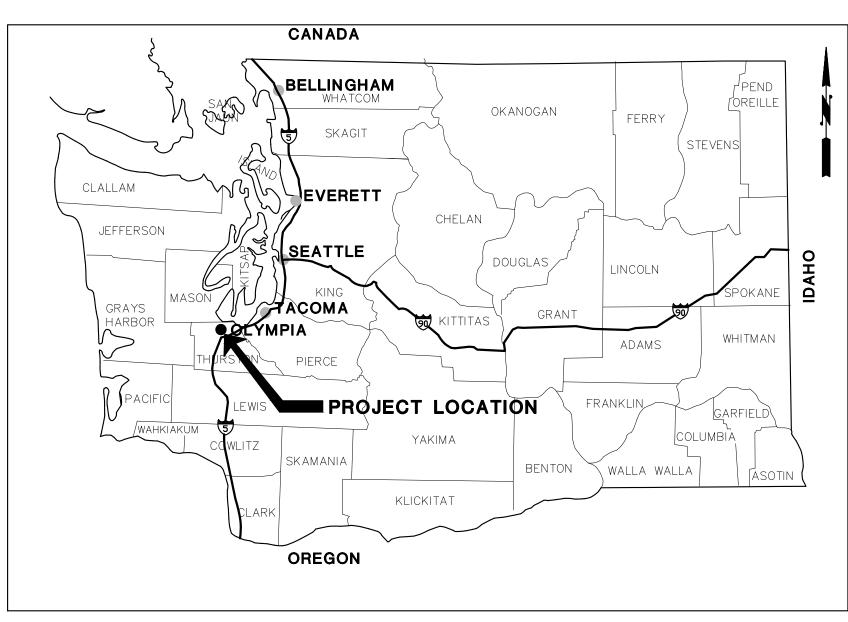
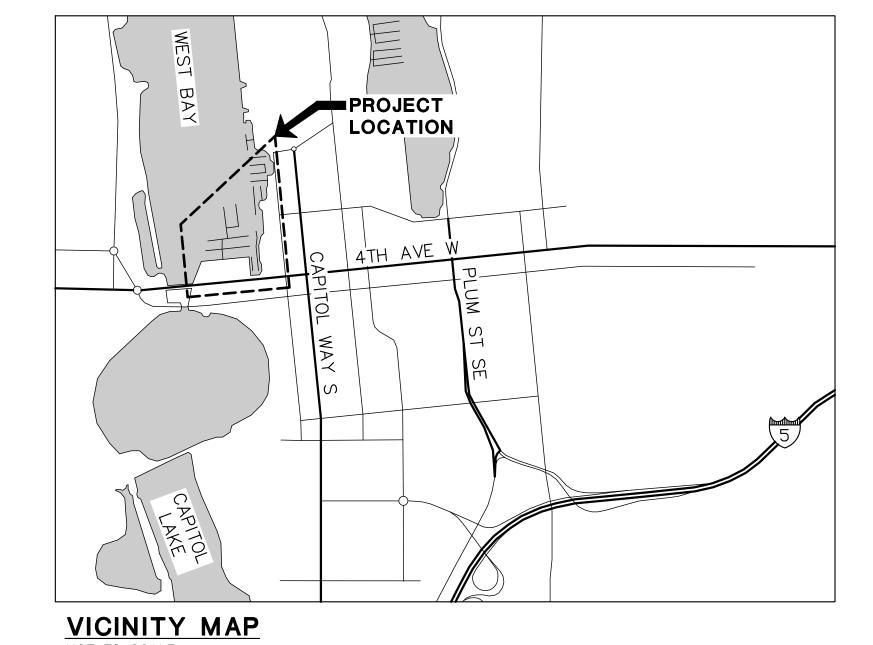
# PERCIVAL LANDING 2021 REPAIRS

CITY OF OLYMPIA PARKS, ARTS, AND RECREATION DEPARTMENT OLYMPIA, WASHINGTON

PROJECT NO. 1956H





**AREA MAP** 

# **Olympia City Council**

**Cheryl Selby, Mayor** Yen Huỳnh **Dani Madrone Clark Gilman Lisa Parshley Renata Rollins Jim Cooper** 

**Jay Burney, City Manager** 

# **Project Team**

Jake Lund, Project Manager Paul Simmons, Director of Parks, Arts and Recreation

### **DRAWING INDEX**

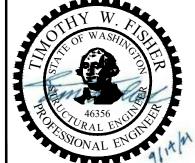
Sneet	Drawing	Drawing Title
No.	No.	Drawing Trac
		General
1	G-1	Cover Sheet & Drawing Index
2	G-2	General Notes
3	G-3	General Notes and Repair Schedule
		Structural
4	S-1	Overall Site Plan, Abbreviations, Contractor Staging and Parking
5	S-2	Repair Plan - Sheet 1
6	S-3	Repair Plan - Sheet 2
7	S-4	Repair Plan - Sheet 3
8	S-5	Repair Plan - Sheet 4
9	S-6	Repair Plan - Sheet 5
10	S-7	Repair Plan - Sheet 6
11	S-8	Repair Plan - Sheet 7
12	S-9	Repair Plan - Sheet 8
13	S-10	Float Repair Plan
14	S-11	Repair Photos - Sheet 1
15	S-12	Repair Photos - Sheet 2
16	S-13	Repair Photos - Sheet 3
17	S-14	Repair Photos - Sheet 4
18	S-15	Repair Photos - Sheet 5
19	S-16	Details
		Reference Drawings
20	R-1	Boardwalk Details - Sheet 1 (Reference Only)
21	R-2	Boardwalk Details - Sheet 2 (Reference Only)

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PERCIVAL LANDING DESIGNED BY: TWF **2021 REPAIRS** DRAWN BY: AHK CHECKED BY: JRG

SCALE: AS SHOWN

DATE: September 14, 2021

**G-1** 

SHEET NO. 1 OF 21 **COVER SHEET & DRAWING INDEX** 

## **GENERAL NOTES**

#### CODES AND REFERENCE STANDARDS

ALL MATERIALS, WORK AND TESTING SHALL CONFORM TO THE FOLLOWING CODES AND REFERENCE STANDARDS IN ADDITION TO THOSE STATED ELSEWHERE IN THE CONTRACT.

- 1. 2018 IBC AS AMENDED BY THE CITY OF OLYMPIA
- 2. 2018 IRC AS AMENDED BY THE CITY OF OLYMPIA
- 3. ACI 301-10: SPECIFICATIONS FOR STRUCTURAL CONCRETE 4. ACI 305R-10: HOT WEATHER CONCRETING
- 5. ACI 306R-10: COLD WEATHER CONCRETING
- 6. ACI 308R-01: GUIDE TO EXTERNAL CURING OF CONCRETE
- 7. ACI 318-14: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
- 8. AITC TIMBER CONSTRUCTION MANUAL
- 9. WCLIB STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 16
- 10. AWPA WOOD PRESERVATION STANDARDS
- 11. WWPI BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC AND OTHER SENSITIVE ENVIRONMENTS (1 AUGUST 2006)
- 12. ASTM, CURRENT EDITION
- 13. 2018 NDS

#### CONSTRUCTION LOADS

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CALCULATIONS AND DETERMINATIONS OF STRUCTURE CAPACITY FOR THE ANTICIPATED LOADS OF THE CONSTRUCTION EQUIPMENT TO BE USED, AND THE STABILITY OF THE STRUCTURE UNTIL IT IS COMPLETE.

#### **GENERAL**

- 1. THE CONTRACTOR SHALL VERIFY INFORMATION SHOWN ON THE DRAWINGS, OTHER CONTRACT DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE BEGINNING AFFECTED WORK. THE ENGINEER WILL RESOLVE ANY SUCH CONFLICTS.
- 2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 3. PROVIDE TEMPORARY SUPPORT TO THE EXISTING STRUCTURE AS REQUIRED TO MAINTAIN STABILITY, AVOID UNDUE STRESS, AND PREVENT DAMAGE PRIOR TO AND **DURING REPAIRS.**
- 4. THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH ALL PERMITS, LAWS AND INDUSTRY STANDARDS.
- 5. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS TO EXISTING FEATURES, STRUCTURES, AND UTILITIES THAT ARE TO REMAIN, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 6. THE CONTRACTOR SHALL PREVENT, AVOID, AND MINIMIZE THE POTENTIAL FOR DEMOLITION, CONSTRUCTION OR OTHER DEBRIS TO FALL INTO THE WATER BY UTILIZING TARPS, FLOATING PLATFORMS OR OTHER MEANS. IN THE EVENT THAT DEBRIS ENTERS THE WATER, THE CONTRACTOR SHALL IMMEDIATELY REMOVE THE DEBRIS AND DISPOSE OF IT IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. THE CONTRACTOR SHALL MONITOR OVERWATER DEMOLITION AND CONSTRUCTION ACTIVITIES TO FACILITATE IMMEDIATE REMOVAL OF ANY DEBRIS THAT ENTERS THE WATER. CONTAINMENT METHODS SHALL BE MODIFIED IF MONITORING INDICATES THAT THE METHODS USED ARE NOT EFFECTIVE.
- 7. ALL MATERIAL SHALL BE NEW AND UNDAMAGED, UNO.
- 8. ALL REPAIR AND REPLACEMENT WORK SHALL BE LIKE-KIND USING NEW MATERIAL, UNO.
- CONTRACTOR SHALL HAVE AT LEAST ONE EMPLOYEE ONSITE SUPERVISING WORK THAT HAS AT LEAST 7 YEARS OF EXPERIENCE WITH THE PARTICULAR TRADE SKILL BEING PERFORMED AT ANY GIVEN TIME.
- 10. UNUSED AND EXCESS MATERIAL SHALL BECOME PROPERTY OF CONTRACTOR AND REMOVED FROM SITE.
- 11. ANY EXISTING STRUCTURES OR ASSEMBLIES THAT ARE TO REMAIN, BUT REQUIRE TEMPORARY DISASSEMBLY, MAY BE REASSEMBLED W/ SAME MEMBER AND HARDWARE, UNO, PROVIDED THE HARDWARE AND/OR MEMBER ARE IN LIKE-NEW AND UNDAMAGED CONDITION, AS DETERMINED BY THE ENGINEER OTHERWISE THIS HARDWARE AND/OR MEMBER SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

#### **PERMITS**

ALL WORK SHALL CONFORM TO THE ENVIRONMENTAL PERMIT REQUIREMENTS IN THE CONTRACT. A BUILDING PERMIT IS NOT REQUIRED FOR THE WORK SHOWN IN THE CONTRACT.

#### **ELEVATIONS**

- 1. ELEVATIONS AND CONTOURS ARE IN FEET AND INDICATE DISTANCE ABOVE OR BELOW TIDAL DATUM MLLW = 0.0.
- 2. CONTOURS AND BATHYMETRY SHALL BE CONSIDERED APPROXIMATE.

#### TIDES

TIDAL ELEVATIONS (REFERENCED TO TIDAL DATUM MLLW = 0.0) ARE BASED ON NOAA STATION 9446969.

a.	HIGHEST OBSERVED TIDE	17.94
b.	MEAN HIGHER HIGH WATER (MHHW)	14.56
c.	MEAN HIGH WATER (MHW)	13.55
d.	MEAN LOW WATER (MLW)	3.07
e.	MEAN LOWER LOW WATER (MLLW)	0.00
f.	LOWEST OBSERVED TIDE	-4.33'

#### PUBLIC USE DURING CONSTRUCTION

IT IS EXPECTED THAT PERCIVAL LANDING WILL REMAIN OPEN TO THE PUBLIC DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT ANY TRAFFIC OR PEDESTRIAN CONTROL PLANS TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO THE CLOSURE. CONTRACTOR MAY CLOSE OFF AREAS OF PERCIVAL LANDING AS REQUIRED TO ACCOMPLISH THE PROJECT. WHERE THE CONTRACTOR NEEDS TO CLOSE OFF LARGE AREAS OF PERCIVAL LANDING DURING CONSTRUCTION, WHERE PRACTICAL THE CONTRACTOR SHALL PROVIDE A PEDESTRIAN ROUTE AROUND THE CLOSED OFF AREAS. PERCIVAL LANDING IS A PUBLIC SPACE AND ALL APPROPRIATE SAFETY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR.

#### CONSTRUCTION SCHEDULE

CONTRACTOR SHALL PROVIDE THE CITY A CONSTRUCTION SCHEDULE. THE CONSTRUCTION SCHEDULE SHALL SPAN FROM AWARD TO DEMOBILIZATION AND SHALL BE UPDATED AND RESUBMITTED IF IT BECOMES OUTDATED. THE SCHEDULE SHALL BE SPECIFIC ENOUGH THAT THE CITY CAN KNOW WHAT ACTIVITIES, NAMED IN THE CONTRACT, WILL BE PERFORMED AND WHEN. CONTRACTOR SHALL COORDINATE AND COMMUNICATE ACTIVITIES REGULARLY, SO THE CITY CAN PLAN AROUND WORK.

#### **SUBMITTALS**

EACH SUBMITTAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING THE ASSOCIATED WORK OR ORDERING THE ASSOCIATED MATERIAL. THE FOLLOWING ARE REQUIRED SUBMITTALS FOR THIS PROJECT, IN ADDITION TO ANY OTHER SUBMITTALS REQUIRED WITHIN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR MATERIALS AND METHODS THAT MEET PROJECT REQUIREMENTS, PROVIDE GOOD FUNCTION AND LONGEVITY. APPROVAL OF SUBMITTALS DOES NOT ABSOLVE CONTRACTOR OF THIS RESPONSIBILITY. SUBMITTALS 1 THROUGH 4, BELOW, ARE DUE AT THE PRE CONSTRUCTION CONFERENCE AND SHALL BE APPROVED BEFORE STARTING ANY REPAIR WORK.

