GENERAL:

1. CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS, DETAILS, AND EXISTING CONDITIONS BEFORE PROCEEDING WITH WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.

2. DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS UNLESS OTHERWISE NOTED.

3. CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT ALL WORK IN PROGRESS UNTIL THE STRUCTURE IS COMPLETED.

4. ALL STRUCTURAL ITEMS FOR THIS PROJECT HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROPRIATE PROVISIONS OF EACH OF THE FOLLOWING:
   A. THE 2021 INTERNATIONAL BUILDING CODE, NEW JERSEY EDITION.
   B. THE A.I.S.C. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", 360-16.
   C. A.C.I. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-19
   E. A.C.I. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", ACI 530-13.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR CONCRETE REINFORCING, AND STRUCTURAL STEEL.

6. THE CONTRACTOR SHALL ENGAGE AN INDEPENDENT TESTING AND INSPECTION AGENCY ACCEPTABLE TO THE ARCHITECT TO INSPECT CONCRETE REINFORCING, TO INSPECT AND TEST CONCRETE QUALITY, TO INSPECT MASONRY PLACEMENT, REINFORCING, AND GROUTING, AND TO INSPECT AND TEST MASONRY QUALITY, TO INSPECT AND TEST HIGH STRENGTH BOLTED CONNECTIONS AND WELDED CONNECTIONS IN THE SHOP AND FIELD. CONTRACTOR SHALL COORDINATE INSPECTIONS REQUIRED WITH THIS AGENCY.

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO THE A.C.I. ``BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-14). SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

2. ALL CONCRETE SHALL HAVE MINIMUM 28-DAY COMPRESSIVE STRENGTHS AS INDICATED BELOW:

CONCRETE STRENGTH	TYPE AGGREGATE	AIR CONTENT	WHERE USED
4500 PSI	STONE	5 - 7%	GRADE BEAMS, FOOTINGS

3. SLUMPS OVER 4 INCHES WILL NOT BE PERMITTED UNLESS THE HRWR ADMIXTURE (SUPERPLASTICIZER) IS USED. MAXIMUM SLUMP IS THEN 2" TO 3" BEFORE ADDITION OF SUPERPLASTICIZER, AND 5 1/2" TO 7" FOR SLAB ON GRADE & 6" - 9" FOR ALL OTHER CONCRETE ELEMENTS AFTER ADDITION OF SUPERPLASTICIZER, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. NO ADMIXTURE SHALL BE USED IN CONCRETE EXCEPT AS ALLOWED BY THE SPECIFICATIONS AND ONLY WITH LABORATORY DESIGN MIX APPROVAL. ALL ADMIXTURES SHALL CONTAIN NO MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER.

5. ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE, NEW BILLET STEEL, DEFORMED BARS, CONFORMING TO ASTM A-615, GRADE 60. ALL BARS SHALL BE SECURELY SUPPORTED AND WIRED IN PLACE PRIOR TO CONCRETE PLACEMENT.

6. UNLESS NOTED, ALL BARS MARKED CONT. SHALL BE SPLICED AT ALL LAP POINTS AND CORNERS AND DEVELOPED AT NON-CONTINUOUS ENDS AS PER TYPICAL DETAILS. SPLICE CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AND SPLICE CONTINUOUS BOTTOM BARS AT SUPPORTS.

7. CONCRETE COVER FOR REINFORCING BARS SHALL BE AS SHOWN IN DETAILS.

8. PROVIDE A MINIMUM OF 1-#4 NOSING BAR IN EACH CONCRETE STEP.

9. REINFORCEMENT SHALL NOT BE WELDED OR HEATED IN ANY WAY.

10. WHERE PIPE SLEEVES (UP TO 2" IN DIAMETER) PASS THROUGH CONCRETE BEAMS, PROVIDE ADDITIONAL STIRRUP EACH SIDE OF SLEEVE. SLEEVES FOR PIPES 2" IN DIAMETER OR LARGER MUST BE STEEL, AND THE LOCATION MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

11. REINFORCING FOR FOOTINGS SHALL BE SUPPORTED ON SOLID CONCRETE BLOCKS AT 5'-0" ON CENTER MAXIMUM EACH WAY.

12. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED, AND TREATED WITH THE SPECIFIED BONDING COMPOUND JUST BEFORE PLACING NEW CONCRETE.

13. CONTRACTOR SHALL COORDINATE PLACEMENT OF, OR BOX OUT FOR, ALL PIPE SLEEVES, OPENINGS, ETC. REQUIRED FOR VARIOUS TRADES.

14. CONTRACTOR SHALL COORDINATE AND NOTIFY OTHER TRADES IN SUFFICIENT TIME TO ALLOW THEM TO SET ANCHORS, INSERTS, BOLTS, HANGER, ETC., AS REQUIRED FOR THEIR USE.

15. FOR CHAMFER OF EXPOSED CORNERS OF BEAMS OR COLUMNS, SEE ARCHITECTURAL DRAWINGS.

16. UNDER NO CIRCUMSTANCES SHALL CONCRETE BE PUMPED THROUGH ALUMINUM PIPES. CONCRETE SHALL NOT BE PLACED IN CONTACT WITH ALUMINUM, ALUMINUM MIXING DRUMS, TRUCK MIXERS, BUGGIES, CHUTES, CONVEYORS, TREMIE PIPES, AND OTHER EQUIPMENT MADE OF ALUMINUM SHALL NOT BE USED ON THIS PROJECT.

17. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT. SHOP DRAWINGS SHALL COMPLY WITH ACI 315. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

18. ALL CONCRETE REINFORCING IS SUBJECT TO INSPECTION BY THE DESIGN ENGINEER PRIOR TO CONCRETE PLACEMENT. CONTRACTOR SHALL NOTIFY ENGINEER FOR REINFORCING INSPECTION A MINIMUM OF 24 HOURS PRIOR TO CONCRETE PLACEMENT.

