

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON

LOT 4
PLAT OF
ALDERWOOD MANOR
NO. 5
VOL. 9, PGS. 93-96

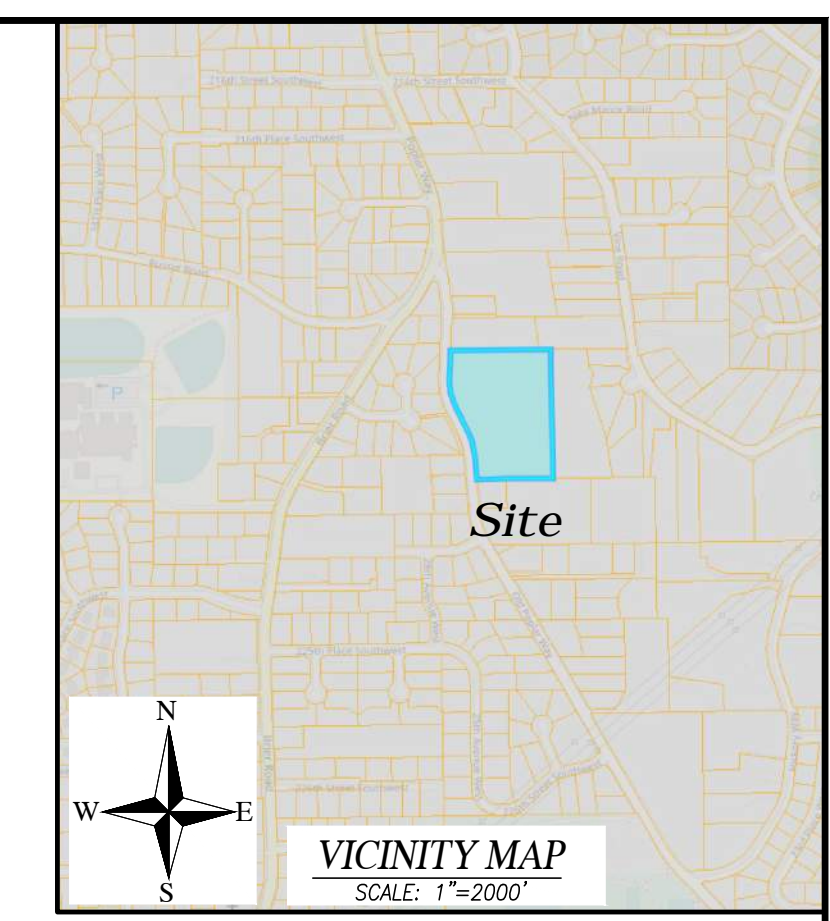
FOUND REBAR W/CAP
STAMPED "TUE" 0.11(S)
OF PROPERTY LINE. FENCE COR.
0.2(S) OF PROPERTY LINE

ROBERT PETERSON
21920 VINE RD
BRIER, WA 98036

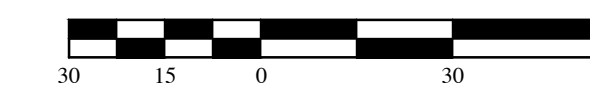
CRITICAL
AREAS TRACT
TRACT 999
3,959 SF

ELLEN BLAIR LAMB
908 BEACHVIEW RD
CLARKSTON, WA 99403

FOUND REBAR W/CAP
STAMPED "LS 23613" AT CORNER. FENCE
0.7(S) AT CORNER



SCALE: 1" = 30'



LEGEND

- ✕ EXISTING MONUMENT (AS SHOWN)
- ✕ SECTION 1/4 CORNER NOT FOUND
- ✕ SECTION CORNER NOT FOUND
- FOUND REBAR/CAP OR I.P. (IRON PIPE)
- (C) CALCULATED
- (P) PLAT
- (M) MEASURED
- TBR TO BE REMOVED
- R.O.W. RIGHT-OF-WAY
- P.O.B. POINT OF BEGINNING
- CLF CENTERLINE
- CLF CHAIN LINK FENCE
- WDF WOOD FENCE
- W.S. WATER SURFACE
- EOP EDGE OF PAVEMENT
- BOW BACK OF WALK
- CB STORM DRAIN CATCH BASIN (CB)
- SD STORM DRAIN MANHOLE (SDMH)
- SS SANITARY SEWER MANHOLE (SSMH)
- CO SANITARY SEWER CLEAN OUT (CO)
- PP POWER POLE
- GP GUY POLE
- WM WATER METER
- WV WATER VALVE
- MB MAILBOX
- UA UTILITY POLE ANCHOR
- FH FIRE HYDRANT (2 NOZZLE)
- TS TYPE I NGPA SIGN
- PROPOSED WATER
- PROPOSED SANITARY SEWER
- PROPOSED STORM DRAINAGE
- PROPERTY LINE
- EXISTING FENCE LINE
- EDGE OF PAVEMENT
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PRE-EXISTING DRAINAGE PATTERN

Parcel Line Table

Line #	Length	Direction
L1	55.03	S9° 13' 18.49"W
L3	99.03	S70° 48' 49.08"W

Curve Table

Curve #	Length	Radius
C1	96.75	90.00

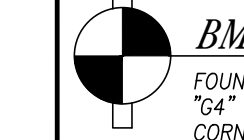
EQUIPMENT AND PROCEDURE

METHOD OF SURVEY:
SURVEY PERFORMED BY FIELD TRAVERSE

INSTRUMENTATION:
LEICA TS15 ROBOTIC ELECTRONIC TOTAL STATION

PRECISION:
MEETS OR EXCEEDS STATE STANDARDS WAC 332-130-090

BASIS OF BEARING:
THE MONUMENTED WEST LINE OF THE PLAT OF GREGORY PLACE, AS THE BEARING OF N 00°03'30" E.



BM
FOUND REBAR W/CAP STAMPED
"G4" AT NORTHWEST PROPERTY
CORNER.
ELEV. = 393.78'
PER GPS OBSERVATIONS

DATUM:
NAVD 88
N.A.V.D 88 - 3.64' = NGVD '29 (MSL)

ENGINEER/CONTACT SURVEYOR

INSIGHT ENGINEERING COMPANY
P.O. BOX 1478
EVERETT, WA 98206
CONTACT: BRIAN R. KALAB, P.E.
PH: (425) 303-9363
FAX: (425) 303-9362
EMAIL: INFO@INSIGHTENGINEERING.NET

PACIFIC COAST SURVEYS, INC.
P.O. BOX 13519
MILLCREEK, WA 98026
CONTACT: DARREN J. RIDDLE, PLS
PHONE: (425) 508-4951
FAX: (425) 357-3577

APPLICANT OWNER

AFORA HOLDINGS LLC
PO BOX 649
MUKILTEO, WA 98275
PH: (425) 512-0736

MARIA PHILLIPS
22015 OLD POPLAR WAY
LYNNWOOD, WA 98036
EMAIL: MK.PHILLIPS@COMCAST.NET

LEGAL DESCRIPTION

LOT 5, BLOCK 18, ALDERWOOD MANOR NO. 6, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 9 OF PLATS, PAGES 93, 94, 95 AND 96, RECORDS OF SNOHOMISH COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.



INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY
LYNNWOOD, WA 98036

TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

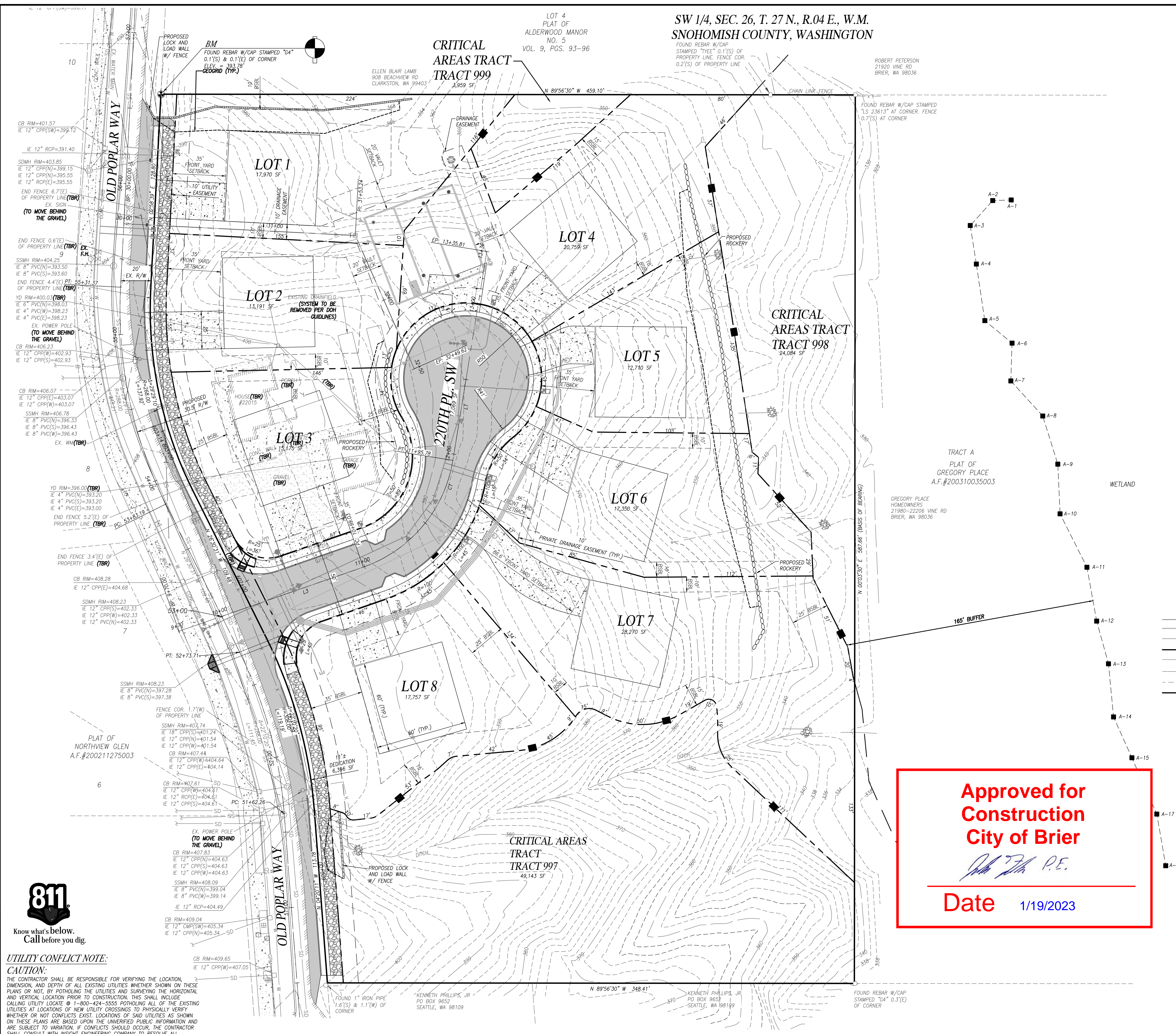
DWG FILENAME: 211108-CO2.DWG
DESIGNED BY: JTK
DATE: 12-22-2021
SCALE: 1"=30'
JOB NO.: 21-1108
SHEET

COVER SHEET

C1.0

Approved for
Construction
City of Brier

Date 1/19/2023



UTILITY CONFLICT NOTE:
CAUTION:
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SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON

LOT 4
PLAT OF
ALDERWOOD MANOR
NO. 5
VOL. 9, PGS. 93-96

FOUND REBAR W/CAP
STAMPED "TIE" 0.11(S) OF
PROPERTY LINE, FENCE COR.
0.2(S) OF PROPERTY LINE

ROBERT PETERSON
21620 VINE RD
BRIER, WA 98036



SCALE: 1" = 30'



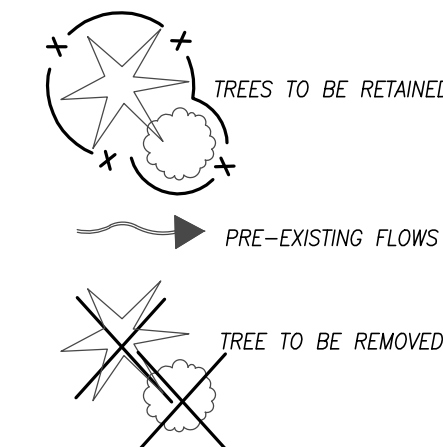
TRACT A
PLAT OF
GREGORY PLACE
A.F.#200310035003

GREGORY PLACE
HOMEOWNERS
21990-22206 VINE RD
BRIER, WA 98036

**Approved for
Construction
City of Brier**

[Signature] P.E.

Date 1/19/2023



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TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-CO2.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108

EXISTING FEATURES MAP

SHEET
CI.1

REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022



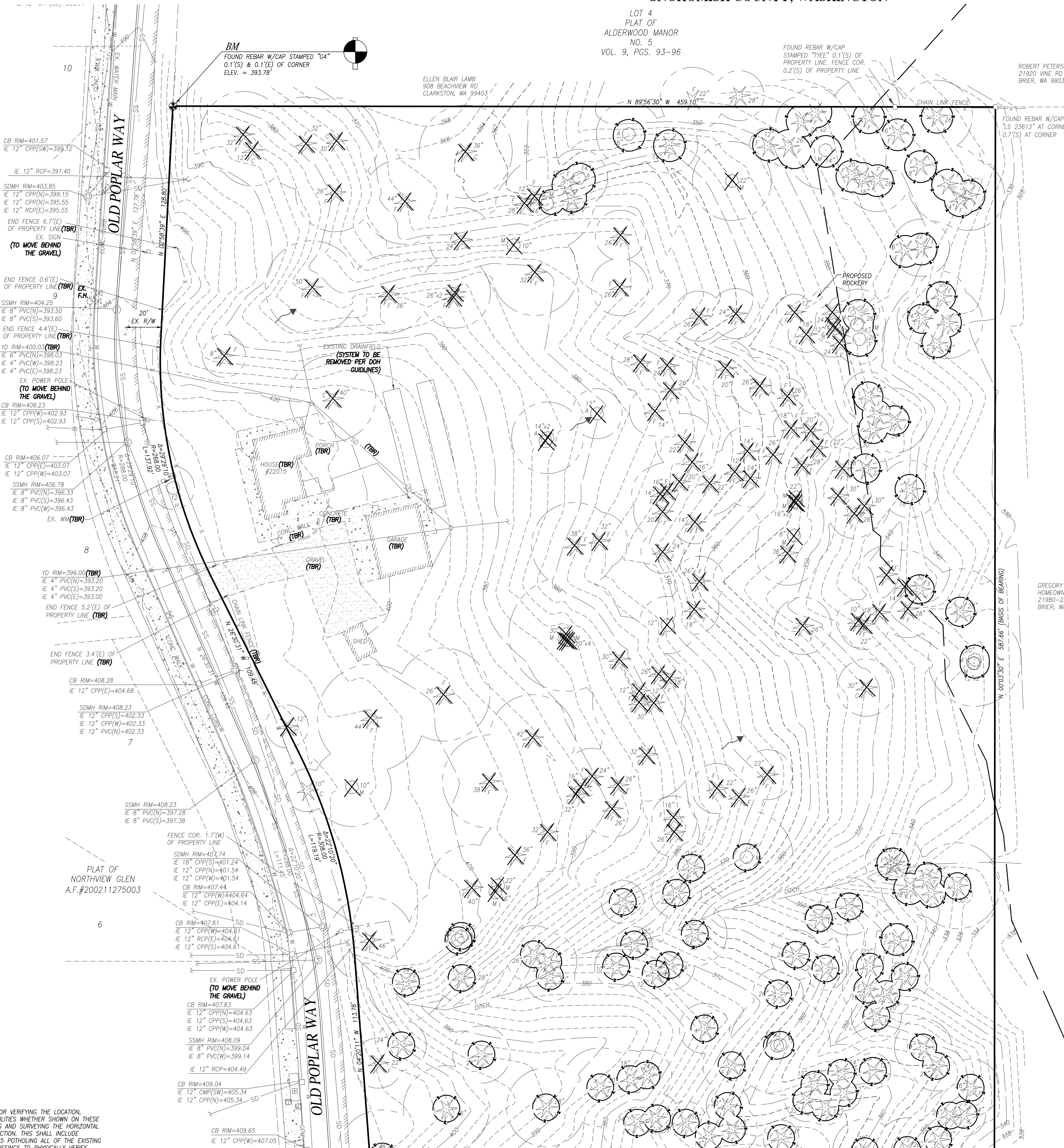
01/11/2023



Know what's below.
Call before you dig.

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10
CB RIM=401.57
IE 12" CPP(S)=399.12
IE 12" RCP=391.40
SDMH RIM=403.85
IE 12" CPP(N)=399.15
IE 12" CPP(S)=395.55
IE 12" RCP(E)=395.55
END FENCE 6.7'(E)
OF PROPERTY LINE (TBR)
EX. SIGN
(TO MOVE BEHIND
THE GRAVEL)
END FENCE 0.6'(E)
OF PROPERTY LINE (TBR)
EX. RM.
SSMH RIM=404.25
IE 8" PVC(N)=393.50
IE 8" PVC(S)=393.60
END FENCE 4.4'(E)
OF PROPERTY LINE (TBR)
YD RIM=400.00 (TBR)
IE 6" PVC(N)=393.13
IE 4" PVC(W)=398.23
IE 4" PVC(E)=398.23
EX. POWER POLE
(TO MOVE BEHIND
THE GRAVEL)
CB RIM=406.23
IE 12" CPP(W)=402.93
IE 12" CPP(S)=402.93
CB RIM=406.07
IE 12" CPP(E)=403.07
IE 12" CPP(W)=403.07
SSMH RIM=406.78
IE 8" PVC(N)=396.33
IE 8" PVC(S)=396.43
IE 8" PVC(W)=396.43
EX. WM (TBR)
YD RIM=396.00 (TBR)
IE 4" PVC(N)=393.20
IE 4" PVC(S)=393.20
IE 4" PVC(E)=393.00
END FENCE 5.2'(E)
OF PROPERTY LINE (TBR)
END FENCE 3.4'(E)
OF PROPERTY LINE (TBR)
CB RIM=408.28
IE 12" CPP(E)=404.68
SDMH RIM=408.23
IE 12" CPP(S)=402.33
IE 12" CPP(W)=402.33
IE 12" PVC(N)=402.33
SSMH RIM=408.23
IE 8" PVC(N)=397.28
IE 8" PVC(S)=397.38
FENCE COR. 1.7'(W)
OF PROPERTY LINE
SDMH RIM=407.74
IE 18" CPP(S)=401.24
IE 12" CPP(W)=401.54
IE 12" CPP(E)=401.54
CB RIM=407.44
IE 12" CPP(W)=404.64
IE 12" CPP(E)=404.14
CB RIM=407.61
IE 12" CPP(W)=404.61
IE 12" RCP(E)=404.61
IE 12" CPP(S)=404.61
EX. POWER POLE
(TO MOVE BEHIND
THE GRAVEL)
CB RIM=407.83
IE 12" CPP(N)=404.63
IE 12" CPP(S)=404.63
IE 12" CPP(W)=404.63
SSMH RIM=408.09
IE 8" PVC(N)=399.04
IE 8" PVC(W)=399.14
IE 12" RCP=404.49
CB RIM=409.04
IE 12" CPP(S)=405.34
IE 12" CPP(N)=405.34
SD
CB RIM=409.65
IE 12" CPP(W)=407.05
SD

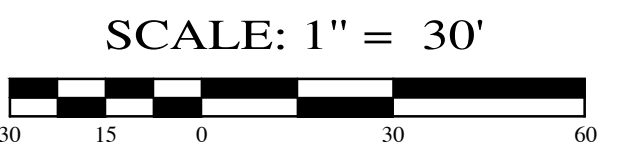
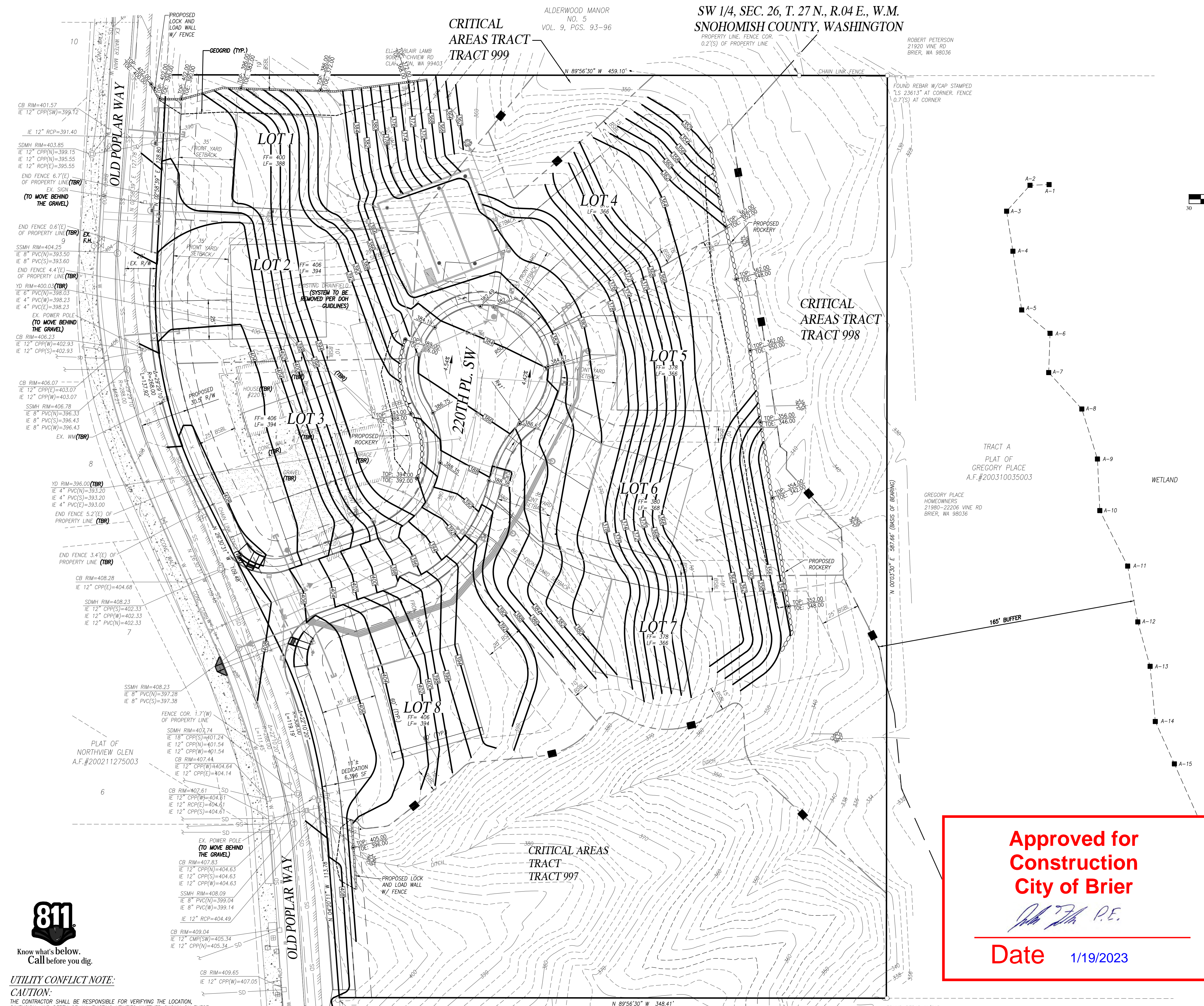
FOUND 1" IRON PIPE
1.6(S) & 1.1(W) OF
CORNER
KENNETH PHILLIPS, JR.
P.O. BOX 9652
SEATTLE, WA 98109
FOUND REBAR W/CAP
STAMPED "G4" 0.3'(E)
OF CORNER

ALDERWOOD MANOR NO. 5 VOL. 9, PGS. 93-96
 SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
 SNOHOMISH COUNTY, WASHINGTON

CRITICAL AREAS TRACT TRACT 999

CRITICAL AREAS TRACT TRACT 998

CRITICAL AREAS TRACT TRACT 997

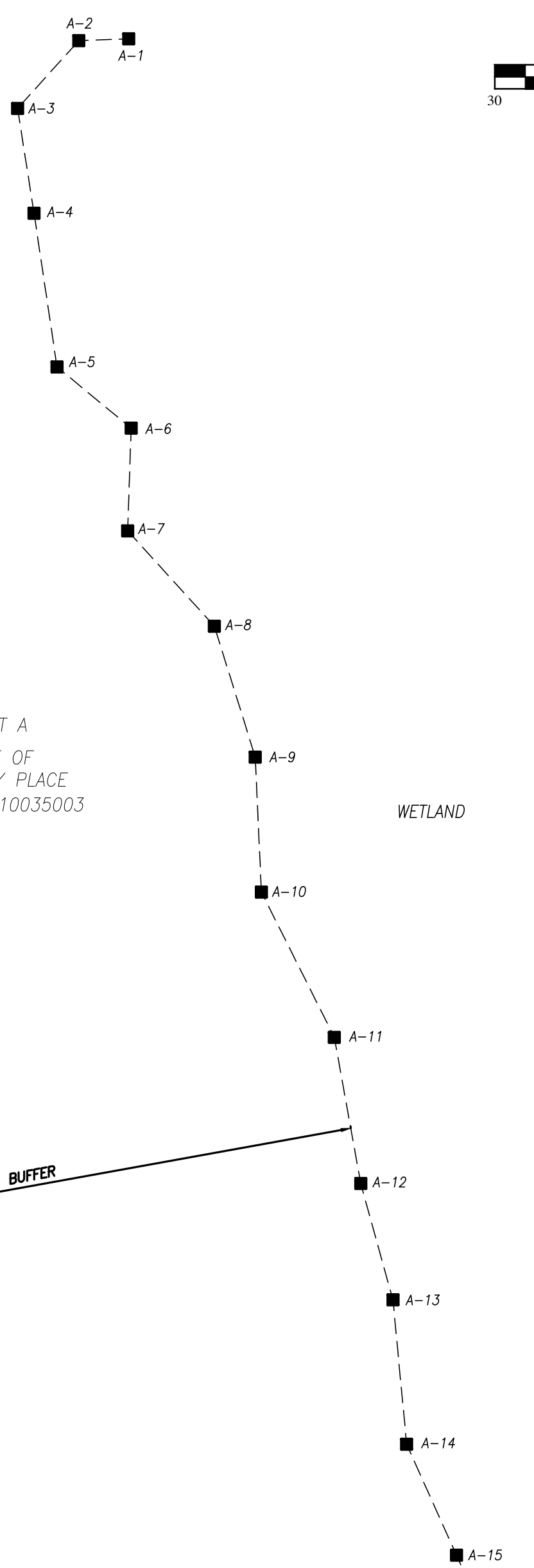


GEOTECH NOTE

1. WE RECOMMEND A MINIMUM BUILDING SETBACK OF 15 FEET FROM THE TOP OF THE RAVINE SLOPE FOR LOT 8, BASED ON THE SITE PLAN. WE ANTICIPATE THAT MUCH OF THE SITE WILL BE GRADED WITH CUTS AND FILLS TO CREATE NEW BUILDING PAD AREAS. IF THIS IS THE CASE, WE CAN DETERMINE IF SETBACKS ARE WARRANTED BASED ON THE FINAL PROPOSED GRADING PLAN AND BUILDING LOCATIONS/ELEVATIONS.
2. IT IS OUR OPINION THAT SOIL EROSION POTENTIAL AT THIS PROJECT SITE CAN BE REDUCED THROUGH LANDSCAPING AND SURFACE WATER RUNOFF CONTROL. EROSION CONTROL MEASURES SHOULD BE IN PLACE BEFORE THE ONSET OF WET WEATHER.
3. WE ANTICIPATE THAT THE SITE WILL BE GRADED TO CREATE THE BUILDING PADS AND LOTS. IN GENERAL, FILLING OF THE NORTH RAVINE FEATURE AND OTHER SLOPED AREAS IS FEASIBLE. HOWEVER, PROPER BENCHING AND KEYING OF NEW STRUCTURAL FILLS INTO SLOPED HILLSIDES IS REQUIRED. AT THE BASE OF THE RAVINE, WE RECOMMEND THAT THE LOWEST TWO FEET OF FILL CONSIST OF FREE DRAINING MATERIALS (LESS THAN 5 PERCENT FINES) IN ORDER TO ALLOW ANY SEASONAL SEEPAGE TO MIGRATE DOWNSLOPE AS WHAT LIKELY CURRENTLY TAKES PLACE.
4. TREES, SHRUBS AND OTHER VEGETATION SHOULD BE REMOVED PRIOR TO STRIPPING OF SURFICIAL ORGANIC-RICH SOIL AND FILL BASED ON OBSERVATIONS FROM THE SITE INVESTIGATION PROGRAM. IT IS ANTICIPATED THAT THE STRIPPING DEPTH WILL BE 6 TO 18 INCHES. DEEPER EXCAVATIONS WILL BE NECESSARY BELOW LARGE TREES WHERE ROOT SYSTEMS CAN EXTEND TO GREATER DEPTHS, IN AREAS OF EXISTING FOUNDATION SYSTEMS, AND IN ANY AREAS UNDERLAIN BY UNDOCUMENTED FILL.
5. SOIL CONDITIONS MAY NOT BE COMPLETELY KNOWN FROM THE GEOTECHNICAL INVESTIGATION. IN THE CASE OF TEMPORARY CUTS, THE EXISTING SOIL CONDITIONS MAY NOT BE COMPLETELY REVEALED UNTIL THE EXCAVATION WORK EXPOSES THE SOIL. TYPICALLY, AS EXCAVATION WORK PROGRESSES THE MAXIMUM INCLINATION OF TEMPORARY SLOPES WILL NEED TO BE RE-EVALUATED BY THE GEOTECHNICAL ENGINEER SO THAT SUPPLEMENTAL RECOMMENDATIONS CAN BE MADE. SOIL AND GROUNDWATER CONDITIONS CAN BE HIGHLY VARIABLE. SCHEDULING FOR SOIL WORK WILL NEED TO BE ADJUSTABLE, TO DEAL WITH UNANTICIPATED CONDITIONS, SO THAT THE PROJECT CAN PROCEED AND REQUIRED DEADLINES CAN BE MET.
6. IF ANY VARIATIONS OR UNDESIRABLE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION, WE SHOULD BE NOTIFIED SO THAT SUPPLEMENTAL RECOMMENDATIONS CAN BE MADE. IF ROOM CONSTRAINTS OR GROUNDWATER CONDITIONS DO NOT PERMIT TEMPORARY SLOPES TO BE CUT TO THE MAXIMUM ANGLES ALLOWED BY THE WAC, TEMPORARY SHORING SYSTEMS MAY BE REQUIRED. THE CONTRACTOR SHOULD BE RESPONSIBLE FOR DEVELOPING TEMPORARY SHORING SYSTEMS, IF NEEDED. WE RECOMMEND THAT COBALT GEOSCIENCES AND THE PROJECT STRUCTURAL ENGINEER REVIEW TEMPORARY SHORING DESIGNS PRIOR TO INSTALLATION, TO VERIFY THE SUITABILITY OF THE PROPOSED SYSTEMS.
7. WE RECOMMEND THAT THE UPPER 12 INCHES OF THE EXISTING NATIVE SOILS WITHIN SLAB AREAS BE RE-COMPACTED TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR (ASTM D1557 TEST METHOD).
8. COBALT MUST BE ON SITE DURING WALL CONSTRUCTION TO VERIFY RELEVANT ASPECTS OF THE CONSTRUCTION.

TRACT A
 PLAT OF
 GREGORY PLACE
 A.F.#200310035003

GREGORY PLACE
 HOMEOWNERS
 21980-22208 VINE RD
 BRIER, WA 98036



Approved for Construction
City of Brier

[Signature] P.E.

Date 1/19/2023

LEGEND

--- GEGRID (TYP.)

GRADING QUANTITIES:

CUT: 4,000 Cu.Yds.
 FILL: 29,000 Cu.Yds.

(GRADING QUANTITIES WERE CALCULATED USING THE LAND DEVELOPMENT DESKTOP COMPOSITE METHOD. CALCULATIONS DO NOT ACCOUNT FOR SOIL SWELLING AND SHRINKAGE.)

NOTE:

1. EXCESS CUT MAY BE SPREAD ON SITE.
2. ANY SOIL REMOVED FROM THE SITE MUST BE HAUL TO A CITY APPROVED SITE.
3. BEFORE CONSTRUCTION ACCEPTANCE BY THE CITY, THE APPLICANT SHALL ESTABLISH A PERMANENT VEGETATIVE GROUND COVER.



INSIGHT ENGINEERING CO.
 P.O. BOX - 1478
 EVERETT, WA 98206
 (425) 303-9363 (425) 303-9362 FAX
 INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY
 LYNNWOOD, WA 98036
 TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-C02.DWG DESIGNED BY: JTK DATE: 03-29-2021 SCALE: 1"=30' JOB NO.: 21-1108

GRADING PLAN SHEET C2.0

REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022

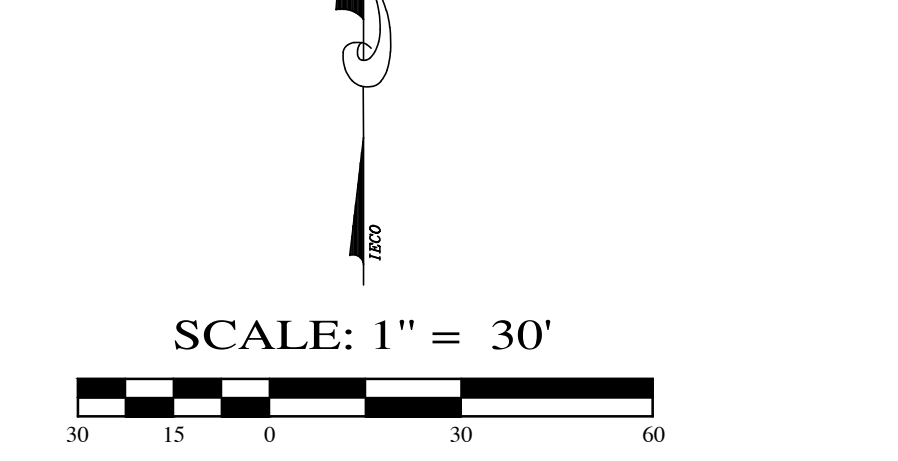
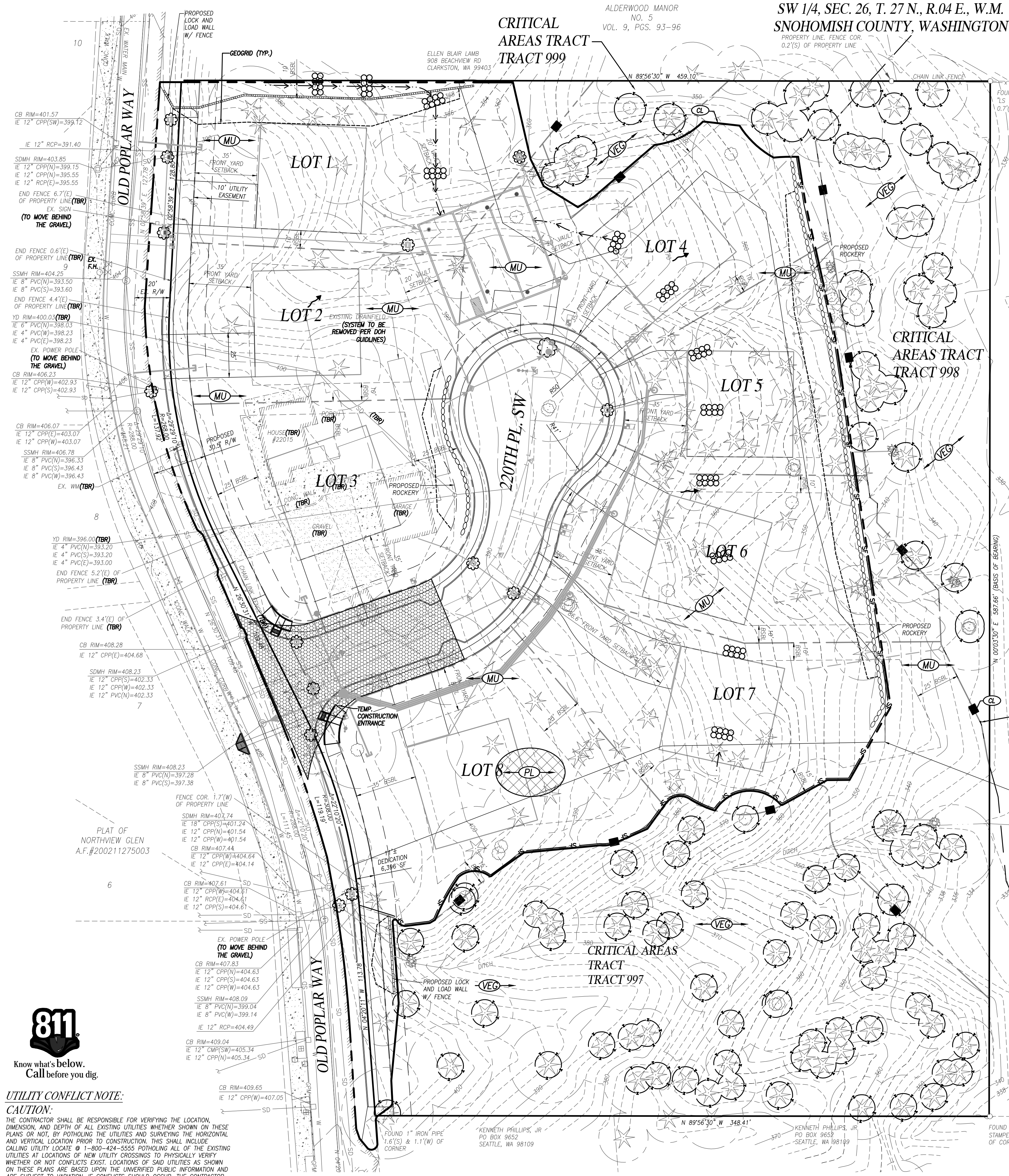


01/11/2023



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PHILLIPS RIDGE

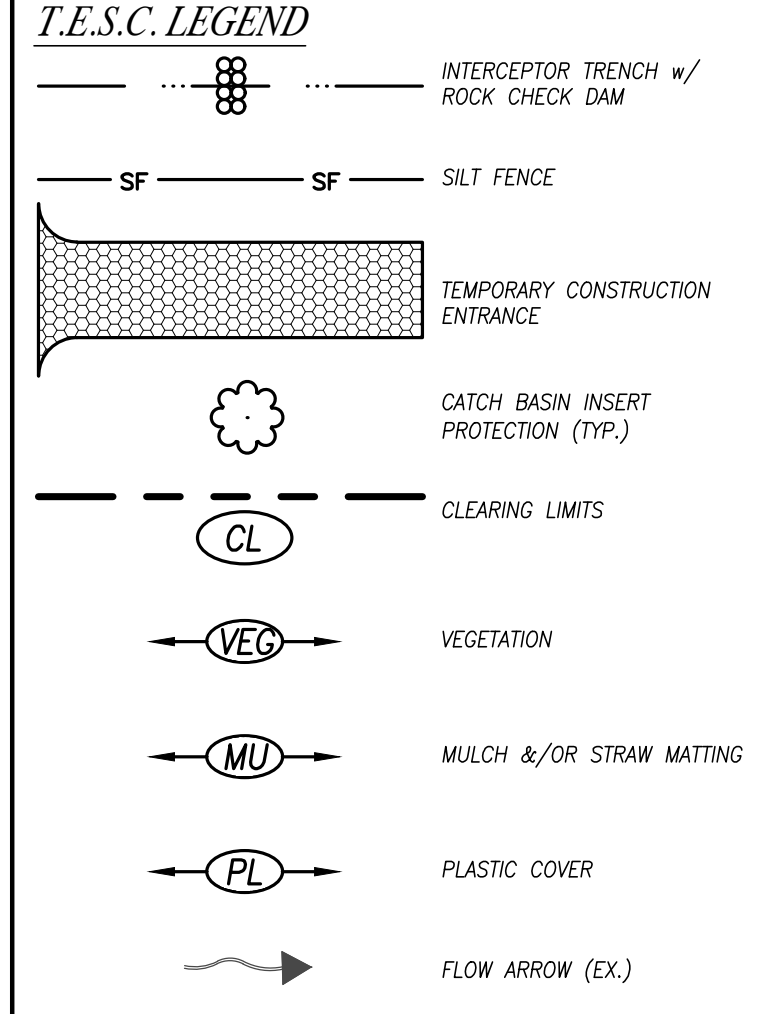


- EROSION AND SEDIMENTATION CONTROL NOTES**
- APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
 - THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
 - THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY ORANGE CONSTRUCTION FENCING PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
 - STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
 - THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
 - THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.).
 - THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
 - ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC COVER METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
 - ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
 - THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
 - AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAUSING THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LOADED WATER INTO THE DOWNSTREAM SYSTEM.
 - ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MOVED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY.
 - ANY DISTURBED AREAS NOT COVERED BY IMPERVIOUS SURFACES SHALL BE SUBJECT TO BMP 15.13-POST CONSTRUCTION SOIL DEPTH.

