



MECHANICAL UNIT

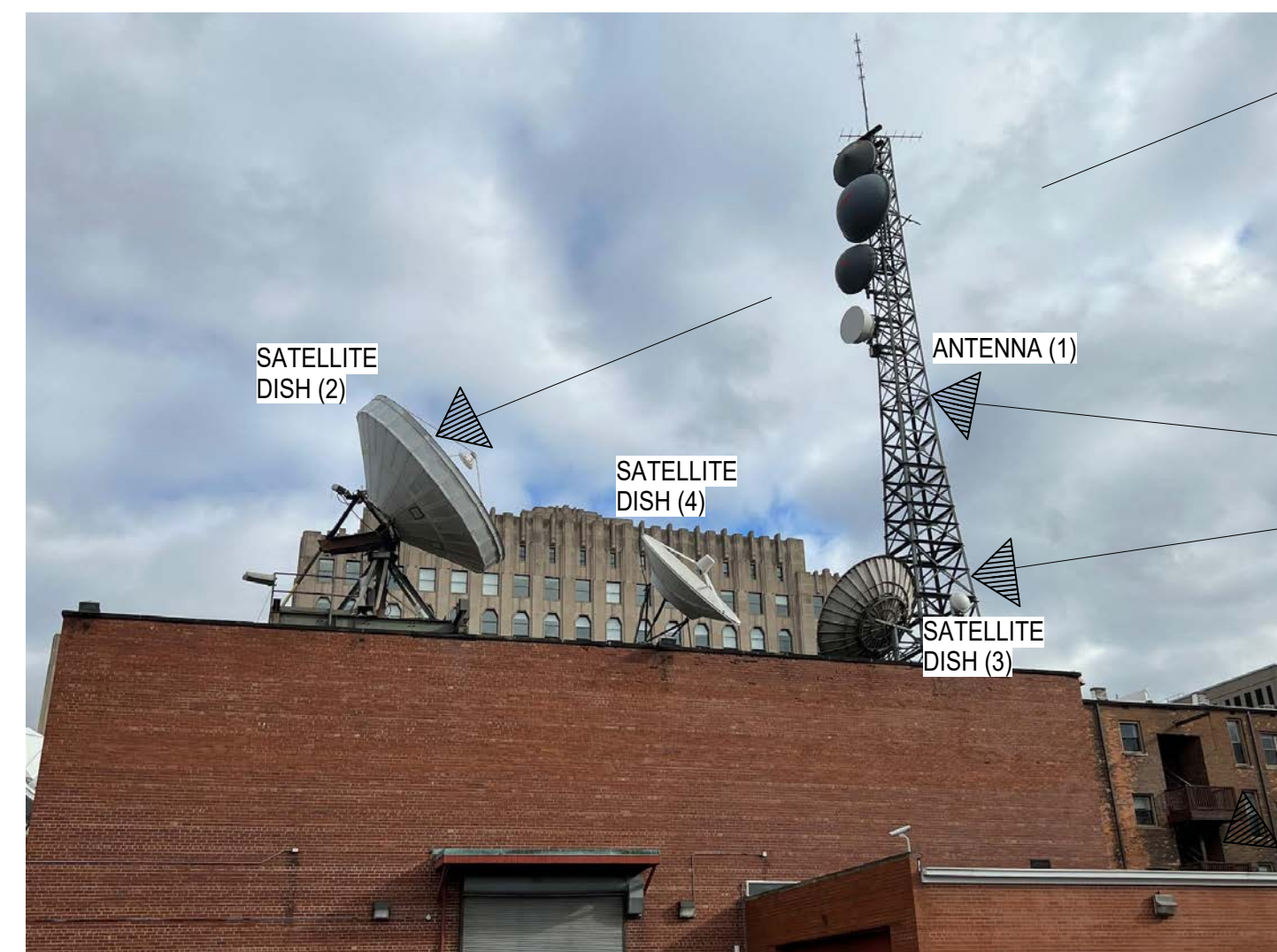


SATELLITE DISH (1)

