



Agenda

City Commission Business Meeting

City of Kalamazoo

Monday, January 3, 2022

7:00 PM

City Commission Chambers – 241 West South Street

A. CALL TO ORDER/ROLL CALL

B. OPENING CEREMONY

1. Invocation: Rev. Dr. Dave Zomer Bethany Reformed Church
2. Pledge of Allegiance
3. Introduction of Guests
4. Proclamations

C. ADOPTION OF FORMAL AGENDA

D. COMMUNICATIONS

E. PUBLIC COMMENTS

F. PUBLIC HEARINGS

1. Public hearing to receive comments on the Fiscal Year 2022 Proposed Budget for the City of Kalamazoo. **(No action requested)**

G. CONSENT AGENDA

(Action: Motion to approve items “1-8” and authorize the City Manager to sign all documents on behalf of the City)

1. Authorization for the City Attorney to execute an agreement with the Miller-Johnson law firm to provide attorney services in connection with negotiations with surrounding municipalities for wastewater services.

2. Approval of a two-year contract extension with Eagle Claims Management for excess workers' compensation insurance in the amount of \$418,141.
3. Approval of a professional services agreement with Abonmarche Consultants, Inc. for the Ransom Street Utility Upgrade & ROW Improvements design in the amount of \$469,755.66.
4. Approval of a contract with Davis Construction Inc. for Stadium Drive Culvert replacement in the amount of \$609,587.28.
5. Approval of a one-year term contract extension for gasoline and diesel fuel with Kalamazoo Oil Inc. for an amount not to exceed \$750,000.
6. Approval of a contract with Davis Construction, Inc. for the construction of the Kalamazoo Water Reclamation Plant's Tertiary Disc Filtration Process Facility in the amount of \$13,711,233.
7. Approval of an agreement granting Consumers Energy an easement across City-owned property at 2740 N. 6th Street.
8. Approval of the minutes from the City Commission Meetings on December 6, 2021.

H. REGULAR AGENDA

I. REPORTS AND LEGISLATION

1. City Manager's Report

J. UNFINISHED BUSINESS

K. POLICY ITEMS

L. NEW BUSINESS

M. COMMISSIONER COMMENTS

N. CLOSED SESSION

O. ADJOURNMENT

ADDITIONAL INFORMATION

Get news, information, and alerts from the City of Kalamazoo. Sign up at www.kalamazoocity.org/connect, follow @KalamazooCity on Twitter, and search for The City of Kalamazoo on Facebook.

Questions regarding agenda items may be answered prior to the meeting by contacting the City Manager's Office at 269.337.8047. Persons who wish to contact members of the City Commission prior to the meeting to provide input about items on the meeting agenda may do so via email to CityCommission@kalamazoocity.org.

Persons who wish to address the City Commission during the meeting to provide input about items on the meeting agenda or to make general comments may do so between 6:30 p.m. and the end of the public comment period by calling 269.226.6573 and leaving a recording.

Agendas for the regular meetings of the Kalamazoo City Commission are available on the Internet at: www.kalamazoocity.org

The Kalamazoo City Commission's business meetings are held on the first and third Mondays at 7:00 p.m. and are shown live on the Public Media Network (channel 190 for Charter customers, channel 99 for U-Verse customers). Committee of the Whole meetings are held immediately prior to business meetings at 5:00 p.m. Both meetings are also streamed live on the City's Facebook page (<https://www.facebook.com/KalamazooCity/>) and YouTube Channel (<https://www.youtube.com/channel/UCIgXSSXLSDxThVaaiRMsR5Q>).

The live stream on the City's Facebook page will feature Closed Captioning in real time. After the meeting a recording with Closed Captioning will be available on both the City's Facebook page and YouTube Channel.

Public Media Network rebroadcasts these meetings on Tuesdays at 8:00 a.m., Wednesdays, at 1:00 a.m., and Thursdays at 3:00 p.m.



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **F.1.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: James K. Ritsema, ICMA-CM, City Manager
Reviewed by: Steve Vicenzi, CFO / Director Management Services
Prepared by: Steve Vicenzi, CFO / Director Management Services

DATE: January 3, 2022

SUBJECT: Public Hearing to Receive Comments on the Fiscal Year 2022 Proposed Budget for the City of Kalamazoo.

RECOMMENDATION:

It is recommended that the City Commission receive comments regarding the Fiscal Year 2022 Proposed Budget.

BACKGROUND:

Each year a resolution must be adopted to provide notice of a public hearing to be held prior to adoption of the budget. The hearing must take place prior to adoption of the budget and publication of a notice of said hearing must be published at least six (6) days prior to the hearing. A resolution was approved on December 20, 2021 to set the hearing to take place at or after 7 p.m., local time, on January 3, 2022.

The final budget actions by the City Commission are scheduled for January 17, 2022 and include the adoption of a General Appropriation Resolution for the Year of 2022 setting property tax millage rates, the final appropriations to be adopted by the City Commission for each fund and operation within the City, and other related actions such as resolutions regarding fee increases.

STRATEGIC VISION ALIGNMENT:

Strategic Goal Impact:



Good Governance- Ensuring the City organization has the capacity and resources to effectively implement the community's Strategic Vision in a way that is sustainable over the long term.

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Consult (two-way conversation) – the community will have a chance to react to the project through two-way conversation.

FISCAL IMPACT:

No fiscal impact from holding the hearing. The Commission may request changes to the budget prior to final approval.



