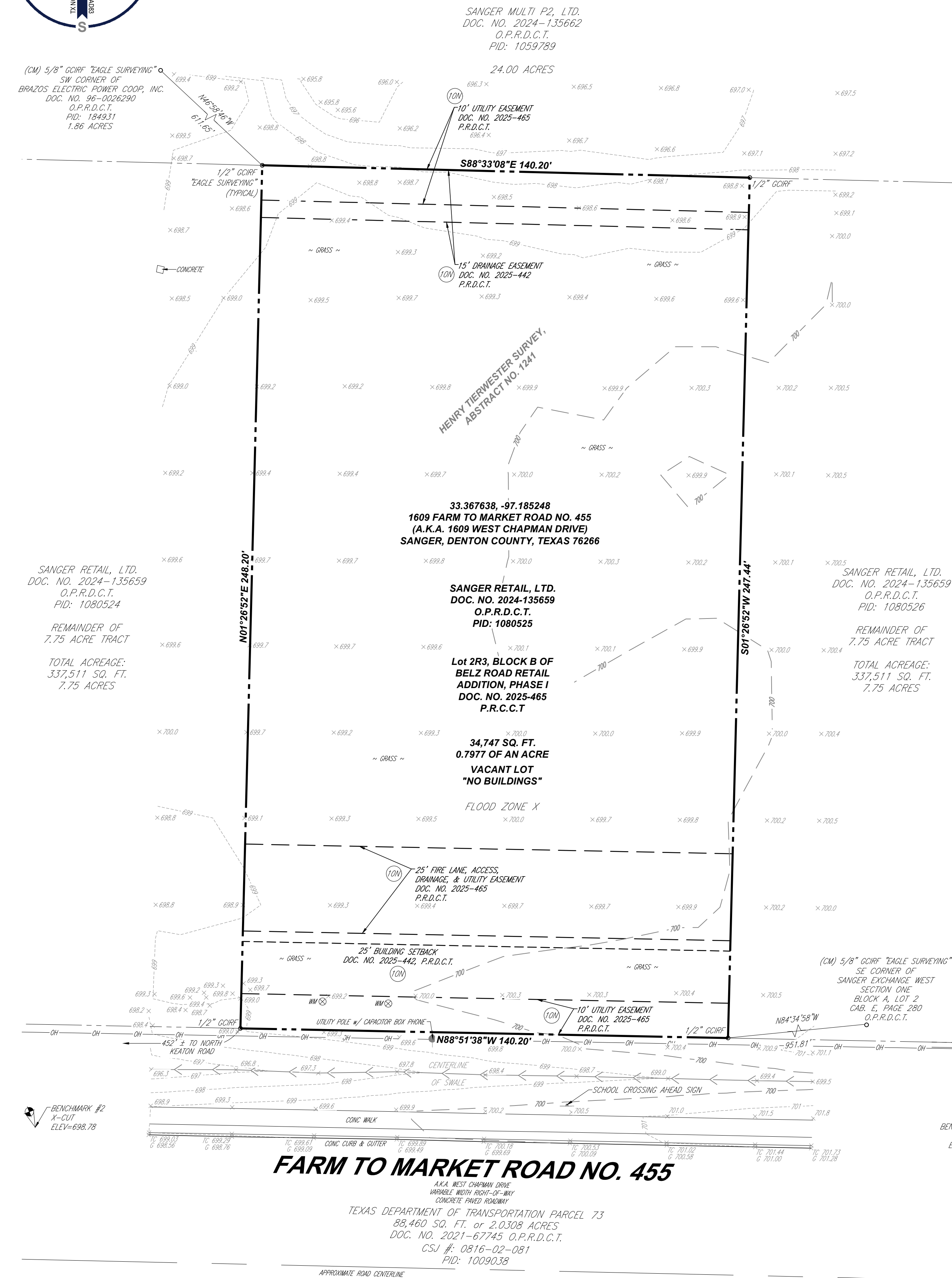




BEING all of Lot 2R3, Block B of BELZ ROAD RETAIL ADDITION, PHASE I, an addition to the City of Sanger, Denton County, Texas according to the plat thereof recorded under Doc. Number 2025-465 in the Plat Records of Denton County, Texas.

Tract 1:

Being a 0.80 acre tract of land out of the Henry Tierwester Survey, Abstract Number 1241, situated in the City of Sanger, Denton County, Texas, being a portion of a called 7.75 acre tract of land conveyed to Sanger Retail Ltd. by Warranty Deed of record in Document Number 2024-135659 of the Official Records of Denton County, Texas, and more particularly described by metes and bounds, as follows:

COMMENCING at a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the north right-of-way line of Farm to Market Road 455 (right-of-way varies), being the East line of a called 95 acre tract of land conveyed to Jackson Jay Marshall by deed of record in Document Number 2013-133569 of said Official Records, also being the southwest corner of said 7.75 acre tract, from which a 5/8" iron rod with pink plastic cap stamped "TXDOT SURVEY MARKER, RIGHT-OF-WAY MONUMENT" found at the northwest corner of a called Parcel 73 - 2.0308 acre tract of land conveyed to the State of Texas by deed of record in Document Number 2021-67745 of said Official Records bears N 88° 51' 38" W, a distance of 2.00 feet;

Thence S 88° 51' 38" E, leaving the east line of said 95 acre tract, along the north right-of-way line of Farm to Market Road 455, being the north line of said Parcel 73, also being the common south line of said 7.75 acre tract, a distance of 452.29 feet to the Point of Beginning, and the southwest corner hereof;

Thence N 01° 26' 52" E, leaving the north right-of-way line of Farm to Market Road 455, over and across said 7.75 acre tract, a distance of 248.20 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the south line of a called 24.00 acre tract of land conveyed to Sanger Multi P2, Ltd. by deed of record in Document Number 2024-135662 of said Official Records, being the common north line of said 7.75 acre tract, for the northwest corner hereof;

Thence S 88° 33' 08" E along the south line of said 24.00 acre tract and the common north line of said 7.75 acre tract, a distance of 140.22 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set for the northeast corner hereof;

Thence S 01° 27' 04" W, leaving the south line of said 24.00 acre tract, over and across said 7.75 acre tract, a distance of 247.44 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the north right-of-way line of Farm to Market Road 455, being the north line of said Parcel 73, also being the common south line of said 7.75 acre tract, for the southeast corner hereof;

Thence N 88° 51' 38" W, along the north right-of-way line of Farm to Market Road 455 and the common south line of said 7.75 acre tract, a distance of 140.20 feet to the Point of Beginning, and containing an area of 0.80 acre or 34,747 square feet of land, more or less;

NOW KNOWN AS Lot 2R3, Block B of BELZ ROAD RETAIL ADDITION, PHASE I, an addition to the City of Sanger, Denton County, Texas according to the plat thereof recorded under Doc. Number 2025-465 in the Plat Records of Denton County, Texas.

Tract 2 (easement):
Non-exclusive easement for access and utilities created and described in Declaration of Restrictive Covenants and Reciprocal Easement Agreement dated April 24, 2025, filed April 24, 2025, recorded under Clerk's File No. 2025-43212, Official Records of Denton County, Texas.

THIS SURVEY IS PREPARED WITH REFERENCE TO A COMMITMENT FOR TITLE INSURANCE PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NO. PL25-38939 WITH AN EFFECTIVE DATE OF DECEMBER 18, 2025. CLIENT UNDERSTANDS AND AGREES THAT THE FIRM SHALL NOT BE LIABLE FOR ANY ERRORS OR OMISSIONS IN OR RESULTING FROM THE USE OF THE TITLE DOCUMENTS OR FROM ANY DEFICIENCIES OR ANY INACCURACIES CONTAINED IN SAID TITLE DOCUMENTS. OUR OFFICE HAS REVIEWED THE FOLLOWING SURVEY RELATED EXCEPTIONS IN SCHEDULE B, SECTION 10:

- D. EASEMENT EXECUTED BY M.L. MOORE TO BRAZOS RIVER TRANSMISSION ELECTRIC COOPERATIVE, INC., DATED FEBRUARY 12, 1942, FILED JULY 10, 1944, RECORDED IN VOLUME 306, PAGE 840, DEED RECORDS, DENTON COUNTY, TEXAS.
CANNOT PLACE, EASEMENT IS UNDEFINED
- E. EASEMENTS EXECUTED BY W.C. MOORE TO BRAZOS RIVER TRANSMISSION ELECTRIC COOPERATIVE, INC., DATED FEBRUARY 12, 1942, FILED JULY 10, 1944, RECORDED IN VOLUME 309, PAGE 1 AND VOLUME 309, PAGE 2, DEED RECORDS, DENTON COUNTY, TEXAS.
CANNOT PLACE, EASEMENT IS UNDEFINED
- F. INTENTIONALLY DELETED.
- G. INTENTIONALLY DELETED.
- H. INTENTIONALLY DELETED.
- I. INTENTIONALLY DELETED.
- J. INTENTIONALLY DELETED.
- K. RESTRICTIVE TERMS, CONDITIONS, AND EASEMENTS SET FORTH IN DECLARATION OF COVENANTS, COVENANTS AND RECIPROCAL EASEMENT AGREEMENT DATED APRIL 24, 2025, FILED APRIL 24, 2025, RECORDED UNDER CLERK'S FILE NO. 2025-43212, OFFICIAL RECORDS OF DENTON COUNTY, TEXAS; AND NOTED ON SURVEY DATED AUGUST 25, 2025 PREPARED BY DAVID A. MINTON, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6233, PROJECT NO. TXA250140.00.
- L. ANY AND ALL LIENS ARISING BY REASON OF UNPAID BILLS OR CLAIMS FOR WORK PERFORMANCE OR MATERIALS FURNISHED IN CONNECTION WITH IMPROVEMENTS PLACED, OR TO BE PLACED UPON THE SUBJECT LAND. HOWEVER, THE COMPANY DOES INSURE THE INSURED AGAINST LOSS, IF ANY, SUSTAINED BY THE INSURED UNDER THIS POLICY IF SUCH LIENS HAVE BEEN FILED WITH THE COUNTY CLERK OF DENTON COUNTY, TEXAS, PRIOR TO THE DATE HEREOF.
- LIABILITY HEREUNDER AT THE DATE HEREOF IS LIMITED TO \$_____ LIABILITY SHALL INCREASE AS CONTEMPLATED IMPROVEMENTS ARE MADE, SO THAT ANY LOSS PAYABLE HEREUNDER SHALL BE LIMITED TO SAID SUM PLUS THE AMOUNT ACTUALLY EXPENDED BY THE INSURED ON IMPROPER LAND AT THE TIME THE LOSS OCCURS. ANY EXPENDITURES MADE FOR IMPROVEMENTS, SUBSEQUENT TO THE DATE OF THIS POLICY, WILL BE DEEMED MADE AS OF THE DATE OF THIS POLICY. IN NO EVENT SHALL THE LIABILITY OF THE COMPANY HEREUNDER EXCEED THE AMOUNT OF THIS POLICY. NOTHING CONTAINED IN THIS PARAGRAPH SHALL BE CONSTRUED AS LIMITING ANY EXCEPTION OR PRINTED PROVISION OF THIS POLICY (OWNERS'S POLICY ONLY.)
(EXCEPTION MAY BE DELETED IF PROPOSED TRANSACTION DOES NOT INCLUDE COST OF CONTEMPLATED IMPROVEMENTS, CONSTRUCTION OR REPAIRS).
FINANCIAL DOCUMENT - NOT A SURVEY MATTER
- M. ANY AND ALL LIENS ARISING BY REASON OF UNPAID BILLS OR CLAIMS FOR WORK PERFORMANCE OR MATERIALS FURNISHED IN CONNECTION WITH IMPROVEMENTS PLACED, OR TO BE PLACED UPON THE SUBJECT LAND. HOWEVER, THE COMPANY DOES INSURE THE INSURED AGAINST LOSS, IF ANY, SUSTAINED BY THE INSURED UNDER THIS POLICY IF SUCH LIENS HAVE BEEN

(LOAN POLICY ONLY)
(EXCEPTION MAY BE DELETED IF PROPOSED TRANSACTION DOES NOT INCLUDE COST OF
CONTEMPLATED IMPROVEMENTS, CONSTRUCTION OR REPAIRS AND LOAN PROCEEDS ARE
FULLY DISBURSED).
FINANCIAL DOCUMENT - NOT A SURVEY MATTER

N. THE FOLLOWING, AS SHOWN ON PLAT RECORDED UNDER DOC. NUMBER 2025-465 IN THE PLAT RECORDS OF DENTON COUNTY, TEXAS:

25' FIRE LANE, ACCESS, DRAINAGE & UTILITY EASEMENT ACROSS PROPERTY;
10' UTILITY EASEMENT ALONG NORTH AND SOUTH PROPERTY LINES;
15' DRAINAGE EASEMENT ALONG NORTH PROPERTY LINE;
25' BUILDING SETBACK ALONG SOUTH PROPERTY LINE.
AFFECTS SUBJECT - AS SHOWN ON SURVEY

SANGER

THIS IS THE

WERE MA
FOR ALTA
AND NSP
17 OF TA

BM#1
X-CUT ON THE NORTHWEST CORNER OF A CONCRETE INLET
LOCATED ON THE NORTH RIGHT-OF-WAY LINE OF FARM TO
MARKET ROAD NO. 455 NEAR THE SOUTHEAST CORNER OF
THE SUBJECT PROPERTY.
ELEVATION = 705.14'

BM#2
X-CUT ON THE NORTHWEST CORNER OF A CONCRETE INLET
LOCATED ON THE NORTH RIGHT-OF-WAY LINE OF FARM TO
MARKET ROAD NO. 455 NEAR THE SOUTHWEST CORNER OF
THE SUBJECT PROPERTY.
ELEVATION = 698.78'



—01—	—121—	OVERHEAD WIRES
—123—		EXISTING CONTOUR
X 121.45		EXISTING SPOT ELEVATION
X TO 121.45		EXIST TOP OF CURB ELEVATION
X G 122.85		EXIST GUTTER ELEVATION
		WATER METER
		UTILITY POLE
		SIGN
		IRON PIN FOUND
		BENCHMARK
		TITLE REPORT EXCEPTION
GGRRF		GREEN-CAPPED IRON ROD FOUND
CON		CONTROL MONUMENT
CONC		CONCRETE
SQ. FT.		SQUARE FEET
W/		WITH
NAD		NORTH AMERICAN DATUM
ELEV		ELEVATION
PFC		POINT FOR CORNER
EV		EXISTING
±		PLUS OR MINUS
R		RADIUS
Δ		DELTA
L		LENGTH
CHB		CHORD BEARING
CHD		CHORD DISTANCE
UP/LP		UTILITY POLE/LIGHT POLE
CS#		TxDOT CONTROL-SECTION JOB NUMBER
STA		TxDOT STATION
O.P.R.D.C.T.		OFFICIAL PUBLIC RECORDS OF DENTON COUNTY TEXAS
LTG		LIMITED LIABILITY COMPANY
CO		COMPANY
PID		PROPERTY IDENTIFICATION
DOC		DOCUMENT
# No		NUMBER
A.K.A.		ALSO KNOWN AS
POB		POINT OF BEGINNING
POC		POINT OF COMMENCING

TO BENCHMARK TITLE, L.L.C.; FIDELITY NATIONAL TITLE INSURANCE COMPANY; BRAKES PLUS, L.L.C., A DELAWARE LIMITED LIABILITY COMPANY; EXPRESS OIL CHANGE, L.L.C.; & SANGER RETAIL, LTD., A TEXAS LIMITED PARTNERSHIP

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENT FOR ALTA / NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(A), 7(A), 7(B)(1), 7(C), 8, 9, 11(B), 13, 14, 16, 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 01/21/2026.

REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6233
01/23/2026
THIS CERTIFICATION IS MADE TO ONLY NAMED PARTIES FOR PURCHASE AND
BY THE NAMED PURCHASER. NO RESPONSIBILITY OR LIABILITY IS ASSUMED BY
OTHER PURPOSE INCLUDING, BUT NOT LIMITED TO, USE OF SURVEY AFFIDAVIT
PERSON NOT LISTED IN CERTIFICATION, EITHER DIRECTLY OR INDIRECTLY.

REVISIONS			
REV	DATE	COMMENT	DRAWN BY CHECKED BY
1	01/23/26	UPDATE TITLE	Dr DM

PROJECT No.:	TXA250140.00.0ADWG
DRAWN BY:	~ XT ~
CHECKED BY:	~ DR / DAM ~
DATE:	01/23/2026
CAD I.D.:	S-ALTA-SURV
FIELD DATE:	07/28/2025
CREW CHIEF:	BA
APPROVED:	SRB



TEXAS
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-344-3377
www.texas811.org

PROJECT:

ALTA/NSPS LAND TITLE SURVEY

- FOR



33.367638, -97.185248
509 FARM TO MARKET ROAD NO. 455
(A.K.A. 1609 WEST CHAPMAN DRIVE)
SANGER, DENTON COUNTY,
TEXAS 76266

BOHLER //

2600 NETWORK BLVD., SUITE 310
FRISCO, TX 75034
Phone: (469) 458-7300
TX@BohlerEng.com
TBPELS #10194942

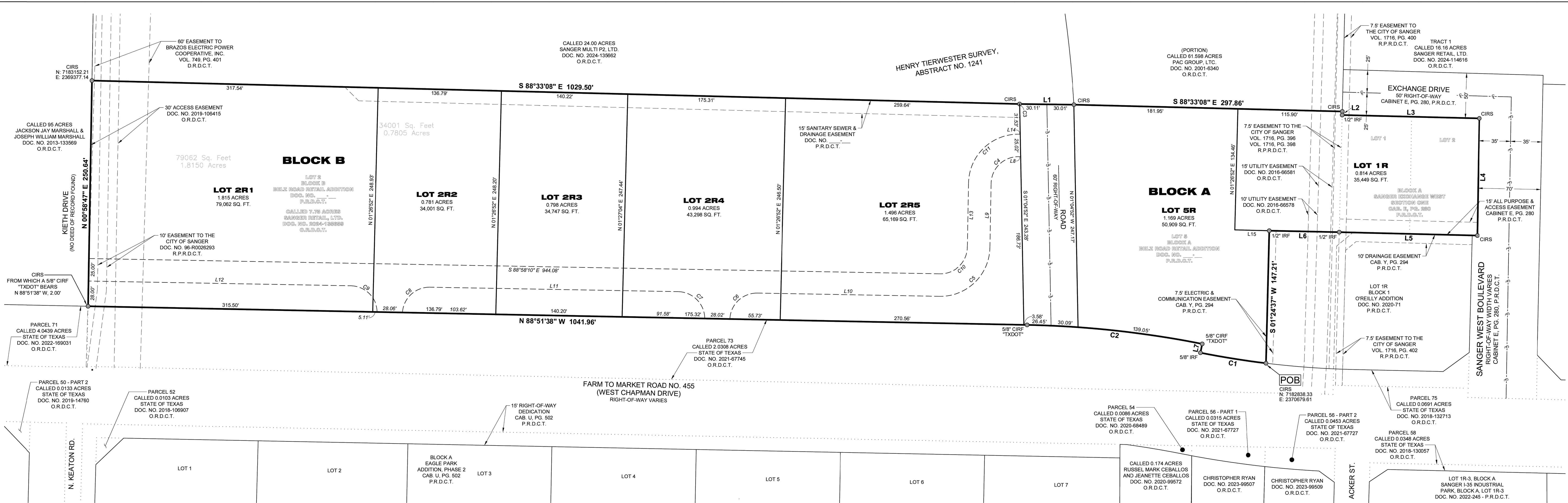
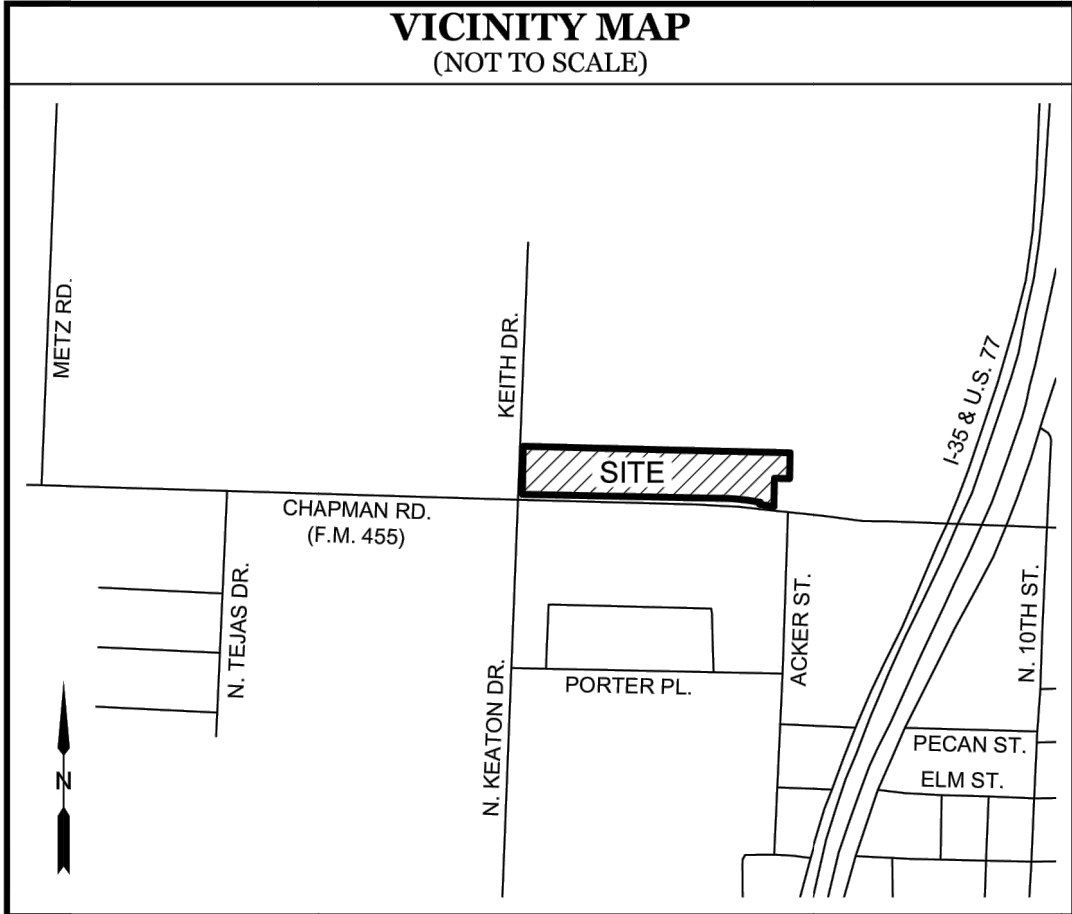
20 10 5 0 20

SCALE: 1" = 20'

SHEET NUMBER:

1
OF 1

REVISION 1 - 01/23/2026



LEGEND	
PG.	= PAGE
VOL.	= VOLUME
CAB.	= CABINET
POB	= POINT OF BEGINNING
IRF	= IRON ROD FOUND
CIRF	= CAPPED IRON ROD FOUND
1/2" IRON ROD SET	= GREEN
PLASTIC CAP STAMPED	= PLASTIC CAP STAMPED
"EAGLE SURVEYING" SET	= "EAGLE SURVEYING" SET
DOC. NO.	= DOCUMENT NUMBER
P.R.D.C.T.	= PLAT RECORDS, DENTON COUNTY, TEXAS
O.R.D.C.T.	= OFFICIAL RECORDS, DENTON COUNTY, TEXAS
R.P.R.D.C.T.	= REAL PROPERTY RECORDS, DENTON COUNTY, TEXAS

Project

2108.092-46

Date

07/07/2025

Drafter

DJJ

EAGLE SURVEYING, LLC
222 S. Elm Street, Suite: 200
Denton, TX 76201
(940) 222-3009
TX Firm #10194177

OWNER'S CERTIFICATE

STATE OF TEXAS §
COUNTY OF DENTON §

WHEREAS, **SANGER RETAIL, LTD.**, is the owner of a 7.75 acre tract of land out of the Henry Tierwester Survey, Abstract Number 1241, situated in the City of Sanger, Denton County, Texas, being all of a called 7.75 acre tract of land conveyed to Sanger Retail, LTD. by General Warranty Deed with Vendor's Lien of record in Document Number 2024-135659 of the Official Records of Denton County, Texas, and being all of Lots 1 and 2, Block A, Sanger Exchange West, Section One, a subdivision of record in Cabinet E, Page 280 of the Plat Records of Denton County, Texas, and being more particularly described by metes & bounds as follows:

BEGINNING, at a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the curving North right-of-way line of Farm to Market 455 (right-of-way varies), being the North line of a called Parcel 73 - 2.0308 acre tract of land conveyed to the State of Texas by Agreed Final Judgement of record in Document Number 2021-67745 of said Official Records, being the Southwest corner of Lot 1R, Block 1 of O'Reilly Addition, Lot 1R, Block 1, a subdivision of record in Document Number 2020-71 of the Plat Records of Denton County Texas, for the most Southerly Southeast corner of said 7.75 acre tract;

THENCE, with the curving North right-of-way line of Farm to Market 455, along the North line of said Parcel 73, being the common South line of said 7.75 acre tract, the following four (4) courses and distances:

- Along a non-tangent curve to the right, having a radius of 982.00 feet, a chord bearing of N80°53'47"W, a chord length of 73.68 feet, a delta angle of 04°17'59", an arc length of 73.69 feet to a 5/8 inch iron rod found at the end of said curve;
- N11°51'13"E, a distance of 10.00 feet to a 5/8 inch iron rod with pink plastic cap stamped "TXDOT SURVEY MARKER, RIGHT-OF-WAY MONUMENT" found at the point of curvature of a non-tangent curve to the left;
- Along said non-tangent curve to the left, having a radius of 1108.00 feet, a chord bearing of N83°48'12"W, a chord length of 195.34 feet, a delta angle of 10°06'52", an arc length of 195.59 feet to a 5/8 inch iron rod with pink plastic cap stamped "TXDOT SURVEY MARKER, RIGHT-OF-WAY MONUMENT" found at the point of tangency of said curve;
- N88°51'38"W, a distance of 1041.96 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the East line of a called 95 acre tract of land conveyed to Jackson Jay Marshall and Joseph William Marshall by deed of record in Document Number 2013-133569 of said Official Records, being the Southwest corner of said 7.75 acre tract, from which a 5/8 inch iron rod with pink plastic cap stamped "TXDOT SURVEY MARKER, RIGHT-OF-WAY MONUMENT" found at the Northwest corner of said Parcel 73, being the Northeast corner of a called Parcel 71 - 4.0439 acre tract of land conveyed to the State of Texas by Agreed Final Judgement of record in Document Number 2022-169031 of said Official Records bears N88°51'38"W, a distance of 2.00 feet;

THENCE, N00°58'47"E, leaving the North right-of-way line of Farm to Market 455, being the North line of said Parcel 73, along the East line of said 95 acre tract, being the common West line of said 7.75 acre tract, a distance of 250.64 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set for the Southwest corner of a called 24.00 acre tract of land conveyed to Sanger Multi P2, Ltd. by General Warranty Deed with Vendor's Lien of record in Document Number 2024-135662 of said Official Records, being the Northwest corner of said 7.75 acre tract;

THENCE, leaving the East line of said 95 acre tract, along the South line of said 24.00 acre tract, being the common North line of said 7.75 acre tract, the following two (2) courses and distances:

- S88°33'08"E, a distance of 1029.50 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set;
- S89°17'06"E, a distance of 60.12 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set for the Southeast corner of said 24.00 acre tract;

THENCE, S88°33'08"E, along the North line of said 7.75 acre tract, a distance of 297.86 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the West terminus of Exchange Drive, a 50' wide right-of-way dedicated in Sanger Exchange West, Section One, a subdivision of record in Cabinet E, Page 280 of said Plat Records, being the common East line of said 61.598 acre tract, being the Northeast corner of said 7.75 acre tract;

THENCE, S01°26'23"W, along the common West terminus of Exchange Drive, being the common East line of said 7.75 acre tract, a distance of 3.95 feet to a 1/2" iron rod found for the Northwest corner of Lot 1, Block A of said Sanger Exchange West, Section One;

THENCE, S88°36'05"E, departing the East line of said 7.75 acre tract, along the South right-of-way line of Exchange Drive, being the common North line of Lots 1 and 2, Block A of said Sanger Exchange West, Section One, a distance of 152.27 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the intersection of the South line of Exchange Drive and the West right-of-way line of Sanger West Boulevard, a variable width right-of-way dedicated in said Sanger Exchange West, Section One, being the Northeast corner of said Lot 2;

THENCE, S00°59'04"W, along the West right-of-way line of Sanger West Boulevard, being the common East line of said Lot 2, a distance of 130.12 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set for the Southeast corner of said Lot 2;

THENCE, N89°36'05"W, along the West right-of-way line of Sanger West Boulevard, in part the North line of said Lot 1R, being the common South line of said Lots 2 and 1, Block A of said Sanger Exchange West, Section One, a distance of 153.30 feet to a 1/2" iron rod with green plastic cap stamped "EAGLE SURVEYING" set for the Southwest corner of said Lot 1, being the most Easterly Southeast corner of said 7.75 acre tract;

THENCE, along the North and West lines of said Lot 1R, being the common irregular East line of said 7.75 acre tract, the following two (2) courses and distances:

- N88°48'42"W, a distance of 77.60 feet to a 1/2 inch iron rod found at the Northwest corner of said Lot 1R;
- S01°24'37"W, a distance of 147.21 feet to the **POINT OF BEGINNING** and containing an area of 8.205 Acres, or (357,391 Square Feet) of land, more or less.

OWNER'S DEDICATION

STATE OF TEXAS §
COUNTY OF DENTON §

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS:

THAT, **SANGER RETAIL, LTD.**, does hereby adopt this plat, designating herein described property as **BELZ ROAD RETAIL ADDITION, BLOCK A, LOTS 1R & 5R AND BLOCK B, LOTS 2R-1 THRU 2R-5**, an addition to the City of Sanger, Denton County, Texas, and does hereby dedicate to public use forever all streets, alleys, parks, watercourses, drains, easements and public places thereon shown for the purpose and consideration therein expressed. No buildings, fences, trees, shrubs or other improvements or growths shall be constructed or placed upon, over or across the drainage and utility easements as shown. Said drainage and utility easements being hereby reserved for the mutual use and accommodation of all public utilities desiring to use same. All and any public utility shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of its respective system on the drainage and utility easement and all public utilities shall at all times have the full right of ingress and egress to or from and upon the said drainage and utility easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining and adding to or removing all or parts of its respective systems without the necessity at any time of procuring the permission of anyone.

OWNER: **SANGER RETAIL, LTD.**

BY: _____ Date _____

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing Instrument, and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF THE OFFICE this _____ day of _____, 2025.

Notary Public in and for the State of Texas _____

CERTIFICATE OF SURVEYOR

STATE OF TEXAS §
COUNTY OF DENTON §

I, **MATTHEW RAABE**, Registered Professional Land Surveyor, do hereby certify that this plat was prepared from an actual survey made on the ground and that the monuments shown as shown on Map Number 4812102100. The location of the Flood Zone is approximate, no vertical datum was collected at the time of the survey. For the exact Flood Zone designation, please contact 1-(877) FEMA MAP.

PRELIMINARY
this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document

Matthew Raabe, R.P.L.S. # 6402

Date _____

STATE OF TEXAS §
COUNTY OF TARRANT §

BEFORE ME, the undersigned authority, on this day personally appeared **MATTHEW RAABE**, known to me to be the person whose name is subscribed to the foregoing Instrument, and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF THE OFFICE this _____ day of _____, 2025.

Notary Public in and for the State of Texas _____

GENERAL NOTES

- The purpose of this plat is to create six (6) lots of record, dedicate easements, and dedicate right-of-way.
- This property is located in **Non-Shaded Zone "X"** as scaled from the F.E.M.A. Flood Insurance Rate Map dated April 18, 2011 and is located in Community Number 480786 as shown on Map Number 4812102100. The location of the Flood Zone is approximate, no vertical datum was collected at the time of the survey. For the exact Flood Zone designation, please contact 1-(877) FEMA MAP.
- The bearings and grid coordinates shown on this plat are based on GPS observations utilizing the AllTerra RTK Network. State Plane Coordinate System, Texas North Central Zone (4202), North American Datum of 1983 (Adjustment Realization 2011).
- All interior property corners are marked with a 1/2-inch iron rod with a green plastic cap stamped "EAGLE SURVEYING" unless noted otherwise.
- Lot to lot drainage shall not be allowed.
- All lots comply with the minimum size requirements of the zoning district.
- This property may be subject to charges related to impact fees and the applicant should contact the city regarding any applicable fees due.
- All common areas, drainage easements, and detention facilities will be owned and maintained by the HOA/property owner. Any common area within the city's right-of-way will require a facilities agreement, to be reviewed and approved by the city.
- Notice - selling a portion of this addition by metes and bounds is a violation of state law and is subject to fines and withholding of utilities and building permits.
- This plat does not alter or remove existing deed restrictions, if any, on this property.
- The City of Sanger is not responsible for the design, construction, operation, maintenance or use of TK storm water detention area, and their associated private drainage easements, herein referred to as "features" to be developed and constructed by the Owners or their successors. Owners or successors agree to indemnify and hold harmless the City of Sanger, its officers, employees, and agents from any direct or indirect loss, damage, liability, or expense and attorney's fees for any negligence or omissions whatsoever arising out of the design, construction, operation, maintenance, condition or use of the "features" including any non-performance of the foregoing. Owners and successors accept full responsibility and liability for the "features". All of the above shall be covenants running with the land.

REPLAT
BELZ ROAD RETAIL ADDITION
BLOCK A, LOTS 1R & 5R
BLOCK B, LOTS 2R1 - 2R5
8.205 ACRES

BEING A REPLAT LOT 5, BLOCK A & LOT 2, BLOCK B
BELZ ROAD RETAIL ADDITION
RECORDED IN DOC. NO. _____, P.R.D.C.T.
HENRY TIERWESTER SURVEY, ABSTRACT No. 1241
CITY OF SANGER, DENTON COUNTY, TEXAS

CURVE TABLE					
CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	982.00'	73.69'	4°17'59"	N 80°53'47" W	73.68'
C2	1108.00'	195.59'	10°06'52"	N 83°48'12" W	195.34'
C3	1322.70'	2.01'	0°05'13"	N 03°43'16" W	2.01'
C4	30.00'	47.12'	90°00'00"	S 46°05'34" W	42.43'
C5	55.00'	86.33'	89°56'15"	S 46°03'42" W	77.74'
C6	30.00'	46.47'	88°45'37"	S 46°39'01" W	41.96'
C7	30.00'	46.42'	88°39'30"	N 44°38'25" W	41.93'
C8	30.00'	45.78'	87°26'24"	S 47°18'38" W	41.47'
C9	30.00'	45.73'	87°20'17"	N 45°18'02" W	41.43'
C10	30.00'	47.09'	89°56'15"	N 46°03'42" E	42.40'
C11	55.00'	86.39'	90°00'00"	N 46°05'34" E	77.78'

Approved:

Chairman, Planning & Zoning Commission
City of Sanger, Texas

Mayor
City of Sanger, Texas

Attested by:

City Secretary
City of Sanger, Texas

Date

Date

Date



1. SEE SHEET C-102 FOR GENERAL NOTES, STANDARD ABBREVIATIONS, AND STANDARD DRAWING LEGEND.
2. TOTAL LIMITS OF DISTURBANCE IS 0.86 AC.
3. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.), AS AMENDED AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
4. BOHLER ENGINEERING TX, LLC HAS NO CONTRACTUAL, LEGAL, OR OTHER RESPONSIBILITY FOR JOB SITE SAFETY OR JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME.
5. THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION ONLY. REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR MUST ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE ALL DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
6. CONTRACTOR MUST RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS, OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT, WITH BOHLER ENGINEERING, IN WRITING, AND RESPONDED TO BY BOHLER, IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
7. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER OF RECORD AND OTHER PUBLIC AGENCIES HAVING JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK AND DEMOLITION WORK.
8. THE LOCATION OF EXISTING UNDERGROUND UTILITIES AS INDICATED ON THE PLAN IS APPROXIMATE. CONTRACTOR TO FIELD LOCATE ALL UNDERGROUND EXISTING UTILITIES LOCATED IN THE AREA OF WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CALL TEXAS811 PRIOR TO CONSTRUCTION FOR ASSISTANCE IN LOCATING EXISTING UNDERGROUND UTILITIES. SURFACE UTILITIES SHOWN IN AN APPROXIMATE LOCATION. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION TO DETERMINE UNDERGROUND UTILITY LOCATIONS AND DEPTH. UNDERGROUND UTILITY LOCATIONS SHOWN ARE TO STANDARD OF ACCURACY BASED ON UTILITY MARKOUT METHOD NOTED IN THE REFERENCED SURVEY. CONTRACTOR IS RESPONSIBLE FOR RECORDING ANY UTILITY CONFLICT PRIOR TO STARTING CONSTRUCTION OF RELATED ADJACENT INFRASTRUCTURE AND NOTIFYING THE ENGINEER OF RECORD IN WRITING OF ANY CONFLICTS.
9. CONTRACTOR TO COORDINATE ALL UTILITY REMOVAL, RELOCATION, & ABANDONMENT WITH THE APPROPRIATE UTILITY SERVICE PROVIDER. CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDER PRIOR TO DISRUPTING SERVICE. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL UTILITY SERVICES TO ADJACENT PROPERTIES DURING ALL PHASES OF CONSTRUCTION.
10. CONTRACTOR TO REMOVE ANY UTILITY SERVICES NO LONGER UTILIZED WITHIN THE PROJECT PARCEL AND REMOVE BACK TO THE MAIN SERVICE LINE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL STANDARDS AND REGULATIONS.
11. ALL SIDEWALKS AND CURB AND GUTTER SECTIONS SHALL BE REMOVED BY SAWCUTTING THE NEAREST CONTROL JOINT AHEAD FROM THE LOCATION DESIGNATED FOR REMOVAL ON THE PLANS. EXISTING PAVEMENT SHALL BE SAWCUT IN ALL LOCATIONS WITHIN THE PROJECT PARCEL WHERE CONFLICT OR CONFLICTOR SHALL BE SAWCUT PAVEMENT NOT EXPLICITLY SHOWN IN THIS PLAN TO ENSURE COMPLIANCE WITH PROPOSED GRADES IF EXISTING CONCRETE IS PRESENT AND MODIFICATION IS NECESSARY.
12. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COSTS SHALL BE INCLUDED IN BASE BID. CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO EXISTING INFRASTRUCTURE AND SHALL REPLACE AND/OR REPAIR IN KIND.
13. CONTRACTOR TO ESTABLISH NEW BENCHMARKS IF EXISTING BENCHMARK WILL BE DISTURBED OR REMOVED.
14. CONTRACTOR TO REMOVE EXISTING TREES OR PLANTS AS SHOWN ON THE TREE DISPOSITION PLAN WITHIN THE PROJECT PARCEL OF DISTURBANCE. CONTRACTOR TO OBTAIN APPROVAL FROM THE OWNER AND ENGINEER OF RECORD PRIOR TO REMOVING EXISTING TREES NOT SHOWN ON THE TREE DISPOSITION PLAN TREES TO BE PRESERVED SHALL BE ADEQUATELY FENCED PRIOR TO CONSTRUCTION.
15. THIS PLAN WAS PREPARED WITH SITE BOUNDARY, TOPOGRAPHY, UTILITY, AND ROAD INFORMATION TAKEN FROM A SURVEY PREPARED BY A LAND SURVEYOR. SEE SHEET C-101 FOR SURVEY REFERENCE.

ABBREVIATION	DESCRIPTION
(TBR)	TO BE REMOVED

LIMIT OF DISTURBANCE	LOD
----------------------	---

REVISIONS

[illegible]

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY
REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION
DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	TXA250140.00-0A
DRAWN BY:	PJC/MBS
CHECKED BY:	MJH
DATE:	02/03/2026
CAD I.D.:	P-CIVL-EXDM

PROJECT:

— FOR

brakes plus 

**PROPOSED
MINOR AUTO SERVICE
NWC FM 455 AND ACKER STREET
SANGER, TX 76266**

2600 NETWORK BLVD., SUITE 310
FRISCO, TX 75034
Phone: (469) 458-7300
TX@BohlerEng.com
TBPE NO. 18065



SHEET NUMBER

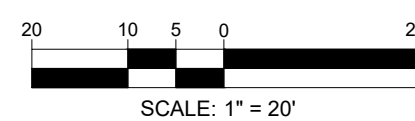
C-201

ORG. DATE - 02/03/2026



**THIS PLAN TO BE UTILIZED
FOR DEMOLITION PURPOSES
ONLY**

SEE SHEET C-101 FOR PROJECT BENCHMARKS





ORG. DATE - 02/03/2026

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

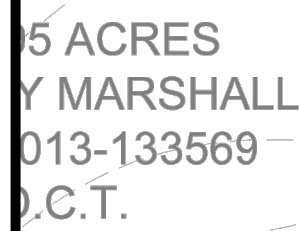
THE INFORMATION, DESIGN AND CONSTRUCTION OF THE ABOVE PROJECTS AND PLAN SET ARE SOLELY THE PROPERTY OF BOHLER AND SHALL NOT BE REPRODUCED OR USED FOR ANY OTHER PROJECTS WITHOUT THE WRITTEN PERMISSION OF BOHLER.

C-302

Feb 03, 2026



ORG. DATE - 02/03/2026



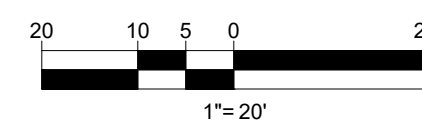
NOTE: NO 100-YEAR FLOODPLAIN EXISTS ON THE SITE

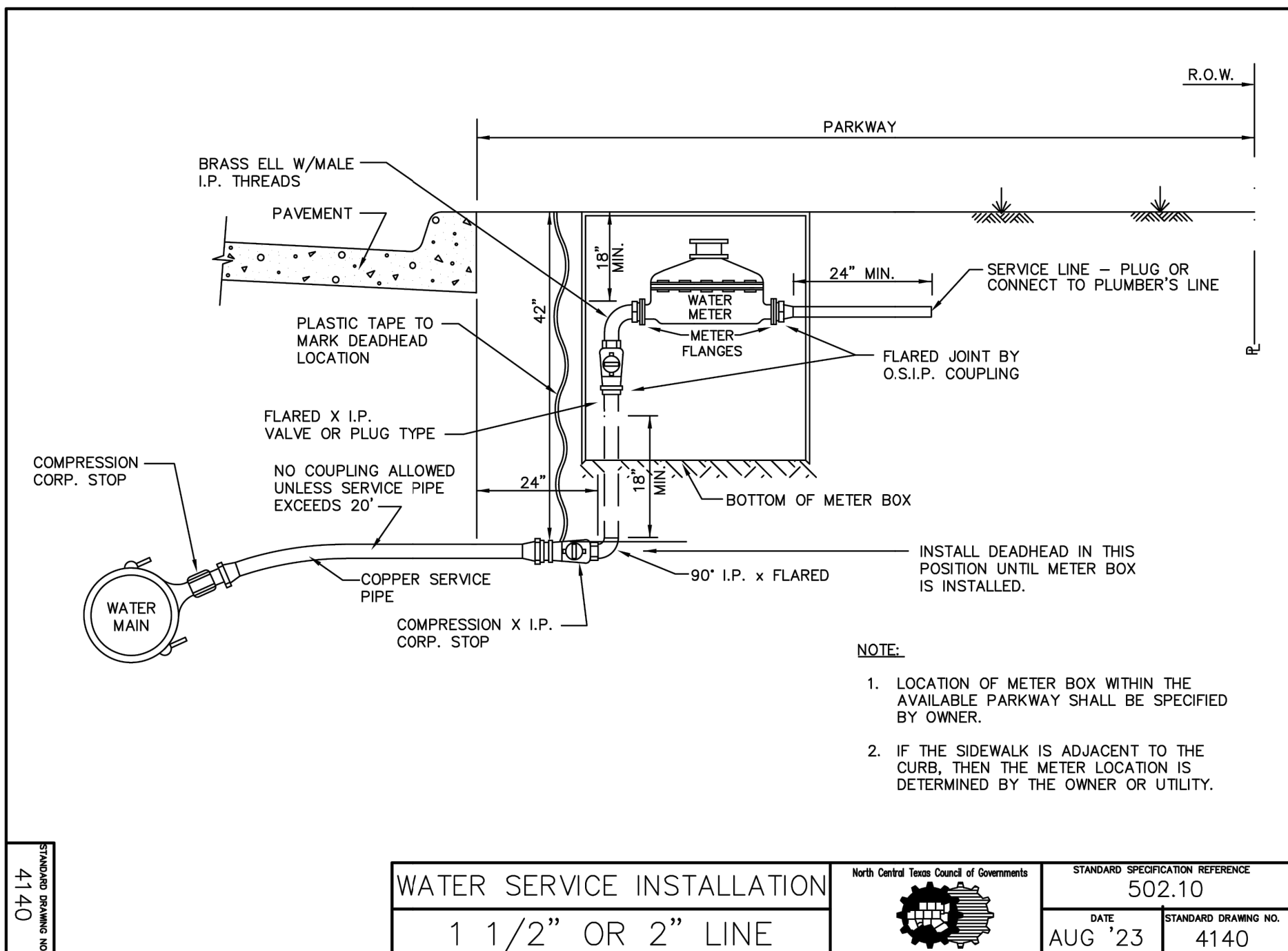


BOHLER TM

SITE CIVIL AND CONSULTING ENGINEERING

LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SOILS AND FOUNDATIONS
PERMITTING SERVICES
TRANSPORTATION SERVICES

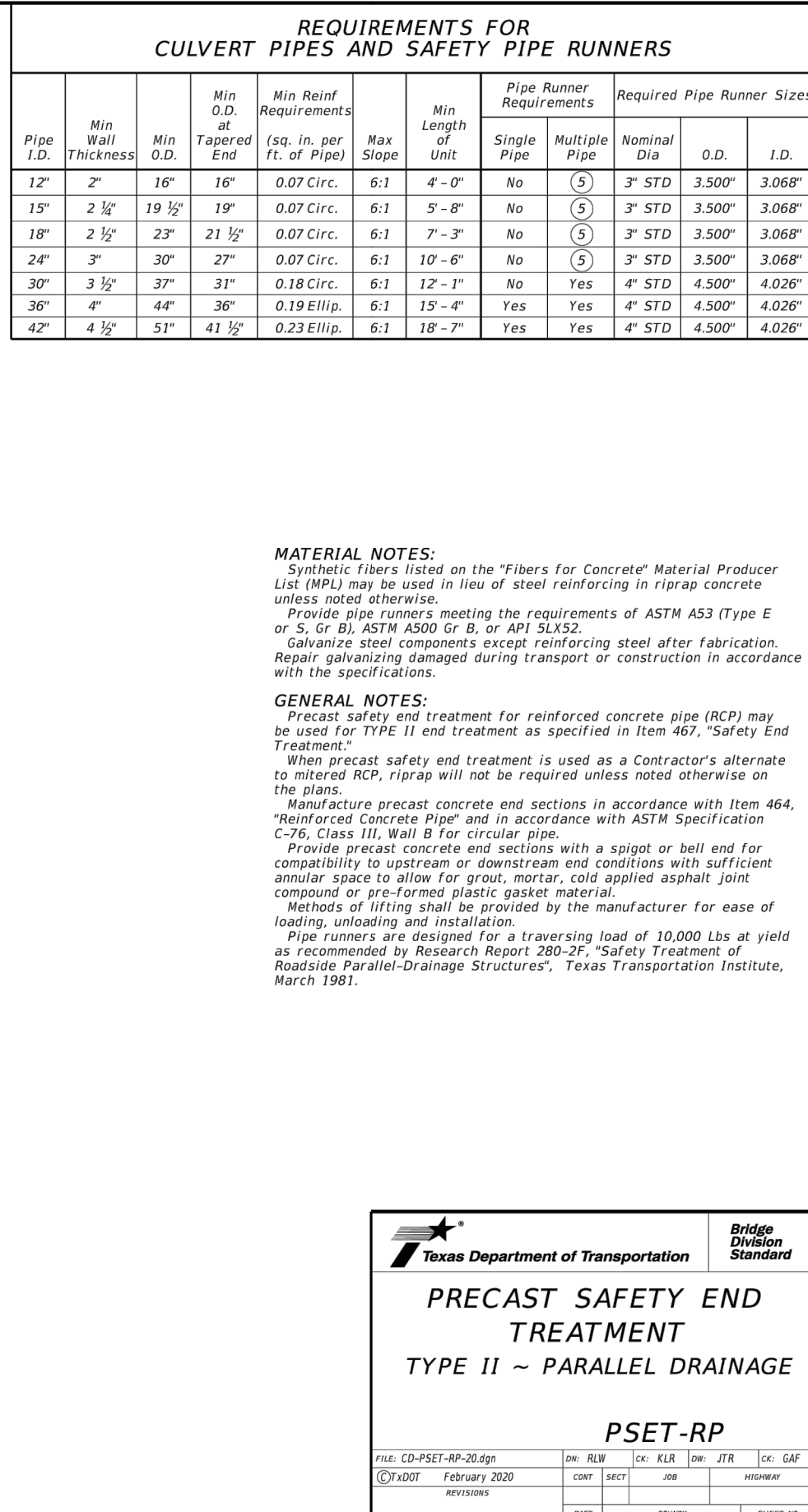
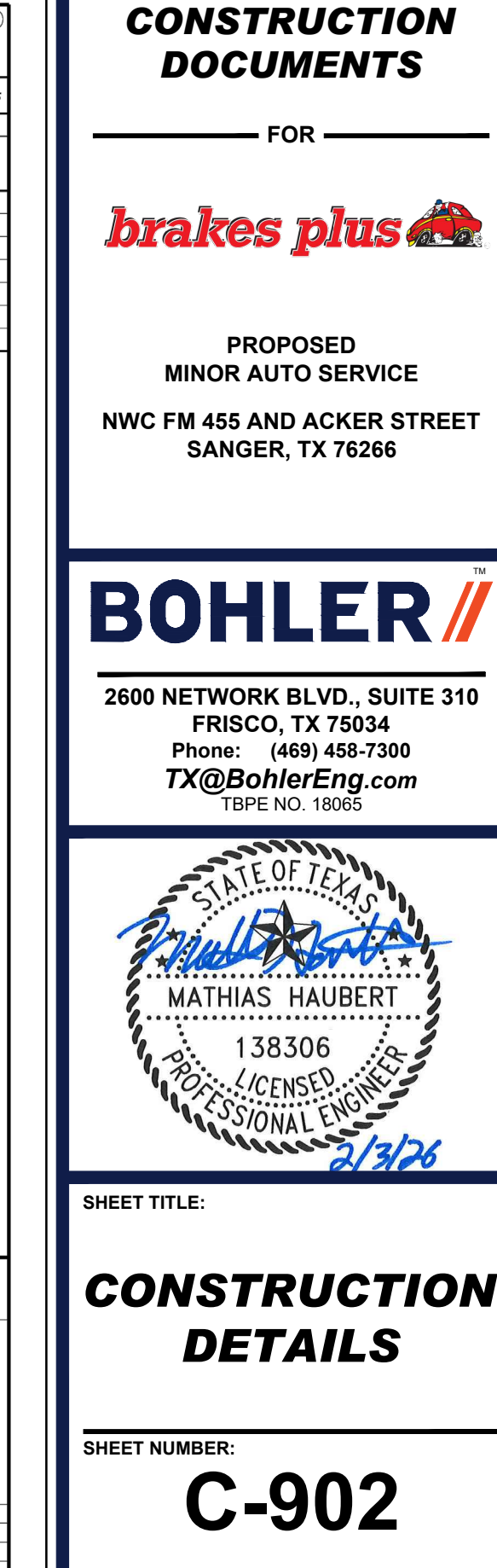
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11

North Central Texas Council of Governments

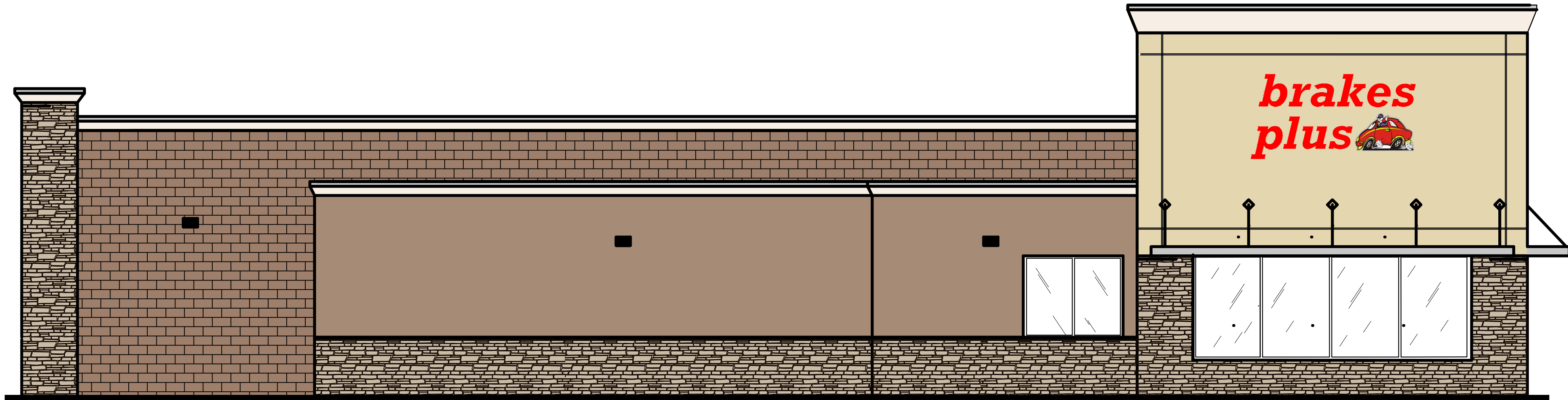
STANDARD SPECIFICATION REFERENCE	
502.10	
DATE	STANDARD DRAWING NO.
AUG '23	4140





brakes plus

SANGER, TEXAS



GENERAL NOTES

- WE CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE AND INFORMATION, AND IN ACCORDANCE WITH ACCEPTED PROFESSIONAL STANDARDS, WE HAVE COMPLIED WITH APPLICABLE PORTIONS OF ANSI A117.1 2003 EDITION PERTAINING TO BUILDING ACCESSIBILITY FOR THE PHYSICALLY HANDICAPPED (AR34-401 THROUGH 34-411), IBC CHAPTER STANDARDS AND 1990 AMERICANS WITH DISABILITIES ACT (ADA) TITLE III ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES.
- ALL DIMENSIONS ARE TO THE FACE OF STUD AT FRAME WALLS AND TO THE FACE OF MASONRY WALLS AS SHOWN, UNLESS NOTED OTHERWISE.
- INSTALL SEALANT AT ALL INTERIOR AND EXTERIOR JOINTS, SEAMS, CONNECTIONS OF OPENINGS WHICH WOULD ALLOW WATER OR AIR INFILTRATION EXCEPT AS NOTED OTHERWISE. SEALANT COLOR TO MATCH ADJACENT SURFACE. COLOR REQUIRES ARCHITECTS APPROVAL.
- DOOR OPENINGS IN FRAME CONSTRUCTION WHICH ARE NOT DIMENSIONED ARE EITHER CENTERED IN THE WALL OR LOCATED 5" FROM THE FACE OF STUD TO FINISH JAMB
- ALL HANDICAPPED FACILITIES SHALL BE IDENTIFIED WITH APPROVED SIGNAGE.
- THE CONTRACTOR IS RESPONSIBLE FOR PRODUCING A WEATHER TIGHT BUILDING - - DETAILS AND OMISSIONS TO DRAWINGS NOTWITHSTANDING. ALL DRAWING CONFLICTS WHICH MAY NOT ALLOW THIS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF TH ARCHITECT.
- DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND PLANS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT.
- ALL FLOORS WITH DRAINS ARE SLOPED MINIMUM $\frac{1}{8}$ " PER FOOT TO DRAIN UNLESS NOTED OTHERWISE.
- LOCATION OF EXISTING UTILITIES ARE SHOWN TO THE BEST OF OUR KNOWLEDGE. CONTRACTOR SHALL HAVE THE RESPONSIBILITY OF VERIFYING IN THE FIELD BEFORE CONSTRUCTION STARTS, AND COORDINATING ALL NEW UTILITY LOCATIONS, CONNECTIONS, AND PENETRATIONS W/ CIVIL ENGINEER.
- ALL REQUIRED EXITS SHALL BE OPERABLE FROM THE INSIDE WITHOUT SPECIAL KNOWLEDGE OR THE USE OF A KEY.
- PROVIDE FULL 2X6 WOOD BLOCKING AS REQUIRED TO SECURELY ANCHOR ALL WALL MOUNTED EQUIPMENT(E.G., CABINETS, TOILET ROOM, ACCESSORIES, HARDWARE, ETC.). BLOCKING SHALL PROVIDED A RIGID CONNECTION CAPABLE OF SUPPORTING LOADS AS DETERMINED BY MANUFACTURER. PROVIDE SOLID 2X6 WOOD BLOCKING SECURED TO 2 MAIN WALL STUDS TO SECURELY SUPPORT ALL WALL STOPS (DOOR BUMPER).
- THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE WITH ALL TRADES, SIZES AND LOCATIONS OF ALL OPENINGS OF MECHANICAL AND ELECTRICAL EQUIPMENT, EQUIPMENT PADS, AS WELL AS POWER, WATER, AND DRAIN INSTALLATIONS, BEFORE PROCEEDING WITH WORK, ANY CONCERNS OF STRUCTURAL CONFLICTS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. A REASONABLE RESPONSE TIME SHALL BE ALLOWED.
- ALL FLOOR OR WALL OPENINGS REQUIRED FOR PIPES, DUCTS,CONDUITS, ETC. SHALL BE SEALED IN A MANNER APPROVED BY THE ARCHITECT.
- ROOMS ENCLOSED WITH 1-HOUR RATED WALLS REQUIRE RATED DOORS, 1-HOUR PARTITIONS PENETRATING THROUGH AND ABOVE ROOF SURFACE AND STRUCTURE ABOVE. ANY DUCTS PASSING THROUGH WALLS REQUIRE FIRE DAMPERS. ANY CONDUIT OF PIPING REQUIRES RATED SEALANT.
- STRUCTURAL NOTES SHALL GOVERN TYPICAL CONDITIONS WHETHER OR NOT SPECIFICALLY DETAILED OR NOTED.
- CONTROL JOINTS SHALL BE PROVIDED IN CONCRETE FLOOR SLABS AND MASONRY WALLS WHETHER OF NOT SPECIFICALLY REFERENCED ON PLANS. THE MAXIMUM AREA PERMITTED BETWEEN JOINTS SHALL BE 650 SQUARE FEET FOR REINFORCED CONCRETE SLABS, 250 SQUARE FEET FOR NON-REINFORCED SLABS AND 400 SQUARE FEET FOR MASONRY UNLESS SHOWN OTHERWISE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY ELECTRIC CONNECTIONS, METERS, TRANSFORMERS AND GENERATORS.
- IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ELECTRICAL RECEPTACLES AND SWITCHES TO AVOID CASEWORK, DOORS, ETC.
- CAULK ALL INTERIOR AND EXTERIOR JOINTS.
- FOLLOW ALL RECOMMENDATIONS OF THE SOILS REPORT BY TERRACON (214-630-1010), PROJECT #94255494 DATED 9/6/25.

PROJECT TEAM

OWNER:	EXPRESS OIL 1890 SOUTHPARK DRIVE BIRMINGHAM, AL 35244 ANDY GOLDEN 205943-5770
ARCHITECT:	NORMAN L. HERMAN 5265 RIO GRANDE # 202 LITTLETON, COLORADO 80120 (303)385-1203 ATTN: NORMHERMAN@ARCODEV.COM
STRUCTURAL ENGINEER:	PERFORMANCE ENGINEERING 7400 EAST ORCHARD ROAD, # 240 ENGLEWOOD, COLORADO 80111 (303)721-3322 ATTN: TOM SCHOTT
MECHANICAL PLUMBING ELECTRICAL ENGINEER	LOREN PRIEST 12005 ANTELOPE TRAIL, PARKER, COLORADO 80138 (303)748-1189 ATTN: LOREN@EEPARKER.COM
CIVIL ENGINEER	BOHLER ENGINEERING 6017 MAIN STREET FRISCO, TEXAS ATTN: MATHIAS HAUBERT 469-458-7300 MHAUBERT@BOHLERENG.COM

SHEET INDEX

ARCHITECTURAL

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A2-1	FLOOR PLAN
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A2-3	REFLECTED CEILING PLAN
A2-4	ROOF PLAN
A3-1	EXTERIOR BUILDING ELEVATIONS
A4-1	BUILDING SECTIONS/ENVELOPE COMCHECK
A4-2	BUILDING SECTIONS
A4-3	WALL SECTIONS / DETAILS
A4-4	WALL SECTIONS / DETAILS
A4-5	WALL SECTIONSPlot
A4-6	DETAILS
A5-1	INTERIOR ELEVATIONS AND DETAILS
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MECHANICAL

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M0.2	MECHANICAL SEQUENCE OF OPERATIONS/SPECS/SCHEDULES
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E5.1	LIGHTING COM CHECK

LOCATION-LEGAL DESCRIPTION

FM 455 W
SANGER, TEXAS

CODE INFORMATION

APPLICABLE CODES

2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL PLUMBING CODE
2021 NATIONAL MECHANICAL CODE
2021 NATIONAL FIRE CODE
2023 NATIONAL ELECTRICAL CODE
2021 IECC

TYPE OF CONSTRUCTION

TYPE V-B

MAXIMUM BUILDING HEIGHT

1 STORY

ALLOWABLE BUILDING AREA

9000 s.f.

ACTUAL BUILDING AREA

4950 s.f.

OCCUPANCY

M AND S-1
(MOTOR VEHICLE REPAIR GARAGE) NON-SEPARATED USES

OCCUPANT LOAD COUNT

SALES / WAITING AREA - 607 SF/ 60 OLF = 11 OCCUPANTS
BREAK ROOM - 125 SF/15 = 9 OCCUPANTS
ADMIN / OFFICE - 116 SF / 100 OLF = 2 OCCUPANTS
INVENTORY - 504 SF / 300 OLF = 2 OCCUPANTS
SERVICE BAYS - 3,221 SF / 200 = 16 OCCUPANTS
RESTROOMS - 148F /100 2 OCCUPANTS

TOTAL OCCUPANT LOAD = 42 OCCUPANTS

FIRE PROTECTION

BUILDING IS NON SPRINKLED

ROOFING MATERIALS

REQUIRED: CLASS "C" (CAN BE CLASS A OR B PER CODE)
PROVIDED: CLASS "A" ROOF

ROOF INSULATION REQUIREMENT: MEETS ASTM C 1289
ROOF INSULATION PROVIDED: MEETS ASTM C 1289

NUMBER OF EXITS REQUIRED:
2 REQUIRED.....2 PROVIDED

FIRE RESISTANCE OF EXTERIOR WALLS :
NONE REQUIRED.....DISTANCE GREATER THAN 30 FEET AND TYPE 5
CONSTRUCTION HAS NO REQUIREMENTS

FIRE RESISTANCE OF ELEMENTS :
TYPE 5B CONSTRUCTION HAS NO REQUIREMENTS

OPENING PROTECTION REQUIREMENTS:
NO REQUIREMENTS - FIRE SEPARATION DISTANCE EXCEEDS 30 FEET

PLUMBING FIXTURES

2 RR. REQ.
2 RR. PROVIDED

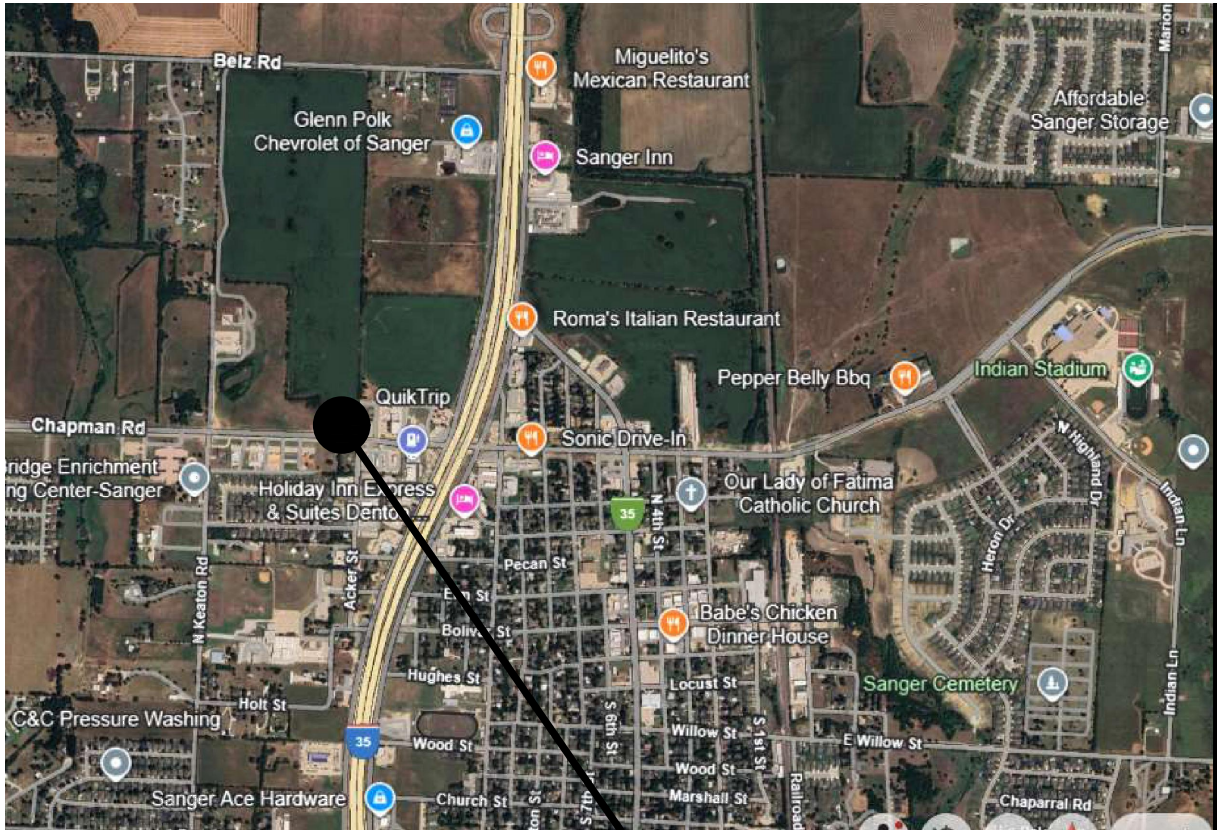
NUMBER OF EXITS

2 REQ.
2 PROVIDED

EXIT WIDTH

42 x 0.2 = 9" REQ.
36" PROVIDED

VICINITY MAP



BRAKES PLUS
LOCATION

VICINITY PLAN

HAZARDOUS GLAZING REQUIREMENTS:
THESE REQUIREMENTS HAVE BEEN MET.... SEE SHEET A6-1

PARAPET REQUIREMENTS - PARAPETS MEET REQUIREMENTS. THEY EXCEED 30" IN HEIGHT HAD HAVE NO REQUIREMENT FOR FIRE RESISTANCE (SEE EXT. WALLS ABOVE)

REQUIRED PLUMBING FIXTURES:

- 2 RESTROOMS REQUIRED AND TWO PROVIDED
- 2 WATER CLOSETS REQUIRED AND TWO PROVIDED
- 2 LAVATORIES REQUIRED AND TWO PROVIDED
- HANDICAP WATER FOUNTAIN REQUIRED AND 1 PROVIDED
- 1 SERVICE SINK REQUIRED AND ONE PROVIDED.

ROOF DRAINAGE REQUIREMENTS:
ROOF DRAINAGE HAS BEEN PROVIDED PER #1503. SEE SUBMITTAL DWG A2-4 AND PLUMBING DRAWINGS

BRAKES PLUS

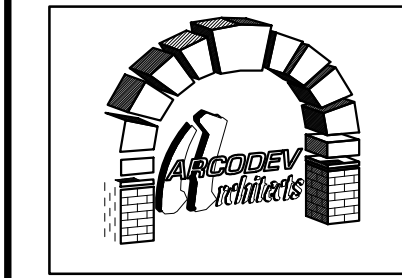
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76866



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	01/23/26	FOR BLDG DEPT. SUBMITTAL
	01/27/26	FOR CONSTRUCTION CONTRACT

ARCODEV_JOB #: _____
CLIENTJOB #: _____
DRAWN BY: _____ NLH
CHECKED BY: _____ NLH
DATE OF ISSUE: 010.01.25



45 SPYGLASS DRIVE
LITTLETON, CO 80133
VOICE: 303.881-8925
NORMHERMAN@ARCODEV.COM

SHEET

A0

COVER SHEET



 **SITE PLAN**
NO SCALE

BRAKES PLUS

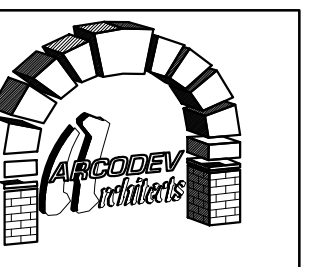
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

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CLIENTJOB #:	-
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CHECKED BY:	NLH
DATE OF ISSUE:	010.01.25

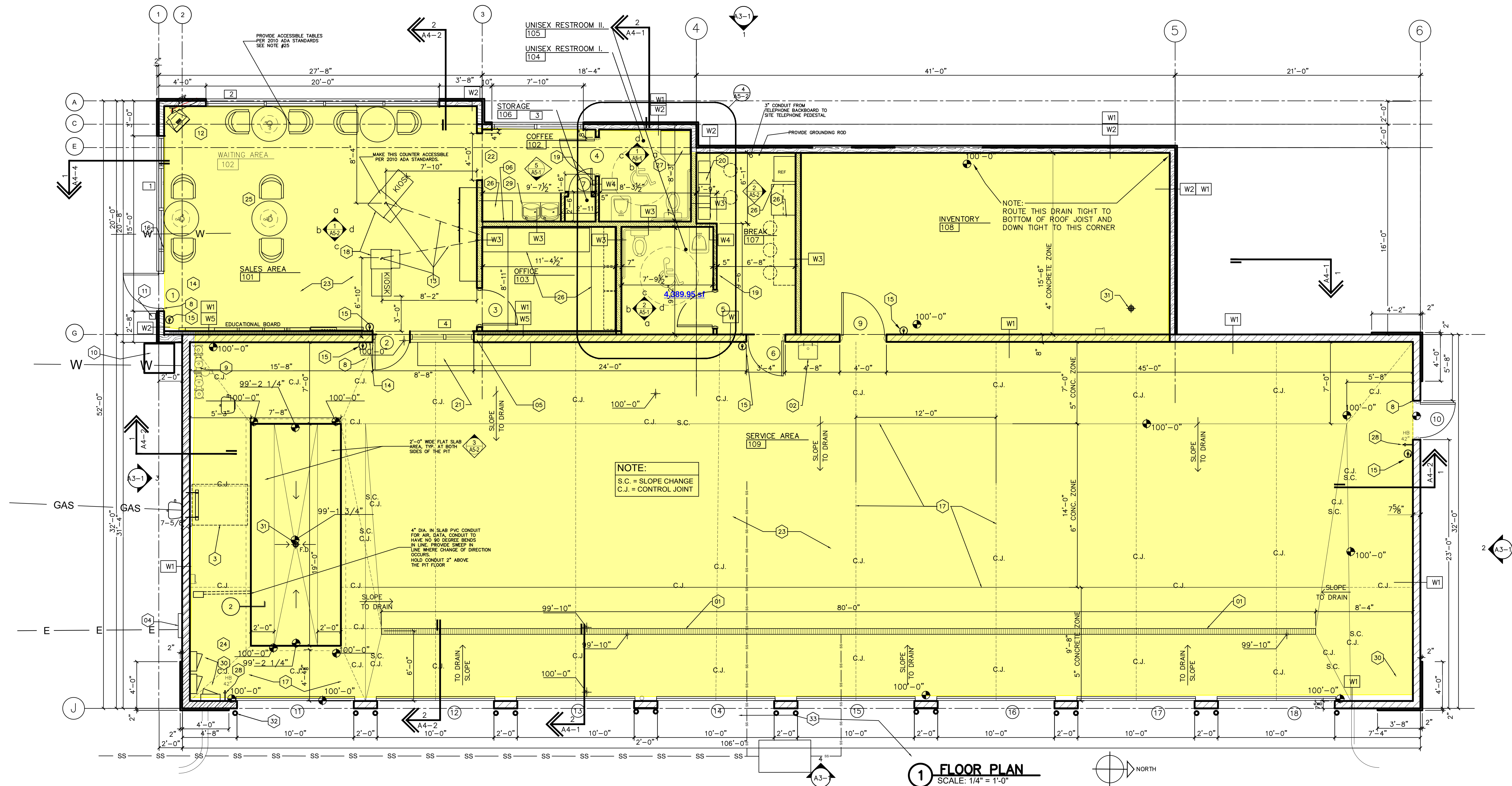


45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
ORMHERMAN@ARCODEV.COM

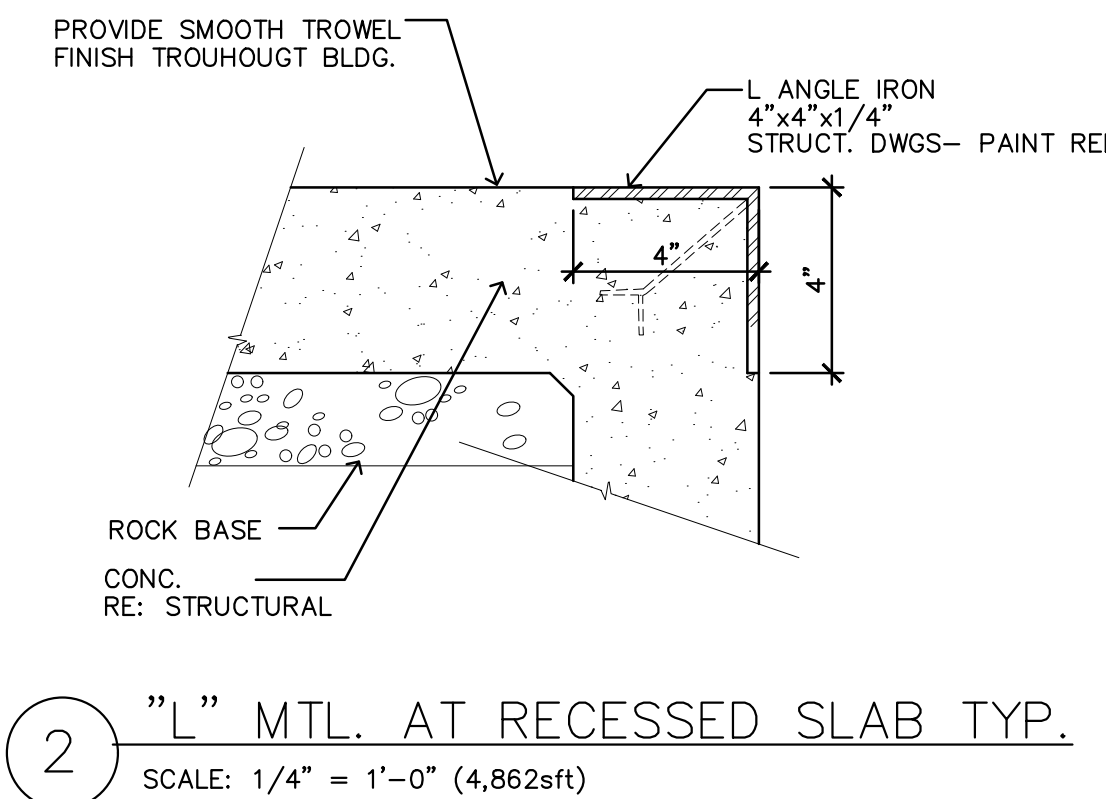
SHEET

A1-1

SITE PLAN AND DETAILS



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



2 "L" MTL. AT RECESSED SLAB TYP.
SCALE: 1/4" = 1'-0" (4,862sf)

WALLS ASSEMBLIES:				
ID	WALL TYPE / SYMBOL	DESCRIPTION	FIRE RATING	UL LISTING
W1	8" NOM. CONCRETE BLOCK FULL HEIGHT / BECK	NOMINAL (see PLAN) 16x16 LIGHT WEIGHT CONCRETE BLOCK. PROVIDE CORE-FILL 500 - INSULATION BY TALLOWED CHEMICAL PRODUCTS (OR EQUAL) HIGHORY C.C. - MIN R VALUE OF 10. ALSO SEE STRUCT. DWGS.	-	-
W2	NEW WOOD STUD WALL	3/4" GYP BD EACH SIDE OVER 2X6 WOOD STUDS @ 16" O.C. TO ELEVATION NOTED ON DRAWINGS. PROVIDE MOISTURE RESISTANT GYP BD AT WET LOCATIONS IN RESTROOM. USE EXTERIOR SHEATHING ON OUTSIDE SURFACES. PROVIDE MIN. FULL BATT R-19 INSULATION W/ VAPOR BARRIER (30 KRAFT PAPER OF EQUAL CLASS II VAPOR BARRIER). PROVIDE WATER BARRIER "GREENGUARD MAX BUILDING WRAP". PROVIDE DRAINAGE PER IRC SECTION 1404.2 & INSTALLED PER 1405.	-	-
W3		3/4" GYP BD EACH SIDE OVER 2X6 WOOD STUDS @ 16" O.C. TO UNDERSIDE OF STRUCTURE ABOVE.	-	-
W31		3/4" GYP BD EACH SIDE OVER 2X6 WOOD STUDS AT 16" O.C. TO 6" 12'-0" AFF. PROVIDE MOISTURE RESISTANT GYP BD AT WET LOCATIONS IN RESTROOM. PROVIDE FULL BATT SOUND INSULATION.	-	-
W4	NEW WOOD STUD WALL	3/4" GYP BD EACH SIDE OVER 2X4 WOOD STUDS @ O.C. @ 9'-0" AFF PROVIDE FULL BATT SOUND INSULATION.	-	-
W5	NEW FURRING	3/4" GYP BD OVER 2X2 WOOD FURRING STUDS @ 16" O.C. TO 6" ABOVE CEILING. PROVIDE FULL BATT INSULATION IN FURRED CAVITY	-	-
W6	NOT USED	NOT USED	-	-
GENERAL WALL CONSTRUCTION NOTES:				
PROVIDE SLIP TRACK HEAD RECEPTOR WHERE REQUIRED. ALL WALLS AROUND RESTROOMS TO RECEIVE R-19 BATT INSULATION. ALL RESTROOM CEILINGS TO RECEIVE R-19 BATT INSULATION.				

FLOOR PLAN KEYNOTES:

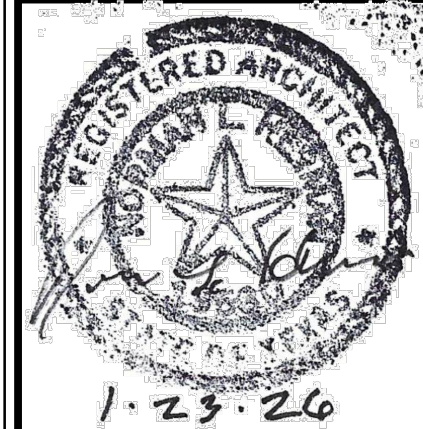
- 6" WIDE CONTINUOUS PRE-FORMED TRENCH DRAIN. MAX OPENING = 8". SEE PLUMBING DRAWINGS AND DRAIN SPEC.
- DEEP-BASIN SERVICE SINK. RE: MECHANICAL DRAWINGS. PROVIDE 48" HIGH STAINLESS STEEL PANEL ON WALL BEHIND SINK.
- ROOF LADDER (HATCH ABOVE) - RE: 2/A2-4 - COORDINATE EXACT LOCATION WITH ROOF JOIST LOCATIONS.
- ELECTRICAL CONNECTION. REFER TO ELECTRICAL DRAWINGS.
- PROVIDE ELECTRICAL CONDUIT FROM 18" AFF TO ABOVE CEILING AND PENETRATE THROUGH MASONRY WALL TO OFFICE.
- COLD WATER LINE FOR COFFEE MACHINE. RE: PLUMBING DRAWINGS.
- N/A.
- PROVIDE TACTILE EXIT SIGN - SEE SHEET A4-5
- BACK FLOW PREVENTER. SEE CIVIL DRAWINGS. REFER TO PLUMBING DRAWINGS.
- PROVIDE HALLON FD-2014K DEPOSITORY SAFE LOCK TYPE: DUEL KEY GRAY WITH SALSURBY INDUSTRIES 3395 BLK STAND
- KNOX BOX OBTAINED FROM LOCAL FIRE DEPARTMENT AND INSTALLED BY CONTRACTOR. VERIFY LOCATION WITH FIRE DEPARTMENT PRIOR TO INSTALLATION.
- PROVIDE BACKING AS REQUIRED TO SUPPORT TV MOUNTING BRACKET. COORDINATE WITH OWNER.
- CONDUIT IN SLAB FOR POWER & DATA
- PROVIDE SIGN AT EXIT "MAXIMUM NUMBER OF OCCUPANTS"
- PROVIDE TYPE 208 FIRE EXTINGUISHER (VERIFY TYPE, SIZE, AND LOCATION WITH FIRE DEPARTMENT)
- PROVIDE GYP BD AT END OF PART. (PAINT)
- CONTROL JOINTS TYP.U
- KNOX AND PRINTER CABINET FURNISHED AND INSTALLED BY CONTRACTOR
- PROVIDE ACCESSIBLE SIGNAGE AT RESTROOM AS REQUIRED PER CODE
- LOCKERS PROVIDED AND INSTALLED BY GENERAL CONTRACTOR
- SERVICE COUNTER FURNISHED AND INSTALLED BY CONTRACTOR.
- 22' 4'-0" W X 7'-4" H OPENING
- CONCRETE SLAB - RE: STRUCTURAL DRAWINGS.
- PROVIDE CONDUIT FOR CONTROLS AND PIPING TO LANDSCAPE MANIFOLD
- CONTRACTOR SHALL PROVIDE BISTRO TABLES AS SHOWN ON THE FLOOR PLAN AND DETAIL 5B SHEET A6-2.
- MILLWORK FURNISHED AND INSTALLED BY GENERAL CONTRACTOR
- 24" W X 30" H X 12" D UPPER CABINET FURNISHED AND INSTALLED BY GC. MOUNT BOTTOM AT 40" AFF.
- HOSE BIB. REFER TO PLUMBING DRAWINGS.
- WATER FOUNTAIN
- ELECTRICAL CIRCUIT PANELS
- FLOOR DRAIN
- CONCRETE FILLED 4" DIA. STEEL BOLLARD 36" HIGH WITH ROUNDED TOP - PAINT RED.
- PROVIDE 6" DEEP CONCRETE APRON PAD W/ STEEL REINFORCING 10' OUT FROM BUILDING.

GENERAL NOTES:

- PAIN EXPOSED UNFINISHED METALS PER SPECIFICATIONS. COLOR TO MATCH ADJACENT SURFACE IF NOT SPECIFIED.
- MAKE SURE TO HAVE A MINIMUM OF 6" CONCRETE UNDER HEAVY EQUIPMENT
- KEEP ALL EXPOSED PLUMBING AND CONDUIT LINES AT LEAST 6" ABOVE F.F.
- PROVIDE ANCHORS, BOLT AND OTHER NECESSARY FASTENERS AND BLOCKING AS REQUIRED AND ATTACH ACCESSORIES SECURELY TO WALLS AND PARTITIONS IN LOCATIONS AS SHOWN AS REQUIRED.
- PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY LOCAL FIRE MARSHALL. CONTRACTOR IS REQUIRED TO CONTACT FIRE DEPARTMENT FOR FIRE EXTINGUISHER TYPE AND EXACT MOUNTING LOCATIONS.
- ALL ELECTRICAL DEVICES SHALL BE EXPOSED SURFACE MOUNTED IN INSTALLATION BAYS. ALL DEVICES IN PUBLIC AREAS SHALL BE CONCEALED IN WALLS. PROVIDE POWER PER EQUIPMENT AND ALL ASSEMBLIES NOTED AS WELL.
- CONVENIENCE POWER IS INDICATED ON THIS DRAWING FOR REFERENCE. PROVIDE POWER PER EQUIPMENT AND ALL ASSEMBLIES NOTED AS WELL.
- FOLLOW ALL RECOMMENDATIONS OF THE SOILS REPORT BY TERRACON (214-630-1010). PROJECT #94255494, DATED SEPT. 16, 2025.
- NOT USED.
- ALL DIMENSIONS OF FACE OF STUDS AND FACE OF CMU BLOCKS

BRAKES PLUS

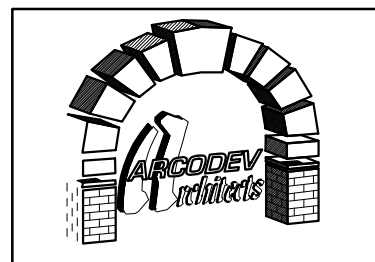
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76286



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	01.23.26	FOR BLDG DEPT. SUBMITAL
	01.27.26	FOR CONSTRUCTION CONTRACT

ARCOCODE JOB #:
CLIENT JOB #:
DRAWN BY: NLH
CHECKED BY: NLH
DATE OF ISSUE: 010.01.25

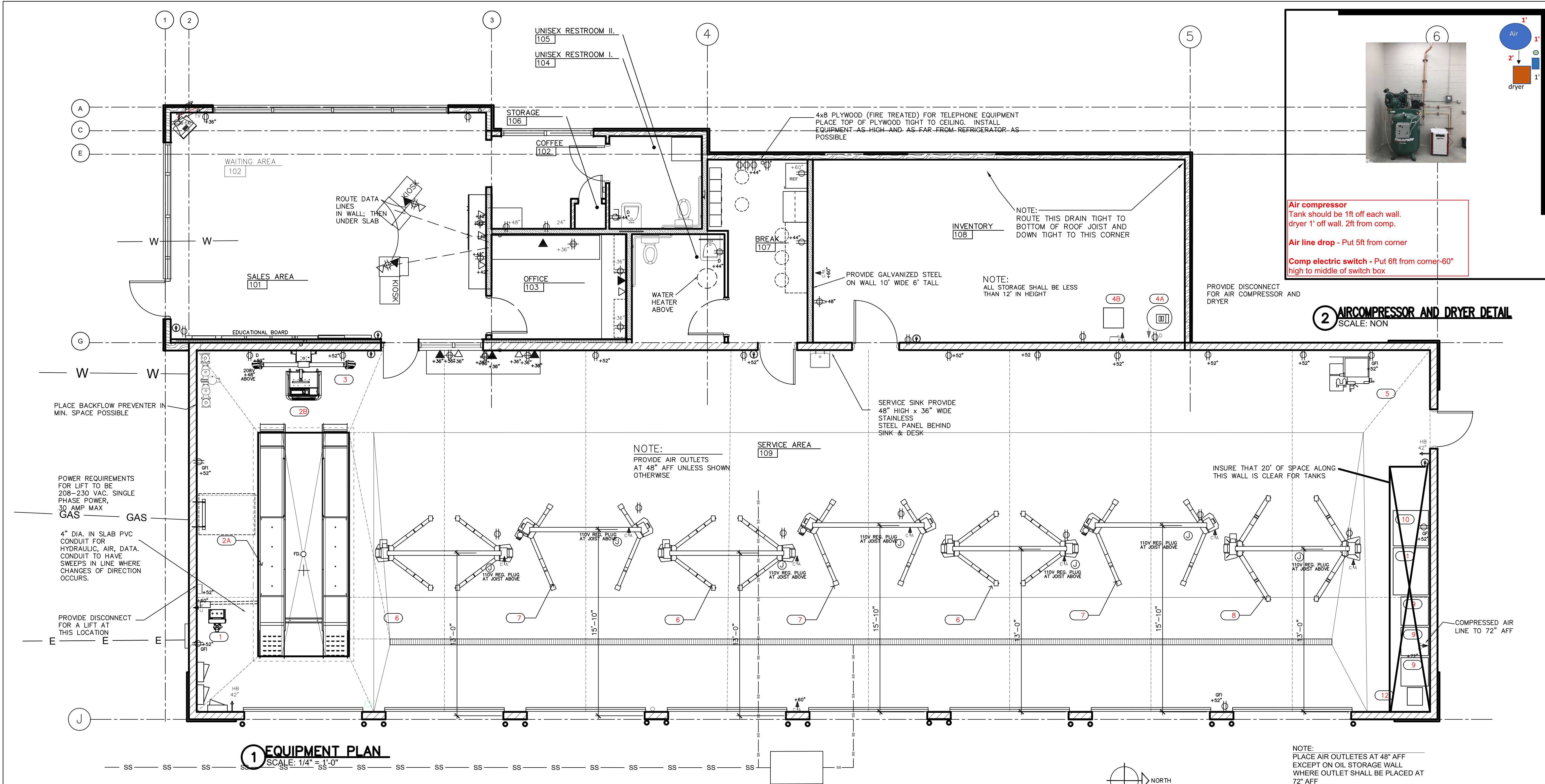


45 SPYGLASS DRIVE
LITTLETON, CO 80133
VOICE: 303.881-8925
NORM.HERMAN@ARCOCODE.COM

SHEET

A2-1

FLOOR PLAN



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

2 AIRCOMPRESSOR AND DRYER DETAIL
SCALE: NON



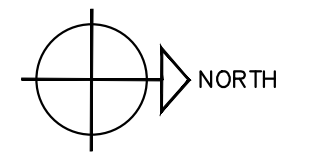
Air compressor
Tank should be 1ft off each wall.
dryer 1' off wall. 2ft from comp.

Air line drop - Put 5ft from corner

Comp electric switch - Put 6ft from corner-60"
high to middle of switch box

ID	DESCRIPTION	MANUFACTURER	MODEL NUMBER	LENGTH	DEPTH	HEIGHT	HP	VOLTAGE	AMPS	PHASE	NOTES
1	ALIGNMENT RACK - CONTROL BOX	HUNTER	RX10LFT-1S	19"	7'-4 1/2"	5'	-	208-230	28A	1	DEDICATED CIRCUIT
2	ALIGNMENT MACHINE	HUNTER	WA44S	36"	2'-6"	5'-8"	-	115	15A	1	DEDICATED CIRCUIT
3	ALIGNMENT SENSORS	HUNTER	HE421	8"-9"	1'-3"	10'-3"	-	120	15A	1	DEDICATED CIRCUIT
4A	AIR COMPRESSOR	CHAMPION	HR5D-12	5'-10"	2'-4"	4'-8"	5	208	30A	3	DEDICATED CIRCUIT 30 AMP, WITH DISCONNECT
4B	AIR COMPRESSOR - DRYER	HUNTER	BL500	44 1/2"	35 1/2"	-	1.5	115	15A	1	DEDICATED CIRCUIT (115V, 15 AMP)
6	ABOVE-GROUND 10K TWIN POST LIFT	ROTARY	SPO10	11'-6"	-	12'-5"	5	110	-	1	WITH SHOCKWAVE, NON-DEDICATED CIRCUIT
7	ABOVE-GROUND 10K A-TWIN POST LIFT	ROTARY	SPOA10	11'-6"	-	12'-5"	5	110	-	1	WITH SHOCKWAVE, NON-DEDICATED CIRCUIT
8	ABOVE-GROUND 12K TWIN POST LIFT	ROTARY	SPOA12RA	11'-6"	-	13'-8"	5	110	-	1	WITH SHOCKWAVE, NON-DEDICATED CIRCUIT
9	NEW OIL TANK	VALVOLINE	-	-	-	-	-	-	-	-	STACKABLE
10	USED OIL TANK	-	-	3'	4'	-	-	-	-	-	DBL WALL, UL LISTED
11	WASHER/COOLANT TANK	-	-	3'	3'	5'-1"	-	-	-	-	DBL WALL, UL LISTED
12	OIL DISPENSER	EP16	-	-	-	-	-	-	-	-	
13											
14											
15											
16											
17											
18											
19											

Purchase by	Install by	Description	Vendor	Model	Serial #	Qty.
Brakes Plus	Brakes Plus	Security System	Security Central			
Brakes Plus	Brakes Plus	Exterior Bldg. Signage		Logo Sign/28"x24" Panel Letters		1
Contractor	Contractor	Cable Work				1
Brakes Plus	Brakes Plus	Interior Signage / Sales Material	American Solutions			1
Brakes Plus	Brakes Plus	Credit card Machine				1
Brakes Plus	Brakes Plus	First Aid Cabinet	Allegas	RAC4659610		1
Brakes Plus	Brakes Plus	Open Sign / Needs One with Remote	Costco	283158		1
Brakes Plus	Brakes Plus	Countertop Hot/Cold Water Station	Costco			1
Contractor	Contractor	High/Low Water Cooler				1
Contractor	Contractor	Ameco Front Load Drive Safe W/ Key	Englewood Lock & Safe	DSF 2014K		1
Brakes Plus	Brakes Plus	Bulk Oil & ATF Tanks	Fluid All	DW165/DW275		4
Brakes Plus	Brakes Plus	ATF/5W/20 Stack Tanks	Fluid All	T120-11CV/120SS036		1
Brakes Plus	Brakes Plus	Tank Valves/ hoses/Dispenser/Etc.	Fluid All			1
Brakes Plus	Brakes Plus	Garage Door Locks	Home Depot/Menards			8
Brakes Plus	Brakes Plus	Night Drop Mail Box	Home Depot/Menards			1
Brakes Plus	Brakes Plus	Bench Brake Lathe	Hunter	BL555-AB		1
Brakes Plus	Brakes Plus	Alignment Camera Tower HawkEye Elite	Hunter	HE421ML		1
Brakes Plus	Brakes Plus	Alignment Rack	Hunter	RX10LFT-1S		1
Brakes Plus	Brakes Plus	Aligner Computer System - WA4213	Hunter	WA4213		1
Brakes Plus	Brakes Plus	Champion 7.5 hp/1120 Air Compressor 3 Ph	JAM			1
Brakes Plus	Brakes Plus	Compressor Dryer	JAM			1
Brakes Plus	Brakes Plus	Rotary 10K/2 Post Lift	JAM	SPO10TASW		1
Brakes Plus	Brakes Plus	Rotary 12K/2 Post Lift	JAM	SPO12TASW		1
Brakes Plus	Brakes Plus	Rotary 10K/2 Post Lift	JAM	SPOA10RASWYTRIO		1
Brakes Plus	Brakes Plus	Warehouse Racking Material	Lynch Material	(8') x 38" x 12" (8') 7x48"x24"		3
Brakes Plus	Brakes Plus	Shut Compressor	McGee Cos.	BRN7000		1
Brakes Plus	Brakes Plus	Refrigerator	Walmart			1
Brakes Plus	Brakes Plus	Refrigerator	Walmart			1
Brakes Plus	Brakes Plus	Refrigerator	Walmart			1
Brakes Plus	Brakes Plus	Refrigerator	Walmart			1
Brakes Plus	Brakes Plus	HD T.V. Antenna	Walmart			1
Brakes Plus	Contractor	2 Roll Toilet Paper Dispenser	Western Paper			3
Brakes Plus	Contractor	Hand Towel Dispenser	Western Paper			3
Brakes Plus	Contractor	Foam Hand Soap Dispenser	Western Paper			1
Brakes Plus	Brakes Plus	Phone & Data Cabling				1
Brakes Plus	Brakes Plus	Phone System				1
Brakes Plus	Brakes Plus	Showroom Furniture	IK-Log	OPT-05/GBS-3STR/GBS-48TP		1
Contractor	Contractor	LVT Tile Flooring & Adhesive	Bouliu			
Contractor	Contractor	Interior & Exterior Light Fixtures	Next Step Energy			



GENERAL NOTES:

- VERIFY ALL EQUIPMENT LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
- COORDINATE INSTALLATION OF EQUIPMENT ITEMS SUPPLIED BY OWNER.
- TELEPHONE SYSTEM PROVIDED BY VENDORS. COORDINATE SCHEDULE WITH GENERAL CONTRACTOR.
- COMPRESSED AIR LINE DROPS TO 48" AFF UNLESS NOTED OTHERWISE. REFER TO PLUMBING PLAN FOR COMPRESSED AIR LINE SIZES.
- AIR LINES SHALL BE COPPER.

ELECTRICAL LEGEND:			
	DUPLEX OUTLET		LIGHT SWITCH 56" AFF
	DEDICATED DUPLEX OUTLET		THREE-WAY LIGHT SWITCH 56" AFF
	AUTOCALVE RECEPTACLE		TELEPHONE BACKBOARD W/ OUTLET
	FOUR-PLEX OUTLET		ELECTRICAL PANEL
	220-VOLT OUTLET		TIME CLOCK
	FLOOR OUTLET		SIGN OUTLET
	TELEPHONE JACK		JUNCTION BOX
	TELEPHONE JACK +60"		THERMOSTAT
	DATA JACK		
	PLUGMODE		
	AC ABOVE COUNTER		
VERIFY ELECTRICAL REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION			

BRAKES PLUS

NW of FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266

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ARCOCODEY JOB #:

CLIENT/JOB #:

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CHECKED BY: NLH

DATE OF ISSUE: 010.01.25

45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
NORM@ARCOCODEY.COM

SHEET

A2-2

EQUIPMENT PLAN



NORTH

1. 2x4 ACoustICAL TILE CEILING GRID WITH ARMSTRONG "DUNE" - FINE FISURED SECOND LOOK 1" CEILING TILES. RE: ROOM FINISH SCHEDULE.
2. GYP DR CEILING OVER WOOD STUD FRAMING. PAINT: RE: ROOM FINISH SCHEDULE.
3. OPEN TO STRUCTURE ABOVE. PAINT: RE: ROOM FINISH SCHEDULE.
4. ROOF LADDER AND HATCH ABOVE - COORDINATE EXACT LOCATION WITH ROOF FRAMING.
5. UNIT HATCH - SEE PLUMBING SCHEDULE.
6. JUNCTION BOX FOR EXTERIOR WALL SONS.
7. NOT USED
8. LINE OF METAL AWNING
9. CENTER LIGHT FIXTURE IN ROOM
10. NA.
11. NA.
12. CENTER LIGHT FIXTURES BETWEEN OVERHEAD DOOR. MOUNT BOTTOM OF FIXTURE 2" BELOW BOTTOM OF OVERHEAD DOOR TRACK. TYPICAL
13. LINE OF OVERHEAD DOOR
14. MOUNT FIXTURES TIGHT TO STRUCTURE ABOVE. TYPICAL
15. CENTER FIXTURE OVER SERVICE DESK BELOW
16. DECK MOUNTED WATER HEATER. RE: PLUMBING DRAWINGS.