- 1. LIST OF SUBMITTALS
- 2. CONSTRUCTION SCHEDULE
- WORK PLAN
- 4. TRAFFIC AND PEDESTRIAN CONTROL PLANS
- MATERIAL CERTIFICATIONS, MILL CERTIFICATIONS AND MATERIAL CUT SHEETS
- SHOP DRAWINGS
- PRE-CONSTRUCTION D AND E FLOAT EXISTING SUPPLEMENTAL FLOTATION AS-BUILT SKETCHES
- 8. GATE SELF-CLOSING SPRING ATTACHMENT DETAIL SKETCHES, 3 LOCATIONS
- 9. FINAL AS-BUILTS
- 10. ZINC RICH PAINT COLOR SWATCH, PLASTIC LUMBER SAMPLE FOR COLOR
- 11. D AND E FLOATS BUOYANCY CALCULATIONS

#### WOOD/TIMBER

- 1. ALL WOOD/TIMBER SHALL BE PACIFIC COAST DOUGLAS FIR, GRADE NO. 1, UNO, AND SHALL CONFORM TO THE LATEST SPECIFICATIONS OF THE WCLIB.
- 2. HOLES FOR BOLTS SHALL BE 1/16 INCH LARGER THAT THE BOLT DIAMETER. LEAD HOLES FOR LAG SCREWS SHALL BE PRE-BORED TO 65 PERCENT OF THE SHANK DIAMETER.
- 3. INSTALL FASTENERS IN A MANNER THAT PREVENTS SPLITTING OF WOOD, AS APPROVED BY THE ENGINEER WHICH MAY INCLUDE USE OF PILOT/LEAD HOLES, ETC.
- 4. ALL SHOP AND FIELD CUTS, BORED HOLES AND INJURIES OF TIMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD M4. FIELD TREATMENT SHALL BE COPPER NAPHTHENATE.
- 5. BOARDWALK TIMBER DECKING BOARDS SHALL BE UNTREATED.
- 6. ALL WOOD/TIMBER SHALL BE PRESSURE TREATED IN ACCORDANCE TO AWPA STANDARDS T1, U1 AND UC4B WITH A MINIMUM RETENTION OF 0.60 POUNDS PER CUBIC FOOT OF AMMONIACAL COPPER ZINC ARSENATE (ACZA), UNO. BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE INCORPORATED AS SET FORTH BY THE WESTERN WOOD PRESERVERS INSTITUTE (WWPI). SEE DWG S-11 FOR BENCH MEMBERS THAT REQUIRE A DIFFERENT TREATMENT PROCESS.
- 7. ALL TIMBER SHALL BE INSOFAR AS PRACTICABLE CUT TO LENGTH AND BORED BEFORE TREATMENT.
- 8. PLYWOOD SHALL BE UNTREATED MARINE GRADE PLYWOOD CONFORMING TO PS-1, EXTERIOR.
- ALL WOOD/TIMBER SHALL BE STRAIGHT, SQUARE, TRUE, LEVEL, PLUMB, PLANE AND SHALL BE CUT AND BORED THE SAME. WOOD/TIMBER SHALL BE CUT TO FIT TIGHT WHERE INSTALLED. ALL CUTS SHALL BE SMOOTH AND FREE OF ABRASION AND BURRS FROM POOR WORKMANSHIP. MATING SURFACES SHALL BE CUT TO FULLY CONTACT. WARPED, BOWING OR TWISTED WOOD/TIMBER ARE NOT ACCEPTABLE AND SHALL NOT BE USED. ANY WARPED, TWISTED OR POORLY FITTING WOOD INSTALLED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, AS DETERMINED BY THE ENGINEER. BORED HOLES SHALL BE ROUND.

#### REINFORCED CONCRETE

- 1. REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615, GRADE 60.
- 2. CAST-IN-PLACE CONCRETE SHALL HAVE A 5000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.
- CONSTRUCTION JOINTS SHALL BE PROVIDED ONLY AS NOTED ON THE DRAWINGS AND AS APPROVED BY THE ENGINEER.
- SPILLING FRESH CONCRETE INTO THE WATER DURING CONCRETE PLACEMENT ACTIVITIES IS STRICTLY PROHIBITED.
- 5. CONCRETE SHALL BE HIGH STRENGTH CONCRETE BY SAKRETE OR EQUIVALENT.
- 6. ENGINEER SHALL BE GIVEN 2 DAYS NOTICE PRIOR TO PLACING CONCRETE.

#### **DEMOLITION**

ALL DEMOLITION MATERIAL, EXCEPT AS NOTED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE W/ ALL LAWS AND PERMITS. THE REMOVAL, HANDLING AND DISPOSAL OF ALL DEMOLITION MATERIALS, INCLUDING CREOSOTE-TREATED TIMBERS SHALL BE IN STRICT ACCORDANCE WITH ALL STATE AND FEDERAL REQUIREMENTS. PROPER DISPOSAL OF ALL DEMOLITION AND CONSTRUCTION MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE ITSELF WITH THE MATERIALS TO BE DISPOSED OF AND ALL GOVERNING AGENCIES AND PERMIT REQUIREMENTS.

PROVED BY: JRG

SCALE: AS SHOWN

DATE: September 14, 2021

#### SHIM BOARDWALK TIMBER DECKING

- UP TO 295 LF OF BOARDWALK 12" NOMINAL WIDTH DECKING BOARDS SHALL BE SHIMMED, WHERE IDENTIFIED BY THE CITY FOLLOWING AWARD.
- 2. REMOVE, SHIM AND REINSTALL BOARDWALK TIMBER DECKING BOARDS.
- 3. REMOVED DECKING HARDWARE THAT IS BENT OR DAMAGED SHALL BE REPLACED.
- 4. CARE SHALL BE TAKEN TO NOT DAMAGE THE EXISTING DECKING BOARDS THAT ARE TO BE REINSTALLED.
- SHIM W/ PLYWOOD TO MAKE TIMBER DECKING BOARDS EVEN W/ ADJACENT DECKING BOARDS AND CONCRETE. A SINGLE PIECE OF PLYWOOD SHALL BE USED FOR FULL SHIM THICKNESS WHERE POSSIBLE.
- 6. CHASE EXISTING LAG SCREW THREAD PROFILE INTO EXISTING SUBSTRATE WHEN REINSTALLING DECKING BOARDS.
- 7. IF AN EXISTING LAG SCREW HOLE PROFILE BECOMES STRIPPED, THEN ADD A 6" HEADLOK SCREW ADJACENT.
- 8. PLYWOOD SHIMS SHALL BE SIZED FOR FULL BEARING AREA OF DECKING BOARD.

#### REPLACE BOARDWALK TIMBER DECKING BOARDS

- 1. UP TO 240 LF OF BOARDWALK 12" NOMINAL WIDTH DECKING BOARDS SHALL BE REPLACED, WHERE IDENTIFIED BY THE CITY FOLLOWING AWARD.
- 2. SHIM REPLACEMENT DECK BOARDS AS NEEDED TO PROVIDE AN EVEN SURFACE W/ SURROUNDING WOOD AND CONCRETE SURFACES.
- DECKING BOARDS REPLACED AS PART OF THE 240 LF PROJECT TOTAL THAT ARE ALSO SHIMMED, SHALL NOT ALSO COUNT TOWARDS THE 295 LF PROJECT TOTAL FOR SHIMMING.
- EXISTING END BUTTED BOARDS TO REMAIN THAT REQUIRE BEING CUT SHALL BE SECURED OVER EACH SUPPORT AND MAY REQUIRE ADDITIONAL SPIKES OR LAGS BE INSTALLED. 6" LONG HEADLOK SCREWS SHALL BE USED INSTEAD OF NEW LAGS IN THIS INSTANCE.

#### DRIVE NAIL AND SPIKE POPS

- NUMEROUS EXISTING NAIL AND SPIKE HEADS PROTRUDE PROUD OF THEIR SUBSTRATE. THE PROTRUDING HEADS ARE SCATTERED ALONG THE LENGTH OF THE BOARDWALK SPANNING DRAWINGS S-2 THROUGH S-9 WITH GREATEST CONCENTRATION IN THE VICINITY SHOWN IN DRAWINGS S-3 AND S-4. THE PROTRUDING HEADS ARE OBSERVED ON THE DECKING AND ON THE GUARDRAILS. THE HEADS CAN BE ACCESSED BY WALKING ALONG THE BOARDWALK AND DO NOT REQUIRE CLIMBING LADDERS OR STANDING OUTSIDE OF THE WALKING PATH TO ACCESS. THE PROTRUDING HEADS MAY HAVE BEEN CAUSED BY THERMAL AND WOOD MOISTURE CONTENT FLUCTUATIONS OVER THE LIFE OF THE TIMBER STRUCTURE, MAY BE FROM UNDERDRIVING OF FASTENERS DURING ORIGINAL CONSTRUCTION OR DEFLECTION OF THE STRUCTURE OVER THE YEARS.
- 2. CONTRACTOR SHALL DRIVE FLUSH ALL NAIL AND SPIKE HEADS THAT ARE STICKING UP PROUD OF THE WOOD SUBSTRATE SURFACE ON THE TIMBER BOARDWALK, GUARD RAILS, INTERMEDIATE FLOATS, TIMBER MEMBERS OF D FLOATS AND E FLOATS. THE TIMBER BOARDWALK SPANS FROM DRAWING S-2 THROUGH S-9.
- 3. A SPRING IMPACT NAIL SET BY SPRING TOOLS® OR EQUIVALENT SHALL BE USED FOR NAILS. KEEP NAIL HEADS, ESPECIALLY TOENAILS, FROM BEING OVERDRIVEN INTO WOOD SUBSTRATE IF HEAVILY WEATHERED OR THIN WOOD BOARDS TO REDUCE THE CHANCE OF SPLITTING.
- NAIL AND SPIKE POPS TO BE DRIVEN AS PART OF OTHER REPAIRS SHOWN IN THESE DRAWINGS SHALL NOT COUNT TOWARD THE QUANTITY OF REPAIR R102, "DRIVE NAIL AND SPIKE POPS" STATED IN THE REPAIR SCHEDULE

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SHEET NO. 2 OF 21

**GENERAL NOTES** 

Federal Way, WA 98003-2600 TEL: (206) 431-2300 FAX: (206) 431-2250

33301 9th Avenue South

## **GENERAL NOTES CONT.**

#### WOOD FASTENER INSTALLATION

- 1. ALL THREADED FASTENERS INSTALLED BY ROTATIONAL DRIVING MEANS ARE CONSIDERED SCREWS IN THIS CONTRACT, UNO, FOR EXAMPLE, WOOD SCREWS, LAG SCREWS, POWER LAG, LEDGERLOK, HEADLOK, SPAX, ETC.
- 2. INSTALL SCREWS SUCH THAT SCREW HEADS FULLY BEAR AGAINST SUBSTRATE. NAILS AND SPIKES SHALL BE DRIVEN FLUSH WITH SUBSTRATE. MATTING SUBSTRATES SHALL BE HELD IN FULL CONTACT BY FASTENERS.
- 3. WHEN INSTALLING FASTENERS, PROVIDE FULL CONTACT BETWEEN MATTING SUBSTRATES BY MEANS OTHER THAN THE FORCE DELIVERED FROM THE FASTENER DRIVING TO MINIMIZE THE CHANCE OF SPIN-OUT/STRIPPING OF THE FASTENER HOLE.
- 4. NO SCREW HEADS SHALL BE STRIPPED DURING DRIVING, AS COATING MAY BECOME DAMAGED. ANY STRIPPED SCREW HEADS, AS DETERMINED BY THE ENGINEER, SHALL BE REMOVED AND REPLACED WITH A NEW SCREW.
- 5. OVERDRIVING FASTENERS IS NOT ACCEPTABLE. WOOD MEMBERS, EXISTING OR NEW, THAT THE CONTRACTOR HAS OVERDRIVEN FASTENERS INTO MAY BE DETERMINED TO BE DAMAGED BY THE ENGINEER AND IN WHICH CASE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 6. WASHERS SHALL BE USED UNDER ALL BOLT HEADS, NUTS AND LAG SCREW HEADS, EXCEPT ECONOMY BOLT HEADS.

#### PLASTIC LUMBER

- 1. PLASTIC BULLRAIL AND PLASTIC SCUPPER BLOCKS SHALL BE FIBER REINFORCED MOLDED LUMBER, HDPE WITH FIBERGLASS FILAMENT, BY TENGENT OR EQUIVALENT. MATERIAL SHALL BE UV STABILIZED.
- 2. WHERE DAPPING AND NOTCHING FOR LAPS OR OTHER CONNECTIONS ARE MADE IN PLASTIC LUMBER, OVERCUTTING IS NOT ALLOWED, AS NOT TO MAKE A WEAK POINT IN MEMBER WHERE A CRACK OR FRACTURE COULD EMINATE. ALL TRANSITIONS FROM ONE CUT PLANE TO ANOTHER SHALL BE SMOOTH AND FREE OF NOTCHES OR ABRUPT EDGES, LOCAL SANDING OR SHAPING OF CUT SURFACES MAY BE REQUIRED.
- 3. MATCH SIZE AND COLOR WITH EXISTING PLASTIC AND SUBMIT SAMPLES TO ENGINEER FOR APPROVAL.
- 4. THE SAME REQUIREMENTS FOR WOOD/TIMBER QUALITY WORKMANSHIP APPLY TO PLASTIC LUMBER AS WELL.
- 5. HARDWARE SHALL BE PROVIDED THAT MATCHES THE TYPICAL HARDWARE USED FOR SIMILAR CONNECTIONS AT E FLOAT, UNO.

REPAIR SCHEDULE										
SHEET NO.	REPAIR DESIGNATION *	DESCRIPTION	NUMBER OF LOCATIONS	PROJECT QUANTITY	QUANTITY UNITS					
S-2	R1	REPAIR/REPLACE BROKEN/MISSING BENCH TRIM	3	-	=1					
S-2	R2	REPLACE DETERIORATED BENCH	1	-	==					
S-2	R3	REPLACE MISSING CARRIAGE BOLT NUT AND WASHER	3	-	5)					
S-2	R4	TIGHTEN LOOSE CARRIAGE BOLT NUT	3	-	<u> </u>					
S-2, S-3, S-4, S-5, S-6, S-7, S-8, S-9	R102	DRIVE NAIL AND SPIKE POPS	MANY	100 ESTIMATED	EA					
S-3	R1	GUARDRAIL UPPER RAIL REPAIR	1	-	-					
S-3	R2	TIGHTEN GUARDRAIL POST HARDWARE	1	-	7					
S-4	R1	REPLACE MISSING GATE AND SELF-CLOSER TORSION SPRING	1		<b>5</b> 0					
S-4	R2	REPLACE TIMBER DECKING BOARD **	1	-	-					
S-5, S-6, S-7, S-8, S-9	R100	REPLACE BOARDWALK TIMBER DECKING BOARDS	MANY	240	LF					
S-5	R1	REPLACE BROKEN/ROTTED TIMBER HORIZONTAL BRACE MEMBER	3	-	-					
S-5	R2	TIGHTEN GUARDRAIL POST HARDWARE	1	-	-1					
S-5	R3	REPLACE MISSING GATE AND SELF-CLOSER TORSION SPRING	1	-	E.					
S-6	R1	REPLACE MISSING STEEL SECURITY GATE	1	-						
S-6, S-7, S-8, S-9	R101	SHIM BOARDWALK TIMBER DECKING BOARDS	MANY	295	LF					
S-7	R1	ADD TIMBER BLOCKING AND FASTEN FOR GUARDRAIL POSTS AT OUTER STRINGER	3	-	-					
S-7	R2	FASTEN OUTER STRINGER END	1	-	*					
S-7	R3	DRIVE PULLED UP OUTER STRINGER SPIKES	1	-	#1:					
S-7	R4	REPLACE GUARDRAIL POST	2	y <del>-</del> y	S.I.					
S-7	R5	REPLACE ROTTED DECKING BOARD NEAR CURB **	1	-	-					
S-8	R1	SHIM POST THAT IS NOT BEARING	1	-	ur.					
S-8	R2	REPLACE POST AND FOOTING	1	-	-0					
S-8	R3	SHIM STRINGER THAT IS NOT BEARING	1	-	-					
S-9	R1	REPAIR SPLIT STRINGER	1	-	<u>₹</u>					
S-10	R1	FASTEN LOOSE FLOAT RUB BOARD	7	-	<u>-</u>					
S-10	R2	REPLACE SPLIT/MISSING FLOAT RUB BOARD	10	-	-					
S-10	R3	BEVEL POST BOTTOMS AND NOTCH WALERS	1	-	=1					
S-10	R4	FASTEN LOOSE RIM JOIST	1	-	<b>2</b> 0					
S-10	R5	PATCH CHAINLINK MESH	1	-	-					
S-10	R6	REPLACE MISSING CARRIAGE BOLT NUT AND WASHER	8	-	表名					
S-10	R7	REPLACE MISSING PLASTIC SCUPPER BLOCKS	9	-	- -					
S-10	R8	REPLACE DAMAGED PLASTIC BULLRAIL MEMBERS	8	-	=					
S-10	R9	PLACE THIN GROUT PAD	1	-						
S-10	R10	FASTEN GANGWAY TRANSITION PLATE NOSING	1	-						
S-10	R11	ADD SUPPLEMENTAL FLOTATION DRUMS	34	_						

<sup>\*</sup> SHOWN CIRCLED WHERE APPREARING ON DWG PLAN SHEET CALLOUTS.

