

Figure 1. Noise barrier sound mechanics (FWHA 2017).

The Signature Stone privacy fence system was also compared to typical wooden privacy fence systems for effectiveness as a physical barrier against pollution from traffic. We defined pollution in this case as the splash and spray which can be generated by traffic during wet conditions. The spray can contain various chemicals compounds including deicer, oil, dirt, and other vehicular fluids, none of which are desirable compounds to have in a residential yard area.

We began our analysis by examining the material and cross-sectional properties of the 6' and 8' tall privacy fences (see attachment one). The Signature Stone privacy fence system consists of stacked 2" thick precast concrete panels. Concrete typically has a density of 150pcf which translates into a material weight of 25 psf for this system. This material weight falls well within the typical rule of thumb. Additionally, for this fence cross section, an approximate TL value of 33 dB(A) can reasonably be expected. This value was assumed based on TL values reported for light concrete by the FWHA (see the second attachment for the full table). This TL value translates to a sound level at the receiver of 42 dB(A) which is approximately equivalent to the sounds encountered in a residential area at night. See the figure below to help put this value into context.

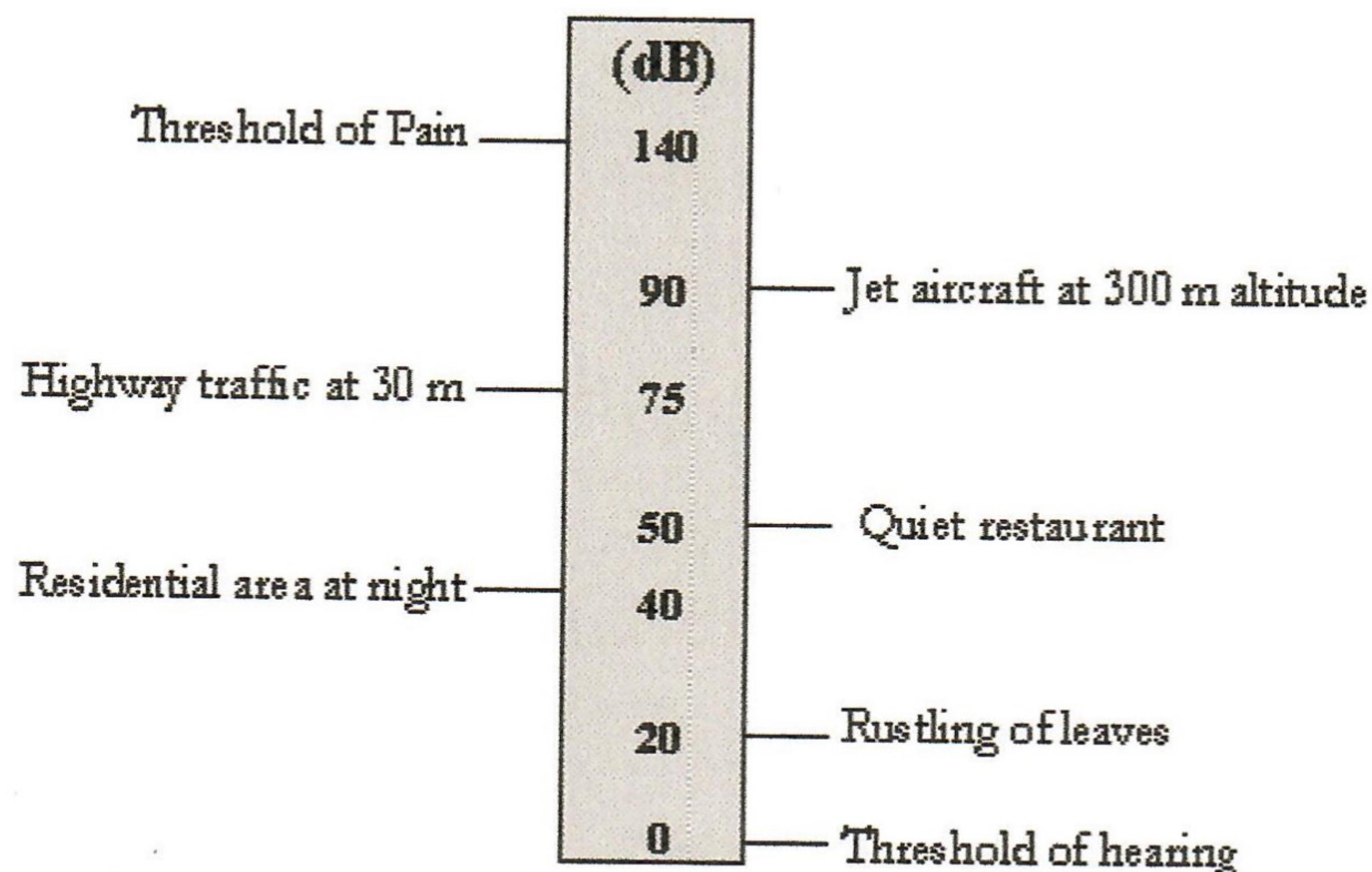


Figure 2. Decibel scale with contextual perception levels (FWHA 2017).

June 03, 2020

Eric Boehner
Signature Stone, LLC
211 30th Street
Greeley, CO

Subject: Noise and Pollution Control Analysis for 6' and 8' Privacy Fence
CTL Thompson Project Number: FC07305

Dear Mr. Boehner,

Per your inquiry, engineers at CTL|Thompson, Inc. have analyzed the properties of the 6' and 8' tall precast concrete privacy fence for their effectiveness for noise and pollution control. We understand that you would like to know the effectiveness of the precast concrete fence system, particularly in comparison to a typical wood privacy fence. This letter presents our engineering conclusions. For our review, we checked multiple criteria based on the U.S. Department of Transportation's Federal Highway Administration's *Noise Barrier Design Handbook*.

The first acoustical property of the fence examined was the theoretical transmission loss (TL) of sound that could reasonably be expected. TL is defined as the amount of incident sound the barrier will transmit from the source of noise to the receiver and is a property of the barrier material. The U.S. Department of Transportation's Federal Highway Administration's *Noise Barrier Design Handbook* states that, as a rule of thumb, any material weighing 20 kg/m² (4 psf) or more has a transmission loss of at least 20 dB(A). Such material would be adequate for a noise reduction of at least 10 dB(A) due to diffraction, which indicates a noise level behind the barrier half as loud as the source. Therefore, a material that has a TL of at least 25 dB(A) or greater is desired and would always be adequate for a noise barrier (FHWA 2017).

The second acoustical property of the fence examined was the theoretical insertion loss (IL) of the barrier. Essentially, this property is defined as the sound level at a given receiver before the construction of the barrier minus the sound level at the same receiver after the construction of the barrier. Typically, a 5 dB(A) IL can be expected for receivers whose line-of-site to the roadways is blocked by the barrier. This also assumes that the barrier has no openings which would let the full, if not amplified sound, through to the receiver.

These two acoustical properties, based on material (TL) and geometry (IL), both lead to the reduction in perceptible noise levels at the receiver. See the figure on the following page for an illustration of noise barrier mechanics. The dashed lines indicate the reduced level of sound the receiver perceives.