LIGHT FIXTURE SCHEDULE ALL FIXTURES FURNISHED AND INSTALLED BY GENERAL CONTRACTOR



COMMENTS
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FOR CONSTRUCTION CONTRACT

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CLIENTJOB #:	-
DRAWN BY:	NLI
CHECKED BY:	NLI
DATE OF ISSUE:	010.01.23



CEILING PLAN



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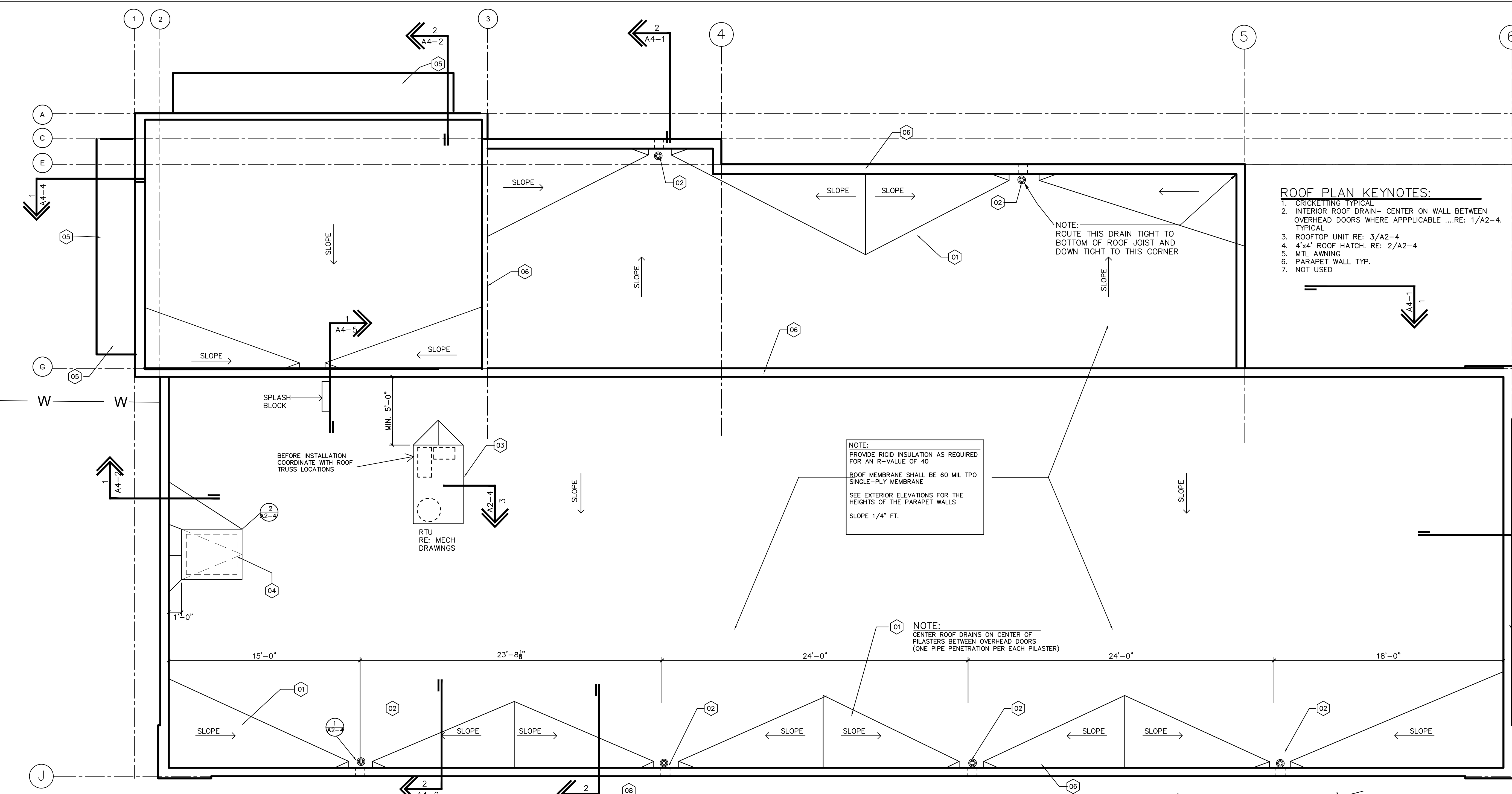
ARCODEV_JOB_#:
CLIENT_JOB_#:
DRAWN BY: NLH
CHECKED BY: NLH
DATE OF ISSUE: 010.01.25



45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
NORMHERMAN@ARCODEV.COM

SHEET

A2-4
ROOF PLAN

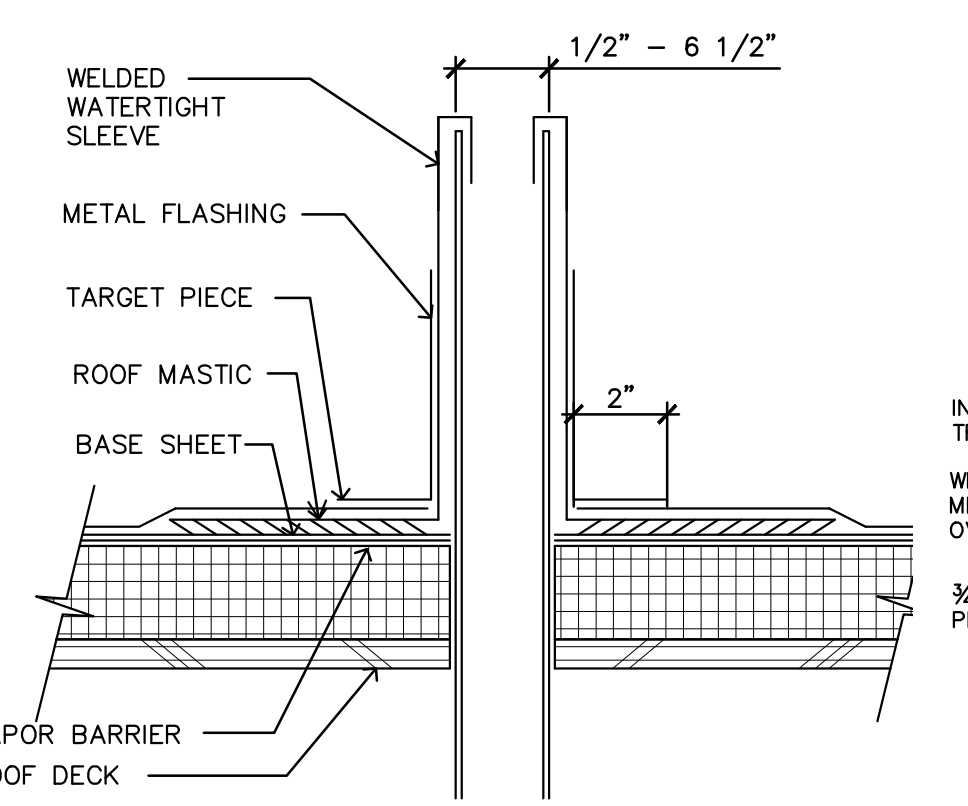


- ROOF PLAN KEYNOTES:
- CRICKETING TYPICAL
 - INTERIOR ROOF DRAIN- CENTER ON WALL BETWEEN OVERHEAD DOORS WHERE APPLICABLERE: 1/A2-4. TYPICAL
 - ROOFTOP UNIT RE: 3/A2-4
 - 4'x4' ROOF HATCH. RE: 2/A2-4
 - MTL AWNING
 - PARAPET WALL TYP.
 - NOT USED

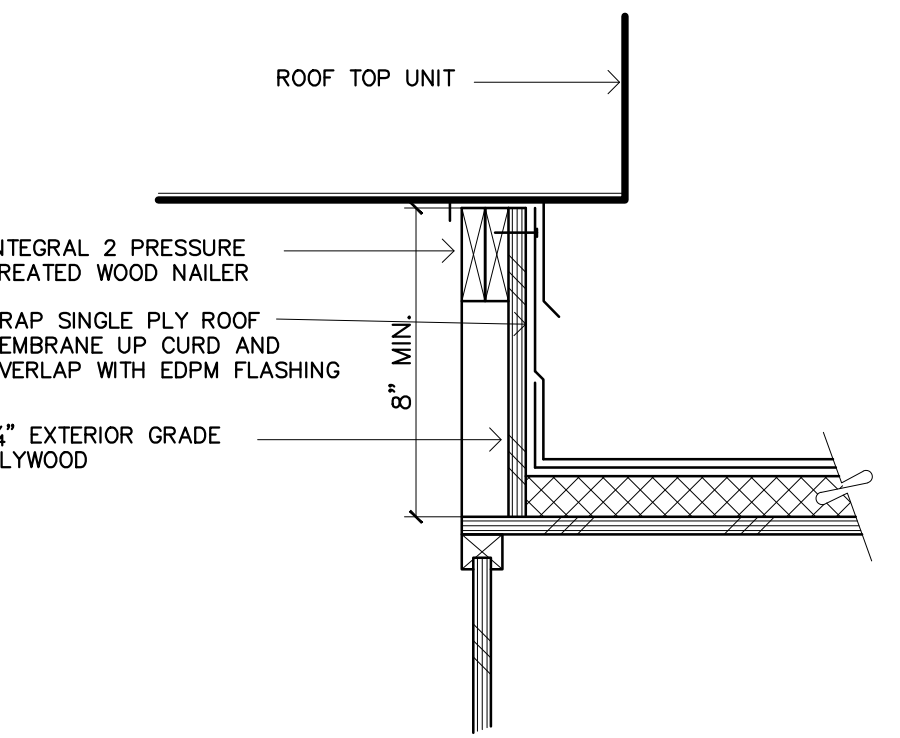
NOTE:
PROVIDE RIGID INSULATION AS REQUIRED FOR AN R-VALUE OF 40
ROOF MEMBRANE SHALL BE 60 MIL TPO SINGLE-PLY MEMBRANE
SEE EXTERIOR ELEVATIONS FOR THE HEIGHTS OF THE PARAPET WALLS
SLOPE 1/4" FT.

NOTE:
CENTER ROOF DRAINS ON CENTER OF PILASTERS BETWEEN OVERHEAD DOORS (ONE PIPE PENETRATION PER EACH PILASTER)

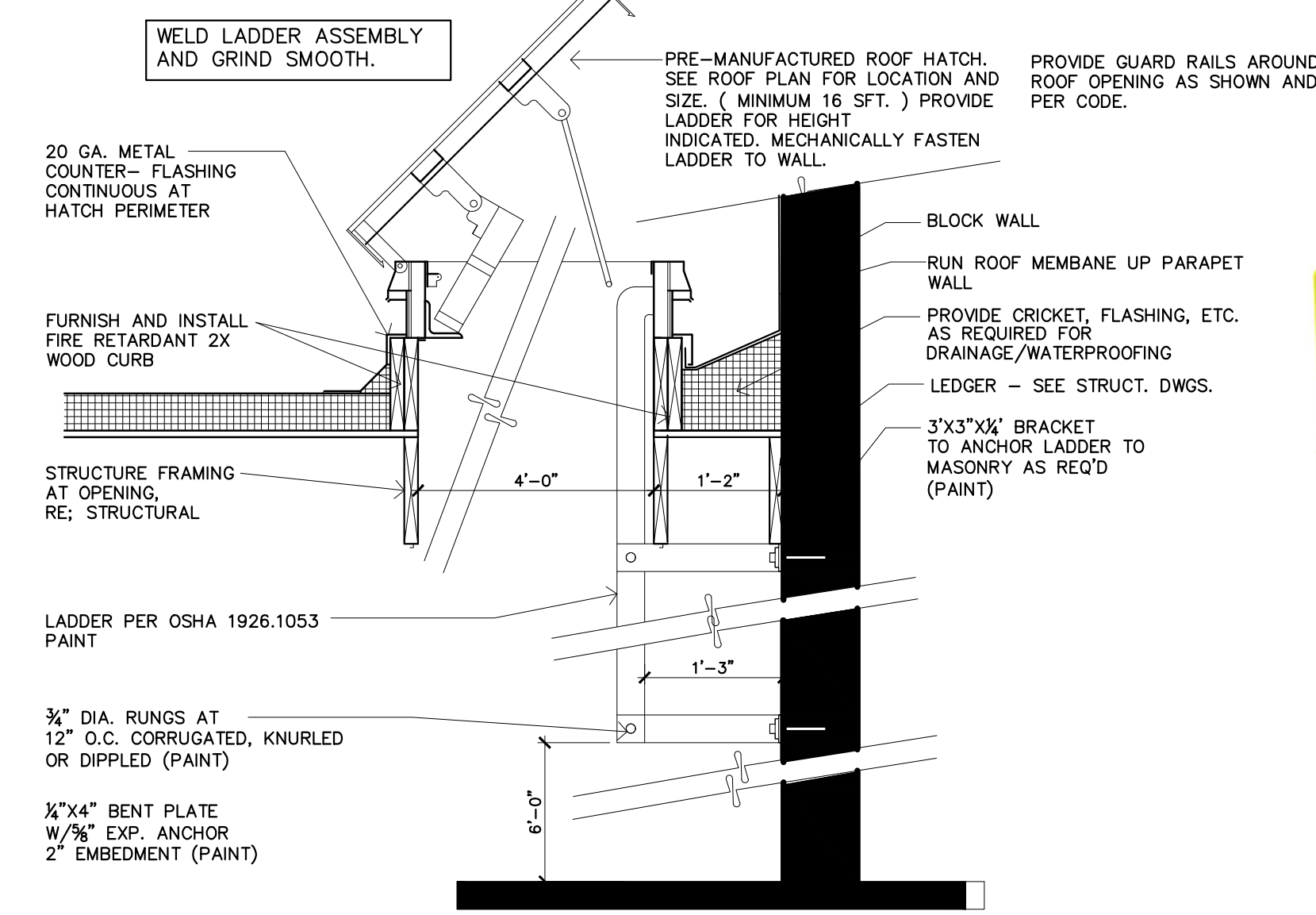
5 ROOF PLAN
SCALE: 1/4" = 1'-0"



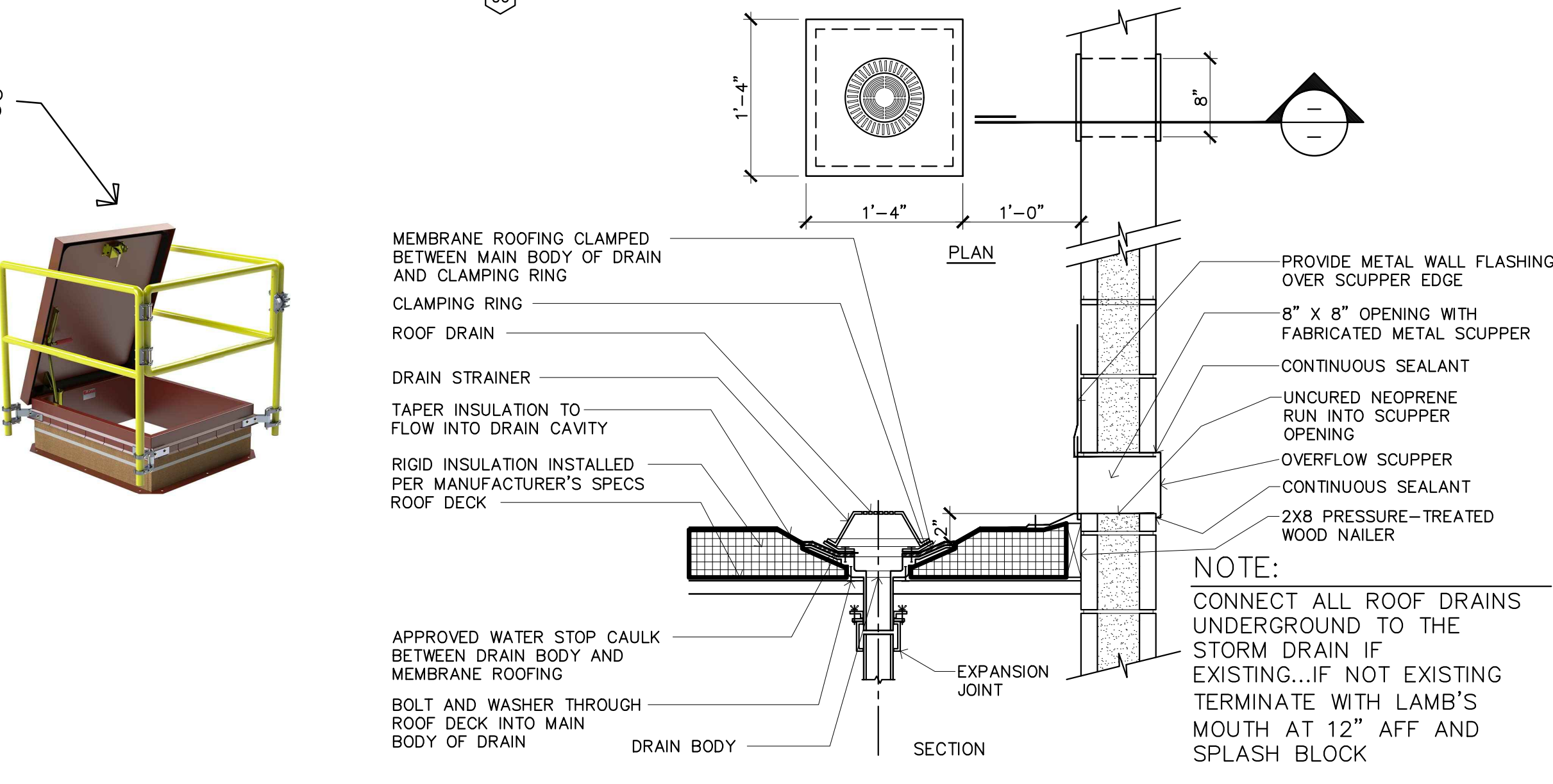
4 PIPE PENETRATION DETAIL
SCALE: 3" = 1'-0"



3 RTU CURB DETAIL
SCALE: 1 1/2" = 1'-0"



2 ROOF HATCH DETAIL
SCALE: 3/4" = 1'-0"

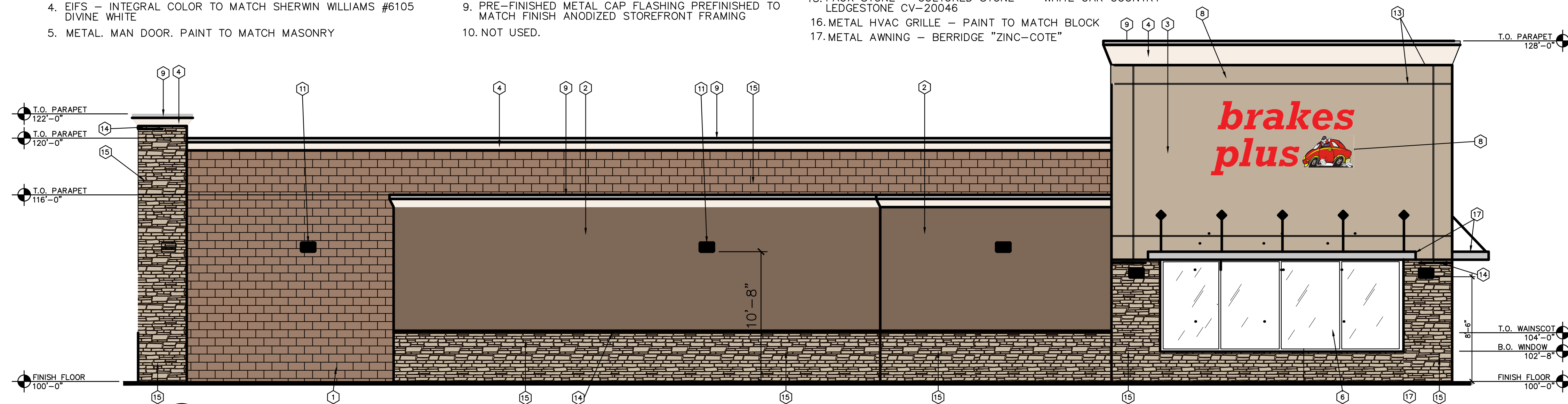


1 DOWNSPOUT / OVERFLOW DETAIL
SCALE: 1" = 1'-0"

1. SMOOTH FACE CONCRETE BLOCK BY BEST BLOCK
COLOR: MEDIUM BROWN - PROVIDE INTEGRAL WATER REPELLENT
2. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #2835
CRAFTSMAN BROWN
3. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #2834
BIRDS EYE MAPLE
4. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #6105
DIVINE WHITE
5. METAL. MAN DOOR. PAINT TO MATCH MASONRY

6. ALUMINUM/GLASS STOREFRONT
CLEAR ANODIZED ALUMINUM
7. ALUMINUM SECTIONAL OVERHEAD DOORS
CLEAR ANODIZED ALUMINUM
8. ILLUMINATED SIGNAGE (UNDER SEPARATE PERMIT)
9. PRE-FINISHED METAL CAP FLASHING PREFINISHED TO
MATCH FINISH ANODIZED STOREFRONT FRAMING
10. NOT USED.

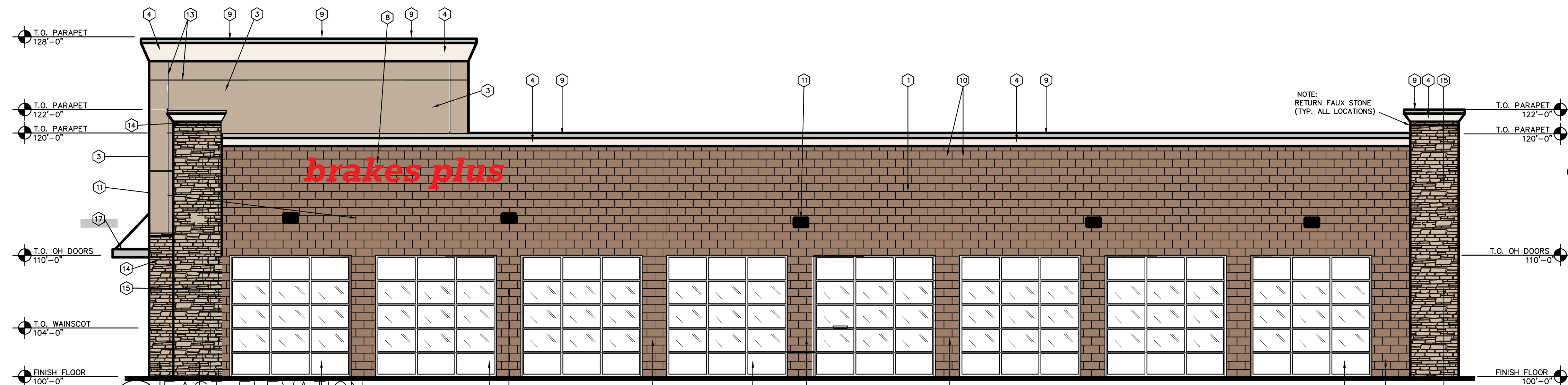
11. DECORATIVE LIGHT FIXTURE.
12. NOT USED.
13. 1 1/2" X 3/4" REVEAL
14. WATER SILL - FAUX STONE - CULTURED STONE - WHITE OAK COUNTRY LEDGESTONE CV-20046
15. FAUX STONE - CULTURED STONE - WHITE OAK COUNTRY LEDGESTONE CV-20046
16. METAL HVAC GRILLE - PAINT TO MATCH BLOCK
17. METAL AWNING - BERRIDGE "ZINC-COTE"



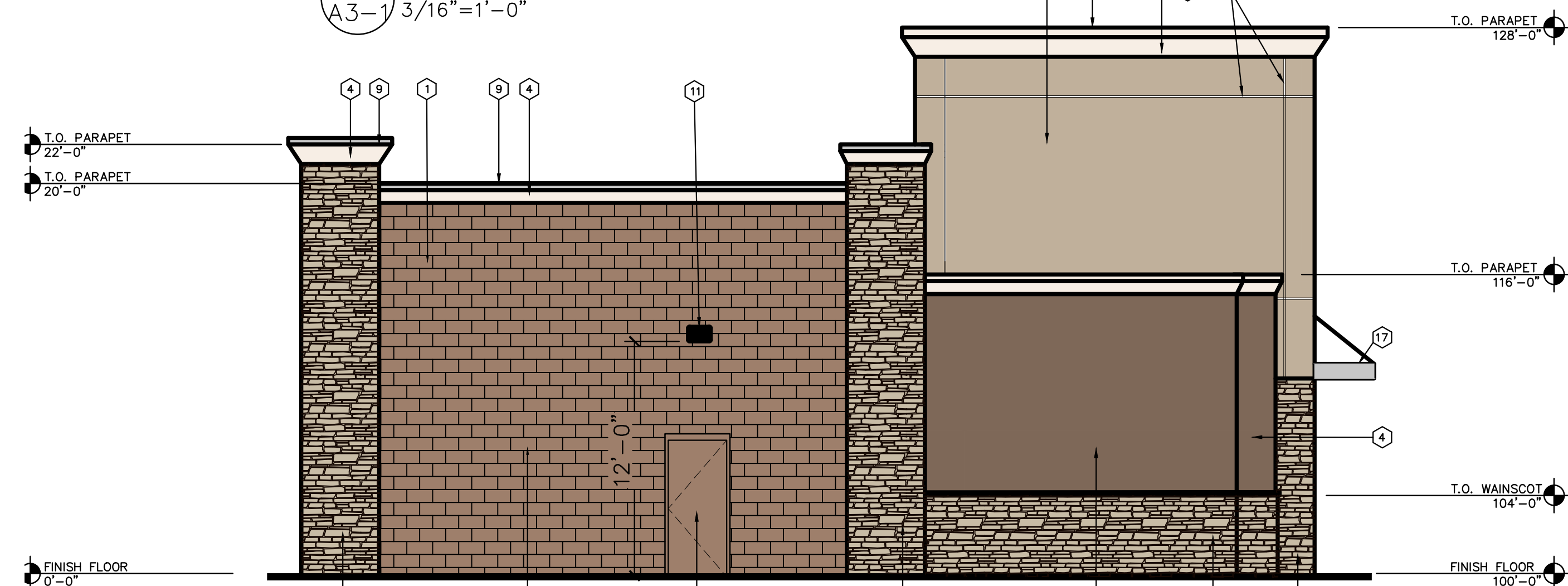
WEST ELEVATION

3/16" = 1' - 0"

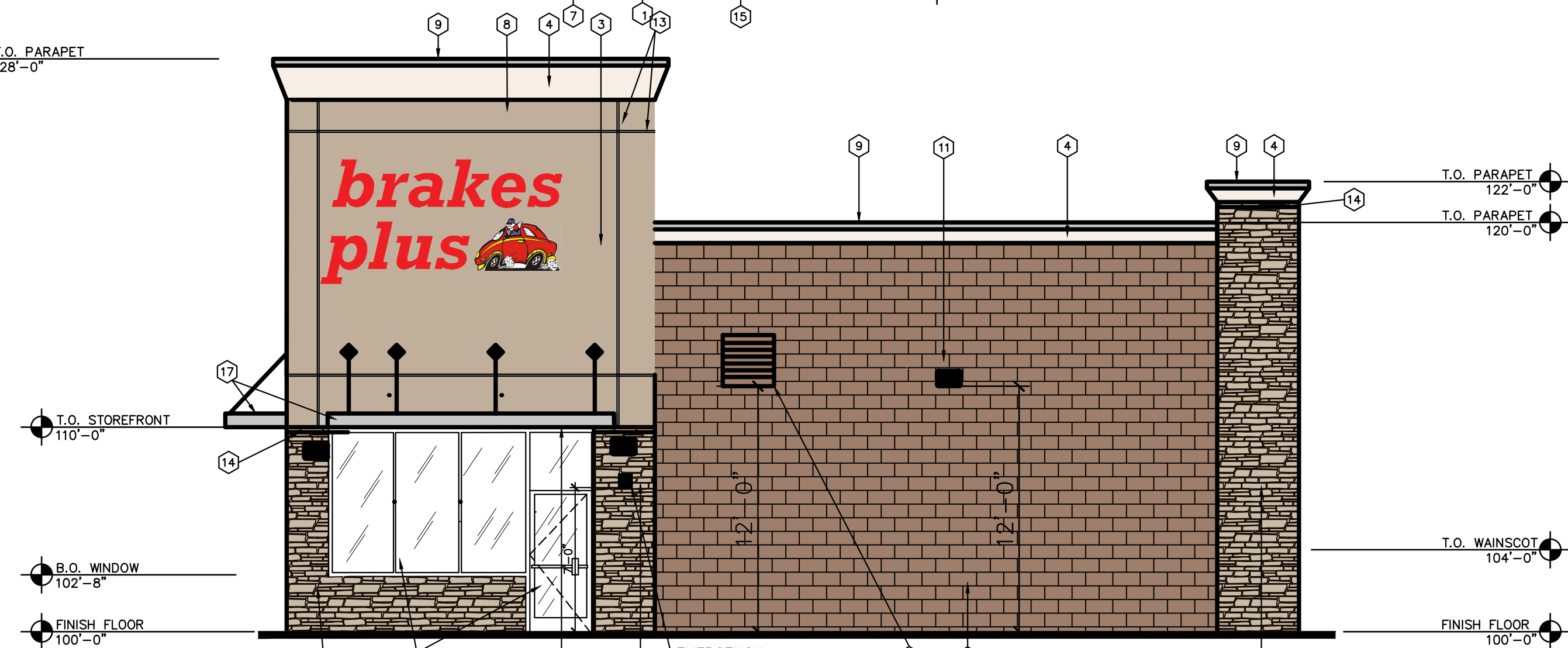
3
A3-1



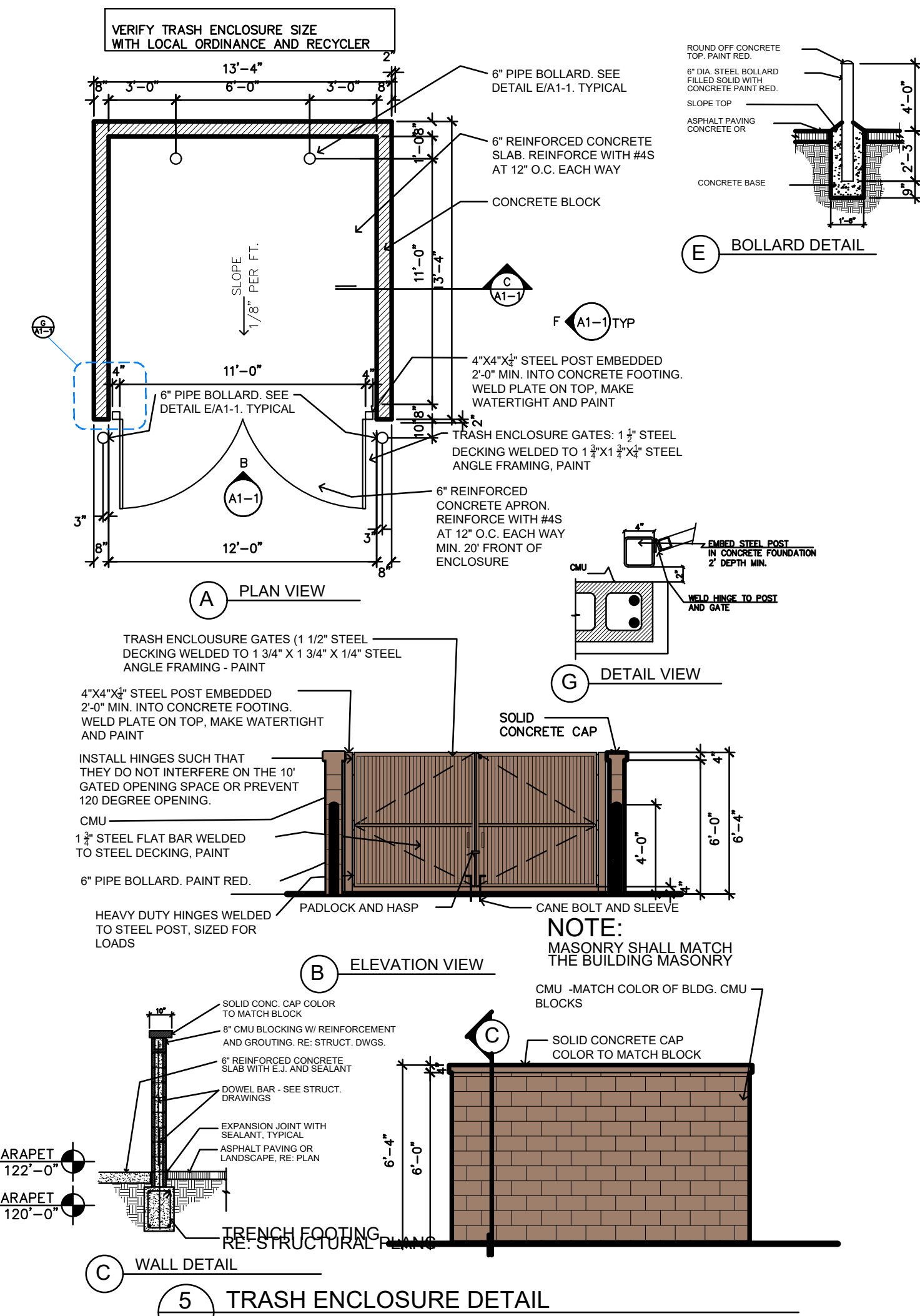
4 EAST ELEVATION
A3-1 $3/16" = 1'-0"$



2 NORTH ELEVATION
A3-1 3/16"=1'-0"



1 SOUTH ELEVATION
A3-1 3/16"=1'-0"



BRAKES PLUS

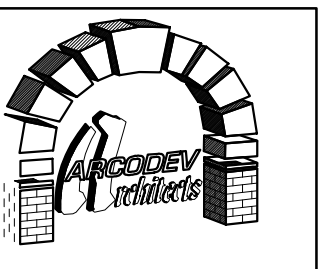
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



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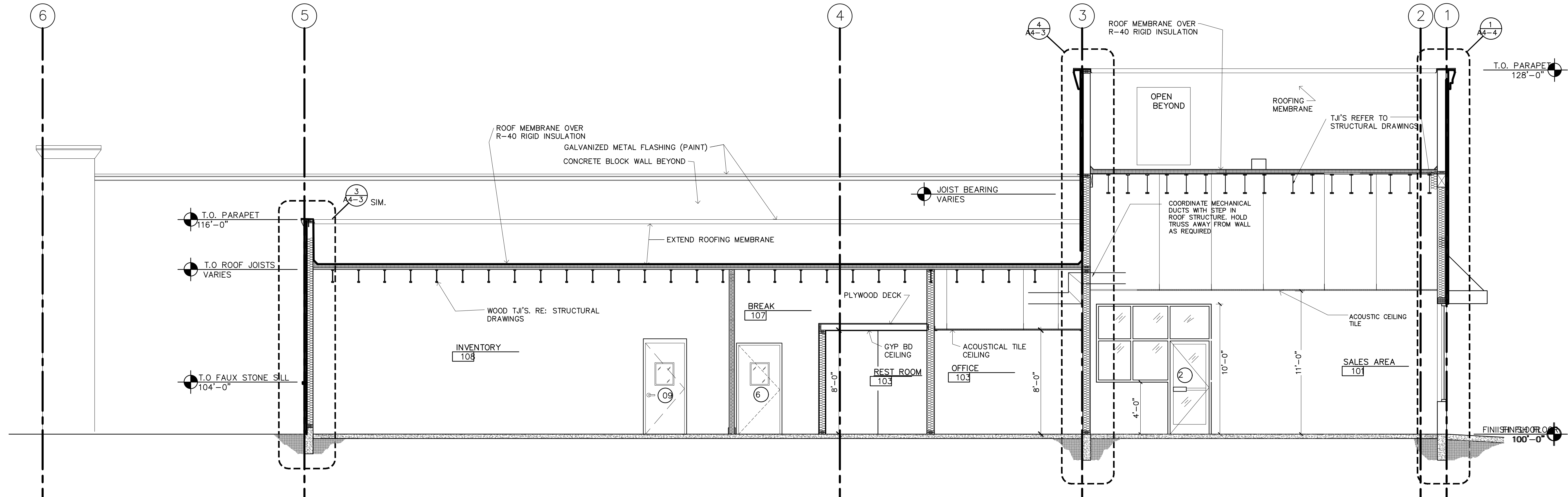


45 SPYGLASS DRIVE
LITTLETON, CO 80123
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NORMHERMAN@ARCODEV.COM

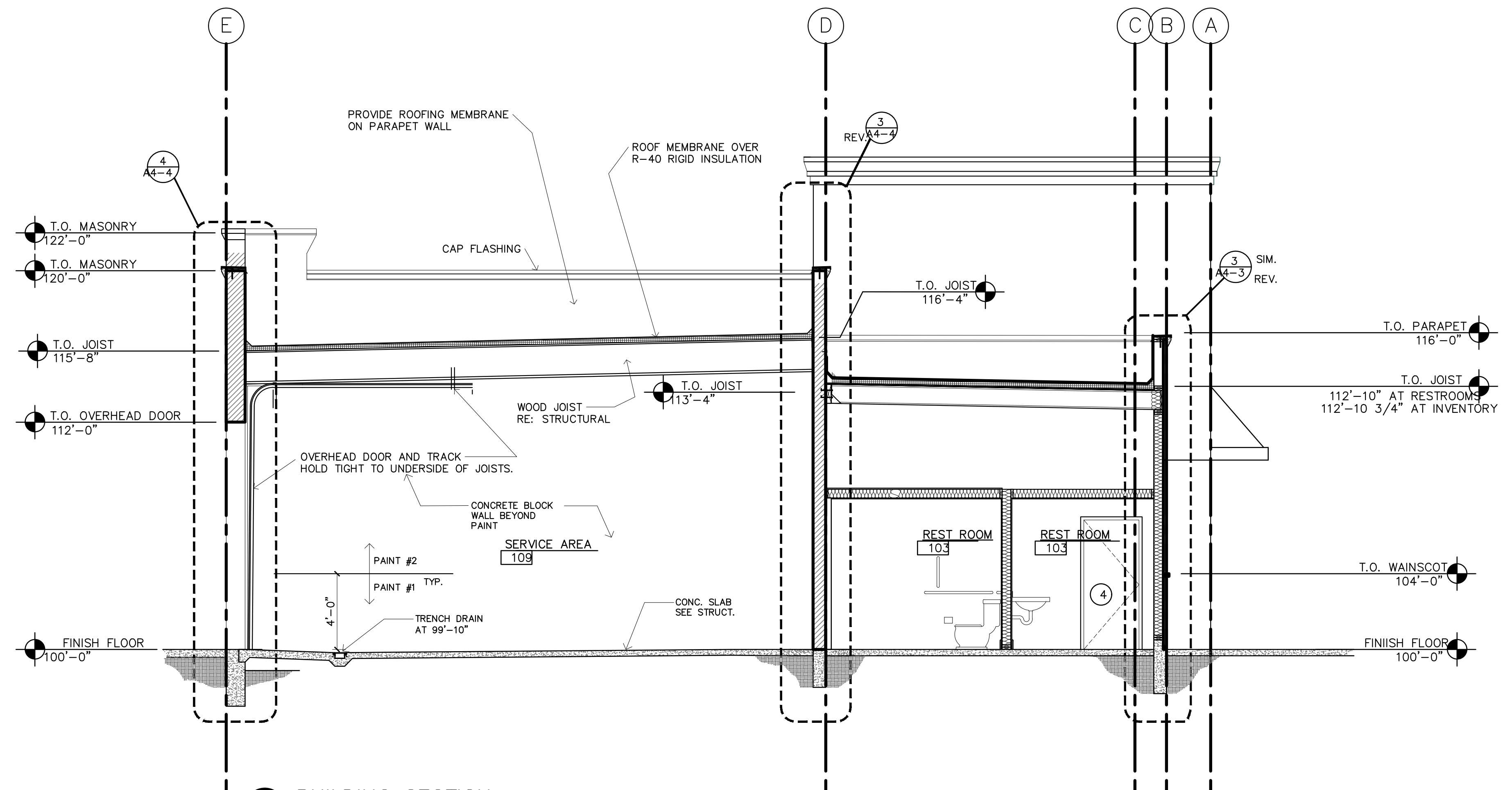
SHEET

A3-1

EXTERIOR ELEVATIONS



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



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



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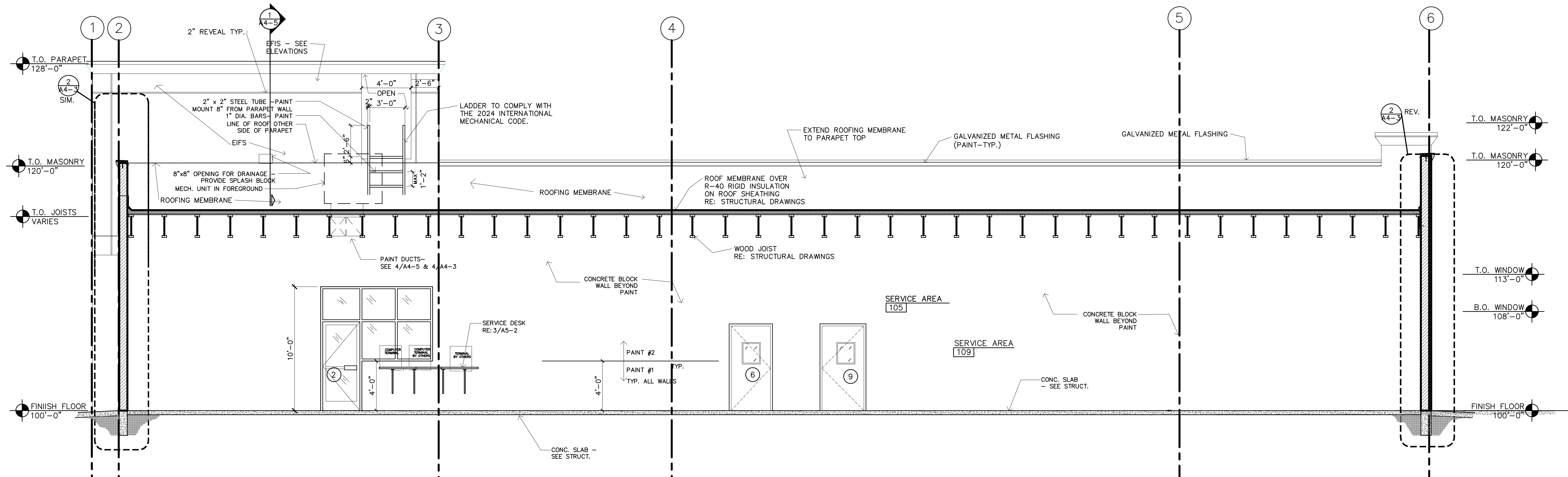


45 SPYGLASS DRIVE
LITTLETON, CO 80123
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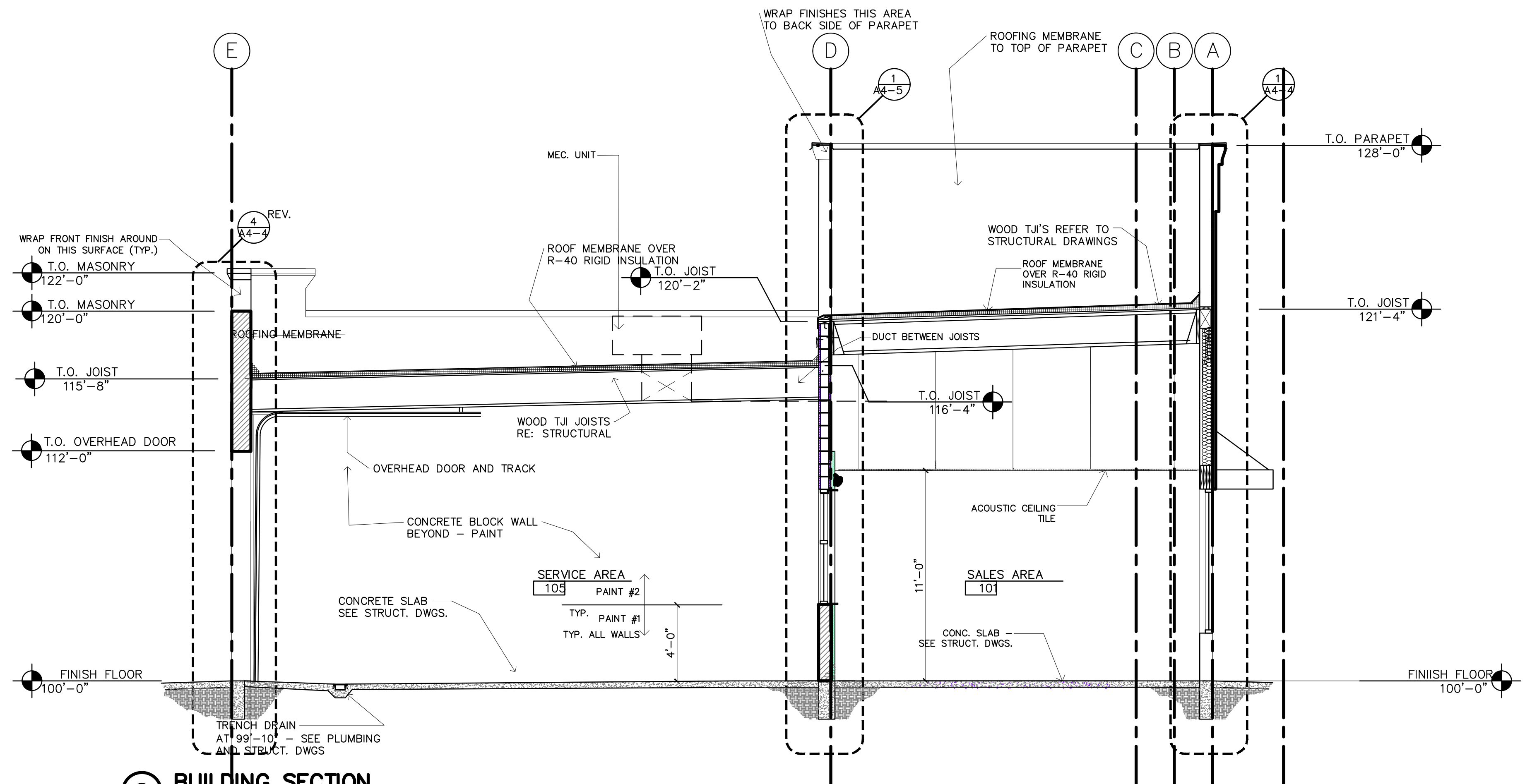
SHEET

A4-1

BUILDING SECTIONS



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



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76286



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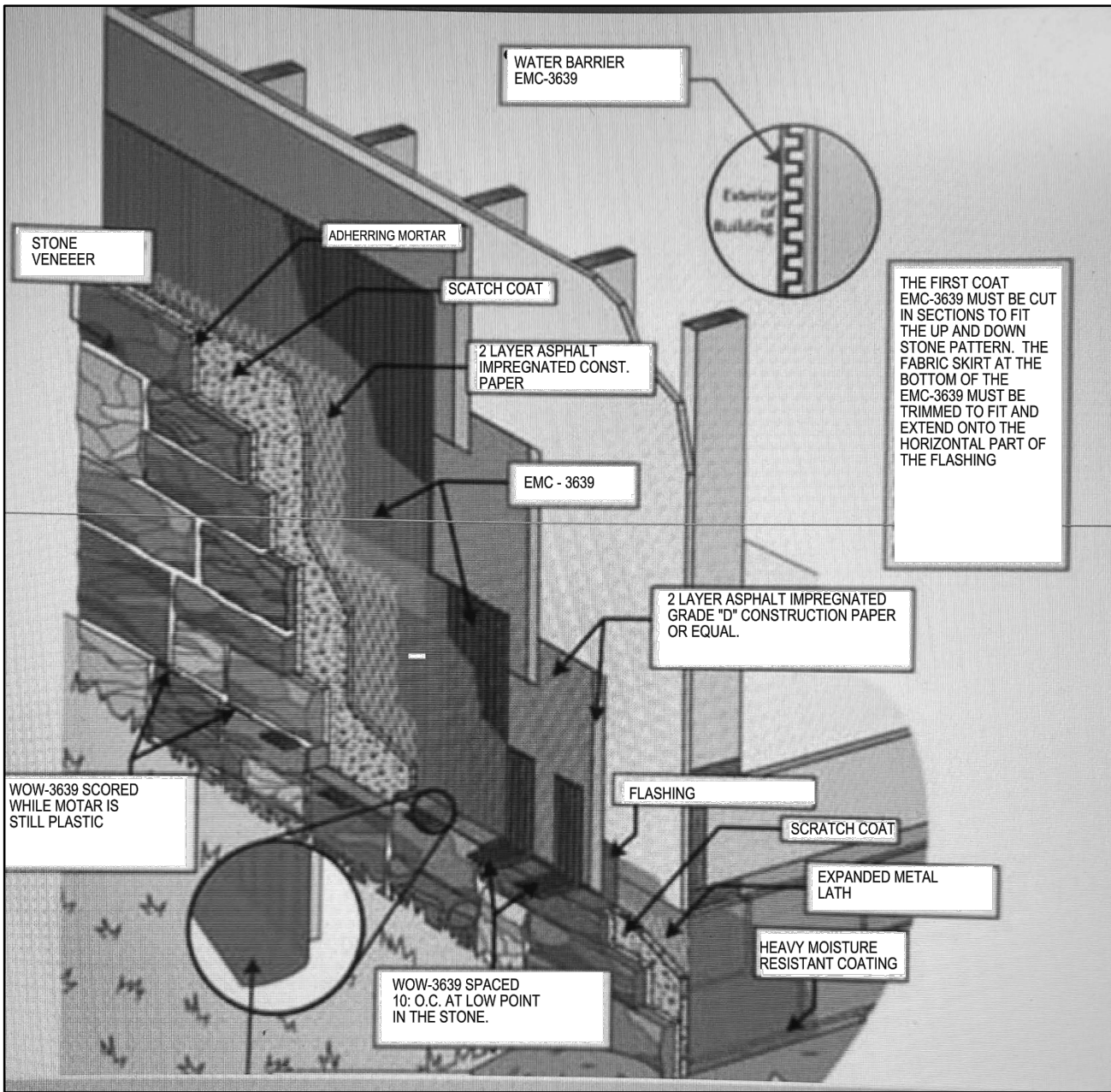


45 SPYGLASS DRIVE
LITTLETON, CO 80123
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NORMHERMAN@ARCODEV.COM

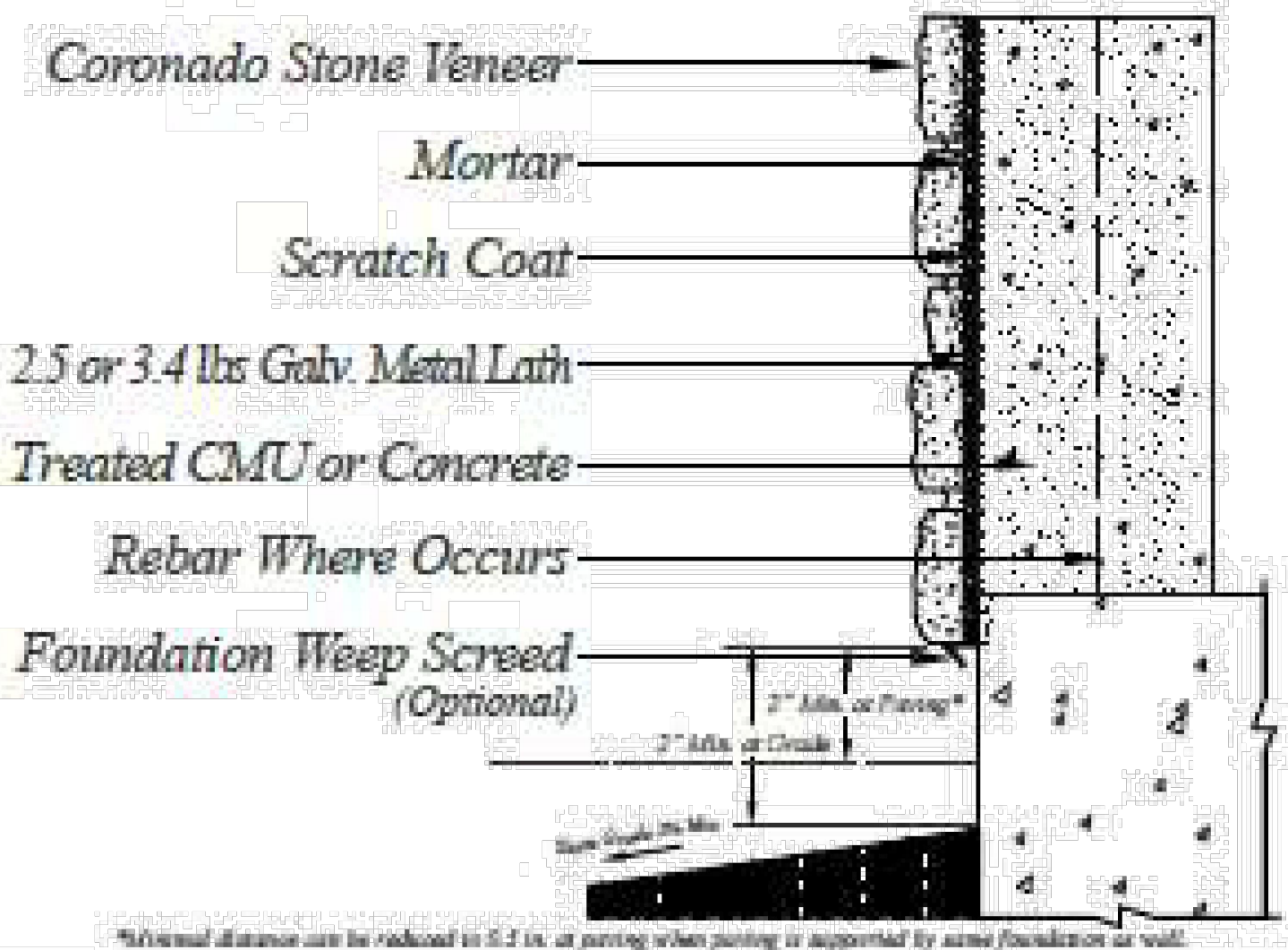
SHEET

A4-2

BUILDING SECTIONS



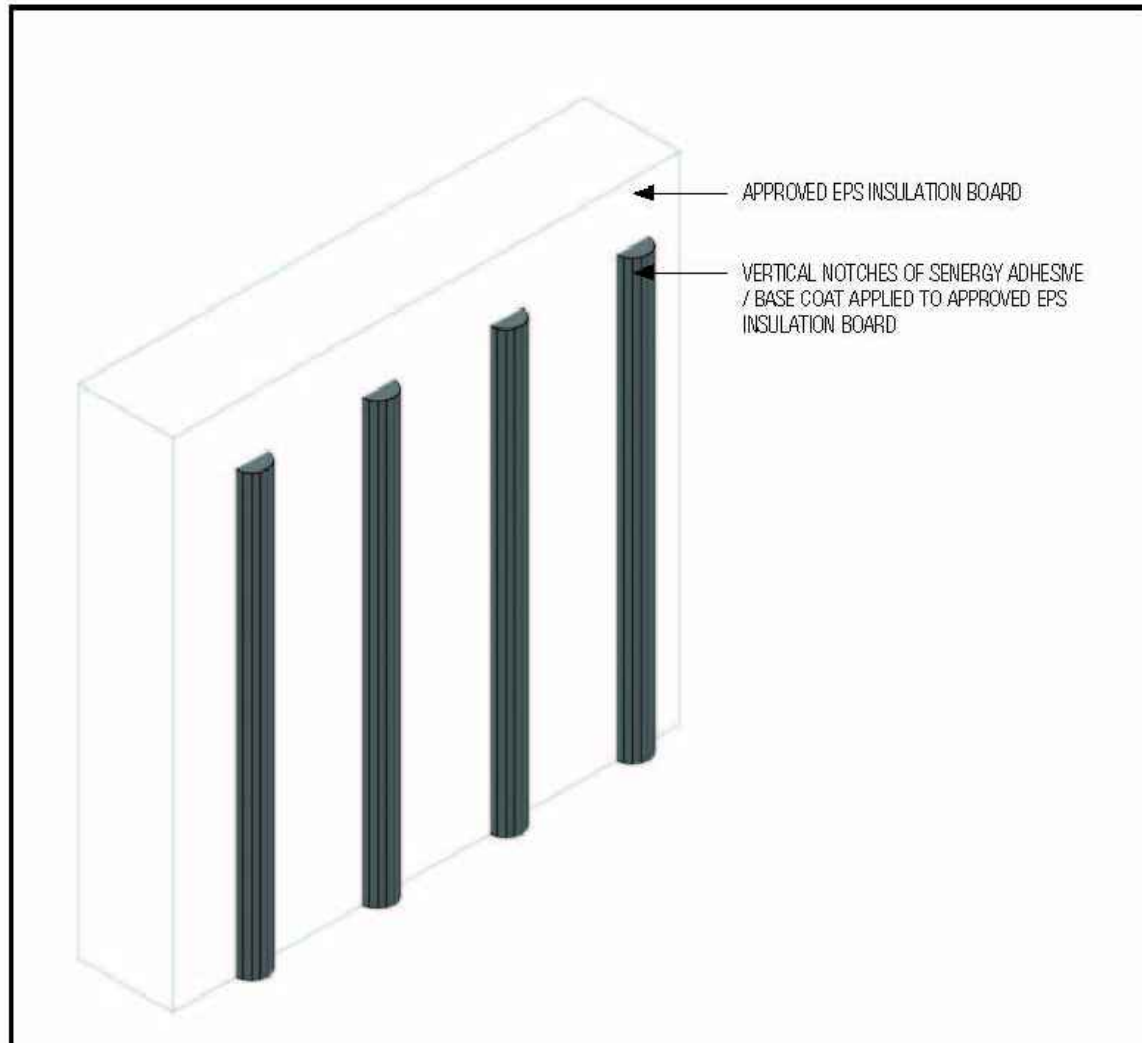
5 FAUX STONE @ STUD FRAMING
A4-3 NO SCALE



6 FAUX STONE @ CONC. BLOCK
A4-3 NO SCALE

Channeled Adhesive CI Design

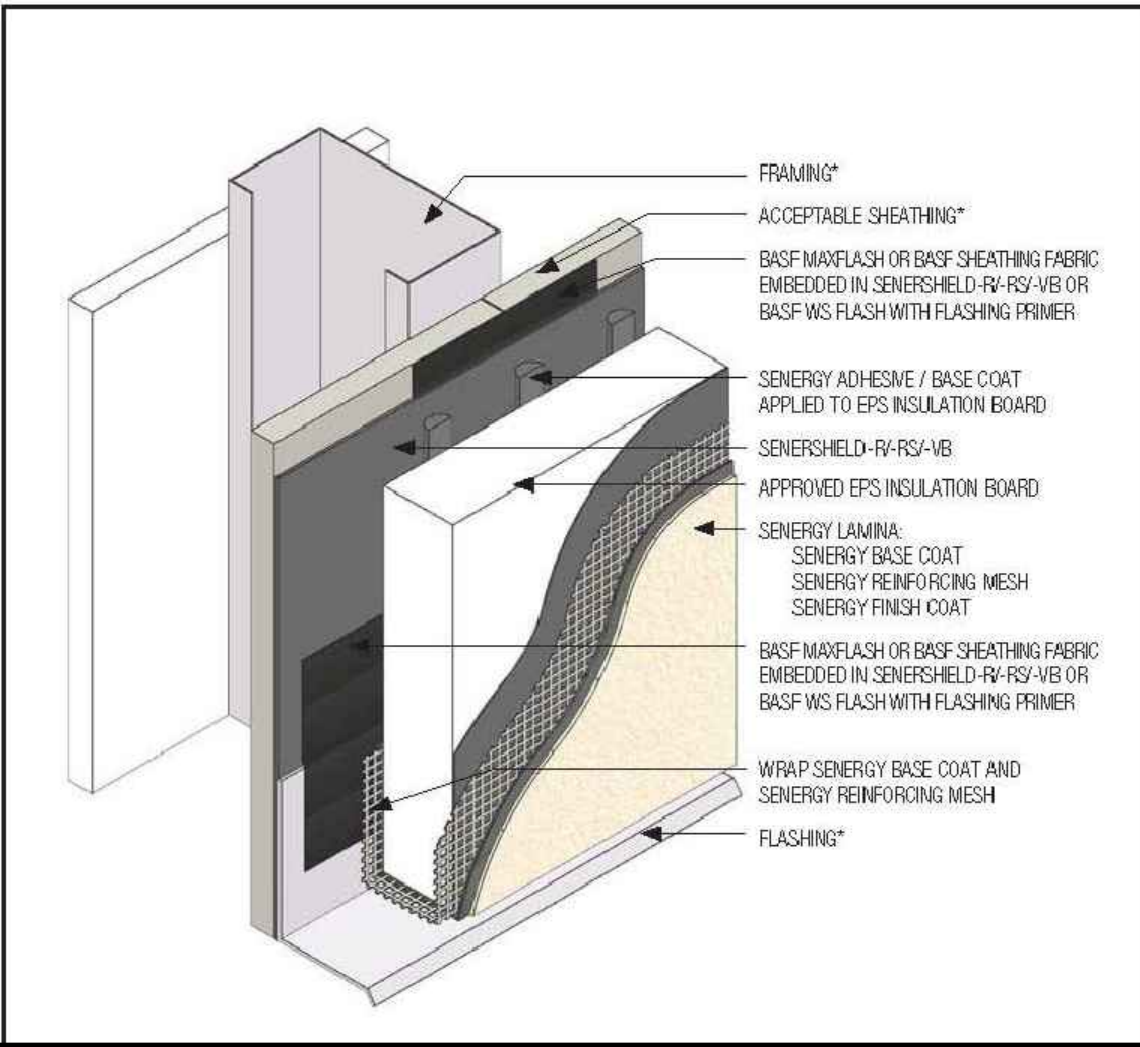
TYPICAL CHANNELLED ADHESIVE



- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- Apply mixed base coat to entire surface of insulation board using a stainless steel trowel with 1/2" x 1/2" (13 mm x 13 mm) notches spaced 2" (50 mm) apart. Ribbons of adhesive must be applied parallel to the 2" (610 mm) dimension of the EPS insulation board to ensure they are vertical when the EPS insulation board is applied to the substrate.
- Set EPS insulation board into place and apply pressure over entire surface of board to ensure positive uniform contact and high initial grab. Do not slide board into place.

Channeled Adhesive CI Design

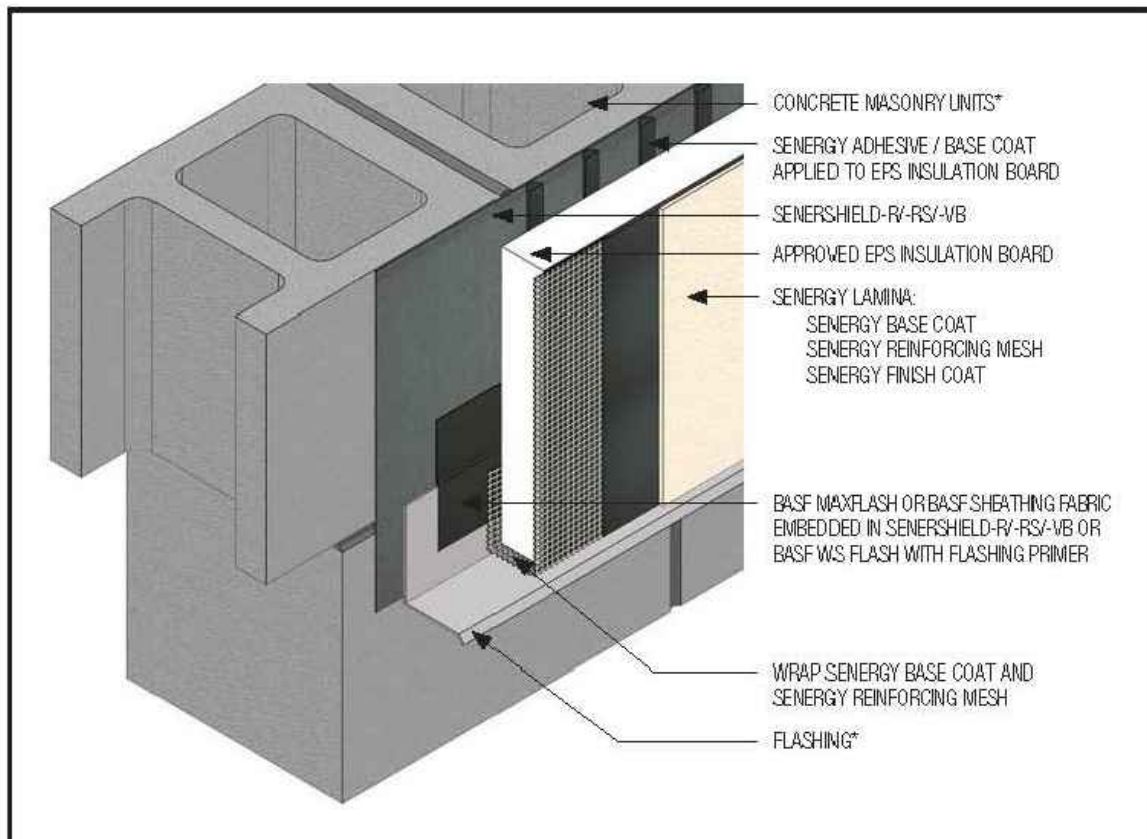
TYPICAL APPLICATION



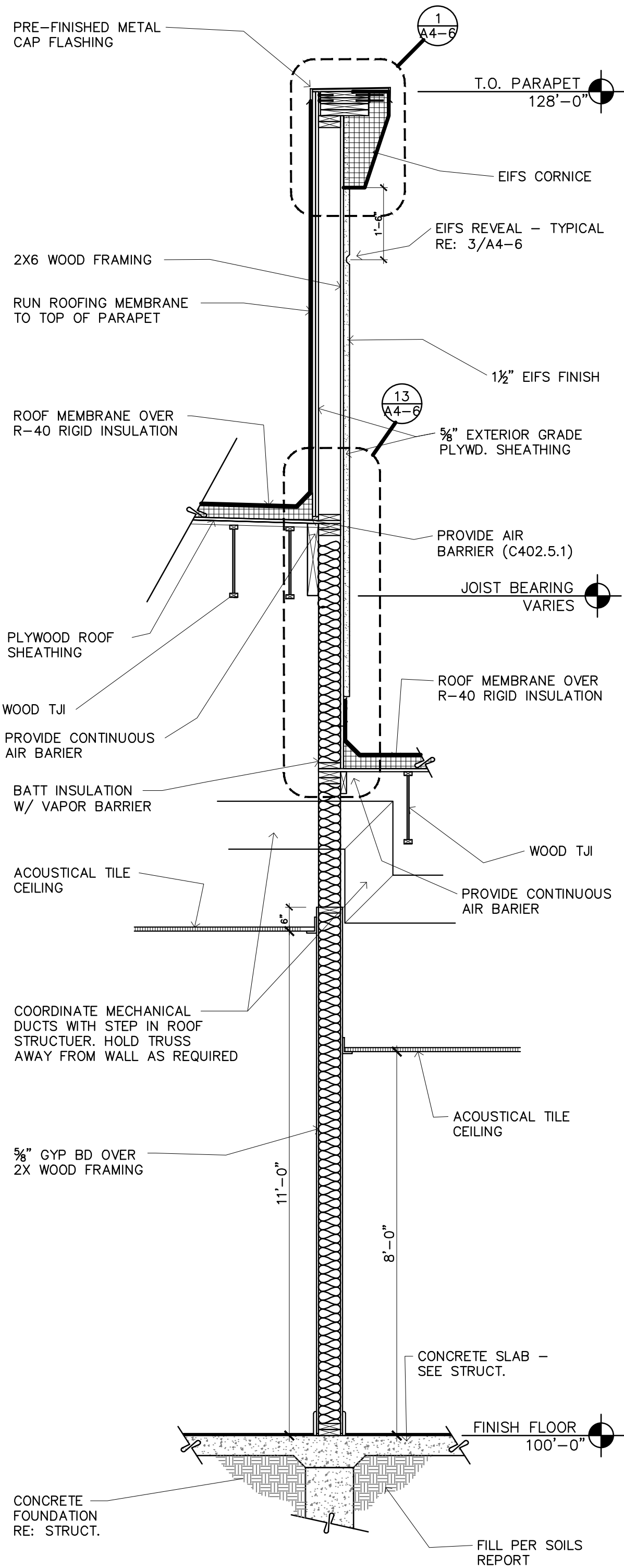
- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- All terminations must be fully encapsulated with mesh reinforced base coat.
- Ensure a means for drainage is provided at system termination.

Channeled Adhesive CI Design

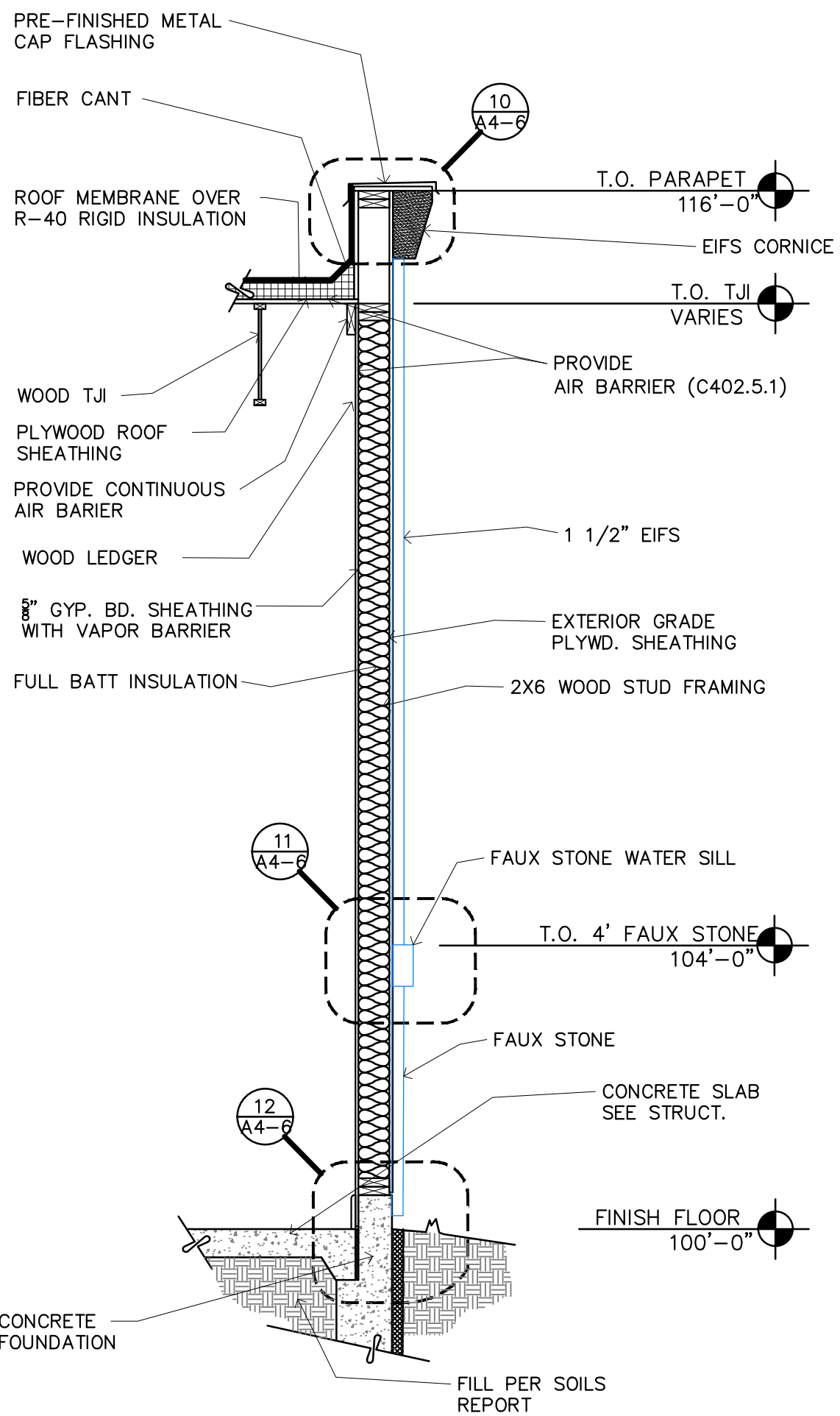
TYPICAL APPLICATION OVER CMU



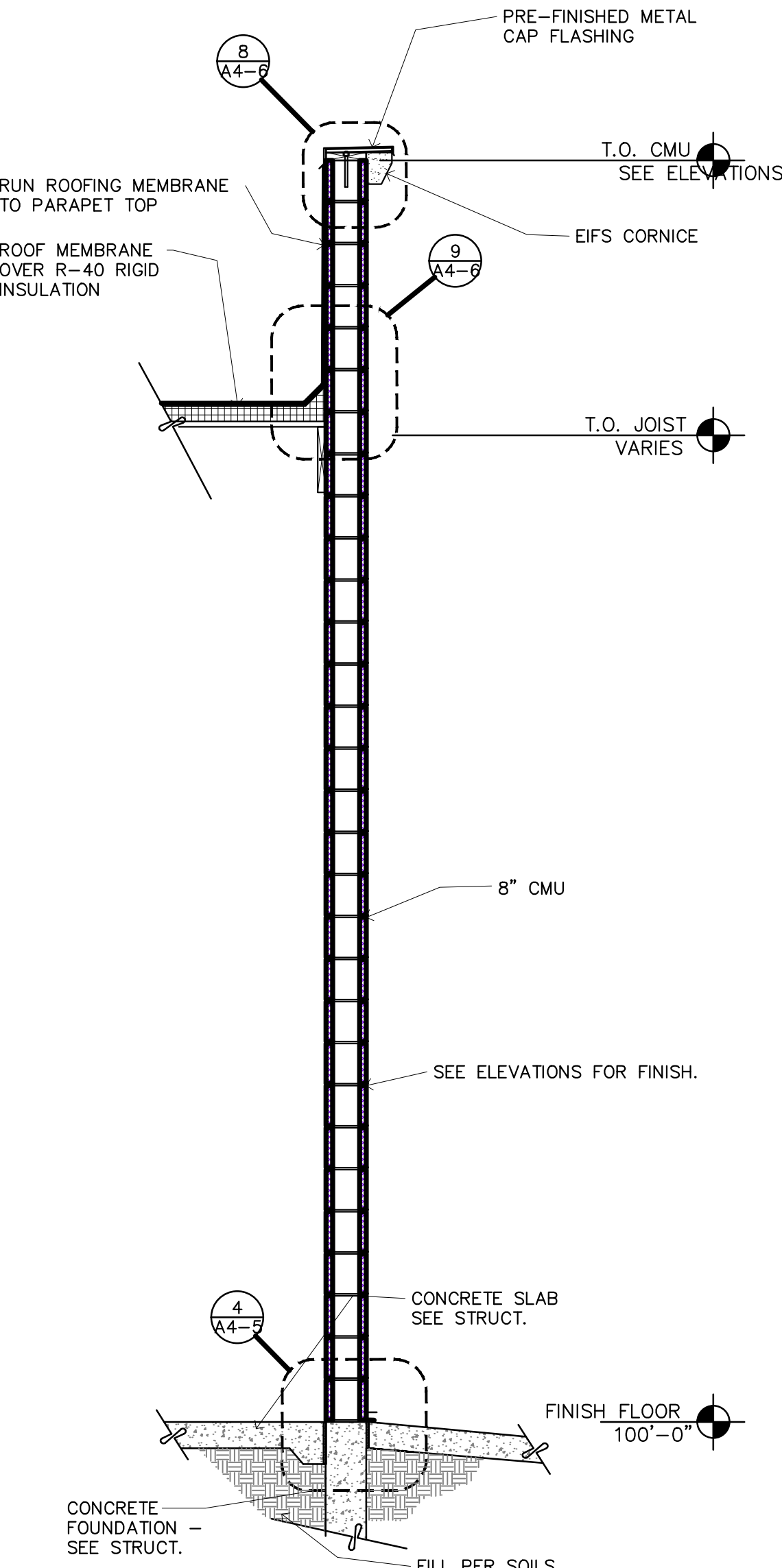
- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- All terminations must be fully encapsulated with mesh reinforced base coat.
- Ensure a means for drainage is provided at system termination.



4 WALL SECTION
A4-3 1/2"=1'-0"



3 WALL SECTION
A4-3 1/2"=1'-0"



2 WALL SECTION
A4-3 1/2"=1'-0"

1 EIFS WATER DRAINAGE DETAILS.
A4-3 NO SCALE

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2B3 BLOCK B
SANGER, TEXAS 76266



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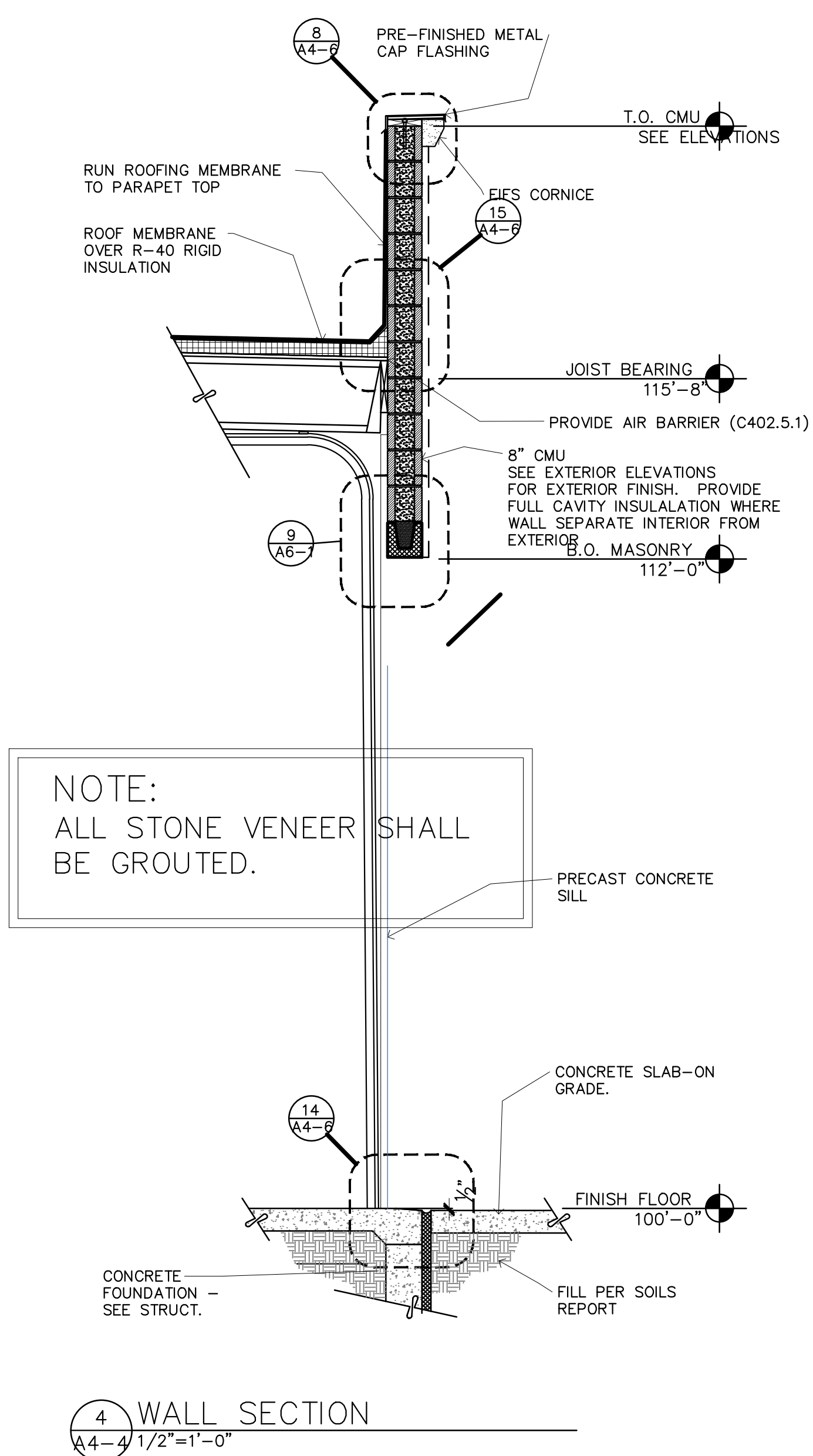
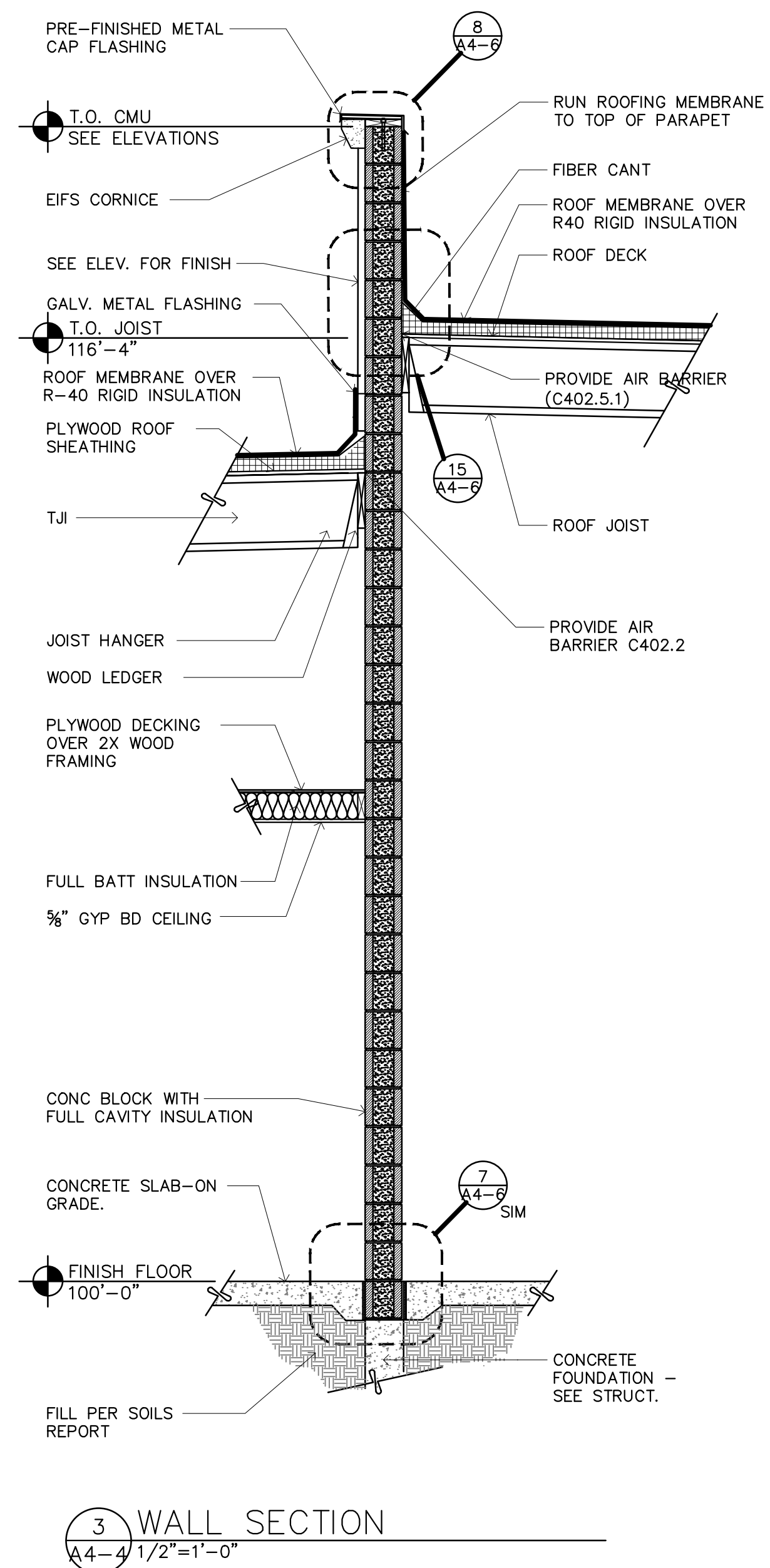
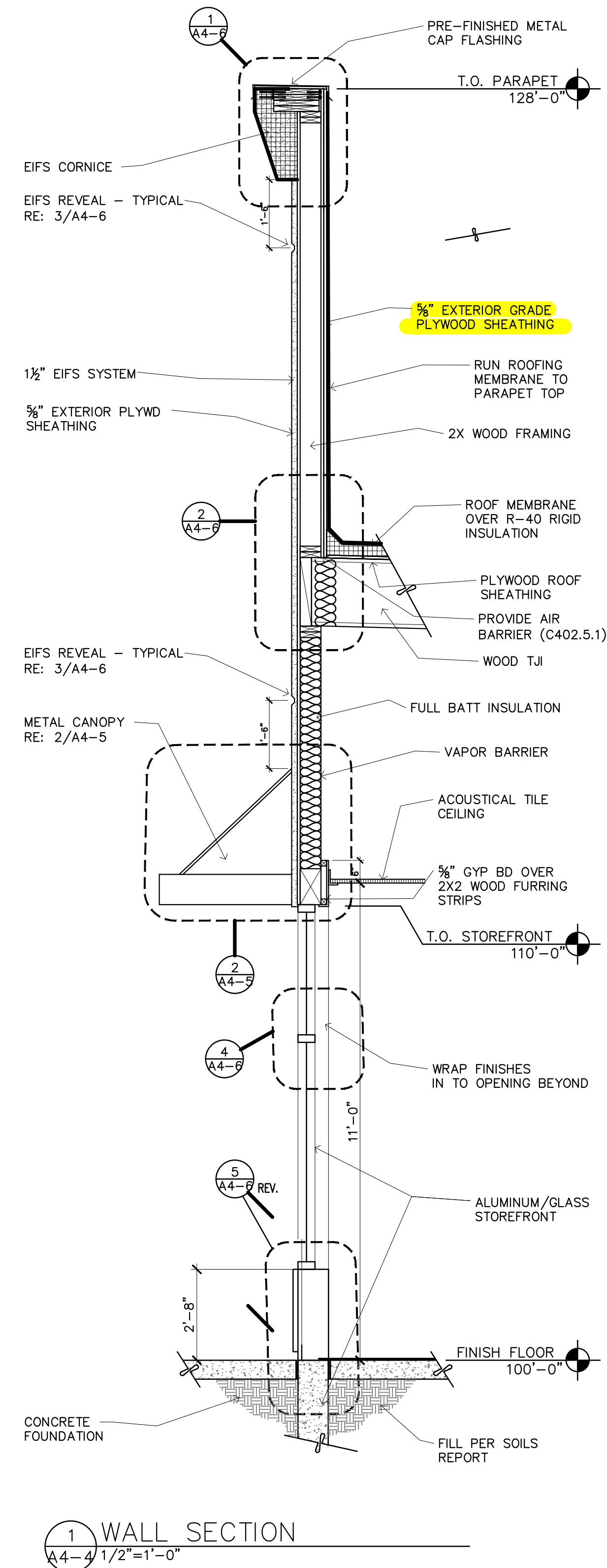


45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.981-8925
NORM@BRKPLUS.COM

SHEET

A4-3

WALL SECTIONS



BRAKES PLUS

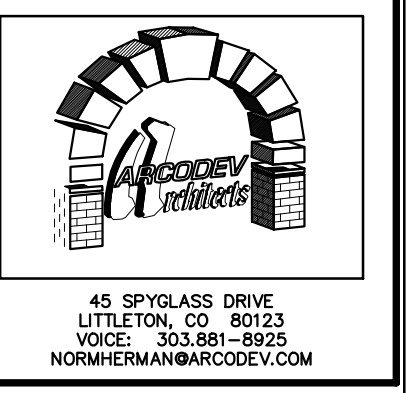
NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76286



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	01.23.26	FOR BLDG DEPT. SUBMITTAL
	01.27.26	FOR CONSTRUCTION CONTRACT

ARCDEV JOB #:
CLIENTJOB #:
DRAWN BY: NLH
CHECKED BY: NLH
DATE OF ISSUE: 010.01.25



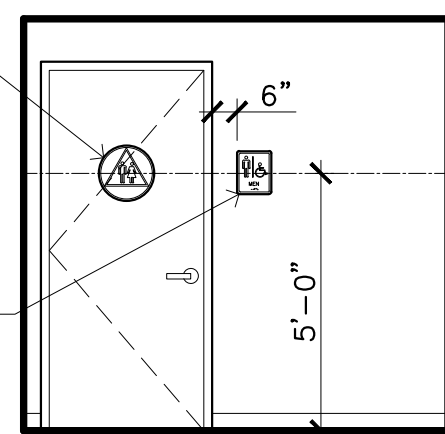
SHEET

A4-4

WALL SECTIONS

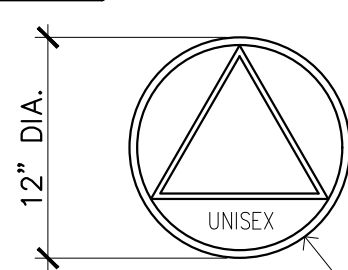
DOOR-MOUNTED SIGNAGE
APPROPRIATE TO ROOM
USE PER CBC 1115B.6.1,
1115B.6.2 AND 1115B.6.2

WALL MOUNTED SIGNAGE TO
BE LOCATED ON LATCH SIDE
OF DOOR SWING. MOUNT AT
60" TO CENTERLINE OF SIGN
FROM FLOOR



NOTES:

- ON DOORWAYS LEADING TO
SANITARY FACILITIES, THE
SYMBOLS TO BE PROVIDED ARE
12" EQUILATERAL TRIANGLE FOR
MEN, OR 12" DIAMETER CIRCLE
FOR WOMEN, 1/4" THICK, CENTERED
ON DOOR 60" ABOVE FLOOR,
CONTRASTING COLOR WITH DOOR.
PER CBC 1115B.6

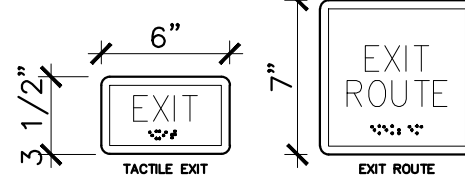


1/4" THICK (TYP)

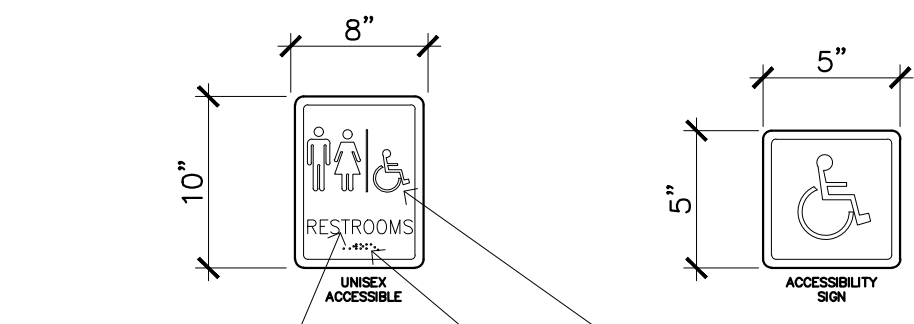
NOTES:

- H.C. SIGNS PER ADA
- ALL LETTERS AND SYMBOLS SHALL BE RAISED 1/32"
- 12" DIAMETER CIRCLE, 1/4" THICK WITH THE COLOR AND CONTRAST
BEING DISTINCTLY DIFFERENT FROM THE COLOR OF THE DOOR
- INTERNATIONAL SIGN OF ACCESSIBILITY, WHITE FIGURE ON BLUE
(#15090 FEDERAL STANDARD 595A) BACKGROUND
- SIGN SHALL BE DISPLAYED AT 60" A.F.F., CENTERED ON THE DOOR,
COLOR AND CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM
COLOR AND CONTRAST OF THE DOOR TYP. FOR MEN'S AND WOMEN'S
SIGNS
- EDGES OF SIGNS SHALL BE ROUNDED, CHAMFERED OR EASED AND
CORNERS OF SIGNS SHALL HAVE A MINIMUM RADIUS OF 1/8"
- 12" EQUILATERAL TRIANGLE, 1/4" THICK WITH THE VERTEX POINTING
UPWARD AND THE COLOR AND CONTRAST BEING DISTINCTLY
DIFFERENT FROM THE COLOR OF THE DOOR
- LETTERS AND NUMERALS ON SIGNS ARE RAISED 1/32", SANS SERIF
UPPERCASE CHARACTERS TO BE ACCOMPANIED BY GRADE 2
BRAILLE
- BRAILLE DOTS ARE 1/10" ON CENTER IN EACH CELL WITH 2/10"
SPACE BETWEEN CELLS
- BRAILLE DOTS ARE RAISED A MINIMUM OF 1/40" ABOVE THE
BACKGROUND
- MOUNTING HEIGHT IS 60" FROM FINISH FLOOR TO THE CENTERLINE
OF THE SIGN

LETTERING RAISED 1/32"
UPPER-CASE
CHARACTERS



NOTE
PROVIDE SIGNAGE AT RESTROOMS
AND EXITS



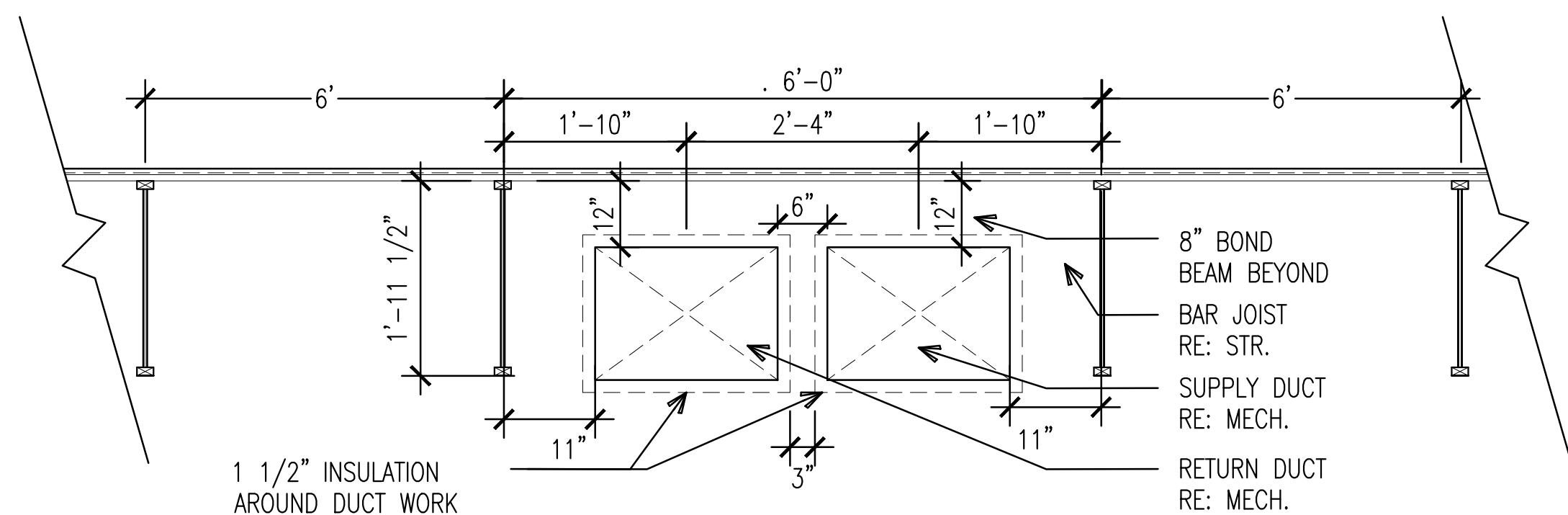
WHITE SYMBOLS AND
LETTERS ON A BLUE
BACKGROUND, TYPICAL
CORRESPONDING, GRADE II
BRAILLE

NOTES:

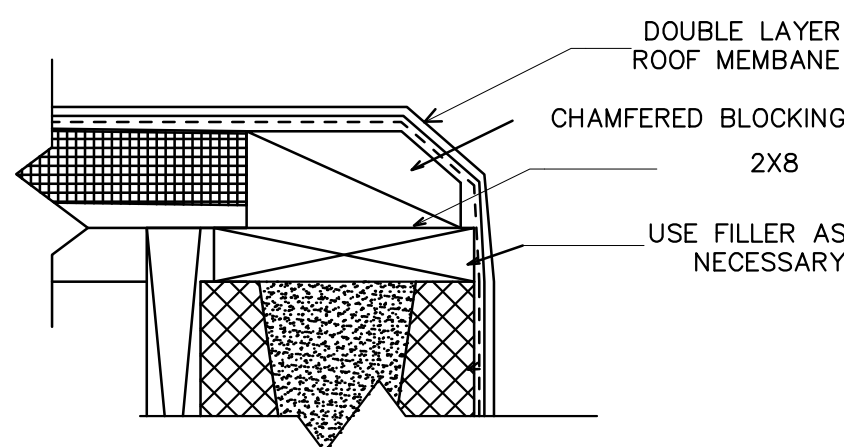
- CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A
NONGLARE FINISH
- CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR
BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON
A LIGHT BACKGROUND
- VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS
WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM
AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".
STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10%
MINIMUM AND 20% MAXIMUM OF THE HEIGHT OF THE CHARACTER
CHARACTERS ON SIGNS REQUIRED TO BE ACCESSIBLE SHALL BE
SIZED ACCORDING TO THE "VISUAL CHARACTER HEIGHT" TABLE. THE
MINIMUM HEIGHT IS MEASURED USING AN UPPERCASE LETTER "I".
- RAISED CHARACTERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND
SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY
CONTRACTED (GRADE 2) BRAILLE
- RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8" AND A MAXIMUM
OF 2" HIGH.
- PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY
THE VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM.
THE OUTSIDE DIMENSION OF THE PICTOGRAM FIELD SHALL BE A
MINIMUM OF 6" IN HEIGHT.
- BRAILLE SHALL BE PLACED A MINIMUM OF 3/8" AND A MAXIMUM OF
1/2" DIRECTLY BELOW THE TACTILE CHARACTERS, FLUSH LEFT OR
CENTERED.

- RAISED CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS
WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM
AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".
STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10%
MINIMUM AND 20% MAXIMUM OF THE HEIGHT OF THE CHARACTER.
- CONTRACTED (GRADE 2) BRAILLE SHALL BE USED.
- MOUNTING HEIGHT SHALL BE 48" MINIMUM, MEASURED FROM THE
BASELINE OF THE LOWEST LINE OF BRAILLE, AND 60" MAXIMUM,
MEASURED FROM THE BASELINE OF THE HIGHEST RAISED
CHARACTERS, ABOVE THE FINISH FLOOR OR GROUND SURFACE.

