





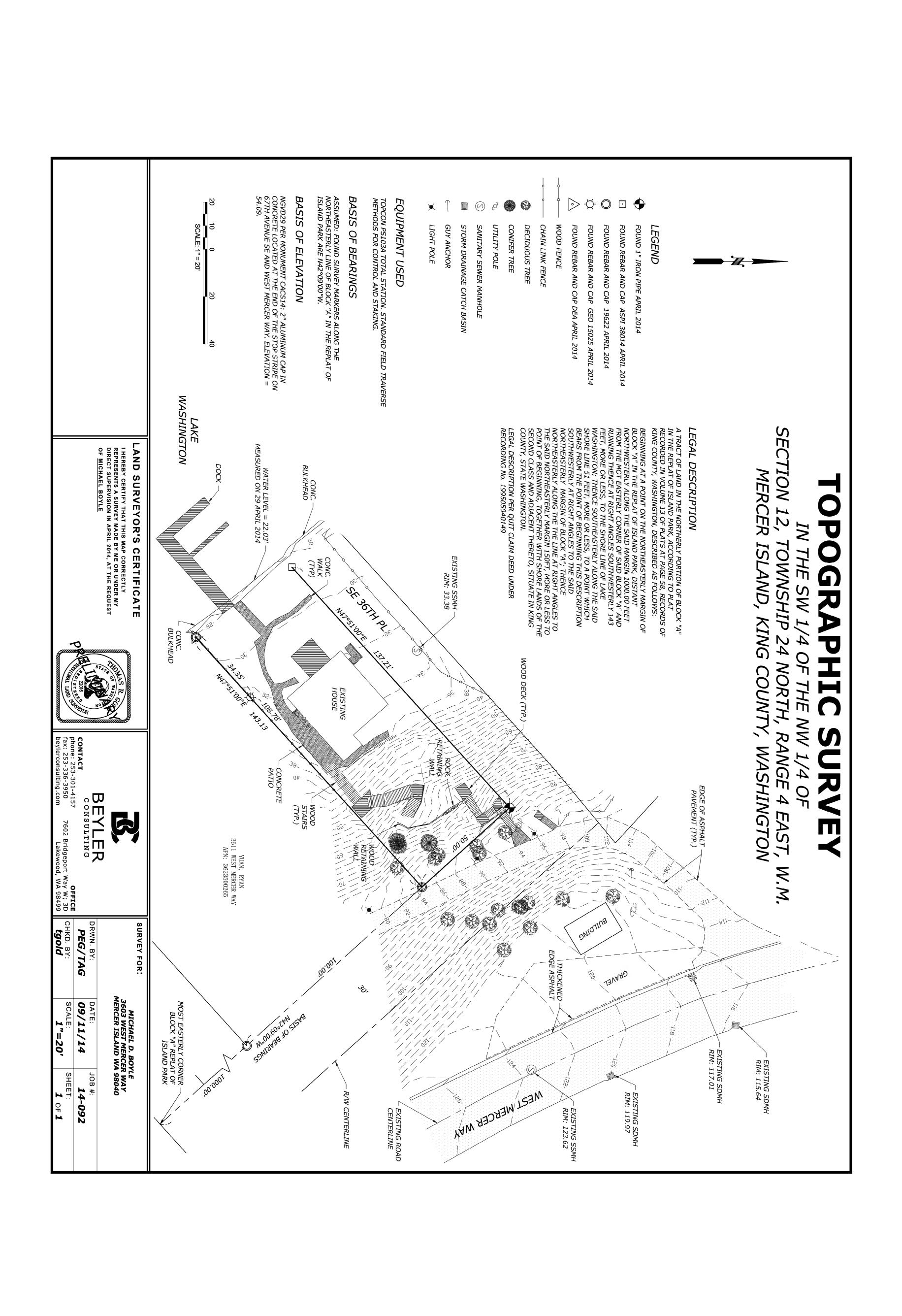
Website: www.jgarch.net

ARCHITECT

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AMES GUERRERO

STATE OF WASHINGTON 2ND SUBMITTAL O5-31-18



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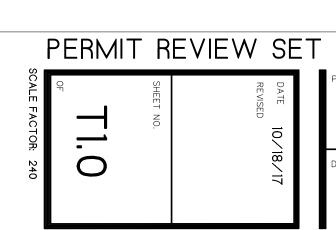
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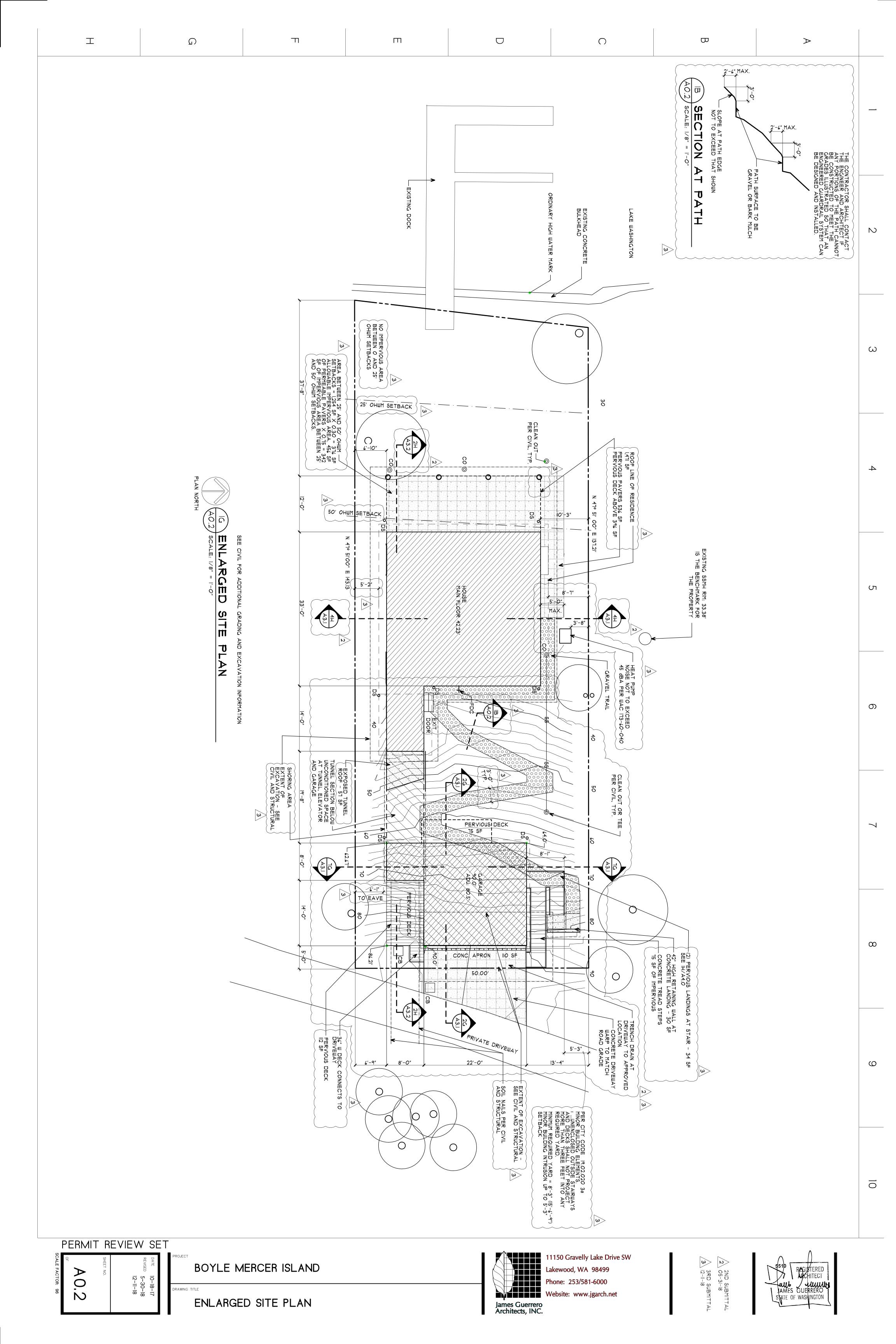
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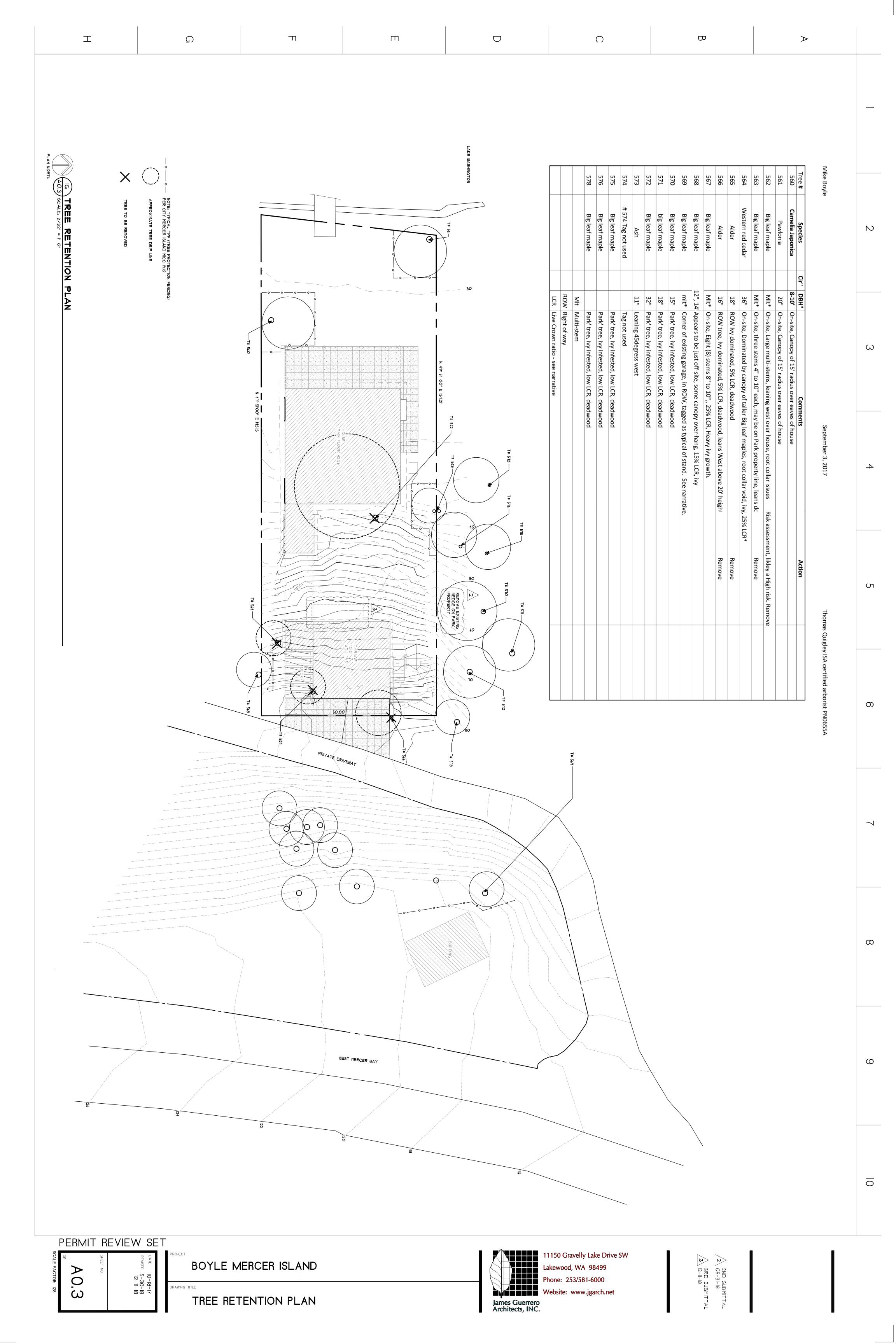


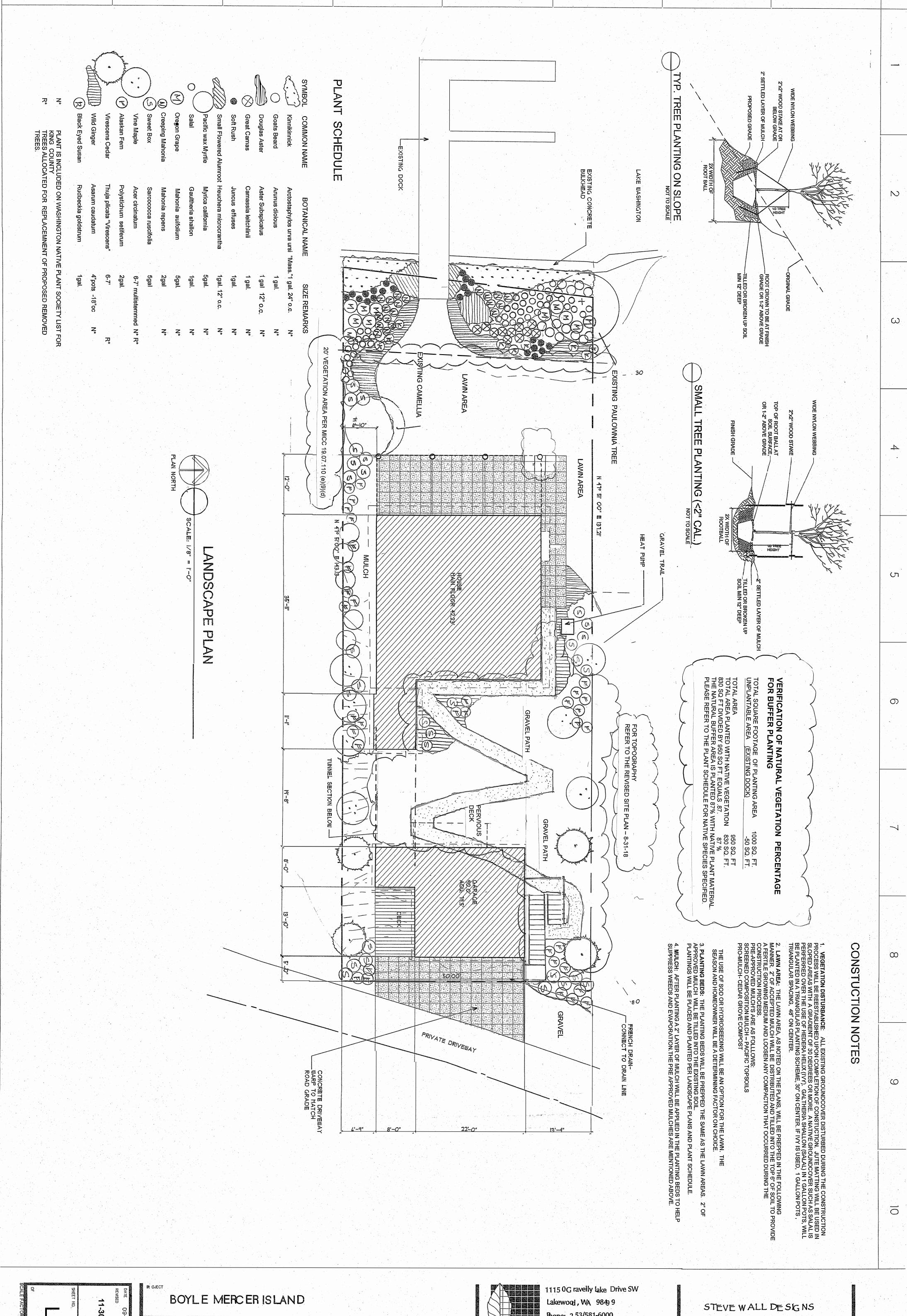
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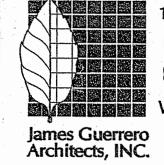
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LANDSCAPE PLAN



Phone: 253/581-6000 Website: www.jgarch.net

425-802-1303 stevewalldesigns@gmal.com 0-0.8' 0.8-2.5'

B1 - BORING 1

6.5-10'

TOPSOIL/DUFF

TAN/GRAY FINE SAND WITH SOME SILT (LOOSE, MOIST)

SILTY SAND GRADES TO
D GRAY FINE TO MEDIUM SAND (MED DENSE, MOIST)

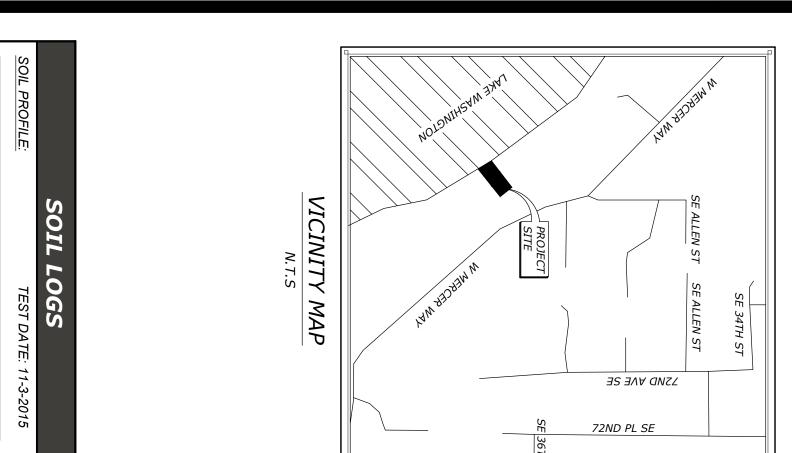
GRADES TO BLUE-GRAY FINE SANDY SILT (VERY STIFF, MOIST)

BECOMES INTERBEDDED GRAY FINE SAND AND SILT (DENSE, MOIST)

SILTY SAND GRADES TO
GRAY SILTY FINE TO MEDIUM SAND (DENSE, MOIST)

10-15'

2.5-4.5' 4.5-6.5'



0.0-0.3' 0.3-1.0' 0.0-1.0' 4.5-5.0' 5.0-5.5 3.5-4.3' 2.0-3.5' 1.0-2.0' *TERMINATED AT 5.5' BELOW GROUND SURFACE. NO CAVING OBSERVED. GROUNDWATER OBSERVED AT 5' BELOW GROUND SURFACE. HA1 - HAND AUGER 1 HA2 - HAND AUGER 2 CLTOPSOIL, DUFF L. BROWN SAND WITH ORGANICS AND ROOTS (MED DENSE) L. BROWN SAND WITH MOTTLING (MED DENSE) GREY SAND WITH MOTTLING (MED DENSE) GREY SAND WITH WOOD DEBRIS (MED DENSE) GREY/TAN FINE SAND (DENSE) BROWN SAND WITH SILT, MOTTLING, AND WOOD DEBRIS (MED DENSE, MOIST) GREY SAND WITH SILT WITH MOTTLING (MED DENSE, MOIST) GREY SAND WITH SILT TO SILTY FINE SAND (DENSE, MOIST) GREY SAND WITH SILT TO SILTY FINE SAND (DENSE, WET) GREY SILTY WITH SOME FINE SANDY (DENSE, WET) BROWN SILTY SAND WITH ORGANICS (MED DENSE, MOIST) GREY SILTY SAND WITH MOTTLING, WOOD DEBRIS, AND ORGANICS (MED DENSE, MOIST)

		'									'	
		PERVIOUS						IMPERVIOUS				
NEW PERMEABLE PAVERS	NEW GRAVEL PATH	NEW DECK AT HOUSE	NEW DECKS & LANDING AT ADU	EXISTING WOOD STAIRS + PATHS REMOVED	TOTAL	EXTERIOR CONCRETE STAIRS	CONCRETE APRON @ GARAGE	NEW GARAGE/ADU ROOF AREA	EXPOSED CONCRETE ROOF	NEW HOUSE ROOF AREA	EXISTING HOUSE TO BE REMOVED	SURFACE TYPE
536	449	396	221	300	2332	75	011	619	57	1471	1683	EXISTING SURFACES (SF)
0.012	0.010	0.009	0.005	0.007	0.054	0.002	0.003	0.014	0.001	0.034	0.039	(AC)

TOPOGRAPHIC NOTE

*BOTTOM OF BORING @ 21.5'

THE EXISTING CULTURAL ON THESE DRAWINGS HA

THE EXISTING CULTURAL AND TOPOGRAPHICAL DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, BEYLER CONSULTING CANNOT ENSURE ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF THAT INFORMATION OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

SURVEY DATA

BASIS OF BEARINGS

ASSUMED: FOUND SURVEY MARKERS ALONG THE
NORTHEASTERLY LINE OF BLOCK "A" IN THE REPLAT OF
ISLAND PARK ARE N42°09'00"W.

EQUIPMENT USED TOPCON PS103A TOTAL STATION. STANDARD FIELD TRAVERSE METHODS FOR CONTROL AND STAKING.

DESCRIPTION

1602

0.037

4.0-6.0'

*TERMINATED AT 6.0' BELOW GROUND SURFACE. NO CAVING OBSERVED. NO GROUNDWATER SEEPAGE OBSERVED.

1.0-1.6'

OF BLOCK "A" IN THE REPLAT OF ISLAND PARK, DISTANT NORTHWESTERLY ALONG THE SAID MARGIN 1000.00 FEET FROM THE MOT EASTERLY CORNER OF SAID BLOCK "A" AND RUNNING THENCE AT RIGHT ANGLES SOUTHWESTERLY 143 FEET, MORE OR LESS, TO THE SHORE LINE OF LAKE WASHINGTON; THENCE SOUTHEASTERLY ALONG THE SAID SHORE LINE 51 FEET, MORE OR LESS, TO A POINT WHICH BEARS FROM THE POINT OF BEGINNING THIS DESCRIPTION SOUTHWESTERLY ALONG THE THE LINE AT RIGHT ANGLES TO THE SAID NORTHEASTERLY MARGIN OF BLOCK "A"; THENCE NORTHEASTERLY ALONG THE THE LINE AT RIGHT ANGLES TO THE SAID NORTHEASTERLY MARGIN 150FT, MORE OR LESS TO POINT OF BEGINNING, TOGETHER WITH SHORE LANDS OF THE SECOND CLASS AND ADJACENT THERETO, SITUATE IN KING COUNTY, STATE WASHINGTON.

LEGAL DESCRIPTION PER QUIT CLAIM DEED UNDER RECORDING No. 199505040149

ORDINARY HIGH WATER MARK WATER LEVEL = 22.03' MEASURED ON 29 APRIL 2014 EX FENCE

PARCEL NUMBER: 362350-0260 SITE ADDRESS: MERCER ISLAND, WA 98040 SITE AREA: ZONING: R-15 SETBACKS: FRONT: BACK: INTERIOR: SITE DATA 362350-0260 RACGER WAY MERCER ISLAND, WA 98040 7,097 SF (0.162 AC) R-15 SETBACKS: FRONT: SIDES ADD UP TO 15' TOTAL							
362350-0260 3603 W MERCER WAY MERCER ISLAND, WA 98040 7,097 SF (0.162 AC) R-15 R-15 SIDES ADD UP TO 15' TOTAL	BACK: INTERIOR:	SETBACKS: FRONT:	ZONING:	SITE AREA:	SITE ADDRESS:	PARCEL NUMBER:	SIT
	20' SIDES ADD UP TO 15' TOTAL	10'	R-15	7,097 SF (0.162 AC)	3603 W MERCER WAY MERCER ISLAND, WA 98040	362350-0260	'E DATA

DRAWN BY:

SHEET C1.0 SHEET C2.0 SHEET C3.0 SHEET C4.0 SHEET C5.0 SHEET C6.0 PROJECT INFO SHEET INDEX

OWNER/CLIENT:
MIKE BOYLE
FATBOY CONSTRUCTION
PO BOX 44429
TEL: 253-576-8333

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	Tay and the same of the same o
12/11/2018	
2018	NOTEON

CITY OF MERCER ISLAND,

SCALE: DATE: **CHECKED BY:** 10/18/2017 DRB **HORZ:** 1"=10' **VERT:** N/A

	LAKEWOOD OFFICE 5920 100TH ST SW, STE 25 Lakewood, WA 98499 phone: 253-984-2900
NG	beylerconsulting.com

	,		
NO.	DESCRIPTION	INIT	DATE
1	REVISIONS PER REDLINES #1 ADU FF ADJUSTMENT	KRD KRD	5/24/18 12/11/18

CALL 48 BEFORE 1-800-

YOU YOU

DIG -5555

800

EX ACCESS DRIVEWAY

PORTION OF SECTION 12, TOWNSHIP 24 S., RANGE 04 W., W.M.