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**2021 REPAIRS** 

**G-3** 

SHEET NO. 3 OF 21

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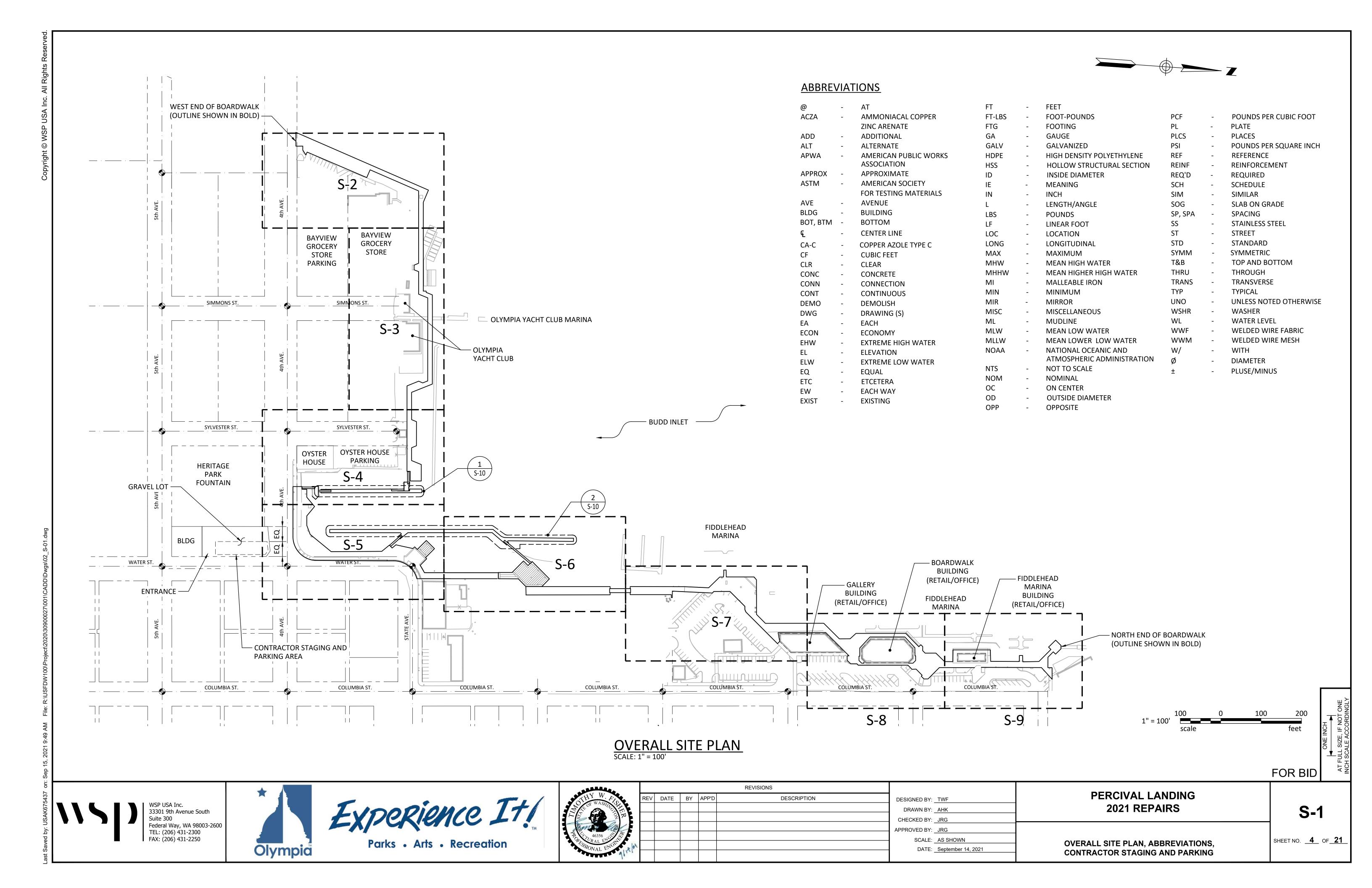
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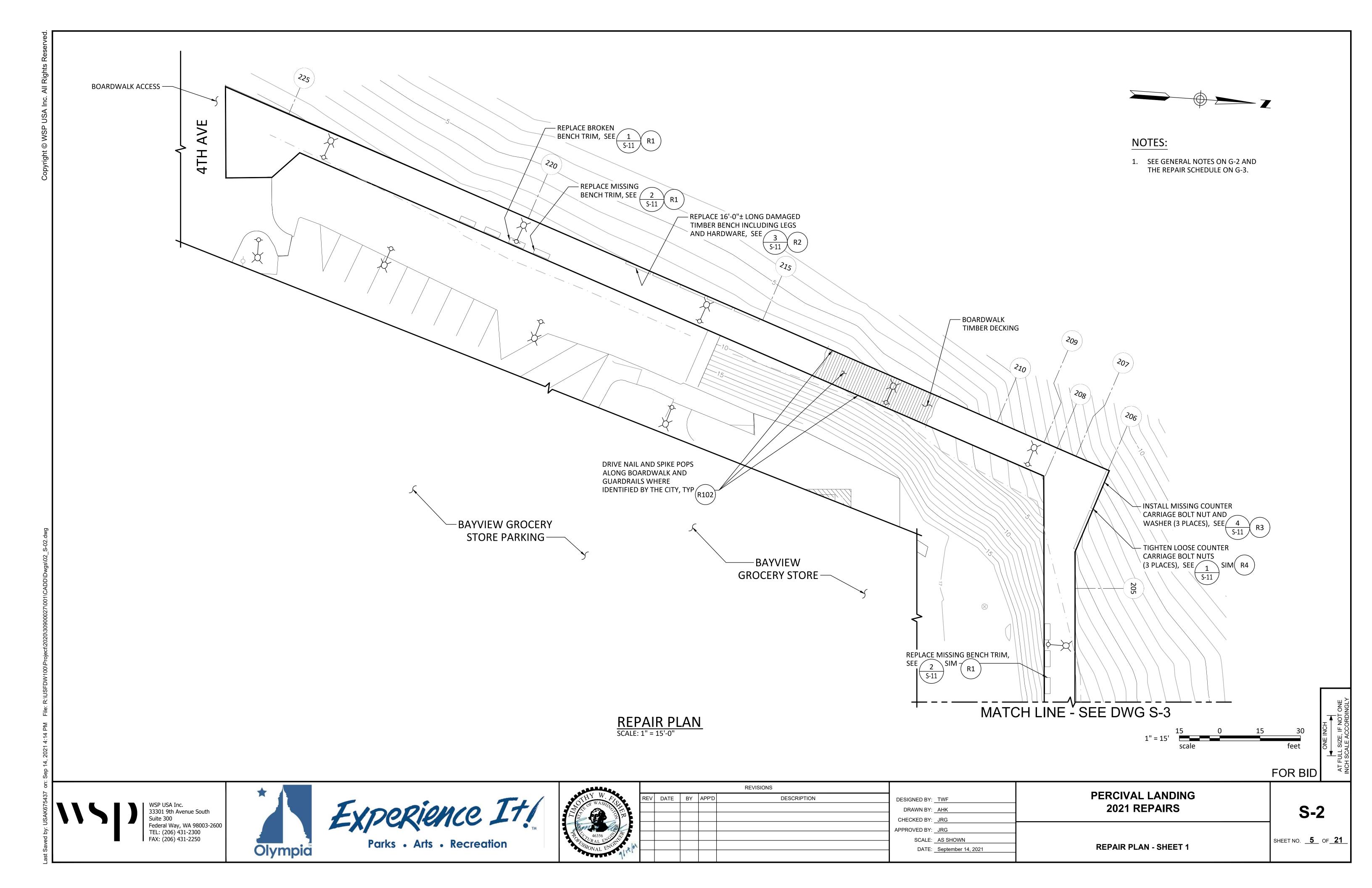
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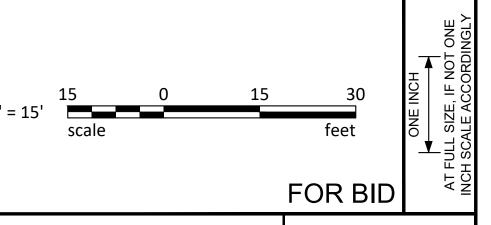
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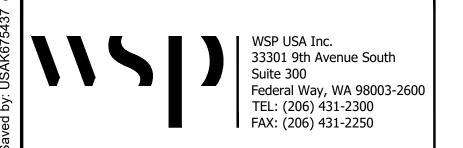
<sup>\*\*</sup> TIMBER DECKING BOARDS REPLACED FOR THIS ITEM COUNT TOWARDS THE 240 LF TOTAL SHOWN FOR REPAIR ITEM R100.





REPAIR PLAN
SCALE: 1" = 15'-0"







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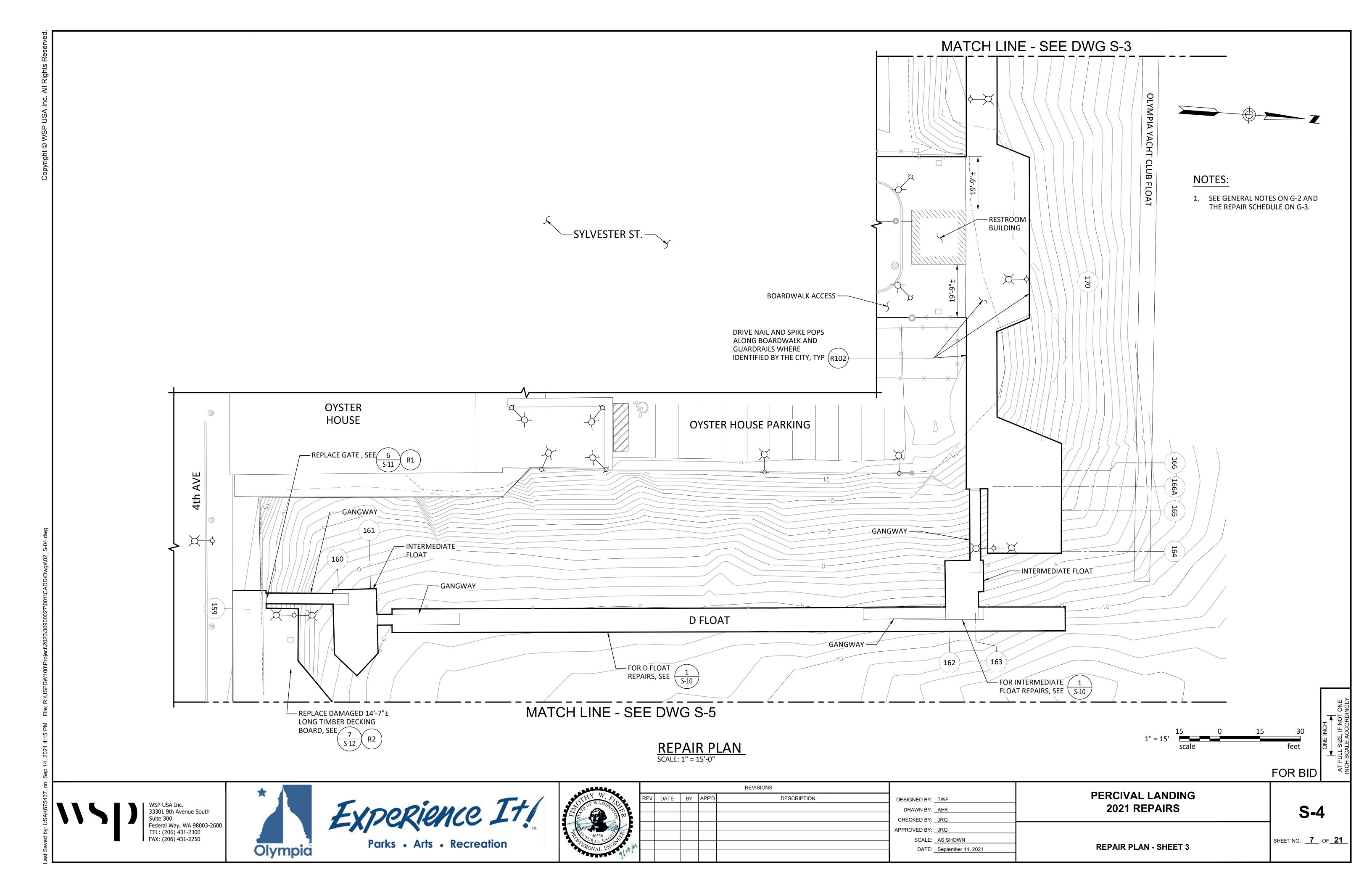
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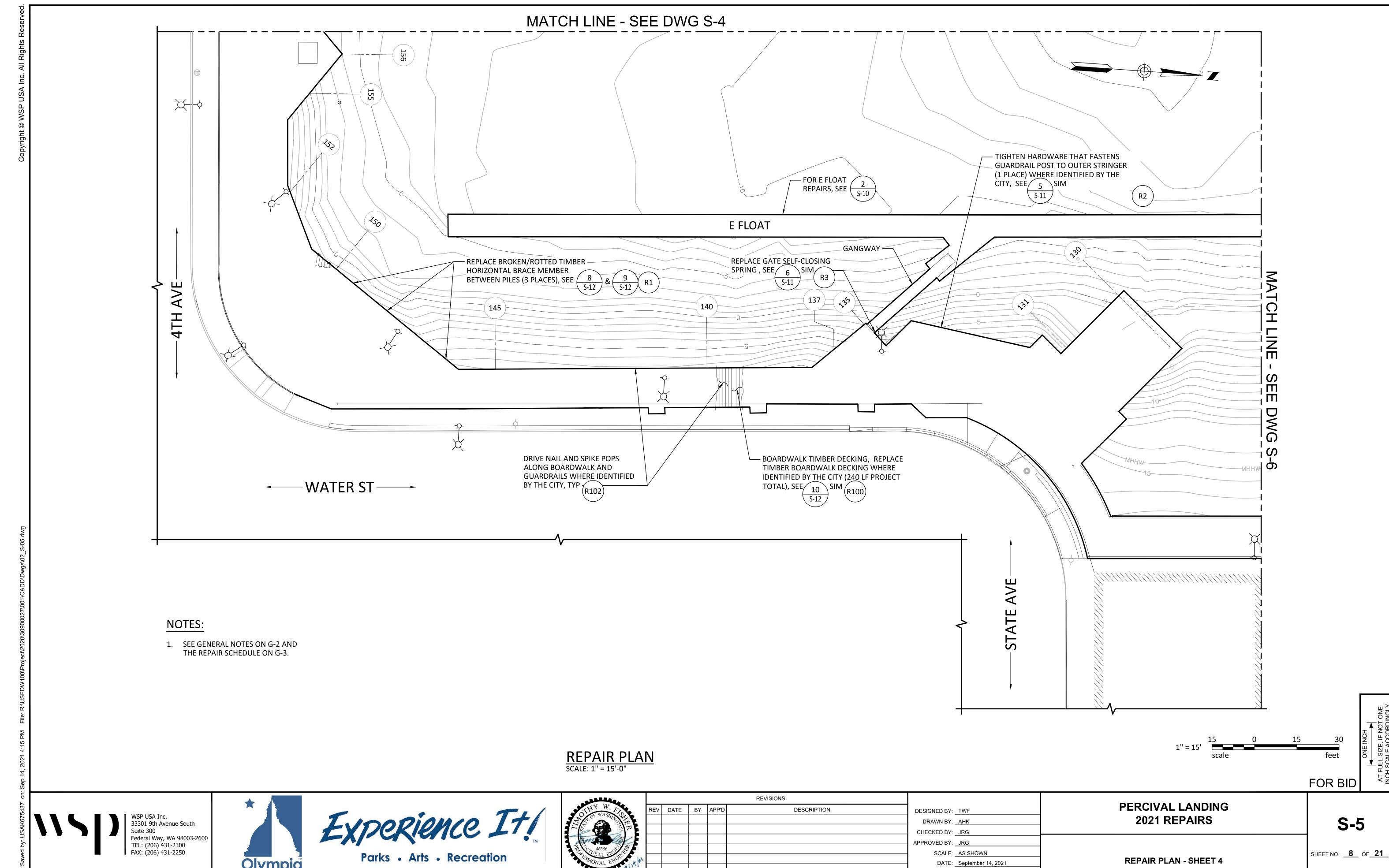
DESIGNED BY: TWO  DRAWN BY: AHI  CHECKED BY: JRO	К	PERCIVAL LANDING 2021 REPAIRS
PPROVED BY: JRC	G	
SCALE: AS	SHOWN	
DATE: Sep	otember 14, 2021	REPAIR PLAN - SHEET 2

