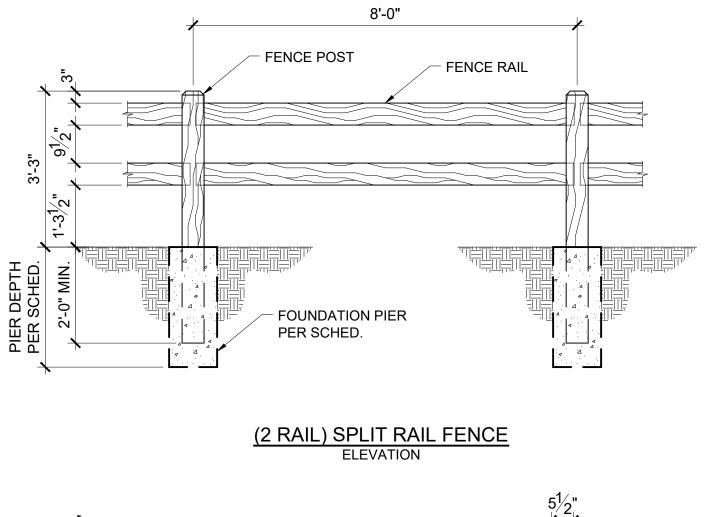
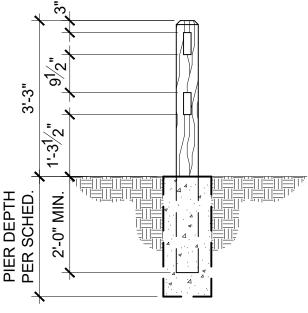
						E OF R								
		Bedrock			Gravel		Sand			Clay			Unknown Fill / Organics	
		Friction Angle, $\phi = 40^{\circ}$ (min)Cohesion, c = 10,000 psf (min)Bearing = 3000 psf			Friction Angle, $\phi$ = 35° (min) Cohesion, c = 0 psf (min) Bearing = 2000 psf			Friction Angle, $\phi$ = 30° (min) Cohesion, c = 0 psf (min) Bearing = 2000 psf			Friction Angle, $\phi$ = 0° (min) Cohesion, c = 1000 psf (min) Bearing = 1500 psf			- Poorly-Characterizo
		Total Density $\gamma_t$ = 130 pcf (min)		Total Density $\gamma_t$ = 120 pcf (min)			Total Density $\gamma_t$ = 115 pcf (min)			Total Density $\gamma_t$ = 110 pcf (min)				
Exposure	Wind Speed (mph)	Pier Diameter (in)	Pier Depth (in)	Pier Steel	Pier Diameter (in)	Pier Depth (in)	Pier Steel	Pier Diameter (in)	Pier Depth (in)	Pier Steel	Pier Diameter (in)	Pier Depth (in)	Pier Steel	REQUIRES SITE SPECIFIC ENGINEERED FOUNDATION
	110	12	30	NIL	12	36	NIL	18	36	NIL	18	30	NIL	
в	130	12	30	NIL	12	36	NIL	<mark>18</mark>	36	NIL	18	30	NIL	
	140	12	30	NIL	12	36	NIL	18	36	NIL	18	30	NIL	
	110	12	30	NIL	12	36	NIL	18	36	NIL	18	30	NIL	
С	130	12	30	NIL	12	36	NIL	18	36	NIL	18	30	NIL	
ote: F	140 Found	12 ation pier r	30 ninimum de	NIL pth shall ex	12 ceed dept	36 h required I	NIL ocally for fro	18 ost protect	36 ion.	NIL	18	30	NIL	
ote: F				pth shall ex	ceed dept		ocally for fro	ost protect	ion.				NIL	
ote: F		ation pier r	ninimum de Bedroc	pth shall exe SPLI	ceed dept	h required I FENCI Gravel	ocally for fro	RAILS N	ion. /IIN. FO Sand	UNDAT	ION SIZ	<b>ES</b> Clay		Unknown Fill / Organics
ote: F		ation pier r	Bedroc	pth shall exi SPLI k	T RAIL	h required I	E W/ 2 F	RAILS N Friction	ion. /IIN. FO	UNDAT	ION SIZ	ZES	0° (min)	Organics
ote: F		ation pier r Frictic Cohesia	Bedroc	pth shall ex SPLI k = 40° (min) 00 psf (min)	T RAIL	h required I FENCI GraveI n Angle, ∳=	E W/ 2 F 35° (min) psf (min)	Cohes	ion. <b>/IIN. FO</b> Sand Angle, φ=	UNDAT 30° (min) osf (min)	Friction Cohesion	<b>ΈS</b> Clay Angle, φ=	0° (min) psf (min)	Organics
ote: F		ation pier r Frictic Cohesic	<b>Bedroc</b> <b>Bedroc</b> on Angle, φ = on, c = 10,0 earing = 30	pth shall ex SPLI k = 40° (min) 00 psf (min)	T RAIL	h required I <b>FENC</b> <b>Gravel</b> h Angle, $\phi =$ sion, c = 0	E W/ 2 F 35° (min) psf (min)	AILS N Friction Cohes Be	ion. <b>/IIN. FO</b> <b>Sand</b> Angle, φ= ion, c = 0 p	UNDAT 30° (min) psf (min) 0 psf	Friction Cohesion Bea	<b>Δngle</b> , φ = 1000	0° (min) psf (min) D psf	Unknown Fill / Organics Poorly-Characteriz