PARCEL#

362350-0260

COVER SHEET/ SITE PLAN	

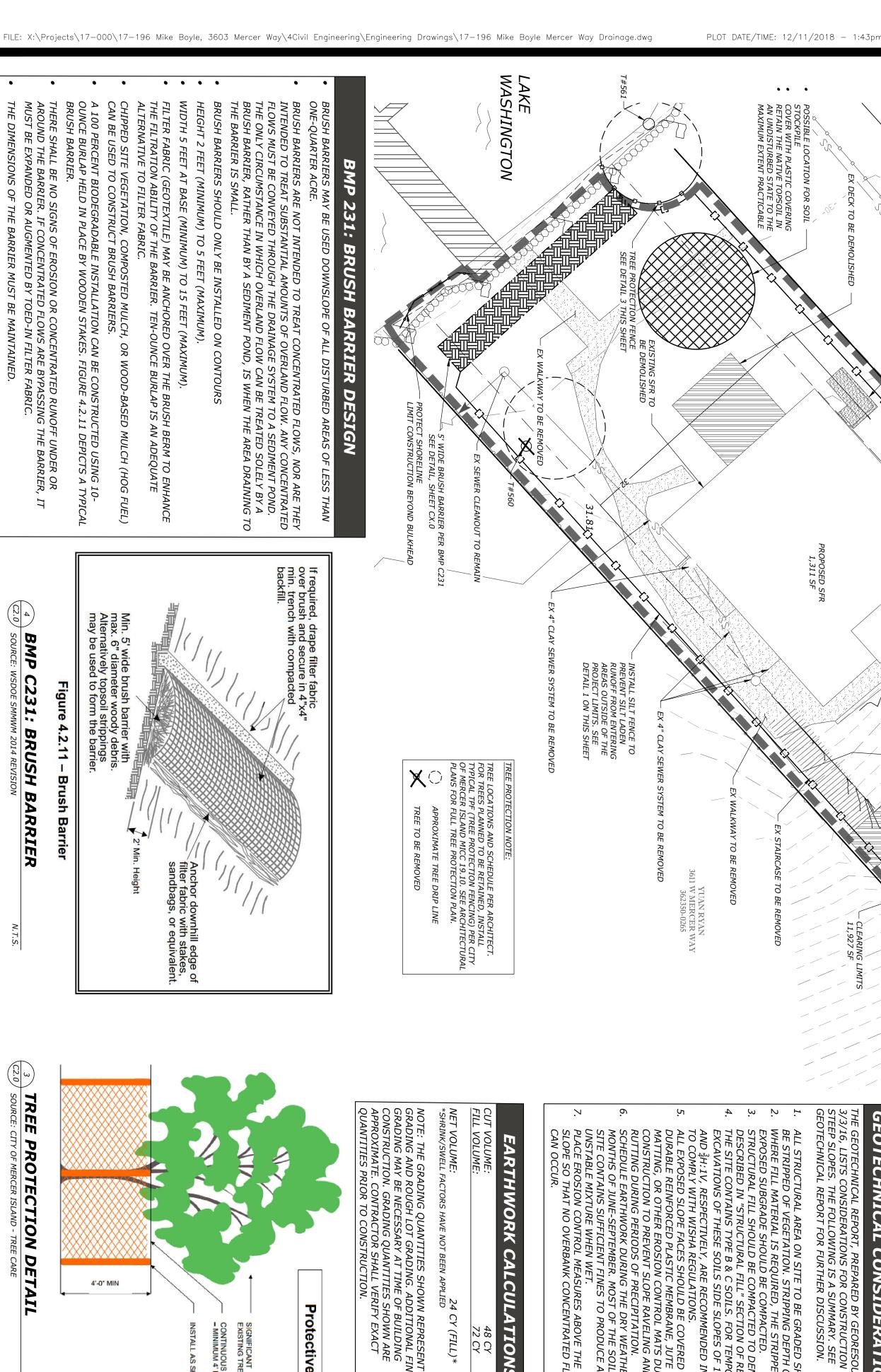
3603 MERCER WAY DRAINAGE PARCEL# 362350-0260

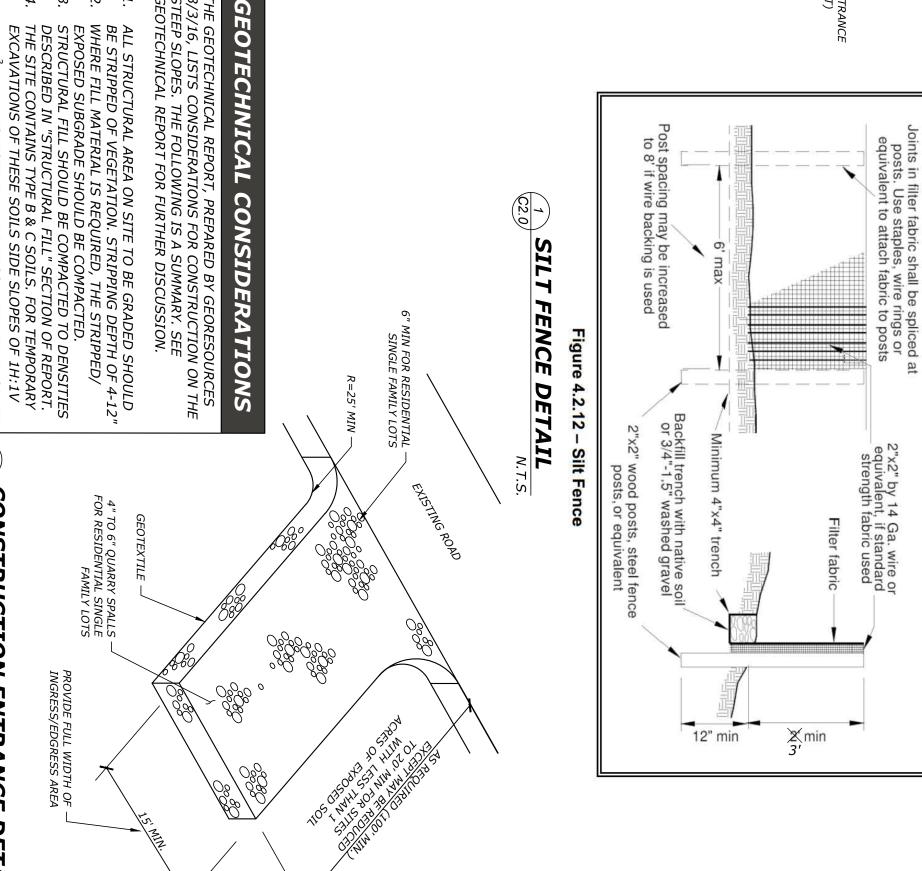
WASHINGTON

PROPOSED ELEVATOR SHAF DOWN TO EL = 42.23

Plan. Design. Manage CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNIN PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

WALKWAY TO BE REMOVED





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RCASE TO BE REMO

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PORTION OF SECTION 12,

TOWNSHIP 24 S,

RANGE 04 W.,

≶ .⊻

FABRIC

FENCE NOTES:

AMEND SOILS WITHIN CLEARING—LIMITS TO RESTORE THE SOILS COMPACTED DURING COMPACTED DURING CONSTRUCTION AND PROMOTE HEALTHY VEGETATION. SEE THE SOIL AMENDMENTS NOTES ON SHEET C3

STEEP SLOPES. THE FOLLOWING IS A SUMMARY. SEE GEOTECHNICAL REPORT FOR FURTHER DISCUSSION.

CONSTRUCTION ENTRA

AND \$\frac{3}{4}H:1V, RESPECTIVELY, ARE RECOMMENDED IN ORDER TO COMPLY WITH WISHA REGULATIONS.

ALL EXPOSED SLOPE FACES SHOULD BE COVERED WITHA DURABLE REINFORCED PLASTIC MEMBRANE, JUTE MATTING, OR OTHER EROSION CONTROL MATS DURING CONSTRUCTION TO PREVENT SLOPE RAVELING AND RUTTING DURING PERIODS OF PRECIPITATION.

SCHEDULE EARTHWORK DURING THE DRY WEATHER MONTHS OF JUNE-SEPTEMBER. MOST OF THE SOIL AT THE SITE CONTAINS SUFFICIENT FINES TO PRODUCE AN UNSTABLE MIXTURE WHEN WET.

PLACE EROSION CONTROL MEASURES ABOVE THE STEEP SLOPE SO THAT NO OVERBANK CONCENTRATED FLOWS CAN OCCUR.

CONSTRUCTION ENTRAN CE NOTES:

THE ROCK PAD SHALL BE AT LEAST 12 IN AND 50 FEET LONG (20 FEET FOR SITES 1 ACRE OF DISTURBED SOIL). WIDTH SH WIDTH OF THE VEHICLE INGRESS AND EXEMPLER PADS MAY BE APPROVED FOR SERSIDENTIAL AND SMALL COMMERCIAL SERVICES AND SMALL SERVICES A ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF PAD. PINCHES THICK
ES WITH LESS THAN
SHALL BE THE FULL
DEGRESS AREA.
R SINGLE-FAMILY
AL SITES.

EARTHWORK CALCULATIONS

IF THE PAD DOES NOT ADEQUATELY REMEMBER FROM THE VEHICLE WHEELS, THE WHEEL HOSED OFF BEFORE THE VEHICLE ENTER STREET. THE WASHING SHALL BE DONE COVERED WITH CRUSHED ROCK AND WASHALL DRAIN TO A SEDIMENT RETENTION THROUGH A SILT FENCE. GEOTEXTILE SHALL MEET THE FOLLOW-GRAB TENSILE STRENGTH (ASTM DA7-GRAB TENSILE ELONGATION (ASTM D.-MULLEN BURST STRENGTH (ASTM D37-NING STANDARDS: 751) - 200 PSI MIN. 74632) - 30% MAX 3786-80a) - 400 PSI REMOVE THE MUDHEELS SHALL BE
TERS A PAVED
NE IN AN AREA
WASH WATER

NCE DETAIL

2

FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF

THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER

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 TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.

Protective

-AOS (ASTM D4751) - 20 TO 45 (U.S. S SIZE)

TANDARD SIEVE

CONTINUOUS FENCING - MINIMUM 4' HIGH

TREE PROTECTION N

CATED WHERE
IPLETELY ENCIRCLE
), AVOID DRIVING
'S. FENCE MUST

DE CHANGES, EQUIPMENT OR

N THE LIMIT OF FOR MITIGATION

INSTALL AS SHOWN

THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED

THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE AT NO TIME SHALL MORE THAN 1 FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSHSEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

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9

NO STOCKPILING OF MATERIALS, GRADE VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENTHING MACHINERY SHALL BE ALLOWED WITHIN THE FENCING. PLEASE CALL ARBORIST FOM MEASURES IF FENCING MUST COME DOWN TREATMENT OF ROOTS EXPOSED DURING FOR ROOTS OVER 1" IN DIAMETER DAMAN CONSTRUCTION. MAKE A CLEAN STRAIGH

NG CONSTRUCTION: MAGED DURING GHT CUT TO

PROTECTION

DETAIL

3603 MERCER WAY DRAINAGE

PARCEL# 362350-0260

CHECKED BY:

DRB

SCALE:

HORZ: 1"=10' VERT: N/A

DATE: 10/18/2017

10.

WIRE MESH SUPPORT FENCE SHALL BE FASTENED
WIRE MESH SUPPORT FENCE SHALL BE FASTENED
CURELY TO THE UPSLOPE SIDE OF THE POST
YING A HEAVY-DUTY WIRE STAPLES AT LEAST 1
CH LONG, TIE WIRES OR HOG RINGS. THE WIRE
CHES AND SHALL NOT EXTEND MORE THAN 24
CHES AND SHALL NOT EXTEND MORE THAN 24
CHES ABOVE THE ORIGINAL GROUND SURFACE.
TE STANDARD STRENGTH FILTER FABRIC SHALL BE
APLED OR WIRED TO THE FENCE, AND 20 INCHES
THE FABRIC SHALL NOT EXTENDED TO THE TRENCH.
TE FABRIC SHALL NOT EXTEND MORE THAN 24
CHES ABOVE THE ORIGINAL GROUND SURFACE.
TTER FABRIC SHALL NOT BE STAPLED TO EXISTING
EFS NUM OF 30 INCHES).

NCH SHALL BE EXCAVATED APPROXIMATELY 8
S WIDE AND 12 INCHES DEEP ALONG THE LINE
ST AND UPSLOPE FROM THE BARRIER. THIS
'H SHALL BE BACKFILLED WITH WASHED IGTH OF THE EN JOINTS **DESCRIPTION** INIT DATE KRD | 5/24/18 REVISIONS PER REDLINES #1

CED A MAXIMUM OF 6 FEET SECURELY INTO THE GROUND

EROSION CONTROL NOTES

SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

THE IMPLEMENTATION OF THESE EROSION AND SEDIMENT CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE

CONTRIBUTING LENGTH TO FENCE WILL NOT BE CONTRIBUTING LENGTH TO FENCE WILL NOT BE GREATER THAN 100 FEET.

DO NOT INSTALL BELOW AN OUTLET PIPE OR WEIR.

INSTALL DOWNSLOPE OF EXPOSED AREAS.

DO NOT DRIVE OVER OR FILL OVER SILT FENCES.

WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH CASE, THE FILTER FABRIC IS STAPLED OR WIRE DIRECTLY TO THE POST WITH ALL OTHER PROVISIONS OF ABOVE NOTES APPLYING.
FILTER FABRIC FENCES SHALL NOT BE REMOVED BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY

R FABRIC FENCES SHALL DIATELY AFTER EACH R

BE INSPECTED
RAINFALL AND AT

DAILY DURING PROLONGED RAINFALL. ANY RED REPAIRS SHALL BE MADE IMMEDIATELY. ENCES WILL BE INSTALLED PARALLEL TO ANY CONTOURS.

WASHINGTON Plan. Design. Manage CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

LAKEWOOD OFFICE 5920 100TH ST SW, STE 25 Lakewood, WA 98499 phone: 253-984-2900 beylerconsulting.com

TESC PLAN & NOTES CITY OF MERCER ISLAND, **DRAWN BY:**

JOB NUMBER 17-196 SHEET 3 OF 6 C3.0

DRAINAGE & UTILITY PLAN 3603 MERCER WAY DRAINAGE

PARCEL# 362350-0260

CITY OF MERCER ISLAND,

DRAWN BY: CHECKED BY: SCALE:

DRB

WASHINGTON

SCALE: DATE: 10/18/2017

BEYLER
CONSULTING

Plan. Design. Manage

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1 REVISIONS PER REDLINES #1 KRD 5/24/18
2 ADU FF ADJUSTMENT KRD 12/11/18

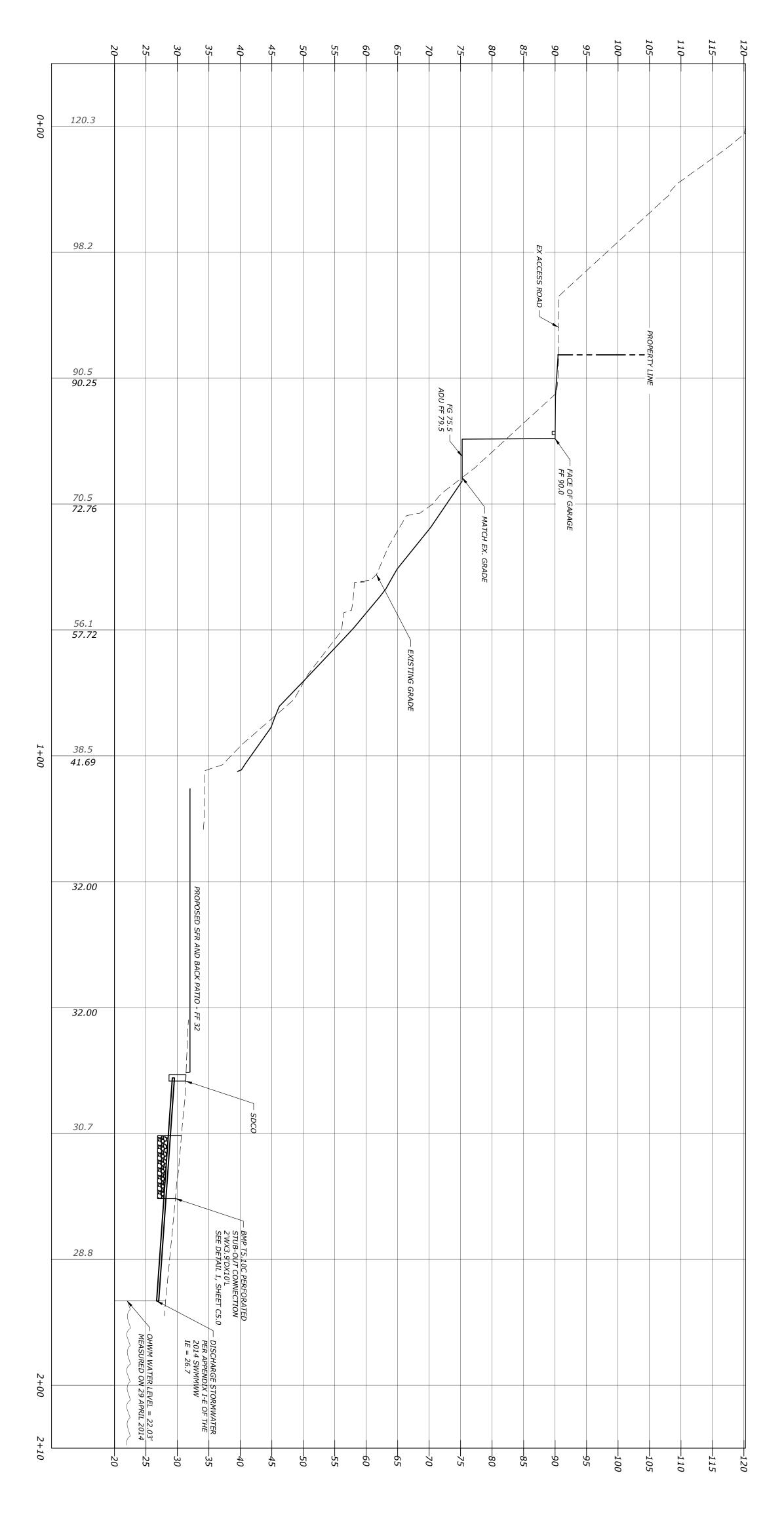
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SW, STE 25
VA 98499
984-2900

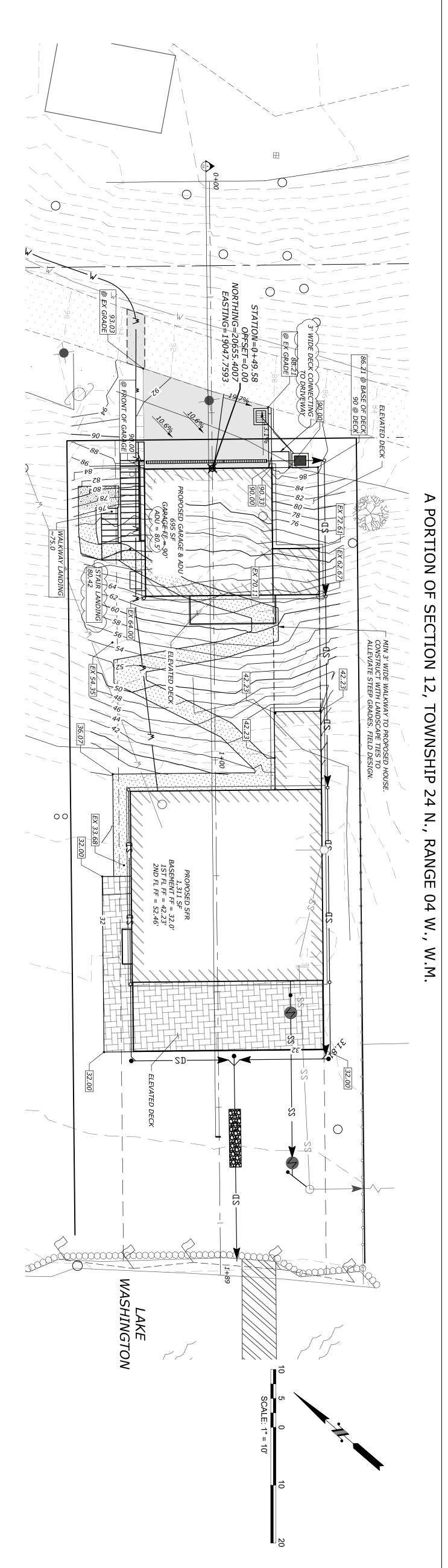
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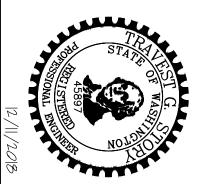
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ECTION - A E 1"=10' HORIZ, 1"=10'





JOB NUMBER
17-196
SHEET 4 OF 6
C4.0



GRADING PLAN

3603 MERCER WAY DRAINAGE

PARCEL# 362350-0260 CITY OF MERCER ISLAND,

CHECKED BY:

DRB

DRAWN BY:

 WASHINGTON

 SCALE:
 DATE:

 HORZ: 1"=10"
 VERT: 1"=10"

 10/18/2017

BEYLER
CONSULTING

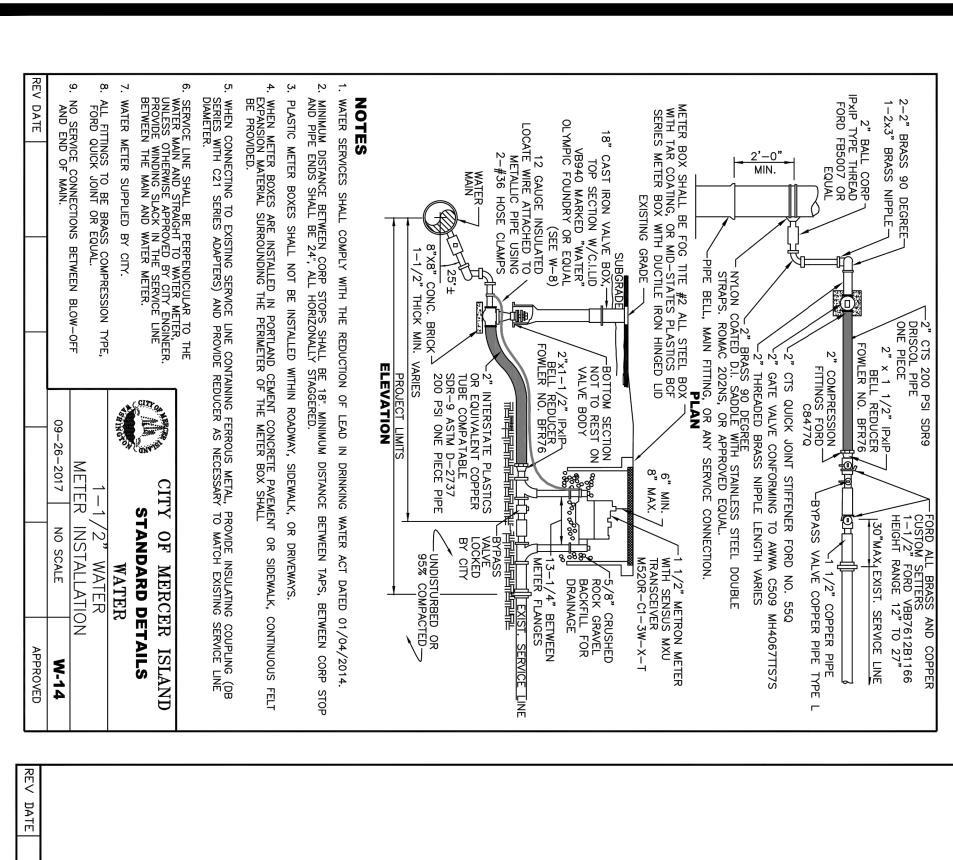
Plan. Design. Manage

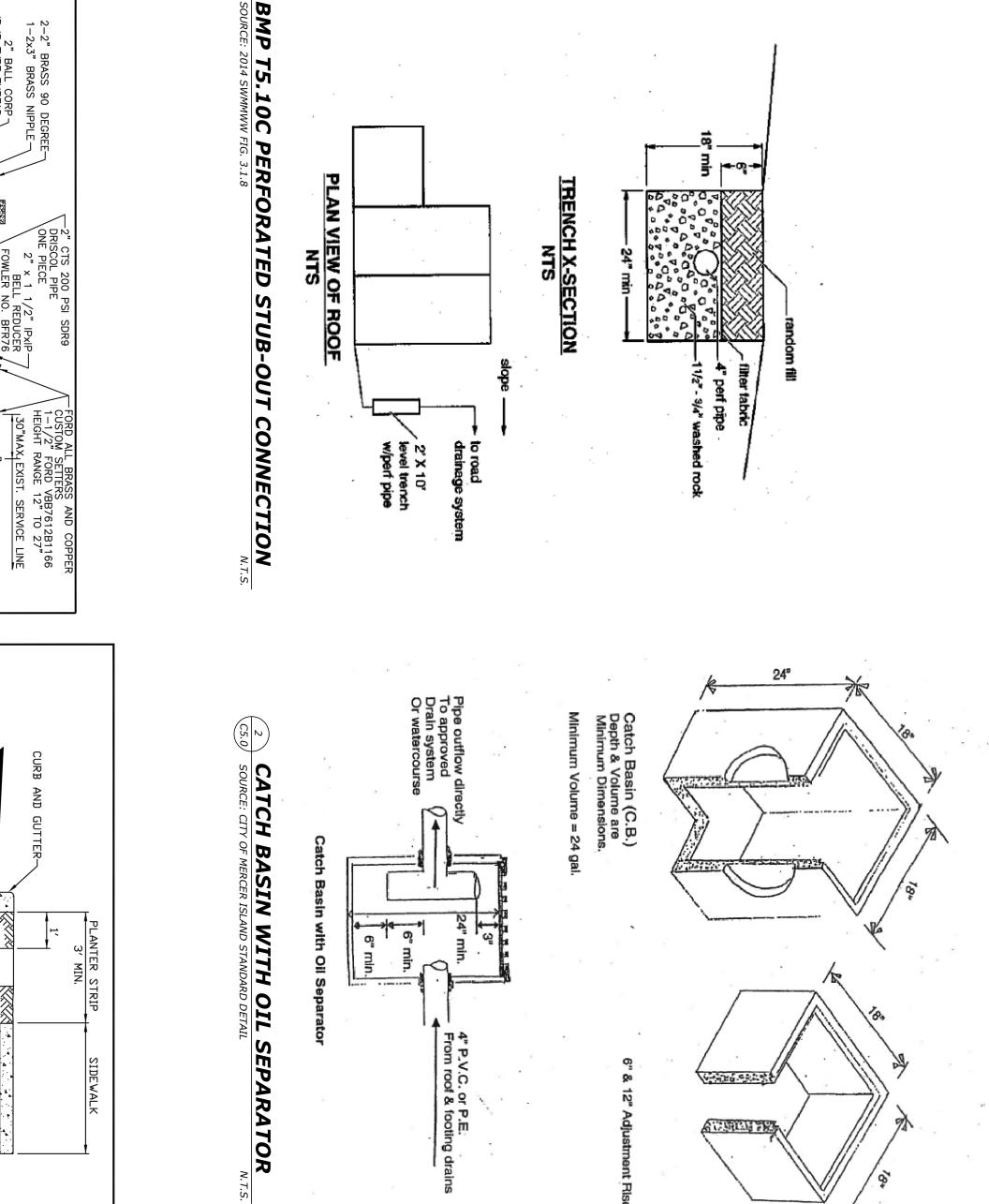
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NO.	DESCRIPTION	INIT	DATE
1 2	REVISIONS PER REDLINES #1	KRD	5/24/18
	ADU FF ADJUSTMENT	KRD	12/11/18