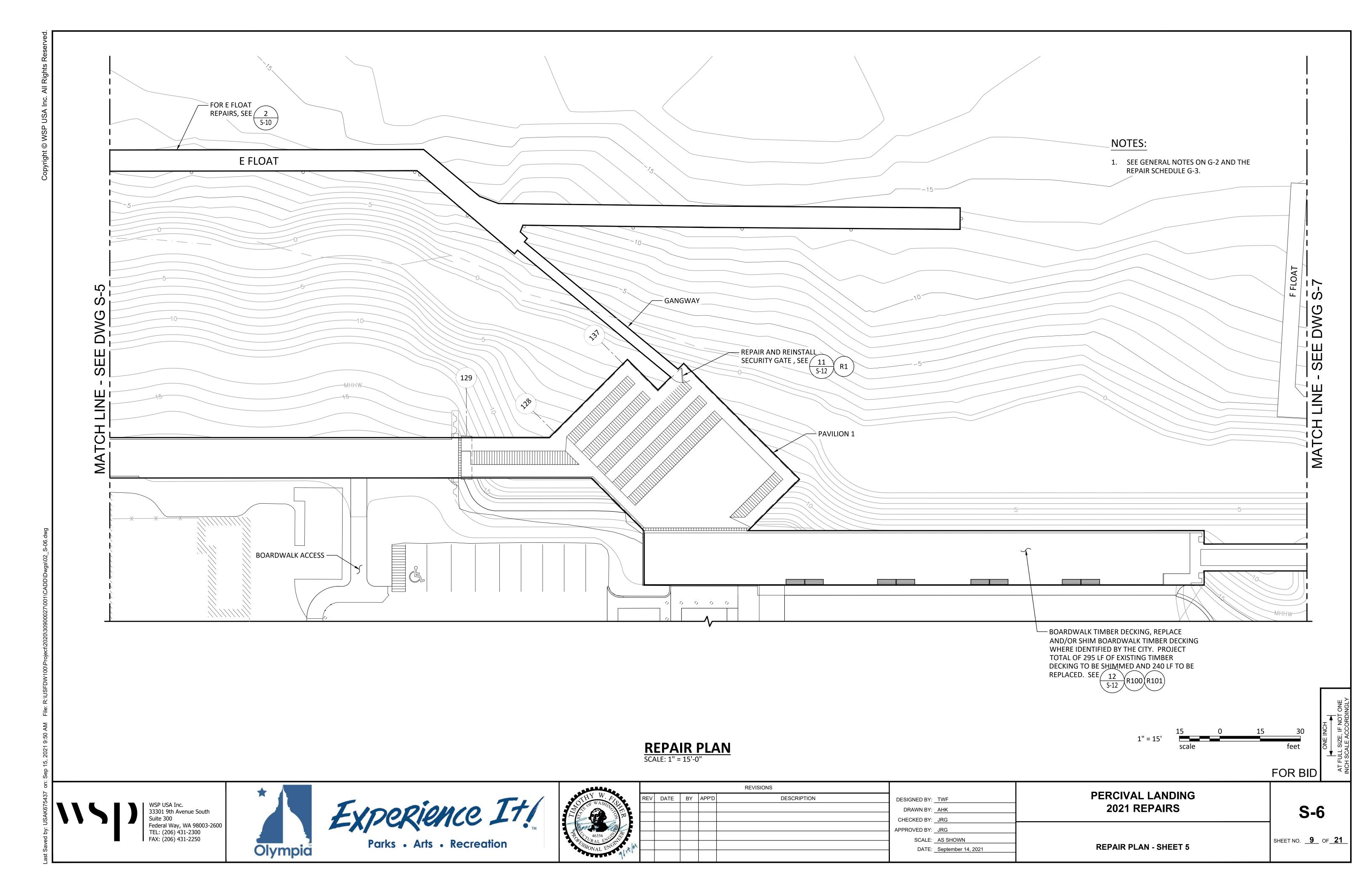
DATE: September 14, 2021

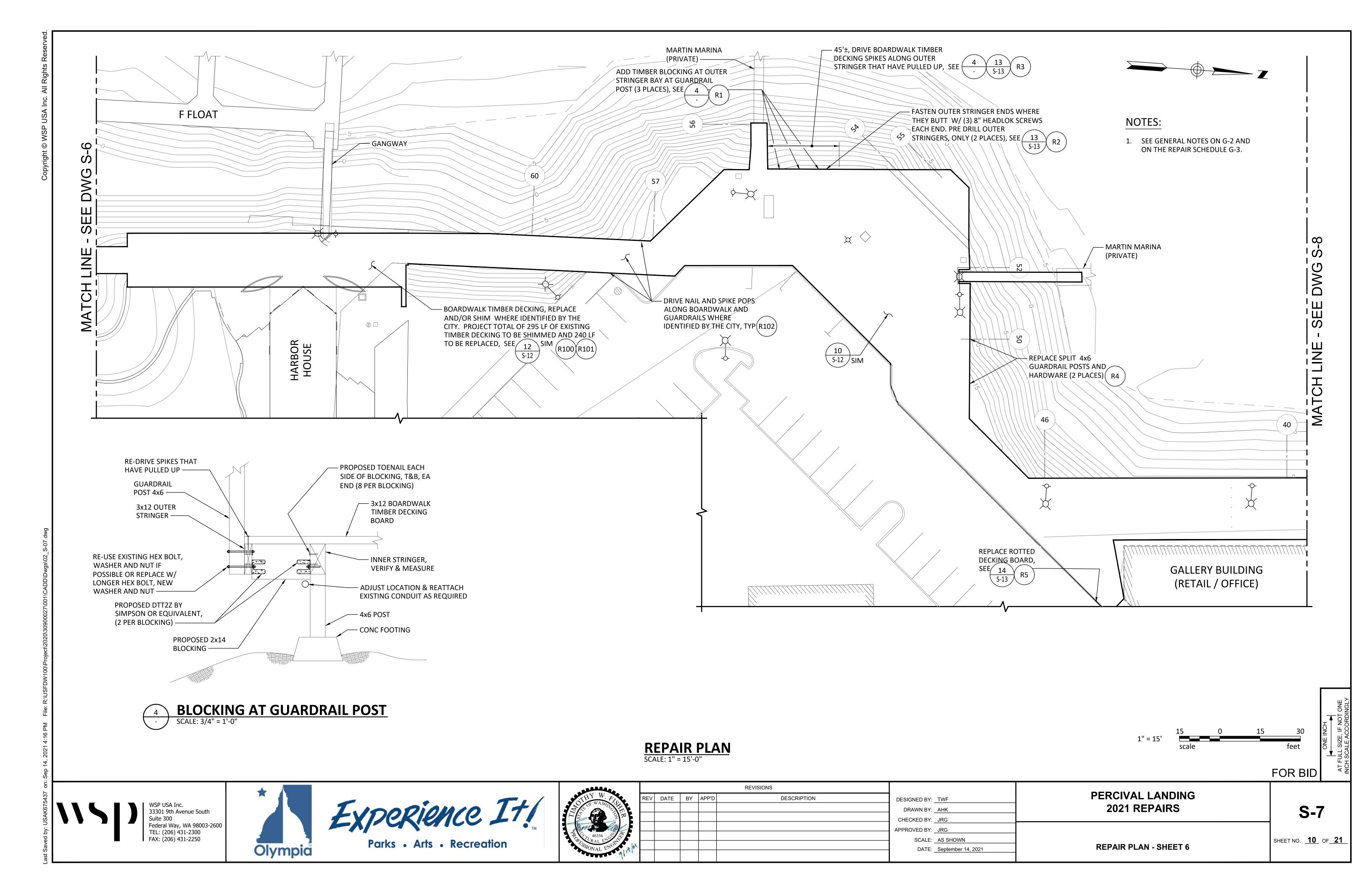
**S-3** 

SHEET NO. <u>6</u> OF <u>21</u>

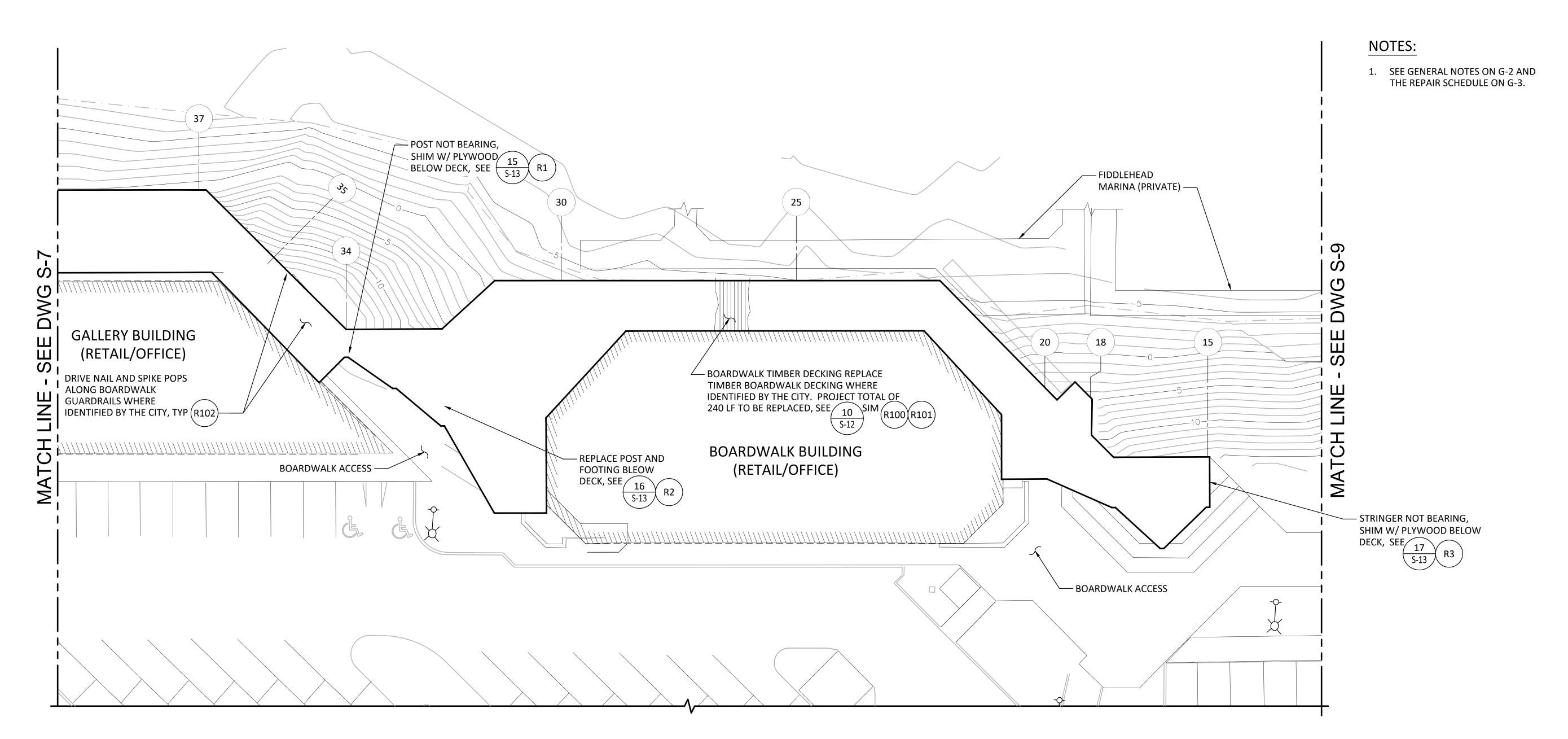




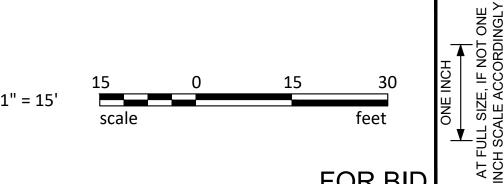








REPAIR PLAN
SCALE: 1" = 15'-0"