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **G.1.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: Clyde J. Robinson, City Attorney

DATE: January 3, 2022

SUBJECT: Approve a Contract with Miller-Johnson law firm for Wastewater Negotiations Attorney Services (Bid Ref#96158-001.0)

RECOMMENDATION:

It is recommended that the City Commission authorize the City Attorney to execute an agreement with the Miller-Johnson law firm to provide attorney services in connection with negotiations with surrounding municipalities for wastewater services.

BACKGROUND:

In 2014 the surrounding municipalities threatened to bring suit against the City alleging that the water and wastewater service rates charged to nonresidents were excessive and unreasonable. Additionally, nearly all of the agreements between the City and the other municipalities receiving these services had expired (and were being continued on a year-to-year basis) or were about to expire. In light of these circumstances the City and a group of representatives from the surrounding townships entered into negotiations to craft new utility agreements.

In early 2021 a new master water service agreement was reached by the City and those municipalities receiving water service from the City. The parties now will turn to negotiating a new wastewater service agreement. The City was assisted by outside counsel during the course of the water agreement negotiations, but that attorney is winding down his practice, so the City issued a Request for Proposals for a replacement. The Miller-Johnson firm was the only one to respond to the request. However, the proposal for their services is reasonable and they have the necessary expertise and experience to assist the City.

STRATEGIC VISION ALIGNMENT:

The approval of the attorney services agreement furthers the Good Governance goal.



Good Governance- Ensuring the City organization has the capacity and resources to effectively implement the community's Strategic Vision in a way that is sustainable over the long term.

COMMUNITY ENGAGEMENT:

Inform (one-way conversation) – no feasible alternatives available due to legal/regulatory restrictions, standards and best practices, or resource limitations; the community will be made aware of the project.

FISCAL IMPACT:

Funds are available in budgets for the City Attorney's Office and the Wastewater fund.



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **G.2.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: James K. Ritsema, ICMA-CM, City Manager
Prepared by: Stephen Vicenzi, Management Services Director / CFO

DATE: January 3, 2022

SUBJECT: Approval of 2022 Excess Workers Compensation Insurance Premium (Bid Ref#962-47-009.3.1)

RECOMMENDATION:

It is recommended that the City Commission approve a two-year contract extension with Eagle Claims Management for excess workers' compensation insurance. The two-year premium payments will be for a total of \$418,141; \$204,971 for 2022 and \$213,170 for 2023.

BACKGROUND:

This is statutorily required workers' compensation coverage for the City. The City was confronted with a workers' compensation insurance market which is seeking to impose greater self-insured retention levels on employers (the City has had an \$850,000 self-insured retention (SIR) which has been rarely exceeded) and higher premiums due to rising medical costs.

The City was able to retain its current SIR of \$850,000 with a rate increase to .4125 cents per \$100 of payroll for the first year of this policy and .41285 cents per \$100 of payroll for the second year. Our insurance agent, Keyser Group advised that the City should retain the SIR of \$850,000.

STRATEGIC VISION ALIGNMENT:

Strategic Goal Impact:



Good Governance- Ensuring the City organization has the capacity and resources to effectively implement the community's Strategic Vision in a way that is sustainable over long term.

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Inform (one-way conversation) – no feasible alternatives available due to legal/regulatory restrictions, standards and best practices, or resource limitations; the community will be made aware of the project.

FISCAL IMPACT:

The cost of the premium has been included in the proposed 2022 City Insurance Fund Budget and is funded by departments through payroll as a cost of employee benefits.



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **G.3.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: James K. Ritsema, ICMA-CM, City Manager
Reviewed by: James J. Baker, PE, Public Services Director and City Engineer
Prepared by: Ryan S. Stoughton, PE, Asst. City Engineer

DATE: January 3, 2022

SUBJECT: Professional Service Agreement with Abonmarche Consultants, Inc. for Ransom Street Utility Upgrade Design (Bid Ref# 92500-002.0.1)

RECOMMENDATION:

It is recommended that the City Commission approve a design Professional Services Agreement with Abonmarche Consultants, Inc. for the Ransom Street Utility Upgrade & ROW Improvements design in the amount of \$469,755.66.

BACKGROUND:

The remaining original Ransom Street Sanitary Sewer Interceptor, Walbridge to Westnedge, is under capacity for the existing tributary area. This Project will replace the remaining entirety of the original interceptor with one which meets current engineering and regulatory standards. The existing watermain on Ransom Street is a transmission main upgrade candidate to increase the long-term reliability of the water utility. The Project will also identify and replace lead water services which may exist within the construction limits. The right-of-way corridor will also receive planned improvements. The existing Ransom Street corridor is a mix of City Local and City Major streets including sections of brick pavement. The planned intent of this Project is to extend the City Major Street designation from Burdick Street to Westnedge Ave with alignment with Imagine Kalamazoo 2025 and the Northside Neighborhood Plan, 2018. The corridor design will also include consideration for the Northside Cultural Business District, historical brick street sections, as well as traffic flows of related anticipated corridor improvements.

A portion of the original interceptor, watermain, and right-of-way Corridor was upgraded and improved from Gull Street to Walbridge under the River's Edge Roundabout Project. This Project continues both the utility infrastructure and right-of-way corridor upgrades and improvements.