FOUNDATIONS:

1. FOUNDATIONS CONSIST OF SPREAD FOOTINGS DESIGNED TO BEAR ON SOIL HAVING AN ASSUMED ALLOWABLE BEARING CAPACITY OF 3,000 PSF. A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY SHALL INSPECT AND VERIFY CAPACITY OF FOOTING SUBGRADE PRIOR TO PLACING FOOTING.

2. DESIGN, FURNISH, AND PLACE ALL TEMPORARY OR PERMANENT SUPPORTS, WHETHER SHORING, SHEETING, OR BRACING, SO THAT NO HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT OCCURS TO EXISTING STRUCTURES, STREETS, OR UTILITIES ADJACENT TO PROJECT SITE.

3. CONTROL SURFACE AND SUBSURFACE WATER DURING CONSTRUCTION SO THAT FOUNDATION WORK WILL BE PERFORMED IN DRY CONDITIONS AND ON UNDISTURBED SOIL.

4. FOUNDATION CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.

5. ALL FILL AND BACKFILL SHALL BE PLACED ON VIRGIN SOIL THAT DOES NOT CONTAIN ANY ORGANIC MATERIAL. STRIP ALL TOP SOIL AS REQUIRED AND PROOF-COMPACT SUBGRADE TO 95% OF MAXIMUM MODIFIED PROCTOR DENSITY AS PER ASTM D-1557-70 WITH A HEAVY VIBRATORY COMPACTOR UNDER THE SUPERVISION OF A LICENSED SOILS ENGINEER PRIOR TO INSTALLING FILL OR BACKFILL.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL WORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE OF STANDARD PRACTICE. STRUCTURAL STEEL SHALL BE NEW, CLEAN AND STRAIGHT, AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   A. WIDE FLANGE ROLLED SHAPES: ASTM A992, GRADE 50 (Fy=50 KSI).
   B. PLATES, ANGLES, BARS, CHANNELS, AND S SHAPES: ASTM A36 (Fy=36 KSI).
   C. TUBES: ASTM A500, GRADE B (Fy=46 KSI).

2. ALL ANCHOR BOLTS SHALL BE ASTM A307 OR ASTM A36 UNLESS NOTED OTHERWISE.

3. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM A325 AND SHALL BE PROVIDED WITH HARDENED WASHERS UNDER THE TURNED ELEMENT (NUT OR BOLT HEAD).

4. INSTALLATION AND TIGHTENING OF ALL HIGH STRENGTH BOLTS IN SLIP CRITICAL TYPE CONNECTIONS SHALL CONFORM TO ONE OF THE FOUR METHODS DESCRIBED IN THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 8d.

5. SHOP CONNECTIONS MAY BE WELDED OR HIGH STRENGTH BOLTED. ALL CONNECTIONS SHALL CONFORM TO THE TYPICAL CONNECTION DETAILS SHOWN ON THE DRAWINGS.

6. ALL FIELD CONNECTIONS SHALL BE BOLTED WITH HIGH STRENGTH BOLTS UNLESS OTHERWISE SHOWN.

7. ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE - STEEL (AWS D1.1) AND SHALL BE DONE BY A.W.S. QUALIFIED WELDERS USING E70XX ELECTRODES.

8. ALL CONTACT SURFACES WITHIN HIGH STRENGTH BOLTED CONNECTIONS AND WELDING AREAS SHALL BE FREE OF OIL, PAINT, AND LACQUER.

10. THE CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL ROOF OPENINGS SHOWN ON THE STRUCTURAL, ARCHITECTURAL AND/OR MECHANICAL AND ELECTRICAL DRAWINGS. ANY STEEL WHICH IS NOT SHOWN ON THE CONTRACT DRAWINGS AS FURNISHED BY THE STRUCTURAL STEEL CONTRACTOR AND WHICH IS REQUIRED BY THE MECHANICAL OR ELECTRICAL TRADES TO SUPPORT THEIR EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR REQUIRING SUCH STEEL, UNLESS OTHERWISE NOTED.

11. CUTS, HOLES, COPING, ETC., REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE STRUCTURAL STEEL SHOP DRAWINGS, AND BE MADE IN THE SHOP. HOLES SHALL BE REINFORCED AND APPROVED BY THE ENGINEER.

12. BURNING OF HOLES, CUTS, ETC., IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED, EXCEPT WITH THE SPECIFIC WRITTEN APPROVAL OF THE ENGINEER.

14. FOR MISCELLANEOUS STEEL, SEE ARCHITECTURAL DRAWINGS.

15. COATINGS FOR STRUCTURAL STEEL SHALL BE AS FOLLOWS:
   A. UNCOATED-STRUCTURAL STEEL TO RECEIVE SPRAYED ON FIREPROOFING OR TO BE PERMANENTLY EMBEDDED IN CONCRETE.
   B. PRIMER PAINT - ALL STRUCTURAL STEEL UNLESS INDICATED OTHERWISE HEREIN OR ON OTHER CONSTRUCTION DOCUMENTS.
      STEP 1: STEEL SURFACES SHALL BE CLEANED IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL STANDARD FOR SURFACE PREPARATION, SSPC-SP3.
      STEP 2: STEEL SHALL RECEIVE SHOP COAT PRIMER PAINT: "RUSTARMOR 29" BY CARBOLINE COMPANY, OR SHERWIN-WILLIAMS "HI-SOLIDS ALKYD METAL PRIMER", OR "FERROX PRIMER" BY CON-LUX COATINGS, INC., OR "VESARE 55" BY TNEMEC CO. COLOR TO BE RED, UNLESS OTHERWISE INDICATED BY THE ENGINEER/ARCHITECT.
   C. 3 STEP PAINT - STRUCTURAL STEEL EXPOSED TO WEATHER, EXCESSIVE MOISTURE OR CORROSIVE ENVIRONMENT AND AS INDICATED ON CONSTRUCTION DOCUMENTS.
      STEP 1: STEEL SURFACES SHALL BE COMMERCIAL BLAST CLEANED IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL STANDARD FOR SURFACE PREPARATION, SSPC-SP6.
      STEP 2: STEEL SHALL RECEIVE SHOP APPLIED ZINC RICH PRIMER, (2.5-3.5 MIL DRY FILM THICKNESS). KOPCOAT - CARBO ZINC 11 HS. TNEMEC - 90-97.
      STEP 3: STEEL SHALL RECEIVE FIELD APPLIED TOP COAT (3.0 - 5.0 MIL DRY FILM THICKNESS). KOPCOAT - CARBOLINE 133 HB TNEMEC ENDURA SHIELD SERIES 73
   D. HOT DIP GALVANIZATION - STRUCTURAL STEEL EXPOSED TO WEATHER, EXCESSIVE MOISTURE OR CORROSIVE ENVIRONMENT AND AS INDICATED ON CONSTRUCTION DOCUMENTS. STRUCTURAL STEEL TO RECEIVE HOT DIP GALVANIZATION SHALL MEET REQUIREMENTS OF ASTM A123, AND A153 AS APPLICABLE.

