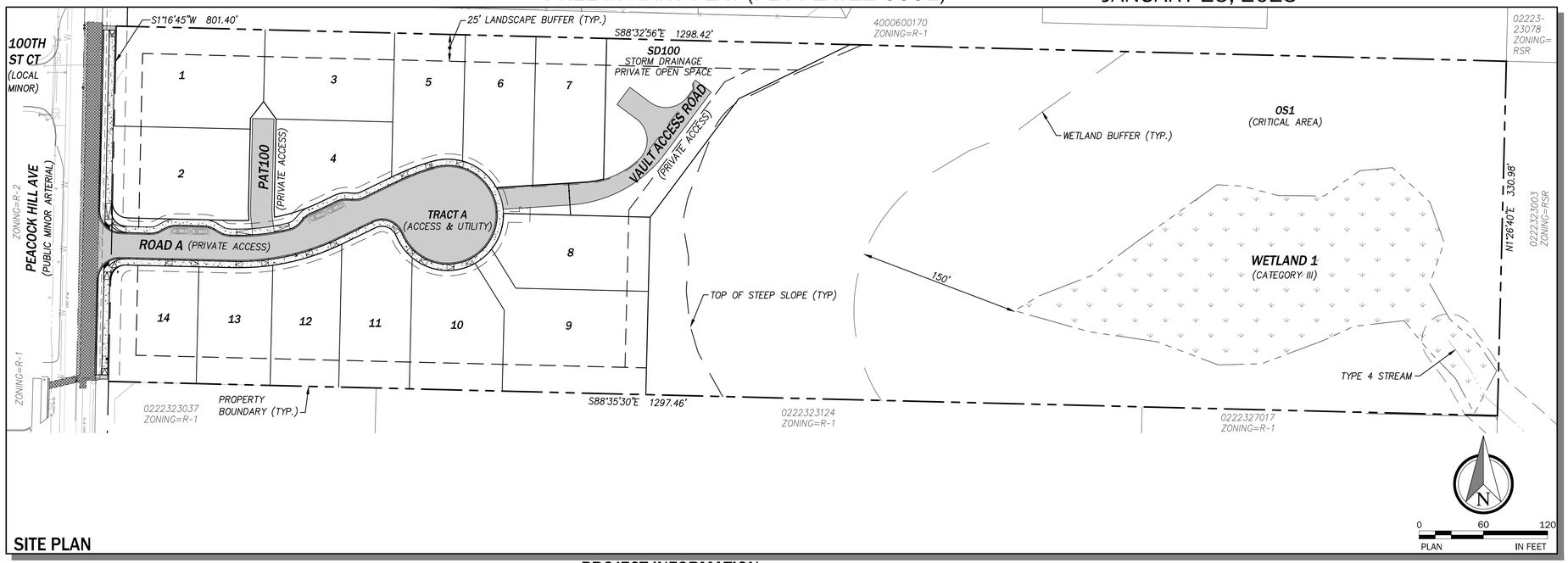
SEC. 32, TWP 22 N, R2E W.M.

THE RESERVE

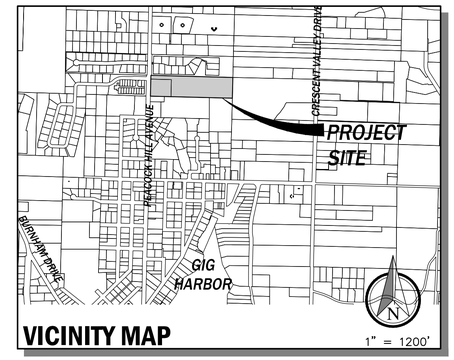
RECEIVED 04 11 2023 CA

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

PRELIMINARY PLAT (PL-PPLAT22-0001) JANUARY 25, 2023



SITE PLAN



VICINITY MAP 1" = 1200'

DRAWING INDEX

SURVEY DATA

EXISTING BOUNDARY, TOPOGRAPHIC, AND PLANIMETRIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY OTAK, INC. (OTAK JOB NO. 3005), AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANTS. THE FOLLOWING SURVEY DATA WAS PROVIDED WITH THE TOPOGRAPHIC MAP BY OTAK, INC.:

HORIZONTAL DATUM

NAD 83/91 NOTE: DATUM WAS ESTABLISHED BY HOLDING SPC COORDINATES, WASHINGTON SOUTH ZONE, AT PIERCE COUNTY SURVEY CONTROL POINT #'s 401 AND 87 AS PUBLISHED BY SURVEY SECTION OF PIERCE COUNTY DEPARTMENT OF PUBLIC WORKS.

VERTICAL DATUM

N.G.V.D. 29 PROJECT BENCHMARK IS PIERCE COUNTY SURVEY CONTROL POINT #'s 401 AND 87 CONVERSION TO NAVD88=NGVD29+3.45

BASIS OF BEARING

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LEGAL DESCRIPTION

TAX PARCEL 0222323134

THE WEST 2.00 ACRES, AFTER EXCEPTIONS, OF THE FOLLOWING DESCRIBED PROPERTY:

THE SOUTH HALF OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 32, TOWNSHIP 22 NORTH, RANGE 2 EAST, WILLAMETTE MERIDIAN, IN PIERCE COUNTY, WASHINGTON

EXCEPT THE NORTH 60 FEET THEREOF;

AND EXCEPT THE WEST 30 FEET FOR PEACOCK HILL AVENUE N.W.

TAX PARCEL 0222323135

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ALSO EXCEPT THE WEST 2 ACRES OF THE ABOVE DESCRIBED PROPERTY AFTER EXCEPTING THE NORTH 60 FEET AND SAID ROAD.

SITUATE IN THE COUNTY OF PIERCE, STATE OF WASHINGTON

PROJECT INFORMATION

GENERAL	
PARCEL NO:	*0222323134 AND 0222323135*
ADDRESS:	*10017 PEACOCK HILL AVE GIG HARBOR, WA 98332*
ZONING:	*R-1*
SITE AREA:	*9.88 AC (430,216 SF)*
PROPOSED USE:	*SINGLE-FAMILY, DETACHED*
FLOOD HAZARD:	*NO*

ZONING CRITERIA

MINIMUM LOT AREA:	*7,500 SF*
MINIMUM LOT WIDTH:	*70 FT*
MINIMUM FRONT YARD SETBACKS:	
HOUSE:	*20 FT*
PORCH:	*12 FT*
GARAGE:	*26 FT*
MINIMUM REAR YARD SETBACK:	*30 FT*
MINIMUM SIDE YARD SETBACK:	*8 FT*
MAXIMUM HARD SURFACE LOT COVERAGE:	*40%*
MINIMUM STREET FRONTAGE:	*20 FT*
ALLOWED GROSS DENSITY:	*4 DU/ACRE*
MAXIMUM HEIGHT:	*35 FT*
DESCRIPTION:	*14 SINGLE-FAMILY, DETACHED UNITS WITH ASSOCIATED ROADWAY, GRADING, DRAINAGE, AND UTILITIES*

PROPOSED

GROSS PARCEL AREA:	*9.88 AC*
AVERAGE LOT SIZE:	*9,688 SF*
NET DEVELOPED AREA:	*4.09 AC*
TOTAL AREA OF PROPOSED LOTS (1-14):	*3.11 AC*
TOTAL PRIVATE ACCESS TRACT AREA:	*0.57 AC*
STORM DRAINAGE TRACT AREA:	*0.44 AC*
DISTURBED AREA:	*3.19 AC*
NET DENSITY:	*=(LOT AREA+STORM TRACT AREA) X 4*
	=(3.11+0.44) X 4 = 14.2 = 14 LOTS
IMPERVIOUS COVERAGE:	*1.24 (54,014 SF) AC LOTS (12.6%)*
	0.60 (26,136 SF) AC PAVEMENT (6.1%)
	1.84 (80,150 SF) AC TOTAL (18.6%)
HARD SURFACE LOT COVERAGE:	*40%*
TOTAL HARD SURFACE COVERAGE:	*18.6%*

EARTHWORK

CUT:	*5,341 CU.YD.*
FILL:	*23,640 CU. YD.*
NET:	*18,307 CU. YD. (FILL)*

UTILITY PURVEYORS

WATER:	*WASHINGTON WATER SERVICE COMPANY*
SEWER:	*CITY OF GIG HARBOR*
POWER/GAS:	*PUGET SOUND ENERGY*
TELEPHONE:	*CENTURY LINK*
TV CABLE:	*COMCAST*
FIRE DISTRICT:	*PIERCE COUNTY FIRE DISTRICT NO. 5, GIG HARBOR FIRE AND MEDIC ONE*

PROJECT TEAM

APPLICANT
PROSPECT DEVELOPMENT
CONTACT: JUSTIN HOLLAND
2913 5TH AVENUE NE, SUITE 201
PUYALLUP, WA 98372
PHONE: (425)745-9176

GEOTECHNICAL ENGINEER
TERRA ASSOCIATES, INC.
CONTACT: TED SCHEPPER, PE
12220 113TH AVENUE NE, SUITE 130
KIRKLAND, WA 98034
PHONE: (425) 821-7777

CIVIL ENGINEER/PLANNER
CPH CONSULTANTS
CONTACT: MATT HOUGH, PE
11321-B NE 120TH STREET
KIRKLAND, WA 98034
PHONE: (425) 285-2390

LANDSCAPE ARCHITECT
CPH CONSULTANTS
CONTACT: DAVE ANDREWS, RLA
11321-B NE 120TH STREET
KIRKLAND, WA 98034
PHONE: (425) 285-2390

WETLAND CONSULTANT
SOUNDVIEW CONSULTANTS
CONTACT: JON PICKETT
2907 HARBORVIEW DRIVE, SUITE D
GIG HARBOR, WA 98335
PHONE: (253) 514-8952

SURVEYOR
OTAK, INC.
CONTACT: BILL LAWRENCE, PLS
11241 WILLOWS ROAD NE, SUITE 200
REDMOND, WA 98052
PHONE: (425) 822-4446
FAX: (425) 827-9577

ARBORIST
CREATIVE LANDSCAPE SOLUTIONS
CONTACT: SUSAN PRINCE
17518 NE 119TH WAY
REDMOND, WA 98052
PHONE: (425) 890-3808

TRAFFIC ENGINEER
JAKE TRAFFIC ENGINEERING, INC.
CONTACT: MARK J. JACOBS, PE, PTOE
2614 39TH AVENUE SW
SEATTLE, WA 98116
PHONE: (206) 762-1978

DUE TO INSUFFICIENT FIRE FLOW, ALL BUILDINGS WITHIN THIS PLAT MUST BE PROVIDED WITH A CODE COMPLIANT FIRE SPRINKLER SYSTEMS. NO BUILDING WAY EXCEED 3,600 SQUARE FEET OF FIRE AREA.

PROJECT DESIGNED TO "CITY OF GIG HARBOR 2016 STORMWATER DESIGN MANUAL, CITY OF GIG HARBOR 2018 PUBLIC WORKS DESIGN STANDARDS.

DAMON RIELY-GIBBONS STATE OF WASHINGTON 54944 REGISTERED PROFESSIONAL ENGINEER 1/25/2023

ISSUED FOR CONSTUCTION

DATE

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

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

P:\project\0228_Prospect Development\21001_The Reserve\Dwg\Sheets\Final Engineering\C0.00.dwg
1/26/2023 10:00 AM MONTANA SAYSANASY

PTN. SEC. 32, TWP 22 N, R2E W.M.

LEGEND

	EXISTING	PROPOSED
ROADWAY CENTERLINE		
PROJECT BOUNDARY LINE		
PROPERTY BOUNDARY LINE		
RIGHT-OF-WAY LINE		
BSBL SETBACK LINE		
GARAGE SETBACK LINE		
LANDSCAPE BUFFER LINE		
NO CONSTRUCTION LINE		
EASEMENT LINE		
BACK OF CURB LINE		
FACE OF CURB LINE		
EDGE OF PAVEMENT LINE		
EDGE OF SIDEWALK LINE		
10' CONTOUR LINE	290	290
2' CONTOUR LINE		
SANITARY SEWER MAIN	SS	SS SS
SANITARY SEWER FORCED MAIN	FM	FM FM
SANITARY SEWER SERVICE LINE		
WATER SERVICE LINE	W	W W
WATER MAIN		
FIRE SUPPLY	F	F F F F F F
STORM PIPE	SD	
ROOF DRAINS	RD	RD RD RD
GAS LINE	GAS	GAS
FENCE LINE	X	
POWER LINE	OP	
BURIED POWER LINE	BP	BP BP
UTILITY EASEMENT		
TELEPHONE LINE	T	
BURIED TELEPHONE LINE	BT	
SWALE		
SILT FENCE		X X X X X
CONSTRUCTION FENCING		// // // //
CLEARING LIMIT		
SANITARY SEWER CLEAN OUT		
SANITARY SEWER MANHOLE		
STORM DRAIN CATCH BASIN – TYPE I		
STORM DRAIN CATCH BASIN – TYPE II		
STORM DRAIN INLET (NO CATCH)		
STORM DRAIN CULVERT		
WATER CAP/PLUG		
WATER COUPLING		
GUARD POST		
REDUCER		
THRUST BLOCK		
WATER METER		
2 NOZZLE FIRE HYDRANT		
3 NOZZLE FIRE HYDRANT		
FLANGE/BUND FL JOINT		
MECHANICAL JOINT		
PUSH-ON/HUB JOINT		
THREAD JOINT		
AIR RELIEF VALVE		
BLOW-OFF VALVE		
BUTTERFLY VALVE		
CHECK VALVE		
GATE/GENERAL VALVE		
PLUG VALVE		
GAS METER		
GAS VALVE		
PAD MOUNTED TRANSFORMER		
POWER VAULT		
UTILITY POLE		
POWER POLE		
UTILITY POLE ANCHOR		
TELEPHONE RISER		
TELEPHONE VAULT		
BUS STOP		
MAIL BOX		
RIP RAP		
MSE WALL		
ROCKERY		
SHRUB		
GENERAL SIGN		
REGULATORY SIGN		
TREE (CONIFER)		
TREE (DECIDUOUS)		
YARD LIGHT		
UNDERGROUND STORM VAULT		
ASPHALT PAVEMENT		
CONCRETE		

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

ABBREVIATIONS

AC	ASPHALT CONCRETE PAVEMENT
AP	ANGLE POINT
ATB	ASPHALT TREATED BASE
AVE	AVENUE
BCR	BEGIN CURB RETURN
BOC	BACK OF CURB
BOW	BOTTOM OF WALL
BPE	BEARING PAD ELEVATION
BSBL	BUILDING SETBACK LINE
CASP	CRITICAL AREA SITE PLAN
℄	CENTERLINE
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CMP	CORRUGATED METAL PIPE
COGH	CITY OF GIG HARBOR
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CPP	CORRUGATED POLYETHYLENE PIPE (W/SMOOTH INTERIOR WALLS)
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
DIA.	DIAMETER
DI	DUCTILE IRON
DW	DRIVEWAY
E	EAST
ECR	END CURB RETURN
EDDS	ENGINEERING DESIGN AND DEVELOPMENT STANDARDS
EL.	ELEVATION
EOP	EDGE OF PAVEMENT
ESC	EROSION AND SEDIMENT CONTROL
ESD	ENTERING SIGHT DISTANCE
ESMT.	EASEMENT
EVA	EMERGENCY VEHICLE ACCESS
EXIST.	EXISTING
FL	FLOW LINE
FL	FLANGE
FOC	FACE OF CURB
GSBL	GARAGE SETBACK LINE
HORIZ	HORIZONTAL
IE	INVERT ELEVATION
INT	INTERSECTION
LCPE	LINED CORRUGATED POLYETHYLENE PIPE
LF	LINEAL FEET
LT	LEFT
LUI	LAND USE INSPECTOR
MAX.	MAXIMUM
MDRT	MAJOR DEVELOPMENT REVIEW TEAM
MH	MANHOLE
MIN.	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH
NIC	NOT IN CONTRACT
O.C.	ON CENTER
PC	POINT OF CURVATURE
PE	PLAIN END
PI	POINT OF INTERSECTION
PL	PLACE
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
PUE	PUBLIC UTILITY EASEMENT
REQ'D.	REQUIRED
ROW	RIGHT-OF-WAY
RT	RIGHT
S	SOUTH
SD	STORM DRAIN
SP	SPACE
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
STA	STATION
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TOC	TOP OF CURB
TYP.	TYPICAL
TBW	TOP BACK OF WALK
TOW	TOP OF WALL
UNO	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
WSDOT	WASHINGTON DEPT. OF TRANSPORTATION
WWS	WASHINGTON WATER SERVICE COMPANY
W/	WITH
W	WEST
WS	WATER SERVICE

GENERAL PROJECT NOTES

1. ALL WORKMANSHIP, METHODS AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PRODUCED BY WSDOT AND THE WASHINGTON STATE CHAPTER OF THE APWA; CITY OF GIG HARBOR REVISED MUNICIPAL CODE, THE 2018 CITY OF GIG HARBOR PUBLIC WORKS DEVELOPMENT STANDARDS (UNLESS SPECIFIED OTHERWISE), THE 2016 CITY OF GIG HARBOR STORMWATER DESIGN MANUAL, WASHINGTON WATER SERVICE STANDARDS AND THE 2008 WASHINGTON STATE DEPARTMENT OF ECOLOGY CRITERIA FOR SEWAGE WORKS AND SPECIFICATIONS FOR DEVELOPMENT AND ANY SPECIAL PROVISIONS PROVIDED BY THESE PLANS OR OTHER CONTRACT DOCUMENTS FOR THE PROJECT.

2. EXISTING UTILITIES ARE SHOWN IN THESE PLANS PER THE LATEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AND RELATED SURFACE FEATURES WITHIN THE PROJECT AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE PLAN INFORMATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL, AT MINIMUM, CONTACT THE UNDERGROUND UTILITIES LOCATE CENTER (811) TO HAVE UTILITIES VERIFIED ON THE GROUND PRIOR TO CONSTRUCTION.

3. THE TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) MEASURES SHOWN IN THESE PLANS SHALL BE CONSIDERED A MINIMUM. THE CONTRACTOR SHALL PROVIDE ANY REASONABLE ADDITIONAL MEASURES AS MAY BE REQUIRED TO FACILITATE ACTUAL SITE RUNOFF CONDITIONS AT THE TIME OF CONSTRUCTION. ALL NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN-PLACE PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.

4. ALL NEW PAVEMENT, SIDEWALKS, AND CURB AND GUTTER INSTALLED BY THIS PROJECT SHALL BEAR ON SUITABLE, COMPACT FOUNDATION SOILS IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND PROJECT CONTRACT DOCUMENTS. SIMILAR EXISTING FACILITIES TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION, SHALL BE REPLACED IN-KIND TO THE SAME STANDARDS OF NEW FACILITIES.

5. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE WSDOT STANDARD PLANS AND SPECIFICATIONS AS AMENDED OR SUPPLEMENTED BY THE PROJECT PLANS, DETAILS, AND SPECIFICATIONS AS PROVIDED IN THE CONTRACT DOCUMENTS.

6. ALL EXISTING ON-SITE WELLS OR SEPTIC TANKS SHALL BE PROPERLY ABANDONED BY A LICENSED CONTRACTOR, CERTIFIED TO PERFORM SUCH WORK, AND WRITTEN VERIFICATION OF ABANDONMENT SHALL BE PROVIDED TO THE OWNER, WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND PIERCE COUNTY HEALTH DEPARTMENT IN ACCORDANCE WITH APPLICABLE AGENCY REGULATIONS.

7. THE MATERIALS AND METHODS OF INSTALLATION FOR ALL SANITARY SEWER FACILITIES SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF GIG HARBOR STANDARDS.

8. THE MATERIALS AND METHODS OF INSTALLATION FOR ALL WATER FACILITIES SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF GIG HARBOR STANDARDS, WASHINGTON WATER SERVICE AND THE 2008 WASHINGTON STATE DEPARTMENT OF ECOLOGY CRITERIA FOR SEWAGE WORKS.

9. AT LEAST TWO COPIES OF THESE PLANS SHALL BE ON THE JOB SITE WHEN CONSTRUCTION IS IN PROGRESS. THE CONTRACTOR SHALL ALSO HAVE COPIES OF THE APPLICABLE REGULATORY AGENCY STANDARDS AVAILABLE AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION ACTIVITY. ONE COMPLETE SET OF PROJECT PLANS WITH RECORDS OF AS-BUILT INFORMATION SHALL BE PROVIDED TO THE PROJECT ENGINEER AT THE END OF THE PROJECT.

10. THE CONTRACTOR SHALL COORDINATE ACTIVITIES OF ALL UTILITY PURVEYORS IMPACTED BY WORK FOR THIS PROJECT AND SHALL CONTACT THEM PRIOR TO CONSTRUCTION TO SCHEDULE WORK FOR PROVISIONS FOR AND BE RESPONSIBLE TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT AND KEEP IN SERVICE ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE PLANS DURING CONSTRUCTION.

11. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO COMPLETE THE PROPOSED WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES. CUTTING AND PLUGGING OF LINES TO BE ABANDONED SHALL BE CONSIDERED INCIDENTAL TO OTHER WORK PERFORMED.

12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF SITE PREPARATION, GRADING OPERATIONS, FOUNDATION, SLAB AND PAVING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY OF ANY PROVISION OF THE SOIL REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRES FURTHER CLARIFICATION.

13. THE OWNER SHALL OBTAIN THE SERVICES OF A QUALIFIED SOILS ENGINEER AND/OR TESTING AGENCY TO PERFORM SUBGRADE/BACKFILL DENSITY TESTS OR TO DIRECT THE REMOVAL AND REPLACEMENT OF ANY UNSUITABLE MATERIALS DURING CONSTRUCTION. A REPRESENTATIVE OF THE SOILS ENGINEER AND/OR TESTING AGENCY SHALL BE AVAILABLE TO OBSERVE AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS AS REQUIRED TO CERTIFY THE METHODS AND MATERIALS ARE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE THE APPROPRIATE SOILS INSPECTIONS AND TESTING.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL DURING CONSTRUCTION ADJACENT TO OR WITHIN ALL PUBLIC ROADWAYS. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-00001)	MDS	DRG

DAWSON RILEY-CIPRIANI STATE OF WASHINGTON 54944 REGISTERED PROFESSIONAL ENGINEER 1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

LEGEND, ABBREVIATION, AND NOTES

CITY OF GIG HARBOR

PIERCE COUNTY, WASHINGTON

CLIENT

PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
PHONE: (253) 405-8695
EMAIL: JUSTIN@PROSPECTDEVELOP.COM

C|P|H CONSULTANTS
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PROJECT NO.
0228-21-001

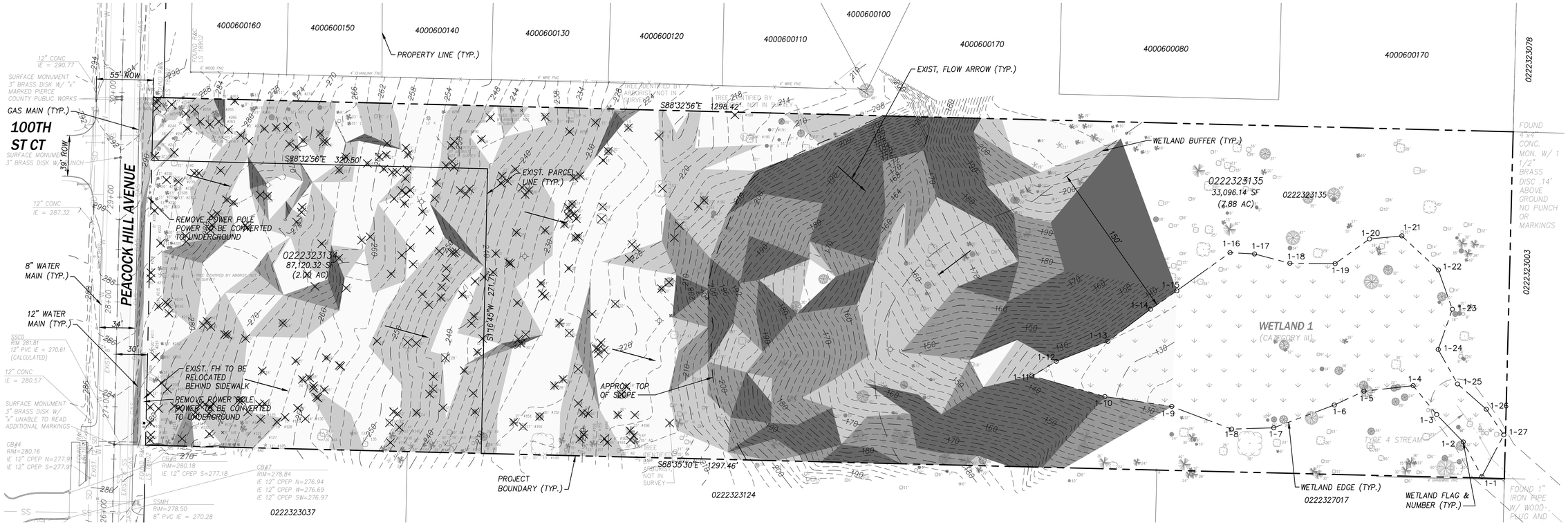
DRAWING
C0.01

SHEET 2 OF 44

P:\project\0228_Prospect Development\21001_The Reserve\Dwg\Sheets\Final Engineering\C0.01.dwg
1/26/2023 10:00 AM MONTANA SAYSANASY

EXHIBIT 1 - EXISTING CONDITIONS

PTN. SEC. 32, TWP 22 N, R2E W.M.



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EXCEPT THE NORTH 60 FEET THEREOF;

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TAX PARCEL 0222323135

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ALSO EXCEPT THE WEST 2 ACRES OF THE ABOVE DESCRIBED PROPERTY AFTER EXCEPTING THE NORTH 60 FEET AND SAID ROAD.

SITUATE IN THE COUNTY OF PIERCE, STATE OF WASHINGTON

SLOPES

- 0% - 15%
- 15% - 30%
- 30% - 40%
- GREATER THAN 40%

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

0 50 100
PLAN IN FEET

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-00013)	MDS	DRG

DARRON RILEY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

EXISTING CONDITIONS

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

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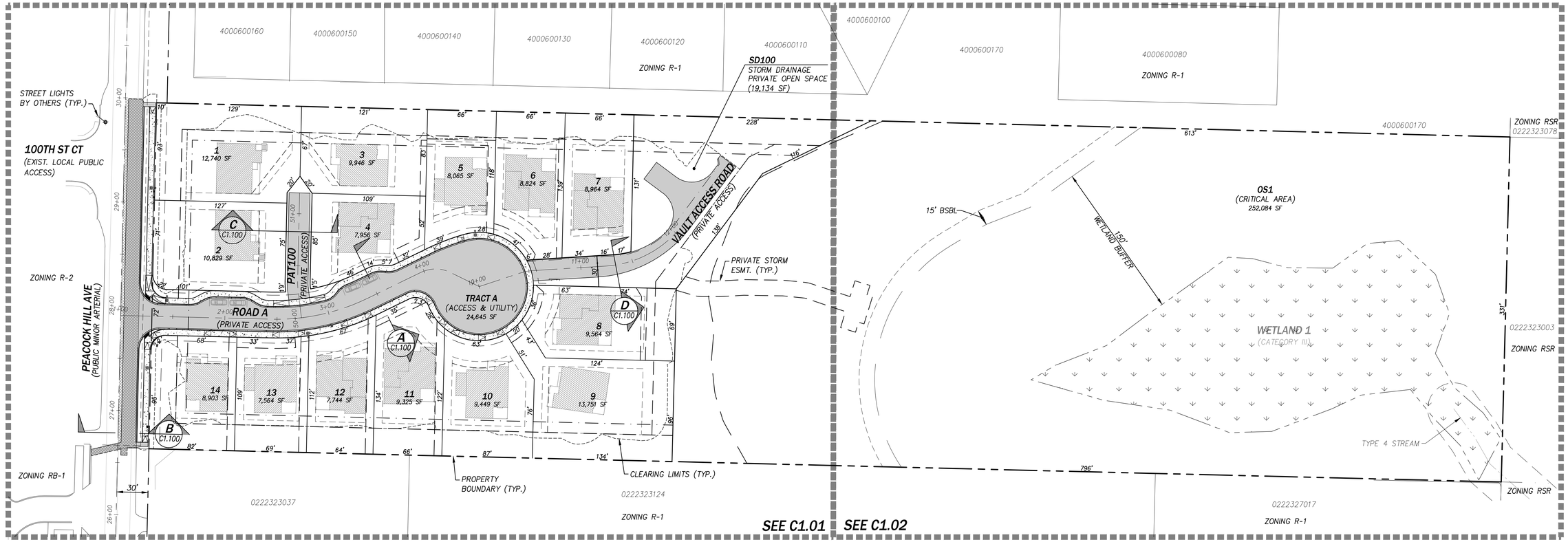
C0.10

SHEET 3 OF 44

P:\project\0228_Prospect Development\21001_The Reserve\Dwg\Sheets\Final Engineering\C0.10.dwg
1/26/2023 10:00 AM MONTANA SAYSANASY

PRELIMINARY PLAT (PL-PPLAT22-0001)

PTN. SEC. 32, TWP 22 N, R2E W.M.



PROJECT INFORMATION

GENERAL	
PARCEL NO:	0222323134 AND 0222323135
ADDRESS:	10017 PEACOCK HILL AVE GIG HARBOR, WA 98332
ZONING:	R-1
SITE AREA:	9.88 AC (430,216 SF)
PROPOSED USE:	SINGLE-FAMILY, DETACHED
FLOOD HAZARD:	NO

ZONING CRITERIA

MINIMUM LOT AREA:	7,500 SF
MINIMUM LOT WIDTH:	70 FT
MINIMUM FRONT YARD SETBACKS:	
HOUSE:	20 FT
PORCH:	12 FT
GARAGE:	26 FT
MINIMUM REAR YARD SETBACK:	30 FT
MINIMUM SIDE YARD SETBACK:	8 FT
MAXIMUM HARD SURFACE LOT COVERAGE:	40%
MINIMUM STREET FRONTAGE:	20 FT
ALLOWED GROSS DENSITY:	4 DU/ACRE
MAXIMUM HEIGHT:	35 FT
DESCRIPTION:	14 SINGLE-FAMILY, DETACHED UNITS WITH ASSOCIATED ROADWAY, GRADING, DRAINAGE, AND UTILITIES

PROPOSED

GROSS PARCEL AREA:	9.88 AC
AVERAGE LOT SIZE:	9,688 SF
NET DEVELOPED AREA:	4.09 AC
TOTAL AREA OF PROPOSED LOTS (1-14):	3.11 AC
TOTAL PRIVATE ACCESS TRACT AREA:	0.57 AC
STORM DRAINAGE TRACT AREA:	0.44 AC
DISTURBED AREA:	3.19 AC
NET DENSITY:	=(LOT AREA+STORM TRACT AREA) X 4 =(3.11+0.44) X 4 = 14.2 = 14 LOTS
IMPERVIOUS COVERAGE:	1.24 (54,014 SF) AC LOTS (12.6%) 0.60 (26,136 SF) AC PAVEMENT (6.1%) 1.84 (80,150 SF) AC TOTAL (18.6%)
HARD SURFACE LOT COVERAGE:	40%
TOTAL HARD SURFACE COVERAGE:	18.6%

EARTHWORK

CUT:	5,341 CU.YD.
FILL:	23,640 CU. YD.
NET:	18,307 CU. YD. (FILL)

UTILITY PURVEYORS

WATER:	WASHINGTON WATER SERVICE COMPANY
SEWER:	CITY OF GIG HARBOR
POWER/GAS:	PUGET SOUND ENERGY
TELEPHONE:	CENTURY LINK
TV CABLE:	COMCAST
FIRE DISTRICT:	PIERCE COUNTY FIRE DISTRICT NO. 5,

PROJECT TEAM

APPLICANT
PROSPECT DEVELOPMENT
CONTACT: JUSTIN HOLLAND
2913 5TH AVENUE NE, SUITE 201
PUYALLUP, WA 98372
PHONE: (425)745-9176

GEOTECHNICAL ENGINEER
TERRA ASSOCIATES, INC.
CONTACT: TED SCHEPPER, PE
12220 113TH AVENUE NE, SUITE 130
KIRKLAND, WA 98034
PHONE: (425) 821-7777

WETLAND CONSULTANT
SOUNDVIEW CONSULTANTS
CONTACT: JON PICKETT
2907 HARBORVIEW DRIVE, SUITE D
GIG HARBOR, WA 98335
PHONE: (253) 514-8952

SURVEYOR
OTAK, INC.
CONTACT: BILL LAWRENCE, PLS
11241 WILLOWS ROAD NE, SUITE 200
REDMOND, WA 98052
PHONE: (425) 822-4446
FAX: (425) 827-9577

CIVIL ENGINEER/PLANNER
CPH CONSULTANTS
CONTACT: MATT HOUGH, PE
11321-B NE 120TH STREET
KIRKLAND, WA 98034
PHONE: (425) 285-2390

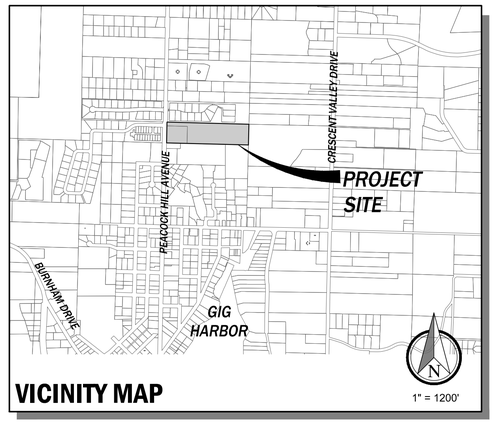
LANDSCAPE ARCHITECT
CPH CONSULTANTS
CONTACT: DAVE ANDREWS, RLA
11321-B NE 120TH STREET
KIRKLAND, WA 98034
PHONE: (425) 285-2390

ARBORIST
CREATIVE LANDSCAPE SOLUTIONS
CONTACT: SUSAN PRINCE
17518 NE 119TH WAY
REDMOND, WA 98052
PHONE: (425) 890-3808

TRAFFIC ENGINEER
JAKE TRAFFIC ENGINEERING, INC.
CONTACT: MARK J. JACOBS, PE, PTOE
2614 39TH AVENUE SW
SEATTLE, WA 98116
PHONE: (206) 762-1978

LOT #	LOT AREA (SF)	*MIN. LOT WIDTH (FT)	ACTUAL LOT WIDTH (FT)
1	12,740	89	93
2	10,829	76	86
3	9,946	70	83
4	7,956	56	102
5	8,065	56	66
6	8,824	62	66
7	8,964	63	66
8	9,564	67	69
9	13,751	96	96
10	9,449	66	87
11	9,325	65	66
12	7,744	54	64
13	7,564	53	69
14	8,903	62	82

*-MIN. LOT WIDTH IS 0.7% OF TOTAL LOT AREA



VICINITY MAP

TRACT USE AND OWNERSHIP				
TRACT	AREA	USE	OWNERSHIP	NOTES
A	24,645 SF	INGRESS/EGRESS, UTILITIES AND STORM DRAINAGE	HOME OWNERS ASSOCIATIONS	
OS1	252,084 SF	OPEN SPACE AND CRITICAL AREA	HOME OWNERS ASSOCIATIONS	
SD100	19,134 SF	INGRESS/EGRESS, UTILITIES AND STORM DRAINAGE, RECREATION	PRIVATE; HOME OWNERS ASSOCIATION	INCL. ACCESS ESMT. TO 022232-3135

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PLAN IN FEET

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DARTON RIELY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

OVERALL SITE PLAN

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
PHONE: (253) 405-8695
EMAIL: JUSTIN@PROSPECTDEVELOP.COM

C|P|H CONSULTANTS
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Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
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PROJECT NO.
0228-21-001

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C1.00

SHEET 4 OF 44

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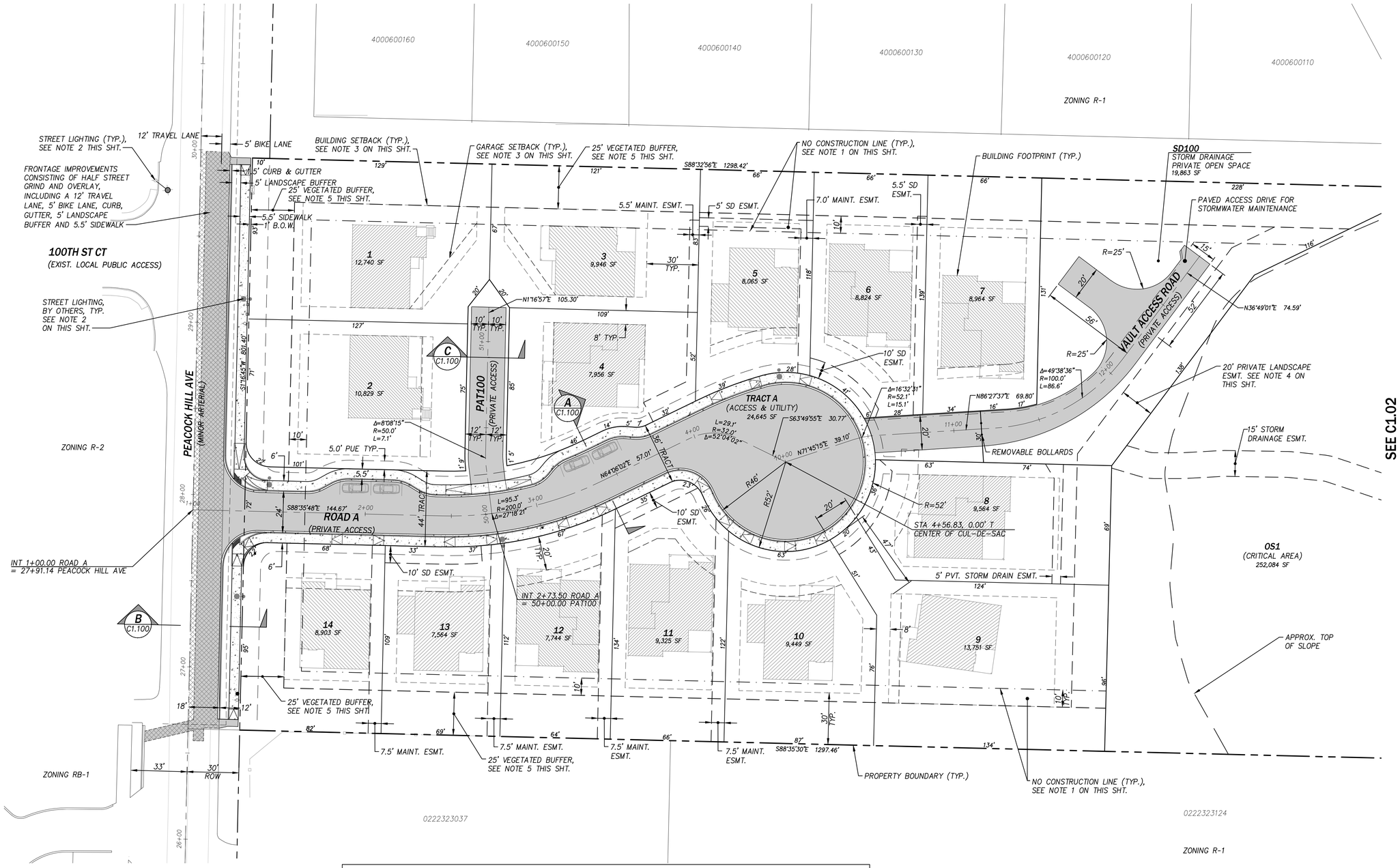
1/26/2023 10:01 AM MONTANA SAYSANASY

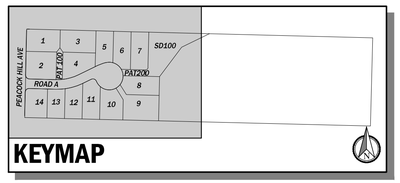
PRELIMINARY PLAT (PL-PPLAT22-0001)

PTN. SEC. 32, TWP 22 N, R2E W.M.



NOTES:

1. THE CLEARING AND GRADING SHOWN WITH THIS CIVIL CONSTRUCTION PERMIT AND ANY OTHER IMPROVEMENTS THAT MAY BE PROPOSED WITHIN THE 10-FOOT NO CONSTRUCTION ZONE WITH SUBSEQUENT PERMITS WILL BE ALLOWED ONLY AFTER APPROVAL BY THE CITY OF A WRITTEN STATEMENT FROM A QUALIFIED ARBORIST ACKNOWLEDGING THAT THE PROPOSED CONSTRUCTION ACTIVITY WITHIN THE 10-FOOT SETBACK WILL NOT HARM EXISTING VEGETATION WITHIN THE DESIGNATED LANDSCAPE OR BUFFER AREA.
2. A STREET LIGHTING PLAN IS PROVIDED BY OTHERS BUT INCLUDED IN THIS PLAN SET.
3. THE BSBL AND GSBL FOR EACH LOT SHALL BE SHOWN ON THE FINAL PLAT AS DEPICTED ON THIS PLAN.
4. THE PRIVATE LANDSCAPE EASEMENT SHOWN OVER LOTS 8 AND 9 AND TRACT SD100 SHALL BE MAINTAINED BY THE HOA. A NOTE SPECIFYING MAINTENANCE RESPONSIBILITIES SHALL BE PROVIDED ON THE FACE OF THE FINAL PLAT AND ACCOMPANYING COVENANTS, CONDITIONS, AND RESTRICTIONS FOR THE PROJECT.
5. THE 25' VEGETATED BUFFER SHALL BE RECORDED AS A PRIVATE ESMT. AND SHALL BE MAINTAINED BY THE HOA, A NOTE SPECIFYING MAINTENANCE RESPONSIBILITIES SHALL BE PROVIDED ON THE FACE OF THE FINAL PLAT AND ACCOMPANYING A COVENANTS, CONDITIONS AND RESTRICTIONS FOR THE PROJECT.
6. A VARIANCE IS APPROVED BY PUBLIC WORKS (EN-22-0014) FOR THE PROPOSED LENGTH OF THE ROAD A ACCESS LANDING.
7. A VARIANCE IS APPROVED BY PUBLIC WORKS (EN-22-0015) FOR THE JOINT USE DRIVEWAY, PAT100.
8. A VARIANCE IS IN REVIEW WITH PUBLIC WORKS (EN-22-0049) FOR THE MINOR ARTERIAL ROADWAY SECTION FOR PEACOCK HILL AVE.
9. A VARIANCE IS APPROVED BY PUBLIC WORKS (EN-22-0050) FOR THE CUL-DE-SAC AT THE EAST END OF ROAD A.
10. A VARIANCE IS IN REVIEW WITH PUBLIC WORKS (EN-23-_____) FOR THE VAULT SETBACK FROM 20 PERCENT SLOPES IN SD100.
11. A VARIANCE IS IN REVIEW WITH PUBLIC WORKS (EN-23-_____) FOR THE LOCAL ACCESS SPACING ON PEACOCK HILL AVENUE.