STRATEGIC VISION ALIGNMENT:

Strategic Goal Impact:

Good Governance – Organizational Resources.
Safe Community – Water Management & Delivery
Environmental Responsibility – Water Management
Environmental Responsibility – Sustainability & Conservation
Economic Vitality – Asset Management
Connected City – Wayfinding
Connected City – Accessibility
Connected City – Network Strategies
Connected City – Non-Motorized Transportation
Inviting Public Places – Streets as Public Realm
Inviting Public Places – Placemaking
Complete Neighborhood – Neighborhood Relationships
Complete Neighborhood – Land Use & Transportation

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Internal – A Design Team comprised of Community Planning and Economic Development and Public Services Departmental staff collaborated to create select a Firm which is believed to provide the best value to the Project.

Collaborate – During the Design Phase, meetings are anticipated to be held to update the Neighborhood and Community Stakeholders of the design as well as afford said Stakeholders opportunities to provide suggestions and feedback for incorporation consideration into the final construction design.

FISCAL IMPACT:

Funding for the design is available via 5-year Capital Improvement Program (CIP) approved budget.

2022 Fiscal Year Capital Improvement Program Project Budget Breakdown:

Street – mst0100223	\$199,149.48
Water Resources – wat0500364	\$69,932.05
<u>Wastewater – wwr0200065</u>	<u>\$200,674.13</u>
Total:	\$469,755.66



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **G.4.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: James K. Ritsema, ICMA-CM, City Manager
Reviewed by: James J. Baker, PE, Public Services Director and City Engineer
Prepared by: George H. Waring, E.I.T., Public Works Senior Civil Engineer

DATE: January 3, 2022

SUBJECT: Approve a Contract with Davis Construction Inc. for Stadium Drive Culvert Replacement (Bid Ref #91339-001.0)

RECOMMENDATION:

It is recommended that City Commission approve the contract for Stadium Drive Culvert replacement with Davis Construction, Inc. in the amount of \$609,587.28.

BACKGROUND:

Stadium Drive is a key piece of the City of Kalamazoo's transportation system. It provides vehicle, non-motorized, and pedestrian passage to and from the City. A major road resurfacing and alignment effort is scheduled for summer 2022 to improve the roadway and sustain capacity and transportation operations. To facilitate this work, one of the four culverts underneath Stadium Drive needs improvements prior to the roadwork commencing.

The scope of work for this project includes but is not limited to: The removal and replacement of a 60" diameter concrete culvert with an 8' x 6' concrete box culvert on Stadium Drive over Arcadia Creek. Included in the culvert replacement work is maintaining traffic to facilitate part width construction, removal of existing pavement, excavation, bypassing, proposed structure placement, backfill, pavement restoration, slope restoration, and fence relocation / placement.

Davis Construction, Inc.'s bid was the lowest bid of competent bids submitted for this effort.

STRATEGIC VISION ALIGNMENT:

Strategic Goal Impact:

Safe Community – Creating a safe environment for living, working, and playing

Connected City – A city that is networked for walking, biking, riding, and driving
Economic Vitality – Growing businesses and stabilizing the local economy to the benefit of all
Good Governance – Making and implementing public decisions in ways that are collaborative, inclusive, and data-driven

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Inform (one-way conversation) – no feasible alternatives available due to legal/regulatory restrictions, standards and best practices, or resource limitations; the community will be made aware of the project.

Engagement/Communication Tools

Press releases, public notices, website publication, and other such public communication tools will be used to ensure community is aware and can prepare and act accordingly. This work will involve motorists needing to detour their commute and traffic patterns during various phases of the project.

FISCAL IMPACT:

Funding:

MST0100278 \$ 610,000.00

Project Costs:

Construction – MST0100278 \$609,587.28

Total Cost \$609,587.28



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **G.5.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: James K. Ritsema, ICMA-CM, City Manager
Reviewed by: James J. Baker, PE, Public Services Director and City Engineer
Prepared by: Tom Quigley, City Fleet Manager

DATE: January 3, 2022

SUBJECT: One-Year Contract Extension with Kalamazoo Oil for Gasoline and Diesel Fuel
(Bid Ref#405-09-014.5)

RECOMMENDATION:

It is recommended that the City Commission approve a one-year term contract extension for gasoline and diesel fuel with Kalamazoo Oil Inc. not to exceed \$750,000.

BACKGROUND:

In 2017, the City of Kalamazoo and Kalamazoo County participated in a cooperative sealed bid purchase of gasoline and diesel fuel. A one-year contract was awarded to Kalamazoo Oil Inc. because of that bidding process the current extension expires December 31, 2021.

Since the petroleum market is continually changing, the contract was structured to obtain a firm and competitive price which stays current with the market by bidding the margin charged by the supplier. This margin includes the supplier's cost and profit to deliver the fuel to the City's storage sites. This margin is added to the regional refiner's rack price with each shipment of fuel.

The City purchases fuel in bulk quantities ranging from 250 gallons to 6,000 gallons and dispenses fuel to City vehicles and equipment. A contract extension with Kalamazoo Oil Inc is recommended for approval. Kalamazoo County will contract separately for their fuel needs.

STRATEGIC VISION ALIGNMENT:

Strategic Goal Impact:



Good Governance- Ensuring the City organization has the capacity and resources to effectively implement the community's Strategic Vision in a way that is sustainable over the long term.

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Inform (one-way conversation) – no feasible alternatives available due to legal/regulatory restrictions, standards and best practices, or resource limitations; the community will be made aware of the project.

FISCAL IMPACT:

Funds have been allocated in the Fleet budget.