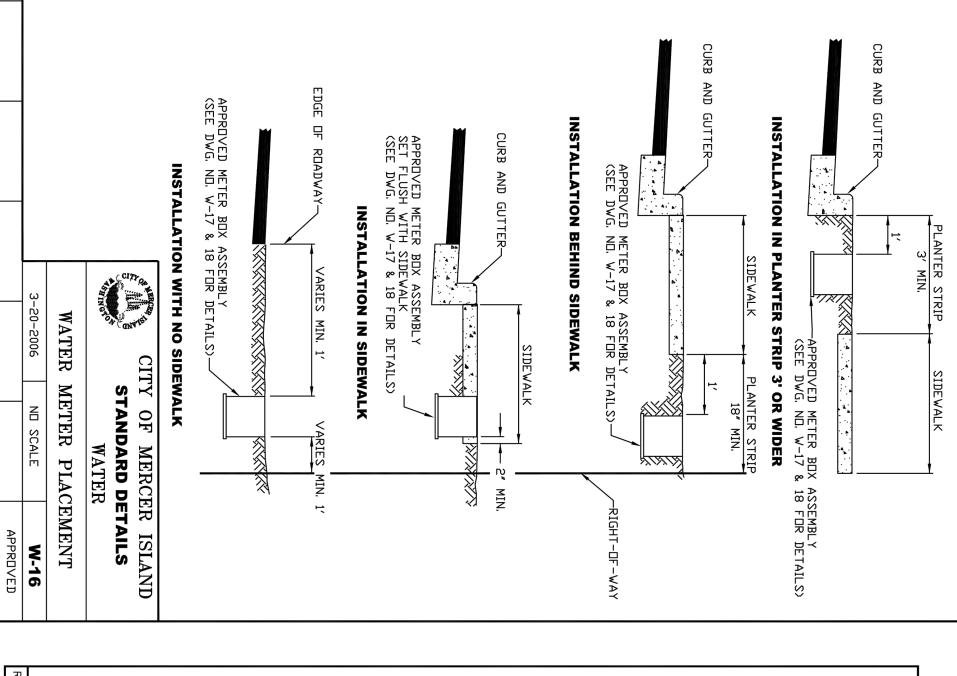
PLAN VIEW OF ROOF NTS

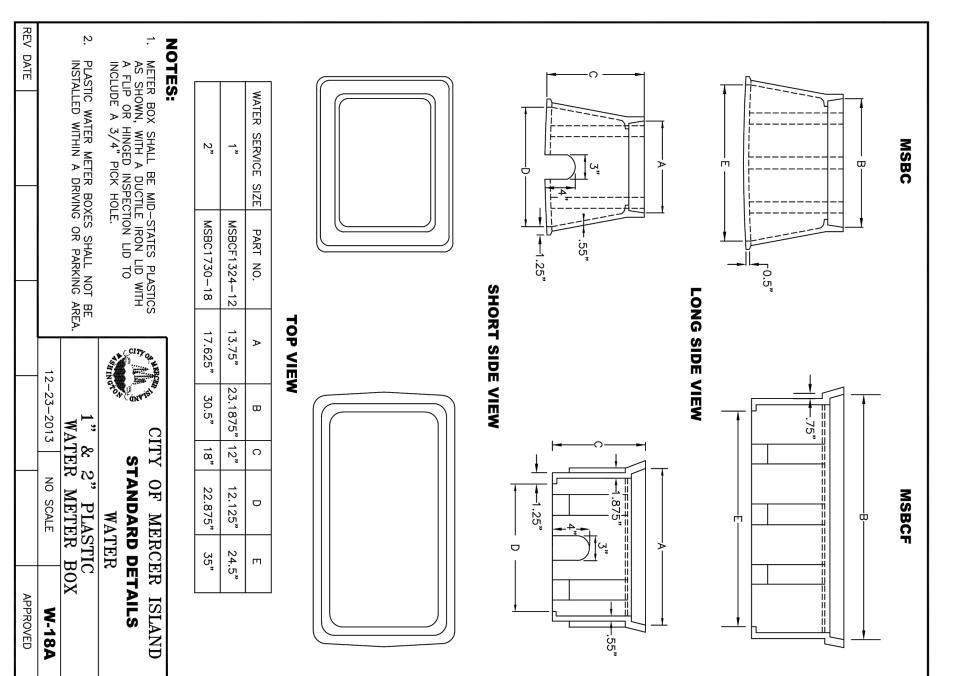


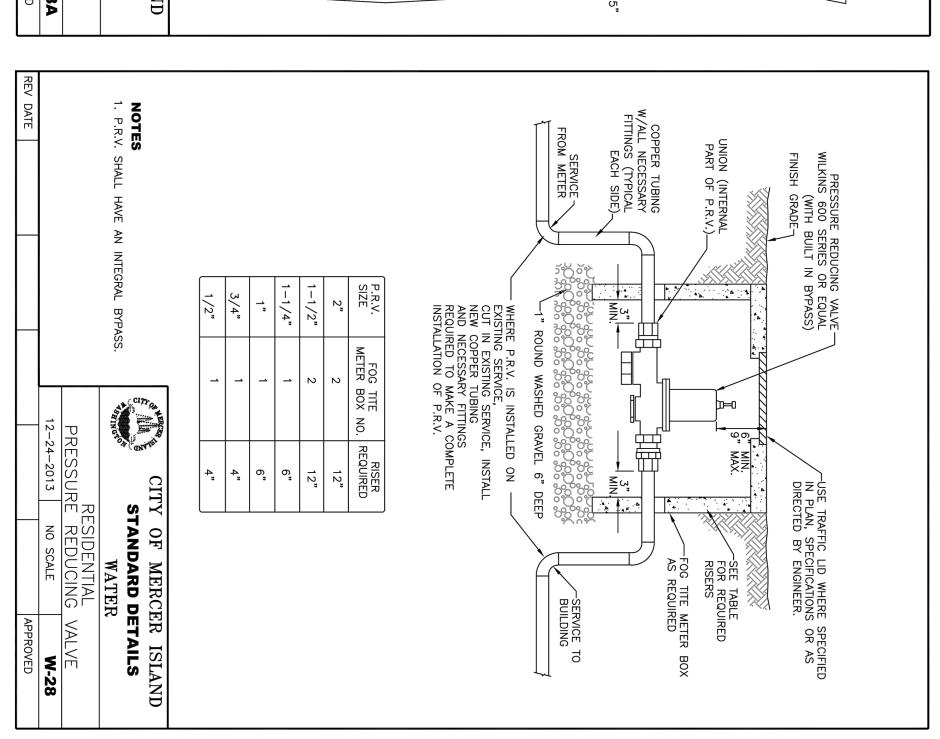


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TRENCH X-SECTION NTS

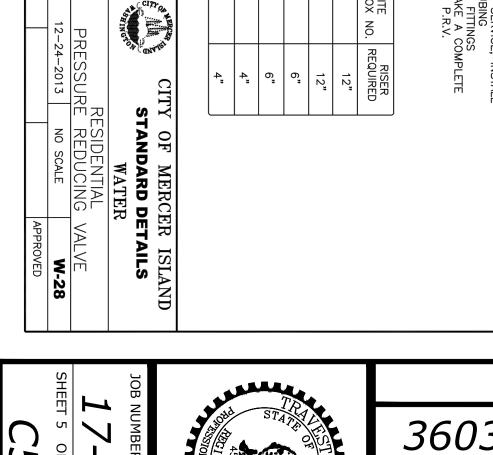






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 | & 12" Adiustment | | | |
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| 11-3-2017 | TR | | CIT | < BACKFILL. | -424–5555) | 5'-0" | 4'-6" | 4'-0" | 4'-0" | 3'-0"
 | 2'-0" | SUBGRADE | 유 | WIDTH | ABLE ABLE
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W-3	<u>N</u>		R ISLAND						
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 | S HICKNESS ON | UM THICKNESS ON THICKNESS ON | 3" ASPHALT CONC. | |
 |
| EQUAL. | MAIN. | ON SIZE TAPS. TAP SHALL BE AT | TAPPING TEES SHALL BE EPOXY | TAPPING TEES SHALL HAVE | NOTES | | | CAST IRON PIPE AND DUCTILE IRON PIPE | INSTALLED ON ASBESTOS CEMENT PIPE, | ANICAL JOINT
 | | | | |
 | | | | |
 | <u>-</u> | MATCH /
YETHLEN | | |
 | | a a a | 7 | |
 |
| | 3-2017 NO SCALE W-3 4. TAPPING TEES SHALL BE MULLER OR EQUAL. —— | IS DETERMINED BY THE TRENCH SECTION TRENCH SECTION 11-3-2017 NO SCALE W-3 4. TAPPING TEES SHALL BE MULLER OR EQUAL. | TOP FOUR FEET WHERE MAIN RUNS PARALLEL TO THE TRAVELED LANE, UNLESS EXISTING MATERIAL IS DETERMINED BY THE CITY ENGINEER TO BE SUITABLE BACKFILL. WATER 3. NO SIZE ON SIZE TAPS. TAP SHALL BE AT LEAST 2" SMALLER DIAMETER THAN THE EXISTING MAIN. TRENCH SECTION 4. TAPPING TEES SHALL BE MULLER OR EQUAL. | A. FULL DEPTH OF TRENCH WHERE MAIN CROSSES THE TRAVELED ROADWAY. RD DETAIL N.T.S. B. TOP FOUR FEET WHERE MAIN RUNS PARALLEL TO THE TRAVELED LANE, UNLESS EXISTING MATERAL IS DETERMINED BY THE CITY ENGINEER TO BE SUITABLE BACKFILL. 11–3–2017 NO SCALF W4.3 CITY OF MERCER ISLAND 2. STEEL TAPPING TEES SHALL BE EPDXY WATER LEAST 2' SMALLER DIAMETER THAN THE TRENCH SECTION 4. TAPPING TEES SHALL BE MULLER OR EQUAL. | 2. IN RIGHT OF WAY USE 100% 5/8 MINUS CRUSHED ROCK BACKFILL. A. 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FULL DEPTH OF TRENCH WHERE MAIN CROSSES THE TRAVELED LAWE. UNLESS STEEL TAPPING TEES SHALL BE EPDXY STANDARD DETAILS B. TOP FOUR FEET WHERE MAIN RUNS PARALLEL TO THE TRAVELED LAWE. UNLESS EXISTING MATERIAL IS DETERMINED BY THE CITY ENGINEER TO BE SUITABLE BACKFILL. 11–3–2017 NO SCAIF W-3 NOTES NOTES | NOTES NOTES NOTES 1. CALL TWO BUSINESS DAYS BEFORE YOU DIG. (1–800–424–5555) 2. IN RIGHT OF WAY USE 100% 5/8 MINUS CRUSHED ROCK BACKFILL. A. FULL DEPTH OF TRENCH WHERE MAIN CROSSES THE TRAVELED ROADWAY. DETAIL N.T.S. B. TOP FOUR FEET WHERE MAIN RUNS EXISTING MATERNAL IS DETERBUNINED BY THE CITY OF MERCER ISLAND PRABALLEL TO THE TRAVELED LAVE, UNLESS EXISTING MATERNAL IS DETERBUNINED BY THE CITY BE SUITABLE BACKFILL. 11-3-2017 NO SCAIF W-3 NOTES NOT | NOTES NO | NOTES 16" 2'-6" 4'-0" 6'-0" 112" 2'-8" 16" 3'-0" 5'-0" 16" 16" 3'-0" 16" 16" 3'-0" 16" 16" 16" 16" 16" 16" 16" 16" 16" 16 | B* 2'-4* 4'-0* 6'-0* INSTALLED IN ASBESTIGS CEMENT PIPE, 10* 2'-6* 4'-6* 6'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 4'-6* 112* 2'-6* 112* 2'-6* 4'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112* 2'-6* 112 | 4° PAYC. 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OF P.E. 4" OR 6" 2'-2" 3'-0" 5'-0" 10" 2'-6" 4'-0" 6'-0" 10" 2'-6" 4'-0" 6'-0" 10" 2'-6" 4'-0" 6'-0" 10" 2'-6" 4'-0" 6'-0" 10" 2'-6" 4'-0" 6'-0" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-0" 112" 2'-8" 4'-0" 6'-6" 112" 2'-8" 4'-0" 6'-0" 112" 2'-8" 4'-0" 112" 2'-8" 4'-0" 112" 2'-8" 4'-0" 112" 2'-8" 4'-0" 112" 2'-8" 4'-0" 112" 2'-8 | ### PLV.C. or P.E. WATER SERVICES 2'-0" 2'-0" 2'-0" 4'-0" 4'-0" 4'-0" 4'-0" 4'-0" 5'-0" 5'-0" 4'-0" 6'-0" 5'-0" | PPE ZONE MAX. TRENCH WIDTH AT SUBGRADE 4" P.V.C. OF P.E. 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NOTES &	DETAILS
3603 MERCER V	VAY DRAINAGE

PARCEL# 362350-0260 CITY OF MERCER ISLAND,

WASHINGTON SCALE: DATE: **CHECKED BY:** 10/18/2017 DRB HORZ: N/A VERT: N/A



-2009

W-11

TAPPING TEE

STANDARD DETAILS
WATER

OF MERCER

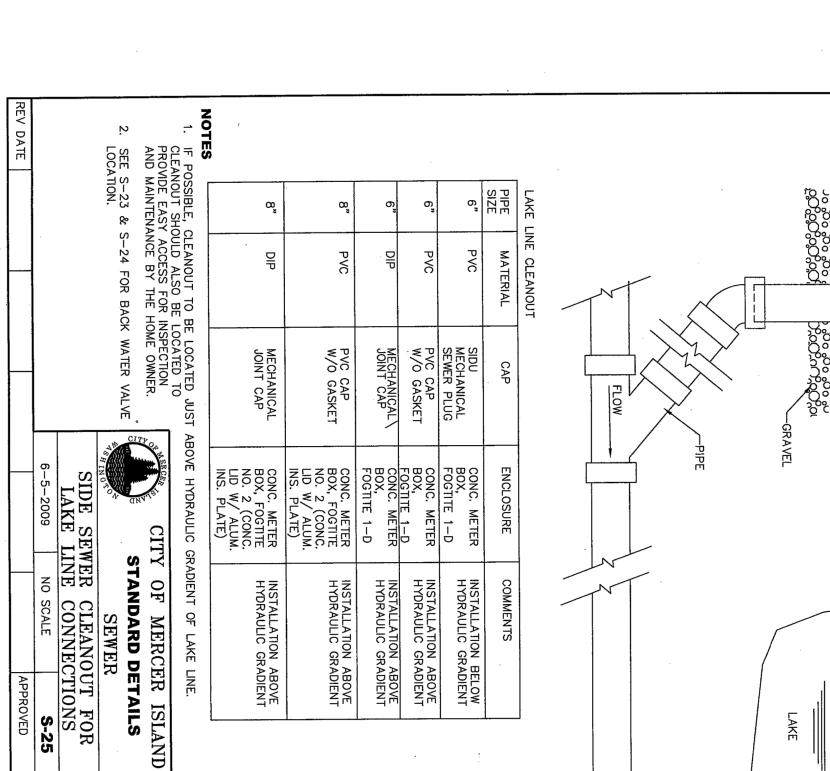
ISLAND

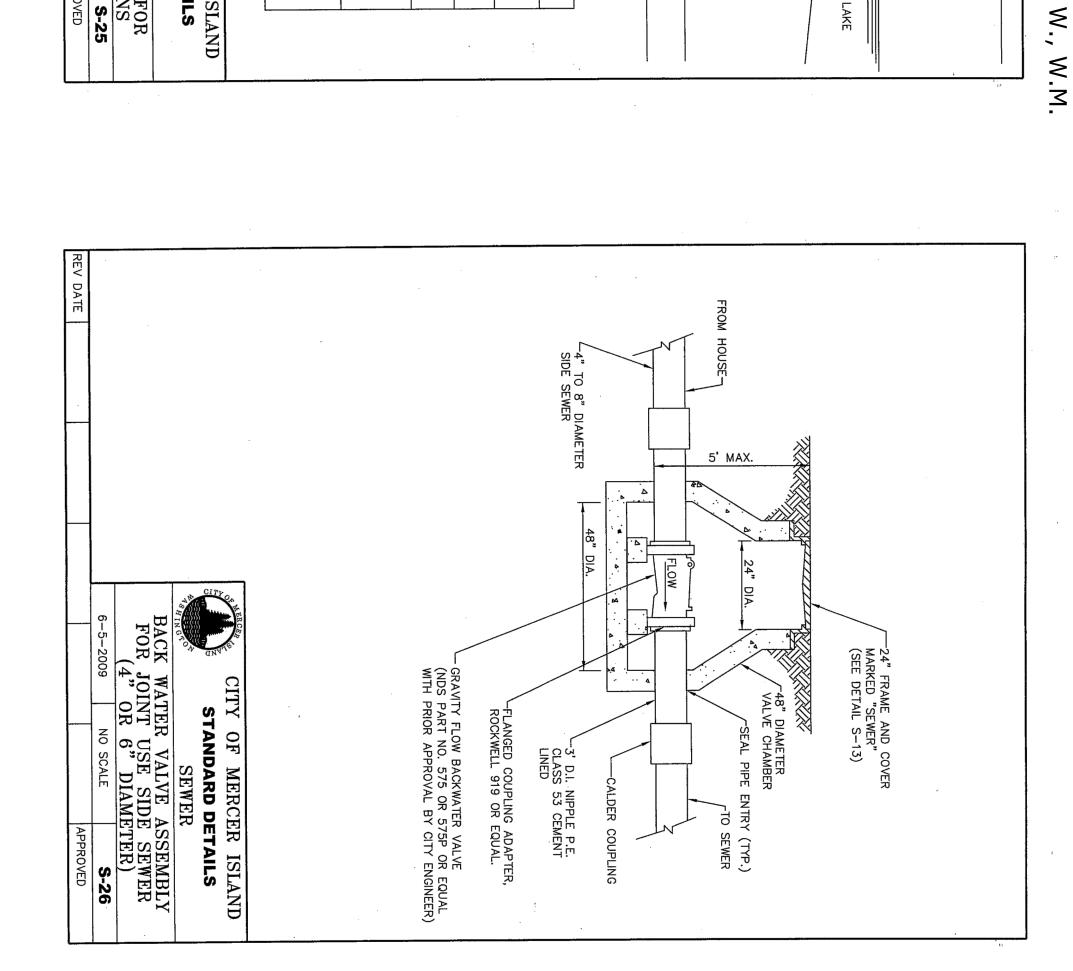
STAINLESS STEEL TAPPING TEE

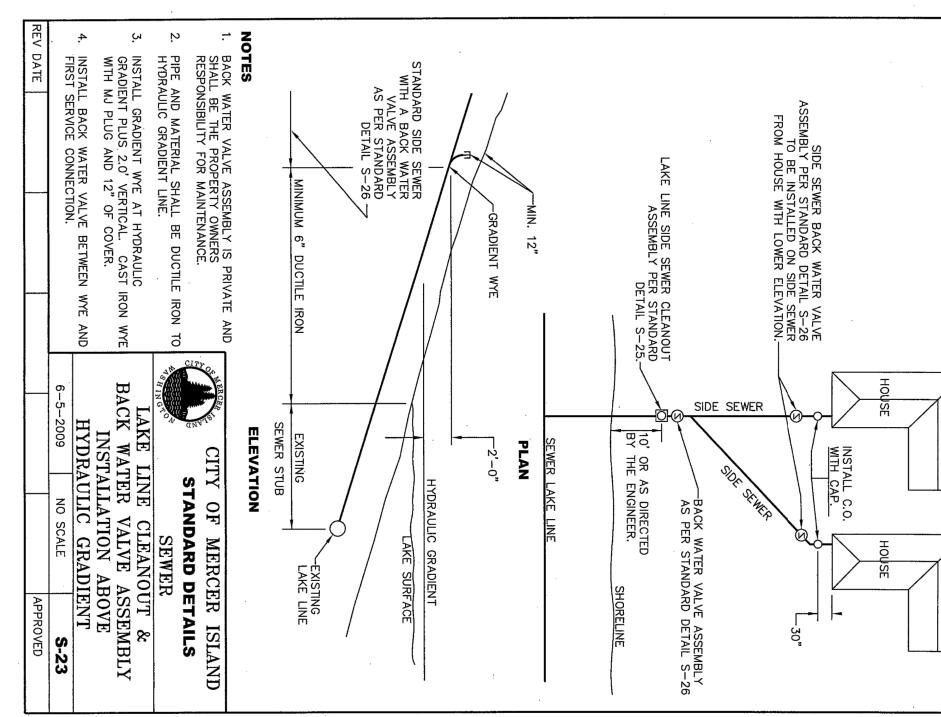
INSTALLED ON ASBESTOS CEMENT PIPE, CAST IRON PIPE AND DUCTILE IRON PIPE

	NO.	DESCRIPTION	INIT	DATE
	1	REVISIONS PER REDLINES #1	KRD	5/24/18
LAKEWOOD OFFICE 5920 100TH ST SW, STE 25 Lakewood, WA 98499 phone: 253-984-2900				
beylerconsulting.com				

PIPE AND MATERIAL SHALL BE DUCTILE IRON HYDRAULIC GRADIENT LINE. INSTALL BACK WATER VALVE BETWEEN WYE FIRST SERVICE CONNECTION. INSTALL GRADIENT WYE AT HYDRAULIC GRADIENT PLUS 2.0' VERTICAL. CAST IRON WYE WITH MJ PLUG AND 12" OF COVER. BACK WATER VALVE ASSEMBLY IS PRIVATE AND SHALL BE THE PROPERTY OWNERS RESPONSIBILITY FOR MAINTENANCE. LAKE LINE SIDE SEWER CLEANOUT ASSEMBLY PER STANDARD DETAIL S-25. MINIMUM 6" GRADIENT WYE DUCTILE AND ರ SEWER
LAKE LINE CLEANOUT &
BACK WATER VALVE ASSEMBLY
INSTALLATION ABOVE
HYDRAULIC GRADIENT
6-5-2009 NO SCALF SIDE SEWER SEWER STUB **ELEVATION** 10° NSTALL C.O. CITY OR AS DIRECTED THE ENGINEER. Y OF MERCER ISLA
STANDARD DETAILS BACK WATER VALVE ASSEMBLY AS PER STANDARD DETAIL S-26 LAKE SURFACE -EXISTING APPROVED ISLAND







Maximum Pipe Slopes and Velocities

Table 4.2.1.A presents maximum pipe slopes and velocities by pipe material.

Тавл	TABLE 4.2.1.A MAXIMUM PIPE SLOPES AND VELOCITIES	AND VELOCITIES	3
Pipe Material	Pipe Slope above which Pipe Anchors Required and Minimum Anchor Spacing	Maximum Slope Allowed	Maximum Velocity at Full Flow
CMP, Spiral Rib, PVC, (1)	20% (1 anchor per 100 LF of pipe)	30%(3)	30 fps
Concrete, CPE, or PP ⁽¹⁾	10% (1 anchor per 50 LF of pipe)	20%(3)	30 fps
Ductile Iron ⁽²⁾	20% (1 anchor per pipe section)	None	None
Solid wall HDPE ⁽²⁾	20% (1 anchor per 100 LF of pipe, cross-slope installations only)	None	None
Notes:			

Butt-fused or flanged pipe joints are required; above ground installation is recommended on slugreater than 40%.

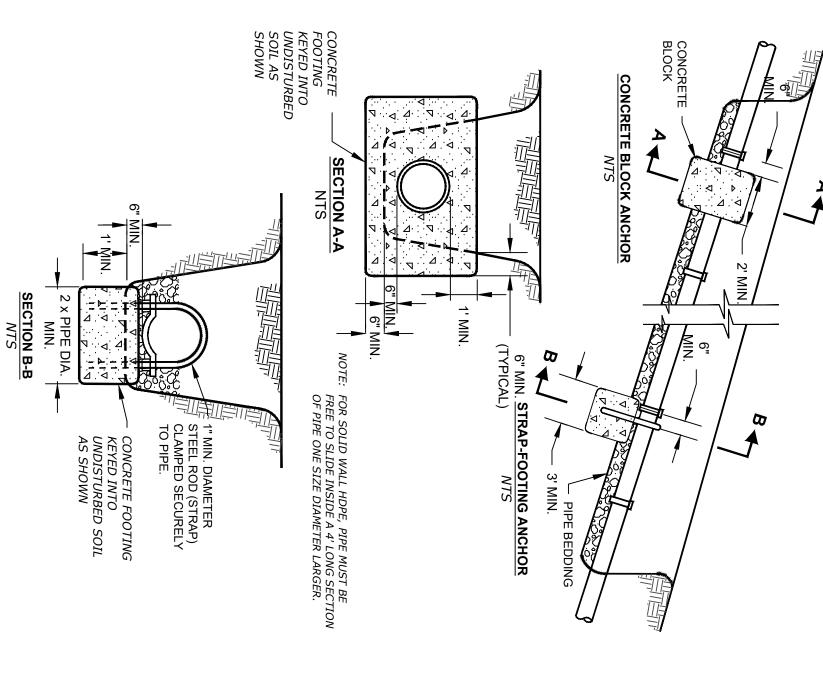
A maximum slope of 200% is allowed for these pipe materials with no joints (one section), with structures at each end, and with proper grouting.

MAXIMUM PIPE SLOPES/VELOCITIES & PIPE ANCHORING

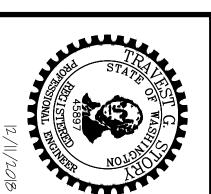
C6.0 SOURCE: 2016 KCSWDM

N.T.S.

These materials are not allowed in landslide hazard areas



9 9



DRAWN BY:

NOTES & DETAILS

3603 MERCER WAY DRAINAGE

PARCEL# 362350-0260 CITY OF MERCER ISLAND,

DRB

CHECKED BY: SCALE: HORZ: N/A

VERT: N/A

BEYLER CONSULTING Plan. Design. Manage CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

WASHINGTON

DATE:

10/18/2017

LAKEWOOD OFFICE 5920 100TH ST SW, STE 25 Lakewood, WA 98499 phone: 253-984-2900 beylerconsulting.com

DESCRIPTION INIT DATE KRD 5/24/18 REVISIONS PER REDLINES #1

 \triangleright

PORTION OF SECTION 12,

TOWNSHIP

24 N., RANGE 04

ENCLOSURE (SEE TABLE BELOW)

CODE REQUIREMENTS

A. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL DRAWINGS, SPECIFICATIONS, AND THE REQUIREMENTS OF THE BUILDING CODE, 2015 EDITION, AND THE LATEST EDITION OF THE "RECOMMENDATIONS FOR PRE-STRESSED ROCK AND SOIL ANCHORS". ON SHALL CONFORM TO THE OF THE INTERNATIONAL TO THE PTI DOCUMENT,

REFERENCE DOCUMENTS

A. TOPOGRAPHIC AND BOUNDARY SURVEY BY BEYLER CONSULTING, JOB NO. 17-196 GEOTECHNICAL INVESTIGATION FATBOYCON. WMERCERWAY. RG В GEORESOURCES, Ε̈

GEOTECHNICAL INFORMATION AND CRITERIA

A. INSTALLATION EXCAVATION, (INSTALLATION OF SHORING, SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION AND FILLING REQUIREMENTS SHALL CONFORM WITH THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT AND/OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE SUBSURFACE CHARACTERIZATIONS USED TO DESIGN THE SHORING ARE CONTAINED IN THE SOILS REPORT AS REFERENCED ABOVE.