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PLAN IN FEET

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DARTON RILEY-GILBOE
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

SITE PLAN - WEST

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT

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PRELIMINARY PLAT (PL-PPLAT22-0001)

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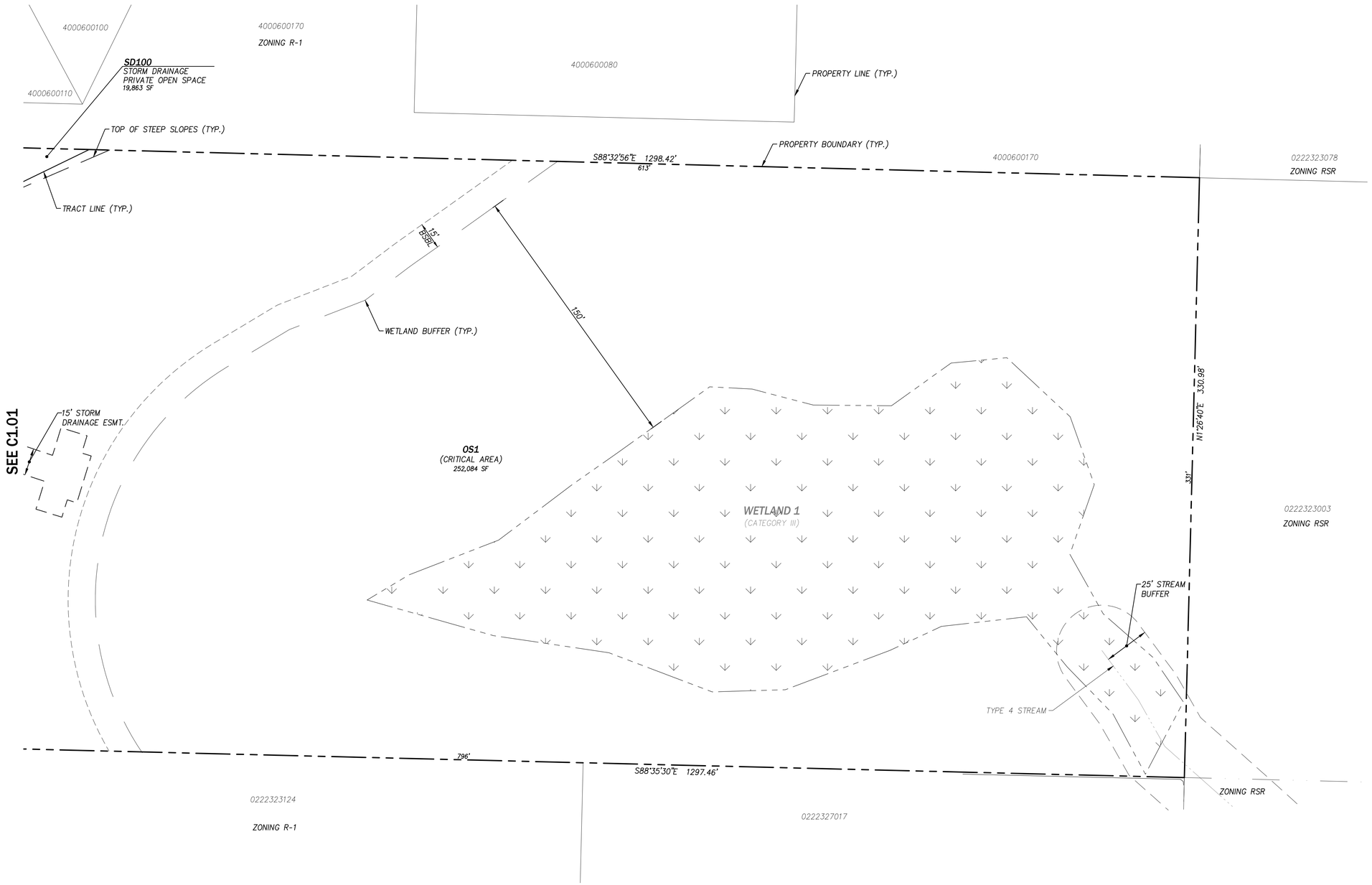

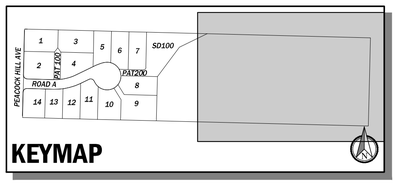

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STATE OF WASHINGTON
54944
REGISTERED PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

SITE PLAN - EAST

CITY OF GIG HARBOR

PIERCE COUNTY, WASHINGTON

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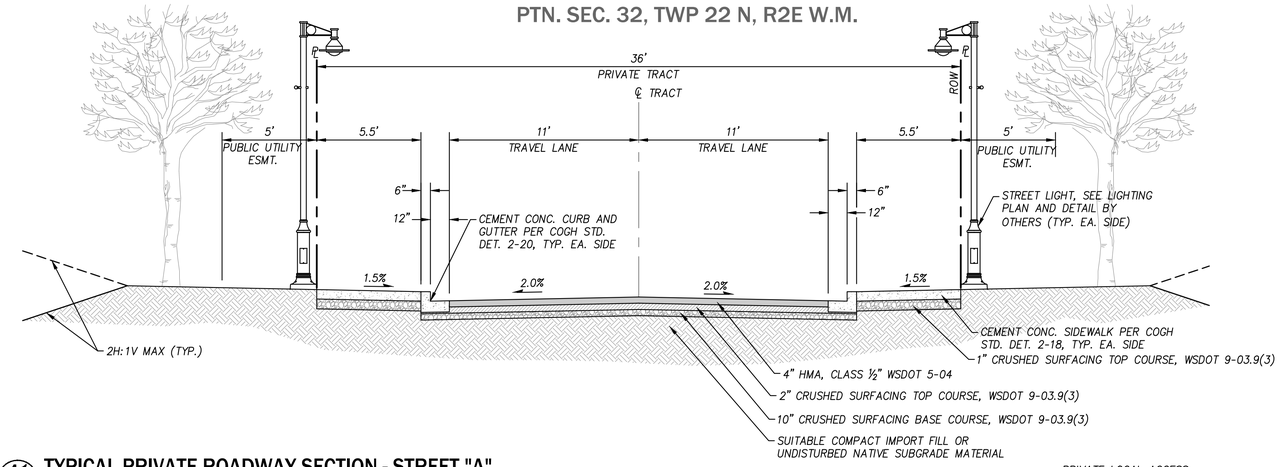
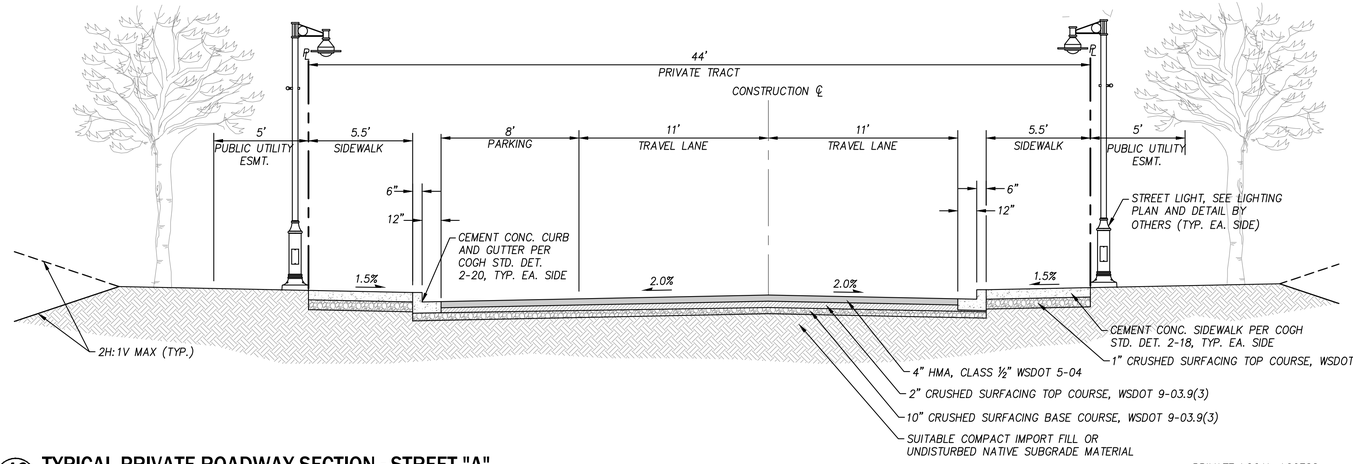


A1 – TYPICAL PRIVATE ROADWAY SECTION - STREET "A" — PRIVATE LOCAL ACCESS

NOT TO SCALE



A2 – TYPICAL PRIVATE ROADWAY SECTION - STREET "A" — PRIVATE LOCAL ACCESS

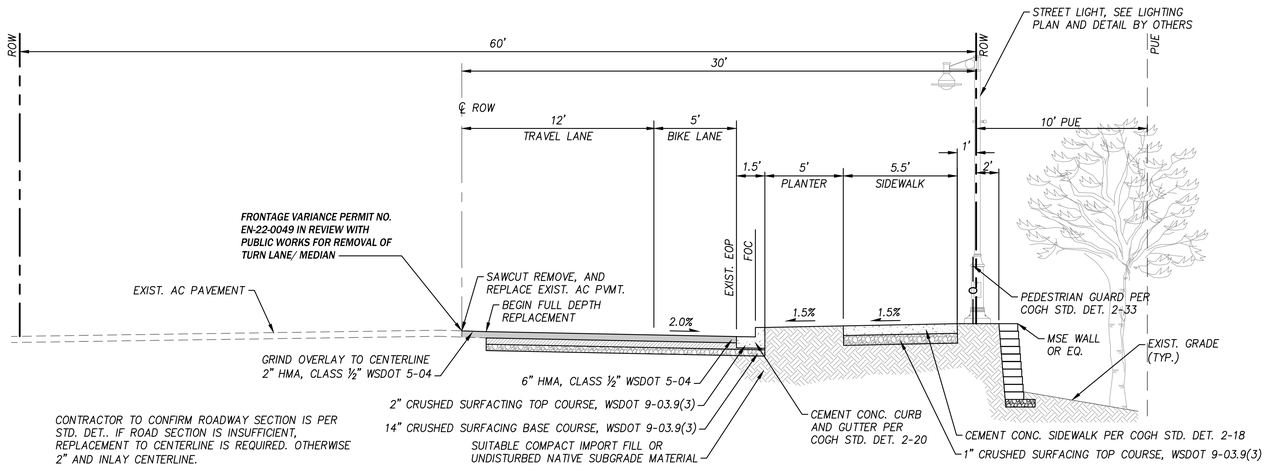
NOT TO SCALE

C – TYPICAL SECTION - PAT100 — ACCESS WAY

NOT TO SCALE

D – TYPICAL SECTION - VAULT ACCESS ROAD — ACCESS WAY

NOT TO SCALE



B – TYPICAL ROADWAY SECTION - PEACOCK HILL AVE (PUBLIC) — MINOR ARTERIAL

NOT TO SCALE

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DAWSON R. RILEY-CLARKAS — STATE OF WASHINGTON — 54944 — REGISTERED PROFESSIONAL ENGINEER — 1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

TYPICAL ROADWAY SECTIONS

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

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SHEET 7 OF 44

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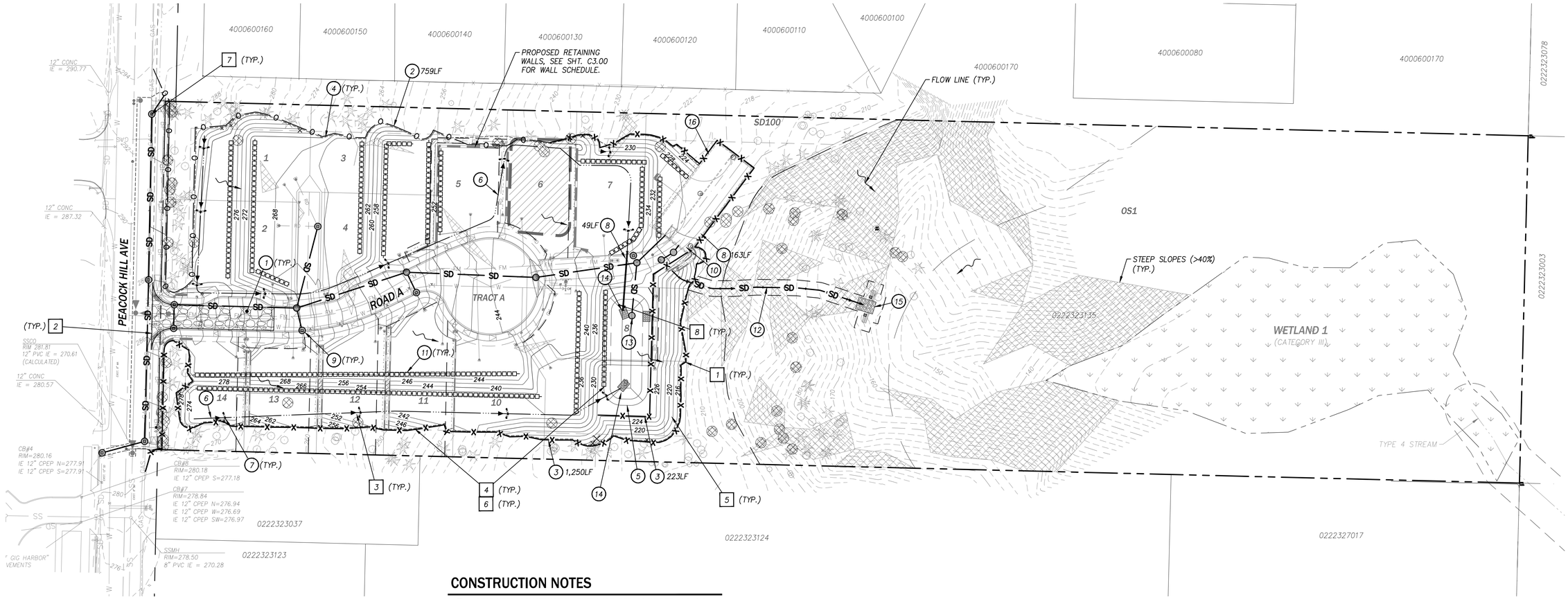

LEGEND

- TYP. SILT FENCE
- CONSTRUCTION FENCE
- EXISTING TOPOGRAPHIC CONTOUR
- LIMITS OF GRADING
- PROPOSED GRADING CONTOUR
- TEMPORARY INTERCEPTOR DITCH WITH ROCK CHECK DAM, SEE NOTE 1
- PERMANENT SD PIPE, SEE NOTE 2
- RIP-RAP/QUARRY SPALL PAD
- CATCH BASIN INLET PROTECTION
- TREE/TREE GROUP TO BE REMOVED
- TEMPORARY CULVERT, SEE NOTE 1
- TEST PIT LOCATION
- TEMPORARY SEDIMENT POND
- STRAW WATTLE
- STABILIZED CONSTRUCTION ENTRANCE

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CONSTRUCTION NOTES

1. STABILIZED CONSTRUCTION ENTRANCE PER COGH DET. 4.0 ON SHT. C2.100
2. CONSTRUCTION FENCE PER DET. ON SHT. C2.101
3. SILT FENCE PER COGH 8.0 DET. ON SHT. C2.101
4. APPROX. LIMIT OF GRADING, SEE TYP. CLEARING LIMITS DET. ON SHT. C2.101
5. TEMP. SEDIMENT POND PER COGH DET. 5.0, 5.1, AND 5.2 AND CALCULATIONS ON SHT. C2.100
6. TEMP. INTERCEPTOR DIKES AND SWALES PER COGH DET. 17.0 ON SHT. C2.101
7. ROCK CHECK DAM PER COGH DET. 19.0 ON SHT C2.101
8. TEMP. CULVERT, APPROX. LENGTH AND SIZE PER PLAN, S=2% MIN.
9. CATCH BASIN INLET PROTECTION PER COGH DET. 8.0 ON SHT. C2.101
10. TEMP. PLUG AT CATCH BASIN OUTLET PIPE, REMOVE W/ FINAL PAVING IMPROVEMENTS AND SITE STABILIZATION
11. STRAW WATTLES PER WSDOT STD. PLAN I-30.30-02
12. PIPE SLOPE DRAINS, SEE DET. SHT. C3.101
13. SEDIMENT POND RISER PER COGH DET. 5.0, 5.1, AND 5.2 AND CALCULATIONS ON SHT. C2.100
14. OUTLET PROTECTION, ROCK LINING WITH 1' THICK PAD, AND 7' WIDE BY 10' LONG.
15. OUTLET PROTECTION, RIP RAP WITH 2' THICK PAD, AND 7' WIDE BY 14' LONG.
16. CONTRACTOR TO UTILIZE DETENTION VAULT AS SEDIMENT POND UNTIL PROJECT IS STABILIZED, SEE NOTE # 2, THIS SHT. SEE SHT. C2.100 FOR DETENTION POND SEDIMENT CONTROL SIZING.

TABLE OF BMPS

TESC ELEMENTS #	BMP USED
1	BMP C101:PRESERVING NATURAL VEGETATION, BMP C103: HIGH VISIBILITY FENCE, AND BMP C233: SILT FENCE
2	BMP C105: STABILIZED CONSTRUCTION ENTRANCE, BMP C106: WHEEL WASH (AS NEEDED)
3	BMP C207: CHECK DAMS, BMP C209: OUTLET PROTECTION, BMP C241: TEMPORARY SEDIMENT POND
4	BP C233: SILT FENCE, BMP C235: STRAW WATTLES, BMP C200: TEMPORARY SEDIMENT POND
5	BMP C120: TEMPORARY AND PERMANENT SEEDING, BMP C123: PLASTIC COVER (AS NECESSARY)
6	BMP C233: SILT FENCE, BMP C235: STRAW WATTLES, BMP C200: INTERCEPTOR DIKE AND SWALE, BMP C207: CHECK DAMS, BMP 241: TEMPORARY SEDIMENT POND
7	BMP C220: STORM DRAIN INLET PROTECTION
8	BMP C220: STORM DRAIN INLET PROTECTION
9	BMP C151: CONCRETE HANDLING, BMP C152: SAWCUTTING AND SURFACING POLLUTION PREVENTION, BMP C153: MATERIAL DELIVERY, STORAGE AND CONTAINMENT, BMP C154: CONCRETE WASH OUT AREA
10	BMP C236: VEGETATIVE STRIP (IF MEETS NPDES MONITORING REQ.), PUMP AND REMOVE FROM SITE IF DOES NOT MEET TREATMENT REQ.
11	BMP C160: CERTIFIED EROSION AND SEDIMENT CONTROL LEAD
12	BMP C160: CERTIFIED EROSION AND SEDIMENT CONTROL LEAD, BMP C162: SCHEDULING
13	NO LOW IMPACT DEVELOPMENT BMPS ARE PROPOSED WITH THIS PROJECT

NOTES:

1. TEMPORARY CULVERTS, INTERCEPTOR DITCHES, AND CHECK DAMS ARE SHOWN APPROXIMATE. ACTUAL LIMITS AND LOCATIONS MAY VARY TO FACILITATE SITE CONDITIONS AND CONSTRUCTION ACTIVITIES.
2. PERMANENT STORM DRAINAGE FACILITIES MAY BE USED FOR TEMPORARY STORM WATER COLLECTION AND CONVEYANCE CONTROLS IN CONJUNCTION WITH NECESSARY TEMPORARY BMP'S DURING CONSTRUCTION. ALL PERMANENT STORM DRAIN FACILITIES ACTIVE DURING CONSTRUCTION SHALL BE CLEANED AND/OR REPAIRED TO GOOD WORKING CONDITION PRIOR TO FINAL PROJECT CLOSEOUT.
3. EXISTING UTILITIES, INCLUDING EXTENSIONS PROVIDED FOR FUTURE CONNECTION, SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER/ENGINEER OF ANY CONFLICTS WITH PROPOSED IMPROVEMENTS AND/OR CONSTRUCTION PHASING.
4. A CONSTRUCTION STAGING AREA IS PROPOSED TO BE LOCATED AS SHOWN ON THIS PLAN. THE ELEMENTS AND CONFIGURATION SHOWN FOR THE STAGING AREA IS CONCEPTUAL AND IS PROVIDED TO ILLUSTRATE THE CURRENT PLAN TO CENTRALIZE CONSTRUCTION OPERATIONS AND MATERIALS FOR THE PROJECT. ALTERNATE ON-SITE STAGING OR CONSTRUCTION LAY DOWN AREAS MAY BE PROPOSED BY THE CONTRACTOR BASED ON ACTUAL OPERATIONAL NEEDS AS THE BUILD-OUT OF THE PROJECT PROGRESSES.
5. ALL RETAINING WALLS OVER FOUR FEET IN HEIGHT, FROM BOTTOM OF FOOTING, SHALL BE CONSTRUCTED UNDER A SEPARATE BUILDING PERMIT.

N

0 50 100
PLAN IN FEET

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DAWSON R. RILEY-CLARKSON
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

CITY OF GIG HARBOR

PIERCE COUNTY, WASHINGTON

CLIENT
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PROJECT NO.
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C2.00

SHEET 8 OF 44

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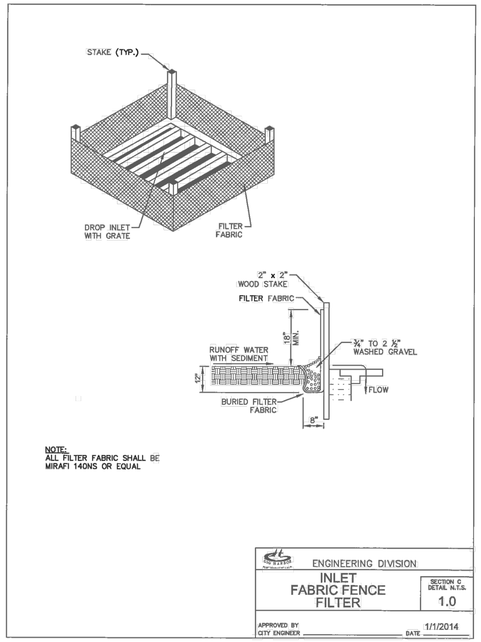
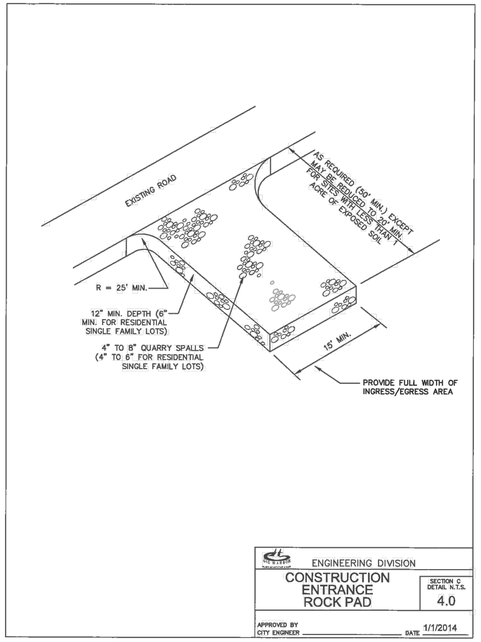
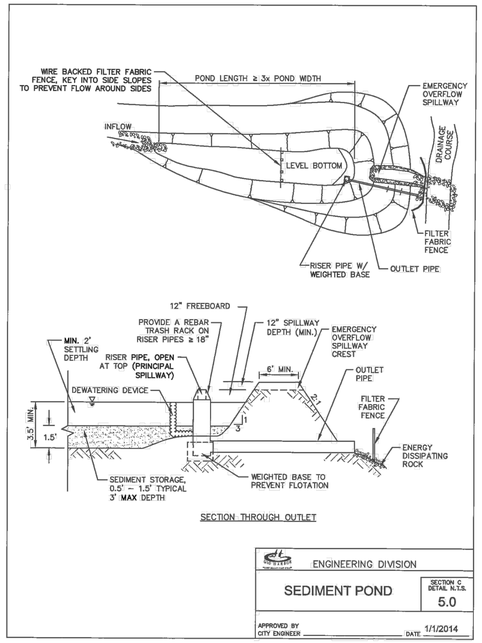


NOTE:
ALL FILTER FABRIC SHALL BE MIRAFI 140NS OR EQUAL

ENGINEERING DIVISION
INLET FABRIC FENCE FILTER
SECTION C DETAIL N.T.S. 1.0
APPROVED BY CITY ENGINEER _____ DATE 1/1/2014

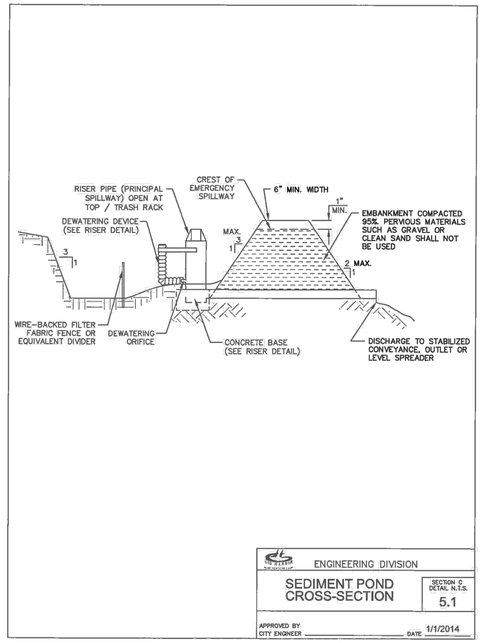


ENGINEERING DIVISION
CONSTRUCTION ENTRANCE ROCK PAD
SECTION C DETAIL N.T.S. 4.0
APPROVED BY CITY ENGINEER _____ DATE 1/1/2014



SECTION THROUGH OUTLET

ENGINEERING DIVISION
SEDIMENT POND
SECTION C DETAIL N.T.S. 5.0
APPROVED BY CITY ENGINEER _____ DATE 1/1/2014



ENGINEERING DIVISION
SEDIMENT POND CROSS-SECTION
SECTION C DETAIL N.T.S. 5.1
APPROVED BY CITY ENGINEER _____ DATE 1/1/2014

SEDIMENT POND SUMMARY TABLE

FACILITY NO.	IMPERVIOUS (AC.)	PERVIOUS (AC.)	TOTAL (AC.)	DESIGN Q_{10} (CFS)*	MINIMUM WATER SURFACE AREA (SF)	W.S. ELEV. (FT.)	BOT. ELEV. (FT.)
SED. POND	1.837	1.120	2.957	1.36	2,834	225.0	221.5
DET. VAULT**	1.837	1.120	2.957	1.36***	2,834	215	211.5

*Q10 FLOW RATE ARE THE 10-YEAR, 24-HOUR PEAK FLOWS DETERMINED BY USING AUTODESK STORM AND SANITARY SEWER ANALYSIS WITH SCS TIME OF CONCENTRATION, IDF CURVE AND RATIONAL METHOD LAND USE COEFFICIENT.
**THE DETENTION VAULT SHALL BE USED AFTER IT IS CONSTRUCTED AND THE STRUCTURAL ELEMENTS HAVE BEEN INSPECTED AND APPROVED FOR OPERATION. ONCE OPERATIONAL, BOTH SEDIMENT PONDS CAN BE REMOVED. A TEMPORARY CONTROL STRUCTURE SHALL BE USED UNTIL THE SITE IS STABILIZED AND THE CONVEYANCE SYSTEM IS OPERATIONAL.
***10-YEAR, 24-HOUR FLOW RATES USED TO CHECK SIZE OF DETENTION VAULT AS SEDIMENT POND.

SEDIMENT POND DEWATERING ORIFICE CALCULATIONS

FACILITY	SEDIMENT POND	DET. VAULT
PROPOSED SURFACE AREA (SF)	2,850	4,000
MIN. ORIFICE SIZE (IN)	3.69	5.18
PROPOSED ORIFICE SIZE (IN)	3 - ¾"	5 - 1⅛"
PROPOSED PERF. PIPE SIZE (IN)	6	8

SEDIMENT POND PRINCIPLE SPILLWAY CALCULATIONS

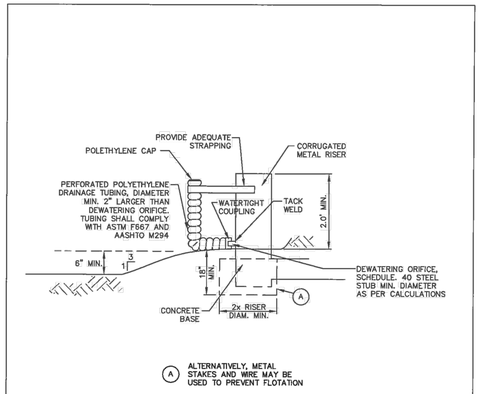
FACILITY	SEDIMENT POND	DET. VAULT
10-YR, 24-HR FLOW RATE (CFS)	1.36	1.36
MINIMUM DIAMETER (IN)	10	10
PROPOSED DIAMETER (IN)	10	10

SEDIMENT POND EMERGENCY SPILLWAY CALCULATIONS

FACILITY	SEDIMENT POND	DET. VAULT
100-YR, 24-HR FLOW RATE (CFS)	2.11	2.11
SPILLWAY LENGTH MIN. (FT)	6.87	6.87
SPILLWAY LENGTH PROPOSED (FT)	7	7

TEMPORARY SEDIMENT POND SIZING

NOT TO SCALE



(A) ALTERNATIVELY, METAL STAKES AND WIRE MAY BE USED TO PREVENT FLOTATION

MAINTENANCE STANDARDS:
1. SEDIMENT SHALL BE REMOVED FROM THE POND WHEN IT REACHES 1' IN DEPTH.
2. ANY DAMAGE TO THE POND EMBANKMENTS OR SLOPES SHALL BE REPAIRED.

ENGINEERING DIVISION
RISER
SECTION C DETAIL N.T.S. 5.2
APPROVED BY CITY ENGINEER _____ DATE 1/1/2014

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1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DAWSON R. RILEY-CIRKOVICH
STATE OF WASHINGTON
54944
REGISTERED PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

TESC DETAILS

CITY OF GIG HARBOR
PIERCE COUNTY, WASHINGTON

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PROJECT NO. 0228-21-001

DRAWING C2.100

SHEET 9 OF 44

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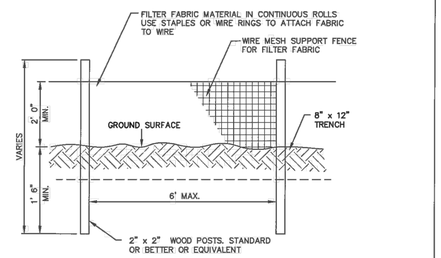
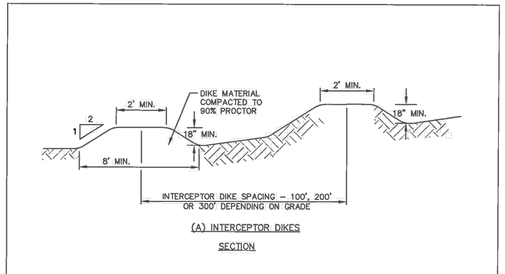
1/26/2023 10:03 AM MONTANA SAYSANASY



ENGINEERING DIVISION

FILTER FABRIC FENCE — SECTION C, DETAIL N.T.S. 8.0

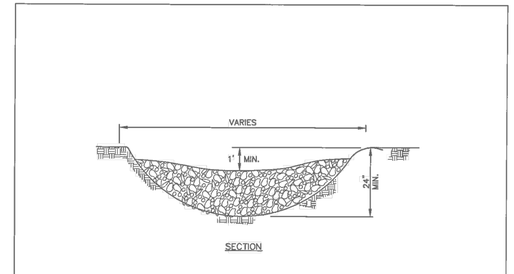
APPROVED BY CITY ENGINEER _____ DATE 1/1/2014



ENGINEERING DIVISION

TEMPORARY INTERCEPTOR DIKES AND SWALES — SECTION C, DETAIL N.T.S. 17.0

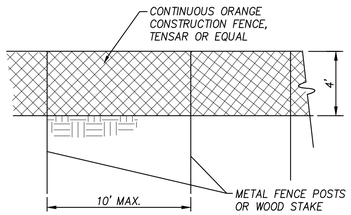
APPROVED BY CITY ENGINEER _____ DATE 1/1/2014



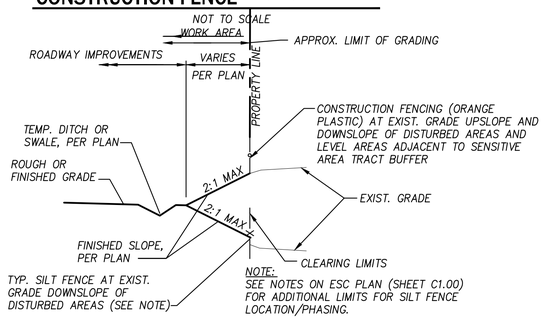
ENGINEERING DIVISION

ROCK CHECK DAMS — SECTION C, DETAIL N.T.S. 19.0

APPROVED BY CITY ENGINEER _____ DATE 1/1/2014

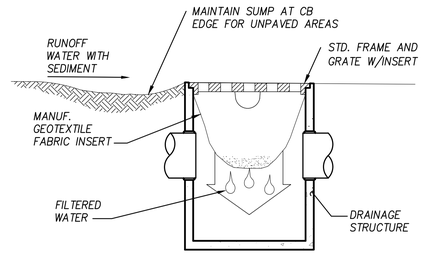


CONSTRUCTION FENCE



TYPICAL CLEARING LIMITS

NOT TO SCALE



INLET PROTECTION NOTES

1. PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, SO THAT THE OPEN ENDS FACE OUTWARD, NOT UPWARD. THE ENDS OF ADJACENT BLOCKS SHALL ABUT. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF BLOCKS THAT ARE 4 INCHES, AND 12 INCHES WIDE. THE ROW OF BLOCKS SHALL BE AT LEAST 12 INCHES BUT NO GREATER THAN 24 INCHES HIGH.
2. PLACE WIRE MESH OVER THE OUTSIDE VERTICAL FACE (OPEN END) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE BLOCKS. USE HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2–INCH OPENINGS.
3. PILE STONE AGAINST THE WIRE MESH TO THE TOP OF THE BLOCKS. USE 3/4–TO 3–INCH GRAVEL.
4. PLACE WIRE MESH OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FT BEYOND EACH SIDE OF THE INLET STRUCTURE. USE HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2–INCH OPENINGS. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, OVERLAP THE STRIPS. PLACE FILTER FABRIC OVER WIRE MESH.
5. PLACE 3/4–INCH GRAVEL OVER THE WIRE MESH. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. EXTEND THE STONE BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
6. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT, THE STONES MUST BE PULLED AWAY FROM THE INLET AND CLEANED OR REPLACED.

MAINTENANCE STANDARDS

1. ANY ACCUMULATED SEDIMENT ON OR AROUND INLET PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON SITE OR HAULED OFF SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACE AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR ALL FORMS OF CATCH BASIN/INLET PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY. CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED.

CATCH BASIN INLET PROTECTION

NOT TO SCALE

CITY OF GIG HARBOR RECOMMENDED STANDARD NOTES FOR CONSTRUCTION STORMWATER POLLUTION PREVENTION PLANS

1. APPROVAL OF THIS CONSTRUCTION SWPPP DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION/ DETENTION/INFILTRATION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THIS CONSTRUCTION SWPPP AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE CONSTRUCTION SWPPP FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE CONSTRUCTION SWPPP FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE CONSTRUCTION SWPPP FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE CONSTRUCTION SWPPP FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT–LADEN WATER DO NOT LEAVE THE SITE
6. THE CONSTRUCTION SWPPP FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. THE CONSTRUCTION SWPPP FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
8. AT NO TIME SHALL MORE THAN 1 FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STABLIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURE MAY BE REQUIRED OT INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF PROJECT.

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1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DAWSON R. RILEY-CLARKAS — STATE OF WASHINGTON — 54944 — REGISTERED PROFESSIONAL ENGINEER — 1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

TESC DETAILS

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

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PROJECT NO. 0228-21-001

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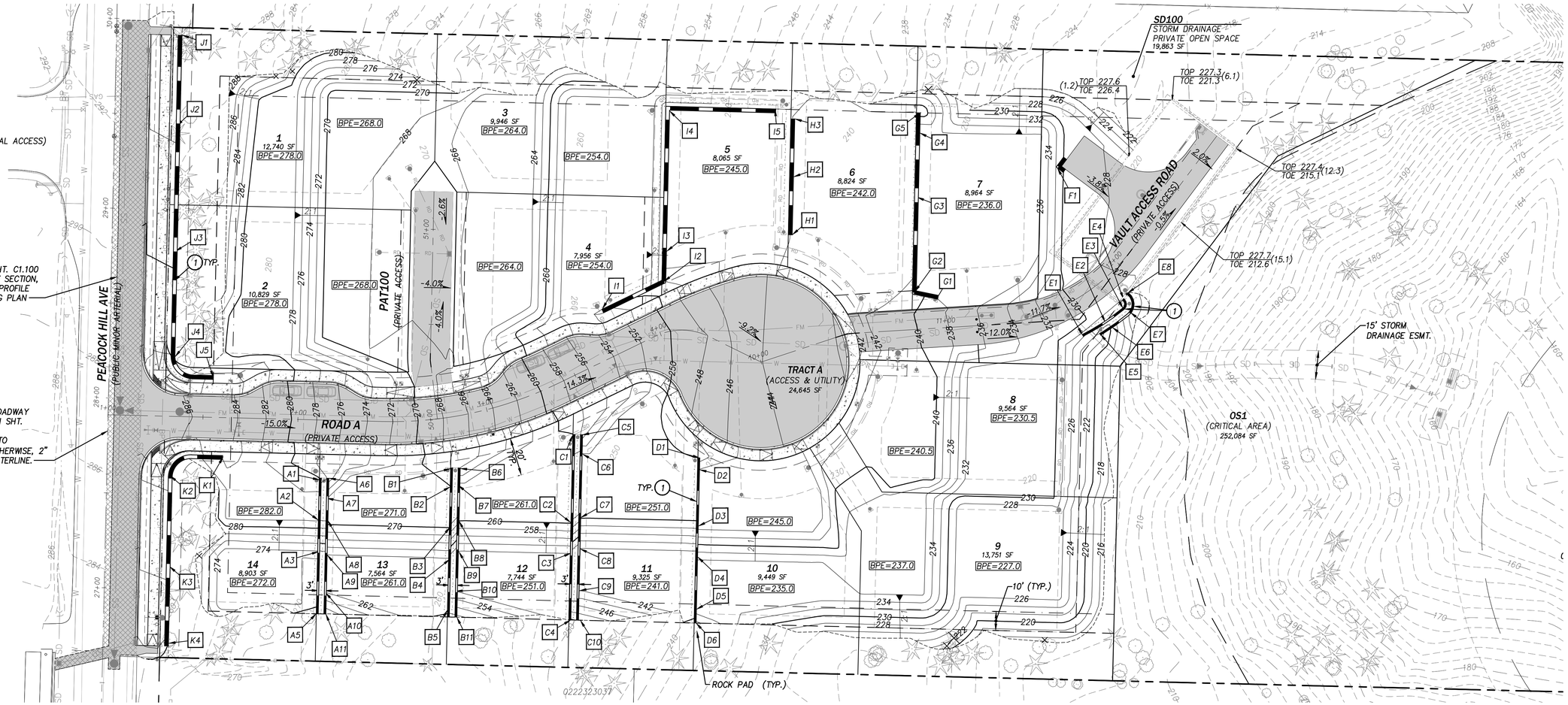
SHEET 10 OF 44



CONSTRUCTION NOTES

(1) MSE RETAINING WALL, SEE RETAINING WALL NOTE THIS SHEET

LEGEND

- HMA PVMT. OVERLAY
- AC PAVEMENT VALLEY, FLOWLINE
- MSE RETAINING WALL
- GRADE BREAK
- 100 EXISTING TOPOGRAPHIC CONTOUR
- 100 PROPOSED GRADING CONTOUR
- STORM DRAINAGE CATCH BASIN – TYPE I
- STORM DRAINAGE CATCH BASIN – TYPE II
- APPROX. SOIL TEST PIT LOCATION
- EXIST. TREE (TO REMAIN)

WALL SCHEDULE

WALL REFERENCE	TOP ELEV.	TOE ELEV.	EXPOSED HEIGHT
A1	280	279	1
A2	282	276	6
A3	274	268	6
A4	272	268	4
A5	269	268	1
A6	278	277	1
A7	276	272	4
A8	276	271	5
A9	267	262	5
A10	266	262	4
A11	268	267	1
B1	268	267	1
B2	270	266	4
B3	270	265	5
B4	261	258	3
B5	260	259	1
B6	267	266	1
B7	266	261	5
B8	264	260	4
B9	256	252	4
B10	256	252	4
B11	259	258	1
C1	260	259	1
C2	260	256	4
C3	252	247	5
C4	251	250	1
C5	258	257	1
C6	257	252	5
C7	254	250	4
C8	246	242	4
C9	246	242	4
C10	250	249	1
D1	250	249	1
D2	250	246	4
D3	248	245	3
D4	241	236	5
D5	241	236	5
D6	239	238	1
E1	228	227	1
E2	227	221	6
E3	227	221	6
E4	227	221	6
E5	224	223	1
E6	222	219	3
E7	220	214	6
E8	220	214	6
F1	232	229	3
G1	238	237	1
G2	241	236	5
G3	242	236	6
G4	242	236	6
G5	242	241	1
H1	245	243	2
H2	245	242	3
H3	245	243	2
I1	254	253	1
I2	251	248	3
I3	251	245	6
I4	251	245	6
I5	246	245	1
J1	292	291	1
J2	292	289	3
J3	290	287	3
J4	288	285	3
J5	285	284	1
K1	285	284	1
K2	286	283	3
K3	284	281	3
K4	281	279	2

APPROX. EARTHWORK QUANTITIES

EARTHWORK QUANTITIES WERE ESTIMATED USING A GRID VOLUME METHOD AND AUTODESK AUTOCAD CIVIL3D SOFTWARE. THE FOLLOWING VALUES ARE APPROXIMATE AND PROVIDED TO ILLUSTRATE GENERAL EARTHWORK EFFORTS BASED ON AVAILABLE SURVEY AND DESIGN DATA INCLUDING ESTIMATES OF ANY VAULT, FOUNDATION, AND PAVEMENT QUANTITIES:

FILL: 23,648.59 CY
CUT: 5,341.18 CY
NET: 18,307.42 CY (FILL)

THESE VALUES ARE NOT FOR CONSTRUCTION BID PURPOSES. THE CONTRACTOR SHALL USE THEIR OWN MEANS AND METHODS TO ESTIMATE EARTHWORK QUANTITIES. THE VALUES ASSUME 9 INCHES OF STRIPPING.

RETAINING WALL NOTES:

1. *ALL WALLS OVER 4 FEET IN HEIGHT, FROM BOTTOM OF FOOTING, ARE TO BE CONSTRUCTED UNDER SEPARATE BUILDING PERMITS.*
2. *CONTRACTOR TO FOLLOW GEOTECHNICAL ENGINEER DESIGN AND CALCULATIONS*

0 30 60
PLAN IN FEET

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DARTON RIELY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

OVERALL GRADING PLAN

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

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SHEET 11 OF 44

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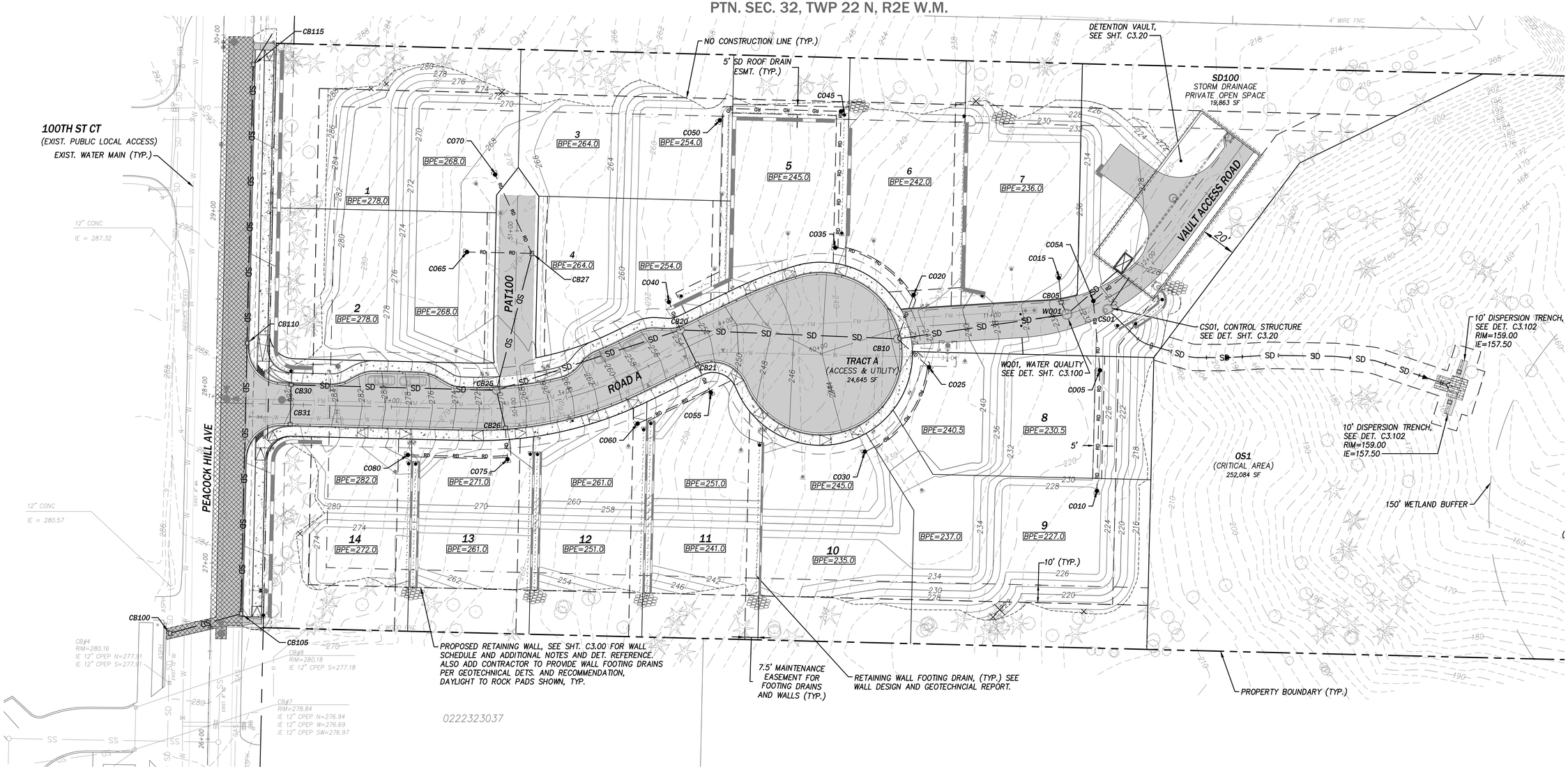

NOTES:

1. LOTS 10-14 ARE PROPOSED DAYLIGHT STYLE DWELLINGS. DWELLING ARCHITECT AND CONTRACTOR SHALL KEEP DOWNSPOUTS ON UPHILL SIDE OF DWELLING. ROOF DOWNSPOUTS ON DOWNHILL SIDE OF THE HOUSE WILL REQUIRE PUMPS TO CONVEY STORMWATER TO ROOF LEADER SYSTEM OR ROAD A STORMWATER CONVEYANCE SYSTEM. SPECIFIC STORMWATER CONVEYANCE FROM DWELLING ROOFS WILL BE DETERMINED AT BUILDING PERMIT SUBMITTAL FOR EACH INDIVIDUAL DWELLING.

LEGEND

- SD — STORM DRAIN
- SD CATCH BASIN
- FM — FM — SANITARY SEWER FORCED MAIN
- SS — SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- W — WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.