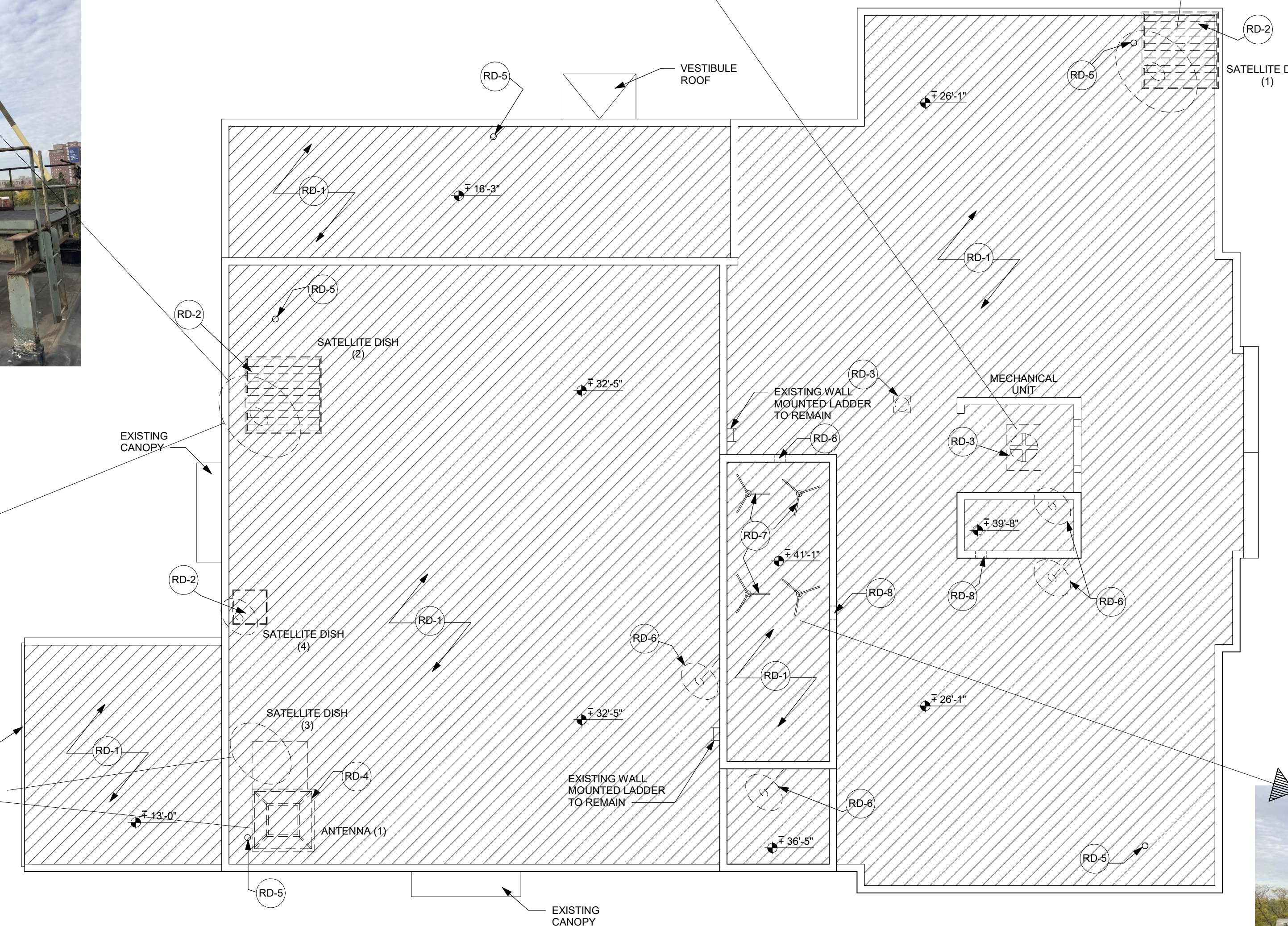


SATELLITE DISH (2)

NOTE:
ALL EXISTING SATELLITE DISHES,
ANTENNAS AND MECHANICAL
EQUIPMENT TO BE REMOVED



SATELLITE DISH (2) ANTENNA (1)
SATELLITE DISH (4) SATELLITE DISH (3)
SATELLITE DISH (1)



1 ROOF DEMO PLAN
3/32" = 1'-0"

- ROOF DEMOLITION KEYNOTES:**
- RD-1 REMOVE ENTIRE EXISTING ROOFING SYSTEM, INCLUDING BALLAST, ROOFING MEMBRANE AND INSULATION AS REQUIRED TO EXPOSE THE EXISTING ROOF. DISPOSE ALL MATERIALS OF SITE.
 - RD-2 REMOVE EXISTING DISH AND THE MOUNTING PLATFORM WITH ALL SUPPORTING STEEL BEAMS, GUARDRAILS AND GRATING. IN ADDITION, REMOVE PLATFORM STEEL POST SUPPORTED ON ROOF STRUCTURE ACCORDING TO STRUCTURAL ENGINEER DETAIL. DISPOSE ALL MATERIAL OF SITE.
 - RD-3 REMOVE EXISTING MECHANICAL UNITS AND THEIR CURBS OR MOUNTING STEEL FRAMING AND DISPOSE OF-SITE. CAP ALL ROOF OPENINGS FOR THE SAME MECHANICAL UNITS AS STRUCTURAL ENGINEER REQUIRES.
 - RD-4 REMOVE STEEL FRAMED TOWER AND THE DISHS MOUNTED ON IT. COVER ALL TOWER ROOF PENETRATIONS TO CREATE A FLUSH ROOF SUBSTRATE SUITABLE TO LAY INSULATION BOARDS.
 - RD-5 EXISTING ROOF DRAIN TO BE REMOVED. MAINTAIN ROOF OPENING FOR RE-INSTALLATION OF NEW ROOF DRAINS.
 - RD-6 REMOVE ALL WALL MOUNTED DISHES AND THEIR SUPPORTS.
 - RD-7 REMOVE ALL ANTENNAS
 - RD-8 EXISTING SCUPPER OPENING TO REMAIN. REMOVE EXISTING SHEET METAL COVERINGS FOR A NEW SCUPPER.

1- SAVE ALL DISLOCATED LIMESTONE COPING PIECES FOR LATER USE.