In comparison, a typical wooden fence with a picket thickness of ½" has a density of 33pcf or a material weight of 16.5 psf. The approximate TL value of wood of this thickness is 18 dB(A). Both the material weight and the TL value fall well below the desired threshold for adequate noise barriers. Additionally, the noise level at the receiver would be 57 dB(A) which is exponentially more than the noise level at the receiver using the concrete privacy fence.

Next, the 6' and 8' privacy fences are both tall enough to break the line of sight from the average theoretical receiver to the highway traffic, or source. When a barrier does this, an increment loss (IL) of 5 dB(A) can reasonably be expected. Figure 2 illustrates this condition.

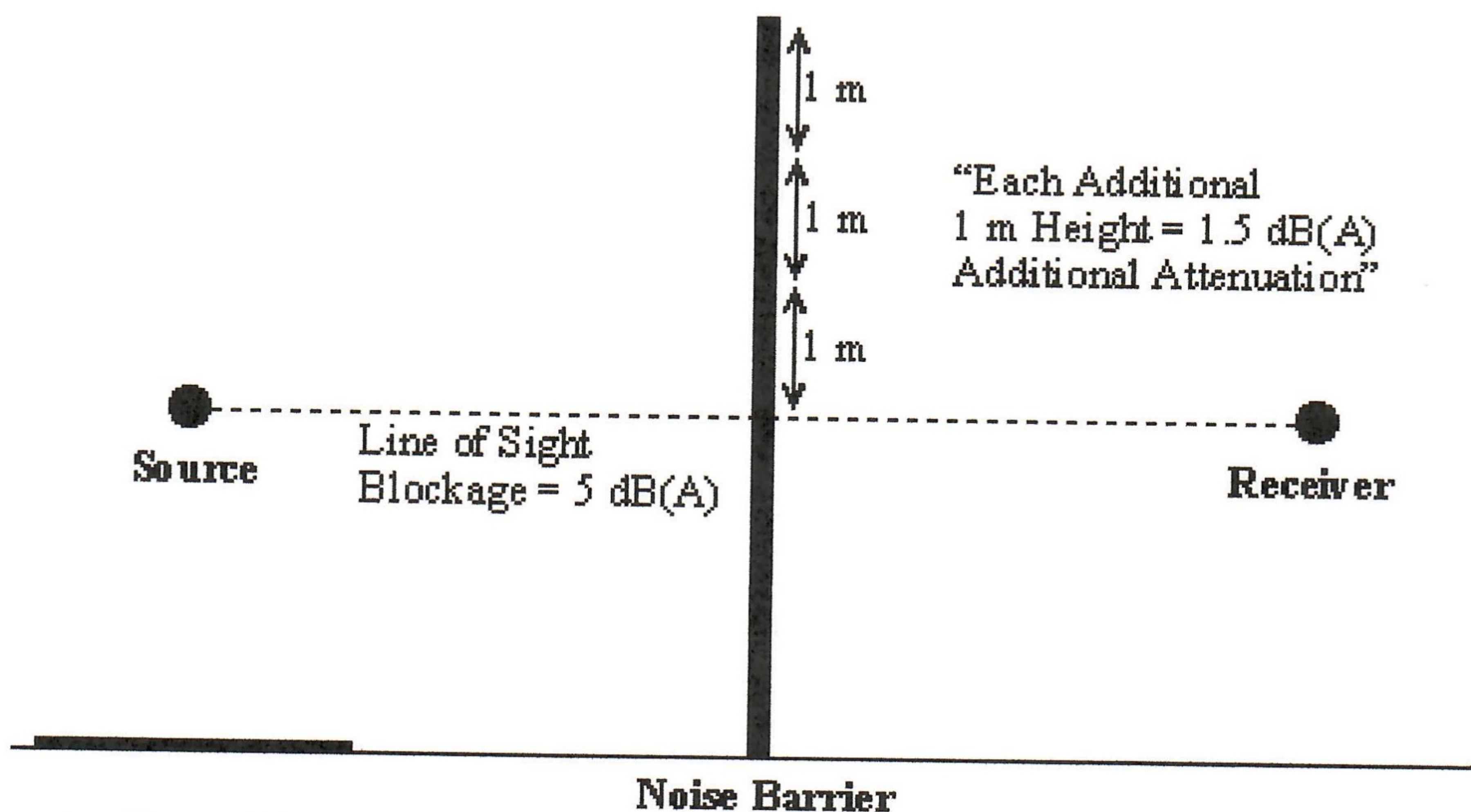


Figure 3. IL expected at receiver due to line of site blockage (FWHA 2017).

Because the Signature Stone privacy fences are manufactured with concrete, CTL|Thompson expects this value to be higher. Openings and gaps in the barrier construction reduce the effectiveness of the noise barrier and lower the IL value. Since the Signature Stone privacy fences are constructed using precast concrete panels, the fences are not expected to develop openings over time due to shrinkage or warping. Wood fences naturally have gaps in their construction which increase over time as the wood dries and deteriorates. The increase in gap size corresponds to an increase in noise levels at the receiver over time.

Additionally, it has been indicated that the project where these fences are to be used as noise barriers is several thousand feet long. A rule-of-thumb is that a barrier should be long enough such that the distance between a receiver and a barrier end is at least four times the perpendicular distance from the receiver to the barrier along a line drawn between the receiver and the roadway (FWHA 2017). This should not be a problem for the proposed project.

In relation to pollution control, the fence is built as one solid section which will effectively knock down the spray from the road. Additionally, the keyed construction of the fence panels should also effectively disallow any pollution from the road surface from penetrating through the joint areas. The gaps in a wooden fence would more easily allow pollution due to splash through into the residential areas.

Thank you for selecting CTL Thompson for your engineering needs. When we can be of additional service, please contact our office.

Very truly yours,



Cidne Bernhardt, EI
Staff Engineer
CTL Thompson, INC.



