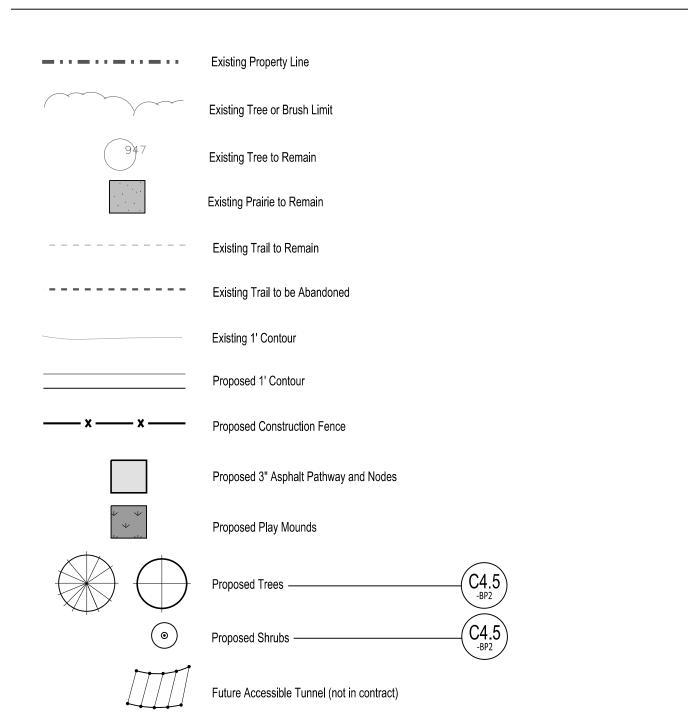
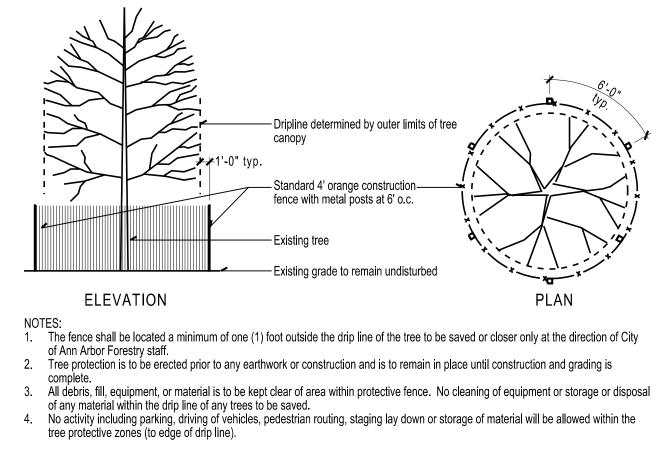


LEGEND:



Refer to Topographic and Boundary Survey, Sheet C1.1-BP2, for legend of existing site elements not indicated here.



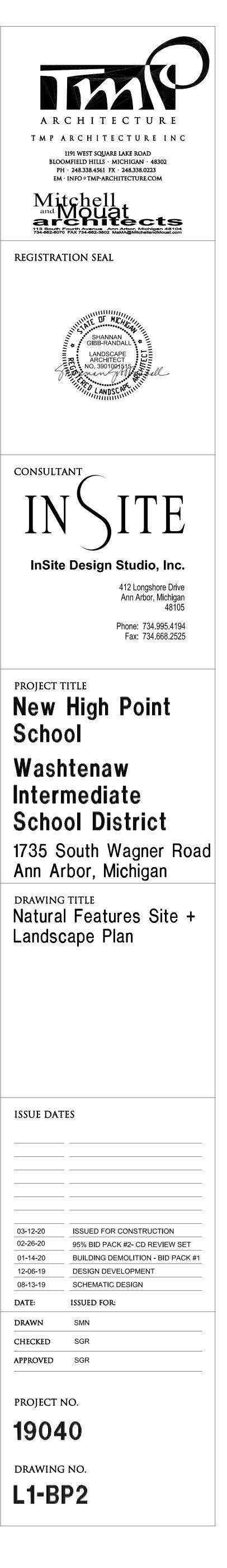
2 Construction fence

- ALTERNATE #1

PLANT SCHEDULE

Key	Qty	Botanical Name	Common Name	Spacing	Size	Comments
CO	1	Celtis occidentalis	Hackberry	as shown	2" cal.	
CR	10	Cornus racemosa	Gray Dogwood	60" o.c.	#5	
GD	1	Gymnocladus dioicus	Kentucky Coffeetree	as shown	2" cal.	
HV	20	Hamamelis virginiana	Witch-hazel	60" o.c.	#5	
LT	1	Liriodendron tulipfera	Tulip Tree	as shown	2" cal.	
PA	7	Picea abies	Norway Spruce	as shown	6-7' B&B	
QM	1	Quercus macrocarpa	Bur Oak	as shown	2" cal.	
RA	10	Rhus aromatica	Fragrant Sumac	as shown	#5	
TA	2	Tilia americana	Basswood	as shown	2" cal.	





STATIONING NOTES

Any discrepancies between dimensioned layout and actual field conditions shall be immediately brought to the attention of the landscape architect. The contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.

|BP: −0+00.00|--

ALTERNATE #1 —

2"CH

= 3'-0'



Beginning Point Diameter End Point Point of Compound Curve Point of Reverse Curve Point of Tangent Radius

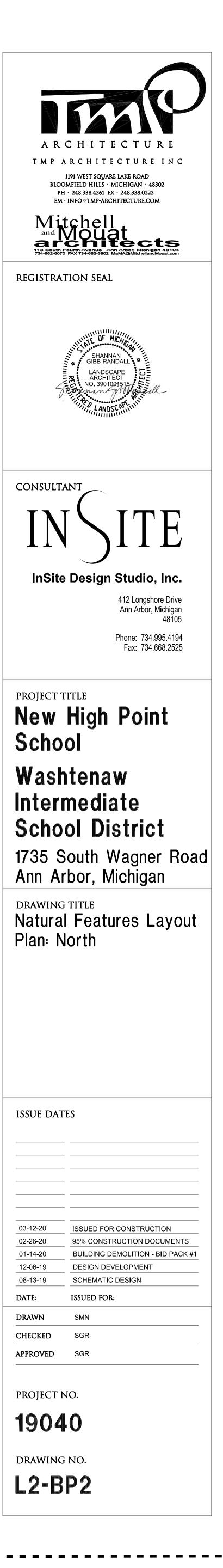


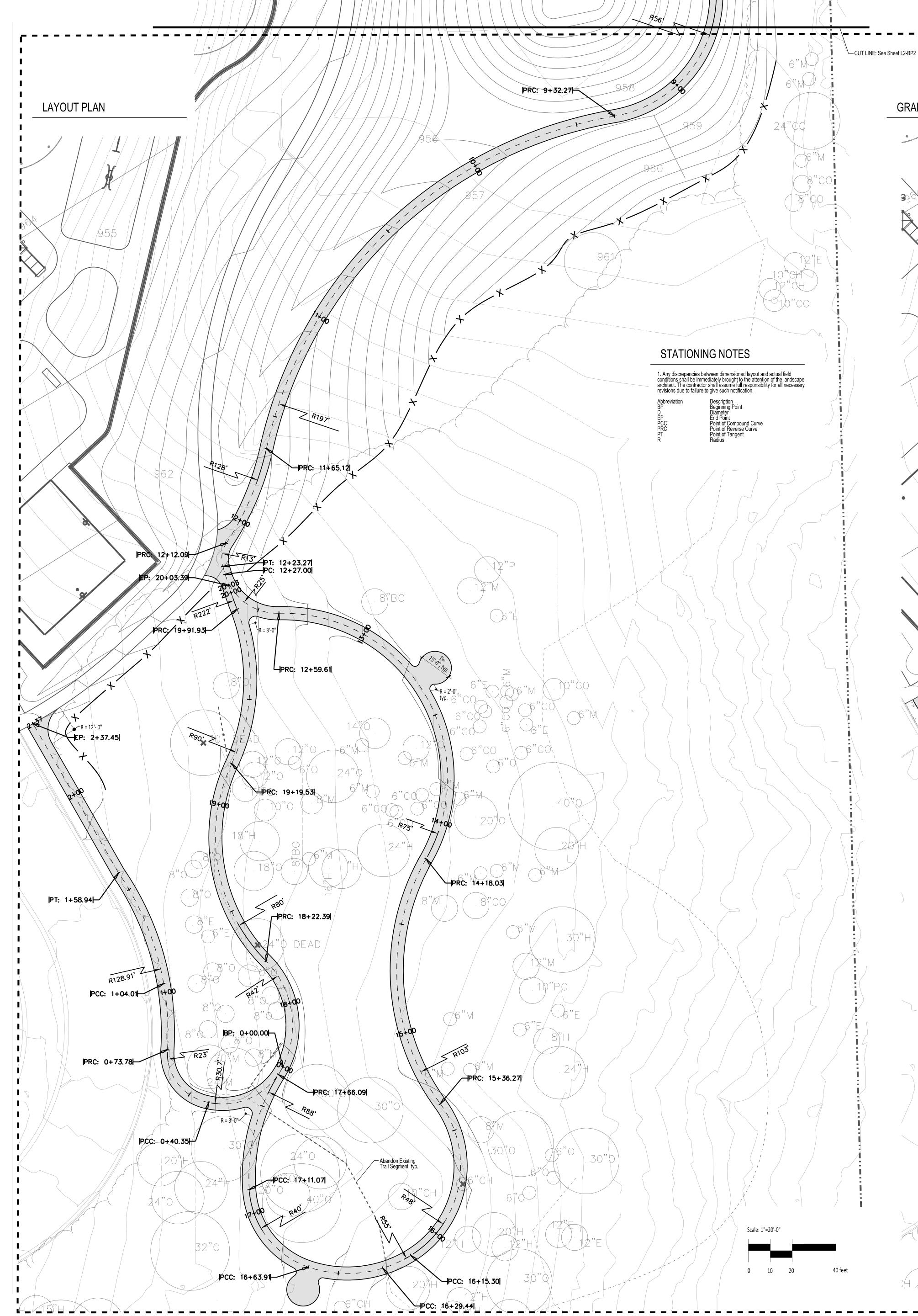
Existing Property Line Existing Tree or Brush Limit Existing Tree to Remain Existing Prairie to Remain Existing Path to Remain Existing 1' Contour Proposed 1' Contour Proposed Construction Fence Proposed 3" Asphalt Pathway and Nodes

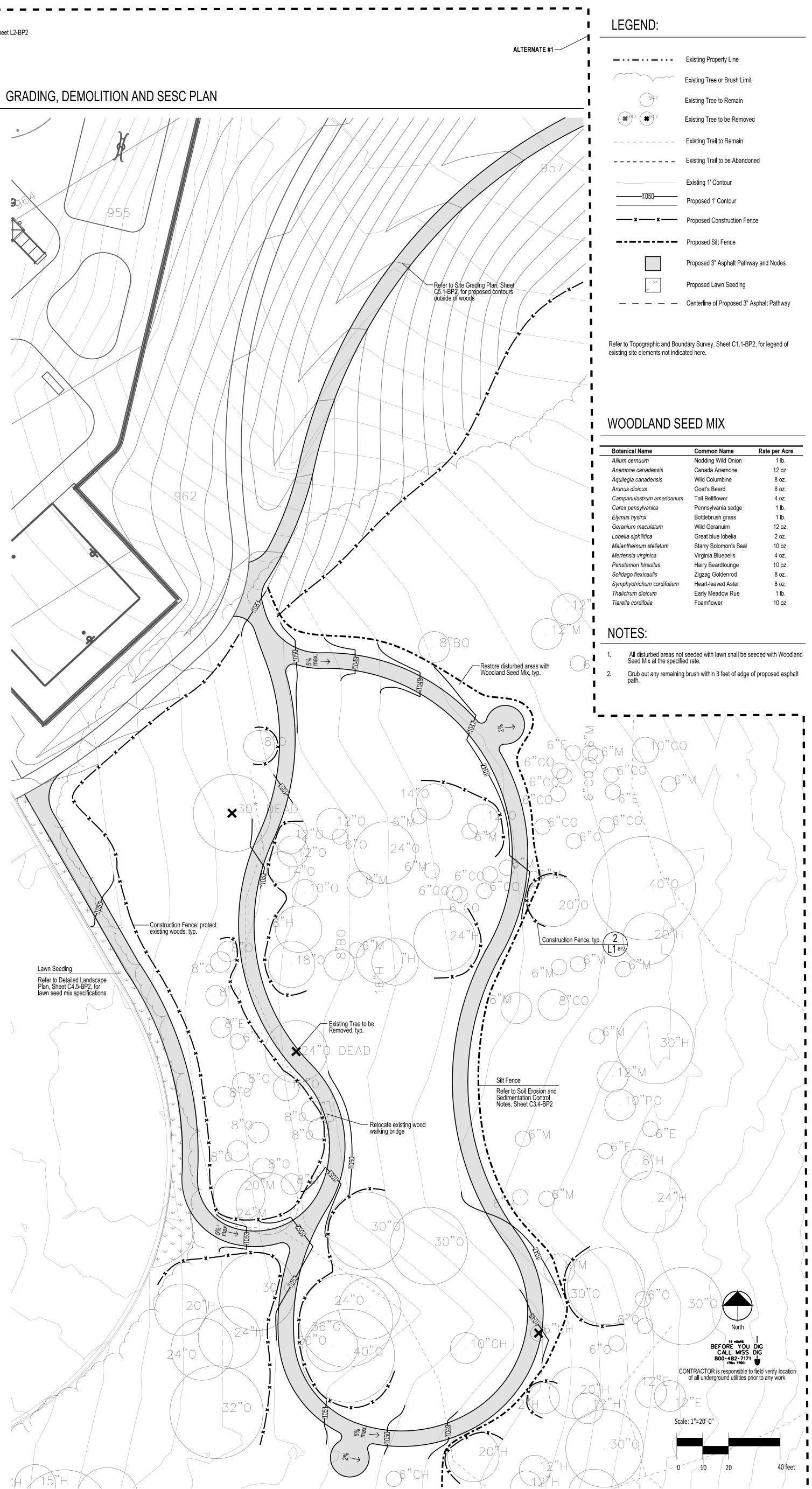
Refer to Topographic and Boundary Survey, Sheet C1.1-BP2, for legend of existing site

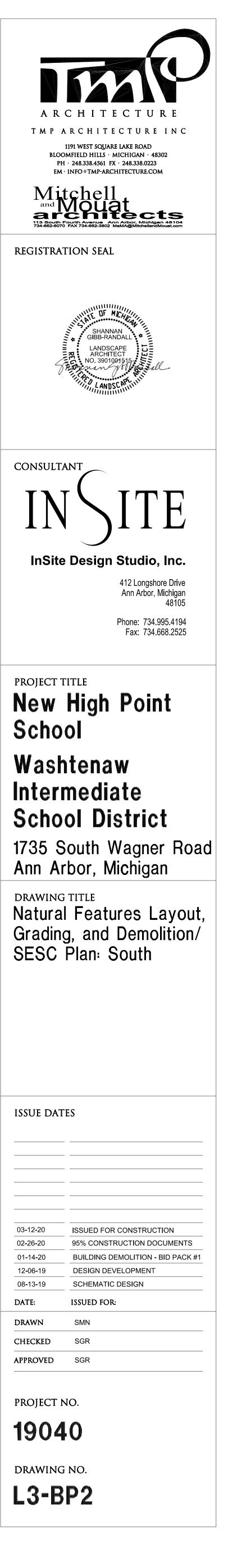


Scale: 1"=20'-0" 40 feet 0 10 20









	DESIGN CRI	TERIA			
The structure is designed fo f the following live I weight of the structure. Where applicable, the li					
Building Code.					
				CODE REFERENCE	
Risk Category	ш			IBC Table 1604.5 ASCE Table 1.5-1	
F		LOADS			
				CODE REFERENCE	
Slabs on Grade	100 PSF			ASCE Table 4-1	
	SNOW LO	ADS			
				CODE REFERENCI	
Ground Snow Load	Pg = 20 PSF			ASCE Figure 7-1	
lat Roof Snow Load	Pf = 22 PSF	(minimum)		ASCE Section 7.3	
Exposure Factor	Ce = 1.0			ASCE Table 7-2	
mportance Factor	l = 1.1			ASCE Table 1.5-2	
hermal Factor	Ct = 1.0			ASCE Table 7-3	
Snow loads adjacent to vertical projections, on effects of drifting.	lower roofs adjac	ent to high roofs	s, or sloped roc	ofs are increased for the	
		908			
		403			
Iltimate Design Wind Speed (3 sec. gust)	Vult = 120 N			ASCE Figure 26.5-1B	
Iominal Design Wind Speed	Vasd = 93 N	PH		IBC Section 1609.3.1 ASCE Section 26.7.3 ASCE Section 26.11- ASCE Chapter 30	
xposure Category	С				
nternal Pressure Coefficient	± 0.18 (Enclo	,			
Components and Cladding					
	ROOF COMPO				
	Zone 1	Zone 2	Zone 3	CODE REFERENCE	
Support Beams (A > 100 SF)	-31.1 PSF	-36.9 PSF	-36.9 PSF	ASCE Table 30.7-2	
Roof Sheathing (A = 50 SF)	-32.6 PSF	-42.7 PSF	-51.3 PSF	ASCE Table 30.7-2	
0eck Fasteners (A < 10 SF)	-34.0 PSF	-57.1 PSF	-85.9 PSF	ASCE Table 30.7-2	
	WALL COMPO	NENTS		1	
	Zone 4	Zone 5		CODE REFERENC	
a = 100 SF	-31.1 PSF	-35.5 PSF		ASCE Table 30.7-2	
x = 50 SF	-32.6 PSF	-38.3 PSF		ASCE Table 30.7-2	
a = 10 SF	-36.9 PSF	-45.6 PSF		ASCE Table 30.7-2	
Refer to ASCE 7-10 for zone definitions. Calcul re for use with ASCE 7-10 load combinations actor Kd = 0.85, per ASCE Table 26.6-1.	ate wind load for (i.e. 0.6 factor for	tributary area of ASD and 1.0 fa	design compo	nent. Wind loads show , and include directiona	
	SEISMIC LO	DADS			
				CODE REFERENC	
Seismic Importance Factor	le = 1.25			ASCE Table 1.5-2	
Short Period Mapped Spectral Response	g) SS = 0.094g			ASCE Section 11.4.1	
.0 sec. Mapped Spectral Response Accelerati Parameter (5% of Critical Damping)		l		ASCE Section 11.4.1	
Soil Site Class	D			ASCE Section 11.4.2	
Design Spectral Response Acceleration Param for short period)	sDS = 0.10	g		ASCE Section 11.4.4	
Design Spectral Response Acceleration Param 1 sec. period)	sD1 = 0.08 g	9		ASCE Section 11.4.4	
Seismic Design Category	В			ASCE Section 11.6	

Seismic Design Category

Design Base Shear

Analysis Procedure

Walls Unbraced at Top

Walls Braced at Top

Typical Roofs

Roof with Solar Panels

Seismic Force Resisting System

Seismic Response Coefficient

Response Modification Factor

Allowable Soil Bearing Capacity

. Refer to Geotechnical Report for additional Information

GENERAL STRUCTURAL NOTES

- 1. Structural notes, the 3 strictest provision shall govern.

- specifically referenced on the plans.
- 4. 5.
- addition of temporary bracing, guys or tie-downs if necessary. Contractor shall retain ownership of such material after completion of the project.
- by code.
- effective date identified in the REFERENCED STANDARDS Chapter in the Governing Building Code.

Work constructed per these drawings shall be inspected by an Independent Testing Agency retained to ensure compliance with the requirements shown on the Drawings. Special Inspections required by the Governing Building Code, local building department and the Contract Documents shall be performed by a qualified Special Inspector. Project site visits by the Engineer do not constitute or replace inspection. SHOP DRAWINGS

1.

- Submit shop drawings for review as indicated in material section of general Structural notes. Use of Engineering Drawings as erection drawings by the Contractor is strictly prohibited. prior to the first submittal.
- 4. are the responsibility of the shop drawing preparer.
- accordance with the latest Contract Documents. Shop drawing review is only for general compliance with the Contract Documents. Review of the
- Contract Documents.
- to the project site.

MECHANICAL & ELECTRICAL EQUIPMENT

- 1.
- consult with the Architect/Structural Engineer prior to steel shop drawing submittal.

SHORING AND BRACING

ASCE Section 11.6

ASCE Table 12.2-1

ASCE Section 12.8.1

ASCE Section 12.8.1.

ASCE Table 12.2-1

ASCE Section 12.8

Intermediate Reinforced Masonry Shear

Walls

234 Kips

R = 4.0

40 PCF

55 PCF

5 PSF

10 PSF

2. Lateral earth pressure is based upon drained soil. Refer to drawings for foundation drainage.

3000 PSF

CS = 0.031

Equivalent Lateral Force

EARTH PRESSURE LOADS

LATERAL EARTH EQUIVALENT FLUID PRESSURE

MECHANICAL / ELECTRICAL LOADS

Cont	ractor shall provide temporary shoring and bracing
a.	Where shown or noted on the Drawings.
b.	Where existing construction is to be altered or o
C.	Where existing construction is not undergoing a
d.	As required for safe erection, installation of new
e.	When needed for Contractor's "means and met
Shor	ing and bracing shown on the Drawings is concept.

- bracing projects.
- Shoring and bracing shall be designed by a Professional Engineer registered in the State of the Project with minimum 5 years demonstrated Architect/Structural Engineer.
- temporary conditions, final conditions and sequence of work.
- photographic documentation and submit survey to the Owner for record.
- During the shoring and bracing operations, Contractor shall: Keep the existing and new construction in a safe condition. Monitor existing and new construction to detect any signs of distress or deformation. Take immediate steps to prevent distress, deformation or damage.

XISTING CONSTRUCTION

- Contractor shall visit the site and become familiar with the existing conditions. Existing building dimensions and conditions shown are based upon original drawings or partial survey and have not been completely field
- verified. The Owner and Architect/Structural Engineer take no responsibility for the accuracy of existing dimensions shown. Contractor shall field measure existing dimensions prior to shop drawing preparation and fabrication.

The analysis of the existing structure is based upon inform provided by the Owner.

- Contractor shall verify conditions covering or affecting th 4 proper strength, fit and location of the structural work; rep may interfere with or otherwise affect or prevent the prop Documents. All discrepancies shall be fully resolved prio
- Existing construction not undergoing alteration is to rema of this contract, Contractor shall repair or replace as requ Representative.
- Contractor shall verify the existence, location and elevat 6 with the work. All discrepancies shall be documented and resolution.
- Should uncharted piping or other utilities be encountered Owner's Representative for resolution.
- Contractor shall provide fire watch during field cutting an Contractor shall provide temporary protection of existing
- Contractor shall provide temporary protection to prevent 10.
- Contractor shall coordinate work with the Owner's perso 11.
- Refer to SHORING AND BRACING notes for additional 12.

FOOTINGS AND FOUNDATIONS

- Contractor shall verify all conditions, including undergrou Representative. Provide necessary sheeting, shoring, bracing, etc. as rea Comply fully with requirements of OSHA and other regul 3. Top of spread footing elevations noted on plan are minin 4. fill having a minimum net allowable bearing capacity of Earth formed footings are acceptable where existing soi for specific preparation and procedures. Where soil is gr
- surfaces shall be maintained smooth and vertical. Slope before and during concrete placement. Where footing steps are necessary, they shall be no stee 6.
- Footings shall be centered under columns and walls unle 7.
- 8. frost.
- The Contractor shall provide all necessary measures to prevent any frost or ice from penetrating any footing or slab sub-grade before and after 9. placing of concrete until the full building enclosure is completed and heated.
- Excavated material shall be legally disposed of off the Owner's property or stored at the site or used for backfilling operations as required in 10. accordance with the Geotechnical Engineer's recommendations and Project Specification requirements.
- Contractor shall furnish all required de-watering equipment to maintain a dry excavation until backfill is complete. 11. 12.
- undermining such as underpinning or shoring. 13.
- 14.
- including any non-conforming work.
- 15. site preparations, earthwork operations and work adjacent to the existing building

The structural notes are intended to augment the drawings and specifications. Should conflicts exist between the Drawings, Specifications and the

The Structural drawings form an integral part of Contract Documents, which include Architectural, Structural, Mechanical, Electrical, Civil/Site drawings and Specifications. Coordinate the Structural drawings with the requirements shown in the other components of the Contract Documents.

Typical details and other sections/details apply to conditions that are similar to the conditions described in the sections/details, even if they are not

The Contractor shall be responsible for means, methods, sequences and procedures of construction.

The structure is designed to be self-supporting and stable after it is fully completed per requirements of Contract Documents. Contractor shall determine erection procedures and sequence, and ensure the safety of the building and its component parts during erection. This includes the

Construction shall comply fully with the applicable provisions of OSHA and the local Governing Codes, current edition, and all requirements specified in the codes shall be adhered to as if they were called for or shown on the drawings. This shall not be construed to mean that requirements

set forth on the drawing may be modified because they are more stringent than the code requirements or because they are not specifically required

Governing Building Code – Michigan (International) Building Code 2015. Standards listed in structural note sections refer to the version and

Allow in the schedule - detailing, fabrication and erection - a minimum of 10 working days for review of each shop drawing submittal by the Structural Engineer. Submit shop drawings in reasonable quantities at reasonable intervals (not more than 70 drawings per submittal per week). The 10 working days stated herein, will be in addition to the review time required by other project team members. Submit a shop drawing submittal schedule

Review of shop drawings and other submittals by the Structural Engineer does not relieve the Contractor of the responsibility to check the shop drawings prior to submittal. Errors and omissions associated with the preparation of shop drawings not conforming to the Construction Documents

Shop drawings are an aid for field placement and are superseded by the Contract Documents. Contractor shall ensure that construction is in

shop drawings by the Structural Engineer does not guarantee that the shop drawings are correct nor infer that the shop drawings supersede the

Contractor shall provide a set of approved shop drawings bearing the review stamp of the Structural Engineer to the state building department and

Notes on submitted shop drawings for work "by others" cannot be responsibly approved by Structural Engineer. Contractor shall coordinate responsibility for materials, connections, etc. prior to shop drawing submittal to the Structural Engineer.

Contractor shall verify all relevant dimensions and elevations for equipment installations against purchased Manufacturer's certified equipment drawings. Contractor shall coordinate dimensions that depend upon specific equipment, such as elevator openings, mechanical equipment supports, etc., prior to submittal. Such dimensions shall be provided on the shop drawings prior to submittal to the Structural Engineer. Contractor's failure to provide such dimensions on submitted shop drawings will result in shop drawing return without review.

Pipes of 3 inches or greater in diameter shall be suspended from steel members, using pipe hangers and clamps. Hangers and clamps shall be aligned with structural member centerlines. One sided beam connections, expansion anchors or other anchors to slabs are not allowed for pipes of 3 inches or greater in diameter. Submit details for pipe hangers and attachments for review by Architect/Structural Engineer.

Mechanical and electrical equipment weights assumed for structural design are shown on the plans. If the equipment weight varies from that listed,

g of existing construction, new construction, and underground utilities as follows:

disturbed until permanent support is in place. alteration and is to remain undisturbed but is disturbed as a result of the work of this contract. w construction, equipment, etc. nethods" of construction and other safety related issues.

2. Shoring and bracing shown on the Drawings is conceptual. Contractor shall be responsible for verifying existing conditions, shoring and bracing calculations, methods of installation, transfer of loads through to final load support, and work sequence phasing with new construction

Shoring and bracing shall be performed by a Contractor with minimum 5 years demonstrated experience in similar size and scope of shoring and

experience in similar size and scope of shoring and bracing projects. Design loads and methods shall conform to applicable codes. Soil and material strengths shall be verified by tests, unless conservative estimates that do not affect deflections and deformations are approved by the

Contractor shall submit drawings and calculations sealed and signed by the Contractor's Professional Engineer showing complete design including

Before starting work, Contractor shall perform condition survey of the existing building structure, exterior façade and interior finishes, including

Contractor shall continuously monitor the shoring and bracing system. Contractor shall review and ascertain that all field connections are completed according to the Contractor's design and issue approval for inspection of the work by the Testing Agency. After completion of shoring and bracing and completion of work requiring shoring and bracing, Contractor shall repair any damage to the existing and new construction, without any cost to the Owner, and to the satisfaction of the Owner and Architect/Structural Engineer.

g preparation and fabrication.
ormation shown on original drawings by Guido A, Binda & Assoc. dated Sept. 1972,
the structural work; obtain and verify all dimensions and elevations to ensure the eport to the Architect/Structural Engineer any and all conditions/discrepancies which oper execution and completion of the new work in compliance with the Construction ior to commencing work.
nain undisturbed. Where such construction is disturbed as a result of the operations quired and to the satisfaction of the Architect/Structural Engineer and Owner's
ation of existing utilities, sewers, drains, etc. in demolition areas before proceeding nd reported to the Architect/Structural Engineer and Owner's Representative for
ed during excavation, Contractor shall consult the Architect/Structural Engineer and
nd welding operations, meeting the Owner's requirements.
g equipment during execution of work, satisfying the Owner's requirements.
nt damage from the weather and vandalism.
onnel to avoid any interference in their operations.
l requirements.
ound utilities and field measurements at job site and report any discrepancies to Owner's
required during excavations to protect sides of excavations.
ulatory agencies for safety provisions.
imum elevations. In all cases, footings are to bear on undisturbed natural soils or engineered 3,000 psf.
oil conditions allow neat, vertical cuts. Follow the Geotechnical Engineer's recommendations granular and/or does not hold a vertical cut, sides of foundations shall be formed. All concret be sides of excavations as approved by the Geotechnical Engineer, and clean up sloughing
eeper than one vertical to two horizontal unless noted otherwise.
nless specifically detailed otherwise on the Drawings.
grade containing free water, frost or ice. Should water or frost, however slight, enter a footing

No footings or slabs shall be placed on or against sub-grade containing free water, frost or ice. Should water or frost, however slight, enter a footing excavation after sub-grade approval, the sub-grade shall be re-inspected by the Geotechnical Engineer/Testing Laboratory after removal of water or

Where new footings are adjacent or abut existing foundations, carefully hand excavate and determine bottom of existing foundation. If different than anticipated, adjust new foundations to match existing. In no case shall the new footing be lower than the existing without protection against

Foundation bearing soils shall be inspected by a qualified Geotechnical Engineer. The testing shall include, but not be limited to, identification of soils at and below the foundation bearing level, and the allowable bearing capacity of these soils.

A Geotechnical Engineer registered in the State of the Project shall inspect the condition and assure the adequacy of all subgrades, fills, backfills before placement of foundations, footings, slabs and walls. They shall submit reports to the Architect/Engineer describing their investigations,

The design of foundations, retaining walls, and slab on grade is based on the criteria established in the Geotechnical Report No. 193506 by G2 Consulting Group, dated Jan. 23, 2020. Refer to the report for additional considerations related to ground water conditions and control, drainage, SITE PREPARATION

BACK

	<u>fc'</u>	Max. W/C	<u>Air</u>
Foundations:	4,000 psi	0.50	-
Slab-on-grade:	4,000 psi	0.46	-
Exterior Concrete:	5.000 psi	0.40	6%

TE PREPARATION Refer to Geotechnical Report No. 163506 dated Jan. 23, 2020 for consideration related to site pre7iaration and earthwork operations. The	CAST-IN-PLACE CONCRETE CONT. 8 10
requirements and recommendations contained in the report are part of Contract requirements.	 53. For floor finish tolerances for interior slabs, refer to Specifications. 54. Curing of concrete surfaces shall conform to ACI 308.1 "Standard Specification for Concrete Curing" and ACI 308R "Guide to Curing
Do not place backfill against foundation walls - designed as supported at top and bottom - until basement level and first floor slabs are in place. Shore and/or brace walls as required if backfilling operations are to be carried out prior to placement of floor slabs.	 54. Concrete". 55. Joints between the structural (and architectural) members shall be properly prepared and filled with joint sealant unless noted otherwise. All
Place backfill against basement retaining walls - designed as cantilevered - after concrete has attained design strength and before lower level and first floor slabs are in place.	joint edges, including top and bottom surfaces and vertical and horizontal surfaces shall be formed or tooled as required. Joint sealant shall be applied only to the top, vertical, and horizontal surfaces unless noted otherwise on the Drawings.
Where backfill is to be placed on both sides of foundation walls, provide a balanced backfill against foundation walls to eliminate lateral load effects, or provide necessary temporary lateral support to the top of the wall until permanent support is installed.	56. Joints to be prepared and filled with joint sealant shall include, but are not limited to, construction joints, control joints, isolation joints, and all interface joints between similar and dissimilar members. Specific locations may be indicated on the Drawings, or may be required by approved shop drawings, or may occur due to the construction sequence selected by the Contractor.
Backfill material shall consist of clean, well grade granular soils, free of organic material, silt and clay, or as specified in the Project Specifications.	57. Prior to placing concrete adjacent to existing concrete, mechanically roughen, then thoroughly clean and de-grease existing concrete surfaces. Apply epoxy bonding agent prior to placing fresh concrete. Bonding agent shall be "Sika Armatec 110 EpoCem" by Sika
Backfill material shall be compacted to 95% of maximum density, as determined by the Modified Proctor Method (ASTM D1557), in lifts not exceeding 6 inches.	 Corporation, or approved equal. Follow all Manufacturer's instructions for surface preparation, mixing and application. 58. Prior to placing concrete topping, mechanically roughen, then thoroughly clean and de-grease existing concrete surfaces. Soak existing
AST-IN-PLACE CONCRETE Concrete structural framing has been designed by the Ultimate Strength Method per ACI 318 "Building Code Requirements for Structural	 concrete surfaces for minimum 12 hours. Place a concrete-slurry of cement and water within 1 hour of topping placement. 59. Non-shrink grout shall conform to ASTM C1107. Grout shall be premixed, non-shrink, non-catalyzed natural aggregate grout with a minimum 7-day compressive strength of 7,000 psi plastic, 6,000 psi flowable, and 5,000 psi fluid consistency.
Concrete". Concrete".	60. Reinforcing steel, anchor rods and embed placement shall be inspected, prior to placement of concrete, in accordance with ACI 318 and code required Special Inspection by qualified Inspector prior. These inspections are not included in the basic services of the Structural
Requirements for Structural Concrete" except as modified by Structural requirements noted on the Drawings. All concrete work shall conform to ACI 201.2R, "Guide to Durable Concrete". Parking structures shall also conform to ACI 362.1R, "Guide to	Engineer of Record.
Durable Concrete for Parking Structures". Cement shall conform to ASTM C150 "Specification for Portland Cement" type I or III.	STRUCTURAL STEEL
Concrete aggregates shall conform to ASTM C33 "Specification for Concrete Aggregates"; and ASTM C330 "Specification for Light Weight Aggregates for Structural Concrete".	 Design, fabrication and erection of structural steel shall be in accordance with the American Institute of Steel Construction (AISC) 360 Specification for Structural Steel Buildings and the Steel Construction Manual, Allowable Strength Design ASD.
Reinforcing shall conform to ASTM A615 grade 60, unless noted otherwise.	 Structural steel shall conform to the following ASTM specifications and minimum yield strength: W Shapes A992 Gr. 50 F_y = 50 ksi Miscellaneous shapes and plates A36 F_y = 36 ksi
Reinforcement shall be fabricated and erected according to the ACI standards: "Details and Detailing of Concrete Reinforcement", ACI 315 - and "Manual of Engineering and Placing Drawings for Reinforced Concrete Structures", ACI 315R. Welded wire fabric shall be furnished in flat sheets (rolls not permitted) and shall conform to ASTM A-185 and have a minimum side and end	Round TubesA500 Grade B $F_y = 42$ ksiPipeA53 Grade B $F_y = 35$ ksiSquare TubesA500 Grade B $F_y = 46$ ksi
Welding of reinforcing steel is prohibited unless specifically detailed. Welding where detailed shall conform to AWS D1.4 specification.	 3. Masonry and brick lintels shall be galvanized G90 per ASTM A123. 4. Checkered plate shall be F_v = 36 ksi steel per ASTM A786 and have medium raised lug pattern.
A copy of ACI SP-15 "Field Reference Manual", ACI 301 "Specifications for Structural Concrete" with a selected ACI and ASTM references, shall be kept in the Contractor's field office.	5. Anchor rods shall conform to ASTM F1554 Grade 36, unless noted Grade 55 or other on Drawings.
. Concrete shall have a minimum 28-day compressive strength and properties as follows:	 Structural steel bolting shall be ASTM A325 type N, 3/4" diameter snug tight except where other size, ASTM A490 N, pre-tensioned or slip- critical type bolts are indicated.
<u>f_c' Max. W/C Air</u> Foundations: 4,000 psi 0.50 -	 ASTM A490 bolts in tension shall be pre-tensioned. Shear connectors shall conform to the requirements of "Structural Welding Code – Steel" of the American Welding Society, ANSI/AWS D1.1,
Slab-on-grade: 4,000 psi 0.46 - Exterior Concrete: 5,000 psi 0.40 6%	F _u = 65 ksi, as manufactured by Nelson Stud Welding, Div. of TRW, or approved substitute, and welded as per Manufacturer's written instructions.
 Exterior concrete, and interior concrete subjected to freeze/thaw cycles, salt, etc., including walls, shall be air-entrained 6% +/- 1%. Concrete shall be normal weight, unless indicated otherwise. Light weight concrete, if specified for supported slabs shall be sand light-weight 	9. Welding shall be done with appropriate E70 series electrodes compatible with the new and existing steel. Welds and welding procedures shall conform to, and welders shall be qualified in accordance with, the "Structural Welding Code - Steel" of the American Welding Society, ANSI/AWS D1.1.
with a concrete unit weight not exceeding 120 pcf. . Contractor shall submit the concrete mix designs for review by the Structural Engineer. Proportion mix designs and provide proof of mix design strength as defined in ACI 301. The submittal shall include cement type and source, cement cube strength, aggregate gradations,	10. Where specifically noted as AESS, steel and connections are Architecturally Exposed Structural Steel. Finish steel in compliance with AISC Code of Standard Practice for Steel Buildings and Bridges, Section 10 - Architecturally Exposed Structural Steel.
water tests, admixture catalog information and cylinder strength test results from 30 tests, on specimens with identical mix design, for each concrete mix, or other proof of strength per ACI 301.	11. Detailing shall be performed using rational engineering design and standard practice in accordance with the Contract Documents. The typical details shown are approximate only and do not indicate the required number of bolts or weld sizes, unless specifically noted.
. The approved materials and mix design shall be fully documented and reviewed by the Testing Agency for full compliance. Responsibility for obtaining the required design strength is the Contractor's responsibility.	12. Contractor shall submit for review, typical connection details and calculations sealed by a Professional Engineer registered in the State in which the Project is being constructed for proposed connections and for connections not specifically designed and detailed. Follow the details shown where specific connections are detailed.
 Use of calcium chloride, chloride ions, or other salts in concrete is not permitted. Samples for strength tests of each class of concrete placed each day shall be taken by the Testing Agency in accordance with Project 	13. Contractor shall submit for review, engineered drawings showing shop fabrication details, field assembly details and erection diagrams for all structural steel. Show at minimum all details included in these Contract Documents with additional erection details as required to completely
Specification requirements or ACI 301. . Contractor shall prepare and submit reinforcement shop drawings to the Structural Engineer for review prior to fabrication. The shop drawings shall clearly show reinforcement lengths and bends, locations of bars, methods of support, details of placement and placement coordination	 define the interconnection of structural steel pieces. Fabricator shall be AISC Certified or have an AISC equivalent Quality Assurance program as certified by a qualified independent testing
with formwork, embedments, concrete vibration and construction joints. The drawings shall also indicate openings, sleeves, curbs and concrete dimensions in accordance with ACI 315. Provide, at minimum wall, column and beam elevations; wall, column and beam sections, material schedules, bar lap schedules and locations.	agency. 15. Anchor rods, base plates and bearing plates shall be located and built into connecting work, pre-set by templates or similar method prior to concrete placement. Plates shall be set in full beds of non-shrink grout.
. Contractor shall tie reinforcing steel securely in place prior to placing concrete and provide sufficient supports to maintain the position of reinforcing within specified tolerances during all construction activities. Inserting dowels into wet concrete is not permitted.	 Contractor shall reference Architectural drawings for miscellaneous shapes and plates not shown on structural drawings. These items shall be shop welded to the structural framing sections to minimize field welding.
. Contractor shall provide continuous reinforcement wherever possible; splice only as shown or approved; stagger splices where possible; use splice lengths as noted. Dowels shall match the size and spacing of the specified reinforcement and shall be lapped with tension splices, unless noted otherwise.	17. The length, dimension and connection detail from new structural member to existing structures shall be field verified before fabrication. Field modifications to the fabricated member or connection are not allowed without prior approval by the Structural Engineer. Contractor shall submit
. Horizontal wall reinforcement shall be continuous with the minimum lap per ACI 318 unless detailed or noted otherwise. Corner bars shall be provided at changes in wall direction (however small) and shall be of the same size and spacing as the horizontal steel. Each corner bar leg to	sketches or shop drawings detailing proposed modifications for approval. 18. Roof openings, unless otherwise noted, to be framed with L5x3x1/4 LLV. Verify size and location of all openings with the trade involved.
provide lap splice per ACI 318 unless detailed or noted otherwise. Extend horizontal wall reinforcing through piers. . Hooked bars shall be standard 90 degree hooks per ACI unless noted otherwise on the Drawings.	19. Contractor shall provide L4x4x1/4 seats at column webs where required for support of roof and floor decks. Provide angle outrigger from exterior columns for slab and roof edge plate support.
. Minimum lap splice shall be Class B per ACI 318. Location of lap splices shall be as indicated on Construction Documents and/or as shown on the approved reinforcing steel shop drawings.	20. Non-composite beam connections shall be capable of supporting minimum 50% of the Maximum Total Uniform Load, AISC Steel Construction Manual, unless specifically noted on the Drawings.
. Approved rebar couplers may be used to aid placement of dowels through forms. Mechanical splices shall develop 125% of the tensile strength of the rebar.	21. Beam connections shall be standard AISC approved connections. Extended shear plate connections protruding from column web only approved where beams/girders on either side of column web have equally loaded bays.
. Reinforcing steel shall not be cut, bent or straightened in the field unless approved by the Structural Engineer or as indicated on the Drawings. . Reinforcing steel shall be placed with the following concrete cover unless noted otherwise:	 Simple shear connections shall be capable of end rotation as per the requirements of the AISC Specification, Simple Connections, Specification Section J1.2 and Manual Part 10. Connections shall be shop welded in accordance with latest AWS Specifications for E70XX electrodes and field bolted with ASTM A325 or
 A. Concrete cast against earth (not formed): 3" B. Formed concrete exposed to earth or weather: a. #5 bars or smaller: 1 1/2" 	 ASTM A490 bolts. Contractor shall install A325 and A490 bolts in accordance with the "Specification for Structural Joints Using ASTM A325 or A490 Bolts." Snug
b. #6 thru #18 bars: 2" C. Formed concrete not exposed to earth or weather:	tight condition shall be achieved using an impact wrench, to bring the connected plies into firm contact, except where noted as slip-critical, pre- tensioned or finger tight.
 b. Slabs, joists, and walls, #14 bars or larger: 1 1/2" c. Beams, columns, pedestals, and tensions ties: 1 1/2" D. Clearance between parallel bars in a horizontal layer shall not be less than the bar diameter, 1", or 4/3 d agg, whichever is greater. E. Clearance between parallel bars in two or more horizontal layers, shall not be less than 1" between layers. 	 25. Contractor shall provide slip-critical connections at braced frames, moment connections, beams and columns supporting cranes and equipment, mechanical penthouse and elevator room framing and where bolts are in tension. 26. Contractor shall provide 3/4" diameter shoulder bolts, double nuts or tack welded nuts finger tight to allow vertical movement with lock washers
 F. Clearance between longitudinal bars in columns, pedestals, struts, and boundary elements in walls shall not be less than 1.5 times the bar diameter, 1 1/2", or 4/3 d agg, whichever is greater. G. Maximum deviation from these requirements shall be: 	 at slotted connections of wind columns or as noted. Where field welding to existing structural steel is indicated, contractor shall thoroughly clean all surfaces to receive weld, removing rust, paint,
 + 3/8" for sections with dimensions of 8" or less + 1/2" for sections with dimensions over 8" 	dirt and other foreign matter in area of work. Provide fire watch protection acceptable to the Owner.28. Stiffener plates and bearing stiffeners are to be provided in pairs.
 Tie embeds securely in place prior to placing concrete. Do not place pipes or ducts exceeding one quarter the slab or wall thickness within the slab or wall unless specifically shown and detailed on the Structural drawings. Pipes or duct shall be located within middle third of slab or wall thickness. 	29. Brick relieving angles shall be bolted to plate work as indicated and field welded after alignment to a tolerance of +/- 1/8" from the location specified on the Architectural drawings. The alignment and adjustment shall be done after placement of concrete on floor slabs and after
 Install inserts and anchors in concrete for suspending mechanical, electrical and architectural items. If additional fasteners are needed in conventionally reinforced concrete, use drilled-in type anchors located to avoid conflict with reinforcement. 	 placement of roofing including ballast where applicable. 30. Fabrication and erection tolerances for brick frames shall conform to the requirements for Architecturally Exposed Structural Steel (AESS) per AISC 303 Code of Standard Practice for Steel Buildings and Bridges Section 10, with adjustment to meet the brick shelf tolerance noted above
 Anchor rods and steel embeds (furnished by Structural Steel Contractor) shall be set by template to within a 1/8" tolerance in any direction with minimum embedment and exact projection indicated on the drawings, prior to placing concrete. 	 AISC 303 Code of Standard Practice for Steel Buildings and Bridges Section 10, with adjustment to meet the brick shell tolerance noted above unless otherwise specified. 31. Secondary steel framing supporting exterior façade shall have connections with minimum 1 inch lateral) and 1/2 inch vertical adjustment -
 No aluminum conduit or products containing aluminum or any other material injurious to the concrete shall be embedded in the concrete. Dowels into foundation shall match size and spacing of vertical reinforcement at all columns, piers and walls, unless otherwise noted. 	allowance each direction from center of attachment point. Contractor shall provide slotted holes and shims as required to provide adjustment. 32. Clean steel per SSPC-SP3 and shall receive one shop coat of paint. Omit paint at holes for slip critical type connections, at structural steel to
. Contractor shall coordinate all masonry dowel sizes and spacing to be cast into concrete with masonry reinforcing shop drawings.	 be fireproofed, encased or in contact with concrete, and on top flange of beams receiving shear connectors. 33. Steel above the roof and outside the building envelope (exposed to weather) shall be cleaned per SSPC-SP6 and hot dip galvanized.
 Provide two #5 bars (one each face) around unframed openings in slabs and walls. Place bars parallel to sides of openings and extend them 24 inches beyond corners, unless otherwise noted. Locate sleeves, openings, embeds, etc. as indicated on the drawings. The Concrete Contractor shall check with other trades to make sure the 	34. Contractor shall control erection procedures and sequences with relation to temperature differentials, especially with respect to structural steel framing into concrete walls, beams or columns.
 Sleeves, openings and embeds that are to be provided and set by them are in place prior to placing of concrete in the area involved. Contractor shall obtain approval prior to placing openings or sleeves not shown on the Drawings, through any structural member. 	35. Contractor shall provide temporary bracing as required to ensure stability of the structure under full design loads until the permanent bracing is in place. Provide necessary shoring where required during construction.
. Contractor shall review Architectural, Mechanical and Electrical drawings for bases, openings, sleeves, anchors, inserts, conduits, recesses and other devices in concrete work before placing concrete.	 36. The steel frame is self supporting for lateral loads after: a. Connections, braces and moment frames have been completely welded and bolted. b. Masonry bearing and shear walls have reached design strength.
. Horizontal construction joints are permitted only where indicated. The location of vertical construction joints shall be submitted to the Structural Engineer for review and approval. Construction joints shall be thoroughly mechanically roughened, cleaned and bonding agent applied before	c. The roof deck has been properly installed and attached.
placement of adjoining concrete. . For control joints in slabs, space joints at maximum 15'-0" on center unless otherwise noted on the Drawings. For control joints in walls, space joints at maximum 10'-0" on center unless otherwise noted on the Drawings.	
. Construction joints shall be furnished with a full length keyway centered on members. Where the size of key is not shown on the Drawings, the key shall be 25% of the cross section dimension of the member and minimum 1-1/2 inches into the first pour of concrete.	VERIFY IN FIELD (V.I.F.) ITEMS: 1. THE CONTRACTOR SHALL VERIFY EXISTING
 Provide waterstops in construction joints in cast-in-place concrete elements that have one side exposed to the weather or soil and the other side occurring adjacent to enclosed space. Refer to Drawings and Specifications for other waterproofing and damp proofing details. 	CONDITIONS FOR PORTIONS OF THE EXISTING BUILDING BEING INCORPORATED INTO THE NEW CONSTRUCTION PRIOR TO FABRICATION AND
Provide 3/4" by 3/4" chamfer strips at all exposed corners of concrete members, unless noted otherwise.	ERECTION OF NEW STRUCTURE. 2. ANY REMAINING CONDITIONS WHICH DIFFER SIGNIFICANTLY FROM WHAT IS INDICATED ON THE
 Provide dovetail slots in concrete members where masonry abuts and where required for veneer attachment. The Concrete Contractor shall be responsible for all pour sequences and construction procedures for all concrete work to account for temperature differentials and sprinkage occurring during the construction phase until the building is permanently in a mechanically controlled 	SIGNIFICANTLY FROM WHAT IS INDICATED ON THE CONSTRUCTION DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING
temperature differentials and shrinkage occurring during the construction phase until the building is permanently in a mechanically controlled environment. . Coordinate vapor retarder requirements with floor finish requirements.	 PROCEEDING. 3. ANY REMAINING ITEMS WHICH ARE FOUND TO HAVE SIGNIFICANT CORROSION, DETERIORATION
 Provide pockets or recesses in concrete work for steel columns and beams as required and/or as called for in the Specifications even if not shown on the Drawings. Provide concrete fill after steel erection. 	OR ARE OTHERWISE COMPROMISED SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.
. Refer to Architectural drawings for slab recesses and for floor finish materials and requirements.	4. THE FOLLOWING SPECIFIC ITEMS REMAINING MUST BE CHECKED (NOT A COMPREHENSIVE LIST):
 Provide recess in top of basement walls and grade beams, where applicable, for door openings, ramps, for support of thickened floor slabs, and to receive door jambs. Concrete shall be placed to the constant top of slab elevations, while maintaining the minimum concrete thickness noted on the Drawings. 	 * EXIST. FLOOR SLAB ELEVATIONS * EXIST. ROOF ELEVATIONS * VERIFY EXIST. FOOTING DEPTHS & WIDTHS
. Concrete shall be placed to the constant top of slab elevations, while maintaining the minimum concrete thickness noted on the Drawings.	VERIFY EXIST. FOOTING DEPTHS & WIDTHS CONDITION OF EXIST. ROOF FRAMING & DECK
. The use of chlorides such as deicing salts is prohibited for melting ice prior to placement of concrete.	

49.

52. Sizes of concrete placements shall not exceed the following, unless otherwise indicated on the plans: 40 feet maximum length <u>Walls:</u> Place in alternating strips (approximate width 30 feet & maximum length 200 feet) Slabs on grade:

Place in sections with a maximum area of 12,000 square feet and a maximum length of 100 feet (all Supported slabs: c₆ncrete slabs including those cast on metal deck)



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MASO	ONRY NOTES					POST-	INSTALLED ANCHORS	i.			
						1. Post-installed anchors include all mechanical and adhesive anchors noted on Construction Documents. All pos					Il post-installed anchors shall
1.	Concrete masonry has been des constructed in accordance with A			nts for Masonry Structures" and s	shall be						
2.	Concrete Masonry to have a minimum 28-day compressive strength f_m =2,000 psi unless noted otherwise.						 Use only code approved anchors with valid ICC-ESR Evaluation Report for use in base material shown on the Construction Documents. Submit ICC-ESR Evaluation Report to Structural Engineer and Special Inspection Agent for approval. 				
3.	Concrete Masonry units (CMU) s	÷	andards:			3.	Installer of post-installe	d anchors shall be trained by	anchor Manufacturer.		
	a. Load-Bearing Units: b. Medium Weight Units:	ASTM C90 105 to 125 pcf				4.	Clean existing concrete	e surface to solid structural co	oncrete. Grind smooth	for full steel contact and to prev	vent gaps between steel and A
	c. Normal Weight Units:	greater than 125 pcf						provide non-shrink grout in a			
4.	Load-bearing CMU shall be at m	inimum medium weight units, u	inless noted otherwise.			5.	Drill smaller diameter p	ilot hole in existing concrete	and check for existing	reinforcing. Do not cut or dama	ge existing reinforcing.
5.	Mortar for all masonry shall confo Elsewhere mortar may be either					6.	If existing reinforcing is	found, shift hole to avoid exist	sting reinforcing. Subn	nit location of new hole to Struc	tural Engineer for review.
	mortar.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			,	7.	Install mechanical anch detailed in ICC-ESR Ev		strict accordance with	Manufacturer's written recomm	nendations and procedure
6.	Grout shall conform to ASTM C4	76 with minimum 28-day comp	ressive strength of 3,000 psi.					•			
7.	Steel bar reinforcement shall con	form to ASTM A615, grade 60				8.	Special Inspections are ESR Evaluation Report		and adhesive anchors.	Inspect and test post installed	anchors as specified in ICC-
8.	Horizontal joint reinforcement sha on center, maximum.	all be "Ladder" type with 3/16 d	iameter longitudinal bars. Spaci	ing of horizontal joint reinforcing	shall be 16"	9.	The following anchors a their discretion.	are approved. Submittals for	alternative equal anch	ors will be reviewed by Structur	al Engineer and approved at
9.	Minimum vertical CMU wall reinfo to match size and spacing of rein						Anchor Type:	Approved Anchor	ICC-ESR Report No.	Base Material	
	wall openings with additional (2)	#5 continuous vertical reinforci	ng bars.				Screw Anchors	Hilti Kwik HUS-EZ	ESR-3027 ESR-3056	Concrete Grouted Masonry	
10.	Vertical cells containing reinforcing	ng and grout shall form a contir	າuous cavity, free of mortar dro	opings.						-	
11.	Horizontal lintels shall be placed						Steel Drop-In Anchor	Hilti HDI/HDI-L Hilti HDI-P	(n/a) (n/a)	Concrete Precast Concrete	
	positioned at the bottom of the fu approved masonry reinforcing sh		otherwise. Coordinate lintel elev	vations with Architectural Drawing	gs and		Expansion Anchors	Hilti Kwik Bolt TZ	ESR-1917	Concrete	B
40				ton of nonconsta . Double course of			Expandion Anonoro	Hilti Kwik Bolt 3	ESR-2302	Concrete (un-cracked only)	D
12.	Horizontal bond beams shall be p reinforced with (2) #5 minimum c	ontinuous horizontal reinforcing	g bars positioned at the top of th	ne fully grouted bond beam, unle	ss noted						
	otherwise. Coordinate bond bear	n elevations with Architectural	Drawings and approved mason	ry reinforcing shop drawings.			Adhesive Anchors	Hilti HIT-HY200 SAFESET Hilti HIT-HY70 + HAS/REE		Concrete Grouted Masonry	
13.	Horizontal bond beam and vertication							Hilti HIT-HY10 + HAS/REE		Hollow Masonry	
	use mechanical splices adequate size and spacing that have been the CAST-IN-PLACE CONCRET	previously installed in the foun					Note: Refer to plan note post-installed anchors.	es, details and/or schedules f	for diameter of anchor	rods or size of rebar used and	he embed depth required for
		LAP SPLICE LENGTH									
	BAR SIZE #4	24"									-
	#5	30"					FORMED METAL FRA	<u>MING</u>			
	#6 #7	48" Provide mechanical splice				1.		-	-	erected in accordance with the n Manufacturer's written instruc	-
14.	Reinforcing bars shall be held in grouting.	position by wire ties or other ap	proved means to insure desigr	n location and lap. Place bars and	d lap prior to	2.		orm to ASTM A1003, with mir /e galvanized coating conforr		ksi for 18 gauge and 50 ksi for 60	16 gauge and heavier
15.	Grouting of masonry walls shall of 3-2A – "Grouting Concrete Maso without mechanically consolidate	nry Walls" and ACI 530.1/ASC				3.	All welding shall confo welding zinc coated st		de – Sheet Steel" of th	e American Welding Society, A	WS D1.3 and AWS D19.0
16.	Lifts of grout shall be keyed 4 inc	hes into the previous course of	f masonry below.			4.		ed, all material shall be of a r f a minimum metal thickness		ss of 43 mils (18 gauge). Studs	s serving as backup for C
17.	Masonry below grade shall be gr	outed solid.				~			the definetion norminan	anta af tha finiala matanial ta ha	

BAR SIZE	LAP SPLICE LENGTH
#4	24"
#5	30"
#6	48"
#7	Provide mechanical splice

17. Masonry below grade shall be grouted solid.

18. Sampling and Testing of mortar and grout shall be in accordance ASTM C780 and ASTM C1019, respectively. One test of each is required for each 5,000 square foot of wall.