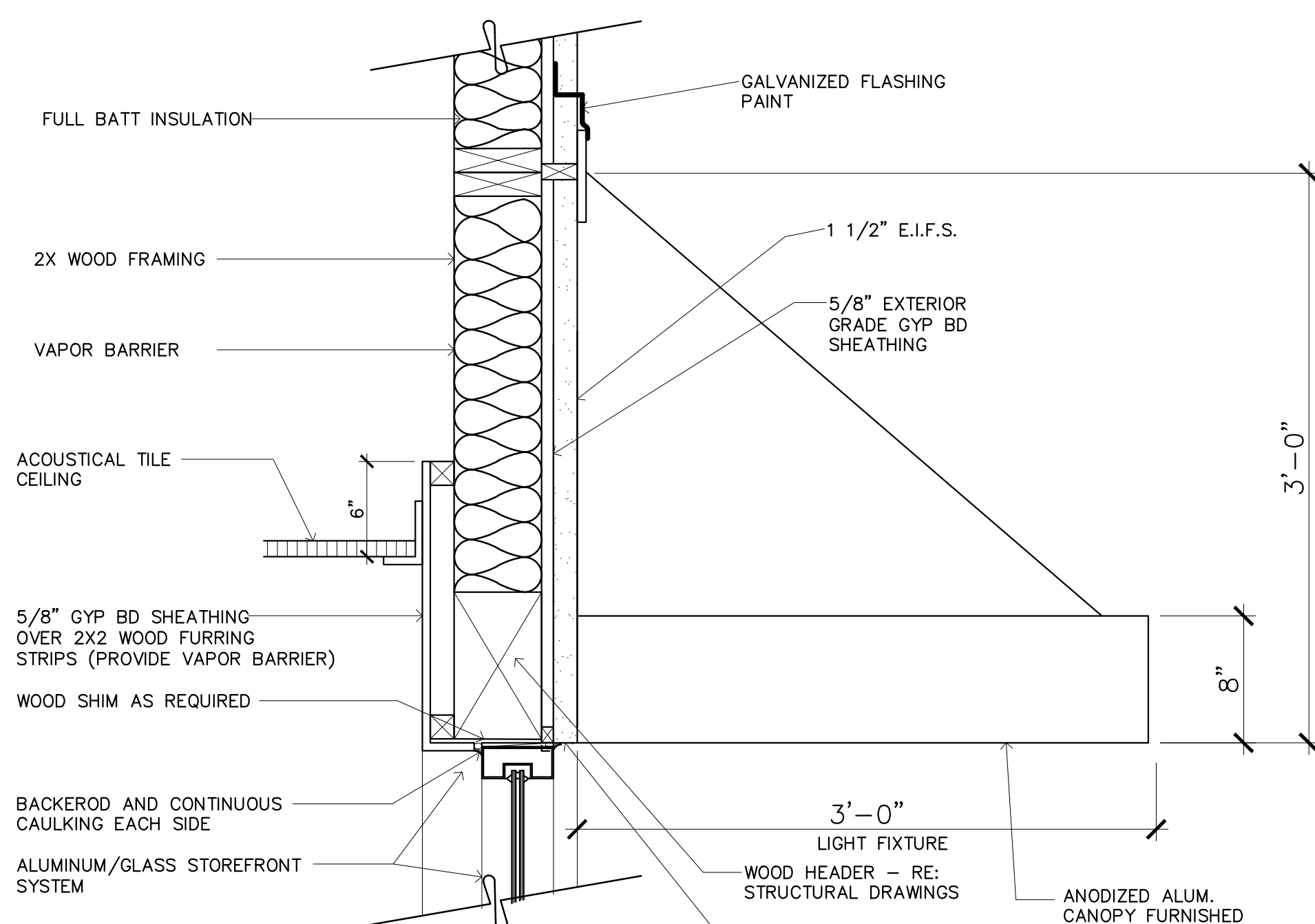
10 INTERIOR SIGNAGE INFORMATION NO SCALE



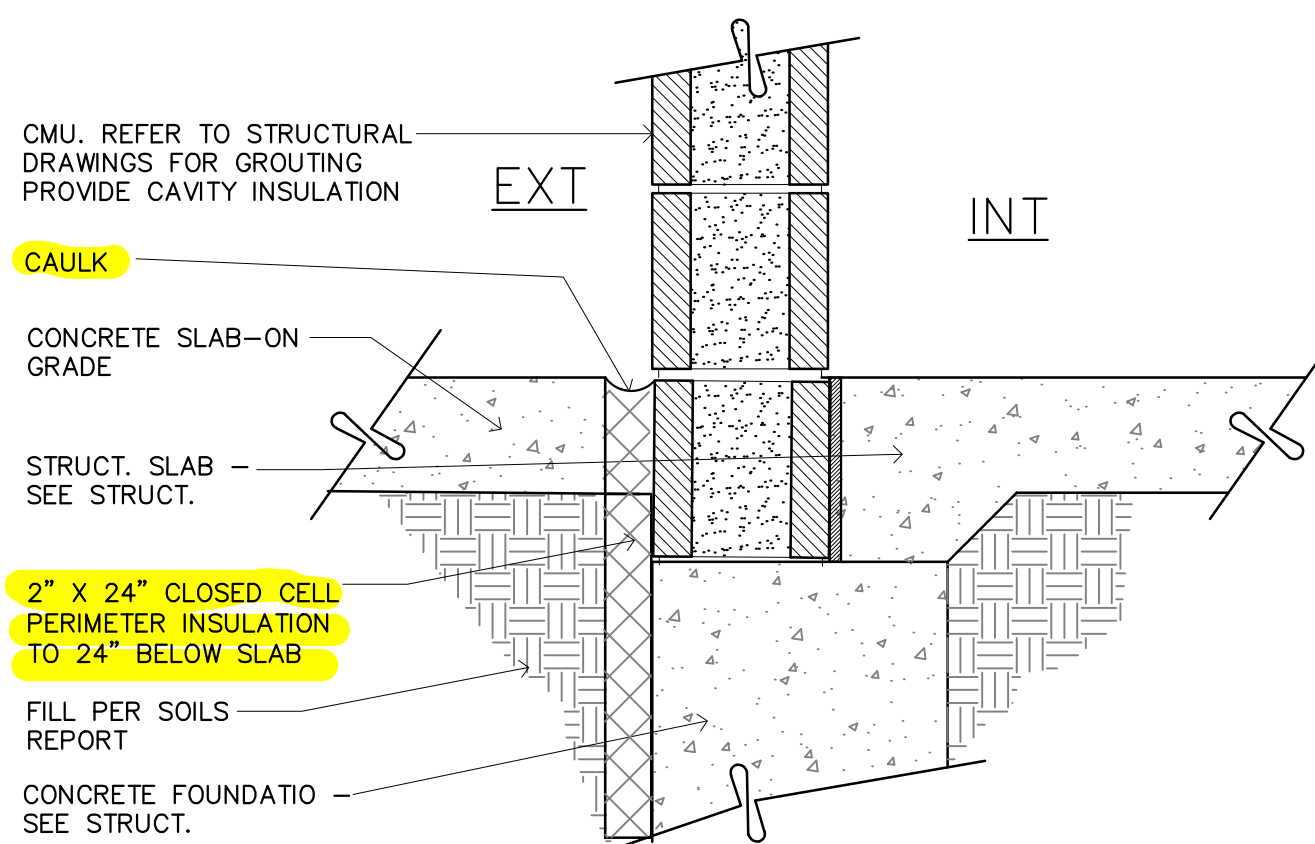
4 RTU DUCT-WORK DETAIL
SCALE: 3/4" = 1'-0"



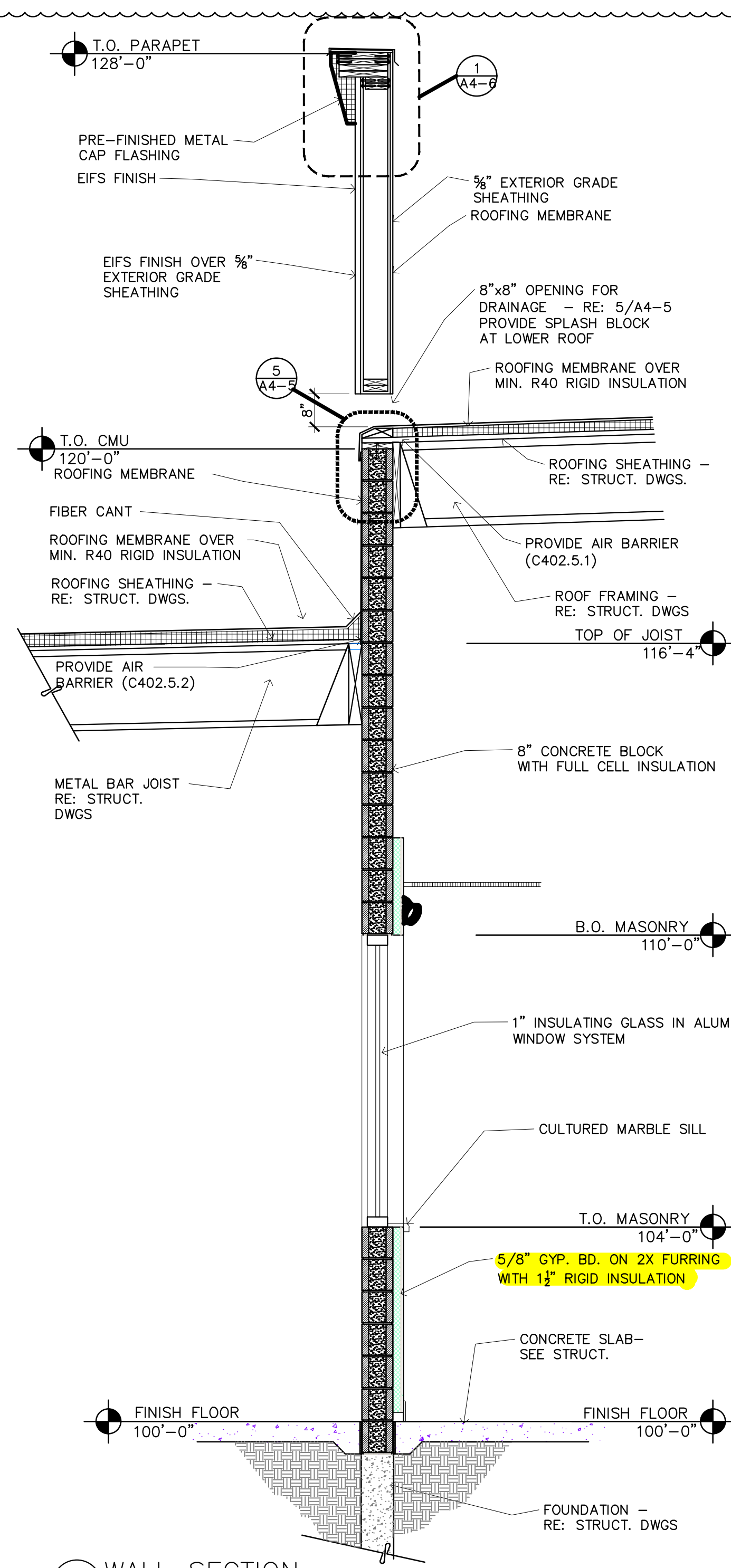
5 ROOF DETAIL DRAIN
SCALE: 3" = 1'-0"



2 AWNING DETAIL
SCALE: 1 1/2" = 1'-0"



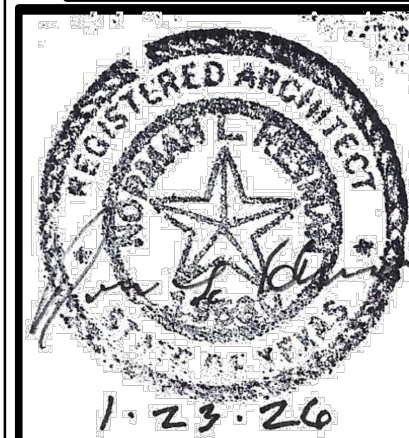
3 CMU FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



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

BRAKES PLUS

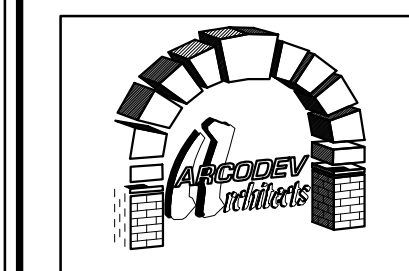
NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76286



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
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ARCODEV JOB #:
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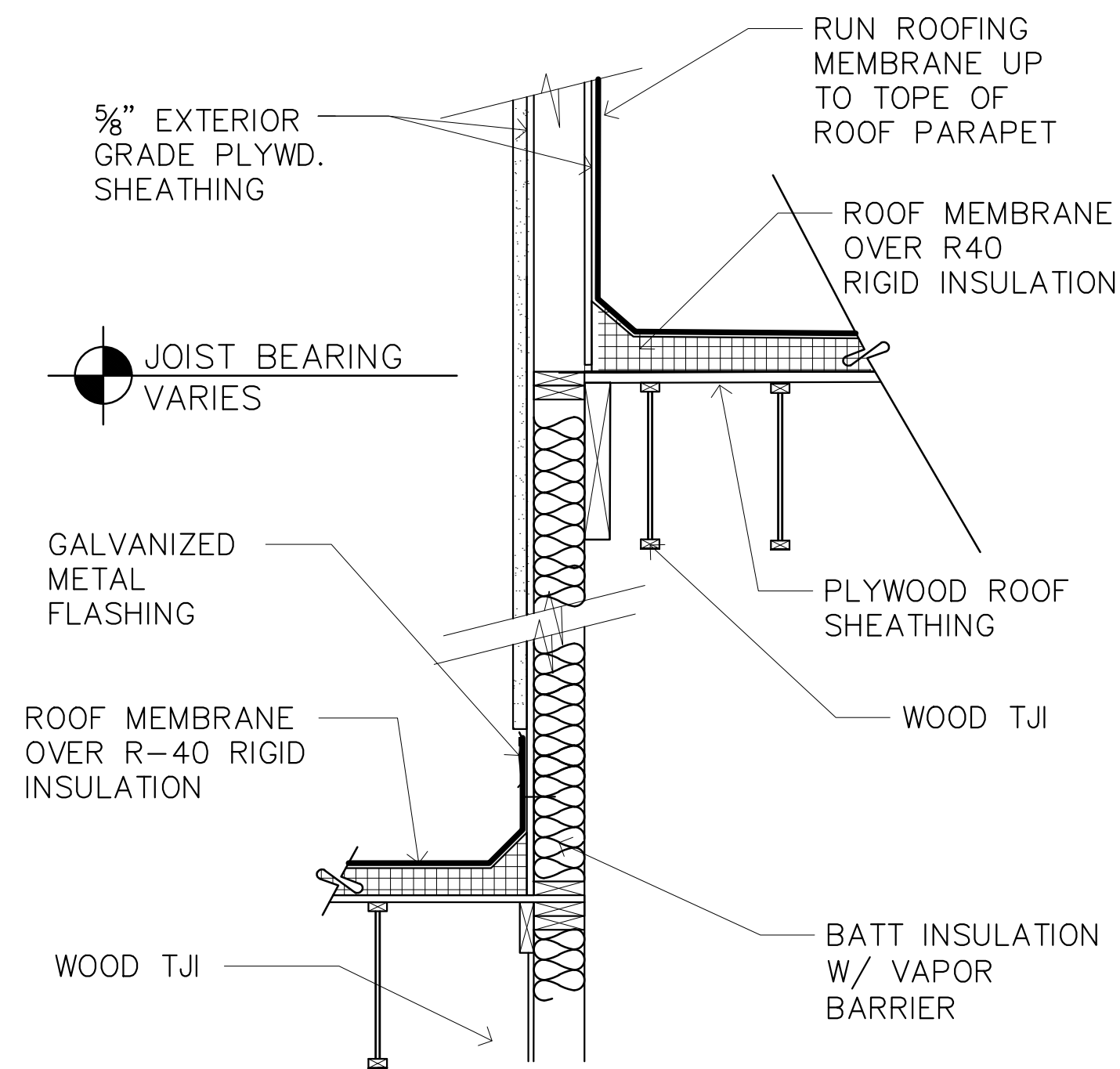


45 SPYGLASS DRIVE
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VOICE: 303.681-8925
NORMAN@ARCODEV.COM

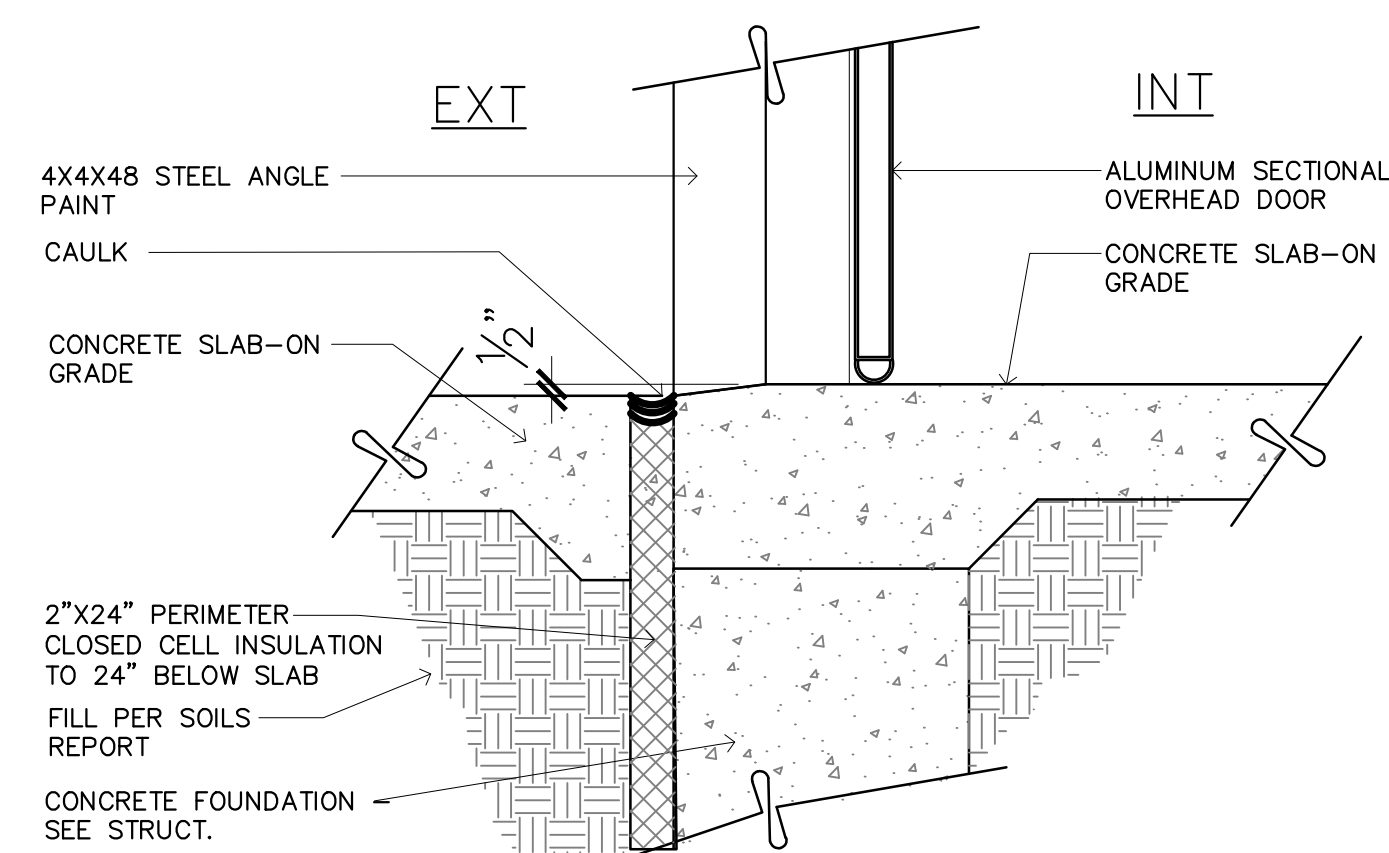
SHEET

A4-5

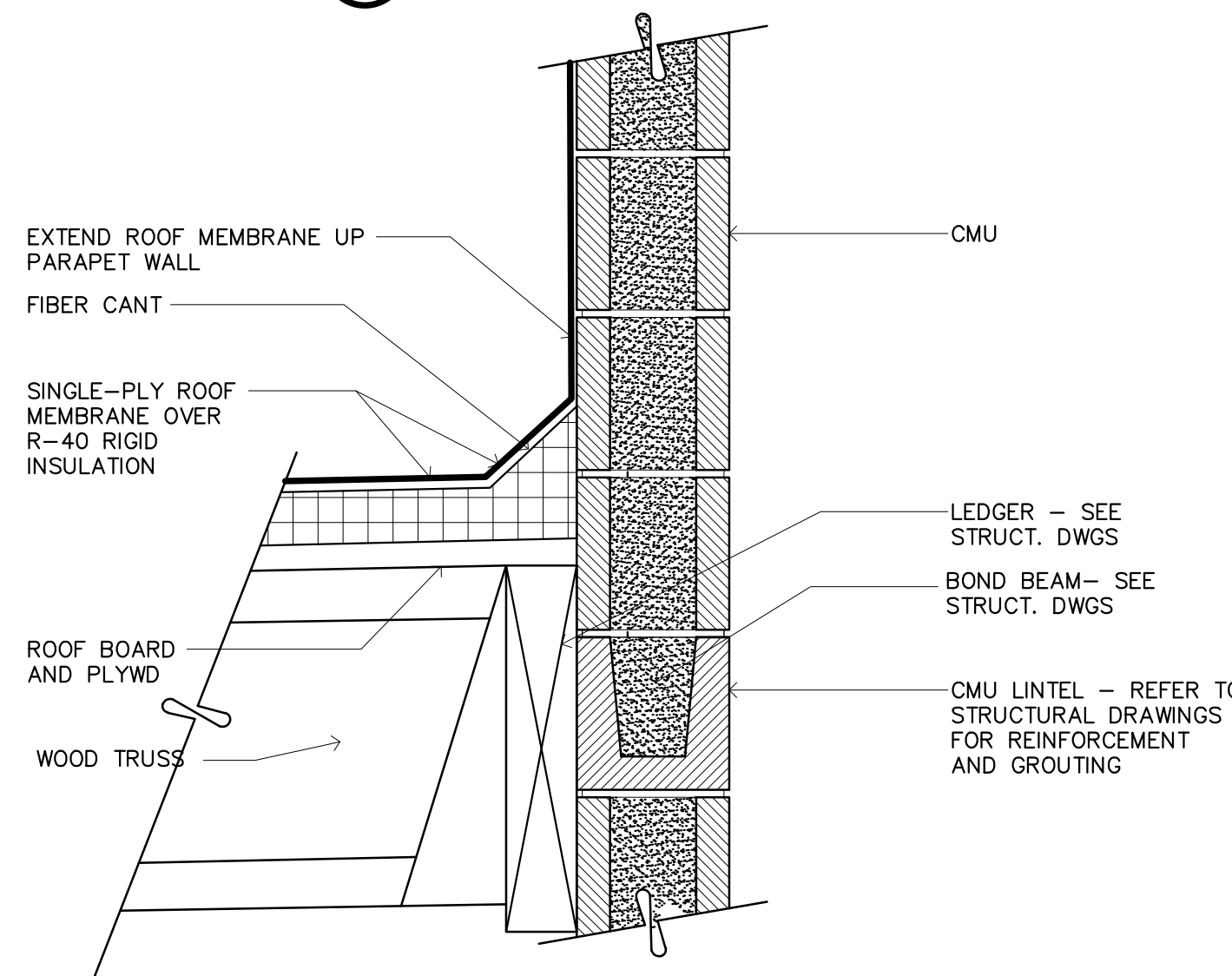
WALL SECTIONS & DET.



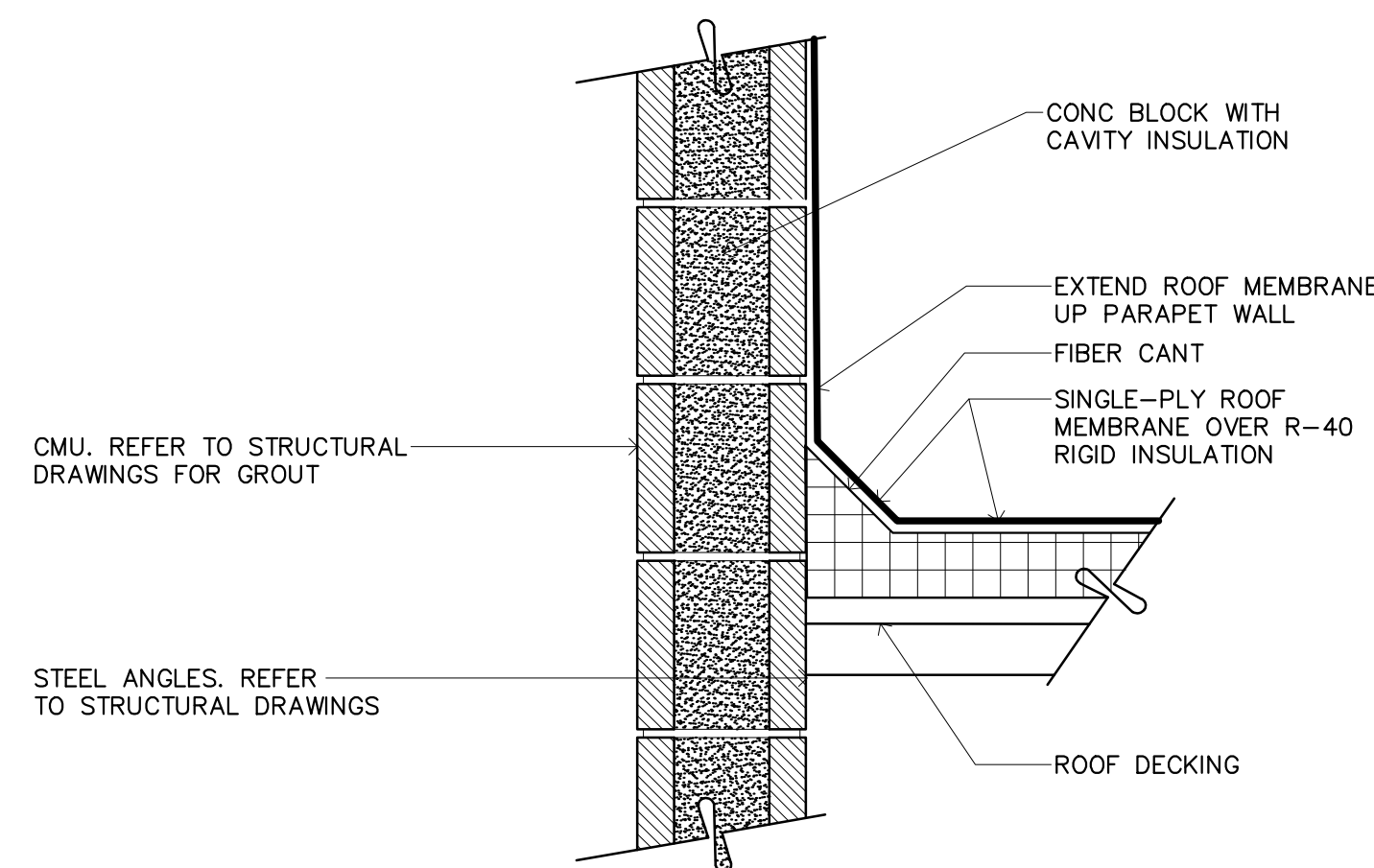
13 ROOF DETAIL
SCALE: NO SCALE



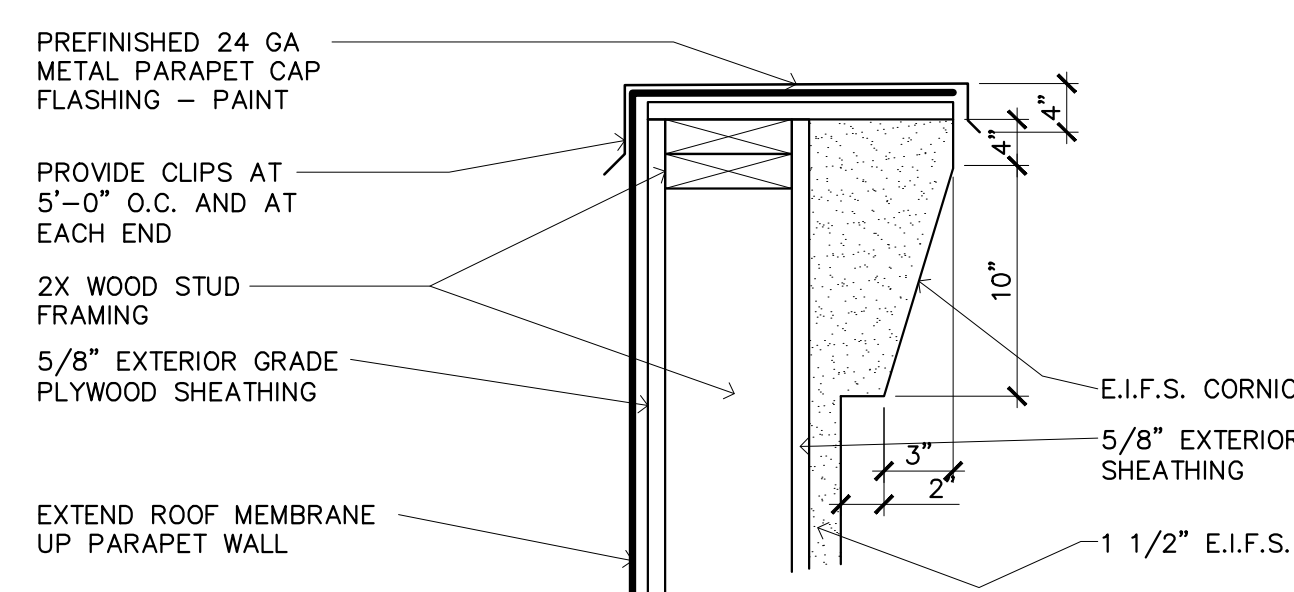
14 FOUNDATION DETAIL
SCALE: 1 1/2"=1'-0"



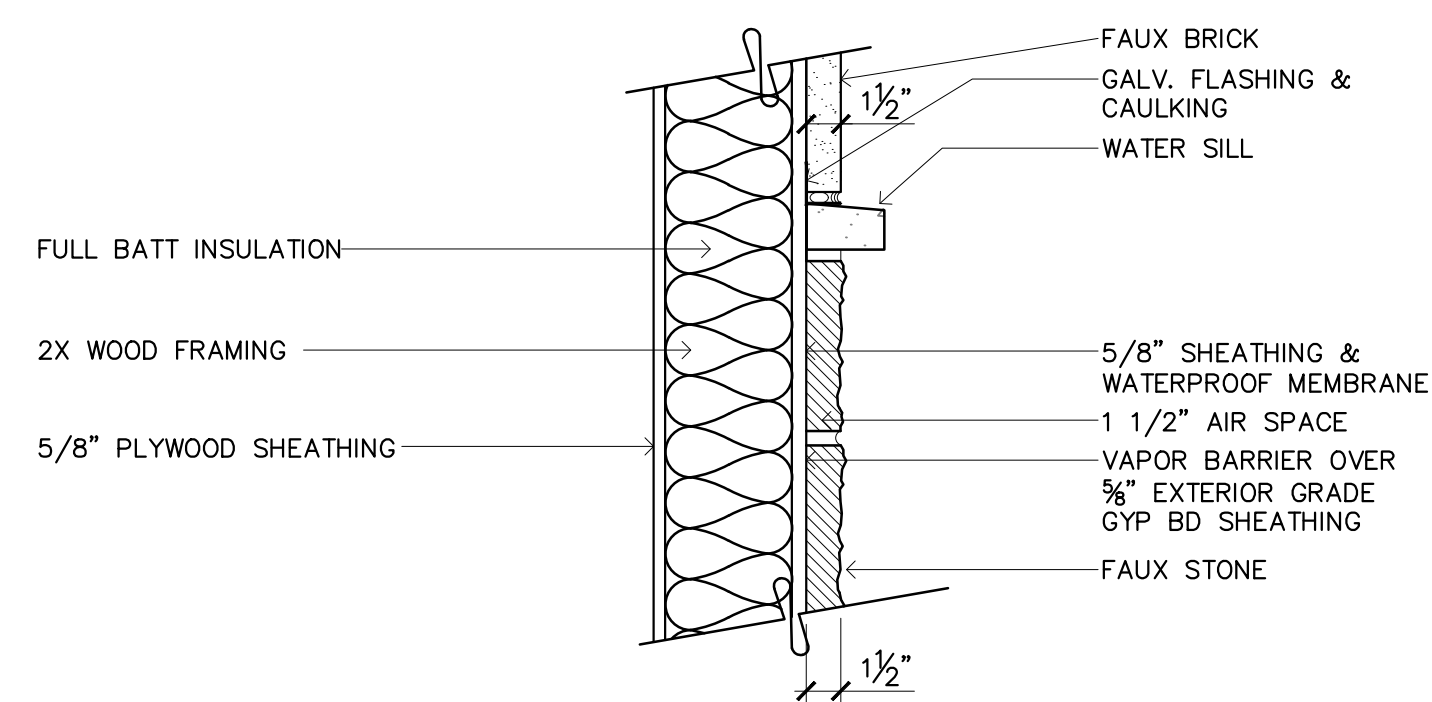
15 ROOF AT CMU DETAIL
SCALE: 1 1/2"=1'-0"



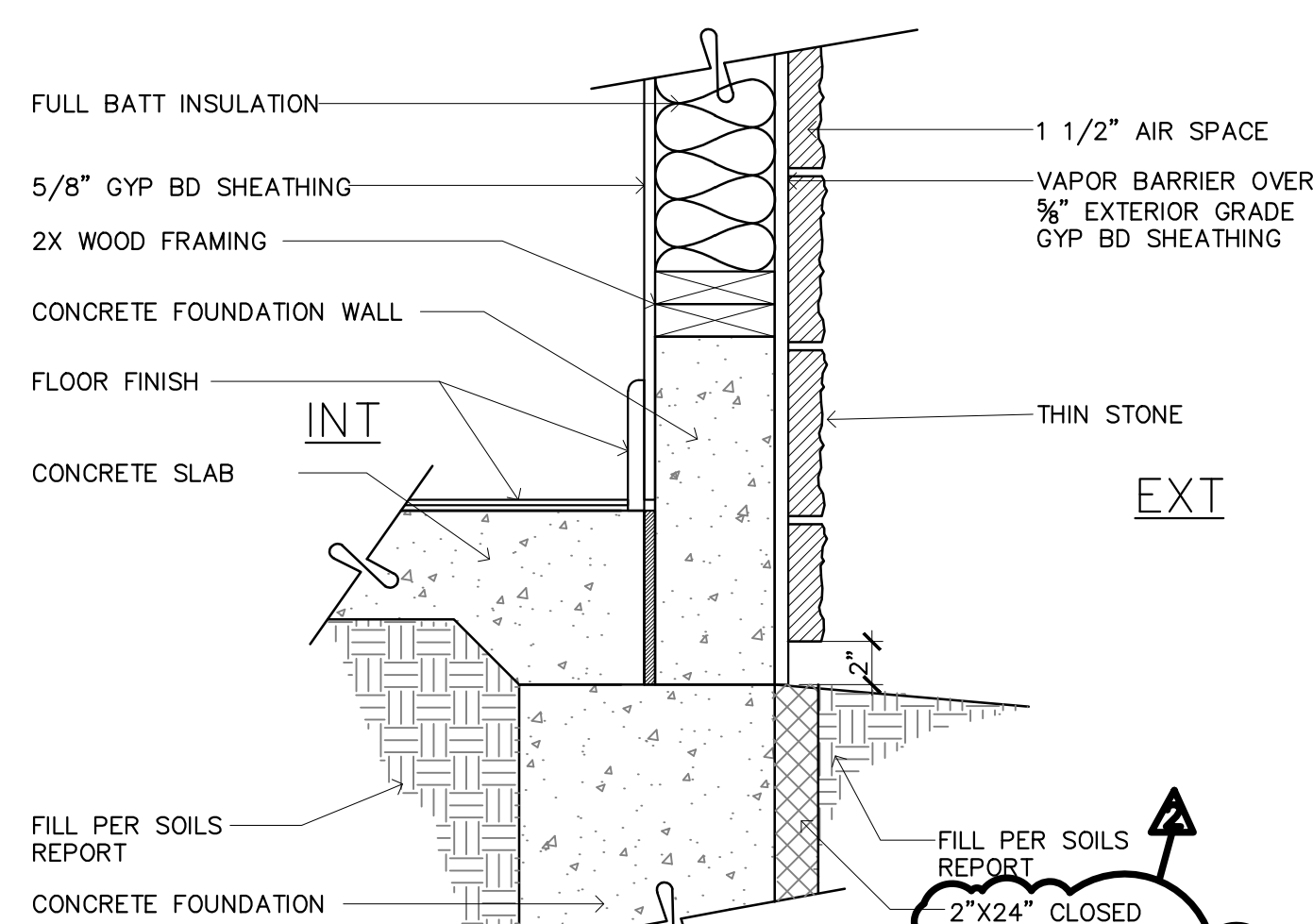
9 DECK AT CMU DETAIL
SCALE: 1 1/2"=1'-0"



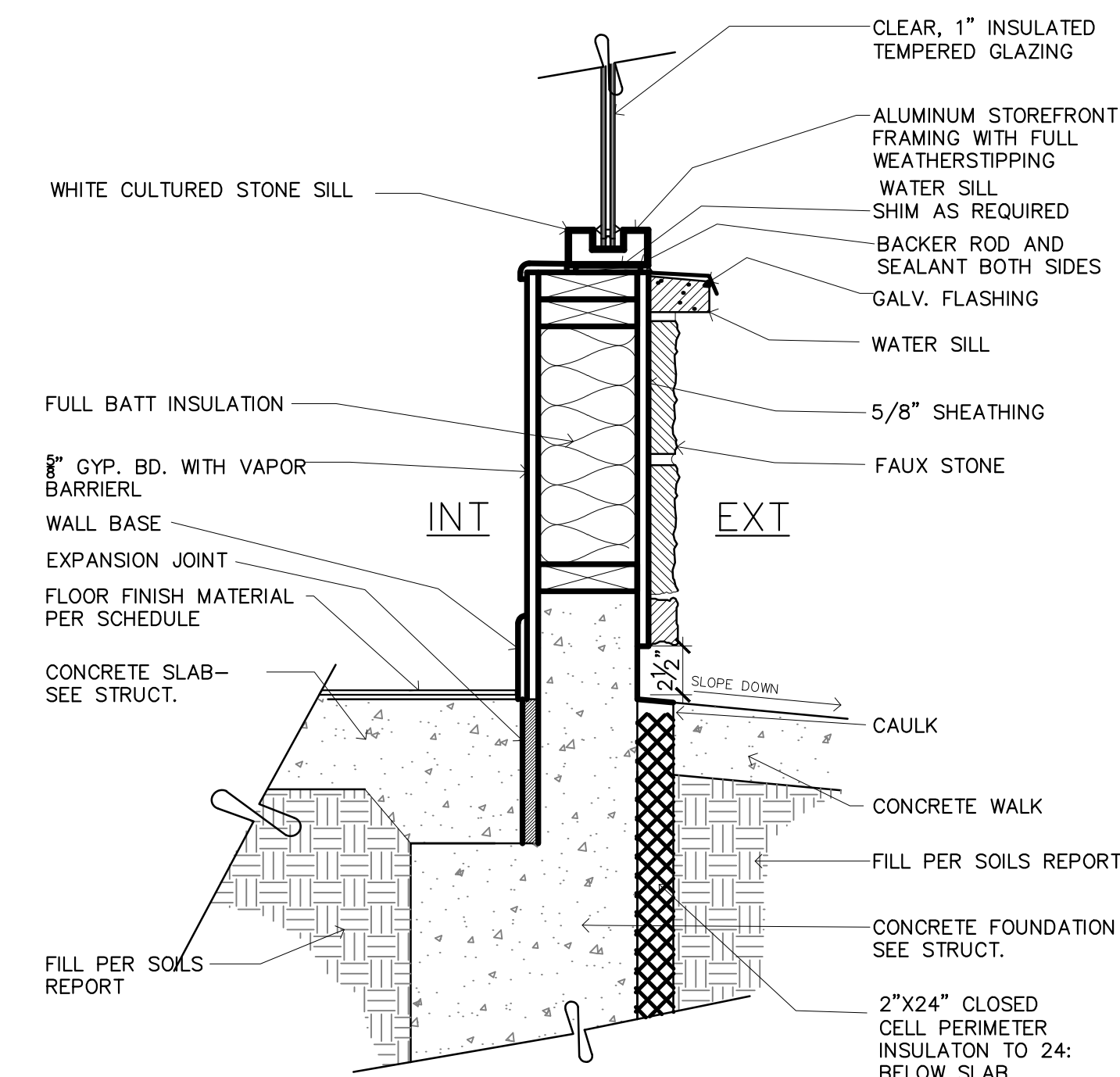
10 CORNICE AT STUD WALL DETAIL
SCALE: 1 1/2"=1'-0"



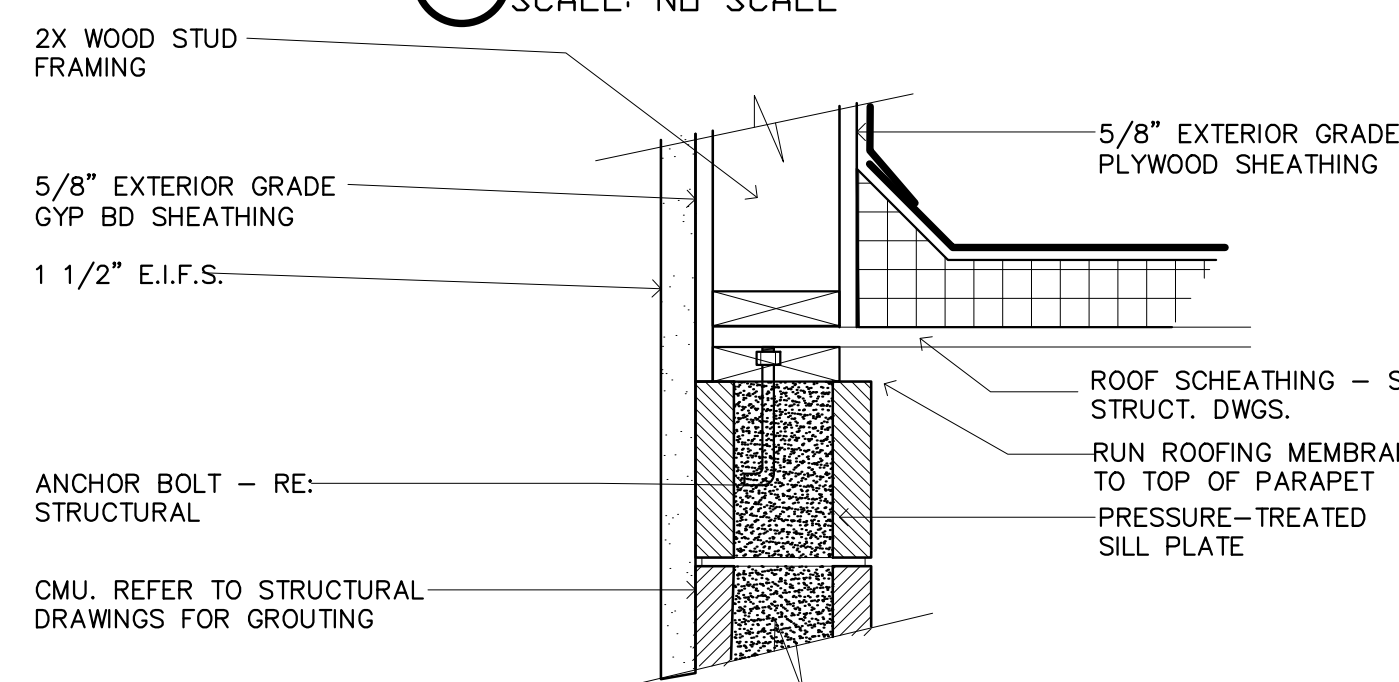
11 WAINSCOT DETAIL
SCALE: 1 1/2"=1'-0"



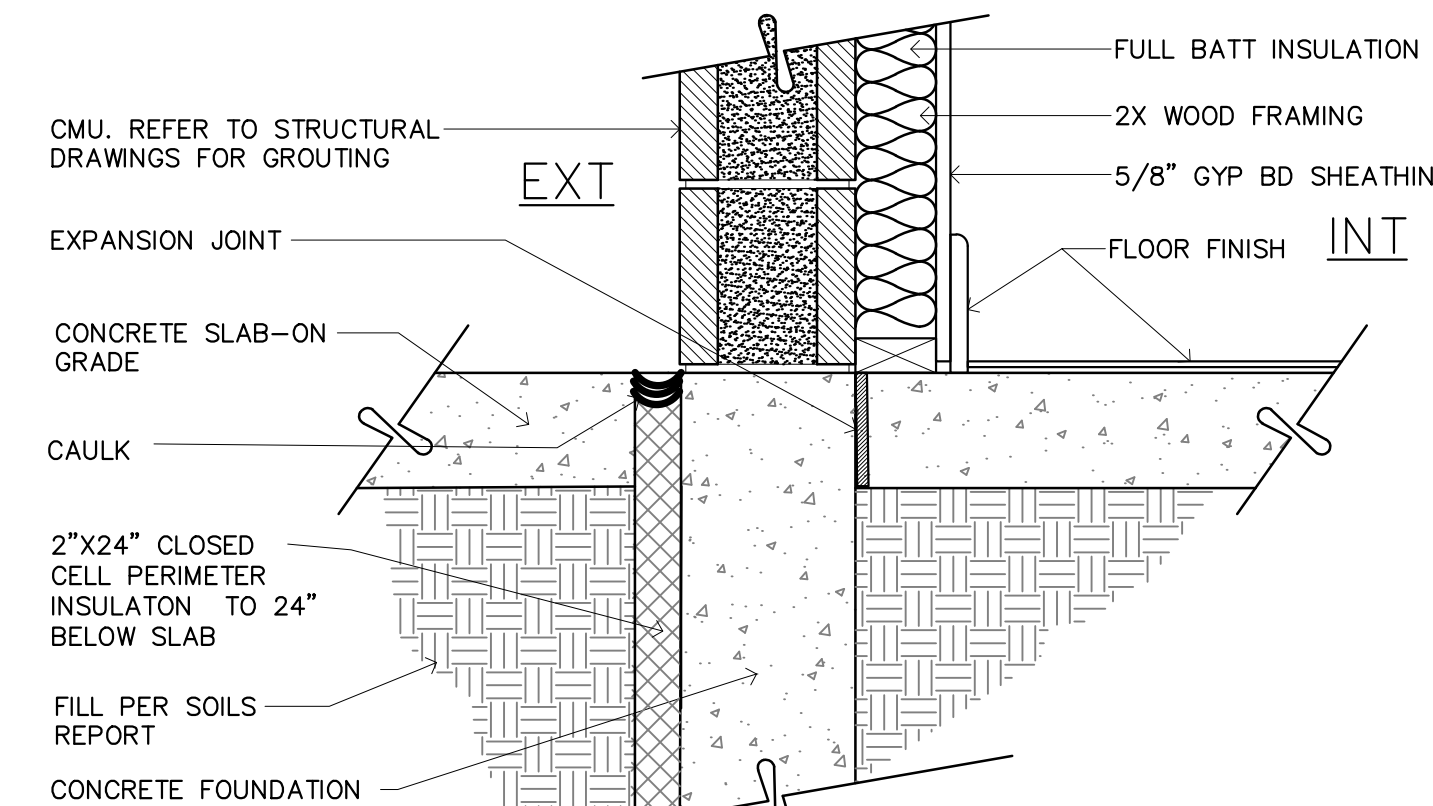
12 FOUNDATION DETAIL
SCALE: 1 1/2"=1'-0"



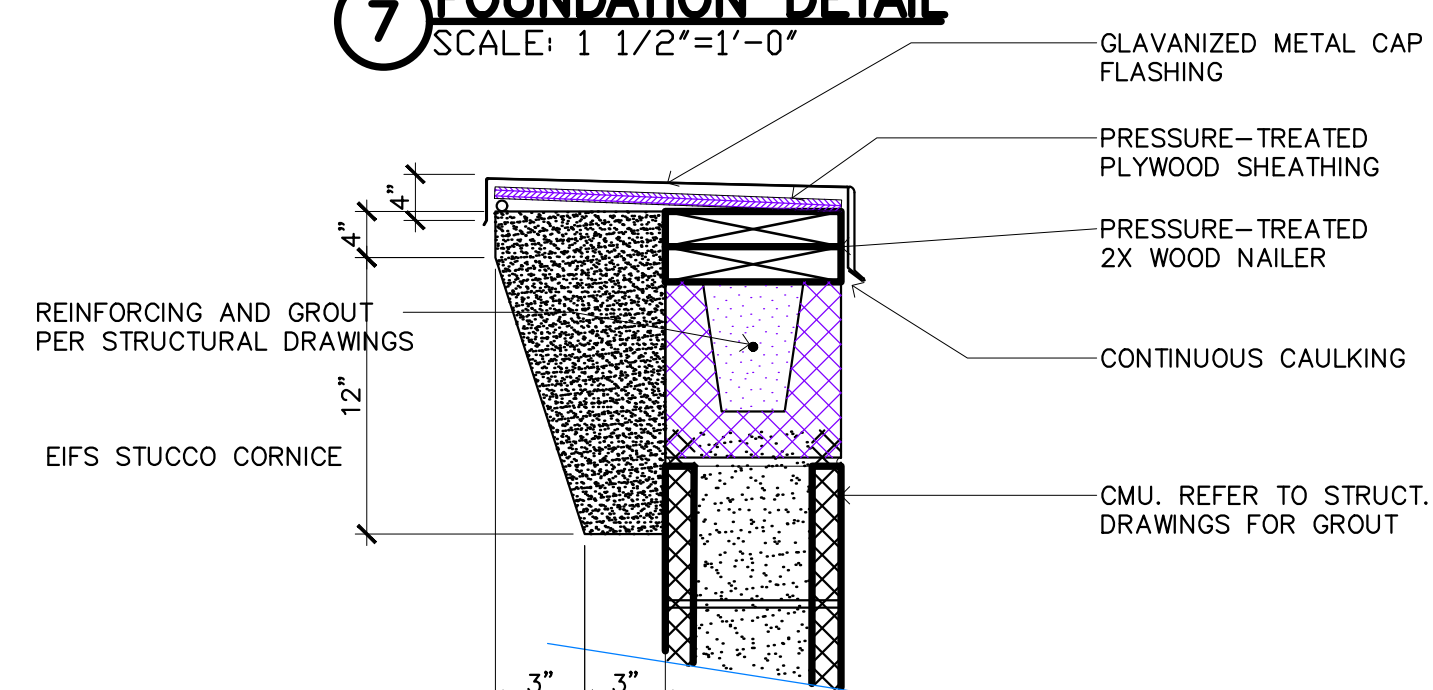
5 FOUNDATION DETAIL
SCALE: NO SCALE



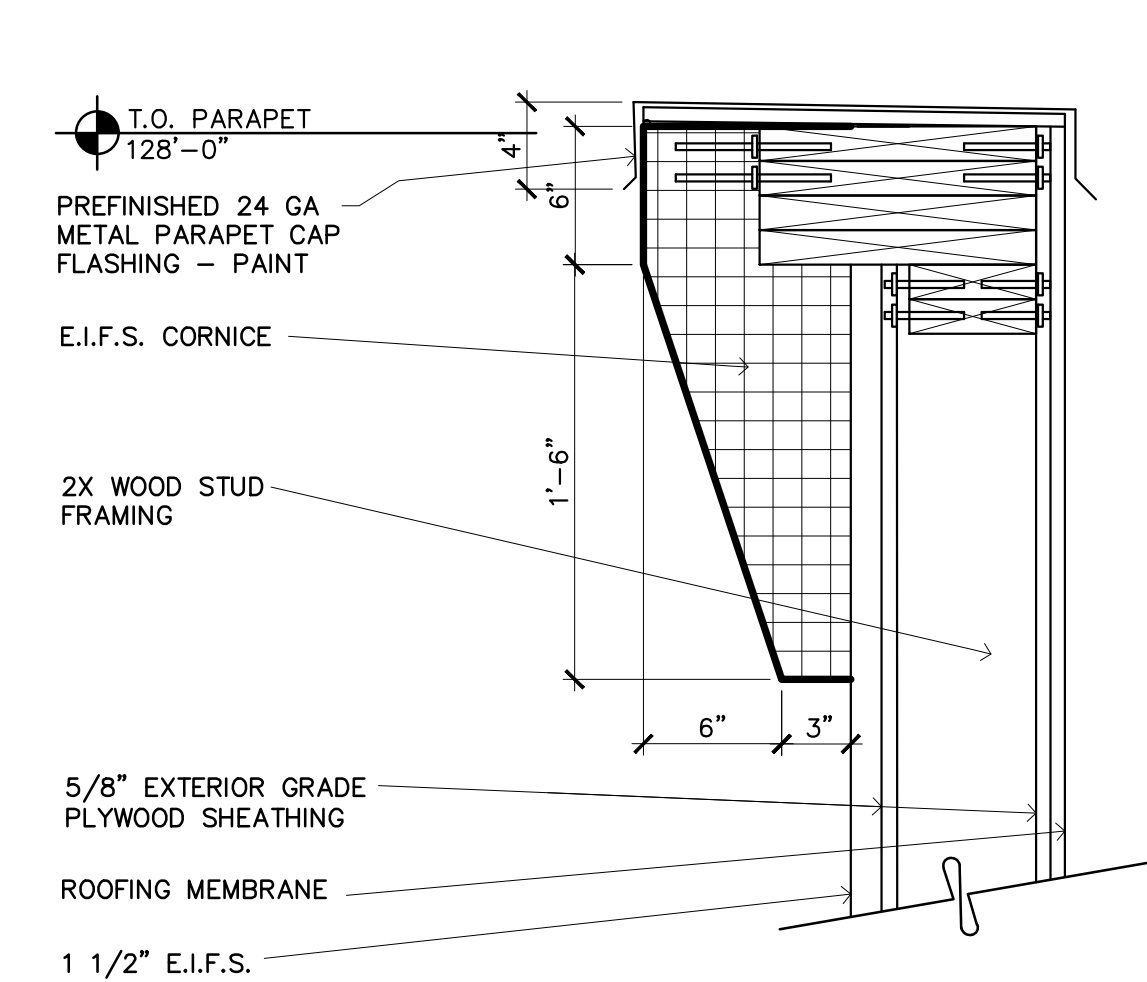
6 CMU AT STUD WALL DETAIL
SCALE: 1 1/2"=1'-0"



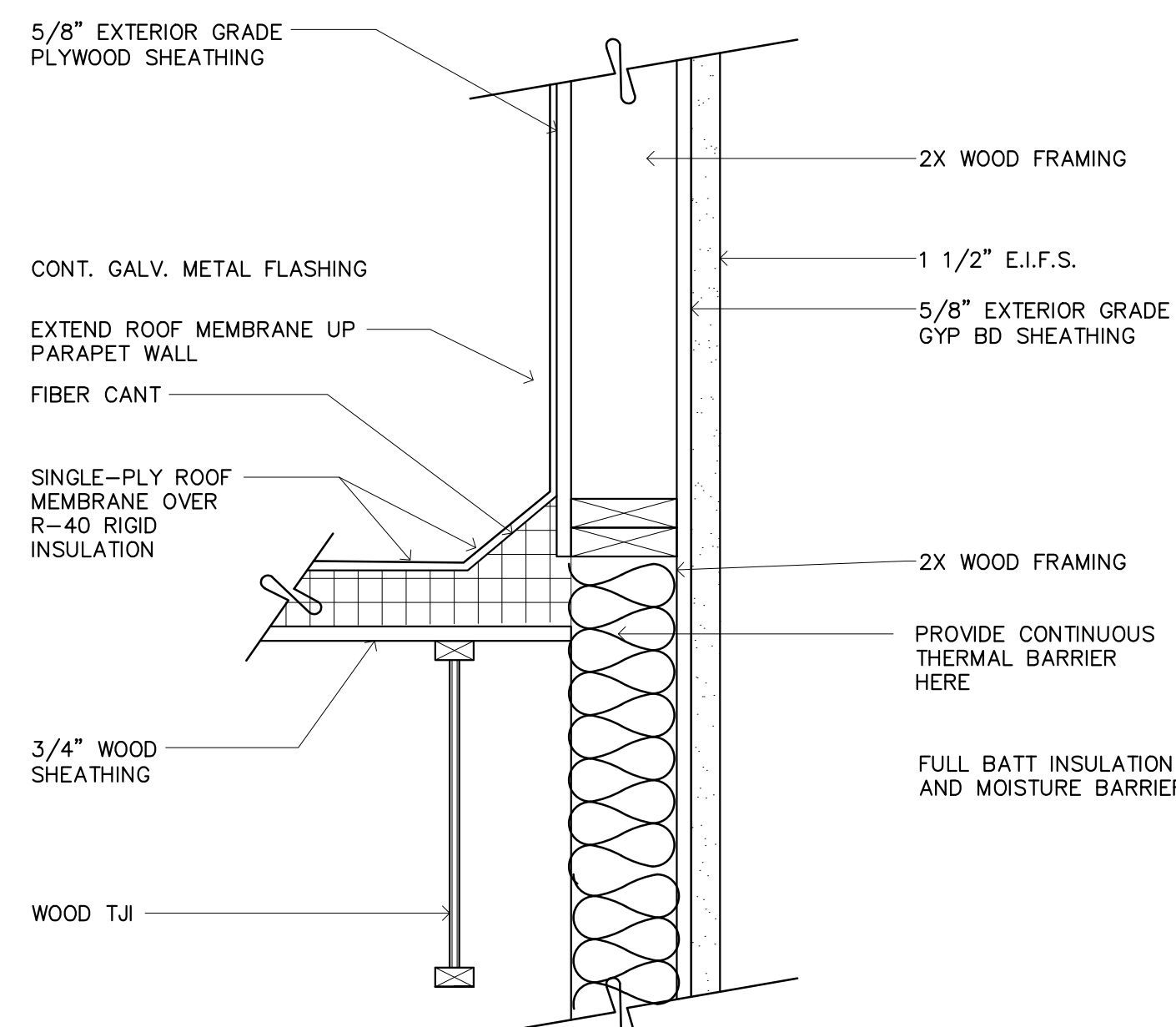
7 FOUNDATION DETAIL
SCALE: 1 1/2"=1'-0"



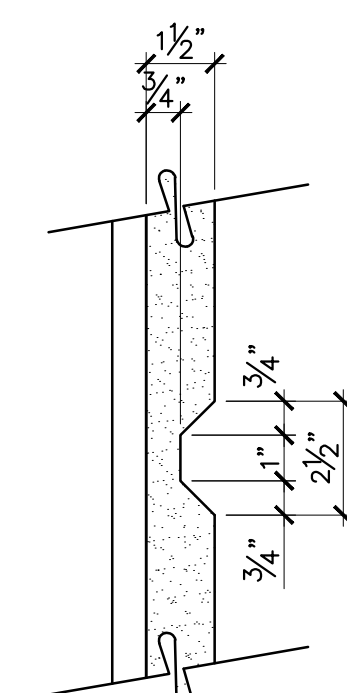
8 CORNICE AT CMU DETAIL
SCALE: 1 1/2"=1'-0"



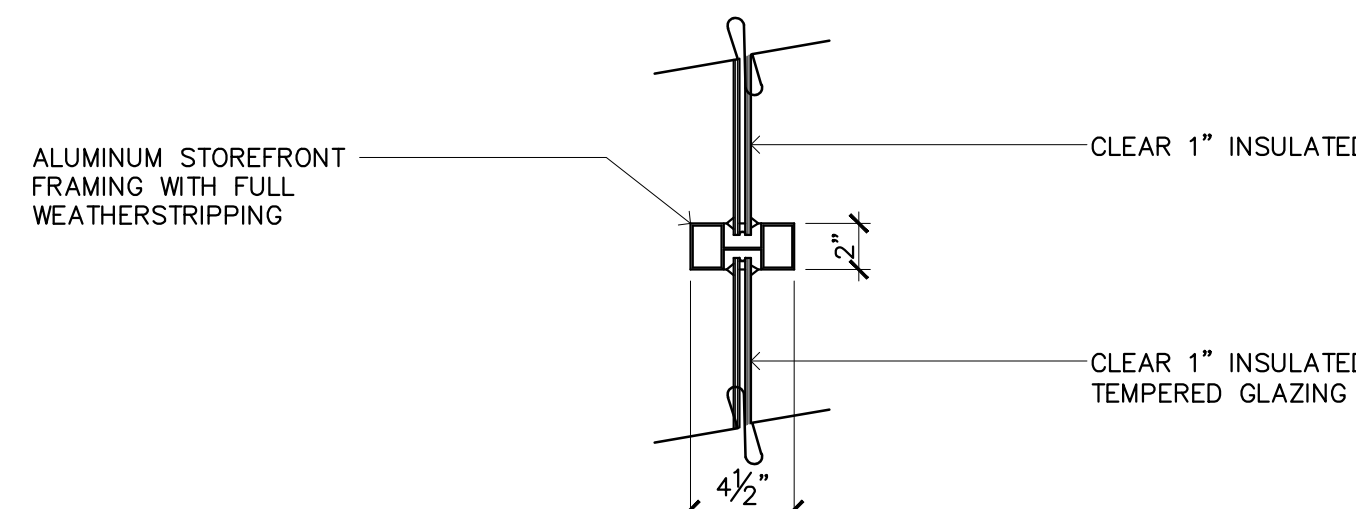
1 CORNICE AT STUD WALL DETAIL
SCALE: 1 1/2"=1'-0"



2 DECK AT STUD WALL DETAIL
SCALE: 1 1/2"=1'-0"



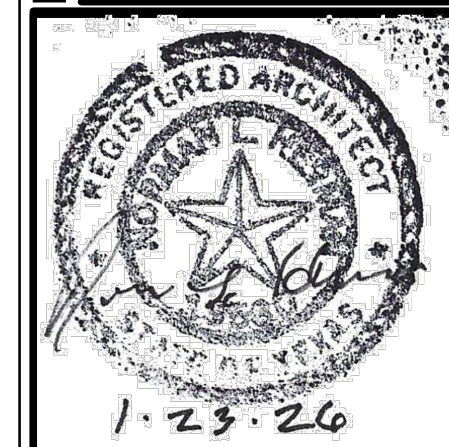
3 REVEAL DETAIL
SCALE: 3"=1'-0"



4 STOREFRONT WINDOW DETAIL
SCALE: 1 1/2"=1'-0"

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
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ARCODEV JOB #: _____
CLIENT/JOB #: _____
DRAWN BY: NLH
CHECKED BY: NLH
DATE OF ISSUE: 01.01.29

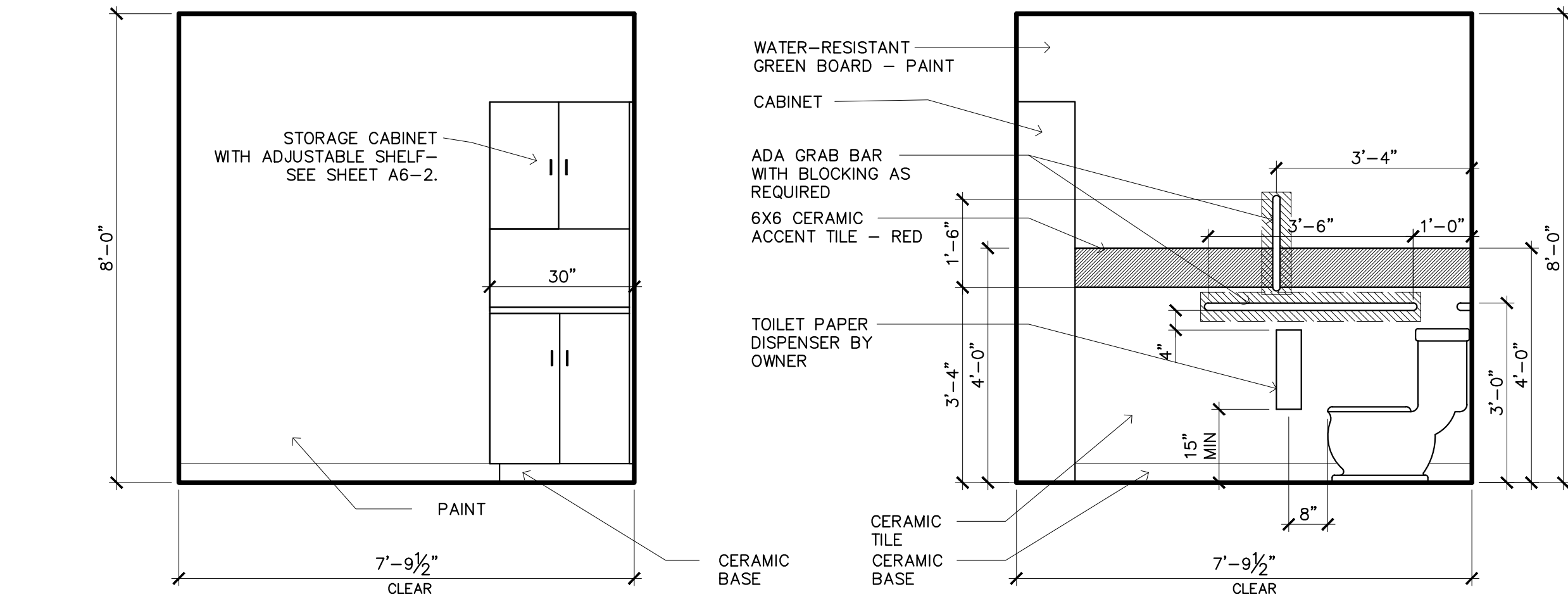


45 SPYGLASS DRIVE
LITTLETON, CO 80133
VOICE: 303.881-8925
NORM.HERMAN@ARCODEV.COM

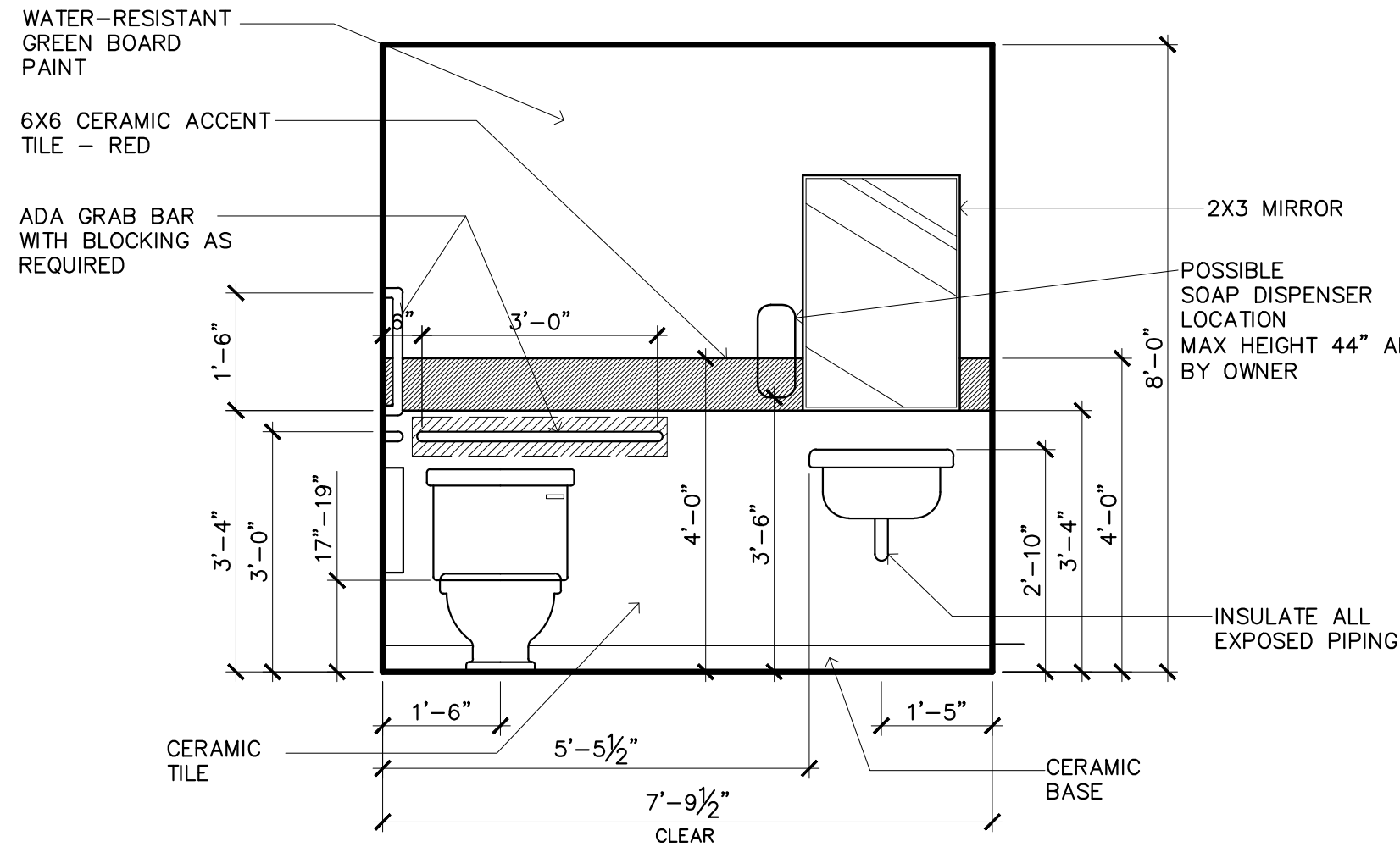
SHEET

A4-6

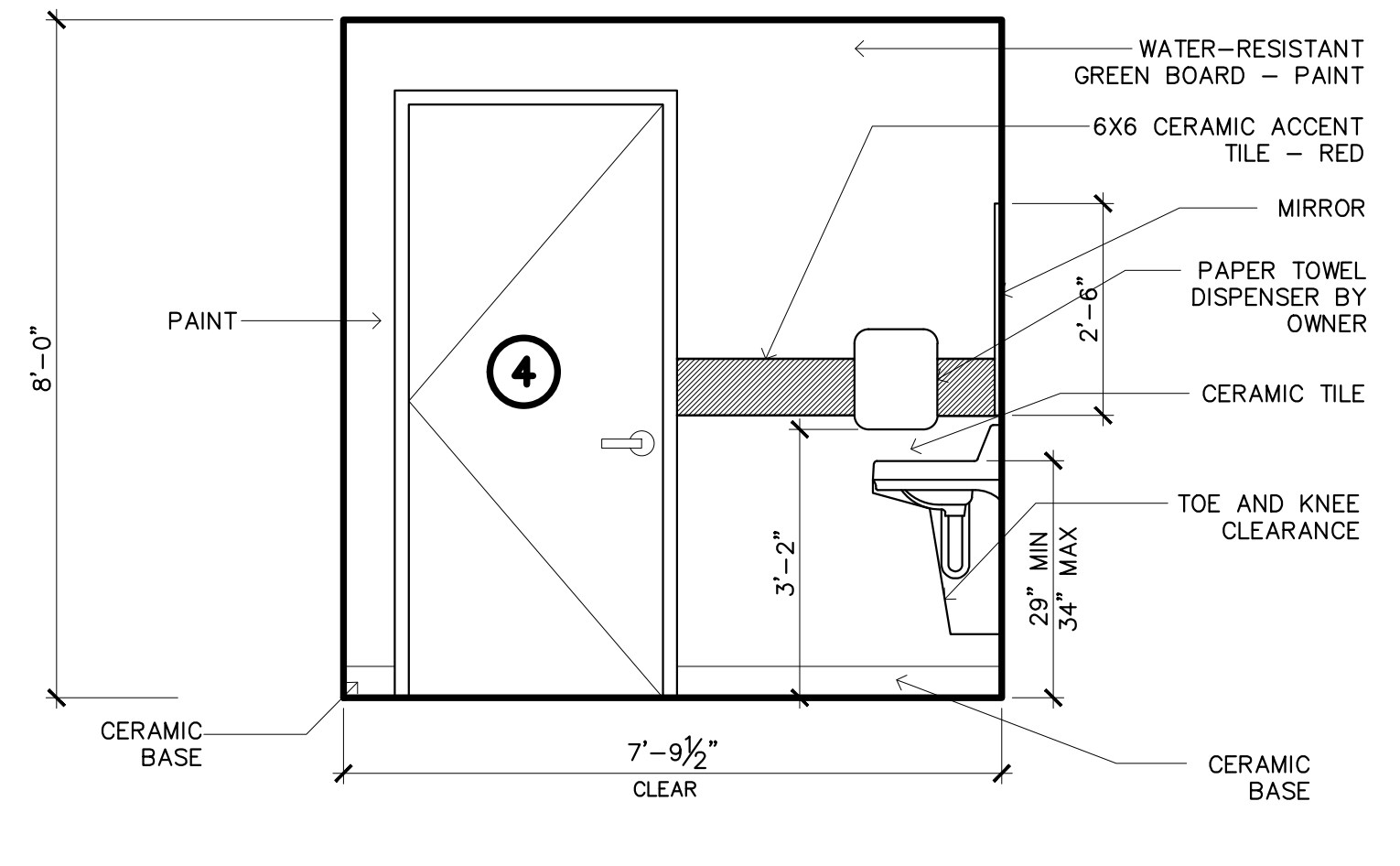
DETAILS



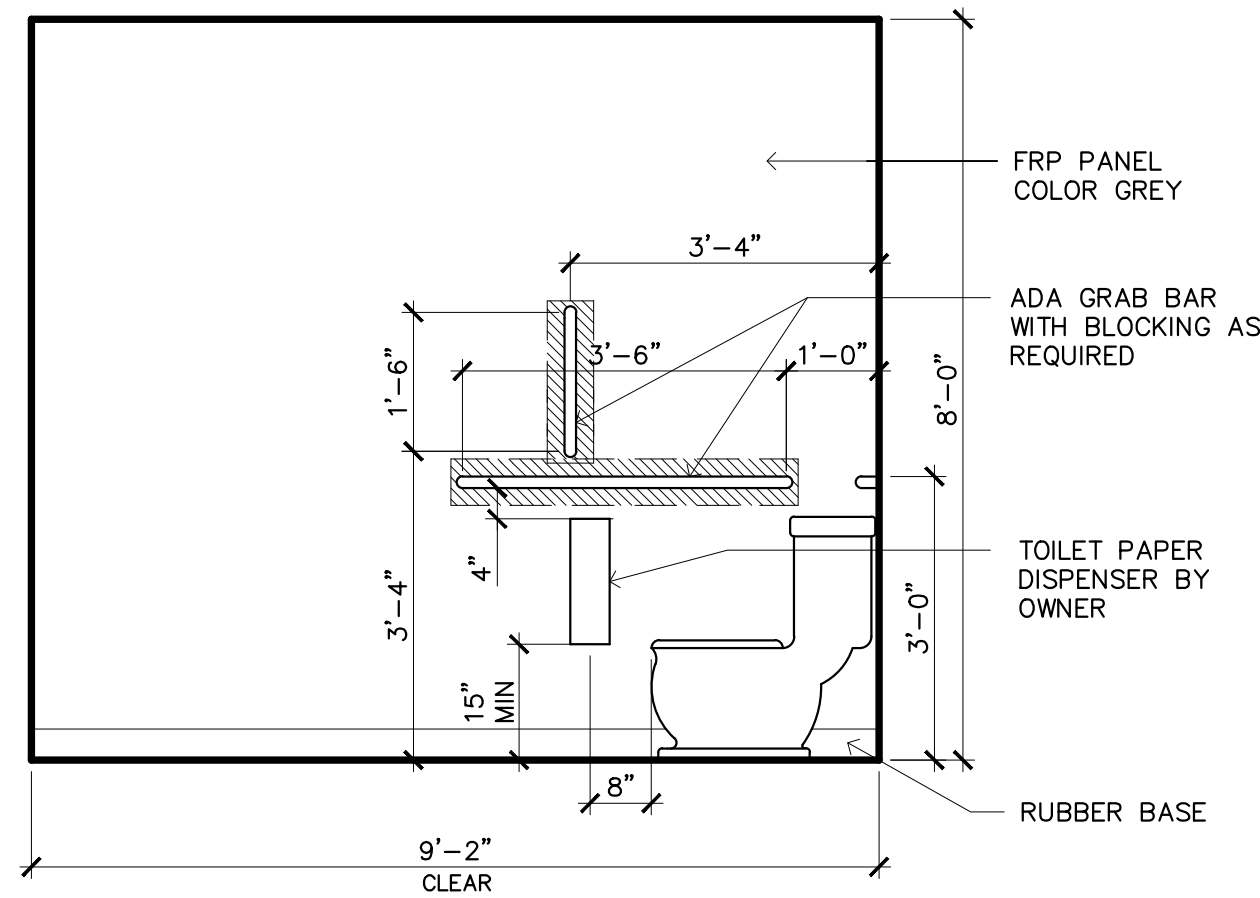
1 WOMEN'S RESTROOM ELEVATION
SCALE: 1/2" = 1'-0"



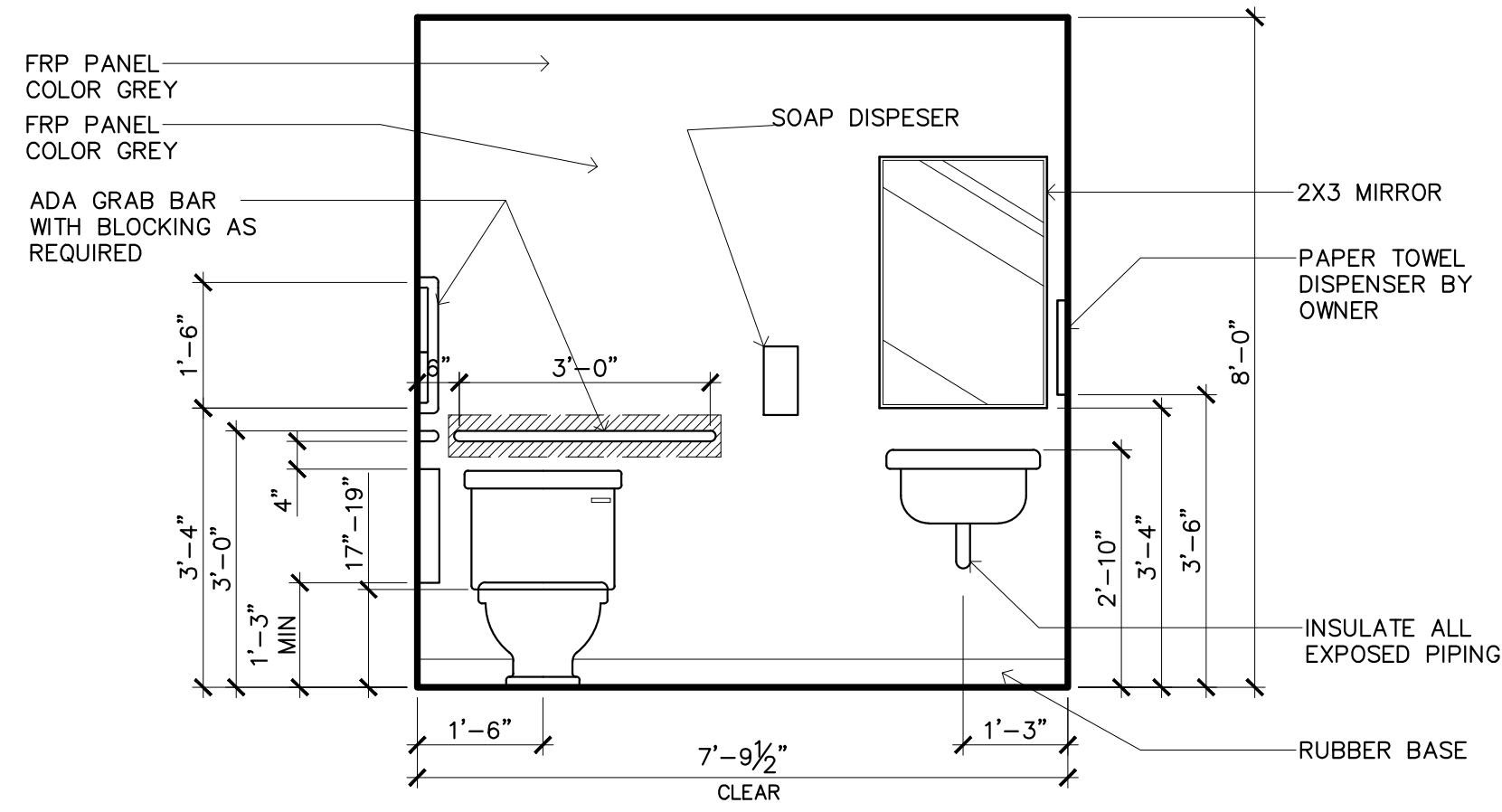
b



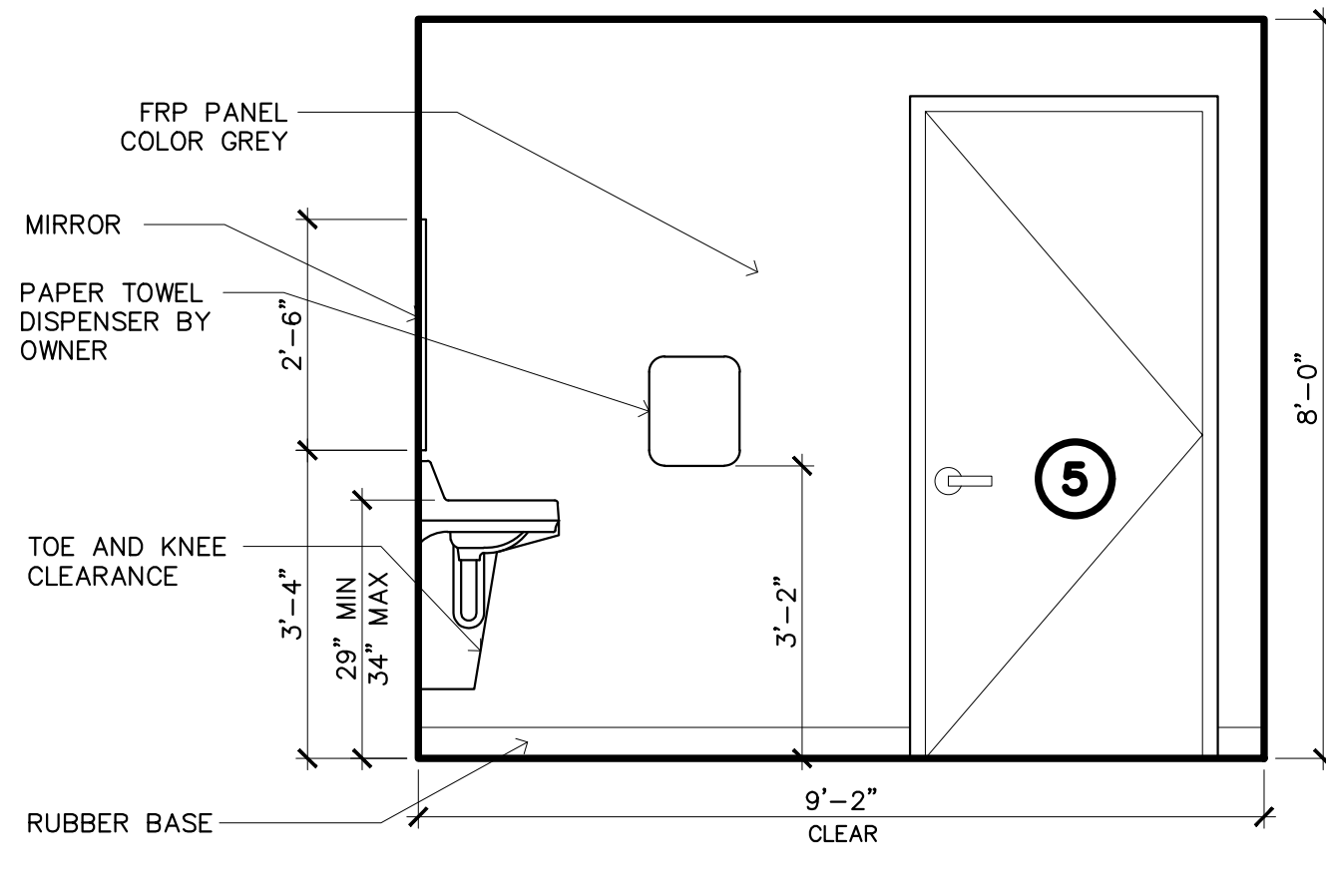
c



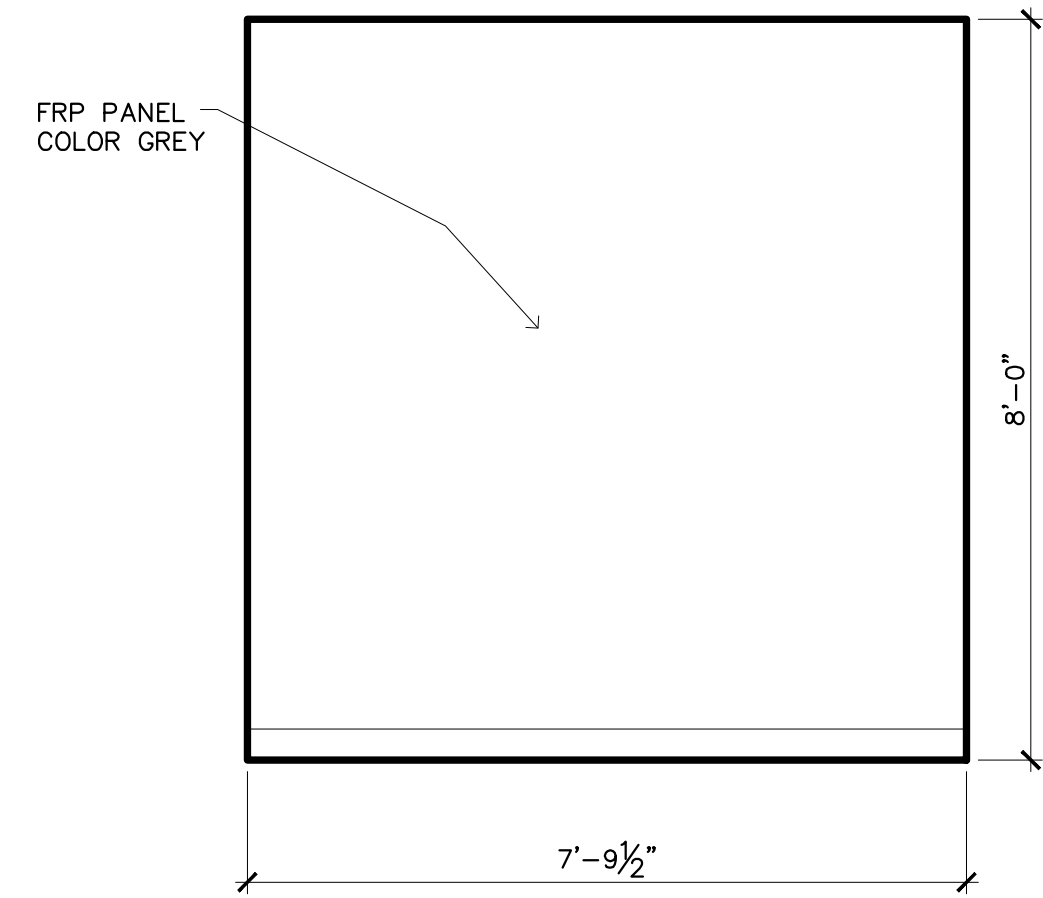
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c

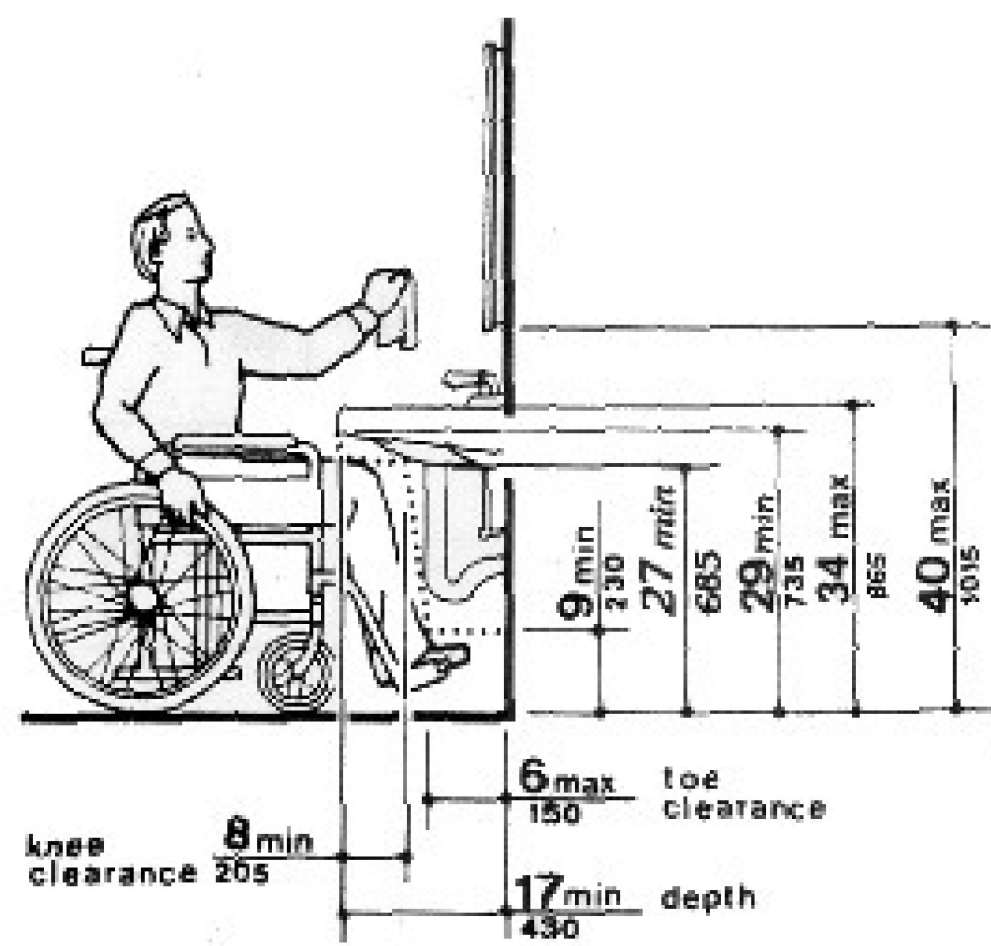


d

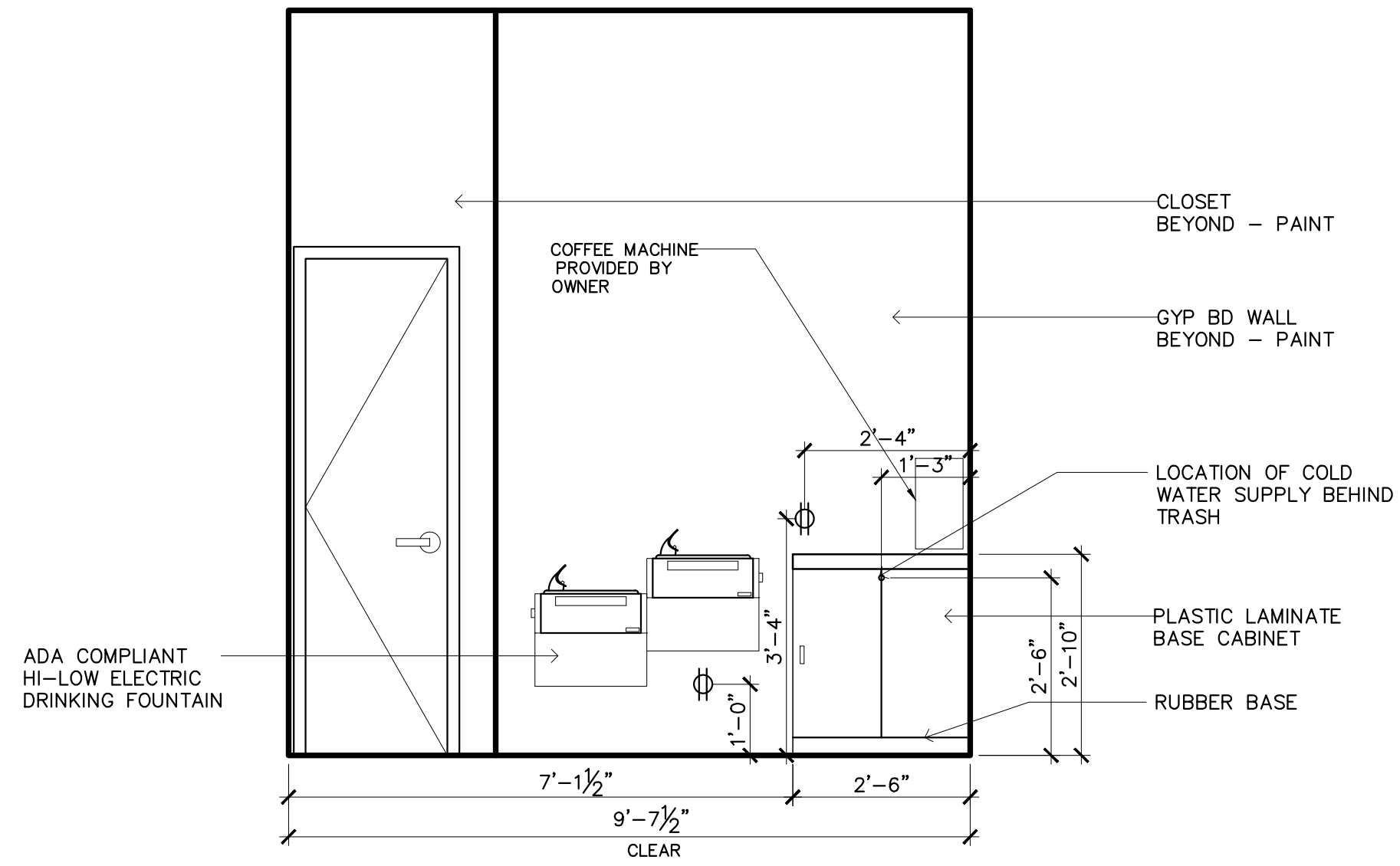


a

2 MEN'S RESTROOM ELEVATION
SCALE: 1/2" = 1'-0"



6 ADA PLACEMENT OF FIXTURES
SCALE: 1/2" = 1'-0"



5 COFFEE ROOM ELEVATION
SCALE: 1/2" = 1'-0"

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76286



ARCHITECT OF RECORD

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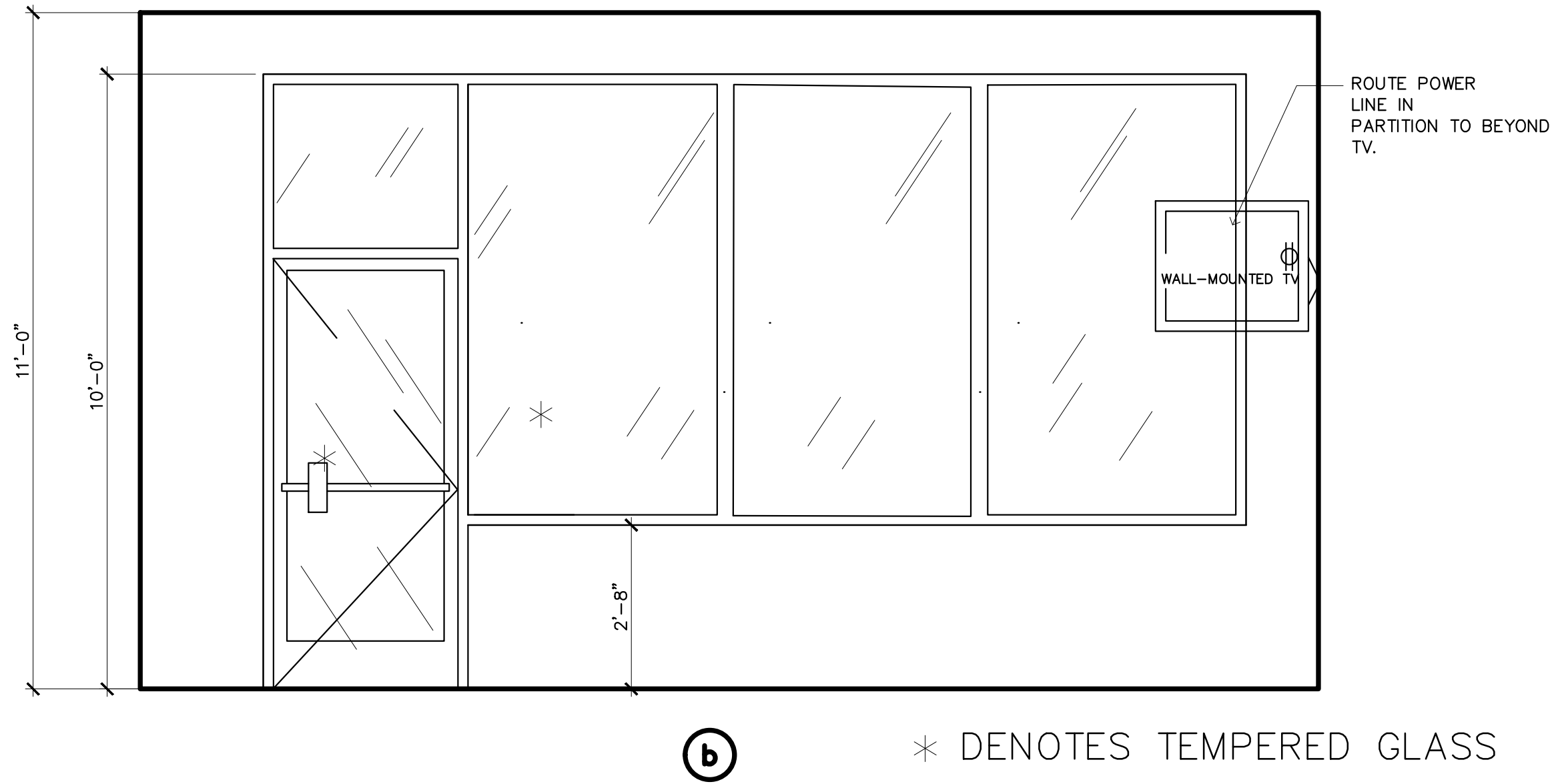
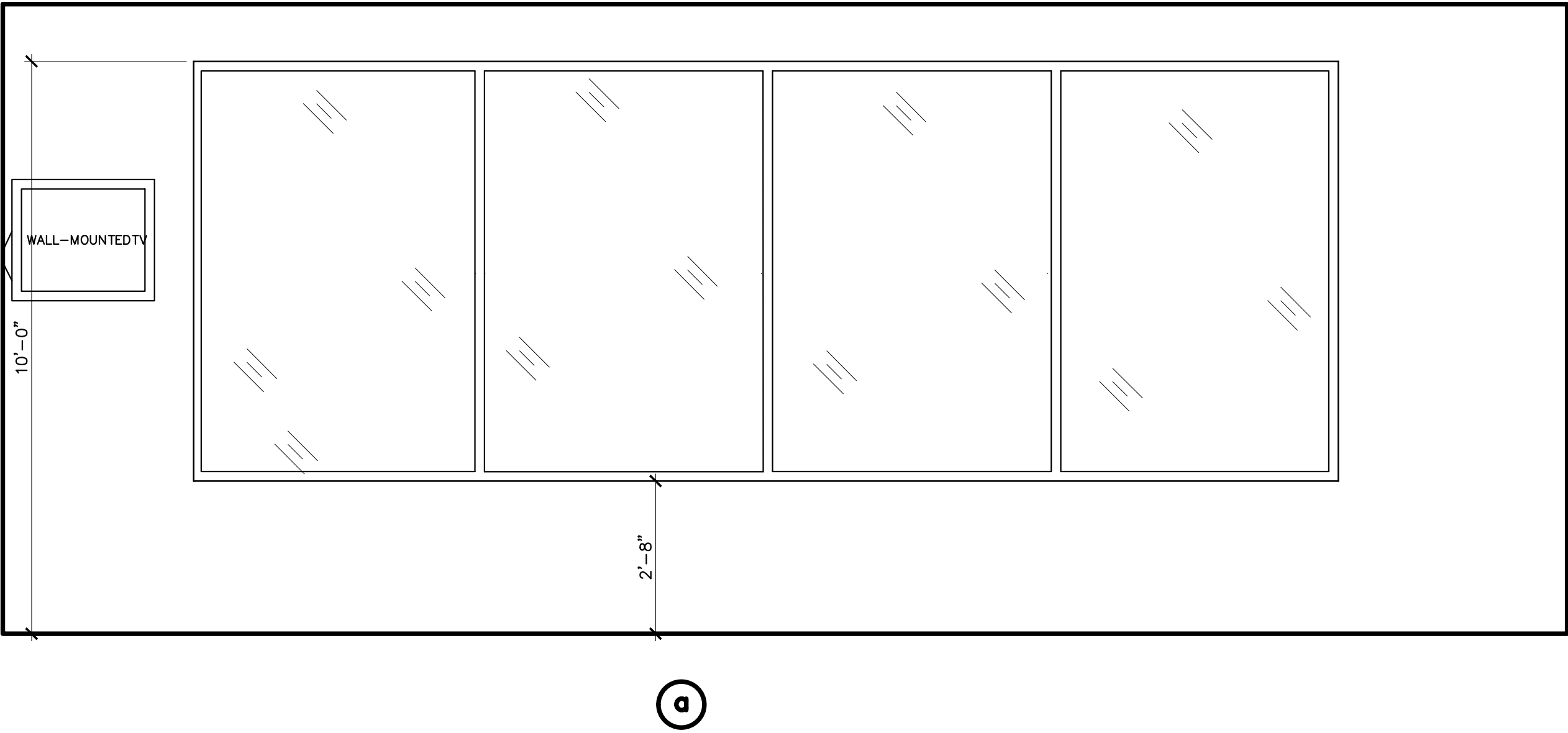
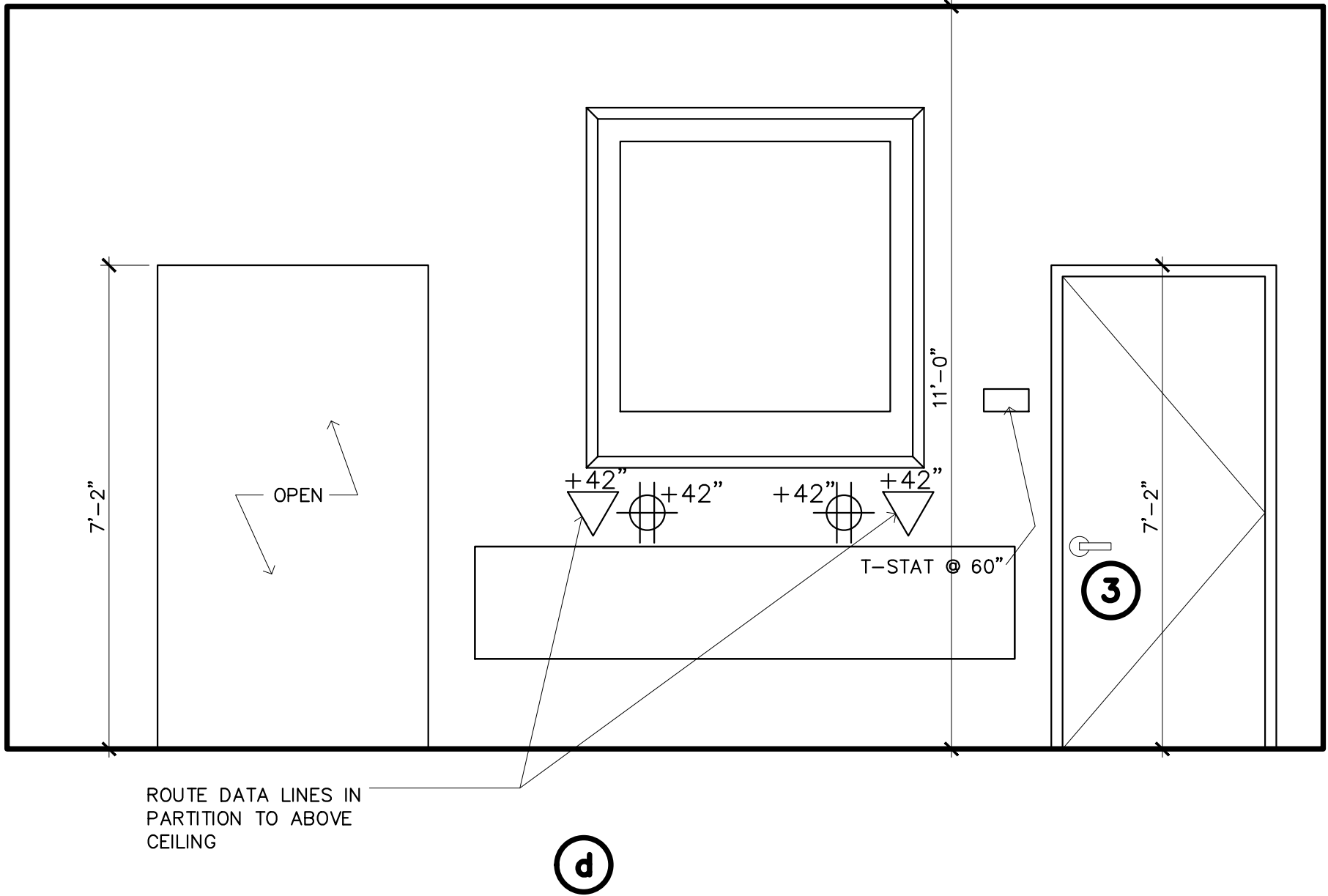
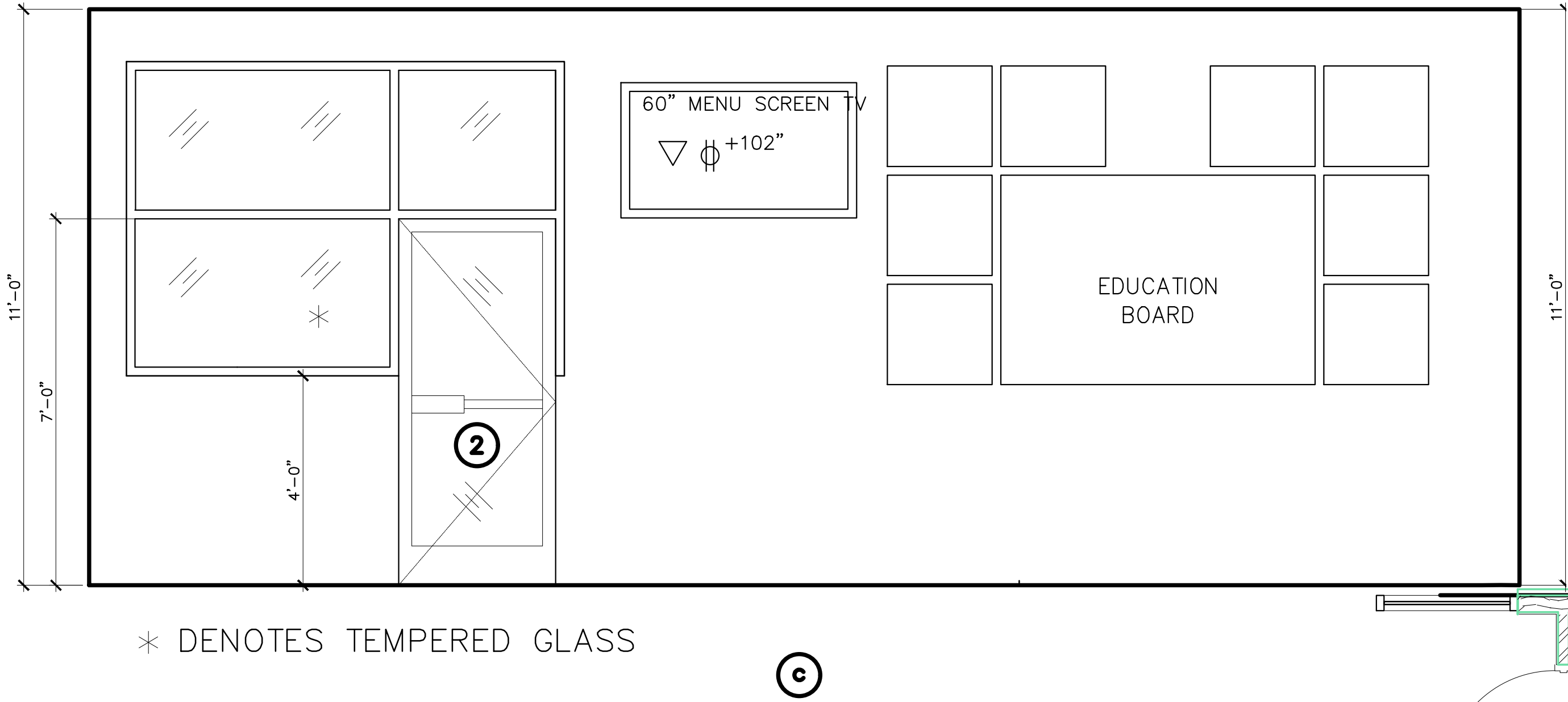
ARCDEV JOB #:
CLIENTJOB #:
DRAWN BY: NLH
CHECKED BY: NLH
DATE OF ISSUE: 010.01.25