Jun 4 2020 10:19 AM

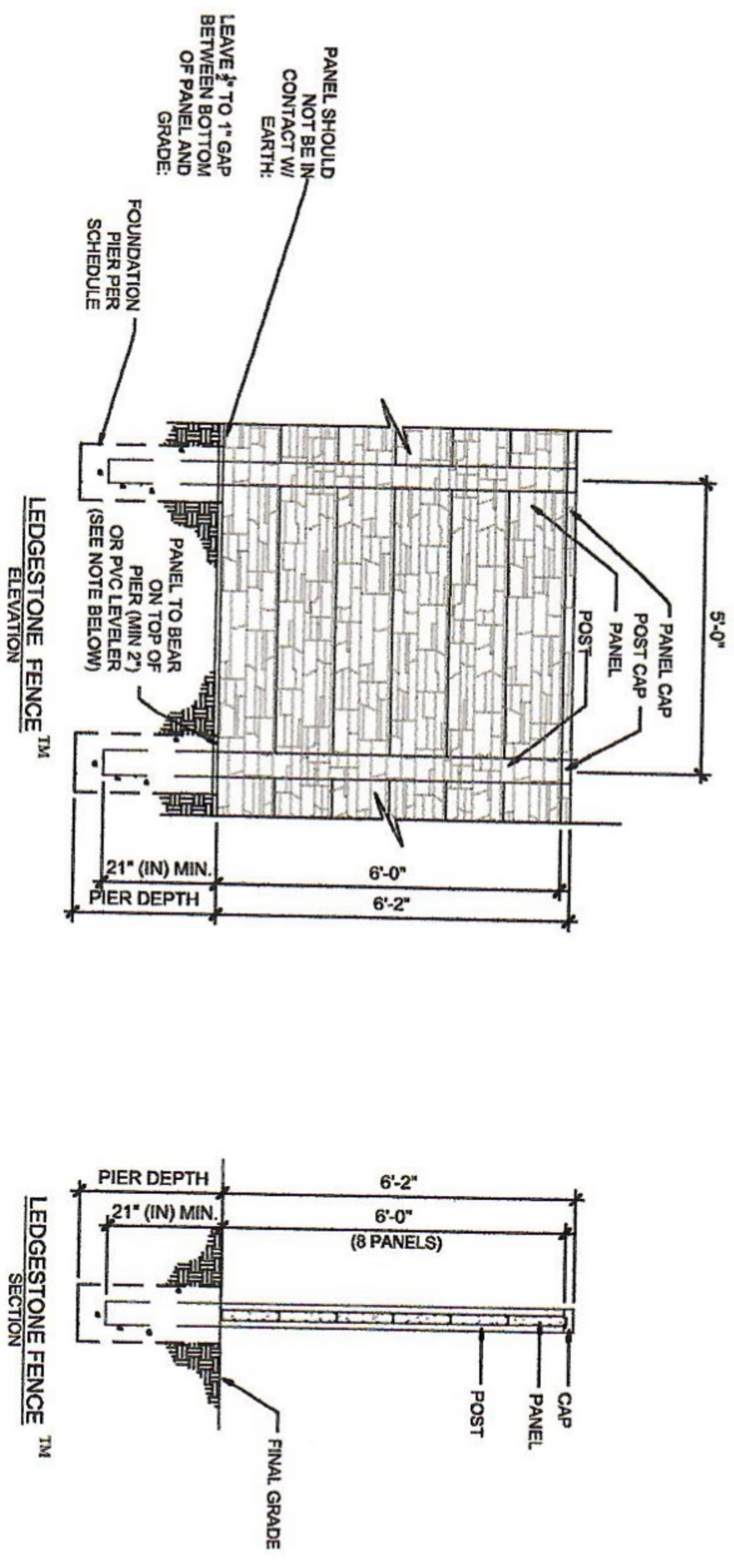
Wayne Thompson, PE
Project Engineer
CTL Thompson, INC.

Attachments (2): 6' and 8' Privacy Fence Drawings (2 Pages), FWHA Approximate Transmission Loss Table (1 Page)

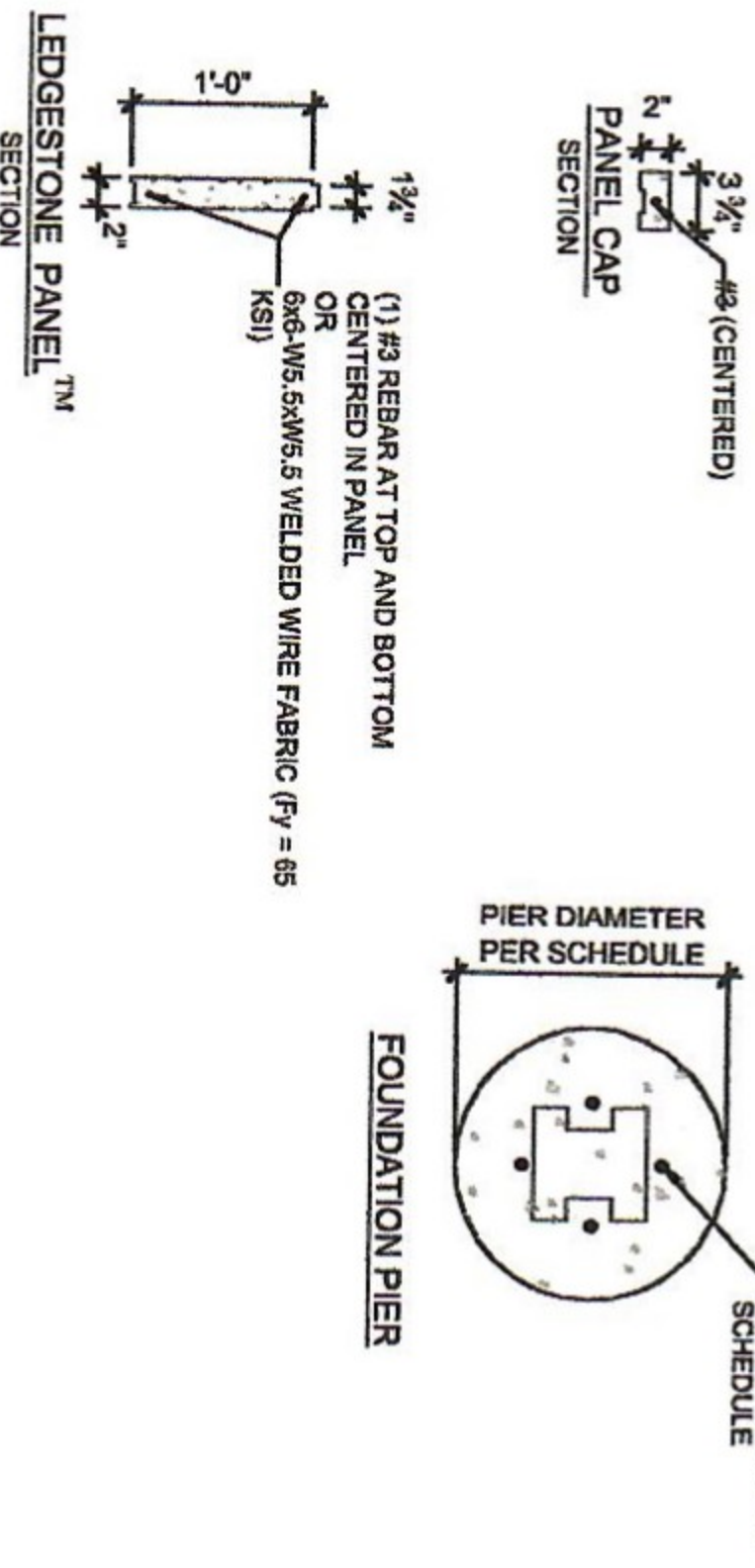
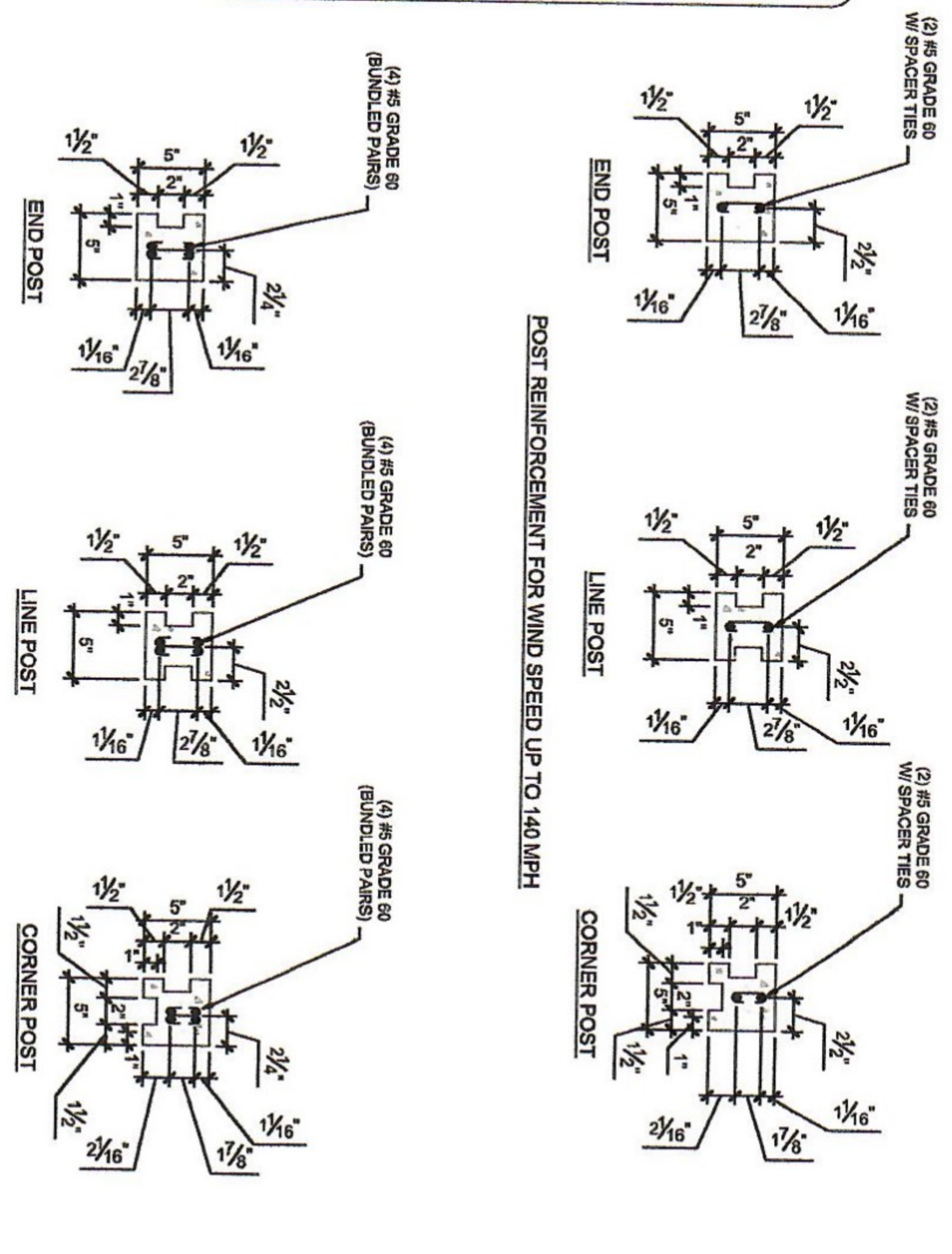
SCHEDULE OF RECOMMENDED FOUNDATION PIER MIN. SIZES
6"x6" POST, 6'-0" MAX COLUMN HEIGHT

