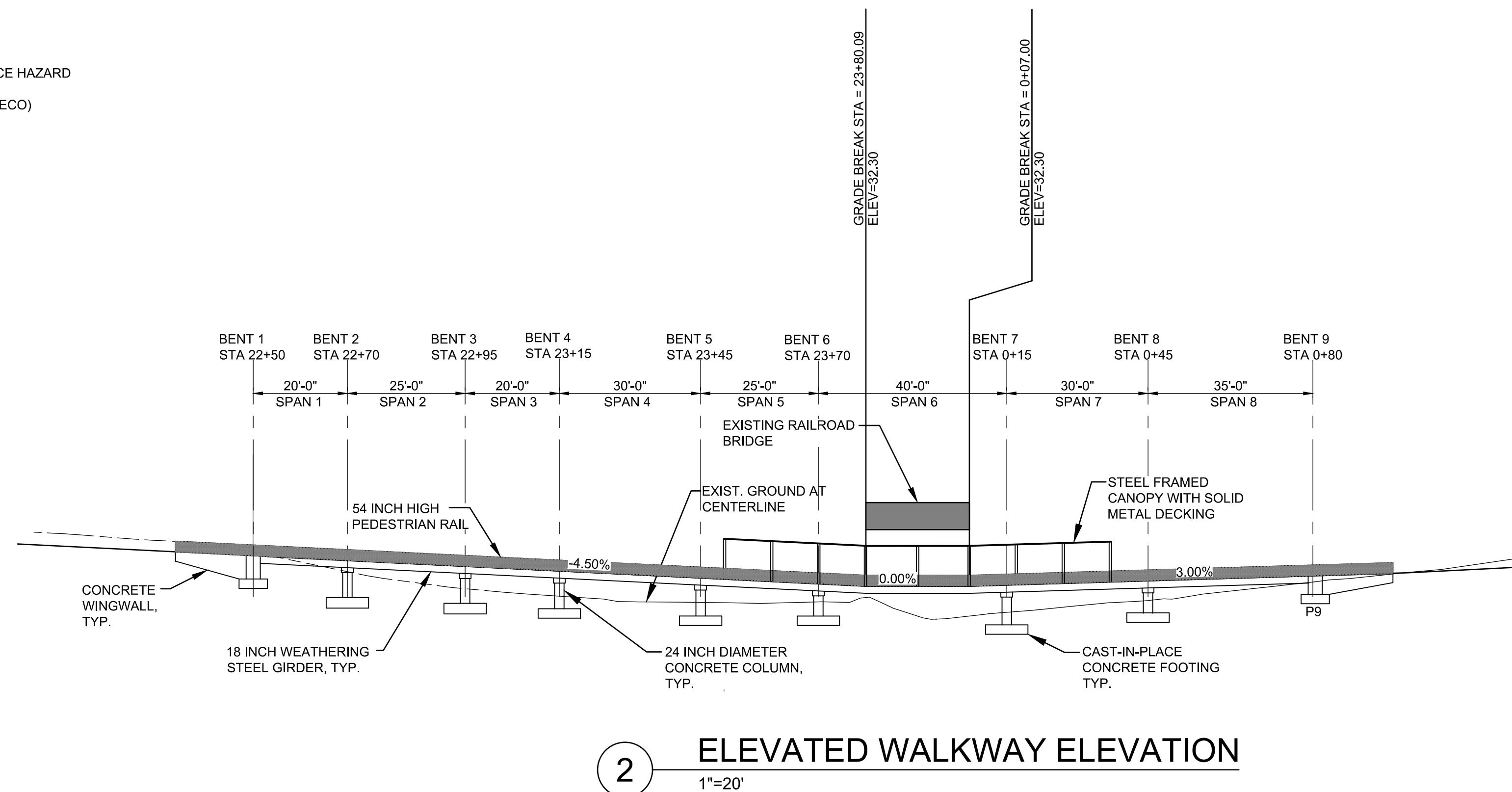
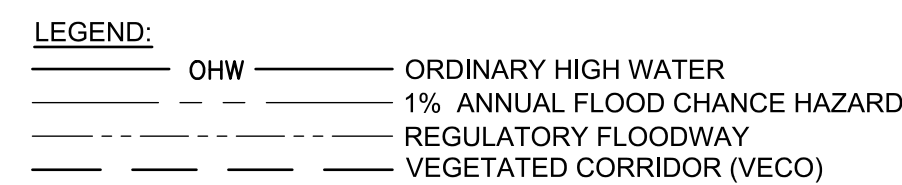
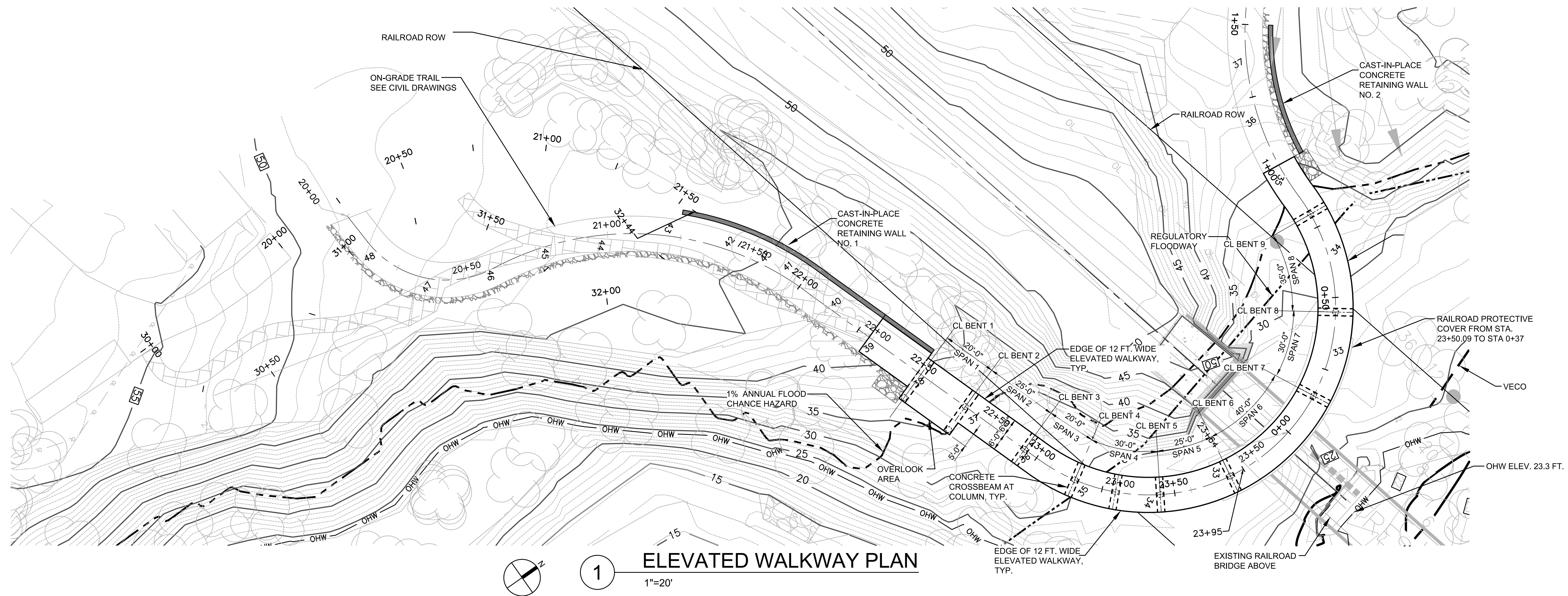




NOTED: 07/27/21 at 11:51 AM			DRAWN: CSB	DESIGNED: SF	CHECKED: CJT	STAMP: NOT FOR CONSTRUCTION	CONSULTANT:  111 SW Fifth Ave., Suite 2600 Portland, OR 97204 O: 503.227.3251 F: 503.227.7980 www.kpff.com	CLIENT: CITY OF TROUTDALE 219 E. Historic Columbia River Highway Troutdale, Oregon 97060	PROJECT: SANDY RIVERFRONT TRAIL 473 E. Historic Columbia River Highway Troutdale, Oregon 97060	SHEET: PLAN AND ELEVATION S-1
			SCALE: AS SHOWN		DATE: 08.04.2021					
			PROJECT NO: 10022000580							
			PACKAGE TITLE:							
			60% SET							
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File: K:\2020\10022000580 - Troutdale Sandy Riverfront Park\Drafting\10022000580-S02.dwg TAB: GENERAL STRUCTURAL NOTES
Plotted: 8/2/21 at 1:31pm By: stevev

GENERAL STRUCTURAL NOTES:

Provide all materials and perform all work according to The 2010 City of Portland Standard Construction Specifications. 2021 Oregon Standard Specifications for Construction.

Bridge is designed in accordance with the 2018 edition of the "AASHTO LRFD Bridge Design Specifications" (including 2017 thru 2018 interim revisions) and 2021 edition of the "Oregon Bridge Design Manual" with an allowance of 0 psf for future wearing surface and all of the following Live Loads :

Service and Strength I Limit States:
Pedestrian 90 PSF

Seismic design is performed by the single-mode analysis in accordance with the AASHTO Guide Specifications for Pedestrian Bridges dated Dec 2009, AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2nd Edition, with 2015 Interim Revisions and the 8th Edition AASHTO LRFD Bridge Design Specifications as modified by the ODOT Bridge Design & Drafting Manual. The 2014 USGS Seismic Hazard Maps have been used to collect the Seismic Hazard Values for the bridge site with Latitude 45.5417° N and Longitude 122.3829° W:

	Earthquake	Mapped Hazard Values			Site Class	Design Hazard Values			Seismic Design Category
Seismic Performance Criteria		PGA	Ss	S1		As	SDS	SD1	
Life Safety	1000-Year Return	0.27	0.59	0.22	D	0.36	0.79	0.47	C
Operational	500-Year Return	0.14	0.26	0.14	D	0.17	0.36	0.25	C

The Response Modification factors used are: R=3.0 for single column moments, R= 0.8 for abutment connections, and R= 1.0 for other components.