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PERCIVAL LANDING
2021 REPAIRS

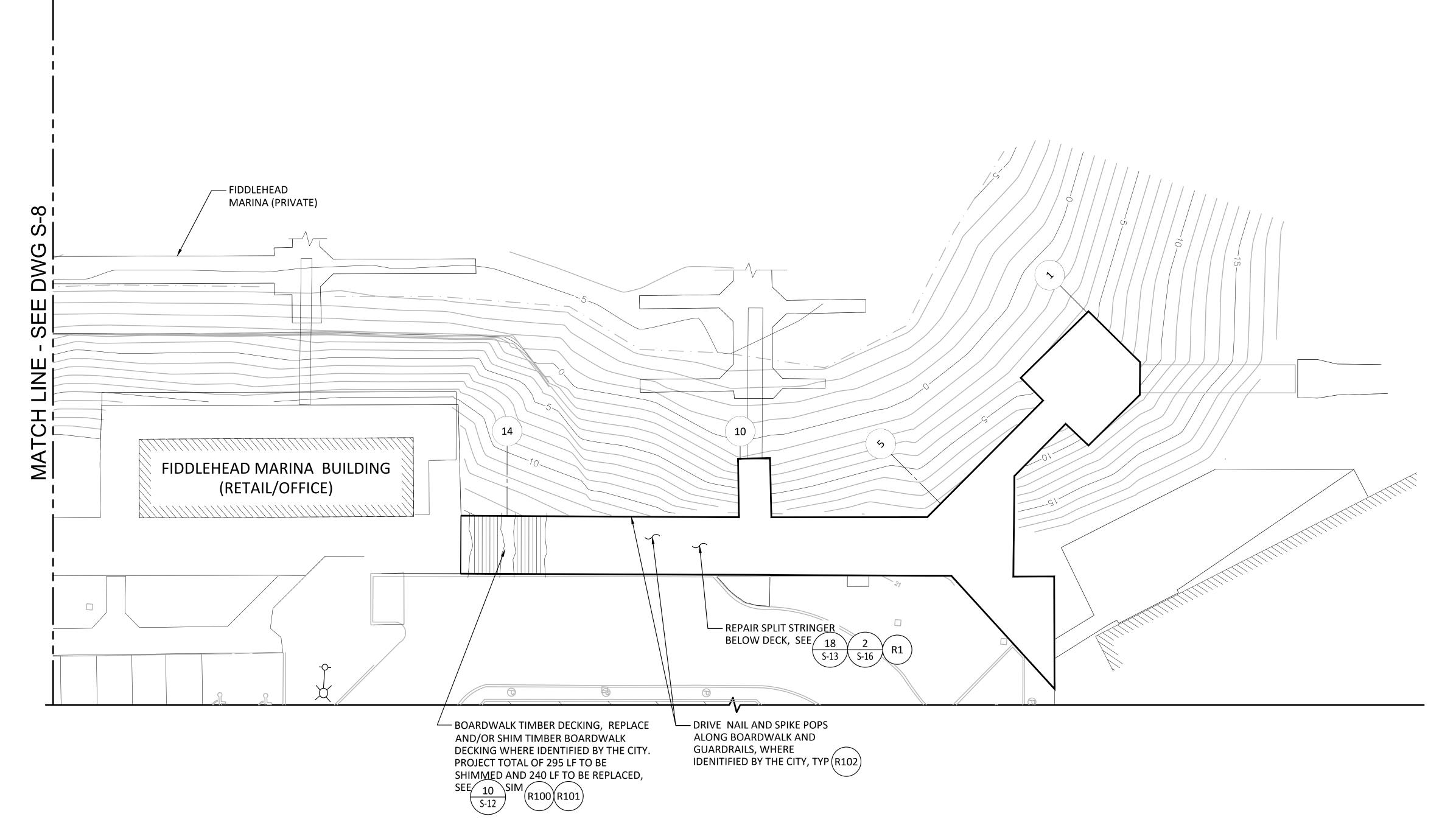
**REPAIR PLAN - SHEET 7** 

DATE: September 14, 2021

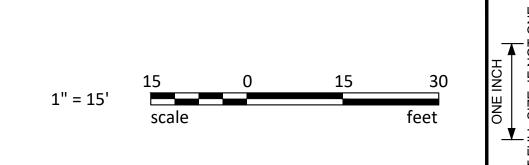
**S-8** 

SHEET NO. 11 OF 21

1. SEE GENERAL NOTES ON G-2 AND THE REPAIR SCHEDULE ON G-3.



REPAIR PLAN
SCALE: 1" = 15'-0"



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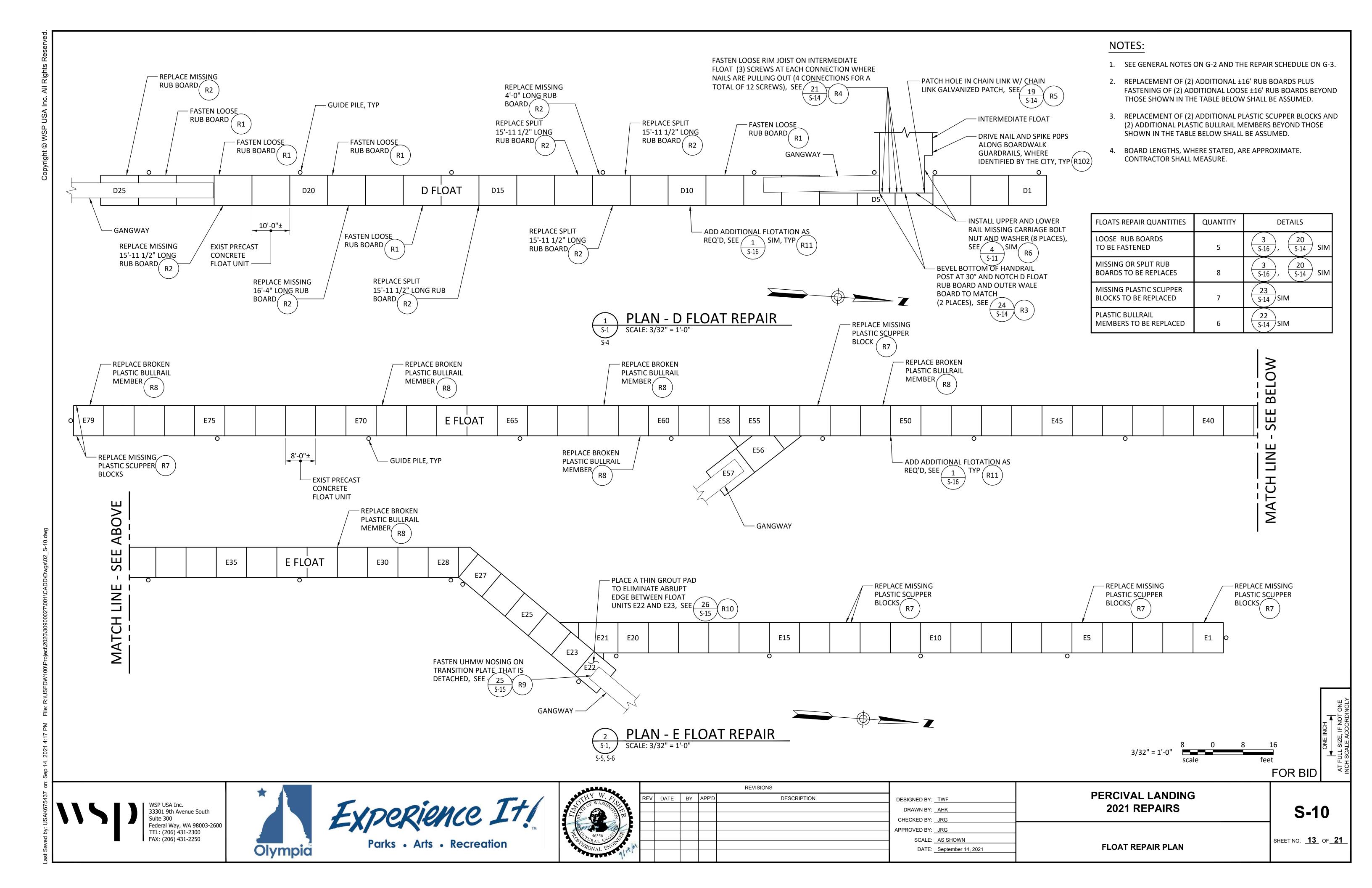
DESIGNED BY: _TWF	PERCIVAL LANDING 2021 REPAIRS
CHECKED BY: <u>JRG</u>	
PPROVED BY: JRG	

SCALE: AS SHOWN

DATE: September 14, 2021

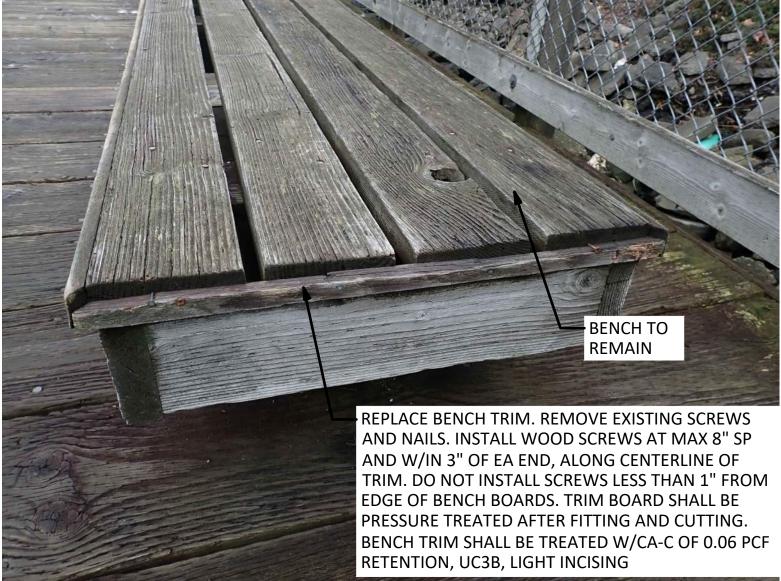
**S-9** 

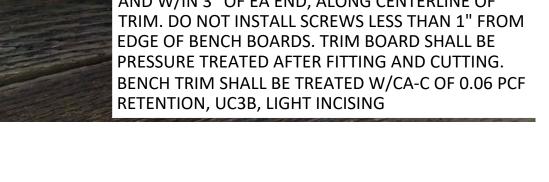
SHEET NO. 12 OF 21 **REPAIR PLAN - SHEET 8** 



- 1. SEE GENERAL NOTES ON G-2 AND G-3.
- DRAWING SHALL BE PRINTED IN COLOR.

PHOTO - 1
SCALE: NTS

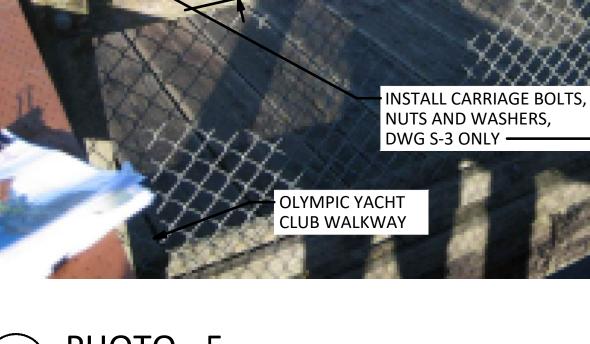














GUARDRAIL POST





BRUTUS GATE SPRING BY HOOVER FENCE COMPANY OR EQUIVALENT, BLACK 302 STAINLESS, DRILL AND TAP MOUNTING LOCATIONS, USE 1/4"-20 COMBO ROUNDED SS MACHINE SCREW BY EVERBUILT OR EQUIVALENT TO ATTACH SPRING, 1 1/4" LENGTH, LOCTITE RED 263, SUBMIT ATTACHMENT DETAIL TO ENGINEER FOR APPROVAL., DWG S-4 AND S-5

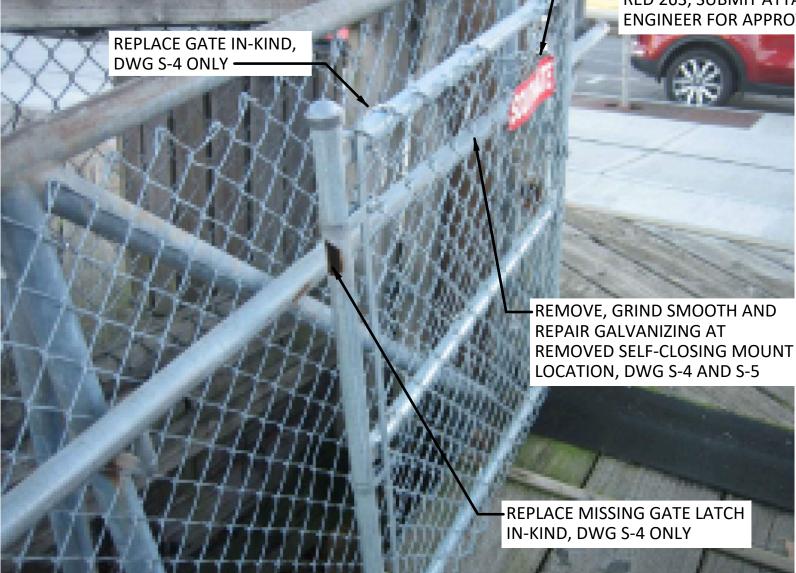


PHOTO - 6 SCALE: NTS

DATE: September 14, 2021

PHOTO - 4

PHOTO - 5 SCALE: NTS

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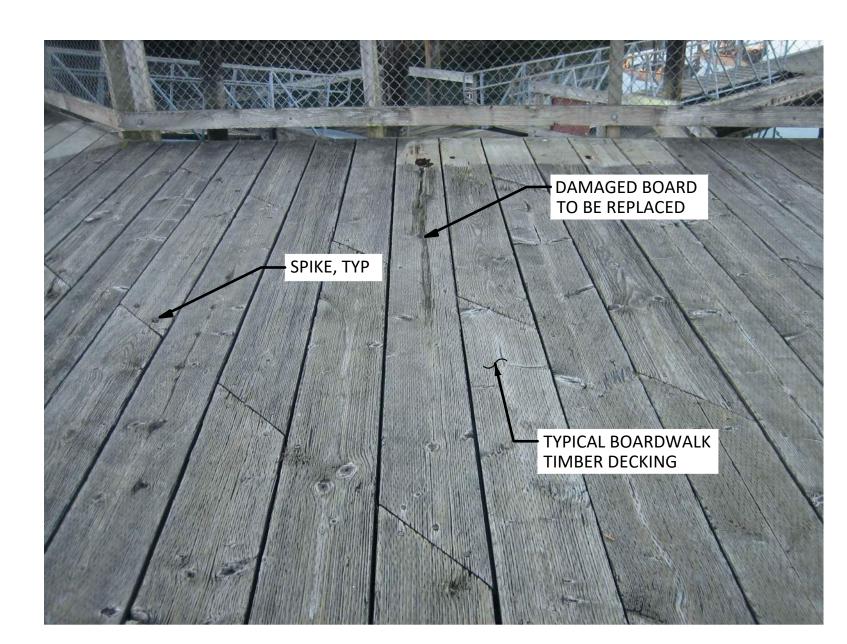
DESIGNED BY:	TWF	PERCIVAL LANDING
DRAWN BY:	AHK	2021 REPAIRS
CHECKED BY:	JRG	
APPROVED BY:	JRG	
SCALE:	AS SHOWN	