EXCAVATIONS FOR FOUNDATIONS SHALL BE PER PLAN DOWN TO UNDISTURBED NATIVE MATERIAL PER THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. OVER EXCAVATED AREAS SHALL BE BACKFILLED WITH LEAN CONCRETE OR PER GEOTECHNICAL RECOMMENDATIONS AT THE CONTRACTOR'S EXPENSE. EXCAVATION SLOPES SHALL BE SAFE AND SHALL NOT BE GREATER THAN THE LIMITS SPECIFIED BY LOCAL, STATE, AND NATIONAL SAFETY REGULATIONS. CONTRACTOR SHALL PROTECT CUT SLOPES AS NECESSARY IF CONSTRUCTION OCCURS DURING WET WEATHER, AND SHALL CONTROL AND MANAGE RUNOFF TO MINIMIZE EFFECTS ON CONSTRUCTION.

DESIGN LOADS ARE DETERMINED BY THE GEOTECHNICAL ENGINEER. THE SOIL PRESSURES INDICATED ON THE SOIL PRESSURE DIAGRAM WERE USED FOR DESIGN, IN ADDITION TO THE DEAD AND LIVE LOADS. SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR MORE COMPLETE INFORMATION, INCLUDING RECOMMENDATIONS FOR SHORING IN GENERAL, SHORING MONITORING, EXCAVATION, LAGGING, AND DRAINAGE.

SOIL NAIL DESIGN PARAMETERS: DESIGN PARAMETERS AS APPROVED BY THE GEOTECHNICAL ENGINEER ARE AS FOLLOWS:

(PCF) (DEG) (PSF) RESISTANCE (K/FT)	SOII IIII	UNIT WEIGHT	UNIT WEIGHT SOIL FRICTION	SOIL COHESION	DESIGN PULLOUT
NATIVE SOILS 130 33 1000 3.6	NATIVE SOILS	130	33	1000	3.6
THE WATER TABLE HAS BEEN ASSUMED TO OCCUR BENEATH THE BASE OF THE EXCAVATION IN ACCORDANCE WITH THE FINDINGS FROM THE GEOTECHNICAL INVESTIGATION	THE WATER TAE	WITH THE FIN	SSUMED TO OCCUDINGS FROM THE	GEOTECHNICAL IN	ASE OF THE EXCAVATION

FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, CONFORMANCE WITH W.C.L.B. STANDARD GRADING RULES 17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS: AND GRADEI S FOR WEST GRADED COAST LUMBER AND MARKED

WOOD

Use Grade Fb (psi, single use)

2X OR 4X TIMBER LAGGING

HEM-FIR NO. 1

STEEL SPECIFICATIONS:
ACCORDANCE WITH THE LATEST
2205 OF THE BUILDING CODE. US: DESIGN, FABRICATION AND EF ERECTION AL, AISC 3 AND

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER CONNECTION BOLTS PLATES, AND RODS A53 (E OR S, A307 ASTM SPECIFICATION GR. B) 36 KSI 35 KSI

ALL WELDING SHALL BE IN CONFORMANCE WITH A. I.S.C. / SHALL BE PERFORMED BY W. A. B. O. CERTIFIED WELDERS (ONLY PREQUALIFIED WELDS (AS DEFINED BY A. W. S.) SHALL **DESCRIPTION** AND A.W.S. USING E70 BE USED. XX ELECTRODES.

A. THE THE GENERAL CONTRACTOR AND SUBCONCTRACTORS (HEREAFTER REFERRED TO COLLECTIVELY AS THE CONTRACTOR UNLESS INDICATED OTHERWISE) ARE RESPONSIBLE FOR THE CONSTRUCTION MEANS AND METHODS AND CONTROL FOR THE PROCESSES OF THE WORK. THIS INCLUDES THE CONSTRUCTION SEQUENCE, THE SAFETY OF THE WORKERS, TEMPORARY HANDRAILS, EXCAVATION ACCESS, BARRIERS, LIFTING OF MATERIAL AND CONSTRUCTION EQUIPMENT INTO AND OUT OF THE EXCAVATION, TEMPORARY BRACING OF FORMWORK, AND THE STABILITY OF ALL TEMPORARY CUT

THE SOIL NAIL SHORING WALL IS A SYSTEM OF SHORING DESIGNED TO SUPPORT THE EXCAVATION SIDEWALLS ONCE THE COMPONENTS OF THE SOIL NAILS AND FACING SYSTEM ARE COMPLETELY INSTALLED FOR ALL LIFTS UP TO AND INCLUDING THE CURRENT EXCAVATION LIFT. THE STABILITY OF INTERIM TEMPORARY FACE CUTS THAT EXIST PRIOR TO INSTALLATION OF THE WALL FACINGS IS THE SOLE RESPONSIBILITY THE CONTRACTOR.

 \mathcal{C} THE WORK SHALL CONSIST OF INSTALLING SOIL NAILS, WALL DRAINAGE, AND WALL FACING AS SPECIFIED HEREIN AND SHOWN ON THE PLANS. THE WORK SHALL ALSO INCLUDE EXCAVATIONS IN ACCORDANCE WITH THE STAGED LIFTS SHOWN ON THE PLANS, INSTALLING SOIL NAILS TO THE SPECIFIED MINIMUM LENGTH AND ORIENTATION INDICATED ON THE PLANS, PLACING THE WALL DRAINAGE ELEMENTS AND FACING, AND PERFORMING SOIL NAIL PULLOUT TESTING. THE CONTRACTOR SHALL FURNISH ALL LABOR MATERIALS, AND EQUIPMENT REQUIRED FOR COMPLETING THE

PRECONSTRUCTION MEETING

. A PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO THE START OF THE WORK AND SHALL BE ATTENDED BY THE OWNER'S REPRESENTATIVES, THE ENGINEER, THE GENERAL CONTRACTOR, THE EXCAVATION SUBCONTRACTOR, THE SOIL NAIL SPECIALTY SUBCONTRACTOR, THE GEOTECHNICAL SPECIAL INSPECTOR, AND THE BUILDING DEPARTMENT SITE INSPECTOR. THE PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED TO CLARIFY THE REQUIREMENTS FOR THE WORK, TO COORDINATE THE CONSTRUCTION ACTIVITIES, AND TO IDENTIFY CONTRACTUAL RELATIONSHIPS AND RESPONSIBILITIES.

EXISTING SITE CONDITIONS, UTIL

A. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO ANY CONSTRUCTION ACTIVITIES FOR THE PURPOSE OF OBSERVING AND DOCUMENTING THE PRE-CONSTRUCTION CONDITION OF ALL STRUCTURES, INFRASTRUCTURE, SIDEWALKS, ROADWAYS, AND ALL OTHER FACILITIES ADJACENT TO THE SITE. DURING CONSTRUCTION, THE CONTRACTOR SHALL OBSERVE THE CONDITIONS ABOVE THE SOIL NAIL WALL ON A DAILY BASIS FOR SIGNS OF GROUND OR BUILDING MOVEMENTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND THE ENGINEER IF SIGNS OF MOVEMENT SUCH AS NEW CRACKS, INCREASED SIZE OF OLD CRACKS OR SEPARATION OF JOINTS IN STRUCTURES, FOUNDATIONS, STREETS OR PAVED AND UNPAVED SURFACES ARE OBSERVED. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WRITTEN DOCUMENTATION OF THE OBSERVED CONDITIONS WITHIN 24 HOURS OF INITIAL OBSERVATION.

B. THE CONTRACTOR MUST VERIFY ALL EXISTING DIMENSIONS AND SITE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS AND THOSE UTILITIES OR UNDERGROUND OBSTRUCTIONS NOT SHOWN ON THE PLANS, THAT MAY IMPACT OR CONFLICT WITH THE

B. THE CONTRACTOR MUST VERIFY ALL THE CONTRACTOR IS RESPONSIBLE EXISTING UTILITIES SHOWN ON THE FORESTRUCTIONS NOT SHOWN ON THE FORESTRUCTURE TO SHOW THE FORESTRUCT

THE CONTRACTOR IS RESPONSIBLE OTHER UNDERGROUND OBSTRUCTIONS FOR ANY REMOVAL OF ABANDONED UTILITIES, THAT INTERFERE WITH THE SOIL NAIL WALL.

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A. IN ACCORDANCE WITH PROVIDED BY THE OWN WITH THE LOCAL E OWNER FOR ALL

B. IK

CONSTRUCTION SITE DRAINAGE

THE CONTRACTOR IS RESPONSIB BOTH BEHIND AND IN FRONT OF 1 CONSTRUCTION SITE

C. EXISTING

D. THE CONTRACTOR IS RESPONSIBLE FOR THE CONDITION AND MAINTENANCE OF ANY PIPE OR CONDUIT USED TO CONTROL SURFACE WATER DURING CONSTRUCTION. UPON SUBSTANTIAL COMPLETION OF THE WORK, SURFACE WATER CONTROL PIPES OR CONDUITS SHALL BE REMOVED FROM THE SITE. ALTERNATIVELY, PIPES OR CONDUITS THAT ARE LEFT IN PLACE WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE SHALL BE FULLY GROUTED (ABANDONED) OR LEFT IN A MANNER THAT PROTECTS THE STRUCTURE AND ALL ADJACENT FACILITIES FROM GROUND LOSS ASSOCIATED WITH MIGRATION FINES THROUGH THE PIPE OR CONDUIT.

CONSTRUCTION METHODS AND SEQUENCE

₽ A. AT LEAST 15 DAYS PRIOR TO INITIATING THE PROPOSED CONSTRUCTION METHODS AND ALL BE AS ING THE WORK, THE CONTRACTOR AND SEQUENCE TO THE ENGINE

E AS SHOWN ON THE PLANS, OF SAPPROVED OTHERWISE BY THE NOTHOUSE SPECIFIED HEREIN CONTRACTOR AND THOSE SPECIFIED HEREIN CONTRACTOR AND THE CONTRACT THE CONTRACTOR
TO THE ENGINEER ONTRACTOR SHALL ENGINEER FOR R

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UNDERGROUND

C. BASED ON THE AS-BUILT LOCATIONS
POWER SERVICE LINES, THE CONTRAC
TO SHIFT NAIL LOCATIONS TO AVOID OF SIDE SEWERS, WATER SERVICE AND GAS OR STOR SHALL SEEK APPROVAL FROM THE ENGINEER CONFLICTS WITH THESE UTILITIES.

G.

THE OWNER'S REPRESENTATIVE PROVIDING THE SPECIAL INSPECTION SHALL BE A QUALIFIED GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE WITH EXPERIENCE MONITORING SOIL NAIL WALL CONSTRUCTION. ACCURATE RECORDS DOCUMENTING THE SOIL NAIL WALL CONSTRUCTION SHALL BE MAINTAINED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ASSIST THE OWNER'S REPRESENTATIVE AS NECESSARY TO OBTAIN THE AS-BUILT NAIL LOCATIONS, TOP OF WALL ELEVATIONS, AND ALL OTHER INFORMATION AS REQUIRED BY THE OWNER AND ENGINEER.

₽ AT LEAST 15 DAYS PRIOR TO INITIATING THE WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW A DETAILED CONSTRUCTION SITE DRAINAGE PLAN ADDRESSING ALL ELEMENTS NECESSARY TO DIVERT, CONTROL, AND DISPOSE OF SURFACE WATER. AMONG OTHER MEANS, CONTROL OF SURFACE WATER FROM BEHIND THE WALL MAY BE ACCOMPLISHED BY GRADING AWAY FROM THE WALL, TRENCHES AND SUMPS, OR A SHOTCRETED GUTTER SYSTEM. IN ADDITION, THE EXCAVATION SHOULD BE GRADED SO AS TO DIRECT SURFACE WATER AWAY FROM THE TOE OF THE SOIL NAIL AND TO PREVENT THE PONDING OF WATER.

EXISTING SUBSURFACE DRAINAGE FEATURES ENCOUNTERED DURING THE EXCAVATION SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER'S REPRESENTATIVE. WORK IN THESE AREAS SHALL BE SUSPENDED UNTIL REMEDIAL MEASURES MEETING THE APPROVAL OF THE OWNER'S REPRESENTATIVE ARE IMPLEMENTED BY THE CONTRACTOR. REMEDIAL MEASURES FOR EXISTING SUBSURFACE DRAINAGE FEATURES ENCOUNTERED DURING THE WORK, WHICH WERE NOT IDENTIFIED ON THE PLANS, WILL BE PAID FOR AS EXTRA WORK PER THE CONTRACT DOCUMENTS.

ယ

B. THE CONSTRUCTION SEQUENCE SHALL B WITH THE APPROVED SUBMITTAL, UNLE EXCAVATIONS STEEPER OR HIGHER THAT SHALL BE MADE ABOVE OR BELOW THE OF THE ENGINEER. S, OR IN ACCORDANCE 3Y THE ENGINEER. NO IN OR ON THE PLANS IT WRITTEN APPROVAL

C. TENTATIVELY APPROVED CONSTRUCTIMES ARE INDICATED ON THE PLA OR CLOSURE TIMES THAT ARE E OTHERWISE BY THE ENGINEER RESPONSIBILITY FOR STABILITY OF AND STABILIZED WITH WALL FACING INSTALLED. . ED CONSTRUCTION ON THE PLANS. H ON METHODS, SEQUENCE, AND FACE S. HOWEVER, CONSTRUCTION METHODS, SHER INDICATED ON THE PLANS OR A NOT RELIEVE THE CONTRACTOR OF THE TEMPORARY CUT FACE UNTIL IT IS AND THE NAIL HEAD CONNECTION IS COM SEQUENCE
SEQUENCE
APPROVED
OF ALL
IS CLOSED
OMPLETELY

SHALL SUBMIT

D METHODS OF

AT LEAST 15 DAYS PRIOR TO INITIATING THE WORK, THE CONTRACTOR TO THE ENGINEER FOR REVIEW EXCAVATION EQUIPMENT TYPES AND EXCAVATING TO THE STAGED LIFTS INDICATED ON THE PLANS.
FOR DISTANCES AWAY FROM THE SHOTCRETE WALL FACE GREATER THAN SHOTCRETE WALL HEIGHT OR 10 FEET, WHICHEVER IS MORE, MASS EXCOCUR AT ANY TIME, BUT WITH SLOPES NO STEEPER THAN 1H: 1V, UNLIOTHERWISE BY THE ENGINEER. SHOTCRETE WALL FACE GREATER THAN THE CURRENT FEET, WHICHEVER IS MORE, MASS EXCAVATION MAY SLOPES NO STEEPER THAN 1H: 1V, UNLESS APPROVED

MASS EXCAVATION OF THE DRILL BENCH FOR THE NEXT ROW OCCUR ANY TIME THE DAY AFTER THE PRECEDING LIFT. MAY

MASS EXCAVATION BENEATH A PRECEDING LIFT, CLOSER FACING WALL, SHALL NOT OCCUR UNTIL INSTALLATION OF NAIL TESTING FOR THE PRECEDING LIFT ARE COMPLETE OWNER'S REPRESENTATIVE. ER THAN 5 FEET FROM CONNECTION HARDWARE AND ACCEPTABLE TO H A H

E. DURING MASS EXCAVATION OF THE DRILL BENCH FOR THE NEXT ROW OF SOIL NAILS, THE CONTRACTOR SHALL MAINTAIN A BENCH OF MATERIAL TO SERVE AS A PLATFORM FOR THE DRILLING EQUIPMENT AND AS A STABILIZING BERM FOR THE WALL EXCAVATION FACE (NEAT LINE). IN ACCORDANCE WITH THE PLANS OR AS APPROVED BY THE ENGINEER, THE STABILIZING BERM MAY BE EITHER (1) A NATIVE BERM, (2) A FILL BERM, OR (3) NEAT CUT. IN ALL THREE CASES, THE DRILL BENCH SHALL BE ESTABLISHED NOT MORE THAN 3-1/2 FEET BELOW THE ROW OF NAILS TO BE INSTALLED AND SHALL EXTEND OUT FROM THE WALL FACE A MINIMUM DISTANCE NECESSARY TO PROVIDE A SAFE WORKING BENCH FOR THE DRILL EQUIPMENT AND WORKERS.

EXCAVATION TO THE NEAT LINE SHALL BE DONE USING PROCEDURES OVEREXCAVATION OR LOOSENING, MINIMIZE DEGRADATION OF THE SUPPORT BELOW THE OVERLYING PORTIONS OF THE SOIL NAIL WALL, SOIL NAILS CURRENTLY BEING INSTALLED, MINIMIZE LOSS OF SOIL PREVENT GROUND FREEZING. S THAT PREVENT
SOIL BEARING
AND BELOW THE
MOISTURE, AND

EXTENSION OF THE CLOSURE TIME SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO EXTENSION OF CLOSURE TIME SHALL BE APPROVED UNTIL A TEST CUT IS CONSTRUCTED AND THE CONTRACTOR DEMONSTRATES FOR EACH MATERIAL TYPE THAT THE CUT FACE WILL BE STABLE OVER THE PROPOSED CLOSURE TIME. EXTENSIONS TO THE CLOSURE TIME MAY BE REVOKED BY THE ENGINEER AT ANY TIME DEPENDING ON THE PERFORMANCE OF THE CUT FACE. CLOSURE TIME MAY NOT BE EXTENDED TO LONGER THAN 24 HOURS BETWEEN EXCAVATION AND APPLICATION OF THE WALL FACING. THE DURATION OF THE TIME BETWEEN FINAL EXCAVATION TO THE NEAT LAPPLICATION OF THE WALL FACING IS REFERRED TO AS CLOSURE TIME.

TIME FOR ALL WALL EXCAVATION FACES SHALL BE LESS THAN A SINGLE UNLESS SHOWN OTHERWISE ON THE PLANS OR APPROVED OTHERWISE BY THE T LINE AND THE E. THE CLOSURE SLE WORK SHIFT, THE ENGINEER.

METHODS REMOVAL OF FACE PROTRUSIONS (E.G. COBBLES, BOULDERS, RUBBLE, OR OTHER OBJECTS) TO ACCOMPLISH THE CONSTRUCTION SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE PROPOSED METHOD FOR MITIGATION OF THE FACE PROTRUSION PRIOR TO INITIATION OF THE WORK. SHOULD THE REMOVAL OF FACE PROTRUSIONS RESULT IN VOIDS BEYOND THE NEAT LINE, THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE METHOD OF BACKFILLING AND SHALL SUBMIT TO THE ENGINEER SUCH METHOD(S) PRIOR TO INITIATING THE WORK.

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PRIOR TO INITIATING THE THE ENGINEER FOR REVIEW: WORK, 품 CONTRACTOR SHALL SUBMIT

5

1. DRILLING METHODS AND EQUIPMENT INCLUDING DRILL RIG TYPE, USE OF CASED OR OPEN-HOLE METHODS, PROPOSED DRILL HOLE DIAMETER, AND METHOD OF CUTTINGS REMOVAL TO ACHIEVE THE SPECIFIED PULLOUT RESISTANCE.

2. NAIL GROUT MIX DESIGN INCLUDING: BRAND AND TYPE OF PORTLAND CEMENT; SOURCE, GRADATION, AND QUALITY OF ALL AGGREGATES; PROPORTIONS OF MIX BY WEIGHT AND WATER-CEMENT RATIO; MANUFACTURER AND BRAND NAME OF ALL ADMIXTURES; AND COMPRESSIVE STRENGTH TEST RESULTS (PER ASTM C109 / AASHTO T106) VERIFYING THE SPECIFIED MINIMUM 3 AND 28 DAY GROUT STRENGTHS.

3. NAIL GROUT PLACEMENT PROCEDURES AND EQUIPMENT.

4. NAIL TESTING METHODS AND EQUIPMENT INCLUDING DETAILS OF THE JACKING FRAME AND APPURTENANT BRACING, METHODS OF ISOLATING TEST NAILS DURING WALL FACING APPLICATION, AND METHODS OF GROUTING THE UNBONDED LENGTH OF TEST NAILS AFTER TESTING.

ω. 4.

5. IDENTIFICATION NUMBERS AND CERTIFIED CALIBRATION RECORDS FOR EACH TEST JACK AND PRESSURE GAUGE PAIR TO BE USED. CALIBRATION RECORDS SHALL INCLUDE THE DATE TESTED, DEVICE IDENTIFICATION NUMBER, AND THE CALIBRATION TEST RESULTS AND SHALL BE CERTIFIED FOR AN ACCURACY OF AT LEAST 2 PERCENT OF THE APPLIED CERTIFICATION LOADS BY A QUALIFIED INDEPENDENT TESTING LABORATORY WITHIN 90 DAYS PRIOR TO SUBMITTAL.

6. ONCE AVAILABLE, CERTIFIED MILL TEST RESULTS FOR NAIL BARS FROM EACH HEAT SPECIFYING THE ULTIMATE STRENGTH, YIELD STRENGTH, ELONGATION AND COMPOSITION.

7. MANUFACTURER CERTIFICATIONS FOR THE SOIL NAIL CENTRALIZERS AND SOIL NAIL BAR COUPLERS. 6. 7. Ÿ

. MATERIALS WITHOUT DEFECTS. DEFECTIVE REPRESENTATIVE SHALL BE REMOVED CONSIST OF THE FOLLOWING: CONSTRUCTION OF SOIL NAIL WALLS SHALL E
MATERIALS REJECTED
D BY THE CONTRACTOR. IK BY E FURNISHED NEW AND
BY THE OWNER'S
THE MATERIALS SHALL

1. CENTRALIZERS SHALL BE CONSTRUCTED OF SCHEDULE 40 PVC, SHALL BE SECURELY ATTACHED TO THE NAIL BAR, SIZED TO POSITION THE NAIL BAR WITHIN 1 INCH OF THE CENTER OF THE DRILL HOLE, SIZED TO ALLOW TREMIE PIPE INSERTION TO THE BOTTOM OF THE DRILL HOLE, AND SIZED TO ALLOW GROUT TO FLOW FREELY UP THE DRILL HOLE.

2. NAIL GROUT SHALL BE A NEAT CEMENT OR SAND-CEMENT MIXTURE WITH A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1500 PSI AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI PER ASTM C109 / AASHTO T106.

3. CEMENT SHALL CONFORM TO ASTM C150 / AASHTO M85, TYPE I.

4. FINE AGGREGATE SHALL CONFORM TO ASTM C33 / AASHTO M6.

5. NAIL BARS SHALL CONFORM TO ASTM A615 / AASHTO M31, GRADE 60 OR 75 OR ASTM A722 / AASHTO M275, GRADE 150.

6. BAR COUPLERS SHALL DEVELOP THE ULTIMATE TENSILE STRENGTH OF THE BAR AS CERTIFIED BY THE MANUFACTURER.

. CEMENT PARTIAL SHALL ADEQUATELY)N. CEMENT TI STORED HAT HAS TO PREVENT MOISTURE DEGRADATION BECOME CAKED OR LUMPY SHALL NO

C. ALL NAIL BARS SHALL BE CAREFULLY HANDLED AND SHALL BE STORED ON SUPPORTS TO KEEP THE STEEL FROM CONTACT WITH THE GROUND. STEEL BARS SHALL BE PICKED UP IN SUCH A WAY AS TO PREVENT OVERSTRESSING. DAMAGE TO THE NAIL STEEL AS A RESULT OF OVERSTRESSING, ABRASION, CUTS, NICKS, WELDS, AND WELD SPLATTER SHALL BE CAUSE FOR REJECTION BY THE OWNER'S REPRESENTATIVE. GROUNDING OF PROTECTED FROM AND SUFFICIENTLY FREE OF DIRT, RUST, AND OTHER DELETERIOUS SUBSTANCES PRIOR TO INSTALLATION. HEAVY CORROSION OR PITTING OF NAILS SHALL BE CAUSE FOR REJECTION BY THE OWNER'S REPRESENTATIVE. LIGHT RUST THAT HAS NOT RESULTED IN PITTING IS ACCEPTABLE.

DESIGN:

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APPROVED:

ABB

ONE SUCCESSFUL VERIFICATION TEST SHALL BE PERFORMED IN EACH SOIL UNIT IDENTIFIED ON THE PLANS, PRIOR TO STARTING INSTALLATION OF PRODUCTION NAILS IN THE VARIOUS SOIL UNITS. THE VERIFICATION TEST LOCATIONS ARE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE OWNER'S REPRESENTATIVE.

NAILS SHALL BE INSTALLED AT THE LOCATIONS AND TO THE LENGTHS INDICATED ON THE PLANS. THE ENGINEER MAY ADD, ELIMINATE, OR RELOCATE NAILS TO ACCOMMODATE ACTUAL FIELD CONDITIONS.

Permit Revisions

Nov. 22, 2018

THE CONTRACTOR SHALL SELECT THE DRILLING EQUIPMENT AND METHODS SUITABLE FOR THE GROUND CONDITIONS AT THE SITE. THE DRILL HOLE DIAMETER SHALL BE SELECTED TO PROVIDE THE MINIMUM SPECIFIED GROUT COVER OVER THE NAIL BAR AND TO DEVELOP THE SPECIFIED PULLOUT RESISTANCE. WATER, DRILLING MUDS, OR OTHER FLUIDS USED TO ASSIST IN CUTTING REMOVAL SHALL NOT BE ALLOWED FOR UNCASED DRILL HOLES. UNCASED DRILL HOLES SHALL BE OBSERVED FOR CLEANLINESS PRIOR TO INSERTION OF THE NAIL BAR. IN CAVING GROUND, THE CONTRACTOR SHALL USE CASED OR AUGERCAST DRILLING METHODS TO SUPPORT THE SIDES OF THE

D. THE CONTRACTOR SHALL IMMEDIATELY SUSPEND DRILLING OPERATIONS IF GROUND SUBSIDENCE IS OBSERVED, IF THE SOIL NAIL WALL IS ADVERSELY AFFECTED, OR IF ADJACENT STRUCTURES ARE DAMAGED AS A RESULT OF THE DRILLING OPERATION. THE ADVERSE CONDITIONS SHALL BE STABILIZED IMMEDIATELY AND THE ENGINEER SHALL BE NOTIFIED OF SUCH CONDITIONS WITHIN 24 HOURS.

E. NAIL BARS SHALL BE INSERTED INTO THE DRILL HOLE TO THE REQUIRED LENGTH WITHOUT DIFFICULTY AND IN SUCH A MANNER AS TO PREVENT DAMAGE TO THE DRILL HOLE. NAIL BARS THAT CANNOT BE FULLY INSERTED TO THE DESIGN DEPTH SHALL BE REMOVED FROM THE DRILL HOLE AND THE DRILL HOLE SHALL BE CLEANED SUFFICIENTLY TO ALLOW UNOBSTRUCTED INSTALLATION OF THE BAR.