See Foundation Plan for Foundation Design Notes.

Provide spiral column reinforcement according to ASTM Specification A706, AASHTO Specifications M31 Grade 60, AASHTO M225, or AASHTO M32.

Provide reinforcing steel according tot ASTM Specification A706 for the following bars:

- Welded
- Column spirals and vertical reinforcement
- Drilled shaft spirals and vertical reinforcement

Provide Type 2 mechanical splices for vertical reinforcement in column and drilled shaft as shown on the detail plans.

Provide all other reinforcing steel according to AASHTO M31 (ASTM A615) Grade 60.

Provide Field bent stirrups according to ASTM Specifications A706.

Use the following splice lengths, unless shown otherwise.

Reinforcing Splice Lengths (Class B) Grade 60 f'c = 4.0 ksi, λrc = 0.4, 2in min. concrete clear cover										
Bar size	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
Uncoated	1'-4"	1'-7"	2'-0"	2'-5"	2'-9"	3'-2"	3'-7"	4'-0"	4'-5"	Not used

Increase all splice lengths 30% for horizontal or nearly horizontal bars so placed that more than 12" of fresh concrete is cast below the bar.

Splice reinforcing steel at alternate bars, staggered at least one splice length or as far as possible, unless shown otherwise.

Support the bottom mat reinforcing steel from the forms with precast mortar blocks at 24" maximum centers each way. Support the top mat of reinforcing steel from the bottom mat of reinforcing steel with wire bar supports as shown in Chapter 3 of the "CRSI Manual of Standard Practice". Place wire bar supports at 24" maximum centers.

Place bars 2" clear of the nearest face of concrete (unless shown otherwise). The top bends of stirrups extending from beam stems into the top slab may be shop or field bent (unless shown otherwise).

Do not fabricate reinforcing steel for columns and walls until final footing elevations have been determined in the field.

Provide Class 4,000 - 1 1/2, 1 or 3/4 concrete in columns, footings, etc.

Provide structural steel according to AASHTO Specifications in accordance with plans.

STRUCTURAL STEEL NOTES:
All structural steel in girder webs, flanges, and cross frames, including splice plates, stiffeners, and all connection and gusset plate, shall be weathering structural steel conforming to ASTM Specification A709, Grade 50W, except as noted. All steel members subject to tensile stresses shall meet the (ASTM A709 Supplemental Requirement S83 for Impact Testing Temperature Zone 2. This includes all girder flanges and webs designated with a (*) , and all cross frame members.

Do not punch or drill holes in webs of interior girders for falsework.

WELDING NOTES:
Produce welds according to the latest edition of "AWS D 1.5. Bridge Welding Code"

BOLTING NOTES:
Provide 7/8" diameter Type 3 weathering high-strength bolts at structural connections according to ASTM Specification F3125 GR A325 unless shown otherwise.

All structural steel connections are slip critical connections with Class B faying surfaces unless shown otherwise. (Bolt threads shall be excluded from shear plane.)

Tighten all high-strength bolts using the "Turn-of-Nut Tightening" method.

MASONRY NOTES:
Hollow clay masonry units shall comply with ASTM C652 Grade SW, Type HBX.

Concrete masonry units shall comply with ASTM C90, medium weight, sampled and tested in accordance w/ ASTM C140. Lineal Shrinkage for Units shall not exceed 0.065%.

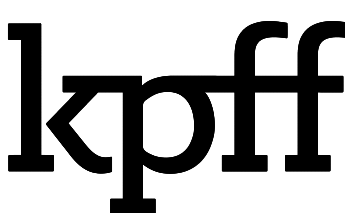
Mortar shall be Type S.

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PACKAGE TITLE: 60% SET		

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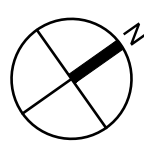
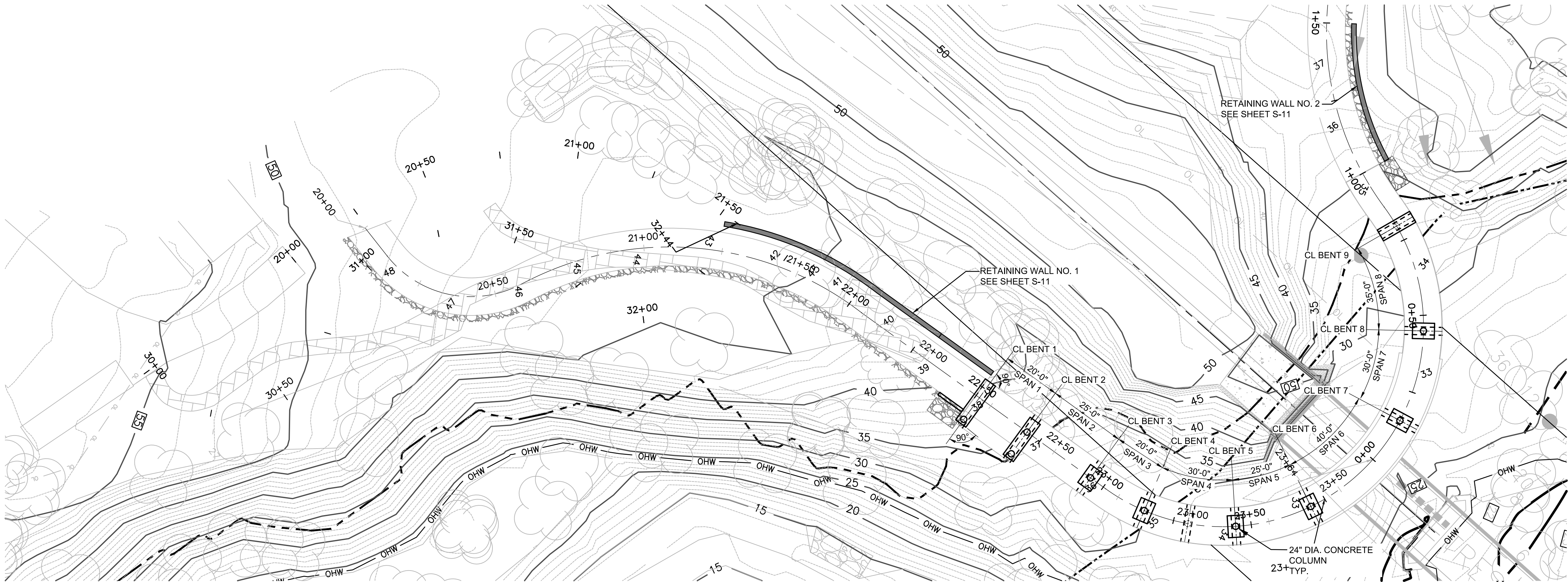
PROJECT:

SANDY RIVERFRONT TRAIL
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SHEET:

GENERAL
STRUCTURAL
NOTES
S-2

File: K:\2020\10022000580 - Troutdale Sandy Riverfront Park\Drafting\10022000580-S03.dwg TAB: FOUNDATION PLAN
Plotted: 8/2/21 at 1:31pm By: stevev



1

FOUNDATION PLAN

1"=20'

FOUNDATION NOTES:

- SPAN LENGTH MEASURED ALONG TRAIL CENTERLINE.
- REF. SHEET S-4 FOR BENT 1 DETAILS AND SHEET S-5 FOR BENT 9 DETAILS.
- REF. SHEET S-6 FOR INTERMEDIATE BENT DETAILS
- REF. SHEET S-6 FOR TYPICAL SPREAD FOOTINGS.
-  DENOTES 24" DIA. CONCRETE COLUMN.
-  INDICATES BOTTOM OF PILE CAP.
INDICATES MINIMUM MICRO PILE TIP ELEVATION.
- DESIGN IS BASED ON GEOTECHNICAL DRAFT REPORT BY GRI DATED MARCH 22ND, 2021.

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			PROJECT NO: 10022000580			
			PACKAGE TITLE:			
			60% SET			
DATE:	NO.	REVISION:				