16. INITIAL SHOP DRAWING SUBMITTAL SHALL BE FOR PROPOSED CONNECTION DETAILS. THESE CONNECTION DETAILS SHALL INDICATE ALL CONNECTION MATERIALS AND ALLOWABLE CAPACITIES. CAPACITIES SHALL TAKE INTO ACCOUNT MATERIAL THICKNESS, STRENGTH, BOLT AND WELD CAPACITIES, AND ANY REDUCTIONS DUE TO COPES, ETC. THESE DRAWINGS SHALL BE SUBMITTED WITH SIGNED AND SEALED CALCULATIONS UNLESS THEY ARE STANDARD AISC CONNECTIONS (CONNECTIONS TABULATED IN THE AISC MANUAL).

DEMOLITION:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK. SHOULD EXISTING CONDITIONS DIFFER FROM DRAWINGS, CONTRACTOR TO NOTIFY ENGINEER.

2. PRIOR TO DEMOLITION, CONTRACTOR TO REVIEW ALL DRAWINGS RELATING TO AREA OF WORK AND IDENTIFY THE EFFECTS ON ADJACENT EXISTING UTILITIES, UTILITY TUNNELS, AND OTHER EXISTING STRUCTURES TO REMAIN.

3. WHERE SHORING IS REQUIRED, A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY IS TO BE HIRED FOR THE DESIGN OF ANY UNDERPINNING, BRACING AND/ OR SHORING SYSTEMS.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR CAPPING AND SEALING ALL UNDERGROUND UTILITIES AND PIPING PERTAINING TO WORK.

5. CONTRACTOR SHALL COORDINATE SERVICE INTERRUPTION WITH OWNER AND UTILITY COMPANY AND SHALL NOT INTERRUPT POWER WITHOUT OWNER/ ENGINEER'S REVIEW/ PERMISSION.

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INTERIOR ALTERATIONS
FOUNTAIN OF FITNESS
1077 RT 34
ABERDEEN, NJ

REVISIONS:

#	DESCRIPTION:	DATE:

DRAWING TITLE:

GENERAL NOTES

Robert J. Bernard
Professional Engineer - New Jersey
License no. 45167

SIGNATURE DATE

DATE: 10-03-2025
SCALE: AS NOTED
DRAWN BY: MA
JOB NUMBER: 25-129
SHEET: 1 OF 6

DRAWING NUMBER

S-001

KUSTERA, BERNARD & FOX ENGINEERING D.P.C. INC,
200 NORTH 5TH STREET
HARRISON, NJ 07029
certificate of authorization no. 24GA28341000

CRSI (ACI 318-19)

CONCRETE STRENGTH		4,000 PSI, NORMAL WEIGHT				5,000 PSI, NORMAL WEIGHT				CONCRETE STRENGTH	
BAR SIZE	LAP CLASS	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		LAP CLASS	BAR SIZE
		CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2		
#3	A B	19 24	28 36	15 19	22 28	17 22	25 33	13 17	19 25	A B	#3
#4	A B	25 32	37 48	19 25	29 37	22 29	33 43	17 22	26 33	A B	#4
#5	A B	40	47 60	24 31	36 47	28 36	42 54	22 28	32 42	A B	#5
#6	A B	37 48	56 72	29 37	43 56	33 43	50 65	26 33	38 50	A B	#6
#7	A B	54 70	81 106	42 54	63 81	49 63	73 94	37 49	56 73	A B	#7
#8	A B	62 80	93 121	48 62	71 93	55 72	83 108	43 55	64 83	A B	#8
#9	A B	70	105 136	54 70	81 105	63 81	94 122	48 63	72 94	A B	#9
#10	A B	79 102	118 153	61 79	91 118	70 91	105 137	54 70	81 105	A B	#10
#11	A B	87 113	131 170	67 87	101 131	78 101	117 152	60 78	90 117	A B	#11

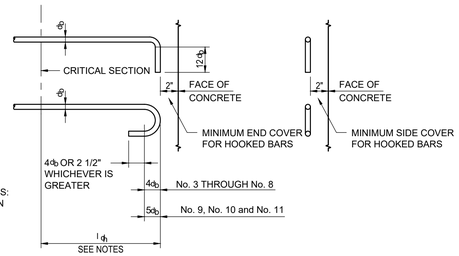
NOTES:

1. TENSION DEVELOPMENT LENGTH "l_d" = TENSION LAP CLASS A IN TABLE.
2. USE LAP CLASS B UNLESS CLASS A IS SPECIFIED FOR PARTICULAR SITUATION(S) ELSEWHERE ON THE DRAWINGS.
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE BELOW THE BAR CAST AT THE SAME TIME AS THE CONCRETE DIRECTLY SURROUNDING THE BAR.
4. CASES 1 & 2 ARE DEFINED AS FOLLOWS:
   (a) BEAMS OR COLUMNS:
   CASE 1: CENTER-TO-CENTER SPACING $\geq 2.0d_b$
   CASE 2: CENTER-TO-CENTER SPACING $< 2.0\,d_b$
   (b) ALL OTHERS:
   CASE 1: COVER $\geq 1.0\ d_b$ AND CENTER-TO-CENTER SPACING $\geq 3.0d_b$
   CASE 2: COVER $< 1.0\ d_b$ OR CENTER-TO-CENTER SPACING $< 3.0\,d_b$
5. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.