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0 30 60
PLAN IN FEET

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DARRON RIELY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

OVERALL STORMWATER PLAN

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

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SHEET 12 OF 44

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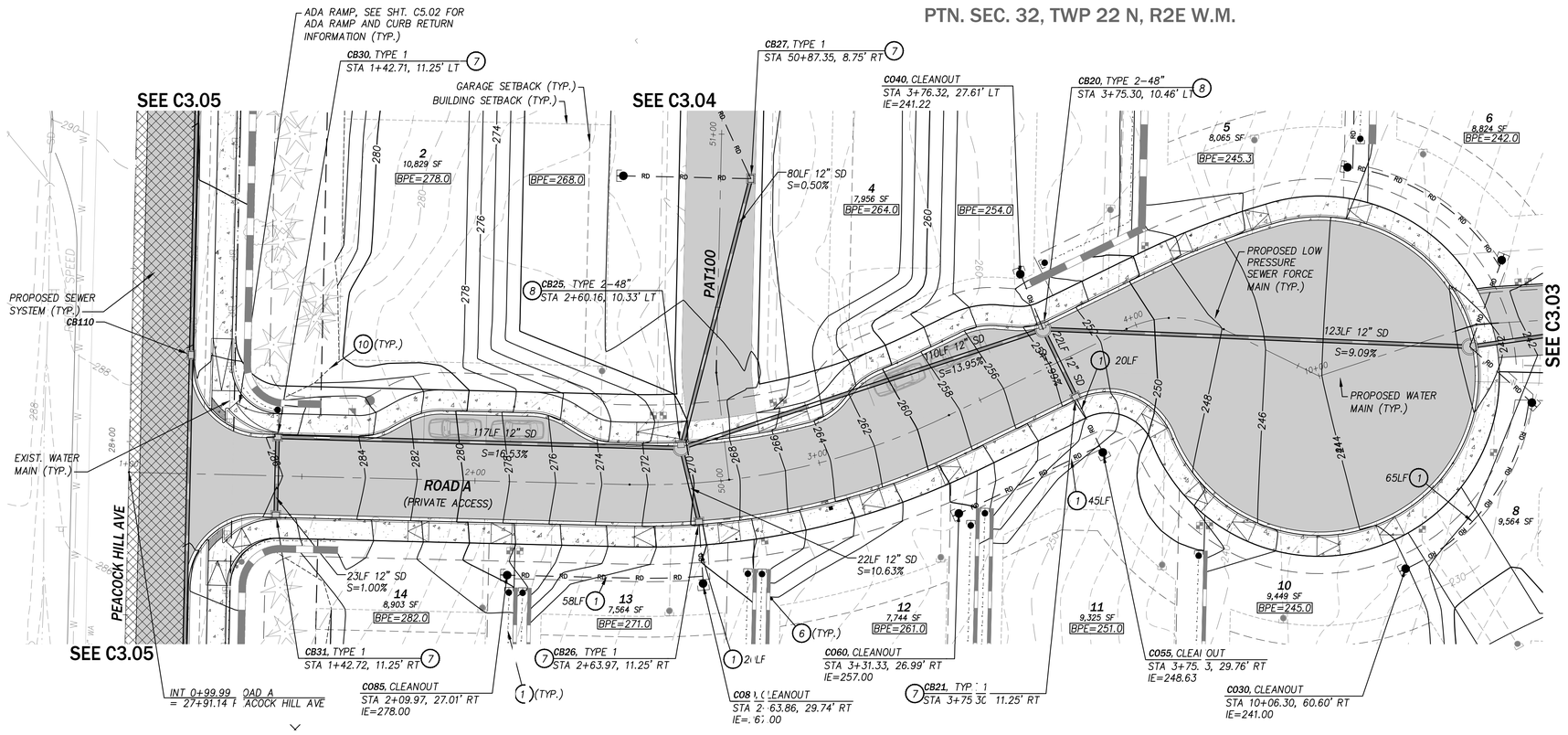
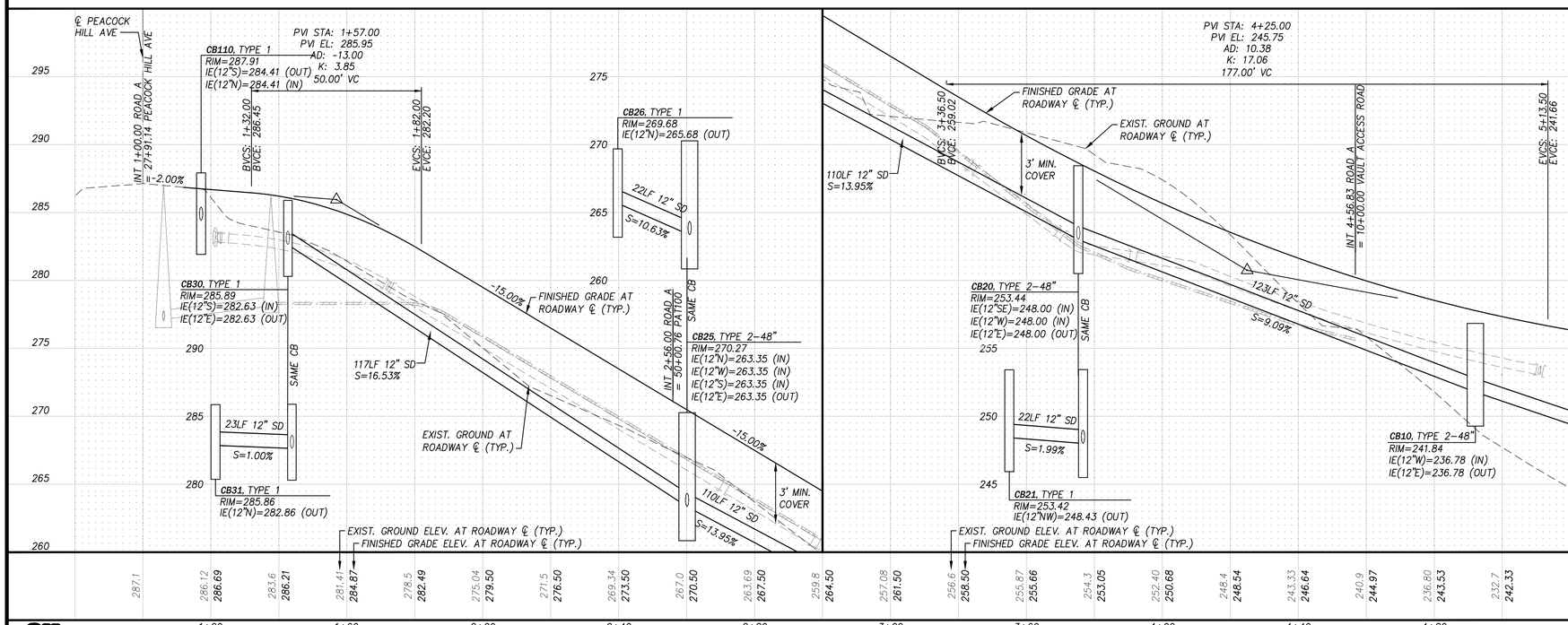




CONSTRUCTION NOTES

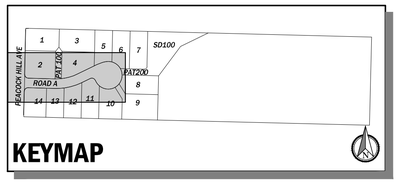
1. PVC FOR BLDG. DRAIN CONN., SEE DET. SHT. C3.101 FOR MIN. SLOPE AND DIAMETER; LENGTH PER PLAN
2. GABION OUTFALL PER DETAIL ON SHEET C3.101
3. HDPE PIPE CONNECTION-UPHILL SDCB PER DETAIL ON SHEET C3.101
4. CONC. BLOCK PIPE ANCHOR PER DETAIL ON SHEET C3.101
5. STRAP-FOOTING PIPE ANCHOR PER DETAIL ON SHEET C3.101
6. MSE RETAINING WALL, SEE C3.00 FOR WALL SCHEDULE
7. CATCH BASIN TYPE 1 PER WSDOT STD. PLAN B-5.20-01
8. CATCH BASIN, TYPE II PER WSDOT STD. PLAN B-10.20-01
9. CONN. EXIST. STORM DRAIN CATCH BASIN
10. LIMITS OF GRADING
11. RETAINING WALL FOOTING DRAIN, SEE GEOTCHNICAL REPORT AND WALL ANALYSIS BY OTHERS

LEGEND

- STORM DRAIN
- SD CATCH BASIN
- SANITARY SEWER FORCED MAIN
- SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.
- WATER METER (SIZE PER PLAN)
- FIRE HYDRANT (FH)
- TREE TO BE REMOVED

NOTES:
1. ALL DRAINAGE (SD) CONVEYANCE PIPE SHALL BE LINED CORRUGATED POLYETHYLENE (LCPE), UNLESS NOTED OTHERWISE.
2. HOMEOWNER'S ASSOCIATION TO MAINTAIN PRIVATE STORMWATER OUTFALL PIPE, GABION OUTFALL, AND DISPERSION TRENCHES.
3. ALL RETAINING WALLS OVER FOUR FEET IN HEIGHT, FROM BOTTOM OF FOOTING, SHALL BE CONSTRUCTED UNDER A SEPARATE BUILDING PERMIT.
4. BOTH SIDES OF THE ROADWAY THROUGHOUT THE PLAT ARE TO BE MARKED AND SIGNED AS FIRE LANES PER CITY STANDARDS. DESIGNATED ON-STREET PARKING SPOT SHALL NOT BE MARKED FIRE LANE.
5. THE CLEARING AND GRADING SHOWN AND ANY IMPROVEMENTS WITHIN THE 10-FOOT NO CONSTRUCTION ZONE SHALL BE ALLOWED ONLY UPON INSPECTION AND CERTIFICATION BY THE PROJECT ARBORIST THAT SUCH WORK WILL NOT ADVERSELY AFFECT THE LONG-TERM VIABILITY OF THE TREES WITHIN THE DESIGNATED LANDSCAPE OR BUFFER AREA.

A VARIANCE IS IN REVIEW WITH PUBLIC WORKS (EN-22-0014) FOR THE PROPOSED LENGTH OF THE ROAD A ACCESS LANDING



KEYMAP

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DARTON RILEY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

ROAD AND STORM PLAN AND PROFILE - ROAD A

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
PHONE: (253) 405-8695
EMAIL: JUSTIN@PROSPECTDEVELOP.COM

C|P|H CONSULTANTS
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11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
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PROJECT NO.
0228-21-001

DRAWING
C3.02

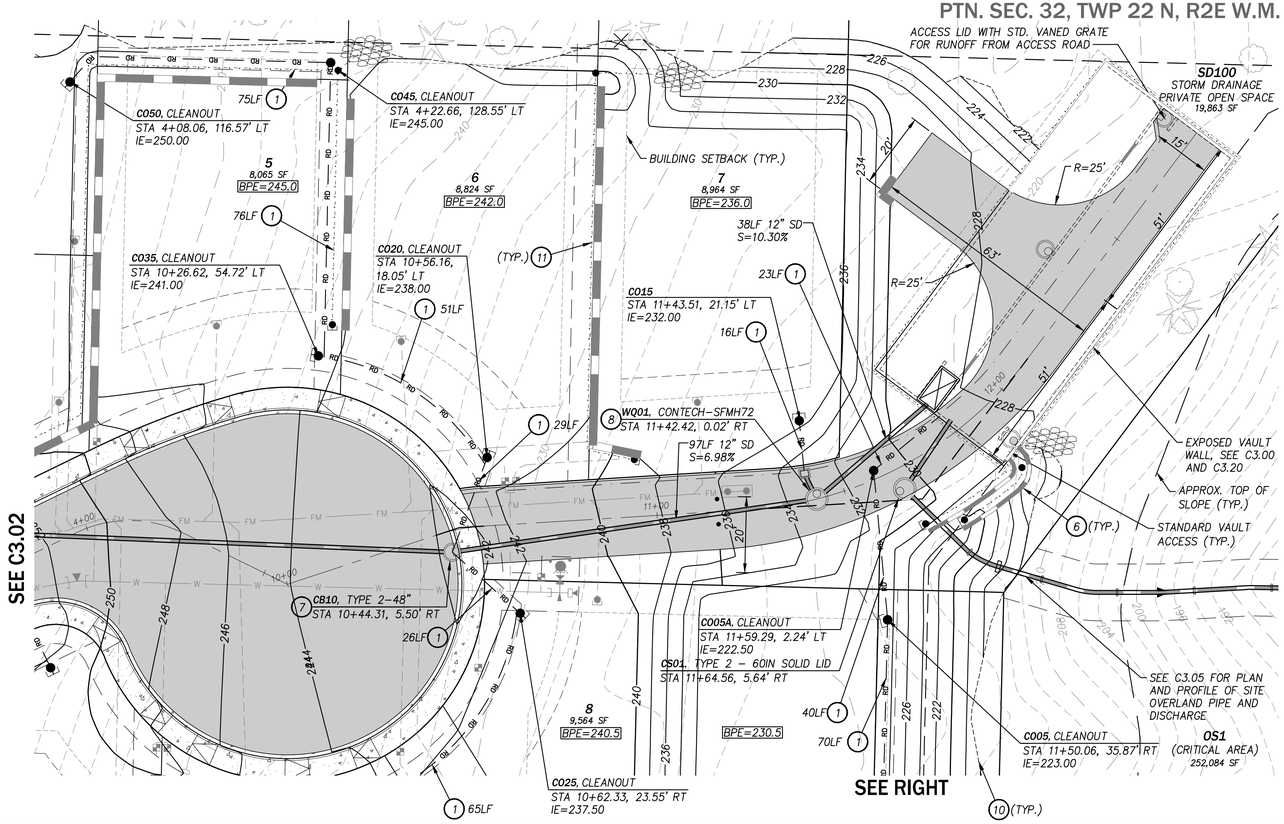
SHEET 13 OF 44

0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

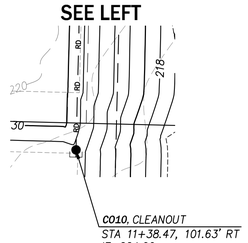
811 Know what's below. Call before you dig.

P:\project\0228_Prospect Development\21001_The Reserve\Dwg\Sheets\Final Engineering\C3.02.dwg
1/26/2023 10:24 AM DARTON RIELY-GIBBONS

PTN. SEC. 32, TWP 22 N, R2E W.M.



SEE LEFT



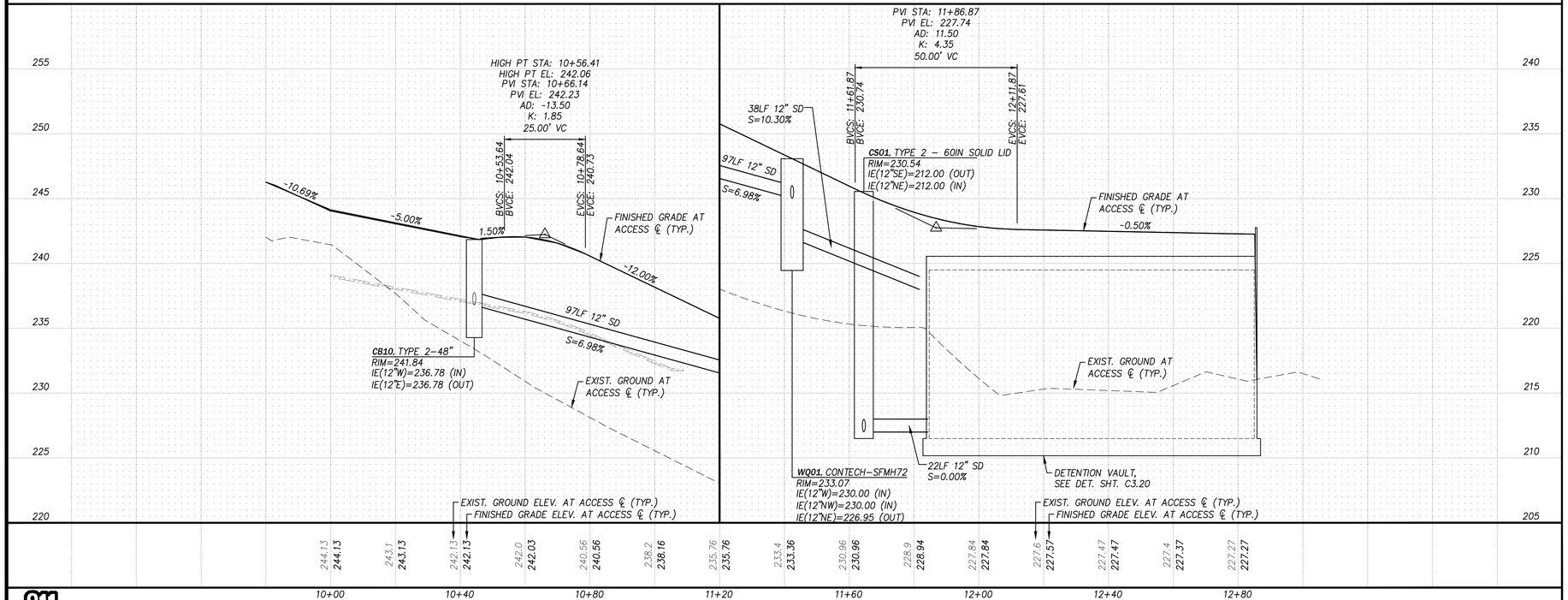
CONSTRUCTION NOTES

1. PVC FOR BLDG. DRAIN CONN., SEE DET. SHT. C3.101 FOR MIN. SLOPE AND DIAMETER; LENGTH PER PLAN
2. GABION OUTFALL PER DETAIL ON SHEET C3.101
3. HDPE PIPE CONNECTION-UPHILL SDCB PER DETAIL ON SHEET C3.101
4. CONC. BLOCK PIPE ANCHOR PER DETAIL ON SHEET C3.101
5. STRAP-FOOTING PIPE ANCHOR PER DETAIL ON SHEET C3.101
6. MSE RETAINING WALL, SEE C3.00 FOR WALL SCHEDULE
7. CATCH BASIN TYPE 1 PER WSDOT STD. PLAN B-5.20-01
8. CATCH BASIN, TYPE II PER WSDOT STD. PLAN B-10.20-01
9. CONN. EXIST. STORM DRAIN CATCH BASIN
10. LIMITS OF GRADING
11. RETAINING WALL FOOTING DRAIN, SEE GEOTCHNICAL REPORT AND WALL ANALYSIS BY OTHERS

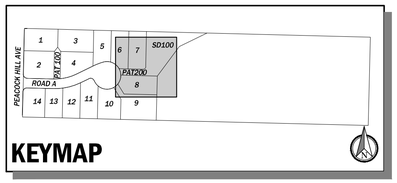
LEGEND

- STORM DRAIN
- SD CATCH BASIN
- SANITARY SEWER FORCED MAIN
- SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.
- WATER METER (SIZE PER PLAN)
- FIRE HYDRANT (FH)
- TREE TO BE REMOVED

NOTES:
1. ALL DRAINAGE (SD) CONVEYANCE PIPE SHALL BE LINED CORRUGATED POLYETHYLENE (LCPE), UNLESS NOTED OTHERWISE.
2. HOMEOWNER'S ASSOCIATION TO MAINTAIN PRIVATE STORMWATER OUTFALL PIPE, GABION OUTFALL, AND DISPERSION TRENCHES.
3. ALL RETAINING WALLS OVER FOUR FEET IN HEIGHT, FROM BOTTOM OF FOOTING, SHALL BE CONSTRUCTED UNDER A SEPARATE BUILDING PERMIT.
4. BOTH SIDES OF THE ROADWAY THROUGHOUT THE PLAT ARE TO BE MARKED AND SIGNED AS FIRE LANES PER CITY STANDARDS. DESIGNATED ON-STREET PARKING SPOT SHALL NOT BE MARKED FIRE LANE.
5. THE CLEARING AND GRADING SHOWN AND ANY IMPROVEMENTS WITHIN THE 10-FOOT NO CONSTRUCTION ZONE SHALL BE ALLOWED ONLY UPON INSPECTION AND CERTIFICATION BY THE PROJECT ARBORIST THAT SUCH WORK WILL NOT ADVERSELY AFFECT THE LONG-TERM VIABILITY OF THE TREES WITHIN THE DESIGNATED LANDSCAPE OR BUFFER AREA.



VAULT ACCESS



0 5 10
VERT. IN FEET
0 20 40
HORIZ. IN FEET

NO.	DATE	REVISION	BY	CK.
4	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DARTON RIELY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

ROAD AND STORM PLAN AND PROFILE - VAULT ACCESS ROAD

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT

PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
PHONE: (253) 405-8695
EMAIL: JUSTIN@PROSPECTDEVELOP.COM

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PROJECT NO. 0228-21-001

DRAWING C3.03

SHEET 14 OF 44

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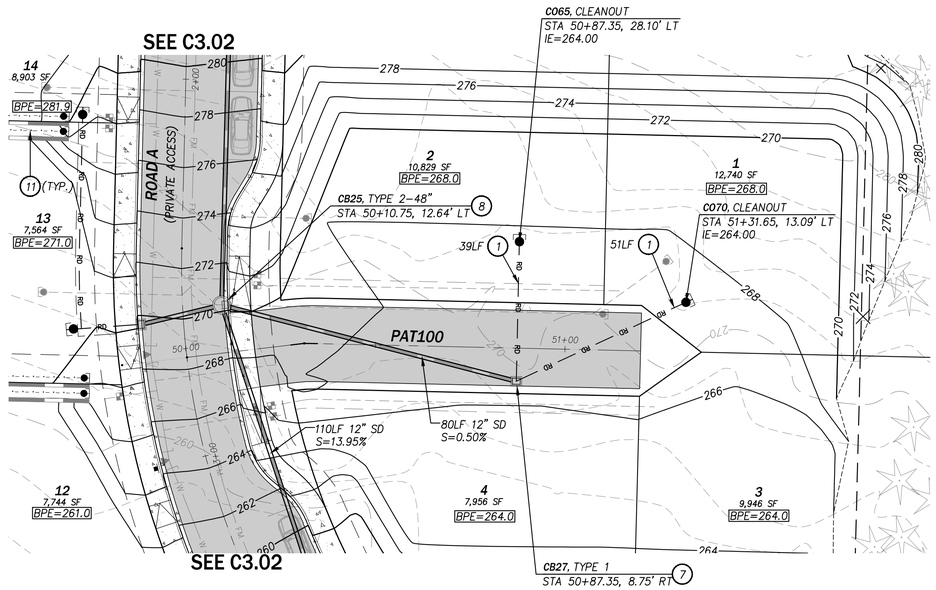
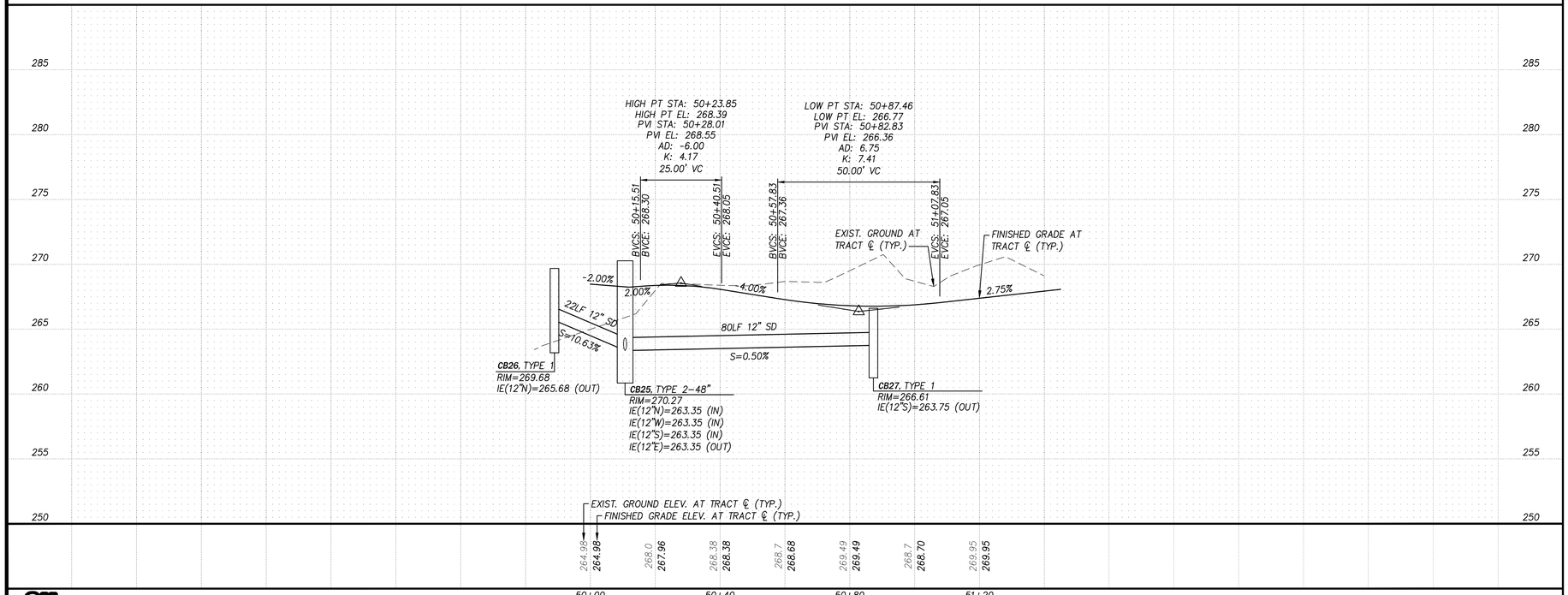
1/26/2023 10:25 AM DARTON RIELY-GIBBONS





PAT 100

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1/26/2023 10:07 AM MONTANA SAYSANASY

CONSTRUCTION NOTES

1. PVC FOR BLDG. DRAIN CONN., SEE DET. SHT. C3.101 FOR MIN. SLOPE AND DIAMETER; LENGTH PER PLAN
2. GABION OUTFALL PER DETAIL ON SHEET C3.101
3. HDPE PIPE CONNECTION-UPHILL SDCB PER DETAIL ON SHEET C3.101
4. CONC. BLOCK PIPE ANCHOR PER DETAIL ON SHEET C3.101
5. STRAP-FOOTING PIPE ANCHOR PER DETAIL ON SHEET C3.101
6. MSE RETAINING WALL, SEE C3.00 FOR WALL SCHEDULE
7. CATCH BASIN TYPE 1 PER WSDOT STD. PLAN B-5.20-01
8. CATCH BASIN, TYPE II PER WSDOT STD. PLAN B-10.20-01
9. CONN. EXIST. STORM DRAIN CATCH BASIN
10. LIMITS OF GRADING
11. RETAINING WALL FOOTING DRAIN, SEE GEOTCHNICAL REPORT AND WALL ANALYSIS BY OTHERS

LEGEND

- STORM DRAIN
- SD CATCH BASIN
- SANITARY SEWER FORCED MAIN
- SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.
- WATER METER (SIZE PER PLAN)
- FIRE HYDRANT (FH)
- TREE TO BE REMOVED

NOTES:
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KEYMAP

0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DANYON RILEY-CLARKAS
STATE OF WASHINGTON
54944
REGISTERED PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

ROAD AND STORM PLAN AND PROFILE - PAT 100

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
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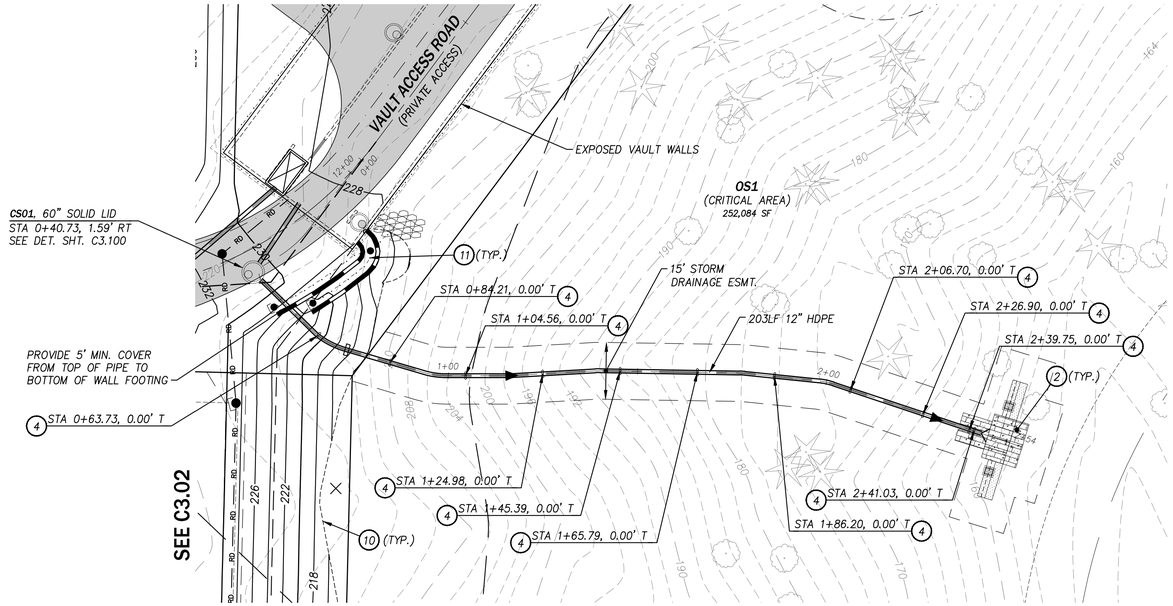
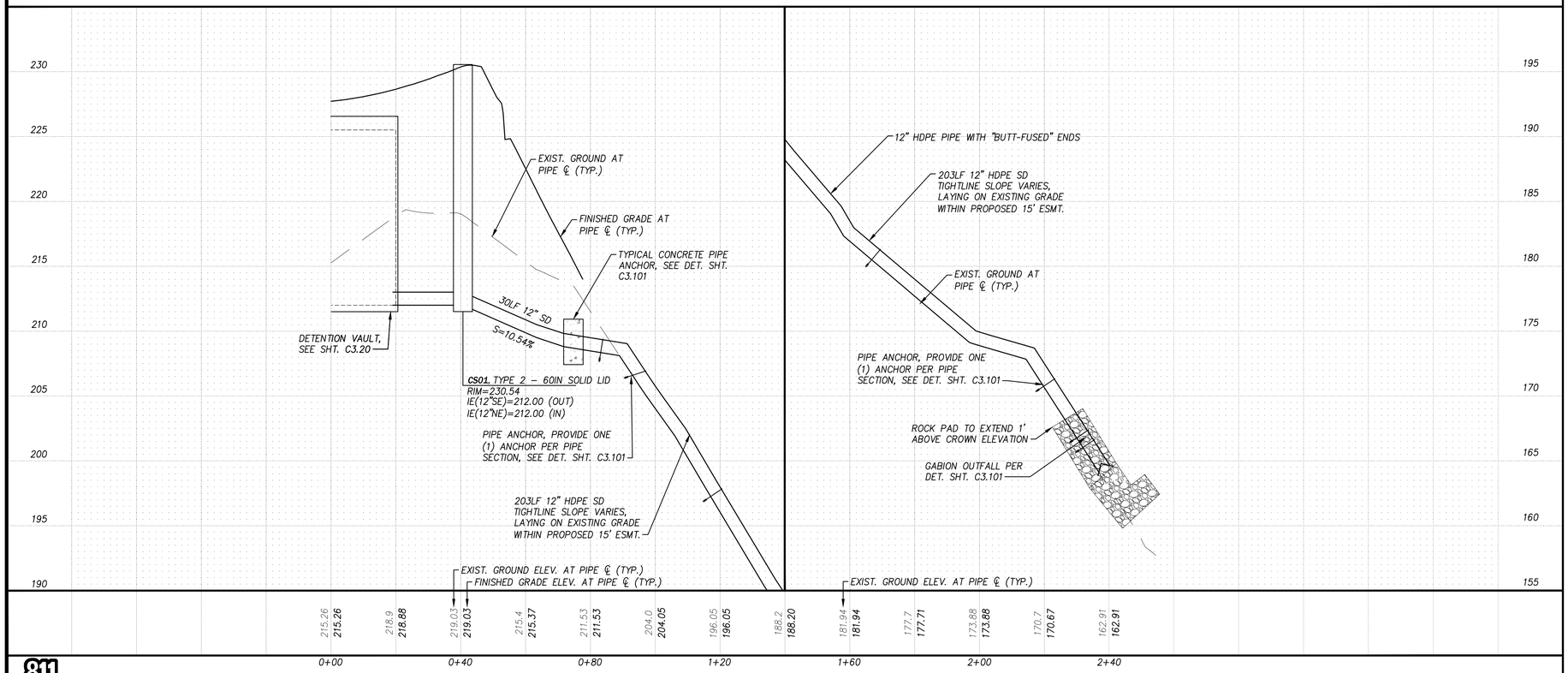
PROJECT NO.
0228-21-001

DRAWING
C3.04

SHEET 15 OF 44

PTN. SEC. 32, TWP 22 N, R2E W.M.





VAULT TO OUTFALL

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1/26/2023 10:08 AM MONTANA SAYSANASY

CONSTRUCTION NOTES

1. PVC FOR BLDG. DRAIN CONN., SEE DET. SHT. C3.101 FOR MIN. SLOPE AND DIAMETER; LENGTH PER PLAN
2. GABION OUTFALL PER DETAIL ON SHEET C3.101
3. HDPE PIPE CONNECTION-UPHILL SDCB PER DETAIL ON SHEET C3.101
4. CONC. BLOCK PIPE ANCHOR PER DETAIL ON SHEET C3.101
5. STRAP-FOOTING PIPE ANCHOR PER DETAIL ON SHEET C3.101
6. MSE RETAINING WALL, SEE C3.00 FOR WALL SCHEDULE
7. CATCH BASIN TYPE 1 PER WSDOT STD. PLAN B-5.20-01
8. CATCH BASIN, TYPE II PER WSDOT STD. PLAN B-10.20-01
9. CONN. EXIST. STORM DRAIN CATCH BASIN
10. LIMITS OF GRADING
11. RETAINING WALL FOOTING DRAIN, SEE GEOTCHNICAL REPORT AND WALL ANALYSIS BY OTHERS

LEGEND

- STORM DRAIN
- SD CATCH BASIN
- FM — SANITARY SEWER FORCED MAIN
- SS — SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- W — WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.
- WATER METER (SIZE PER PLAN)
- FIRE HYDRANT (FH)
- TREE TO BE REMOVED

NOTES:
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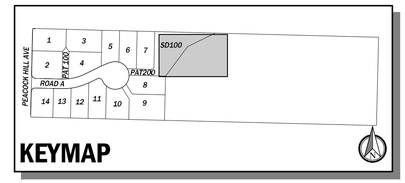

KEYMAP

N

0 5 10
VERT. IN FEET
0 20 40
HORIZ. IN FEET

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-00001)	MDS	DRG

DANTON RILEY-CLARKAS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

ROAD AND STORM PLAN AND PROFILE - VAULT TO OUTFALL

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
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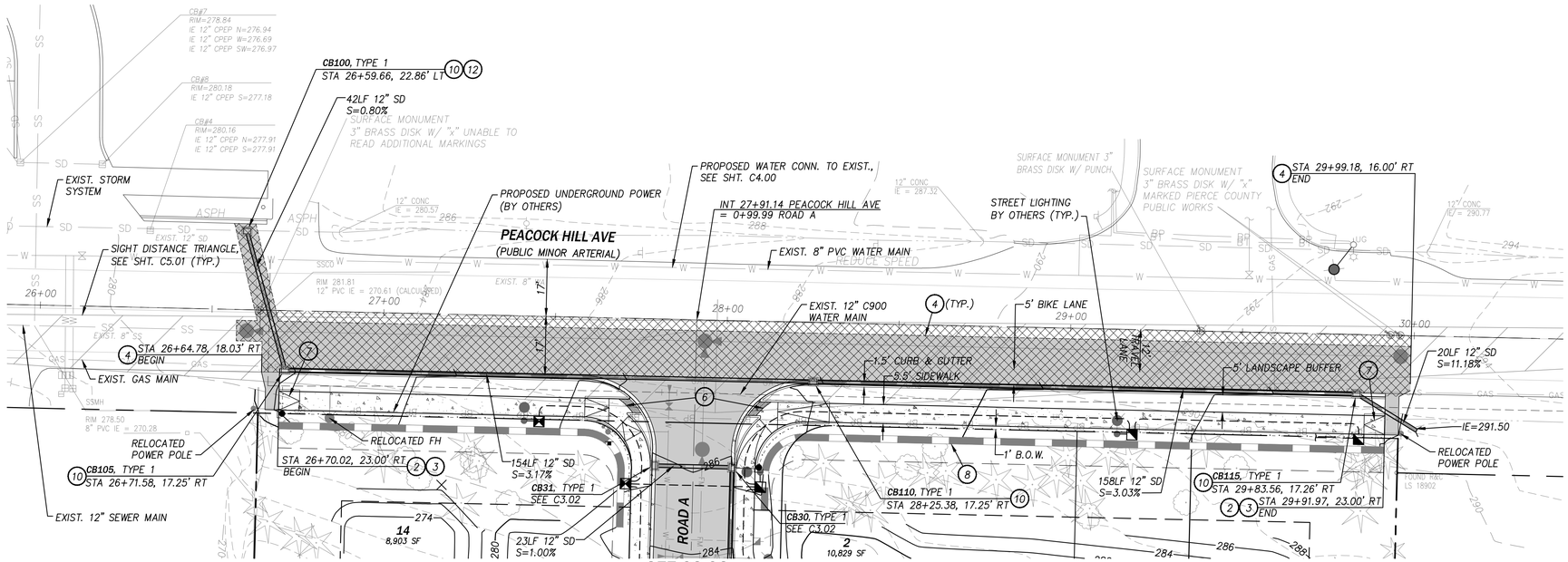
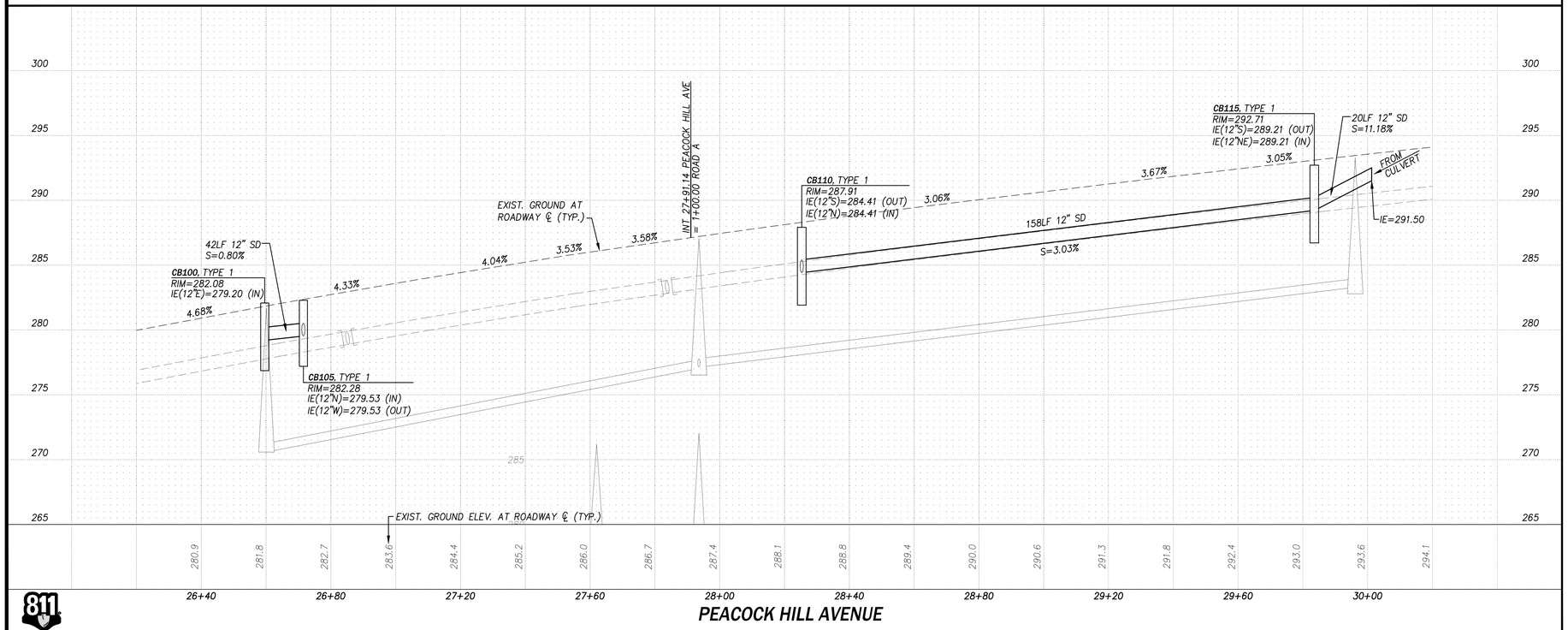
PROJECT NO.
0228-21-001

DRAWING
C3.05

SHEET 16 OF 44

PTN. SEC. 32, TWP 22 N, R2E W.M.





CONSTRUCTION NOTES

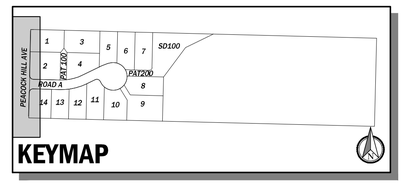
1. PERPENDICULAR TRENCH RESTORATION PER COGH STD. DET. NO. 2-14
2. CEMENT CONC. SIDEWALK PER COGH STD. DET. NO. 2-18
3. CEMENT CONC. CURB AND GUTTER PAN PER COGH STD. DET. NO. 2-20
4. SAWCUT, REMOVE, AND REPLACE EXIST. HMA PVMT.
5. TYP. HMA PVMT. WIDENING PER SEC. B ON SHT. C3.100
6. SINGLE DIRECTION CURB RAMP, TYPE B PER WSDOT STD. PLAN F-40.16-03, SEE DET. SHT. C5.02 FOR GRADING
7. SINGLE DIRECTION CURB RAMP, TYPE A PER WSDOT STD. PLAN F-40.16-02 WITH HMA LANDING AT SHOULDER, SEE DET. SHT. C5.02 FOR GRADING
8. TYP. MSE RETAINING WALL PER SEC. ON C3.00
9. PEDESTRIAN GUARD PER COGH STD. DET. NO. 2-66 (AT TOP OF WALL)
10. CATCH BASIN TYPE 1 PER WSDOT STD. PLAN B-5.20-01
11. CATCH BASIN, TYPE II PER WSDOT STD. PLAN B-10.20-01
12. CONN. TO EXIST. STORM
13. LIMITS OF GRADING

LEGEND

- STORM DRAIN
- SD CATCH BASIN
- SANITARY SEWER FORCED MAIN
- SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.
- WATER METER (SIZE PER PLAN)
- FIRE HYDRANT (FH)
- TREE TO BE REMOVED

NOTES:

1. CATCH BASIN LOCATIONS SHOWN ON PLAN REPRESENT CENTER OF STRUCTURE. SEE STRUCTURE PLACEMENT DETAIL ON SHEET C3.100.
2. ALL STORM DRAINAGE (SD) CONVEYANCE PIPE SHALL BE LINED CORRUGATED POLYETHYLENE (LCPE), UNLESS NOTED OTHERWISE.
3. TYPICAL CATCH BASIN INLETS SHALL BE STANDARD RECTANGULAR FRAMES WITH VANED GRATES (18"x24") PER KCRS FIG. 7-014 AND 7-018 WITH EMBOSSING PER SCPW STD. DETAIL 5-180 RESPECTIVELY. SOLID LIDS FOR TYPE 2 CATCH BASINS SHALL BE CIRCULAR FRAME AND COVER PER SCPW STD. DETAIL 5-230 AND SOLID LIDS FOR TYPE 1 STRUCTURES SHALL BE RECTANGULAR (18"x24") PER KCRS FIG. 7-015 UNLESS OTHERWISE NOTED.



KEYMAP

N

0 5 10
VERT. IN FEET
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HORIZ. IN FEET

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DAWSON R. RILEY-CLARKAS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

FRONTAGE PLAN AND PROFILE - PEACOCK HILL AVE

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT

PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
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PROJECT NO.
0228-21-001

DRAWING
C3.06

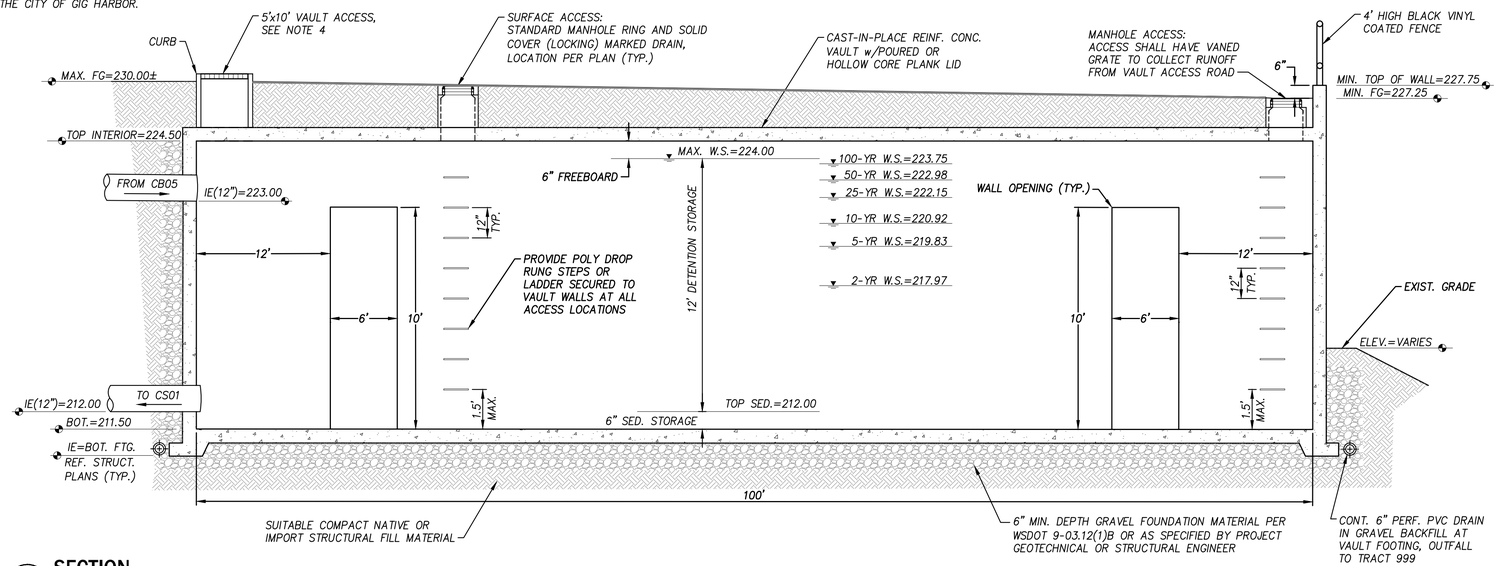
SHEET 17 OF 44

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

P:\project\0228_Prospect Development\21001_The Reserve\Dwg\Sheets\Final Engineering\C3.06.dwg
1/26/2023 10:09 AM MONTANA SAYSANASY

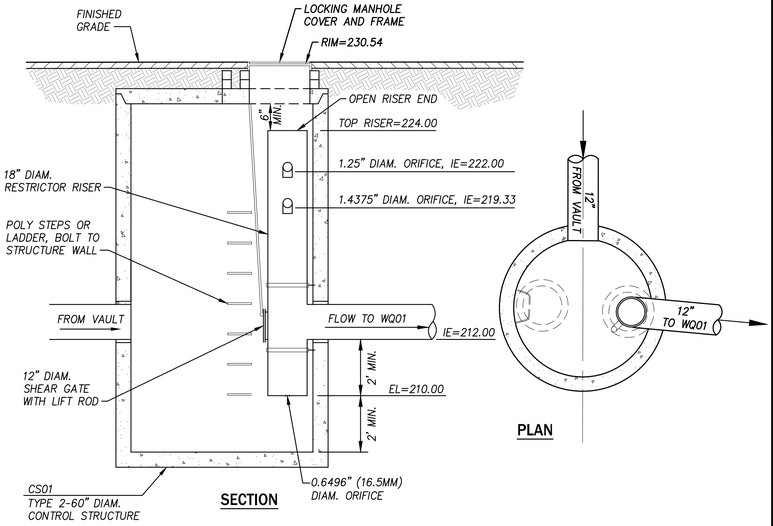
NOTE: DETENTION VAULT REQUIRES SEPARATE BUILDING PERMIT FROM THE CITY OF GIG HARBOR.

PTN. SEC. 32, TWP 22 N, R2E W.M.