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **G.6.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: James K. Ritsema, ICMA-CM, City Manager
Reviewed by: James J. Baker, PE, Public Services Director and City Engineer
Prepared by: Ryan S. Stoughton, PE, Asst. City Engineer

DATE: January 3, 2022

SUBJECT: Approve a Contract with Davis Construction Inc. for Tertiary Disc Filtration Process Facility Construction -Contract 75 (Bid Ref# 91359-001.0)

RECOMMENDATION:

It is recommended that the City Commission approve a construction contract with Davis Construction, Inc. for the construction of the Kalamazoo Water Reclamation Plant's Tertiary Disc Filtration Process Facility in the amount of \$13,711,233.

BACKGROUND:

The Kalamazoo Water Reclamation Plant (Plant) is a Regional Advanced Activated Sludge Wastewater Treatment Plant with multiple major treatment processes, including Preliminary, Primary, Secondary, and Tertiary, with sub-processes within each major process. Tertiary Filtration is a vital permit required process within the treatment system to meet the Plant's Discharge Permit.

The primary goal of this Project is to increase operational flexibility and efficiencies while decreasing long term maintenance costs and decreasing the adverse impacts on downstream systems. The secondary goal of this Project is to allow for future expansion needs within the Plants existing footprint as well as future downstream system upgrade opportunities.

Completing the goals of this Project at the most cost effective 20-year life cycle cost is of upmost importance.

An extensive matrix review was conducted on the submitted bids to determine the best value responsive bidder. The matrix review was conducted by the Plant's Project Design Team to determine the best value responsive bidder. Davis Construction, Inc. has been determined to be the best value responsive bidder.

The construction is scheduled to be substantially complete by March 31, 2023 and ready for final payment by May 31, 2023.

STRATEGIC VISION ALIGNMENT:

Strategic Goal Impact:

Good Governance – Organizational Resources.
Safe Community – Water Management & Delivery
Environmental Responsibility – Water Management
Environmental Responsibility – Sustainability & Conservation
Economic Vitality – Asset Management

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Inform (one-way conversation) – no feasible alternatives available due to legal/regulatory restrictions, standards and best practices, or resource limitations; the community will be made aware of the project.

FISCAL IMPACT:

Funding for the equipment procurement of this Project is available via 5-year Capital Improvement Program (CIP) approved budget.

Fiscal Budget Breakdown:

2021 – via FY 2020 approved CIP Project budget	\$3,800,000.00
2022 – via FY 2021 approved 5-year CIP budget proposal	\$7,411,233.00
<u>2023 – via FY 2022 approved 5-year CIP budget proposal</u>	<u>\$2,500,000.00</u>
Total	\$13,711,233.00



City Commission Agenda Report

City of Kalamazoo

Date: **1/3/2022**

Item: **G.7.**

TO: Mayor Anderson, Vice Mayor Cooney, and City Commissioners

FROM: James K. Ritsema, ICMA-CM, City Manager
Reviewed by: James J. Baker, PE, Public Services Director and City Engineer
Prepared by: James J. Baker, PE, Public Services Director and City Engineer

DATE: January 3, 2022

SUBJECT: 2740 N. 6th Street - Consumers Energy Property Easement

RECOMMENDATION:

It is recommended the City Commission approve an agreement granting Consumers Energy an easement across City-owned property at 2740 N. 6th Street.

BACKGROUND:

The Executive Director of the Kalamazoo County Dispatch Authority is working for a communications tower at 2740 N. 6th Street requiring a separate electrical service to the tower. In order to proceed Consumers Energy requires a right of way easement.

STRATEGIC VISION ALIGNMENT:

Strategic Goal Impact:
Economic Vitality

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement
Internal

FISCAL IMPACT:

There is no fiscal impact associated with this item

PROJECT DESCRIPTION CONSISTS OF, BUT IS NOT LIMITED TO:
THE INSTALLATION OF A CHAIN LINK FENCE WITH BARBED WIRE, ACCESS GATE
AND GRAVEL COMPOUND

THE INSTALLATION OF A SELF SUPPORT TOWER WITH FOUNDATIONS

THE INSTALLATION OF A PRE-FAB EQUIPMENT SHELTER WITH A PROPANE
GENERATOR ON A CONCRETE FOUNDATION, A PROPANE TANK ON A CONCRETE SLAB,
ICE BRIDGE, ANTENNAS, AND ALL ASSOCIATED RADIOS AND CABLING

THE INSTALLATION OF ASSOCIATED UNDERGROUND PROPANE FUEL LINE, POWER,
FIBER/TELCO AND ALARM CONDUITS AND GROUNDING

SITE NAME: 5111 OSHTEMO

SITE ADDRESS: N. 6TH STREET
KALAMAZOO, MI 49009

SITE COORDINATES
AND ELEV.: LATITUDE: N. 42° 18' 49.7"
LONGITUDE: W. 85° 42' 16.5"
GROUND ELEV.: 1038.8' AMSL APPROX.