Exposure		ation pier r Frictic Cohesic	<b>Bedroc</b> <b>Bedroc</b> on Angle, φ = on, c = 10,0 earing = 30	pth shall exe SPLI k = 40° (min) 00 psf (min) 00 psf	T RAIL	h required I <b>FENCI</b> <b>GraveI</b> h Angle, $\phi =$ sion, c = 0 earing = 200	E W/ 2 F 35° (min) psf (min)	AILS N Friction Cohes Be	ion. <b>AIN. FO</b> <b>Sand</b> Angle, $\phi =$ ion, c = 0 p aring = 200	UNDAT 30° (min) psf (min) 0 psf	Friction Cohesion Bea	<b>Clay</b> <b>Clay</b> Angle, φ = n, c = 1000 aring = 1500	0° (min) psf (min) D psf	Organics Poorly-Characteriz
	Speed (mph)	ation pier r Frictic Cohesia Total Da (i) Jameter E	<b>Bedroc</b> <b>Bedroc</b> on Angle, $\phi$ = on, c = 10,0 earing = 30 ensity $\gamma_t$ = 1	pth shall exi SPLI k = 40° (min) 00 psf (min) 00 psf 30 pcf (min)	T RAIL	h required I <b>FENCI</b> <b>GraveI</b> n Angle, $\phi =$ sion, c = 0 earing = 200 msity $\gamma_t = 12$	<u>35° (min)</u> 20 pcf (min)	AILS N Friction Cohes Be Total Der	ion. <b>AIN. FO</b> <b>Sand</b> Angle, $\phi =$ ion, c = 0 p aring = 200 nsity $\gamma_t = 11$	UNDAT 30° (min) osf (min) 0 psf 5 pcf (min)	Friction Cohesion Bea Total Den	<b>LES</b> Clay Angle, $\phi =$ n, c = 1000 aring = 1500 sity $\gamma_t = 110$	0° (min) psf (min) 0 psf 0 pcf (min)	Organics Poorly-Characteriz REQUIRES SITE SPECIFIC
	Wind Speed (mph)	ation pier r Frictic Cohesic B Total Do U I I I I I I I I I I I I I I I I I I	$Bedroc$ $Bedroc$ $n Angle, \phi = 10,0$ $earing = 30$ $ensity \gamma_t = 1$ $(\underline{i})$ $\underline{i}$	pth shall exi SPLI k = 40° (min) 00 psf (min) 00 psf 30 pcf (min) 	Ceed dept	h required I <b>FENCI</b> <b>GraveI</b> n Angle, $\phi =$ sion, c = 0 earing = 200 nsity $\gamma_t = 12$ ( <u>ii</u> ) $\psi_{td} =$ $\tilde{c}$	acally for fro <b>E W/ 2 F</b> 35° (min) psf (min) 00 psf 20 pcf (min) <del>a</del> <del>a</del> <del>a</del>	St protect Context Friction Cohes Be Total Der (I) Jan Cohes Be	ion. <b>AIN. FO</b> <b>Sand</b> Angle, $\phi =$ ion, c = 0 p aring = 200 nsity $\gamma_t = 11$ (ii) (iii)	UNDAT	ION SIZ Friction Cohesion Bea Total Den	$\frac{2 \text{ES}}{\text{Clay}}$ Angle, $\phi =$ n, c = 1000 aring = 1500 sity $\gamma_t = 110$ (ii) updae	0° (min) psf (min) 0 psf 0 pcf (min)	Organics Poorly-Characteriz REQUIRES SITE