Exposure	Wind Speed (mph)	Bedrock			Gravel			Sand			Clay			Unknown Fill / Organics
		Fraction Angle, f = 40 (min) cohesion, c = 30,000 psf (min) bearing = 30,000 psf Total Density R _t = 130 psf (min)	Fraction Angle, f = 35 (min) cohesion, c = 0 psf (min) bearing = 3,000 psf Total Density R _t = 120 psf (min)	Fraction Angle, f = 30 (min) cohesion, c = 0 psf (min) bearing = 2,000 psf Total Density R _t = 115 psf (min)	Fraction Angle, f = 25 (min) cohesion, c = 0 psf (min) bearing = 1,500 psf Total Density R _t = 110 psf (min)	Fraction Angle, f = 20 (min) cohesion, c = 0 psf (min) bearing = 1,000 psf Total Density R _t = 105 psf (min)	Fraction Angle, f = 15 (min) cohesion, c = 0 psf (min) bearing = 500 psf Total Density R _t = 100 psf (min)	Fraction Angle, f = 10 (min) cohesion, c = 0 psf (min) bearing = 500 psf Total Density R _t = 100 psf (min)						
B	95	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	REQUIRES SITE SPECIFIC ENGINEERED FOUNDATION
	115	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	
	140	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	
	165	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	
C	95	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	REQUIRES SITE SPECIFIC ENGINEERED FOUNDATION
	115	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	
	140	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	
	165	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	18	3.0	4.45	

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



NOTE: SMALL DIAMETER PVC PIPE IS COMMONLY CAST IN PIER TO LEVEL PANELS. IT IS ACCEPTABLE TO BEAR THE CONCRETE PANEL ON PVC LEVELERS 4" IN DIAMETER. THE PVC LEVELERS MAY EXTEND 1/2" MAX ABOVE THE TOP OF THE CONCRETE PIER.



LEDGESTONE PRIVACY FENCE SYSTEM

GENERAL NOTES:

1. ALL CONSTRUCTION TO MEET LOCAL CODES AND AMENDMENTS
2. ALL CONCRETE FOOTINGS SHALL USE TYPE III CEMENT.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60 (FOR AS SHOWN ON PLAN).
4. 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 165 MPH (ULTIMATE). WIND PRESSURE IS BASED ON PRESSURE COEFFICIENTS WHICH MEETS OR EXCEEDS IBC WIND PRESSURES.
6. APPROVAL OF THE ENGINEER IS REQUIRED WHEN FENCE IS USED UNDER A LOAD DIFFERENT FROM THE SPECIFICATIONS.
7. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE.
8. SIGNATURE STONE CONCRETE FENCING THAT IS INSTALLED IN A LOCATION WHERE IT COULD BE EXPOSED TO COLLISION SHALL BE CONSTRUCTED WITH A SLOTTED WATER REPELLENT THAT IS SPECIFICALLY FORMULATED FOR THIS APPLICATION.
9. A FULLY DIMENSIONED PLOT PLAN IS REQUIRED FOR A STANDING PLAN, AND MUST BE PROVIDED WITH EACH CITY/COUNTY FENCING CODES AND CLERK/RECORD CONDITIONS.
10. LOCATION AND FENCE HEIGHT SHALL CONFORM WITH CITY/COUNTY FENCING CODES AND CLERK/RECORD CONDITIONS.
11. ALL WORK SHALL COMPLY WITH CITY/COUNTY GRADING ORDINANCES.

PRODUCT NAMES:
LEDGESTONE COLUMN
LEDGESTONE POST
LEDGESTONE PANEL
LEDGESTONE CAP
LEDGESTONE PANEL CAP
LEDGESTONE PANEL
LEDGESTONE TOP/BOTTOM PANEL
LEDGESTONE FENCE™
LEDGESTONE FENCE™ SECTION

REINFORCING PER SCHEDULE:

(1) #3 REBAR AT TOP AND BOTTOM OR #3 REBAR IN PANEL

(4) #5 GRADE 60 (BUNDLED PAIRS)

(2) #5 GRADE 60 W/ SPACER TIES

SPECIFICATION DATA

1. PRODUCT NAMES:
LEDGESTONE COLUMN
LEDGESTONE POST
LEDGESTONE PANEL
LEDGESTONE CAP
LEDGESTONE PANEL CAP
LEDGESTONE PANEL
LEDGESTONE TOP/BOTTOM PANEL
LEDGESTONE FENCE™
LEDGESTONE FENCE™ SECTION

2. MANUFACTURER:
SIGNATURE STONE, LLC
211 30TH STREET
GREELEY, CO 80631

3. PRODUCTS DESCRIPTION:
PRODUCTS ARE INTENDED FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL EXTENSION FENCING, SCREENING WALLS AND NOISE BARRIERS.