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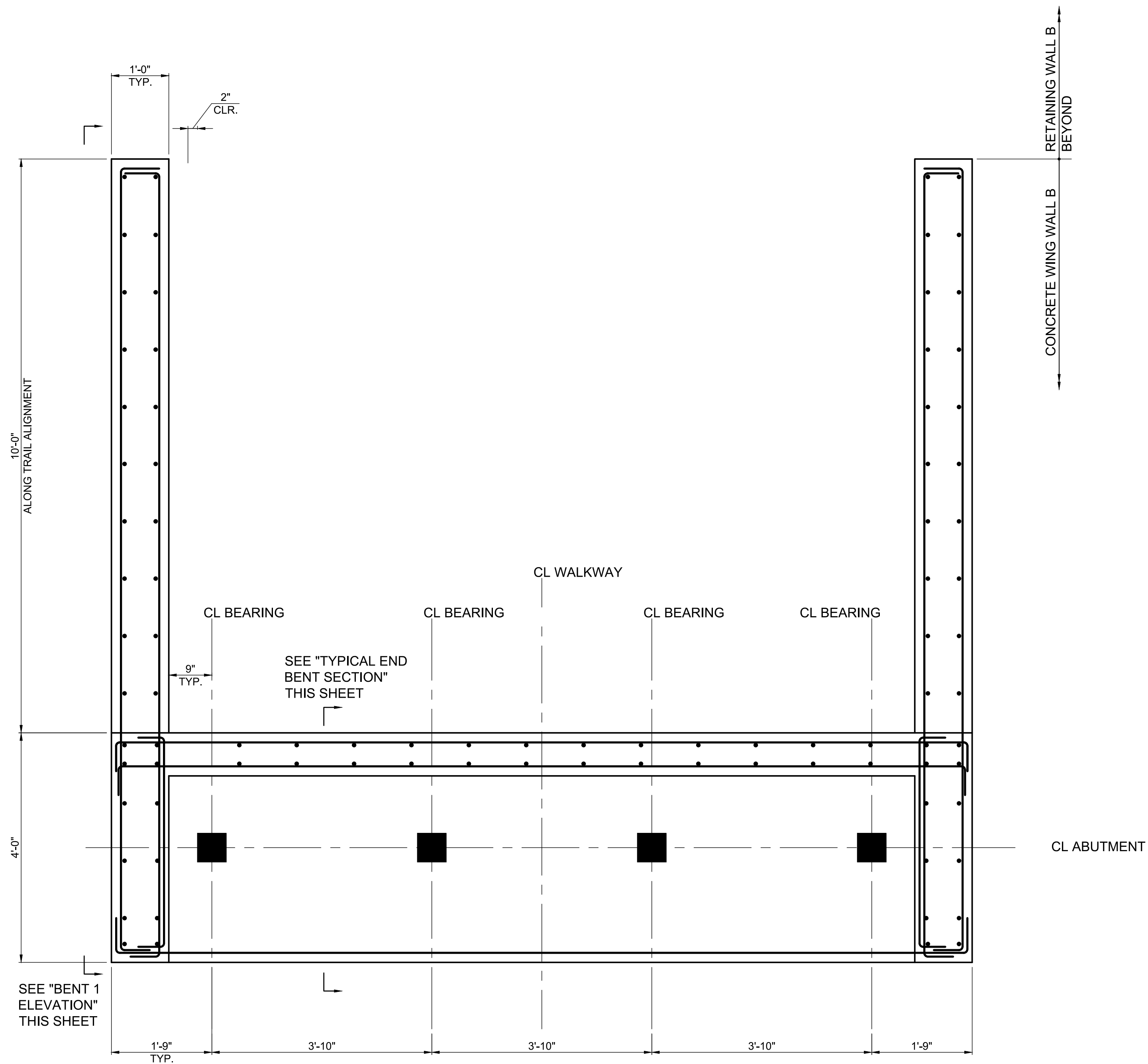
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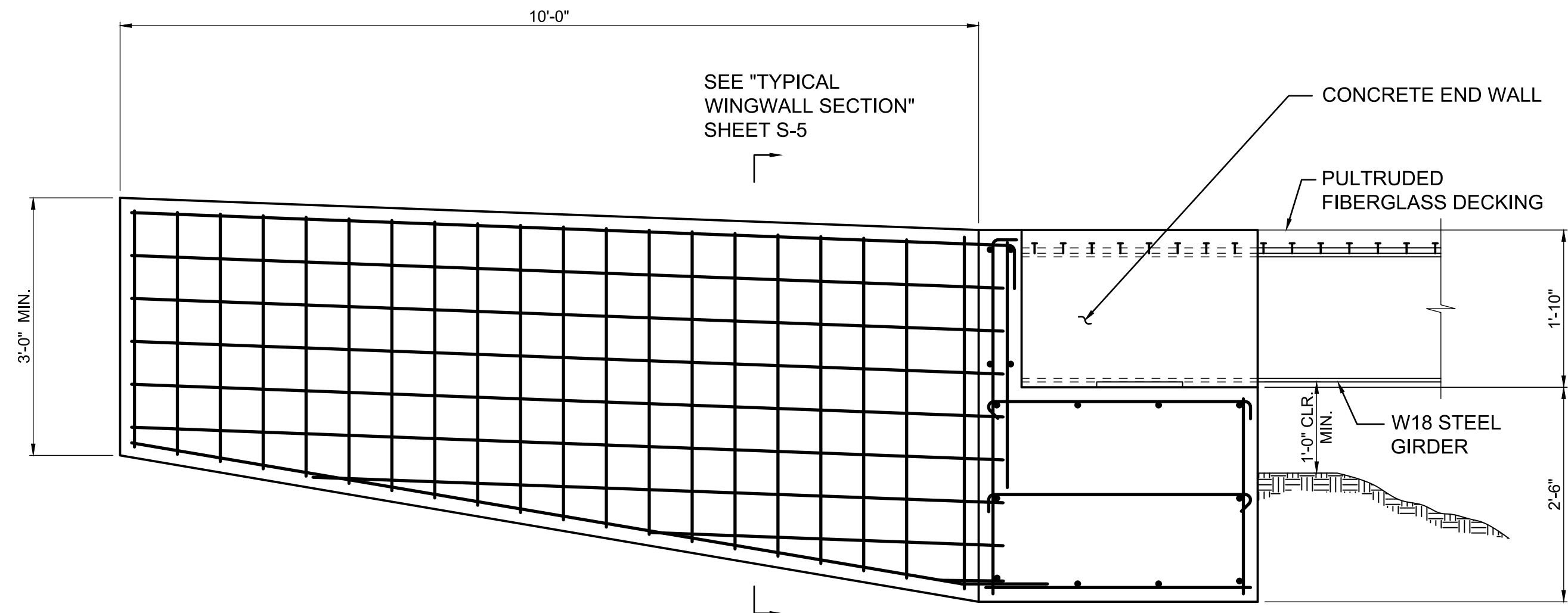
PROJECT:
SANDY RIVERFRONT TRAIL
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SHEET:
**FOUNDATION
PLAN**
S-3

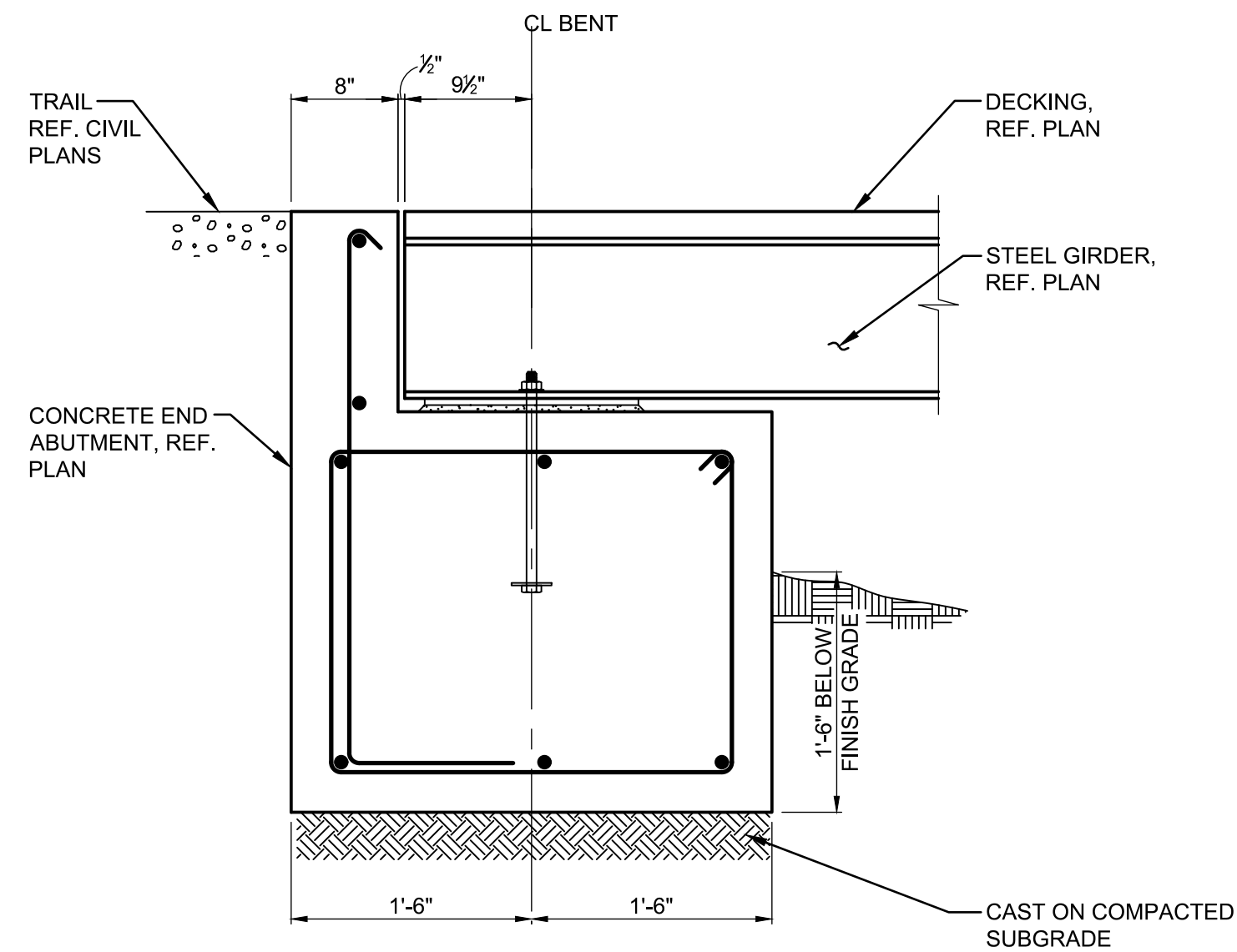
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Plotted: 8/2/21 at 1:31pm By: stevev



1 BENT 1 PLAN
3/4"=1'-0"



2 BENT 1 ELEVATION
3/4"=1'-0"



3 TYPICAL END BENT SECTION
1"=1'-0"

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			PROJECT NO: 10022000580			
			PACKAGE TITLE:			
			60% SET			
DATE:	NO.	REVISION:				