Exposure	Found Speed (mph)	ation pier r Frictic Cohesic B Total Do I I I I I I I I I I I I I I I I I I I	$Bedroc$ $Bedroc$ $Dn Angle, \phi = 0$ $Dn, c = 10,0$ $C $	pth shall exi SPLI k = 40° (min) 00 psf (min) 00 psf 30 pcf (min) 00 psf 30 pcf (min) 00 psf 30 pcf (min)	Triction Friction Cohe Total De (i) Diameter Diameter Diameter Total De	h required I <b>FENCI</b> <b>GraveI</b> n Angle, $\phi =$ sion, c = 0 earing = 200 insity $\gamma_t = 12$ (i) tight and insity $\gamma_t = 32$ insity $\gamma_t = 32$	acally for fro <b>E W/ 2 F</b> 35° (min) psf (min) 0 psf 20 pcf (min) <del>a</del> <u>a</u> <u>b</u> <u>b</u> <u>b</u> <u>c</u> NIL	AILS N Friction Cohes Be Total Der (II) Jaueter II Total Der	ion. <b>AIN. FO</b> <b>Sand</b> Angle, $\phi =$ ion, c = 0 p aring = 200 nsity $\gamma_t = 11$ (u) tdo u) aring aring = 36	UNDAT	ION SIZ Friction Cohesion Bea Total Den (u) Jameter Diameter Diameter La 12	$2ES$ Clay Angle, $\phi =$ n, c = 1000 aring = 1500 sity $\gamma_t = 110$ (ii) updae ia. 30	0° (min) psf (min) 0 psf 0 pcf (min) 0 pcf (min)	Organics Poorly-Characteriz REQUIRES SITE SPECIFIC ENGINEERED
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Exposure	Found Wind Speed (mph)	ation pier r Frictic Cohesic B Total D (i) iaj energia ia 0 12 0 12 0 12	$Bedroc$ $Bedroc$ $Dn Angle, \phi = 10,0$ earing = 30 ensity $\gamma_t = 1$ $(\underline{u})$ $d_{0}$ $a_{0}$ $a_{0}$ $30$ $30$ $30$	pth shall exi SPLI k = 40° (min) 00 psf (min) 00 psf 30 pcf (min) 00 psf 30 pcf (min) 00 psf 30 pcf (min) NIL NIL NIL	Ceed dept	h required I <b>FENCI</b> <b>GraveI</b> n Angle, $\phi =$ sion, c = 0 earing = 200 msity $\gamma_t = 12$ $(\underline{e})$ $\psi_{d}$ 0 20 12	acally for fro E W/ 2 F 35° (min) psf (min) 0 psf 20 pcf (min) 0 psf 20 pcf (min) NIL NIL NIL	AILS N Friction Cohes Be Total Der (i) Jaameter Laine 12 12 12	ion. <b>AIN. FO</b> <b>Sand</b> Angle, $\phi =$ ion, $c = 0$ p aring = 200 nsity $\gamma_t = 11$ (ii) iii iii iiiii iiiii iiiii iiiii iiiii iiii iiii iiii iiiii iiii iiii iiii iiii iiii iiii iiiii iiiii iiiiii $iiiiiiiiiiiiiiiiiii ii$	UNDAT	ION SIZ Friction Cohesion Bea Total Den (ii) Laguerer Lag	<b>ZES</b> <b>Clay</b> Angle, $\phi =$ n, c = 1000 aring = 1500 sity $\gamma_t = 110$ ( <u>ii</u> ) $\psi_{td} =$ 1000 100 100 100 1000 10	0° (min) psf (min) D psf 0 pcf (min) 0 pcf (min) ia ia NIL NIL NIL	Organics Poorly-Characteriz REQUIRES SITE SPECIFIC ENGINEERED