PROPERTY OWNER: CITY OF KALAMAZOO
241 W. SOUTH STREET
KALAMAZOO, MI 49007

TOWER OWNER: KALAMAZOO COUNTY CONSOLIDATED
DISPATCH AUTHORITY
7040 STADIUM DRIVE
KALAMAZOO, MI 49009
JEFFERY TROYER (269) 488-6615
EMAIL: JTroyer@kccda911.org

CONTACT: MOTOROLA SOLUTIONS
500 W. MONROE STREET STE 4400
CHICAGO, IL 60661
DEREK SONKSEN (616) 498-9020
EMAIL: derek.sonksenr@motorolasolutions.com

PROJECT MANAGER: PYRAMID NETWORK SERVICES , LLC
6615 TOWPATH ROAD
EAST SYRACUSE, NY 13057
EVERETT OZBAT (989) 737-2954
EMAIL: EOzbat@pyramidns.com

SURVEYOR: MIDWESTERN CONSULTING
3815 PLAZA DRIVE
ANN ARBOR, MI 48108
PAUL KOVACS, PS (734) 995-0200
EMAIL: pk@midwesternconsulting.com

ENGINEER: HARPER ENGINEERING, INC
815 SUPERIOR AVENUE SUITE 1514
CLEVELAND, OH 44114
DAVID W. HARPER (216) 344-3855
EMAIL: dwharper@harperengineering.org

<u>KALAMAZOO COUNTY CONSOLIDATED DISPATCH AUTHORITY:</u>	<u>RECEIVED:</u>
	<u>ACCEPTED:</u>
<u>MOTOROLA:</u>	<u>RECEIVED:</u>
	<u>ACCEPTED:</u>
<u>PROPERTY OWNER:</u>	<u>RECEIVED:</u>
	<u>ACCEPTED:</u>

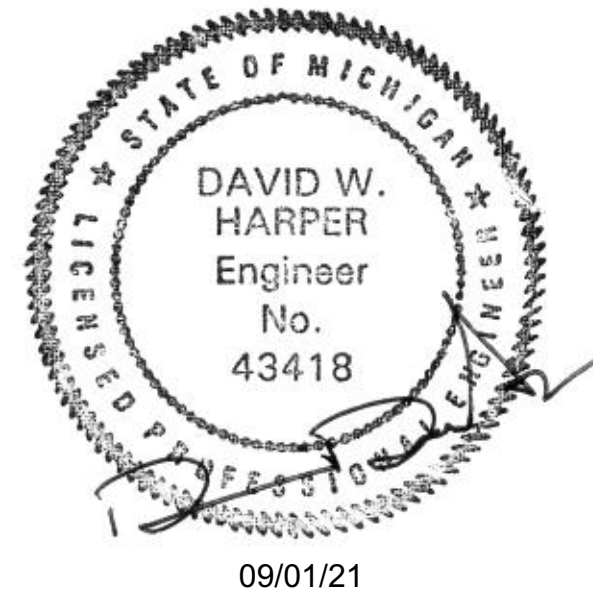
FROM DOWNTOWN KALAMAZOO: TAKE W. KALAMAZOO AVENUE WEST TO DOUGLAS AVENUE. TURN LEFT ONTO DOUGLAS AVENUE. MERGE RIGHT ONTO W. MAIN STREET. CONTINUE WEST TO N. 6TH STREET. TURN RIGHT ONTO N. 6TH STREET. SITE IS LOCATED NEXT TO THE WATER TANK ON THE RIGHT HAND SIDE.

RAW LAND SELF SUPPORT TOWER SITE

A map of Kalamazoo, Michigan, showing the location of the proposed site. The map includes major roads like I-131, I-94, and I-69, and landmarks such as Western Michigan University, Bronson Methodist Hospital, and Walmart Supercenter. A red pin labeled 'SITE' is located near the intersection of W Main St and I-131.

[illegible]

SHEET	DESCRIPTION	REV.
T-1	TITLE SHEET	2
SURV-1	SITE SURVEY (BY OTHERS)	
C-1	OVERALL SITE PLAN	2
CD-1	CIVIL DETAILS	2
A-1	COMPOUND SITE PLAN	2
A-2	TOWER ELEVATION AND ANTENNA INFO	2
A-3	ANTENNA DETAILS	1
A-4	ANTENNA DETAILS	1
S-1	FOUNDATION DETAILS	1
S-2	SHELTER ELEVATIONS	1
S-3	SHELTER INSTALLATION DETAILS	1
E-1	UTILITY DETAILS	1
E-2	LP TANK & ELECTRICAL DETAILS	1
G-1	GROUNDING PLAN	1
G-2	GROUNDING DETAILS	1
G-3	GROUNDING DETAILS	1
G-4	GROUNDING DETAILS	1
GN-1	GENERAL NOTES	1
GN-2	GENERAL NOTES AND LEGEND	1



2	09/01/21	REVISED DRAWINGS C-1, CD-1, A-1 & A-2	GJB
1	06/25/21	FOR CONSTRUCTION	GJB
0	05/25/21	FOR ZONING	GJB
C	05/03/21	RELOCATED UTILITY TRANSFORMER	GJB
B	03/30/21	FOR APPROVAL	GJB
A	03/18/21	FOR APPROVAL	GJB
Rev.	Date:	Description:	Mgr.