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**S-11** 

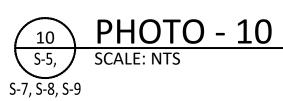
SHEET NO. 14 OF 21 **REPAIR PHOTOS - SHEET 1** 

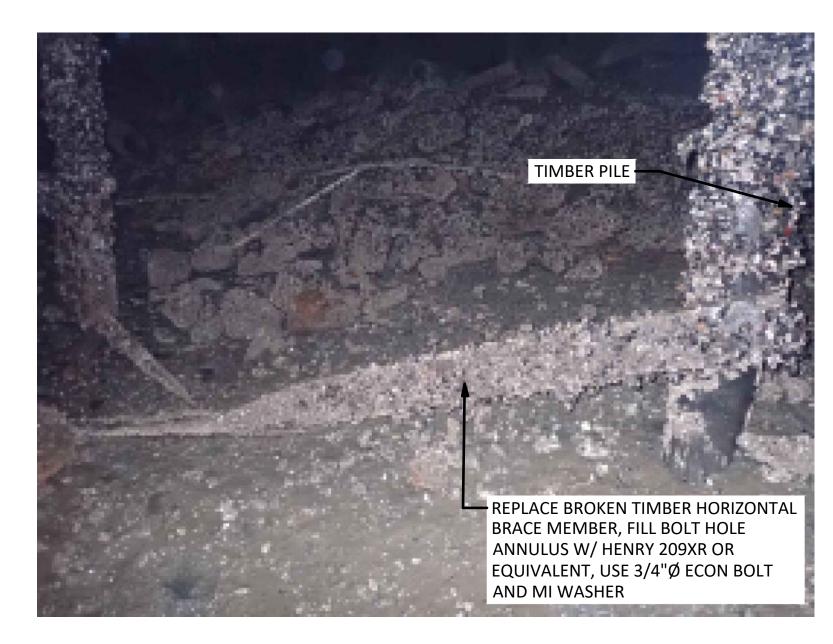
- 1. SEE GENERAL NOTES ON G-2 AND G-3.
- 2. DRAWING SHALL BE PRINTED IN COLOR.





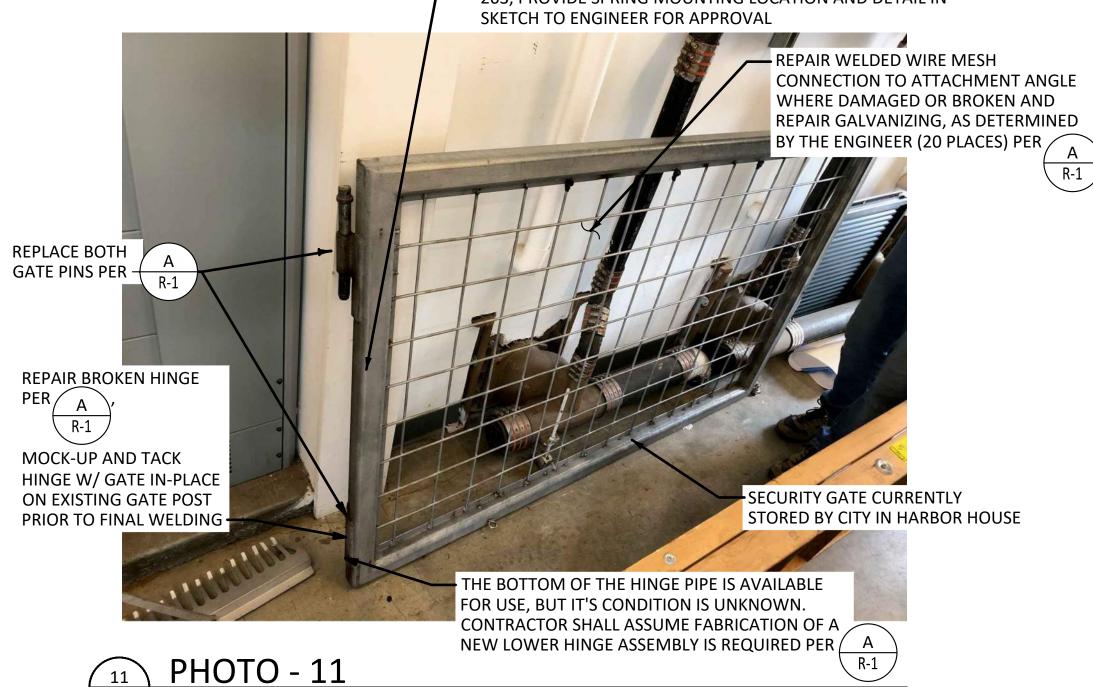








INSTALL BRUTUS GATE SPRING BY HOOVER FENCE COMPANY, BLACK 302 STAINLESS, DRILL AND TAP MOUNTING LOCATIONS, USE 1/4"-20 COMBO ROUNDED SS MACHINE SCREW BY EVERBUILT OR EQUIVALENT TO ATTACH SPRING, 1 1/4" LENGTH, LOCTITE RED 263, PROVIDE SPRING MOUNTING LOCATION AND DETAIL IN SKETCH TO ENGINEER FOR APPROVAL



SCALE: NTS - GATE SHALL SWING EASILY W/OUT BINDING OR NOTICEABLE BINDING FRICTION. GATE SHALL CONTACT AND CLOSE AGAINST OPPOSITE POST SQUARELY. ALTHOUGH GATE WAS INSTALLED AT SOME POINT, CONTRACTOR SHALL PLAN TO REALIGN THE LOWER HINGE FOR PROPER SWING AND SQUARE IN CLOSED AND OPEN POSITIONS.

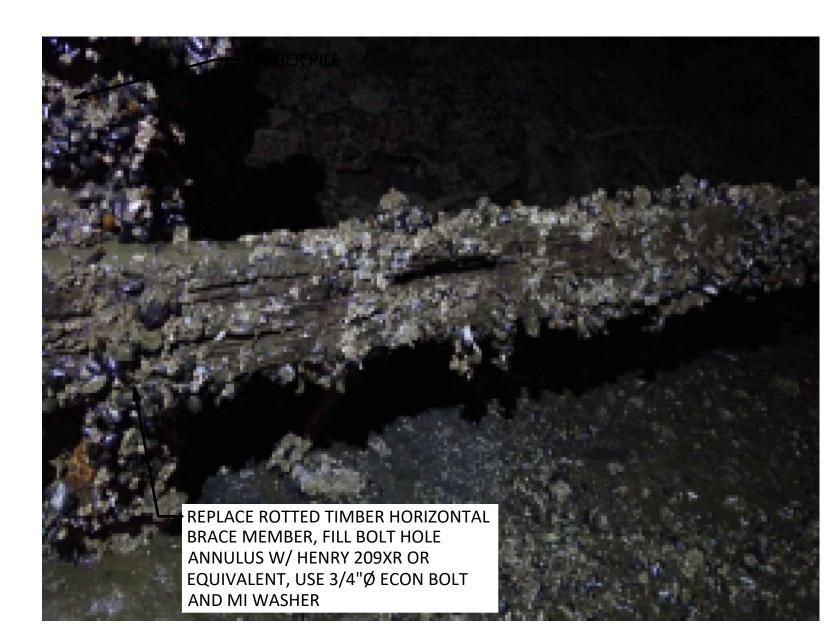
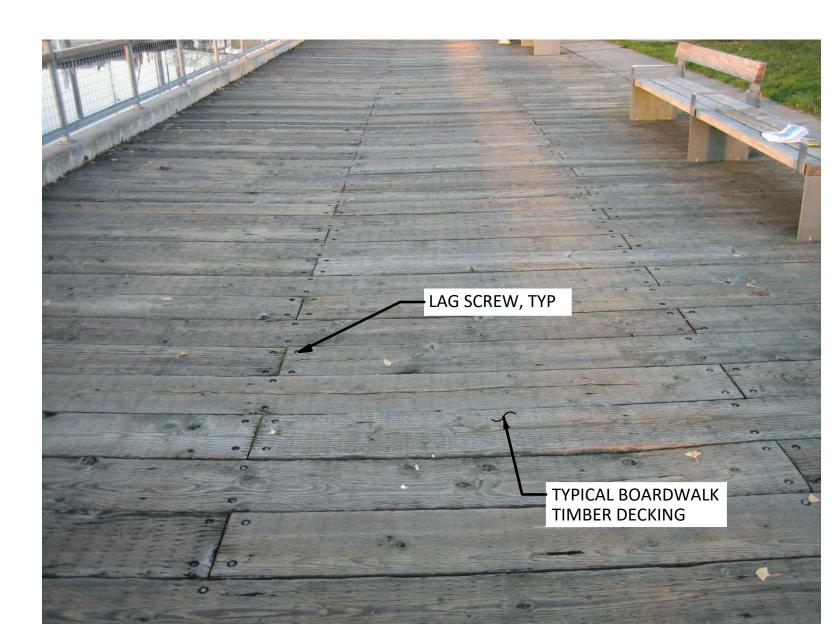


PHOTO - 9



**PHOTO - 12** SCALE: NTS

SCALE: AS SHOWN

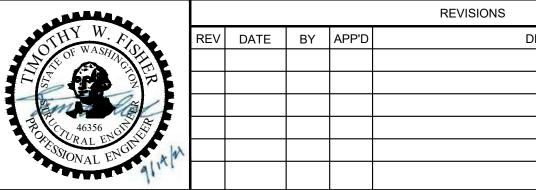
DATE: September 14, 2021

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PERCIVAL LANDING

**2021 REPAIRS** 

**REPAIR PHOTOS - SHEET 2** 

**S-12** 

SHEET NO. <u>15</u> OF <u>21</u>

- 1. SEE GENERAL NOTES ON G-2 AND G-3.
- 2. DRAWING SHALL BE PRINTED IN COLOR.



**PHOTO - 13** S-7 SCALE: NTS



PHOTO -14
SCALE: NTS



PHOTO - 17
SCALE: NTS



PHOTO - 15
SCALE: NTS



PHOTO - 18
SCALE: NTS

SCALE: AS SHOWN

DATE: September 14, 2021

PHOTO - 16 AND REPAIR DETAIL

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AND NUT, FILL HOLE W/ HENRY 209XR OR EQUIVALENT, TYP ——

GROUND LINE —

2-#4 @ 12" SP, EW, 18" LONG, CENTER OF FTG HEIGHT —

SIMPSON CB44HDG, OR EQUIVALENT ——



- (4) TOENAILS

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**S-13** 

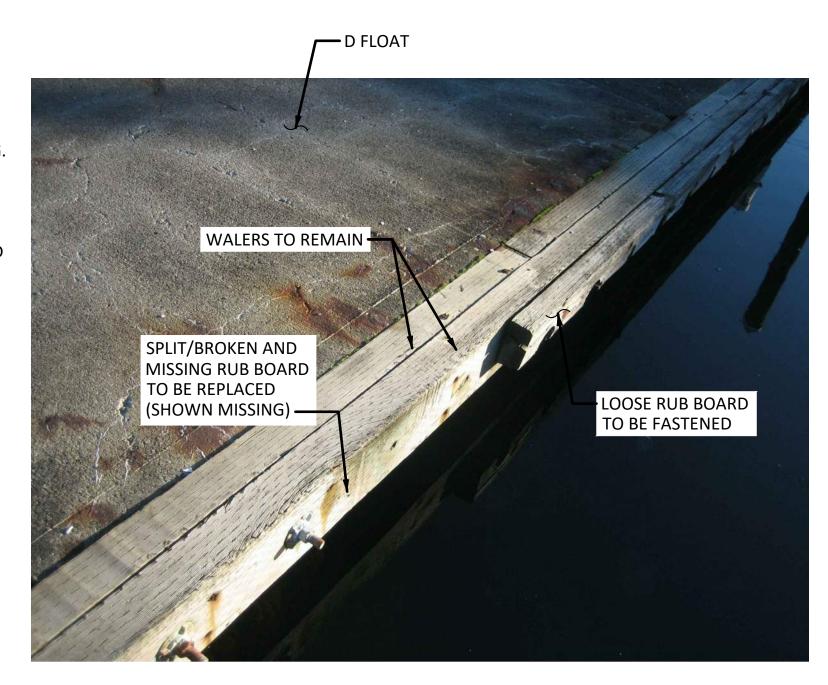
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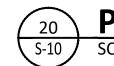
SHEET NO. 16 OF 21 **REPAIR PHOTOS - SHEET 3** 

- 1. SEE GENERAL NOTES ON G-2 AND G-3.
- 2. DRAWING SHALL BE PRINTED IN COLOR.