19. Construction and testing of masonry prisms shall be in accordance with the procedure outlined in the ASTM C1314. 20. Special Inspection of masonry construction is required. Refer to project specifications and ACI 530 for quality assurance requirements.

20.	Special Inspection shall include at minimum:
	 a. Mortar and grout testing. b. Reinforcement placement and lap verification. c. Verification of clear grout space prior to grouting. d. Verification of proper grouting procedures (grout lift and consolidation).
21.	Contractor shall brace masonry walls to resist wind loads until floors and roofs are in place, and the masonry has reached 75% of the required strength f_m . Bracing shall be provided in accordance with OSHA – Construction Safety Standards for Masonry Wall Bracing and NCMA TEK 3-4B – "Bracing Concrete Masonry Walls During Construction".
22.	Contractor shall shore masonry walls above masonry bond beam lintels until the masonry is placed full height and has reached the required strength.
<u>STEEL</u>	OPEN WEB JOISTS AND JOIST GIRDERS
1.	Steel open web joists and joist girders shall be designed, fabricated and erected in accordance with latest Steel Joist Institute (SJI) specifications.
2.	Manufacturers shall be members of the Steel Joist Institute (SJI).

Where noted, joists and joist girders shall be designed for additional distributed loads, concentrated loads and moments as indicated. 3. All roof joist and joist girders exposed to a work floor shall be designed for a single panel point load on the lower chord in addition to the 4. specified loads as follows:

300 lbs All occupancies 5. Contractor shall modify joist and joist girder seats where indicated and as required for end reactions and moments noted. Minimum joists bearing on a CMU wall shall be as follows (measured from the face of the wall) unless noted otherwise 6.

6" at an 8" wall 8" at a 12" wall

The maximum center-to-center spacing of steel joists shall be 6'-6" U.N.O. 7.

Contractor shall provide top chord extensions as shown on Structural or Architectural drawings. Contractor shall provide bottom chord extensions at all columns and exterior spandrels as noted. Where moment connections are indicated on 9. drawings, connect bottom chord after dead load is applied. Size connection for loads indicated.

10. Contractor shall provide connections for additional members and bracing shown within the joist depth. 11. Contractor shall provide bridging meeting the minimum requirements of SJI, including wind uplift considerations, unless detailed otherwise. (Provide bridging at first interior panel point from support for wind uplift.) Horizontal bridging shall be continuous top and bottom, anchored at

each end, and welded to each joist. Diagonal bridging shall be bolted to each joist and clamped at the intersection. 12. Joist bridging in first joist space adjacent to masonry walls and shorter span steel wide flange beams shall be horizontal, not diagonal bridging.

13. Joists and joist girders shall be cambered for deflection due to dead loads or as specifically noted on plan.

14. Live load deflection shall not exceed span/360 for joists, special joists and joist girders. 15. Joist and joist girders shall be connected to support in accordance with SJI minimum requirements, or as required to resist loads shown on the drawings.

16. Stagger joists as required to achieve minimum bearing length per SJI.

17. Contractor shall submit shop drawings with erection plans, details and loading diagrams for special joists and joist girders and camber for review by Structural Engineer. Shop drawings shall be sealed and signed by a Professional Engineer registered in the State the Project. Provide sealed design calculations for all special joists and joist girders for review by Structural Engineer.

18. Joists and joist girders shall receive one coat of shop primer paint except those receiving fireproofing. Refer to Architectural drawings for fireproofing requirements.

STEEL DECK

1 2 3 4 5 6 7 8 9

Steel decks shall be as noted on drawings, fabricated and erected in accordance with the latest Steel Deck Institute (SDI) specifications. Manufacturer shall be a member of the Steel Deck Institute (SDI). 2.

Steel roof deck shall conform to the requirements of and be a Factory Mutual approved product. 3.

Steel deck shall have galvanized coating conforming to ASTM A653, coating designation G90 for roof deck and G60 for floor deck. Touch-up 4. paint galvanized surfaces with zinc rich paint after cutting and welding. Clean as required to receive fireproofing. Refer to Architectural drawings for fireproofing requirements.

5. Design of floor deck as a form shall conform to the requirements of SDI Specifications and Commentary for composite steel floor deck, except that calculated theoretical deflections as defined under Paragraph 3.3 shall not exceed span/240 or 1/2", whichever is smaller.

Contractor shall provide engineering calculations or published Manufacturer's data and independently certified test data verifying the specified 6. deck requirements. Provide engineered and checked shop drawings indicating location, gage and size of each piece of decking. Erection drawings shall clearly show details, size and spacing of connections to structural framing and side laps. Steel deck shall be continuous over 3 spans in the direction indicated. Single and double spans, if required, shall satisfy load and deflection 7. requirements.

8. Contractor shall provide accessories including closures, "Z" closures, column closures, screed angles and girder fillers, as required to contain the slab concrete and as required to adequately support the steel deck all sides on the steel framing.

Steel decking shall be welded as shown or minimum at maximum 12" on center to the supporting steel with 5/8" diameter puddle welds unless 9. otherwise noted. Weld roof deck at maximum 6" on center to perimeter, moment frame and braced frame steel members. Side laps shall be fastened at maximum 30" on center.

10. Steel decking shall be welded to structural steel by qualified welders using pre-qualified procedures. Establish a welding procedure for the plug weld of the steel decking to the structural steel for the particular gage used. Prior to the start of erection of the steel deck, each welder shall be qualified according to AWS requirements.

11. No loads shall be permitted to be hung from any roof deck. Mechanical piping over 2 1/2 inches in diameter shall not be hung from floor deck. Hangers for ceilings, ductwork, electrical conduit, piping, etc. shall be directly from structural steel work or supplementary members.

All cold formed metal framing members shall meet the deflection requirements of the finish material to be attached to the cold 5. formed metal framing work. Deflection of cold formed metal framing members serving as back up for brick veneer shall not exceed span/600 under serviceability wind load.

When not specifically designed, the contractor shall submit calculations and layout for stud size, spacing and connection prepared 6. and sealed by a Professional Engineer registered in the State of the Project for review by the Architect/Engineer. All studs and joists shall be installed at spacing indicated on the drawings, unless noted, each side of the openings shall be framed 7.

with double studs.

8. All studs and joists shall have a bridging line installed at a maximum distances of 4'-0" and 5'-0", respectively.

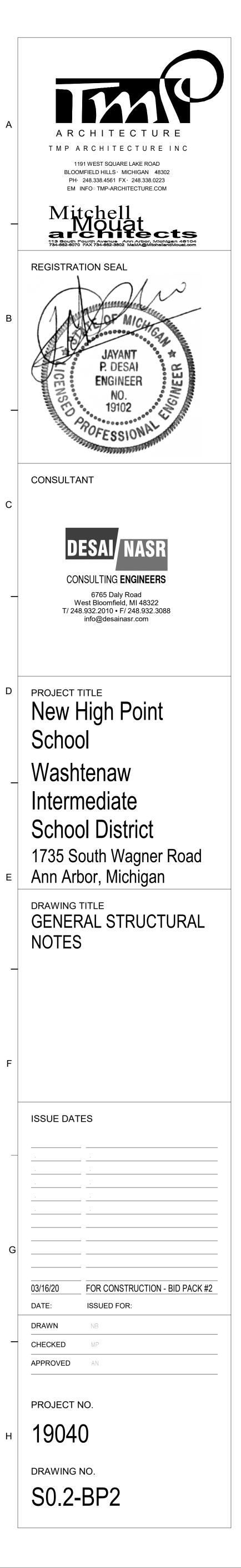
the Drawings or as listed in the Manufacturer's uniform loading capacity tables, whichever is greater.

9. All Joists shall have web stiffeners at reaction points and concentrated loads.

10. The nomenclature used for the design of cold formed metal framing is from the AISI Manual. All members supplied shall meet or exceed the strength shown in the AISI Manual. 11. Structural connections of cold formed metal framing members shall be made per manufacturer's recommendations, adequate to carry the imposed loads, and conforming to the AISI and AWS specifications. Connection design to be based on reactions given on

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		STATE	MENT OI	SPECIA	AL INSP
1.	SPE	CIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE 20	15 MICHIGAN (IN	ITERNATIONAL) E	BUILDING COD
2.	DES	SIGNATIONS:			
	SI	SPECIAL INSPECTOR QUALIFIED WITH DEMONSTRATED COMPETENCE D AS SUBMITTED AND APPROVED BY THE BUILDING OFFICIAL. SPECIAL IN			
	TA	TESTING AGENCY QUALIFIED TO TEST AND INSPECT MATERIALS AND AS	SEMBLIES. TES	STING AGENCY S	HALL BE UNDE
	GE	GEOTECHNICAL ENGINEER WHO PROVIDED THE ORIGINAL PROJECT GE	OTECHNICAL SO	DILS INVESTIGAT	ION REPORT.
	SE	SPECIALTY ENGINEER RESPONSIBLE FOR DESIGNING ASSEMBLIES SUC OBSERVATION OF FABRICATED AND INSTALLED ITEMS OF THEIR DESIG			
3.		GE AND SE SHALL SUBMIT RECORDS OF THE INSPECTION RESULTS TO THAT INCLUDE STATEMENTS OF TESTS, WHETHER INSTALLED/FABRICATED			
4.	CON	HALL PROVIDE A DAILY REPORT OF ANY DISCREPANCIES FROM THE CON //PLIANCE CAN FOLLOW BY A MAXIMUM OF 2 WEEKS. SI SHALL PROVIDE A _DING OFFICIAL, IN ACCORDANCE WITH SECTION 1704.2.4.			
5.	SI, T	A & GE SHALL BE ENGAGED BY THE OWNER IN COMPLIANCE WITH THE M	ICHIGAN (INTER	NATIONAL) BUILE	DING CODE.
6.	OF FAB	ERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-R THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION. SI RICATION	PECIAL INSPECT	IONS DURING FA	ABRICATION AF
) QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROI /ERNING BUILDING CODE. APPROVAL SHALL BE BASED UPON REVIEW OF			
7.	REF	ER TO SPECIAL INSPECTION SCHEDULES AND GENERAL STRUCTURAL NO	DTES FOR ADDIT	IONAL QUALITY	CONTROL TES
		SPECIAL INSPECTION	N REQUI	REMENT	'S - SOI
		INSPECTION TASK	INS	SPECTION FF	REQUENCY

	SPECIAL INSPECTION REQUIREMENTS - SOILS AND FOUNDATIONS								
		INSPECTION FREQUENCY		REFERENCED	IBC REFERENCE	RESPONSIBLE			
	INSPECTION TASK	CONTINUOUS	PERIODIC	STANDARD	IDC REFERENCE	AGENT			
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE			
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE			
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE/TA			
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	х	-	GEOTECHNICAL REPORT	1705.6	SI/GE/TA			
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE/TA			

SPECIAL	INSPECTION	REQUIREMEN	TS - MASONRY

		MINIMUM	TESTS				
	VERIFICATION OF SLUMP FLOW AND V IN ACCORDANCE WITH SPECIFIC					SITE	
	VERIFICATION OF fm AND faac IN ACCOR EXCEPT WHER		PECIFICATION AF		IOR TO CONSTR	UCTION,	
	N	IINIMUM SPECIA	L INSPECTION				
		INSPECTION	FREQUENCY	RE	FERENCE CRITE	RIA	
	TASK	CONTINUOUS	PERIODIC	IBC SECTION	TMS 402 ACI 530 ASCE 5	TMS 602 ACI 530.1 ASCE 6	RESPONSIBLE AGENT
	VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPL	- IANCE [:]	Х	-	-	ART. 1.5	SI
	A. PROPORTIONS OF SITE-PREPARED MORTAR.		x			ART. 2.1, 2.6A	
ŀ	3. CONSTRUCTION OF MORTAR JOINTS.	-	X	-	-	ART. 2.1, 2.0A ART. 3.3B	
ł	C. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.	-	X	-	-	ART. 2.4B, 2.4H	
-	 D. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES. 	-	x	-	-	ART. 3.4, 3.6A	SI
	E. PRESTRESSING TECHNIQUE.	-	X	-	-	ART. 3.6B	
-	F. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY.	X FOR FIRST 5,000 SQ.FT. OF ACC MASONRY	X AFTER FIRST 5,000 SQ.FT. OF ACC MASONRY	-	-	ART. 2.1C	
	PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		1	1		1	
	A. GROUT SPACE.	-	X	-	-	ART. 3.2D, 3.2F	
	 GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR RODS, AND PRESTRESSING TENDONS AND ANCHORAGES. 	-	Х	-	SEC. 6.1	ART. 2.4, 3.4	
	C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	-	x	-	SEC. 6.1, 6.2.1, 6.2.6, 6.2.7	ART. 3.2E, 3.4, 3.6A	SI/TA
	D. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	-	Х	-	-	ART. 2.6B, 2.4 G.1.b	
	E. CONSTRUCTION OF MORTAR JOINTS.	-	X	-	-	ART. 3.3B	
•	VERIFY DURING CONSTRUCTION:						
	A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	X	-	-	ART. 3.3F	
	 TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION. 	-	x	-	SEC. 1.2.1(e), 6.1.4.3, 6.2.1	-	
	C. WELDING OF REINFORCEMENT.	Х	-	-	SEC. 8.1.6.7.2, 9.3.3.4(c),11.3.3.4(b)	-	
	D. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	-	x	-	-	ART. 1.8C, 1.8D	SI/TA
	E. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	-	-	-	ART. 3.6B	
-	F. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE.	X	-	-	-	ART. 3.5, 3.6C	
-	G. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS.	X FOR FIRST 5,000 SQ.FT. OF ACC MASONRY	X AFTER FIRST 5,000 SQ.FT. OF ACC MASONRY	-	-	ART. 3.3 B.9, 3.3 F.1.b	
	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS.	-	x	-	-	ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4	SI/TA

		INSPECTION F	REQUENCY	REFERENCED		RESPONSIBLE	
	INSPECTION TASK	CONTINUOUS PERIODIC		STANDARD	IBC REFERENCE	AGENT	
1.	INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	Х	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	SI	
2.	REINFORCING BAR WELDING:						
	A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	Х	AWS D1.4		CI	
	B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	-	Х	ACI 318: 26.6.4	-	SI	
	C. INSPECT ALL OTHER WELDS	Х	-				
3.	INSPECT ANCHORS CAST IN CONCRETE.	-	Х	ACI 318: 17.8.2	-	SI / TA	
4.	INSPECT ANCHORS POST-INSTALLED IN HARDENED MEMBERS.					SI / TA	
	A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	Х		ACI 318: 17.8.2.4			
	B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.		Х	ACI318: 17.8.2			
5.	VERIFY USE OF REQUIRED DESIGN MIX.	-	Х	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	SI / TA	
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	Х	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10	SI / TA	
7.	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	Х	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8	SI	
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	Х	ACI 318: 26.5.3-26.5.5	1908.9	SI	
9.	INSPECT PRESTRESSED CONCRETE FOR:						
	A. APPLICATION OF PRE-STRESSED FORCES	Х	-	ACI 318: 26.10	-	SI / SE	
	B. GROUTING OF BONDED PRESTRESSING TENDONS	Х	-				
10.	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	Х	ACI 318: Ch. 26.8	-	SI / SE	
11.	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.	-	х	ACI 318: 26.11.2	-	SI / SE / TA	
12.	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	Х	ACI 318: 26.11.1.2(b)	-	SI / SE / TA	

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NSPECTIONS

G CODE CHAPTER 17 AND AS MODIFIED HEREIN.

I RECOGNIZED AGENCIES SUCH AS AWS, ACI, MASONRY INSTITUTE OF MICHIGAN (MIM), ETC LE SPECIALISTS AND A PROJECT MANAGER PROVIDING REPORTS. E UNDER THE SUPERVISION OF THE SPECIAL INSPECTOR.

TS, COLD FORMED FRAMING ASSEMBLIES, ETC. SPECIALTY ENGINEER SHALL PROVIDE

IT INSPECTION RECORDS TO THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL. RECORDS MENTS, REMEDIAL WORK PERFORMED, RETESTS. ME DAY OF THE INSPECTION TO THE ENGINEER OF RECORD. FORMAL REPORTS OF

RY OF ALL TESTS PERFORMED AND RESULTS TO THE ENGINEER OF RECORD AND

BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS TION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAILED RICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND THE PROCEDURES AND PERIODIC INSPECTION OF FABRICATION PRACTICES BY THE BUILDING.. TESTING AND INSPECTIONS.

RY: LEVEL B QUALITY ASSURANCE

INSPECTION TASK INSPECTION OF STEEL FABRICATED ITEMS SHALL BE PERFORME DURING FABRICATION. A. EXCEPTIONS: SPECIAL INSPECTIONS DURING FABRICATION WHERE THE FABRICATOR IS REGISTERED AND APPROVED I SECTION 1704.2.5.1. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRU ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREC ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REC AISC 360. A. SPECIAL INSPECTION OF RAILING SYSTEMS COMPOSED OF STEEL ELEMENTS SHALL BE LIMITED TO WELDING INSPECT THE BASE OF CANTILEVERED RAIL POSTS. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABR QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS INSPECTION TASK INSPECTION OF BOLTING INSPECTION TASKS PRIOR TO BOLTING: MANUFACTURER'S CERTIFICATIONS AVAILABLE FC MATERIALS. B. FASTENERS MARKED IN ACCORDANCE WITH ASTM С. PROPER FASTENERS SELECTED FOR THE JOINT D BOLT LENGTH IF THREADS ARE TO BE EXCLUDED F PROPER BOLTING PROCEDURE SELECTED FOR JOI D. CONNECTING ELEMENTS, INCLUDING THE APPROPI SURFACE CONDITION AND HOLE PREPARATION, IF APPLICABLE REQUIREMENTS. PRE-INSTALLATION VERIFICATION TESTING BY INST PERSONNEL OBSERVED AND DOCUMENTED FOR FA ASSEMBLIES AND METHODS USED. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, OTHER... INSPECTION TASKS DURING BOLTING: A. FASTENER ASSMEBLIES, OF SUITABLE CONDITION, HOLES AND WASHERS (IF REQUIRED) ARE POSITIO JOINT BROUGHT TO THE SNUG-TIGHT CONDITION P PRETENSIONING OPERATION. FASTENER COMPONENT NOT TURNED BY THE WRE FROM ROTATING. FASTENERS ARE PRETENSIONED IN ACCORDANCE SPECIFICATION, PROGRESSING SYSTEMATICALLY F RIGID POINT TOWARD THE FREE EDGES. INSPECTION TASKS AFTER BOLTING: A. DOCUMENT ACCEPTANCE OR REJECTION OF BOLT : OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED P: PERFORM THESE TASKS FOR EACH BOLTED CONNECTION. INSPECTION OF WELDING: INSPECTION TASKS PRIOR TO WELDING: WELDING PROCEDURE SPECIFICATIONS (WPSs) AV Α. MANUFACTURER CERTIFICATIONS FOR WELDING AVAILABLE. MATERIAL IDENTIFICATION (TYPE/GRADE). C. WELDER IDENTIFICATION SYSTEM. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEO - JOINT PREPARATION - DIMENSIONS (ALIGNMENT, ROOT OPENING, RO - CLEANLINESS (CONDITION OF STEEL SURFACE - TACKING (TACK WELD QUALITY AND LOCATION) - BACKING TYPE AND FIT (IF AVAILABLE) CONFIGURATION OF FINISH AND ACCESS HOLES. F FIT-UP OF FILLET WELDS: G. - DIMENSIONS (ALIGNMENT, GAPS AT ROOT) - CLEANLINESS (CONDITION OF STEEL SURFACE - TACKING (TACK WELD QUALITY AND LOCATION) H. CHECK WELDING EQUIPMENT. INSPECTION TASKS DURING WELDING: A. USE OF QUALIFIED WELDERS. CONTROL AND HANDLING OF WELDING CONSUMAE В. - PACKAGING - EXPOSURE CONTROL NO WELDING OVER CRACKED TACK WELDS. С ENVIRONMENTAL CONDITIONS: - WIND SPEED WITHIN LIMITS - PRECIPITATION AND TEMPERATURE WPS FOLLOWED: - SETTINGS ON WELDING EQUIPMENT - TRAVEL SPEED - SELECTED WELDING MATERIALS - SHIELDING GAS TYPE/FLOW RATE - PREHEAT APPLIED - INTERPASS TEMPERATURE MAINTAINED (MIN./M - PROPER POSITION (F, V, H, OH) WELDING TECHNIQUES: - INTERPASS AND FINAL CLEANING - EACH PASS WITHIN PROFILE LIMITATIONS - EACH PASS MEETS QUALITY REQUIREMENTS 3. INSPECTION TASKS AFTER WELDING: A. WELDS CLEANED. SIZE, LENGTH AND LOCATION OF WELDS. Β. WELDS MEET VISUAL ACCEPTANCE CRITERIA: - CRACK PROHIBITION. - WELD/BASE-METAL FUSION. - CRATER CROSS SECTION. - WELD PROFILES. - WELD SIZE. - UNDERCUT. - POROSITY. D. ARC STRIKES. K-AREA. Ε. BACKING REMOVED AND WELD TABS REMOVED (IF F REPAIR ACTIVITY. G. DOCUMENT ACCEPTANCE OR REJECTION OF WELL Η. MEMBER. : OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEE : PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION CONCRETE PLACEMENT: PLACEMENT AND INSTALLATION OF STEEL DECK. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEME O: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATION P: PERFORM THESE TASKS FOR EACH STEEL ELEMENT.

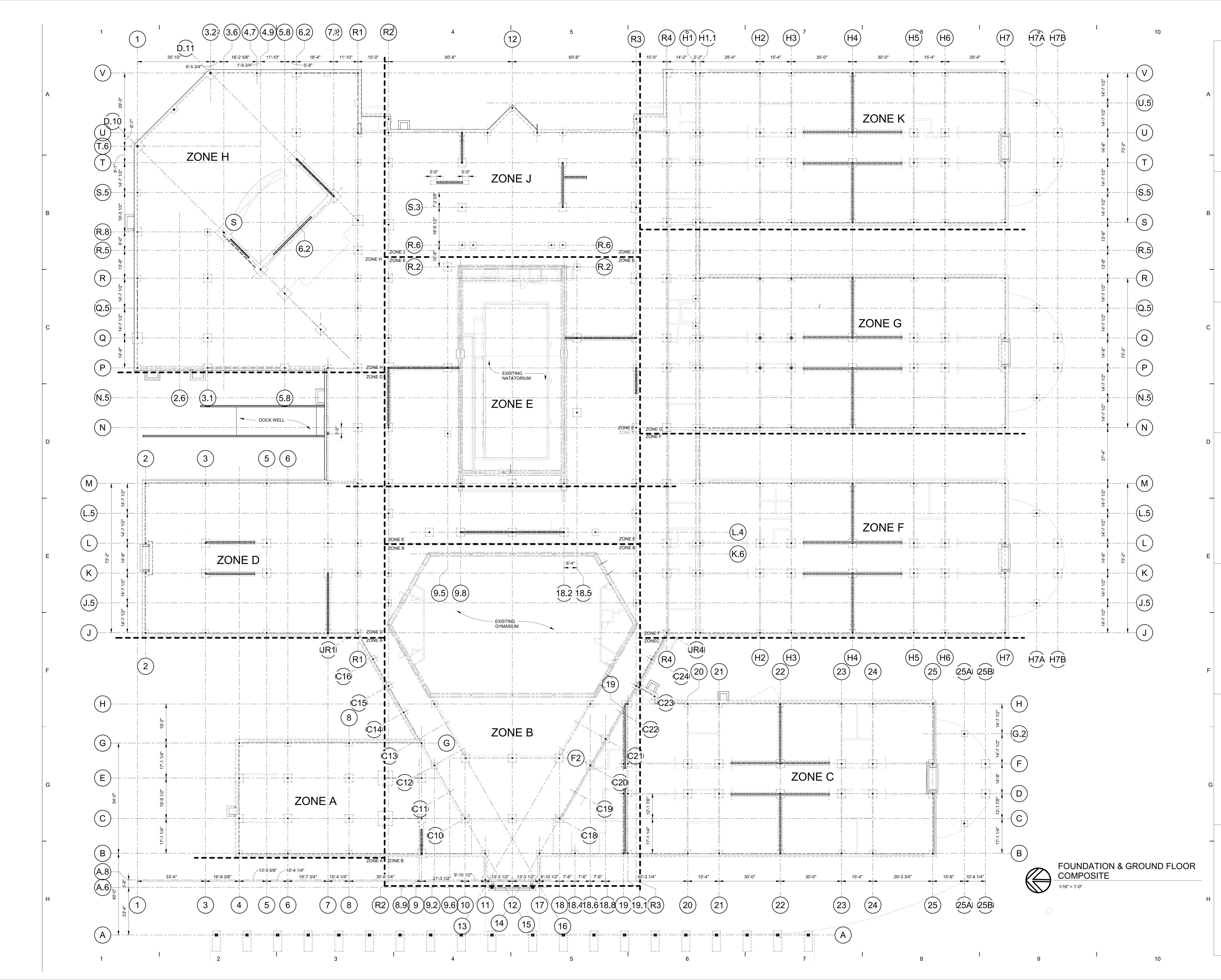
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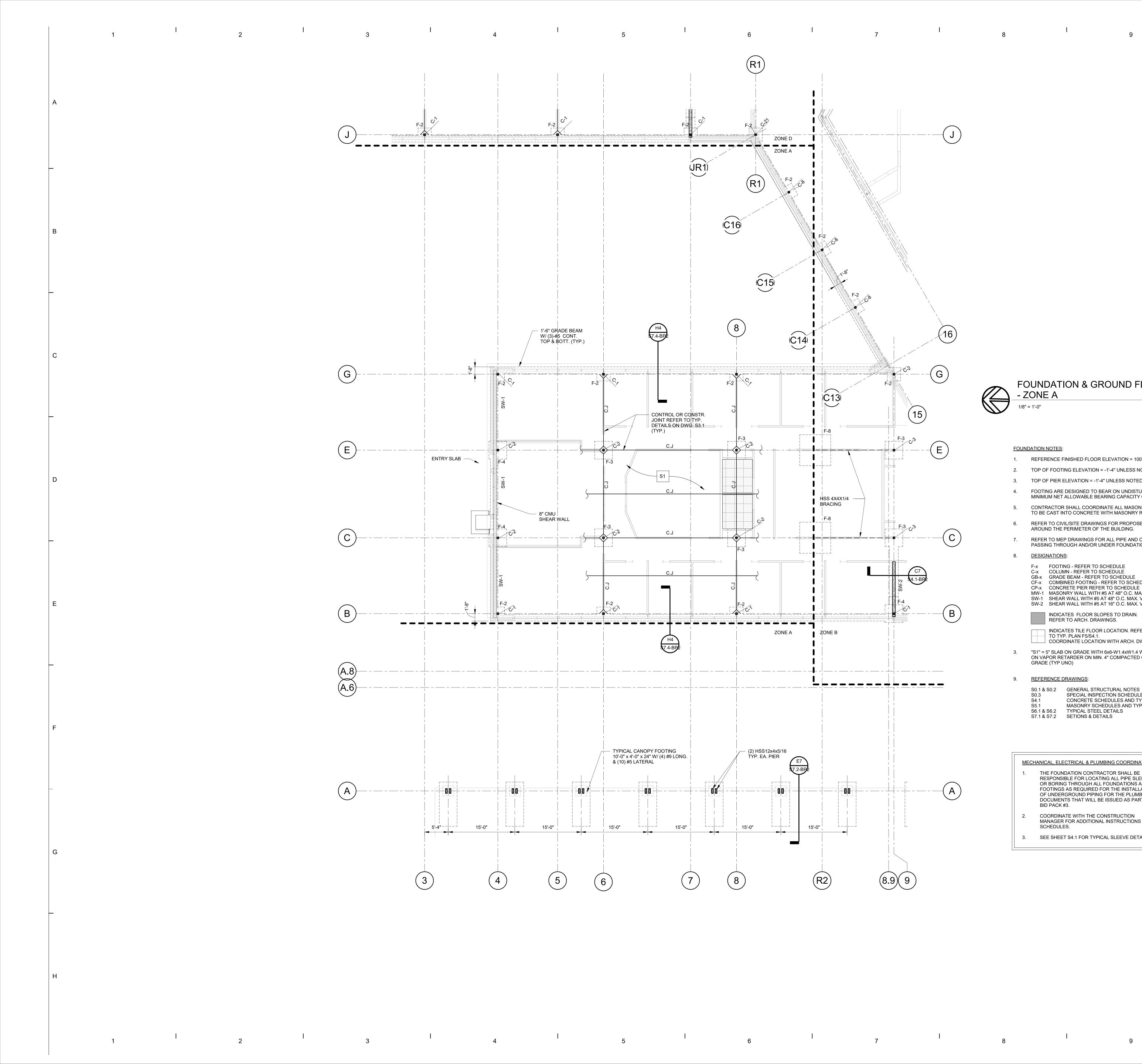
	INSPECTION	FREQUENCY	REFERENCED		RESPONSIBLE
_	CONTINUOUS	PERIODIC	STANDARD	IBC REFERENCE	AGENT
IED ON PREMISES	-	Х			
ON NOT REQUIRED O IN ACCORANCE WITH	-	-	AISC QUALITY CERTIFICATION	1704.2.5	SI
RUCTURAL STEEL EOF SHALL BE IN QUIREMENTS OF	х	х	AISC QUALITY CERTIFICATION	1705.2.1	SI
OF STRUCTURAL CTION OF WELDS AT	-	x	AISC QUALITY CERTIFICATION	1705.2.1	SI
RICATOR AND ERECTOR		ING JURISDICTION, APP	LICABLE BUILDING CODE, PU	JRCHASER, OWNER, OR ENGI	NEER OF RECORD.
	INSPECTION	FREQUENCY	REFERENCED	IBC REFERENCE	RESPONSIBLE
	QC	QA	STANDARD		AGENT
OR FASTENER	0	Р			
M REQUIREMENTS.	0	0			
DETAIL (GRADE, TYPE,	0	0			
FROM SHEAR OINT DETAIL.	0	0	AISC 360, SECTION N5,	1705.2	SI/TA
PRIATE FAYING			TABLE N5.6-1		
F SPECIFIED, MEET	0	0			
STALLATION FASTENER	Р	0			
WASHERS AND		-			
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PRIOR TO THE	0	0	AISC 360, SECTION N5,	1705.2	SI/TA
RENCH PREVENTING	0	0	TABLE N5.6-2	1703.2	SINA
E WITH THE RCSC					
Y FROM THE MOST	0	0			
			AISC 360, SECTION N5,	1705.2	SI/TA
TED CONNECTIONS.	Р	Р	TABLE N5.6-3		
ED NOT BE DELAYED PE	ENDING THESE INSPEC	TIONS.			
VAILABLE.	Р	Р			
CONSUMABLES	Р	Р			
	0	0			
OMETRY):	0	0			
OOT FACE, BEVEL) ES) N)	0	0	AISC 360, SECTION N5, TABLE N5.4-1	1705.2	SI/TA
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DED JOINT OR	Р	Р			
ED NOT BE DELAYED PE	ENDING THESE INSPEC	TIONS.			
R.				1	1
I PRIOR TO					
I PRIOR TO	Р	Р	AISC 360, SECTION N6,	1705.2	SI/TA
ANCHORS.	P P P	P P P	AISC 360, SECTION N6, TABLE N6.1	1705.2	SI/TA

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FOUNDATION NOTES:

1/8" = 1'-0"

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- 1. REFERENCE FINISHED FLOOR ELEVATION = 100'-0"
- 2. TOP OF FOOTING ELEVATION = -1'-4" UNLESS NOTED THUS [XX'-XX"]
- TOP OF PIER ELEVATION = -1'-4" UNLESS NOTED THUS (XX'-XX")
- FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A 4 MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
- 5.

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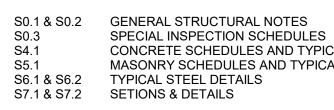
- CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
- REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING. 6.
- REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS 7.

PASSING THROUGH AND/OR UNDER FOUNDATIONS. DESIGNATIONS: 8.

- F-x FOOTING REFER TO SCHEDULE C-x COLUMN REFER TO SCHEDULE
- GB-x GRADE BEAM REFER TO SCHEDULE CF-x COMBINED FOOTING - REFER TO SCHEDULE
- CP-x CONCRETE PIER REFER TO SCHEDULE MW-1 MASONRY WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT U.N.O.
- SW-1 SHEAR WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT SW-2 SHEAR WALL WITH #5 AT 16" O.C. MAX. VERTICAL REINFORCEMENT
- INDICATES FLOOR SLOPES TO DRAIN. REFER TO ARCH. DRAWINGS.
- INDICATES TILE FLOOR LOCATION. REFER TO TYP. PLAN F5/S4.1.
- COORDINATE LOCATION WITH ARCH. DWGS.
- "S1" = 5" SLAB ON GRADE WITH 6x6-W1.4xW1.4 W.W.F. PLACED AT MID-DEPTH OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP UNO)
- REFERENCE DRAWINGS: 9.

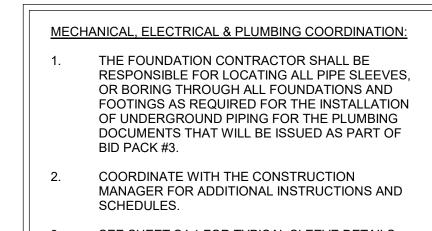
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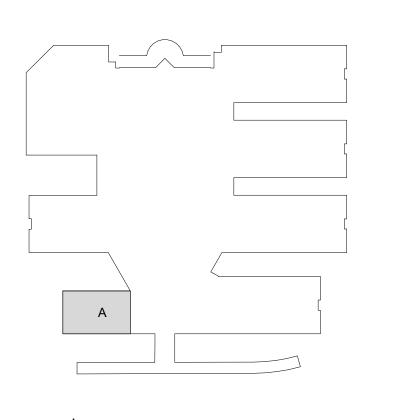


CONCRETE SCHEDULES AND TYPICAL DETAILS MASONRY SCHEDULES AND TYPICAL DETAILS

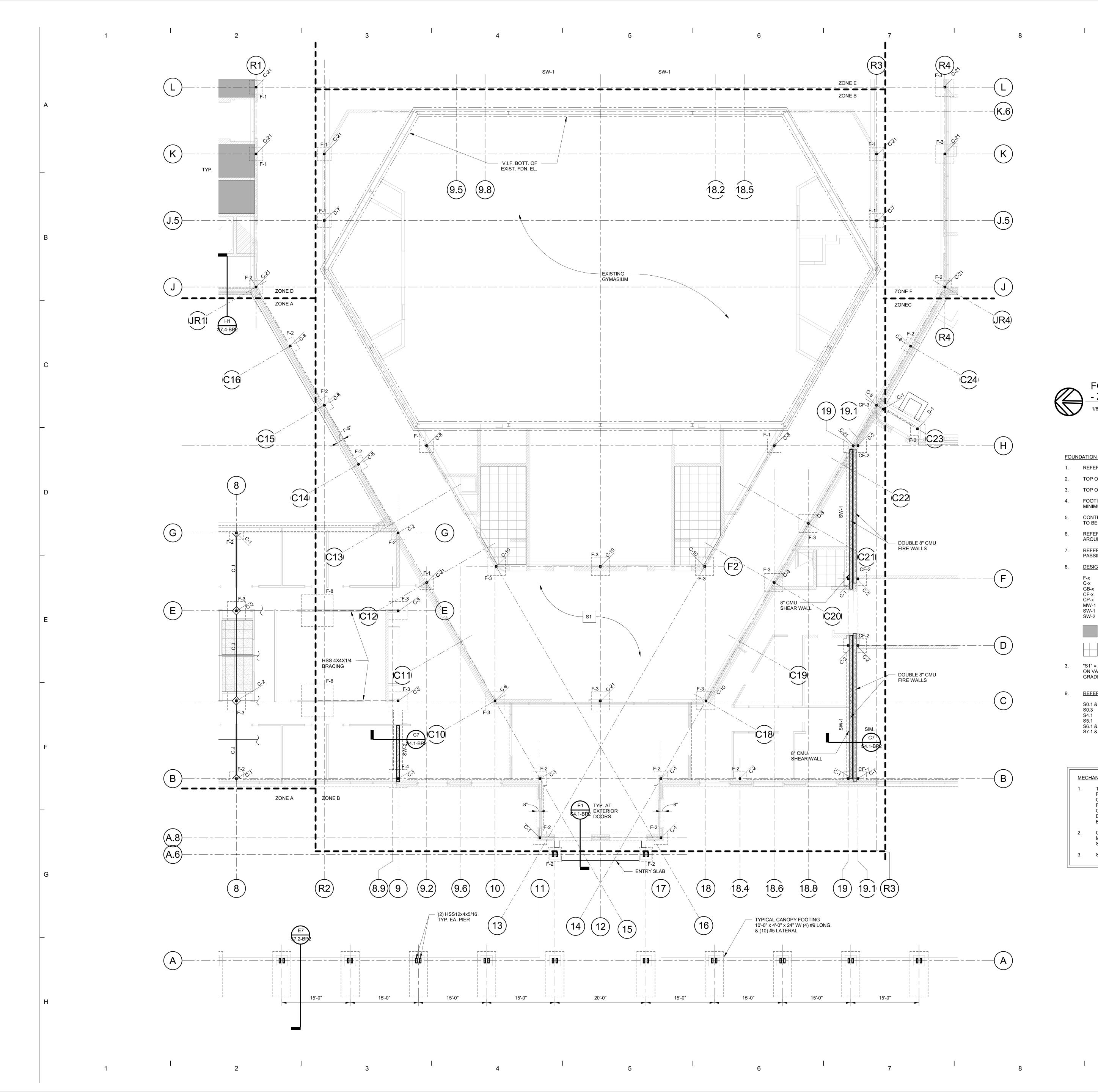
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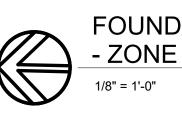












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FOUNDATION & GROUND FLOOR - ZONE B

FOUNDATION NOTES:

- REFERENCE FINISHED FLOOR ELEVATION = 100'-0" 1.
- TOP OF FOOTING ELEVATION = -1'-4" UNLESS NOTED THUS [XX'-XX"]
- TOP OF PIER ELEVATION = -1'-4" UNLESS NOTED THUS (XX'-XX")
- FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
- CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
- REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
- REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS. 7.

DESIGNATIONS: 8.

- FOOTING REFER TO SCHEDULE F-x COLUMN - REFER TO SCHEDULE C-x
- GB-x GRADE BEAM - REFER TO SCHEDULE COMBINED FOOTING - REFER TO SCHEDULE
- CF-x CP-x CONCRETE PIER REFER TO SCHEDULE
- MW-1 MASONRY WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT U.N.O. SW-1 SHEAR WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT SW-2 SHEAR WALL WITH #5 AT 16" O.C. MAX. VERTICAL REINFORCEMENT
- INDICATES FLOOR SLOPES TO DRAIN. REFER TO ARCH. DRAWINGS.
- INDICATES TILE FLOOR LOCATION. REFER
- TO TYP. PLAN F5/S4.1. COORDINATE LOCATION WITH ARCH. DWGS.
- 3. "S1" = 5" SLAB ON GRADE WITH 6x6-W1.4xW1.4 W.W.F. PLACED AT MID-DEPTH OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP UNO)

REFERENCE DRAWINGS:

S0.1 & S0.2GENERAL STRUCTURAL NOTESS0.3SPECIAL INSPECTION SCHEDULESS4.1CONCRETE SCHEDULES AND TYPICAL DETAILS MASONRY SCHEDULES AND TYPICAL DETAILS S5.1 S6.1 & S6.2 TYPICAL STEEL DETAILS S7.1 & S7.2 SETIONS & DETAILS

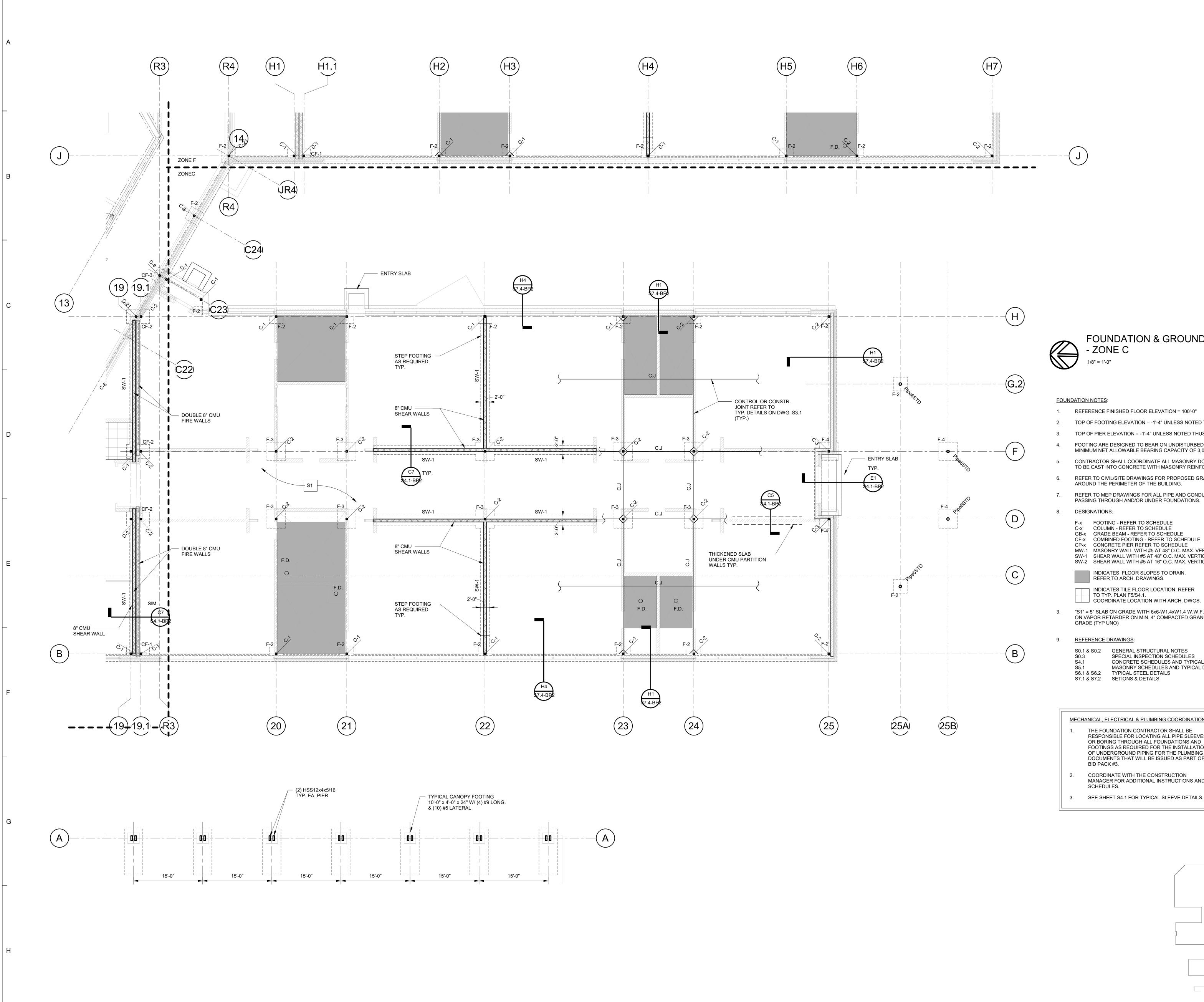
MECHANICAL, ELECTRICAL & PLUMBING COORDINATION: THE FOUNDATION CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL PIPE SLEEVES, OR BORING THROUGH ALL FOUNDATIONS AND FOOTINGS AS REQUIRED FOR THE INSTALLATION OF UNDERGROUND PIPING FOR THE PLUMBING DOCUMENTS THAT WILL BE ISSUED AS PART OF BID PACK #3. COORDINATE WITH THE CONSTRUCTION MANAGER FOR ADDITIONAL INSTRUCTIONS AND SCHEDULES. 3. SEE SHEET S4.1 FOR TYPICAL SLEEVE DETAILS.

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FOUNDATION & GROUND FLOOR PLAN - ZONE C

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FOUNDATION NOTES:

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REFERENCE FINISHED FLOOR ELEVATION = 100'-0" TOP OF FOOTING ELEVATION = -1'-4" UNLESS NOTED THUS [XX'-XX"] TOP OF PIER ELEVATION = -1'-4" UNLESS NOTED THUS (XX'-XX")

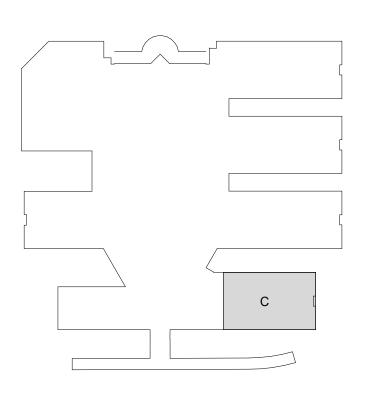
- FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
- CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING
- TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
- REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
- REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.

DESIGNATIONS:

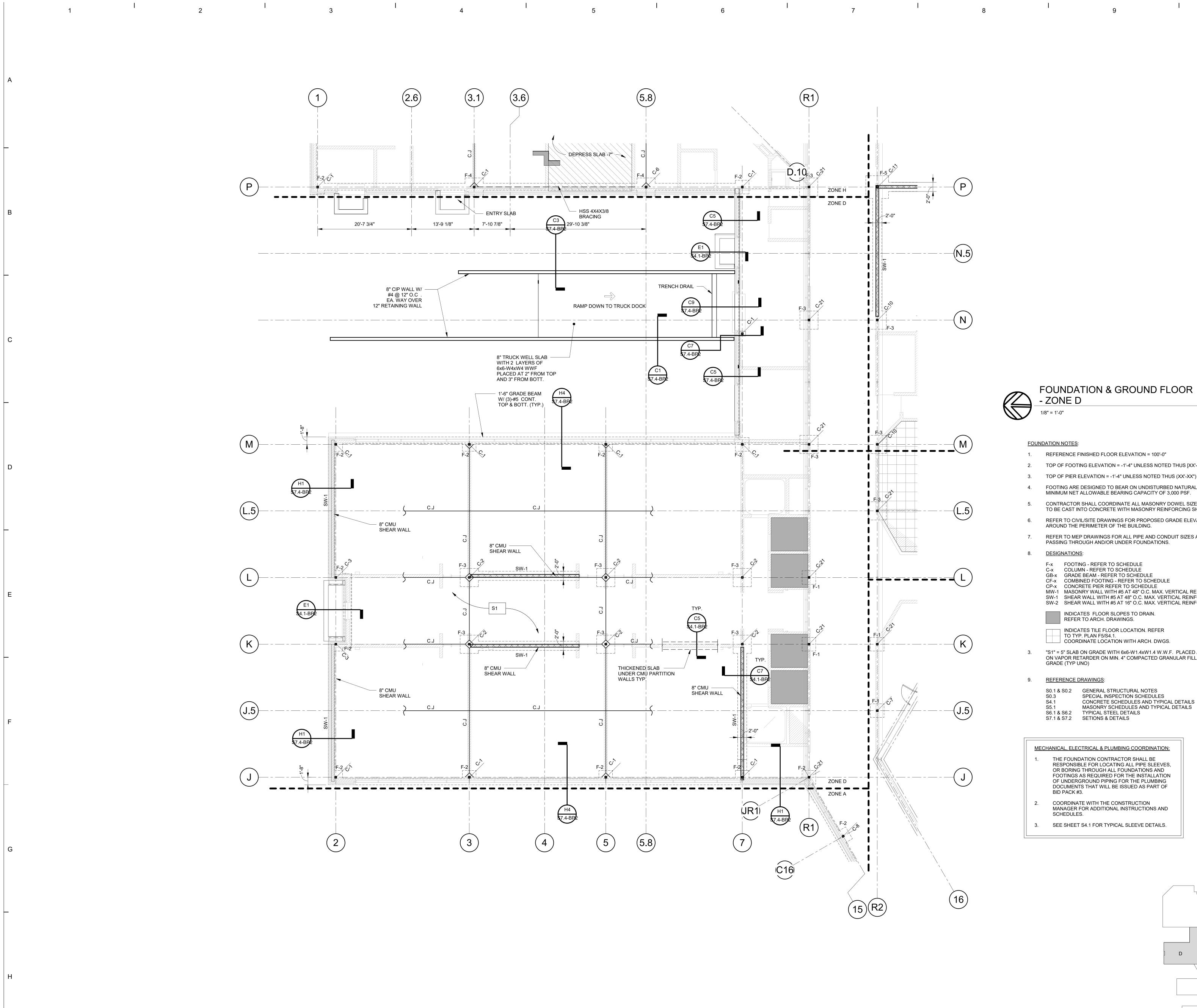
- F-x FOOTING REFER TO SCHEDULE COLUMN - REFER TO SCHEDULE GB-x GRADE BEAM - REFER TO SCHEDULE CF-x COMBINED FOOTING - REFER TO SCHEDULE CP-x CONCRETE PIER REFER TO SCHEDULE MW-1 MASONRY WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT U.N.O. SW-1 SHEAR WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT SW-2 SHEAR WALL WITH #5 AT 16" O.C. MAX. VERTICAL REINFORCEMENT INDICATES FLOOR SLOPES TO DRAIN. REFER TO ARCH. DRAWINGS. INDICATES TILE FLOOR LOCATION. REFER TO TYP. PLAN F5/S4.1. COORDINATE LOCATION WITH ARCH. DWGS.
- "S1" = 5" SLAB ON GRADE WITH 6x6-W1.4xW1.4 W.W.F. PLACED AT MID-DEPTH OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-

REFERENCE DRAWINGS:

- S0.1 & S0.2GENERAL STRUCTURAL NOTESS0.3SPECIAL INSPECTION SCHEDULES CONCRETE SCHEDULES AND TYPICAL DETAILS
- MASONRY SCHEDULES AND TYPICAL DETAILS S6.1 & S6.2 TYPICAL STEEL DETAILS
- MECHANICAL, ELECTRICAL & PLUMBING COORDINATION: THE FOUNDATION CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL PIPE SLEEVES, OR BORING THROUGH ALL FOUNDATIONS AND FOOTINGS AS REQUIRED FOR THE INSTALLATION OF UNDERGROUND PIPING FOR THE PLUMBING DOCUMENTS THAT WILL BE ISSUED AS PART OF BID PACK #3. COORDINATE WITH THE CONSTRUCTION MANAGER FOR ADDITIONAL INSTRUCTIONS AND SCHEDULES.