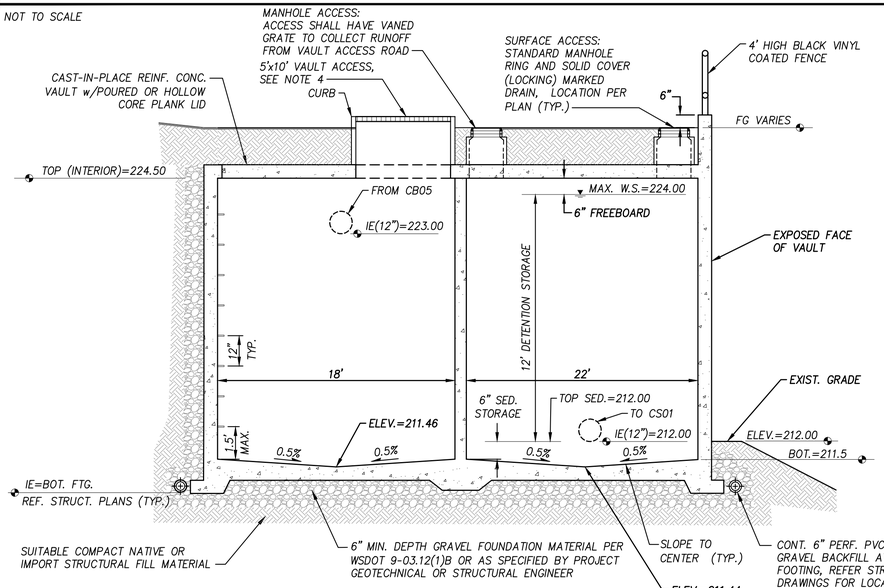
A SECTION

NOT TO SCALE



FLOW CONTROL STRUCTURE – CS01

NOT TO SCALE



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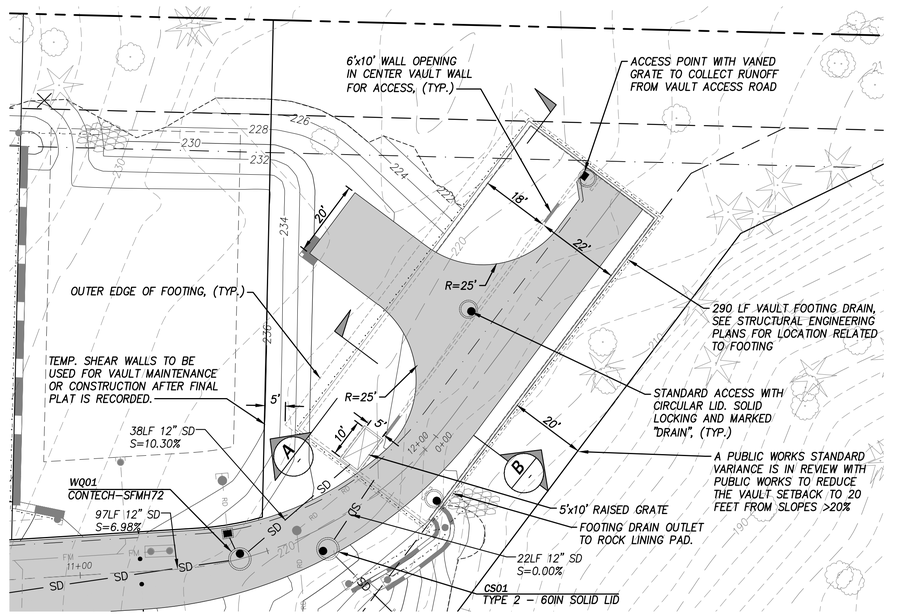

VAULT PLAN

SCALE: AS NOTED

NOTES:

1. VAULTS AND ALL APPURTENANCES SHALL MEET THE STRUCTURAL REQUIREMENTS FOR OVERBURDEN SUPPORT UNDER A MINIMUM HS-25 TRAFFIC LOADING WITH ANY SPECIAL PROVISIONS OF THE STRUCTURAL PLANS AND DETAILS.
2. ALL METAL PARTS SHALL BE CORROSION RESISTANT STEEL PARTS SHALL BE STAINLESS STEEL, OR EQUIVALENT.
3. A CONTINUOUS PVC OR HYDROPHILIC WATER STOP SHALL BE INSTALLED AT ALL CAST-IN-PLACE CONCRETE CONSTRUCTION OR EXPANSION JOINTS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH MANUFACTURER DATA FOR THE SPECIFIC TYPE AND MODEL OF WATER STOP PROPOSED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
4. THE 5'x10' VAULT ACCESS OPENING SHALL BE INSTALLED AT THE LOCATION SHOWN ON THIS PLAN IN ACCORDANCE WITH ANY ADDITIONAL PROVISIONS OF THE ACCOMPANYING STRUCTURAL PLANS AND DETAILS. THIS OPENING SHALL HAVE A PRE-MANUFACTURED LID INSTALLED FLUSH WITH ADJACENT FINISHED GRADES. THE TYPE OF COVER MAY BE A REMOVABLE GRATE, SPRING-LOADED HATCH, SOLID, OR EQUIVALENT COMBINATION THAT PROVIDES A CLEAR OPENING OF 5'X10'. THE LID SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR THE SAME STRUCTURAL LOADING CONDITIONS AS THE ASSOCIATED VAULT AS PROVIDED ON THE STRUCTURAL PLANS.
5. RIM ELEVATIONS SHALL BE ADJUSTED AS REQUIRED TO ACCOMMODATE ACTUAL ACCESS LOCATIONS AND FINISHED GRADE CONDITIONS.
6. ALL UNSUITABLE SOILS SHALL BE REMOVED FROM FOOTPRINT OF VAULT AND TO A DISTANCE BEYOND THE VAULT EQUAL TO THE DEPTH OF OVER EXCAVATED MATERIAL IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR COMPACTION AND SOIL REQUIREMENTS. ALL UNSUITABLE MATERIAL SHALL BE REPLACED WITH SUITABLE COMPACT STRUCTURAL FILL MATERIAL.
7. VAULT LOCATION COORDINATES AND DIMENSIONS REFERENCE FINISHED INSIDE WALL UNLESS NOTED OTHERWISE.

DETENTION VAULT DATA						
STORM EVENT	LIVE STORAGE VOLUME (CF)			RELEASE RATE (CFS)		
	REQUIRED	DESIGNED (VAULT)	AS-BUILT	REQUIRED	DESIGNED	AS-BUILT
2-YR	23,867	23,867		0.0956	0.0956	
10-YR	35,679	35,679		0.1682	0.1682	
50-YR	43,928	43,928		0.2908	0.2908	

ALLOWABLE IMPERVIOUS AREA PER LOT = 3,875 SF (AVERAGE OF 14 LOTS)

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1/26/2023 8:28 AM DARTON RIELY-GIBBONS

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DARTON RIELY-GIBBONS — STATE OF WASHINGTON — 54944 — REGISTERED PROFESSIONAL ENGINEER — 1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

STORM VAULT DETAILS

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

CLIENT

PROSPECT DEVELOPMENT, LLC
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EMAIL: JUSTIN@PROSPECTDEVELOP.COM

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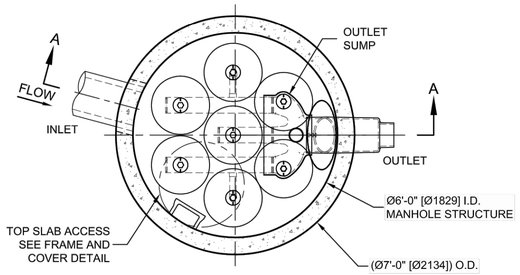
PROJECT NO. 0228-21-001

DRAWING C3.20

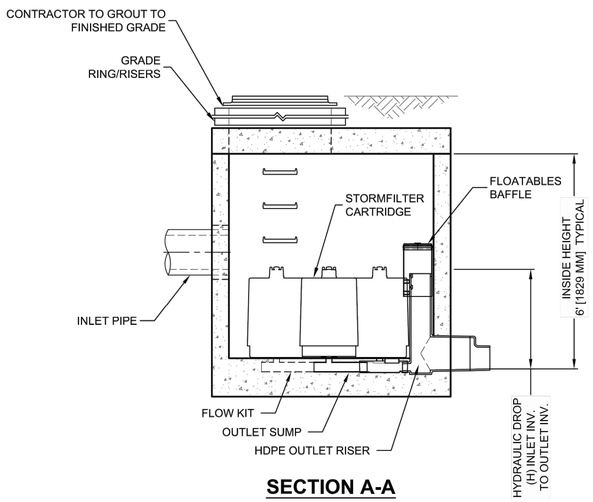
SHEET 18 OF 44

N

0 40 80
PLAN IN FEET



PLAN VIEW
STANDARD OUTLET RISER
FLOWKIT: 42A



SECTION A-A

The Stormwater Management StormFilter®

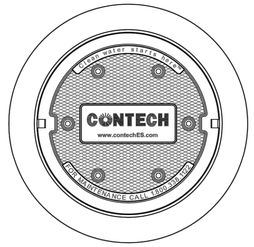
STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (7). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 7 CARTRIDGES.

CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27" [686 mm]			18" [458 mm]			LOW DROP		
RECOMMENDED HYDRAULIC DROP (H)	3.05' [930 mm]			2.3' [700 mm]			1.8' [550 mm]		
SPECIFIC FLOW RATE (gpm/sf) [L/s/m^2]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]
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 [0.44]	10 [0.63]	8.35 [0.54]	5 [0.32]

* 1.67 gpm/sf [1.08 L/s/m^2] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WQ01
WATER QUALITY FLOW RATE (cfs)/[L/s]	0.1691
PEAK FLOW RATE (cfs)/[L/s]	1.836
RETURN PERIOD OF PEAK FLOW (yrs)	100
CARTRIDGE HEIGHT (SEE TABLE ABOVE)	27"
NUMBER OF CARTRIDGES REQUIRED	5
CARTRIDGE FLOW RATE	18.79
MEDIA TYPE (PERLITE, ZPG, PSORB)	PSORB

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	230.00	ADS N-12	12"
INLET PIPE #2	230.50	PVC	6"
OUTLET PIPE	226.95	ADS N-12	12"

RIM ELEVATION	233.07

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' [1524 mm] 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.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178 mm]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft)[m^2].
8. STORMFILTER 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 STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES [200 mm], CONTRACTOR TO REMOVE THE 8 INCH [200 mm] OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

SFMH72
STORMFILTER
STANDARD DETAIL

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DANTON RILEY-CLARKAS
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54944
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PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE
ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS
WATER QUALITY DETAILS
CITY OF GIG HARBOR
PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
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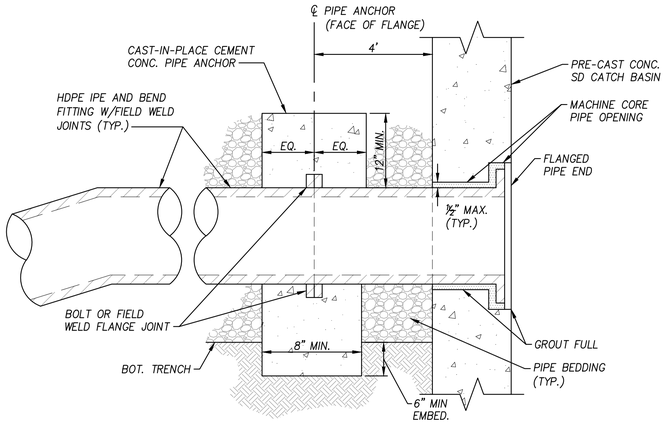
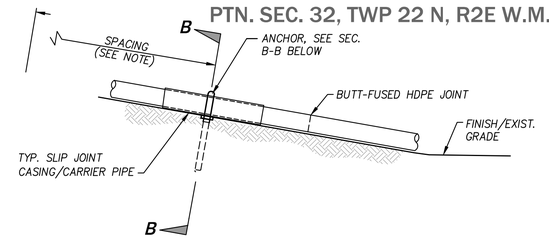
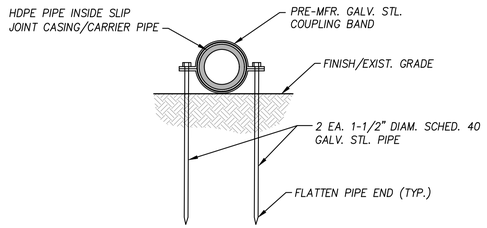


HDPE PIPE CONN.-UPHILL SDCB

NOT TO SCALE



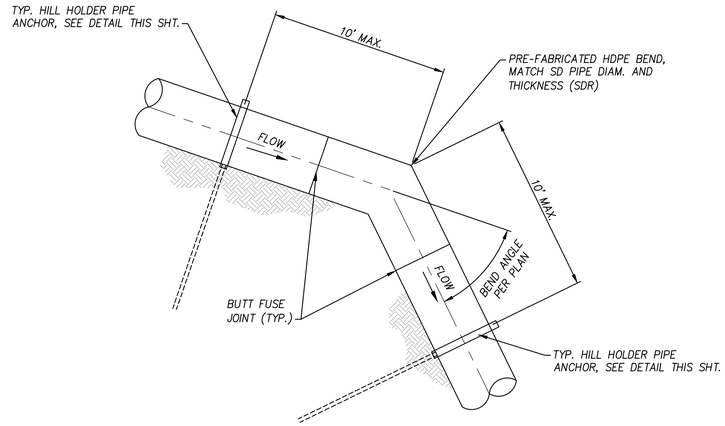


SECTION B-B

NOTE:
1. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT GEOTECHNICAL ENGINEER TO FIELD VERIFY THE SOIL CONDITIONS DURING CONSTRUCTION AND CONFIRM THE REQUIRED EARTH ANCHOR EMBEDMENT DEPTH AND SPACING OF ANCHORS.
2. SLIP JOINT SHALL BE INSTALLED AT ALL ABOVE-GRADE PIPE INSTALLATIONS.

TYPICAL HILL HOLDER PIPE ANCHOR

NOT TO SCALE



TYPICAL HDPE BEND ANCHOR

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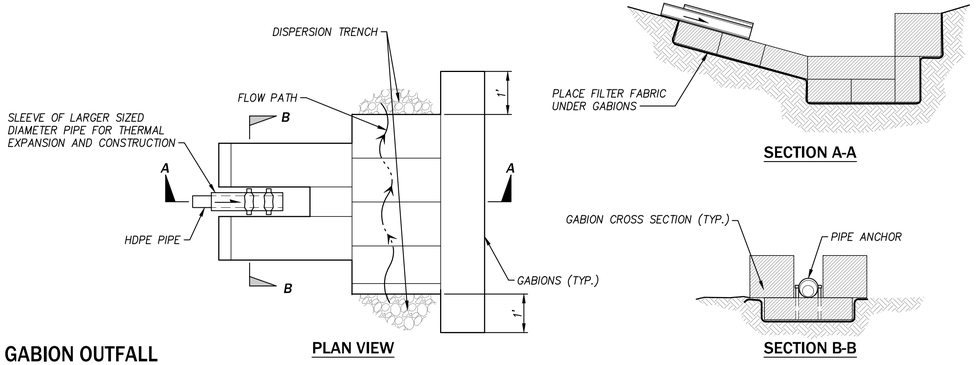
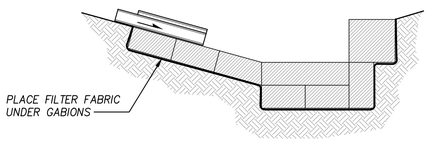


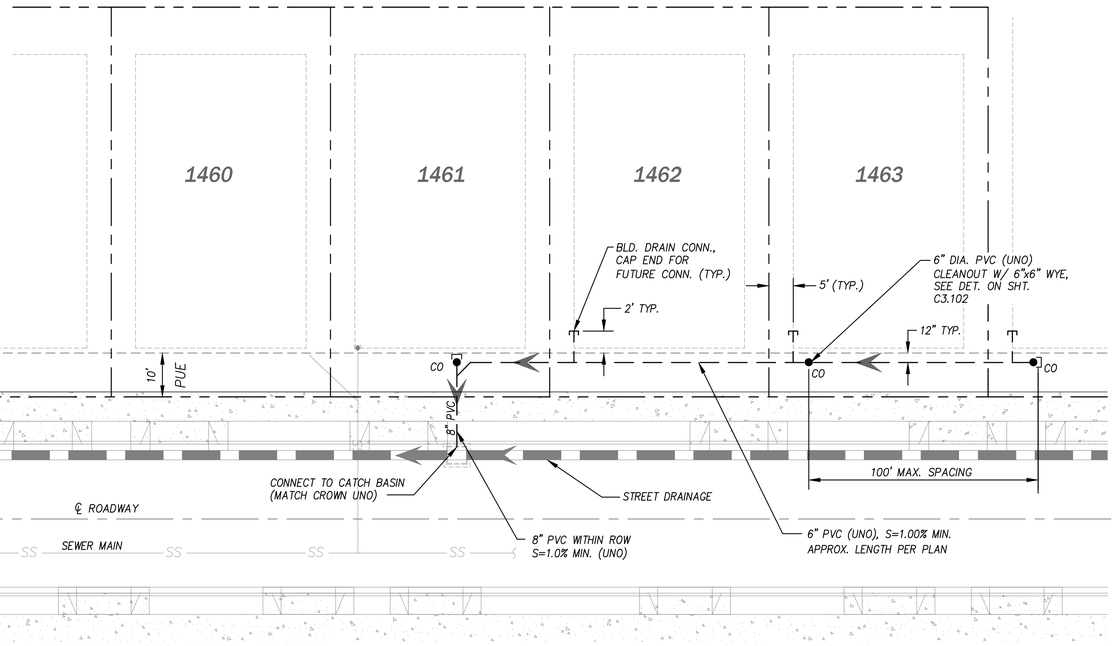


SECTION A-A

SECTION B-B

GABION OUTFALL

NOT TO SCALE



TYPICAL ROOF DRAIN COLLECTION SYSTEM

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1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

GRADING AND DRAINAGE DETAILS

CITY OF GIG HARBOR
PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
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EMAIL:
JUSTIN@PROSPECTDEVELOP.COM

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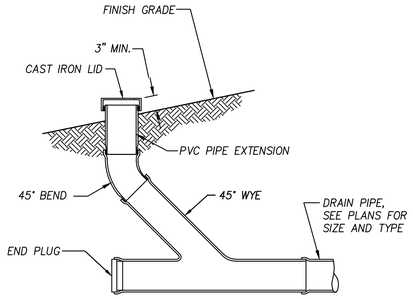
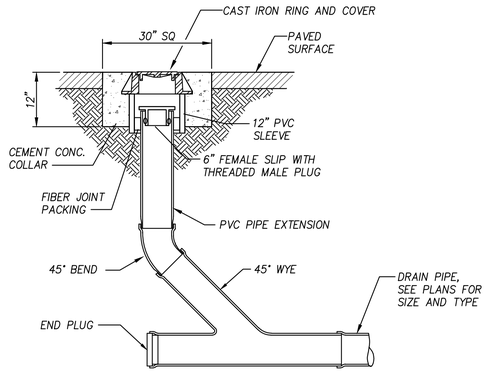


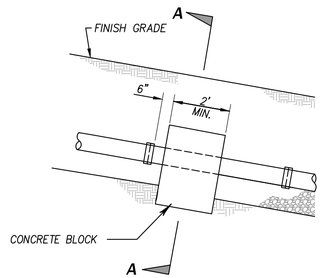
OPEN SPACE/LOT FRONTAGE

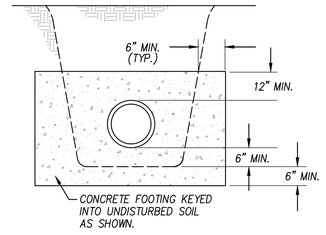


PAVED FRONTAGE

TYPICAL CLEANOUT

NOT TO SCALE





SECTION A-A
CONCRETE BLOCK ANCHOR-BELOW GRADE

TYPICAL CONCRETE PIPE ANCHOR DETAIL

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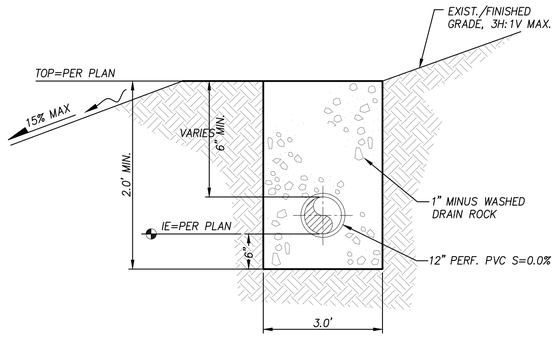
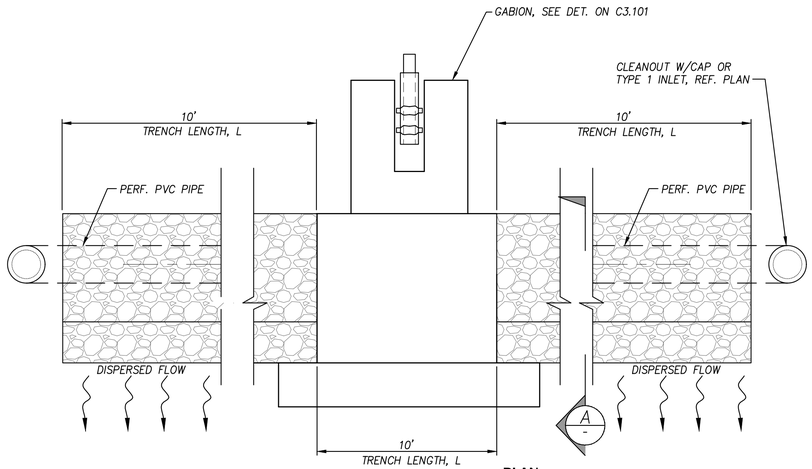


SECTION A-A



PLAN

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GRADING AND DRAINAGE DETAILS

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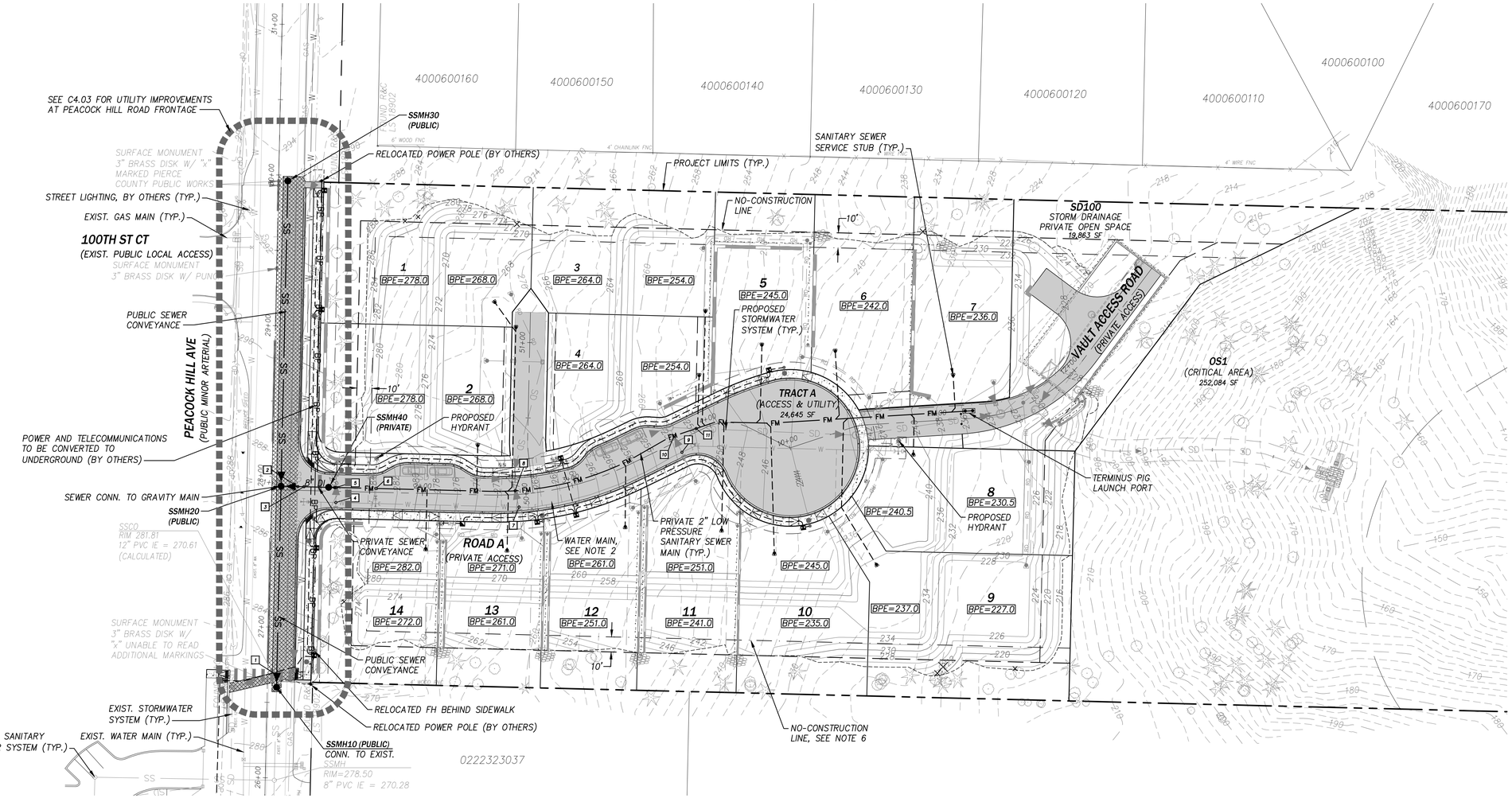

LEGEND

- SD — STORM DRAIN
- SD CATCH BASIN
- FM — SANITARY SEWER FORCED MAIN
- SS — SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- W — WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.
- WATER METER
- FIRE HYDRANT

NOTES:

1. THE LOW PRESSURE SANITARY SEWER (LPSS) COLLECTION MAIN SHALL BE HDPE SDR-11 OR APPROVED EQUAL INSTALLED IN GENERAL ACCORDANCE WITH COGH PUBLIC WORKS STANDARDS.
2. WATER IMPROVEMENTS SHOWN ARE FOR REFERENCE ONLY. FINAL DESIGN AND CONSTRUCTION TO BE COMPLETED BY WASHINGTON WATER SERVICE COMPANY (WWSC). CONTRACTOR SHALL COORDINATE INSTALLATION WITH WWSC.
3. THE MANHOLE AT THE TERMINUS OF THE LOW PRESSURE MAIN AND THE FIRST MANHOLE DOWNSTREAM OF THIS TERMINUS SHALL BE COATED WITH SPECTRA-SHIELD LINING SYSTEM OR APPROVED EQUAL.
4. THE LOW PRESSURE SANITARY SEWER (LPSS) COLLECTION MAIN AND PRIVATE SEWER SERVICE LATERAL DESIGN PROPOSED WITH THIS PROJECT ARE BASED ON MANUFACTURER RECOMMENDATIONS FOR A REPRESENTATIVE E|ONE MODEL DH07 GRINDER PUMP SYSTEM (OAE). THIS PROJECT PROPOSES TO INSTALL THE LPSS COLLECTION MAIN AND PRIVATE SEWER LATERALS FOR EACH LOT AS SHOWN IN THESE PLANS. EXTENSION OF THE SERVICE LATERALS, INCLUDING A SWING CHECK VALVE AND OTHER NECESSARY APPURTENANCES, SHALL BE INSTALLED BY INDIVIDUAL HOME BUILDERS IN THE FUTURE AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED MEANS AND METHODS.
5. DUE TO INADEQUATE FIRE FLOW AVAILABILITY, RESIDENTIAL SPRINKLER SYSTEMS IN ACCORDANCE WITH IFC CH. B105.1 AND NFPA 13D (INCLUDING GARAGES) MUST BE INSTALLED AND MAINTAINED IN PERPETUITY IN ALL BUILDINGS AND STRUCTURES HENCEFORTH UNDER A SEPARATE BUILDING PERMIT FROM THE CITY OF GIG HARBOR.
6. THE CLEARING AND GRADING SHOWN AND ANY IMPROVEMENTS WITHIN THE 10-FOOT NO CONSTRUCTION ZONE SHALL BE ALLOWED ONLY UPON INSPECTION AND CERTIFICATION BY THE PROJECT ARBORIST THAT SUCH WORK WILL NOT ADVERSELY AFFECT THE LONG-TERM VIABILITY OF THE TREES WITHIN THE DESIGNATED LANDSCAPE OR BUFFER AREA.
7. SANITARY SEWER PIPES AND STRUCTURES MARKED PRIVATE WILL BE OWNED, OPERATED, AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. SANITARY SEWER PIPES AND STRUCTURES MARKED PUBLIC WILL BE OWNED, OPERATED, AND MAINTAINED BY THE CITY OF GIG HARBOR.
8. INDIVIDUAL LOT GRINDER PUMPS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNER.

UTILITY CROSSING DATA	
1	IE 12" SD=279.44
	TOP 8" SS=271.65
2	IE 12" SD=283.43
	TOP 8" SS=278.15
3	IE 12" WA=281.79
	TOP 8" SS=278.27
4	IE 12" SD=282.83
	TOP 8" WA=281.23
5	IE 12" SD=282.75
	TOP 2" FM=278.29
6	IE 6" WA=280.00
	TOP 2" FM=278.29
7	IE 12" SD=265.47
	TOP 8" WA=263.95
8	IE 2" FM=266.81
	TOP 12" SD=265.29
9	IE 12" SD=248.36
	TOP 8" WA=247.82
10	IE 12" SD=248.14
	TOP 2" FM=247.10
11	IE 12" SD=246.63
	TOP 2" FM=245.14

0 40 80
PLAN IN FEET

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4/10/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

OVERALL UTILITY PLAN

CITY OF GIG HARBOR

PIERCE COUNTY, WASHINGTON

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SHEET 22 OF 52

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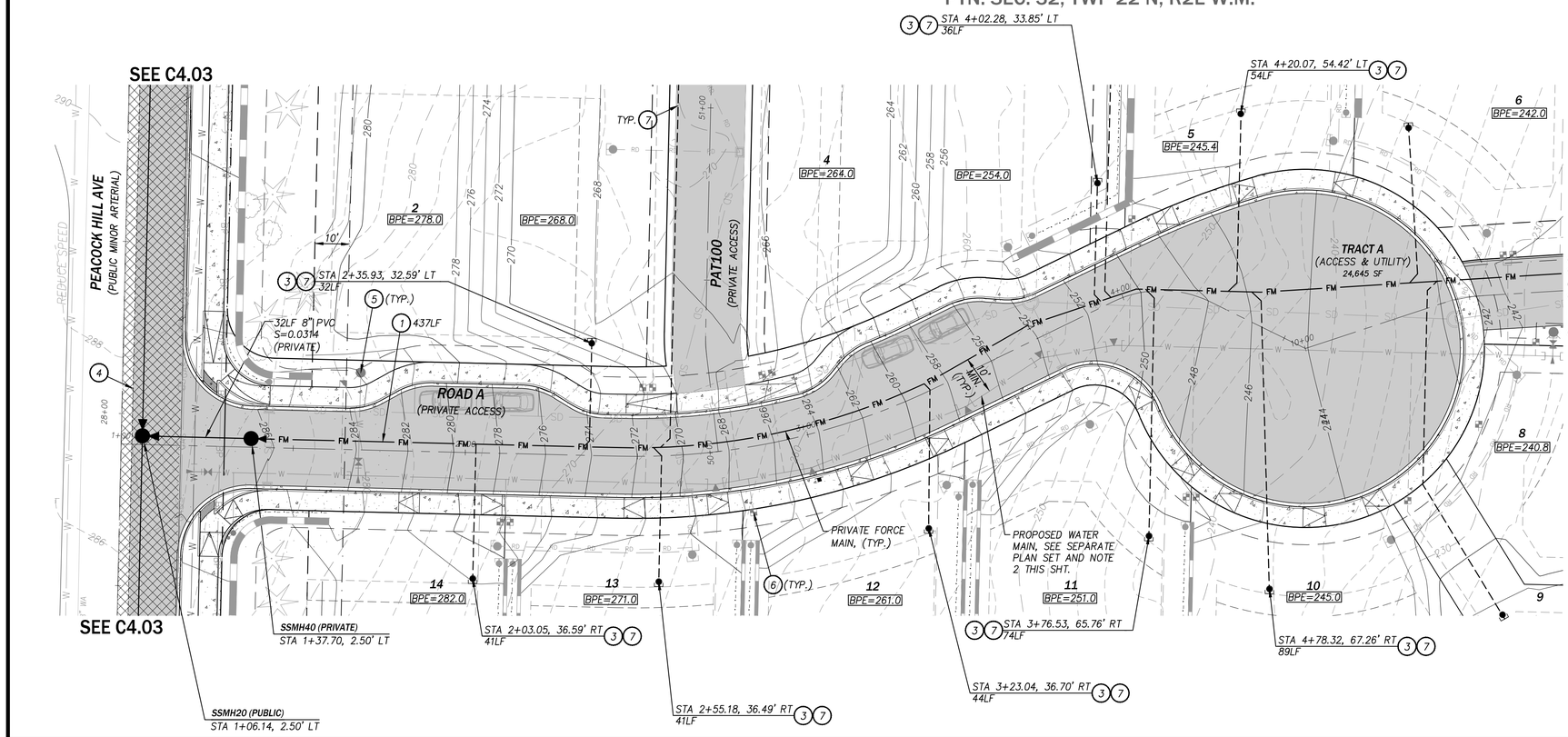

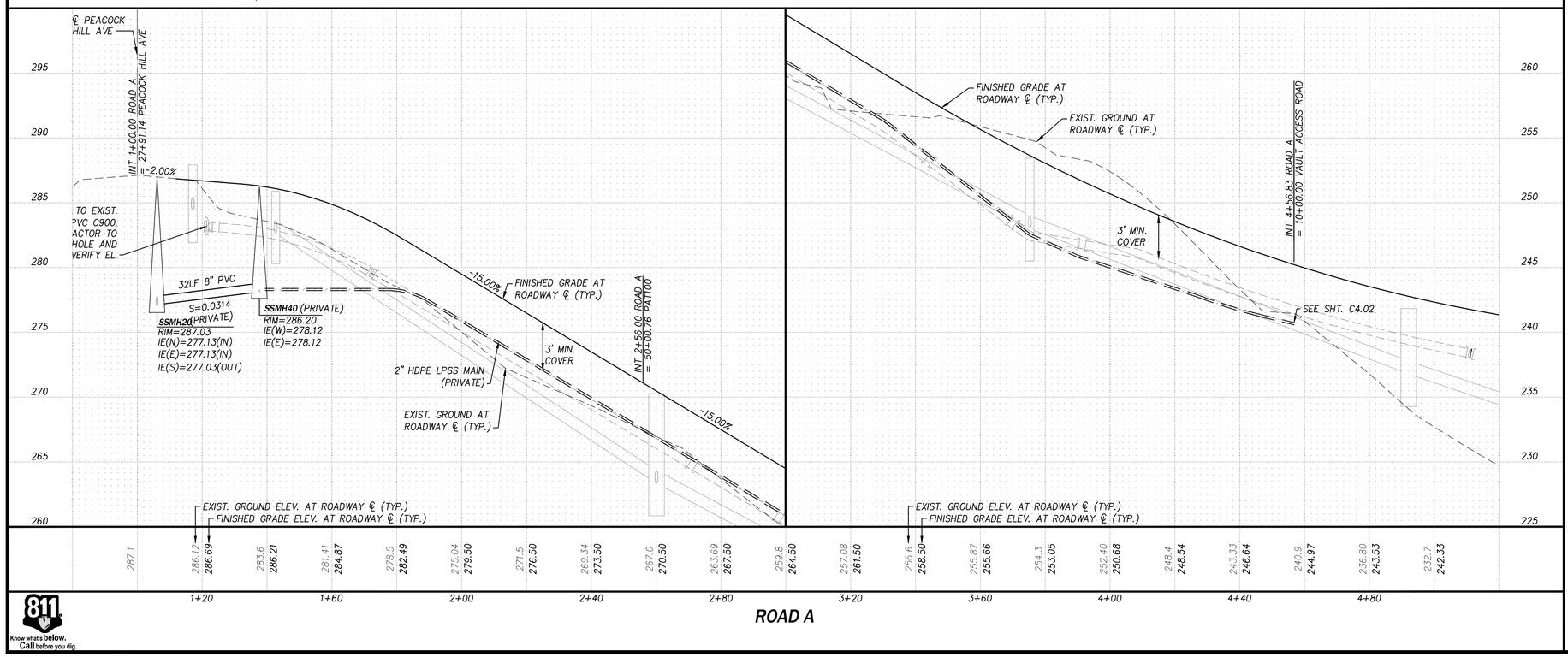

CONSTRUCTION NOTES

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2. 48" SANITARY SEWER MANHOLE W/ FRAME AND COVER PER COGH STD. DWG. 5-01
3. SANITARY SEWER SERVICE STUB, SEE NOTE 4
4. SAWCUT, REMOVE, AND REPLACE EXIST. AC PAVEMENT; PER SEC. B ON SHEET P3.100
5. FIRE HYDRANT ASSEMBLY, SEE NOTE 2
6. ¾" WATER SERVICE CONN. SEE NOTE 2
7. 1 ¼" HDPE SDR-11 SEWER SERVICE LATERAL PER TYPICAL PRIVATE SEWER SERVICE INSTALLATION DET. ON C4.100, APPROX. LENGTH PER PLAN
8. TERMINUS PIG LAUNCH PORT PER COGH STD. DWG. 5-21
9. PRIVATE WATER UTILITY EASEMENT

LEGEND

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- SD CATCH BASIN
- FM — SANITARY SEWER FORCED MAIN
- SS — SANITARY SEWER MAIN
- STANDARD PRECAST MANHOLE
- SIDE SEWER SERVICE
- SIDE SEWER CLEANOUT
- W — WATER MAIN
- WATER SERVICE
- PUBLIC UTILITY ESMT.
- WATER METER
- FIRE HYDRANT

NOTES:

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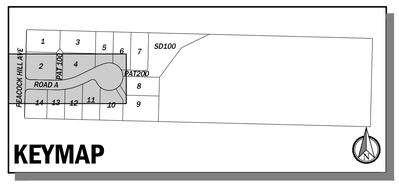
4. THE LOW PRESSURE SANITARY SEWER (LPSS) COLLECTION MAIN AND PRIVATE SEWER SERVICE LATERAL DESIGN PROPOSED WITH THIS PROJECT ARE BASED ON MANUFACTURER RECOMMENDATIONS FOR A REPRESENTATIVE E|ONE MODEL DH07 GRINDER PUMP SYSTEM (OAE). THIS PROJECT PROPOSES TO INSTALL THE LPSS COLLECTION MAIN AND PRIVATE SEWER LATERALS FOR EACH LOT AS SHOWN IN THESE PLANS. EXTENSION OF THE SERVICE LATERALS, INCLUDING A SWING CHECK VALVE AND OTHER NECESSARY APPURTENANCES, SHALL BE INSTALLED BY INDIVIDUAL HOME BUILDERS IN THE FUTURE AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED MEANS AND METHODS.
5. DUE TO INADEQUATE FIRE FLOW AVAILABILITY, RESIDENTIAL SPRINKLER SYSTEMS IN ACCORDANCE WITH IFC CH. B105.1 AND NFPA 13D (INCLUDING GARAGES) MUST BE INSTALLED AND MAINTAINED IN PERPETUITY IN ALL BUILDINGS AND STRUCTURES HENCEFORTH UNDER A SEPARATE BUILDING PERMIT FROM THE CITY OF GIG HARBOR.
6. THE CLEARING AND GRADING SHOWN AND ANY IMPROVEMENTS WITHIN THE 10-FOOT NO CONSTRUCTION ZONE SHALL BE ALLOWED ONLY UPON INSPECTION AND CERTIFICATION BY THE PROJECT ARBORIST THAT SUCH WORK WILL NOT ADVERSELY AFFECT THE LONG-TERM VIABILITY OF THE TREES WITHIN THE DESIGNATED LANDSCAPE OR BUFFER AREA.
7. SANITARY SEWER PIPES AND STRUCTURES MARKED PRIVATE WILL BE OWNED, OPERATED, AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. SANITARY SEWER PIPES AND STRUCTURES MARKED PUBLIC WILL BE OWNED, OPERATED, AND MAINTAINED BY THE CITY OF GIG HARBOR.



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1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

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STATE OF WASHINGTON
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PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

UTILITY PLAN AND PROFILE - ROAD A

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

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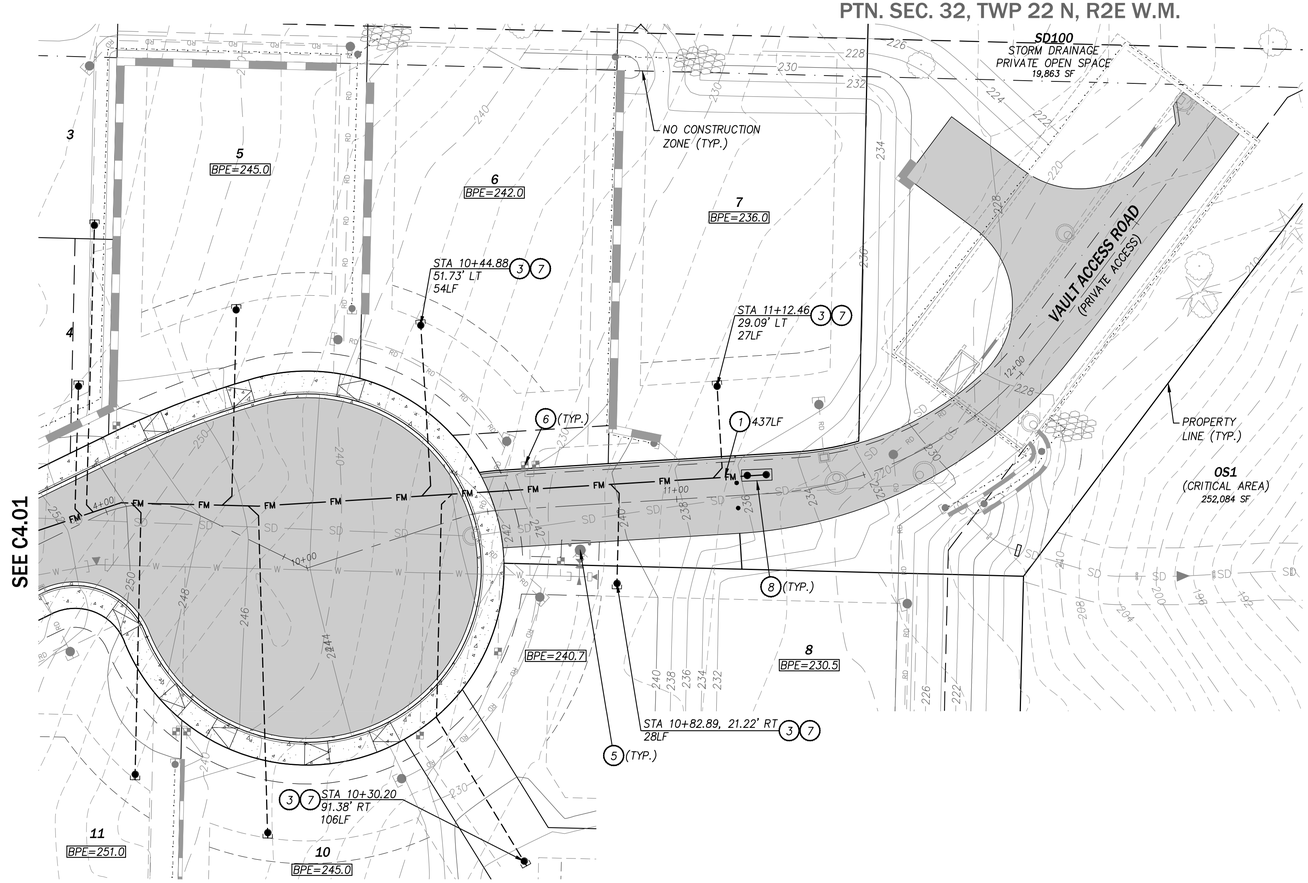

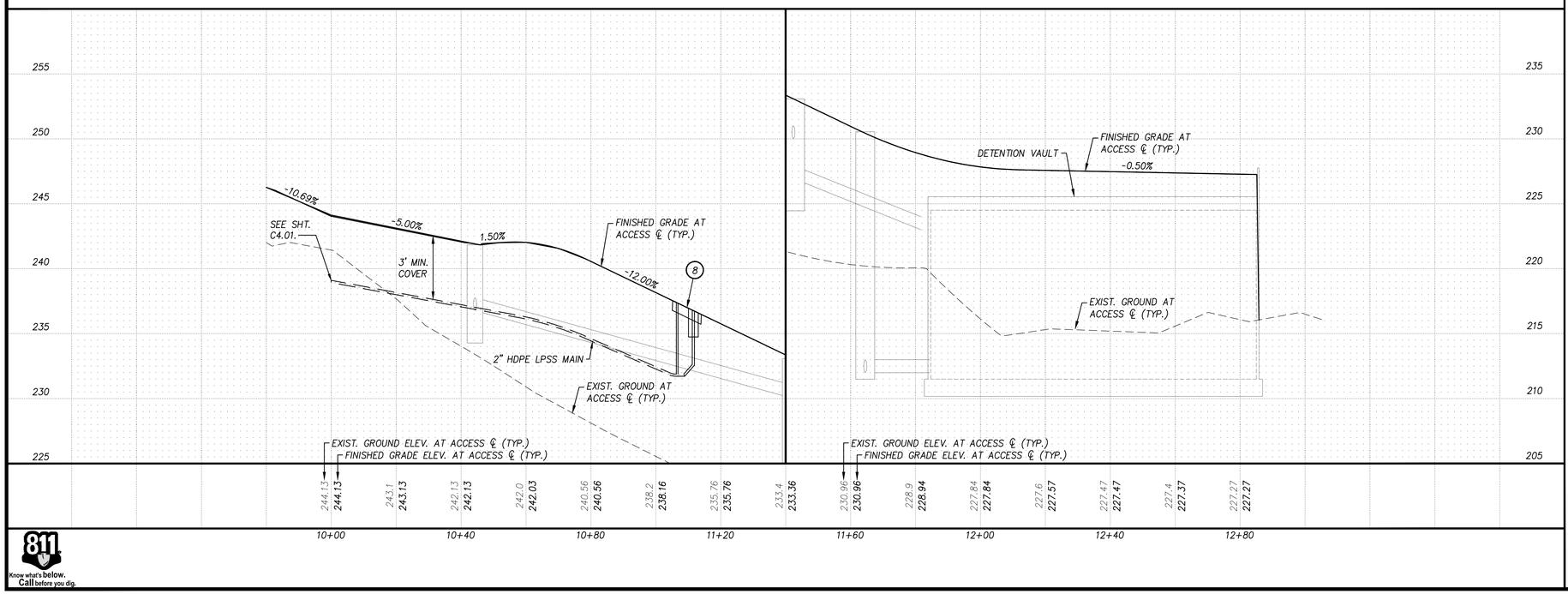

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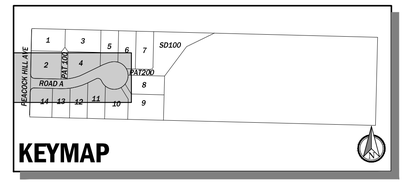

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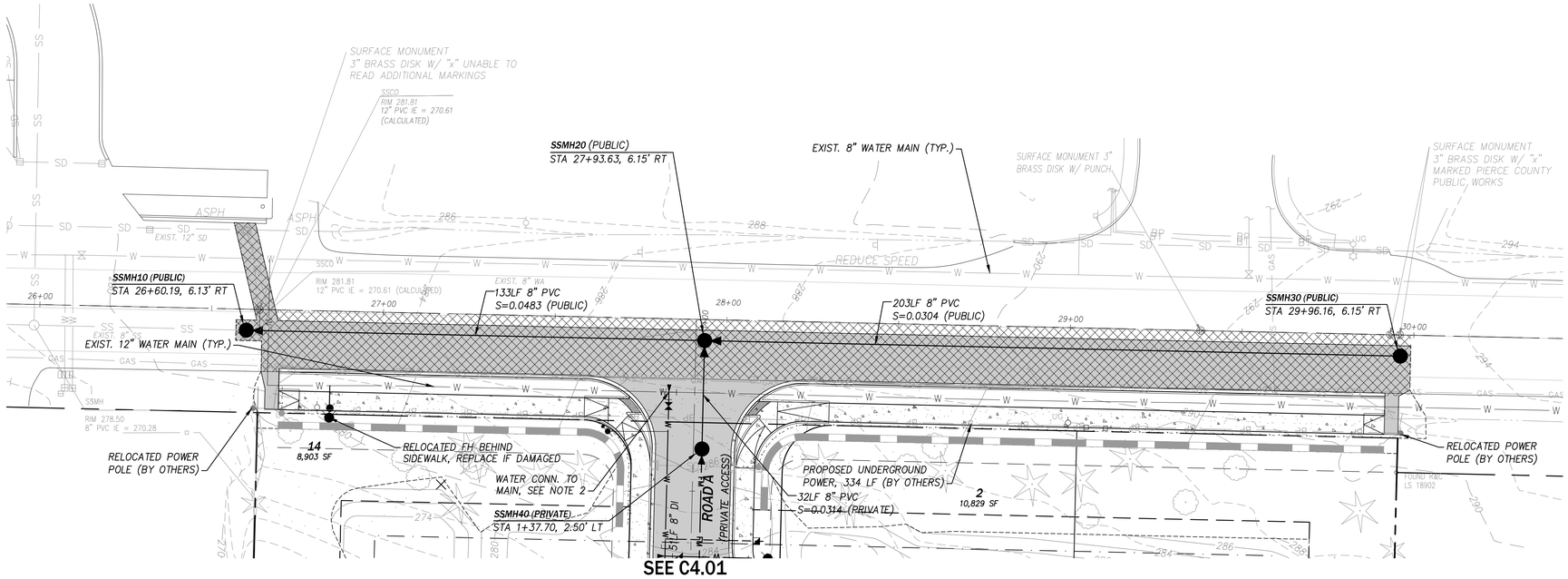
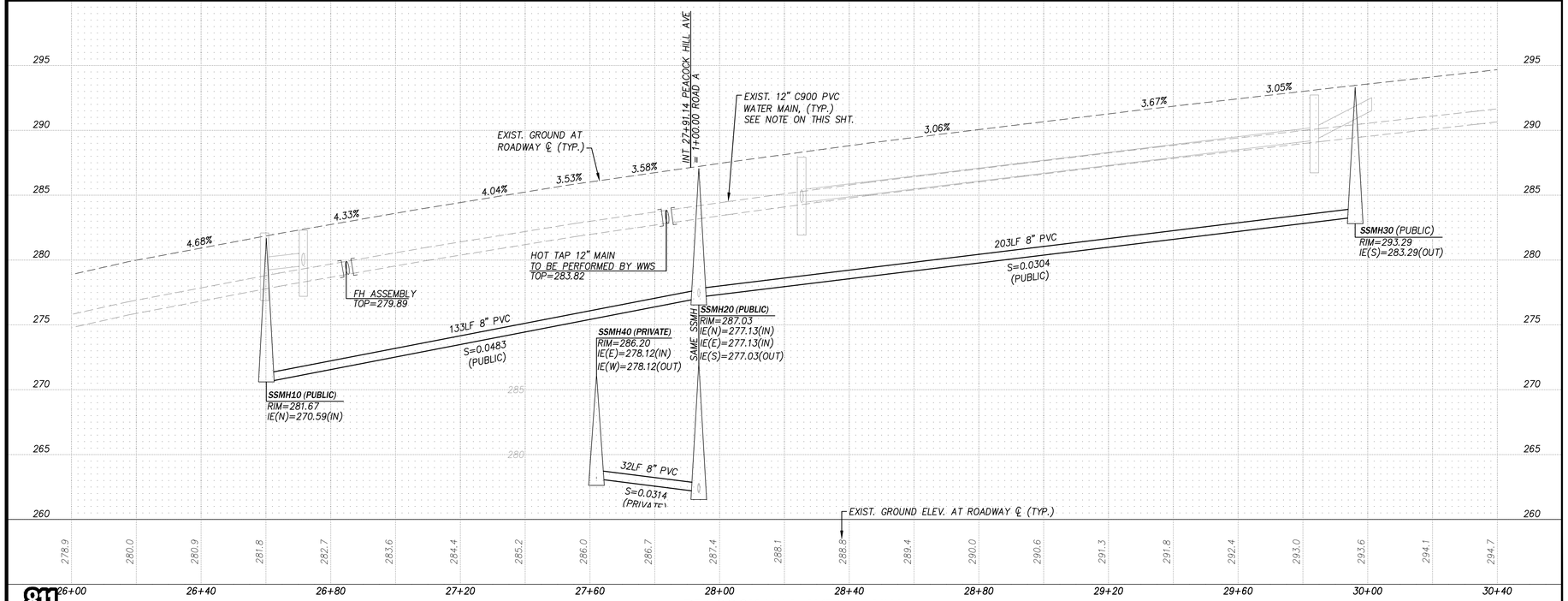


SEE C4.01

WATER NOTE: CONTRACTOR SHALL POTHOLE AND VERIFY 12" C900 WATER MAIN LOCATION AND DEPTH PRIOR TO BEGINNING WATER OR STORM IMPROVEMENTS. REPORT DISCREPANCIES TO PROJECT ENGINEER.