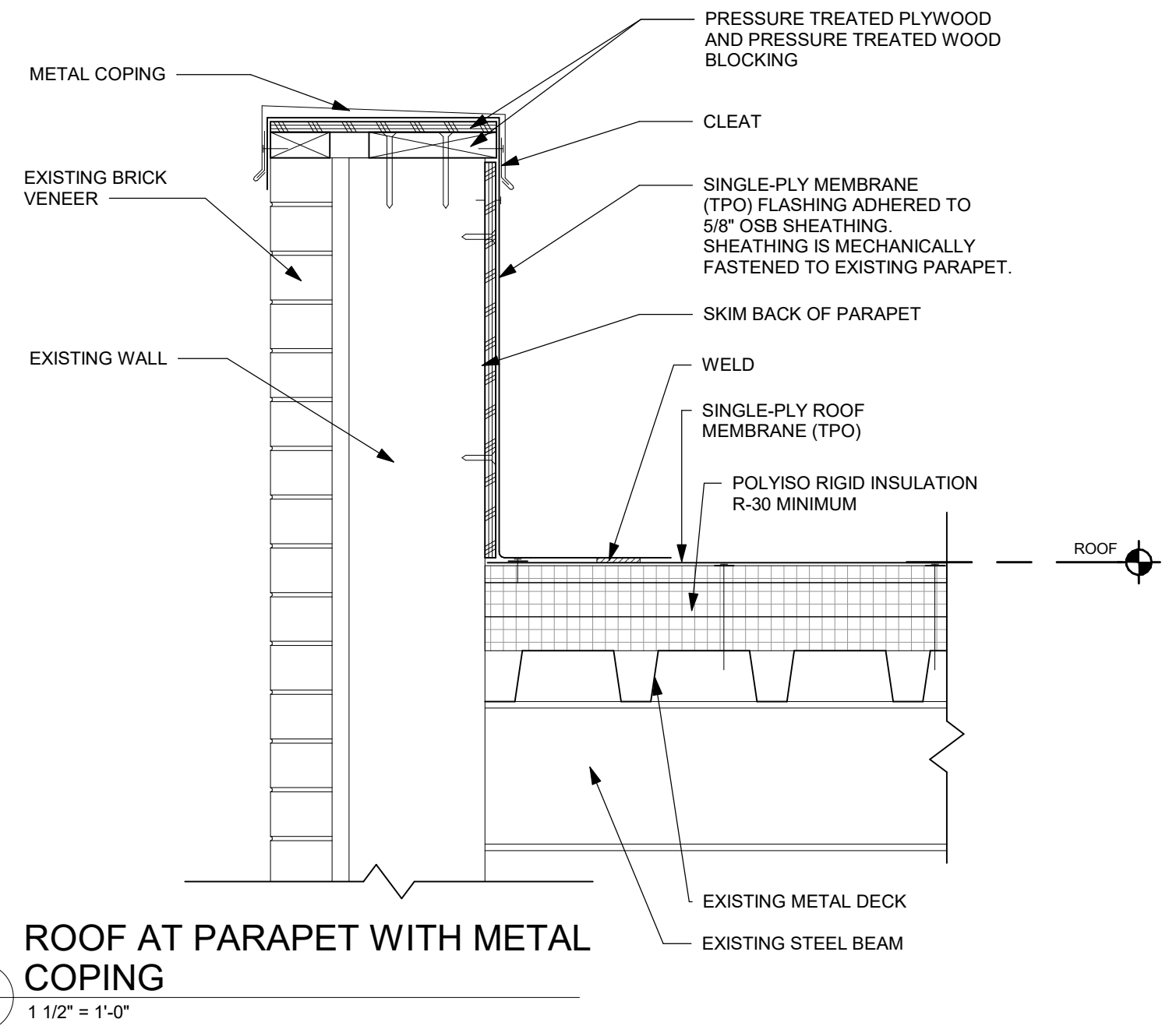
GROUP OF SMALL ANTENNAS

Client
DETROIT MIDNIGHT GOLF
Street
City, State
Zip
Key Plan

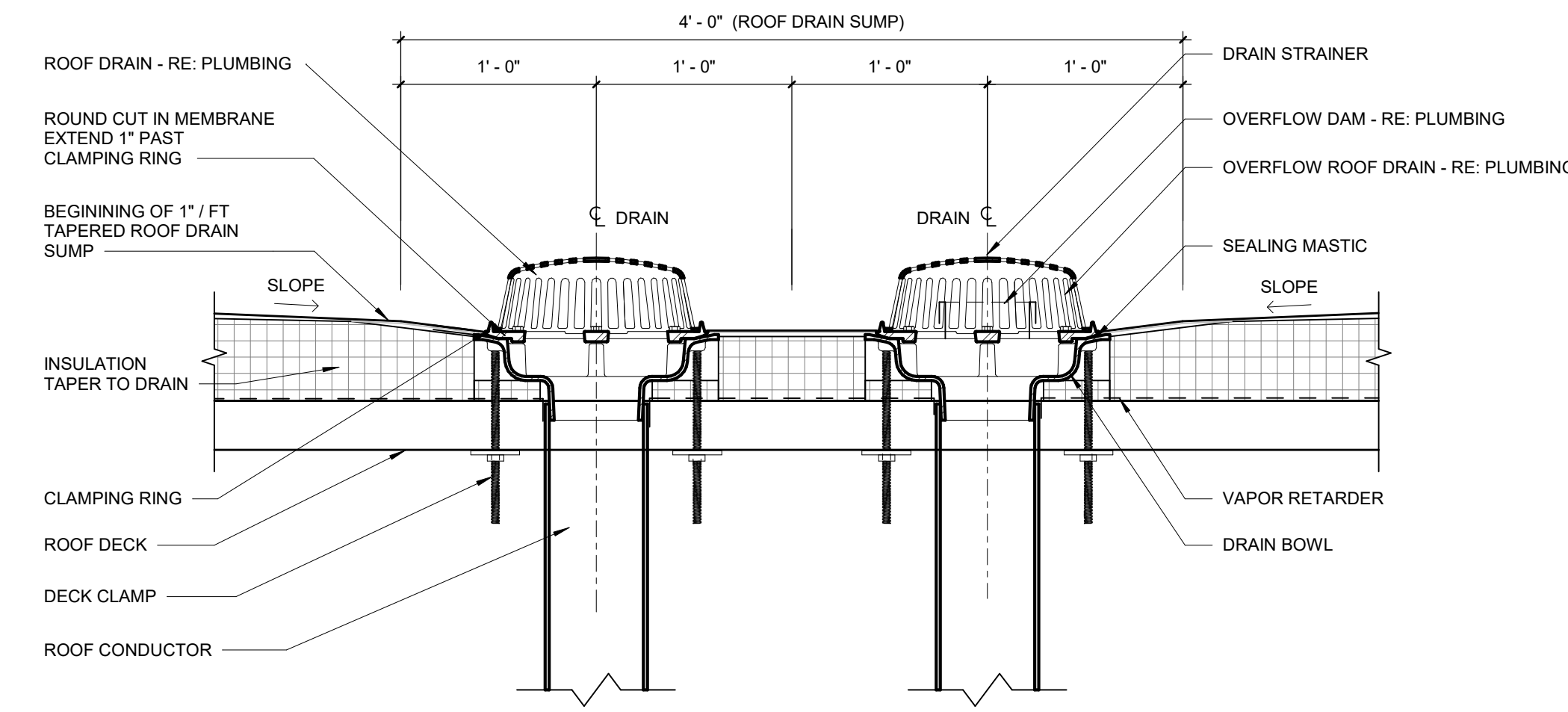
Project
DETROIT MIDNIGHT GOLF
Drawing Title
ROOF DEMOLITION PLAN

Project Number: 2022036
Drawn By: Designer Approved By: Checker
Scale: As indicated
Seal:

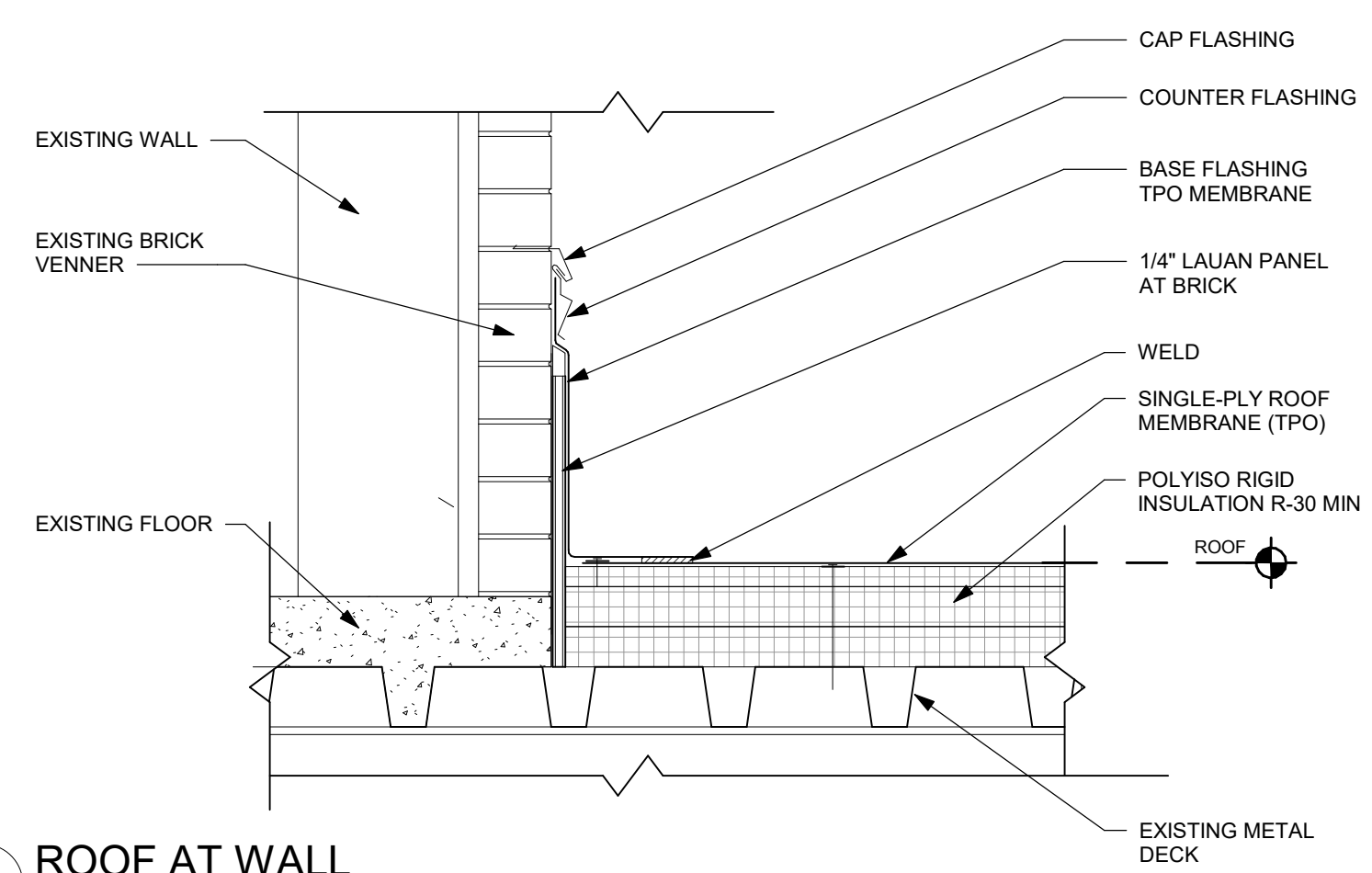
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Drawing No:



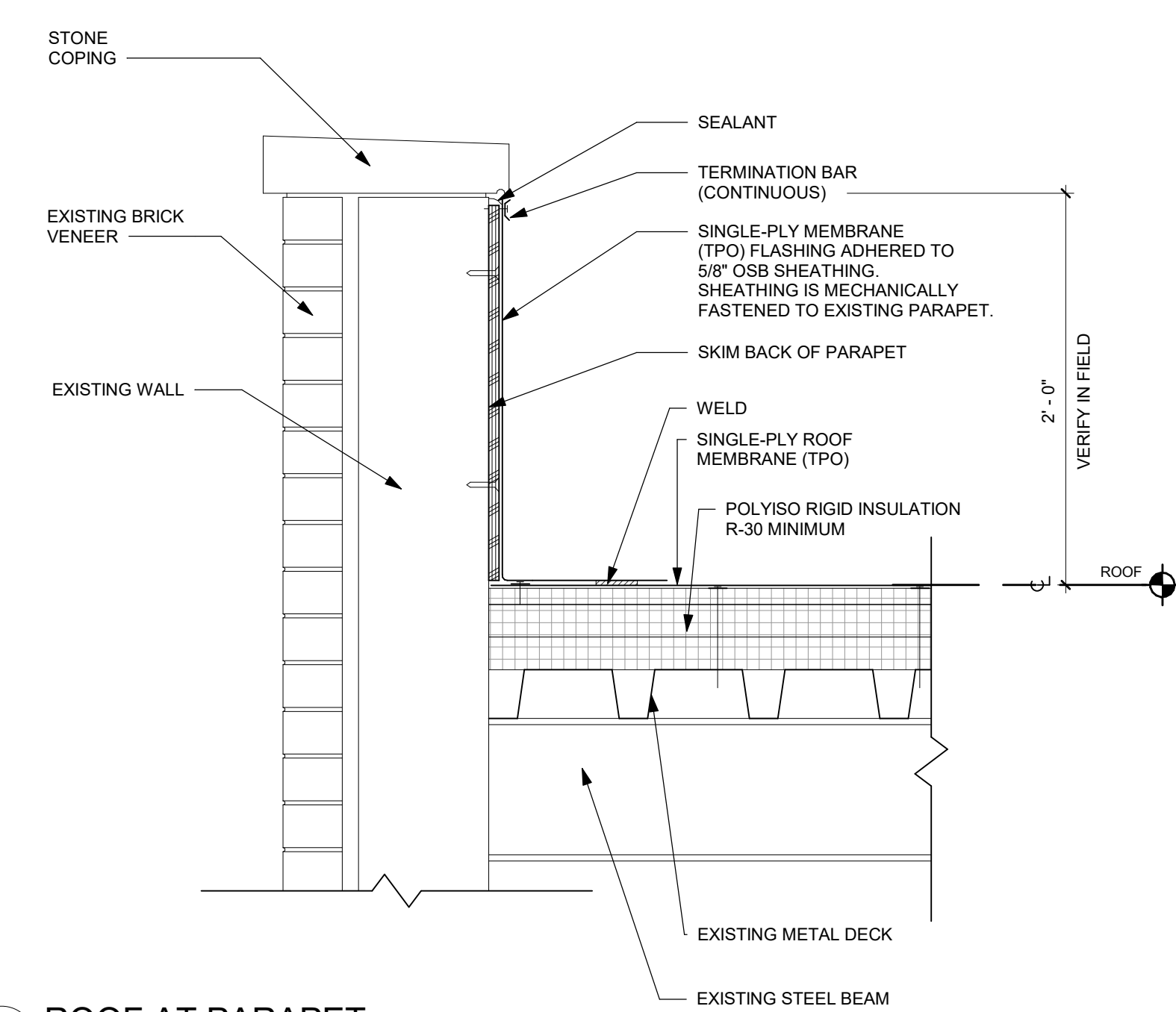
4
ROOF AT PARAPET WITH METAL COPING
1 1/2" = 1'-0"