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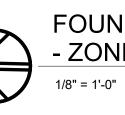
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FOUNDATION & GROUND FLOOR - ZONE D

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FOUNDATION NOTES:

- 1. REFERENCE FINISHED FLOOR ELEVATION = 100'-0"
- TOP OF FOOTING ELEVATION = -1'-4" UNLESS NOTED THUS [XX'-XX"]
- TOP OF PIER ELEVATION = -1'-4" UNLESS NOTED THUS (XX'-XX")
- FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
- CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING 5. TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
- 6
- REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
- REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS. DESIGNATIONS: 8.
- FOOTING REFER TO SCHEDULE F-x
- COLUMN REFER TO SCHEDULE C-x GRADE BEAM - REFER TO SCHEDULE GB-x
- CF-x COMBINED FOOTING REFER TO SCHEDULE CP-x CONCRETE PIER REFER TO SCHEDULE
- MW-1 MASONRY WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT U.N.O. SW-1 SHEAR WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT SW-2 SHEAR WALL WITH #5 AT 16" O.C. MAX. VERTICAL REINFORCEMENT
- INDICATES FLOOR SLOPES TO DRAIN. REFER TO ARCH. DRAWINGS.
- INDICATES TILE FLOOR LOCATION. REFER TO TYP. PLAN F5/S4.1.
- ☐ COORDINATE LOCATION WITH ARCH. DWGS.
- "S1" = 5" SLAB ON GRADE WITH 6x6-W1.4xW1.4 W.W.F. PLACED AT MID-DEPTH OF SLAB 3. ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP UNO)

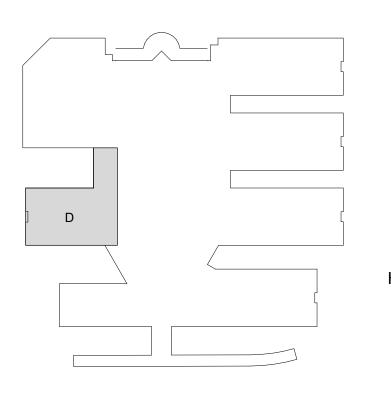
REFERENCE DRAWINGS:

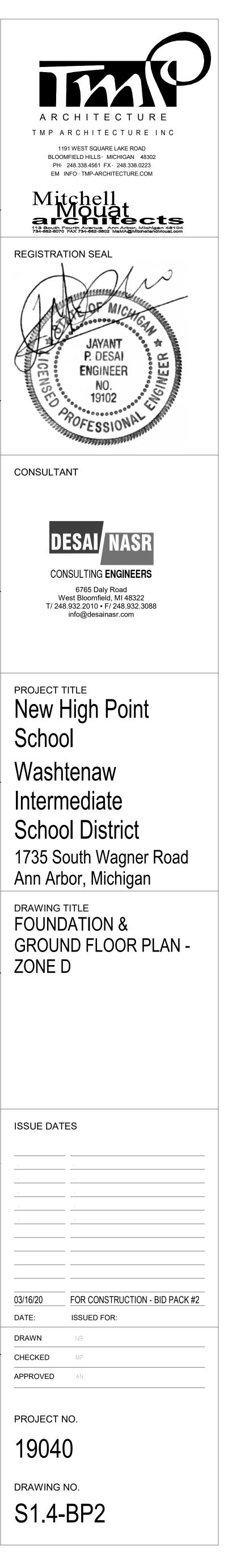
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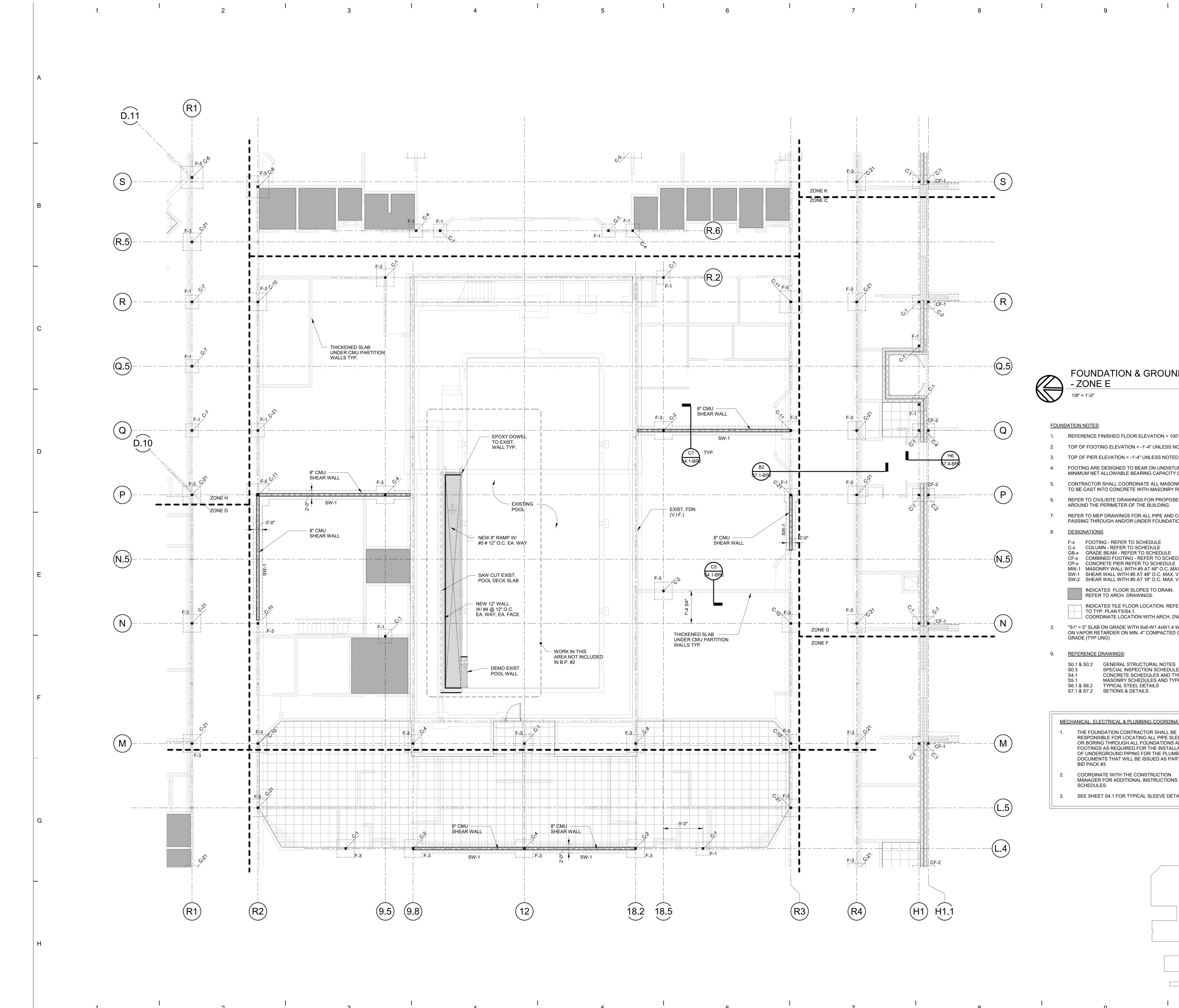
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- GENERAL STRUCTURAL NOTES S0.1 & S0.2
- SPECIAL INSPECTION SCHEDULES S0.3 CONCRETE SCHEDULES AND TYPICAL DETAILS MASONRY SCHEDULES AND TYPICAL DETAILS S4.1 S5.1 S6.1 & S6.2 TYPICAL STEEL DETAILS
- S7.1 & S7.2 SETIONS & DETAILS
- MECHANICAL, ELECTRICAL & PLUMBING COORDINATION: THE FOUNDATION CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL PIPE SLEEVES, OR BORING THROUGH ALL FOUNDATIONS AND FOOTINGS AS REQUIRED FOR THE INSTALLATION OF UNDERGROUND PIPING FOR THE PLUMBING DOCUMENTS THAT WILL BE ISSUED AS PART OF BID PACK #3. COORDINATE WITH THE CONSTRUCTION MANAGER FOR ADDITIONAL INSTRUCTIONS AND
- SCHEDULES.
- SEE SHEET S4.1 FOR TYPICAL SLEEVE DETAILS.

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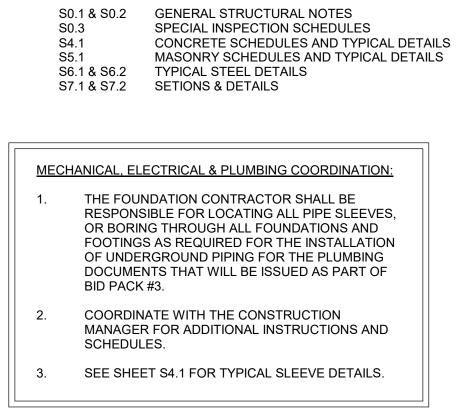
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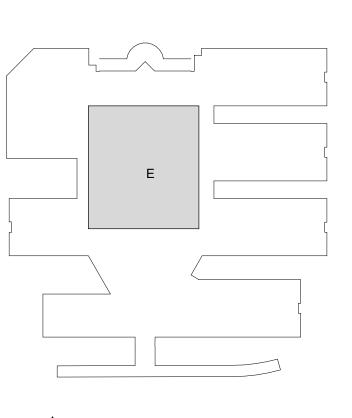
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1/8" = 1'-0" FOUNDATION NOTES:

DESIGNATIONS:

1. REFERENCE FINISHED FLOOR ELEVATION = 100'-0"

AROUND THE PERIMETER OF THE BUILDING.

F-x FOOTING - REFER TO SCHEDULE

C-x COLUMN - REFER TO SCHEDULE

GB-x GRADE BEAM - REFER TO SCHEDULE

REFER TO ARCH. DRAWINGS.

TO TYP. PLAN F5/S4.1.

REFERENCE DRAWINGS:

CF-x COMBINED FOOTING - REFER TO SCHEDULE CP-x CONCRETE PIER REFER TO SCHEDULE

INDICATES FLOOR SLOPES TO DRAIN.

INDICATES TILE FLOOR LOCATION. REFER

COORDINATE LOCATION WITH ARCH. DWGS.

FOUNDATION & GROUND FLOOR PLAN - ZONE E

TOP OF FOOTING ELEVATION = -1'-4" UNLESS NOTED THUS [XX'-XX"]

FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.

CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING

TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.

REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.

MW-1 MASONRY WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT U.N.O.

"S1" = 5" SLAB ON GRADE WITH 6x6-W1.4xW1.4 W.W.F. PLACED AT MID-DEPTH OF SLAB

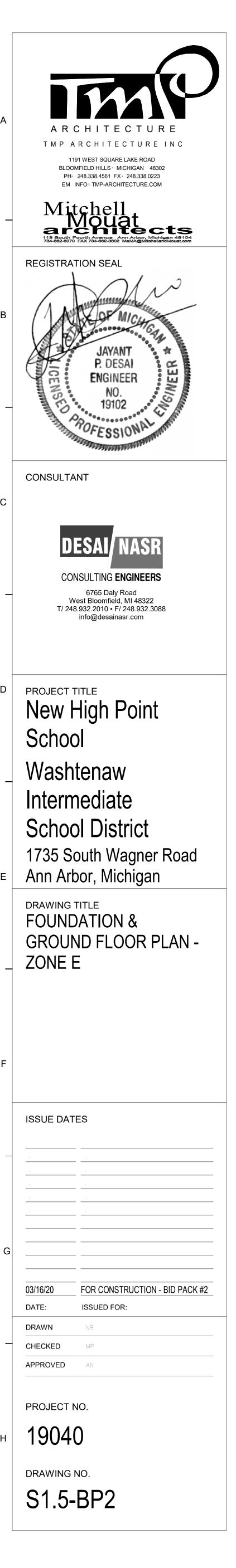
ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP UNO)

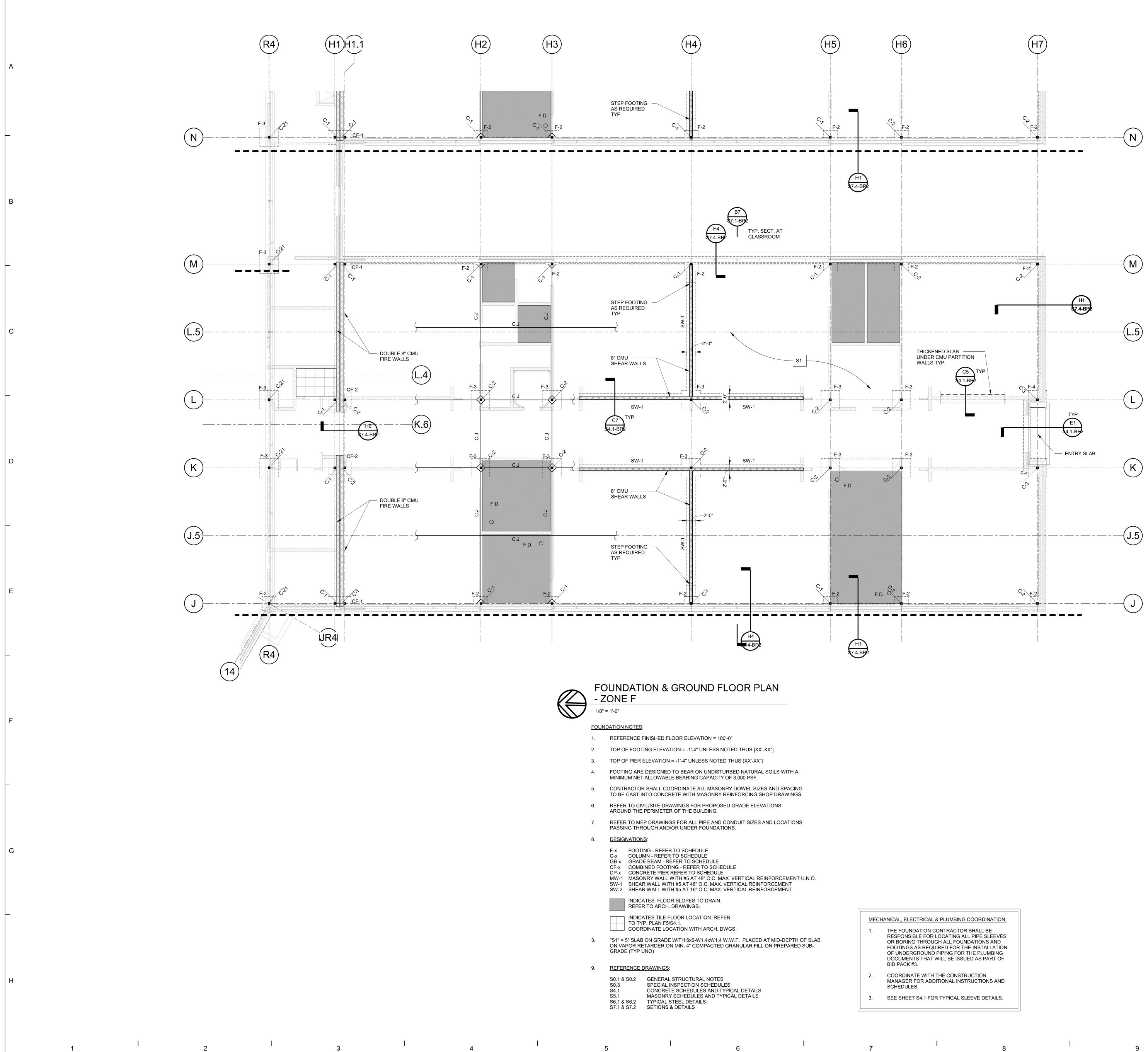
SW-1 SHEAR WALL WITH #5 AT 48" O.C. MAX. VERTICAL REINFORCEMENT

SW-2 SHEAR WALL WITH #5 AT 16" O.C. MAX. VERTICAL REINFORCEMENT

REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS

TOP OF PIER ELEVATION = -1'-4" UNLESS NOTED THUS (XX'-XX")





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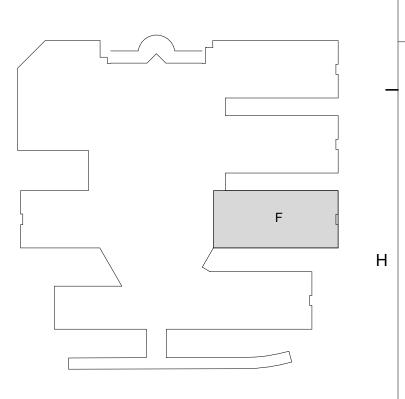
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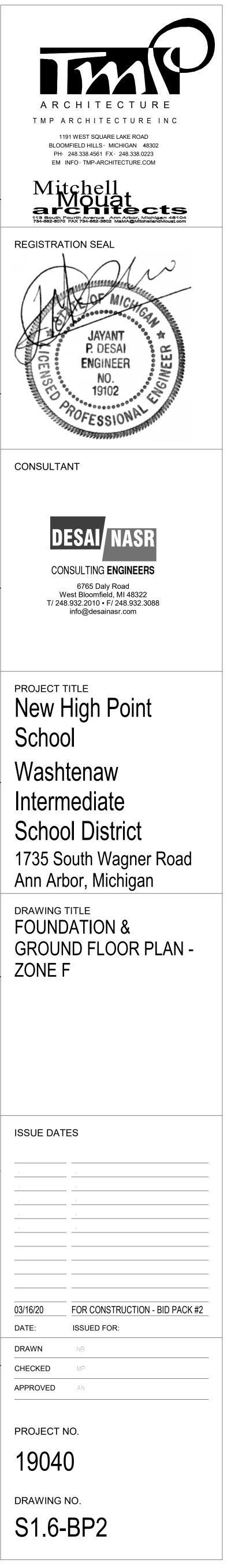
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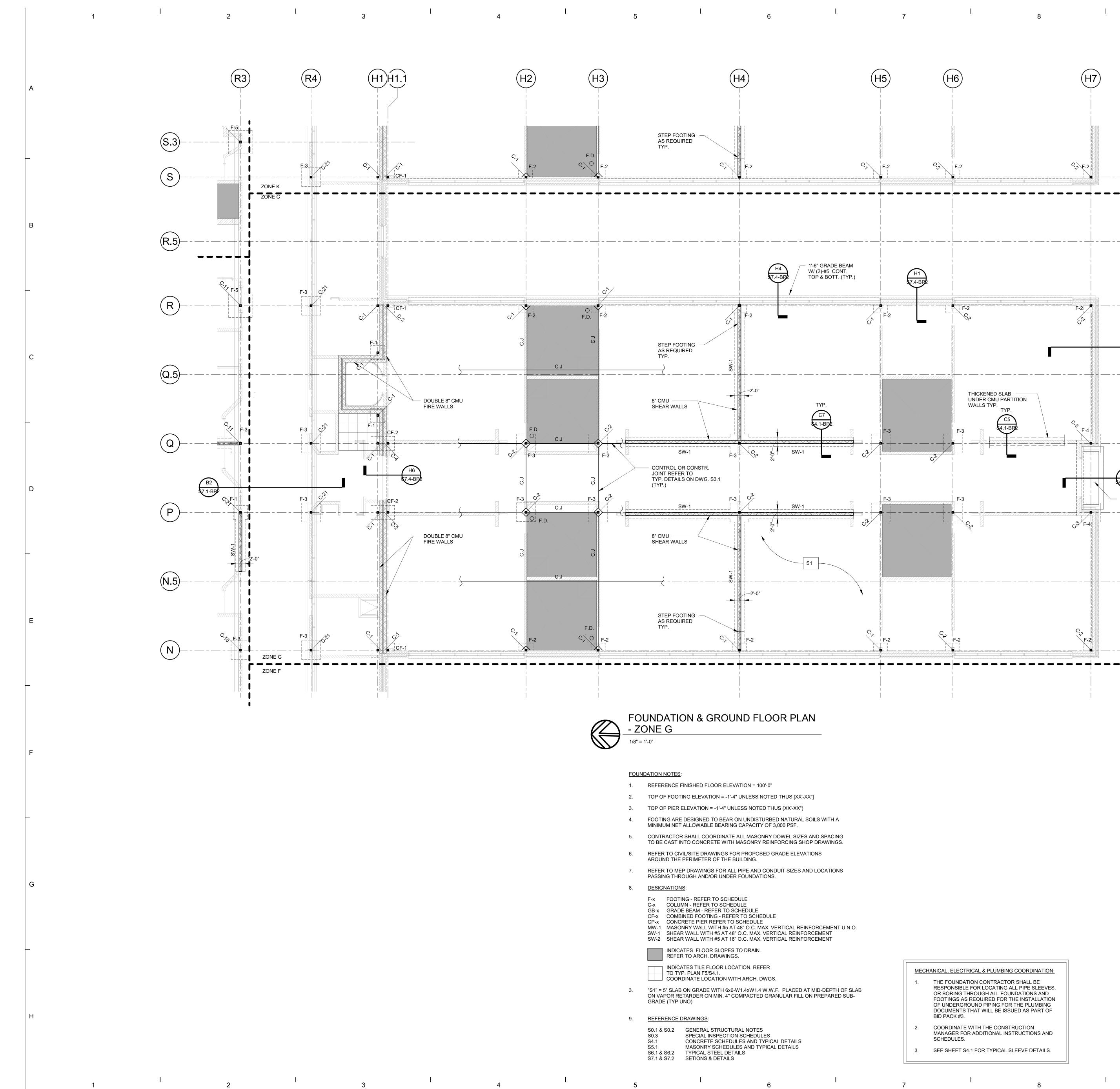
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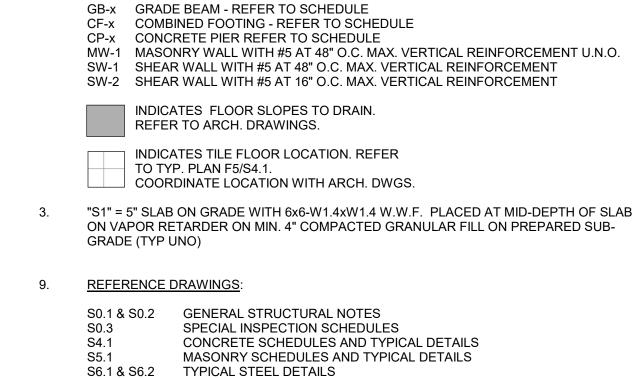
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8. <u>DESIGNATIONS</u>:

- ZONE G

FOUNDATION NOTES:

1/8" = 1'-0"

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F-x FOOTING - REFER TO SCHEDULE

AROUND THE PERIMETER OF THE BUILDING.

1. REFERENCE FINISHED FLOOR ELEVATION = 100'-0"

- C-x COLUMN REFER TO SCHEDULE

S7.1 & S7.2 SETIONS & DETAILS

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PASSING THROUGH AND/OR UNDER FOUNDATIONS.

FOUNDATION & GROUND FLOOR PLAN

TOP OF FOOTING ELEVATION = -1'-4" UNLESS NOTED THUS [XX'-XX"]

FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A

CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.

REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS

REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS

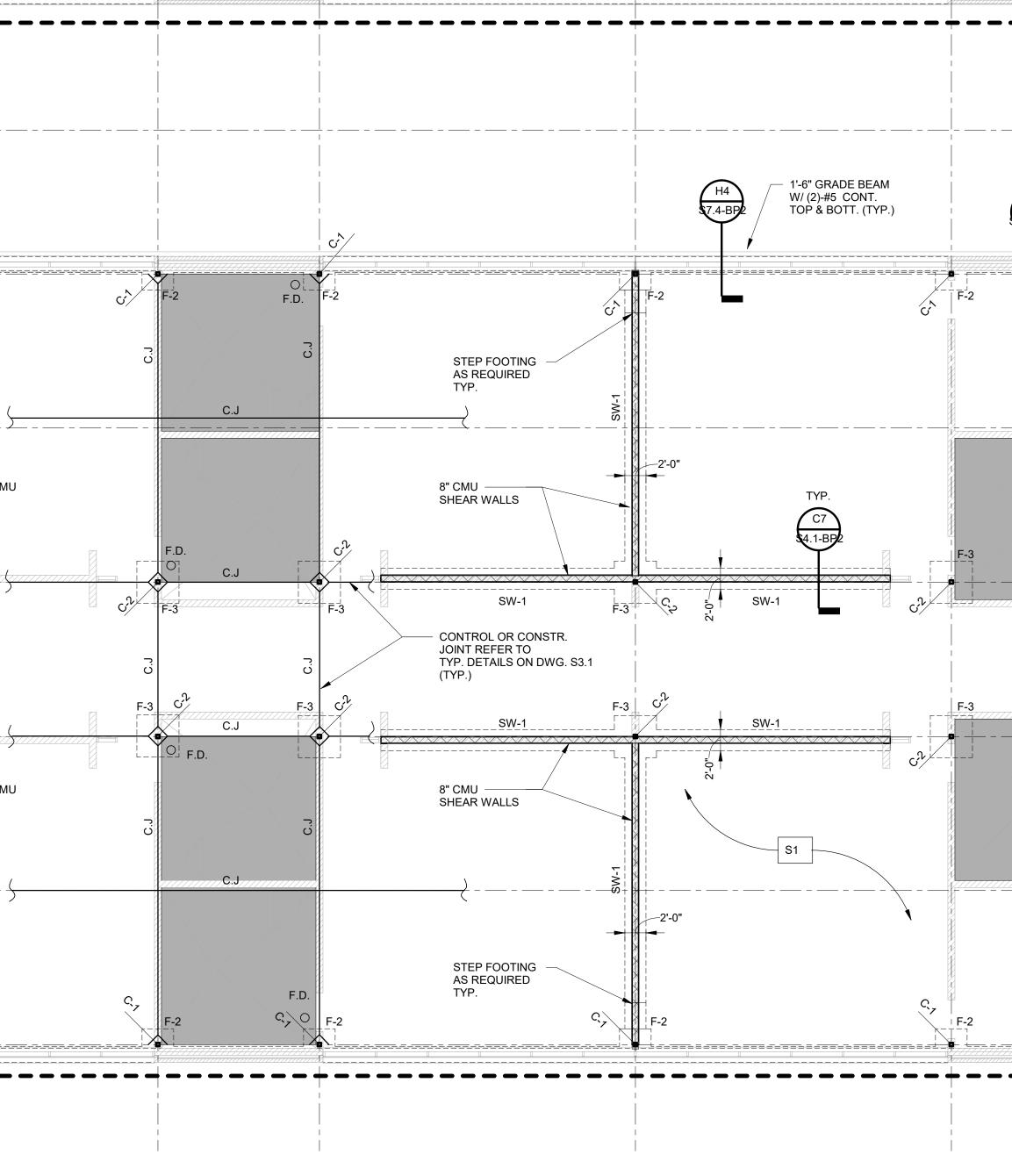
TOP OF PIER ELEVATION = -1'-4" UNLESS NOTED THUS (XX'-XX")

MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.

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STEP FOOTING AS REQUIRED

TYP.

(H4)

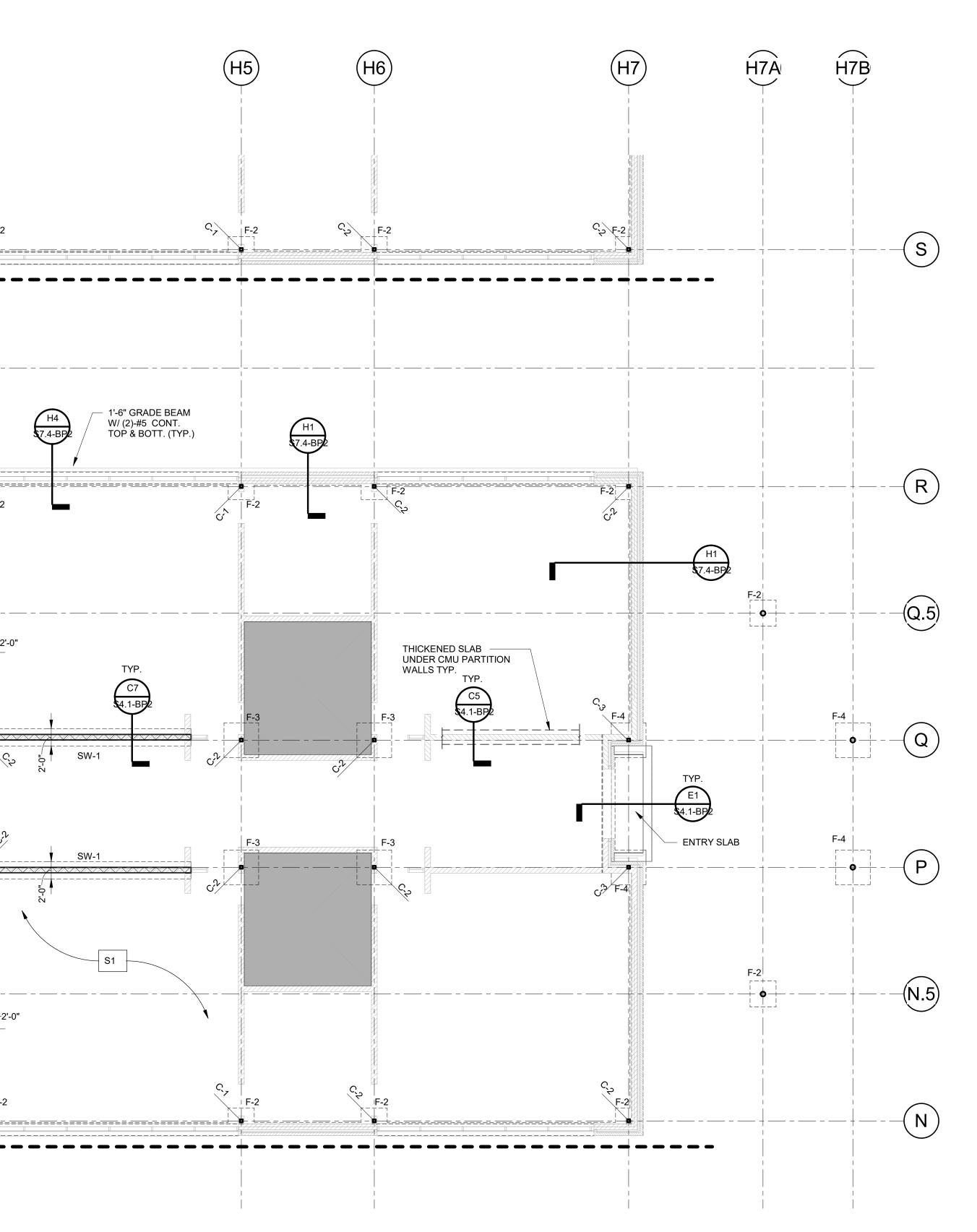
(H3)

(H2)

(H5)

C, /

∣ **F-2**



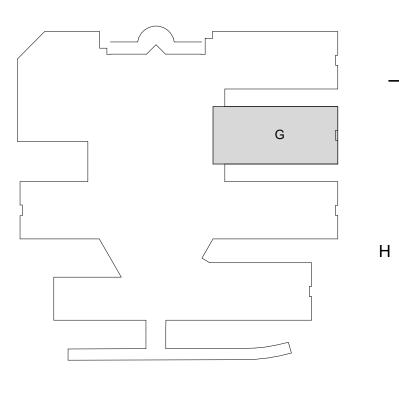
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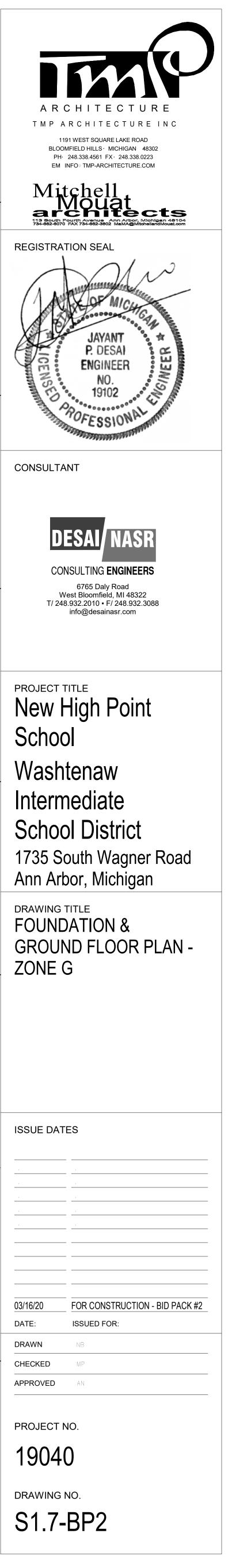
MECHANICAL, ELECTRICAL & PLUMBING COORDINATION: 1. THE FOUNDATION CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL PIPE SLEEVES, OR BORING THROUGH ALL FOUNDATIONS AND FOOTINGS AS REQUIRED FOR THE INSTALLATION OF UNDERGROUND PIPING FOR THE PLUMBING DOCUMENTS THAT WILL BE ISSUED AS PART OF BID PACK #3. COORDINATE WITH THE CONSTRUCTION MANAGER FOR ADDITIONAL INSTRUCTIONS AND SCHEDULES. 3. SEE SHEET S4.1 FOR TYPICAL SLEEVE DETAILS.

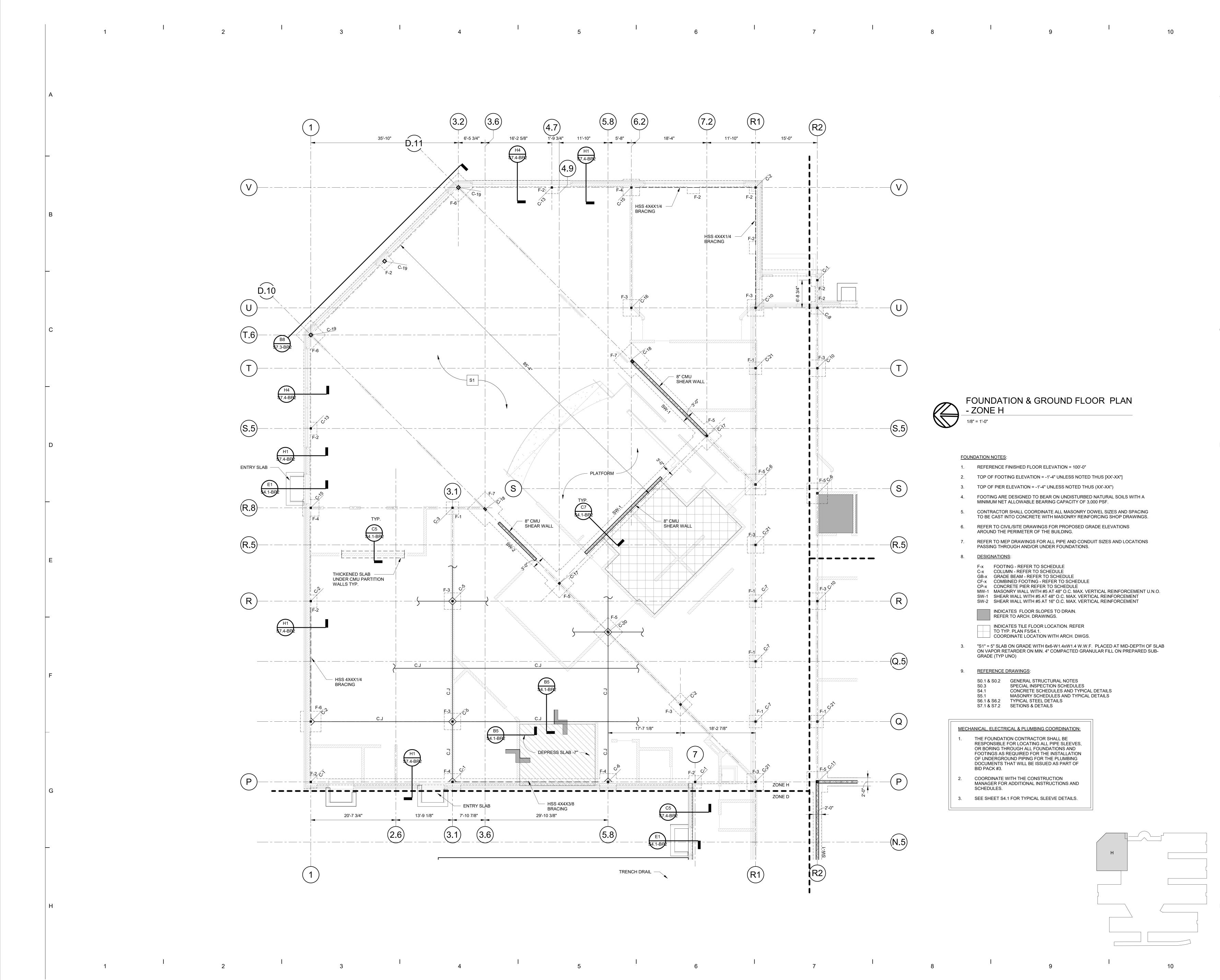
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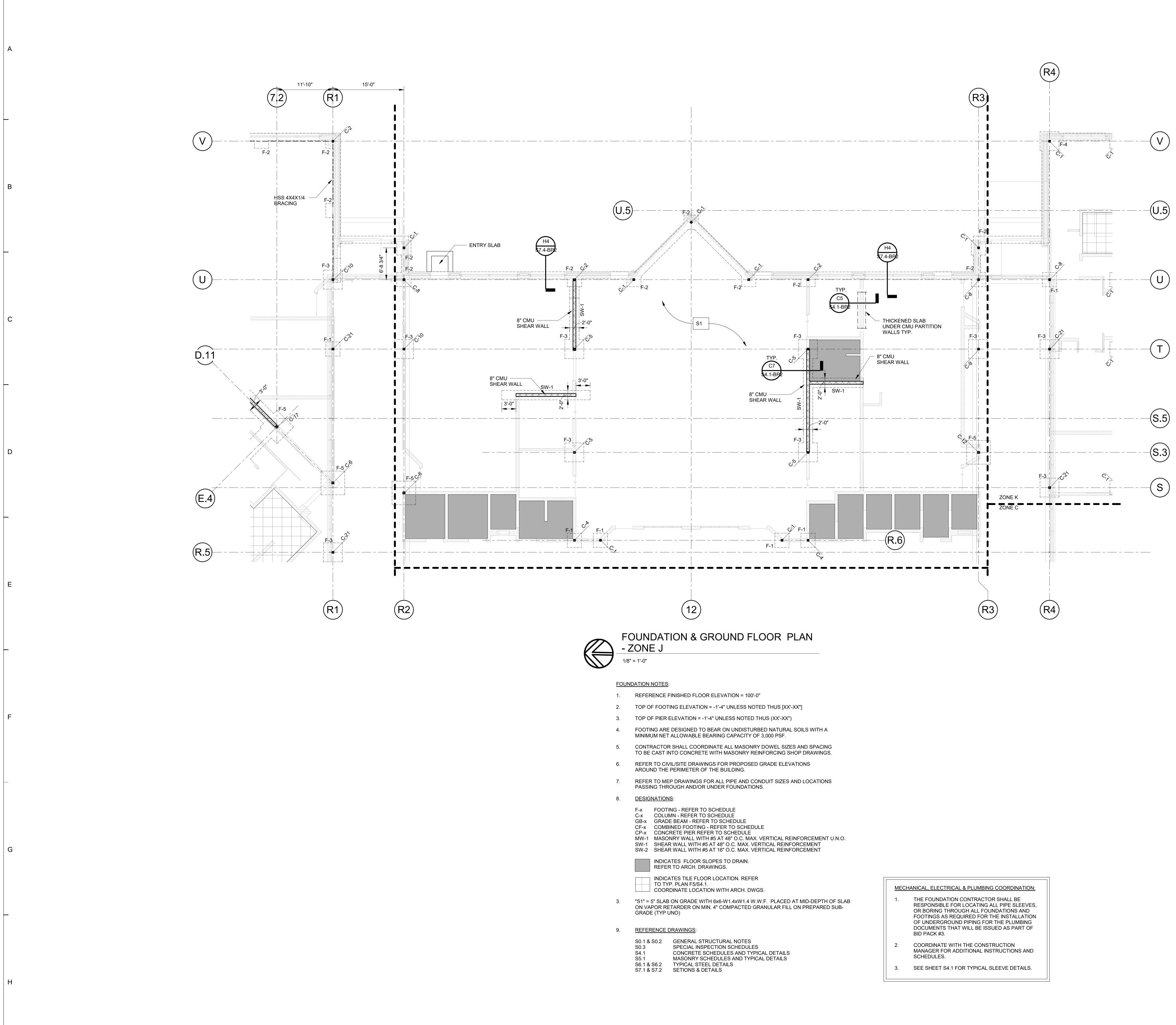
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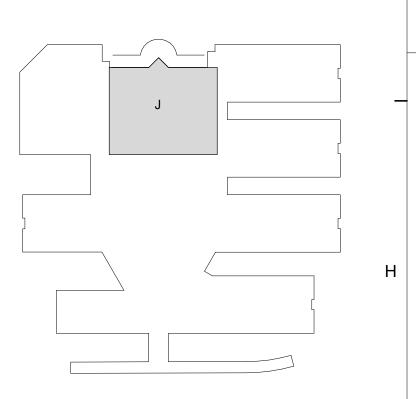
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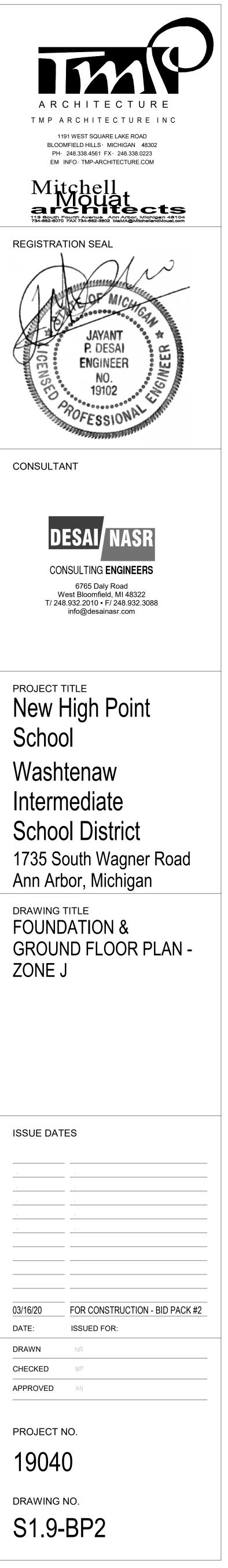


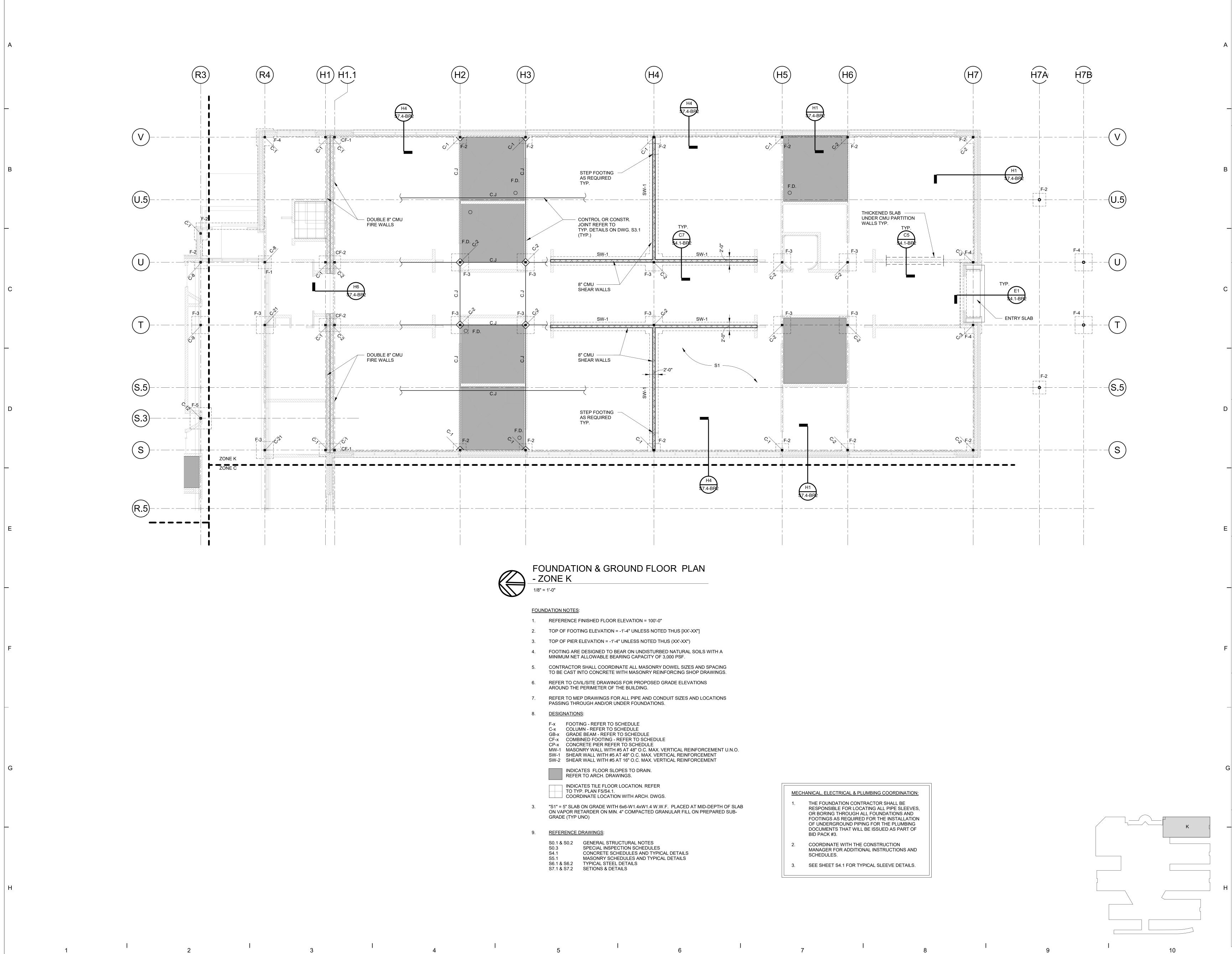












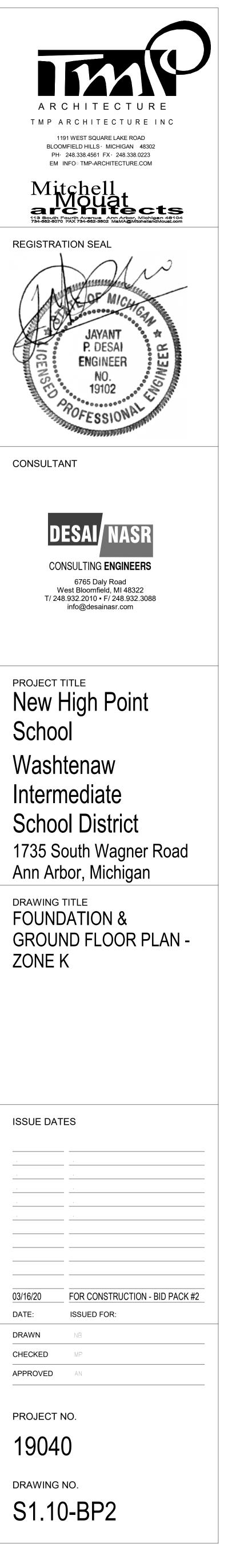
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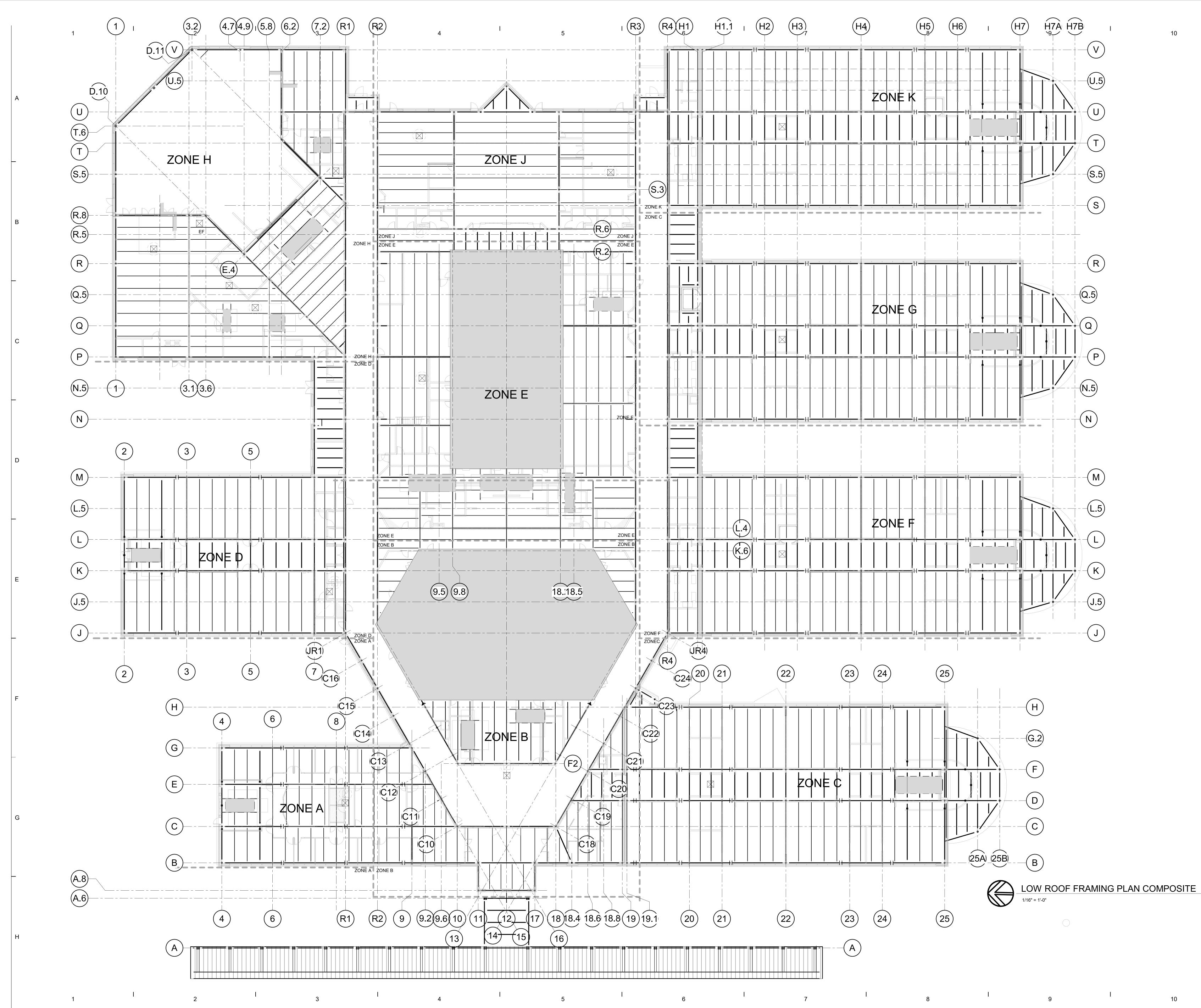
S0.1 & S0.2	GENERAL STRUCTURAL NOTES
S0.3	SPECIAL INSPECTION SCHEDULES
S4.1	CONCRETE SCHEDULES AND TYPICAL DETAILS
S5.1	MASONRY SCHEDULES AND TYPICAL DETAILS
S6.1 & S6.2	TYPICAL STEEL DETAILS
S7.1 & S7.2	SETIONS & DETAILS

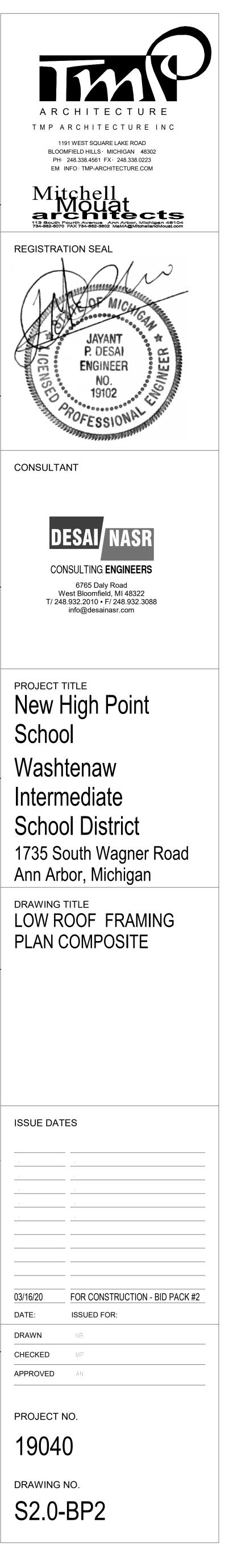
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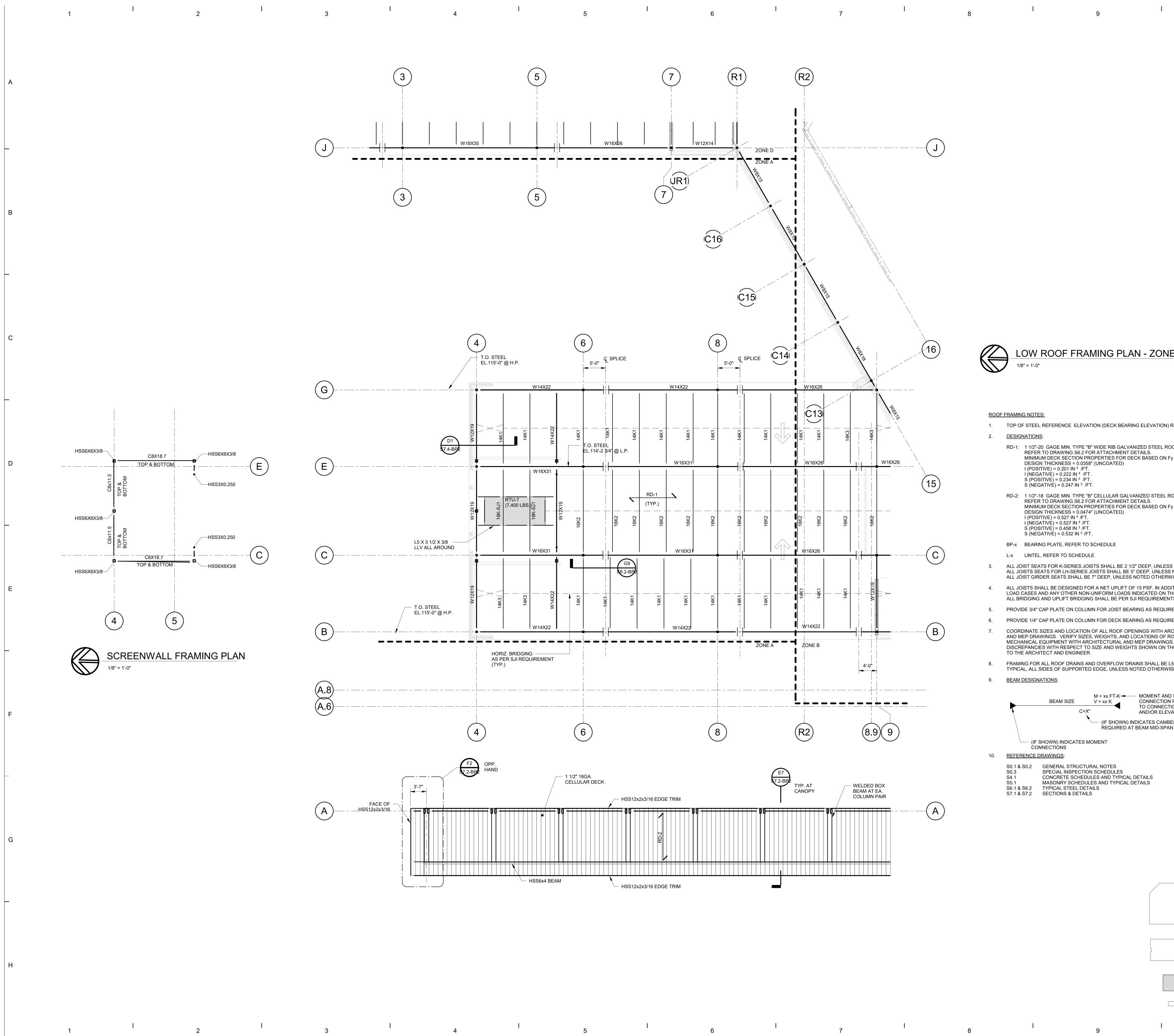
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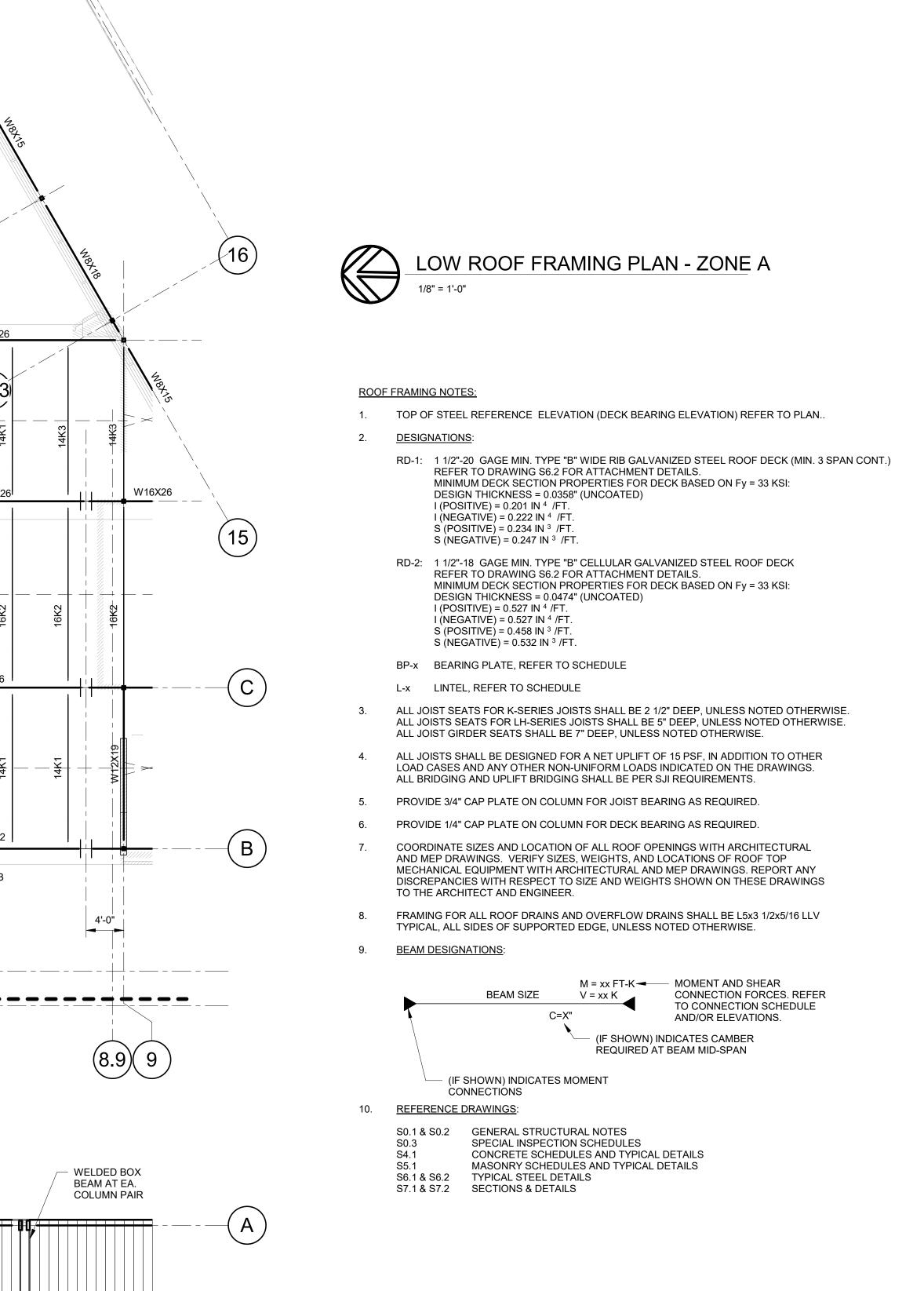
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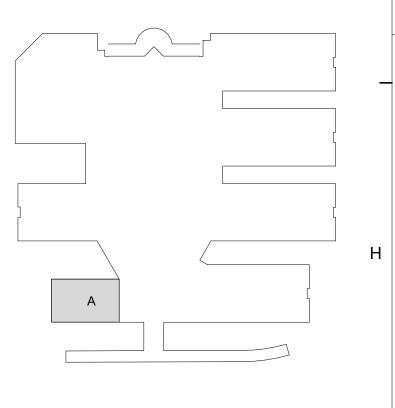