PEACOCK HILL AVENUE NW

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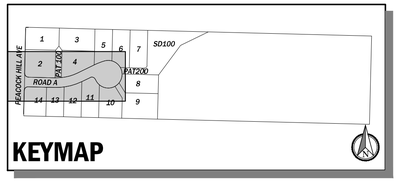

KEYMAP

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UTILITY PLAN AND PROFILE - PEACOCK HILL AVE

PIERCE COUNTY, WASHINGTON

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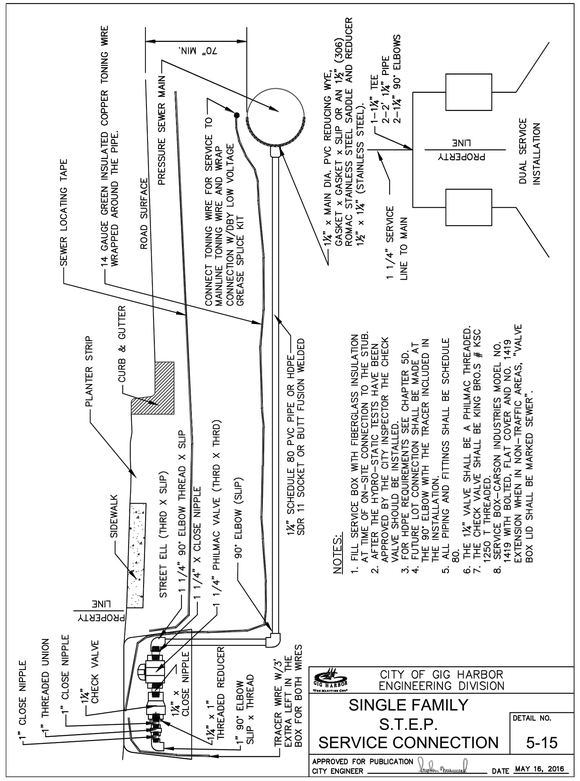
SANITARY SEWER GENERAL NOTES

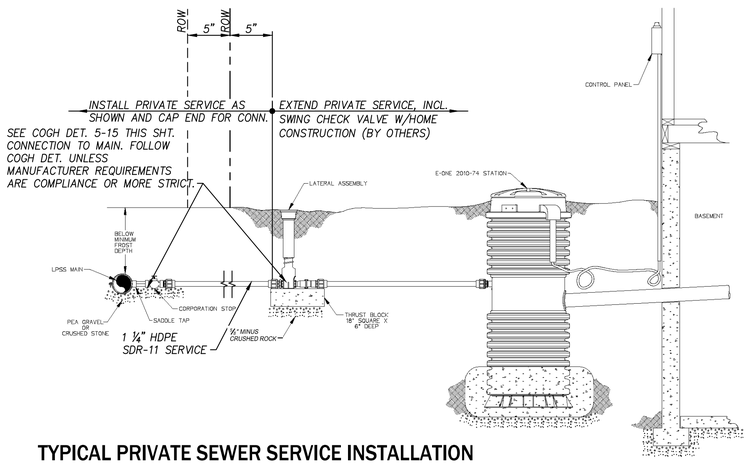
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF GIG HARBOR PUBLIC WORKS STANDARDS AND THE MOST CURRENT COPY OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION. IN CASES OF CONFLICT, THE MOST STRINGENT STANDARD SHALL APPLY.
2. ALL SAFETY STANDARDS AND REQUIREMENTS SHALL BE COMPLIED WITH AS SET FORTH BY OSHA, WISHA AND WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES.
3. CITY OF GIG HARBOR DATUM SHALL BE USED FOR ALL VERTICAL CONTROL. A LIST OF BENCHMARKS IS AVAILABLE AT THE ENGINEERING DEPARTMENT.
4. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF GIG HARBOR SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
5. IF CONSTRUCTION IS TO TAKE PLACE IN THE COUNTY AND/OR WASHINGTON STATE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE CITY. THE CITY WILL OBTAIN THE COUNTY AND/OR WSDOT PERMIT(S) AND PROVIDE A COPY TO THE CONTRACTOR. THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ASSOCIATED PERMIT FEES.
6. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
7. THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR SHALL BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF A TAP CONNECTION TO AN EXISTING MAIN OR LATERAL. THE INSPECTOR SHALL BE PRESENT AT THE TIME OF THE TAP. ANY MATERIAL REMOVED IN THE TAP PROCESS MUST BE GIVEN TO THE CITY INSPECTOR AT THE TIME OF THE TAP.
8. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.
9. GRAVITY SEWER MAIN SHALL BE GREEN PVC, ASTM D 3034 SDR 35 OR ASTM F 589 WITH JOINTS AND RUBBER GASKETS CONFORMING TO ASTM D 3212 AND ASTM F 455, AND SHALL BE GREEN IN COLOR.
10. PRE-CAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C 458. MANHOLES SHALL BE TYPE 1-48" MANHOLE UNLESS OTHERWISE SPECIFIED ON THE PLANS. JOINTS SHALL BE RUBBER GASKET CONFORMING TO ASTM C 443 AND SHALL BE GROUTED FROM THE INSIDE AND OUTSIDE. LIFT HOLES SHALL BE GROUTED FROM THE OUTSIDE AND INSIDE OF THE MANHOLE. (SEE NOTE 11.) ALL MANHOLES USED IN A STEP SYSTEM, MANHOLES WHERE A FORCE MAIN TERMINATES INTO, AND GRAVITY MANHOLES AS DETERMINED BY THE CITY, MUST BE PROPERLY COATED INSIDE WITH A COATING SYSTEM MANUFACTURED BY EITHER SPECTRA SHIELD©, SPRAYWALL© BY SPRAYROQ OR APPROVED EQUAL TO PREVENT HYDROGEN SULFIDE CORROSION.
11. MANHOLE FRAMES AND COVERS SHALL HAVE A DUCTILE IRON CASTING MARKED "SEWER" AND SHALL BE CAPABLE OF WITHSTANDING A TEST LOAD OF 120,000 LBS. AND MEET AASHTO M 306 STANDARDS. COVERS SHALL BE ONE-MAN OPERABLE USING STANDARD TOOLS. COVERS SHALL BE HINGED AND INCORPORATE A 90 DEGREE BLOCKING SYSTEM TO PREVENT ACCIDENTAL CLOSURE AND COME COMPLETE WITH HINGE INFILTRATION PLUG. FRAMES SHALL BE CIRCULAR AND SHALL INCORPORATE A SEALING RING AND PROVIDE A 24 IN. CLEAR OPENING. THE FRAME DEPTH SHALL NOT EXCEED 4 IN. AND THE FLANGE SHALL INCORPORATE BEDDING SLOTS AND BOLT HOLES. ALL COMPONENTS SHALL BE BLACK COATED WITH A TOTAL WEIGHT NOT TO EXCEED 200LBS. THE MANUFACTURER SHALL BE EAST JORDAN IRON WORKS, OLYMPIC FOUNDRY OR AN APPROVED EQUAL. LOCK-TYPE COVERS SHALL BE REQUIRED IN ALL MULTI-FAMILY COMPLEXES, ON SCHOOL GROUNDS, ON MANHOLES CONTAINING ODOR CONTROL DEVICES OR AS DETERMINED BY THE CITY.
12. SIDE SEWER SERVICES SHALL BE PVC, ASTM D 3034 SDR 35 AND GREEN IN COLOR WITH FLEXIBLE GASKET JOINTS. SIDE SEWER CONNECTIONS SHALL BE MADE BY A TAP TO AN EXISTING MAIN OR A WYE BRANCH FROM A NEW MAIN CONNECTED ABOVE THE SPRING LINE OF THE PIPE.
13. ALL SEWER MAINS SHALL BE FIELD STAKED FOR GRADES AND ALIGNMENT BY A LICENSED ENGINEERING OR SURVEYING FIRM QUALIFIED TO PERFORM SUCH WORK.
14. ALL PLASTIC PIPE AND SERVICES SHALL BE INSTALLED WITH CONTINUOUS TRACER TAPE INSTALLED 12" TO 18" UNDER THE PROPOSED FINISHED SUB GRADE. THE MARKER SHALL BE PLASTIC NON-BIODEGRADABLE, METAL CORE OR BACKING, MARKED "SEWER" WHICH CAN BE DETECTED BY A STANDARD METAL DETECTOR. IN ADDITION, STEP SYSTEMS AND FORCE MAINS SHALL BE INSTALLED WITH 14 GAUGE COATED COPPER WIRE WRAPPED AROUND ALL PLASTIC PIPE, BROUGHT UP AND TIED OFF AT VALVE BODY. TAPE SHALL BE TERRA TAPE "D" OR APPROVED EQUAL. THE TAPE AND WIRE SHALL BE FURNISHED BY THE CONTRACTOR. ALL SEWER PIPE SHALL BE GREEN IN COLOR. IF PIPE USED IS NOT GREEN IN COLOR A PVC SHEATHING OR "POLYWRAP" SHALL BE INSTALLED ON PIPE DURING CONSTRUCTION.
15. ALL SIDE SEWERS LOCATIONS SHALL BE MARKED ON THE FACE OF THE CURB WITH AN EMBOSSED "S" 3 IN. HIGH AND ¼ IN. INTO CONCRETE AND HAVE THE STUB MARKED WITH TREATED 4 IN. X 4 IN. POSTS WITH WIRE.
16. COMPACTION OF THE BACKFILL MATERIAL SHALL BE REQUIRED IN ACCORDANCE WITH THE ABOVE MENTIONED SPECIFICATION (SEE NOTE #1). REFER TO THE APPLICABLE DETAILS 2-14 THROUGH 2-16. NO PEA GRAVEL WILL BE ALLOWED AS PIPE BEDDING.
17. A 3-FT. SQUARE BY 8 IN. THICK CONCRETE PAD WITH WELDED WIRE OR #4 REBAR SHALL BE INSTALLED AROUND ALL CLEAN OUTS THAT ARE NOT IN A PAVEMENT AREA.
18. TEMPORARY STREET PATCHING SHALL BE ALLOWED AS APPROVED BY THE CITY ENGINEER. TEMPORARY STREET PATCHING SHALL BE PROVIDED BY PLACEMENT AND COMPACTION OF 1 IN. MAXIMUM ASPHALT CONCRETE COLD MIX. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED.
19. EROSION CONTROL MEASURES SHALL BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO PREVENT INFILTRATION OF EXISTING AND PROPOSED STORM DRAINAGE FACILITIES AND ROADWAYS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH SECTION 2B.126 OF THE GIG HARBOR PUBLIC WORKS STANDARDS, THE WSDOT STANDARD PLANS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (ALL APPLICABLE "K" PLANS) AND/OR THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). PRIOR TO DISRUPTION OF ANY TRAFFIC, A TRAFFIC CONTROL PLAN SHALL BE PREPARED AND SUBMITTED TO THE CITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.
21. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THE APPROVED PLANS ON CONSTRUCTION SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
22. ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER AND THE CITY OF GIG HARBOR.
23. ALL LINES SHALL BE HIGH VELOCITY CLEANED, PRESSURE TESTED, AND VIDEO INSPECTED PRIOR TO PAVING IN CONFORMANCE WITH THE ABOVE REFERENCED SPECIFICATIONS. HYDRANT FLUSHING OF LINES IS NOT AN ACCEPTABLE CLEANING METHOD. TESTING OF THE SANITARY SEWER MAIN SHALL INCLUDE VIDEOTAPING OF THE MAIN BY THE CONTRACTOR. IMMEDIATELY PRIOR TO VIDEOTAPING, ENOUGH WATER SHALL BE RUN DOWN THE LINE SO IT COMES OUT THE LOWER MANHOLE. THE CONTRACTOR SHALL INSTALL A SCREEN AT THE LOWER MANHOLE TO CATCH ALL DEBRIS. A COPY OF THE VIDEO SHALL BE SUBMITTED TO THE CITY OF GIG HARBOR. ACCEPTANCE OF THE LINE WILL BE MADE AFTER THE VIDEO HAS BEEN REVIEWED AND APPROVED BY THE INSPECTOR. ANY BELLIES IN MAIN GREATER THAN 3/8" SHALL BE DUG UP AND REPAIRED PRIOR TO ACCEPTANCE. A RE-INSPECTION VIDEO WILL BE REQUIRED AFTER REPAIR HAS BEEN MADE. A WATER OR VACUUM TEST OF ALL MANHOLES IN ACCORDANCE WITH GIG HARBOR STANDARDS IS ALSO REQUIRED. TESTING SHALL TAKE PLACE AFTER ALL UNDERGROUND UTILITIES ARE INSTALLED AND COMPACTION OF THE ROADWAY SUB GRADE IS COMPLETED. AFTER THE PAVING AND RAISING OF MANHOLES IS COMPLETE, THE DEVELOPER SHALL CLEAN THE SEWER CONVEYANCE SYSTEM AGAIN AT THE DEVELOPER'S EXPENSE. THE METHOD OF CLEANING SHALL BE A HIGH VELOCITY WATER PRESSURE CLEANING. ALL ROCKS AND DEBRIS SHALL BE REMOVED AND BE DISPOSED OF AT THE DEVELOPER'S EXPENSE.
24. CONTRACTORS SHALL BE RESPONSIBLE FOR CLEANUP OF ANY DEBRIS IN NEW OR EXISTING MANHOLES AND MAINS ASSOCIATED WITH THE PROJECT AFTER THE NEW LINES ARE CLEANED AS OUTLINED ABOVE.
25. ALL STEP MAINS SHALL BE HYDROSTATICALLY TESTED IN CONFORMANCE WITH THE ABOVE-REFERENCED SPECIFICATION FOR TESTING WATER MAINS. IN ADDITION, ALL STEP MAINS SHALL BE PIGGED IN THE PRESENCE OF THE CITY INSPECTOR PRIOR TO PLACING STEP MAIN IN SERVICE.
26. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR. APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FOR CORRECTION OF ANY DEFICIENCIES AND/OR FAILURES AS DETERMINED BY SUBSEQUENT TESTING AND INSPECTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF GIG HARBOR FOR THE REQUIRED INSPECTIONS.
27. WHEN USING STEEL PLATES OVER THE TRENCH, "STEEL PLATES AHEAD" AND "MOTORCYCLES USERS EXTREME CAUTION" SIGNS SHALL BE REQUIRED.

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

GENERAL NOTES (PRESSURE SEWER MAIN INSTALLATION)

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF GIG HARBOR STANDARDS AND THE MOST CURRENT COPY OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (WSDOT). IN CASES OF CONFLICT, THE MOST STRINGENT STANDARD SHALL APPLY.
2. ALL SAFETY STANDARDS AND REQUIREMENTS SHALL BE COMPLIED WITH AS SET FORTH BY OSHA, WISHA AND WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES.
3. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF GIG HARBOR SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
4. IF CONSTRUCTION IS TO TAKE PLACE IN THE COUNTY RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE CITY. THE CITY WILL OBTAIN ALL THE REQUIRED APPROVALS AND PERMITS AND PROVIDE A COPY TO THE CONTRACTOR. THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ASSOCIATED PERMIT FEES.
5. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
6. THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR SHALL BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF A TAP CONNECTION TO AN EXISTING MAIN. THE INSPECTOR SHALL BE PRESENT AT THE TIME OF THE TAP.
7. ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER AND THE CITY OF GIG HARBOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). PRIOR TO DISRUPTION OF ANY TRAFFIC, TRAFFIC CONTROL PLANS SHALL BE PREPARED AND SUBMITTED TO THE CITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.
9. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.
10. ALL SEWER MAINS SHALL BE FIELD STAKED FOR GRADES AND ALIGNMENT IN ACCORDANCE WITH SECTION 5A.030 OF THE DEVELOPMENT GUIDELINES.
11. ALL SIDE SEWER LOCATIONS SHALL BE MARKED ON THE FACE OF THE CURB WITH AN EMBOSSED "S" 3 IN. HIGH AND ¼ IN. INTO CONCRETE.
12. PIPE BEDDING MATERIAL FOR SEWER MAINS SHALL CONFORM TO SECTION 9-03.9(3) OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION. NO "PEA" GRAVEL WILL BE ALLOWED.
13. A 3 FT. SQUARE X 8 IN. THICK CONCRETE PAD WITH #4 REBAR SHALL BE INSTALLED AROUND ALL VALVES THAT ARE NOT IN A PAVEMENT AREA.
14. TEMPORARY STREET PATCHING SHALL BE ALLOWED FOR AS APPROVED BY THE CITY ENGINEER. TEMPORARY STREET PATCHING SHALL BE PROVIDED BY PLACEMENT AND COMPACTION OF 1 IN. MAXIMUM ASPHALT CONCRETE COLD MIX. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED.
15. EROSION CONTROL MEASURES SHALL BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO PREVENT INFILTRATION OF EXISTING AND PROPOSED STORM DRAINAGE FACILITIES AND ROADWAYS.
16. ALL BURIED POWER FOR STEP/GRINDER SYSTEMS SHALL BE INSTALLED WITH CONTINUOUS TRACER TAPE INSTALLED 12 IN. ABOVE THE BURIED POWER. THE MARKER SHALL BE PLASTIC NON-BIODEGRADABLE, METAL CORE BACKING MARKED "POWER". TAPE SHALL BE FURNISHED BY CONTRACTOR.
17. PRESSURE MAINS 2 IN. DIAMETER SHALL BE SCHEDULE 80 PVC, ASTM D2241, SDR 21 WITH RUBBER GASKET JOINTS. GASKETS SHALL COMPLY WITH ASTM D 1869 (5E.030). PRESSURE MAINS OVER 2 IN. DIAMETER SHALL BE PVC C-900. WELDED POLY (HDPE) PIPE SHALL BE HIGH-DENSITY ASTM D 3350, SDR 11 3408 SOCKET WELDED OR BUTT FUSION WELDED. FITTINGS AND VALVES SHALL COMPLY WITH SECTION 5E.040 OF THE DEVELOPMENT GUIDELINES.
18. STEP/GRINDER SERVICE LINE FROM MAIN CONNECTION TO SERVICE BALL VALVE SHALL BE 1 ¼ IN. OR 2 IN. DIAMETER SCHEDULE 80 PVC. HDPE PIPE SHALL BE HIGH-DENSITY ASTM D 3350, SDR 11 3408 SOCKET OR BUTT FUSION WELDED.
19. ALL PLASTIC PIPE AND SERVICES SHALL BE INSTALLED WITH CONTINUOUS TRACER TAPE INSTALLED 12 IN. TO 18 IN. UNDER THE PROPOSED FINISHED SUB GRADE. THE MARKER SHALL BE PLASTIC NON-BIODEGRADABLE, METAL CORE OR BACKING MARKED SEWER WHICH CAN BE DETECTED BY A STANDARD METAL DETECTOR. IN ADDITION, STEP SYSTEMS AND PRESSURE MAINS SHALL BE INSTALLED WITH 14-GAUGE DIRECT BURY, USE GREEN COATED COPPER WIRE WRAPPED AROUND ALL PLASTIC PIPE, BROUGHT UP AND TIED OFF AT VALVE BODY. CONTINUITY TESTING OF THE WIRE WILL BE DONE BY THE CITY. TAPE SHALL BE TERRA TAPE "D" OR APPROVED EQUAL. THE TAPE AND WIRE SHALL BE FURNISHED BY THE CONTRACTOR.
20. ALL PRESSURE MAINS SHALL BE HYDROSTATIC TESTED IN CONFORMANCE WITH THE ABOVE-REFERENCED SPECIFICATION FOR TESTING WATER MAINS. (SEE NOTE 1) IN ADDITION, ALL PRESSURE MAINS SHALL BE PIGGED IN THE PRESENCE OF THE CITY INSPECTOR PRIOR TO PLACING THE MAIN IN SERVICE.
21. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR. APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FOR CORRECTION OF ANY DEFICIENCIES AND/OR FAILURES AS DETERMINED BY SUBSEQUENT TESTING AND INSPECTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF GIG HARBOR FOR THE REQUIRED INSPECTIONS.





TYPICAL PRIVATE SEWER SERVICE INSTALLATION

NOT TO SCALE

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-00001)	MDS	DRG

DANTON RILEY-CIRKOVICH — STATE OF WASHINGTON — 54944 — REGISTERED PROFESSIONAL ENGINEER — 1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

SANITARY SEWER GENERAL NOTES

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

CLIENT

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PROJECT NO. 0228-21-001

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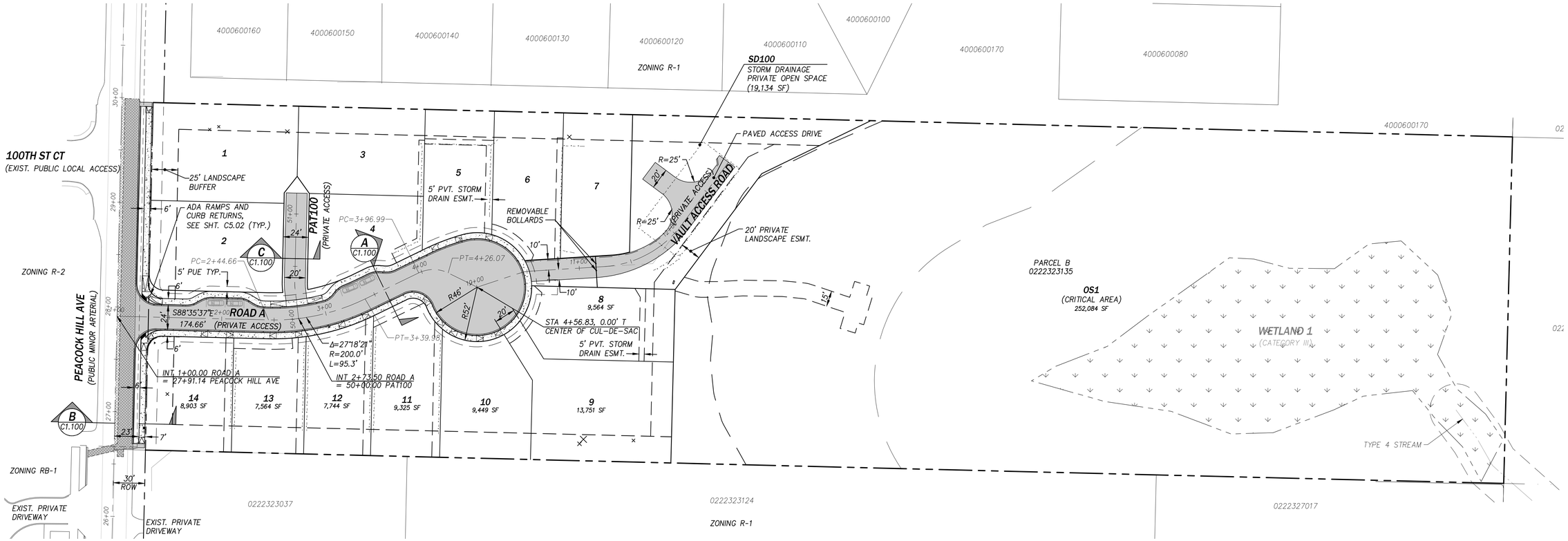

GENERAL PROJECT NOTES

1. ALL WORKMANSHIP, METHODS AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PRODUCED BY WSDOT AND THE WASHINGTON STATE CHAPTER OF THE APWA; CITY OF GIG HARBOR REVISED MUNICIPAL CODE, THE 2018 CITY OF GIG HARBOR PUBLIC WORKS DEVELOPMENT STANDARDS (UNLESS SPECIFIED OTHERWISE), THE 2016 CITY OF GIG HARBOR STORMWATER DESIGN MANUAL AND SPECIAL PROVISIONS PROVIDED BY THESE PLANS OR OTHER CONTRACT DOCUMENTS FOR THE PROJECT.
2. EXISTING UTILITIES ARE SHOWN IN THESE PLANS PER THE LATEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AND RELATED SURFACE FEATURES WITHIN THE PROJECT AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE PLAN INFORMATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL, AT MINIMUM, CONTACT THE UNDERGROUND UTILITIES LOCATE CENTER 811 TO HAVE UTILITIES VERIFIED ON THE GROUND PRIOR TO CONSTRUCTION.
3. THE TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) MEASURES SHOWN IN THESE PLANS SHALL BE CONSIDERED A MINIMUM. THE CONTRACTOR SHALL PROVIDE ANY REASONABLE ADDITIONAL MEASURES AS MAY BE REQUIRED TO FACILITATE ACTUAL SITE RUNOFF CONDITIONS AT THE TIME OF CONSTRUCTION. ALL NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN-PLACE PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.
4. ALL NEW PAVEMENT, SIDEWALKS, AND CURB AND GUTTER INSTALLED BY THIS PROJECT SHALL BEAR ON SUITABLE, COMPACT FOUNDATION SOILS IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND PROJECT CONTRACT DOCUMENTS. SIMILAR EXISTING FACILITIES TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION, SHALL BE REPLACED IN-KIND TO THE SAME STANDARDS OF NEW FACILITIES.
5. AT THE TIME OF CIVIL PERMIT INTAKE ALL PROPOSED CURB RAMPS DEPICTED ON PUBLIC OR PRIVATE STREETS IN THIS PRELIMINARY PLAN SET SHALL COMPLY WITH MAXIMUM SLOPE PERCENTAGES AND ALL OTHER REQUIREMENTS, PER THE MOST CURRENT WSDOT STANDARD F-PLAN.
6. AT THE TIME OF CIVIL PERMIT INTAKE ALL PUBLIC OR PRIVATE ROADWAYS IN THIS PRELIMINARY PLAN SET SHALL COMPLY WITH MAXIMUM SLOPE PERCENTAGES AND ALL OTHER REQUIREMENTS, PER THE PUBLIC WORKS STANDARDS.
7. AT THE TIME OF CIVIL PERMIT INTAKE ALL DRIVEWAY APPROACH LOCATIONS DEPICTED IN THIS PRELIMINARY PLAN SET SHALL COMPLY WITH MAXIMUM SLOPE PERCENTAGES AND ALL OTHER REQUIREMENTS, PER THE MOST CURRENT WSDOT STANDARD F-PLAN.
8. AT THE TIME OF CIVIL PERMIT INTAKE P.E.-STAMPED AND SIGNED ROADWAY ILLUMINATION SHEETS SHALL BE PROVIDED AS WELL AS AN ILLUMINATION CALCULATION REPORT CREATED WITH A LIGHTING SOFTWARE PROGRAM, PER THE PUBLIC WORKS STANDARDS.
9. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE WSDOT STANDARD PLANS AND SPECIFICATIONS AS AMENDED OR SUPPLEMENTED BY THE PROJECT PLANS, DETAILS, AND SPECIFICATIONS AS PROVIDED IN THE CONTRACT DOCUMENTS.
10. BUILDING PERMITS MUST BE OBTAINED PRIOR TO CONSTRUCTION OF ALL WALLS GREATER THAN 4 FEET IN HEIGHT OR ANY WALL SUPPORTING A SURCHARGE.
11. ALL EXISTING ON-SITE WELLS OR SEPTIC TANKS SHALL BE PROPERLY ABANDONED BY A LICENSED CONTRACTOR, CERTIFIED TO PERFORM SUCH WORK, AND WRITTEN VERIFICATION OF ABANDONMENT SHALL BE PROVIDED TO THE OWNER, WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND PIERCE COUNTY HEALTH DEPARTMENT IN ACCORDANCE WITH APPLICABLE AGENCY REGULATIONS.
12. THE MATERIALS AND METHODS OF INSTALLATION FOR ALL WATER AND SANITARY SEWER FACILITIES SHALL BE IN ACCORDANCE WITH THE LATEST LHUD STANDARDS, GENERAL REQUIREMENTS AND DETAILS FOR WATER MAIN CONSTRUCTION, AND GENERAL REQUIREMENTS AND DETAILS FOR SEWER MAIN CONSTRUCTION.
13. AT LEAST TWO COPIES OF THESE PLANS SHALL BE ON THE JOB SITE WHEN CONSTRUCTION IS IN PROGRESS. THE CONTRACTOR SHALL ALSO HAVE COPIES OF THE APPLICABLE REGULATORY AGENCY STANDARDS AVAILABLE AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION ACTIVITY. ONE COMPLETE SET OF PROJECT PLANS WITH RECORDS OF AS-BUILT INFORMATION SHALL BE PROVIDED TO THE PROJECT ENGINEER AT THE END OF THE PROJECT.
14. THE CONTRACTOR SHALL COORDINATE ACTIVITIES OF ALL UTILITY PURVEYORS IMPACTED BY WORK FOR THIS PROJECT AND SHALL CONTACT THEM PRIOR TO CONSTRUCTION TO SCHEDULE WORK FOR PROVISIONS FOR AND BE RESPONSIBLE TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT AND KEEP IN SERVICE ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE PLANS DURING CONSTRUCTION.
15. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO COMPLETE THE PROPOSED WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES. CUTTING AND PLUGGING OF LINES TO BE ABANDONED SHALL BE CONSIDERED INCIDENTAL TO OTHER WORK PERFORMED.
16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF SITE PREPARATION, GRADING OPERATIONS, FOUNDATION, SLAB AND PAVING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY OF ANY PROVISION OF THE SOIL REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRES FURTHER CLARIFICATION.
17. THE CONTRACTOR OR OWNER SHALL OBTAIN THE SERVICES OF A QUALIFIED SOILS ENGINEER AND/OR TESTING AGENCY TO PERFORM SUBGRADE/BACKFILL DENSITY TESTS OR TO DIRECT THE REMOVAL AND REPLACEMENT OF ANY UNSUITABLE MATERIALS DURING CONSTRUCTION. A REPRESENTATIVE OF THE SOILS ENGINEER AND/OR TESTING AGENCY SHALL BE AVAILABLE TO OBSERVE AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS AS REQUIRED TO CERTIFY THE METHODS AND MATERIALS ARE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE THE APPROPRIATE SOILS INSPECTIONS AND TESTING.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL DURING CONSTRUCTION ADJACENT TO OR WITHIN ALL PUBLIC ROADWAYS. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.
19. ALL WORK PERTAINING TO THIS PROJECT SHALL BE SUBJECT TO INSPECTION BY THE CITY INSPECTOR OR HIS DESIGNATED REPRESENTATIVE. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL CONTACT THE CITY PLAN REVIEWER AT (253)851-6170 AND SCHEDULE A PRE-CONSTRUCTION CONFERENCE.

DRIVEWAY TABLE

LOT	STATION, OFFSET	WIDTH
1-4	STA 2+57.10, 12.00' LT	20.7'
5	STA 4+19.33, 24.07' LT	18'
6-9	STA 4+95.97, 24.17' LT	107.9'
10	STA 4+68.01, 44.62' RT	18'
11	STA 4+31.25, 38.23' RT	18'
12	STA 3+22.58, 12.00' RT	18'
13	STA 2+60.49, 12.00' RT	18'
14	STA 1+96.04, 12.00' RT	18'

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NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-00013)	MDS	DRG

DARTON RILEY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

INTERNAL ROADWAYS PLAN

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT

PROSPECT DEVELOPMENT, LLC
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PROJECT NO. 0228-21-001

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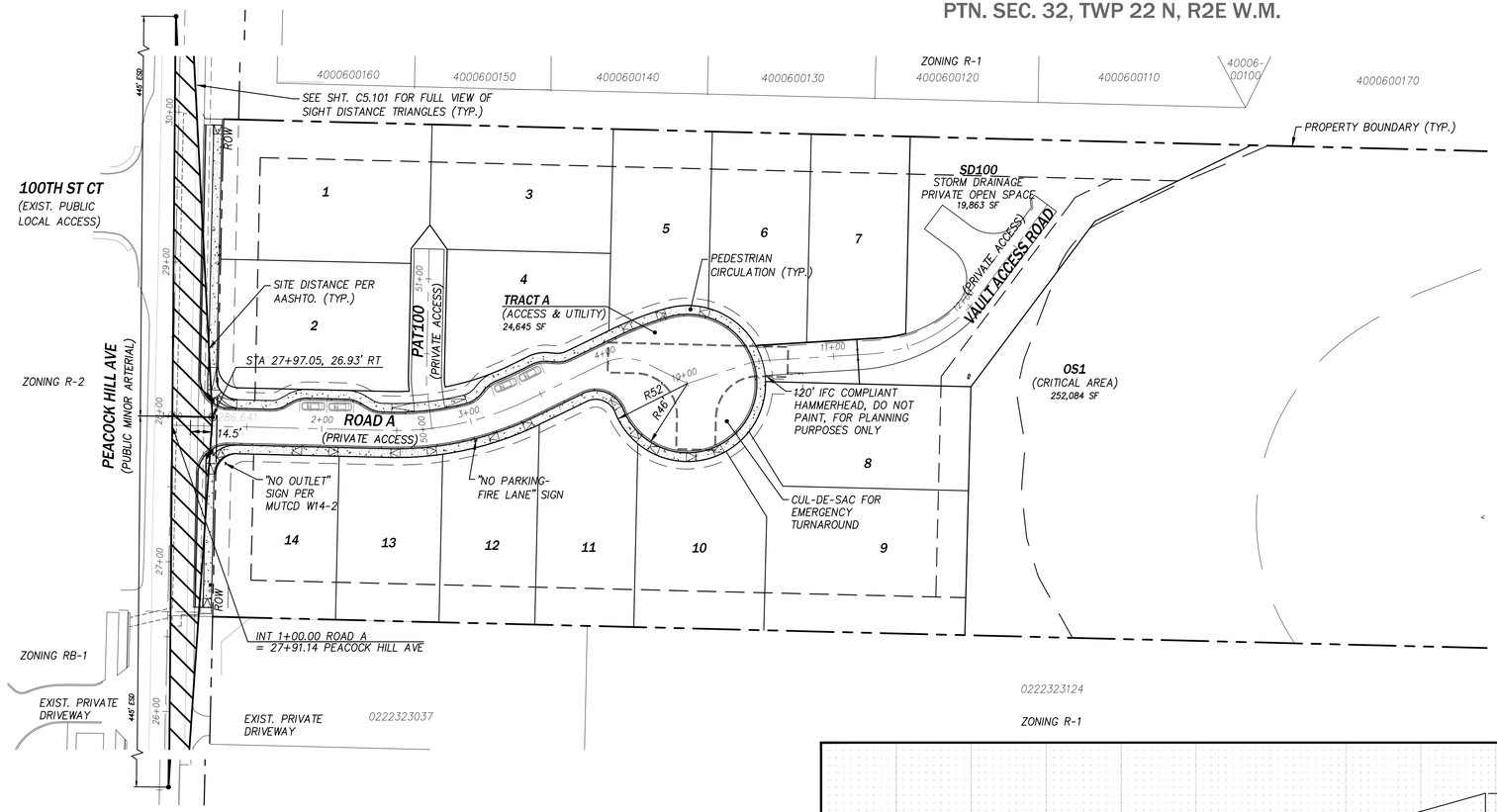

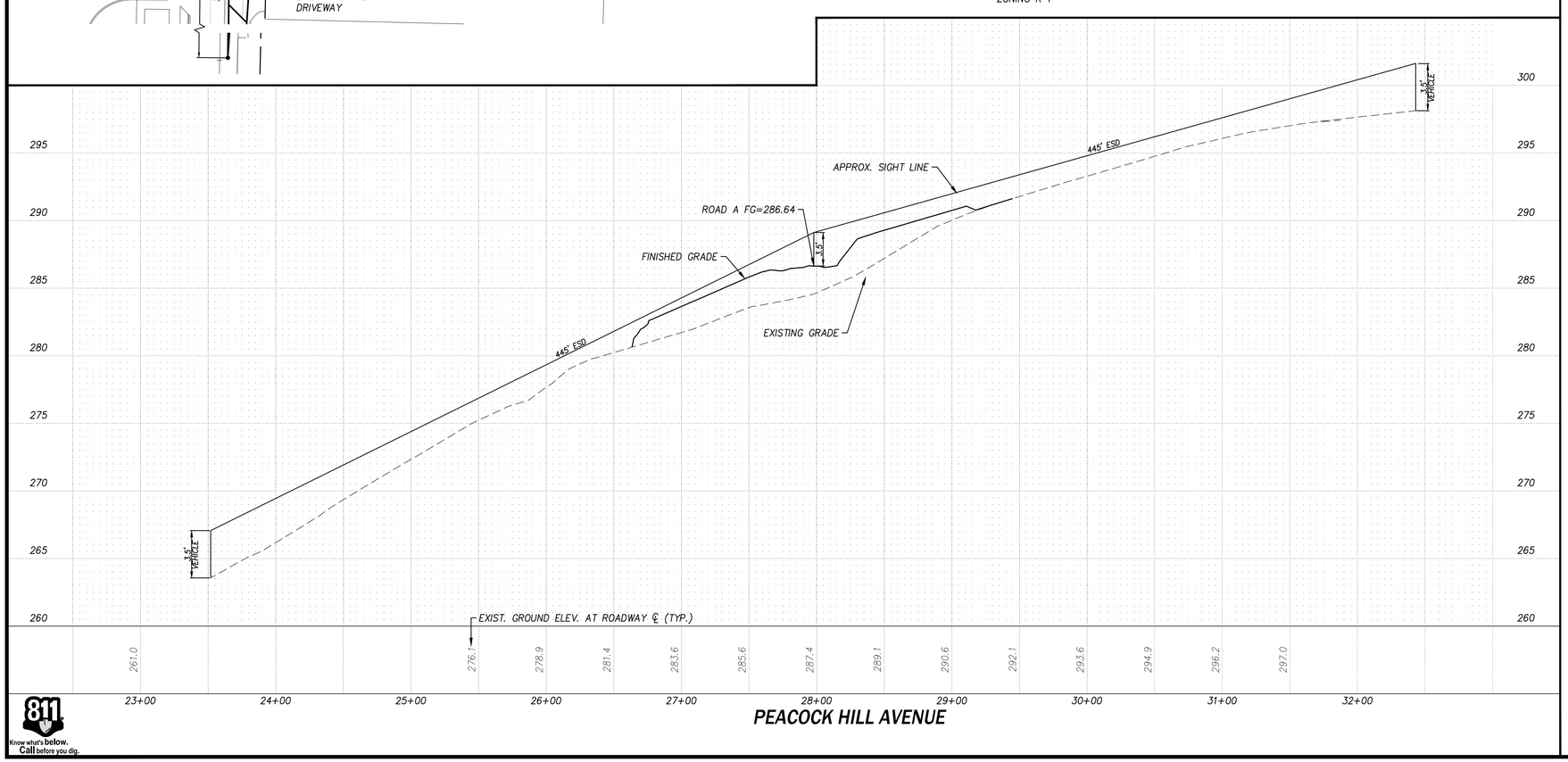

SIGHT DISTANCE

EYE HEIGHT: 3.5 FT

VEHICLE OBJECT HEIGHT: 3.5 FT

POSTED SPEED: 35 MPH

DESIGN SPEED: 40 MPH

REQ'D ESD FOR LEFT TURN FROM STOP: 445 FT
(AASHTO TABLE 9-6)

NOTE: NO ADJUSTMENT OF SIGHT DISTANCE IS RECOMMENDED SINCE BOTH VEHICLES WILL BE AT NEARLY THE SAME GRADE. PASSENGER CARS ASSUMED BASED RESIDENTIAL USE OF MINOR ROAD, WITH WORST CASE LEFT TURN ESD

NOTES:
"NO PARKING-FIRE LANE" SIGNAGE AND MARKING SHALL BE INSTALLED ON BOTH SIDES OF THE ROADWAYS EXCEPT FOR PARALELL PARKING STALL SHOWN ON ROAD A. THIS INCLUDES PAT100 AND THE WEST 30' OF THE VAULT ACCESS ROAD ON BOTH SIDES. THE ENTIRE CUL-DE-SAC SHALL ALSO HAVE "NO PARKING-FIRE LANE" SIGNAGE AND MARKINGS AROUND ITS PERIMETER.