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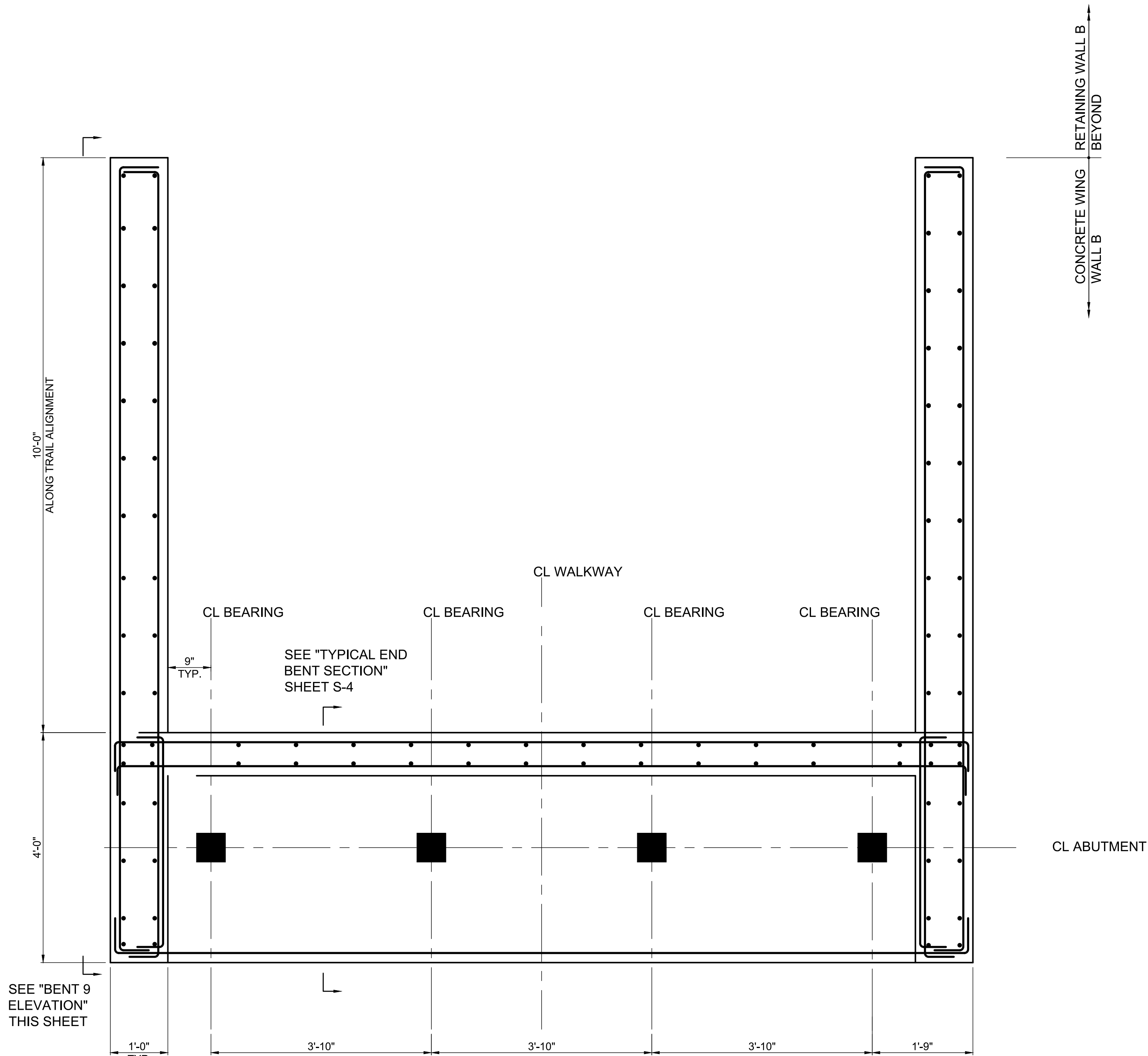
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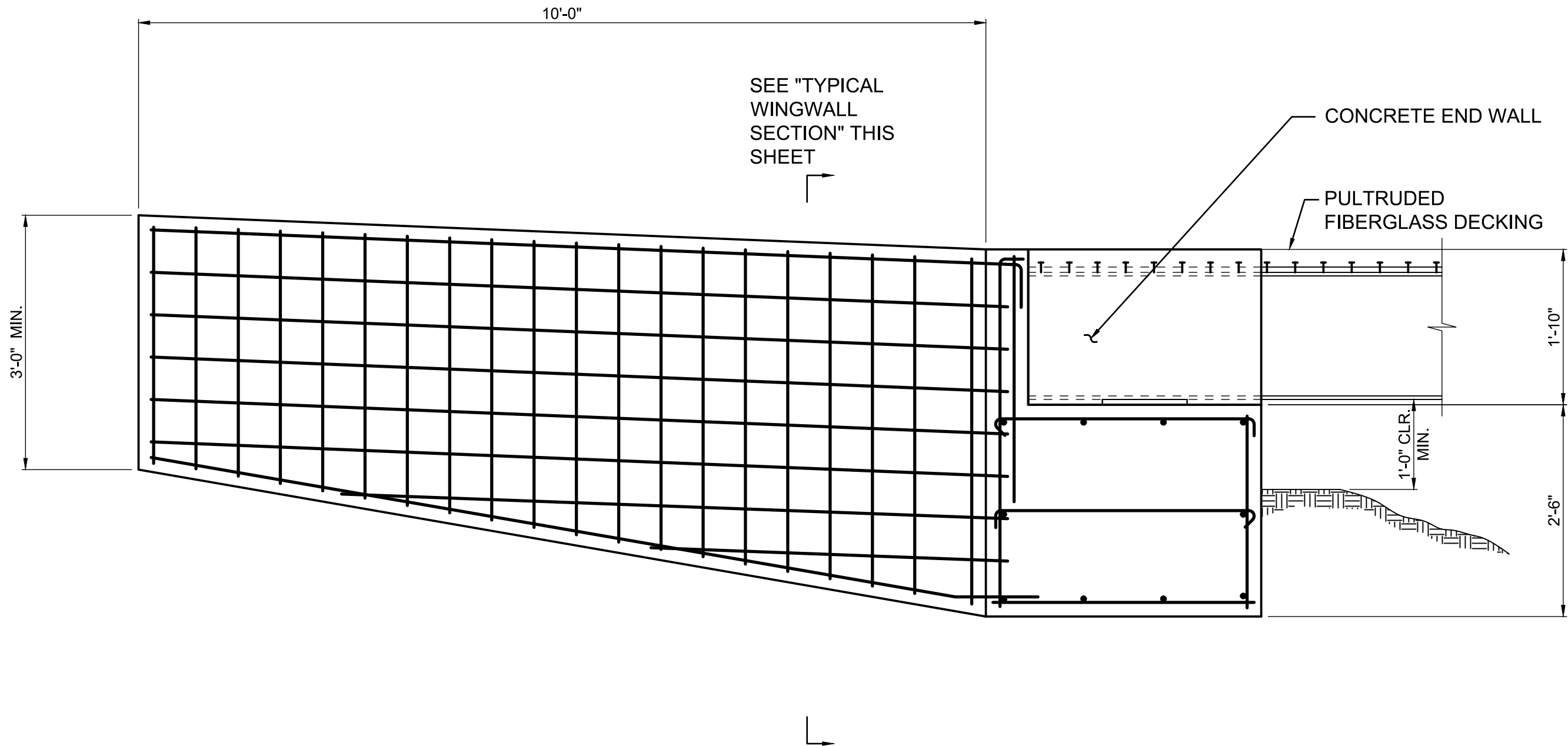
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SHEET:
**BENT 1 PLAN
AND
ELEVATION
S-4**

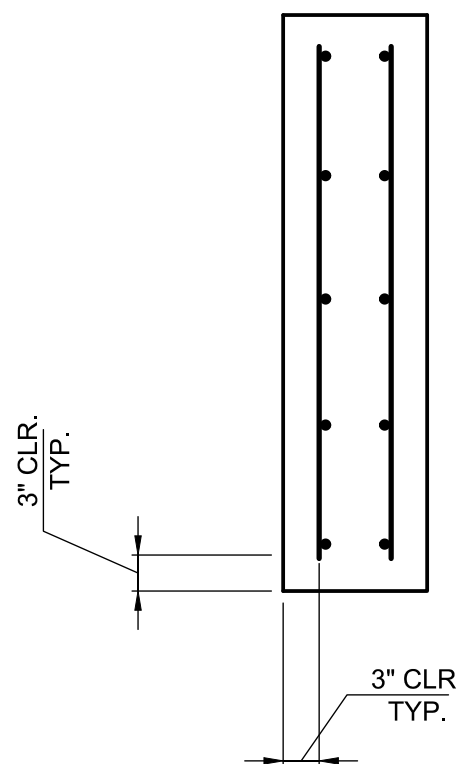
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Plotted: 8/2/21 at 1:31pm By: stevev



