DESIGN NOTES

1. Design is based on the assumption that the methods of construction and quality of materials conform to the requirements of Hilfiker Retaining Walls.

2. Soil Characteristics:

   SN - Retained Soils
   Unit Weight: 115 pcf
   Internal Friction Angle: 40°
   Cohesion = 150 psf
   Bond Stress = 15 psi

   If actual characteristics, grades or dimensions of soil materials differ from those listed above or shown on the plans, the Spriralnail Engineer shall be notified to evaluate the need to redesign.

3. Design Procedure:
   Geotechnical Engineering Circular No. 7 - Soil Nail Walls
   FHWA Report No. FHWA0-IF-03-017.

4. Conflicts between the trusswall panels, pillasters or spiralnails and obstructions are resolved in the field by any combination of the following:
   a) Trimming the vertical truss wall panel wires and or bending vertical & horizontal wires to accommodate the penetration through the facing
   b) Trimming the bottom part of the pilaster
   c) Slight Re-orientation of the spiralnail angle or direction. If re-orientation of the pilaster or nails is more than one foot from the planned location, confirmation of the change shall be approved by CES.

5. This design is intended to be responsible for the internal stability of the retaining wall only, and not for global stability or foundation bearing capacity. CES is not responsible for job site drainage, safety and fall protection provisions including compliance with OSHA regulations, nor the Competent Person designated for daily inspection.

SUPPLIED QUANTITY			
FACING MATS	TRUSS FACING (SF)	PILLASTER	SPIRALNAILS
9	384	(1) 2.5'	(6) 12'
		(3) 4.5'	(6) 16'
		(3) 6.5'	(3) 18'
		(3) 8.5'	(9) 22'
		(2) 9.0'	(6) 24'

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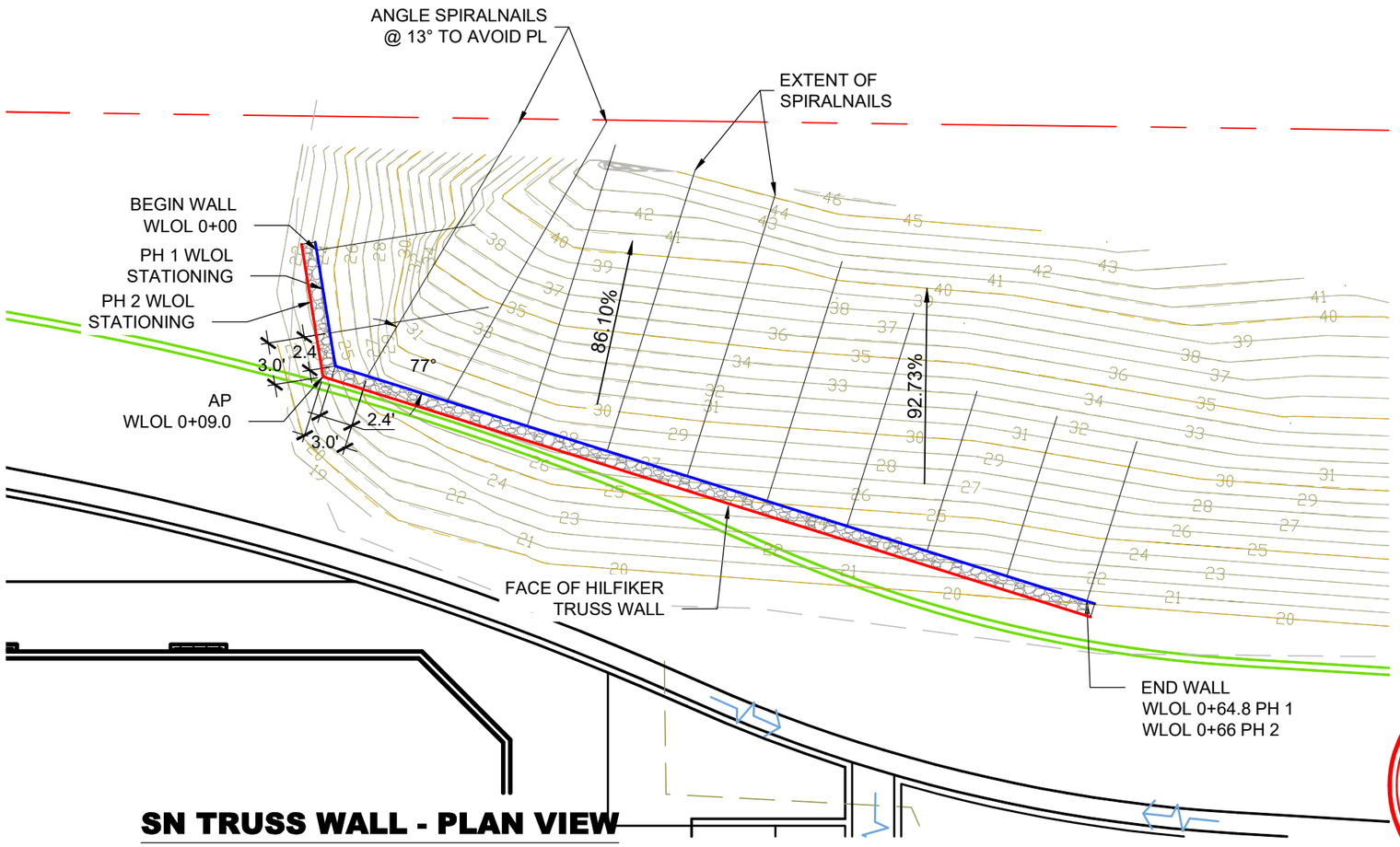
EXISTING INFRASTRUCTURE