4. CONDITIONAL AND MATERIALS:
A MIX OF HIGH STRENGTH PORTLAND CEMENT CONCRETE WITH FIBER MESH REINFORCING, MEETING OR EXCEEDING THE REQUIREMENTS OF ASTM C-1199, NATURAL AGGREGATE, AND INDUSTRIAL EXTENSION FENCING, CAST WITH FACTORY MOLDS, FILLED MOLDS, AND VIBRATED AFTER SETUP OF MIX, CURED, AND PACKAGED AS SHOWN.

5. FINISH:
FENCE POSTS ARE TYPICALLY PLACED AT 60.0 IN. CENTERS WITH THE FENCE PANELS BEING 120.0 IN. IN HEIGHT AND APPROXIMATELY 2.0 IN. IN THICKNESS. HEIGHT OF THE FENCE SYSTEM SHOULD NOT EXCEED 6'-0".

6. LIMITATIONS:
FENCE SYSTEM IS DESIGNED FOR TYPICAL CONDITIONS AND APPLICATIONS. SIGNATURE STONE RECOMMENDS INSTALLATION BE APPROVED BY A REGISTERED PROFESSIONAL ENGINEER ON EVERY PROJECT. FENCE SYSTEM SHOULD NOT BE USED AS AN EARTH RETENTION SYSTEM UNLESS 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, A.C.I. AND A.S.H.T.O. CODES.

9. INSTALLATION:
THE POSTS ARE POSITIONED AND SET INTO A DRILLED CONCRETE FOUNDATION PIER. THE SIZE, DEPTH AND REINFORCEMENT SHALL BE AS SPECIFIED BY LOCAL ENGINEER OR AS SHOWN ON SCHEDULE. AFTER LOCAL ENGINEER APPROVAL, THE PANELS SHALL BE LEVELED, THEN ARE BRACKETED WITH PANEL CAPS AND HAS OBTAINED ITS FINAL STRENGTH. THE PANELS ARE MANUALLY SLID INTO PLACE BETWEEN THE ACCURATELY POSITIONED FOUNDATION PIERS. THE LEADING EDGE OF THE PANEL CAPS ARE BOND INTO PLACE BY APPLYING SMALL LEAKA ADHESIVE BETWEEN THE CAP AND FENCE SYSTEM.

10. DRAINAGE:
THE LONG-TERM PERFORMANCE OF ALL FOUNDATIONS, INCLUDING THE SIGNATURE STONE FENCE FOUNDATION, DEPENDS ON THE DRAINAGE OF WATER AWAY FROM THE FENCE FOUNDATION. WHERE POSSIBLE IT IS RECOMMENDED AT ALL TIMES, PANELS CAN BE ARRANGED TO ALLOW FOR CONTINUOUS OR INTERMITTENT DRAINAGE FROM THE FENCE WHERE NECESSARY, IF REQUIRED BY APPLICABLE LOCAL CODES.

CLIENT:
SIGNATURE STONE
211 30TH STREET
GREELEY, COLORADO, 80631
contact: ERIC BOEHNER
(970) 351-0270

SIGNATURE STONE 6' PRIVACY FENCE SYSTEM

NO.	DATE	REVISION/ISSUE



THIS DRAWING IS AN ACCURATE REPRESENTATION OF THE DESIGN AND INTENT OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CLIENT TO VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM LOCAL AUTHORITIES. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND STRUCTURES ON THE SITE. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND STRUCTURES. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ENVIRONMENTAL FEATURES AND RESOURCES. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL HISTORICAL AND CULTURAL RESOURCES. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ARCHAEOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ANTHROPOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL GEOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL BOTANICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ZOOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER FEATURES AND RESOURCES. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER HISTORICAL AND CULTURAL RESOURCES. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER ARCHAEOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER ANTHROPOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER GEOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER BOTANICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER ZOOLOGICAL REMAINS. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL OTHER REMAINS.