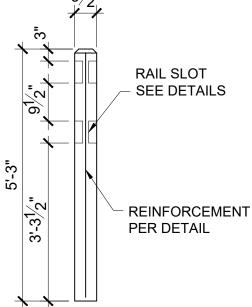


Note: Foundation pier minimum depth shall exceed depth required locally for frost protection.

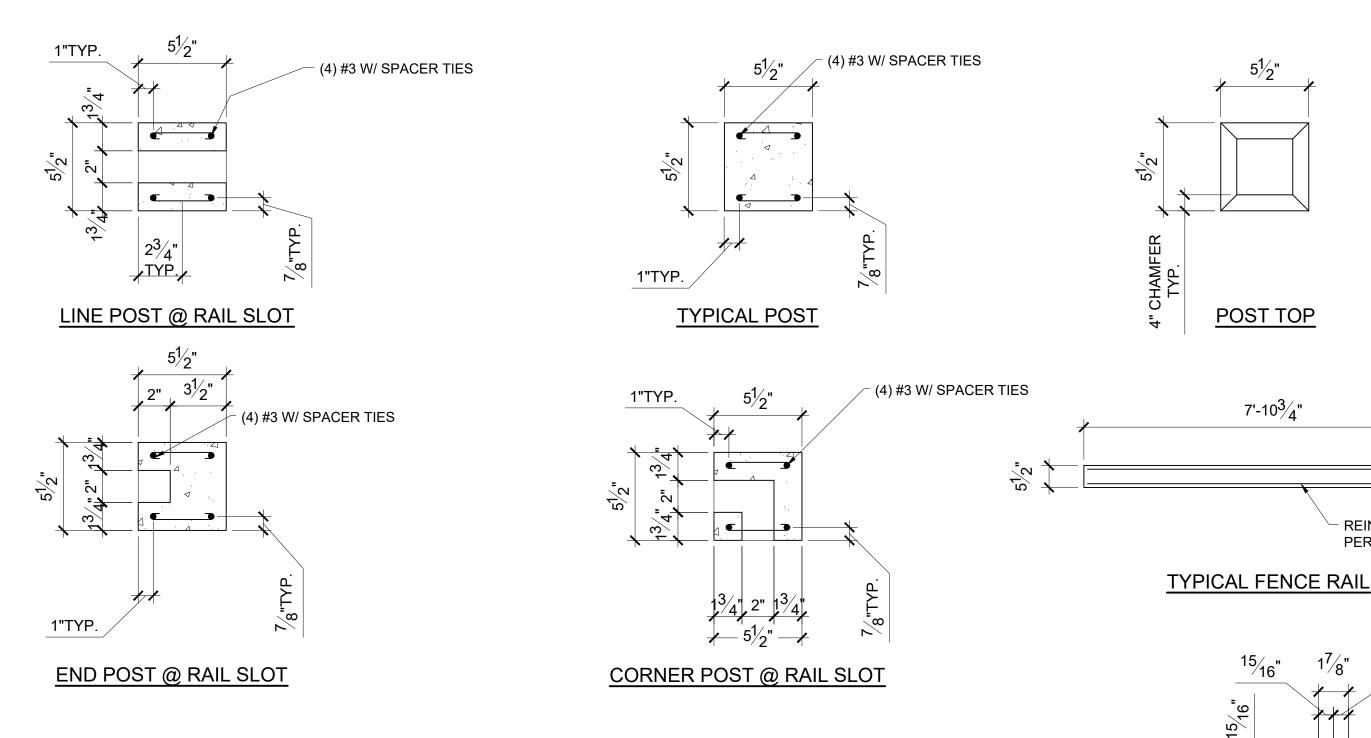
SYSTEM

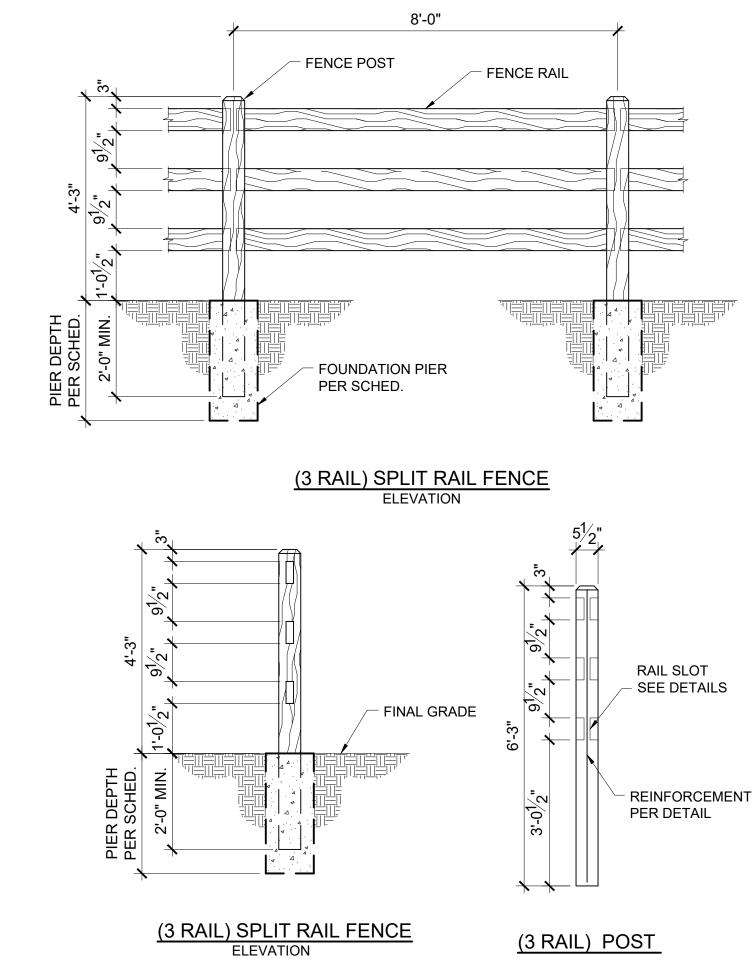
FENCE

**2-RAIL** 



(2 RAIL) SPLIT RAIL FENCE ELEVATION (2 RAIL) POST





**3-RAIL FENCE SYSTEM** 



1. PRODUCT NAMES: SPLIT RAIL FENCE 2. MANUFACTURER: SIGNATURE STONE, LLC. 211 30TH STREET GREELEY, CO 80631

### 3. PRODUCTS DESCRIPTION:

#### PRODUCTS ARE INTENDED FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL EXTERIOR FENCING, SCREENING WALLS AND NOISE BARRIERS.

4. COMPOSITION AND MATERIALS: A MIX OF HIGH STRENGTH PORTLAND CEMENT CONCRETE W/ FIBER MESH REINFORCING, MEETING OR EXCEEDING THE REQUIREMENTS OF ASTM-C150, NATURAL AGGREGATES, AND IRON OXIDE COLORS PLACED AND CAST WITHIN FACTORY MOLDS. FILLED MOLDS ARE VIBRATED AFTER SETUP OF MIX, CURED, AND PACKAGED FOR SHIPMENT.

#### 5. SIZES:

FENCE POSTS ARE TYPICALLY PLACED AT 60.0 in. CENTERS WITH THE FENCE PANELS BEING 12.0 in. IN HEIGHT AND APPROXIMATELY 2.0 in. IN THICKNESS. HEIGHT OF THE FENCE SYSTEM SHOULD NOT EXCEED THAT SHOWN. CONTACT MANUFACTURER FOR ENGINEERING NOT INCLUDED IN THESE SPECIFICATIONS.

#### 6. LIMITATIONS:

FENCE SYSTEM IS DESIGNED FOR TYPICAL CONDITIONS AND APPLICATIONS. SIGNATURE STONE RECOMMENDS FENCE SYSTEM APPLICATION AND FOUNDATION INSTALLATION BE APPROVED BY LOCAL PROFESSIONAL ENGINEER ON EVERY PROJECT. FENCE SYSTEM SHOULD NOT BE USED AS AN EARTH RETENTION SYSTEM UNLESS MODIFICATIONS IN DESIGN AND CONSTRUCTION ARE DONE BY A REGISTERED PROFESSIONAL ENGINEER AND APPROVED BY THE MANUFACTURER.