PIPING, UTILITIES, OR ANY OTHER UNDERGROUND ITEMS OR INFRASTRUCTURES MAY OR MAY NOT BE SHOWN. SPIRALNAILS WERE LOCATED ON THESE PLANS AS COULD BE BEST DETERMINED WTIH THE INFORMATION PROVIDED. PRECISE LOCATIONS SHALL BE ASCERTAINED IN THE FIELD PRIOR TO DRAWING APPROVAL AND CONFIRMED BY OTHERS. DESIGN APPROVAL WARRANTS NEITHER HILFIKER NOR CES WILL BE LIABLE FOR ANY DAMAGE CAUSED BY SPIRALNAIL INSTALLATIONS PERFORMED IN ACCORDANCE WITH THESE PLANS. CALL USA PRIOR TO ANY EXCAVATION OR NAIL INSTALLATION.



SN TRUSS WALL - PLAN VIEW

SCALE: 1" = 10'

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REV.NO.	DATE	BY	DESCRIPTION
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2411 Broadway Starbucks
SPIRALNAIL TRUSS WALL

PLAN VIEW & GENERAL NOTES

PROJECT	23-066
DATE	10-6-23
DESIGN	KLC
DRAWN	KLC

SHT 1 OF 4

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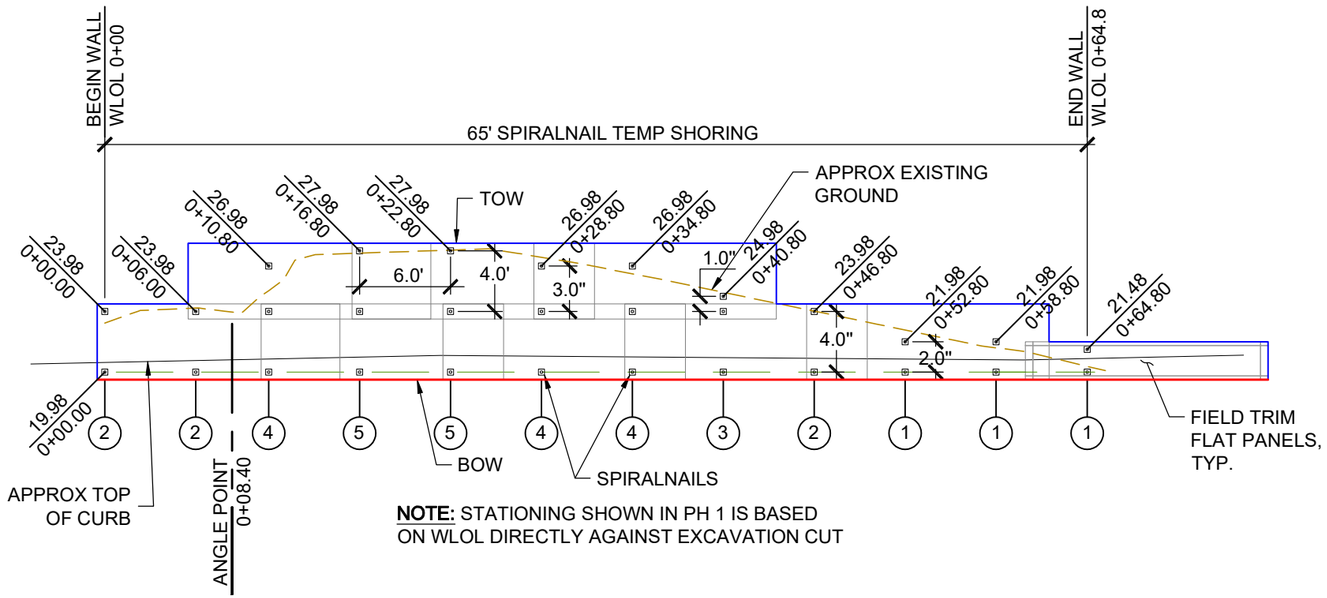
PROPOSED CONSTRUCTION SEQUENCE:
PHASE 1: IS TOP DOWN CONSTRUCTION WITH A MAXIMUM UNSHORED 5'H EXCAVATION, AS SHOWN ON SHT 4.
PHASE 2: CONNECTS SPIRALNAIL TRUSS WALL FACING SYSTEM TO THE SHORING.



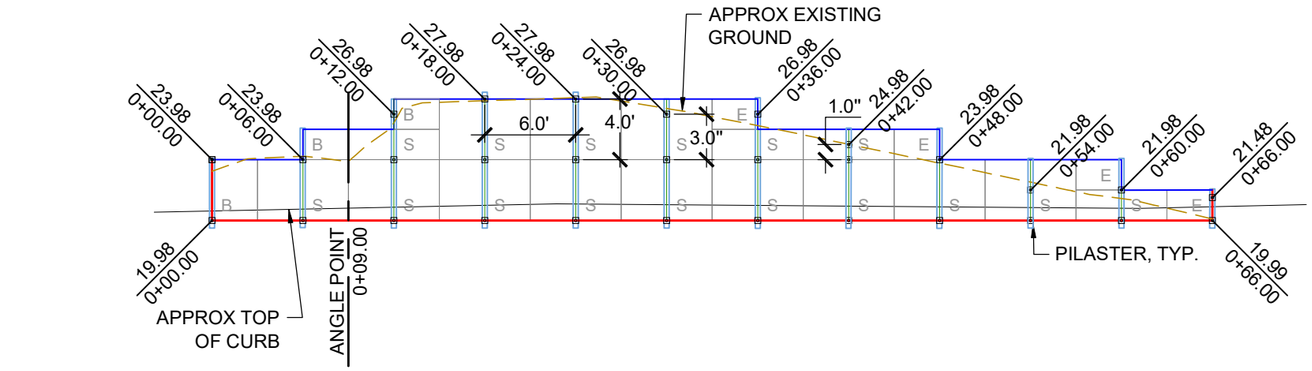
NOTE: STATIONING SHOWN IN PH 1 IS BASED ON WLOL DIRECTLY AGAINST EXCAVATION CUT

PHASE 1 - SPIRALNAIL WELDED WIRE SHORING - ELEVATION VIEW

SCALE: 1" = 10'

SHORING PARAMETERS		
SECTION	HEIGHT	SPIRALNAIL
1	3.0'	2 - 12'L
2	4.7'	2 - 16'L
3	5.7'	3 - 18'L
4	8.0'	3 - 22'L
5	8.7'	3 - 24'L

NOTE:
ALL SPIRALNAILS ARE INCLINED 15°.



PHASE 2 STATIONING VARIES FROM PH 1@ AP & RT, BASED ON OUTSIDE OF TRUSS FACING SYSTEM WLOL

PHASE 2 - SPIRALNAIL TRUSS WALL - ELEVATION VIEW

SCALE: 1" = 10'

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2411 Broadway Starbucks
SPIRALNAIL TRUSS WALL

ELEVATION VIEWS

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DATE	10-6-23
DESIGN	KLC
DRAWN	KLC

SHT 2 OF 4

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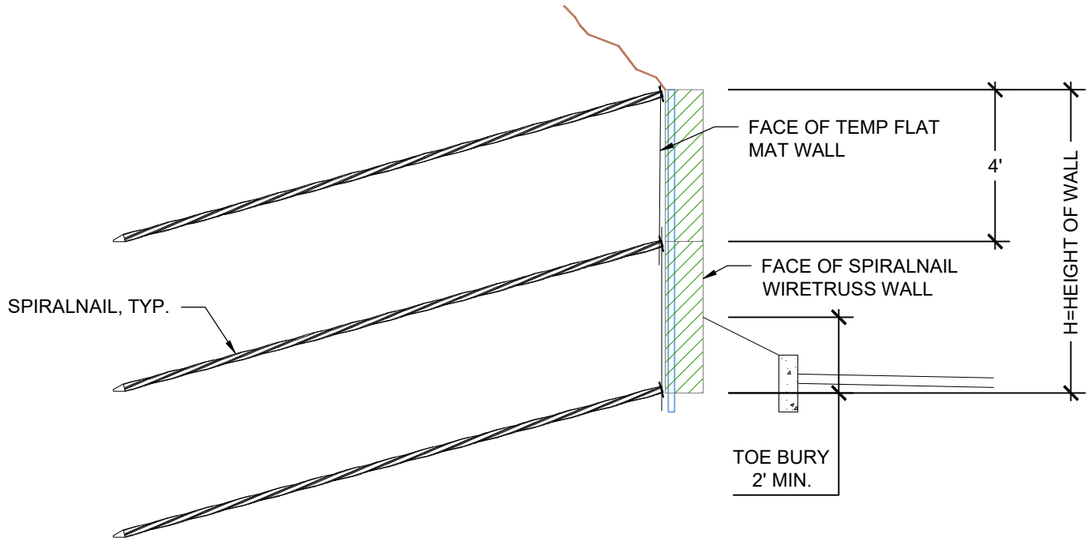

TYP CROSS SECTION

1"=5'

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CROSS SECTION & DETAILS

PROJECT	23-066
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SHT 3 OF 4

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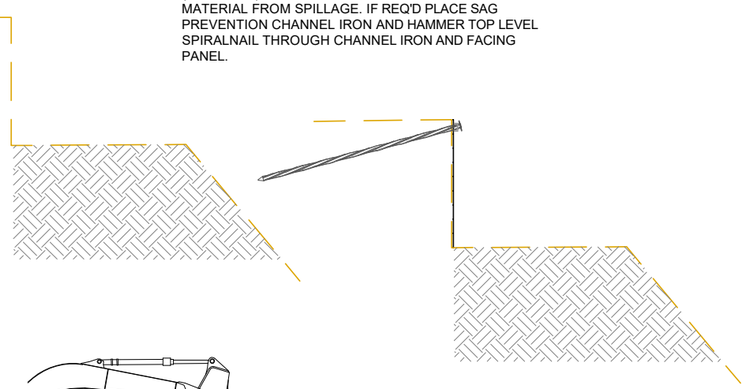
EXCAVATE DOWN 5' CONFIRM SOIL CAN STAND 5' ON IT OWN AND PREPARE FOR STEP 2. SEE OPEN CUT POLICY SHT 1.

NOTE

WHERE REQ'D 1.5" Ø PILOT HOLES MAY BE DRILLED TO AVOID REFUSAL AND ASSURE INCLINATION ANGLE ACCURACY TO MINIMIZE RISK OF UNDERGROUND UTILITY DAMAGE.

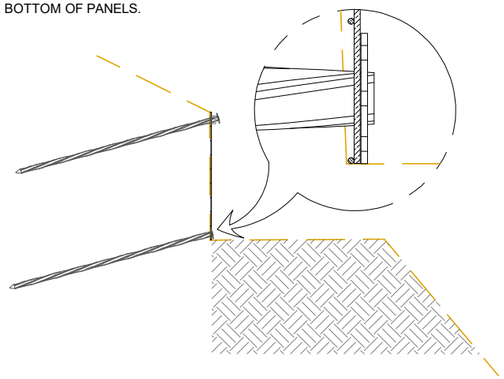
STEP 2

PLACE LAYER OF FACING PANELS AND FILTER FABRIC (OR EQUIV.) TO BE USED TO PREVENT BACKFILL MATERIAL FROM SPILLAGE. IF REQ'D PLACE SAG PREVENTION CHANNEL IRON AND HAMMER TOP LEVEL SPIRALNAIL THROUGH CHANNEL IRON AND FACING PANEL.



STEP 3

DRIVE NEXT LAYER OF SPIRALNAILS THROUGH PREVIOUS LAYER OF FACING PANELS TO SECURE BOTTOM OF PANELS.

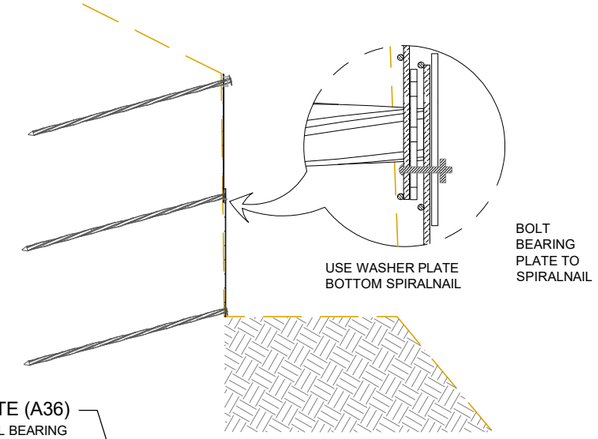


STEP 4

EXCAVATE DOWN AN ADDITIONAL 5' AND PLACE ANOTHER LAYER OF FACING PANELS. REPEAT STEPS 3 THROUGH 4 TO BOTTOM OF WALL SECURING FINAL LAYER OF FACING PANELS WITH THE BOTTOM LAYER OF SPIRALNAILS.

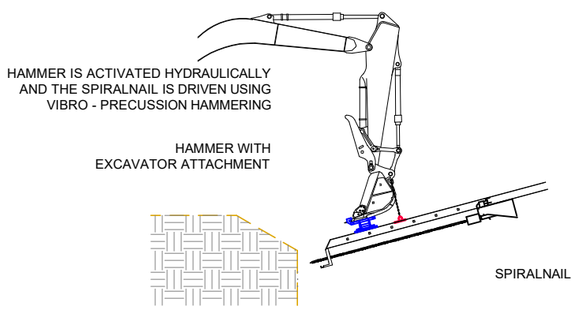
NOTE:

A HILFIKER REPRESENTATIVE WILL BE ON SITE DURING THE INITIAL STAGES OF CONSTRUCTION OF THE SPIRALNAIL SHORING AS WELL AS PRESENT DURING THE INITIAL PULLOUT TESTING PROCEDURE.