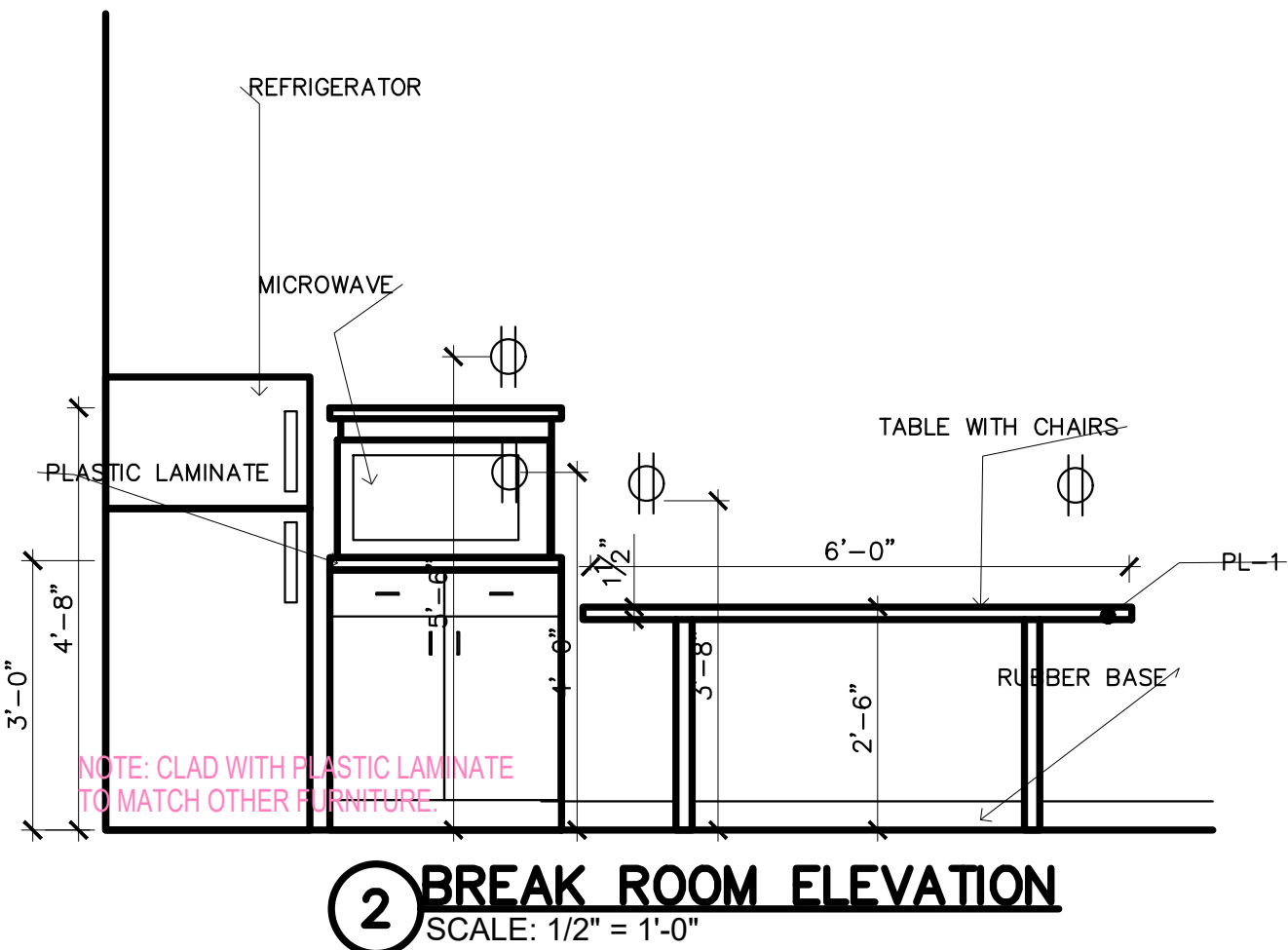
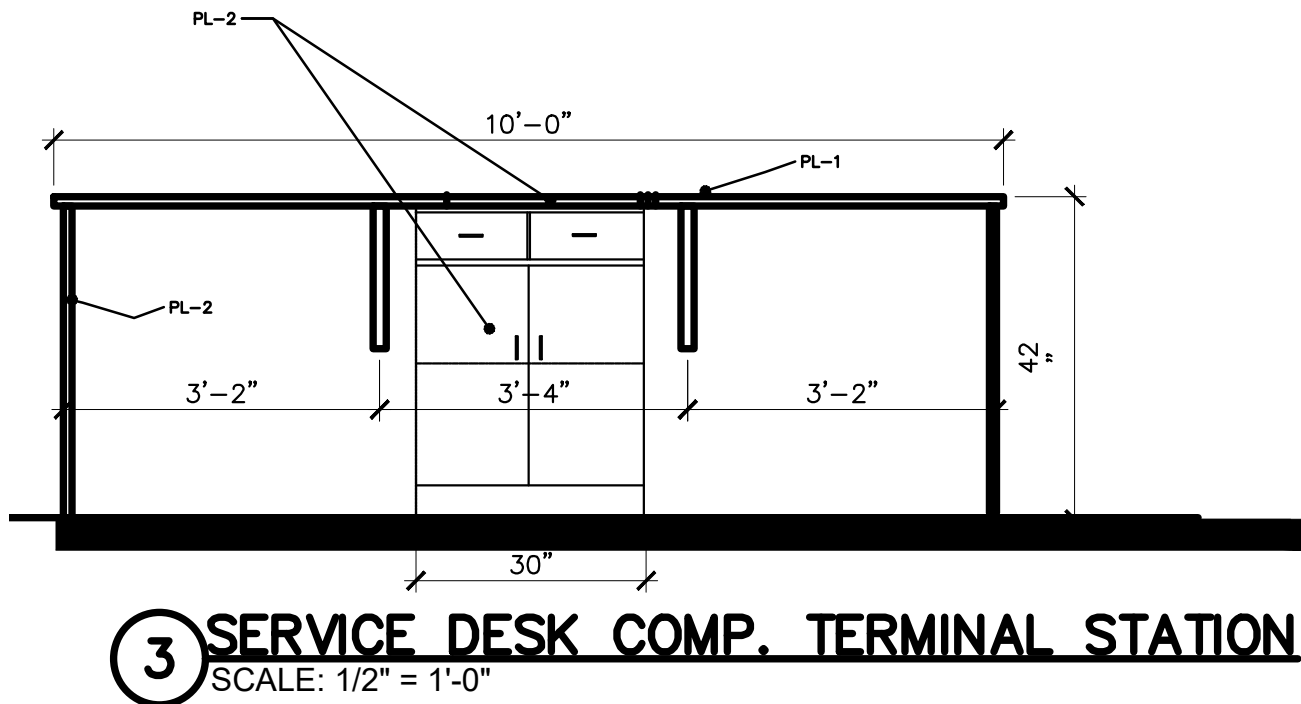
SHEET

A5-1

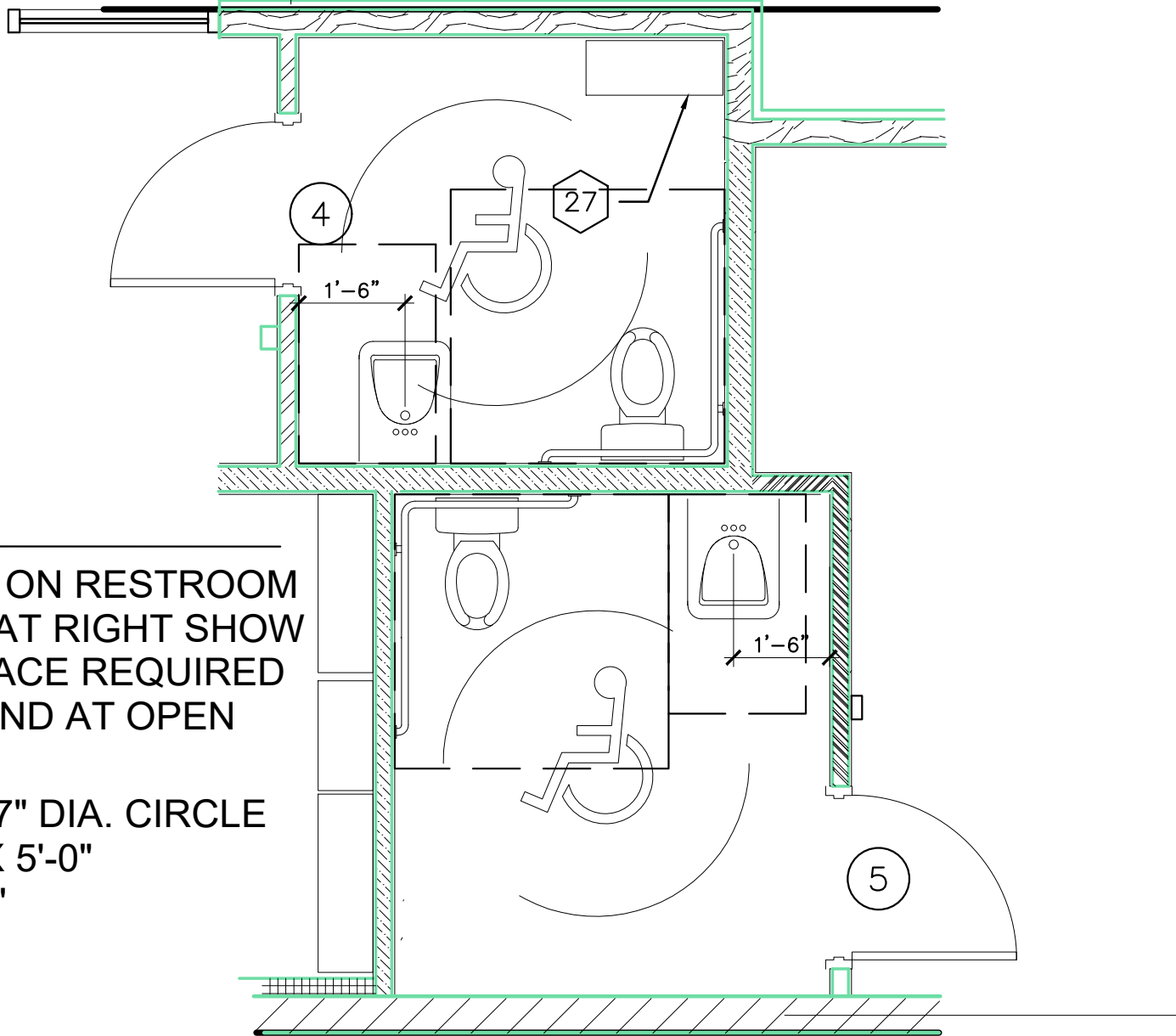
INTERIOR ELEVATIONS
AND DETAILS



1 SALES AREA ELEVATIONS
SCALE: 1/2" = 1'-0"



NOTE:
DASHED LINES ON RESTROOM FLOOR PLANS AT RIGHT SHOW THE CLEAR SPACE REQUIRED AT FIXTURES AND AT OPEN AREA:
OPEN AREA: 67" DIA. CIRCLE
TOILET: 5'-0" X 5'-0"
SINK: 30"X52"



BRAKES PLUS

NWIC OF FM455 & ACKER STREET
 LOT 2R3, BLOCK 8
 SANGER, TEXAS 76266

1-23-26
ARCHITECT OF RECORD

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 DRAWN BY: _____
 CHECKED BY: _____
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45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
NORMAN@ARCODEV.COM

SHEET

A5-2

INTERIOR ELEVATIONS
AND DETAILS

DOOR NO.	DOOR SIZE	DOOR				FRAME		DETAILS			HDWR GROUP	FIRE RATING	REMARKS
		TYPE	MAT'L	FINISH		MAT'L	FINISH	HEAD	JAMB	SILL			
				IN	OUT								
1	3'-0" X 7'-0"	C	ALUM/GL	M1	M1	ALUM.	M1	8/A6-1	7/A6-1	8/A6-1	6	—	SIGN THIS DOOR SHALL REMAIN UNLOCKED DURING BUSINESS HOURS WHEN THIS SPACE IS OCCUPIED IN 1" HIGH LETTERS
2	3'-0" X 7'-0"	C	ALUM/GL	M1	M1	ALUM.	M1	8/A6-1	7/A6-1	8/A6-1	7	—	
3	3'-0" X 7'-0"	B	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	—	2	—	—
4	3'-0" X 7'-0"	B	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	—	1	—	PROVIDE ACCESSIBLE RESTROOM SIGNAGE.
5	3'-0" X 7'-0"	F	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	—	1	—	PROVIDE ACCESSIBLE RESTROOM SIGNAGE.
6	3'-0" X 7'-0"	E	H.M.	P2	P2	H.M.	P2	2/A6-1 SIM	4/A6-1 SIM	2/A6-1 SIM	4	—	PROVIDE 16"X30" VIEW PANEL.
7	2'-0"X 7'-0"	A	H.M.	—	—	—	—	—	—	—	—	—	1 1/2 PR. HINGES, LEVER LATCH SET.
8	NOT USED	—	—	—	—	—	—	—	—	—	—	—	—
9	3'-8" X 7'-0"	E	H.M.	P2	P2	H.M.	P2	1/A6-1	4/A6-1	—	1	—	PROVIDE 16"X30" VIEW PANEL.
10	3'-0" X 7'-0"	B	H.M.	—	—	—	—	1,2/A6-1	4/A6-1	1,2/A6-1	3	—	INSULATED DOOR
11	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK
12	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK
13	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK
14	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK
15	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK
16	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK
17	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK
18	10'-0" X 12'-0"	D	ALUM/GL	—	—	—	—	9/A6-1	4/A6-3	9/A6-1	—	—	PADLOCK

ROOM FINISH SCHEDULE															
ROOM NO.	ROOM NAME	FLOORS		WALLS								CEILINGS		HEIGHT (AFF)	REMARKS
		FLOOR	BASE	EAST		WEST		NORTH		SOUTH		MATERIAL	FINISH		
				MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH				
101	SALES FLOOR	LVT	RB	ALUM/G.B.	F3			ALUM/G.B.	F3	G.B.	F3	ACT	F1	11'-0"	-
102	COFFEE ROOM	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	ACT	F1	10'-0"	-
103	OFFICE	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	ACT	F1	8'-0"	-
104	UNISEX RR.	LVT	CT	GB	F1	G.B./CT	F4/F1	GB/CT	F4/F1	GB/CT	F4/F1	GB	F4	8'-0"	-
105	UNISEX RR.	LVT	RB	FRP	F1	CMU	F3	FRP	F1	FRP	F1	GB	F4	8'-0"	PROVIDE 1 COAT BLOCK FILLER AT CMU WALL
106	STO.	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	GB	F4	ON TRUSS	
107	BREAK ROOM	SEALED CONCRETE	RB	CMU	F3	CMU	F3	GB	F3	GB	F3	OPEN	P2	ON TRUSS	PROVIDE 1 COAT BLOCK FILLER AT CMU WALL
108	INVENTORY	SEALED CONCRETE	RB	CMU	F3	CMU	F3	GB	F3	GB	F3	OPEN	F4	ON TRUSS	PROVIDE 1 COAT BLOCK FILLER AT CMU WALL
109	SERVICE AREA	SEALED CONCRETE	-	CMU	F5	CMU	F5	CMU	F5	CMU	F5	OPEN	F4	VARIES	PROVIDE 1 COAT BLOCK FILLER AT CMU WALL
110	NOT USED	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111															

NOTES:

- PROVIDE MOISTURE-RESISTANT GYPSUM BOARD.

1
FACTORY FINISHED ALUMINUM W/
1" CLEAR INSULATED GLASS
CLEAR ANODIZED ALUMINUM

2
FACTORY FINISHED ALUMINUM W/
1" CLEAR INSULATED GLASS
CLEAR ANODIZED ALUMINUM

3
FACTORY FINISHED ALUMINUM W/
1" CLEAR INSULATED GLASS
CLEAR ANODIZED ALUMINUM

4
FACTORY FINISHED ALUMINUM W/
1" CLEAR INSULATED GLASS
CLEAR ANODIZED ALUMINUM

* = TEMPERED GLASS

The diagram illustrates six different window and door profiles, labeled A through F, with their respective materials and finishes. Profile A is a hollow metal galvanized-primer painted unit. Profile B is a hollow metal galvanized and insulated primed and painted unit. Profile C is an aluminum storefront clear aluminum anodized finish unit, featuring a 10" dimension and a note indicating that an asterisk (*) denotes tempered glass. Profile D is an alum/glass overhead door with 1/4" tempered vision panels, high-lift track, and 50,000 cycles, with dimensions of 10'-0" and 12'-0". Profile E is a hollow metal galvanized primed and painted unit, featuring a view panel with dimensions of 1'-4", 2'-6", and 3'-4", and a note indicating that an asterisk (*) denotes tempered glass. Profile F is a hollow metal galvanized primed and painted unit. A legend indicates that an asterisk (*) denotes tempered glass.

A

HOLLOW METAL
GALVANIZED-PRIMER
PAINTED

B

HOLLOW METAL
GALVANIZED AND INSULATED
PRIMED AND PAINTED

C

ALUMINUM STOREFRONT
CLEAR ALUMINUM
ANODIZED FINISH

D

ALUM/GLASS OVERHEAD DOORS
1/4" TEMPERED VISION PANELS
HIGH-LIFT TRACK,
50,000 CYCLES

E

HOLLOW METAL
GALVANIZED PRIMED
AND PAINTED

F

HOLLOW METAL
GALVANIZED
PRIMED AND PAINTED

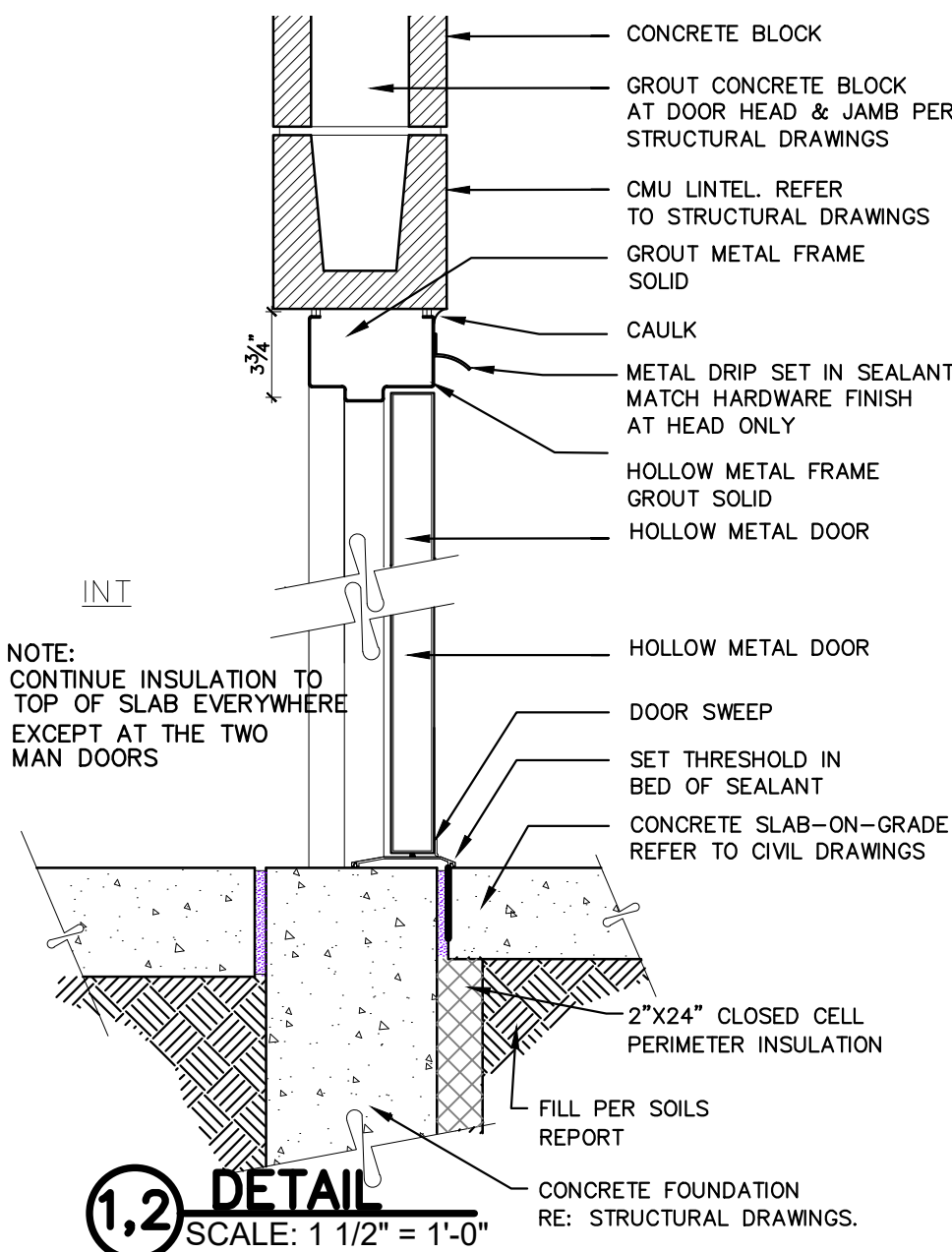
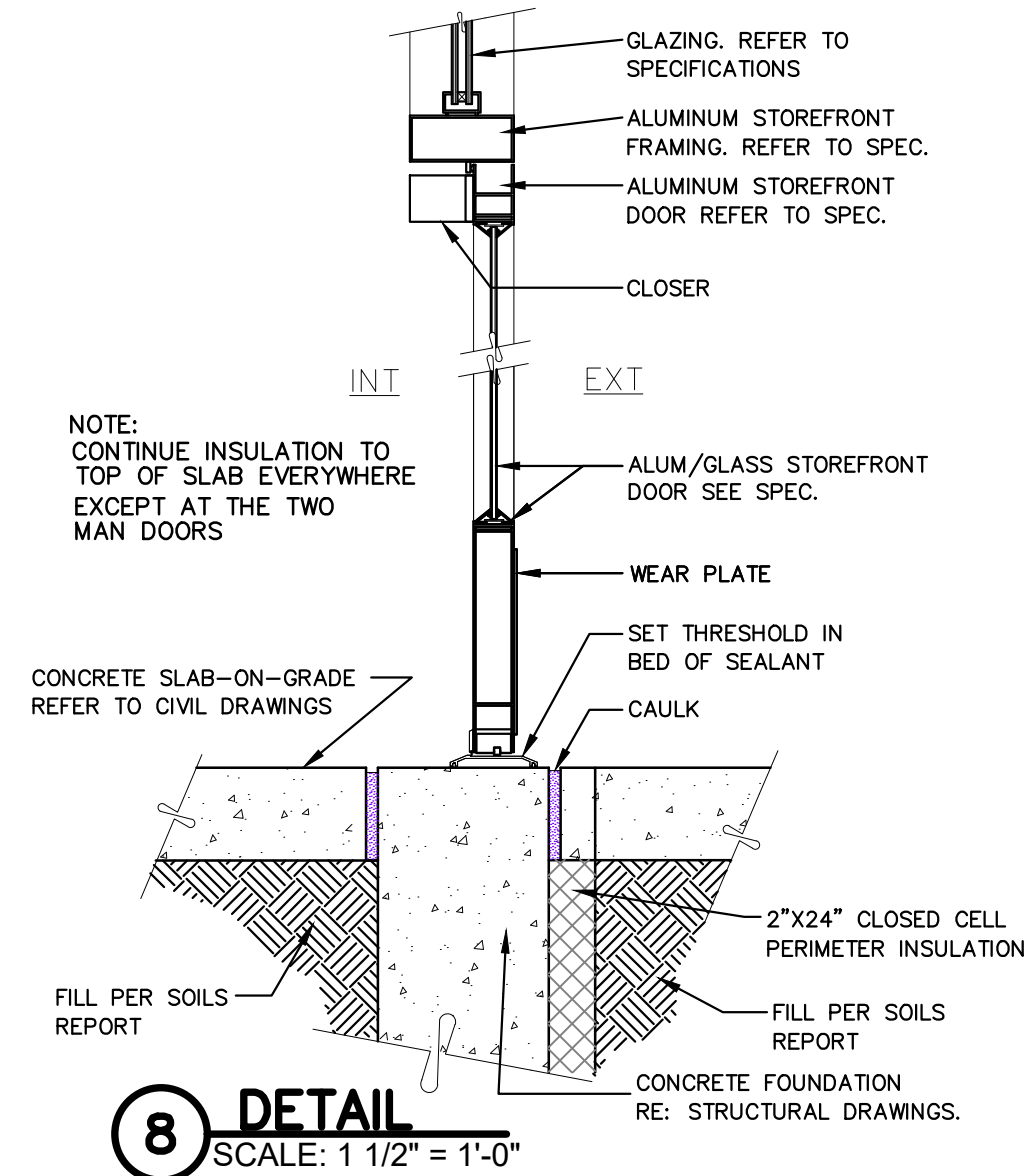
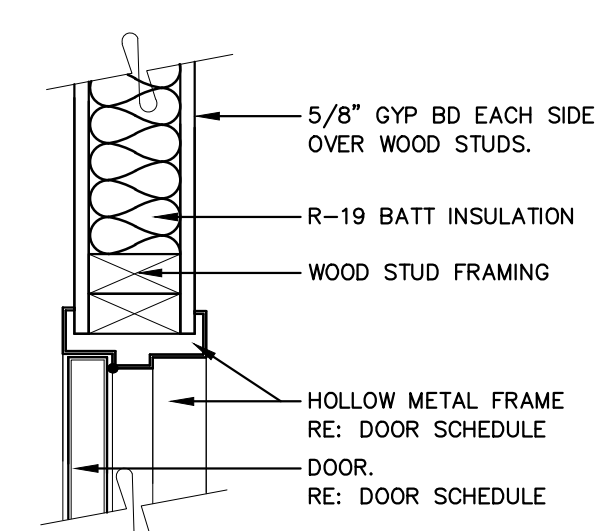
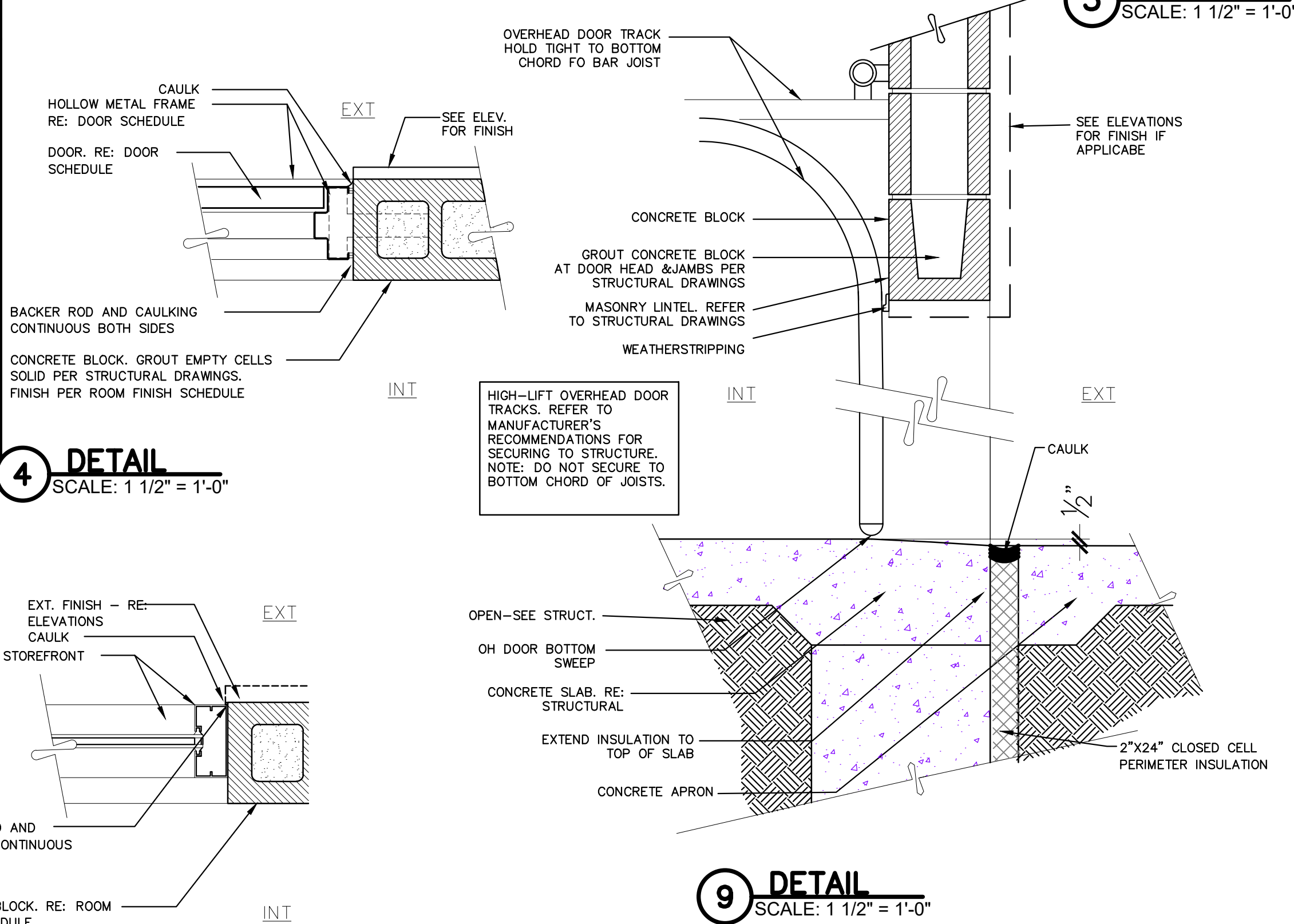
* DENOTES TEMPERED GLASS

GROUP	QTY.	DESCRIPTION	GROUP	QTY.	DESCRIPTION
1	1 EACH	FRAME - ME416 3070 X 5 3/4" HMF	5	1 EACH	FRAME - ME416 3070 X 5 3/4" HMF
1	1 EACH	DOOR - 3070 X 1 3/4" H.M.	1	1 EACH	DOOR - 3070 X 1 3/4" H.M.
3	1 EACH	HINGE - STANLEY FBB179 4.5 X 4.5 X 626	3	1 EACH	HINGE - STANLEY FBB179 4.5 X 4.5 X 626
1	1 EACH	LOCKSET - SCHLAGE AL40S SAT X 626 (PRIVACY)	1	1 EACH	LOCKSET - SCHLAGE AL10S SAT X 626 (PASSAGE)
1	1 EACH	FLOOR STOP - MM FS13 X US26D	1	1 EACH	FLOOR STOP - MM FS13 X US26D
2	1 EACH	FRAME - ME416 3070 X 5 3/4" HMF LH CR ASA	6	2 EACH	HINGE - KAWNEER OFFSET PIVOT
1	1 EACH	DOOR - 3070 X 1 3/4" H.M.	1	1 EACH	CLOSER - LCN 4041 CUSH TBWMS X ALU
3	1 EACH	HINGE - STANLEY FBB179 4.5 X 4.5 X 626	1	1 EACH	PUSH/PULL - KAWNEER, STYLE F-2
1	1 EACH	LOCKSET - SCHLAGE AL53PD SAT X 626 (ENTRY)	1	1 EACH	DEADLOCK - KAWNEER ADAMS RITE MS-1850A-50S W/
1	1 EACH	CLOSER - LCN 1461 RGP/PA TBMS X ALU			STANDARD LOCK CYLINDERS WITH HEAD & SILL BOLTS
1	1 EACH	FLOOR STOP - MM FS13 X US26D	1	1 EACH	EXIT INDICATOR - KAWNEER ADAMS RITE 4089
3	1 EACH	FRAME - ME416 3070 X 5 3/4" X 4" HD HMF RH CR BUJR	1	1 EACH	THRESHOLD
1	1 EACH	DOOR - 3070 X 1 3/4" HD BLANK MOLCR	1	1 EACH	SWEEP
3	1 EACH	HINGE - STANLEY FBB179 NRP 4.5 X 4.5 X 626	1	1 EACH	WEATHERSTRIPPING
1	1 EACH	EXIT DEVICE - VON DUFRIN 22NL 3" X SP28			NOTE: HEAD AND SILL BOLTS MUST BE
1	1 EACH	RIM CYLINDER - SCH C" X US26D			OPERATED BY THE DEAD BOLT MECHANISM
1	1 EACH	CLOSER - LCN 4041 CUSH TBMS X ALU	7	2 EACH	HINGE - KAWNEER OFFSET PIVOT
1	1 EACH	LATCHGUARD - MM MS 1799 3" X 3" X 3"	1	1 EACH	CLOSER - LCN 4041 CUSH TBWMS X ALU
1	1 EACH	THRESHOLD - PEMKO 179AV X 36"	1	1 EACH	PUSH/PULL - KAWNEER, STYLE F-2
1	1 EACH	SWEEP - PEMKO 18137P X 36"	1	1 EACH	THRESHOLD
1	1 EACH	SMOKE SEAL - PEMKO 586C 17"	1	1 EACH	SWEEP
4	1 EACH	FRAME - ME416 3070 X 5 3/4" HMF LH CR ASA	* ALL DOOR HARDWARE SHALL BE LEVER TYPE		
1	1 EACH	DOOR - 3070 X 1 3/4" H.M.			
3	1 EACH	HINGE - STANLEY FBB179 4.5 X 4.5 X 626			
1	1 EACH	LOCKSET - SCHLAGE AL539D SAT X 626 (ENTRY)			
1	1 EACH	CLOSER STOP - MM FS13 X US26D			

DOOR AND FRAME MATERIALS	
SCW	SOLID CORE WOOD
HM	HOLLOW METAL
ALUM	ALUMINUM
STL	STEEL
DOOR AND FRAME FINISHES	
P1	NOT USED
P2	PRIMED AND PAINTED
P3	FACTORY PRIMED, STANDARD WHITE/LIGHT GRAY
M1	CLEAR ANODIZED ALUMINUM, MILL FINISH
FINISH MATERIALS	
ACT	ACOUSTICAL CEILING TILES
CT	CERAMIC TILE
CMU	CONCRETE MASONRY UNIT
RB	RUBBER BASE
GB	GYPSUM BOARD
FRP	FIBERGLASS REINFORCED PLASTIC
OPT	CARPET
FINISHES	
F1	NONE
F2	HARDENER AND SEALER
F3	2 COATS ENAMEL
F4	2 COATS ENAMEL
F5	1 COAT BLOCK FILLER - 2 COAT HIGH GLOSS ENAMEL
	1" 4" - 6" AFF - 1 COATS HIGH GLOSS ENAMEL ABOVE 4" - 6" AFF
F6	2 COATS SEMI-GLOSS ENAMEL

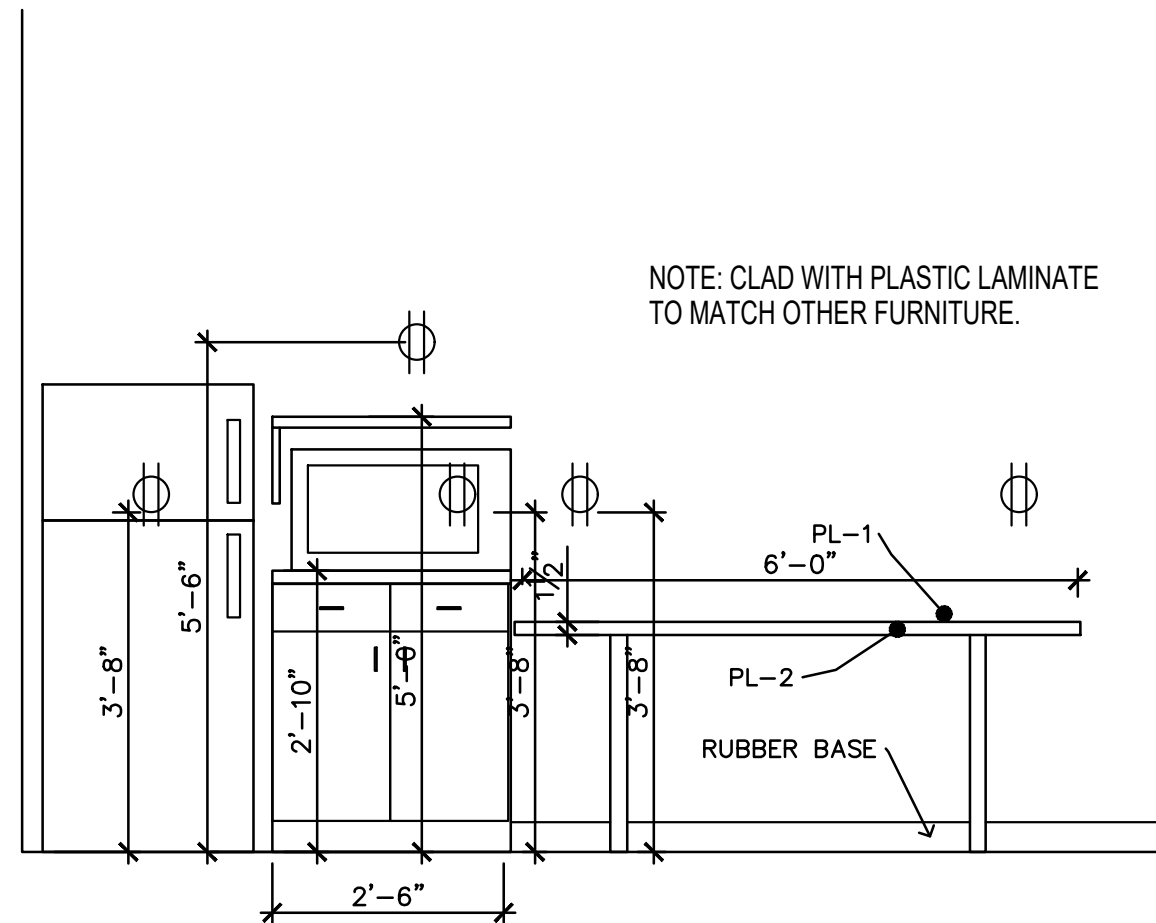
LE: 1 1/2" = 1'-0"

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

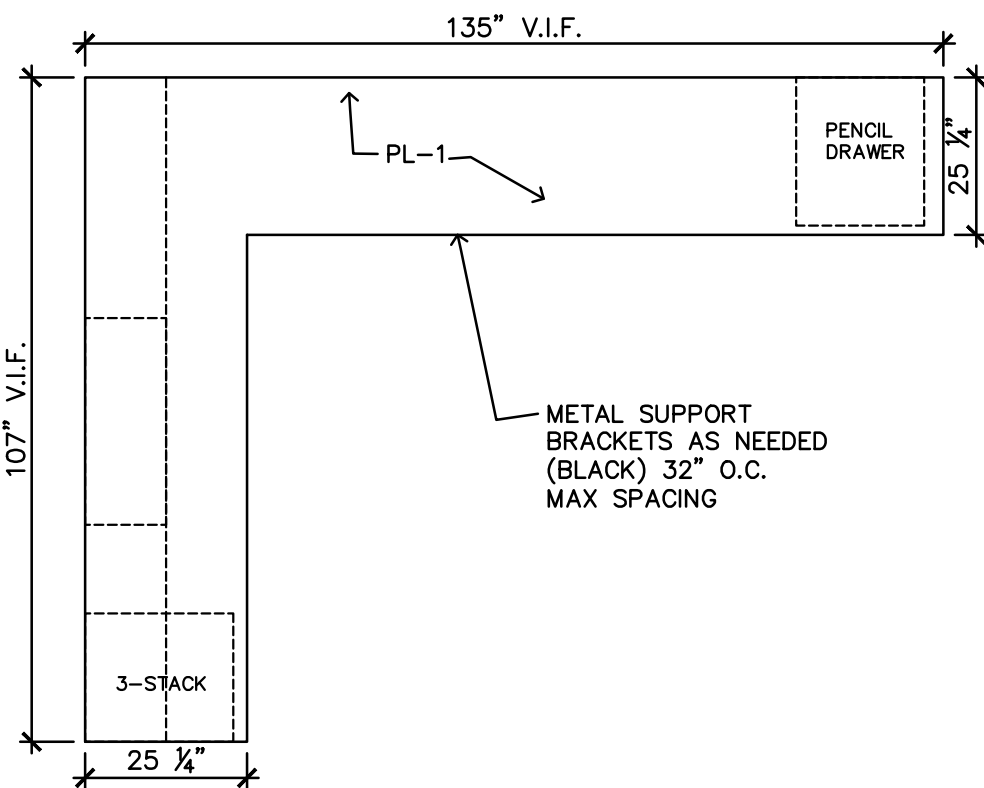


A6-1

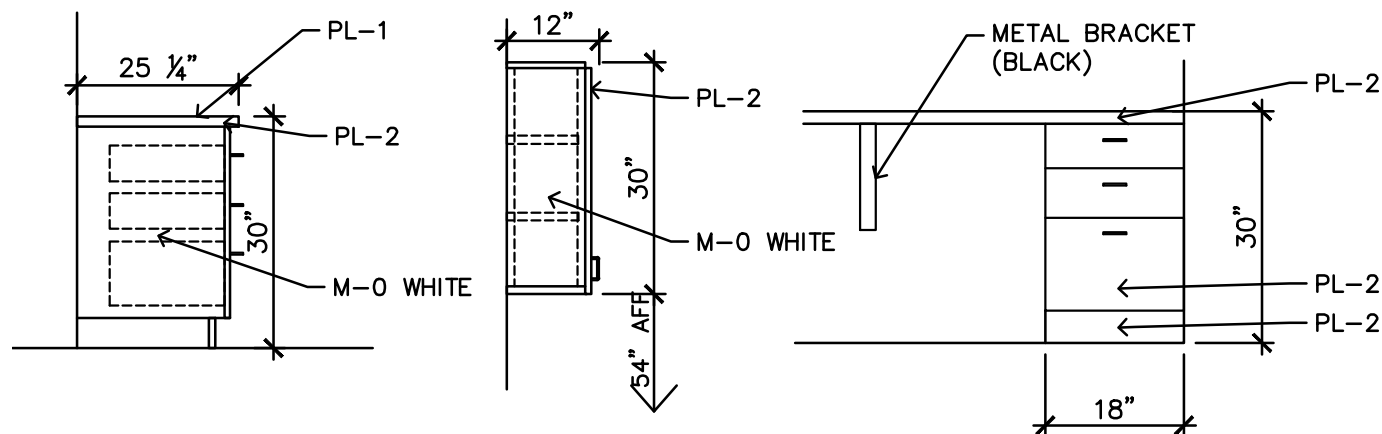
SCHEDULES



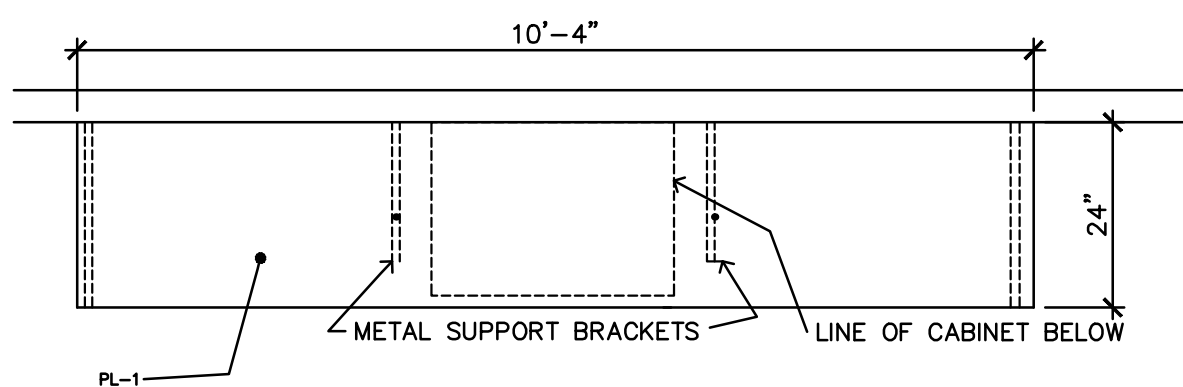
13 DETAIL - BREAK ROOM ELEVATION
SCALE: 1/2" = 1'-0"



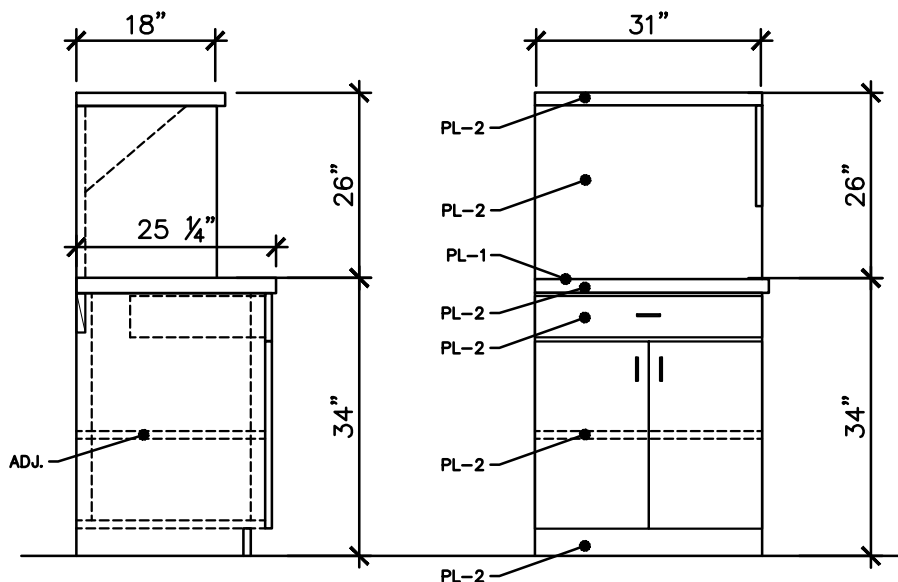
14 DETAIL - OFFICE 103 FURNITURE
SCALE: 1/2" = 1'-0"



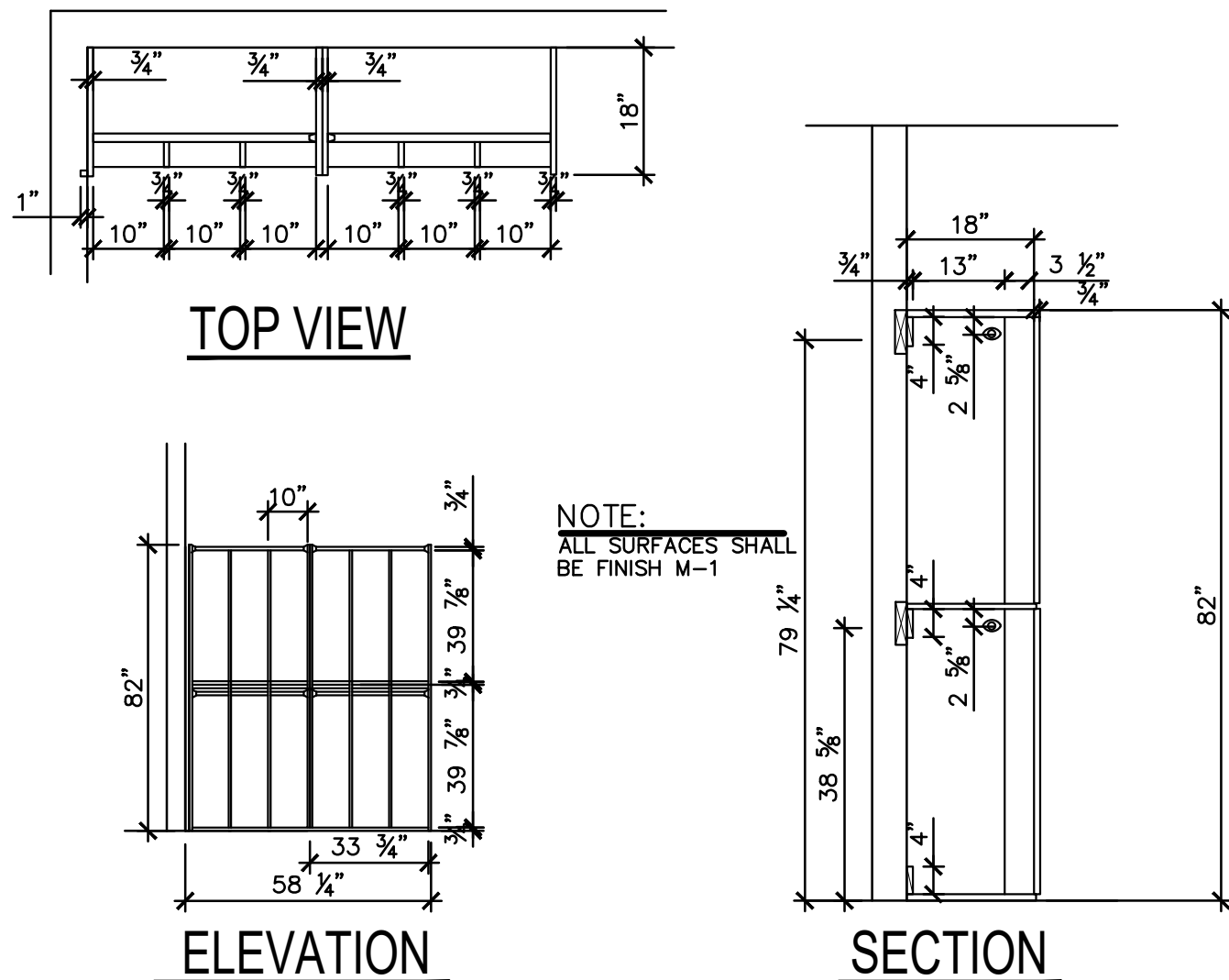
15 DETAIL - OFFICE 103 FURNITURE
SCALE: 1/2" = 1'-0"



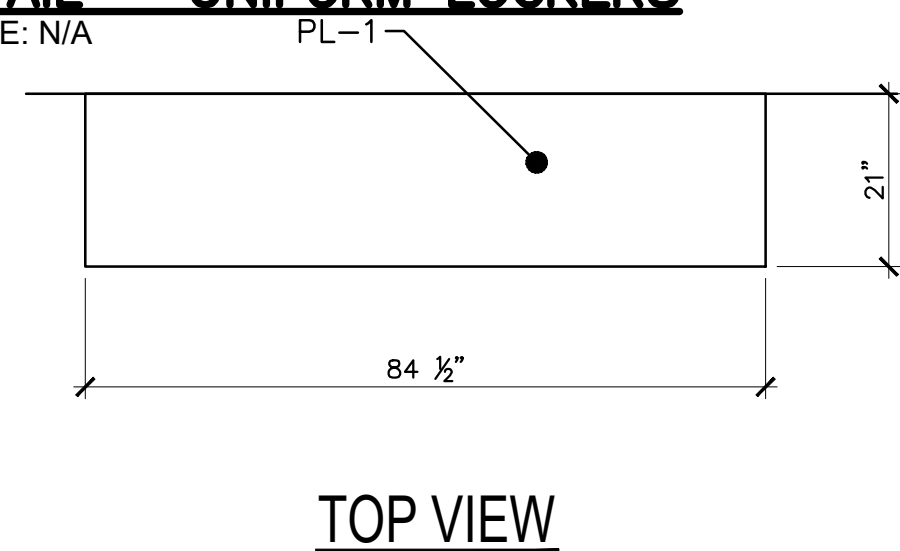
16 DETAIL - SERVICE ADVISORS DESK
SCALE: 1/2" = 1'-0"



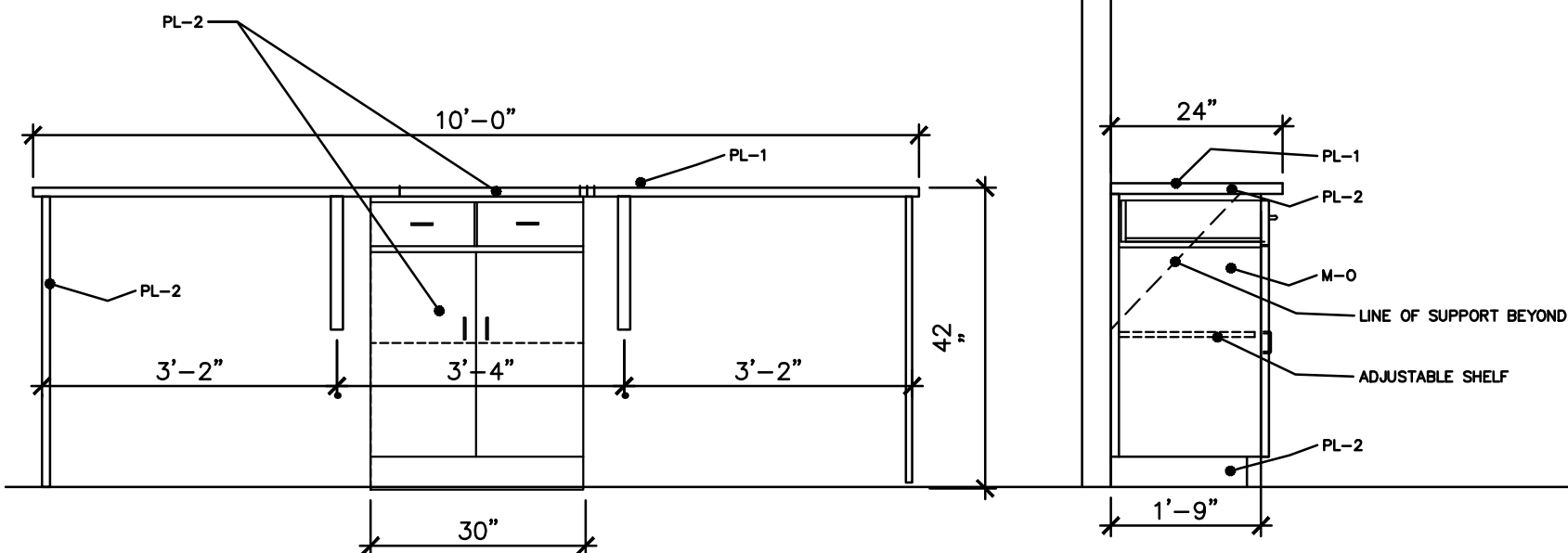
9 DETAIL - MICROWAVE STAND
SCALE: 1/2" = 1'-0"



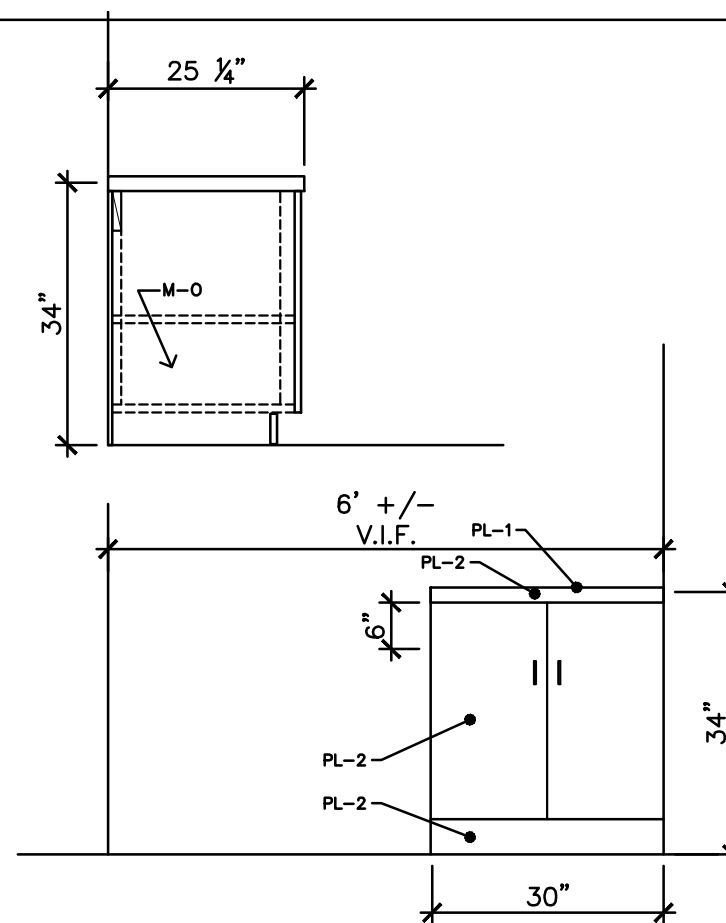
10 DETAIL - UNIFORM LOCKERS
SCALE: N/A



11 DETAIL - SALES AREA - PRINTER CABINETS
SCALE: 1" = 1'-0"



12 DETAIL - SERVICE ADVISORS DESK
SCALE: 1/2" = 1'-0"

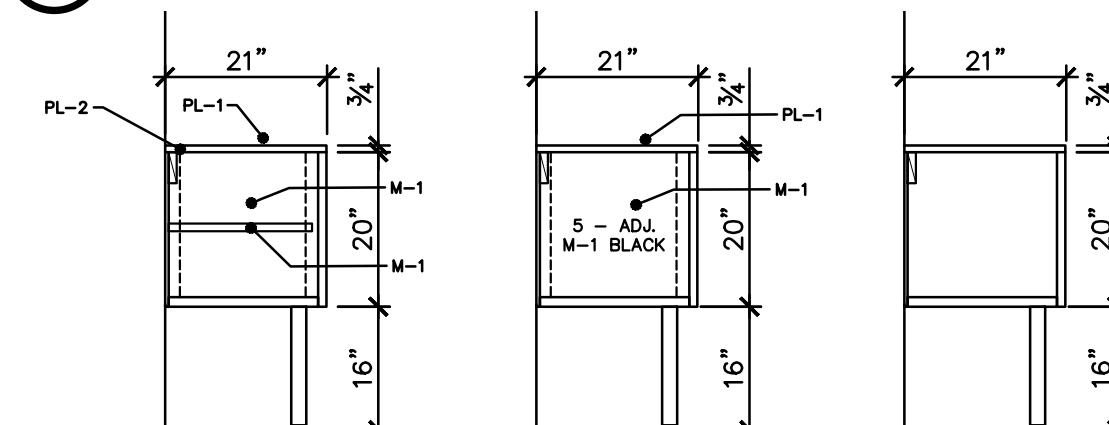


5 DETAIL - COFFEE ROOM 102
SCALE: 1/2" = 1'-0"

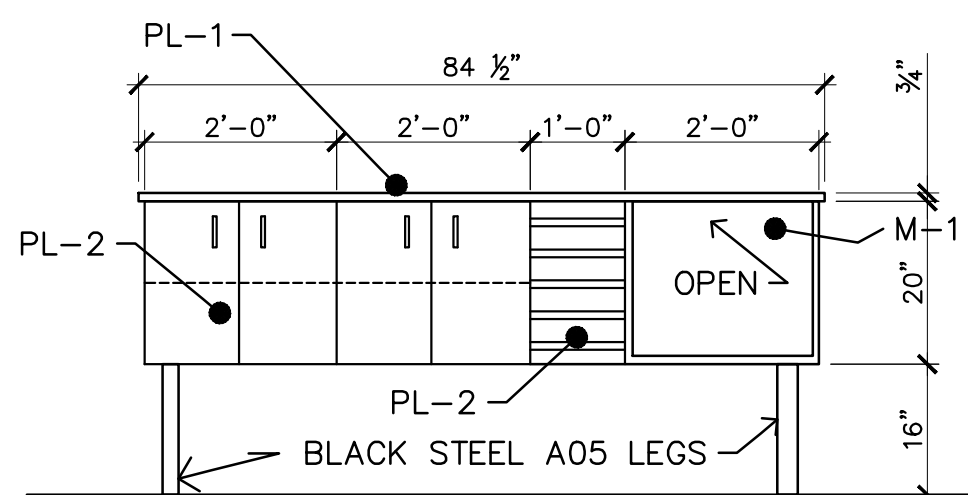


NOTE:
- 24" DIAMETER, 1.5" THICK
- EDGE - 3MM PVS EDGE BAND TO MATCH NATURAL TIGRUS LAMINATE
- FLAT TOP SURFACE - WILSON ART 4689-60 NATURAL TIGRUS MATT FINISH
- CENTER POST BASE, 30" TABLE HEIGHT, BLACK BASE

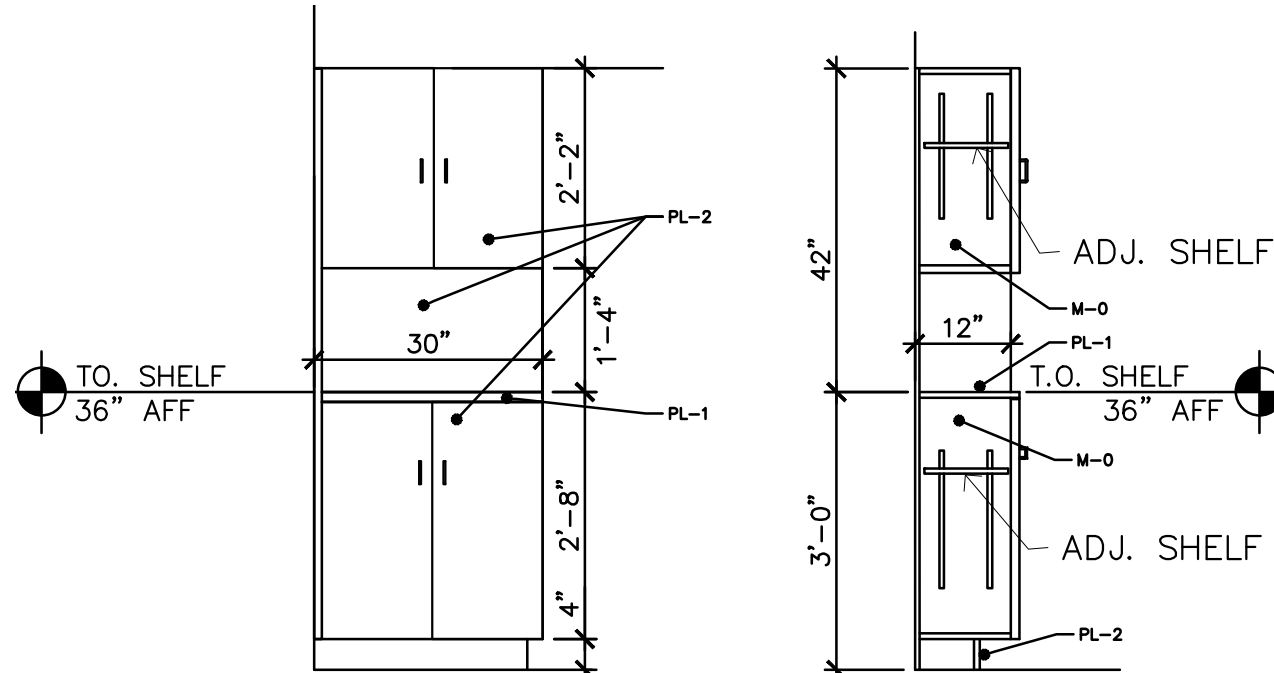
5B BISTRO TABLE
NO SCALE



6 DETAIL - SALES AREA - PRINTER CABINETS
SCALE: 1/2" = 1'-0"



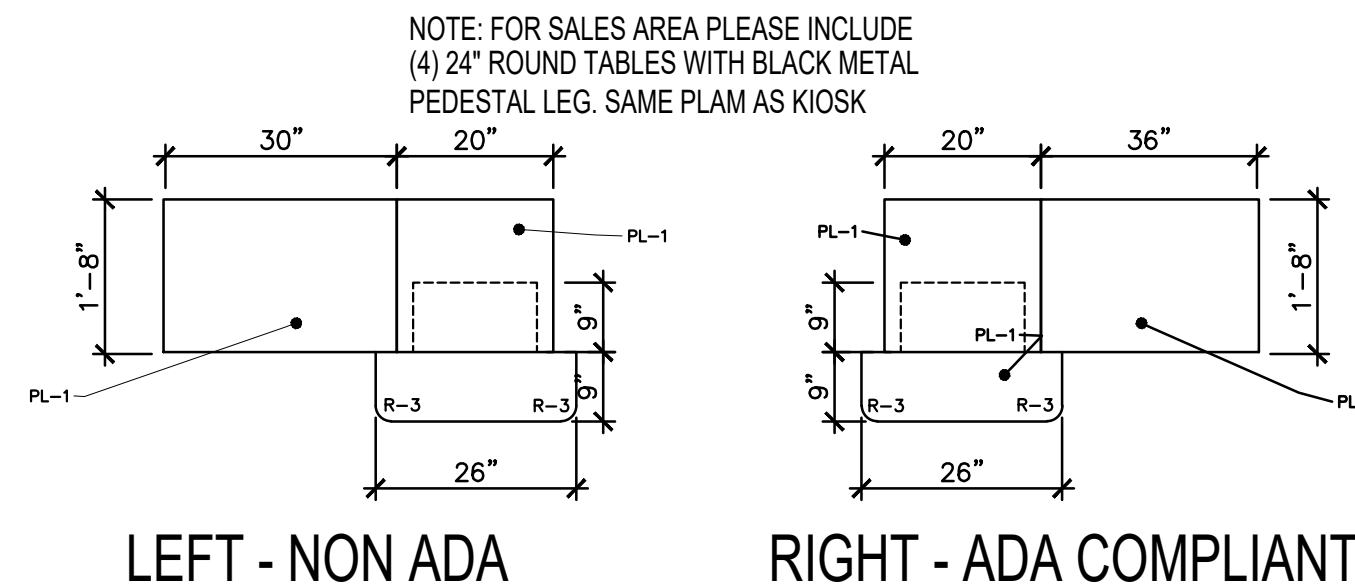
7 DETAIL - SALES AREA - PRINTER CABINETS
SCALE: 1" = 1'-0"



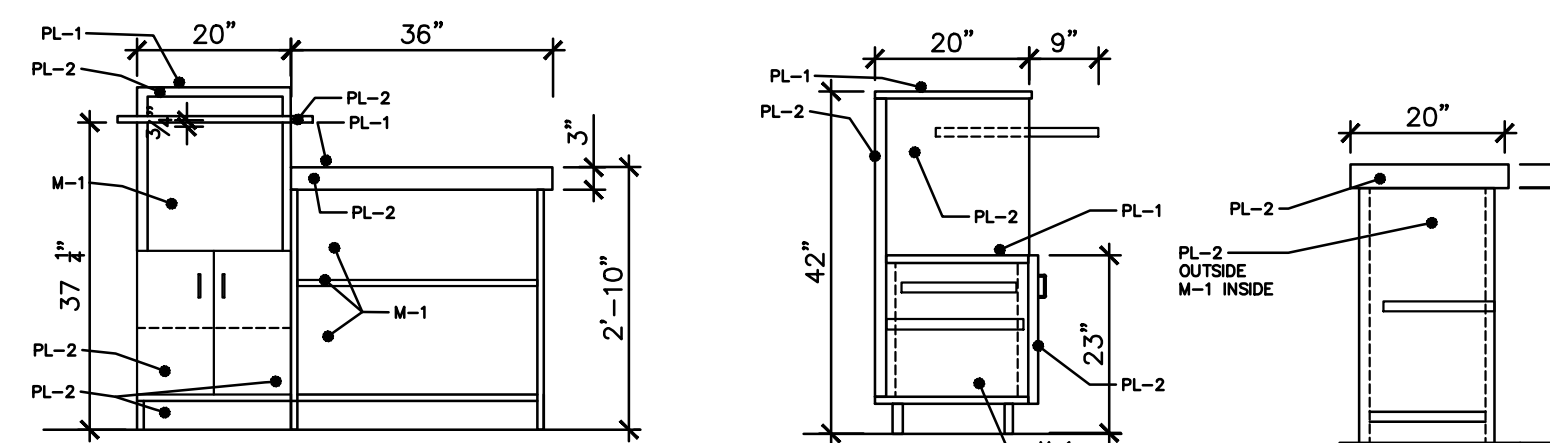
8 DETAIL - RESTROOM CABINETS
SCALE: 1/2" = 1'-0"

PLAM COLORS LEGEND:
PLAM COLORS - WILSON ART:
PL-1 = #4669 NATURAL TIGRUS
PL-2 = #4623 GRAPHITE NEBULA
M-0 = WHITE MELAMINE
M-1 = BLACK MELAMINE

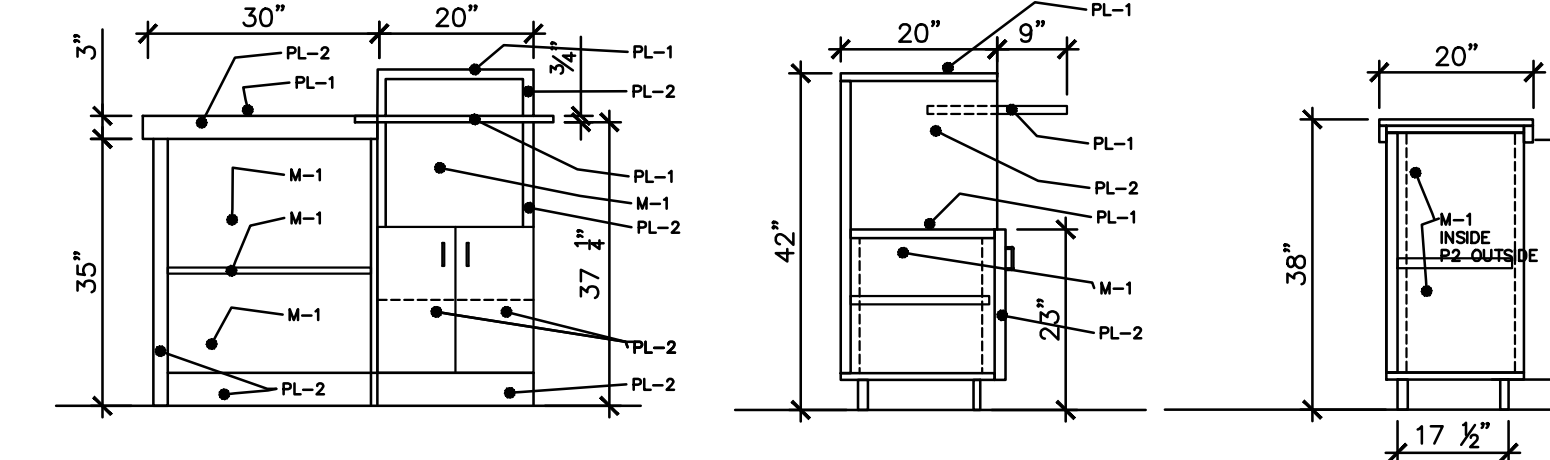
NOTE:
SELECTED CONTRACTOR WILL PROVIDE COMPLETE NEW DRAWINGS FOR APPROVAL.



2 DETAIL - SALES AREA KIOSKS
SCALE: 1/2" = 1'-0"



3 DETAIL - KIOSK 2 - ADA COMPLIANT
SCALE: 1/2" = 1'-0"



4 DETAIL - KIOSK 1 - NON ADA
SCALE: 1/2" = 1'-0"

BRAKES PLUS

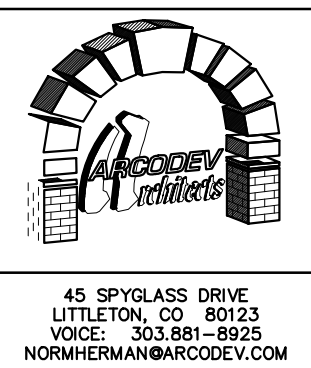
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	01/23/26	FOR BLDG DEPT. SUBMITAL
	01/27/26	FOR CONSTRUCTION CONTRACT

ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY: NLH
CHECKED BY: NLH
DATE OF ISSUE: 010.01.25



SHEET

A6-2

FURNITURE AND
FIXTURE DETAILS



COMcheck Software Version COMcheckWeb Envelope Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Brakes Plus - Sanger, TX
Location: Sanger, Texas
Climate Zone: 3a
Project Type: New Construction
Vertical Glazing / Wall Area: 5%

Construction Site:
NWC of FM455 & Acker Street
Sanger, Texas 76266

Owner/Agent:

Designer/Contractor:
Norm Herman
ARCODEV Architects PC
45 Spyglass Drive
Littleton, Colorado 80123
303-881-8925
normherman@arcodev.com

Additional Efficiency Package(s)

Credits: 10.0 Required 17.3 Proposed
Reduced lighting power, 11.9 credit
Reduced lighting power, 5.4 credit

Building Area	Floor Area
1-Service Bays and Inventory (Automotive Facility) : Nonresidential	3730
2-Customer Area (Retail) : Nonresidential	985

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{min}
Roof: Insulation Entirely Above Deck, 3-Year-Aged Solar Reflectance Index = 64.00 (d), [Bldg. Use 1 - Service Bays and Inventory]	3725	----	40.0	0.025	0.039
Roof: Insulation Entirely Above Deck, 3-Year-Aged Solar Reflectance Index = 64.00 (d), [Bldg. Use 2 - Customer Area]	996	----	40.0	0.025	0.039
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Service Bays and Inventory] (c)	245	----	----	0.730	0.730
Floor: Unheated Slab-On-Grade, [Bldg. Use 2 - Customer Area] (c)	69	----	----	0.730	0.730
NORTH Ext. Wall: Inventory: Concrete Block, 8in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Service Bays and Inventory]	507	----	5.0	0.115	0.123
Ext. Wall: Wood-Framed, 24in. o.c., [Bldg. Use 2 - Customer Area]	393	19.0	0.0	0.065	0.064
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID storefront, SHGC 0.25, [Bldg. Use 2 - Customer Area] (b)	45	----	----	0.460	0.420
Ext. Wall: Wood-Framed, 24in. o.c., [Bldg. Use 2 - Customer Area]	116	19.0	0.0	0.065	0.064
EAST Ext. Wall: Concrete Block, 8in., Partially Grouted, Cells Ins.,	1696	----	5.0	0.115	0.123
Light Density, Furring: None, [Bldg. Use 1 - Service Bays and Inventory]	800	----	----	0.350	0.310
Door: Insulated Metal, Garage door 14% glazing, [Bldg. Use 1 - Service Bays and Inventory]	699	----	5.0	0.111	0.123
SOUTH Ext. Wall: Concrete Block, 8in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Service Bays and Inventory]	24	----	----	0.300	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Service Bays and Inventory]	854	19.0	0.0	0.065	0.064
WEST Ext. Wall: Wood-Framed, 24in. o.c., [Bldg. Use 2 - Customer Area]	185	----	----	0.460	0.420
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID North Sales, SHGC 0.25, [Bldg. Use 2 - Customer Area] (b)	11	----	----	0.460	0.420
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID North Sales, SHGC 0.25, [Bldg. Use 2 - Customer Area] (b)	958	----	5.0	0.115	0.123
Ext. Wall: Concrete Block, 8in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Service Bays and Inventory]					

- (a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
(d) High albedo roof requirement options: 1) 3-year aged solar reflectance index ≥ 55.0 thermal emittance ≥ 0.75 , 2) 3-year aged solar reflectance index ≥ 64.0 , 3) initial year aged solar reflectance index ≥ 0.70 thermal emittance ≥ 0.75 , 4) initial year aged solar reflectance index ≥ 82.0 .

Envelope PASSES: Design 4% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Norm Herman - Architect
Name - Title

Signature
Date

1/19/26

CONCRETE BLOCK. GROUT EMPTY CELLS SOLID PER STRUCTURAL DRAWINGS. PAINT. RE: ROOM FINISH SCHEDULE

OH DOOR AND TRACK RE: DOOR SCHEDULE

4 DETAIL - OVERHEAD DOOR JAMB

SCALE: N.T.S.

RESTROOM WAINSCOT FINISHES

MAIN COLOR	TWO TOP ROWS
DALTILE (SEMI-GLOSS)	DALTILE (SEMI-GLOSS)
PRICE GROUP 2	PRICE GROUP 3
	#DM-1
URBAN PUTTY #0161	CURRENT
SEMI-GLOSS	SEMI-GLOSS
4 1/4" X 4 1/4"	4 1/4" X 4 1/4"
GROUT: MAPEI BSICUIT	GROUT: MAPEI BISCUIT
PROVIDE CERAMIC BASE TO MATCH MAIN TILE COLOR	

4 RESTROOM FINISHES

SCALE: N.T.S.

Location	Brand	Color	Number	Finish	Special Instructions
Corner-guards	Sherwin Williams	Artisan Tan	SW 7540		
Doors	Sherwin Williams	Artisan Tan	SW 7540		
Trash Enclosure Doors	Sherwin Williams	Artisan Tan	SW 7540		

5 DETAIL - EXTERIOR PAINT SPECIFICATIONS

SCALE: N.T.S.

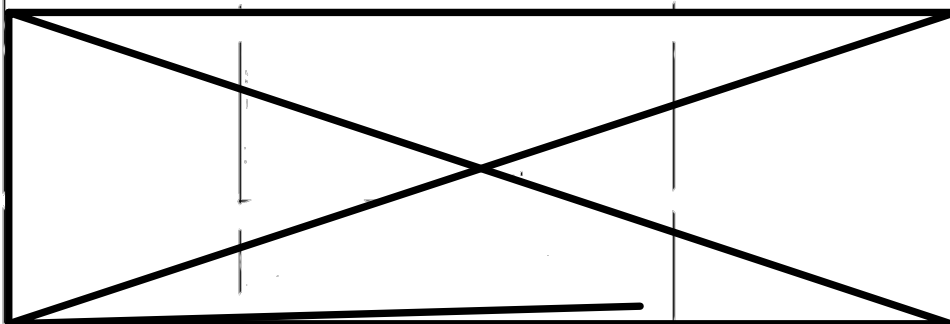
GENERAL NOTES:

- ALL FLOORING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR
- PROVIDE 1 EXTRA BOX (32 S.F.) OF ALL FLOORING PRODUCTS FOR ATTIC STOCK
- ALL FLOORING MATERIALS MAY BE PURCHASED FROM EF CONTRACT FLOORING EXCEPT ADHESIVE AND THE TRANSITION STRIPS.....CONTACT KIMBERLY LYNCH AT THE CONTACT INFORMATION SHOWN BELOW.
- RUBBER TRANSITION STRIP HAS A 1-3 WEEK LEAD TIME

NOTE:

ALL INTERIOR FINISHES SHALL COMPLY WITH THE REQUIREMENTS CONTAINED IN THE 2018 IBC CHAPTER 18

	Floor	Supplied by:
Manufacturer (1)	Bolyu/EF Contract Flooring	Bolyu/EF Contract Flooring
Number (1)	Main Floor LVT Style: Woodlands, Color Ironwood LVT direction - Run lengthwise in the wide direction of the room. Regardless of entry location / Showroom design	Bolyu/EF Contract Flooring
Color (1)	Ironwood - Item # EFCWL001	Bolyu/EF Contract Flooring
Finish	N/A	
Size (1)	7" x 48" (42 sq ft per box)	Bolyu/EF Contract Flooring
Note (1)	LVT - with Hardwood Plank Pattern Attic Stock - Provide 1 extra Box (32 sq. ft) extra for Attic Stock	
Adhesive (1a)	LVT Adhesive The LVT adhesive, Taylor, RESOLUTE (MS-PLUS® RESILIENT™) Adhesive	Supplied by Installer



	Transition	Supplied by Installer - Lead Time 1 - 3 weeks
Size (2)	Johnsontite - Rubber Reducer - Style: CTA-09-A1, Color: #63 Burt Umber	Bolyu/EF Contract Flooring
Note (2)	Install Quarter Turn	
Adhesive (2a)	Nexus, multipurpose carpet tile adhesive	Bolyu/EF Contract Flooring

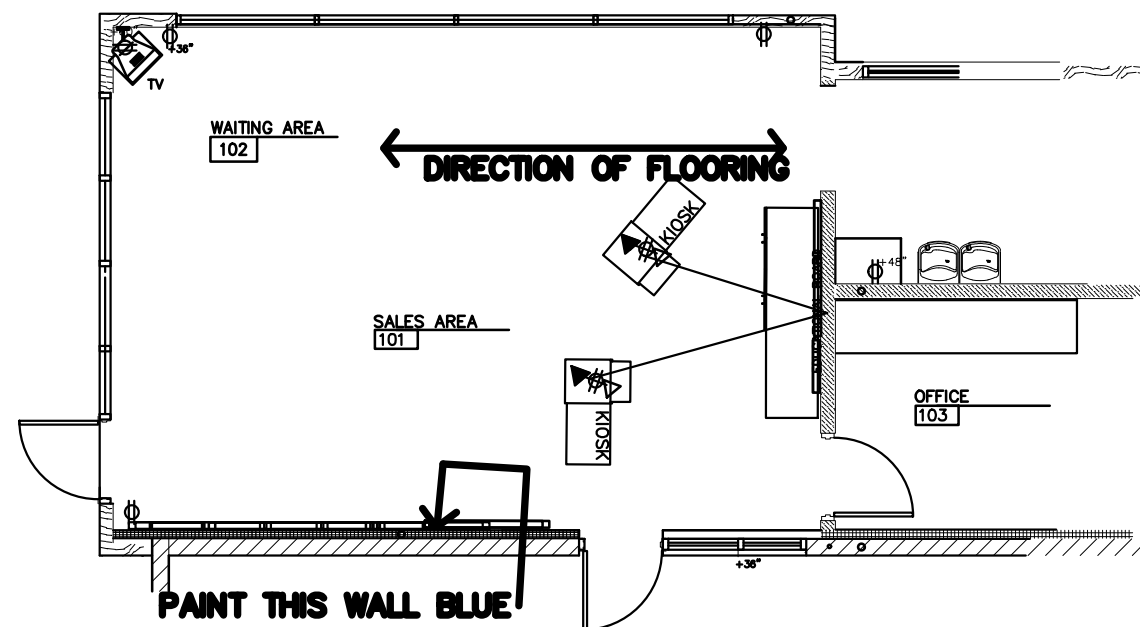
CONTACT PRICING AND QUESTIONS (ALL LOCATIONS, NATIONWIDE)
TARA KALVA
BOLYU/EF CONTRACT
720-404-0944
TARA.KALVA@EFCONTRACTFLOORING.COM

3 DETAIL - FLOORING SPECIFICATIONS

SCALE: N.T.S.

REQUIRED SUBMITTALS: (item if applicable)

CAST-IN-PLACE CONCRETE/REBAR PLACEMENT DRAWINGS
UNIT MASONRY
STRUCTURAL STEEL FRAMING
STEEL JOIST FRAMING
STEEL DECKING
LADDERS
METAL COPINGS AND CANOPIES
FOUNDATION WATERPROOFING
TPO ROOFING
STANDING SEAM METAL ROOF
ROOF SPECIALTIES
INTERIOR / EXTERIOR PAINT
EFIS CORNICE
SMOKE VENT
ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
ALUMINUM WINDOWS
OH DOORS
DOORS, FRAMES AND DOOR HARDWARE
GLAZING
EXHAUST FANS IN SHOP
GAS FIRED UNIT HEATERS / RADIANT HEATERS
HEAT PUMP / GAS FIRED FURNACE
SUMP PUMP
WATER HEATER / RECIRC PUMP
OIL WATER SEPARATOR
PLUMBING FIXTURES
ELECTRICAL PANELS
LIGHT FIXTURES
TERMITE CONTROL
SIGNAGE
FIRE EXTINGUISHERS
FIRE SUPPRESSION SYSTEM (IF NECESSARY)
UNDERGROUND PIPING MATERIALS (TO CIVIL ENG.)
UNDERGROUND WATER RETENTION SYSTEM (TO CIVIL ENG.)
SEWER PUMP OR GRINDER PUMP (TO CIVIL ENG.)



1 DETAIL - INTERIOR PAINT DETAILS

SCALE: N.T.S.

Brakes Plus Interior Paint Specifications

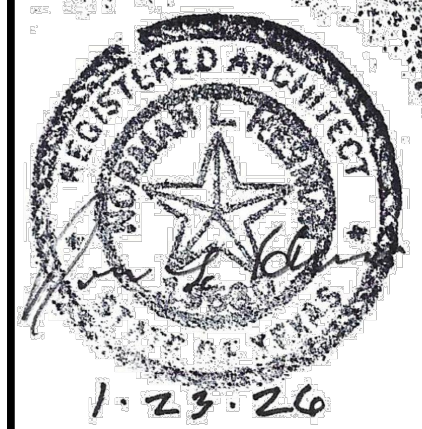
Location	Worldly Gray	Intellectual Gray	Virtual Taupe	Balanced Beige	Safety Red	Brakes Plus Blue
Shop	All walls above red base	Ceiling & Joists	Metal Doors & Frames (Interior of Building)		Lower 4' of walls This area to receive block filler & gloss paint	
Office			Painted Wood Doors and Frames	Walls		
Showroom			Half Wall Drywall Painted Wood Doors and Frames (to office and bathroom and closet)	Walls		See attached Drawing
Parts Room	Walls	Ceiling & Joists	Metal Door and Frame			
Employee Bath	Walls & Ceiling		Metal Doors & Frames			
Customer Bath			Painted Wood Doors and Frames	Walls & Ceiling		Formula: Promar 200 Deep Base B31W2253 1 Gallon Formula W1 2Y 23+11 B1 1+01 L1 2Y 21+11 R3 55+01
Break Room	Walls	Ceiling				

* Use block fill on all cinder block walls prior to painting (See Finish Schedule Section 3.05)

Brand	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams
Color	Worldly Gray	Intellectual Gray	Virtual Taupe	Balanced Beige	Safety Red	Blue
Number	SW7043	SW7045	SW7039	SW7037		Brakes Plus Custom Color
Product	See Finish Schedule	Dry Fall	See Finish Schedule	See Finish Schedule	See Finish Schedule	
Finish	Section 3.05		Section 3.05	Section 3.05	Section 3.05	

BRAKES PLUS

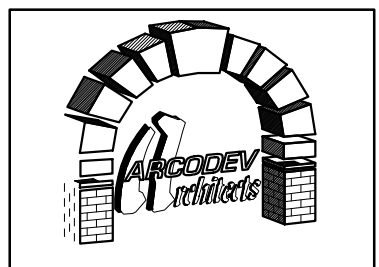
NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	01/23/26	FOR BLDG DEPT. SUBMITTAL
	01/27/26	FOR CONSTRUCTION CONTRACT

ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY: NLH
CHECKED BY: NLH
DATE OF ISSUE: 010.01.25



45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
NORM@ARCODEV.COM

SHEET

A6-3

MATERIAL FINISHES

GENERAL STRUCTURAL NOTES:

A. DESIGN DATA:

DESIGN CODE:	2021 INTERNATIONAL BUILDING CODE
CONCRETE 28-DAY STRENGTH:	FC = 4,000 PSI
MISCELLANEOUS ROLLED SECTIONS AND PLATES (ANGLES, CHANNELS, PLATES, ETC.)	ASTM A36 (UNLESS NOTED OTHERWISE)
PLAIN BOLTS AND ANCHORS	ASTM A307
REINFORCING STEEL	ASTM A615 FY = 60,000 PSI
WELDED WIRE FABRIC	ASTM A185
MORTAR TYPE S & GROUT 28-DAY COMPRESSIVE STRENGTH = 2,000 PSI (MASONRY CEMENT IS NOT ACCEPTABLE)ASTM C1019	

CONCRETE MASONRY UNITS (LIGHTWEIGHT) ASTM C99
NET COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS = 2,800 PSI
NET AREA COMPRESSIVE STRENGTH OF MASONRY FM = 2,000 PSI

ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF ON IMPROVED SUBGRADE (PER SOIL REPORT)

DESIGN LOADS	
ROOFS	D = 20 PSF Lr = 20 PSF (NON-REDUCIBLE) S = 5 PSF (GROUND & ROOF SNOW LOAD)

WIND LOADING CRITERIA (2021 IBC & ASCE 7-16)
115 MPH, EXPOSURE C

SEISMIC LOADING CRITERIA (2021 IBC & ASCE 7-16)
IMPORTANCE FACTOR = 1.0
MAPPED SPECTRAL RESPONSE $S_s = 0.133g$, $S_1 = 0.059g$
SITE CLASS = B, $F_a = 1$, $F_v = 1$
SPECTRAL RESPONSE COEFFICIENTS: $SDS = 0.089g$, $SD1 = 0.039g$
SEISMIC DESIGN CATEGORY = A
SEISMIC FORCE RESISTANT SYSTEM = ORDINARY REINFORCED MASONRY SHEAR WALLS & LIGHT FRAMED SHEAR WALLS
RESPONSE MODIFICATION FACTOR (R) = 2.0

B. FOUNDATION WORK:

- THE GEOTECHNICAL REPORT PREPARED BY TERRACON (PROJECT NO. 94255494) DATED SEPTEMBER 16, 2025, IS AVAILABLE AND SHALL BE REVIEWED BY THE CONTRACTOR. SEE SPECIFICATIONS AND GEOTECHNICAL REPORT FOR OVEREXCAVATION RECOMPACTION.
- CONTRACTOR SHALL COORDINATE FOOTING ELEVATIONS WITH FINAL GRADING PLAN TO PROVIDE A MINIMUM OF 2'-0" OF GRADE ABOVE THE BOTTOM OF ALL FOOTINGS.
- SUBSOILS SUPPORTING OR IN DIRECT CONTACT WITH FOOTINGS, SLABS/ON GRADE, OR OTHER FOUNDATION ELEMENTS SHALL BE PROTECTED AGAINST FREEZING CONDITIONS THAT COULD CAUSE MOVEMENT OR OTHER DETRIMENTAL EFFECT TO THE STRUCTURE AS A WHOLE OR TO ANY OF ITS COMPONENT PARTS.
- WHEN WORKING NEAR EXISTING AND/OR NEW CONSTRUCTION, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO UNDERMINE, DISTURB, DAMAGE OR, IN ANY WAY, CAUSE UNDESIRABLE MOVEMENT, CRACKING, AND/OR SETTLEMENT OF THE ADJACENT CONSTRUCTION.
- SLABS ON GRADE SHALL BE SUPPORTED ON SUBGRADE THAT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE SECTION 4.13 "SLAB-ON-GRADE FLOORS" IN THE GEOTECHNICAL REPORT. ANY UNACCEPTABLE UNDISTURBED VIRGIN SOIL, OR BACKFILL/GRANULAR FILL, AS DETERMINED BY THE OWNER'S GEOTECHNICAL ENGINEER, SHALL BE REMOVED AND REPLACED AS REQUIRED BY THE GEOTECHNICAL ENGINEER.

C. CONCRETE

- FOR REINFORCEMENT DEVELOPMENT LENGTH AND SPLICE LENGTH SEE TYPICAL REINFORCEMENT TABLE ON THIS SHEET.
- PROVIDE CORNER BARS IN WALLS AND FOOTINGS THE SAME SIZE AND NUMBER AS THE CONTINUOUS REINFORCING.
- REINFORCING IN FOOTINGS SHALL BE ACCURATELY PLACED BEFORE PLACING CONCRETE. DO NOT FLOAT REINFORCING INTO FOOTINGS.
- CONCRETE SHALL BE REGULAR WEIGHT (144 PCF) WITH TYPE II CEMENT, $\frac{3}{4}$ " MAXIMUM AGGREGATE SIZE WITH POTABLE WATER. CONCRETE SHALL CONFORM TO ACI 301. THE MAXIMUM WATER-CEMENT RATIO FOR FOOTINGS, WALLS & SLABS SHALL BE 0.45. PROVIDE 6% AIR ENTRAINMENT IN CONCRETE USED IN FOOTINGS & WALLS. INTERIOR SLABS SHALL HAVE NATURAL ENTRAPPED AIR (3% MAXIMUM). MINIMUM 28 DAY STRENGTH SHALL BE 4000 PSI.
- MECHANICALLY VIBRATE CONCRETE, EXCEPT THAT SLABS ON GRADE NEED TO BE VIBRATED ONLY AROUND UNDERFLOOR DUCTS AND OTHER ITEMS EMBEDDED IN THE SLAB. EMBEDDED ITEMS INCLUDE ELECTRICAL CONDUITS, MECHANICAL PIPING, AND STEEL ANGLES OR CHANNELS. EMBEDDED ITEMS DOES NOT IMPLY REINFORCING STEEL. ALL OTHER CONCRETE PLACEMENT SHALL BE VIBRATED. CONCRETE SHALL BE VIBRATED IN CONFORMANCE WITH ACI 309. VIBRATE CONCRETE ONLY UNTIL THE CONCRETE IS THOROUGHLY CONSOLIDATED AND THE VOIDS FILLED. INSERT INTERNAL VIBRATORS VERTICALLY TO THE FULL DEPTH OF THE LAYER BEING PLACED AND INTO THE PREVIOUS LAYER IF APPLICABLE. DO NOT DRAG VIBRATORS THROUGH THE CONCRETE. DO NOT FLOW CONCRETE FROM ONE LOCATION TO ANOTHER BY USE OF VIBRATOR.
- DO NOT PLACE PIPES, DUCTS, OR CHASES IN STRUCTURAL CONCRETE WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS.
- FLOOR SURFACE TOLERANCE CLASS "B". SEE ACI 301 FOR PROCEDURE OF MEASUREMENT AND CORRECTION.
- CONTROL JOINTS SHALL BE PLACED AT COLUMN-LINE INTERSECTIONS AT A MAXIMUM SPACING INDICATED BELOW AND HAVE A MAXIMUM ASPECT RATIO OF 1.5 TO 1.0 UNLESS OTHERWISE INDICATED. SEE DETAIL - ON DRAWING - FOR CONTROL JOINT REQUIREMENTS.

SLAB THICKNESS	MAX. CONTROL JOINT SPACING
4"	12'-0"
5"	15'-0"

- ALL CONSTRUCTION JOINTS IN CONCRETE WALLS SHALL HAVE A 2" X 4" CONTINUOUS KEYWAY. ALL CONSTRUCTION JOINTS, EXCEPT THOSE DETAILED, SHALL HAVE ARCHITECT/ENGINEER APPROVAL. SEE SPECIFICATIONS FOR OTHER CONSTRUCTION JOINT REQUIREMENTS.
- ALL REINFORCING STEEL SHALL BE DEFORMED NEW BILLET BARS (#615, GRADE 60), BENT COLD, AND DETAILED, FABRICATED, AND WELDED IN PLACE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315 - LATEST EDITION) EXCEPT AS OTHERWISE DETAILED OR SPECIFIED.