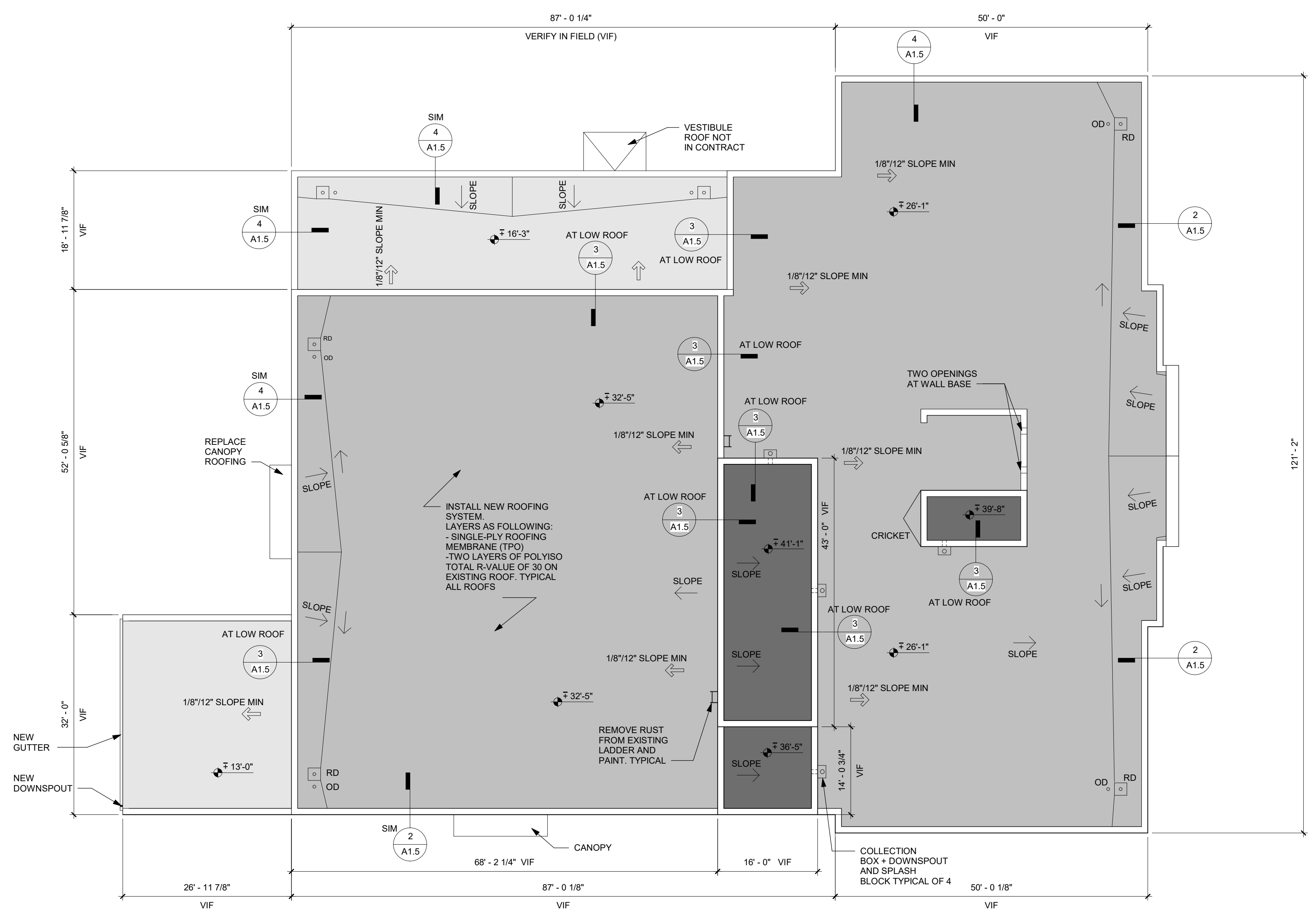
6
ROOF DRAIN AND OVERFLOW SECTION
1 1/2" = 1'-0"



3
ROOF AT WALL
1 1/2" = 1'-0"



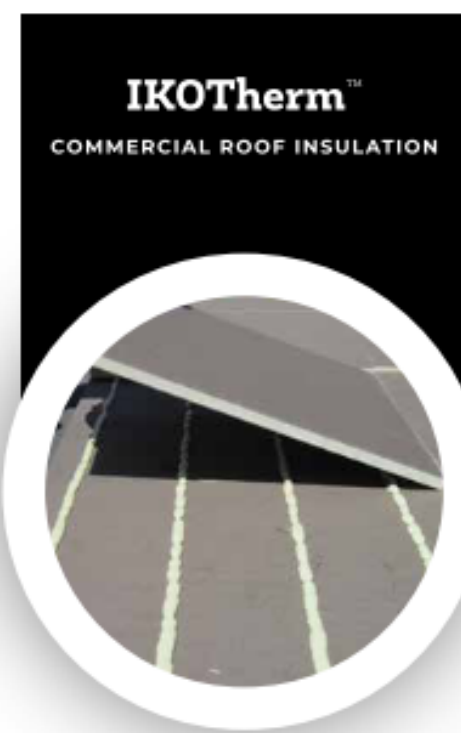
2
ROOF AT PARAPET
1 1/2" = 1'-0"



1
ROOF PLAN
3/32" = 1'-0"

ABBREVIATIONS:
RD: ROOF DRAIN
OD: OVERFLOW ROOF DRAIN
VIF: VERIFY IN FIELD
NOTE: ALL ROOFS ELEVATIONS ARE APPROXIMATE AND NEED TO BE VERIFIED ON SITE





IKO Therm Polyisocyanurate Foam Insulation is produced according to the requirements of CAN/ULC S-704 for Type 2, Class 3 materials, and ASTM C1289 Type II, Class 1, Grade 2. This product is FM and UL approved.

Please contact your IKO Technical Representative for specific slope requirements.

CHARACTERISTICS	UNITS	MEETS/ EXCEEDS	TEST METHOD	STANDARD LIMITS
Length Tolerance:	mm (in)	± 4 (- 0.16)	ASTM C303	+ 6 (- 0.25) - 4 (- 0.16)
Width Tolerance:	mm (in)	± 2 (- 0.08)	ASTM C303	+ 4 (- 0.16) - 2 (- 0.08)
Dimensional Stability (MOI) At -29°C At 70°C, 77% R.H.	%	-0.02/-0.03 -0.02/-0.17 0.30/0.80	ASTM D2126	max ± 2 max ± 2
Water Vapour Permeance:	ng/Pa-s-m ²	✓	ASTM E96	<60
Water Absorption:	% by Vol.	✓	ASTM D2642	max 3.5
Compressive Strength*	kPa (psi)	✓	ASTM D2621	min: 140 (20)
Flexural Strength MD ND	kPa (psi)	✓	ASTM C203	min: 275 (39.3)
Long Term Thermal Resistance (LTR) R-Value: Thickness 25 mm (1.0 in) 50 mm (2.0 in) 75 mm (3.0 in) 102 mm (4.0 in)	m ² K/W (ft ² °F/ftU)	1.00 (0.17) 2.01 (0.4) 3.06 (0.74) 4.36 (1.24)	CAN/ULC-S770	-

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InnoviFast™ Heavy Duty (HD) Fasteners

System Compatibility
InnoviFast Heavy Duty (HD) Fasteners are intended for use with IKO InnoviTPO Roofing Systems and are approved for use with an appropriate IKO Diamond Shield Limited Warranty. Building owners, specifiers, roof consultants and roofing contractors are invited to review the IKO InnoviTPO System Specifications at www.iko.com/innovi for further information on including this product as part of a complete IKO roofing system.

Features and Benefits
• The 13 threads-per-inch (26 mm) design provides higher pull-out values.
• The drill point design prevents fastener walking and cuts through gravel and BUR.
• The fastener has a cathodic epoxy E-coating for resistance to humidity and cyclic corrosion.