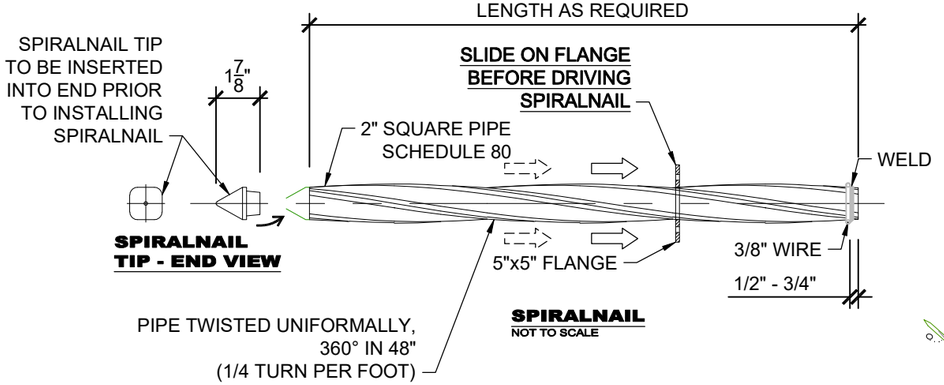
CONSTRUCTION SEQUENCE

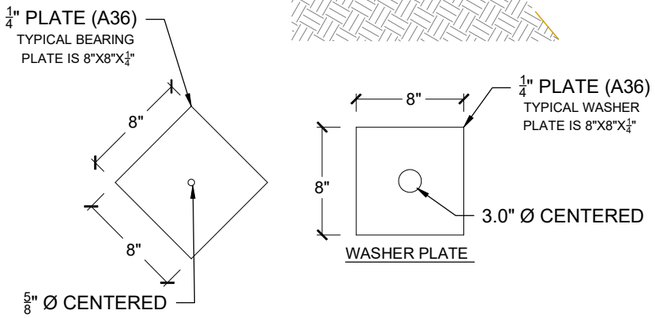
NOT TO SCALE

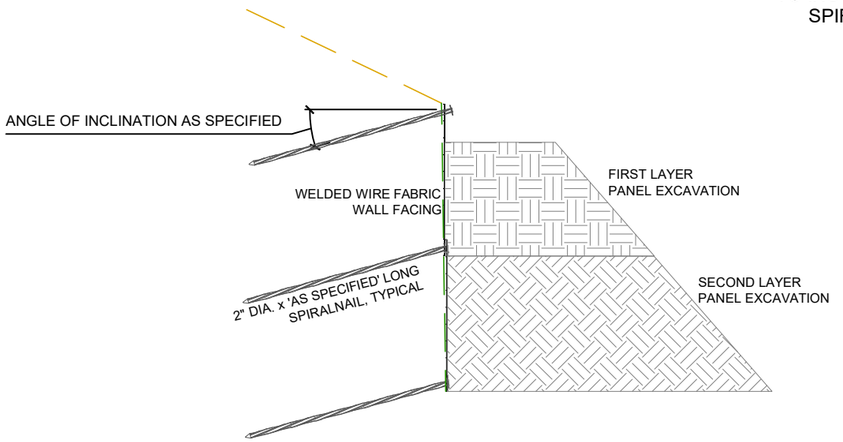


TYPICAL NAIL DRIVER SETUP

NTS

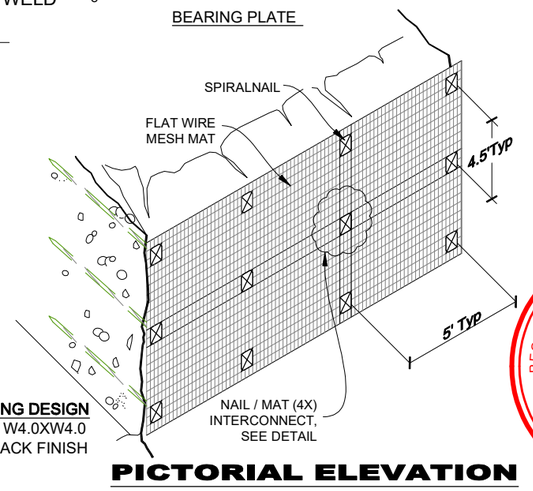






TYPICAL SECTION

SCALE: 1"=5'



FACING DESIGN
4"X2" WWF / W4.0XW4.0
BLACK FINISH

PICTORIAL ELEVATION

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CONSTRUCTION SEQUENCE & DETAILS

PROJECT	23-066
DATE	10-2-23
DESIGN	KLC
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SHT 4 OF 4

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