NOTES:
ENGINEER OF RECORD CERTIFIES THAT PROPOSED CONDITIONS WILL HAVE NO OBSTRUCTIONS WITHIN VISION TRIANGLES AS REQUIRED BY AASHTO STANDARDS AND CITY OF GIG HARBOR PUBLIC WORKS STANDARDS

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NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-00013)	MDS	DRG

DARTON RIELY-GIBBONS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

CIRCULATION, CHANNELIZATION, AND STRIPING PLAN

CITY OF GIG HARBOR

PIERCE COUNTY, WASHINGTON

CLIENT

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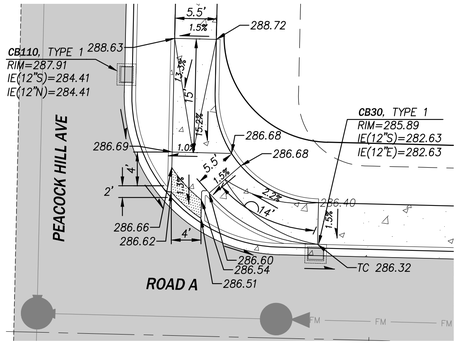
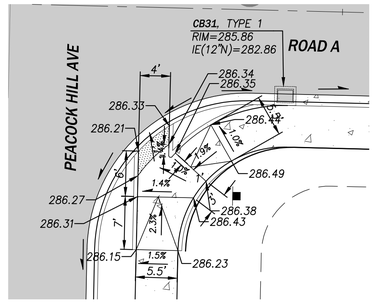


A TYPICAL RAMP DET.

1"=10'

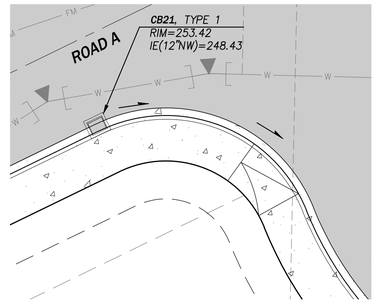
CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
①	20.0'	15.7'	44°56'11"	PC=	STA 1+37.93, 12.00' LT	286.04
				Δ/4=	STA 1+30.29, 13.52' LT	286.44
				Δ/2=	STA 28+08.93, 23.85' RT	286.60
				3Δ/4=	STA 28+15.41, 19.52' RT	287.27
				PT=	STA 28+23.06, 18.01' RT	287.82



B TYPICAL RAMP DET.

1"=10'

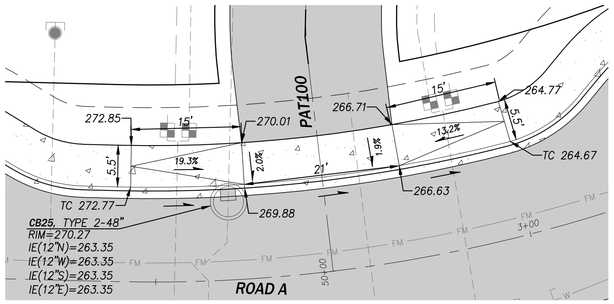
CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
②	20.0'	15.7'	45°03'49"	PC=	STA 27+59.05, 18.01' RT	285.58
				Δ/4=	STA 27+66.72, 19.53' RT	285.89
				Δ/2=	STA 1+23.91, 17.87' RT	286.22
				3Δ/4=	STA 1+30.41, 13.53' RT	286.35
				PT=	STA 1+38.07, 12.00' RT	286.04



C TYPICAL RAMP DET.

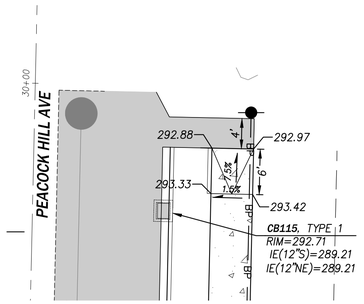
1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
③	20.0'	16.4'	46°59'45"	PC=	STA 3+75.30, 12.00' RT	253.41
				Δ/4=	STA 3+83.27, 13.66' RT	252.28
				Δ/2=	STA 3+89.92, 18.36' RT	251.07
				3Δ/4=	STA 3+94.15, 25.32' RT	249.92
				PT=	STA 3+95.25, 33.39' RT	249.00



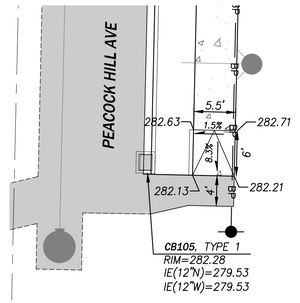
D TYPICAL RAMP DET.

1"=10'



E TYPICAL RAMP DET.

1"=10'



F TYPICAL RAMP DET.

1"=10'

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DANTON R. RILEY-CLARKAS
STATE OF WASHINGTON
54944
REGISTERED PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

RAMP DETAILS AND CURB RETURNS

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

CLIENT

PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
PHONE: (253) 405-8695
EMAIL:
JUSTIN@PROSPECTDEVELOP.COM

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PROJECT NO.
0228-21-001

DRAWING
C5.02

SHEET 29 OF 44

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1/26/2023 10:14 AM MONTANA SAYSANASY

ROADWAY CONSTRUCTION GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT COPY OF CITY OF GIG HARBOR PUBLIC WORKS STANDARDS AND THE MOST CURRENT COPY OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION. IN CASES OF CONFLICT, THE MOST STRINGENT STANDARD SHALL APPLY.
2. THE CONTRACTOR SHALL BE IN COMPLIANCE WITH ALL SAFETY STANDARDS AND REQUIREMENTS AS SET FORTH BY OSHA, WISHA AND THE WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE WSDOT STANDARD PLANS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND/OR THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). PRIOR TO DISRUPTION OF ANY TRAFFIC, A TRAFFIC CONTROL PLAN SHALL BE PREPARED AND SUBMITTED TO THE CITY FOR APPROVAL BY THE ENGINEER OF RECORD. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.
4. ALL CURB AND GUTTER, ROADWAY GRADES, SIDEWALK GRADES AND ANY OTHER VERTICAL AND/OR HORIZONTAL ALIGNMENTS SHALL BE STAKED BY A REGISTERED SURVEYOR LICENSED IN THE STATE OF WASHINGTON.
5. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF GIG HARBOR SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
6. IF CONSTRUCTION IS TO TAKE PLACE IN OTHER JURISDICTION'S RIGHT-OF-WAY (I.E., PIERCE COUNTY, THE STATE, OR OTHER ADJACENT MUNICIPALITIES), THE CONTRACTOR SHALL NOTIFY THE CITY. ALL THE REQUIRED APPROVALS AND PERMITS SHALL BE OBTAINED PRIOR TO STARTING WORK. THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ASSOCIATED PERMIT FEES.
7. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF AN APPROVED SET OF PLANS ON THE CONSTRUCTION SITE AT ALL TIMES.
10. ALL SURVEYING AND STAKING SHALL BE PERFORMED PER THE CORRESPONDING SECTION OF THE CITY OF GIG HARBOR PUBLIC WORKS STANDARDS.
11. TEMPORARY EROSION CONTROL/WATER POLLUTION PREVENTION MEASURES SHALL BE REQUIRED IN ACCORDANCE WITH SECTION 1-07.15 OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND THE CITY OF GIG HARBOR STORMWATER MANAGEMENT AND SITE DEVELOPMENT MANUAL. AT NO TIME WILL SILTS AND DEBRIS BE ALLOWED TO DRAIN INTO AN EXISTING OR NEWLY INSTALLED FACILITY UNLESS SPECIAL PROVISIONS HAVE BEEN DESIGNED. PROJECTS THAT EXCEED ONE ACRE OR MORE IN SIZE ARE REQUIRED TO OBTAIN A GENERAL CONSTRUCTION STORM WATER PERMIT THROUGH THE DEPARTMENT OF ECOLOGY. A COPY OF THIS PERMIT MUST BE SUBMITTED TO THE CITY PRIOR TO THE START OF ANY CONSTRUCTION.
12. WHERE NEW ASPHALT JOINS EXISTING, THE EXISTING ASPHALT SHALL BE CUT TO A NEAT VERTICAL EDGE AND TACKED WITH ASPHALT EMULSION TYPE CSS-1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE NEW ASPHALT SHALL BE FEATHERED BACK OVER THE EXISTING TO PROVIDE FOR A SEAL AT THE SAW CUT LOCATION AND THE JOINT IS TO BE SEALED WITH GRADE AR-4000W PAVING ASPHALT.
13. COMPACTION OF SUB-GRADE, ROCK, AND ASPHALT SHALL BE IN ACCORDANCE WITH THE MOST CURRENT ADOPTED VERSION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.
14. FORM AND SUB-GRADE INSPECTION BY THE CITY IS REQUIRED BEFORE POURING CONCRETE. 24 HOURS' NOTICE TO THE CITY IS REQUIRED FOR FORM INSPECTION.
15. SEE THE CITY OF GIG HARBOR PUBLIC WORKS STANDARDS, SECTION 2B.200, FOR TESTING AND SAMPLING FREQUENCIES.
16. ALL SIGN SHEETING SHALL BE HIGH INTENSITY PRISMATIC RETROREFLECTIVE AND IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGHT DISTANCE

EYE HEIGHT: 3.5 FT

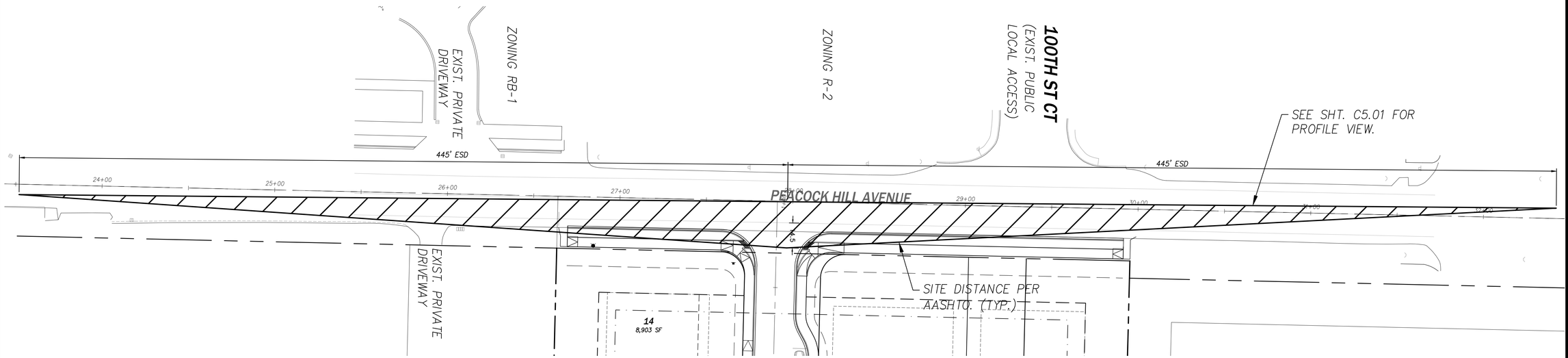
VEHICLE OBJECT HEIGHT: 3.5 FT

POSTED SPEED: 35 MPH

DESIGN SPEED: 40 MPH

REQ'D ESD FOR LEFT TURN FROM STOP: 445 FT
(AASHTO TABLE 9-6)

NOTE: NO ADJUSTMENT OF SIGHT DISTANCE IS RECOMMENDED SINCE BOTH VEHICLES WILL BE AT NEARLY THE SAME GRADE. PASSENGER CARS ASSUMED BASED RESIDENTIAL USE OF MINOR ROAD, WITH WORST CASE LEFT TURN ESD



NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

DANTON RILEY-CLARKAS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

TRANSPORTATION DETAILS

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
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PROJECT NO.
0228-21-001

DRAWING
C5.101

SHEET 30 OF 44

0 5 10
VERT. IN FEET
0 50 100
HORIZ. IN FEET

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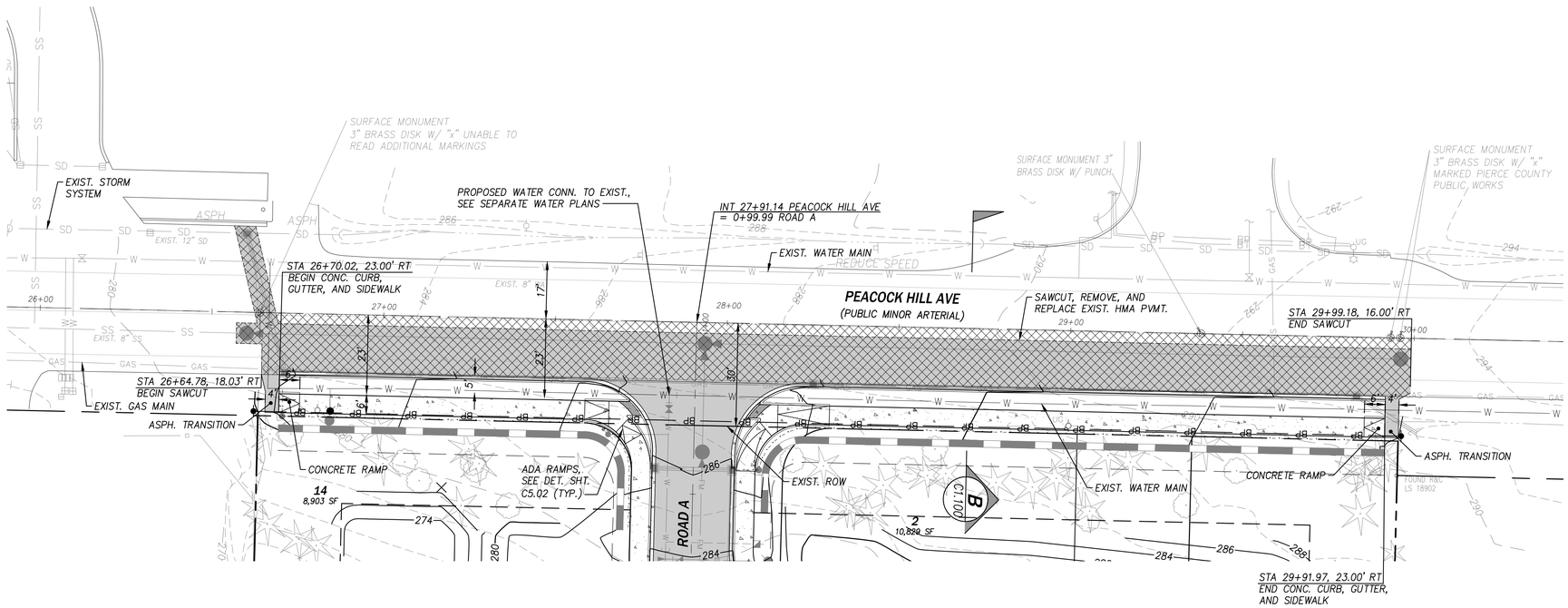

LEGEND

HMA PVMT. OVERLAY

ASPH. HATCH

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DANTON R. RILEY-CLIFKENS
STATE OF WASHINGTON
54944
REGISTERED
PROFESSIONAL ENGINEER
1/25/2023

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

FRONTAGE IMPROVEMENTS PAVING

CITY OF GIG HARBOR

PIERCE COUNTY, WASHINGTON

CLIENT

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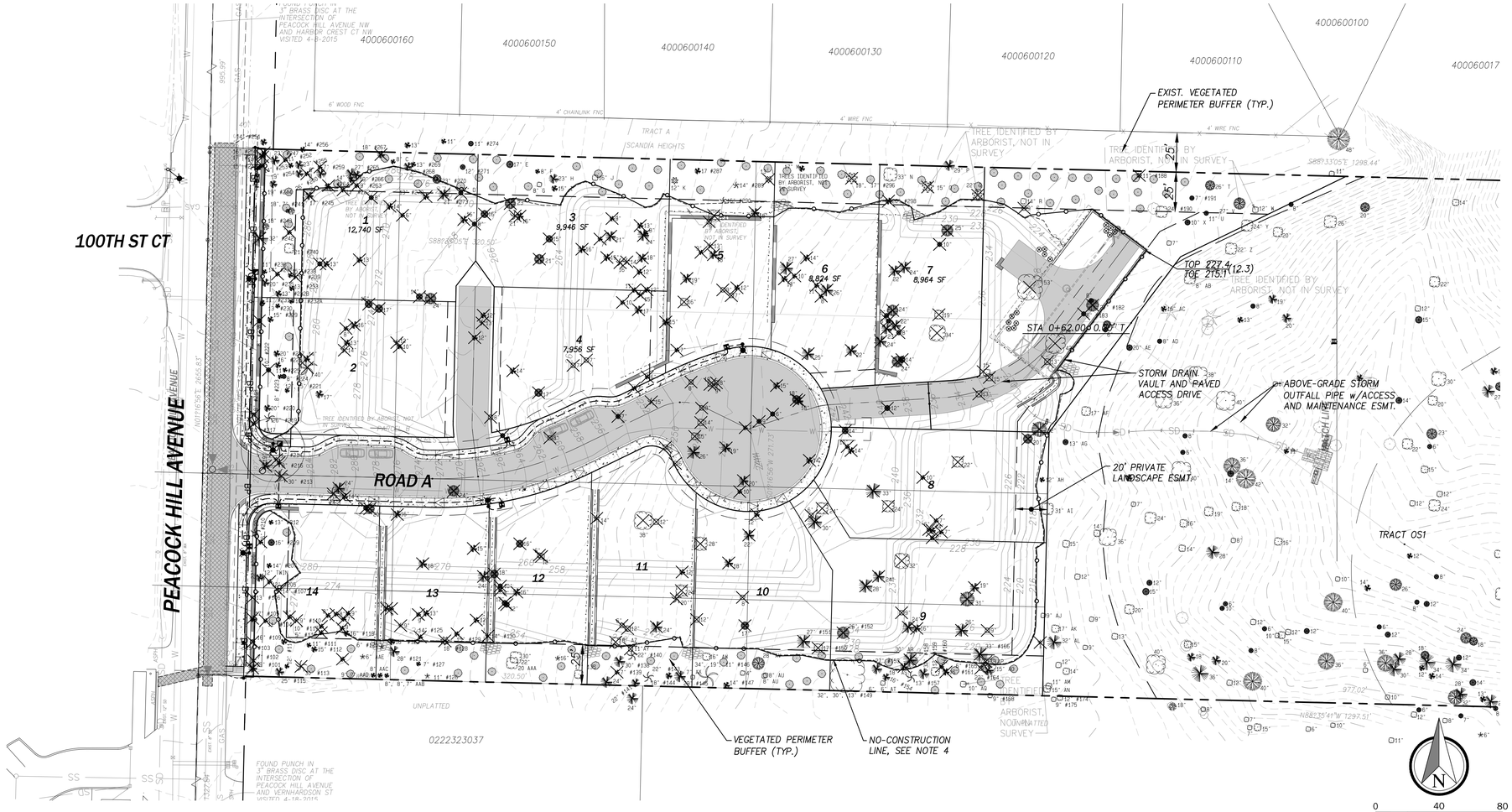
DRAWING
C6.00

SHEET 31 OF 44

0 5 10
VERT. IN FEET
0 20 40
HORIZ. IN FEET

PTN. SEC. 32, TWP 22 N, R2E W.M.



NOTES:

1. THIS PLAN HAS BEEN PREPARED TO ILLUSTRATE COMPLIANCE WITH APPLICABLE PROVISIONS OF GIG HARBOR MUNICIPAL CODE (GHMC) CHAPTER 17.78 REGARDING PRESERVATION OF SIGNIFICANT TREES AND NATIVE VEGETATION.
2. THE SITE IS FULLY FORESTED IN ITS CURRENT PRE-DEVELOPED CONDITION. THE EXISTING SIGNIFICANT TREES SHOWN REPRESENT ONLY THOSE SIGNIFICANT TREES SURVEYED AND EVALUATED BY THE PROJECT ARBORIST TO MAINTAIN A PERMANENT VEGETATED BUFFER IN ACCORDANCE WITH GHMC 17.78.050 AND 17.78.060. TREES WITHIN THE DEVELOPABLE PORTION OF THE SITE (PARCEL 022232-3134) WILL BE REMOVED TO FACILITATE THE PROJECT PROPOSED SITE IMPROVEMENTS EXCEPT FOR THOSE TREES IN CLOSE PROXIMITY TO THE EDGE OF THE VEGETATED PERIMETER BUFFER WHERE SUCH TREES HAVE THE POTENTIAL TO REMAIN VIABLE WITH THE PROPOSED SITE IMPROVEMENTS.
3. GRADING INTRUSIONS INTO THE DRIP LINE OR 10-FOOT BUFFER TO THE DRIP LINE OF TREES WITHIN THE VEGETATED PERIMETER BUFFER IS PROPOSED. THESE INTRUSIONS WILL BE PERFORMED WITH CARE AND UNDER THE DIRECTION OF THE PROJECT ARBORIST AS ALLOWED BY GHMC 17.78.050. REMOVAL OF SOME SELECT TREES WITHIN THE BUFFER ARE ALSO PROPOSED TO FACILITATE SITE GRADING. SUPPLEMENTAL TREES WILL BE PLANTED TO MITIGATE REMOVED TREES AS WELL AS TO IMPROVE THE VEGETATIVE SCREEN PROVIDED BY THE EXISTING TREES AS SHOWN ON THE LANDSCAPE PLAN (DRAWING L1.00). THE GRADING INTRUSIONS INTO DRIP LINES OR BUFFERS AND THE LIMITED TREE REMOVAL ARE REQUIRED TO ACCOMMODATE THE STEEP SITE TOPOGRAPHY AND REDUCE THE VISUAL IMPACTS OF PERIMETER RETAINING WALLS.
4. THE CLEARING AND GRADING SHOWN AND ANY IMPROVEMENTS WITHIN THE 10-FOOT NO CONSTRUCTION ZONE SHALL BE ALLOWED ONLY WHEN A QUALIFIED ARBORIST PROVIDES WRITTEN DOCUMENTATION THAT PROPOSED CONSTRUCTION ACTIVITY WITHIN THE 10-FOOT SETBACK WILL NOT HARM EXISTING VEGETATION WITHIN THE DESIGNATED LANDSCAPE OR BUFFER AREA.
5. THE CLEARING AND GRADING SHOWN WITH THIS PRELIMINARY PLAT AND ANY OTHER IMPROVEMENTS THAT MAY BE PROPOSED WITHIN THE 10-FOOT NO CONSTRUCTION ZONE WITH SUBSEQUENT PERMITS WILL BE ALLOWED ONLY AFTER APPROVAL BY THE CITY OF A WRITTEN STATEMENT FROM A QUALIFIED ARBORIST ACKNOWLEDGING THAT THE PROPOSED CONSTRUCTION ACTIVITY WITHIN THE 10-FOOT SETBACK WILL NOT HARM EXISTING VEGETATION WITHIN THE DESIGNATED LANDSCAPE OR BUFFER AREA.

LEGEND

- 15" #109 / 15" / 32" AL — EXIST. SIGNIFICANT TREE
- EXIST. SIGNIFICANT TREE TO BE REMOVED
- TREE PROTECTION FENCING
- REPLACEMENT TREE, SEE LANDSCAPE PLAN, L1.00

SIGNIFICANT TREE CALCULATIONS

17.99.240A: LIMIT CLEARING TO 50%
EXISTING SITE: 10.69 ACRES
CLEARED AREA: 4.09 ACRES (38.3%)

17.99.240D: RETAIN 25% OF SIGNIFICANT TREES

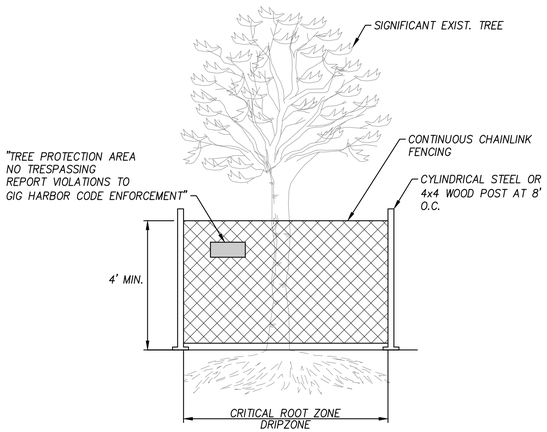
EX. SIGNIFICANT TREES:	667
TREES TO BE SAVED:	448
% SAVED:	67.5%

REFER TO ARBORIST REPORT FOR ADDITIONAL INFORMATION.

17.78.060D TREE RETENTION IN 25' PERIMETER BUFFER

EX. SIGNIFICANT TREES WITHIN 25' BUFFER:	149
NON-VIABLE TREES TO BE REMOVED PER ARBORIST:	29
VIABLE TREES TO BE REMOVED FOR CONSTRUCTION:	21
REMAINING SIGNIFICANT TREES:	99
TOTAL DBH OF VIABLE TREES TO BE REMOVED:	250"

17.78.100 ALTERNATE LANDSCAPE OPTION
COMPENSATION FOR TREES TO BE REMOVED WITHIN THE 25' BUFFER IS PROPOSED AS FOLLOWS:
97 3' HT CONIFERS WITH NATIVE SHRUBS AND GROUNDCOVERS THROUGHOUT ALL DISTURBED AREAS. SEE THIS PLAN AND LANDSCAPE PLAN. SEE ALSO ARBORIST REPORT AND DESIGN NARRATIVE FOR SUPPORTING DESCRIPTION.



TREE PROTECTION FENCE DETAIL

NOT TO SCALE

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STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT DAVID STUART ANDREWS CERTIFICATE NO. 439

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

SIGNIFICANT VEGETATION AND TREE RETENTION PLAN

CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

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SHEET 32 OF 44

PTN. SEC. 32, TWP 22 N, R2E W.M.

PRESERVE EXISTING SHRUBS AND GROUNDCOVER IN THIS AREA. INFILL WITH NEW MATERIAL WHERE NECESSARY TO MEET CITY STANDARDS

3
9,946 SF

5
8,065 SF

6
8,824 SF

7
8,964 SF

SEE INSET PLAN BELOW

SD100
STORM DRAINAGE
PRIVATE OPEN SPACE
19,863 SF

4
7,956 SF

2
10,829 SF

TRACT A
(ACCESS & UTILITY)
24,645 SF

CONTINUE RE-VEGETATION AS NEEDED THROUGHOUT DISTURBED AREA

8
9,564 SF

11
9,325 SF

12
7,744 SF

14
8,903 SF

13
7,564 SF

10
9,449 SF

9
13,751 SF

SEE PLAN ABOVE

PRESERVE EXISTING SHRUBS AND GROUNDCOVER IN THIS AREA. INFILL WITH NEW MATERIAL WHERE NECESSARY TO MEET CITY STANDARDS

FIELD LOCATE TREES IN BUFFER TO AVOID IMPACTING EXISTING TREES, TREE ROOTS, AND UNDERSTORY PLANTS.

0 20 40
PLAN IN FEET

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STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 429

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

LANDSCAPE PLAN

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

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2913 5TH AVE NE, SUITE 201
PUYALLUP, WA 98372
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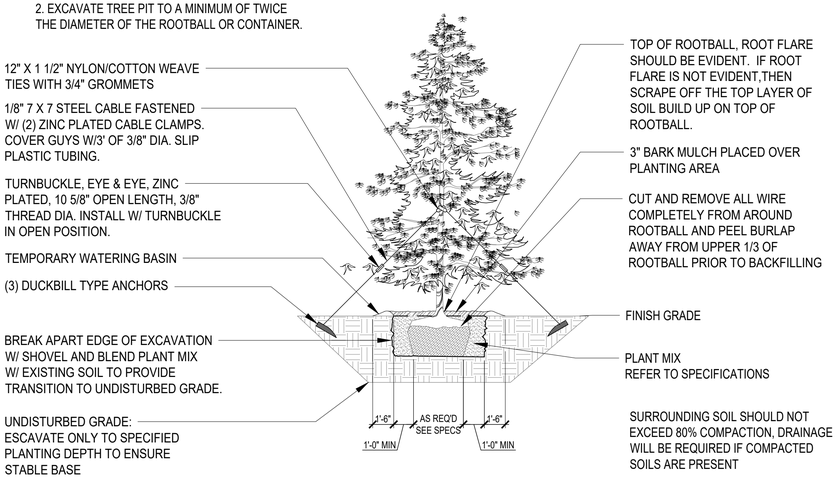
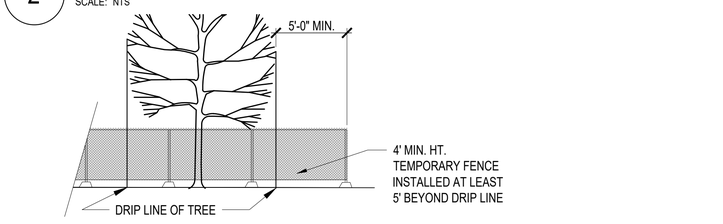
L1.00

SHEET 33 OF 44

NOTES:
1.EXAMINE ENTIRE TREE AND REMOVE ALL NURSERY TAGS, ROPE, STRING, OR SURVEYORS TAPE TO PREVENT FUTURE GIRDLING.
2. EXCAVATE TREE PIT TO A MINIMUM OF TWICE THE DIAMETER OF THE ROOTBALL OR CONTAINER.



1 EVERGREEN TREE PLANTING DETAIL
SCALE: NTS



2 DECIDUOUS TREE PLANTING DETAIL
SCALE: NTS

1. MINIMUM 4' HT. TEMPORARY FENCE SHALL BE PLACED AT THE DESIGNATED LIMITS OF DISTURBANCE OF THE TREE TO BE SAVED. FENCING SHALL COMPLETELY ENCIRCLE TREE(S). AVOID DRIVING FENCE POSTS OR STAKES INTO ROOTS.
2. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION. FOR ROOTS OVER (1) ONE INCH DIAMETER DAMAGED DURING CONSTRUCTION; MAKE A CLEAN STRAIGHT CUT TO REMOVE THE DAMAGED PORTION OF THE ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE.
3. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE RESPONSIBLE OFFICIAL GOVERNING THE WORK. WORK WITHIN THE PROTECTION FENCE SHALL BE DONE MANUALLY.

3 TREE PROTECTION FENCING
SCALE: NTS

PLANTING NOTES

1. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER THE CONTRACT DOCUMENTS AND SPECIFICATIONS, AND PER CITY OF GIG HARBOR STANDARDS.

2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE GENERAL CONTRACTOR AND IF NECESSARY OTHER SUB CONTRACTORS AS REQUIRED TO ACCOMPLISH PLANT MATERIAL INSTALLATION.

3. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO STARTING WORK.

4. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY AMERICANHORT. ALL TREES AND SHRUBS OF THE SAME SPECIES AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM UNLESS OTHERWISE NOTED ON THE PLANS.

5. CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN IN THE CONTRACT DOCUMENTS. DISCREPANCIES IN QUANTITIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT IMMEDIATELY.

6. STAKE LOCATIONS OF PROPOSED PLANT MATERIAL PRIOR TO EXCAVATING PLANT PITS. LOCATION OF ALL PLANT PITS TO BE DETERMINED IN THE FIELD WITH THE LANDSCAPE ARCHITECT. PAINT OUTLINES FOR PLANT BEDS AND GROUND COVER, FINAL LAYOUT TO BE APPROVED BY LANDSCAPE ARCHITECT.

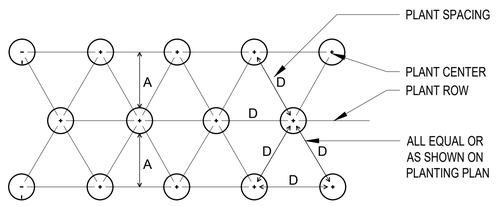
7. CONTRACTOR SHALL FURNISH PLANT MATERIAL FREE OF PESTS OR PLANT DISEASES. PRESELECTED OR "TAGGED" MATERIAL MUST BE INSPECTED BY THE CONTRACTOR AND CERTIFIED PEST AND DISEASE FREE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO WARRANTY ALL PLANT MATERIAL BASED ON THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING HARDSCAPE OR SOFTSCAPE MATERIALS DAMAGED DURING PLANTING OPERATIONS.

9. ALL LANDSCAPE AREAS SHALL RECEIVE 3" SETTLED DEPTH OF ORGANIC BARK MULCH THROUGHOUT. HAND DETAIL BY REMOVING EXCESS OR ACCUMULATED MULCH FROM AROUND THE BASE OF ALL PLANTS.

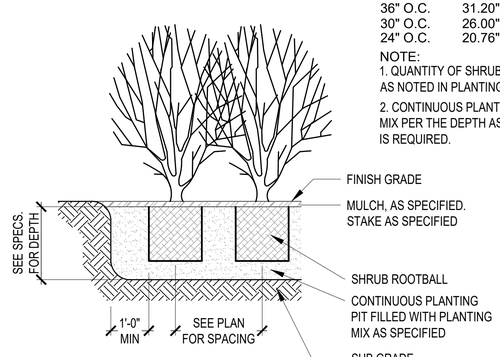
10. ALL SHRUBS AND GROUNDCOVER SHALL BE PLANTED USING A TRIANGULATED METHOD, REFER TO PLANT MATERIAL INSTALLATION DETAILS.

11. ALL LANDSCAPE AREAS SHALL RECEIVE AN 8 INCH SETTLED DEPTH OF A 3-WAY SOIL MIX: 1/3 COMPOST, 1/3 SAND, AND 1/3 NATIVE SOIL/LOAM SOIL. ROTO-TILL EXISTING SUBSOIL TO A DEPTH OF 12" PRIOR TO PLACING TOPSOIL. INCORPORATE THE IMPORT SOIL WITH THE NATIVE SUBSOIL BY ADDITIONAL ROTO-TILLING. CONFORM TO CITY OF GIG HARBOR REQUIREMENTS.



SPACING "D"	ROW "A"	NUMBER OF PLANTS/SQ. FT.
5' O.C.	51.96"	0.04
4' O.C.	41.52"	0.07
36" O.C.	31.20"	0.12
30" O.C.	26.00"	0.18
24" O.C.	20.76"	0.28

NOTE:
1. QUANTITY OF SHRUBS AND SPACING AS NOTED IN PLANTING SCHEDULE.
2. CONTINUOUS PLANTING PITS FILLED WITH PLANTING MIX PER THE DEPTH AS NOTED IN THE SPECIFICATIONS IS REQUIRED.



4 SHRUB PLANTING DETAIL
SCALE: NTS

PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
DECIDUOUS TREES					
	Quercus garryana	*Garry Oak*	2" Cal.	See Plans	
	Prunus emarginata v. mollis	*Bitter Cherry*	2" Cal.	See Plans	
	Acer macrophyllum	*Bigleaf Maple*	2" Cal.	See Plans	
	Acer macrophyllum	*Bigleaf Maple*	3' Min. Ht.	See Plans	Existing Vegetation Buffer Area
	Acer circinatum	*Vine Maple*	2" Cal.	See Plans	
	Acer circinatum	*Vine Maple*	3' Min. Ht.	See Plans	Existing Vegetation Buffer Area
	Gleditsia triacanthos 'Imcole'	*Imperial Honeylocust*	2" Cal.	See Plans	
EVERGREEN TREES					
	Calocedrus decurrens	*Incense Cedar*	6' Min. Ht.	See Plans	
	Calocedrus decurrens	*Incense Cedar*	3' Min. Ht.	See Plans	Existing Vegetation Buffer Area
	Sequoia giganteum	*Giant Sequoia*	3' Min. Ht.	See Plans	Existing Vegetation Buffer Area
	Pinus contorta	*Shore Pine*	6' Min. Ht.	See Plans	
	Pinus contorta	*Shore Pine*	3' Min. Ht.	See Plans	Existing Vegetation Buffer Area
	Thuja plicata	*Hogan's Cedar*	3' Min. Ht.	See Plans	
	Thuja plicata	*Hogan's Cedar*	3' Min. Ht.	See Plans	Existing Vegetation Buffer Area
SHRUBS					
	Vaccinium ovatum	*Evergreen Huckleberry*	2 Gal.	See Plans	
	Gaultheria shallon	*Salal*	2 Gal.	See Plans	
	Ledum groelandicum	*Labrador Tea*	2 Gal.	See Plans	
	Mahonia aquifolium	*Tall Oregon Grape*	5 Gal.	See Plans	
	Physocarpus capitatus	*Pacific Ninebark*	5 Gal.	See Plans	
	Philadelphus lewisii	*Mock Orange*	5 Gal.	See Plans	
	Symphoricarpos albus	*Snowberry*	5 Gal.	See Plans	
	Ribes sanguineum	*Red-flowering Currant*	2 Gal.	See Plans	
	Spirea douglasii	*Douglas Spirea*	1 Gal.	See Plans	
FERNS AND GRASSES					
	Polystichum munitum	*Sword Fern*	1 Gal.	See Plans	
	Blechnum spicant	*Deer fern*	1 Gal.	See Plans	
GROUNDCOVERS					
	Mahonia repens	*Creeping Mahonia*	1 Gal.	⅓ of each type, 24" o.c., plant in groups of 12-18 of the same species	
	Arctostaphylos uva-ursi	Kinnikinnick	1 Gal.		
	Fragraria chiloensis	*Coastal Strawberry*	1 Gal.		
OTHERS					
	EXISTING VEGETATION AREA	GHMC 17.78.060 Retain existing vegetation or, where clearing is required, replace with 3 shrubs / 200 SF of cleared area and groundcover to provide 75% coverage within 3 years. 33% Vaccinium ovatum, 33% Symphoricarpos albus, 33% Mahonia aquifolium			
	SOD OR SEEDED LAWN	See specifications			

NO.	DATE	REVISION	BY	CK.
2	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-00011)	MDS	DRG

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 4329

THE RESERVE
ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS
PLANT LEGEND & DETAILS
CITY OF GIG HARBOR — PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
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PROJECT NO.
0228-21-001

DRAWING
L1.10

SHEET 34 OF 44

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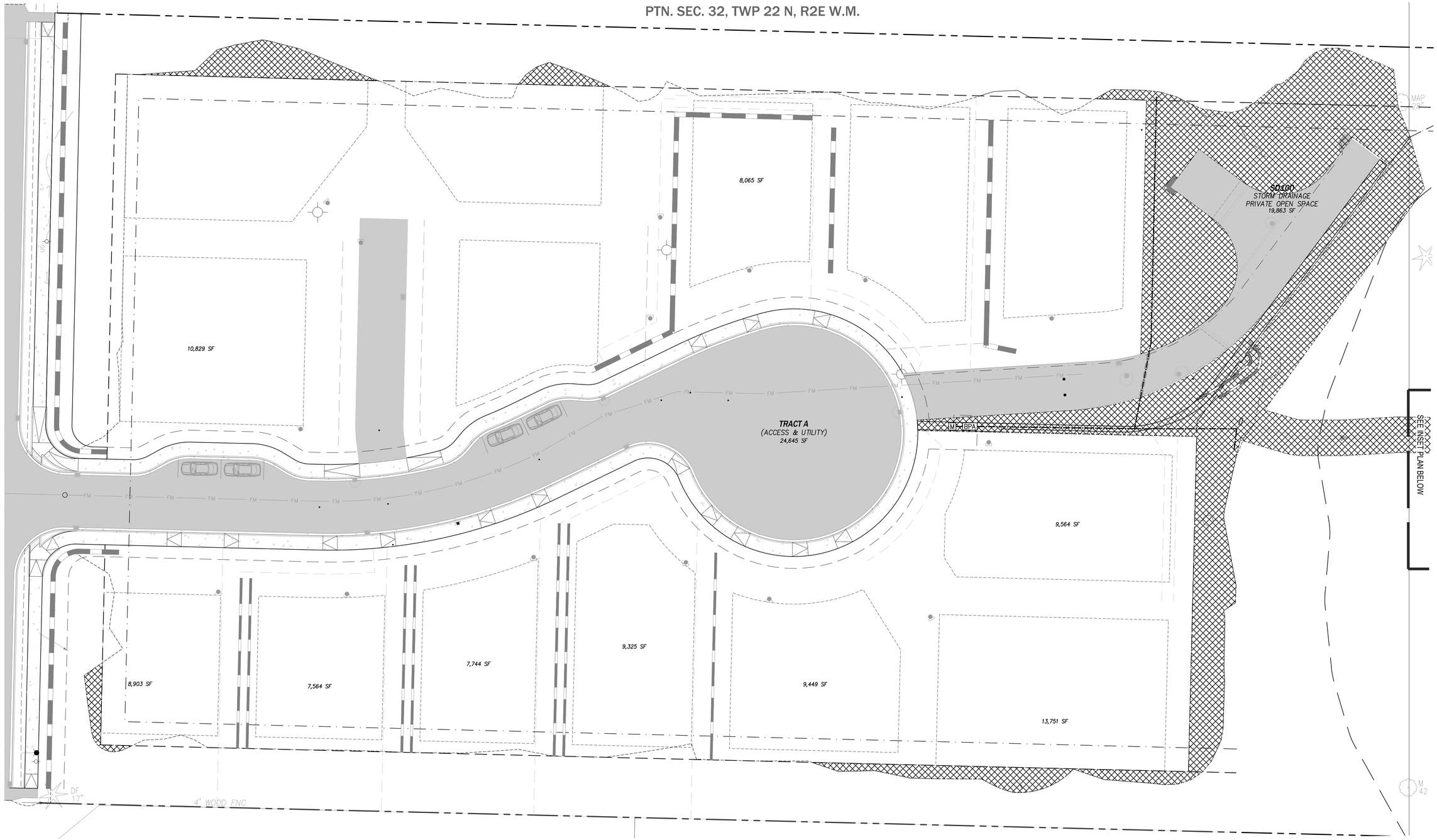

LEGEND

AREA TO BE IRRIGATED

0 20 40
PLAN IN FEET

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

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NO.	DATE	REVISION	BY	CK.
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STATE OF WASHINGTON
REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 429

THE RESERVE

ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS

IRRIGATION PLAN

CITY OF GIG HARBOR PIERCE COUNTY, WASHINGTON

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PROJECT NO.
0228-21-001

DRAWING
L2.00

SHEET 35 OF 44

LANDSCAPE SPECIFICATIONS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Drawings and general provisions of the contract including General and Supplementary Conditions apply to the work described in this specification.

a. Work included: Provide all labor, materials, transportation and equipment necessary for the complete installation of all project landscaping. Landscaping includes review of subgrades, import and placement of topsoil, specialty topsoil, mulch and other materials, rototilling, fertilizer and amendment application compaction, fine grading, all temporary and permanent seeding, tree, shrub and groundcover planting, staking, pruning, watering and other maintenance until final acceptance and other items as described herein and as necessary to deliver to the owner a complete, thriving healthy landscape installation.

1.2 QUALITY ASSURANCE

A. All work shall be performed by experienced landscape installers. The installer shall maintain an experienced full time field supervisor on site when topsoil placement and planting is in progress.

B. Soil and other material testing shall be performed by a licensed independent laboratory that specializes in the type of testing to be performed.

C. Reference standards: "American Standard for Nursery Stock" Current Edition; Hortus III – Current Edition

D. Pre installation conference. Conduct a pre installation conference on site with the Landscape Architect, general contractor and owner's representative prior to beginning the work.

1.3 PROJECT CONDITIONS

A. Work only within areas designated for new landscape. Do not disturb existing vegetation outside of limits of work.

B. Coordinate work with other trades. Do not damage existing pavements, curbs, underground and overhead utilities, or other existing improvements. Do not store or transport landscape materials over or upon existing pavements in such a manner as to damage or stain existing surfaces.

C. The contractor is responsible for any replacement, cleaning or other remediation necessary as a result of landscape installation operations.

1.4 SUBMITTALS

A. Import Topsoil:

Provide documentation of the source for Import Topsoil and a 2 gallon sample.
Obtain an agricultural suitability analysis of the import topsoil from an accredited soils laboratory at the contractors cost. The analysis shall include soil structure analysis by percentage, percentage of organic matter by weight, pH, percentage N, P, K, heavy metals and trace elements, salinity, recommendations for amendments and an opinion of the suitability of the soils for the intended use.

B. Provide certification of Grass Seed from seed vendor for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

C. Provide product certification for all fertilizers, soil amendments and other imported materials.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Labeling: Furnish standard products in unopened manufacturer's standard containers bearing original labels showing quantity, analysis and name of manufacturer. Plant material shall be labeled by genus, species and variety and name of grower.

B. Storage: Store products with protection from weather or other conditions which would damage or impair the effectiveness of the product.

C. Plant material shall be protected from wind and sun at all times. Plant material stored on site for longer than 24 hours prior to planting shall be heeled in to mulch or topsoil to protect root balls. Provide temporary irrigation.

D. Anti-Desiccant: At Contractor's option, spray all evergreen or deciduous plant material in full leaf immediately before transporting with anti-desiccant. Apply an adequate film over trunks, branches, twigs and foliage.

E. Digging: Dig ball and burlap plants with firm, natural balls of earth of diameter not less than that recommended by USDA Standard for Nursery Stock, and of sufficient depth to include the fibrous and feeding roots.

1.6 WARRANTY PERIOD

A. Contractor shall continuously maintain the installed landscape until final acceptance of the project. The Warranty Period begins at final acceptance. Contractor shall warrant that all trees, shrubs and groundcovers installed under this contract will be healthy and in flourishing condition, exhibiting active growth one year from final acceptance. Plants shall be free of dead or dying branches and branch tips, with all foliage of a normal density, size and color.

B. Replacements: As soon as weather conditions permit, replace, without cost to Owner all dead plants and all plants not in a vigorous, thriving condition, as described above and as determined by Project Manager during and at the end of Warranty Period. All replacement plants shall have similar warranty for one year from date of replacement planting.

C. Exclusions: Contractor shall not be held responsible for failures due to neglect by Owner, vandalism, etc., during Warranty Period. Report such conditions in writing to the Landscape Architect.

PRODUCTS

2.1 IMPORT TOPSOIL

A. Commercially manufactured topsoil consisting of a uniform blend of sandy loam, sand and compost. Material shall contain no weed seed, roots, rocks or other materials over ½" diameter, clods, clay lumps, construction debris or other deleterious materials harmful to plant growth. Ph between 5.5 and 7.5. Minimum 5% organic content required per DOE BMP T5.13. Pacific Topsoils Supreme Mix or approved equal.

B. Compost for use in import topsoil shall conform to WAC 173-350-220, "compost facility standards". Provide copy of current annual test report from compost facility.

2.2 PLANT MATERIALS

A. General: Verify that all container stock has been grown in the containers in which delivered for at least two (2) months, but not over two (2) years for shrubs or one (1) year for perennial and groundcovers. Do not install container plants that have cracked or broken balls of earth when taken from container.

1. Growing Conditions: Plants shall be nursery-grown in accordance with good horticultural practices under similar climatic conditions to those of the project for at least two years unless otherwise specifically authorized. Collected material shall be identified for approval by the Landscape Architect.

2. Appearance: All plants shall be exceptionally heavy, symmetrical, tightly knit, and so trained or favored in development and appearance as to be superior in form for their species, with regard to number of branches, compactness and symmetry.

3. Vigor: Plants shall be sound, healthy and vigorous, well branched and densely foliated when in leaf. They shall be free of disease, insect pests, eggs, or larvae. They shall have healthy, well-developed root systems. Plants shall be free from physical damage or adverse conditions that would prevent thriving growth.

B. Condition of Root System: Samples must prove to be completely free of circling, kinked or girdling trunk surface and center roots and show no evidence of a root-bound condition.