- THE 13 ELEMENTS OF TESC BMP**
- ELEMENT #1 - MARK CLEARING LIMITS: LIMIT OF CONSTRUCTION ARE CLEARLY MARKED.
- ELEMENT #2 - ESTABLISH CONSTRUCTION ACCESS: A STABILIZED CONSTRUCTION ENTRANCE IS SHOWN.
- ELEMENT #3 - CONTROL FLOW RATES: THE PROPOSED DETENTION VAULT WILL BE USED AS SEDIMENT POND DURING CONSTRUCTION.
- ELEMENT #4 - INSTALL SEDIMENT CONTROLS: SILT FENCE, INLET PROTECTION, MULCH, INTERCEPTOR SWALES AND VAULT ARE PROPOSED.
- ELEMENT #5 - STABILIZE SOILS: SOIL STABILIZATION IS ACHIEVED BY MULCHING, PLASTIC COVERING AND SEEDS.
- ELEMENT #6 - PROTECT SLOPES: SLOPES ARE PROTECTED BY PLASTIC COVERING, MULCHING AND SEEDS.
- ELEMENT #7 - PROTECT DRAIN INLETS: INLET PROTECTIONS ARE PROPOSED FOR THE STORM DRAINS.
- ELEMENT #8 - STABILIZE CHANNELS AND OUTLETS: OUTLET PROTECTIONS ARE PROPOSED.
- ELEMENT #9 - CONTROL POLLUTANTS: ALL VEHICLES, EQUIPMENT AND PETROLEUM PRODUCT STORAGE/DISPENSING AREAS WILL BE INSPECTED REGULARLY TO DETECT ANY LEAKS OF SPILLS, AND TO IDENTIFY MAINTENANCE NEEDS AND PREVENT LEAKS OF SPILLS.
- ELEMENT #10 - CONTROL DEWATERING: THERE WILL BE NO DEWATERING AS PART OF THIS CONSTRUCTION PROJECT.
- ELEMENT #11 - MAINTAIN BMP'S: ALL TEST BMP'S SHALL BE MAINTAINED AND REPAIRED AS NEEDED.
- ELEMENT #12 - MANAGE THE PROJECT: THIS COULD BE ACHIEVED BY MINIMIZING THE EXTENT AND DURATION OF THE AREA EXPOSED AND BY EMPHASIZING EROSION CONTROL THEN SEDIMENT CONTROL.
- ELEMENT #13 - PROTECT ON-SITE STORMWATER MANAGEMENT BMP'S FOR RUNOFF FROM ROOFS AND OTHER HARD SURFACES: N/A.

NOTE:

- PLEASE REFER TO THE TREE PROTECTION MEASURES THAT ARE REQUIRED PER BRIER MUNICIPAL CODE 17.52.150.



- CONSTRUCTION SEQUENCE**
- PRIOR TO CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SCHEDULE AND ATTEND PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF BRIER INSPECTION UNIT AND EROSION CONTROL SPECIALIST.
 - FLAG CLEARING LIMITS AND INSTALL SILT FENCE AS SHOWN.
 - INSTALL ROCK CONSTRUCTION ENTRANCES.
 - CLEAR AND GRUB ROAD AREAS, AND STOCKPILE AREAS. CONSTRUCT SEDIMENT POND. INSTALL TEMPORARY EROSION CONTROL BMP'S SUCH AS INTERCEPTOR TRENCHES, CHECK DAMS, ETC. AND DIRECT RUNOFF TO THE SEDIMENT POND.
 - GRADE AND STABILIZE ROAD WITH GRAVEL BASE. COVER EXPOSED SOILS WITH MULCH, HOG FUEL OR HYDROSEED.
 - CONSTRUCT WATER AND STORM UTILITIES. INSTALL GAS, POWER, TELEPHONE AND CABLE UTILITIES, AS REQUIRED.
 - PLACE AND POUR CURBS AND GUTTERS.
 - PAVE ROADS WITH ATB AND PLACE DETENTION SYSTEM INTO FULL OPERATION.
 - HYDROSEED REMAINING EXPOSED SOILS AND STABILIZE PROJECT.
 - FLUSH STORM DRAINAGE SYSTEM AND REMOVED SEDIMENTATION IN ALL CATCH BASINS AND THE VAULT.
 - STABILIZE ALL DISTURBED AREAS AND REMOVE ALL T.E.S.C. MEASURES.

Approved for Construction City of Brier

John P. E.

Date 1/19/2023

SOIL AMENDMENT CALCULATIONS

AREA FOR SOIL AMENDMENT	=	51,680 SF
AREA IN THOUSANDS	=	51.680
AMOUNT OF NATIVE TOP SOIL TO BE STOCK PILED AND REAPPLIED AFTER CONSTRUCTION	=	25 x 51.68 = 1,292 CY

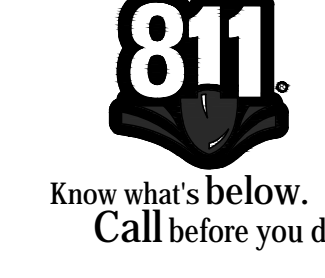
REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022

SITE ADDRESS: 22015 OLD POPLAR WAY LYNNWOOD, WA 98036

TAX ACCOUNT NO.'S: 00373101800500

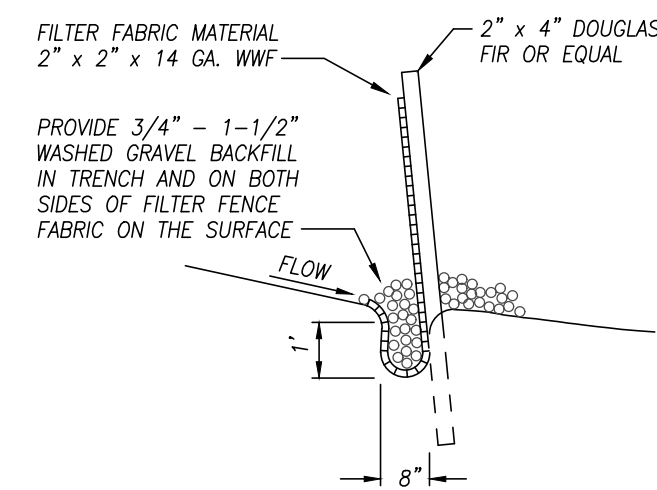
SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M. PHILLIPS RIDGE

DWG FILENAME	DESIGNED BY:	DATE:	SCALE:	JOB NO.:
211108-002.DWG	JTK	03-29-2021	1"=30'	21-1108
TESC PLAN				SHEET C2.1

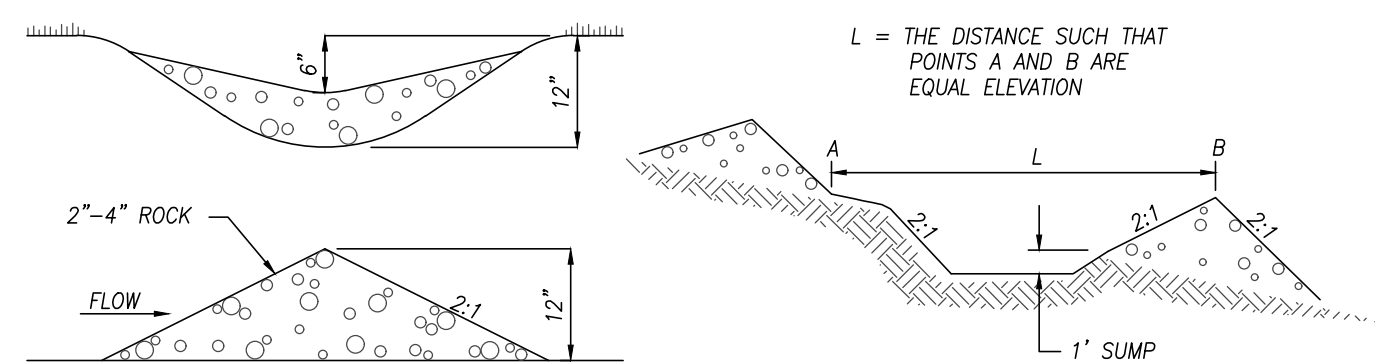


UTILITY CONFLICT NOTE:

CAUTION: THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-5555 POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT WITH INSIGHT ENGINEERING COMPANY TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



NOTES:
PLACE 12" OF 3/4" - 1-1/2" WASHED ROCK OR PEA GRAVEL ON BOTH SIDES OF THE FENCE TO CREATE A BEVEL SHAPE.
FABRIC SHALL COVER BOTTOM OF 8" x 12" TRENCH AND EXTEND BEYOND THE LIMITS OF THE GRAVEL IN ORDER TO MAINTAIN AN EXCESS OVERLAP OF 2" MINIMUM AS SHOWN.

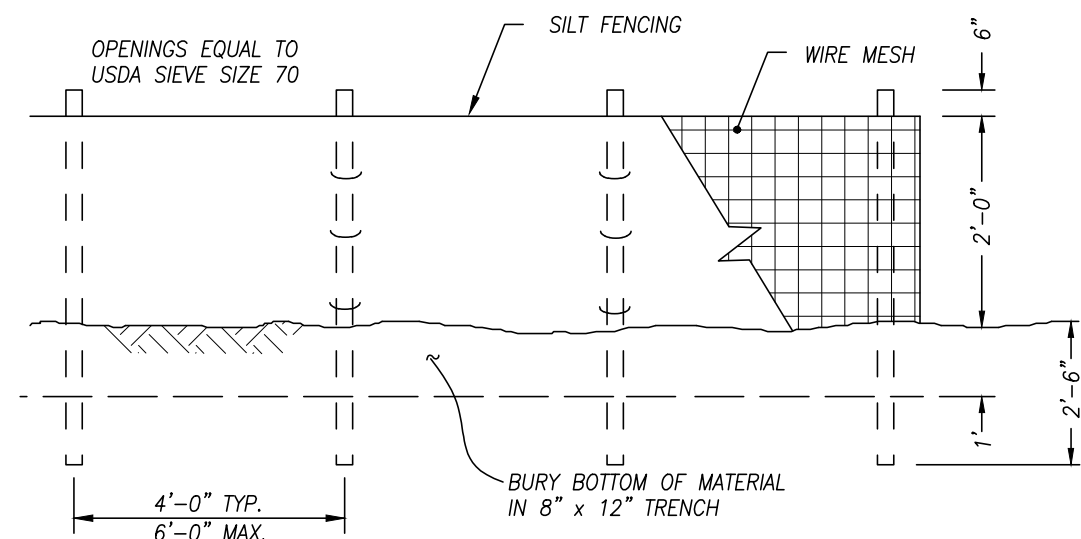


ROCK CHECK DAM

SPACING BETWEEN CHECK DAMS

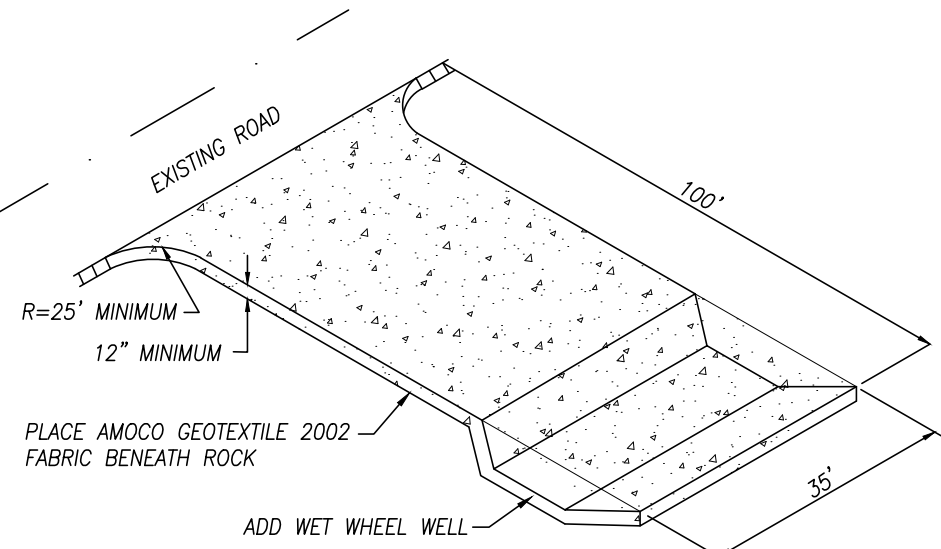
2 ROCK CHECK DAM

NOT TO SCALE



1 SILT FENCE DETAIL

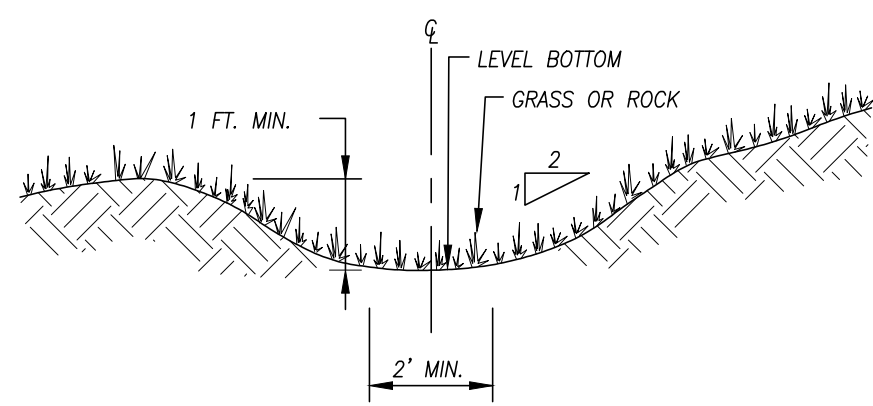
NOT TO SCALE



NOTES:
1. INSTALLATION: THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS IN THE PLAN. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. AGGREGATE: 4" TO 6" CRUSHED BALLAST ROCK WSDOT STANDARD SPECIFICATION 9-03.9 (1)
3. ENTRANCE DIMENSIONS: THE AGGREGATE LAYER MUST BE AT LEAST 6 INCHES THICK. IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA. THE LENGTH OF THE ENTRANCE MUST BE AT LEAST 50 FEET.
4. WASHING: IF CONDITIONS ON THE SITE ARE SUCH THAT MOST OF THE MUD IS NOT REMOVED FROM VEHICLE TIRES BY CONTACT WITH THE GRAVEL, THEN THE TIRES MUST BE WASHED BEFORE VEHICLES ENTER A PUBLIC ROAD. WASH WATER MUST BE CARRIED AWAY FROM THE ENTRANCE TO A SETTLING AREA TO REMOVE SEDIMENT. A WASH RACK MAY ALSO BE USED TO MAKE WASHING MORE CONVENIENT AND EFFECTIVE.
5. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAY OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

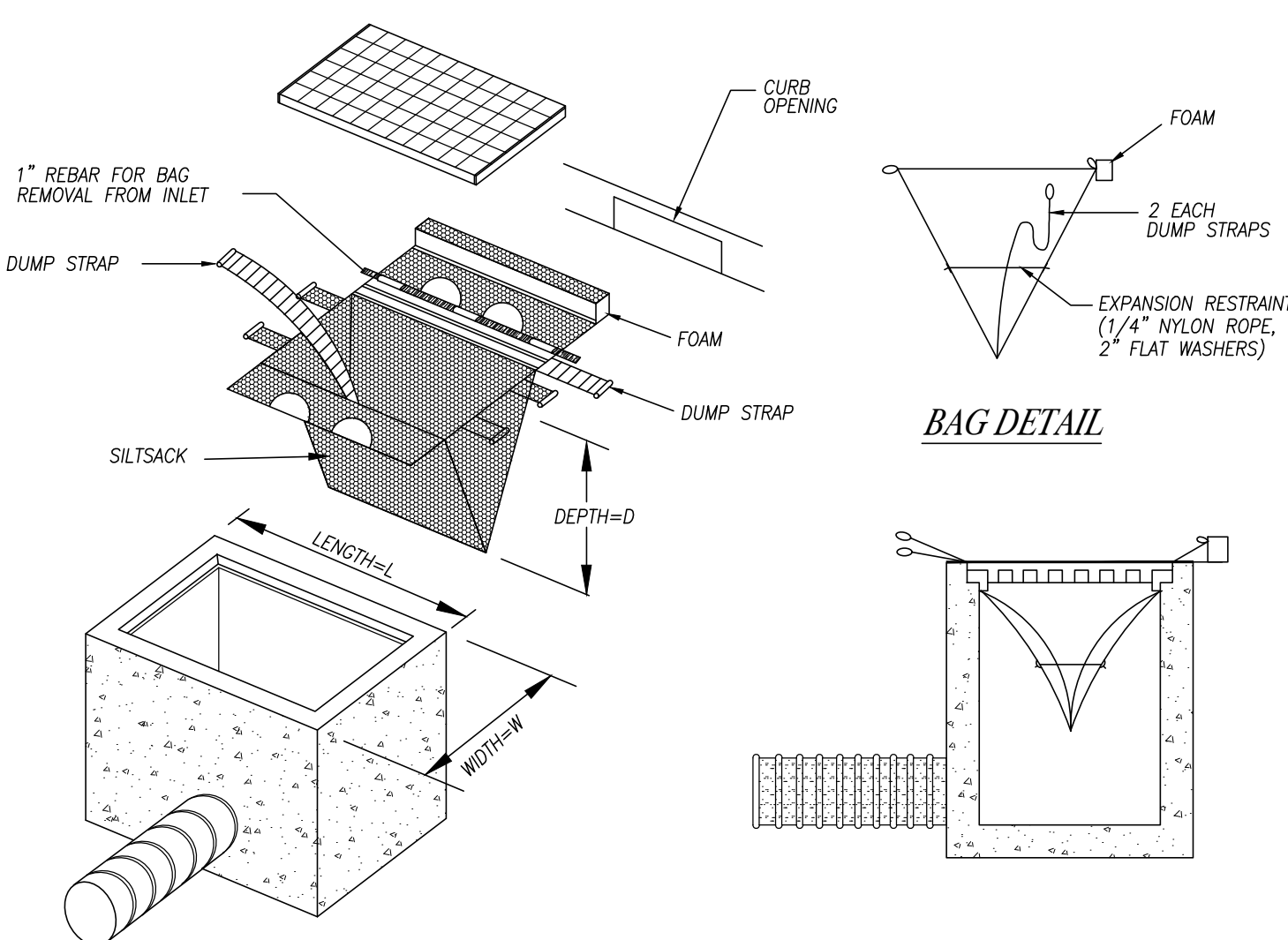
3 TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



6 TEMPORARY INTERCEPTOR TRENCH SECTION

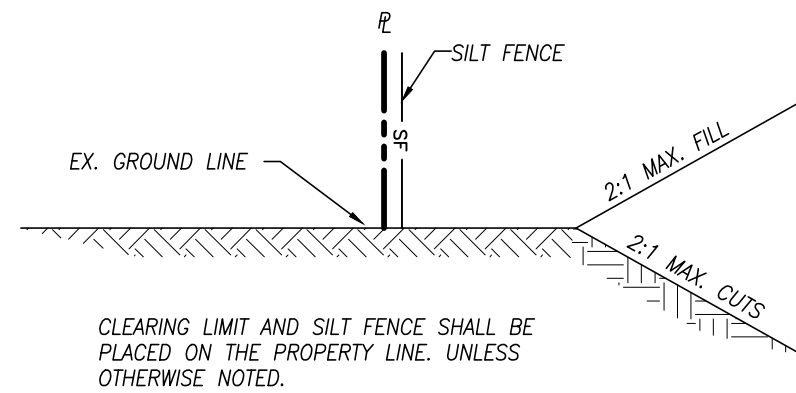
NOT TO SCALE



BAG DETAIL

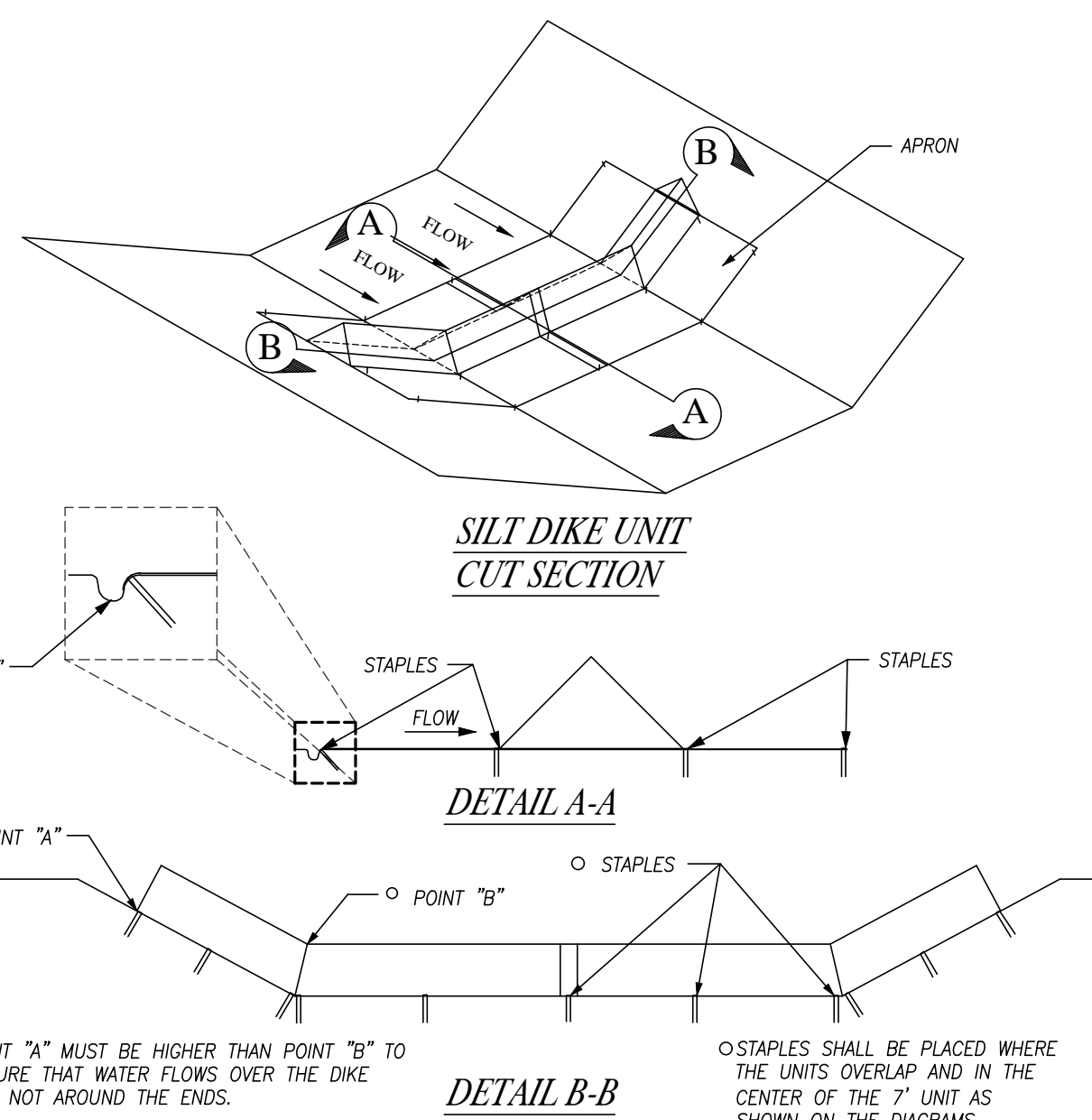
4 CATCH BASIN INSERT

NOT TO SCALE



7 TYPICAL CONSTRUCTION SETBACK DETAIL

NOT TO SCALE

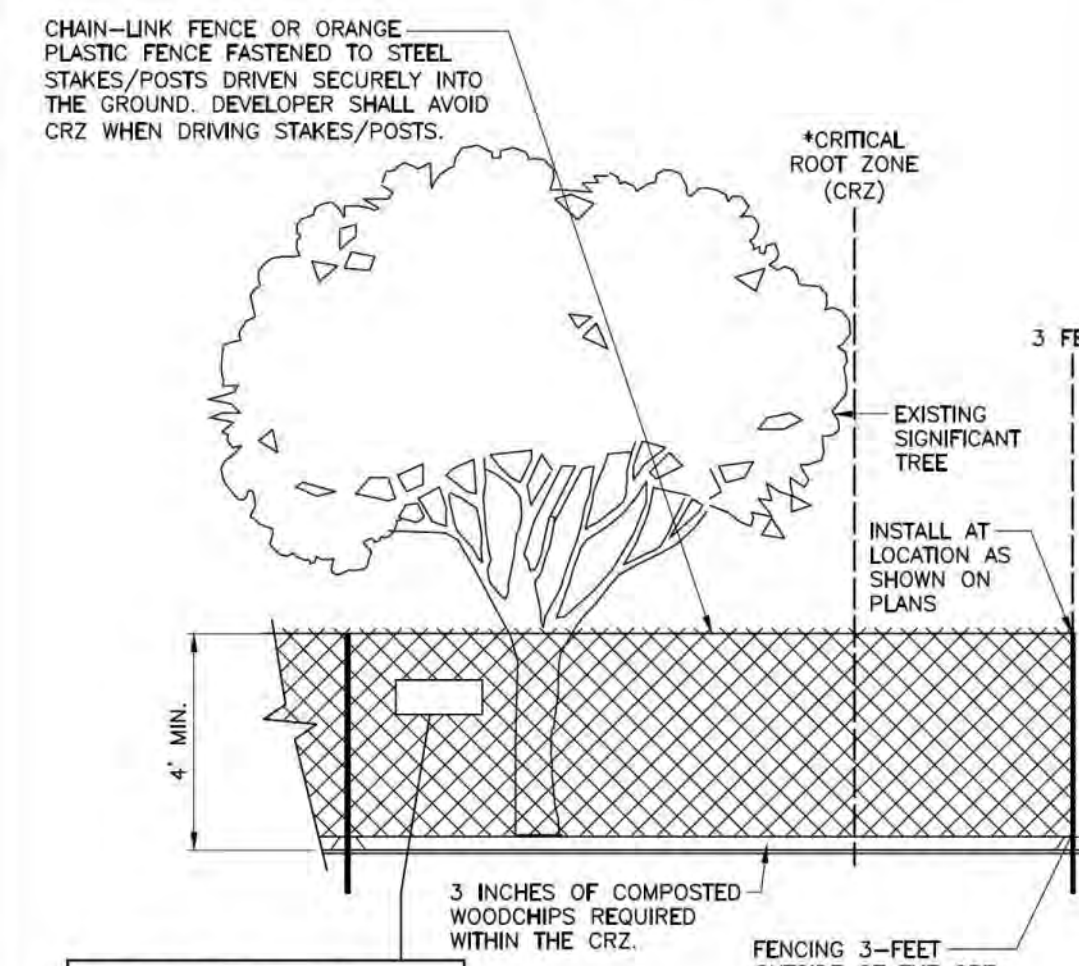


5 TRIANGULAR SILT DIKE INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH

NOT TO SCALE

* POINT "A" MUST BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
* STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAMS

TREE PROTECTION DURING CONSTRUCTION



TREE PROTECTION AREA, ENTRANCE PROHIBITED. REPORT VIOLATIONS TO CITY OF KENMORE AT 425-398-8900.

* THE CRITICAL ROOT ZONE (CRZ) IS THE AREA WHERE THE TREE'S ESSENTIAL MASS OF ROOTS IS LOCATED. THE AREA SURROUNDING THE TREE AT A DISTANCE WHICH IS EQUAL TO ONE FOOT FOR EVERY INCH OF TRUNK DIAMETER AT BREAST HEIGHT (DBH) OR THE AREA OF A CIRCLE WITH RADIUS EXTENDING FROM A TREE'S TRUNK TO A POINT NO LESS THAN THE END OF A TREE'S LONGEST BRANCH, WHICHEVER IS GREATER.

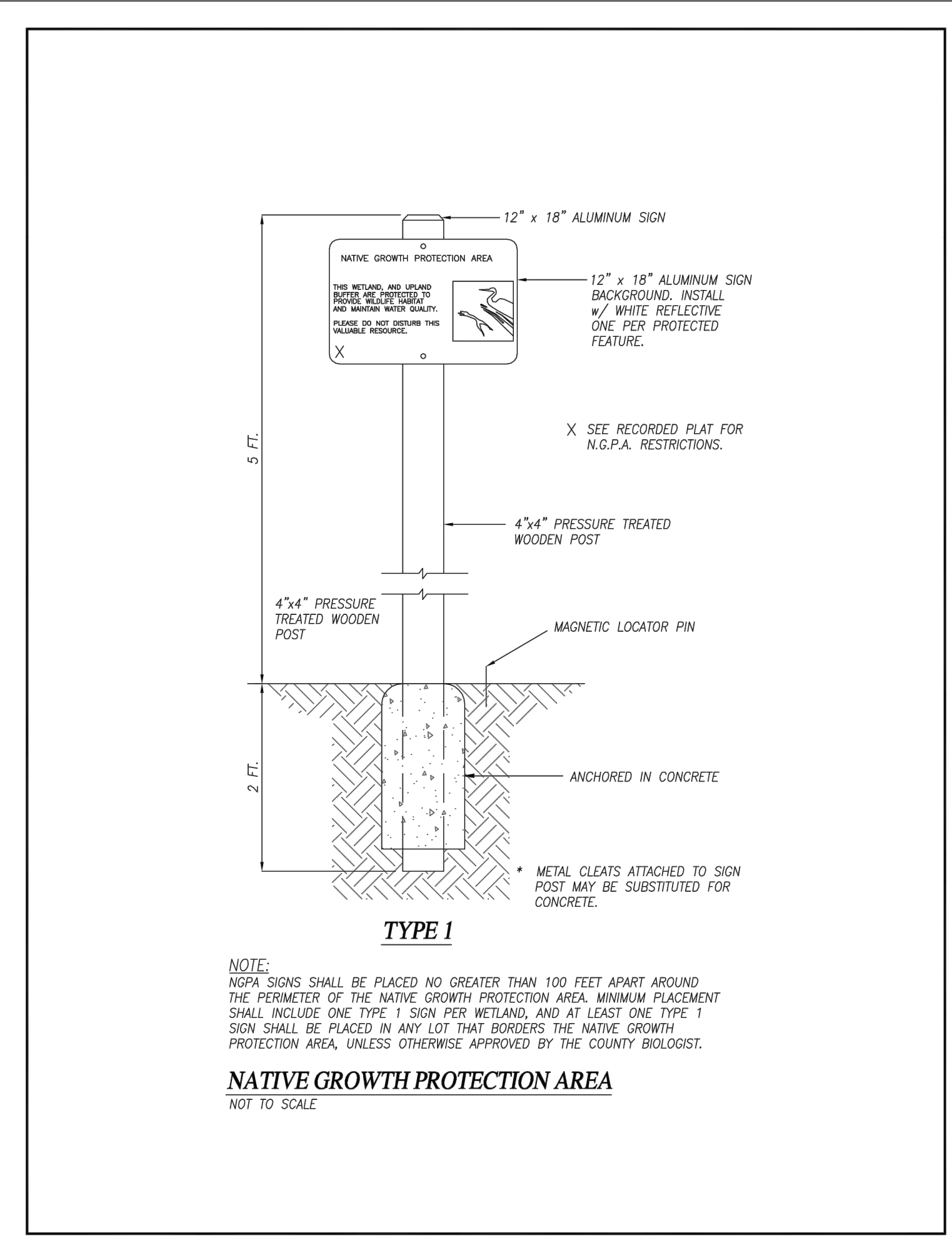
8 TREE PROTECTION DETAIL

N.T.S.

Approved for Construction
City of Brier

John P.E.

Date 1/19/2023



TYPE 1

NOTE:
NGPA SIGNS SHALL BE PLACED NO GREATER THAN 100 FEET APART AROUND THE PERIMETER OF THE NATIVE GROWTH PROTECTION AREA. MINIMUM PLACEMENT SHALL INCLUDE ONE TYPE 1 SIGN PER WETLAND, AND AT LEAST ONE TYPE 1 SIGN SHALL BE PLACED IN ANY LOT THAT BORDERS THE NATIVE GROWTH PROTECTION AREA, UNLESS OTHERWISE APPROVED BY THE COUNTY BIOLOGIST.

NATIVE GROWTH PROTECTION AREA

NOT TO SCALE

9 TYPE 1-NGPA SIGN

NOT TO SCALE

REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022



IECO
INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY
LYNNWOOD, WA 98036
TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-CO2.DWG
DESIGNED BY: JTK
DATE: 12-22-2021
SCALE: 1"=30'
JOB NO.: 21-1108

GRADING AND TESC
NOTES AND DETAILS
SHEET
C2.2



Cobalt Geosciences, LLC
P.O. Box 82243
Kenmore, Washington 98028

June 6, 2022

Peter Spadafora
pspadafora@aforagroup.com

RE: Wall Design
Proposed Residential Development
22015 Old Poplar Way
Brier, Washington

In accordance with your authorization, Cobalt Geosciences, LLC has prepared this letter to discuss wall design information for the proposed residential development.

From our review of the provided site plan by Insight Engineering, there will be lock and load and rockery walls within the proposed development.

Lock and load walls are noted to be up to 14 feet tall near the north property line and will face fill and have potential building surcharge loads setback about 8 feet from the wall and a slight backslope.

Rockery walls are shown to be located at the toe of natural and proposed fill/graded slopes east of the development. These walls will be up to 10 feet tall with up to 2H:1V backslopes and relatively low magnitude fore-slopes. Additional rockery walls along the west side of the cul de sac (220th Place SW) with heights of up to 8 feet. We estimate that surcharge loads from the roadway and sidewalk will be about 5 feet from the back of the wall.

There is a wall shown south of the site along Older Poplar Way and within or above an existing ravine feature. This wall is indicated to be 10 feet tall and have variable fore-slopes of about 2H:1V (horizontal to vertical). While a rockery may be considered in this area, it appears that a lock and load wall would be more suitable provided it is adequately keyed into dense glacial till at depth. We can provide soldier pile wall recommendations upon request.

Wall Preparation

Wall keyways should be excavated into medium dense or firmer native soils. The areas behind the walls will either consist of structural fill placed in lifts with geogrid reinforcement, cut native glacial till, or a combination of these (eastern wall only). We recommend a 1 foot embedment for the north wall and 1.5 feet of embedment for the rockery near the cul-de-sac. The ravine wall and eastern rockery should have 2 feet of embedment. The keyways must be verified by the geotechnical engineer to confirm suitability. A bench of structural fill may be required below some wall areas depending on the fore-slope condition.

Existing areas behind the walls must be benched into medium dense or firmer native glacial till prior to fill placement.

Temporary excavations should include vertical cuts of 2 to 4 feet with lateral benches of 4 to 8 feet. We anticipate that an overall 1H:1V (horizontal to vertical) benching system will be suitable.

June 6, 2022
Page 2 of 8
Limited Geotechnical Evaluation

The native soils consist of silty-sand with gravel. Some of the native soils may be used as structural fill provided they achieve compaction requirements and are within 3 percent of the optimum moisture. These soils may only be suitable for use as fill during the summer months, as they will be above the optimum moisture levels in their current state. These soils are variably moisture sensitive and may degrade during periods of wet weather and under equipment traffic. Any cobbles and organic or deleterious materials should be removed. Note that these soils will likely require drying during the summer months or modification with dry cement.

Imported structural fill should consist of a sand and gravel mixture with a maximum grain size of 3 inches and less than 5 percent fines (material passing the U.S. Standard No. 200 Sieve). Structural fill should be placed in maximum lift thicknesses of 12 inches and should be compacted to a minimum of 95 percent of the modified proctor maximum dry density, as determined by the ASTM D 1557 test method.

Lock and Load Walls

In general, wall heights of less than 3.5 feet may utilize lock and load panels, cribbing, and crushed rock backfill without the need for geogrid reinforcement. All taller walls should have geogrid reinforcement and embedment as noted below.

We anticipate that 16 inch tall by 32 inch wide concrete facing blocks set into 26 inch long concrete counterforts will be utilized. We also anticipate a near vertical wall batter for all walls.

All walls should utilize Syntee SF80 geogrid placed between each block/counterfort layer (1.3 feet vertically) and underlying structural fill. Geogrid must be placed on level structural fill compacted to at least 95 percent of the modified proctor (behind the drainage zone). Geogrid should be rolled out and cut in lengths, then turned 90 degrees so that the primary direction of strength is perpendicular to the wall face direction.

Structural fill should consist of 5/8 inch minus crushed rock within the panel and counterfort zone. Structural fill behind this zone (geogrid area) may consist of on site or imported soils with at least 60 percent sand, gravel no larger than 1.5 inches in diameter, and no organic materials. Structural fill should be compacted to at least 95 percent of the modified proctor in 6 inch thick lifts.

A curtain drain system behind the backfill/geogrid zone should be placed during wall construction. This zone should consist of clean angular rock between 0.75 and 2.5 inches in size and have a minimum width of 12 inches. A minimum 4 inch diameter perforated PVC pipe should be placed at the base of the drainage zone (base of lowest embedded wall panel). The pipes should connect to an approved drainage system. We must verify wall drainage systems.

Design Information

The following soil parameters were used in our designs:

Soil Type	Friction Angle	Cohesion	Unit Weight
Retained Soil	34 degrees	0 psf	135 pcf
Reinforced Backfill	34 degrees	0 psf	135 pcf

psf = pounds per square foot
pcf = pounds per cubic foot

A seismic value of 0.2g was used for the wall designs.

June 6, 2022
Page 3 of 8
Limited Geotechnical Evaluation

Where noted, we utilized sloping backslope surcharges and/or building/roadway surcharge loads of 250 psf (live loads) and/or 2,500 psf line loads where applicable. Please see the attached diagrams and wall design files for block layouts of the various wall heights.

The following tables show geogrid lengths based on wall location and surcharge loads. Syntee SF80 geogrid is to be utilized for all wall heights.

Wall Height (Exposed)	Geogrid Length	No. of Geogrid Layers
2'	N/A	0
3'	4'	3
4'	5.7'	4
5'	6.5'	4
6'	8.2'	5
7'	8.35'	6
8'	8.5'	7
9'	9.52'	7
10'	10.6'	8
11'	11.7'	9
12'	12.75'	10
13'	13.8'	11
14'	14.8'	11

We recommend a minimum of 12 inches of embedment for this wall. A minimum 2 foot level bench should be created with structural fill or medium dense native soils in front of the wall at the embedment height.

Wall Height (Exposed)	Geogrid Length	No. of Geogrid Layers
4'	8.2'	4
5'	8.2'	4
6'	9.5'	7
7'	9.5'	7
8'	11.3'	8
9'	11.3'	8
10'	13'	9

Note: This wall requires at least 2 feet of embedment and verified by the geotechnical engineer. Due to sloping conditions below the wall, additional embedment or creation of a level compacted soil bench in front of the wall may be required.

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(206) 331-10

June 6, 2022
Page 4 of 8
Limited Geotechnical Evaluation

To guard against hydrostatic pressure development, drainage must be installed behind the walls.

Every wall should have at least one 4 inch diameter perforated PVC pipe drainage system (surrounded with at least 6 inches of clean angular or washed rock) placed at the base of the system. See attached figures for more information. These should be directed into the site stormwater system or another approved conveyance. Dispersion systems could be utilized in areas with slope magnitudes of 20 percent or less.

Rockery Walls

Rockery walls are not considered as engineered gravity retaining walls mainly because the structure is not an integral as the rocks are just sitting and they are not structurally connected to each other. They generally function as erosion protection for the materials they face that are themselves stable, which usually be dense to very dense soils with adequate fines, preferably glacially consolidated materials in the region. In this case, the rockery wall will face dense native soils as well as geogrid reinforced structural fill.

At this site, rockery walls may be up to 10 feet in exposed height. Walls will locally have variable magnitude fore-slopes and backslopes of up to 2H:1V.

All walls must be embedded into medium dense or firmer native soils. Embedment is at least 12 inches for the cul-de-sac rockery and 1.5 feet for the east site walls. A 2 foot level bench should be created in front of these walls if the fore-slope is steeper than 3H:1V.

Walls should have a minimum batter of 6V:1H (vertical to horizontal) for all wall heights. All rockery walls should be backfilled with a 1 to 1.5 foot width of 2 to 4 inch sized angular quarry rock between the rocks and reinforced fill zone (see below) or dense till cuts.

All rockeries should be constructed per the Associated Rockery Contractors (ARC) guidelines (http://www.cegeo.org/schedule/09244404pm_Current%202013%20ARC%20Rockery%20Construction%20Guidelines.pdf) with periodic monitoring of the keyway excavation, drainage, rock placement, backfill, and excavation work by the geotechnical engineer.

Rockery Wall Design

Our rockery design recommendations refer to various rock sizes. The Washington State Department of Transportation (WSDOT) uses the following table when referring to larger size rocks and boulders:

Rock Size	Rock Weight	Ave. Dimensions
Half Man	25 - 50lbs	6" - 12"
One Man	50 - 200lbs	12" - 18"
Two Man	200 - 700lbs	18" - 28"
Three Man	700 - 2,000lbs	28" - 36"
Four Man	2,000 - 4,000lbs	36" - 48"
Five Man	4,000 - 6,000lbs	48" - 54"
Six Man	6,000 - 8,000lbs	54" - 60"

June 6, 2022
Page 5 of 8
Limited Geotechnical Evaluation

Design Parameters

The following soil parameters were used in rockery design calculations:

Soil Type	Friction Angle	Cohesion	Unit Weight
Retained Soils (Glacial Till)	34 degrees	0 psf	135 pcf
Foundation Soils (Glacial Till)	34 degrees	0 psf	135 pcf

psf = pounds per square foot
pcf = pounds per cubic foot

A unit weight of 155 pcf was used for large rocks.

See the attached figures for more information. Design files are attached with this report.