IF THE NAIL BAR IS INSTALLED USING CENTRALIZERS ARE NOT REQUIRED PROVIDED THAT THE BAR WILL REMAIN IN THE CENTRAL SITUATIONS, SUMP SHALL NOT EXCEED 8 INCHES. INSTALLED USING CASED OR AUGERCAST QUIRED PROVIDED THE INSTALLATION METHOD N IN THE CENTRAL PORTION OF THE GROUT. METHODS,

ENSURES

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Max Corp.

A. GROUT EQUIPMENT SHALL PRODUCE A UNIFORMLY MIXED GROUT FREE OF LUMPY AND UNDISPERSED CEMENT. A POSTITIVE DISPLACEMENT GROUT PUMP SHALL BE USED. THE PUMP SHALL BE EQUIPPED WITH A PRESSURE GAUGE THAT CAN MEASURE AT LEAST TWICE BUT NO MORE THAN THREE TIMES THE INTENDED GROUT PRESSURE. THE GROUTING EQUIPMENT SHALL BE SIZED TO ENABLE THE ENTIRE NAIL TO BE GROUTED IN ONE CONTINUOUS OPERATION. THE MIXER SHALL BE CAPABLE OF CONTINUOUSLY ACITATING THE GROUT DURING USAGE.

B. UNCASED DRILL HOLES SHALL BE GROUTED AFTER INSTALLATION OF THE NAIL BAR. GROUTING PRIOR TO INSERTION OF THE NAIL BAR MAY BE ALLOWED PROVIDED NEAT CEMENT GROUT IS USED AND THE NAIL BAR IS IMMEDIATELY INSERTED THROUGH THE GROUT TO THE SPECIFIED LENGTH WITHOUT DIFFICULTY. NO PORTION OF THE NAIL HOLE SHALL BE LEFT OPEN FOR MORE THAN I HOUR PRIOR TO GROUTING UNLESS APPROVED OTHERWISE BY THE ENGINEER. THE GROUT SHALL BE INJECTED AT THE LOWEST POINT OF EACH DRILL HOLE THROUGH A TREMIE PIPE, HOLLOW-STEM AUGER, OR DRILL RODS WITH THE DRILL HOLE FILLED IN ONE CONSTRUCTION OF TEST NAILS. THE CONDUIT DELIVERING THE GROUT SHALL BE KEPT BELOW THE SURFACE OF THE GROUT AS THE CONDUIT IS WITHDRAWN. THE GROUTING CONDUIT SHALL BE WITHDRAWN AS THE ANAIL HOLE IS FILLED IN A MANNER WHICH PREVENTS THE CREATION OF VOIDS. THE QUANTITY OF GROUT AND THE GROUTING PRESSURES SHALL BE RECORDED FOR EACH SOIL NAIL. GROUT PRESSURES SHALL BE CONTROLLED TO PREVENT EXCESSIVE GROUND HEAVE OR FRACTURING.

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PROJECT NO:

02087-2018-01

May 24, 2018

DATE:

Shoring Wall **Temporary**

Notes

Permit

DURING CASING REMOVAL FOR DRILL HOLES ADVANCED AUGERCAST METHODS, THE GROUT SURFACE WITHIN CASING MONITORED FOR MAINTENANCE OF "HEAD" SUFFICIENT TO GROUNDWATER FOR MAINTENANCE (

/ SOIL PRESSURE. BY EITHER
SHALL BE C
OFFSET THE ER CASED OR CONTINUALLY

D. NAIL GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI IN 3 DAYS AND 3000 PSI IN 28 DAYS. NAIL GROUT SHALL BE TESTED BY A TESTING AGENCY UNDER CONTRACT WITH THE OWNER IN ACCORDANCE WITH ASTM C109 / AASHTO T106 AT A FREQUENCY OF NO LESS THAN ONE TEST FOR EVERY 50 CUBIC YARDS OF GROUT PLACED OR ONCE PER WEEK, WHICHEVER IS FIRST.

TEMPORARY UNBONDED LENGTHS SHALL BE PROVIDED FOR EACH TEST NAIL. THE TEST NAIL BAR SHALL BE ISOLATED FROM THE WALL FACING AND THE REACTION FRAME DURING TESTING. SATISFACTORY TEST NAILS MAY BE INCORPORATED IN THE WORK PROVIDED THE TEMPORARY TEST UNBONDED LENGTH IS FULLY GROUTED SUBSEQUENT TO

NAIL TOLERANCES

BARS SHALL BE CENTERED WITHIN 1 INCH OF THE CENTER OF THE DRILL HOLE. INDIVIDUAL NAILS SHALL BE POSITIONED PLUS OR MINUS 1 FOOT FROM THE DESIGN LOCATIONS SHOWN IN THE PLANS. LOCATION TOLERANCES SHALL BE CONSIDERED APPLICABLE TO ONLY ONE NAIL AND NOT CUMULATIVE OVER LARGE WALL AREAS. THE NAIL INCLINATION SHALL BE PLUS OR MINUS 3 DEGREES. NAILS THAT ENCOUNTER UNANTICIPATED OBSTRUCTIONS DURING DRILLING SHALL BE RELOCATED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.

VERIFICATION TESTS SHALL BE PERFORMED AT THE LOCATIONS SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. PROOF TESTS SHALL BE PERFORMED AT THE LOCATIONS SELECTED BY THE OWNER'S REPRESENTATIVE. ALL TEST DATA SHALL BE RECORDED BY THE OWNER'S REPRESENTATIVE, UNLESS APPROVED OTHERWISE. PULLOUT TESTING OF NAILS SHALL NOT BE PERFORMED UNTIL THE NAIL GROUT HAS ATTAINED AT LEAST 50 PERCENT OF ITS SPECIFIED 28-DAY COMPRESSIVE STRENGTHS.

AND THE GROUTED BOND LENGTH OF THE NAIL AND/OR THE STRESSING TESTING EQUIPMENT SHALL INCLUDE TWO DIAL GAUGES, A DIAL JACK AND PRESSURE GAUGE, A PUMP, AND A REACTION FRAME. TEMPORARY CASING OF THE ASING SHALL BE INSTALLED UNBONDED LENGTH OF TEST TO PREVENT ANY REACTION TEST NAILS IS PROVIDED, CTION BETWEEN THE CASING GAUGE APPARATUS

A MINIMUM OF TWO DIAL GAUGES CAPABLE OF MEASURING TO 0.001-INCH SHALL BE AVAILABLE AT THE SITE TO MEASURE THE NAIL MOVEMENT. THE DIAL GAUGES SHALL BE ALIGNED WITHIN 5 DEGREES OF THE AXIS OF THE NAIL AND SHALL BE SUPPORTED INDEPENDENT OF THE JACKING SET-UP AND THE WALL. A HYDRAULIC JACK, PRESSURE GAUGE, AND PUMP SHALL BE USED TO APPLY AND MEASURE THE TEST LOAD.

THE JACK AND PRESSURE GAUGE SHALL BE CALIBRATED BY AN INDEPENDENT TESTING LABORATORY AS A UNIT. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI INCREMENTS OR LESS AND SHALL HAVE A RANGE NOT EXCEEDING TWICE THE ANTICIPATED MAXIMUM PRESSURE DURING TESTING UNLESS APPROVED OTHERWISE BY THE ENGINEER. THE RAM TRAVEL OF THE JACK SHALL BE SUFFICIENT TO ENABLE THE TEST TO BE PERFORMED WITHOUT RE-SETTING THE JACK.

F. THE JACK SHALL BE INDEPENDENTLY SUPPORTED AND CENTERED OVER THE NAIL SO THAT THE NAIL DOES NOT CARRY THE WEIGHT OF THE JACK. THE STRESSING EQUIPMENT SHALL BE PLACED OVER THE NAIL IN SUCH A MANNER THAT THE JACK, BEARING PLATES, AND STRESSING ANCHORAGE ARE IN ALIGNMENT. THE JACK SHALL BE POSITIONED AT THE BEGINNING OF THE TEST SUCH THAT UNLOADING AND REPOSITIONING OF THE JACK DURING THE TEST WILL NOT BE REQUIRED.

G. THE TEST REACTION FRAME SHALL BE SUFFICIENTLY RIGID AND OF ADEQUATE DIMENSION SUCH THAT EXCESSIVE DEFORMATION OF THE TEST APPARATUS REQUIRING REPOSITIONING OF ANY COMPONENTS DOES NOT OCCUR DURING TESTING. WHERE THE REACTION FRAME BEARS DIRECTLY ON THE WALL, THE REACTION FRAME SHALL BE DESIGNED TO PREVENT DAMAGE OF THE WALL FACING.

VERIFICATION TESTING OF SACRIFICIAL NAILS

VERIFICATION TESTING IN EACH SOIL UNIT SHALL BE PERFORMED PRIOR TO INSTALLATION OF PRODUCTION NAILS IN THAT UNIT TO VERIFY THE CONTRACTOR'S INSTALLATION METHODS, NAIL PULLOUT CAPACITY, AND DESIGN ASSUMPTIONS. THE NAILS USED FOR THE VERIFICATION TESTS MAY BE INCORPORATED AS PRODUCTION NAILS IF APPROVED BY THE ENGINEER. PAYMENT FOR ADDITIONAL VERIFICATION TEST NAILS REQUIRED DUE TO DIFFERENT SITE CONDITIONS, AS DETERMINED BY THE ENGINEER, SHALL BE PER THE CONTRACT UNIT PRICE.

OR INSTALLATION BY THE ENGINEER. TEST NAILS SHALL BE CONSTRUCTED USING THE SAME EQUIPMENT, HOLE DIAMETER AS PLANNED FOR THE PRODUCTION NAILS. CHANGES IN OR INSTALLATION METHOD MAY REQUIRE ADDITIONAL NAIL TESTING A METHODS, N THE DRIL AS DETERN ETHODS, AND THE DRILLING DETERMINED

 $\dot{\Omega}$ THE UNBONDED LENGTH OF TEST NAILS SHALL BE AT LEAST 3 FEET UNLESS APPROVED OTHERWISE BY THE ENGINEER. THE BOND LENGTH OF TEST NAILS SHALL BE DETERMINED BY THE OWNER'S REPRESENTATIVE SUCH THAT THE ALLOWABLE BAR LOAD IS NOT EXCEEDED BUT SHALL NOT BE LESS THAN 10 FEET. THE BAR LOAD DURING TESTING SHALL NOT EXCEED 80 PERCENT OF THE STEEL ULTIMATE STRENGTH FOR GRADE 150 BARS OR 90 PERCENT OF THE STEEL YIELD STRENGTH FOR GRADE 75 BARS.

> D. MULTIPLYING RESISTANCE. UNLOADED IN N TEST LOAD (DTL)
> G THE BOND LENGTH
> . VERIFICATION TEST
> N ACCORDANCE WITH THE DURING TESTING SHALL BE DETERMINED BY OF THE NAIL TIMES THE DESIGN PULLOUT NAILS SHALL BE INCREMENTALLY LOADED AND FOLLOWING SCHEDULE:

			1. 25DL				0. 25DL	AL	LOAD
10 MINUTES	10 MINUTES	60 MINUTES	10 MINUTES	1 MINUTE	HOLD TIME				

THE ALIGNMENT LOAD (AL) SHOULD TESTING APPARATUS AND SHOULD N
ZEROED AFTER THE ALIGNMENT LOAD LD BE THE MINIMUM LOAD F) NOT EXCEED 0.05DTL. D AD IS APPLIED. DIAL GAUGES SHOULD

F. EACH LOAD INCREMENT SHALL B VERIFICATION TEST NAIL SHALL B 1.50 DTL LOAD INCREMENT. NAIL TEST SHALL BE MEASURED AND REC 60 MINUTES. BE BE BE HELD FOR AT LEAST 10
BE MONITORED FOR CREEP FOR 60 N
L MOVEMENTS DURING THE CREEP PORTON 1, 2, 3, 5, 6, 10, 20 0 MINUTES.
0 MINUTES A
0 PORTION 0
20, 30, 50 AT OF 50,

A COPY OF THE VERIFICATION TEST RECORDS DEPARTMENT WITHIN 24 HOURS AFTER COMPLET TEST, REGARDLESS OF THE ENGINEER'S TEST RECORDS SHALL BE SUBMITTED TO THE BUILDING COMPLETION OF EACH SOIL NAIL VERIFICATION'S TEST ACCEPTANCF

PROOF TESTING OF PRODUCTION NAILS

A. PROOF THE 0 REQUIRED. OWNER'S REPRESENTATIVE. IF N PARTICULAR RMED ON IF NAIL SERIES ONE PRODUCTION NAIL AS INSTALLATION METHODS AF OF NAILS, ADDITIONAL _ AS DETERMINED BY OS ARE SUBSTANDARD NAL TESTS MAY BE

B. THE UNBONDED LENGTH OF TEST NAILS SHALL BE AT LEAST 3 FEET UNLESS APPROVED OTHERWISE BY THE ENGINEER. THE BOND LENGTH OF TEST NAILS SHALL BE DETERMINED BY THE OWNER'S REPRESENTATIVE SUCH THAT THE ALLOWABLE BAR LOAD IS NOT EXCEEDED BUT SHALL NOT BE LESS THAN 10 FEET. THE BAR LOAD DURING TESTING SHALL NOT EXCEED 80 PERCENT OF THE STEEL ULTIMATE STRENGTH FOR GRADE 150 BARS OR 90 PERCENT OF THE STEEL YEILD STRENGTH FOR GRADE 60 AND GRADE 75 BARS.

PROOF TEST NAILS SHALL BE II MAXIMUM LOAD OF 1.50DTL IN A NCREMENTALLY LOADED IN 0.25DTL INCREMENTS CCORDANCE WITH THE FOLLOWING SCHEDULE: T0

٦ -	AL 1	I MINUIE
רי	0. 25DL	1 MINUTE
	0. 50DL	1 MINUTE
0	0. 75DL	1 MINUTE
, Q	1. 00DL	1 MINUTE
• •	1. 25DL	1 MINUTE
	1. 50DL	10 MINUTES

D. THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD TESTING APPARATUS AND SHOULD NOT EXCEED 0.05TDL. ZEROED AFTER THE ALIGNMENT LOAD IS APPLIED. DIAL REQUIRED TO ALIGN DIAL GAUGES SHOULD

DEPENDING ON PERFORMANCE, EITHER A 10 MINUTE OR 60 MINUTE CREEP TEST SHALL BE PERFORMED AT 1.50DTL. NAIL MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, AND 10 MINUTES. WHERE THE NAIL MOVEMENT BETWEEN 1 MINUTE AND 10 MINUTES EXCEEDS 0.04 INCHES, THE MAXIMUM TEST LOAD SHALL BE MAINTAINED AN ADDITIONAL 50 MINUTES AND MOVEMENTS SHALL BE RECORDED AT 20, 30, 50, AND 60 MINUTES.

TEST NAIL ACCEPTANCE

A. A TEST NAIL SHALL BE CONSIDE

FOR VERIFICATION TESTS,
TIME BETWEEN THE 6 AND
AND THE RATE IS LINEAR A CREE 60 MINU R OR DEO P RATE LESS THAN 0.08 INCHES PER LOGUTE READINGS IS OBSERVED DURING CREEP CREEP TEST LOGUTERS THE CREEP TEST LOGUE OF TEST LOGUE OF THE CREEP TEST LOGUE OF OG CYCLE OF EEP TESTING, LOAD HOLD

AND THE RATE IS LINEAR OR DECRE PERIOD.

2. FOR PROOF TESTS, A CREEP RATE LE BETWEEN THE 1 AND 10 MINUTE READ 0. 08 INCHES PER LOG CYCLE OF TIME CREEP RATE IS LINEAR OR DECRETE OF THE CREEP RATE IS LINEAR OR DECRETE OF TIME CREEP RATE IS LINEAR OR DECRETE OF THE CREEP RATE IS LINEAR OR DECRETE OR DEC RATE LESS THAN 0.04 INCHES PER E READINGS IS OBSERVED OR A C OF TIME BETWEEN THE 6 AND 60 M OR DECREASING THROUGHOUT THE C G CYCLE OF RATE LESS FE READINGS, TEST LOAD TIME THAN THAN

3. THE TOTAL MOVEMENT AT THE MAXIMUM TEST LOAD THEORETICAL ELASTIC ELONGATION OF THE UNBONDED LE 4. A PULLOUT FAILURE DOES NOT OCCUR DURING TESTING. AS THE LOAD AT WHICH ATTEMPTS TO INCREASE THE CONTINUED PULLOUT MOVEMENT OF THE TEST NAIL. MAXIMUM TEST LOAD EXCEEDS ON OF THE UNBONDED LENGTH. 80 邢

> THAT (1) THE UNBONDED TEST LENGTH OF THE NAIL HOLE HAS NOT COLLAPSED DURING TESTING, (2) THE MINIMUM REQUIRED HOLE DIAMETER HAS BEEN MAINTAINED, AND (3) THE TEST NAIL LENGTH AND BAR SIZE ARE EQUAL TO OR GREATER THAN THE SCHEDULED PRODUCTION NAIL LENGTH AND BAR SIZE. TEST NAILS MEETING THESE REQUIREMENTS SHALL BE COMPLETED BY SATISFACTORILY GROUTING THE UNBONDED TEST LENGTH. MAINTAINING THE TEMPORARY UNBONDED TEST LENGTH FOR SUBSEQUENT GROUTING IS THE CONTRACTOR'S RESPONSIBILITY.
>
> C. THE ENGINEER SHALL EVALUATE THE RESULTS OF EACH VERIFICATION TEST. NAIL INSTALLATION METHODS THAT DO NOT SATISFY THE NAIL TESTING REQUIREMENTS SHALL BE CONSIDERED INADEQUATE. THE CONTRACTOR SHALL PROPOSE ALTERNATIVE METHODS AND INSTALL REPLACEMENT VERIFICATION TEST NAILS. ACCEPTANCE (1) THE UN CONTRACTOR'S OPTION, S SUCCESSFUL PROOF : TEST NAILS MEETING THE ABOVE AS PRODUCTION NAILS PROVIDED NAIL HOLE HAS NOT COLLAPSED

THE ENGINEER MAY REQUIRE THAT THE CONTRACTOR REPLACE PRODUCTION NAILS REPRESENTED BY INADEQUATE PROOF TESTS. SOME 욹 유

D.

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MONITORING PROGRAM SHALL CONSIST OF

PRE-CONSTRUCTION SURVE UTILITIES, BUILDING, A FEET FROM THE SHORING. SURVEY ING, AND (VIDEO) OTHER ! OR PHOTOGRAPHIC SURVEY) OF ADJACENT STRUCTURES WITHIN A DISTANCE NOT LESS STREETS, THAN 40

ALL SEWER AND STORM LINES IN THE RIGHT OF WAY WITHIN 10 FEET IF SUCH LINES ARE 30 FEET OR MORE FROM THE SITE PROPROPOSED SHORING ELEMENT SHALL BE VIDEOTAPED IN THE PRIAND A COPY SENT TO THE BUILDING DEPARTMENT PRIOR TO MEETING. IIN 10 FEET (OR WITHIN 20 TE PROPERTY LINE) OF ANY THE PRE-PROJECT CONDITION TO THE PRECONSTRUCTION

OPTICAL SURVEY OF MONITORING POINTS SHALL BE COMPLETED WEEKLY DURING CONSTRUCTION, AND TWICE PER MONTH (OR AS DETERMINED BY THE GEOTECHNICAL SPECIAL INSPECTOR WITH THE CONCURRENCE OF THE BUILDING DEPARTMENT) FOLLOWING COMPLETION OF THE EXCAVATION AND BEFORE THE INTERIOR BUILDING FLOORS REACH THE GROUND SURFACE. MONITORING SHALL INCLUDE VERTICAL AND HORIZONTAL SURVEY MEASUREMENTS TO AN ACCURACY OF 0.01 FEET. BASELINE READINGS ARE TO BE TAKEN PRIOR TO THE START OF CONSTRUCTION. ALL RESULTS ARE TO BE SENT TO THE GEOTECHNICAL SPECIAL INSPECTOR WITHIN 24 HOURS AND TO THE BUILDING DEPARTMENT WEEKLY. A LICENSED SURVEYOR CONTRACTED DIRECTLY WITH THE OWNER MUST PERFORM THE MONITORING AT LEAST ONCE PER WEEK.

OPTICAL AROUND SURVEY POINTS SHOULD BE ESTABLISHED AT THE THE PERIMETER OF THE EXCAVATION. TOP 유 黑 SHORING WALL

ADDITIONAL SURVEY POINTS SHOULD BE ESTABLISHED ALONG THE CURBLINES CENTERLINES OF ADJACENT ROADWAY, AND ON SETTLEMENT SENSITIVE STRUCTURES, AT DISTANCES UP TO AT LEAST THE WALL HEIGHT ON PRIVATE PROPERTY ADJACENT EXCAVATION, AND SPACED AT 20 FEET HORIZONTALLY. THESE POINTS SHALL MONITORED IF SHORING WALL MOVEMENTS EXCEED 0.5 INCH, OR AT THE REQUEST THE BUILDING DEPARTMENT. T AND AND AND AND

THE GEOTECHNICAL SPECIAL INSPECTOR SHALL BE CONTINUOUSLY DRILLING FOR AND INSTALLATION OF SOIL NAILS, AND DURING NAILS. A REPRESENTATIVE OF THE SHORING WALL DESIGNER MAY BUT NOT IN LIEU OF THE GEOTECHNICAL SPECIAL INSPECTOR. Y PRESENT TESTING (ALSO BE I OF SOIL PRESENT,

SURVEY FREQUENCY CAN BE DECREASED AFTER THE SHORING SYSTEM HAS BEEN INSTALLED AND EXCAVATION IS COMPLETE IF THE DATA INDICATES LITTLE OR NO ADDITIONAL MOVEMENT. SURVEYING MUST CONTINUE UNTIL THE PERMANENT STRUCTURE IS COMPLETE UP TO FINAL AND STREET GRADES. THE SURVEY FREQUENCY WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER REVIEW AND APPROVAL BY THE BUILDING DEPARTMENT.

THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND OF WALL PERFORMANCE WITH A GRAPHICAL REPRESENTATION OF SURVEY DATA TO THE BUILDING DEPARTMENT ON AT LEAST IMMEDIATELY IF SIGNIFICANTLY INCREASED MOVEMENT OCCURS. OF WALL I AN EVALUATION MOVEMENT AND KLY BASIS AND

IMMEDIATELY AND DIRECTLY NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEERS, WALL DESIGNER, THE BUILDING DEPARTMENT, IF 0.5 INCHES OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS AND WHEN TOTAL MOVEMENTS REACH 0.5 INCH. AT THAT AMOUNT OF MOVEMENT, THE ENGINEERS AND DESIGNERS SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP REMEDIAL MEASURES SUFFICIENT TO LIMIT TOTAL WALL MOVEMENTS TO 1 INCH. ALL EARTHWORK AND CONSTRUCTION ACTIVITIES MUST BE DIRECTED TOWARDS IMMEDIATE IMPLEMENTATION OF REMEDIAL MEASURES NECESSARY TO LIMIT TOTAL WALL MOVEMENT TO WHAT HAS BEEN DEFINED AS ACCEPTABLE BY THE DESIGN TEAM AND THE BUILDING DEPARTMENT (AS INDICATED

A SITE VISIT FROM THE GEOTECHNICAL SPECIAL INSPECTOR SHALL OCCUR DURING EACH DAY OF ACTIVE GRADING AND IN THE EVENT OF SIGNIFICANT RAINFALL WHICH MIGHT COMPROMISE STABILIZATION MEASURES BETWEEN NOVEMBER 1 AND MARCH 31. THE DETERMINATION OF WHAT CONSTITUTES SIGNIFICANT RAINFALL IS SUBJECT TO THE DISCRETION OF THE GEOTECHNICAL SPECIAL INSPECTOR. HOWEVER, AS A MINIMUM STANDARD, THE GEOTECHNICAL SPECIAL INSPECTOR IS REQUIRED TO CONDUCT A SITE VISIT IF MORE THAN ONE HALF INCH OF PRECIPITATION OCCURS ON ANY GIVEN DAY. ANY RECOMMENDATIONS REQUIRED TO MAINTAIN STABILITY OF EXCAVATIONS AND PROPER FUNCTIONING OF THE SEDIMENT/EROSION CONTROL SYSTEM PROVIDED BY THE GEOTECHNICAL SPECIAL INSPECTOR SHALL BE IMPLEMENTED IMMEDIATELY. THE GEOTECHNICAL SPECIAL INSPECTOR SHALL PROVIDE COPIES OF FIELD REPORTS TO THE BUILDING DEPARTMENT NO LATER THAN 48 HOURS AFTER EACH INSPECTION. THE GEOTECHNICAL SPECIAL INSPECTOR SHALL PROVIDE WRITTEN NOTICE THAT THE SITE HAS BEEN STABILIZED FOLLOWING COMPLETION OF GRADING.

934 Broadway - Tacoma, WA 98402 p: 253.284.9470 ssfengineers.com

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2124 Third Avenue - Suite 100 - Seattle, WA 98121 D: 206.443.6212 ssfengineers.com

STRUCTURAL ENGINEERING

PILES PILES: 9 Ħ ₽ AN SHALL 쁌 2"DIAMETER SCHEDULE 80.