PHOTO - 19
SCALE: NTS







**PHOTO - 20** 



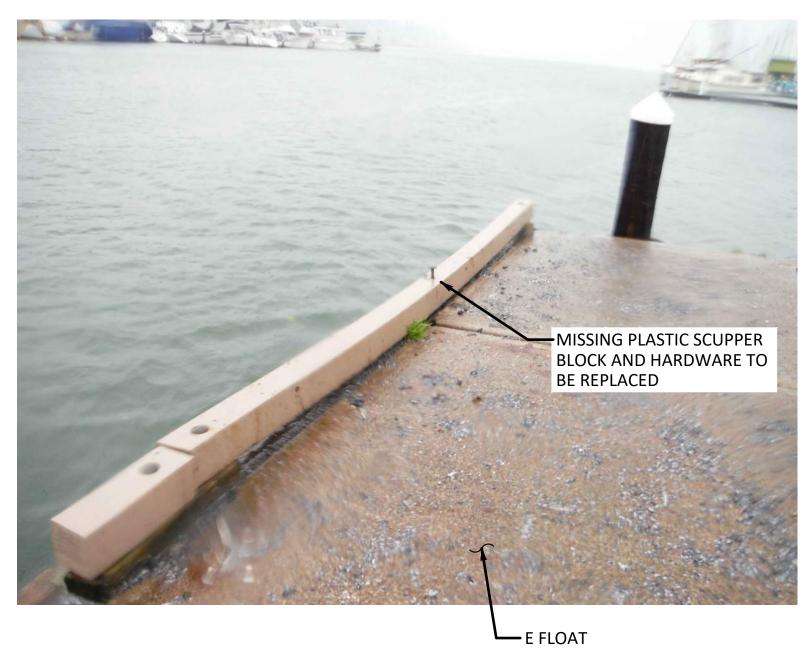
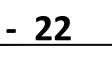


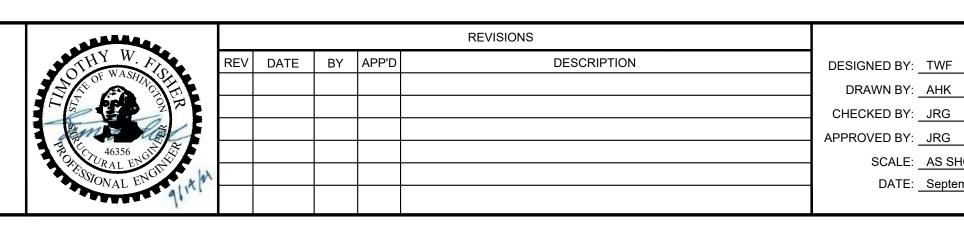
PHOTO - 23
SCALE: NTS

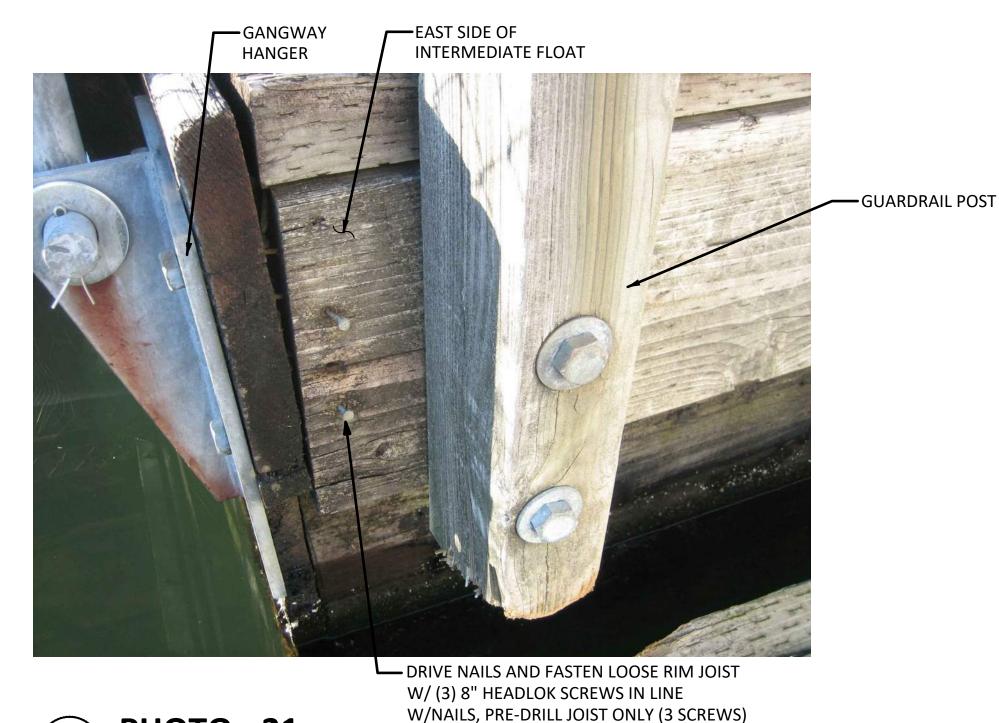
22 **PHOTO - 22** S-10 SCALE: NTS





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**PHOTO - 21** SCALE: NTS

SCALE: AS SHOWN

DATE: September 14, 2021

BEVEL A NOTCH IN RUB BOARD AND OUTER WALER TO MATCH BEVELED OUTER WALER BOARD BTM OF GUARDRAIL POST AS SHOWN— INNER WALER BOARD **BEVEL BOTTOM OF** GUARDRAIL POST — EQ, WHEN INTERMEDIATE FLOAT & D FLOAT ARE CENTERED AROUND PILE HOOPS (SLACK WATER) RUB BOARD — **└**─ D FLOAT PHOTO - 24
SCALE: NTS

FOR BID

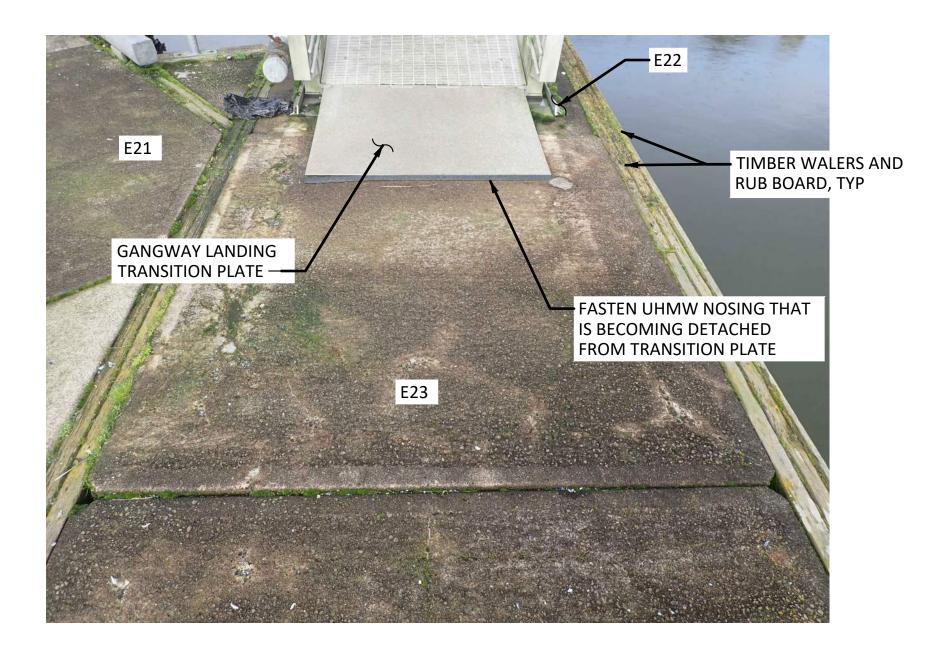
**S-14** 

**REPAIR PHOTOS - SHEET 4** 

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SHEET NO. 17 OF 21

- 1. SEE GENERAL NOTES ON G-2 AND G-3.
- DRAWING SHALL BE PRINTED IN COLOR.





 REMOVE AND RE-INSTALL TRANSITION PLATE UHMW NOSING SS SCREWS THAT HAVE PULLED THROUGH UHMW NOSING. FOR SS SCREWS THAT CANNOT BE REMOVED, OR FOR EXISTING HOLES THROUGH UHMW THAT HAVE BEEN STRETCHED TO A POINT THAT SS SCREW HEADS DON'T PROPERLY BEAR, NEW SCREWS SHALL BE INSTALLED, WITHIN 1.5" OF THE EXISTING HOLE, ALONG SAME LINE WITH ALL OTHER HOLES. COUNTER SINK UHMW SIMILAR TO EXISTING FOR **NEW SCREWS.** 



**PHOTO - 26** SCALE: NTS

## NOTES:

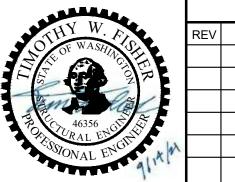
- 1. SUPPLEMENTAL FLOTATION WORK SHALL BE COMPLETE BEFORE INSTALLING GROUT PAD.
- 2. GROUT PAD SHALL BE SIKAQUICK® EZ PATCH OR EQUIVALENT.
- 3. GROUT SHALL BE NEAT.
- 4. MANUFACTURER RECOMMENDATIONS SHALL BE STRICTLY FOLLOWED, PLUS THE REQUIREMENTS OF THIS CONTRACT.
- 5. CONCRETE FLOAT SURFACE TO RECEIVE GROUT SHALL BE THOROUGHLY CLEANED W/ A STEEL WIRE CUP BRUSH DRIVEN BY ANGLE GRINDER. CONCRETE FLOAT UNIT E22 SURFACE TO RECEIVE GROUT SHALL BE SCARIFIED TO MEET GROUT SUPPLIER RECOMMENDATIONS. ANY CONCRETE DUST OR DEBRIS CREATED DURING SURFACE SCARIFICATION SHALL BE CAPTURED WITH APPROPRIATE MEANS SUCH AS DUST COLLECTION, TENTING, WET SUCTION, CONTAINMENT BARRIER, ETC., AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LAWS, REGULATION AND STANDARDS.
- 6. CONCRETE SURFACE TO RECEIVE GROUT SHALL BE THOROUGHLY WASHED WITH 3,000 PSI POTABLE WATER RIGHT BEFORE APPLICATION OF GROUT TO REMOVE ALL RESIDUE, DEBRIS, DIRT, ORGANIC MATTER THAT COULD COMPROMISE THE GROUT BOND.
- 7. GROUT PAD SURFACE SHALL HAVE A BROOM FINISH.
- 8. ENGINEER SHALL BE GIVEN 2 DAYS NOTICE PRIOR TO PLACING GROUT PAD.

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PERCIVAL LANDING ESIGNED BY: TWF **2021 REPAIRS** DRAWN BY: AHK

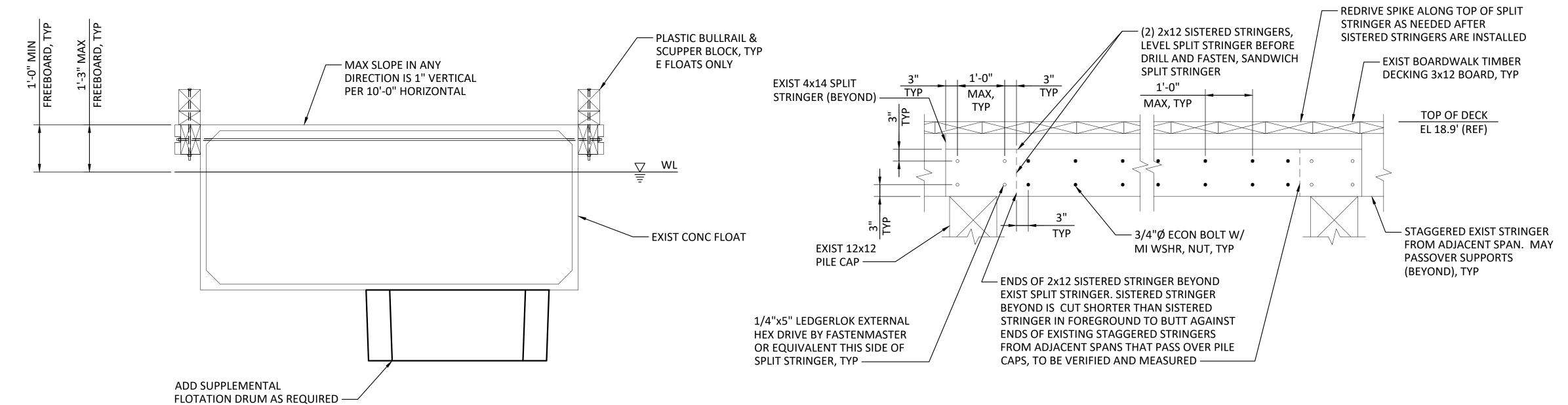
SCALE: AS SHOWN

DATE: September 14, 2021

**REPAIR PHOTOS - SHEET 5** 

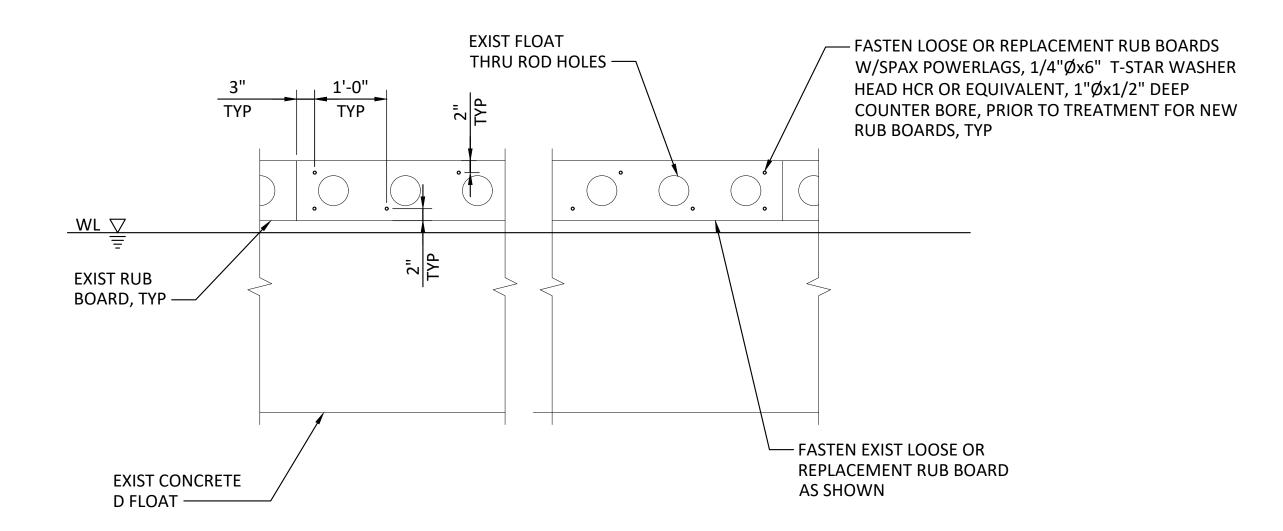
**S-15** 

SHEET NO. 18 OF 21









- 1. SEE GENERAL NOTES ON G-2 AND G-3.
- 2. DRUM LOCATIONS AND DRUM QUANTITY ARE ESTIMATED. CONTRACTOR SHALL DETERMINE THE LOCATION, SIZE AND QUANTITY OF DRUMS TO MEET THE FREEBOARD AND SLOPE REQUIREMENTS. 7 ADDITIONAL DRUMS SHALL BE ASSUMED FOR BIDDING PURPOSES, BEYOND THOSE IN THE TABLE. UNUSED DRUMS SHALL BECOME PROPERTY OF THE CONTRACTOR.
- 3. MINIMUM FREEBOARD FOR FLOAT UNITS SHALL BE 12 INCHES AFTER SUPPLEMENTAL FLOTATION HAS BEEN ADDED. USE FOAM FILLED ACE ROTO-MOLD FLOAT DRUMS OR EQUIVALENT.
- 4. EXISTING CONCRETE FLOATS SHALL FLOAT LEVEL UNDER DEAD LOAD ONLY AND BE FLUSH WITH ADJACENT FLOAT UNITS. MAXIMUM OUT OF LEVEL TOLERANCE FOR TRANSVERSE AND LONGITUDINAL SLOPE SHALL BE 1 INCH PER 10 FEET AFTER SUPPLEMENTAL FLOTATION HAS BEEN ADDED.
- SUPPLEMENTAL FLOTATION UNITS MAY HAVE BEEN ADDED BENEATH D AND E FLOATS DURING PAST PROJECTS AND THE LOCATION OF THESE UNITS ARE NOT KNOWN. CONTRACTOR SHALL DIVE TO DETERMINE THE SIZE AND LOCATION OF EXISTING SUPPLEMENTAL FLOTATION BENEATH D AND E FLOATS, PRIOR TO PROCURING PROPOSED DRUMS. CONTRACTOR SHALL PROVIDE AN AS-BUILT SKETCH OF SIZE AND LOCATION FOR ALL EXISTING SUPPLEMENTAL FLOTATION BENEATH D AND E FLOATS. CONTRACTOR SHALL NOT STACK SUPPLEMENTAL FLOTATION UNITS/DRUMS ON TOP OF EACH OTHER BENEATH D AND E FLOATS. CONTRACTOR MAY HAVE TO MOVE OR REMOVE (DEMOLISH) EXISTING SUPPLEMENTAL FLOTATION UNITS WHERE ADDITIONAL SUPPLEMENTAL FLOTATION IS NEEDED, TO ACHIEVE REQUIRED FREEBOARD.
- 6. CONTRACTOR SHALL BASE FLOTATION DRUM MODEL SELECTION AND QUANTITY FOR PROCUREMENT ON FREEBOARD MEASUREMENTS THAT THE CONTRACTOR COLLECTS OF D AND E FLOATS AND CONTRACTOR'S BUOYANCY CALCULATIONS. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS TO ENGINEER FOR APPROVAL.