**HARPER
ENGINEERING, INC.**
TELECOM GROUP

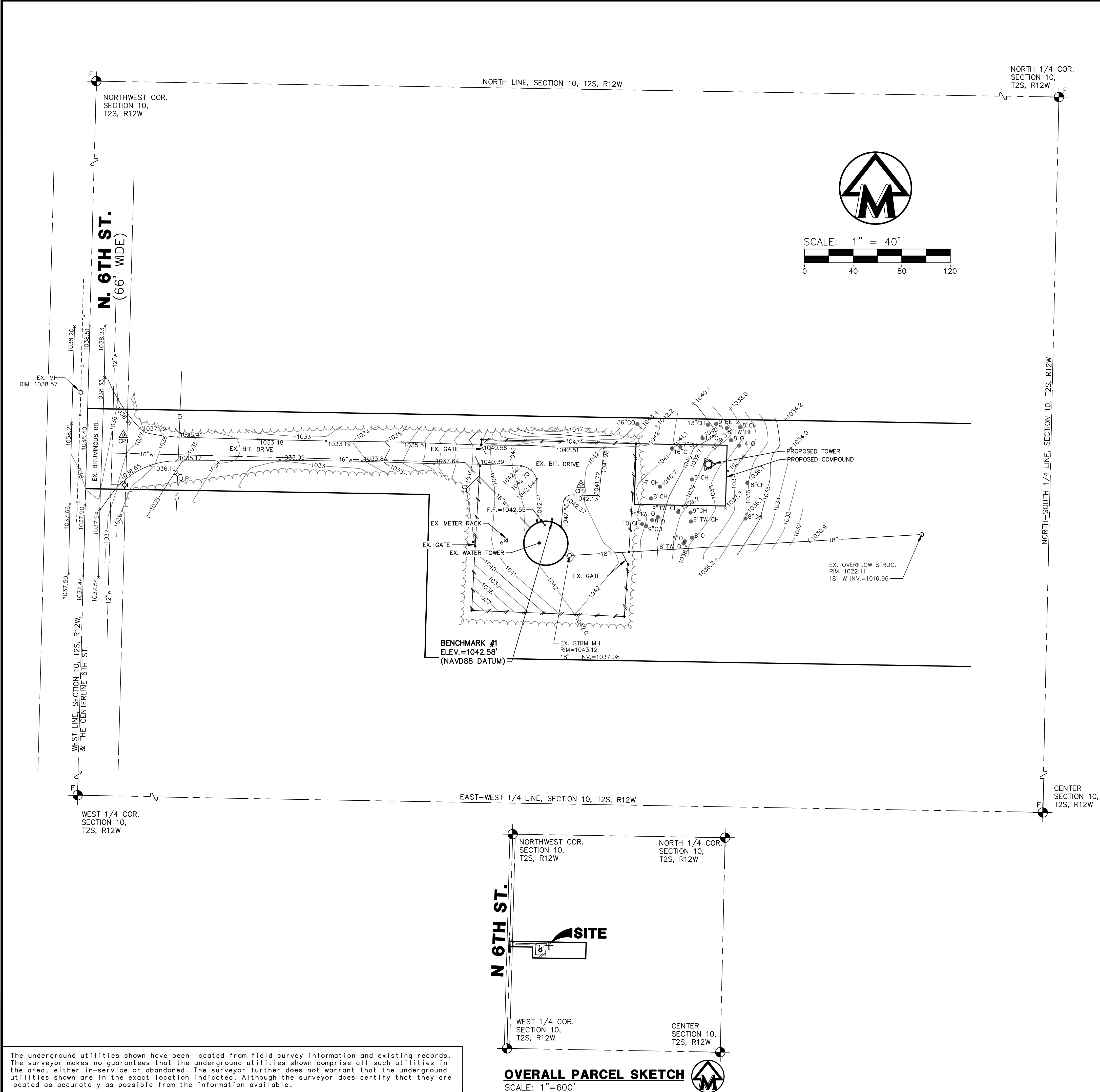
815 Superior Ave. Suite 1514
Cleveland, OH. 44114

Phone: (216)344-3855
Fax: (216)344-3856

TITLE SHEET		
SCALE: AS NOTED	5111 OSHTEMO N. 6TH STREET KALAMAZOO, MI 49009	Drawing / Rev.
DRAWN BY: GJB		T-1/2
CHECKED BY: GJB		
DATE: 03/02/21		
FILE: 20-216-005		

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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.



The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

OVERALL PARCEL SKETCH

SCALE: 1"=600



VICINITY SKETCH

NOT TO SCALE



LOCATION

LONGITUDE 85° 42' 16.5"

LATITUDE 42° 18' 49.7"

GROUND ELEV. @ TOWER BASE = 1038.8

LEGAL DESCRIPTION OF OVERALL PARCEL

**LEGAL DESCRIPTION OF A PARCEL OF LAND LOCATED
IN THE NORTHWEST 1/4 OF SECTION 10, T2S, R12W,
OSHTEMO TOWNSHIP, KALAMAZOO COUTNY, MICHIGAN**

The North 200 feet of the West 943 feet of the Southwest 1/4 of the Northwest 1/4 of said Section 10;

EXCEPT the South 134 feet of the West 283 feet thereof.