Stock # 6300008-6300010
Thread Lengths Range From 1/2" to 3" (12.7 to 76.2 mm)

Fastener Length in (mm)	Pull Weight lbs. (kg)	Pull Capacity
1/2"	20 (9.0)	1000
3/4"	30 (13.6)	1500
1"	40 (18.2)	2000
1 1/4"	60 (27.2)	3000
1 1/2"	80 (36.3)	4000
1 3/4"	100 (45.3)	5000
2"	140 (63.5)	7000
2 1/4"	180 (81.6)	9000
2 1/2"	220 (99.7)	11000
2 3/4"	260 (117.8)	13000
3"	300 (135.9)	15000

All reported values are nominal.

- *R5 Fastener for attachment of membrane, insulation, upper board, and metal terminations.
- *Idea for steel, wood, and structural concrete roof decks.
- *Drill point design is able to cut through gravel and BUR.



IKO Therm COMMERCIAL ROOF INSULATION

Durable but Lightweight
Lightweight and easy to handle, IKO Therm Polyisocyanurate Foam Insulation is designed to be part of modified bitumen, built-up, or single-ply roof systems.

Reinforced Facer
IKO Therm is composed of a select kraft paper reinforced with glass fiber strands for high strength and excellent absorption for both hot mopping and adhesive attachment methods. The product also performs well with mechanical fasteners.

Excellent R-Value
IKO Therm is a rigid, polyisocyanurate foam insulation with high thermal properties, which can provide outstanding insulation protection and help to reduce heating and cooling costs.

Versatile
IKO Therm is available in two board sizes and a range of thicknesses to meet a variety of insulation needs.

- EXTRA TOUGH
- OUTSTANDING R-VALUE
- RANGE OF THICKNESSES AVAILABLE

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InnoviWeld™ TPO Induction Plate

System Compatibility
InnoviWeld TPO Induction Plates are intended for use with IKO InnoviTPO Roofing Systems and are approved for use with an appropriate IKO Diamond Shield Limited Warranty for up to 20 years with a 60-mil membrane, and up to 15 years with a 45-mil membrane. Building owners, specifiers, roof consultants and roofing contractors are invited to review the IKO InnoviTPO System Specifications at www.iko.com/innovi for further information on including this product as part of a complete IKO roofing system.

Features and Benefits
• InnoviWeld TPO Induction Plates are specially-coated Galvalume® plates used as part of a non-penetrating IKO InnoviTPO Roofing System.
• The induction welding process is highly efficient, resulting in streamlined commercial roofing installations.
• InnoviWeld TPO Induction Plates are designed to be used with induction welding tools (by others) that produce focused heat, so that energy is concentrated, and a quality weld is assured.

Stock # 6300008
OD: 1.5 in. (38 mm) round
Material Type: 22 ga. G90 Galvalume Steel
Color, Face of Plate: Yellow
Pull Weight: 34 lbs. (15.4 kg)
Quantity: 100/roll

- *Specially designed for attachment of IKO InnoviTPO membrane.
- *22 ga. G90 galvalume steel plate with proprietary adhesive coating.
- *Compatible with induction welding tools (by others).



InnoviTPO™ | 60-Mil Single-Ply Membrane

Performance Innovation
IKO has optimized the ideal product weathering chemistry, bringing the future of roofing technology to the commercial rooftop. Designed with the proprietary Matrix™ weathering formulation, IKO InnoviTPO continues to reinforce IKO's reputation for performance innovation. Matrix's exceptional weathering chemistry makes InnoviTPO highly durable and able to withstand harsh climate conditions. It is exceptionally resistant to ultraviolet and infrared radiation, ozone and mold.

Energy Efficient
As a highly reflective "cool roof" membrane, IKO InnoviTPO is an ideal choice for specifiers designing in environments that demand maximum energy efficiency. Additionally, TPO is chlorine-free, and the IKO manufacturing process is designed to result in net zero waste of the TPO product itself.

Ease of Installation
IKO InnoviTPO is flexible and has excellent lay-flat characteristics, greatly enhancing the installation process. Contractors especially value the exceptional weldability within wide temperature windows, allowing more scheduling and application options.

Stock # 60K1000, 60K1000L, 60K1000T, 60K1000S
Rolls Per Pallet: 8
Thickness: 60 mil (1.52 mm) ± 1.52 mm
Weight: 0.21 lb./ft² (13 kg/m²)
Colors: White, Gray, Tan
Roll Size & Area Coverage:
6 ft. x 100 ft. (2.1 m x 30.5 m) ± 1000 ft² (93 m²)
6 ft. x 200 ft. (2.1 m x 61.0 m) ± 2000 ft² (186 m²)
10 ft. x 100 ft. (3.0 m x 30.5 m) ± 1000 ft² (93 m²)
10 ft. x 200 ft. (3.0 m x 61.0 m) ± 2000 ft² (186 m²)
12 ft. x 100 ft. (3.7 m x 30.5 m) ± 1200 ft² (111 m²)
12 ft. x 200 ft. (3.7 m x 61.0 m) ± 2400 ft² (222 m²)
*TPO membrane only, length rolls of 200 ft.
*100 ft. rolls are not tested and are not included.

- *Meets or exceeds the requirements of ASTM D6878.
- *Exceptional Weathering Chemistry.
- *Outstanding Energy Efficiency.
- *Optimum Weld Windows.



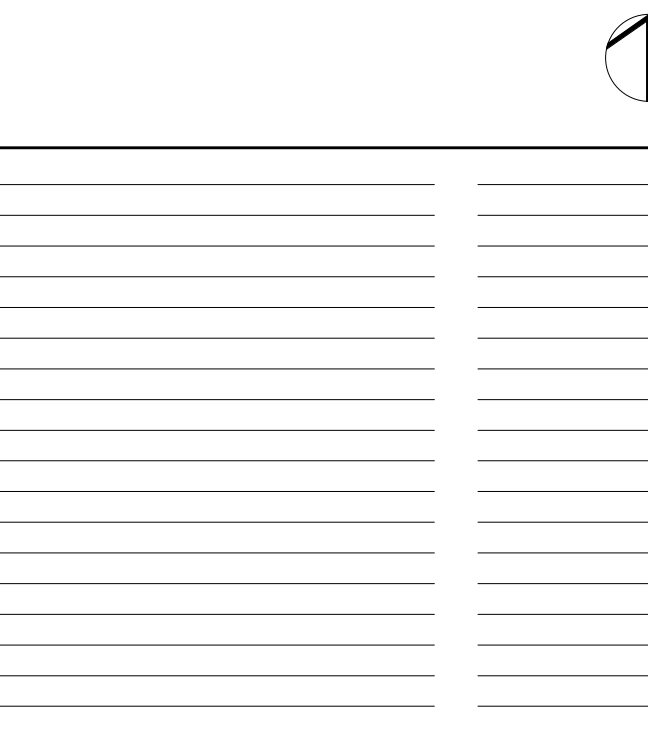
HamiltonAnderson

architecture landscape architecture urban design

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- Structural Engineer: Desai/Near Consulting Engineer
6765 Daly Rd
West Bloomfield, MI 48322
248.932.2010
- Civil Engineer: HH Engineering
230 Bagley
Detroit, MI 48226
313.963.6560

