

- TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN.
- 4. SEE DRAWINGS 5200 TO 5201 \$ 5300 TO 5301 FOR SECTIONS AND DETAILS. 5. SEE DWG. S400 & S401 FOR STRUCTURAL GENERAL NOTES.
- 6. "C.J." DENOTES SLAB CONTROL JOINT. SEE DETAIL 5/S201
- 7. "S.O.G. SI" DENOTES 4" CONCRETE SLAB ON GRADE OVER COMPACTED FILL & VAPOR RETARDER. PROVIDE 6x6-W2.IXW2.I W.W.R. W/ 1/4" TOP COVER. SEE GEOTECHNICAL REPORT FOR BACKFILL REQUIREMENTS.
- 8. "F30" DENOTES 12" × 3'-0" × 3'-0" REINF. CONCRETE FOOTING. SEE SECTION 5/200.
- 8. "F40" DENOTES 12" × 4'-0" × 4'-0" REINF. CONCRETE FOOTING. SEE SECTION 6/200.
- 9. "CI" DENOTES 4" DIA. (SCH. 40) PIPE COLUMN. SEE SECTION 2/5200. 10. "WSW-1" DENOTES WOOD STUD SHEAR WALL W/ 76" EXTERIOR GRADE WOOD STRUCTURAL
- PANELS. FASTEN TO STUDS W/ 0.148" DIA. x 3" LG. NAILS @ 2" O.C. ON EDGES AND 12" O.C. IN THE FIELD. PANEL EDGES TO BE BLOCKED W/ DOUBLE 2x6 BETWEEN STUDS. II. "WSW-2" DENOTES WOOD STUD SHEAR WALL W/ 76" EXTERIOR GRADE WOOD STRUCTURAL
- PANELS. FASTEN TO STUDS W/ 0.148" DIA. x 3" LG. NAILS @ 6" O.C. ON EDGES AND 12" O.C. IN THE FIELD. PANEL EDGES TO BE BLOCKED W/ DOUBLE 2x6 BETWEEN STUDS.
- 12. "WSW-3" DENOTES WOOD STUD SHEAR WALL W/ 76" EXTERIOR GRADE WOOD STRUCTURAL PANELS. FASTEN TO STUDS W/ 0.148" DIA. x 3" LG. NAILS @ 4" O.C. ON EDGES AND 12" O.C. IN THE FIELD. PANEL EDGES TO BE BLOCKED W/ DOUBLE 2x6 BETWEEN STUDS.
- 13. TYPICAL WALL SHEATHING (NON-SHEAR WALLS) SHALL BE 16" EXTERIOR GRADE WOOD STRUCTURAL PANELS. FASTEN TO STUDS W/ 0.148" DIA. x 3" LG. NAILS @ 6" O.C. ON EDGES AND 12" O.C. IN THE FIELD.



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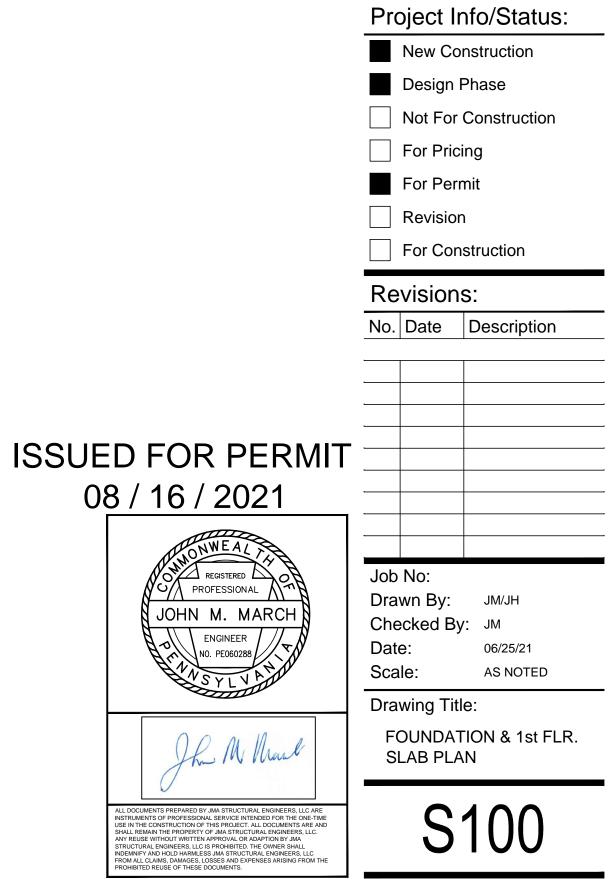
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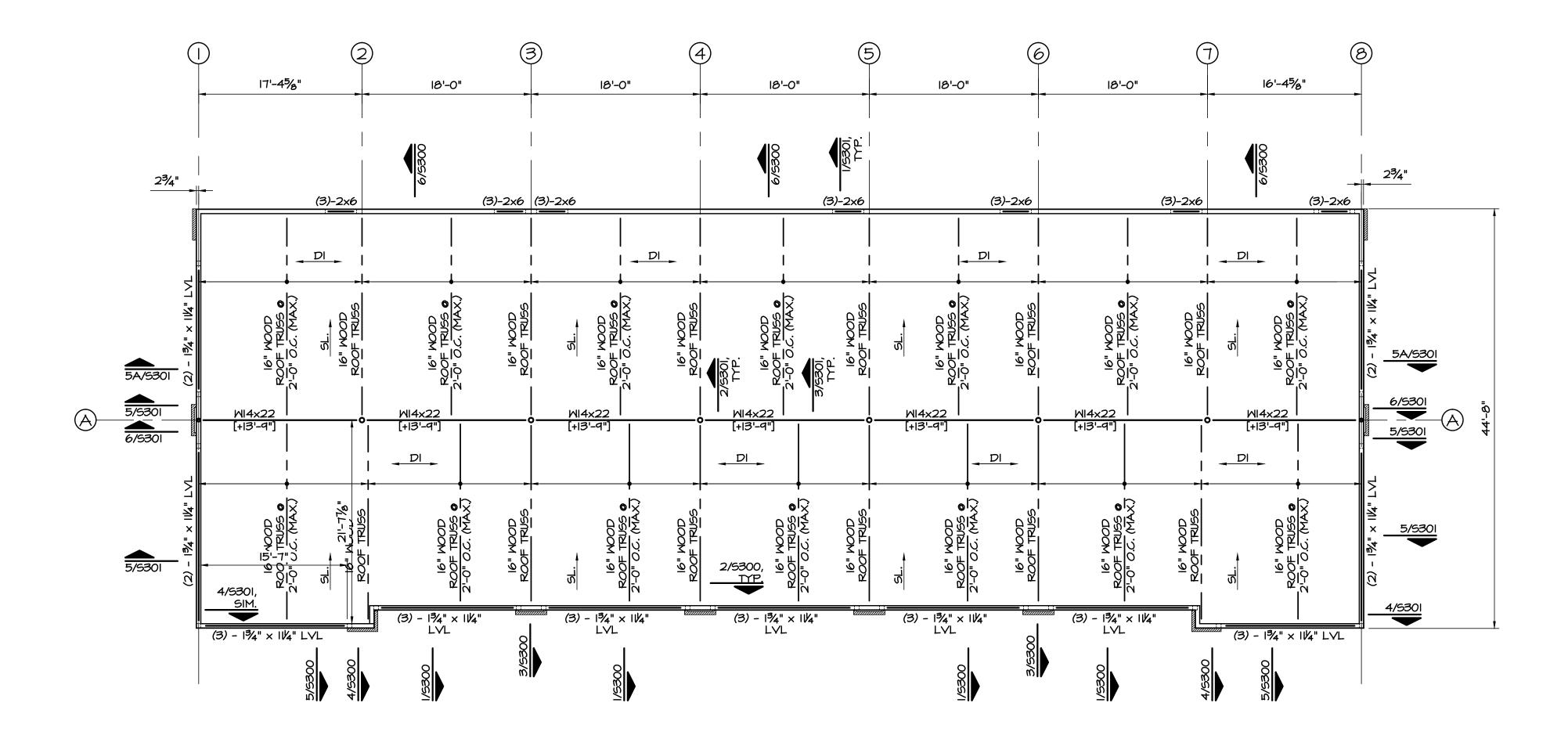
Consultants:

JMA STRUCTURAL ENGINEERS, LLC 330 Crescent Hill Drive Havertown, PA 19083 Phone : 610-853-8162

Project Name:

THE VILLAGE at **STATION SQUARE**





ROOF FRAMING PLAN SCALE: 1/8"=1'-0"

- PLAN NOTES: I. TOP OF ROOF PLYWOOD SHEATHING ELEVATION SLOPES. SEE ARCH. DWGS.
- 2. TOP OF (2) 2x6 BEARING PLATES IS AT ELEVATION (+14'-0") 3. COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH ARCH. & M.E.P. DWGS. REFER TO ARCHITECTURAL
- DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN. 4. SEE DRAWINGS 5200 TO 5201 & 5300 TO 5301 FOR SECTIONS AND DETAILS.

- SEE DRAMINGS 5200 TO 520T & 5000 TO 500T TOR SECTIONS AND DETAILS.
 SEE DWG. 5400 & 540I FOR STRUCTURAL GENERAL NOTES.
 "DI" DENOTES SPAN OF ½" EXTERIOR GRADE PLYWOOD ROOF SHEATHING. SEE ARCH. DWGS. FOR ADD'L. INFO.
 "RD" DENOTES SPAN OF ½" EXTERIOR GRADE PLYWOOD.
 WALL SHEATHING (NON-SHEAR WALLS) SHALL BE ½" EXTERIOR GRADE WOOD STRUCTURAL PANELS. FASTEN TO STUDS W 0.148" DIA. x 3" LG. NAILS O 6" O.C. ON EDGES AND 12" O.C. IN THE FIELD. SEE BRACED WALL PANEL PLANS FOR ADDITIONAL FASTENER REQUIREMENTS.



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THESE DRAWINGS ARE PRELIMINARY AND NOT

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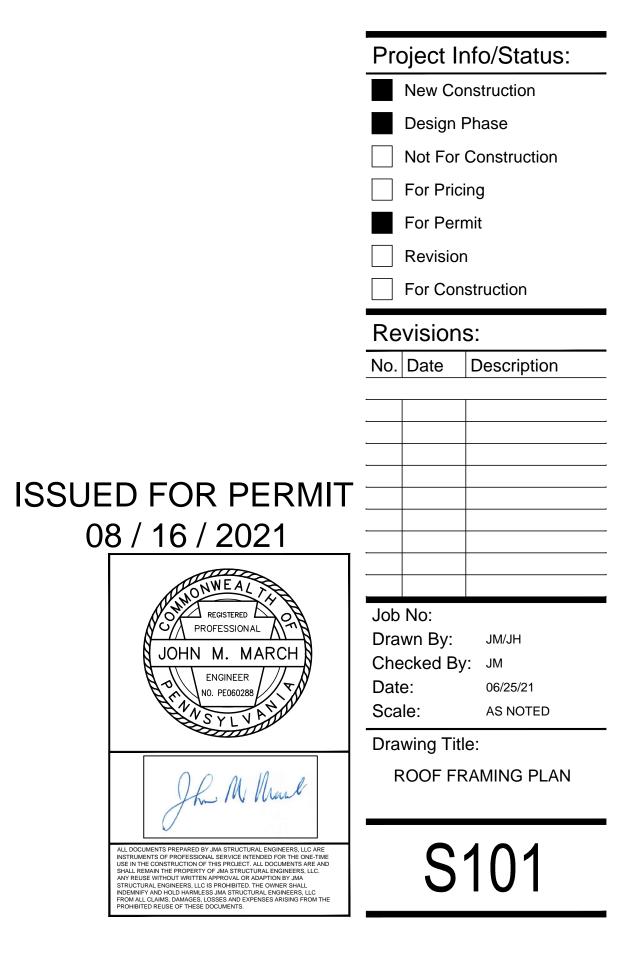
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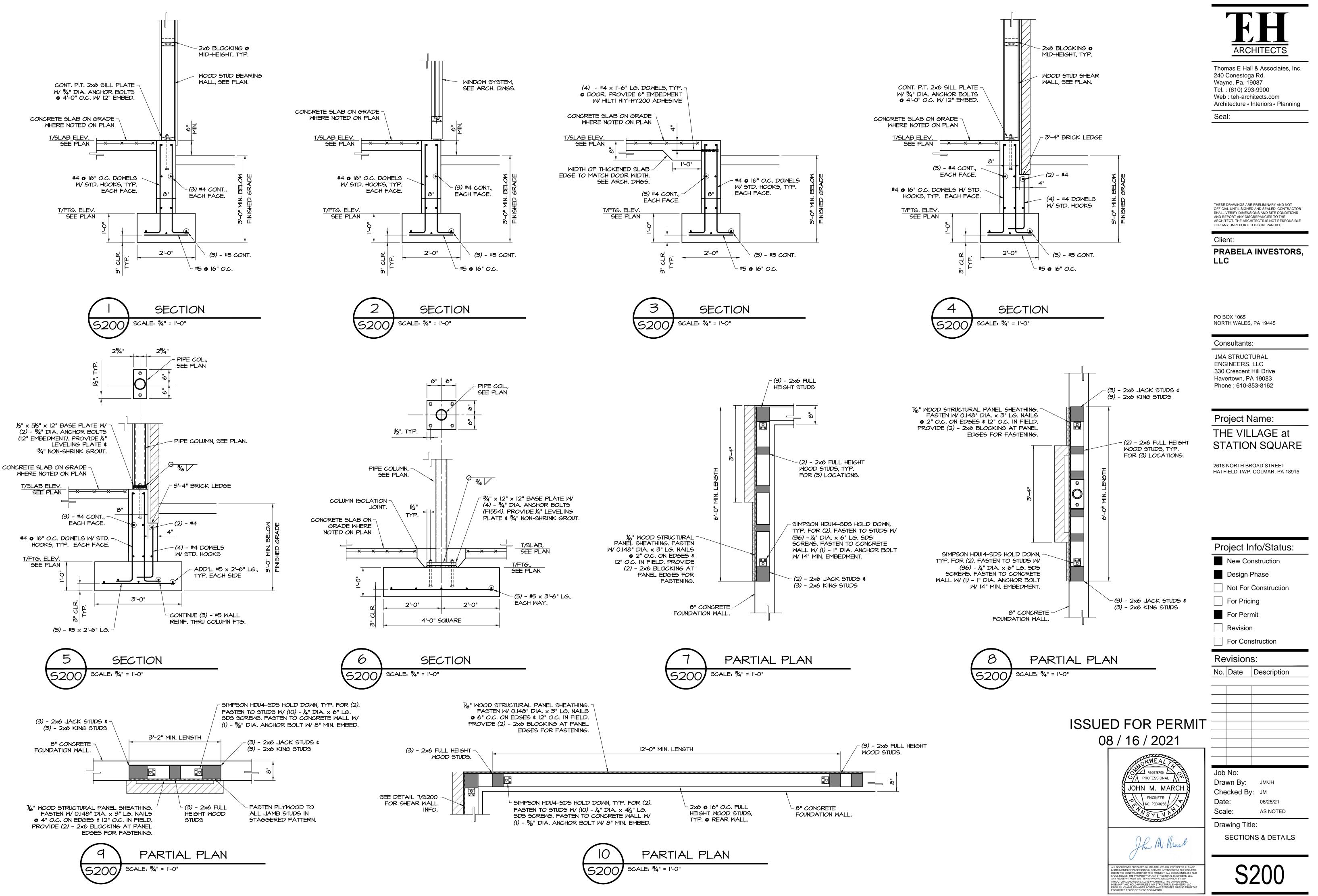
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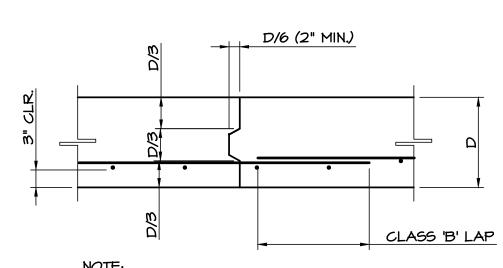
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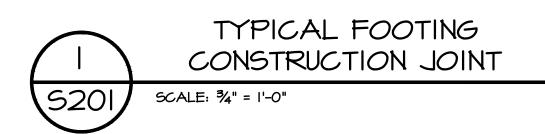


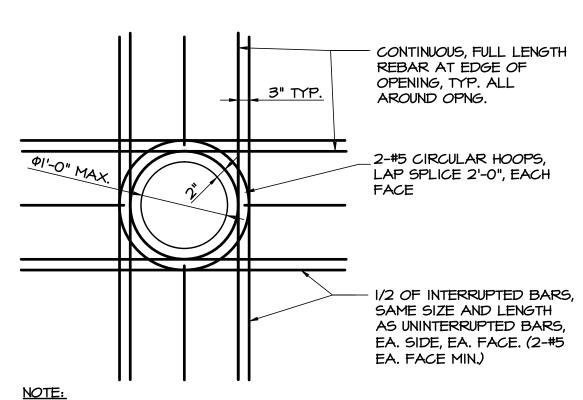


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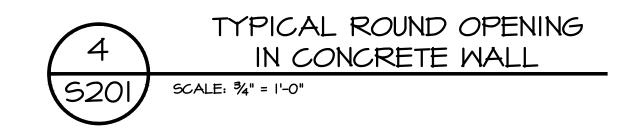


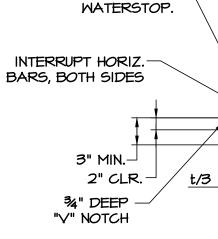
NOTE: CONTRACTOR SHALL LOCATE CONSTRUCTION JOINTS.





NOTE: PROVIDE REINFORCING AROUND ALL OPENINGS AS SHOWN IN THESE DETAILS UNLESS OTHERWISE SHOWN.



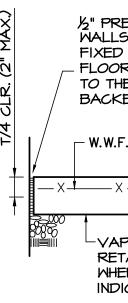


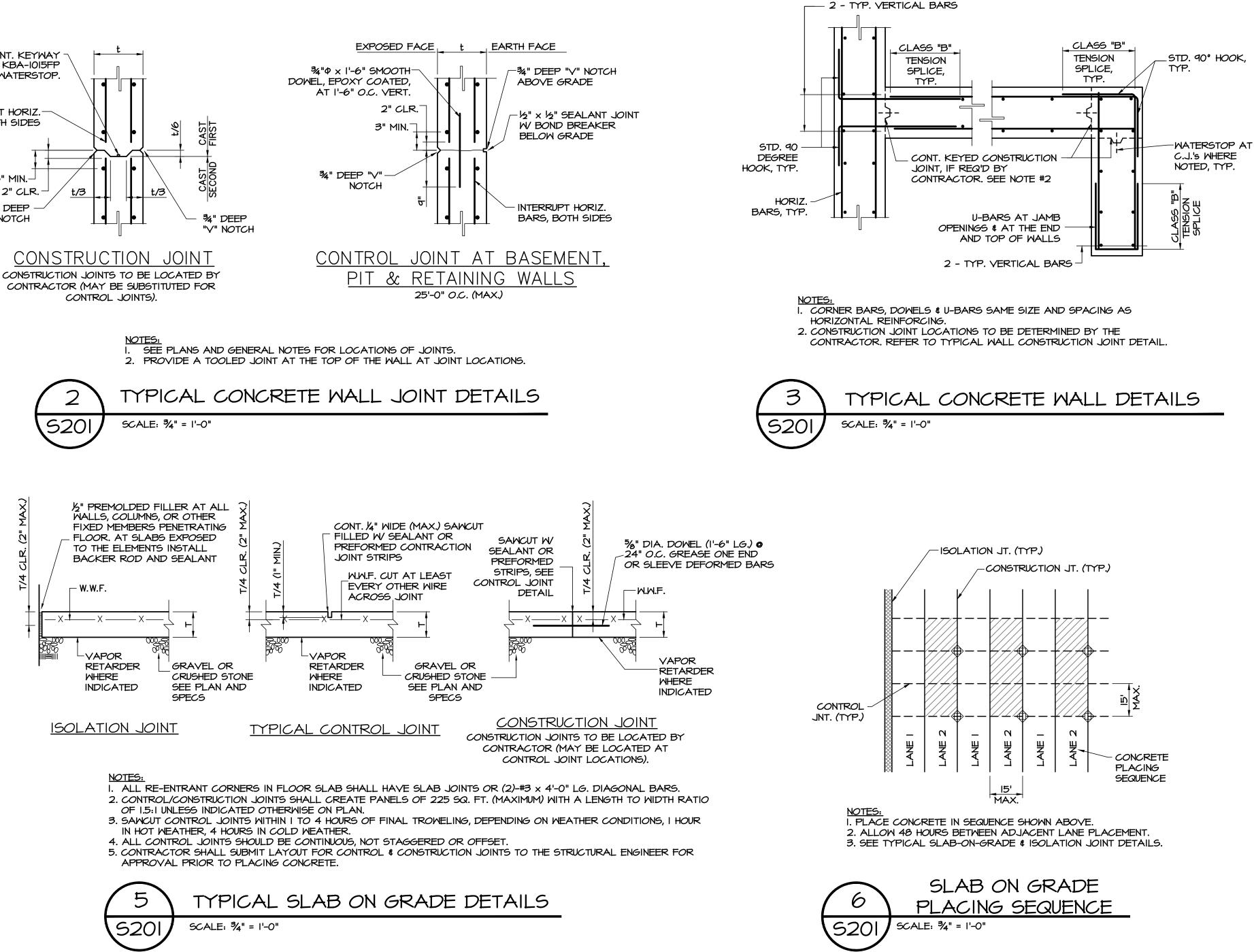
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W/ ADEKA KBA-1015FP



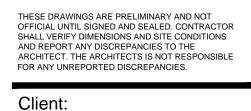












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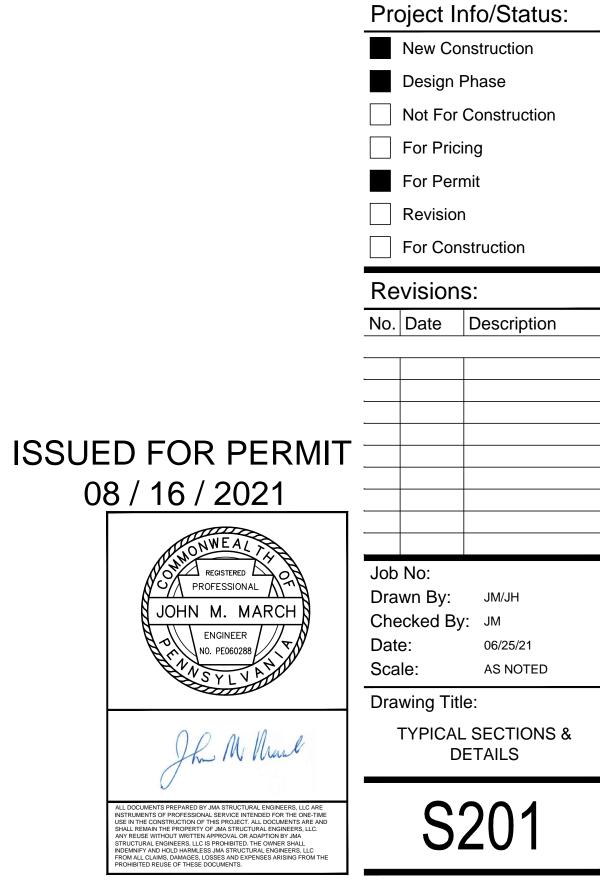
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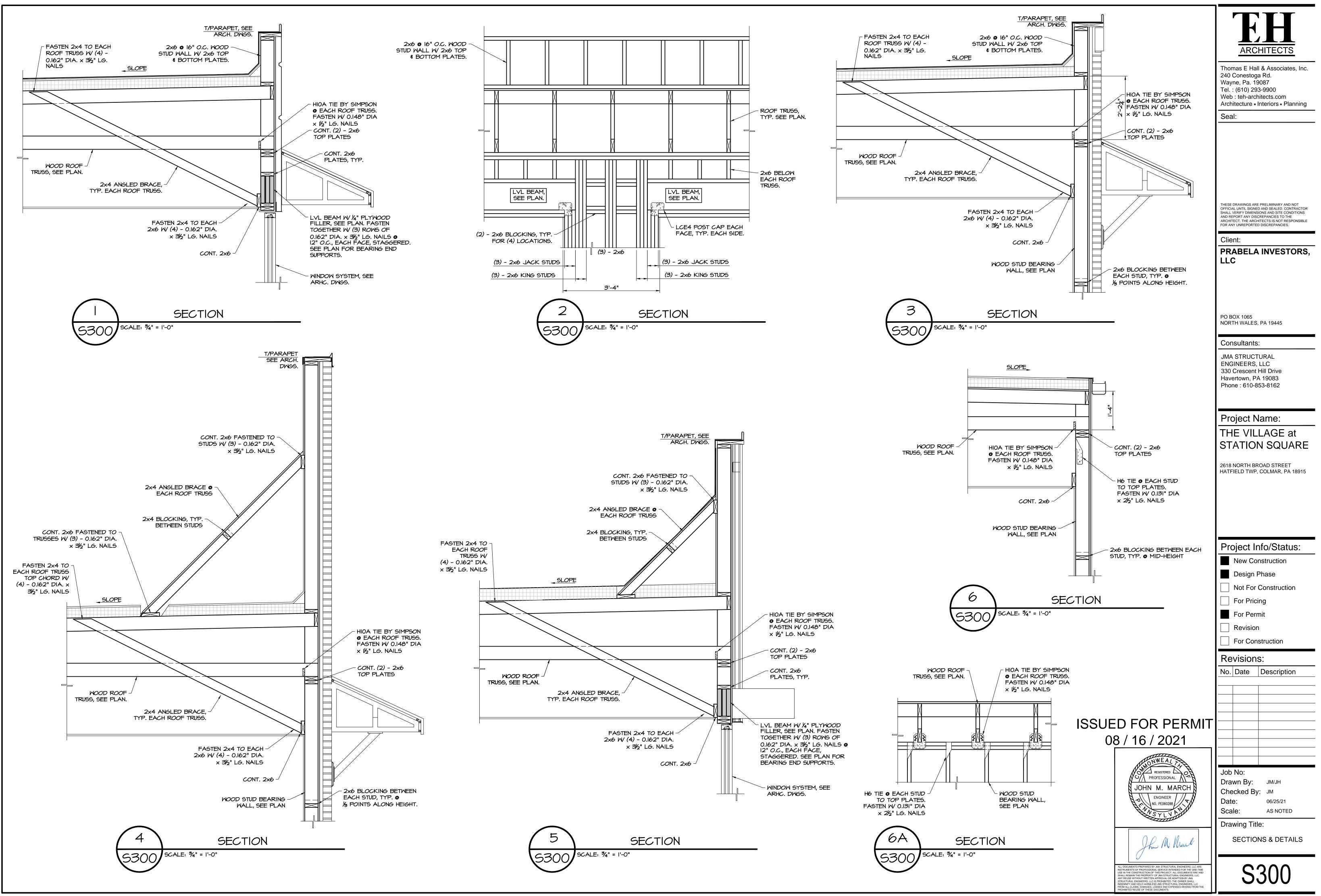
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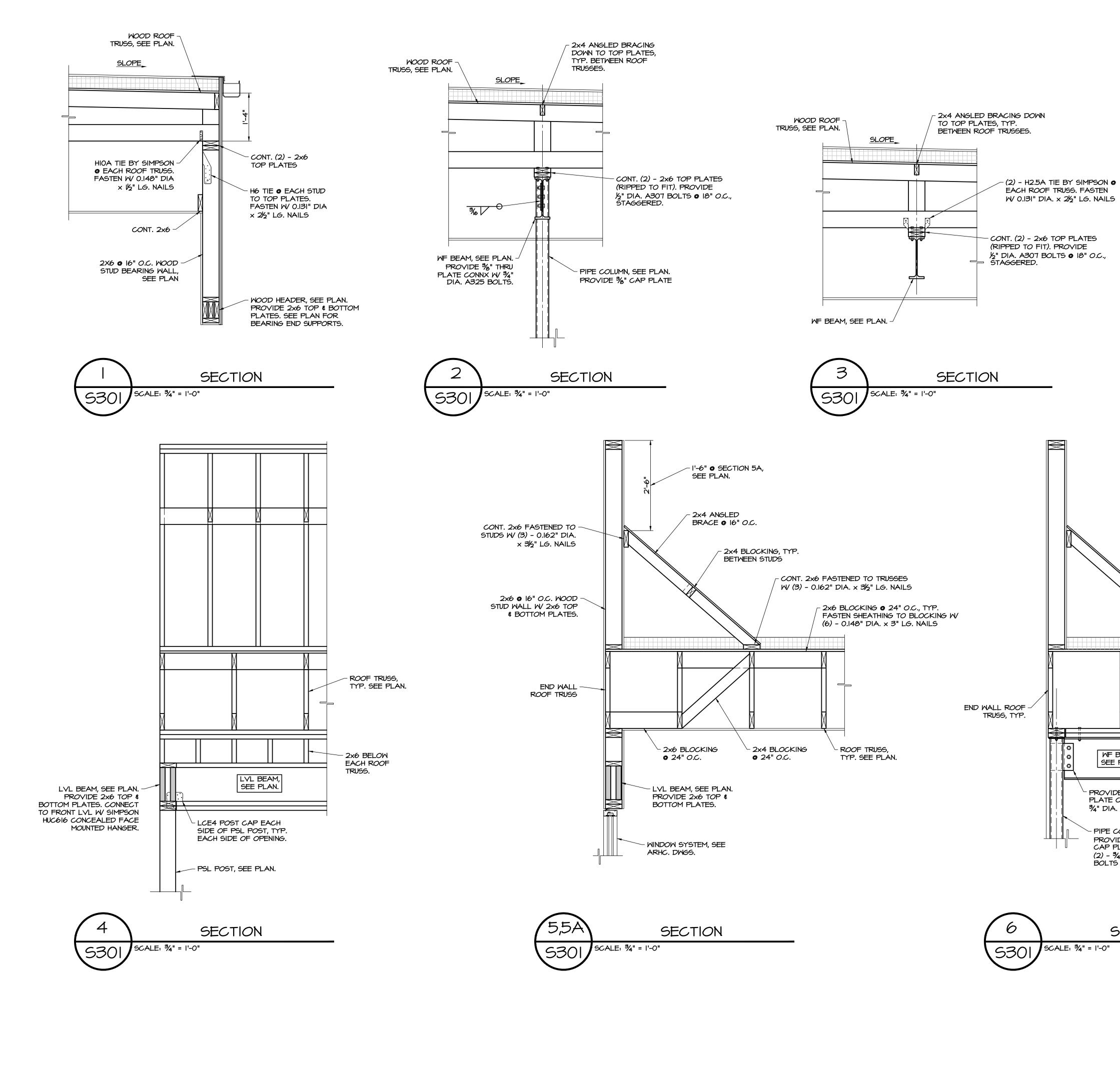
Project Name:

THE VILLAGE at STATION SQUARE





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		PO BOX 1065 NORTH WALES, PA 19445
		Consultants:
		JMA STRUCTURAL ENGINEERS, LLC 330 Crescent Hill Drive Havertown, PA 19083 Phone : 610-853-8162
SEE SECTION 5/5301 FOR ADD'L. INFO.		Project Name: THE VILLAGE at STATION SQUARE
		HATFIELD TWP, COLMAR, PA 18915
ROOF TRUSS, TYP. SEE PLAN. (2) - H2.5A TIE BY SIMPSON O EACH ROOF TRUSS. FASTEN W 0.131" DIA. x 2½" LG. NAILS		Project Info/Status: New Construction Design Phase Not For Construction For Pricing
BEAM, PLAN. BEAM, PLAN. BEAM, PLAN. BEAM, PLAN. BEAM, PLAN. BEAM, PLAN. BEAM, PLAN. BEAM, PLAN. BEAM, PLAN. BEAM, PLATES (RIPPED TO FIT). PROVIDE K" DIA. A307 BOLTS @ 18" O.C., STAGGERED.		For Permit Revision
DE %" THRU		For Construction
CONNX W CONNX W A A325 BOLTS. COLUMN, SEE PLAN. $IDE \sqrt[3]{} \times 5" \times 12"$ PLATE. PROVIDE $\sqrt[3]{} DIA. A301 THRU 5 IN TOP PLATES$		Revisions: No. Date Description
	D FOR PERMIT	
30 T	3 / 16 / 2021	
BECTION	DOINNEAL REGISTERED PROFESSIONAL JOHN M. MARCH ENGINEER NO. PEO60288	Job No: Drawn By: JM/JH Checked By: JM Date: 06/25/21 Scale: AS NOTED Drawing Title:
	ALL DOCUMENTS PREPARED BY JMA STRUCTURAL ENGINEERS, LLC ARE INSTRUMENTS OF PROFESSIONAL SERVICE INTENDED FOR THE ONE-TIME USE IN THE ONE-TIME DURING THE REPORT OF LOT UNDERSTICA DE AND	SECTIONS & DETAILS
	INSTRUMENTS OF PROFESSIONAL SERVICE INTELLED OF ON THE UNE-TIME USE IN THE CONSTRUCTION OF THIS PROJECT. ALL DOCUMENTS ARE AND SHALL REMAIN THE PROPERTY OF JMA STRUCTURAL ENGINEERS, LLC. ANY REUSE WITHOUT WRITTEN APPROVAL OR ADAPTION BY JMA STRUCTURAL ENGINEERS, LLC IS PROHIBITED. THE OWNER SHALL INDEMNIFY AND HOLD HARMLESS JMA STRUCTURAL ENGINEERS, LLC FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING FROM THE	S301

<u>GENERAL</u>

- I. The structure is designed in accordance with the applicable requirements of the 2015 International Building Code. All work shall be done in accordance with the building code and all local governing authorities.
- 2. All Contractors are responsible for adhering to the requirements as specified in these notes. All parties must carefully study all notes for items which may pertain to their trades. Failure to read these notes does not permit the Contractor(s) to deviate from their requirements. Any questions will be answered by the SEOR. Submit questions in RFI format.
- 3. Methods, procedures and the sequences (other than that noted on the drawings) of construction are the responsibility of the Contractor(s). The Contractor(s) shall take all necessary precautions to maintain and insure integrity of the structure at all stages of construction
- 4. All structural work shall be completed and coordinated with the architectural, electrical, piping and mechanical drawings and specifications.
- 5. The Contractor(s) shall verify all conditions, check all measurements and be responsible for same.
- 6. Principal openings in the structure are indicated on the Contract Documents. Refer to the architectural, mechanical, electrical and plumbing drawings for additional openings, sleeves, curbs, insets, etc. not indicated. The location of sleeves or openings in structural members must be approved by the SEOR prior to installation. All openings in walls, floors, roofs, etc., not shown are to be located and sized per mechanical and architectural requirements.
- 7. Submit signed and sealed calculations and shop drawings by a structural engineer registered in the state in which the project is located showing designs of ladders and railings taking into account the vertical and lateral loads in compliance with the applicable building codes.
- 8. The Contractor shall provide bracing as required to maintain plumbness and stability during construction. All walls and framing shall be adequately braced until the entire structural frame has been installed and is structurally sound/stable.
- 9. Work not indicated on a part of the drawings but reasonably implied to be similar to that shown at corresponding locations shall be provided by the Contractor(s) at no additional cost.
- 10. Minor details or incidental items not shown or specified, but necessary for a proper and complete installation shall be included as required.
- II. Miscellaneous wood blocking and/or cold formed framing, framing members, anchors, fasteners, etc. shall be provided as required at no additional cost whether or not specifically indicated on drawings.
- 12. Work shall be performed in accordance with the federal, state and local municipal laws, bylaws, ordinances and regulations in any manner affecting the conduct of this work as well as all orders or decrees which have been promulgated or enacted by any legal bodies or tribunals having authority or jurisdiction over the work, materials, employees or contract. The Contractor shall be responsible for maintaining personnel safety on the jobsite. Guidelines for construction safety shall be in accordance with, but not limited to, the construction industry OSHA Safety and Health Regulations for Construction (Part 1926 standards), and any local ordinances or codes that may be applicable.
- 13. All existing conditions shall be verified in the field prior to beginning any work. If field conditions do not permit the installation of the work in accordance with the details as shown, the Contractor shall notify the appropriate design professional immediately and provide a sketch of the condition with proposed modification for review by the design professional.
- 14. All codes and standards referenced in these notes, including all specifications referenced within, and all federal, state and local regulations apply to the design, construction, demolition, quality control and safety of all work performed on the project. Use the latest adopted editions of the codes and standards.
- 15. This project has been designed for the weights of the materials indicated on the drawings and for the superimposed loads indicated in the design data. It is the Contractor's responsibility to determine allowable construction loads and provide proper design and construction of falsework, formwork, staging, bracing, sheeting and shoring, etc.
- 16. Coordinate with the architectural, mechanical, plumbing, electrical, (etc.), drawings for the size and locations of concrete housekeeping pads and/or slab depressions.
- 17. Refer to the architectural drawings for additional detail information regarding finishes, fireproofing, etc.
- 18. Refer to the architectural drawings for locations of non-load bearing partitions. Unless specifically shown otherwise, provide slip connections that allow vertical movement at the tops of all partitions. Connections shall be designed to support the top of the walls laterally for the lateral load required by code.
- 19. All Contractors and Subcontractors on this project shall be responsible for the proper performance of their work, selection of means and methods, coordination with other trades, safety and security on the job site.
- 20. In case of conflict between the notes, details, and specifications, the most stringent requirements shall govern.
- 21. Locate all underground structures and utilities, such as water mains, sewers, telephone and electric conduits, etc., and above ground utilities, which may be encountered during construction operations. Dig test holes to determine the position of the underground structures and utilities, or arrange with the owners of such underground structures and utilities to assign a representative to mark the locations. The Contractor shall pay the cost of digging test holes and likewise shall pay the cost of the service of the representatives of the owners of such utilities for locating the said utilities. The cost of determining the locations shall be included in the lump sum bid prices.
- 22. Acceptance of deviations from any of the requirements of these notes shall be at the sole discretion of the Engineer. Acceptance of a deviation from any requirement shall not be construed as permitting any other deviation.
- 23. Contractor shall become familiar with existing conditions prior to execution of work. If drawing contents/dimensions are inconsistent with field details, notify Architect to resolve each discrepancy.
- 24. Construction materials shall be provided free from defect and installed plumb and true to the limits set forth on the drawings by experienced tradesmen.

FOUNDATIONS

- . Footinas shall bear on undisturbed virain soil and/or supervised compacted fill, free of frost, having a minimum allowable bearing capacity of 2,000 pounds per square foot. Elevations shown on drawings are for estimating and are subject to revision when the true conditions are revealed by excavation. Contractor shall notify Architect & SEOR of any doubtful conditions.
- 2. Perform site preparation and excavation work related to support of structures in strict accordance with the Geotechnical Investigation provided by the Owner. Contractor(s) shall familiarize themselves with the geotechnical investigation report before commencing work.
- 3. The bottom of all excavations and compacted earthwork shall be inspected and approved by a registered Geotechnical Engineer retained by the Owner prior to placing concrete and/or backfilling. Approval by the Geotechnical Engineer, in writing, shall indicate that the soil is adequate to safely support the specified design foundation pressures and meets the requirements noted on the Contract Drawings. Excavation below the anticipated bottoms of footings along with placement of compacted backfill may be required due to unknown field conditions.
- 4. Backfill shall be accomplished using material consisting of crushed stone and/or material, approved by a registered Geotechnical Engineer, with optimum moisture content for compacting and shall be free of any debris. The subgrade and each layer of fill or backfill shall be compacted to a dry density at least equal to 95% of the maximum dry density attained by the Modified Proctor test ASTM DI557 unless noted otherwise in the geotechnical report.
- 5. The bottom of all exterior footing excavations shall be a minimum of 3'-0" below exterior finished grade to provide frost protection. Verify all proposed bottom of footing elevations against the proposed finished grade elevations on the civil and/or architectural drawings to comply with the minimum frost depth. In case of conflict, notify the Architect \$ SEOR prior to any construction to allow for adjustment.
- 6. Soil under footings shall be protected from freezing. 7. Contractor shall adequately protect walls, piers, etc., from
- damage due to backfilling. 8. Contractor must prevent the foundations from being
- jeopardized by excavating for utilities, etc. 9. Where pipes pass through new walls, drop footings so that pipes pass over the top of the footing. Provide sleeves as
- reavired. 10. Dewatering procedures, if required, shall not disturb the soil structure
- II. The Contractor shall employ all means necessary to insure that the structural integrity of any and all adjacent structures will not be compromised.
- 12. Maintain a maximum of 1:1 slope from bottom edge of any excavation to adjacent excavations or foundations.
- 13. Utility lines shall not be placed through or below foundations without the SEOR's written approval.
- 14. Shoring, sheeting and dewatering shall be the total responsibility of the contractor.
- 15. Do not backfill against basement walls until the basement slab on grade and 1st floors slab are in place and have attained the specified design strength, or the walls are adequately braced.
- Backfill shall be brought up equally on each side of piers, walls and grade beams.
- 17. Exposed concrete walls shall have control joints at a maximum of 30 feet o.c., unless noted otherwise. On the exposed face of the wall, joints shall be filled with an approved sealant.

<u>CONCRETE</u>

admixture.

- Concrete work shall comply with the requirements of the latest adopted editions of ACI "Building Code Requirements for Structural Concrete and Commentary (ACI 318)" and ACI "Specifications for Structural Concrete (ACI 301)". A copy of ACI 318 shall be available at the project site at all
- 2. Reinforcing steel shall be detailed, fabricated and installed in accordance with the latest editions of CRSI "Manual of Standard Practice", CRSI "Placing Reinforcing Bars" and ACI "Detailing Manual (SP-66)". Submit concrete reinforcing shop drawings for review and approval prior to fabrication of reinforcement.
- 3. Concrete for applications noted below shall have natural sand fine aggregate and normal weight coarse aggregates conforming to ASTM C33, Type I Portland cement conforming to ASTM C150, and shall have the following properties: APPLICATION

APPLICATION	f'c (PSI)	MAX. UNIT MT. (PCF)
Curbs, sidewalks and slabs		
exposed to weather	4,000	150
Slabs on grade	4,000	150
Walls	4,000	150
Footings	3,000	150

- 4. Concrete exposed to freeze/thaw conditions and/or weather (including exterior footings, slabs and walls) shall have
- 4%~6% air-entrainment in accordance with ACI. 5. All concrete shall contain an approved water-reducing
- 6. Slump tests shall be made prior to the addition of plasticizers. Concrete for the preparation of test cylinders shall be taken from the hose end for concrete placed by pumping methods. Slump (at point of concrete placement) shall be 4" (+ 1"). If needed for workability, add a high range water reducing admixture (HRWR) to the concrete. When using water reducing admixtures, the slump limits shall be:
- A. Prior to addition of admixture: less than 3" B. After addition of admixture: 8" maximum
- 8. Water shall not be added to the concrete at the jobsite, unless approved in writing by the SEOR. It shall be the responsibility of the contractor to coordinate the requirements of the concrete supplier and pumper to ensure pumpable and workable mix without the addition of water at the jobsite. The use of plasticizers, retardants and other additives shall be at the option of the contractor subject to the approval of the SEOR. Follow the recommendations of the manufacturer for proper use of retardants and other additives. Use of calcium chloride or other chloride bearing salts is not permitted.

CONCRETE (cont"d)

- 9. The concrete supplier shall submit mix designs for review and approval prior to placing any concrete. Compressive strength must be substantiated by a suitable experience record or by the method of laboratory trial batches. The pertinent criteria of Chapter 5 of ACI 318 (latest edition) shall apply to the proportioning of mix designs and to the acceptance of concrete produced for the job. If during construction any class concrete fails to meet the acceptance criteria, the contractor shall take such steps as are deemed necessary by the SEOR to improve subsequent test results at no additional cost to the Owner. The contractor shall also bear the cost of special investigation, testing or remedial work necessary because of evidence of low strength or non-conforming concrete or workmanship.
- 10. Reinforcing steel shall be manufactured from high-strength billet steel, deformed type, conforming to ASTM A615, Grade
- II. Welded wire reinforcing (WWR) shall comply with ASTM A185, latest edition. Deformed WWR shall comply with ASTM A497, latest edition. Reinforcing shall be supplied in flat sheets.
- 12. All concrete pads, sidewalks, etc., not poured integrally with structural slabs, shall be reinforced with 6x6-W2.9xW2.9 WWR at mid-depth of slab, unless shown otherwise
- 13. Lap all bars a minimum of 40 diameters and in accordance with ACI requirements, unless approved otherwise by SEOR. Reinforcement designated as "continuous" shall lap 48 bar diameters at splices, unless noted otherwise.
- 14. Lap all WWR a minimum of one full mesh at sides and ends (6" min.), and tie wire together.
- 15. All concrete shall be formed, unless otherwise approved by the SEOR. All pours shall be terminated by forms. Provide keys, as directed by SEOR, between adjacent pours.
- 16. Provide a 3/4" chamfer at exposed corners and provide 3/4" flat fillet at re-entrant corners in precast and cast-in-place concrete beams, columns, slabs, walls, curbs, pads, etc., unless otherwise noted by Architect or SEOR.
- 17. No welding of reinforcing shall be permitted, unless specifically called for or approved by the SEOR. Where reinforcing bars are to be welded, they shall conform to ASTM A706 and AWS DI.4 (latest edition)
- 18. Reinforcing steel shall be accurately placed with steel clear cover in accordance with ACI 318, and adequately supported before the concrete is placed. Reinforcing steel shall be secured against displacement within permitted tolerances. Contractor shall provide all high chairs, spacers, supports, etc., necessary for proper placement of reinforcing steel.
- 19. All reinforcing steel shall be securely wired together in the forms. Two way mats of steel shall be tied at alternate itersections both ways.
- 20. Bottom steel, for concrete pours on grade, shall be supported on precast concrete block supports (minimum size 3"x3"x3") spaced at 4'-0" o.c. each way. Top bars shall be supported from doweled concrete blocks or chairs equipped with sand plates. One way top steel shall be tied with #3 bars at 4'-0" o.c. Use of split bricks is not permitted.
- 21. Placing of concrete shall not commence until the placement of reinforcing has been approved by the Owner's inspection agency.
- 22. Floor and slab construction shall conform to the latest edition of "Guide for Concrete Floor and Slab Construction (ACI 302R.I)".
- 23. Concrete slabs shall be finished flat within tolerance, to the elevation indicated on the drawings, using a level or similar device. The contractor shall provide all concrete required to achieve the finished top of slab elevation.
- 24. Slabs with shrinkage steel (example:6x6-WI.4xWI.4 WWR) shall have construction joints and/or control joints at each column line in each direction. Additional joints shall be provided, such that the maximum spacing between construction and/or crack control joints does not exceed 15' with a maximum length to width ratio of 1.5:1. Provide contraction joints at all re-entrant corners. Provide diamond shaped isolation joints around columns.
- 25. Contractor shall submit plan showing pour sequence and type and location of proposed joints in all slabs to SEOR for approval prior to placing concrete for slabs on grade.
- 26. Coordinate the placement of all slabs on grade with the installation of the underslab utilities, building foundations, equipment pads and foundations, drains, retaining walls, etc.
- 27. No splices of reinforcement shall be permitted except as detailed or authorized by the SEOR. Make bars continuous around corners. When permitted, splices shall be made by contact laps, Class B, unless noted otherwise.
- 28. Provide (2)-#6 (I each face) bars on all sides in openings in walls, unless noted otherwise on drawings. Extend bars 30 inches beyond edge of opening.
- 29. Provide (2)-#4 bars, 4'-0" longer than opening, in top and bottom of solid slabs on four sides of unframed opening 12" square or larger; spread slab bars at openings smaller than 12° square.
- 30. Provide (1)-#5 x 4'-0" long diagonal at each corner, unless noted otherwise.
- 31. Provide (2)- #3 x 4'-0" long bars at all re-entrant corners, placed on the diagonal with I-1/2" cover from the corner and top/bottom of slab. Refer to detail.
- 32. Provide (4)-#5 dowels from slabs into concrete pads required for mechanical equipment as shown on the architectural and mechanical drawings.
- 33. Slabs shall not have joints in a horizontal plane. Any stop in concrete work shall be made with vertical bulkheads and horizontal keys, unless otherwise shown.
- 34. Bonding agents shall be used where new concrete is placed aqainst existing concrete, unless noted otherwise.
- 35. General Contractor shall grout under all leveling and bearing plates with an approved non-shrink, non-metallic grout conforming to ASTM CIIOT, and shall have a minimum 28-day compressive strength of 5,000 PSI. Pre-grouting of base plates is not permitted.
- 36. Repair concrete exhibiting voids due to snap ties, honeycombs, rock pockets, and runs, spalls or otherwise damaged surfaces with dry pack or cement grout, and finish flush with adjoining surfaces. At the discretion of the SEOR or as qualified by lab testing, excessive honeycombs or exposed reinforcement that jeopardize the design, shall be removed and replaced at the expense of the contractor.
- 37. Contractor shall take every precaution to protect finished surfaces from stains or abrasions. No fire shall be allowed in direct contact with concrete. Provide adequate protection against injurious action by sun or wind. Fresh concrete shall be thoroughly protected from heavy rain, flowing water and mechanical injury.
- 38. Tops of foundations shall be hand trowel finished and smooth. Refer to drawings for base plate accommodations.
- 39. Set tops of slabs to accommodate architectural finishes.
- 40. Horizontal footing and horizontal wall reinforcement shall be continuous and shall have 90 degree bends and extensions, or corner bars of equivalent size lapped 48 bar diameters, at corners and intersections.

<u>CONCRETE (cont"d)</u>

- 41. Horizontal jointing will not be permitted in concrete construction, except as shown on the Contract Documents.
- 42. Place concrete in a manner to prevent segregation of the mix. Delay floating and troweling operations until the concrete has lost surface water sheen or all free slab surface water.
- 43. Contraction joints, if sawcut, shall meet the following requirements: Joint depth: 1/4 of slab thickness
- Soff-cut saw: Joints to be cut within 2 hours of finishing.
- Wet-cut saw: Joints to be cut between 4 and 12 hours after finishina.
- 44. Provide 7 days of curing immediately after finishing using one of the following methods:
- A. Continuously watered burlap
- B. Waterproof membranes
- C. Sprayed-on liquid membranes

Refer to the manufacturer's specifications for requirements Protect the concrete surface between finishing operations on hot, dry days or any time plastic shrinkage cracks develop using wet burlap, plastic membranes or fogging. Protect concrete deck at all times from rain, hail or other injurious effects

- Curing of concrete is to start as soon as finishes will not be marred thereby. It is not permissible to delay the curing until the morning after the concrete is placed.
- 45. When concreting is to be done in hot weather conditions that could adversely affect the properties and serviceability of concrete, preparations and procedures outlined in ACI 305R (latest edition) should be followed, unless otherwise noted in construction specifications.
- 46. When concreting is to be done in cold weather conditions (<40 degrees F) that could adversely affect the properties and serviceability of concrete, preparations and procedures outlined in ACI 306R (latest edition) should be followed, unless otherwise noted in construction specifications.
- 47. All column footings shall be centered under column centerline, unless otherwise noted.
- 48. All footing dowels to be same size, number and grade as vertical reinforcement in columns, piers or walls which the footings support.
- 49. The Contractor shall ascertain the location of all sleeves, inserts, anchor rods, etc., required by other trades. Installation of all such embedments shall be checked for completeness and location before concrete is poured.
- 50. Provide continuous chairs to support mesh over each floor beam in slabs on metal deck.
- 51. Do not backfill against retaining or basement walls until supporting slabs have been placed and have been allowed to cure, concrete has attained 28-day strength, and any other walls designed to resist lateral forces have been properly installed.
- 52. Anchor rods shall be ASTM F1554, Grade 36, unless noted otherwise
- 53. All concrete, including foundation work, shall be vibrated. Proper use of vibrators is a must. Vibrators shall not be used to transport concrete.
- 54. All embedments, including anchor rods, shall be in place prior to pouring concrete. Concrete shall be placed in accordance with ACI 304, latest
- edition. Concrete shall not be subject to drops in excess of 5 feet.

INSPECTION & TESTING:

Owner shall engage a qualified independent testing and inspecting agency to perform field tests and inspections in accordance to Chapter 17 of the 2015 International Building Code20. Splicing of structural steel members where not detailed on the The agency shall prepare test reports and the agency shall also act as the special inspector for the project.

DESIGN DATA

I. This project has been designed and shall be constructed in strict accordance with "The International Building Code -

2. Super-imposed Gravity Loads:

Thermal Factor (Ct):

-	. soper impessed er arng				
	I	Dead Load	Live Load	Total Load	
	lst Floor - Commercial:	20 psf	100 psf	120 psf	2
	Roof	20 psf	30 psf	50 psf	
3	Wind - Main Wind Force	Registing Su	ctom.		

3. W	ind - Main Wind Force Resis	ting s	bystem:		acco
	Risk Category:	П			confo
	Basic Wind Speed:	115 m	ph	24.	Steel
	Exposure:	В			bitum concr
	Importance Factor:	1.0		25.	le IIA
					paint
4. 5	eismic Criteria:			26.	All co
	Site Class:		D		weldi
	Risk Category:		II	27.	Frami
	Importance Factor:		1.0		right unles
	l sec. acceleration (Sdl):		0.096	~~~	
	short period accel. (Sds):		0.2 3	28.	Unles: provi
	Seismic Design Cat.:		В		lintels equip floor
	Seismic Resisting System:		Light framed walls		
			sheathed w/ wood structural panels	29.	Provi struc
	Response Modif. Factor:		6.5	30	
	System Overstrength Factor	or:	3.0	50.	Provi fabria
	Deflection Amplif. Fcator:		4		durino struc
	Seismic Response Coeff. (Cs):	0.033	31.	Provi
	Seismic Base Shear (V):		5.5 kips		ancha appro
5 9	now Loading Criteria:			32.	All co siz <i>e</i> s
).)	-			33.	Notifu
	Ground Snow Load:		30 psf		devic
	Exposure Factor (Ce):		0.9		corre
	Importance Factor:		1.10	34.	Fabri
	I				requi

1.0

STRUCTURAL STEEL

2. The Steel Contractor shall furnish an affidavit from the producer of the steel certifying that the steel meets the minimum requirements as defined by the applicable ASTM Specification.

etc., prior to start of erection. 4. The Steel Contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, adequacy of connections, coordinating his work with that of all other trades and performing his work in a safe and satisfactory manner. 5. Submit steel shop drawings for review and approval prior to

fabrication.

- ASTM A501.

noted otherwise.

10. Bolts shall be designed as bearing type bolts, except as noted herein or on plan. Bearing bolts shall be installed in accordance with the "snug tight" condition as outlined in the AISC "Specifications for Structural Joints Using ASTM A325 or A490 Bolts", latest revision. Connection bolts shall have a hardened washer placed under the turned element. II. The fabricator is responsible for the selection, design and

connection designs prior to submitting the shop drawings for review and approval. Connections shall be designed and detailed in accordance with AISC's "Steel Construction Manual", 13th Edition to develop a minimum end reaction of 5 KIPS, unless noted otherwise. No steel connection shall consist of less than two (2) high-strength bolts or equivalent welds. 12. All connections shall be made with framing angles, unless otherwise noted on drawings or determined during shop drawing

review

approved otherwise by the SEOR. 14. Provide a minimum 3/8" thick single plate for all connections to pipe and tube columns. Provide through plates if required per

AISC's quidelines. 15. One sided connections shall be full depth with minimum 3/8" thick connection material.

16. Prior to detailing connections for structural steel, the steel fabricator shall submit for review representative details and calculations for each type of connection.

17. All welding shall be done by AWS certified welders in accordance with AWS DI.I (latest edition). Minimum fillet weld shall

be 3/16". 18. Steel welding rods shall be ETOXX (low hudrogen @ 50 KS)

material) 19. If approved, welding of reinforcing bars to structural steel shall

use É90XX series electrodes. Contract Documents is prohibited without prior written approval of the SEOR as to location, type of splice and connection to be

21. Beams shall be cambered upward where shown on the Contract Documents. Where no upward camber is indicated, fabricate and erect beams with mill camber up.

2015 Edition" and all applicable federal, state and local codes22. Steel shall have a shop coat of a VOC compliant rust-inhibitive primer, except where steel is to receive spray-on fireproofing, concrete encasement or galvanizing coating. All steel shall be thoroughly cleaned by power tool cleaning (SSPC-SP3) prior to

painting, unless noted otherwise. ordance with ASTM A780. Galvanizing of connectors shall

23. All exterior steel including loose linteld (and any other framing noted to be galvanized) shall be galvanized per ASTM Al23. Galvanized steel shall be thoroughly cleaned by power tool cleaning prior to galvanizing. The steel erector shall touch up any points of welding or damage to the galvanized finish in form to ASTM A153.

el at and/or below finished grade shall receive 2 coats of mastic paint or shall be encased with a minimum of 3" of crete. steel to receive spray-on fireproofing shall be free of oil, nt, qalvanizinq, etc.

contact surfaces within slip-critical, bolted connections and ling areas shall be free of oil, paint or galvanizing. ming members shall be equally spaced and parallel or at

: angles to one another with their webs in a vertical plane, ss noted otherwise. ess noted otherwise, the Contractor is responsible for viding all structural steel, miscellaneous steel and loose els that are necessary to support all roof top mounted vipment and all masonry openings and to frame all roof and r openings.

vide holes, as required, for attaching other materials to uctural steel; refer to architectural drawings. vide temporary bracing, as required and determined by ricator or erector, to resist wind, construction loads, etc., ing construction. Bracing shall remain in place until the cture is capable of sustaining all such loads.

vide bearing plates and anchor bolts, studs and/or wall hors for all wall bearing beams and/or wall bearing joists, as roved by the SEOR.

I. Structural steel material, design, detailing, fabrication and erection shall be in accordance with the following references:

"Specification for Structural Steel Buildings", AISC's 13th Edition "Structural Welding Code, AWS DI.I", AWS

"Engineering for Steel Construction", AISC

"Detailing for Steel Construction", AISC

3. The Structural Steel Contractor shall verify the foundation construction for anchor rod location, elevation of top of concrete and/or leveling plates and bearing plates, alignment,

6. Structural steel rolled shapes shall conform to ASTM A992, unless noted otherwise. Angles, channels, plate and rods shall conform to ASTM A36.

7. Structural steel pipe shall conform to ASTM A53, Type E or S, or

8. Structural steel tubing shall conform to ASTM A500, Grade B (Fy = 46 KSI), unless noted otherwise.

9. Anchor rods shall conform to ASTM F1554, Grade 36, unless

detailing of all connections not fully detailed in the Contract Documents. Typical connection details are indicated on the drawings for design intent only. The fabricator shall have a registered Professional Engineer prepare and/or review the

13. Steel connections shall be bolted with 3/4" (min.) diameter A325-TC high-strength bolts or welded, unless noted or approved otherwise. Bolts shall be spaced 3" o.c. (min.), unless

> columns shall be furnished with cap plates and base plates of es called for and shall be shop welded.

fy the SEOR of any fabrication and erection errors or iations and receive written approval before any field rections are made.

ricator shall take full responsibility for errors and or required corrections to steel fabricated prior to SEOR's and Architect's approval of shop drawings.



Thomas E Hall & Associates, Inc. 240 Conestoga Rd. Wayne, Pa. 19087 Tel. : (610) 293-9900 Web : teh-architects.com Architecture • Interiors • Planning

Seal:

THESE DRAWINGS ARE PRELIMINARY AND NOT OFFICIAL UNTIL SIGNED AND SEALED. CONTRACTOR SHALL VERIEV DIMENSIONS AND SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT. THE ARCHITECTS IS NOT RESPONSIBLE FOR ANY UNREPORTED DISCREPANCIES.

Client: **PRABELA INVESTORS,** LLC

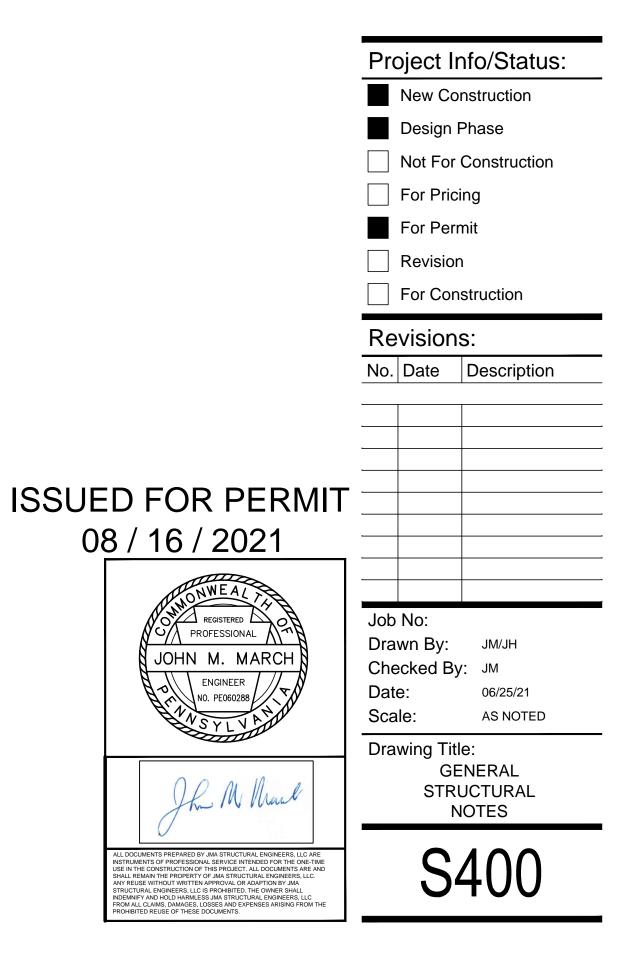
PO BOX 1065 NORTH WALES, PA 19445

Consultants:

JMA STRUCTURAL ENGINEERS, LLC 330 Crescent Hill Drive Havertown, PA 19083 Phone : 610-853-8162

Project Name:

THE VILLAGE at STATION SQUARE



WOOD CONSTRUCTION

- I. Extent of structural wood framing is shown or implied on drawings.
- 2. Provide timber graded by a recognized agency (SPIB, WCLIB or WWPA), with rules and service complying with requirements of American Lumber Standard Committee and PS 20.
- 3. Time delivery and installation of framing to avoid extended
- on-site storage and to avoid delaying work of others. 4. Keep structural timber protected during delivery, storage, handling and erection. Do not store in areas with either
- excessively high or excessively low humidity. 5. Provide hurricane anchors at each bearing point of each roof rafter.
- 6. Timber and timber construction shall comply with the latest editions of the specifications and codes specified below:
- a. American Institute of Timber Construction (AITC): 'Timber Construction Manual"
- b. ANSI/AF&PA: "National Design Specification for Wood Construction"
- c. The Engineered Wood Association: "Plywood Design Specificatiom"
- d. American Wood Protection Association:
- "Book of Standards"
- 7. Structural dimensional lumber shall be Hem-Fir #2 or better with the following minimum material properties: Fb = 850 PSI Ft = 525 PSI
- Fc (perpendicular) = 405 PSI Fc (parallel) = 1,300 PSI E = 1,300,000 PSI Fv = 75 PSI
- Stamped in accordance with AITC's "Timber Construction Manual" Dried to maximum moisture content of 19%. Include "S-DRY" or similar indication in grade marking or certification of grade.
- 8. Provide timber which has been dressed on 4 sides (545) at mill prior to grading. Comply with grade sizes.
- 9. Framing members shall be set with crown up.
- 10. Connection details show arrangements of structural members. Detailing of connections shall be the responsibility of the builder/fabricator.
- II. Timber connections shall be made using prefabricated connectors where possible. Toe nailing is not permitted. Submit manufacturer's data for review. Fasteners shall be as manufactured by USP Structural Connectors, Simpson Strong-Tie or approved equal.
- 12. Wall studs shall be located directly under floor and roof members, unless noted otherwise.
- 13. Headers at non-bearing conditions shall be as follows:

<u>Opening size</u>	<u>Header</u>
Up to 4'-0"	(2) 2×6
4'-0" to 6'-0"	(2) 2x8
6'-0" to I'-0"	(2) 2x10

- 14. Nail sawn lumber pieces of multiple member posts or beams together with 10d nails at 12" o.c.
- 15. Provide temporary and permanent bracing for framing, including trusses, to hold it securely in position at all times.
- 16. Provide double members around openings greater than 16" wide, unless shown otherwise.
- 17. Provide a minimum of two members under all parallel partitions, unless shown otherwise.
- 18. Provide nailers or ledgers, where required, and fasten securely. 19. Lap and spike ends of rafters or joists. Unless shown
- otherwise, anchor all framing to walls not more than 4'-0" o/c; including rafters and joists parallel to walls.
- 20. Provide 12" high curbs at roof openings, unless otherwise shown.
- 21. Provide all framing hardware as required to properly complete the framing.
- As an example: a. 5/8" diameter carriage bolts at 4'-0" o/c alt. for top nailers.
- b. 3/4" diameter adhesive anchors with washers at 12" o.c. for ledgers.
- c. 5/8" diameter x 1'-0" long bolts at 4'-0" o.c. for wall plates.
- 22. Wood stud bearing walls not faced with plywood shall be braced with solid blocking at intervals not exceeding 0.4 times the length of the stud for 2x4 studs and 0.25 times the length of the stud for 2x6 studs.

ENGINEERED WOOD PRODUCTS

- I. Engineered wood products consisting of beams, headers and column sections shall be per the minimum sizes indicated on the design documents.
- 2. The Contractor may substitute an "equal" engineered wood product provided it complies with the minimum specifications and the design member dimensions. Any redesign or analysis fees required on behalf of the client will be passed onto the Contractor as a backcharge.
- 3. Installation, including temporary and permanent shoring and connections shall be in accordance with the manufacturer's recommendations. The Contractor shall be aware that the documents cannot possibly show every recommended detail. Details such as attachment of sheathing, temporary bracing, blocking, shear blocks, end supports, etc., must be in accordance with the product manufacturer's recommendations.
- 4. Microllam LVL beams shall be as manufactured by Weyerhaeuser or approved equal. The minimum allowable properties for Microllam LVL beams are:
- Fb = 2,600 PSI
- Fv = 285 PSI E = 1,900,000 PSI

Nail multiple LVL members together with two horizontal rows of 16d nails at 12" on center, staggered

LVL members deeper than 9" shall have three rows, staggered.

- 5. Parallam PSL beams shall be as manufactured by Weyerhaeuser or approved equal. The minimum allowable properties for Parallam PSL beams are:
- Fb = 2,900 PSI
- Fv = 290 PSI E = 2,000,000 PSI
- 6. Engineered lumber shall be kept dry through duration of construction.

PREFABRICATED WOOD TRUSSES

- I. Wood truss members shall be fabricated from kiln dried Southern Pine stress grade lumber or equal.
- 2. Design, fabrication and installation of wood trusses and sheet metal connectors shall be in accordance with the following Truss Plate Institute standards:
- a. "TPI-I: National Design Standard for Metal Plate Connected Wood Truss Construction"
- b. "DSB-89: Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood
- c. "BCSI: Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses"
- 3. Truss manufacturer shall design trusses to support design loads indicated on the plans or local building code requirements, whichever are more stringent. Unbalanced, drifting and sliding snow loads shall be considered.
- 4. Design trusses to limit deflections TO L/360 for live load and L/240 for total loads noted on the contract documents or in accordance with the local governing building code, whichever is more stringent.
- 5. Wood trusses shall be fabricated by an authorized truss manufacturer. Engineering drawings conforming to the design load and deflection criteria shall be submitted for approval before fabrication. They shall bear the seal of a registered Professional Engineer licensed in the state in which the project is located.
- 6. All connector plates shall be a minimum thickness of 0.036" and shall be manufactured from steel meeting the requirements of ASTM A653.
- 7. Lumber defects such as wane and knots occurring on the connector plate area must not affect more than ten percent of required plate area or number of effective teeth required for each truss member. Connector plates shall be applied to both faces of truss at each joint and shall provide firm even contact between the plate and the wood. All wood members shall be accurately cut and fabricated so that all members have good bearing and all completed truss units are uniform.
- 8. Where conventional framing and/or prefabricated trusses frame into one another, truss manufacturer shall provide steel hangers, clips, etc. to provide full lateral and vertical support.
- 9. Prefabricated truss manufacturer is responsible for providing a complete system as described on these drawings. Any additional supports required to provide a complete sustem shall be specified prior to bidding.
- 10. Temporary and permanent bracing is required and shall be designed by the truss manufacturer.
- II. All trusses must be securely braced both during erection and after permanent installation in a building in accordance with "BCSI: Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses". Erection bracing shall hold trusses straight and plumb and in a safe condition until sheathing/decking and permanent bracing have been fastened forming a structurally sound roof framing system. All erection and permanent bracing shall be installed and all trusses permanently fastened before application of any loads. Permanent structural cross bracing to ensure overall rigidity of the roof system shall be in accordance with architectural/engineering plans for the building structure. Materials used for bracing are to be furnished by the erector.
- 12. Provide (2) hurricane anchors at each bearing location of each roof truss.
- 13. Truss types shown are suggested configurations. Alternate web member arrangement will be acceptable pending design approval of same.
- 14. Provide camber in truss design as required by span limits. 15. Provide bridging for floor trusses as required by truss designer.



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