Being a part of the Northwest 1/4 of Section 10, Town 2 South, Range 12 West, Oshtemo Township, Kalamazoo County, Michigan and containing 3.46 acres of land, more or less. Subject to the rights of the public over the westerly 33 feet thereof, as occupied by 6th Street. Subject to any other easements or restrictions of record, if any

BENCH MARK

TOP OF THE EAST END OF THE CONCRETE STOOP AT THE ENTRANCE DOOR OF THE EXISTING WATER TOWER; 39 FEET SOUTHWEST OF CONTROL POINT #2; +/- 81 FEET SOUTHEAST OF THE WATER TOWER COMPOUND ENTRANCE; +/-87 FEET SOUTH OF THE NORTH PROPERTY LINE;

ELEVATION = 1042.58' (NAVD88 DATUM)

PROPERTY INFORMATION

TAX PARCEL: #05-10-155-011

OWNER: CITY OF KALAMAZOO
241 W SOUTH ST.
KALAMAZOO, MI 49007

LEGEND

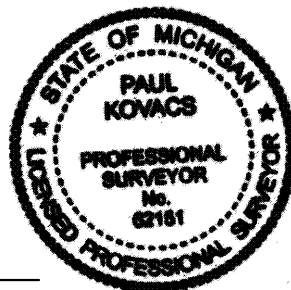
	EXIST. CONTOUR
	EXIST. SPOT ELEVATION
	EXIST. UTILITY POLE
	EXIST. OVERHEAD UTILITY LINE
	EXIST. WATER MAIN
	EXIST. HYDRANT
	EXIST. STORM SEWER
	EXIST. SANITARY SEWER
	ELECTRIC METER
	POST
	FENCE
	SINGLE TREE
	TREE OR BRUSH LIMIT
	SECTION CORNER
	CONTROL PT.

TREE LEGEND

- BE BEECH
- CH CHERRY
- CO COTTONWOOD
- O OAK

PREPARED BY:
MIDWESTERN CONSULTING, L.L.C.

PAUL E. KOVACS, PS #62151



SITE # #20047
OSHTMO

REVISIONS:	REV. DATE:
------------	------------

MIDWESTERN
CONSULTING

JOB No. 16188-20048

DATE: 02/21/2021

5193

TECH. 610

E11 F. 16188.

[illegible]

SITE SURVEY

1

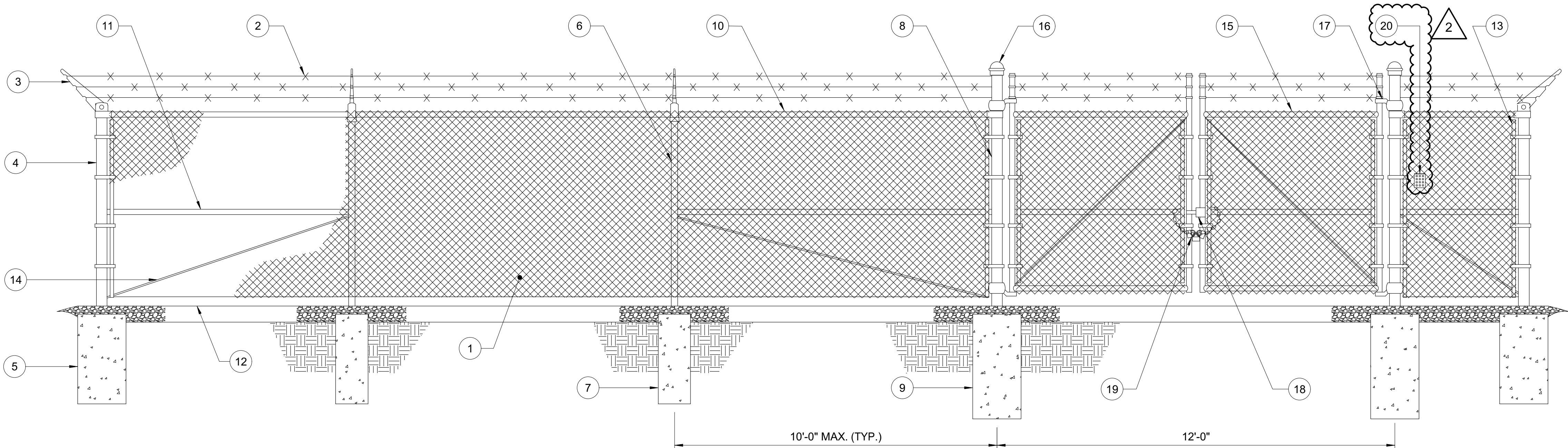
SHEET 1 OF 1

KEYNOTE LEGEND:

- 1
- FABRIC: 9 GA, 2" MESH, ASTM-A392 (SEE FENCE SECTION FOR HEIGHT)
- 2
- BARBED WIRE: 12 GAUGE WIRE (3 RUNS) FINISH TO MATCH FABRIC ASTM A121.
- 3
- EXTENSION ARMS: STAMPED STEEL WITH MALLEABLE IRON BASE, FINISH TO MATCH FENCE FRAMEWORK, ASTM F626.
- 4
- END AND CORNER POSTS: 3" DIA. PIPE, SCHED. 40 (GALV) ASTM F1083.
- 5
- CONCRETE FOUNDATION: 42"x12" DIA. (3000 PSI).
- 6
- LINE POSTS: 2" DIA. PIPE SCHED. 40 (GALV.) ASTM F1083.
- 7
- CONCRETE FOUNDATION: 42"x10" DIA. (3000 PSI).
- 8
- GATE POSTS: 4" DIA. PIPE SCHED. 40 (GALV.) ASTM F1083.
- 9
- CONCRETE FOUNDATION: 48"x12" DIA. (3000 PSI).
- 10
- TOP RAIL AND BRACE RAIL: 1 1/2" DIA. PIPE SCHED. 40 (GALV.) ASTM F1083.
- 11
- MIDDLE RAIL: 1 1/2" DIA. PIPE SCHED. 40 (GALV.) ASTM F1083.
- 12
- BOTTOM TENSION WIRE: 0.177" DIA. METALLIC-COATED STEEL(GALV.) MARCELLED ASTM A824.
- 13
- TENSION BARS: 3/16"x3/4", FULL HEIGHT OF FABRIC, FINISH TO MATCH FENCE FRAMEWORK.
- 14
- TENSION ROD: 3/8" DIA. WITH ADJ. TIGHTENER, FINISH TO MATCH FENCE FRAMEWORK.
- 15
- GATE FRAME: 2" DIA. SCHED. 40 (GALV.) ASTM F1083.
- 16
- POST CAPS: PER POST DIAMETER.
- 17
- GATE HINGES: NON-LIFT-OFF TYPE, OFFSET TO PERMIT 180 DEGREE SWING.
- 18
- DOUBLE GATE LATCH: COMMERCIAL STRONG ARM EQUAL TO: DAC INDUSTRIES, 615-C, ELEVENTH STREET, GRAND RAPIDS MI, 49504.
- 19
- LOCK CHAIN: 3/8" SIZE 36" LONG, HOT DIPPED (GALV.) ZINC COATED, W/ KEY LOCK
- 20
- CONTRACTOR TO INSTALL KNOX BOX 3200 SERIES WITH ZIP CODE COMBINATION # 49009 NEAR THE ACCESS GATE (FIELD LOCATE). KNOX BOX SHALL CONTAIN (1) KEY FOR ACCESS GATE AND (1) KEY FOR SHELTER.