- UNLESS NOTED OTHERWISE ON PLAN SHEETS SLABS ON GRADE SHALL BE:

SLAB THICKNESS	SLAB REINFORCEMENT	SUBBASE
4"	6x6-W1.4W1.4 WWF	SEE GEOTECHNICAL REPORT
5"	6x6-W2.3W2.3 WWF	SEE GEOTECHNICAL REPORT

- ALL REINFORCING IN SLABS AND WALLS SHALL BE CONTINUOUS UNLESS DETAILED OTHERWISE AND LAP SPLICED ONLY IN REGIONS OF LOW STRESS. ALL BARS SHALL HAVE A STANDARD HOOK WHERE A HOOK IS SHOWN, UNLESS DETAILED OTHERWISE.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING, UNLESS NOTED OTHERWISE:
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS AND WALLS: 1"

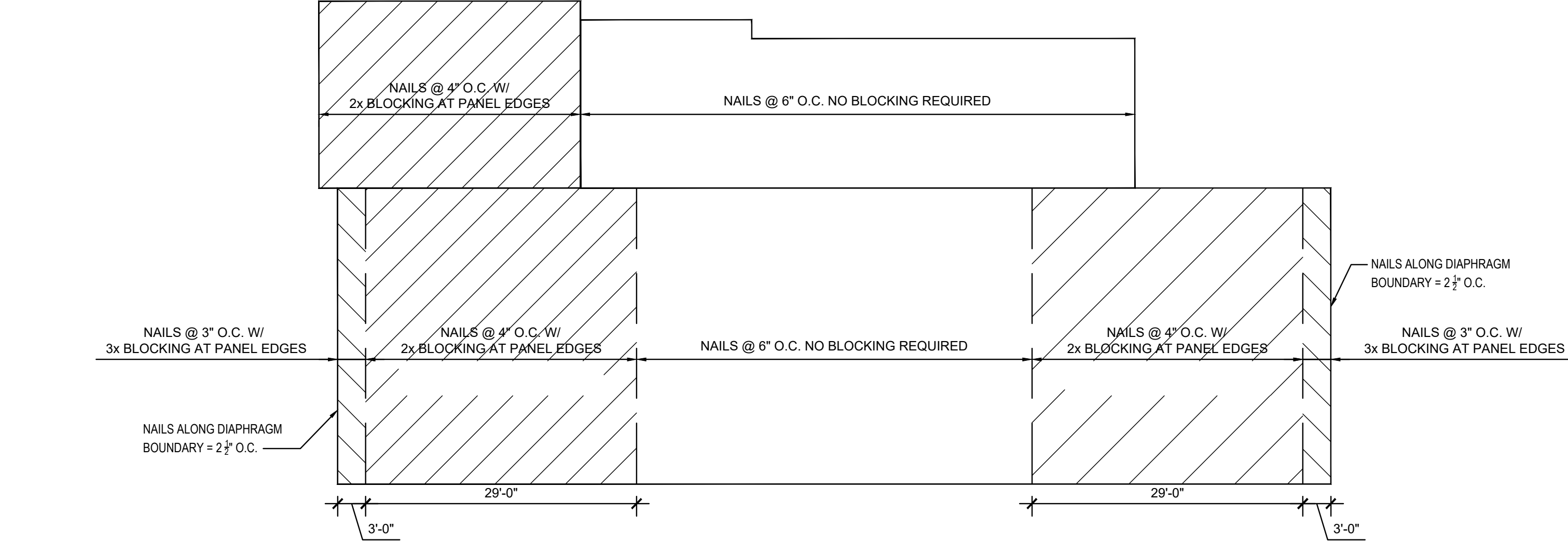
D. MASONRY:

- FURNISH AND CONSTRUCT MASONRY IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR MASONRY CONSTRUCTION (ACI 530.1-11/ASCE 6-11/TMS 602-11.)
- LAY MASONRY UNITS IN RUNNING BOND.
- MAXIMUM GROUT LIFT WITHOUT CLEANOUTS 4'-0" IN BLOCK WALLS AND 8" IN GROUTED TWO-WYTHE WALLS.
- IN 8" WALLS, PROVIDE CONTINUOUS FULL HEIGHT VERTICAL REINFORCING IN CENTER OF GROUT AT CENTER OF WALL. TYPICAL REINFORCING SHALL BE 1#6 AT 2'-8" ON CENTER AND 2#6 AT CORNERS, INTERSECTIONS, WALL ENDS, DOOR AND WINDOW JAMBS, AND SIDE OF EXPANSION OR CONTROL JOINTS UNLESS NOTED OTHERWISE.
- GROUT CELLS FULL AT ALL ANCHOR AND EMBED LOCATIONS.
- PROVIDE LADDER TYPE #9 JOINT REINFORCING AT 16" ON CENTER VERTICAL SPACING IN ALL CLAY MASONRY AND UNLESS NOTED OTHERWISE.
- SPLICE MASONRY WALL REINFORCING AS SCHEDULED ON 3/S3-3.
- PLACE BOND BEAM REINFORCING CONTINUOUS THROUGH EXPANSION/ CONTROL JOINTS, WRAPPING BARS WITH 18 INCH THICK BOND BREAKING TAPE 2'-0" BOTH SIDES OF JOINT. DO NOT SPLICE BOND BEAM REINFORCING WITHIN 6'-0" OF AN EXPANSION OR CONTROL JOINT.
- PROVIDE CONTINUOUS BOND BEAMS AT ALL BEAM BEARING AND TRUSS BEARING ELEVATIONS, AND AT THE TOP OF ALL WALLS.
- SPLICE BOND BEAM REINFORCING AT MASONRY CONTROL/EXPANSION JOINTS AS SHOWN ON MASONRY JOINT DETAIL ON 4/S3-3.
- PROVIDE CONTINUOUS WIRE LATH GROUT BARRIERS BELOW BOND BEAMS.
- PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY WALLS.
- ALL LINTELS SHALL HAVE A MINIMUM BEARING OF 8 INCHES EACH END.
- FOR ALL OPENINGS NOT OTHERWISE DETAILED OR SCHEDULED, MINIMUM LINTELS SHALL BE FOR EACH 4 INCH OF MASONRY WIDTH 1-L 3-1/2 X 3-1/2 X 1/4 FOR SPANS UP TO 4'-0", 1-L 4 X 3-1/2 X 1/4 FOR SPANS UP TO 6'-0" AND 1-L 5 X 3-1/2 X 1/4 FOR SPANS UP TO 8'-0". FOR SPANS LESS THAN 2'-0" PROVIDE A 5/16" PLATE.
- MASONRY CONTROL JOINT SPACING SHALL NOT EXCEED 24'-0".
- ALL MASONRY CONSTRUCTION SHALL HAVE SPECIAL INSPECTION PER IBC SECTION 1705.4 AND HAVE LEVEL 2 QUALITY ASSURANCE IN ACCORD WITH ACI530-11 SECTION 1.14. PERIODIC INSPECTION SHALL BE INTERPRETED AS TWO TIMES PER WEEK.

E. WOOD:

- WOOD SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU.
- ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.
- SAWN LUMBER SHALL HAVE THE FOLLOWING MINIMUM GRADE UNLESS NOTED OTHERWISE:

TYPE OF USE	MATERIAL AND GRADE
TOP PLATES, ALL OTHER SAWN LUMBER	DOUGLAS FIR NO. 2
POSTS AND BEAMS	DOUGLAS FIR NO. 1
- ALL 2x BEARING WALLS SHALL BE BLOCKED HORIZONTALLY AT 4'-0" O.C. VERT. SPACING FOR ALL WALLS GREATER THAN 9'-0" IN HEIGHT.
- ALL PLYWOOD SHALL BE C-D OR C-C SHEATHING EXTERIOR GRADE CONFORMING TO STANDARD PS0.019.
- PLYWOOD SHALL BE PLACED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS USING A MINIMUM 5-PLY PLYWOOD. PLYWOOD JOINTS SHALL BE STAGGERED.
- PLYWOOD ATTACHMENT SHALL BE DONE USING COMMON NAILS. NAILING SHALL BE AS NOTED ON ROOF FRAMING PLAN.
- ALL SILL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED DOUGLAS FIR OR FOUNDATION GRADE REDWOOD.
- BRACE WOOD TRUSSES LATERALLY AT BEARING POINTS AND INTERMEDIATE LOCATIONS AS REQUIRED BY MANUFACTURER.
- SEE 3/S1-0 FOR ULTIMATE WIND UPLIFT.



2 S1-0 3/4"=1'-0" ROOF DIAPHRAGM NAILING PATTERN

F. SPECIAL INSPECTION

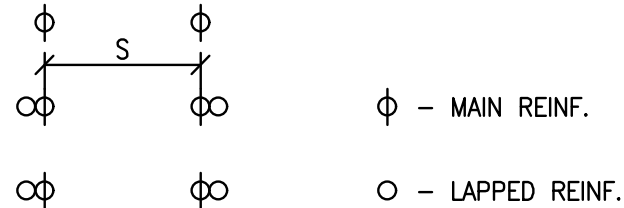
- IN ACCORD WITH 2018 IBC SECTIONS 1704 & 1705, AS NOTED BELOW, TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THIS ENGINEER SHALL BE DEEMED THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS PERFORMED BY HIS FIRM OR HIS CONSULTANTS. INSPECTORS SHALL BE ICBO CERTIFIED AND APPROVED BY THE BUILDING OFFICIAL.
- THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE BUILDING OFFICIAL AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE INTERNATIONAL BUILDING CODE.
- SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 108.5 AND 108.7 OF THE INTERNATIONAL BUILDING CODE.
- CONCRETE PER SECTION 1705.3 AND TABLE 1705.3.
- ANCHOR RODS INSTALLED IN CONCRETE; PER TABLE 1705.3.
- REINFORCING PER TABLE 1705.3.
- STRUCTURAL MASONRY; PER SECTION 1705.4.
- GRADING, EXCAVATION AND FILLING; PER SECTION 1705.6. SEE GEOTECHNICAL REPORT.
- EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHOR INSTALLATION TO VERIFY INSTALLATION IN ACCORD WITH ICBO REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.
- THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL.
- THE TESTING/ INSPECTION FIRMS ENGINEER SHALL COMPLETE, SIGN AND SEAL, A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
- THE SPECIAL INSPECTOR SHALL BE SELECTED AND CREDENTIALS SHALL BE SUBMITTED TO THE CITY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

G. OTHER:

- UNLESS NOTED OTHERWISE, EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT II EXPANSION ANCHORS OR APPROVED EQUAL. ADHESIVE ANCHORS SHALL BE HILTI STANDARD HAS RODS WITH THE HVA ADHESIVE SYSTEM, THE SIMPSON SET SYSTEM, OR APPROVED EQUAL.
- VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
- VERIFY IN FIELD ALL EXISTING CONDITIONS SHOWN ON DRAWINGS.
- ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES. PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING, OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
- ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE STAMP (AND SIGNATURE) OF AN ENGINEER REGISTERED IN TEXAS.

TYPICAL REINFORCEMENT NOTES

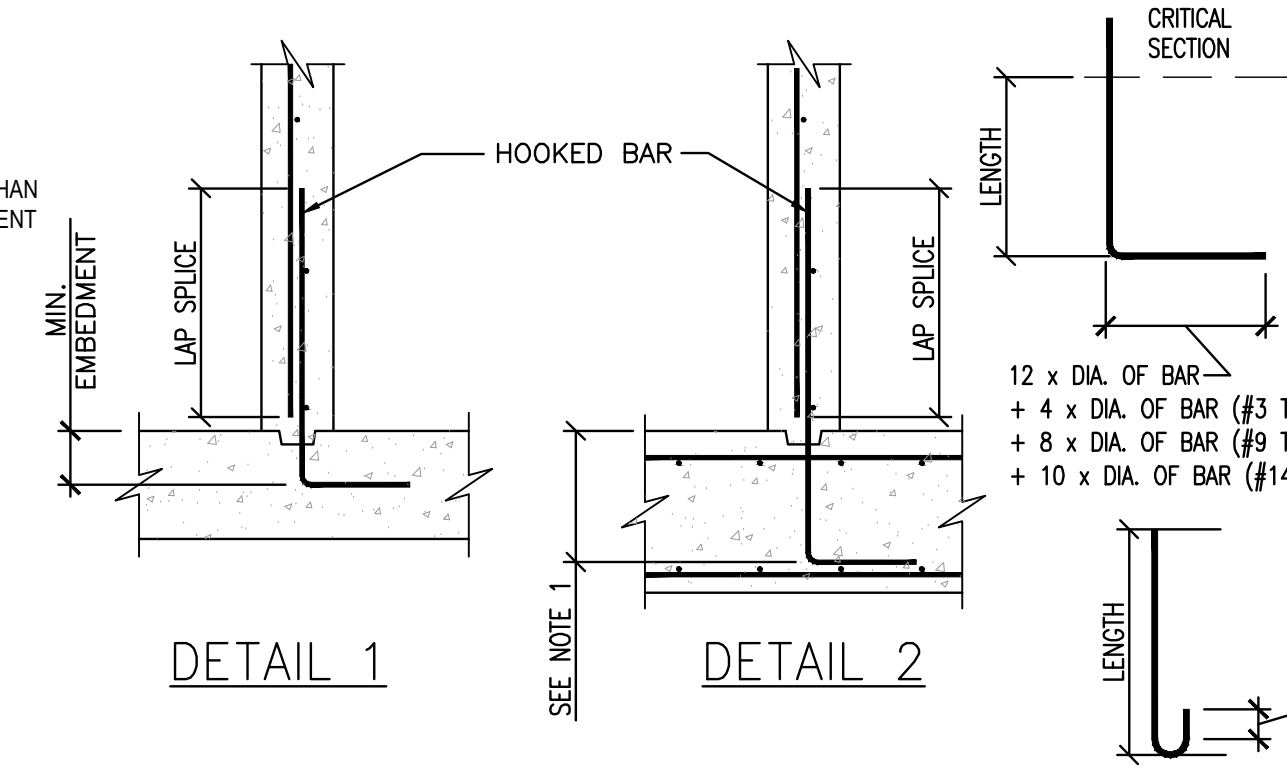
- THE LENGTHS SHOWN IN THE TABLES ARE BASED ON THE FOLLOWING CONCRETE COVERAGE AND REINFORCING C-C SPACING:
BEAMS OR COLUMNS:
COVER (EQUAL OR MORE) 1.0bd (BAR DIAMETER)
CENTER TO CENTER (C-C) SPACING (EQUAL OR MORE) 2.0bd
ALL OTHERS:
COVER (EQUAL OR MORE) 1.0bd
CENTER TO CENTER SPACING (EQUAL OR MORE) 3.0bd.
- TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.
- DEVELOPMENT AND SPLICE LENGTH SHOWN SHALL NOT APPLY IF ANY OF THE FOLLOWING CONDITIONS OCCUR:
A) $f_c < 2,500$ PSI
B) $f_y > 60,000$ PSI
C) THE COVER OR C-C BAR SPACING IS NOT AS LISTED ABOVE
D) THE REINFORCING STEEL IS EPOXY COATED
E) LIGHT WEIGHT CONCRETE IS USED.
- CENTER ON CENTER SPACING (S) IS DEFINED AS BELOW:



REINFORCING DEVELOPMENT AND SPLICES $f_c = 4,000$ PSI				
BAR SIZE	DEVELOPMENT LENGTH		SPLICE LENGTH	
	TOP	OTHER	TOP	OTHER
#3	1'-7"	1'-3"	2'-0"	1'-7"
#4	2'-1"	1'-7"	2'-8"	2'-1"
#5	2'-7"	2'-0"	3'-4"	2'-7"
#6	3'-1"	2'-5"	4'-0"	3'-1"
#7	4'-6"	3'-6"	5'-10"	4'-6"
#8	5'-2"	4'-0"	6'-8"	5'-2"
#9	5'-10"	4'-6"	7'-7"	5'-10"
#10	6'-7"	5'-1"	8'-6"	6'-7"
#11	7'-3"	5'-7"	9'-5"	7'-3"

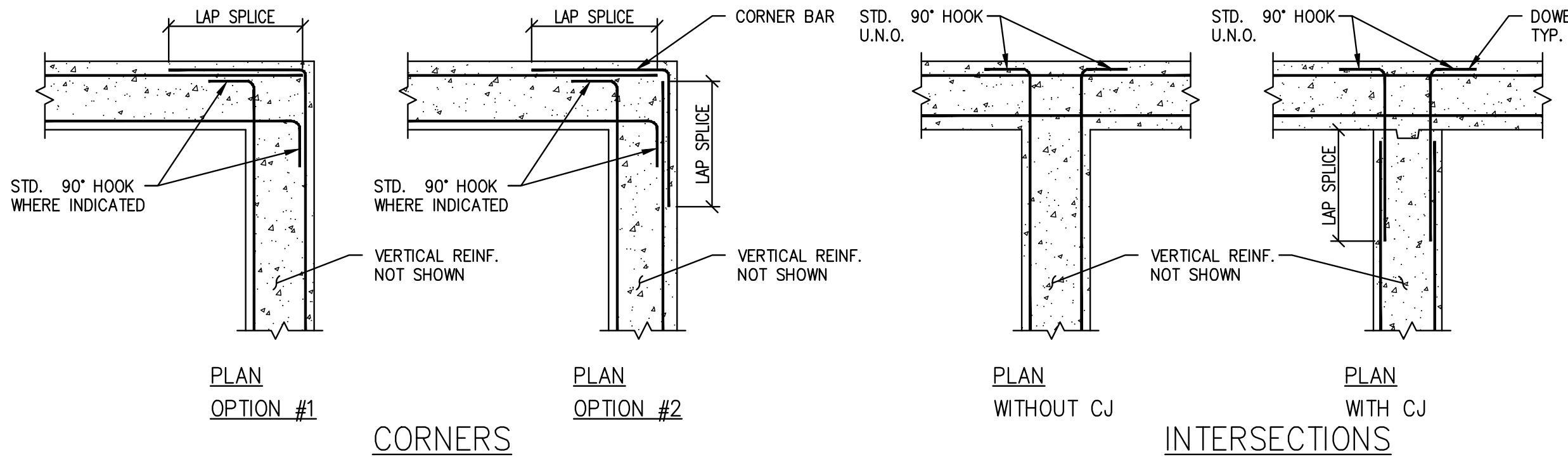
DETAILED REINFORCEMENT NOTES

- EMBEDMENT LENGTHS IN CHART ARE TYPICAL EXCEPT AS NOTED IN DETAIL 2, OR AS INDICATED ON DRAWINGS.



DEVELOPMENT LENGTHS HOOKED BARS ($f_c = 4,000$ PSI)	
BAR SIZE	LENGTH OR MIN. EMBEDMENT
#3	8"
#4	10"
#5	1'-0"
#6	1'-3"
#7	1'-5"
#8	1'-7"
#9	1'-10"
#10	2'-0"
#11	2'-3"

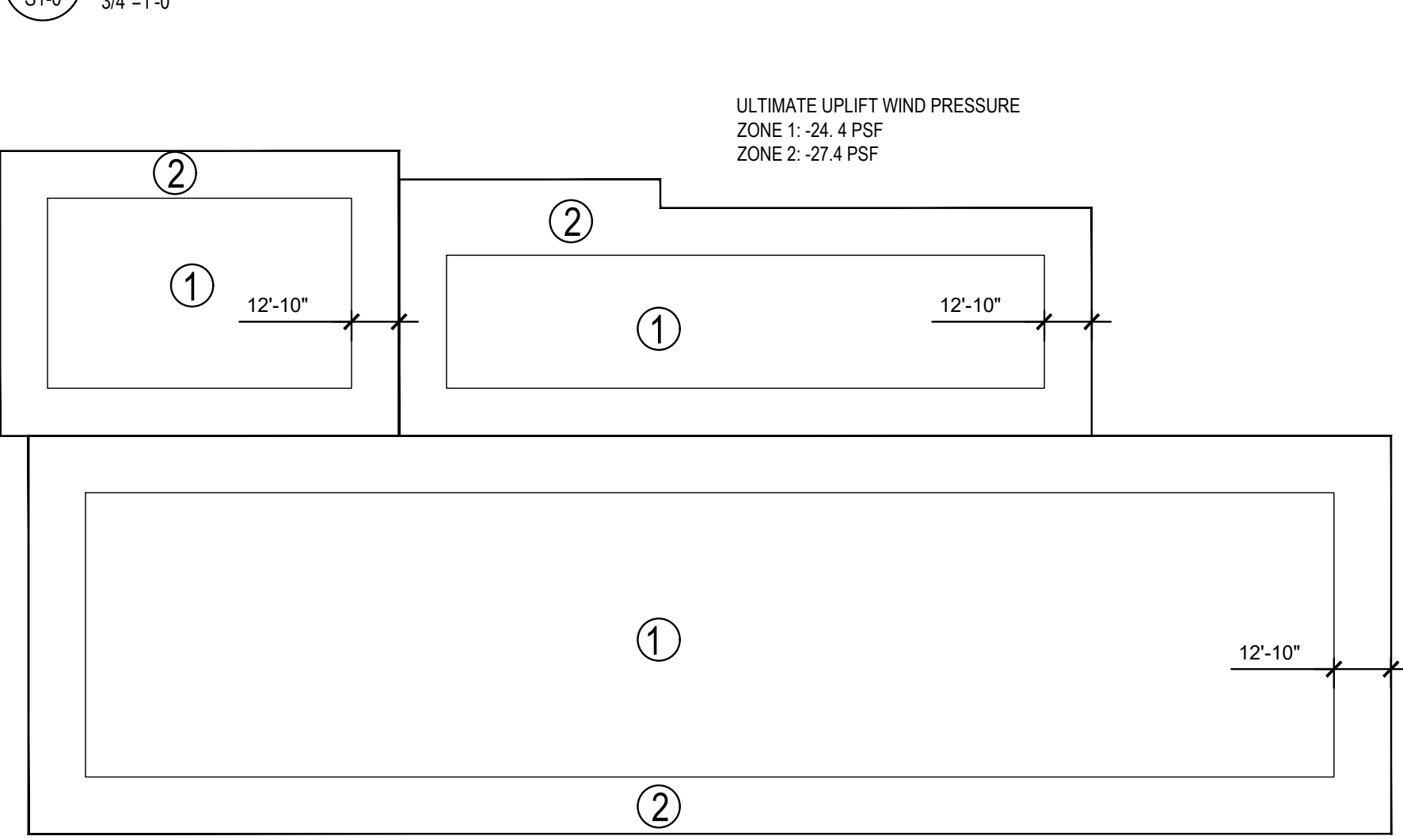
CONCRETE REINFORCEMENT COVER			
CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18 #5 AND SMALLER	2" 1 1/2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, & WALLS BEAMS, COLUMNS, PEDASTALS, AND TENSION TIES	#14 & #18 #14 & SMALLER PRIMARY REINFORCEMENT STIRRUPS, TIES, SPIRALS, AND HOOPS	1 1/2" 3/4" 1 1/2"



CORNERS

INTERSECTIONS

1 S1-0 3/4"=1'-0" HORIZONTAL WALL REINFORCEMENT DETAILS



3 S1-0 3/4"=1'-0" ROOF WIND UPLIFT LOADING

TEXAS COMPANY REGISTRATION F-11349

P PERFORMANCE Engineering

11811 Fort Street, Suite 104 - Omaha, NE 68164
388 Perry St., Suite 204A - Castle Rock, CO 80104
(402) 343-5860 Fax: (402) 343-5861
NE-CAS-05
PE #051003

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266

STATE OF TEXAS

THOMAS A. SCHOTT
97072
LICENSED PROFESSIONAL ENGINEER

10/17/2025

ENGINEER OF RECORD

REVISION	DATE	COMMENTS
	01/29/2026	FOR CONSTRUCTION

ARCODEV JOB # _____

CLIENT JOB # _____

DRAWN BY: SLM

CHECKED BY: TAS

DATE OF ISSUE: 10.17.25

ARCODEV

45 SPRINGGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925

R SHEET

S1-0

GENERAL STRUCTURAL NOTES AND DETAILS

STATEMENT OF SPECIAL INSPECTIONS

2021 IBC SECTIONS 1704 & 1705

Category	Item #	Verification & Inspection	Continuous Periodic	Req Y / N	Reference Standard or Compliance Document	IBC Reference	Special Inspector
1704.2.4 Report Requirement							
Rep.	1	Special Inspector to keep record of special inspections and furnish inspection reports to the building official and to the Registered design professional in response to change.	•	--	Y	1704.2.4	
1704.2.5 Inspection of Fabricated Items							
Fab.	1	Work done in fabricator shop requires inspector unless the fabricator is registered and approved according to IBC 1704.2.5.1. Where fabricator is approved, provide fabricator certification document. At completion of fabrication, submit certificate of compliance to building official stating the work was performed in accordance with the approved construction documents.	--	•	N	1704.2.5 Document Required	
Fab.	2	At completion of fabrication, submit certificate of compliance to building official stating the work was performed in accordance with the approved construction documents.	--	•	N	1704.2.5.1 Document Required	
1705.2.1 Steel Construction Inspection							
Stl.	1	Structure Steel shall be in accordance with the quality assurance inspection requirements of AWS 360.	--	N	AISC 360	1705.2.1	
1705.2.2 to 1705.2.4 Steel Construction other than Structural Steel Inspection							
Stl.	1	Material verification of high-strength bolts, nuts and washers.	•	N	ASTM Standards	1705.2	
Stl.	1a	Identification markings to conform to ASTM standards specified in the approved construction documents.	--	•	N	AISC 360, Section A3.3 and applicable ASTM material standards	1705.2
Stl.	1b	Manufacturer's certificate test reports.	--	•	N		1705.2
Stl.	2	Inspection of welding.	--	N			
2a.		Cold-formed steel deck	--	N			
Stl.	2a (1)	Floor and roof deck welds	--	•	N	AWS D1.3	1705.2
2b.		Reinforcing steel	--	N			
Stl.	2b (1)	Verification of weldability of reinforcing steel other than ASTM A 706	•	N	AWS D1.4 ACI 318: 3.5.2	1705.2	
Stl.	2b (2)	Reinforcing steel-resisting flexural and axial forces	•	N	AWS D1.4 ACI 318: 3.5.2	1705.2	
Stl.	2b (3)	Shear reinforcement	•	N	AWS D1.4 ACI 318: 3.5.2	1705.2	
Stl.	2b (4)	Other reinforcing steel	•	N	AWS D1.4 ACI 318: 3.5.2	1705.2	

Page 1

Category	Item #	Verification & Inspection	Continuous Periodic	Req Y / N	Reference Standard or Compliance Document	IBC Reference	Agent
1705.2.3 Inspection of Open-web Steel Joist and Joist Girders							
Stl.	1	Installation of open-web steel joist and joist girders.	--	N	SJI specification listed in Section 2207.1	Table 1705.2.3	
Stl.	1a	End connections -- welding or bolting	--	•	N	Table 1705.2.3	
Stl.	1b	Bridging -- horizontal or diagonal	--	N	SJI specification listed in Section 2207.1	Table 1705.2.3	
Stl.	1b (1)	Standard bridging	--	•	N	Table 1705.2.3	
Stl.	1b (2)	Bridging that differs from the SJI specifications listed in Section 2207.1	--	•	N	Table 1705.2.3	
1705.3 Concrete Construction							
Conc.	1	Inspection of reinforcing steel including prestressing tendons, and placement	--	•	Y	ACI 318 Ch. 20, 25.2, 25.3, 26.5.1-26.5.3, 35 and IBC 1905	1705.3
Conc.	2	Reinforcing bar welding	--	N		Table 1705.3	
Conc.	2a	Verify weldability of reinforcing bars other than ASTM A 706	--	•	N		Table 1705.3
Conc.	2b	Inspect single-pass welds, maximum 5/16"	--	•	N	IBC 1905 AWS D1.4 ACI 318: 26.5.4	Table 1705.3
Conc.	2c	Inspect all other welds	•	--	Y		Table 1705.3
Conc.	3	Inspection of anchors cast in concrete	--	•	Y	IBC 1905 ACI 318: 17.8.2	Table 1705.3
Conc.	4	Inspection of anchors post-installed in hardened concrete members	--	Y			
Conc.	4a	Adhesive anchors installed in horizontally or upwardly inclined	•	--	Y	ACI 318: 17.8.2.4	Table 1705.3
Conc.	4b	Mechanical anchors and adhesive anchors not defined in 4a	--	•	Y	ACI 318: 17.8.2	Table 1705.3
Conc.	5	Verifying use of required design mix	--	•	Y	ACI 318 Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3, Table 1705.3

Page 2

Category	Item #	Verification & Inspection	Continuous Periodic	Req Y / N	Reference Standard or Compliance Document	IBC Reference	Agent
Conc.	6	Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	•	--	Y	ASTM C172 ASTM C31 ACI 318: 26.4.5, 26.12	1908.10 & Table 1705.3
Conc.	7	Inspection of concrete and shoring and support for proper application techniques	--	•	Y	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8, Table 1705.3
Conc.	8	Verify maintenance of specified curing temperature and techniques	--	•	Y	ACI 318: 26.4.7 -- 26.4.9	1908.8 & Table 1705.3
Conc.	9	Inspection of pre-stressed concrete	--	N			
Conc.	9a	Application of pre-stressing forces	--	N		ACI 318: 26.8.2.1 ACI 318: 26.8.2.3	Table 1705.3
Conc.	9b	Grouting of bonded pre-stressing tendon	--	N			Table 1705.3
Conc.	10	Inspect erection of precast concrete members	--	•	N	ACI 318: Ch. 26.8	Table 1705.3
Conc.	11	Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs	--	•	N	ACI 318: 26.10.2	Table 1705.3
Conc.	12	Inspect formwork for shape, location and dimensions of the concrete member being formed	--	•	Y	ACI 318: 26.10.1(b)	Table 1705.3
1705.4 Masonry Construction							
Max.		Masonry construction shall be inspected and verified per standards	--	•	Y	TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1V ASCE 8	1705.4
Max.	1	Empirically design masonry, glass unit masonry and masonry veneer in Risk Category IV	--	N		Section 1705.2110 or Chapter 14, Section 1904.5, shall comply with TMS 402/ACI 530/ ASCE 5 Level B Quality Assurance	1705.4.1
Max.	2	Vertical masonry foundation elements	--	•	N	IBC Section 1705.4	1705.4.2
1705.5 Wood Construction							
Wd	1	High-Load Diaphragms	--	N		IBC Sec. 2306.2, Sec 1704.2, approved construction drawings	1705.5.1
Wd	2	Model-gate-connected wood trusses spanning 60 feet or greater	--	N		Approved truss submittal package (bracing)	1705.5.2
Wd	3	Inspection of anchorage and connections of mass timber construction to timber deep foundation systems	--	•	N		Table 1705.5.3
Wd	4	Inspect erection of mass timber construction	--	•	N		Table 1705.5.3
Wd	5	Inspection of connections where installation methods are required to meet design loads. Verify use of proper installation equipment, verify use of pre-drilled holes. Inspect screws including dia., length, head type, spacing, installation angle and depth	--	•	N		Table 1705.5.3

Page 3

Wd	6	Adhesive anchors installed in horizontal or upwardly inclined orientation to resist sustained tension loads.	--	•	N		Table 1705.5.3
Wd	7	Adhesive anchors not defined above	•	--	N		Table 1705.5.3
Wd	8	Bolted connections	--	•	N		Table 1705.5.3
Wd	9	Concealed connections	--	•	N		Table 1705.5.3
1705.6 Soils							
Soil	1	Verify materials below shallow foundations are adequate to achieve the design bearing capacity	--	•	Y		Table 1705.6
Soil	2	Verify excavations are extended to proper depth and have reached proper material	--	•	Y		Table 1705.6
Soil	3	Perform classification and testing of compacted fill materials	--	•	Y		Table 1705.6
Soil	4	Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill	•	--	Y		Table 1705.6
Soil	5	Prior to placement of compacted fill, observe sub-grade and verify that site has been prepared properly	--	•	Y		Table 1705.6

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Category	Item #	Verification & Inspection	Continuous Periodic	Req Y / N	Reference Standard or Compliance Document	IBC Reference	Agent
1705.7 Driven Deep Foundation							
Drv	1	Verify element materials, sizes and lengths comply with the requirements	--	N		Table 1705.7	
Drv	2	Determine capacities of test elements and conduct additional load tests, as required	--	N		Table 1705.7	
Drv	3	Inspect driving operations and maintain complete and accurate records for each element	--	N		Table 1705.7	
Drv	4	Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element	--	N		Table 1705.7	
Drv	5	For steel elements, perform additional inspections in accordance with Section 1705.2	--	N		Sec. 1705.7 & Table 1705.7	
Drv	6	For concrete elements and concrete filled elements, perform additional inspections in accordance with Section 1705.3	--	N		Sec. 1705.7 & Table 1705.7	
Drv	7	For specialty elements, perform additional inspections as determined by the registered design professional in response to change	--	N		Table 1705.7	
1705.8 Cast-In-Place Deep Foundation							
CIP	1	Inspect drilling operations and maintain complete and accurate records for each element	--	N		Table 1705.8	
CIP	2	Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock, (if applicable) and adequate end bearing strata capacity. Record concrete or grout volumes	--	N		Table 1705.8	
CIP	3	For concrete elements, perform additional inspections in accordance with Section 1705.3	--	N		Sec. 1705.3 & Table 1705.8	
1705.9 Helical Pile Foundations							
HPF	1	Installation of helical pile foundations	--	N	Approved Geotechnical report and registered design professional	1705.9	
1705.11 Special Inspections for Fabricated Items							
Fab		Special inspections of fabricated items shall be performed in accordance with Section 1704.2.5	•	N		1705.11	
1705.12 Special Inspections for Wind Resistance							
Wind		Wind Requirements for buildings and structures per 1705.11	--	N		1705.12	
Wind	1	Structural Wood	--	N		1705.12.1	
Wind	2	Cold-formed steel light-frame construction	--	N		1705.12.2	

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Category	Item #	Verification & Inspection	Continuous Periodic	Req Y / N	Reference Standard or Compliance Document	IBC Reference	Agent
Wind	3	Wind-resisting components: 1. Roof covering, roof deck and roof framing connections 2. Exterior wall covering and wall connections to roof and floor diaphragms and framing	--	N		1705.12.3	
1705.13 Special Inspection for Seismic Resistance							
Seis	1	Structural Steel seismic resistance shall be in accordance with Section 1705.12.1.1 or 1705.12.1.2 as applicable	--	N	Section 1705.13.1.1 Section 1705.13.1.2	1705.13.1	
Seis	1a	Seismic force-resisting systems of structural steel in the seismic force-resisting systems of buildings and structures assigned to Seismic Design Category B, C, D, E or F shall be performed in accordance with the quality assurance of requirements of ASCE 341.	--	N	AISC 341	1705.13.1.1	
Seis	1b	Structural steel elements in the seismic force resisting systems of buildings and structures assigned to Seismic Design Category B, C, D, E or F other than those covered in Section 1705.12.1.1, including studs, collectors, chords and foundation elements, shall be performed in accordance with the quality assurance requirements of ASCE 341	--	N	Section 1705.13.1.1 AISC 341	1705.13.1.2	
Seis	2	Structural wood for the seismic force-resisting systems of structures assigned to Seismic Design Category C, D, E or F	--	N		1705.13.2	
Seis	2a	Structural wood fast joint gluing operations of elements of seismic force-resisting system	--	N		1705.13.2	
Seis	2b	Structural wood fastening for nailing, bolting, anchoring and other fastening of elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels and hold-downs	--	N		1705.13.2	
Seis	3	Cold-formed steel light-frame construction for seismic force resisting systems of structures assigned to Seismic Design Category C, D, E or F	--	N		1705.13.3	
Seis	3a	For welding operations of elements of the seismic force resisting system	--	N		1705.13.3	
Seis	3b	For screw attachment, bolting, anchoring and other fastening of elements of the seismic force-resisting system, including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs	--	N		1705.13.3	
Seis	4	Designated seismic system verifications for structures assigned to Seismic Design Category C, D, E or F. The special inspector shall examine designated seismic systems requiring seismic qualification in accordance with Section 13.2.2 of ASCE 7 and verify that the label, anchorage and mounting conform to the certificate of compliance	--	N	Section 13.2.2 ASCE 7	1705.13.4	

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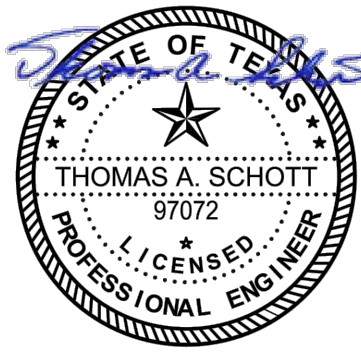
Category	Item #	Verification & Inspection	Continuous Periodic	Req Y / N	Reference Standard or Compliance Document	IBC Reference	Agent
Seis	5	Architectural Components in D, E, or F	--	•	N	D, E, F	1705.13.5
Seis	5.1	Access Floors in D, E, or F	--	•	N	D, E, F	1705.13.5.1
Seis	6	Plumbing, Mechanical and Electrical Components	--	•	N		1705.13.6
Seis	6a	Anchorage of electrical equipment for emergency or standby power systems, in C, D, E or F	--	•	N		1705.13.6
Seis	6b	Anchorage of other electrical equipment in E or F	--	•	N		1705.13.6
Seis	6c	Installation and anchoring of piping systems designed to carry hazardous materials and associated mechanical units in C, D, E or F	--	•	N		1705.13.6
Seis	6d	Installation of HVAC ductwork that will carry hazardous materials in C, D, E or F	--	•	N		1705.13.6
Seis	6e	Installation of vibration isolation systems with clearance less than 0.25 inches between equipment support frame and restraint where indicated on construction documents in C, D, E or F	--	•	N		1705.13.6
Seis	7	Storage Rack during anchoring storage racks 8 feet or greater in height in D, E or F	--	•	N		1705.13.7
Seis	8	Seismic Isolation System	--	•	N		1705.13.8
Seis	9	Cold-formed steel special bolted moment frames in the seismic force-resisting systems of structures assigned to seismic Design Category D, E or F	--	•	N		1705.13.9
1705.13 Testing for Seismic Resistance							
Test	1	Structural Steel	--	•	N	Section 1705.14.1 Section 1705.14.2	1705.14.1
Test	2	Seismic force-resisting systems	--	•	N	AISC 341	1706.14.1.1
Test	3	Structural steel elements	--	•	N	AISC 341	1705.14.1.2
Test	4	Seismic certification of nonstructural components and designated seismic systems	--	•	N	Per the registered design professionals requirements on the construction documents, Sec. 13.2 of ASCE 7	1705.14.2 and 1705.14.3
Test	5	Seismically isolated structures	--	•	N	Sec. 17.8 of ASCE 7	1705.14.4

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TEXAS COMPANY REGISTRATION F-11349

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NE-CAS-55
PE #251003

BRAKES PLUS

NWO OF FM455 & ACKER STREET
LOT 2183, BLOCK B
SANGER, TEXAS 76266

ENGINEER OF RECORD

REVISION	DATE	COMMENTS							
	01/29/2026	FOR CONSTRUCTION							

ARCODEV JOB #:

CLIENT JOB #:

DRAWN BY: SLW

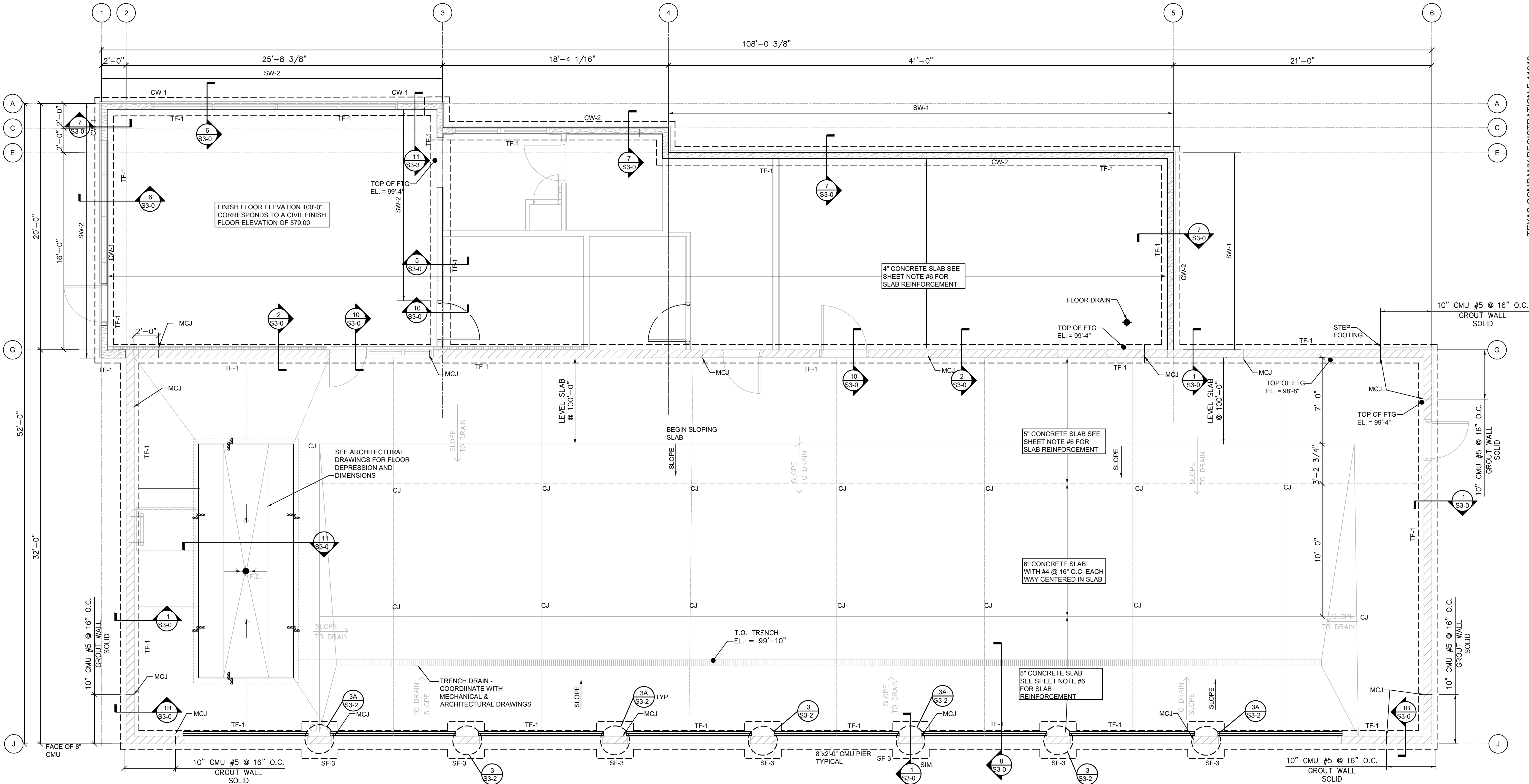
CHECKED BY: TAS

DATE OF ISSUE: 10.17.25

45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925

S1-1

SPECIAL INSPECTIONS



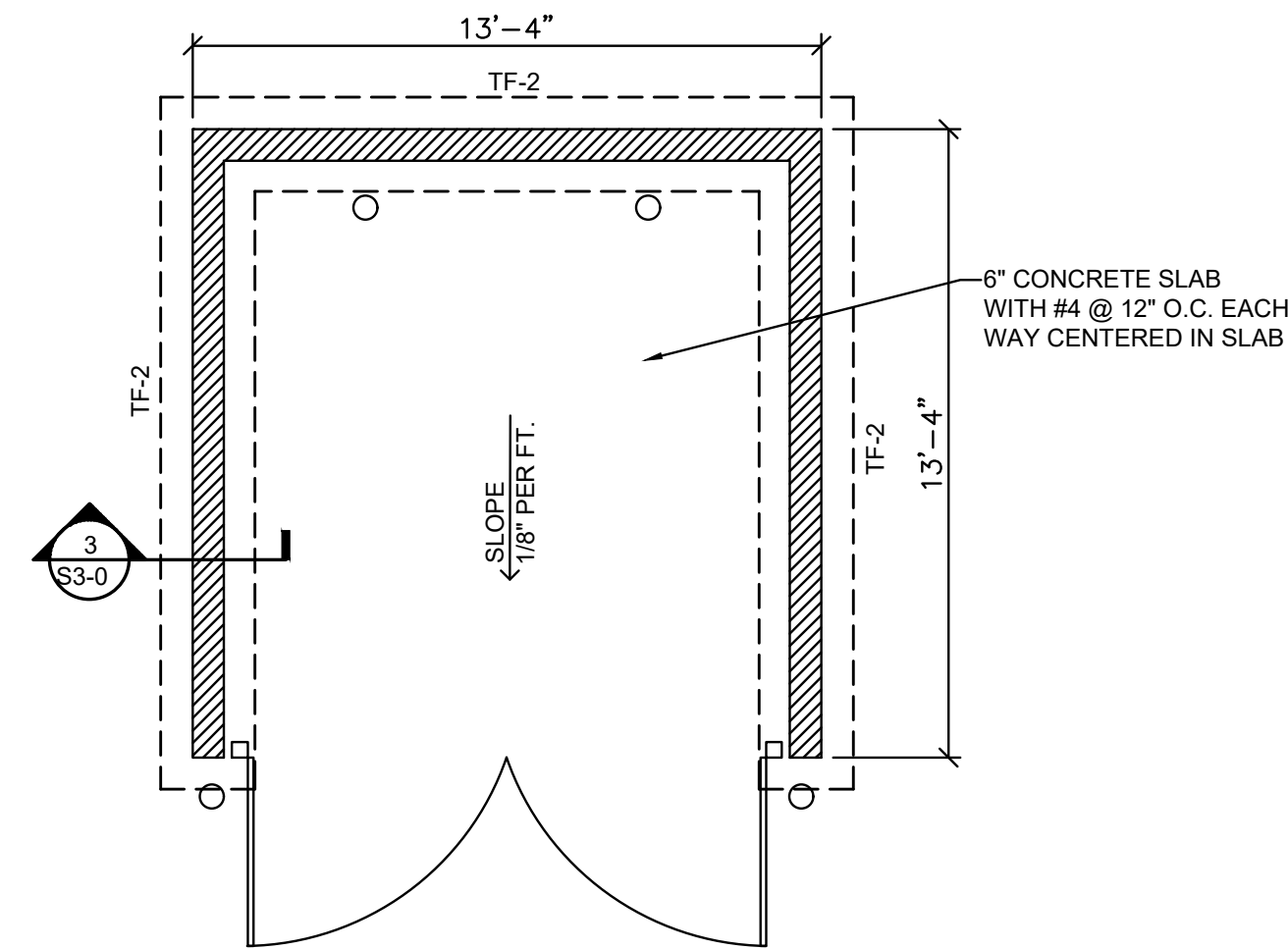
1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

SHEAR WALL SCHEDULE									
MARK	WALL SHEATHING	NAILS, PENETRATION	PANEL EDGE NAILING	FIELD NAILING	SILL BOLTS	STUDS, SILLS & PLATES	ALLOWABLE SHEAR (PLF)	HOLDOWNS	FOUNDATION ANCHOR
SW-1	1/2" NOMINAL STRUCTURAL I SHEATHING, ONE SIDE, BLOCKED	10d x 3" 1 1/2" PEN.	6" O.C.	6" O.C.	1/2" DIA. @ 24" O.C.	2x STUDS, 2x SILL, 2x PL	340	HDU8-SDS2.5	7/8" DIA. EMBED 9"
SW-2	1/2" NOMINAL STRUCTURAL I SHEATHING, TWO SIDES, BLOCKED	10d x 3" 1 1/2" PEN.	6" O.C.	6" O.C.	1/2" DIA. @ 24" O.C.	2x STUDS, 2x SILL, 2x PL	680	HDU11-SDS2.5	1" DIA. EMBED 12"

- NOTE:
1. ALL WOOD MEMBERS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
2. NAILING & HARDWARE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED.
3. WHERE PANELS ARE APPLIED ON BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. STAGGER NAILING AT EACH SIDE OF JOINT.
4. INSTALL HARDWARE IN ACCORD WITH MANUFACTURER'S RECOMMENDATIONS.
5. ALL BOLT HOLES SHALL BE 1/8" (MAX) OVERSIZED AT THE CONNECTION OF HOLD DOWNS TO POSTS. INSPECTOR SHALL VERIFY.
6. SEE DETAIL 5/S3-3 FOR TYPICAL SHEAR WALL FRAMING.

FOUNDATION SCHEDULE		
MARK	SIZE	REINFORCING
TF-1	1'-6" WIDE x 2'-0" DEEP	3 - #5 CONT. TOP & BOTT W/ #4 STIRRUPS @ 18" O.C.
TF-2	2'-0" WIDE x 2'-0" DEEP	3 - #5 CONT. TOP & BOTT W/ #4 STIRRUPS @ 18" O.C.

FOUNDATION WALL SCHEDULE		
MARK	SIZE	REINFORCING
CW-1	6" WIDE x 1'-2" HIGH	2 - #5 CONT. & #5 DOWELS AT 18" O.C.
CW-2	6" WIDE x 1'-10" HIGH	3 - #5 CONT. & #5 DOWELS AT 18" O.C.



2 TRASH ENCLOSURE
SCALE: 1/4" = 1'-0"

- SHEET NOTES:**
1. Hatched area indicates CMU walls with #5 vertical bars @ 2'-0" O.C. centered in masonry walls. SEE 6/S3-3 FOR MASONRY CONSTRUCTION.
2. SOIL PREPARATION BENEATH BUILDING AND FOUNDATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT FOR SHALLOW FOUNDATION SYSTEM AND SLAB ON GRADE CONSTRUCTION. THIS ACTION SHALL BE OBSERVED BY A REPRESENTATIVE OF THE GEOTECHNICAL FIRM ON A CONTINUOUS BASIS TO ENSURE THAT SOIL PROPERTIES MEET THE REQUIREMENTS IN THE GEOTECHNICAL REPORT.
- ALL SUBGRADE SOILS BELOW SLAB ON GRADES SHALL BE MOISTURE CONDITIONED AND COMPACTED AS DISCUSSED IN THE SOIL REPORT.
- CONTRACTOR SHALL FOLLOW ALL RECOMMENDATIONS FOR MATERIAL AND COMPACTION LISTED IN THE SOIL REPORT
3. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF FLOOR AND WALL PENETRATIONS AND BLOCK OUT ACCORDINGLY.
4. TOP OF FOOTING ELEVATION SHALL BE 99'-4" UNLESS NOTED OTHERWISE. CONTINUOUS FOOTINGS MAY BE EARTH FORMED.
5. "MCJ" INDICATES MASONRY CONTROL JOINT LOCATION FOR CONCRETE MASONRY UNITS. SEE 2/S3-3 & 4/S3-3 FOR DETAILS. SEE ARCHITECTURAL DRAWINGS FOR BRICK CONTROL JOINTS.
6. SEE PLAN FOR SHOP AREA SLAB ON GRADE THICKNESS. REINFORCE CONCRETE SLAB WITH #4 BARS @ 16" O.C. EA. WAY. TOP OF SLAB SHALL BE 100'-0" UNLESS NOTED OTHERWISE.
7. SW-# INDICATES SHEAR WALL TYPE. SEE SCHEDULE.

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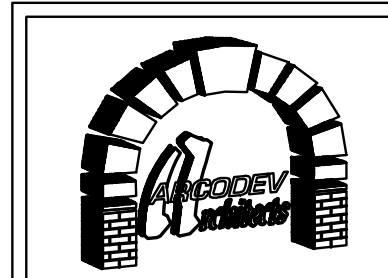
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76286



ENGINEER OF RECORD

REVISION	DATE	COMMENTS
	01/29/2026	FOR CONSTRUCTION

ARCODEV JOB #:
CLIENT JOB #:
DRAWN BY: SLM
CHECKED BY: TAS
DATE OF ISSUE: 10.17.25

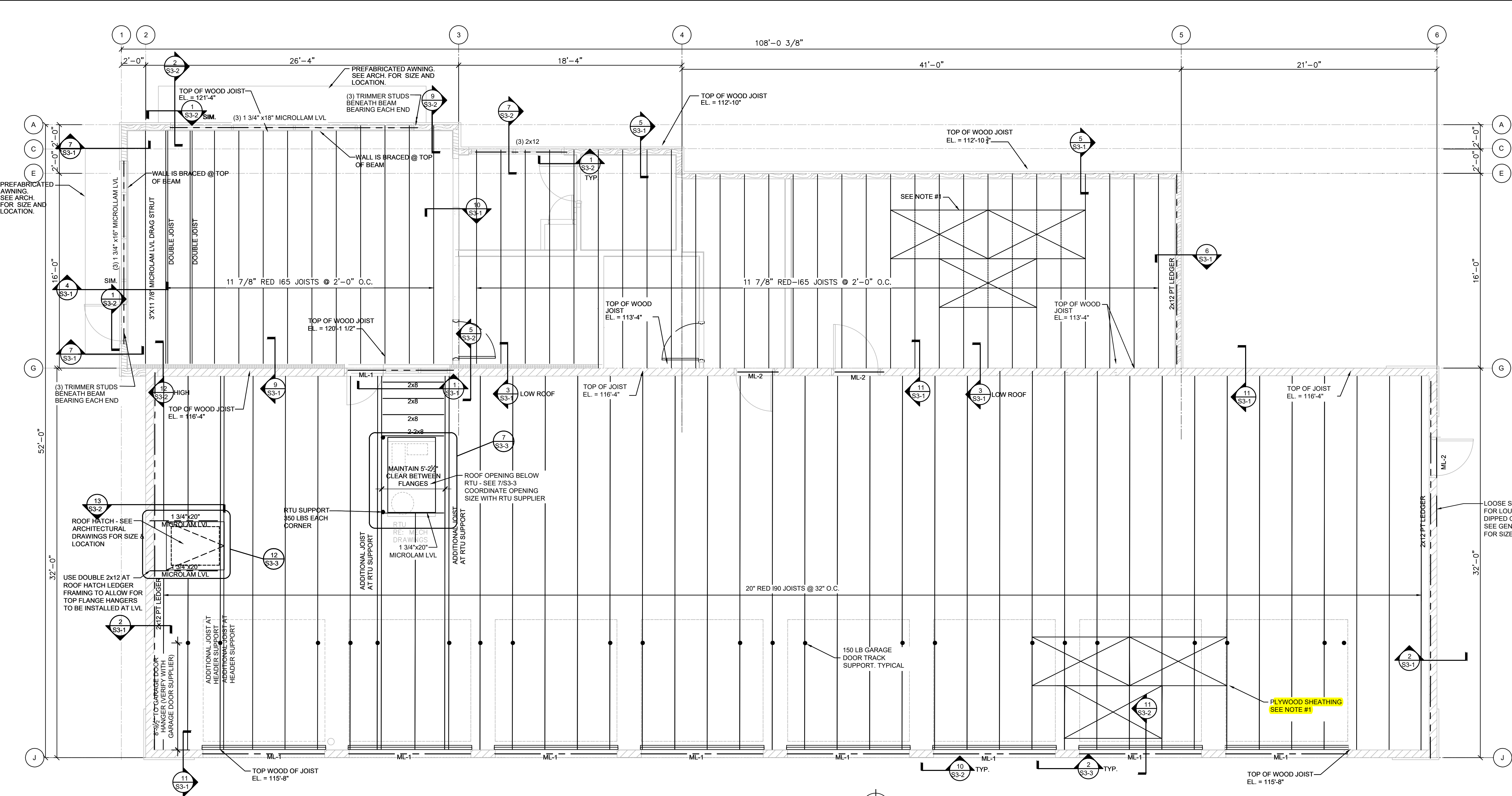
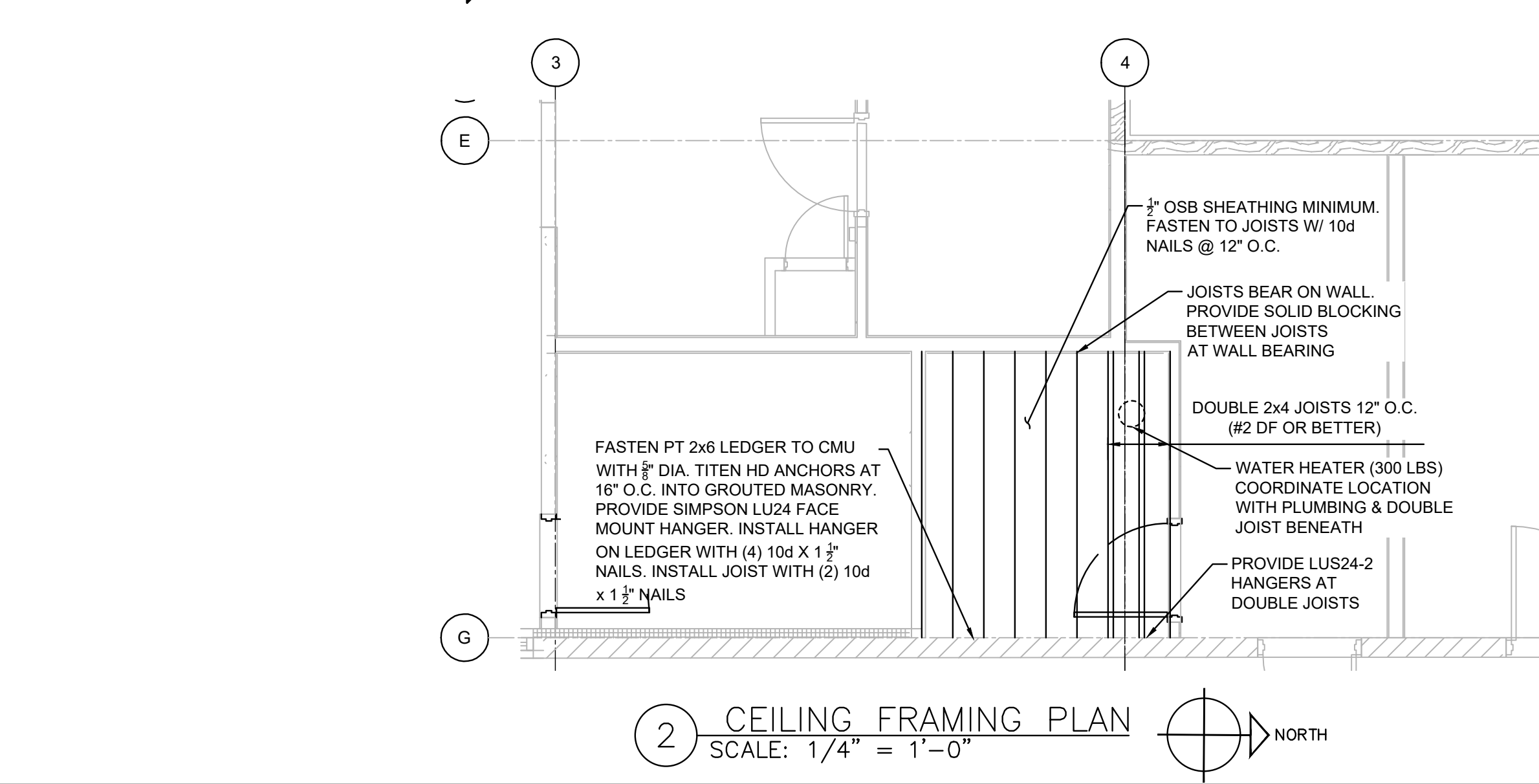


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RCSHEET

S2-0

FOUNDATION PLAN



- SHEET NOTES:**
- DIAPHRAGM SHALL BE A MINIMUM OF 3/4\"/>
 - ML-# INDICATES MASONRY LINTEL TYPE. SEE DETAIL 11/S3-2.
 - UNLESS OTHERWISE DETAILED, CONNECTIONS FOR ITEMS HUNG FROM JOISTS (FANS, HEATERS, GARAGE DOORS, ETC.) SHALL BE DESIGNED AND INSTALLED BY THE GENERAL CONTRACTOR AND THEIR RESPECTIVE TRADES. THIS LOAD SHALL NOT EXCEED 250 LBS PER JOIST.
 - ATTACH 2x12 LEDGER PIECES TO CMU WALL W/ (2) 3/4\"/>
 - SEE DETAIL 7/S3-3 FOR ROOF OPENINGS & PENETRATIONS.
 - WOOD WALLS SHALL BE 2x6 DOUGLAS FIR NO. 2 STUD. STUD SPACING SHALL BE 16\"/>
 - ALL WOOD JOISTS SHALL BE DESIGNED TO SUPPORT THE LOADS INDICATED ON SHEET S1-0.

TEXAS COMPANY REGISTRATION F-11349

PERFORMANCE Engineering

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NE-C04455 PE #251003

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76286

STATE OF TEXAS
THOMAS A. SCHOTT
97072
LICENSED PROFESSIONAL ENGINEER
10/17/2025

ENGINEER OF RECORD

REVISION	DATE	COMMENTS
	01/29/2026	FOR CONSTRUCTION

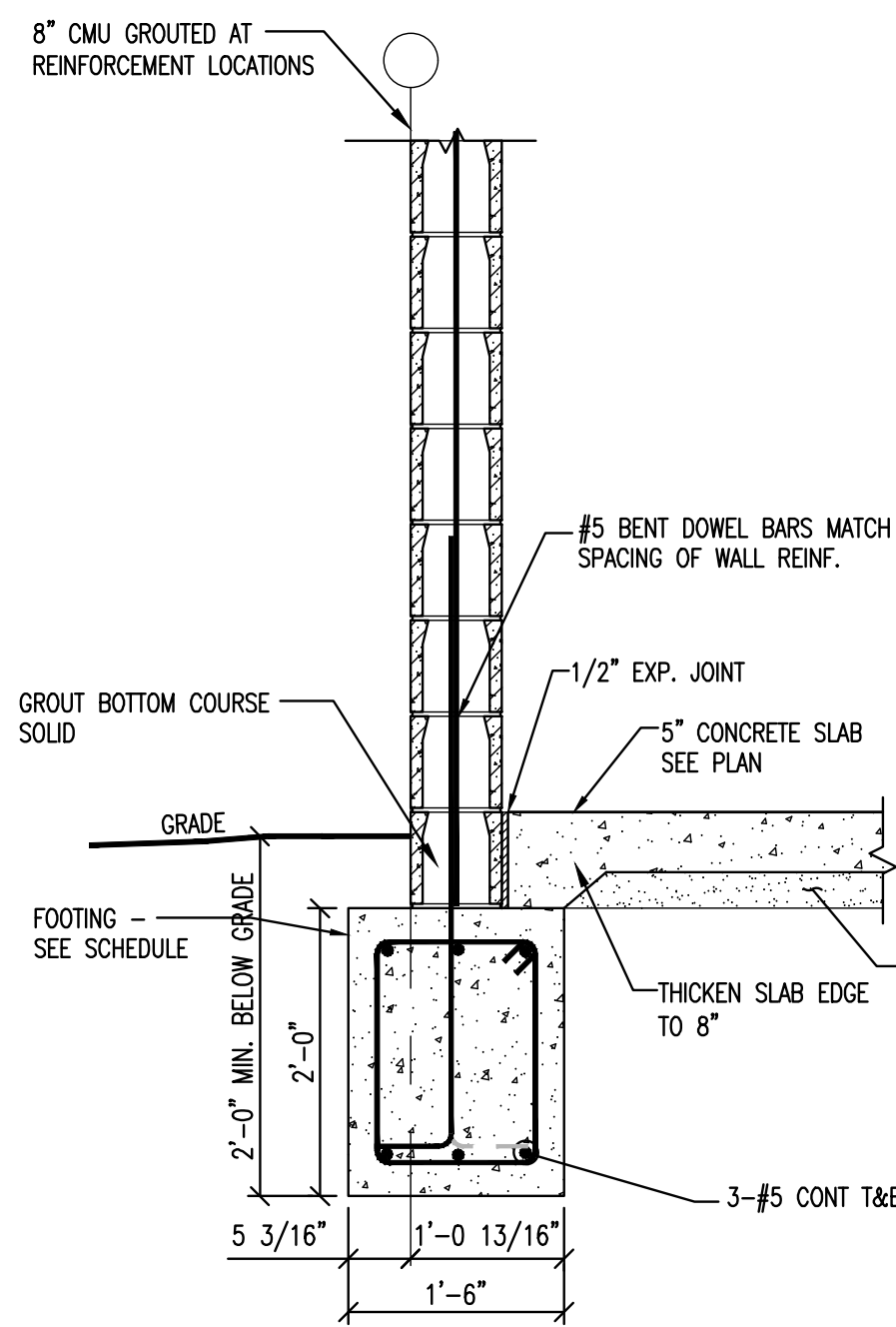
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CLIENT JOB # _____
DRAWN BY: SLW
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DATE OF ISSUE: 10.17.25

ARCODEV

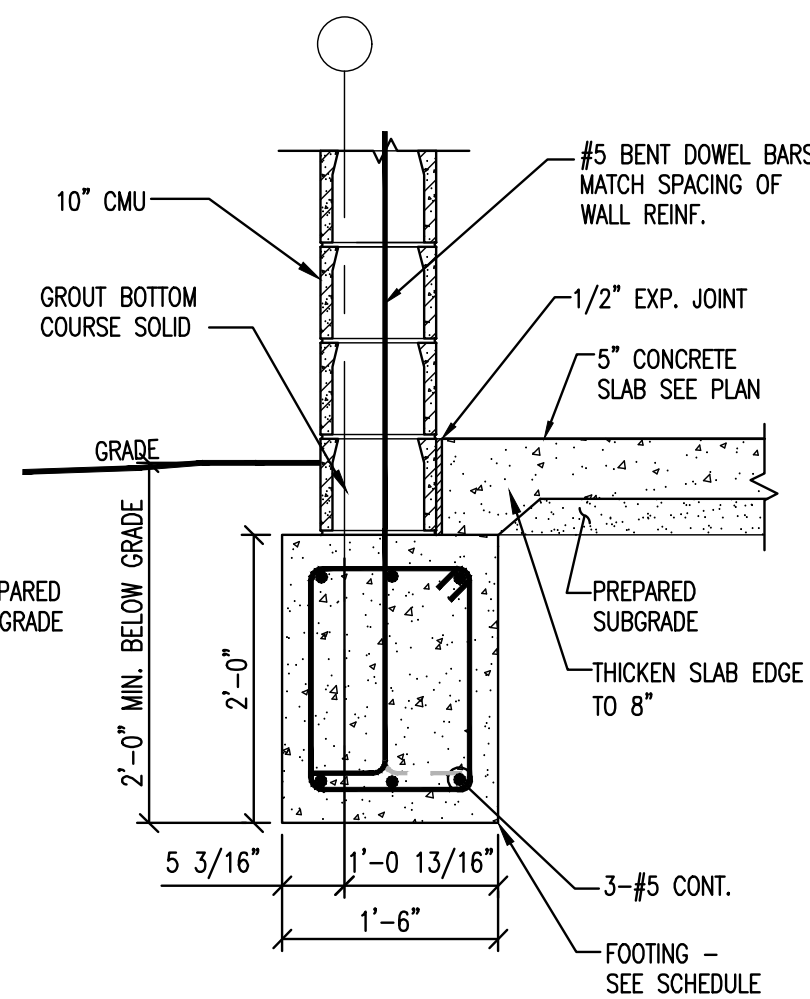
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S2-1

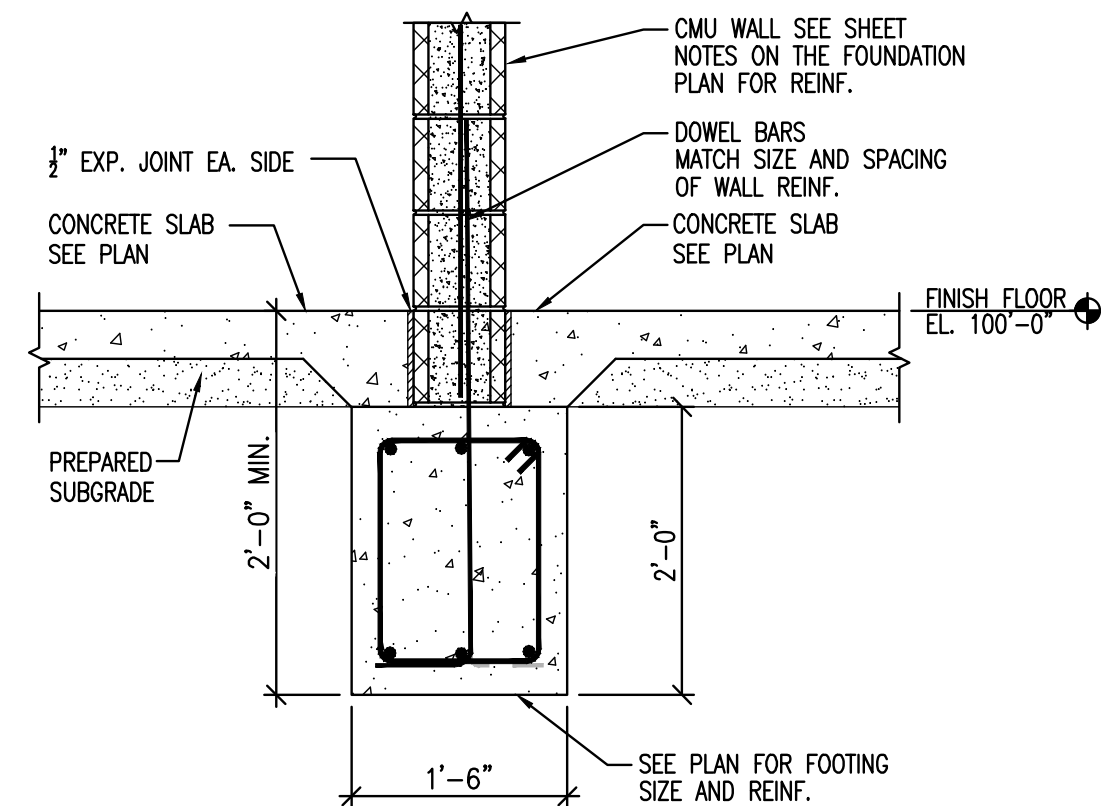
ROOF FRAMING PLAN



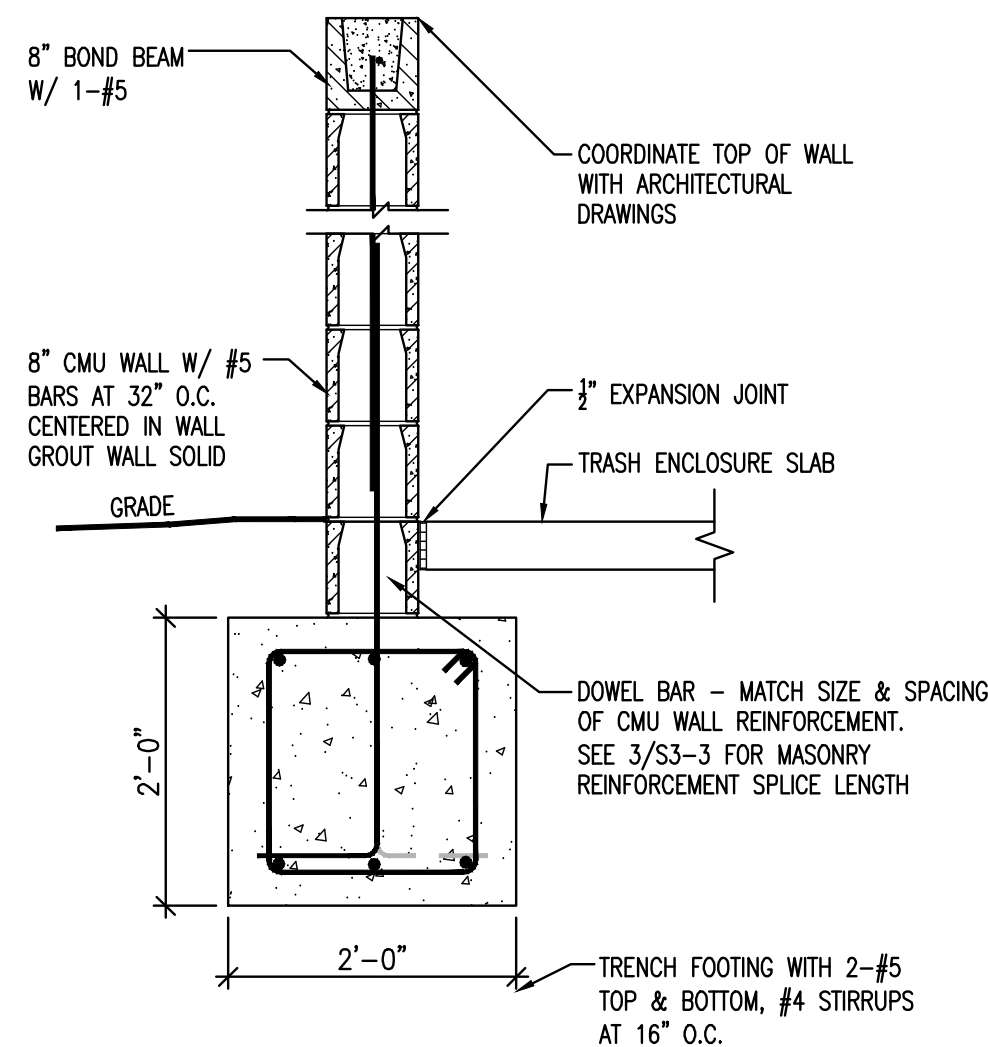
1 TRENCH FOOTING @ WALL
S3-0 3/4"=1'-0"



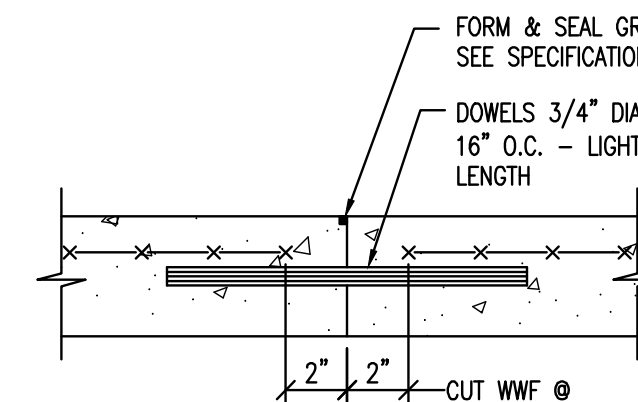
1B FOOTING @ 10" CMU
S3-0 3/4"=1'-0"



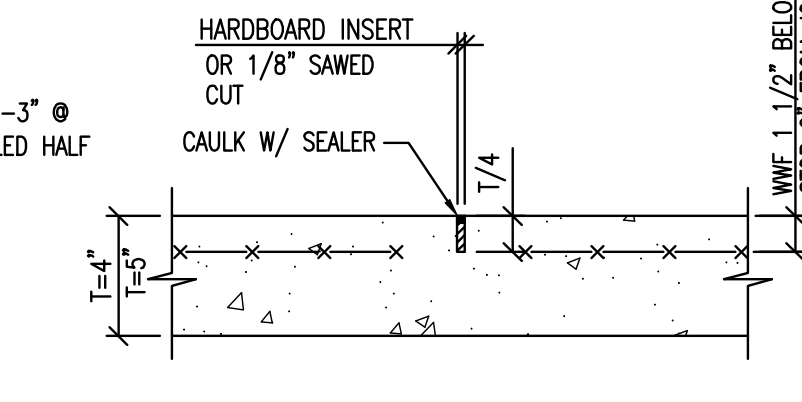
2 FOOTING
S3-0 3/4"=1'-0"



3 TRASH ENCLOSURE WALL SECTION
S3-0 3/4"=1'-0"



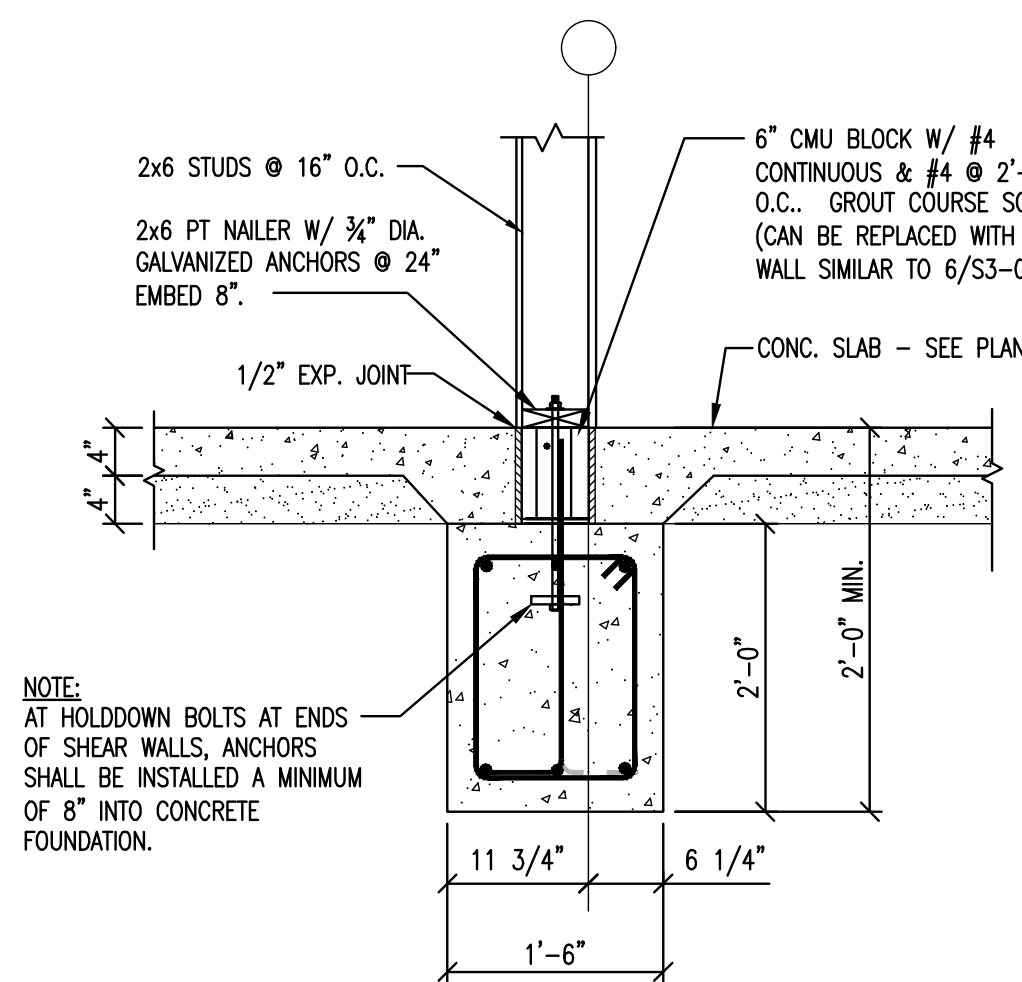
CONSTRUCTION JOINT



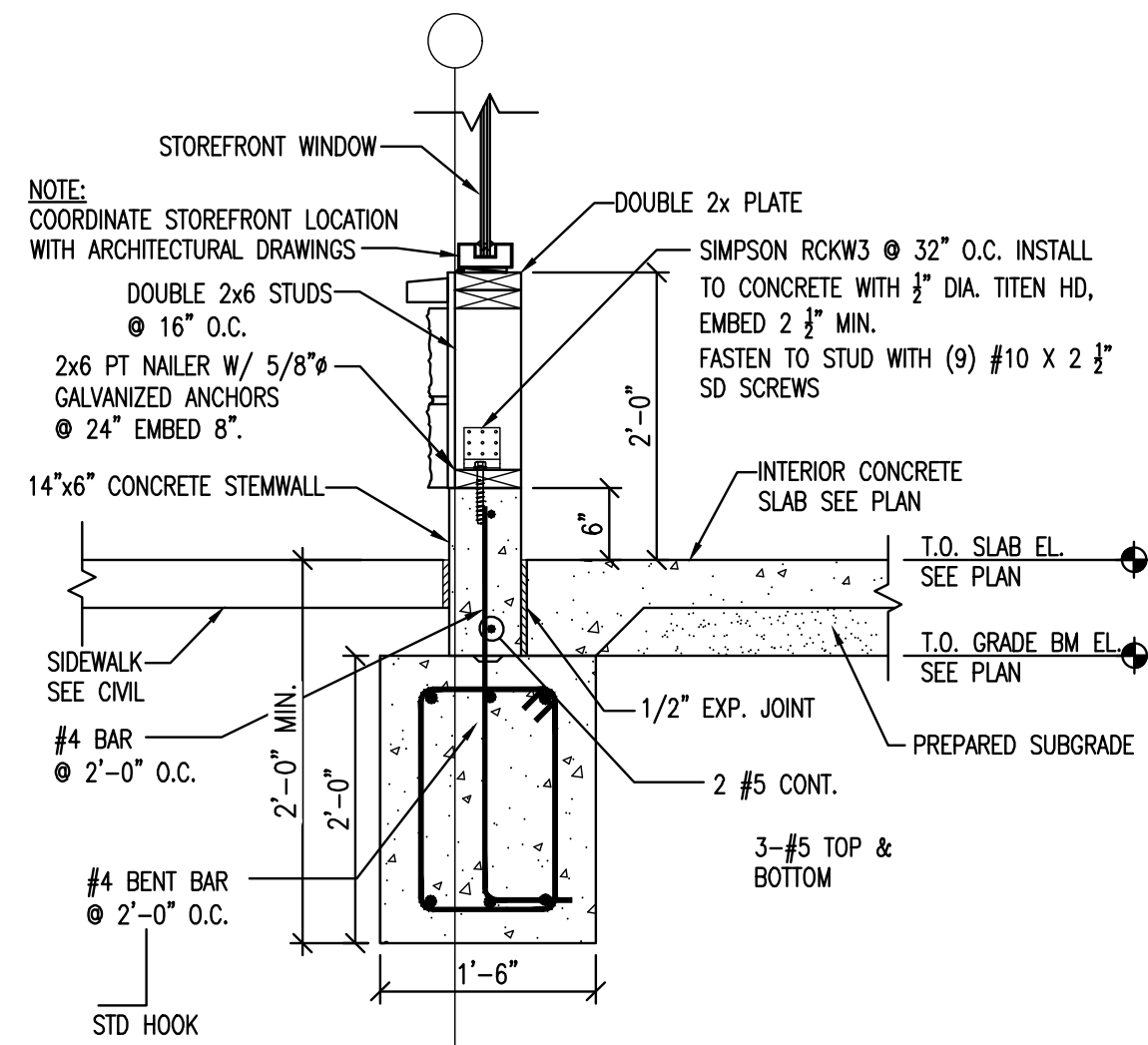
CONTROL JOINT

- NOTES:
1. EPOXY JOINT FILLER TO BE SIKADUR 51 BY SIKA CORPORATION OR APPROVED EQUAL. MINIMUM AGE OF CONCRETE TO BE 28 DAYS WHEN FILLED.
 2. SAW JOINT AS SOON AS SURFACE IS FIRM ENOUGH TO BE TORN OR DAMAGED BY THE BLADE (USUALLY 4 TO 12 HOURS AFTER CONCRETE HARDENS).

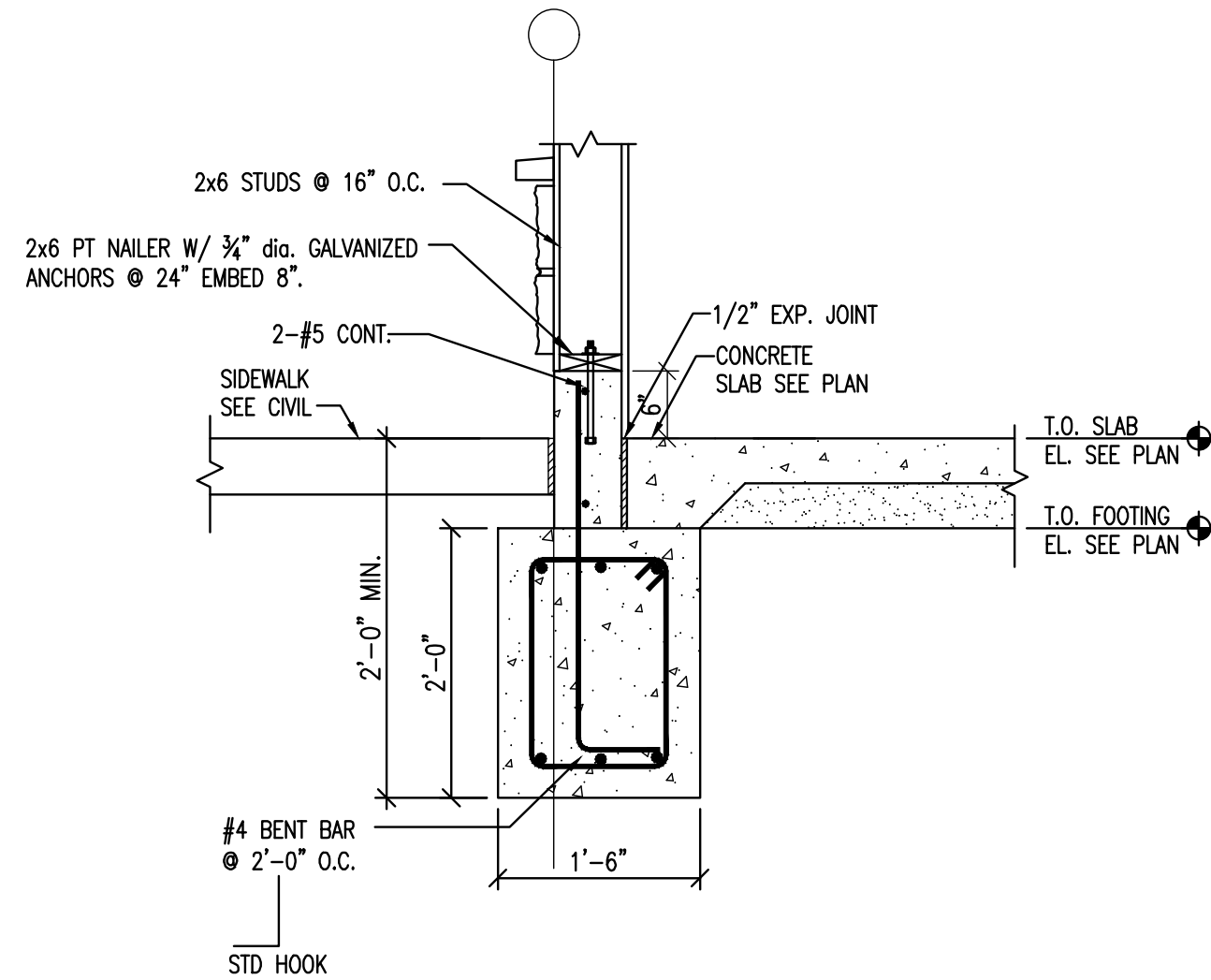
4 4" & 5" CONCRETE SLAB (C.J.) DETAILS
S3-0 N.T.S.