DESIGN:

ABB

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CHECKED:

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APPROVED:

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PIN

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DPD:		

Permit Revisions

, 22, 2018

Boyle Shoring

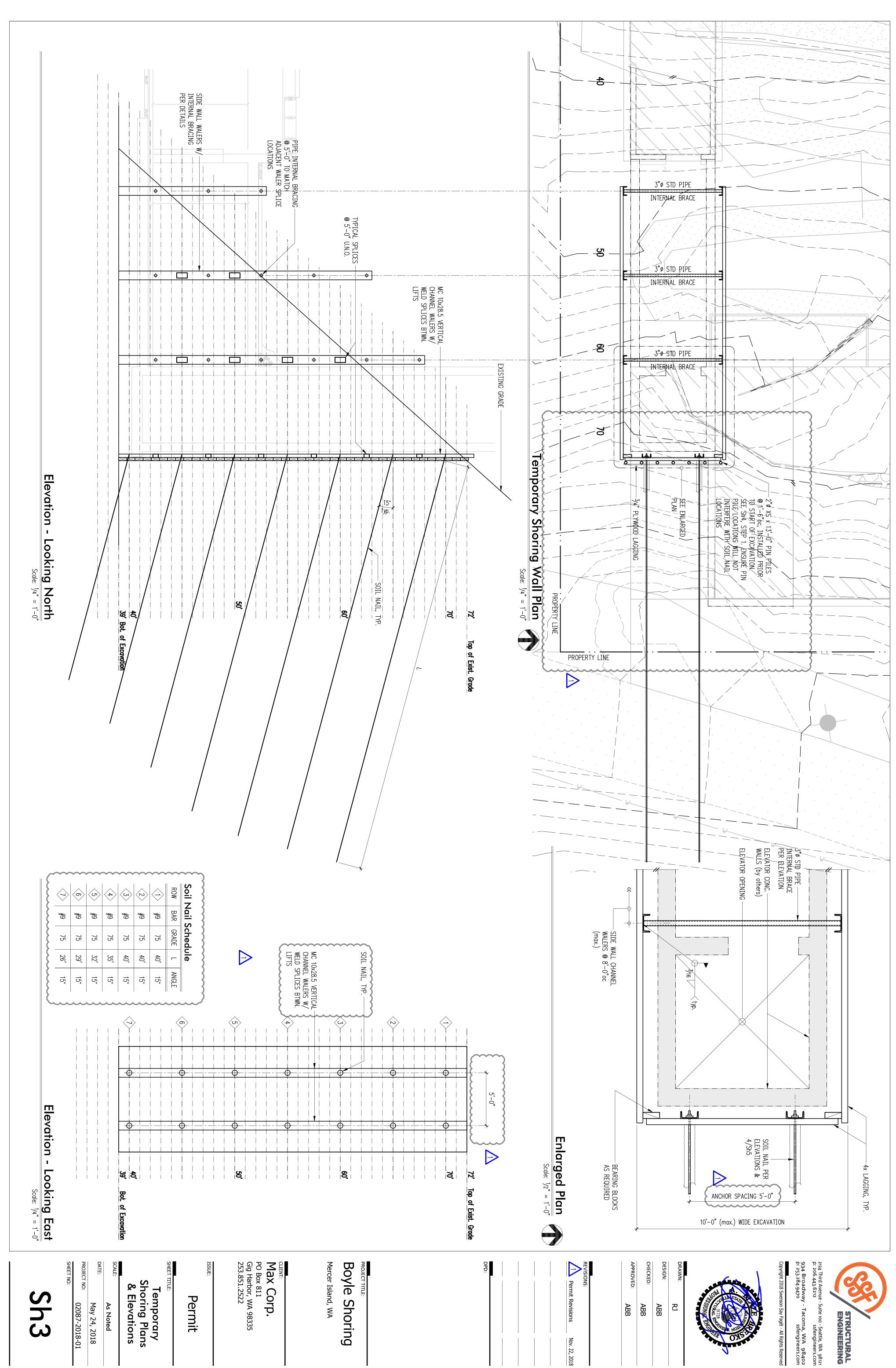
Mercer Island, WA

PO Box 811 Gig Harbor, WA 98335 253.851.2522 Max Corp.

Permit

Shoring Wall Notes, Cont. Notes, Temporary

PROJECT NO: DATE: 02087-2018-01 May 24, 2018

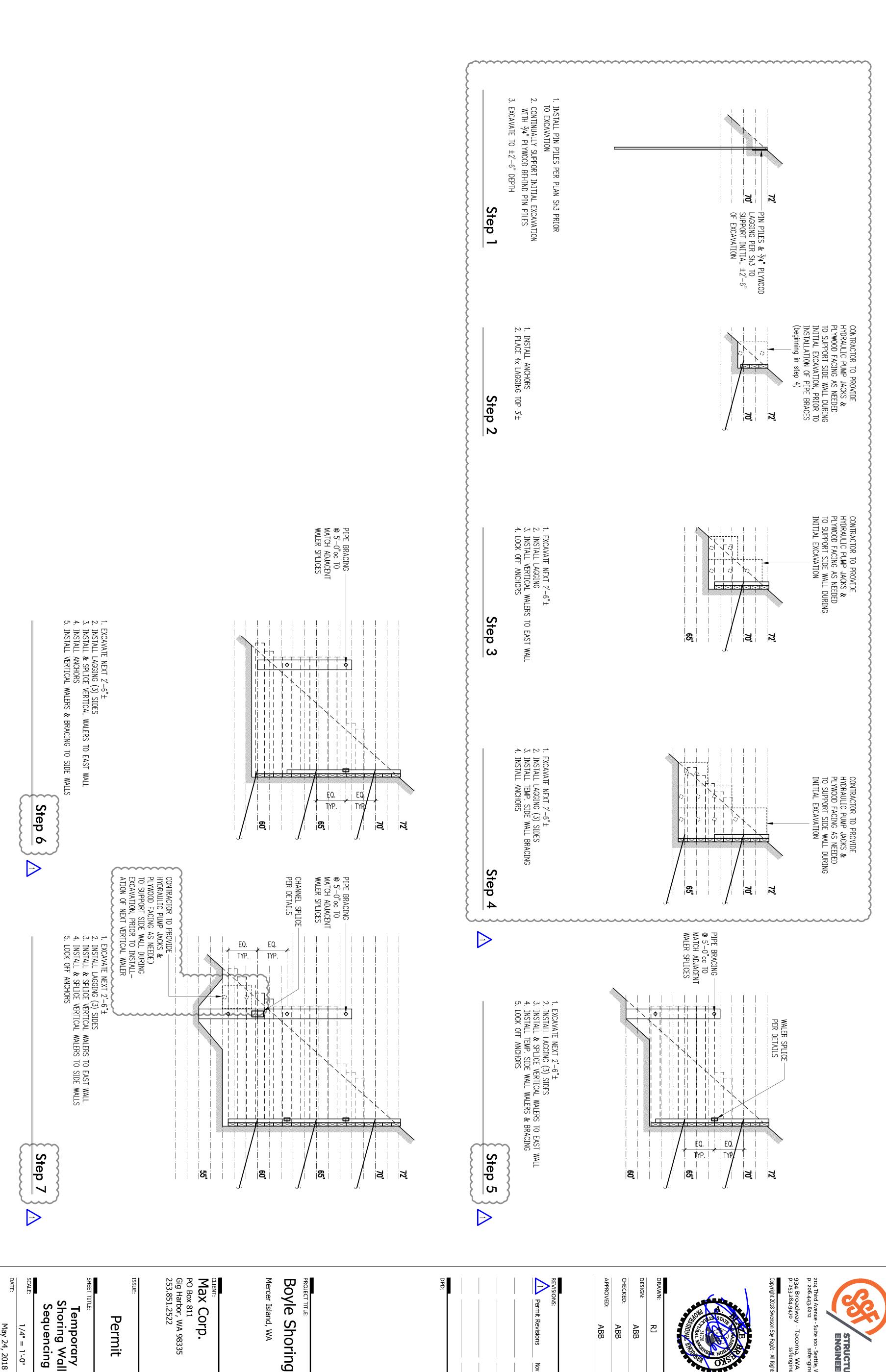


Permit Revisions Nov. 22, 2018

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REPEAT STEPS 6-7 TO BOTTOM OF EXCAVATION

PROJECT NO:

02087-2018-01

May 24, 2018

1/4" = 1'-0"

Temporary Shoring Wall Sequencing

Permit

mit Revisions

Nov. 22, 2018

ABB

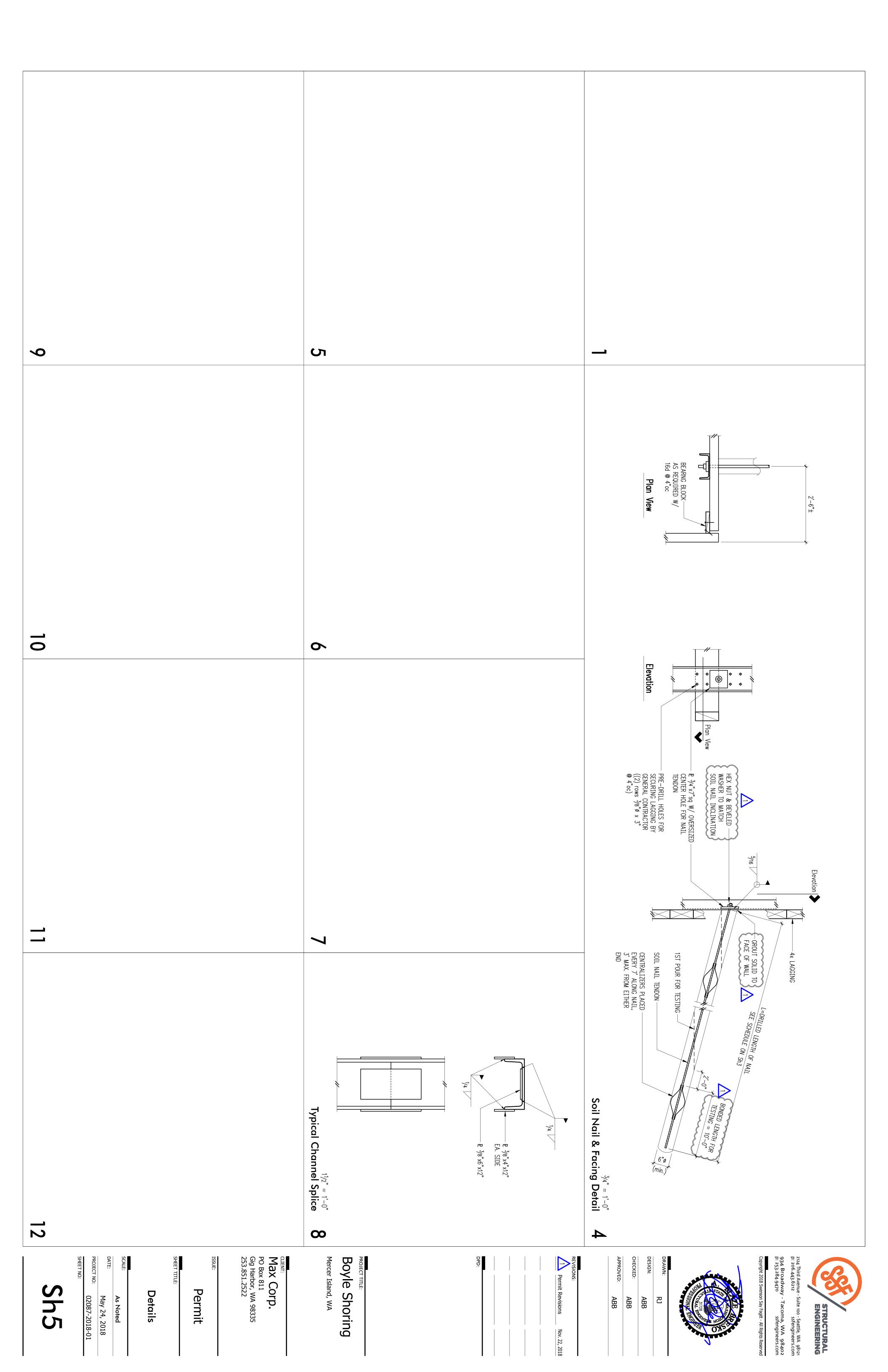
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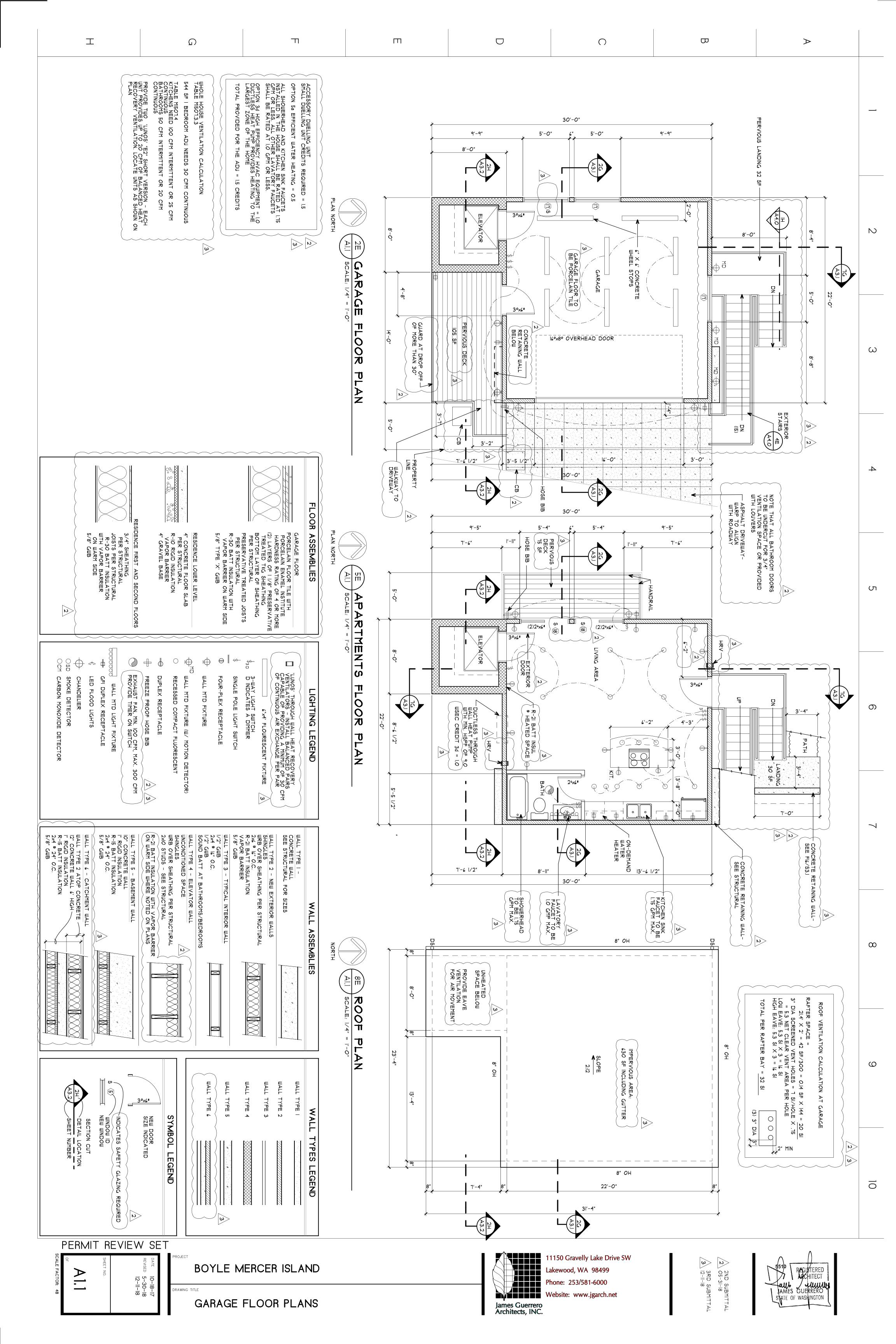
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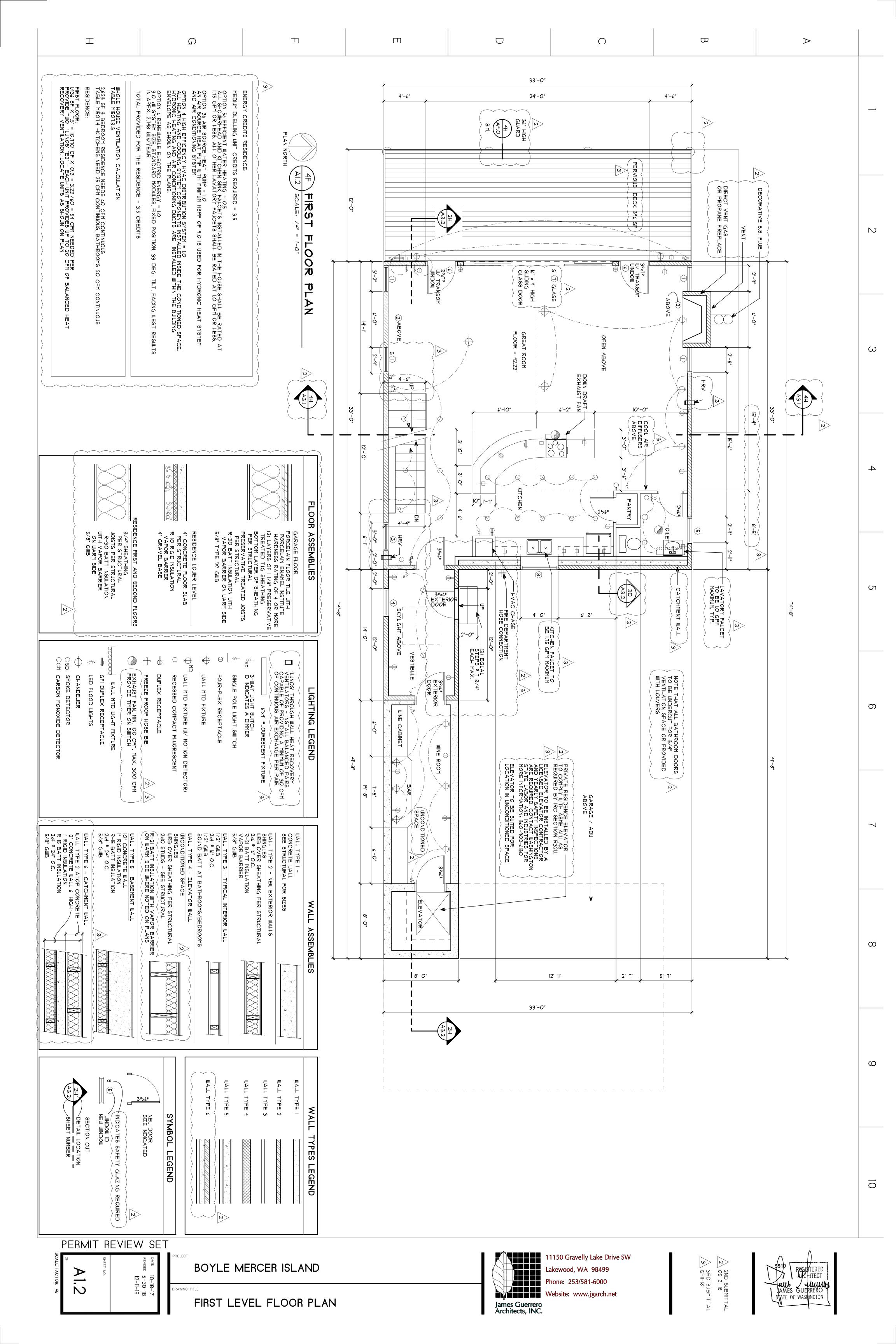
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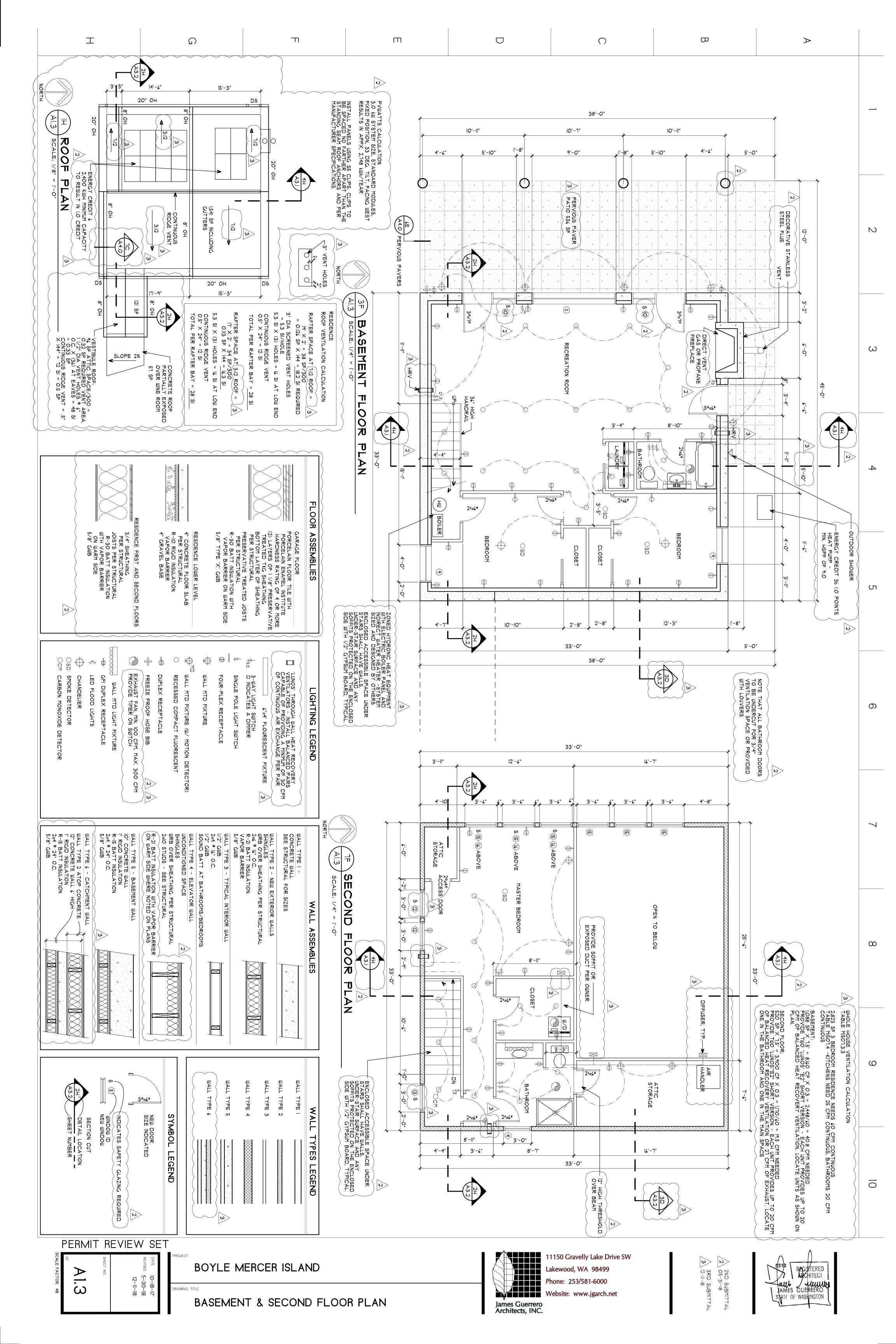
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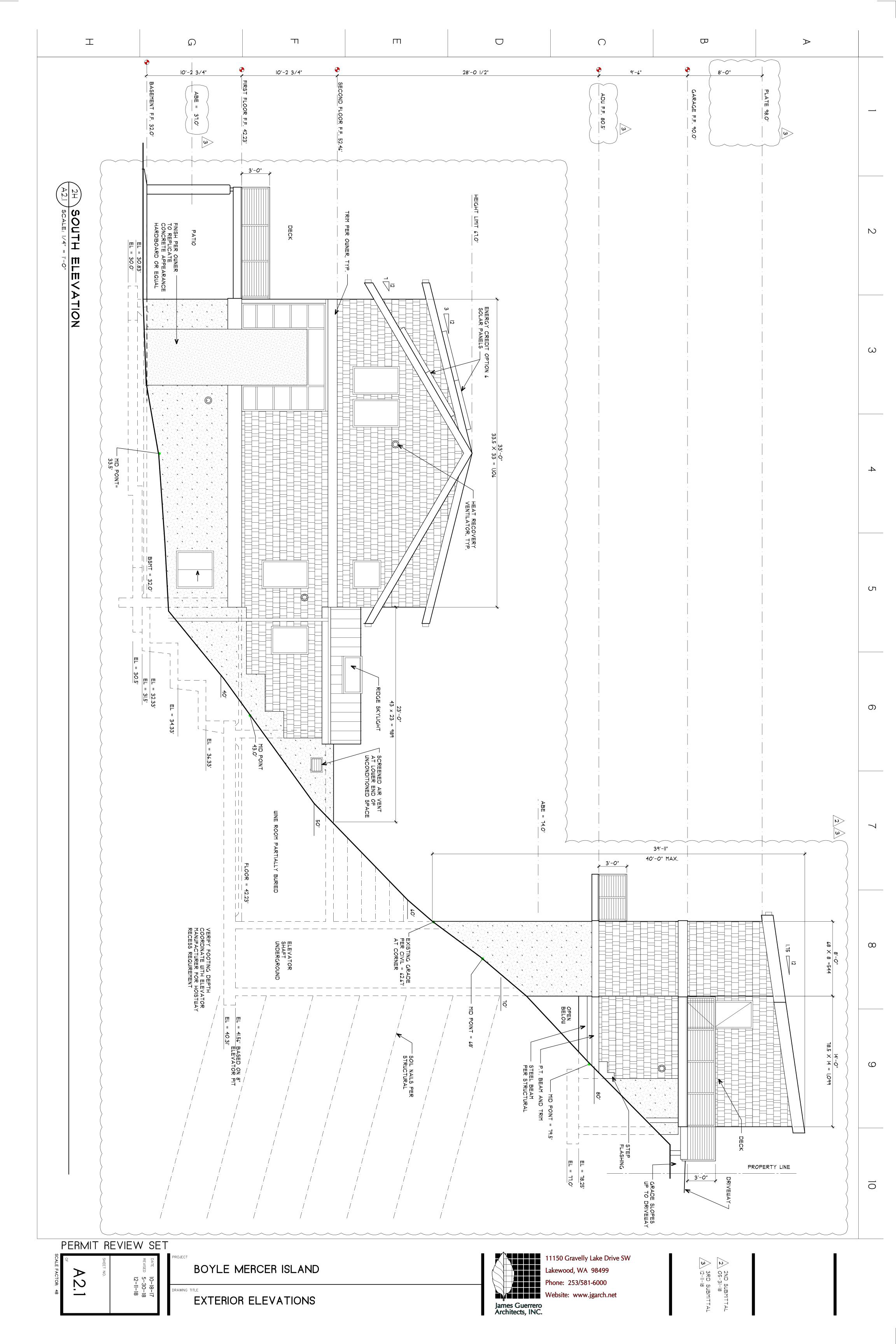
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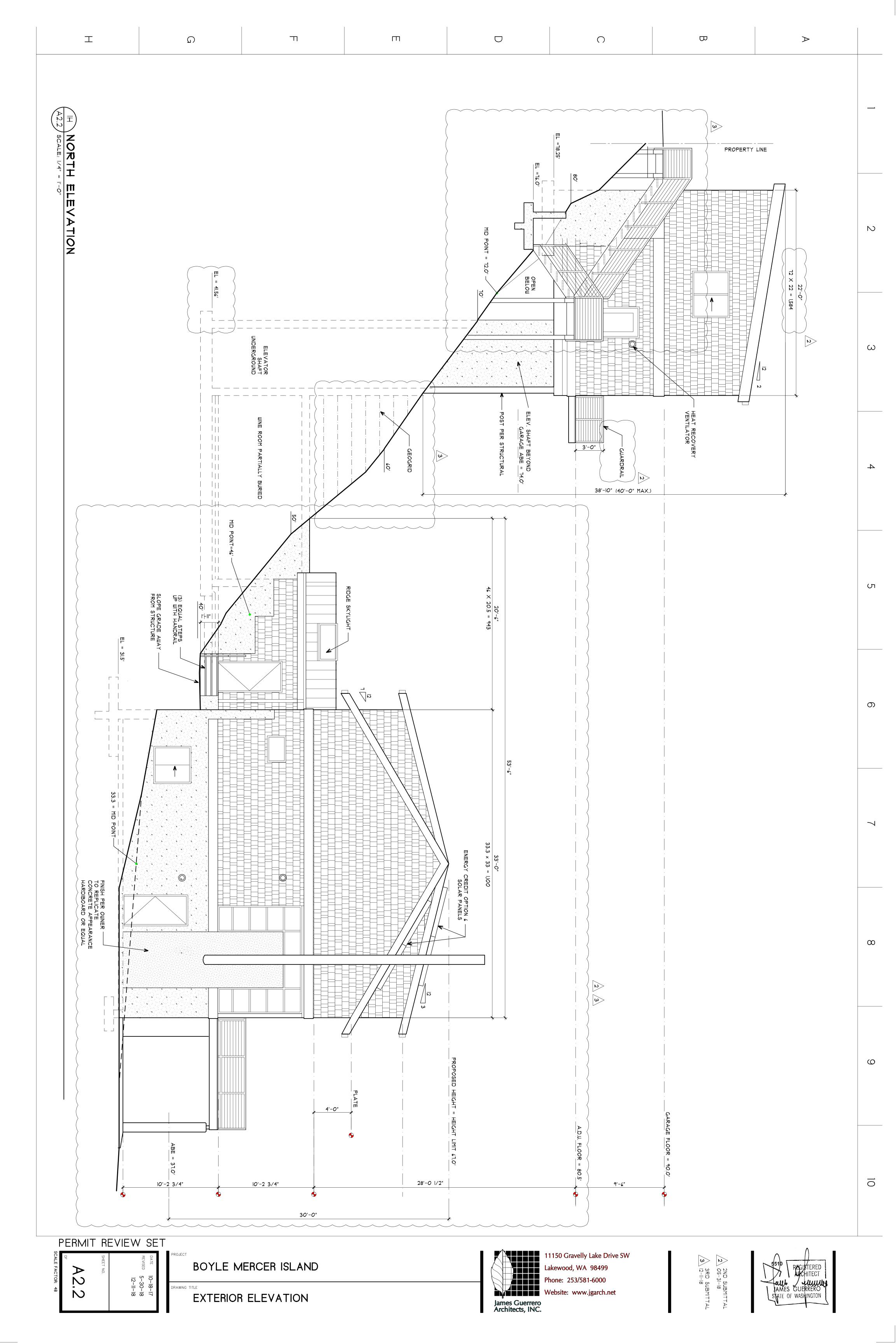