CTL | THOMPSON INCORPORATED

CTL THOMPSON INCORPORATED
400 North Link Lane
Fort Collins, CO 80524

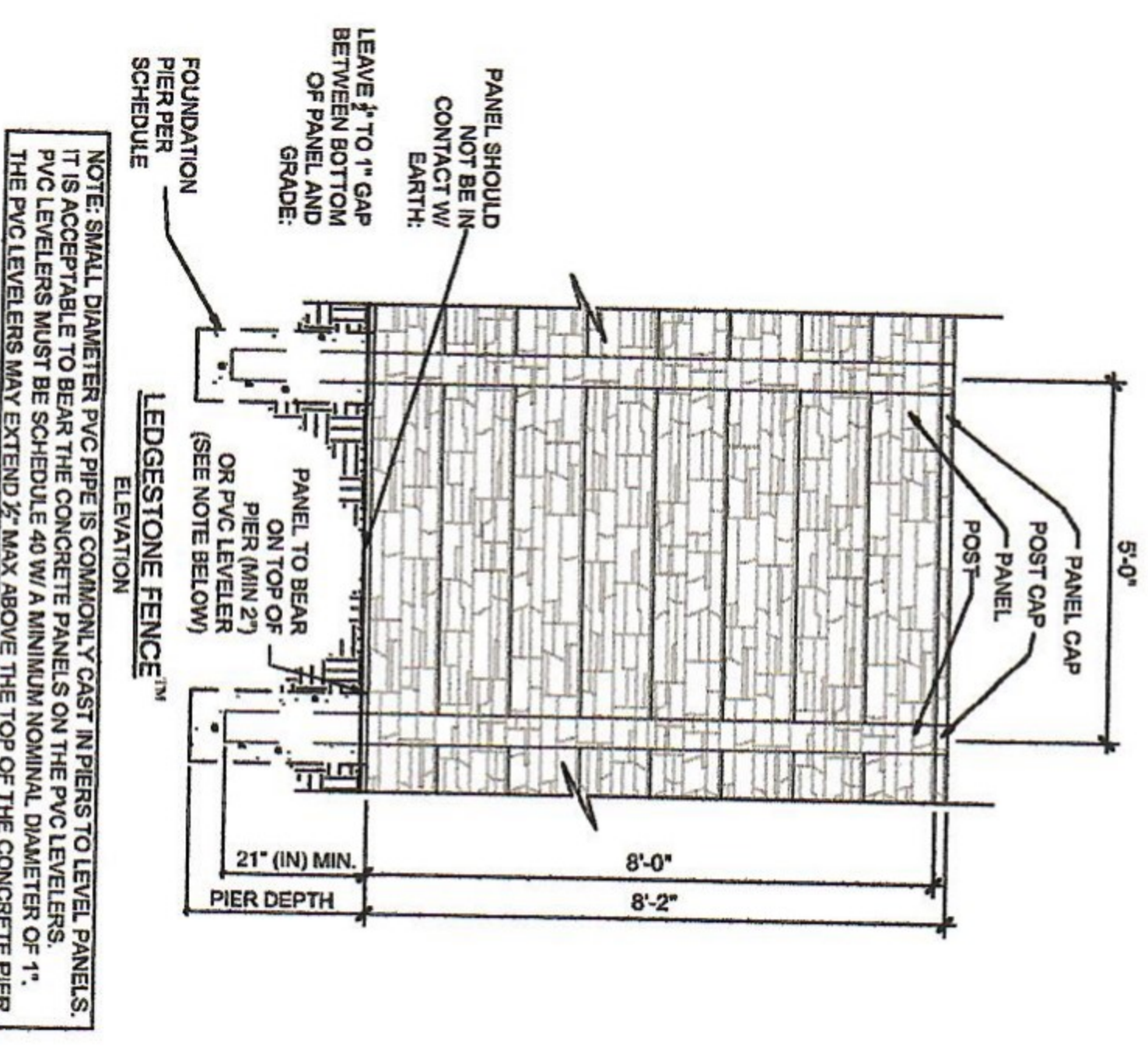
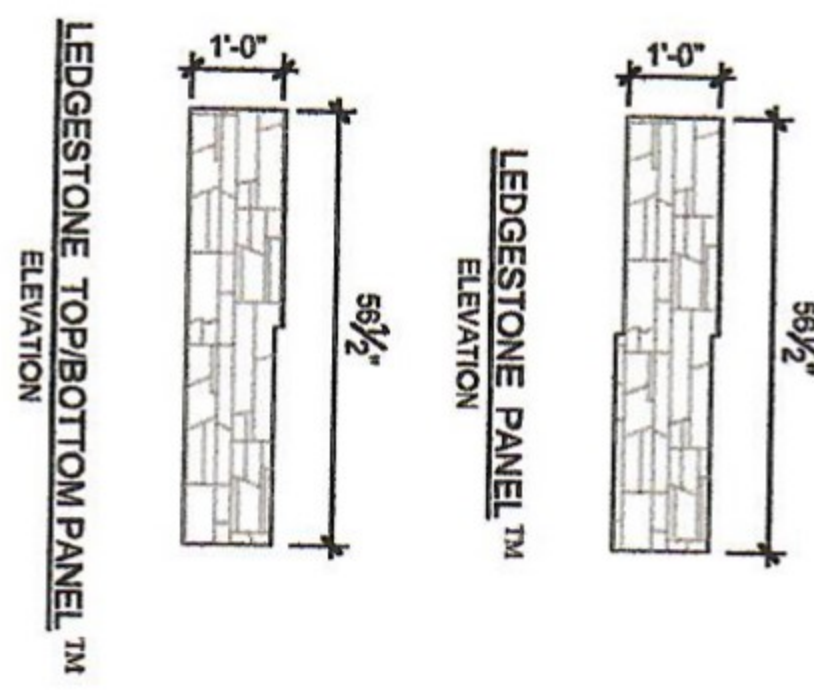
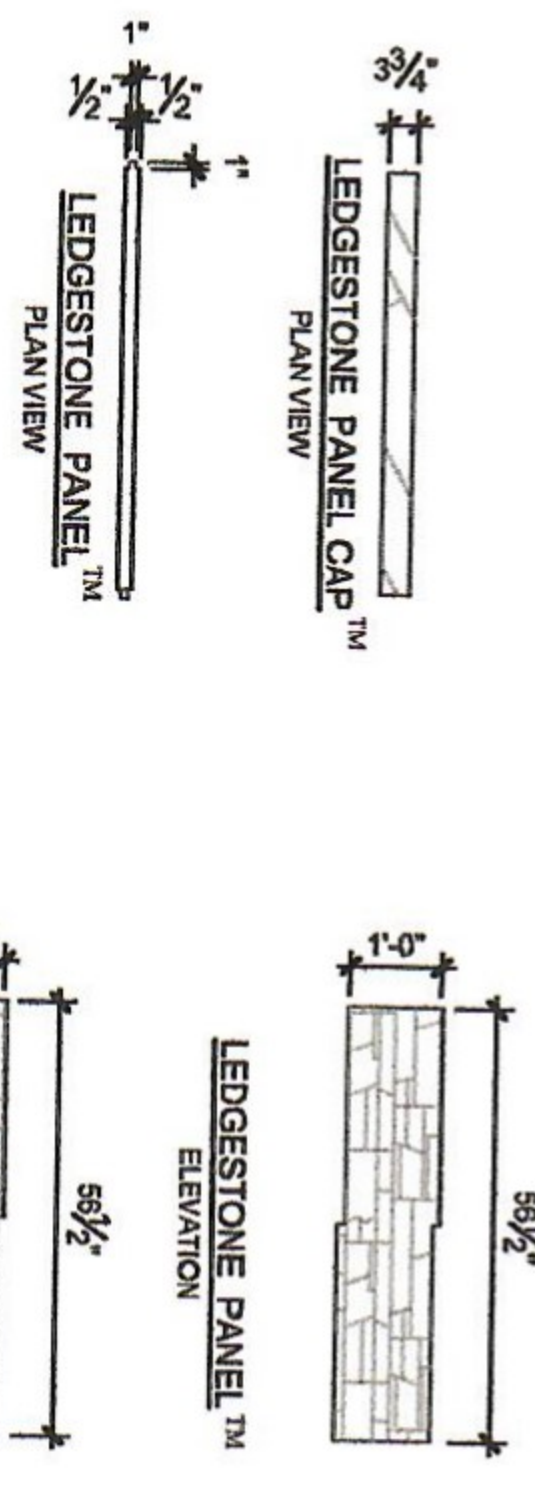
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F-970-208-9441
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SCHEDULE OF RECOMMENDED FOUNDATION PIER MIN. SIZES