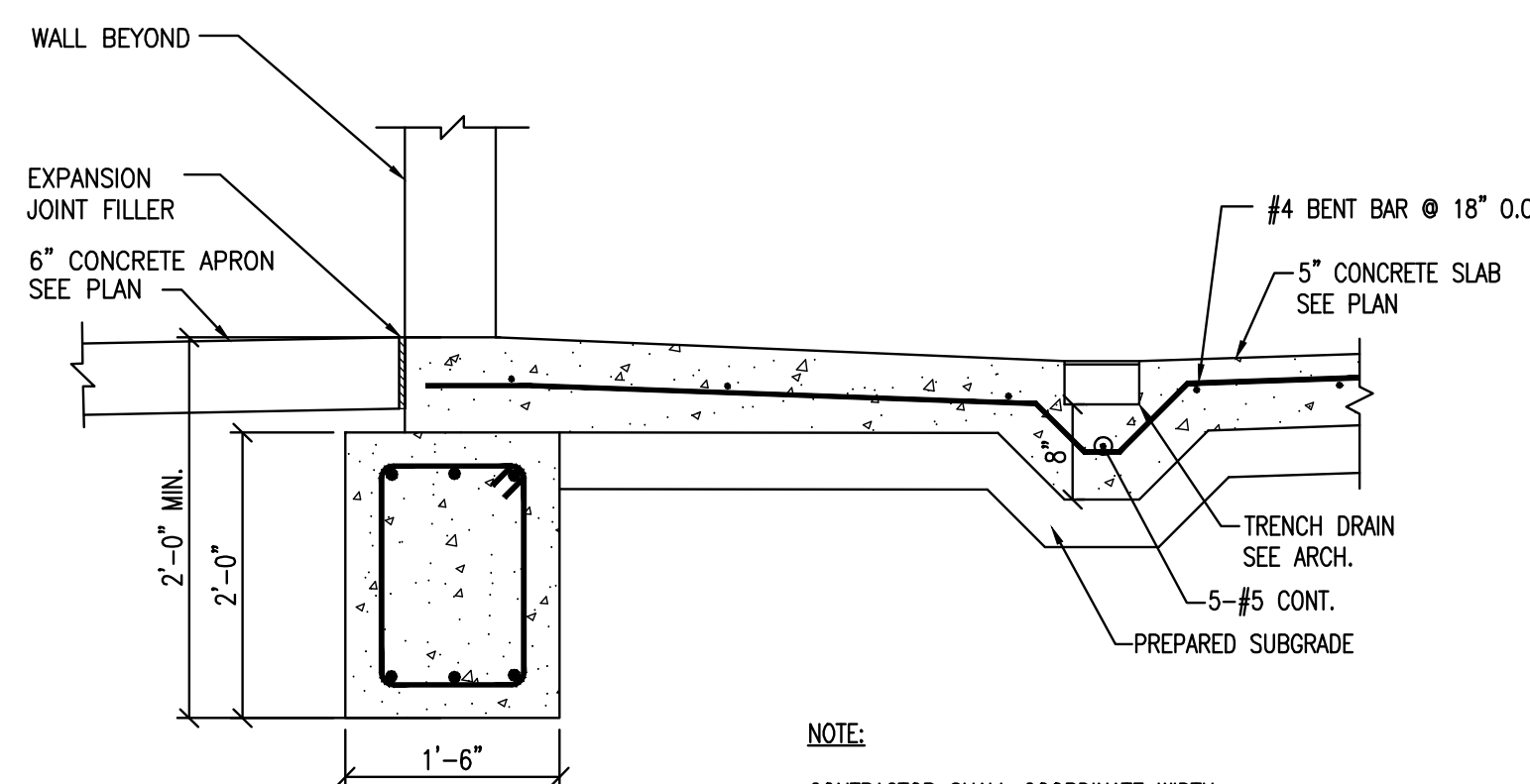
5 FOUNDATION SECTION
S3-0 3/4"=1'-0"



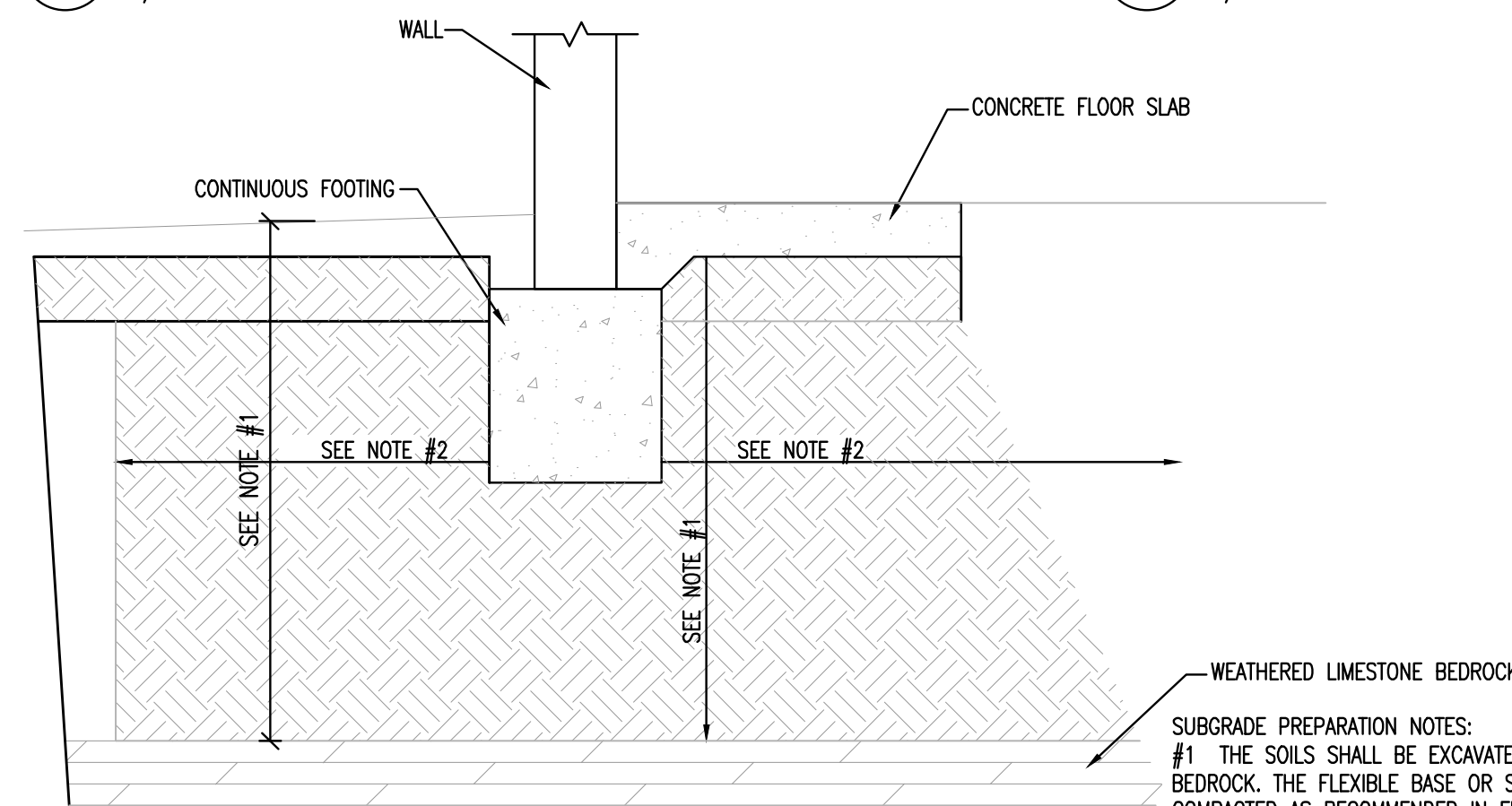
6 FOOTING @ STOREFRONT
S3-0 3/4"=1'-0"



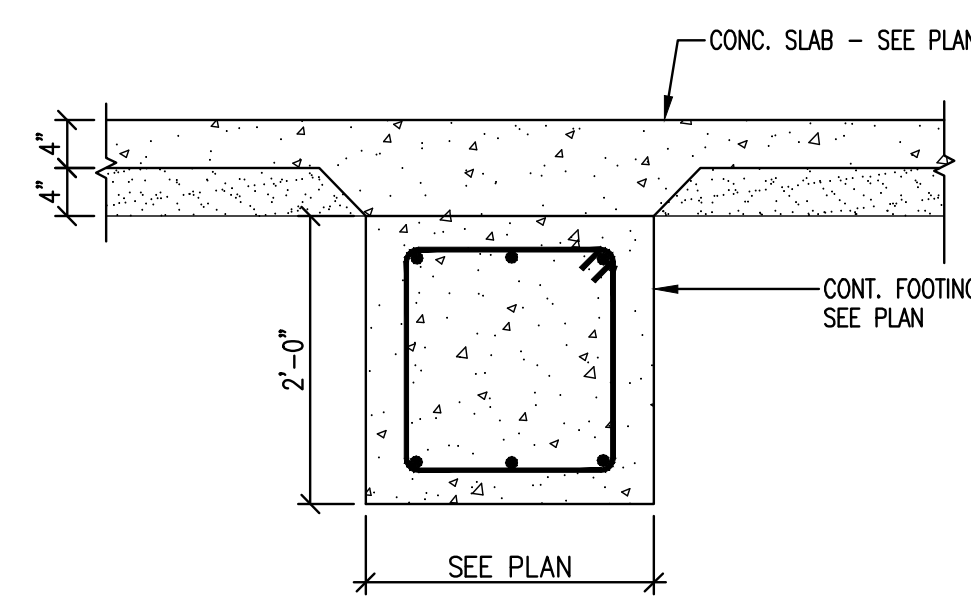
7 FOOTING @ WOOD WALL
S3-0 3/4"=1'-0"



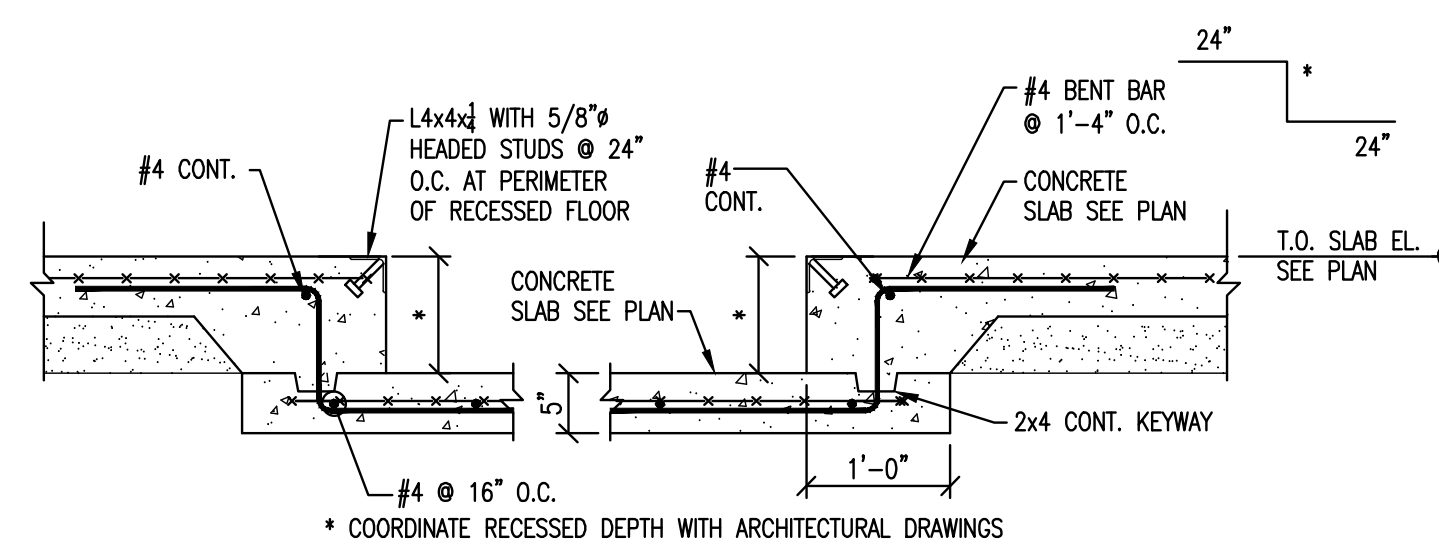
8 FOOTING & TRENCH DRAIN
S3-0 3/4"=1'-0"



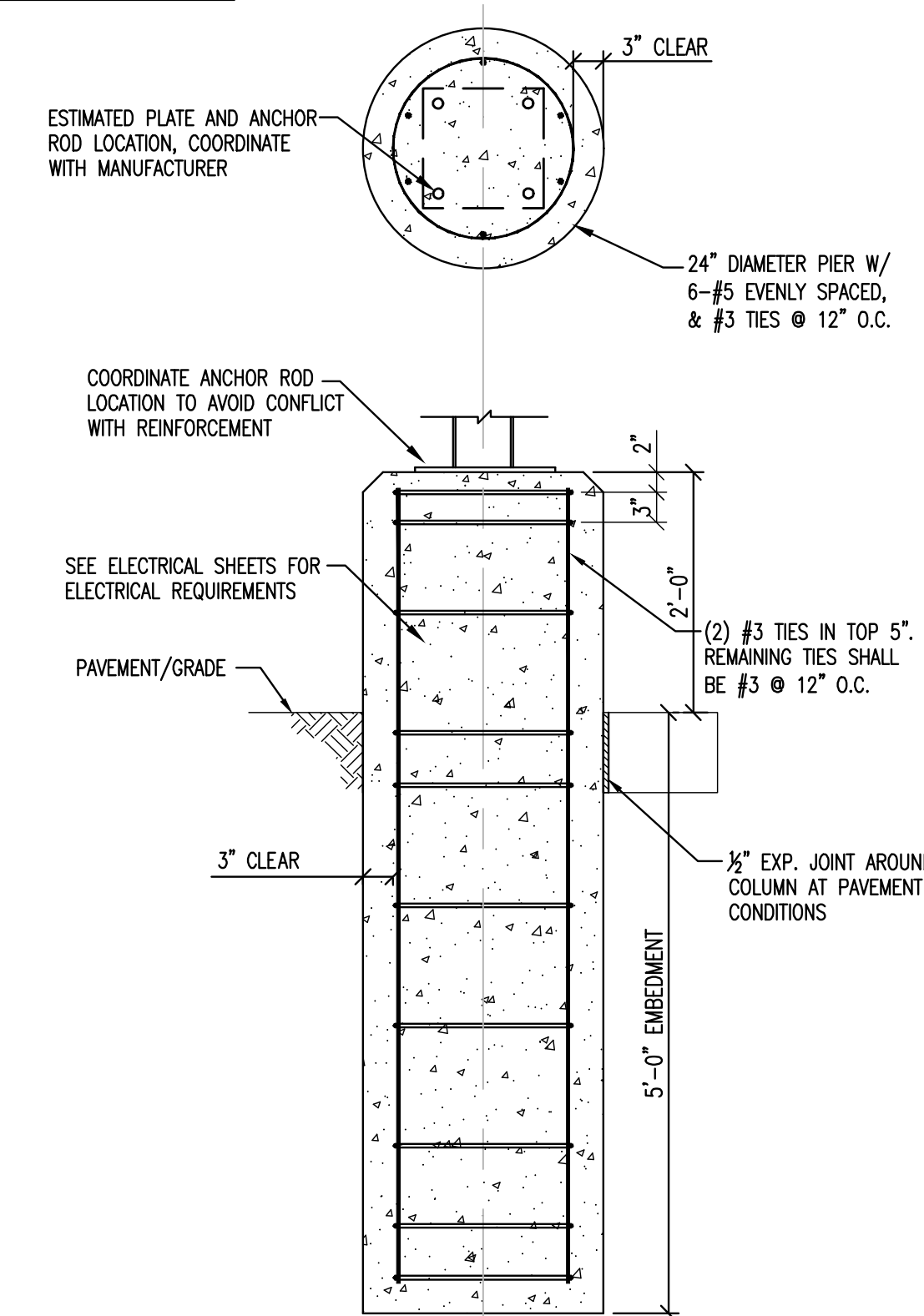
9 SUBGRADE PREPARATION
S3-0 3/4"=1'-0"



10 FOOTING SECTION
S3-0 3/4"=1'-0"



11 DEPRESSED SLAB DETAIL
S3-0 3/4"=1'-0"



12 LIGHT POLE FOUNDATION
S3-0 3/4"=1'-0"

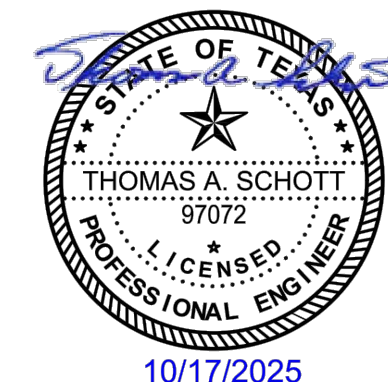
TEXAS COMPANY REGISTRATION F-11349

PERFORMANCE Engineering

11811 Fort Street, Suite 104 - Omaha, NE 68164
389 Perry St., Suite 204A - Castle Rock, CO 80104
(402) 343-3860 Fax (402) 343-3861
NE-CA-4455 PE #251003

BRAKES PLUS

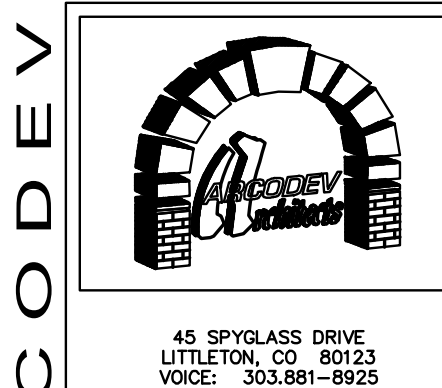
NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76286



ENGINEER OF RECORD

REVISION	DATE	COMMENTS
	01/29/2026	FOR CONSTRUCTION

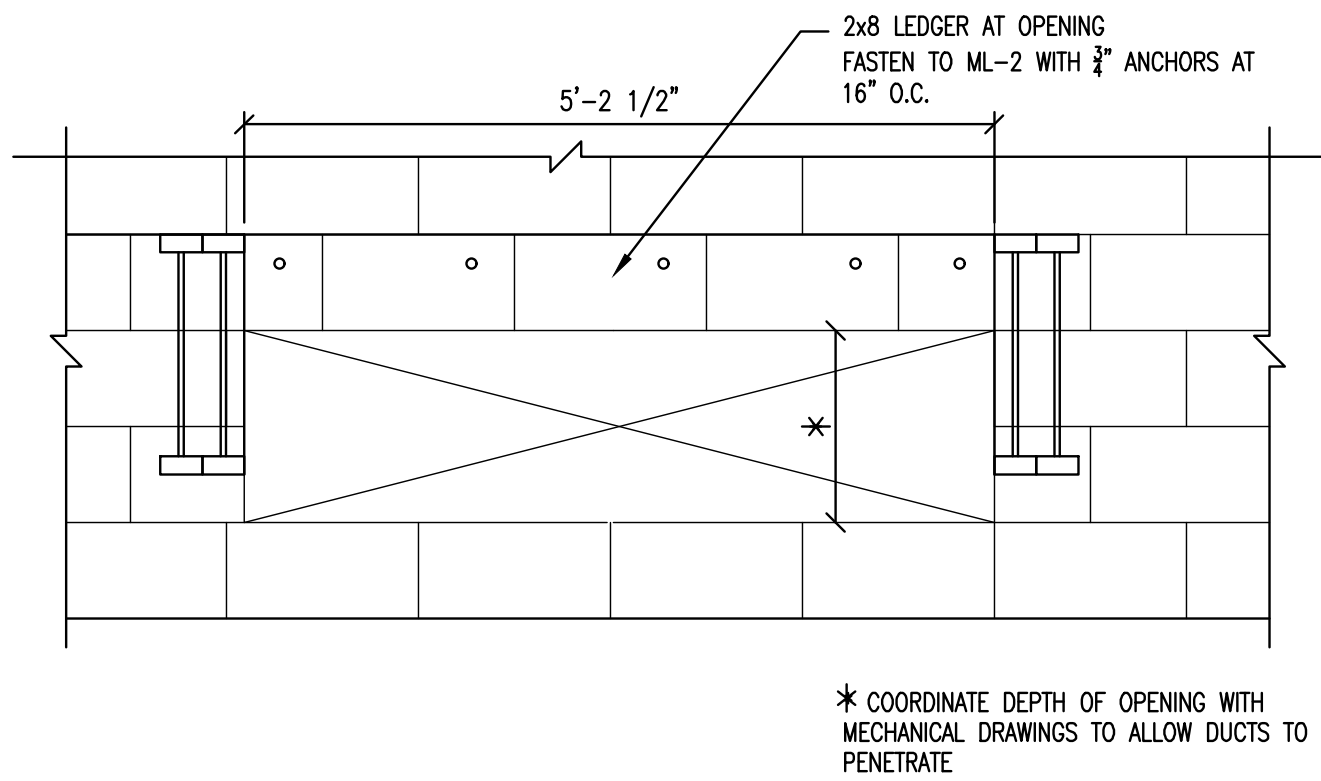
ARCOWE JOB # _____
CLIENT JOB # _____
DRAWN BY: SLM
CHECKED BY: TAS
DATE OF ISSUE: 10.17.25



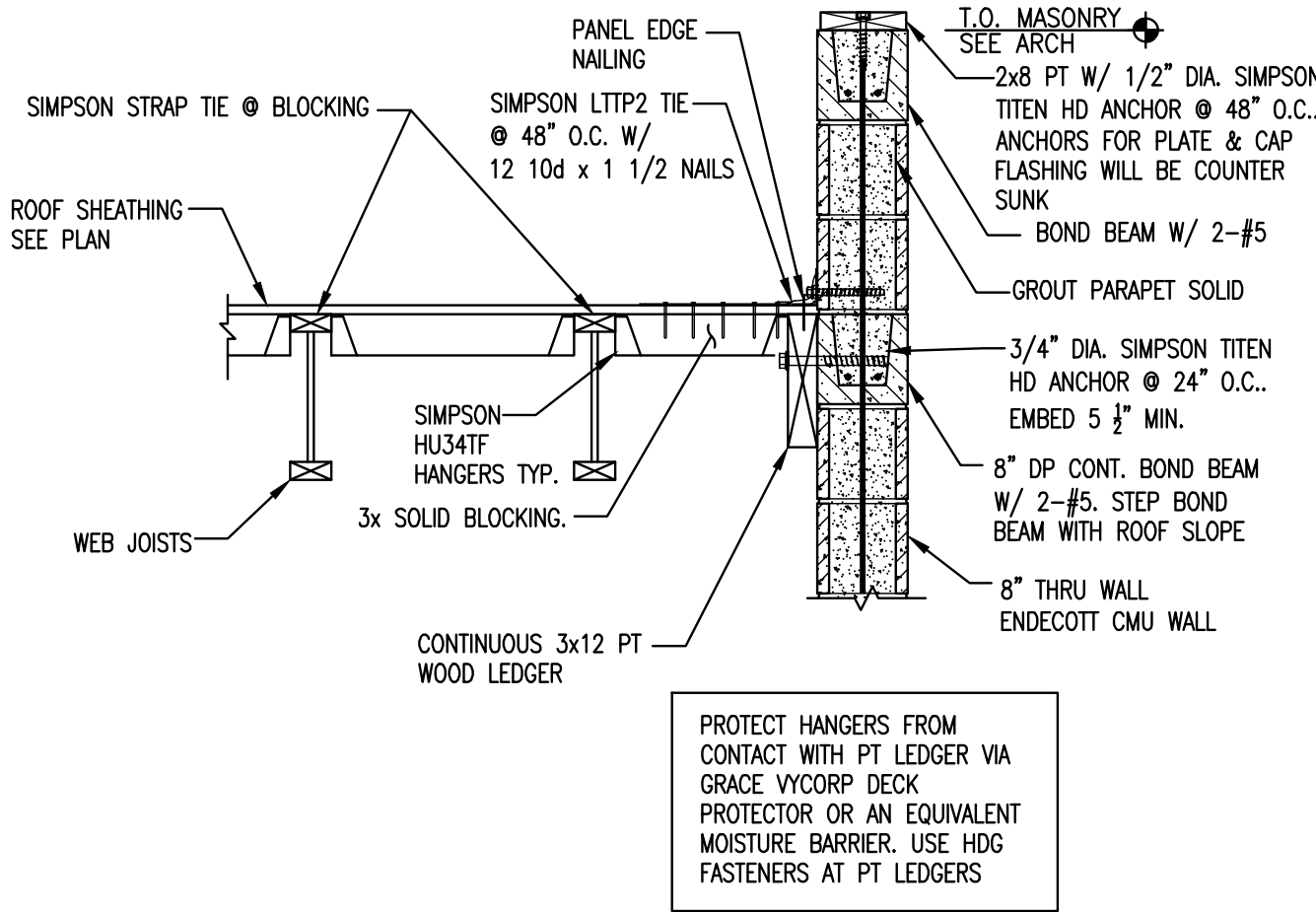
SHEET

S3-0

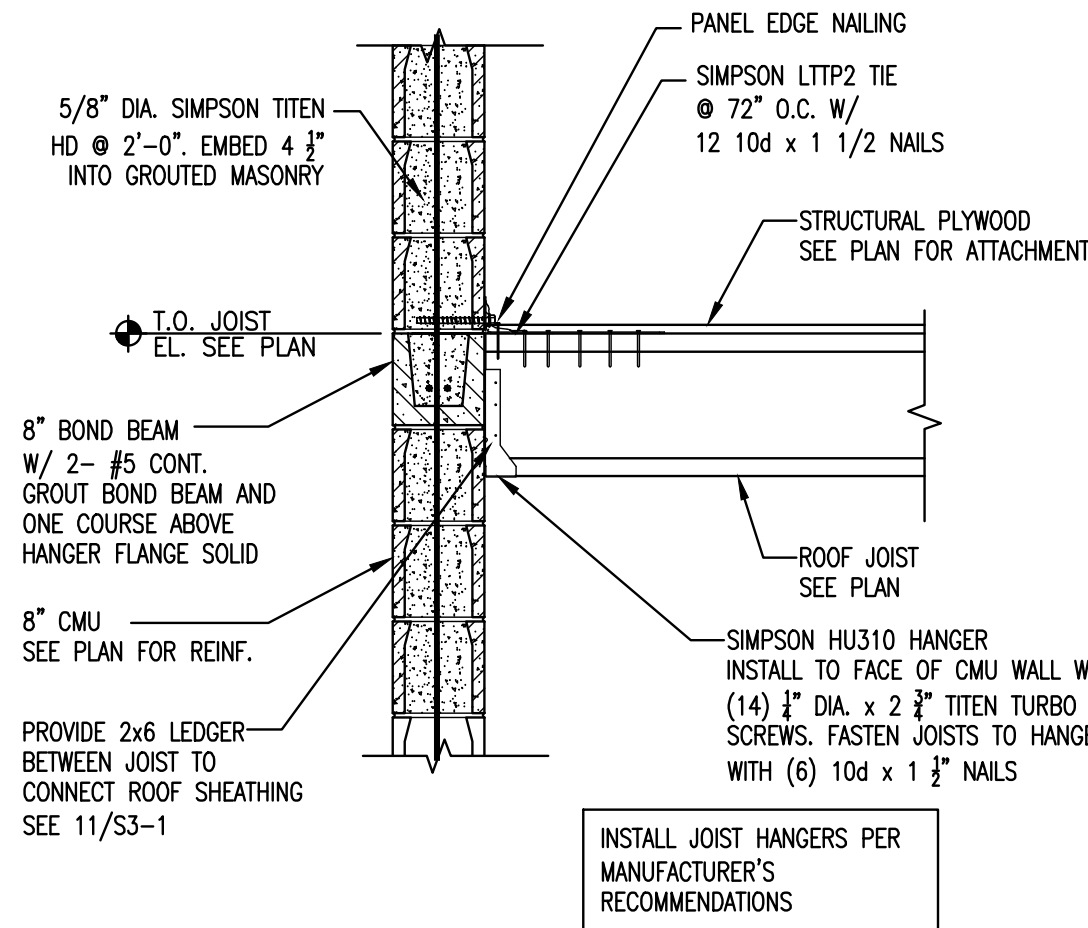
SECTIONS AND DETAILS



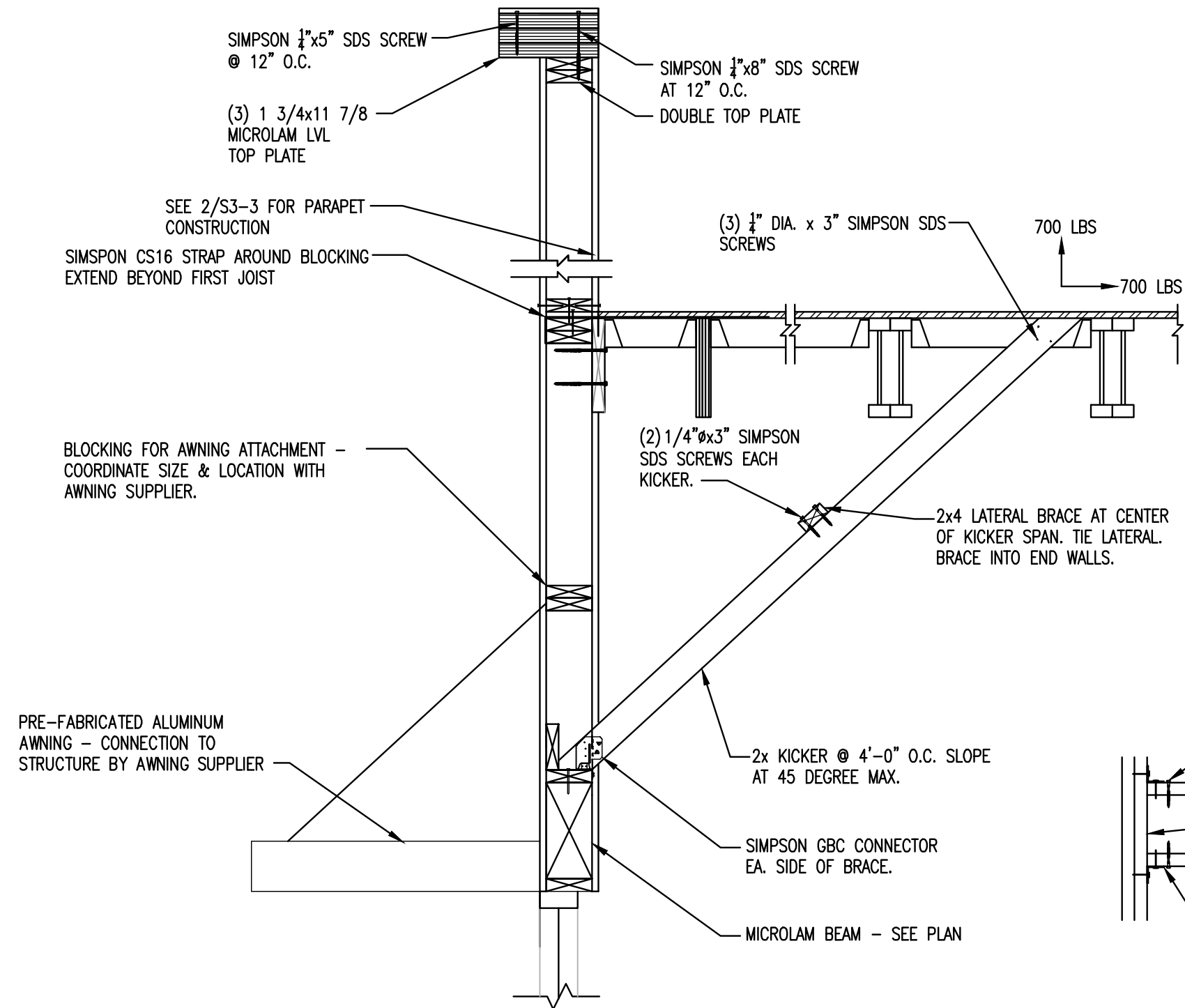
1 DUCT OPENING
S3-1 3/4" = 1'-0"



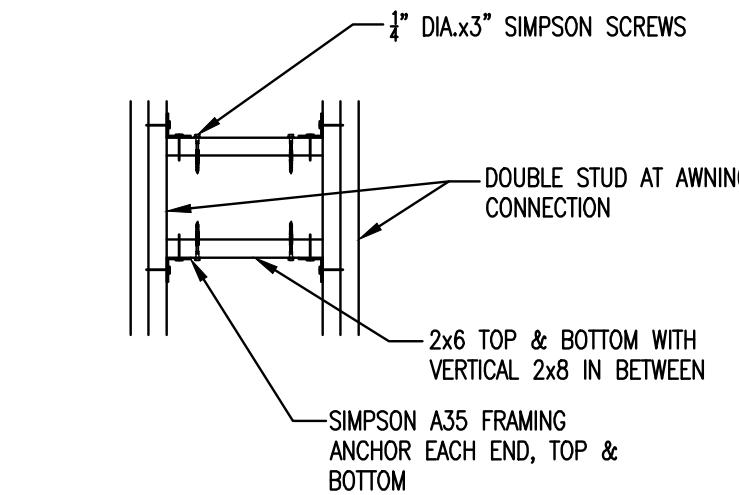
2 ROOF DIAPHRAGM CONNECTION
S3-1 3/4" = 1'-0"



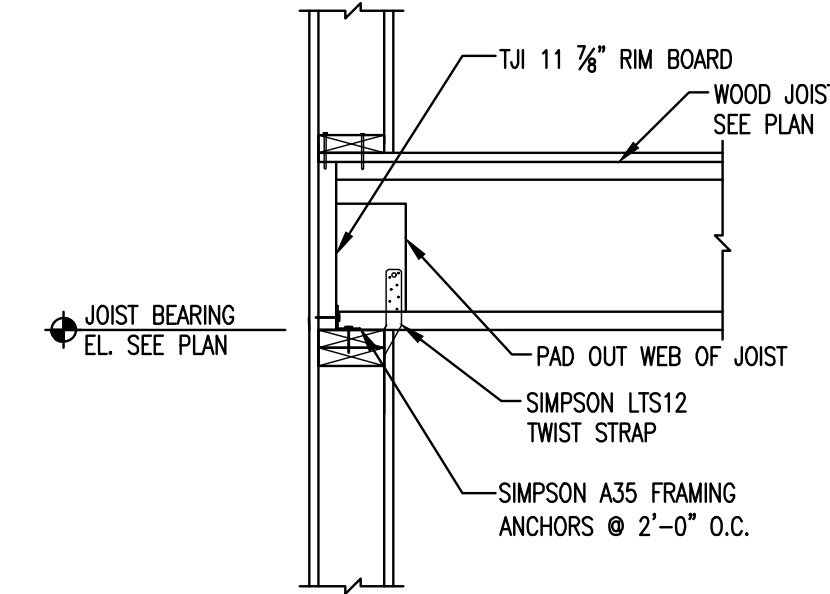
3 WALL SECTION
S3-1 3/4" = 1'-0"



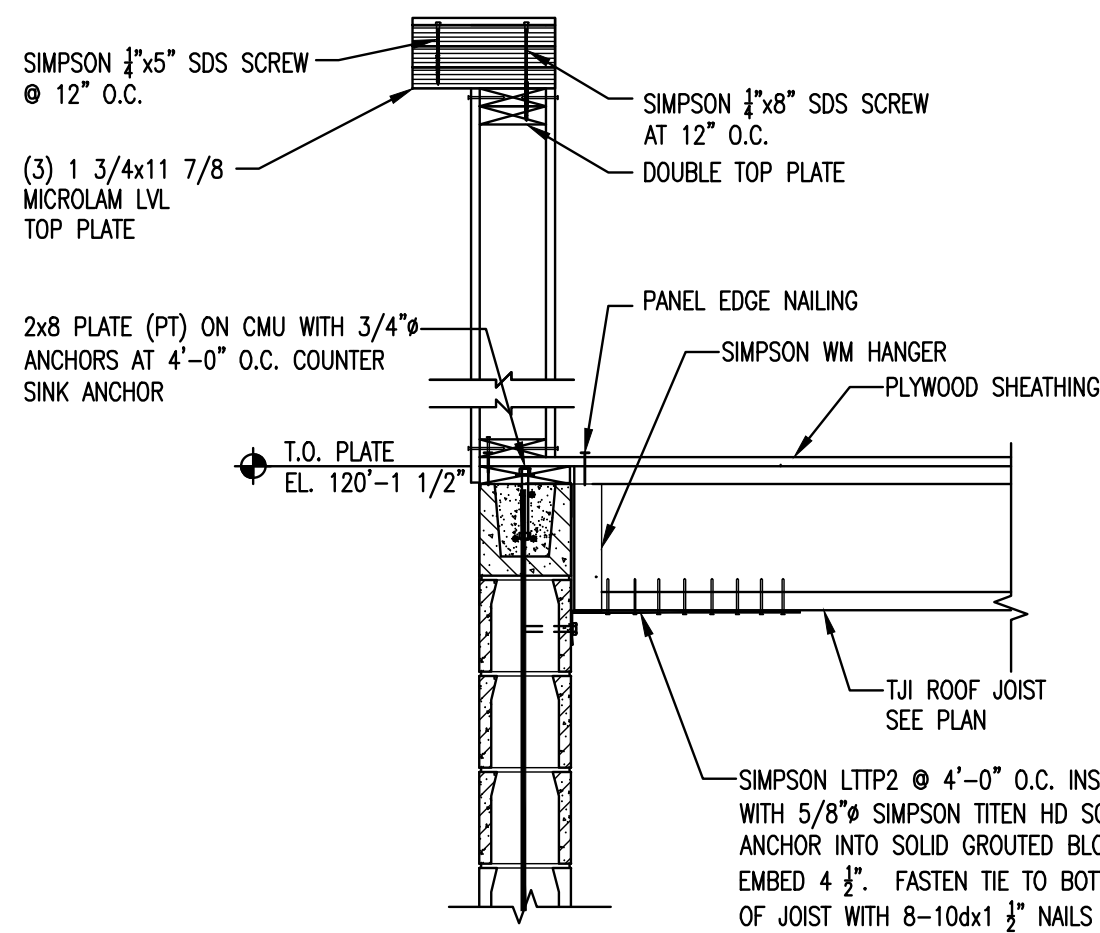
4 STOREFRONT WALL SECTION
S3-1 3/4" = 1'-0"



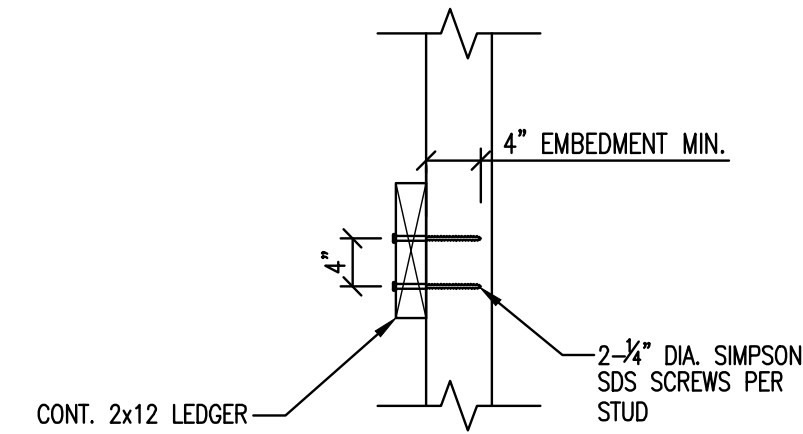
5 FRONT WALL SECTION
S3-1 3/4" = 1'-0"



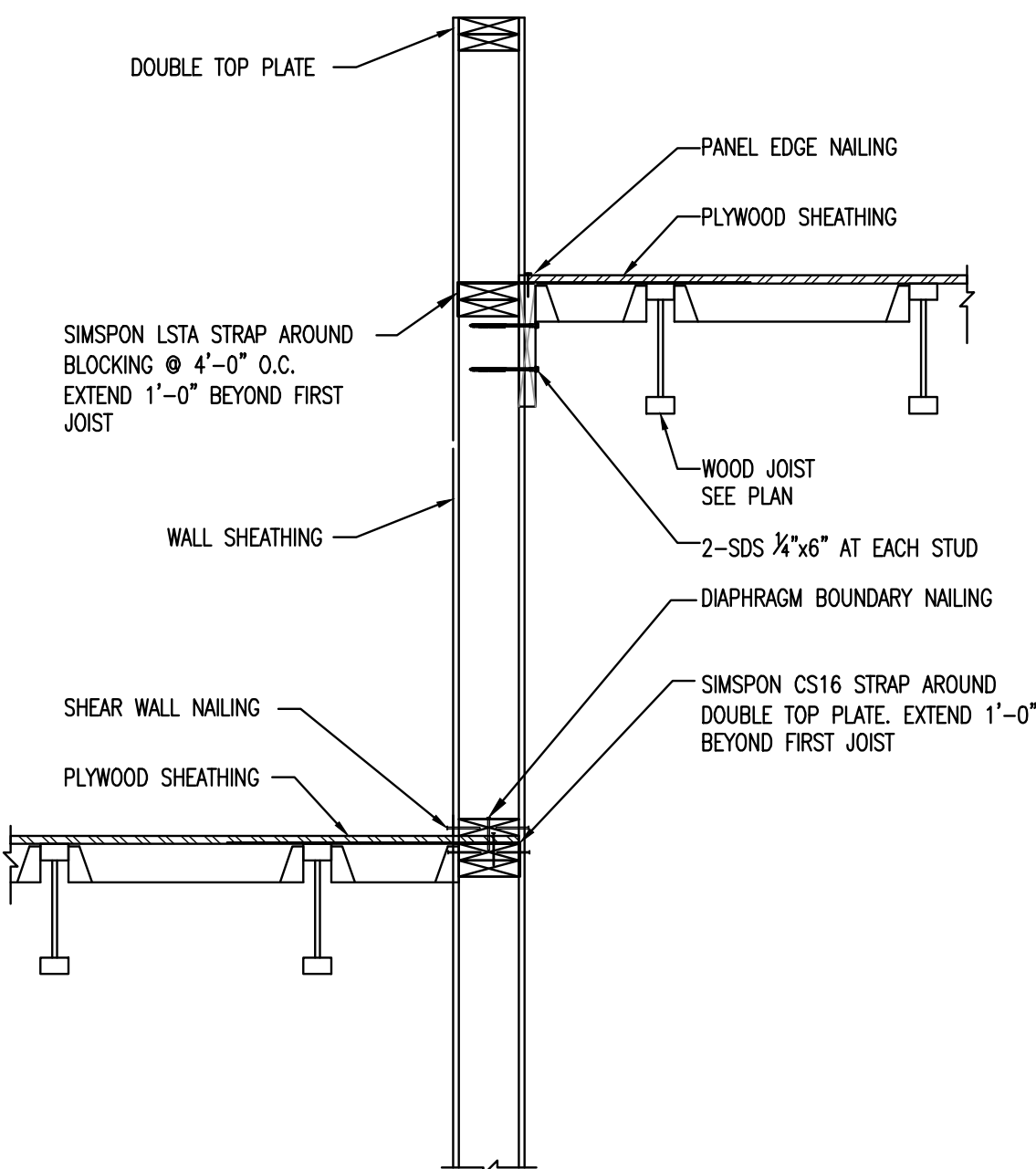
6 SIDE WALL SECTION
S3-1 3/4" = 1'-0"



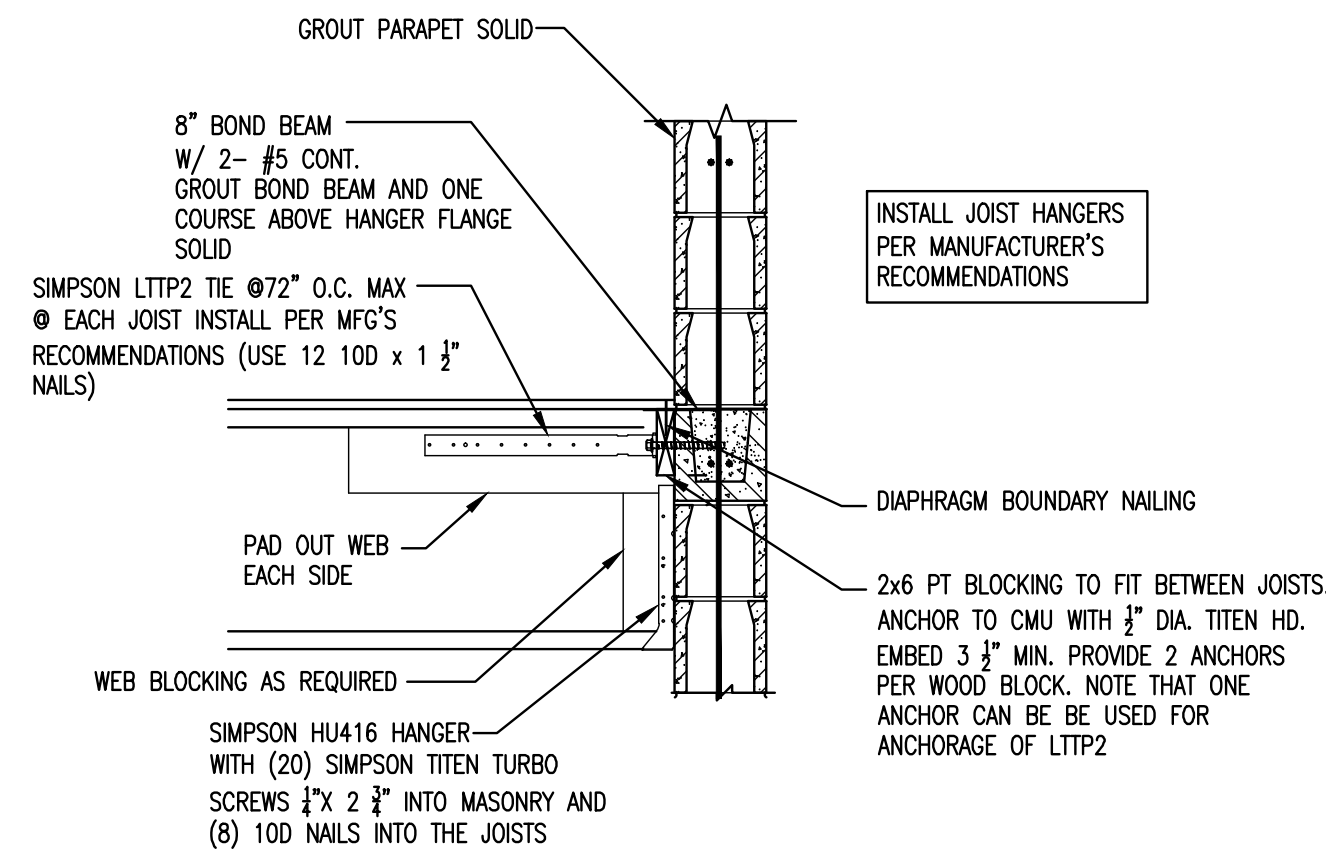
7 WALL SECTION
S3-1 3" = 1'-0"



8 LEDGER ATTACHMENT
S3-1 3" = 1'-0"



9 PARAPET WALL SECTION
S3-1 3/4" = 1'-0"



10 WALL SECTION
S3-1 3/4" = 1'-0"

11 JOIST CONNECTION
S3-1 3/4" = 1'-0"

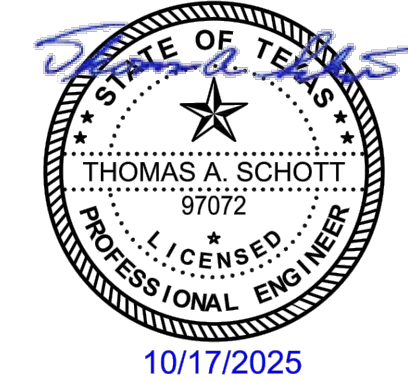
TEXAS COMPANY REGISTRATION F-11349

PERFORMANCE
Engineering

11811 Fort Street, Suite 104 - Omaha, NE 68164 389 Perry St., Suite 204A - Castle Rock, CO 80104
(402) 343-3860 Fax: (402) 343-3861 (303) 721-5222
NE-C04345 PE #251003

BRAKES PLUS

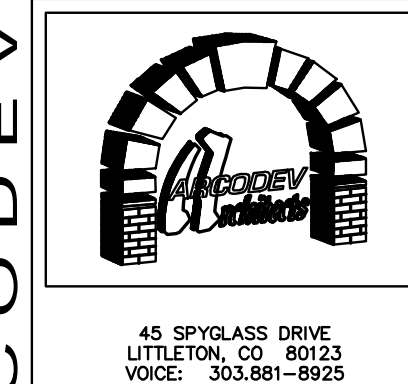
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76286



ENGINEER OF RECORD

REVISION	DATE	COMMENTS
	01/29/2026	FOR CONSTRUCTION

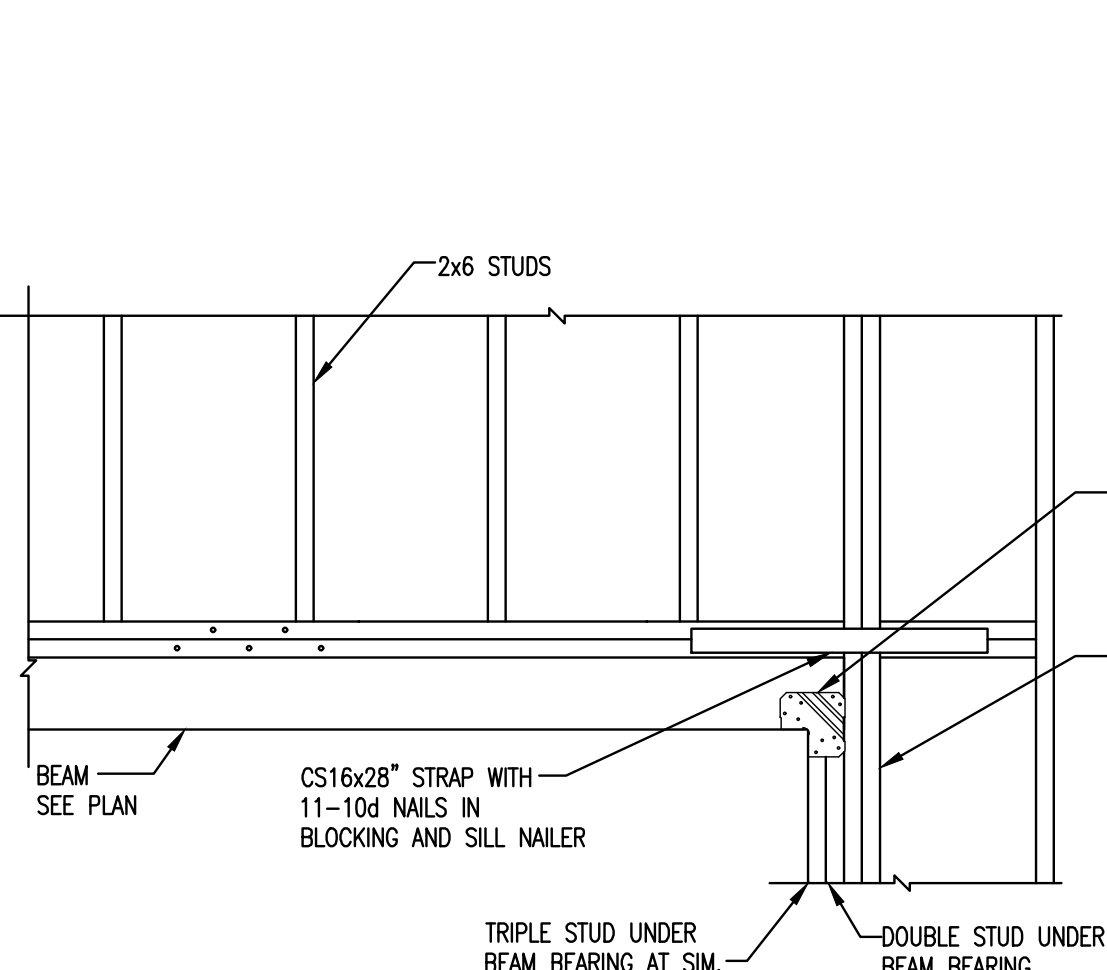
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CLIENT JOB # _____
DRAWN BY: SLM
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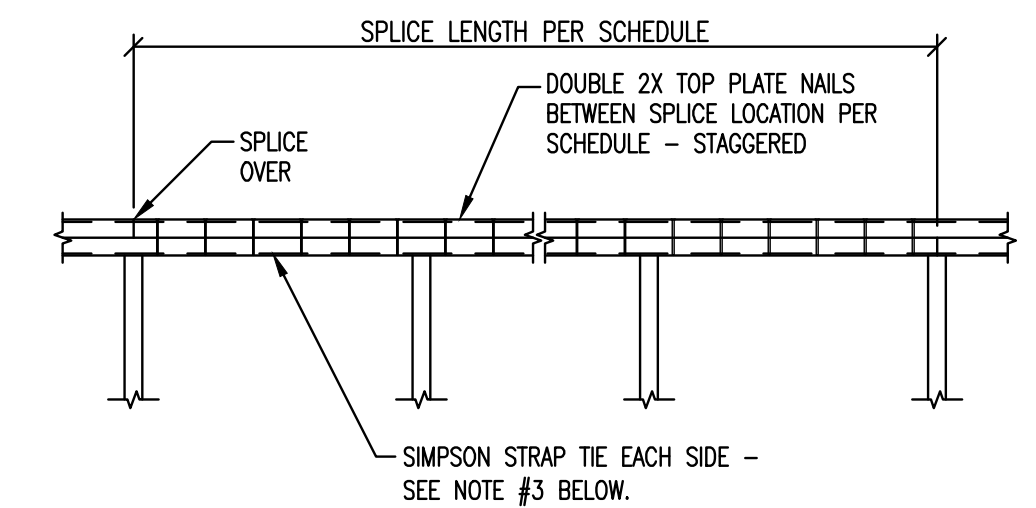
SHEET

S3-1

SECTIONS AND
DETAILS



1
S3-2
3/4"=1'-0"

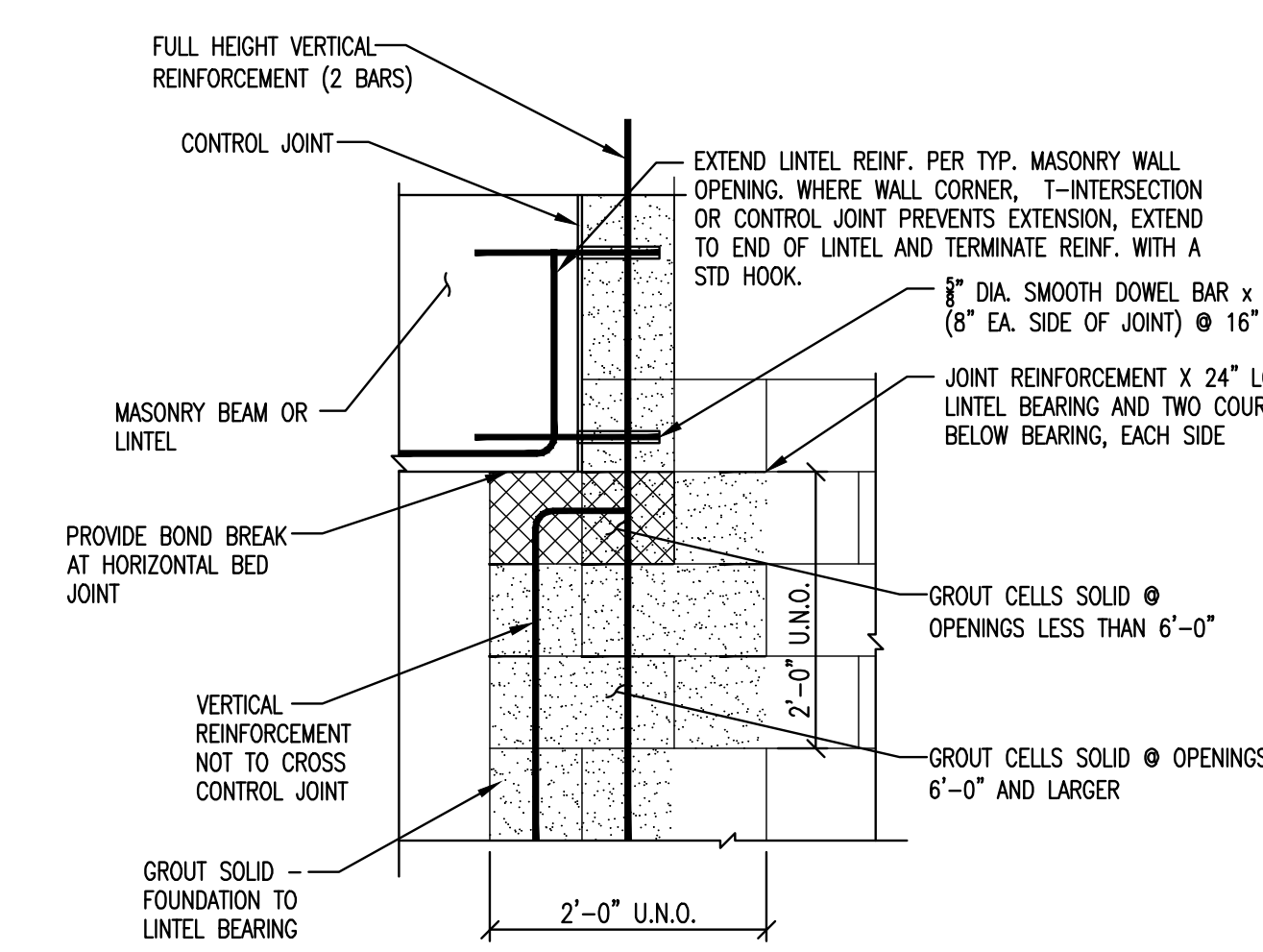


2
S3-2
3/4"=1'-0"

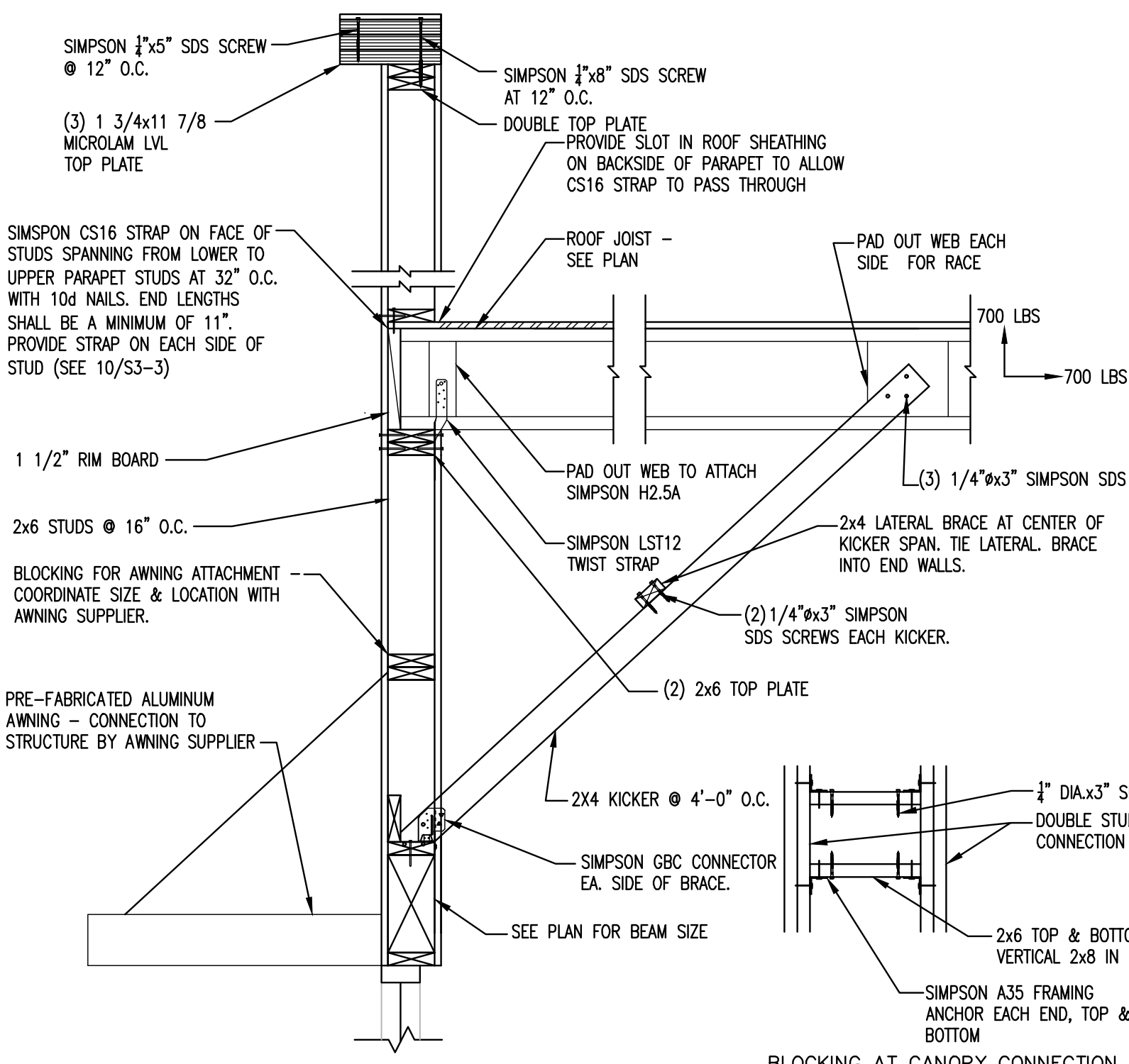
LENGTH OF WALL (BETWEEN CORNERS)	SPLICE LENGTH (MINIMUM)	NAILS ALONG SPLICE LENGTH
OVER 30'	4'-0"	18-16d
OVER 20'	2'-8"	10-16d
OVER 10'	1'-4"	6-16d
LESS THAN 10'	1'-4"	4-16d

NOTE:
1. DO NOT SPLICE TOP PLATES WITHIN 6'-0" OF ENDS OF WOOD STRUCTURAL PANEL SHEAR WALLS.
2. THIS DETAIL APPLIES TO ALL EXTERIOR WALLS AND INTERIOR WALLS. SIMPSON STRAP TIE NEED NOT BE APPLIED TO INTERIOR WALLS.
3. PROVIDE SIMPSON CMST 14 ON EACH SIDE OF TOP PLATE AT SPLICE LOCATION. EXTEND STRAP 34" BEYOND END OF PLATE SPLICE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

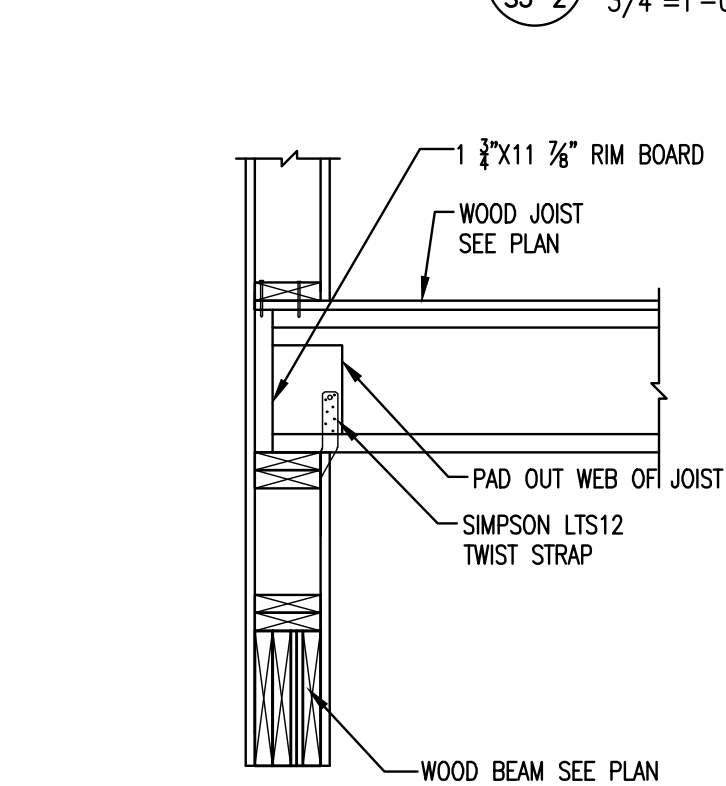
6
S3-2
3/4"=1'-0"



10
S3-2
3/4"=1'-0"



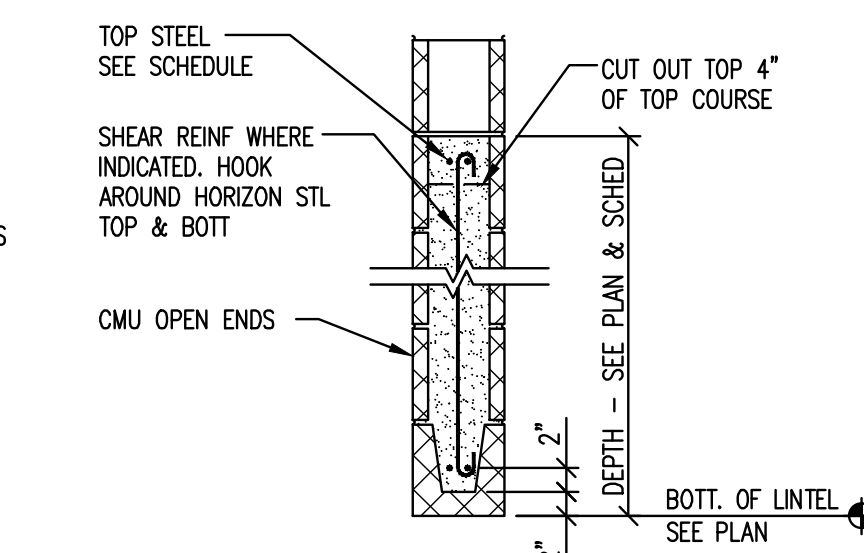
2
S3-2
3/4"=1'-0"



7
S3-2
3/4" = 1'-0"

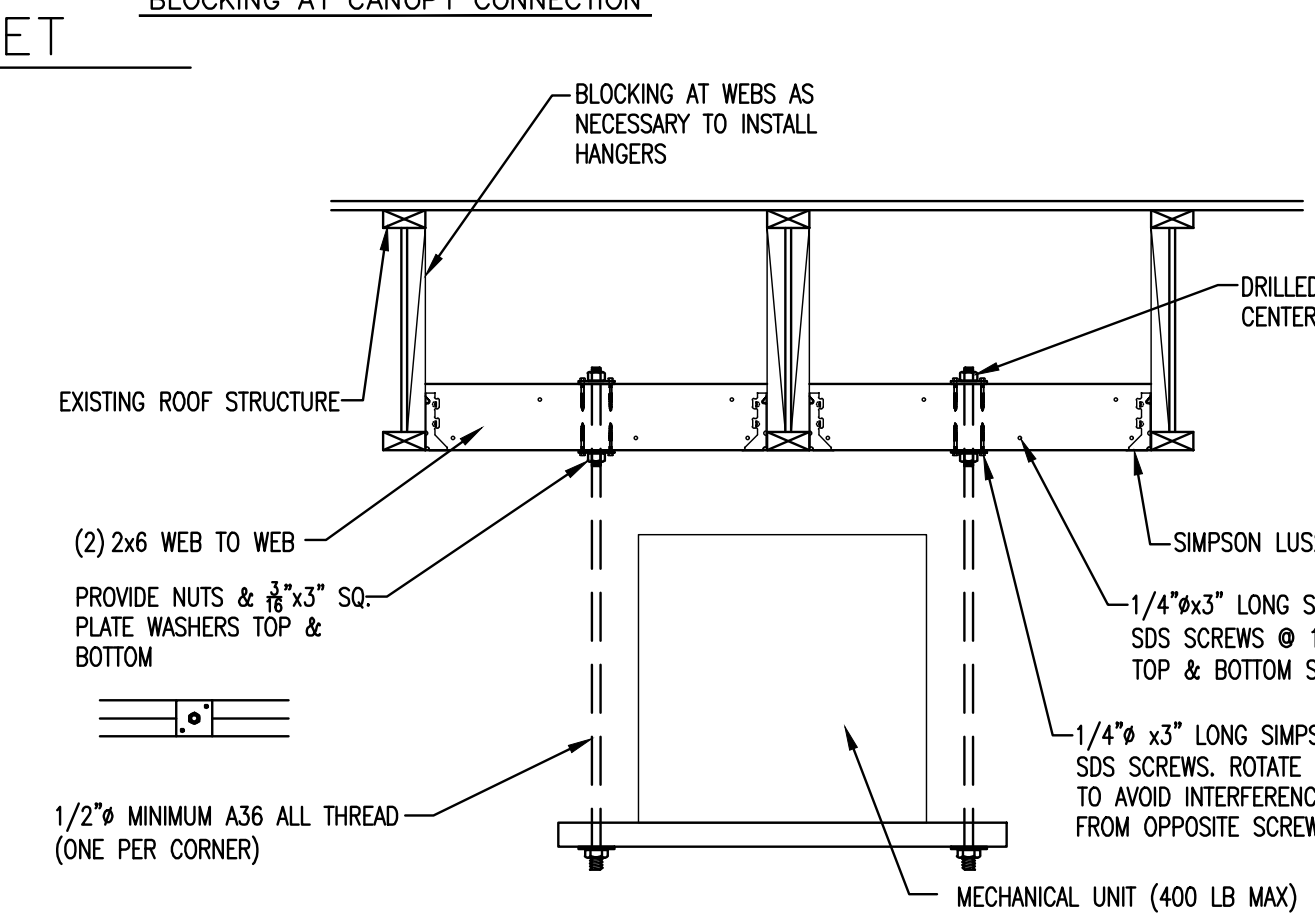
MASONRY LINTEL SCHEDULE				
MARK	DEPTH	BOND BM REINF	SHEAR REINF	REMARKS
ML-1	2'-8"	2-#5 TOP & BOT	-	8" CMU
ML-2	1'-4"	2-#5 TOP & BOT	-	8" CMU

NOTE:
1. USE LINTEL ML-2 AT ALL OPENINGS LESS THAN 4'-0" WIDE UNLESS NOTED OTHERWISE.
2. BOND BEAM REINFORCING SHALL BE CONTINUOUS WITHOUT SPLICES.
3. MASONRY LINTELS SHALL BE GROUTED SOLID.

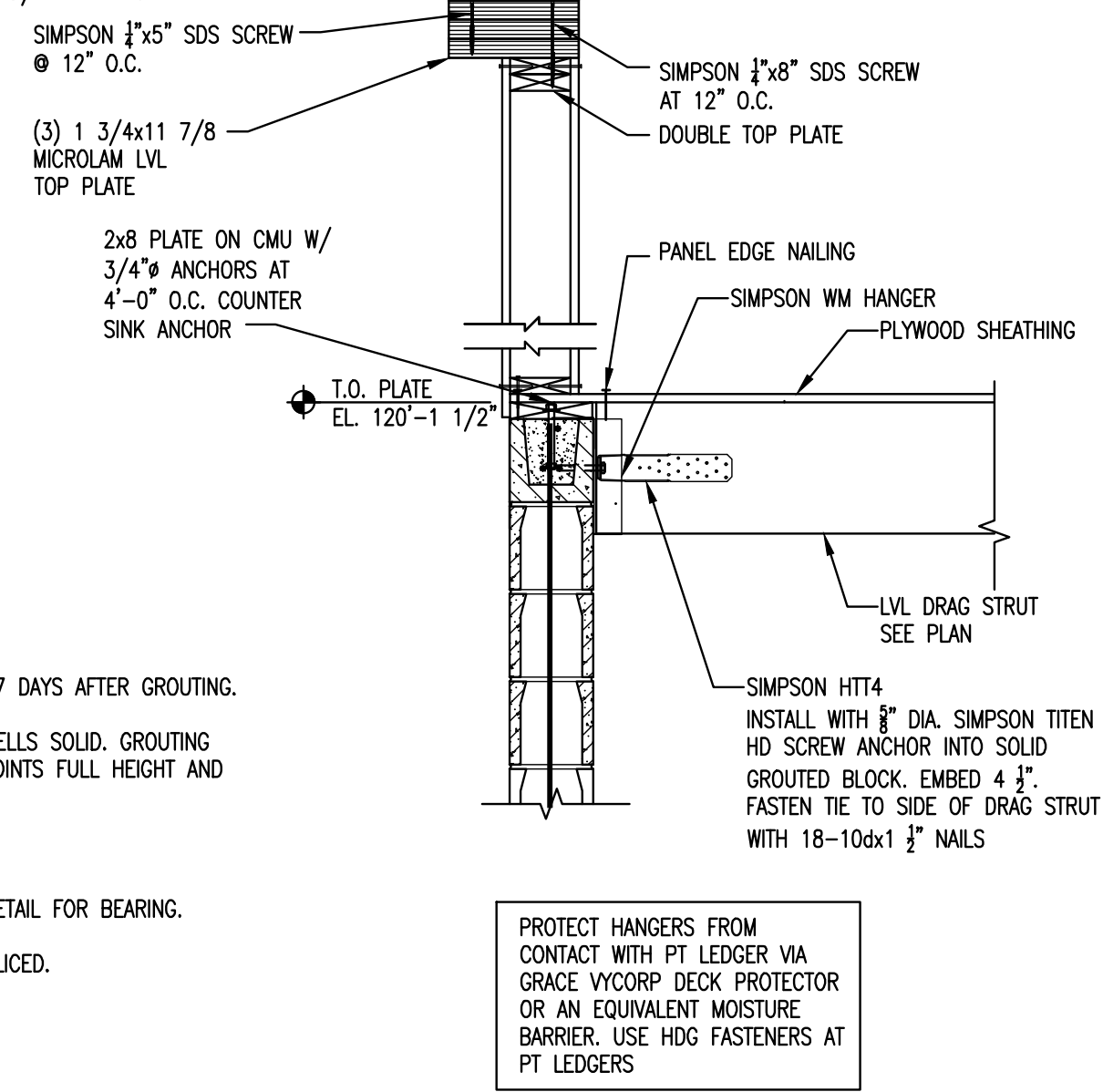


11
S3-2
3/4"=1'-0"

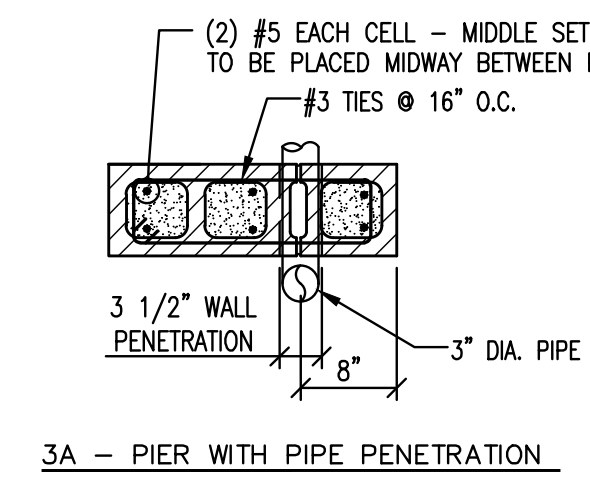
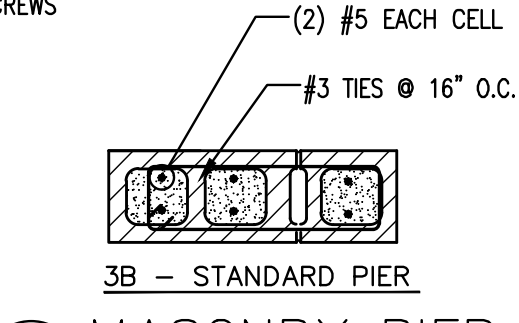
NOTES:
1. PROVIDE SHORING UNDER BEAM FOR A MIN. OF 7 DAYS AFTER GROUTING.
2. MONOLITHICALLY GROUT BOND BEAM AND ALL CELLS SOLID. GROUTING SHALL HAVE NO VERTICAL OR HORIZONTAL COLD JOINTS FULL HEIGHT AND LENGTH OF LINTEL INCLUDING END BEARINGS.
3. MECHANICALLY VIBRATE GROUT.
4. SEE TYPICAL MASONRY BEAM/LINTEL BEARING DETAIL FOR BEARING.
5. HORIZONTAL REINFORCEMENT SHALL NOT BE SPLICED.



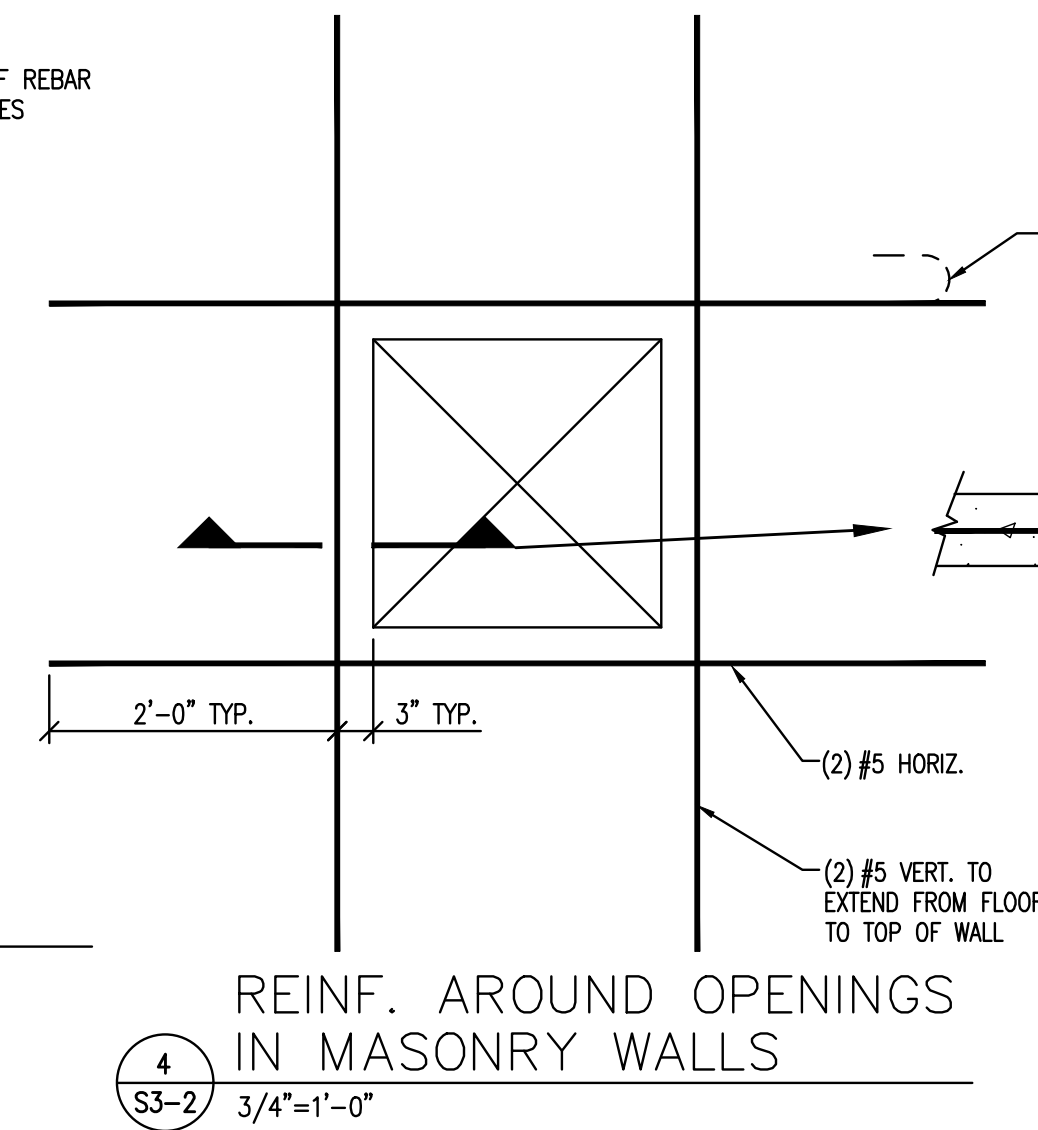
8
S3-2
3/4" = 1'-0"



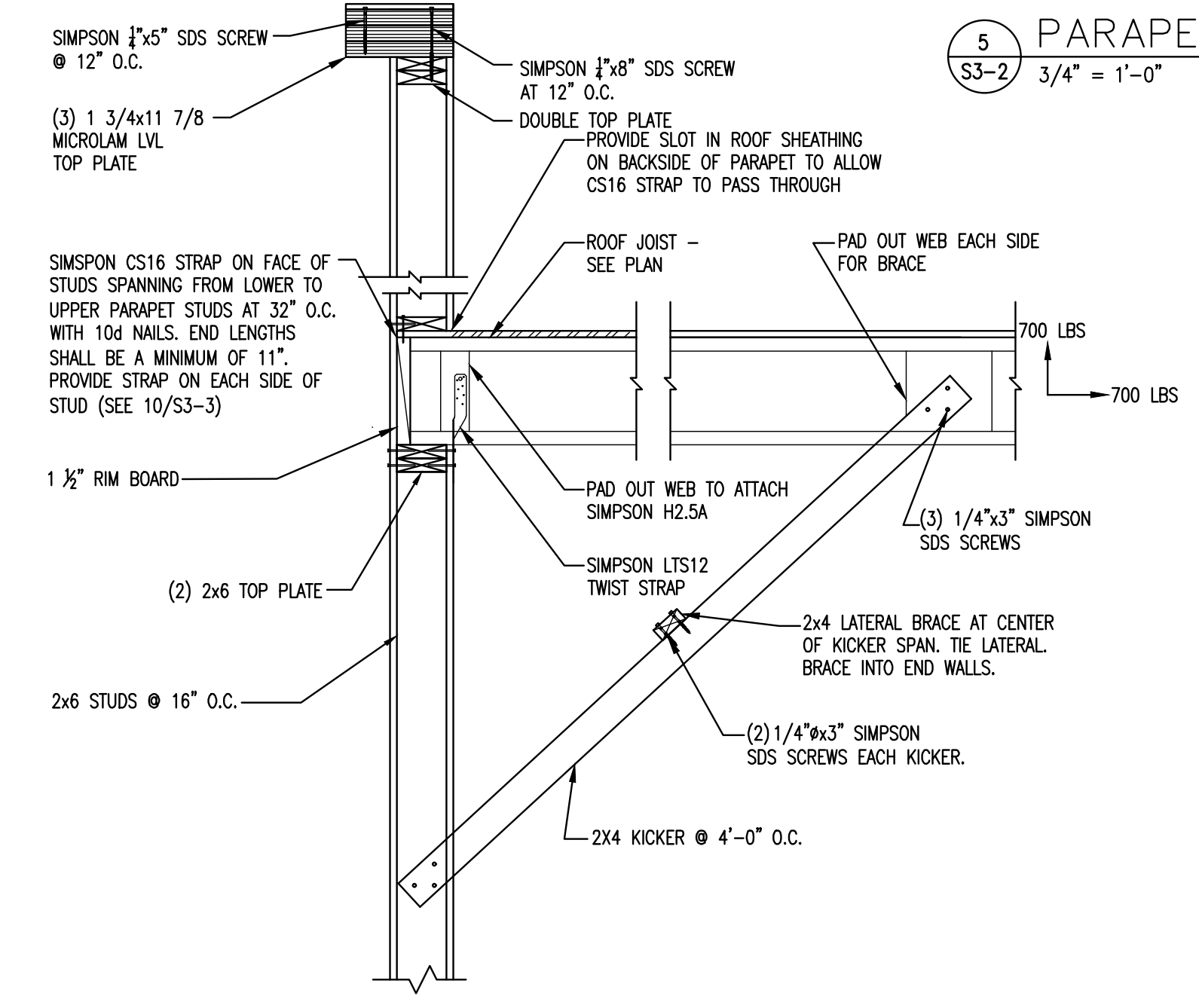
12
S3-2
3/4"=1'-0"



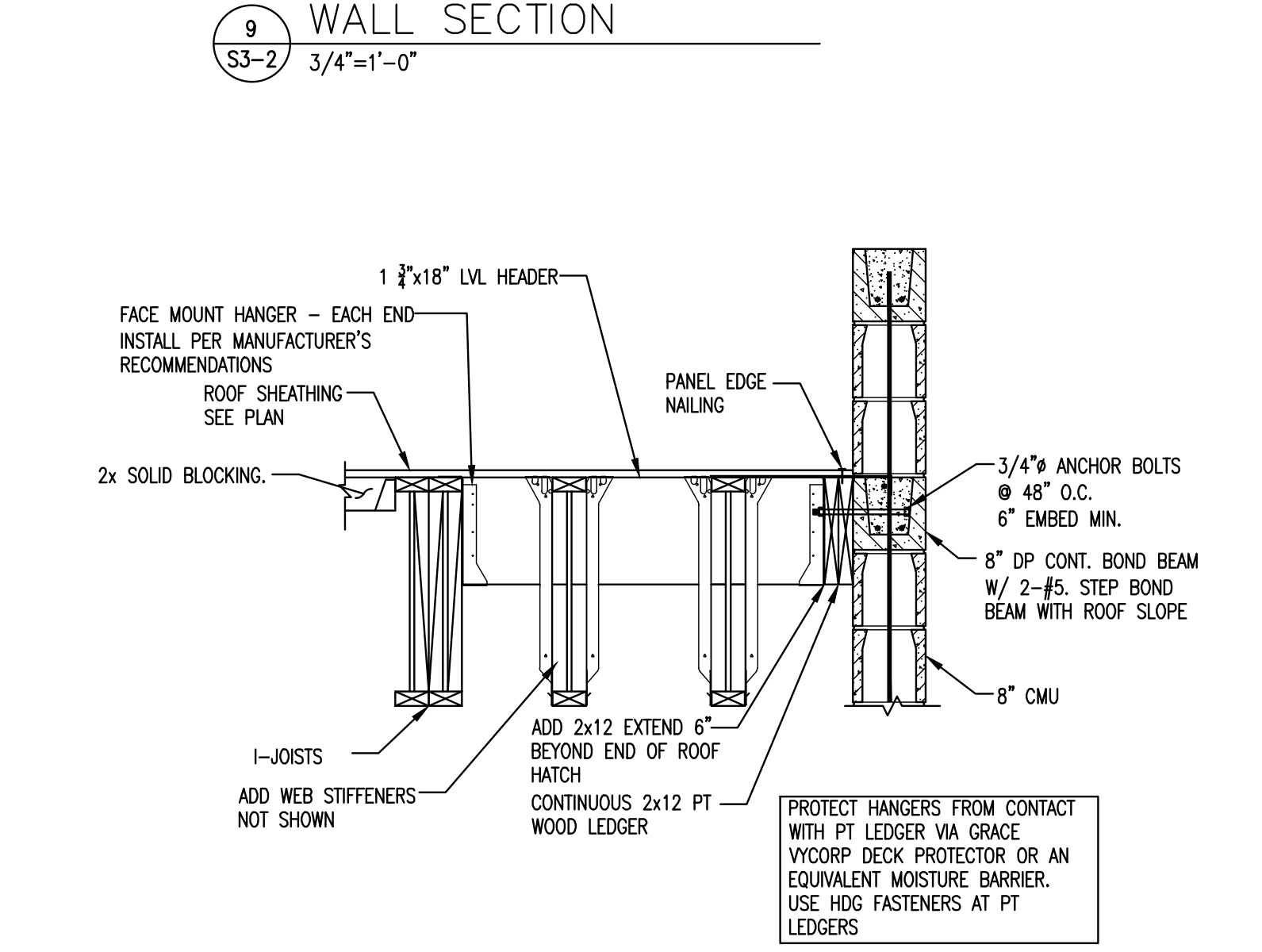
3
S3-2
3/4"=1'-0"



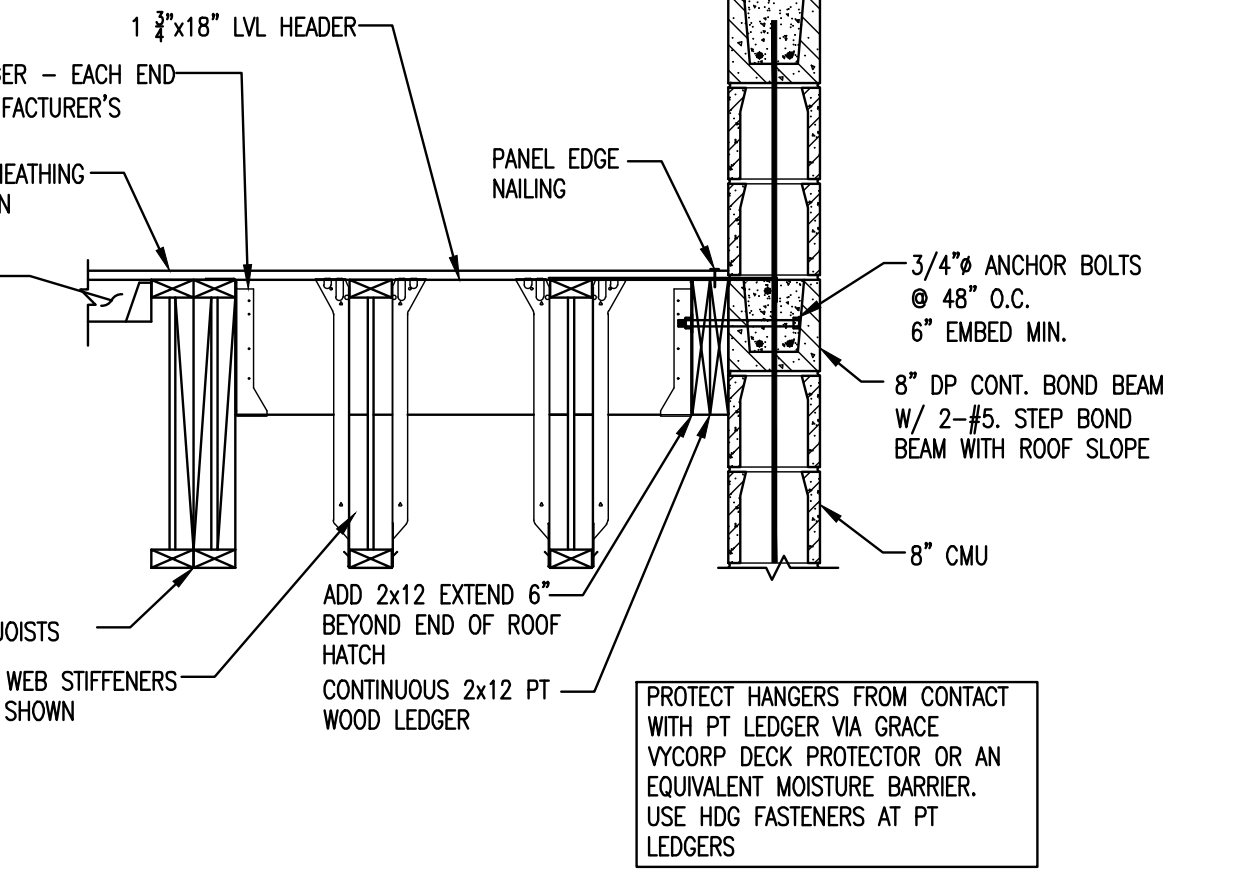
4
S3-2
3/4"=1'-0"



5
S3-2
3/4" = 1'-0"



9
S3-2
3/4"=1'-0"



13
S3-2
3/4"=1'-0"

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NE-CAL-045

PE #051003

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266

STATE OF TEXAS

THOMAS A. SCHOTT
97072
LICENSED PROFESSIONAL ENGINEER

10/17/2025

ENGINEER OF RECORD

REVISION	DATE	COMMENTS
	01/29/2026	FOR CONSTRUCTION

ARCOWE JOB # _____
CLIENT JOB # _____
DRAWN BY: SLM
CHECKED BY: TAS
DATE OF ISSUE: 10.17.25

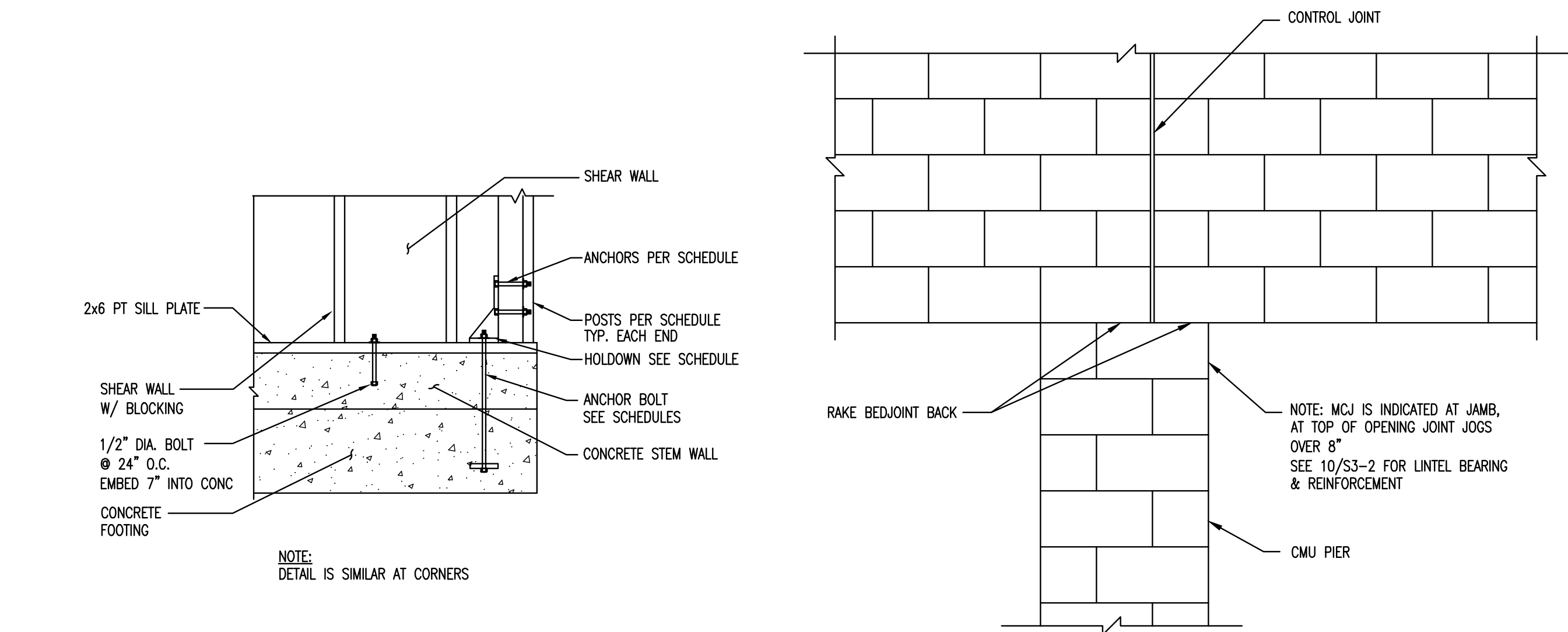
ARCOWE

45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925

R SHEET

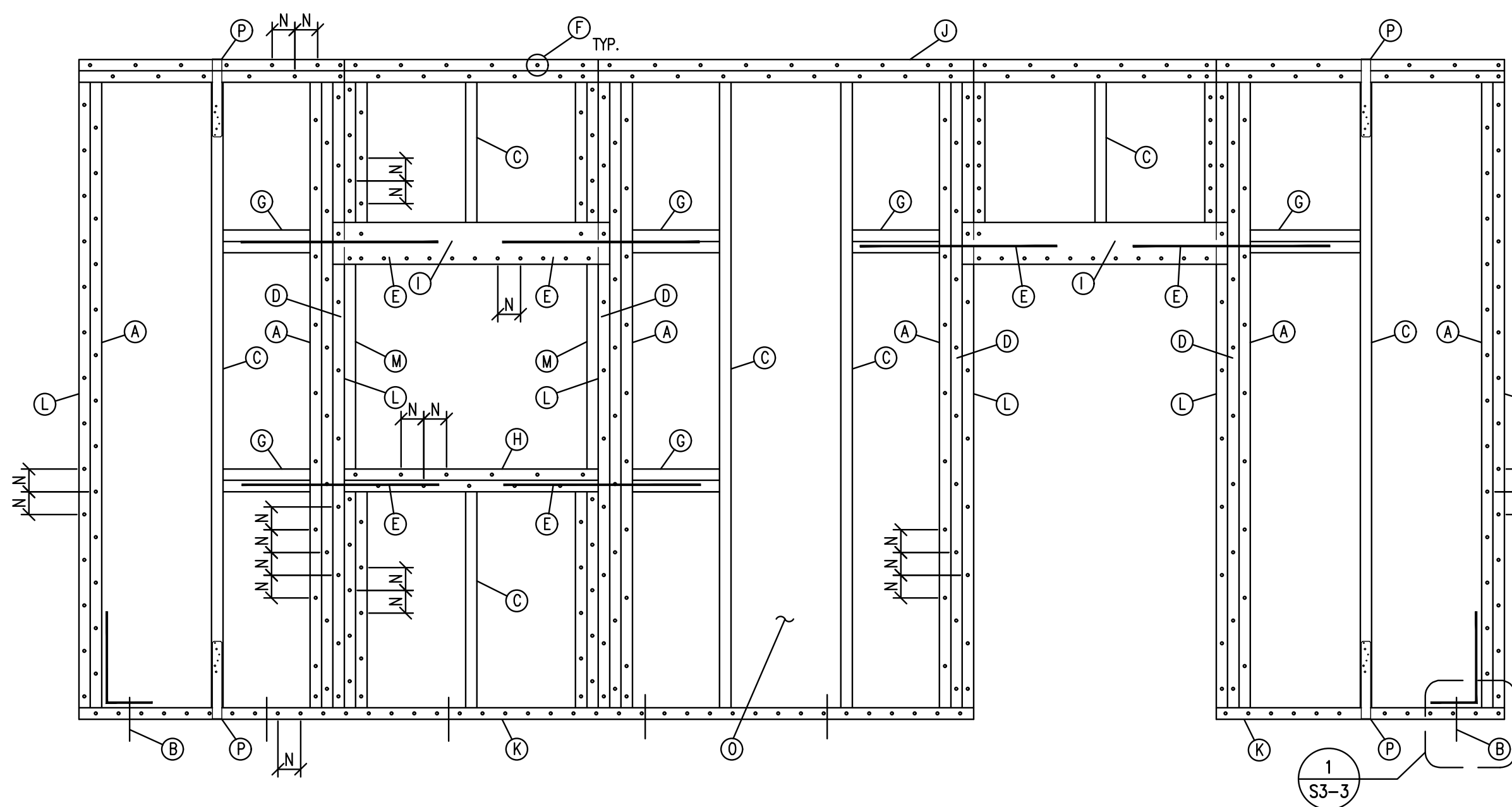
S3-2

SECTIONS AND DETAILS



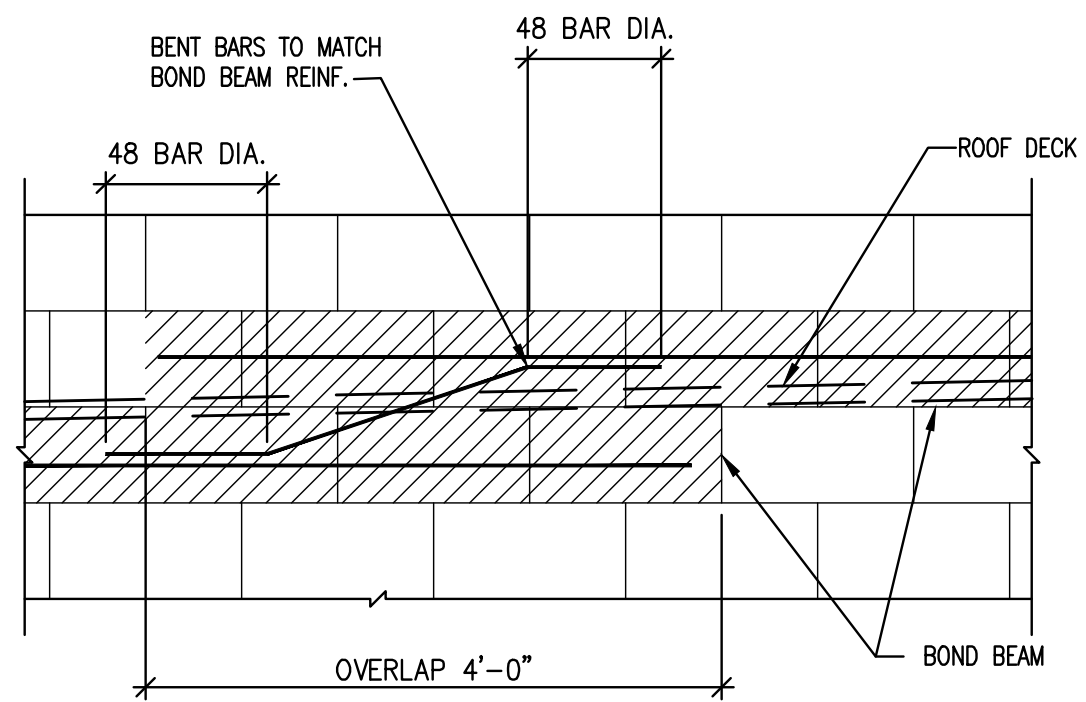
1 FOOTING @ COLUMN
S3-3 3/4"=1'-0"

2 CONTROL JOINT @ PIER
S3-3 3/4"=1'-0"

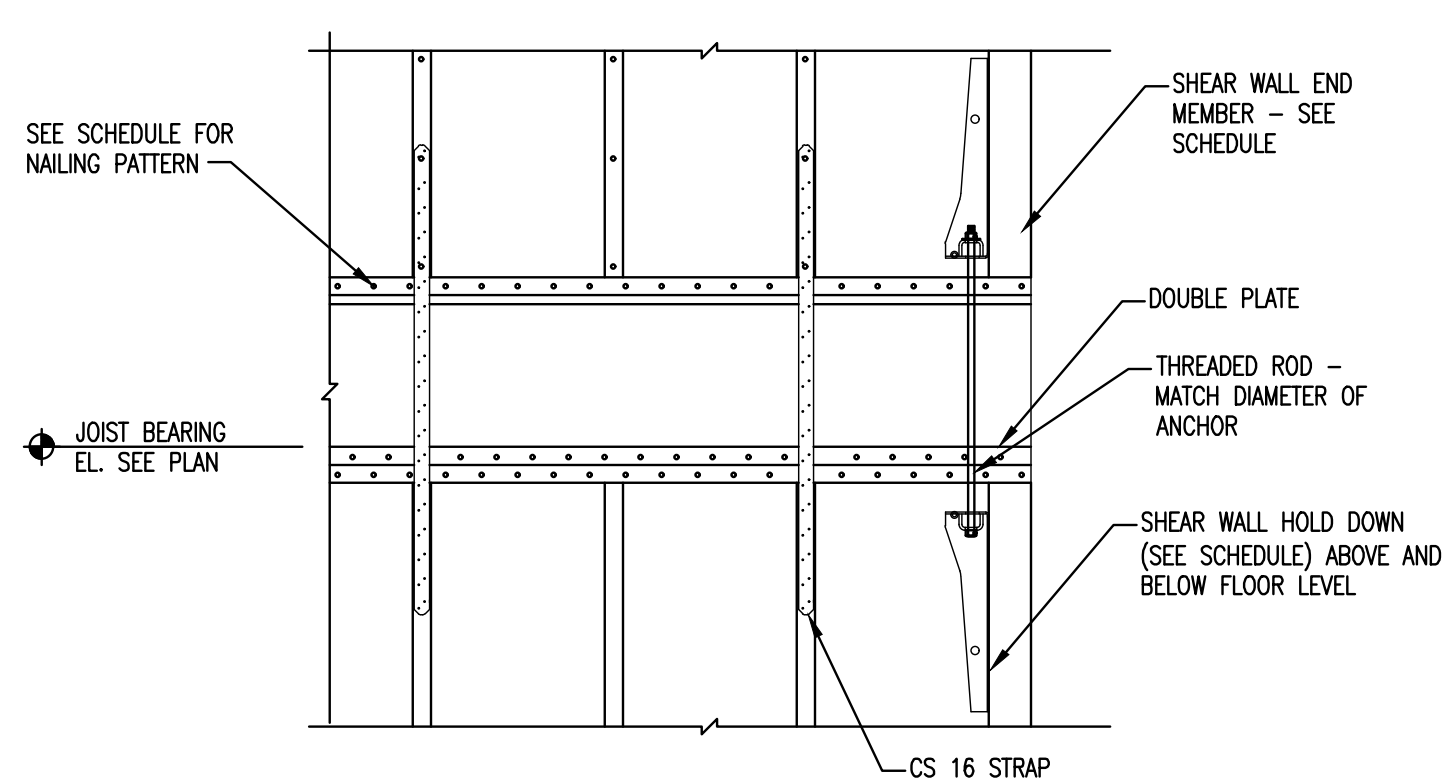


- A SHEARWALL END STUDS (KING STUDS @ OPENINGS). NAIL THESE STUDS TOGETHER WITH SHEARWALL BOTTOM PLATE NAILING (2 STUDS MIN.) EDGE NAIL WOOD STRUCTURAL PANEL SHEARWALL TO THESE STUDS.
- B SHEARWALL ANCHORS OR STRAPS.
- C TYPICAL STUDS (OR JACK STUDS) @ 16" O.C. MAX. SPACING. FIELD NAIL WOOD STRUCTURAL PANEL SHEARWALLS TO STUDS. EDGE NAIL AT PANEL EDGES.
- D TRIMMER STUDS, CONTINUE EDGE NAILING FROM KING STUDS AND NAIL STUDS TOGETHER WITH SHEARWALL BOTTOM PLATE NAILING.
- E CS16 x 28" STRAP WITH 11-10d NAILS IN BLOCKING AND HEADER OR WINDOW PLATE.
- F SHEAR EDGE NAILING.
- G 2-2X BLOCKING (WIDTH TO MATCH STUDS).
- H WINDOW PLATE (2-2X MIN., WIDTH TO MATCH STUD).
- I HEADER (2-2x6 MIN.) WITH SHEARWALL EDGE NAILING.
- J DOUBLE TOP PLATE WITH SHEARWALL EDGE NAILING.
- K BOTTOM PLATE WITH SHEARWALL EDGE NAILING AND BOLTED OR NAILED TO BELOW.
- L WOOD STRUCTURAL PANEL EDGE.
- M 2X BLOCK BETWEEN HEADER AND WINDOW PLATE. NAIL TO TRIMMER WITH 16d NAILS @ 6" O.C.
- N SHEARWALL EDGE NAILING SPACING.
- O SHEARWALL PANEL.
- P STUD PLATE TIE - SEE TYPICAL WALL FRAMING DETAIL 8/S3-3.

5 SHEAR WALL CONSTRUCTION
S3-3 3/4"=1'-0"



9 BOND BEAM STEP AT SLOPING ROOF
S3-3 3/4"=1'-0"

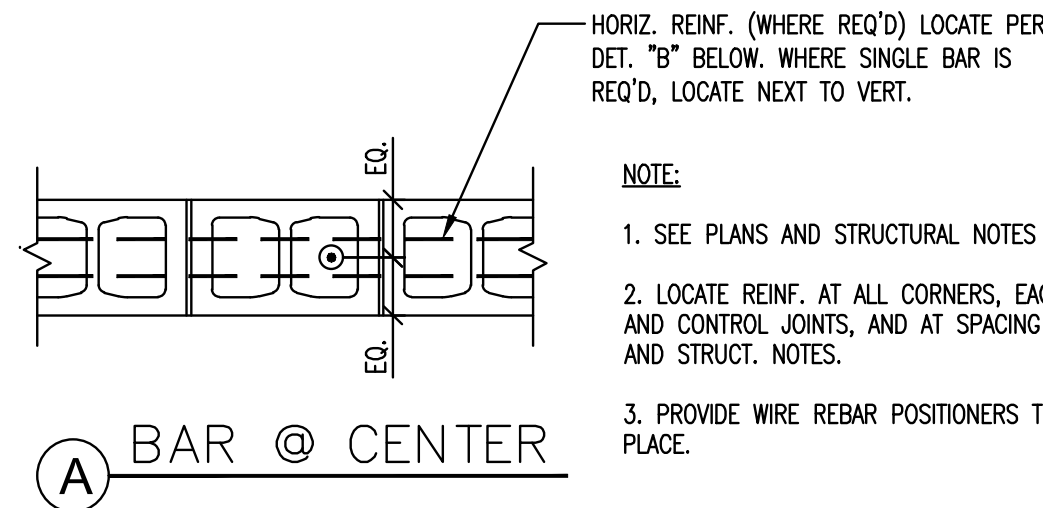


10 TWO LEVEL SHEAR WALL CONNECTION
S3-3 3/4"=1'-0"

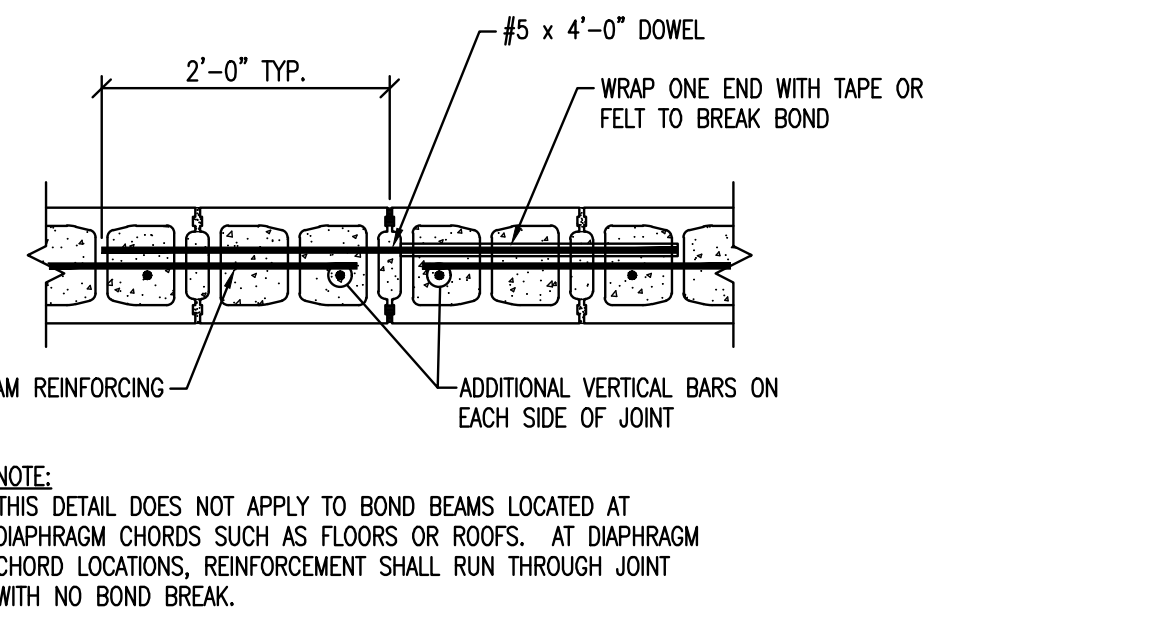
MASONRY REINF. SPLICE TABLE								
BAR SIZE	6" BLOCK	8" BLOCK		10" BLOCK		12" BLOCK		REMARKS
	BAR @ CL	BAR @ CL	BAR @ EDGE	BAR @ CL	BAR @ EDGE	BAR @ CL	BAR @ EDGE	
#4	2'-1"	1'-9"	2'-7"	2'-1"	2'-5"	2'-1"	2'-4"	-
#5	3'-3"	2'-2"	4'-0"	2'-7"	3'-10"	2'-7"	3'-7"	-
#6	-	3'-6"	8'-2"	4'-4"	7'-8"	4'-4"	7'-3"	-
#7	-	5'-0"	-	5'-1"	10'-5"	5'-1"	9'-10"	-

NOTE: WHEN REQUIRED SPLICE LENGTH EXCEEDS 4'-0" USE HIGH LIFT GROUTING WITH NO SPLICES OR USE MECHANICAL TENSION SPLICES WITH LOW LIFT GROUTING.