Below are recommended rock sizes for the new rockery wall in the eastern portion of the site:

Exposed Rockery Height	Base Rock Size (Min. in Feet)	Top Rock Size (Min. in Feet)
3 Feet	2.0	1.5
4 Feet	2.5	2.0
5 Feet	3.0	2.0
6 Feet	3.0	2.5
7 Feet	4.0	3.0
8 Feet	4.5	3.5
9 Feet	5.0	4.0
10 Feet	5.5	4.0

The wall near the cul de sac with a vehicle surcharge load should utilize the following recommended boulder sizes:

Exposed Rockery Height	Base Rock Size (Min. in Feet)	Top Rock Size (Min. in Feet)
3 Feet	3.0	2.5

June 6, 2022
Page 6 of 8
Limited Geotechnical Evaluation

4 Feet	3.0	2.5
5 Feet	3.5	3.0
6 Feet	3.5	3.0
7 Feet	4.0	3.5
8 Feet	4.5	4.0

For any walls or portions of walls that will face structural fill and not dense glacial till, we recommend placement of geogrid. The geogrid should consist of Syntee SF80 with a horizontal length equal to the height of the wall at any given location.

The geogrid should be turned 90 degrees so that the direction of primary strength is perpendicular to the wall face. Geogrid should overlap at least 12 inches onto adjacent geogrid and the geogrid should have an extended length to allow for a minimum 3 feet of overlap over the face of the upper lift of fill (see attached figures). Geogrid should have a vertical spacing of 2 feet.

Structural fill must be compacted to at least 95 percent of the modified proctor in 12 inch thick loose lifts. The 12 to 18 inch zone between the boulders and structural fill should consist of 2 to 4 inch clean angular rock. It will be necessary to construct the rockery concurrent with the geogrid reinforced fill.

If walls will face a lower level of glacial till with fill above, the till should be benched level to allow for the proper geogrid length and placement on a level surface.

If fill slopes are created above the walls, it should be compacted as noted above and excavated back to create the slope face.

Wall Subgrade Preparation

To prepare the wall areas for construction, all vegetation, organic surface soils, and other deleterious materials should be stripped and removed from the keyway areas.

Rockery keyways should be excavated to the level of medium dense/stiff or firmer native soils. If excessively soft or yielding areas are present, and cannot be stabilized in place by compaction, they should be cut to firm bearing soil and filled to grade with structural fill. If the depth to remove the unsuitable soil is excessive, we should be contacted to provide recommendations as necessary for the successful completion of the walls, or to re-evaluate the wall designs based on actual site conditions.

Wall Drainage

To guard against hydrostatic pressure development, drainage must be installed behind the walls. Typically, rockery walls are backfilled with clean angular rock (2-4 quarry rock) which extends from the base to the top of the wall and 12 to 18 inches in width.

Approved for Construction
City of Brier

John J. P.E.

Date 1/19/2023



INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY
LYNNWOOD, WA 98036
TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-CO2.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30'
JOB NO.: 21-1108 SHEET

WALL DESIGN DETAILS C2.3

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON

June 6, 2022
Page 8 of 8
Limited Geotechnical Evaluation

Statement of General Conditions

USE OF THIS REPORT: This report has been prepared for the sole benefit of the Client or its agent and may not be used by any third party without the express written consent of Cobalt Geosciences and the Client. Any use which a third party makes of this report is the responsibility of such third party.

BASIS OF THE REPORT: The information, opinions, and/or recommendations made in this report are in accordance with Cobalt Geosciences present understanding of the site specific project as described by the Client. The applicability of these is restricted to the site conditions encountered at the time of the investigation or study. If the proposed site specific project differs or is modified from what is described in this report or if the site conditions are altered, this report is no longer valid unless Cobalt Geosciences is requested by the Client to review and revise the report to reflect the differing or modified project specifics and/or the altered site conditions.

STANDARD OF CARE: Preparation of this report, and all associated work, was carried out in accordance with the normally accepted standard of care in the state of execution for the specific professional service provided to the Client. No other warranty is made.

INTERPRETATION OF SITE CONDITIONS: Soil, rock, or other material descriptions, and statements regarding their condition, made in this report are based on site conditions encountered by Cobalt Geosciences at the time of the work and at the specific testing and/or sampling locations. Classifications and statements of condition have been made in accordance with normally accepted practices which are judgmental in nature; no specific description should be considered exact, but rather reflective of the anticipated material behavior. Extrapolation of in situ conditions can only be made to some limited extent beyond the sampling or test points. The extent depends on variability of the soil, rock and groundwater conditions as influenced by geological processes, construction activity, and site use.

VARYING OR UNEXPECTED CONDITIONS: Should any site or subsurface conditions be encountered that are different from those described in this report or encountered at the test locations, Cobalt Geosciences must be notified immediately to assess if the varying or unexpected conditions are substantial and if reassessments of the report conclusions or recommendations are required. Cobalt Geosciences will not be responsible to any party for damages incurred as a result of failing to notify Cobalt Geosciences that differing site or sub-surface conditions are present upon becoming aware of such conditions.

PLANNING, DESIGN, OR CONSTRUCTION: Development or design plans and specifications should be reviewed by Cobalt Geosciences, sufficiently ahead of initiating the next project stage (property acquisition, tender, construction, etc), to confirm that this report completely addresses the elaborated project specifics and that the contents of this report have been properly interpreted. Specialty quality assurance services (field observations and testing) during construction are a necessary part of the evaluation of sub-surface conditions and site preparation works. Site work relating to the recommendations included in this report should only be carried out in the presence of a qualified geotechnical engineer; Cobalt Geosciences cannot be responsible for site work carried out without being present.

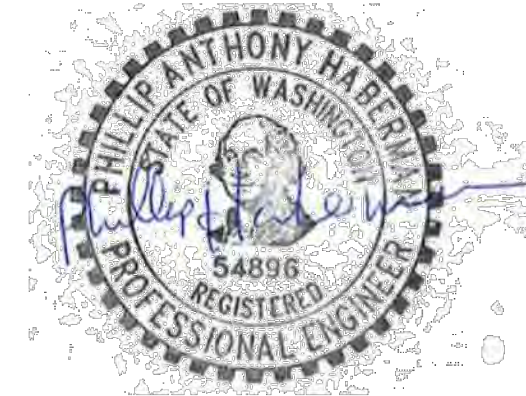
June 6, 2022
Page 7 of 8
Limited Geotechnical Evaluation

A four inch diameter perforated PVC pipe should be placed behind the lowest boulders and surrounded by the clean rock fill. The pipes should daylight from the wall (under and/or at ends) at low areas and at least 50 feet on center along the wall face. These should either outflow onto rock pads and dispersion systems in areas with magnitudes of 20 percent or less, or be routed to an approved conveyance or stormwater system.

Closure

The information presented herein is based upon professional interpretation utilizing standard practices and a degree of conservatism deemed proper for this project. We emphasize that this report is valid for this project as outlined above and for the current site conditions and should not be used for any other site. The contractor and owner are responsible for project safety, risk to adjacent properties, and excavation stability. Cobalt must be on site during wall construction to verify relevant aspects of the construction.

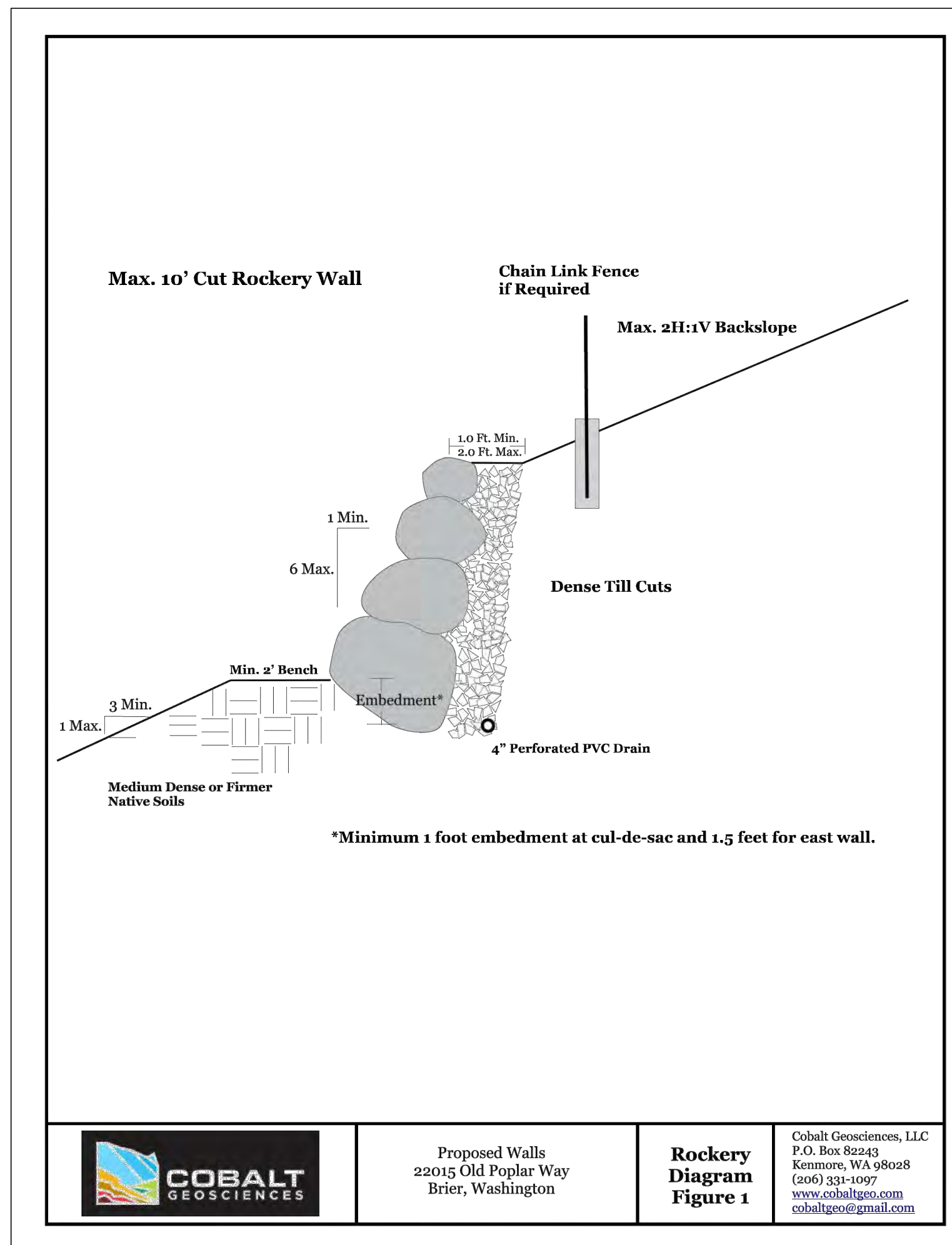
Sincerely,
Cobalt Geosciences, LLC



6/6/2022

Phil Haberman, PE, LG, LEG
Principal

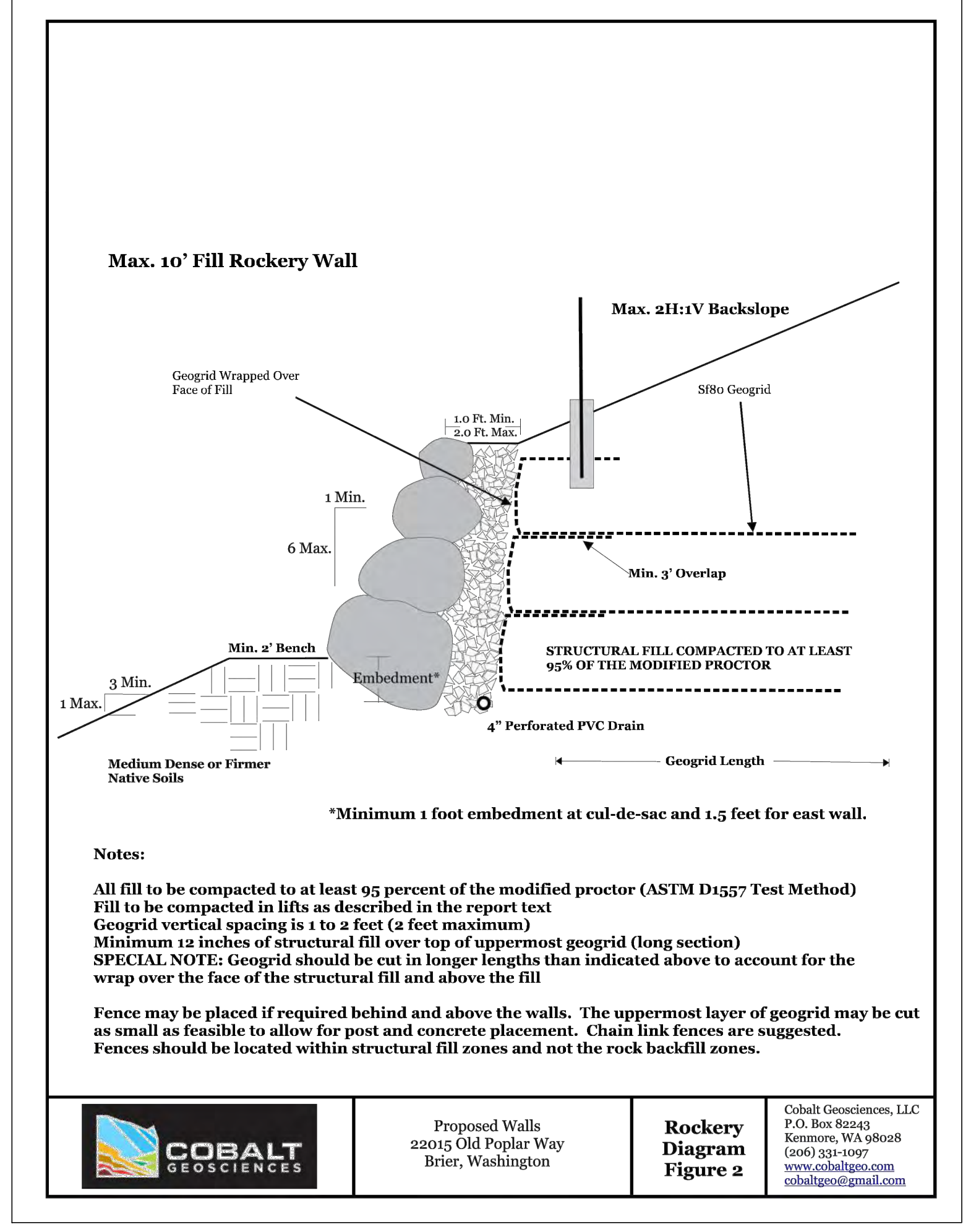
PH/sc



Proposed Walls
22015 Old Poplar Way
Brier, Washington

**Rockery
Diagram
Figure 1**

Cobalt Geosciences, LLC
P.O. Box 82243
Kenmore, WA 98028
(206) 331-1097
www.cobaltgeo.com
cobaltgeo@gmail.com

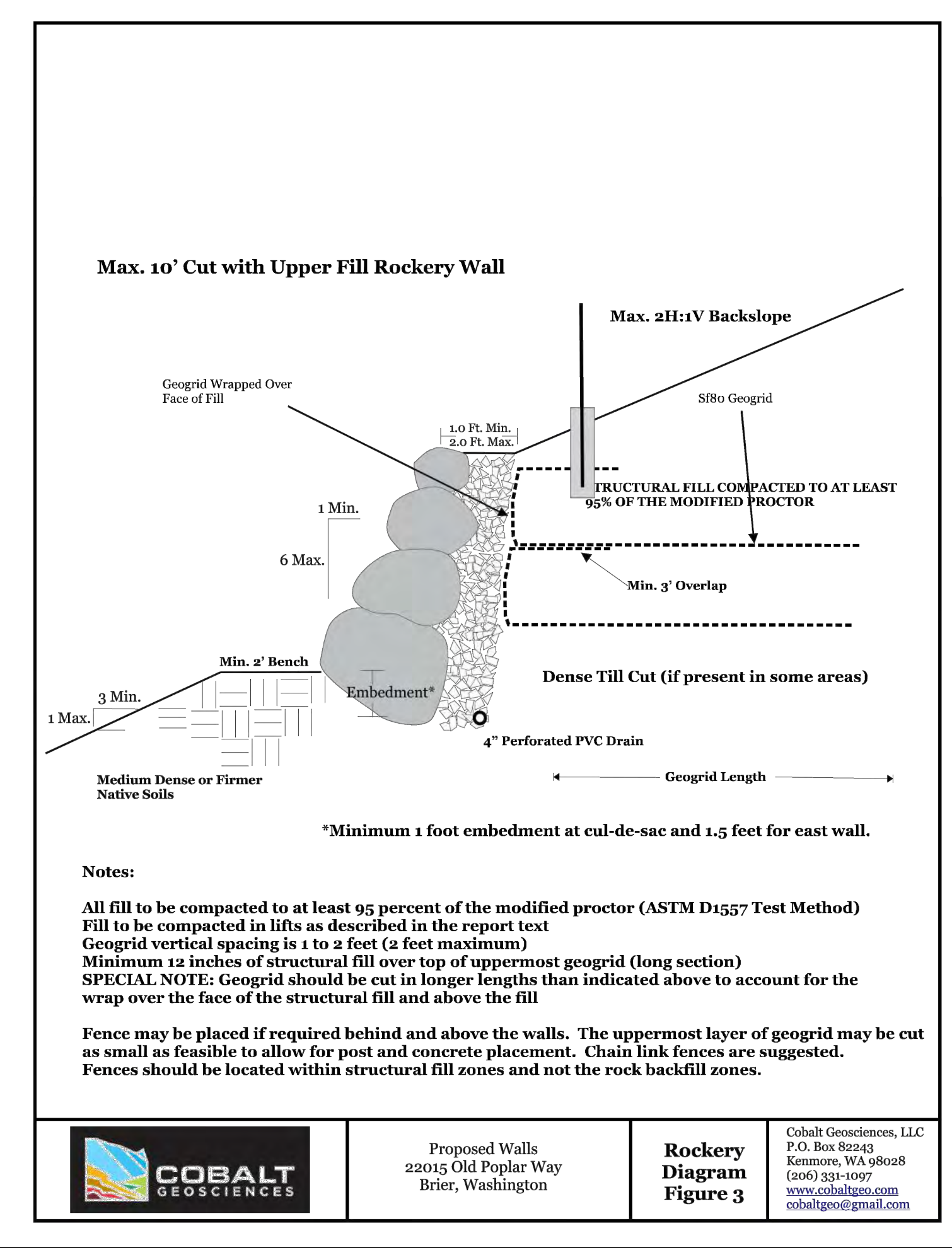


Proposed Walls
22015 Old Poplar Way
Brier, Washington

**Rockery
Diagram
Figure 2**

Cobalt Geosciences, LLC
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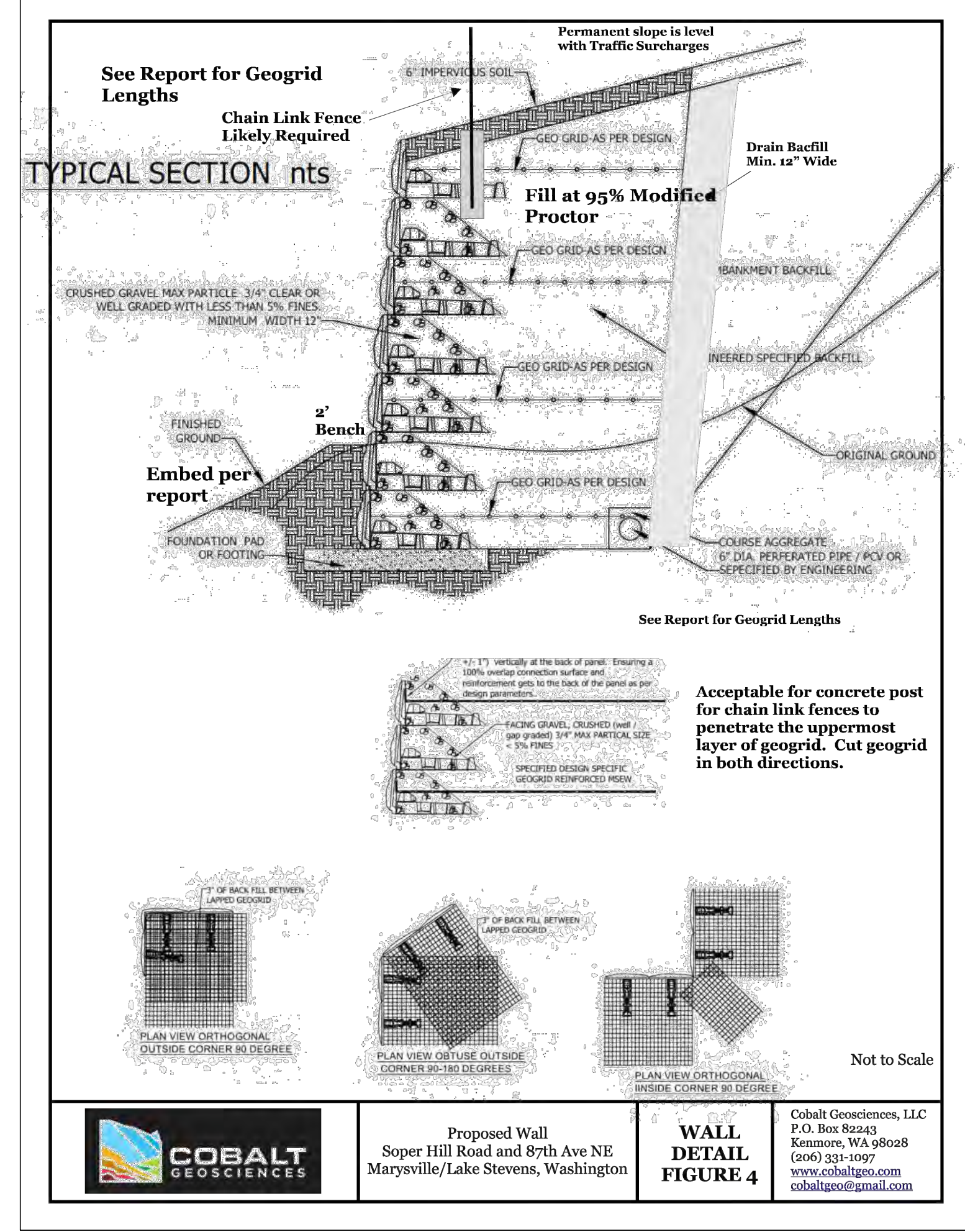
Notes:
All fill to be compacted to at least 95 percent of the modified proctor (ASTM D1557 Test Method)
Fill to be compacted in lifts as described in the report text
Geogrid vertical spacing is 1 to 2 feet (2 feet maximum)
Minimum 12 inches of structural fill over top of uppermost geogrid (long section)
SPECIAL NOTE: Geogrid should be cut in longer lengths than indicated above to account for the wrap over the face of the structural fill and above the fill
Fence may be placed if required behind and above the walls. The uppermost layer of geogrid may be cut as small as feasible to allow for post and concrete placement. Chain link fences are suggested. Fences should be located within structural fill zones and not the rock backfill zones.



Proposed Walls
22015 Old Poplar Way
Brier, Washington

**Rockery
Diagram
Figure 3**

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Proposed Wall
Soper Hill Road and 87th Ave NE
Marysville/Lake Stevens, Washington

**WALL
DETAIL
FIGURE 4**

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**Approved for
Construction
City of Brier**
John J. P.E.
Date 1/19/2023

REV. NO.	DESCRIPTION	INITIALS	DATE
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SITE ADDRESS: 22015 OLD POPLAR WAY
LYNNWOOD, WA 98036

TAX ACCOUNT NO.'S: 00373101800500

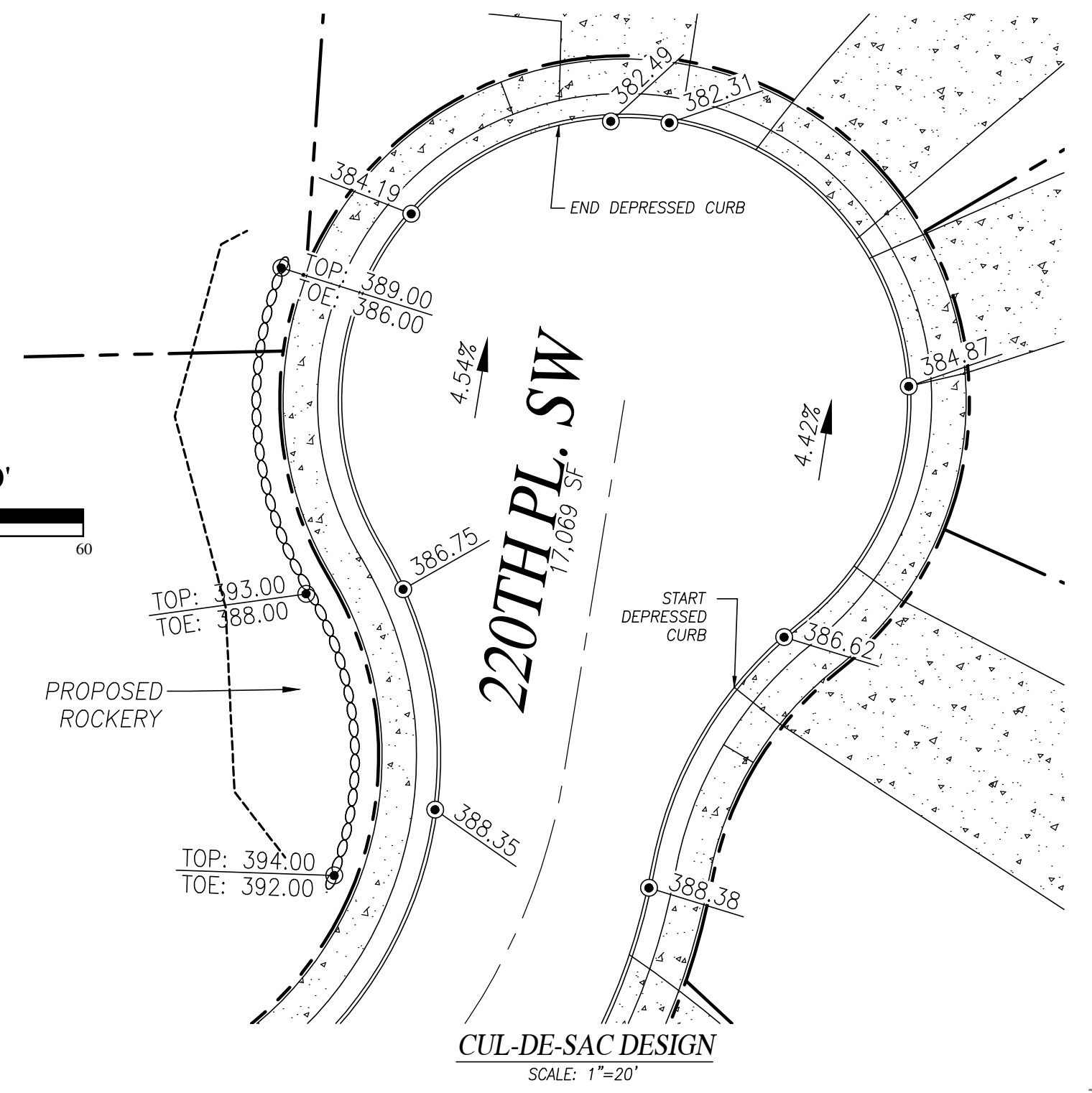
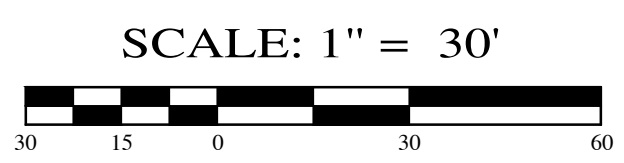
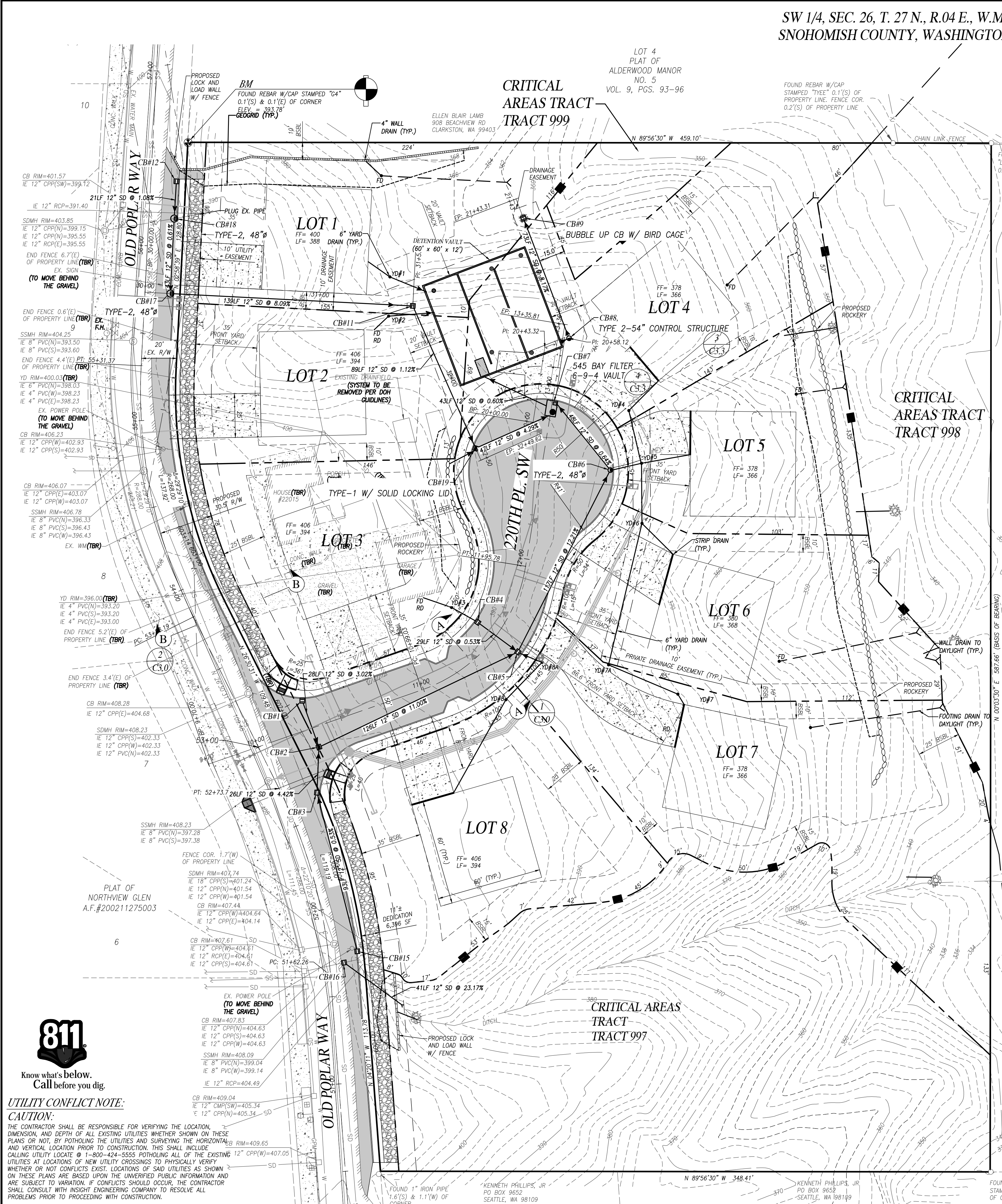
SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-C02.DWG
DESIGNED BY: JTK
DATE: 12-22-2021
SCALE: 1"=30'

JOB NO.: 21-1108
SHEET

WALL DESIGN DETAILS
C2.4

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON

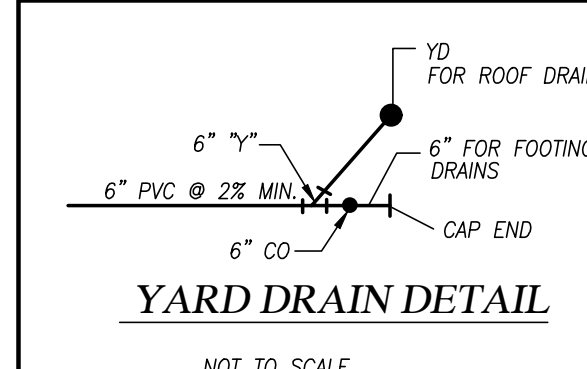
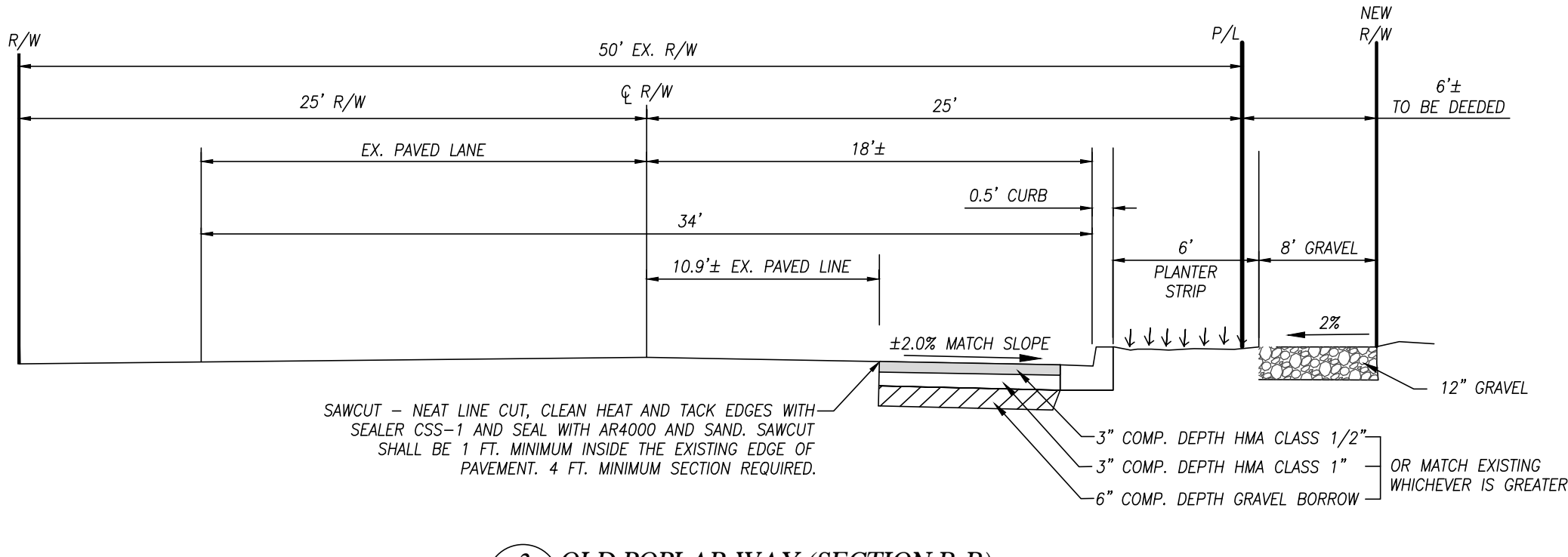
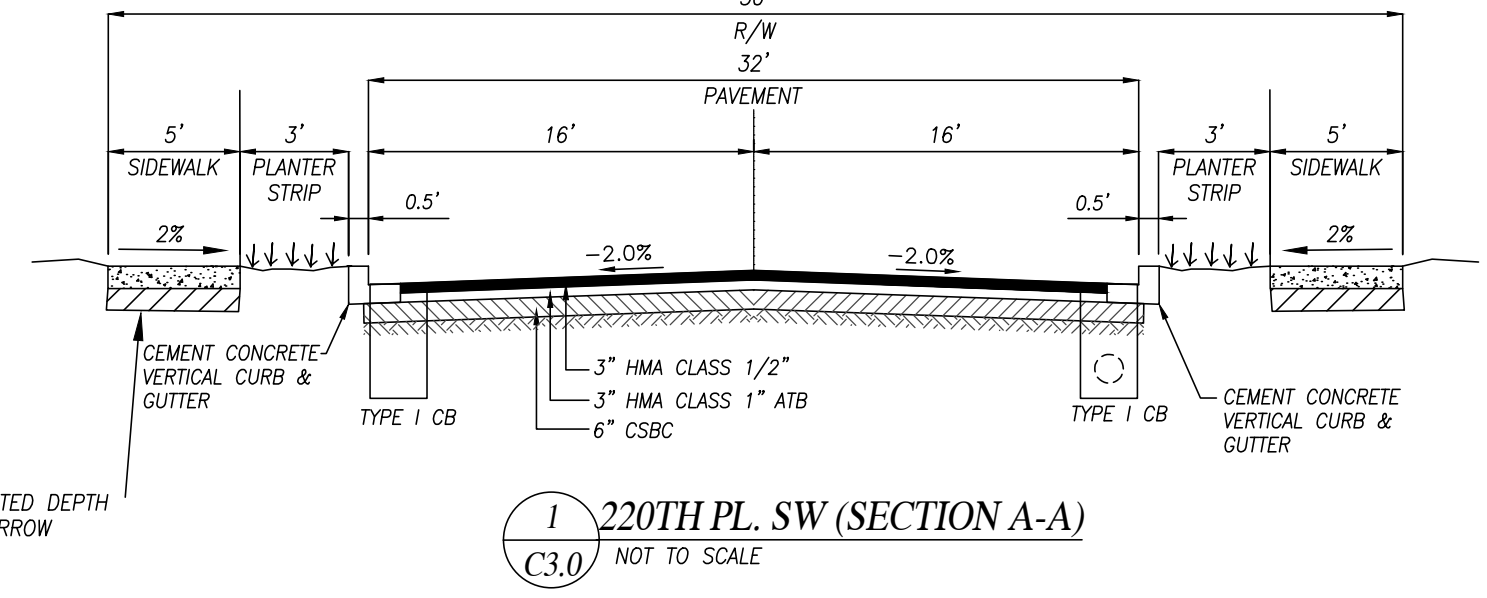


- LEGEND**
- ⊕ EXISTING MONUMENT (AS SHOWN)
 - ⊕ SECTION 1/4 CORNER NOT FOUND
 - ⊕ SECTION CORNER NOT FOUND
 - FOUND REBAR/CAP OR I.P. (IRON PIPE)
 - (C) CALCULATED
 - (P) PLAT
 - (M) MEASURED
 - TBR TO BE REMOVED
 - R.O.W. RIGHT-OF-WAY
 - P.O.B. POINT OF BEGINNING
 - CLF CENTERLINE
 - CLF CHAIN LINK FENCE
 - WDF WOOD FENCE
 - W.S. WATER SURFACE
 - EOP EDGE OF PAVEMENT
 - BOW BACK OF WALK
 - CB STORM DRAIN CATCH BASIN (CB)
 - SD STORM DRAIN MANHOLE (SDMH)
 - SSM SANITARY SEWER MANHOLE (SSMH)
 - CO SANITARY SEWER CLEAN OUT (CO)
 - PP POWER POLE
 - GP GUY POLE
 - WM WATER METER
 - WV WATER VALVE
 - MB MAILBOX
 - UFA UTILITY POLE ANCHOR
 - FH FIRE HYDRANT (2 NOZZLE)
 - NGPA TYPE 1 NGPA SIGN
 - RD ROOF DRAIN
 - FD FOOTING DRAIN
 - PROPOSED WATER
 - PROPOSED SANITARY SEWER
 - PROPOSED DRAINAGE
 - PROPERTY LINE
 - EXISTING FENCE LINE
 - EDGE OF PAVEMENT

Approved for
Construction
City of Brier

John J. P.E.