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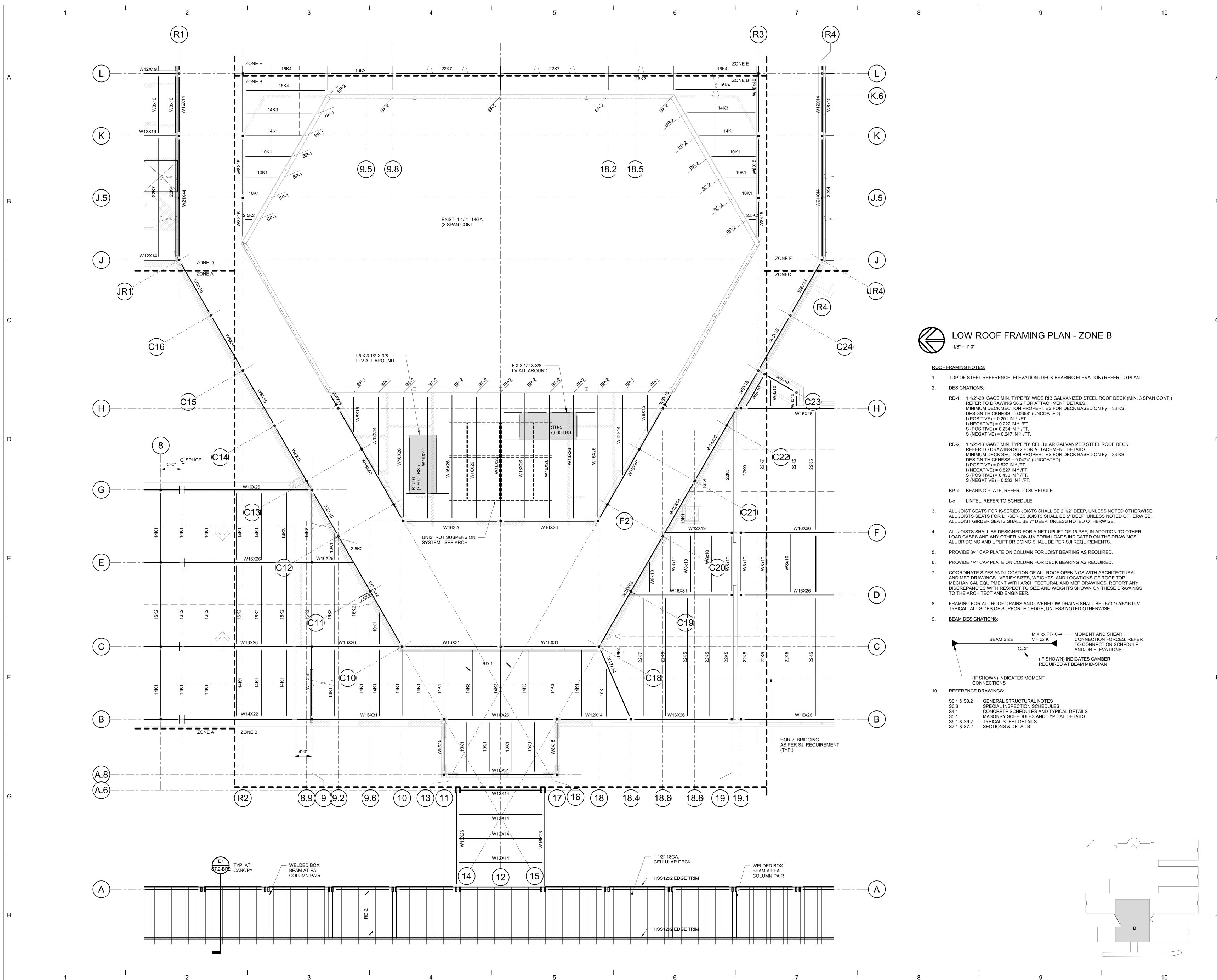
WELDED BOX BEAM AT EA. COLUMN PAIR

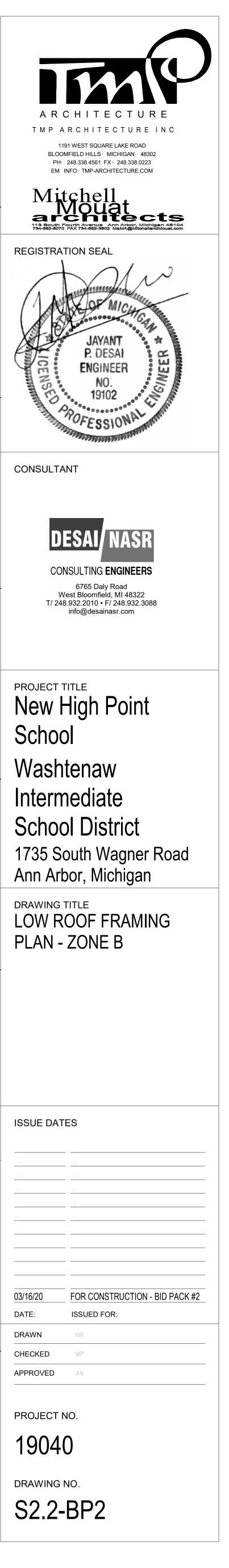
4'-0"

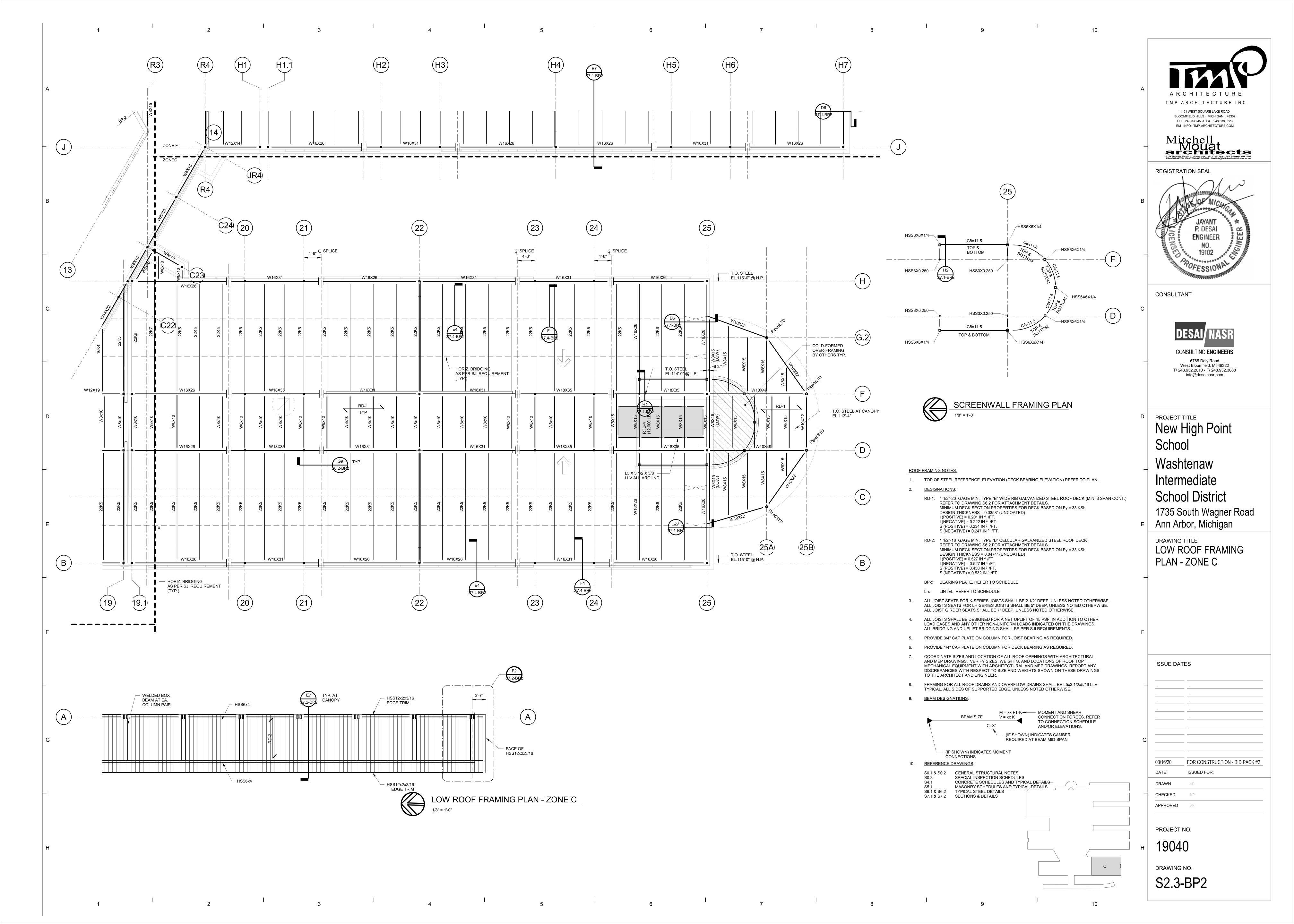
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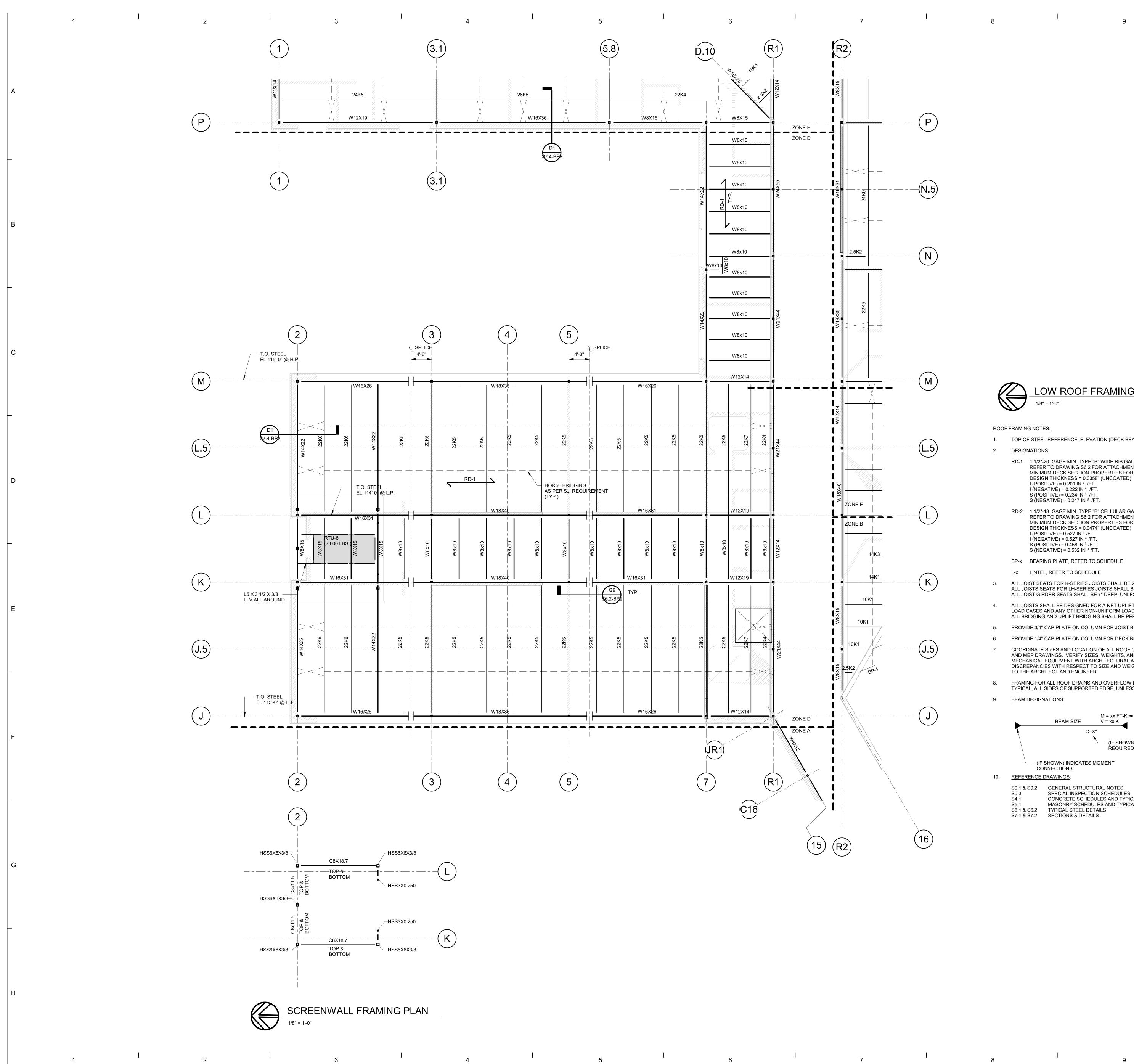
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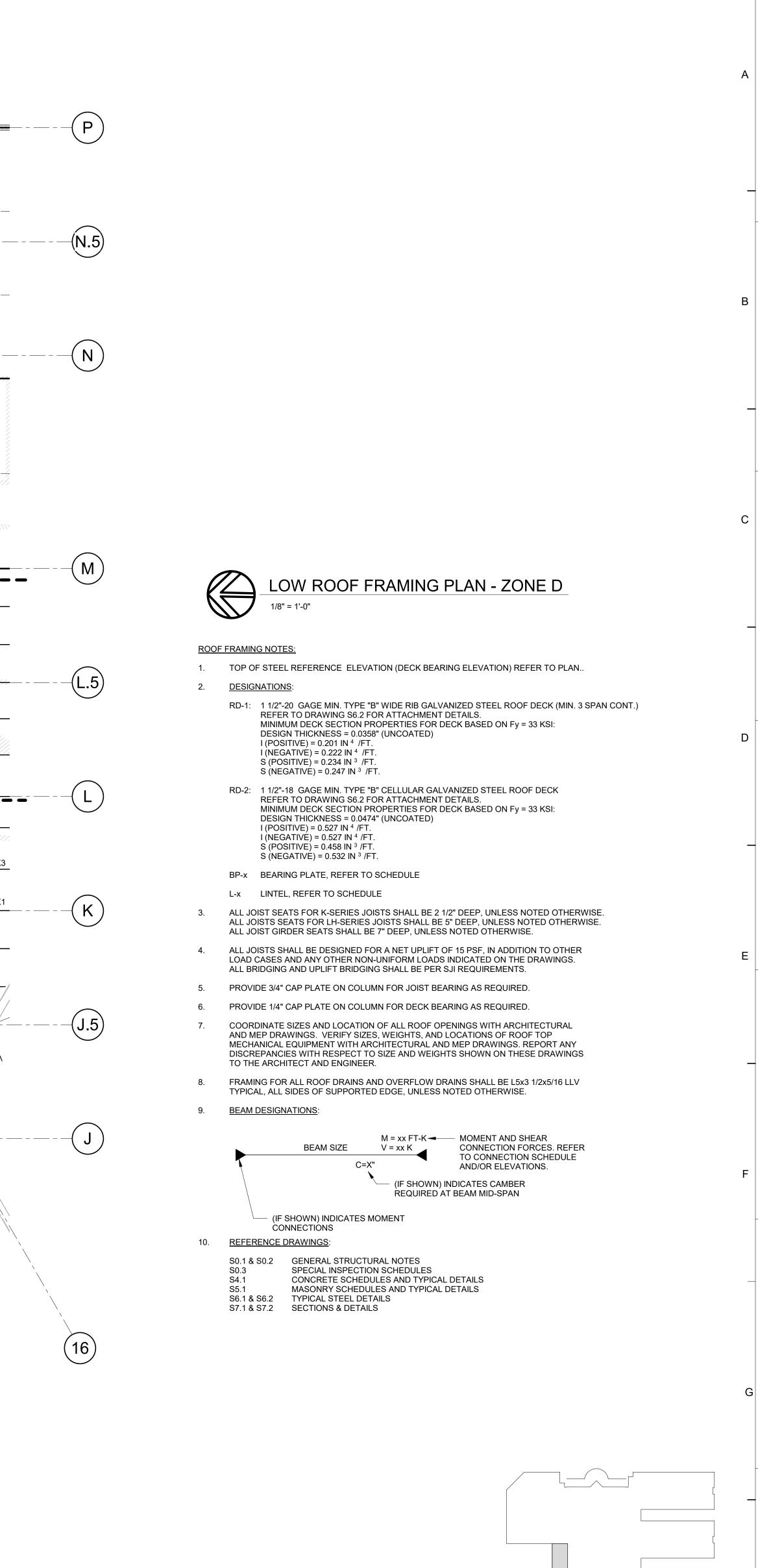












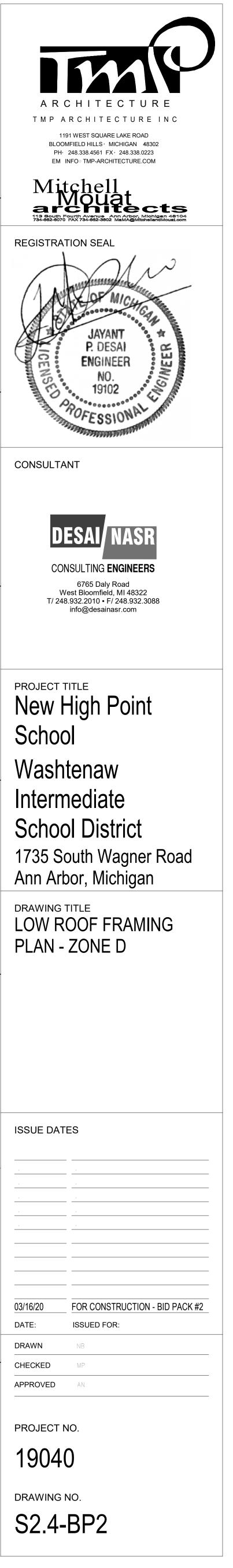
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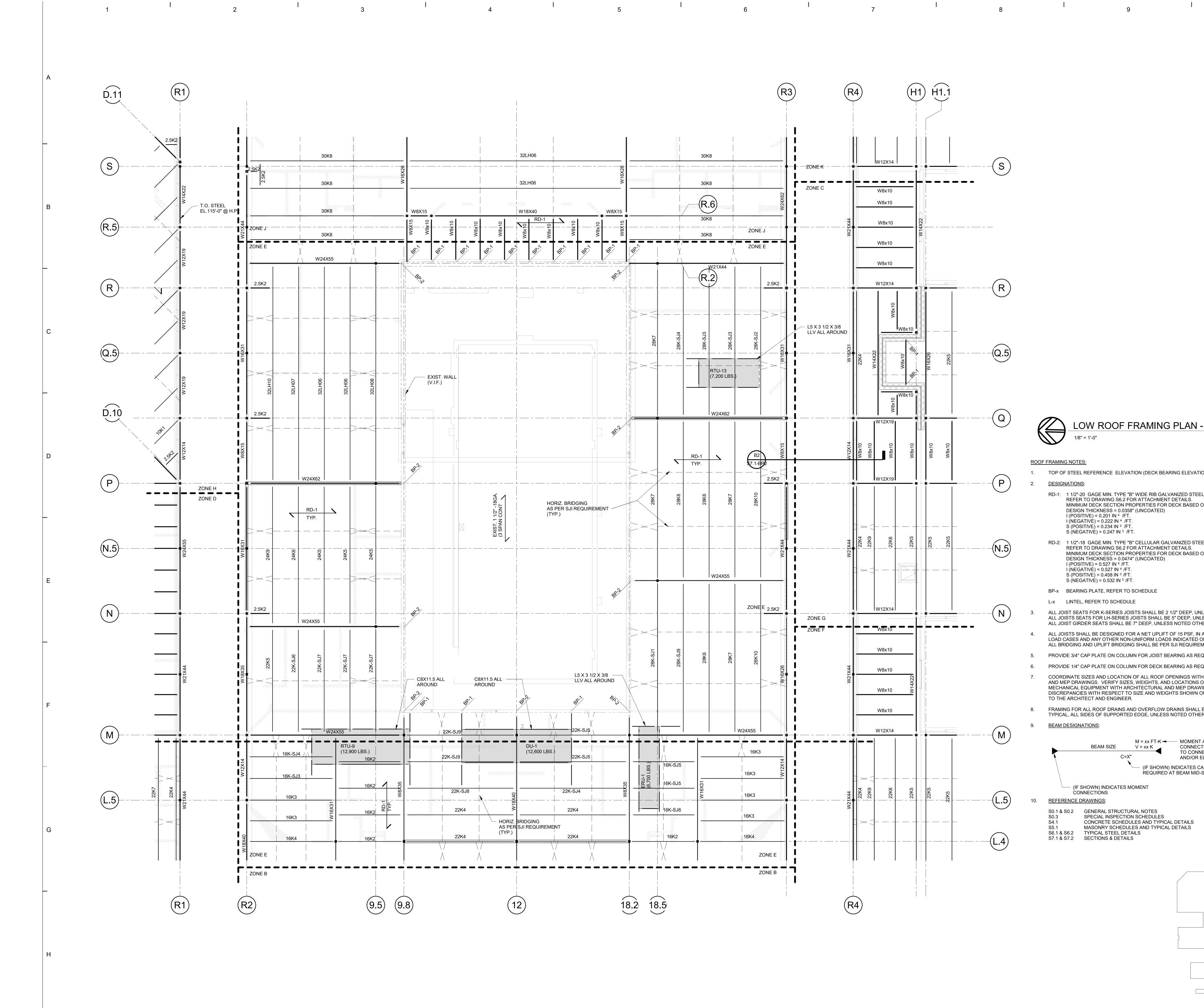
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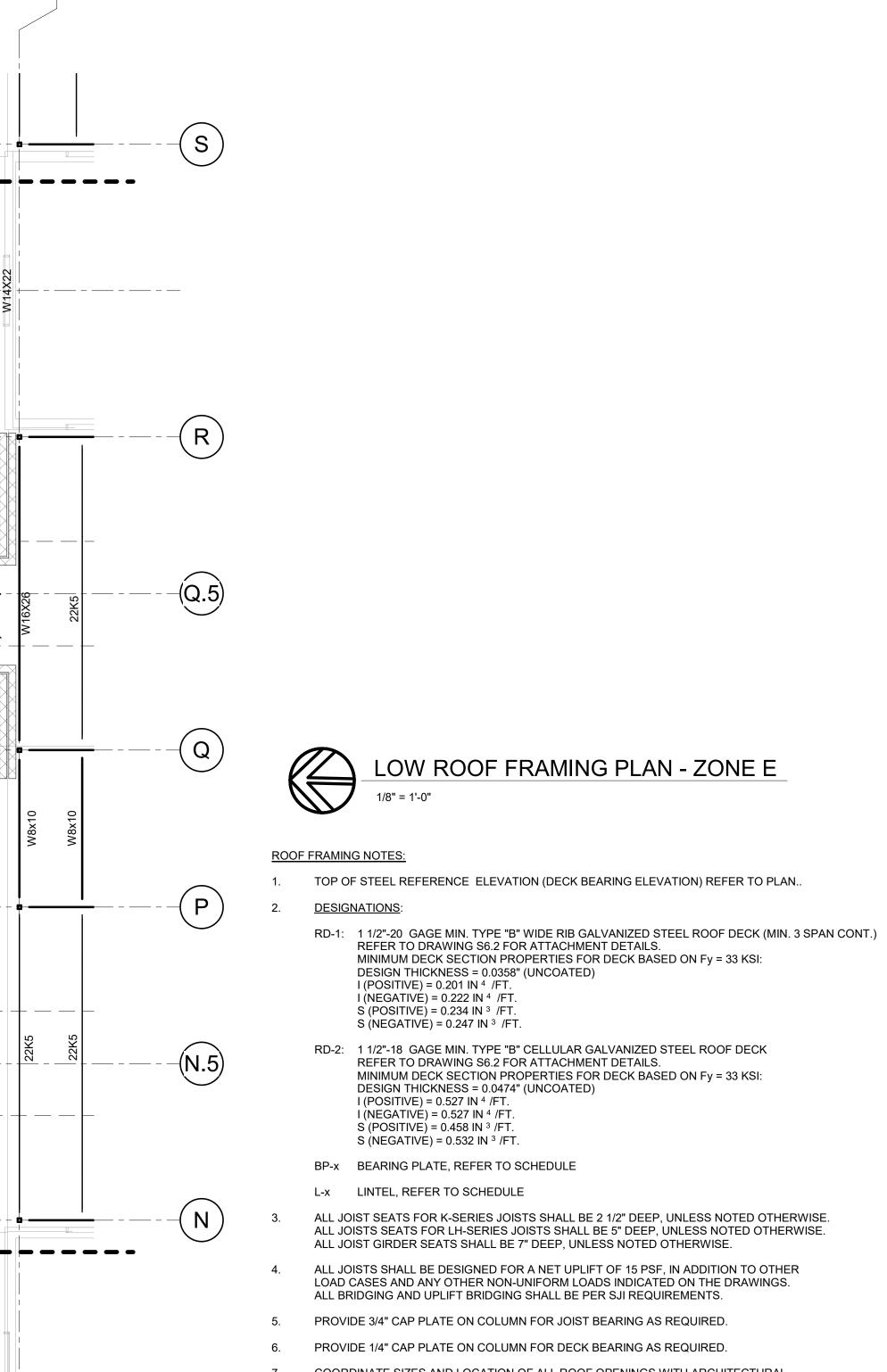
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- COORDINATE SIZES AND LOCATION OF ALL ROOF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS. VERIFY SIZES, WEIGHTS, AND LOCATIONS OF ROOF TOP MECHANICAL EQUIPMENT WITH ARCHITECTURAL AND MEP DRAWINGS. REPORT ANY DISCREPANCIES WITH RESPECT TO SIZE AND WEIGHTS SHOWN ON THESE DRAWINGS TO THE ARCHITECT AND ENGINEER.
- FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE L5x3 1/2x5/16 LLV TYPICAL, ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE. BEAM DESIGNATIONS:

8.

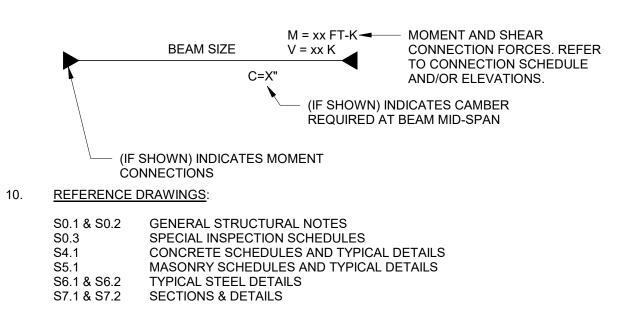
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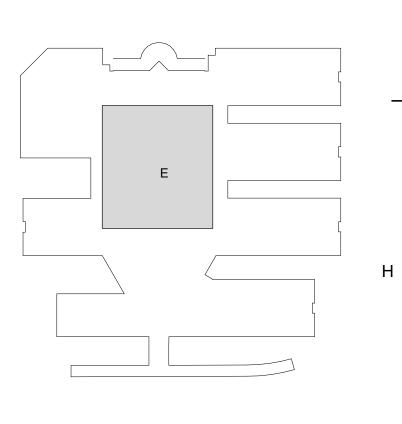
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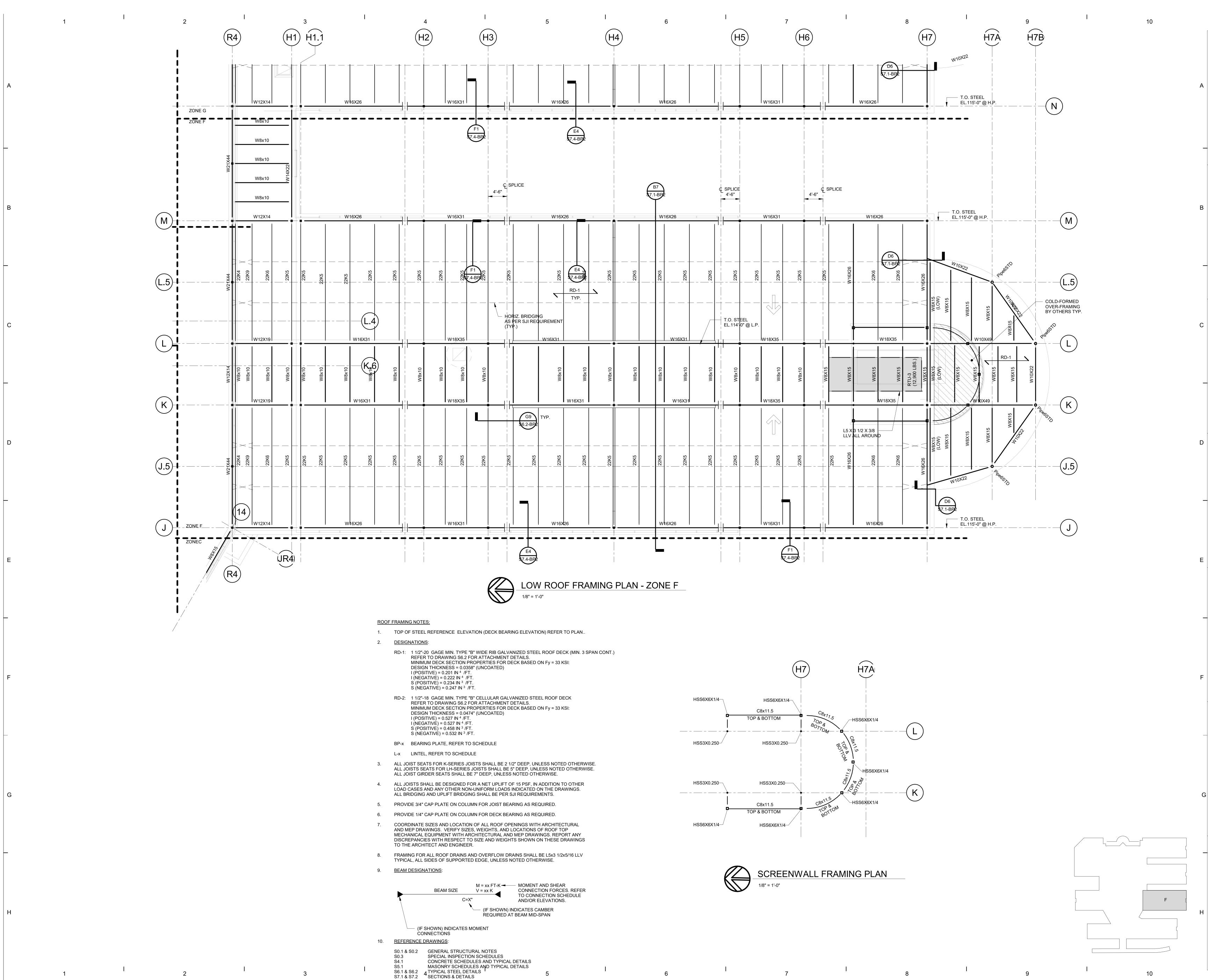


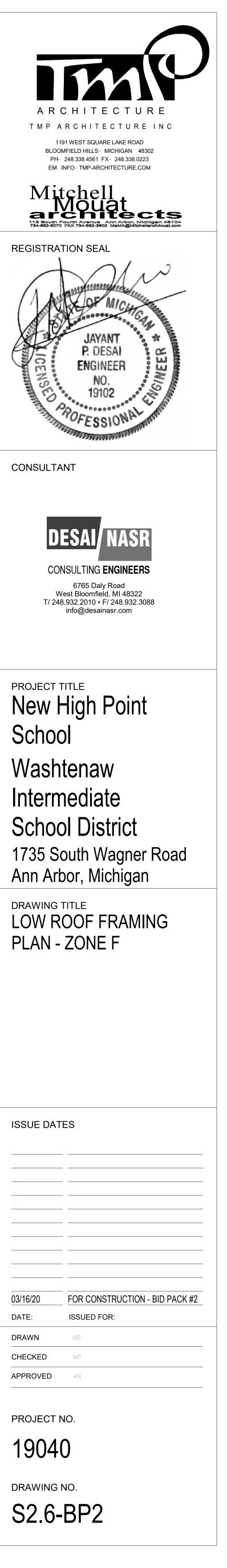


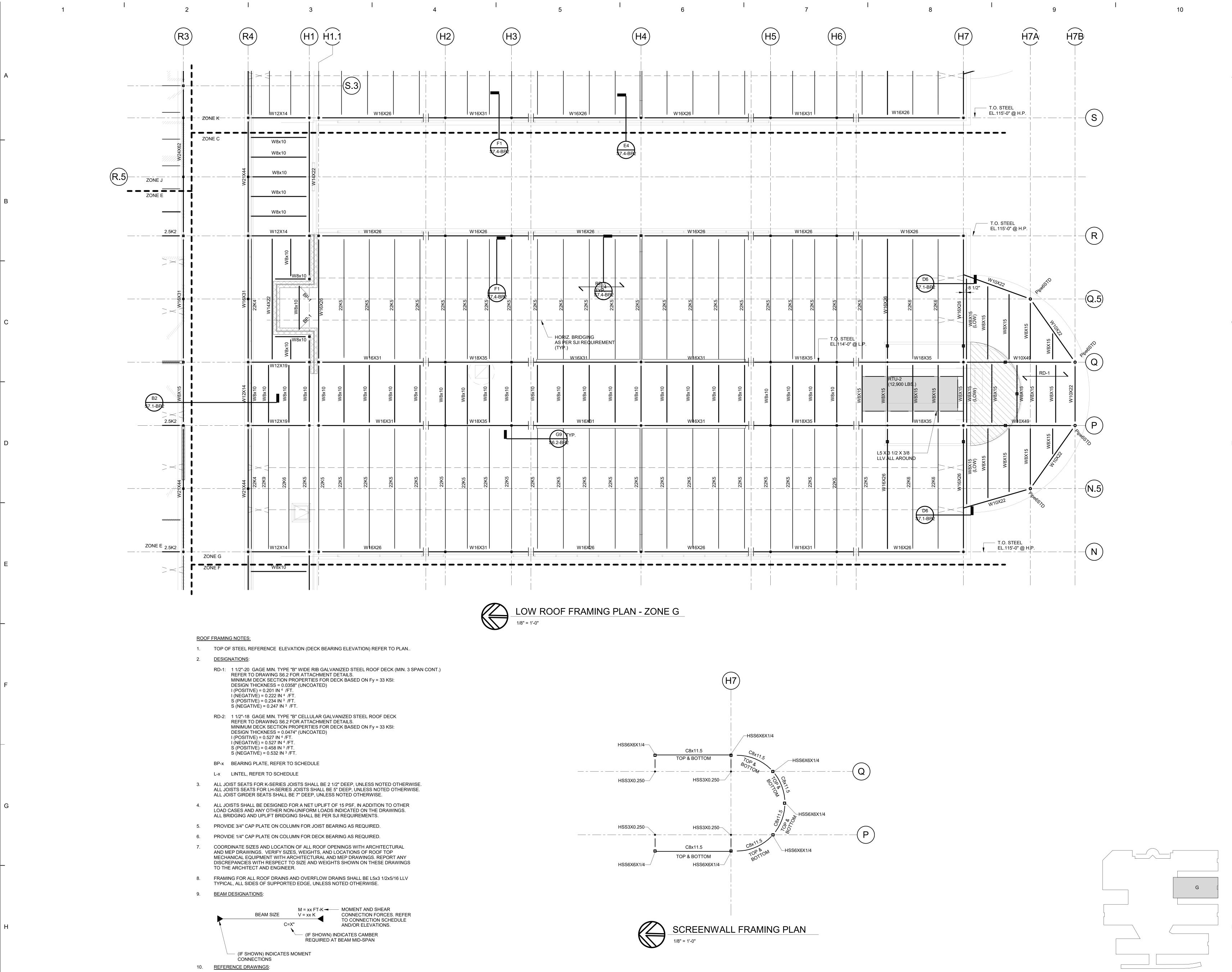
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	2.	DESIGNATIONS:
		 RD-1: 1 1/2"-20 GAGE MIN. TYPE "B" WIDE RIB GALVANIZED STEEL ROOF DI REFER TO DRAWING S6.2 FOR ATTACHMENT DETAILS. MINIMUM DECK SECTION PROPERTIES FOR DECK BASED ON Fy = 33 DESIGN THICKNESS = 0.0358" (UNCOATED) I (POSITIVE) = 0.201 IN ⁴ /FT. I (NEGATIVE) = 0.222 IN ⁴ /FT. S (POSITIVE) = 0.234 IN ³ /FT. S (NEGATIVE) = 0.247 IN ³ /FT.
		 RD-2: 1 1/2"-18 GAGE MIN. TYPE "B" CELLULAR GALVANIZED STEEL ROOF IN REFER TO DRAWING S6.2 FOR ATTACHMENT DETAILS. MINIMUM DECK SECTION PROPERTIES FOR DECK BASED ON Fy = 33 DESIGN THICKNESS = 0.0474" (UNCOATED) I (POSITIVE) = 0.527 IN ⁴ /FT. I (NEGATIVE) = 0.527 IN ⁴ /FT. S (POSITIVE) = 0.458 IN ³ /FT. S (NEGATIVE) = 0.532 IN ³ /FT.
		BP-x BEARING PLATE, REFER TO SCHEDULE
		L-x LINTEL, REFER TO SCHEDULE
	3.	ALL JOIST SEATS FOR K-SERIES JOISTS SHALL BE 2 1/2" DEEP, UNLESS NOT ALL JOISTS SEATS FOR LH-SERIES JOISTS SHALL BE 5" DEEP, UNLESS NOTE ALL JOIST GIRDER SEATS SHALL BE 7" DEEP, UNLESS NOTED OTHERWISE.
	4.	ALL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 15 PSF, IN ADDITION LOAD CASES AND ANY OTHER NON-UNIFORM LOADS INDICATED ON THE DR ALL BRIDGING AND UPLIFT BRIDGING SHALL BE PER SJI REQUIREMENTS.
	5.	PROVIDE 3/4" CAP PLATE ON COLUMN FOR JOIST BEARING AS REQUIRED.
	6.	PROVIDE 1/4" CAP PLATE ON COLUMN FOR DECK BEARING AS REQUIRED.
	7.	COORDINATE SIZES AND LOCATION OF ALL ROOF OPENINGS WITH ARCHITE AND MEP DRAWINGS. VERIFY SIZES, WEIGHTS, AND LOCATIONS OF ROOF T MECHANICAL EQUIPMENT WITH ARCHITECTURAL AND MEP DRAWINGS. REF DISCREPANCIES WITH RESPECT TO SIZE AND WEIGHTS SHOWN ON THESE TO THE ARCHITECT AND ENGINEER.
	8.	FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE L5x3 1/ TYPICAL, ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE.
	9.	BEAM DESIGNATIONS:
		BEAM SIZE M = xx FT-K MOMENT AND SHEAD C=X" CONNECTION FOR C=X" AND/OR ELEVATION
		(IF SHOWN) INDICATES CAMBER REQUIRED AT BEAM MID-SPAN
	10.	CONNECTIONS REFERENCE DRAWINGS:
2		S0.1 & S0.2GENERAL STRUCTURAL NOTESS0.3SPECIAL INSPECTION SCHEDULESS4.1CONCRETE SCHEDULES AND TYPICAL DETAILSS5.1MASONRY SCHEDULES AND TYPICAL DETAILSS6.1 & S6.2TYPICAL STEEL DETAILSS7.1 & S7.2SECTIONS & DETAILS

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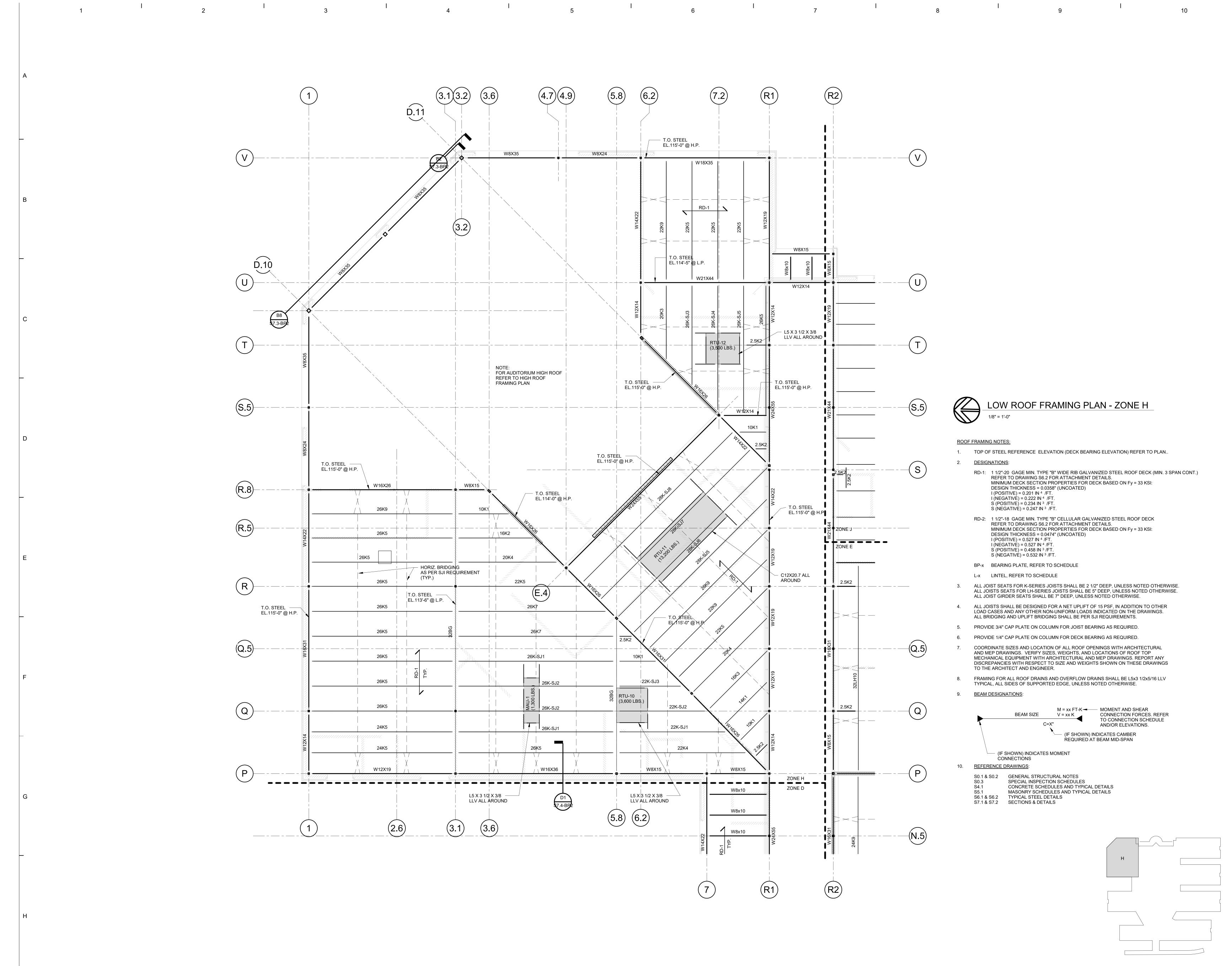
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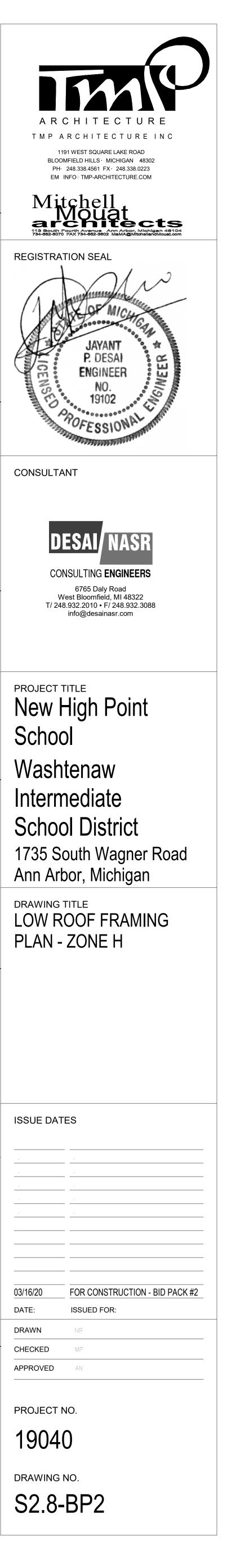


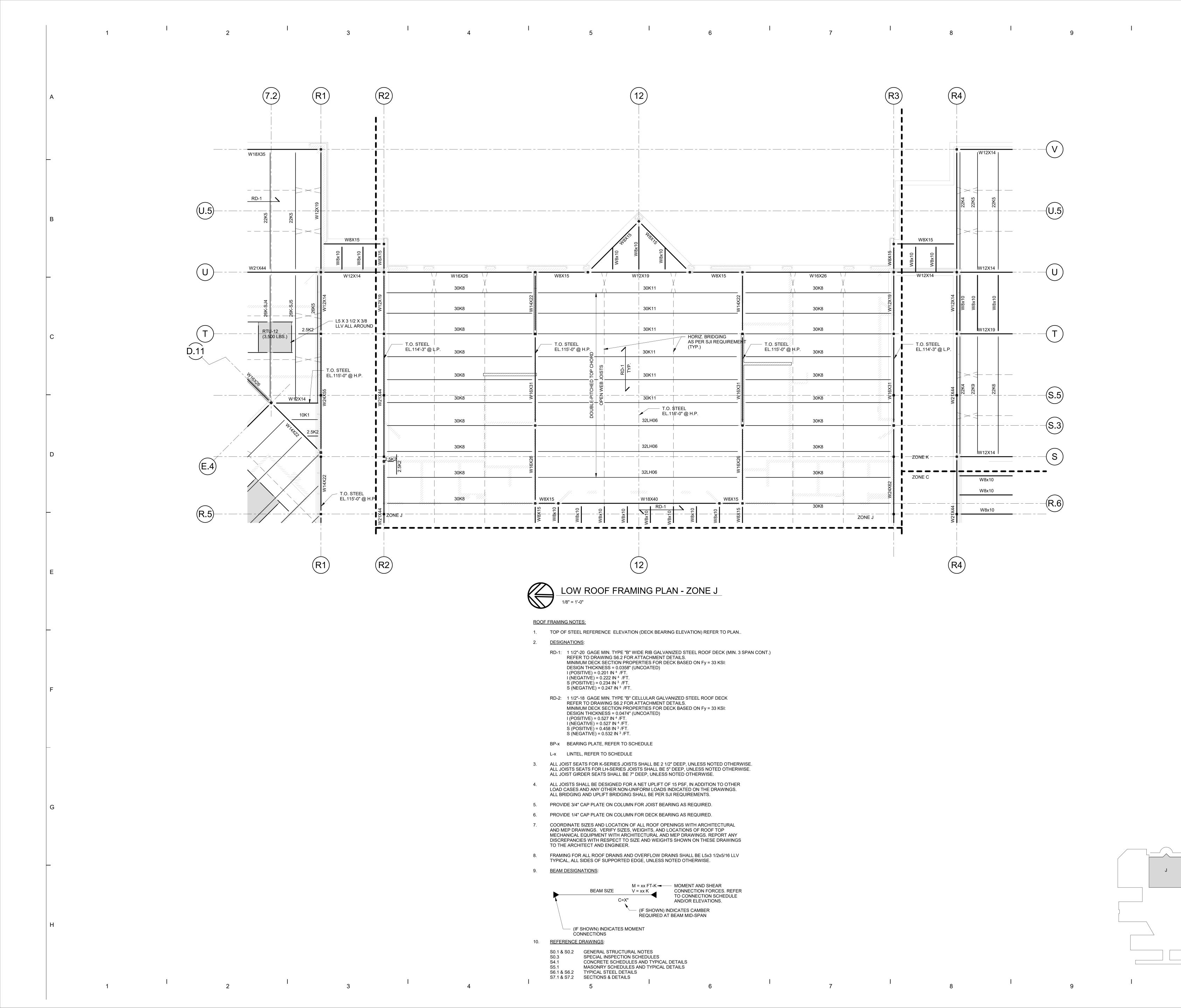


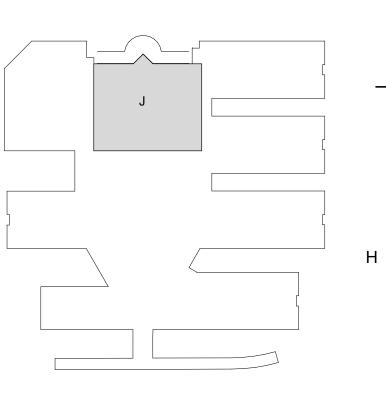
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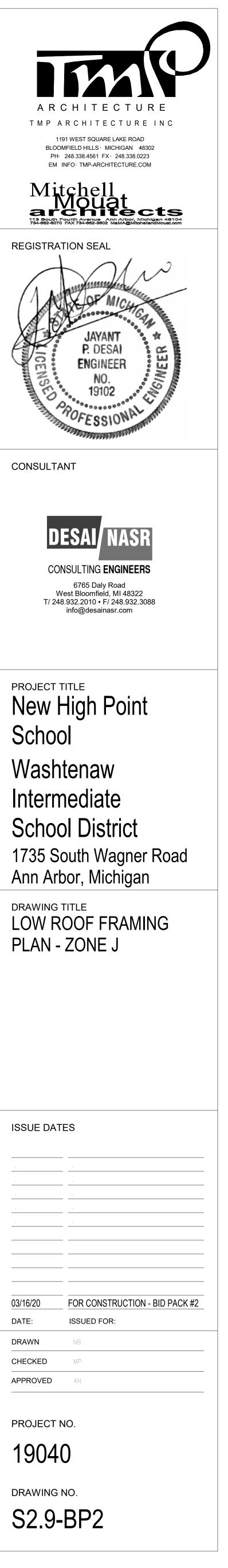
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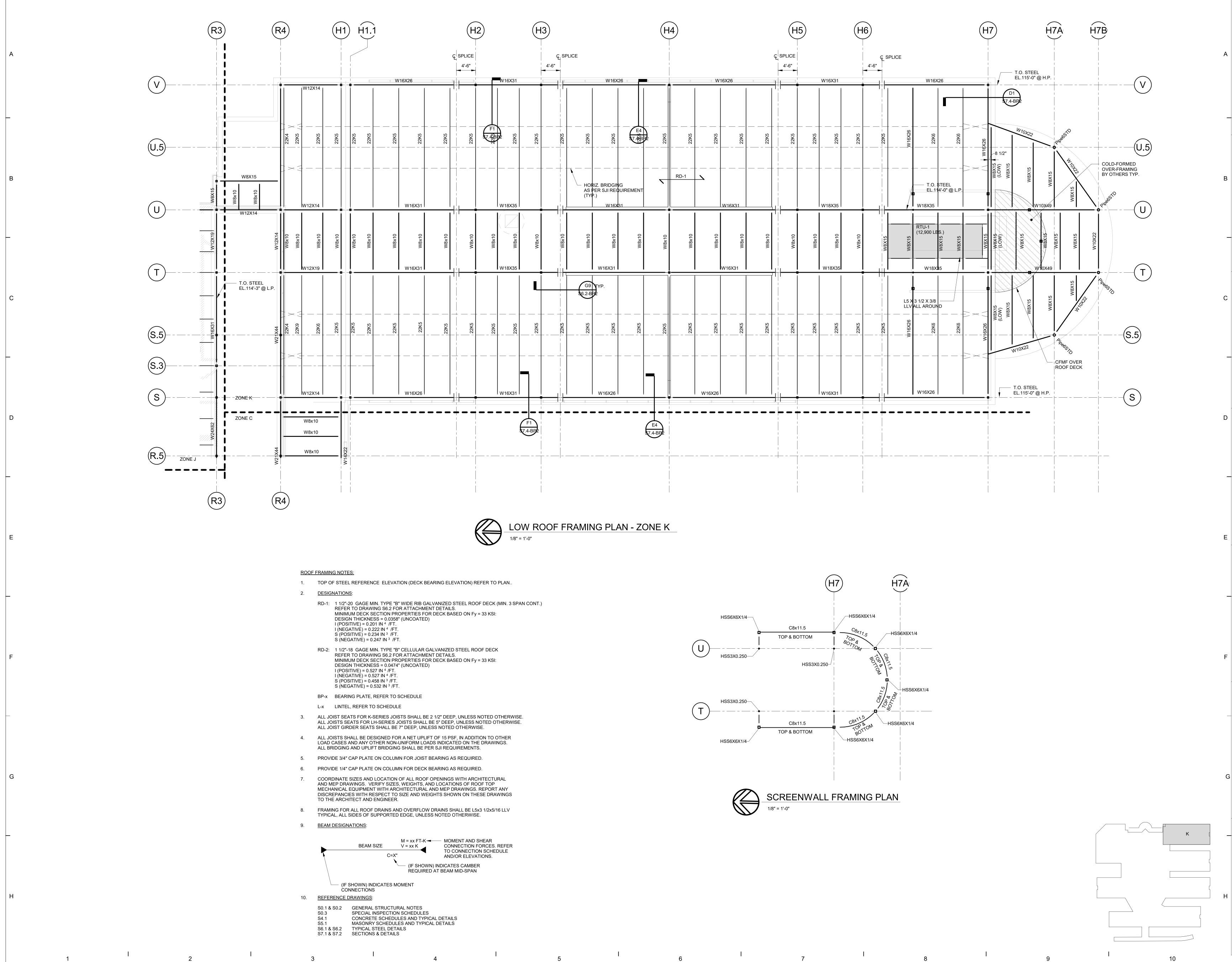
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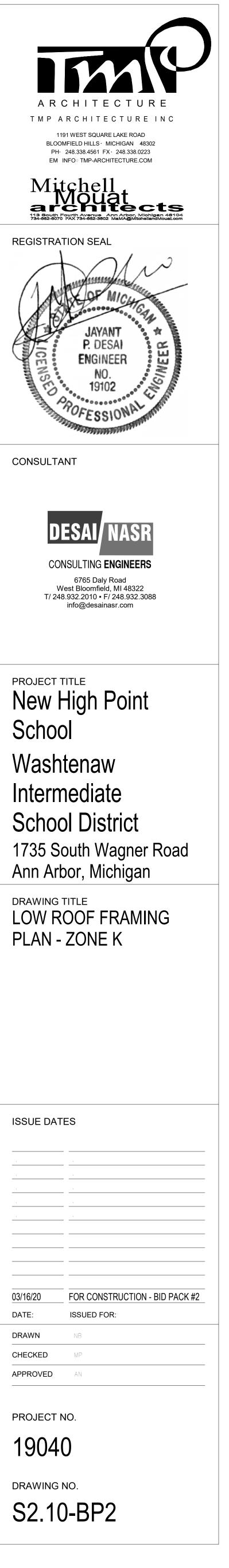