Client
**DETROIT MIDNIGHT
GOLF**
Street
City, State
Zip
Key Plan




12/02/2022 PERMIT

Project
**DETROIT MIDNIGHT
GOLF**
Drawing Title
**MATERIALS CUT
SHEETS**


Project Number: 2022036
Drawn By: RJ Approved By: DZ
Scale:
Seal:

Signature: _____
Drawing No:

A1.7



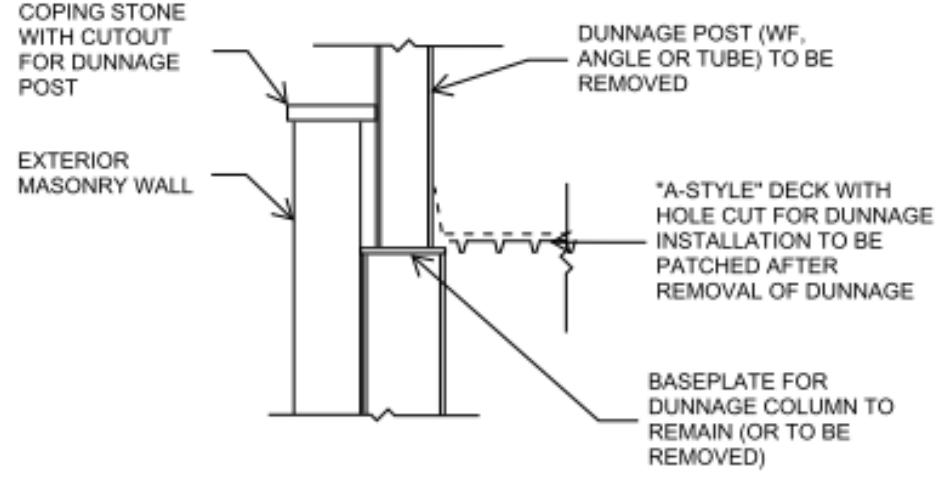
POST THAT EXTENDS THROUGH PORTION OF PARAPET



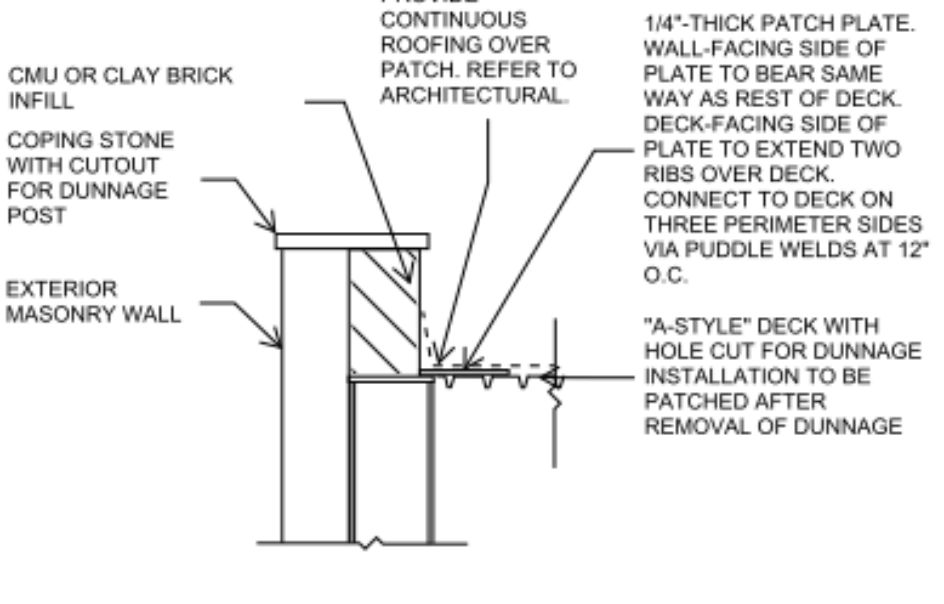
OPENING IN DECK FOR DUNNAGE SUPPORT

1 TYPICAL CONDITION OF DUNNAGE BEARING AT PARAPET
NTS

2 TYPICAL CONDITION OF DUNNAGE BEARING AT PARAPET
NTS

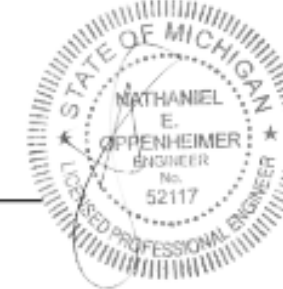



3 EXISTING TYPICAL DETAIL OF DUNNAGE POST BEARING ON BEAM
NTS




4 DUNNAGE REMOVAL AT PARAPET TYPICAL DETAIL
NTS

GENERAL NOTES
REFER TO ALL GENERAL NOTES ON STRUCTURAL SKETCH 1.




DUNNAGE REMOVAL FOR BEARING TYPE 2	Date: 11/07/2022	Scale: NTS
 <p>4001 3rd Street NW, Washington, DC 20007 800.533.6100</p>	Job Number:	HA-SILMAN EMAILS
	Job Title: MIDNIGHT GOLF PROGRAM RENOVATIONS	Sheet: 3