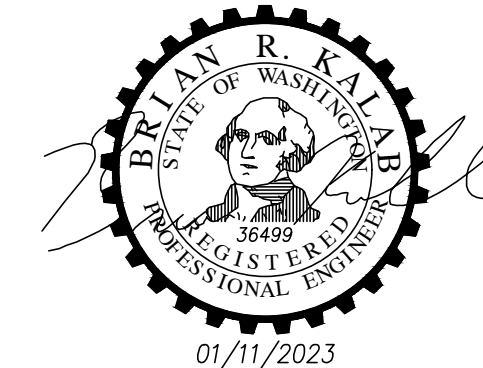
Date 1/19/2023



YARD DRAIN TABLE

LOT#	RIM	IE	AS-BUILT RIM	AS-BUILT IE
1	387.0	385.0		
2	389.0	387.0		
3	393.0	391.0		
4	381.5	379.50		
5	381.0	375.00		
6	382.0	375.25		
7	378.0	376.0		
7A	384.0	375.70		
8	393.0	391.0		
8A	391.0	389.00		

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811
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SITE ADDRESS: 22015 OLD POPLAR WAY LYNNWOOD, WA 98036

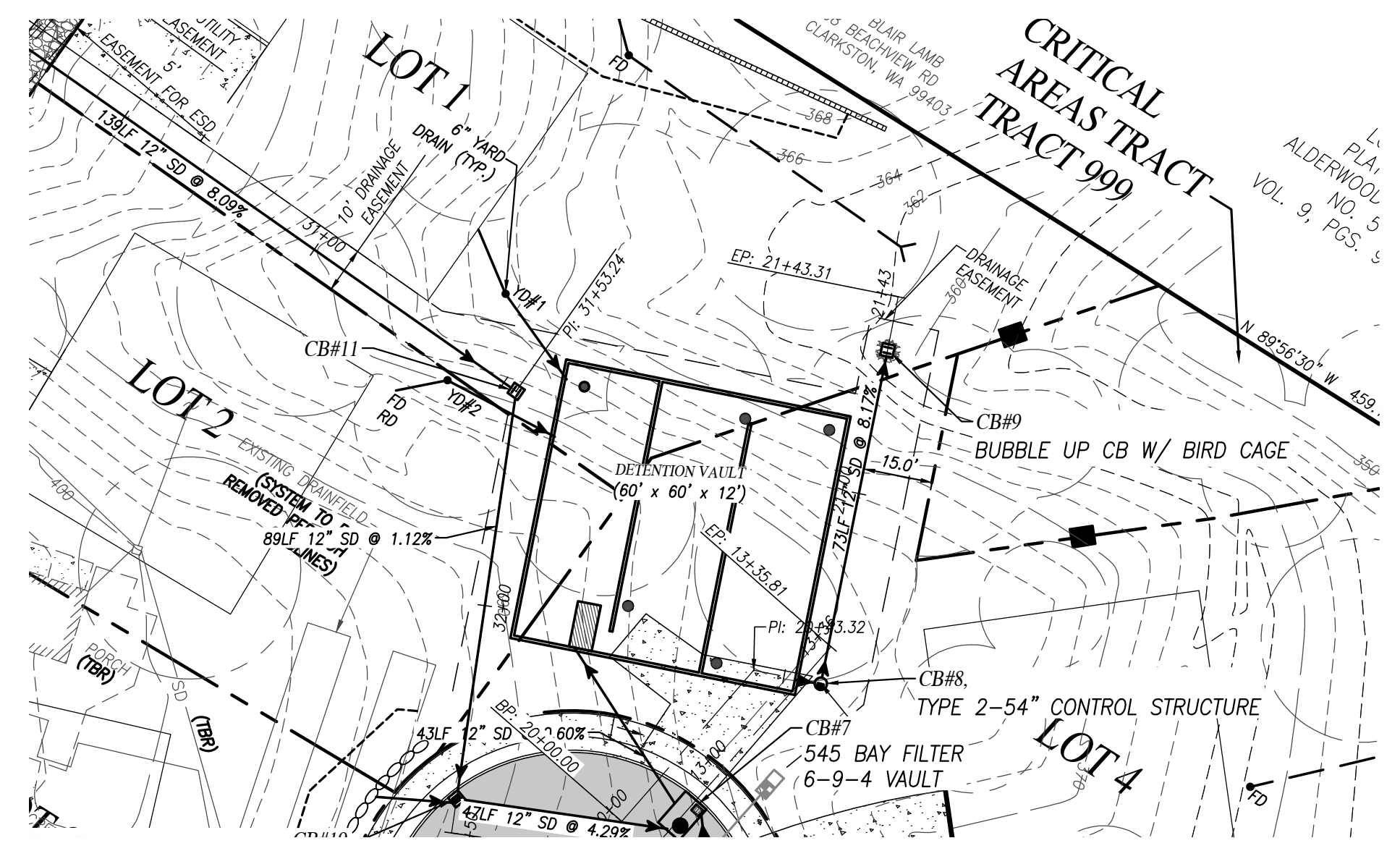
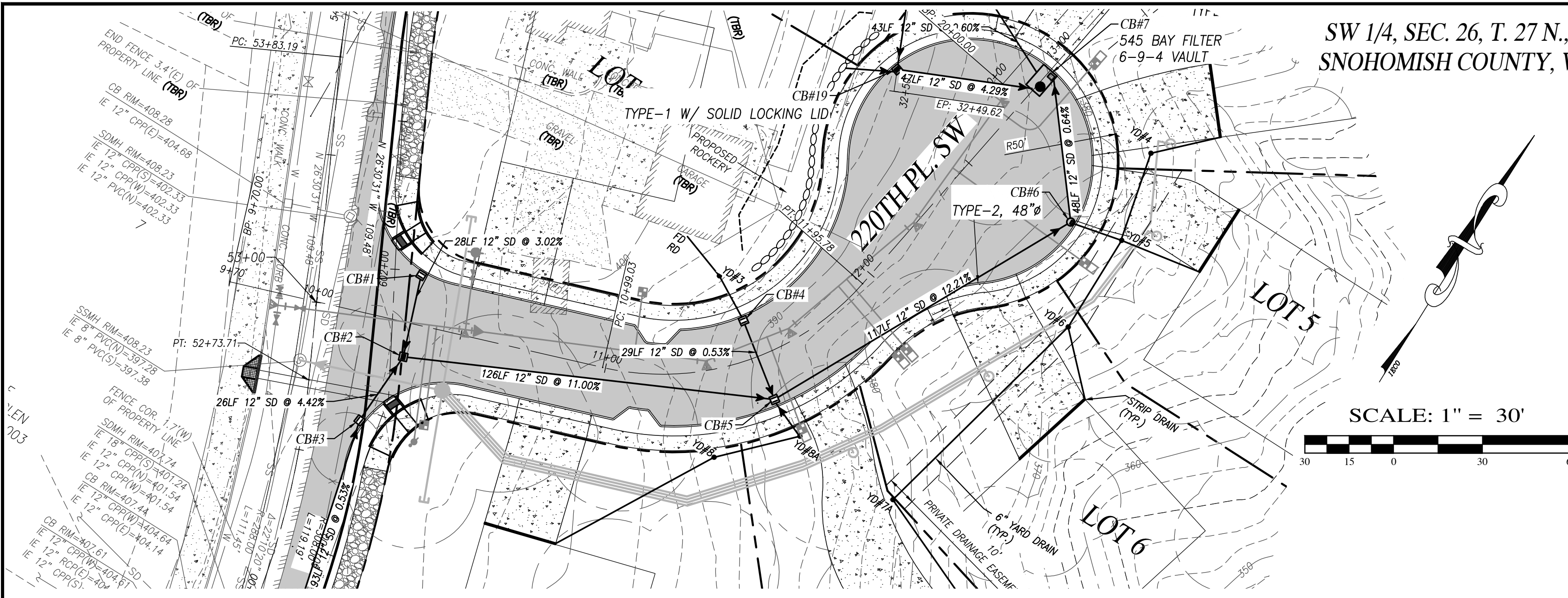
TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-C02.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108 SHEET

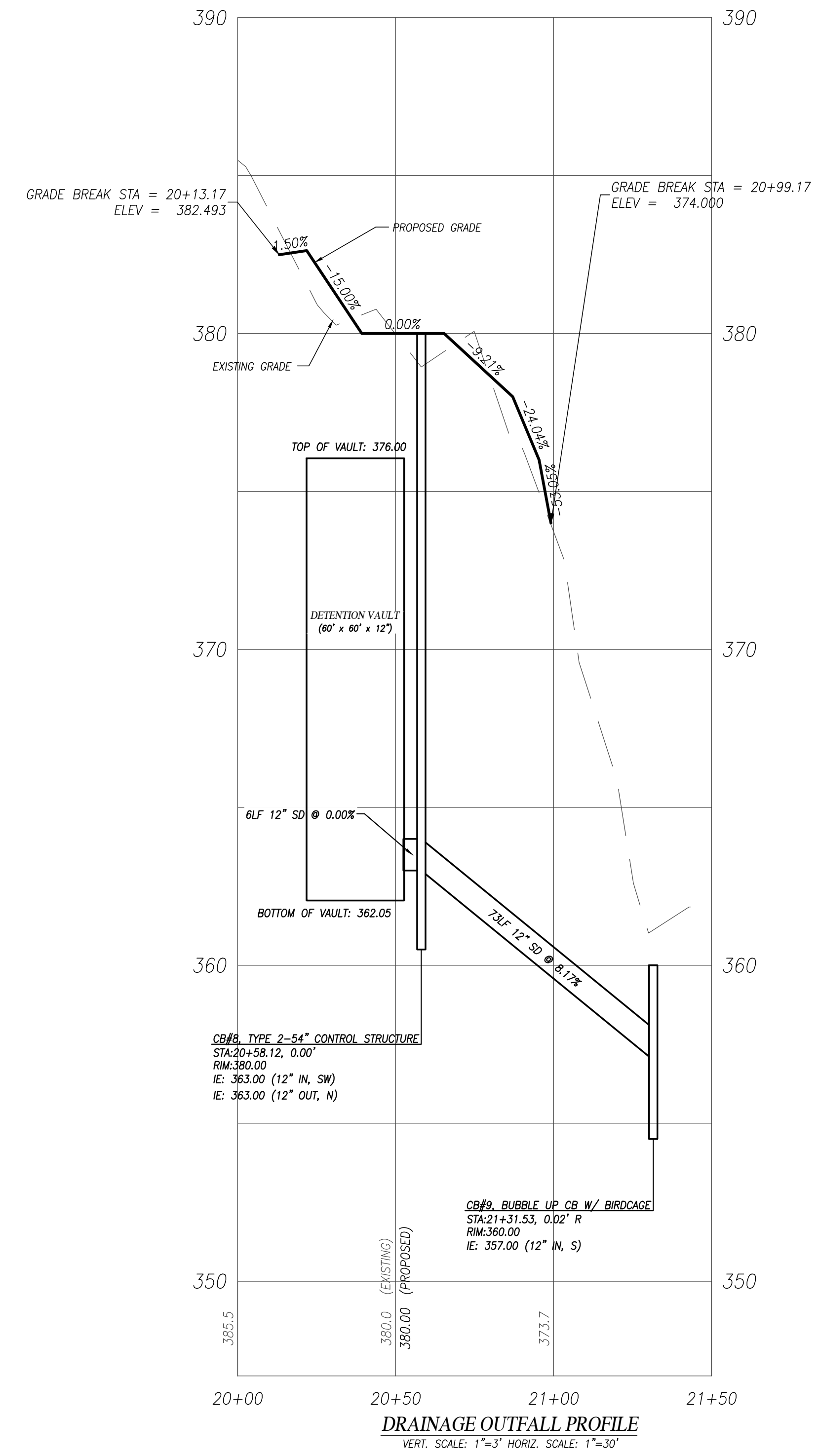
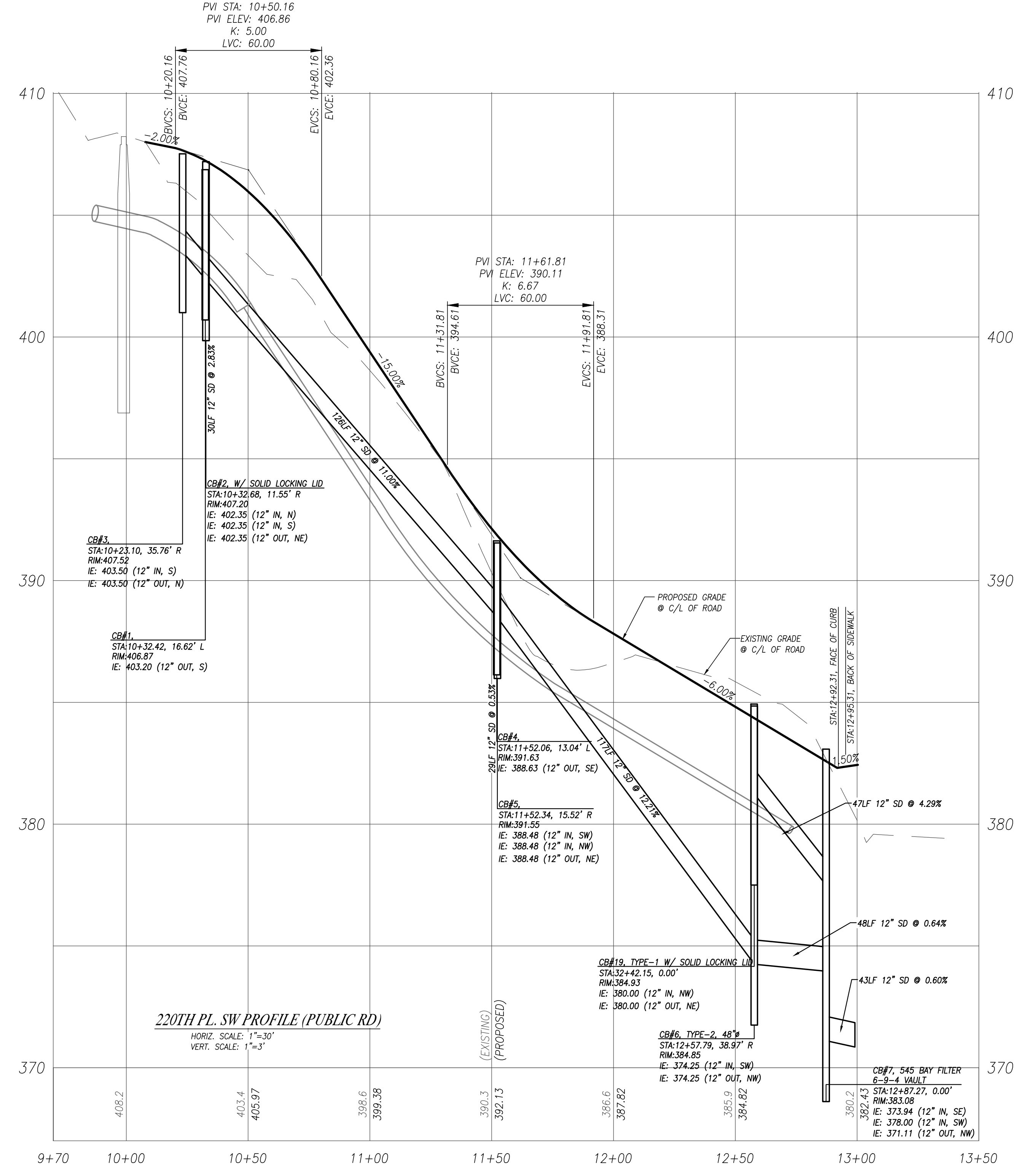
ROAD AND DRAINAGE PLAN C3.0

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON



Approved for Construction
City of Brier

Date 1/19/2023



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- DRAINAGE NOTES**
- ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT SPECIFICATIONS. THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL, AND ANY REQUIRED PIPE BEDDING, TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE.
 - ALL PIPE STORM DRAIN PIPE SHALL BE CONCRETE OR ULTRA RIB ASHTO M284 TYPE S, UNLESS OTHERWISE NOTED. STEEL PIPE SHALL NOT BE ALLOWED FOR USE IN PRIVATE OR PUBLIC DRAINAGE SYSTEMS.
 - ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
 - ALL CATCH BASINS SHALL CONFORM TO WSDOT TYPE 1 CATCH BASIN (STANDARD PLAN B-5.20-00) OR CATCH BASIN TYPE 2 (STANDARD PLAN B-10.20-00).
 - ALL CATCH BASIN GRATES SHALL BE VANED GRATE PER WSDOT STANDARD PLAN B-30.30-00.
 - DRAINAGE OUTLETS (STUB-OUTS) SHALL BE PROVIDED FOR EACH INDIVIDUAL LOT. STUB-OUTS SHALL CONFORM TO THE FOLLOWING:
 - EACH OUTLET SHALL BE SUITABLY LOCATED AT THE LOWEST ELEVATION ON THE LOT, SO AS TO SERVICE ALL FUTURE ROOF DOWNSPOUTS AND FOOTING DRAINS, DRIVEWAYS, YARD DRAINS, AND ANY OTHER SURFACE OR SUBSURFACE DRAINS NECESSARY TO RENDER THE LOTS SUITABLE FOR THEIR INTENDED USE. EACH OUTLET SHALL HAVE FREE-FLOWING POSITIVE DRAINAGE TO AN APPROVED STORMWATER CONVEYANCE SYSTEM OR TO AN APPROVED OUTFALL LOCATION.
 - OUTLETS ON EACH LOT SHALL BE LOCATED WITH A FIVE-FOOT-HIGH, 2" X 4" STAKE MARKED "STORM" OR "DRAIN". THE STUB-OUT SHALL EXTEND ABOVE SURFACE LEVEL, BE VISIBLE, AND BE SECURED TO THE STAKE.
 - PIPE MATERIAL SHALL CONFORM TO UNDERDRAIN SPECIFICATIONS DESCRIBED IN KCRS AND, IF NON-METALLIC, THE PIPE SHALL CONTAIN WIRE OR OTHER ACCEPTABLE DETECTION.
 - DRAINAGE BASEMENTS ARE REQUIRED FOR DRAINAGE SYSTEMS DESIGNED TO CONVEY FLOWS THROUGH INDIVIDUAL LOTS.
 - THE APPLICANT/CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB-OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G. POWER, GAS, TELEPHONE, TELEVISION).
 - ALL INDIVIDUAL STUB-OUTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT HOME OWNER.
 - ALL DISTURBED PERVIOUS AREAS (COMPACTED, GRADED, LANDSCAPED, ETC.) OF THE DEVELOPMENT SITE MUST DEMONSTRATE ONE OF THE FOLLOWING: THE EXISTING DUFF LAYER SHALL BE STAGED AND REDISTRIBUTED TO MAINTAIN THE MOISTURE CAPACITY OF THE SOIL, OR, AMENDED SOIL SHALL BE ADDED TO MAINTAIN THE MOISTURE CAPACITY.
 - NO PART OF THE STORM DRAINAGE SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND APPROVED BY THE CITY INSPECTOR.
 - IMPROVEMENTS AND/OR BUILDINGS SHALL NOT BE INSTALLED UNTIL DRAINAGE FACILITIES ARE "IN OPERATION".

- NOTES**
- ALL CATCH BASINS ARE TYPE-1 UNLESS OTHERWISE SPECIFIED.
 - PROVIDE AIR TEST PER EDDS ON ALL STORM PIPES BELOW 100 YEAR ELEV.

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 INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY
 LYNNWOOD, WA 98036

TAX ACCOUNT NO. S: 00373101800500

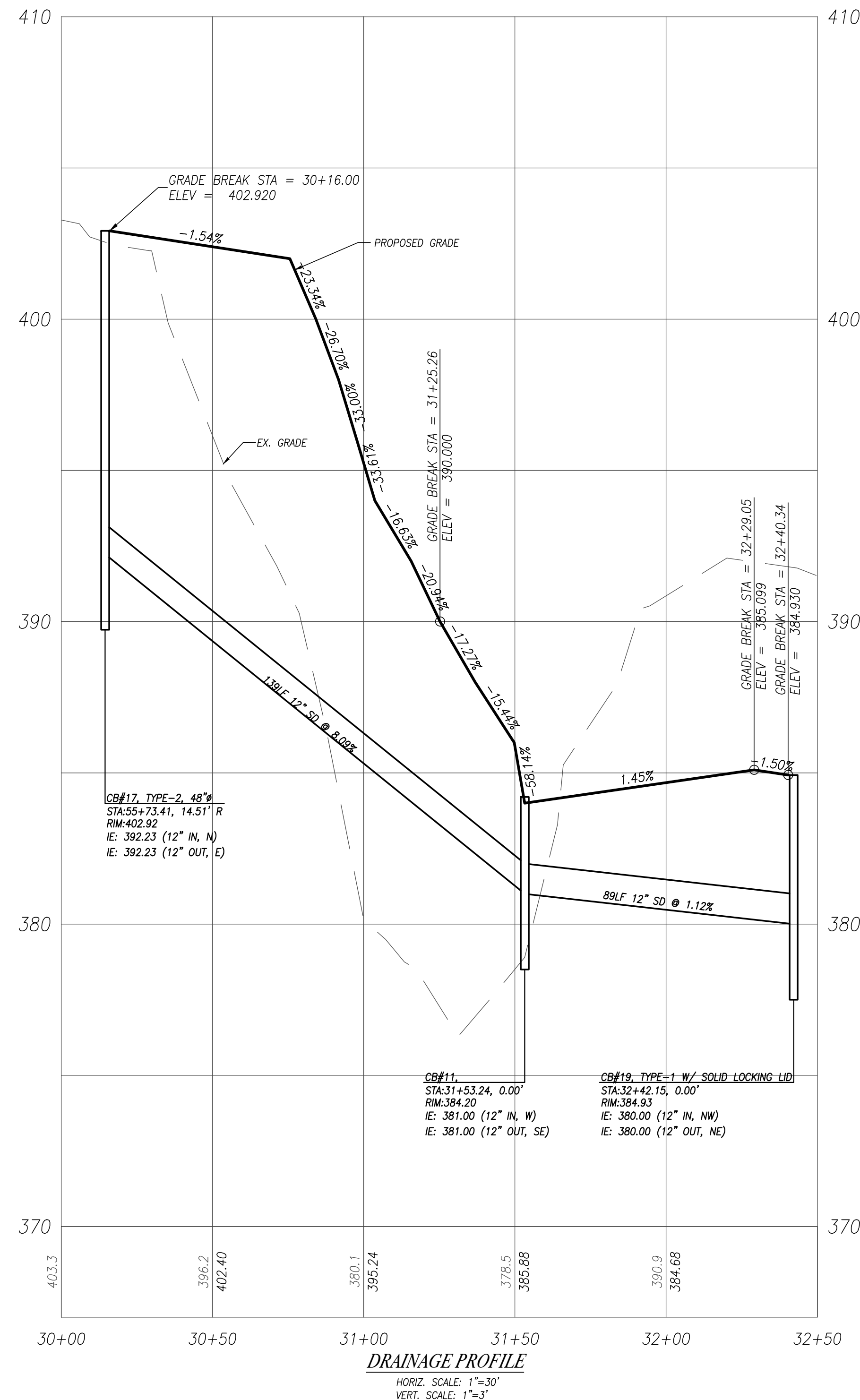
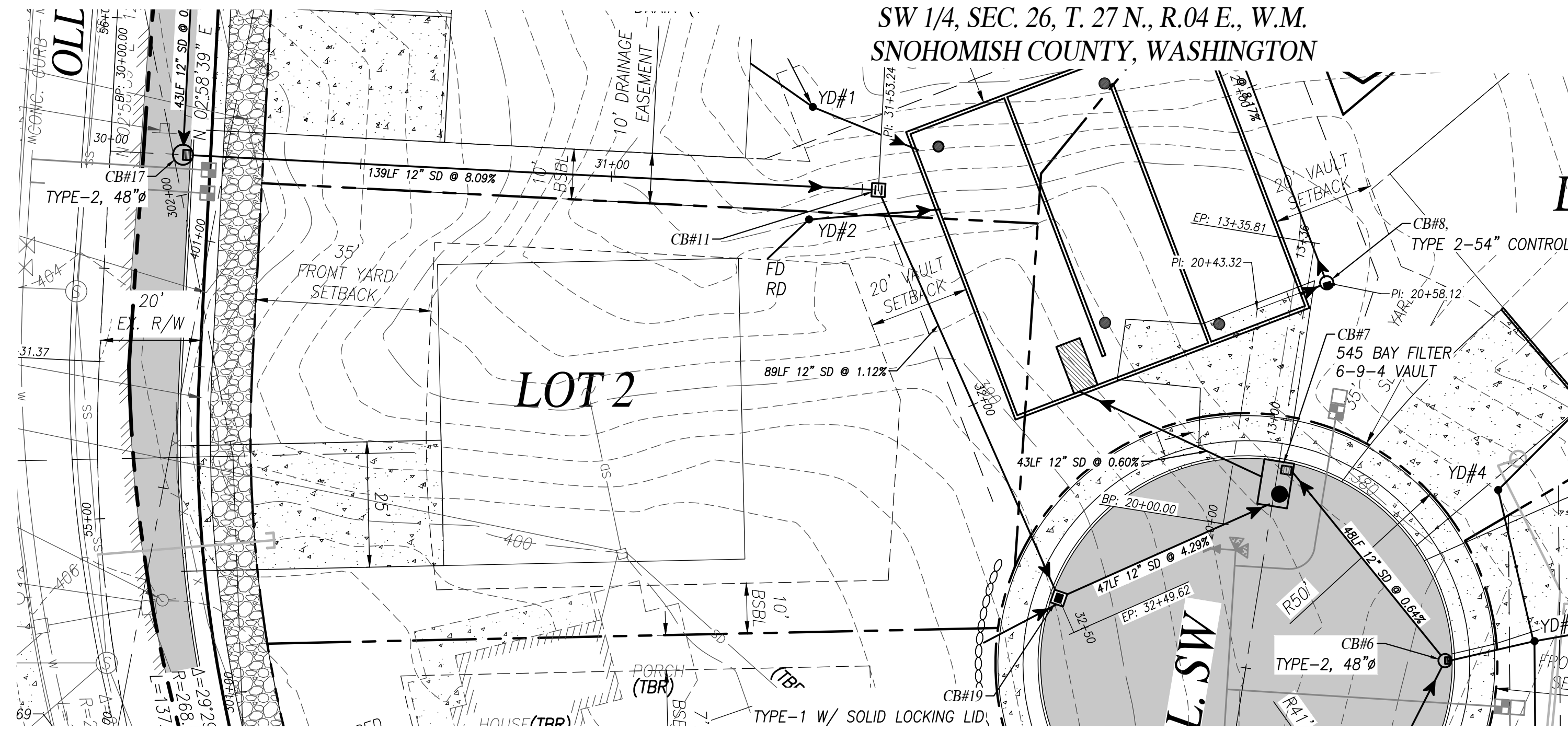
SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-CO2.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108

ROAD & DRAINAGE PROFILE **C3.1**

01/11/2023

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON



Approved for Construction
City of Brier
John P. P.E.
Date 1/19/2023



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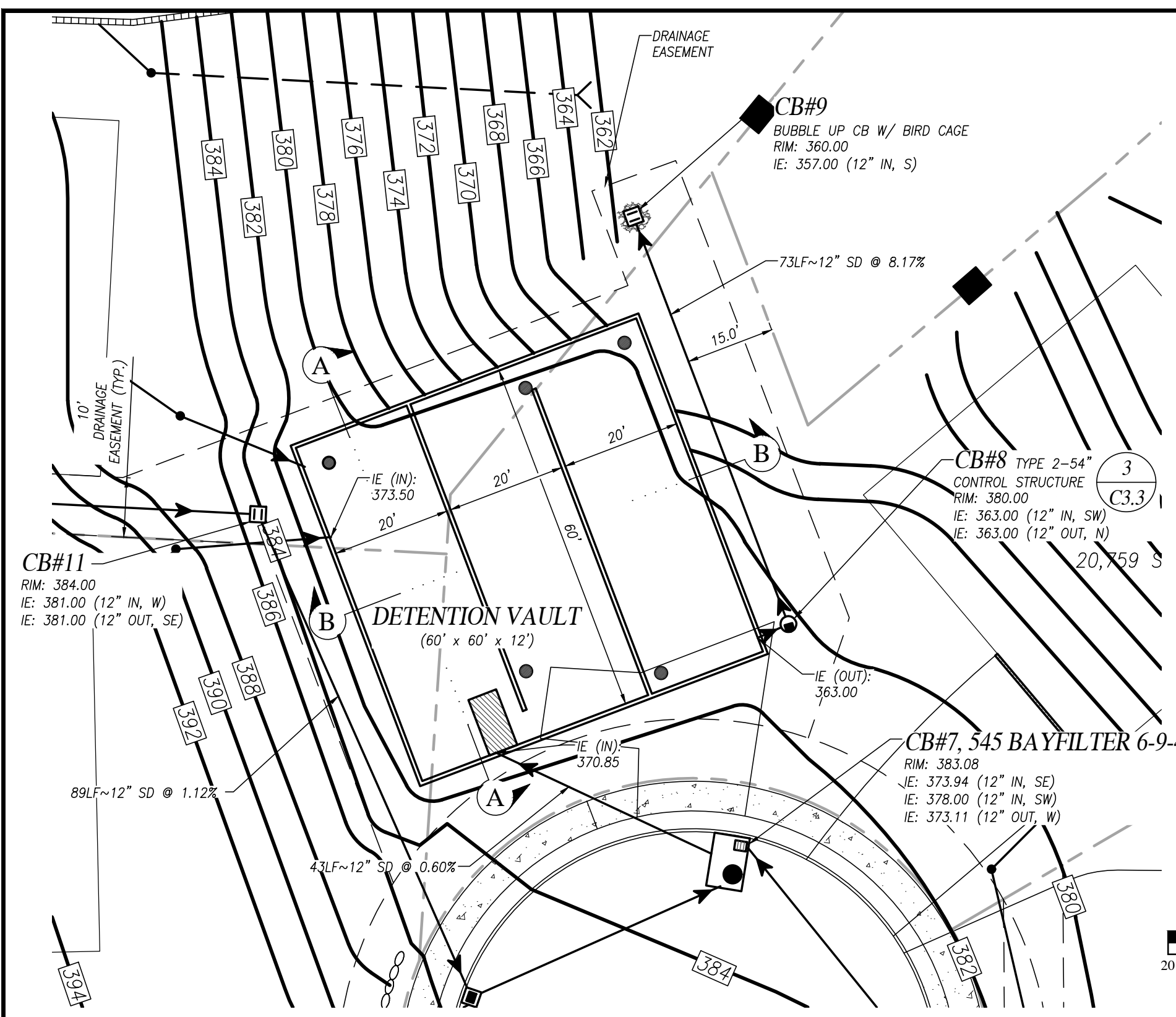
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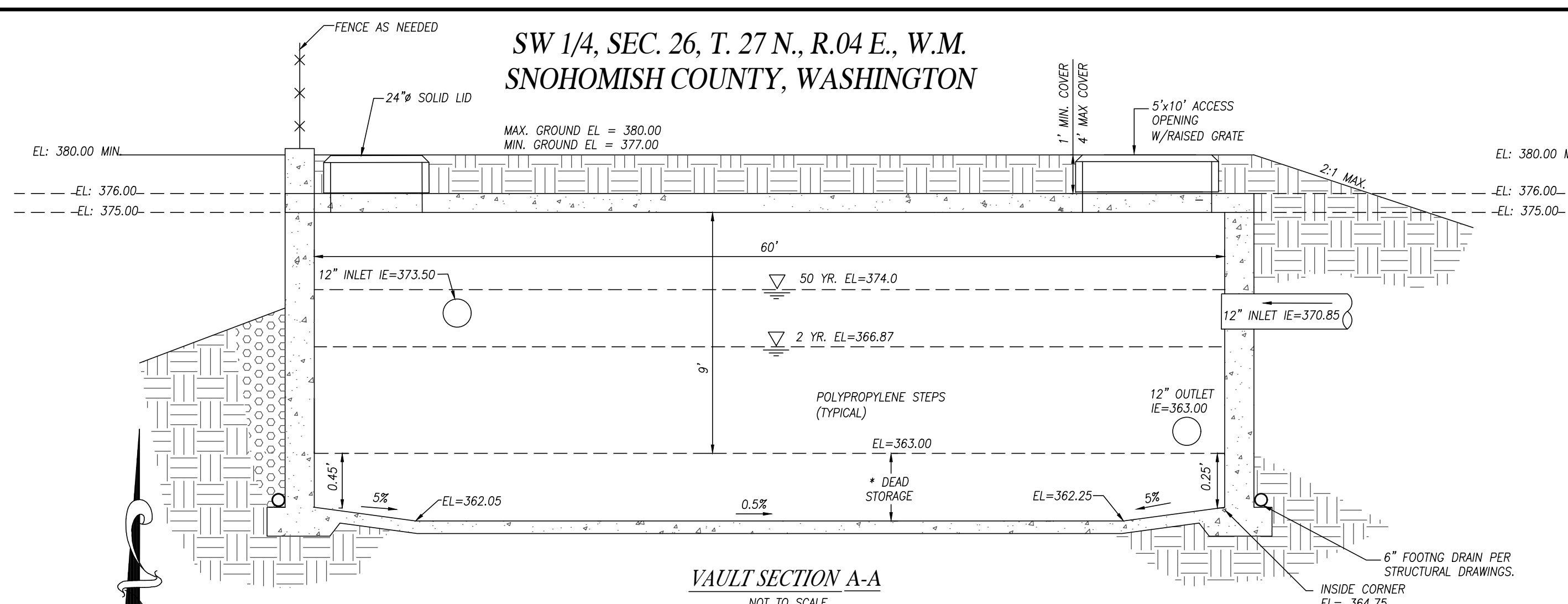
ROAD & DRAINAGE PROFILE C3.2



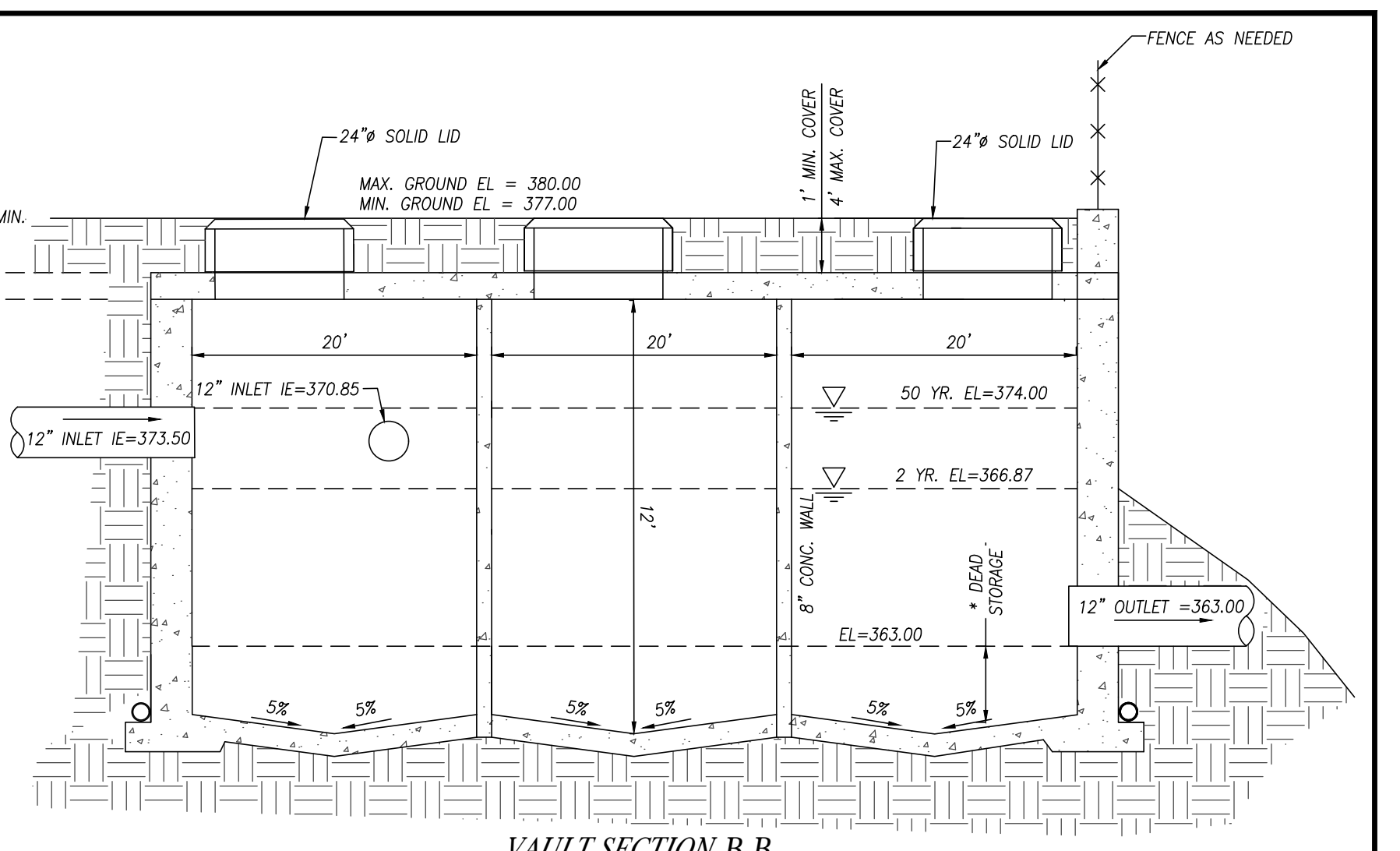
DETENTION SUMMARY CHART - VAULT

STORM EVENT	VOLUME STORAGE REQUIREMENTS (CF)				MAXIMUM RELEASE RATES (CFS)		
	DEAD	LIVE	DESIGNED	AS-BUILT	RATE	DESIGNED	AS-BUILT
1/2 OF 2-YEAR	1,800	15,840	15,840		0.24	0.08	
50-YEAR	1,800	39,600	39,600		0.60	0.18	

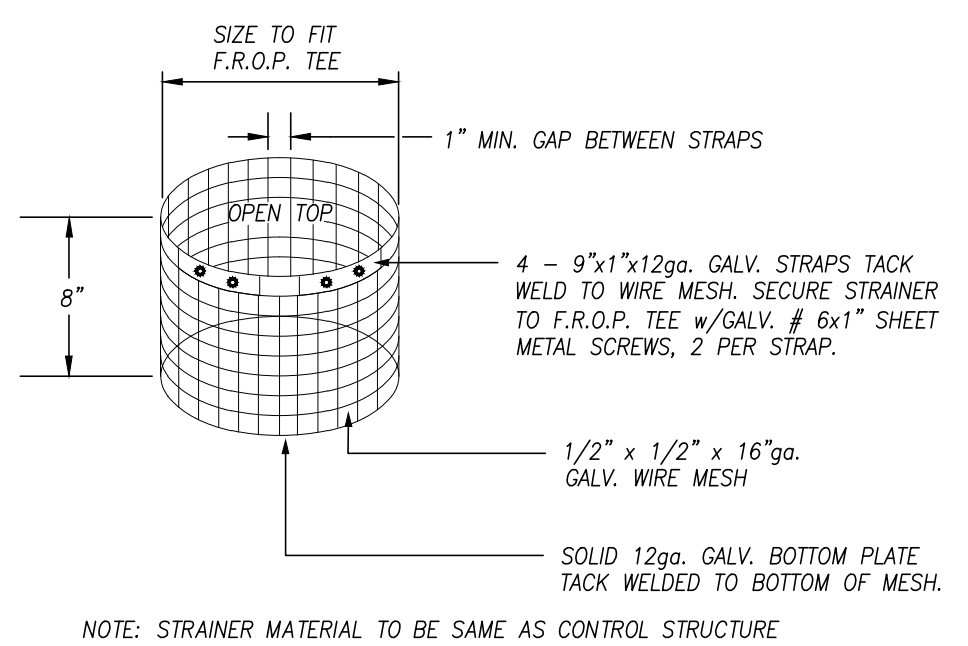
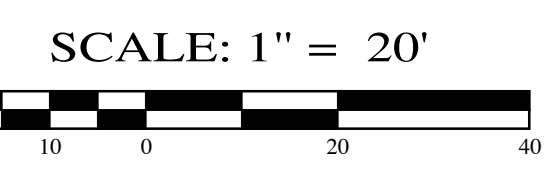
LOT IMPERVIOUS AREA: 1.24 AC (40% OF LOT AREA)
 ROAD & SIDEWALK IMPERVIOUS AREA: 0.35 AC
 OFFSITE IMPERVIOUS AREA: 0.62 AC



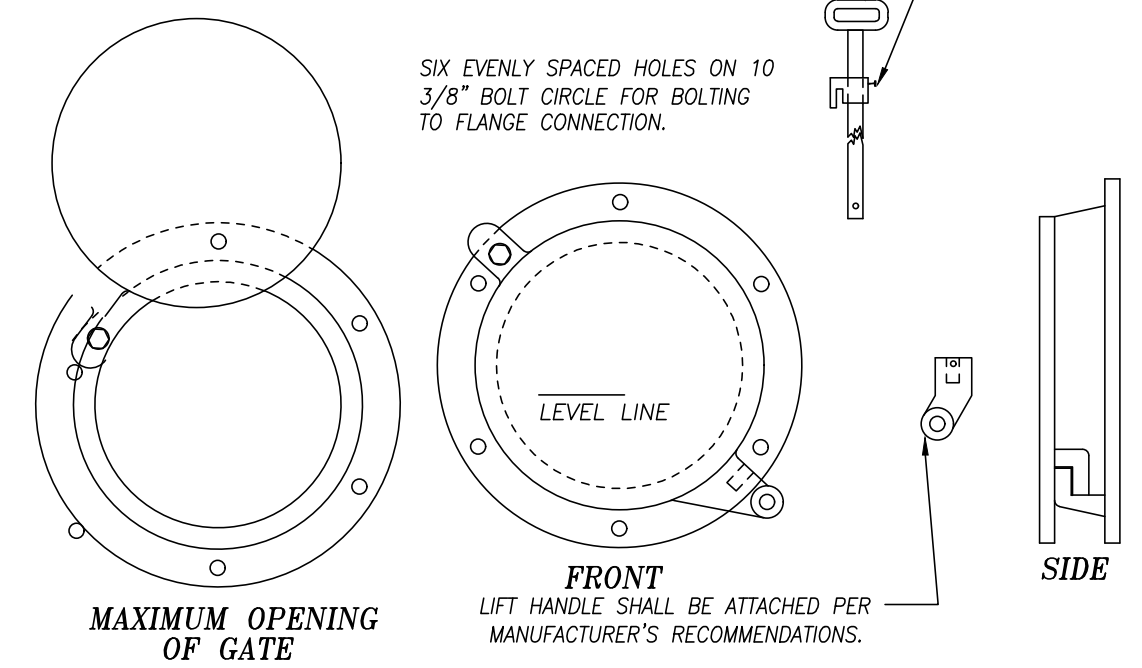
NOTE: SEE STRUCTURAL PLANS FOR REMAINING FLOOR ELEVATIONS.
 * THE PROPOSED DEAD STORAGE WILL PROVIDE AN AVERAGE DEPTH OF GREATER THAN 0.5 FEET.