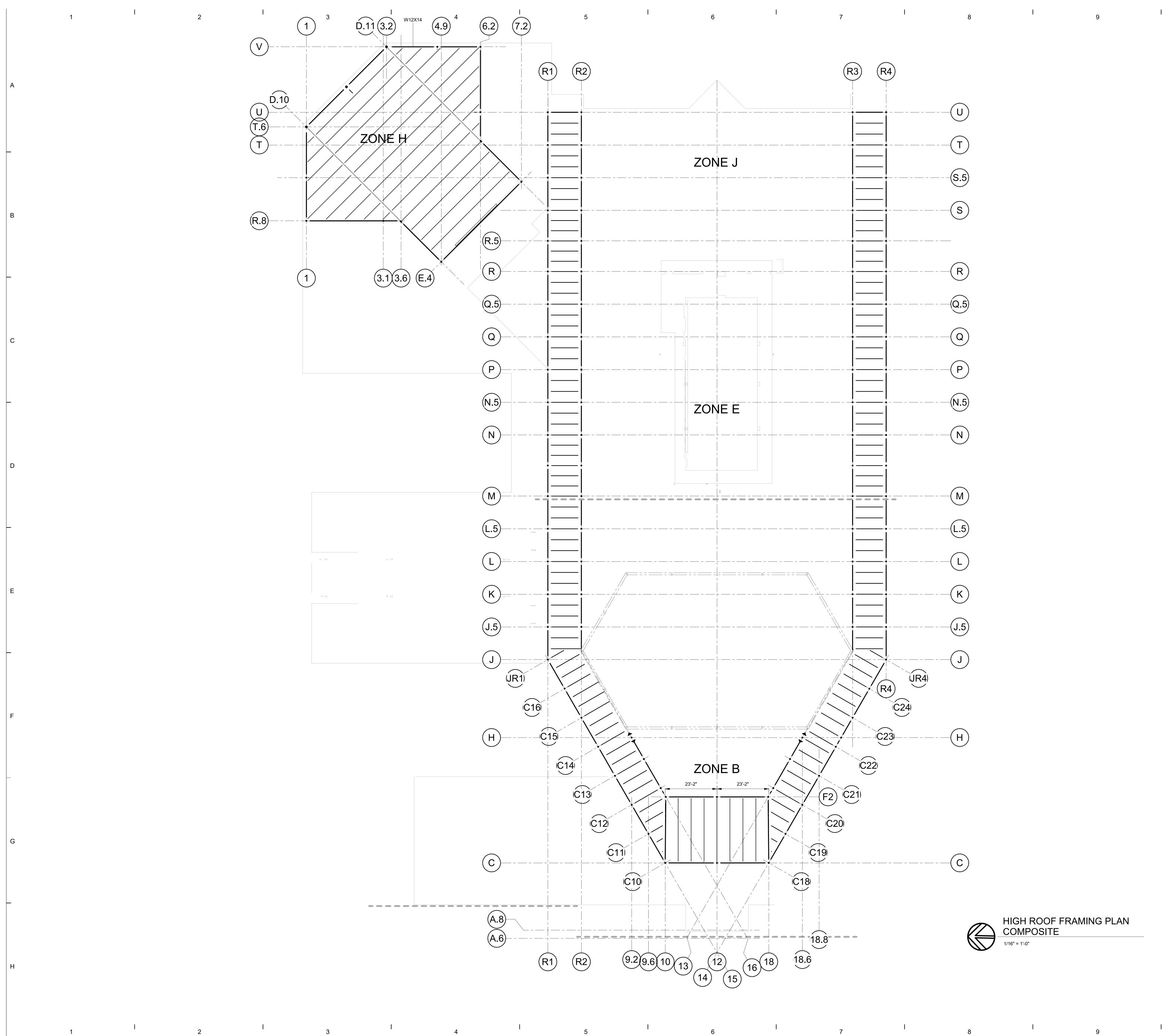
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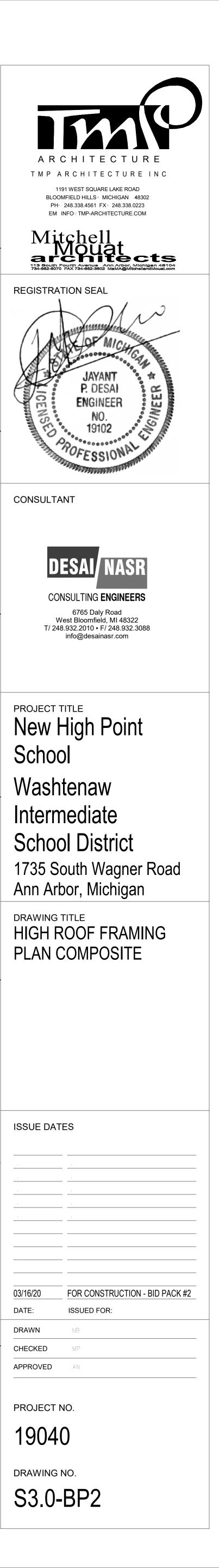


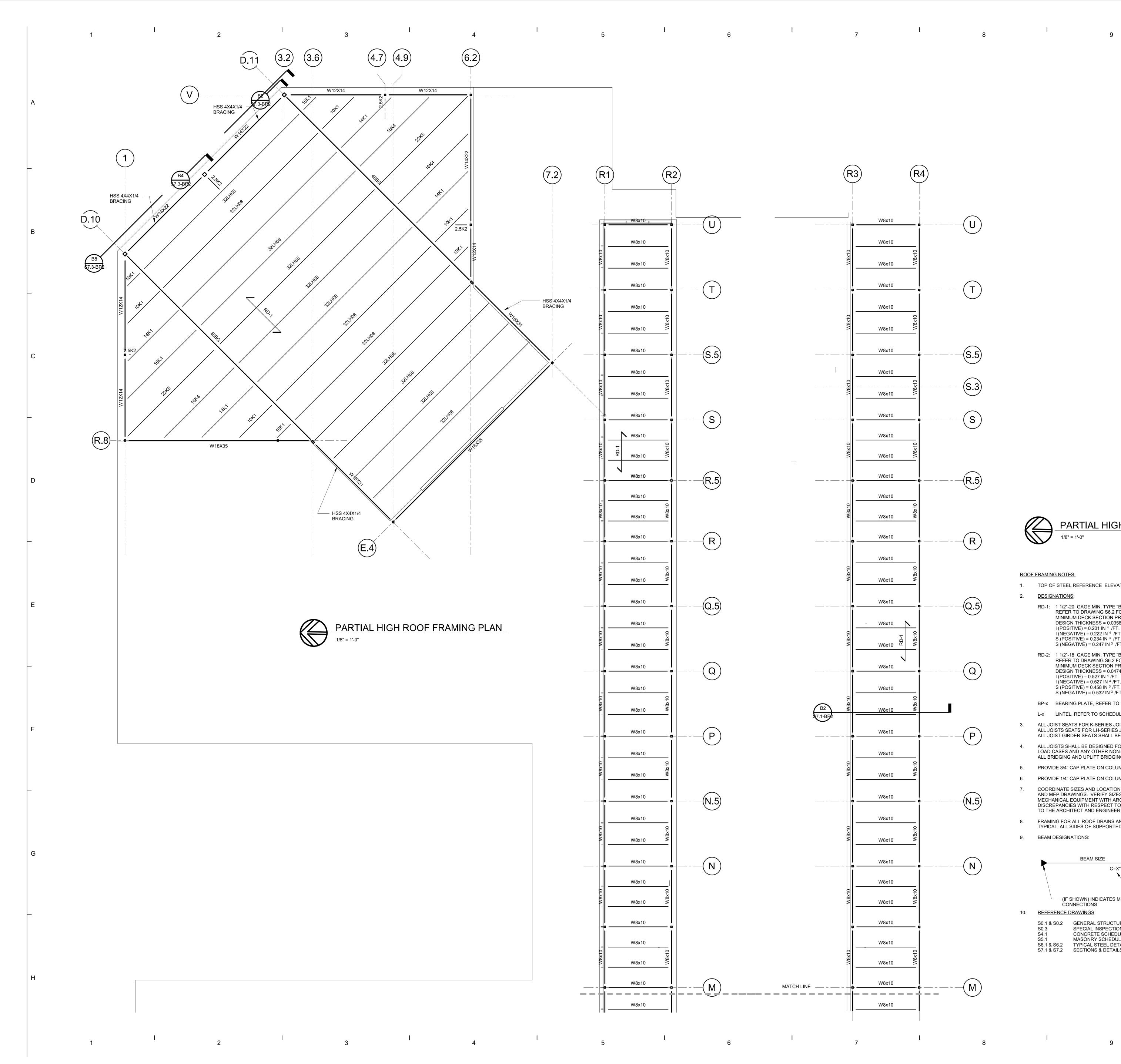


HIGH ROOF FRAMING PLAN COMPOSITE 1/16" = 1'-0"

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	PARTIAL HIGH ROOF I	FRAMING PLAN
	1/8" = 1'-0"	
	<u>NG NOTES:</u>	
	DF STEEL REFERENCE ELEVATION (DECK BEAI	RING ELEVATION) REFER TO PLAN
RD-1:		
RD-2:	1 1/2"-18 GAGE MIN. TYPE "B" CELLULAR GAL REFER TO DRAWING S6.2 FOR ATTACHMENT MINIMUM DECK SECTION PROPERTIES FOR I DESIGN THICKNESS = 0.0474 " (UNCOATED) I (POSITIVE) = 0.527 IN ⁴ /FT. I (NEGATIVE) = 0.527 IN ⁴ /FT. S (POSITIVE) = 0.458 IN ³ /FT. S (NEGATIVE) = 0.532 IN ³ /FT.	DETAILS.
BP-x	BEARING PLATE, REFER TO SCHEDULE	
L-x	LINTEL, REFER TO SCHEDULE	
ALL JO	DIST SEATS FOR K-SERIES JOISTS SHALL BE 2 DISTS SEATS FOR LH-SERIES JOISTS SHALL BE DIST GIRDER SEATS SHALL BE 7" DEEP, UNLES	5" DEEP, UNLESS NOTED OTHERWISE.
LOAD	DISTS SHALL BE DESIGNED FOR A NET UPLIFT CASES AND ANY OTHER NON-UNIFORM LOADS RIDGING AND UPLIFT BRIDGING SHALL BE PER	S INDICATED ON THE DRAWINGS.
PROV	IDE 3/4" CAP PLATE ON COLUMN FOR JOIST BE	ARING AS REQUIRED.
PROV	IDE 1/4" CAP PLATE ON COLUMN FOR DECK BE	ARING AS REQUIRED.
AND N MECH DISCF	RDINATE SIZES AND LOCATION OF ALL ROOF OF MEP DRAWINGS. VERIFY SIZES, WEIGHTS, AND IANICAL EQUIPMENT WITH ARCHITECTURAL AN REPANCIES WITH RESPECT TO SIZE AND WEIGI IE ARCHITECT AND ENGINEER.) LOCATIONS OF ROOF TOP ND MEP DRAWINGS. REPORT ANY
	ING FOR ALL ROOF DRAINS AND OVERFLOW D AL, ALL SIDES OF SUPPORTED EDGE, UNLESS	
	DESIGNATIONS:	
	M = xx FT-K BEAM SIZE V = xx K	
Ţ	C=X"	AND/OR ELEVATIONS.
		INDICATES CAMBER AT BEAM MID-SPAN
REFE	(IF SHOWN) INDICATES MOMENT CONNECTIONS RENCE DRAWINGS:	
S0.1 8		
	SPECIAL INSPECTION SCHEDULES CONCRETE SCHEDULES AND TYPICA MASONRY SCHEDULES AND TYPICAL S6.2 TYPICAL STEEL DETAILS	
S7.18	& S7.2 SECTIONS & DETAILS	

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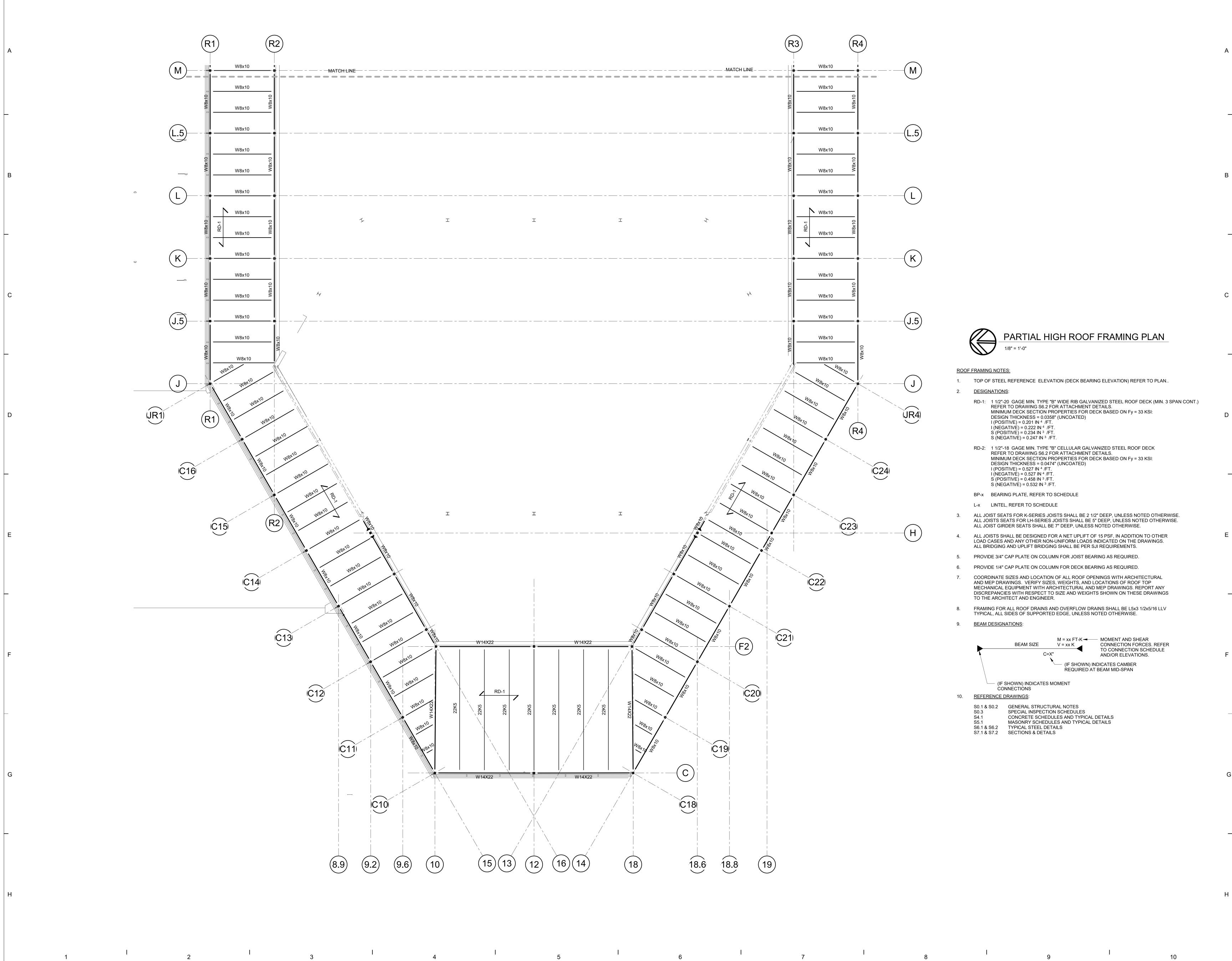
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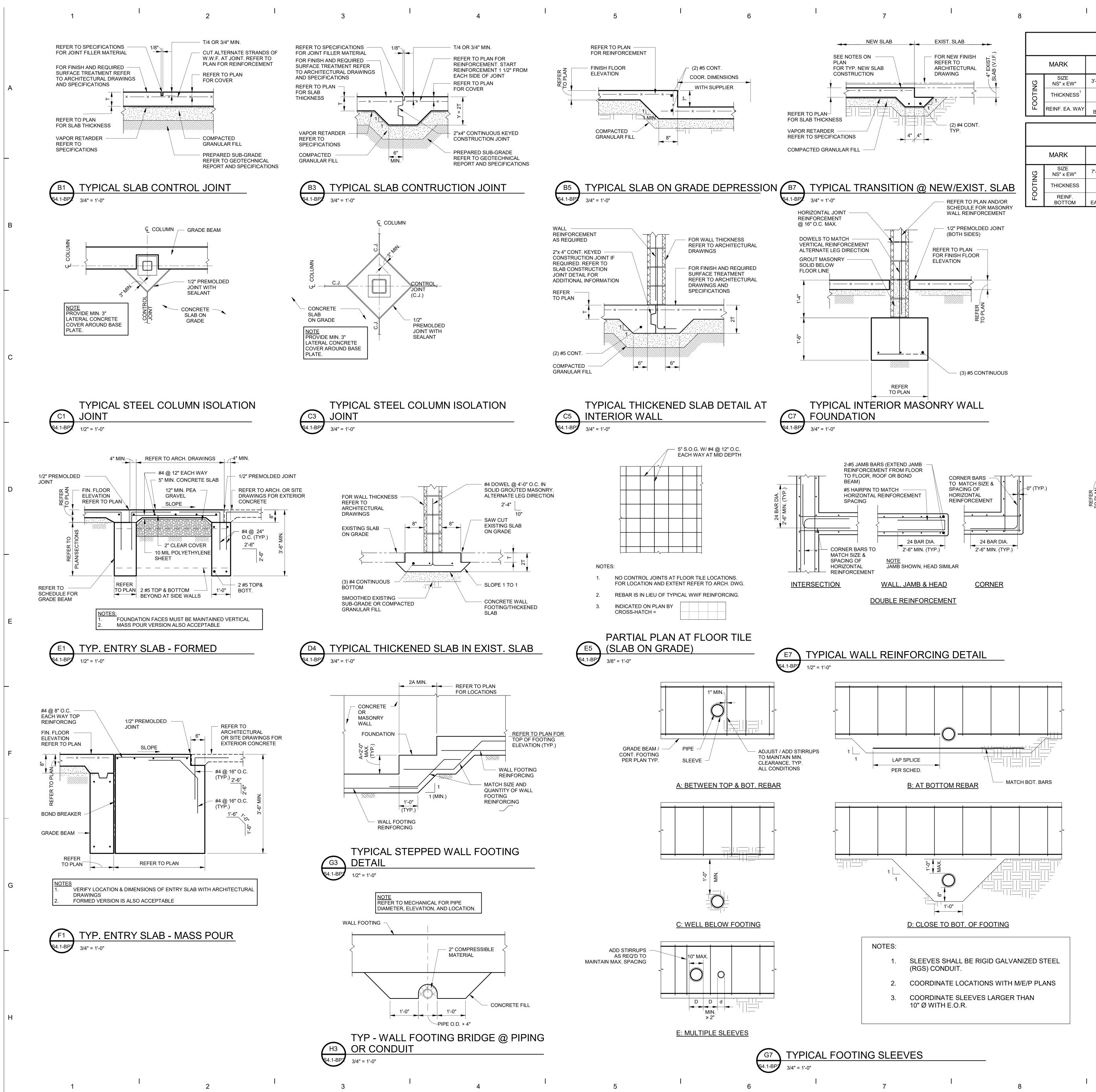
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D









F-2

2'-2"

(6) #5

BOTTOM

CF-1

2'-2"

FOOTING SCHEDULE

F-1

3'-0" x 3'-0"

1'-4"

(4) #5

BÒTTOM

F-8

7'-0" x 7'-0"

1'-4"

FOOTING SCHEDULE

3'-0" x 3'-0" 4'-0" x 4'-0" 4'-0" x 4'-0" 5'-0" x 5'-0"

F-4

2'-2"

(6) #5

BOTTOM

CF-3

2'-2"

F-3

1'-4"

(8) #5

BOTTOM

CF-2

3'-0" x 5'-0" 3'-0" x 5'-0" 3'-0" x 4'-0"

1'-4"

10

F-6

5'-0" x 5'-0"

2'-2"

(10) #5

BOTTOM

F-5

1'-4"

(6) #5

BOTTOM

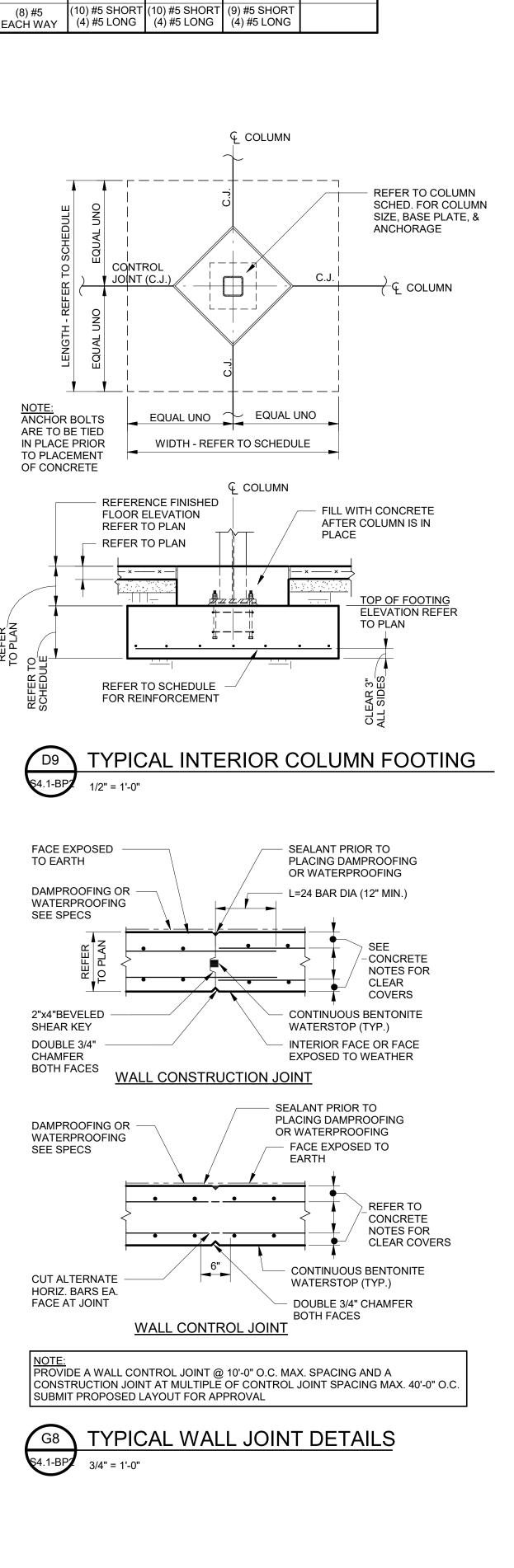
F-7

6'-0" x 6'-0'

1'-4"

(7) #5

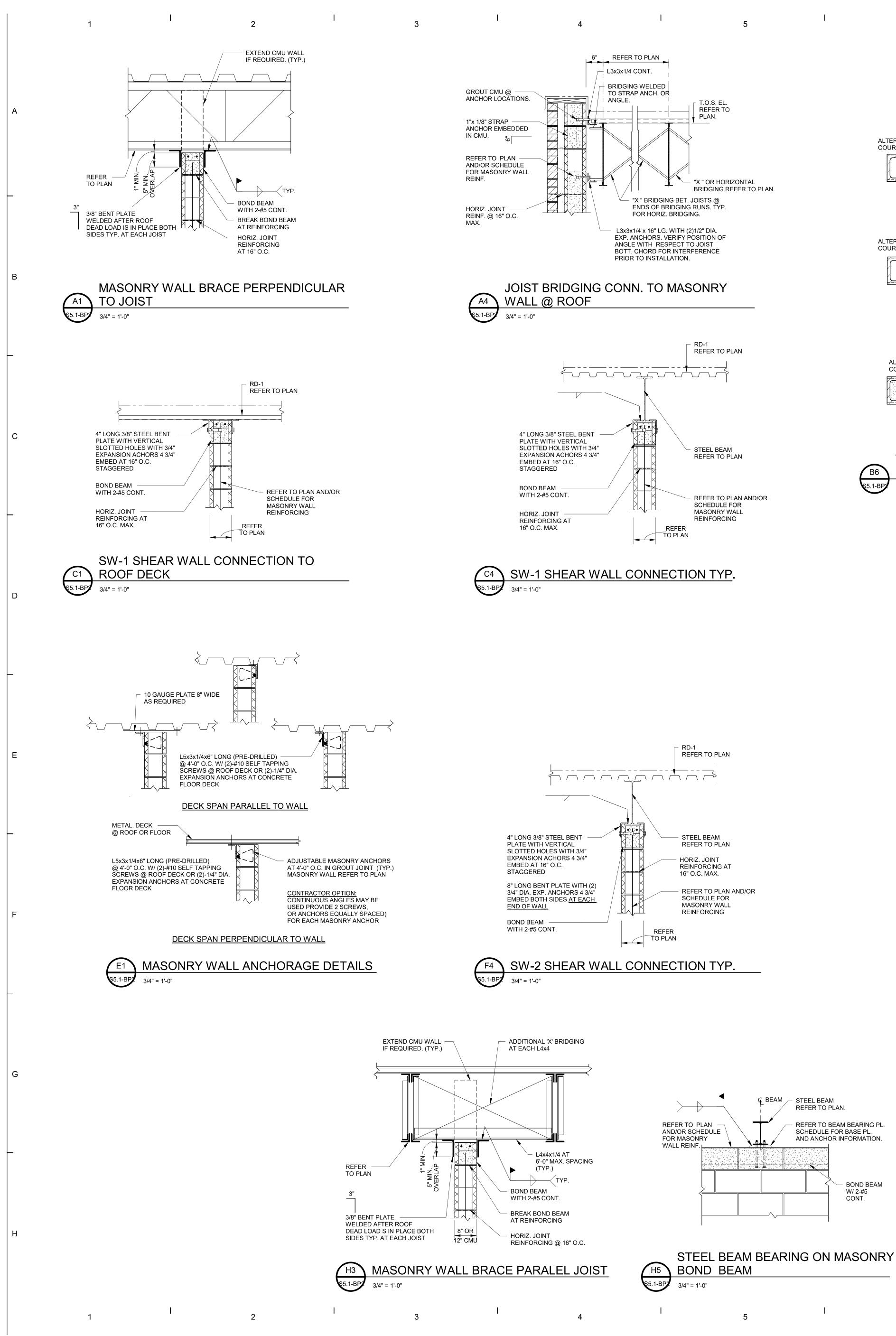
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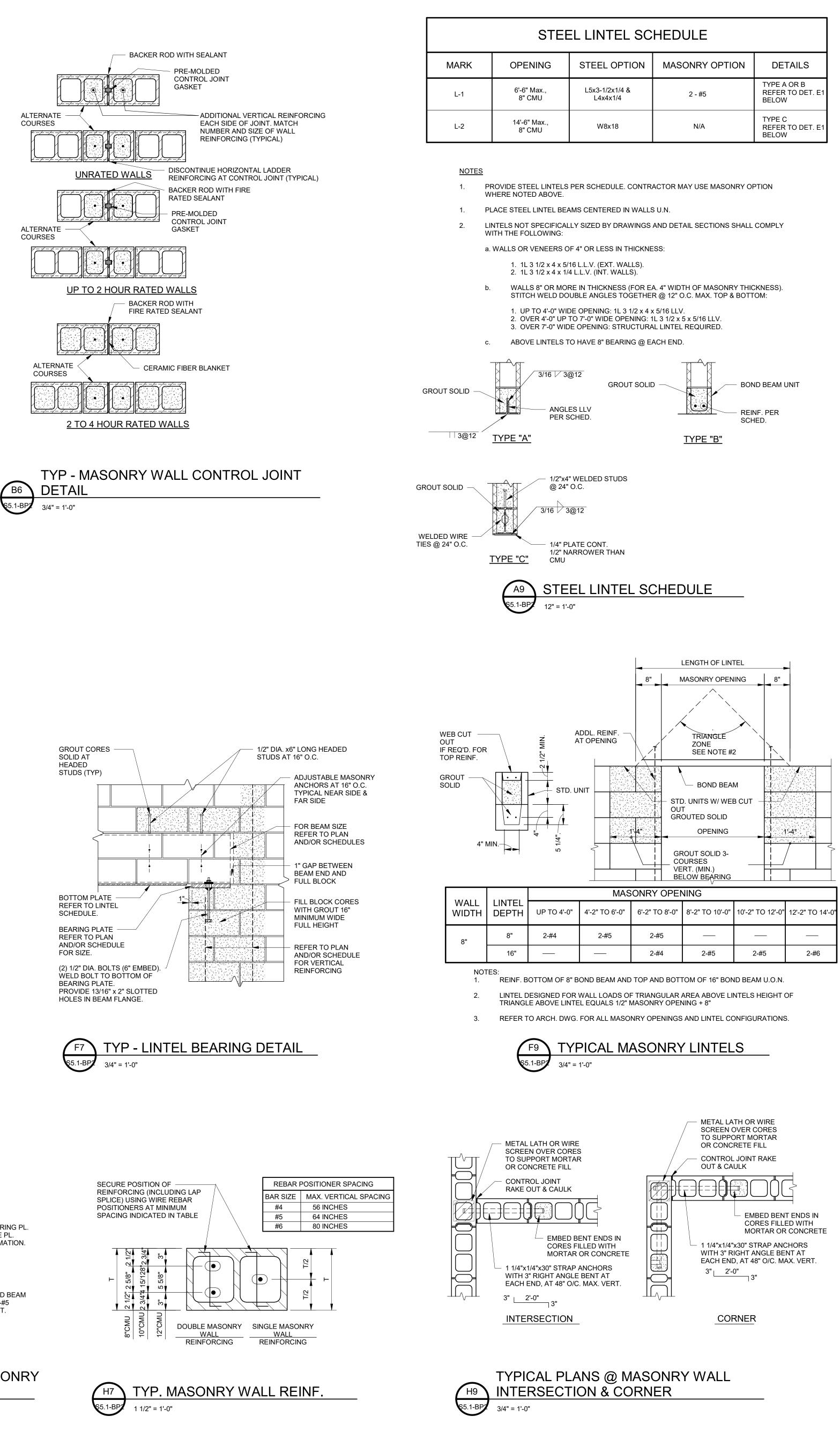


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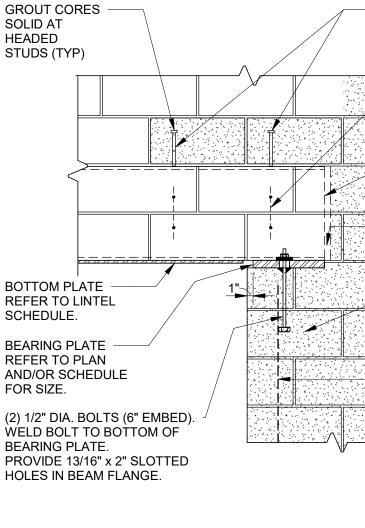
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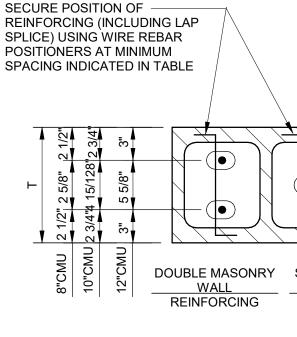


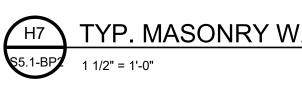






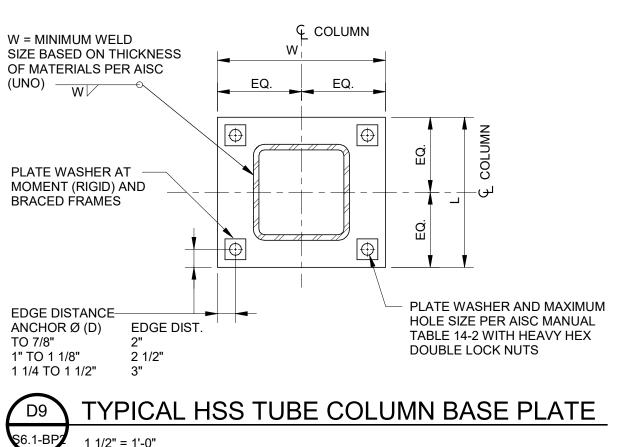


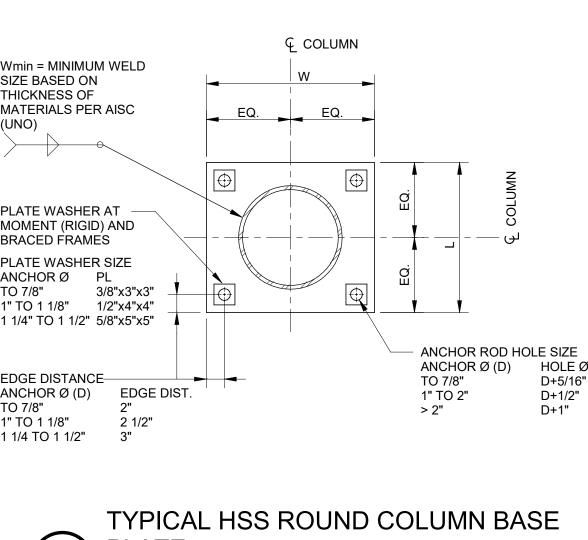




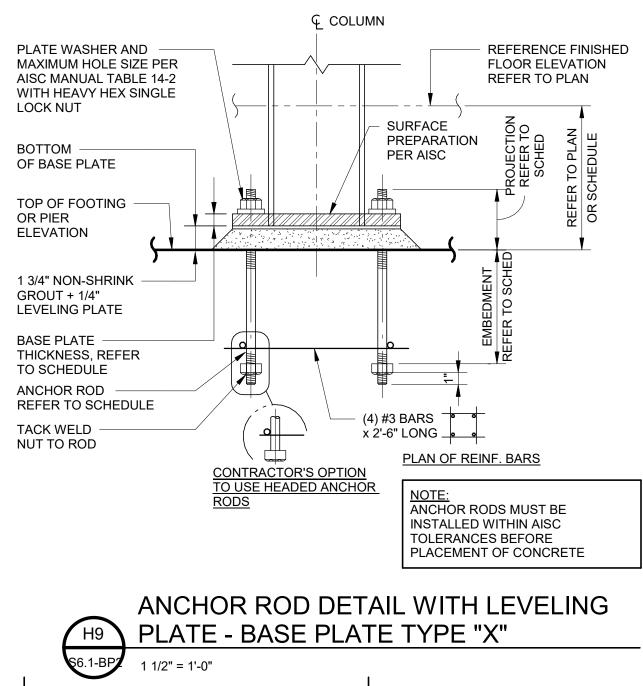


1	Ι	2 3		4	I 5 6		۱ 7 ۲	I		8		I		9			10	
	<u> </u>	ECIAL JOIST SCHEDULE			SPECIAL JOIST SCHEDULE					STE	EEL CO	_UMN S	CHEDULE	Ē				
MARK	SIZE	LOADING DIAGRAM	REMARKS MECH. UNIT LOAD	MARK	SIZE LOADING DIAGRAM	REMARKS MECH. UNIT LOAD		C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8 C	C-9 C-1	0 C-11	C-12
A 16K - SJ1			P=2300 LBS 1	26K - SJ5		P=1800 LBS	SUPPORTING											A
		$P_{\rm e}$ $P_{\rm e}$ $W_{\rm SL}$ =150 PLF												- 1 - +- ·	- +	1	. + - + .	
16K - SJ2		$P_{1} \qquad P_{1} \qquad \qquad$	MECH. UNIT LOAD P ₁ =1000 LBS	28K - SJ1	P_{1} $W_{SL} = 150 PLF$ $W_{DL} = 150 PLF$	MECH. UNIT LOAD P=600 LBS 1											1/2 X 3/8	
_							REF. FIN. T.O.S. LOW ROOF	 			+-			34X 4 X3/16	54X4X1/4	54X4X5/16 	34 1/2 X 4	
16K - SJ3		DRIFT=300 LBS P_1 W_{SL} =150 PLF W_{DL} =150 PLF	MECH. UNIT LOAD P=600 LBS 1			MECH. UNIT LOAD		X4X3/16	X4X1/4	X4X3/8	X4X5/16	X4X1/2	/2 X4 1/2X	HSS	HSS	HSS H	HSS	/2 X4 1/2X
				28K - SJ2	$P_{1} \qquad P_{1} \qquad \qquad$	P=1100 LBS		HSS4)	– – HSS4)	HSS4)	HSS4)	HSS4)	HSS4 1					HSS4 1
в		► _							_					-			-	
16K - SJ4		DRIFT=300 LBS P1 WSL =150 PLF WDL =150 PLF	MECH. UNIT LOAD P=1000 LBS 1		P P I W _{SL} =180 PLF W _{DL} =150 PLF	MECH. UNIT LOAD P=2100 LBS	TYPE	A	A	A	A	A	A	A	A	A A	A	A
10K - 354				28K - SJ3		1	Image: Letter size Size L" x W" x T" How and the size How and the size <		10" x 10" x 3/4"	x 3/4"	10" x 10" x 3/4"			x 3/4"	x 3/4" x	x 10" 10" x 1 3/4" x 3/4" 3/4" (4) 3/4	' x 3/4"	" 12" x 12" x 3/4" (4) 3/4"
		P ₁ P ₁ W _{SL} =150 PLF	MECH. UNIT LOAD				BOLTS ANCHOR BOLT	(4) 3/4" DIA.	(4) 3/4" DIA. 7"	(4) 3/4" DIA. 7"	(4) 3/4" DIA. 7"	(4) 3/4" DIA.	(4) 3/4" (DIA. 7"	DIA.	DIA. D	3/4" (4) 3/4 DIA. DIA.	DIA.	DIA.
16K - SJ5			P=1700 LBS		P P SL =150 PLF W _{DL} =150 PLF	MECH. UNIT LOAD P=400 LBS	PROJECTION	12"	12"	12"	12"	12"	12"	12"	12"	12" 12"	12"	12"
				28K - SJ4			REMARKS	12" EMBED.	12" EMBED.	EMBED.	EMBED.	12" EMBED.	12" EMBED. E	MBED. E	MBED. EM	12" 12" BED. EMBE	D. EMBED	EMBED.
с 16К - SJ6		$P_{1} P_{1} W_{SL} = 150 PLF$ $W_{DL} = 150 PLF$	MECH. UNIT LOAD P=1100 LBS 1		$W_{SL} = 150 PLF P_1 P_1 DRIFT = 150 LBS$	MECH. UNIT LOAD				STE			CHEDULE					
				28K - SJ5	W _{DL} =150 PLF	P=2000 LBS	MARK		0.44									
		P1	MECH. UNIT LOAD		15'-0".		SUPPORTING	C-13	C-14	C-15	C-16	C-17	C-18	C-19	C-20	C-21		
22K - SJ1			P=1000 LBS 1		$W_{SL} = 200 \text{ PLF} P_1 \qquad P_1 \qquad \text{DRIFT} = 250 \text{ LBS}$ $W_{DL} = 150 \text{ PLF} \qquad \qquad$	MECH. UNIT LOAD	REF. FIN. T.O.S. AUDITORIUM	== F =	= = = = =		==#=	 	=====	_1_:	===	= = =	: _ = = = :	= = = ==
				28K - SJ6		P=4250 LBS 1	REF. FIN. T.O.S. MONITOR					< 1/2						
		P_=XX LBS	MECH. UNIT LOAD P=1000 LBS 1				REF. FIN. T.O.S. LOW ROOF	X3/16	X1/4	X3/8	X1/2	2 X 4 1/2)	4 X 1/2	8 X 5/16		X3/8		
22K - SJ2					Wsl =200 PLF P1 DRIFT=250 LBS WDL =150 PLF	MECH. UNIT LOAD P=5800 LBS		HSS4X	HSS4X4	HSS4X4	HSS4X4	HSS4 1/2		HSS 8 X	X 1/2	HSS4X4		
D		P1	MECH. UNIT LOAD P=1650 LBS	28K - SJ7											SS 6 X 4			D
22K - SJ3			1		15'-0".		REF. FIN. 1ST. FL											
		P 1 W _{SL} =150 PLF W _{DL} =150 PLF	MECH. UNIT LOAD	28K - SJ8	$W_{SL} = 320 \text{ PLF} \qquad P \qquad P \\ W_{DL} = 150 \text{ PLF} \qquad 1 \qquad 1 \\ W_{DL} = 150 \text{ PLF} \qquad 1 \\ W_{DL} = 100 \text{ PLF} \qquad 1 \\ W_{DL} = 10$	MECH. UNIT LOAD P=1000 LBS	ТҮРЕ	A	A	А	Α	A	A	A	A	A		
 22K - SJ4			P=600 LBS 1	28K - 5J8			L" x W" x T"	10" x 10" x 3/4"	10" x 10" x 3/4"	10" x 10" x 3/4"	10" x 10" x 3/4"	12" x 12" x 3/4"	12" x 12" x 1"	14" x 14" x 1"	12" x 12" x 1"	10" x 10" x 3/4"		
					P ₁ W _{SL} =150 PLF	MECH. UNIT LOAD	ANCHOR ANCHOR ANCHOR ANCHOR BOLTS		(4) 3/4" DIA.	(4) 3/4" DIA.	(4) 3/4" DIA.	(4) 3/4" DIA.	_	(4) 1" DIA.	(4) 3/4" DIA.	(4) 3/4" DIA.		
22K - SJ5		P ₁ W _{SL} =150 PLF W _{DL} =150 PLF	MECH. UNIT LOAD P=2700 LBS 1	28K - SJ9		P=100 LBS 1	ANCHOR BOLT PROJECTION	7."	7"	7"	7"	7"	7"	7"	7"	7"		
E							REMARKS	12" EMBED.	12" EMBED.	12" EMBED.	12" EMBED.	12" EMBED.	12" EMBED.	16" EMBED.	12" EMBED.	12" EMBED.		E
		P_1 $W_{SL} = 180 PLF$ $W_{DL} = 150 PLF$	MECH. UNIT LOAD P=400 LBS 1	<u>NOTE:</u> COORDINATE POINT LOA	DS LOCATIONS WITH MEP AND ARCH. LAYOUT.							<u> </u>	<u> </u>					
22K - SJ6							BEARING	PLATE	SCH	EDULE	Ξ							
-		P1 W _{SL} =150 PLF W _{DL} =150 PLF	MECH. UNIT LOAD P=2500 LBS				MARK BEARING PLATE S (L" x W" x T")				REMA	RKS						
22K - SJ7							BP-1 7"X8"X3/8"	NO. & SIZ	LENG1	ENT PROJ.								
		P_1 P_2 $W_{SL} = 150 PLF$ $W_{SL} = 150 PLF$	MECH. UNIT LOAD P=100 LBS				BP-2 7"X8"X1/2"		6"									
F 22K - SJ8			P=600 LBS				BP-3 7"X8"X5/8"		6"									F
							BP-4 8"X10"X1/2"		6"									
		P_{1} P_{2} $W_{SL} = 150 PLF$ $W_{DL} = 150 PLF$	MECH. UNIT LOAD P=450 LBS 1 P=2700 LBS				BP-5 8"X10"X5/8" <u>NOTE:</u>		6"									
22K - SJ9			2				EDGE OF BEARING PLATE SHALL BE OF THE WALL ON THE SIDE OF BEAM	LOCATED NOT MO I OR JOIST SPAN.	DRE THAN 1/2"	FROM THE FAC	E				€ COLU	JMN	DEFEDENCE	
		P_1 P_1 $W_{SL} = 150 PLF$	MECH. UNIT LOAD P=200 LBS									MAXIMU AISC MA WITH HI	WASHER AND — JM HOLE SIZE PEF ANUAL TABLE 14-2 EAVY HEX SINGLE				 REFERENCE FLOOR ELEV REFER TO PL 	ATION
26K - SJ1			1			Wn	nin = MINIMUM WELD	ନ୍ COLUMN				LOCK N BOTTO	М ———			- SURFACE PREPARATION PER AISC	ECTION LED	
G						SIZ THI MA	ZE BASED ON	EQ.				OF BAS					PROJE SCF	SCHEDU
		P P W _{SL} =150 PLF W _{DL} =150 PLF	MECH. UNIT LOAD P=650 LBS 1	$\lambda a = \lambda a \lambda a $	LIM WELD & COLUMN	``				7		OR PIEF ELEVAT	R					
26K - SJ2				W = MINIMU SIZE BASEL OF MATERI (UNO) —		PL/ MC	ATE WASHER AT		Ğ	COLUMI		1 3/4" N GROUT LEVELIN	ON-SHRINK —— - + 1/4" NG PLATE				EDMENT TO SCHE	
		P P W DRIFT= 1 1 SL = 200 PLF	MECH. UNIT LOAD	v		PL	DMENT (RIGID) AND ACED FRAMES ATE WASHER SIZE ICHOR Ø PL		— <u>—</u> — –	لى			LATE				REFER REFER	
26K - SJ3			P=1000 LBS 1	PLATE WA MOMENT (BRACED F		TO 1" 7 1 1,	ICHOR Ø PL 7/8" 3/8"x3"x3" TO 1 1/8" 1/2"x4"x4" /4" TO 1 1/2" 5/8"x5"x5"					ANCHO REFER	R ROD			(4) #3 BARS x 2'-6" LONG	•	
		13'-0".		BRAUED F		ED	DGE DISTANCE		ANCHO TO 7/8"	D+5/	EØ /16"	TACK W NUT TO	VELD			PLAN OF R	1	
н		DRIFT= P P W 180 L PS 1 1 1 SL =190 PLF	MECH. UNIT LOAD			TO 1" ⁻	ICHOR Ø (D) EDGE DIST.) 7/8" 2" TO 1 1/8" 2 1/2" /4 TO 1 1/2" 3"		1" TO 2" > 2"	D+1/ D+1"	1 Z 1			TO USE RODS	ACTOR'S OPTIOI	ANCHOR INSTALLE	RODS MUST BE D WITHIN AISC	н
26K - SJ4			P=1600 LBS 1	EDGE DIST ANCHOR Ø TO 7/8" 1" TO 1 1/8'	ANCE HOLE SIZE PER AISC MANUAL Ø (D) EDGE DIST. 2" TABLE 14-2 WITH HEAVY HEX 2 1/2" DOUBLE LOCK NUTS											TOLERAN	CES BEFORE NT OF CONCRE	TE
		13'-0".		1 1/4 TO 1	TYPICAL HSS TUBE COLUMN BASE PLATE		F9 PLATE	ROUND	COLUM	N BASE			AN (H9) PL/		ROD DET ASF PI A	TAIL WITH	I LEVELI "X"	NG
NOTE: ALL JOISTS TO BE I	DESIGNED FOR NE	ET ROOF UPLIFT PRESSURE OF MIN. 15.0 PSF TYP.			1 1/2" = 1'-0"		66.1-BP2 1 1/2" = 1'-0"	l		0			66.1-BP 1 1/2"					
1		۷ 3		4	ъ б		1			8				Э			10	

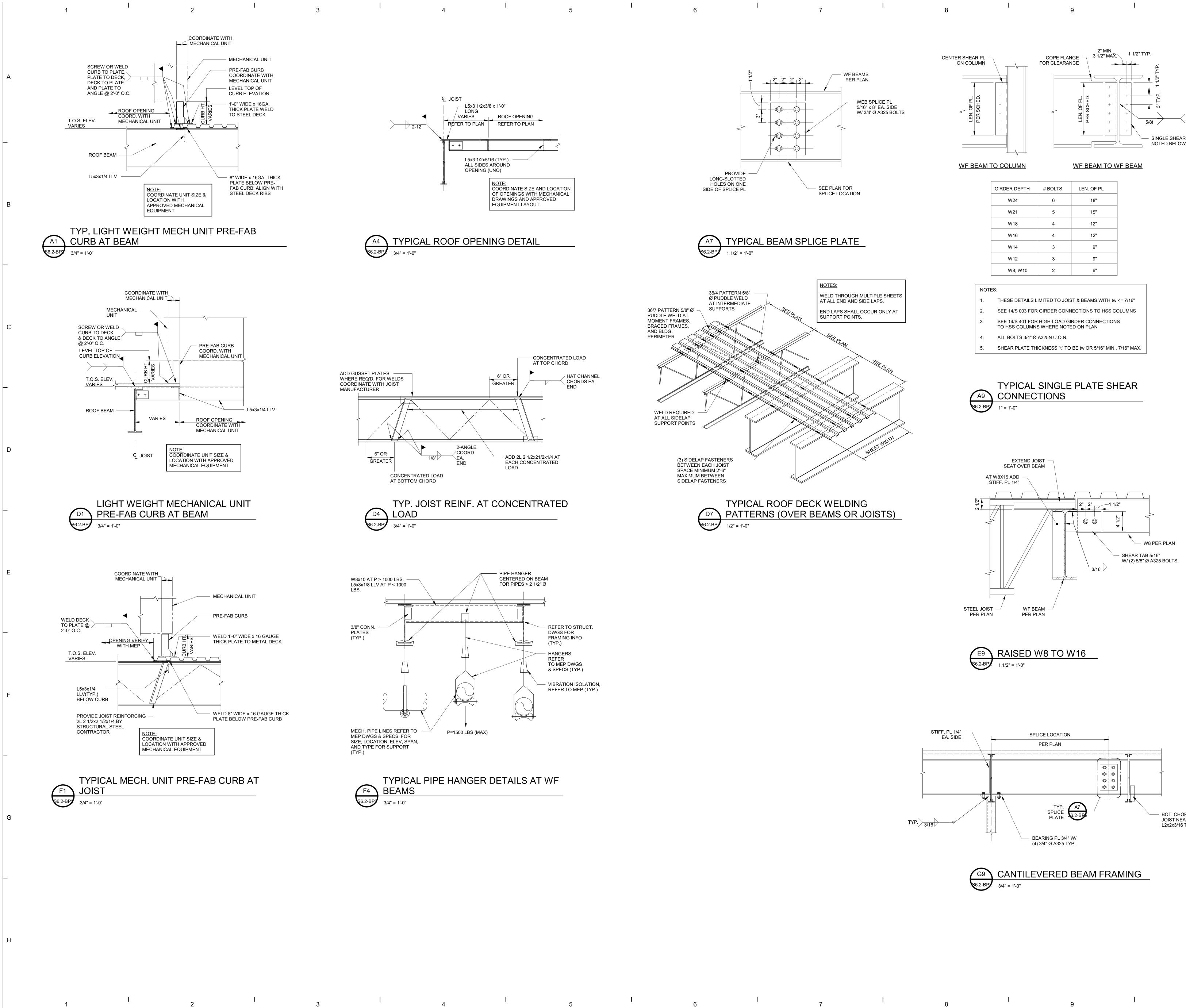


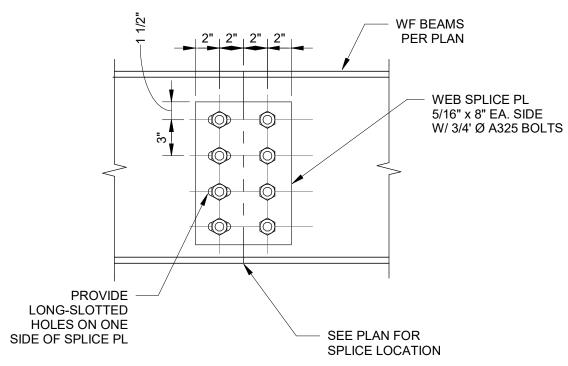


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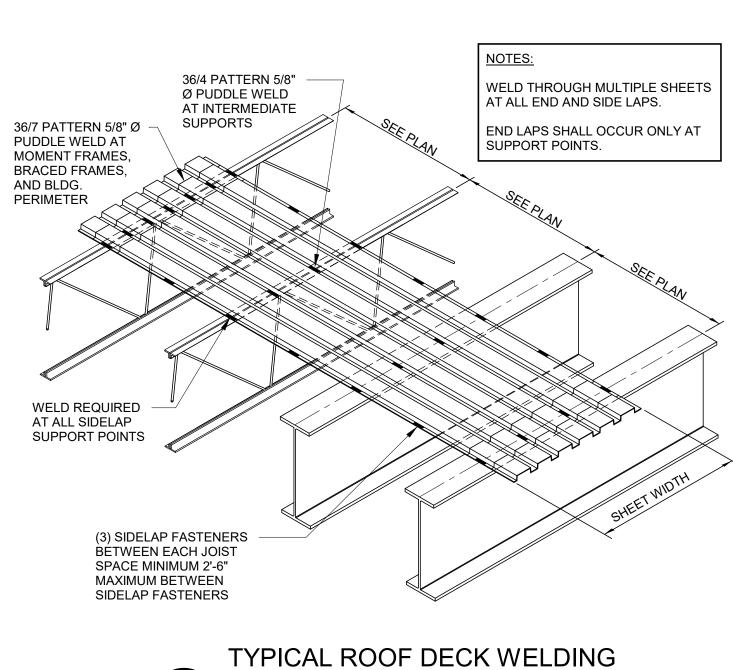


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6

\$6.2-BP7

1 1/2" = 1'-0"



 D7
 PATTERNS (OVER BEAMS OR JOISTS)

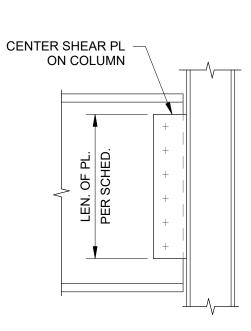
 \$6.2-BP2 1/2" = 1'-0"

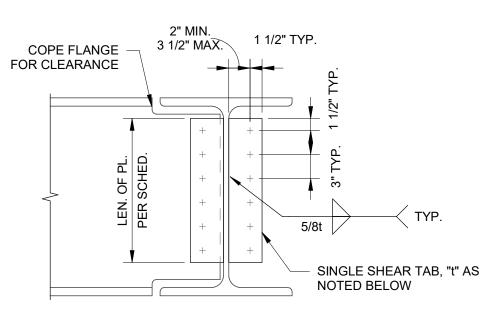




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WF BEAM TO COLUMN

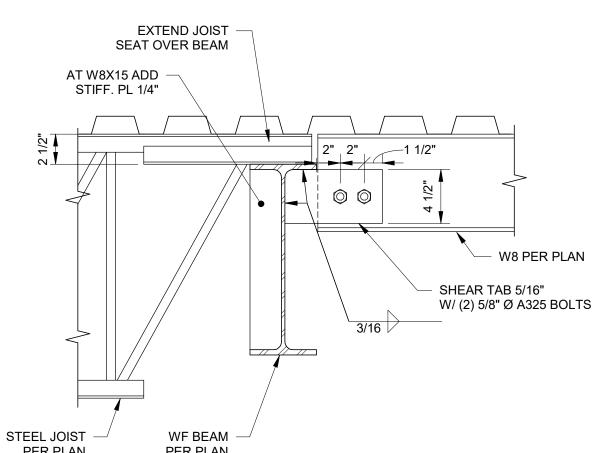
WF BEAM TO WF BEAM

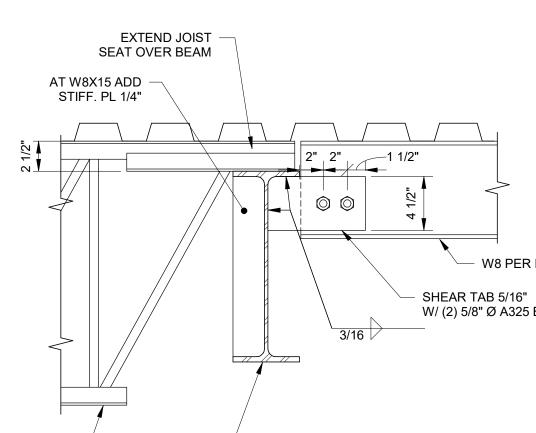
GIRDER DEPTH	# BOLTS	LEN. OF PL
W24	6	18"
W21	5	15"
W18	4	12"
W16	4	12"
W14	3	9"
W12	3	9"
W8, W10	2	6"

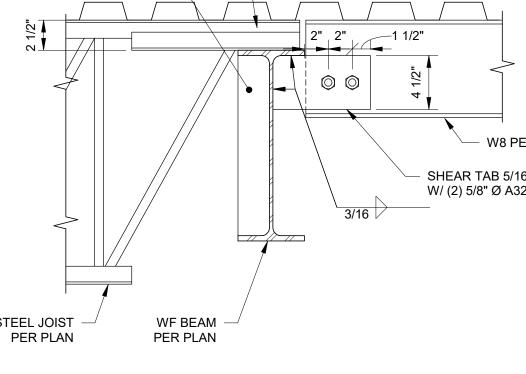
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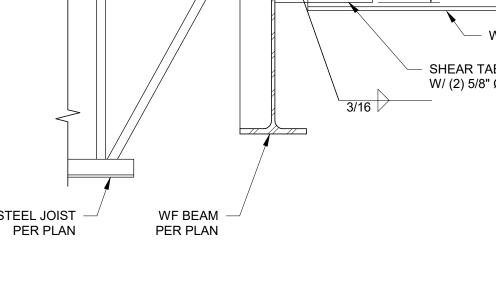
- THESE DETAILS LIMITED TO JOIST & BEAMS WITH tw <= 7/16"
- SEE 14/S 003 FOR GIRDER CONNECTIONS TO HSS COLUMNS
- SEE 14/S 401 FOR HIGH-LOAD GIRDER CONNECTIONS TO HSS COLUMNS WHERE NOTED ON PLAN
- ALL BOLTS 3/4" Ø A325N U.O.N. 4.
- SHEAR PLATE THICKNESS "t" TO BE tw OR 5/16" MIN., 7/16" MAX. 5.