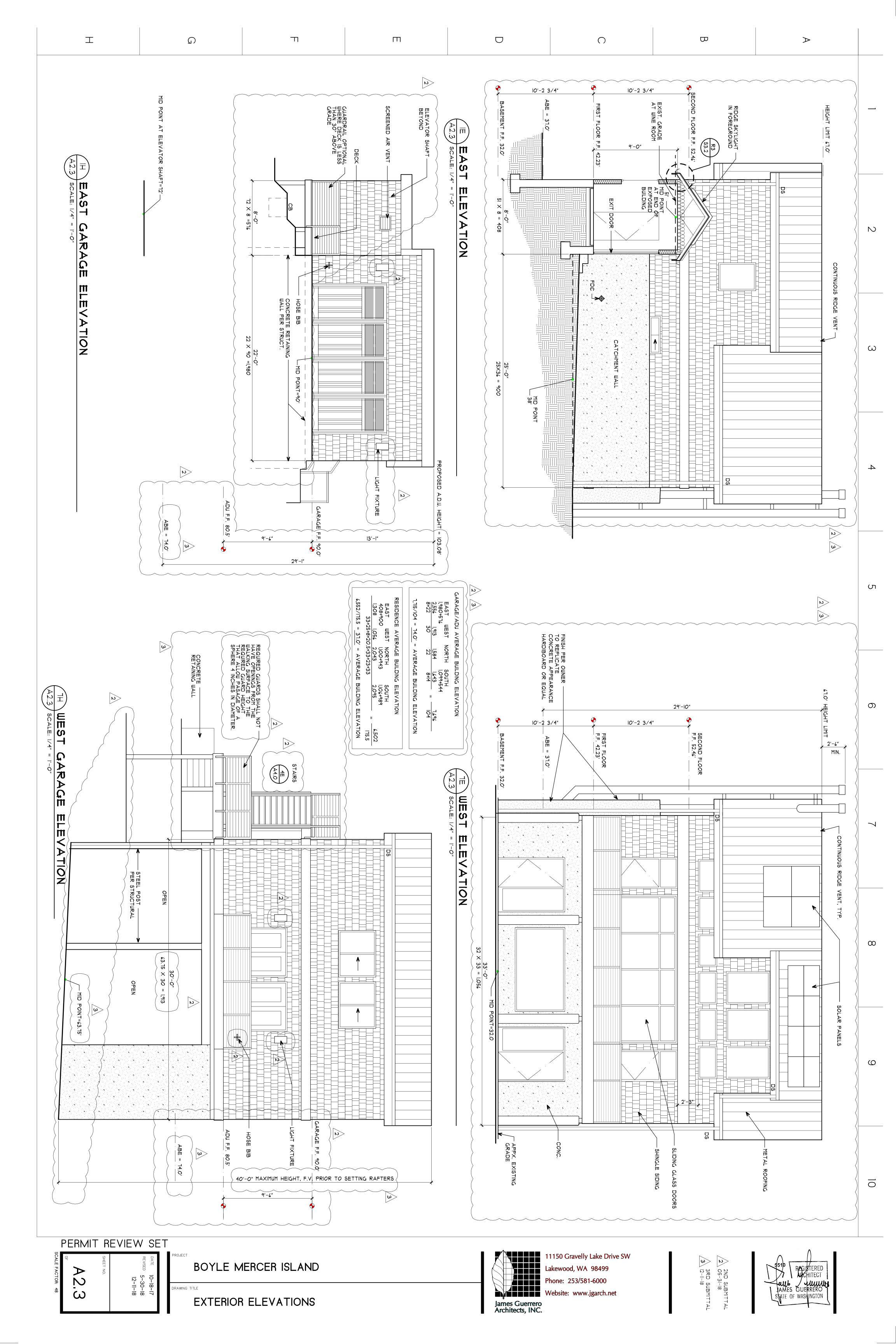


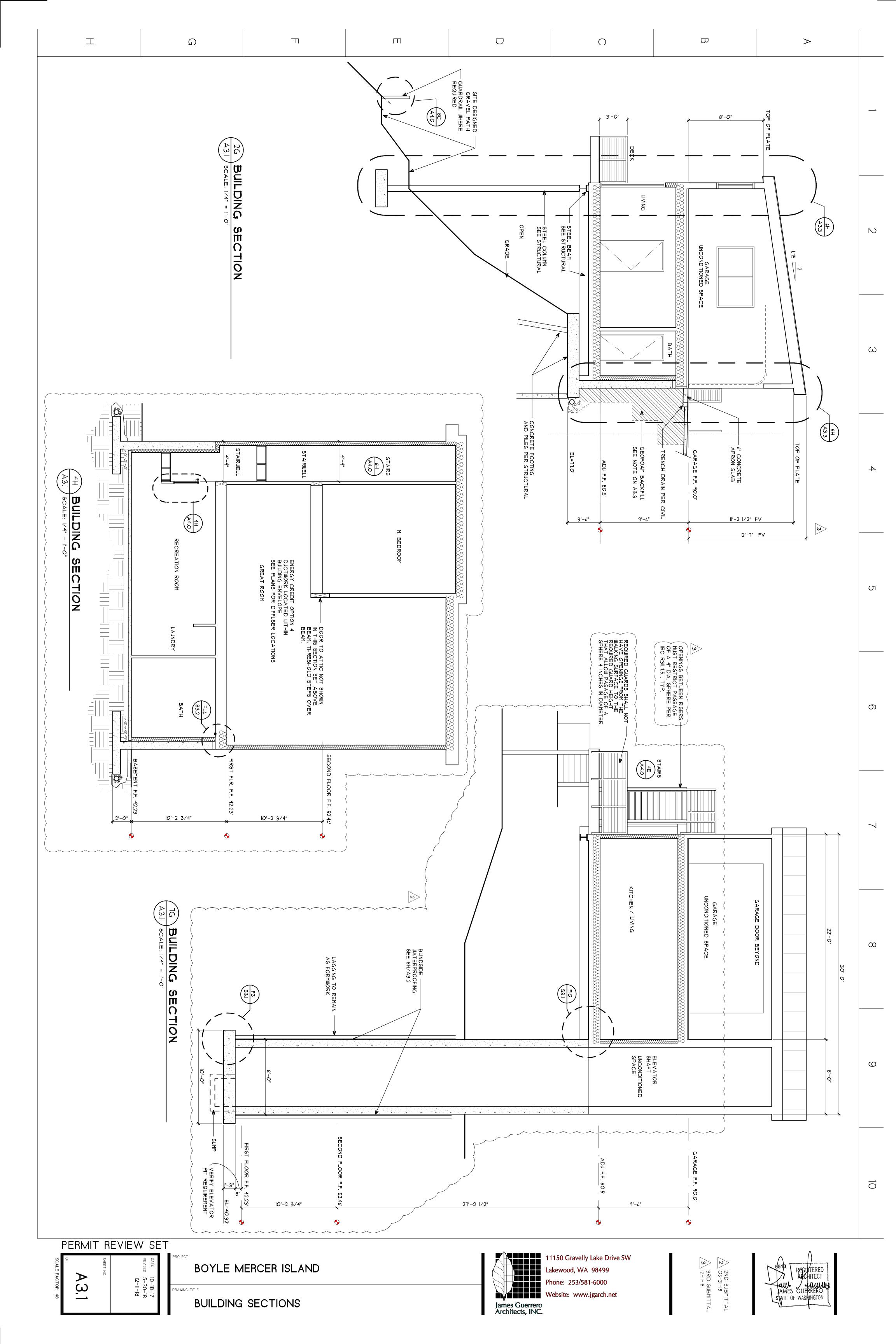


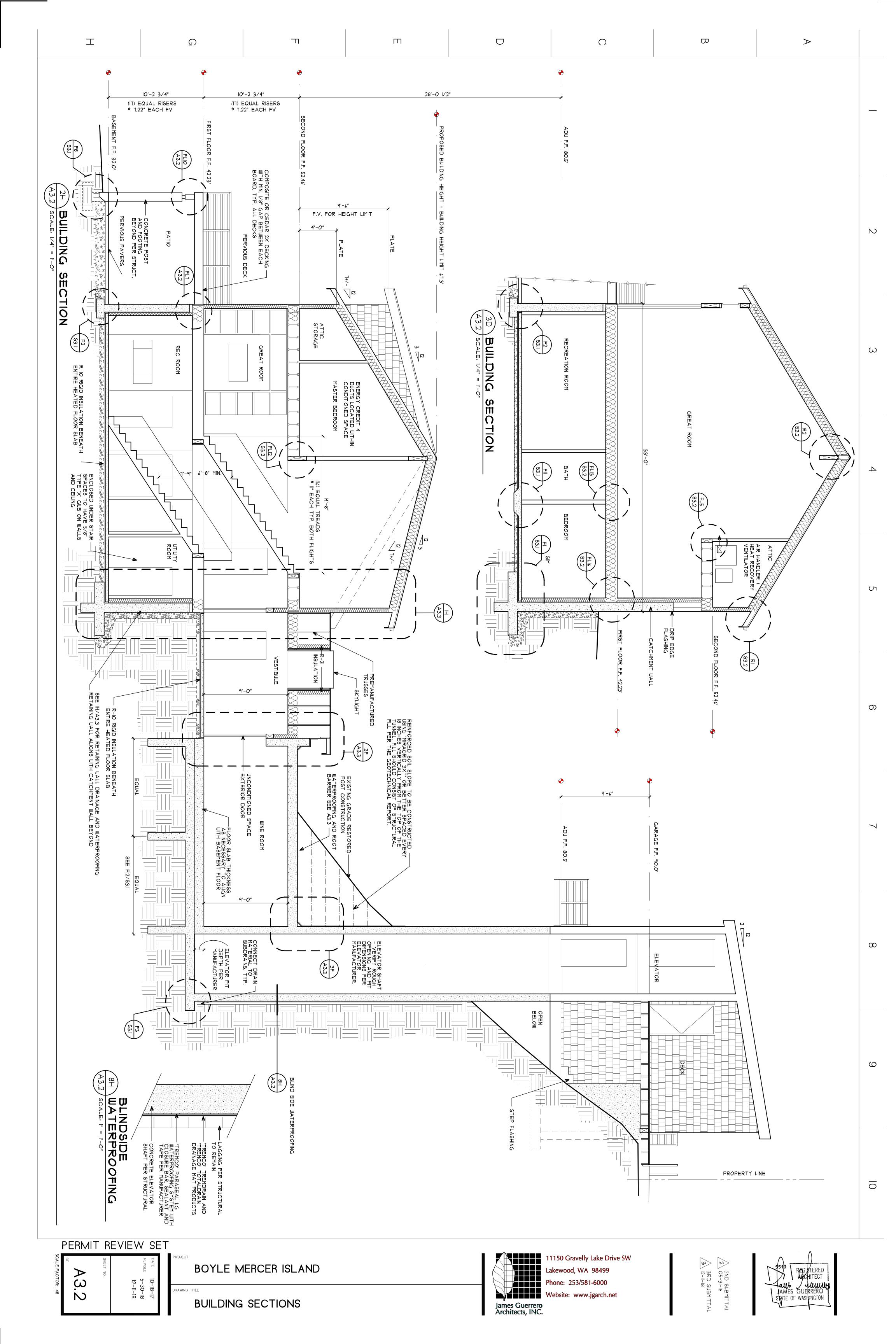


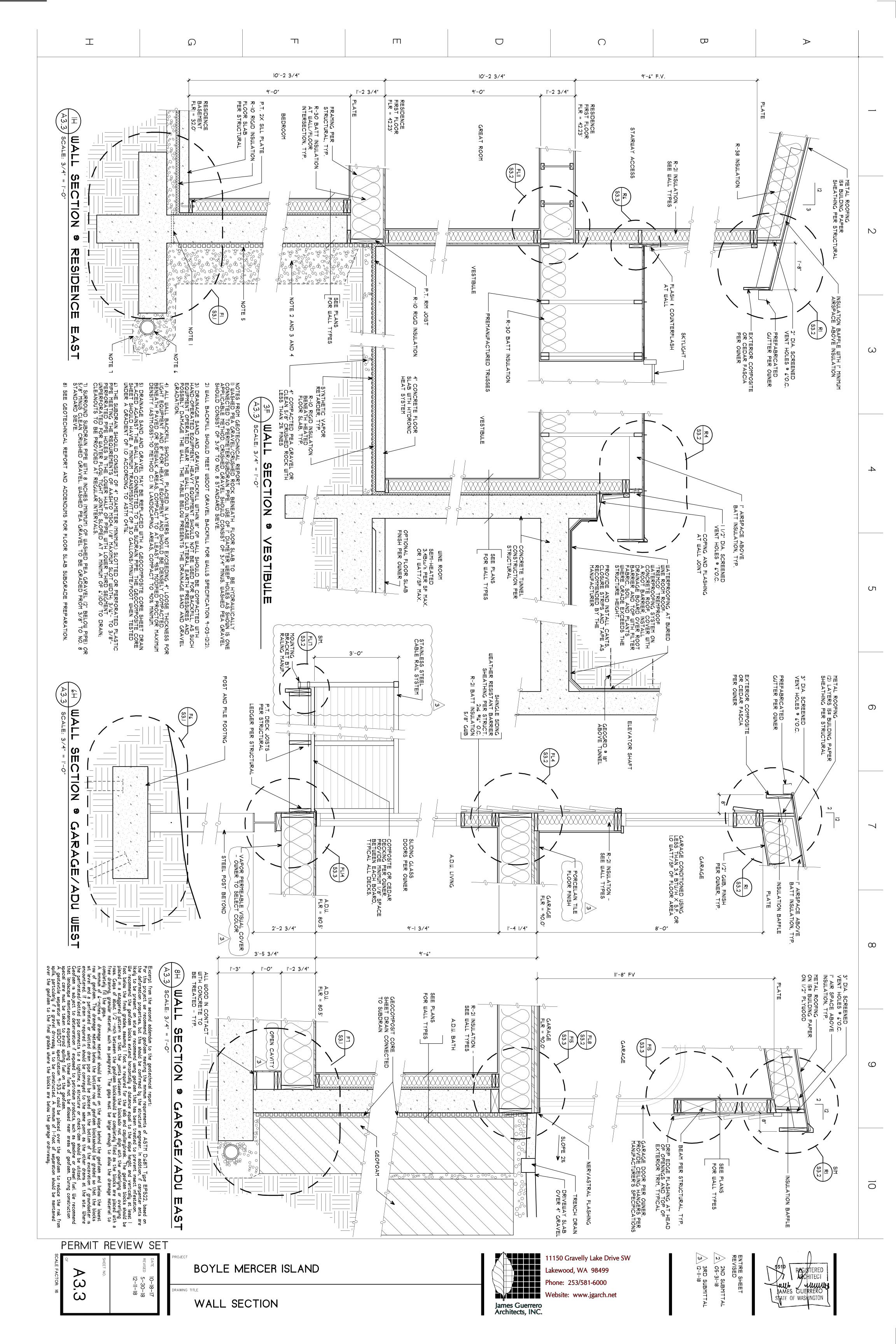


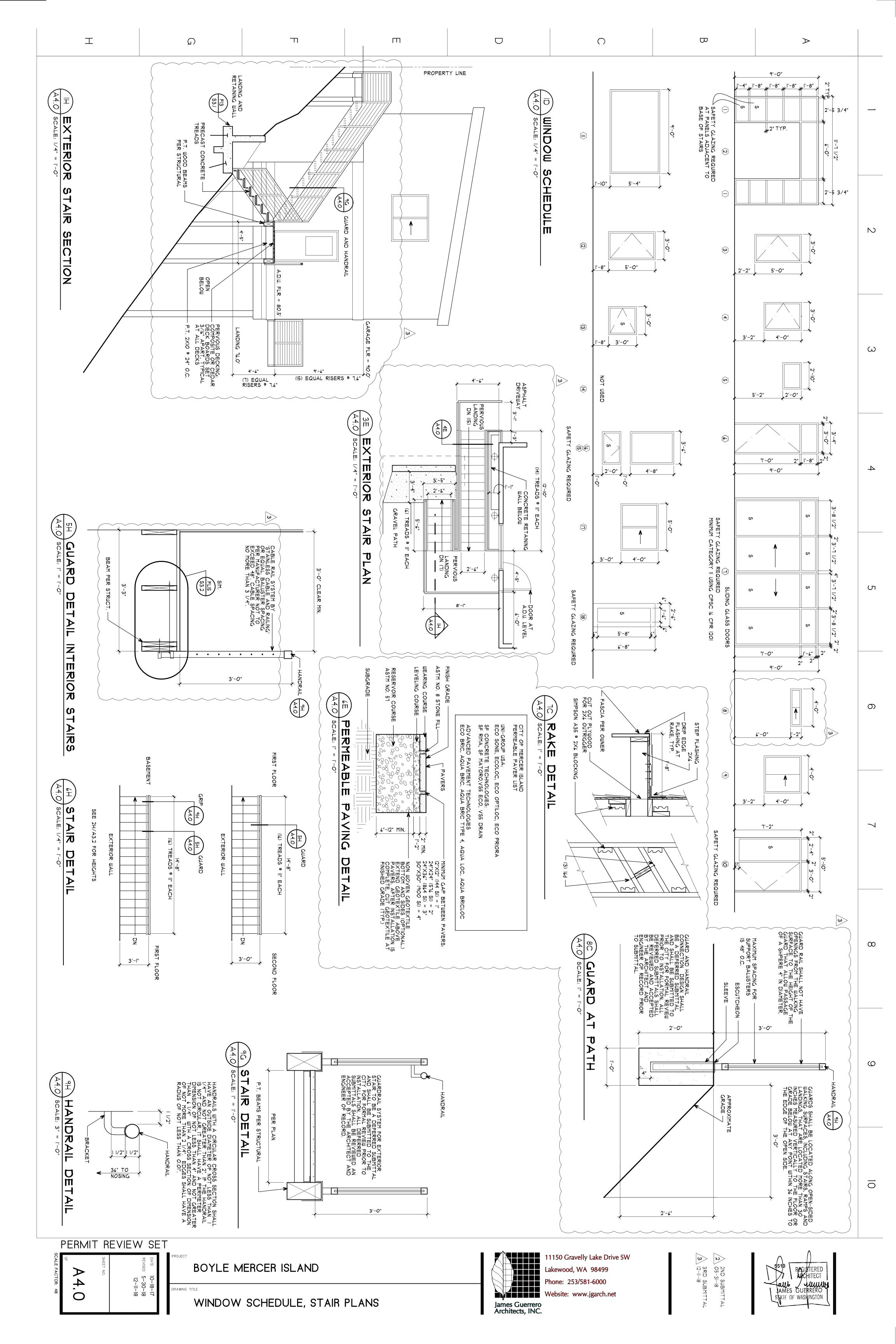












0 \triangleright I U **G** П Ш W I.O Construction Notes.
These notes supplement the specification. Any discrepancy found among the drawings, specifications, these notes, and the site conditions shall be reported to the Architect/Engineer, who shall correct such discrepancy in writing. Any work done by the Contractor after discovery of such discrepancy shall be done at the Contractor's rithe Contractor shall verify and coordinate the dimensions among all drawings prior to proceeding with any work or fabrication. The Contractor is responsible for all erection bracing, formwork and temporary construction shoring. By the act of submitting a bid for the proposed contract, the Contractor warrants that: The Contractor and all subcontractors he intends to use have carefully and thoroughly reviewed the drawings and structural notes and have found them complete and free from ambiguities and sufficient for the purpose intended; further that, The Contractor has carefully examined the site of the work and that from his own investigations, he has satisfied himself as to the nature and location of the work, as to the character, quality, quantities of material and difficulties to be encountered, as to the extent of equipment and other facilities needed for the performance of the work and as to the general and local conditions, and other items which may in any way affect the work or its performance, further that,

The Contractor and all workmen he intends to use are skilled and experienced in the type of construction represented by the drawings and documents bid upon; further that, Neither the Contractor nor any of his employees, agents, intended suppliers, or subcontractors have relied upon any verbal representations allegedly authorized or unauthorized from the owner or his employees or agents, including the Architect or Engineers, in assembling the bid figures; further that,

The bid figure is based solely upon the construction contract documents and properly issued written addenda and not upon any other written or verbal representations. *15% increase in stresses for wood framing allowed for :
Concentrated loads:
Mechanical units or other concentrated loads on roof or
engineered systems shall locate, coordinate, verify weigh
system for these loads.

Lateral loads:
Wind (IBC 1609)
IIO MPH - 3 second gust
IM = 1.0
Exposure C
Earthquake Design Data (IBC 1613)
Ie = 1.0
Ss = 1.41
Site Class C
SDS = 0.94
SDI = 0.47
Seismic Design Catagory D
Bearing Wall System - Light framing walls with
shear panels - wood structural panels
V = 0.14W (Strength Design)
Cs = 0.14
R = 6.5
Equivalent lateral force method
1.40 Soil data.
2500 psf herria. I.70 Miscellaneous.

Verify all dimensions and conditions in the field.

Verify size and location of all openings in the floors, roof and walls with Archi mechanical and electrical drawings.

Construction details not specifically shown on the drawings shall follow similar sections of this project as approved by the Architect/Engineer.

See architectural, mechanical and electrical drawings for dimensions and locat openings not dimensioned or shown on structural plans. 1.30 Design criteria. Uniform loads: All methods, materials and workmanship shall conform to the 2015 International (IBC) as amended and adopted by the local building authority. All reference to other codes and standards, (ACI, ASTM, etc..), Shall be most current edition available. 1.80 Special Inspections Special inspection in accordance with IBC section 1704 shall following work items: (Refer tp Section 1704 for complete (Inspection - see specifications.

Differred Submittals / Shop drawings.

Submit differred submittals / shop drawings to be reviewed by the Engineer for the following:

Concrete mix

Reinforcing steel

Pre-engineered Steel/Mood Trusses (Mashington State seal required)

Glue-laminated members

Concrete piles

Shoring design psf bearing - See soils report by Geo concentrated loads on roof or floor. All manufacturers of prlocate, coordinate, verify weights, etc., And design their for wood framing allowed for snow live load. Live load 25 psf* 40 psf Required for
Reinforcing
Reinforcing welding
Reinforcing welding
Bolts installed in concrete
Use of correct design mix
Slump & air tests
Placement of concrete
Curing temp. & technique Drilling & Grouting International Building Continuous
Periodic
Continuous
Continuous
Periodic Continuous Continuous Ö 0.0 ယ I.40 Quality Assurance
Qualitity Assurance Plans for Seismic Re
Architect or other Consultans for this p
assurance for each of the following sys
Piping systems and mechanical unit
materials.
Anchorage of electrical equipmen
Suspended ceiling systems and the Beams, columns, vertically
Formed walls
Footings
These slumps may be increased with properties of the containing chlorides are not permitted un Structural Concrete. 3.20 Strength. Twenty-eight day compressive strengths : psi 3000 3.50 Formwork and shoring.
Follow recommended practice for concrete formwork (ACI-347).
Reshoring for early removal of original supports will not be permitted.
While reshoring operations are underway, no construction loads will be new construction.
All shoring shall be the responsibility of the Contractor. Formwork sup shall be designed to provide finished concrete surfaces at all faces lito the dimensions and elevations shown. Tolerances and variations shows 3.10 General.
All concrete shall be hard rock concrete meeting requirements of ACI-301,
All concrete shall be hard rock concrete for Buildings." Proportioning of ingredients for each concrete mix shall be by method 2 or the alternate procedure given in ACI-301.
Place concrete per ACI-304 and conform to ACI-604(306) for winter concreting and A605(305) for hot weather concreting. Use interior mechanical vibrators with 7,000 rpm minimum frequency. Do not over-vibrate. Concrete shall be placed in a single pour between construction or control joints. Protect all concrete from premature drying, excessive hot or cold temperature for seven days after placing. 2.10 Excavation.