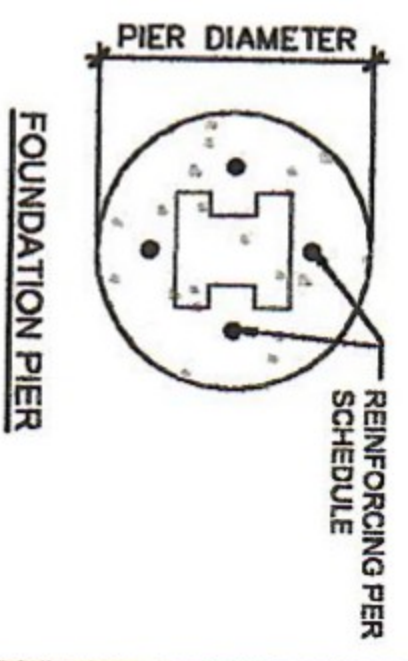
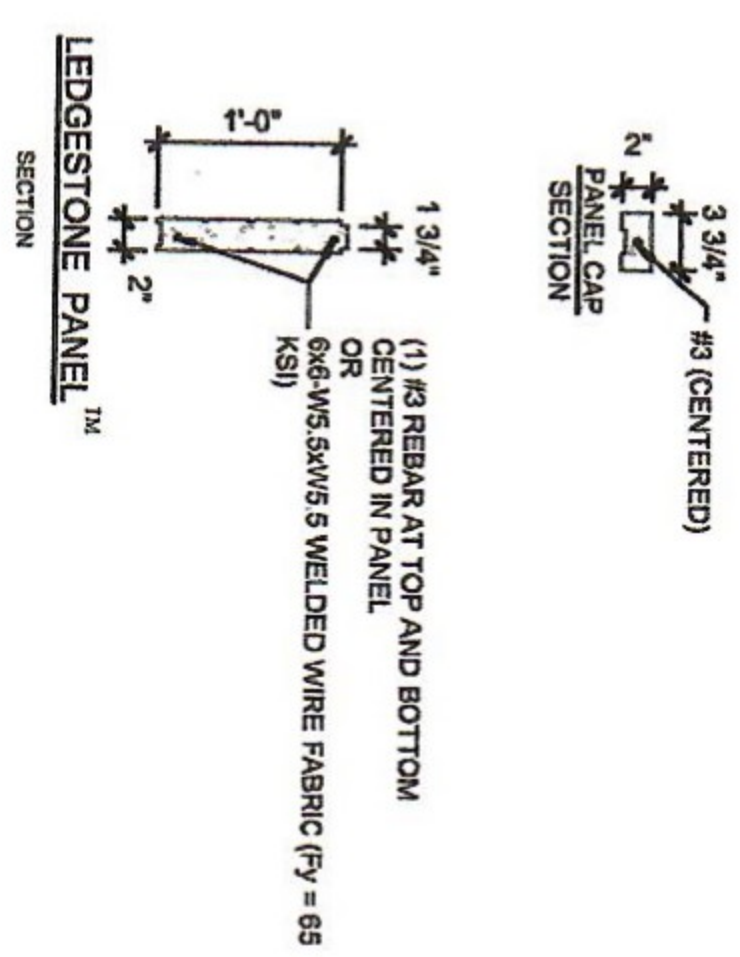
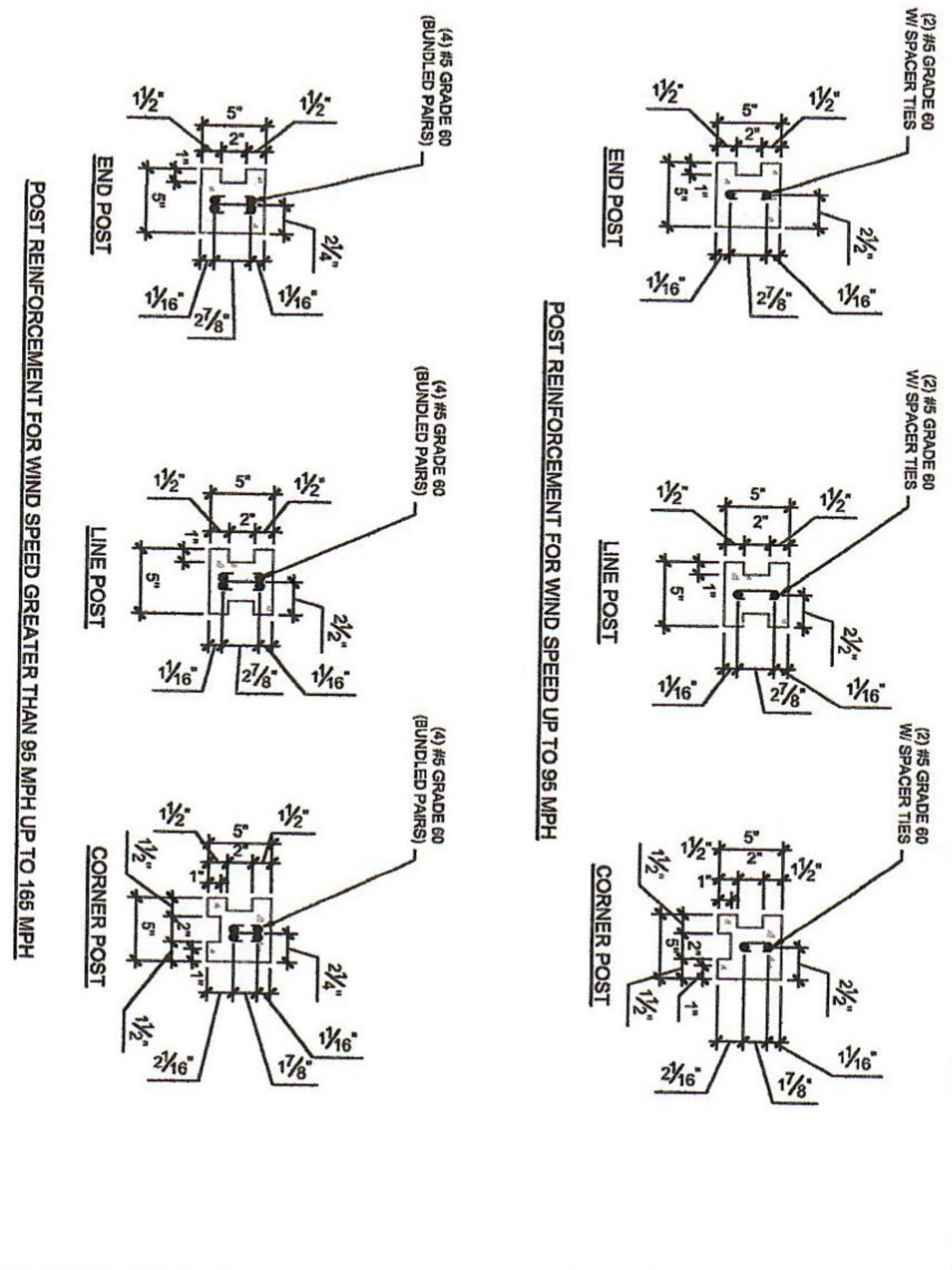
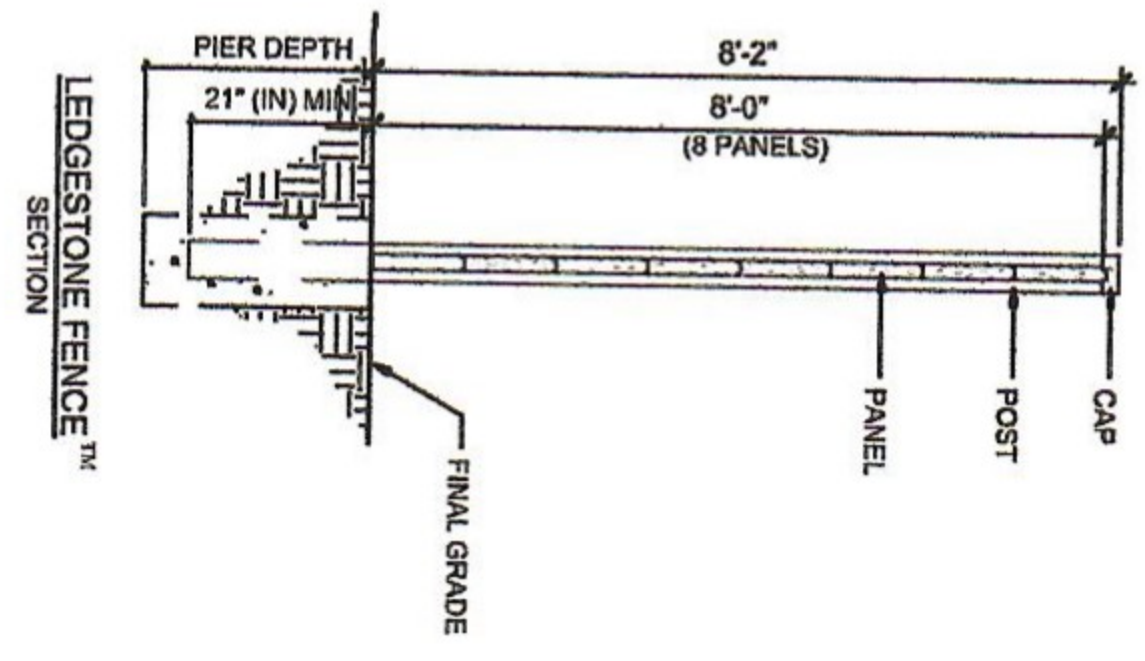
5 1/2" POST, 8'-0" MAX. COLUMN HEIGHT