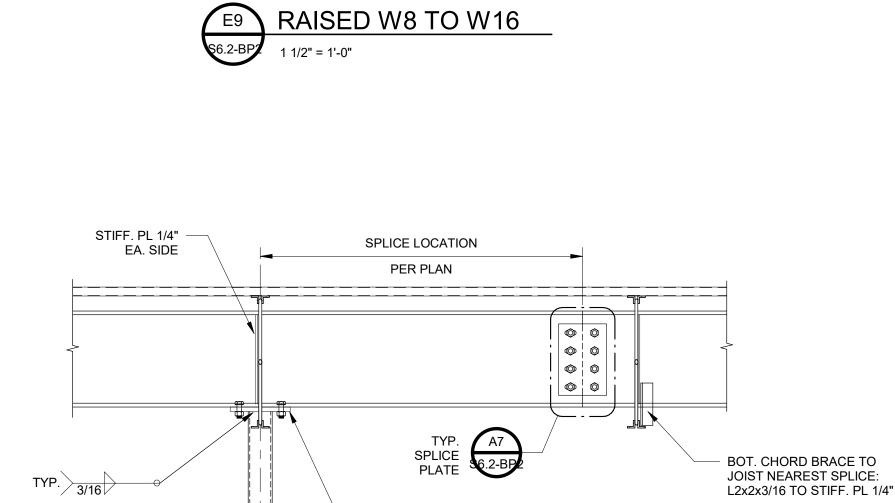












BEARING PL 3/4" W/

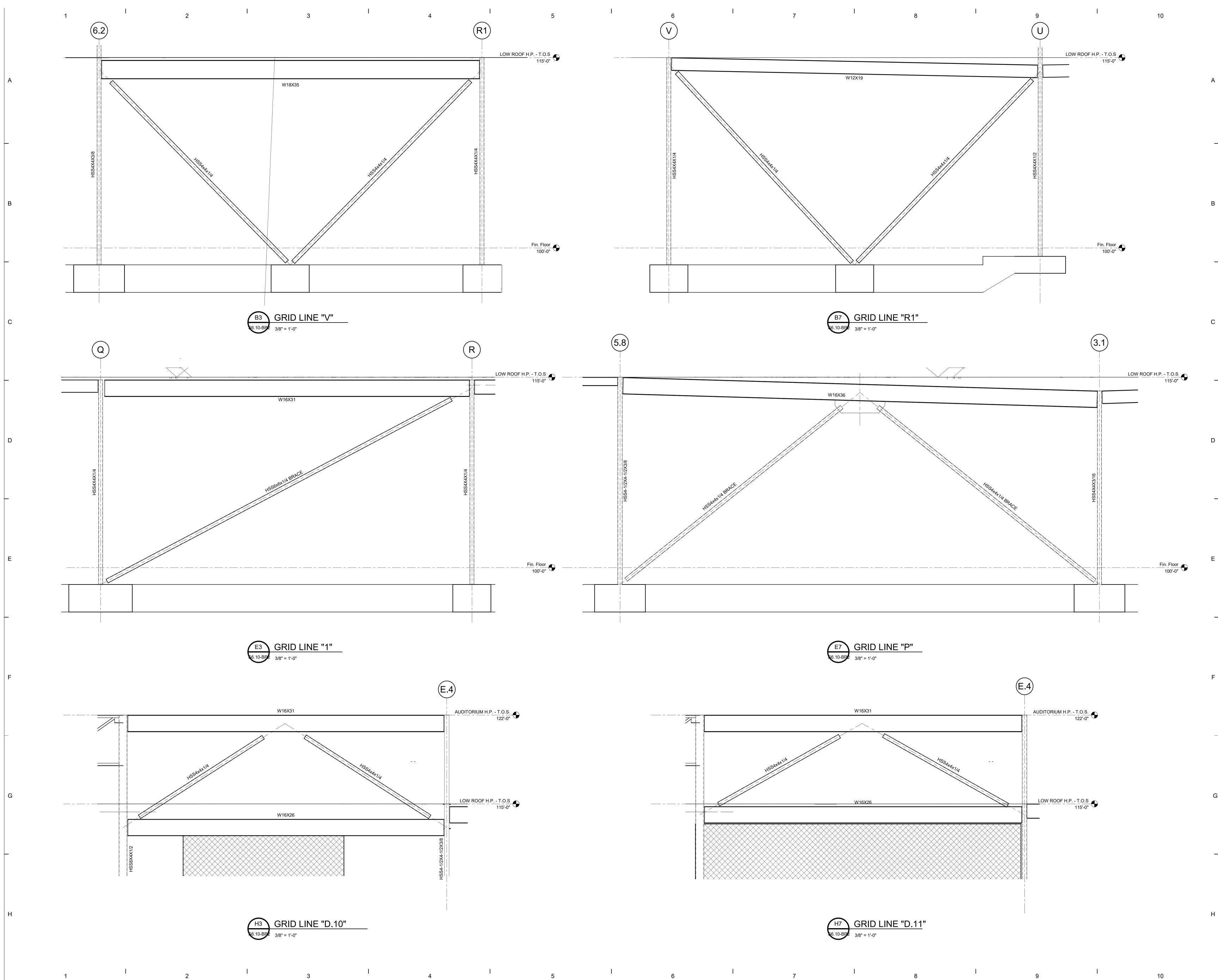
G9 CANTILEVERED BEAM FRAMING

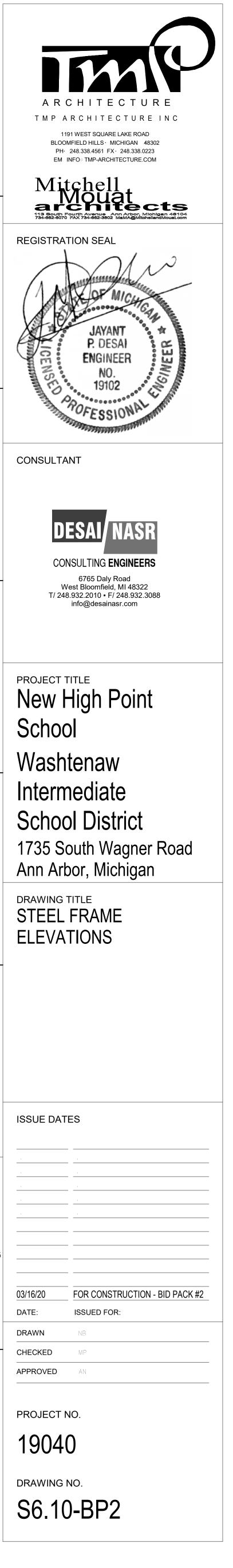
10

\$6.2-BP7 3/4" = 1'-0"

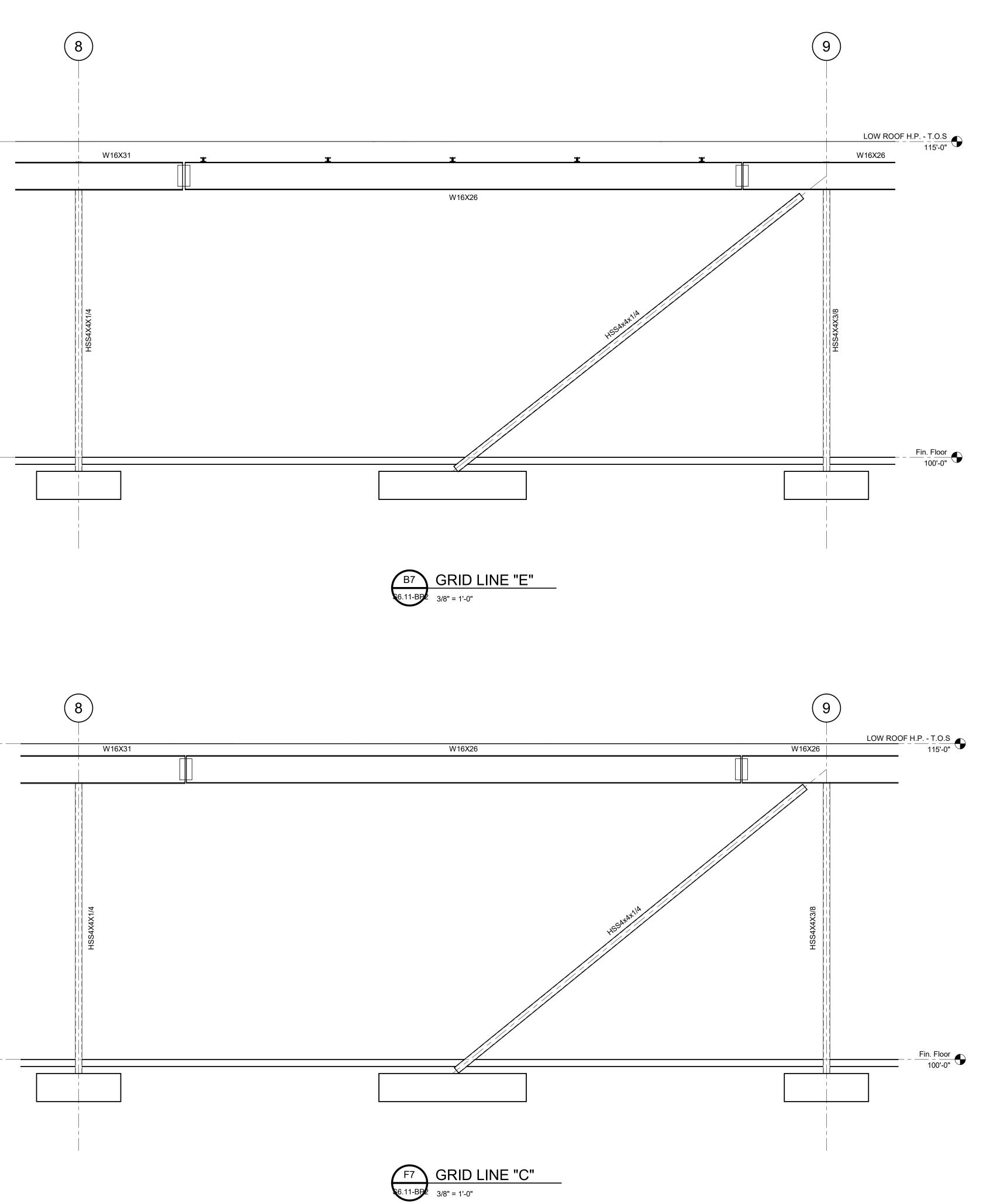
(4) 3/4" Ø A325 TYP.

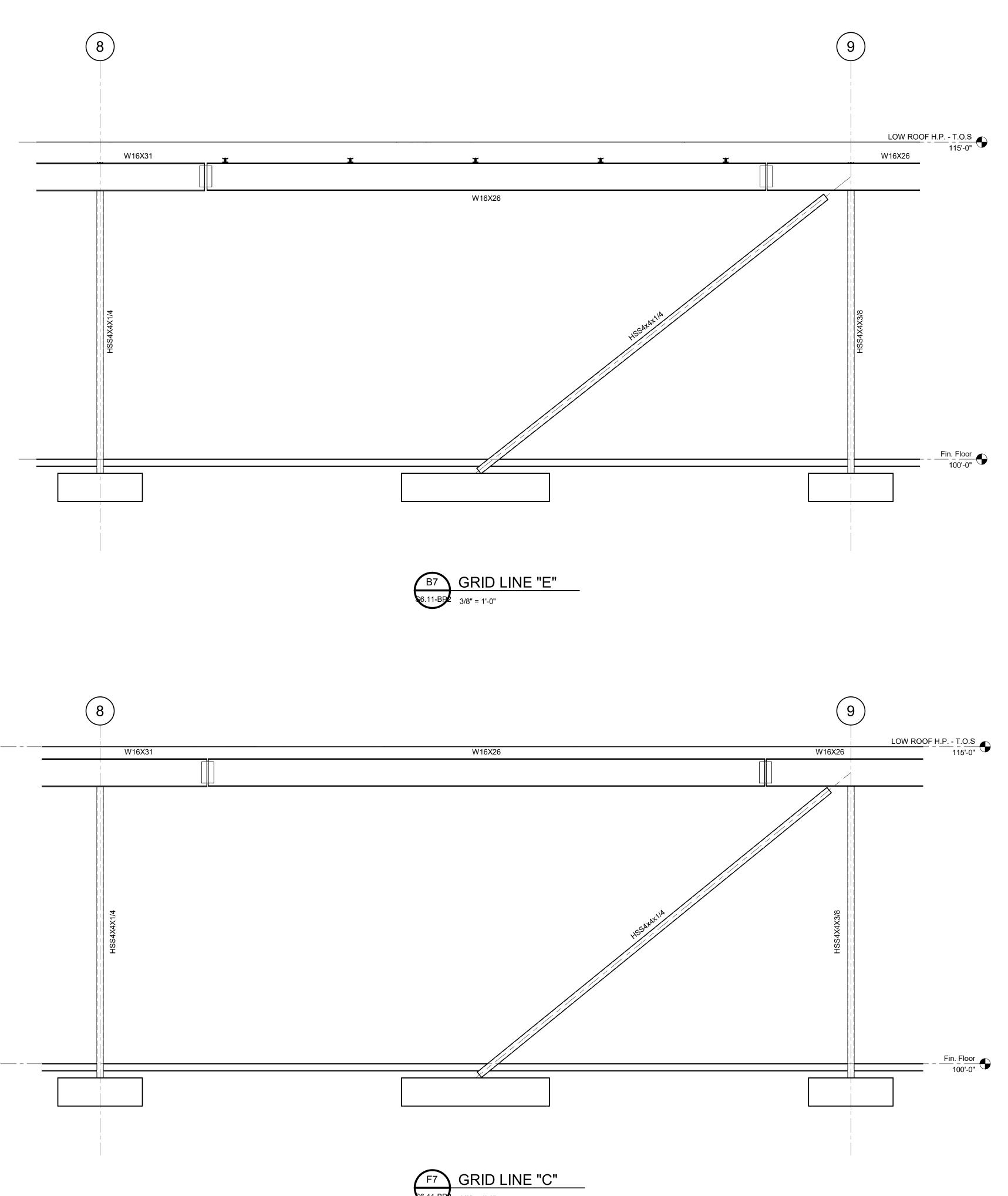






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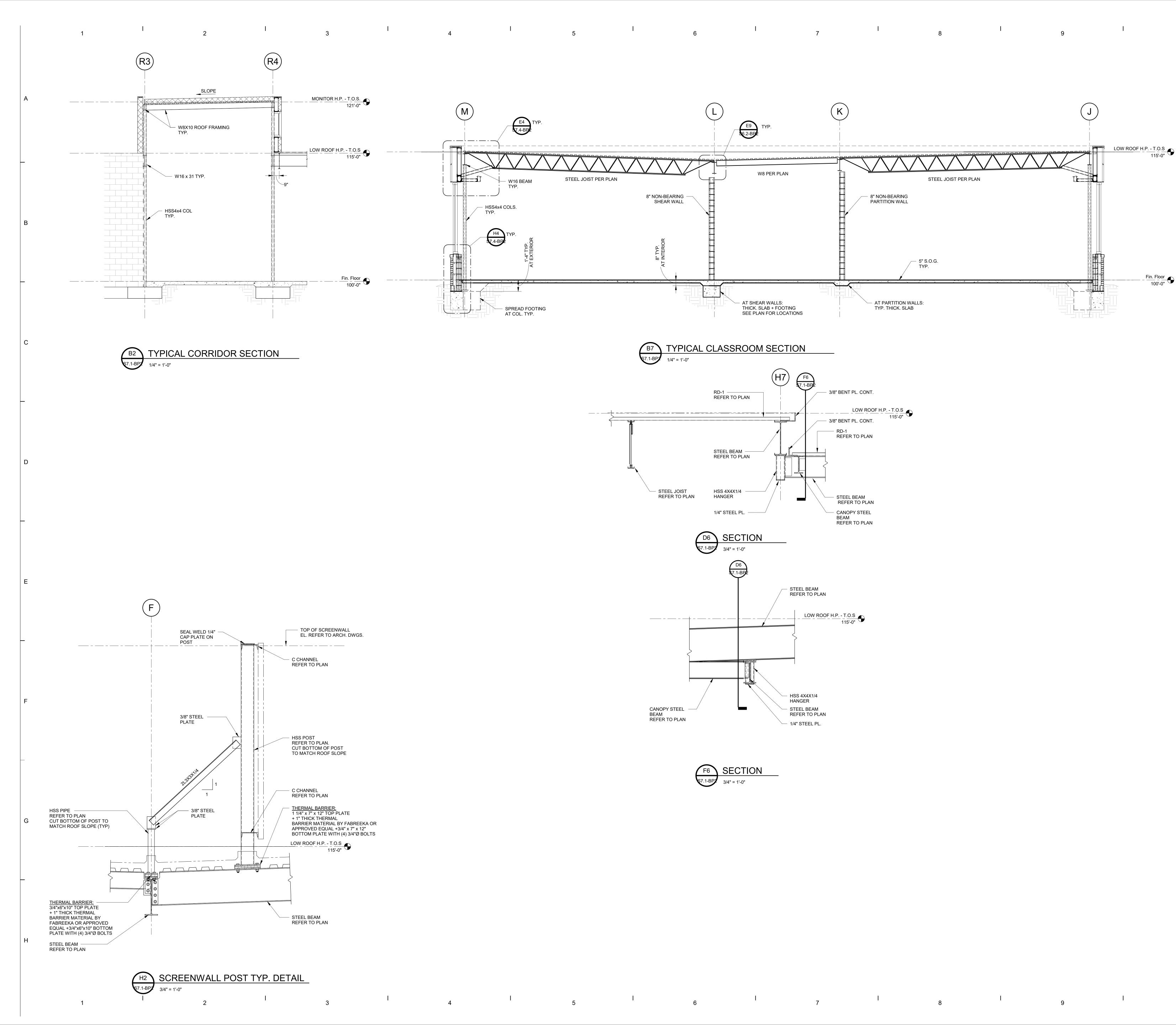


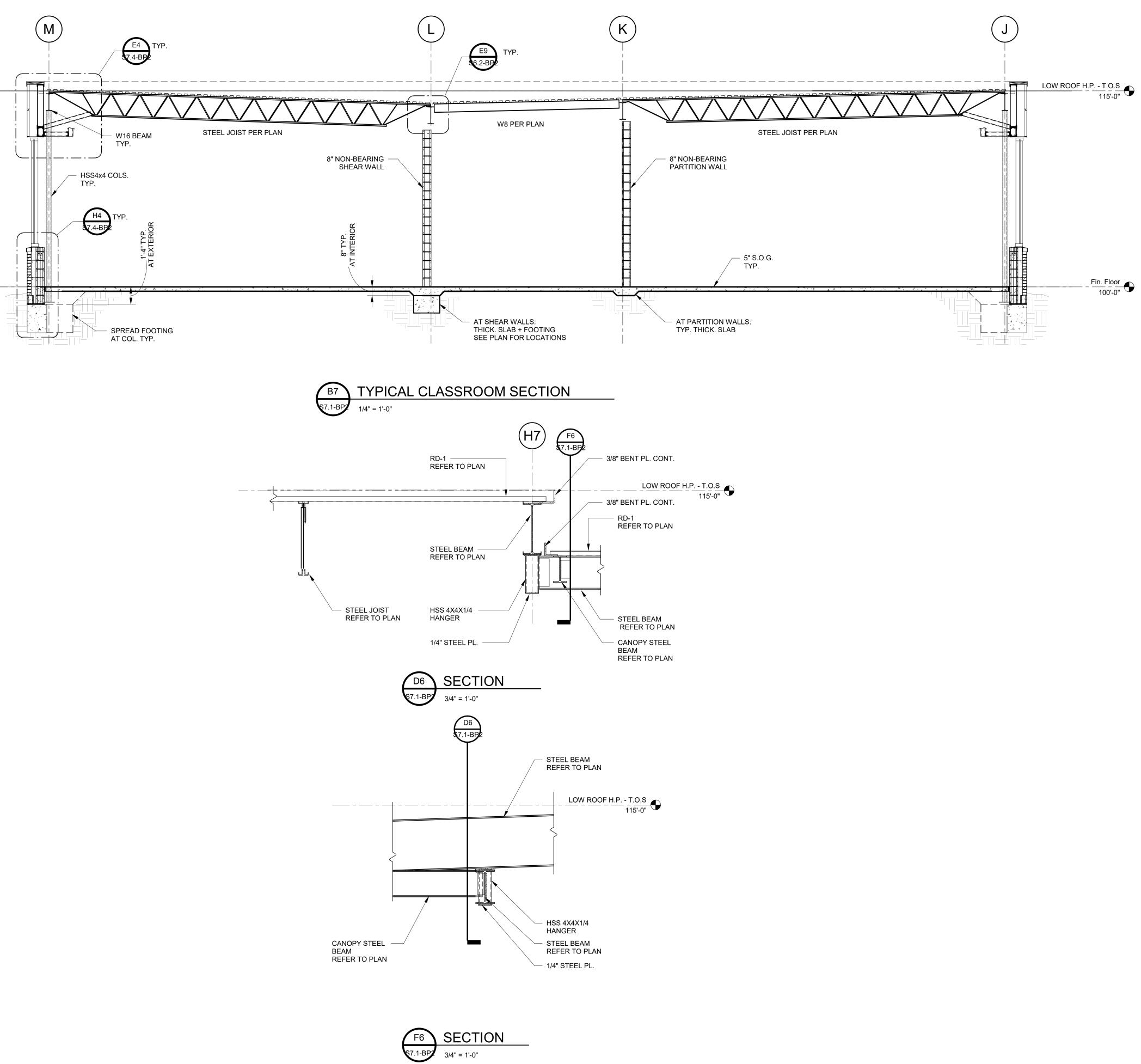
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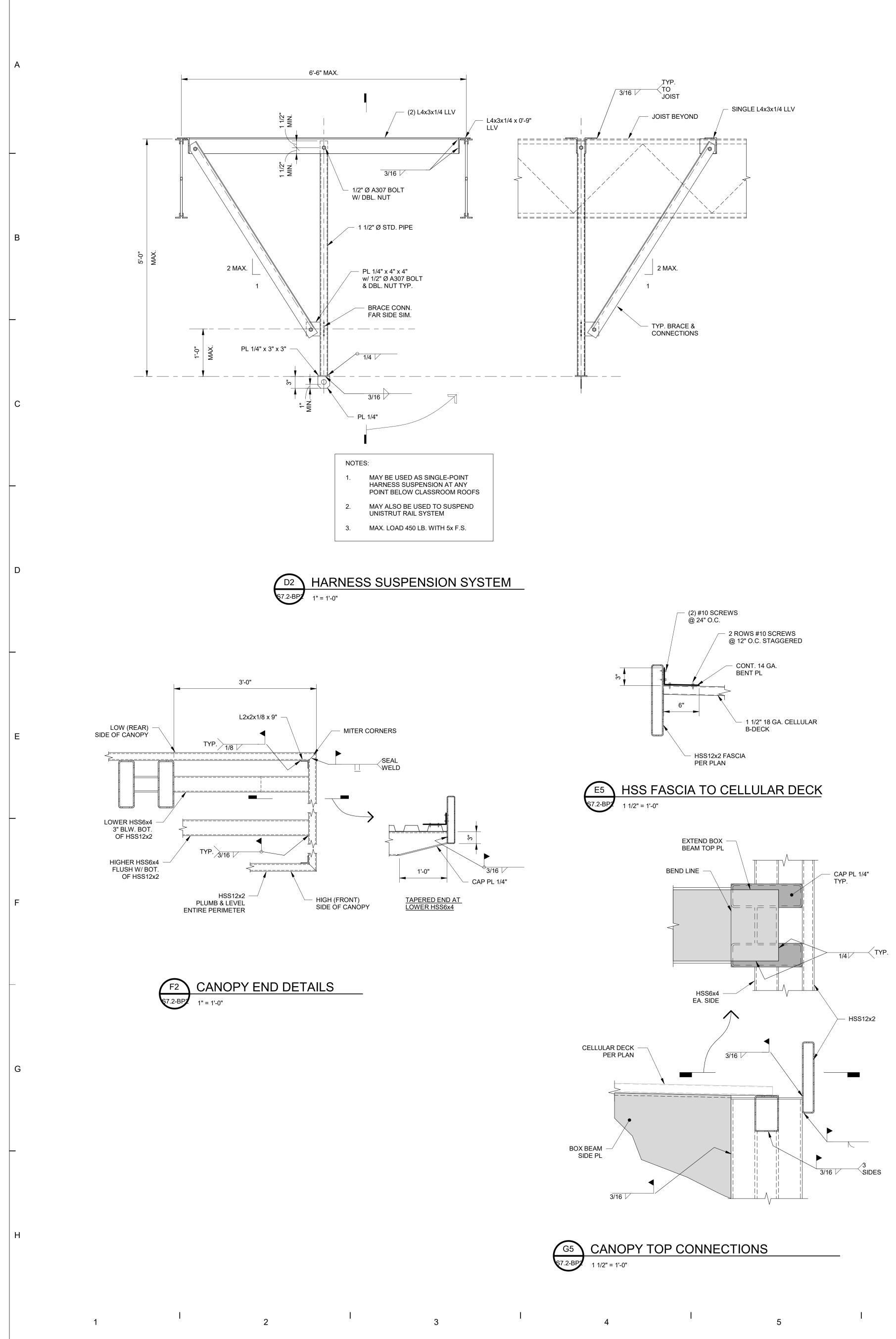


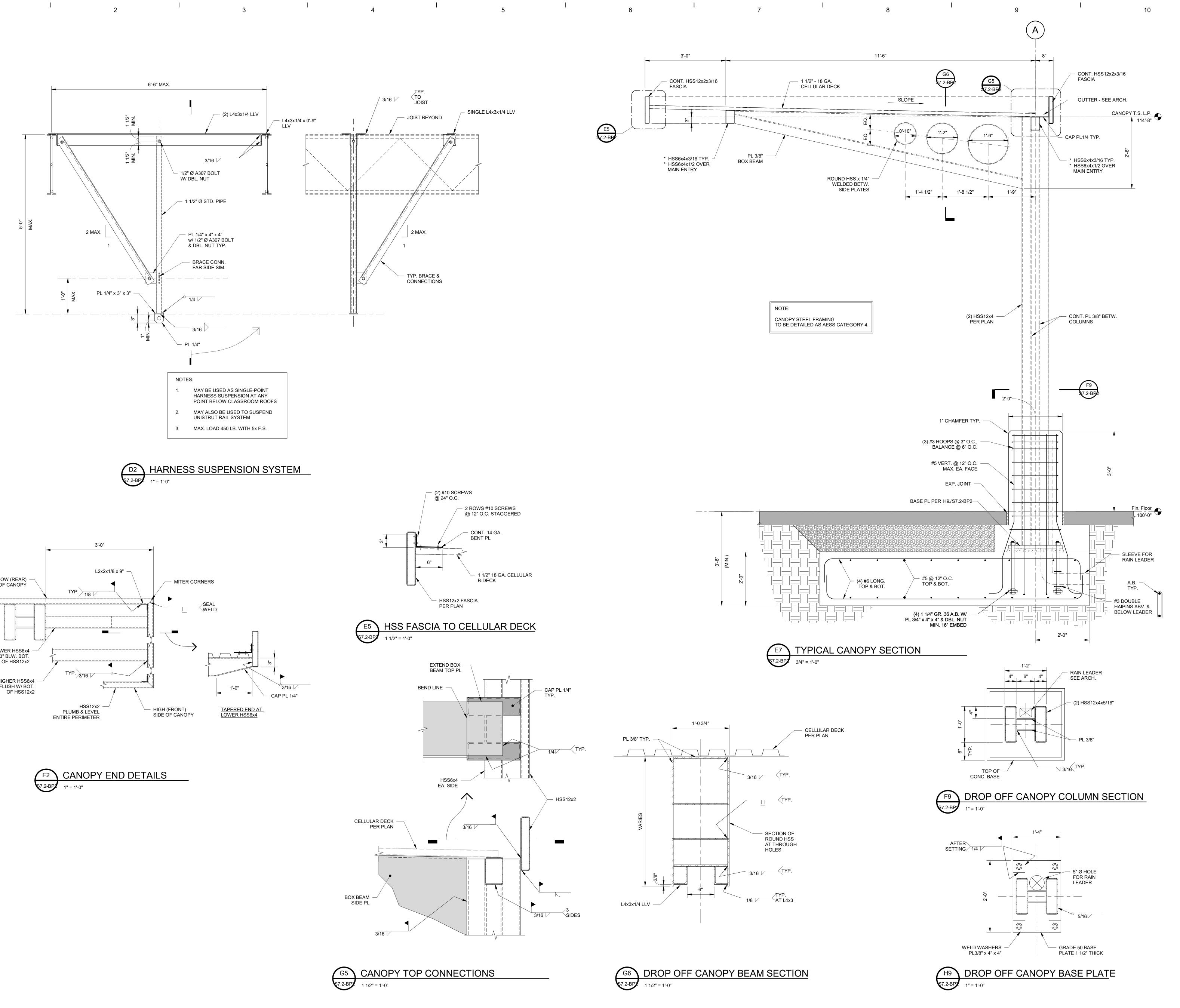
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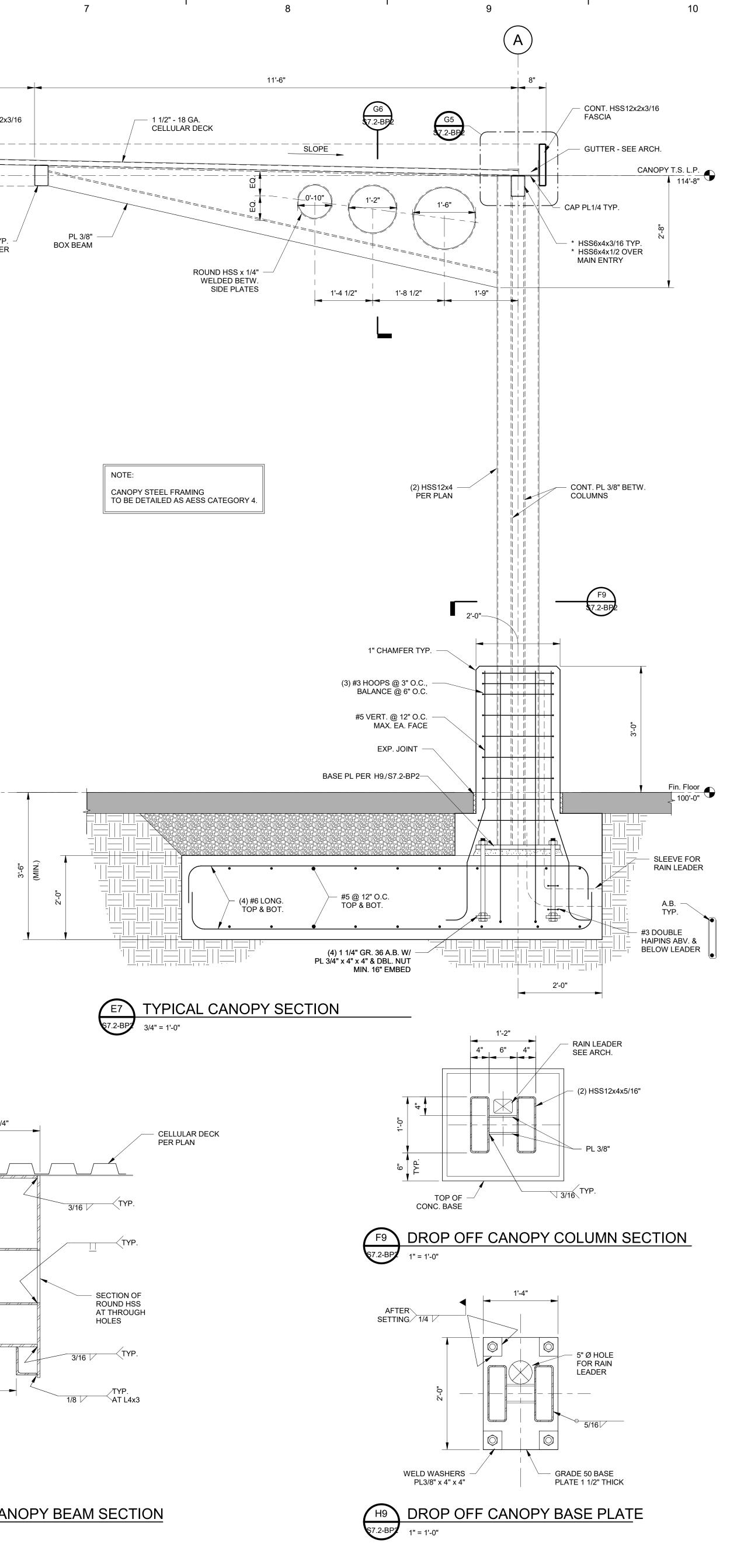


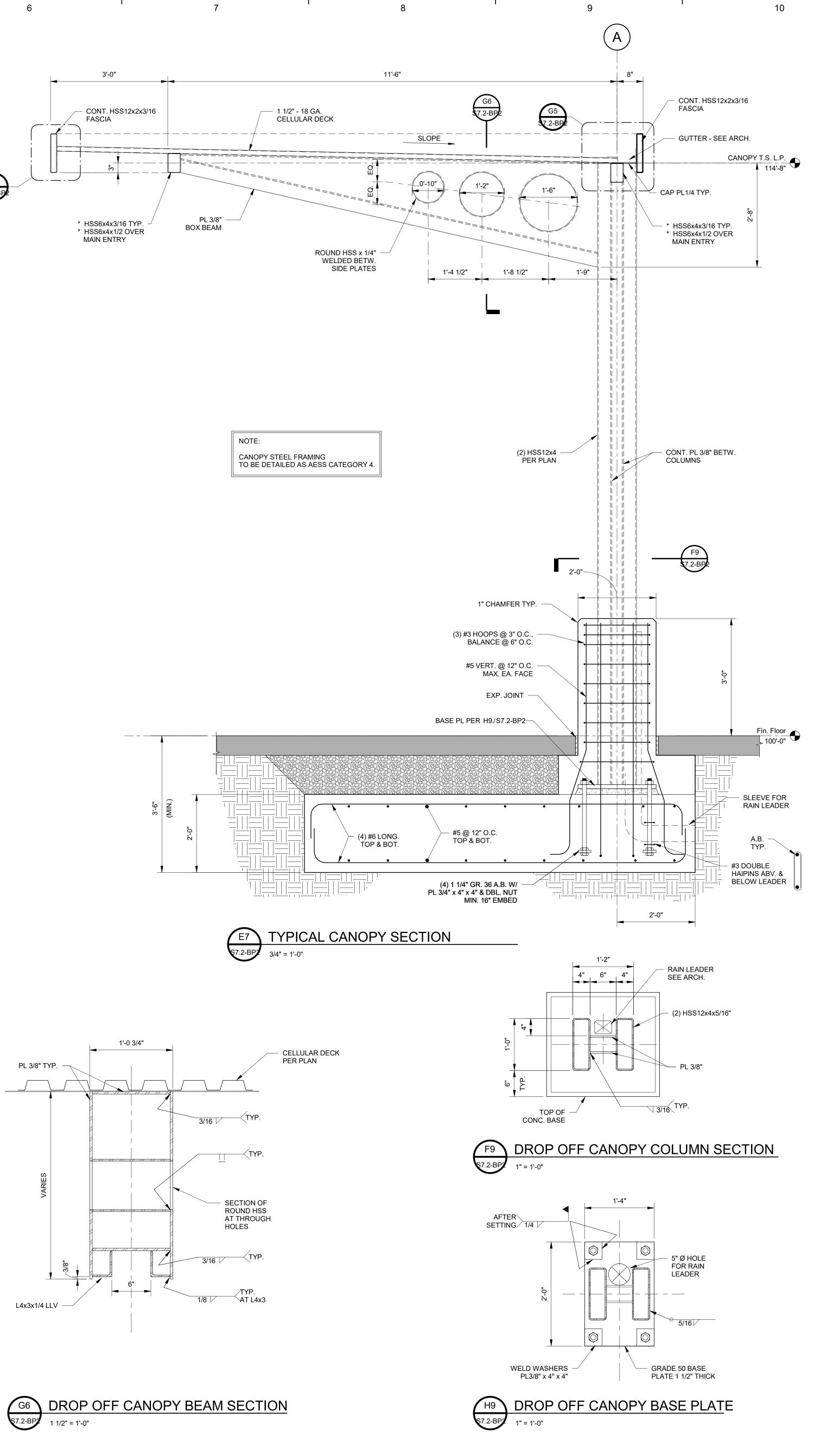


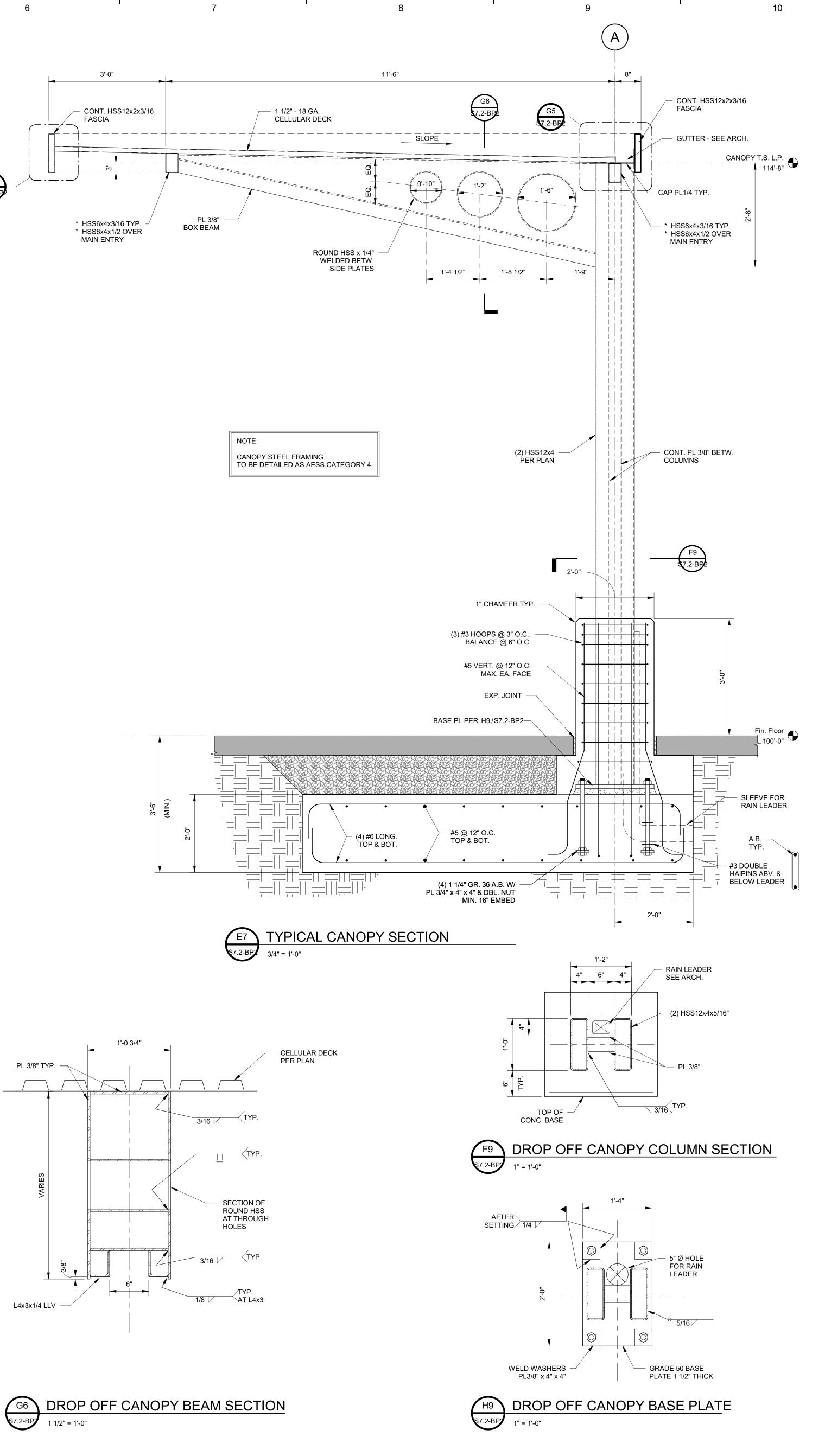




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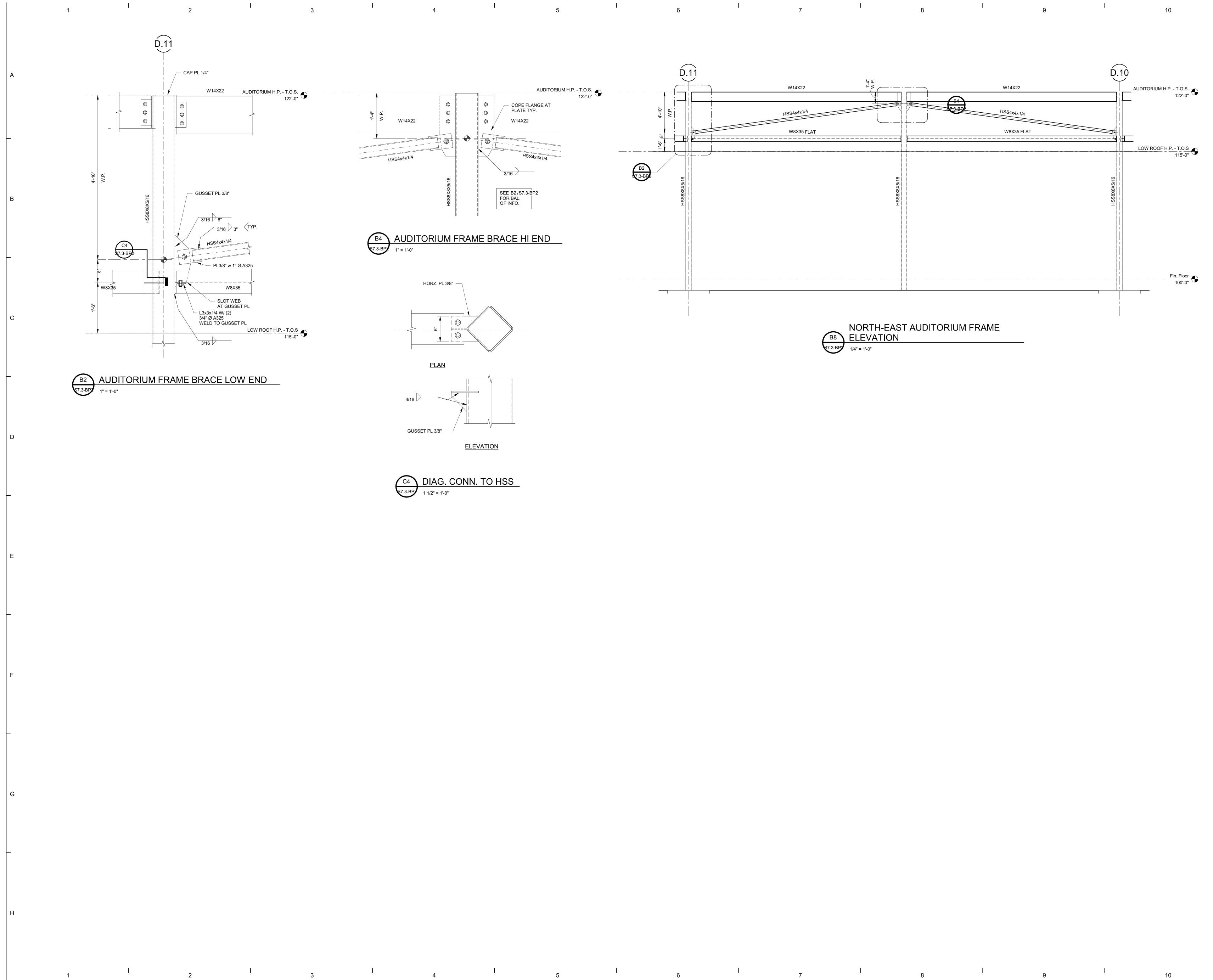


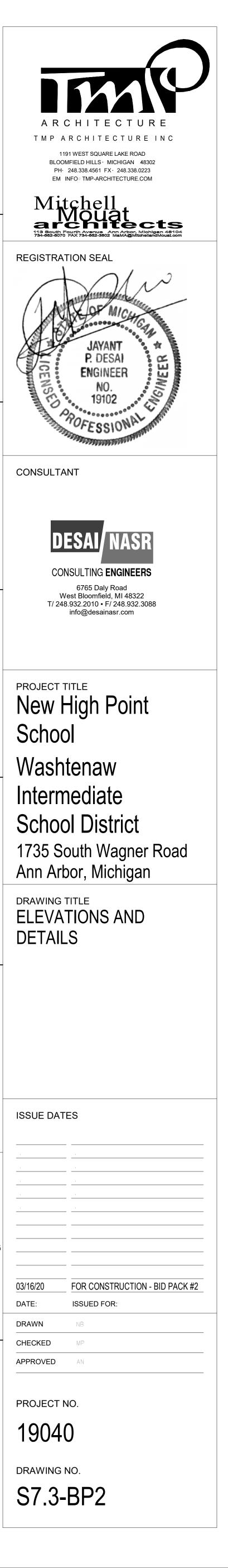


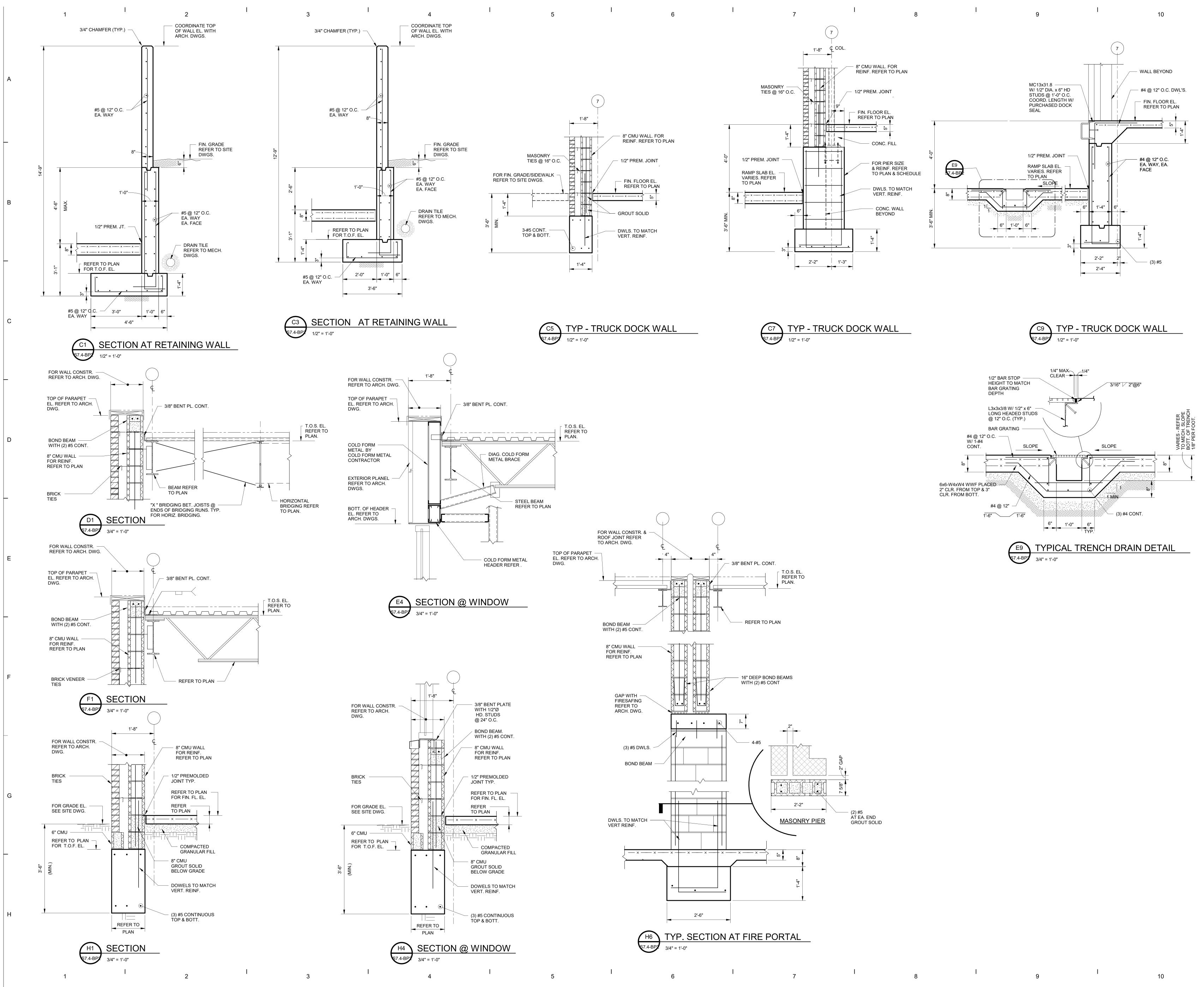


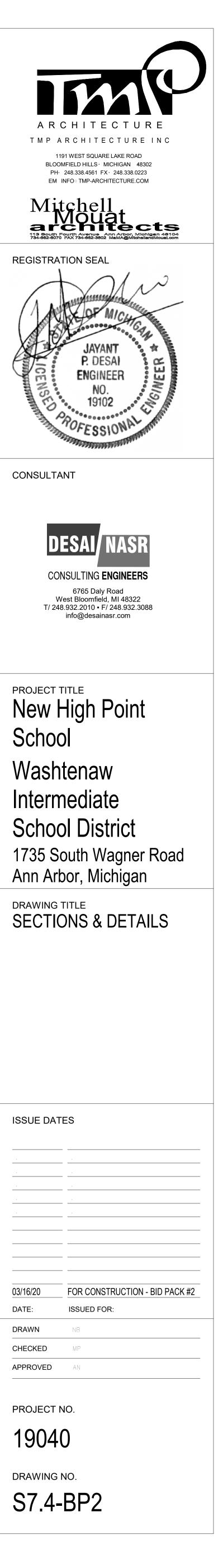
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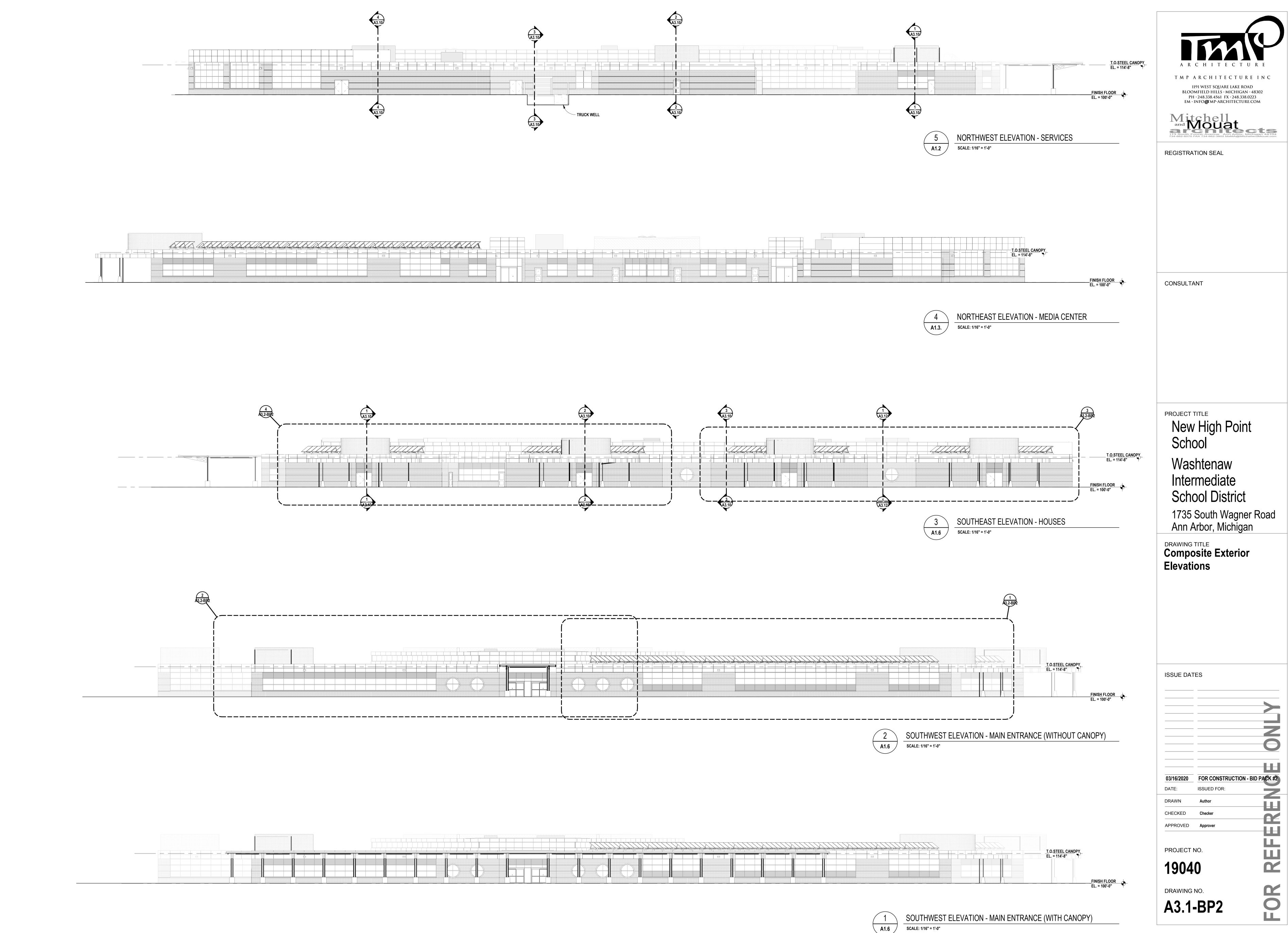