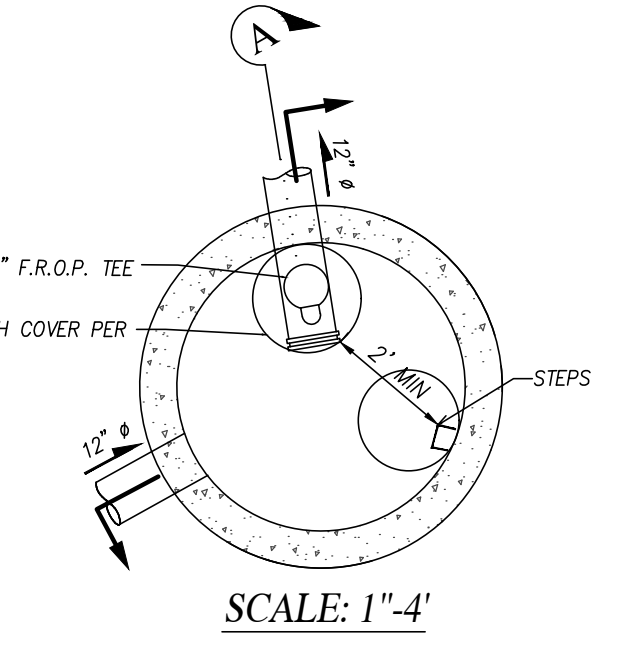
* THE PROPOSED DEAD STORAGE WILL PROVIDE AN AVERAGE DEPTH OF GREATER THAN 0.5 FEET.



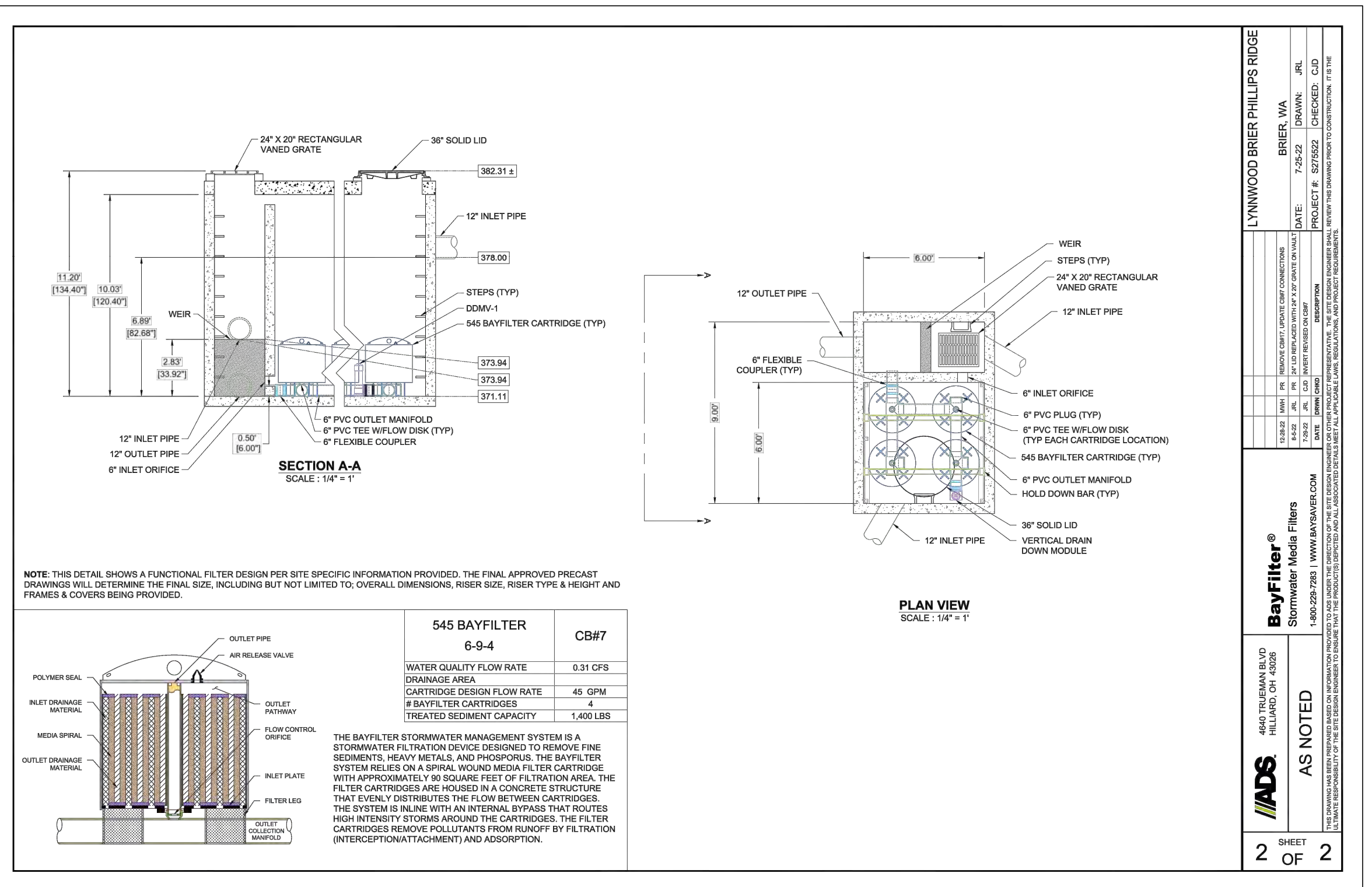
1 STRAINER DETAIL
 C3.3 N.T.S.



2 CLEANOUT/SHEAR GATE
 C3.3



3 FLOW RESTRICTOR/OIL POLLUTION CONTROL DEVICE (F.R.O.P.)
 C3.3 N.T.S.



4 CB#7 BAYFILTER 6-9-4 VAULT DETAIL
 C3.3 N.T.S.

Approved for Construction
City of Brier
John P. P.E.
Date 1/19/2023



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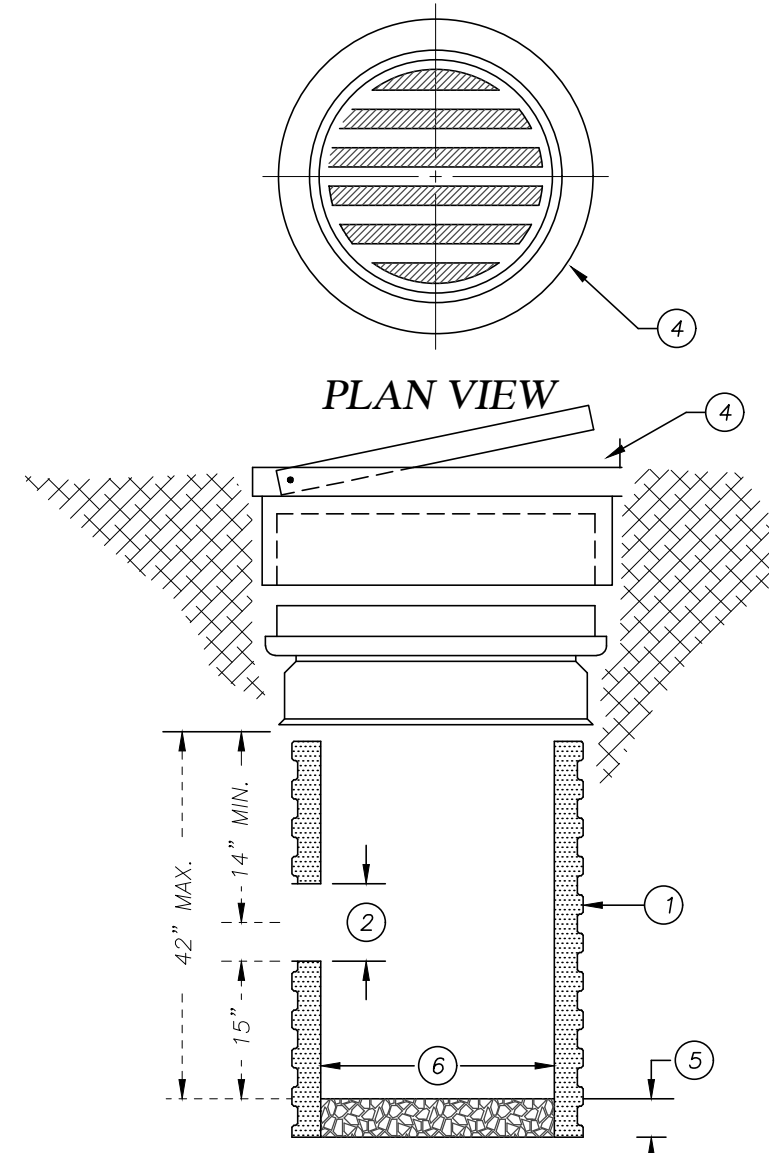
SITE ADDRESS: 22015 OLD POPLAR WAY
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TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME	DESIGNED BY:	DATE:	SCALE:	JOB NO.:
211108-CO2.DWG	JTK	12-22-2021	1"=30'	21-1108

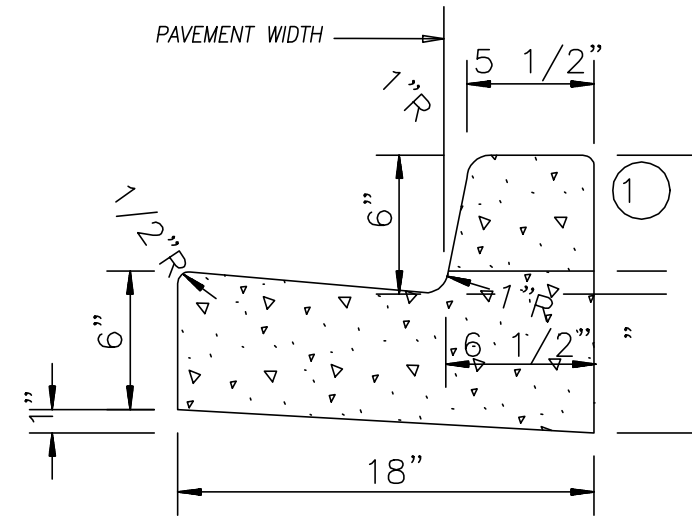
SHEET
DETENTION PLAN & DETAILS C3.3



NOTES: ELEVATION VIEW

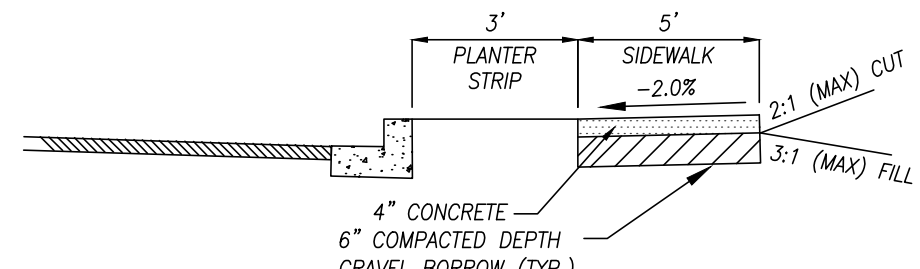
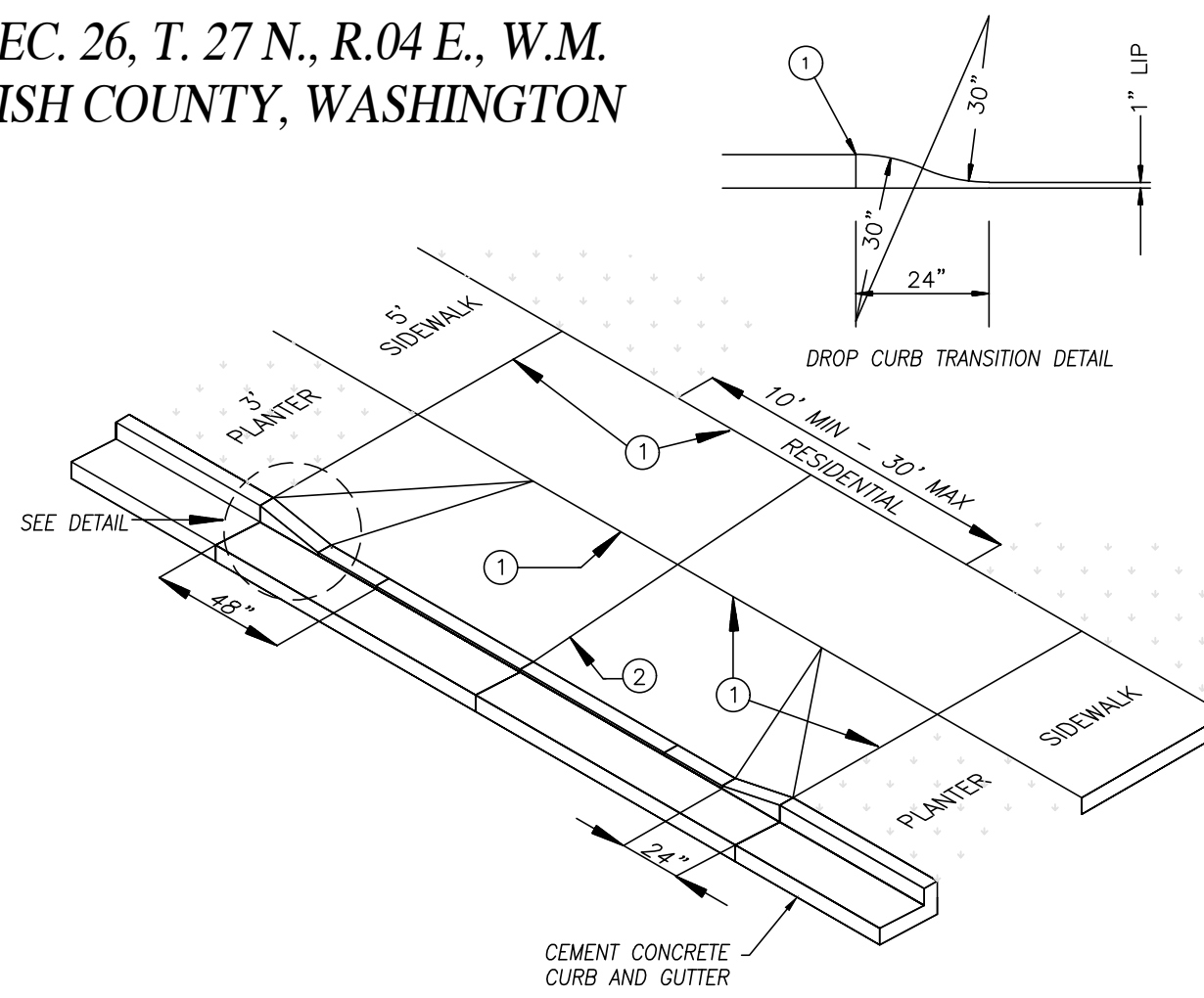
- YARD DRAINS TO BE CONSTRUCTED FROM ADS N12 PIPE
- CUTOUT HOLE SIZE IN EQUAL TO OUTLET PIPE OUTSIDE DIAMETER PLUS YARD DRAIN WALL THICKNESS.
- CONNECTION TO INLET PIPE TO BE SEALED AND MADE FLUSH WITH INSIDE OF THE YARD DRAIN WALL.
- CAST IRON GRATE FITS ONTO INLINE DRAIN THAT IS SEALED OVER THE CORRUGATED PIPE VIA A RUBBER GASKET
- WASHED DRAIN ROCK - 6 INCHES MINIMUM DEPTH
- VARIES 12 OR 18 INCHES

1 YARD DRAIN DETAIL
C3.4 N.T.S.



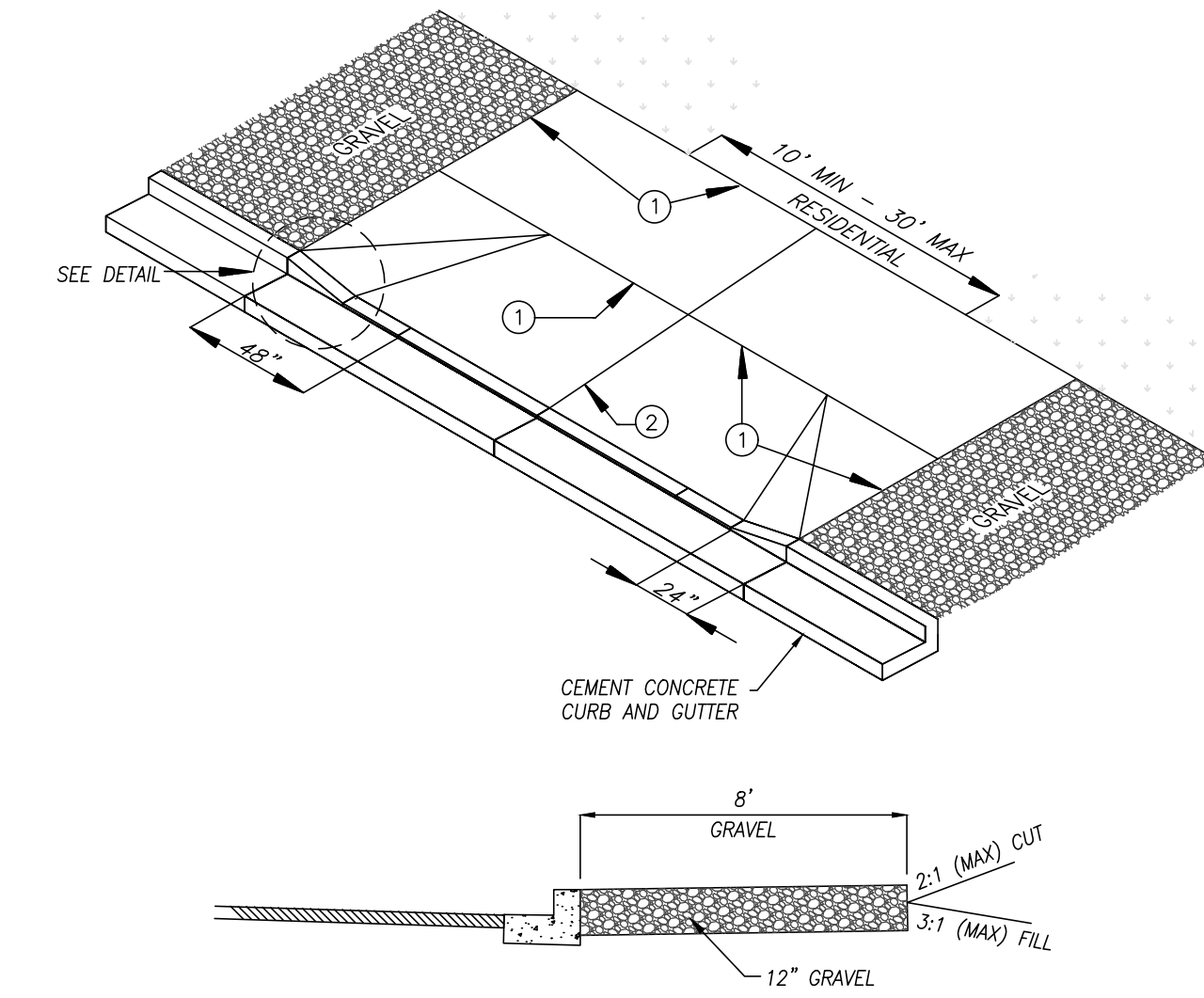
2 CEMENT CONCRETE DROP CURB & GUTTER
C3.4 NOT TO SCALE

- VERTICAL CURB WILL BE REQUIRED EXCEPT AS NOTED IN SECTION 4-04.
 - CONSTRUCTION OF CURB DETAILS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION. (WSDOT/APWA SPECIFICATIONS) UNLESS OTHERWISE MODIFIED BELOW.
 - ALL CONCRETE SHALL BE COMMERCIAL CLASS PER WSDOT/APWA SPECIFICATIONS.
 - FORMS SHALL BE TRUE TO LINE AND SECURELY STAKED, STEEL FORMS ONLY SHALL BE USED ON TANGENT SECTIONS, WOOD FORMS SHALL BE USED ON CURVED SECTIONS.
 - FULL DEPTH EXPANSION JOINTS CONSISTING OF 3/8 INCH MINIMUM PREMOULDED JOINT MATERIAL SHALL BE PLACED ADJACENT TO CATCH BASINS, INLETS AND AT POINTS OF TANGENCY ON STREETS AND DRIVEWAY RETURNS, MAXIMUM SPACING SHALL BE 20 FEET.
 - CONTRACTION JOINTS (DUMMY JOINTS) CONSISTING OF 3/8" MIN. X 2" OF PREMOULDED JOINT MATERIAL SHALL BE CONSTRUCTED AT INTERVALS OF 10 FEET.
 - ALL JOINTS SHALL BE CLEAN AND EDGED.
 - FINISH SHALL BE A LIGHT BROOM FINISH.
 - FINISH CURBS AND GUTTERS SHALL BE SPRAYED WITH A CLEAR CURING COMPOUND.
 - TOP OF CURB AT ACCESS POINT APPROACH.
 - SUBGRADE COMPACTION FOR CURBS AND GUTTERS SHALL MEET A MINIMUM 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH SEC. 2-03.3(14) OF THE WSDOT/APWA SPECIFICATIONS.
- SEE TEXT SECTION 4-04

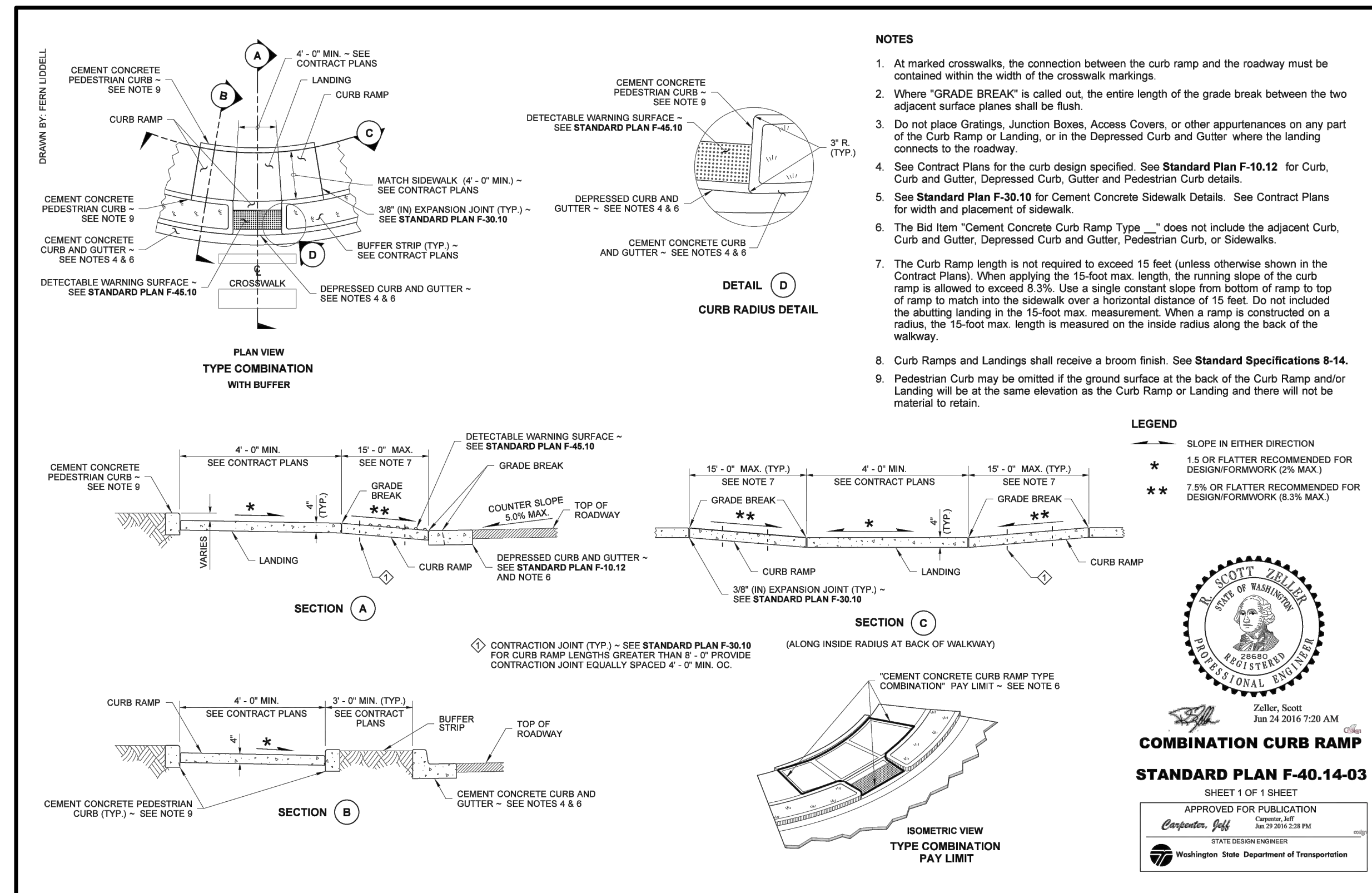


3 CEMENT CONCRETE DRIVEWAY & SIDEWALK
C3.4 NOT TO SCALE

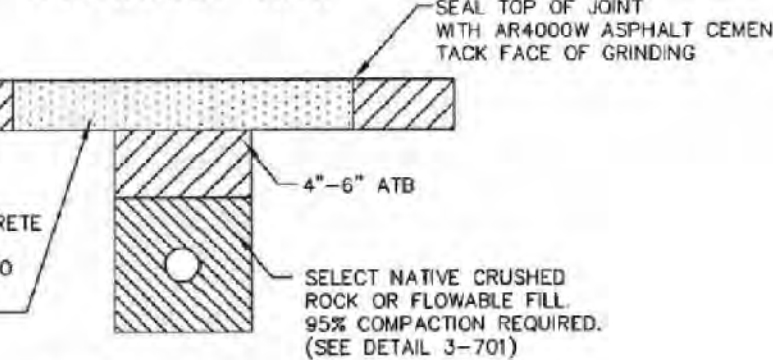
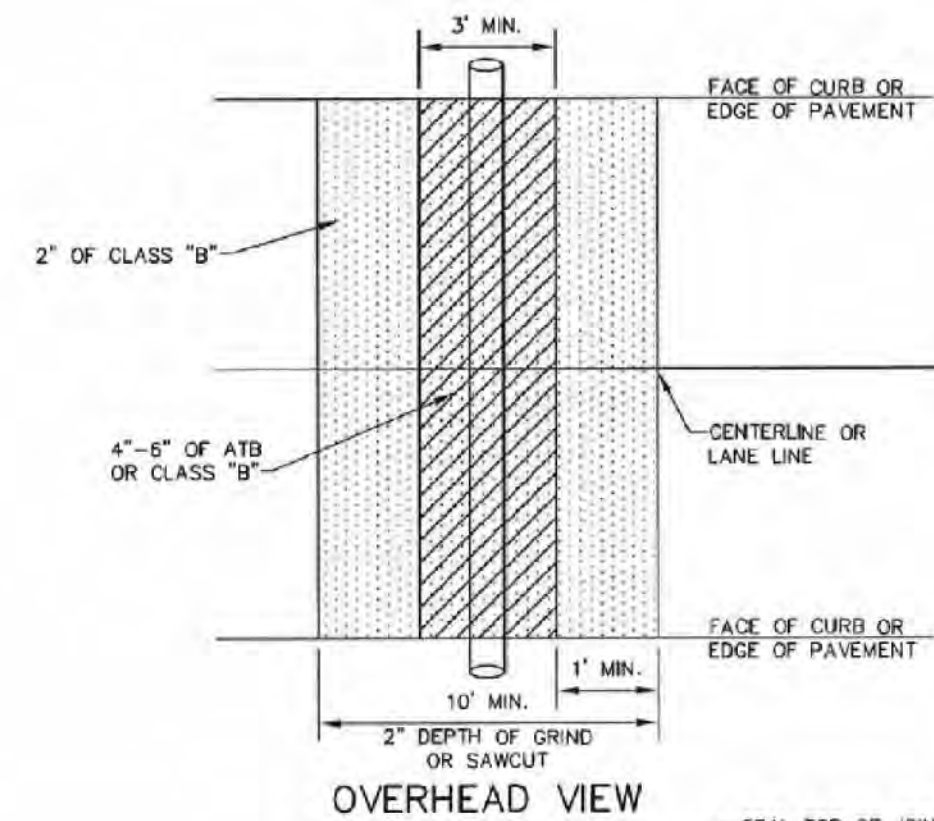
- NOTES:
- FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS.
 - FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS IF WIDTH OF DRIVEWAY IS 15 FEET OR GREATER.
 - DRIVEWAY SECTION WITHIN PUBLIC RIGHT-OF-WAY IS TO BE SURFACED WITH ASPHALT OR CONCRETE.
 - DRIVEWAY CEMENT CONCRETE DEPTH SHALL BE A MINIMUM OF 6" AND PLACED ON COMPACTED GRADE.
 - CONCRETE SHALL BE COMMERCIAL CLASS CONCRETE PER WSDOT/APWA SPECIFICATIONS.
 - CLEAN AND EDGE ALL JOINTS.
 - MINIMUM DISTANCE FROM DRIVEWAYS TO BULB-OUTS, STREET LIGHTS AND STREET TREES SHALL BE 10 FT.



4 CEMENT CONCRETE DRIVEWAY & GRAVEL
C3.4 NOT TO SCALE



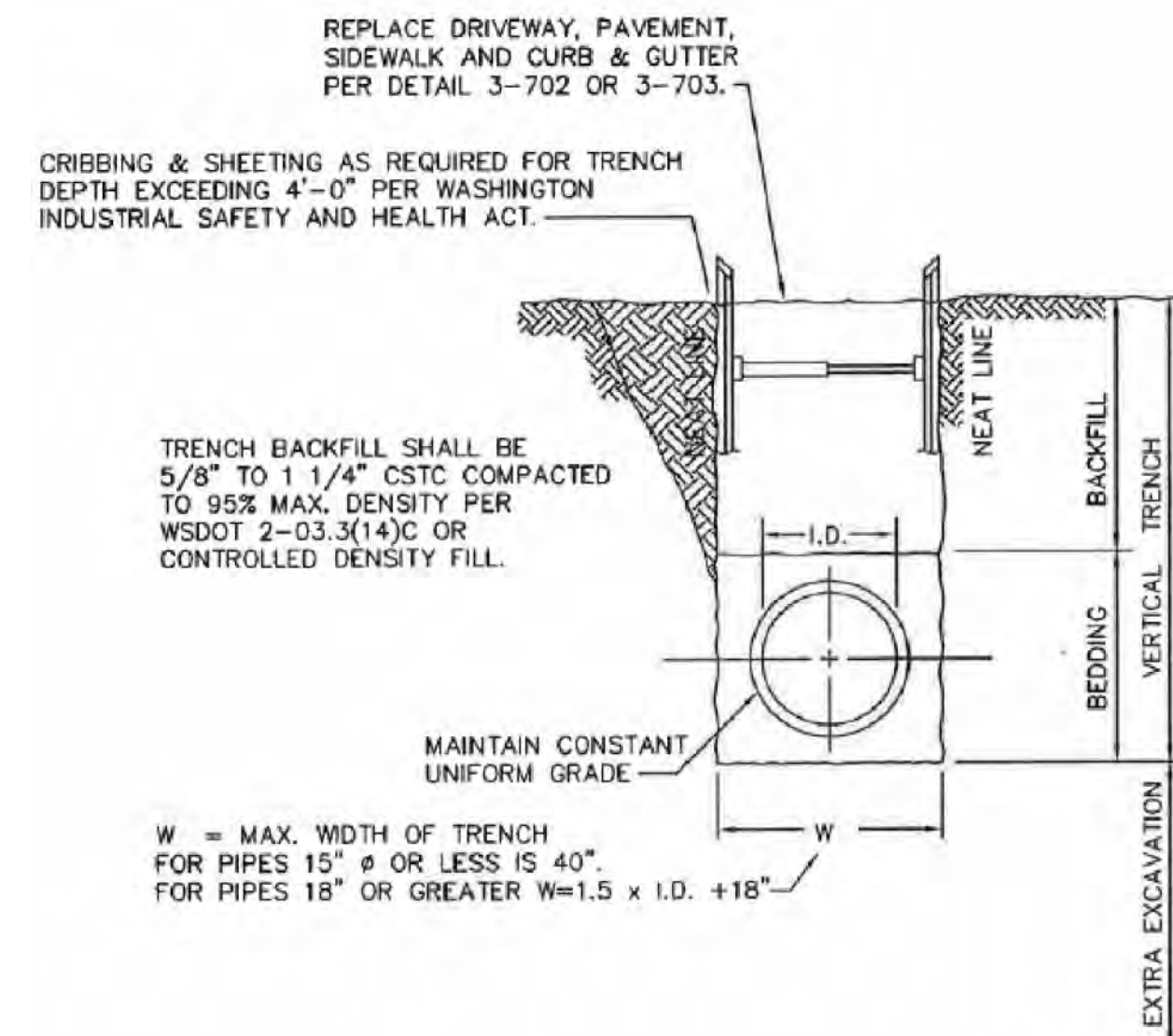
5 COMBINATION CURB RAMP DETAIL
C3.4 W.S.D.O.T. F-40.14-03



CROSS SECTION

- NOTES:
- ALL TRENCHES IN ROADWAY AREAS SHALL BE BACKFILLED AND PATCHED WITH TEMPORARY ASPHALT AT THE END OF EACH WORK DAY, UNLESS PERMISSION IS GRANTED TO DO OTHERWISE BY THE CITY.
 - ALL TEMPORARY PATCHES ON TRENCHES SHALL BE PERMANENTLY PATCHED AS SOON AS POSSIBLE UPON COMPLETION OF WORK WITHIN THE ROADWAY AREA.
 - REPLACE AND RESTORE ALL SURFACE IMPROVEMENTS (I.E. TRAFFIC BUTTONS, CURBING, STRIPING) AS DIRECTED BY THE CITY.
 - IF THERE ARE MORE THAN 2 PARALLEL OR PERPENDICULAR PATCHES PROPOSED WITHIN 100 LINEAL FEET OF ROADWAY, THE APPLICANT SHALL BE RESPONSIBLE TO GRIND OFF THE TOP TWO INCHES OF ASPHALT AND OVERLAY THE FULL STREET SECTION.

6 TRENCH RESTORATION
C3.4 NOT TO SCALE



- NOTES:
- DEWATERING IS REQUIRED WHERE WATER IS ENCOUNTERED.
 - FOUNDATION GRAVEL IF REQUIRED BY THE ENGINEER TO REPLACE UNSUITABLE MATERIAL SHALL BE FOUNDATION MATERIAL CLASS A.
 - PIPE BEDDING PER WSDOT 7-08.3(1)C.

Approved for
Construction
City of Brier
[Signature] P.E.
Date 1/19/2023

UTILITY CONFLICT NOTE:

CAUTION:
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Know what's below.
Call before you dig.



		INSIGHT ENGINEERING CO. P.O. BOX - 1478 EVERETT, WA 98206 (425) 303-9363 (425) 303-9362 FAX INFO@INSIGHTENGINEERING.NET	
SITE ADDRESS: 22015 OLD POPLAR WAY LYNNWOOD, WA 98036		SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M. PHILLIPS RIDGE	
DWG FILENAME: 211108-CO2.DWG	DESIGNED BY: JTK	DATE: 12-22-2021	SCALE: 1"=30' JOB NO.: 21-1108
GENERAL NOTES AND DETAILS		SHEET C3.4	

REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022

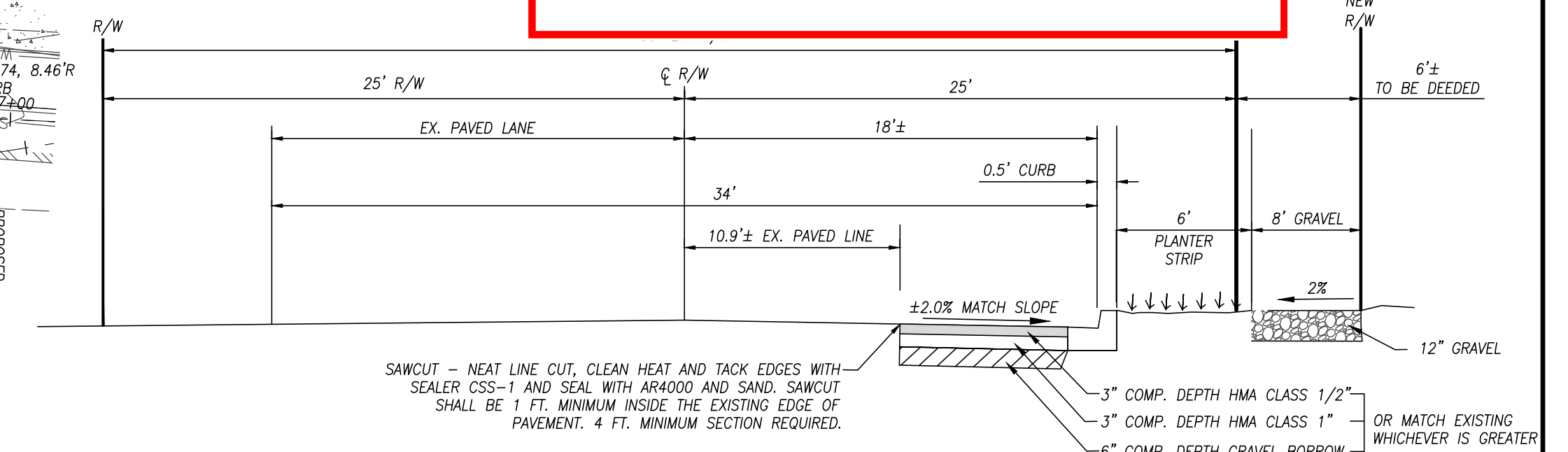
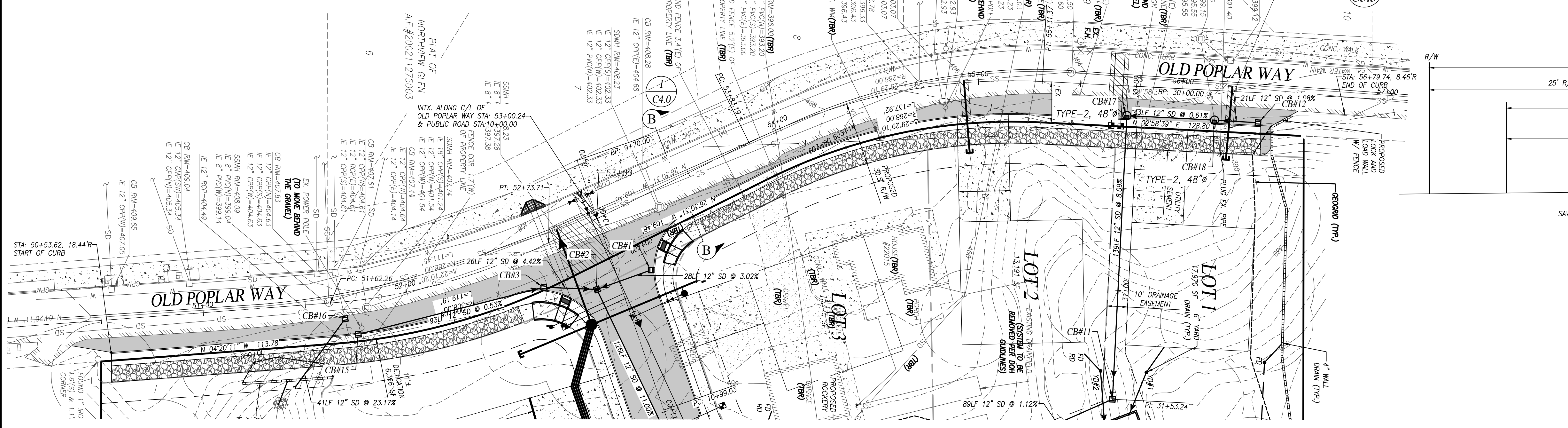
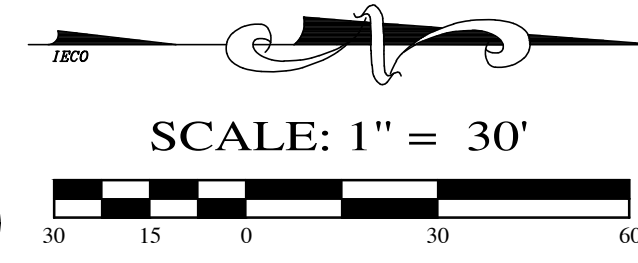
TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON

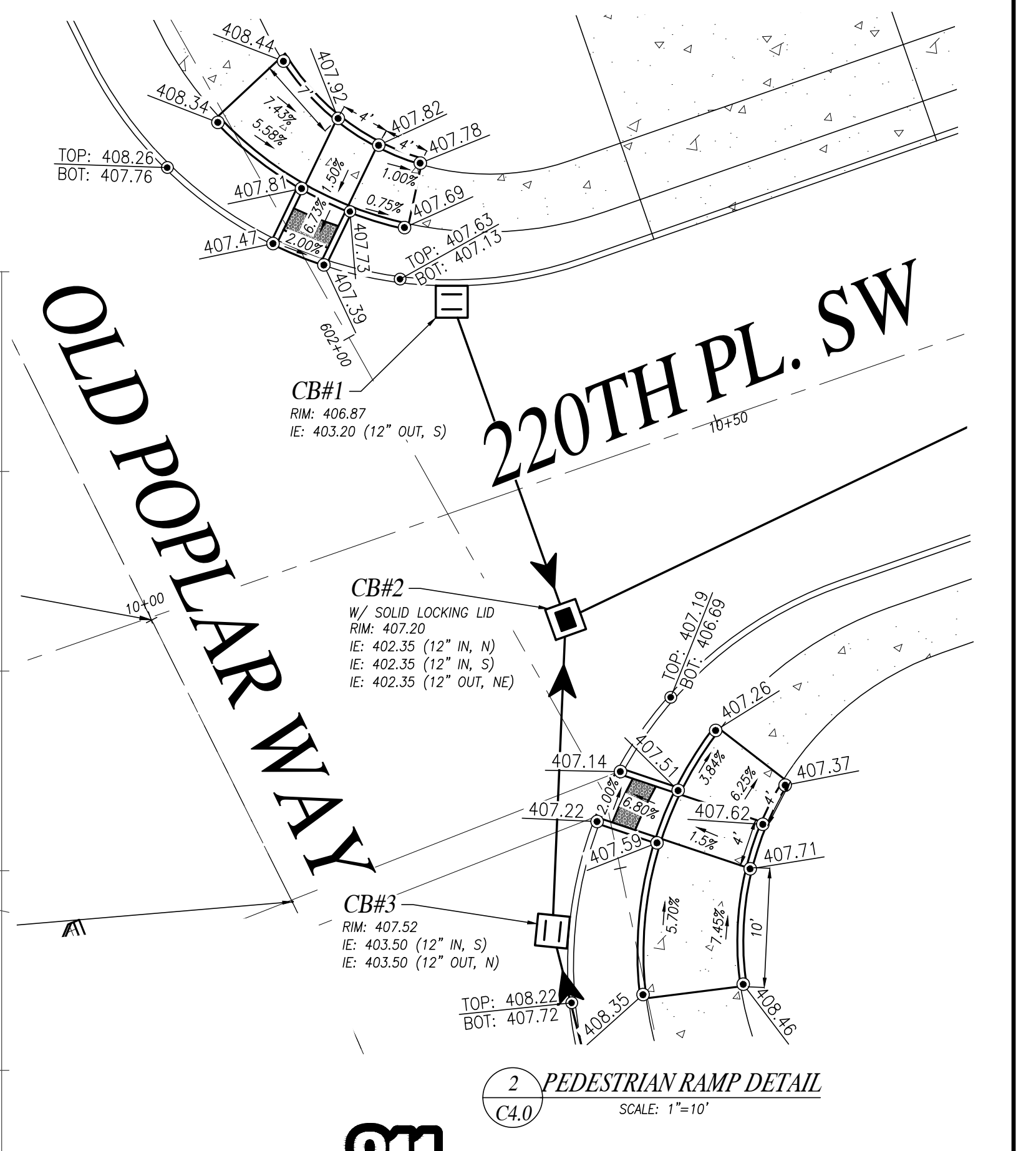
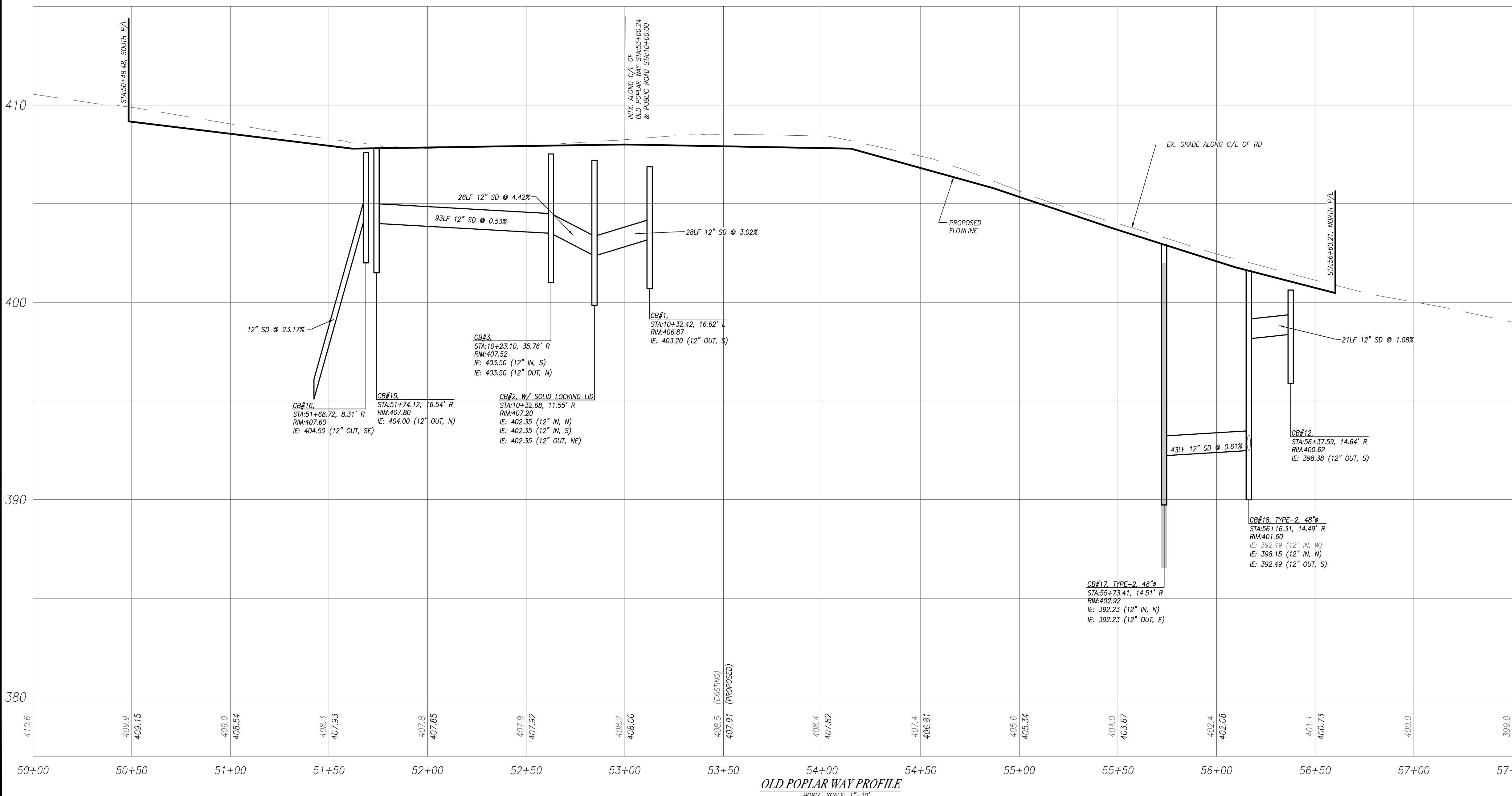
Approved for
Construction
City of Brier

[Signature] P.E.

Date 1/19/2023



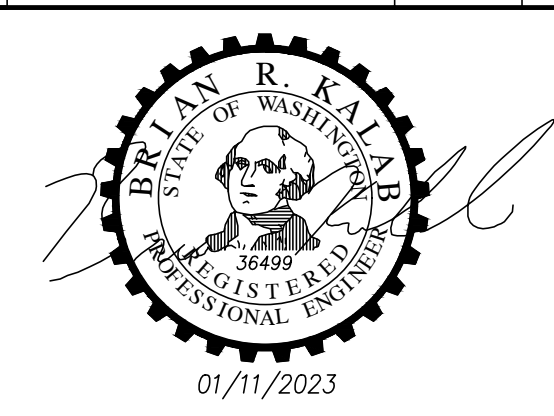
1 OLD POPLAR WAY (SECTION B-B)
C4.0 NOT TO SCALE



2 PEDESTRIAN RAMP DETAIL
C4.0 SCALE: 1"=10'

UTILITY CONFLICT NOTE:
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REV. NO.	DESCRIPTION	INITIALS	DATE
1	MOVE WALL LOCATIONS	BRK	10-15-2022
2	CHANGE TO WALL LOCATIONS	BRK	09-23-2022



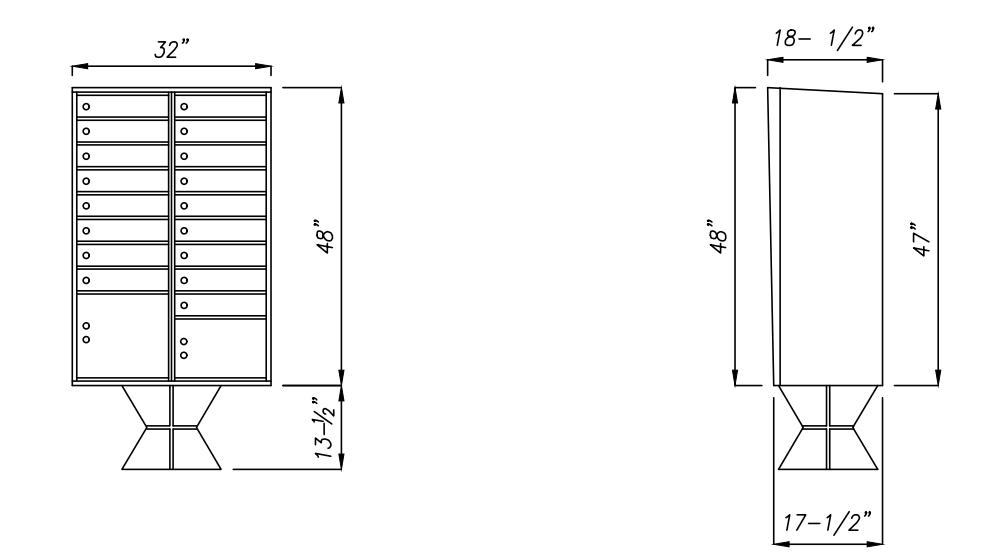
INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY LYNNWOOD, WA 98036	
TAX ACCOUNT NO. S: 00373101800500	
SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M. PHILLIPS RIDGE	
DWG FILENAME: 211108-CO2.DWG	DESIGNED BY: JTK
DATE: 12-22-2021	SCALE: 1"=30'
JOB NO.: 21-1108	SHEET: 21-1108
FRONTAGE IMPROVEMENT PLAN AND PROFILE	
C4.0	

OLD POPLAR WAY PROFILE
HORIZ. SCALE: 1"=30'
VERT. SCALE: 1"=3'

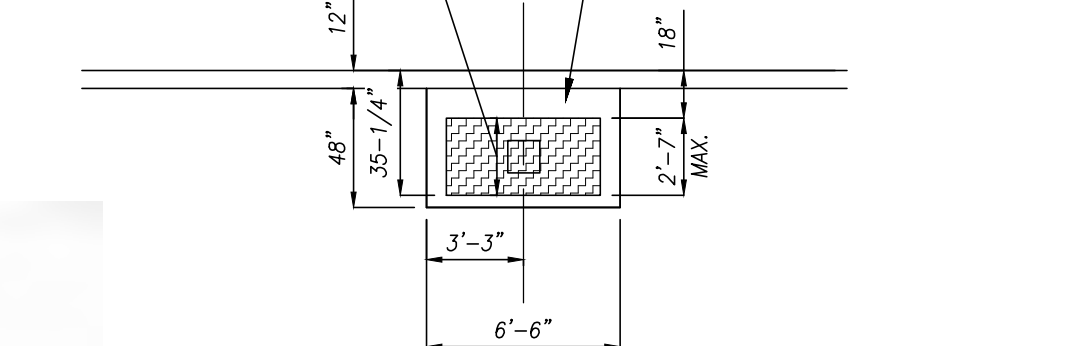
SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON

AMERICAN LOCKER GROUP TYPE III CLUSTER BOX

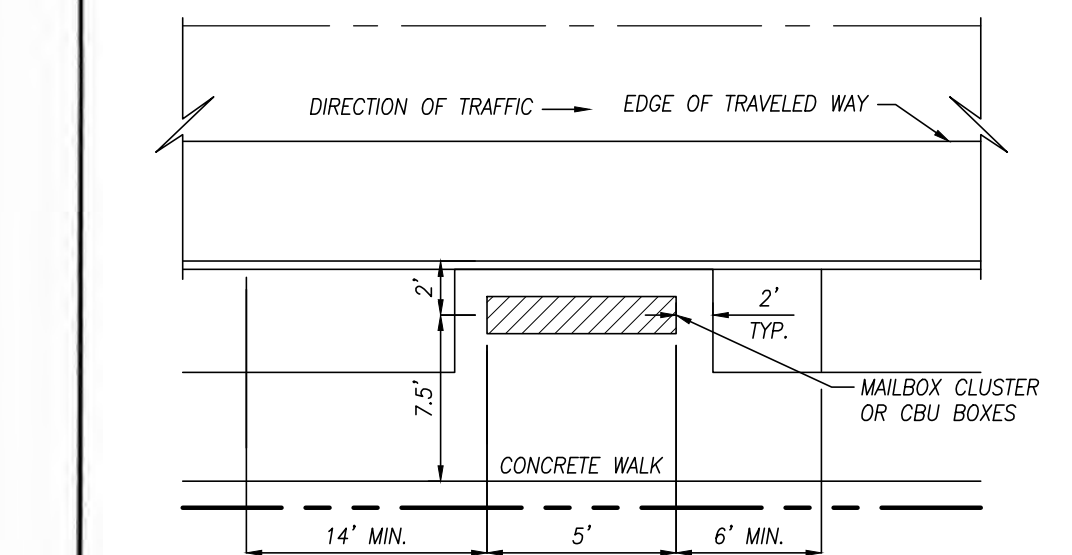


AMERICAN LOCKER GROUP TYPE III CLUSTER BOX, 16 UNIT SUPPLIED BY CONTRACTOR

48" x 78" CUT-OUT TO BE FILLED BY POST OFFICE DEPARTMENT CONTRACTOR AFTER PEDESTAL ANCHOR INSTALLATION



MAILBOX PAD DETAIL PLAN VIEW
NOT TO SCALE



MAILBOX ENCLOSURE DETAIL PLAN VIEW
NOT TO SCALE

- NOTES**
- FOR ACCESS AND SUBCOLLECTOR STREETS WHERE THE POSTED SPEED LIMIT IS 25 MPH OR LESS, FOR ALL OTHER STREETS, MAILBOX TURNOUTS CONFORMING TO STANDARD DRAWING 6-156 WILL BE REQUIRED.
 - MAILBOXES MUST BE POSTMASTER APPROVED WITH A UNIFORM BOX STYLE AND METHOD OF ADDRESS IDENTIFICATION.
 - LOCATIONS OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE DIRECTOR FOR ACCESS AND SIGHT DISTANCE REQUIREMENTS.
 - COLLECTION BOX UNITS (CBU) INCLUDING PEDESTAL, BASE PLATE, BREAKAWAY BOLTS AND ASSOCIATED CONCRETE SLAB SHALL BE INSTALLED BY THE CONTRACTOR.
 - PRIOR TO RECORDING, KEYS TO MAILBOXES SHALL BE MARKED AND DELIVERED TO PAUL CHARLTON C/O USPS, 3102 HOYT AVE., EVERETT, (425) 258-1430

APPROVAL SUPERINTENDENT
POSTAL OPERATIONS

SIGNATURE _____ DATE _____
NOTE: SEE CONSTRUCTION FILE AT SNOHOMISH COUNTY FOR POST OFFICE APPROVAL

IECO
INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

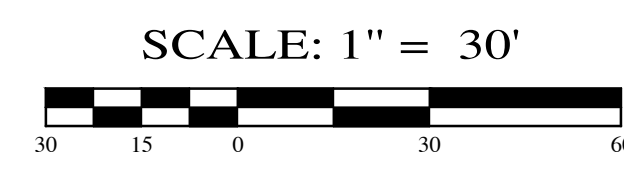
SITE ADDRESS: 22015 OLD POPLAR WAY
LYNNWOOD, WA 98036

TAX ACCOUNT NO.'S: 00373101800500

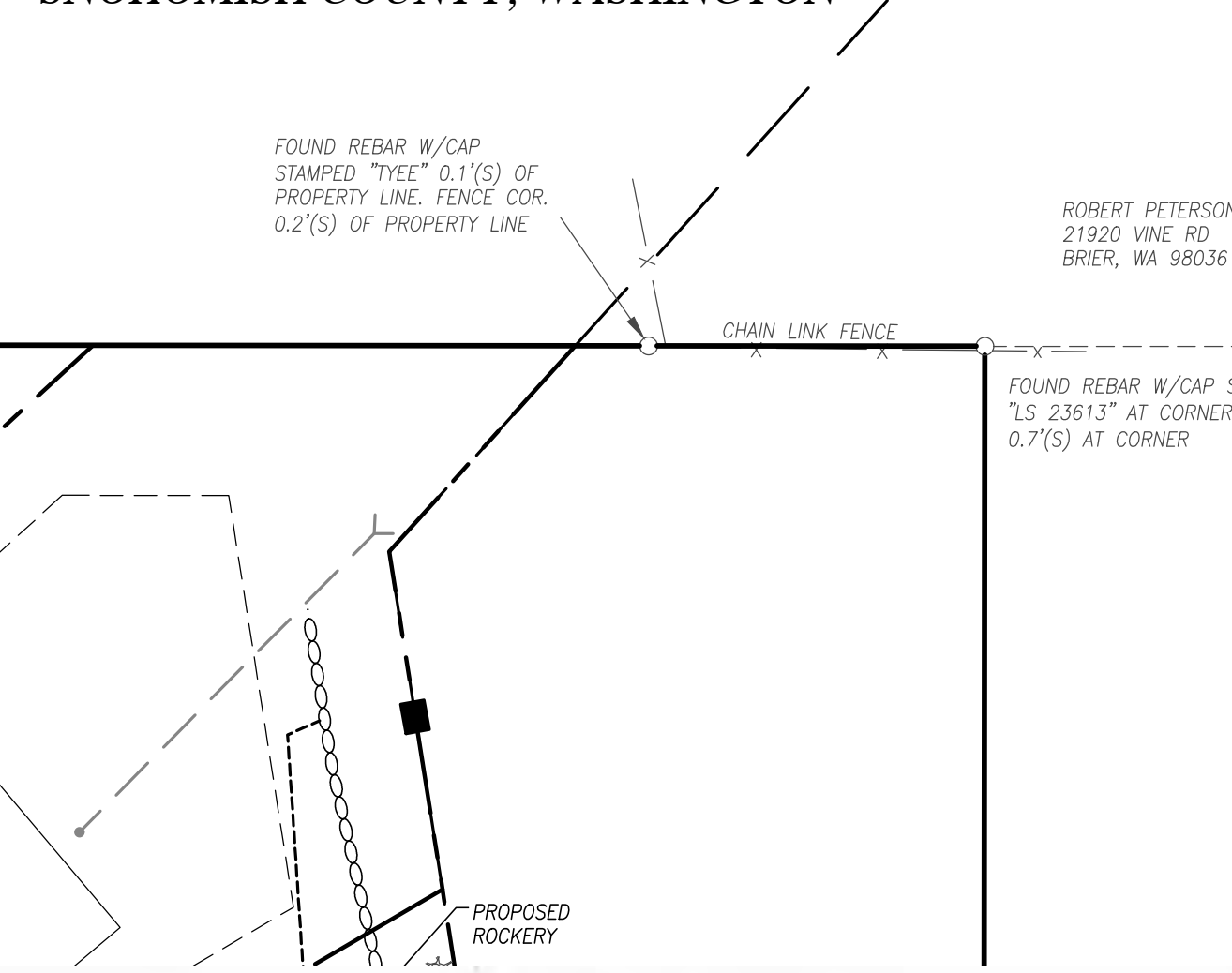
SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-C02.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108

POST OFFICE APPROVAL PLAN C5.0 SHEET



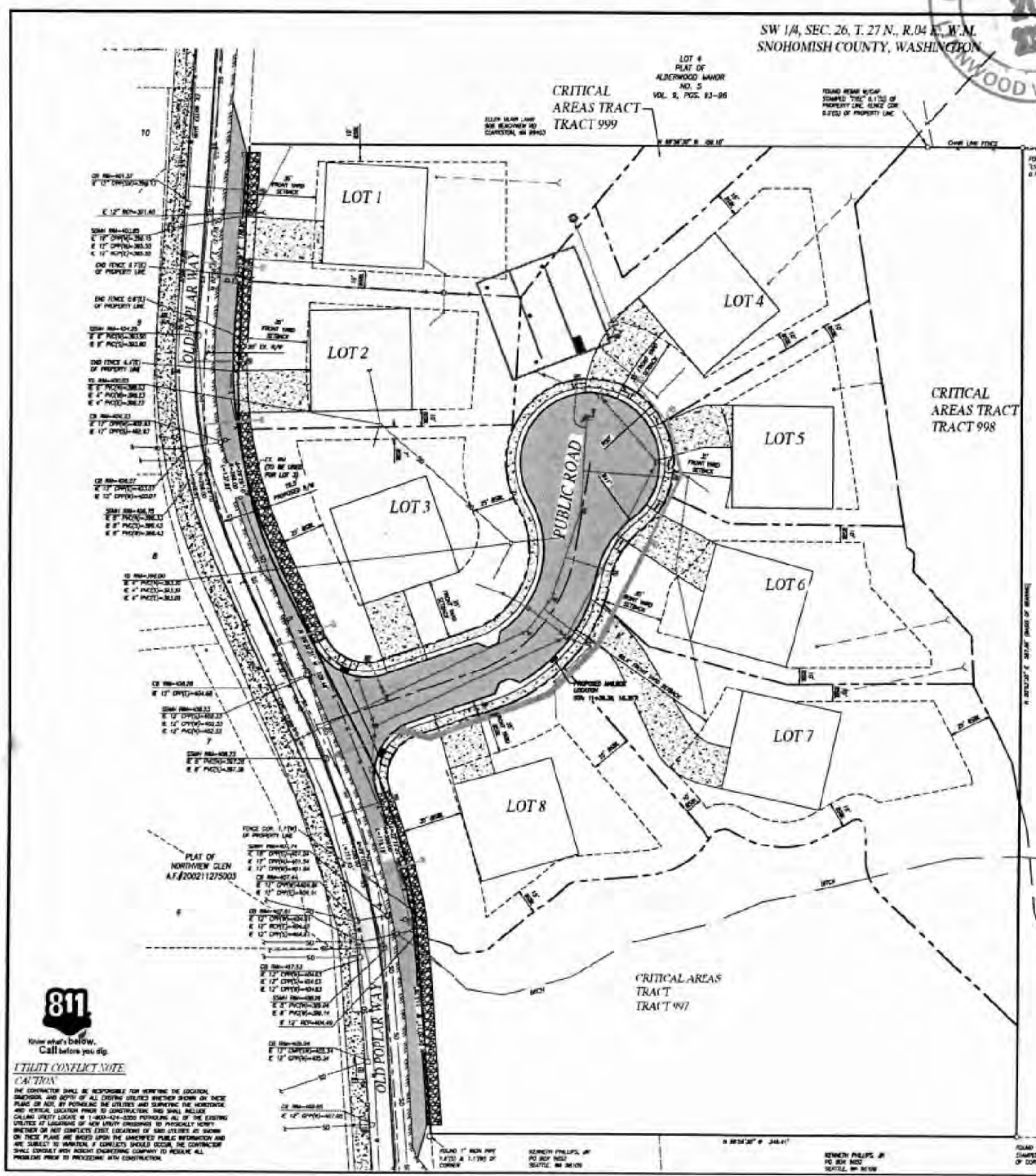
SCALE: 1" = 30'



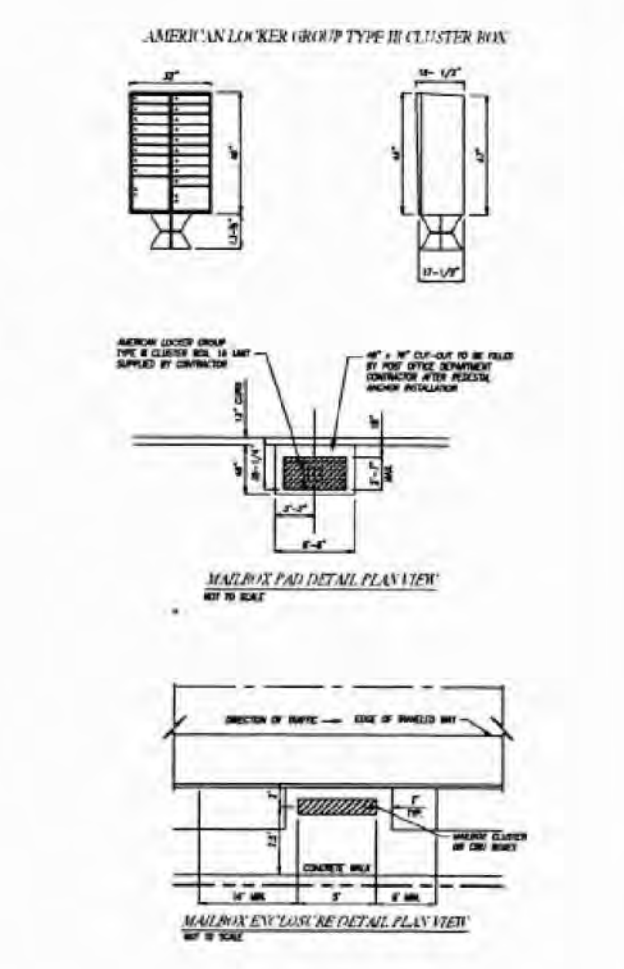
Approved Robert Phillips



PA-36100



SCALE: 1" = 30'



APPROVAL SUPERINTENDENT
POSTAL OPERATIONS

SIGNATURE _____ DATE _____

NOTE: SEE CONSTRUCTION FILE AT SNOHOMISH COUNTY FOR POST OFFICE APPROVAL

IECO
INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

PLANNING AND DEVELOPMENT SERVICES
APPROVED FOR CONSTRUCTION

BY: _____ DATE: _____

R/W PERMIT NO. _____

REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022

DATE 1/19/2023

Approved for Construction
City of Brier

John P. P.E.

Date 1/19/2023



01/11/2023



Know what's below.
Call before you dig.

UTILITY CONFLICT NOTE:
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PLAT OF
NORTHVIEW GLEN
A.F.#200211275003

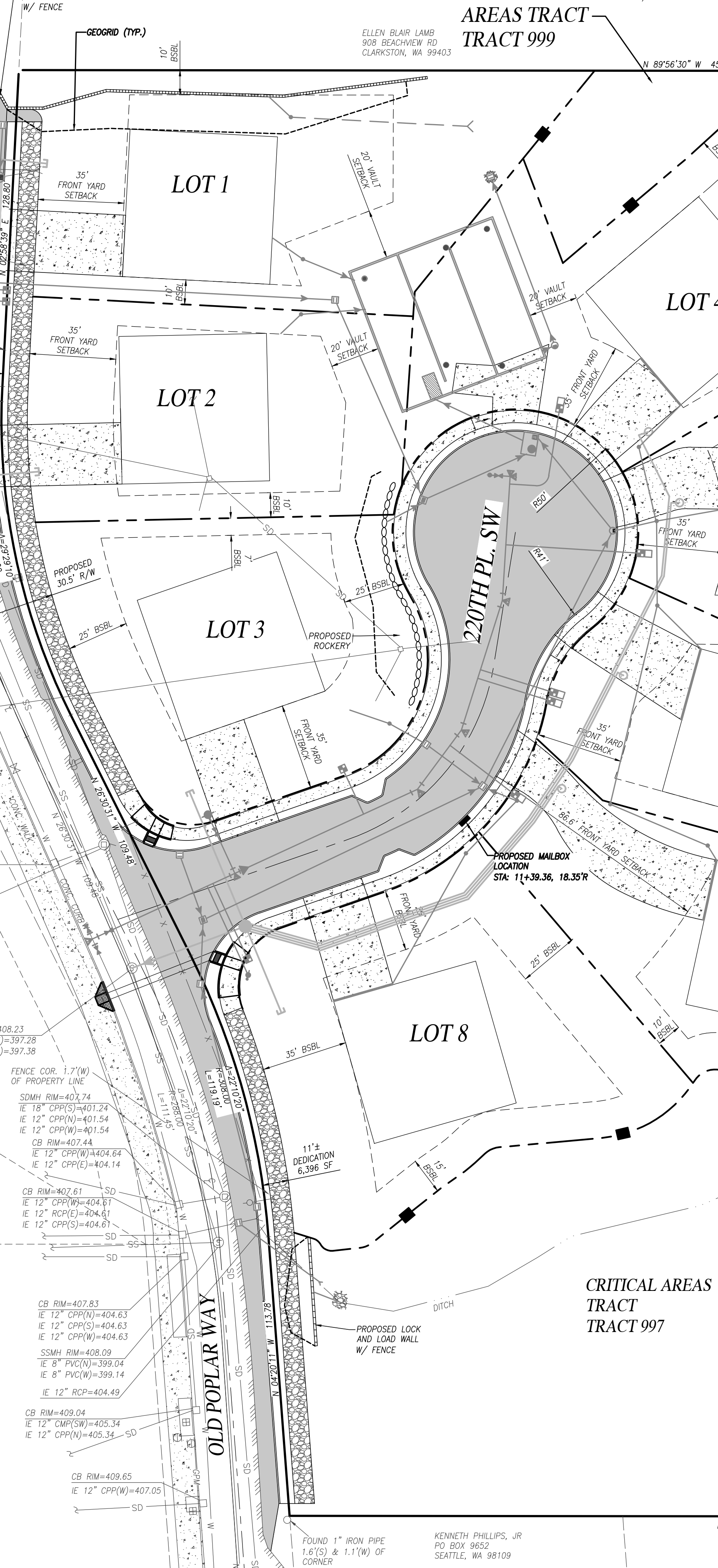
6

811

8

10

10



N 89°56'30" W 348.41'

KENNETH PHILLIPS, JR
PO BOX 9652
SEATTLE, WA 98109

FOUND REBAR W/CAP
STAMPED "C4" 0.3'(E)
OF CORNER

KENNETH PHILLIPS, JR
PO BOX 9652
SEATTLE, WA 98109

FOUND 1" IRON PIPE
1.6'(S) & 1.1'(W) OF
CORNER

CRITICAL AREAS
TRACT
TRACT 997

CRITICAL AREAS
TRACT
TRACT 998

CRITICAL AREAS
TRACT
TRACT 999

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LOT 4
PLAT OF
ALDERWOOD MANOR
NO. 5
VOL. 9, PGS. 93-96

ELLEN BLAIR LAMB
908 BEACHVIEW RD
CLARKSTON, WA 99403

ROBERT PETERSON
21920 VINE RD
BRIER, WA 98036

FOUND REBAR W/CAP
STAMPED "TYE" 0.1'(S) OF
PROPERTY LINE, FENCE COR.
0.2'(S) OF PROPERTY LINE

FOUND REBAR W/CAP STAM
"LS" 2.3613" AT CORNER, FEI
0.7'(S) AT CORNER

GEOGRID (TYP.)

PROPOSED LOCK AND
LOAD WALL
W/ FENCE

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ROCKERY

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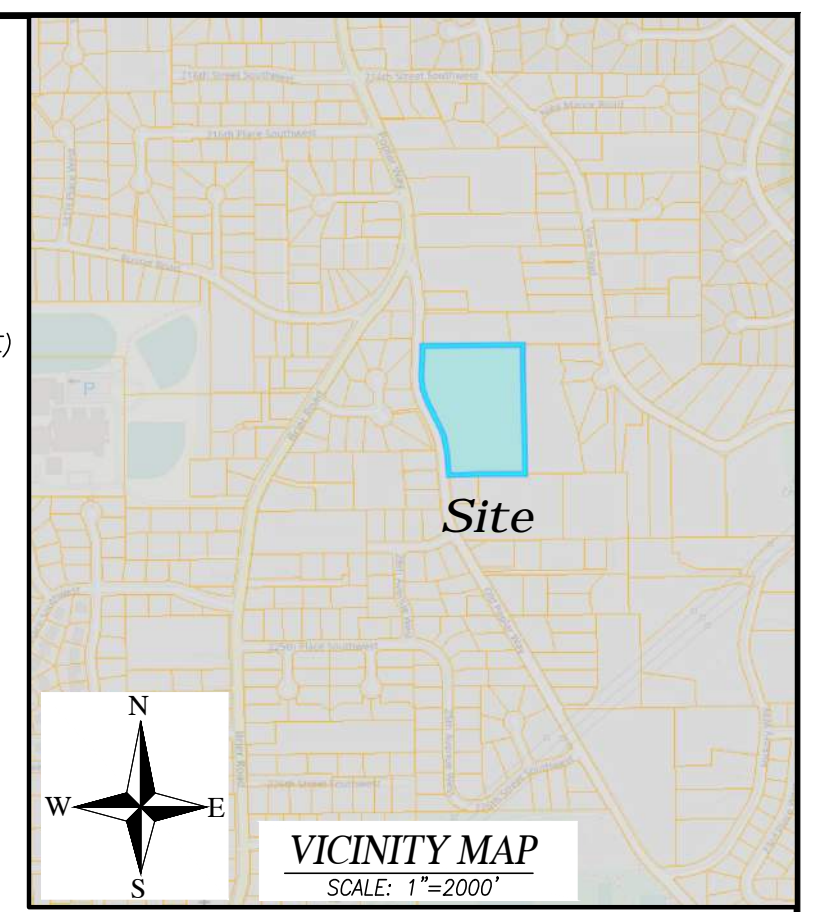
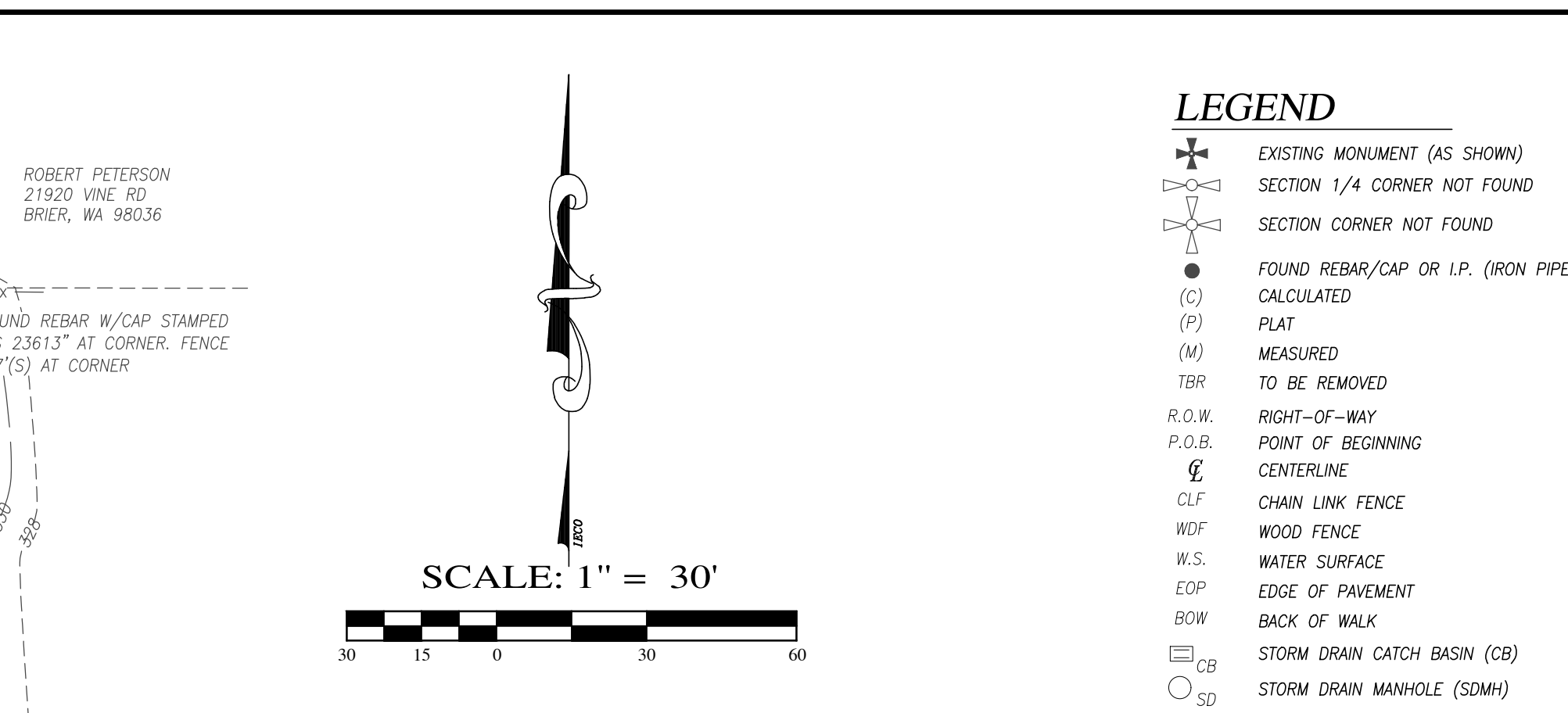
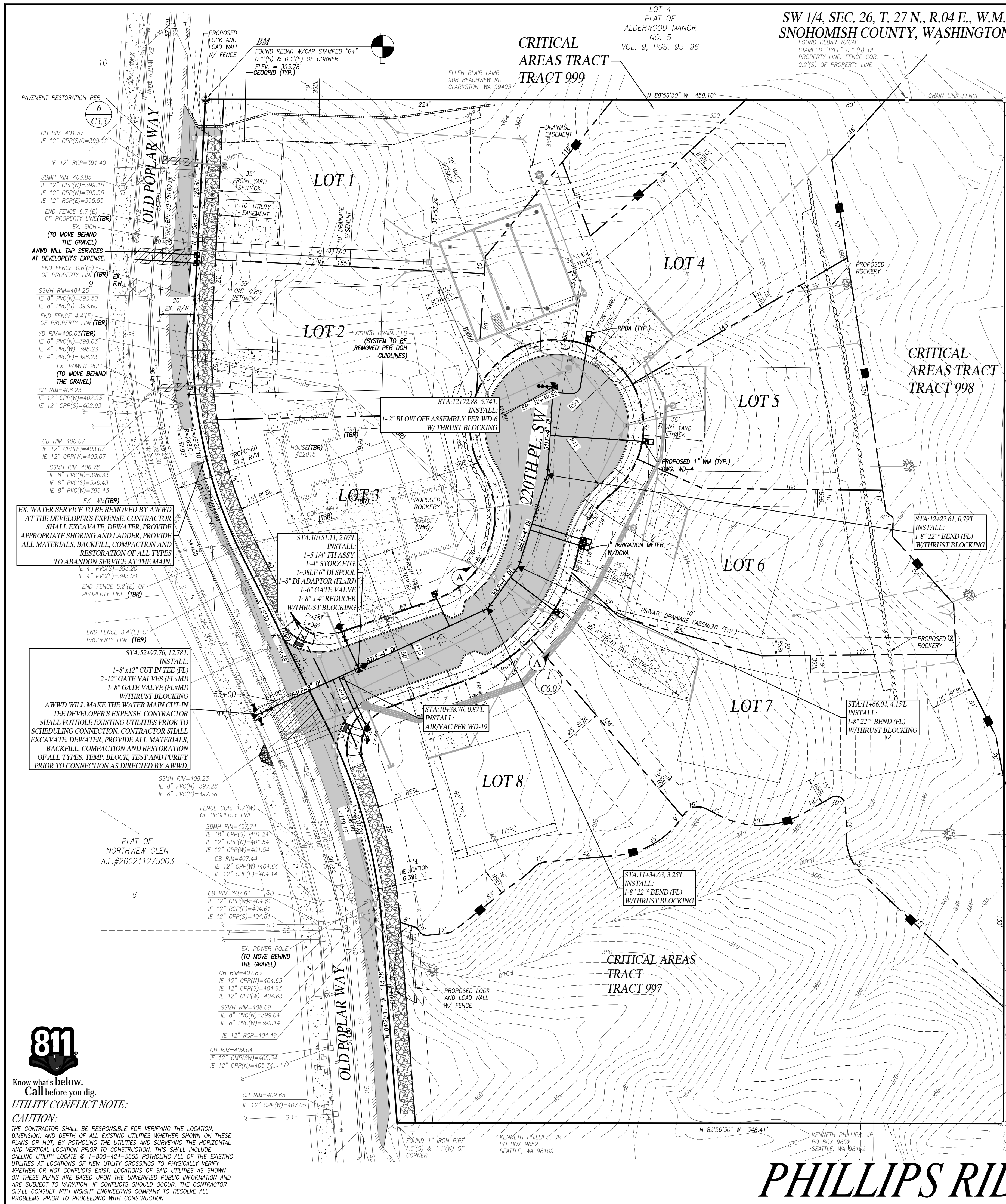
PROPOSED
ROCKERY

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PROPOSED
ROCKERY



Approved for
Construction
City of Brier

Date 1/19/2023

- LEGEND**
- ⊕ EXISTING MONUMENT (AS SHOWN)
 - ⊗ SECTION 1/4 CORNER NOT FOUND
 - SECTION CORNER NOT FOUND
 - FOUND REBAR/CAP OR I.P. (IRON PIPE)
 - CALCULATED
 - (C) PLAT
 - (M) MEASURED
 - TBR TO BE REMOVED
 - R.O.W. RIGHT-OF-WAY
 - P.O.B. POINT OF BEGINNING
 - CENTERLINE
 - CLF CHAIN LINK FENCE
 - WDF WOOD FENCE
 - W.S. WATER SURFACE
 - EOP EDGE OF PAVEMENT
 - BOW BACK OF WALK
 - CB STORM DRAIN CATCH BASIN (CB)
 - SS STORM DRAIN MANHOLE (SDMH)
 - SS SANITARY SEWER MANHOLE (SSMH)
 - SANITARY
 - POWER POLE
 - GUY POLE
 - WATER METER
 - WATER VALVE
 - MAILBOX
 - UTILITY POLE
 - FIRE HYDRANT
 - TYPE 1 CURB
 - PROPOSED
 - PROPOSED
 - PROPOSED
 - PROPERTY
 - EXISTING
 - EDGE OF PAVEMENT
 - EXISTING CONTOURS
 - PROPOSED CONTOURS
 - PRE-EXISTING DRAINAGE PATTERN

GENERAL NOTES:

- SPECIFICATIONS, GENERAL PROVISIONS AND STANDARD DETAILS ARE CONTAINED IN ALDERWOOD WATER & WASTEWATER DISTRICT'S (AWWD) STANDARDS AND SPECIFICATIONS, WHICH ARE AVAILABLE ON THE DISTRICT'S WEBSITE WWW.AWWD.COM.
 - DEVELOPER OR CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES WHETHER OR NOT SHOWN ON THE PLANS PRIOR TO CONSTRUCTION. NOTIFY DIAL-4-1-1 AT 811 TWO (2) BUSINESS DAYS PRIOR TO DIGGING.
 - THE DEVELOPER SHALL HIRE A LICENSED ARBORIST TO ASSESS IMPACTS TO EXISTING SIGNIFICANT (6" DIAMETER AT GREATEST HEIGHT) TREES WHEN UTILITY INSTALLATION WORK FALLS WITHIN THE DRILIPE.
 - ALL LANDSCAPE PLANTINGS WITHIN 10 FEET OF AWWD ASSETS REQUIRE AN 18" DEEP (MIN) ROOT BARRIER. NO SIGNIFICANT (6" DBH) TREE PLANTINGS WILL BE ALLOWED DIRECTLY OVER AWWD FACILITIES OR WITHIN THE DISTRICT EASEMENT. SHRUBS AND GROUNDCOVER ARE ALLOWED.
 - EASEMENTS:
 - EASEMENTS SHALL BE PROVIDED TO AWWD ON DISTRICT STANDARD FORMS. THE EASEMENTS SHALL ENCOMPASS WATER MAINS, SEWER MAINS, FIRE HYDRANTS, BLOW OFFS AND METERS LYING OUTSIDE OF PUBLIC RIGHT-OF-WAY.
 - EXISTING AND PROPOSED EASEMENTS SHALL BE FREE FROM ANY ENCROACHMENTS SUCH AS STRUCTURES, OVERHANGS, FOUNDATIONS, ETC. ALL EASEMENTS SHALL BE BASED ON "AS-BUILT" HORIZONTAL LOCATIONS.
 - OFFSITE EASEMENTS SHALL BE SUBMITTED TO AWWD AND APPROVED PRIOR TO SCHEDULING A PRE-CONSTRUCTION MEETING.
 - PROPERTY OWNERS OF THE OFFSITE EASEMENT AND/OR IMPACTED BY THE DEVELOPMENT SHALL BE NOTIFIED IN WRITING A MINIMUM OF 10 DAYS PRIOR TO START OF CONSTRUCTION. A COPY OF THE NOTIFICATION SHALL BE PROVIDED BY AWWD.
 - A LETTER OF ACCEPTANCE OF RESTORATION FROM ALL PROPERTY OWNERS IMPACTED BY THE DEVELOPMENT SHALL BE PROVIDED BY THE DEVELOPER TO THE DISTRICT PRIOR TO USE AND OPERATION OF THE PROJECT.
 - DEVELOPER SHALL SUBMIT A LEGAL DESCRIPTION AND EXHIBIT MAP OF THAT PORTION OF THE EXISTING WATER AND/OR SEWER EASEMENT TO BE RELINQUISHED BY THE DISTRICT. THAT PORTION OF THE EXISTING EASEMENT SHALL BE RELINQUISHED PRIOR TO ISSUANCE OF USE AND OPERATIONS.
 - DEVELOPER/CONTRACTOR SHALL OBTAIN A CITY OF BRIER UTILITY AND/OR RIGHT-OF-WAY PERMIT AND PROVIDE A COPY TO AWWD PRIOR TO SCHEDULING A PRE-CONSTRUCTION MEETING.
 - DEVELOPER/CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND PROVISIONS OF THE RIGHT-OF-WAY AND UTILITY PERMITS ISSUED BY THE LOCAL LAND USE AGENCY.
- COMPACTION IN FILL AREAS:**
1. PIPES IN FILL SECTIONS SHALL HAVE RESTRAINED JOINTS WITHIN THREE PIPE SECTIONS (MINIMUM) OUTSIDE OF THE FILL. EXTERIOR LOOKING GASKET TYPE JOINTS ARE NOT ALLOWED IN FILL.
 2. PRIOR TO FILL MATERIAL INSTALLATION, NATIVE GROUND SHALL BE STRIPPED OF ALL ORGANIC MATERIAL, ALLOWING THE BEGINNING FILL SURFACE TO CONSIST OF NATIVE BEARING SOIL.
 3. EMBANKMENT FILL MATERIAL UNDER AWWD UTILITIES SHALL MEET WSDOT STANDARD SPECIFICATIONS SECTION 9-03.14(1) FOR GRAVEL BORROW, OR JURISDICTIONAL REQUIREMENTS, WHICHEVER IS MORE STRINGENT. THIS BORROW SHALL BE PLACED TO EACH EDGE OF THE EASEMENT.
 4. FILL MATERIAL UNDER UTILITIES SHALL BE COMPACTED IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 9-03.14(1). THE FILL ABOVE THE UTILITIES SHALL BE COMPACTED IN ACCORDANCE WITH AWWD DEVELOPMENT GUIDELINES AND STANDARDS.
 5. A WASHINGTON STATE LICENSED GEOTECHNICAL ENGINEERING FIRM SHALL WITNESS THE FILL PLACEMENT AND TAKE THE COMPACTION TESTS AT THE REQUIRED FREQUENCY AT THE DEVELOPER'S EXPENSE. COMPACTION TESTS AROUND AWWD UTILITIES SHALL BE PROVIDED TO THE DISTRICT PRIOR TO ISSUANCE OF APPROVED USE AND OPERATIONS.