1 BENT 9 PLAN
3/4"=1'-0"



2 BENT 9 ELEVATION
3/4"=1'-0"



3 TYPICAL WINGWALL SECTION
3/4"=1'-0"

			DRAWN: CSB	DESIGNED: SF	CHECKED: CJT	STAMP:
			SCALE: AS SHOWN	DATE: 08.04.2021		
			PROJECT NO: 10022000580			
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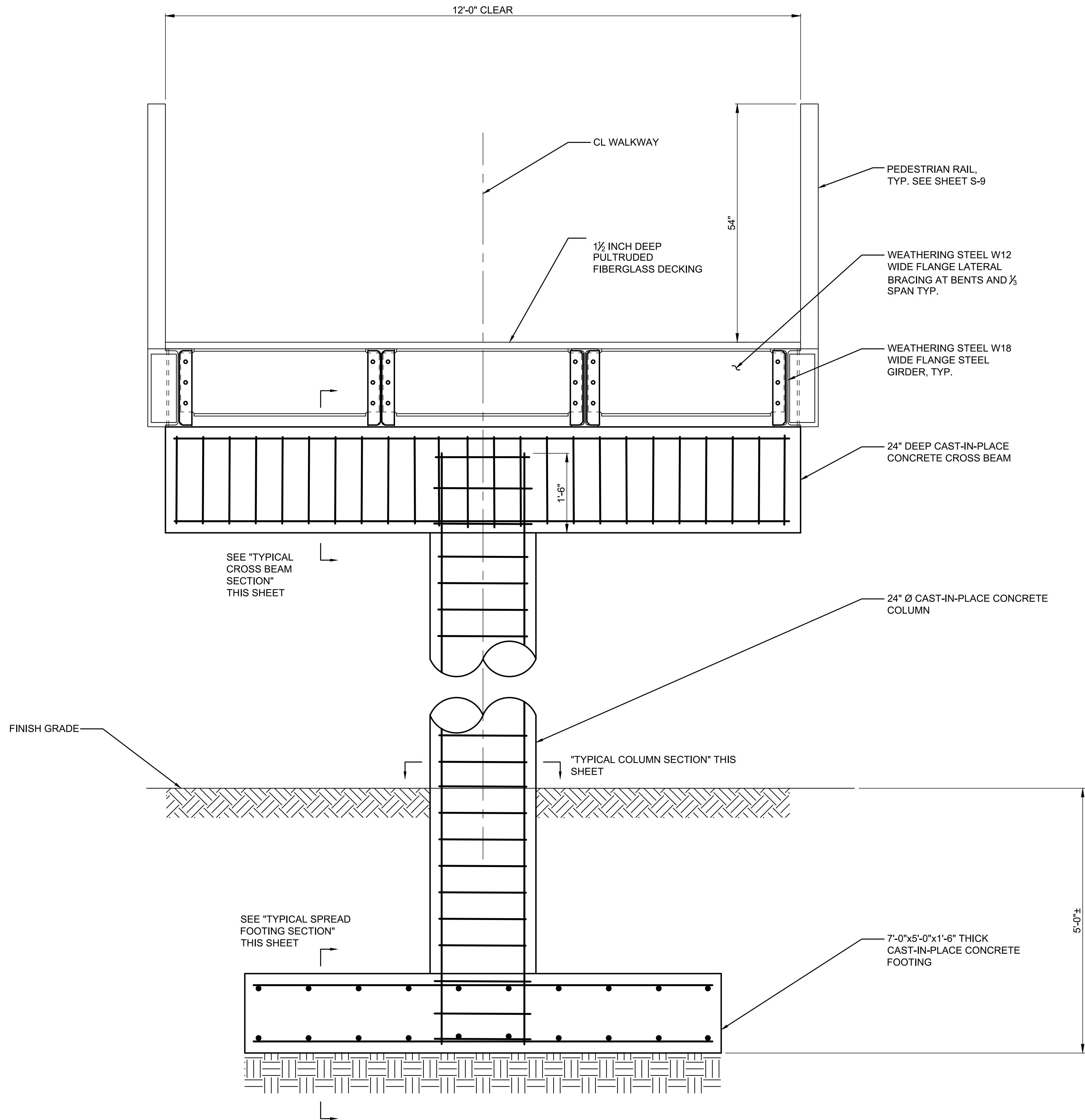
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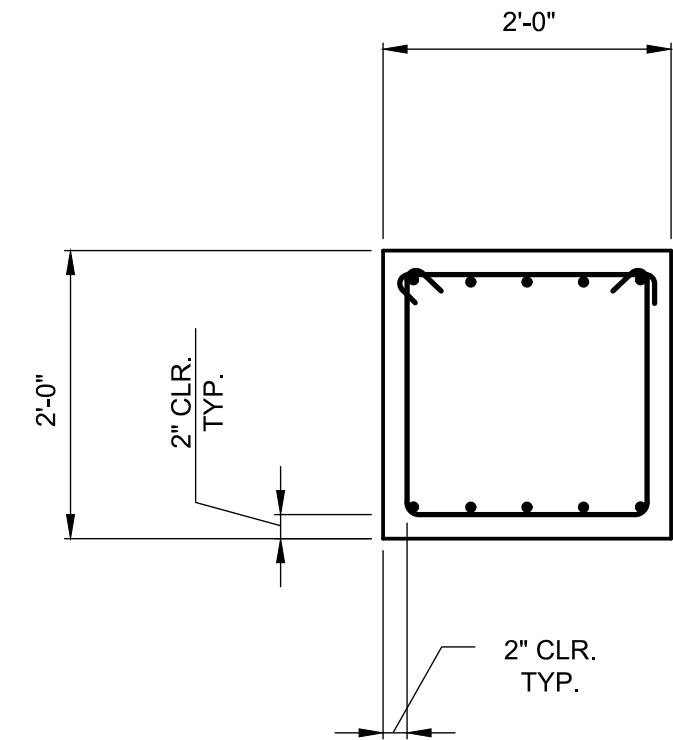
PROJECT:
SANDY RIVERFRONT TRAIL
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SHEET:
**BENT 9 PLAN
AND
ELEVATION
S-5**

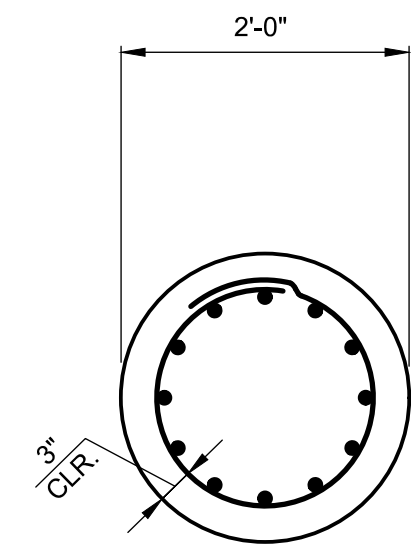
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Plotted: 8/2/21 at 1:31pm By: stevev



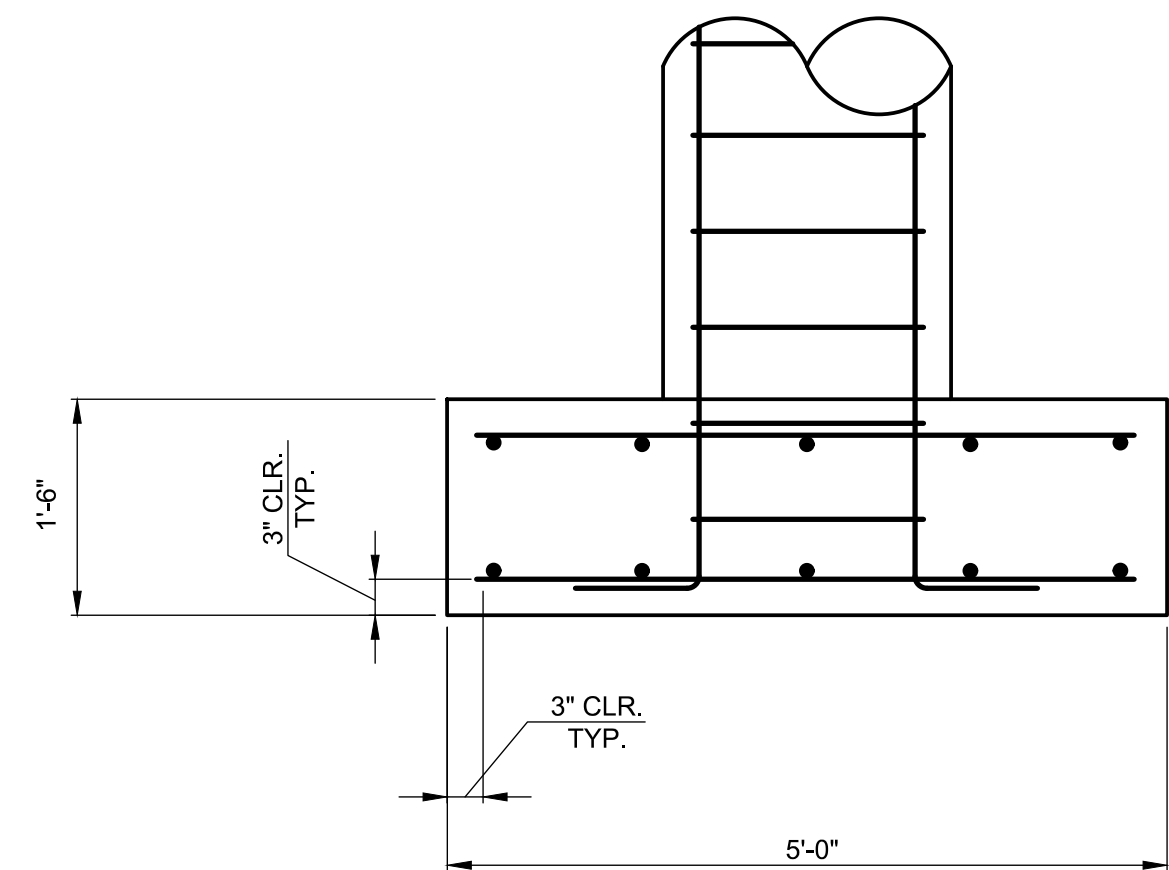
1 SECTION AT INTERMEDIATE BENT
3/4"=1'-0"



2 TYPICAL CROSS BEAM SECTION
3/4"=1'-0"



3 TYPICAL COLUMN SECTION
3/4"=1'-0"



4 TYPICAL SPREAD FOOTING SECTION
3/4"=1'-0"

			DRAWN: CSB	DESIGNED: SF	CHECKED: CJT	STAMP:
			SCALE: AS SHOWN	DATE: 08.04.2021		
			PROJECT NO: 10022000580			
			PACKAGE TITLE:			
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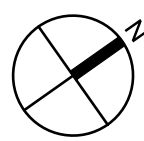
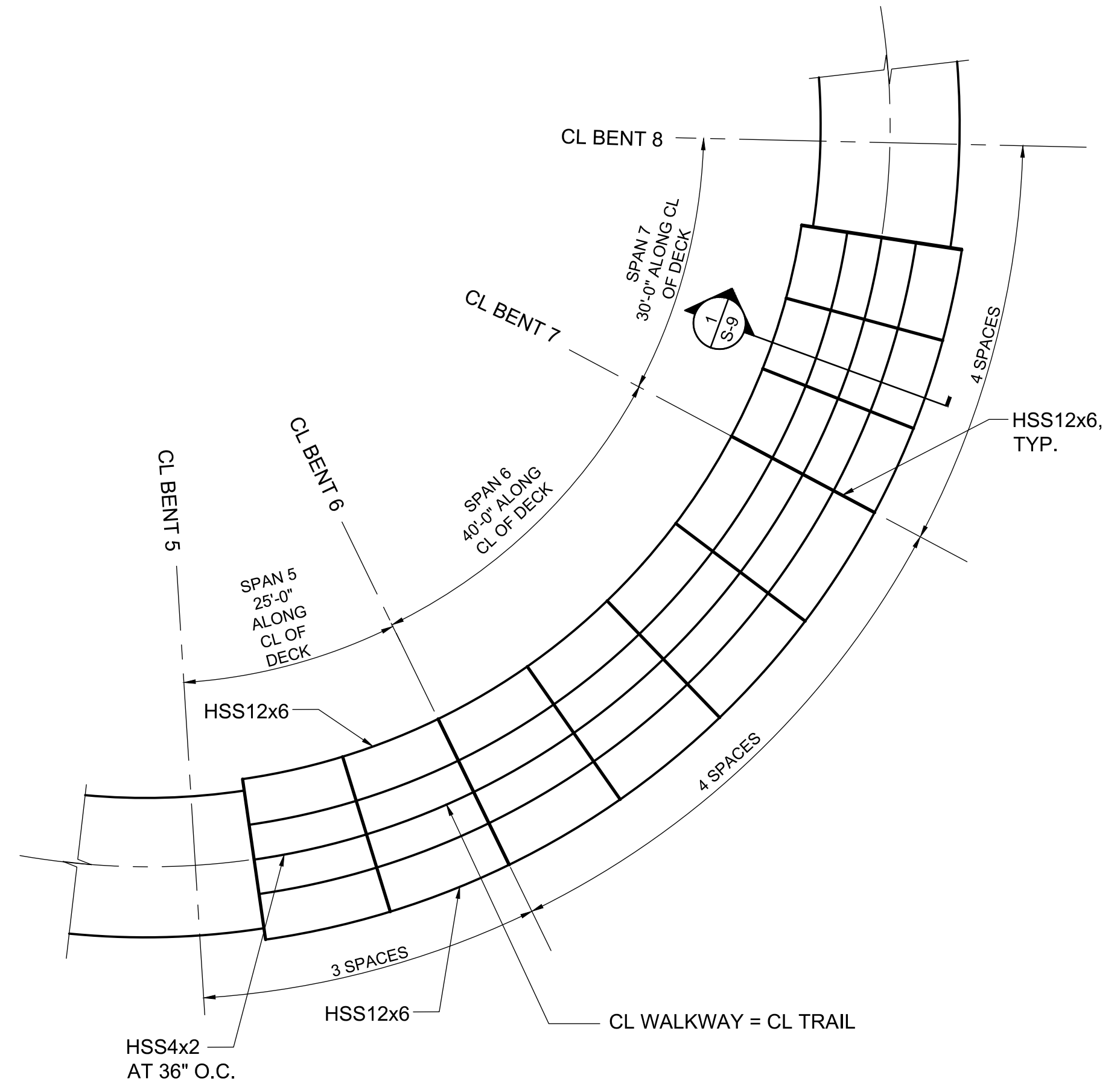
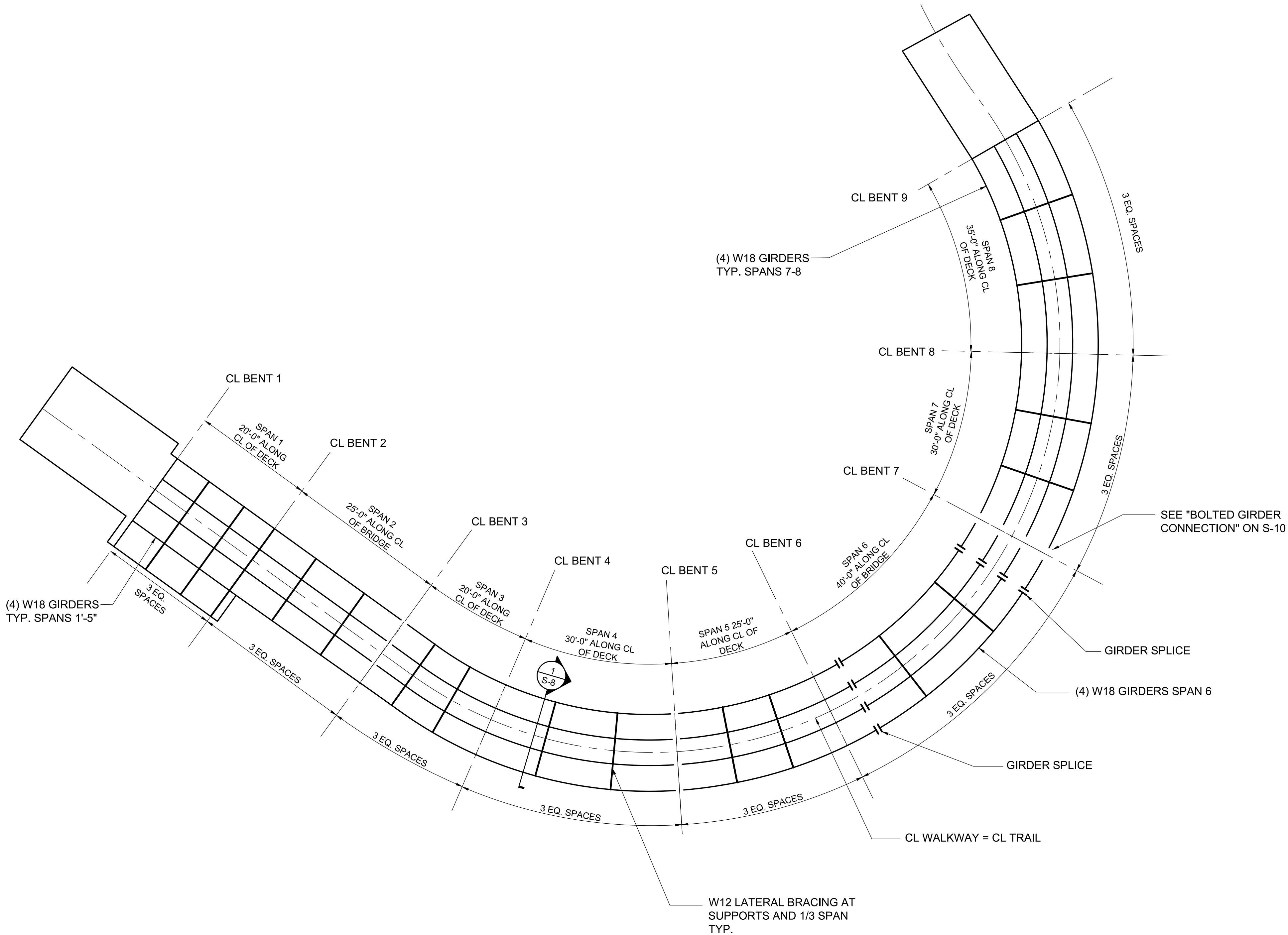
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SHEET:
**TYPICAL
SECTIONS
S-6**

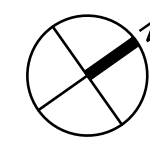
File: K:\2020\10022000580 - Troutdale Sandy Riverfront Park \Drafting\10022000580-S07.dwg TAB: STEEL FRAMING PLAN
Plotted: 8/2/21 at 1:31pm By: stevev



1

BOARDWALK DECK FRAMING PLAN

1"=10'



2

CANOPY STEEL FRAMING PLAN

1"=10'