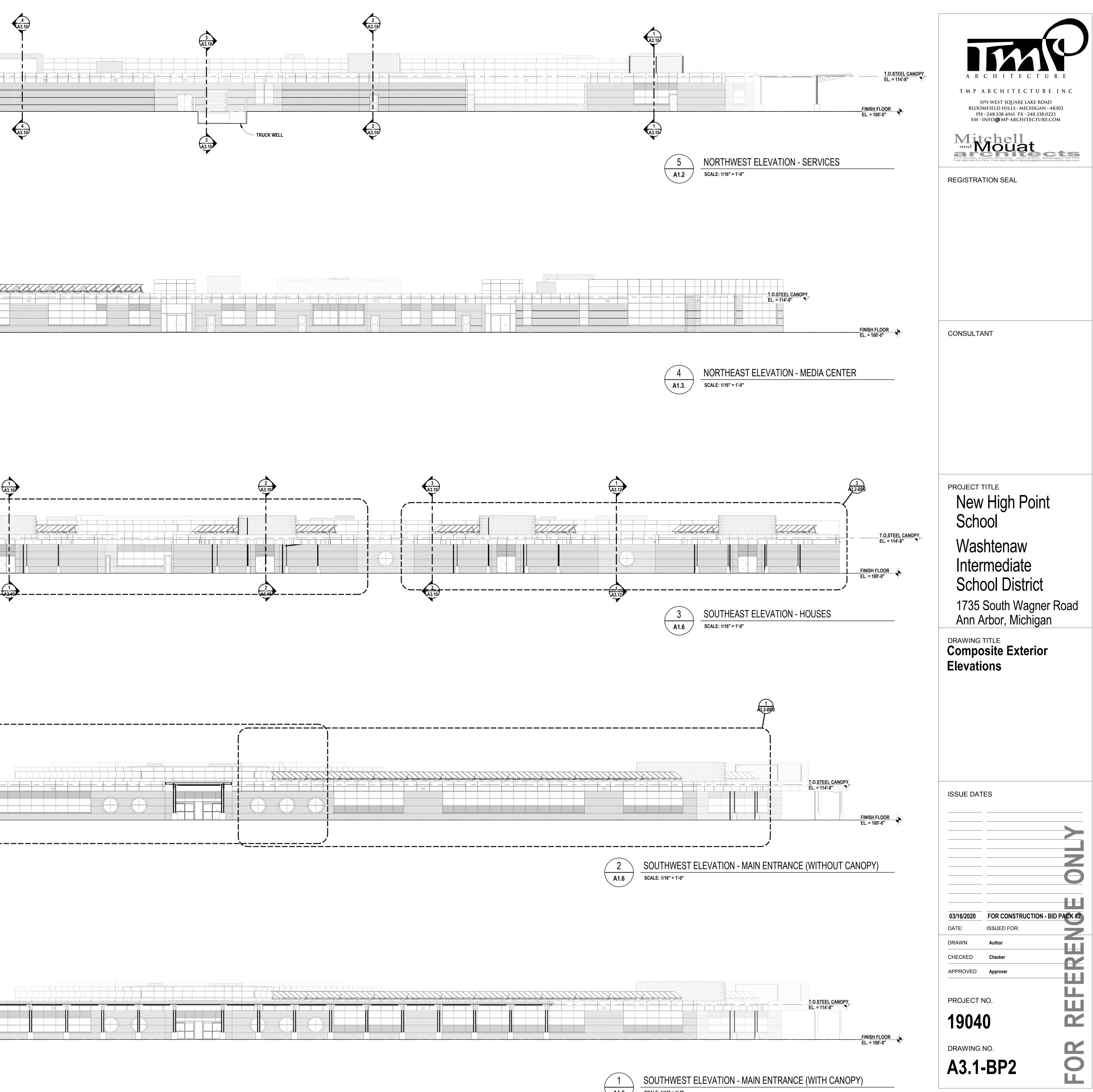




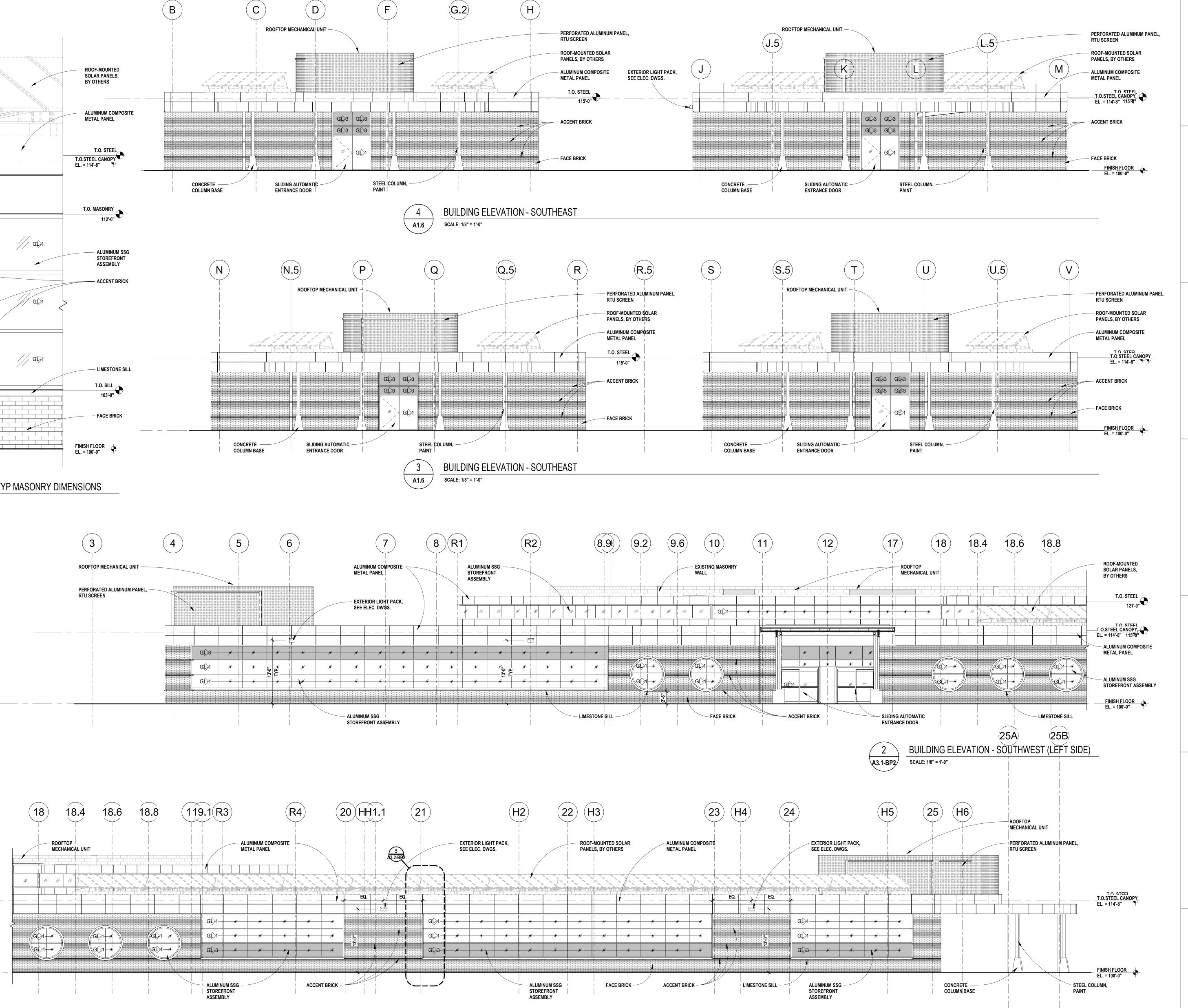


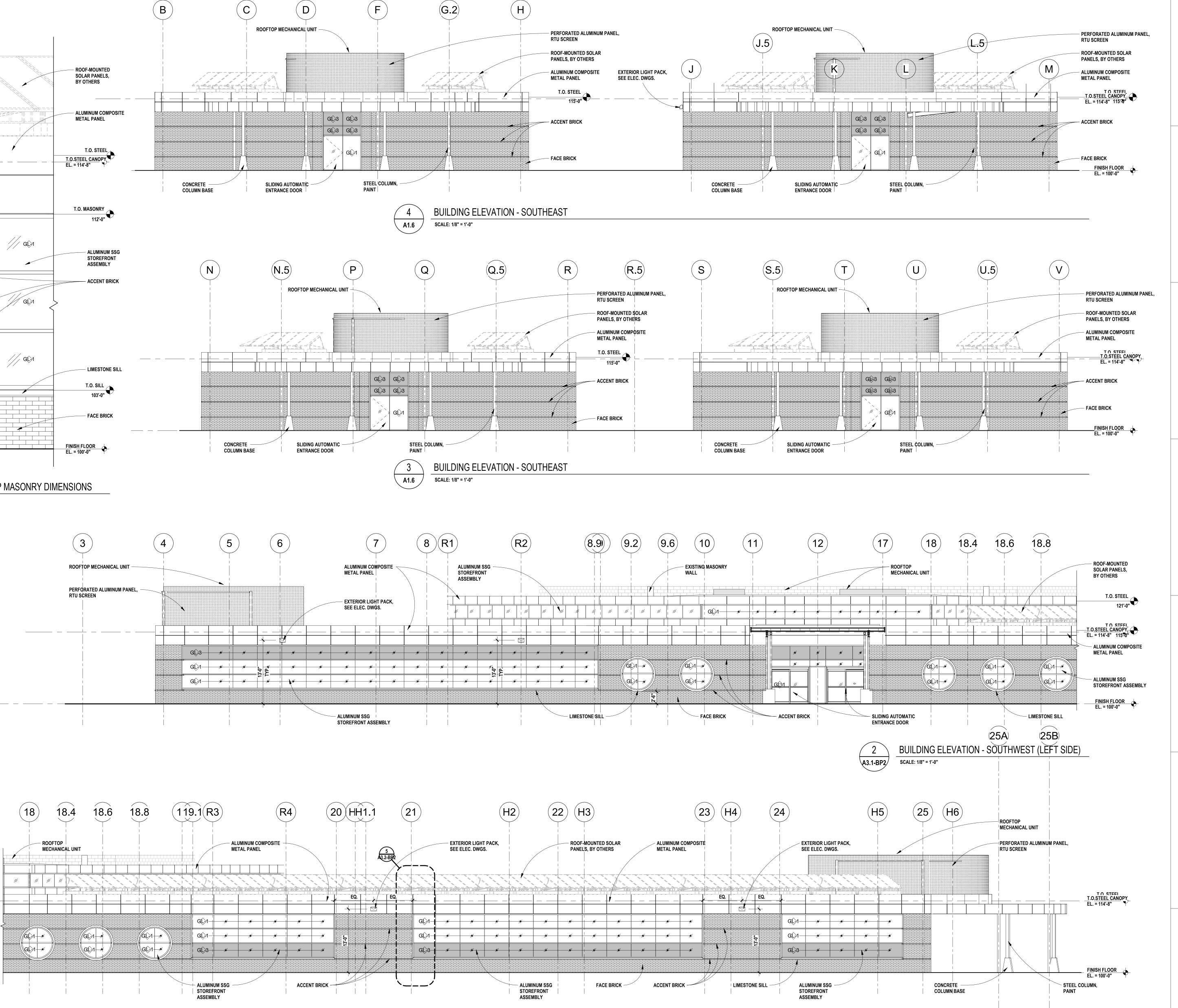


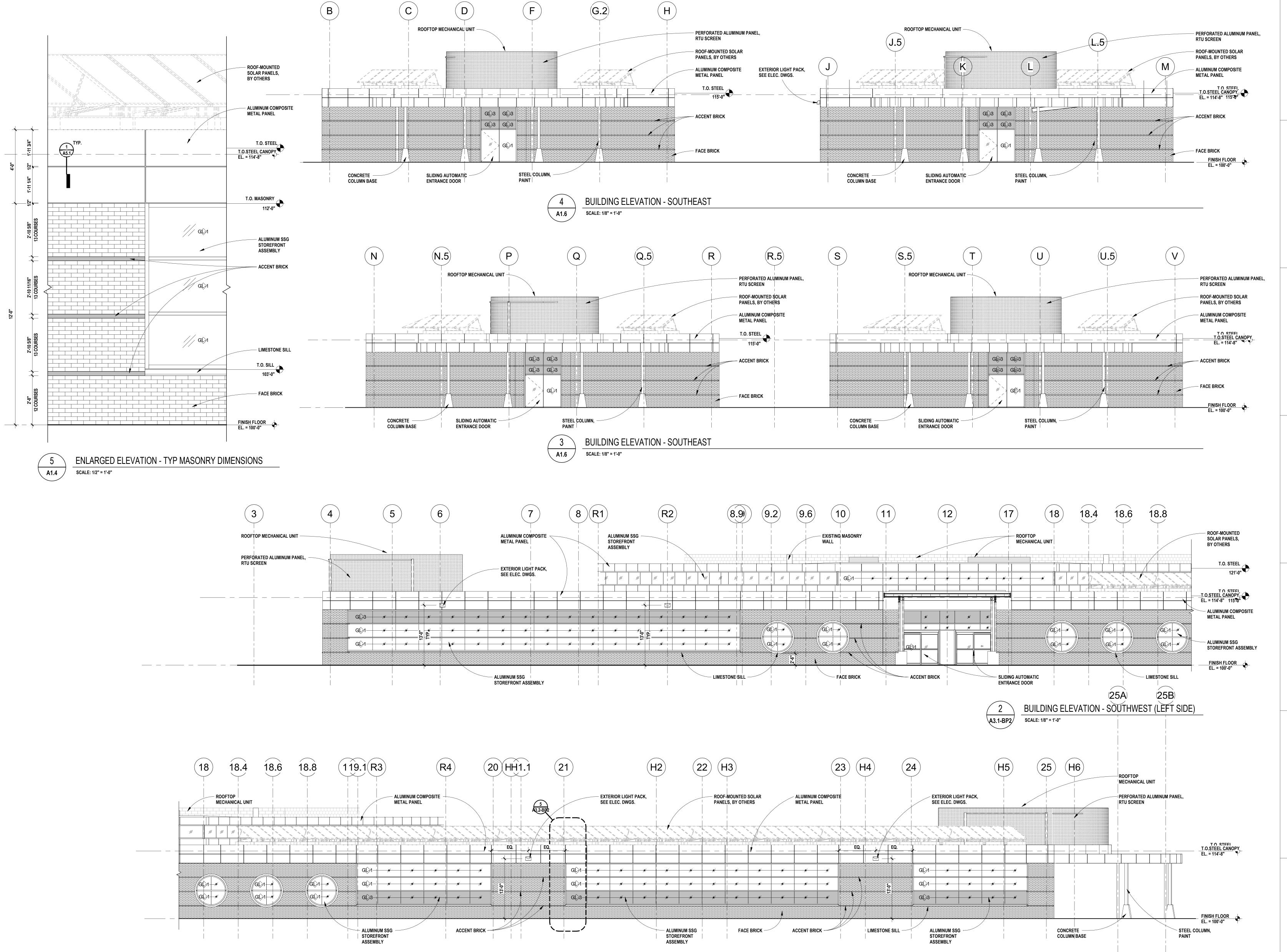




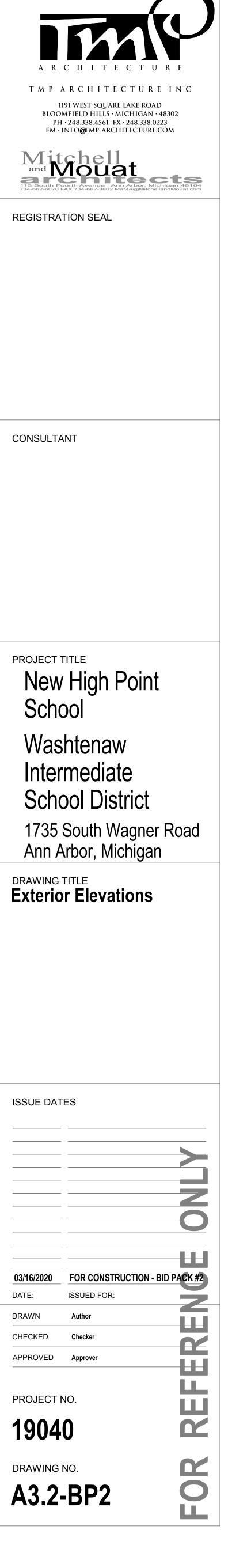
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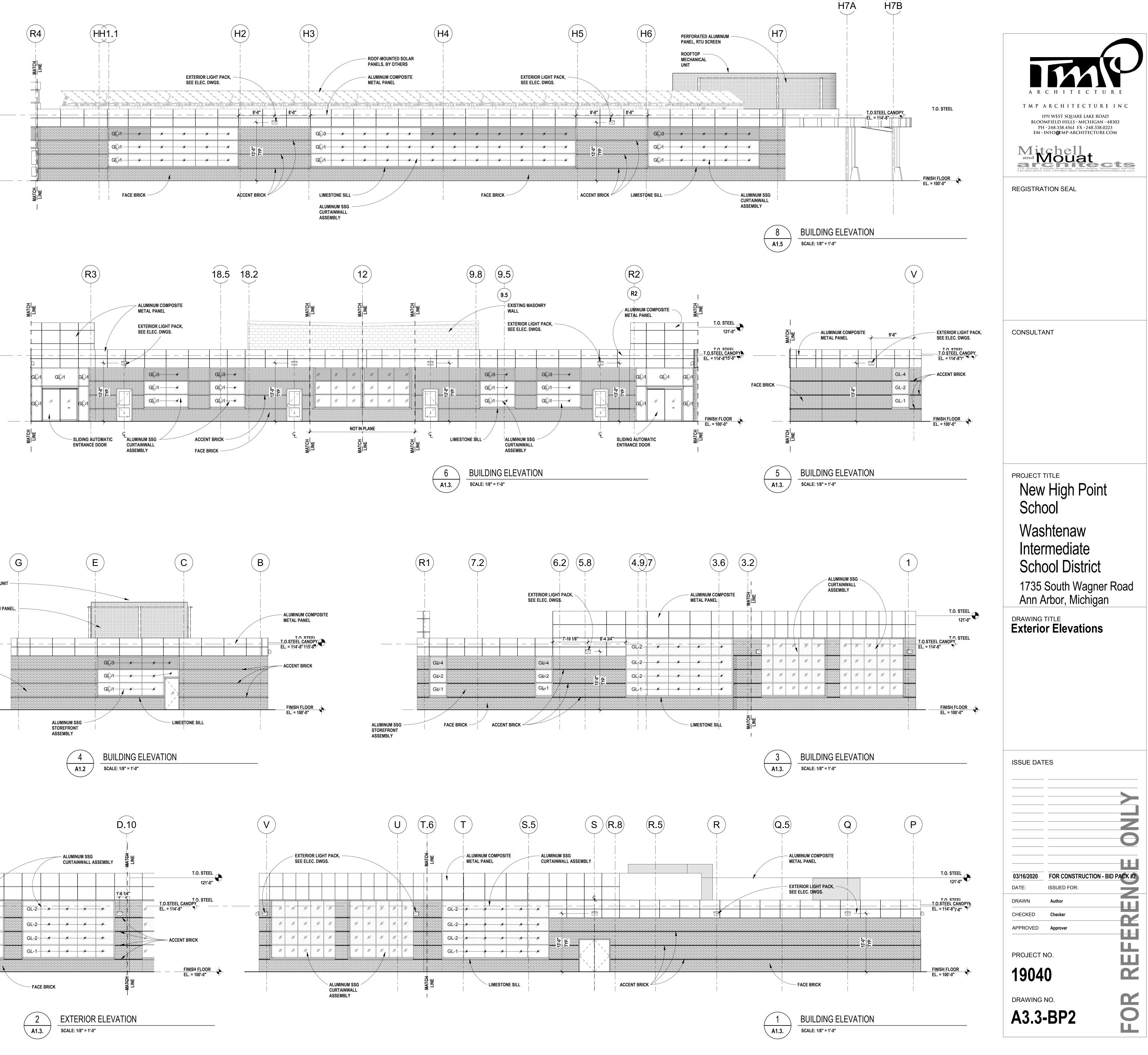