C. Measurements:

1. General: Measure plants when branches are in their normal upright position. Height and spread dimensions specified refer to main body of plant and not branch tip to tip. Take caliper measurement at a point on the trunk 6 in. above natural ground line for trees up to 4 in. in caliper and at a point 12 in. above the natural ground line for trees over 4 in. in caliper. Evergreen trees shall be measured from the base of the tree to the midpoint of the top central leader.

2. Size Range: Do not use plant materials less than the minimum specified size. If a size range is specified, at least 40 percent of the plants shall be as large as the maximum size specified. The measurements specified are the measurements after pruning, where pruning is required. Plants that meet the measurements specified, but do not possess a normal balance between height and spread shall be rejected.

3. Substitutions: Substitution of species or variety is not allowed without the prior written approval of the Landscape Architect. Approved plants larger than specified may be used if accepted. Use of such plants shall not increase Contract price. If larger plants are accepted, increase the rootball in proportion to the size of the plant.

D. Pruning: Do not prune plants before delivery. For pruning after installation, see Section 02970 - Landscape Maintenance.

E. Condition: Trees which have multiple leaders, unless specified, or damaged or crooked leaders will be rejected. Trees having a main leader shall not have been headed back. Trees with abrasions of the bark, sunscalds, disfiguring knots, or fresh cuts of limbs over 3/4 in. which have not completely callused, will be rejected.

2.3 LAWN SEED

A. Lawn Mix: Minimum three Cultivars (1/3 of each) as approved. Seed at minimum rate of 8 lbs./1000 s.f. or greater if recommended by Supplier.

	Proportions by Weight	*Percent Purity*	*Percent Germination*
Perennial Rye (3-way blend)	70%	98%	90%
Fine Fescue	20%	98%	90%
Kentucky Bluegrass	10%	98%	90%

B. Hydromulch: Silva-fiber or approved at minimum rate of 2000 lbs/acre.

C. Tackifier: Use on all sloped areas greater than 5:1 or at manufacturers suggested rate.

D. Hydromulch: Silva-fiber or approved at minimum rate of 2000 lbs/acre.

E. Tackifier: Use on all sloped areas greater than 5:1 or at manufacturers suggested rate.

2.4 TURFGRASS SOD

A. Premium quality, 100% weed, disease and insect free sod complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications for Turfgrass Sodding". Furnish sod of uniform density, color and texture, strongly rooted and capable of vigorous growth and development when planted

2.5 COMMERCIAL FERTILIZERS

A. Top-dress Fertilizer: Complete fertilizer, 50 percent of the nitrogen to be derived from natural organic sources or urea-form. Available phosphoric acid shall be from superphosphate, bone or tankage. Potash shall be derived from muriate of potash containing 60 percent potash:

16% Nitrogen
6% Phosphoric Acid
8% Potash

B. Perennials: Diammonium Phosphate (18-46-0).

2.6 STAKING MATERIALS

A. Tree Stakes: Rough-sawn, sound, new hardwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches by length indicated, pointed at one end.

B. Wire Ties: 11 gauge, single strand, galvanized steel with rubber, two-ply, dark-colored, ½"-5/8" diameter protective hose loops or approved equal.

2.7 TREE PROTECTION MATERIALS

A. Tree Wrap: Tree wrapping material shall be first quality, 4" wide bituminous, impregnated tape, corrugated or crepe brown paper, specifically manufactured for tree wrapping and having a quality to resist insect infestation.

PART 3 - EXECUTION

3.1 SOIL PREPARATION

A. General:

1. Moisture Content: Do not work soil when moisture content is so great that excessive compaction will occur, nor when it is so dry that dust will form in air or that clods will not break readily. Apply water, if necessary to bring soil to an optimum moisture content for tilling and planting. Maintain within 2 percent above or below optimum moisture content at all times during the work.

2. Clearing of Debris: Clear all planting areas of stones 2 in. diameter and larger, weeds, debris and other extraneous materials prior to amending existing soil and incorporating imported topsoil.

3. Weed Control: Weeds may require spraying with Round-up for eradication prior to cultivating them into the soil. Follow manufacturer's specifications for application and treatment.

3.2 HYDROSEEDING

A. Hydroseed only from April 30 thru Sept 1. Outside of this window install sod in lieu of hydroseed.

B. Hydroseed using seed, hydromulch and Tackifier in quantities as specified herein. Use Tackifier on all slopes greater than 1:5.

C. Immediately remove all overspray from walks, planting beds and other surfaces.

D. Provide temporary flagging completely surrounding all seeded areas to deter foot traffic. Remove flagging after first mowing.

3.3 WEED CONTROL

A. Apply pre-emergent weed control to all areas to receive woody, non-lawn ornamental planting after amendment of topsoil.

B. Spray all weeds that may have established prior to planting operations with post emergent herbicide. If rain occurs within 6 hours of application, reapply the product. Wait at least 7 days after last application to rake, till, or re-plant.

C. Apply strictly according to manufacturer's current printed specifications.

3.4 REPLANT REVIEW

A. General: Do not commence planting work prior to acceptance of soil preparation.

B. Finish Grades: Finish grades for all planting areas shall have been established by in accordance to the grading plans. Verify that all grades are within 1 in. plus or minus of required finish grade and that all soil amendments have been installed as specified. Fine rake planting beds prior to planting shrubs.

3.5 LAYOUT AND EXCAVATION OF PLANTING AREAS

A. Layout and Staking: Lay out all trees, shrubs and container locations as shown on Drawings. Landscape Architect reserves the right to review and adjust plant locations.

B. Review: Locations of plants will be checked in the field and will be adjusted to exact position before planting begins. Right is reserved to refuse review at this time if, in the Landscape Architect's opinion, an insufficient quantity of plants is available.

C. Equipment for Digging Plant Pits: Use of an auger or vernier spade to dig plant pits is prohibited. Backhoe is acceptable, with scarification of the tree pit after excavation - see below.

D. Plant Pits: Excavate tree and shrub to a minimum of twice the diameter of the ball or container, in accordance with Drawings.

3.6 PLANTING OPERATIONS

A. Handling and De-potting of Plant Materials:

1. Metal Containers: Cut can on two sides with accepted cutting tool. Do not use spade.

2. Plastic Containers: Tip container to horizontal orientation and carefully remove shrub. Support rootball during installation to prevent cracking or shedding of soil.

3. Balled and Burlap Plants: Avoid all damage to rootballs. If rootball is cracked or broken during handling, plant will be rejected. Lift and carry by bottom of ball only. Do not remove wrapping until plant is set in plant pit. Cut and remove all wire completely from around root ball and peel burlap away from upper 1/2 of rootball prior to backfilling.

B. Installation:

1. Scarification:

a. Plant Rootball: After removing plant from container, scarify the sides of the rootball to a depth of 1 in. at four to six equally-spaced locations around the perimeter of the ball. Completely sever or remove all circling roots over 1/4 in. diameter.

b. Plant Pit: Excavate deep enough to accommodate the ball and bed of prepared back fill mix. Compact before setting of plants. Scarify sides of plant pit, thoroughly breaking up all surfaces and eliminating all "glazed" areas.

2. Positioning: Top of rootball should be placed at same level that the plant material was grown in the nursery. Thoroughly foot tamp all backfill. Position plant in planting pit, maintaining plumb condition.

3. Backfilling:

a. Use backfill mix as specified to backfill plant pits. Brace each plant plumb and rigidly in position until planting soil has been tamped solidly around the ball and roots.

b. When plant pits have been backfilled approximately 2/3 full, water thoroughly and saturate rootball, before installing remainder of the backfill mix to top of pit, eliminating all air pockets.

4. Staking and/or Guying: When required, stake or guy as detailed.

D. Adjustment: Adjust plants so that after full settlement has occurred, the grade at the base of the plants is 2 in. above the adjacent planting finish grade.

E. Watering Basin: Form saucer with 3 in. high berm centered around tree and shrub pits 12 in. wider than ball diameter.

F. Watering: Water all plants immediately after completion of planting operations.

G. Labels: Remove all nursery-type plant labels, wires and ties from plants.

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DARYL M. SCHREIBER
WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
CERTIFICATE NO. 1001
1/25/2023

THE RESERVE
ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS
LANDSCAPE SPECIFICATIONS
CITY OF GIG HARBOR
PIERCE COUNTY, WASHINGTON

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LANDSCAPE SECTION, CONTINUED

3.7 STAKING AND GUYING

A. General:

1. Trees shall be able to stand upright without support, and shall return to the vertical after their tops have been deflected horizontally and released. Stake or guy trees which do not meet this qualification.

2. All plant materials shall remain plumb and straight for all given conditions from installation through the guarantee period.

B. Staking (Deciduous Trees):

1. Locate stakes in a line with trunk of tree, perpendicular to prevailing wind and as close to the main trunk as is practical, avoiding root injury. Drive stakes at least 30 in. into firm ground. See Planting Details.

2. Wire support straps shall be placed around the trunk in a single loop. Run wire through grommets on support strap, tighten, and keep taut.

C. Guying (Evergreen Trees):

1. Guy Evergreen trees at points of branching height of tree, with three (3) guys spaced equally around and outside perimeter of ball, in accordance with Drawings.

2. Guys: Provide one turnbuckle for each guy. Use 2 cable clamps at each cable connection. Place Plastic Guy Covers on all guys.

3.8 MULCHING

A. Install a 2 in. deep layer of specified mulch over all planting areas including tree and shrub watering basins unless otherwise noted on drawings.

3.9 GROUNDCOVER AND PERENNIAL PLANTING

A. Planting: Plant groundcover plants at optimum depth for proper growth. Avoid air pockets. Equally spaced triangularly, at distances called for in the Drawings. See Planting Details.

B. Fertilizers: Apply top-dress fertilizer at the rate of 3 pounds per 1,000 square feet immediately after planting.

C. Watering: Water bed thoroughly after fertilizer application. Wash all fertilizer from leaves of plant materials.

3.10 TREE WRAPPING

A. Wrap trunks of deciduous trees with sun-sensitive bark with a spiral wrapping to the height of the third branch.

B. Wrap from top down and tape wrapping securely in place.

3.11 CLEAN-UP

A. Keep all areas of work clean, neat and orderly at all times.

B. Clean up and remove all deleterious materials and debris from the entire work area prior to Final Acceptance.

3.12 MAINTENANCE

A. Continuously maintain all landscape areas until final project acceptance. Provide daily irrigation, and weekly weeding, mowing, fertilization, trash and construction debris removal and other operations as necessary and directed to keep the landscape in a flourishing state.
B. At bioretention swales, inspect all areas on a weekly basis and immediately after each significant rain event. Note and repair any areas of erosion, ponding, accumulation of debris, blocked flow or other problems. Report all such issues to the landscape Architect immediately.

END OF SECTION

SECTION 32 84 00 – BIDDER DESIGN IRRIGATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. General system requirements, materials, installation and testing requirements for bidder designed irrigation.

1.2 PERFORMANCE REQUIREMENTS

A. Provide new irrigation for all common area lawn and planting areas associated with this project as indicated on the plan.

B. Design to provide head to head coverage based on the manufacturer's specifications for each head type.

C. All zones to be operated by automatic control valve. Valves to be wired to new controller.

D. Provide adequate manual drain valves to completely drain the system for winterization.

E. Provide at least two quick coupler assemblies at convenient locations.

1.3 SUBMITTALS

A. Provide head and piping layout plan for review. Plan shall clearly indicate head coverage arcs, pipe sizes and routing, control wire routing and the extent of each individual irrigation zone. Provide summary spreadsheet of zone GPM's.

B. Product Data: For each type of product proposed. Include rated capacities, operating characteristics and furnished specialties and accessories.

PART 2 - PRODUCTS

2.1 PIPES, TUBES, AND FITTINGS

A. Comply with requirements in the piping schedule for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.

B. Galvanized-Steel Pipe: ASTM A 53/A 53M, Standard Weight, Type E, Grade B.

1. Galvanized-Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106/A 106M, Standard Weight, seamless-steel pipe with threaded ends.
2. Galvanized, Gray-Iron Threaded Fittings: ASME B16.4, Class 125, standard pattern.
3. Malleable-Iron Unions: ASME B16.39, Class 150, hexagonal-stock body with ball-and-socket, metal-to-metal, bronze seating surface, and female threaded ends.

C. PVC Pipe: ASTM D 1785, PVC 1120 compound, Schedule 40.
1. PVC Threaded Fittings: ASTM D 2464, Schedule 80.
2. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket ends.

D. PVC Pipe, Pressure Rated: ASTM D 2241, PVC 1120 compound, SDR 21.

1. PVC Socket Fittings: ASTM D 2467, Schedule 80.
2. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket or threaded ends.

2.2 PIPING JOINING MATERIALS

A. .Solvent Cements for Joining PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

B. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.3 MANUAL VALVES

A. Provide manually operated drain valves at the low point in each irrigation zone, or belly of any pipe run.

2.4 AUTOMATIC CONTROL VALVES

A. Plastic, Automatic Control Valves:

1. Rainbird PEB Series valves. Provide plastic union at both sides of valve assembly to facilitate removal/replacement.

2.5 SPRINKLERS

A. General Requirements: Designed for uniform coverage over entire spray area indicated at available water pressure.

B. Plastic, Pop-up, Gear-Drive Rotary Sprinklers:

1. Manufacturers: Subject to compliance with requirements.

a. Rainbird irrigation products or approved equal.

2. Description:

a. Body Material: ABS.
b. Nozzle: ABS.
c. Retraction Spring: Stainless steel.
d. Internal Parts: Corrosion resistant.
e. Pop-up ht: 4" in lawn areas, 6" in shrub areas.

C. Plastic, Surface, Pop-up Spray Sprinklers:

1. Manufacturers: Subject to compliance with requirements.

a. Rainbird irrigation products or approved equal.

2. Description:

a. Body Material and Flange: ABS.
b. Pattern: Fixed, with flow adjustment.
c. Pop-up ht: 4" in lawn areas, 6" in shrub areas.

2.6 QUICK COUPLERS

A. Description: Factory-fabricated, bronze or brass, two-piece assembly. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key.

1. Locking-Top Option: Vandal-resistant locking feature. Include two matching keys.

2.7 CONTROLLERS

A. Provide new controller (Rainbird ESP series or approved equal).

B. Controller shall have at least three zones capacity in excess of what is required for the system.

2.8 BOXES FOR AUTOMATIC CONTROL VALVES

A. Plastic Boxes:

1. Description: Box and cover, with open bottom and openings for piping; designed for installing flush with grade.

a. Size: 11" by 17" jumbo valve box with extensions as required.
b. Shape: Rectangular.
c. Sidewall Material: PE.
d. Cover Material: PE.

1) Lettering: "IRRIGATION."

PART 3 - EXECUTION

3.1 EARTHWORK

A. Install warning tape directly above pressure piping, 12 inches below finished grades, except 6 inches below subgrade under pavement and slabs.

B. Provide minimum cover over top of underground piping according to the following:

1. Irrigation Main Piping: Minimum depth of 18 inches below finished grade.
2. Circuit Piping: 12 inches.
3. Sleeves: 18 inches.
4. All piping: maximum 24" bury depth.

3.2 PIPING INSTALLATION

A. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.

B. Install piping free of sags and bends.

C. Install groups of pipes parallel to each other, spaced to permit valve servicing.

D. Install fittings for changes in direction and branch connections.

E. Install unions adjacent to valves and to final connections to other components with NPS 2 or smaller pipe connection.

F. Install flanges adjacent to valves and to final connections to other components with NPS 2-1/2 or larger pipe connection.

G. Lay piping on solid subbase, uniformly sloped without humps or depressions. Where soils are rocky, provide 4" sand bedding below and above the pipe.

H. Install PVC piping in dry weather when temperature is above 40 deg F. Allow joints to cure at least 24 hours at temperatures above 40 deg F before testing.

3.3 JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

D. Flanged Joints: Select rubber gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

E. Ductile-Iron Piping Gasketed Joints: Comply with AWWA C600 and AWWA M41.

F. PE Piping Fastener Joints: Join with insert fittings and bands or fasteners according to piping manufacturer's written instructions.

G. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:

1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
2. PVC Pressure Piping: Join schedule number, ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
3. PVC Nonpressure Piping: Join according to ASTM D 2855.

3.4 VALVE INSTALLATION

A. Install valves below grade in line with pipe, with a minimum of 6" clear space around all sides of valve..

B. Provide 1cf of 3/8" washed pea gravel drainage sump in the bottom of all valve box assemblies.

C. Set valve boxes as required to maintain specified clearances to valves. Utilize extensions as required. Set entire assembly on brick supports as base to stabilize valve box. Top of boxes flush with finish grade.

3.5 SPRINKLER INSTALLATION

A. Install sprinklers after hydrostatic test is completed.

B. Install sprinklers at manufacturer's recommended heights.

C. Locate part-circle sprinklers to maintain a consistent distance of 4 inches from walls and pavement edges unless otherwise indicated.

3.6 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. Mainline pressure test. Once mainlines have been completed, including installation of valves, perform a mainline pressure test in the presence of the landscape architect or owners representative.

a. Purge all air from the mainline and fill with water.

b. Utilizing portable pumping equipment outfitted with a pressure gauge and means for isolating the pump assembly from the pipe to be tested, pressurize the mainline to 140 PSI and isolate.

c. Observe pressure for 30 minutes. Mainlines that exhibit 5 psi loss in pressure or less over 30 minutes shall be deemed passing.

2. Leak Test: After installation and prior to backfill, charge system and test each zone for leaks. Repair leaks and retest until no leaks exist.
3. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.

4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

C. Any irrigation product will be considered defective if it does not pass tests and inspections.

3.7 ADJUSTING

A. Adjust settings of controllers.

B. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.

C. Adjust spray patterns to minimize overspray and eliminate head fogging.

D. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with, or not more than 1/2 inch below, finish grade.

END OF SECTION 328400

NO.	DATE	REVISION	BY	CK.
1	1/25/23	PRELIMINARY PLAT SUBMITTAL (PL-PPLAT22-0001)	MDS	DRG

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 429

THE RESERVE
ROADWAY, GRADING AND DRAINAGE IMPROVEMENTS
LANDSCAPE SPECIFICATIONS
CITY OF GIG HARBOR
PIERCE COUNTY, WASHINGTON

CLIENT
PROSPECT DEVELOPMENT, LLC
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PROJECT NO.
0228-21-001

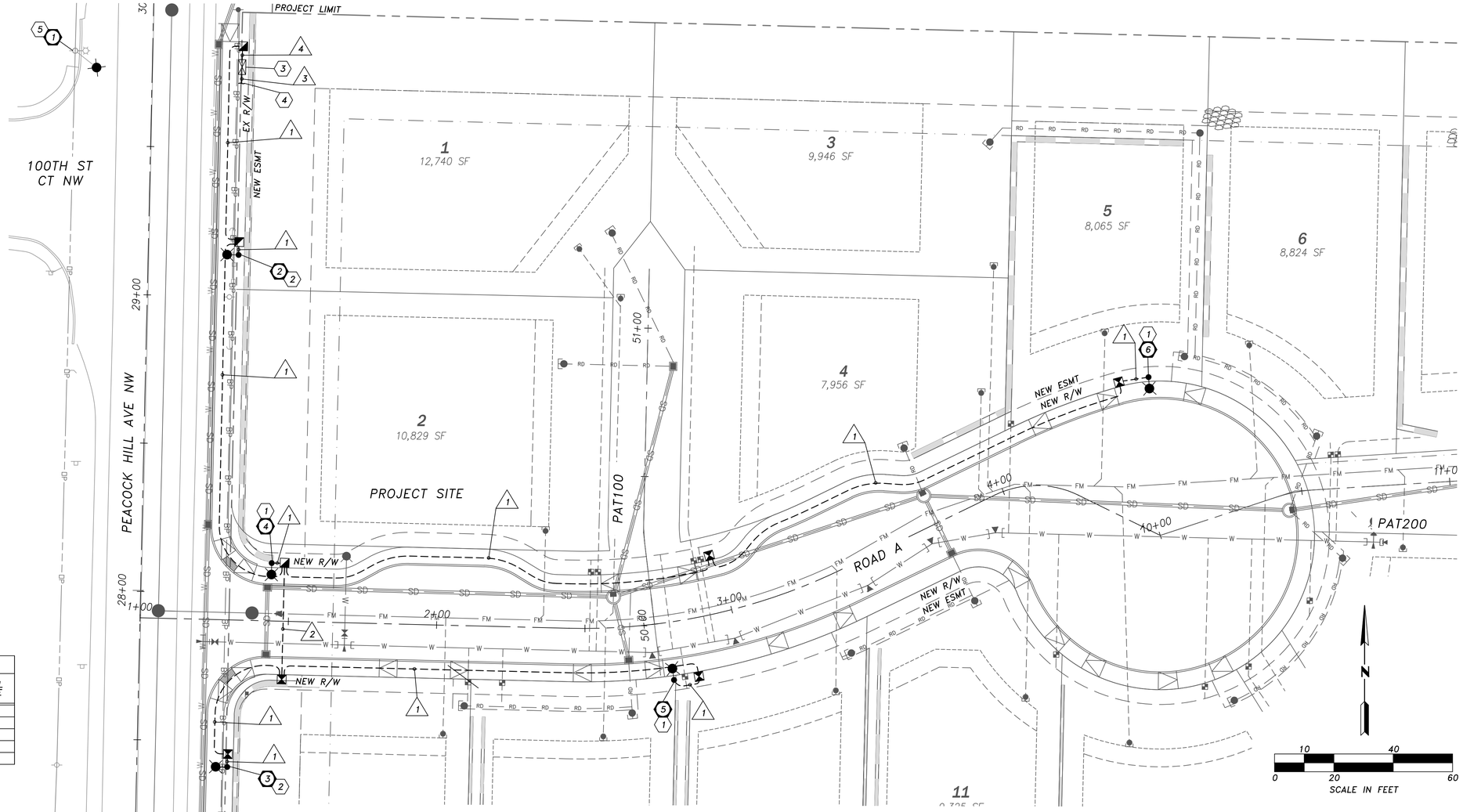
DRAWING
L3.01

SHEET 37 OF 44

ILLUMINATION CONSTRUCTION NOTES

1. FURNISH AND INSTALL NEW FOUNDATION, POLE, AND LUMINAIRE PER CITY OF GIG HARBOR DETAIL NUMBERS 2-28, 2-31 & 2-34 AND ILLUMINATION POLE SCHEDULE, THIS SHEET.
2. FURNISH AND INSTALL NEW FOUNDATION, POLE, AND LUMINAIRE PER CITY OF GIG HARBOR DETAIL NUMBERS 2-28, 2-31 & 2-35 AND ILLUMINATION POLE SCHEDULE, THIS SHEET.
3. CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-10.10. FURNISH AND INSTALL NEW SERVICE DISCONNECT PER CITY OF GIG HARBOR DETAIL NUMBER 2-23.
4. THE POWER SOURCE LOCATION WAS NOT KNOW AT THE TIME OF PLAN PREPARATION. THE CONTRACTOR SHALL COORDINATE WITH PUGET SOUND ENERGY TO IDENTIFY A LOCATION FOR 120/240 VOLT SINGLE PHASE POWER SOURCE CONNECTION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR COMPLETION OF ALL NECESSARY FORMS/APPLICATIONS ASSOCIATED WITH THE NEW POWER SOURCE. THE CONTRACTOR SHALL INSTALL CONDUIT AND CONDUCTORS TO THE POWER SOURCE. CONTRACTOR SHALL COORDINATE WITH PUGET SOUND ENERGY FOR SPECIFIC REQUIREMENTS. PUGET SOUND ENERGY SHALL MAKE FINAL CONNECTION TO THE POWER SOURCE. THE CONTRACTOR SHALL ASSUME 500' FEET OF TRENCHING TO CONNECT TO POWER SOURCE FOR BIDDING PURPOSES.
5. EXISTING UTILITY POLE TO REMAIN. REPLACE EXISTING LUMINAIRE PER ILLUMINATION POLE SCHEDULE, THIS SHEET.

LIGHTING PLANS WILL BE UPDATED WITH FINAL ENGINEERING SET



ILLUMINATION WIRING SCHEDULE

NO.	RACEWAY CONDUIT SIZE	ILLUM. #8	SVC POWER #2	EQUIP. GRND. *	PULL WIRE
1	2" SCH40 PVC	2		1	
2	2" SCH80 PVC	2		1	
	2" SCH80 PVC SPARE				1
3	2" SCH80 PVC		3		
4	3" SCH40 PVC	2		1	

* EQUIPMENT GROUND SIZE SHALL BE EQUAL TO OR LARGER THAN THE LARGEST WIRE SIZE IN THE CONDUIT.

ILLUMINATION POLE SCHEDULE

LUM. POLE NO.	STREET	STATION	OFFSET*	LT.	RT.	MOUNT. HEIGHT	ARM LENGTH	WATTAGE /TYPE	INITIAL LUMENS	LUMINAIRE TYPE DISTRIBUTION	POLE TYPE	COMMENT
1	PEACOCK HILL AVENUE NW	EX	EX	X		EX 30'	EX 6'	35 LED	3,509	LEOTEK GC1-20F-MV-NW-3-BK-530	EXISTING UTILITY POLE	EXISTING POLE TO REMAIN. REPLACE FIXTURE.
2	PEACOCK HILL AVENUE NW	29+14.0	30.5'		X	30'	1.5'	80 LED	8,338	LUMEC DMS50-80W48LED4K-R-LE3F-240	ROUND STEEL POLE	NEW FOUNDATION PER CITY OF GIG HARBOR STANDARD DETAIL NO. 2-28.
3	PEACOCK HILL AVENUE NW	27+41.5	30.5'		X	30'	1.5'	80 LED	8,338	LUMEC DMS50-80W48LED4K-R-LE3F-240	ROUND STEEL POLE	NEW FOUNDATION PER CITY OF GIG HARBOR STANDARD DETAIL NO. 2-28.
4	ROAD A	1+44.0	19.5'	X		30'	1.5'	55 LED	5,829	LUMEC DMS50-55W48LED4K-R-LE3F-240	ROUND STEEL POLE	NEW FOUNDATION PER CITY OF GIG HARBOR STANDARD DETAIL NO. 2-28.
5	ROAD A	2+77.5	19.5'		X	30'	1.5'	55 LED	5,829	LUMEC DMS50-55W48LED4K-R-LE3F-240	ROUND STEEL POLE	NEW FOUNDATION PER CITY OF GIG HARBOR STANDARD DETAIL NO. 2-28.
6	ROAD A	4+30.0	46.0'	X		30'	1.5'	55 LED	5,829	LUMEC DMS50-55W48LED4K-R-LE3F-240	ROUND STEEL POLE	NEW FOUNDATION PER CITY OF GIG HARBOR STANDARD DETAIL NO. 2-28.

LEGEND

SYMBOL	DESCRIPTION
	JUNCTION BOX TYPE 1, 2
	LIGHT STANDARD
	CONDUIT/CONDUCTOR
	SERVICE CABINET
	STREET LIGHT POLE ID
	WIRE NOTE
	CONSTRUCTION NOTE

NO.	REVISION	DATE	BY

DESIGNED BY: MJG/TDR
DRAWN BY: MJG/TDR
APPROVED BY: CTB
ISSUE DATE: 04-29-2022
JOB NO.: TENW #2022-050
DRAWING FILE NO.:

CHRISTOPHER T. BICKET — STATE OF WASHINGTON — 33635 — REGISTERED PROFESSIONAL ENGINEER
04-29-2022

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THE RESERVE
GIG HARBOR, WA

ILLUMINATION PLAN

DRAWING NO.: IL-01
SHEET NO.: 1 OF 3 SHEETS

TENW GENERAL NOTES

1. ALL WORK MATERIALS SHALL BE IN CONFORMANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF GIG HARBOR AND THE LATEST EDITION OF THE WSDOT STANDARDS AND SPECIFICATIONS. A SET OF APPROVED PLANS SHALL BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION.

2. THE JUNCTION BOX AND CONDUIT LOCATIONS SHOWN ARE APPROXIMATE. JUNCTION BOXES SHALL BE PLACED OUTSIDE OF SIDEWALKS UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.

3. THE LOCATIONS OF FEATURES AND UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR AS NECESSARY.

4. THE CONTRACTOR SHALL SUBMIT A REQUEST TO THE INSPECTOR FOR MATERIALS APPROVAL AT THE EARLIEST POSSIBLE DATE.

5. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY AGENCIES 48 HOURS BEFORE COMMENCING WORK, AND SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY AND THE CITY OF GIG HARBOR IMMEDIATELY UPON DAMAGE.

7. AS PART OF THE DESIGN PROCESS, THE ENGINEER HAS ATTEMPTED TO CONFIRM THAT THERE ARE NOT CONFLICTS WITH OVERHEAD POWER LINES OR SUBSURFACE UTILITIES. HOWEVER, IT IS POSSIBLE FOR THE EXISTING OR PROPOSED CONDITIONS TO CHANGE PRIOR TO IMPLEMENTATION OF THE SCOPE OF WORK IDENTIFIED ON THESE DOCUMENTS. AS THE FIRST ORDER OF BUSINESS, THE CONTRACTOR SHALL CONFIRM THAT THERE ARE NOT CONFLICTS WITH SUBSURFACE UTILITIES. ADDITIONALLY THE CONTRACTOR SHALL CONFIRM THAT THERE IS A MINIMUM 10-FT CLEARANCE PROVIDED BETWEEN OVERHEAD POWER LINES AND THE PROPOSED LUMINAIRE POLES PRIOR TO POLE PLACEMENT. ADDITIONAL CLEARANCE MAY BE REQUIRED AS DIRECTED BY THE UTILITY. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY IF A CONFLICT IS DISCOVERED.

CITY OF GIG HARBOR GENERAL NOTES (ROADWAY ILLUMINATION CONSTRUCTION)

1. ALL WORKMANSHIP, MATERIALS AND TESTING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, NATIONAL ELECTRICAL CODE OR CITY OF GIG HARBOR PUBLIC WORKS STANDARDS UNLESS OTHERWISE SPECIFIED BELOW. IN CASES OF CONFLICT, THE MOST STRINGENT STANDARD SHALL APPLY. WHEN THE MOST STRINGENT STANDARD IS NOT CLEAR, THE CITY ENGINEER WILL MAKE THE DETERMINATION. THE ELECTRICAL CONTRACTOR SHALL BE FAMILIAR WITH ALL ABOVE STATED PUBLICATIONS AND GUIDELINES AS THEY WILL BE STRICTLY ENFORCED BY THE STATE OF WASHINGTON DEPARTMENT OF LABOR AND INDUSTRIES.

2. THE CONTRACTOR SHALL BE IN COMPLIANCE WITH ALL SAFETY STANDARDS AND REQUIREMENTS AS SET FORTH BY OSHA, WISHA AND THE STATE OF WASHINGTON, DEPARTMENT OF LABOR AND INDUSTRIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE WSDOT STANDARD PLANS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND/OR THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). PRIOR TO DISRUPTION OF ANY TRAFFIC, A TRAFFIC CONTROL PLAN SHALL BE PREPARED AND SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.

4. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF GIG HARBOR SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

5. IF CONSTRUCTION IS TO TAKE PLACE IN THE COUNTY AND/OR WASHINGTON STATE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE CITY. THE CITY SHALL OBTAIN ALL THE REQUIRED APPROVALS AND PERMITS. THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ASSOCIATED PERMIT FEES.

6. ELECTRICAL PERMITS AND INSPECTIONS ARE REQUIRED FOR ALL ROADWAY LIGHTING INSTALLATIONS WITHIN THE CITY OF GIG HARBOR. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING SAID PERMITS PRIOR TO ANY TYPE OF ACTUAL CONSTRUCTION. THESE PERMITS ARE AVAILABLE FROM THE WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES. THE DEVELOPER/ CONTRACTOR IS RESPONSIBLE FOR ALL CONNECTION FEES ASSOCIATED WITH THE ELECTRICAL SYSTEMS AND SHOULD CONTACT PENINSULA LIGHT CO. AT (253) 857-1541 FOR CONNECTION REQUIREMENTS AND FEE AMOUNTS.

7. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY OF GIG HARBOR CONSTRUCTION INSPECTOR PRIOR TO THE START OF CONSTRUCTION.

8. PRIOR TO INSTALLATION OF ANY MATERIALS, THE ELECTRICAL CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE CITY THREE COPIES OF MATERIAL CATALOG CUTS, SPECIFICATIONS, SHOP DRAWINGS AND/OR WIRING DIAGRAMS. ANY MATERIALS PURCHASED OR LABOR PERFORMED PRIOR TO SUCH APPROVAL SHALL BE AT THE CONTRACTOR'S RISK. MOUNTING HEIGHTS, ARM LENGTH, POWER SOURCE, LUMINAIRE TYPE AND BOLT PATTERNS SHALL FOLLOW CITY OF GIG HARBOR PUBLIC WORKS STANDARDS, SECTION 2E.020. MODIFICATIONS OF ANY PORTION OF THE LIGHTING SYSTEM WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL BY THE CITY.

9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF AN APPROVED SET OF PLANS ON THE CONSTRUCTION SITE AT ALL TIMES.

10. ALL SURVEYING AND STAKING SHALL BE PERFORMED PER THE CORRESPONDING SECTION OF THE CITY OF GIG HARBOR PUBLIC WORKS STANDARDS.

11. TEMPORARY EROSION CONTROL/WATER POLLUTION MEASURES SHALL BE REQUIRED IN ACCORDANCE WITH SECTION 1-07.15 OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND THE GIG HARBOR STORMWATER MANAGEMENT AND SITE DEVELOPMENT MANUAL. AT NO TIME WILL SILTS AND DEBRIS BE ALLOWED TO DRAIN INTO AN EXISTING OR NEWLY INSTALLED FACILITY UNLESS SPECIAL PROVISIONS HAVE BEEN DESIGNED.

12. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

13. A 500 VOLT MEGGER TEST WILL BE PERFORMED BY THE CONTRACTOR ON EACH CIRCUIT BETWEEN CONDUCTOR AND GROUND PRIOR TO ACCEPTANCE OF THE LIGHTING SYSTEM. THE INSULATION RESISTANCE SHALL NOT BE LESS THAN 6 MEGA OHMS TO GROUND FOR RUNS OVER 2,500 FT. NOR LESS THAN 8 MEGA OHMS FOR RUNS UNDER 2,500 FT. A FUNCTIONAL TEST WILL BE PERFORMED BY THE CITY IN WHICH IT IS DEMONSTRATED THAT EACH AND EVERY PART OF THE SYSTEM FUNCTIONS AS SPECIFIED OR INTENDED HEREIN. WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION 8-20.3(11). LAMP, PHOTOCELL AND FIXTURE SHALL BE UNDER WARRANTY FOR A PERIOD OF TWO YEARS.

14. ALL LIGHTING POLES SHALL BE AS SPECIFIED IN SECTION 2E.020 OF THE GIG HARBOR PUBLIC WORKS STANDARDS. THE SONOTUBE FORM SHALL BE REMOVED TO BELOW GROUND LEVEL. POLE BASES SHALL BE GROUTED AND ALL LUMINAIRE HEADS SHALL BE PLUMB AND LEVEL.

15. CEMENT CONCRETE BASES SHALL FOLLOW CITY OF GIG HARBOR PUBLIC WORKS STANDARDS DETAIL 2-28, DECORATIVE LUMINAIRE BASE. THE DEPTH AND SIZE OF ALL CONCRETE STREET LIGHT FOUNDATIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER BASED ON SOIL CONDITIONS, POLE HEIGHT, WIND LOAD, ETC. DESIGN CRITERIA AND CALCULATIONS SHALL BE SUBMITTED TO THE CITY WITH ILLUMINATION PLAN SUBMITTAL.

16. THE PHOTO CELL WINDOW SHALL FACE NORTH UNLESS OTHERWISE DIRECTED BY THE CITY. THE SERVICE DISCONNECT SHALL NOT BE MOUNTED ON THE LUMINAIRE POLE. THE SERVICE DISCONNECT SHALL BE MANUFACTURED BY SKYLINE ELECTRIC AND MFG. COMPANY, SEE DETAIL 2-23.

17. ALL LIGHTING WIRE SHALL BE COPPER WITH A MINIMUM SIZE OF #8. ALL WIRE SHALL BE SUITABLE FOR WET LOCATIONS. ALL WIRE SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT WITH A MINIMUM DIAMETER OF 2 INCHES. A BUSHING OR BELL-END SHALL BE USED AT THE END OF A CONDUIT THAT TERMINATES AT A JUNCTION BOX OR LUMINAIRE POLE. CONDUCTOR IDENTIFICATION SHALL BE AN INTEGRAL PART OF THE INSULATION OF THE CONDUCTORS THROUGHOUT THE SYSTEM I.E. COLOR CODED WIRE. EQUIPMENT GROUNDING CONDUCTOR SHALL BE #8 COPPER. ALL SPLICES OR TAPS SHALL BE MADE BY APPROVED METHODS UTILIZING EPOXY KITS RATED AT 600 VOLTS (I.E., 3-M 82- A2). ALL SPLICES SHALL BE MADE WITH PRESSURE TYPE CONNECTORS (WIRE NUTS WILL NOT BE ALLOWED). DIRECT BURIAL WIRE WILL NOT BE ALLOWED. ALL OTHER INSTALLATION SHALL CONFORM TO NEC, WSDOT AND MUTCD STANDARDS.

18. EACH LUMINAIRE POLE SHALL HAVE AN IN-LINE, FUSED, WATER-TIGHT ELECTRICAL DISCONNECT LOCATED AT THE BASE OF THE POLE. ACCESS TO THESE FUSED DISCONNECTS SHALL BE THROUGH THE HAND-HOLE ON THE POLE. THE HAND-HOLE SHALL BE FACING AWAY FROM ON-COMING TRAFFIC. ADDITIONAL CONDUCTOR LENGTH SHALL BE LEFT INSIDE THE POLE AND PULL OR JUNCTION BOX EQUAL TO A LOOP HAVING A DIAMETER OF ONE FOOT. LOAD SIDE OF IN-LINE FUSE TO LUMINAIRE HEAD SHALL BE CABLE AND POLE BRACKET WIRE, 2 CONDUCTOR, 19 STRAND COPPER #10 AND SHALL BE SUPPORTED AT THE END OF THE LUMINAIRE ARM BY AN APPROVED MEANS. FUSE SIZE, DISCONNECT INSTALLATION AND GROUNDING IN POLE SHALL CONFORM TO NEC STANDARDS.

19. APPROVED PULL BOXES OR JUNCTION BOXES SHALL BE INSTALLED WHEN CONDUIT RUNS ARE MORE THAN 200 FEET. IN ADDITION, A PULL BOX OR JUNCTION BOX SHALL BE LOCATED WITHIN 10 FEET OF EACH LUMINAIRE POLE AND AT EVERY ROAD CROSSING. BOXES SHALL BE CLEARLY AND INDELIBLY MARKED AS LIGHTING BOXES BY THE LEGEND, "L.T." OR "LIGHTING". SEE WSDOT STANDARD PLAN J-11A. AT THE END OF THE PROJECT FOLLOWING FINAL ACCEPTANCE FROM CITY INSPECTOR, ALL JUNCTION BOXES SHALL BE "TACK" WELDED CLOSED. TACK WELDS ARE TO PREVENT WIRE THEFT AND SHALL BE TWO 1" LONG WELDS ON OPPOSITE SIDES OF LID. WELDS WILL THEN BE TREATED WITH COLD GALVANIZING SPRAY.

20. ANY MODIFICATION TO APPROVED LIGHTING PLANS SHALL BE REVIEWED AND APPROVED BY THE CITY PRIOR TO INSTALLATION. ANY APPROVED MODIFICATIONS SHALL BE SHOWN ON THE RECORD DRAWINGS SUPPLIED TO THE CITY AFTER THE LIGHTING INSTALLATION IS COMPLETED AND BEFORE FINAL ACCEPTANCE. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO ENSURE THESE RECORD DRAWINGS ARE PROVIDED TO THE CITY.

LIGHTING PLANS WILL BE UPDATED WITH FINAL ENGINEERING SET

△	REVISION	DATE	BY

DESIGNED BY: MJG/TDR
DRAWN BY: MJG/TDR
APPROVED BY: CTB

ISSUE DATE: 04-29-2022
JOB NO.: TENW #2022-050
DRAWING FILE NO.:

CHRISTOPHER T. BICKO — STATE OF WASHINGTON — 30635 — REGISTERED PROFESSIONAL ENGINEER
04-29-2022

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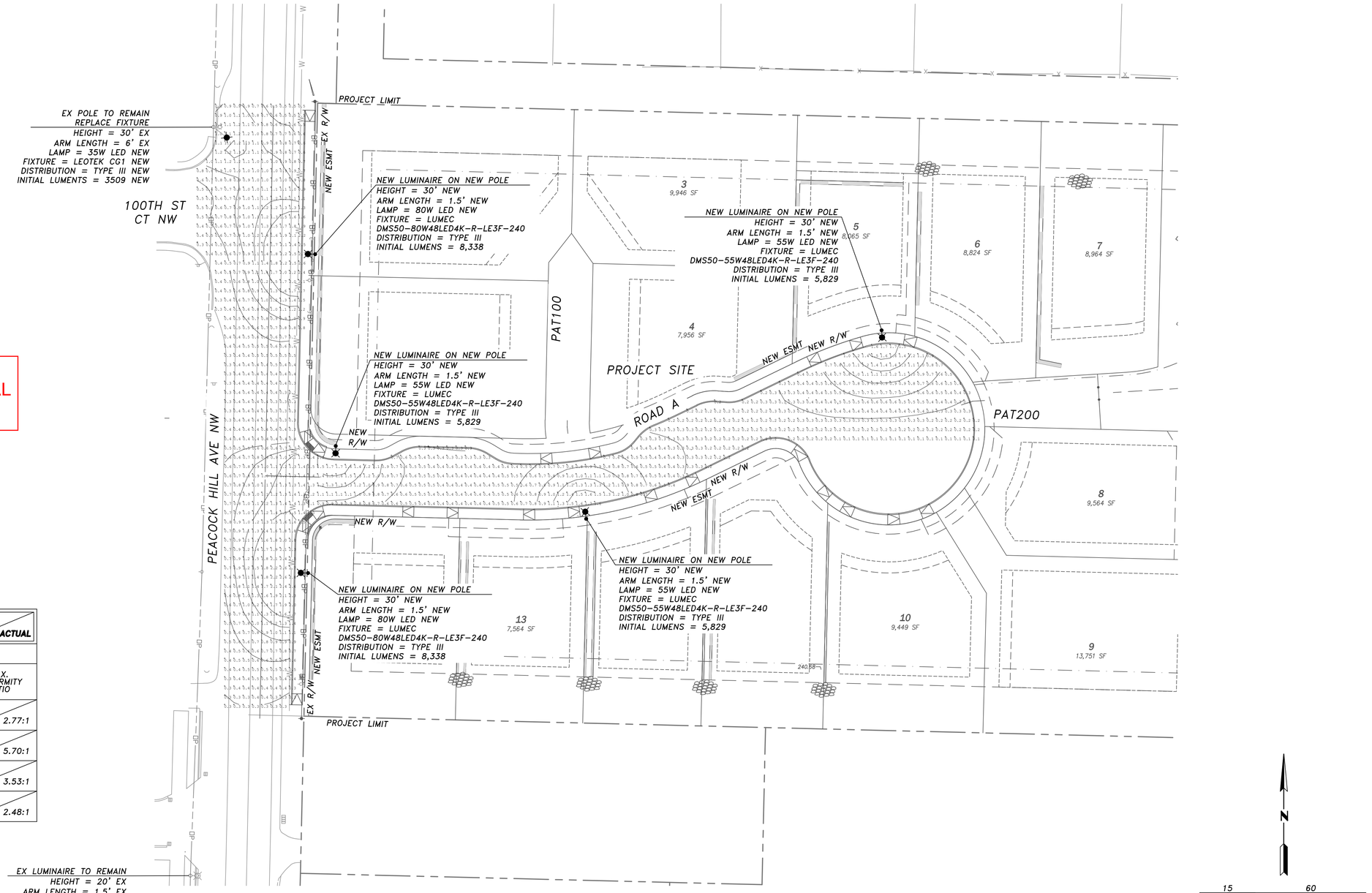
THE RESERVE
GIG HARBOR, WA

ILLUMINATION PLAN

DRAWING NO.: IL-02
SHEET NO.: 2 OF 3 SHEETS

LIGHTING PLANS WILL BE UPDATED WITH FINAL ENGINEERING SET



CALCULATION SUMMARY	TARGET / ACTUAL	
CALCULATION AREA	MIN. AVG. MAINTAINED FOOT CANDLES (LUX)	MAX. UNIFORMITY RATIO
PEACOCK HILL AVENUE NW (MINOR ARTERIAL)	0.60 / 0.83	4.00:1 / 2.77:1
ROAD A (LOCAL ROAD)	0.40 / 0.57	6.00:1 / 5.70:1
INT. PEACOCK HILL AVE NW & 100TH ST CT NW (MINOR ARTERIAL & LOCAL ROAD)	0.90 / 1.06	4.00:1 / 3.53:1
INT. PEACOCK HILL AVE NW & ROAD A (MINOR ARTERIAL & LOCAL ROAD)	0.90 / 0.99	4.00:1 / 2.48:1

△	REVISION	DATE	BY

DESIGNED BY: MJG/TDR
DRAWN BY: MJG/TDR
APPROVED BY: CTB
ISSUE DATE: 04-29-2022
JOB NO.: TENW #2022-050
DRAWING FILE NO.:

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THE RESERVE
GIG HARBOR, WA

PHOTOMETRIC CALCULATIONS

DRAWING NO.: PC-01
SHEET NO.: 3 OF 3 SHEETS

GENERAL CONSTRUCTION NOTES

CODE:
VAULT DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2018 IBC AS ADOPTED BY THE CITY OF GIG HARBOR, WASHINGTON.

GENERAL DETAILS:
CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

WALL BACKFILL:
PRIOR TO BACKFILLING VAULT WALLS THE CONTRACTOR SHALL HAVE PLACED THE LID PLANKS AND PROVIDED A MINIMUM OF 5 DAYS OF CURE ON THE PLANK VOID FILL.

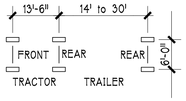
BACKFILL SOIL:
SEE THE GEOTECHNICAL REPORT FOR WALL BACKFILL MATERIAL REQUIREMENTS AND PLACEMENT AND COMPACTION REQUIREMENTS. ALL COMPACTION OCCURING WITHIN 5' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

DESIGN CRITERIA

VERTICAL LOADS ON VAULT LID:

***UNIFORM LIVE LOAD :** = 150PSF

***HS25 TRUCK WHEEL LOADS :**



TRACTOR :
FRONT AXLE = 10,000 lb.
SINGLE REAR AXLE = 40,000 lb.
TRAILER :
SINGLE REAR AXLE = 40,000 lb.