Excavate to depth shown and to firm undisturbed material. Over-excavations shall be backfilled with lean concrete (f'c = 2,000 psi) at the Contractor's expense. Exercise extreme care during excavation to avoid damage to buried lines, tanks, and other concealed items. Upon discovery, do not proceed with work until receiving written instructions from Architect. A competent representative of the owner shall inspect all footing excavations for suitability of bearing surfaces prior to placement of reinforcing steel. Provide drainage as necessary to avoid water-softened subgrade. Each Contractor responsible for the construction of the building's seismic-force-resisting system or other system listed in the quality assurance plan(s) shall submit a written contractor's statement of responsibility to the Building Official, Owner and Architect prior to commencement of the work on that system. The statement of responsibility shall meet all the requirements of IBC 1705.3. 3.40 Mater reducing admixtures.

Water reducing admixture: ASTM C-494. Admixtures shall be used in exc with manufacturer's instructions.

Synergized performance systems: Concrete using admixtures to produce concrete may be used subject to Engineer's approval.

Air entrainment: ASTM C-260 and ASTM C-494, entrain 4% plus/minus 1% 2.20 Fill, backfill and compaction.
Backfill against walls shall not be placed until after the removal of all material subject to rot or corrosion. All fill placed against retaining walls or basement walls shall be freedraining granular material. Structural fill other than pea gravel shall be granular, placed in 6 inch lifts and compacted to at least 95% of its maximum dry density as determined by ASTM D-1557 (Mod. Proctor) and ASTM D-698 (Standard Proctor). Pea gravel fill shall have a maximum particle size of 3/8" diameter. 3.60 Reinforcing steel.

Detail, fabricate, and place per ACI-315 and ACI-316. Support reinforcement with approved chairs, spacers, or ties.

Deformed bar reinforcement: ASTM A-615 Grade 60

Welded deformed bar reinforcement: ASTM A-615 Grade 60 or 40, weldable grade, submit weld procedures and mill certificates showing carbon content for all bars to be besided. Coarse and fine aggregate: ASTM C Water shall be clean and potable. 3.30 Materials. Cement: ASTM 150, type | or type |-cement. permitted unless All pene Multipas Single p Shear wall and diaphragm nailing Drag struts and holdowns ASTM A-185 & ASTM A-82 ASTM A-496 3000 3" +/- |"
3000 4" +/- |"
proper addition of admixtures for workability
of the original aproved mix design. Admixtures
ted unless approved by the Engineer. enetration groove welds bass fillet welds e pass fillet welds > 5/16" e pass fillet welds < 5/16" 3000 3000 units containing flammable combustible or highly toxic approved by the Engineer shall be: 3" +/- |" slump Unless otherwise provided by the Contractor shall provide quality emergency or standby power ain 4% plus/minus 1% by volume Formwork supports and shoring at all faces level, plumb, and true variations shall be as specified. Periodic Periodic of type S <u>О</u> 9 Construction joints.

Construction joint spacing in walls shall not exceed 50' on center except as directed by the Architect/Engineer.

Horizontal construction joints in beams and girders are not permitted except where indicated. Vertical construction joints in beams and slabs shall be located between the midpoint and the third point of the span. Unless noted otherwise, location of the construction or control joints in slab-on-grade shall be on column grids or under permanent partitions and shall not exceed 20'-0" c/c each way.

No joists, beams or girders shall be sleeved for piping or conduit except as noted on the structural drawings or as approved by the Architect/Engineer.

Electrical conduit in slabs, shall be placed at the mid-depth of the slab at a minimum spacing of three times the conduit diameter. Conduit outside diameter shall not exceed one-third of the slab thickness.

Provide control joints in exposed hollow core topping at each end of each hollow core plank. Provide additional joints parallel to planks at 16' o/c maximum. 6.20 Accessories.
Bolts shall be ASTM A-307.

Mashers shall be malleable iron washers (M.I.M.) or heavy plate cut wash.

Nails shall be common, American or Canadian manufacturers only.

Lag screws, shear plates - see national design specifications.

Anchors and connections shall be Simpson, Teco, Lumberlok or other Inte
products. All fasteners shall be installed per manufacturer's recommend. 5.20 Structural steel.
All detailing, fabrication, and erection shall conform to aisc "maconstruction", latest edition.

Materials:
Steel shapes/plates ASTM A-36
Pipe columns ASTM A-53, type E or S (fy=36 ksi.)
Tube columns ASTM A-500, grade B (fy=46 ksi.)
Bolts, nuts ASTM A-301 unless noted otherwise 6.50 Gluelam Beams.
Materials, manufacture and quality control sh
Unless otherwise shown, camber all beams 1-1
be combination 24F-1.8E as listed in AMC-As
appearance is acceptable. Chromated Copper Arsenate (CCA-C)
DOT Sodium Borate (SBX)
Alkaline Copper Quat ACQ-C and ACQ-C
Copper Azole (CBA-A and CA-B) Mood.
6.10 General.
6.10 General.
Framing lumber shall be DF#2 or better, except that 2x framing lumber may be HF #2 unless otherw Framing lumber shall be are a grade stamp of the plans. All 2" lumber shall be kiln dried (KD). Each piece of lumber shall bear a grade stamp of the plans. All 2" lumber standard for agency per the NIST American Softwood Lumber Standard for lumber grading or inspection bureau or agency per the NIST American Softwood Lumber Standard for lumber grading or inspection bureau or where bolt heads, nuts, and lag screws bear on wood. 6.30 Minimum nailing. Minimum nailing shall be All hardware exposed to weather, in unheated portions of building, or in contact with treated wood as specified above shall be galvanized as follows: Fasteners shall be hot dipped per ASTM A 153 or mechanically galvanized per ASTM B 695, class 55 or greater. Hardware shall be galvanized per one of the following processes: ASTM A 653 Class 185 (Simpson ZMax G185) or Batch/Post Hot Dipped Galvanized per ASTM A 123. Treat all wood in contact with concrete, mortar, grout, masonry, and within 8" of earth; all wood ox all wood in contact with earth; with one of the following processes: Metal protection: all steel exposed to weather, moisture, soil, or galvanized per ASTM A-123 (1.25 Oz/sf minimum). All other steel sprimed after fabrication. Where possible, pre-cut material before treatment. All field cuts accordance with AMPA M-4. 5.10 Welding.
All welding shall be in accordance with the "Structural Welding Code" ANSI/AWS DI.1. In the case of welding reinforcing bars, all welding shall be in accordance with ANSI/AWS DI.4. Welding of reinforcement bars shall not be allowed except where shown.
Materials: use only E60 or E70 electrodes
All welding shall be by certified welders. All full penetration welds shall be inspected to the procedures. Submit test results to Architect/Engineer ultrasonic non-destructive testing procedures. Submit test results to Architect/Engineer All reinforcing shall be lap-spliced a minimum lap of 40 bar diame specifically on the structural drawings. No more than 50% of horishall be spliced at one location. Provide elbow bars (40 diameter) to lap horizontal steel at corn footings and walls.

Lap welded fabric 12" or one spacing plus 2", whichever is more. 6.40 Sheathing (plywood ONLY). All grading shall conform to the following star ay-up shall be as shown. All plywood shall be minimum nailing: 3.70 Concrete cover on reinforcing (unless shown otherwise).

Bottom of footings 3"

Formed earth face & slab-on-grade 2"

Walls, weather face 1-1/2"

Columns and beams to stirrups 1-1/2"

Bottom of interior slab 3/4"

Walls, inside face 1" .60 Wood adhesive. Il wood adhesives shall be elastomeric and shall have a current coordance with the adhesive manufacturer's recommendations. ndards: NIST Voluntary Product Standard PS 2-92. group I or II species. Unless otherwise shown, prov - <u>3/4</u> 2 2 stress [<u>6</u> 19 기 Member geometry and spacing shall be as shown on the plans. The manufacturer shall provide additional framing member as shown or as necessary to provide support for mechanical equipment, wall or other partitions, snow drift loads, etc. Trusses with spans greater than 35' shall have the heel plates designed considering the effect of eccentric loading. Where noted precut blocking, bridging, bracing and/or filler pieces shall be furnished by the manufacturer. Where applicable, wind uplift bracing shall be provided by the manufacturer. Unless noted otherwise, the truss manufacturer shall specify and furnish connection hardware for the installation of their system. BI Summary Sheet - Guide for Handling, Installation and Bracing of Metal Plate B2 Summary Sheet - Truss Installation and Temporary Bracing.
B3 Summary Sheet - Web Member Permanent Bracing/Web Reinforcement.
B4 Summary Sheet - Construction Loading. TP1 1-2002 National Design Standards for Metal Plate Connected Wood Truss Construction. TP1 1-1995 Code of Standard Practice for the Metal Plate Connected Wood Truss Industry. TP1 2-1995 Standard for Testing Metal Plate Connected Wood Trusses. delivered, the components shall be accompanied by the fabricators certificate of conformance to the referenced standards, and by the following user advisory notices (or notices equivalent) to: drawings shall indicate all required permanent bracing. Supporting calculations shall indicate member es, species/grades and applicable ICC-ES approvals. Shop drawings and calculations shall be sealed professional engineer registered in the State of Mashington. ∞ Backing removed and weld tabs Size, length and location of welds Material identification (type/grade) Settings on welding equipmer
Travel speeed
Selected welding materials
Shielding gas type/flow rate
Preheat applied -up of fillet welds
Dimensions (alignment, gaps at root)
Cleanliness (condition of steel surfaces)
Tacking (tack weld quality and location) Inspection Tasks Prior to Welding elding over cracked tack welds Inspection Tasks During Welding Inspection Tasks After Welding Iding equipment tion (F, V, H, OH) TABLE C-N5.4-1 Inspection Tasks Prior to Welding TABLE C-N5.4-2 Inspection Tasks During Welding Inspection Tasks ns (WPSs) TABLE C-N5.4-3 ion Tasks After Welding removed (if re 9 AWS D1.1/D1.1M References** AWS D1.1/D1.1M References* AWS D1.1/D1.1M Referen 6.2 5.3.1 (for SMAW), 5.3.3 (for SAW) 6.4 (welder qualification) ication system not req AWS D1.1/D1.1M) 6.3.3, 6.5.2, 5.5, 5.21 ce with the following standards 5.10, 5.31 6.5.3 Table 6.1(1) Table 6.1(2) 6.5.2, 5.17 see Section J1.6) ble 6.1(4), 5.24
Table 6.1(6)
Table 6.1(7)
Table 6.1(8) 5.6, 5.7 5.12.1 5.12.2 5.22.1 5.15 5.18 5.18 quired by 10

12181 'C' STREET SOUTH TACOMA, WA 98444 (253) 537-8128 ccfynboe@cs.com

Christian Fundoe:

ENGINEER

BOYLE RESIDENCE MERCER ISLAND, WA

Occument acceptance or rejection of velded joint or member

k-area issues were identified in AISC (1997b).

AWS (2010)

ion A3.1c and Section J10.8

PERMIT SET

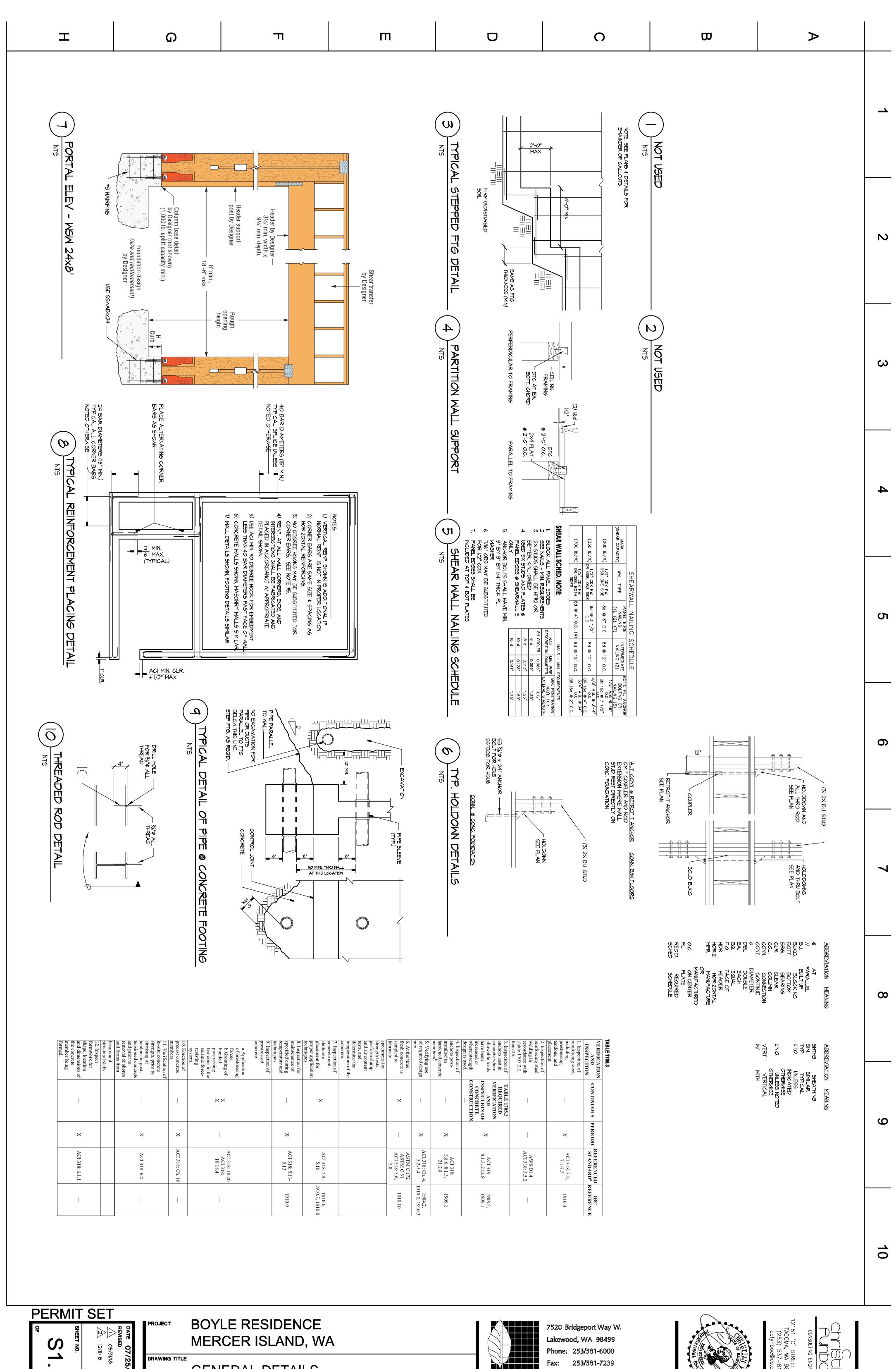
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DRAWING TITLE

GENERAL NOTES

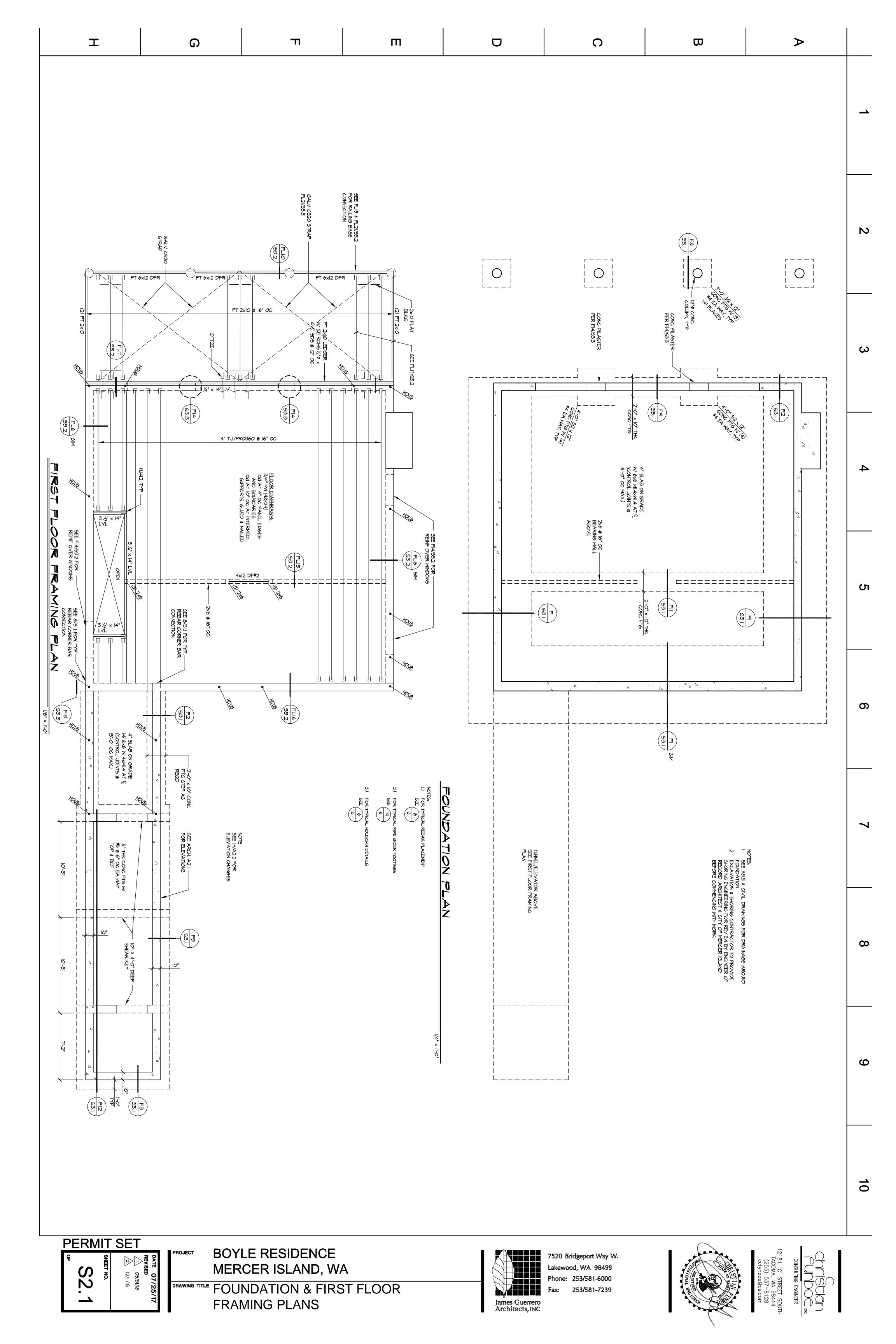
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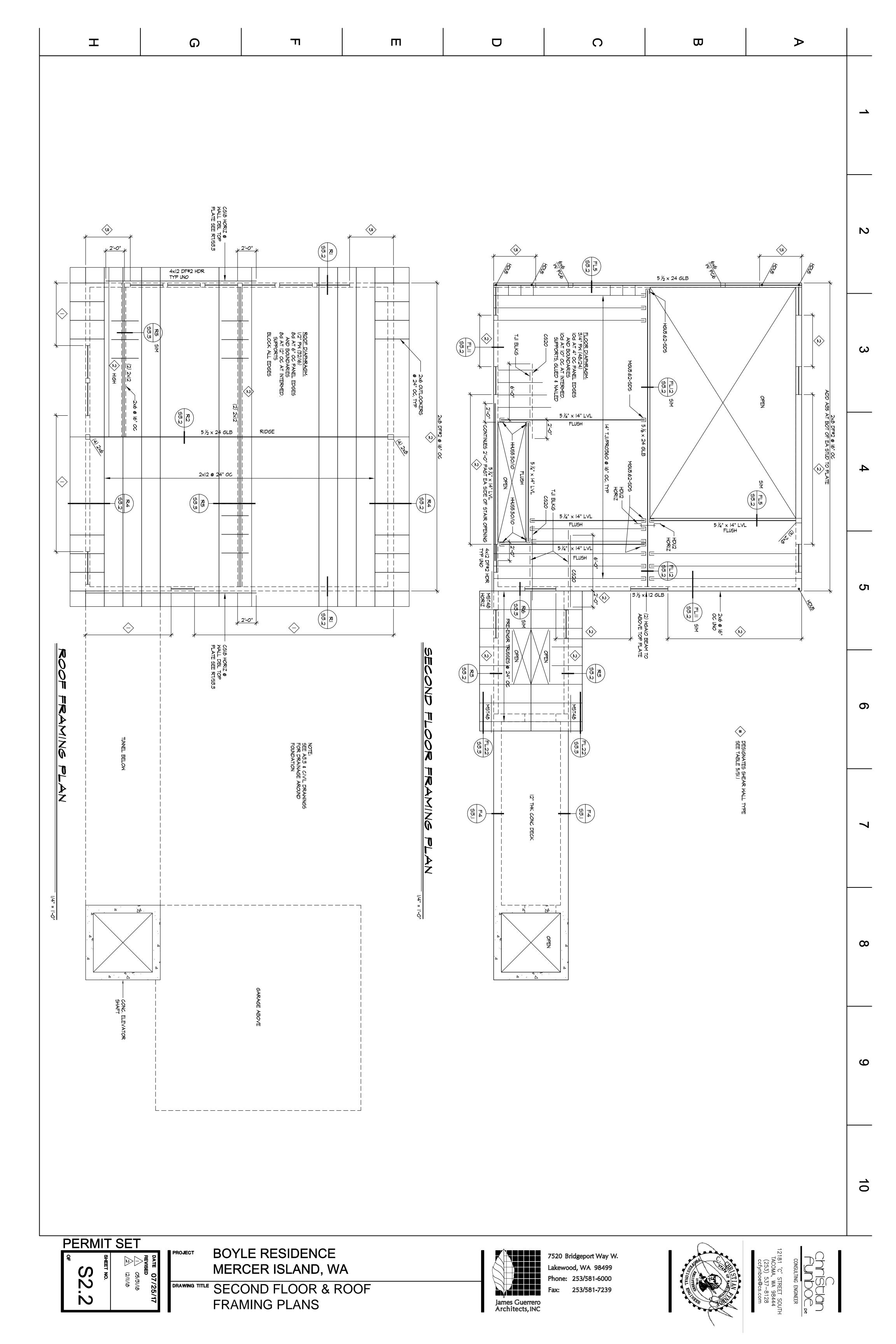
7520 Bridgeport Way W. Lakewood, WA 98499 Phone: 253/581-6000 253/581-7239

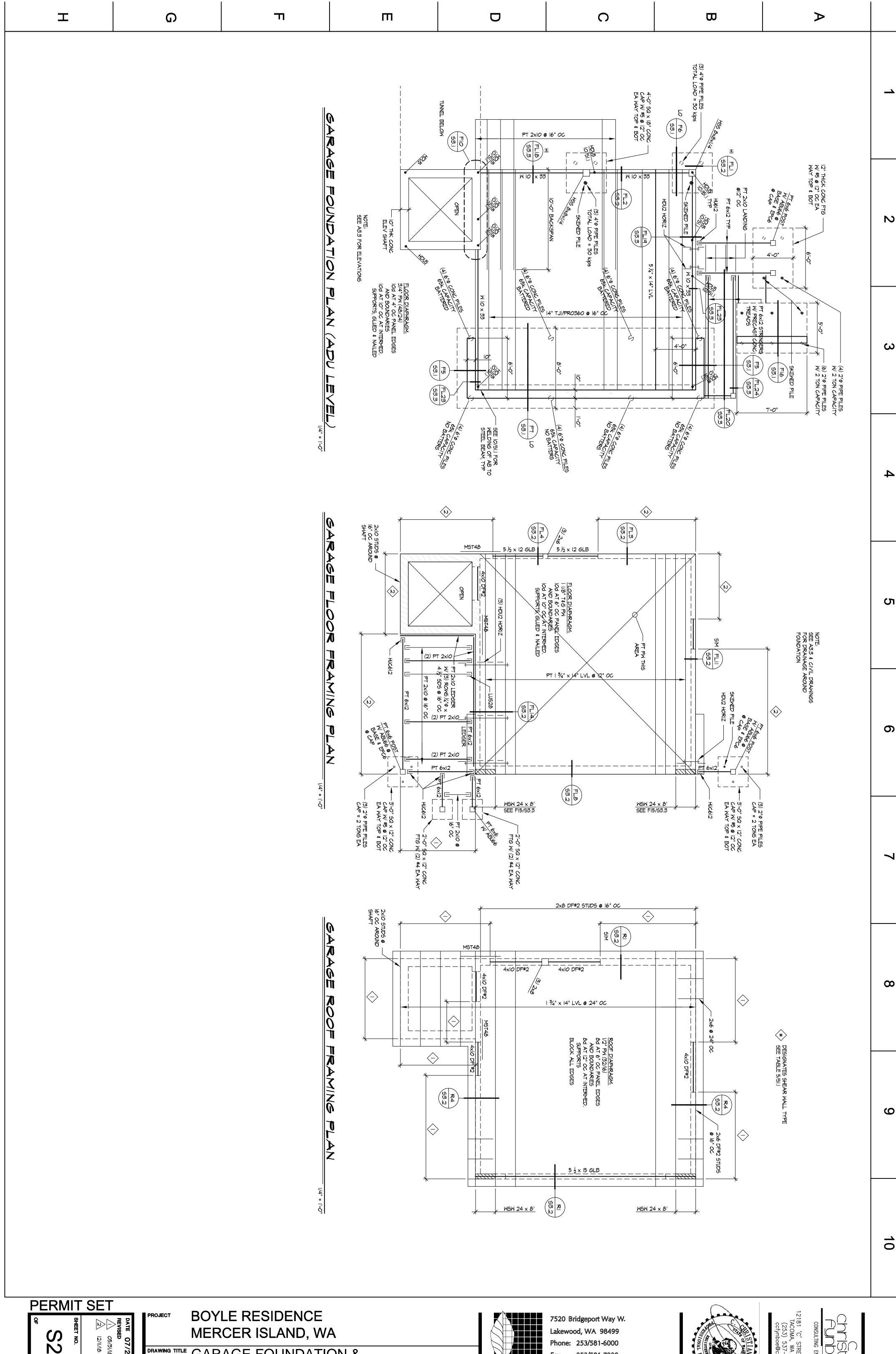


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GARAGE FOUNDATION & FRAMING PLANS



253/581-7239