Client
DETROIT MIDNIGHT GOLF
Street
City, State
Zip
Key Plan



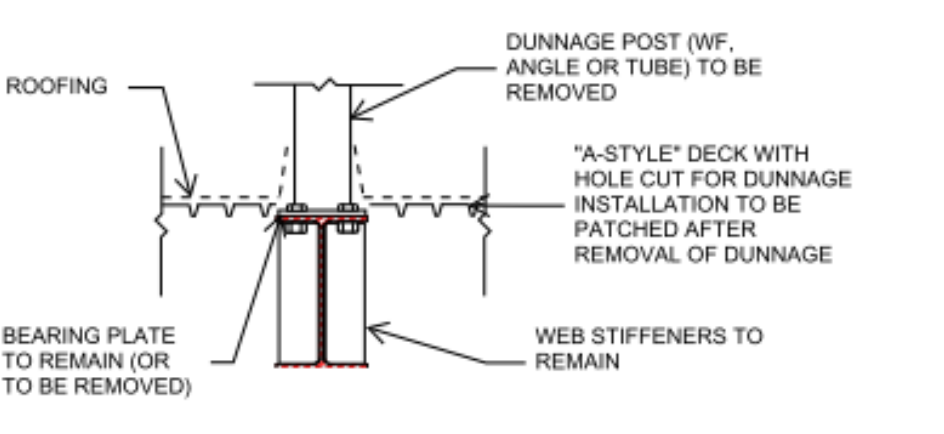
POST THAT BEARS ON BASEPLATE ATTACHED TO BEAM BELOW



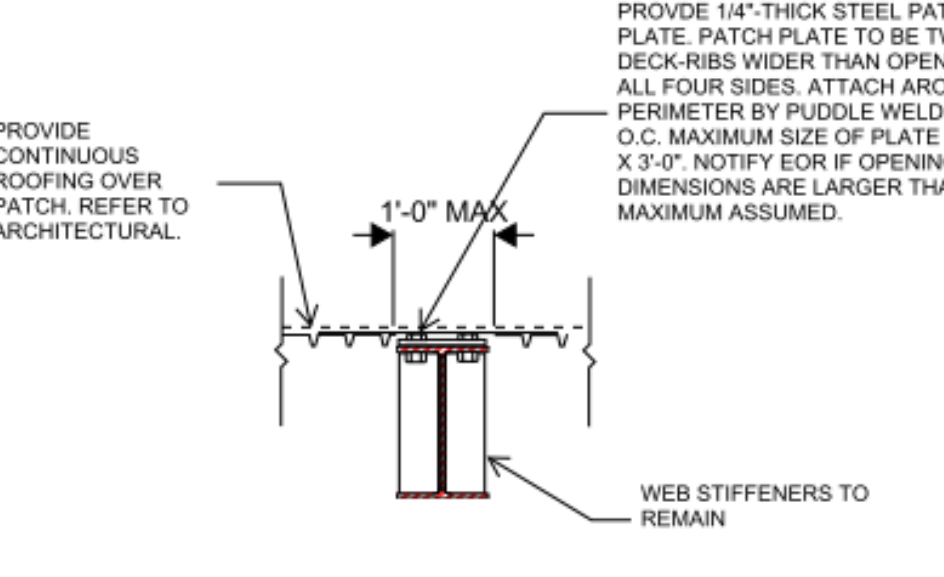
WEB STIFFENER

1 TYPICAL CONDITION OF DUNNAGE BEARING ON BEAM
NTS

2 TYPICAL CONDITION OF DUNNAGE BEARING ON BEAM
NTS





3 EXISTING TYPICAL DETAIL OF DUNNAGE POST BEARING ON BEAM
NTS



4 DUNNAGE REMOVAL TYPICAL DETAIL
NTS

GENERAL NOTES
REFER TO ALL GENERAL NOTES ON STRUCTURAL SKETCH 1.



DUNNAGE REMOVAL FOR BEARING TYPE 1	Date: 11/07/2022	Scale: NTS
 <p>4001 3rd Street NW, Washington, DC 20007 800.533.6100</p>	Job Number:	HA-SILMAN EMAILS
	Job Title: MIDNIGHT GOLF PROGRAM RENOVATIONS	Sheet: 2

LEGEND (PLEASE REFER TO GENERAL NOTE 3 ABOVE)

1) DUNNAGE POST BEARS ON EXISTING STEEL (BEAM OR COLUMN)

2) DUNNAGE POST BEARS ON COLUMN THROUGH PARAPET

X) UNCONFIRMED WHETHER POST BEARS ON EXISTING STEEL FRAMING. NOTIFY EOR IF POST BEARS ON DECK.

GENERAL NOTES

1. ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS AND SHALL CONFORM TO THE PROJECT SPECIFICATIONS, INCLUDING THE MICHIGAN STATE BUILDING REHABILITATION CODE, LATEST EDITION.

2. WHERE NEEDED, CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING TO MAKE SAFE ALL FLOORS AND WALLS AS PROJECT CONDITIONS AND/OR MEANS AND METHODS REQUIRE. SHORING SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN MICHIGAN, HIRED BY THE CONTRACTOR WHO SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR REVIEW. PARTICULAR CARE AND ADDITIONAL SHORING SHALL BE PROVIDED WHERE REQUIRED FOR REPAIRS TO DETORNOCKED BEAMS, GIRDERS, AND COLUMNS SUPPORTING MORE THAN 1 STORY OF FLOORS AND/OR MASONRY ABOVE BASED ON CONTRACTOR'S REVIEW OF THESE CONDITIONS ONCE ON SITE.

3. DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION GIVEN IN STRUCTURAL DRAWINGS ARE BASED ON LIMITED FIELD OBSERVATIONS AND MEASUREMENTS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PERTAINING TO EXISTING CONDITIONS BY ACTUAL MEASUREMENT AND OBSERVATION AT THE SITE. ALL DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN IN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER OF RECORD FOR EVALUATION BEFORE THE AFFECTED CONSTRUCTION IS PUT IN PLACE.

4. THE SITE IS TO BE RESTORED TO PRE-CONSTRUCTION APPEARANCE AFTER THE COMPLETION OF ALL WORK AS ESTABLISHED BY THE CONTRACTOR'S WORK PLAN.


5. CONTRACTOR IS TO PROTECT AND RETAIN INTACT ALL EXISTING CONDITIONS AND SOUND ELEMENTS WITHIN AND AROUND THE MASONRY DURING THE PERFORMANCE OF THE WORK.


STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING GOVERNING STANDARDS:
A. AISC 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS"
B. AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
C. AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE - STEEL"

2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
A. PLATES: ASTM A36 UNLESS OTHERWISE NOTED.
3. MINIMUM WELD SIZE IS 1/4" FILLET UNLESS NOTED OTHERWISE.
4. FIELD CUTTING OR BURNING OF STEEL IS PROHIBITED EXCEPT WITH THE EXPRESS WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD. IN WHICH CASE ALL BURNING OF STEEL MUST CONFORM TO THE THERMAL CUTTING REQUIREMENTS OF AISC AND AWS.
5. WELDING SHALL BE PERFORMED BY CERTIFIED, AWS-QUALIFIED WELDERS. WELDING ELECTRODES FOR CARBON STEEL SHALL BE AWS E1, CLASS E70XX.
6. ALL NEW EXTERIOR EXPOSED MEMBERS SHALL BE HOT DIP GALVANIZED.
7. HOT DIP GALVANIZING SHALL CONFORM TO ASTM A123. REPAIR SCRATCHES OR ABRASION GALVANIZED SURFACE WITH ZINC RICH PAINT. ALL EXTERIOR EXPOSED STEEL AND STEEL SUPPORTING EXTERIOR SHALL BE HOT DIPPED GALVANIZED.
8. SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. NO FABRICATION OF STEEL SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS.

1 PLAN LOCATIONS OF DUNNAGE ATTACHMENT POINTS
NTS



DUNNAGE REMOVAL DETAILS	Date: 11/07/2022	Scale: NTS
 <p>4001 3rd Street NW, Washington, DC 20007 800.533.6100</p>	Job Number:	HA-SILMAN EMAILS
	Job Title: MIDNIGHT GOLF PROGRAM RENOVATIONS	Sheet: 1

↑

12/02/2022 PERMIT

Project
DETROIT MIDNIGHT GOLF
Drawing Title
STRUCTURAL SKETCHES

Project Number: 2022036

Drawn By: Designer Approved By: Checker

Scale:

Seal:

Signature: _____

Drawing No: **S1.00**