WATER:

1. USE THIS NOTE IF STATIC PRESSURE IS GREATER THAN 80 PSI. STATIC WATER PRESSURE IS APPROXIMATELY 70-80 (PSI) AT THE METER. THE DEVELOPER IS RESPONSIBLE FOR INSTALLING PRESSURE REDUCING VALVES ON THE PRIVATE SIDE OF THE METER TO PROTECT THE FACILITY FROM HIGH PRESSURE.
2. CONSTRUCT WATER MAIN LOWER THAN STORM ONLY WHERE NECESSARY TO PROVIDE MINIMUM COVER AND/OR SOIL TO BLOCK AGAINST.
3. ALL WATER METER SIZES AND LOCATIONS SHALL BE VERIFIED BY THE DEVELOPER PRIOR TO INSTALLATION. WATER METERS SHALL NOT BE LOCATED IN DRIVEWAYS, SIDEWALKS OR PAVED AREAS UNLESS APPROVED BY AWWD.
4. ALL WATER METER BOXES SHALL BE TRAFFIC RATED WHEN PLACED IN DRIVEWAYS OR WHERE NO VERTICAL CURB EXISTS IN ACCORDANCE WITH AWWD STANDARD DETAIL WD-2.
5. COMBINATION AIR AND VACUUM RELEASE VALVES SHALL BE INSTALLED AT LOCATIONS AS DETERMINED BY AWWD BASED ON SYSTEM DESIGN AND TOPOGRAPHY. UNLESS OTHERWISE APPROVED, THESE VALVES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH AWWD STANDARD DETAIL WD-19.
6. EXISTING WATER SERVICE(S) TO 22015 OLD POPLAR WAY SHALL REMAIN UNINTERRUPTED THROUGH CONSTRUCTION. UPON ACCEPTANCE OF THE WATER MAIN THE WATER METER(S) SHALL BE TRANSFERRED INTO THE PLAT AS SHOWN. THE DISTRICT SHALL REMOVE THE EXISTING WATER SERVICE(S) TO THE MAIN, AT DEVELOPER EXPENSE.
7. DECOMMISSION EXISTING WELLS AS REQUIRED BY THE STATE DEPARTMENT OF ECOLOGY AND WAC CHAPTER 173-160. A COPY OF VERIFICATION OF WELL DECOMMISSIONING WILL BE REQUIRED FOR PROJECT ACCEPTANCE. THE DEVELOPER MUST INSTALL A REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) PER AWWD STANDARD DETAIL WD-25 IF WATER METERS ARE INSTALLED PRIOR TO DECOMMISSIONING OF THE EXISTING WELLS.
8. FOR ALL NEW HYDRANT INSTALLATIONS, THE DEVELOPER MAY PAINT THE TOP OF THE HYDRANT THE APPROPRIATE COLOR TO DESIGNATE THE LEVEL OF SERVICE PROVIDED BY THE WATER PURVEYOR IN ACCORDANCE WITH FIRE MARSHAL REQUIREMENTS. LOTS SERVICED BY SEWER GRINDER PUMPS WILL BE REQUIRED TO INSTALL RPBA'S BEHIND THE WATER METERS.

CROSS CONNECTION CONTROL:

1. APPROPRIATE, PRIVATELY MAINTAINED, BACKFLOW PROTECTION COMMENSURATE WITH THE DEGREE OF HAZARD AND INSTALLATION LOCATION WILL BE DETERMINED BY AN AWWD CROSS-CONNECTION CONTROL SPECIALIST UPON REVIEW OF THE WATER APPLICATION SURVEY AND/OR REPAIR PROPOSED TENANT OCCUPANCY, HEIGHT OF BUILDING AND HEALTH HAZARD ASSESSMENT.
2. THE PRIVATELY MAINTAINED BACKFLOW ASSEMBLY FOR THE FIRE PROTECTION SYSTEM SHALL BE LOCATED OUTSIDE OF THE BUILDING IN A VAULT AND SHALL CONFORM TO DISTRICT STANDARDS.
3. USE THIS NOTE FOR SINGLE FAMILY RESIDENTIAL / TOWNHOUSE PROJECTS. ALL LOTS THAT ARE SERVICED BY INDIVIDUAL PRIVATE SEWER GRINDER PUMPS OR INTERNAL EJECTOR PUMPS SHALL BE NOTED ON THE PLANS AND ARE REQUIRED TO HAVE AN RPBA AT THE WATER METER IN ACCORDANCE WITH AWWD STANDARD DETAIL WD-25.
4. ALL SERVICE CONNECTIONS REQUIRING BACKFLOW PROTECTION WILL BE SET WITH THE WATER METERS LOCKED IN THE OFF POSITION UNTIL AN AWWD INSPECTOR CONDUCTS THE APPROPRIATE BACKFLOW ASSEMBLY IS PROPERLY INSTALLED. THIS INSPECTION CAN OFTEN BE PERFORMED WHEN THE METER IS INSTALLED, BUT CONTACTING AWWD WATER QUALITY AFTER THE METER IS SET MAY BE NECESSARY. ONCE A BACKFLOW TEST REPORT FROM A CERTIFIED BACKFLOW TESTER MUST BE SUBMITTED VIA EMAIL TO CCB@AWWD.COM WITHIN 10 BUSINESS DAYS.

REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022



EQUIPMENT AND PROCEDURE

METHOD OF SURVEY: SURVEY PERFORMED BY FIELD TRAVERSE

INSTRUMENTATION: LEICA TS15 ROBOTIC ELECTRONIC TOTAL STATION

PRECISION: MEETS OR EXCEEDS STATE STANDARDS WAC 332-130-090

BASIS OF BEARING: THE MONUMENTED WEST LINE OF THE PLAT OF GREGORY PLACE, AS THE BEARING OF N 00°03'30.0"

ENGINEER/CONTACT
INSIGHT ENGINEERING COMPANY
P.O. BOX 1478
EVERETT, WA 98206
CONTACT: BRIAN R. KALAB, P.E.
PHONE: (425) 303-9363
FAX: (425) 303-9362
EMAIL: INFO@INSIGHTENGINEERING.NET

APPLICANT
AFORA HOLDINGS LLC
PO BOX 643
MUKILTEO, WA 98275
PH: (425) 512-0736

SURVEYOR
PACIFIC COAST SURVEYS, INC.
P.O. BOX 13519
MILLCREEK, WA 98022
CONTACT: DARRIN J. RIDGLE, PLS
PHONE: (425) 508-4951
FAX: (425) 357-3577
EMAIL: MR.PHILLIPS@COMCAST.NET

OWNER
MARIA PHILLIPS
22015 OLD POPLAR WAY
LYNNWOOD, WA 98036
EMAIL: MR.PHILLIPS@COMCAST.NET

LEGAL DESCRIPTION

LOT 5, BLOCK 18, ALDERWOOD MANOR NO. 6, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 9 OF PLATS, PAGES 93, 94 AND 96, RECORDS OF SNOHOMISH COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

ALDERWOOD WATER & WASTEWATER DISTRICT

APPROVED FOR WATER & SEWER CONSTRUCTION

EXT. NO. **3806**

BY: _____ DATE: _____
ENGINEERING AND DEVELOPMENT DEPARTMENT

IECO

INSIGHT ENGINEERING CO.

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EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY
LYNNWOOD, WA 98036

TAX ACCOUNT NO.'S: 0037310180050

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

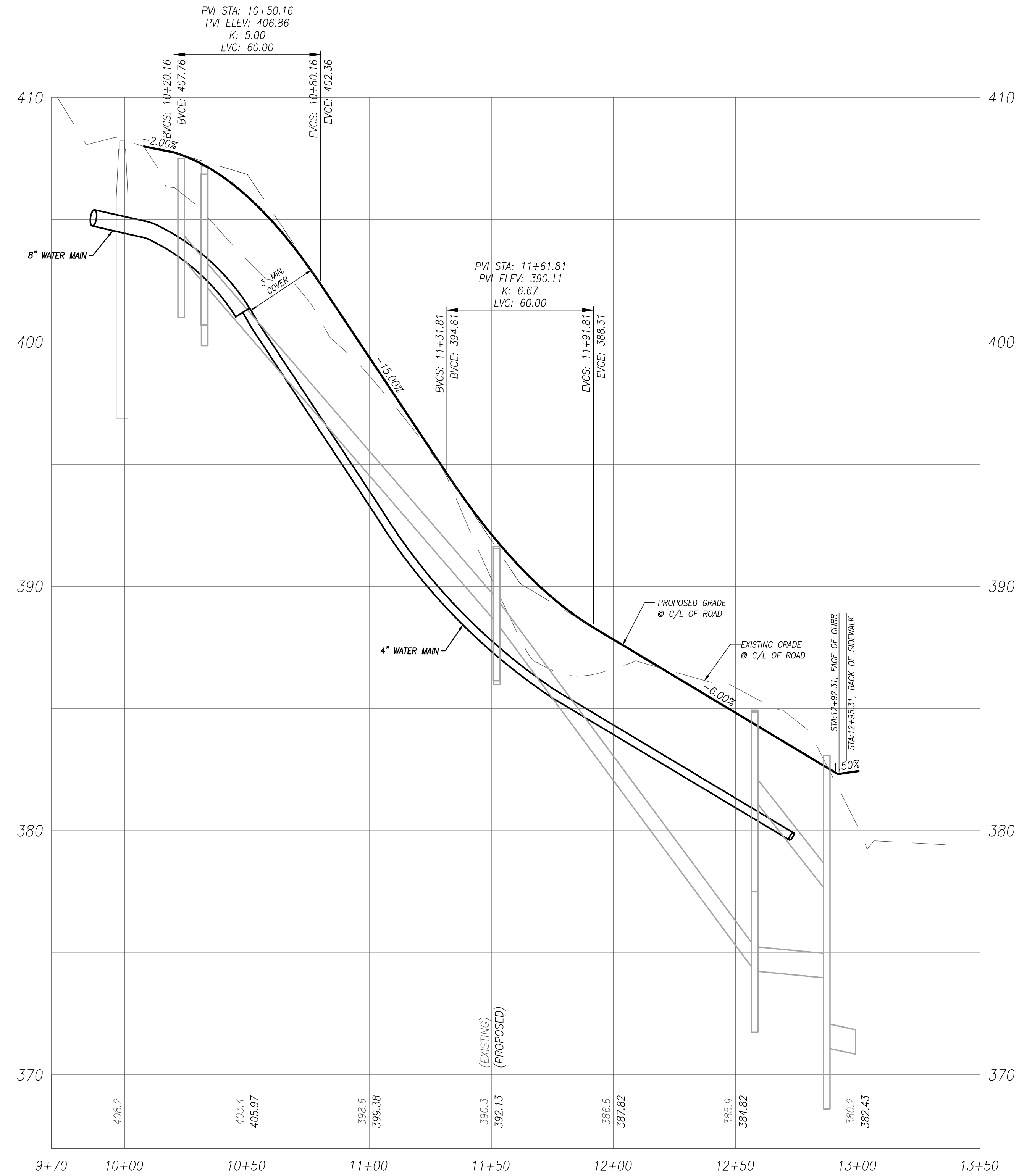
DWG FILENAME: 211108-C02.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108

DATE: 01/11/2023

WATER PLAN C6.0

PHILLIPS RIDGE

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON



220TH PL. SW PROFILE
HORIZ. SCALE: 1"=30'
VERT. SCALE: 1"=3'

**Approved for
Construction
City of Brier**

John J. P.E.

Date 1/19/2023



Know what's below.
Call before you dig.

UTILITY CONFLICT NOTE:

CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-5555 POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT WITH INSIGHT ENGINEERING COMPANY TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022
REV. NO.	DESCRIPTION	INITIALS	DATE

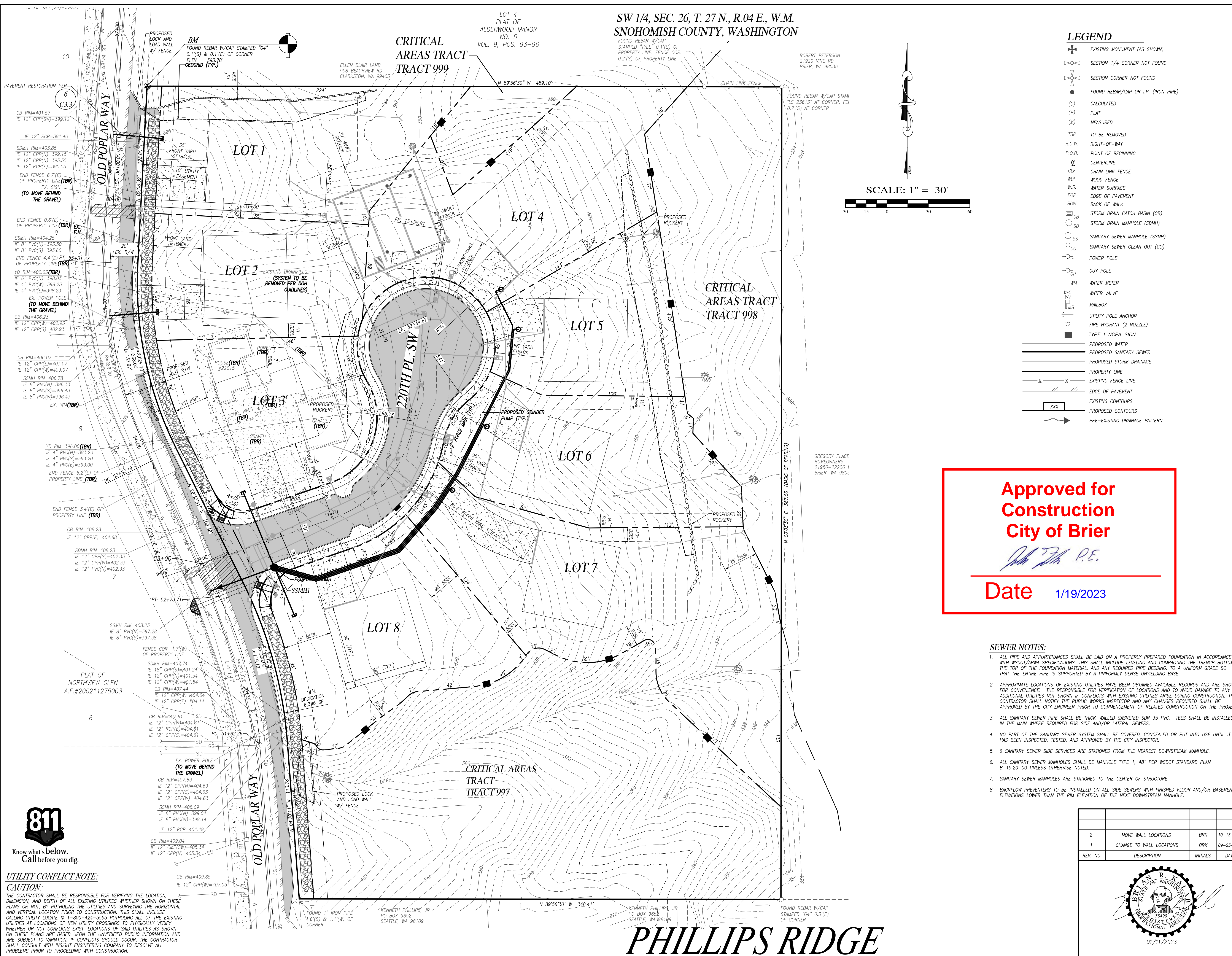
ALDERWOOD WATER & WASTEWATER DISTRICT
APPROVED FOR WATER & SEWER CONSTRUCTION
EXT. NO. 3806
BY: _____ DATE: _____
ENGINEERING AND DEVELOPMENT DEPARTMENT

IECO
INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
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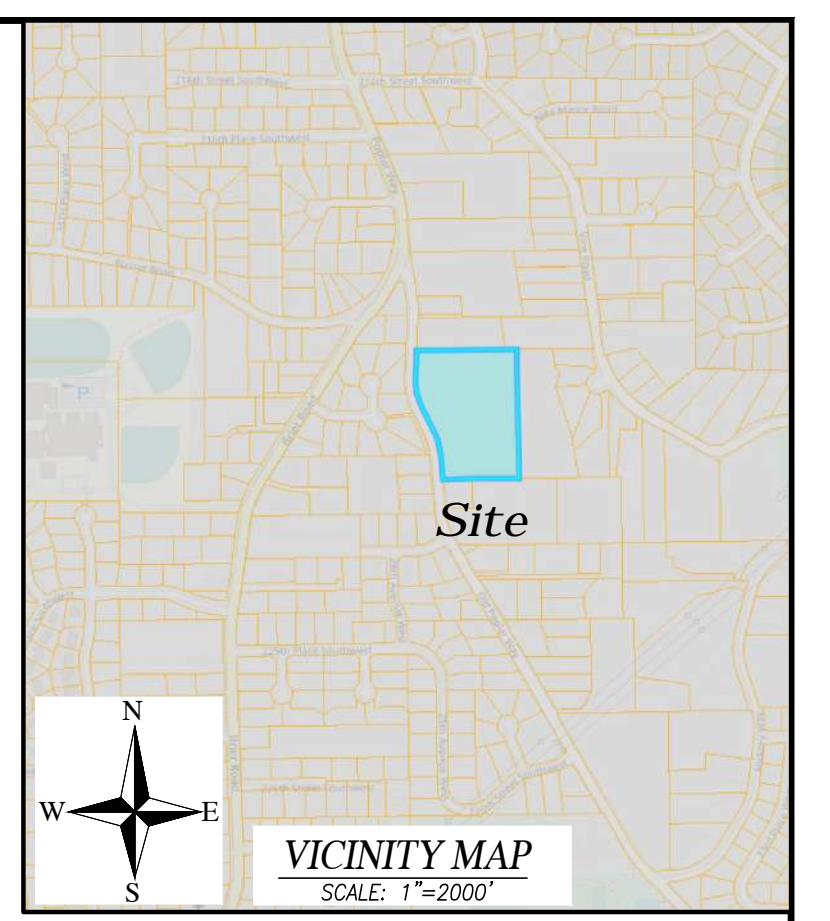
SITE ADDRESS: 22015 OLD POPLAR WAY
LYNNWOOD, WA 98036
TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME	DESIGNED BY:	DATE:	SCALE:	JOB NO.:
211108-C02.DWG	JTK	12-22-2021	1"=30'	21-1108
WATER PROFILE				SHEET
				C6.1



- LEGEND**
- ✦ EXISTING MONUMENT (AS SHOWN)
 - ⊕ SECTION 1/4 CORNER NOT FOUND
 - ⊕ SECTION CORNER NOT FOUND
 - FOUND REBAR/CAP OR I.P. (IRON PIPE)
 - (C) CALCULATED
 - (P) PLAT
 - (M) MEASURED
 - TBR TO BE REMOVED
 - R.O.W. RIGHT-OF-WAY
 - P.O.B. POINT OF BEGINNING
 - CLF CENTERLINE
 - CLF CHAIN LINK FENCE
 - WDF WOOD FENCE
 - W.S. WATER SURFACE
 - EOP EDGE OF PAVEMENT
 - BOW BACK OF WALK
 - CB STORM DRAIN CATCH BASIN (CB)
 - SD STORM DRAIN MANHOLE (SDMH)
 - SS SANITARY SEWER MANHOLE (SSMH)
 - CO SANITARY SEWER CLEAN OUT (CO)
 - P POWER POLE
 - GP GUY POLE
 - WM WATER METER
 - WV WATER VALVE
 - MB MAILBOX
 - UPA UTILITY POLE ANCHOR
 - FH FIRE HYDRANT (2 NOZZLE)
 - TYPE I NGPA SIGN
 - PROPOSED WATER
 - PROPOSED SANITARY SEWER
 - PROPOSED STORM DRAINAGE
 - PROPERTY LINE
 - - - EXISTING FENCE LINE
 - - - EDGE OF PAVEMENT
 - - - EXISTING CONTOURS
 - - - PROPOSED CONTOURS
 - PRE-EXISTING DRAINAGE PATTERN



SCALE: 1" = 30'

Approved for Construction
City of Brier
[Signature] P.E.
Date 1/19/2023

- NOTES:**
- GRINDER PUMPS WITH BACKWATER VALVE SHALL BE USED FOR LOTS 4, 5, 6, & 7.
 - LOTS 1, 2, 3, & 8 SHALL BE GRAVITY SIDE SEWER.

EQUIPMENT AND PROCEDURE
 METHOD OF SURVEY: SURVEY PERFORMED BY FIELD TRAVERSE
 INSTRUMENTATION: LEICA TS15 ROBOTIC ELECTRONIC TOTAL STATION
 PRECISION: MEETS OR EXCEEDS STATE STANDARDS WAC 332-130-090
 BASIS OF BEARING: THE MONUMENTED WEST LINE OF THE PLAT OF GREGORY PLACE, AS THE BEARING OF N 00°03'30.0"E.

DATE: NAVD 88 N.A.V.D 88-3.64' = NAVD '29 (MSL)

ENGINEER/CONTACT
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 PHONE: (425) 508-4951
 EMAIL: MK.PHILLIPS@COMCAST.NET

LEGAL DESCRIPTION
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 SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

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 (425) 303-9363 (425) 303-9362 FAX
 INFO@INSIGHTENGINEERING.NET

SITE ADDRESS: 22015 OLD POPLAR WAY LYNNWOOD, WA 98036
 TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-C02.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108 SHEET: 7 OF 7
 SHEET: **SEWER PLAN** **C7.0**

- SEWER NOTES:**
- ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT/APWA SPECIFICATIONS. THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL, AND ANY REQUIRED PIPE BEDDING, TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNWEAVING BASE.
 - APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE RESPONSIBILITY FOR VERIFICATION OF LOCATIONS AND TO AVOID DAMAGE TO ANY ADDITIONAL UTILITIES NOT SHOWN IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.
 - ALL SANITARY SEWER PIPE SHALL BE THICK-WALLED GASKETED SDR 35 PVC. TEES SHALL BE INSTALLED IN THE MAIN WHERE REQUIRED FOR SIDE AND/OR LATERAL SEWERS.
 - NO PART OF THE SANITARY SEWER SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND APPROVED BY THE CITY INSPECTOR.
 - SANITARY SEWER SIDE SERVICES ARE STATIONED FROM THE NEAREST DOWNSTREAM MANHOLE.
 - ALL SANITARY SEWER MANHOLES SHALL BE MANHOLE TYPE 1, 48" PER WSDOT STANDARD PLAN 8-15.20-00 UNLESS OTHERWISE NOTED.
 - SANITARY SEWER MANHOLES ARE STATIONED TO THE CENTER OF STRUCTURE.
 - BACKFLOW PREVENTERS TO BE INSTALLED ON ALL SIDE SEWERS WITH FINISHED FLOOR AND/OR BASEMENT ELEVATIONS LOWER THAN THE RIM ELEVATION OF THE NEXT DOWNSTREAM MANHOLE.

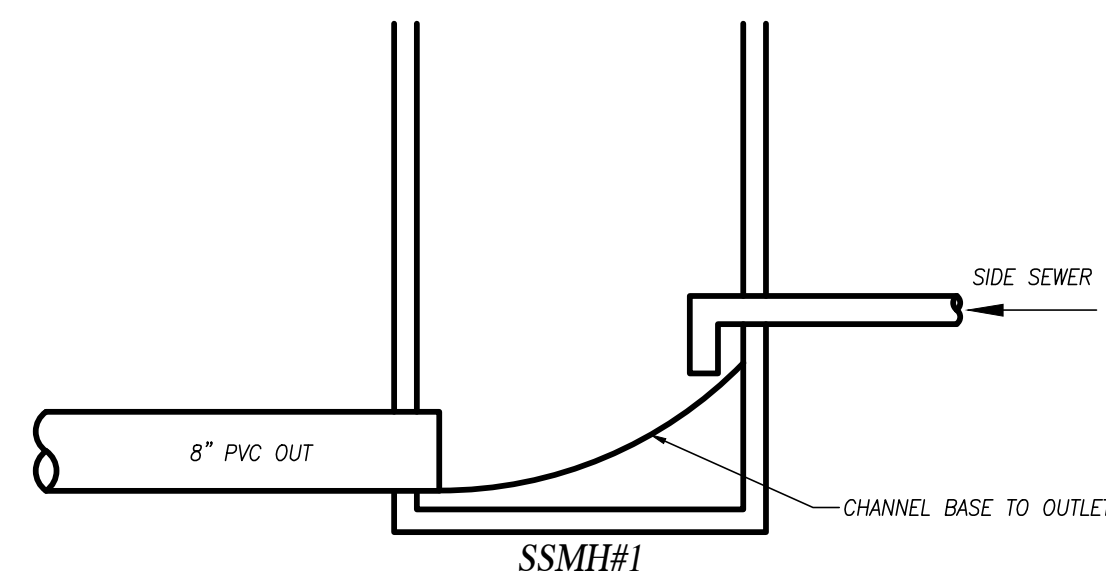
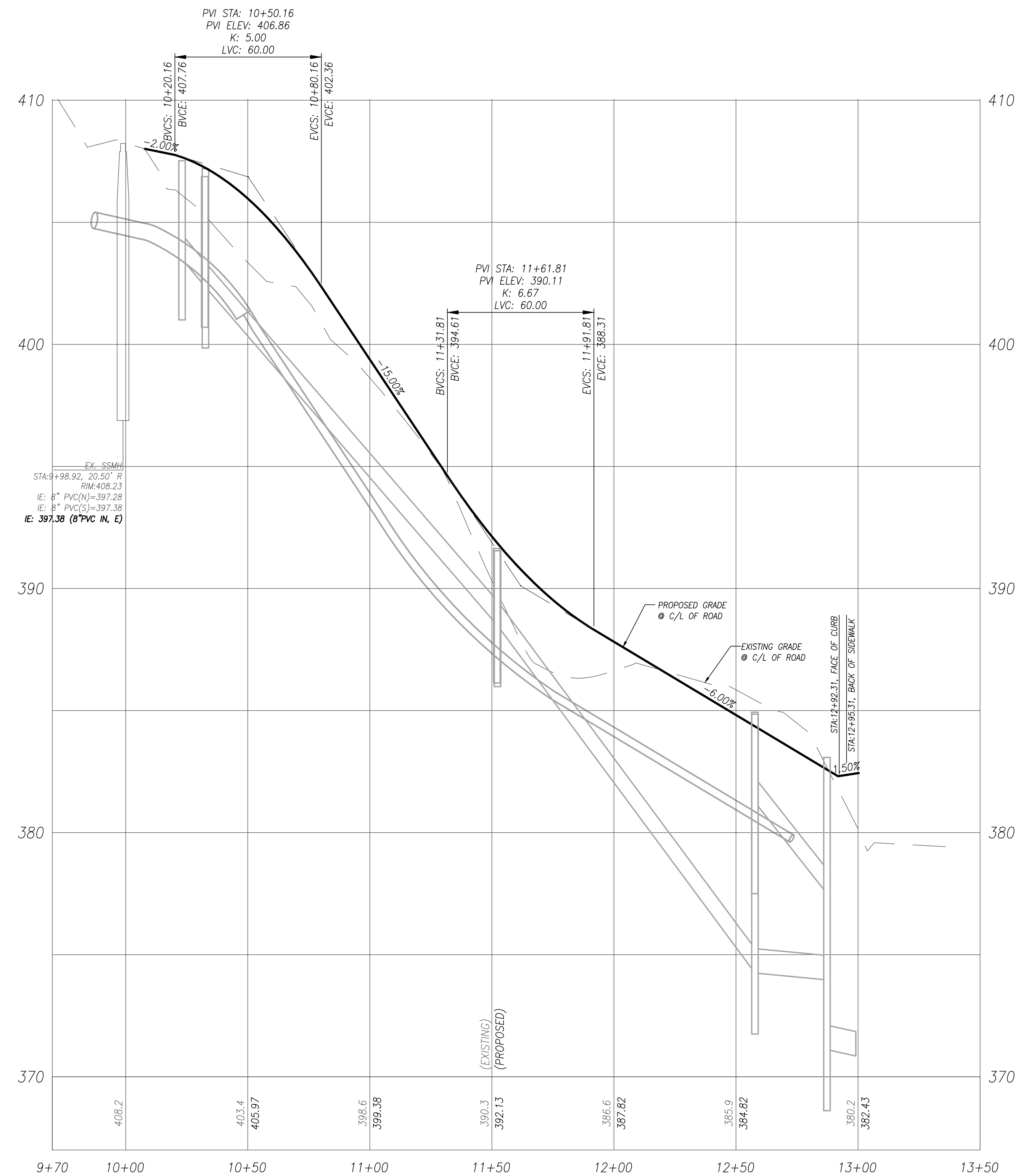
811
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PHILLIPS RIDGE



SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON



SIDE SEWER DETAIL
NOT TO SCALE

220TH PL. SW PROFILE
HORIZ. SCALE: 1"=30'
VERT. SCALE: 1"=3'

Approved for Construction
City of Brier

Date 1/19/2023



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REV. NO.	DESCRIPTION	INITIALS	DATE
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1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022

SITE ADDRESS: 22015 OLD POPULAR WAY
LYNNWOOD, WA 98036
TAX ACCOUNT NO.'S: 00373101800500

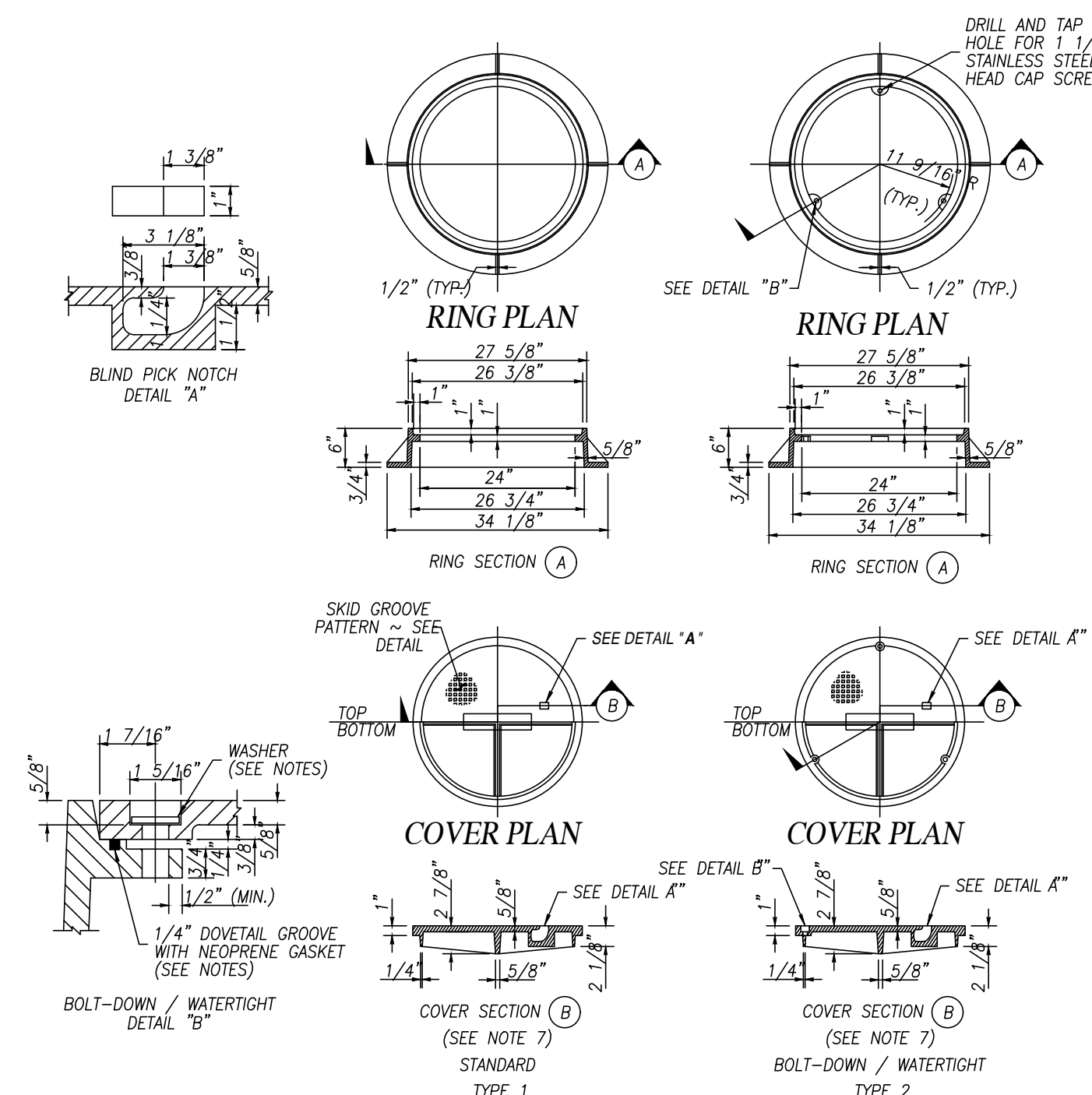


SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-C02.DWG
DESIGNED BY: JTK
DATE: 12-22-2021
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JOB NO.: 21-1108

SEWER PROFILE
SHEET
C7.1

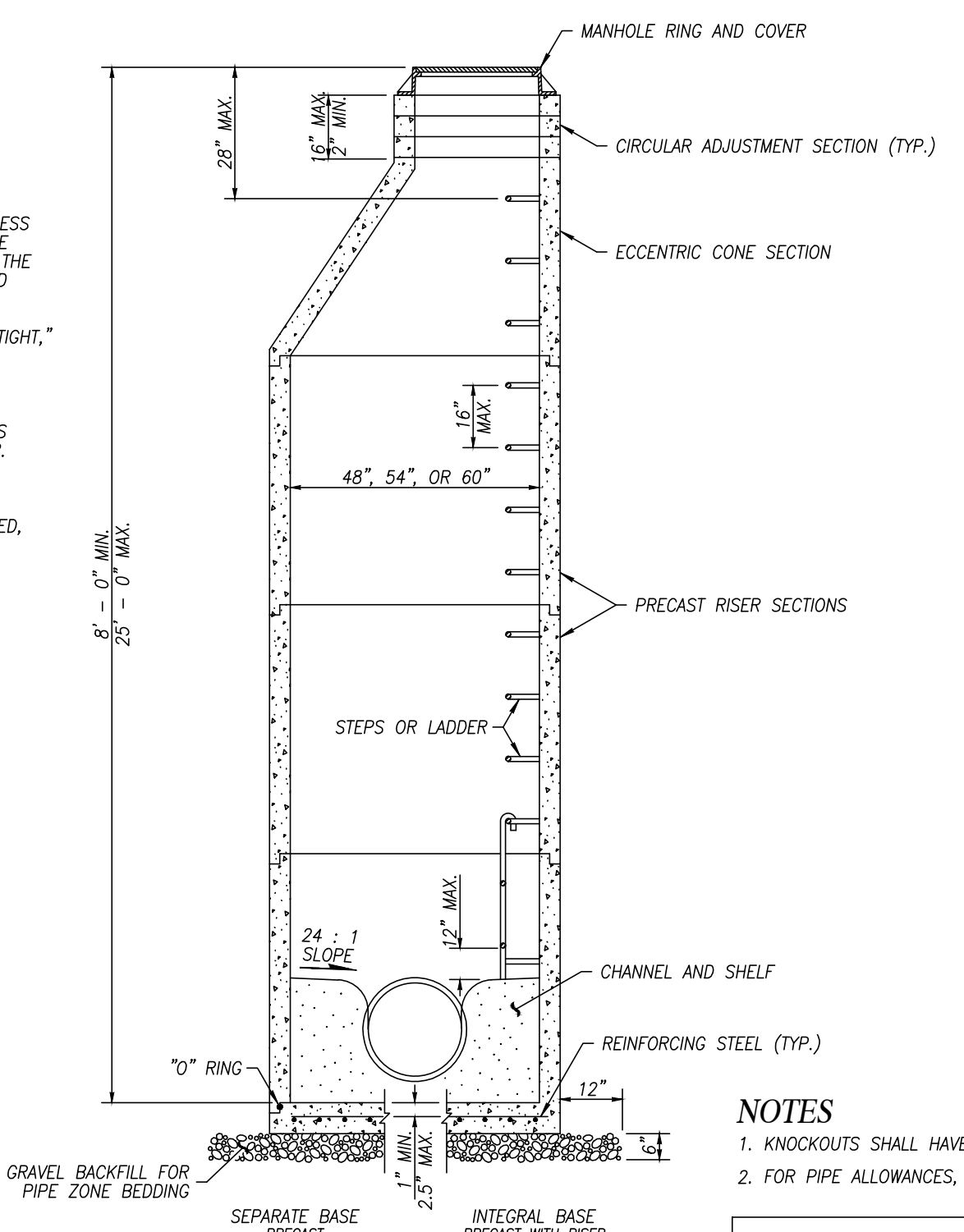
SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON



NOTES

- THE GASKET AND GROOVE MAY BE IN THE SEAT (FRAME) OR IN THE UNDERSIDE OF THE COVER. THE GASKET MAY BE "T" SHAPED IN SECTION. THE GROOVE MAY BE CAST OR MACHINED.
- BOLT-DOWN CAPABILITY IS REQUIRED ON ALL FRAMES, GRATES, AND COVERS, UNLESS SPECIFIED OTHERWISE IN THE CONTRACT. PROVIDE 3 HOLES IN THE FRAME THAT ARE VERTICALLY ALIGNED WITH THE GRATE OR COVER SLOTS. THE FRAME SHALL ACCEPT THE 5/8" - 11 NC x 2" ALLEN HEAD CAP SCREW BY BEING TAPPED, OR OTHER APPROVED MECHANISM. LOCATION OF BOLT DOWN HOLES VARIES BY MANUFACTURER.
- FOR BOLT-DOWN MANHOLE RING AND COVERS THAT ARE NOT DESIGNATED "WATERTIGHT," THE NEOPRENE GASKET, GROOVE, AND WASHER ARE NOT REQUIRED.
- WASHER SHALL BE NEOPRENE (DETAIL "B").
- IN LIEU OF BLIND PICK NOTCH FOR MANHOLE COVERS, A SINGLE 1" PICK HOLE IS ACCEPTABLE. HOLE LOCATION AND NUMBER OF HOLES MAY VARY BY MANUFACTURER.
- ALTERNATIVE REINFORCING DESIGNS ARE ACCEPTABLE IN LIEU OF THE RIB DESIGN.
- FOR CLARITY, THE VERTICAL SCALE OF THE COVER SECTION HAS BEEN EXAGGERATED, IT IS 1.5 TIMES THE HORIZONTAL SCALE (1H:1.5V).