* = DESIGN UNIFORM LIVE LOAD &, TRUCK WHEEL LOAD TO BE APPLIED INDEPENDENTLY AND IN COMBINATION WITH THE SOIL COVER DEAD LOAD.

RAISED GRATE:
100 PSF UNIFORM PEDESTRIAN LIVE LOAD.

IMPACT & FATIGUE:
DUE TO THE LOW SPEEDS OF VEHICLES OVER THE LID, AND THE SOIL COVER OVER THE LID, INCREASES IN VEHICLE LOADS TO ACCOUNT FOR IMPACT & FATIGUE ARE NOT REQUIRED.

SOIL COVER FOR LID DESIGN:
PLANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE SOIL COVER DEPTHS USED IN THE LID DESIGN BASED ON THE PERMITTED CIVIL DRAWING, VAULT AND FINISHED GRADE ELEVATIONS.

SOIL COVER FOR SUBSTRUCTURE DESIGN:
THE SUBSTRUCTURE WAS DESIGNED FOR A SOIL COVER OF 1.8FT MIN TO 4.5FT MAX

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES PROVIDED BY TERRA ASSOCIATES, INC IN THEIR GEOTECHNICAL REPORT DATED 12-03-2015 REVISED 09-02-2022.

ALLOWABLE BEARING PRESSURE: 3,000 PSF

LATERAL EARTH PRESSURES ON DETENTION VAULT:

ACTIVE CONDITION: 35PCF EFW
AT REST CONDITION: 35PCF EFW + 100PSF UNIFORM HORZ PRESSURE
PASSIVE CONDITION: 300PCF EFW w/ SF=1.5
SEISMIC PRESSURE COMPONENT: E = 8H PSF UNIFORM
COEFFICIENT OF BASE FRICTION: 0.35 w/ SF=1.5
SATURATED SOIL DENSITY: 125 PCF
5% DAMPED 0.2SECOND PERIOD, Sds = 0.903g

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE. MAXIMUM SPACING OF SUPPORTS SHALL BE 3'-6".

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH_____ 3"

CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH_____ 2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

LAP SPLICES:
LAP ALL BARS 24" MIN UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2018 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2018 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT.	P	1705.3
INSTALLATION & FASTENING OF PRECAST PANELS	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
STRUCTURAL STEEL		
STRUCTURAL STEEL (GRATING) FABRICATION	P	1704.2.5
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY: INSTALLATION OF DRAINAGE SYSTEM:	P	1705.6
PLACEMENT & COMPACTION OF WALL BACKFILL:	P	1705.6

FREQUENCY LEGEND
C = CONTINUOUS P = PERIODIC
SEE REFERENCES AND STANDARDS LISTED WITHIN THE VERIFICATION & INSPECTION SCHEDULE FOR MEANING OF PERIODIC AND CONTINUOUS INSPECTIONS.

CERTIFICATE OF COMPLIANCE:
THE SPECIAL INSPECTION AGENCY SHALL PROVIDE A FINAL LETTER CERTIFICATE OF COMPLIANCE STATING THAT THE REVIEWED WORK WAS COMPLETED IN ACCORDANCE WITH THE PERMITTED DOCUMENTS.

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & CIP LID AREAS	4000PSI @ 28 DAYS	0.50
FTGS & GRADE SLAB	4000PSI @ 56 DAYS	0.53
PLANK VOID FILL	TO MEET PLANK MFGR'S REQUIREMENTS*	
PLANK JOINT GROUT	TO MEET PLANK MFGR'S REQUIREMENTS*	

* MINIMUM STRENGTH SHALL BE 3000PSI @ 28 DAYS.

AIR CONTENT:
CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS. SUBMIT MIX DESIGNS TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT.

EXPOSURE CATEGORIES:

FREEZING THAWING	F0
SULFATE	S0
IN CONTACT w/ WATER	W1
CORROSION PROTECTION	C1

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150. ADMIXTURES: ACI 301.
AGGREGATES: ASTM C33. WATER: ASTM C94.

PLACING REQUIREMENTS:
PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

LID PLANK PLACEMENT:
IN NO CASE SHALL THE LID PLANKS BE PLACED BEFORE THE WALLS HAVE BEEN ALLOWED A MINIMUM OF 3 DAYS OF CURE. WHEN AVERAGE AMBIENT TEMPERATURES ARE LESS THAN 50 DEGREES FAHRENHEIT, THE CONTRACTOR MUST ALLOW A MINIMUM CURE TIME OF 7 DAYS OR PROVIDE AN ADDITIONAL SET OF CYLINDERS TO BE BROKEN AT THE TIME OF LID PLACEMENT DEMONSTRATING A MINIMUM CONCRETE STRENGTH OF 1,000 PSI HAS BEEN REACHED.

DEFERRED SUBMITTALS

THE FOLLOWING AREAS OF WORK SHALL BE CONSIDERED AS "DEFERRED SUBMITTALS" AS DEFINED IN THE 2018 IBC

PRECAST PRESTRESSED HOLLOW CORE PLANK

ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON WHO HAS CURRENT DESIGN EXPERIENCE IN THE TYPE OF WORK REVIEWED.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD.

COPIES OF THE APPROVED DEFERRED SUBMITTAL DOCUMENTS SHALL BE MAINTAINED ON SITE BY THE GENERAL CONTRACTOR AND MADE AVAILABLE FOR REVIEW AS REQUESTED.

STRUCTURAL STEEL

MATERIALS:

a. STRUCTURAL STEEL SHAPES & PLATES SHALL CONFORM TO ASTM A36.
b. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500 GRADE B, Fy=42,000PSI.

WELDING:
CONFORM TO AWS D1.1 "STRUCTRUAL WELDING CODE - STEEL". WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH WABO REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.

GALVANIZING:
ALL STEEL SECTIONS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION CONFORMING TO ASM A-123. REPAIRS SHALL CONFORM TO ASTM A-780 USING ZINC RICH PAINT. THE COATING THICKNESS FOR THE PAINT MUST BE 50% MORE THAN THE SURROUNDING COATING THICKNESS, BUT NOT GREATER THAN 4.0 MILS.

HOLLOW CORE PLANK

SCOPE OF WORK:
THE WORK INCLUDED IS THE DESIGN, MANUFACTURE AND DELIVERY OF PRECAST PRESTRESSED CONCRETE UNITS. DESIGN PLANK FOR THE MOST CRITICAL OF THE LOADING CONDITIONS AS SHOWN WITHIN THE DESIGN CRITERIA NOTE.

THE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLACEMENT DRAWINGS SIGNED BY A WASHINGTON STATE REGISTERED CIVIL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

THE MANUFACTURER SHALL INSTALL ALL BLOCK OUTS REQUIRED FOR STRUCTURAL CONNECTIONS AS INDICATED ON THESE DRAWINGS. NO OTHER PENETRATIONS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE PLANK MANUFACTURER.

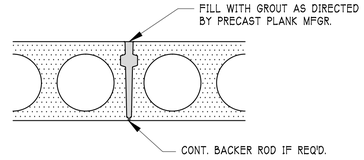
ALL HOLLOW CORE JOINTS SHALL BE GROUTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

OPEN METAL GRATING

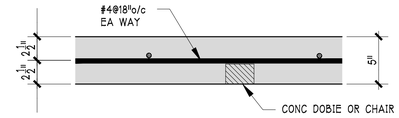
OPEN METAL GRATING SHALL BE WELDED STEEL BAR GRATING AS SPECIFIED ON THE DRAWINGS. ALL STEEL GRATING AND GRATING COMPONENTS INCLUDING ITEMS EMBEDED WITHIN THE CONCRETE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

SUPPLIER SHALL PROVIDE ALL COMPONENTS NECESSARY TO INSTALL AND SECURE THE GRATING IN PLACE.

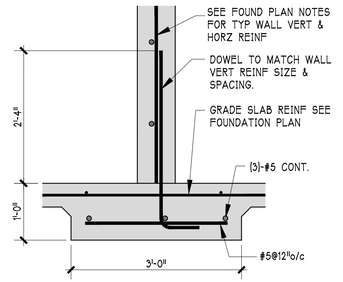
SUPPLIER SHALL PROVIDE SHOP DRAWINGS DESCRIBING ALL COMPONENTS OF THE INSTALLATION, TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.



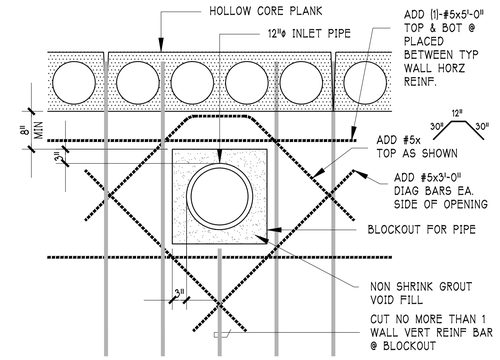
1/S1 TYP PLANK JOINT DETAIL
SCALE 1"=1'-0"

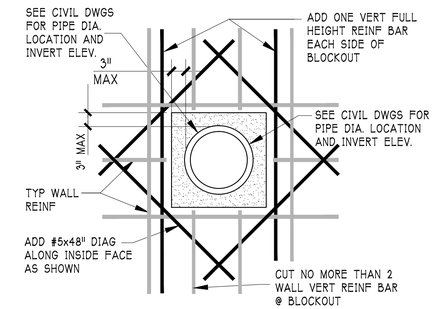


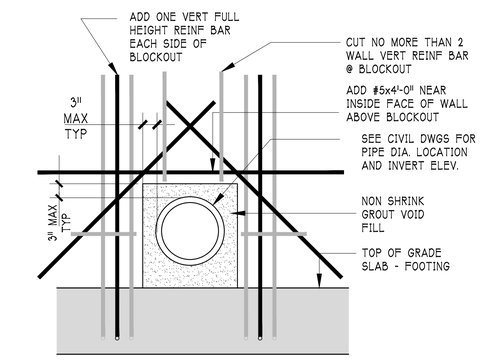
2/S1 TYP GRADE SLAB SECTION
SCALE 1-1/2"=1'-0"



4/S1 KNEEWALL FTG DETAIL
SCALE 3/4"=1'-0"







3/S1 WALL REINF @ PIPE PENETRATION
3/4"=1'-0"

DATE.	DESCRIPTION.	COUD.
07-27-2022	ISSUED FOR CONST. PERMIT APPLICATION	N/A
12-19-2022	INCORP GEOTECH & PLAN REVIEW COMMENTS	NO

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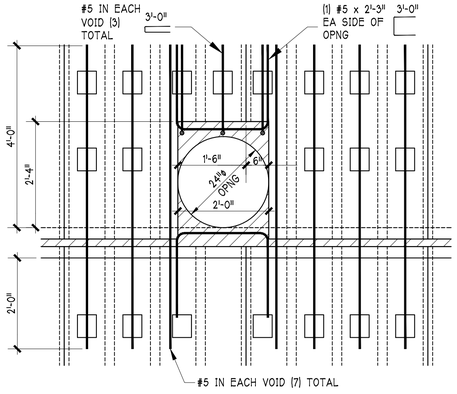
12-19-2022 DANIEL J. KOSNIK STATE OF WASHINGTON 20744 PROFESSIONAL ENGINEER

THE RESERVE
STORM WATER DETENTION VAULT
CITY OF GIG HARBOR, WASHINGTON

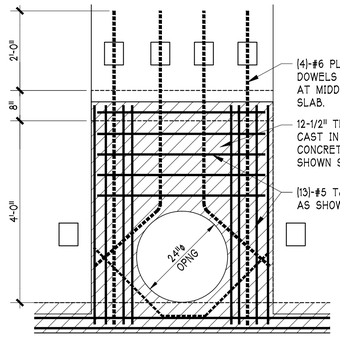
STRUCTURAL NOTES
TYP DETAILS

SHEET:
S1 OF 4
S-22-036

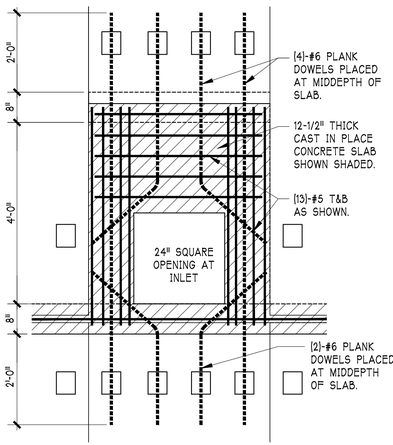
SHEET SIZE 22x34



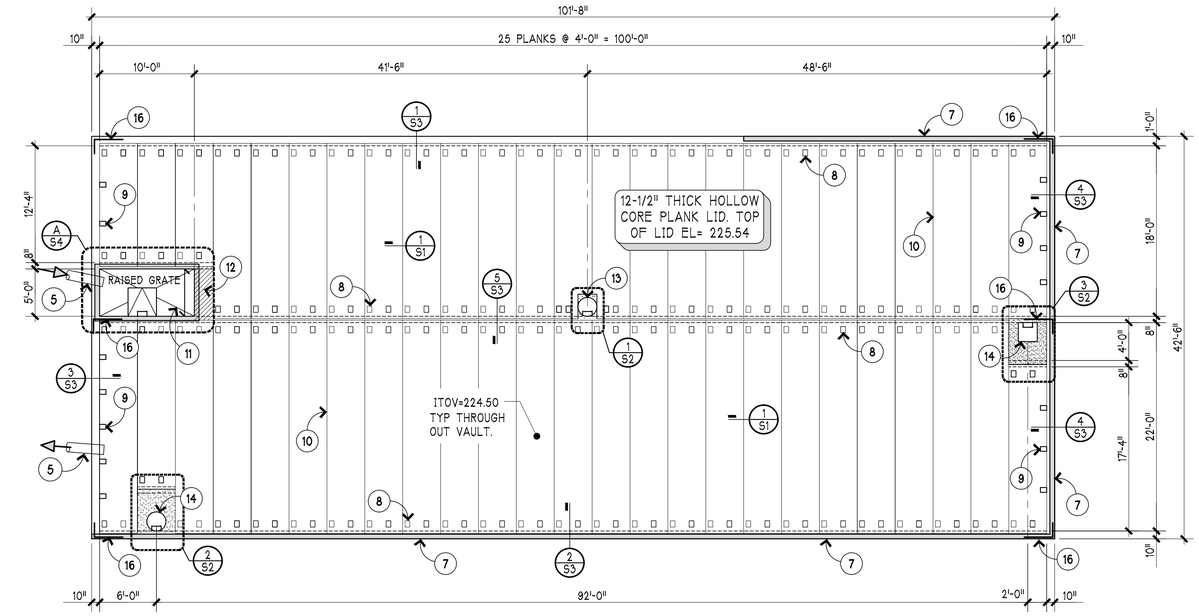
1/S2 LID REINF @ MANHOLE
SCALE NTS



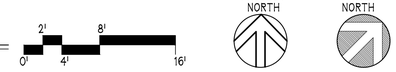
2/S2 LID REINF @ MANHOLE w/ KNEE-WALL
SCALE NTS



3/S2 LID REINF @ INLET w/ KNEE-WALL
SCALE NTS

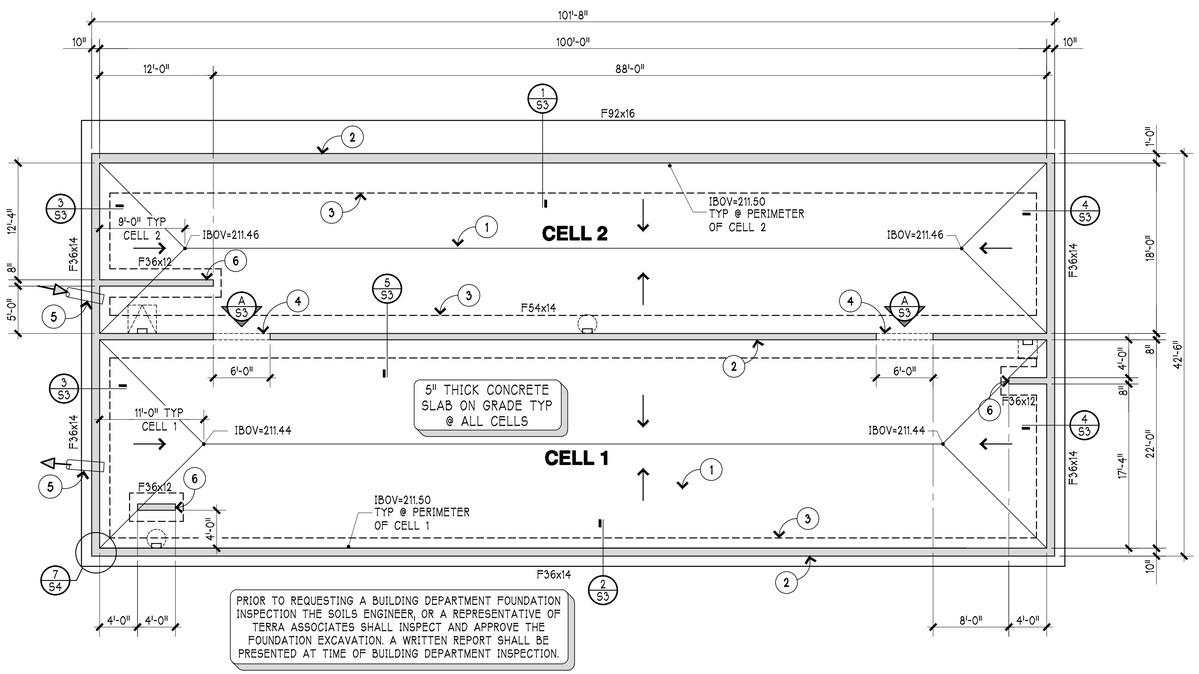


VAULT LID PLAN
SCALE 1/8" = 1'-0"



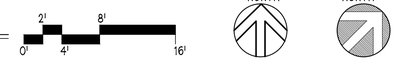
PROJECT NORTH

TRUE NORTH



PRIOR TO REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION THE SOILS ENGINEER, OR A REPRESENTATIVE OF TERRA ASSOCIATES SHALL INSPECT AND APPROVE THE FOUNDATION EXCAVATION. A WRITTEN REPORT SHALL BE PRESENTED AT TIME OF BUILDING DEPARTMENT INSPECTION.

VAULT FOUNDATION PLAN
SCALE 1/8" = 1'-0"



PROJECT NORTH

TRUE NORTH

PLAN KEYNOTES

1. 5" THICK CONCRETE SLAB ON GRADE REINF WITH #4@18"o/c EA WAY. PLACE ALL REINF AT MID-DEPTH OF THE SLAB. CAST GRADE SLAB IN A SINGLE POUR. SEE 2/S1 FOR REINFORCING PLACEMENT DETAIL.
2. CAST IN PLACE CONCRETE WALLS TYPICAL AT THE INTERIOR & PERIMETER OF THE VAULT. SEE WALL SECTIONS FOR REINFORCING AND DIMENSIONS. PROVIDE ADDED REINF AT PIPE PENETRATIONS AS SHOWN IN 3/S1. PROVIDE REINF @ ALL WALL CORNERS AS SHOWN IN 7/S4.
3. THICKENED SLAB FOOTINGS TO BE CAST WITH THE GRADE SLAB. SEE WALL SECTIONS FOR SIZE & REINF UNO.
4. 6'-0" WIDE OPENING WITHIN THE INTERIOR WALL. SEE A/S3 FOR WALL REINFORCING @ THE OPENING.
5. PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAMETER, LOCATION. VERIFY INVERT ELEVATION w/ THE CURRENT CIVIL DWG. SEE 3/S1 FOR WALL REINF @ PENETRATION. ADDITIONAL REINF IS NOT REQUIRED FOR PIPES LESS THAN 8"ø PROVIDED THEY ARE PLACED BETWEEN THE TYPICAL WALL REINFORCING.
6. 8" THICK KNEE-WALL. REINF w/ #5@12"o/c HORZ. AND VERT. PLACED AT THE CENTER OF THE WALL. PROVIDE (2)-#5 HORZ AT THE TOP OF THE WALL & (2)-#5 VERT AT THE FREE ENDS OF THE WALL. EXTEND VERT BARS 11" INTO THE 12-1/2" THICK LID CLOSURE POUR. SEE 4/S1 FOR FTG INFORMATION.
7. 6" THICK CURB AT THE PERIMETER OF THE VAULT. SEE 6/S3 FOR REINF DETAILS. VERIFY EXTENT w/ THE CIVIL DWGS.
8. POUR SLOTS IN THE TOP OF THE PLANK. MANUFACTURER TO PROVIDE A MINIMUM OF 2 SLOTS @ EACH END OF EACH PLANK. PLANK MANUFACTURER MAY REQUIRE GROUTING OF ADDITIONAL CELLS BEYOND THE MINIMUM SHOWN. THE GENERAL CONTRACTOR SHALL INCLUDE GROUTING OF THESE ADDED CELLS IN HIS BID. SEE WALL SECTIONS FOR REINF.
9. PROVIDE BLOCKOUTS IN THE EDGE CELL OF THE PLANK PARALLEL TO THE PERIMETER VAULT WALLS. LOCATE BLOCKOUTS APPROXIMATELY AS SHOWN ON THIS PLAN. SEE WALL SECTIONS FOR REINFORCING AT BLOCKOUT.
10. 12-1/2" THICK PRECAST HOLLOW CORE PLANK. SEE DESIGN CRITERIA NOTES ON SHEET S1 FOR PLANK LOADING REQMTS.
11. 5'-0"x10'-0" OPENING TO RECEIVE OPEN METAL BAR GRATING w/ INTEGRAL 36" x 36" HINGED ACCESS HATCH. SET TOP OF GRATING 8" MIN ABOVE THE HIGHEST ADJACENT FINISHED GRADE. SEE A/S4 FOR GRATING ASSEMBLY INFORMATION.
12. HATCHED AREA REPRESENTS 24" WIDE x 12-1/2" THICK CAST IN PLACE CONCRETE SLAB BEAM. SEE 3/S4 FOR REINFORCING.
13. 24" DIAMETER OPENING THRU LID TO ACCEPT RISERS, LADDER, RING AND LOCKING MANHOLE COVER PER CIVIL DRAWINGS. SEE 1/S2 FOR LID REINF @ OPNG.
14. 24" DIAMETER OPENING THRU LID w/ KNEEWALL TO ACCEPT RISERS, LADDER, RING AND LOCKING MANHOLE COVER PER CIVIL DRAWINGS. SEE 2/S2 FOR LID REINF @ OPNG.
15. 24" SQUARE OPENING THRU LID w/ KNEEWALL TO ACCEPT RISERS, LADDER, RING AND LOCKING INLET GRATE COVER PER CIVIL DRAWINGS. SEE 3/S2 FOR LID REINF @ OPNG.
16. #5x18"x36" CORNER REINF AT EA HORZ BAR WITHIN CLOSURE POUR. SEE 11/S4 FOR PLACEMENT DETAIL. PLACE HOOK HORIZONTALLY.

LEGEND

IBOV	INSIDE BOT OF VAULT (TOP OF GRADE SLAB)
ITOV	INSIDE TOP OF VAULT LID (BOTTOM OF LID)
	GRATING SPAN DIRECTION
F36x12	36" WIDE x 12" THICK FOOTING. SEE 4/S1
F36x14	36" WIDE x 14" THICK FOOTING. SEE 2, 3 & 4/S3
F54x14	54" WIDE x 14" THICK FOOTING. SEE 5/S3
F92x16	92" WIDE x 16" THICK FOOTING. SEE 1/S3
	CIP CONCRETE WALL
	CONCRETE SPREAD FOOTING

DIMENSIONS & ELEVATIONS

THE CONTRACTOR AND HIS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE CURRENT PERMITTED SET OF CIVIL DRAWINGS, AND SHALL NOTIFY BOTH THE CIVIL & STRUCTURAL ENGINEERS IN WRITING OF ALL DISCREPANCIES BETWEEN THE CIVIL DWGS AND THESE DWGS PRIOR TO CONSTRUCTION.

CONSTRUCTION LOADS

THE VAULT LID HAS BEEN DESIGNED TO CARRY THE "DESIGN LOADS" ONLY AFTER VAULT CONSTRUCTION IS COMPLETE, ALL DESIGN CONCRETE AND GROUT STRENGTHS HAVE BEEN ACHIEVED, AND ALL COVER HAS BEEN PLACED OVER THE VAULT WITHIN THE LIMITS SPECIFIED ON THIS DRAWING. "BOBCAT" OR OTHER LIGHT EQUIPMENT SHALL BE USED FOR PLACEMENT OF MATERIALS OVER THE VAULT LID. ALTERNATIVELY, ALLOWABLE UNIFORM LOADS ON THE BARE SLAB CAN BE OBTAINED FROM THE PLANK MFGR.

DATE.	DESCRIPTION.	COUD.
07-27-2022	ISSUED FOR CONST. PERMIT APPLICATION	N/A
12-19-2022	INCORP GEOTECH & PLAN REVIEW COMMENTS	NO

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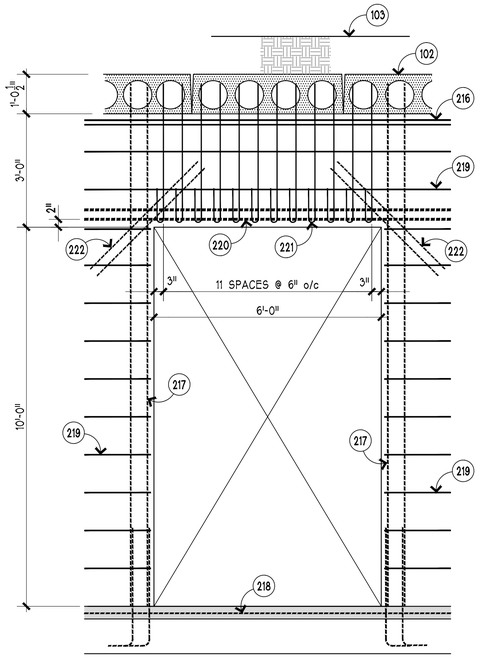
12-19-2022 DANIEL J. KOSNIK STATE OF WASHINGTON 20744 STRUCTURAL ENGINEER PROFESSIONAL ENGINEER

THE RESERVE
STORM WATER DETENTION VAULT
CITY OF GIG HARBOR, WASHINGTON

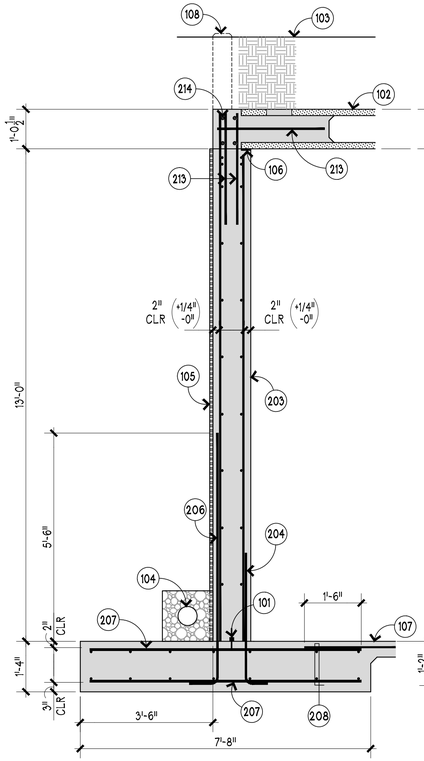
LID & FOUNDATION PLANS & DETAILS

SHEET:
S2 OF 4
S-22-036

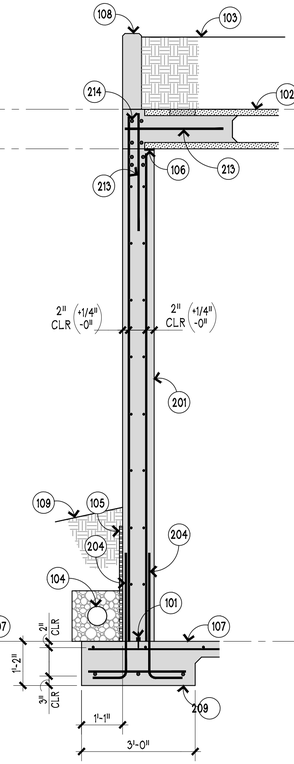
SHEET SIZE 22x34



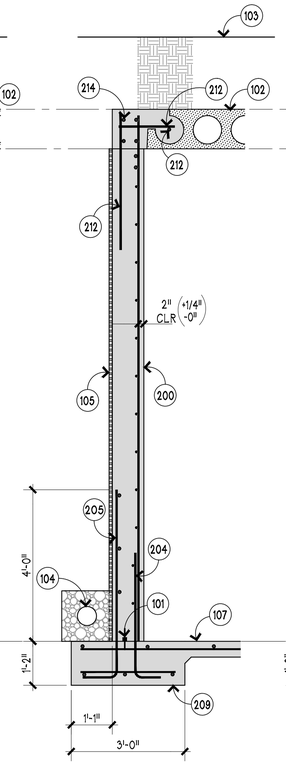
A S3 OPNG IN CELL DIVIDER WALL
SCALE 1/2"=1'-0"



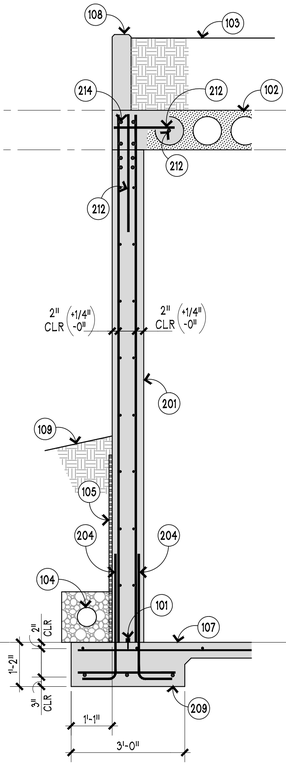
1 S3 TYP WALL SECTION
SCALE 1/2"=1'-0"



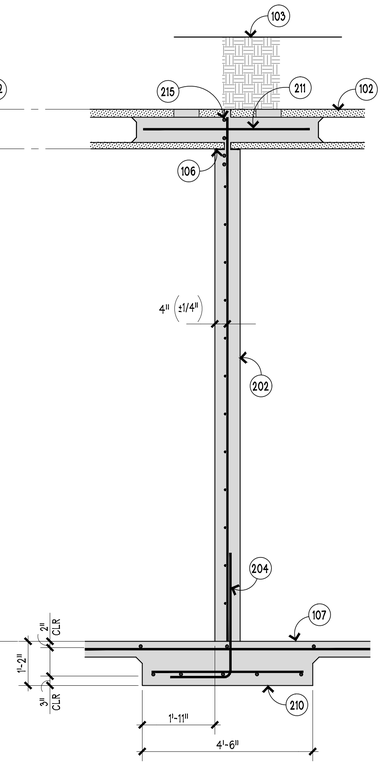
2 S3 TYP WALL SECTION
SCALE 1/2"=1'-0"



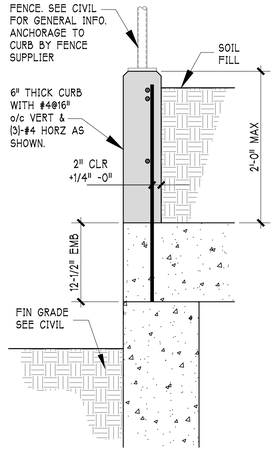
3 S3 TYP WALL SECTION
SCALE 1/2"=1'-0"



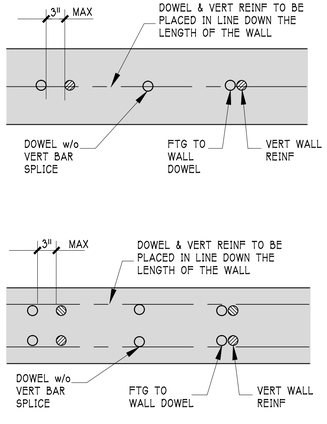
4 S3 TYP WALL SECTION
SCALE 1/2"=1'-0"



5 S3 TYP WALL SECTION
SCALE 1/2"=1'-0"



6 S3 CURB DETAIL
SCALE 1"=1'-0"



7 S3 TYP FTG DOWEL PLACEMENT DETAIL
SCALE 1"=1'-0"

GENERAL KEYNOTES

101. PROVIDE CONTINUOUS 4" PVC WATERSTOP - RIBBED WITH CENTERBULB AT THE BASE OF ALL PERIMETER WALLS. INSTALL WATERSTOP IN ACCORDANCE WITH ALL MANUFACTURER'S INSTRUCTIONS. PLACE AT THE CENTER OF THE WALL
102. 12-1/2" THICK PRECAST HOLLOW CORE PLANK.
103. FINISHED GRADE OVER THE LID. ELEVATION VARIES. SEE DESIGN CRITERIA ON SHEET S1 FOR APPROXIMATE SOIL DEPTHS OVER THE VAULT LID IN ADDITION TO THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.
104. 6"ø PERFORATED PVC FTG DRAIN MIN IE=212.00 WRAPPED IN 18"x18" MINIMUM DRAIN ROCK BEDDING & FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
105. APPLY PREFABRICATED DRAINAGE PANEL TO ALL PERIMETER VAULT WALLS. EXTEND DRAINAGE PANEL OVER THE HEIGHT OF THE WALL AS SHOWN. SEE GEOTECHNICAL ENGINEER FOR MATERIAL SPECIFICATIONS.
106. PLANK TO BEAR 3" MINIMUM ONTO THE TOP OF THE CONCRETE WALL. SEE PLANK MANUFACTURER'S DRAWINGS FOR FINAL BEARING LENGTH. INSTALL BEARING PAD AS DETAILED ON THE PRECAST PLANK PLACEMENT DRAWINGS.
107. SEE FOUNDATION PLAN FOR SLAB REINFORCING.
108. 6" THICK CURB. SEE 6/S3 FOR REINF AND LID PLAN FOR EXTENT.
109. FINISHED GRADE ALONG THE EXPOSED FACE OF THE WALL. ELEVATION VARIES. SEE THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.

REINFORCING KEYNOTES

200. 10" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & #7@10"o/c VERT. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. LAP ALL HORZ BARS 24" MIN @ SPLICE LOCATIONS. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND VERT REINF 11" MIN INTO THE LID CLOSURE POUR WHERE POSSIBLE.
201. 10" THICK CONCRETE WALL REINF w/ #5@18"o/c HORZ EA FACE & #6@15"o/c VERT. NEAR THE INSIDE FACE OF THE WALL & #6&10"o/c VERT NEAR THE OUTSIDE FACE OF THE WALL. LAP ALL HORZ BARS 24" MIN @ SPLICE LOCATIONS. PROVIDE (2)-#5 CONT HORZ BARS EA FACE @ THE TOP OF THE WALL. EXTEND VERT REINF 11" MIN INTO THE LID CLOSURE POUR WHERE POSSIBLE.
202. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT REINF @ THE CENTER OF THE WALL. LAP ALL HORZ BARS 24" MIN @ SPLICE LOCATIONS. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND ALL VERT REINF 11" MIN INTO THE LID CLOSURE POUR.
203. 12" THICK CONCRETE WALL REINF w/ #5@18"o/c HORZ EA FACE & #7@12"o/c VERT. NEAR THE BACKFILLED FACE @ #6@18"o/c NEAR THE INSIDE FACE OF THE WALL. LAP ALL HORZ BARS 24" MIN @ SPLICE LOCATIONS. PROVIDE (2)-#5 CONT HORZ BARS EA FACE @ THE TOP OF THE WALL. EXTEND ALL VERT REINF 11" MIN INTO THE LID CLOSURE POUR.
204. #5 FTG TO WALL DOWEL @ EA VERT. PROVIDE STD HOOK @ END OF BAR CAST INTO FOOTING. DOWELS SHALL BE EMBEDDED A MIN. OF 13" +/- 1/2" INTO 16" THK FTG AND 11" INTO 14" THK FTG & SHALL EXTEND INTO THE WALL 28" MIN. SEE 7/S3 FOR PLACEMENT DETAIL.
205. #5@15"o/c WALL TO FOOTING DOWELS. EXTEND 48" INTO THE WALL AND 11" INTO THE 14" THK FTG. PROVIDE STD HOOK AT END OF BAR EMBEDED WITHIN FTG. PROVIDE (3)-#4 CONT HORZ. BARS AS SHOWN. SET DOWELS 1-1/2" CLR FROM THE BACKFILLED FACE OF THE WALL.
206. #7@6"o/c WALL TO FOOTING DOWELS. EXTEND 66" INTO THE WALL AND 13" INTO THE 16" THK FTG. PROVIDE STD HOOK AT END OF BAR EMBEDED WITHIN FTG.
207. #7@12"o/c TRANSVERSE BOT.
208. (7)-#5 CONT LONGITUDINAL T & B. LAP 24" AT ALL SPLICE LOCATIONS.
209. REINFORCE FOOTING w/ (3)-#5 LONG & #5@15"o/c TRANS BOTTOM.
210. REINFORCE FOOTING w/ (5)-#5 LONG & #5@12"o/c TRANS BOTTOM.
211. #5x4'-0"@24"o/c PLACED SUCH THAT EACH 48" WIDE PLANK RECEIVES (2) BARS. LOCATE BARS IN VOIDS WITH POUR SLOTS AS SHOWN ON THE PRECAST PLANK PLACEMENT DWGS. PROVIDE ADDITIONAL BARS @ EACH PLANK IF REQ'D AND SHOWN ON THE PRECAST PLANK SHOP DWGS.
212. LID & WALL TO CLOSURE POUR REINF @ VOID BLOCK OUT. SEE 10/S4.
213. LID & WALL TO CLOSURE POUR REINF @ VOID END FILL. SEE 8 & 9/S4.
214. (2)-#6 EA FACE CONT IN CLOSURE POUR. LAP 48" AT ALL SPLICE LOCATIONS.
215. (2)-#6 CONT. IN CLOSURE POUR LAP 48" AT ALL SPLICE LOCATIONS.
216. (2)-#5 HORZ @ THE TOP OF THE WALL.
217. PROVIDE (2)-#5@6"o/c VERT EACH FREE EDGE OF WALL.
218. ADD (5)-#6x12'-0" TOP WITHIN THE FOOTING CENTERED BELOW THE OPENING.
219. #5@12"o/c TYP CELL DIVIDER WALL HORZ REINF.
220. (2)-#7@3"o/c. EXTEND 30" BEYOND EACH JAMB.
221. #4 VERT w/ 180 HOOK @ HEAD OF OPNG, SPACED AS SHOWN.
222.. (2)-#5 x 4'-0" @ 3"o/c DIAGONAL BARS PLACED AT THE CENTER OF THE WALL.

DATE:	DESCRIPTION:	COUD.
07-27-2022	ISSUED FOR CONST. PERMIT APPLICATION	N/A
12-19-2022	INCORP GEOTECH & PLAN REVIEW COMMENTS	NO

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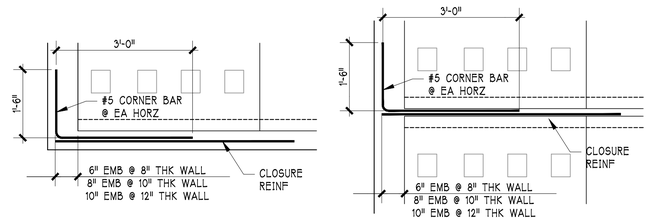
THE RESERVE
STORM WATER DETENTION VAULT
CITY OF GIG HARBOR, WASHINGTON

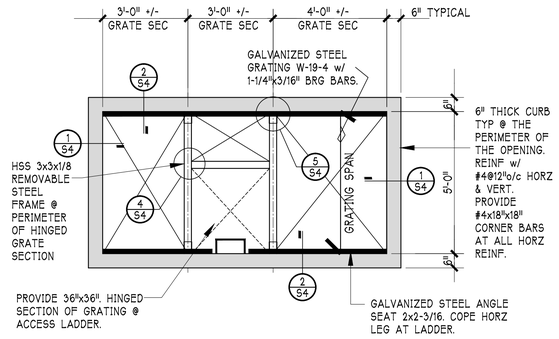
WALL SECTIONS & DETAILS

SHEET:
S3 OF 4
S-22-036

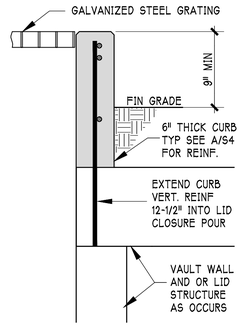
SHEET SIZE 22x34



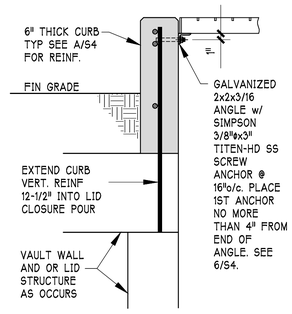
11/S4 CLOSURE CORNER BAR DETAIL
SCALE NTS



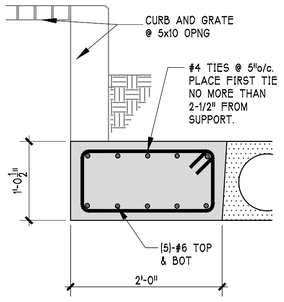
A/S4 GRATING & CURB @ RAISED 5'x10' OPNG
SCALE 3/8"=1'-0"



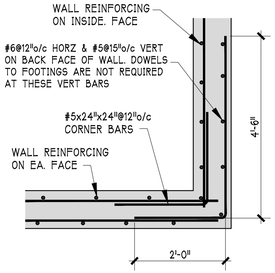
1/S4 TYP CURB @ OPNG
SCALE 1"=1'-0"

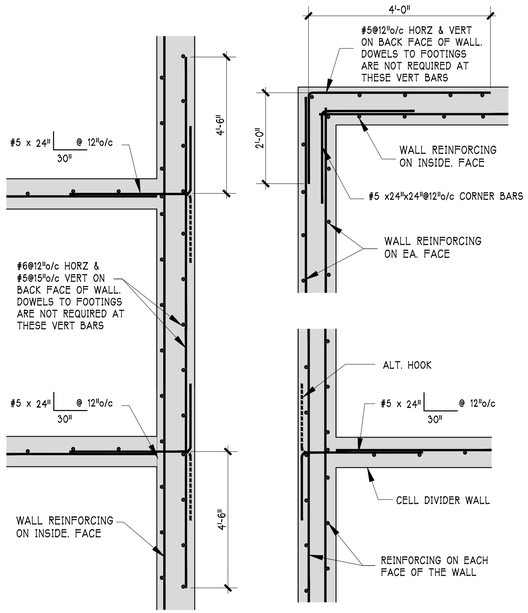


2/S4 TYP CURB @ OPNG
SCALE 1"=1'-0"

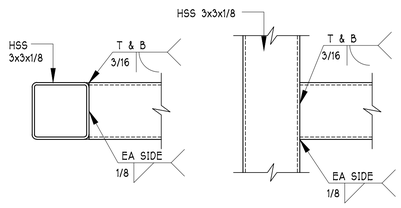


3/S4 SLAB BEAM @ OPNG
SCALE 1"=1'-0"

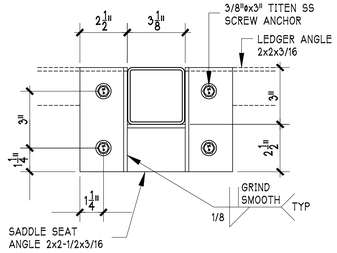




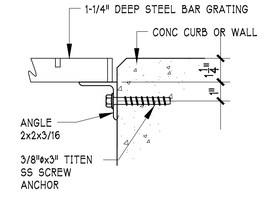
7/S4 TYP WALL CORNER REINF.
NTS



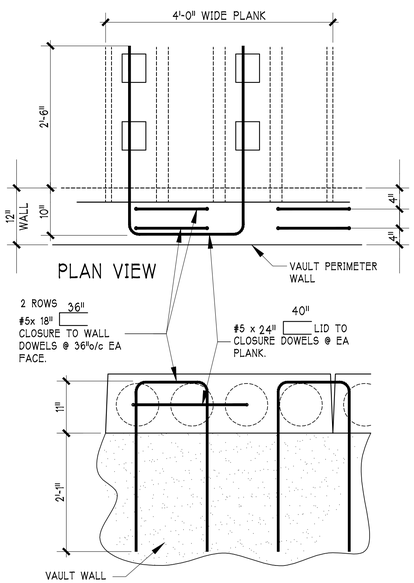
4/S4 HSS FRAME CONN
SCALE 3"=1'-0"



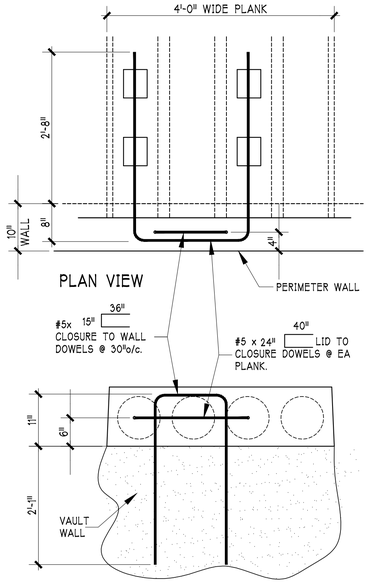
5/S4 HSS SEAT DETAIL
SCALE 3"=1'-0"



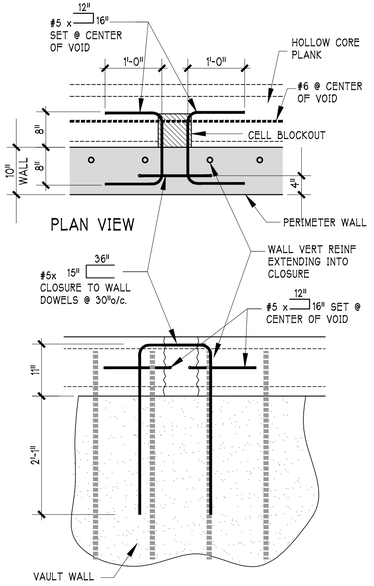
6/S4 LEDGER ANGLE DETAILS
SCALE 3"=1'-0"



8/S4 LID & WALL TO CLOSURE DOWELS AT PLANK VOID FILL - 12" WALL
SCALE 3/4"=1'-0"



9/S4 LID & WALL TO CLOSURE DOWELS AT PLANK VOID END FILL - 10" WALL
SCALE 3/4"=1'-0"



10/S4 LID & WALL TO CLOSURE DOWELS AT VOID BLOCKOUTS - 10" WALL
SCALE 3/4"=1'-0"

DATE.	DESCRIPTION.	COUD.
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DETAILS

SHEET:
S4 OF 4
S-22-036

SHEET SIZE 22x34