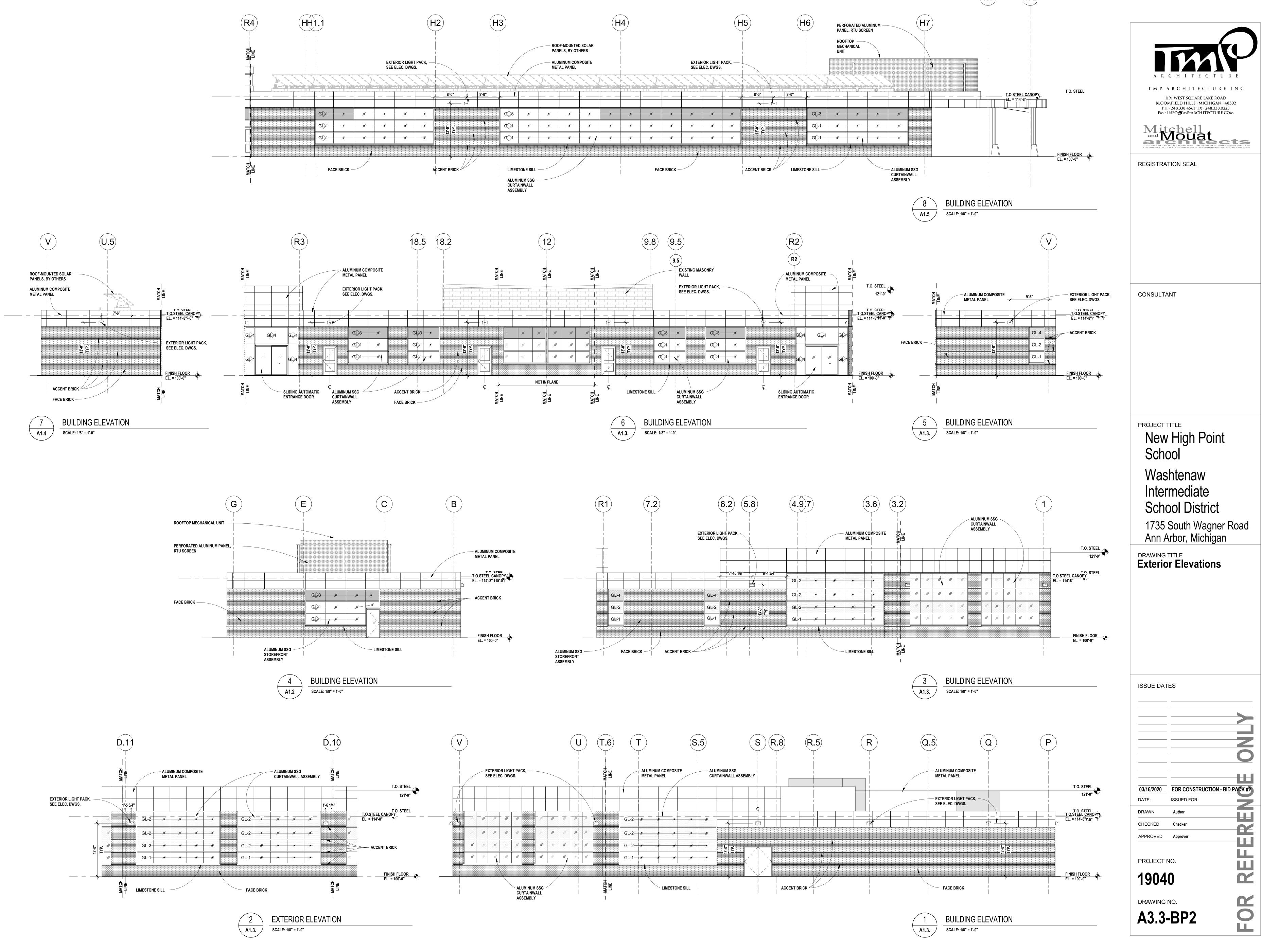


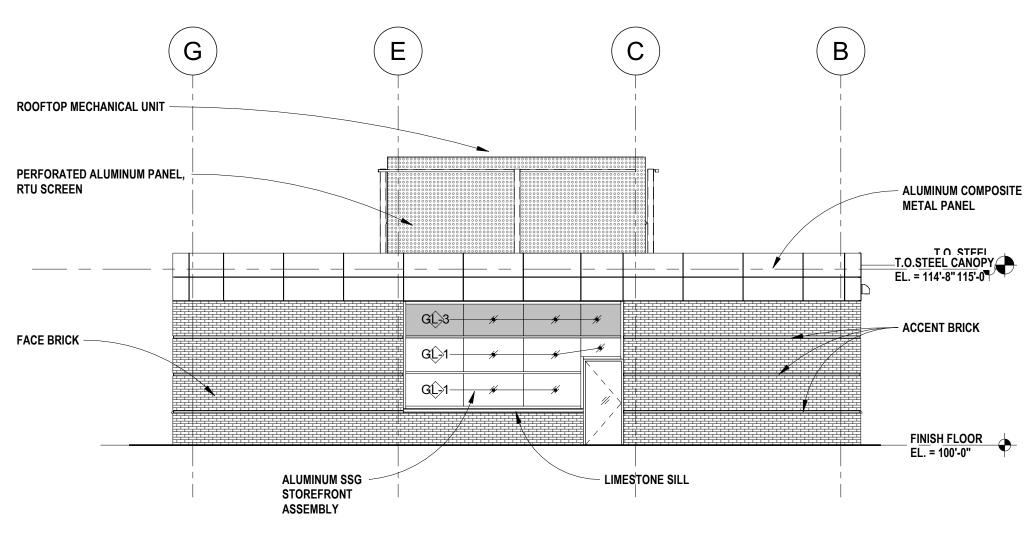


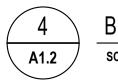


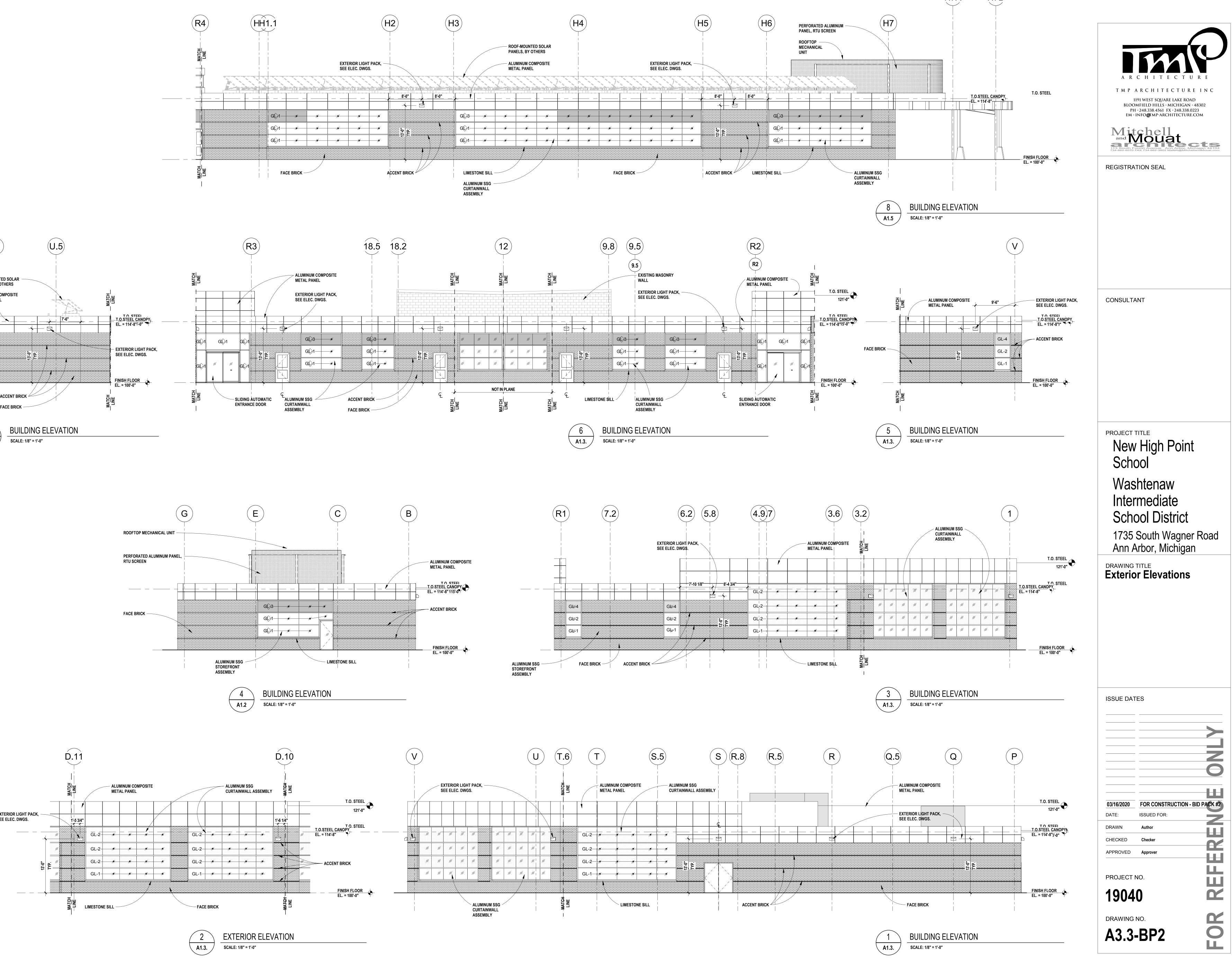






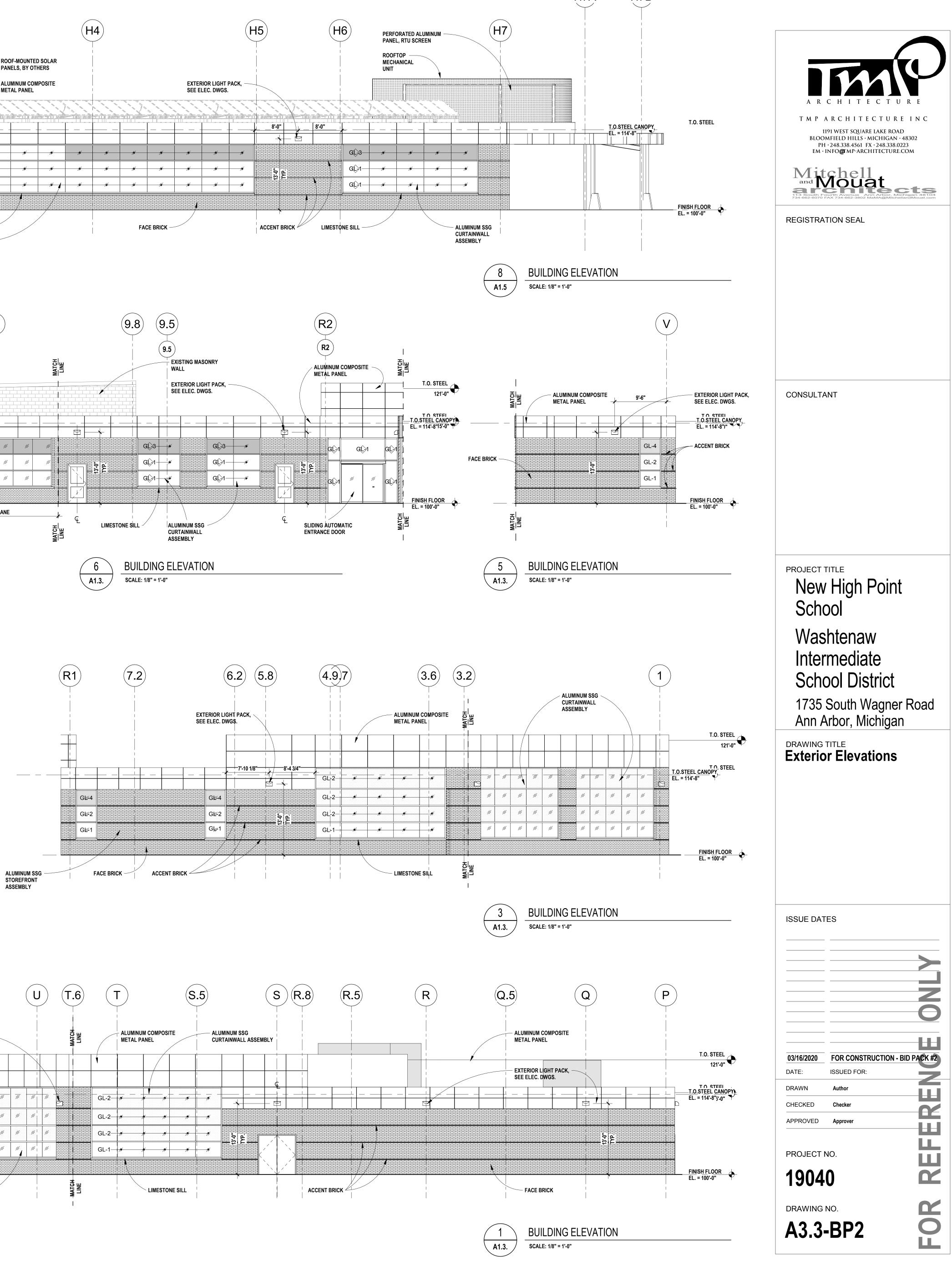


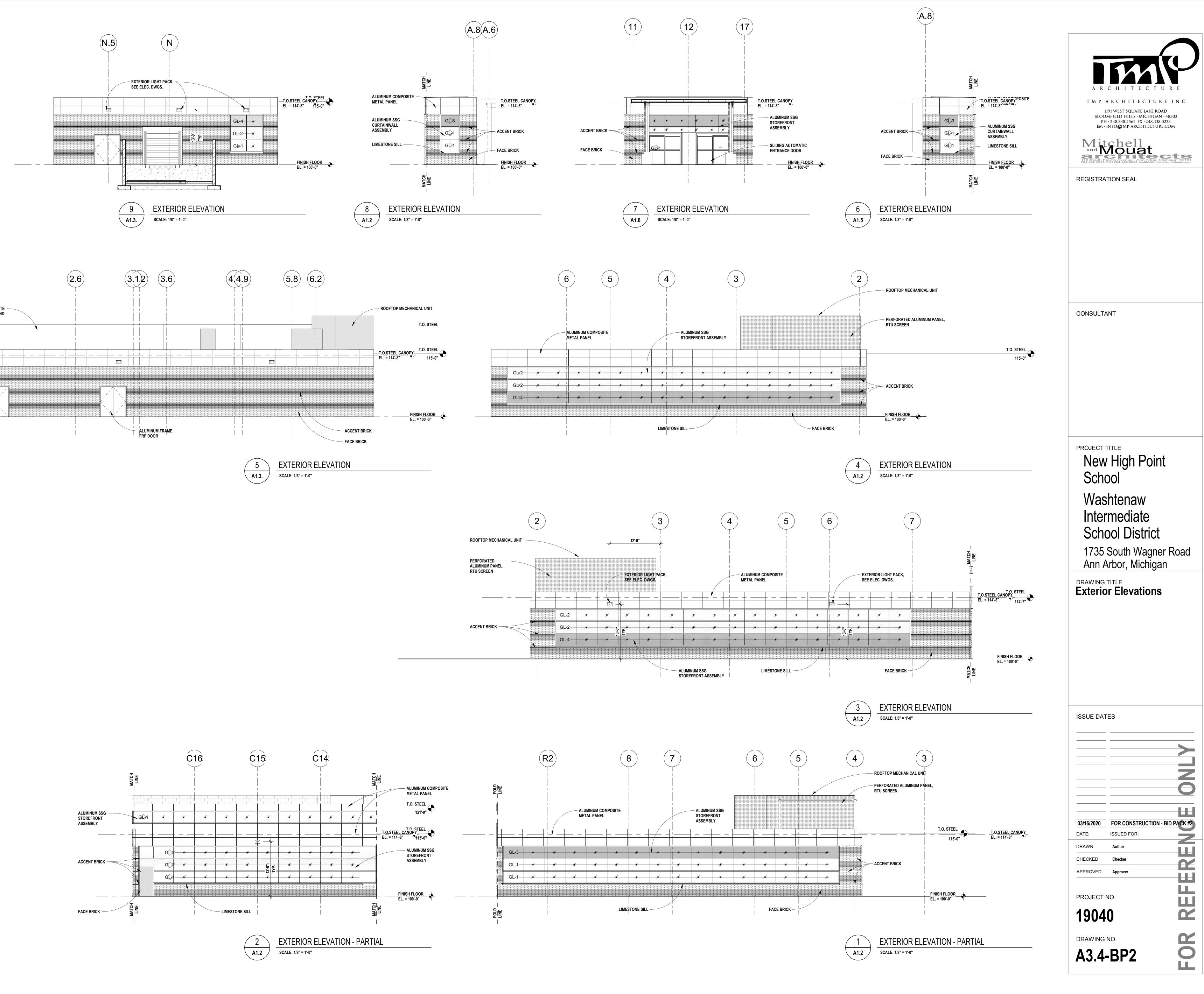


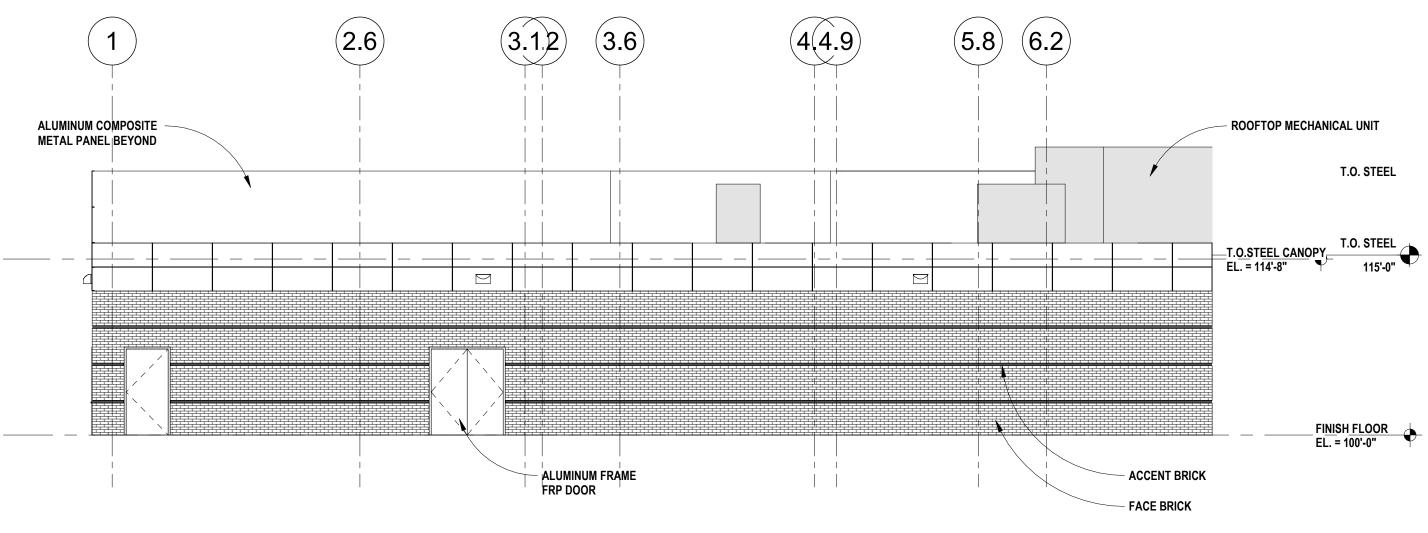


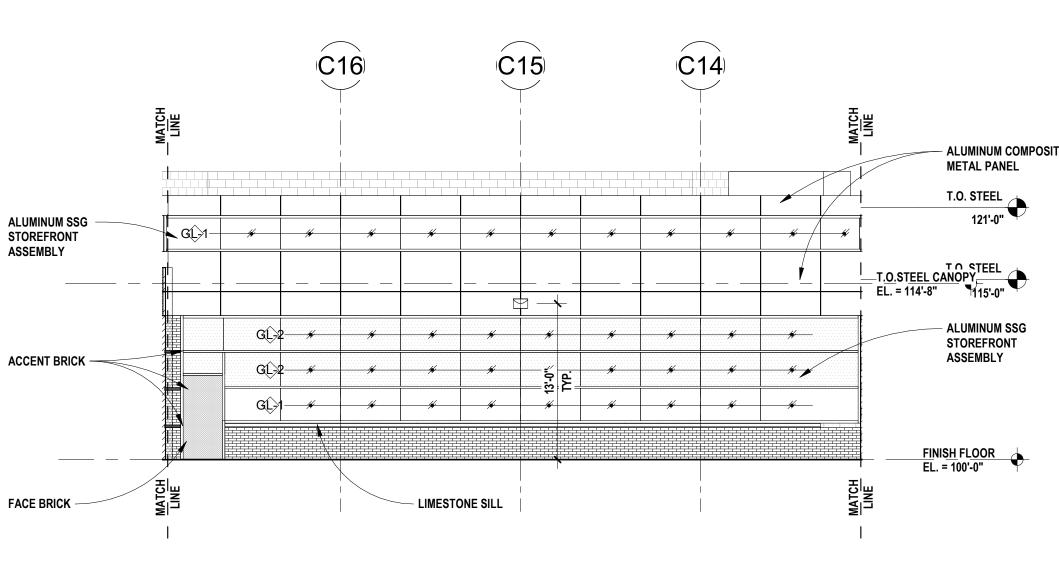


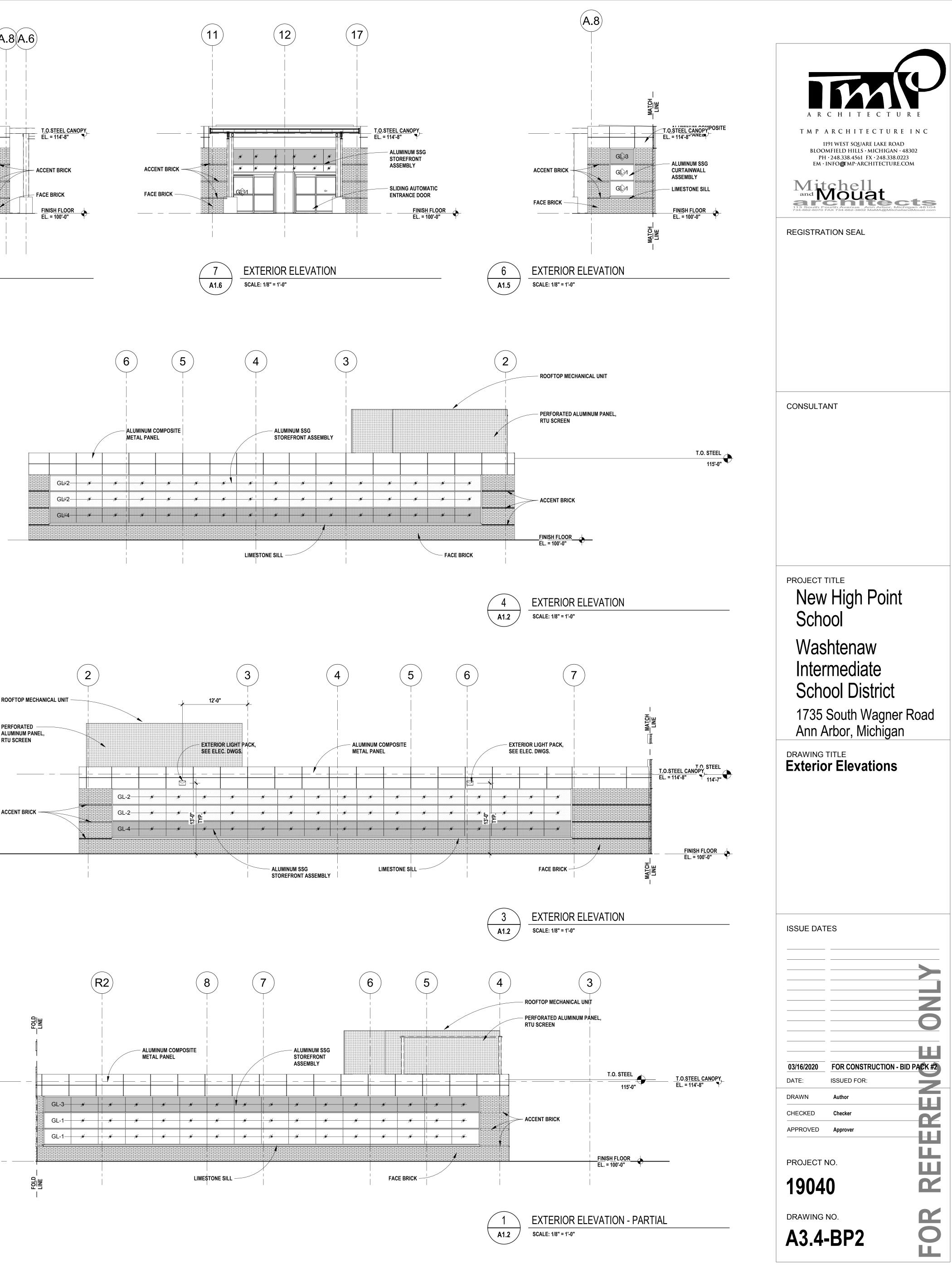


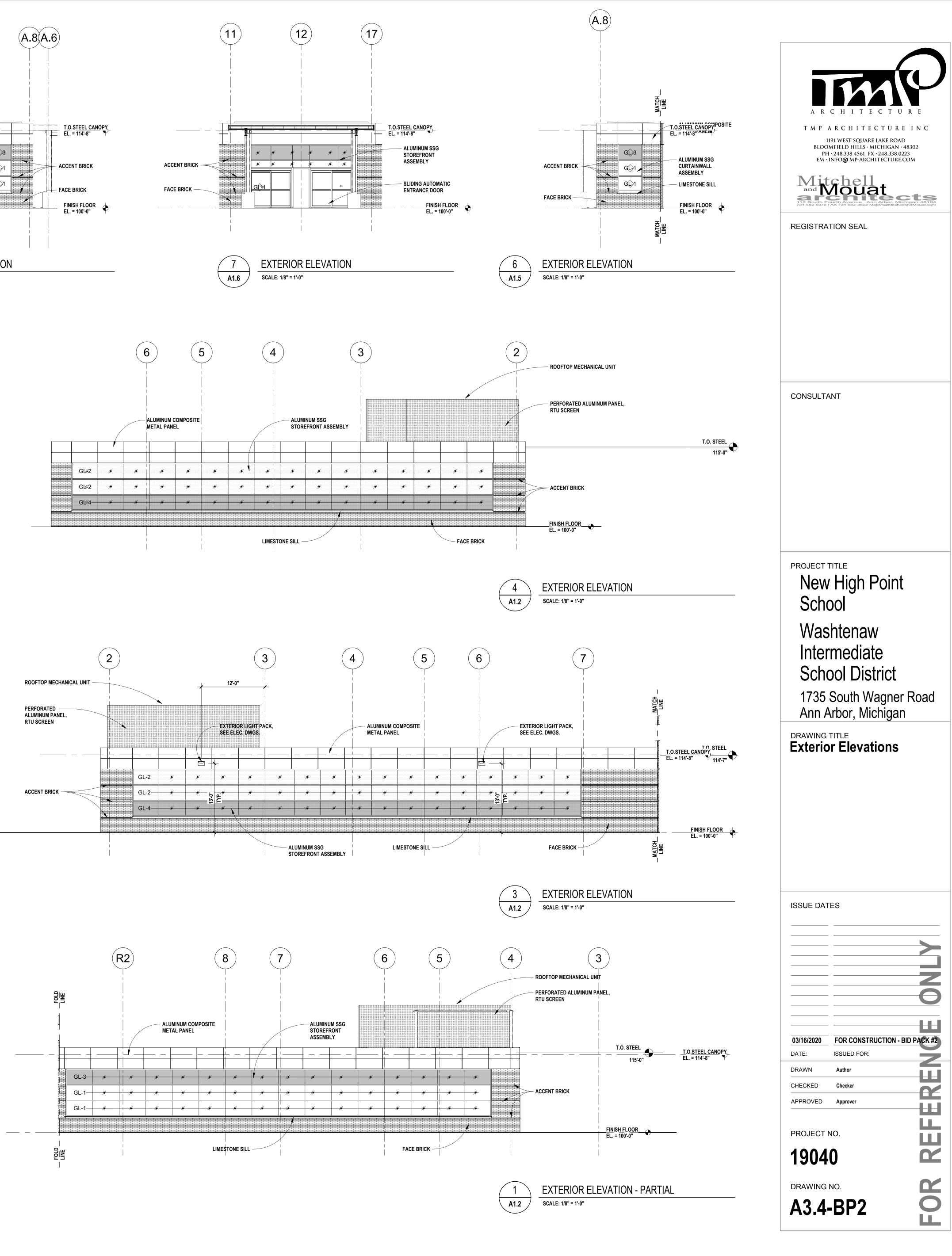


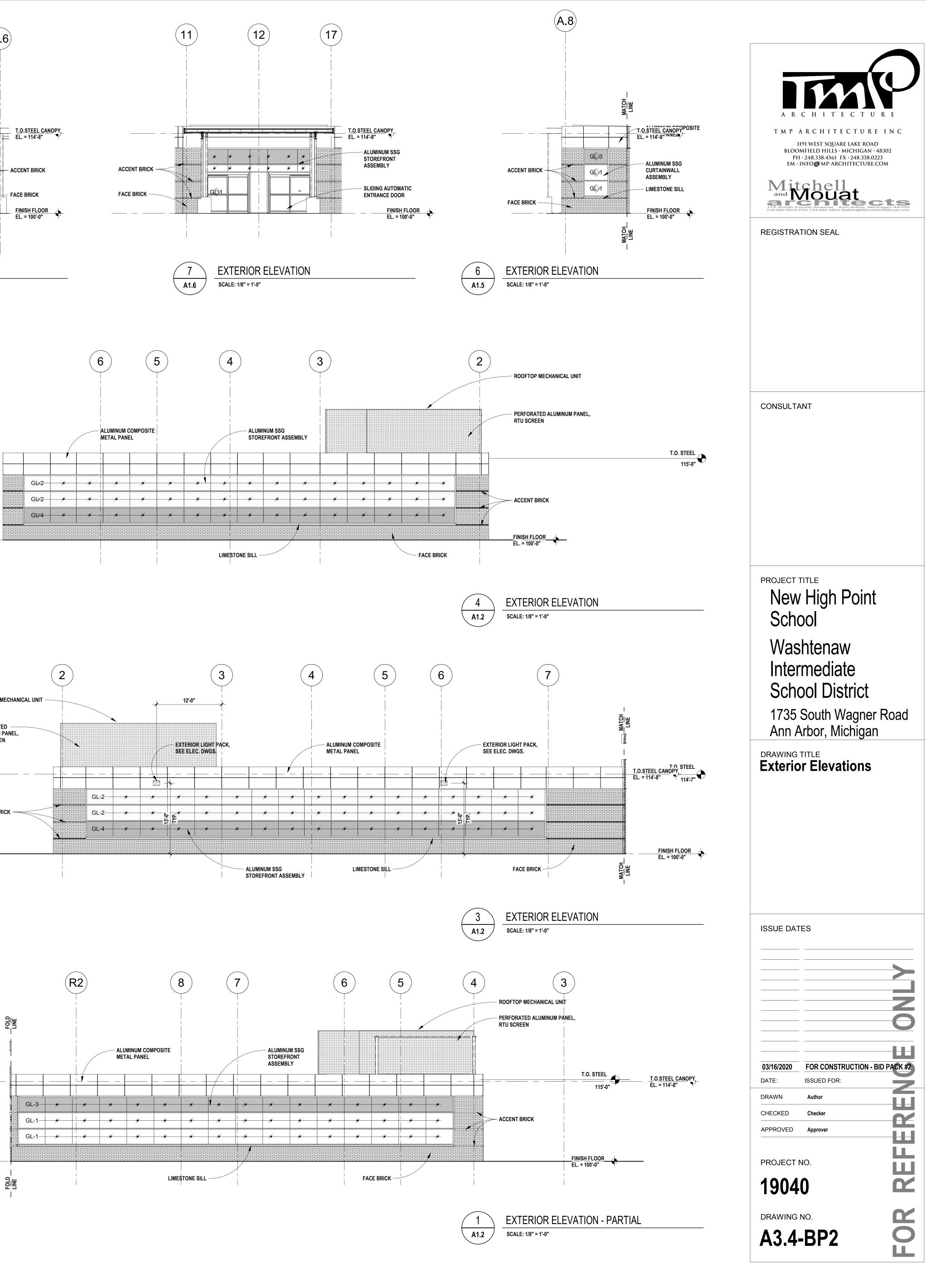


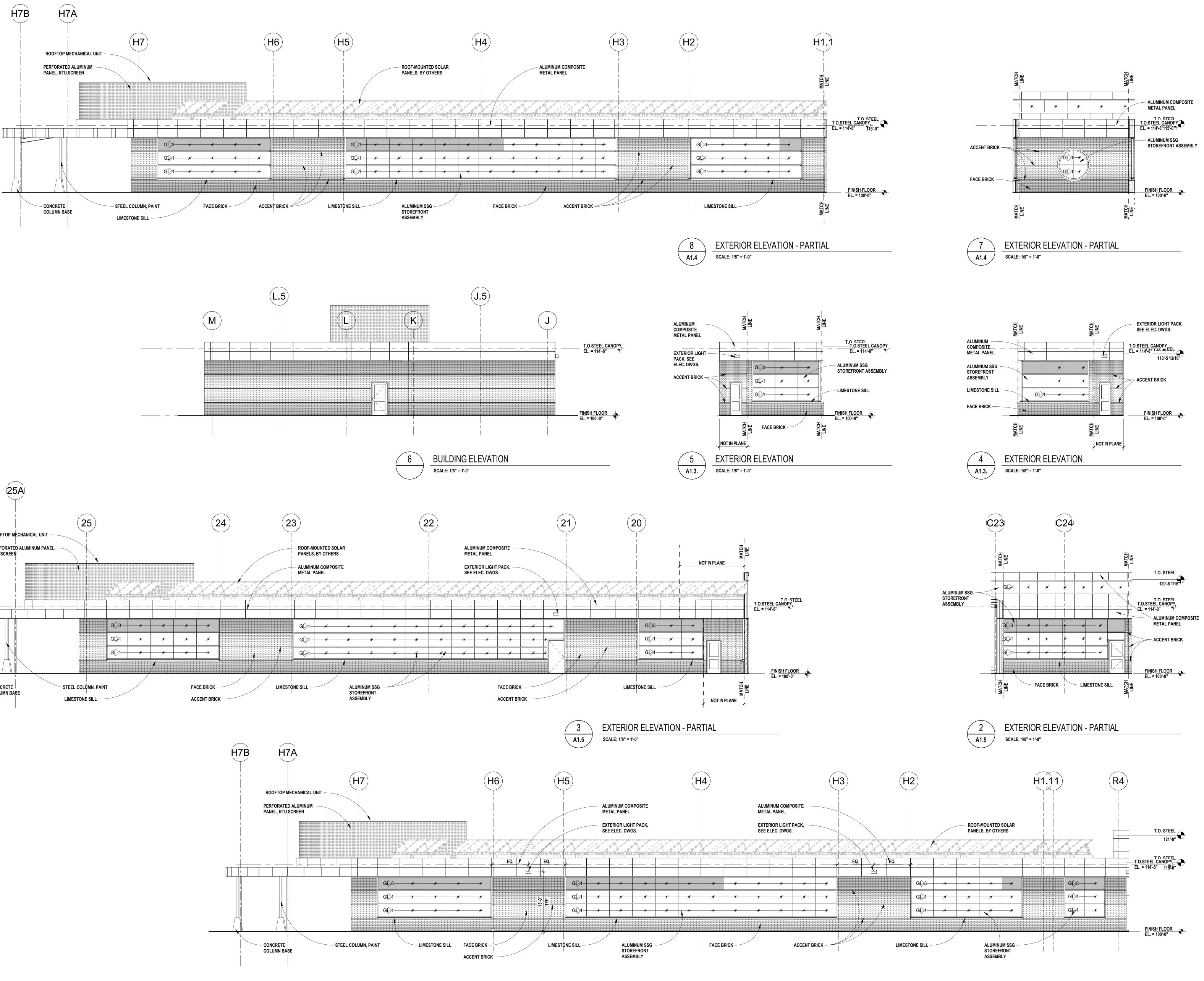


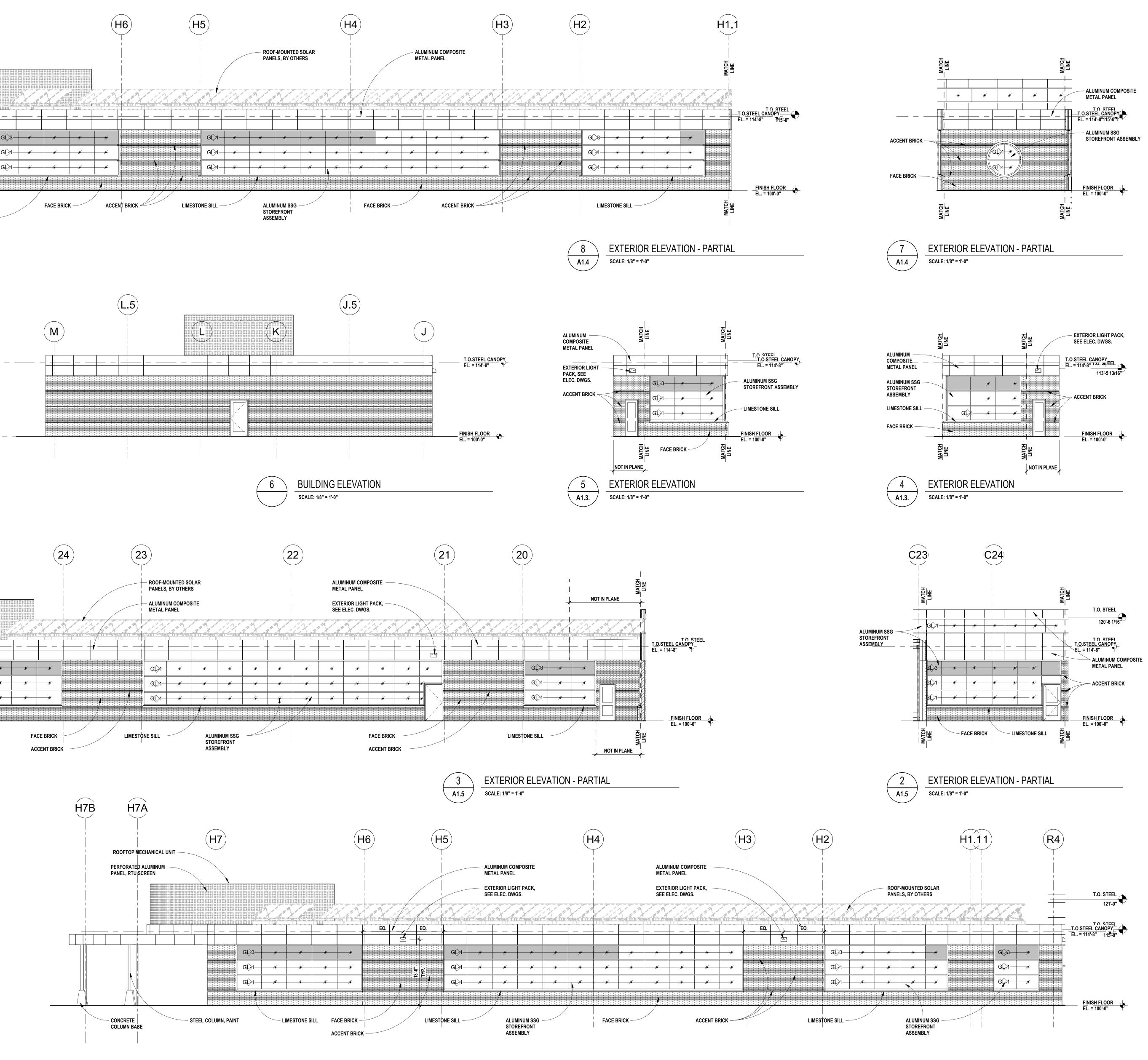


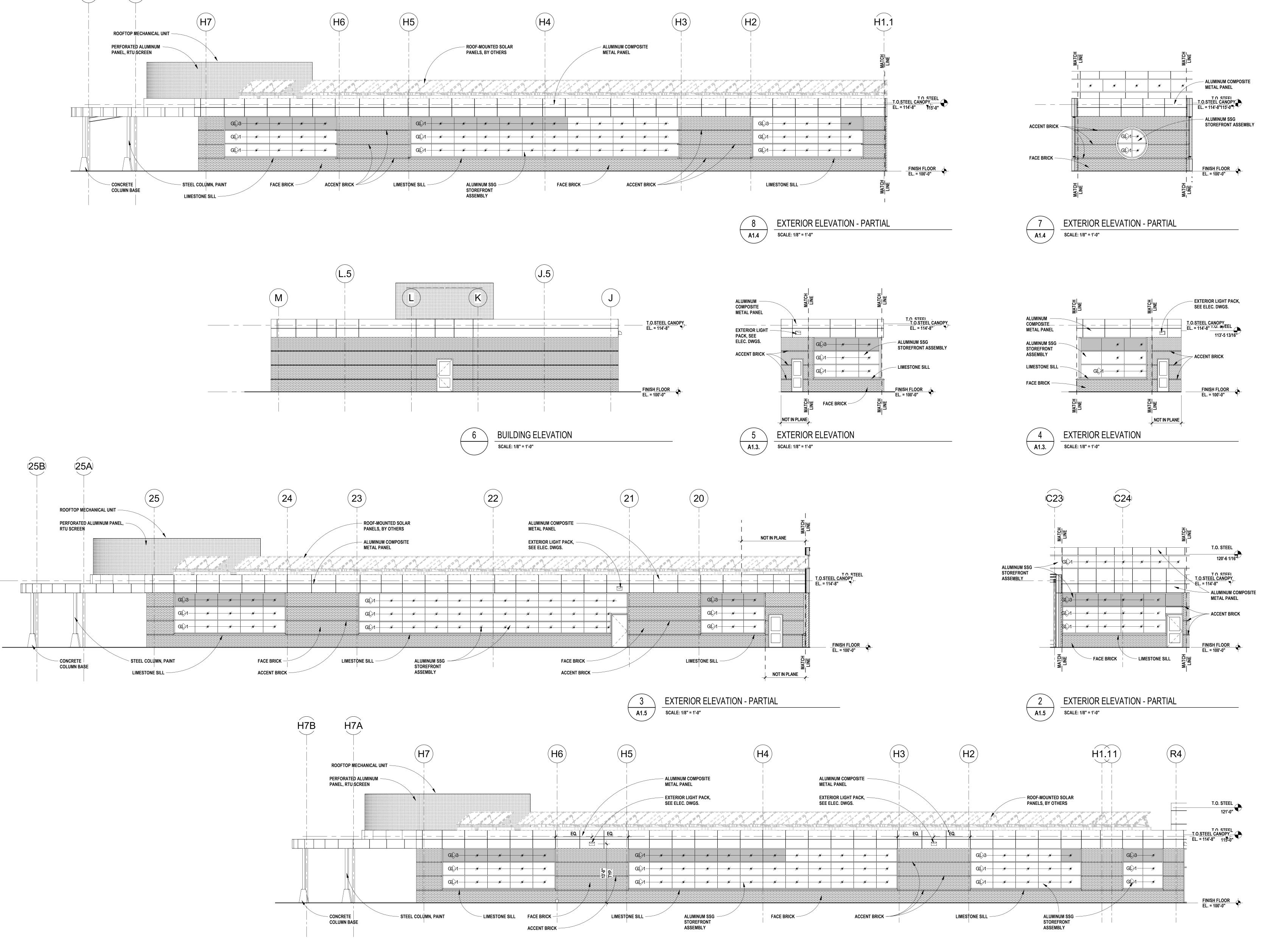


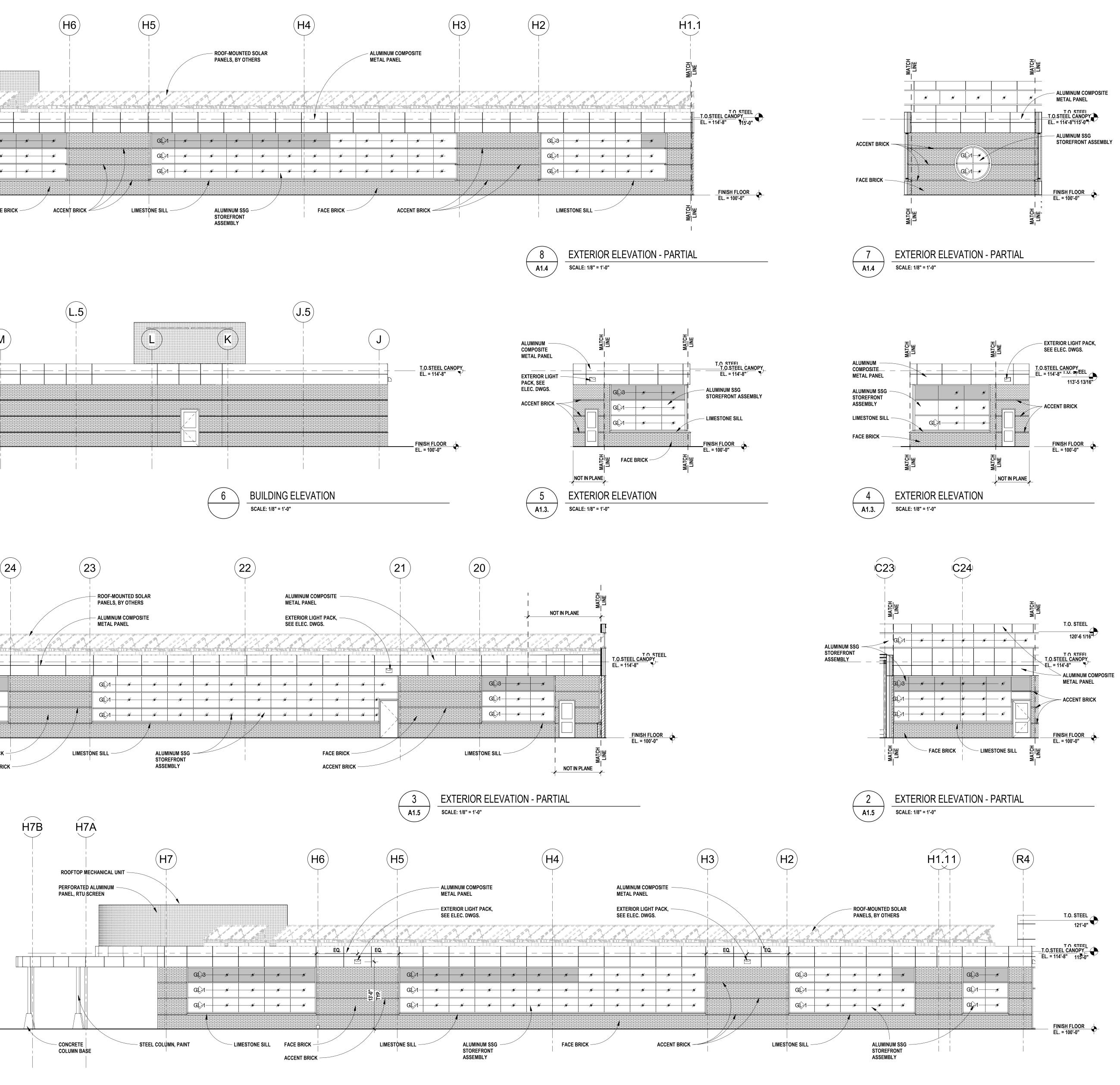












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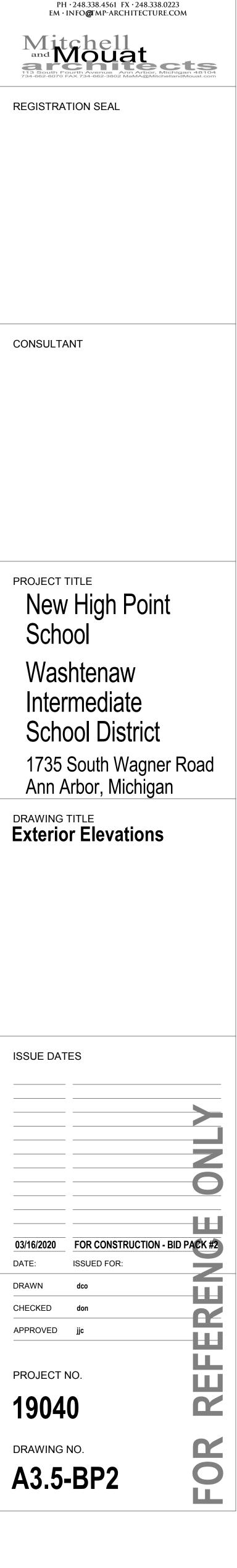


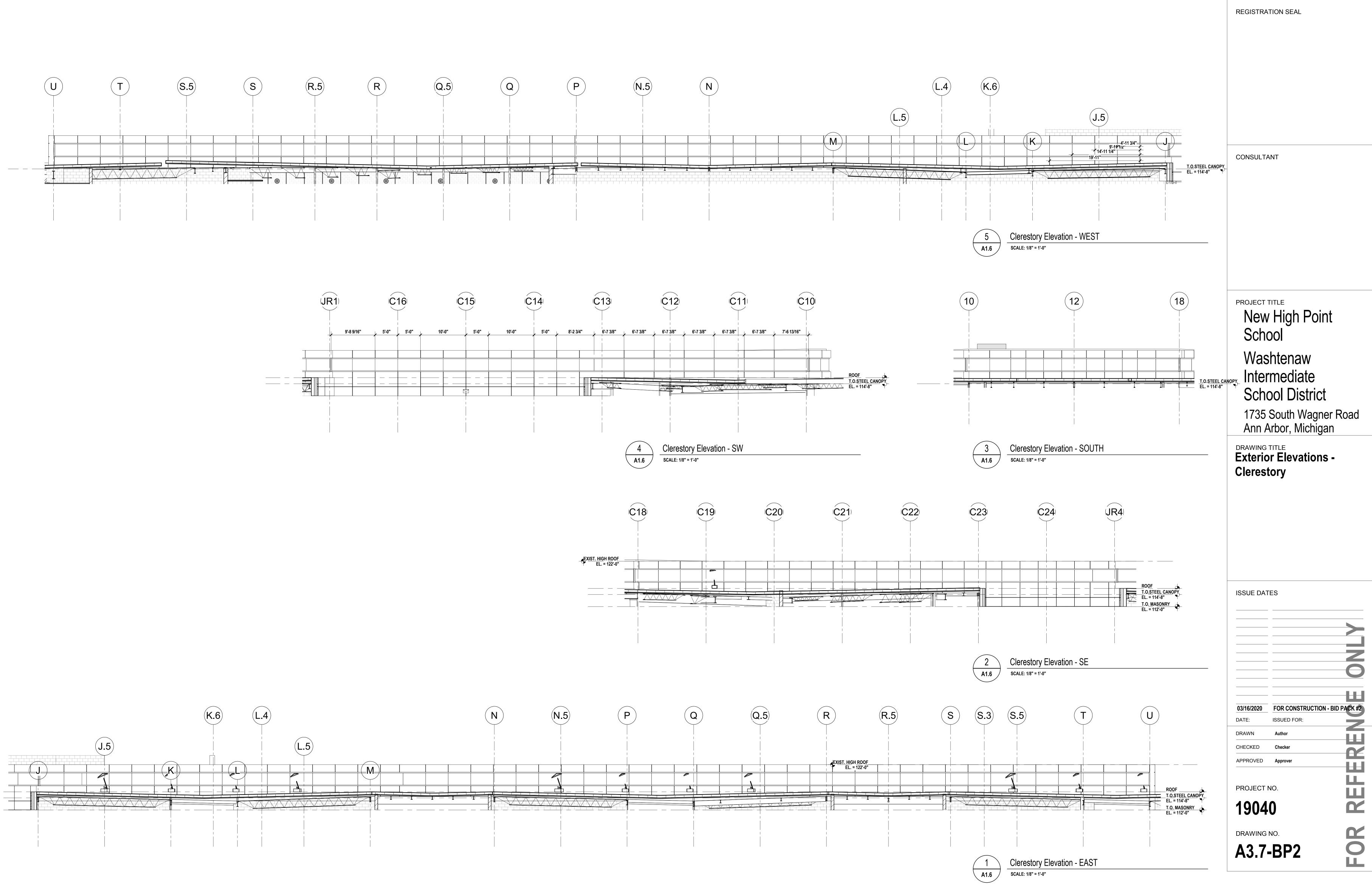
EXTERIOR ELEVATION SCALE: 1/8" = 1'-0"

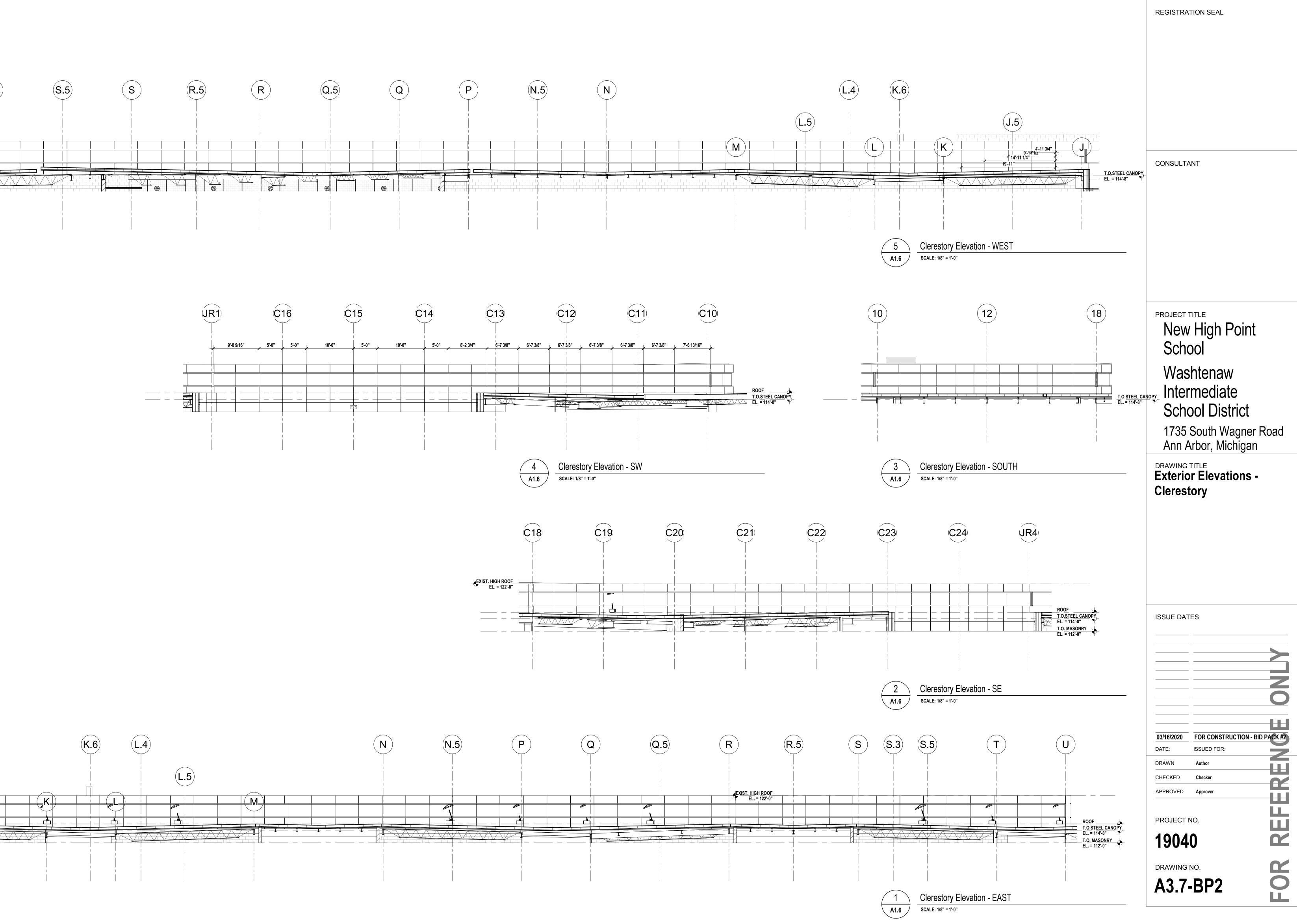
TMP ARCHITECTURE INC

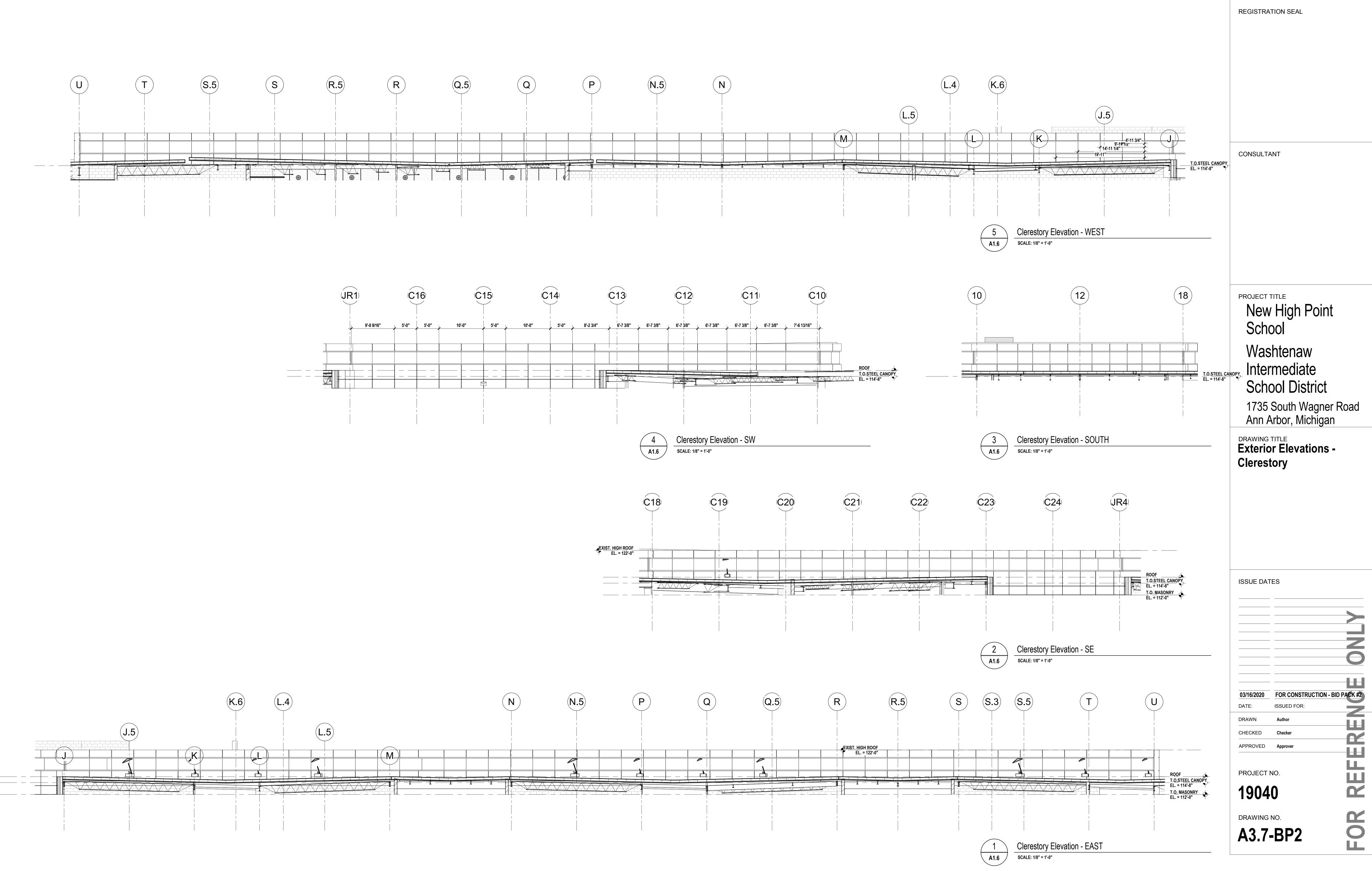
1191 WEST SQUARE LAKE ROAD

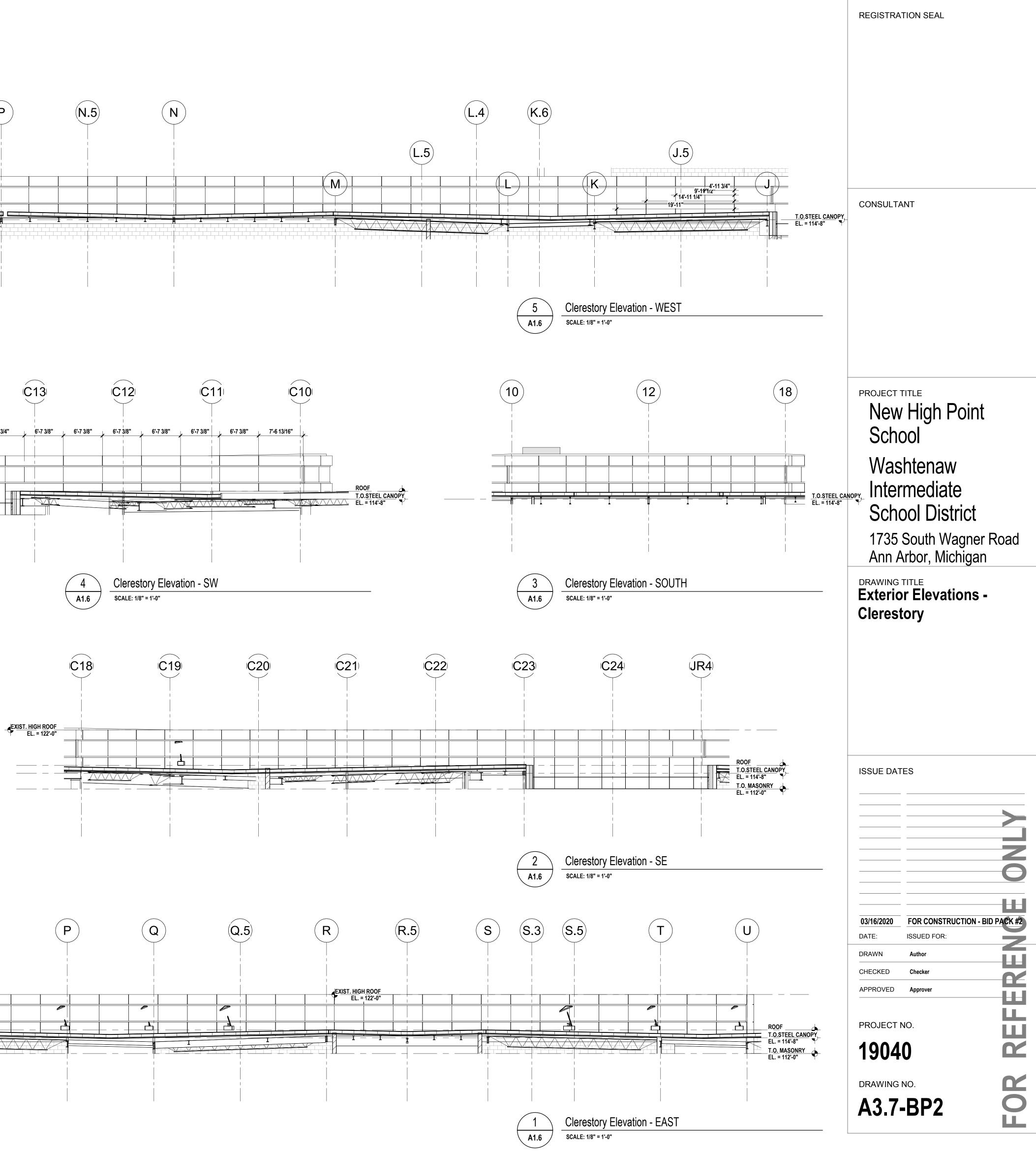
BLOOMFIELD HILLS · MICHIGAN · 48302





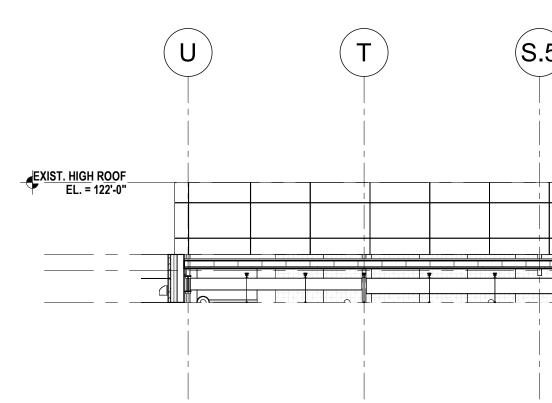


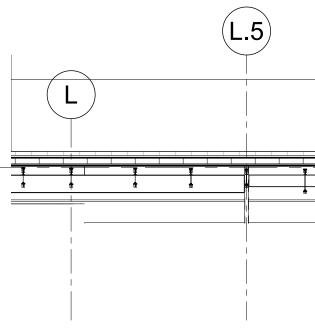




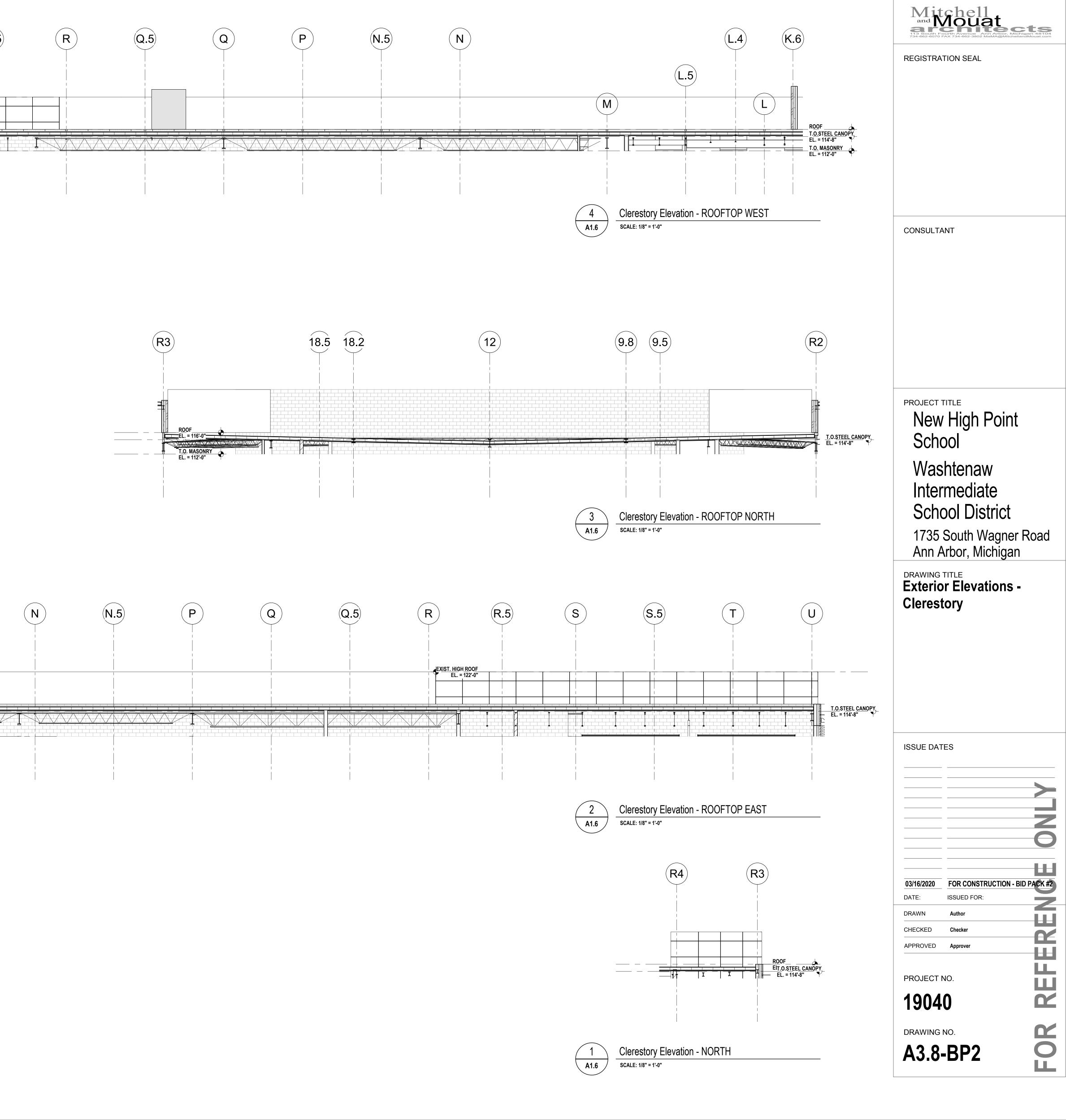
Mitchell and Mouat and Annarbor, Michigan 48104

ARCHITECTURE TMP ARCHITECTURE INC 1191 WEST SQUARE LAKE ROAD BLOOMFIELD HILLS • MICHIGAN • 48302 PH • 248.338.4561 FX • 248.338.0223 Em • Info@TMP-Architecture.com





8.5	(S.3)	S	(R.5)	R	(Q.5)	Q	P	



ARCHITECTURE

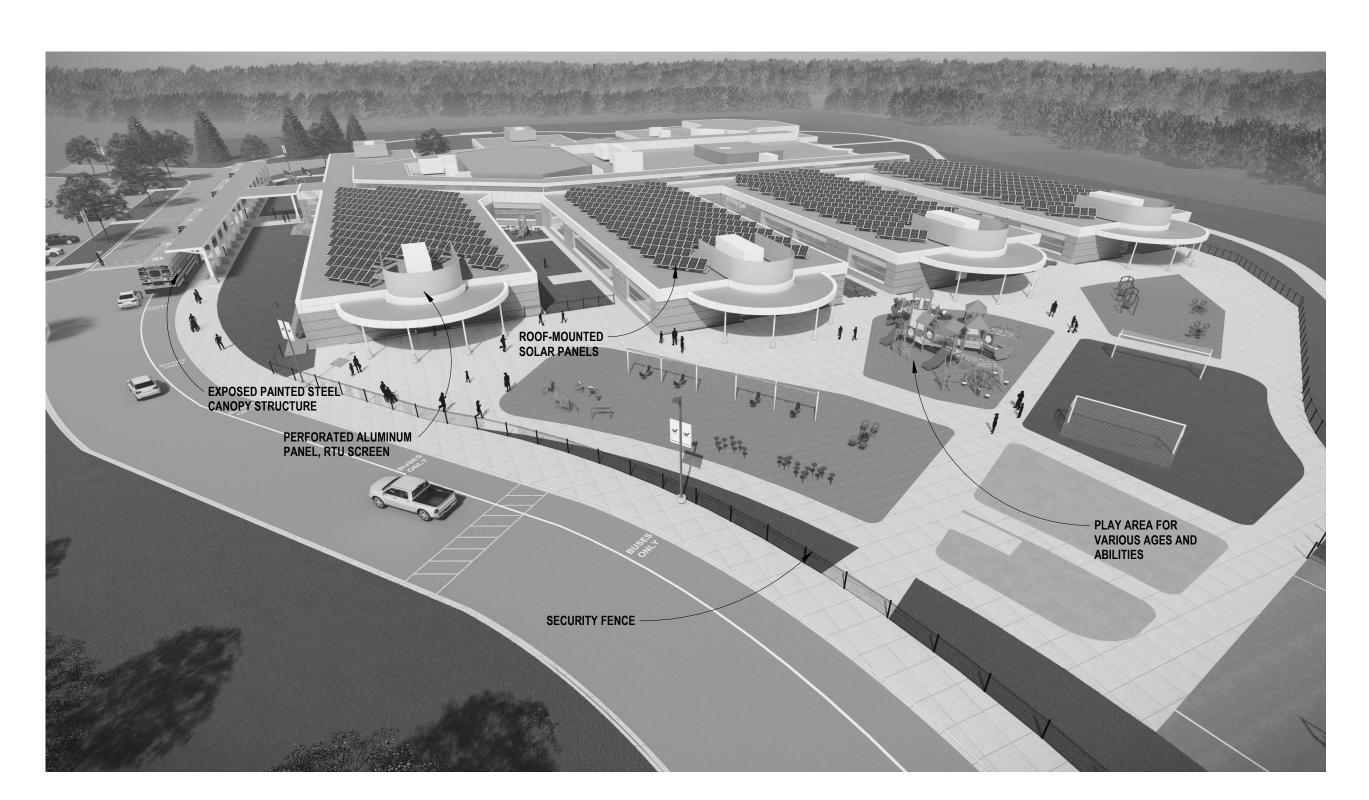
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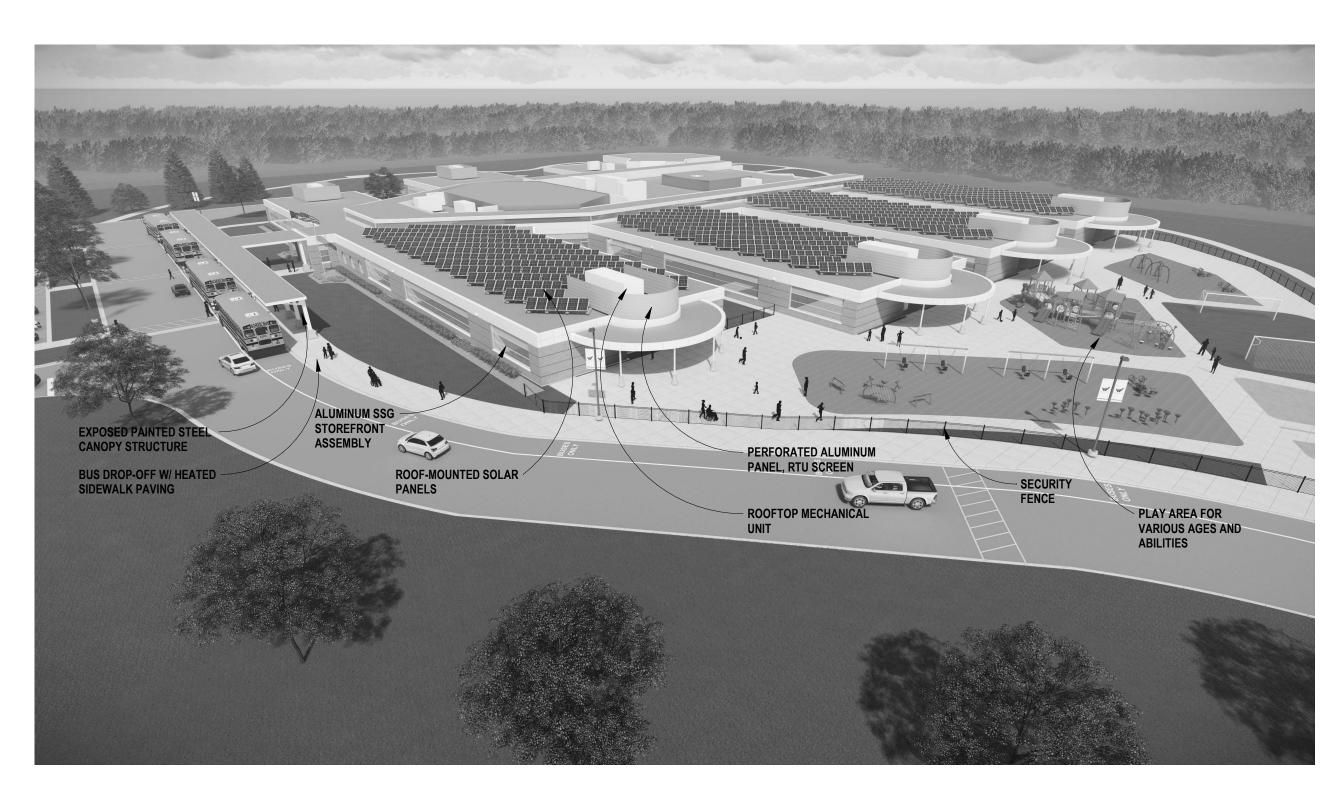
	N	(N.5)	P	Q	(Q.5)
CLASSROOM CEILING EL. = 110'-0"					



EXTERIOR - OVERALL



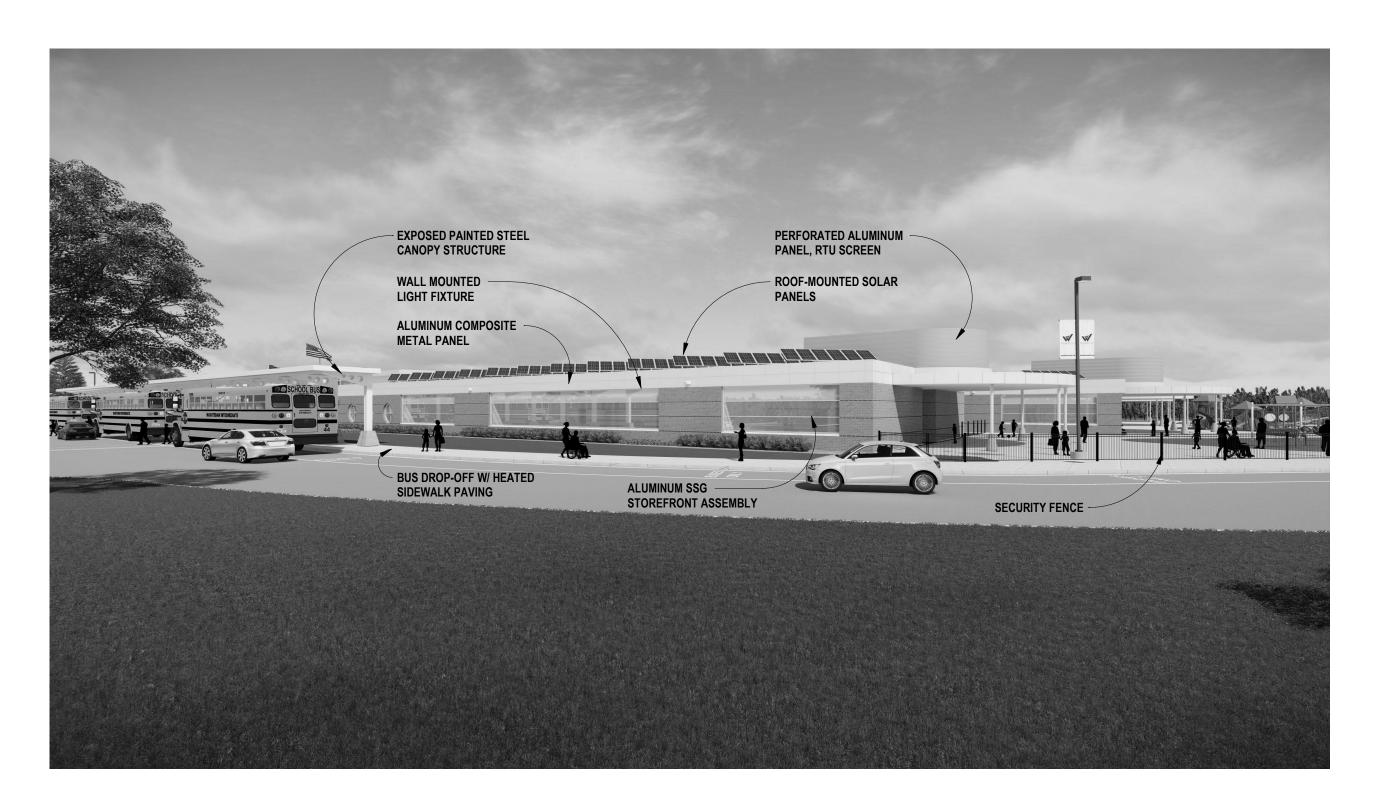
EXTERIOR - OVERALL



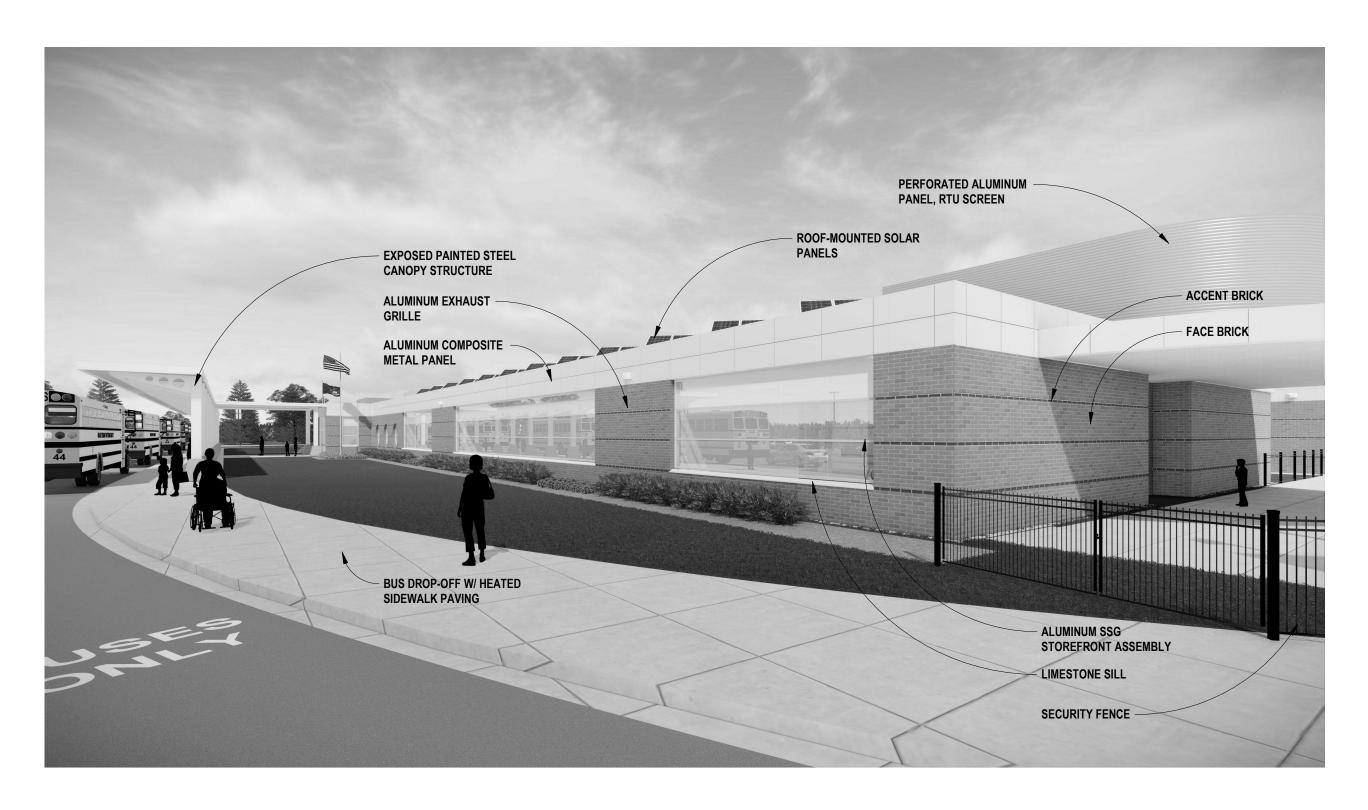
EXTERIOR - OVERALL



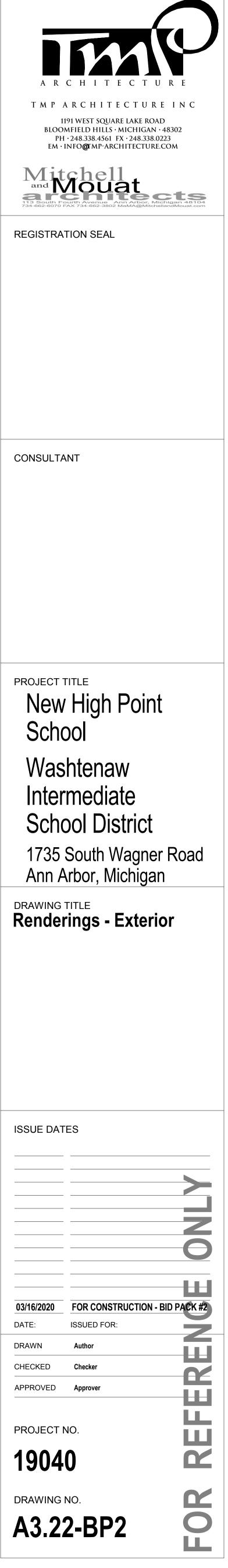
EXTERIOR - ENTRANCE

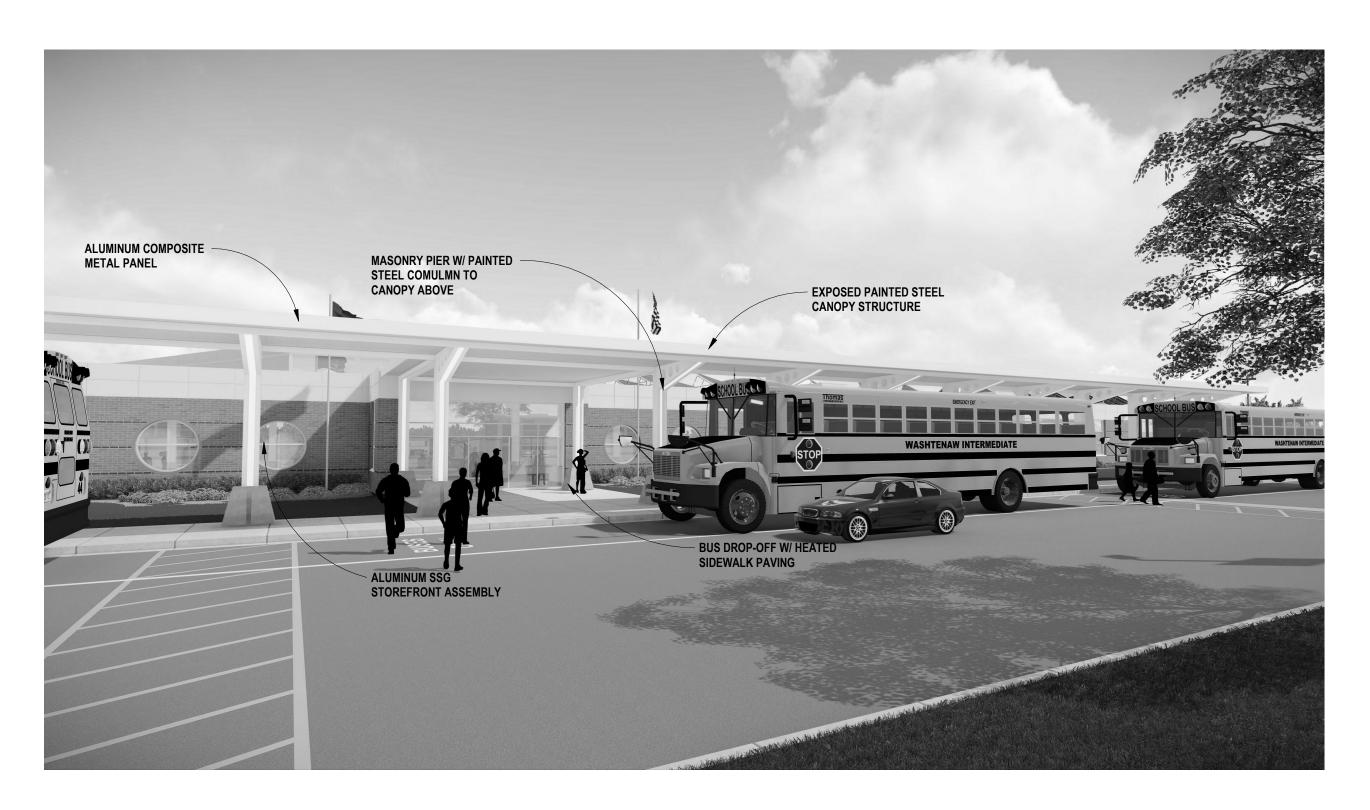


EXTERIOR - ENTRANCE



EXTERIOR - BUS DROP-OFF

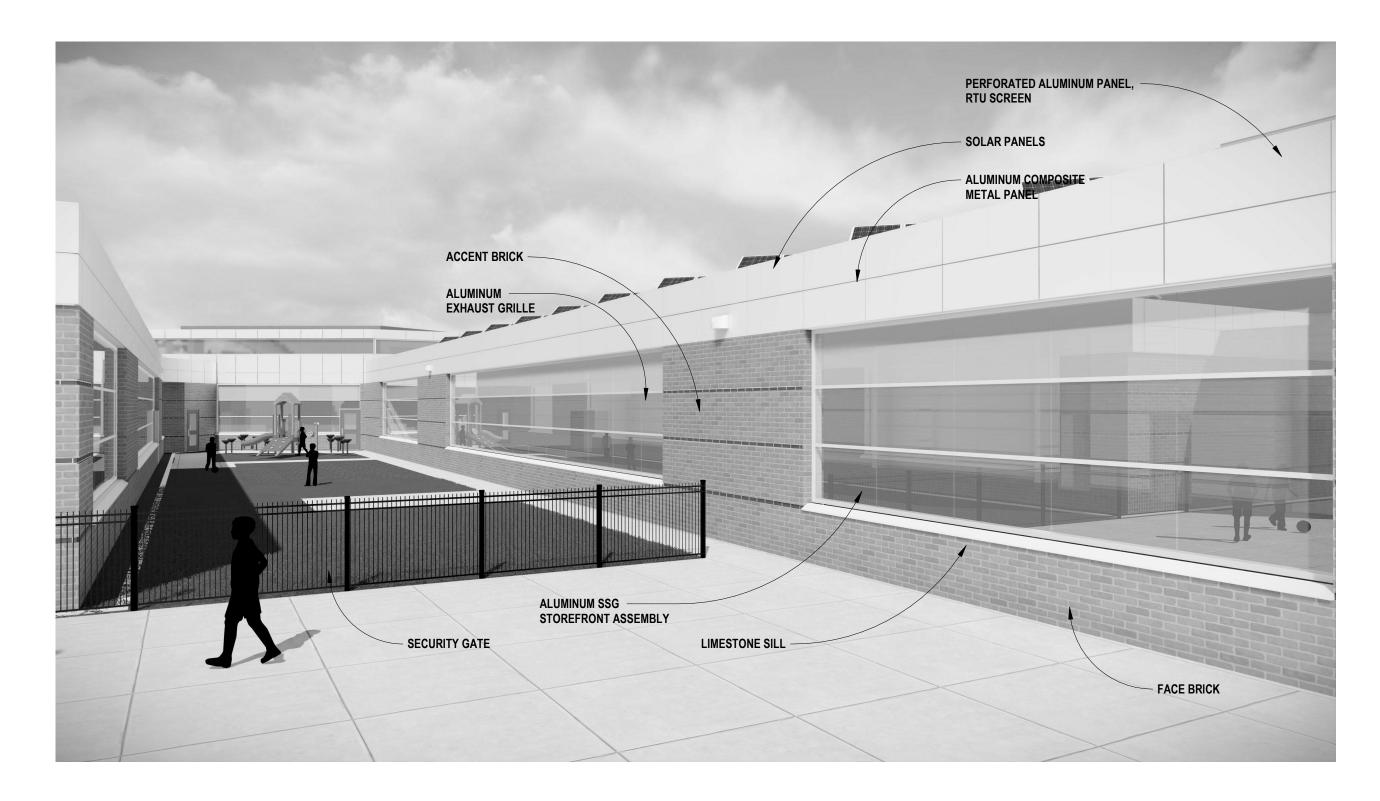




EXTERIOR - MAIN ENTRANCE



EXTERIOR - CAFETORIUM



EXTERIOR - INTERSTITIAL SPACE



EXTERIOR - PLAYGROUND



EXTERIOR - CANOPY

DATE:

