

ADVERTISEMENT
REQUESTS FOR PROPOSALS
for the
Lowell Maintenance Facility Financing
Town of Lowell, IN

Notice is hereby given that Requests for Proposal (RFP) will be received by the Town of Lowell, Lake County, Indiana until 12:00 p.m. Central Time on July 12, 2024, at the Lowell Town Hall, 501 E. Main Street, Lowell, IN 46356 for the opportunity to provide financing solutions for the proposed Lowell Public Works Maintenance Facility.

The complete RFP is available for download via the Town of Lowell website at www.Lowell.net or by contacting the Lowell Town Manager by email at chendrix@lowell.net or telephone at 219.696.7794.

Town of Lowell
Lake County, Indiana
By: Craig Hendrix, Town Manager

TOWN OF LOWELL, INDIANA



REQUEST FOR PROPOSALS

for

LOWELL MAINTENANCE FACILITY FINANCING

June 24, 2024

Town of Lowell
501 E. Main Street
Lowell, IN 46356
Phone: (219) 696-7794
Attention: Craig Hendrix, PE

INTRODUCTION

The Lowell Town Council, Lowell, Indiana ("Lowell") seeks proposals from financial institutions (Respondent") interested in providing construction and end loans for a new Public Works Maintenance Facility ("Facility") to be located at 7511 Belshaw Road, Lowell, IN. The information sought and background details are further outlined in this Request for Proposals ("RFP").

BACKGROUND INFORMATION

In December of 2020 Lowell purchased a 14.19-acre parcel from John and Judy Keithley. On April 12, 2021, Lowell passed Ordinance 2021-11 annexing the parcel into the Town of Lowell. Lowell granted a variance of use for the proposed facility on June 14, 2021. In September of 2021, the Lowell Plan Commission granted final plat approval of the Maintenance Facility Subdivision ("Plat") consisting of one lot. The Commission also approved a site plan for the Facility which included the building and all site improvements.

The Facility consists of a maintenance building and office space. The building is approximately 16,000 square feet in area. The structure is mainly comprised of "tip-up" precast concrete panels. The Facility will be serviced by NIPSCO gas and electric, Indiana-American Water Company potable water and Town of Lowell sanitary sewer. Stormwater and drainage are managed on site. Asphalt parking and driveways are provided in public areas. Compacted aggregate is provided in non-public areas. A salt storage barn having a capacity of at least 2,000 tons is proposed along with a fueling station. The Facility will be surrounded by a chain-link security fence. Lighting and security cameras will facilitate site security.

The preliminary cost estimate for the Facility is nearly \$7.6 million. Lowell wishes to finance the construction of the facility with a construction loan. At completion, Lowell wishes to roll the construction loan into an end loan with a term between five and ten years.

INFORMATION REQUESTED

1) General Information

a) Respondent shall provide the following:

- (1) Name of the financial institution
- (2) Name and title of the individual who is responsible for the response, including business mailing address, fax, telephone numbers and e-mail.
- (3) Previous Experience -- List any relevant experience your organization has with municipal entities.

2) Proposed Financing Solution

a) Respondent shall provide a Financial Solution that includes the following:

- (1) Construction loan not exceeding 18 months from the date of the first draw
- (2) Conversion of construction loan into an end loan of not less than five years and not greater than 20 years

- (3) Available funds up to \$10 million
- (4) Proposed payment schedules
- (5) Proposed interest rates
- (6) Anticipated loan closing schedules
- (7) Other financing details

RESTRICTIONS ON COMMUNICATIONS.

The contact named in the Respondent's submittal shall be the sole point of contact throughout the RFP process. All communications, oral and written (whether transmitted by regular mail, express mail, or electronic mail) concerning this process shall be addressed to:

Craig Hendrix, PE
Town Manager
501 E. Main Street
Lowell, IN 46356
phone: (219) 696-7794
chendrix@lowell.net

OTHER THAN AS PROVIDED ABOVE, INQUIRIES RELATED TO THIS RFP ARE NOT TO BE DIRECTED TO ANY MEMBER OF THE COUNCIL OR OTHER TOWN OFFICIAL OR EMPLOYEE. SUCH ACTION MAY DISQUALIFY THE RESPONDENT FROM FURTHER CONSIDERATION. RESPONDENTS MAY NOT RELY UPON VERBAL RESPONSES TO ANY INQUIRY.

ADMINISTRATIVE ITEMS.

- 1) Lowell may enter into a contract or other agreement for services without further discussion.
- 2) Lowell creates no obligation, expressed or implied, of any kind or description in issuing this RFP or receiving a response. Neither this RFP nor the response shall be construed as a legal offer.
- 3) Lowell will not assume any responsibility or liability for any expenses incurred by a Respondent, or prospective respondent, in connection with the preparation or delivery of a response, requested interview or any action related to the process of completing and submitting a response to this RFP.
- 4) Respondent shall certify within the letter of transmittal that all information provided therein and in their response is accurate and complete, to the best of its knowledge, and that it understands that submission of any false or misleading information may result in disqualification of the proposing organization at Lowell's discretion.
- 5) Respondent shall disclose any information that may materially impair the organization's ability to provide the level of service required.
- 6) Lowell shall reserve the right to reject any and all submissions without cause; waive irregularities in all procedures related to this RFP; make inquiries of Respondents and their

references regarding qualifications or information submitted as part of their responses as deemed necessary, and request and receive additional information as Lowell deems necessary.

- 7) Provide details of any relevant criminal investigation or conviction, material pending litigation, or regulatory or civil enforcement action pending against your organization.
- 8) Responses shall be delivered in hard copy format via hand delivery, U.S. Mail or other delivery services to:

Craig Hendrix, PE
Town Manager
Town of Lowell
501 E. Main Street
Lowell, IN 46356
phone: (219) 696-7794
chendrix@lowell.net

CALENDAR.

The following calendar will generally be followed. Lowell reserves the right to alter this calendar, as it deems necessary.

- 1) June 24, 2024: The RFP is publicly advertised and available for review.
- 2) July 12, 2024 (noon): Deadline to ask any clarifying questions of Lowell about this request.
- 3) July 17, 2024: All responses to this RFP are due by 12:00 p.m. Central Time on this date. Responses received after the deadline will not be considered or reviewed. Lowell reserves the right to conduct interviews of any Respondent it deems necessary.
- 4) August 21, 2024: Anticipated project bid opening.
- 5) September 18, 2024: Anticipated loan closing.
- 6) September 23, 2024: Anticipated project bid Award.

ATTACHMENTS.

The following attachments are made part of this RFP.

- 1) Recorded Final Plat of Maintenance Facility Subdivision
- 2) Title work from closing with Keithley
- 3) Draft Facility plans for bidding
- 4) Current Engineer/Architect estimate of probable construction costs

MAINTENANCE FACILITY SUBDIVISION

AN ADDITION TO THE TOWN OF LOWELL

LAKE COUNTY, INDIANA

GINA PIMENTEL
RECORDER
STATE OF INDIANA
LAKE COUNTY
FILED FOR RECORD 1:18 PM 2021 Sep 15

2021-059812

WARRANTY DEED (2020-097560)

THE EAST 330.00 FEET OF THE FOLLOWING DESCRIBED PARCEL: THE EAST 30.28 ACRES OFF THAT PART OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 35, TOWNSHIP 33 NORTH, RANGE 9 WEST OF THE SECOND PRINCIPAL MERIDIAN, LYING SOUTH OF WHAT IS KNOWN AND DESIGNATED AS THE STATE ROAD, SAID TRACT RUNNING FROM SAID STATE ROAD SOUTH TO THE SOUTH LINE OF SAID SECTION, THE WEST LINE OF SAID TRACT BEING PARALLEL WITH THE CENTER LINE OF SAID SECTION, IN LAKE COUNTY, INDIANA, THE EAST 330.00 FEET THEREOF CONTAINING 14.51 ACRES, MORE OR LESS.

BOOK 114 PAGE 82

DEED OF DEDICATION

WE, THE UNDERSIGNED, TOWN OF LOWELL, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED AND SUBDIVIDED, AND DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THE PLAT HEREIN.

THIS SUBDIVISION SHALL BE KNOWN AND DESIGNATED AS MAINTENANCE FACILITY SUBDIVISION, AN ADDITION TO THE TOWN OF LOWELL, ALL STREETS, ALLEYS AND EASEMENTS SHOWN AND NOT HERETOFORE DEDICATED, ARE HEREBY DEDICATED TO THE TOWN OF LOWELL, LAKE COUNTY, INDIANA.

FRONT YARD BUILDING SETBACK LINES ARE HEREBY ESTABLISHED AS SHOWN ON THIS PLAT, BETWEEN WHICH LINES AND THE PROPERTY LINES, THERE SHALL BE ERECTED OR MAINTAINED NO BUILDING OR STRUCTURE.

Chris Henderson
TOWN MANAGER

Justin Walters
CLERK TREASURER

NOTARY CERTIFICATE

STATE OF INDIANA)
COUNTY OF LAKE) SS:

BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR THE COUNTY AND STATE, PERSONALLY APPEARED AND EACH SEPARATELY AND SEVERALLY ACKNOWLEDGED THE EXECUTION OF THE FOREGOING INSTRUMENT AS HIS OR HER VOLUNTARY ACT AND DEED FOR THE PURPOSE THEREIN EXPRESSED.

WITNESS MY HAND AND NOTARIAL SEAL THIS 17 DAY OF June, 2021.

NOTARY PUBLIC SIGNATURE

RESIDENT OF Lake COUNTY

MY COMMISSION EXPIRES 1/7/2022



PLAN COMMISSION CERTIFICATE

STATE OF INDIANA)
COUNTY OF LAKE) SS:

UNDER THE AUTHORITY PROVIDED BY INDIANA CODE 36-7-4-700 (SEC. 700-799), AS AMENDED FROM TIME TO TIME, AND AN ORDINANCE ADOPTED BY THE TOWN COUNCIL OF THE TOWN OF LOWELL, LAKE COUNTY, INDIANA THIS PLAT WAS GIVEN APPROVAL BY THE TOWN OF LOWELL AS FOLLOWS:

APPROVED BY A TOWN PLAN COMMISSION AT A MEETING HELD ON THE 13th DAY OF May, 2021.

PRESIDENT

SECRETARY

TOWN COUNCIL CERTIFICATE

STATE OF INDIANA)
COUNTY OF LAKE) SS:

SUBMITTED TO, APPROVED AND ACCEPTED BY THE TOWN OF LOWELL BY ITS TOWN COUNCIL DATED THIS 14th DAY OF June, 2021.

PRESIDENT

VICE PRESIDENT

MEMBER

MEMBER

MEMBER

VARIANCE OF USE 7511
BELSHAW
BZA #21-003 5/13/TOWN COUNCIL
6/14/21

SURVEYOR'S NOTES

- ACCORDING TO FIRM PANEL 18089C0341E, DATED JANUARY 18, 2018, THE ABOVE DESCRIBED PARCEL IS IN ZONE "X".
- THE BASIS OF BEARINGS FOR THIS PLAT OF SUBDIVISION IS BASED UPON THE INDIANA STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD83), AS ESTABLISHED BY REAL-TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) UTILIZING THE INCORS NETWORK.
- DISTANCES ARE MARKED IN FEET AND DECIMAL PLACES THEREOF. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON. DISTANCES AND/OR BEARINGS SHOWN IN PARENTHESES (XXX.XX') ARE RECORD OR DEED VALUES.
- THIS SUBDIVISION MAY BE SUBJECT TO MATTERS OF TITLE, WHICH MAY BE REVEALED BY A CURRENT TITLE REPORT. PRE-EXISTING EASEMENTS, SETBACKS AND OTHER RESTRICTIONS WHICH MAY BE FOUND IN A CURRENT TITLE REPORT, LOCAL ORDINANCES, DEEDS OR OTHER INSTRUMENTS OF RECORD MAY NOT BE SHOWN.
- MONUMENTS SET ARE 5/8" DIAMETER BY 24" LENGTH REBAR WITH A YELLOW CAP STAMPED "OMAN LS20800110". MONUMENTS SHALL BE SET AT ALL PROPERTY CORNERS IN ACCORDANCE WITH 865 IAC 1-12-18.

SURVEYOR'S CERTIFICATE

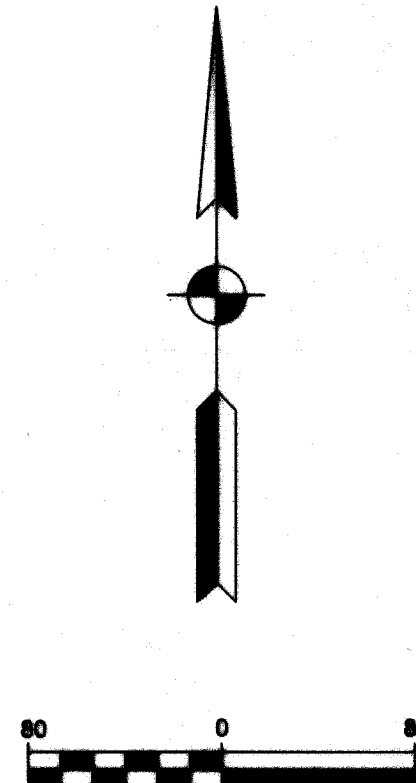
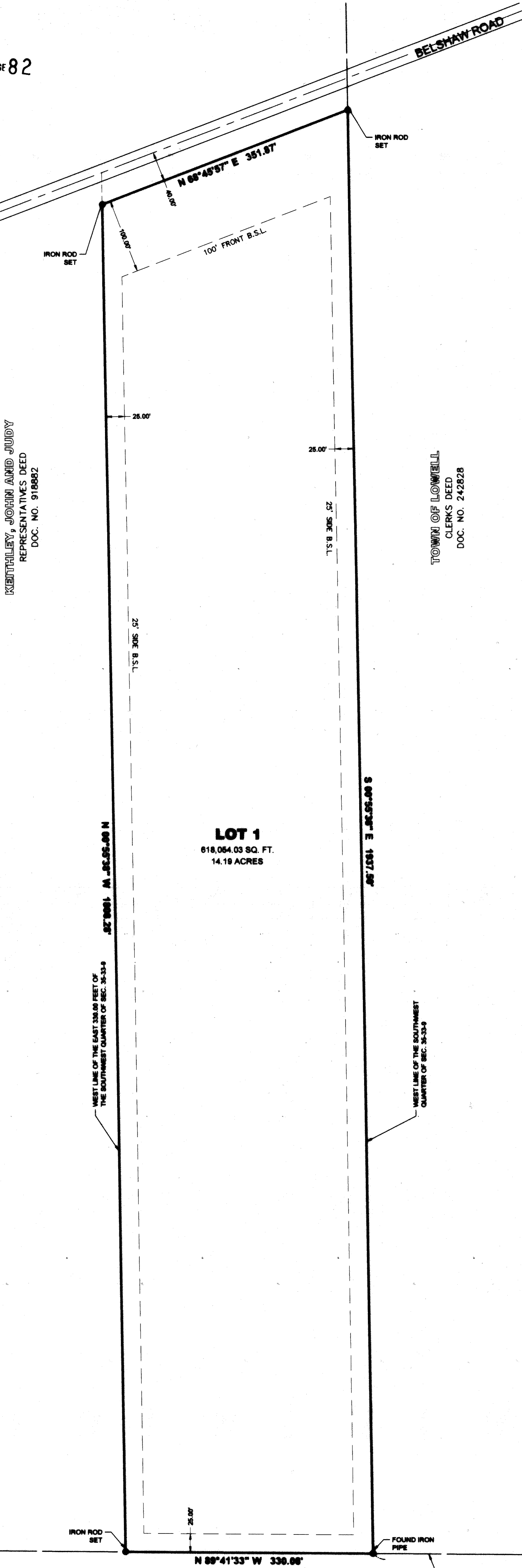
STATE OF INDIANA)
COUNTY OF LAKE) SS:

I, RICHARD P. OMAN, HEREBY DECLARE THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED IN COMPLIANCE WITH THE LAWS OF THE STATE OF INDIANA; THAT THE HEREON DESCRIBED PROPERTY HAS BEEN SURVEYED AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION COMPLETED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF WAS EXECUTED IN ACCORDANCE WITH SURVEY REQUIREMENTS IN IAC 865.

THE FIELD WORK WAS COMPLETED ON MARCH 13, 2021.

DATED THIS 5th DAY OF MAY, 2021.

RICHARD P. OMAN LS 20800110



DAILY ENTERED FOR TAXATION SUBJECT
TO FINAL ACCEPTANCE FOR TRANSFER
SEP 15 2021
45-17-35-30-00-00-00
JOHN E. PETALAS
LAKE COUNTY AUDITOR

S.W. CORNER OF SEC. 35-33-4
PK NAIL (NOT 1" BRASS DISK)
COUNTY RECORD G-42



SHEET

1

TOWN OF LOWELL
PHONE: (219) 696-7794
501 EAST MAIN STREET
LOWELL, INDIANA 46356

FINAL PLAT
MAINTENANCE FACILITY
SUBDIVISION
LOWELL, IN 46356

OWNER / SUBDIVIDER

TOWN OF LOWELL
501 EAST MAIN STREET
LOWELL, IN 46356

PROJECT NO. 2021-003

ISSUE DATE 04/08/21

DRAWN BY: RPO

DESIGNED BY: ---

CHECKED BY: RPO

NO.	BY	DATE	REVISIONS

Fidelity National Title Company, LLC

11364 Broadway, Crown Point, IN 46307
Phone: (219)663-5160 | Fax: (219)662-0456

MASTER STATEMENT

Settlement Date: December 22, 2020
Disbursement Date: December 22, 2020

Escrow Number: FNW1905415
Escrow Officer: Renee Wells
Email: Renee.Wells@fnf.com

Borrower: Town of Lowell
501 E. Main St, P.O. Box 157
Lowell, IN 46356

Seller: John L. Keithley and Judy M. Keithley
P.O. Box 1133, 37270 NE
Greythorn Cir
Carefree, AZ 85377

Property: 6808 Belshaw Road
Lowell, IN 46356
S pt E 1/2 SW 35-33-9

Lender:

SELLER			BORROWER		
\$	DEBITS	\$ CREDITS	\$	DEBITS	\$ CREDITS
		FINANCIAL CONSIDERATION			
		164,369.28 Sale Price of Property	164,369.28		
		Deposit			10.00
10.00		Excess Deposit			
		PRORATIONS/ADJUSTMENTS			
379.24		Proration of RE Taxes at \$389.89 01/01/20-12/22/20			379.24
		TITLE & ESCROW CHARGES			
		Title - Closing Fee to Fidelity National Title Company, LLC	600.00		
		Title - Delivery Overnight and Service Fee to Fidelity National Title Company, LLC	25.00		
		Title - Later Date/Policy Issuance Fee to Fidelity National Title Company, LLC	225.00		
		Title - Search and Exam Fee to Fidelity National Title Company, LLC	300.00		
		Title - Sold Search - Add'l Deeds search to Fidelity National Title Company, LLC	50.00		
		Title - TIEFF to Fidelity National Title Company, LLC	5.00		
		Title - updated search fee to Fidelity National Title Company, LLC	150.00		
		Title - Wire Service Fee to Fidelity National Title Company, LLC	35.00		
		Title - Owner's Title Insurance to Fidelity National Title Company, LLC	525.00		
		Policies to be issued:			
		Owners Policy			
		Coverage: \$164,369.28 Premium: \$525.00			
		Version: ALTA Owner's Policy 2006			

SELLER:

John L. Keithley
John L. Keithley

Judy M. Keithley
Judy M. Keithley

BORROWER:

Town of Lowell

BY:

Craig Hendrix
Town Manager

To the best of my knowledge, the Settlement Statement which I have prepared is a true and accurate account of the funds which ~~were~~ received and have been, or will be, disbursed by the undersigned as part of the settlement of this transaction.

Fidelity National Title Company, LLC
Settlement Agent

WARRANTY DEED

File No.: FNW1905415-RJW

THIS INDENTURE WITNESSETH, that John L. Keithley, II and Judy M. Keithley, husband and wife (Grantor) CONVEY(S) AND WARRANT(S) to Town of Lowell (Grantee) for the sum of Ten Dollars (\$10.00) and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the following described real estate in Lake County in the State of Indiana, to wit:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

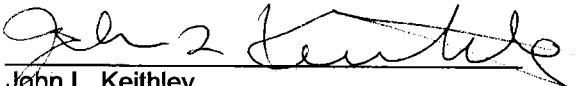
Property: 6808 Belshaw Road, Lowell, IN 46356

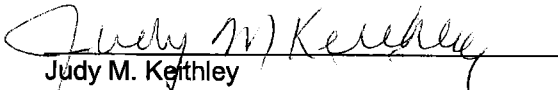
Tax ID No.: 45-19-35-300-004.000-007

Subject to all current real estate taxes and assessments and all subsequent taxes and assessments.

Subject to all easements, covenants, conditions, and restrictions of record.

IN WITNESS WHEREOF, Grantor has executed this deed this 21st day of December, 2020.


John L. Keithley

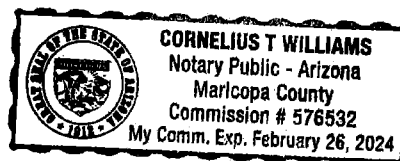

Judy M. Keithley

STATE OF ~~INDIANA~~ Arizona CTW
COUNTY OF ~~LAKE~~ Maricopa CTW

Before me, a Notary Public in and for said County and State, personally appeared John L. Keithley, II and Judy M. Keithley who acknowledged the execution of the foregoing instrument, who acknowledged the foregoing instrument to be his/her free act and deed.

Witness my hand and Notarial Seal this 21st day of December, 2020

Signature: Cornelius T. Williams Notary Public
Printed: Cornelius T. Williams
Resident of: Lake County Maricopa CTW
State of: INDIANA Arizona CTW
My Commission expires: July 8, 2025 CTW
2/24/2024 CTW



Prepared By: Timothy R. Kuiper
Austgen Kuiper Jasaitis P.C.
130 North Main Street, Crown Point, IN 46307

Grantee's Address and Tax Billing Address: 501 E. Main St, P.O. Box 157
Lowell, IN 46356

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law: Renee.

Return To: Craig Hendrix
Town of Lowell
501 E. Main St, P.O. Box 157
Lowell, IN 46356

EXHIBIT "A"
Legal Description

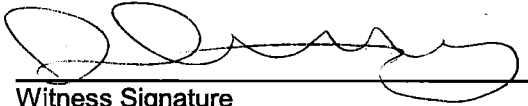
For APN/Parcel ID(s): 45-19-35-300-004.000-007

The East 330.00 feet of the following described parcel: The East 30.28 acres off of that part of the East Half of the Southwest Quarter of Section 35, Township 33 North, Range 9 West of the Second Principal Meridian, lying South of what is known and designated as the State Road, said tract running from said State Road South to the South line of said Section, the West line of said tract being parallel with the center line of said section; in Lake County, Indiana.

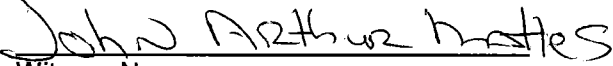
CERTIFICATE OF PROOF

File No.: FNW1905415-RJW

WITNESS to the signature(s) on the foregoing instrument to which this Proof is attached.



Witness Signature



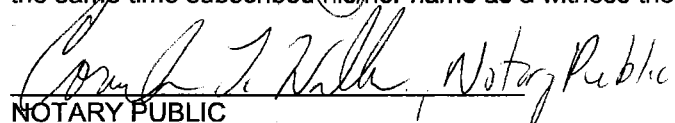
Witness Name

PROOF:

STATE OF Arizona CTW

COUNTY OF Maricopa CTW

Before me, a Notary Public in and for said County and State, on December ²¹22, 2020, personally appeared the above named WITNESS to the foregoing instrument, who, being by me duly sworn, did depose and say that he/she knows John L. Keithley and Judy M. Keithley to be the individual(s) described in and who executed the foregoing instrument; that said WITNESS was present and saw said John L. Keithley and Judy M. Keithley execute the same; and that said WITNESS at the same time subscribed his/her name as a witness thereto. CTW

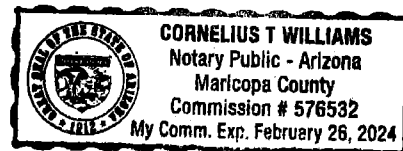

NOTARY PUBLIC

Printed: Cornelius T. Williams

Resident of: Maricopa CTW

State of: Arizona CTW

My Commission expires: 2/26/2024





SALES DISCLOSURE FORM

State Form 46021 (R11/12-11)

Prescribed by Department of Local Government Finance
Pursuant to IC 6-1.1-5.5

PRIVACY NOTICE: The telephone numbers and Social Security numbers of the parties on this form are confidential according to IC 6-1.1-5.5-3(d).

SDF ID

Lake		
County	Year	Unique ID
SDF Date: _____		

PART 1 - To be completed by BUYER/GRANTEE and SELLER/GRANTOR

A. PROPERTY TRANSFERRED - MUST BE CONVEYED ON A SINGLE CONVEYANCE DOCUMENT

1. Property Number	Check box if applicable to parcel	5. Complete Address of Property	6. Complete Tax Billing Address (if different from property address)
A.) 45-19-35-300-004.000-007 <i>E 330' of</i>	<input checked="" type="checkbox"/> 2. Split <input checked="" type="checkbox"/> 3. Land <input type="checkbox"/> 4. Improvement	6808 Belshaw Road Lowell, IN 46356	501 E MAIN ST LOWELL IN 46356
7. Legal Description of Parcel A: S pt E 1/2 SW 35-33-9			
B.)	<input type="checkbox"/> 2. Split <input type="checkbox"/> 3. Land <input type="checkbox"/> 4. Improvement		

7. Legal Description of Parcel B:

B. CONDITIONS - IDENTIFY ALL THAT APPLY

If condition 1 applies, filer is subject to disclosure and a disclosure filing fee,

YES NO CONDITION

- ☒ ☐ 1. A transfer of real property interest for valuable consideration
- ☐ ☒ 2. Buyer is an adjacent property owner.
- ☒ ☐ 3. Vacant land.
- ☐ ☒ 4. Exchange for other real property ("Trade").
- ☐ ☒ 5. Seller Paid Points. (Provide the value Table C Item 12.)
- ☐ ☒ 6. Change planned in the primary use of the property? (Describe in special circumstances in Table C Item 3.)
- ☐ ☒ 7. Existence of family or business relationship between buyer and seller. (Complete Table C Item 4.)
- ☐ ☒ 8. Land contract. Contract term (YY): _____ and contract date (MM/DD/YYYY): _____
- ☐ ☒ 9. Personal property included in transfer. (Provide the value Table C Item 5.)
- ☐ ☒ 10. Physical changes to property between March 1 and date of sale. (Describe in special circumstances in Table C Item 3.)
- ☐ ☒ 11. Partial interest. (Describe in special circumstances in Table C Item 3.)
- ☐ ☒ 12. Easement or right-of-way grants.

C. SALES DATA - DISCLOSE VALUE OF ITEMS LISTED IN TABLE B, ITEMS 1-15

1. Conveyance date (MM/DD/YYYY): 12-22-2020
2. Total number of Parcels: 1
3. Describe any unusual or special circumstances related to this sale, including the specification of any less-than-complete ownership interest and terms of seller financing.
- YES NO CONDITION
- ☐ ☒ 4. Family or business relationship existing between buyer or seller?
- Amount of discount: \$ _____
- Disclose actual value in money, property, a service, an agreement, or other consideration.

If conditions 13-15 apply, filers are subject to disclosure, but no disclosure filing fee.

YES NO CONDITION

- ☐ ☒ 13. Document for compulsory transactions as a result of foreclosure or express threat of foreclosure, divorce, court order, judgment, condemnation, or probate.
- ☐ ☒ 14. Documents involving the partition of land between tenants in common, joint tenants, or tenants by the entirety.
- ☐ ☒ 15. Transfer to a charity, not-for-profit organization, or government.

5. Estimated value of personal property:	\$0.00
6. Sales price:	\$164,369.28
YES NO CONDITION	
<input type="checkbox"/> <input checked="" type="checkbox"/> 7. Is the seller financing sale? If yes, answer questions (8-13).	
<input type="checkbox"/> <input type="checkbox"/> 8. Is buyer/borrower personally liable for loan?	
<input type="checkbox"/> <input type="checkbox"/> 9. Is this a mortgage loan?	
10. Amount of loan:	\$
11. Interest rate:	%
12. Amount in points:	\$
13. Amortization period:	

D. PREPARER

Renee Wells

Preparer of the Sales Disclosure Form

11364 Broadway

Address (Number and Street)

Crown Point, IN 46307

City, State, and ZIP Code

Closer

Title

Fidelity National Title Company, LLC

Company

(219)663-5160

Telephone Number

Renee.Wells@fnf.com

E-mail

E. SELLER(S)/GRANTOR(S)

John L. Keithley, II

Seller 1 - Name as appears on conveyance document

P.O. Box 1133, 37270 NE Greythorn Cir

Address (Number and Street)

Carefree, AZ 85377

City, State, and ZIP Code

Telephone Number

E-mail

Judy M. Keithley

Seller 2 - Name as appears on conveyance document

P.O. Box 1133, 37270 NE Greythorn Cir

Address (Number and Street)

Carefree, AZ 85377

City, State, and ZIP Code

Telephone Number

E-mail

Under penalties of perjury, I hereby certify that this Sales Disclosure, to the best of my knowledge and belief, is true, correct and complete as required by law, and is prepared in accordance with IC 6-1.1-5.5, "Real Property Sales Disclosure Act".

Signature of Seller

John L. Keithley, II

Printed Name of Seller

12-21-2020

Sign Date (MM/DD/YYYY)

Signature of Seller

Judy M. Keithley

Printed Name of Seller

12-21-2020

Sign Date (MM/DD/YYYY)

F. BUYER(S)/GRANTEE(S) - APPLICATION FOR PROPERTY TAX DEDUCTIONS - IDENTIFY ALL ITEMS THAT APPLY

Town of Lowell

Buyer 1 - Name as appears on conveyance document

501 E MAIN ST, PO BOX 157

Address (Number and Street)

LOWELL IN 46356

City, State, and ZIP Code

219-696-7794

Telephone Number

E-mail

Buyer 2 - Name as appears on conveyance document

Address (Number and Street)

City, State, and ZIP Code

Telephone Number

E-mail

THE SALES DISCLOSURE FORM MAY BE USED TO APPLY FOR CERTAIN DEDUCTIONS FOR THIS PROPERTY. IDENTIFY ALL OF THOSE THAT APPLY.

YES NO CONDITION

- ☐ ☒ 1. Will this property be the buyer's primary residence? Provide complete address of primary residence, including county:

P.O. BOX 157

Address (Number and Street)

LOWELL IN 46356

City, State, and ZIP Code

LAKE

County

- ☐ ☒ 2. Does the buyer have a homestead in Indiana to be vacated for this residence? If yes, provide complete address of residence being vacated, including county

Address (Number and Street)

City, State, and ZIP Code

County

YES NO CONDITION

- ☐ ☒ 3. Homestead
- ☐ ☒ 4. Solar Energy Heating/Cooling System
- ☐ ☒ 5. Wind Power Device
- ☐ ☒ 6. Hydroelectric Power Device
- ☐ ☒ 7. Geothermal Energy Heating/Cooling Device
- ☐ ☒ 8. Is this property a residential rental property?
- ☐ ☒ 9. Would you like to receive tax statements for this property via e-mail? (Provide contact information below. Please see instructions for more information. Not available in all counties.)

Primary property owner contact name

E-mail

Under penalties of perjury, I hereby certify that this Sales Disclosure, to the best of my knowledge and belief, is true, correct and complete as required by law, and is prepared in accordance with IC 6-1.1-5.5, "Real Property Sales Disclosure Act". (Note: Spouse information, Social Security and Driver's License/Other numbers are not necessary if no Homestead Deduction is being filed.)

Signature of Buyer 1

Craig Hendrix, Town Manager

Printed Legal Name of Buyer 1

12-22-2020

Sign Date (MM/DD/YYYY)

Last 5 digits of Buyer 1 Driver's License/ID/Other Number

State

Last 5 digits of Social Security Number

Signature of Buyer 2/Spouse

Printed Legal Name of Buyer 2

Sign Date (MM/DD/YYYY)

Last 5 digits of Buyer 2/Spouse Driver's License/ID/Other Number

State

Last 5 digits of Social Security Number

D. PREPARER	
Renee Wells <i>Preparer of the Sales Disclosure Form</i> 11364 Broadway <i>Address (Number and Street)</i> Crown Point, IN 46307 <i>City, State, and ZIP Code</i>	Closer <i>Title</i> Fidelity National Title Company, LLC <i>Company</i> (219)663-5160 <i>Telephone Number</i> Renee.Wells@fnf.com <i>E-mail</i>

E. SELLER(S)/GRANTOR(S)	
John L. Keithley, II <i>Seller 1 - Name as appears on conveyance document</i> P.O. Box 1133, 37270 NE Greythorn Cir <i>Address (Number and Street)</i> Carefree, AZ 85377 <i>City, State, and ZIP Code</i> Telephone Number <i>Telephone Number</i> E-mail	Judy M. Keithley <i>Seller 2 - Name as appears on conveyance document</i> P.O. Box 1133, 37270 NE Greythorn Cir <i>Address (Number and Street)</i> Carefree, AZ 85377 <i>City, State, and ZIP Code</i> Telephone Number <i>Telephone Number</i> E-mail

Under penalties of perjury, I hereby certify that this Sales Disclosure, to the best of my knowledge and belief, is true, correct and complete as required by law, and is prepared in accordance with IC 6-1.1-5.5, "Real Property Sales Disclosure Act".

Signature of Seller John L. Keithley, II <i>Printed Name of Seller</i> 12-21-2020 <i>Sign Date (MM/DD/YYYY)</i>	Signature of Seller Judy M. Keithley <i>Printed Name of Seller</i> 12-21-2020 <i>Sign Date (MM/DD/YYYY)</i>
---	---

F. BUYER(S)/GRANTEE(S) - APPLICATION FOR PROPERTY TAX DEDUCTIONS - IDENTIFY ALL ITEMS THAT APPLY	
Town of Lowell <i>Buyer 1 - Name as appears on conveyance document</i> 501 E MAIN ST, PO BOX 157 <i>Address (Number and Street)</i> LOWELL IN 46356 <i>City, State, and ZIP Code</i> 219-696-7794 <i>Telephone Number</i> E-mail	Buyer 2 - Name as appears on conveyance document <i>Buyer 2 - Name as appears on conveyance document</i> <i>Address (Number and Street)</i> <i>City, State, and ZIP Code</i> <i>Telephone Number</i> <i>E-mail</i>

THE SALES DISCLOSURE FORM MAY BE USED TO APPLY FOR CERTAIN DEDUCTIONS FOR THIS PROPERTY. IDENTIFY ALL OF THOSE THAT APPLY.

YES	NO	CONDITION	YES	NO	CONDITION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Will this property be the buyer's primary residence? Provide complete address of primary residence, including county:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. Homestead
P.O. BOX 157 <i>Address (Number and Street)</i> LOWELL IN 46356 <i>City, State, and ZIP Code</i> LAKE <i>County</i>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Solar Energy Heating/Cooling System
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Wind Power Device
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Hydroelectric Power Device
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	7. Geothermal Energy Heating/Cooling Device
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. Is this property a residential rental property?
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	9. Would you like to receive tax statements for this property via e-mail? (Provide contact information below. Please see instructions for more information. Not available in all counties.)
Address (Number and Street) <i>City, State, and ZIP Code</i> <i>County</i>			Primary property owner contact name <i>E-mail</i>		

Under penalties of perjury, I hereby certify that this Sales Disclosure, to the best of my knowledge and belief, is true, correct and complete as required by law, and is prepared in accordance with IC 6-1.1-5.5, "Real Property Sales Disclosure Act". (Note: Spouse information, Social Security and Driver's License/Other numbers are not necessary if no Homestead Deduction is being filed.)

Signature of Buyer 1 Craig Hendrix, Town Manager <i>Printed Legal Name of Buyer 1</i> FID 35-600107 <i>Last 5 digits of Buyer 1 Driver's License/ID/Other Number</i> 12-22-2020 <i>Sign Date (MM/DD/YYYY)</i>	Signature of Buyer 2/Spouse <i>Printed Legal Name of Buyer 2</i> <i>Last 5 digits of Buyer 2/Spouse Driver's License/ID/Other Number</i> <i>State</i> <i>Last 5 digits of Social Security Number</i>
---	--

PART 2: COUNTY ASSESSOR

The county assessor must verify and complete items 1 through 14 and stamp the sales disclosure form before sending to the auditor:

1. Property	2. AV Land	3. AV Improvement	4. Value of Personal Property	5. AV Total	6. Property Class Code	7. Neighborhood Code	8. Tax District	9. Acreage
A.)								
B.)								

Assessor Stamp	10. Identify physical changes to property between March 1 and date of sale. _____ _____ _____ _____ _____	<table border="1"> <thead> <tr> <th>YES</th> <th>NO</th> <th>CONDITION</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>11. Is form completed?</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>12. State sales fee required?</td> </tr> <tr> <td colspan="3">13. Date of sale (MM/DD/YYYY): _____</td> </tr> <tr> <td colspan="3">14. Date form received (MM/DD/YYYY): _____</td> </tr> </tbody> </table>	YES	NO	CONDITION	<input type="checkbox"/>	<input type="checkbox"/>	11. Is form completed?	<input type="checkbox"/>	<input type="checkbox"/>	12. State sales fee required?	13. Date of sale (MM/DD/YYYY): _____			14. Date form received (MM/DD/YYYY): _____		
	YES	NO	CONDITION														
	<input type="checkbox"/>	<input type="checkbox"/>	11. Is form completed?														
	<input type="checkbox"/>	<input type="checkbox"/>	12. State sales fee required?														
	13. Date of sale (MM/DD/YYYY): _____																
14. Date form received (MM/DD/YYYY): _____																	

Items 15 through 18 are to be completed by the assessor when validating this sale:

15. if applicable, identify any additional circumstances relating to validation of sale. _____ _____ _____ _____ _____ _____	<table border="1"> <thead> <tr> <th>YES</th> <th>NO</th> <th>CONDITION</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>16. Sale valid for trending?</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>17. Validation of sale complete?</td> </tr> <tr> <td colspan="3">18. Validated by: _____</td> </tr> </tbody> </table>	YES	NO	CONDITION	<input type="checkbox"/>	<input type="checkbox"/>	16. Sale valid for trending?	<input type="checkbox"/>	<input type="checkbox"/>	17. Validation of sale complete?	18. Validated by: _____		
YES	NO	CONDITION											
<input type="checkbox"/>	<input type="checkbox"/>	16. Sale valid for trending?											
<input type="checkbox"/>	<input type="checkbox"/>	17. Validation of sale complete?											
18. Validated by: _____													

PART 3: COUNTY AUDITOR

Auditor Stamp	1. Disclosure fee amount collected: \$ _____	<table border="1"> <thead> <tr> <th>YES</th> <th>NO</th> <th>CONDITION</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>6. Is form completed?</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>7. Is state fee collected?</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>8. Attachments complete?</td> </tr> </tbody> </table>	YES	NO	CONDITION	<input type="checkbox"/>	<input type="checkbox"/>	6. Is form completed?	<input type="checkbox"/>	<input type="checkbox"/>	7. Is state fee collected?	<input type="checkbox"/>	<input type="checkbox"/>	8. Attachments complete?
	YES		NO	CONDITION										
	<input type="checkbox"/>		<input type="checkbox"/>	6. Is form completed?										
	<input type="checkbox"/>		<input type="checkbox"/>	7. Is state fee collected?										
	<input type="checkbox"/>		<input type="checkbox"/>	8. Attachments complete?										
2. Other Local Fee: \$ _____														
3. Total Fee: \$ _____														
4. Auditor receipt book number: _____														
5. Date of transfer (MM/DD/YYYY): _____														

PART 4: RECEIPT FOR STATEMENT OF DEDUCTION OF ASSESSED VALUATION

45-19-35-300-004.000-007 SDF ID	SDF Date (MM/DD/YYYY)	Town of Lowell Buyer 1 - Name as appears on conveyance document
Parcel Number		6808 Belshaw Road Address of Property (Number and Street)
Check all that apply:		Lowell, IN 46356 City, State, and ZIP Code of Property
<input type="checkbox"/> Homestead <input type="checkbox"/> Solar Energy <input type="checkbox"/> Wind Power <input type="checkbox"/> Hydroelectric <input type="checkbox"/> Geothermal <input type="checkbox"/> Rental Property <input type="checkbox"/> Electronic Statement (e-mail) _____		Auditor Signature _____ Date (MM/DD/YYYY)

A person who knowingly and intentionally falsifies value of transferred real property, or omits or falsifies any information required to be provided in the sales disclosure form commits a Class C felony.



DISCLOSURE AND ACKNOWLEDGMENT

File No.: FNW1905415-RJW

Property: 6808 Belshaw Road, Lowell, IN 46356

By signing this statement, I acknowledge the following:

1. That Fidelity National Title Company, LLC **IS NOT ACTING AS MY AGENT, ATTORNEY, REPRESENTATIVE OR FIDUCIARY** at this real estate closing.
2. That Fidelity National Title Company, LLC's employee who has conducted this closing represents only Fidelity National Title Company, LLC and, if he or she has said so, .
3. That Fidelity National Title Company, LLC's employee has identified certain documents to me as he or she has presented them to me for signing, but **HAS NOT GIVEN ME LEGAL ADVICE AS TO THE MEANING OR EFFECT OF THE DOCUMENTS**. I understand that any of his or her statements about the documents are not legal advice to me. If I have an attorney, that attorney is my only attorney in this transaction.
4. **I UNDERSTAND THAT FIDELITY NATIONAL TITLE COMPANY, LLC IS NOT RESPONSIBLE FOR EXPLAINING TO ME THE EFFECT OF THE DOCUMENTS I HAVE SIGNED.**
5. **THAT I HAVE READ THIS STATEMENT AND UNDERSTAND IT.**

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

BORROWER(S):

Town of Lowell

BY: 

Craig Hendrix
Town Manager

12.22.20

Date

SELLER(S):

John L. Keithley

Date

Judy M. Keithley

Date



DISCLOSURE AND ACKNOWLEDGMENT

File No.: FNW1905415-RJW

Property: 6808 Belshaw Road, Lowell, IN 46356

By signing this statement, I acknowledge the following:

1. That Fidelity National Title Company, LLC **IS NOT ACTING AS MY AGENT, ATTORNEY, REPRESENTATIVE OR FIDUCIARY** at this real estate closing.
2. That Fidelity National Title Company, LLC's employee who has conducted this closing represents only Fidelity National Title Company, LLC and, if he or she has said so, .
3. That Fidelity National Title Company, LLC's employee has identified certain documents to me as he or she has presented them to me for signing, but **HAS NOT GIVEN ME LEGAL ADVICE AS TO THE MEANING OR EFFECT OF THE DOCUMENTS.** I understand that any of his or her statements about the documents are not legal advice to me. If I have an attorney, that attorney is my only attorney in this transaction.
4. **I UNDERSTAND THAT FIDELITY NATIONAL TITLE COMPANY, LLC IS NOT RESPONSIBLE FOR EXPLAINING TO ME THE EFFECT OF THE DOCUMENTS I HAVE SIGNED.**
5. **THAT I HAVE READ THIS STATEMENT AND UNDERSTAND IT.**

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

BORROWER(S):

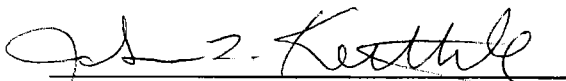
Town of Lowell

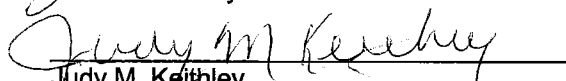
BY: _____

Craig Hendrix
Town Manager

Date

SELLER(S):


John L. Keithley


Judy M. Keithley

12/21/2020
Date

12/21/2020
Date



**LIMITED POWER OF ATTORNEY FOR
PREPARATION, COMPLETION AND
SIGNATURE OF THE INDIANA
SALES DISCLOSURE FORM**

File No.: FNW1905415

Know all men by these presents that the undersigned Buyer(s) and Seller(s) do hereby make, constitute and appoint Fidelity National Title Company, LLC or its designated agent to be my/our true and lawful attorney, for me/us and in my/our name, place and stead to do any and all of the following:

1. To prepare, complete and, if necessary, sign the Indiana Sales Disclosure Form from the property located at:
6808 Belshaw Road, Lowell, IN 46356

This power shall not be affected by my/our later disability or incompetence.

I/We give and grant to my/our said Attorney-in-Fact full power and authority to do and perform all and every act and thing requisite or proper to be done in the exercise of the rights and powers herein granted, as full, to all intents and purposes, as I/we might or could do if personally present, with full power and substitution and revocation and with full authority to deal with the property as authorized above hereby ratifying and confirming all that my/our said Attorney-in-Fact, or his/her substitute, or substitutes, lawfully do or cause to be done by virtue of the authority herein.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

BUYER(S):

Town of Lowell

BY: 

Craig Hendrix
Town Manager

STATE OF INDIANA

COUNTY OF LAKE

Before me, a Notary Public in and for said County and State, personally appeared Craig Hendrix, as Town Manager of Town of Lowell, who acknowledged the execution of the foregoing instrument, and who, having been duly sworn, stated that the representations therein contained are true.

Witness my hand and Notarial Seal this 22nd day of December, 2020

Signature: 

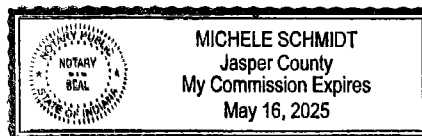
Printed: ~~Renee J. Wells~~ Michele Schmidt

Resident of: ~~Lake County~~ Jasper County

State of: INDIANA

My Commission expires: ~~July 6, 2025~~

May 16, 2025



**LIMITED POWER OF ATTORNEY
FOR PREPARATION, COMPLETION AND SIGNATURE
OF THE INDIANA SALES DISCLOSURE FORM**

(continued)

SELLER(S):

John L. Keithley
John L. Keithley

Judy M. Keithley
Judy M. Keithley

STATE OF ~~INDIANA~~ Arizona CTW

COUNTY OF ~~LAKE~~ Maricopa CTW

Before me, a Notary Public in and for said County and State, personally appeared John L. Keithley and Judy M. Keithley who acknowledged the execution of the foregoing instrument, who acknowledged the foregoing instrument to be his/her free act and deed.

Witness my hand and Notarial Seal this 21st day of December, 2020

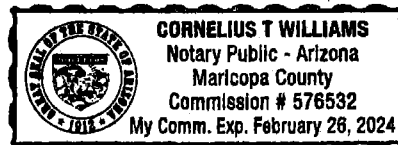
Signature: *Cornelius T. Williams* Notary Public

Printed: ~~Renee J. Wells~~ Cornelius T. Williams CTW

Resident of: ~~Lake County~~ Maricopa CTW

State of: ~~INDIANA~~ Arizona CTW

My Commission expires: ~~July 8, 2025~~ 2/26/2024 CTW





FINAL AGREEMENT FOR TAX PRORATION

We, Buyer(s) and Seller(s), hereby agree to the following:

1. We understand and agree that the tax valuation and/or special assessment (if any) used as a basis to determine the tax proration is subject to change due to an increase or decrease in the rate, reassessments, improvements, exemptions and tax credits in the current year.
2. With full knowledge of the above, we will not, at any time after the settlement date, assert any right or obligation to make any adjustment of the tax proration between ourselves in the event of ANY increase or decrease in the rate, reassessments, improvements, exemptions and tax credits in the current year.
3. We accept the adjustments for the tax proration shown on the Settlement Statement as final.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

BUYER(S):

Town of Lowell

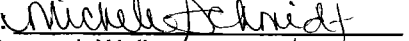
BY: 
Craig Hendrix
Town Manager

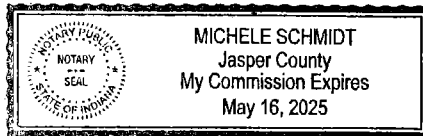
STATE OF INDIANA

COUNTY OF LAKE

Before me, a Notary Public in and for said County and State, personally appeared Craig Hendrix, as Town Manager of Town of Lowell, who acknowledged the execution of the foregoing instrument, and who, having been duly sworn, stated that the representations therein contained are true.

Witness my hand and Notarial Seal this 22nd day of December, 2020

Signature: 
Printed: ~~Renee J. Wells~~ Michele Schmidt
Resident of: ~~Lake County~~ Jasper County
State of: INDIANA
My Commission expires: ~~July 8, 2025~~
May 16, 2025



FINAL AGREEMENT FOR TAX PRORATION
(continued)

SELLER(S):

John L. Keithley
John L. Keithley

Judy M. Keithley
Judy M. Keithley

Forwarding Address: P.O. Box 1133, 37270 NE Greythorn Cir, Carefree, AZ 85377

Phone No.:

219 333 1247

STATE OF ~~INDIANA~~ Arizona CTW

COUNTY OF ~~LAKE~~ Maricopa CTW

Before me, a Notary Public in and for said County and State, personally appeared John L. Keithley and Judy M. Keithley who acknowledged the execution of the foregoing instrument, who acknowledged the foregoing instrument to be his/her free act and deed.

Witness my hand and Notarial Seal this 21st day of December, 2020

Signature:

Cornelius T. Williams Notary Public

Printed: ~~Renee J. Wells~~

Cornelius T. Williams

CTW

Resident of: ~~Lake County~~

Maricopa

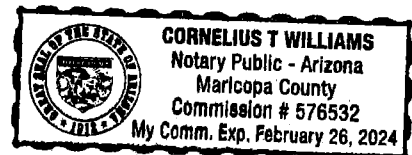
State of: ~~INDIANA~~

Arizona

CTW

My Commission expires: ~~July 8, 2025~~

2/26/2024





TERMS AND CONDITIONS OF ESCROW

The undersigned parties have employed Escrow Agent Fidelity National Title Company, LLC to act on their behalf as stated below in the closing of an escrow transaction. The escrow fee charged shall be paid as follows unless specified otherwise by written instruction from all parties: (A) Purchase/Sale Transaction – one-half (1/2) by Buyer and one-half (1/2) by Seller. The Seller shall pay for the overnight courier or messenger fee(s) or wire fee(s) for any proceeds or payoffs that are sent by overnight courier or messenger or wire. The Buyer shall pay any charge(s) for the overnight courier or messenger fee(s) for any loan documents that are returned to the lender by overnight courier or messenger. (B) Refinance Transaction – all by Borrower.

1. Escrow Agent is hereby authorized to pay from funds deposited into escrow for said purpose all amounts necessary to procure documents and all other charges and obligations necessary to consummate this transaction. The parties acknowledge that any fund deposited into escrow will be deposited into the escrow account of the Escrow Agent. Any funds deposited in an amount that exceeds Two Hundred Fifty Thousand And No/100 Dollars (\$250,000.00) may not qualify for FDIC insurance. Seller/Buyer/Borrower grant Escrow Agent a lien on all property and funds deposited in escrow. Seller/Buyer/Borrower hereby authorizes Escrow Agent to reimburse itself for its charges and for all damages or expenses it may incur in connection with the escrow and the performance of Escrow Agent's duties, including costs, damages and attorneys' fees.
2. Escrow Agent is hereby authorized to act upon any statement furnished to Escrow Agent by a lien holder or his agent, without liability or responsibility for the accuracy of such statement. In the event the lender or lien holder demands additional funds after the close of escrow, Seller/Borrower agrees to deposit with Escrow Agent any additional funds necessary to comply with the lender/lien holder's instructions upon receipt of same from Escrow Agent. Seller/Borrower acknowledges that any payment in full to a lender must be received by the lender on or before a specific date to avoid further interest accrual; and Seller/Borrower hereby instructs Escrow Agent to forward payoff funds to the lender by express service of Escrow Agent's choice and to charge Seller/Borrower any fees for express delivery at close of escrow.
3. Possession of the property, transfer of utilities, and collection of cancellation premiums from the Seller's fire or hazard insurance policy shall be handled by the parties direct and outside of escrow, and Escrow Agent shall have no responsibility with regard thereto.
4. Any litigation, arbitration or mediation arising out of this transaction in which Escrow Agent is named as a party shall be filed and maintained in the county in which the office of the Escrow Agent handling this transaction is located. In the event of any litigation or arbitration which relates to the duties or actions of Escrow Agent, including any action seeking a declaration of the rights or obligations of any party to this Escrow, the prevailing party or parties in such litigation or arbitration proceeding shall be awarded, in addition to any other available remedy, all expenses, fees and costs including expert witness fees, and all reasonable attorney's fees incurred by said prevailing party. The award of costs, fees, expenses, and attorneys' fees shall be determined by the court or arbitrator, and not by a jury, in a separate proceeding.
5. All of the terms and conditions of the Real Estate Purchase Contract remain the same. However, Seller and Buyer hereby agree that all notices required to be delivered to any party to the contract or to Escrow Agent pursuant to the parties' contract shall be mailed or delivered to all parties and to Escrow Agent in order to constitute notice under the contract.
6. If any document is lost, misplaced, misstated, or inaccurately reflects the true and correct terms and conditions of the Loan, upon request of Agent, Seller/Buyer/Borrower will comply with Agent's request to execute, acknowledge, initial, and deliver to Agent any documentation Agent deems necessary to replace or correct the lost, misplaced, misstated, or inaccurate document(s). Buyer/Borrower also agrees that, upon request, Buyer/Borrower will supply additional amounts and/or pay to Agent any additional sum previously and properly disclosed to Buyer/Borrower as a cost or fee associated with the loan which for whatever reason was not collected at closing.
7. Seller/Buyer/Borrower hereby agree that at such time as Seller/Buyer/Borrower deposit into escrow the executed documents, an executed copy of the Settlement Statement and the funds sufficient to close the transaction, Escrow Agent is authorized to close the escrow.

TERMS AND CONDITIONS OF ESCROW

(continued)

8. By depositing the above referenced documentation, the following matters shall be deemed to be satisfied, waived, met or agreed to without further instruction from Seller and Buyer and Seller and Buyer further agree to indemnify, defend, and hold Escrow Agent harmless from, for, and against any and all claims by any persons, including Seller and Buyer, as to the following matters:
 - A. All items to be prorated have been submitted to Escrow Agent.
 - B. All repairs, inspections, contingencies, and/or conditions have been completed, met, waived or satisfied.
 - C. Buyer has received and reviewed the Commitment for Title Insurance issued by Fidelity National Title Company, LLC and Buyer approves and accepts all matters as set forth therein.
 - D. Escrow Agent shall not record before the closing date as set forth in the contract.
9. Proration of real property taxes shall be based upon the last available tax statement from the taxing authority.
10. The disclosures required by I.C. 32-21-5 et seq and any other disclosures that may be required under Indiana law from time to time from the Seller and lead paint disclosure, if applicable, have been given to the Buyer.
11. Fidelity National Title Company, LLC is hereby granted an irrevocable power of attorney by the parties for the sole purpose of executing and recording any necessary documents to correct the terms and conditions of the deposited documents to conform with the agreement of the Parties, including but not limited to correcting any errors in the legal description.
12. A dormancy fee of Twenty-Five And No/100 Dollars (\$25.00) per month shall accrue for each month or fraction thereof that any undisbursed funds remain in an escrow for more than one hundred eighty (180) days after the close of escrow. The fee will be deducted from any funds held. However, the dormancy fee will not apply to any funds held in an Escrow Holdback account.
13. This Agreement shall survive the closing of the Loan and inure to the benefit of the Agent, its successors and assigns, and be binding upon the heirs, devisees, personal representatives successors, and assigns of the parties.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

BUYER:

Town of Lowell

BY: 

Craig Hendrix
Town Manager

TERMS AND CONDITIONS OF ESCROW
(continued)

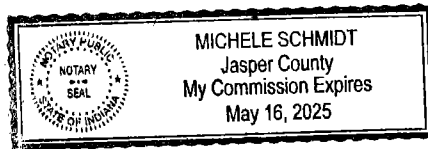
STATE OF INDIANA

COUNTY OF LAKE

Before me, a Notary Public in and for said County and State, personally appeared Craig Hendrix, as Town Manager of Town of Lowell, who acknowledged the execution of the foregoing instrument, and who, having been duly sworn, stated that the representations therein contained are true.

Witness my hand and Notarial Seal this 22nd day of December, 2020

Signature: Michele Schmidt
Printed: ~~Renee J. Wells~~ Michele Schmidt
Resident of: ~~Lake County~~ Jasper County
State of: INDIANA
My Commission expires: ~~July 8, 2025~~ May 16, 2025



SELLER:

John L. Keithley

Judy M. Keithley

STATE OF INDIANA

COUNTY OF LAKE

Before me, a Notary Public in and for said County and State, personally appeared John L. Keithley and Judy M. Keithley who acknowledged the execution of the foregoing instrument, who acknowledged the foregoing instrument to be his/her free act and deed.

Witness my hand and Notarial Seal this 21st day of December, 2020

Signature: _____
Printed: Renee J. Wells
Resident of: Lake County
State of: INDIANA
My Commission expires: July 8, 2025

TERMS AND CONDITIONS OF ESCROW

(continued)

STATE OF INDIANA

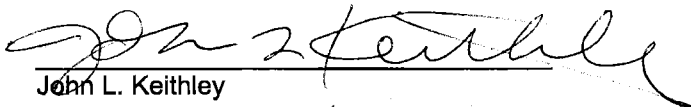
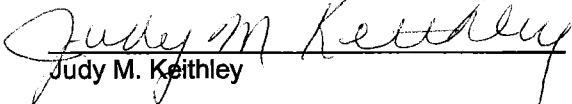
COUNTY OF LAKE

Before me, a Notary Public in and for said County and State, personally appeared Craig Hendrix, as Town Manager of Town of Lowell, who acknowledged the execution of the foregoing instrument, and who, having been duly sworn, stated that the representations therein contained are true.

Witness my hand and Notarial Seal this 22nd day of December, 2020

Signature: _____
Printed: Renee J. Wells
Resident of: Lake County
State of: INDIANA
My Commission expires: July 8, 2025

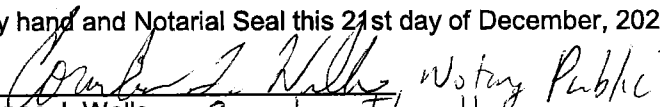
SELLER:

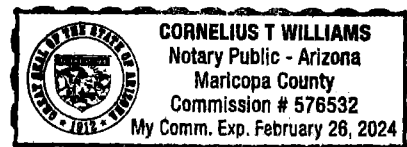

John L. Keithley

Judy M. Keithley

STATE OF ~~INDIANA~~ *Arizona* CTW
COUNTY OF ~~LAKE~~ *Maricopa* CTW

Before me, a Notary Public in and for said County and State, personally appeared John L. Keithley and Judy M. Keithley who acknowledged the execution of the foregoing instrument, who acknowledged the foregoing instrument to be his/her free act and deed.

Witness my hand and Notarial Seal this 21st day of December, 2020

Signature:  Notary Public
Printed: ~~Renee J. Wells~~ *Cornelius T. Williams*
Resident of: ~~Lake County~~ *Maricopa* CTW
State of: ~~INDIANA~~ *Arizona* CTW
My Commission expires: ~~July 8, 2025~~ *2/26/2024* CTW



VENDOR'S AFFIDAVIT

STATE OF INDIANA

File No.: FNW1905415M

COUNTY OF LAKE

The undersigned, being first duly sworn states that John L. Keithley and Judy M. Keithley (hereinafter referred to, jointly and severally, as "Vendor") is this day conveying to Town of Lowell (hereinafter referred to, jointly and severally, as "Purchaser"), by Warranty Deed, the following described Real Estate located in Lake County, Indiana:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

and commonly known as 6808 Belshaw Road, Lowell, IN 46356 (hereinafter referred to as "Real Estate").

In connection with the sale of Real Estate, Vendor has furnished Purchaser with a commitment for an owner's policy of title insurance for the Real Estate with an Effective date of November 3, 2020 issued by Fidelity National Title Insurance Company as Commitment No. FNW1905415.

Vendor has an indefeasible estate in fee simple in the Real Estate; and the Real Estate is free and clear of every kind of description lien, lease or encumbrance except the following:

1. Easements, agreements and restrictions of record disclosed in said commitment.
2. Current taxes not delinquent.
3. Whatever matters affecting the Real Estate, if any, disclosed in the above deed.

Vendor has not executed, or permitted anyone in Vendor's behalf to execute, any conveyance, mortgage, lien, lease, security agreement, financing statement or encumbrance of or upon Real Estate or any fixtures attached thereto, except as stated above, which is now outstanding or enforceable against the Real Estate. Vendor has made no contract to sell all or a part of the Real Estate to any person other than the Purchaser, and Vendor has not given to any person an option to purchase all or any part of the Real Estate, which is enforceable or exercisable now or at any time in the future. There are no unpaid claims for labor done upon or material furnished for the Real Estate in respect of which liens have been or may be filed. The improvements upon the Real Estate are all located entirely within the bounds of the Real Estate, and there are no encroachments thereon. There are no existing violations of zoning ordinances or other covenants, conditions and restrictions applicable to the Real Estate.

There is no judgment of any court of the State of Indiana or of any court of the United States that is or may become a lien on the Real Estate. No petition for bankruptcy has been filed by or against Vendor within the last six (6) months, nor is any petition now pending with respect to Vendor for bankruptcy, insolvency or incompetency. Vendor is neither principal nor surety on any bond payable to the State of Indiana.

The Real Estate is now in possession of Vendor and no other person has a right to possession or claims possession of all or any part of the Real Estate. Vendor will deliver possession of Real Estate to Purchaser as stated in the Purchase Agreement, free and clear of any right or claim of any person to the possession of the Real Estate.

Vendor has not received any notices under the Indiana Unsafe Building Law (IC 36-7-9, et seq) regarding an order to board, order to repair, order to demolish, or order to demolish a part of an improvement located on the Real Estate or any modifications of such orders.

Vendor intends that each of the statements made in this affidavit shall be construed as a representation; each of the representations is made for the purpose of inducing Purchaser to purchase the Real Estate; and each of the representations, whether construed jointly or severally, is true, correct and complete. Vendor expressly authorizes Purchaser, Fidelity National Title Insurance Company and all other persons to rely on such representations.

VENDOR'S AFFIDAVIT

(continued)

Vendor hereby requests Fidelity National Title Insurance Company to issue its policy or policies of title insurance upon said real estate without exception therein as to any pending litigation, and in consideration thereof, and as an inducement therefore, said Vendor does hereby, jointly and severally, agree to indemnify and hold said Fidelity National Title Insurance Company harmless of and from any and all loss, cost, damage and expense of every kind, including attorneys' fees, which said Fidelity National Title Insurance Company shall or may suffer or incur or become liable for under its said policy or policies now to be issued, or any reissue, renewal or extension thereof, or new policy at any time issued upon said real estate, part thereof or interest therein, arising, directly or indirectly, out of or on account of any such pending litigation or in connection with its enforcement of its rights under this agreement. All representations, agreements of indemnity, and waivers herein contained shall inure also to the benefit of any party insured under any policy issued by Fidelity National Title Insurance Company and any action brought hereon may be instituted in the name of Fidelity National Title Insurance Company or said insured or both.

Vendor is not acting, directly or indirectly, in any capacity whatsoever for any foreign country or national thereof, and Vendor is more than eighteen (18) years of age and a citizen of the United States.

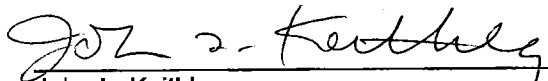
If Fidelity National Title Company, LLC issues an ALTA Homeowner's Policy of Title Insurance, then the Vendor certifies the following as true and correct:

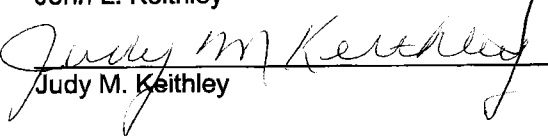
1. There have been no improvements added to the land or construction on the land within the last year.
2. There are no pending repairs or improvements to the street(s) adjacent to the land.
3. The land has a single family house/condominium and does not have a separate building, garage or apartment used as a second residence.
4. Any improvements we added to the land were authorized by a building permit.
5. None of the improvements on the land violate any building permits, zoning, restrictions or covenants.
6. None of the improvements on the land encroach over any building lines, easements or property lines.
7. No improvements by our neighbors encroach over our property lines.
8. The land has actual pedestrian and vehicular access based on the legal right of access to the land.

Vendor has not received any notification concerning the removal of any deduction or exemption that may affect the real estate taxes pertaining to the Real Estate.

Vendor intends that each of the statements made herein shall be construed as a representation; each of the representations is made for the purpose of inducing Purchaser to purchase the Real Estate; and to induce Fidelity National Title Company, LLC to issue its title insurance policy insuring the Purchaser in accordance with the commitment and its terms and conditions thereof; and each of the representations whether construed jointly or severally, is true. Vendor expressly authorizes Purchaser, Fidelity National Title Company, LLC and all other persons to rely on such representations.

IN WITNESS WHEREOF, the undersigned have executed this document on December 22, 2020.


John L. Keithley


Judy M. Keithley

VENDOR'S AFFIDAVIT
(continued)

STATE OF ~~INDIANA~~ *Arizona* *CTW*
COUNTY OF ~~LAKE~~ *Maricopa* *CTW*

Before me, a Notary Public in and for said County and State, personally appeared John L. Keithley and Judy M. Keithley who acknowledged the execution of the foregoing instrument, who acknowledged the foregoing instrument to be his/her free act and deed.

Witness my hand and Notarial Seal this 21st day of December, 2020

Signature: *Cornelius T. Williams, Notary Public*
Printed: ~~Renee J. Wells~~ *Cornelius T. Williams*
Resident of: ~~Lake County~~ *Maricopa* *CTW*
State of: ~~INDIANA~~ *Arizona* *CTW*
My Commission expires: ~~July 8, 2025~~ *2/26/2024*

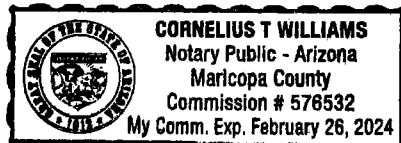
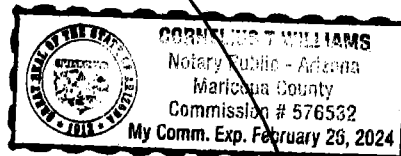


EXHIBIT "A"
Legal Description

For APN/Parcel ID(s): 45-19-35-300-004.000-007

The East 330.00 feet of the following described parcel: The East 30.28 acres off of that part of the East Half of the Southwest Quarter of Section 35, Township 33 North, Range 9 West of the Second Principal Meridian, lying South of what is known and designated as the State Road, said tract running from said State Road South to the South line of said Section, the West line of said tract being parallel with the center line of said section; in Lake County, Indiana.

WHEREAS, the Fidelity National Title Insurance Company, hereinafter referred to as the "Company", is about to issue its title insurance policy or policies or commitments thereof, all hereinafter referred to as the "Title Insurance Policy", No. FNW1905415, in respect to the land described therein.

AND WHEREAS, the Company has raised as title exceptions on the Title Insurance Policy certain defects, liens, encumbrances, adverse claims or other matters, all hereinafter referred to as "Exceptions to Title", described as follows:

Any and all matters affecting title to the subject property arising on or after November 3, 2020 (the last effective date of the subject commitment) and on or before the date and time of the recording of documents to be insured.

AND WHEREAS, the Company has been requested to issue the Title Insurance Policy, and may hereafter, in the ordinary course of its business, issue title insurance policy or policies or date down endorsements or commitments thereof in the form or forms now or then commonly used by the Company, or issue hold harmless or indemnity letters to induce other title insurance companies to issue title insurance policies or commitments therefor, in respect to the land or to some part or parts thereof, or interests therein, all of the foregoing being hereafter referred to as "Future Policies or Date Down Endorsements or Commitments", either omitting all mention of the aforesaid Exceptions to Title, or insuring against loss or damage by reason thereof;

NOW THEREFORE, in consideration of the issuance of the Title Insurance Policy and the payment of One And No/100 Dollar (\$1.00) to the undersigned by the Company, the sufficiency and receipt of which are hereby acknowledged, the undersigned, jointly and severally, for themselves, heirs, personal representatives, and assigns do hereby covenant and agree with the Company: 1) to forever fully protect, defend, and save the Company harmless from and against all the Exceptions to Title, in and from any and all loss, costs, damages, attorneys' fees, and expenses of every kind and nature which it may suffer, expend or incur under, or by reason, or in consequence of the Title Insurance Policy on account, or in consequence, or growing out of the Exceptions to Title or on account of the assertion or enforcement or attempted assertion or enforcement thereof or of any rights existing or hereafter arising, or which may be claimed to exist under, or by reason, or in consequence, or growing out of the Exceptions to Title or any of them; 2) to provide for the defense, at their own expense, on behalf and for the protection of the Company and the parties insured or who may become insured, against loss or damage under the Title Insurance Policy (but without prejudice to the right of the Company to defend if it so elects) in all litigation consisting of actions or proceedings based on any Exceptions to Title which may be asserted or attempted to be asserted, established or enforced in, to, upon, against or in respect to the land or any part thereof, or interest therein; 3) to pay, discharge, satisfy or remove all or any of the items referred to above, when called upon by the Company after thirty (30) days notice in writing and mailed to the undersigned at the address set out below; and 4) that each and every provision herein shall extend and be in force concerning Future Policies or Date Down Endorsements or Commitments.

THE FOREGOING NOTWITHSTANDING, it is hereby covenanted and agreed, and expressly made a part of this agreement, that the liability of the undersigned hereunder shall cease and determine at such time as the Company shall have completed all of its various title searches and examination thereof covering the date of recording, required for the issuance of the above policy; provided, however that (1) no rights, interests, liens, claims, encumbrances, or defects in title or any of them, or any rights existing by reason or in consequence thereof or growing out thereof are disclosed by the various title searches and examination thereof; (2) there is then pending no suit, action, or proceedings, either direct or collateral, to assert, establish, or enforce the said mentioned rights, interests, liens, claims, encumbrances, or defects in title, or in any of them, or any rights existing or arising by reason or in consequence thereof or growing out thereof; (3) that no judgment, order, or decree rendered in any such proceeding remains unsatisfied; and (4) that the undersigned is not in default in the performance of any of the terms, covenants, and conditions hereof.

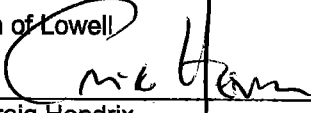
PERSONAL UNDERTAKING
(GAP)
(continued)

Nothing contained herein shall be construed so as to obligate the Company to issue Title Insurance Policy, in the form requested herein. However, should the Company issue any such Title Insurance Policy, it will do so in reliance upon the undertaking of the undersigned and the issuance of such Title Insurance Policy shall be the consideration for the above undertaking by the undersigned.

The Company shall have the right at any time hereinafter, after notice to the undersigned below, when it shall deem necessary, expedient, desirable or of interest to do so, in its sole discretion, to pay, discharge, satisfy or remove from the title to said real estate all or any of the items set out above. The undersigned covenants and agree to pay the Company all amounts so expended on demand.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

BORROWER(S):

Town of Lowell
BY: 
Craig Hendrix
Town Manager

12-22-20
Date

SELLER(S):

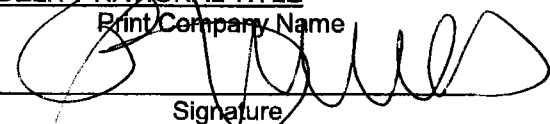
John L. Keithley

Date

Judy M. Keithley

Date

FIDELITY NATIONAL TITLE

Print Company Name

Signature

12-22-2020
Date

By: RENEE J. WELLS, CLOSER
Print Name

Its:
Print Title

PERSONAL UNDERTAKING
(GAP)
(continued)

Nothing contained herein shall be construed so as to obligate the Company to issue Title Insurance Policy, in the form requested herein. However, should the Company issue any such Title Insurance Policy, it will do so in reliance upon the undertaking of the undersigned and the issuance of such Title Insurance Policy shall be the consideration for the above undertaking by the undersigned.

The Company shall have the right at any time hereinafter, after notice to the undersigned below, when it shall deem necessary, expedient, desirable or of interest to do so, in its sole discretion, to pay, discharge, satisfy or remove from the title to said real estate all or any of the items set out above. The undersigned covenants and agree to pay the Company all amounts so expended on demand.

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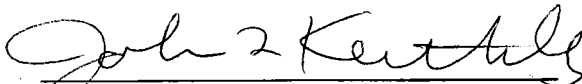
BORROWER(S):

Town of Lowell

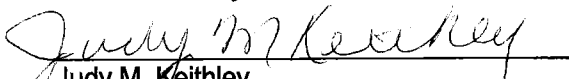
BY: _____
Craig Hendrix
Town Manager

Date

SELLER(S):


John L. Keithley

12/21/2020
Date


Judy M. Keithley

12/21/2020
Date

FIDELITY NATIONAL TITLE
Print Company Name

Signature

Date

By: RENEE J. WELLS, CLOSER
Print Name

Its: _____
Print Title



NOTICE OF SETTLEMENT AGENT RESPONSIBILITY

Renee Wells, Closer
Fidelity National Title Company, LLC
11364 Broadway
Crown Point, IN 46307
Phone: (219)663-5160 Fax: (219)662-0456

Date: December 20, 2020
Escrow No.: FNW1905415-RJW
Seller(s): John L. Keithley and Judy M. Keithley
Borrower(s): Town of Lowell
Property: 6808 Belshaw Road
Lowell, IN 46356

The Foreign Investment in Real Property Tax Act (FIRPTA), Title 26 U.S.C., Section 1445, and the regulations there under, provide in part, that a transferee (buyer) of a U.S. real property interest from a foreign person must withhold a statutory percentage of the amount realized on the disposition, report the transaction and remit the withholding to the Internal Revenue Service (IRS) within twenty (20) days after the transfer. Fidelity National Title Company, LLC will not determine nor aid in the determination of whether the FIRPTA withholding provisions are applicable to the subject transaction, nor act as a Qualified Substitute under state or federal law, nor furnish tax advice to any party to the transaction. Fidelity National Title Company, LLC will not determine nor aid in the determination of whether the transaction will qualify for an exception or an exemption and is not responsible for the filing of any tax forms with the IRS as they relate to FIRPTA, nor responsible for collecting and holding of any documentation from the buyer or seller on the buyer's behalf for the purpose of supporting a claim of an exception or exemption. Fidelity National Title Company, LLC is not an agent for the buyer for the purposes of receiving and analyzing any evidence or documentation that the seller in the subject transaction is a U.S. citizen or resident alien. Fidelity National Title Company, LLC is not responsible for the payment of this tax and/or penalty and/or interest incurred in connection therewith and such taxes are not a matter covered by the Owner's Policy of Title Insurance to be issued to the buyer. Fidelity National Title Company, LLC is not responsible for the completion of any IRS documents or related forms related to the referenced statute. The buyer is advised: they must independently make a determination of whether the contemplated transaction is subject to the withholding requirement; bear full responsibility for compliance with the withholding requirement if applicable and/or for payment of any tax, interest, penalties and/or other expenses that may be due on the subject transaction; and they are responsible for the completion of any and all forms, including but not limited to applicable IRS documentation, and the mailing of those forms. The Buyer is advised any forms, documents, or information received from Fidelity National Title Company, LLC is not tax or legal advice and should not be construed as such nor treated as a complete representation of FIRPTA requirements. Buyer should seek outside counsel from a qualified individual to determine any and all implications of the referenced statute.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

PURCHASER(S):

Town of Lowell

BY: 

Craig Hendrix
Town Manager

12.22.20
Date



**ACKNOWLEDGMENT AND RECEIPT OF
PROPERTY TAX BENEFITS FORM**

File No: FNW1905415-RJW

The undersigned, Town of Lowell (Borrower(s)) hereby acknowledge that Fidelity National Title Company, LLC has provided us/me with a copy of the Indiana Property Tax Benefits Form 51781 (R12 / 1-16) setting forth the deductions and credits available for property taxes on real property in Indiana in connection with the purchase/refinance transaction on the property located at the following address:

6808 Belshaw Road, Lowell, IN 46356

Executed this 22nd day of December, 2020.

Town of Lowell

BY:


Craig Hendrix
Town Manager

12.22.20

Date

WIRE FRAUD ALERT

IMPORTANT! YOUR FUNDS MAY BE AT RISK

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

Realtors®, Real Estate Brokers, Closing Attorneys, Buyers and Sellers are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification.

A fraudster will hack into a participant's email account to obtain information about upcoming real estate transactions. After monitoring the account to determine the likely timing of a closing, the fraudster will send an email to the Buyer purporting to be the escrow agent or another party to the transaction. The fraudulent email will contain new wiring instructions or routing information, and will request that the Buyer send funds to a fraudulent account.

Please be advised that the wire instructions listed below are the only wire instructions we will send you. This is the only form that should be used to wire funds to us in this transaction. If you receive another email or unsolicited call purporting to alter these instructions, please immediately call us at: (219)663-5160.

BANK NAME: BMO HARRIS BANK N.A.

ABA NO.: 071000288

ACCOUNT NO.: 2547305

ACCOUNT HOLDER: Fidelity National Title Company, LLC **REFERENCE:** FNW1905415 / 6808 Belshaw Road, Lowell

*****Closing funds in the form of ACH Electronic Transfers will NOT be accepted.*****

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.



NEVER RELY on emails or other communications purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.



DO NOT FORWARD wire instructions to other parties without first verbally verifying the instructions from the sending party.



ALWAYS VERIFY WIRE INSTRUCTIONS, specifically the ABA routing number and account number, by calling the party who is receiving the funds. **DO NOT RELY** on other parties calling you.

Obtain the number of your Realtor®, Real Estate Broker and your escrow officer as soon as an escrow account is opened.

DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **DO NOT** send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation: <http://www.fbi.gov>

Internet Crime Complaint Center: <http://www.ic3.gov>

ACKNOWLEDGEMENT OF RECEIPT

Your signature below acknowledges receipt of this Wire Fraud Alert.

Buyer 1

Signature

Craig Hendrix

Printed Name

Address

Date

Phone Number

Buyer 2

Signature

Printed Name

Address

Date

Phone Number

NERI COMPANIES

6400 N. Northwest Highway, Suite 4
Chicago, IL 60631

Main: 847-825-9400

PROJECT NAME: **Lowell - Public Works Facility**

JOB #: **2101**

SUB JOB #:

ADDRESS:

ESTIMATED BY: **TDR**

CHECKED BY: **GCN**

ESTIMATE DATE: **6/10/2024**

PLAN DATED: **7/15/2023**

START DATE: **TBD**

NUMBER OF UNITS: **1**

Garage

GROUND FLOOR: **16,057**

SECOND FLOOR:

BASEMENT

TOTAL GROSS AREA: 16,057

CODE	DESCRIPTION	COST/SF	TOTAL COST	NOTES
10000	GENERAL REQUIREMENTS	12.89	206,900.00	
20000	EXISTING CONDITIONS	0.31	5,000.00	
30000	CONCRETE	51.02	819,198.00	
40000	MASONRY	43.78	702,900.00	
50000	METALS	35.98	577,700.00	
60000	WOOD, PLASTICS, COMPOSITES	13.01	208,900.00	
70000	THERMAL PROTECTION	14.13	226,855.00	
80000	OPENINGS	17.36	278,673.00	
90000	FINISHES	23.70	380,500.00	
100000	SPECIALTIES	3.31	53,200.00	
110000	EQUIPMENT	0.00	0.00	
120000	FURNISHINGS	1.56	25,000.00	
130000	SPECIAL CONSTRUCTION	0.00	0.00	
140000	ELEVATORS	0.00	0.00	
210000	FIRE SUPPRESSION	0.00	0.00	
220000	PLUMBING	37.12	596,000.00	
230000	HVAC	13.24	212,550.00	
260000	ELECTRICAL	43.27	694,745.00	
270000	COMMUNICATIONS	0.00	0.00	
280000	ELECTRONIC SAFETY & SECURITY	0.00	0.00	
310000	EARTHWORK	14.65	235,250.00	
320000	EXTERIOR IMPORVEMENTS	49.15	789,133.00	
330000	UTILITIES	1.24	19,900.00	

	SUBTOTAL COSTS:	6,032,404.00
SITE SUPERVISION		0.00
CONTINGENCIES		904,860.60
SUBCONTRACTOR BONDS		0.00
BUILDERS RISK INSURANCE		0.00
GENERAL LIABILITY INSURANCE		0.00
GC OVERHEAD & PROFIT		693,726.46
PERFORMANCE BOND		0.00
SALES TAX		0.00
	TOTAL COSTS:	7,630,991.06
	COST/SF	475.24

Neri Companies, Inc.
6400 N. Northwest Highway, Suite 4
Chicago, IL 60631

1 Units
16,057 GSF

DIV	DESCRIPTION	Qty.	Units	Unit Cost	Total Cost	Cost/Unit	Cost/GSF	% of Hard	% of Total	Notes
010000	GENERAL REQUIREMENTS - TOTAL				206,900.00	206,900.00	12.89	3.43%	2.71%	
012000	General Conditions				78,000.00	78,000.00	4.86	1.29%	1.02%	On-Site Supervision.
012100	Construction & Silt Fence				10,000.00	10,000.00	0.62	0.17%	0.13%	Allowance.
012200	Toilet Facilities (12 Months)				1,800.00	1,800.00	0.11	0.03%	0.02%	
012300	Temporary Utilities, Electricity & Gas Heat				0.00	0.00	0.00	0.00%	0.00%	By Owner.
012400	Waste & Trash Removal				9,600.00	9,600.00	0.60	0.16%	0.13%	Dumpsters.
012500	Misc Labor (Clean Up)				7,500.00	7,500.00	0.47	0.12%	0.10%	Labor Only.
012600	Post Construction Cleaning				5,000.00	5,000.00	0.31	0.08%	0.07%	Allowance.
012700	Misc Tool Rental				2,000.00	2,000.00	0.12	0.03%	0.03%	Allowance.
012800	Street Sweeper				2,000.00	2,000.00	0.12	0.03%	0.03%	Estimate.
013000	Mobilization				80,000.00	80,000.00	4.98	1.33%	1.05%	
014000	Holisting				0.00	0.00	0.00	0.00%	0.00%	
015000	Temporary Facilities (Construction Trailer)				6,000.00	6,000.00	0.37	0.10%	0.08%	12 Months.
016000	Product Requirements				0.00	0.00	0.00	0.00%	0.00%	
017000	Execution and Closeout Requirements				5,000.00	5,000.00	0.31	0.08%	0.07%	Estimate.
018000	Performance Requirements				0.00	0.00	0.00	0.00%	0.00%	
019000	Life Cycle Activities				0.00	0.00	0.00	0.00%	0.00%	
020000	EXISTING CONDITIONS - TOTAL				5,000.00	5,000.00	0.31	0.08%	0.07%	
023000	Subsurface Investigations (Soil Testing)				5,000.00	5,000.00	0.31	0.08%	0.07%	Allowance.
024000	Demolition and Structure Moving				0.00	0.00	0.00	0.00%	0.00%	
025000	Site Remediation				0.00	0.00	0.00	0.00%	0.00%	
025100	Site Clearing				0.00	0.00	0.00	0.00%	0.00%	
026000	Contaminated Site Material Removal				0.00	0.00	0.00	0.00%	0.00%	
027000	Water Remediation				0.00	0.00	0.00	0.00%	0.00%	
028000	Facility Remediation				0.00	0.00	0.00	0.00%	0.00%	
030000	CONCRETE - TOTAL				819,198.00	819,198.00	51.02	13.58%	10.74%	
031000	Concrete Forming and Accessories				0.00	0.00	0.00	0.00%	0.00%	
032000	Concrete Reinforcing				0.00	0.00	0.00	0.00%	0.00%	
033000	Cast-in-Place Concrete Foundation				404,000.00	404,000.00	25.16	6.70%	5.29%	Labor & Materials.
033100	Concrete Curbing				45,400.00	45,400.00	2.83	0.75%	0.59%	Labor & Materials.
033200	8" Reinforced Concrete Pavement				139,800.00	139,800.00	8.71	2.32%	1.83%	
033300	Public Sidewalks				0.00	0.00	0.00	0.00%	0.00%	
033400	Private Sidewalks				5,200.00	5,200.00	0.32	0.09%	0.07%	Labor & Materials.
034000	Indoor Concrete Slab				224,798.00	224,798.00	14.00	3.73%	2.95%	Labor & Materials.
035000	Cast Decks and Underlayment				0.00	0.00	0.00	0.00%	0.00%	
036000	Grouting				0.00	0.00	0.00	0.00%	0.00%	
037000	Mass Concrete				0.00	0.00	0.00	0.00%	0.00%	
038000	Concrete Cutting				0.00	0.00	0.00	0.00%	0.00%	
040000	MASONRY - TOTAL				702,900.00	702,900.00	43.78	11.65%	9.21%	
042000	Precast Concrete Panels				520,500.00	520,500.00	32.42	8.63%	6.82%	AVAN Precast Concrete
044000	Stone Assemblies				0.00	0.00	0.00	0.00%	0.00%	
045000	Masonry & Stone				182,400.00	182,400.00	11.36	3.02%	2.39%	Labor & Materials.
046000	Corrosion-Resistant Masonry				0.00	0.00	0.00	0.00%	0.00%	
047000	Manufactured Masonry				0.00	0.00	0.00	0.00%	0.00%	
050000	METALS - TOTAL				577,700.00	577,700.00	35.98	9.58%	7.57%	
051000	Structural Metal Framing				0.00	0.00	0.00	0.00%	0.00%	Hugget-Betten Corp
052000	Metal Joists				537,700.00	537,700.00	33.49	8.91%	7.05%	De Pasquale Steel
053000	Metal Decking				0.00	0.00	0.00	0.00%	0.00%	Included in 052000
054000	Cold Formed Metal Framing				0.00	0.00	0.00	0.00%	0.00%	
055000	Metal Fabrications (Railings)				40,000.00	40,000.00	2.49	0.66%	0.52%	Labor & Materials.
057000	Decorative Metal (Wrought Iron Fence)				0.00	0.00	0.00	0.00%	0.00%	
060000	WOOD, PLASTICS, COMPOSITES - TOTAL				208,900.00	208,900.00	13.01	3.46%	2.74%	
061000	Metal Stud Framing & Drywall				84,900.00	84,900.00	5.29	1.41%	1.11%	Hugget-Betten Corp
062000	Finish Carpentry				44,000.00	44,000.00	2.74	0.73%	0.58%	Labor Only
064000	Architectural Woodwork (Trim & Doors)				50,000.00	50,000.00	3.11	0.83%	0.66%	Estimate.
065000	Structural Plastics				0.00	0.00	0.00	0.00%	0.00%	
066000	Plastic Fabrications				0.00	0.00	0.00	0.00%	0.00%	
067000	Structural Composites (Lumber Supplies)				30,000.00	30,000.00	1.87	0.50%	0.39%	Allowance for Miscellaneous Lumber.
068000	Composite Fabrications				0.00	0.00	0.00	0.00%	0.00%	
070000	THERMAL PROTECTION - TOTAL				226,855.00	226,855.00	14.13	3.76%	2.97%	
071000	Dampproofing and Waterproofing				0.00	0.00	0.00	0.00%	0.00%	
072000	Thermal Protection (Thermal & sound Insulation)				11,440.00	11,440.00	0.71	0.19%	0.15%	Labor & Materials
072500	Weather Barriers				0.00	0.00	0.00	0.00%	0.00%	
073000	Steep Slope Roofing				0.00	0.00	0.00	0.00%	0.00%	
074000	Roofing and Siding Panels				0.00	0.00	0.00	0.00%	0.00%	
075000	Membrane Roofing				215,415.00	215,415.00	13.42	3.57%	2.82%	Labor & Materials
076000	Flashing and Sheet Metal				0.00	0.00	0.00	0.00%	0.00%	
077000	Roof and Wall Specialties and Accessories				0.00	0.00	0.00	0.00%	0.00%	
078000	Fire and Smoke Protection				0.00	0.00	0.00	0.00%	0.00%	
079000	Joint Protection (Exterior Caulking)				0.00	0.00	0.00	0.00%	0.00%	
080000	OPENINGS - TOTAL				278,673.00	278,673.00	17.36	4.62%	3.65%	
081000	Doors and Frames				0.00	0.00	0.00	0.00%	0.00%	
083000	Specialty Doors Overhead Doors				176,673.00	176,673.00	11.00	2.93%	2.32%	Materials & Installation.
084000	Entrances, Storefronts, and Curtain Walls				12,000.00	12,000.00	0.75	0.20%	0.16%	Front Entrance Door Allowance
085000	Windows				80,000.00	80,000.00	4.98	1.33%	1.05%	Materials & Installation.
086000	Roof Windows and Skylights				0.00	0.00	0.00	0.00%	0.00%	
087000	Hardware				10,000.00	10,000.00	0.62	0.17%	0.13%	Allowance
088000	Glazing (Mirrors & Shower Doors)				0.00	0.00	0.00	0.00%	0.00%	Included in 085000
089000	Louvers and Vents				0.00	0.00	0.00	0.00%	0.00%	

DIV	DESCRIPTION	Qty.	Units	Unit Cost	Total Cost	Cost/Unit	Cost/GSF	% of Hard	% of Total	Notes
090000	FINISHES - TOTAL				380,500.00	380,500.00	23.70	6.31%	4.99%	
092000	Plaster and Gypsum Board				0.00	0.00	0.00	0.00%	0.00%	Included in Hugget-Betten quote - 051000
093000	Tiling				140,000.00	140,000.00	8.72	2.32%	1.83%	Labor & Materials.
095000	Ceilings				0.00	0.00	0.00	0.00%	0.00%	Included in Hugget-Betten quote - 051000
096000	Flooring Finishes				0.00	0.00	0.00	0.00%	0.00%	
097000	Carpeting & Rugs				0.00	0.00	0.00	0.00%	0.00%	
098000	Acoustic Treatment (Ceiling)				0.00	0.00	0.00	0.00%	0.00%	Included in 061000
099000	Painting and Coatings				240,500.00	240,500.00	14.98	3.99%	3.15%	Estimate
100000	SPECIALTIES - TOTAL				53,200.00	53,200.00	3.31	0.88%	0.70%	
101000	Information Specialties (Signage)				15,000.00	15,000.00	0.93	0.25%	0.20%	Allowance
102000	Interior Specialties (Toilet Accessories & Grab Bars)				8,000.00	8,000.00	0.50	0.13%	0.10%	Allowance
103000	Fireplaces and Stoves				0.00	0.00	0.00	0.00%	0.00%	
104000	Safety Specialties				0.00	0.00	0.00	0.00%	0.00%	
105000	Storage Specialties (Storage Lockers)				20,000.00	20,000.00	1.25	0.33%	0.26%	Allowance
107000	Exterior Specialties (Closet Shelving)				10,000.00	10,000.00	0.62	0.17%	0.13%	Allowance
108000	Other Specialties (Mailboxes)				200.00	200.00	0.01	0.00%	0.00%	Allowance.
110000	EQUIPMENT - TOTAL				0.00	0.00	0.00	0.00%	0.00%	
111000	Vehicle and Pedestrian Equipment				0.00	0.00	0.00	0.00%	0.00%	
111500	Security, Detention, and Baking Equipment				0.00	0.00	0.00	0.00%	0.00%	
112000	Commercial Equipment (Wash Tunnel)				0.00	0.00	0.00	0.00%	0.00%	
113000	Residential Equipment (Appliances)				0.00	0.00	0.00	0.00%	0.00%	
114000	Foodservice Equipment				0.00	0.00	0.00	0.00%	0.00%	
115000	Education and Scientific Equipment				0.00	0.00	0.00	0.00%	0.00%	
116000	Entertainment Equipment				0.00	0.00	0.00	0.00%	0.00%	
116500	Athletic and Recreational Equipment				0.00	0.00	0.00	0.00%	0.00%	
117000	Healthcare Equipment				0.00	0.00	0.00	0.00%	0.00%	
118000	Collection and Disposal Equipment				0.00	0.00	0.00	0.00%	0.00%	
120000	FURNISHINGS - TOTAL				25,000.00	25,000.00	1.56	0.41%	0.33%	
121000	Art				0.00	0.00	0.00	0.00%	0.00%	
122000	Window Treatments				0.00	0.00	0.00	0.00%	0.00%	
123000	Casework (Kitchen Cabinets & Bathroom Vanities)				20,000.00	20,000.00	1.25	0.33%	0.26%	Allowance
124000	Granite / Marble / Stone Countertops				5,000.00	5,000.00	0.31	0.08%	0.07%	Allowance
125000	Furniture				0.00	0.00	0.00	0.00%	0.00%	
126000	Multiple Seating				0.00	0.00	0.00	0.00%	0.00%	
129000	Other Furnishings				0.00	0.00	0.00	0.00%	0.00%	
130000	SPECIAL CONSTRUCTION - TOTAL				0.00	0.00	0.00	0.00%	0.00%	
131000	Special Facility Components				0.00	0.00	0.00	0.00%	0.00%	
131100	Swimming Pools				0.00	0.00	0.00	0.00%	0.00%	
131700	Hot Tubs				0.00	0.00	0.00	0.00%	0.00%	
132000	Special Purpose Rooms				0.00	0.00	0.00	0.00%	0.00%	
133000	Special Structures				0.00	0.00	0.00	0.00%	0.00%	
134000	Integrated Construction				0.00	0.00	0.00	0.00%	0.00%	
135000	Special Instrumentation				0.00	0.00	0.00	0.00%	0.00%	
140000	ELEVATORS - TOTAL				0.00	0.00	0.00	0.00%	0.00%	
141000	Dumbwaiters				0.00	0.00	0.00	0.00%	0.00%	
142000	Elevators				0.00	0.00	0.00	0.00%	0.00%	
143000	Escalators and Moving Walks				0.00	0.00	0.00	0.00%	0.00%	
144000	Lifts				0.00	0.00	0.00	0.00%	0.00%	
147000	Turntables				0.00	0.00	0.00	0.00%	0.00%	
148000	Scaffolding				0.00	0.00	0.00	0.00%	0.00%	
149000	Wash Tunnel Conveying Equipment				0.00	0.00	0.00	0.00%	0.00%	
210000	FIRE SUPPRESSION - TOTAL				0.00	0.00	0.00	0.00%	0.00%	
211000	Water-Based Fire-Suppression Systems				0.00	0.00	0.00	0.00%	0.00%	
212000	Fire-Extinguishing Systems (Extinguishers)				0.00	0.00	0.00	0.00%	0.00%	
213000	Fire Pumps				0.00	0.00	0.00	0.00%	0.00%	
214000	Fire Suppression Water Storage				0.00	0.00	0.00	0.00%	0.00%	
220000	PLUMBING - TOTAL				596,000.00	596,000.00	37.12	9.88%	7.81%	
221000	Plumbing Piping				388,000.00	388,000.00	24.16	6.43%	5.08%	Reichelt Plumbing, Inc.
223000	Gas Piping & Compressed Air Piping				208,000.00	208,000.00	12.95	3.45%	2.73%	Labor & Materials
224000	Plumbing Fixtures				0.00	0.00	0.00	0.00%	0.00%	
225000	Pool and Fountain Plumbing Systems				0.00	0.00	0.00	0.00%	0.00%	
230000	HVAC - TOTAL				212,550.00	212,550.00	13.24	3.52%	2.79%	
231000	Facility Fuel Systems				0.00	0.00	0.00	0.00%	0.00%	
232000	HVAC Piping and Pumps				0.00	0.00	0.00	0.00%	0.00%	
233000	HVAC Air Distribution				212,550.00	212,550.00	13.24	3.52%	2.79%	Circle 'R' Mechanical Inc.
233100	HVAC Testing				0.00	0.00	0.00	0.00%	0.00%	
234000	HVAC Air Cleaning Devices				0.00	0.00	0.00	0.00%	0.00%	
235000	Central Heating Equipment				0.00	0.00	0.00	0.00%	0.00%	
236000	Central Cooling Equipment				0.00	0.00	0.00	0.00%	0.00%	
237000	Central HVAC Equipment				0.00	0.00	0.00	0.00%	0.00%	
238000	Decentralized HVAC Equipment				0.00	0.00	0.00	0.00%	0.00%	
260000	ELECTRICAL - TOTAL				694,745.00	694,745.00	43.27	11.52%	9.10%	
261000	Medium-Voltage Electrical Distribution				650,700.00	650,700.00	40.52	10.79%	8.53%	Sargent Electric Company
262000	Low-Voltage Electrical Transmission				0.00	0.00	0.00	0.00%	0.00%	
263000	Electrical Power Generating & Storage Equipment				0.00	0.00	0.00	0.00%	0.00%	
264000	Electrical and Cathodic Protection				0.00	0.00	0.00	0.00%	0.00%	
265000	Light Fixtures				20,000.00	20,000.00	1.25	0.33%	0.26%	Allowance
265100	Underground Cable Duct				4,545.00	4,545.00	0.28	0.08%	0.06%	
265200	Site Lighting (Poles & Fixtures)				19,500.00	19,500.00	1.21	0.32%	0.26%	Estimate for outdoor poles & light fixtures.

DIV	DESCRIPTION	Qty.	Units	Unit Cost	Total Cost	Cost/Unit	Cost/GSF	% of Hard	% of Total	Notes
270000	COMMUNICATIONS - TOTAL				0.00	0.00	0.00	0.00%	0.00%	
271000	Structured Cabling				0.00	0.00	0.00	0.00%	0.00%	
272000	Data Communications				0.00	0.00	0.00	0.00%	0.00%	
273000	Voice Communications				0.00	0.00	0.00	0.00%	0.00%	
274000	Audio-Voice Communications (Intercomm)				0.00	0.00	0.00	0.00%	0.00%	
275000	Distributed Communications and Monitoring Systems				0.00	0.00	0.00	0.00%	0.00%	
280000	ELECTRONIC SAFETY & SECURITY - TOTAL				0.00	0.00	0.00	0.00%	0.00%	
281000	Electronic Access Control & Intrusion Detection				0.00	0.00	0.00	0.00%	0.00%	
282000	Electronic Surveillance				0.00	0.00	0.00	0.00%	0.00%	
282100	Fire Alarm				0.00	0.00	0.00	0.00%	0.00%	
283000	Electronic Detection and Alarm				0.00	0.00	0.00	0.00%	0.00%	
284000	Electronic Monitoring and Control				0.00	0.00	0.00	0.00%	0.00%	
310000	EARTHWORK - TOTAL				235,250.00	235,250.00	14.65	3.90%	3.08%	
311000	Site Clearing				12,000.00	12,000.00	0.75	0.20%	0.16%	Machinery & Trucking.
312000	Earth Moving				19,950.00	19,950.00	1.24	0.33%	0.26%	Machinery & Trucking.
312100	Excavation For Parking Lots & Driveways				42,500.00	42,500.00	2.65	0.70%	0.56%	Machinery & Trucking.
313000	Site Grading				100,000.00	100,000.00	6.23	1.66%	1.31%	Machinery & Trucking.
314000	Erosion control				20,000.00	20,000.00	1.25	0.33%	0.26%	
314100	Geofabric				20,400.00	20,400.00	1.27	0.34%	0.27%	
314200	Geotextile				20,400.00	20,400.00	1.27	0.34%	0.27%	
315000	Excavation Support and Protection				0.00	0.00	0.00	0.00%	0.00%	
316000	Special Foundations & Load-Bearing Elements				0.00	0.00	0.00	0.00%	0.00%	
317000	Tunneling and Mining				0.00	0.00	0.00	0.00%	0.00%	
320000	EXTERIOR IMPROVEMENTS - TOTAL				789,133.00	789,133.00	49.15	13.08%	10.34%	
321000	Bases & Brick Paving				0.00	0.00	0.00	0.00%	0.00%	
321100	Trash Enclosure				3,000.00	3,000.00	0.19	0.05%	0.04%	Allowance, not shown on site plan.
321200	Salt Shed				212,760.00	212,760.00	13.25	3.53%	2.79%	1,100 ton capacity.
321300	Fueling Station				30,000.00	30,000.00	1.87	0.50%	0.39%	
322000	Surveying, Site Layout & Location				4,000.00	4,000.00	0.25	0.07%	0.05%	Allowance
323000	Security Fence & Gates				89,700.00	89,700.00	5.59	1.49%	1.18%	Includes 2 electronic gates.
323100	Water Service & Hydrant				19,800.00	19,800.00	1.23	0.33%	0.26%	Add \$16,000-\$25,000 if Meter vault is required.
323200	Sanitary Sewer				24,000.00	24,000.00	1.49	0.40%	0.31%	Labor & Materials.
323300	Storm & Sanitary Manholes				3,600.00	3,600.00	0.22	0.06%	0.05%	
323400	Storm Sewer				31,000.00	31,000.00	1.93	0.51%	0.41%	Labor & Materials.
323500	Asphalt Paving & Striping				97,849.00	97,849.00	6.09	1.62%	1.28%	Includes machinery & materials.
327000	Gravel Parking Lot				215,424.00	215,424.00	13.42	3.57%	2.82%	Includes machinery & materials.
328000	Irrigation				18,000.00	18,000.00	1.12	0.30%	0.24%	Allowance including labor & equipment.
329000	Planting (Landscaping)				40,000.00	40,000.00	2.49	0.66%	0.52%	Allowance including labor & plantings
330000	UTILITIES - TOTAL				19,900.00	19,900.00	1.24	0.33%	0.26%	
331000	Water Utilities				0.00	0.00	0.00	0.00%	0.00%	
331100	Utility Services Cut-Offs & Fees				0.00	0.00	0.00	0.00%	0.00%	
332000	Wells				0.00	0.00	0.00	0.00%	0.00%	
333000	Sanitary Sewage Utilities				0.00	0.00	0.00	0.00%	0.00%	
334000	Storm Drainage Utilities				0.00	0.00	0.00	0.00%	0.00%	
335000	Fuel Distribution Utilities (Gas Service)				8,900.00	8,900.00	0.55	0.15%	0.12%	Labor & Materials.
336000	Hydraulic and Steam Energy Utilities				0.00	0.00	0.00	0.00%	0.00%	
337000	Electrical Utilities (ComEd/Transformer & Pad)				8,000.00	8,000.00	0.50	0.13%	0.10%	Allowance.
338000	Communications Utilities (AT&T/ComCast)				3,000.00	3,000.00	0.19	0.05%	0.04%	Allowance
	SUBTOTAL (Hard Costs)				6,032,404.00	6,032,404.00	375.69		79.05%	
	Site Supervision				0.00	0.00	0.00		0.00%	
	Contingencies (15%)				904,860.60	904,860.60	56.35		11.86%	
	Subcontractor Bonds				0.00	0.00	0.00		0.00%	
	Builders Risk Insurance				0.00	0.00	0.00		0.00%	By Owner
	General Liability Insurance				0.00	0.00	0.00		0.00%	Included in GC Fee.
	GC Overhead & Profit				693,726.46	693,726.46	43.20		9.09%	10% of Construction Costs
	Performance Bond				0.00	0.00	0.00		0.00%	
	Sales Tax				0.00	0.00	0.00		0.00%	
	Total				7,630,991.06	7,630,991.06	475.24		100.00%	

DIRECTORY

ARCHITECT

NERI ARCHITECTS
6400 N. NORTHWEST HWY. SUITE 4
CHICAGO, IL 60631
P. 847.825.9400
LICENSE # AR12100139
EXPIRATION DATE: OCTOBER, 2023

CODE SUMMARY

PROJECT DATA

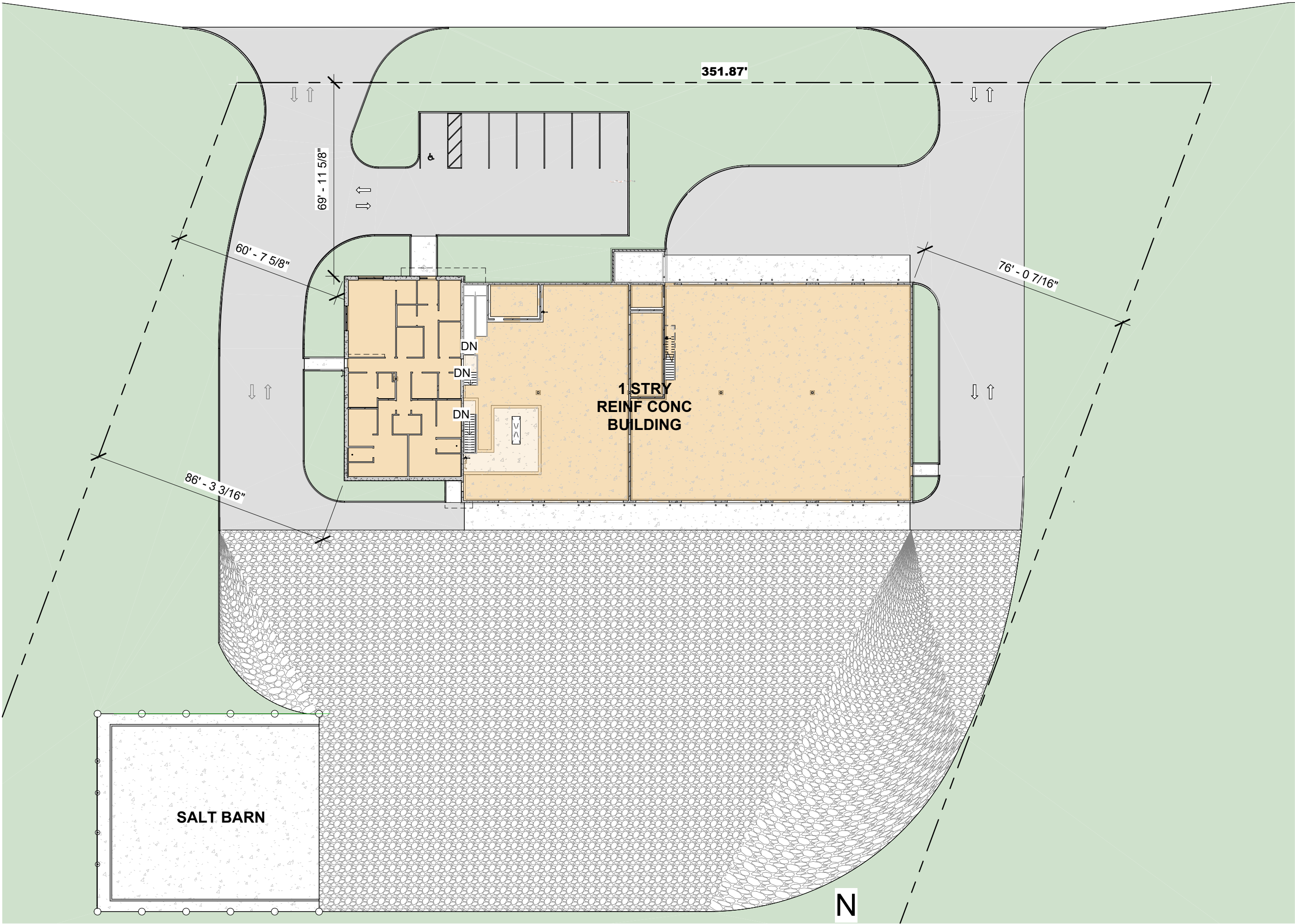
SCOPE OF WORK:	NEW PUBLIC WORKS FACILITY
APPLICABLE CODES:	<p>2014 Indiana Building Code based on: 2012 International Building Code (1st printing), with Indiana Amendments</p> <p>2014 Indiana Fire Prevention Code based on: 2012 International Fire Code</p> <p>Indiana Supplementary Fire Safety Rules</p> <p>2010 Indiana Energy Conservation Code</p> <p>Indiana Plumbing Code (675 IAC 16, IPC), based on: 1997 Uniform Plumbing Code, with Indiana Amendments</p> <p>Indiana Electrical Code (675 IAC 17, IEC), based on: 2008 National Electrical Code (1st printing), with Indiana Amendments</p> <p>2014 Indiana Mechanical Code (675 IAC 18, IMC), based on: 2012 International Mechanical Code with 2008 Indiana Amendments</p> <p>2014 Indiana Fuel Gas Code (675 IAC 25, IFGC), based on: 2012 International Fuel Gas Code (1st printing), with Indiana Amendments</p> <p>Indiana Handicapped Accessibility Code</p>
EXISTING USE:	VACANT

BUILDING DESCRIPTION

USE GROUP:	WHAREHOUSE S-1 Moderate-hazard storage
CONSTRUCTION TYPE:	II-B
BULDING AREA:	16,0333.0 s.f.

SHEET INDEX

ARCHITECTURAL		SALT SHED STRUCTURE		ELECTRICAL	
A-0.0	SITE PLAN & PROJECT INFO	S-101	GENERAL NOTES, SEC. & DETAILS	E-1	ELECTRIC FLOOR PLAN
		A		E-2	ELECTRIC ROOF PLAN
CIVIL		S-201	FOUNDATION PLAN	E-3	ELECTRICAL LIGHTING PLAN
C-1	SITE DIMENSION PLAN	A		E-4	ELECTRICAL POWER & LIGHTING PLAN
C-2	SITE GRADING PLAN			E-5	ELECTRIC SCHEDULES, NOTES, & DETAILS
C-3	SITE LIGHTING PLAN			E-6	ELECTRIC SCHEDULES, NOTES, & DETAILS
				E-7	ELECTRIC SCHEDULES, NOTES, & DETAILS
				E-8	ELECTRIC SCHEDULES, NOTES, & DETAILS
				E-9	ELECTRIC SCHEDULES, NOTES, & DETAILS
ARCHITECTURAL		STRUCTURE			
A-1.0	GENERAL NOTES	S-101	GENERAL NOTES	PLUMBING	
A-2.0	FOUNDATION PLAN	S-201	FOUNDATION PLAN	P-1	PLUMBING FLOOR PLAN
A-2.1	FLOOR PLAN(S)	S-202	FLOOR PLAN	P-2	PLUMBING ROOF PLAN
A-2.2	FLOOR PLAN BLOW UP	S-203	ROOF PLAN	P-3	PLUMBING MISC. PLANS
A-2.3	REFLECTED CLG'S - OFFICES	S-301	SECTIONS & DETAILS	P-4	PLUMBING SCHEDULES, NOTES, & DETAILS
A-2.4	ROOF PLAN	S-302	SECTIONS & DETAILS	P-5	PLUMBING SCHEDULES, NOTES, & DETAILS
A-3.0	INTERIOR ELEVATIONS			P-6	PLUMBING SCHEDULES, NOTES, & DETAILS
A-3.1	INTERIOR ELEV's WOMEN'S BATH	MECHANICAL			
A-3.2	INTERIOR ELEV's MEN'S BATH	M-1	MECHANICAL PLANS		
A-4.0	ELEVATIONS	M-2	MECHANICAL ROOF PLAN		
A-4.1	LIFE SAFETY AND WALL TYPES	M-3	MECH SCHEDULES, NOTES & DETAILS		
A-5.0	BUILDING SECTIONS	M-4	MECH SCHEDULES, NOTES & DETAILS		
A-6.0	DOOR / WINDOW SCHEDULE	M-5	MECH DETAILS & SCHEDULES		
A-7.0	FIRESTOPPING DETAILS	M-6	MECH DETAILS & SCHEDULES		
A-8.0	ACCESSORY STRUCTURE				



2 SITE PLAN (Blow-Up)
A-0.0 SCALE: 1/32" = 1'-0"

SITE PLAN



1 SITE PLAN
A-0.0 SCALE: 1" = 100'-0"

PUBLIC WORKS BUILDING

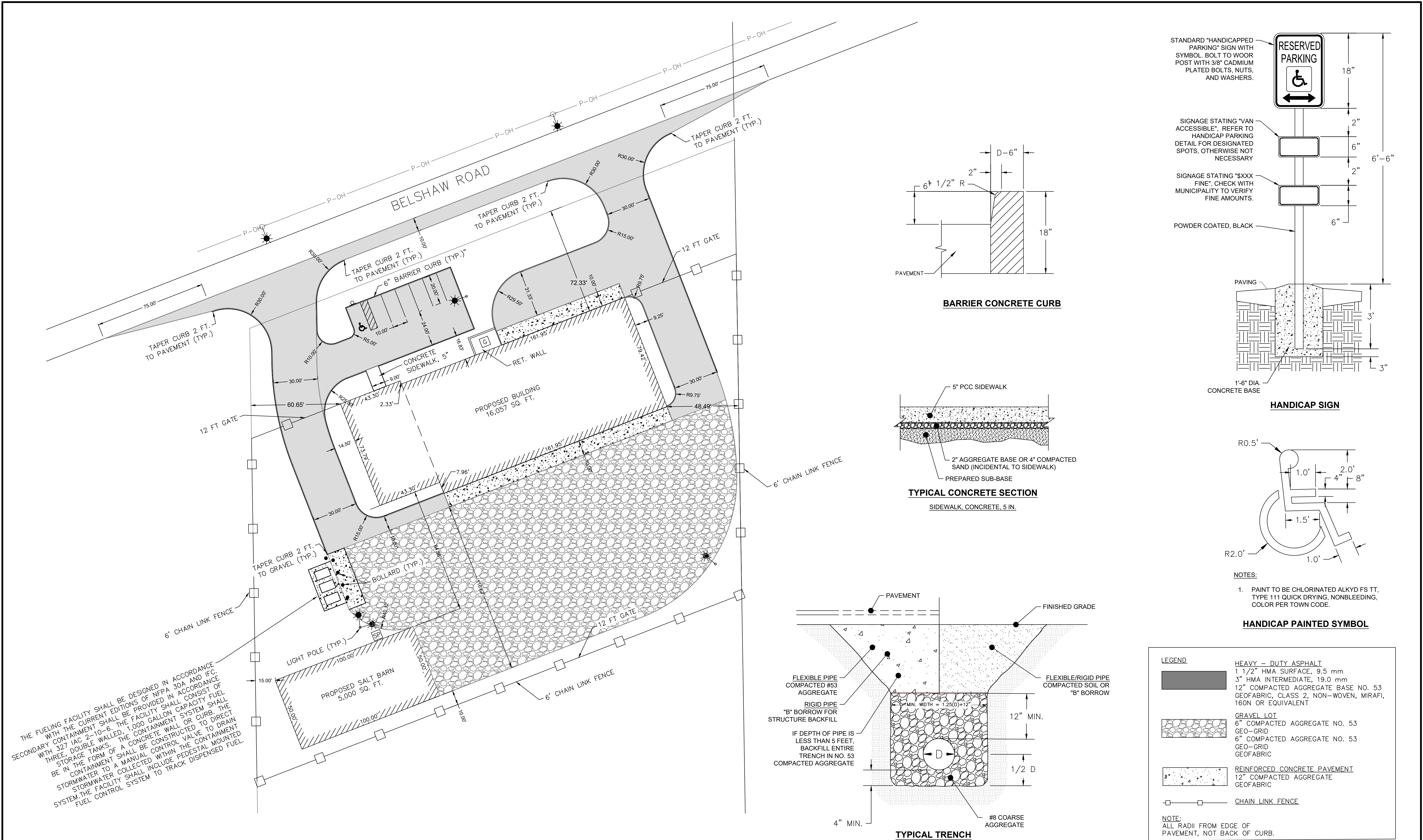
BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

PROJECT #	2102
DATE:	05/13/22

07.15.23	ISSUED FOR BID
REVISIONS	
DRAWN BY:	Author
APPROVED BY:	Checker
SCALE:	AS NOTED
DESCRIPTION:	SITE PLAN & PROJECT INFO
SHEET NO.	

A-0.0



FILE NO.	LOWELL				
PROJECT NO.	2021-1				
ISSUE DATE	03/12/21				
DRAWN BY:	RPO				
DESIGNED BY:	RPO				
CHECKED BY:	CLH				
		NO.	BY	DATE	
		REVISIONS			

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF INDIANA.

CRAIG HENDRIX, P.E.

Date: 03/12/21 Lic. No. PE19500326

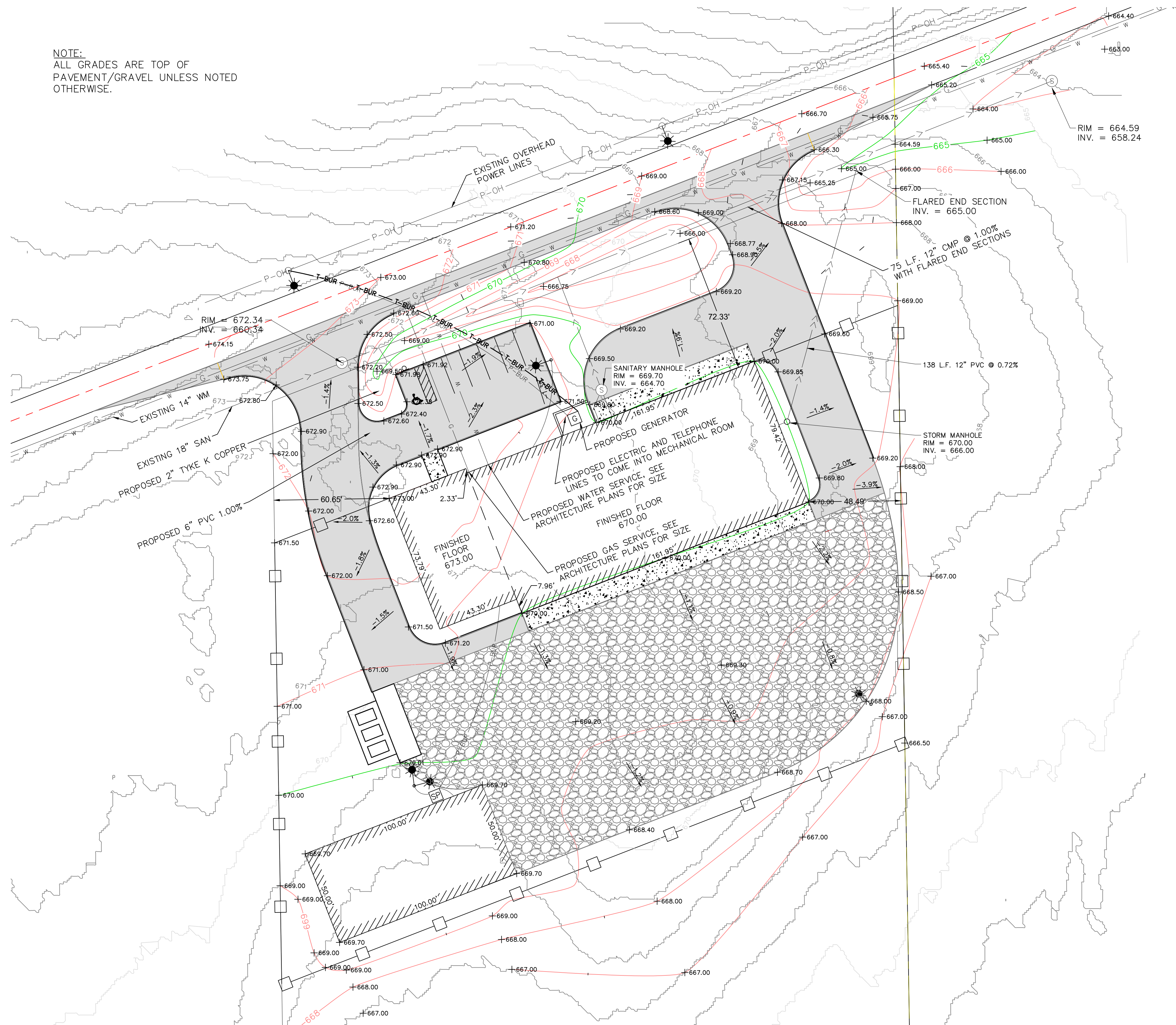
TOWN OF LOWELL
INDIANA



DIMENSIONAL SITE PLAN
MAINTENANCE BUILDING PROJECT

C1

NOTE:
ALL GRADES ARE TOP OF
PAVEMENT/GRAVEL UNLESS NOTED
OTHERWISE.



FILE NO.	LOWELL				
PROJECT NO.	2021-1				
ISSUE DATE	03/12/21				
DRAWN BY:	RPO				
DESIGNED BY:	RPO				
CHECKED BY:	CLH				
	NO.	BY	DATE	REVISIONS	

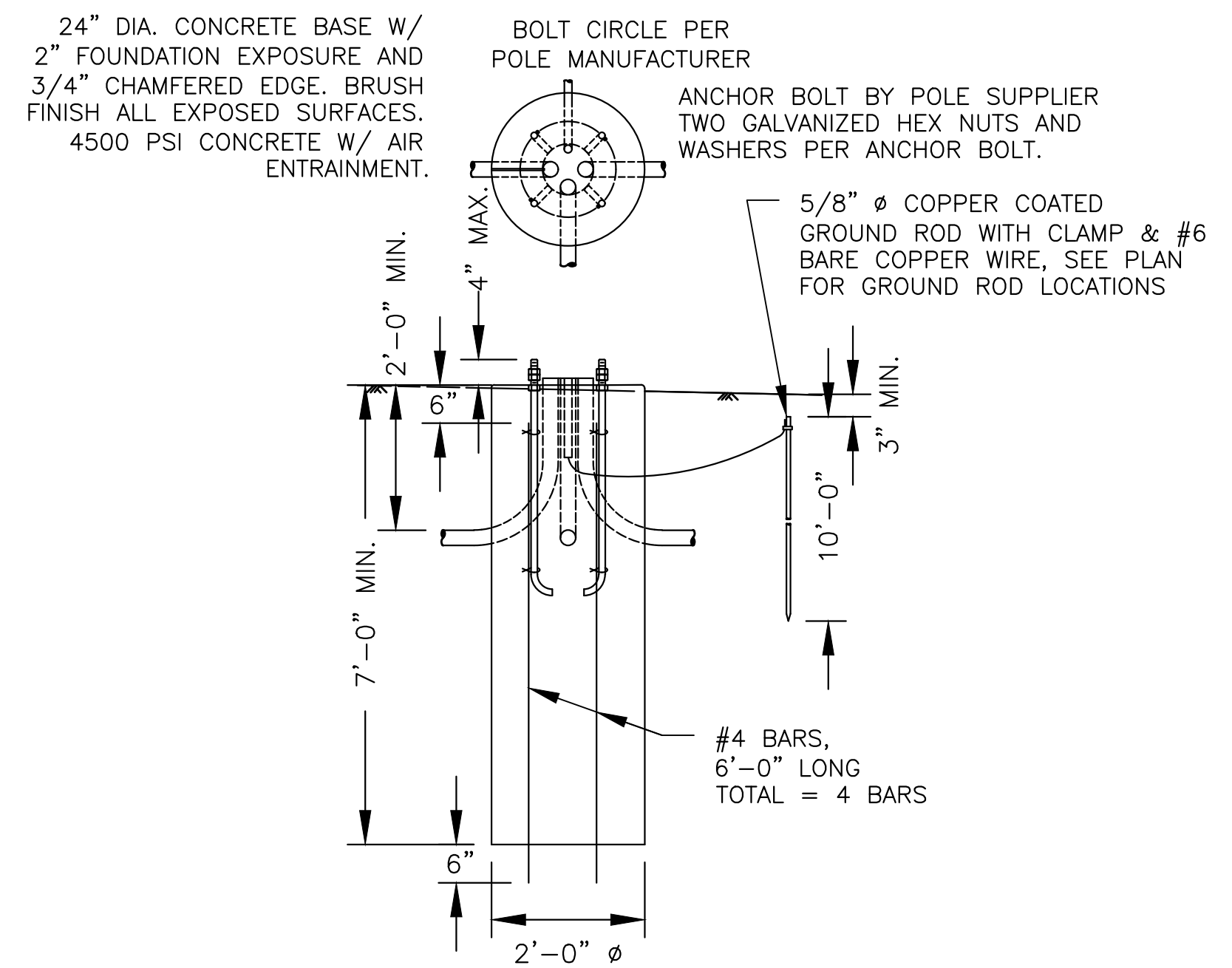
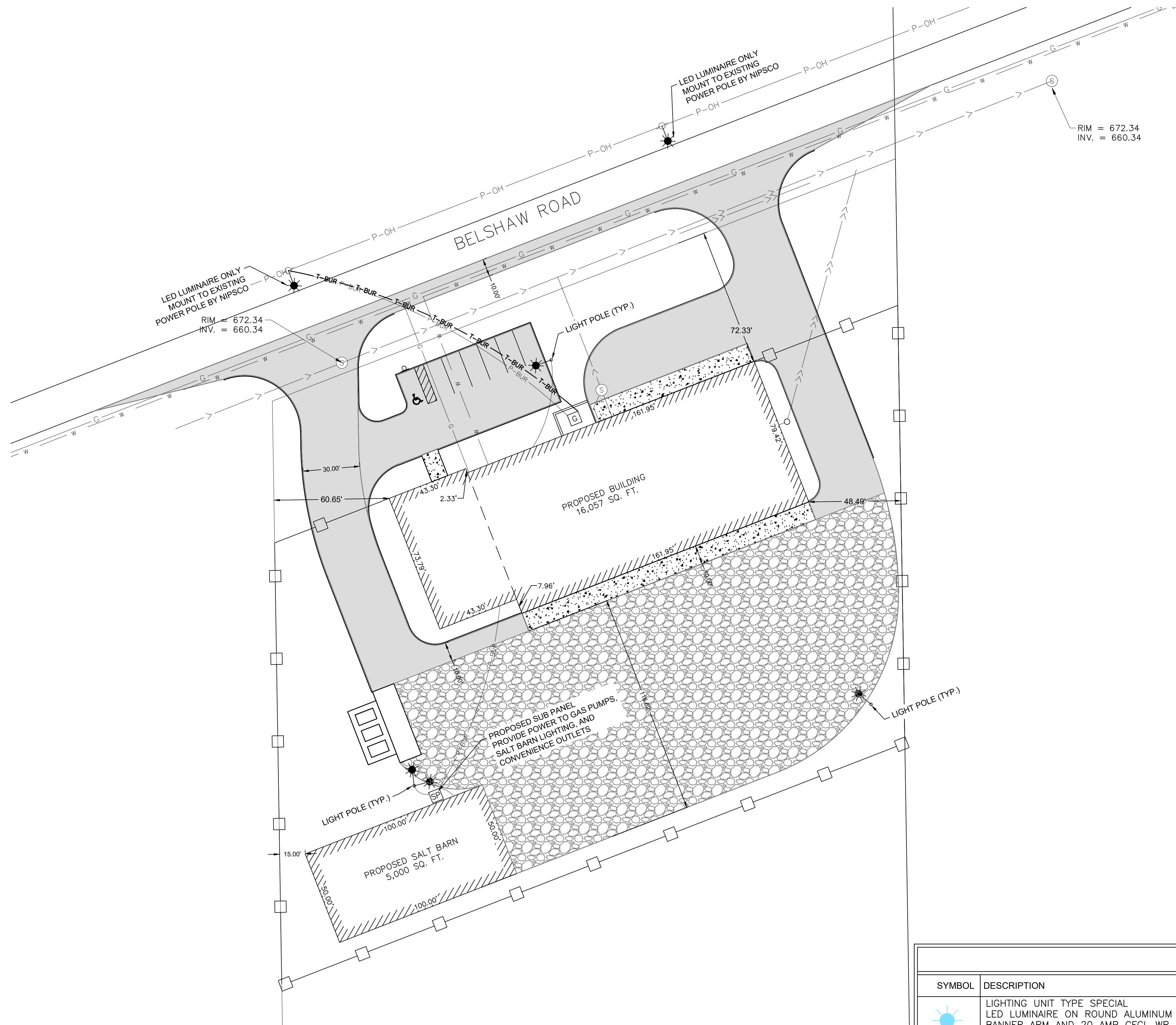
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY
DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF INDIANA.

CRAIG HENDRIX, P.E.
Date: 03/12/21 Lic. No. PE19500326

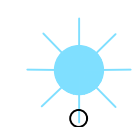
TOWN OF LOWELL
INDIANA



GRADING AND UTILITY PLAN
MAINTENANCE BUILDING PROJECT



LIGHT POLE FOUNDATION DETAIL

EQUIPMENT SCHEDULE					
SYMBOL	DESCRIPTION	LAMP SOURCE	MOUNTING	OPTICS	MANUFACTURER & SERIES #
	LIGHTING UNIT TYPE SPECIAL LED LUMINAIRE ON ROUND ALUMINUM POLE, BANNER ARM AND 20 AMP GFCI, WR RATED RECEPTACLE WITH METALLIC IN USE COVER ALL PAINTED BLACK	204 WATT LED 3000K	30' POLE ON LIGHT FOUNDATION	TYPE V	HOLOPHANE - LUMINAIRE: ATB2 60BLEDE10 MVOLT R5 BK POLE: SSS30-D2-W5-2BANNERARMS-BK1 (ABSET) RFD301374 ARM: HZ 08 BOW_2_180 BK FITTER: UMS POLE ADAPTER

FILE NO.	LOWELL				
PROJECT NO.	2021-1				
ISSUE DATE	03/12/21				
DRAWN BY:	RPO				
DESIGNED BY:	RPO				
CHECKED BY:	CLH				
NO.	BY	DATE	REVISIONS		

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF INDIANA.

CRAIG HENDRIX, P.E.
Date: 03/12/21 Lic. No. PE19500326

TOWN OF LOWELL
INDIANA



LIGHTING PLAN
MAINTENANCE BUILDING PROJECT

C3

FRAMING NOTES

1. ALL BEAMS, LINTELS OR STRUCTURAL MEMBERS TO BE NO. 2 SOUTHERN PINE (KILN DRIED) W/ "E" = 1,600,000 AND Fb = 1,300 (OR EQUAL).
2. ALL FLOOR JOISTS SHALL BE 11-7/8" TJI-560 BY "TRUS-JOIST" CORP. @ 16" O.C. (UNLESS NOTED OTHERWISE) AND SHALL BE COVERED ON THE UNDERSIDE WITH A MINIMUM 5/8" TYPE X DRYWALL THROUGHOUT. STAIR HEADERS TO BE 11-7/8" DEEP TJI (GIRDER TRUSS) AND TRIMMERS TO BE 2 - 1 3/4" x 11 7/8" "MICRO-LAM" (UNLESS NOTED OTHERWISE). FURNISH ONE (1) SET OF SEPIA SHOP DRAWINGS TO THE GENERAL CONTRACTOR TWO (2) WEEKS PRIOR TO FABRICATION FOR REVIEW AND COMMENT, AND SHALL BE SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER LICENSED IN THE STATE OF INDIANA. ANY MATERIALS DELIVERED TO THE JOB SITE WITHOUT APPROVED SHOP DRAWINGS WILL BE REJECTED. ALSO THE TRUSS MANUFACTURER SHALL SUPPLY THE GENERAL CONTRACTOR WITH A COPY OF HIS CERTIFICATE OF INSURANCE. SEE 06190 AND 06195 FOR PRODUCT SPECIFICATIONS AND INFORMATION.
3. ALL WOOD LINTELS OVER DOORS AND WINDOWS SHALL BE 2 - 2 x 12's (UNLESS NOTED OTHERWISE).
4. ALL WOOD PLATES AND SILLS BEARING DIRECTLY ON CONCRETE SHALL BE PRESSURE TREATED FOR ROT AND TERMITES.
5. ALL EXTERIOR CORNERS SHALL BE LET-IN METAL DIAGONAL WIND BRACING BY "SIMPSON" #CWB-126, OR 5/8" CDX PLYWOOD.
6. ROOF: (LIVE LOAD = 20 P.S.F., DEAD LOAD = 10 P.S.F.)
7. FLOOR: (LIVE LOAD = 40 P.S.F., DEAD LOAD = 15 P.S.F.)
8. PARTITIONS: ASSUMED WALL LOAD = 20 lb/LF.
9. SNOW LOAD: 30 lb P.S.F.
10. ULTIMATE WIND DESIGN SPEEDS: 115 MPH
11. WIND EXPOSURE CATEGORY B. URBAN AND SUBURBAN AREAS, WOODED AREAS OR OTHER TERRAIN WITH NUMEROUS CLOSELY SPACED OBSTRUCTIONS HAVING THE SIZE OF SINGLE FAMILY DWELLINGS OR LARGER. EXPOSURE B SHALL BE ASSUMED UNLESS THE SITE MEETS THE DEFINITION OF ANOTHER TYPE OF EXPOSURE.
12. ROOF SHEATHING SHALL BE 5/8" DOUGLAS FIR CDX PLYWOOD W/ IDENTIFICATION INDEX NO. 32/16. ALL TYPICAL FLOORS AND WALK ON DECKS SHALL BE 3/4" CDX PLYWOOD INDEX NO. 24/48. ALL TO BE GLUED AND NAILED.
13. 2 x 4 TOP PLATES TO BE DOUBLED BELOW FLOOR TRUSS BEARING.
14. ALL DOUBLE TRUSSES OR "MICRO-LAM" BEAMS BEARING ON FRAME WALLS TO BE CARRIED DOWN TO FOUNDATION ON TRIPLE STUDS GLUED AND SPIKED AS INDICATED.
15. REFLECTED FRAMING SHOWN ON PLAN.
16. EXTERIOR OR LOAD BEARING WALLS WITH PLATES CUT, DRILLED OR NOTCHED MORE THAN 50% OF THE WIDTH OF THE STUD SHALL HAVE A GALVANIZED METAL TIE 16 GAGE AND 11/2 INCHES (11/2") WIDE FASTENED TO EACH PLATE.
17. EXTERIOR OR LOAD BEARING WALLS WITH STUDS DRILLED WITHIN 5/8" OF THE FACE OF THE STUD SHALL BE REINFORCED WITH A STRUCTURAL STUD SHOE.
18. TYPE 1A-FIRECODE INTUMESCENT ACRYLIC FIRESTOP SEALANT- TO BE USED AS FIRESTOP AND DRAFTSTOP AT ALL REQUIRED LOCATIONS AS DESCRIBED IN IRC R602.8
19. CUTS, NOTCHES AND HOLES BORED IN TRUSSES, LAMINATED VENEER LUMBER, GLUE-LAMINATED MEMBERS OR I-JOISTS ARE NOT PERMITTED UNLESS THE EFFECTS OF SUCH ARE SPECIFICALLY ADDRESSED. (SECTION: R502.8.2)
20. MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE PRE-ENGINEERED TJI FLOOR JOISTS SHALL BE ON THE JOBSITE AT THE TIME OF INSPECTIONS.

MASONRY NOTES

1. STONE AND BRICK SHALL BE AS APPROVED BY THE OWNER. ALLOW \$380/M FOR BRICK ONLY.
2. CONCRETE MASONRY UNITS (CMU) SHALL BE AS INDICATED ON THE PROJECT DRAWINGS.
3. ANCHORS AND TIES SHALL BE ZINC-COATED STEEL AND SHALL MEET "ASTM" A-525, CLASS G-60.
4. JOINT REINFORCING SHALL BE PREFABRICATED TRUSS-TYPE, SIMILAR TO "DUR-O-WALL" AND SHALL MEET "ASTM" A-153, CLASS B-2.
5. MORTAR SHALL CONSIST OF PORTLAND CEMENT, HYDRATED LIME AND SAND IN A PROPORTION OF 1:1:6 IN ACCORDANCE WITH "ASTM" C-270 FOR TYPE "N" MORTAR.
6. LIMESTONE SILLS AND CAPS WHERE REQUIRED SHALL BE "INDIANA" LIMESTONE, BUFF COLOR, VARIEGATED STONE SHALL NOT BE PERMITTED.
7. EXPANSION AND CONTROL JOINT FILLERS SHALL BE PRE-FORMED RUBBER. THE EXTENT AND LOCATION SHALL BE AS INDICATED ON THE PLANS.
8. FLASHING @ ALL MASONRY LINTEL OPENINGS AND WEEP HOLES SHALL BE OF THE TYPE AS INDICATED ON THE PROJECT DRAWINGS. WEEPS SHALL BE WICK TYPE, INSTALLED IN EXTERIOR WALLS AT TWENTY FOUR (24) INCH CENTERS (MAX) SPACING.
9. PROTECT ALL MASONRY MATERIAL AGAINST MOISTURE. DO NOT USE REINFORCING OR TIES HAVING LOOSE RUST OR OTHER COATING WHICH AFFECT BONDING.
10. LAY UP WALLS PLUMB AND TRUE WITH COURSES LEVEL, ACCURATELY SPACED AND COORDINATED WITH OTHER WORK. ALL BOND SHALL MATCH EXISTING UNLESS INDICATED OTHERWISE. ALL HORIZONTAL JOINTS SHALL BE LEVEL AND ALL VERTICAL JOINTS SHALL BE PLUMB, WITH A TOLERANCE OF PLUS OR MINUS ONE QUARTER (1/4) INCH FOR THE HEIGHT (TOP AND BOTTOM OF THE WALL.
11. BRICK WORK SHALL BE REINFORCED WITH CORROSION RESISTANT TIES, SPACED AT SIXTEEN (16) INCHES VERTICAL CENTERS AND THIRTY TWO (32) INCHES HORIZONTAL CENTERS.
12. EXPOSED JOINTS SHALL BE TOOLED AND BRUSHED.
13. CLEAN ALL MASONRY WORK INCLUDED IN THIS SECTION. PROTECT ADJOINING WORK FROM DAMAGE FROM ALL CLEANING OPERATIONS.
14. GROUT ALL VOIDS AT JAMBS, HEADERS, FOUNDATIONS AND SILLS. POINT JOINTS AS NECESSARY INCLUDING POCKETS AND VOIDS.
15. PROTECT ALL WORK FROM FREEZING.
16. SET STEEL LINTELS AND MISC. STEEL IN MASONRY AS INDICATED ON PLANS. PROVIDE 4" MIN. BEARING @ EACH END OF BEARING.

GENERAL CONCRETE NOTES

1. WHERE AND WHEN CALLED FOR ALL CLEAN GRANULAR FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% OF "ASTM" D-1557-70 (MINIMUM PROCTOR DENSITY).
2. EXCAVATIONS DEEPER THAN THE ELEVATION OF FOOTING MUST BE CLEARED THROUGH THE ENGINEERING OFFICE.
3. WALL FOOTINGS TO HAVE 6" PROTECTIONS FROM EACH FACE OF WALL AND BE 1'-0" DEEP (UNLESS NOTED OTHERWISE).
4. CONTRACTOR SHALL PROTECT FOUNDATION AGAINST LATERAL DISPLACEMENT, HEAT OR FREEZING CONDITIONS.
5. PROVIDE 2-#5 BARS (TOP AND BOTTOM) CONTINUOUS IN CONCRETE WALL UNLESS NOTED OTHERWISE. LAP AND TIE BARS 3'-0" AT SPLICES AND PROVIDE 4'-0" LONG CORNER BARS (UNLESS NOTED OTHERWISE).
6. ALL REINFORCED CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AS PUBLISHED BY "THE AMERICAN CONCRETE INSTITUTE" (A.C.I. STANDARD 318-83).
7. ALL CONCRETE TO HAVE A MINIMUM ULTIMATE STRENGTH OF 3000 P.S.I. AT THE END OF 28 DAYS UNLESS NOTED OTHERWISE).
8. ALL REINFORCING STEEL SHALL CONFORM TO "ASTM" A-615, GRADE 60 SPEC. FOR NEW BILLET STEEL.
9. ALL WELDED WIRE MESH SHALL BE LAPPED (2) TWO FULL MESH PANELS AND TIED SECURELY. WELDED WIRE MESH SHALL CONFORM TO "ASTM" A-185 SPEC.
10. CONCRETE COVER SHALL BE 1" TOP AND BOTTOM FOR SLABS; 1-1/2" FOR BEAMS, COLUMNS AND WALLS; 3" FOR FOOTINGS, MATS AND GRADE BEAMSALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED OF LAITANCE WITH A WIRE BRUSH AND WATER IMMEDIATELY PRIOR TO POURING OF SUBSEQUENT OR NEW CONCRETE.
11. POUR ALL SLABS-ON-GRADE IN CHECKERBOARD FASHION BETWEEN CONSTRUCTION JOINTS IN AREAS NOT TO EXCEED 600 SQ. FT. WITH A MINIMUM OF 24 HOURS BETWEEN ADJACENT POURS.
12. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE OR MORTAR.
13. ALL STRUCTURAL STEEL SHALL CONFORM TO "ASTM" A-36 SPEC. (UNLESS NOTED OTHERWISE).
14. SPADE OR VIBRATE CONCRETE FOUNDATIONS AS NECESSARY TO AVOID HONEYCOMBING
15. INSTALL ALL THRU-WALL SLEEVES OR CHASES AS REQUIRED BY THE ELEC./PLUMBING/ OR HVAC CONTRACTOR, LOCATE AS DIRECTED.
16. CONCRETE CONTRACTOR TO SUBMIT ALTERNATIVE PRICE FOR REPLACING DAMAGED SECTIONS OF PUBLIC SIDEWALK
17. KEYNOTE SHOWN BY:

1. 4" CONCRETE SLAB ON GRADE WITH ONE LAYER WWF 66-1010 AT 1-12" CLEAR @ TOP.

2. SEE DETAILS FOR BRICK LEDGE REINFORCEMENT.

3. DEPRESS TOP OF WALL 8" AT ENTRY (UNLESS NOTED OTHERWISE)- SEE ARCHITECTURAL FOR LOCATION.

4. 5" CONCRETE SLAB ON GRADE WITH ONE LAYER WWF 66-1010 AT 1-1/2" CLEAR @ TOP. (GARAGE)

5. ALL SECTIONS OF DRIVEWAY INCLUDING THE APRON SECTIONS OF THE DRIVE (FROM THE SIDEWALK TO THE HOUSE) TO BE CONSTRUCTED OF:

A. A MINIMUM 4" COMPACTED GRADE C.A. 6 STONE BASE, WITH 6" CONCRETE;

B. AN 8" COMPACTED GRADE C.A. 6 STONE BASE, WITH 2" CLASS I BITUMINOUS SURFACE, NO WIRE MESH ALLOWED UNDER PUBLIC WALK & PARKWAY. MESH REQUIRED ON PRIVATE SECTIONS OR ENTIRE POUR TO BE FIBER MESH, NO PEA GRAVEL ALLOWED

6. PRIVATE SIDEWALKS ARE TO BE 4" THICK WITH A MINIMUM OF 4" GRADE CA-6 STONE BASE. PUBLIC SIDEWALKS ARE TO BE 5" THICK WITH A MINIMUM OF 4" GRADE CA-6 STONE BASE.

7. BRICK PAVER PATIO TO BE CONSTRUCTED OF A MINIMUM 4" COMPACTED GRADE C.A. 6 STONE BASE AND 1-1/2" SAND. A CONCRETE BASE IN LIEU OF THE MINIMUM OF CA-6 STONE IS ACCEPTABLE.

NOTE
CONCRETE CONTRACTOR SHALL COORDINATE ALL CHASES AND SLEEVES IN FOUNDATION WALLS WITH PLUMBING AND HEATING CONTRACTORS.

PLUMBING CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL SLEEVES AND CHASES NECESSARY TO INSTALL A COMPLETE SYSTEM AS REQUIRED PER THE PROJECT DRAWINGS. THE PLUMBING CONTRACTOR SHALL COORDINATE ANY CHANGES OR ADDITIONAL INFORMATION WITH THE CONCRETE AND GENERAL CONTRACTORS PRIOR TO ANY POURING OF FOOTINGS AND FOUNDATIONS. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING OFF AND MAKING WATERTIGHT ALL PENETRATIONS MADE BELOW GRADE.

GENERAL NOTES

1. INCLUDED AS PART OF THESE DOCUMENTS IS THE "GENERAL CONDITIONS FOR CONSTRUCTION", AIA DOCUMENT A-201, ARTICLE 1 THROUGH 14 INCLUSIVE.
2. THESE DRAWINGS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF THE ARCHITECTURAL DESIGN CONCEPT, DIMENSIONS, MAJOR ELEMENTS AND MATERIALS. THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR THE FULL COMPLETION OF THE PROJECT.
3. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL FURNISH ALL OF THOSE ITEMS AND LABOR REQUIRED FOR THE FULL COMPLETION OF THIS PROJECT IN A FIRST CLASS WORKMANSHIP LIKE MANNER.
4. ALL INTERIOR BEARING WALLS AND SHAFTS SHALL BE (1) ONE HOUR RATED CONSTRUCTION USING 5/8" TYPE-X U.L. RATED DRY WALL (BOTH SIDES)
5. THIS CONTRACTOR SHALL INSTALL SMOKE DETECTORS AS REQUIRED BY THE CITY OF LOWELL CODE
6. INTERIOR FINISHES SHALL NOT EXCEED CLASS 1, 0-25 FLAME SPREAD, 200 SMOKE.
7. INSULATION MATERIALS, INCLUDING FACINGS, SUCH AS VAPOR RETARDERS AND VAPOR-PERMEABLE MEMBRANES INSTALLED WITHIN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, WALL ASSEMBLIES, CRAWL SPACES AND ATTICS SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 25 WITH AN ACCOMPANYING SMOKE-DEVELOPED INDEX NOT TO EXCEED 450 WHERE TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
8. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS AND CONDITIONS BEFORE EXECUTION OF ANY WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT IN WRITING.
9. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE ADHERENCE TO COMPLY WITH ALL APPLICABLE CITY, STATE, AND NATIONAL CODES AND ORDINANCES.
10. THE CONTRACTOR SHALL VERIFY ALL PARTITION LAYOUTS WITH THE ARCHITECT BEFORE PROCEEDING WITH ANY FRAMING.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL INCOMING UTILITIES.
12. WRITTEN DIMENSIONS HOLD PREFERENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.

A. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL:

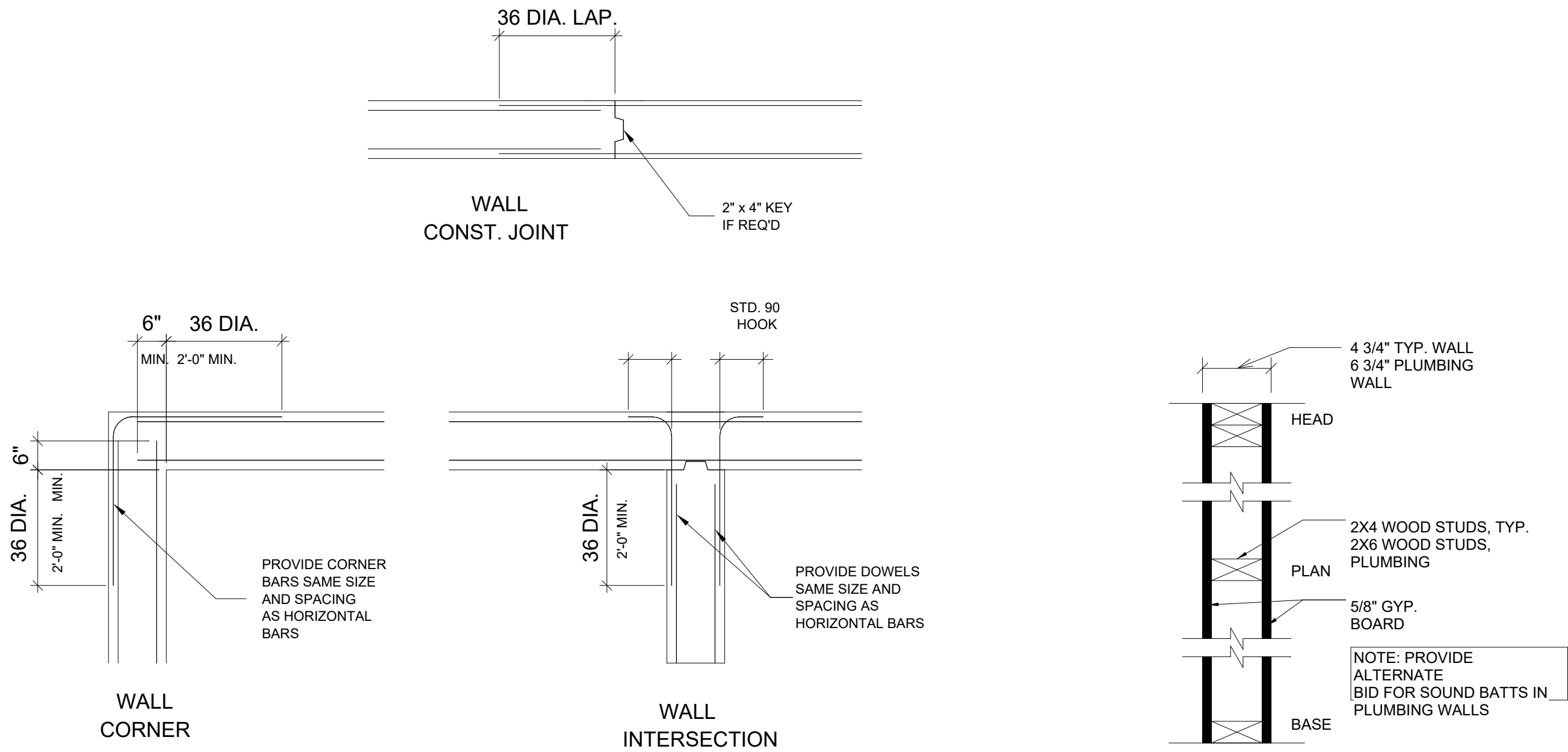
COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES AND ORDINANCES.

B. PERFORM ALL WORK IN A FIRST CLASS WORKMANSHIP LIKE MANNER AND IN NO WAY DAMAGE OR WEAKEN THE STRUCTURAL STRENGTH OF THE BUILDING.

C. REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT, (OSHA) LATEST ADDITION.

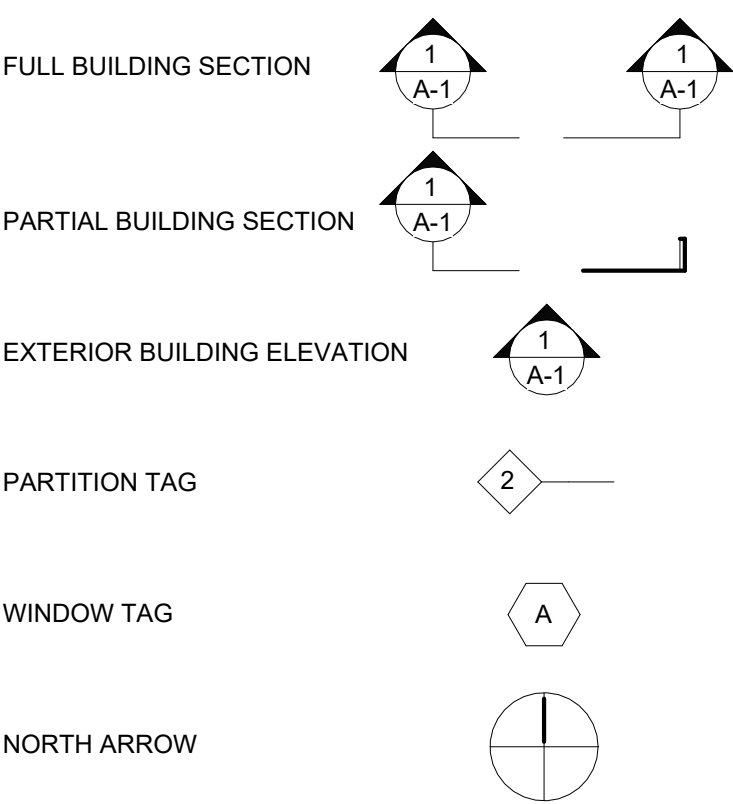
D. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR AFTER SUBMITTAL OF COMPLETION OF WORK.

E. MAINTAIN THROUGHOUT THE CONSTRUCTION PERIOD, A CERTIFICATE OF INSURANCE FOR ALL LIABILITIES, WITH A HOLD HARMLESS CLAUSE, PROTECTING THE OWNER AND ARCHITECT.
13. THE GENERAL CONTRACTOR'S SUBCONTRACTORS SHALL COMPLETELY HOOKUP AND CONNECT ALL EQUIPMENT AND FURNISH ALL NECESSARY APPENDAGES.
14. ALL WINDOW GLASS, MIRRORS, FLOORS AND WALL TILE SHALL BE CLEANED AND WASHED UPON COMPLETION OF THE PROJECT BY THE GENERAL CONTRACTOR.
15. THE PREMISES SHALL BE KEPT IN A BROOM SWEEP FINISH CONDITION DURING ALL PHASES OF THE CONSTRUCTION. (ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR CLEANING UP AND DISPOSING OF THEIR LITTER AND LEFT OVER MATERIALS ON A REGULAR BASIS AND LEAVE THE PROJECT IN A BROOM SWEEP FINISH CONDITION UPON COMPLETION OF THEIR PORTION OF THIS PROJECT).
16. THE ENTIRE INSTALLATION SHALL BE PERFORMED IN FIRST CLASS WORKMANSHIP LIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL. ACCEPTANCE BY THE OWNER SHALL BE A CONDITION OF THE CONTRACT.
17. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES IN ORDER TO AVOID INTERFERENCE, PRESERVE MAXIMUM HEAD ROOM AND AVOID OMISSIONS.
18. ALL WORK PERFORMED MUST COMPLY WITH THE CITY OF LOWELL BUILDING CODE.
19. THE EXCAVATOR SHALL REMOVE ALL EXCESS MATERIAL DOWN TO 6" (SIX INCHES) BELOW FINISH GRADE, INCLUDING PARKWAYS.
20. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ONE (1) 4 x 4 WOOD POST WITH A TEMPORARY METER HEAD AND TWO (2) 110 V. AND ONE (1) 220 V. OUTLET TO BE USED BY ALL OTHER TRADES DURING THE COURSE OF CONSTRUCTION OR UNTIL EACH UNIT IS ELECTRIFIED AND SHALL BE BILLED TO THE GENERAL CONTRACTOR.
21. THE GENERAL CONTRACTOR TO PROVIDE TEMPORARY FENCING AND BARRICADES AROUND THE ENTIRE SITE TO BE PROTECTED AND AT ANY INTERIOR FLOOR OPENINGS THAT MIGHT CAUSE A HAZARD TO ALL.
22. APPROVED PLANS SHALL BE ON SITE FOR ALL INSPECTIONS.
23. ALL CONTRACTORS AND THEIR REPRESENTATIVES WORKING ON THIS PROJECT SHALL AT ALL TIMES PRIOR AND DURING THE COURSE OF THEIR ACTIVITY BE RESPONSIBLE FOR THE SAFETY OF THEIR EMPLOYEES, AS WELL AS OTHERS AND IN THE CARE OF THE PROPERTY. EACH AS REPRESENTATIVES OF THEIR EMPLOYEES SHALL ASCERTAIN THAT THE CONDITIONS UNDER WHICH THEY WILL BE REQUIRED TO ACCOMPLISH THEIR WORK ARE SAFE WITHIN GOOD SAFETY PRACTICES AND MEET ALL CONCERNED REGULATIONS OF THE OCCUPATIONAL SAFETY AND HAZARD ACT OR OTHER GOVERNING REGULATIONS. THE BEGINNING OF WORK BY A CONTRACTOR SHALL INDICATE SATISFACTION CONCERNING SAFETY AND FULL RESPONSIBILITY FOR ACCIDENTS OR DAMAGE. IF UNSATISFIED, THE CONTRACTOR SHALL INDICATE WHAT SO EVER ACTION OR DEVICES NECESSARY TO RENDER SAFETY CONDITIONS FOR LIFE AND PROPERTY AS ARE RELATED TO HIS ACTIVITY. IF THE WORK OF OTHER PARTIES OUTSIDE OF THEIR ORGANIZATION IS UPON INSPECTION FOUND AT ANY TIME TO BE UNSAFE, HE SHALL STOP WORK IMMEDIATELY AND NOTIFY THE GENERAL CONTRACTOR, ARCHITECT AND OWNER. THE BEGINNING OF WORK SHALL INDICATE SATISFACTION. ACCEPTANCE OF A CONTRACT SHALL INDICATE ACCEPTANCE OF THESE REQUIREMENTS.
24. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION OTHER THAN SHOWN ON THESE DRAWINGS.
25. THIS SET OF PLANS IS PROTECTED UNDER UNITED STATES GOVERNMENT COPYRIGHT LAWS AND MAY NOT BE REPRODUCED, REPRINTED OR COPIED IN ANY MANNER, EXCEPT BY APPROVAL OF ARCHITECT IN WRITING. ANY PERSON OR FIRM KNOWINGLY REPRODUCING, REPRINTING, OR PHOTOCOYPING ANY OF THIS WORK WILL BE SUBJECT TO LAWSUITS AND SUCH PENALTIES AS THE LAW ALLOWS.
26. THESE DRAWINGS WERE PREPARED UNDER MY DIRECTION AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE IN ACCORDANCE WITH THE BUILDING LAWS OF CITY OF LOWELL.



TYPICAL FOUNDATION WALL DETAILS
VERTICAL REINFORCING NOT SHOWN

SYMBOLS LIST



PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

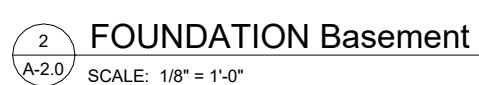
NERO ARCHITECTS

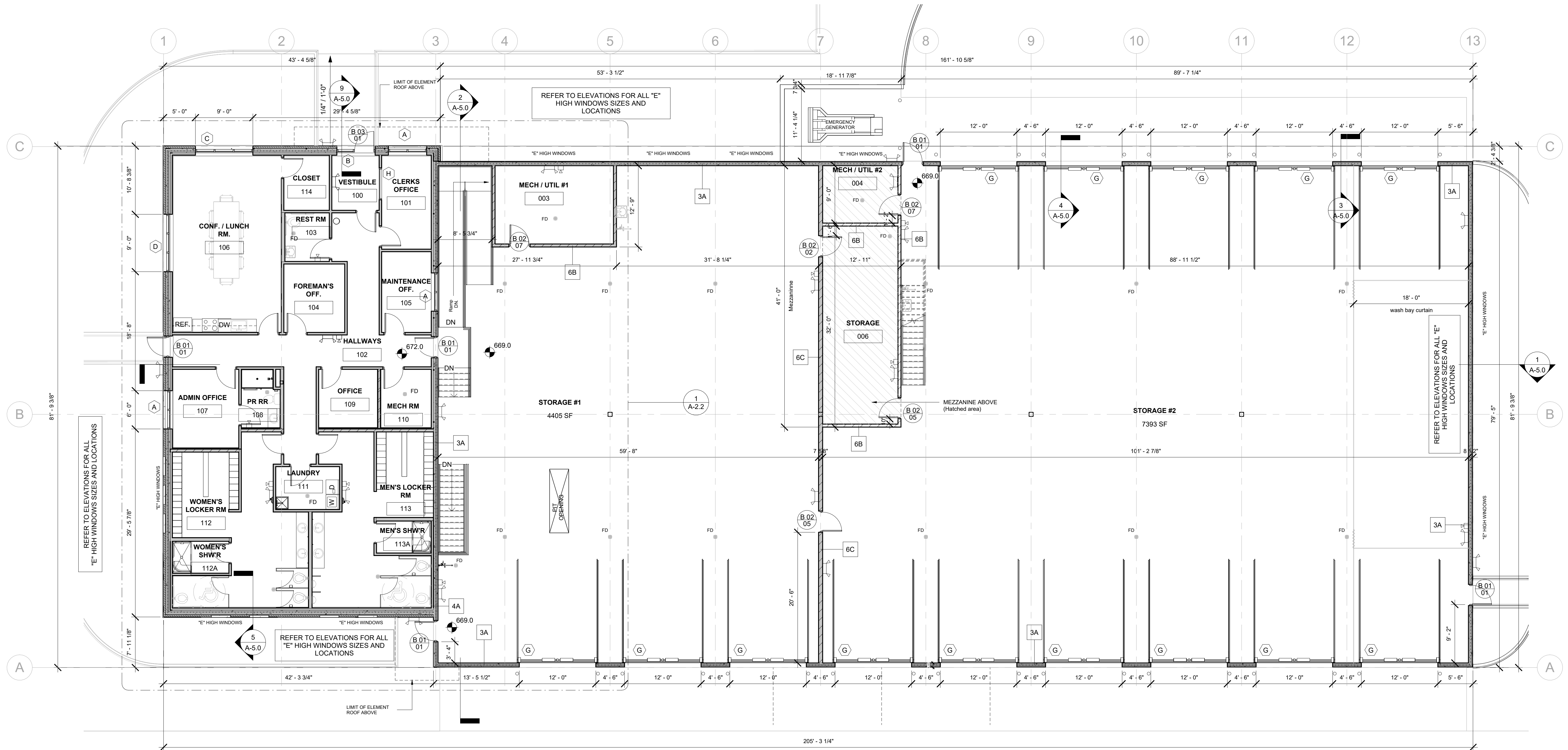
6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847/825-9400

PROJECT #	2102
DATE:	05/13/22

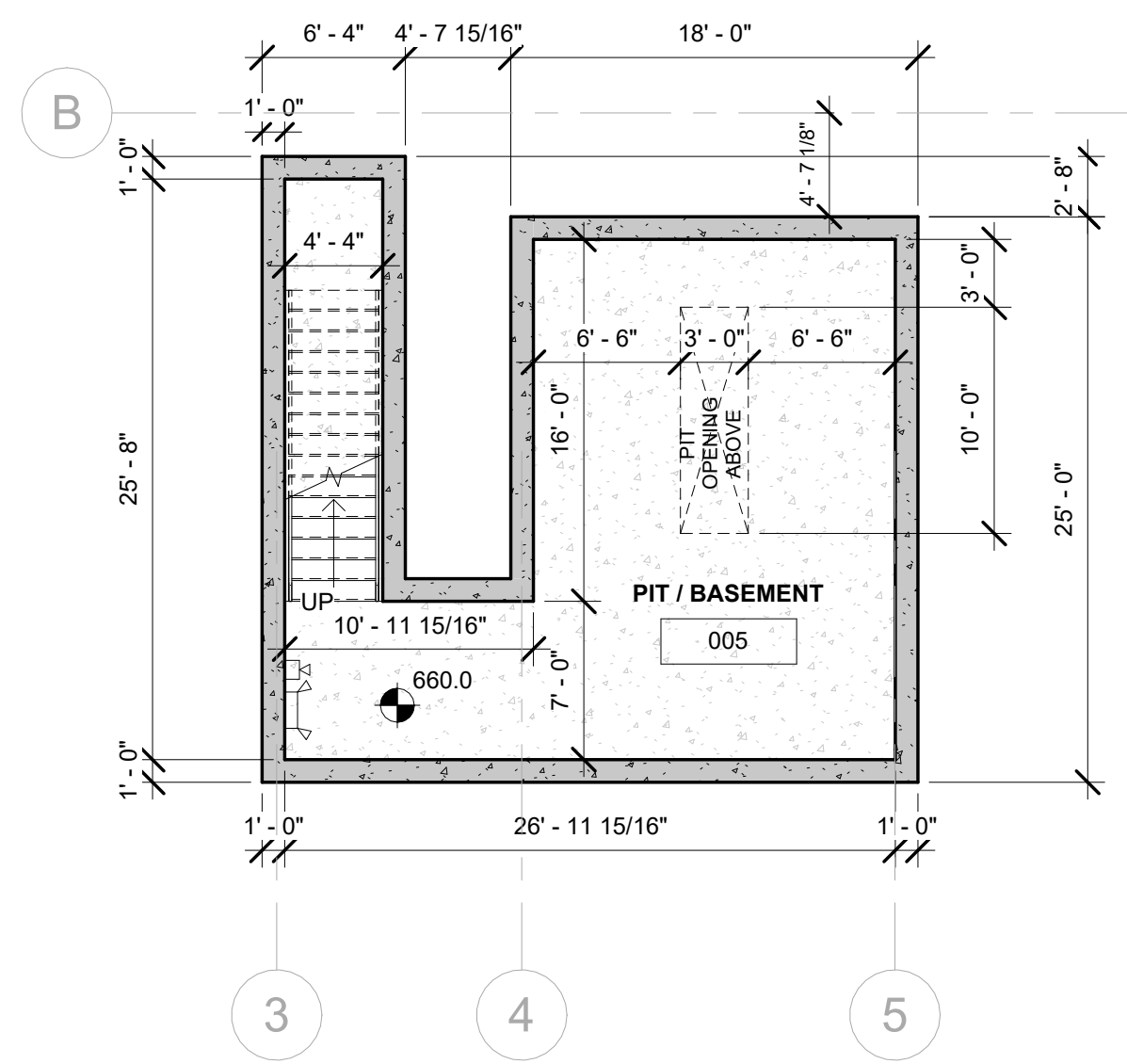
07.15.23	ISSUED FOR BID
▲	REVISIONS
DRAWN BY:	Author
APPROVED BY:	Checker
SCALE:	AS NOTED
DESCRIPTION:	GENERAL NOTES

SHEET NO.	A-1.0
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1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 BASEMENT/PIT
SCALE: 1/8" = 1'-0"

PROJECT # 2102
DATE: 05/13/22

PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

07.15.23	ISSUED FOR BID
REVISIONS	
DRAWN BY:	Author
APPROVED BY:	Checker
SCALE:	AS NOTED
DESCRIPTION:	FLOOR PLAN(S)

SHEET NO.
A-2.1

PROJECT # 2102
DATE: 05/13/22

PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

07.15.23 ISSUED FOR BID

REVISIONS

DRAWN BY: Author

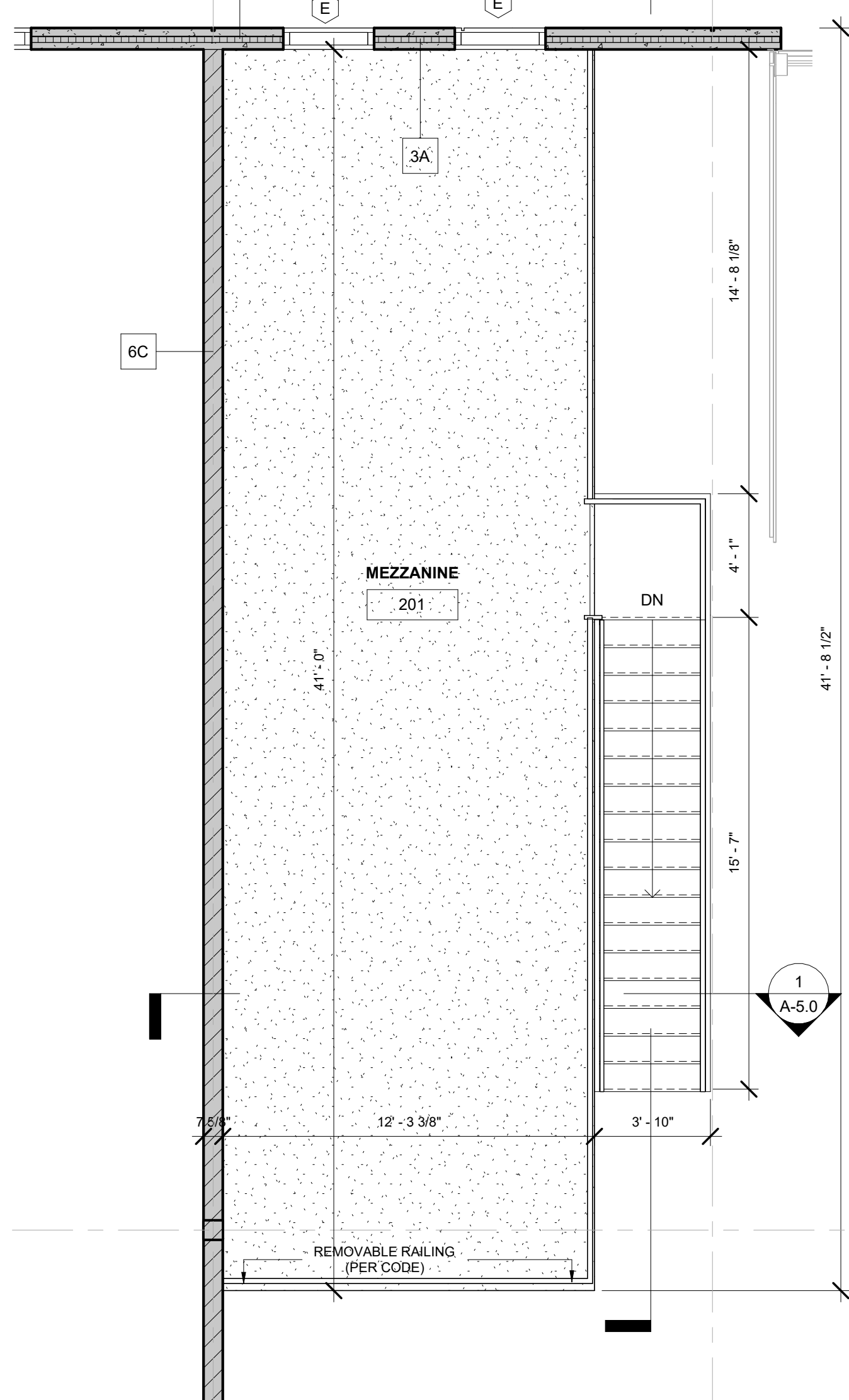
APPROVED BY: Checker

SCALE: AS NOTED

DESCRIPTION: FLOOR PLAN BLOW UP

SHEET NO.

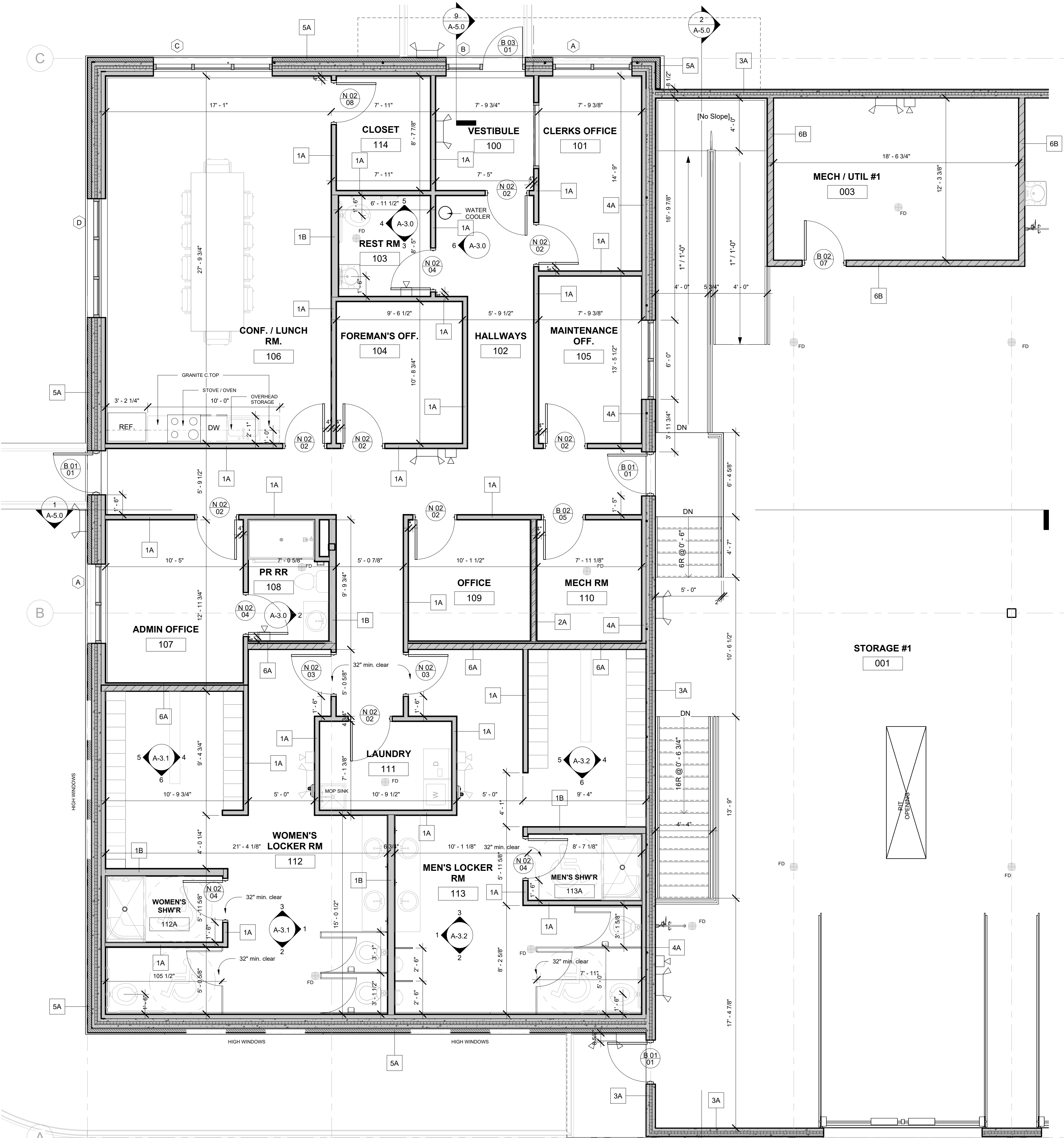
A-2.2



MEZZANINE FLOOR PLAN
SHEET

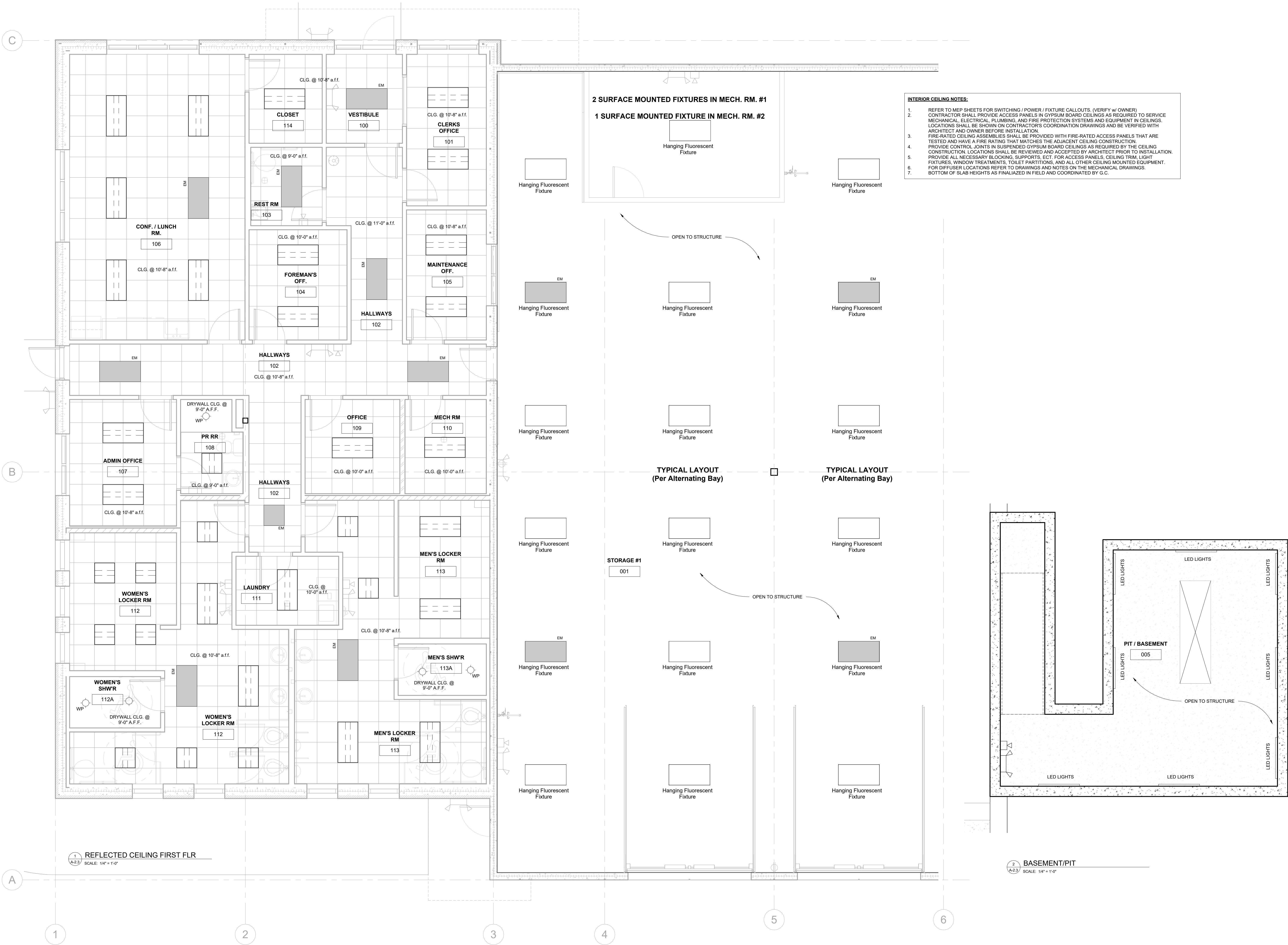
SCALE: 1/4" = 1'-0"

Room Schedule								
LEVEL	ROOM #	ROOM NAME	CEILING FINISH	CEILING HEIGHT	FLOOR FINISH	WALL FINISH	BASE FINISH	REMARKS
BASEMENT/PIT	005	PIT / BASEMENT	Bottom of Slab	8' - 4"	Conc. Slab	None	None	
FIRST FLOOR	001	STORAGE #1	Open to Trusses	19' - 2"	Conc. Slab	None	None	
FIRST FLOOR	002	STORAGE #2	Open to Trusses	19' - 2"	Conc. Slab	None	None	
FIRST FLOOR	003	MECH / UTIL #1	Open to Trusses	19' - 2"	Conc. Slab	None	None	
FIRST FLOOR	004	MECH / UTIL #2	Bottom of Slab	8' - 10"	Conc. Slab	None	None	
FIRST FLOOR	006	STORAGE	Bottom of Slab	8' - 10"	Conc. Slab	None	None	
FIRST FLOOR	100	VESTIBULE	2'x2' Acoustical Tile	10' - 8"	Tile	Drywall	Tile	
FIRST FLOOR	101	CLERKS OFFICE	2'x2' Acoustical Tile	10' - 8"	Tile	Drywall	Tile	
FIRST FLOOR	102	HALLWAYS	2'x2' Acoustical Tile	10' - 8"	Tile	Drywall	Tile	Wall finishes and Fixtures to comply w/ codes shown in diagrams on 2/A1-1
FIRST FLOOR	103	REST RM	2'x2' Acoustical Tile	9' - 0"	Tile	Tile / Drywall	Tile	
FIRST FLOOR	104	FOREMAN'S OFF.	2'x2' Acoustical Tile	10' - 0"	Tile	Drywall	Tile	
FIRST FLOOR	105	MAINTENANCE OFF.	2'x2' Acoustical Tile	10' - 8"	Tile	Drywall	Tile	
FIRST FLOOR	106	CONF. / LUNCH RM.	2'x2' Acoustical Tile	10' - 8"	Tile	Drywall	Tile	
FIRST FLOOR	107	ADMIN OFFICE	2'x2' Acoustical Tile	10' - 8"	Tile	Drywall	Tile	
FIRST FLOOR	108	PR RR	2'x2' Acoustical Tile	9' - 0"	Tile	Tile / Drywall	Tile	
FIRST FLOOR	109	OFFICE	2'x2' Acoustical Tile	10' - 0"	Tile	Drywall	Tile	
FIRST FLOOR	110	MECH RM	2'x2' Acoustical Tile	10' - 0"	Conc. Slab	Drywall	Vinyl	
FIRST FLOOR	111	LAUNDRY	2'x2' Acoustical Tile	10' - 0"	Tile	Tile / Drywall	Tile	
FIRST FLOOR	112	WOMEN'S LOCKER RM	2'x2' Acoustical Tile	10' - 8"	Tile	Tile / Drywall	Tile	
FIRST FLOOR	112A	WOMEN'S SHWR	Drywall	9' - 0"	Tile	Tile	Tile	
FIRST FLOOR	113	MEN'S LOCKER RM	2'x2' Acoustical Tile	10' - 8"	Tile	Tile / Drywall	Tile	
FIRST FLOOR	113A	MEN'S SHWR	Drywall	9' - 0"	Tile	Tile	Tile	
FIRST FLOOR	114	CLOSET	2'x2' Acoustical Tile	10' - 8"	Tile	Drywall	Vinyl	
MEZZANINE	201	MEZZANINE	Open to Trusses	9' - 2"	Conc. Slab	None	None	



FIRST FLOOR PLAN - Callout 1

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



PUBLIC WORKS BUILDING

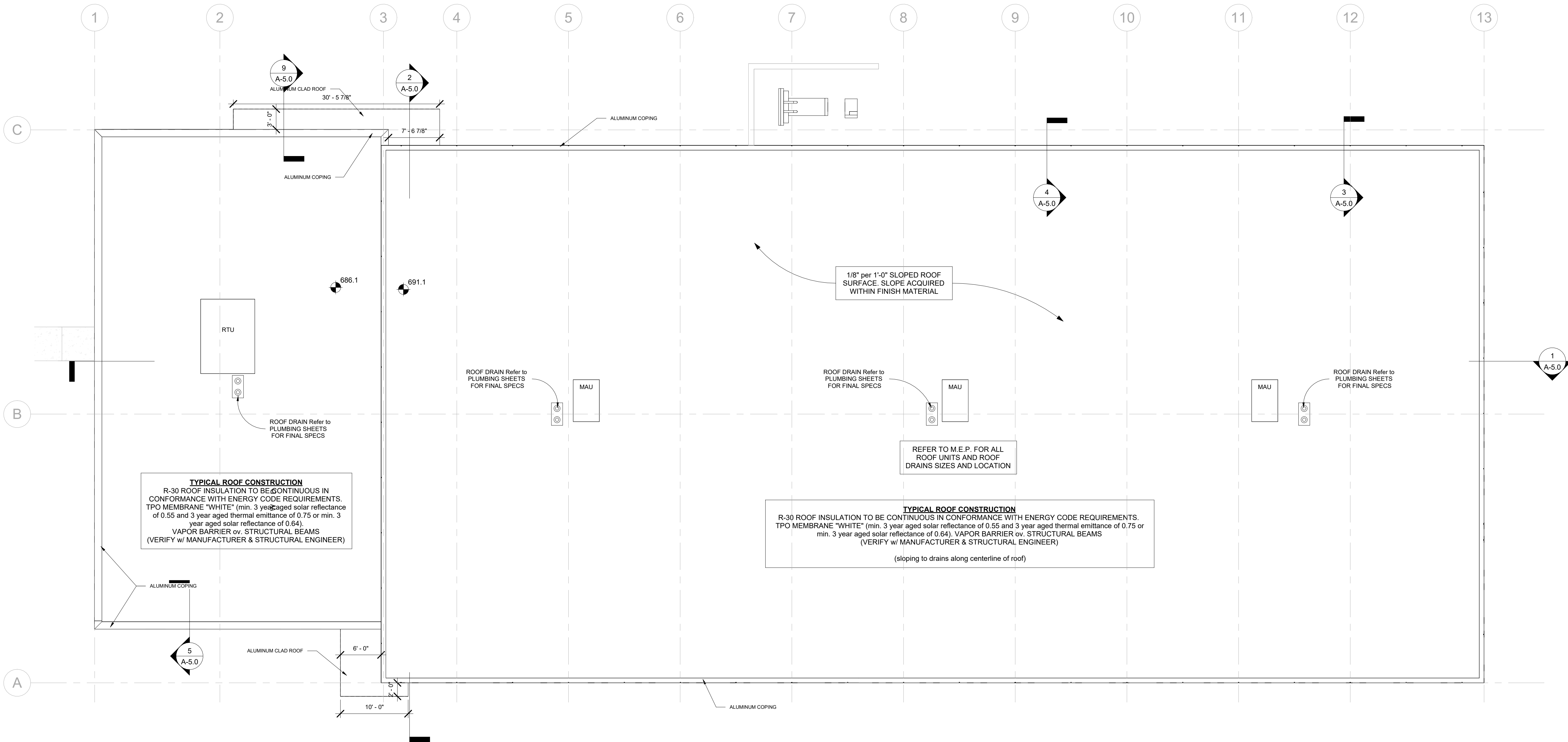
BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

PROJECT #	2102
DATE:	05/13/22

07.15.23	ISSUED FOR BID
REVISIONS	
DRAWN BY:	Author
APPROVED BY:	Checker
SCALE:	AS NOTED
DESCRIPTION:	REFLECTED CLG'S - OFFICES
SHEET NO.	

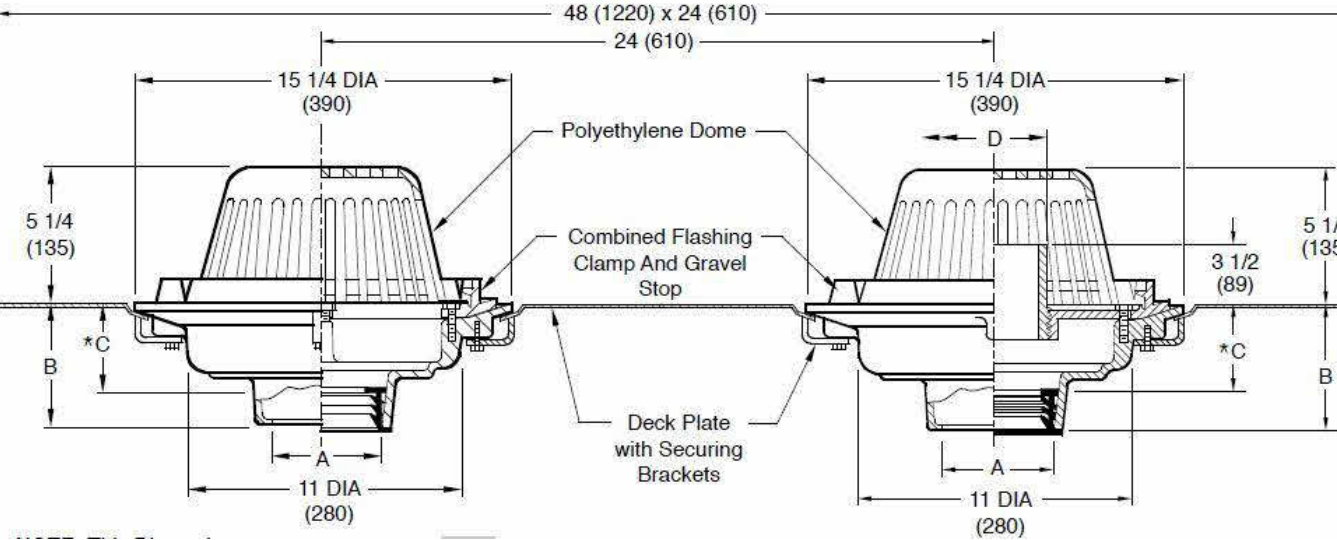
A-2.3



1 UPPER ROOF
SCALE: 1/8" = 1'-0"

ROOF DRAIN AND OVERFLOW DRAIN

FUNCTION: Used on flat roofs of any construction (other than poured in place) where an emergency overflow drain can be used in combination with a standard roof drain. Large sump drain bodies with low profile domes provide sufficient free area for quick drainage of rainwater while protecting the drain sump and connected piping from the intrusion of debris. Internal standpipe type overflow drain receives water only when the build-up is greater than the setting of the standpipe. Water dam standpipe can be cut to achieve various water depths on the roof. Attached wide dual drain deck plate with securing holes enables both drains to be secured to the roof deck from the top surface of the roof reducing installation time, reducing the number of roof penetrations and eliminating the need for an underdeck clamp. The wide dual deck plate also recesses the drains slightly to prevent water build-up at the base of the drains.



PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

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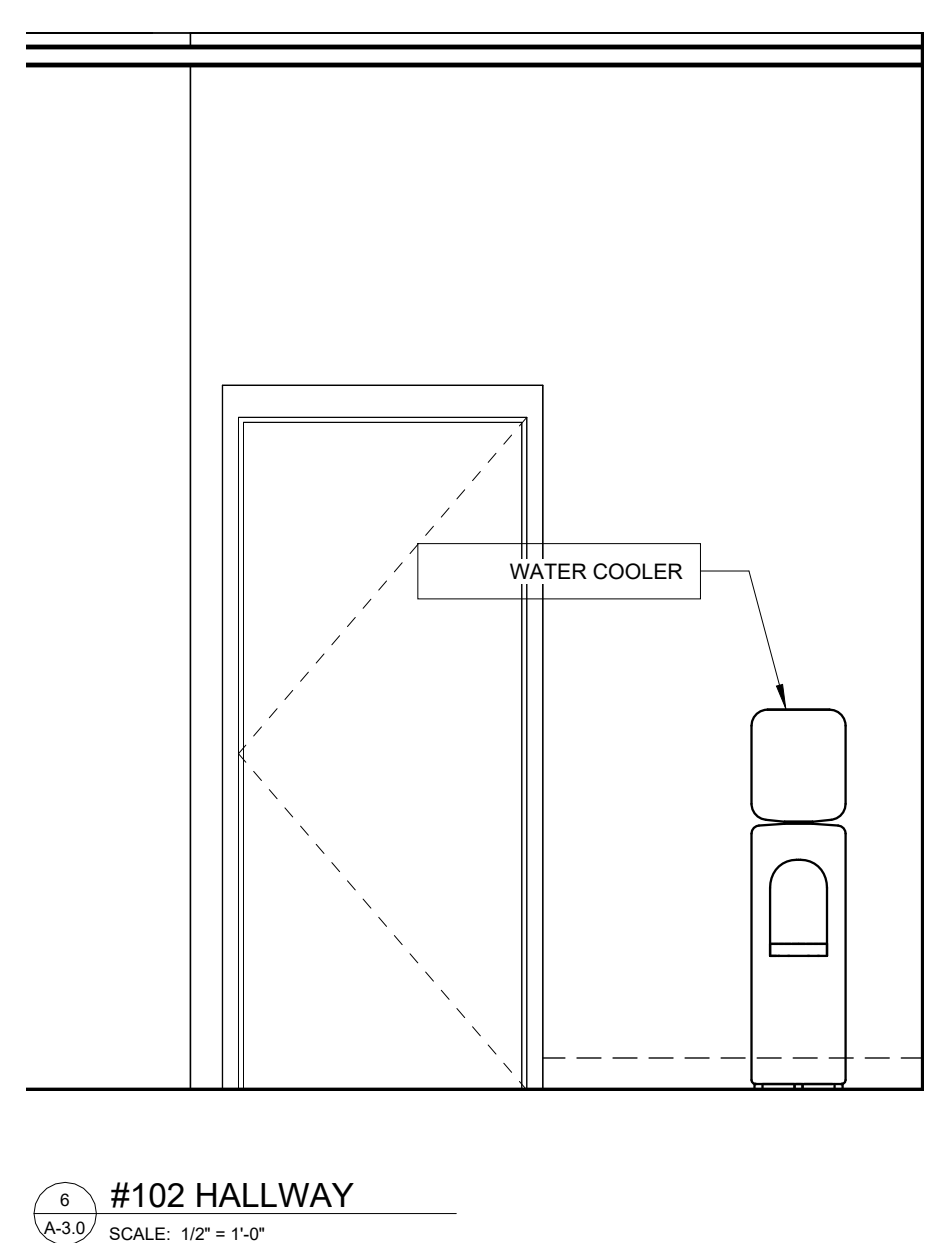
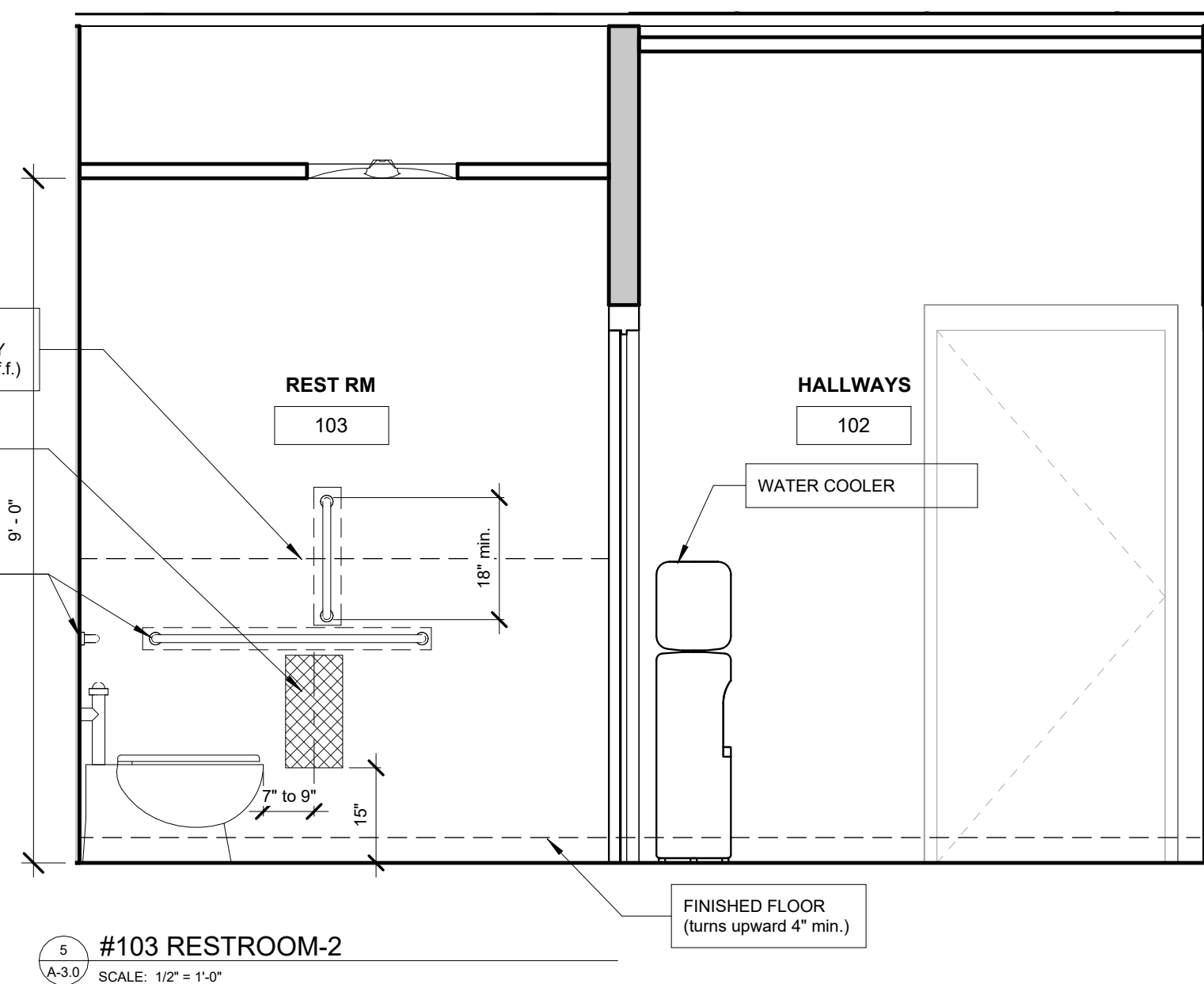
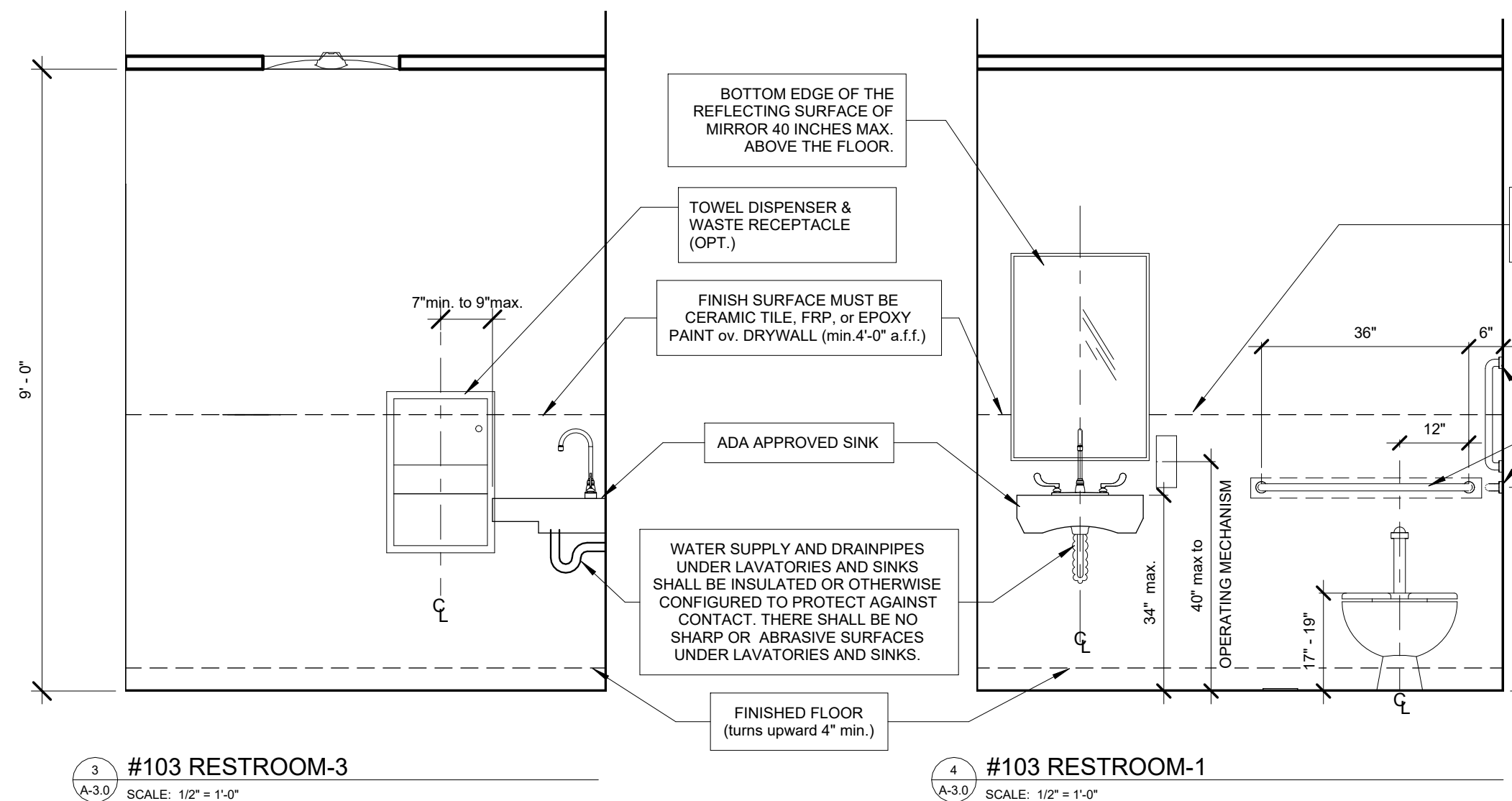
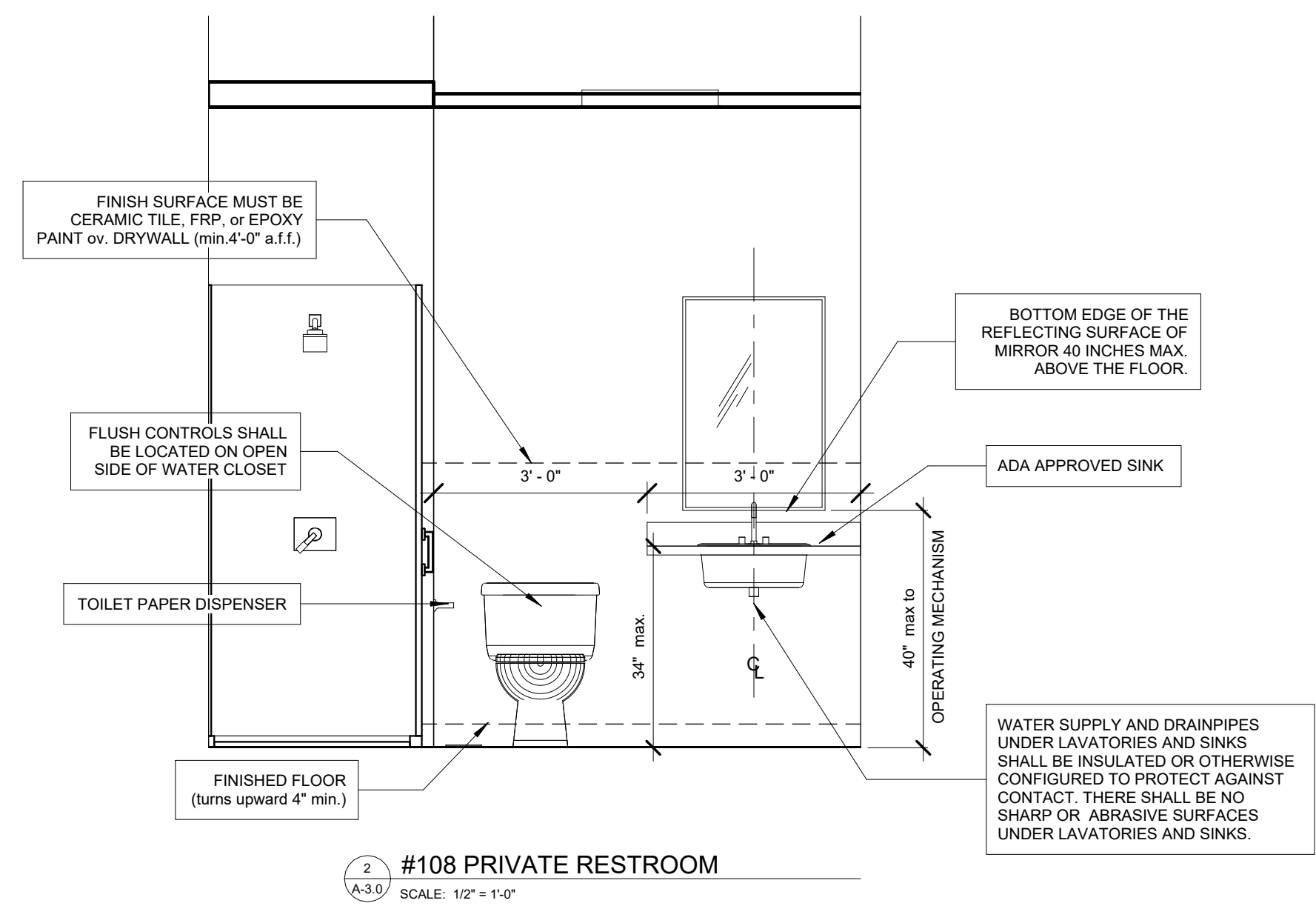
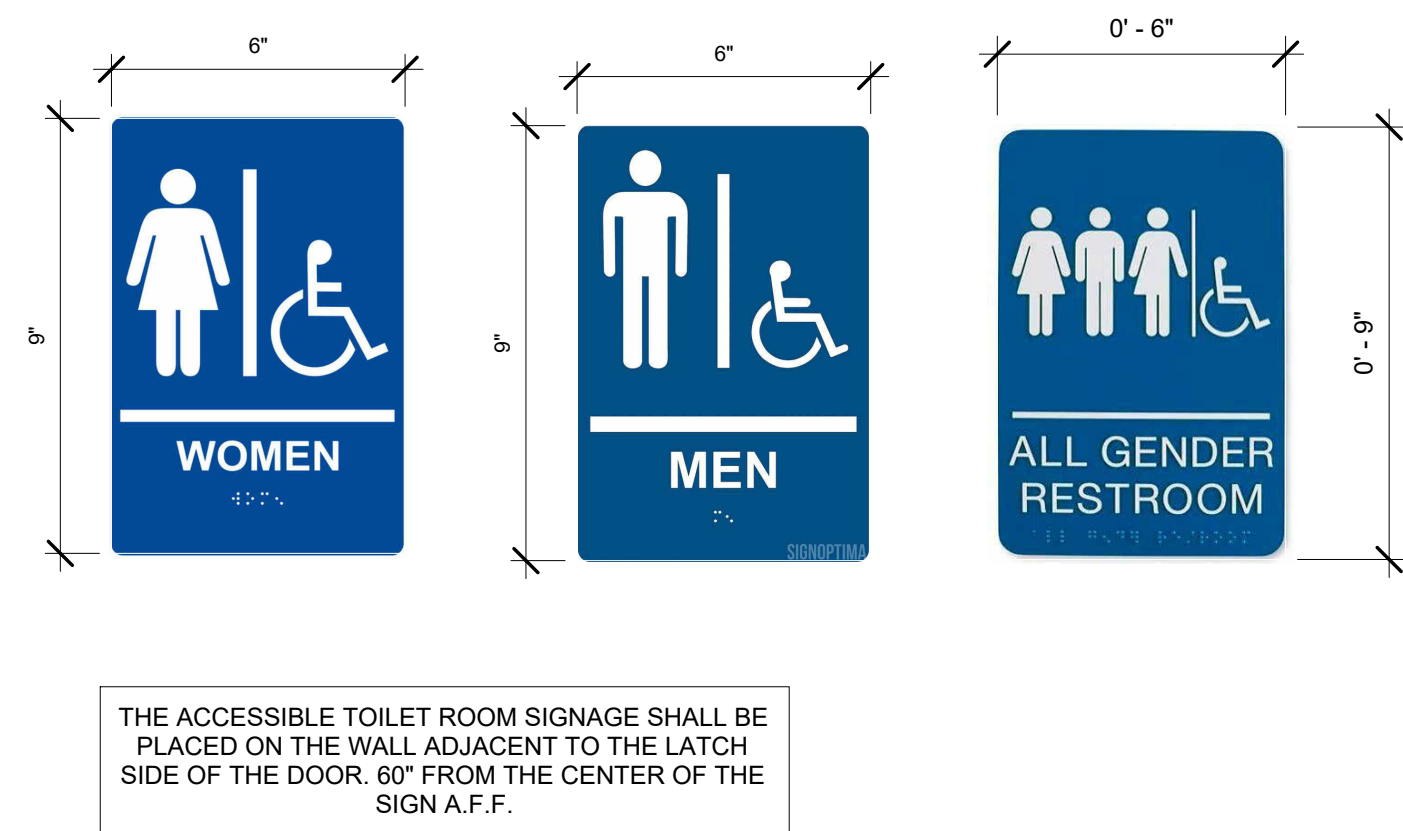
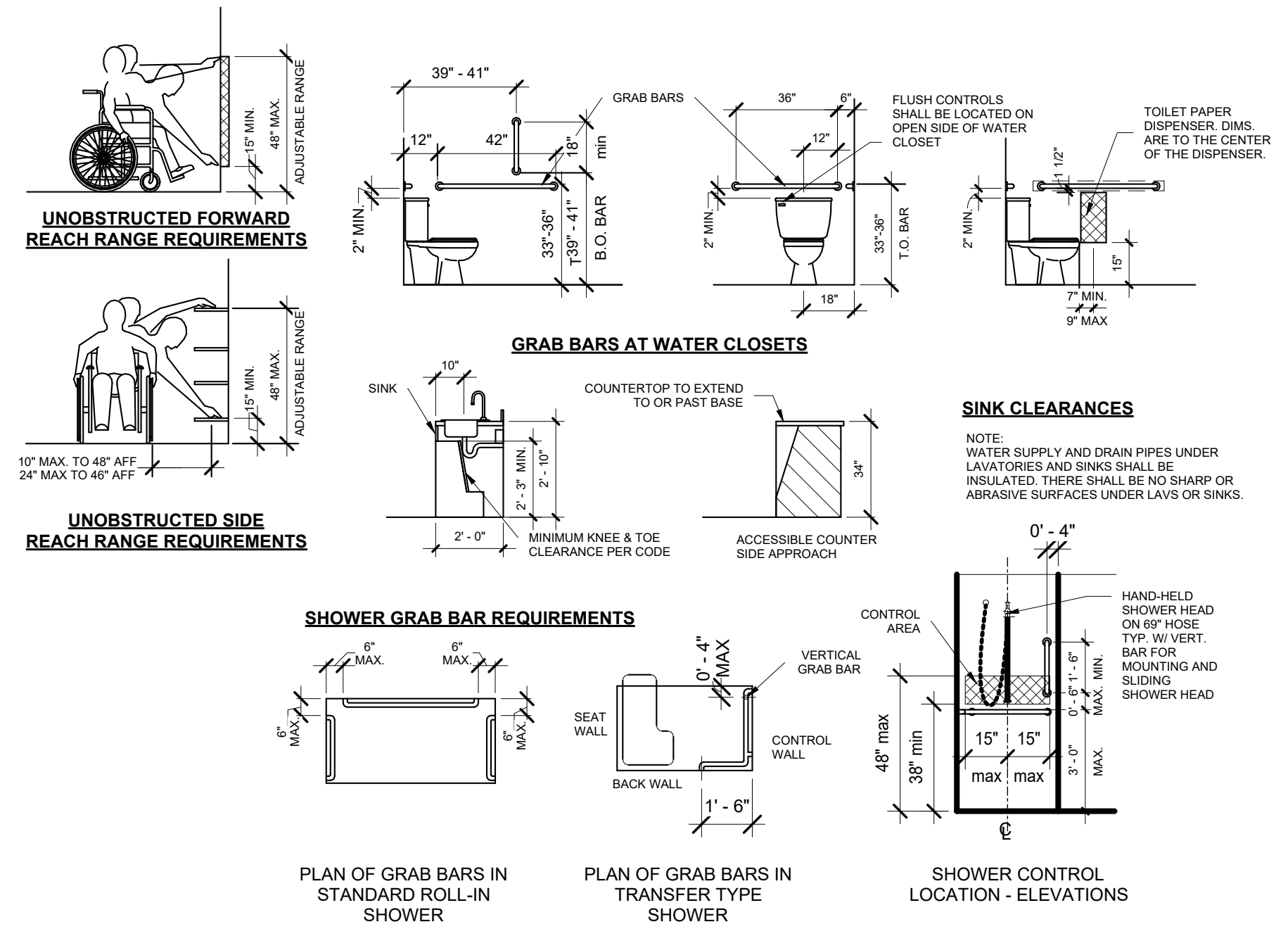
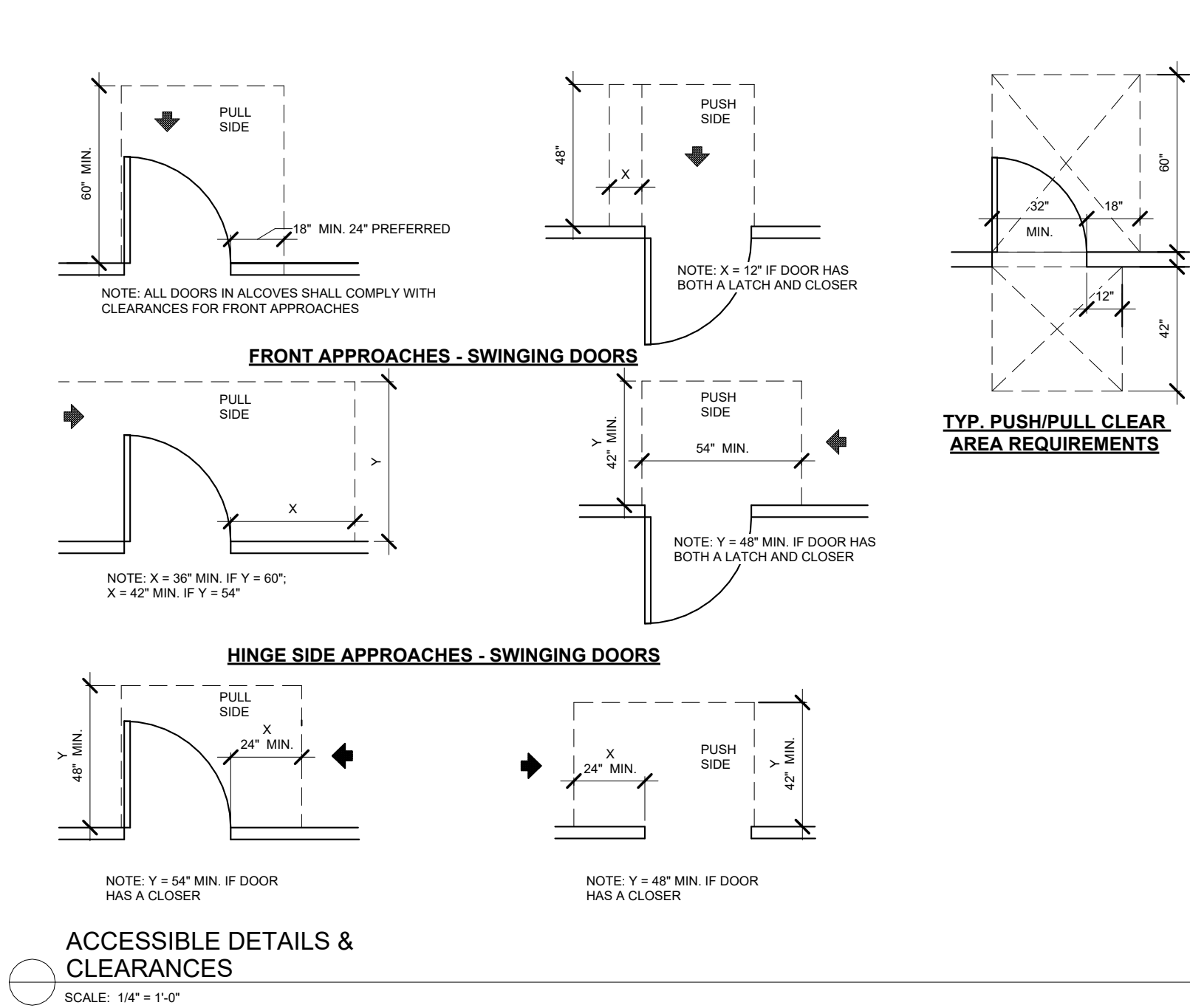
ARCHITECTS

6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847/626-9400

PROJECT #	2102
DATE:	05/13/22

07.15.23	ISSUED FOR BID
REVISIONS	
DRAWN BY:	Author
APPROVED BY:	Checker
SCALE:	AS NOTED
DESCRIPTION:	ROOF PLAN

SHEET NO.
A-2.4



PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

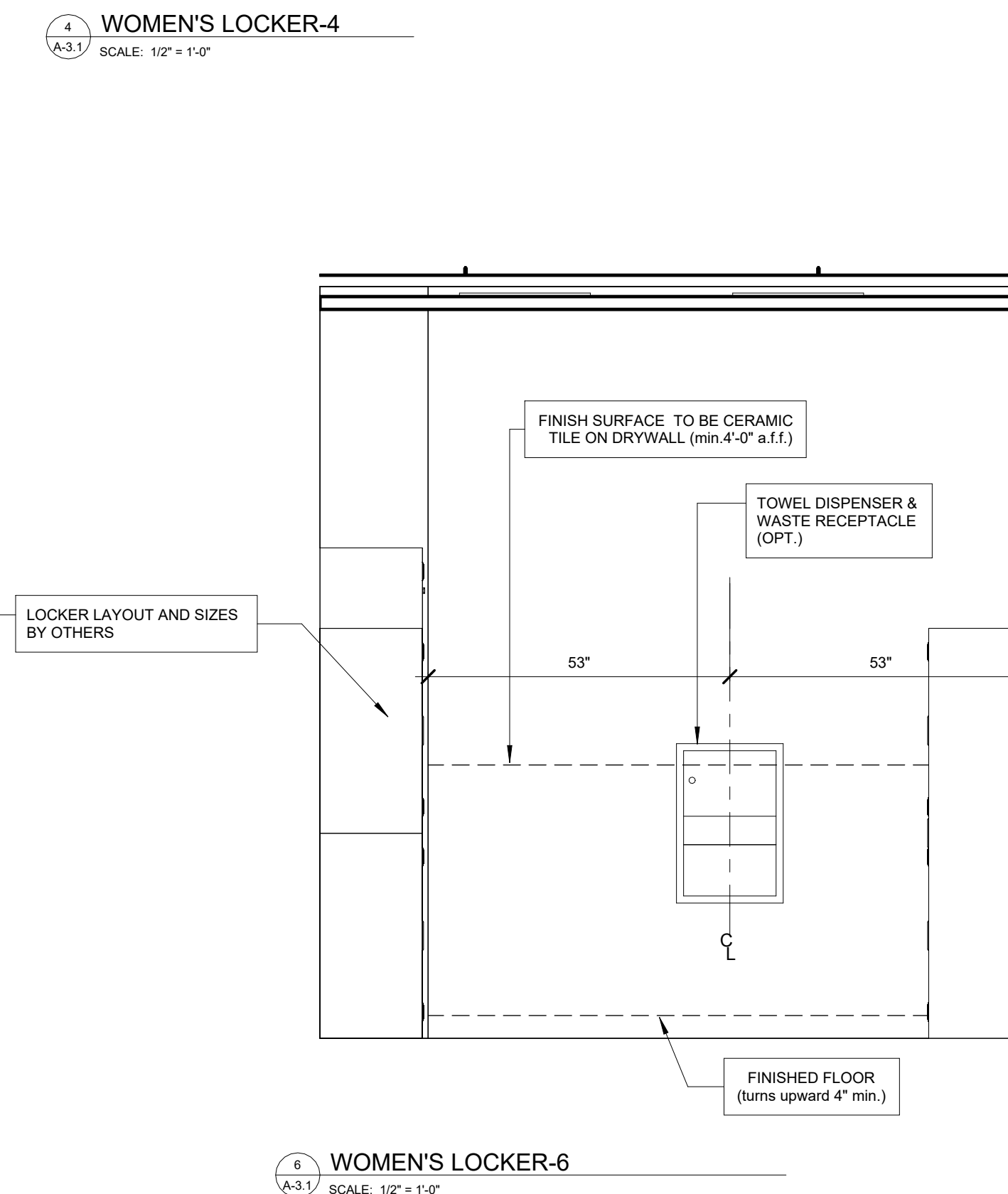
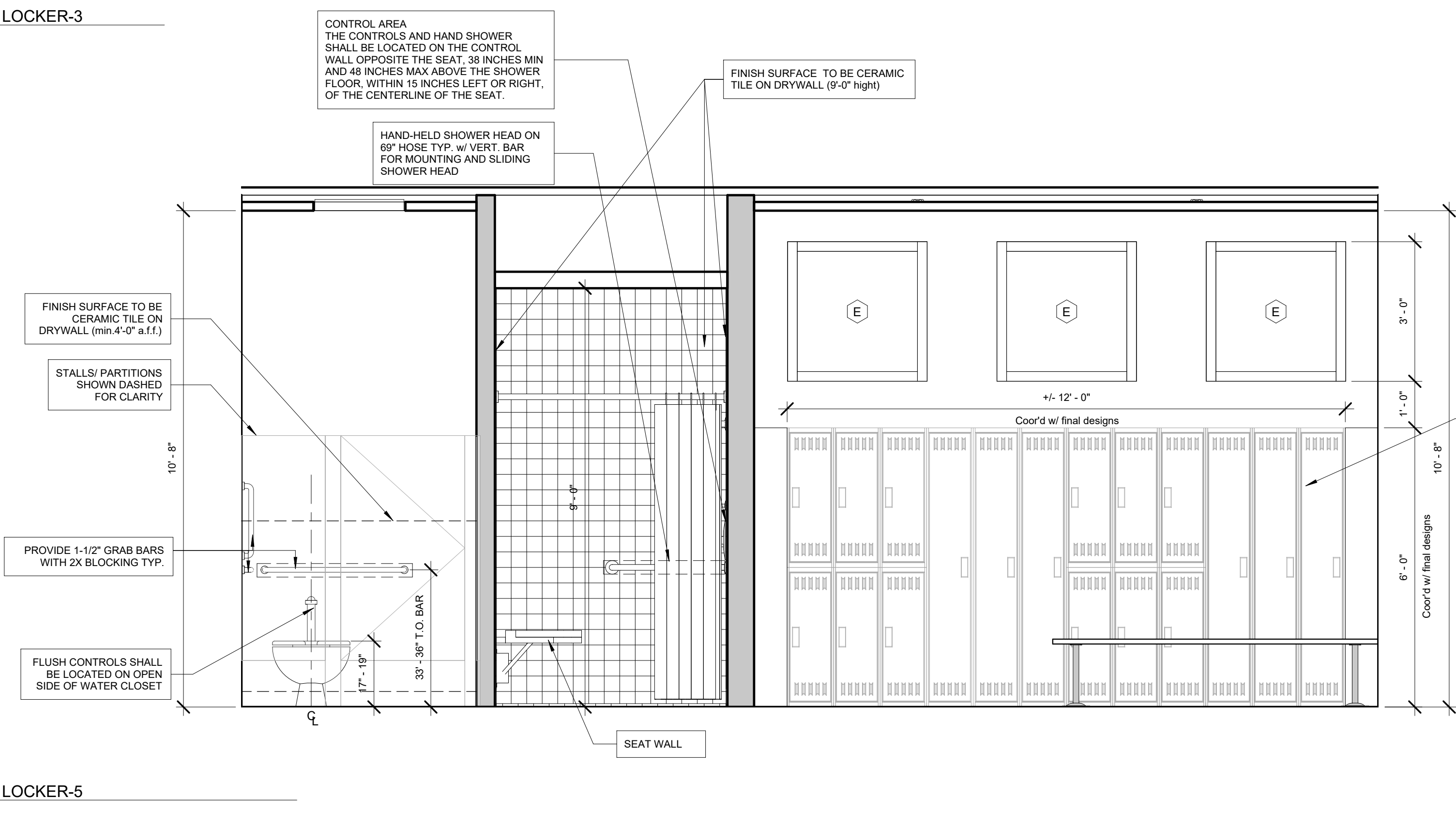
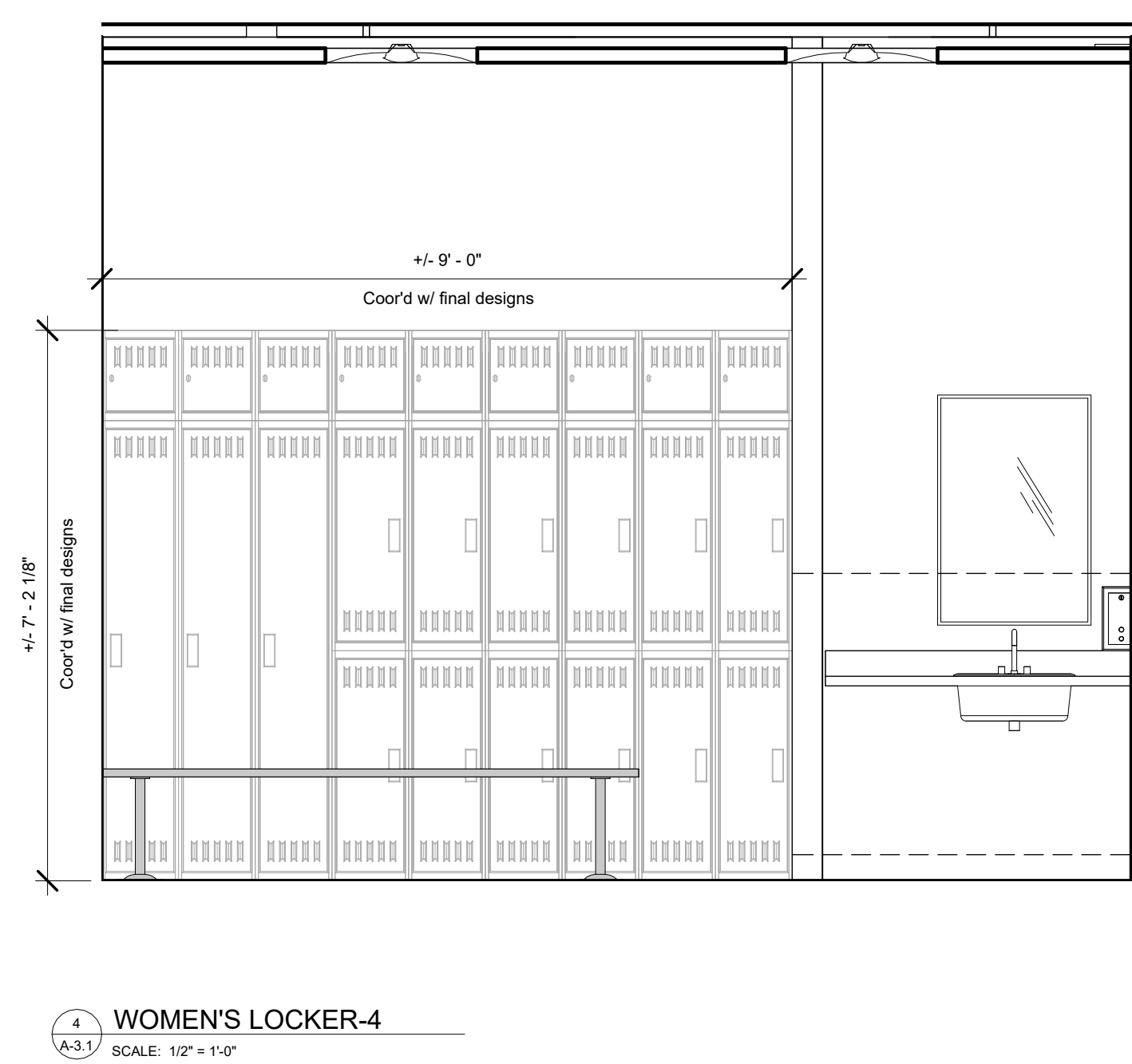
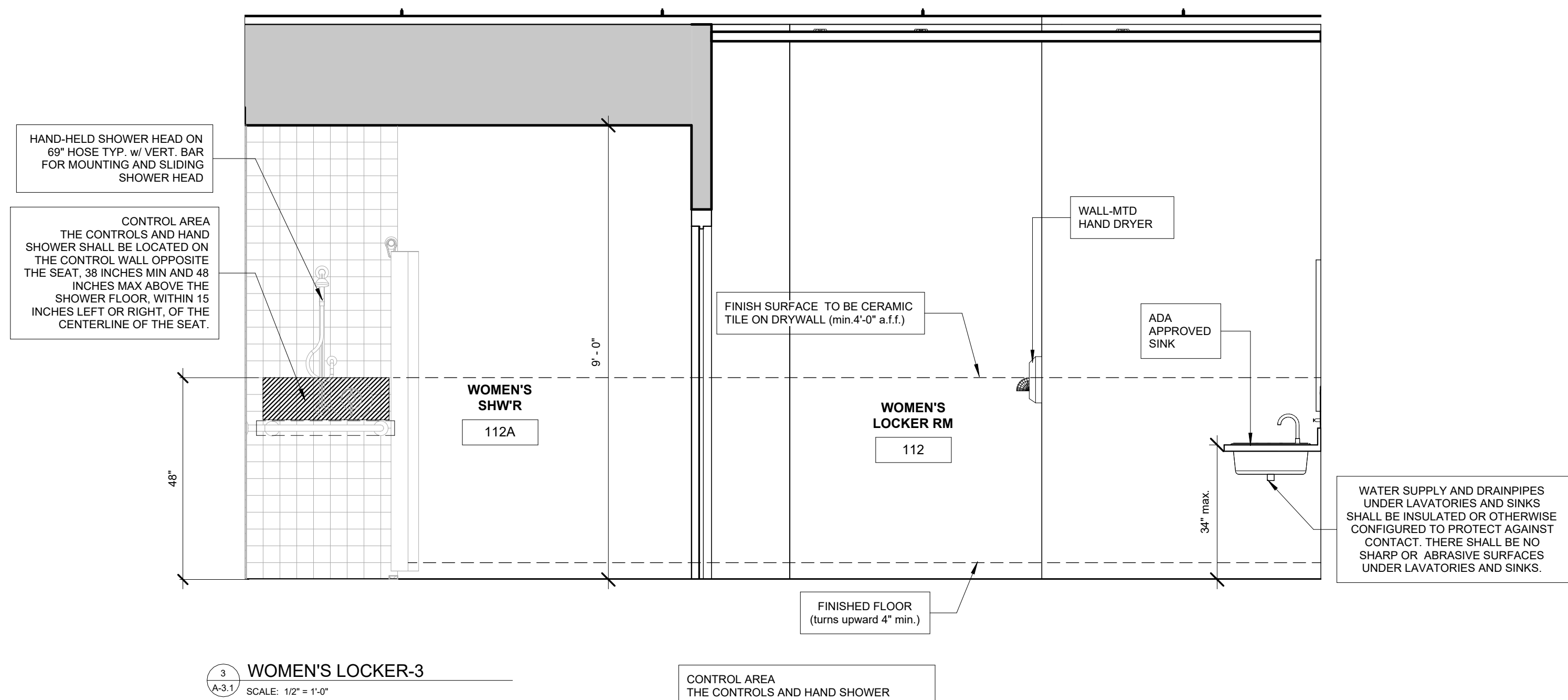
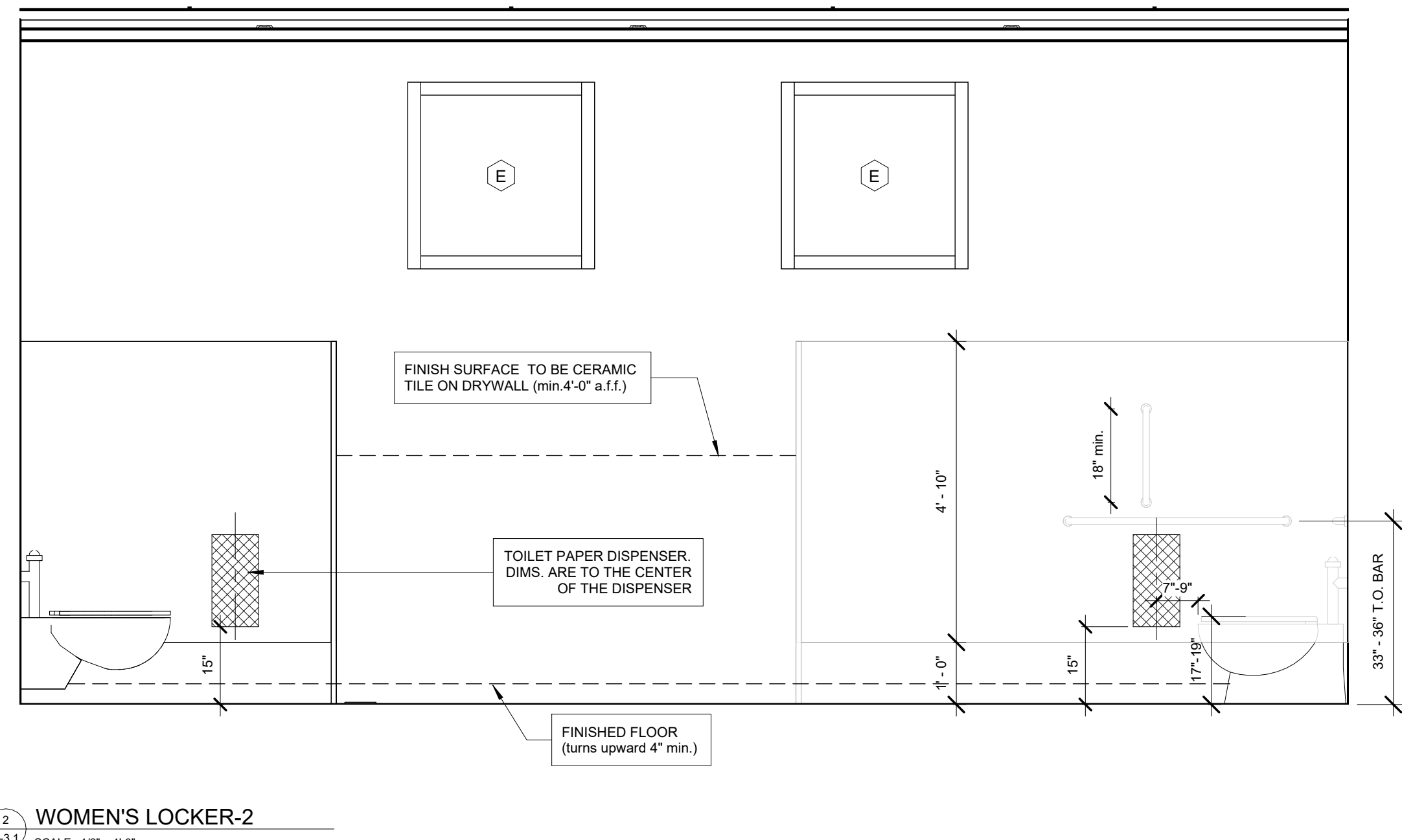
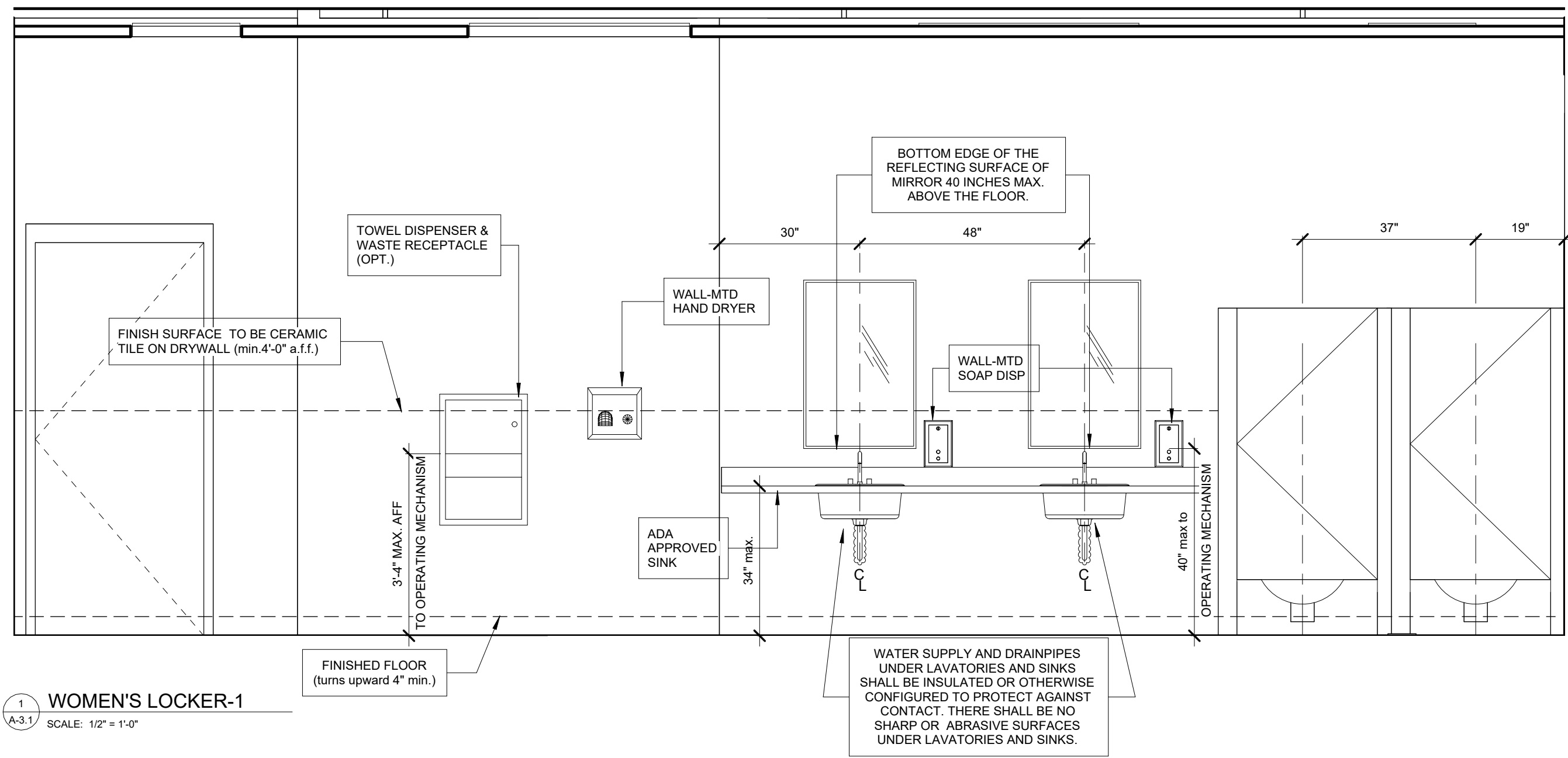
PROJECT #	2102
DATE:	05/13/22

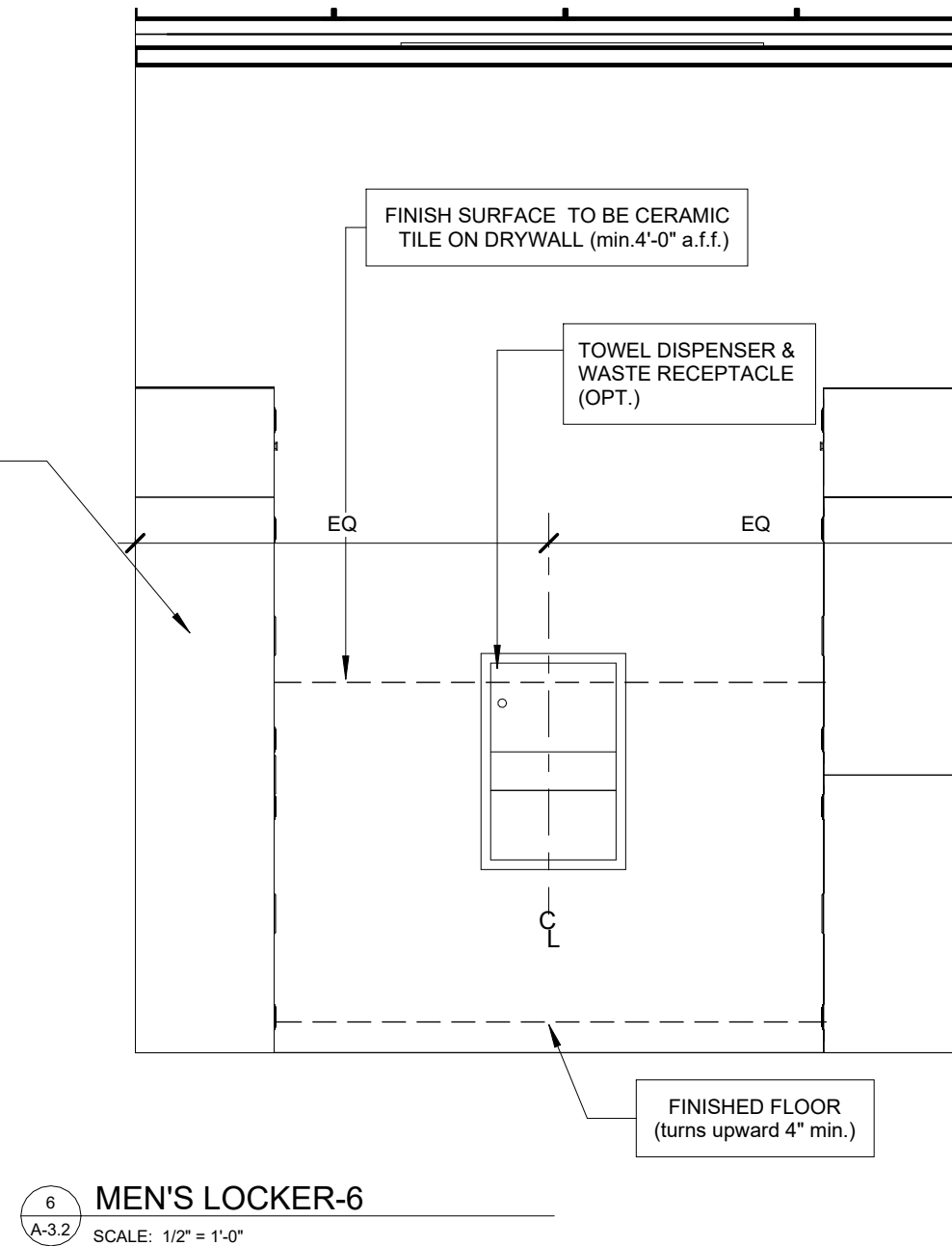
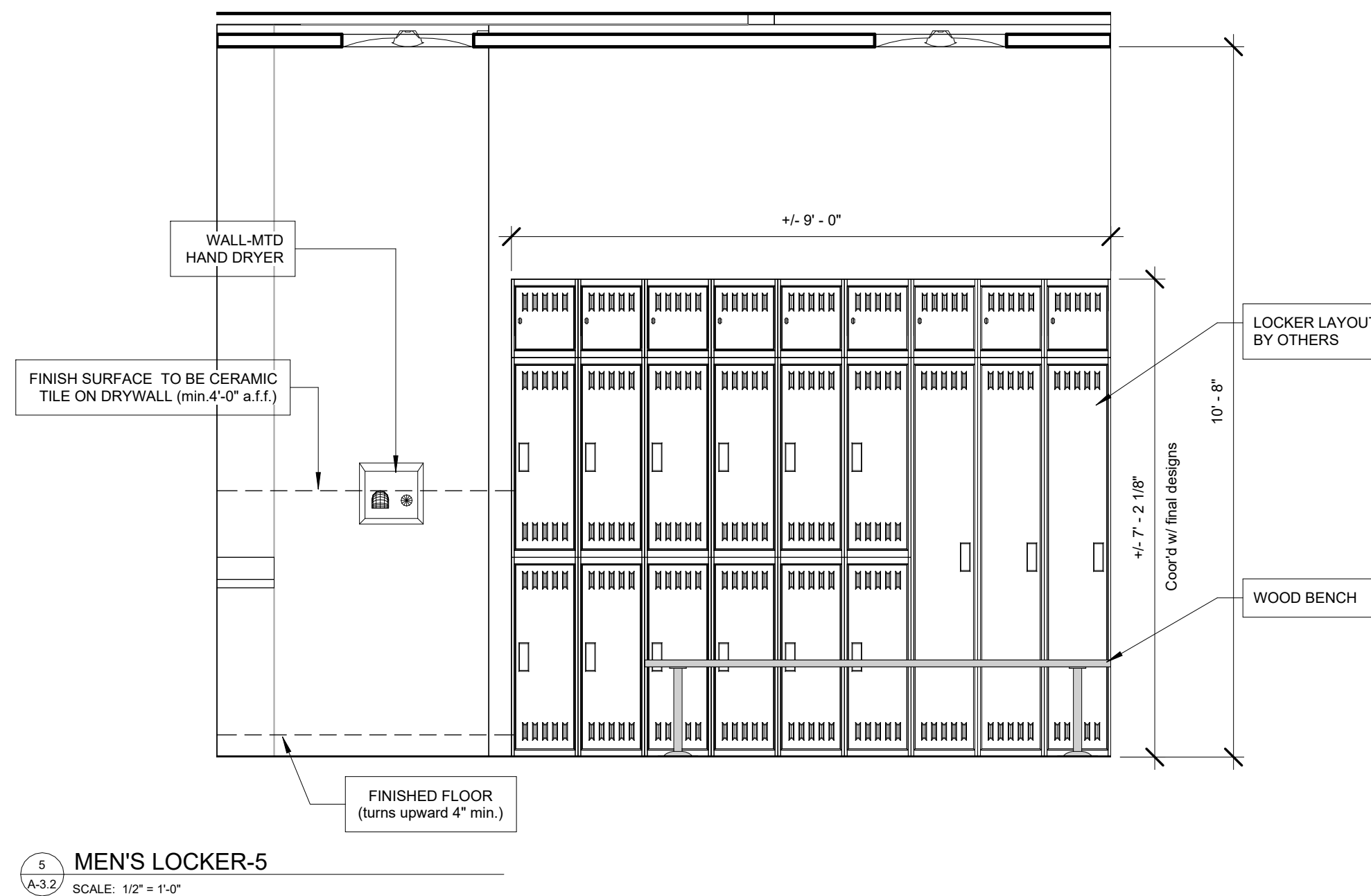
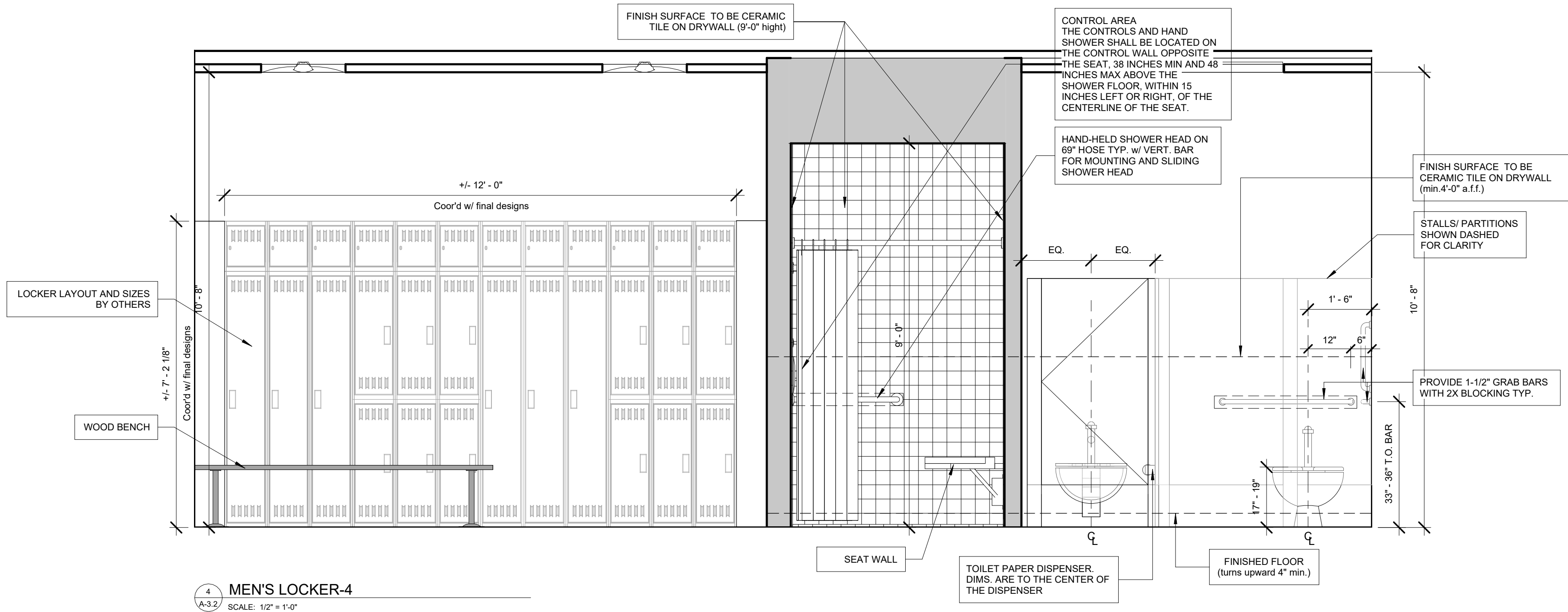
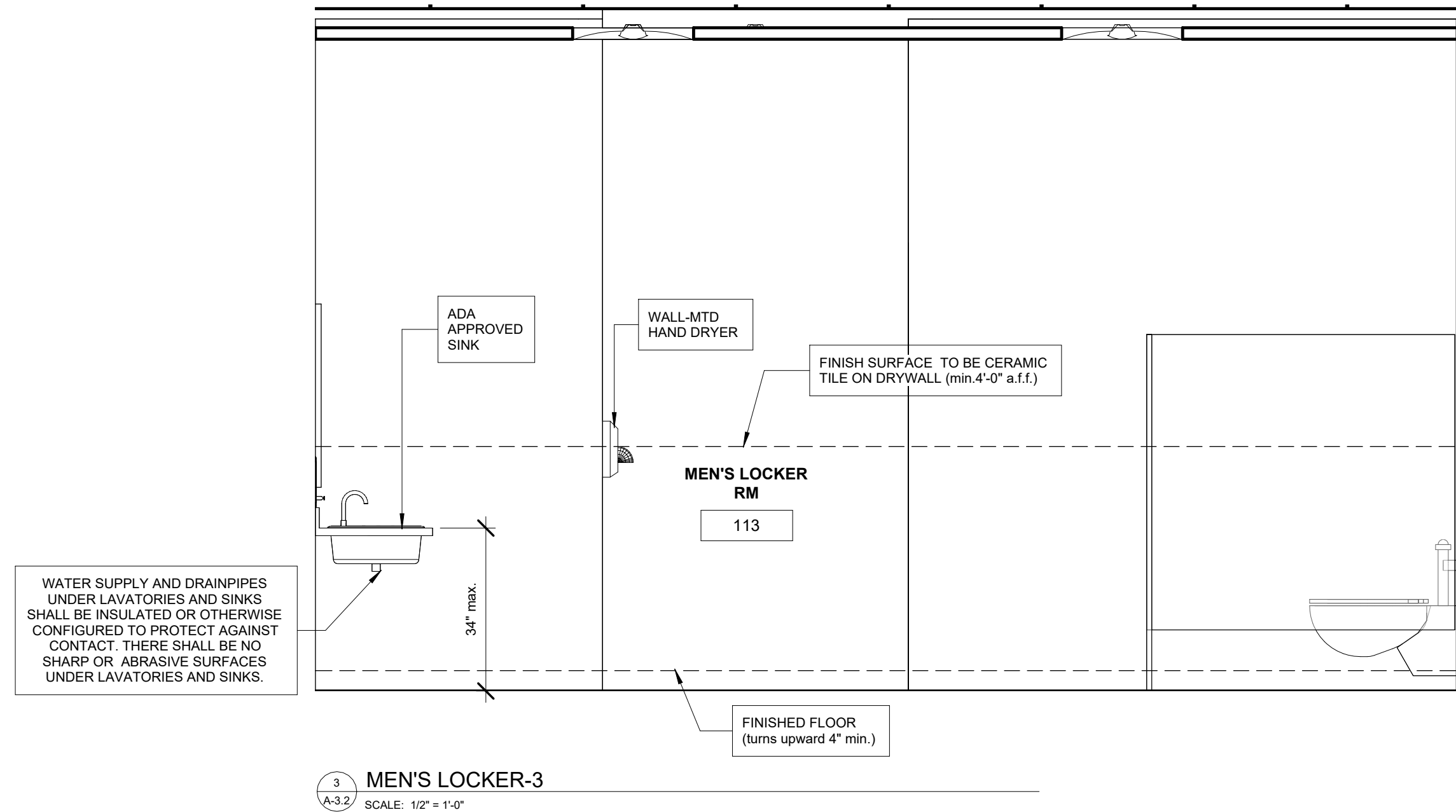
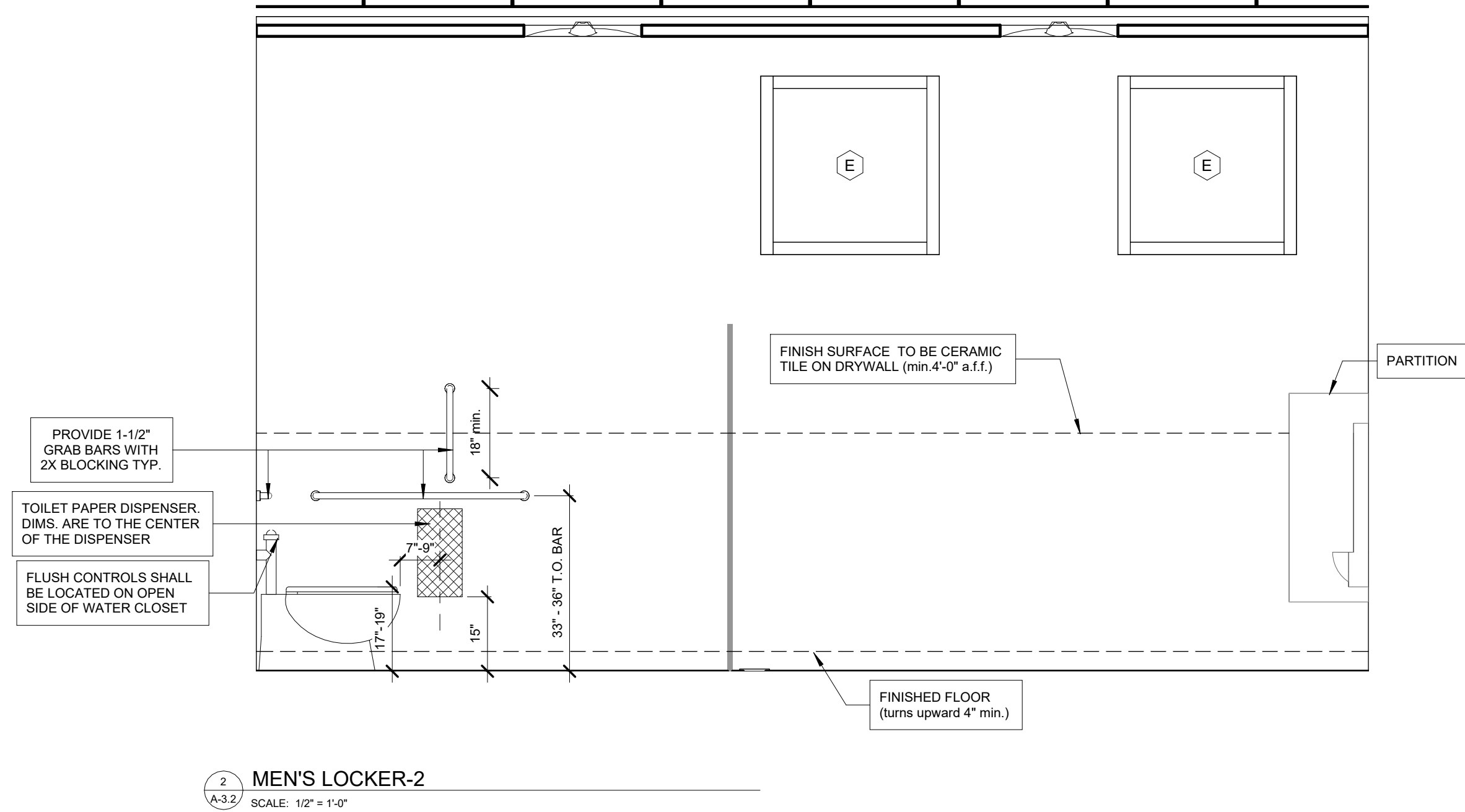
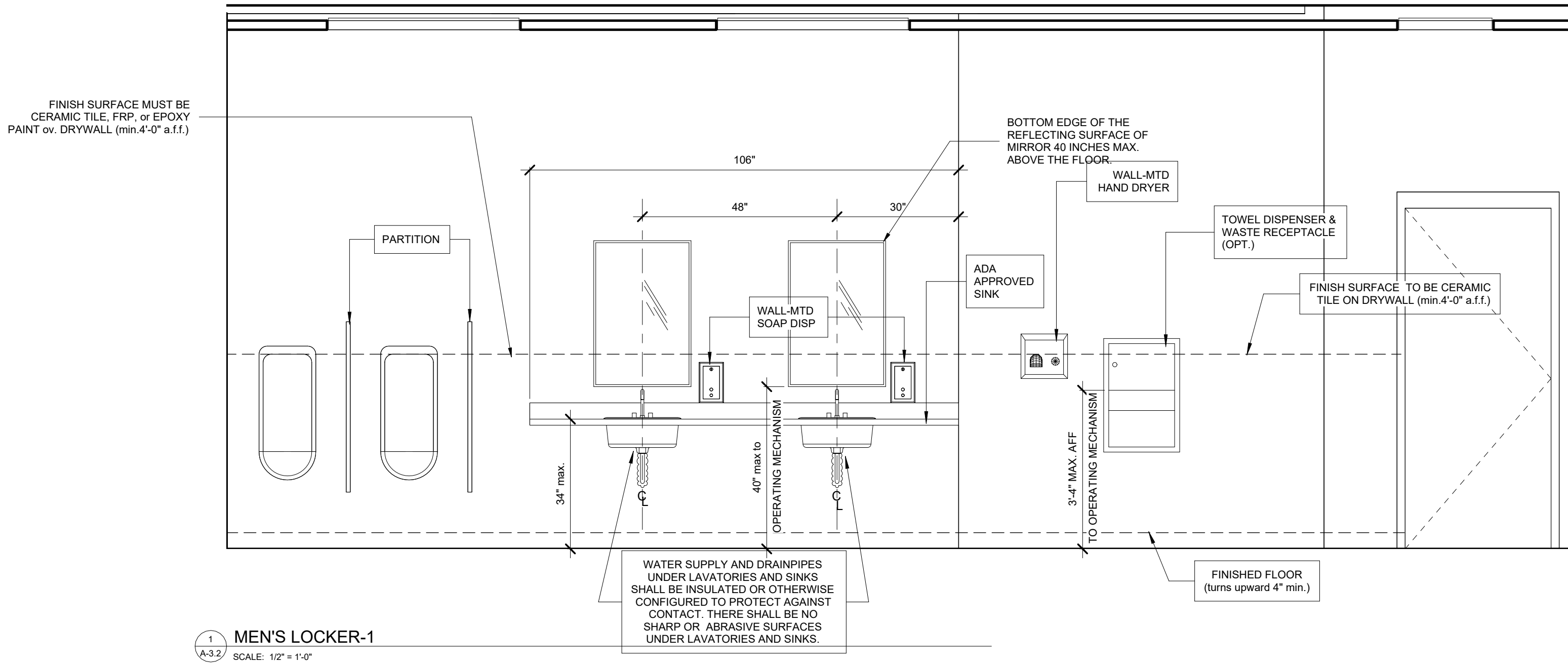
07.15.23	ISSUED FOR BID
REVISIONS	
DRAWN BY:	Author
APPROVED BY:	Checker
SCALE:	AS NOTED
DESCRIPTION:	INTERIOR ELEVATIONS
SHEET NO.	

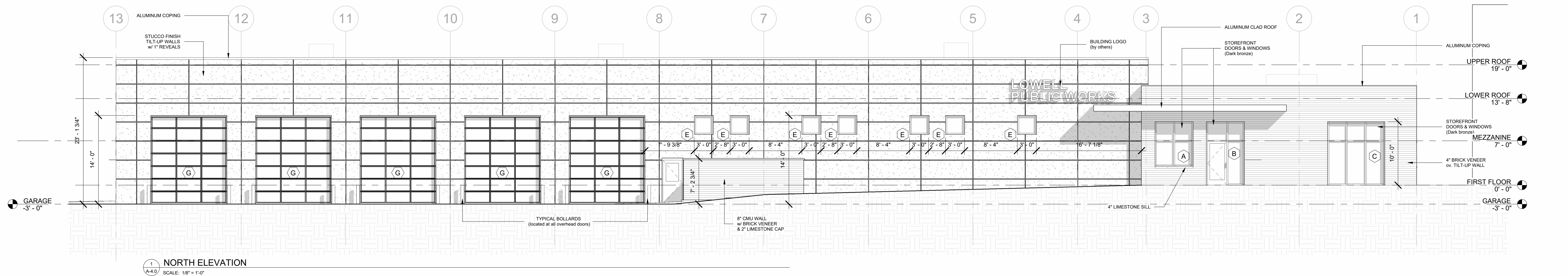
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NERO ARCHITECTS

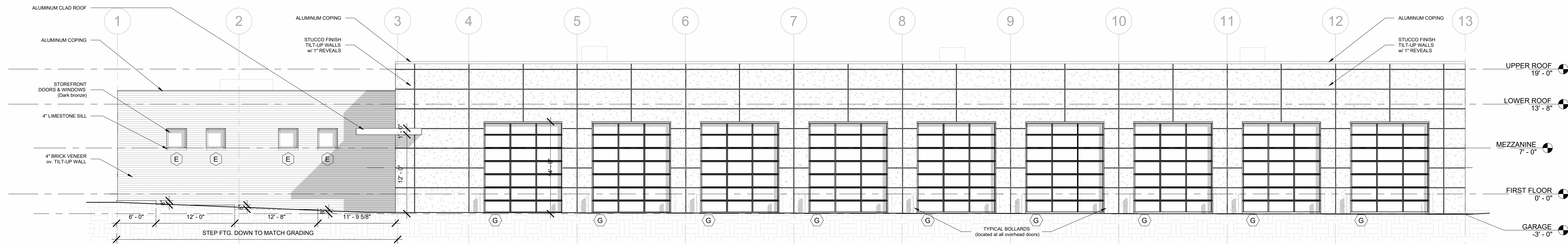
6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847.625.9400



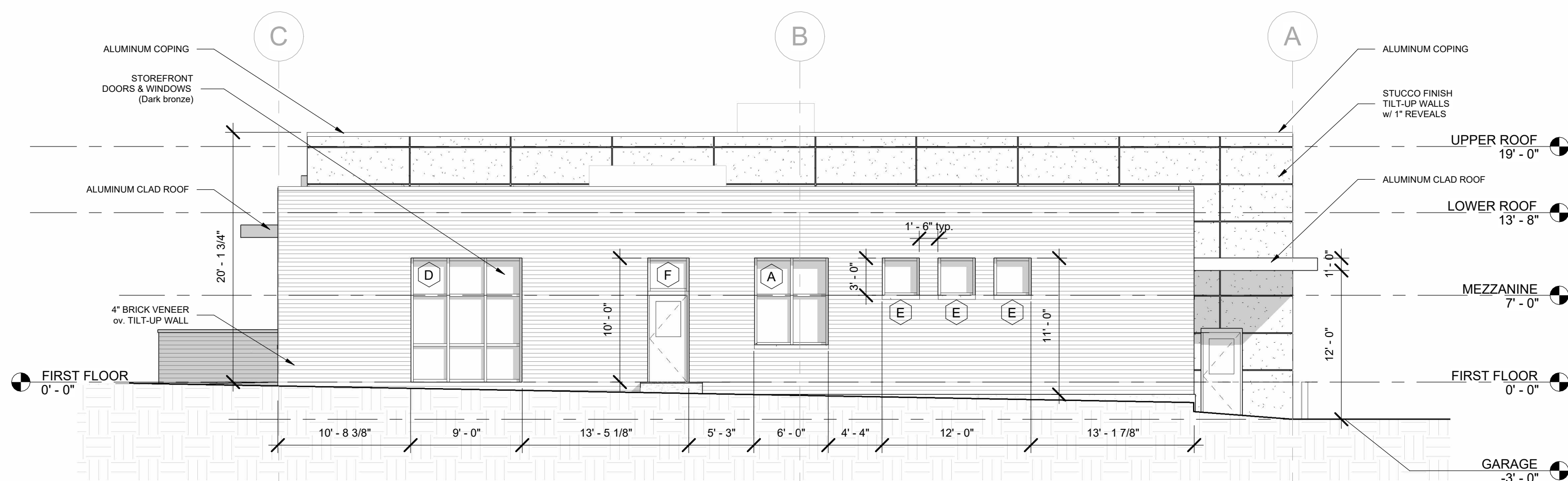




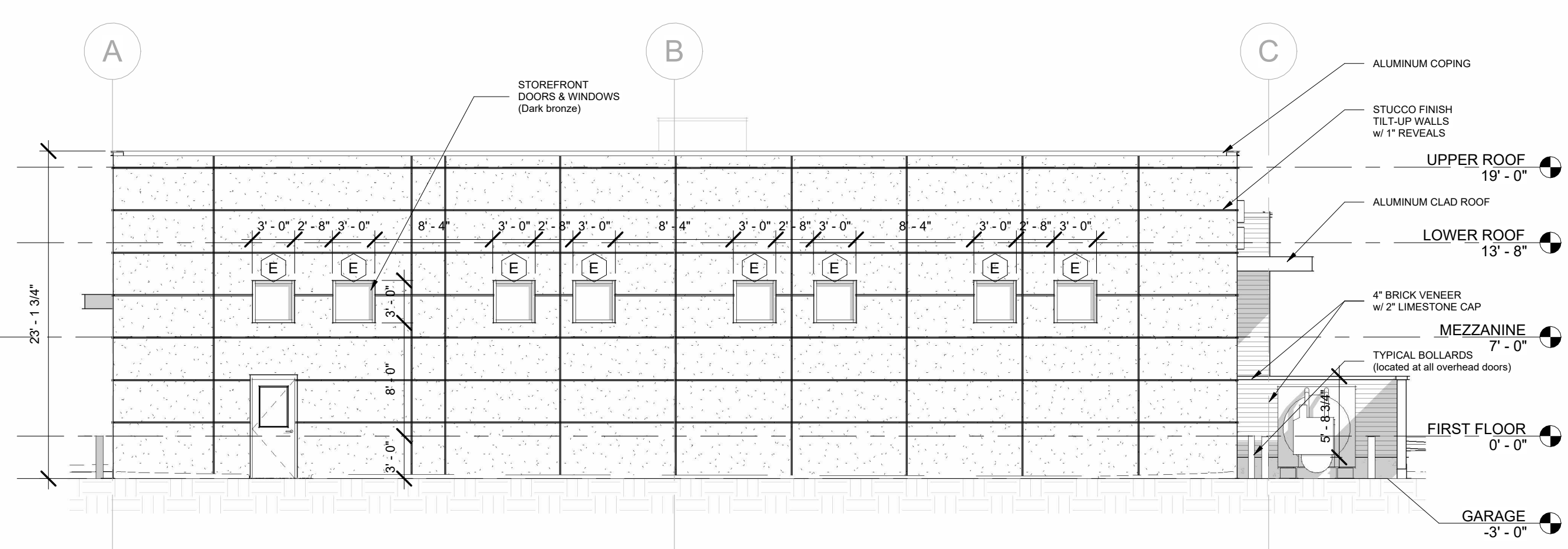
1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



4 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



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



2 EAST ELEVATION
SCALE: 1/8" = 1'-0"

PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

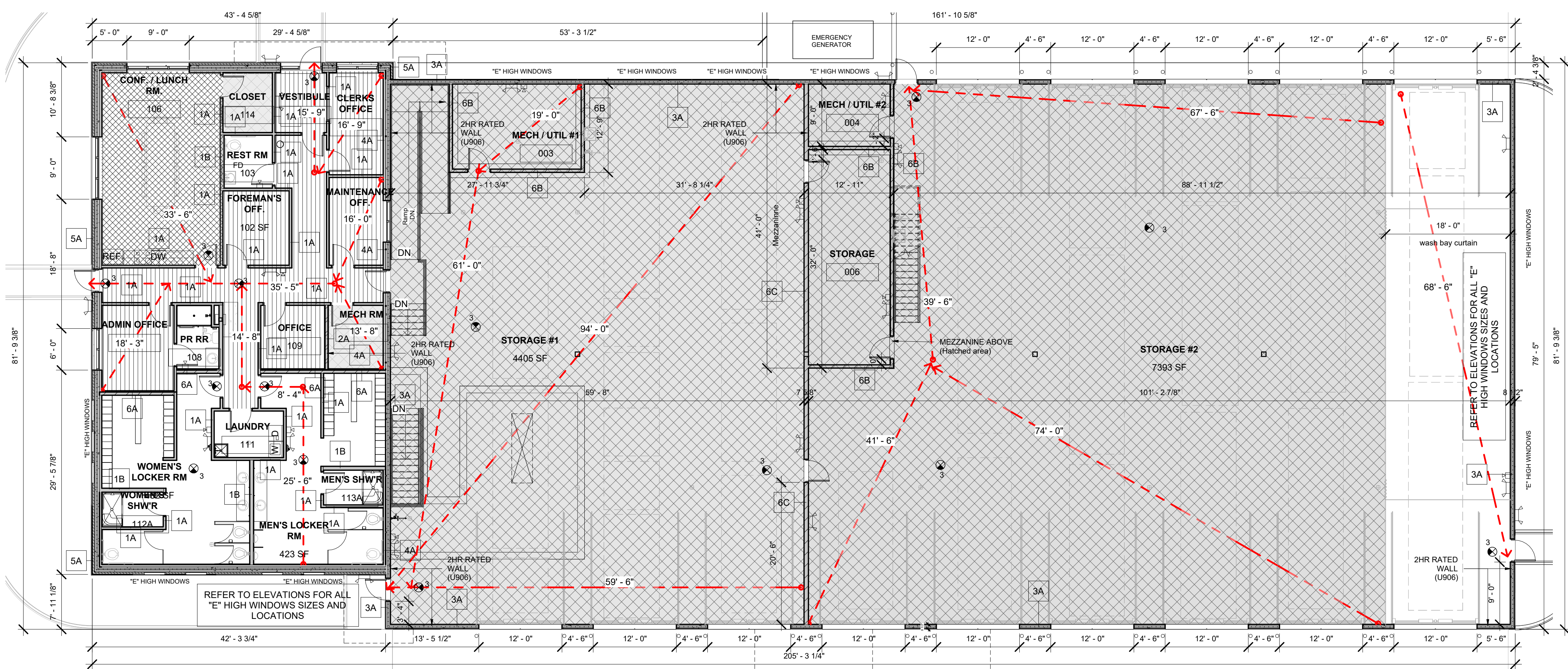
PROJECT # 2102
DATE: 05/13/22

NERO ARCHITECTS
6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847.626.9400

07.15.23 ISSUED FOR BID
DRAWN BY: Author
APPROVED BY: Checker
SCALE: AS NOTED
DESCRIPTION: ELEVATIONS

SHEET NO.

A-4.0



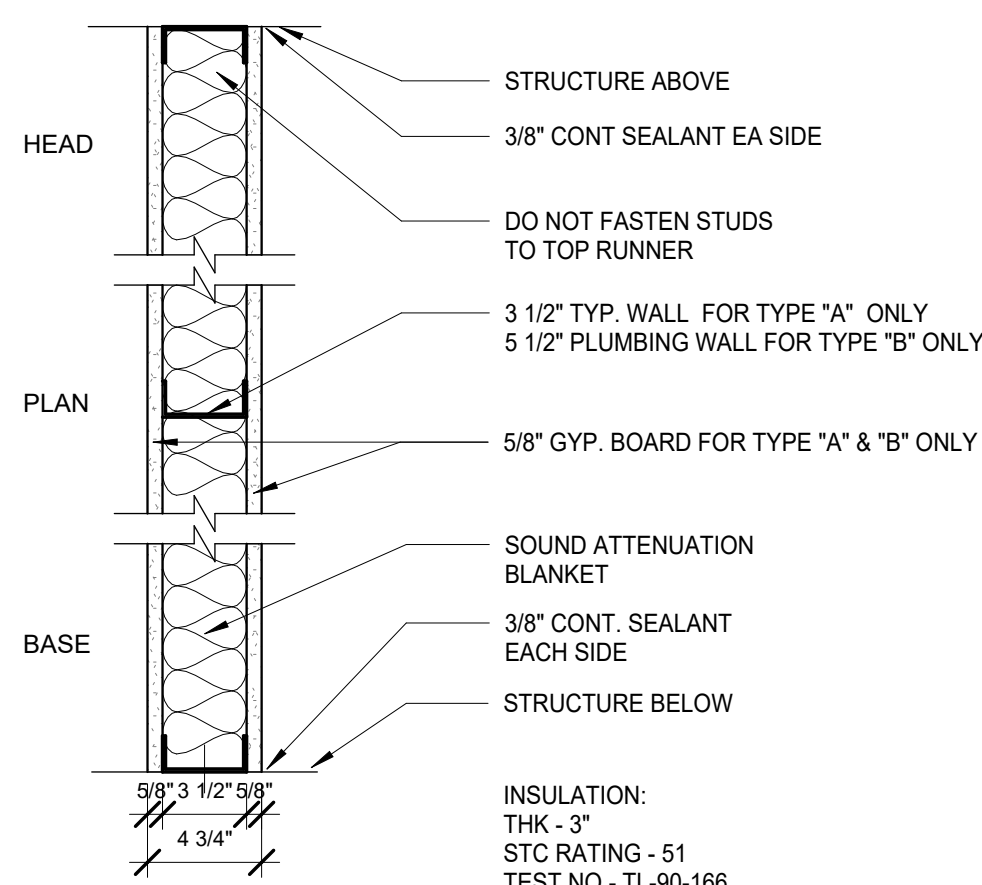
OCCUPANCY USE GROUP				
SPACE	OCCUPANCY TYPE	AREA PER	AREA	TOTAL OCC. (by code)
Mech and Storage Rooms	ACCESSORY STORAGE / MECHANICAL EQUIPMENT ROOM	300 S.F.	11,766.43 S.F.	40
Office	BUSINESS AREAS	100 S.F.	1,032.08 S.F.	11
Conf. / Lunch Room	ASSEMBLY WITH FIXED SEATS			10
				61

OCCUPANCY TABLE
SCALE: 1/2" = 1'-0"

FIRE PREVENTION BUREAU EXIT SYMBOLS							
VIEWING SIDES				SIGN NUMBER (FOR ALL SIGNS)			
SINGLE FACE				DOUBLE FACE			
SIGN (#)	SIGNAGE	SIGN (#)	SIGNAGE	SIGN (#)	SIGNAGE	SIGN (#)	SIGNAGE
01	FIRE ESCAPE	08	STAIRWAY	15	DBL. FACE TRIANGLE	22	FIRE ESCAPE
02	STAIRWAY	08A	STAIR	16	FIRE ESCAPE	23	STAIRWAY
02A	STAIR	09	EXIT	17	STAIRWAY	23A	STAIR
03	EXIT	10	FIRE ESCAPE	17A	STAIR	24	EXIT
04	FIRE ESCAPE	11	STAIRWAY	18	EXIT		
05	STAIRWAY	11A	STAIR	19	FIRE ESCAPE		
05A	STAIR	12	EXIT	20	STAIRWAY		
06	EXIT	13	WALL RECESSED	20A	STAIR		
07	FIRE ESCAPE	14	ELEVATOR	21	EXIT		
NOTE: FIRE ESCAPE SIGNS BE ILLUMINATED AT ALL TIMES AND SHALL BE ON HOUSE POWER IN ADDITION TO BATTERY/PAK POWER.							

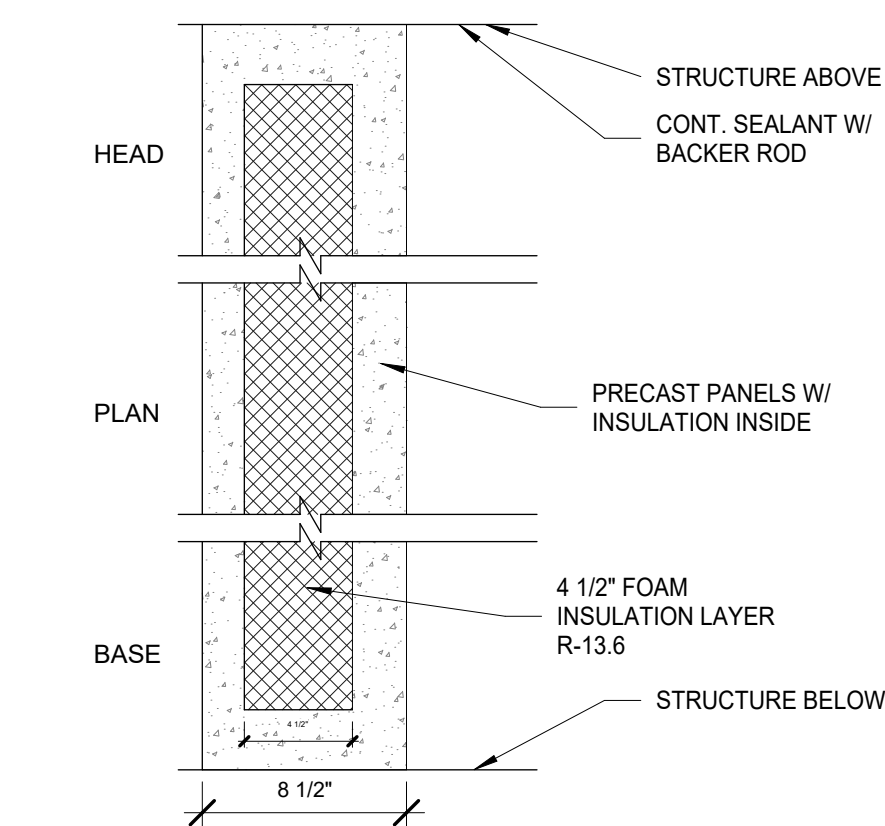
EXTERIOR WALL ASSEMBLY R-VALUES

EXTERIOR AIR FILM	0.17
4" FACE BRICK	0.44
1/2" to 4" AIR SPACE	1.00
6" CONCRETE MASONRY UNIT	1.00
8" CONCRETE MASONRY UNIT	1.11
12" CONCRETE MASONRY UNIT	1.28
2" CLOSED CELL FOAM INSUL.	13.00
1 3/4" FOAMULAR (High R CW Plus)	10.0
1/2" PLYWOOD SHEATING	.62
3/4" PLYWOOD SHEATING	.94
1" PLYWOOD SHEATING	1.25
5/8" GYPSUM BOARD	.56
INTERIOR AIR FILM	.68



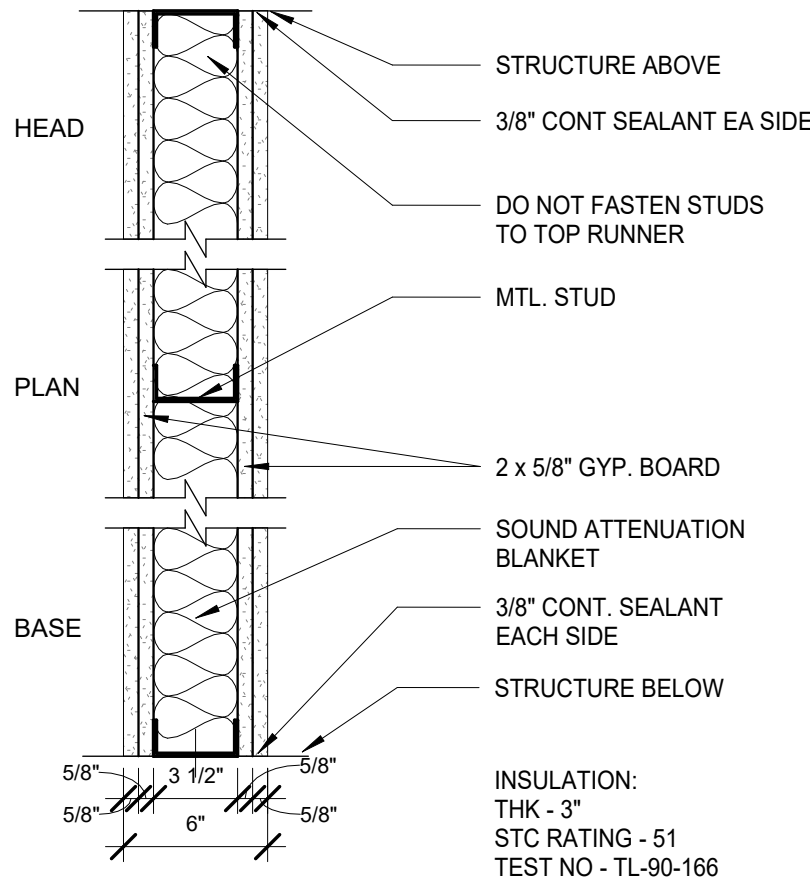
DTD. NO.	STUD SIZE	STUD SPACING	MAX HT. 5 PSF	FIRE RATING / TEST NO.	WALL THK	LOAD BEARING	INSULATION
A	3 1/2" 25 GA	16" OC		1 HR / U494	4 3/4"	N	BATT
B	5 1/2" 25 GA	16" OC		1 HR / U494	6 3/4"	N	BATT

1HR & NON-RATED ACCOUSTICAL WALL
SCALE: 1 1/2" = 1'-0"



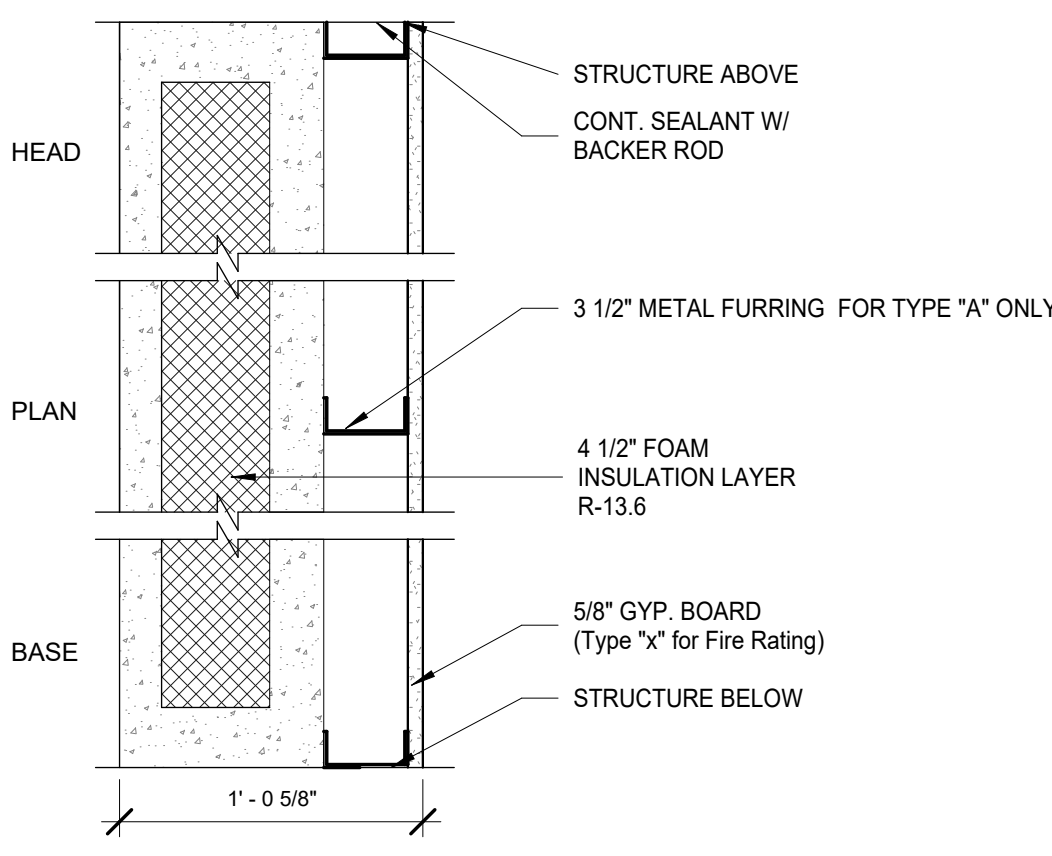
DTD. NO.	P.C. THK	INSULATION	FIRE RATING / TEST NO.	WALL THK	LOAD BEARING
A	8 1/2"	FOAM	3 HR / U914	8 1/2"	Y

PRECAST WALL
SCALE: 1 1/2" = 1'-0"



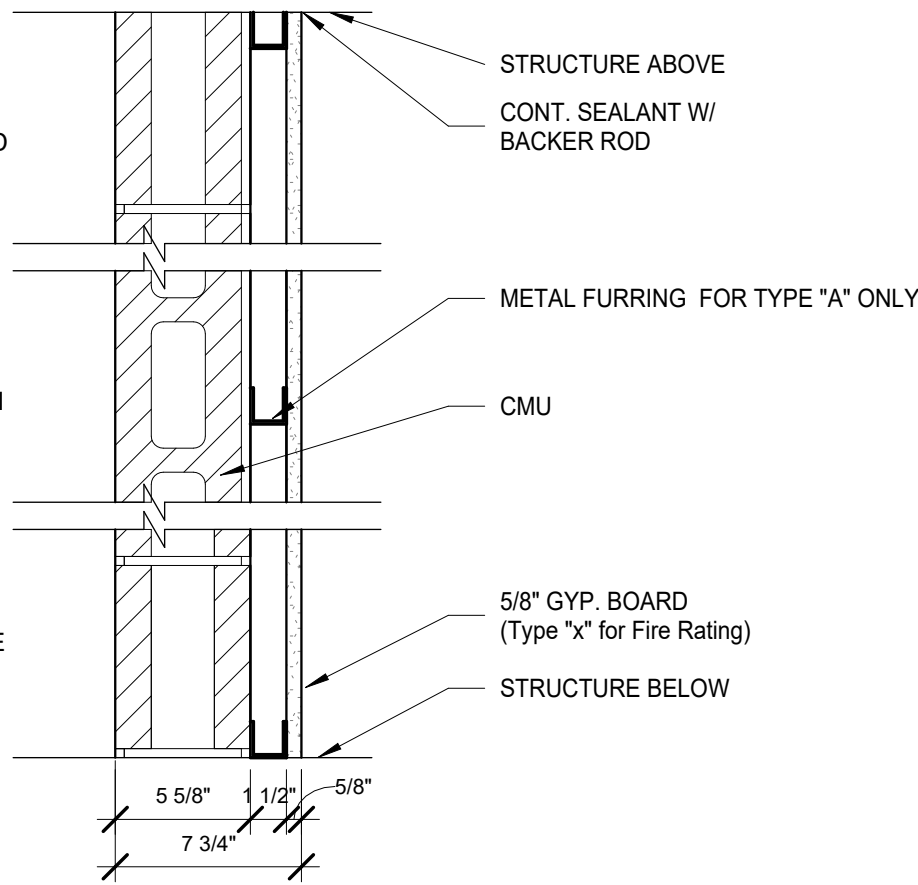
DTD. NO.	STUD SIZE	STUD SPACING	MAX HT. 5 PSF	FIRE RATING / TEST NO.	WALL THK	LOAD BEARING	INSULATION
A	3 1/2" 25 GA	16" OC		2 HR / U906	6"	N	BATT

2HR & NON-RATED ACCOUSTICAL WALL
SCALE: 1 1/2" = 1'-0"



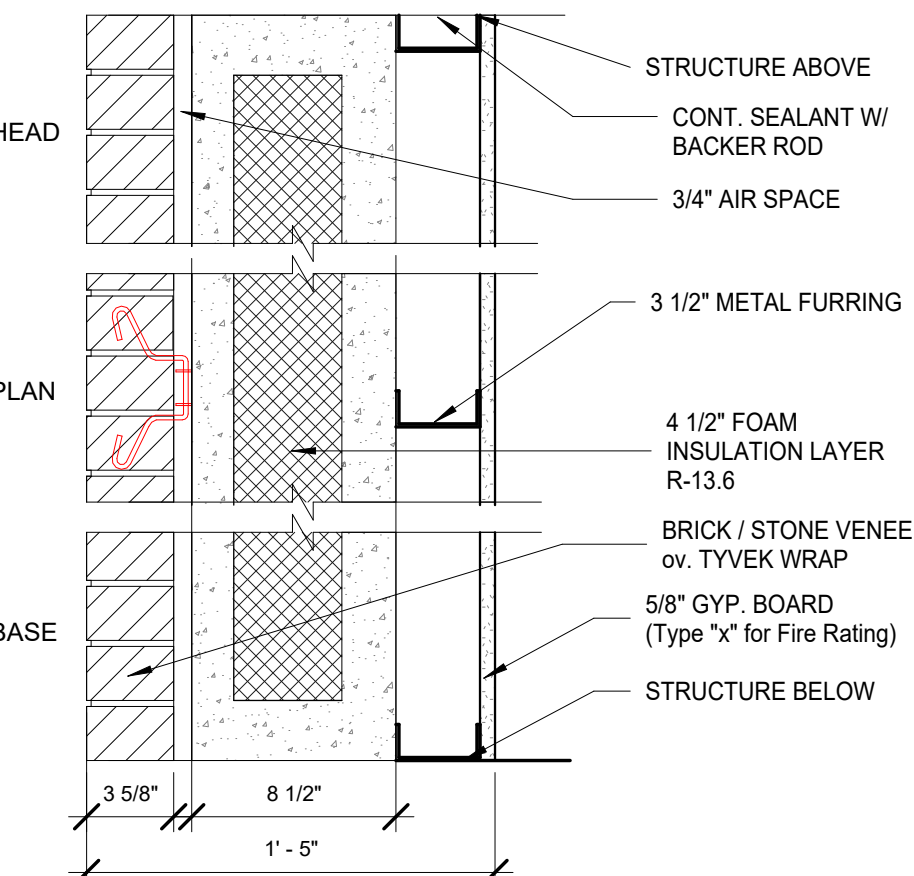
DTD. NO.	P.C. THK	INSULATION	STUD SIZE	STUD SPACING	FIRE RATING / TEST NO.	WALL THK	LOAD BEARING
A	8 1/2"	FOAM	3 1/2"	16" OC	3 HR / U914	1'-0 5/8"	Y

RECAST WALL w/GYP.
SCALE: 1 1/2" = 1'-0"



DTD. NO.	CMU THK	CMU CLASSIFICATION	STUD SIZE	STUD SPACING	FIRE RATING / TEST NO.	WALL THK	LOAD BEARING
A	5 5/8"	D-2	1 1/2"	16" OC	2 HR / U906	7 3/4"	Y
B	5 5/8"	D-2	none		2 HR / U906	5 5/8"	Y
C	7 5/8"	D-2	none		2 HR / U906	7 5/8"	Y

MASONRY WALL
SCALE: 1 1/2" = 1'-0"



DTD. NO.	P.C. THK	INSULATION	STUD SIZE	STUD SPACING	FIRE RATING / TEST NO.	WALL THK	LOAD BEARING
A	8 1/2"	FOAM	3 1/2"	16" OC	3 HR / U914	1'-5"	Y

PRECAST WALL w/GYP. & VENEER
SCALE: 1 1/2" = 1'-0"

FIRST FLOOR EGRESS PLAN
SCALE: 1" = 10'-0"

PARTITION NOTES

- PARTITIONS ARE INDICATED ON FLOOR PLANS BY GRAPHIC DESIGNATION AND/OR BY PARTITION TYPE SYMBOL - REFER TO PARTITION LEGEND.
- LINE OF STRUCTURE INDICATED FOR EACH PARTITION IS DIAGRAMMATIC ONLY AND DOES NOT INDICATE EXACT CONSTRUCTION CONDITIONS OR GEOMETRY - REFER TO STRUCTURAL DRAWINGS FOR FURTHER INFORMATION.
- PROVIDE BRACING WHERE PARTITION HEIGHT EXCEEDS MANUFACTURER'S ALLOWABLE HEIGHT. DO NOT BRACE TO DUCTWORK OR OTHER SUCH COMPONENTS VERIFY ALLOWABLE HEIGHT PSF REQUIREMENTS WITH LOCAL CODE AUTHORITIES.
- THE FIRE RATINGS AND STC RATINGS NOTED FOR THE GYPSUM BOARD PARTITION ASSEMBLIES SHOWN ARE COPIED AND TRANSCRIBED HERE FOR CONVENIENCE ONLY FROM THE UNDERWRITERS LABORATORY DIRECTORY AND THE UNITED STATES GYPSUM CATALOG.
- WALL ASSEMBLIES AND PARTITIONS THAT RECEIVE FIRE RESISTIVE RATINGS SHALL BE CONSTRUCTED PER TESTED ASSEMBLIES. MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS OF ALL APPLICABLE CODES AND LOCAL GOVERNING AUTHORITIES.
- PENETRATIONS OR PRODUCTS FOR USE IN SPECIFIC FIRE RATED PARTITION ASSEMBLIES SHALL BE BASED ON SUCCESSFUL PERFORMANCE IN FIRE TESTS. THESE PENETRATIONS MAY INCLUDE BUT ARE NOT LIMITED TO ITEMS SUCH AS PIPING, CONDUIT, OR HVAC DUCTWORK.
- EACH PARTITION SHOWN ON THE DRAWINGS TO BE A FIRE AND/OR SMOKE RESISTANT PARTITION SHALL BE IDENTIFIED AS SUCH WITH A LABEL ABOVE THE CEILING ON EACH SEGMENT OF THE WALL, 8'-0" O.C.
- FIRE AND/OR SMOKE RESISTANT RATINGS ARE TO CONTINUE ABOVE ALL OPENINGS IN RATED PARTITIONS.
- ELECTRICAL RECEPTACLES SHALL NOT BE LOCATED IN FIRE RATED PARTITIONS IN EXCESS OF 2HRS.
- THE SURFACE AREA OF INDIVIDUAL METALLIC OUTLET OR SWITCH BOXES SHALL NOT EXCEED 16 SQ. IN. THE AGGREGATE SURFACE AREA OF BOXES SHALL NOT EXCEED 100 SQ. IN. PER 100 SQ. FT. OF WALL AREA. A HORIZONTAL DISTANCE OF 24 IN. SHALL SEPARATE BOXES LOCATED ON OPPOSITE SIDES OF PARTITIONS.
- BOXES LOCATED IN CORRIDOR AND UNIT DEMISING PARTITIONS SHALL BE TREATED WITH ACOUSTICAL SEALANT AROUND PERIMETER AND BEHIND EACH BOX (FULL CLOSURE BED). IN ADDITION, OUTLET AND JUNCTION BOXES SHALL BE SEPARATED BY INSTALLING A STUD BETWEEN THEM IN THE PARTITION.
- COMPLETELY SEAL WITH CONTINUOUS ACOUSTICAL SEALANT ALL PARTITION HEADS, BASES, AND ENDS, PLUS SEAL ALL PENETRATIONS, INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL AND PLUMBING WORK.
- SOUND ATTENUATION BLANKETS ARE TO BE INSTALLED IN ALL PARTITIONS SEPARATING PUBLIC FROM PRIVATE AREAS AND WHERE NOISE CAN BE TRANSMITTED (ELEVATOR SHAFTS, TRASH CHUTES, KITCHENS, ETC.) EXTEND BLANKETS FULL HEIGHT OF PARTITION UP TO BOTTOM OF STRUCTURE, INSTALLED IN TIGHT, COMPRESSION FIT TO STUDS, STRUCTURE AND ADJACENT SURFACES.
- FINAL LOCATION AND PLACEMENT OF MEFPF ITEMS (BOTH HORIZONTAL AND VERTICAL) SHALL BE COORDINATED SUCH THAT THEY DO NOT TOUCH STUD PARTITION ASSEMBLIES AND CREATE AN ACOUSTICAL PROBLEM SUCH AS VIBRATION, IMPACT NOISE, ETC.
- PROVIDE FIRE RETARDANT WOOD BLOCKING IN METAL STUD PARTITIONS AS REQUIRED FOR SUPPORT AND/OR INSTALLATION OF DOOR FRAMES, MOLDINGS, MILLWORK, WALL PANELS, HANDRAILS, GRAB BARS, AND/OR PARTITIONS WHICH CONTAIN PLUMBING FIXTURES (SUCH AS WET WALLS AND WALLS ADJACENT TO AND BEHIND PLUMBING FIXTURES) U.N.O.
- CEMENTITIOUS BACKER BOARD SHALL BE USED AT PARTITIONS WHICH CONTAIN TUB AND SHOWER PLUMBING FIXTURES U.N.O.
- USE GALVANIZED METAL CORNER BEADS AND EDGE TRIMS (OR SCREDS AS REQUIRED) IN ALL EXPOSED WORK, POSITIVELY ATTACHED WITH FASTENERS.
- TAPE AND APPLY JOINT COMPOUND TO ALL INTERIOR CORNERS AND MOVEMENT CONTROL JOINTS IN GYPSUM BOARD PARTITIONS U.N.O.
- PROVIDE VERTICAL CONTROL JOINTS FOR ANY UNINTERRUPTED PARTITION LENGTH AT 30'-0" O.C. IN THE HORIZONTAL DIRECTION WHERE INDICATED OR AS REQUIRED. VERIFY LOCATIONS WITH ARCHITECT BEFORE INSTALLATION.
- ALL PLUMBING, MECHANICAL AND ELECTRICAL WORK WITHIN PUBLIC SPACES IS TO BE CONCEALED BY PAINTED SUSPENDED GYPSUM BOARD SOFFITS AND CEILINGS. COORDINATE LOCATIONS WITH MEFPF DRAWINGS.
- ALL MASONRY PARTITIONS THAT EXTEND BETWEEN STRUCTURAL CONCRETE COLUMNS AND/OR HEAR WALLS SHALL HAVE VERTICAL SEALANT JOINTS BETWEEN CONCRETE AND MASONRY.
- ALL FIRE SAFE MASONRY PARTITIONS SHALL HAVE CONTINUOUS FIRESAFING OF DENSITY AS SPECIFIED. PROVIDE CONTINUOUS JOINT FILLER AND ASTOMERIC SEALANT AT THE TOP OF THE WALL AND UNDERSIDE OF STRUCTURE.
- INTERSECTIONS OF MASONRY PARTITIONS SHALL BE CONSTRUCTED BY INTERLOCKING ALTERNATE COURSES OF MASONRY AND INSTALLING METAL TIES, RIGID ANCHORS, OR PREFABRICATED JOINT REINFORCEMENT.
- COORDINATE LOCATIONS OF ALL OPENINGS REQUIRED IN MASONRY PARTITIONS WITH ARCHITECTURAL, STRUCTURAL AND MEP DRAWINGS. REFER TO STRUCTURAL DRAWINGS
- ALL SYSTEMS SHALL MEET THE MINIMUM REQUIREMENTS PER ILLINOIS ENERGY CODE.

PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

PROJECT # 2102
DATE: 05/13/22

07.15.23 ISSUED FOR BID
REVISIONS

DRAWN BY: Author
APPROVED BY: Checker

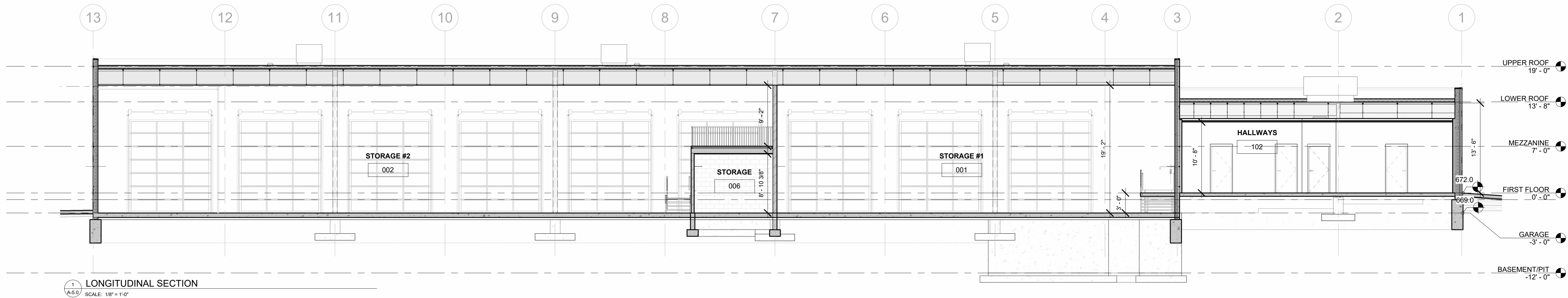
SCALE: AS NOTED
DESCRIPTION: LIFE SAFETY AND WALL TYPES

SHEET NO.

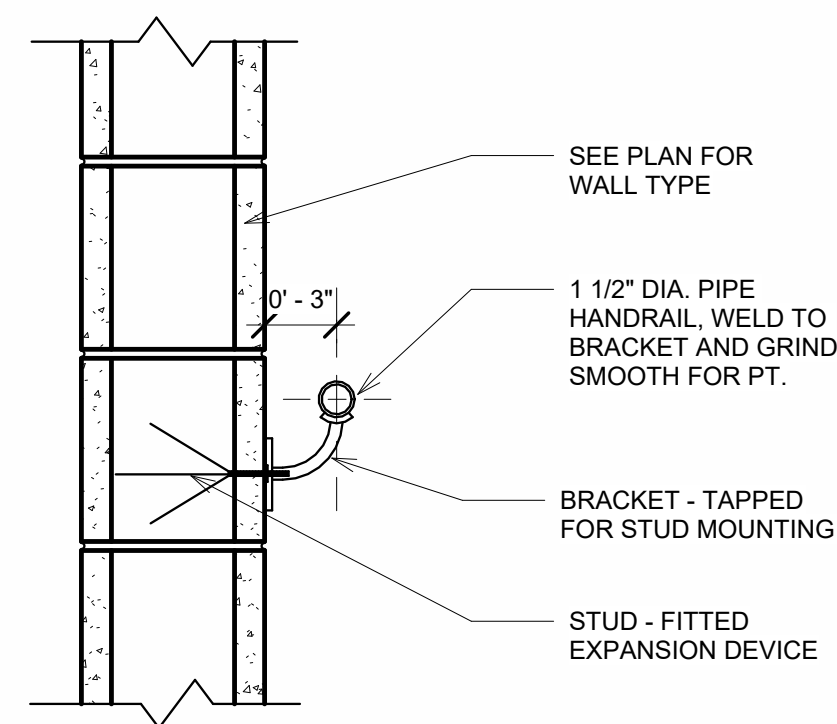
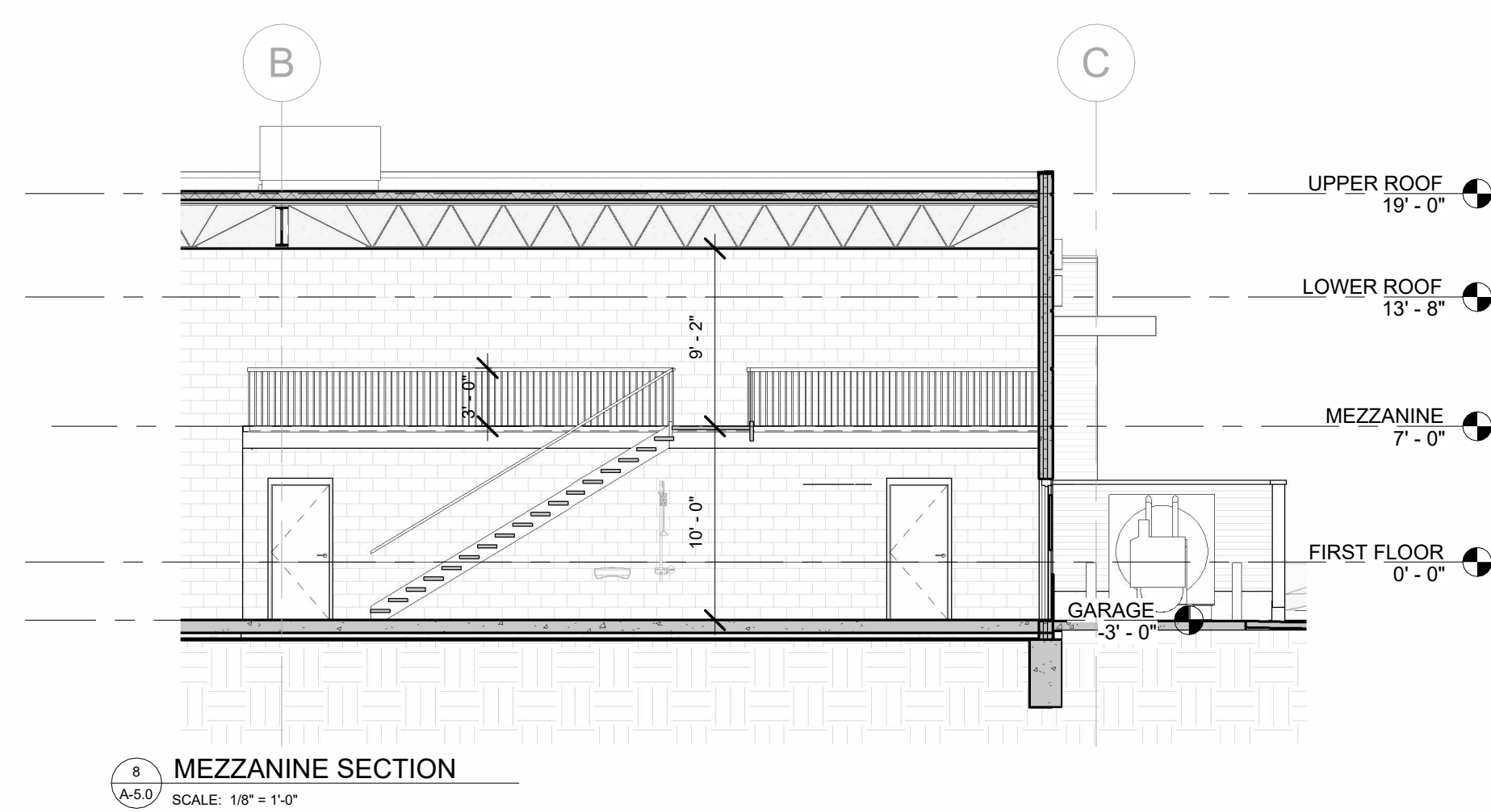
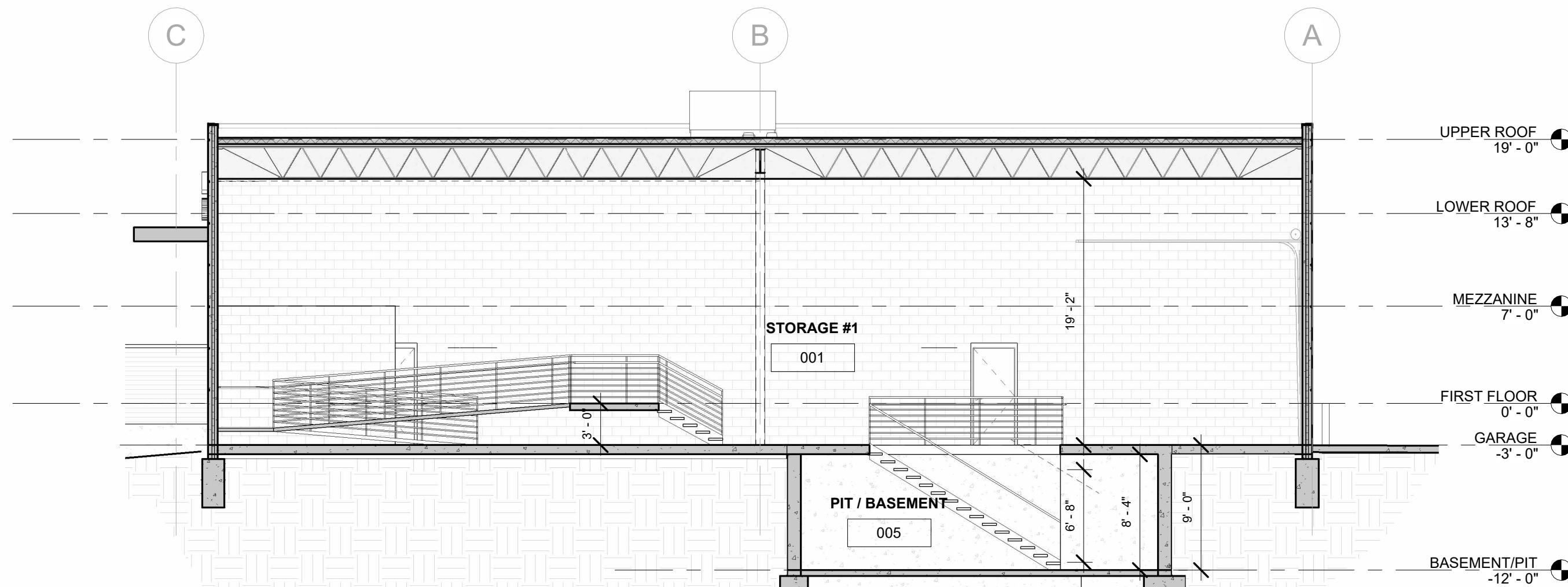
A-4.1

NERO ARCHITECTS

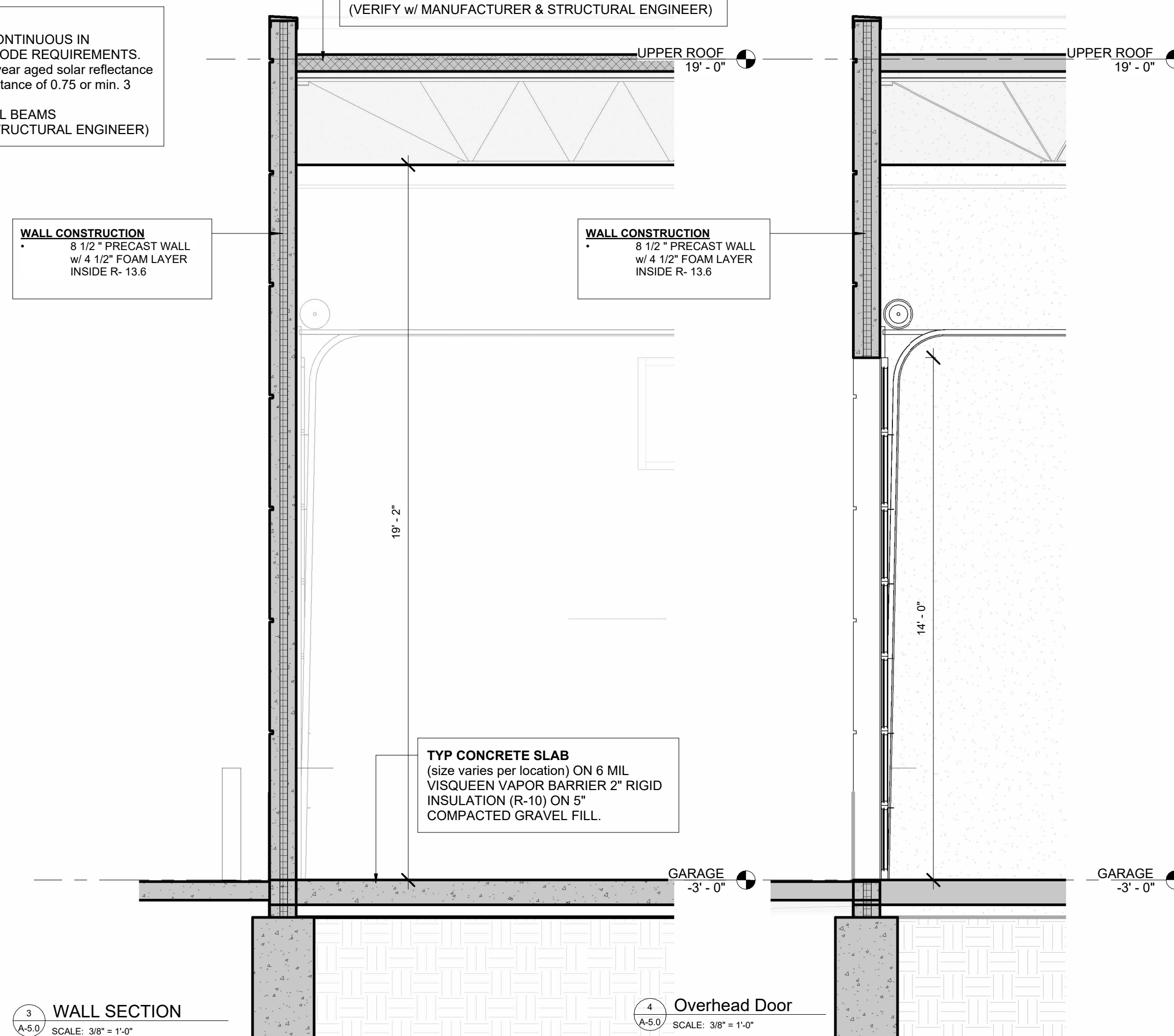
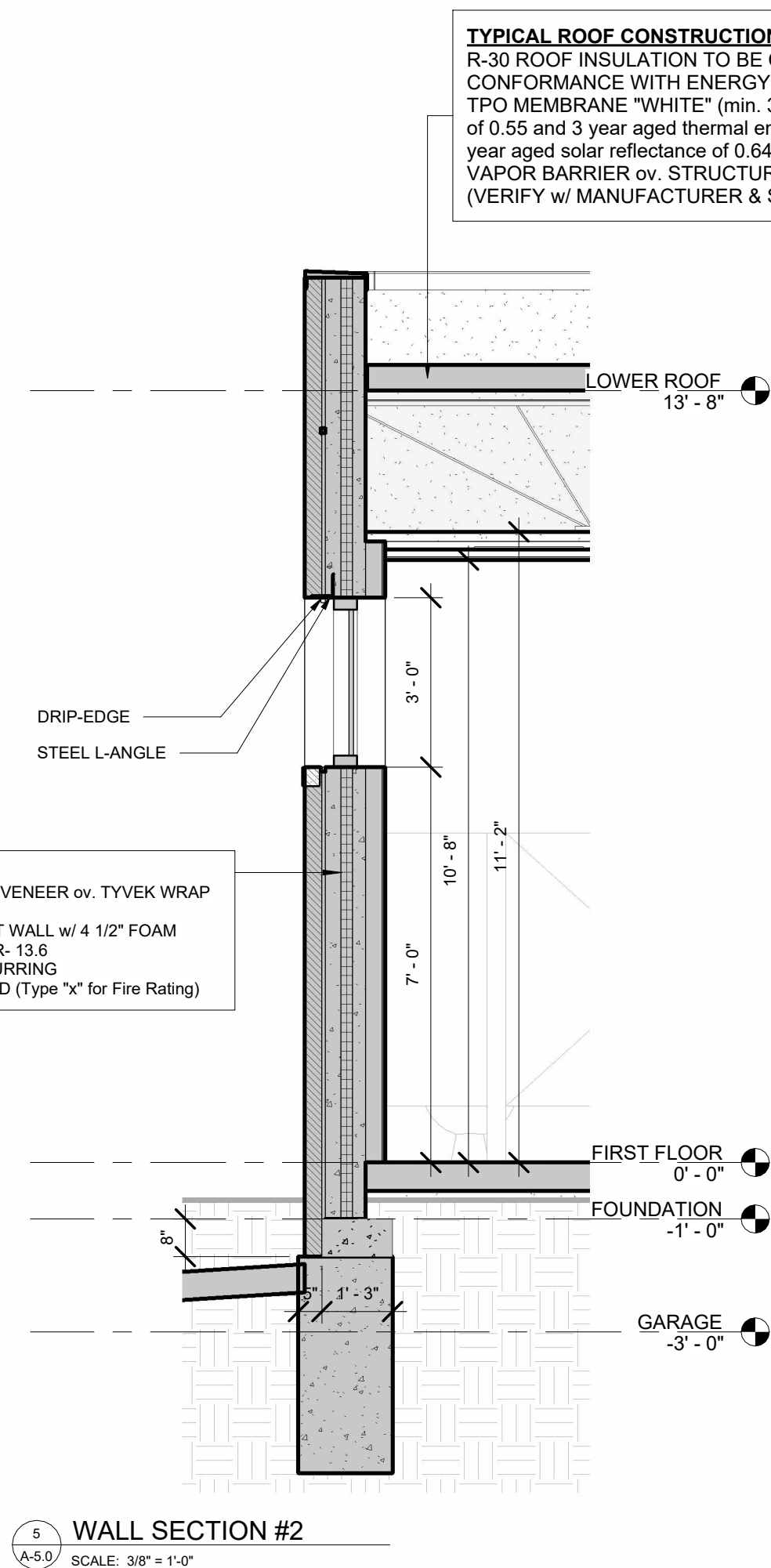
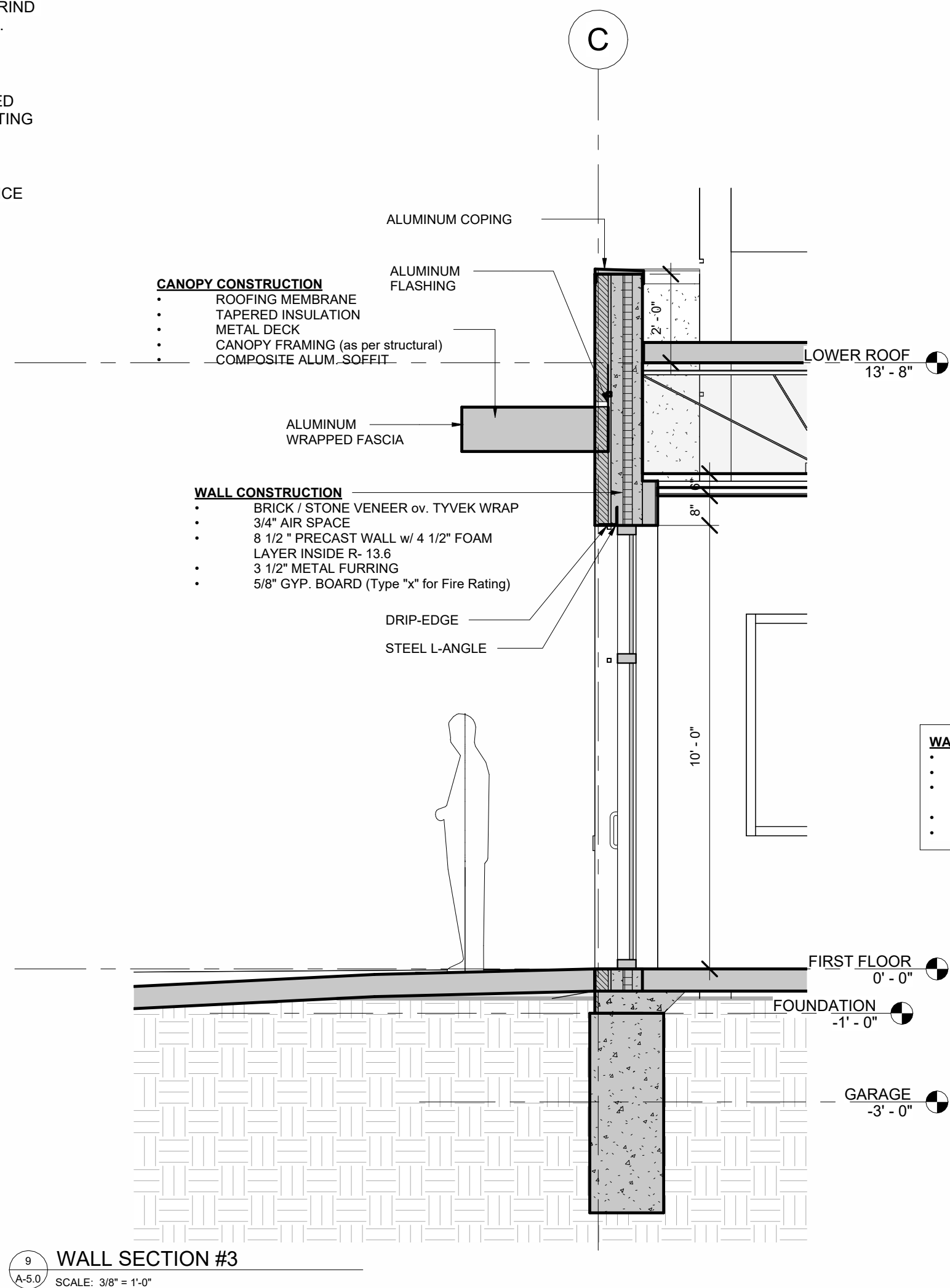
6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847/825.9400



- STAIR NOTES:**
1. ALL TREADS TO BE 11" DEEP WITH 1" NOSING.
 2. RISERS TO BE UNIFORM HEIGHT BETWEEN FLOORS FOR EACH STAIR RUN. RISER HEIGHTS ARE SHOWN ON PLANS.
 3. HANDRAILS TO BE 36" HIGH. GUARDRAILS TO BE 42" HIGH.
 4. ALL HANDRAILS TO BE ROUND PIPE, 1 1/2" OUTSIDE DIAMETER, AND ARE TO BE CONTINUOUS.
 5. HANDRAILS TO EXTEND 1'-0" TYP. BEYOND TOP & BOTTOM TREAD EXCEPT FOR INTERIOR HANDRAILS AT SWITCHBACKS. HANDRAIL EXTENSIONS TO RETURN TO POSTS.
 6. WALL MOUNTED HANDRAILS TO RETURN TO WALLS AT ENDS.
 7. PROVIDE 1 1/2" CLEARANCE BETWEEN HANDRAILS & WALLS AND BETWEEN HANDRAILS & GUARDRAILS TYP.
 8. OPENINGS IN GUARD RAILS SHALL COMPLY WITH OPENING RESTRICTIONS SET FORTH IN IBC SECTION 1015.4.
 9. STAIRS TO BE METAL PAN W/ 1 1/2" CONC. FILL.



7 RAILING BRACKET DETAIL
SCALE: 1 1/2" = 1'-0"



PROJECT # 2102
DATE: 05/13/22

PUBLIC WORKS BUILDING

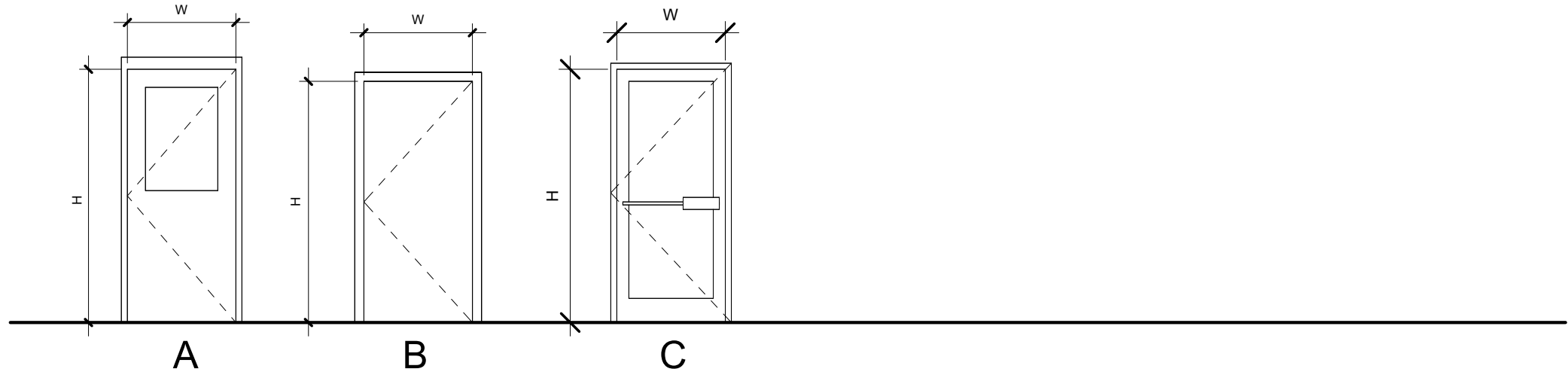
BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

07.15.23 ISSUED FOR BID
DRAWN BY: Author
APPROVED BY: Checker
SCALE: AS NOTED
DESCRIPTION: BUILDING SECTIONS

SHEET NO.
A-5.0

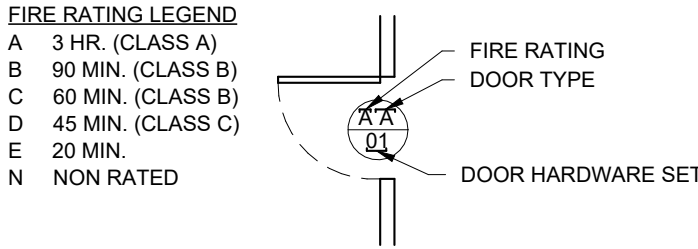
NERI ARCHITECTS
6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847.826.9400



DOOR NOTES:

1. DOOR HARDWARE TO BE REVIEWED BY ARCHITECT, OWNER AND GENERAL CONTRACTOR BEFORE ORDERING.
2. CONTRACTOR TO USE THE ARCHITECT'S DOOR TYPE PLAN DESIGNATION IN ADDITION TO THE ROOM NUMBER ON ALL SHOP DRAWING SCHEDULE SUBMITTALS.
3. DOOR THICKNESS SHALL BE 1 3/4" TYP. UNO.
4. ALL DOORS LEADING INTO HAZARDOUS ROOMS OR SPACES TO HAVE KNURLED HARDWARE AND FULLY GASKETED .
5. GLAZING AT LABELED DOORS TO BE FIRE-RESISTIVE. PROVIDE SAFETY GLAZING AT ALL NON-RATED DOORS.
6. GLAZING IN ALL EXTERIOR DOORS AND WINDOWS ARE TO COMPLY WITH 140 MPH WIND LOADS & IMPACT CODES
7. ALL UNIT ENTRY DOORS TO BE SMOKE / DRAFT CONTROL DOORS.
8. ALL EXTERIOR, OPAQUE, SWINGING DOORS TO HAVE A U-FACTOR ≤ 0.37 .
9. ALL EXTERIOR, OPAQUE, NON-SWINGING DOORS TO HAVE AN R FACTOR ≥ 4.75 .
10. PROVIDE LEVER OPERATED HARDWARE THROUGHOUT THE BUILDING. NO DOOR KNOBS.

DOOR DESIGNATION SYMBOL:



DOOR HARDWARE NOTE

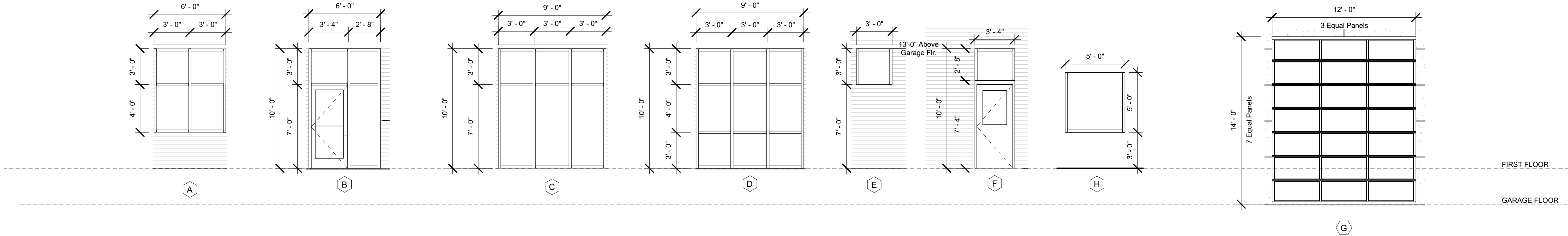
DOOR HARDWARE SHALL BE CAPABLE OF OPERATION WITH THE USE OF ONE (1) HAND AND SHALL NOT REQUIRE TIGHT PINCHING, TIGHT GRASPING OR TWISTING OF THE WRIST TO OPERATE. THUMB-TURN DEADBOLTS ARE PROHIBITED. LEVER OR PADDLE DEADBOLT RELEASES ARE ACCEPTABLE. DOOR THRESHOLD SHALL NOT EXCEED ONE-HALF INCH (1/2 ") IN HEIGHT. THRESHOLDS EXCEEDING ONE-QUARTER INCH (1/4") IN HEIGHT SHALL HAVE A 1:2 BEVEL. DOOR CLOSERS SHALL MEET OPENING FORCE AND SWEEP PERIOD REQUIREMENTS. * SECTION: IAC 400.310 (J) 7), 9), 9), 10)

DOOR TYPE SCHEDULE

TYPE (#)	WIDTH	HEIGHT	ELEV	DOOR		FRAME		REMARKS
				MATERIAL	FINISH	MATERIAL	FINISH	
01	3'-0"	7'-0"	A	MTL/GLASS	ALUM STOREFRONT	MTL	ALUM STOREFRONT	
02	3'-0"	7'-0"	B	WD	PTD	WD	PTD	
03	3'-0"	7'-0"	C	MTL/GLASS	ALUM STOREFRONT	MTL	ALUM STOREFRONT	

HARDWARE SCHEDULE

SET #	OPENING TYPE	HINGES	LOCKSET	KNOB/LEVER	FINISH	CLOSER	STOP	WEATHERSTRIPPING	REMARKS
01	ENTRANCES	1 1/2 PAIR BUTT, 4 1/2"x4"	CYLINDER DEADLATCH. KEY EXTERIOR	PUSH BAR INTERIOR, PULL EXTERIOR	MATCH STOREFRONT SATIN CHROME	ADA POWER OPERATOR WITH ACTUATOR PLATE INSIDE & KEY OPERATOR OUTSIDE	FLOOR	YES	THRESHOLD
02	OFFICE	1 1/2 PAIR BB BUTT, 4 1/2"x4"	KEYED DOUBLE CYLINDER. ANSI E2141	LEVER		NO	WALL	NO	WITH MASTERKEY
03	BATH MAIN DOOR	1 1/2 PAIR BB BUTT, 4 1/2"x4"	N.A.	PUSH PLATE EXTERIOR, PULL INTERIOR	SATIN CHROME	SURFACE MOUNT, MEDIUM DUTY		NO	
04	BATHROOMS	1 1/2 PAIR BB BUTT, 4 1/2"x4"	PRIVACY. ANSI F76A	LEVER	SATIN CHROME	NO	WALL	NO	
05	MECHANICAL	1 1/2 PAIR BB BUTT, 4 1/2"x4"	STOREROOM. ANSI F86 / KEYED(OUT)	LEVER	SATIN CHROME	YES	TBD	NO	KNURLED HARDWARE
06	EXTERIOR SWING	1 1/2 PAIR BUTT, 4 1/2"x4"	CYLINDER DEADLATCH. KEY EXTERIOR	PUSH BAR INTERIOR, KNURLED LEVER EXTERIOR	SATIN CHROME	YES	TBD	YES	FULLY GASKETED
07	ELECTRIC ROOM	1 1/2 PAIR BUTT, 4 1/2"x4"	CYLINDER DEADLATCH. KEY EXTERIOR & EMERGENCY PADDLE INTERIOR.	PUSH BAR INTERIOR, LEVER EXTERIOR	SATIN CHROME				SIGNAGE ON DOOR TO READ 'ELECTRICAL ROOM', FULLY GASKETED, KNURLED HARDWARE
08	CLOSET	1 1/2 PAIR BB BUTT, 4 1/2"x4"	PASSAGE ANSI F75	LEVER	SATIN CHROME		WALL		



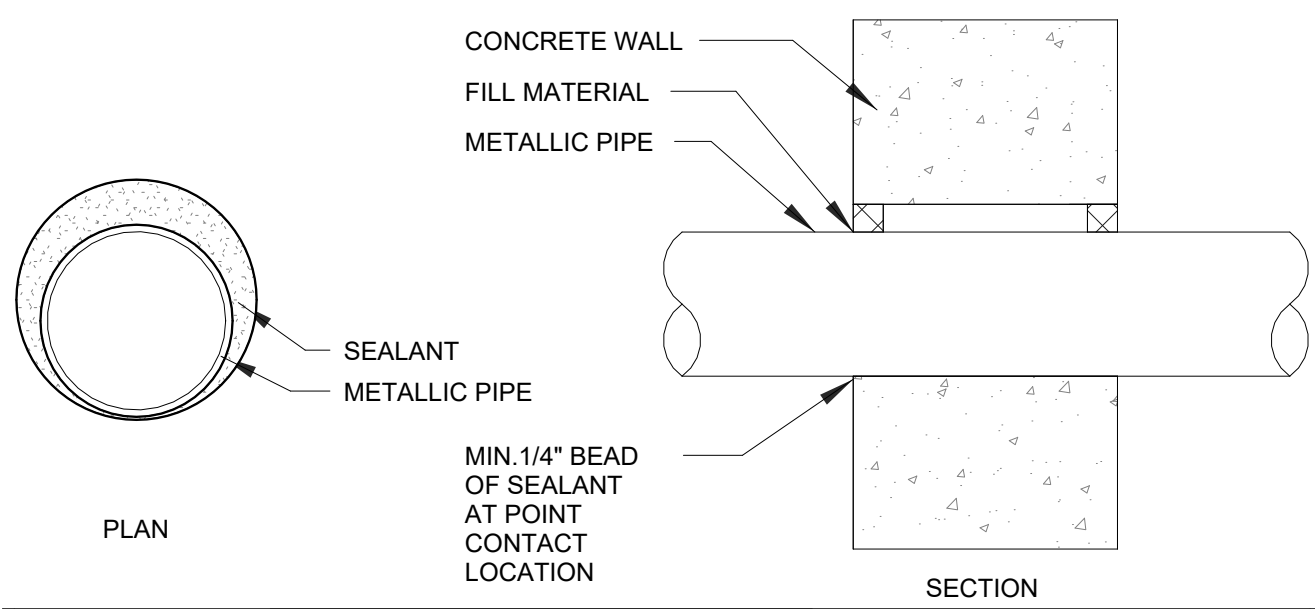
PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

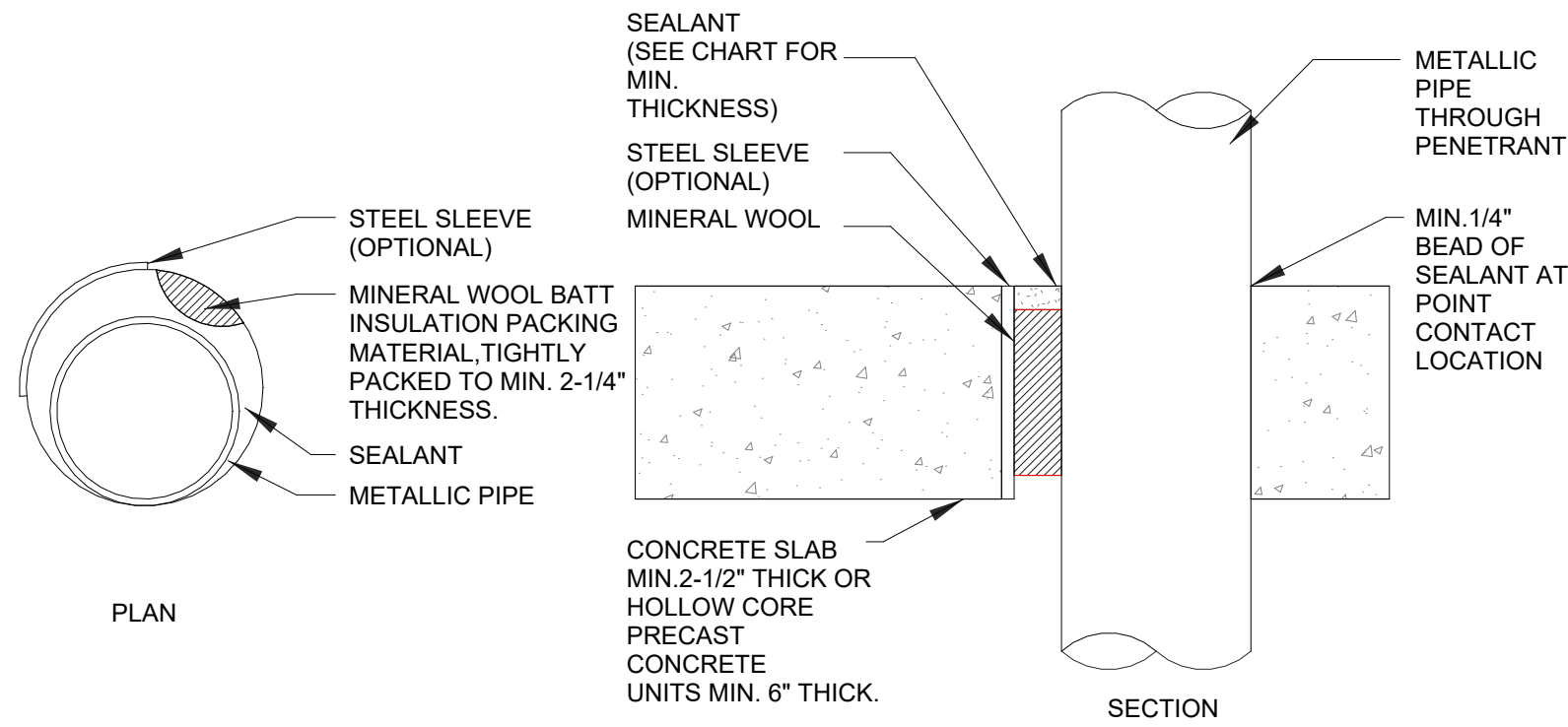
PROJECT #	2102
DATE:	05/13/22

07.15.23	ISSUED FOR BID
REVISIONS	
DRAWN BY:	Author
APPROVED BY:	Checker
SCALE:	AS NOTED
DESCRIPTION:	DOOR / WINDOW SCHEDULE
SHEET NO.	A-6.0



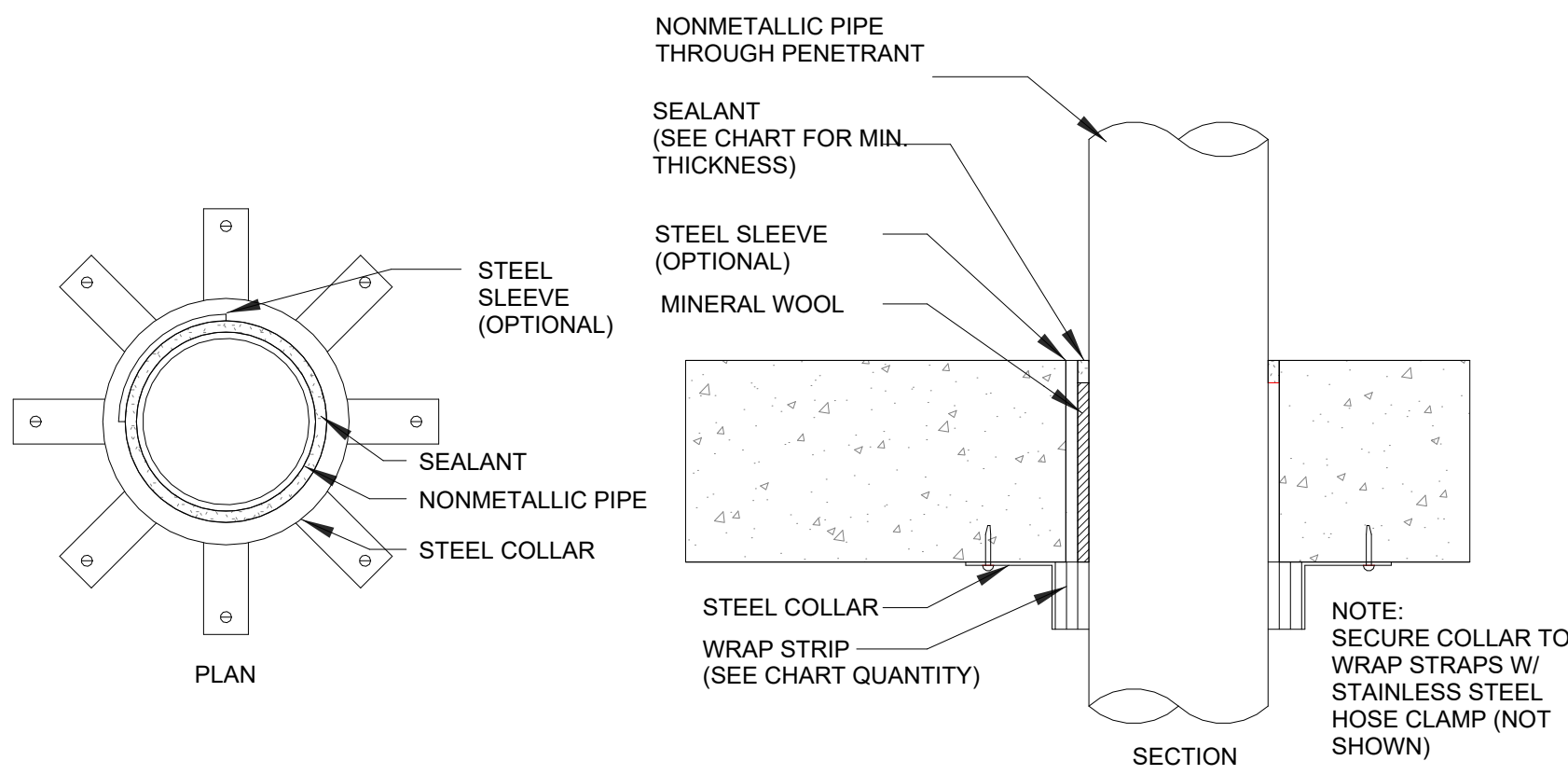
UL SYSTEM NO. W-J-1098					
TYPE OF PENETRANT	MAX. PIPE DIAM.	ANNULAR SPACE	MIN. FILL MATERIAL THICKNESS	F RATING	T RATING
STEEL OR IRON PIPE	8" OR LESS	0" TO 2"	5/8"	2 HR	1/4, 3/4, & 1 HR
COPPER PIPE	4" OR LESS	0" TO 2"	5/8"	2 HR	1/4, 3/4, & 1 HR

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT



UL SYSTEM NO. C-AJ-1353					
MIN. CONCRETE THICKNESS	STEEL SLEEVE	MAX ANNULAR SPACE	PACKING MATERIAL	MIN. FILL MATERIAL THICKNESS	F RATING
2-1/2"	OPTIONAL	2"	REQUIRED	1/4"	3 HR
4-1/2"	NO	1"	OPTIONAL	1/2"	2 HR

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT



UL SYSTEM NO. C-AJ-2297									
PIPE TYPE	MAX PIPE DIAM.	MIN. CONCRETE THICKNESS	WRAP STRIP TYPE	MIN. NO. OF WRAP STRIP LAYERS	F RATING	T RATING	MIN. PACKING MATERIAL DEPTH	MIN. FILL MATERIAL DEPTH	MAX ANNULAR SPACE
PVC, ccPVC, CPVC, RNC, ABS, ccABS	2"	2-1/2"	RED, BLU OR BLU2	1	2	1	N/A	1/2"	1/16"
PVC, ccPVC, CPVC, RNC, ABS, ccABS	2"	2-1/2"	RED, BLU OR BLU2	1	2	1	2"	1/2"	3/14"
PVC, ccPVC, CPVC, RNC, ABS, ccABS	4"	2-1/2"	RED, BLU OR BLU2	2	2	1	2"	1/2"	3/14"
PVC, ccPVC, CPVC, RNC, ABS, ccABS	2"	4-1/2"	RED, BLU OR BLU2	1	3	2	N/A	1/4"	1/4"
PVC, ccPVC, CPVC, RNC, ABS, ccABS	3"	4-1/2"	RED, BLU OR BLU2	2	3	2	N/A	1/4"	1/4"
PVC, ccPVC, CPVC, RNC, ABS, ccABS	4"	4-1/2"	RED, BLU OR BLU2	3	3	2	N/A	1/4"	1/4"
PVC, ccPVC, CPVC, RNC, ABS, ccABS	6"	4-1/2"	RED	3	3	0	N/A	1/4"	1/2"
PVC, ccPVC, CPVC, RNC, ABS, ccABS	6"	4-1/2"	BLU OR BLU2	3	3	2	N/A	1/4"	3/16"
ABS, ccABS	2"	4-1/2"	RED	1	3	0	N/A	1/4"	1/2"
ABS, ccABS	2"	4-1/2"	BLU OR BLU2	1	3	2	N/A	1/4"	1/2"
ABS, ccABS	3"	4-1/2"	RED	2	2	0	N/A	1/4"	1/2"
ABS, ccABS	3"	4-1/2"	BLU OR BLU2	2	3	2	N/A	1/4"	1/2"
ABS, ccABS	4"	4-1/2"	RED	3	2	0	N/A	1/4"	1/2"
ABS, ccABS	4"	4-1/2"	BLU OR BLU2	3	3	2	N/A	1/4"	1/2"
ABS, ccABS	6"	4-1/2"	RED	3	3	0	N/A	1/2"	3/8"
ABS, ccABS	6"	4-1/2"	BLU OR BLU2	3	3	3	N/A	1/2"	3/8"

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT
WRAP STRIP: SPECIFIED TECHNOLOGIES-SPECSEAL RED WRAP STRIP, SPECSEAL BLU WRAP STRIP OR SPECSEAL BLU2 WRAP STRIP

FIRESTOPPING NOTES

ALL PENETRATIONS THROUGH FIRE RATED FLOOR, WALL & ROOF/CEILING ASSEMBLIES BY ELECTRICAL, MECHANICAL & PLUMBING CONDUITS, PIPES, TUBES, ETC., SHALL BE PROPERLY FIRE STOPPED TO COMPLY WITH ASTM E119 REQUIREMENTS. PROVIDE THROUGH PENETRATION SYSTEMS AS SPECIFIED FOR THE FOLLOWING ASSEMBLIES.

HOLLOW CORE CONCRETE PLANK FLOOR ASSEMBLY

UL DES. NO. 64 - UP TO 2 HR. RATING

COMPONENTS

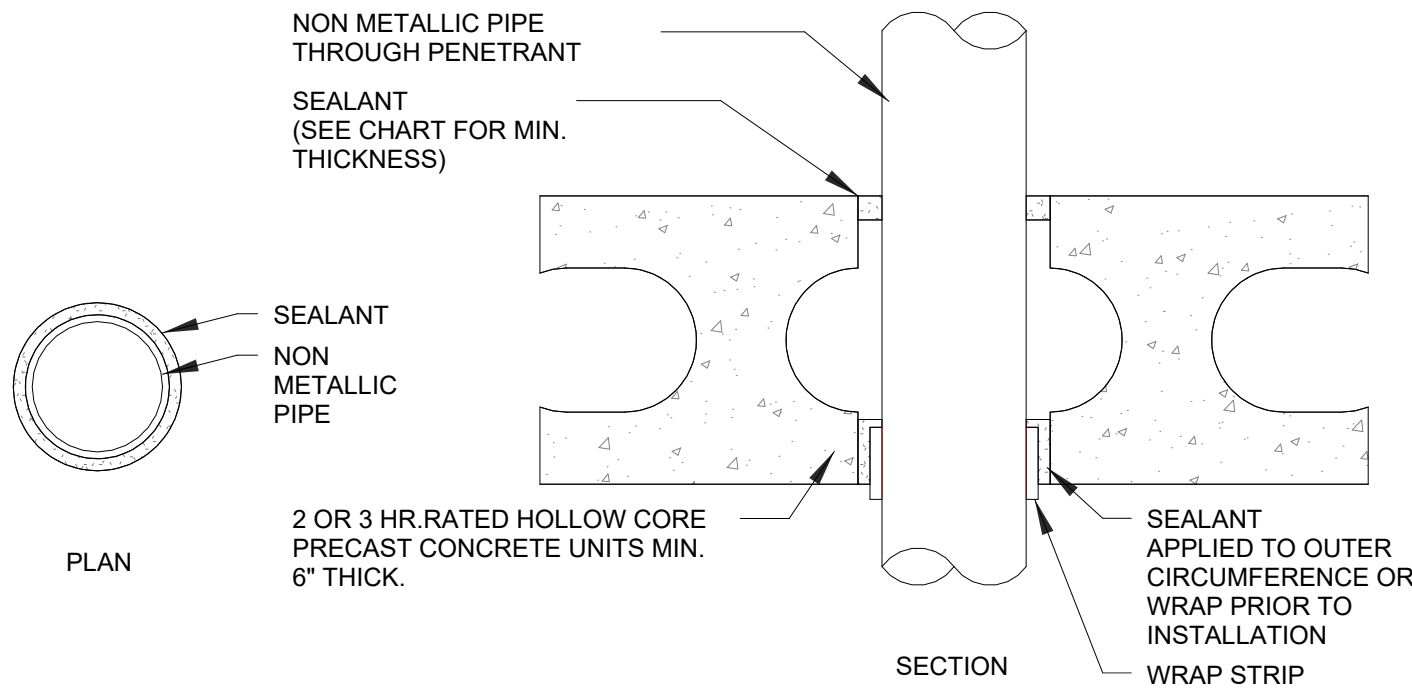
1. FIRE STOP WRAP STRIP AROUND PIPE/CONDUIT
2. FIRE RESTRICTING METAL COLLAR W/APPROPRIATE FASTENERS
3. FIRE STOP CAULK OR MOLDABLE PUTTY AROUND COLLAR

METAL PIPE

UL DES. NO. 319 - UP TO 2 HR. FIRE RATING

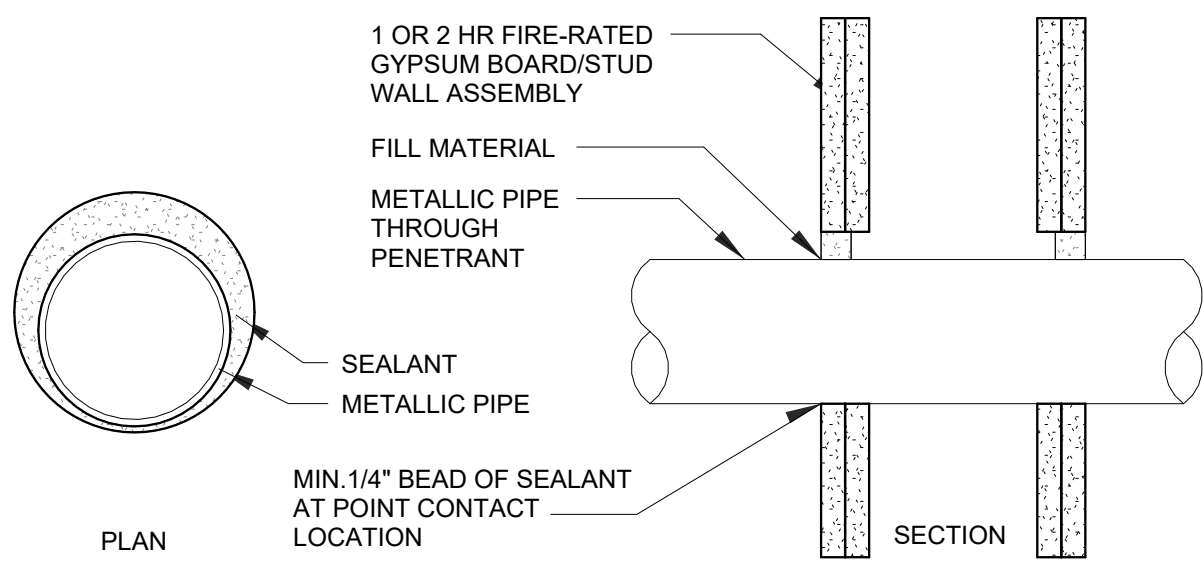
COMPONENTS

1. MINERAL WOOL PACKED INOT ANNULAR SPACE
2. FIRESTOP CAULK EACH SIDE OF PENETRATION



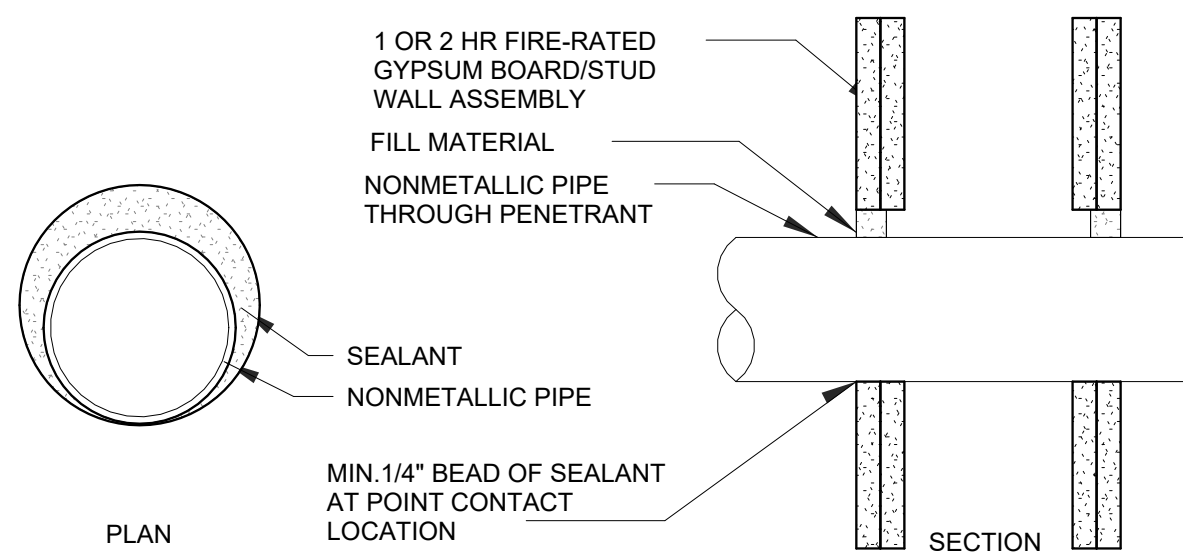
UL SYSTEM NO. F-B-2014						
MIN. HOLLOW CORE CONCRETE UNIT THICKNESS	PIPE DIAM.	ANNULAR SPACE	MIN. FILL MATERIAL THICKNESS	F RATING	T RATING	
6"	0 TO 2"	1/4 TO 5/16"	1/2"	2 HR	3 HR	
6"	2" TO 3"	1/4 TO 5/16"	1/2"	2 HR	1 HR	

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT



UL SYSTEM NO. W-L-1222						
TYPE OF PENETRANT	MAX. PIPE DIAM.	ANNULAR SPACE	MIN. FILL MATERIAL THICKNESS	F RATING	T RATING	
STEEL OR IRON PIPE, STEEL CONDUIT OR EMT	2"	0" TO 2"	5/8"	1&2 HR	1HR	
STEEL OR IRON PIPE, STEEL CONDUIT OR EMT	8"	0" TO 2"	5/8"	1&2 HR	3/4 HR	
COPPER PIPE OR TUBE	4"	0" TO 2"	5/8"	1&2 HR	1/4 HR	

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT



UL SYSTEM NO. W-L-2241						
TYPE OF PENETRANT	MAX. PIPE DIAM.	ANNULAR SPACE	MIN. FILL MATERIAL THICKNESS	F RATING	T RATING	
POLYVINYL CHLORIDE (PVC) PIPE	2"	0" TO 1"	5/8"	1&2 HR	1/4 HR	
CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE	2"	0" TO 1"	5/8"	1&2 HR	1HR OR 1-3/4HR	
RIGID NONMETALLIC CONDUIT	2"	0" TO 1"	5/8"	1&2 HR	1HR OR 1-3/4HR	
ELECTRICAL NONMETALLIC TUBING	2"	0" TO 1"	5/8"	1&2 HR	1HR OR 1-3/4HR	
CROSS LINKED POLYETHYLENE (PEX) TUBING	1"	0" TO 1"	5/8"	1&2 HR	1HR OR 1-3/4HR	
ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE	1-1/2"	1/4" TO 3/4"	5/8"	1&2 HR	0HR	

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT

GYPSUM BOARD WALL ASSEMBLY

PLASTIC PIPE

UL DES. NO. 148 (B) - UP TO 2 HR. FIRE RATING

COMPONENTS:

1. FIRE STOP WRAP/STRIP AROUND PIPE/CONDUIT EACH SIDE OF PENETRATION
2. FIRE STOP CAULK OR MOLDABLE PUTTY EACH SIDE OF PENETRATION

METAL PIPE

UL DES. NO. 147 (A) - UP TO 2 HR. FIRE RATING

COMPONENTS:

1. FIRE STOP WRAP/STRIP AROUND PIPE/CONDUIT
2. FIRE RESTRICTING METAL COLLAR W/APPROPRIATE FASTENERS
3. FIRE STOP CAULK OR MOLDABLE PUTTY AROUND COLLAR

ROOF/CEILING ASSEMBLY

PLASTIC PIPE

UL DES. NO. 451 (B) - UP TO 1 HR. FIRE RATING

COMPONENTS:

1. FIRE STOP WRAP/STRIP AROUND PIPE/CONDUIT
2. FIRE RESTRICTING METAL COLLAR W/APPROPRIATE FASTENERS
3. FIRE STOP CAULK OR MOLDABLE PUTTY AROUND COLLAR

MASONRY WALL ASSEMBLY

PLASTIC PIPE

UL DES. NO. 562 - UP TO 2 HR. FIRE RATING

COMPONENTS:

1. BACKER ROD PACKED AROUND PIPE EACH SIDE OF WALL
2. FIRE STOP EACH SIDE OF PENETRATION

METAL PIPE

UL DES. NO. 161 - UP TO 2 HR. FIRE RATING

COMPONENTS:

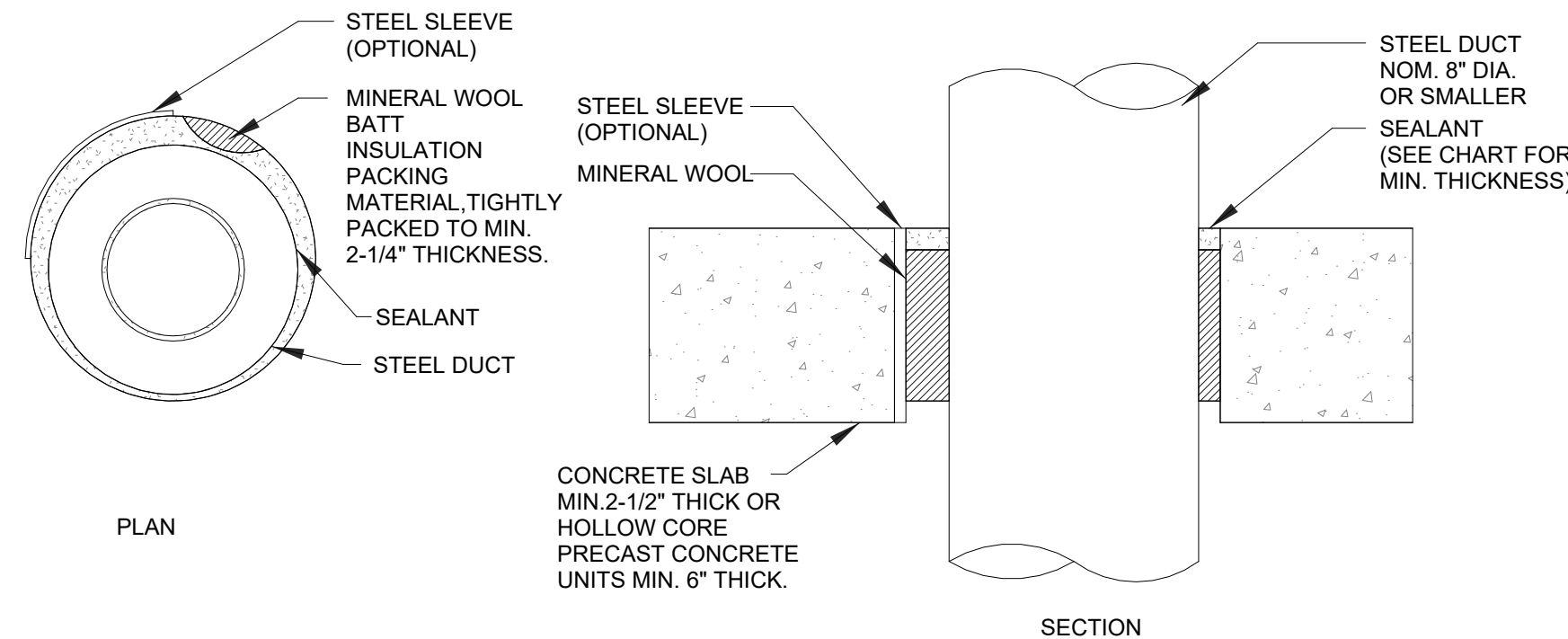
1. MINIMUM 3 DEPTH MINERAL WOOL BACKING PACKED INTO ANNULAR SPACE
2. FIRE STOP CAULK EACH SIDE OF PENETRATION

METAL PIPE

UL DES. NO. 453 - UP TO 1 HR. FIRE RATING

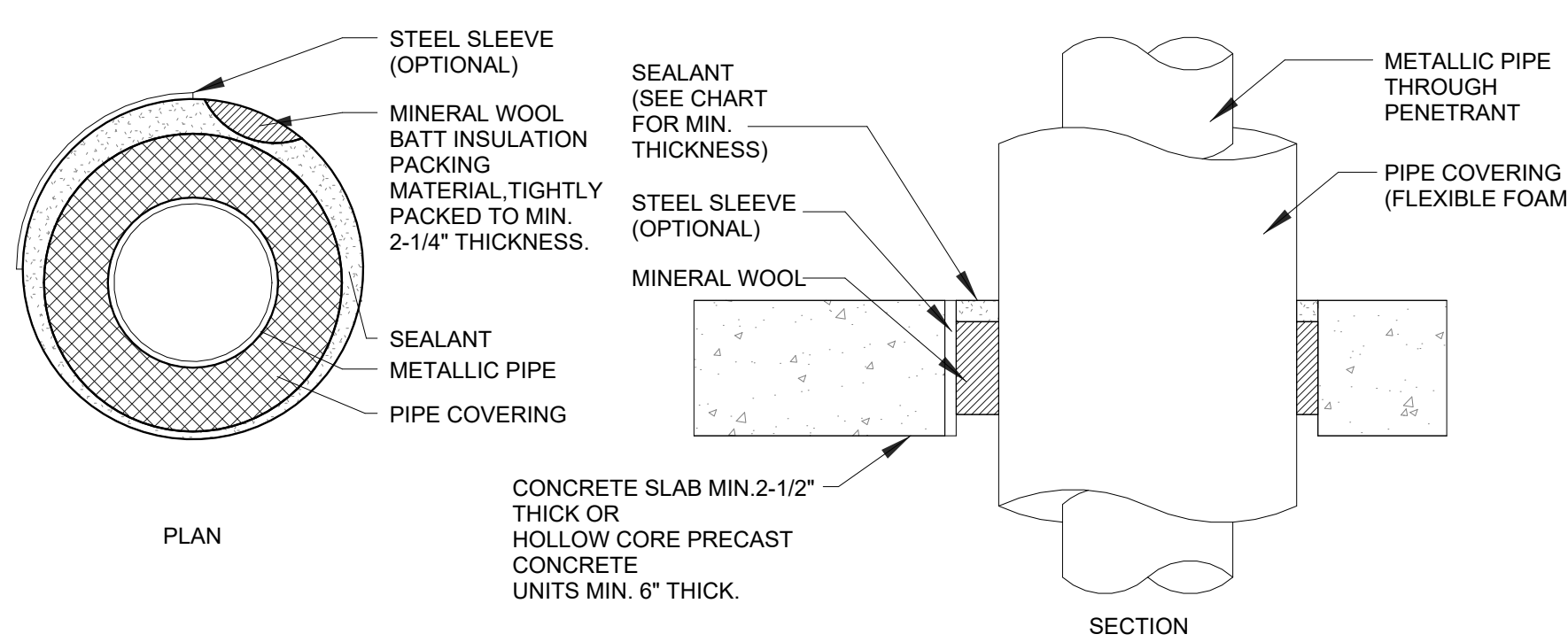
COMPONENTS:

1. PROVIDE FIRE STOP CAULK AROUND GYPSUM BOARD CEILING & ROOF DECK PENETRATIONS



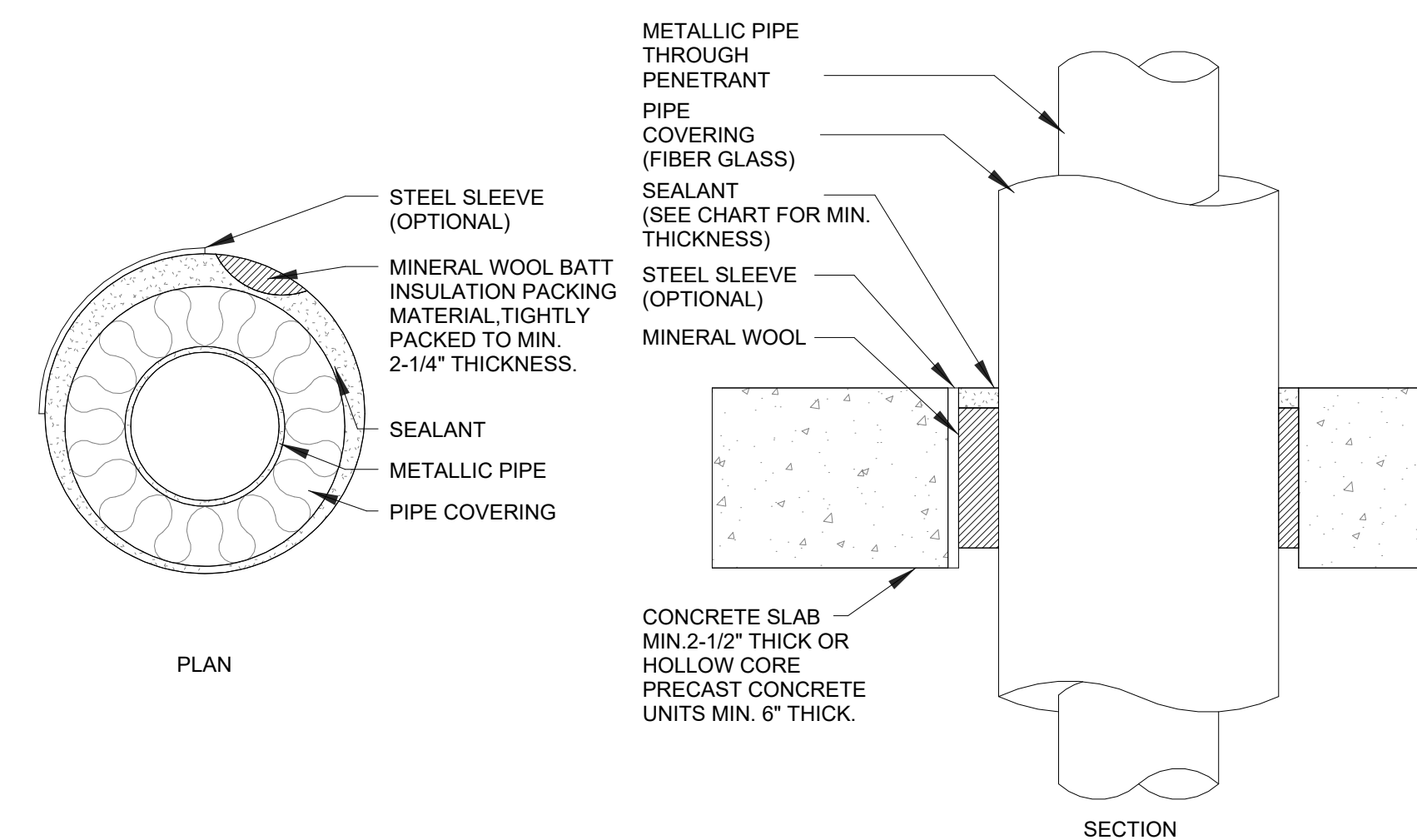
UL SYSTEM NO. C-AJ-7040						
MIN. CONCRETE THICKNESS	STEEL SLEEVE	ANNULAR SPACE	MIN. PACKING MATERIAL THICKNESS	MIN. FILL MATERIAL THICKNESS	F RATING	T RATING
4-1/2"	OPTIONAL	2" MAX	3"	1/2"	2 HR	1/4 HR

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT



UL SYSTEM NO. C-AJ-5155								
MIN. CONCRETE THICKNESS	STEEL SLEEVE	PIPE COVERING THICKNESS	ANNULAR SPACE	MIN. PACKING MATERIAL THICKNESS	MIN. FILL MATERIAL THICKNESS	F RATING	T RATING	
2-1/2"	YES	3/4"	1/4" TO 5/8"	1-1/2"	1"	2 HR	3/4 HR	
4-1/2"	YES	3/4"	1/4" TO 5/8"	3"	1"	2 HR	3/4 HR	
4-1/2"	NO	1/2"	0 TO 2"	3"	1/2"	2 HR	3/4 HR	
4-1/2"	YES	1/2"	1/4" TO 1-5/8"	3"	1/2"	2 HR	3/4 HR	

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT



UL SYSTEM NO. C-AJ-5138								
MIN. CONCRETE THICKNESS	STEEL SLEEVE	MAX ANNULAR SPACE	MIN. PACKING MATERIAL DEPTH	MIN. FILL MATERIAL THICKNESS	F RATING	T RATING W/ SLEEVE	T RATING W/OUT SLEEVE	
2-1/2"	OPTIONAL	1/4" TO 5/8"	1-1/2"	1"	2 HR	3/4 HR	3/4 HR	
4-1/2"	OPTIONAL	1/4" TO 5/8"	3"	1/2"	2 HR	3/4 HR	1 HR	

FILL MATERIAL: SPECIFIED TECHNOLOGIES-SPECSEAL LCI SEALANT

NERO ARCHITECTS

6400 N NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847/625-9400

PROJECT # 2102
DATE: 05/13/22

PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

07.15.23 ISSUED FOR BID

REVISIONS

DRAWN BY: RAM

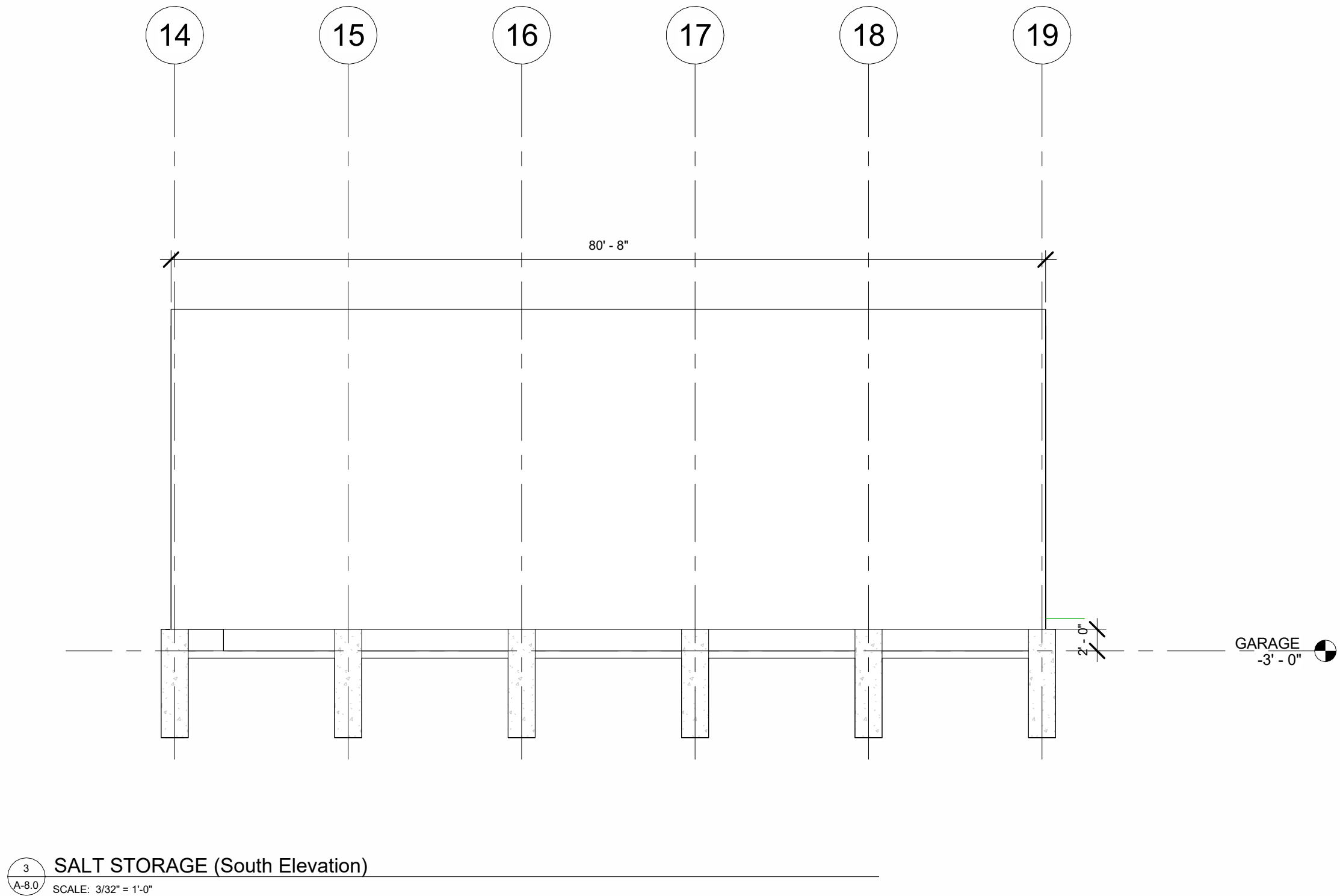
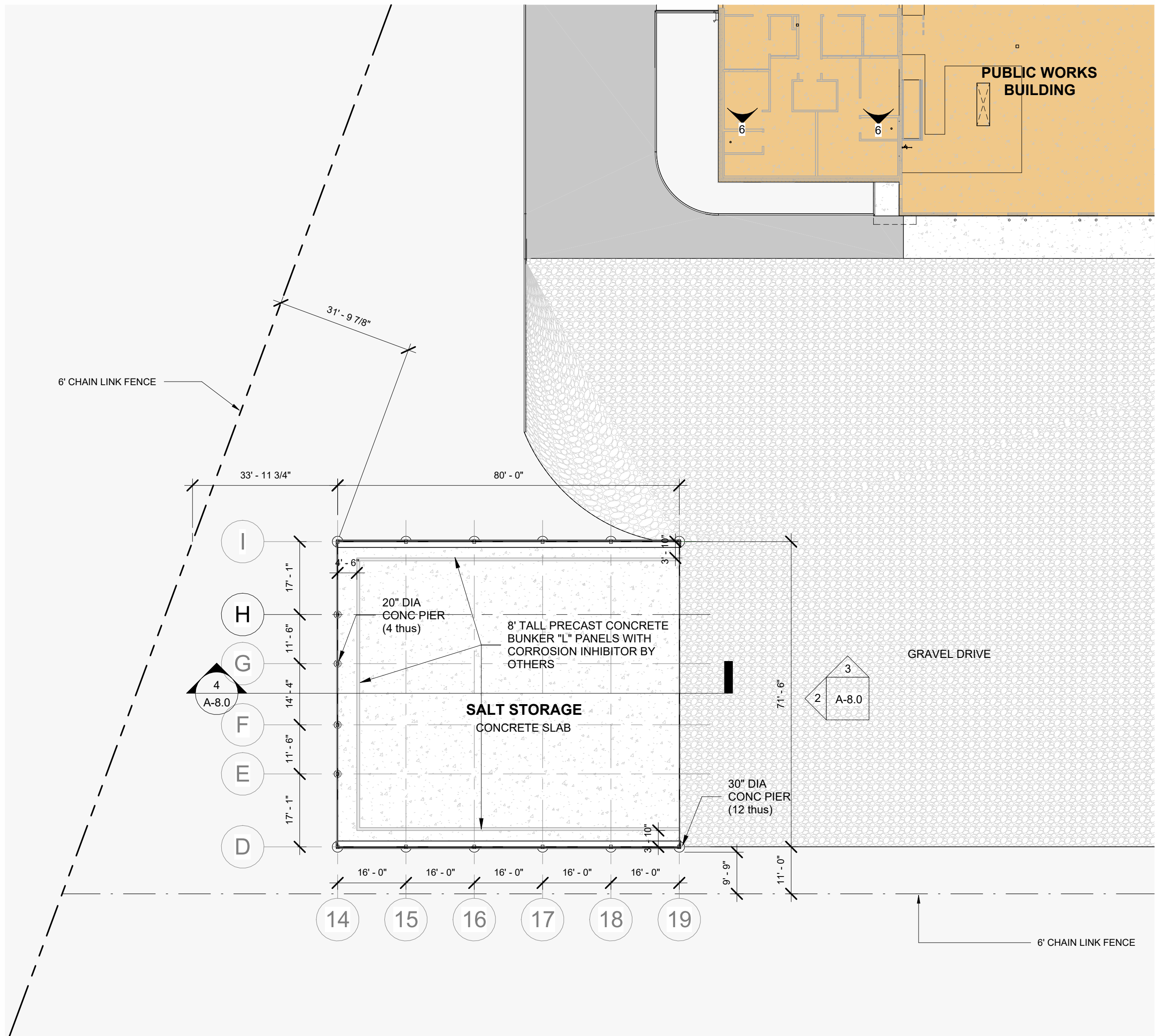
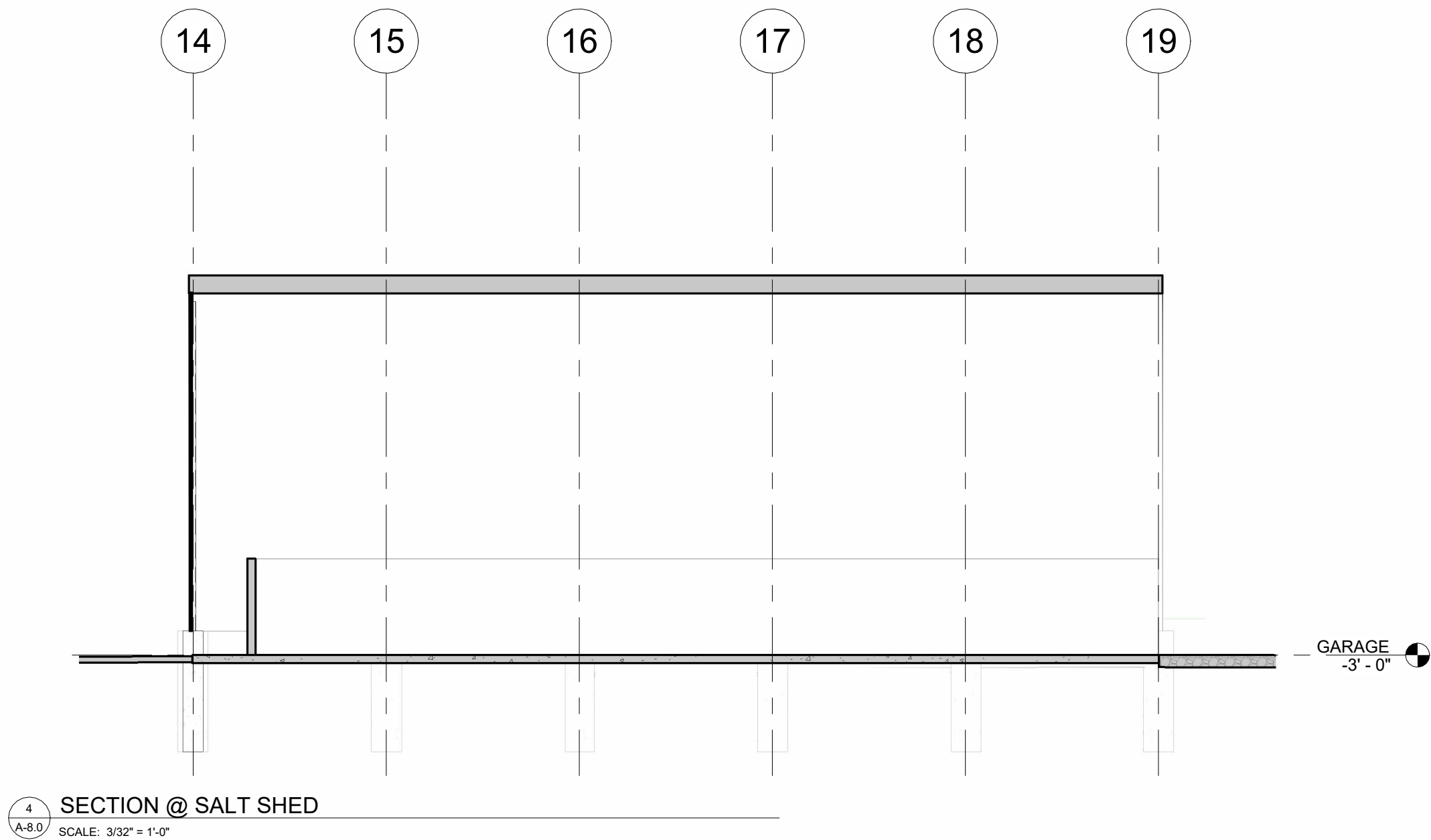
APPROVED BY: GCN / MAM

SCALE: AS NOTED

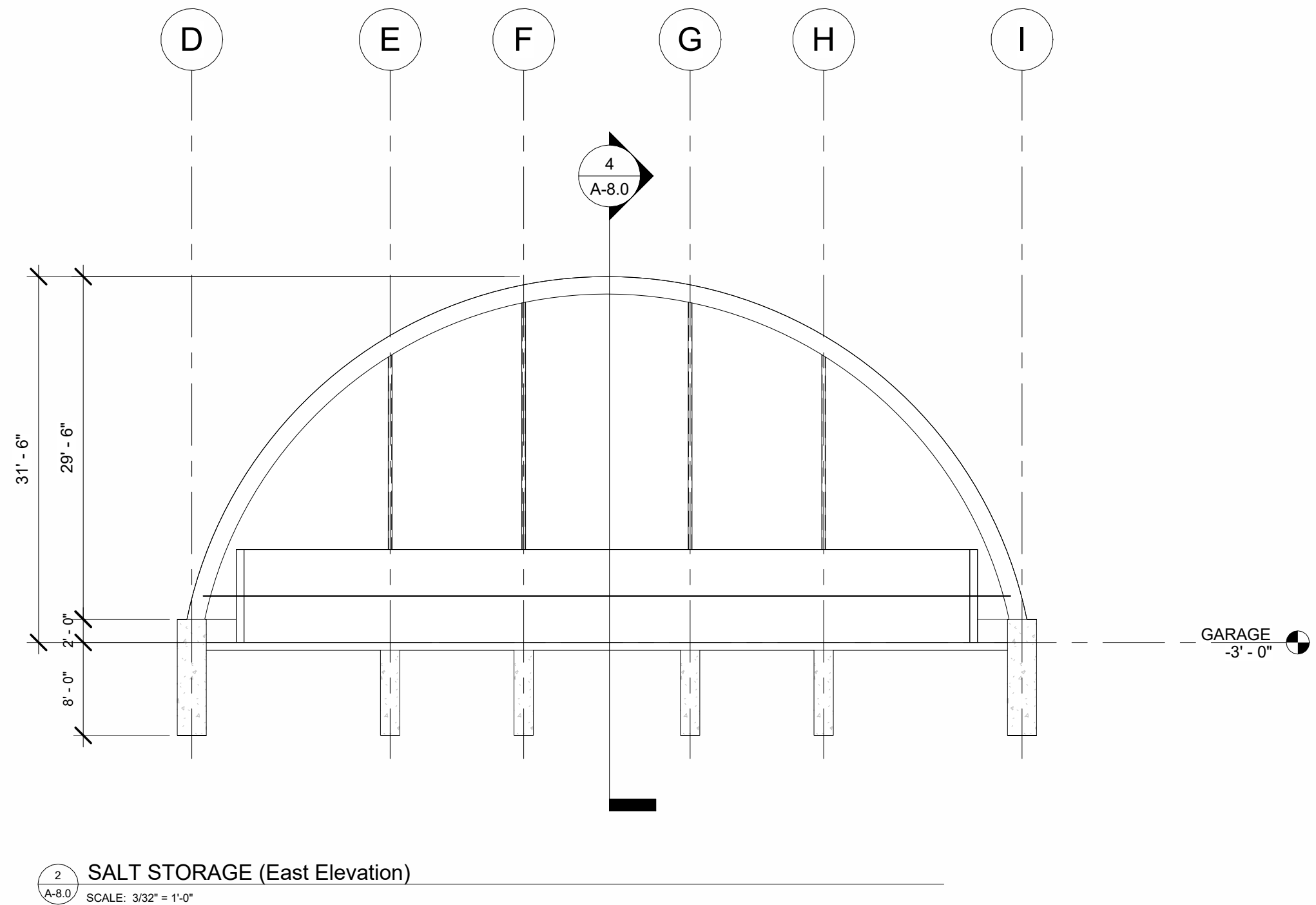
DESCRIPTION: FIRESTOPPING DETAILS

SHEET NO.

A-7.0



1 SALT SHED (SITE - Blow-up)
SCALE: 1" = 20'-0"



2 SALT STORAGE (East Elevation)
SCALE: 3/32" = 1'-0"

PROJECT # 2102
DATE: 05/13/22

PUBLIC WORKS BUILDING

BELSHAW RD
LOWELL, IN
LAKE COUNTY

BID SET - NOT FOR CONSTRUCTION

07.15.23	ISSUED FOR BID
REVISIONS	
DRAWN BY:	RAM
APPROVED BY:	GCN / MAM
SCALE:	AS NOTED
DESCRIPTION:	ACCESSORY STRUCTURE
SHEET NO.	A-8.0

DRAWING INDEX	
S-101	GENERAL NOTES, SECTIONS AND DETAILS
S-201	FOUNDATION PLAN

GENERAL NOTES:

THE FOLLOWING NOTES SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS:

- DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF LOWELL BUILDING CODE, LATEST EDITION.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES WHICH MAY EXIST.
- INSPECTIONS SHALL BE MADE ON ALL MATERIALS AND PROCESSES AS SPECIFIED BELOW:
 - CONCRETE HAVING A STRENGTH IN EXCESS OF 2000 PSI
 - WELDING
- MATERIAL TESTS SHALL BE MADE AS SPECIFIED. CONCRETE TEST CYLINDERS SHALL BE MADE FOR ALL CONCRETE. TEST RESULTS SHALL BE DETERMINED BY THE TESTING LABORATORY.
- DETAILS, SECTIONS AND NOTES SHOWN ON THIS DRAWING ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL FURNISH ALL NECESSARY BRACING REQUIRED TO PROPERLY CONSTRUCT THE STRUCTURE. ALL BRACING TO BE DESIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. SUBMIT BRACING / SHORING DRAWINGS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO PROCEEDING. FOUNDATION WALLS SHALL REMAIN Laterally Braced UNTIL FIRST FLOOR IS FULLY CONSTRUCTED.
- DO NOT SCALE DRAWINGS.
- CONTRACTOR SHALL RELY ONLY ON WRITTEN COMMUNICATION WHEN COMMUNICATING WITH THE EOR. EOR WILL NOT PROVIDE ANY INFORMATION VERBALLY.

DESIGN LOADS:

- FOUNDATION PIERS WERE DESIGNED FOR THE COLUMN LOADS PROVIDED BY THE BUILDING MANUFACTURER. DESIGN LOADS ARE NOT CALCULATED BY ANAX ENGINEERING, INC. SEE BELOW.

MATERIALS:

- CONCRETE:
 - CONCRETE STRENGTHS AT 28 DAYS SHALL BE AS FOLLOWS:
 - GRADE SLABS $F_c = 4000$ PSI
 - FOOTINGS $F_c = 4000$ PSI
 - FOUNDATION WALLS $F_c = 4000$ PSI
 - AIR ENTRAINMENT SHALL BE USED IN ALL CONCRETE EXCEPT CAISSONS AND FOOTINGS.
 - CONCRETE MIX DESIGNS SHALL BE PREPARED BY AN APPROVED TESTING LABORATORY. MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE USE.
 - FINE AND COARSE AGGREGATES SHALL BE STONE AGGREGATES CONFORMING TO ASTM C33.
 - PORTLAND CEMENT SHALL BE TYPE I OR III CONFORMING TO ASTM C150.
 - THE WATER-CEMENT RATIO FOR BEAMS AND SLABS SHALL NOT EXCEED 0.40. SUPERPLASTICIZERS MAY BE USED.
- REINFORCEMENT:
 - REINFORCING STEEL SHALL CONFORM TO ASTM 615 (60,000 PSI YIELD) FOR BEAMS, SLABS AND WALLS.
 - WELDED WIRE FABRIC USED FOR SLAB ON GRADE CONSTRUCTION SHALL CONFORM TO ASTM A884 FOR WELDED WIRE EPOXY COATED.

SUBMIT ALL SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS. REINFORCING STEEL SHOP SHALL BE SUBMITTED TO THE EOR FOR APPROVAL. DO NOT BEGIN FABRICATION OF THE STEEL REBARS UNTIL ALL SHOP DRAWINGS HAVE BEEN APPROVED BY THE EOR. PRIOR TO SUBMISSION TO THE ENGINEER, THE GENERAL CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS. AN APPROVAL STAMP OF THE SHOP DRAWINGS IS REQUIRED. GC SHALL REVIEW AND APPROVE ALL DIMENSIONS, QUANTITIES AND CONTRACTIBILITY ASPECTS.

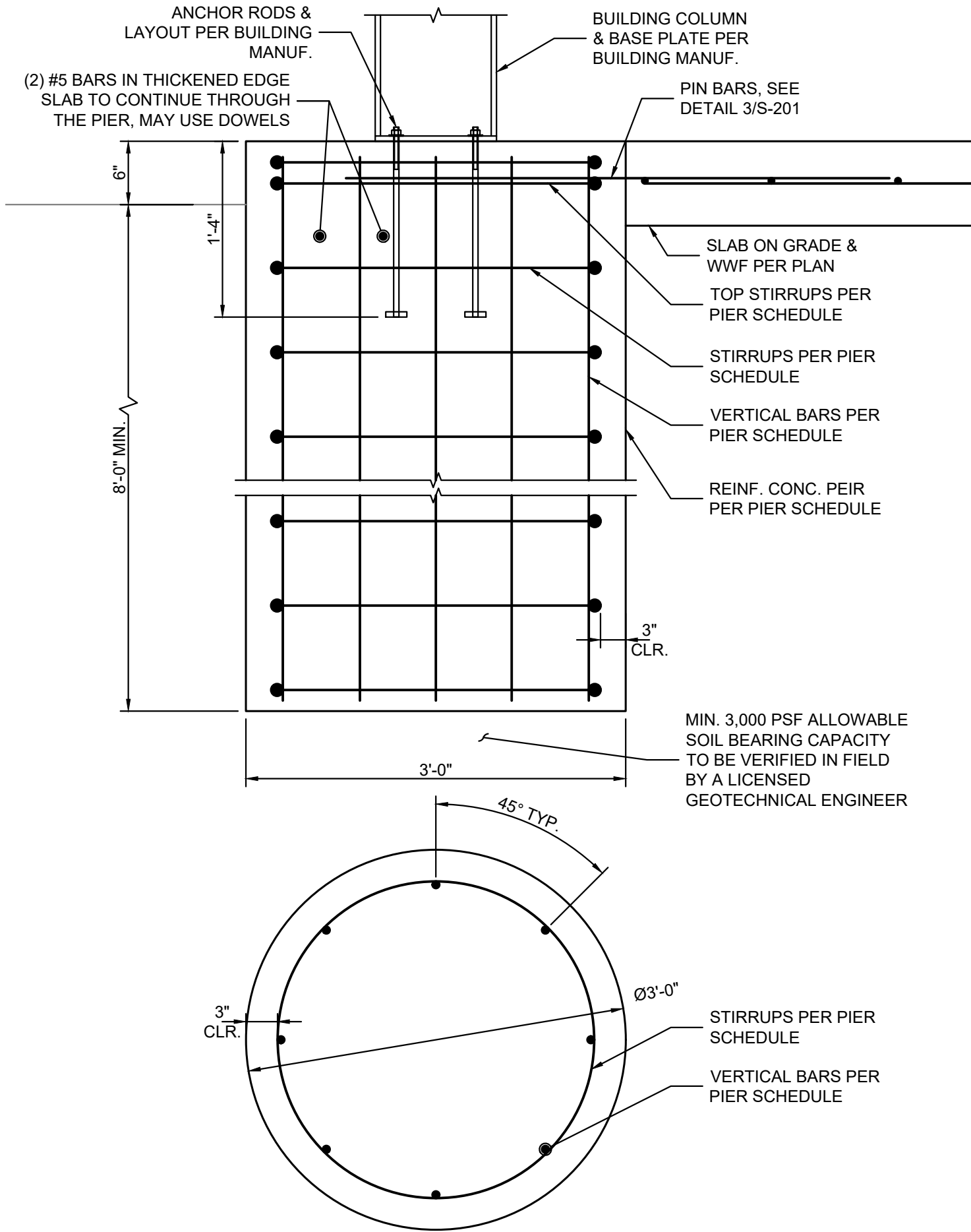
FOUNDATION NOTES:

- NO SOIL INVESTIGATION HAS BEEN PERFORMED BY ANAX ENGINEERING, INC. THE BEARING CAPACITY USED FOR THE FOUNDATION DESIGN IS 3.0 KSF AS PER GEOTECHNICAL REPORT PREPARED BY ADVANCED ENGINEERING SERVICES DATED 12/24/20. THE BEARING VALUE SHALL BE VERIFIED IN THE FIELD BY A QUALIFIED TESTING AGENCY PRIOR TO CONSTRUCTION PROCEDURE.
- THE OWNER SHALL PROVIDE THE SERVICES OF A GEOTECHNICAL ENGINEER TO VERIFY THE SOIL BEARING CAPACITIES AT THE BOTTOM OF THE FOOTINGS IF LESSER BEARING VALUES ARE ENCOUNTERED AT THE REQUIRED ELEVATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE THE PROCEEDING WITH THE PLACEMENT OF FOUNDATIONS.
- FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED GRANULAR FILL. THE MINIMUM DEPTH FOR FOOTINGS SHALL BE 3'-6" BELOW GRADE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION AND REMOVAL OF ALL EXCAVATION SUPPORT SYSTEMS.

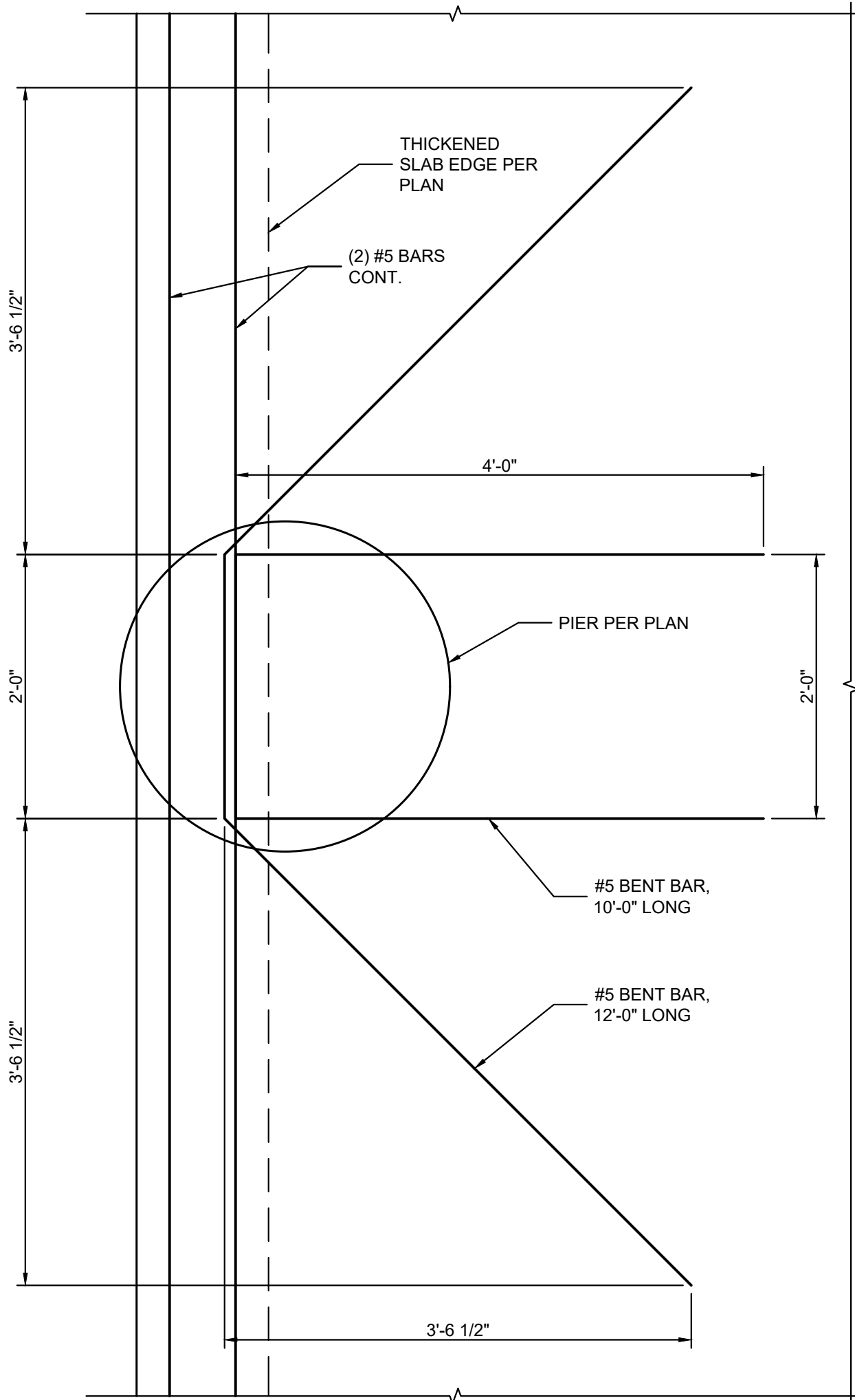
REINFORCED CONCRETE NOTES:

- REINFORCED CONCRETE WORK SHALL BE IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 LATEST EDITION.
- CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS OR VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED SIX (6) FEET AND A SUFFICIENT NUMBER OF CHUTES OR TRUNKS SHALL BE USED TO INSURE THAT THE CONCRETE IS KEPT LEVEL AT ALL TIMES.
- ALL DIMENSIONS SHOWN FOR LOCATIONS OF REINFORCING ARE TO BE TAKEN FROM THE FACE OF MAIN BARS AND DENOTE CLEAR MIN. COVERAGE. FOR BEAMS AND TIED COLUMNS, DIMENSIONS ARE TO MAIN BARS. UNLESS SPECIFICALLY NOTED, CONCRETE COVERAGES TO REINFORCING STEEL (NOT PRESTRESSING STEEL) SHALL BE AS FOLLOWS:
 - 3" WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT GRADE SLABS).
 - 2" WHERE CONCRETE IS EXPOSED TO GROUND, BUT PLACED IN FORMS.
 - 2" TO MAIN BARS OF TIED COLUMNS.
 - 1-1/2" TO WALL BARS, UNLESS NOTED OTHERWISE.
 - 1" TO BOTTOM BARS AND 2" TO TOP BARS IN SLABS IN FORMS.
 - 2" TO BARS IN SLABS ON GRADE.
 - 2" TO MAIN BARS OF BEAMS.
- THE SPLICES IN ADJACENT BARS SHALL NOT BE LESS THAN FIVE (5') FEET APART. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. BARS MAY BE WIRED TOGETHER AT SPLICES OR LAPS EXCEPT FOR TOP REINFORCING OF BEAMS AND SLABS OR WHERE DEFINITELY DETAILED TO BE SEPARATED. SEE BEAM DETAILS OR SCHEDULES FOR SEPARATION OF BEAM OR GIRDER BARS OVER SUPPORTS. CONTINUOUS BARS IN SPANDRELS, WALL BEAMS, ETC., SHALL LAP AS FOLLOWS:
 - TOP BARS AT CENTER LINE OF SPAN.
 - BOTTOM BARS AT CENTER LINE OF SUPPORTS.
- SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR THE SIZE AND LOCATION OF WALL AND FLOOR OPENINGS, WALL OFFSETS, PROVISIONS FOR FUTURE EQUIPMENT, STAIR DETAILS, PIPE, VENT, DUCT AND OTHER OPENINGS AND DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS. SEE ELECTRICAL DRAWINGS FOR SUPPORTS AND OPENINGS FOR ELECTRICAL EQUIPMENT.
- REINFORCING STEEL DETAILS SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI LATEST EDITION.
- THE MINIMUM REINFORCEMENT FOR WALLS SHALL BE AS PER ACI 318 CHAPTER 14, SECTION 14.3, UNLESS NOTED OTHERWISE.
- THE MINIMUM TEMPERATURE REINFORCEMENT SHALL BE AS PER ACI 318 CHAPTER 7, SECTION 7.12 UNLESS NOTED OTHERWISE.

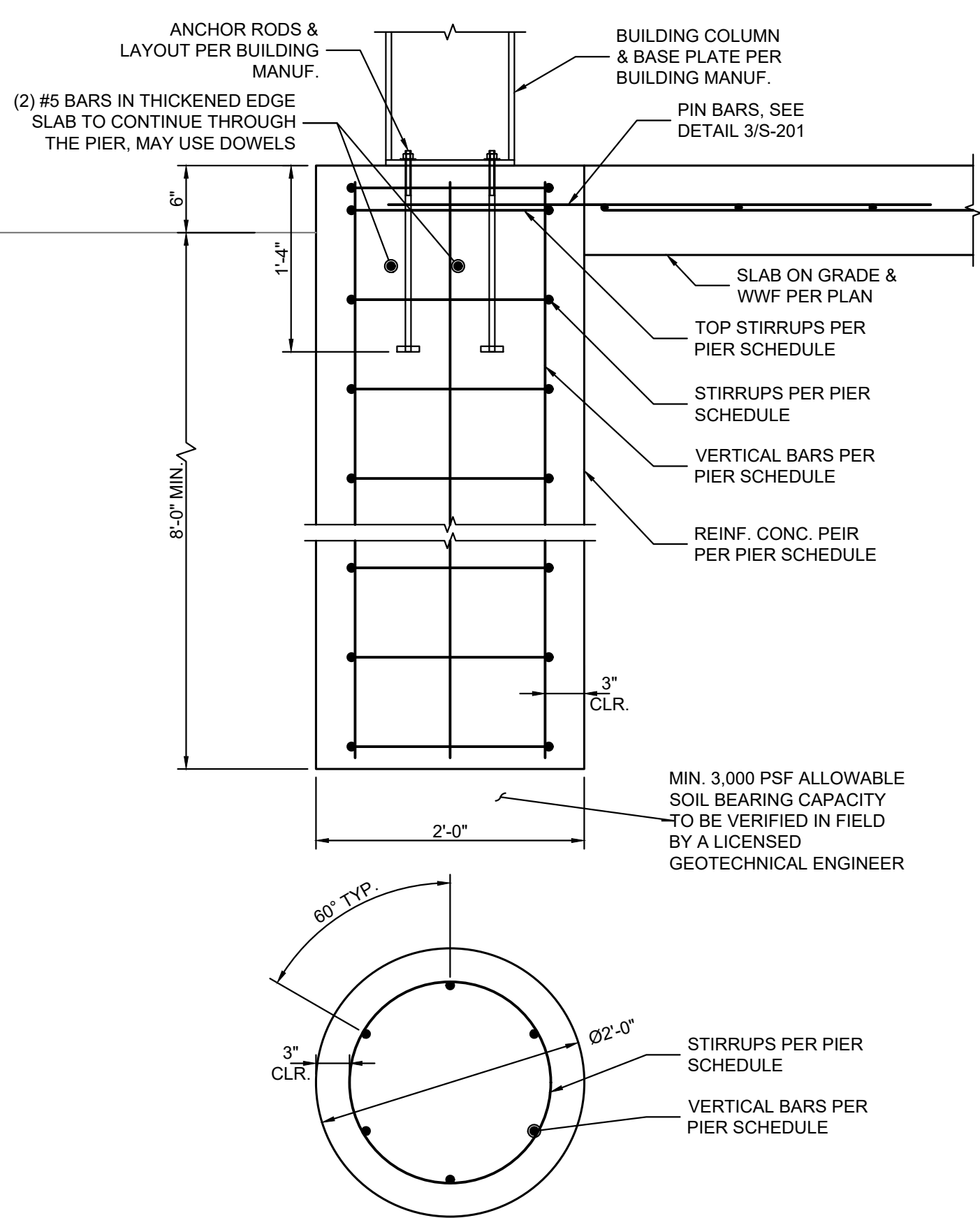
LAP SPLICE SCHEDULE (APPLIES TO REINF. CONC. & MASONRY)	
BAR SIZE	CLASS "B" SPLICE
#4	33
#5	41
#6	48
#7	70
#8	81



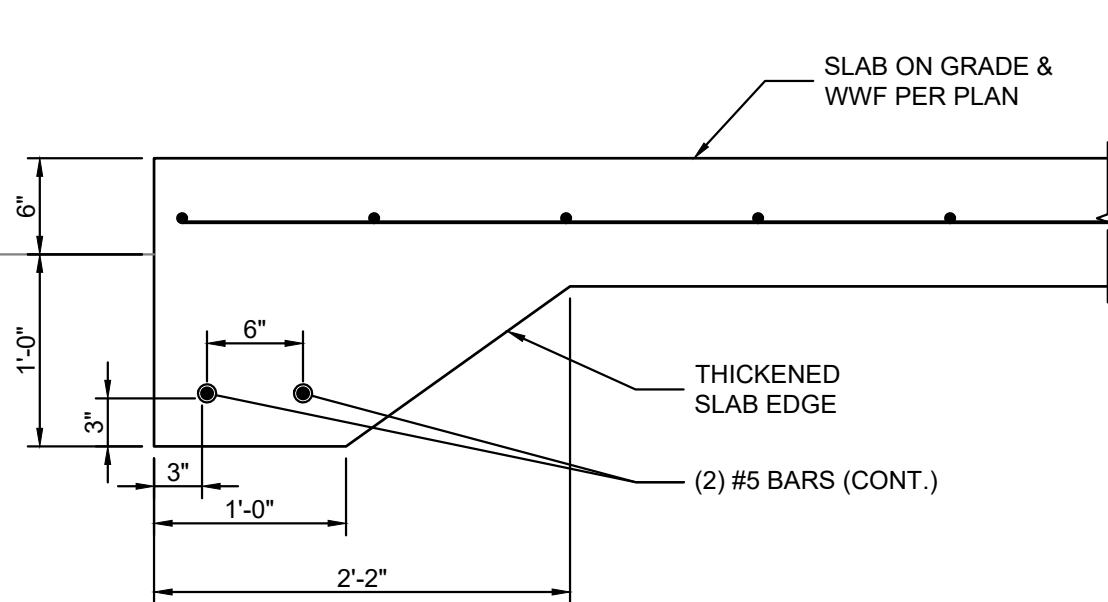
1 SECTION
Scale: 1" = 1'-0"



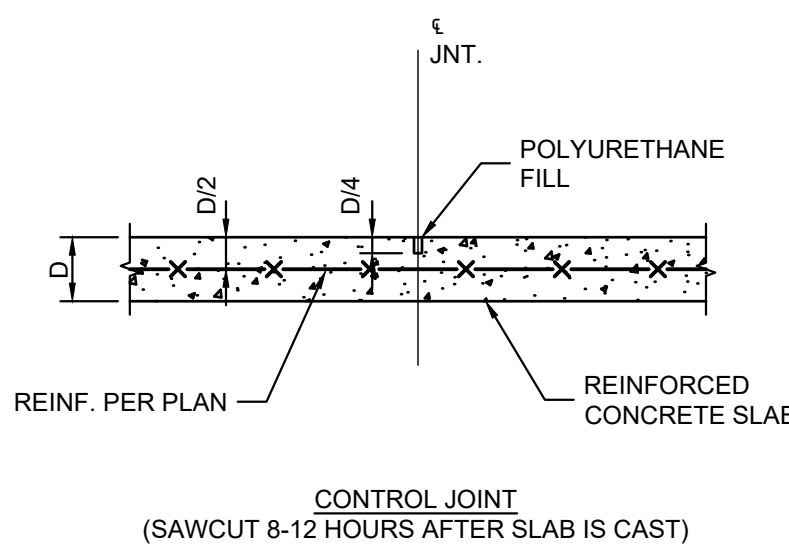
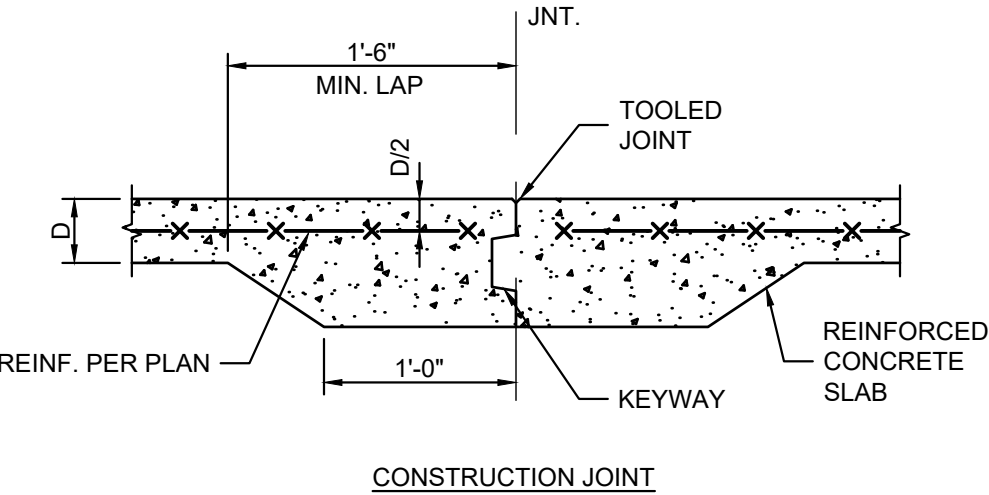
3 SECTION
Scale: 1" = 1'-0"



2 SECTION
Scale: 1" = 1'-0"




4 SECTION
Scale: 1" = 1'-0"



5 SECTION
Scale: 1" = 1'-0"

1 FRAME REACTIONS AS PROVIDED BY MANUF. - NOT BY ANAX ENGINEERING
Scale: No Scale



These foundation reactions are the result of the calculations in the Britespan Calculator and will be either confirmed or revised by the Engineer of Record as part of the final engineering approval of the site specific building installation.

26-Jun-23

Sales Request # 9386-01, Greystone Construction, Lowell, IN, Atlas 24.1 72"W L10' at 16' OC

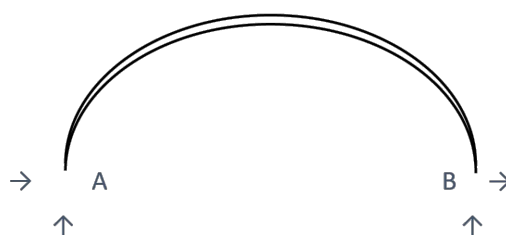
Climatic and Site Parameters

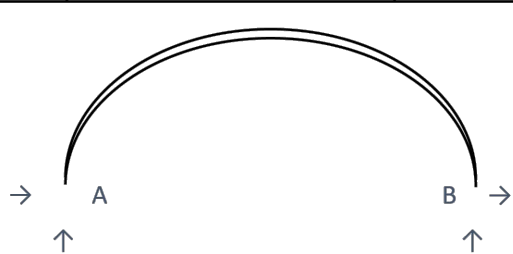
Ground Snow (Pg) (psf)	30	Wind speed (V) (mph)	105
Exposure	Fully Exposed	Risk Category	I
Terrain Category	C	Ce	0.9
Truss Spacing (ft)	16	Foundation height (ft)	2
Kh	0.92	Enclosure	Partially enclosed
Is	0.80	Pf	18.14
Qs	21.99	Collateral (psf)	0.25

BASE REACTIONS (UNFACTORED) :The maximum forces at the truss Base

	SIDE A		SIDE B	
	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
LOAD CASE:	X _A (kips)	Y _A (kips)	X _B (kips)	Y _B (kips)
DEAD	0.33	0.74	-0.33	0.74
COLLATERAL	0.08	0.14	-0.08	0.14
LIVE	1.61	2.81	-1.61	2.81
SNOW BALANCED	4.95	7.61	-4.95	7.61
SNOW UNBALANCED	3.03	2.77	-3.03	8.25
WIND: PERPENDICULAR	-8.01	-6.34	1.51	-7.04
WIND: PARALLEL	-3.20	-11.10	3.20	-11.10
WIND: INTERNAL +	1.50	6.97	-1.50	6.97
WIND: INTERNAL -	-1.50	-6.97	1.50	-6.97

Note:
Negative values of Y reactions indicates uplift forces.



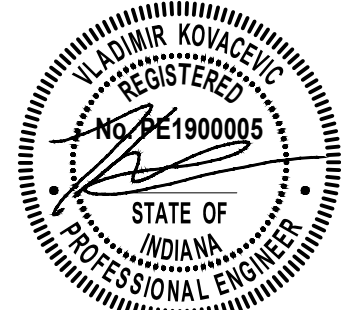


SHEET REVISIONS:

No.	DATE	NATURE OF REVISION
-	7-26-23	ISSUED FOR PERMIT

STATEMENT OF COMPLIANCE

I have prepared, or caused to be prepared under my supervision, the attached plans and specifications and state that, to the best of my knowledge and belief and to the extent of my contractual obligation, they are in compliance with the applicable Codes and Ordinances.



Signature Date: 7-26-2023
License Expires: 07-31-2024

PROJECT NAME:

Public Works Salt
Storage Foundation
Lake County
Lowell, IN

PROJECT No.: 23021


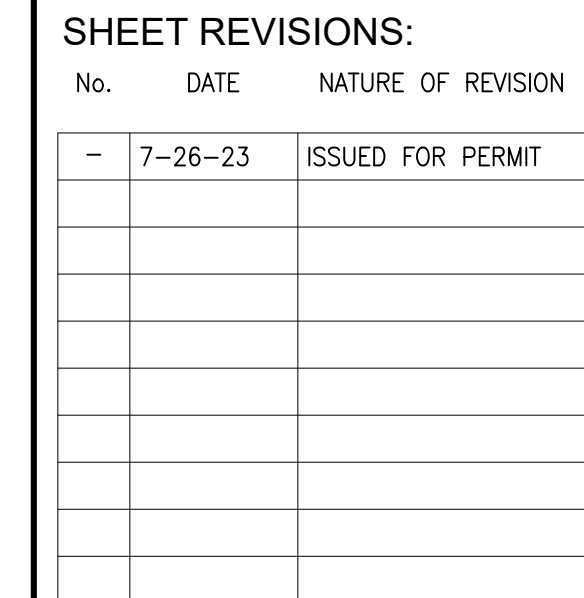
ISSUED FOR PERMIT

SHEET NAME:

GENERAL NOTES,
SECTIONS AND DETAILS

SHEET No.:

S-101 A



PROJECT NAME:
Public Works Salt
Storage Foundation
Lake County
Lowell, IN

SHEET NAME:

FOUNDATION PLAN

SHEET No.:
S-201 A

DRAWING INDEX	
S-101	GENERAL NOTES
S-201	FOUNDATION PLAN
S-202	FLOOR PLAN
S-203	ROOF PLAN
S-301	SECTIONS AND DETAILS

GENERAL NOTES:

THE FOLLOWING NOTES SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS:

- DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF LOWELL BUILDING CODE, LATEST EDITION.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES WHICH MAY EXIST.
- INSPECTIONS SHALL BE MADE ON ALL MATERIALS AND PROCESSES AS SPECIFIED BELOW:
 - CONCRETE HAVING A STRENGTH IN EXCESS OF 2000 PSI
 - WELDING
- MATERIAL TESTS SHALL BE MADE AS SPECIFIED. CONCRETE TEST CYLINDERS SHALL BE MADE FOR ALL CONCRETE. TEST RESULTS SHALL BE DETERMINED BY THE TESTING LABORATORY.
- TOP OF FLOORS SHALL BE TRUE TO INDICATED ELEVATIONS. VARIATIONS SHALL NOT EXCEED 1/4" IN 10 FEET. CARE MUST BE EXERCISED IN FINISHING OPERATIONS TO OBTAIN A TRUE SURFACE.
- DETAILS, SECTIONS AND NOTES SHOWN ON THIS DRAWING ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
- USE BONDING ADHESIVE AND SEALER AT ALL CONSTRUCTION JOINTS IN SUPPORTED SLABS.
- CONTRACTOR SHALL FURNISH ALL NECESSARY BRACING REQUIRED TO PROPERLY CONSTRUCT THE STRUCTURE. ALL BRACING TO BE DESIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. SUBMIT BRACING / SHORING DRAWINGS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO PROCEEDING. FOUNDATION WALLS SHALL REMAIN LATERALLY BRACED UNTIL FIRST FLOOR IS FULLY CONSTRUCTED.
- DO NOT SCALE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SHEETING AND SHORING ADJACENT STRUCTURES AS REQUIRED SO THAT THEY ARE NOT ENDANGERED BY THIS CONSTRUCTION. SHORING SHALL BE DESIGNED BY LICENSED STRUCTURAL ENGINEER AND SEALED.
- CONTRACTOR SHALL RELY ONLY ON WRITTEN COMMUNICATION WHEN COMMUNICATING WITH THE EOR. EOR WILL NOT PROVIDE ANY INFORMATION VERBALLY.

DESIGN LOADS:

- DESIGN SELFWEIGHT LOADS ARE IN ACCORDANCE WITH SHOWN PHYSICAL STRUCTURE.
- THE DESIGN SUPERIMPOSED LOADS ARE AS FOLLOWS:
 - WAREHOUSE FLOOR:

LIVE LOAD	= 125 PSF
DEAD LOAD	= 15 PSF
TOTAL LOAD	= 140 PSF
 - OFFICES:

LIVE LOAD	= 50 PSF
DEAD LOAD	= 15 PSF
PARTITION LOAD	= 20 PSF
TOTAL LOAD	= 85 PSF
 - ROOF:

SNOW LOAD	= 30 PSF
DEAD LOAD	= 25 PSF
TOTAL LOAD	= 55 PSF
 - WIND:

MWFRS	= 20 PSF
CLADDING	= 25 PSF

MATERIALS:

- CONCRETE:
 - CONCRETE STRENGTHS AT 28 DAYS SHALL BE AS FOLLOWS:
 - GRADE SLABS F_c = 4000 PSI
 - FOOTINGS F_c = 4000 PSI
 - FOUNDATION WALLS F_c = 4000 PSI
 - AIR ENTRAINMENT SHALL BE USED IN ALL CONCRETE EXCEPT CAISSONS AND FOOTINGS.
 - CONCRETE MIX DESIGNS SHALL BE PREPARED BY AN APPROVED TESTING LABORATORY. MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE USE.
 - FINE AND COARSE AGGREGATES SHALL BE STONE AGGREGATES CONFORMING TO ASTM C33.
 - PORTLAND CEMENT SHALL BE TYPE I OR III CONFORMING TO ASTM C150.
 - THE WATER-CEMENT RATIO FOR BEAMS AND SLABS SHALL NOT EXCEED 0.40. SUPERPLASTICIZERS MAY BE USED.
- REINFORCEMENT:
 - REINFORCING STEEL SHALL CONFORM TO ASTM 615 (60,000 PSI YIELD) FOR BEAMS, SLABS AND WALLS.
 - WELDED WIRE FABRIC USED FOR SLAB ON GRADE CONSTRUCTION SHALL CONFORM TO ASTM A884 FOR WELDED WIRE EPOXY COATED.

MIXING PROPORTIONS FOR TYPE N OR O MORTAR			
PARTS BY VOLUME			AGGREGATE MEASURED IN A DAMP, LOOSE CONDITION
MORTAR TYPE	PORTLAND CEMENT	TYPE "S" HYDRATED LIME	
M	3	1	12
S	2	1	9
N	1	1	6
O	1	2	9

SUBMIT ALL SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS. STEEL SHOP SHALL DESIGN AND DETAIL ALL STEEL CONNECTIONS PER AISC AND SUBMIT TO THE EOR FOR APPROVAL. DO NOT BEGIN FABRICATION OF THE STEEL UNTIL ALL SHOP DRAWINGS HAVE BEEN APPROVED BY THE EOR. PRIOR TO SUBMISSION TO THE ENGINEER, THE GENERAL CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS. AN APPROVAL STAMP OF THE SHOP DRAWINGS IS REQUIRED. GC SHALL REVIEW AND APPROVE ALL DIMENSIONS, QUANTITIES AND CONTRACTIBILITY ASPECTS.

FOUNDATION NOTES:

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- THE OWNER SHALL PROVIDE THE SERVICES OF A GEOTECHNICAL ENGINEER TO VERIFY THE SOIL BEARING CAPACITIES AT THE BOTTOM OF THE FOOTINGS IF LESSER BEARING VALUES ARE ENCOUNTERED AT THE REQUIRED ELEVATIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE THE PROCEEDING WITH THE PLACEMENT OF FOUNDATIONS.
- FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED GRANULAR FILL. THE MINIMUM DEPTH FOR FOOTINGS SHALL BE 3'-6" BELOW GRADE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION AND REMOVAL OF ALL EXCAVATION SUPPORT SYSTEMS.
- CONTROL JOINTS IN CURBS, RETAINING AND OTHER WALLS SHALL BE EVERY 15'-0" O.C. (MAX.) OR AT CHANGES IN DIRECTION (UNLESS NOTED OTHERWISE).

GENERAL MASONRY NOTES:

- MATERIALS:
 - PORTLAND CEMENT SHALL BE IN ACCORDANCE WITH ASTM C-150 LATEST VERSION, TYPE 1, GRAY OR WHITE AS REQUIRED FOR COLOR SELECTED. COLOR FOR COLORED MORTAR TO BE BY GEORGE B. SMITH COLOR COMPANY OR SOLOMON GRIND-CHEM SERVICE, INC.
 - HYDRATED LIME SHALL BE IN ACCORDANCE WITH ASTM-C-207 LATEST VERSION, TYPE S.
 - AGGREGATE SHALL BE IN ACCORDANCE WITH ASTM C-144-66T, NATURAL SAND. FOR JOINTS 1/4" THICK OR LESS; ALL OF THE SAND MUST PASS THE NO. 8 SIEVE, AND 95% MUST PASS THE NO. 16 SIEVE.
 - WATER SHALL BE CLEAN, FREE OF DELETERIOUS MATERIALS.
 - MINIMUM BLOCK STRENGTH f_m = 1500 PSI U.N.O. AT SHEARWALLS.
- PROPORTIONING: MORTAR SHALL BE PROPORTIONED BY VOLUME PER ASTM C-270-64T FOR TYPE N, S OR M.
- MIXING: MIX CEMENTITIOUS MATERIALS AND AGGREGATE IN A MECHANICAL BATCH MIXER FOR AT LEAST 3 MINUTES WITH THE MAXIMUM AMOUNT OF WATER TO PRODUCE A WORKABLE CONSISTENCY. USE MORTAR WITHIN TWO HOURS AFTER MIXING. DO NOT RETEMPER MORTAR. DO NOT ADD ADMIXTURES WITHOUT WRITTEN APPROVAL. DO NOT ADD LIME TO MASONRY CEMENT MORTAR.
- UNIT MASONRY: IN ADDITION TO THE REQUIREMENTS SPECIFIED HEREIN, COMPLY WITH THE APPLICABLE RECOMMENDATIONS OF THE PORTLAND CEMENT ASSOCIATION CONCRETE MASONRY HANDBOOK.
- HANDLING AND STORAGE: HANDLE AND STORE MATERIALS IN SUCH A MANNER AS TO PREVENT DAMAGE. STORE BRICK, BLOCK, JOINT REINFORCEMENT AND PACKAGED MATERIALS ABOVE GROUND ON WOOD PALLETES OR BLOCKING AND PROTECT FROM THE WEATHER UNTIL USED. ALL DAMAGED OR OTHERWISE UNSUITABLE MATERIAL, WHEN SO ASCERTAINED, SHALL BE IMMEDIATELY REMOVED FROM JOB SITE.
- PROTECTION: DURING CONSTRUCTION, THE TOPS OF ALL WALLS SHALL BE COVERED AT NIGHT, DURING INCLEMENT WEATHER AND DURING DELAYS TO ENSURE AGAINST DAMAGE TO FINISHED WORK. WALLS AT ALL TIMES SHALL BE PROTECTED FROM DRIPPINGS FROM ABOVE, WHERE NECESSARY OR DIRECTED, PROVIDE COVERING TO PROTECT PARTICULAR PORTIONS OF THE WORK. MAINTAIN ALL PROTECTION UNTIL REMOVED FOR FINAL CLEANING.
- REINFORCEMENT: HORIZONTAL JOINT WALL REINFORCEMENT SHALL BE LADDER DESIGN, CRIMPED AT CENTER, GALVANIZED, FABRICATED FROM COLD DRAWN STEEL WIRE CONFORMING TO ASTM-A-82 LATEST VERSION, MINIMUM NO. 9 GAUGE DEFORMED SIDE RODS WITH WELD CONNECTED NO. 9 GAUGE CROSS-RODS @ 16" O.C. WIDTH 2" LESS THAN WALL THICKNESS. INCLUDE PREFABRICATED CORNERS AND TEE SECTIONS. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. VERTICAL REINFORCEMENT SHALL BE PER PLAN. IF NEEDED, REINFORCEMENT SHALL BE SPLICED PER LAP SPLICE SCHEDULE, WITH BARS BEING SPLICED SIDEWAYS, SO THAT BOTH BARS REMAIN AT THE CENTER OF WALL THICKNESS.
- CORRUGATED METAL TIES: GALVANIZED STEEL, MINIMUM 7/8" WIDE, 22 GAUGE AND 7' LONG.
- COMPRESSIBLE JOINT FILLERS: ASTM D-1056 LATEST VERSION, CLASS E, CLOSED CELL EXPANDED NEOPRENE, TYPE S, CLASS SCE 41.
- CONCRETE MASONRY UNITS: AUTOCURED AND PRESHRUNK, MAXIMUM LINEAR SHRINKAGE OF 0.03 WHEN TESTED IN ACCORDANCE WITH ASTM C-426 LATEST VERSION.
 - MAXIMUM MOISTURE CONTENT AT TIME OF DELIVERY SHALL BE 30%.
 - HOLLOW LOAD BEARING UNITS SHALL CONFORM TO ASTM C-90 LATEST VERSION, TYPE 1, P-1.
 - SOLID LOAD BEARING UNITS SHALL CONFORM TO ASTM C-145 LATEST VERSION, TYPE 1, GRADE U-1.
 - LIGHTWEIGHT AGGREGATES SHALL CONFORM TO ASTM C-133 LATEST VERSION MACHINE EXPANDED SLAG.
 - FACES OF UNITS SHALL BE NOMINAL 8" x 16" UNITS, NOMINAL THICKNESS SHALL BE AS SHOWN ON PLANS.

- INSTALLATION: BUILD IN BLOCKING. FORM CHASES, SLOTS, CUTOUTS AND PATCH MASONRY WORK AS REQUIRED. SET ALL BUCKS, BLOCKING LINTELS AND ANCHORS AS REQUIRED. FILL ALL HOLLOW METAL FRAMES OCCURRING IN BRICK OR BLOCK WALLS WITH MASONRY MORTAR AND CAREFULLY POINT ALL JOINTS BETWEEN METAL FRAMES AND ADJACENT MASONRY AND OTHER CONSTRUCTION. USE HALF RUNNING BOND, UNLESS OTHERWISE SHOWN FOR BOTH BRICK AND BLOCK. DO NOT USE CHIPPED OR BROKEN BLOCK WHERE EXPOSED TO VIEW. PROVIDE 3/8" WIDE JOINTS, TOOLED CONCAVE UNLESS OTHERWISE SHOWN OR DIRECTED. USE SOLID MASONRY UNITS AS FIRST COURSE UNDER ALL STRUCTURAL MEMBERS BEARING ON WALLS. UNLESS SHOWN OTHERWISE ON THE PLANS, PROVIDE VERTICAL CONTROL JOINTS AT 40'-0" O.C. MAX. WHERE BLOCK WALLS EXTEND TO UNDERSIDE OF ROOF DECK AND WHERE BLOCK INTERSECTS STEEL COLUMNS, PROVIDE STEEL ANCHORS AT 24" O.C. TO SECURE WALL IN PLACE, GROUT JOINT AT ROOF DECK OR BEAM SOLID WITH MORTAR. WHERE FIRE RATED WALLS ARE SHOWN OR REQUIRED, USE UNITS AND INSTALLATION METHODS COMPLYING WITH CODE AND UL REQUIREMENTS.
- FROZEN WORK: DO NOT BUILD UPON FROZEN WORK. DO NOT LAY MASONRY UNITS WHICH HAVE A FILM OR FROST. REMOVE AND REPLACE AS DIRECTED, MASONRY WORK WHICH IS OBSERVED TO BE DAMAGED BY FREEZING. DO NOT ALLOW GROUT TO REACH TEMPERATURE BELOW 40 DEGREES UNTIL FULLY CURED.
- CLEANING: CLEAN EXPOSED BRICK MASONRY SURFACES BY THE BUCKET OF CLEAR WATER AND BRUSH HAND CLEANING METHOD OR BY HIGH PRESSURE WATER METHOD. CLEAN ALL EXCESS MORTAR AND FILM FROM EXPOSED SURFACES. DO NOT USE ACID OR ACID SOLUTIONS. USE COMMERCIAL CLEANING AGENTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. WASH ALL SURFACES AFTER USING AGENTS WITH CLEAR WATER HOSING. CLEAN EXPOSED CMU MASONRY BY DRY BRUSHING AT THE END OF EACH DAYS WORK AND AFTER FINAL POINTING TO REMOVE MORTAR SPOTS AND DROPPINGS.
- SHEAR WALLS: SHEAR WALLS SHALL BE CONSTRUCTED PER STRUCTURAL PLANS AND DETAILS. REINFORCEMENT SHALL BE PER PLANS AND SHEAR WALL SCHEDULE. THERE SHALL BE NO EXPANSION JOINTS OR OTHER DISCONTINUITIES IN THE SHEAR WALLS, UNLESS WRITTEN APPROVAL IS PROVIDED BY THE STRUCTURAL ENGINEER OF RECORD.

- COMPOSITE WALL CONSTRUCTION: FOR WALLS DESIGNATED AS COMPOSITE, FILL JOINTS BETWEEN MASONRY BRICK AND BLOCK WITH TYPE S MORTAR. PROVIDE MINIMUM WALL TIE (WIRE TIE W2.8) EVERY OTHER COURSE. MINIMUM f_m = 1500 PSI.
- TYPICAL WALL REINFORCEMENT IS #4 @ 32" O.C., U.N.O. WITH MINIMUM SPLICE LAP LENGTH OF 24" U.N.O.
- MASONRY DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI-530, LATEST EDITION.

REINFORCED CONCRETE NOTES:

- REINFORCED CONCRETE WORK SHALL BE IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 LATEST EDITION.
- CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS OR VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED SIX (6) FEET AND A SUFFICIENT NUMBER OF CHUTES OR TRUNKS SHALL BE USED TO INSURE THAT THE CONCRETE IS KEPT LEVEL AT ALL TIMES.
- ALL DIMENSIONS SHOWN FOR LOCATIONS OF REINFORCING ARE TO BE TAKEN FROM THE FACE OF MAIN BARS AND DENOTE CLEAR MIN. COVERAGE. FOR BEAMS AND TIED COLUMNS, DIMENSIONS ARE TO MAIN BARS, UNLESS SPECIFICALLY NOTED, CONCRETE COVERAGES TO REINFORCING STEEL (NOT PRESTRESSING STEEL) SHALL BE AS FOLLOWS:
 - 3" WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT GRADE SLABS).
 - 2" WHERE CONCRETE IS EXPOSED TO GROUND, BUT PLACED IN FORMS.
 - 2" TO MAIN BARS OF TIED COLUMNS.
 - 1-1/2" TO WALL BARS, UNLESS NOTED OTHERWISE.
 - 1" TO BOTTOM BARS AND 2" TO TOP BARS IN SLABS IN FORMS.
 - 2" TO BARS IN SLABS ON GRADE.
 - 2" TO MAIN BARS OF BEAMS.
- THE SPLICES IN ADJACENT BARS SHALL NOT BE LESS THAN FIVE (5') FEET APART. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. BARS MAY BE WIRED TOGETHER AT SPLICES OR LAPS EXCEPT FOR TOP REINFORCING OF BEAMS AND SLABS OR WHERE DEFINITELY DETAILED TO BE SEPARATED. SEE BEAM DETAILS OR SCHEDULES FOR SEPARATION OF BEAM OR GIRDER BARS OVER SUPPORTS. CONTINUOUS BARS IN SPANDREL'S, WALL BEAMS, ETC., SHALL LAP AS FOLLOWS:
 - TOP BARS AT CENTER LINE OF SPAN.
 - BOTTOM BARS AT CENTER LINE OF SUPPORTS.
- WALLS SHALL BE DOWELED TO FOOTINGS, WALLS, BEAMS OR SLABS WITH BARS OF THE SAME SIZE AND SPACING AS THE WALL BARS, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE.
- SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR THE SIZE AND LOCATION OF WALL AND FLOOR OPENINGS, WALL OFFSETS, PROVISIONS FOR FUTURE EQUIPMENT, STAIR DETAILS, PIPE, VENT, DUCT AND OTHER OPENINGS AND DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS. SEE ELECTRICAL DRAWINGS FOR SUPPORTS AND OPENINGS FOR ELECTRICAL EQUIPMENT.
- REINFORCING STEEL DETAILS SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI LATEST EDITION.
- THE MINIMUM REINFORCEMENT FOR WALLS SHALL BE AS PER ACI 318 CHAPTER 14, SECTION 14.3, UNLESS NOTED OTHERWISE.
- THE MINIMUM TEMPERATURE REINFORCEMENT SHALL BE AS PER ACI 318 CHAPTER 7, SECTION 7.12 UNLESS NOTED OTHERWISE.
- AT A MINIMUM, CONCRETE WALLS SHALL HAVE #4 BARS @ 12" O.C. EA. FACE EA. WAY, UNLESS OTHERWISE SHOWN.

LAP SPLICE SCHEDULE (APPLIES TO REINF. CONC. & MASONRY)	
BAR SIZE	CLASS "B" SPLICE
#4	33
#5	41
#6	48
#7	70
#8	81

GENERAL PRECAST NOTES:

- PRE-CAST CONTRACTOR TO REFER TO ARCHITECTURAL DRAWINGS FOR OPENINGS FOR DOOR FLOOR PIVOTS AND MECHANICAL/ELECTRICAL DRAWINGS FOR OPENING LOCATIONS.
- PRECAST CONCRETE:
 - THE PRECAST CONCRETE MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL PRECAST INCLUDING REINFORCING, INSERTS AND CONNECTIONS TO THE STRUCTURE NOT SPECIFICALLY CALLED OUT ON THE DRAWINGS. PRECAST CONCRETE SHALL BE PRESTRESSED TO STRUCTURALLY SUPPORT THE FLOOR STRUCTURE AND HANDLING (ERECTING) LOADS, AND SHALL BE DESIGNED SO THAT BOTH WYTHES OF CONCRETE, INNER AND OUTER, SHALL BE KEPT IN COMPRESSION UNDER ALL LOADING CONDITIONS. NO FLEXURAL TENSION IS TO BE ALLOWED IN THE PRE-COMPRESSED TENSILE ZONE. BOTH WYTHES SHALL BE STRESSED TO MINIMIZE ANY BOWING DUE TO ECCENTRICITY OF PRESTRESS FORCE.
- ENGINEERING:
 - ALL PRECAST SHALL BE DESIGNED FOR ANCHORAGE, ERECTION, REINFORCING, AND APPLIED LOADS BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF PROJECT LOCATION. THEY SHALL PROVIDE DRAWINGS AND CALCULATIONS TO WHICH THEY SHALL AFFIX THEIR SEAL AND SIGNATURE. THE PRESTRESS CONCRETE AND CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH STANDARDS OF THE PRECAST CONCRETE INSTITUTE MANUAL, ACI-318 AND ACI-308 AND THE AISC MANUAL OF STEEL CONSTRUCTION.
- MATERIALS:
 - ALL MATERIALS TO BE CLEAN AND NEW AND TO COMPLY WITH ARTICLES LISTED BELOW AS A MINIMUM STANDARD.

PORTLAND CEMENT: ASTM C-150, TYPE 1, EXCEPT USE TYPE 3 WHERE HIGH EARLY STRENGTH IS REQUIRED.
COURSE AGGREGATE AND SAND: ASTM C-33
PRESTRESS STEEL STRANDS: ASTM A-416
REINFORCING STEEL: ASTM A-615, GRADE 60, ASTM A-305
MISCELLANEOUS STEEL: ASTM A-36
COILS AND BOLTS: ASTM A-325, ASTM A-307
INSULATION: SHALL BE POLYSTYRENE
WATER: CLEAN AND VOID OF ALL DELETERIOUS MATERIALS.

FOR MATERIALS NOT SPECIFIED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS, BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, PROVIDE NEW MATERIALS, FIRST QUALITY OF THEIR RESPECTIVE KINDS, AS SELECTED BY THE CONTRACTOR SUBJECT TO THE REVIEW OF THE ARCHITECT AND THE OWNER'S REPRESENTATIVE.

- FABRICATION:
 - ALL CONCRETE TO BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ACI-301, ACI-304, ACI-311, ACI-318, ACI-347, ACI-533, CRSI MANUAL OF STANDARD PRACTICE, PCI-116, AWS D1.0, AWS D12.1. CONCRETE STRENGTH SHALL BE AT LEAST 5,000 PSI AT 28 DAYS AND SHALL BE AT LEAST 3,000 PSI AT RELEASE. CONCRETE BACK SIDE SHALL BE TROWELED SMOOTH, FREE FROM OIL, GREASE, TROWEL MARKS, HONEYCOMBING AND EXPOSED AGGREGATE. MAKE EXPOSED EDGES SHARP, STRAIGHT AND SQUARE. MAKE FLAT SURFACES INTO A TRUE PLANE. ADDITIVES OR MIXTURES CONTAINING CALCIUM CHLORIDE WILL NOT BE PERMITTED IN THE CONCRETE. TOLERANCE SHALL BE 1/8" IN WIDTH, 1/2" IN LENGTH, AND 1/4" IN DEPTH FOR OVERALL DIMENSIONS. ALL WINDOW AND DOOR TOLERANCES ARE TO BE 1/4".
 - STORAGE: STORE UNITS AT THE JOB SITE IN A MANNER TO PREVENT CRACKING, DISTORTION, WARPING, STAINING AND OTHER PHYSICAL DAMAGE, AND IN A MANNER TO KEEP MARKINGS VISIBLE. GENERAL CONTRACTOR SHALL VERIFY STORAGE AREA(S), LIFT AND SUPPORT POINTS ONLY AT DESIGNATED LIFTING POINTS OR SUPPORTING POINTS AS SHOWN ON THE APPROVED SHOP DRAWINGS. NO PRESTRESSING STRAND MAY BE CUT WITHOUT PRIOR APPROVAL OF THE ENGINEER.
 - UNLESS NOTED OTHERWISE, THE PRECAST PLANK SHALL HAVE A 2" BONDED STRUCTURAL 5000 PSI CONCRETE TOPPING.

STEEL JOIST / DECK NOTES:

FOLLOWING NOTES SHALL APPLY IN ADDITION TO THE STRUCTURAL STEEL NOTES:

- THE STEEL JOIST MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN, MANUFACTURE AND INSTALLATION OF THEIR PRODUCTS, INCLUDING ALL BRIDGING, ACCESSORIES AND CONNECTIONS NECESSARY FOR THE COMPLETE INSTALLATION. JOISTS SHALL BE DESIGNED FOR ALL LOADING CONDITIONS REQUIRED BY THE GOVERNING BUILDING CODES IN ADDITION TO ANY SPECIFIC LOADINGS SHOWN ON THE DRAWINGS. THE DESIGN, MANUFACTURE AND INSTALLATION OF ALL JOISTS, BRIDGING, ACCESSORIES, ETC. SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, INCLUDING LOAD TABLES, OF THE STEEL JOIST INSTITUTE, LATEST EDITION. IF ANY STEEL JOIST SIZES HAVE BEEN SHOWN ON THESE DRAWINGS, THEY ARE PRELIMINARY ONLY AND SUBJECT TO FINAL DESIGN BY THE STEEL JOIST MANUFACTURER'S STRUCTURAL ENGINEER LICENSED IN THE JURISDICTION OF THIS PROJECT.
- ALL STEEL JOISTS TO BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SPECIFICATIONS AND SO CERTIFIED. WHERE CONCENTRATED AND/OR NON-UNIFORM LOADS OCCUR, THE JOISTS MUST BE DESIGNED TO CARRY THE FULL COMBINATION OF UNIFORM, NON-UNIFORM AND CONCENTRATED LOADS. THE NON-UNIFORM AND CONCENTRATED LOADS ARE SPECIFIED ON THE PLANS AND/OR LOADING DIAGRAMS SHOWN. THE JOISTS MANUFACTURER SHALL BE RESPONSIBLE FOR THE JOIST DESIGNS BASED ON THE GIVEN LOADINGS AND SHALL SUBMIT CALCULATIONS FOR ALL SPECIAL JOISTS, PREPARED UNDER THE SUPERVISION OF A LICENSED STRUCTURAL ENGINEER.
- ALL JOISTS SHALL BE WELDED TO THEIR STEEL SUPPORT MEMBERS, PER SJI SPECIFICATIONS, UNLESS NOTED OTHERWISE OR IF EXPANSION IS REQUIRED. ALL JOISTS, U.N.O., SHALL BE DESIGNED FOR A LIVE LOAD DEFLECTION. JOIST ENDS AT THE JOIST LINES FOR DEFLECTER SHALL BE DESIGNED TO TRANSFER AN ADDITIONAL HORIZONTAL FORCE, AS SPECIFIED ON THE STRUCTURAL DRAWINGS, TO THE SUPPORTING MEMBER. THIS LOAD SHALL BE APPLIED AT THE TOP OF THE TOP CHORD, ABOVE THE BEARING SEAT AND PERPENDICULAR TO THE JOIST SPAN.
- IF SHOWN ON PLANS, EXTEND BOTTOM CHORDS OF ALL JOISTS AND BOLT TO 3/4" STIFFENER PLATE ON BEAM OR CLIP ANGLE L3x3x1/4. ALL JOISTS ON COLUMN LINES TO BE BOLTED CONNECTIONS.
- ABSOLUTELY NO HOLES SHALL BE DRILLED OR BURNED INTO TOP OR BOTTOM CHORDS OF OPEN WEB STEEL BAR JOISTS.
- STEEL EQUIPMENT HANGERS ARE TO BE LOCATED AT JOIST PANEL POINTS.
- WHENEVER CONCENTRATED LOAD IS PLACED ON THE STEEL JOISTS AT LOCATIONS OTHER THAN PANEL POINTS, THE STEEL JOISTS SHALL BE REINFORCED WITH MANUFACTURER'S DETAILS. AT A MINIMUM, THE JOISTS SHALL BE REINFORCED WITH L2x2x1/4 STRUTS FIELD WELDED BETWEEN THE LOCATION OF THE POINT LOAD AT THE TOP CORD AND BOTTOM CHORD PANEL POINT.
- ROOF DECK TO BE 1-1/2" DEEP WIDE RIB, 20 GAGE GALVANIZED METAL DECK (U.N.O.), CONTINUOUS OVER 3 SPANS MINIMUM. ALL METAL DECKS TO BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE AND SO CERTIFIED.
- CONDUIT, PIPING, FIXTURES OR ANY OTHER ITEMS SHALL NOT BE SUPPORTED FROM THE METAL DECK.

STRUCTURAL STEEL NOTES:

- ALL STRUCTURAL STEEL SHALL BE AS FOLLOWS:
 - W-SHAPES SHALL BE ASTM A-992, Fy=50 K.S.I.
 - HP-SHAPES SHALL BE ASTM A-572, GRADE 50, Fy=50 K.S.I.
 - RECTANGULAR HSS-SHAPES SHALL BE ASTM A-500, GRADE B, Fy= 46 K.S.I.
 - ROUND HSS-SHAPES SHALL BE ASTM A-500, GRADE B, Fy= 42 K.S.I.
 - PIPES SHALL BE ASTM A-53, GRADE B, Fy=35 K.S.I.
 - ALL OTHER SHAPES AND PLATES SHALL BE ASTM A-36, Fy=36 K.S.I.
- ALL FABRICATION AND ERECTION OF STEEL TO BE IN ACCORDANCE WITH A.I.S.C. SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS LATEST EDITION. UNLESS OTHERWISE SHOWN OR NOTED, ALL CONNECTIONS SHALL DEVELOP ONE-HALF OF THE ALLOWABLE UNIFORM LOAD CAPACITY OF THE MEMBER USING WEB ANGLES AND ASTM A-325N H.S. BOLTS AS A MINIMUM.
- STEEL CONNECTIONS ARE DELEGATED DESIGN ELEMENT PER AISC CODE OF STANDARD PRACTICE 303-10 3.12. ALL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR. DETAILING SHALL BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE GENERAL DETAILS SHOWN ON THE DRAWINGS ARE CONCEPTUAL ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES. ALL CONNECTIONS SHALL BE SUBMITTED TO THE EOR FOR REVIEW AND SHALL INCLUDE ENGINEERING CALCULATIONS ALONG WITH CONNECTION DETAIL DRAWINGS. PRIOR TO THE SUBMITTAL OF STRUCTURAL STEEL SHOP DRAWINGS, THE DESIGN CALCULATIONS SHALL BE PREPARED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF INDIANA. TYPICAL BEAM CONNECTIONS SHALL BE STANDARD AISC FRAMED BEAM CONNECTIONS, UNLESS OTHERWISE SHOWN. ALL FIELD CONNECTIONS, EXCEPT WHERE SHOWN WELDED, SHALL BE BOLTED WITH 3/4" DIAMETER HIGH STRENGTH BOLTS CONFORMING TO ASTM A325 OR A490, UNLESS OTHERWISE NOTED. CONNECTIONS SHALL BE DESIGNED FOR 50% OF THE TOTAL ALLOWABLE UNIFORM LOAD (IN KIPS) DERIVED FROM THE AISC MANUALS TABLE OF "UNIFORM LOAD CONSTANTS" FOR NON-COMPOSITE BEAMS.
- ALL COPED BEAMS TO BE DESIGNED IN ACCORDANCE WITH APPENDIX B OF THE AISC MANUAL "ENGINEERING FOR STEEL CONSTRUCTION". PROVIDE REINFORCING AS REQUIRED. ALL RE-ENTRANT CORNERS TO BE SHAPED, NOTCH-FREE, TO A RADIUS OF AT LEAST 1/2".
- GENERAL CONTRACTOR SHALL PROVIDE AND PAY FOR SERVICES OF A REGISTERED LAND SURVEYOR WHO, AS WORK PROCEEDS, SHALL CHECK EVERY MAJOR ELEMENT FOR LINE, LEVEL AND PLUMB. GENERAL CONTRACTOR SHALL PROMPTLY NOTIFY OWNER AND ARCHITECT UPON DETECTION OF DEVIATIONS WHICH EXCEED STANDARD AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", EXCEPT AS OTHERWISE INDICATED.
- ALL WELDING TO BE IN ACCORDANCE WITH A.W.S. AND AISC SPECIFICATIONS. WELDING ELECTRODES SHALL BE E70XX, Fy=70 KSI.
- ALL ELEVATIONS ARE TO TOP OF STEEL BEAMS UNLESS NOTED OTHERWISE.
- ALL BEAMS SPLICES, NOT INDICATED ON THE CONTRACT DOCUMENTS, SHALL BE PENETRATION WELDED TO RESTORE FULL CAPACITIES OF THE ORIGINAL BEAM. BOLTED CONNECTIONS SHALL BE USED FOR ERECTION PURPOSES ONLY, UNLESS APPROVED IN WRITING BY THE ENGINEER OF RECORD. IF SPLICES ARE REQUIRED FOR CONSTRUCTION PURPOSES, CONTRACTOR SHALL COORDINATE ALL SPLICE LOCATIONS WITH THE ARCHITECT AND THE VARIOUS PROJECT CONSULTANTS TO AVOID ANY INTERFERENCE/CONFLICTS WITH OTHER TRADES.
- SEE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS STEEL, PLATES, ETC.
- VERIFY ALL OPENINGS FOR MECHANICAL EQUIPMENT, ETC., WITH MECHANICAL CONTRACTORS BEFORE ERECTION OF ANY STEEL. PROVIDE ANGLE FRAMES FOR ALL OPENINGS LARGER THAN 12" SQUARE, AND PROVIDE ALL AUXILIARY FRAMING AS REQUIRED.
- ALL STRUCTURAL STEEL TO HAVE ONE SHOP COAT OF MEDIUM GRAY RUST INHIBITIVE PAINT (INCLUDING ALL MISCELLANEOUS STEEL). FIELD TOUCH-UP AS REQUIRED ON ALL EXPOSED STEEL. STEEL EXPOSED TO WEATHER SHALL BE GALVANIZED. STEEL MEMBERS ARE TO BE CLEANED OF ALL MUD, MARKINGS, ETC., AFTER INSTALLATION.
- STEEL BEAMS TO BE SLOPED UNIFORMLY TO ROOF DRAINS AS INDICATED ON STEEL PLANS.



SHEET REVISIONS:

No. DATE NATURE OF REVISION

-	5-13-22	ISSUED FOR PERMIT

STATEMENT OF COMPLIANCE

I have prepared, or caused to be prepared under my supervision, the attached plans and specifications and state that, to the best of my knowledge and belief and to the extent of my contractual obligation, they are in compliance with the applicable Codes and Ordinances.



Signature Date: 5-13-2022
License Expires: 07-31-2022

PROJECT NAME:

Public Works Building
Lake County
Lowell, IN

PROJECT No.: 21024

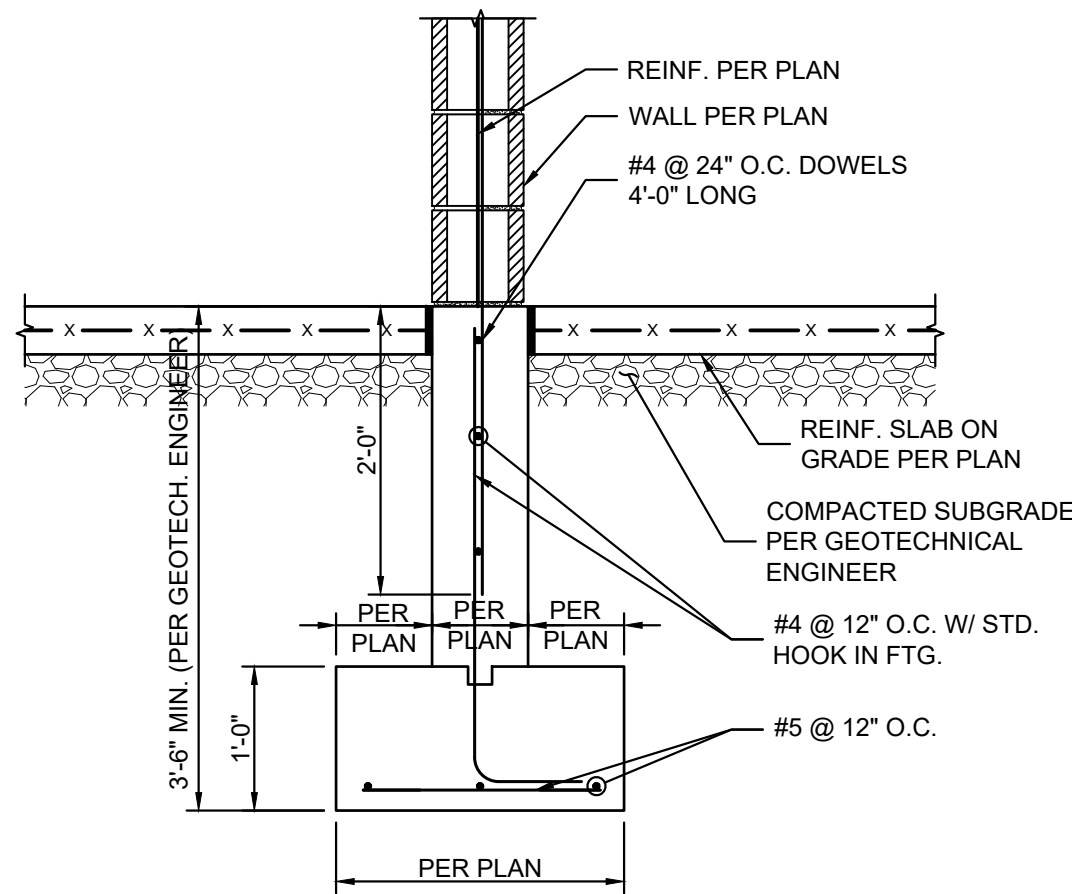
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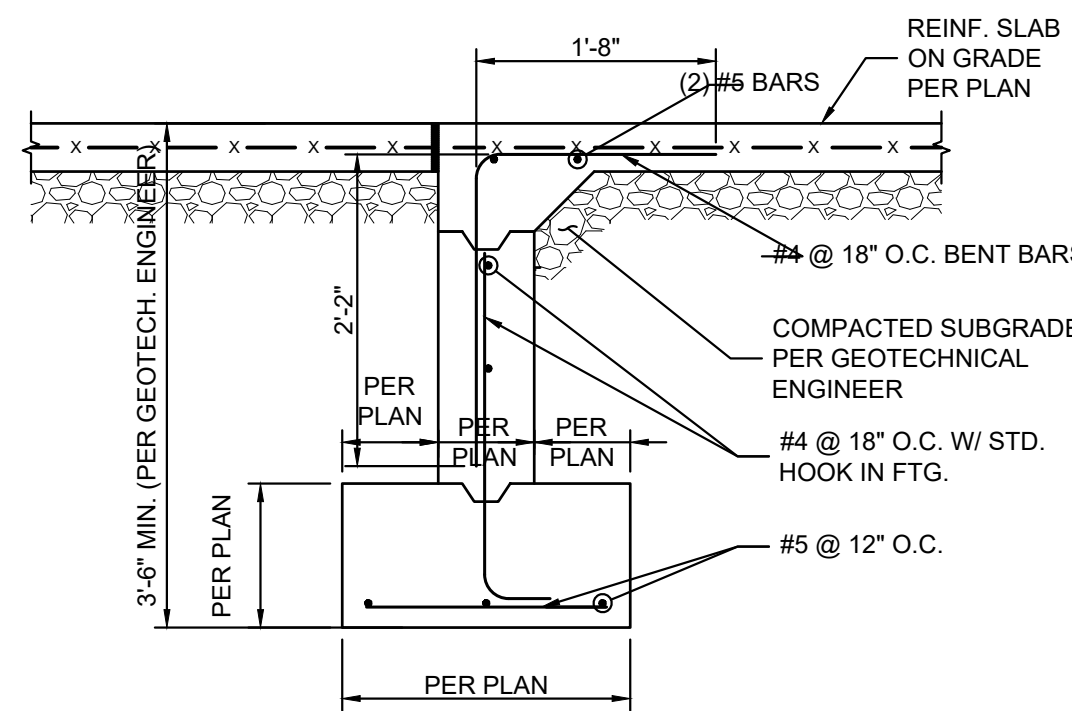
GENERAL NOTES

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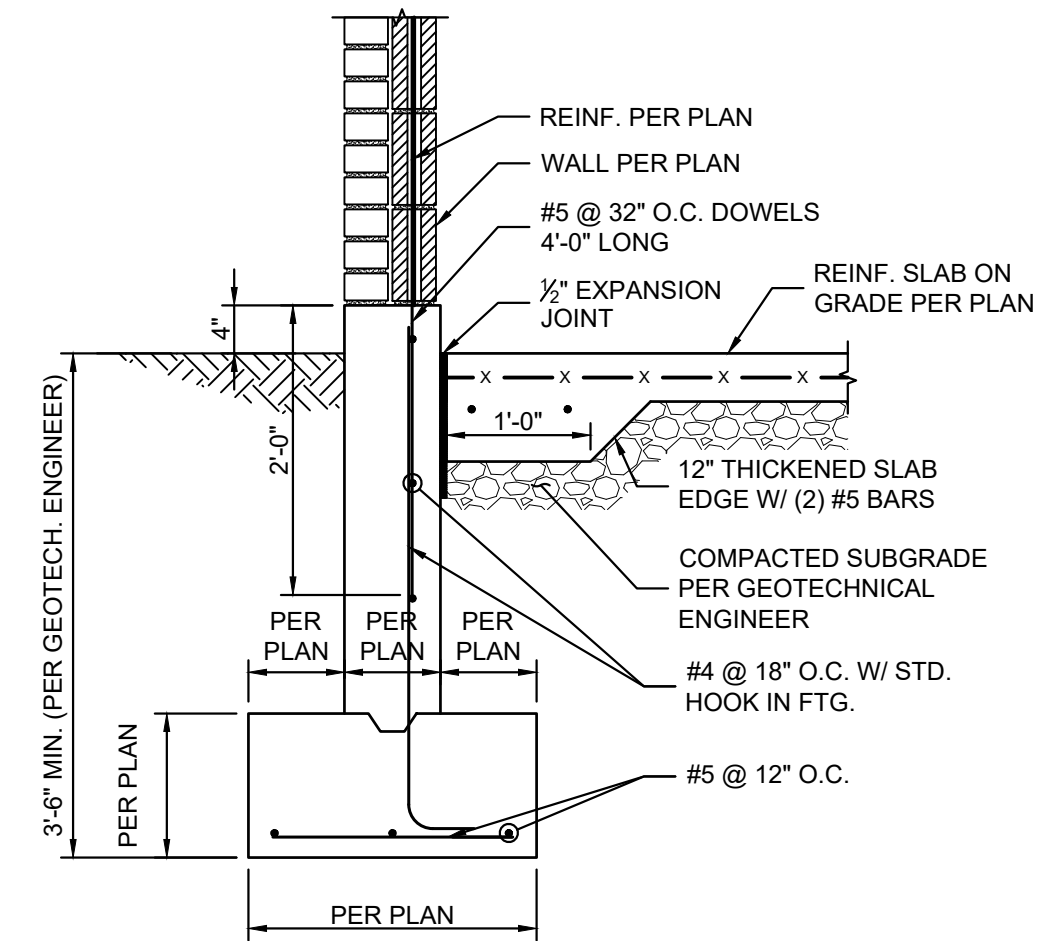
S-101



2 SECTION
Scale: 3/4" = 1'-0"



3 SECTION
Scale: 3/4" = 1'-0"

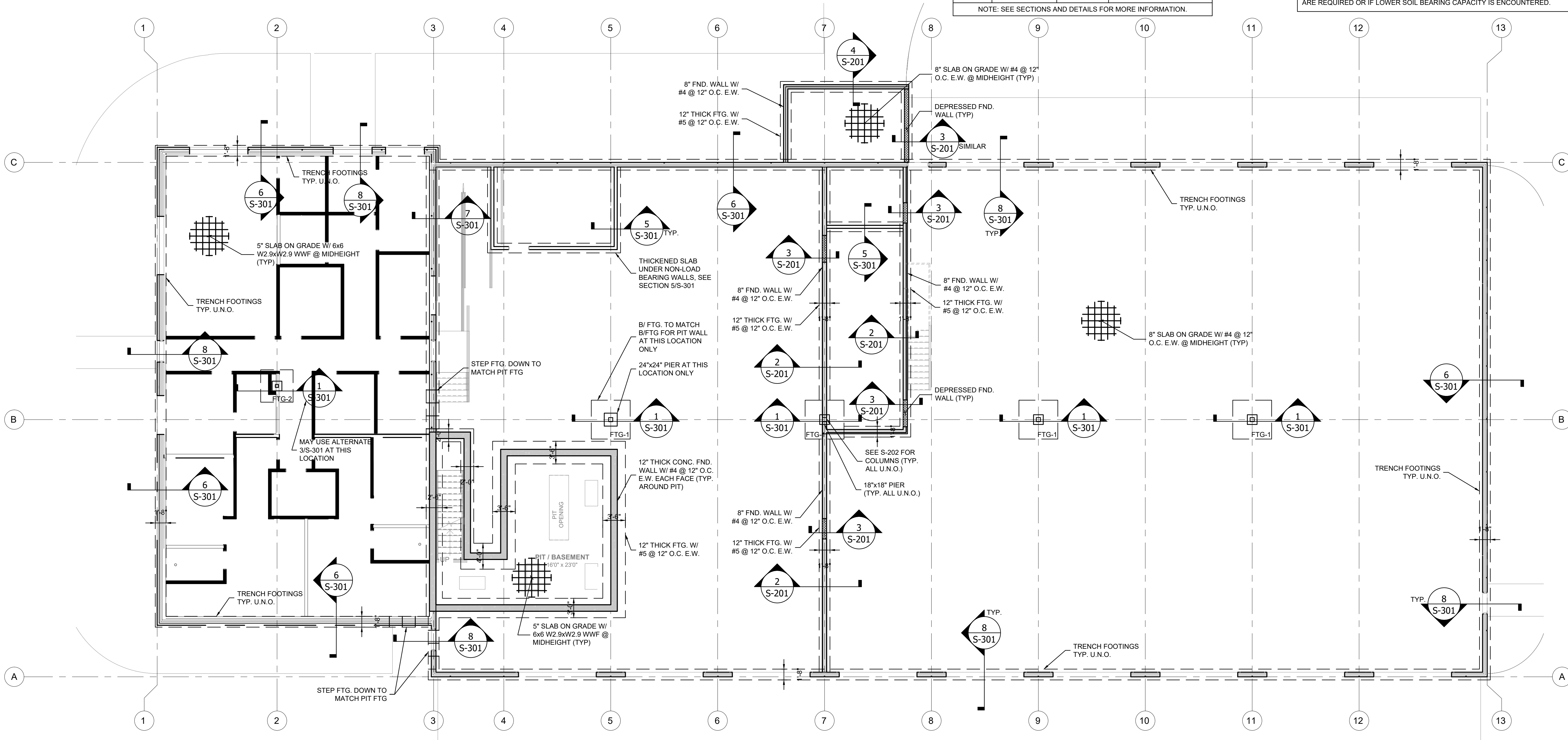


4 SECTION
Scale: 3/4" = 1'-0"

FOOTING SCHEDULE			
MARK	SIZE	THICKNESS	REINFORCEMENT
FTG-1	6'-0" x 6'-0"	12"	(6) #6 BARS EACH WAY
FTG-2	5'-0" x 5'-0"	12"	(5) #5 BARS EACH WAY

NOTE: SEE SECTIONS AND DETAILS FOR MORE INFORMATION.

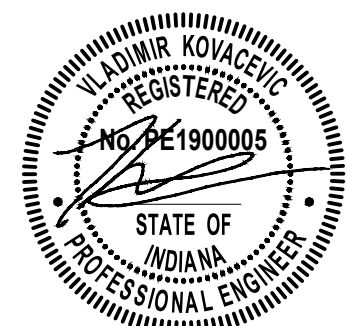
NOTE:
REFER TO GEOTECHNICAL ENGINEERING REPORT BY ADVANCED ENGINEERING SERVICES DATED DECEMBER 24, 2020. CONTRACTOR SHALL HAVE A LICENSED GEOTECHNICAL ENGINEER ON SITE TO CONFIRM ALL FOUNDATION BEARING ELEVATIONS AND SOIL CAPACITIES. SOIL BEARING CAPACITY REQUIRED IS 3,000 PSF. NOTIFY ANAX ENGINEERING, INC. IF DEEPER BEARING ELEVATIONS ARE REQUIRED OR IF LOWER SOIL BEARING CAPACITY IS ENCOUNTERED.



1 FOUNDATION PLAN
Scale: 1/8" = 1'-0"

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No.	DATE	NATURE OF REVISION
-	5-13-22	ISSUED FOR PERMIT

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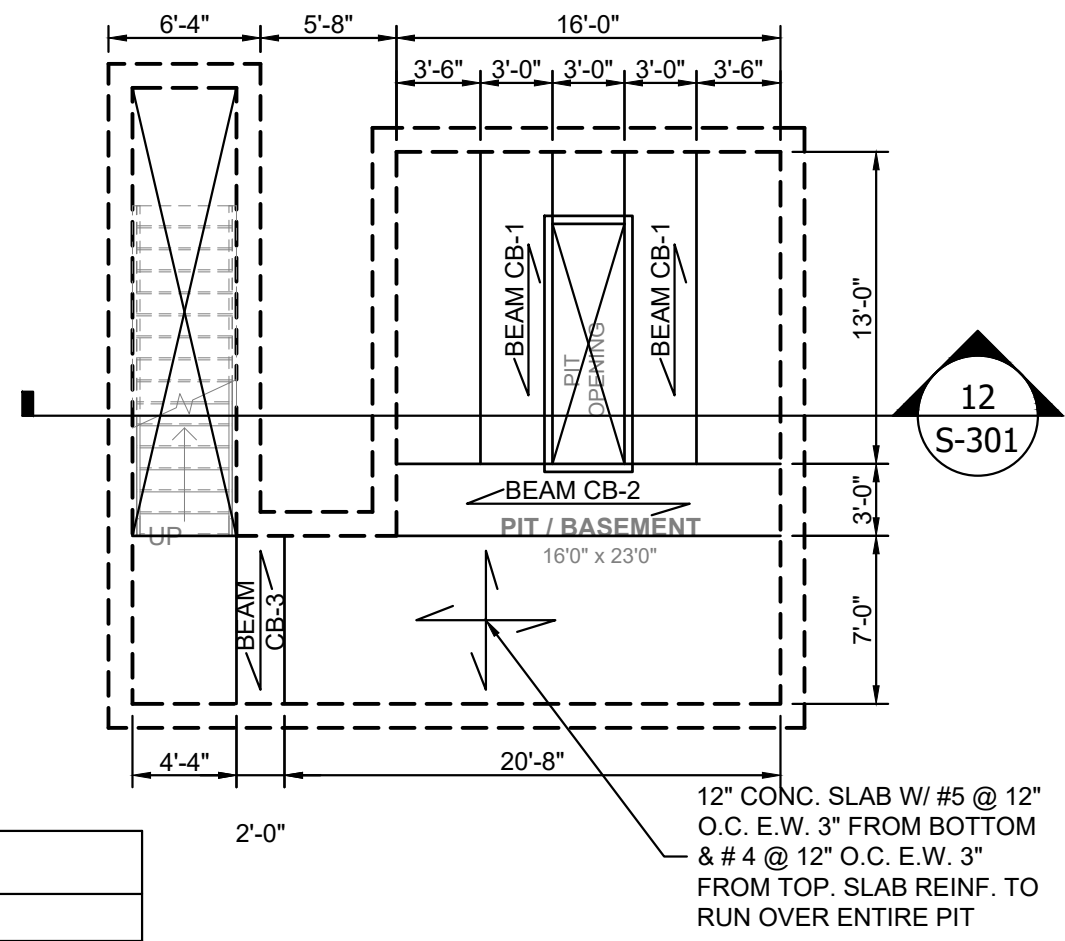
PROJECT NAME:
**Public Works Building
Lake County
Lowell, IN**

PROJECT No.: **21024**
ISSUED FOR PERMIT

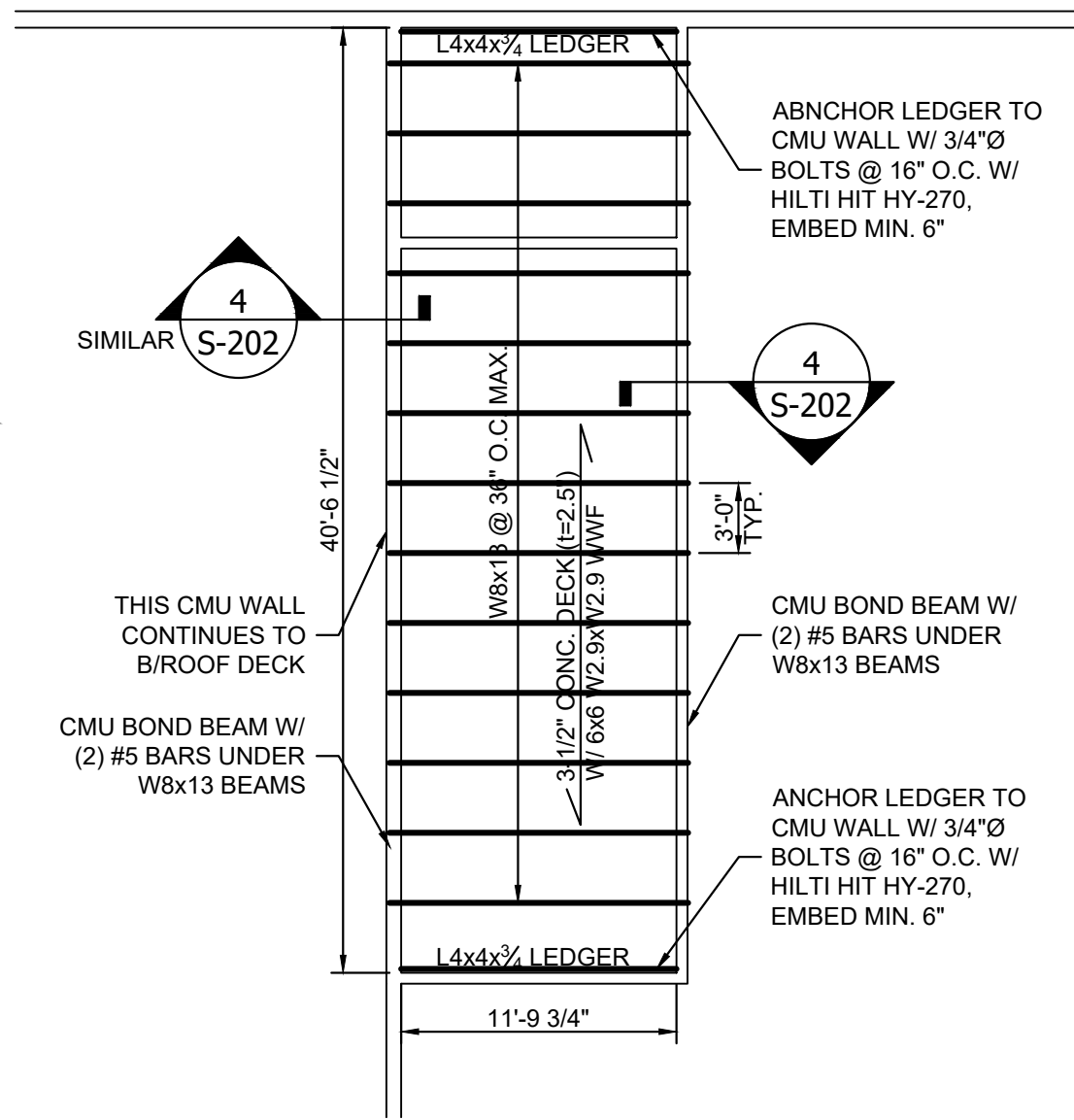
SHEET NAME:
FOUNDATION PLAN

SHEET No.:
S-201

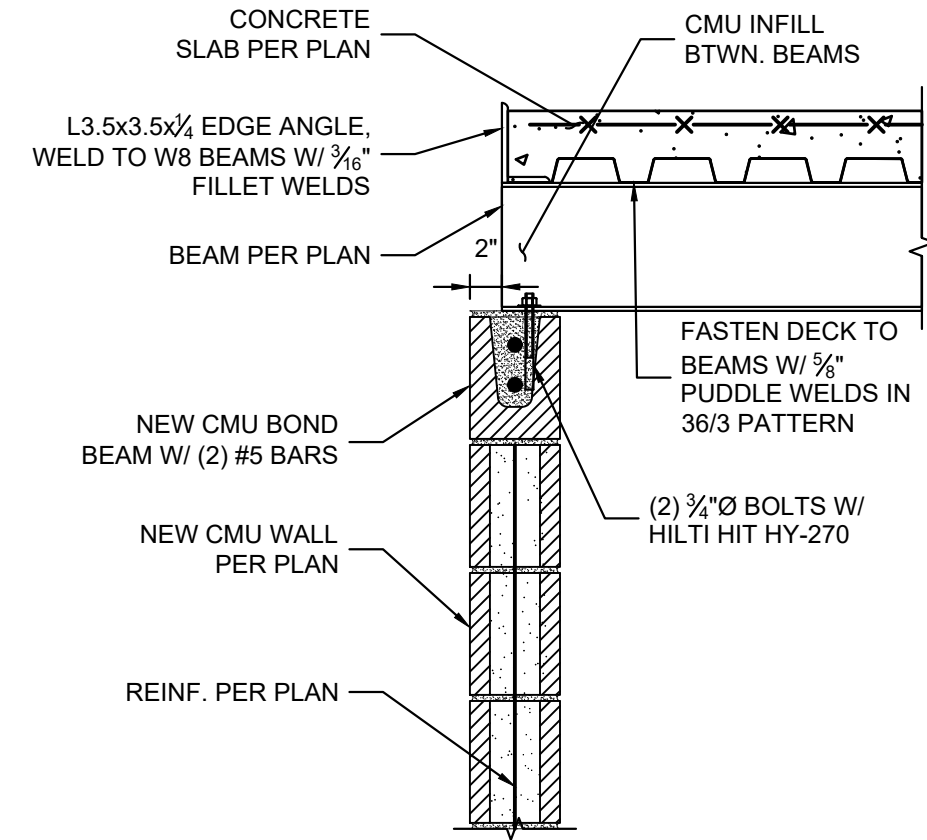
CONCRETE BEAM SCHEDULE			
MARK	HEIGHT x WIDTH	REINFORCEMENT	STIRRUPS
CB-1	12" x 36"	(12) #6 BARS @ BOTTOM; (4) #4 BARS @ TOP	#4 @ 4" O.C. OVER 36" FROM EACH END, #4 @ 8" O.C. ELSEWHERE
CB-2	16" x 36"	(12) #6 BARS @ BOTTOM; (4) #4 BARS @ TOP	#4 @ 4" O.C. OVER 36" FROM EACH END, #4 @ 8" O.C. ELSEWHERE
CB-3	12" x 24"	(6) #5 BARS @ BOTTOM; (4) #4 BARS @ TOP	#4 @ 8" O.C.
SEE NOTES ON S-101 FOR ADDITIONAL CONCRETE REINFORCEMENT INFORMATION.			



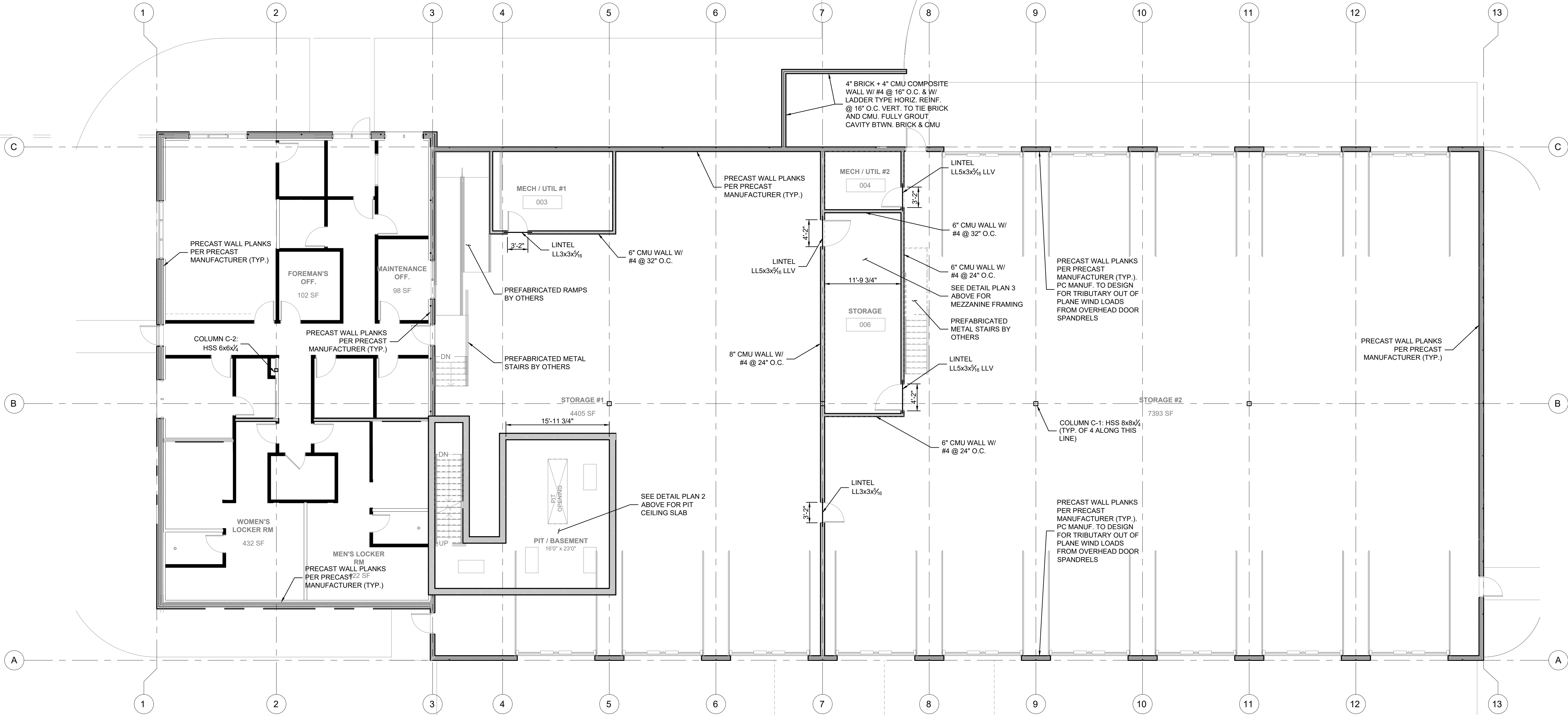
2 PIT FRAMING PLAN
Scale: 1/8" = 1'-0"



3 MEZZANINE FRAMING PLAN
Scale: 1/8" = 1'-0"



4 SECTION
Scale: 1" = 1'-0"



1 FLOOR PLAN
Scale: 1/8" = 1'-0"

SHEET REVISIONS:		
No.	DATE	NATURE OF REVISION
5-13-22		ISSUED FOR PERMIT

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PROJECT NAME:
**Public Works Building
Lake County
Lowell, IN**

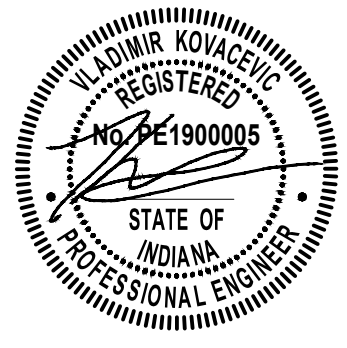
PROJECT No.: **21024**
ISSUED FOR PERMIT

SHEET NAME:
FLOOR PLAN

SHEET No.:
S-202

SHEET REVISIONS:		
No.	DATE	NATURE OF REVISION
-	5-13-22	ISSUED FOR PERMIT

STATEMENT OF COMPLIANCE
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Signature Date: 5-13-2022
License Expires: 07-31-2022

PROJECT NAME:
**Public Works Building
Lake County
Lowell, IN**

PROJECT No.: **21024**
ISSUED FOR PERMIT

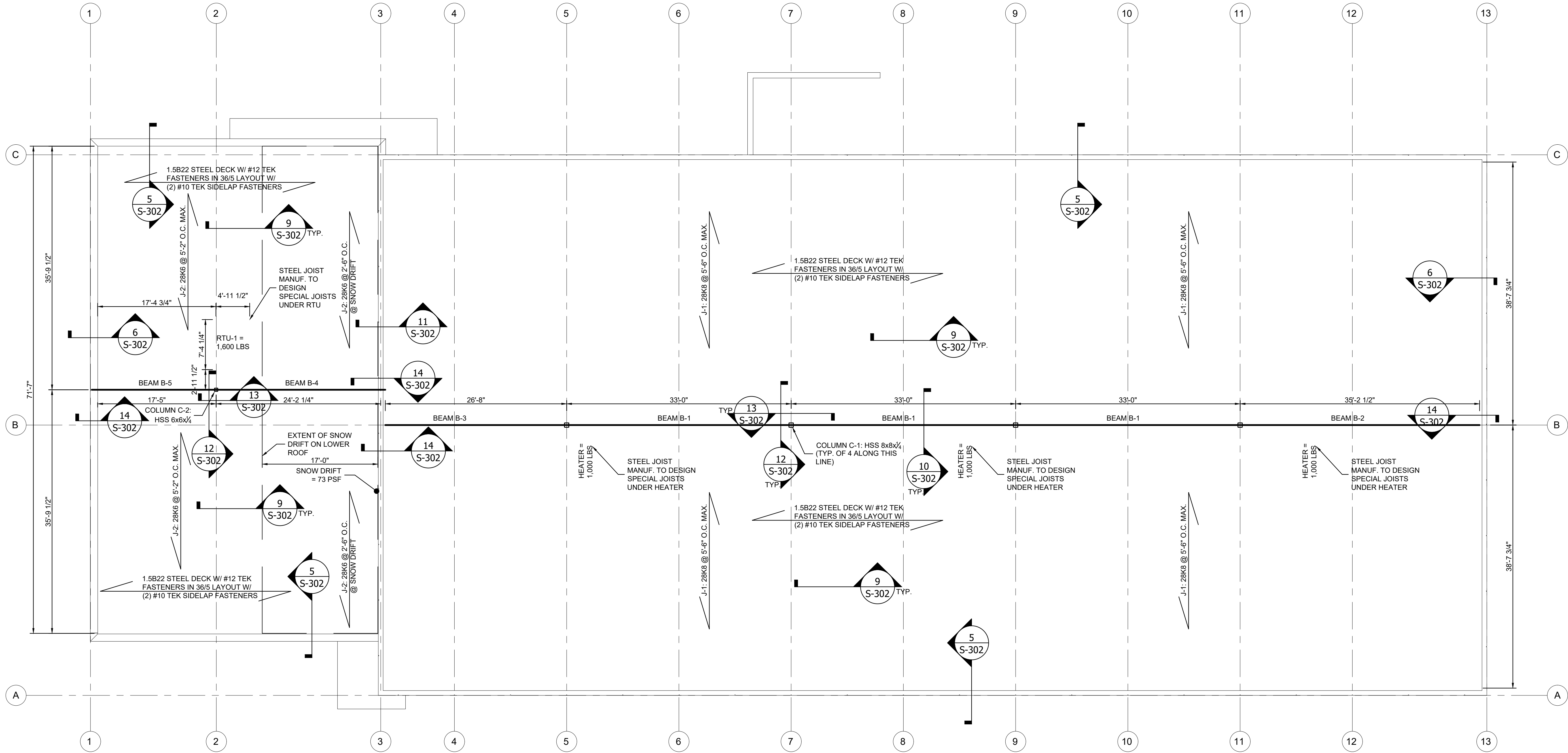
SHEET NAME:
ROOF PLAN

SHEET No.:
S-203

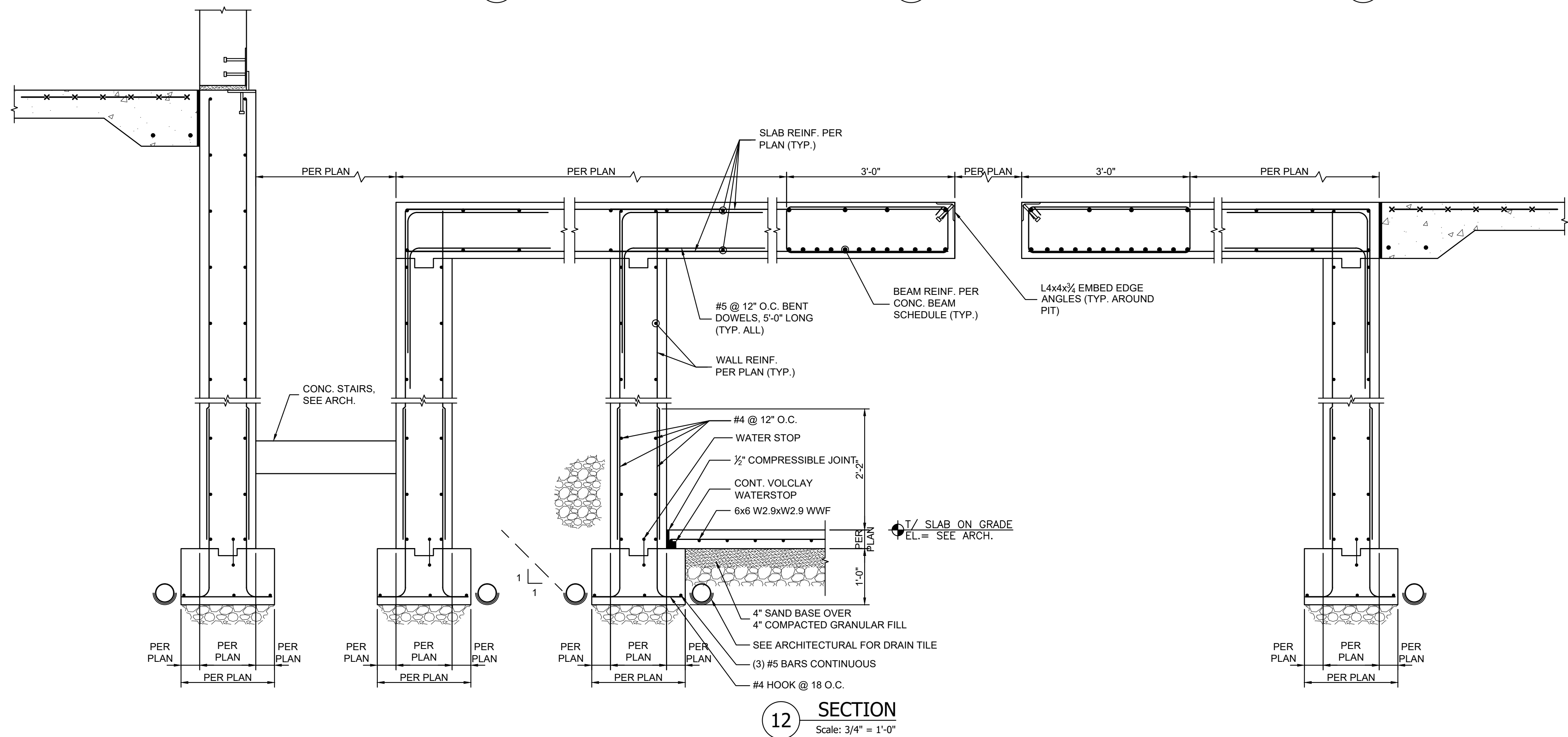
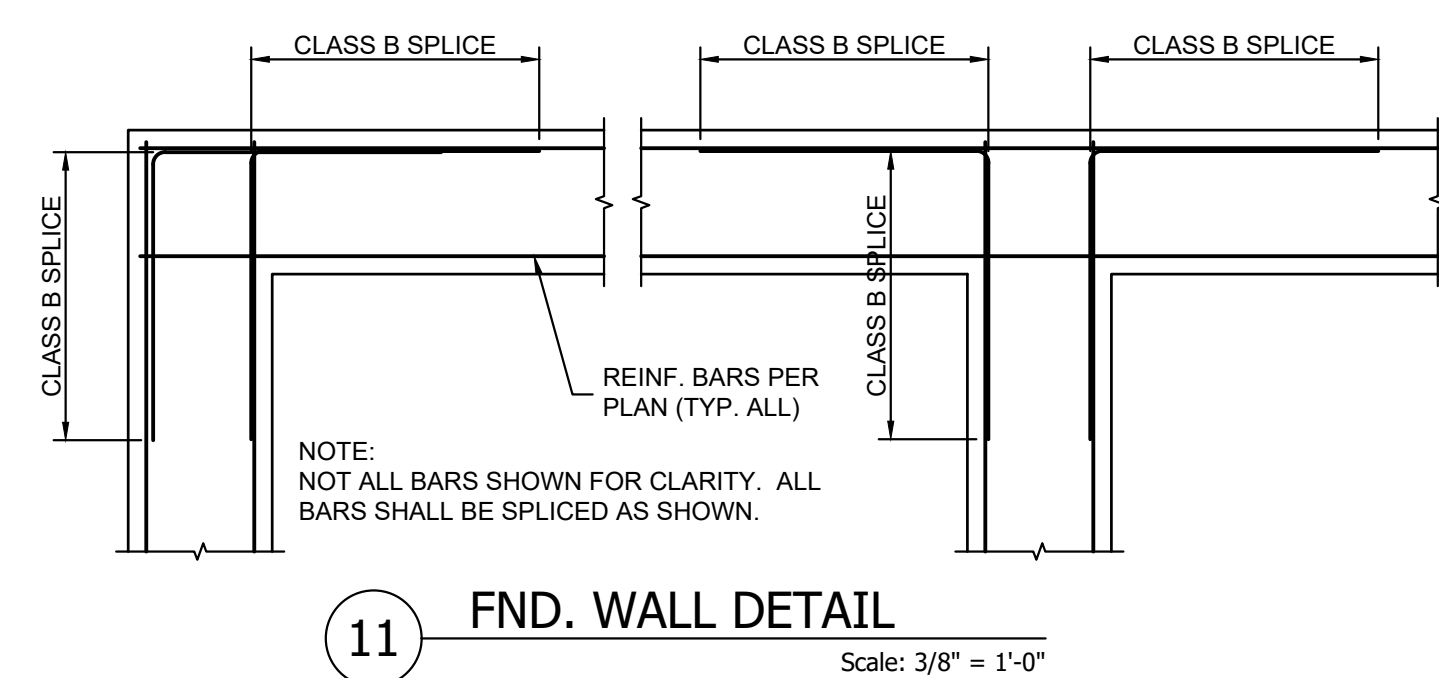
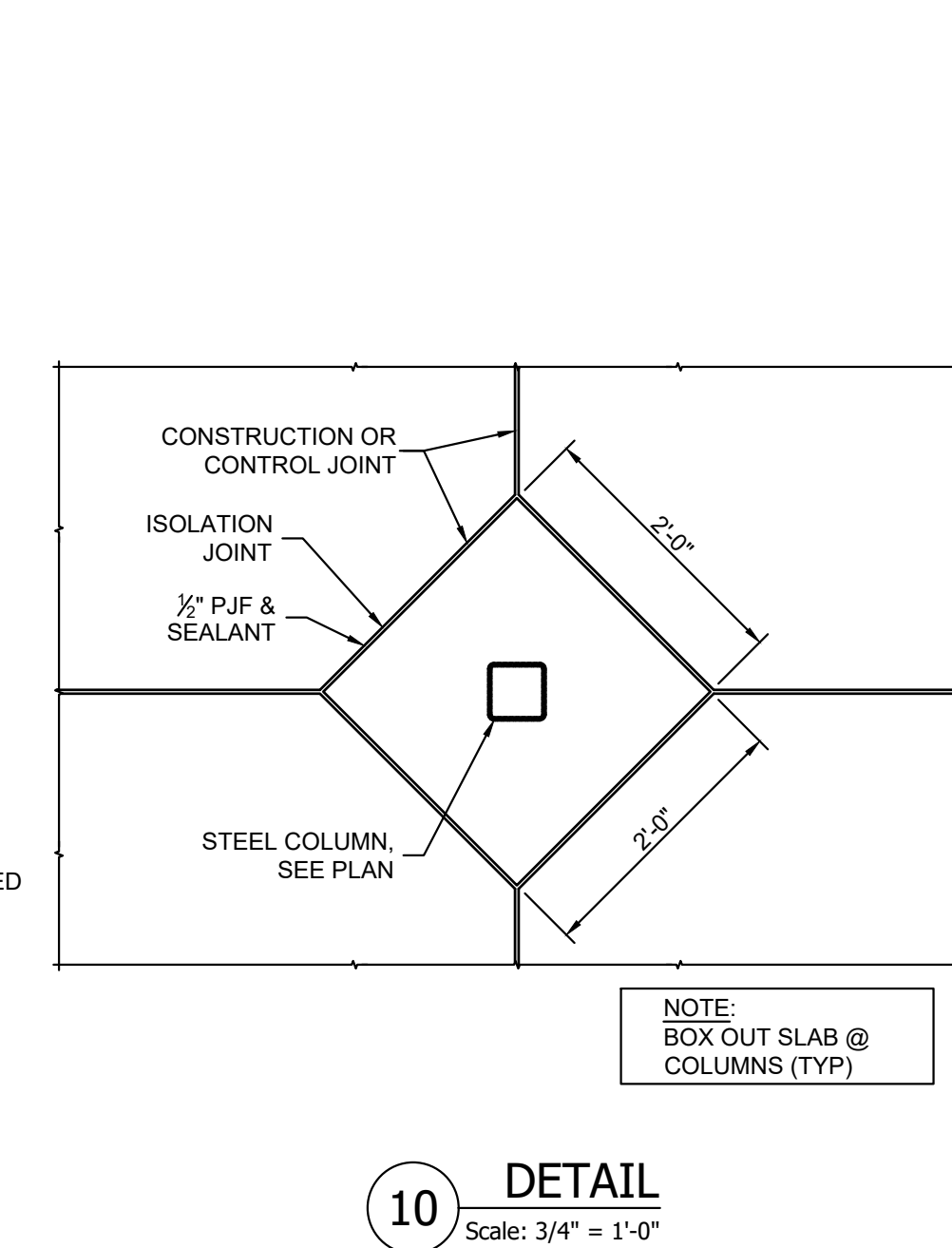
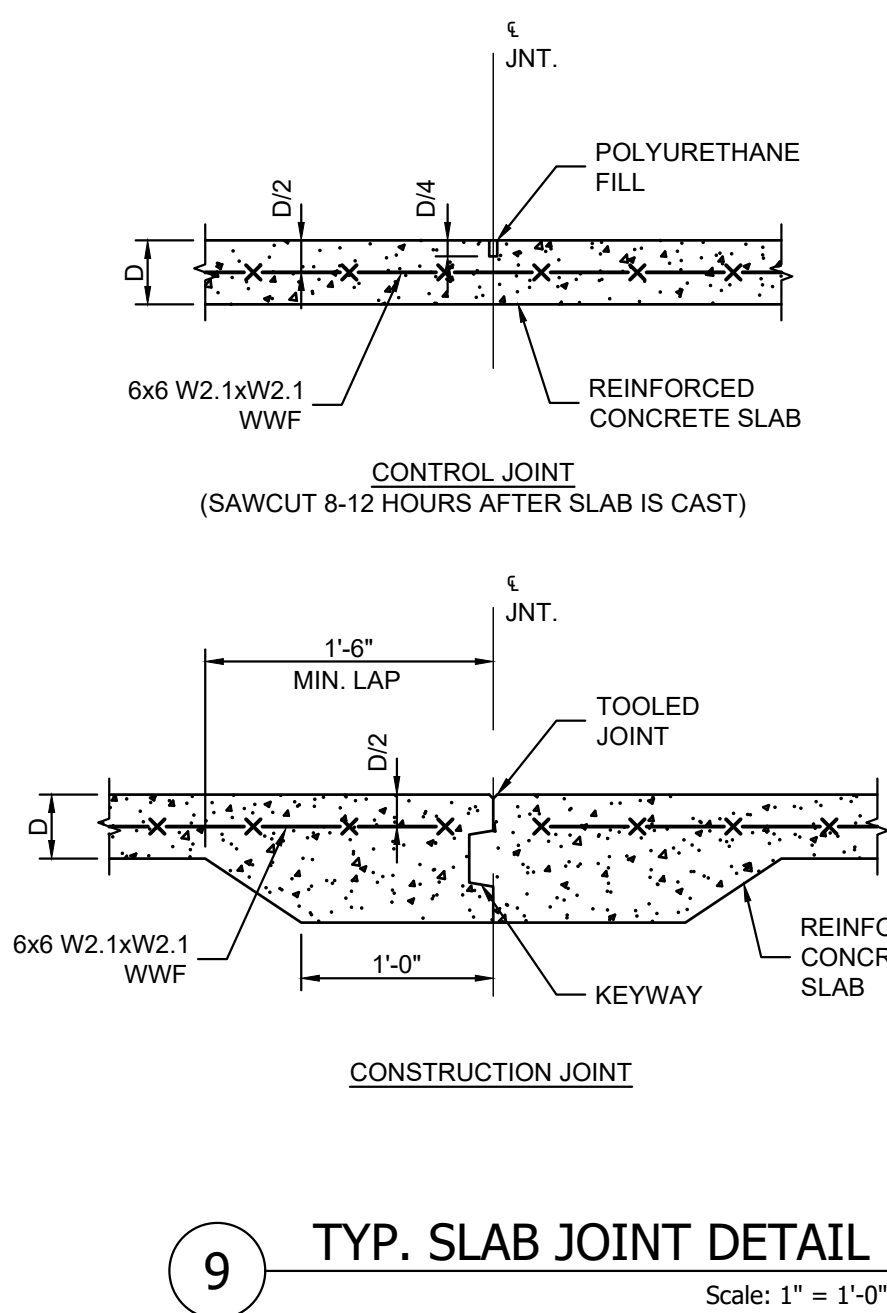
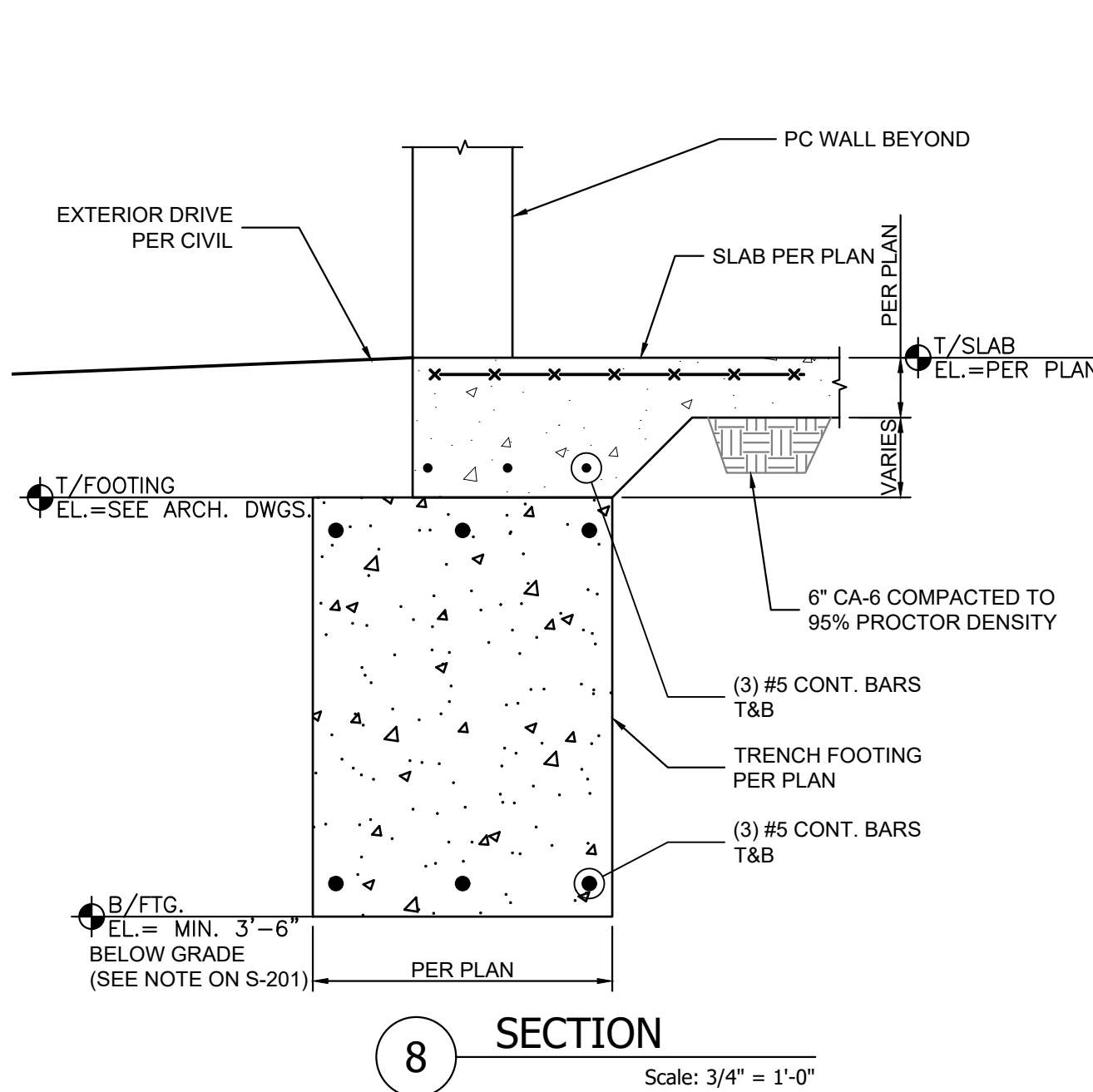
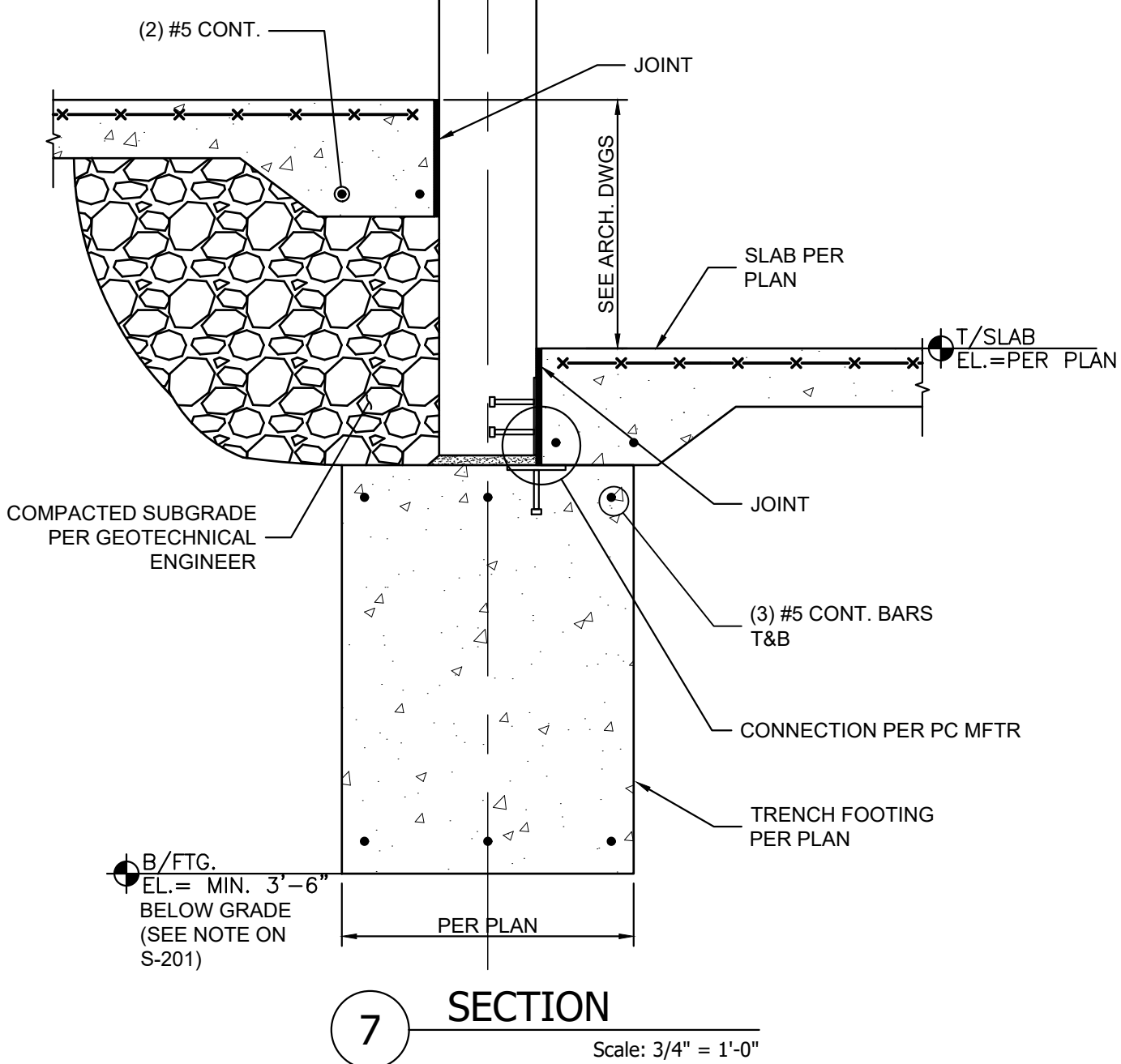
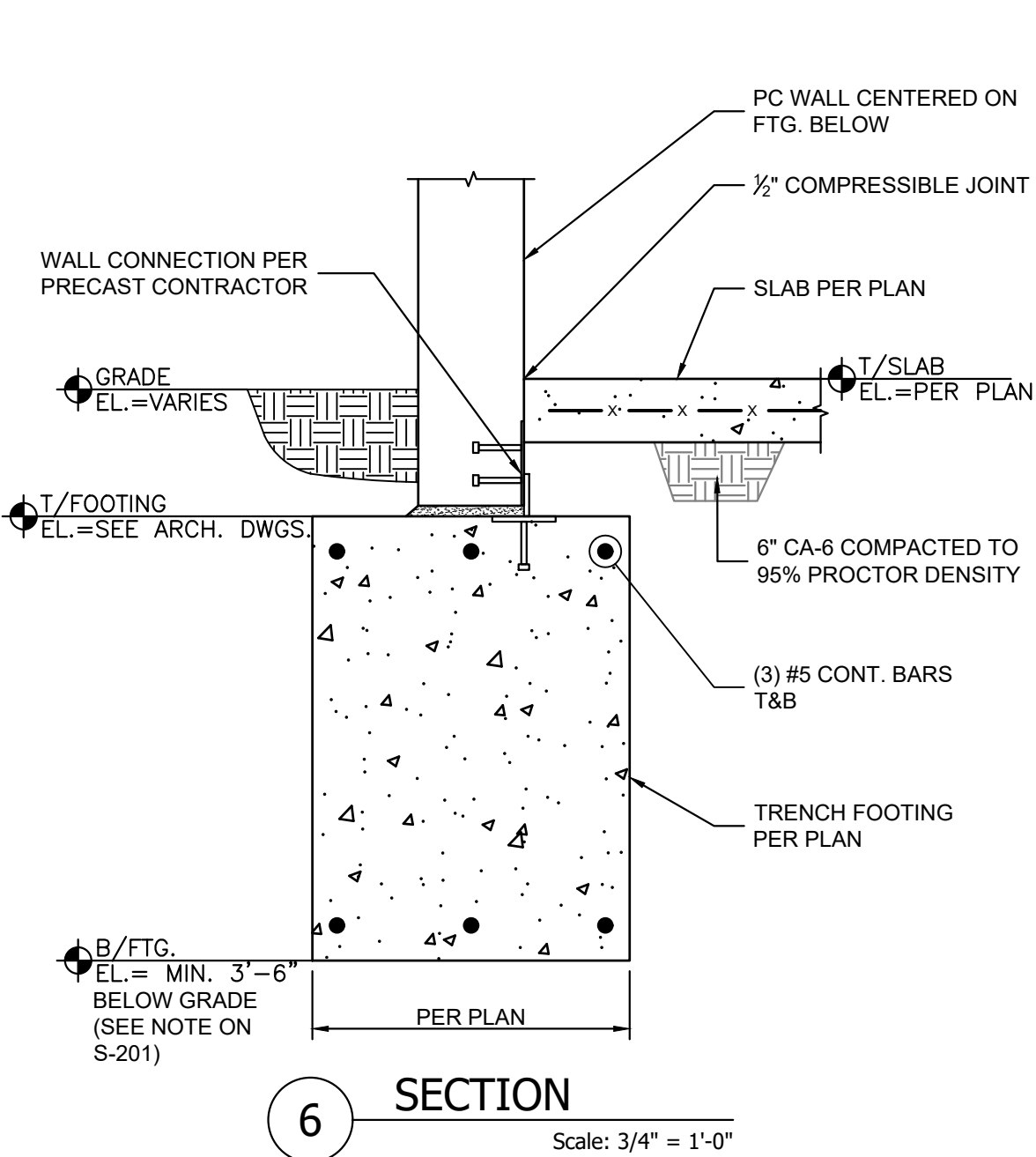
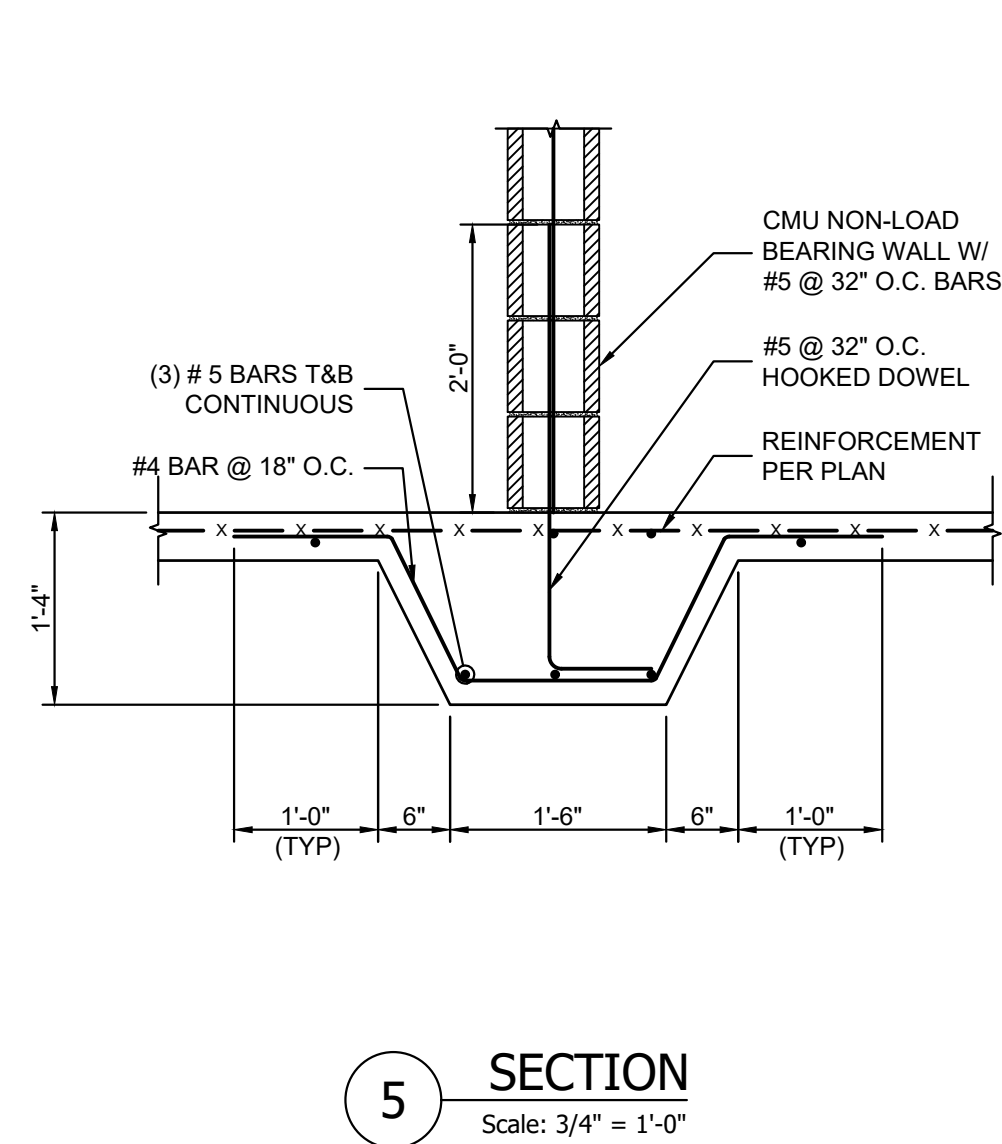
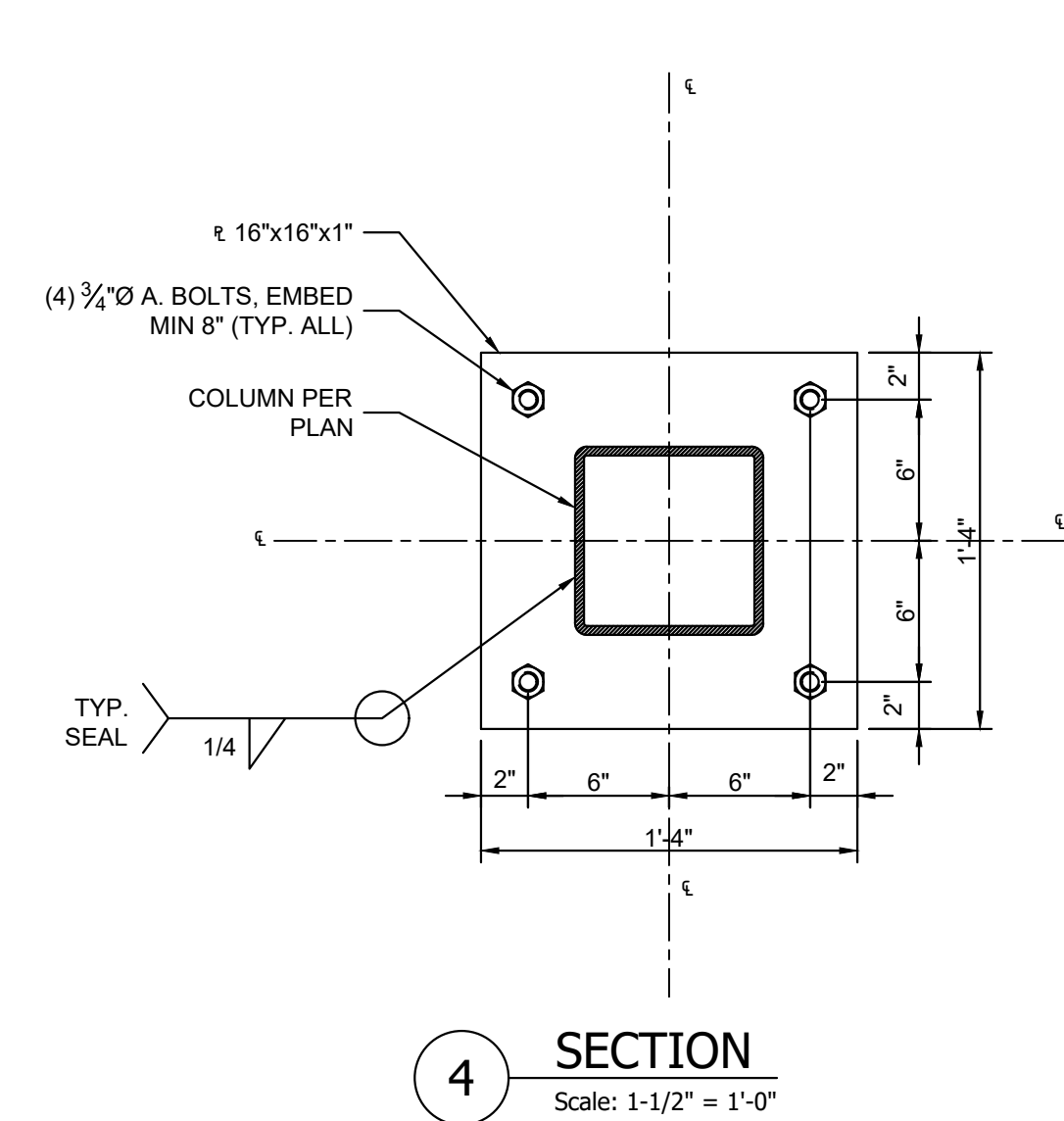
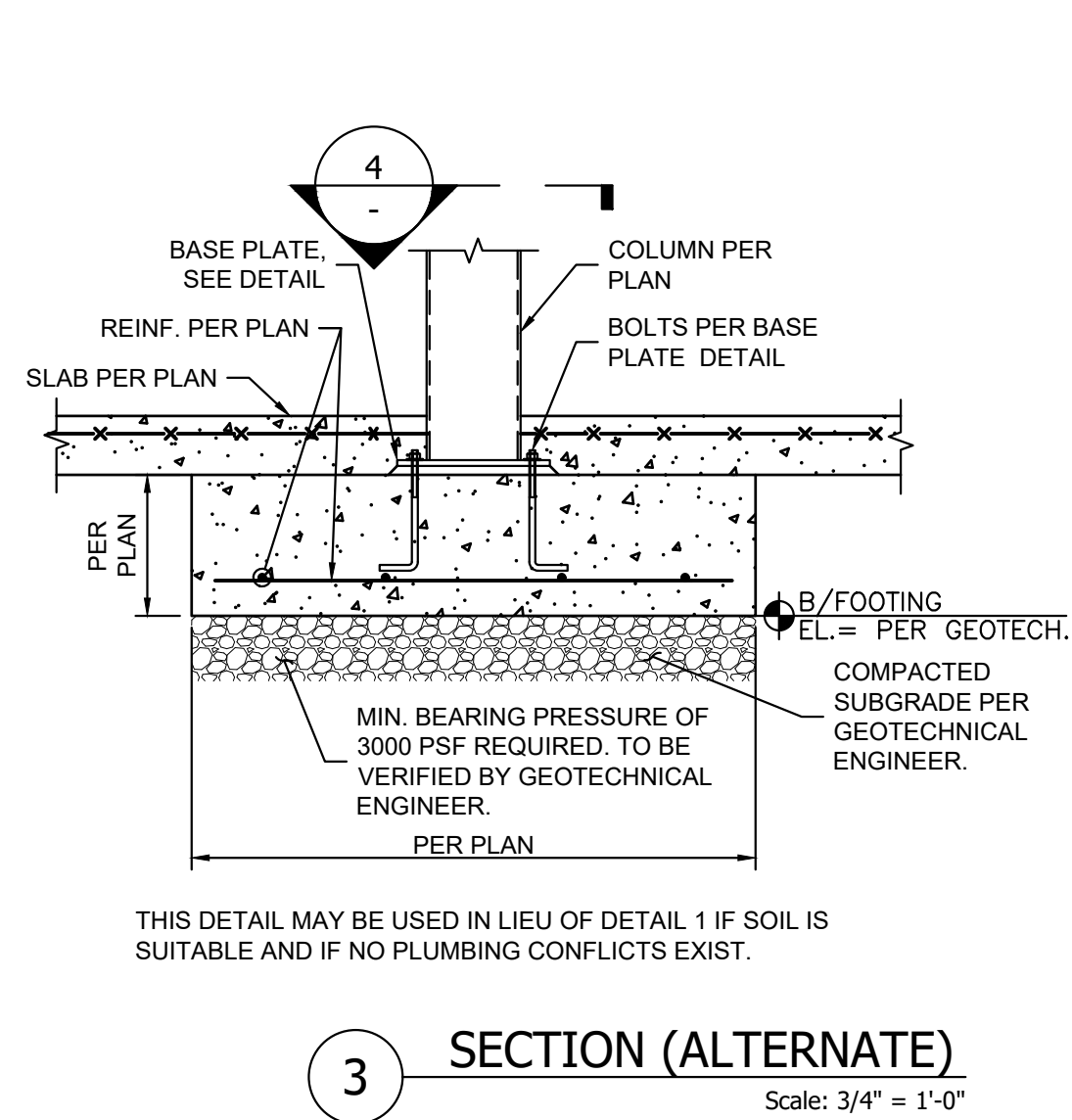
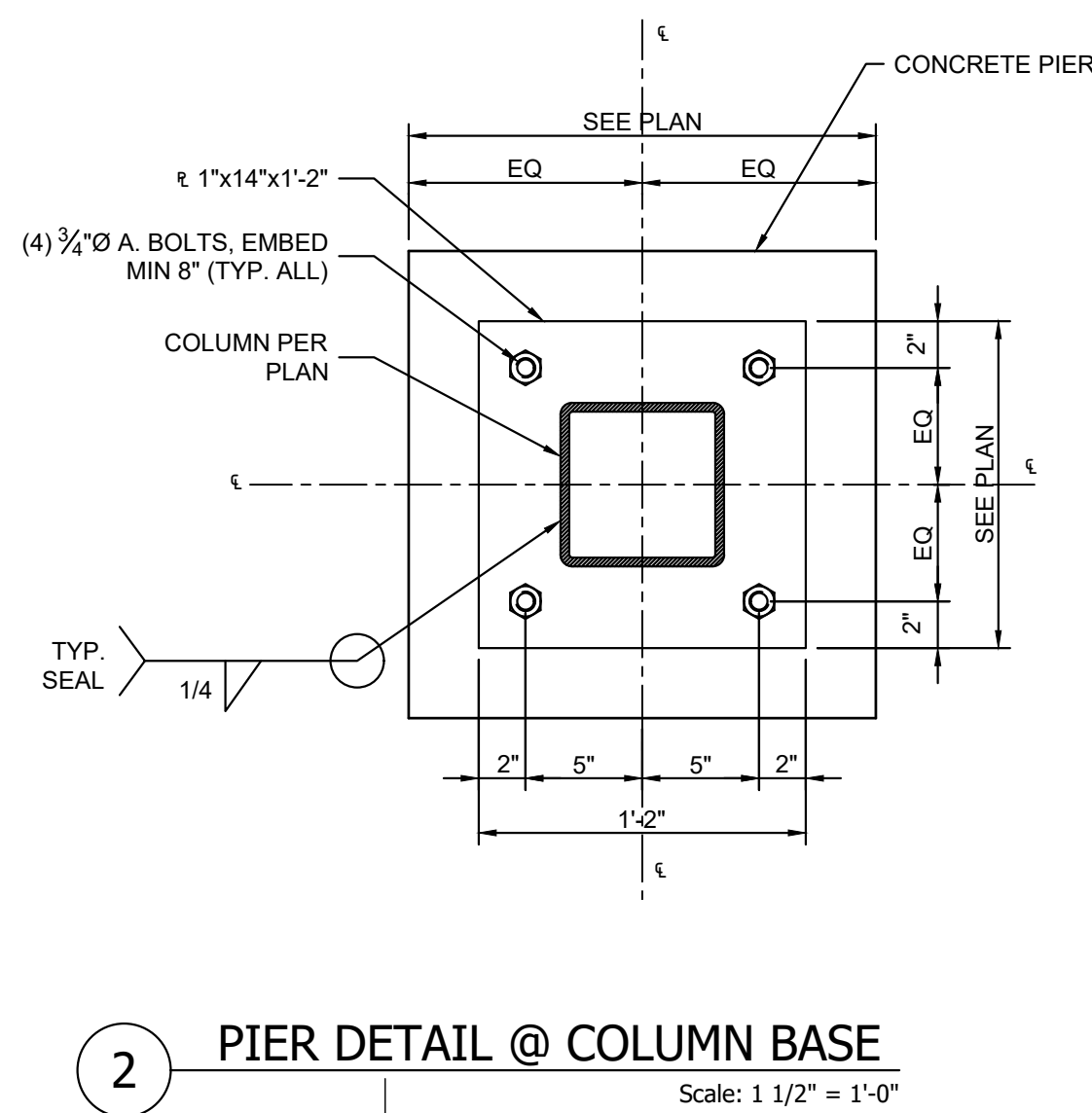
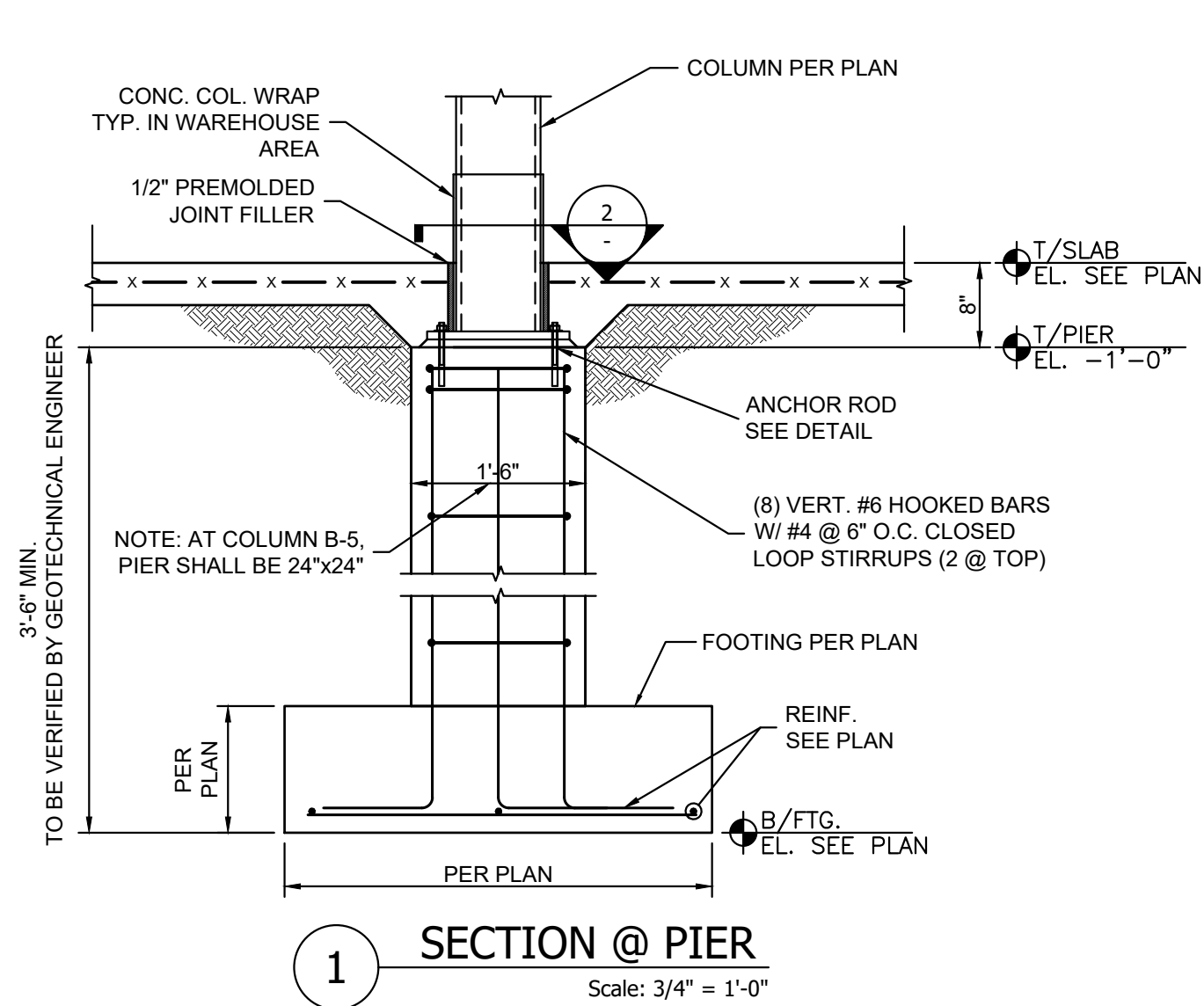
STEEL BEAM SCHEDULE			
MARK	SECTION SIZE	MATERIAL	END CONDITION
B-1	W24x62	Fy=50 ksi	AISC STD. SHEAR TAB
B-2	W24x68	Fy=50 ksi	AISC STD. SHEAR TAB / P.C. EMBED PLATE
B-3	W21x48	Fy=50 ksi	AISC STD. SHEAR TAB / P.C. EMBED PLATE
B-4	W21x48	Fy=50 ksi	AISC STD. SHEAR TAB / P.C. EMBED PLATE
B-5	W16x26	Fy=50 ksi	AISC STD. SHEAR TAB / P.C. EMBED PLATE

NOTE:
STEEL JOIST MANUF. TO DESIGN JOISTS FOR SLOPE TO DRAINS.

NOTE:
STEEL JOIST MANUF. TO DESIGN SPECIAL JOISTS FOR SUPPORT OF ALL ROOF EQUIPMENT PER MECHANICAL DRAWINGS. VERIFY ALL WEIGHT AND LOCATIONS WITH MECH. ENGINEER & G.C.



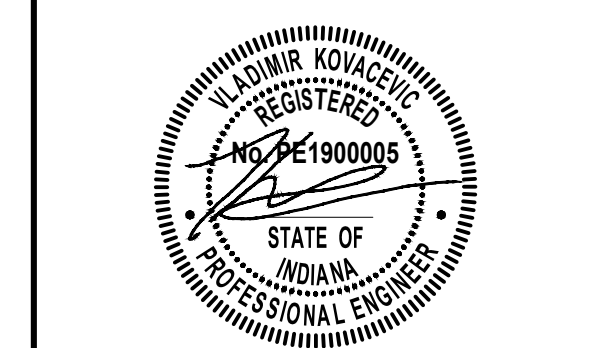
1 ROOF PLAN
Scale: 1/8" = 1'-0"



SHEET REVISIONS:

No.	DATE	NATURE OF REVISION
1	5-13-22	ISSUED FOR PERMIT

STATEMENT OF COMPLIANCE
I have prepared, or caused to be prepared under my supervision, the attached plans and specifications and state that, to the best of my knowledge and belief and to the extent of my contractual obligation, they are in compliance with the applicable Codes and Ordinances.



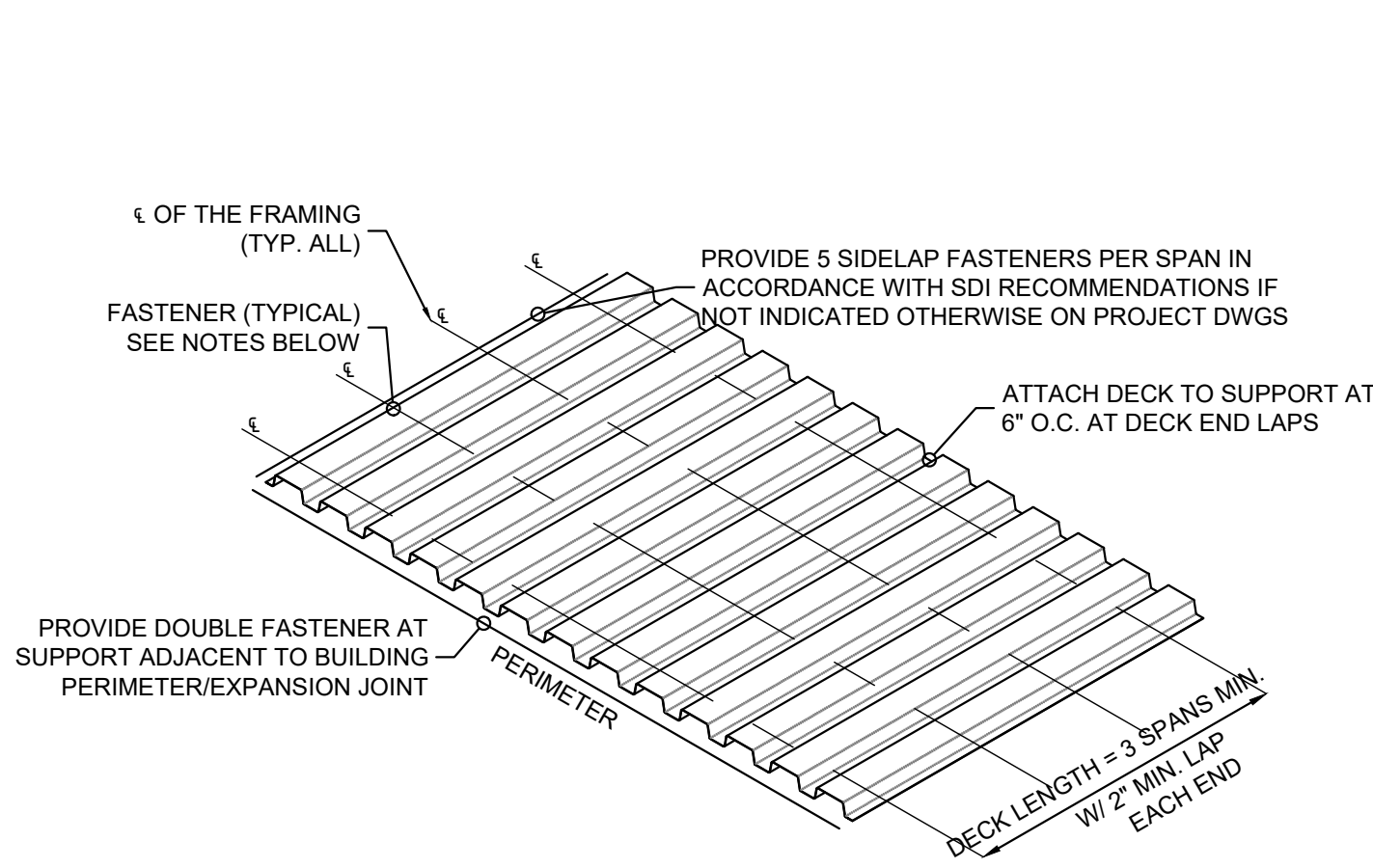
Signature Date: 5-13-2022
License Expires: 07-31-2025

PROJECT NAME:
**Public Works Building
Lake County
Lowell, IN**

PROJECT No.: **21024**
ISSUED FOR PERMIT

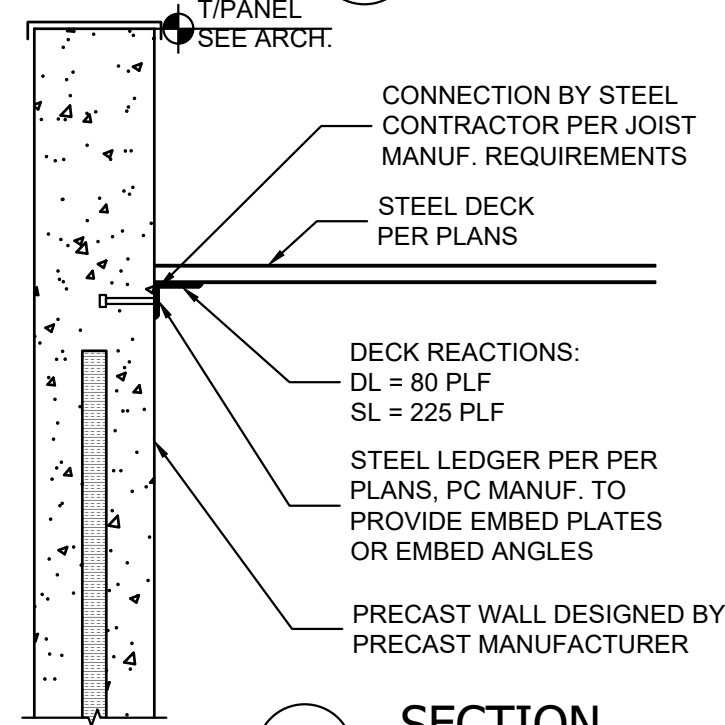
SHEET NAME:
SECTIONS AND DETAILS

SHEET No.:
S-301

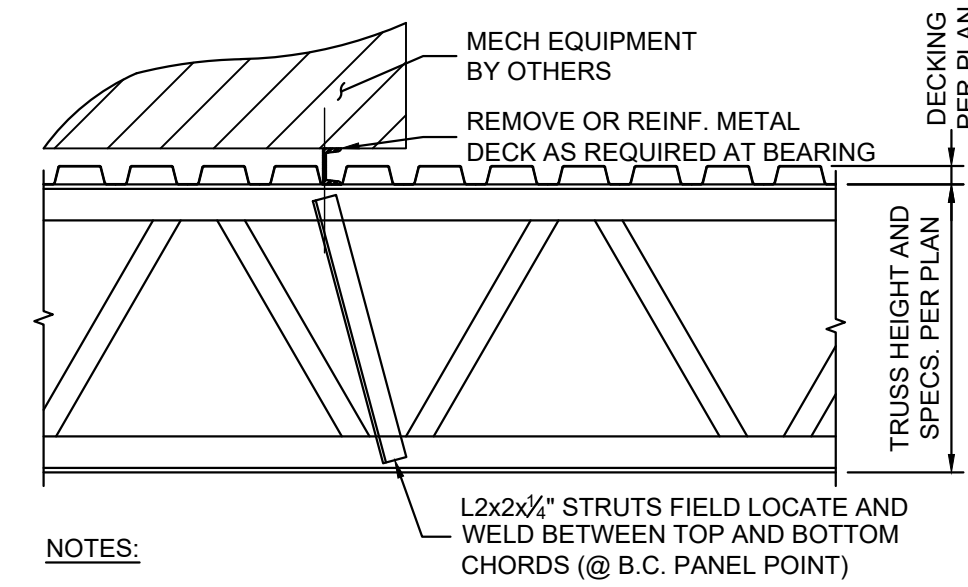


NOTES:
DECK MAY BE FASTENED TO SUPPORT MEMBERS BY ANY OF THE FOLLOWING METHODS:
1. WELDING (DEFAULT UNLESS NOTED OTHERWISE); ALL WELDS ARE TO BE 3/8" DIA. PUDDLE WELDS.
2. SCREWING: BUILDDEX #12 TEK SCREWS OR EQUAL.
3. PNEUMATICALLY-DRIVEN FASTENERS: PNIUTEX PINS OR EQUAL (SUBMIT MANUFACTURER'S LITERATURE FOR APPROVAL PRIOR TO USING ANY PNEUMATIC-DRIVEN PRODUCTS).

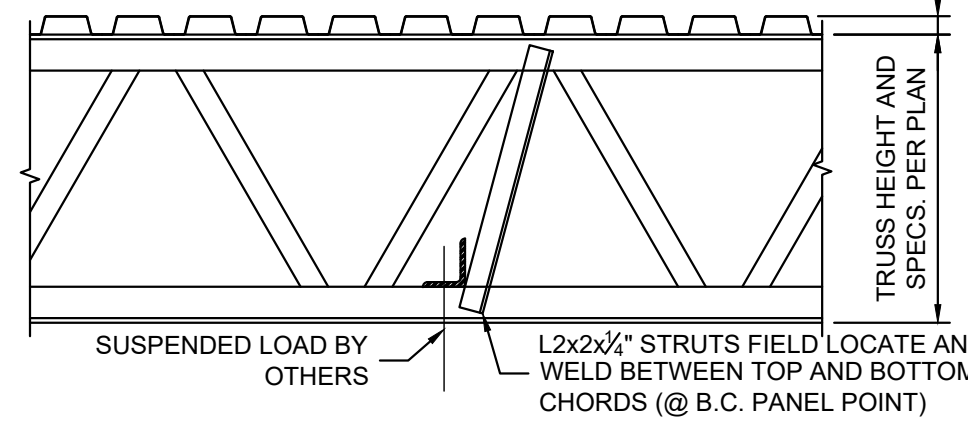
1 SECTION
Scale: 3/4" = 1'-0"



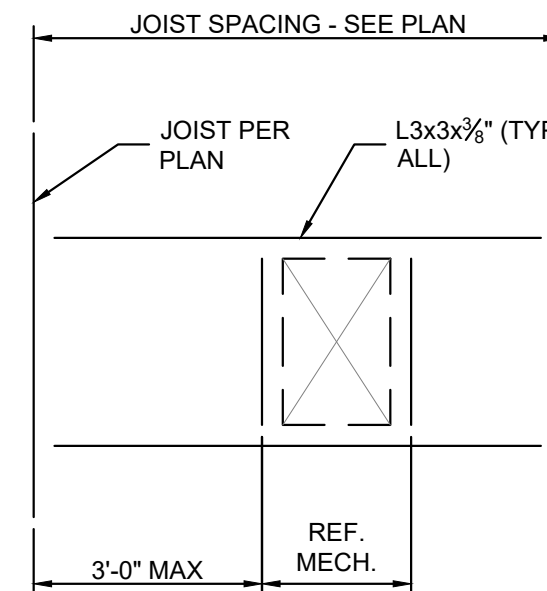
6 SECTION
Scale: N.T.S.



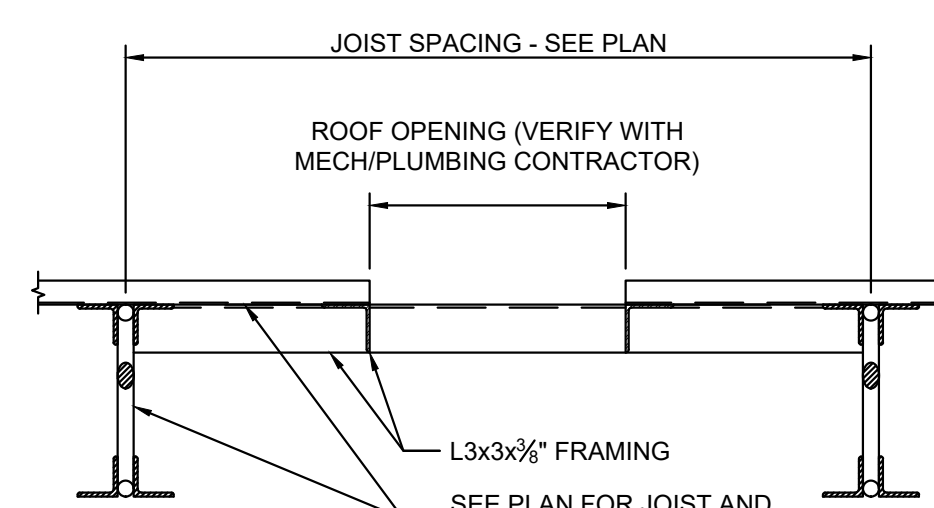
NOTES:
1. VERIFY ALL LOADS IF DIFFERENT THAN POSTED LOADS W/ ENGINEER PRIOR TO INSTALLATION
2. REINFORCE TOP CHORDS @ CONCENTRATED LOADS BETWEEN PANEL POINTS.
3. REINFORCEMENT REQUIRED AT ALL SUSPENDED BETWEEN PANEL POINTS AND AS NOTED ON PLAN.



2 SECTION
Scale: N.T.S.

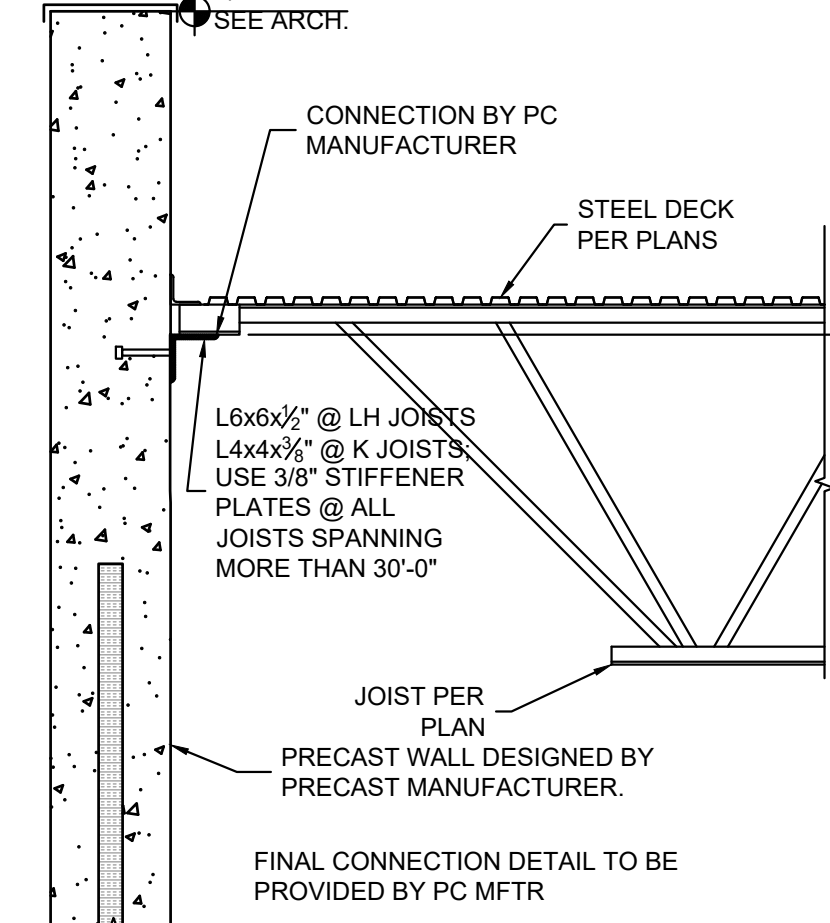


3 DETAIL
Scale: N.T.S.

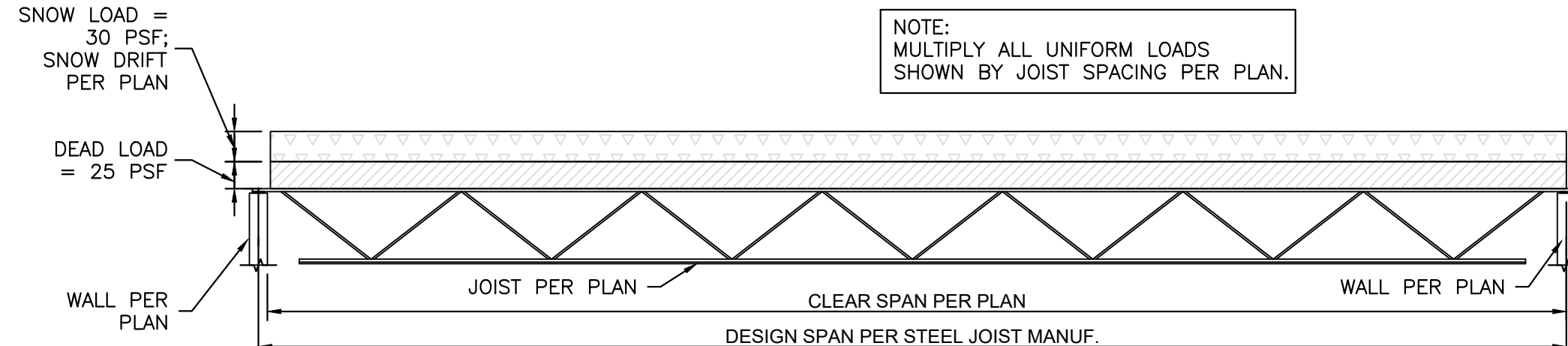


G.C. TO VERIFY SIZE, SHAPE AND LOCATION OF ALL ROOF OPENINGS WITH APPROPRIATE TRADES PROVIDING TYPICAL FRAME AT ALL OPENINGS:
1. LARGER THAN 10" DIAMETER/SQUARE
OR
2. SUPPORTING IN EXCESS OF 60 LBS. OF EQUIPMENT LOADS

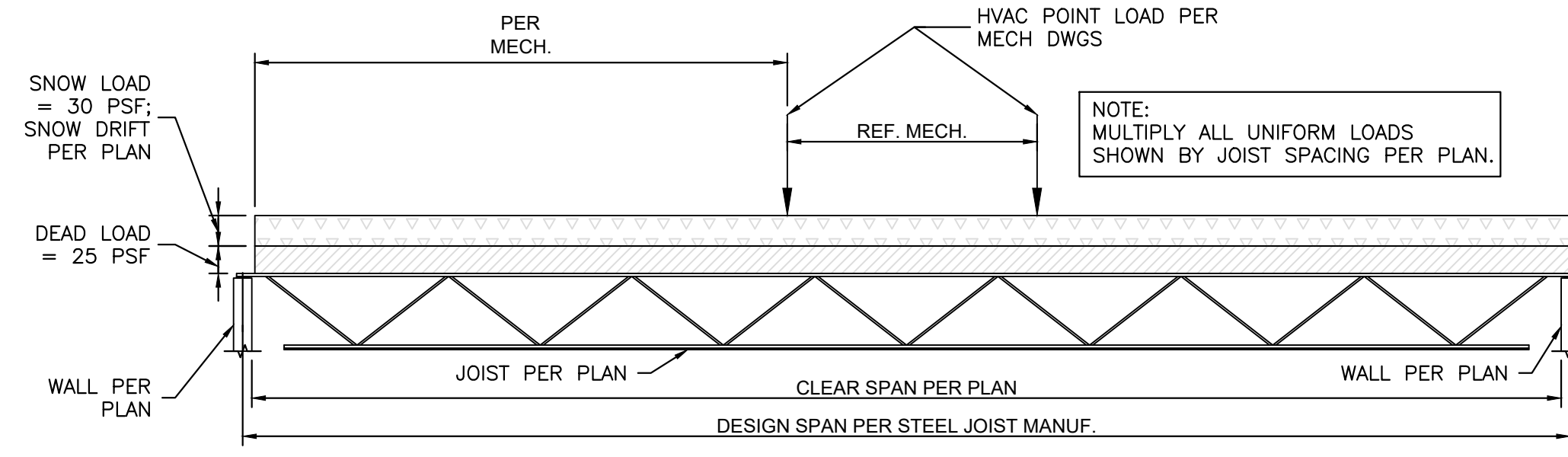
4 SECTION
Scale: N.T.S.



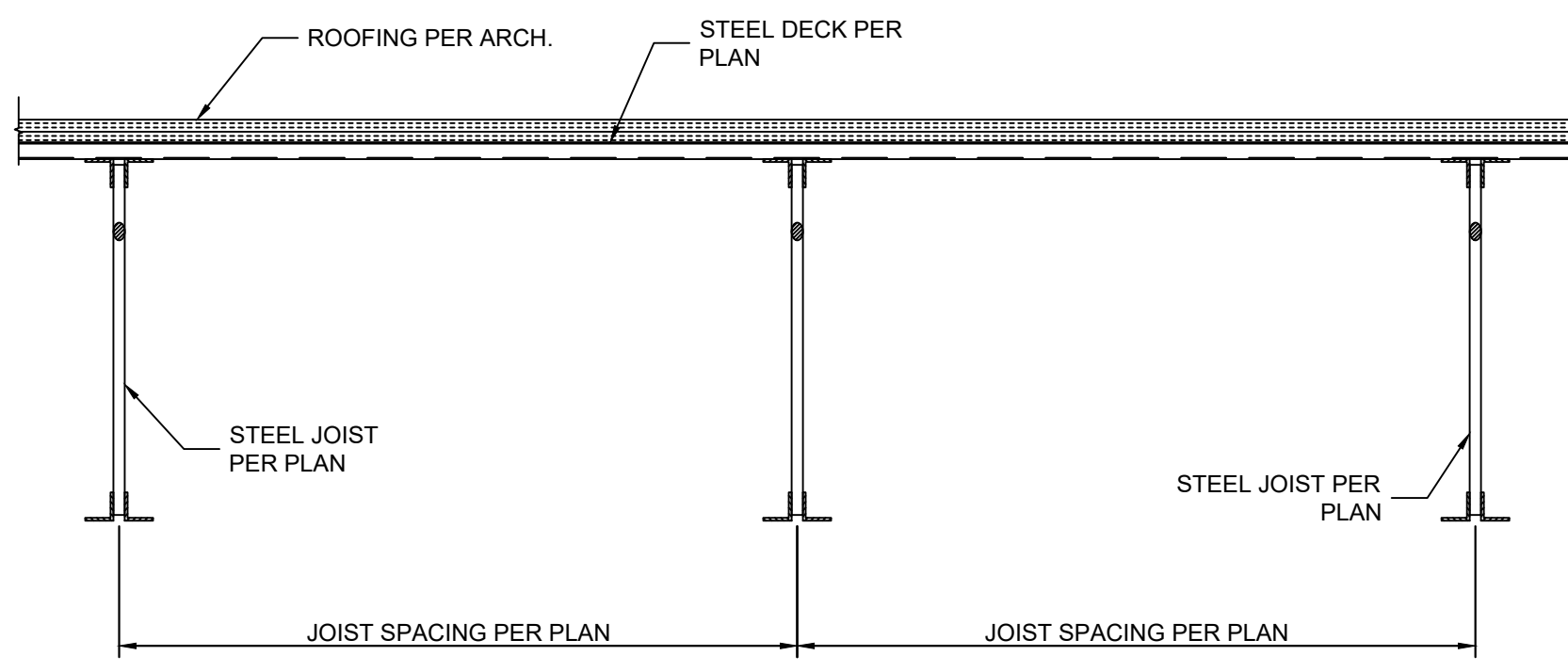
5 SECTION
Scale: 3/4" = 1'-0"



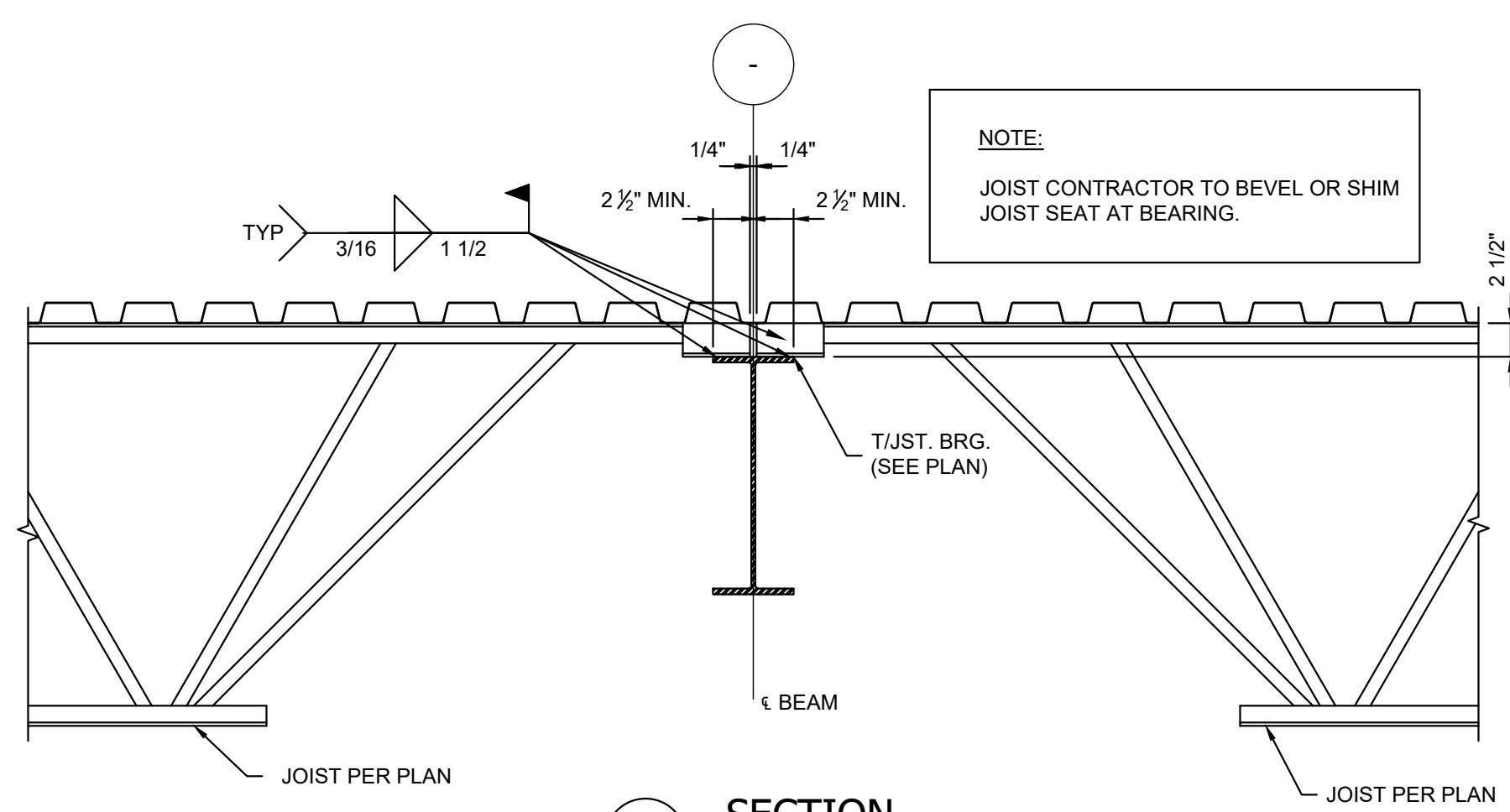
7 JOIST LOADING DIAGRAM - ROOF
Scale: N.T.S.



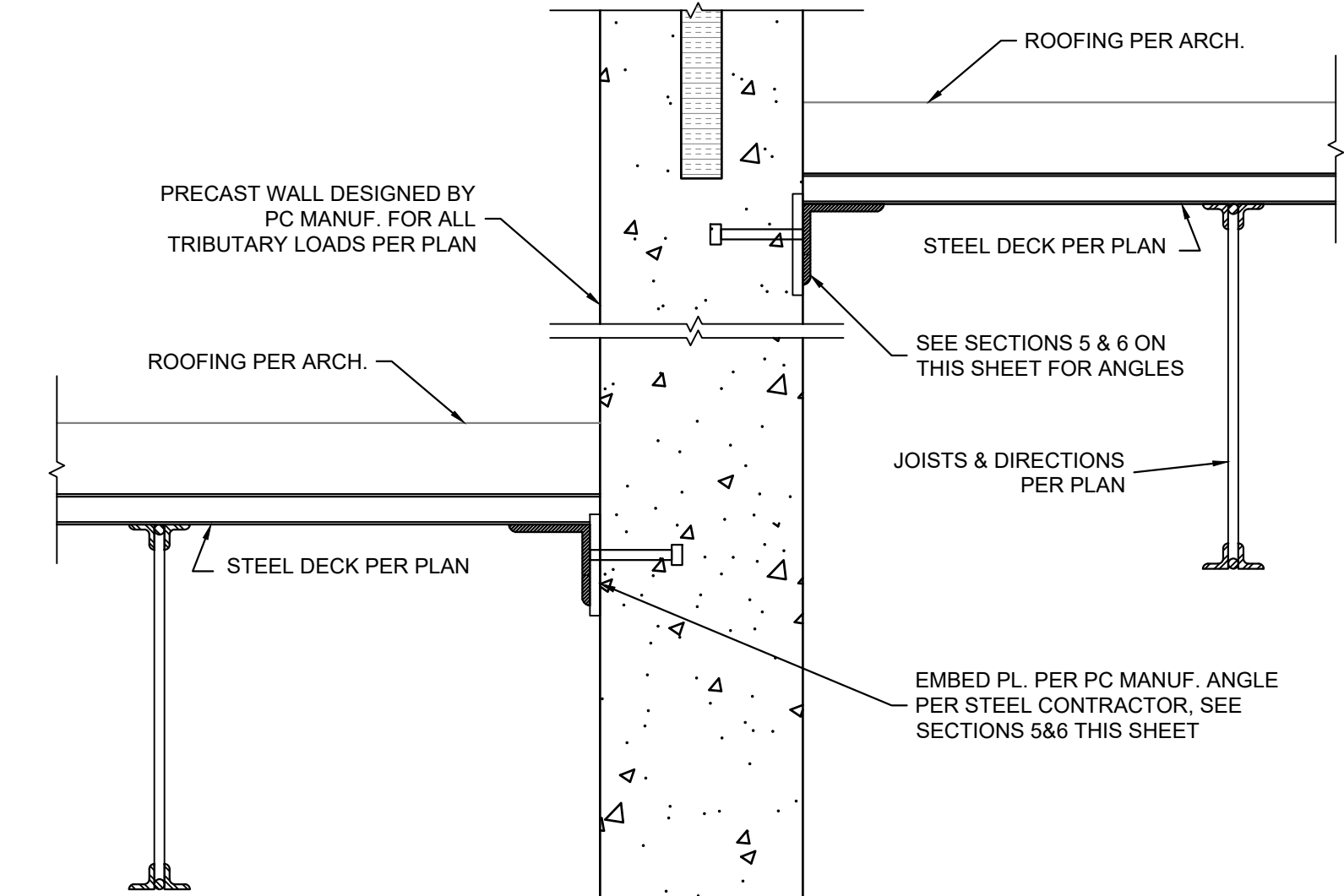
8 JOIST LOADING DIAGRAM @ RTU
Scale: N.T.S.



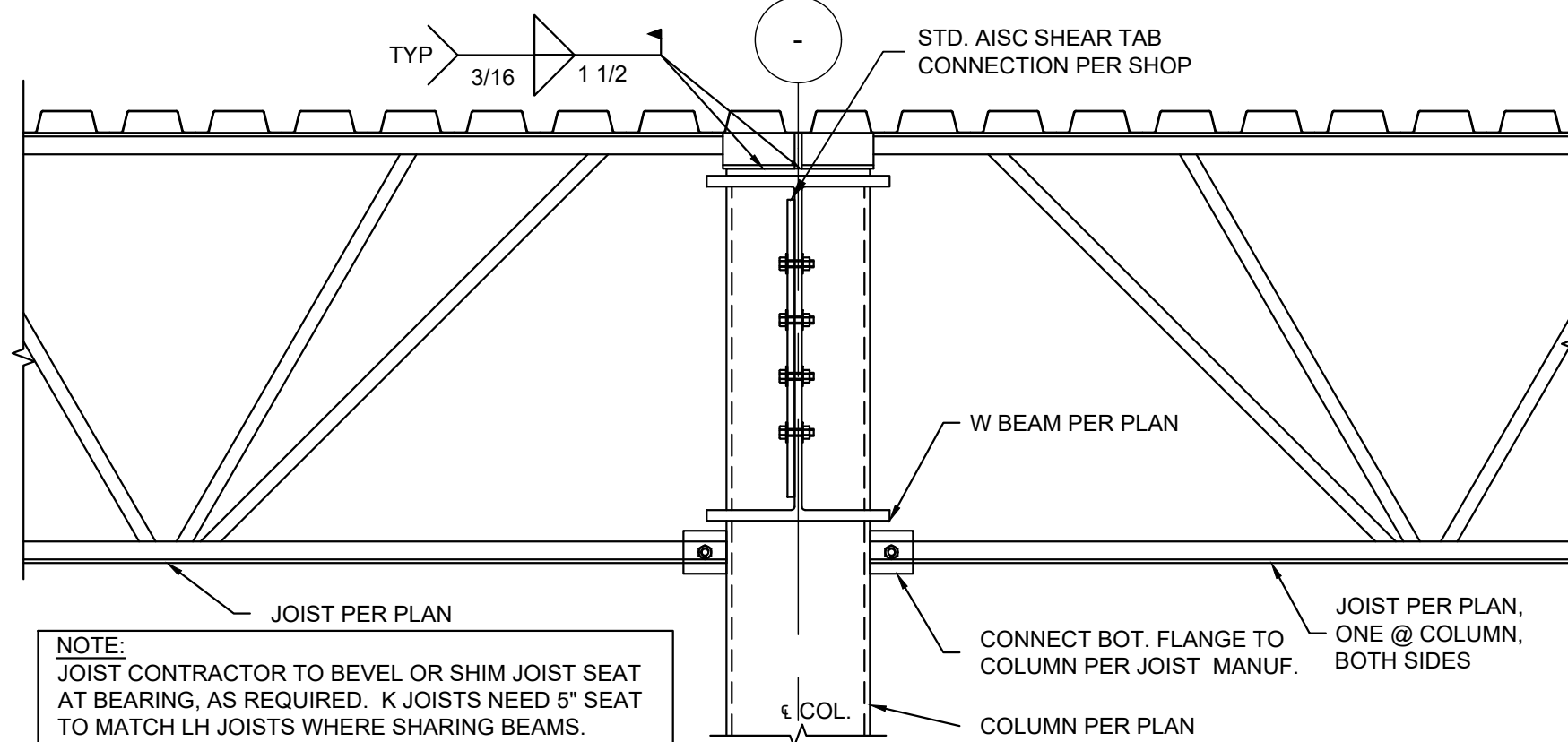
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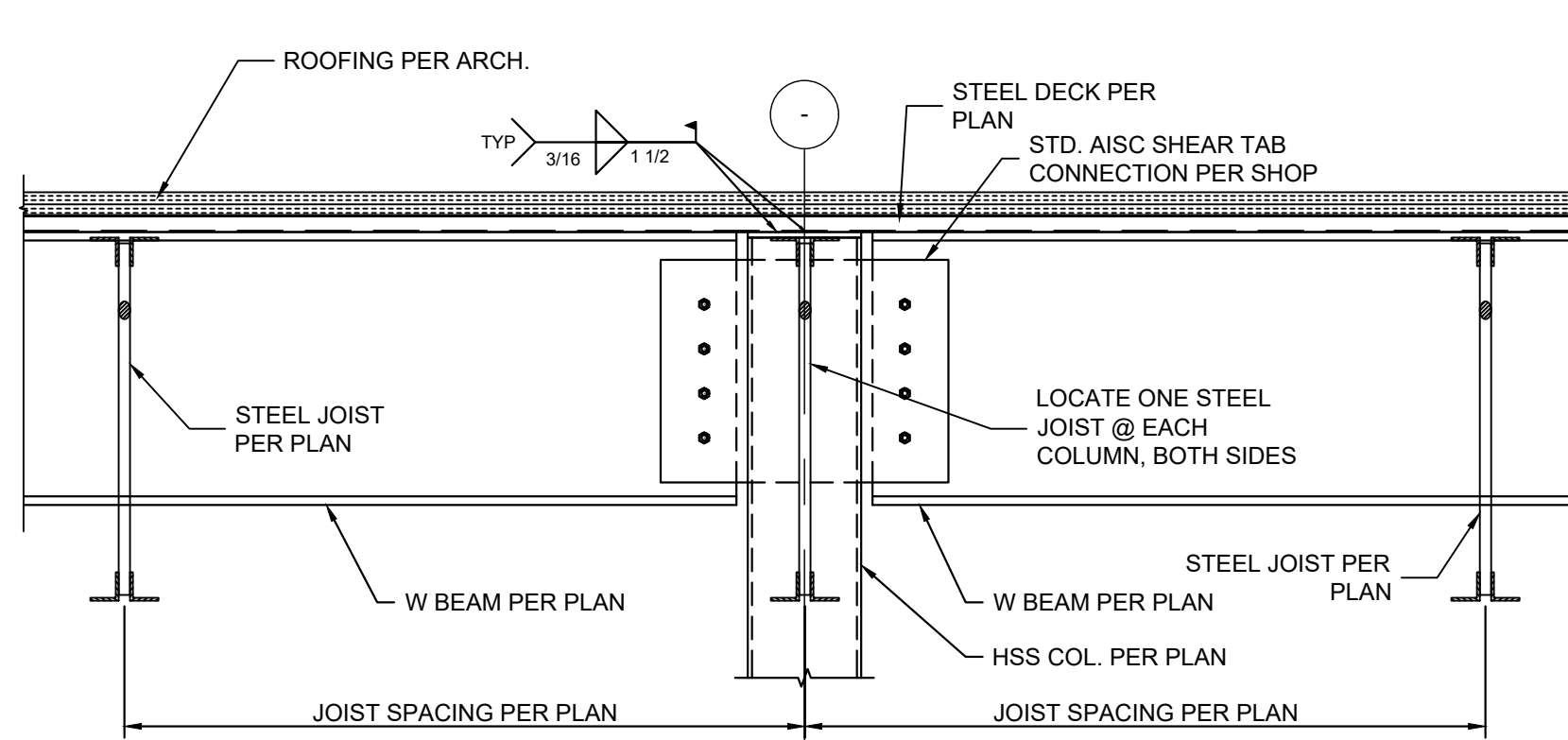
10 SECTION
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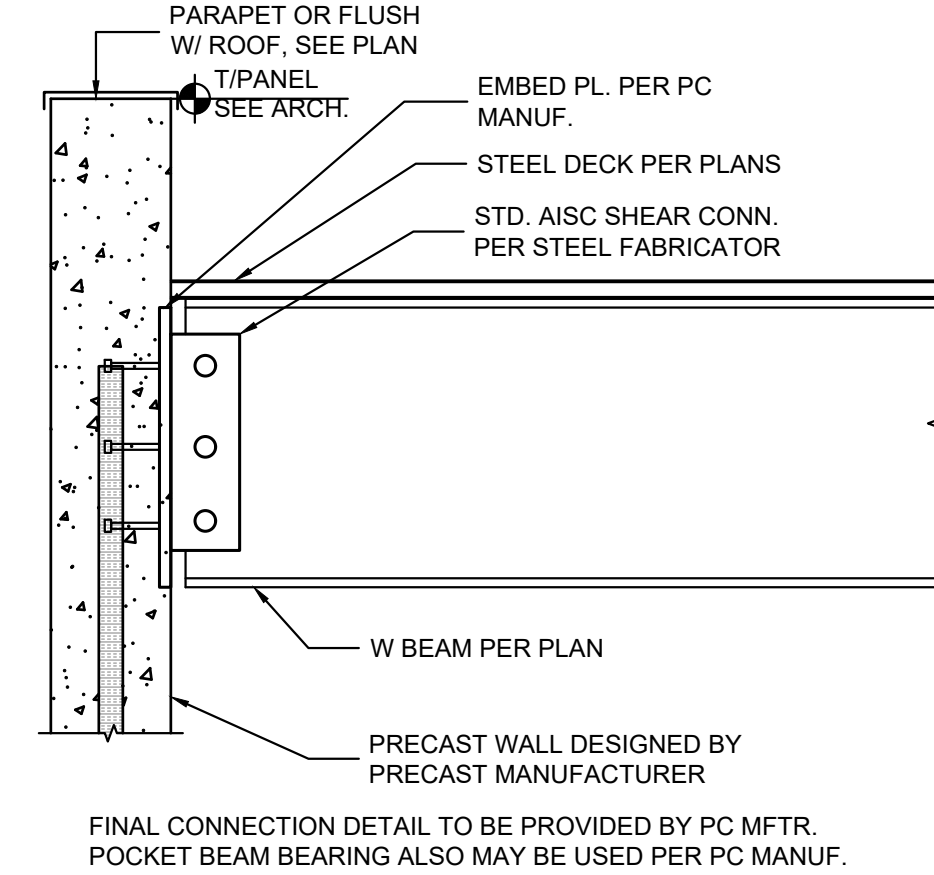
11 SECTION
Scale: N.T.S.



12 SECTION
Scale: N.T.S.



13 SECTION
Scale: N.T.S.

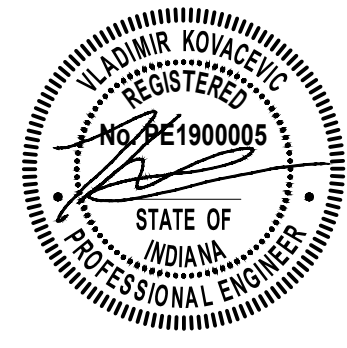


14 SECTION
Scale: N.T.S.

SHEET REVISIONS:

No.	DATE	NATURE OF REVISION
-	5-13-22	ISSUED FOR PERMIT

STATEMENT OF COMPLIANCE
I have prepared, or caused to be prepared under my supervision, the attached plans and specifications and state that, to the best of my knowledge and belief and to the extent of my contractual obligation, they are in compliance with the applicable Codes and Ordinances.



Signature Date: 5-13-2022
License Expires: 07-31-2022

PROJECT NAME:

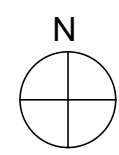
**Public Works Building
Lake County
Lowell, IN**

PROJECT No.: **21024**

ISSUED FOR PERMIT

SHEET NAME:
**SECTIONS AND DETAILS
(CONT.)**

SHEET No.:



CONTRACTOR/MANUFACTURE TO PROVIDE PIPING
LAYOUT & PERFORMANCE FOR ALL RADIANT
ZONES AS NOTED. SHOP DWG TO BE PROVIDED
TO ENGINEER,OWNER & ARCH FOR REVIEW &
APPROVAL. ALL MANIFOLDS SHOWN FOR CORD.
PURPOSE CONFIRM QTY. BASED ON ACTUAL
LAYOUT.

M-2

GAS MONITORING AND CONTROL SYSTEM

MGC2 SERIES CONTROL PANEL & AT-1130/LC-1112 GAS TRANSMITTERS

PART 1 – GENERAL

- 1.1 SCOPE: WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A COMPLETE GAS MONITORING AND CONTROL SYSTEM INCLUDING ALL RELATED ACCESSORIES.

1.2 SUBMITTALS: FURNISH SUBMITTAL DATA FOR THE FOLLOWING MATERIALS AND EQUIPMENT

1. GAS MONITORING AND CONTROL SYSTEM.
2. ALL RELATED DEVICES.

PART 2 – PRODUCT SPECIFICATIONS

2.1 CONTROL PANEL

- A. THE CONTROL PANEL SHALL PROVIDE CONTINUOUS MONITORING OF THE DESIGNATED GAS LEVELS IN THE ASSIGNED AREA AND CONTROL THE VENTILATION SYSTEM VIA DIGITAL OUTPUTS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- B. THE CONTROL PANEL SHALL HAVE THE ABILITY TO INTERFACE VIA ANALOG OR DIGITAL OUTPUTS TO ANY COMPATIBLE ELECTRONIC ANALOG CONTROL, DDC/PLC CONTROL OR AUTOMATION SYSTEM. THE CONTROL PANEL SHALL HAVE THE CAPABILITY TO ACCEPT ANY COMBINATION OF 4–20 MA TRANSMITTERS PROVIDED BY INTEC CONTROLS (A RELEVANT SOLUTIONS BRAND).
- C. THE CONTROL PANEL SHALL ACCEPT UP TO 12 ANALOG INPUTS WITH FOUR (4) DIGITAL INPUTS. EACH ANALOG INPUT CAN HAVE FIVE (5) TRIP/SET-POINTS.
- D. THERE SHALL BE FIVE (5) RELAY OUTPUTS FOR EVERY FOUR (4) ANALOG INPUTS AND TWO (2) INDEPENDENT 4–20 MA OUTPUTS AVAILABLE. THE OUTPUTS SHALL BE PROGRAMMABLE IN THE FIELD. EACH OF THE SENSING POINTS IS READILY ADDRESSABLE TO EITHER OF THE (2) ANALOG OUTPUTS BY SELECTING THE MINIMUM, MAXIMUM, OR AVERAGE VALUE.
- E. THE ALARM SHALL BE ACKNOWLEDGED BY AN EXTERNAL MANUAL RESET SWITCH VIA THE DIGITAL INPUT OR THROUGH THE CONTROL PANEL MENU.
- F. THE CONTROL PANEL SHALL HAVE STATUS INDICATOR LED'S LOCATED ON THE FRONT; RED = FAIL, YELLOW = ALARM.
- G. THE CONTROL PANEL SHALL INCLUDE A TWO LINE, BACKLIT LCD DISPLAY OF 16 CHARACTERS, AT 1 DIGIT RESOLUTION.
- H. THE CONTROLLER SHALL BE NRTL PERFORMANCE TESTED AND CERTIFIED TO ANSI/UL 2017.
- I. THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES MGC2–12–1500US ANALOG CONTROLLER, BY INTEC CONTROLS (A RELEVANT SOLUTIONS BRAND); PHONE (858) 761–9319; FAX (858) 578–4633.

2.2 CARBON MONOXIDE (CO) SENSOR/TRANSMITTER

- A. THE CARBON MONOXIDE SENSOR/TRANSMITTER SHALL PROVIDE MONITORING OF THE CARBON MONOXIDE LEVELS IN THE PARKING GARAGE AND CONTROL THE VENTILATION SYSTEM VIA THE CONTROL PANEL IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- B. THE SENSORS SHALL BE ELECTROCHEMICAL TYPE. THE SENSOR/TRANSMITTER SHALL HAVE PLUG-IN TECHNOLOGY FOR EASE OF TROUBLESHOOTING AND REPLACEMENT OF BOTH THE ELEMENT AND THE PRINTED CIRCUIT BOARD. SOLID-STATE SENSING DEVICES SHALL NOT BE ACCEPTABLE.
- THE SENSOR RANGE SHALL BE 0-250 PPM CARBON MONOXIDE. A MICROPROCESSOR-BASED TRANSMITTER SHALL GENERATE A PROPORTIONAL 4-20 MA OUTPUT SIGNAL. THE WIRING BETWEEN THE TRANSMITTER AND THE CONTROL PANEL SHALL BE A 2-WIRE, TWISTED AND SHIELDED, 4-20MA, 17-28 VDC CONFIGURATION. EACH SENSOR/TRANSMITTER SHALL COVER BETWEEN 5,000 AND 10,000 SQUARE FEET OF THE GARAGE FLOOR AND PLACEMENT SHALL BE APPLIED STRATEGICALLY AND APPROPRIATELY PER FLOOR PLAN REQUIREMENT.
- C. THE SENSOR SHALL HAVE STABILITY AND RESOLUTION OF ± 3 PPM OF READING, REPEATABILITY OF $\pm 3\%$ OF READING, AND A RESPONSE TIME OF 50 SECONDS TO A 90% STEP CHANGE. THE LONG-TERM OUTPUT DRIFT SHALL NOT EXCEED MORE THAN 0.4% OF SIGNAL LOSS PER MONTH. THE PERMISSIBLE AMBIENT WORKING TEMPERATURE SHALL BE 14F TO 122F (-10C TO 50C) AND PERMISSIBLE AMBIENT HUMIDITY SHALL BE 15 TO 95% RH, NON-CONDENSING. THE SENSOR SHALL REQUIRE NO ROUTINE MAINTENANCE OTHER THAN PERIODIC CALIBRATION. ITS LIFE EXPECTANCY SHALL BE 5 YEARS OF NORMAL SERVICE. THE MANUFACTURER SHALL PROVIDE A TWO TWO YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.
- D. THE SENSOR/TRANSMITTER PRINTED CIRCUIT BOARD SHALL HAVE THE CAPABILITY OF ADDING UP TO (2) ALARM RELAYS WITH INDIVIDUAL SETPOINTS FOR LOCAL CONTROL OR STATUS INDICATION.
- E. THE SENSOR/TRANSMITTER SHALL BE CONTAINED IN A NEMA 4X METAL ENCLOSURE. THE ENCLOSURE FOR THE SENSOR/TRANSMITTER SHALL BE INSTALLED ON WALLS OR COLUMNS APPROXIMATELY 5 FEET ABOVE THE FLOOR.
- F. THE OUTPUT SIGNAL FROM THE SENSOR/TRANSMITTER SHALL BE A DIRECT INPUT TO THE CONTROL PANEL. ALL SEQUENCES OF FAN AND ALARM CONTROL, INCLUDING TIME DELAY FUNCTIONS TO PREVENT HUNTING OF VENTILATION FANS SHALL BE A PART OF THE CONTROL PANEL.
- G. IF THE LEVEL OF CARBON MONOXIDE REACHES 25 PPM IN THE AREA OF DETECTION, THE LOW ALARM SHALL ACTIVATE AND THE EXHAUST FANS WILL BE STARTED. IF THE LEVEL OF CO INCREASES TO 100 PPM, THE HIGH ALARM SHALL ACTIVATE.
- H. THE SENSOR/TRANSMITTER SHALL BE NRTL PERFORMANCE TESTED AND CERTIFIED TO ANSI/UL 2075.

2.3 NITROGEN DIOXIDE (NO₂) SENSOR/TRANSMITTER

- A. THE NITROGEN DIOXIDE SENSOR/TRANSMITTER SHALL PROVIDE MONITORING OF THE NITROGEN DIOXIDE LEVELS PRESENT IN DIESEL EXHAUST IN THE PARKING GARAGE AND CONTROL THE VENTILATION SYSTEM VIA THE CONTROL PANEL IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- B. THE SENSORS SHALL BE ELECTROCHEMICAL TYPE. THE SENSOR/TRANSMITTER SHALL HAVE PLUG-IN TECHNOLOGY FOR EASE OF TROUBLESHOOTING AND REPLACEMENT OF BOTH THE SENSING ELEMENT AND THE PRINTED CIRCUIT BOARD. SOLID-STATE SENSING DEVICES SHALL NOT BE ACCEPTABLE.
- C. THE SENSOR RANGE SHALL BE 0.10 PPM NITROGEN DIOXIDE. A MICRO-PROCESSOR-BASED TRANSMITTER SHALL GENERATE A POLARITY PROTECTED, PROPORTIONAL 4-20 MA OUTPUT SIGNAL. THE WIRING BETWEEN THE TRANSMITTER AND THE CONTROL PANEL SHALL BE A 2-WIRE, TWISTED AND SHIELDED, 4-20MA, 17-28 VDC CONFIGURATION. EACH SENSOR/TRANSMITTER SHALL COVER BETWEEN 4,000 AND 6,000 SQUARE FEET OF THE GARAGE FLOOR AND PLACEMENT SHALL BE APPLIED STRATEGICALLY AND APPROPRIATELY PER FLOOR PLAN REQUIREMENT.
- D. THE SENSOR SHALL HAVE AN ACCURACY AND RESOLUTION OF ± 0.1 PPM OF READING, REPEATABILITY OF $\pm 2\%$ OF READING, AND A RESPONSE TIME OF LESS THAN 40 SECONDS TO A 90% STEP CHANGE. THE SENSOR DRIFT SHALL NOT EXCEED MORE THAN 2% SIGNAL LOSS PER MONTH. THE PERMISSIBLE AMBIENT WORKING TEMPERATURE SHALL BE 14F TO 104F (-20C TO 40C) AND THE PERMISSIBLE AMBIENT HUMIDITY SHALL BE 15 TO 95% RH, NON-CONDENSING. THE SENSOR SHALL REQUIRE NO ROUTINE MAINTENANCE OTHER THAN PERIODIC CALIBRATION. ITS LIFE EXPECTANCY SHALL BE 2 YEARS OF NORMAL SERVICE. THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.
- E. THE SENSOR/TRANSMITTER SHALL BE CONTAINED IN A NEMA 4X ENCLOSURE. THE ENCLOSURE WITH THE SENSOR/TRANSMITTER SHALL BE INSTALLED ON WALLS OR COLUMNS APPROXIMATELY 1.5 FT. ABOVE THE FLOOR.
- F. THE SENSOR/TRANSMITTER SHALL HAVE THE CAPABILITY OF ADDING UP TO (2) RELAYS AS A SEPARATE COMPONENT TO THE PRINTED CIRCUIT BOARD OF THE SENSOR.
- G. THE OUTPUT SIGNAL FROM THE SENSOR/TRANSMITTER SHALL BE A DIRECT INPUT INTO THE DIGITAL CONTROL BUILDING AUTOMATION SYSTEM. ALL SEQUENCES OF FAN AND ALARM CONTROL, INCLUDING TIME DELAY FUNCTIONS TO PREVENT HUNTING OF VENTILATION FANS SHALL BE A PART OF THE CONTROL PANEL.
- H. IF THE LEVEL OF NO2 REACHES 2 PPM, THE LOW ALARM SHALL ACTIVATE. IF THE LEVEL OF NO2 INCREASES TO 5 PPM, THE HIGH ALARM SHALL ACTIVATE. THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES AT-1130 NO2 SENSOR/TRANSMITTER, BY INTEC CONTROLS
- 2.4 SUPPLIER: THE CONTRACTOR SHALL SUPPLY THE MCC-SERIES CONTROL PANEL AND ALL ASSOCIATED GAS TRANSMITTERS, BY INTEC CONTROLS
- 2.5 WARRANTY: THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.

PART 3 – EXECUTION

- INSPECTION: GENERAL: EXAMINE AREAS AND CONDITIONS UNDER WHICH GAS MONITORING AND CONTROL SYSTEM SHALL BE INSTALLED. RELATED ITEMS SHALL BE EXAMINED AS WELL.
- 3.2 CONTROL SEQUENCE: THE CONTROLLER SHALL OPERATE ACCORDING TO THE SPECIFICATIONS RECOMMENDED BY THE MANUFACTURER. THE OPERATION SHALL BE AS FOLLOWS:
1. THE CONTROLLER SHALL BE CALIBRATED TO THE DESIRED SET-POINTS BEFORE OPERATION.
 2. THE CONTROLLER SHALL CONTINUOUSLY DETECT THE SURROUNDING AIR FOR ANY TRACES OF THE GAS DETECTED.
 3. WHEN THE FIRST SET-POINT IS REACHED, THE SENSOR SHALL ACTIVATE THE LOW ALARM ON THE CONTROLLER AND THE CORRESPONDING DEVICES, SUCH AS THE EXHAUST FANS, DAMPERS, ETC.
 4. IF THE GAS LEVEL CONTINUES TO INCREASE TO THE SECOND SET-POINT, THE HIGH ALARM SHALL ACTIVATE WITH THE CORRESPONDING DEVICES, SUCH AS THE AUDIO/VISUAL ALARM, ETC.
 5. THE SENSOR SHALL CONTINUE TO TRACE THE SPECIFIED GAS AND WILL NOT DISABLE THE ALARM UNTIL THE GAS LEVEL IS DROPPED A SIGNIFICANT PERCENTAGE BELOW THE ALARM SET-POINTS.
- 3.3 OPERATION AND MAINTENANCE MANUALS: THE OPERATION AND MAINTENANCE MANUALS SHALL CONTAIN ALL INFORMATION NECESSARY FOR THE OPERATION, MAINTENANCE, REPLACEMENT, INSTALLATION, AND PARTS PROCUREMENT FOR THE ENTIRE GAS DETECTION SYSTEM. THIS DOCUMENTATION SHALL INCLUDE SPECIFIC PART NUMBERS.
- 3.4 AS-BUILT DOCUMENTATION: FOLLOWING PROJECT COMPLETION AND TESTING, THE CONTRACTOR WILL SUBMIT AS-BUILT DRAWINGS REFLECTING THE EXACT INSTALLATION OF THE SYSTEM.
- 3.5 CALIBRATION: CALIBRATION SHALL NOT BE NECESSARY TO VERIFY SYSTEM OPERATION. THE USER SHALL VERIFY SIGNAL TRANSMISSION FROM THE SENSOR TO THE CONTROL PANEL BY APPLYING THE APPROPRIATE TEST GAS TO THE CORRESPONDING SENSOR. THE CALIBRATION KIT CAN BE USED FOR SYSTEM VERIFICATION OR SENSOR CALIBRATION WHEN REQUIRED. ONE CALIBRATION KIT SHALL BE PROVIDED BY THE CONTRACTOR SUPPLIED BY INTEC CONTROLS

PERMIT NOTES:

1. EQUIPMENT NOISE LEVEL NOT TO EXCEED 55 DB AT THE LOT LINE.
2. ALL EXPANSION VALVES, DEVICES AND CONNECTIONS SHALL BE REMOVED FROM THE AIRSTREAM OF ALL MECHANICAL EQUIPMENT AS PER LOCAL CODES.
3. THE MECHANICAL CONTRACTOR SHALL GUARANTEE, AS APPLICABLE, THAT THE PLENUM CHAMBER USED FOR RECIRCULATION OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF AIR CONTAMINANTS FROM TRAPS, SOIL STACKS, DOWN SPOUTS, VENTS, EXHAUST DISCHARGES AND OTHER SOURCES WILL BE ENCLOSED SO THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.
4. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A SAFETY RELIEF VALVE DESIGNED TO RELIEVE AND/OR PREVENT THE BUILDUP OF EXCESSIVE REFRIGERANT PRESSURE WITHIN THE DIRECT EXPANSION SYSTEMS. THE PRESSURE RELIEF DEVICE SHALL BE SET AT 400 PSI AND SHALL BE INSTALLED ON THE HIGH PRESSURE SIDE AT THE DISCHARGE OF THE COMPRESSOR AND UPSTREAM OF THE COMPRESSOR SHUTOFF (STOP) VALVE.
5. ALL FRESH AIR INTAKE OPENINGS SHALL BE A MINIMUM OF 15'-0" (CHICAGO) 10'-0" (OUTSIDE CHICAGO) AWAY FROM ANY EXHAUST OR POINT OF CONTAMINATE DISCHARGE.
6. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH "SMACNA" LOW VELOCITY DUCT MANUAL AND "ASHRAE" RECOMMENDATIONS.
7. THE EQUIPMENT IN THE VENTILATING AND HEATING SYSTEM SHALL BE SUFFICIENT TO MAINTAIN 72 DEGREES F WITHIN THE AREA SERVED AT ALL TIMES WHEN 33-1/3 PERCENT OF CODE REQUIRED AIR IS SUPPLIED FROM OUTDOORS AT -10 DEGREES F.
8. VOLUME DAMPERS OF LOCKING TYPE SHALL BE PLACED IN EACH FORCED WARM AIR RUN.

VENTILATION NOTES:

1. CLEARANCES FOR FORCED AIR FURNACES MUST CONFORM TO MANUFACTURERS REQUIREMENTS (OR SHOW CLEARANCES ON THE DRAWINGS).
2. ALL DUCTWORK MUST BE GALVANIZED STEEL OR STAINLESS STEEL., INTAKE MUST BE INSULATED.
3. SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE SHOWN ON ELECTRICAL DRAWING(S).
4. IF THE PROJECT INCLUDES A PLENUM CEILING OR FLOOR: THE CONTRACTOR SHALL GUARANTEE THAT THE PLENUM CHAMBER USED FOR RECIRCULATION OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF AIR CONTAMINATION FROM TRAPS, SOIL STACKS, DOWNSPOUTS, VENTS AND ALL OTHER SOURCES OF CONTAMINATION WILL BE ENCLOSE SUCH THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.

GENERAL COORDINATION NOTES:

- EACH TRADE CONTRACTOR SHALL VISIT CONSTRUCTION SITE PRIOR TO BIDDING, EXAMINE SCOPE AND CONDITIONS OF OTHER CONTRACT WORK, EXAMINE EXISTING CONDITIONS AND ALL INTERFERENCES AND REQUIRED COORDINATION IN ORDER TO INCLUDE EFFECT OF SAID CONDITIONS IN THEIR BID. BID DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE ALL REQUIRED RELOCATIONS, OFFSETS, CHANGE IN ASPECT RATIOS, OR ROUTING CHANGES REQUIRED TO INTEGRATE WORK WITH ALL OTHER TRADES OR CONTRACTS. WORK INSTALLED BEFORE COORDINATING SO AS TO CAUSE INTERFERENCES WITH OTHER TRADES SHALL BE REMOVED AND REWORKED WITHOUT COST TO OWNER. COST OF PROVIDING SUCH RELOCATIONS, OFFSETS, SIZE, CHANGES, REROUTING, ETC. SHALL BE INCLUDED IN BID. CODE CONFORMING SCALED (1/4") COORDINATED DRAWINGS SHALL BE PREPARED BY EACH TRADE TO FACILITATE AND VERIFY FIT AND CONGURANCE OF THEIR INSTALLATION WITH OTHER TRADES.
- WHERE ADDITIONAL DETAILS, DIAGRAMS, EQUIPMENT DATA, AND ISOMETRICS ARE REQUIRED BY BUILDING DEPARTMENT OR CODE AUTHORITIES FOR PERMIT OR APPROVAL, CONTRACTOR SHALL PROVIDE SAME AT NO ADDITIONAL COST.
- BUILDING PLANS SHOWN ARE COMPILED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, THE INFORMATION SHOWN ON THESE PLANS IS SCHEMATIC AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPER DIMENSIONS, SIZES, SYSTEM VOLTAGES, QUANTITIES AND EXTENT OF WORK.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, STRUCTURAL, PLUMBING, FIRE PROTECTION, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COORDINATION AND EXTENT OF THE WORK OF THE VARIOUS TRADES AND IMPACT ON THEIR WORK.
- WITH THE APPROVAL OF THE ARCHITECT AND WITHOUT ADDITIONAL COST TO THE OWNER, MAKE MODIFICATIONS IN THE WORK, INCLUDING REROUTING AS REQUIRED BY INTERFERENCE WITH STRUCTURAL, GENERAL AND WORK OF OTHER TRADES FOR PROPER EXECUTION OF THE WORK.
- REFER TO THE ARCHITECTURAL DRAWINGS, FIELD CONDITIONS AND DETAILS FOR EXACT LOCATION OF PARTITIONS.
- CUTTING AND PATCHING FOR THEIR WORK SHALL BE PERFORMED BY EACH TRADE CONTRACTOR UNLESS NOTED OTHERWISE.

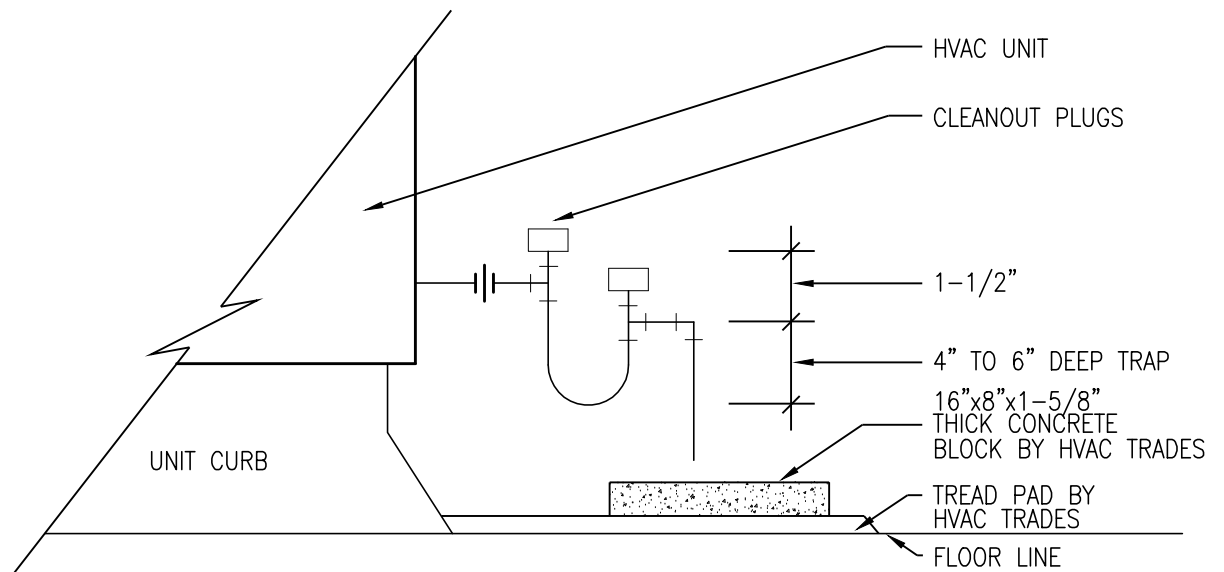
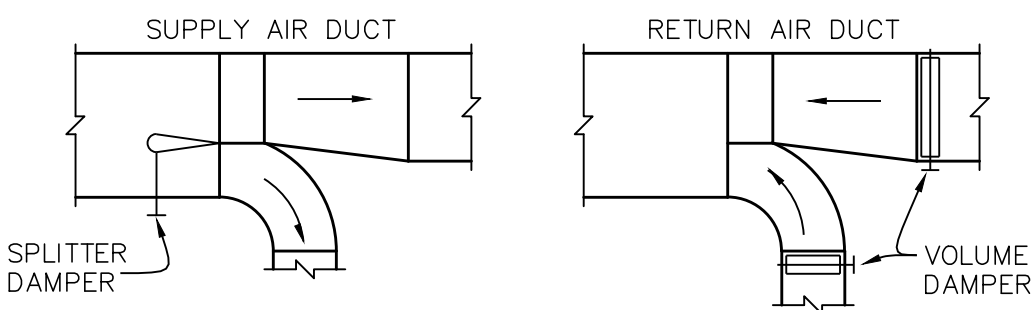
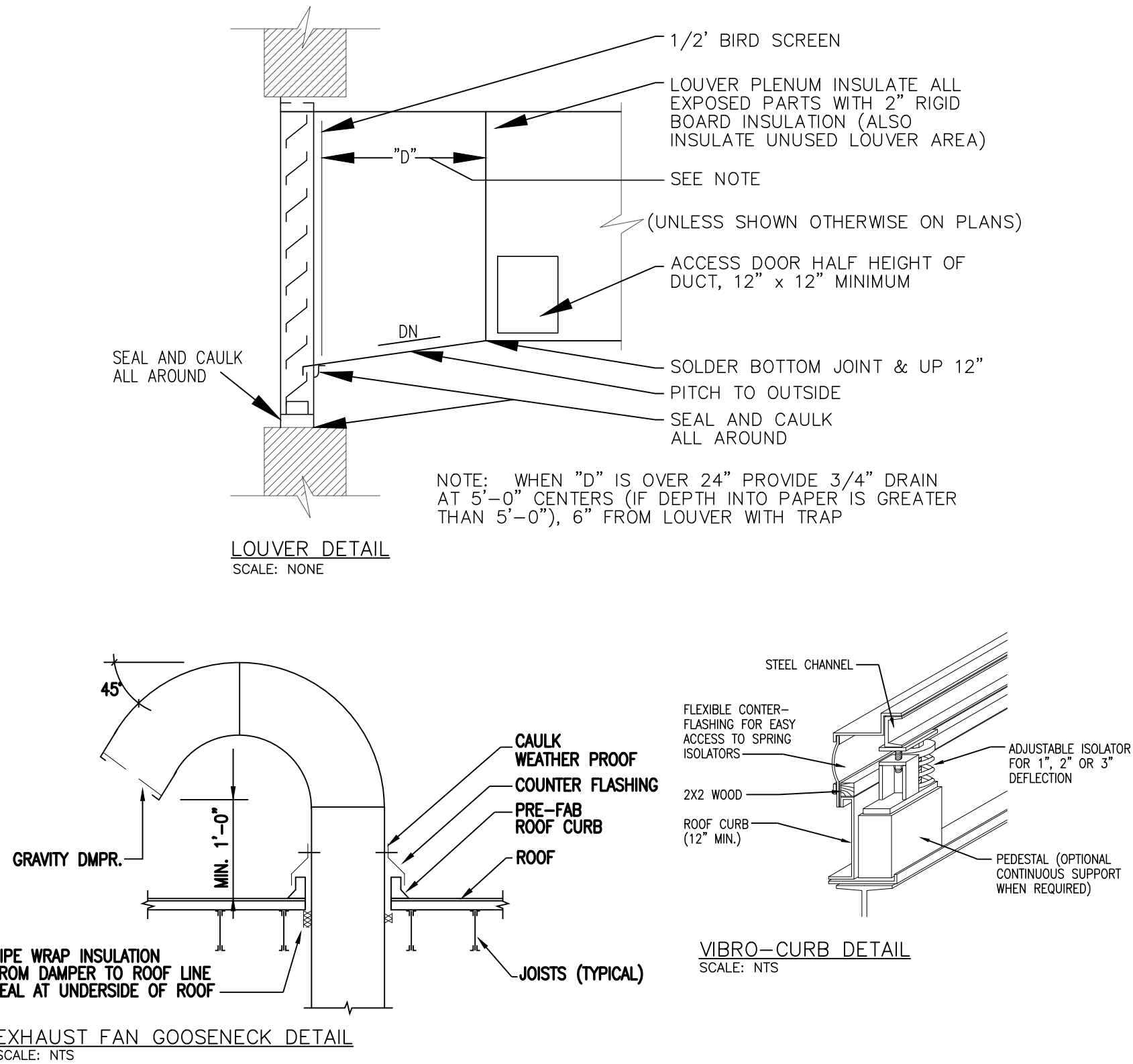
GENERAL MECHANICAL NOTES:

- ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH BUILDING STANDARDS AND ALL APPLICABLE CODES.
- MEDIUM/LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS.
- PROVIDE MANUAL DAMPER ON ALL LOW PRESSURE SUPPLY BRANCH TAKE-OFF DUCTWORK.
- ALL DUCT SIZES SHOWN SHALL BE CLEAR INSIDE DIMENSIONS.
- DIFFUSERS, REGISTERS ARE AS SCHEDULED IN THE DRAWING. CONTRACTOR TO VERIFY AND COORDINATE WITH ARCHITECT TYPE OF CEILING TO DETERMINE FRAME TYPE.
- BLANK-OFF WITH BLACK PAINTED PANEL WHERE SHOWN. DO NOT PAINT EXPOSED DUCTS OR REGISTERS.
- PROVIDE UL APPROVED FIRE DAMPERS. PROVIDE UL APPROVED FIRE DAMPERS IN ALL DUCT PENETRATIONS THRU FIRE-RATED ASSEMBLIES WHETHER INDICATED OR NOT.
- FLEXIBLE DUCTWORK: NOT TO BE USED
- PROVIDE LINING ON ALL SUPPLY AND RETURN AIR DUCTWORK AT A MIN. OF 15" - 0" FROM THE HEAT PUMPS/FURNACES.
1. INSULATE ALL DUCTWORK LOCATED IN UNCONDITIONED SPACES. PER IECC C403.2.9
INSULATE HVAC DUCTWORK AS FOLLOWS:
- UNLESS INDICATED OTHERWISE, NEW HVAC SUPPLY AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED.
 - INSULATE COLD ROOM SUPPLY AND EXHAUST DUCTS.
 - IF DUCTS ARE INTERNALLY INSULATED, THEY ARE NOT EXTERNALLY INSULATED UNLESS SPECIFICALLY DIRECTED.
 - TRANSFER AND EXHAUST DUCTS ARE INTERNALLY INSULATED ONLY IF SPECIFICALLY DIRECTED.
 - INSTALL AN INSULATION JACKET ON EXTERNALLY-INSULATED HVAC DUCTWORK LOCATED OUTDOORS; AND INDOORS EXCEPT IN MECHANICAL ROOMS AND ABOVE CEILINGS.
 - INSULATE OUTSIDE AIR INTAKE DUCTS IF LOCATED IN NON-MECHANICAL ROOM INDOORS SPACE.
2. ALL LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS AND CONNECTIONS IN METALLIC AND NONMETALLIC DUCTS SHALL BE CONSTRUCTED AS SPECIFIED IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS—METAL AND FLEXIBLE AND NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS. ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS, LIQUID SEALANTS OR TAPES. CLOSURE SYSTEMS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED "181A-P" FOR PRESSURE-SENSITIVE TAPE, "181A-M" FOR MASTIC OR "181A-H" FOR HEAT-SENSITIVE TAPE. CLOSURE SYSTEMS USED TO SEAL FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181B-F" FOR PRESSURE-SENSITIVE TAPE OR "181B-M" FOR MASTIC. JOINT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. MECHANICAL FASTENERS FOR USE WITH FLEXIBLE NONMETALLIC AIR DUCTS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181B-C." CLOSURE SYSTEMS USED TO SEAL METAL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. UNLISTED DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY DUCT.
- EXCEPTION: CONTINUOUSLY WELDED AND LOCKING-TYPE LONGITUDINAL JOINTS AND SEAMS IN DUCTS OPERATING AT STATIC PRESSURES LESS THAN 2 INCHES OF WATER COLUMN (500 PA) PRESSURE CLASSIFICATION SHALL NOT REQUIRE ADDITIONAL CLOSURE SYSTEMS.
3. DUCTS SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 10 FEET AND SHALL BE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS—METAL AND FLEXIBLE. FLEXIBLE AND OTHER FACTORY-MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
4. ALL EQUIPMENT AND APPLIANCES, INCLUDING THE AIR CONDITIONER, WATER HEATER AND FURNACE, SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE PROVIDED ON SITE AT THE TIME OF INSPECTION.
5. ALL SYSTEMS >4.5 TONS REQUIRE ECONOMIZER FAULT DETECTION AND DIAGNOSIS. PER IECC C403.2.4.7
6. INSULATE ALL PIPING PER TABLE IECC C403.2.1
7. SYSTEM ADJUST AND BALANCE PROVIDE TEST AND BALANCE REPORT PER IECC C408.2.5.3
8. PROVIDE DRAIN PAN FOR ALL UNITS THAT MAY CAUSE DAMAGE TO BLDG COMPONENTS AS A RESULT OF OVERFLOW FROM CONDENSATE REMOVAL (COOLING COIL OR FUEL BURNING EQUIP.). EXCEPTION IF THE APPLIANCE AUTOMATICALLY SHUT DOWN IN EVENT OF STOPPAGE IN CONDENSATE DRAINAGE SYSTEM.

Gas Piping/Tubing Material Matrix(Based on IFGC 403)			
Material	Permitted	Not Permitted	Standards to Follow
Wrought-Iron	Schedule 40 or better		ASME B 36.10.10M or ASTM A35 or ASTM A106
Steel	Schedule 40 or better		ASME B 36.10.10M or ASTM A35 or ASTM A106
<p>N.G. DISTRIBUTION PIPING SHALL BE SCHEDULE 40 STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A 53/A 53M WITH 150# MALLEABLE IRON FITTINGS. GAS PIPING LARGER THAN 3" OR MORE THAN 5 PSIG TO BE WELDED TO BE SCHEDULE 40 STEEL PIPING.</p> <p>Note: The gas piping design shall conform to all the requirements of IFGC 403.</p>			

GENERAL GAS PIPING NOTES:

1. ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH BUILDING STANDARDS AND ALL APPLICABLE CODES.
2. FUEL GAS PIPING AND CONTROLS MUST CONFORM TO THE INTERNATIONAL FUEL GAS CODE(IFGC), CHAPTER 4 (WITH MODIFICATIONS AS NOTED IN ARTICLE 14). [18-28-1400]
3. GAS PIPING MUST BE SIZED IN ACCORDANCE WITH IFGC TABLES 402.1(1) THROUGH 402.3(34). [IFGC 402.3]
4. THE MAXIMUM DESIGN OPERATING PRESSURE FOR GAS PIPING SYSTEMS LOCATED INSIDE BUILDINGS SHALL NOT EXCEED 5 PSIG (SOME EXCEPTIONS ARE NOTED). [IFGC 402.5]
5. GAS PIPING MATERIALS MUST CONFORM TO THE GAS PIPING & TUBING MATERIAL MATRIX (LFGC 403 REQUIREMENTS). [IFGC 403]
6. PIPING IN CONCEALED LOCATIONS MUST CONFORM TO THIS IFGC 404.3. [IFGC 404.3]
7. MINIMUM REQUIRED BURIAL DEPTH FOR UNDERGROUND PIPING SYSTEMS MUST CONFORM TO IFGC 404.9. (MINIMUM 12 INCHES BELOW GRADE). [IFGC 404.9]
8. GAS PIPES MUST BE SLOPED AT 1/4 INCH IN EVERY 15 FEET. [IFGC 408.1]
9. GAS PIPING GREATER THAN 2" INSIDE DIAMETER OR CARRYING MORE THAN 5 POUNDS(PSIG) SHALL BE SCHEDULE 40 STANDARD WELD FITTINGS.
10. PIPING METER IDENTIFICATION SHALL BE MARKED WITH AN APPROVED PERMANENT IDENTIFICATION AND BE READILY IDENTIFIABLE.
11. PAINT ALL GAS PIPING THAT IS EXPOSED TO THE ELEMENTS.
12. UNDERGROUND PIPING SHALL BE A MIN OF 18" BELOW GRADE. [IFGC 404.12]



AHU/RTU UNIT CONDENSATE DRAIN DETAIL
SCALE: NTS

N E R I
ARCHITECTS
6400 N. NORTHWEST HWY
SUITE 4
CHICAGO, IL 60631
TEL 847.825.9400

PROJECT #	2133
DATE:	05.06.22



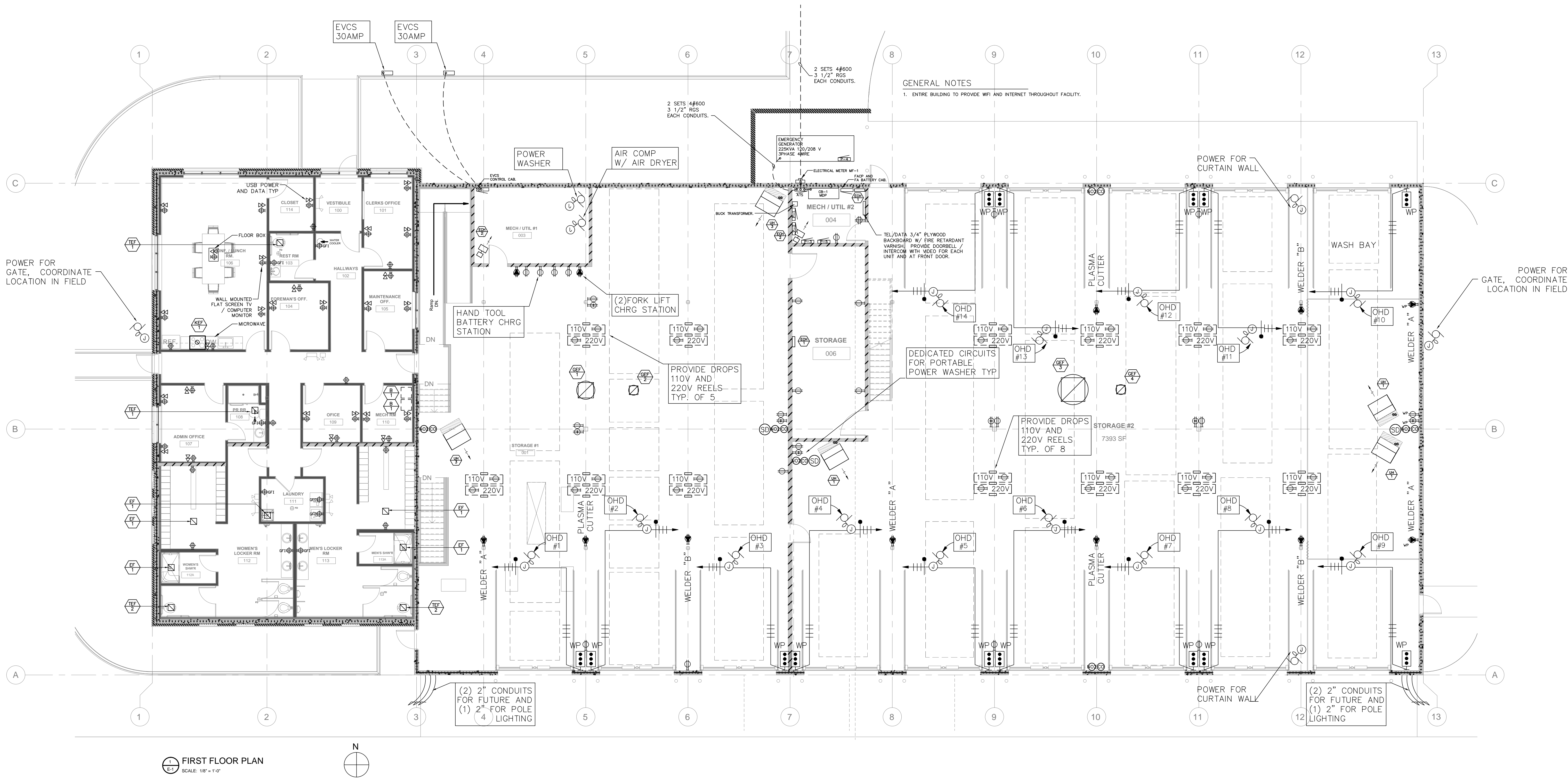
PUBLIC WORKS BUILDING

LOWELL, IN
LAKE COUNTY

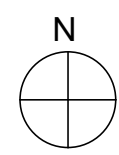
FOR REFERENCE ONLY

	05.06.22	ISSUED FOR PERMIT	
	11.11.21	PROGRESS SET	
		REVISIONS	
DRAWN BY:		SM/GV	
APPROVED BY:		SM/GV	
SCALE:		AS NOTED	
DESCRIPTION:		MECH SCHEDULES, NOTES & DETAILS	
SHEET NO.			

M-4



FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



PROJECT # 2133
DATE: 05.06.22



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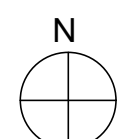
LOWELL, IN
LAKE COUNTY

FOR REFERENCE ONLY

05.06.22	ISSUED FOR PERMIT
11.11.21	PROGRESS SET
▲	REVISIONS
DRAWN BY:	SM/GV
APPROVED BY:	SM/GV
SCALE:	AS NOTED
DESCRIPTION:	FLOOR PLAN(S)

SHEET NO.

E-1

[illegible]



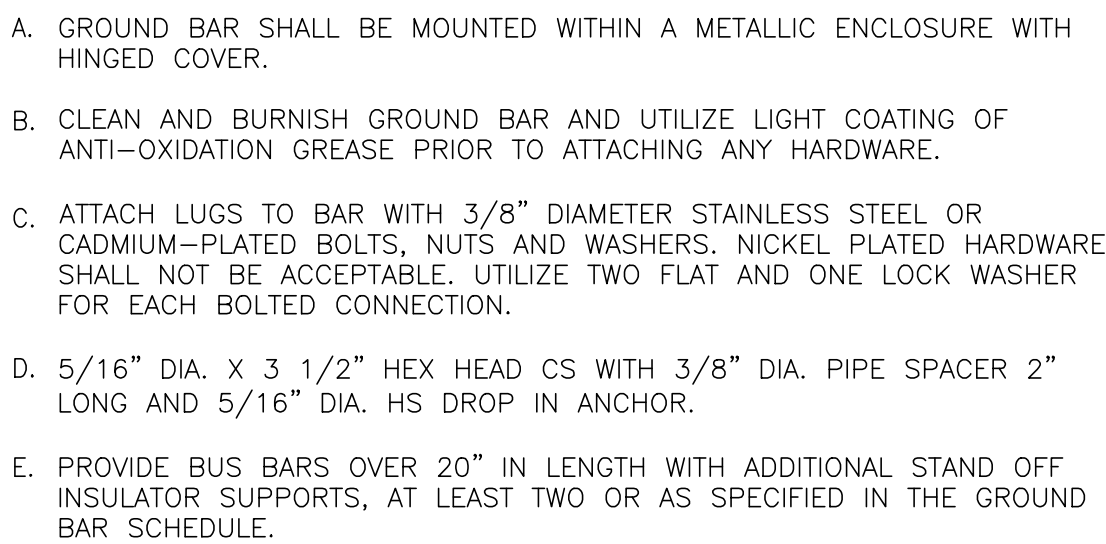
- Provide acuity controls might relay panels with 0-10v dimming and switching for all interior lighting control. Each circuit and room shall have a separate control address. See plans for control device information. Relay panels shall be located in electrical closets. Control wiring shall utilize CAT-5E cabling, connect the panel to a network backbone and system controller enables time based control, remote programming and monitoring from system software, and BMS integration capabilities. All relays shall have a separate local manual override lever and is individually programmable. System shall remotely configurable/upgradable. System shall have a 5 year warranty.

PUBLIC WORKS BUILDING

**LOWELL, IN
LAKE COUNTY**

FOR REFERENCE ONLY

[illegible]



PART NO.	DESCRIPTION
A-6065	WALL MTG. BRKT.
3061-4	INSULATORS
3015-1	5/8-11 X 1 HHCS
3015-8	LOCKWASHERS-5/8"

GROUND BAR SCHEDULE			
TAG	LENGTH (INCHES)	THICKNESS (INCHES)	MOUNTING HEIGHT (IN)
MGB	24"	1/4"	18" A.F.F.



17. ALL BURIED CONNECTIONS SHALL BE EXOTHERMIC WELDS. ALL EXPOSED MECHANICAL AND/OR HIGH COMPRESSION CONNECTIONS SHALL BE TREATED WITH A PROTECTIVE, ANTI-OXIDANT COATING. ALL EXOTHERMIC WELDS TO GALVANIZING SURFACES SHALL BE SPRAYED WITH GALVANIZING PAINT.

1. TRANSFORMER CATALOG NUMBERS ARE FROM HAMMOND POWER SOLUTIONS
2. WIRE BUCK BOOST TRANSFORMERS PER MANUFACTURER'S RECOMMENDATIONS

E-7

LOCATION: STARK ROOM PREP ROOM				208 V		NEUTRAL BUS: STANDARD, COPPER		2/21/2022			
SERVICE: 120/208V-3PH-4W						GROUND BUS: STANDARD, COPPER					
MAIN CIRCUIT BREAKER: 150A MLO						MOUNTING: SURFACE					
MAIN BUS RATING AND TYPE: 150A COPPER						ENCLOSURE: NEMA 1					
INTERRUPT RATING: 22,000 AIC											
DESCRIPTION	CCT. NO.	CIRCUIT BREAKER	CIRCUIT LOAD	CONNECTED LOAD (VA)			CIRCUIT LOAD	CIRCUIT BREAKER	CCT. NO.	DESCRIPTION	
				A	B	C					
M (9) "TEF-1" "EF-1" "TEF-2" NOTE 1	2	20A-1P	500	1700			1200	20A-1P	2	R	RECEPTACLES
M "GEF-2" "GEF-4"	4	20A-1P	150		1350		1200	20A-1P	4	R	RECEPTACLES
M "GEF-1"	6	20A-1P	500			1700	1200	20A-1P	6	R	RECEPTACLES
M "GEF-3"	8	20A-1P	700	1900			1200	20A-1P	8	R	RECEPTACLES
S.P.A.R.E	10	20A-1P			1200		1200	20A-1P	10	R	RECEPTACLES
L LIGHTING	12	20A-1P	1200			2400	1200	20A-1P	12	R	RECEPTACLES
L LIGHTING	14	20A-1P	1200	2400			1200	20A-1P	14	R	RECEPTACLES
L LIGHTING	16	20A-1P	1200		1200			20A-1P	16		S.P.A.R.E
L LIGHTING	18	20A-1P	1200			2400	1200	20A-1P	18	R	RECEPTACLES
L LIGHTING	20	20A-1P	1200	2400			1200	20A-1P	20	R	RECEPTACLES
L LIGHTING	22	20A-1P	1200		2400		1200	20A-1P	22	R	RECEPTACLES
L LIGHTING	24	20A-1P	1200			2400	1200	20A-1P	24	R	RECEPTACLES
L LIGHTING	26	20A-1P	1200	2400			1200	20A-1P	26	R	RECEPTACLES
L LIGHTING	28	20A-1P	1200		1400		200	20A-1P	28	R	RECEPTACLES
L LIGHTING	30	20A-1P	1200			1400	200	20A-1P	30	R	RECEPTACLES
L LIGHTING	32	20A-1P	1200	1250			50	20A-1P	32	R	FIRE ALARM
L LIGHTING	34	20A-1P	200		200			20A-1P	34		S.P.A.R.E
L LIGHTING	36	20A-1P	200			200			36		
L EXTERIOR LIGHTING	38	20A-1P	1200	1200					38		
L EXTERIOR LIGHTING	40	20A-1P	1200		1200				40		
L EXTERIOR LIGHTING	42	20A-1P	1200			1200			42		
				13250	8950	11700					
TOTAL VA PER PHASE											
CONNECTED LOAD				DEMAND FACTOR				DEMAND LOAD			
L LIGHTING				1.00				17.20 KVA			
R RECEPTACLES				1.00				14.85 KVA			
M MOTOR / EQUIP.				1.00				1.85 KVA			
H ELECTRIC HEAT				0.00				0.00 KVA			
TOTAL CONNECTED LOAD:				TOTAL DEMAND LOAD:				33.9 KVA			

			LOCATION:	DARK ROOM PREP ROOM						DATE:	2/21/2022
	SERVICE:	120/208V-3PH-4W		208 V		NEUTRAL BUS:	STANDARD, COPPER				
	MAIN CIRCUIT BREAKER:	100A MLO				GROUND BUS:	STANDARD, COPPER				
	MAIN BUS RATING AND TYPE:	100A COPPER				MOUNTING:	SURFACE				
	INTERRUPT RATING:	22,000 AIC				ENCLOSURE:	NEMA 1				

DESCRIPTION		CCT. NO.	CIRCUIT BREAKER	CIRCUIT LOAD	CONNECTED LOAD (VA)			CIRCUIT LOAD	CIRCUIT BREAKER	CCT. NO.	DESCRIPTION
					A	B	C				
M OVERHEAD DOOR		2	20A-2P	500	1500			1000	20A-2P	2	H "ECH-1" CAB HTR 2KW
M NOTE 1		4		500		1500		1000		4	H 2#12+GRD. 3/4"C
M OVERHEAD DOOR		6	20A-2P	500			1500	1000	20A-2P	6	H "ECH-1" CAB HTR 2KW
M NOTE 1		8		500	1500			1000		8	H 2#10+GRD. 3/4"C
M OVERHEAD DOOR		10	20A-2P	500		1600		1100	20A-3P	10	H "ECH-2" CAB HTR 3.3 KW
M NOTE 1		12		500			1600	1100		12	H 3#10+GRD. 3/4"C
M OVERHEAD DOOR		14	20A-2P	500	1000			1100		14	H
M NOTE 1		16		500		1000		500	20A-2P	16	M OVERHEAD DOOR
M OVERHEAD DOOR		18	20A-2P	500			1000	500		18	M NOTE 1
M NOTE 1		20		500	1000			500	20A-2P	20	M OVERHEAD DOOR
M OVERHEAD DOOR		22	20A-2P	500		1000		500		22	M NOTE 1
M NOTE 1		24		500			1000	500	20A-2P	24	M OVERHEAD DOOR
M OVERHEAD DOOR		26	20A-2P	500	1000			500		26	M NOTE 1
M NOTE 1		28		500		1000		500	20A-2P	28	M OVERHEAD DOOR
SPARE		30	20A-1P				500	500		30	M NOTE 1
SPARE		32	20A-1P		500			500	20A-2P	32	M OVERHEAD DOOR
SPARE		34	20A-1P			500		500		34	M NOTE 1
SPARE		36	20A-1P				500	500	20A-2P	36	M OVERHEAD DOOR
SPARE		38	20A-1P		500			500		38	M NOTE 1
SPARE		40	20A-1P			500		500	20A-2P	40	M OVERHEAD DOOR
SPARE		42	20A-1P				#REF!	500		42	M NOTE 1
					7000	7100	#REF!				
TOTAL VA PER PHASE											
CONNECTED LOAD				DEMAND FACTOR				DEMAND LOAD			
L LIGHTING			0.00 KVA				1.00			0.00 KVA	
R RECEPTACLES			0.00 KVA				1.00			0.00 KVA	
M MOTOR / EQUIP.			14.00 KVA				1.00			14.00 KVA	
H ELECTRIC HEAT			7.30 KVA				1.00			7.30 KVA	
TOTAL CONNECTED LOAD:				TOTAL DEMAND LOAD:				21.3 KVA			
				TOTAL DEMAND CURRENT:				59.12 AMPS			

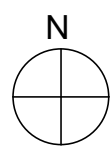
1. PROVIDE CONTROL WIRING, CONTROL STATIONS, AND DISCONNECT SWITCH FOR EACH.

LOCATION:		DARK ROOM PREP ROOM		208 V		NEUTRAL BUS: STANDARD, COPPER		2/21/2022			
SERVICE:		120/208V-3PH-4W				GROUND BUS: STANDARD, COPPER					
MAIN CIRCUIT BREAKER:		80A MCB				MOUNTING: SURFACE					
MAIN BUS RATING AND TYPE:		60A COPPER				ENCLOSURE: NEMA 1					
INTERRUPT RATING:		10,000 AIC									
DESCRIPTION	CCT. NO.	CIRCUIT BREAKER	CIRCUIT LOAD	CONNECTED LOAD (VA)			CIRCUIT LOAD	CIRCUIT BREAKER	CCT. NO.	DESCRIPTION	
				A	B	C					
M AIR COMPRESSOR	2	20A-2P	600	1200			600	20A-1P	2	R RECEPTACLES	
M	4		600		900		300	20A-1P	4	L LIGHTING	
M BATTERY HEATER	6	20A-1P	600			700	100	20A-1P	6	M CONTROL PANEL	
M RADIATOR HEATER	8	20A-2P	600	600				20A-1P	8	SPARE	
M	10		600		600			20A-1P	10	SPARE	
M BATTERY CHARGER	12	20A-1P	200			200			12	SPACE	
SPACE	14			0					14	SPACE	
M ENCLOSURE HEATER	16	20A-2P	1000		1000				16	SPACE	
SPACE	18		1000			1000			18	SPACE	
	20			0					20		
	22				0				22		
	24					0			24		
	26			0					26		
	28				0				28		
	30					0			30		
	32			0					32		
	34				0				34		
	36					0			36		
	38			0					38		
	40				0				40		
	42					0			42		
				1800	2500	1900					
TOTAL VA PER PHASE											
CONNECTED LOAD				DEMAND FACTOR			DEMAND LOAD				
L LIGHTING				0.30 KVA			1.00			0.30 KVA	
R RECEPTACLES				0.60 KVA			1.00			0.60 KVA	
M MOTOR / EQUIP.				4.30 KVA			1.00			4.30 KVA	
H ELECTRIC HEAT				0.00 KVA			1.00			0.00 KVA	
TOTAL CONNECTED LOAD:				5.20 KVA			TOTAL DEMAND LOAD:			5.2 KVA	
							TOTAL DEMAND CURRENT:			14.43 AMPS	

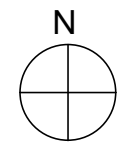
1. PANEL LOCATED IN GENERATOR ENCLOSURE.

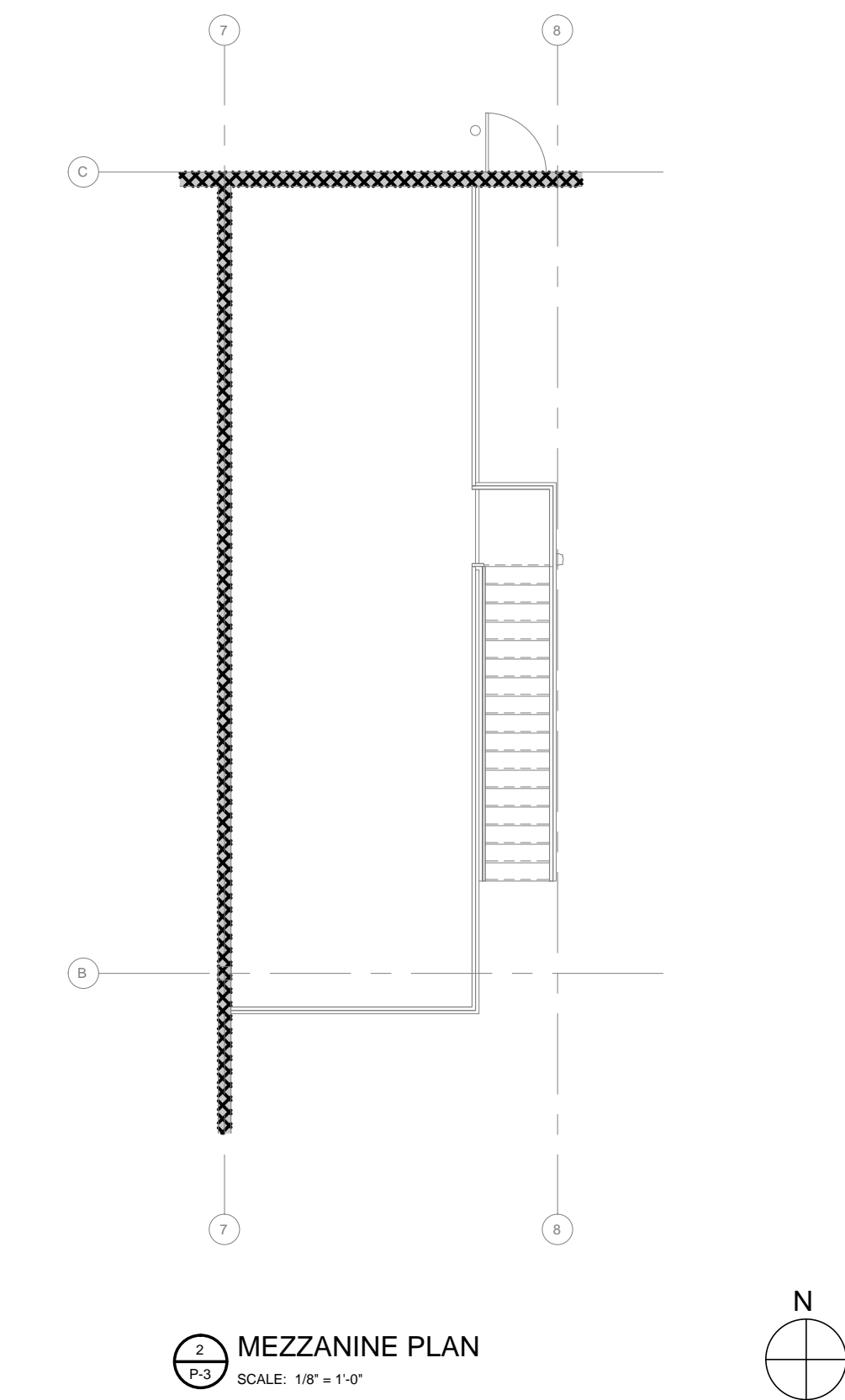
LOCATION: DARK ROOM PREP ROOM										2/21/2022
SERVICE: 120/208V-3PH-4W			208 V	NEUTRAL BUS: STANDARD, COPPER						
MAIN CIRCUIT BREAKER: 200A MLO			GROUND BUS: STANDARD, COPPER							
MAIN BUS RATING AND TYPE: 200A COPPER			MOUNTING: SURFACE							
INTERRUPT RATING: 22,000 AIC			ENCLOSURE: NEMA 1							
DESCRIPTION	CCT. NO.	CIRCUIT BREAKER	CIRCUIT LOAD	CONNECTED LOAD (VA)			CIRCUIT LOAD	CIRCUIT BREAKER	CCT. NO.	DESCRIPTION
				A	B	C				
R POWER WASHER	2	20A-1P	500	1100			800	20A-1P	2	M AIR DRYER
R POWER WASHER	4	20A-1P	500		1100		800		4	M
R POWER WASHER	6	20A-1P	500			1100	600		6	M
R POWER WASHER	8	20A-1P	500	1200			700	15A-3P	8	H "UH-1" UNIT HTR 6A
R POWER WASHER	10	20A-1P	500		1200		700		10	H 3#12+GRD. 3/4"C
R POWER WASHER	12	20A-1P	500			1200	700		12	H
M EVCS CHARGER	14	40A-2P	2000	2700			700	15A-3P	14	H "UH-1" UNIT HTR 6A
M	16		2000		2700		700		16	H 3#12+GRD. 3/4"C
M EVCS CHARGER	18	40A-2P	2000			2700	700		18	H
M	20		2000	2700			700	15A-3P	20	H "UH-1" UNIT HTR 6A
R HAND TOOL CHARGER	22	20A-1P	200		900		700		22	H 3#12+GRD. 3/4"C
M BOILER	24	20A-1P	200			900	700		24	H
M BOILER	26	20A-1P	200	550			350	15A-3P	26	H "UH-3" UNIT HTR 3A
M FORK LIFT CHARGERS	28	30A-2P	2200		2550		350		28	H 3#12+GRD. 3/4"C
M	30		2200			2550	350		30	H
M FORK LIFT CHARGERS	32	30A-2P	2200	2550			350	15A-3P	32	H "UH-3" UNIT HTR 3A
M	34		2200		2550		350		34	H 3#12+GRD. 3/4"C
SPARE	36	20A-1P				350	350		36	H
SPARE	38	20A-1P		0				20A-1P	38	SPARE
SPARE	40	20A-1P			0			20A-1P	40	SPARE
SPARE	42	20A-1P				0		20A-1P	42	SPARE
				10800	11000	8800				
TOTAL VA PER PHASE										
CONNECTED LOAD				DEMAND FACTOR			DEMAND LOAD			
L LIGHTING				1.00			0.00 KVA			
R RECEPTACLES				1.00			3.20 KVA			
M MOTOR / EQUIP.				1.00			19.00 KVA			
H ELECTRIC HEAT				1.00			8.40 KVA			
TOTAL CONNECTED LOAD:				30.60 KVA			TOTAL DEMAND LOAD: 30.6 KVA			
							TOTAL DEMAND CURRENT: 84.94 AMPS			

1. PROVIDE CONTROL WIRING, CONTROL STATIONS, AND DISCONNECT SWITCH FOR EACH.



P-1





PROJECT #	2133
DATE:	05.06.22



PUBLIC WORKS BUILDING

LOWELL, IN
LAKE COUNTY

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PLUMBING FIXTURE SCHEDULE					
TAG	FLOW RATE (GPM)	FIXTURE	MFR. / MODEL No.	DESCRIPTION	REMARKS
WC-1	1.6/1.1 GPF	TOILET WALL HUNG	FOR TYPICAL MFR/MODEL# SEE A7.3 FOR FIXTURE, FAUCET AND TRIM	PROVIDE OPEN FRONT, ANTIBACTERIAL TOILET SEAT WITH STAINLESS STEEL CHECK HINGE. PROVIDE VANDAL RESISTANT QUARTER TURN SUPPLY STOP	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN
UR-1	1.6/1.1 GPF	URINAL WALL HUNG	FOR TYPICAL MFR/MODEL# SEE A7.3 FOR FIXTURE, FAUCET AND TRIM	PROVIDE SLOAN "UPPERCUT" DUAL-FLUSH FLUSHOMETER MODEL No. WES-111. PROVIDE OPEN FRONT, ANTIBACTERIAL TOILET SEAT WITH STAINLESS STEEL CHECK HINGE. PROVIDE VANDAL RESISTANT QUARTER TURN SUPPLY STOP	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN
L-1.	0.5 GPM	LAVATORY	FOR TYPICAL MFR/MODEL# SEE A7.3 FOR FIXTURE, FAUCET AND TRIM	PROVIDE GRID STRAINER, ADA P-TRAP & TAILPIECE & VANDAL RESISTANT QUARTER TURN SUPPLY STOPS. PROVIDE TRU-BRO LAV GUARD III FOR ALL LAV'S. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL LAV'S.	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN
MB.	2.5 GPM	MOP BASIN	ZURN 1996-24	PROVIDE ZURN SINK FAUCET MODEL ZB43M1 WITH POLISHED CHROME FINISH, INTEGRAL SERVICE STOPS, CAST BRASS SPOUT WITH CHEMICAL RESISTANT VACUUM BREAKER 3/4" HOSE THREADED OUTLET, PAIL HOOK AND ADJUSTABLE WALL HOOK. SPECIFY -CS (CHECK STOPS), -WHK (WALL HOOK) AND -5H (5' VINYL HOSE). INSTALL VACUUM BREAKER 7"-6" ABOVE FINISHED FLOOR.	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN
FD	-----	FLOOR DRAIN	JR SMITH 2010	OPTIONS BY OWNER	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN
CO	-----	CLEAN OUT	JR SMITH 420	OPTIONS BY OWNER	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN

SECTION 15400

PLUMBING

PART 1 - GENERAL

1.1 SCOPE OF WORK

4. FURNISHING OF ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION, SERVICES, AND RELATED ITEMS NECESSARY TO COMPLETE THE INSTALLATION OF THE PLUMBING SYSTEM AS ILLUSTRATED ON THE DRAWINGS AND INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- 1.) HOT AND COLD WATER SYSTEMS WITH COMPLETE CONNECTIONS FROM THE WATER METER TO ALL PLUMBING FIXTURES AND EQUIPMENT REQUIRING WATER CONNECTIONS.
 - 2.) SOIL, WASTE, VENT AND CONDENSATE SYSTEM LINES INSIDE THE BUILDING.
 - 3.) PLUMBING FIXTURES, INCLUDING ALL THE REQUIRED TRIM AND SUPPORTS.
 - 4.) TRENCHING AND BACKFILLING.
 - 5.) FINAL PLUMBING CONNECTIONS TO HEATING AND AIR CONDITIONING EQUIPMENT.
 - 6.) METERS AND UTILITY CONNECTIONS.

PART 2 - PRODUCTS

2.1 DESCRIPTION

- A. SOIL, WASTE AND VENT PIPING BELOW FLOOR TO 5'-0" OUTSIDE BUILDING:
STANDARD WEIGHT COATED CAST IRON PIPE AND CAST IRON/NEOPRENE GASKET FITTINGS.
- B. SOIL, WASTE AND VENT PIPING ABOVE FLOOR:
STANDARD WEIGHT COATED CAST IRON PIPE AND STAINLESS STEEL/NEOPRENE GASKET FITTING, OR ABS OR PVC-DWV SCHEDULE 40, AS APPROVED BY LOCAL AUTHORITY IN CONCEALED LOCATIONS.
- C. HOT AND COLD WATER PIPING ABOVE FLOOR:
TYPE "L" COPPER, HARD DRAWN.
BELOW GROUND OUTSIDE OF BUILDING:
TYPE "K" HARD COPPER.
BELOW SLAB INSIDE OF BUILDING:
TYPE "K" SOFT DRAWN COPPER TUBING WITHOUT JOINTS.
- D. CONDENSATE DRAIN PIPING:
BY MECHANICAL CONTRACTOR.
- E. INSIDE STORM PIPING ABOVE GROUND:
STANDARD WEIGHT COATED CAST IRON PIPE AND STAINLESS STEEL/NEOPRENE GASKET FITTING OR ABS OR PVC-DWV SCHEDULE 40, AS APPROVED BY LOCAL AUTHORITY.
- F. TRAPS AND VENTS FOR SERVICE SINKS:
ABS OR PVC SCHEDULE 40, AS APPROVED BY LOCAL AUTHORITY.

2.2 INSULATION

- A. PROVIDE FOAM RUBBER INSULATION EQUAL TO ARMSTRONG ARMAFLEX TYPE "AP" ON COLD AND HOT WATER, AND CONDENSATE DRAIN PIPING. INSULATION TO BE SLIPPED ON WITH BUTT JOINTS. USE MITER CUT PIECES FOR FITTINGS AND PRE-FORMED FITTINGS FOR ALL VALVES. APPLY MANUFACTURER'S PAINT TO ALL EXPOSED RUNS. UTILIZE 1" THICK INSULATION ON HOT WATER PIPING AND 1/2" THICK ON COLD WATER AND CONDENSATE DRAIN PIPING.
- B. INSULATE "P" TRAP AND EXPOSED HOT WATER SUPPLY LINES BELOW HANDICAPPED ACCESSIBLE HAND SINKS AND LAVATORIES IN ONE OF THE FOLLOWING MANNERS:
- 1.) MOLDED FLEXIBLE VINYL INSULATION SYSTEM, MODEL #101 "HANDI LAE-GUARD" AS MANUFACTURED BY TRUEBRO.
 - 2.) PVC 2 PIECE "P" TRAP COVER WITH INSULATION TUBING, "TRAP-GUARD" AS MANUFACTURED BY BUCKAROOS.
 - 3.) OTHER MANUFACTURERS/TYPES BY PRIOR APPROVAL ONLY.

2.3 FIXTURES

- A. ALL FIXTURES: AS INDICATED ON DRAWINGS WITH EQUAL PRODUCTS
FURNISHED BY AMERICAN STANDARD, KOHLER OR ELJER.

2.4 CLEANOUTS, FLOOR DRAINS, FLOOR SINKS AND ROOF DRAINS

- A. ALL ACCESSORIES: AS INDICATED ON THE DRAWINGS THE EQUAL PRODUCTS FURNISHED BY WADE JOSAM OR ZURN BEING ACCEPTABLE.

2.5 EQUIPMENT

- A. SHUT-OFF VALVES UNDERNEATH LAVATORIES, TANK TYPE WATER CLOSETS AND KITCHEN FIXTURES:
CHROME PLATED ANGLE STOP VALVES WITH CHROME PLATED ESCUTCHEON PLATES AND AS SCHEDULED ON DRAWINGS.
- B. HOSE BIBBS:
AS SCHEDULED ON DRAWINGS.
- C. VACUUM BREAKERS:
AS SCHEDULED ON DRAWINGS.
- D. BACKFLOW PREVENTERS:
AS SCHEDULED ON DRAWINGS.

PART 3 - INSTALLATION

3.1 PIPING

- A. RUN ALL PIPING CONCEALED EXCEPT WHERE OTHERWISE INDICATED ON DRAWINGS.
- B. INSTALL VALVES, TRAPS, CLEAN-OUTS AND OTHER APPARATUS IN AN EASILY ACCESSIBLE LOCATION.
- C. INSTALL SOIL, WASTE, VENT OFFSETS AND CONDENSATE DRAINS WITH A MINIMUM UNIFORM GRADE OF ONE QUARTER INCH TO THE FOOT.
- D. MAINTAIN HOT AND COLD WATER LINES AT LEAST 6" APART WHERE PIPING IS PARALLEL.
- E. PROVIDE ESCUTCHEON PLATES WHERE ALL PIPES PASS THROUGH A FINISHED WALL.

3.2 HANGERS AND SUPPORTS

- A. SUPPORT COPPER PIPING AT INTERVALS NOT TO EXCEED 7'-0" AND AT EACH CHANGE IN HORIZONTAL OR VERTICAL DIRECTION.

3.3 PLUMBING FIXTURES

- A. FURNISH AND INSTALL ALL PLUMBING FIXTURES COMPLETE WITH ALL EQUIPMENT FITTINGS, TRIMMINGS AND ACCESSORIES.
- B. ALL FIXTURES: GRADE A, WHITE.
- C. EXPOSED PIPING TO FIXTURES: A PRODUCT OF THE FIXTURE MANUFACTURER.
- D. PROVIDE STOPS AS MANUFACTURED BY THE FIXTURE MANUFACTURER, WITH METAL-TO-METAL SEAT FOR ALL FIXTURES AND EQUIPMENT.

3.4 TEST

- A. THE PLUMBING SYSTEM AND ASSOCIATED SYSTEM IS SUBJECT TO FINAL APPROVAL OF THE OWNER'S.

3.5 CLEANING

- A. AFTER THE PLUMBING PIPING HAS BEEN INSTALLED, INSPECTED AND APPROVED, FLUSH THE PIPING SYSTEM TO REMOVE ANY FOREIGN MATTER FROM THE PIPES. WHERE REQUIRED, USE CHLORINE OR HOT SOLUTION TO SANITIZE THE NEW PIPING.

GENERAL PLUBMING NOTES:

1. ALL WORK TO MEET PLUMBING CODES AS SET FORTH BY THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH – 2014.
2. THE LICENSED PLUMBER OF RECORD LISTED ON THE PERMIT SHALL BE PRESENT ON ALL PLUMBING INSPECTIONS.
3. ACCORDING TO PUBLIC ACT 0940132 SEC. 37 – A LETTER OF INTENT SHALL BE INCLUDED WITH ALL PERMIT APPLICATIONS. THE LETTER SHALL BE WRITTEN ON THE LICENSED PLUMBER OF RECORD'S BUSINESS STATIONARY AND SHALL INCLUDE THE LICENSE HOLDER'S SIGNATURE AND IF THE LICENSE HOLDER IS INCORPORATED, THE LICENSE HOLDER'S CORPORATE SEAL. IF THE HOLDER IS NOT INCORPORATED, THE LETTER MUST BE NOTARIZED.
4. DOMESTIC WATER AS WELL AS SANITARY WASTE SHALL BE TESTED USING A TEST METHOD DESCRIBED IN 890.1930 a)-c)
5. ALL GAS PIPING TO MEET LOCAL AND NATIONAL APPLICABLE MATERIAL AND TESTING CODES
6. FOLLOW THE REQUIREMENTS SET FORTH IN ILLINOIS ENERGY CODE REGARDING WORK TO BE DONE.
7. PROVIDE PLAN REVIEW AT ALL INSPECTIONS.
8. ALL UNDERGROUND PIPING SHALL BE BACKFILLED PER IDPH INCLUDING 890.180, AS WELL AS MANUFACTURER SPECS. PROVIDE MANUFACTURER SPECS AT TIME OF INSPECTION.
9. ALL WORK SHALL BE INSPECTED AND APPROVED PRIOR TO BEING CONCEALED
10. SPRINKLER CONTRACTOR SHALL FOLLOW ILLINOIS PLUMBING LICENSE LAW (255 ILCS 320/2.5) IN ITS ENTIRETY.
11. ALL WORK SHALL MEET ALL ACCESSIBILITY CODES.
12. JOURNEYMAN PLUMBING LICENSE HOLDER SHALL PROVIDE PROOF OF UP TO DATE CONTINUING EDUCATION AT TIME OF INSPECTION.
13. ALL RPZ BACK FLOW PROTECTORS SHALL BE INSTALLED BY PLUMBER OF RECORD, THIS SHALL INCLUDE FIRE SUPPRESSION.
14. WATER SERVICE IS TO BE INSTALLED BY LICENSED PLUMBING CONTRACTOR. PROVIDE LETTER OF INTENT, IDPH PLUMBING CONTRACTOR REGISTRATION (055) AND IL OR CITY PLUMBING LICENSE.
15. COMPLY WITH THE REQUIREMENTS OF THE FIRE DEPARTMENT
16. COMPLY WITH THE REQUIREMENTS OF THE VILLAGE ENGINEER
17. COMPLY WITH THE REQUIREMENTS OF PUBLIC WORKS

VARIABLE SPEED PUMP SCHEDULE											
PUMP NO.	LOCATION	DESCRIPTION	TYPE	FLOW RATE GPM	RATED PUMP HEAD	MOTOR				RPM	REMARKS
						PSI	V / PH / HZ	HP			
BP-1	FIRE PROTECTION, GAS & WATER METER ROOM 004	DUPLEX DOMESTIC WATER BOOSTER PUMP SYSTEM	CLOSE COUPLED VERTICAL MULTI-STAGE	160	60	208/3/60			25	3525	DUPLEX VARIABLE SPEED RATED FOR A SYSTEM CAPACITY OF 320 GPM WITH A MAINTAINED SYSTEM PRESSURE OF 60 PSI INCLUDING A MINIMUM SUCTION PRESSURE OF 10 PSI.
			CLOSE COUPLED VERTICAL MULTI-STAGE	160	60	208/3/60			25	3450	

HOSE BIBB SCHEDULE				
TAG	MFR. / MODEL No.	FIXTURE	DESCRIPTION	REMARKS
NFHB	ZURN ECOLOTROL MODEL 1300-15	NON-FREEZE WALL HYDRANT	ENCASED ANTI-SIPHON AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION w/INTEGRAL BACKFLOW PREVENTOR, BRONZE CASING, NICKEL BRONZE BOX w/HINGED COVER AND OPERATING KEY LOCK.	SEE MFR. SPEC SHEET PRIOR TO INSTALL.
HB	JR SMITH MODEL 5609QT	HOSE BIBB	QUARTER TURN NON-FREEZE HYDRANT, WITH 3/4" HOSE CONNECTION, BACKER PLATE AND INTEGRAL VACUUM BREAKER WITH VANDAL RESISTANT CAP AND "T" HANDLE. SPECIFY CHROME PLATED.	SEE MFR. SPEC SHEET PRIOR TO INSTALL.

EJECTOR & SUMP PUMP SCHEDULE										
PUMP NO.	LOCATION	MEDIA OR SYSTEM	PUMP DATA			MOTOR DATA			MANUFACTURER AND MODEL	REMARKS
			TYPE	CAPACITY (GPM)	HEAD (FT)	V / PH / HZ	HP	RPM		
SP-1	MECH. RM	STORM	SUBMERSIBLE DUPLEX	50	15	115/1/60	1/2	1725	ZOELLER MODEL M266	SEE MFR. SPEC. SHEET PRIOR TO INSTALL. WITH LEAD/LAG CONTROL
EP-1	MECH. RM.	SANITARY	SUBMERSIBLE DUPLEX EXPLOSION PROOF	50	15	115/1/60	1/2	1725	ZOELLER MODEL M266	SEE MFR. SPEC. SHEET PRIOR TO INSTALL.

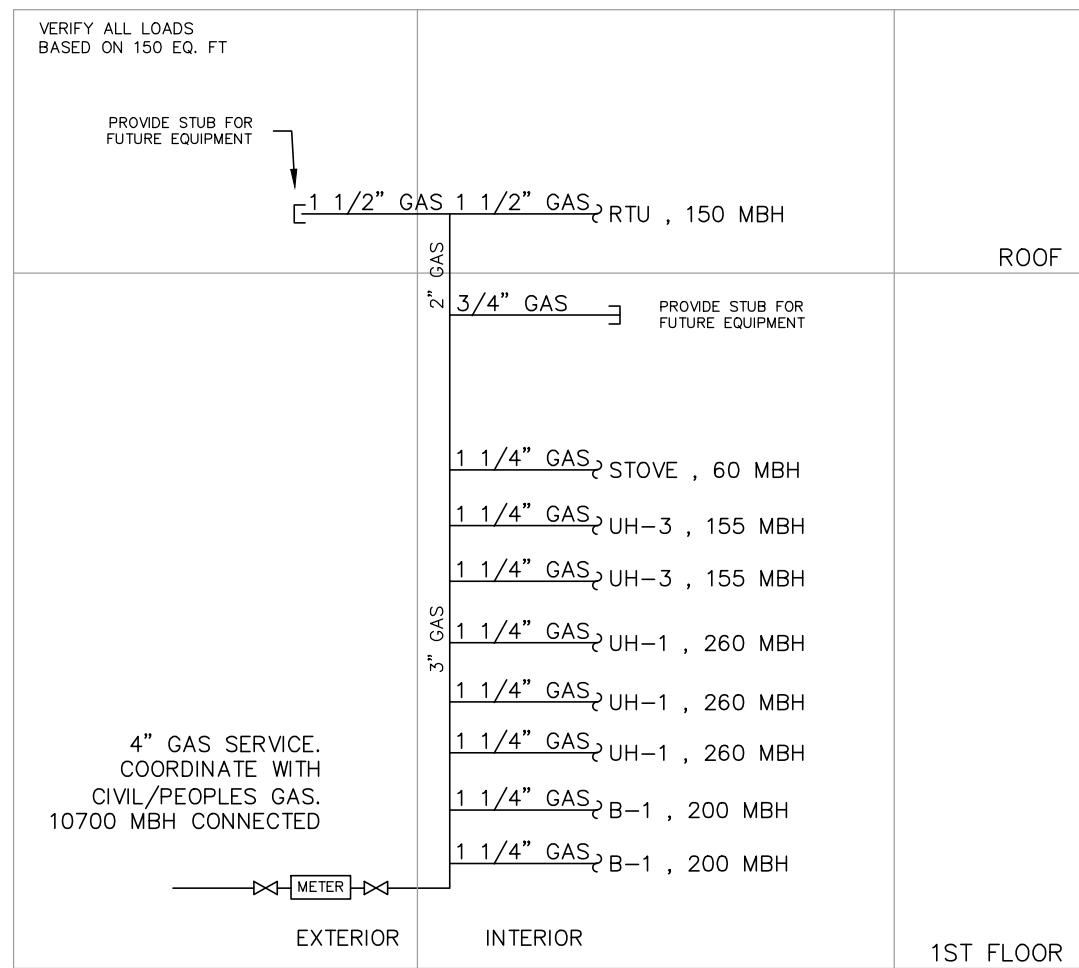
Gas Piping/Tubing Material Matrix(Based on IFGC 403)			
Material	Permitted	Not Permitted	Standards to Follow
Wrought-Iron	Schedule 40 or better		ASME B 36.10.10M or ASTM A35 or ASTM A106
Steel	Schedule 40 or better		ASME B 36.10.10M or ASTM A35 or ASTM A106
N.G. DISTRIBUTION PIPING SHALL BE SCHEDULE 40 STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A 53/A 53M WITH 150# MALLEABLE IRON FITTINGS. GAS PIPING LARGER THAN 3" OR MORE THAN 5 PSIG TO BE WELDED TO BE SCHEDULE 40 STEEL PIPING.			
Note: The gas piping design shall conform to all the requirements of IFGC 403.			
GENERAL GAS PIPING NOTES:			

GENERAL GAS PIPING NOTES:

1. ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH BUILDING STANDARDS AND ALL APPLICABLE CODES.
2. FUEL GAS PIPING AND CONTROLS MUST CONFORM TO THE INTERNATIONAL FUEL GAS CODE (IFGC), CHAPTER 4 (WITH MODIFICATIONS AS NOTED IN ARTICLE 14). [18-28-1400]
3. GAS PIPING MUST BE SIZED IN ACCORDANCE WITH IFGC TABLES 402.1(1) THROUGH 402.3(34). [IFGC 402.3]
4. THE MAXIMUM DESIGN OPERATING PRESSURE FOR GAS PIPING SYSTEMS LOCATED INSIDE BUILDINGS SHALL NOT EXCEED 5 PSIG (SOME EXCEPTIONS ARE NOTED). [IFGC 402.5]
5. GAS PIPING MATERIALS MUST CONFORM TO THE GAS PIPING & TUBING MATERIAL MATRIX (IFGC 403 REQUIREMENTS). [IFGC 403]
6. PIPING IN CONCEALED LOCATIONS MUST CONFORM TO THIS IFGC 404.3. [IFGC 404.3]
7. MINIMUM REQUIRED BURIAL DEPTH FOR UNDERGROUND PIPING SYSTEMS MUST CONFORM TO IFGC 404.9. (MINIMUM 12 INCHES BELOW GRADE). [IFGC 404.9]
8. GAS PIPES MUST BE SLOPED AT 1/4" INCH IN EVERY 15 FEET. [IFGC 408.1]
9. GAS PIPING GREATER THAN 2" INSIDE DIAMETER OR CARRYING MORE THAN 5 POUNDS(PSIG) SHALL BE SCHEDULE 40 STANDARD WELD FITTINGS.
10. PIPING METER IDENTIFICATION SHALL BE MARKED WITH AN APPROVED PERMANENT IDENTIFICATION AND BE READILY IDENTIFIABLE.
11. PAINT ALL GAS PIPING THAT IS EXPOSED TO THE ELEMENTS.
12. UNDERGROUND PIPING SHALL BE A MIN OF 18" BELOW GRADE. [IFGC 404.12]

GAS SERVICE ALTERNATE:

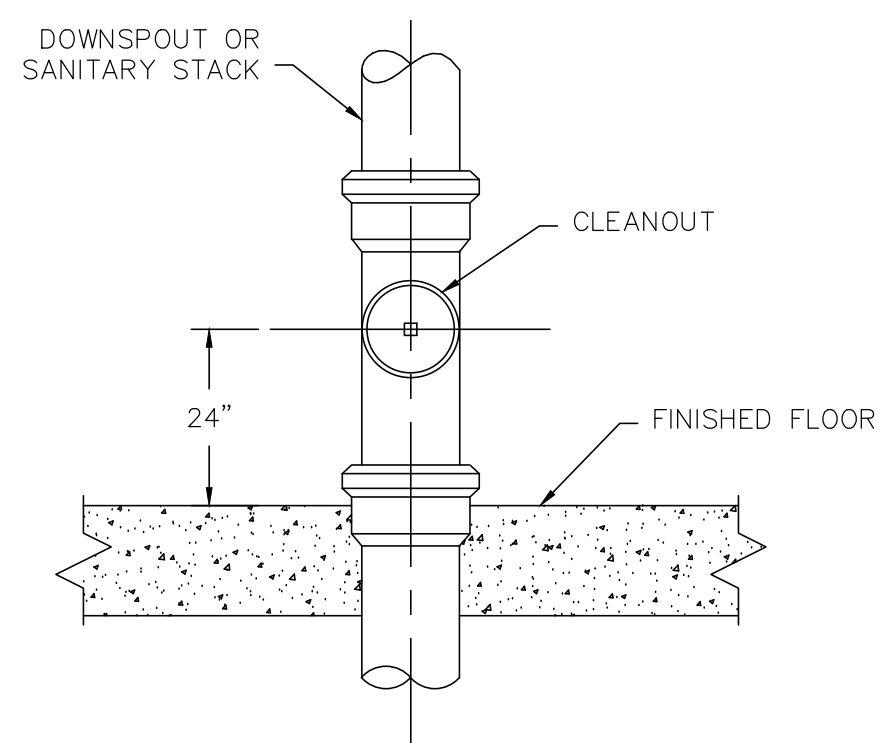
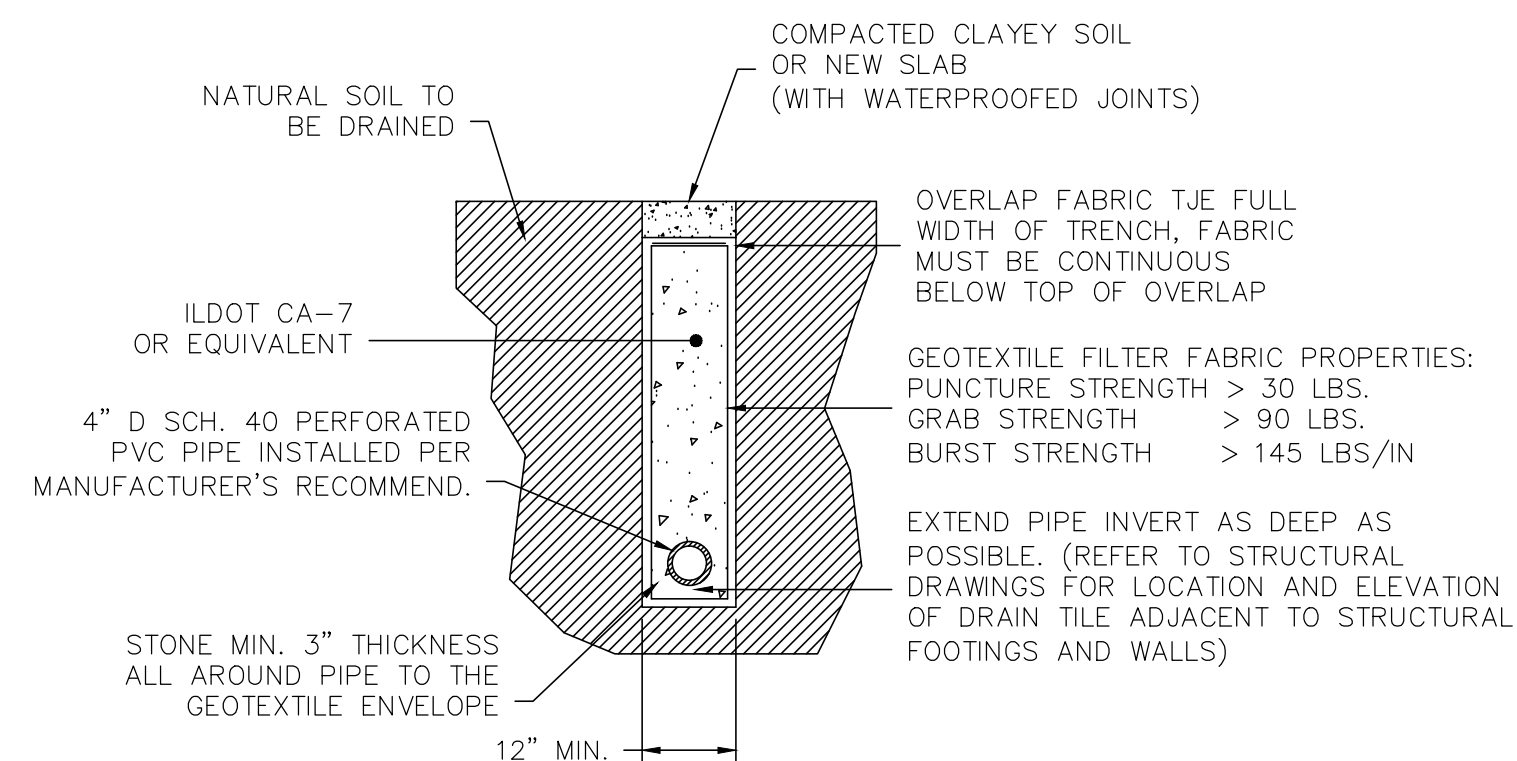
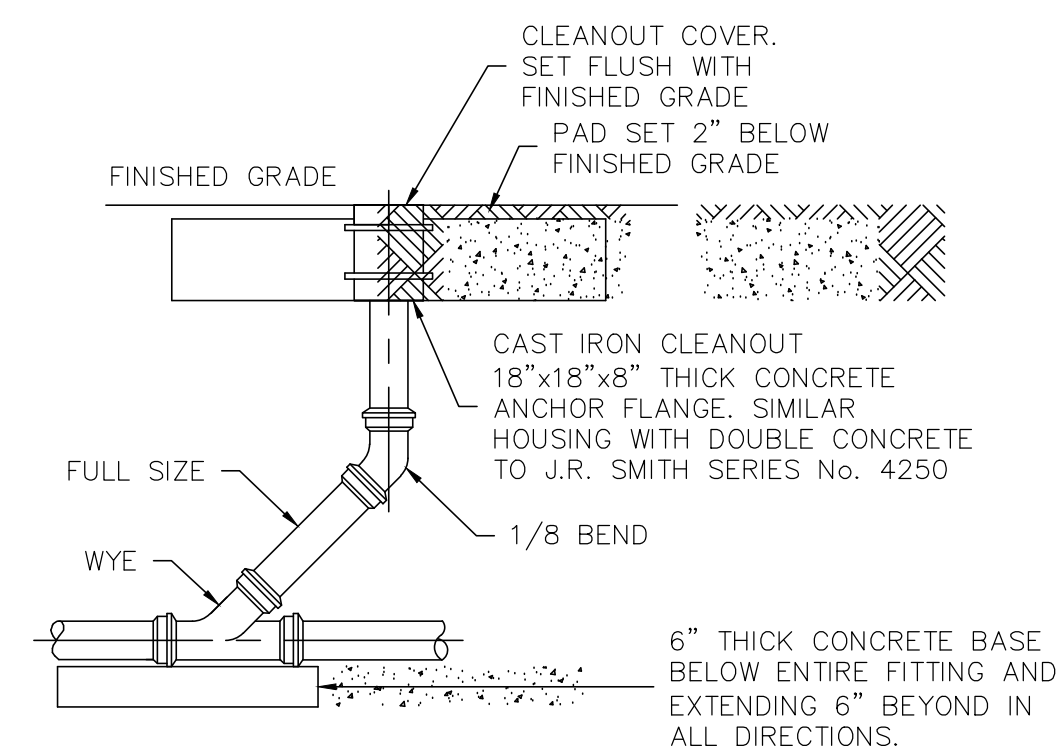
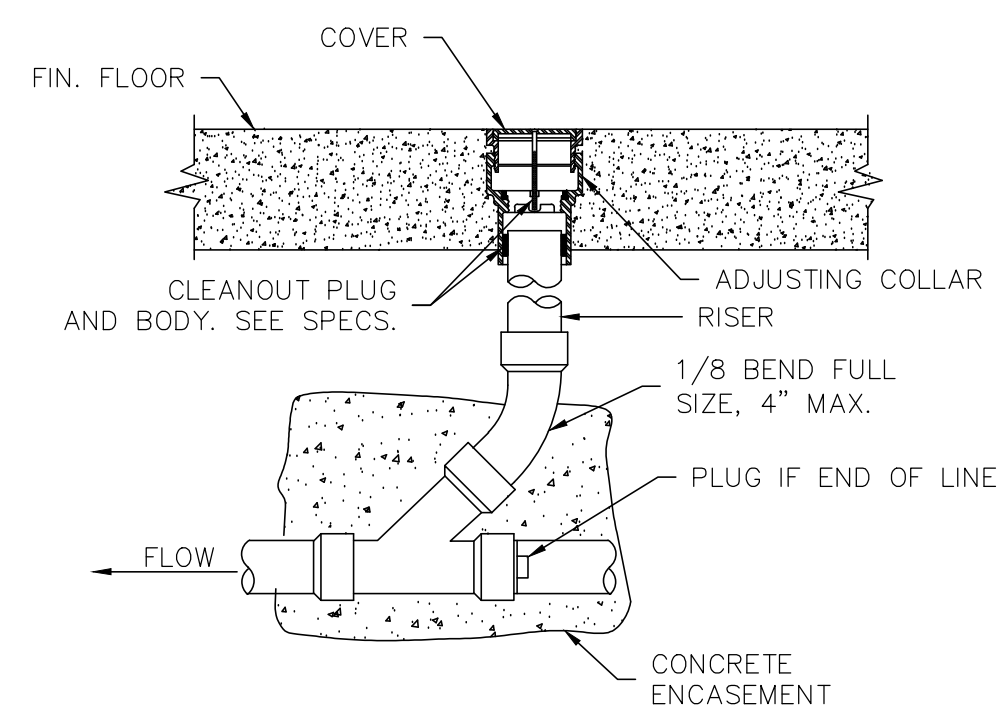
CITY OF CHICAGO TO UPGRADE GAS MAIN PRESSURE. IF CITY UP GRADE IS NOT COMPLETE BY THE TIME THIS PROJECT IS COMPLETE, ADD GAS BOOSTER EQUAL TO ECLIPSE COMPAC HB SERIES [PACKAGED HERMETICALLY SEALED GAS BOOSTER HB3314-1/2-N4, 1.2HP, 208V 3 PHASE.



Gas Distribution

SCALE: NONE

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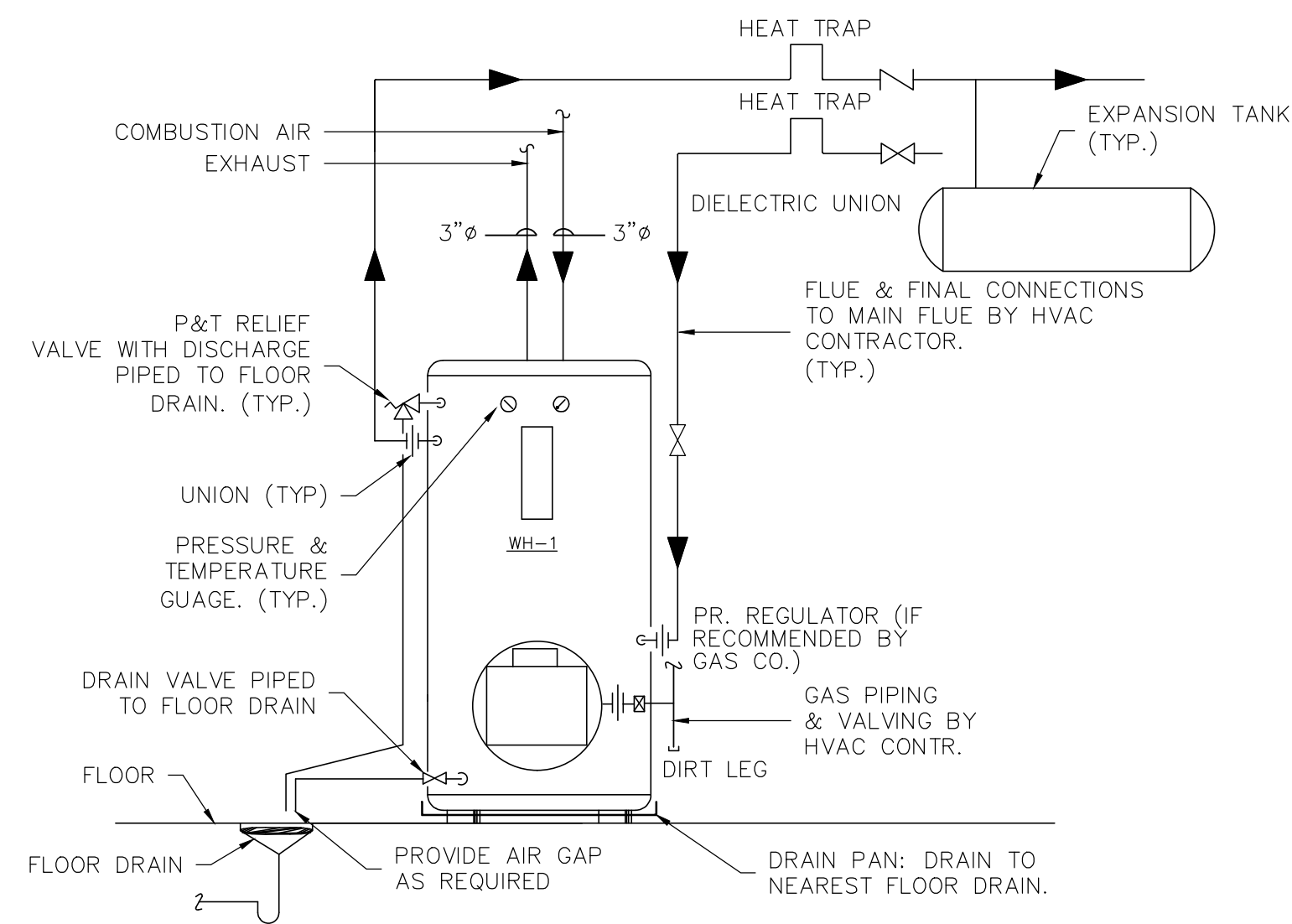
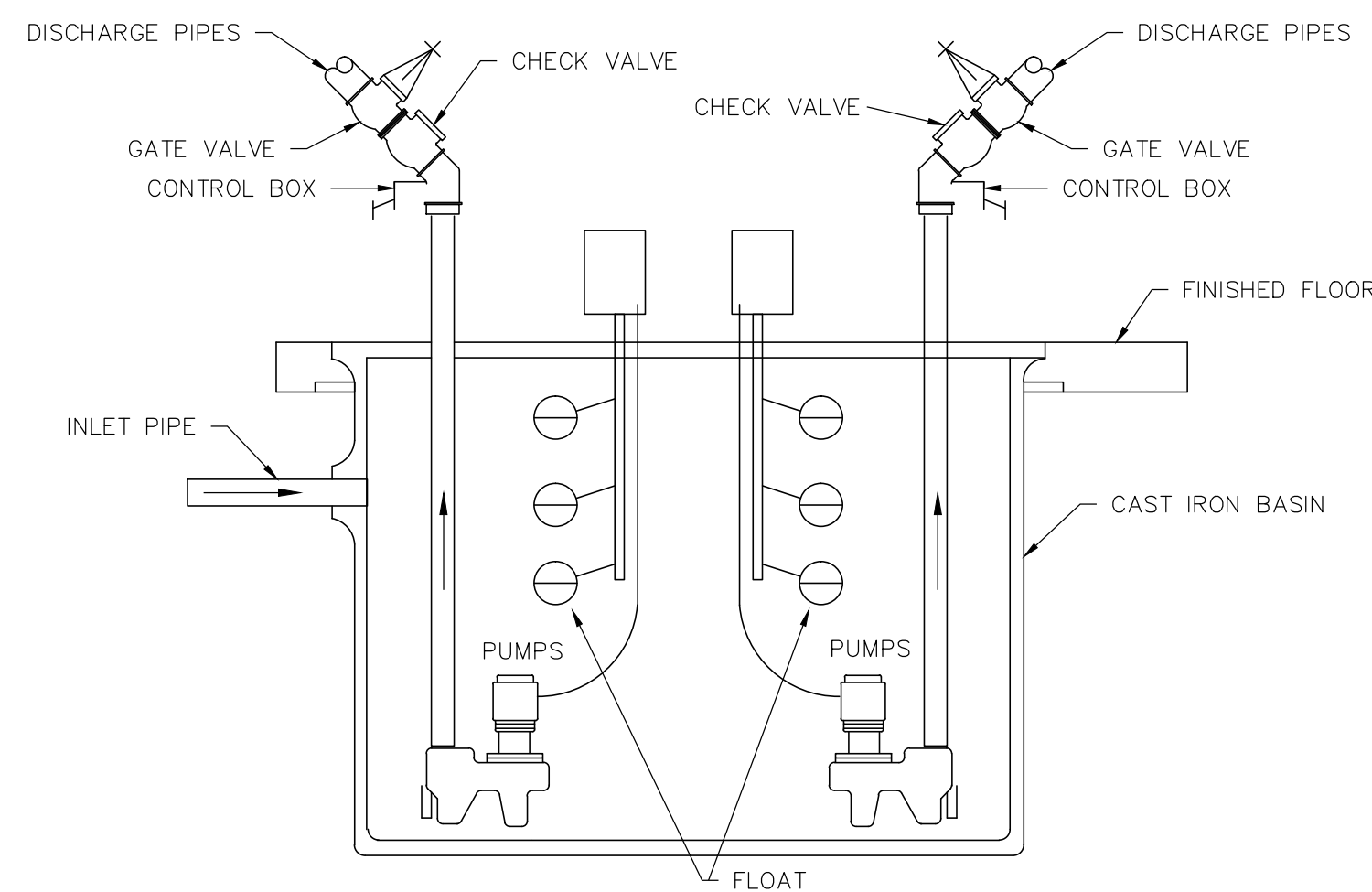
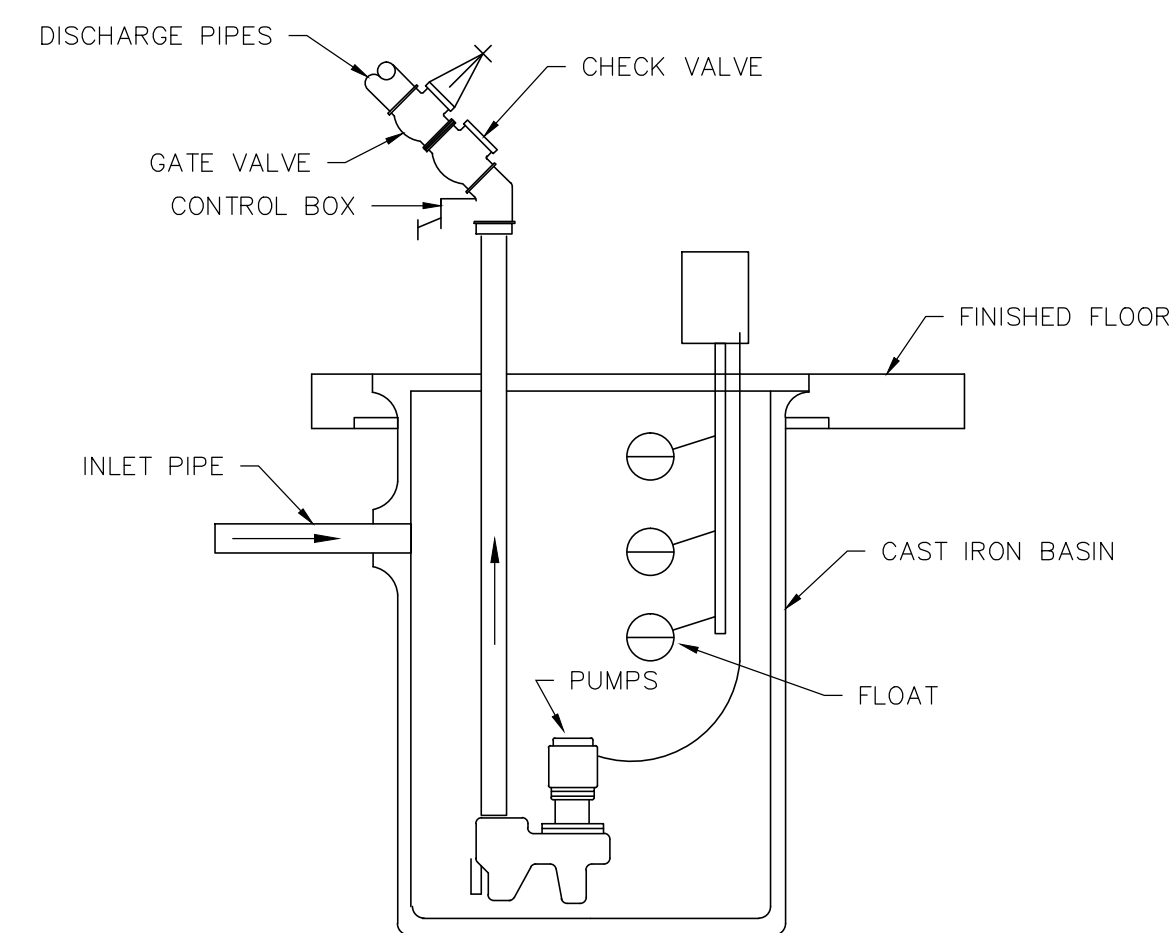


FLOOR CLEANOUT

GRADE CLEANOUT DETAIL

SUB-SOIL DRAIN TILE DETAIL

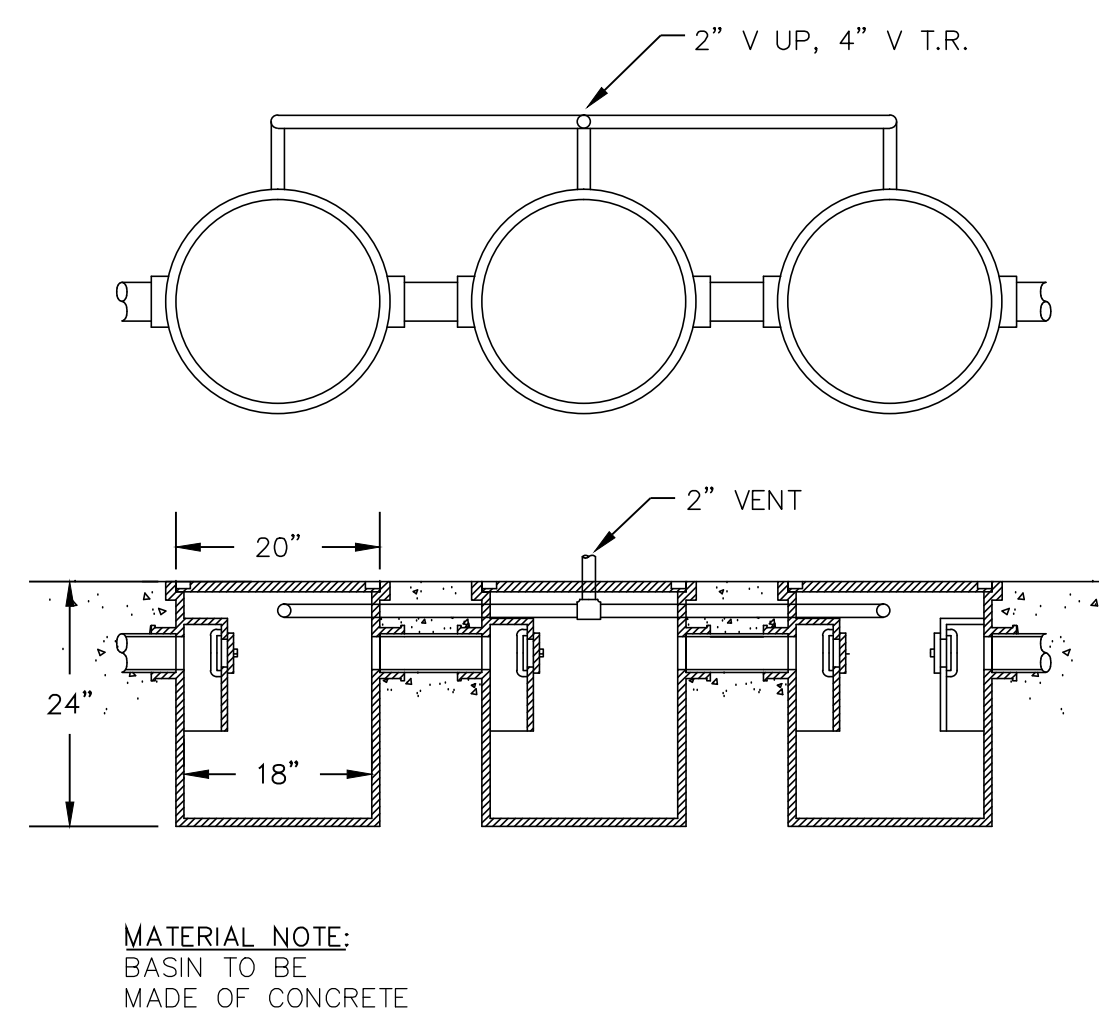
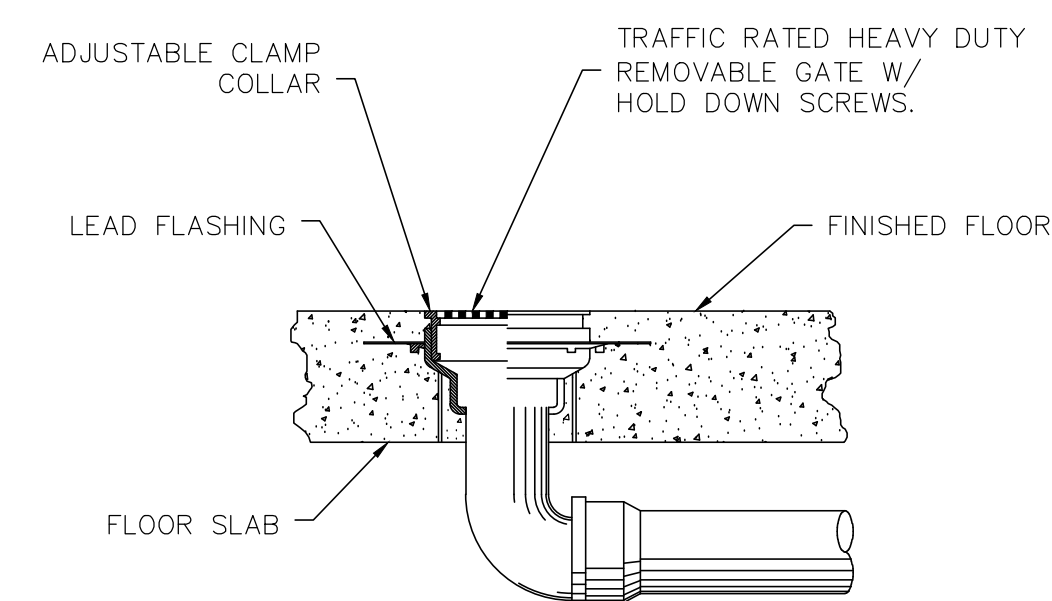
ELEVATION OF STACK CLEANOUT



SEWAGE EJECTOR PUMP

SUMP PUMP

WATER HEATER DETAIL



TYPICAL GARAGE DRAIN DETAIL

TYPICAL GARAGE BASIN DETAIL

[illegible]