TENSION DEVELOPMENT AND LAP SPLICE LENGTHS

ACI 318-19

NORMAL WEIGHT CONCRETE STRENGTH	BASIC HOOK DEVELOPMENT LENGTH l_{hb}
4,000 PSI	$19d_b$
5,000 PSI	$17d_b$



NOTES:

1. $l_{dh} = l_{hb}$ EXCEPT l_{hb} MAY BE MULTIPLIED BY THE FOLLOWING FACTORS:
   (a) 0.7 WHEN CONCRETE COVERS ARE AT LEAST THOSE SHOWN ON THE DETAILS TO THE RIGHT
   (b) (As REQUIRED/As PROVIDED)
2. $l_{dh} \geq 8d_b$.
3. $l_{dh} \geq 6$".

STANDARD HOOKED BAR TENSION AND DEVELOPMENT LENGTHS

ACI 318-19

NORMAL WEIGHT CONCRETE STRENGTH	DEVELOPMENT LENGTH	LAP SPLICE LENGTH
3,000 PSI	$22d_b$	$30d_b \geq 12$"
4,000 PSI	$19d_b$	$30d_b \geq 12$"
5,000 PSI AND HIGHER	$18d_b$	$30d_b \geq 12$"

COMPRESSION DEVELOPMENT AND LAP SPLICE LENGTHS

ACI 318-19

REINFORCING STEEL DEVELOPMENT AND LAP SPLICE LENGTHS

FOR GRADE 60, UNCOATED REINFORCING STEEL BARS #11 & SMALLER

THE MINIMUM CLEAR COVER FOR REINFORCEMENT BARS INCLUDING COLUMN AND BEAM TIES OR STIRRUPS SHALL BE ONE BAR DIAMETER OR THE VALUES TABULATED BELOW, WHICHEVER IS THE GREATER.

CAST-IN-PLACE CONCRETE	
GRADE BEAMS	
SURFACES CAST AGAINST EARTH	3"
OTHER SURFACES	2"
PIERS OR BUTTRESSES	2"
FOUNDATION ELEMENTS	
SURFACES PLACED AGAINST EARTH	3"

TYPICAL CONCRETE COVER FOR REINFORCING BARS

TABLE N5.4-1
Inspection Tasks Prior to Welding

Inspection Tasks Prior to Welding	QC	QA
Welding procedure specifications (WPSs) available	P	P
Manufacturer certifications for welding consumables available	P	P
Material identification (type/grade)	O	O
Welder identification system[1]	O	O
Fit-up of groove welds (including joint geometry) • Joint preparation • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality location) • Backing type and fit (if applicable)	O	O
Configuration and finish of access holes	O	O
Fit-up of fillet welds • Dimensions (alignment, gaps at root) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality location)	O	O
Check welding equipment	O	---

[1] The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low stress type.

O - Observe this items on a random basis. Operations need not be delayed pending these inspections.
P - Perform these tasks for each welded *joint* or member.

TABLE N5.4-2
Inspection Tasks During Welding

Inspection Tasks During Welding	QC	QA
Use of qualified welders	O	O
Control and handling of welding consumables • Packaging • Exposure control	O	O
No welding over cracked tack welds	O	O
Environmental conditions • Wind speed within limits • Precipitation and temperature	O	O
WPS followed • Settings on welding equipment • Travel speed • Selected welding materials • Shielding gas type/flow rate • Preheat applied • Interpass temperature maintained (min./max.) • Proper position (F, V, H, OH)	O	O
Welding techniques • Interpass and final cleaning • Each pass with profile limitations • Each pass meets quality requirements	O	O

TABLE N5.4-3
Inspection Tasks After Welding

Inspection Tasks After Welding	QC	QA
Welds cleaned	O	O
Size, length and location of welds	P	P
Welds meet visual acceptance criteria • Crack prohibition • Weld/base-metal fusion • Crater cross section • Weld profiles • Weld size • Undercut • Porosity	O	O
Arc strikes	P	P
k-area[1]	P	P
Backing removed and weld tabs removed (if required)	P	P
Repair activities	P	P
Document acceptance or rejection of welded joint or member	P	P

[1] When welding of doubler plates, continuity plates or stiffeners has been performed in the *k*-area, visually inspect the web *k*-area for cracks within 3 in. (75 mm) of weld.

TABLE N5.6-1
Inspection Tasks Prior to Bolting

Inspection Tasks Prior to Bolting	QC	QA
Manufacturer certifications available for fastener materials	O	P
Fasteners marked in accordance with ASTM requirements	O	O
Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O
Proper bolting procedure selected for joint detail	O	O
Connecting elements, including appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	O
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.	P	O
Proper storage provided for bolts, nuts, washers and other fastener components.	O	O

O - Observe this items on a random basis. Operations need not be delayed pending these inspections.
P - Perform these tasks for each bolted connection.

TABLE N5.6-2
Inspection Tasks During Bolting

Inspection Tasks During Bolting	QC	QA
Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required.	O	O
Joint brought to the snug-tight condition prior to the pretensioning operation	O	O
Fastener component not turned by the wrench prevented from rotating	O	O
Fasteners are pretensioned in accordance with the RCSC *Specification*, progressing systematically from the most rigid point toward the free edges	O	O

TABLE N5.6-3
Inspection Tasks After Bolting

Inspection Tasks After Bolting	QC	QA
Document acceptance or rejection of bolted connections	P	P