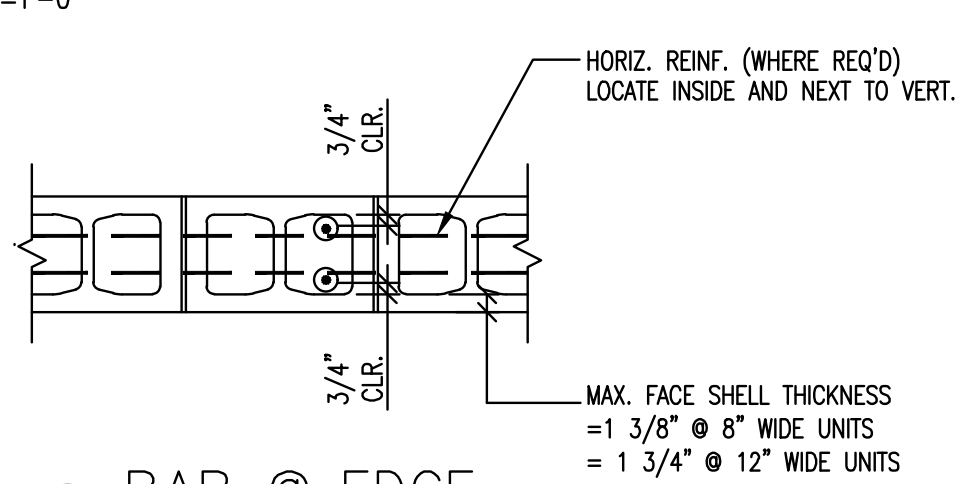
3 MASONRY REINFORCEMENT SPLICE & DEVELOPMENT LENGTH
S3-3 3/4"=1'-0"



A BAR @ CENTER

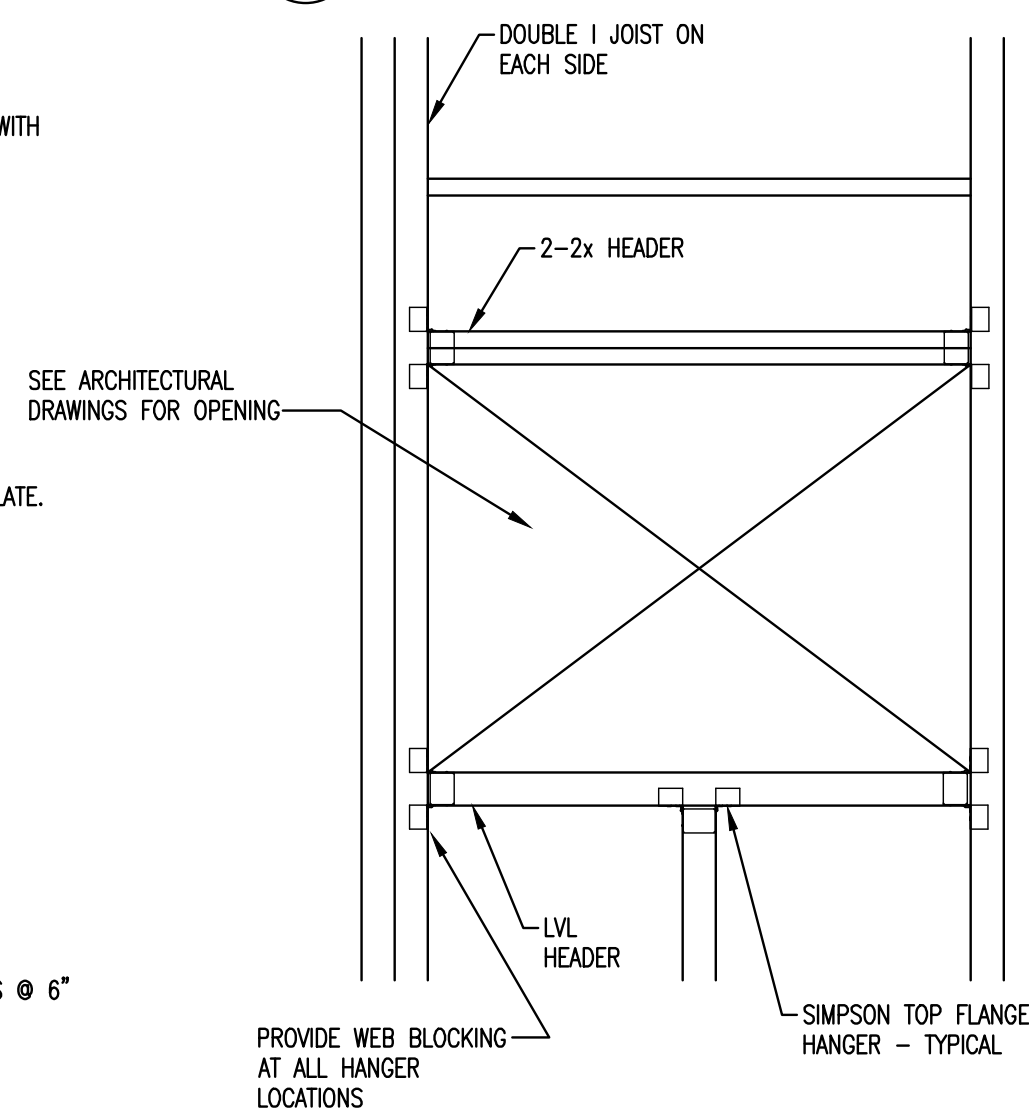


4 MASONRY CONTROL JOINT
S3-3 3/4"=1'-0"

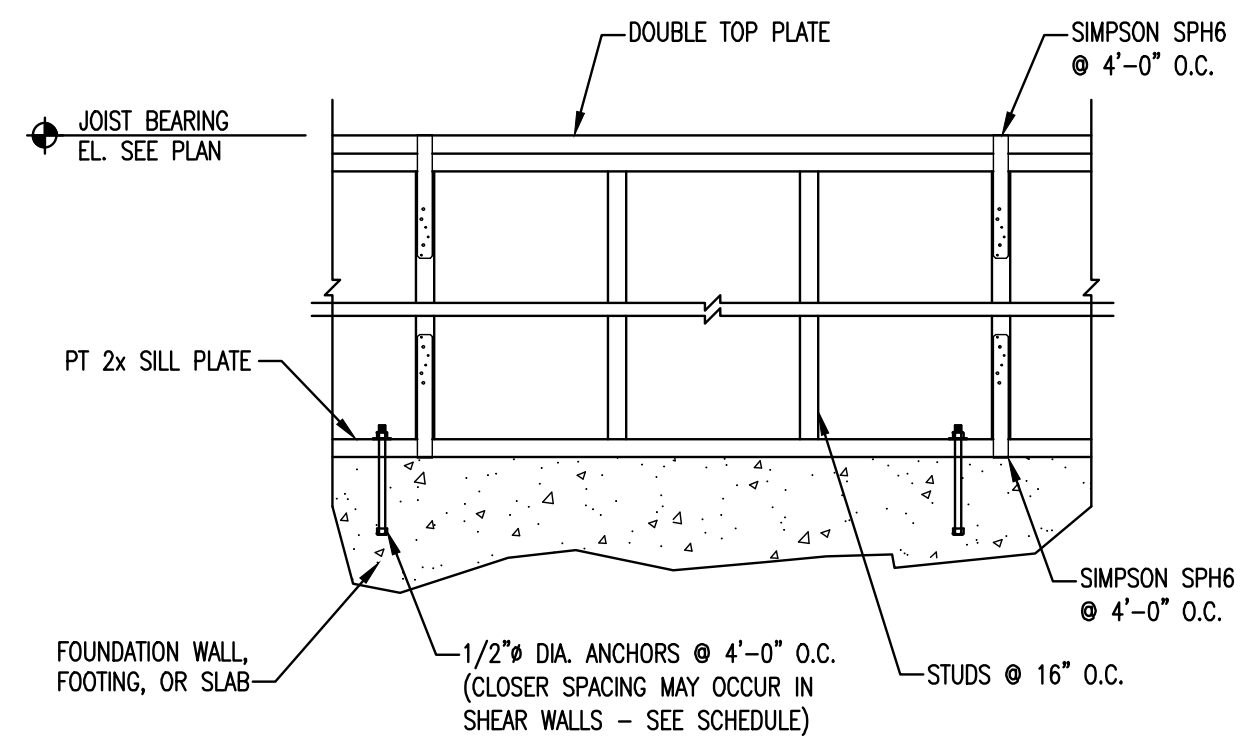


B BAR @ EDGE

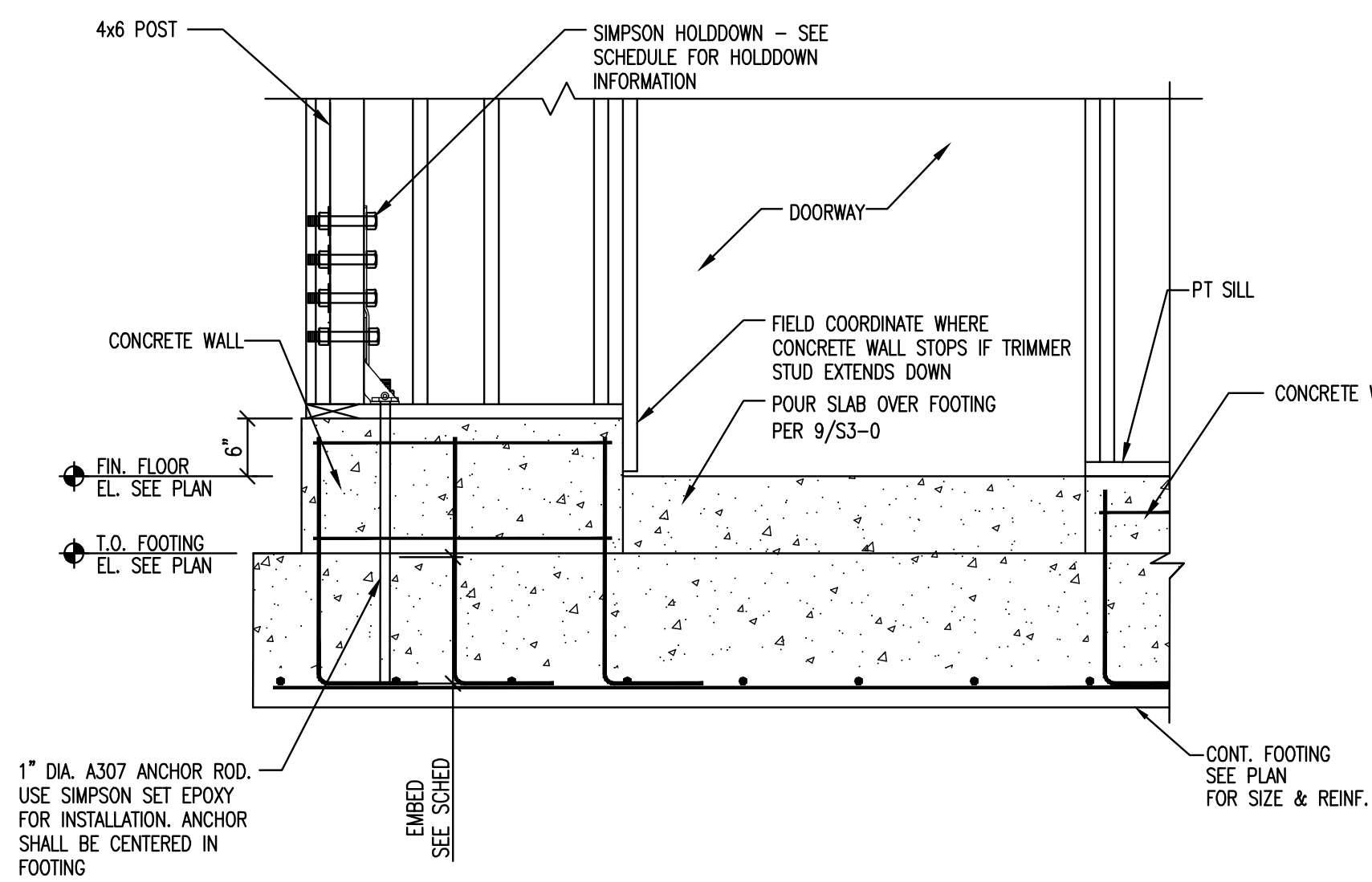
6 TYP. MASONRY WALL REINF. PLACEMENT
S3-3 3/4"=1'-0"



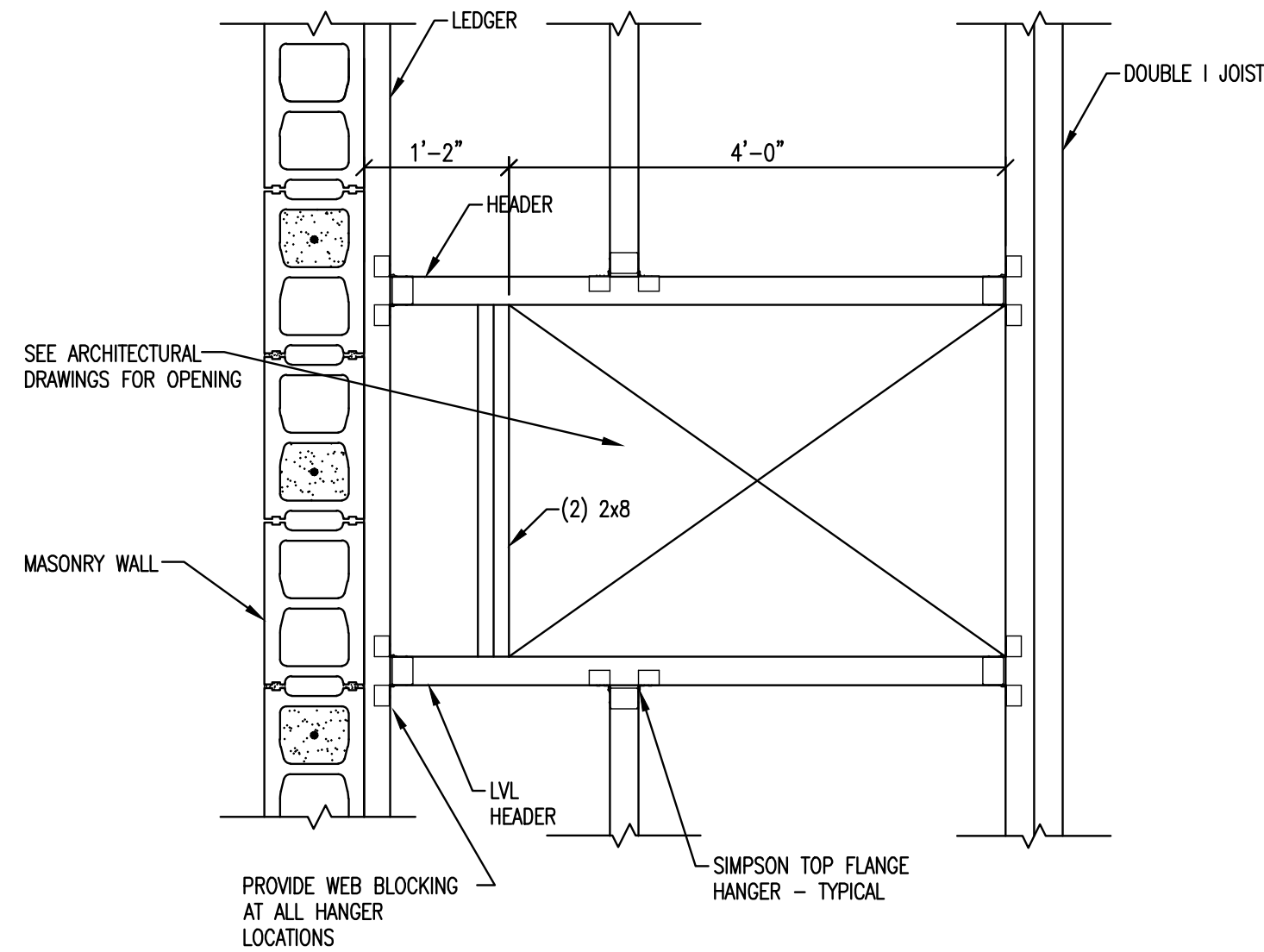
7 WOOD ROOF OPENING PLAN
S3-3 3/4"=1'-0"



8 TYPICAL WALL FRAMING
S3-3 3/4"=1'-0"



11 FOOTING SECTION
S3-3 NTS



12 ROOF ACCESS OPENING
S3-3 3/4"=1'-0"

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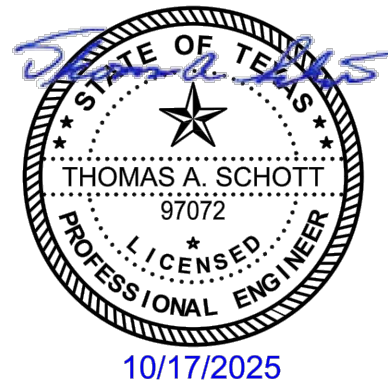
PERFORMANCE
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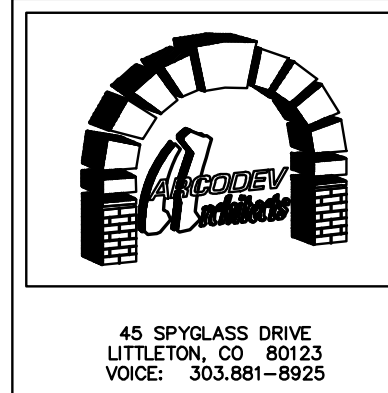
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76286



ENGINEER OF RECORD

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DATE OF ISSUE: 10.17.25



45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925

R CODE V
SHEET

S3-3

SECTIONS AND
DETAILS

MECHANICAL GENERAL NOTES AND SPECIFICATIONS	
<p><u>GENERAL CONSTRUCTION NOTES:</u></p> <p>1. DRAWINGS ARE MEANT TO SHOW INTENT ONLY, NOT EXACT DETAIL. THESE DRAWINGS ARE A "BUILDERS SET" AND INTENDED FOR THE USE ON AN EXPERIENCED AND WELL QUALIFIED CONTRACTOR WHO MAY INFER REASONABLE INFORMATION BASED ON EXPERIENCE COMMON IN THE INDUSTRY AND TRADES. QUALITY LEVEL IS A REQUIRED STANDARD. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL CONDITIONS OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CLARIFICATIONS BEFORE STARTING ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ERRORS IN HIS WORK, INCLUDING THE LACK OF FIELD VERIFICATION OF EXISTING CONDITIONS.</p> <p>2. THE ARCHITECT AND CONSULTANTS WILL NOT HAVE CONTROL, OF AND WILL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE, NOR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT AND/OR THESE CONSTRUCTION DOCUMENTS.</p> <p><u>BASIC REQUIREMENTS:</u></p> <p>MECHANICAL DESIGN SHALL CONFORM TO THE 2021 INTERNATIONAL MECHANICAL CODE, AS ADOPTED BY THE CITY OF SANGER, TX. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT MECHANICAL SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.</p> <p>COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION.</p> <p>RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.</p> <p>ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED MECHANICS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.</p> <p>INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.</p> <p>ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN.</p> <p>THE SUB-CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIARIZED WITH ALL REQUIREMENTS OF THE CONTRACT PRIOR TO SUBMISSION OF BID. THE SUB-CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO BID OR START OF INSTALLATION.</p> <p>THE SUB-CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS WHEN THEY BECOME DUE, AND SHALL NOT COVER ANY WORK UNTIL APPROVED BY THE INSPECTION AUTHORITY. ANY AND ALL FEES ASSOCIATED WITH THE MECHANICAL WORK, INCLUDING CONSTRUCTION AND INSPECTIONS SHALL BE PAID FOR BY THE SUB-CONTRACTOR IN ORDER TO DELIVER A COMPLETE AND FINISHED BUILDING, READY FOR OCCUPANCY AND 100% USAGE. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE SUB-CONTRACTOR HAS FAMILIARIZED HIMSELF/HERSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE UNRELATED TO THE PROPOSAL FOR MATERIALS OR METHODS OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE. ANY COSTS DUE TO THE LACK OF COOPERATION AMONG TRADES SHALL BE BORNE BY THE SUB-CONTRACTOR.</p> <p>THE INFORMATION PRESENTED ON THESE DRAWINGS IS DIAGRAMMATIC IN NATURE. IT DOES NOT NECESSARILY REPRESENT ALL FITTINGS, HANGERS, ETC. FOR A COMPLETE WORKING SYSTEM. PROVIDE ALL MATERIALS AND LABOR FOR COMPLETELY FINISHED AND OPERATIONAL SYSTEMS, REF TO LATEST ARCHITECTURAL DRAWINGS FOR: EXACT WALL LOCATIONS, DIMENSIONS, AND PLUMBING FIXTURE LOCATIONS AND REQUIREMENTS.</p>	<p>SUB-CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ALTERATIONS REQUIRED BY THE OWNER, ARCHITECT, OR FIELD CONDITIONS.</p> <p>ALL EQUIPMENT SHALL BE NEW, SHALL COMPLY WITH APPLICABLE INDUSTRY STANDARDS, WITH SPECIFICATIONS ON DRAWINGS, AND ENERGY CODE COMPLIANCE CERTIFICATION AS ADOPTED BY THE STATE, AS WELL AS LOCAL JURISDICTIONAL BUILDING DEPARTMENT. SUBMIT DATA FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. SUBMITTAL SHALL INCLUDE ENERGY CODE COMPLIANCE CERTIFICATION.</p> <p>SUB-CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT INCLUDING: FIXTURES SPECIFIED IN EQUIPMENT SCHEDULE ON DRAWINGS FOR REVIEW/APPROVAL (5) DAYS PRIOR TO BID. EQUIPMENT IS NOT TO BE ORDERED WITHOUT SUBMITTAL TO ARCHITECT/OWNER/ENGINEER.</p> <p>ALL SPACE HEATING SUPPLY AIR DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST S.M.A.C.N.A. DUCT CONSTRUCTION STANDARDS AND BE INSULATED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL JURISDICTIONAL ENERGY CONSER- VATION STANDARDS AND THE LATEST EDITION INTERNATIONAL MECHANICAL CODE.</p> <p>ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. INCREASE LISTED DUCT SIZE TO ACCOMMODATE LINER.</p> <p>FLEX SHALL NOT EXCEED 8 FT. IN LENGTH AND SHALL BE TYPE "1" FACTORY DUCT. PROVIDE WITH 1 IN. EXTERNAL INSULATION IF MAIN SUPPLY DUCT IS INSULATED.</p> <p>ALL SUPPLY RUN-OUTS TO HAVE MANUALLY ADJUSTABLE VOLUME DAMPERS WITH ABILITY TO LOCK IN PLACE. THIS SUB-CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE COMPLETE COST FOR THE ELECTRICAL CONTRACTOR TO INTERLOCK EXHAUST FANS AS REQUIRED BY EQUIPMENT SCHEDULE. THIS SUB-CONTRACTOR SHALL FIELD VERIFY 10 FT. MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKE AND ALL VENTS OR EXHAUST OUTLETS.</p> <p>WALL THERMOSTATS FOR HEATING/COOLING UNITS TO BE AUTOMATIC CHANGEOVER TYPE AND INSTALLED 48 IN. ABOVE FINISHED FLOOR. HEATING/COOLING UNITS SHALL MAINTAIN MINIMUM OUTSIDE AIR AS SHOWN ON SCHEDULE OR SHOWN IN FRESH AIR CALCULATIONS.</p> <p>ALL FURNACES OR ROOTOOT UNITS SUPPLYING MORE THAN 2000 CFM OF AIR SHALL BE EQUIPPED WITH A SMOKE DETECTOR IN THE MAIN RETURN AIR DUCT WHICH WILL SHUT THE POWER OFF TO THE UNIT WHEN SMOKE IS DETECTED. THIS SMOKE DETECTOR SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE MECHANICAL CONTRACTOR. IN BUILDINGS WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED, THE SMOKE DETECTOR SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR AND SHALL BE SUPERVISED BY FIRE ALARM SYSTEM. SEE LATEST EDITION INTERNATIONAL MECHANICAL CODE FOR ADDITIONAL REQUIREMENTS. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL REMOTE TEST SWITCH AND INDICATING LIGHT AT CEILING LOCATION NEAR FURNACE/ROOFTOP LOCATION.</p> <p>MECHANICAL CONTRACTOR IS RESPONSIBLE TO HAVE ROOFTOP UNIT MANUFACTURERS TECHNICIAN START ALL ROOFTOP UNITS. PROVIDE WRITTEN REPORT FROM MANUFACTURER FOR START-UP COMMISSIONING.</p> <p><u>DUCTWORK</u></p> <p>A. DUCTWORK SHALL BE GALVANIZED SHEET METAL INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. INSTALL TURN VENTS IN ALL ELBOWS. ALL SPIN-IN FITTINGS AND RUN-OUTS TO ANY REGISTERS, RETURN, OR EXHAUST TERMINAL SHALL BE PROVIDED WITH MANUAL VOLUME DAMPERS.</p> <p>B. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA STANDARDS. THE DUCT PRESSURE CLASS SHALL BE AS NOTED ON PLANS OR CORRESPONDING TO THE MAXIMUM EQUIPMENT ESP ON EACH SYSTEM. THE DUCTWORK SHALL BE SEALED TIGHT. LEAKAGE MAY NOT EXCEED 10% OF DESIGN AIRFLOW AT DESIGN PRESSURE. FOR SMOKE CONTROL SYSTEMS THE DUCT MUST BE TESTED AT 1.5 TIMES ITS DESIGN PRESSURE AND LEAKAGE MAY NOT EXCEED 5% OF DESIGN AIRFLOW.</p> <p>C. ALL EXPOSED ROUND DUCTWORK SHALL BE SPIRAL DUCT. NO JOISTS OR CONNECTIONS SHALL HAVE ANY VISIBLE SEALANT FROM THE EXTERIOR SO THE DUCTWORK HAS A CLEAN AND WORKMAN LIKE APPEARANCE.</p> <p>D. DUCT SIZES GIVEN ARE NET INSIDE FREE AREA.</p> <p>E. EQUIPMENT FLEXIBLE DUCTWORK CONNECTION NOT TO EXCEED 10 INCHES IN LENGTH WITH A MAX. 25 FLAME/50 SMOKE INDEX.</p> <p>F. FLEXIBLE DUCTWORK TO AIR DEVICES SHALL HAVE A MAXIMUM STRETCHED LENGTH OF 6 FEET. SUITABLE FOR RETURN AIR PLENUM.</p> <p>G. ALL EXHAUST TERMINALS MUST BE 3'-0" AWAY FROM IN ELEVATION FROM OPERABLE PORTION OF WINDOW AND DOORS. MC TO OFFSET AS REQUIRED.</p> <p>H. ALL DIRECT VENT VENT TERMINALS MUST BE 4'-0" AWAY IN ELEVATION HORIZONTALLY OR BELOW AND ATLEAST 1'-0" ABOVE ANY OPERABLE PORTION OF A WINDOW OR DOOR. MC TO OFFSET AS REQUIRED.</p> <p><u>INSULATION</u></p> <p>A. ALL INSULATING VALUES ARE TO CONFORM TO THE LATEST VERSION OF THE INTERNATIONAL ENERGY CODE.</p> <p>B. ALL ROUND CONCEALED RIGID SUPPLY DUCTWORK SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-6.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.</p> <p>C. OUTDOOR AIR INTAKE DUCTS SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-12.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.</p> <p>D. WHEN LOCATED IN UNCONDITIONED SPACES ALL RECTANGULAR DUCTWORK SHALL BE LINED WITH 1" THICK 2 POUND DENSITY MINIMUM R-6.0 FIBER GLASS ACOUSTIC DUCT LINER.</p> <p>E. ALL DUCTWORK EXPOSED TO OUTDOOR AMBIENT TYPE CONDITIONS (UNCONDITIONED ATTICS, OUTSIDE AIR DUCTS, ETC) SHALL BE EXTERNALLY WRAPPED OR INTERNALLY LINED IN 2 - 2.5" NOMINAL INSULATION (MINIMUM R-12.0). ALL OUTDOOR DUCTWORK SHALL HAVE 2 - 2.5" DUCTLINER (MINIMUM R-12.0) AND THE DUCT TO BE SEALED WEATHERPROOF PER SMACNA GUIDELINES. RECTANGULAR DUCT WORK IN RETURN AIR PLENUM SHALL BE LINED WITH 1/2" THICK 2 POUND DENSITY (MINIMUM R2.1) MAT-LACED ACOUSTIC DUCT LINER.</p> <p><u>AIR INLETS AND OUTLETS</u></p> <p>A. FURNISH AND INSTALL AIR INLETS AND OUTLETS AS SCHEDULED ON THE PLANS.</p> <p>B. OUTLETS SHALL HAVE A WHITE BAKED ENAMEL FINISH TO MATCH CEILING OR WALL.</p> <p><u>EXHAUST FANS</u></p> <p>A. FURNISH AND INSTALL CENTRIFUGAL EXHAUST FANS AS SCHEDULED ON THE PLANS.</p> <p>B. FURNISH AND INSTALL ROOF CURBS AND BACKDRAFT DAMPERS.</p> <p>C. FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROL NECESSARY FOR PROPER OPERATION.</p> <p><u>ROOFTOP HVAC UNITS</u></p> <p>A. FURNISH AND INSTALL ROOF TOP PACKAGED ELECTRIC A/C UNITS WITH NATURAL GAS HEATING SECTIONS AS SCHEDULED ON THE PLANS. ACCEPTABLE MANUFACTURERS ARE TRANE, CARRIER,Carrier, OR YORK. ANY SUBSTITUTED MODELS MUST BE EQUAL IN CONTROLS, ACCESSORIES, AND PERFORMANCE TO SCHEDULED MODELS.</p> <p>B. FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROLS FOR SATISFACTORY OPERATION. PROVIDE PHASE REVERSAL PROTECTION ON ANY UNITS WITH SCROLL COMPRESSORS.</p> <p>C. FURNISH PROGRAMMABLE SPACE THERMOSTAT WITH NIGHT SETBACK OPERATION OR DIGITAL CONTROL SYSTEM FOR VAV APPLICATIONS AS APPLICABLE. MOUNT AT 42-INCHES AFF.</p> <p>D. FURNISH ALL UNITS WITH 100% OUTDOOR AIR ECONOMIZER PACKAGE UNLESS OTHERWISE NOTED.</p> <p>E. FURNISH ALL UNITS WITH 14-INCH ROOF CURBS.</p> <p><u>GAS UNIT HEATERS</u></p> <p>A. FURNISH AND INSTALL NATURAL GAS FIRED HORIZONTAL UNIT HEATERS AS SCHEDULED ON THE PLANS.</p> <p>B. UNIT HEATERS SHALL BE AS MANUFACTURED BY TRANE, REZNOR, OR STERLING.</p> <p>C. HEATERS SHALL BE AGA CERTIFIED AND INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.</p> <p>D. FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROLS FOR SATISFACTORY OPERATION.</p> <p>D. FURNISH AND INSTALL FACTORY FURNISHED SPACE THERMOSTAT WITH AUTO ON AND HEAT, OFF SELECTION.</p>

ABBREVIATIONS	
(D)	DEMO
(E)	EXISTING
(N)	NEW
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
B	BOILER
BB	BASEBOARD
BF	BOOSTER FAN
BFP	BACKFLOW PREVENTER
BT	BATH TUB
BV	BALL VALVE
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CO	CLEANOUT
COTG	CLEANOUT TO GRADE
CU	CONDENSING UNIT
CV	CHECK VALVE
CUH	CABINET UNIT HEATER
DW	DOMESTIC COLD WATER
DF	DRAIN FOUNTAIN
DHW	DOMESTIC HOT WATER
DSN	DOWN SPOUT NOZZLE
EC	ELECTRICAL CONTRACTOR
ECO	END OF LINE CLEANOUT
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EW	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FURN	FURNACE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FS	FLOOR SINK
G	GAS
GC	GENERAL CONTRACTOR
GM	GAS METER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GUH	GAS UNIT HEATER
GW	GREASE WASTE
GWH	GAS WATER HEATER
HB	HOSE BIB
HP	HEAT PUMP
HX	HEAT EXCHANGER
IM	ICE MAKER BOX
LAV	LAVATORY
LS	LAUNDRY SINK
MAU	MAKE-UP AIR UNIT
MC	MECHANICAL CONTRACTOR
MF	MEASURE FLOW
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
ORD	OVER FLOW ROOF DRAIN

	<p>PROVIDE TURNING VANES AT ALL CORNER BENDS IN ACCORDANCE WITH S.M.A.C.N.A. LOW VELOCITY DUCT MANUAL.</p> <p>TYPICAL DUCT TAKE-OFF WITH MANUAL VOLUME DAMPER. MARK DAMPER POSITION AFTER AIR BALANCE.</p> <p>THERMOSTAT SHALL BE MOUNTED PER OWNER'S DIRECTION. DO NOT MOUNT IN DIRECT SUNLIGHT. THERMOSTAT SHALL BE MOUNTED NEAR RETURN AIR DUCT AT 48" AFF.</p> <p>MANUAL BALANCING DAMPER - PROVIDE WHERE SHOWN, AT ALL RUN-OUTS TO AIR OUTLETS, AND AT ALL MAIN DUCT SPLITS. DAMPERS SHALL BE "YOUNG REGULATOR CO" MODEL 820 OR EQUAL.</p> <p>POINT OF CONNECTION - NEW TO EXISTING</p> <p>INDICATES UNDERCUT DOOR FOR RETURN AIR</p>
	<p>SUPPLY UP</p> <p>SUPPLY DOWN</p> <p>RETURN UP</p> <p>RETURN DOWN</p> <p>EXHAUST UP</p> <p>EXHAUST DN</p> <p>FLEXIBLE DUCT</p> <p>(D)XX = DEMO</p> <p>MANUAL VOLUME DAMPER</p> <p>CEILING SUPPLY DIFFUSERS SEE SCHEDULES</p> <p>CEILING RETURN AIR REGISTER</p> <p>FIRE DAMPER</p> <p>SMOKE DAMPER</p> <p>FIRE SMOKE DAMPER</p> <p>EQUIPMENT TAG</p> <p>(POC) POINT OF CONNECTION</p> <p>ROOFTOP UNIT</p> <p>FURNACE</p> <p>CONDENSING UNIT</p> <p>PARALLEL FAN POWERED VAV BOX</p>

PLAN MARK	MFR	MODEL NO.	CFM	MIN. OA CFM	BLWR HP	ESP (IN)	GAS NAT/PROP	HEATING CAPACITY						NET COOLING CAPACITY						REFRIG	EFFICIENCY (STD/HI)	EER (EER2)	I EER (SEER2)	WEIGHT	ELECTRICAL DATA					REMARKS
								INPUT MBH (SL)	OUTPUT MBH (ALT)	EAT (F)	LAT (F)	EFF	STG	TOTAL MBH	SENS MBH	EADB (F)	EAWB (F)	LADB (F)	LAWB (F)						VOLT	PH	FLA (LG MTR)	MCA	MOPP	
RTU-1	CARRIER	48FEDA06B3A3	2,230	515	2	0.70	NAT	65	53	58.6	81.1	81%	1	60.02	51.28	81.9	66.9	60.2	58.4	R-454B	STD	(14.00)	(13.40)	734	208	1	11.7	43	60	1-5

REMARKS:
1. REFERS TO COOLING CAPACITIES BASED ON 101F OADB, 82F EADB, 67F EAWB @ 597 FT ELEV, AND 100F CONDENSING TEMPERATURE
2. PROVIDE 14" ROOF CURB, BELT DRIVE, HAIL GUARDS, MICROPROCESSOR CONTROL, OPTIONAL DISCONNECT, AND 100% ECONOMIZER W/ BARO RELIEF.
3. PROVIDE OPTIONAL CONVENIENCE OUTLET
4. SEER AND EER RATING ARE RATED AT ARI CONDITIONS AND IN ACCORDANCE WITH DOE TEST PROCEDURES.
5. PROVIDE 7-DAY, 24 HOUR PROGRAMMABLE THERMOSTAT.

PLAN MARK	MFR	MODEL NO.	LOCATION	STYLE	CFM	ESP (IN)	SONES	WEIGHT (LBS)	SPD	ELECTRICAL DATA				REMARKS
										VOLT	PH	HP	WATTS	
EF-1	GREENHECK	SP-A110	TOILET	CEILING	80	0.3	1.2	20	1	115	1	-	17	1, 2, 8
EF-2	GREENHECK	SP-A110	TOILET	CEILING	80	0.3	1.2	20	1	115	1	-	17	1, 2, 8
EF-3	GREENHECK	SBC-2H20	SERVICE AREA	WALL	3,200	0.4	21	100	1	115	1	3/4	13.8 AMPS	1, 3, 7

REMARKS:	
1. SELECTION BASED ON 5200 FT ELEVATION	6. CO SENSOR ALARM PER PLANS, DAMPERS OPEN AT 50 PPM & FAN ENERGIZES, SHUTDOWN OPERATION - REVERSE SEQUENCE
2. INTERLOCK WITH LIGHT SWITCH	
3. PROVIDE WALL MOUNTED SENSOR CONNECTED BY E.C.	7. PROVIDE STARTER SET BY M.C., USED FOR DAMPER MOTOR, THERMOSTAT AND CO SENSOR CONTROL
4. PROVIDE VIBRATION ISOLATORS	
5. FURNISH WITH WALL COLLAR (HC-20), MOTORIZED DAMPER, AND WEATHERHOOD	8. PROVIDE VIBRATION ISOLATION HANGING KIT.

AIR CIRCULATION FAN SCHEDULE												
PLAN	MFR	MODEL NO.	LOCATION	STYLE	CFM	ESP (IN)	SPD	ELECTRICAL DATA				REMARKS
								VOLT	PH	HP	WATTS	
F-1	DAYTON	2RSD29	CEILING/WALL	PROP	7450/3450	0.25	1	115	1	1/4	-	1-4

REMARKS:
1. SELECTION BASED ON 5200 FT ELEVATION
2. PROVIDE SOFT START
3. OSCILLATING FAN: MEANT FOR AIR MOVEMENT ONLY
4. STRUCTURAL AND MOUNTING EQ. PER MANUFACTURER

GAS UNIT HEATER SCHEDULE											
PLAN MARK	MFR	MODEL NO.	FUEL	INPUT MBTUH	OUTPUT MBTUH	CFM	HP	VOLT	PH	FLUE SIZE(IN)	REMARKS
GUH-1	MODINE	PDP175	NG	175	143	2725	1/2	115	1	5	1.2

REMARKS:

1. REFERS TO MODINE

2. PROVIDE REMOTE TSTAT WITH SUMMER/WINTER SWITCH.

VENTILATION SCHEDULE (BASED ON 2021 IMC TABLE 404.3.1.1)												
Room Name	Room Area, Az (sq.ft.)	Occupant Density (#/1000sq.ft.)	Zone Population, Pz	People Outdoor Air Rate (CFM/person), Rp	People Outdoor Air (CFM), Pz*Rp	Area Outdoor Air Rate (CFM/sq.ft.), Ra	Area Outdoor Air (CFM), Az * Ra	Breathing Zone Outdoor Airflow (CFM), Vbz (uncorrected)	Exhaust air Rate Required (CFM/sq.ft.)	Exhaust Airflow (CFM)	Zone Air Distribution Effectiveness, Ez	Zone Outdoor Airflow (CFM), Voz (corrected)
RTU-1												
SALES 101	513	15	8	7.5	60	0.12	62	122	—		0.80	153
COFFEE 102	68	—	—	—	—	0.06	5	5	—	70	0.80	7
OFFICE 103	102	5	1	5.0	5	0.06	7	12	—	70	0.80	15
UNISEX RESTROOM 1-104	60	—	—	—	—	—	—	0	50/70e	70	0.80	0
UNISEX RESTROOM 2-105	71	—	—	—	—	—	—	0	50/70e	70	0.80	0
BREAK 107	114	25	3	5.0	15	0.06	7	22	—	—	0.80	28
INVENTORY 108	488	—	—	—	—	0.12	59	59	—		0.80	74
TOTAL OUTSIDE AIR REQUIRED												277
TOTAL OUTSIDE AIR PROVIDED												515

PLAN MARK	STYLE	MATERIAL	FIN	FACE PATT.	DAMPER	NC (MAX)	NO SLOTS	SIZE	INLET DIA	REMARKS
CD-1	TMS	STL	WHT	LF	NONE	35	-	24X24	NOTED	1,2
CD-2	TMS	STL	WHT	LF	NONE	35	-	12X12	NOTED	1,2
SG-1	300 RL	STL	WHT	LF	OP.BLD	35	-	NOTED	SAME	1
RG-1	PAR	STL	WHT	LF	NONE	35	-	NOTED	SAME	1
RG-2	PAR	STL	WHT	LF	NONE	35	-	NOTED	SAME	1
RG-3	350RL	STL	WHT	LF	NONE	35	-	NOTED	SAME	1

REMARKS:

1. REFERS TO TITUS

2. PROVIDE BALANCING DAMPER ABOVE CEILING

JURISDICTION:	SANGER, TX
MECHANICAL CODE:	2021 IMC
ENERGY CODE:	2021 IECC
LOCAL ADDENDUMS:	YES
WINTER DESIGN DB:	17 F
SUMMER DESIGN TEMP DB / WB	100/74 F
INDOOR HEATING SET POINT:	72 F
INDOOR COOLING SET POINT:	75.5 (VERIFY)
ROOF R-VALUE:	R-40 (VERIFY)
WALL R-VALUE:	R-19
ELEVATION:	710
NUMBER OF FLOORS:	1
BUILDING TOTAL AREA:	4,950

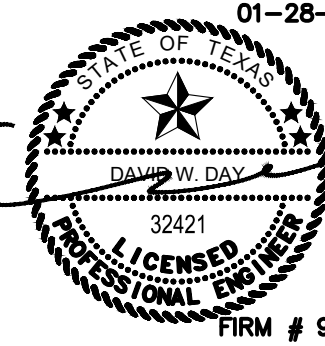
SHEET #	SHEET TITLE
M0.1	MECHANICAL SPEC SCHEDULE & LEGEND
M0.2	SEQUENCE OF OPERATION
M1.1	MECHANICAL PLAN
M1.2	MECHANICAL ROOF PLAN
M2.0	MECHANICAL DETAILS
M3.1	MECHANICAL COMCHECK
M3.2	MECHANICAL COMCHECK

COMMISSIONING NOTE
MECHANICAL SYSTEMS SHALL BE COMMISSIONED AND COMPLETED IN ACCORDANCE WITH SECTION C408.2 OF THE CURRENT IECC.

DAVID W DAY , P.E.
102 Poncho St.
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F-9943

BRAKES PLUS

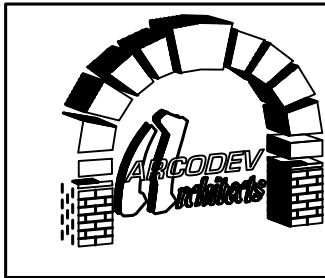
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	10.20.25	FOR BLDG DEPT. SUBMITTAL
	01.28.26	FOR CONSTRUCTION

ARCODEV JOB #:	—
CLIENTJOB #:	—
DRAWN BY:	JD
CHECKED BY:	LP
DATE OF ISSUE:	10.20.25

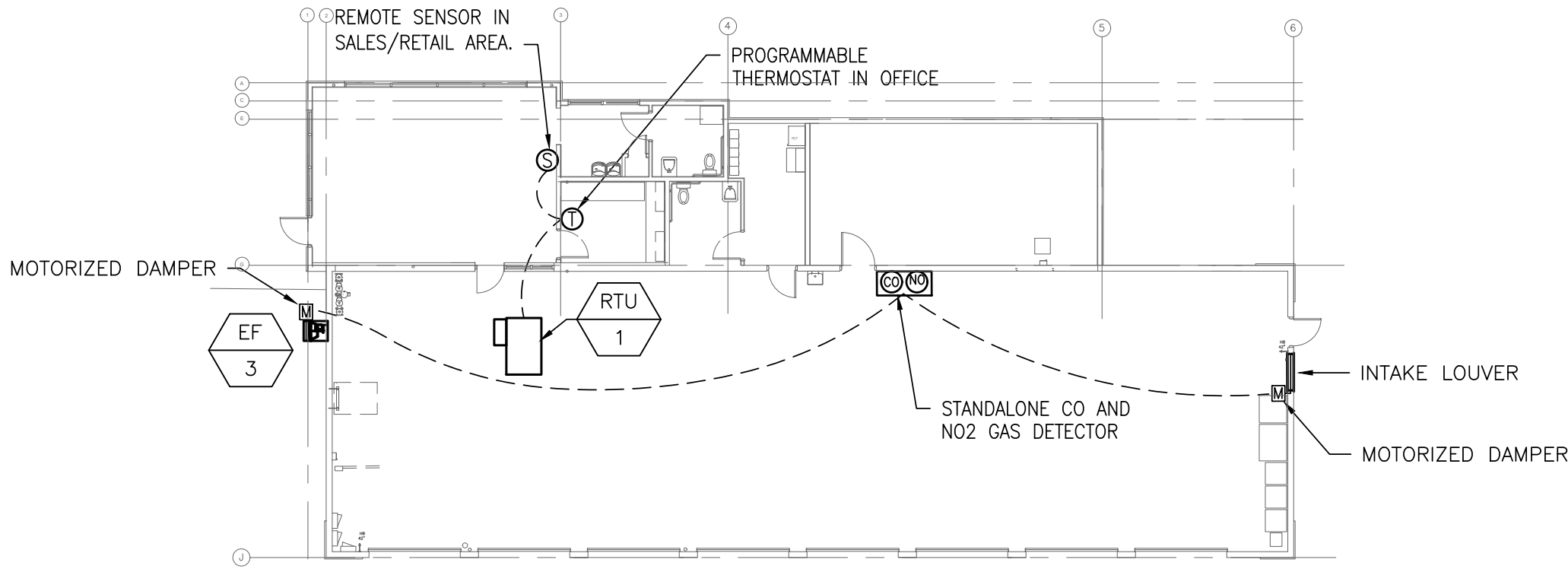


45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
NORMHERMAN@ARCODEV.COM

SHEET

M0.1

MECHANICAL SPECS & LEGEND



OFFICE/RETAIL RTU CONTROL & SERVICE BAY GAS EXHAUST CONTROL

1 M0.2 N.T.S.

GAS DETECTION SYSTEM SEQUENCE OF OPERATION

THE SYSTEM SHALL SERVE THE SERVICE BAY.

EF-3 SHALL REMAIN OFF AND INTAKE LOUVER L-1 SHALL REMAIN CLOSED UNLESS A CALL FOR CO OR NO2 VENTING IS INITIATED.

STAGE 1:

WHENEVER A "LOW ALERT" CONDITION IS DETECTED (25 PPM CO) (0.5 PPM NO2), THE RESPECTIVE DRY CONTACT FOR THE LOW ALERT SHALL CLOSE AFTER A USER-ADJUSTABLE DELAY TIME TO OPEN THE INTAKE LOUVER L-1.

STAGE 2:

WHENEVER A "MEDIUM ALERT" CONDITION IS DETECTED (75 PPM CO) (1 PPM NO2), THE RESPECTIVE DRY CONTACTS FOR THE MEDIUM ALERT SHALL CLOSE TO OPEN THE INTAKE LOUVER L-1, AND ACTIVATE EXHAUST FAN EF-3 AND INTERLOCKED MOTORIZED DAMPER.

STAGE 3:

WHENEVER A "HIGH ALERT" CONDITION IS DETECTED (100 PPM CO) (5 PPM NO2), THE RESPECTIVE DRY CONTACTS FOR THE HIGH ALERT SHALL CLOSE TO OPEN THE INTAKE LOUVER L-1, ACTIVATE EXHAUST FAN EF-3 AND INTERLOCKED MOTORIZED DAMPER, AND AN AUDIBLE WARNING ALARM SHALL BE SOUNDED.

UPON AN "ALARM" CONDITION AT ANY SENSOR, ALR DRY CONTACT(S) FOR THE ALARM SHALL CLOSE. THE INTERNAL BUZZER WILL SOUND AND ANY EXTERNAL STROBE/HORN SHALL BE ACTIVATED.

ONCE THE GAS CONCENTRATION DROPS BELOW THE SETPOINT FOR EACH LEVEL, THE RESPECTIVE ZONED DRY CONTACT(S) WILL OPEN AND THE DETECTOR WILL RETURN TO THE NEXT LOWEST LEVEL.

THE DETECTOR SHALL BE EQUIPPED WITH AN OVERRIDE TO MANUALLY ENERGIZE THE LOW ALERT RELAY REGARDLESS OF GAS CONCENTRATIONS.

PRESSING THE "ALARM OFF" BUTTON ON THE FRONT COVER WILL CANCEL THE INTERNAL BUZZER WHILE ALLOWING THE EXTERNAL CIRCUIT(S) TO CONTINUE OPERATING AS LONG AS THE ALARM CONDITION PERSISTS. THE BUTTON HAS NO EFFECT ON THE DRY CONTACT(S).

SHOULD DATA TRANSMISSION BETWEEN THE DETECTOR AND A SENSOR FAIL, AN ERROR CODE WILL APPEAR AND THE DETECTOR WILL ENTER FAIL-SAFE MODE.

WHEN A SENSOR REACHES END-OF-LIFE, AN ERROR CODE WILL APPEAR AND THE DETECTOR WILL ENTER FAIL-SAFE MODE.

THE ALERT STATUS INDICATORS WILL BLINK SHORT-ON-LONG-OFF DURING DELAY, FLASH SLOWLY DURING LOW ALERT, AND FLASH QUICKLY DURING HIGH ALERT. THE ALARM STATUS INDICATOR WILL ILLUMINATE DURING AN ALARM CONDITION IN EITHER ZONE.

GAS DETECTION SYSTEM SYSTEM DESCRIPTION

THIS SYSTEM INCORPORATES A STANDALONE DETECTOR AND CO AND NO₂ SENSORS ARE TYPICALLY MOUNTED AT AVERAGE BREATHING HEIGHT.

THE DETECTOR POLLS EACH TRANSMITTER IN 5-SECOND INTERVALS IN A SEQUENTIAL MANNER, ACQUIRING DATA USING THE RS-485 COMMUNICATION PROTOCOL.

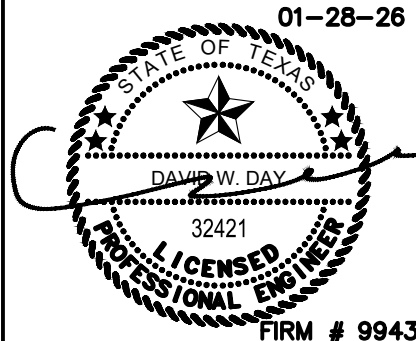
A 4X7-SEGMENT LCD DISPLAY PROVIDES A DIGITAL READ-OUT OF GAS CONCENTRATIONS AND OPERATIONAL STATUS OF EACH SENSOR.

SERVICE BAY GAS DETECTION SYSTEM SPECIFICATIONS:

- PERFORMANCE REQUIREMENTS:
 - STANDARDS COMPLIANCE:
 - PERFORMANCE: ANSI/ISA 92.00.01-2010 (R2015)
 - ELECTROMAGNETIC INTERFERENCE: EN 50270, FCC PART 15 SUBPART B.
 - ENVIRONMENTAL: ROHS COMPLIANT.
 - GENERAL FEATURES: UNLESS SPECIFIED OTHERWISE.
 - USER-ADJUSTABLE SETPOINTS, DELAYS, OUTPUTS, AND RELAYS.
 - PRECONFIGURED WIRING
 - FACTORY CALIBRATION
 - CUSTOMIZED PROGRAMMING
 - WORKS WITH NEW AND EXISTING BUILDING CONTROLS SYSTEMS
 - FULLY BACKWARDS COMPATIBLE WITH GSE GENERATION 1
 - POWER REQUIREMENTS: 120 VAC, 0.2 A, 50/60 HZ.
 - POWER CONSUMPTION: 24 VA.
 - CONTROL RELAYS: 6 RELAYS, 5A AT 125 VAC / 250 VA.
 - ANALOG OUTPUTS:
 - USER-SELECTABLE: 4 TO 20 MA, 0.2 TO 1 VDC, 1 TO 5 VDC, OR 2 TO 10 VDC.
 - STORAGE TEMPERATURE: MINUS 50 TO 240 DEGREES F (MINUS 50 TO 120 DEGREES C).
 - OPERATING TEMPERATURE: MINUS 4 TO 122 DEGREES F (MINUS 20 TO 50 DEGREES C).
 - HUMIDITY: 10 TO 90 PERCENT, NON-CONDENSING.
 - DISPLAY: 4 DIGITS, NUMERIC, COLOR: RED.
 - FRONT PANEL INDICATORS: 10 LEDs.
 - POWER: QUANTITY: 1 COLOR: GREEN.
 - SENSORS: QUANTITY: 4, COLOR: YELLOW.
 - ZONES: QUANTITY: 2, COLOR: YELLOW.
 - ALERT: QUANTITY: 2, COLOR: RED.
 - ALARM: QUANTITY: 1, COLOR: RED.
 - ALARM: 106 DB AT 100 MM, 3.8 KHZ PIEZOELECTRIC ELEMENT.
 - SENSOR LIFESPAN: UP TO 10 YEARS (VARIES BY GAS TYPE).
 - SENSOR CAPACITY: UP TO 4 SENSORS. A MAXIMUM OF 2 LOCALLY MOUNTED SENSORS.
 - COVERAGE: UP TO 36,000 SQ FT (3344.5 SQ M)
 - DIMENSIONS (WXHXD): 8.72 X 10.50 X 2.90 INCH (221 X 267 X 74 MM).
 - WEIGHT: 4.5 LBS (2.04 KG).
 - HOUSING: GRAY, NEMA 3R, POLYCARBONATE PLASTIC.
- BASIS OF DESIGN: CARBON MONOXIDE DETECTOR; GSE2-CM; AS MANUFACTURED BY BRASCH ENVIRONMENTAL TECHNOLOGIES.
- BASIS OF DESIGN: NITROGEN DIOXIDE DETECTOR; GSE2-ND; AS MANUFACTURED BY BRASCH ENVIRONMENTAL TECHNOLOGIES.

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76286



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS	
		FOR BLDG DEPT. SUBMITAL	FOR CONSTRUCTION
	10.20.25		
	01.28.26		

ARCODEV JOB # _____

CLIENT JOB # _____

DRAWN BY: _____ JD

CHECKED BY: _____ LP

DATE OF ISSUE: 10.20.25



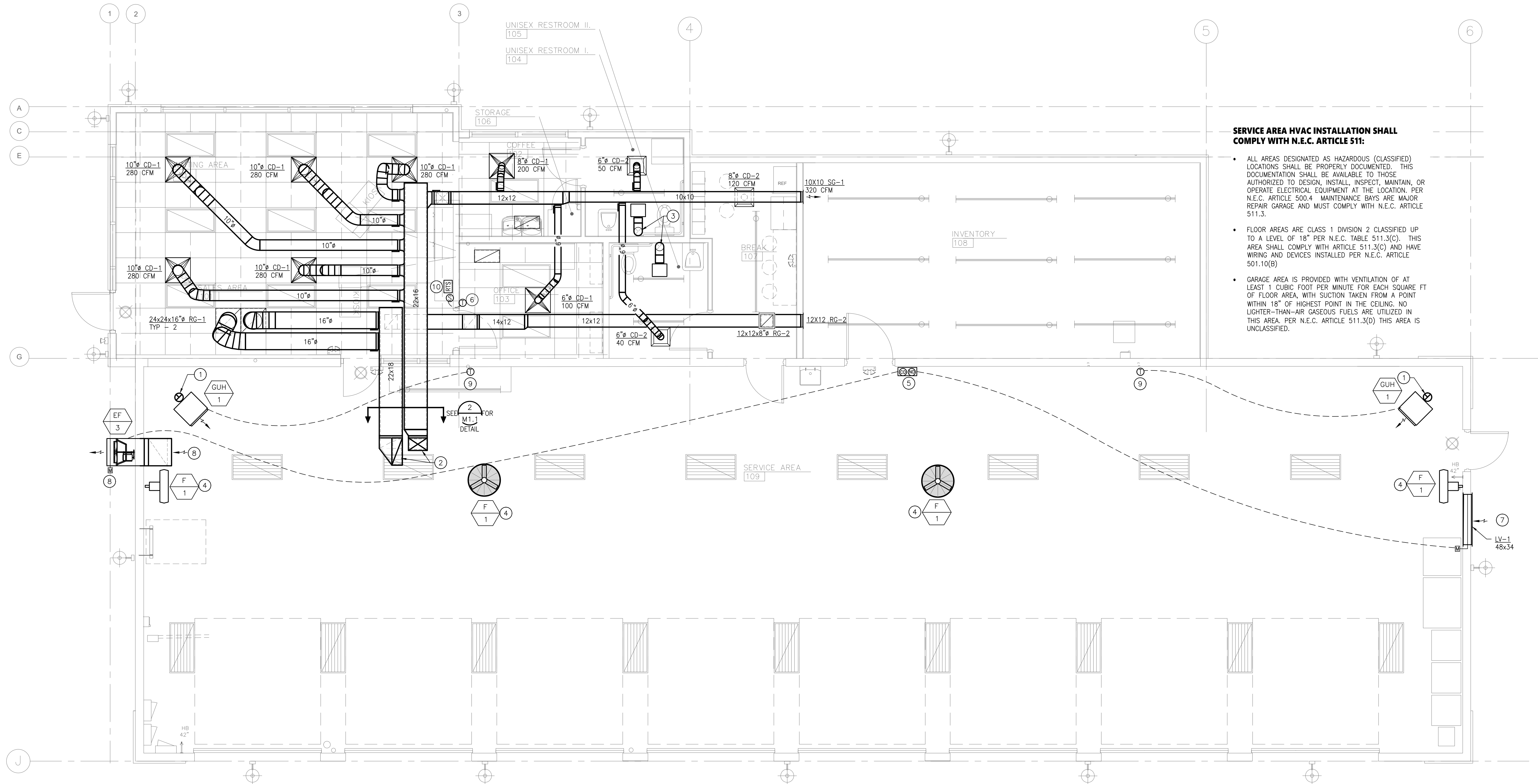
45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.581-8925
NORMHERMAN@ARCODEV.COM

SHEET

M1.1

MECHANICAL PLAN

DAVID W DAY , P.E.
102 Poncho St.
P.O. Box 1640 Anahuac, TX 77514
Telephone 713-927-4470
Texas Registered Engineering Firm
F-9943

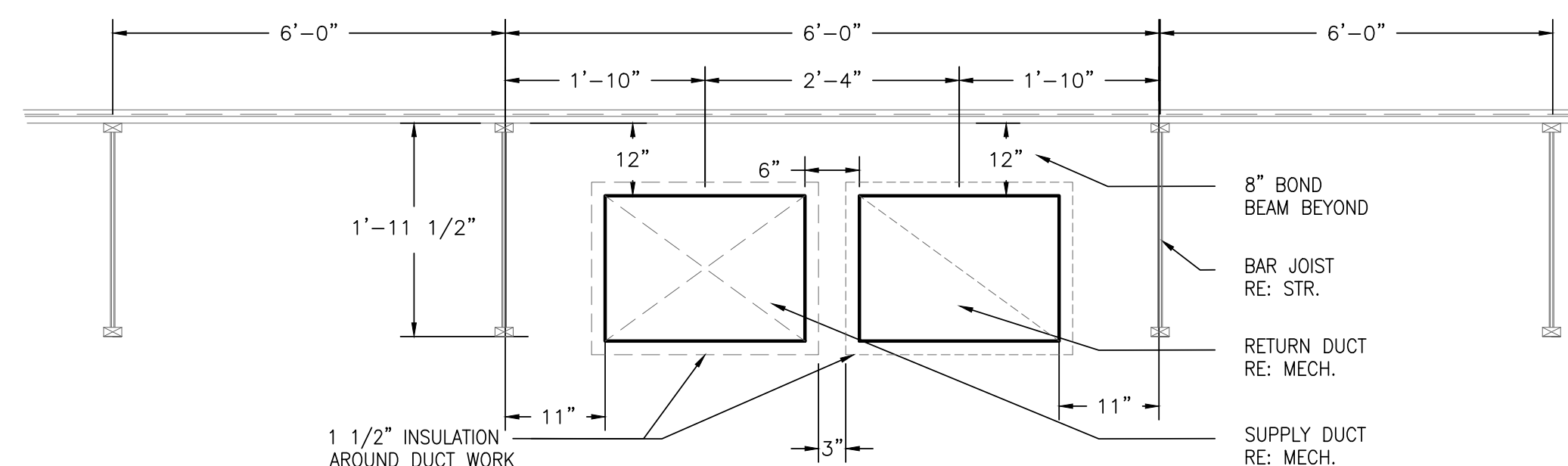


SERVICE AREA HVAC INSTALLATION SHALL COMPLY WITH N.E.C. ARTICLE 511:

- ALL AREAS DESIGNATED AS HAZARDOUS (CLASSIFIED) LOCATIONS SHALL BE PROPERLY DOCUMENTED. THIS DOCUMENTATION SHALL BE AVAILABLE TO THOSE AUTHORIZED TO DESIGN, INSTALL, INSPECT, MAINTAIN, OR OPERATE ELECTRICAL EQUIPMENT AT THE LOCATION, PER N.E.C. ARTICLE 500.4. MAINTENANCE BAYS ARE MAJOR REPAIR GARAGE AND MUST COMPLY WITH N.E.C. ARTICLE 511.3.
- FLOOR AREAS ARE CLASS 1 DIVISION 2 CLASSIFIED UP TO A LEVEL OF 18" PER N.E.C. TABLE 511.3(C). THIS AREA SHALL COMPLY WITH ARTICLE 511.3(C) AND HAVE WIRING AND DEVICES INSTALLED PER N.E.C. ARTICLE 501.10(B).
- GARAGE AREA IS PROVIDED WITH VENTILATION OF AT LEAST 1 CUBIC FOOT PER MINUTE FOR EACH SQUARE FT OF FLOOR AREA, WITH SUCTION TAKEN FROM A POINT WITHIN 18" OF HIGHEST POINT IN THE CEILING. NO LIGHTER-THAN-AIR GASEOUS FUELS ARE UTILIZED IN THIS AREA. PER N.E.C. ARTICLE 511.3(D) THIS AREA IS UNCLASSIFIED.

1 MECHANICAL PLAN

M1.1
4' 2' 0 4' 8'
1/4"=1'-0"



2 DUCTWORK DETAIL

M1.1
1' 6" 0 1' 2'
3/4"=1'-0"

DRAWING NOTES:

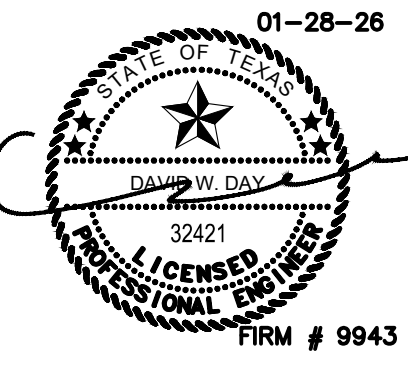
- FLUE/COMBUSTION AIR INTAKE UP THRU ROOF, PROVIDE WITH MANUFACTURER APPROVED INTAKE CAP TERMINATION.
- FULL SIZE SA/RA DUCT DOWN FROM RTU. PROVIDE TRANSITIONS AS REQUIRED TO ACCOMMODATE DUCT SIZE AS INDICATED. PROVIDE FLEXIBLE CONNECTIONS AS REQUIRED.
- EXHAUST DUCT UP THRU ROOF TO APPROVED CAP OR GOOSENECK TERMINATION. SIZE AS INDICATED.
- FANS SHALL BE EITHER WALL OR CEILING MOUNTED AT 10'-0" AFF. REFERENCE ARCHITECTURAL PLANS FOR FINAL LOCATION. COORDINATE WITH OTHER HVAC/SHOP EQUIPMENT. SEE OWNER FOR EXACT LOCATION.
- CONTROL WIRE FROM CO/NOX SENSORS BACK TO DETECTION SYSTEMS CONTROL PANEL. LOCATE AND INSTALL THE SENSORS BASED ON MANUFACTURERS INSTALLATION INSTRUCTIONS. COORDINATE FINAL LOCATION FOR CONTROL PANEL(S). PROVIDE 7-DAY, 24 HOUR PROGRAMMABLE THERMOSTAT WITH SPACE SENSOR. THERMOSTAT AND SENSOR LOCATIONS ON WALL TO BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE 7-DAY PROGRAMMABLE T-STAT WITH SPACE SENSOR. BOTH SENSOR AND THERMOSTAT LOCATION SHALL BE COORDINATED WITH BUILDING OWNER.
- COORDINATE EXTERIOR WALL LOUVER AND EXHAUST FAN WALL OPENING SIZES AND LOCATIONS PER ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION.
- PROVIDE 30x12 EXHAUST DUCT FROM EF-3, ROUTE UP INTERIOR WALL TO MIN. 18" BELOW STRUCTURE. PROVIDE HARDWARE MESH SCREEN AT OPENING. COORDINATE OPENINGS W/ ARCH PLANS AND OWNER.
- PROVIDE HEATING-ONLY THERMOSTAT AT 4'-0" AFF. PROVIDE WITH METAL LOCKING COVER. EXTEND CONTROL WIRING TO TWO (2) UNIT HEATERS. COORDINATE THERMOSTAT SET POINT WITH OWNER.
- RTU DUCT SMOKE DETECTOR REMOTE ANNUNCIATOR/TEST/RESET SWITCH AT 48" A.F.F. COORDINATE LOCATION W/ LOCAL AHJ PRIOR TO INSTALLATION.

PROJ # 251617

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BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	10.20.25	FOR BLDG DEPT. SUBMITTAL
	01.28.26	FOR CONSTRUCTION

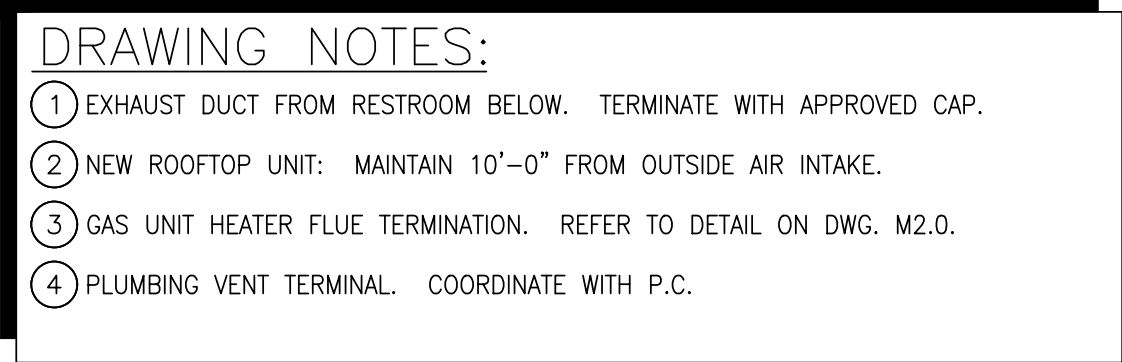
ARC CODE V JOB # _____
CLIENT JOB # _____
DRAWN BY: JD
CHECKED BY: LP
DATE OF ISSUE: 10.20.25



SHEET

M1.1

MECHANICAL PLAN



(4) PLUMBING VENT TERMINAL. COORDINATE WITH P.C.

NORTH

A circular compass rose with a vertical line and a horizontal line intersecting at the center. The top half is labeled 'NORTH' and the bottom half is labeled 'SOUTH'. The right half is labeled 'EAST' and the left half is labeled 'WEST'. The lines are black and the text is in a simple, sans-serif font.

Texas Registered Engineering Firm
F-9943

PROJ # 251617

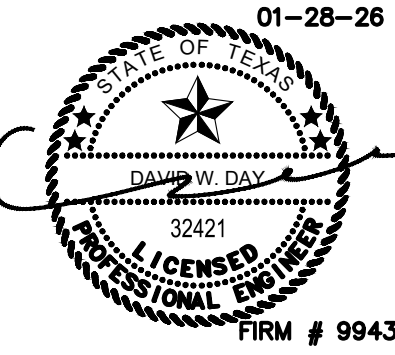
MECHANICAL
ROOF PLAN



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BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



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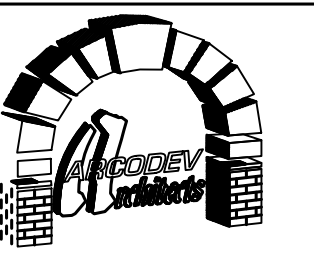
ARCODEV JOB #: —

CLIENTJOB #: _____

DRAWN BY: JD

CHECKED BY: _____ LP

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SHEET

M2.0

MECHANICAL
DETAILS

COMcheck Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Brakes Plus Sanger TX
Location: Sanger, Texas
Climate Zone: 3a
Project Type: New Construction

Construction Site: NWC OF FM455 & ACKER STREET,
LOT 2R3, BLOCK B
Sanger, Texas 76266
Owner/Agent: Brakes Plus
Designer/Contractor: David W. Day, P.E.
David W Day, P.E.
PO Box 1640
Anahuac, Texas 77514
713-927-4470

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Mechanical Systems List

QuantitySystem Type & Description

- RTU-1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 65 kBtu/h
Proposed Efficiency = 91.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 60 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 13.40 SEER2, Required Efficiency = 13.40 SEER2
Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 1 | Office -- Compliance (Motor nameplate HP and fan efficiency method) : Passes
Fans:
FAN 1 Supply, Constant Volume, 2230 CFM, 2.0 motor nameplate hp, 0.00 fan energy index , fan exception: Part of code listed equipment
- HVAC System (Unknown w/ PerimeterSystem):
Heating: 2 each - Unit Heater (GUH-1), Gas, Capacity = 175 kBtu/h
Proposed Efficiency = 80.00% Ec, Required Efficiency: 80.00 % Ec
Fan System: FAN SYSTEM 2 | Garage -- Compliance (Motor nameplate HP and fan efficiency method) : Passes
Fans:
FAN 2 Supply, Constant Volume, 2230 CFM, 0.5 motor nameplate hp, 0.00 fan energy index , fan exception: Part of code listed equipment
- EW/H-1:
Electric Storage Water Heater, Capacity: 30 gallons w/ Circulation Pump
No minimum efficiency requirement applies

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

JAMES J. D'ARCY-MECHANICAL DESIGNER
Name - Title Signature Date 10/20/2025

Project Title: Brakes Plus Sanger TX Report date: 10/21/25
Data filename: Page 1 of 9

COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2021 IECC

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical and service water heating systems and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. Hot water system sized per manufacturer's sizing guide.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C406 [PR3] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)

Project Title: Brakes Plus Sanger TX Report date: 10/21/25
Data filename: Page 2 of 9

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ¹	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C404.6.1, C404.6.2 [PL3] ¹	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C404.6.3 [PL7] ¹	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 3 minutes after end of heating cycle.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C404.6.1, C404.6.1.1 [PL8] ¹	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)

Project Title: Brakes Plus Sanger TX Report date: 10/21/25
Data filename: Page 3 of 9

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ¹	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.12.3 [ME61] ²	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Piping within HVAC equipment.
C403.8.4 [ME142] ²	Motors for fans that are not less than 1/2 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.8.6 [ME143] ²	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.9 [ME144] ²	Large diameter fans where installed shall be tested and labeled in accordance with AMCA 230.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.13.1 [ME71] ¹	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.3 [ME35] ²	HVAC equipment efficiency verified.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Mechanical Systems list for values.
C403.5.5 [ME113] ²	Fault detection and diagnostics installed with air-cooled unitary DX units or VRF units having economizers.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.2.2 [ME59] ¹	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.7.1 [ME59] ¹	Demand control ventilation provided for spaces >500 ft2 and >15 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.7.2 [ME115] ¹	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)

Project Title: Brakes Plus Sanger TX Report date: 10/21/25
Data filename: Page 4 of 9

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.6 [ME141] ¹	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms. Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.7.4 [ME57] ¹	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.7.5 [ME116] ¹	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.12.1 [ME60] ²	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME62] ¹	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.5.2 [ME16] ¹	Economizer operation will not increase heating energy use during normal operation.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.5.3.3 [ME124] ¹	Air economizers automatically reduce outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will not reduce cooling energy usage. See Table C403.5.3.3 for applicable device types and climate zones.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.5.3.4 [ME125] ¹	System capable of relieving excess outdoor air during air economizer operation to prevent over pressurizing the building. The relief air outlet located to avoid recirculation into the building.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.5.3.5 [ME126] ¹	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.7.7 for details.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C403.4.1 [ME63] ²	Heating for vestibules and air curtains with integral heating including automatic controls that shut off the heating system when outdoor air temperatures > 45°F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60°F and cooling setpoint >= 80°F.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)

Project Title: Brakes Plus Sanger TX Report date: 10/21/25
Data filename: Page 5 of 9

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.3.3 [ME35] ¹	Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25%	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.2.1 [ME53] ¹	Air outlets and zone terminal devices have means for air balancing.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.11.3.1, C403.11.3.2 [ME123] ¹	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.11.3.1 and refrigeration compressor systems that comply with C403.11.3.2..	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

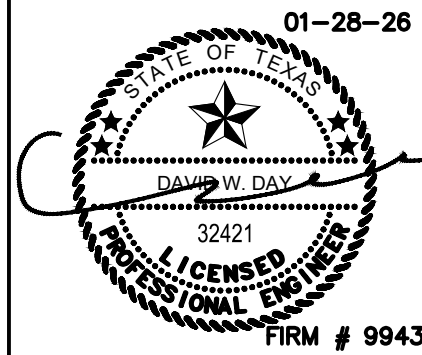
Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)

Project Title: Brakes Plus Sanger TX Report date: 10/21/25
Data filename: Page 6 of 9

BRAKES PLUS

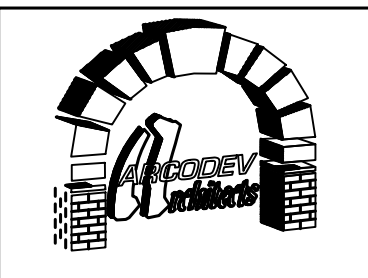
NWC OF FM455 & ACKER STREET
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ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	10.20.25	FOR BLDG DEPT. SUBMITAL
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ARC CODE JOB #:
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45 SPYGLASS DRIVE
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PROJ # 251617

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Telephone 713-927-4470
Texas Registered Engineering Firm
F-9943

SHEET

M3.1

MECHANICAL
COM CHECK

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.7 [EL26] ²	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C405.8 [EL27] ²	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C405.9.1, C405.9.2 [EL28] ²	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C405.10 [EL29] ²	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C405.1.1 [EL30] ²	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C405.11, C405.11.1 [EL31] ¹	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Project Title: Brakes Plus Sanger TX Report date: 10/21/25
Data filename: Page 7 of 9

Section # & Req-ID	Final Inspection	Complies?	Comments/Assumptions
C403.3, C408.2.5, 3 [F18]¹	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.1.1 [F150]¹	HVAC systems and equipment design loads calculated in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.3.1 [F127]¹	HVAC systems and equipment capacity does not exceed calculated loads.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.4.1 [F147]¹	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.4.1.2 [F138]¹	Thermostatic controls have a 5 °F deadband.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.4.1.3 [F120]¹	Temperature controls have setpoint overlap restrictions.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.4.2 [F139]¹	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.4.2.1, C403.4.2.2 [F140]¹	Automatic controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C403.4.2.3 [F141]¹	Systems include optimum start controls.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C404.3 [F111]¹	Heat traps installed on supply and discharge piping of non-circulating systems.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C404.4 [F125]²	All piping insulated in accordance with section details and Table C403.12.3.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C404.6.1 [F112]¹	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Project Title: Brakes Plus Sanger TX Report date: 10/21/25
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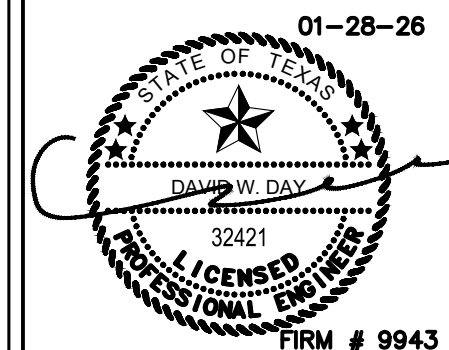
Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.1.1 (F157) ¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.1 (F128) ¹	Commissioning plan developed by registered design professional or approved agency.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.3.1 (F131) ¹	HVAC equipment, systems and system-to-system relationships have been tested to ensure proper operation.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.3.2 (F110) ¹	HVAC and service water heating control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.3.3 (F132) ¹	Economizers have been tested to ensure proper operation.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.4 (F129) ¹	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.5 (F17) ¹	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.5.1 (F143) ¹	An air and/or hydronic system balancing report is provided for HVAC systems.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
C408.2.5.2 (F130) ¹	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Project Title: Brakes Plus Sanger TX Report date: 10/21/25
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BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	10.20.25	FOR BLDG DEPT. SUBMITTAL
	01.28.26	FOR CONSTRUCTION

ARCODEV JOB #: —

CLIENTJOB #: _____

DRAWN BY: JD

CHECKED BY: _____ LP

DATE OF ISSUE: 10.20.25



45 SPYGLASS DRIVE
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VOICE: 303.881-8925
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SHEET

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P.O. Box 1640 Anahuac, TX 77514

Telephone 713-927-4470

Texas Registered Engineering Firm

F-9943

MECHANICAL

MECHANICAL

COM CHECK

PROJ # 251617

PLUMBING GENERAL NOTES AND SPECIFICATIONS

GENERAL CONSTRUCTION NOTES:

1. DRAWINGS ARE MEANT TO SHOW INTENT ONLY, NOT EXACT DETAIL. THESE DRAWINGS ARE A "BUILDERS SET" AND INTENDED FOR THE USE ON AN EXPERIENCED AND WELL QUALIFIED CONTRACTOR WHO MAY INFER REASONABLE INFORMATION BASED ON EXPERIENCE, COMMON IN THE INDUSTRY AND TRADES. QUALITY LEVEL IS A REQUIRED STANDARD. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL CONDITIONS OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CLARIFICATIONS BEFORE STARTING ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ERRORS IN HIS WORK, INCLUDING THE LACK OF FIELD VERIFICATION OF EXISTING CONDITIONS.

2. THE ARCHITECT AND PROFESSIONAL CONSULTANTS WILL NOT HAVE CONTROL, OF AND WILL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE, NOR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT AND OR THESE CONSTRUCTION DOCUMENTS.

BASIC REQUIREMENTS:

PLUMBING DESIGN SHALL CONFORM TO THE 2021 INTERNATIONAL PLUMBING CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT PLUMBING SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.

DO NOT SCALE FROM THESE DRAWINGS. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS FOR DIMENSIONS AND FOR ESTIMATING DISTANCES. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS RELATING TO THE JOB WETHER OR NOT INDICATED ON THESE DRAWINGS. ANY SCALE, DIMENSION OR QUANTITIES SHOWN ON THE DRAWINGS ARE FOR ENGINEERING CALCULATION PURPOSES ONLY. THE PLUMBING CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ESTIMATING AND DETERMINING ALL DISTANCES AND QUANTITIES RELATED TO THE PROJECT. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS AND VERIFY EXISTING CONDITIONS ON SITE FOR ALL ESTIMATING PURPOSES.

COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING THE LOCATION OF U/L AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION. RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.

ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED PLUMBERS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF U/L AND SHALL BEAR THE U/L LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.

INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF ANY DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.

ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN. SUBMIT MANUFACTURER'S LITERATURE (SHOP DRAWINGS) FOR MATERIALS AND EQUIPMENT. SUBMITTAL SHALL INCLUDE EQUIPMENT PERFORMANCE DATA AT ELEVATION AND/OR LOCAL CONDITIONS. EQUIPMENT CUTSHEETS OR CATALOG COPIES ARE NOT ACCEPTABLE. SUBMITTAL SHALL BEAR THE APPROVAL OF THE GENERAL CONTRACTOR FOR COMPLIANCE WITH COORDINATION AND THESE SPECIFICATIONS PRIOR TO SUBMITTAL TO ARCHITECT AND/OR HIS AGENCIES. ANY EQUIPMENT SUBSTITUTED FOR WHAT IS SCHEDULED SHALL BE EQUAL TO THAT SCHEDULED IN CONTROLS, ACCESSORIES, AND PERFORMANCE REGARDLESS OF MANUFACTURER.

FIELD LABEL ALL PLUMBING EQUIPMENT AND PIPING AS INDICATED ON THE PLANS PER PLUMBING AND LOCAL CODE REQUIREMENTS. INDICATE DIRECTION OF FLOW ON PIPING.

TAG ALL VALVES WITH CONSECUTIVE NUMBERING ON PERMANENT HARD PLASTIC OR METAL TAB AND PROVIDE SCHEDULE LISTING ITEMS, AREA SERVED, SIZE AND VALVE TYPE. SUBMIT FINAL VALVE SCHEDULE FOR REVIEW.

PROVIDE EXPANSION LOOPS, SWING JOINTS, OR MECHANICAL EXPANSION COMPENSATING DEVICES AS REQUIRED TO ACCOUNT FOR THERMAL EXPANSION OF ALL PIPING SYSTEMS. EXPANSION SYSTEM SIZING SHALL BE IN ACCORDANCE WITH MATERIALS DATA SHEETS AND MANUFACTURER RECOMMENDATIONS.

INSTALL ALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. IF PLAN DIFFERS FROM THESE INSTRUCTIONS THEN NOTIFY ENGINEER PRIOR TO ROUGH-IN. MANUFACTURERS INSTRUCTIONS SHALL PREVAIL. SPECIAL ATTENTION MUST BE PAID TO GAS FIRED EQUIPMENT FLUE/GA LENGTHS, SIZES, AND MATERIAL.

BASIC MATERIALS

PLUMBING CONTRACTOR TO PROVIDE PLUMBING SYSTEM CONTROLS, CONTROLLERS, CONTROL TRANSFORMER, DISCONNECTS, STARTERS, CONTROL WIRING, ESCUTCHEON CONTROL COWER WIRING, AND ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL PLUMBING SYSTEM. ALL ELECTRICAL ITEMS SHALL BE COORDINATED WITH ELECTRICAL DRAWINGS AND ELECTRICAL SUB-CONTRACTOR FOR INSTALLATION.

PROVIDE SUPPLEMENTAL STEEL AND SUPPORTS AS REQUIRED FOR INSTALLATION OF PLUMBING MATERIALS, EQUIPMENT, AND APPARATUS.

ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON THE PLANS. PRIOR TO THE INSTALLATION OF ANY EXPOSED WORK THIS CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL. APPROVAL OF LOCATION AND EXTENT.

PROVIDE PRESSURE REDUCING VALVE ASSEMBLY AT BUILDING WATER SERVICE ENTRY WHERE PRESSURE EXCEEDS 65 PSI. PRESSURE REDUCING VALVE TO BE SET TO 65 PSI.

PROVIDE SANITARY SEWER SYSTEM CLEANOUTS AS REQUIRED BY LOCAL CODES. PROVIDE BRANCH SHUT-OFF VALVES ON ALL WATER LINES EXTENDING FROM MAINS. THE CONTRACTOR SHALL LOCATE AND FURNISH FOR INSTALLATION BY OTHERS, ALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, MOTORS, ETC. AND THE PROPER SERVICING OF EQUIPMENT AND LINES INSTALLED UNDER THIS CONTRACT.

PIPING

1. SANITARY, VENT, AND STORM PIPING ABOVE AND BELOW GRADE SHALL BE SOLID CORE PVC SCHEDULE 40 OR 80 PIPE AND SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2665. INJECTION MOLDED PVC DWV FITTINGS SHALL CONFORM TO ASTM D 2665. FABRICATED PVC DWV FITTINGS SHALL CONFORM TO ASTM F 1806. PIPE AND FITTINGS SHALL BE MANUFACTURED AS A SYSTEM AND BE THE PRODUCT OF ONE MANUFACTURER. ALL PIPE AND FITTINGS SHALL BE MANUFACTURED IN THE UNITED STATES. ALL SYSTEMS SHALL UTILIZE A SEPARATE WASTE AND VENT SYSTEM. PIPE AND FITTINGS SHALL CONFORM TO NSF INTERNATIONAL STANDARD 14. INSTALLATION SHALL COMPLY WITH THE LATEST INSTALLATION INSTRUCTIONS PUBLISHED BY MANUFACTURER AND SHALL CONFORM TO ALL APPLICABLE PLUMBING, BUILDING, AND FIRE CODE REQUIREMENTS. BURIED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321 AND ASTM F 1698. SOLVENT CEMENT JOINTS SHALL BE MADE IN A TWO STEP PROCESS WITH PRIMER CONFORMING TO ASTM F 656 AND SOLVENT CEMENT CONFORMING TO ASTM D 2564. THE SYSTEM SHALL BE PROTECTED FROM CHEMICAL AGENTS, FIRE STOPPING MATERIALS, THREAD SEALANT, PLASTICIZED VINYL PRODUCTS, OR OTHER AGGRESSIVE CHEMICAL AGENTS NOT COMPATIBLE WITH PVC COMPOUNDS. SYSTEMS SHALL BE HYDROSTATICALLY TESTED AFTER INSTALLATION.

2. DOMESTIC WATER PIPING ABOVE GRADE: ASTM B 88, TYPE L COPPER WITH SOLDERED OR MECHANICALLY CRIMPED JOINTS (PRO PRESS).

3. DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K COPPER WITH SILVER SOLDERED JOINTS.

4. CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER WITH SOLDERED JOINTS, OR CPVC IF ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.

5. GAS PIPING 3 INCHES AND LARGER SHALL BE SCHEDULE 40 STEEL WITH WELDED JOINTS. GAS PIPING 2-1/2 INCHES AND SMALLER SHALL BE SCHEDULE 40 STEEL MALLEABLE THREADED FITTINGS OR MECHANICALLY CRIMPED JOINTS (PRO PRESS) MEETING ASTM A53.

6. GAS PIPING BELOW GRADE SHALL BE WRAPPED WITH PROTECTIVE PIPE COVERING AND VENTED IN ACCORDANCE WITH LOCAL JURISDICTIONS HAVING AUTHORITY.

7. ANY PIPING SYSTEM LOCATED IN A RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NO MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.

8. FIRE STOP ALL PIPING MATERIALS PASSING THROUGH FIRE RATED STRUCTURES OR FIRE RATED ASSEMBLIES IN ACCORDANCE WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. USE CURRENTLY LISTED U.L. CLASSIFIED PRODUCTS, TESTED BY ASTM E814. USE FOR ALL APPLICABLE PIPE PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, OR FLOOR CEILING ASSEMBLIES IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.

9. COMPRESSED AIR PIPING: 1" AND SMALLER: TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; COPPER-PUSH FITTINGS; AND BRAZED JOINTS.

10. COMPRESSED AIR PIPING: 2" DOWN TO 1-1/4" SHALL BE : TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; AND BRAZED JOINTS.

11. COMPRESSED AIR PIPING: 2-1/2" TO 4" SHALL BE TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; AND BRAZED JOINTS.

ABBREVIATIONS

(D) DEMO
(E) EXISTING
(N) NEW
AAV AIR ADMITTANCE VALVE
AD AREA DRAIN
AFF ABOVE FINISH FLOOR
AFG ABOVE FINISHED GRADE
ARD AIR HANDLING UNIT
B BOILER
BB BASEBOARD
BFG BELOW FINISHED GRADE
BFP BATHFLOW PREVENTER
BT BATH TUB
BV BALL VALVE
CD CONDENSATE DRAIN
CFM CUBIC FEET PER MINUTE
CH CHILLER
CLEANOUT CLEANOUT TO GRADE
COTG CLEANOUT TO GRADE
CU CONDENSING UNIT
CV CHECK VALVE
CUH CABINET UNIT HEATER
DCW DOMESTIC COLD WATER
DF DRINKING FOUNTAIN
DHW DOMESTIC HOT WATER
DSN DOWN SPOUT NOZZLE
ECO ELECTRICAL CONTRACTOR
EDH END OF LINE CLEANOUT
EF ELECTRIC DUCT HEATER
EWH EXHAUST FAN
EWC ELECTRIC WATER COOLER
EWH ELECTRIC WATER HEATER
FURN FURNACE
FCO FLOOR CLEANOUT
FCU FAN COIL UNIT
FD FLOOR DRAIN
FS FLOOR SINK
G GAS
GC GENERAL CONTRACTOR
GM GAS METER
GPM GALLONS PER HOUR
GPH GALLONS PER MINUTE
GUH GAS UNIT HEATER
GW GREASE WASTE
GWH GAS WATER HEATER
HB HOSE BIB
HP HEAT PUMP
HX HEAT EXCHANGER
IM ICE MAKER BOX
KS KITCHEN SINK
LAV LAVATORY
LS LAUNDRY SINK
MAU MAKE-UP AIR UNIT
MC MECHANICAL CONTRACTOR
MF MEASURE FLOW
NIC NOT IN CONTRACT
NC NORMALLY CLOSED
NO NORMALLY OPEN
NTS NOT TO SCALE
OA OUTSIDE AIR
ORD OVER FLOW ROOF DRAIN
P PUMP
PC PLUMBING CONTRACTOR
PRV PRESSURE REDUCING VALVE
PSI POUNDS PER SQUARE INCH
RA RETURN AIR
RAR RETURN AIR REGISTER
RD ROOF DRAIN
RH RADIANT HEATER
RTU ROOF TOP UNIT
SA SUPPLY AIR
SAR SUPPLY AIR REGISTER
SFT SUPPLY FAN
SH SERIES FAN TERMINAL
SOI SAND/OIL INTERCEPTOR
SOV SHUT OFF VALVE
SS SERVICE SINK
T&P TEMPERATURE & PRESSURE
TD TRENCH DRAIN
TYP TYPICAL
UR URINAL
WB WASHER BOX
WCO WALL CLEANOUT
WH WALL HYDRANT

PLUMBING LEGEND

CONDENSATE
DOMESTIC COLD WATER
DOMESTIC HOT WATER
DOMESTIC HOT WATER RECIRC
GREASE WASTE
GAS
ROOF DRAIN
OVERFLOW ROOF DRAIN
SAND OIL
SANITARY SEWER
VENT
TYPICAL PIPE ABOVE/ON ROOF
TYPICAL PIPE BELOW/UNDERGROUND
TYPICAL PIPE EXISTING

VALVES

BALL VALVE
GATE VALVE
CHECK VALVE
PRESSURE REDUCING VALVE (PRV)
MEASURE FLOW
TEE UP
TEE DOWN
ELBOW UP
ELBOW DOWN

FIXTURES

WALL CLEAN OUT
FLOOR CLEANOUT
AREA DRAIN
FLOOR DRAIN
FLOOR SINK FULL COVER
GAS METER
HOSE BIB
BATH TUB/MOP SINK
SINK
2-COMPARTMENT SINK
DRINKING FOUNTAIN/URINAL
WASHER BOX
ICE BOX
WATER CLOSET STACK
WATER CLOSET

MISC.

POINT OF CONNECTION (POC)
(D)XX = DEMO

GENERAL NOTES

1. ALL ITEMS CONNECTING TO POTABLE WATER SHALL MEET THE LEAD FREE STANDARD OF .25% OR LESS LEAD.

2. PLUMBING PLANS REFERENCE FINISHED FLOOR TO FINISHED FLOOR ABOVE. SANITARY SHOWN IS FOR FIXTURES ABOVE UNLESS NOTED OTHERWISE.

3. FIELD VERIFY ALL ROUTING OF PLUMBING LINES WITH OTHER TRADES. FIELD ADJUST ALL ROUTING ACCORDINGLY TO MAKE SYSTEM WORK WITH OTHER TRADES.

4. PER SECTION 416.5 OF THE CURRENT PLUMBING CODE, PROVIDE WATTS MMV ASSE1070 MIXING VALVE AT ALL PUBLIC FIXTURES AS REQUIRED PER LOCAL CODE.

5. PC TO PROVIDE VACUUM BREAKERS AT LOCATIONS WHERE HOSES AND NOZZLES ARE USE, I.E. JANITOR SINKS, BEAUTY SINKS, KITCHEN SPRAYERS, DISHWASHERS, AND BATHS.

6. ALL DRAINAGE LINES 2-1/2" AND UNDER TO BE SLOPED AT MINIMUM 1/4" PER FOOT, AND 3" AND OVER TO BE SLOPED AT MINIMUM 1/8" PER FOOT UNLESS NOTED OTHERWISE.

7. START TRENCHING FOR NEW SANITARY LINE AT FURTHEST FIXTURE (HIGHEST POINT IN SYSTEM) FROM CIVIL CONNECTION POINT TO BUILDING.

8. FIELD ROUTE ALL CONDENSATE LINES, T&P VALVES, AND DRAIN VALVES FROM MECHANICAL AND PLUMBING EQUIPMENT TO SANITARY SEWER RECEPTOR OR STORM/GRADE PER LOCAL CODE AND JURISDICTION.

PLUMBING FIXTURE SCHEDULE																
TAG	ADA	DESCRIPTION	CONNECTIONS				FIXTURE									
			DCW	DHW	WASTE	VENT	MANUFACTURER	MODEL NAME	MODEL #	FLOW RATE	DIMENSIONS	MOUNTING	RM HEIGHT	FINISH	MISC.	REMARKS
WC-1	YES	WATER CLOSET-TANK	1/2"		3"	2"	AMER. STND.	CADET PRO	211AA.104	1.28 GPF	12" R/LJ/2-1/8" TRAP	FLOOR	16-1/2"	VITREOUS CHINA	ELONGATED	
LAV-1	YES	OPEN FRONT LESS COVER					BEEMIS	HEAVY DUTY	1955SSCT		ELONGATED	TOILET		PLASTIC	STAINLESS HINGES	
		WALL HUNG			1-1/2"	2"	AMER. STND.	LUCERNE	0355.012	-	21-1/4"X18-1/4"	WALL HANGER	31" TO 34"	VITREOUS CHINA	FRONT OVERFLOW 4" CENTERS	6W, WB
SS-1	NO	FAUCET	1/2"	1/2"			MOEN	CHATEAU	L64621	0.5 GPM		DECK MOUNT		POLISHED CHROME	4" CENTERS	PS, MV
		SERVICE SINK			3"	2"	ELKAY	DEPENDABILT	14-IC22X22-0X		27"X27-13/16"X43-3/4"	FLOOR	36"	STAINLESS STEEL		
	YES	FAUCET	1/2"	1/2"			CHICAGO FAUCET	MANUAL	540-LD12ABCP	2.2 GPM	8" CENTERS	WALL		CHROME PLATED	ADJ. ARM, HOT/COLD PADDLE	
		MANUAL FOOT PEDAL VALVE	1/2"	1/2"			ZURN	FOOT VALVE	285500-KL			FLOOR		CHROME		
EWC-1	YES	BI-LEVEL	1/2"		2"	2"	ELKAY	EZH20	EZSTLBWSK		36-3/4"X19"X36-1/16"	WALL	ADA	STAINLESS STEEL	W/BOTTLE FILLER	6W, 7
		WALL HANGER					ZURN	SINGLE	Z1222			FLOOR		DURACOAT	CARRIER ONLY	
WB-1	-	WASHER WALL BOX	1/2"				SIOUX CHEF	OX BOX	696 (1F FRAME)			WALL	-	ABS	W/ WATER HAMMER ARRESTOR	
HB-1	N	INTERIOR WALL HYDRANT	3/4"	-	-	-	WOODFORD	ANTI-SIPHON	MODEL 101	-	VARIES W/ WALL DEPTH	INTERIOR ONLY	24"AFG	INTERIOR USE ONLY	W/ BACKFLOW PROTECTION	
AD-1		AREA DRAIN			24"		ZURN	-	Z-507-P	-	7" ROUND	FLOOR		CAST IRON BODY		
FD-1		FLOOR DRAIN			24"		ZURN	-	Z-415B	-	5-1/2" ROUND	FLOOR		NICKEL BRONZE FINISH, STAINLESS STRAINER	HEEL PROOF	TP
DSN-1		DOWNSPOUT NOZZLE			-		ZURN	-	Z199			EXTERIOR	-	NICKEL BRONZE	-	-
RD-1	-	ROOF DRAIN	-	-	-	-	ZURN		Z100		15" DIA	ROOF/EXTERIOR	-	DURA COATED CAST IRON	FLASH CLAMP/GRAVEL GUARD	
ORD-1	-	ROOF DRAIN	-	-	-	-	ZURN		Z100		15" DIA	ROOF/EXTERIOR	-	DURA COATED CAST IRON	FLASH CLAMP/GRAVEL GUARD	

ALTERNATE MFG: AMERICAN STANDARD, CRANE, DELTA, ELKAY, HAWS, HALSEY TAYLOR, J.R.SMITH, KOHLER, LASCO, MOEN, SIOUX CHIEF, STING RAY, SYMMONS, TOTO, WADE, ZURN.

REMARKS:

MV-ASSE 1070/ASME 112.107 MIXING VALVE (110 DEG. F MAX TEMP.)

PS-POP UP STRAINER

TP-ASSE 1018 OR 1044 TRAP PRIMER

WB-WALL BRACKET

6W-6" WALL REQUIRED

GENERAL NOTES:

1. ALL PUBLIC SINKS TO HAVE OPEN GRID STRAINERS.

2. ALL NON-PUBLIC SINKS TO HAVE POP-UP STRAINERS.

3. ALL FIXTURES TO BE PROVIDED W/ FLEXIBLE WATER LINES, ANGLE STOPS (INCLUDING DISHWASHER CONNECTIONS), TRAP WRAP, ESCUTCHEON PLATES AS REQUIRED PER FIXTURE INSTALL AND CODE.

4. ALL INSTALLATIONS SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS, AND STATE AND LOCAL CODES.

5. PROVIDE BACKFLOW PROTECTION ON FIXTURES AS REQUIRED PER LOCAL CODE.

6. TRIP LEVERS SHAL BE TO WIDE/OPEN SIDE OF TOILET.

7. 120V/1ph-5 FLA. 370 WATTS

IPC WASTE AND WATER FIXTURE UNIT CALCULATION											
PROJECT: BRAKES PLUS - SANGER, TX											
BUILDING: 1			CODE: 2021 IPC					DATE: 10/8/2025			
FIXTURE TOTAL	FIXTURE TYPE	OCC.	SUPPLY TYPE	WATER FIXTURE UNITS				WASTE FIXTURES UNITS			
				COLD WATER	COLD TOTAL	HOT WATER	HOT TOTAL	COLD & HOT	COMBINED TOTAL	FIXTURE VALUES	TOTAL VALUES
1	HOSE BIBBS	PRIVATE	1/2" VALVE	2.50	2.5		0.0	2.50	2.5		0.0
2	HOSE BIBBS ADDITIONAL	PRIVATE	1/2" VALVE	1.00	2.0		0.0	1.00	2.0		0.0
1	DRINKING FOUNTAIN	OFFICES	3/8" VALVE	0.25	0.3		0.0	0.25	0.3	0.50	0.5
2	LAVATORY	PUBLIC	FAUCET	1.50	3.0	1.50	3.0	2.00	4.0	1.00	2.0
1	SERVICE SINK	OFFICES	FAUCET	2.25	2.3	2.25	2.3	3.00	3.0	2.00	2.0
2	WATER CLOSET	PUBLIC	FLUSH TANK	5.00	10.0		0.0	5.00	10.0	4.00	8.0
TOTAL FIXT. UNITS						20.00		5.25		21.75	12.50
GPM										20.0	4"
PIPE SIZE										1"	1/8"
TOTAL FIXTURE UNITS											
BUILDING MAIN SIZE											
BUILDING MAIN SLOPE											
WATER SERVICE LINE SIZE		FT/SEC	PSI/100FT	NOTES							
TAP & METER		3/4"									
BFP & BLDG MAIN		1"	7.82	9.96							

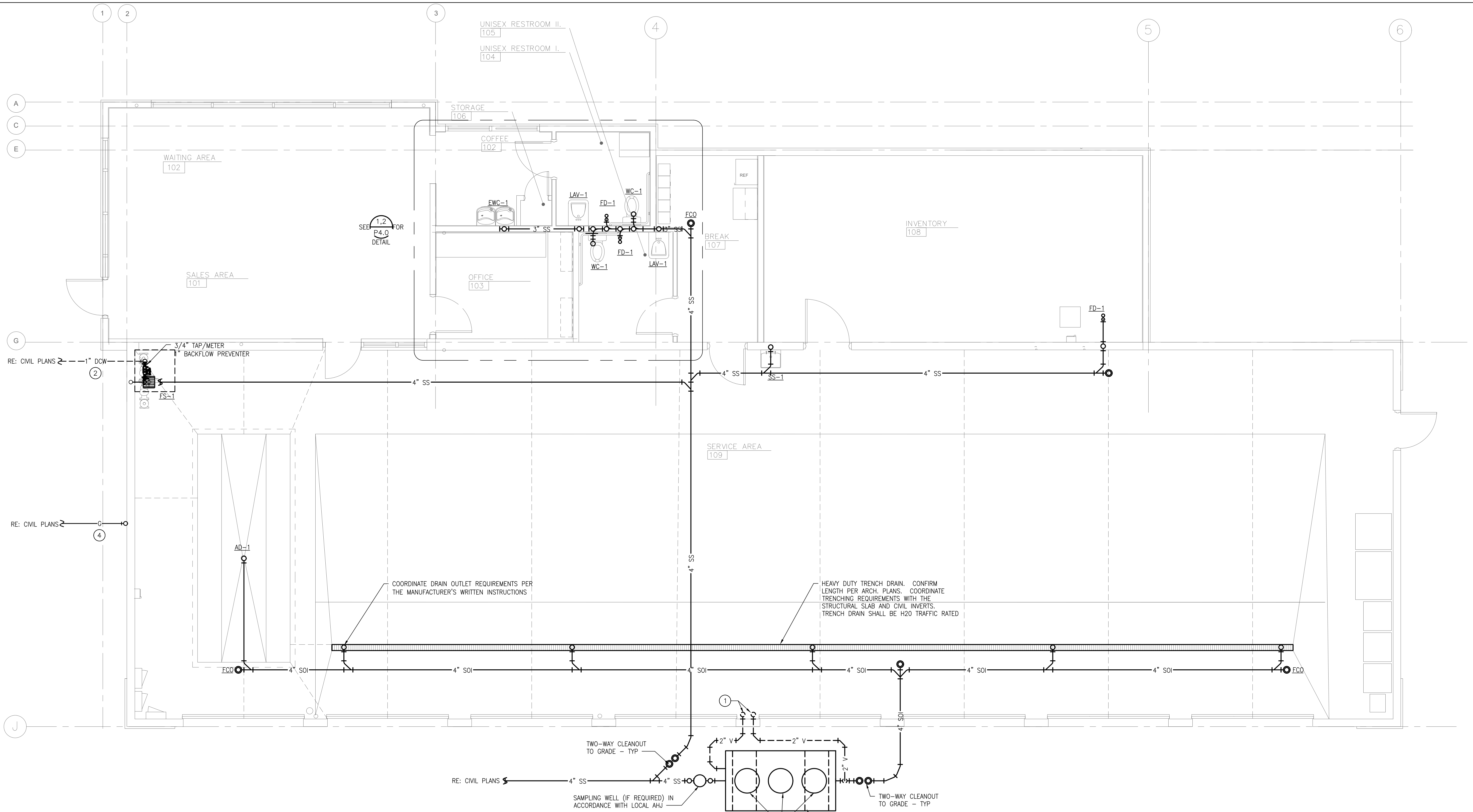
ELECTRIC WATER HEATER SCHEDULE										
PLAN MARK	MANUFACTURER	MODEL NO.	TANK GALLONS	ELECTRICAL VOLT	PH	KW	GPH RISE	RISE (F)	REMARKS	
EWH-1	STATE	PCE-20-10MSA	20	120	1	1.5	8	80	1	
REMARKS:										
1. PROVIDE 2 1/2" DEEP DRAIN PAN. ROUTE 3/4" DRAIN TO LAV TRAP OR FLOOR DRAIN.										
PUMP SCHEDULE										
PLAN MARK	MANUFACTURER	MODEL NO.	GPM	HEAD (FT)	RPM	HP	ELECTRICAL VOLT	PHASE	REMARKS	
CP-1	B & G	NBF-18S	3	12	3300	1/25	120	1	1, 2	
REMARKS:										
1. PROVIDE AQUASTAT AND TIMER KIT.										
2. PROVIDE LEAD-FREE BRONZE OR SS PUMP.										