1 CIRCULAR FRAME (RING) AND COVER
C7.2 NOT TO SCALE WSDOT STD. PLAN B-30.70-03



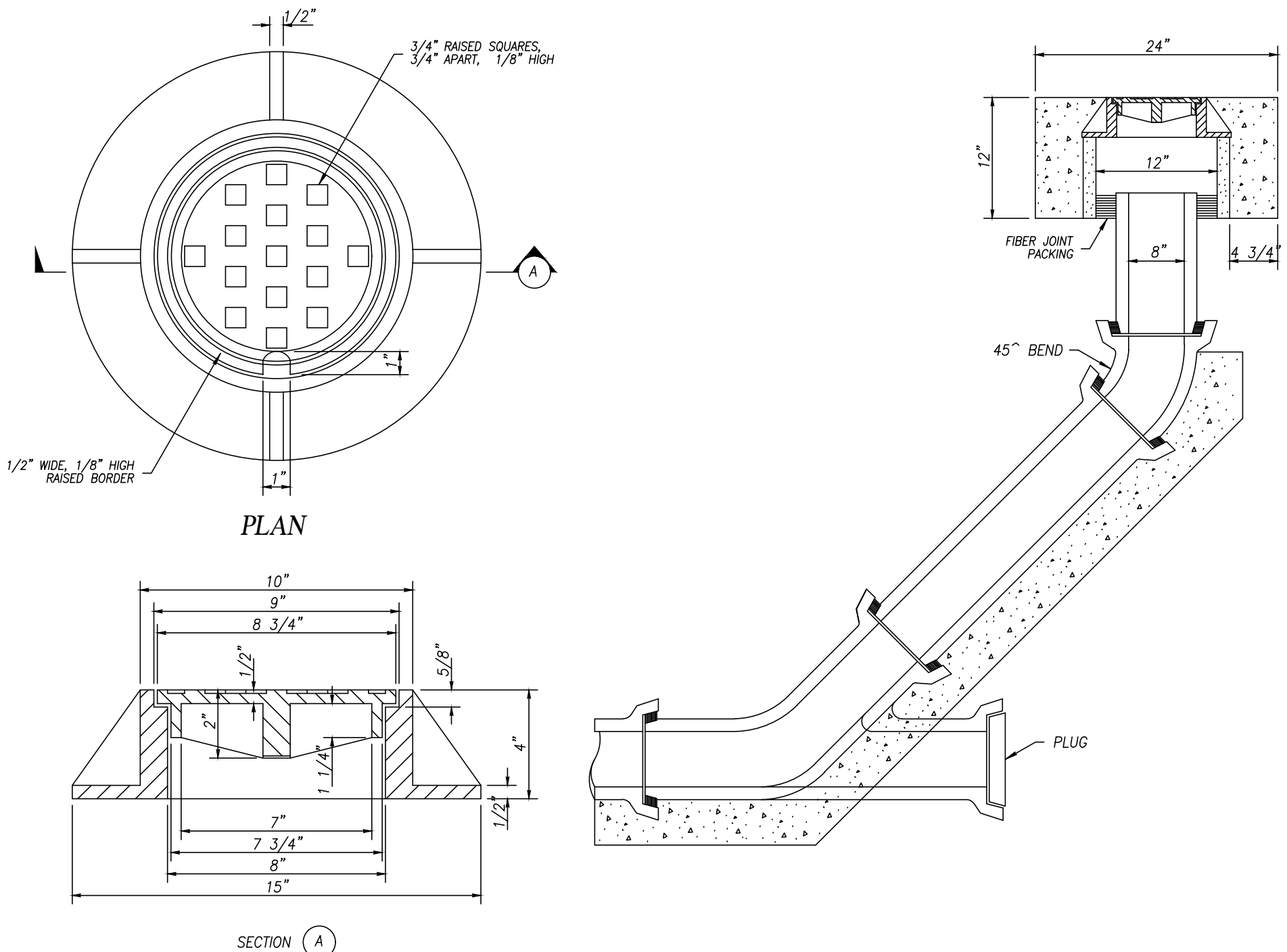
NOTES

- KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM.
- FOR PIPE ALLOWANCES, SEE STANDARD PLAN B-10.20.

MANHOLE DIMENSION TABLE

DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"

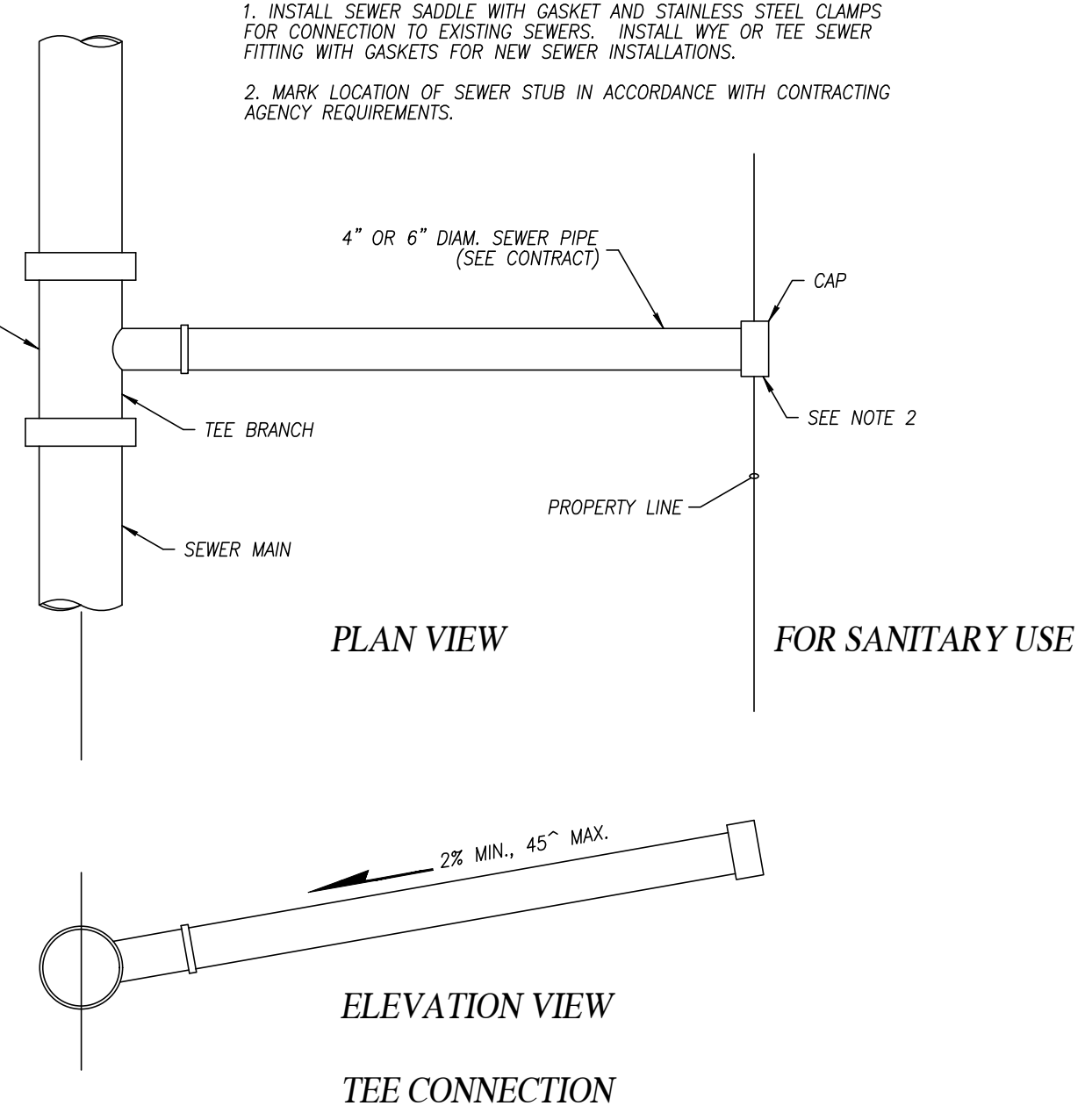
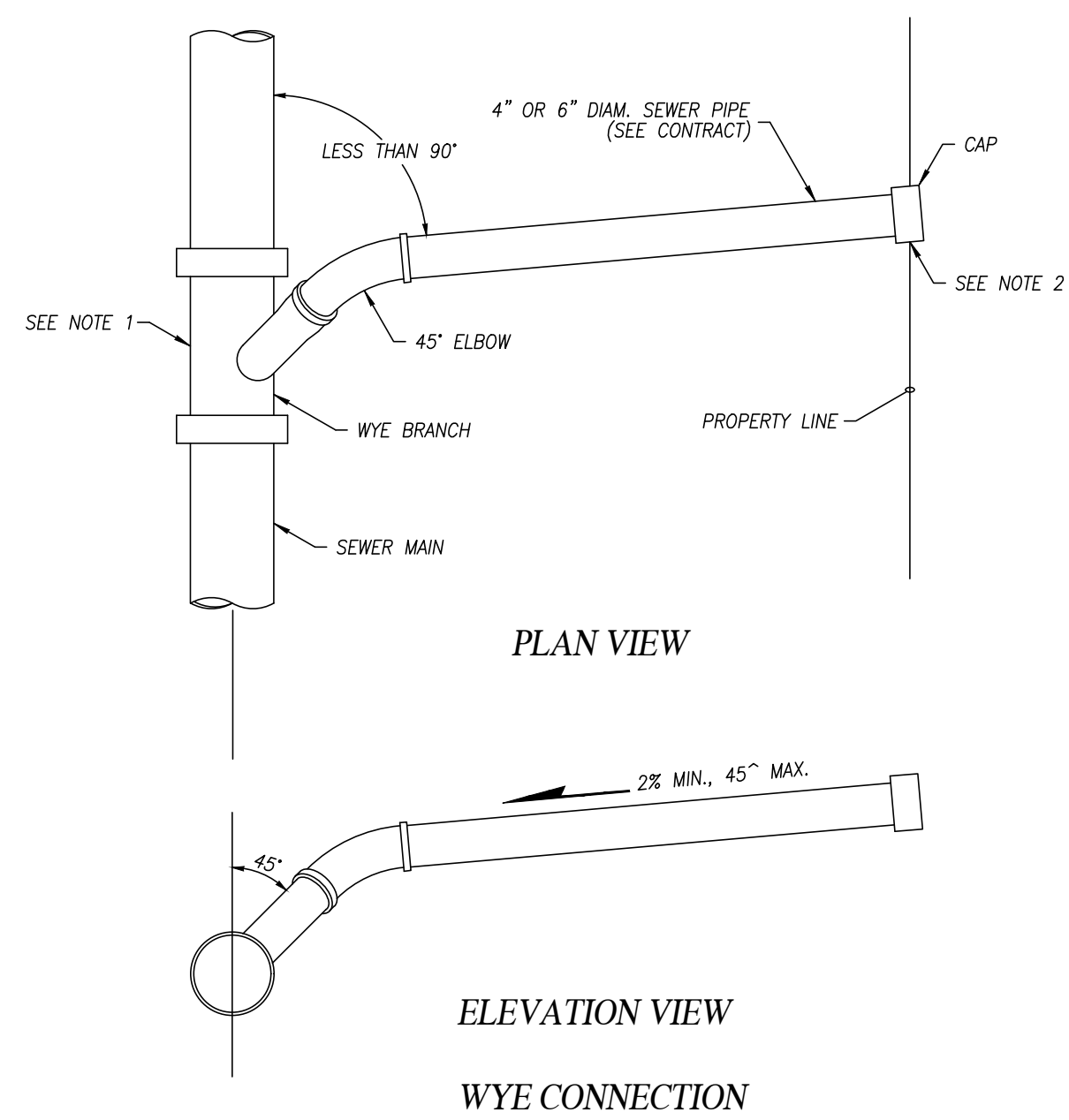
2 STANDARD MANOLE TYPE-1
C7.2 NOT TO SCALE WSDOT STD. DETAIL B-15.20-01



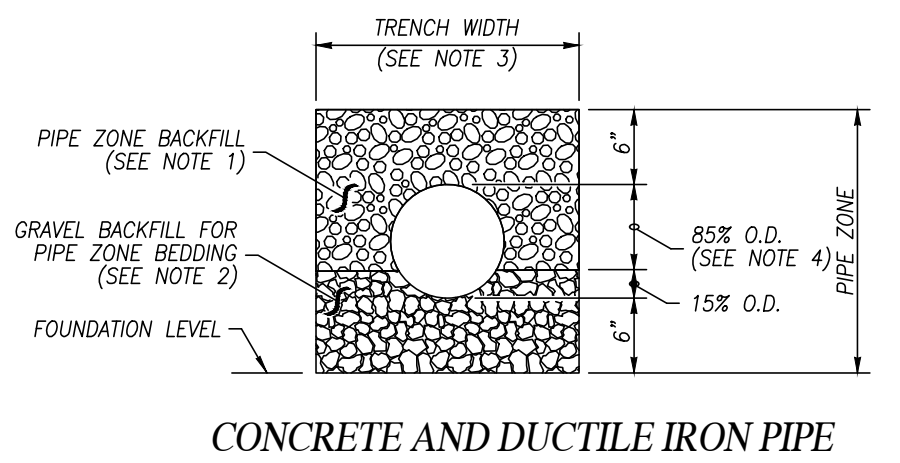
3 8 INCH SEWER CLEAN-OUT
C7.2 NOT TO SCALE WSDOT STD. DETAIL B-85.40-00

NOTES

- INSTALL SEWER SADDLE WITH GASKET AND STAINLESS STEEL CLAMPS FOR CONNECTION TO EXISTING SEWERS. INSTALL WYE OR TEE SEWER FITTING WITH GASKETS FOR NEW SEWER INSTALLATIONS.
- MARK LOCATION OF SEWER STUB IN ACCORDANCE WITH CONTRACTING AGENCY REQUIREMENTS.

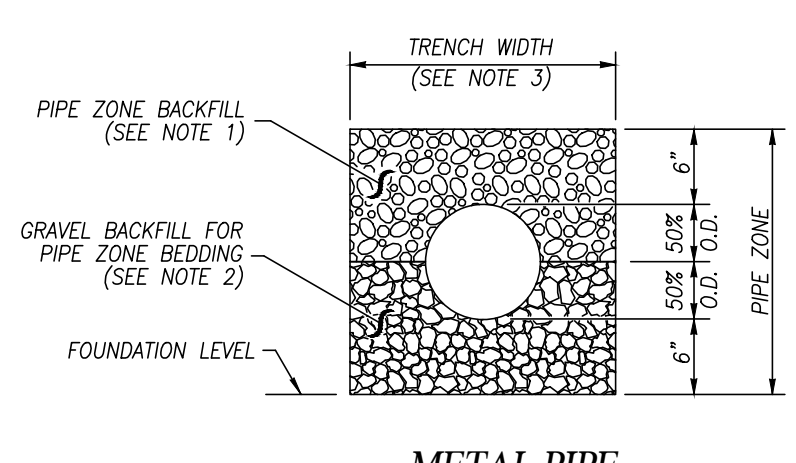
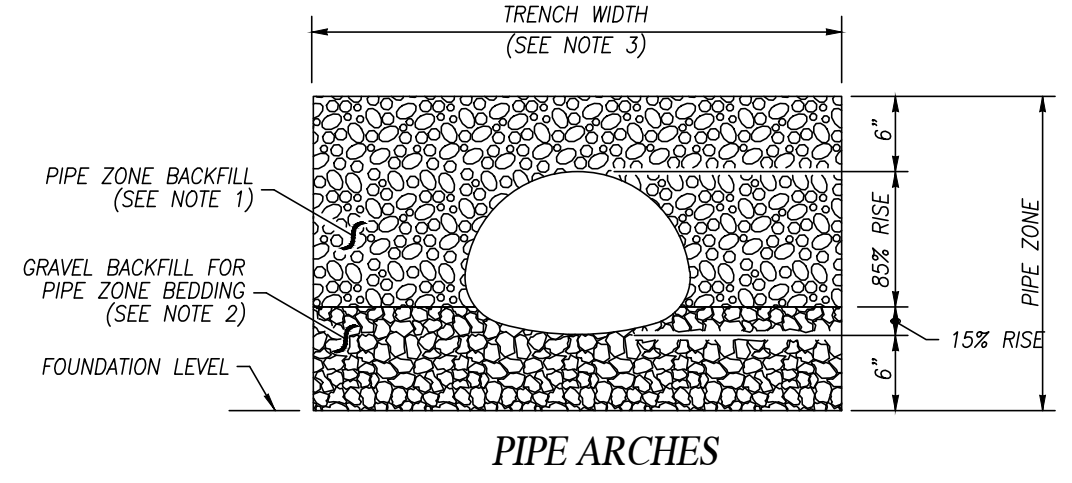
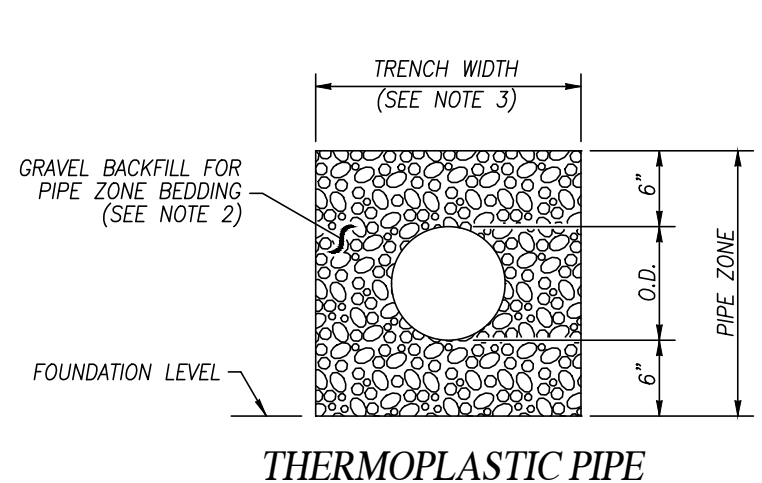


4 SIDE SEWER CONNECTION
C7.2 NOT TO SCALE WSDOT STD. DETAIL B-85.20-00



NOTES

- SEE STANDARD SPECIFICATIONS SECTION 7-08.3(3) FOR PIPE ZONE BACKFILL.
- SEE STANDARD SPECIFICATIONS SECTION 9-03.12(3) FOR GRAVEL BACKFILL FOR PIPE ZONE BEDDING.
- SEE STANDARD SPECIFICATIONS SECTION 2-09.4 FOR MEASUREMENT OF TRENCH WIDTH.
- FOR SANITARY SEWER INSTALLATION, CONCRETE PIPE SHALL BE BEDDED TO SPRING LINE.



CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS

PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
	30" to 96"	DIAM. / 2
	102" to 180"	48"
PIPE ARCH (SPAN)	18" to 36"	12"
	43" to 142"	SPAN / 3
METAL ONLY	148" to 200"	48"

5 PIPE ZONE BEDDING AND BACKFILL
C7.2 NOT TO SCALE WSDOT STD. DETAIL B-55.20-00

Approved for Construction
City of Brier
John J. P.E.
Date 1/19/2023



Know what's below.
Call before you dig.

UTILITY CONFLICT NOTE:
CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-5555 POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT WITH INSIGHT ENGINEERING COMPANY TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

REV. NO.	DESCRIPTION	INITIALS	DATE
2	MOVE WALL LOCATIONS	BRK	10-13-2022
1	CHANGE TO WALL LOCATIONS	BRK	09-23-2022



IECO
INSIGHT ENGINEERING CO.
P.O. BOX - 1478
EVERETT, WA 98206
(425) 303-9363 (425) 303-9362 FAX
INFO@INSIGHTENGINEERING.NET

22015 OLD POPLAR WAY
LYNNWOOD, WA 98036

TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-CO2.DWG
DESIGNED BY: JTK
DATE: 12-22-2021
SCALE: 1"=30'

JOB NO.: 21-1108
SHEET

SEWER NOTES AND DETAILS C7.2

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON

ALDERWOOD MANOR
NO. 5
VOL. 9, PGS. 93-96

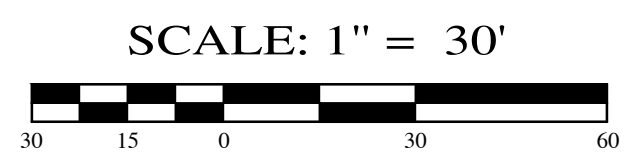
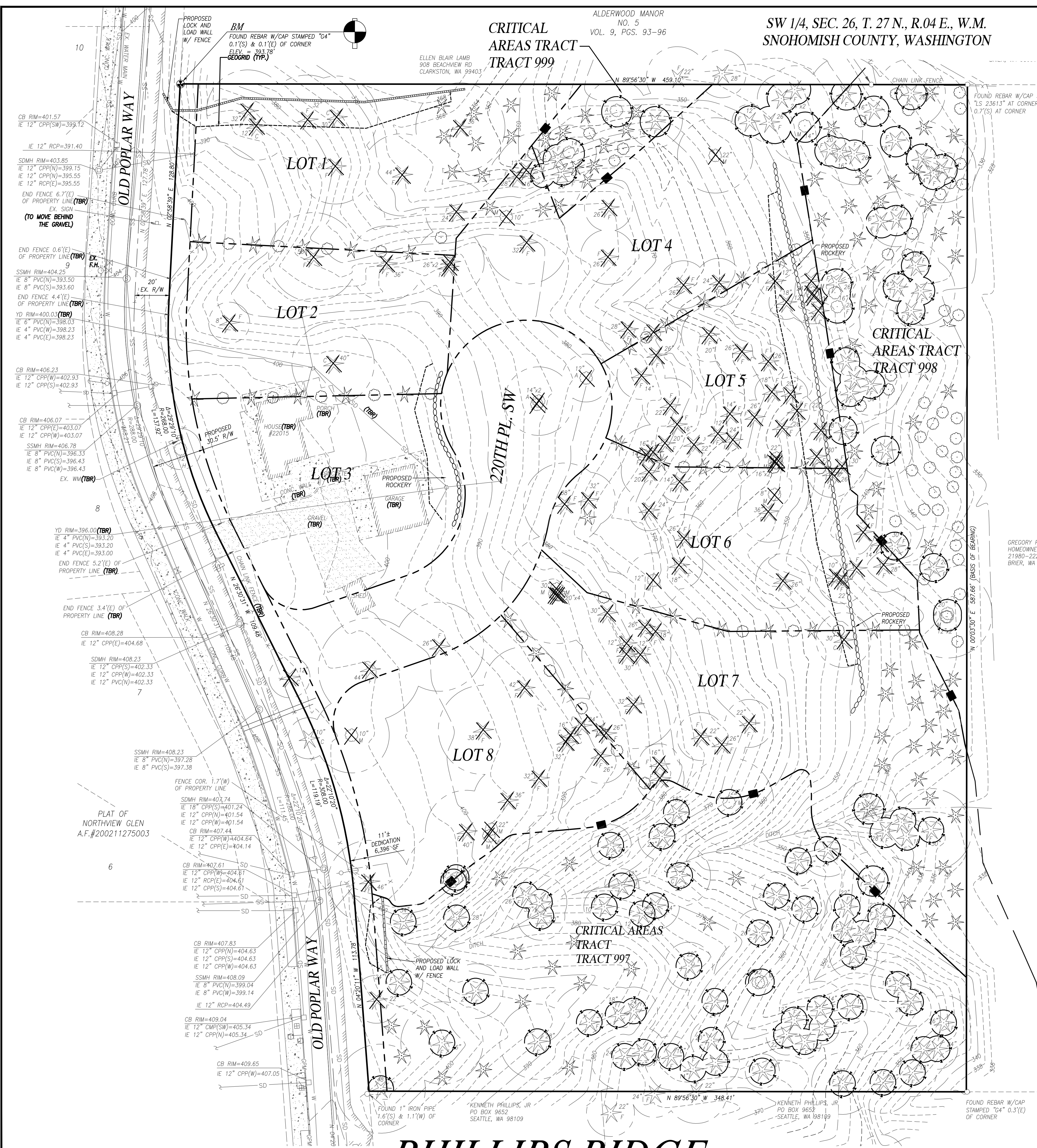
CRITICAL
AREAS TRACT
TRACT 999

ELLEN BLAIS LAMB
908 BEACHVIEW RD
CLARKSON, WA 99403

CRITICAL
AREAS TRACT
TRACT 998

CRITICAL
AREAS TRACT
TRACT 997

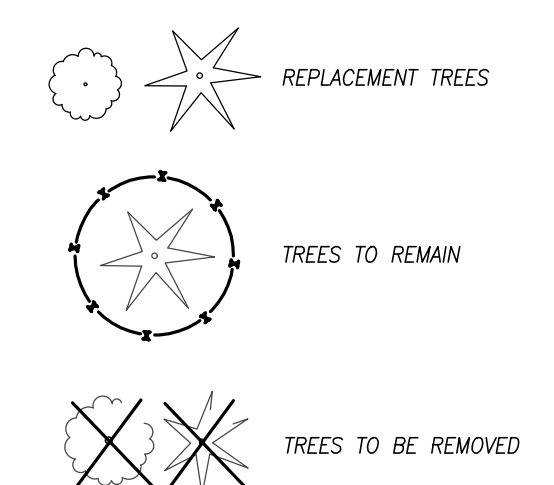
PHILLIPS RIDGE



TREE CALCULATIONS

223 TOTAL TREES ON SITE
223 SIGNIFICANT TREES ON SITE
112 ARE IN CRITICAL AREAS AND ARE TO BE PRESERVED
112 ARE TO BE REMOVED
NONE OF THE REQUIRED TREES (IN CRITICAL AREAS AND BUFFERS) WILL BE REMOVED
206 REPLACEMENT TREES REQUIRED.

Approved for Construction
City of Brier
[Signature] P.E.
Date 1/19/2023



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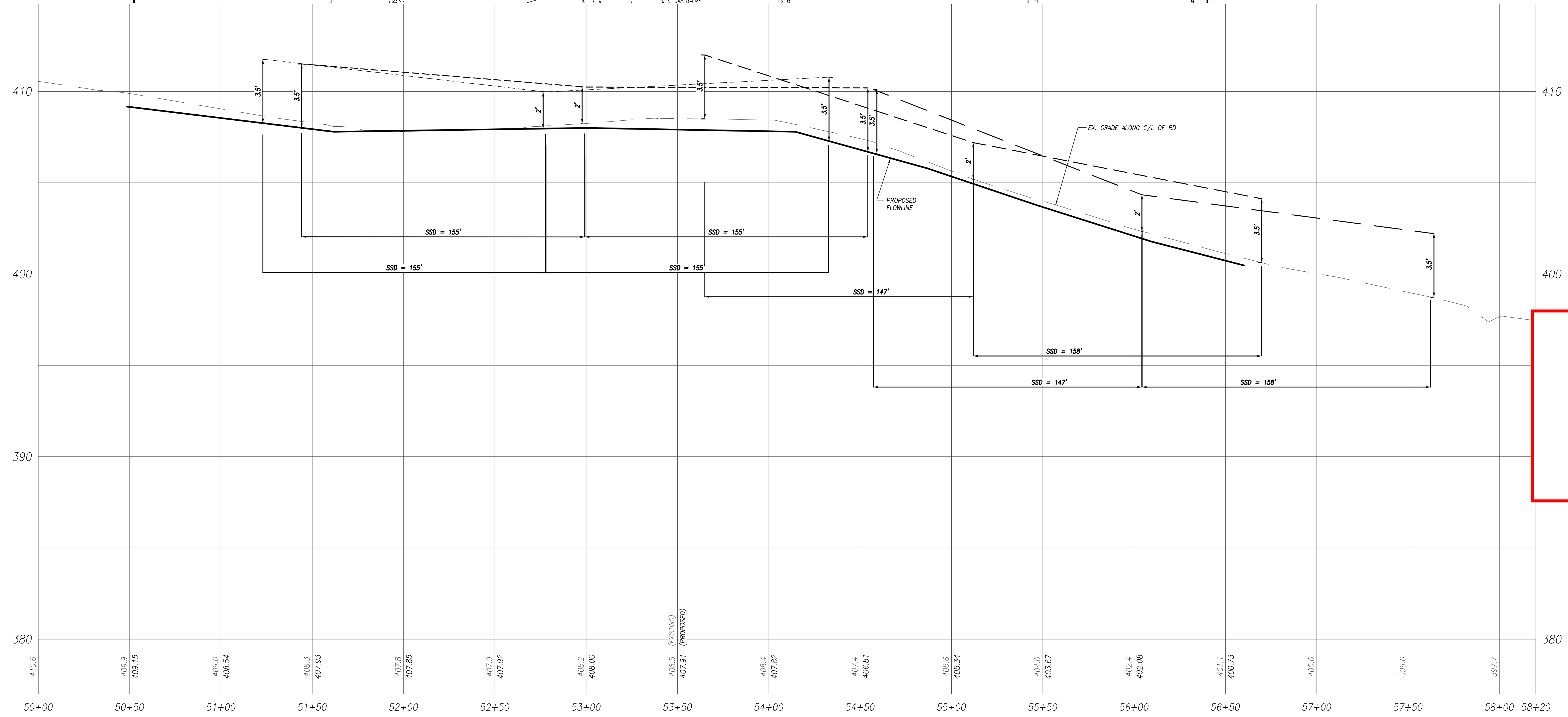
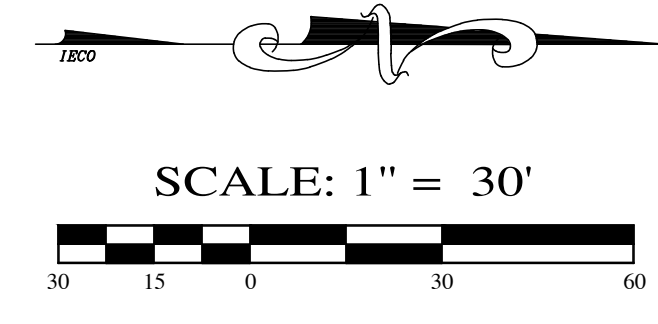
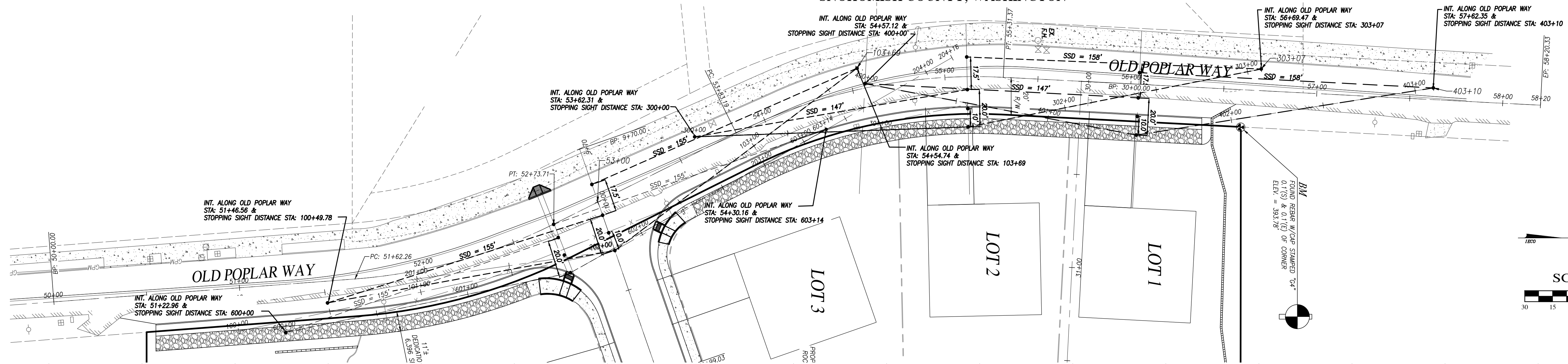
TAX ACCOUNT NO. S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-CO2.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108 SHEET

TREE RETENTION PLAN **C8.0**

SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON



Approved for Construction
City of Brier
John J. P.E.
 Date 1/19/2023

STOPPING SIGHT DISTANCE PROFILE
 HORIZ. SCALE: 1"=30'
 VERT. SCALE: 1"=3'
 SPEED = 25 MPH

REV. NO.	DESCRIPTION	INITIALS	DATE
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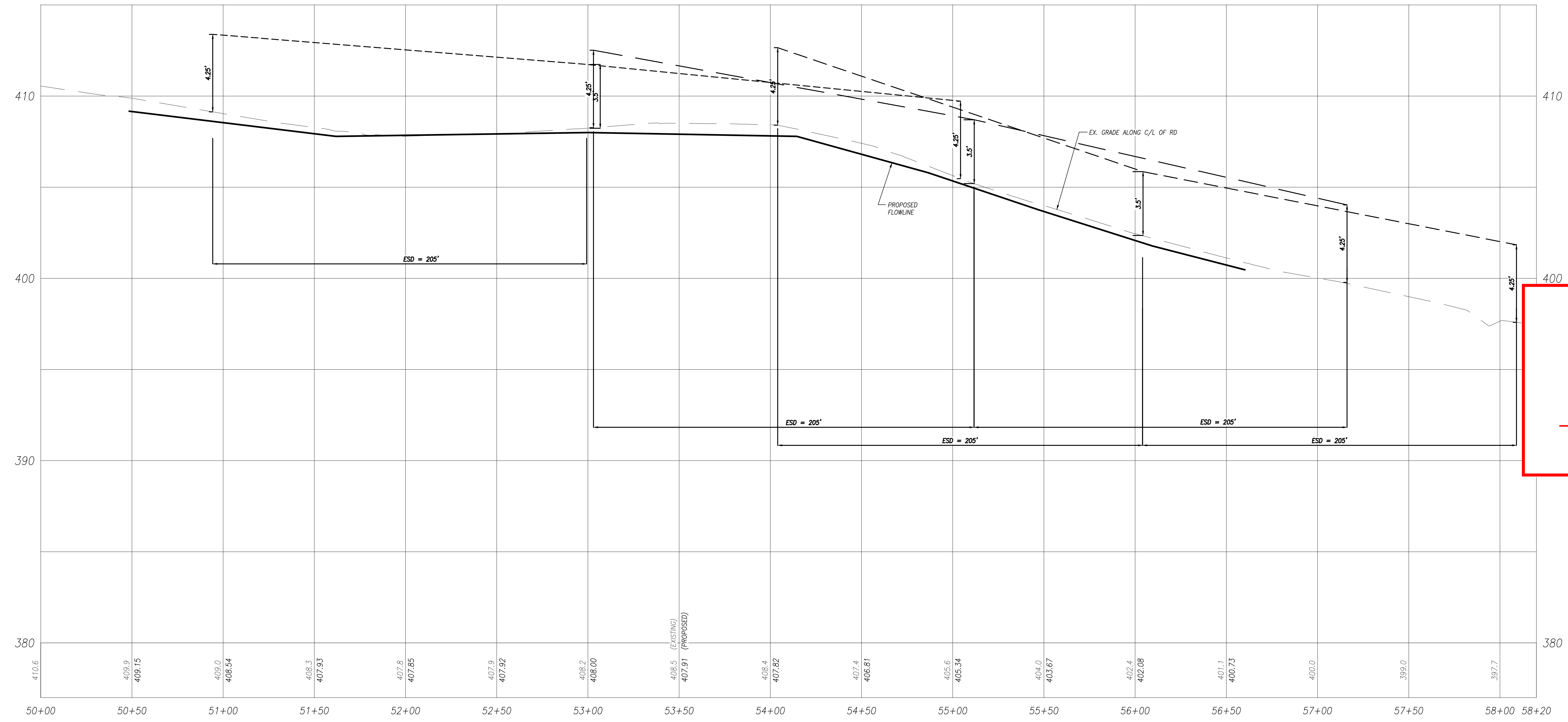
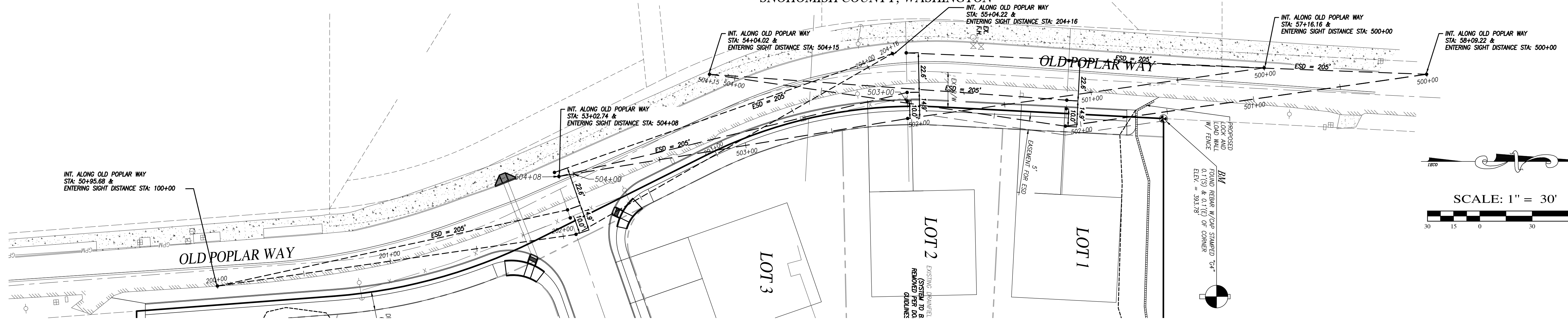
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SW 1/4, SEC. 26, T. 27 N., R.04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-CO2.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108

STOPPING SIGHT DISTANCE-SSD **SSD**

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
SNOHOMISH COUNTY, WASHINGTON



**Approved for
Construction
City of Brier**

[Signature] P.E.

Date 1/19/2023

NOTE:
A 5' EASEMENT FOR ESD IS PROPOSED BETWEEN LOT 1 AND LOT 2.

ENTERING SIGHT DISTANCE PROFILE
HORIZ. SCALE: 1"=30'
 VERT. SCALE: 1"=3'
 SPEED = 25 MPH



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 EVERETT, WA 98206
 (425) 303-9363 (425) 303-9362 FAX
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SITE ADDRESS: 22015 OLD POPLAR WAY
 LYNNWOOD, WA 98036
 TAX ACCOUNT NO.'S: 00373101800500

SW 1/4, SEC. 26, T. 27 N., R. 04 E., W.M.
PHILLIPS RIDGE

DWG FILENAME: 211108-C02.DWG DESIGNED BY: JTK DATE: 12-22-2021 SCALE: 1"=30' JOB NO.: 21-1108

ENTERING SIGHT DISTANCE-SSD **ESD**

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