Exposure	Bedrock			Gravel			Sand			Clay			Uniform Fill / Organics
	Friction Angle, f (°)	Adhesion, c (psf)	Bearing, q (psf)	Friction Angle, f (°)	Adhesion, c (psf)	Bearing, q (psf)	Friction Angle, f (°)	Adhesion, c (psf)	Bearing, q (psf)	Friction Angle, f (°)	Adhesion, c (psf)	Bearing, q (psf)	
a	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	REQUIRES SITE SPECIFIC ENGINEERED FOUNDATION
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
b	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	REQUIRES SITE SPECIFIC ENGINEERED FOUNDATION
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
c	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	REQUIRES SITE SPECIFIC ENGINEERED FOUNDATION
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	
	115	28	3.0	4-45	18	3.0	4-45	18	3.0	4-45	18	3.0	

CONTRACT ENGINEER: _____
CONTRACT ENGINEER: _____



NOTE: SMALL DIAMETER PVC PIPE IS COMMONLY CAST IN PIERS TO LEVEL PANELS. PVC PIPE SHOULD BE SCHEDULE 40 WITH A MINIMUM NOMINAL DIAMETER OF 1". THE PVC LEVELERS MAY EXTEND 2" MAX ABOVE THE TOP OF THE CONCRETE PIER.



LEDGESTONE PRIVACY FENCE SYSTEM

GENERAL NOTES:

1. ALL CONSTRUCTION TO MEET LOCAL CODES AND AMENDMENTS.
2. ALL CONCRETE FOOTINGS SHALL USE TYPE III CEMENT.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60 (GRADE 40 FOR #3 REBAR ONLY).
4. 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 ON A 90° WIND (ULTIMATE) WIND PRESSURE IS BASED ON A 90° WIND (ULTIMATE) WIND PRESSURE OF 15.0 PSF (SEE NOTE 11).
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. SIGNATURE STONE CONCRETE FENCING THAT IS TO BE USED IN AREAS WHERE IT COULD BE EXPOSED TO ROAD SALTS OR OTHER DEICING AGENTS IS RECOMMENDED TO BE SEALED PERIODICALLY WITH A SILICONE WATER REPELLENT THAT IS SPECIFICALLY FORMULATED FOR THIS APPLICATION.
9. SIGNATURE STONE CONCRETE FENCING IS REQUIRED FOR A BUILDING FENCE AND MUST BE PROVIDED WITH EACH STANDARD PLAN.
10. LOCATION AND FENCE HEIGHT SHALL COMPLY WITH CITY/COUNTY FENCING CODES AND CURRENT REGULATIONS.
11. ALL WORK SHALL COMPLY WITH CITY/COUNTY GRADING ORDINANCES.

SPECIFICATION DATA

1. PRODUCT NAMES: LEDGESTONE COLUMN UNFINISHED COLUMN
2. MANUFACTURER: SIGNATURE STONE, LLC, 211 30TH STREET, GREELEY, CO 80631
3. PRODUCT DESCRIPTION: PRODUCT ARE INTENDED FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL EXTERIOR FENCING, SCREENING WALLS AND ROSE BARBERS.
4. COMPOSITION AND MATERIALS: A MIX OF HIGH STRENGTH PORTLAND CEMENT CONCRETE WITH HIGH STRENGTH FIBER REINFORCING OR EXCEEDING AGGREGATES AND IRON OXIDE COLORS PLACED AND CAST WITHIN FACTORY MOLDS. FILLED MOLDS ARE PACKED AFTER SETUP OF MIX, CURED, AND PACKAGED IN SHEETS.
5. FINISHES: FENCE POSTS ARE TYPICALLY PLACED AT 60.0 IN. CENTERS WITH THE FENCE PANELS BEING 24.0 IN. HIGH AND APPROXIMATELY 20.0 IN. IN LENGTH. FINISHES ARE TO BE AS SPECIFIED BY THE ARCHITECT. CONTRACT MANUFACTURER FOR FINISHES NOT INCLUDED IN THESE SPECIFICATIONS.
6. LIMITATIONS: FENCE SYSTEM IS DESIGNED FOR TYPICAL CONDITIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE.
7. TECHNICAL DATA FOR CONCRETE MIX: PRE-CAST FENCE POSTS AND PANELS: MIN. 28 DAY COMPRESSIVE STRENGTH = 6000 PSI. CAST-IN-PLACE FOUNDATION PIERS: MIN. 28 DAY COMPRESSIVE STRENGTH = 3100 PSI.
8. BUILDING CODES: DESIGN OF FENCE POSTS, PANELS AND FOUNDATION PIERS IS BASED ON 2015 VERSION OF IBC, A.C.I. AND A.S.T.M. CODES.
9. INSTALLATION: THE POSTS ARE POSITIONED AND SET INTO A DRILLED CONCRETE FOUNDATION PIER. THE PIER SIZE, DEPTH AND REINFORCEMENT SHALL BE AS SPECIFIED BY THE ARCHITECT. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE.
10. REPLACEMENT: THE LONG-TERM PERFORMANCE OF ALL FOUNDATIONS, DEPENDS ON PROPER GRADING AND FENCE FOUNDATIONS. AWAY FROM THE FENCE FOUNDATIONS TO THE EXTENT POSSIBLE IS RECOMMENDED AT ALL TIMES. PANELS CAN INTERFERE WITH DRAINAGE BEHIND THE PANELS OR WHERE NECESSARY, IF REQUIRED BY PERMITTING AUTHORITY.

CLIENT:
SIGNATURE STONE
211 30TH STREET
GREELEY, COLORADO, 80631
contact: ERIC BOEHNER
(970) 351-0270

SIGNATURE STONE 8' PRIVACY FENCE SYSTEM

NO.	DATE	REVISION/ISSUE
1		
2		
3		



CTL | THOMPSON INCORPORATED
400 North Link Lane
Fort Collins, CO 80524
P: 970-205-9455
F: 970-205-9441
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CTL | THOMPSON INCORPORATED
400 North Link Lane
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F: 970-205-9441
www.cctl.com

DATE: 10/29/2020
REV: S3
TBL: 10/29/2020
P&P PLAN