TABLE 1705.3
Required Special Inspections and Tests of Concrete Construction

Type	Continuous Special Inspection	Periodic Special Inspection	Referenced Standard[a]	IBC Reference
1. Inspect reinforcement, including prestressing tendons, and verify placement.	---	X	ACI 318 Ch. 20, 25.2, 25.3, 26.5.1.-26.5.3	1908.4
2. Inspect anchors cast in concrete.	---	X	ACI 318: 17.8.2	---
3. Inspect anchors post-installed in hardened concrete members.[b] a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension load. b. Mechanical anchors and adhesive anchors not defined in 4.a.	X	X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	---
4. Verify use of required design mix.	---	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2,1908.3
5. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	---	ASTM C172 ASTM C31 ACI 318: 26.4.5, 26.12	1908.10
6. Inspect concrete and shotcrete placement for proper application of techniques.	X	---	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
7. Verify maintenance of specified curing temperature and techniques.	---	X	ACI 318: 26.4.7-26.4.9	1908.9
8. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	---	X	ACI 318: 26.10.2	---
9. Inspect formwork for shape, location and dimensions of the concrete member being formed.	---	X	ACI 318: 26.10.1(b)	

For SI: 1 inch = 25.4 mm
a. Where applicable, see also Section 1705.12, Special inspections for seismic resistance.
b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

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INTERIOR ALTERATIONS
FOUNTAIN OF FITNESS
1077 RT 34
ABERDEEN, NJ

REVISIONS:

#	DESCRIPTION:	DATE:

DRAWING TITLE:

TYPICAL DETAILS

Robert J. Bernard
Professional Engineer - New Jersey
License no. 45167

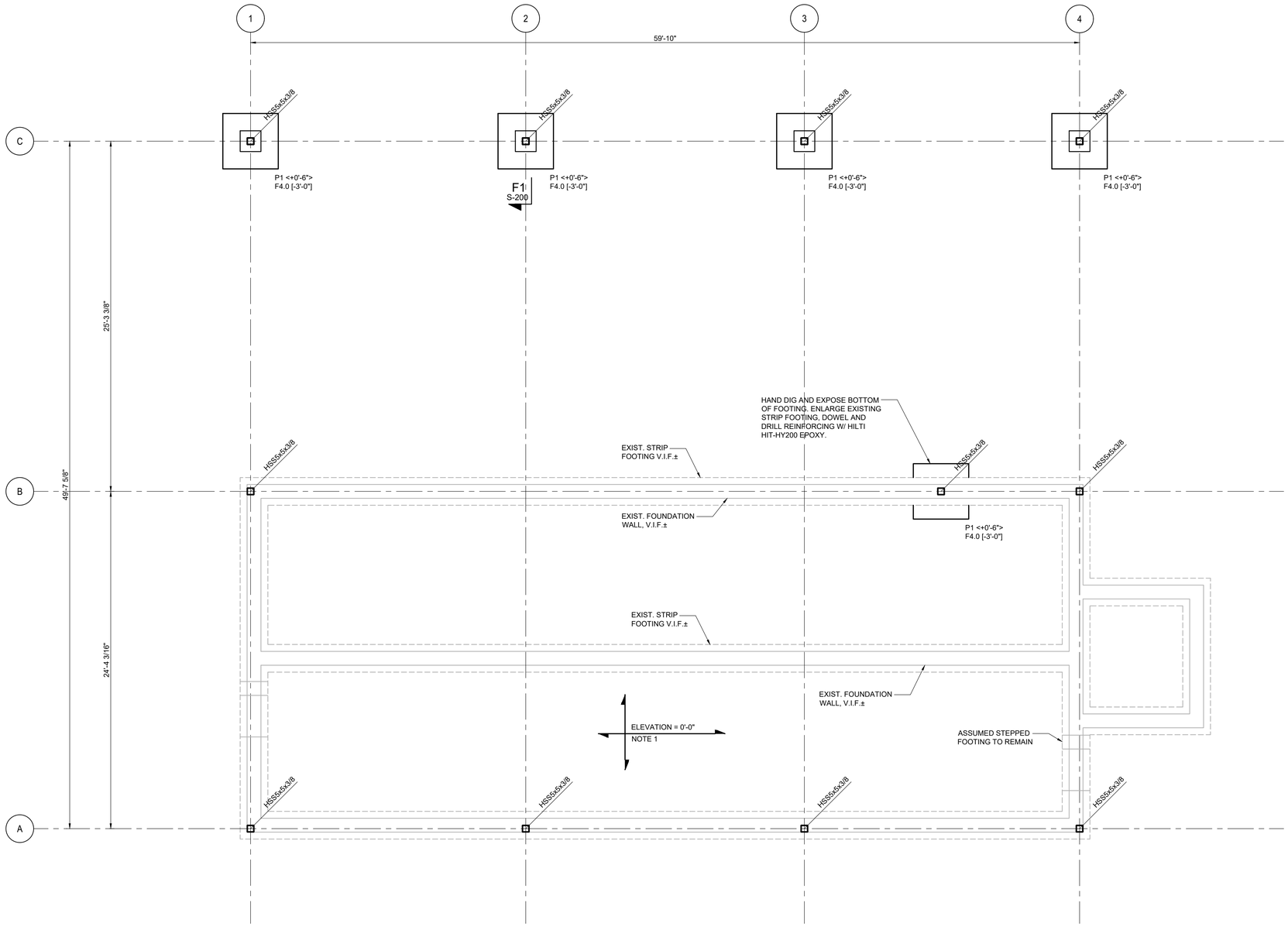
SIGNATURE DATE

DATE: 10-03-2025
SCALE: AS NOTED
DRAWN BY: MA
JOB NUMBER: 25-129
SHEET: 2 OF 6

DRAWING NUMBER

S-002

KUSTERA, BERNARD & FOX ENGINEERING D.P.C. INC.
200 NORTH 5TH STREET
HARRISON, NJ 07029
certificate of authorization no. 24GA28341000



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

NOTES:

1. EXISTING FINISHED FLOOR IS ASSUMED TO COMPRISE OF SLAB ON GRADE TO REMAIN.
2. EXISTING FOUNDATION IS ASSUMED TO COMPRISE OF CONCRETE AND MASONRY FOUNDATION WALLS OVER STRIP FOOTINGS BELOW FROST DEPTH. DUE TO SIGNIFICANT SLOPED GRADING, EXISTING FOOTING IS ASSUMED TO STEP DOWN.
3. CONTRACTOR MUST VERIFY IN FIELD EXISTING CONDITION PRIOR TO PERFORMING WORK AND TO PROVIDE INFORMATION IF EXISTING CONDITION VARIES FROM DRAWING.
4. IT IS KB&F ASSUMPTION THAT EXISTING FOUNDATION WALLS ARE IN GOOD CONDITION AND HAS NO SIGNS OF DEFECTS OR DETERIORATION. UPON REMOVAL OF EXISTING FLOORING AND EXISTING PERIMETER WALLS, CONTRACTOR SHALL VERIFY THE CONDITION OF THE EXISTING FOUNDATION WALLS AND TO PROVIDE INFORMATION TO THE ARCHITECT IF CONDITION IS POOR.
5. BOTTOM OF FOOTING ELEVATIONS ARE SHOWN THUS [...] ON PLAN.
6. F3.0 INDICATES FOOTING TYPE, SEE FOUNDATION SECTIONS FOR REINFORCING.
7. <...> INDICATES TOP OF PIER ELEVATION.
8. SEE DRAWINGS S-001 FOR GENERAL NOTES AND S-002 FOR TYPICAL DETAILS.

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INTERIOR ALTERATIONS
FOUNTAIN OF FITNESS
1077 RT 34
ABERDEEN, NJ

REVISIONS:

#	DESCRIPTION:	DATE:

DRAWING TITLE:

FOUNDATION PLAN

Robert J. Bernard
Professional Engineer - New Jersey
License no. 45167

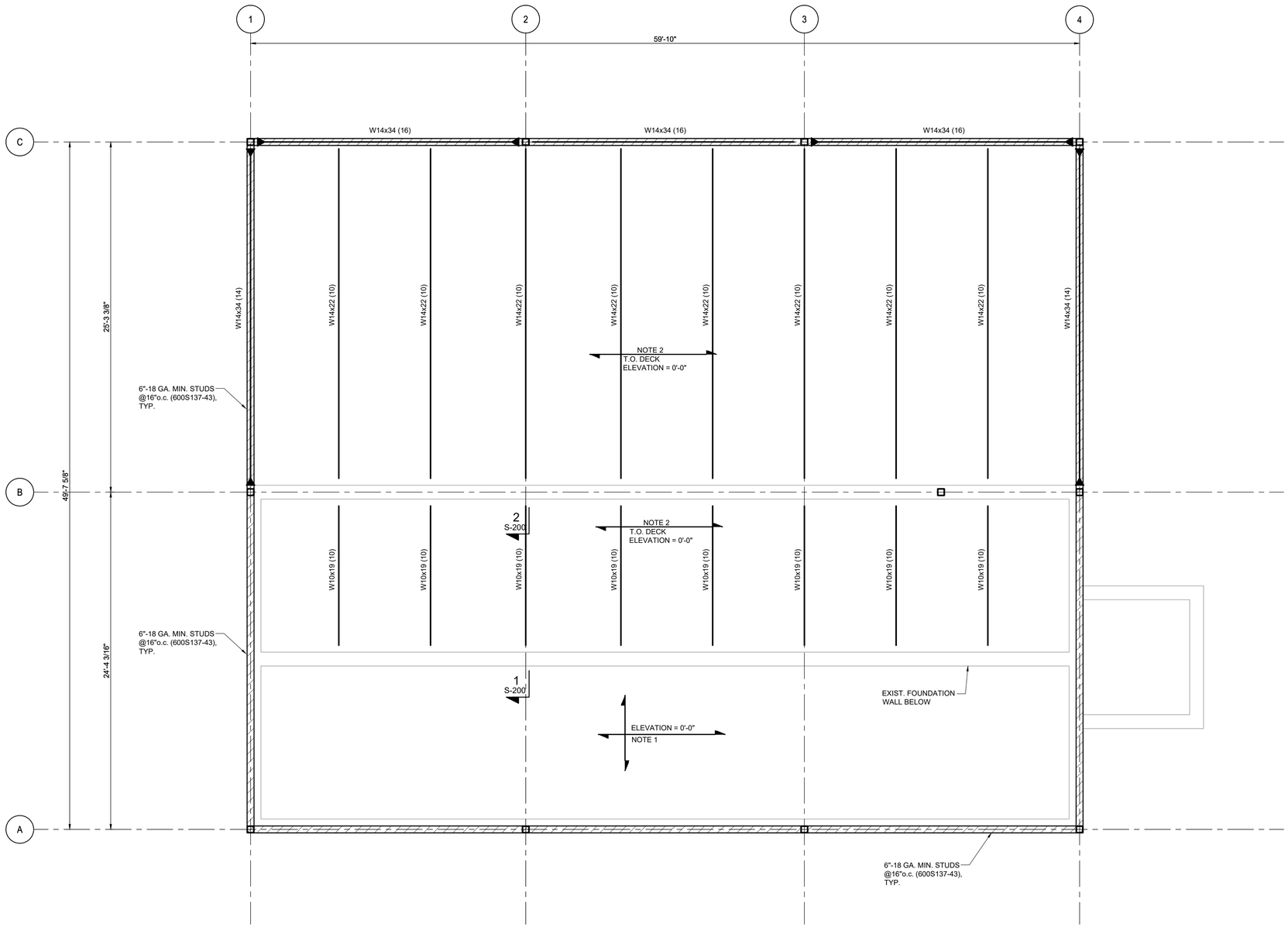
SIGNATURE DATE

DATE: 10-03-2025
SCALE: AS NOTED
DRAWN BY: MA
JOB NUMBER: 25-129
SHEET: 3 OF 6

DRAWING NUMBER

S-100

KUSTERA, BERNARD & FOX ENGINEERING D.P.C. INC,
200 NORTH 5TH STREET
HARRISON, NJ 07029
certificate of authorization no. 24GA28341000



FRAMING PLAN

SCALE: 1/4" = 1'-0"

NOTES:

1. EXISTING FINISHED FLOOR IS ASSUMED TO COMPRISE OF SLAB ON GRADE TO REMAIN.
2. FLOOR CONSTRUCTION SHALL CONSIST OF 3 1/2" NORMAL WEIGHT CONCRETE TOPPING (f'c=3500 PSI AT 28 DAYS) ON 1 1/2"-20 GA GALVANIZED COMPOSITE METAL FLOOR DECK. TOTAL THICKNESS = 5". REINFORCE WITH W4.0xW4.0-4x4 WELDED WIRE FABRIC. SEE GENERAL NOTES FOR INFORMATION. TOP OF STEEL IS AT 5" (UNO) BELOW TOP OF CONCRETE SLAB.
3. DIRECTION OF METAL DECK SHOWN THUS ⟶ ON PLAN.
4. STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50 (UNO).
5. ⟶ - INDICATES BEAM TO COLUMN MOMENT REACTION.
6. ALL EXTERIOR STEEL TO BE HOT DIP GALVANIZED.
7. W BEAMS SHOWN ON PLAN ARE SPACED EQUALLY BETWEEN COLUMN CENTERLINES UNLESS NOTED OTHERWISE.
8. [...] INDICATES NUMBER OF 3/4" DIAMETER x4" HEADED STUDS MACHINE WELDED TO BEAM TOP FLANGE.
9. SEE DRAWING S-001 FOR GENERAL NOTES AND S-002 FOR TYPICAL DETAILS.

LOAD SCHEDULE

DEAD LOAD:

3 1/2" NORMAL WEIGHT CONC + 1 1/2" METAL DECK	51 PSF
STEEL FRAMING	5 PSF
MISCELLANEOUS	4 PSF
TOTAL	60 PSF
LIVE LOAD	100 PSF

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FLOOR FRAMING PLAN

Robert J. Bernard
Professional Engineer - New Jersey
License no. 45167

SIGNATURE DATE

DATE:
10-03-2025
SCALE:
AS NOTED
DRAWN BY:
MA

JOB NUMBER:
25-129

SHEET:
4 OF 6

DRAWING NUMBER

S-101

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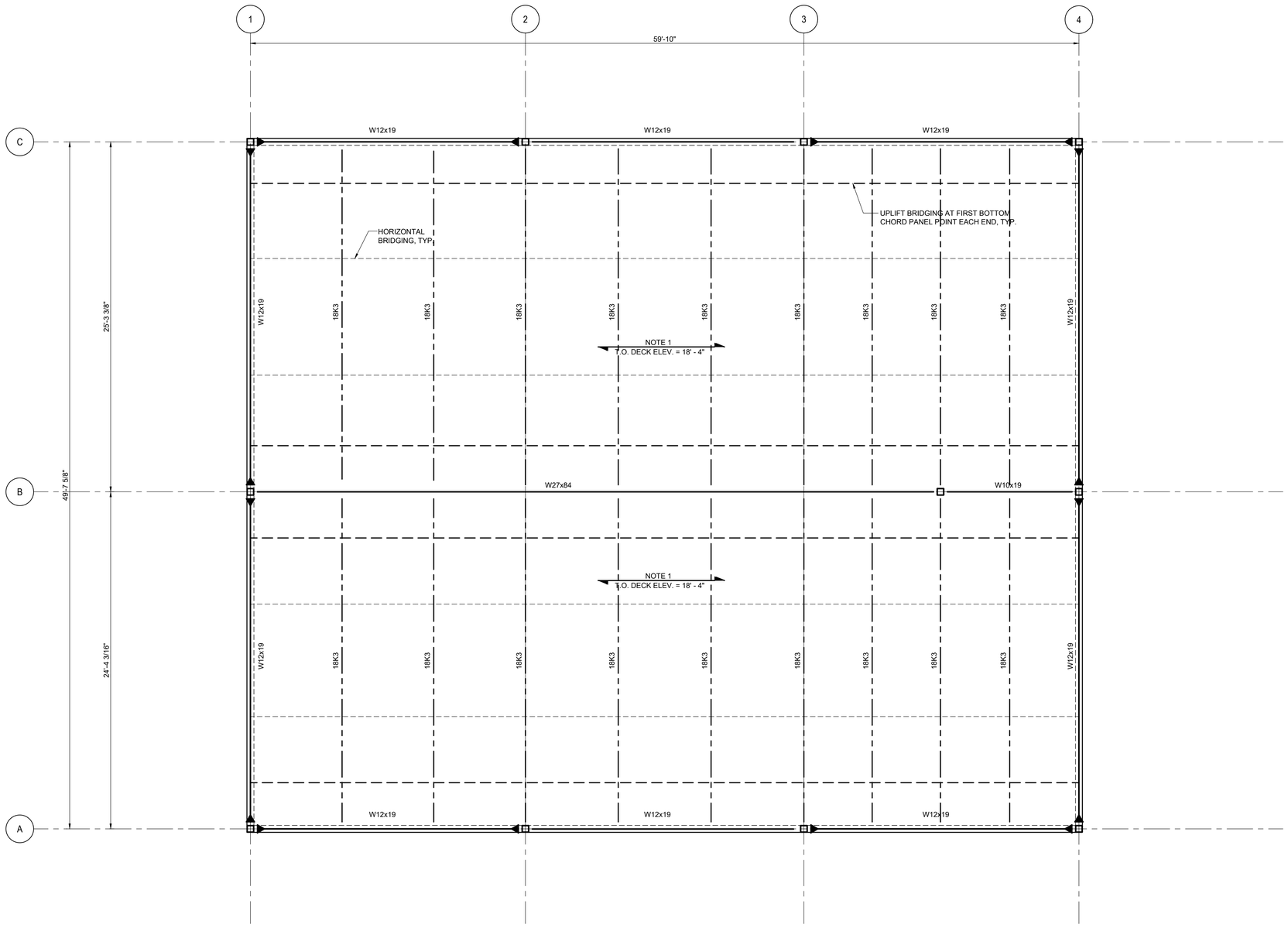

ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

NOTES:

1. ROOF CONSTRUCTION SHALL CONSIST OF 1 1/2"-20 GA TYPE B GALVANIZED METAL ROOF DECK OVER STEEL WIDE FLANGE BEAMS.
2. DIRECTION OF METAL DECK SHOWN THUS ◄——► ON PLAN.
3. STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50 (UNO).
4. ►—S - INDICATES BEAM TO COLUMN MOMENT REACTION.
5. – – – – - INDICATES HORIZONTAL/ DIAGONAL BRIDGING, TYPICAL.
6. SEE DRAWING S-001 FOR GENERAL NOTES AND S-002 FOR TYPICAL DETAILS.
7. JOIST MANUFACTURER NOTE: DESIGN JOISTS FOR AN UPLIFT FORCE OF 15 POUNDS PER SQUARE FOOT.
8. ROOF DECK SHALL BE ANCHORED TO SUPPORTING MEMBERS WITH 5/8" DIA. PUDDLE WELDS AT 6"o.c. TYP. (36-7 PATTERN) WITHIN 10'-0" OF PERIMETER. THE REST IN A (36-4 PATTERN) AT 12"o.c. SIDE LAP CONNECTION TO BE 6-#10 SCREWS PER SPAN.
9. EXTEND BOTTOM CHORD OF JOIST AT ALL COLUMNS.

LOAD SCHEDULE

DEAD LOAD:	
1 1/2"- 20 GA. METAL DECK	2 PSF
STEEL FRAMING	5 PSF
ROOFING	2 PSF
MISCELLANEOUS	4 PSF
TOTAL	13 PSF
SNOW LOAD	30 PSF

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REVISIONS:

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ROOF FRAMING PLAN

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SIGNATURE DATE

DATE: 10-03-2025
JOB NUMBER: 25-129
SCALE: AS NOTED
SHEET: 5 OF 6
DRAWN BY: MA

DRAWING NUMBER

S-102

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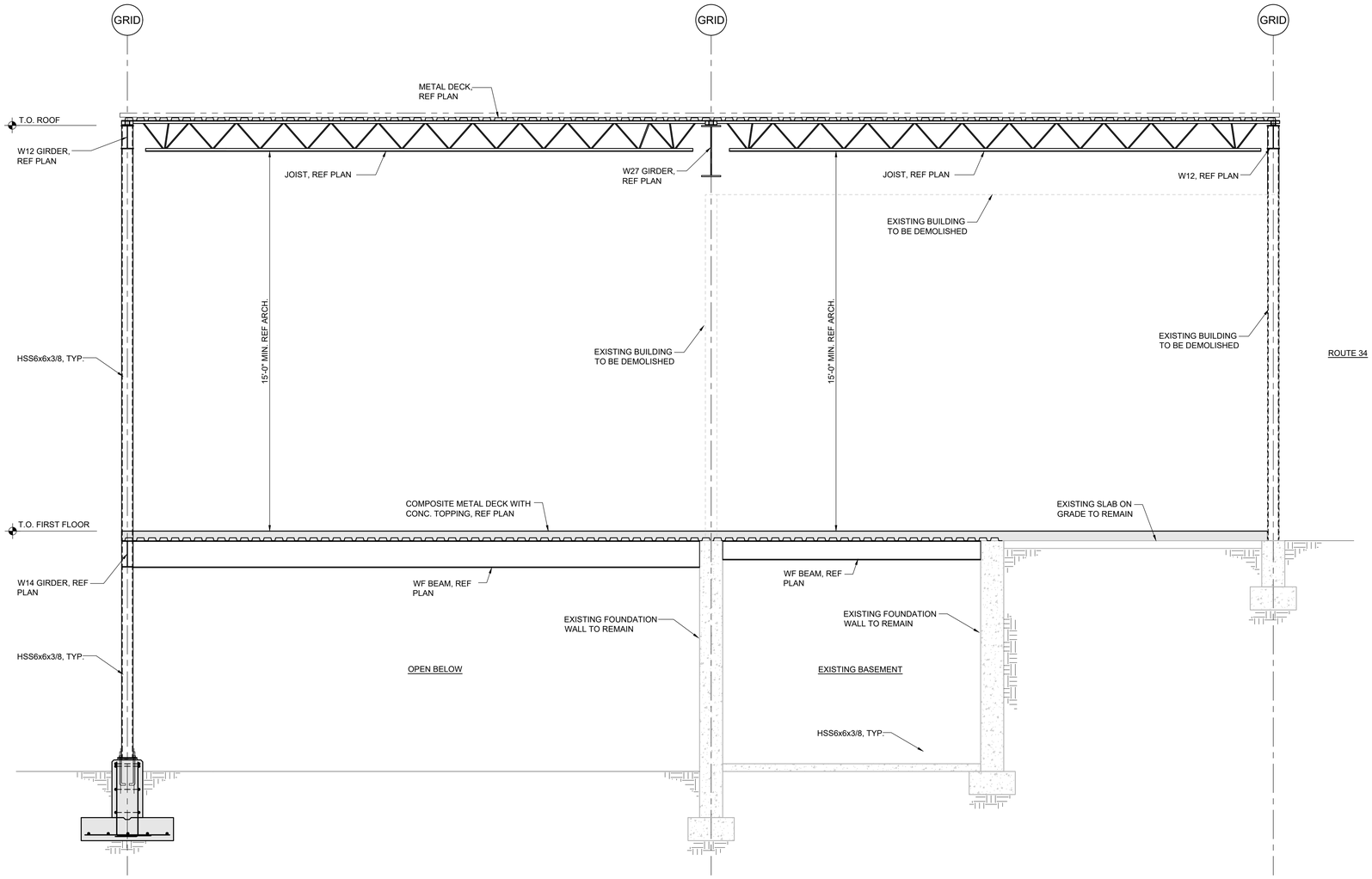

ELEVATION A-A
SCALE: 3/8"=1'-0"

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ELEVATION

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License no. 45167

SIGNATURE DATE

DATE: 10-03-2025
SCALE: AS NOTED
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SHEET: 6 OF 6

DRAWING NUMBER

S-200

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