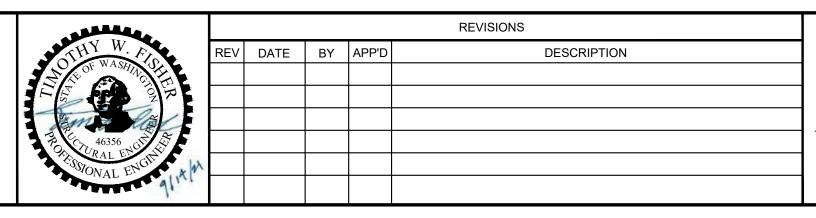
**DETAIL - D FLOAT RUB BOARD FASTENING** SCALE: 3/4" = 1'-0"

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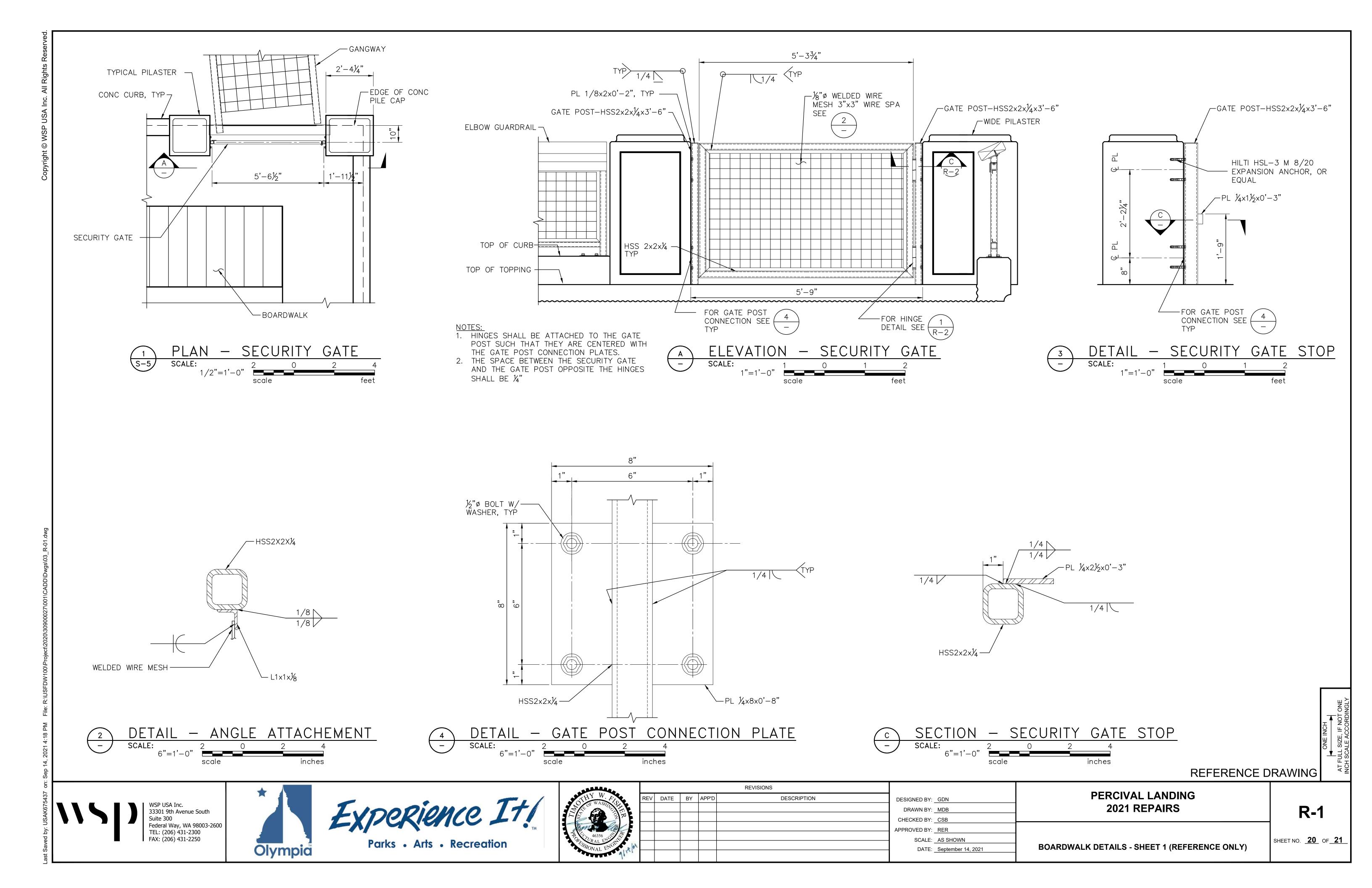
DESIGNED BY:	TWF	
DRAWN BY:	AHK	
CHECKED BY:	JRG	
APPROVED BY:	JRG	
SCALE:	AS SHOWN	
DATE:	September 14, 2021	

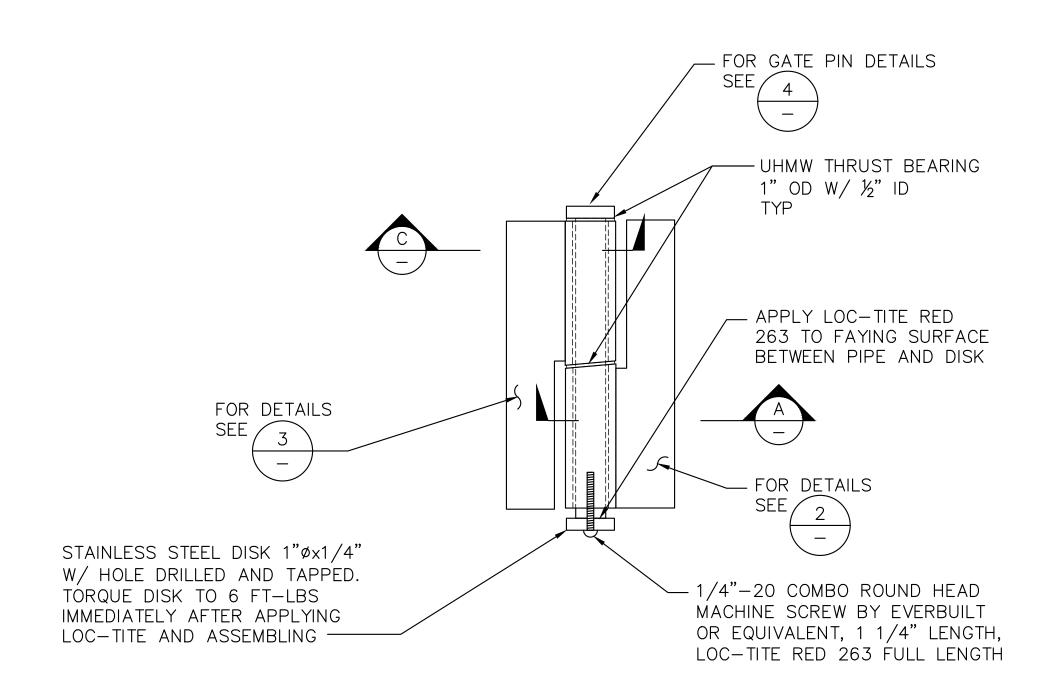
PERCIVAL LANDING **2021 REPAIRS** 

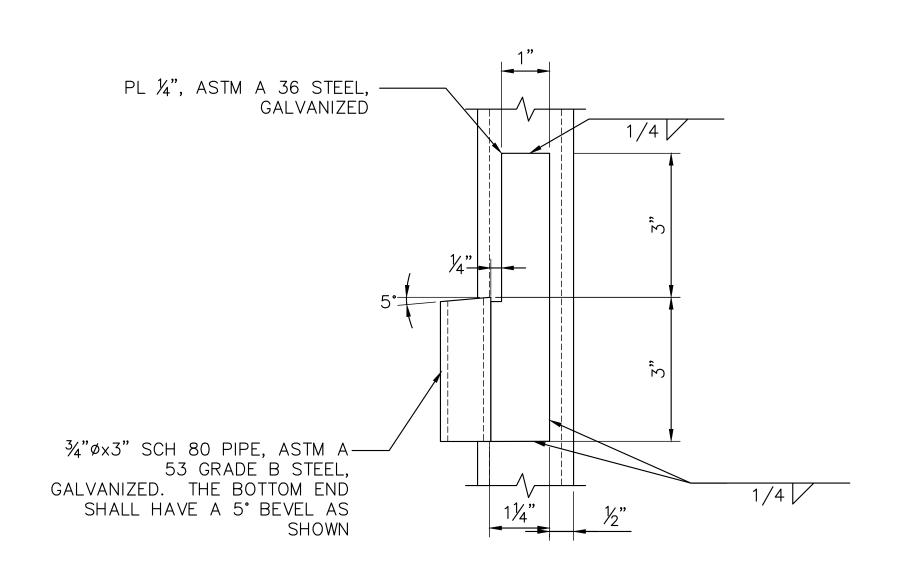
**DETAILS** 

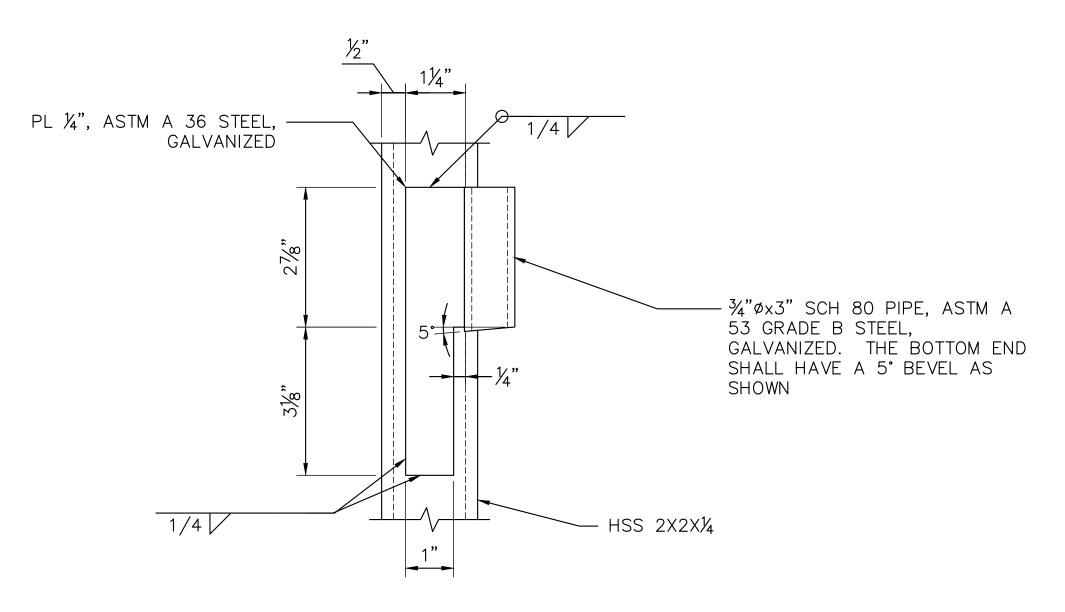
**S-16** 

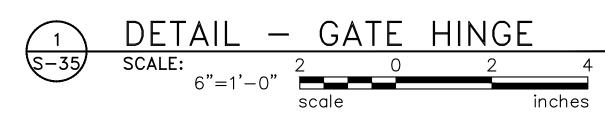
SHEET NO. 19 OF 21





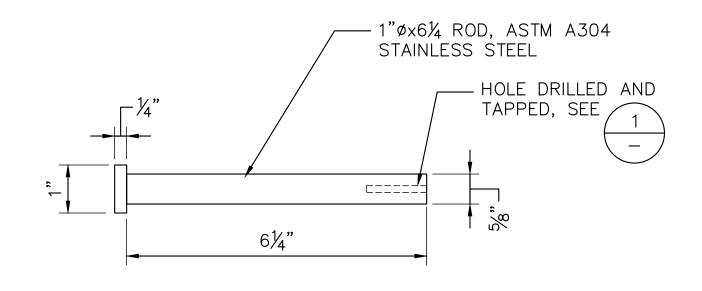




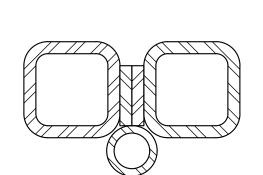




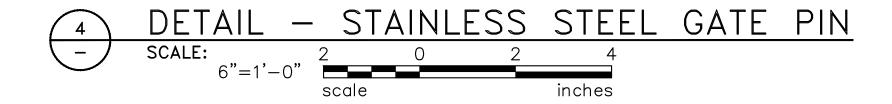


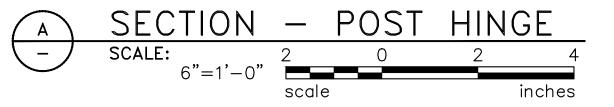


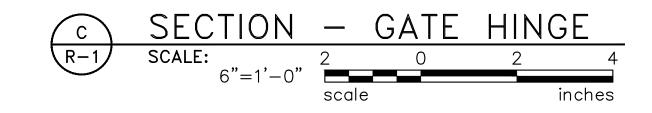
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MACHINE THE 1" Ø ROD TO THE DIMENSIONS SHOWN

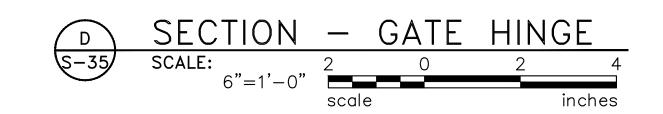






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DATE: September 14, 2021



REFERENCE DRAWING









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SIGNED BY: GDN DRAWN BY: MDB HECKED BY: CSB PROVED BY: RER

PERCIVAL LANDING **2021 REPAIRS** 

**R-2** 

**BOARDWALK DETAILS - SHEET 2 (REFERENCE ONLY)** 

SHEET NO. **21** OF **21**