CODES & DESIGN CRITERIA	
JURISDICTION:	SANGER, TX
PLUMBING CODE:	2021 IPC
LOCAL ADDENDUMS:	YES
PEAK RAINFALL RATE:	4.0 IN./HR
GAS DELIVERY PRESSURE:	2 PSI
NUMBER OF FLOORS:	1

PLUMBING SHEET LIST	
SHEET #	SHEET TITLE
P0.1	PLUMING SPECS, SCHEDULES & LEGEND
P1.0	UNDERGROUND PLUMBING PLAN
P1.1	PLUMBING PLAN
P2.1	PLUMBING ROOF PLAN
P3.1	PLUMBING DETAILS
P4.0	PLUMBING ISOMETRICS

PIPE HANGER SPACING			
TABLE 305.4 (MCC) & 308.5 (IPC)			
PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	REMARKS
ABS	4	10	B
PVC	4	10	B
COPPER OR COPPER ALLOY	12	10	
COPPER 1-1/4" AND SMALLER	6	10	
COPPER 1-1/2" AND LARGER	10	10	
CROSS LINK PE (PEX)	2.67 (32")	10	B
CAST IRON	5	15	A
STAINLESS STEEL	10	10	B
A. THE MAXIMUM HORIZONTAL SPACING OF CAST IRON PIPE HANGERS SHALL BE INCREASED TO 10 FEET WHERE 10 FOOT LENGTHS OF PIPE ARE INSTALLED.			
B. MIDSTORY GUIDE SHALL BE INSTALLED FOR SIZES 2 INCHES AND SMALLER TO PREVENT PIPE MOVEMENT			

PIPE INSULATION (TABLE C403.11.3 2021 IECC)							
MINIMUM PIPE INSULATION THICKNESS (IN INCHES) a, c							
FLUID OPERATING TEMPERATURE AND USAGE (F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY Btu"m/(h"ft2°F)b	MEAN RATING TEMPERATURE (F)	<1	1 TO <1-1/2	1-1/2 TO < 4	4 TO < 8	>= 8
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.						



GENERAL NOTES:

- BUILDING SEWERS SHALL BE PROVIDED WITH CLEANOUTS LOCATED NOT MORE THAT 100'-0" APART, IPC SECTION 708.3.2
- CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45 DEGREES FOR BUILDING SEWER. FOR BUILDING DRAINS WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING, IPC SECTION 708.3.3
- REFER AND COORDINATE W/ CIVIL PLANS FOR SANITARY, GAS AND WATER EXIT/ENTRY LOCATIONS.
- PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS, RE: DETAIL ON SHEET P3.1

DRAWING NOTES:

- (2), 2" VENT UP THROUGH SLAB, COMBINE INTO (1) 3" V, ROUTE AS INDICATED. TERMINATE 3" V TO 3" VTR.
- 1" DOMESTIC WATER TAP / 3/4" METER ON SITE UPSIZE TO A 1" DOW AFTER METER, TO A 1" BACKFLOW IN BUILDING. COORDINATE PER CIVIL PLANS.
- H2O TRAFFIC RATED MANHOLE ASSEMBLY, ACCESS COVERS, MANHOLE RING EXTENSIONS AS REQUIRED FOR DEPTH OF INTERCEPTOR.
- NATURAL GAS SERVICE LINE FROM UTILITY CO. MAIN, PER THE UTILITY CO. STANDARDS. COORDINATE WITH UTILITY CO.

SAND AND OIL INTERCEPTOR SIZING

PER SECTION 1003.4.2.2 OF 2021 IPC: 6 CUBIC FEET FOR THE FIRST 100 SQ.FT. AND 1 CUBIC FOOT FOR EACH ADDITIONAL SQUARE FEET.

SERVICE AREA SQUARE FOOTAGE = 3,216

(3,216-100) SQ.FT. / 100 = 32 CUBIC FEET

+ 6 CUBIC FEET

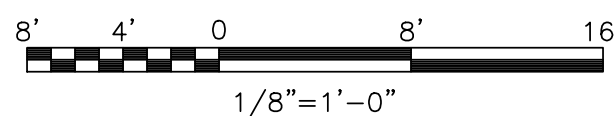
= 38 CUBIC FEET

38 CU.FT. X 7.48 GAL/CU.FT = 285 GALLON REQUIRED.

PROVIDING A 1,000 GALLON INTERCEPTOR

1 UNDERGROUND PLUMBING PLAN

P1.0



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102 Poncho St.

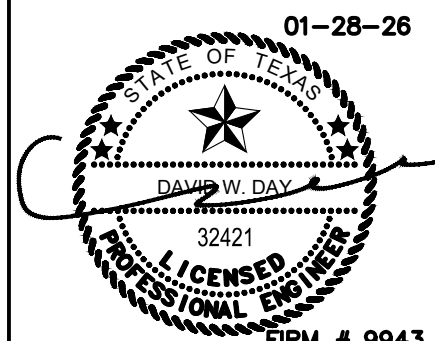
P.O. Box 1640 Anahuac, TX 77514

Telephone 713-927-4470

Texas Registered Engineering Firm
F-9943

BRAKES PLUS

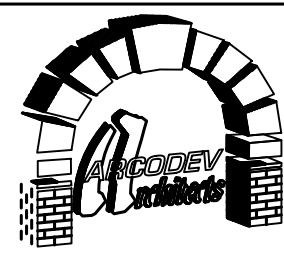
NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76286



ARCHITECT OF RECORD

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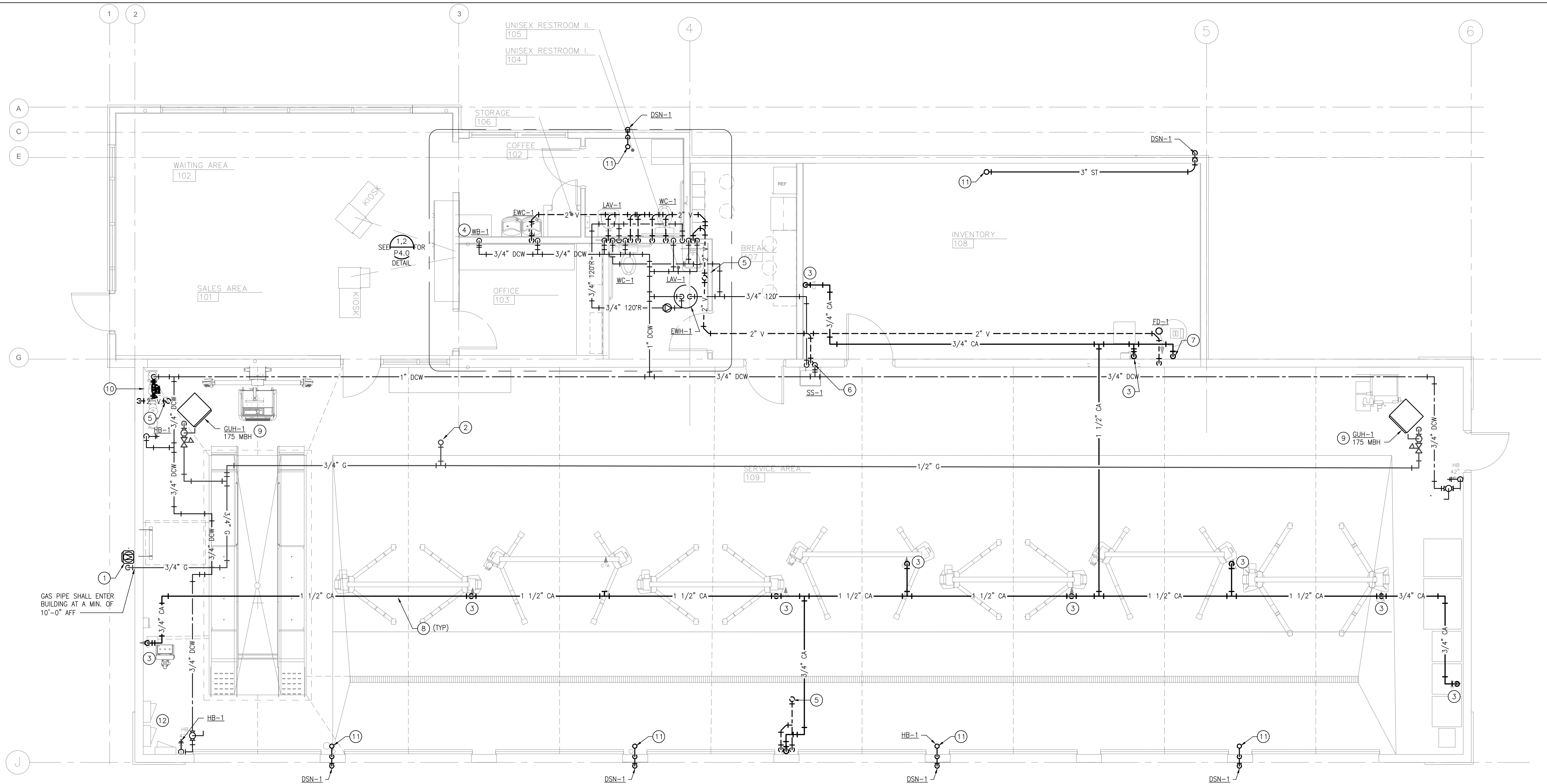


45 SPYGLASS DRIVE
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VOICE: 303.681-8925
NORMHERMAN@ARC CODEV.COM

SHEET

P1.0

UNDERGROUND
PLUMBING PLAN



DRAWING NOTES:

- 1 GAS METER: SIZING BASED ON 175'-0" AT 2.0 PSI GAS PRESSURE. TOTAL CONNECTED GAS LOAD = 415 MBH. CONFIRM GAS PRESSURE WITH LOCAL GAS COMPANY SERVICE.
- 2 3/4" G UP THRU ROOF FOR RTU-1, 65 MBH
- 3 3/4" G DROP, TERMINATE PER DETAIL. CONFIRM HEIGHT REQUIREMENT WITH EQUIPMENT SERVED. CONTRACTOR TO VERIFY SIZE IS ADEQUATE FOR EQUIPMENT USED.
- 4 1/2" DCW DN IN WALL TO RECESSED WALL OUTLET VALVE BOX, PROVIDE W/ INLINE BACKFLOW PREVENTER. ROUGH-IN FOR COFFEE MAKER.
- 5 3" V UP TO 3" VTR.
- 6 3/4" DCW/DHW DN AT WALL, OFFSET 1/2" DCW/DHW TO FAUCET AND 1/2" DCW/DHW TO FOOT PEDALS.
- 7 COMPRESSED AIR MAIN FROM COMPRESSOR OUTLET. INSTALL PER MANUFACTURERS INSTRUCTIONS. PROVIDE ONE DISCONNECT AT AIR COMPRESSOR.
- 8 SLOPE COMPRESSED AIR DOWN IN DIRECTION OF SLOPE AT 1/8" PER FOOT, TYPICAL.
- 9 TERMINATE W/ SHUT-OFF VALVE, PRV AND DIRT LEG. PRV SHALL BE CAPABLE OF REDUCING FROM 2 PSI GAS TO 6" W.C. AT MBH AS INDICATED. PROVIDE VENTLESS REGULATOR IS LOCAL AHJ ALLOWS. IF NOT, VENT SHALL EXIT TO ATMOSPHERE, FULL SIZE.
- 10 1" LEADFREE DOMESTIC WATER BACKFLOW DEVICE, FEBCO LF825Y OR EQUAL. RELIEF DRAIN PIPING FROM AIR GAP FITTING TO TERMINATE OUTDOORS. DISCHARGE MIN 6" AFG, TURN DOWN TO FINISHED GRADE. TERMINATION SHALL INCLUDE STAINLESS STEEL INSECT SCREEN.
- 11 3" RD FROM ABOVE AND DOWN. EXTEND TO EXTERIOR WALL, TERMINATE AT SPLASHBLOCK PER ARCHITECTURAL PLANS.
- 12 APIPING SHALL NOT BE LOCATED IN THE WORKING SPACE IN FRONT OF OR THE DEDICATED SPACE ABOVE THE ELECTRICAL PANELS. COORDINATE WITH THE E.C.

1 PLUMBING PLAN

P1.1

8' 4' 0' 8' 16'

1/8" = 1'-0"

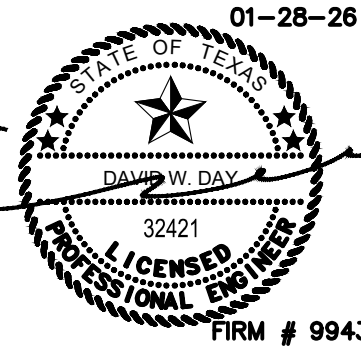


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BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76286



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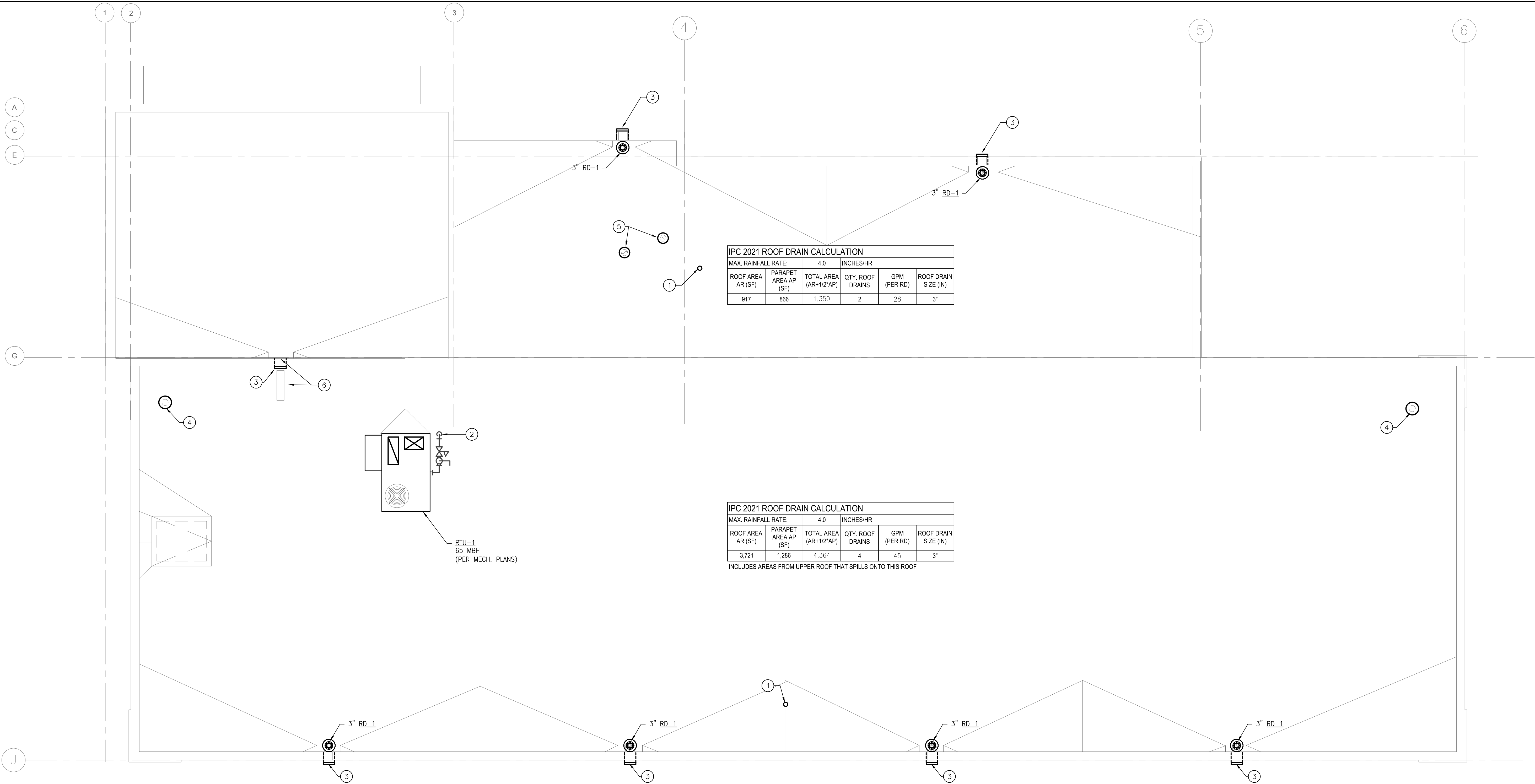


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SHEET

P1.1

PLUMBING PLAN



IPC 2021 ROOF DRAIN CALCULATION					
MAX. RAINFALL RATE:		4.0	INCHES/HR		
ROOF AREA AR (SF)	PARAPET AREA AP (SF)	TOTAL AREA (AR+1/2*AP)	QTY. ROOF DRAINS	GPM (PER RD)	ROOF DRAIN SIZE (IN)
917	866	1,350	2	28	3"

IPC 2021 ROOF DRAIN CALCULATION					
MAX. RAINFALL RATE:		4.0	INCHES/HR		
ROOF AREA AR (SF)	PARAPET AREA AP (SF)	TOTAL AREA (AR+1/2*AP)	QTY. ROOF DRAINS	GPM (PER RD)	ROOF DRAIN SIZE (IN)
3,721	1,286	4,364	4	45	3"

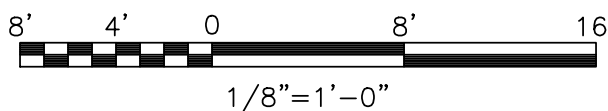
INCLUDES AREAS FROM UPPER ROOF THAT SPILLS ONTO THIS ROOF

DRAWING NOTES:

- 3" PLUMBING VENT UP THRU ROOF FROM BELOW, RE: PLUMBING PLANS.
- GAS PIPING UP FROM BELOW, ROUTE AND TERMINATE W/ SHUT-OFF VALVE, PRV AND DIRT LEG AT ROOFTOP UNIT. PRV SHALL BE CAPABLE OF REDUCING FROM 2 PSI GAS PRESSURE TO 7"W.C. AT MBH AS INDICATED.
- OVERFLOW SCUPPER, SIZE PER ARCHITECTURAL PLANS, DETAIL 1/A2-4.
- GAS-FIRED UNIT HEATER FLUE TERMINAL, BY H.V.A.C.
- TOILET EXHAUST ROOF TERMINAL, BY H.V.A.C.
- 8" X 8" OPENING IN WALL FOR UPPER ROOF DRAINAGE. RE: ARCH PLANS. SPLASH BLOCK ON LOWER ROOF BY G.C.

1 PLUMBING ROOF PLAN

P2.1

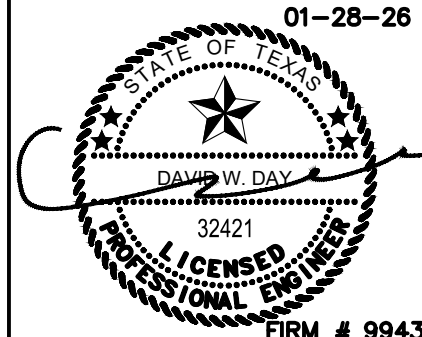


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BRAKES PLUS

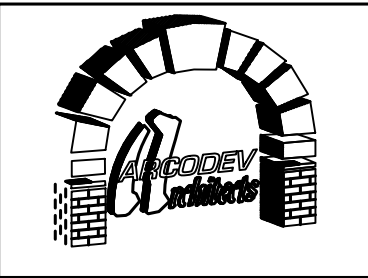
NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
SANGER, TEXAS 76266



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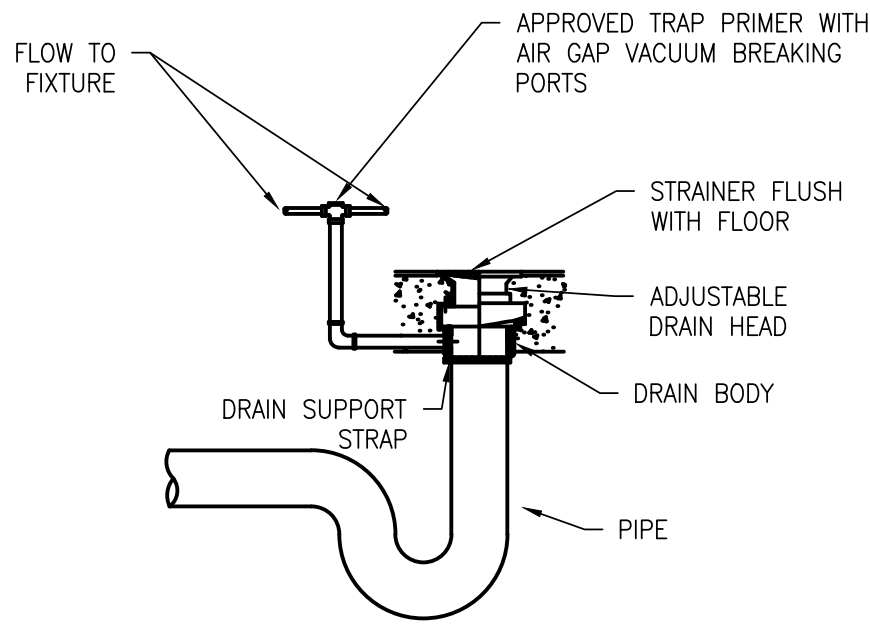


45 SPYGLASS DRIVE
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SHEET

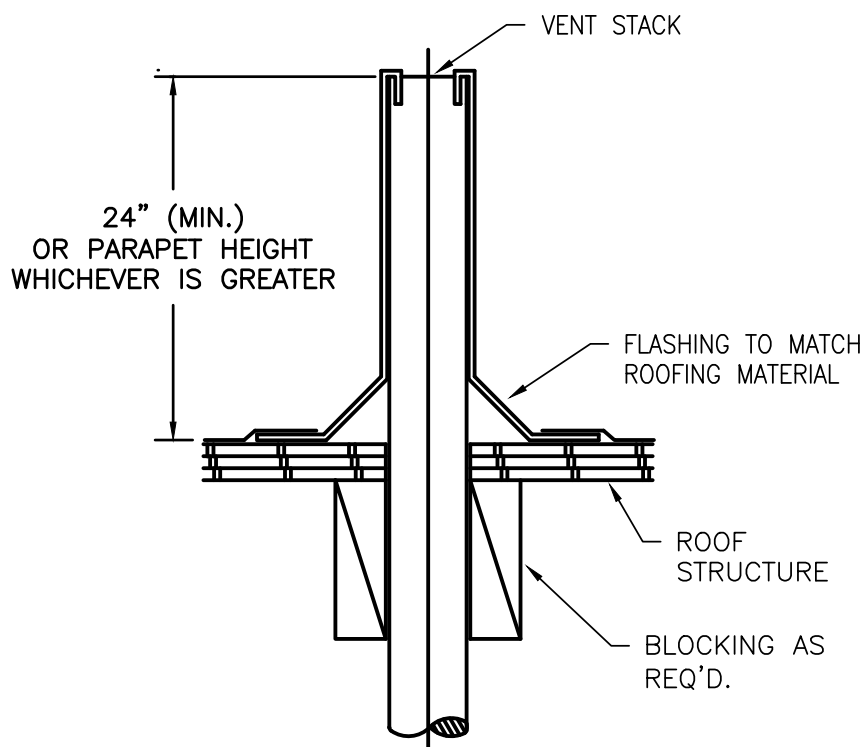
P2.1

PLUMBING
ROOF PLAN



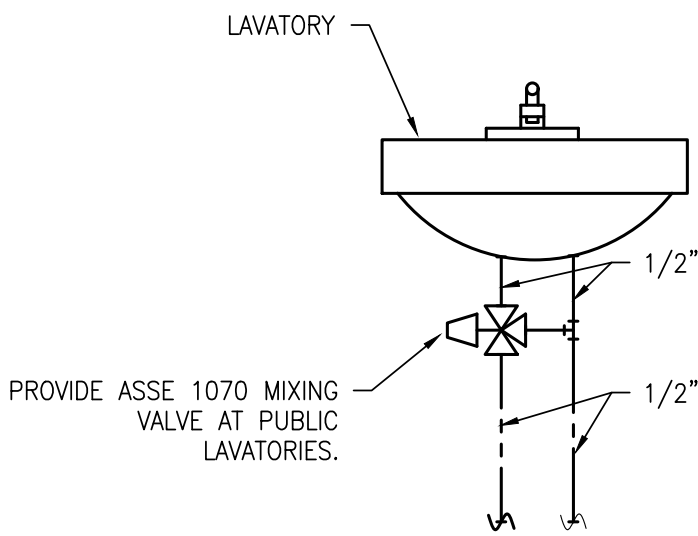
FLOOR DRAIN W/
TRAP PRIMER DETAIL

NOT TO SCALE



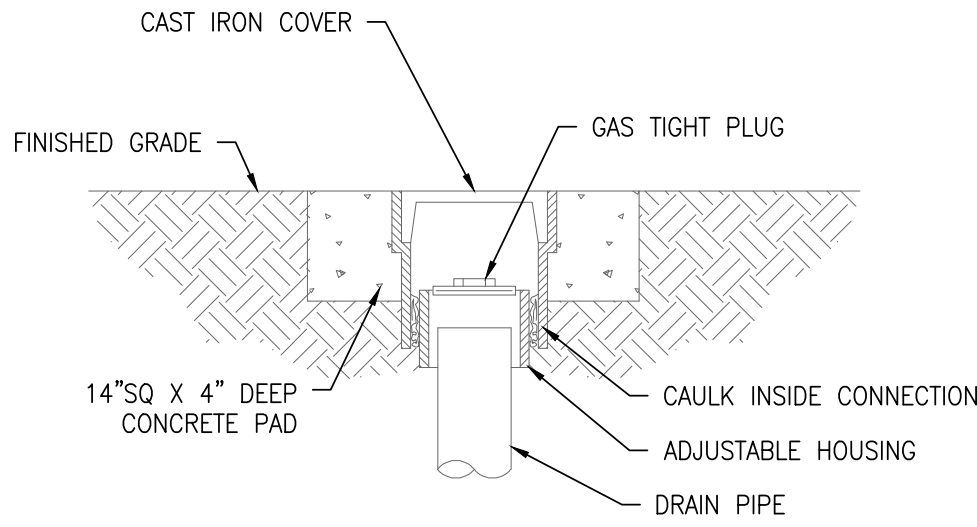
PIPE THRU ROOF DETAIL

NOT TO SCALE



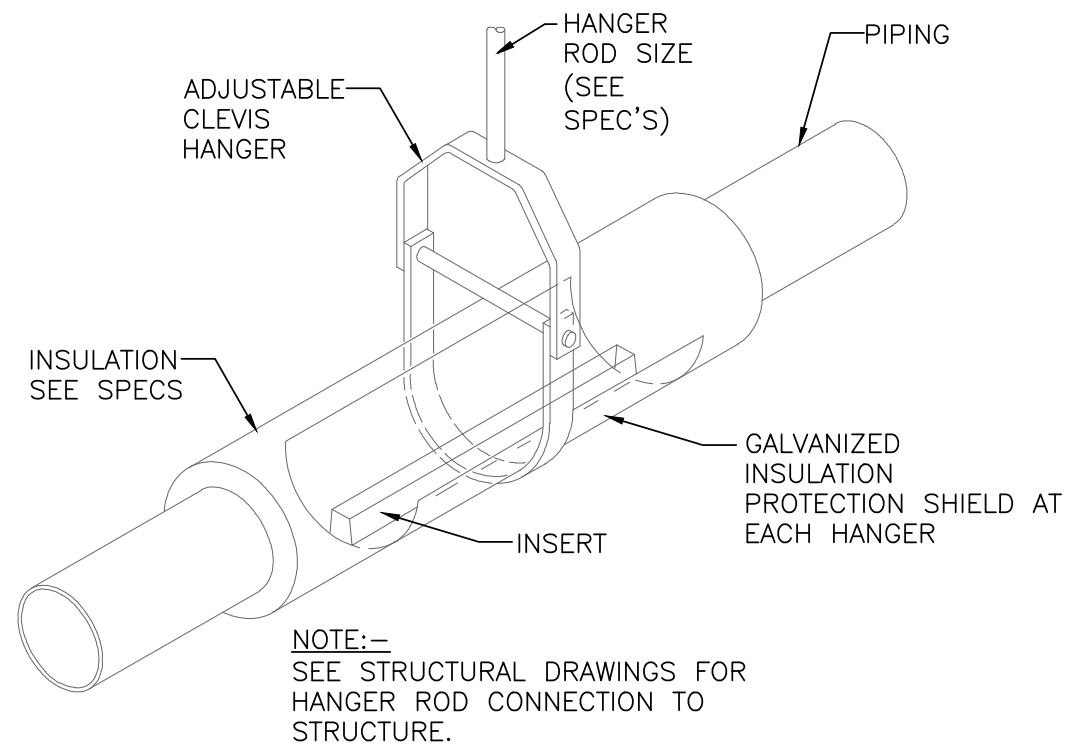
THERMOSTATIC MIXING VALVE DETAIL

NOT TO SCALE



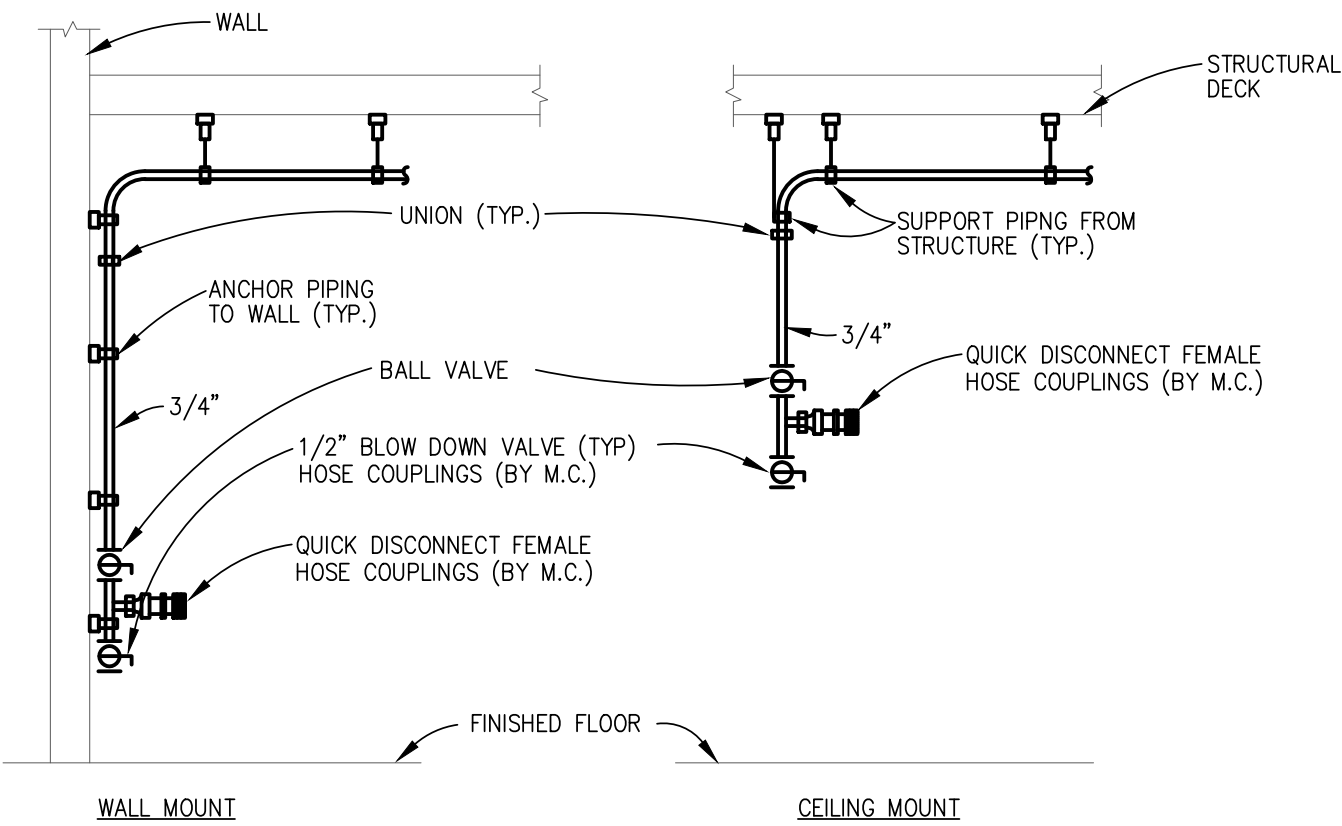
OUTSIDE CLEANOUT TO GRADE

NOT TO SCALE



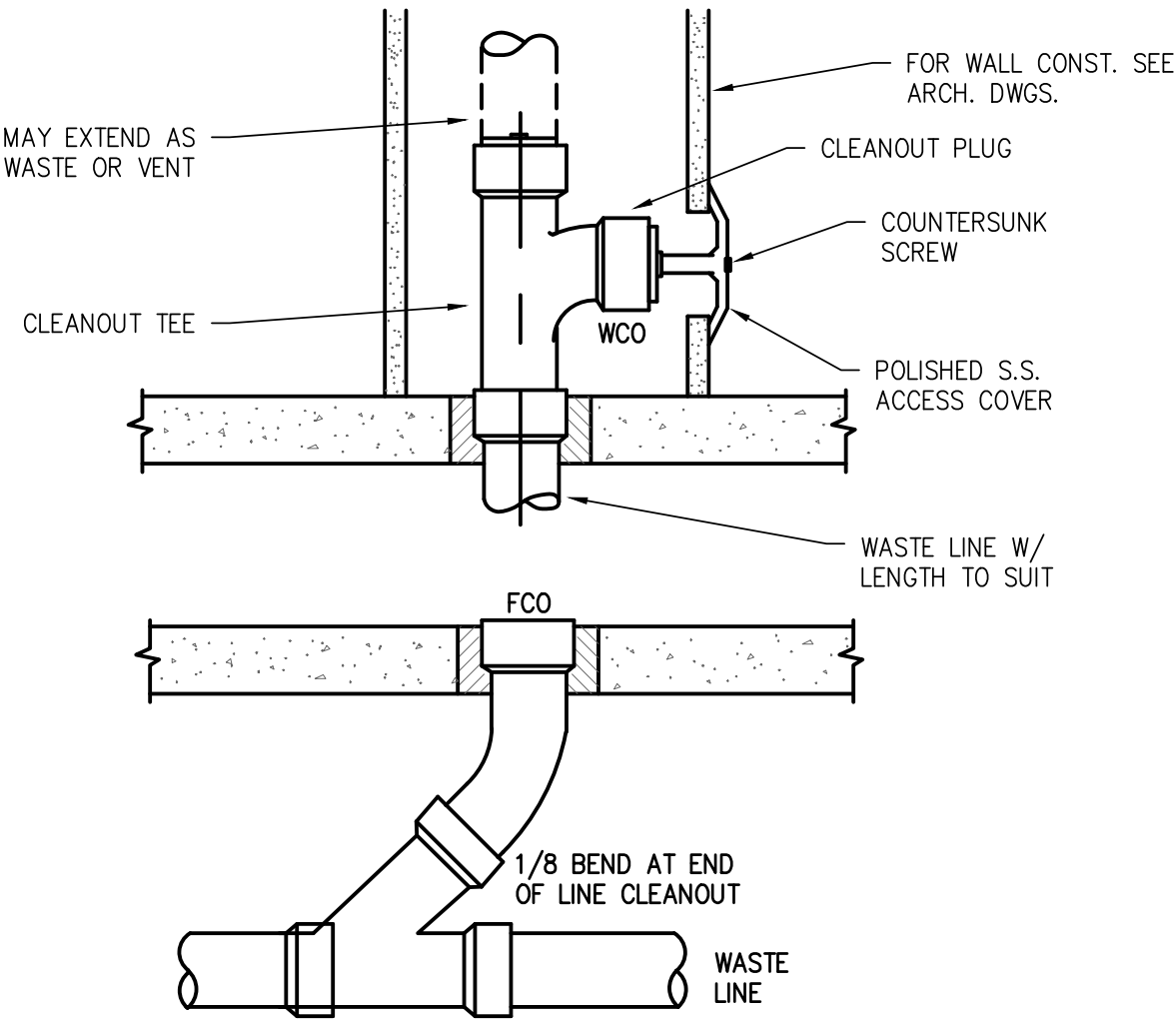
PIPE HANGER AND INSULATION DETAIL

NOT TO SCALE



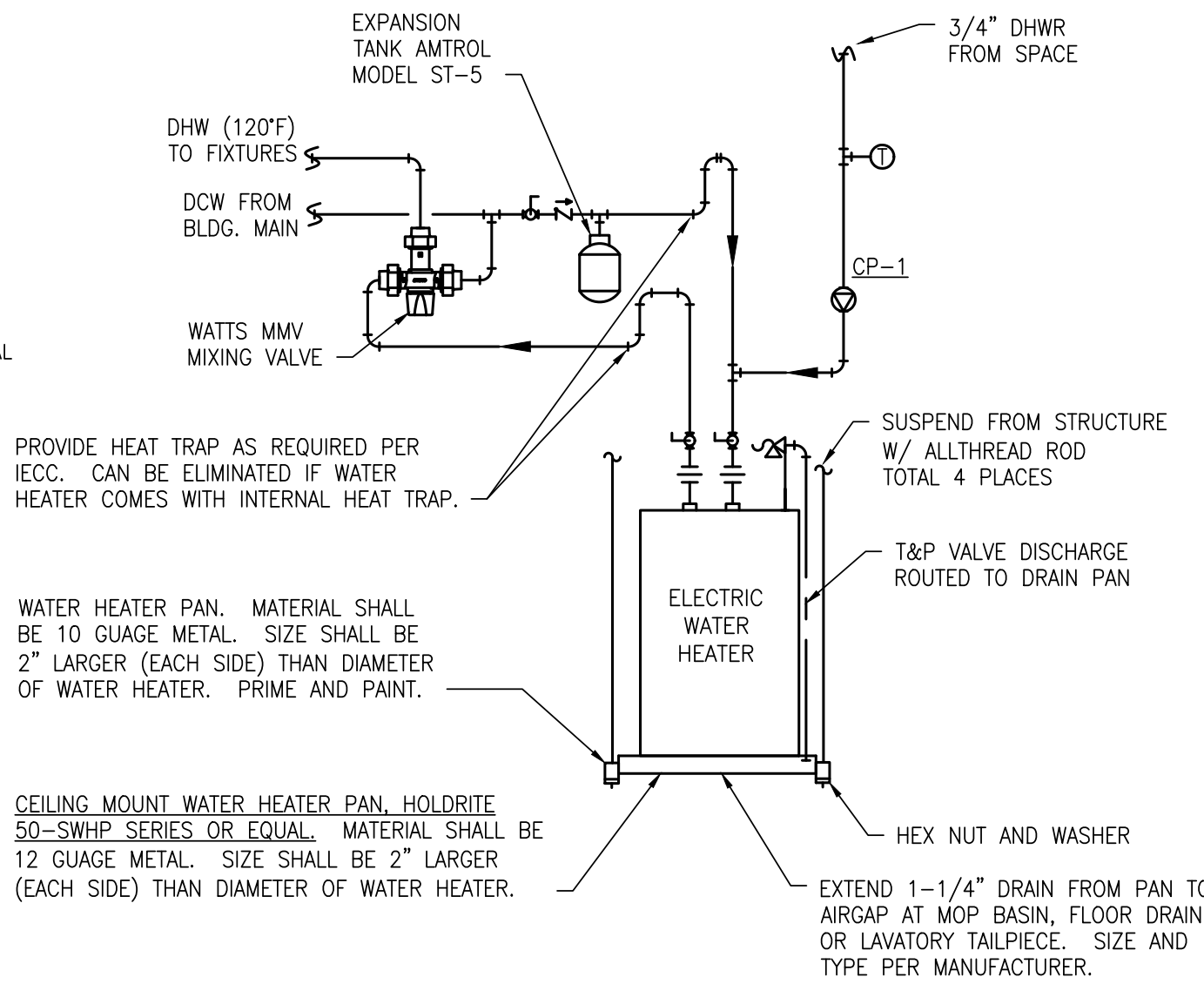
COMPRESSED AIR CONNECTION DETAILS

NOT TO SCALE



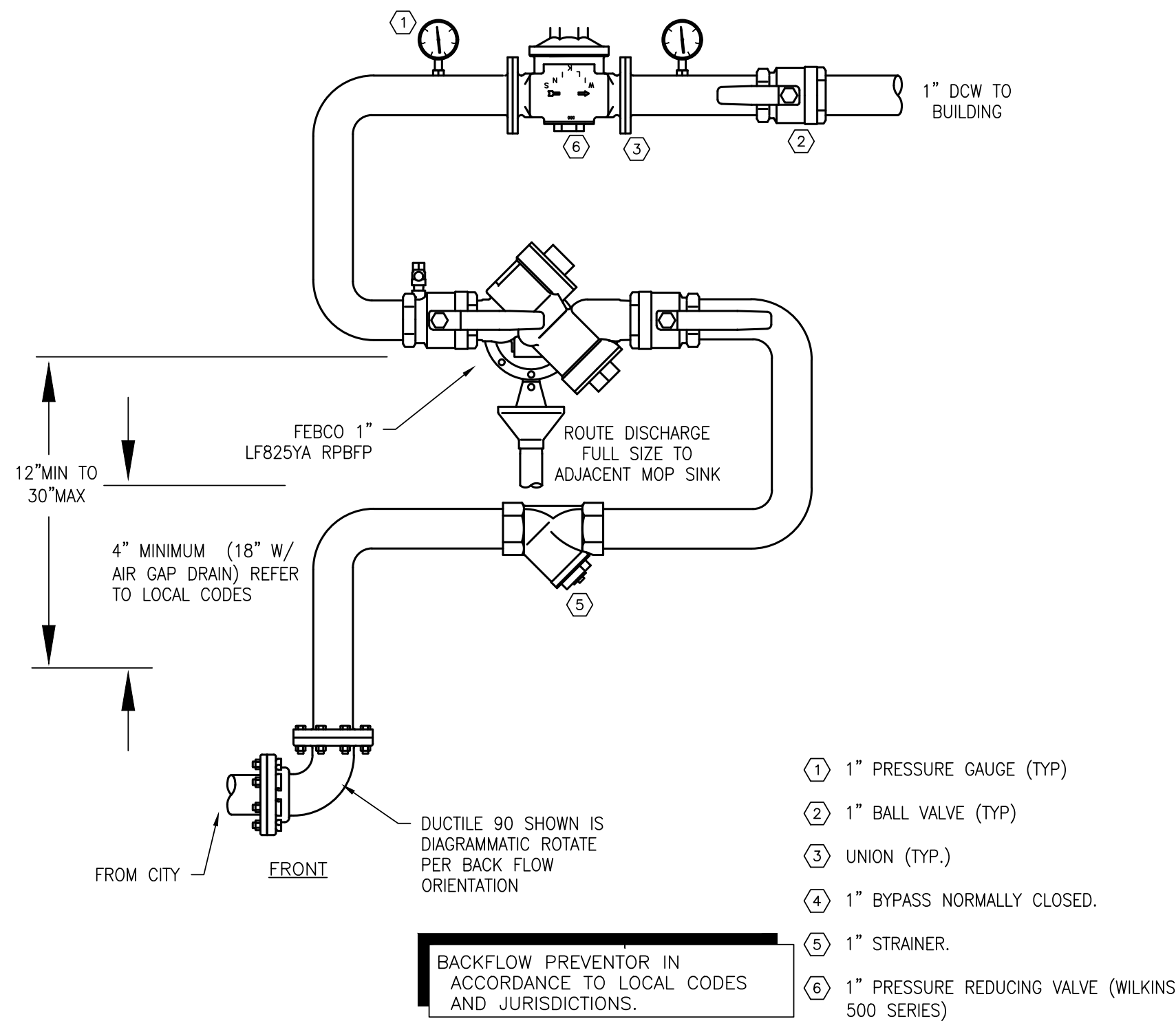
CLEANOUT DETAILS

NOT TO SCALE



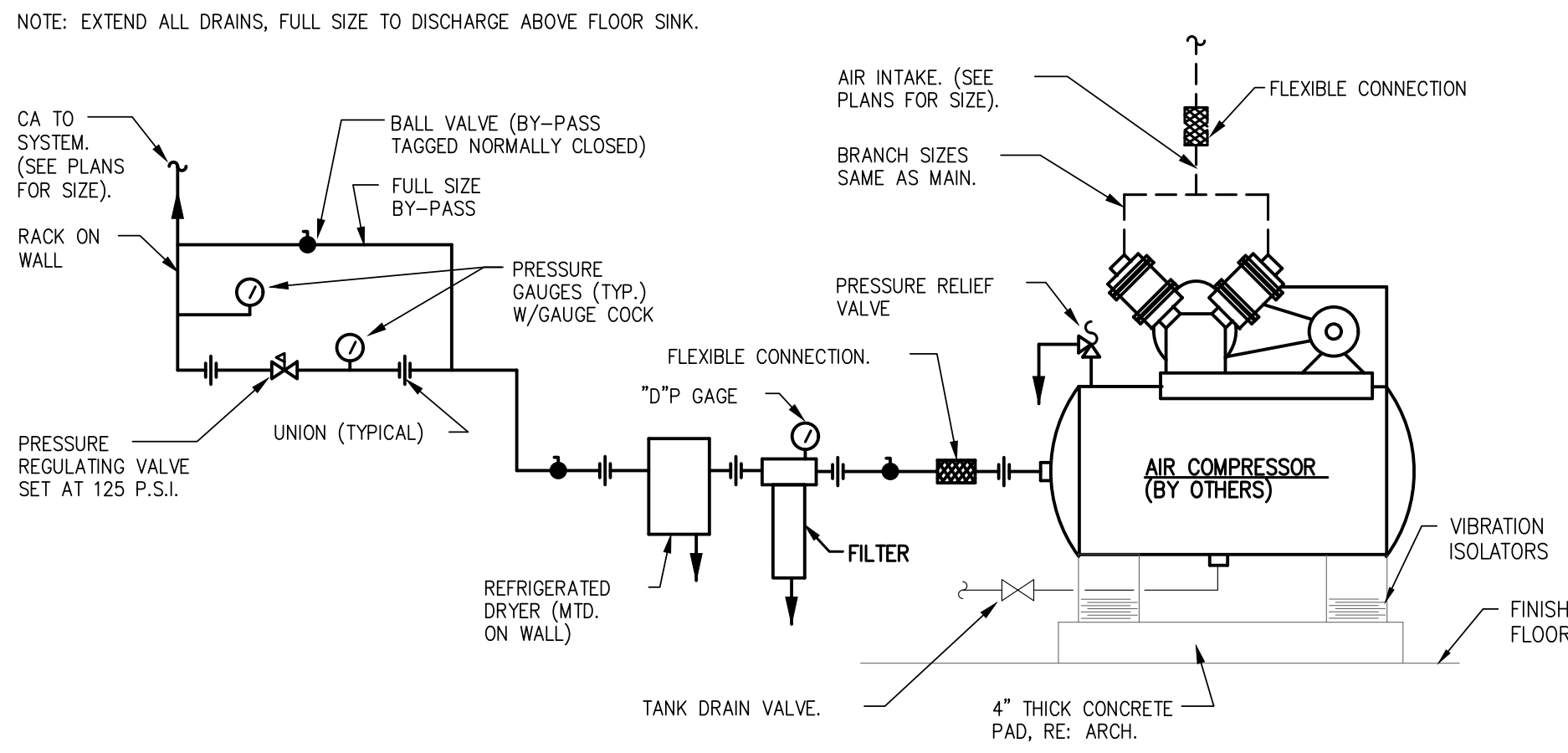
ELECTRIC WATER HEATER DETAIL-ABOVE CEILING

NOT TO SCALE



DOMESTIC WATER ENTRY
BACKFLOW DETAIL

NOT TO SCALE

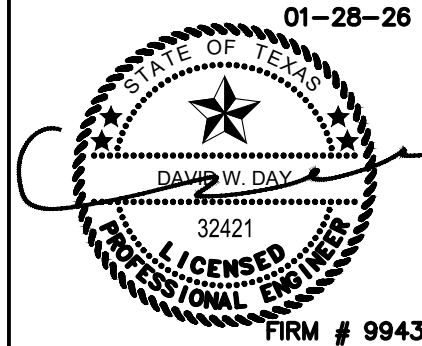


AIR COMPRESSOR PIPING DETAIL

NOT TO SCALE

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3 BLOCK B
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PROJ # 251617

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SHEET

P2.0

PLUMBING DETAILS



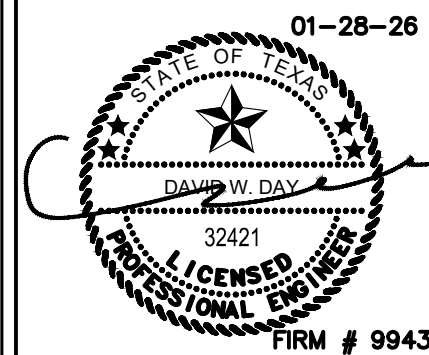
NOTE:
FOR LAVATORIES, THE PIPE VOLUME AND DISTANCE
SHALL BE PER SECTION C404.5 OF 2018 IECC.
REFER TO TABLE C404.5.1 OF IECC FOR MAXIMUM
ALLOWABLE DISTANCES.
A 1/2"PIPE SHALL BE NO LONGER THAN 2'-0"
AND A 3/4"PIPE SHALL BE NO LONGER THAN
0.5'(6") FROM THE HEATED SOURCE MAIN.

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SHEET

P3.0

PLUMBING ISOMETRICS

ELECTRICAL GENERAL NOTES

- DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
- FINAL CONNECTIONS & ROUGH-IN REQUIREMENTS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
- CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.
- PROPOSED SUBSTITUTIONS OF ELECTRICAL EQUIPMENT OR REQUEST FOR "OR EQUAL" OR "APPROVED EQUAL" LISTING SHALL BE SUBMITTED TO ARCHITECT NOT LESS THAN TEN (10) WORKING DAYS PRIOR TO BID.
- WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
- WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES.
- PROVIDE PERMITS AND INSPECTIONS REQUIRED.
- PROVIDE RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.
- VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
- SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
- WIRE SHALL BE COPPER, 75 DEGREE C RATED FOR GENERAL USE. FOR HIS FIXTURES AND WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS, WIRE SHALL BE COPPER, MINIMUM 90 DEGREE C RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30 DEGREE C AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
- CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS OR EQUIPMENT.
- SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC., SHALL BE CONNECTED AND OPERABLE.
- VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC., REQUIRED. BACKFILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
- PROVIDE MAINTENANCE RECEPTACLE WITHIN 25"-0" OF ALL MECHANICAL OR MOTORIZED EQUIPMENT.
- SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AND CONNECT EQUIPMENT AS REQUIRED. PROVIDE FUSES OR HACR-TYPE CIRCUIT BREAKERS FOR ALL AIR CONDITIONING EQUIPMENT SIZED IN ACCORDANCE WITH MANUFACTURER'S NAMEPLATE.
- PROVIDE ENGRAVED NAMEPLATES ON PANELBOARDS, DISCONNECT SWITCHES, ETC. INDICATING EQUIPMENT DESIGNATION (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE. NAMEPLATES TO BE MECHANICALLY FASTENED.
- PANEL DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
- ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 P.V.C. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH P.V.C. JACKET OR APPROVED EQUAL PROTECTION.
- EMT, NON-METALLIC AND FLEXIBLE METAL CONDUITS SHALL HAVE A CODE SIZED COPPER GROUNDING CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.
- FIRE ALARM, SOUND, TELEPHONE, COMPUTER, AND SIMILAR SYSTEMS CONDUITS LARGER THAN 1" SHALL HAVE LONG RADIUS SWEEPS (12 TIMES THE DIAMETER).
- ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L.
- WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75 DEGREE C.
- RECEPTACLES INSTALLED OUTSIDE, ON THE BUILDING EXTERIOR OR ROOF, WITHIN 6' OF A SINK OR WATER COOLER CONNECTION, VENDING MACHINES, AND KITCHEN AREAS SHALL BE GFCI TYPE OR PROTECTED BY GFCI CIRCUIT BREAKER PER NEC 511.12.
- ALL NEW EQUIPMENT SUCH AS SWITCHBOARDS, DISTRIBUTION PANELS, DISCONNECT SWITCHES, TRANSFORMERS, AND PANELBOARDS SHALL BE BY THE SAME MANUFACTURER.
- ELECTRICAL CONTRACTOR SHALL SUBMIT 5 COPIES OF ALL ELECTRICAL EQUIPMENT AND LIGHT FIXTURES TO ENGINEER VIA GENERAL CONTRACTOR FOR APPROVAL PRIOR TO ORDERING.
- ELECTRICAL CONTRACTOR TO PROVIDE FINAL CONNECTION OF OWNER FURNISHED EQUIPMENT. VERIFY EXACT REQUIREMENTS PRIOR TO ROUGH-IN.
- HANDLE TIES SHALL BE PROVIDED FOR ALL MULTI-WIRED BRANCH CIRCUITS UNLESS INDIVIDUAL NEUTRAL CONDUCTORS ARE PROVIDED PER NEC 210.4(B).
- FURNISH ALL MECHANICAL EQUIPMENT WITH FUSIBLE DISCONNECTS. THESE DISCONNECTS SHALL BE EQUIPPED WITH CLASS "R" FUSES.

ALL ELECTRICAL WORK SHALL COMPLY WITH N.E.C. REQUIREMENTS

[illegible]

ELECTRICAL LEGEND

	DUPLEX OUTLET
	DEDICATED DUPLEX OUTLET
	AUTOCLAVE RECEPTACLE
	FOUR- PLEX OUTLET
	220-VOLT OUTLET
	FLOOR OUTLET
	TELEPHONE JACK
	TELEPHONE JACK +60"
	DATA JACK
	PLUGMOLD
	AC
	LIGHT SWITCH @ 48" AFF
	THREE-WAY LIGHT SWITCH @48" AFF
	TELEPHONE BACKBOARD W/ OUTLET
	ELECTRICAL PANEL
	TIME CLOCK
	SIGN OUTLET
	JUNCTION BOX
	THERMOSTAT

VERIFY ELECTRICAL REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION

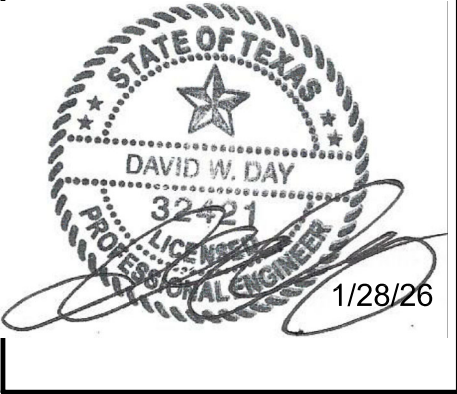
ALL ELECTRICAL WORK SHALL COMPLY WITH N.E.C. REQUIREMENTS

VERIFY ELECTRICAL REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION

BRAKES PLUS

NWC OF FM455 & ACKER STREET
LOT 2R3; BLOCK B
SANGER, TEXAS 76266

BRAKES PL
NWC OF FM455 & ACKER STREET
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	01-28-26	FOR CONSTRUCTION

ARCODEV JOB #: _____ .

CLIENTJOB #:

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DATE OF ISSUE: 010.20.25



45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.881-8925
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SHEET

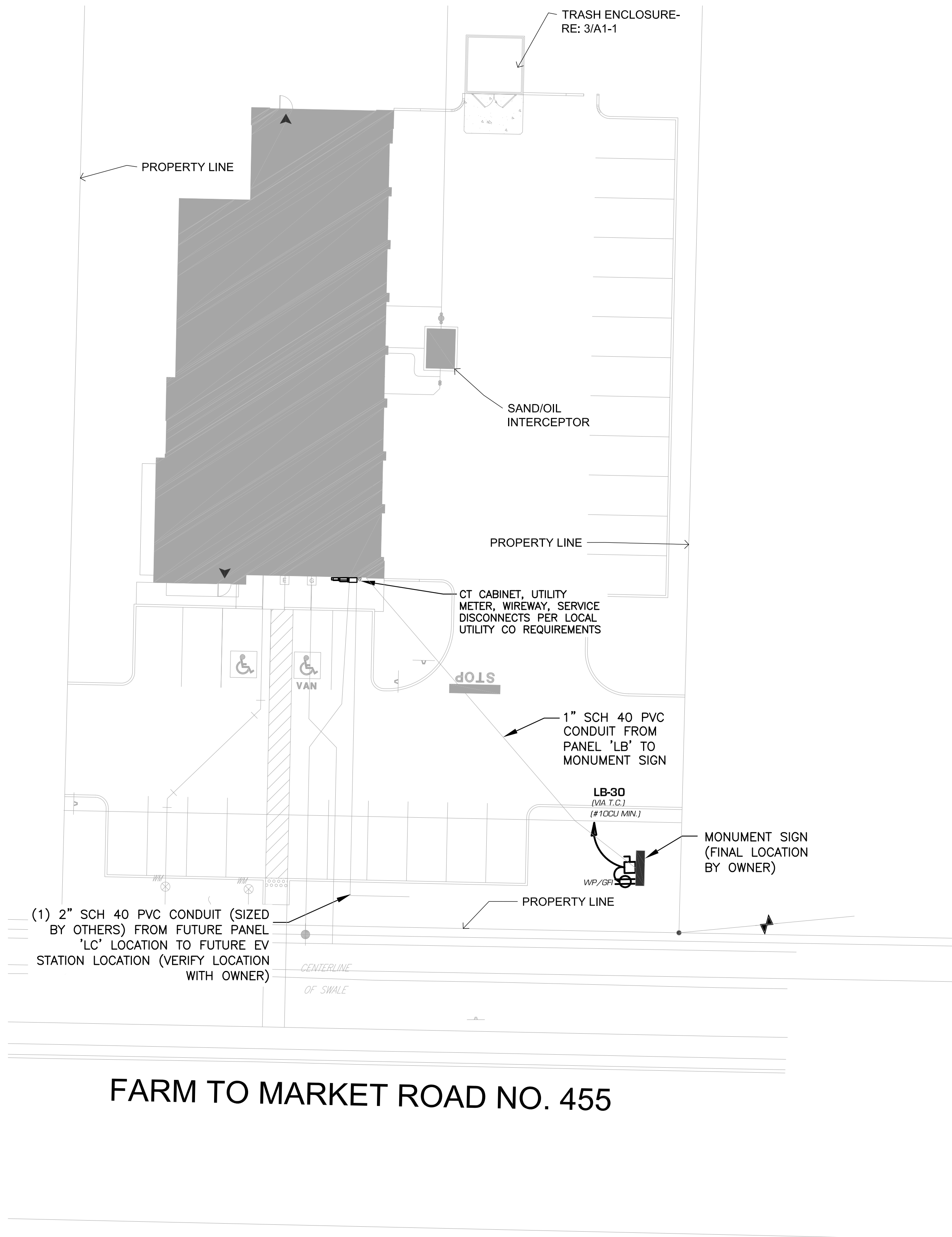
EO.1

ELECTRICAL COVER SHEET

DAVID W DAY , P.E.

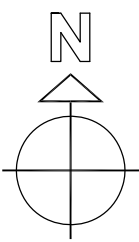
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PROJ #251617



FARM TO MARKET ROAD NO. 455

1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"



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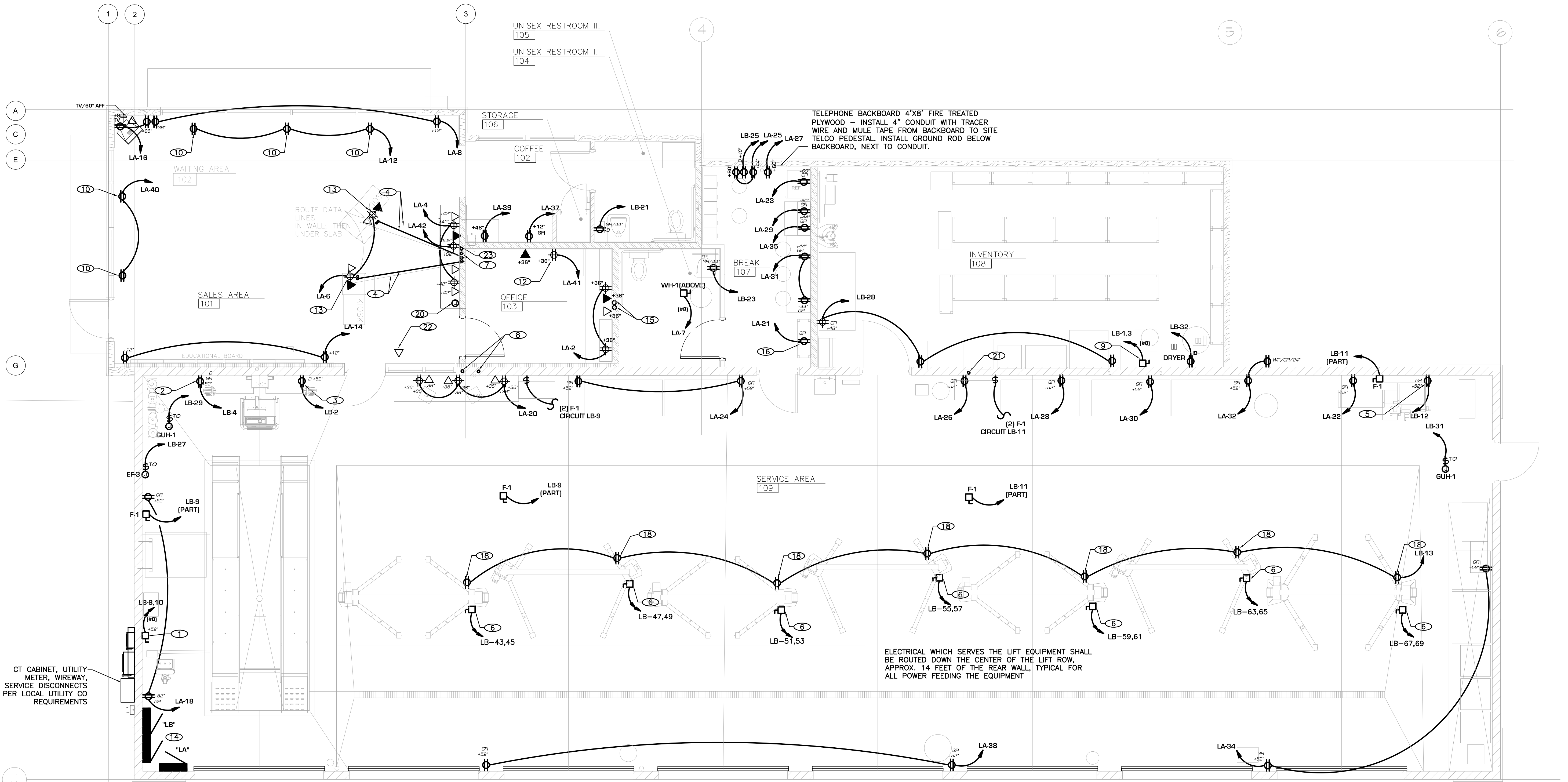
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SHEET
ES1.1
ELECTRICAL
SITE PLAN

ELECTRICAL LIGHTING PLAN



POWER GENERAL NOTES

- REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT AND/OR LOCATION OF DEVICES PRIOR TO ROUGH-IN.
- COORDINATE REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT.
- ALL CONDUIT SHALL BE INSTALLED CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED.
- EACH MULTIWIRED BRANCH CIRCUIT SHALL BE PROVIDED WITH A SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT.
- COORDINATE REQUIREMENTS AND LOCATIONS OF OWNER SUPPLIED EQUIPMENT WITH OWNER AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
- PROVIDE GFCI PROTECTION FOR ALL 125V, 15-20A RECEPTACLES INSTALLED IN THE SERVICE BAY AREAS WHERE DIAGNOSTIC EQUIPMENT, POWER TOOLS, OR LIGHTING EQUIPMENT IS USED PER N.E.C. ARTICLE 511.12.

8. ELECTRICAL INSTALLATION SHALL COMPLY WITH N.E.C. ARTICLE 511:

- ALL AREAS DESIGNATED AS HAZARDOUS (CLASSIFIED) LOCATIONS SHALL BE PROPERLY DOCUMENTED. THIS DOCUMENTATION SHALL BE AVAILABLE TO THOSE AUTHORIZED TO DESIGN, INSTALL, INSPECT, MAINTAIN, OR OPERATE ELECTRICAL EQUIPMENT AT THE LOCATION. PER N.E.C. ARTICLE 500.4 MAINTENANCE BAYS ARE MAJOR REPAIR GARAGE AND MUST COMPLY WITH N.E.C. ARTICLE 511.3.
- FLOOR AREAS ARE CLASS 1 DIVISION 2 CLASSIFIED UP TO A LEVEL OF 18" PER N.E.C. TABLE 511.3(C). THIS AREA SHALL COMPLY WITH ARTICLE 511.3(C) AND HAVE WIRING AND DEVICES INSTALLED PER N.E.C. ARTICLE 501.10(B).
- GARAGE AREA IS PROVIDED WITH VENTILATION OF AT LEAST 1 CUBIC FOOT PER MINUTE FOR EACH SQUARE FT OF FLOOR AREA, WITH SUCTION TAKEN FROM A POINT WITHIN 18" OF HIGHEST POINT IN THE CEILING. NO LIGHTER-THAN-AIR GASEOUS FUELS ARE UTILIZED IN THIS AREA. PER N.E.C. ARTICLE 511.3(D) THIS AREA IS UNCLASSIFIED.

9. AT LEAST 50% OF ALL NEW 120V, 15 AND 20 AMP RECEPTACLES INSTALLED IN ENCLOSED OFFICES, CONFERENCE ROOMS, ROOMS USED PRIMARILY FOR COPY OR PRINT FUNCTIONS, BREAKROOMS, CLASSROOMS, AND INDIVIDUAL WORKSTATIONS SHALL HAVE AUTOMATIC RECEPTACLE CONTROL, COMPLYING WITH 2021 IECC C405.11.1. THESE RECEPTACLES SHALL BE SPLIT CONTROLLED RECEPTACLES WITH THE TOP RECEPTACLE CONTROLLED BY AN OCCUPANT SENSOR CONTROL THAT SHALL TURN OFF RECEPTACLES WITHIN 20 MINUTES OF OCCUPANTS LEAVING A SPACE.
- ALL NONLOCKING-TYPE, 120-VOLT 15 AND 20 AMP RECEPTACLES THAT ARE CONTROLLED BY AN AUTOMATIC CONTROL DEVICE, OR THAT INCORPORATE CONTROL FEATURES THAT REMOVE POWER FROM THE RECEPTACLE FOR THE PURPOSE OF ENERGY MANAGEMENT OR BUILDING AUTOMATION, SHALL BE PERMANENTLY MARKED WITH THE SYMBOL BELOW AND THE WORD "CONTROLLED". FOR RECEPTACLES CONTROLLED BY AN AUTOMATIC CONTROL DEVICE, THE MARKING SHALL BE LOCATED ON THE RECEPTACLE FACE AND VISIBLE AFTER INSTALLATION, PER N.E.C. ARTICLE 406.3(E).



POWER DETAIL NOTES

- ALIGNMENT RACK. PROVIDE 40A/2P DISCONNECT SWITCH AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#8, 1#10G - 1" C.
- ALIGNMENT MACHINE. PROVIDE 20 AMP, 120 VOLT GFI DUPLEX RECEPTACLE AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#12, 1#12G - 1/2" C.
- ALIGNMENT SENSORS. PROVIDE 20 AMP, 120 VOLT GFI DUPLEX RECEPTACLE AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#12, 1#12G - 1/2" C.
- PROVIDE (2) 1" ELECTRICAL CONDUITS FROM JUST ABOVE CEILING, THROUGH THE WALL, AND UNDER FLOOR SLAB TO EACH KIOSK. CONDUIT #1 (FOR POWER) SHALL BE 7'-0" FROM REAR WALL AND 2'-6" FROM CENTERLINE OF FRONT DOOR. CONDUIT #2 (FOR DATA) WILL BE JUST TO THE OUTSIDE OF CONDUIT #1 AND SLIGHTLY BACK TO ALLOW FOR ANGLE MOUNTING OF KIOSK.
- BRAKE LATHE. PROVIDE 20 AMP, 120 VOLT GFI DUPLEX RECEPTACLE AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#12, 1#12G - 1/2" C.
- PROVIDE POWER FOR LIFTS, 208V, 1PH, 25A CIRCUIT, 17FLA. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER TO THE OVERRIDE SWITCH AT EACH LIFT. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
- PROVIDE TWO 1" EMPTY CONDUITS WITH PULL STRINGS FROM THE PRINTER DESK WALL BOX TO THE CEILING PLENUM.
- PROVIDE TWO 1" EMPTY CONDUITS WITH PULL STRINGS AT THE SERVICE MANAGER'S DESK FROM THE WALL BOX UP TO THE CEILING PLENUM.
- AIR COMPRESSOR. PROVIDE (1) 60A/2P DISCONNECT SWITCH AS REQUIRED FOR CONNECTION TO EACH MOTOR. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#8, 1#10G - 3/4" C.
- PROVIDE FLUSH MOUNTED DUPLEX RECEPTACLE LOCATED IN CEILING FOR SHOW WINDOW RECEPTACLES.
- INTERLOCK EF-3 WITH LV-1
- PROVIDE FOUR-PLEX RECEPTACLE FOR CONNECTION TO OWNER SUPPLIED COMPUTER SERVER. COORDINATE LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
- COORDINATE LOCATION OF DUPLEX RECEPTACLE AND DATA OUTLET IN MILLWORK PRIOR TO ROUGH-IN.
- MAINTAIN NEC REQUIRED CLEARANCES AT PANELS.

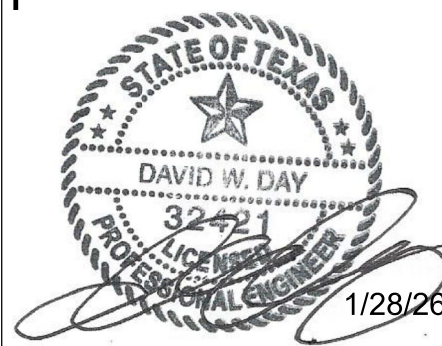
- PROVIDE 1" EMPTY CONDUIT WITH PULL STRING IN MANAGER'S OFFICE AT EACH WORK STATION FROM THE WALL BOX TO THE CEILING PLENUM.
- PROVIDE DUPLEX RECEPTACLE FOR CONNECTION TO IRRIGATION CONTROLLER. COORDINATE EXACT LOCATION WITH LANDSCAPE CONTRACTOR.
- WEATHERPROOF RECEPTACLE PROVIDED WITH ROOF TOP UNIT, E.C. TO INSTALL.
- GFI DUPLEX RECEPTACLE PROVIDED WITH LIFT. CONNECT 120 VOLT RECEPTACLE TO BRANCH CIRCUIT SERVING LIFT.
- PROVIDE 1" EMPTY CONDUIT WITH PULL STRING FROM COMPUTER STATION LOCATION WALL BOX TO THE CEILING PLENUM.
- ALARM PAD - PROVIDE 3/4" EMPTY CONDUIT STUBBED ABOVE CEILING. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
- PROVIDE 1" EMPTY CONDUIT WITH PULL STRING FROM TECH PERSON COMPUTER LOCATION WALL BOX TO THE CEILING PLENUM.
- DATA OUTLET ABOVE CEILING FOR WIRELESS ROUTER. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
- DUPLEX RECEPTACLE AND DATA OUTLET FOR MENU TV. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.

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BRAKES PLUS

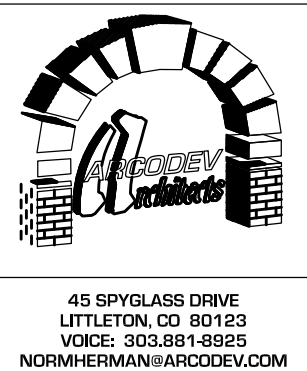
NWC OF FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



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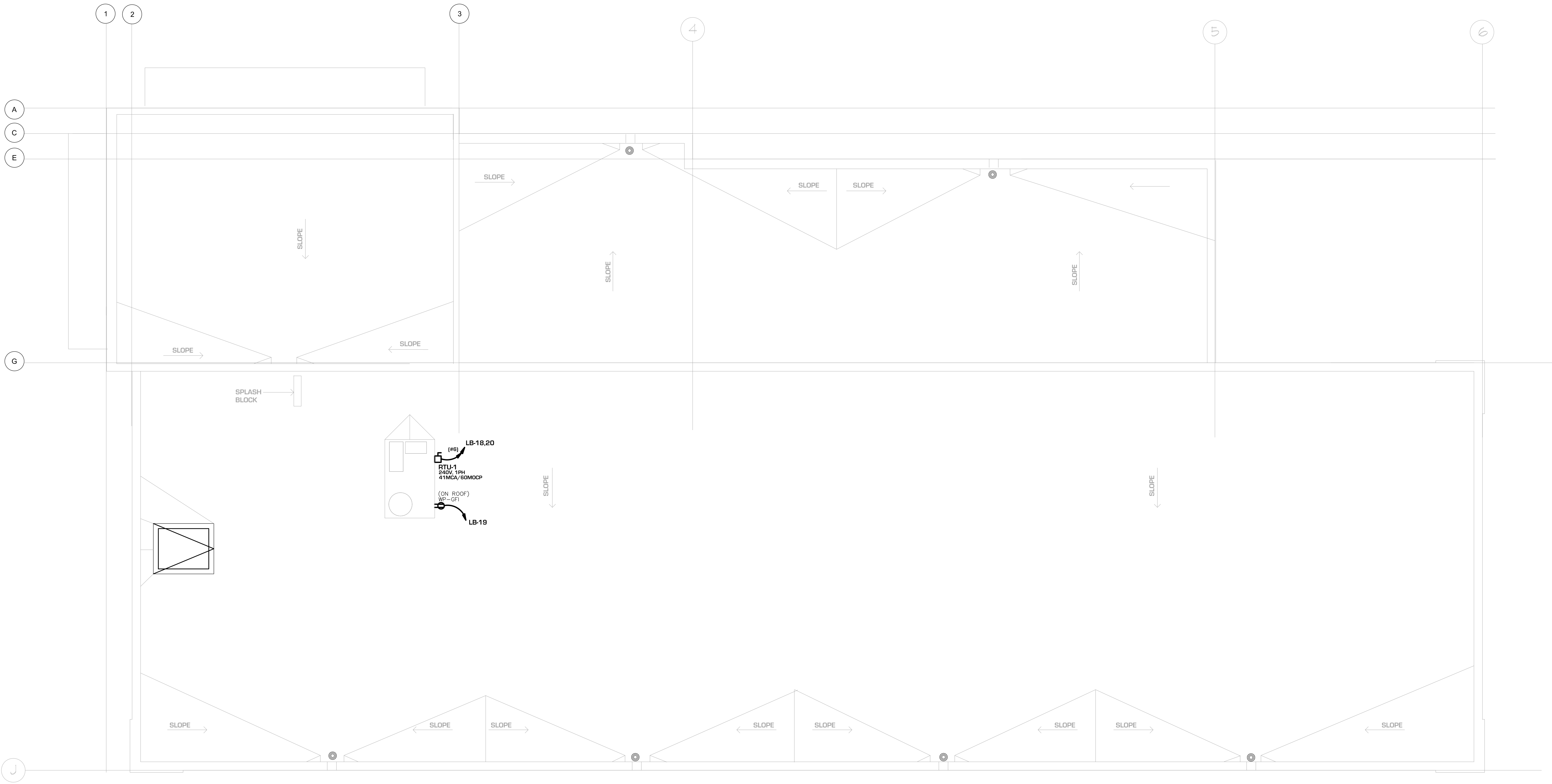


45 SPYGLASS DRIVE
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SHEET

E2.1

ELECTRICAL
POWER PLAN



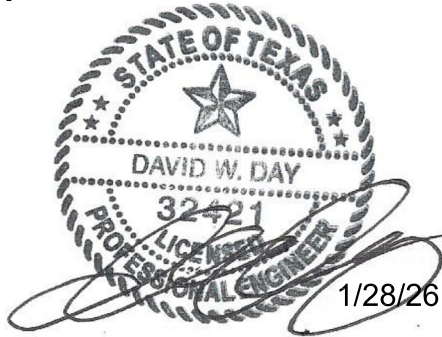
1 ELECTRICAL ROOF PLAN
SCALE: 1/4" = 1'-0"

PROJ #251617

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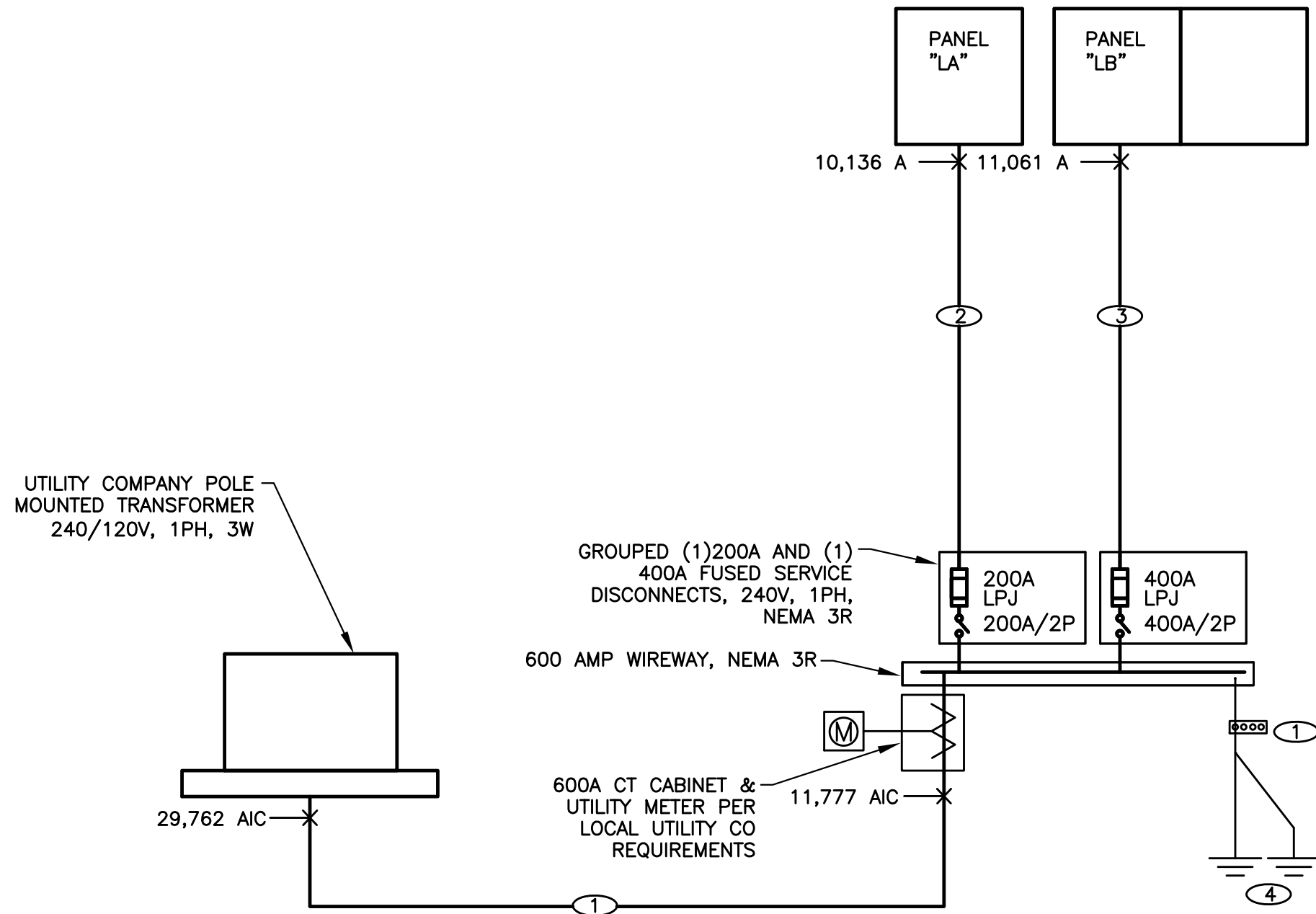
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E3.1

ELECTRICAL
ROOF PLAN

MECHANICAL EQUIPMENT SCHEDULE											
DESIGNATION	DESCRIPTION	LOAD				VOLTAGE	PHASE	DISCONNECT SIZE	FUSE SIZE	FEEDER SIZE	REMARKS
		HP	KVA	FLA	MCA						
RTU-1	ROOF TOP UNIT				41.0	240	1	60A/2P	60A FRN-R	(2#6, 1#10G, 1-1/4"C)	
EF-1	EXHAUST FAN		100W			120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EF-2	EXHAUST FAN		100W			120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EF-3	EXHAUST FAN	1/2	1176W	9.8		120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
F-1	AIR CIRCULATION FAN	1/4	696W	5.8		120	1	30A/1P	9A FRN-R	(2#12, 1#12G, 3/4"C)	
GUH-1	GAS UNIT HEATER	1/2				120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EWB-1	WATER HEATER		1.5KW			120	1	-	-	(2#12, 1#12G, 3/4"C)	
REMARKS											
1. UNIT FURNISHED WITH INTEGRAL DISCONNECT.											
1. PROVIDE MOTOR RATED SWITCH WITH THERMAL OVERLOAD.											

LIGHT FIXTURE SCHEDULE											
ALL FIXTURES FURNISHED AND INSTALLED BY GENERAL CONTRACTOR											
SYMBOL	MARK	QUANTITY	DESCRIPTION	MANUF.	CAT. NO.	LAMP	MOUNTING	VOLTAGE	REMARKS		
	A	4	EXTERIOR DECORATIVE LIGHT FIXTURE	COOPER LIGHTING	303-W1-LED82-3000-UNV-T4-DIM10	16W LED	WALL	120	REFER TO ELEVATIONS FOR MOUNTING LOCATIONS - DARK BRONZE FINISH		
	F1	10	EXTERIOR DECORATIVE LIGHT FIXTURE	MCGRAW EDISON	IST-SA1F-730-U-T4FT	25W LED	WALL	120	REFER TO ELEVATIONS FOR MOUNTING LOCATIONS - DARK BRONZE FINISH		
	F2	3	EXIT SIGN	COOPER LIGHTING	APC7 G	LED	WALL / CENTER ON DOOR	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.)		
	F3	3	4'-0" STRIP LED	COOPER LIGHTING	4SNLED LD5 UNV	38W LED	UNIVERSAL	120	MOUNT AT 12'-0" AFF		
	F4	11	8'-0" STRIP LED	COOPER LIGHTING	8TSNLED LD5 UNV	61W LED	UNIVERSAL	120	MOUNT AT 12'-0" AFF		
	F7	12	2x4 RECESSED LED TROFFER	COOPER LIGHTING	24CGT 4540C	39W LED	GRID MOUNT	120			
	F9	17	4' - LED HIGHBAY	COOPER LIGHTING	LHB 18 UNV	87W LED	HUNG FROM STRUCT.	120			
	F10	8	EMERGENCY LIGHT W/ BATTERY BACKUP	COOPER LIGHTING	SEL 25	LED	WALL MOUNTED	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.) AND TIME DELAY RELAY		
	F11	2	EMERGENCY EGROSS LIGHT - EXTERIOR	COOPER LIGHTING	AEL 246	LED	SURFACE	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.)		



1 ELECTRICAL ONE LINE DIAGRAM N.T.S.

FEEDER SCHEDULE

- 2 RUNS OF 3#350 MCM CU 3°C
- 3#250 MCM AL, 1#4 AL GND, 2°C
- 2 RUNS OF 3#250 MCM AL, 1#1 AL GND, 2°C
- #2/0 CU GND TO BLDG. STEEL & COLD WATER BOND, #6 CU GND TO DRIVEN ROD, & #4 TO CONCRETE ENCASED ELECTRODE (UFER).

ONE-LINE DIAGRAM DETAIL NOTES

- PROVIDE AN INTERSYSTEM BONDING TERMINATION (IBT) AS REQUIRED BY N.E.C. ARTICLE 250.94.

LOAD CALCULATIONS

LIGHTING	9.1	125%	=	11.4	kVA
RECEPTACLE	10.0	100%	=	10.0	kVA
BALANCE	3.1	50%	=	1.6	kVA
MECHANICAL	12.8	100%	=	12.8	kVA
25% OF LARGEST			=	2.0	kVA
SPECIAL	55.7	100%	=	55.7	kVA
TOTAL			=	93.5	kVA (390 A)

SHORT CIRCUIT CALCULATIONS

POINT TO POINT METHOD FOR SHORT CIRCUIT CALCULATIONS ILLUSTRATED IN BUSSMAN MANUFACTURING PUBLICATION FORM SPD90.
SERVICE: 120/240 V., 1-PHASE, 3W

$$\begin{aligned} I_{F.L.} &= \frac{100 \times 1000}{240} = 416.67 \\ \text{MULTIPLIER} &= \frac{100}{T^4} = 71.43 \\ \text{AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY} &= 29,762 \text{ A.} \\ \text{FIND FACTOR } f &= 2.0 \times (\text{length in feet}) \times (\text{short circuit current}) \\ &\quad (\text{constant from Table C}) \times (\text{line-to-line voltage}) \\ f &= 2.0 \times 280 \times 29,762 = 1,527 \\ 2 \times 22,737 \times 240 \\ \text{FIND FACTOR } M &= \frac{1}{1 + f} = 0.3957 \\ \text{SHORT CIRCUIT CURRENT AT CT/GUTTER} &= M \times \text{AVAILABLE S.C. CURRENT} \\ I &= 11,777 \text{ A.} \\ \text{LENGTH IN FEET} &= 20 \quad f = 2.0 \times 20 \times 11,777 = 0.162 \\ \text{FACTOR } f &= 0.162 \\ \text{FACTOR } M &= 0.8606 \\ \text{SHORT CIRCUIT CURRENT AT PANEL "LA"} &= 10,136 \text{ A.} \\ \text{LENGTH IN FEET} &= 16 \quad f = 2.0 \times 16 \times 11,777 = 0.065 \\ \text{FACTOR } f &= 0.065 \\ \text{FACTOR } M &= 0.9392 \\ \text{SHORT CIRCUIT CURRENT AT PANEL "LB"} &= 11,061 \text{ A.} \end{aligned}$$

SCHEDULE - PANEL LA											
MFG. AS APPROVED						NOTE: ALL BREAKERS 20A UNLESS NOTED OTHERWISE					
TYPE: PANELBOARD						LIGHT: 7.9 kVA @ 125% = 9.9 kVA					
LUG LOC.: TOP						RECEPT.: 11.7 kVA @ 100% = 11.7 kVA					
AMPS: 200A, MLO						MECH.: kVA @ 100% = kVA					
VOLTAGE: 120/240V, 1ph, 3W						25% LARGEST MOTOR kVA					
MOUNTING: SURFACE						SPECIAL: 6.3 kVA @ 100% = 6.3 kVA					
BRACING: 22,000 A.I.C.						SPARE: kVA					
						TOTAL: 27.8 kVA					
EXTERIOR LIGHTING	404	1	1	1	1	720 OFFICE RECEPITS					
EXTERIOR SIGN	1200	3	1	1	1	800 SALES AREA COUNTER RECEPITS					
EXTERIOR SIGN	1200	5	1	1	1	1000 KIOSK RECEPITS					
EWB-1	1500	7	1	1	1	360 SALES AREA RECEPITS					
EXTERIOR SIGN	1200	9	1	1	1	SPARE					
SALES, COFFEE, OFFICE LIGHTING	528	11	1	1	1	1800 SHOW WINDOW RECEPITS					
SERVICE AREA LIGHTING	1144	13	1	1	1	360 SALES AREA RECEPITS					
SERVICE AREA LIGHTING	660	15	1	1	1	500 TELEVISION					
SERVICE AREA LIGHTING	528	17	1	1	1	360 SERVICE AREA RECEPITS					
INVENTORY, BREAK, RESTROOM LTG	1012	19	1	1	1	500 GARAGE A/C RECEPITS					
IRRIGATION CONTROLS	500	21	1	1	1	540 GARAGE RECEPIT					
BREAK RM	180	23	1	1	1	360 GARAGE RECEPIT					
BURGLER ALARM	400	25	1	1	1	200 COMPUTER					
TELEPHONE SYSTEM	400	27	1	1	1	500 BENCH RECEPIT					
MICROWAVE	900	29	1	1	1	180 GARAGE RECEPIT					
BREAK RECEPITS	360	31	1	1	1	360 GARAGE RECEPIT					
SPARE	333	33	1	1	1	540 SERVICE AREA RECEPITS					
REFRIGERATOR	1200	35	1	1	1	SPARE					
RECEPT - WATER FOUNTAIN	370	37	1	1	1	360 GARAGE RECEPIT					
COFFEE UNIT	1000	39	1	1	1	1200 SHOW WINDOW RECEPITS					
OFFICE RECEPITS	360	41	1	1	1	300 MENU TV					
A phase = 11,526 VA						B phase = 14,420 VA					
						Total = 25,946 VA					

SCHEDULE - PANEL LB						NOTE: ALL BREAKERS 20A UNLESS NOTED OTHERWISE					
MFG. AS APPROVED						LIGHT: 1.2 KVA @ 125% = 1.5 KVA					
TYPE: PANELBOARD 2-SECTION						RECEPT.: 1.4 KVA @ 100% = 1.4 KVA					
LUG LOC. TOP						MECH: 12.8 KVA @ 100% = 12.8 KVA					
AMPS: 600A, MLO						25% LARGEST MOTOR 2.0 KVA					
VOLTAGE: 120/240V, 1ph, 3W						SPECIAL: 44.4 KVA @ 100% = 44.4 KVA					
MOUNTING: SURFACE						SPARE: KVA					
BRACING: 22,000 A.I.C.						TOTAL: 67.1 KVA (280A)					
AIR COMPRESSOR						3360	1	1	1	1800 ALIGNMENT SENSORS	
SPARE						3360	3	1	1	1800 ALIGNMENT MACHINE	
SPARE							5	1	1	SPARE	
SPARE							7	1	1	3120 ALIGNMENT RACK	
AIR CIRCULATION FANS						1392	9	1	1	3120	
AIR CIRCULATION FANS						1392	11	1	1	1800 BRAKE LATHE	
SHOP EQUIPMENT RECEPITS						1440	13	1	1	SPARE	
SPARE							15	1	1	SPARE	
SPARE							17	1	1	3940 RTU-1	
ROOF RECEPT						180	19	1	1	3940	
RECEPT - RESTROOM						180	21	1	1	SPARE	
RECEPT - RESTROOM						180	23	1	1	SPARE	
RECEPT - INVENTORY						180	25	1	1	SPARE	
EF-3						1130	27	1	1	720 INVENTORY RECEPITS	
GUH-1						500	29	1	1	1200 MONUMENT SIGN	
GUH-1						500	31	1	1	1000 DRYER	
SPARE							33	1	1	SPARE	
SPARE							35	1	1	SPARE	
SPARE							37	1	1	SPARE	
SPARE							39	1	1	SPARE	
SPARE							41	1	1	SPARE	
SECTION TWO											
LIFT						2040	43	1	1	SPACE	
---						2040	45	1	1	SPACE	
LIFT						2040	47	1	1	SPACE	
---						2040	49	1	1	SPACE	
LIFT						2040	51	1	1	SPACE	
---						2040	53	1	1	SPACE	
LIFT						2040	55	1	1	SPACE	
---						2040	57	1	1	SPACE	
LIFT						2040	59	1	1	SPACE	
---						2040	61	1	1	SPACE	
LIFT						2040	63	1	1	SPACE	
---						2040	65	1	1	SPACE	
LIFT						2040	67	1	1	SPACE	
---						2040	69	1	1	SPACE	
SPACE							71	1	1	SPACE	
SPACE							73	1	1	SPACE	
SPACE							75	1	1	SPACE	
SPACE							77	1	1	SPACE	
SPACE							79	1	1	SPACE	
SPACE							81	1	1	SPACE	
SPACE							83	1	1	SPACE	
A phase = 31,942 VA						B phase = 33,402 VA					
						Total = 64,744 VA					



COMcheck Software Version COMcheckWeb Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Brakes Plus - Sanger TX
Project Type: New Construction

Construction Site: NWC of FM455 & Acker St
Sanger, Texas 76266
Owner/Agent: 12005 Antelope Trail
Parker, Colorado 80138
303-748-1189
info@eeparker.com
Designer/Contractor: Loren Priest
EE, LLC
12005 Antelope Trail
Parker, Colorado 80138
303-748-1189
info@eeparker.com

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts
1-Service/Repair/Inventory (Automotive-Vehicular Maintenance Area)	3730	0.60	2238
2-Sales Area (Retail-Sales Area)	985	1.05	1034
Total Allowed Watts = 3272			

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Service/Repair/Inventory (Automotive-Vehicular Maintenance Area)				
LED: F9: 4' LED Highbay: LED Panel 80W:	1	17	87	1479
LED: F4: 8' LED Strip: LED Linear 22W:	4	1	61	61
2-Sales Area (Retail-Sales Area)				
LED: F3: 4' LED Strip: LED Linear 22W:	2	3	38	114
LED: F4: 8' LED Strip: LED Linear 22W:	4	10	61	610
LED: F7: 2x4 LED Troffer: LED Panel 19W:	1	12	39	468
Total Proposed Watts =				2732

Interior Lighting PASSES: Design 17% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley — Electrical Designer
Name - Title Signature Date 10-20-25

Project Title: Brakes Plus - Sanger TX
Data filename: Report date: 10/20/25
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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22] ¹	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern ≥ 50 percent.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.1.1 [EL18] ¹	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces ≤ 300 sq ft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.1.2 [EL19] ¹	Occupancy sensors control function in warehouses: In warehouses, the lighting in aislesways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.1.3 [EL20] ¹	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces ≥ 300 sq ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas ≤ 600 sq ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by $\geq 80\%$ of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.2.1 [EL21] ¹	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus - Sanger TX
Data filename: Report date: 10/20/25
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COMcheck Software Version COMcheckWeb Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Brakes Plus - Sanger TX
Project Type: New Construction
Exterior Lighting Zone: 2 (Light industrial area with limited nighttime use (LZ2))

Construction Site: NWC of FM455 & Acker St
Sanger, Texas 76266
Owner/Agent: 12005 Antelope Trail
Parker, Colorado 80138
303-748-1189
info@eeparker.com
Designer/Contractor: Loren Priest
EE, LLC
12005 Antelope Trail
Parker, Colorado 80138
303-748-1189
info@eeparker.com

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Tradable Wattage	D Tradable Wattage	E Allowed Watts (B X C)
Wall area (Illuminated area of facade wall or surface)	3000 ft ²	0.07	No	225
Total Tradable Watts (a) =				0
Total Allowed Watts =				225
Total Allowed Supplemental Watts (b) =				400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Wall area (Illuminated area of facade wall or surface, 3000 ft ²): Non-tradable Wattage				
LED: F1: LED Wall Pack: LED A Lamp 25W:	1	10	25	250
LED: A: LED Decorative Wall Lt: LED A Lamp 25W:	1	4	16	64
Total Tradable Proposed Watts =				0

Exterior Lighting PASSES: Design 0.0% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley — Electrical Designer
Name - Title Signature Date 10-20-25

Project Title: Brakes Plus - Sanger TX
Data filename: Report date: 10/20/25
Page 2 of 6

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4.1 [EL23] ¹	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3.1. Daylight-responsive controls for applicable spaces, C405.2.3.1. Daylight responsive control function and section C405.2.3.2 Sideit zone.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.5 [EL27] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.7 [EL28] ¹	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting $\geq 30\%$.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.7 [EL26] ¹	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.8 [EL27] ¹	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.9.1, C405.9.2 [EL28] ¹	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.10 [EL29] ¹	Total voltage drop across the combination of feeders and branch circuits $\leq 5\%$.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.1.1 [EL30] ¹	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy ≥ 65 lm/W or luminaires with efficacy ≥ 45 lm/W or comply with C405.2.4 or C405.3.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.11.1 [EL31] ¹	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and $> 25\%$ of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus - Sanger TX
Data filename: Report date: 10/20/25
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COMcheck Software Version COMcheckWeb Inspection Checklist

Energy Code: 2021 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C103.2 [PR8] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C406 [PR9] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus - Sanger TX
Data filename: Report date: 10/20/25
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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [F117] ¹	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.5.1 [F119] ¹	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Exterior Lighting fixture schedule for values.
C408.1.1 [F157] ¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C408.2.5 [F116] ¹	Furnished as-built drawings for electric power system within 90 days of system acceptance.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C408.3 [F133] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

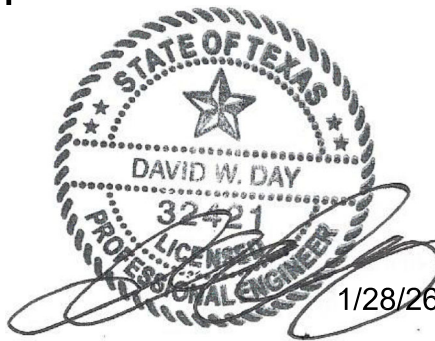
Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus - Sanger TX
Data filename: Report date: 10/20/25
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BRAKES PLUS

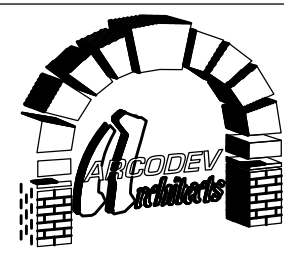
NWC of FM455 & ACKER STREET
LOT 2R3, BLOCK B
SANGER, TEXAS 76266



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	10/20/25	FOR BLDG. DEPT SUBMITTAL
	01/28/26	FOR CONSTRUCTION

ARCODEV JOB #: -
CLIENT/JOB #: -
DRAWN BY: SB
CHECKED BY: LRP
DATE OF ISSUE: 010.20.25



45 SPYGLASS DRIVE
LITTLETON, CO 80123
VOICE: 303.681-4325
NORM.HERMAN@ARCODEV.COM

SHEET

E5.1

LIGHTING COMPLIANCE
CERTIFICATES

DAVID W DAY, P.E.
102 Poncho St.
P.O. Box 1640 Anahuac, TX 77514
Telephone 713-927-4470
Texas Registered Engineering Firm
F-9943

PROJ #251617