			DRAWN: CSB	DESIGNED: SF	CHECKED: CJT	STAMP:
			SCALE: AS SHOWN	DATE: 08.04.2021		
			PROJECT NO: 10022000580			
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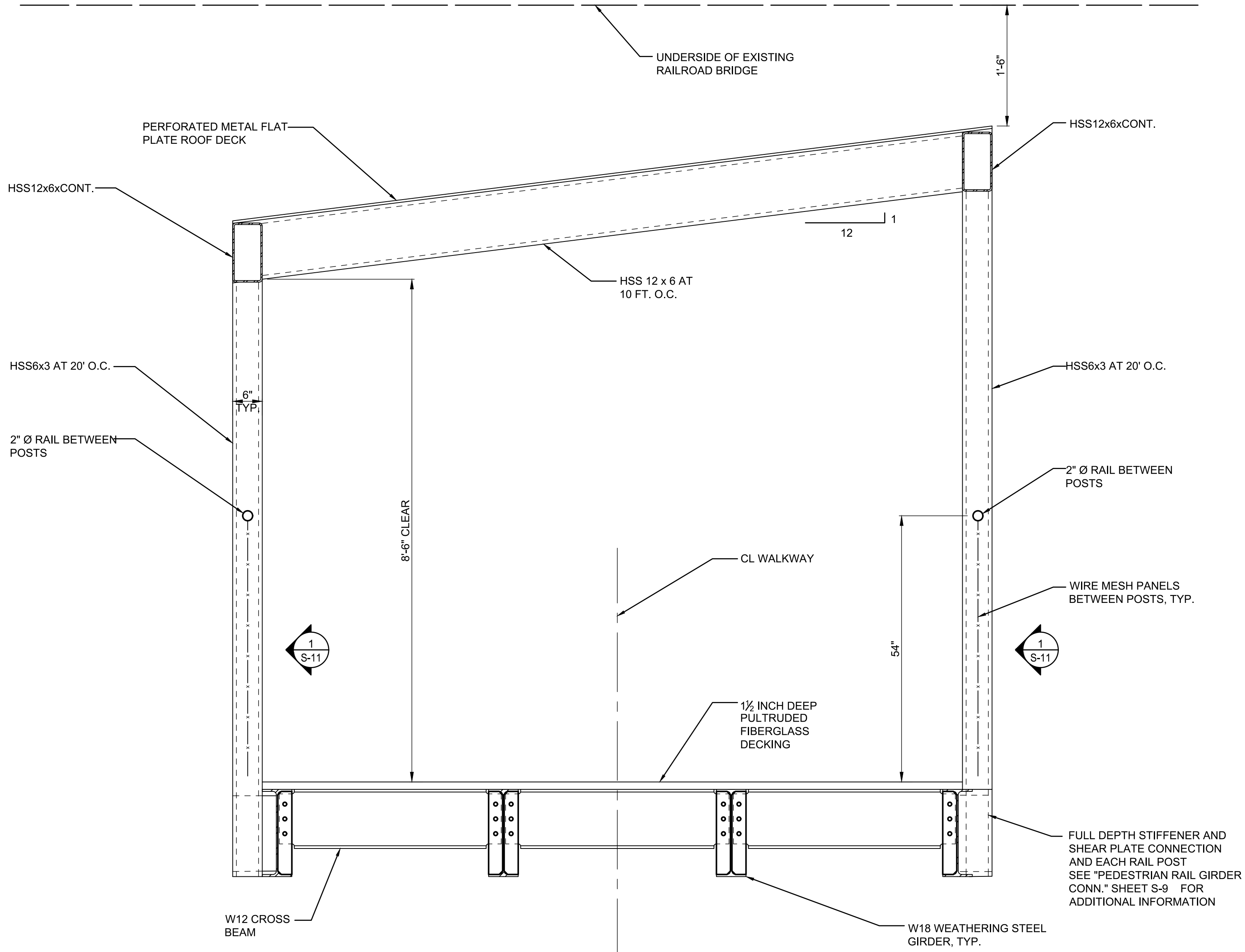
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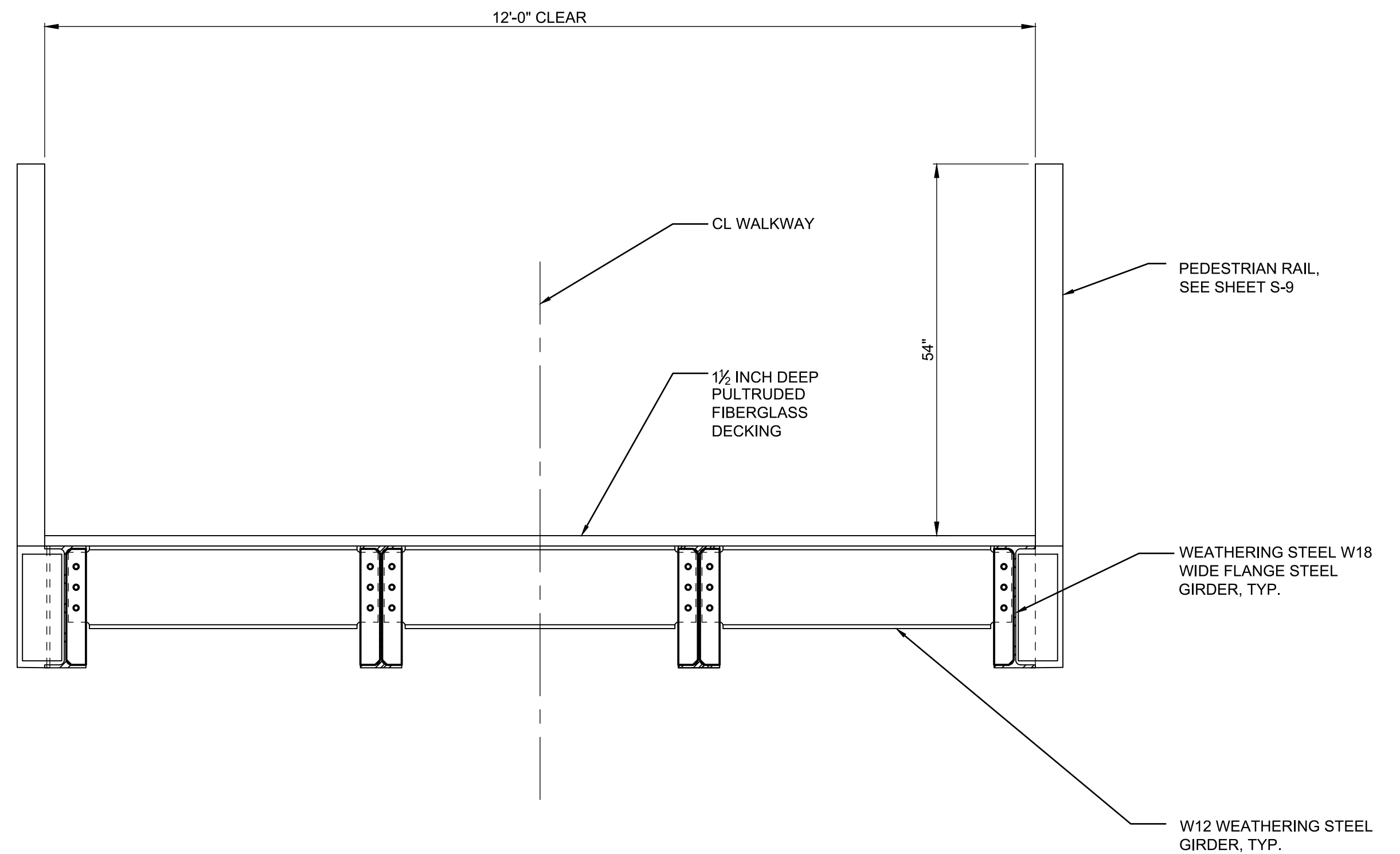
SHEET:

**STEEL
FRAMING
PLAN
S-7**

File: K:\2020\10022000580 - Troutdale Sandy Riverfront Park\Drafting\10022000580-S08.dwg TAB: CANOPY DETAILS
Plotted: 8/2/21 at 1:31pm By: stevev



2 SECTION AT TRAIL COVER
3/4"=1'-0"



1 TYPICAL SECTION
3/4"=1'-0"

			DRAWN: CSB	DESIGNED: SF	CHECKED: CJT	STAMP:
			SCALE: AS SHOWN	DATE: 08.04.2021		
			PROJECT NO: 10022000580			
			PACKAGE TITLE:			
			60% SET			
DATE:	NO.	REVISION:				

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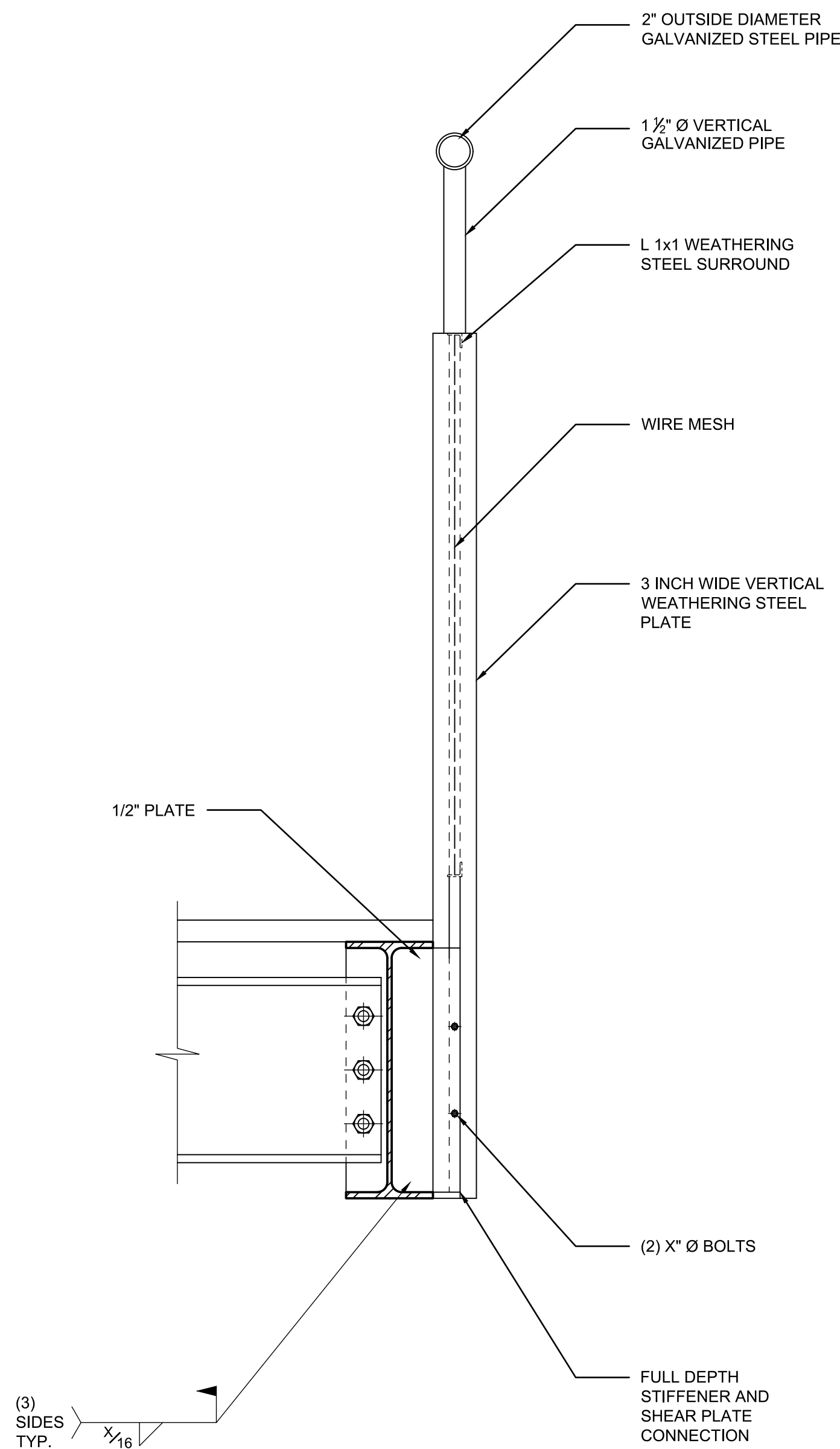
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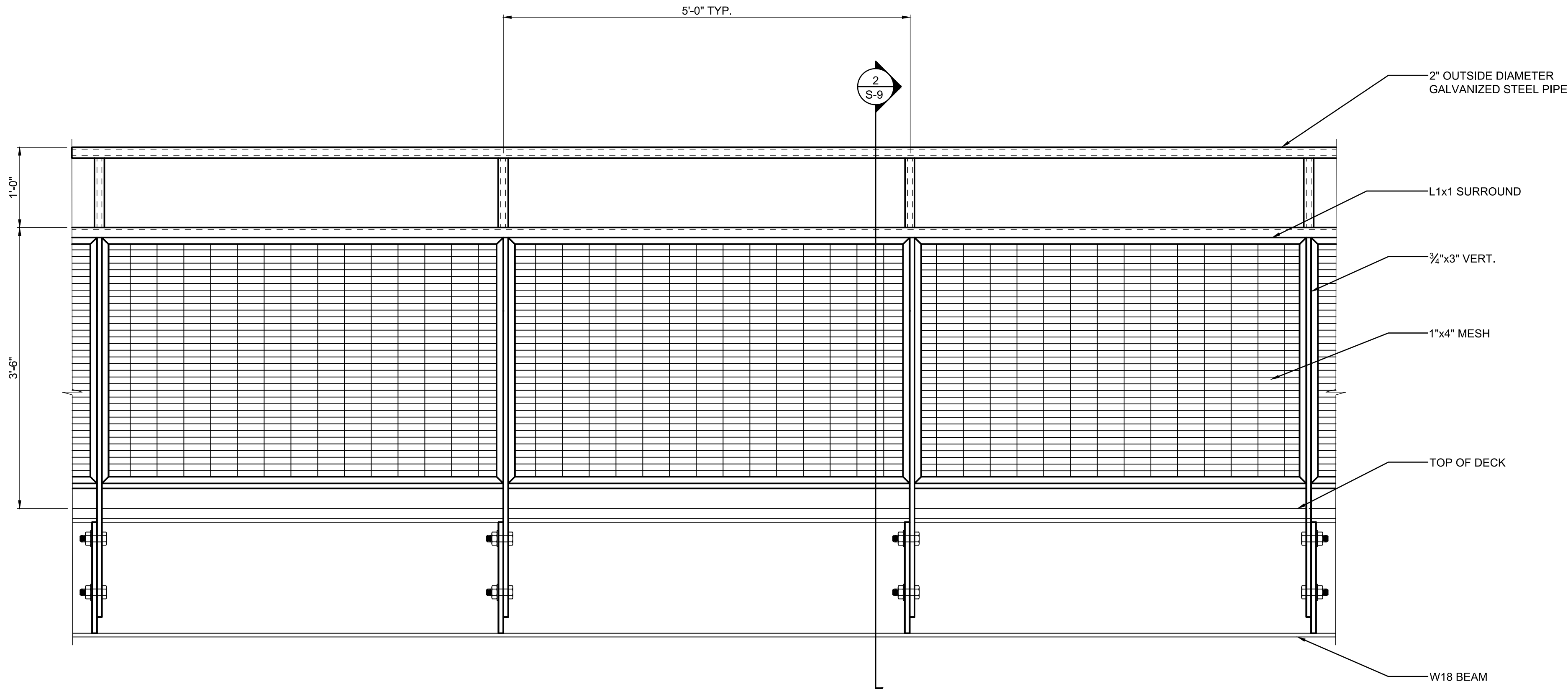
PROJECT:
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SHEET:
CANOPY DETAILS
S-8

File: K:\2020\10022000580 - Troutdale Sandy Riverfront Park\Drafting\10022000580-S09.dwg TAB: PEDESTRIAN RAIL DETAILS
Plotted: 8/2/21 at 1:31pm By: stevev



2 PEDESTRIAN RAIL SECTION
1 1/2"=1'-0"



1 PEDESTRIAN RAIL ELEVATION
1"=1'-0"

			DRAWN: CSB	DESIGNED: SF	CHECKED: CJT	STAMP:
			SCALE: AS SHOWN	DATE: 08.04.2021		
			PROJECT NO: 10022000580			
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SHEET:

**PEDESTRIAN
RAIL DETAILS**

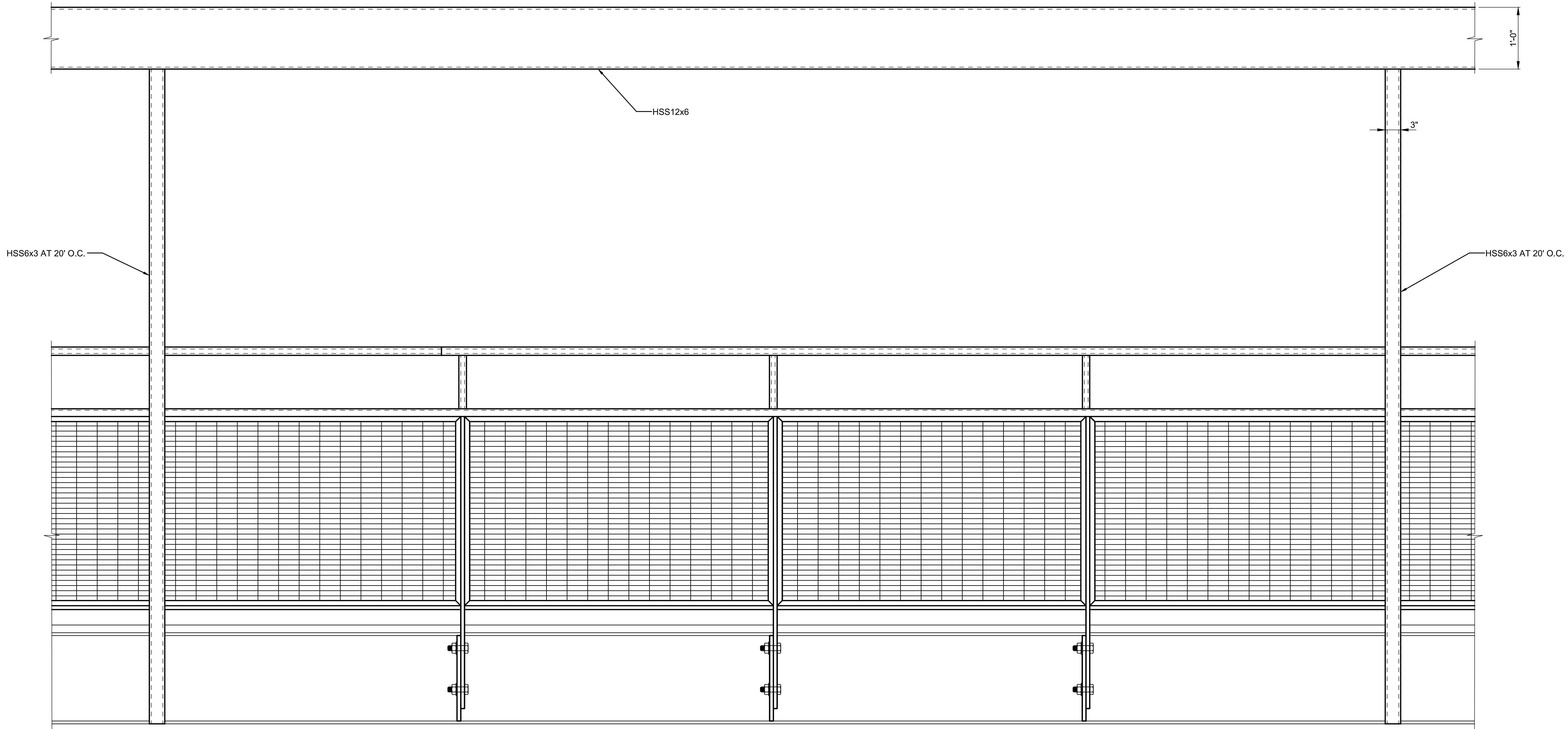
S-9



STAMP:

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File: K:\2020\10022000580 - Troutdale Sandy Riverfront Park\Drafting\10022000580-S11.dwg TAB: TRAIL COVER ELEVATION
Plotted: 8/2/21 at 1:32pm By: stevev



1

ELEVATION AT TRAIL COVER

1"=1'-0"

DATE:	NO.	REVISION:

DRAWN: CSB	DESIGNED: SF	CHECKED: CJT
SCALE: AS SHOWN		DATE: 08.04.2021
PROJECT NO: 10022000580		
PACKAGE TITLE: 60% SET		

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SHEET:

TRAIL COVER
ELEVATION

S-11