7. TECHNICAL DATA FOR CONCRETE MIX

PRE-CAST FENCE POSTS AND PANELS: MIN. 28 DAY COMPRESSIVE STRENGTH = 5,000 psi

CAST-IN-PLACE FOUNDATION PIERS: MIN. 28 DAY COMPRESSIVE STRENGTH = 3,000 psi

#### 8. BUILDING CODES:

DESIGN OF FENCE POSTS, PANELS AND FOUNDATION PIERS IS BASED ON 2015 VERSION OF IBC, ACI, AND AASHTO CODES.

#### 9. INSTALLATION:

THE POSTS ARE POSITIONED AND WET-SET INTO A DRILLED CONCRETE FOUNDATION PIER. THE PIER SIZE, DEPTH AND REINFORCEMENT SHALL BE AS SPECIFIED BY LOCAL ENGINEER OR AS SHOWN ON SCHEDULE. AFTER POSTS AND RAILS ARE ACCURATELY SPACED, PLUMBED AND LEVELED, THEY ARE BRACED UNTIL PIER CONCRETE HAS OBTAINED ITS INITIAL STRENGTH.

#### 10. DRAINAGE:

AMENDMENTS

THE LONG-TERM PERFORMANCE OF ALL FOUNDATIONS, INCLUDING THE SIGNATURE STONE FENCE FOUNDATION, DEPENDS ON PROPER GRADING. POSITIVE DRAINAGE AWAY FROM THE FENCE FOUNDATIONS TO THE EXTENT POSSIBLE IS RECOMMENDED AT ALL TIMES. PANELS CAN BE ARRANGED TO ALLOW FOR CONTINUOUS OR INTERMITTENT DRAINAGE BENEATH THE FENCE WHERE NECESSARY.

## **GENERAL NOTES:**

1. ALL CONSTRUCTION TO MEET LOCAL CODES AND

2. ALL CONCRETE FOOTINGS SHALL USE TYPE I/II CEMENT.

ALL REINFORCING STEEL SHALL CONFORM TO ASTM A
 GRADE 60 (GRADE 40 FOR #3 REBAR ONLY).
 ALL PIER FOUNDATIONS ARE TO BE LOCATED IN
 UNDISTURBED SOIL, UNLESS APPROVED BY A

GEOTECHNICAL ENGINEER. 5. FENCE WALL PANEL STANDARD DESIGN IS FOR A WIND LOAD OF 140 MPH (ULTIMATE). WIND PRESSURE IS BASED ON IBC WIND PRESSURES.

6. APPROVAL OF THE ENGINEER IS REQUIRED WHEN FENCE IS USED UNDER A CONDITION WHERE THE SPECIFICATIONS ARE DIFFERENT THAN SHOWN.

7. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE.

8. THE POSTS, PANELS AND CAPS ARE MADE OF CONCRETE AND ARE MANUFACTURED BY A NATIONAL READY MIX CONCRETE ASSOCIATION APPROVED MANUFACTURER.

9. A FULLY DIMENSIONED PLOT PLAN IS REQUIRED FOR A BUILDING PERMIT AND MUST BE PROVIDED WITH EACH STANDARD PLAN.

10. LOCATION AND FENCE HEIGHT SHALL COMPLY WITH CITY/COUNTY FENCING CODES AND CURRENT CONDITIONS.

11. ALL WORK SHALL COMPLY WITH CITY/COUNTY GRADING ORDINANCES.

12. EPOXY SHALL BE SIKAFLEX-1a (175 PSI TENSILE STRENGTH) OR APPROVED EQUIVALENT. CONTRACTOR SHALL USE EPOXY ON ALL ADJOINING SURFACES OF COLUMN SEGMENTS.

NOTE: ALL DIMENSIONS SHOWN ON THIS SHEET ARE FOR INFORMATION PURPOSES ONLY. ACTUAL DIMENSIONS MAY VARY DUE TO MANUFACTURING AND MOLDING TOLERANCES.

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**TYPICAL RAIL** 

- REINFORCEMENT

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