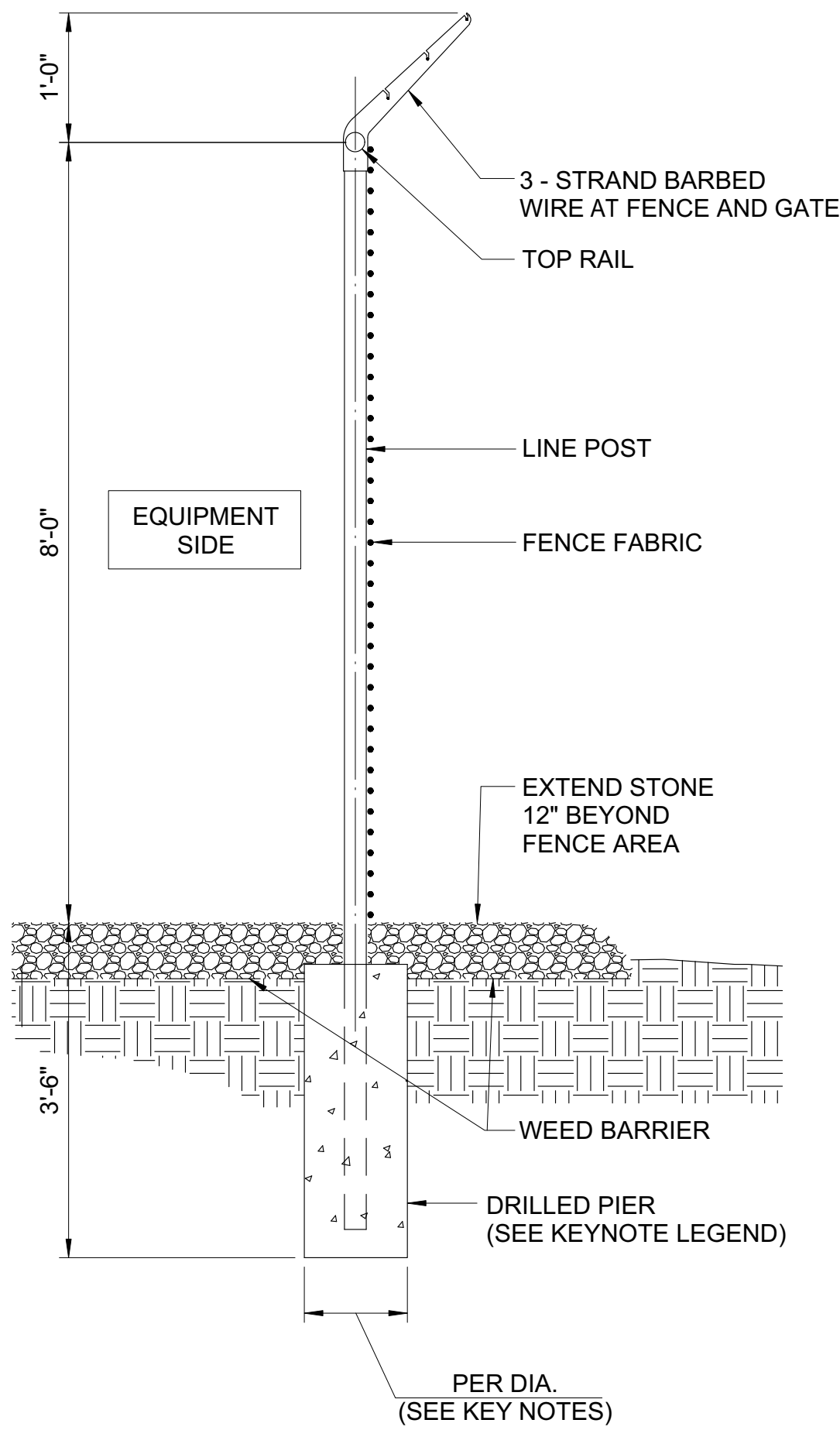
NOTES:

1.
- REFER TO PROJECT SPECIFICATIONS FOR INFORMATION NOT SHOWN IN THE DRAWING.
2.
- FENCE FABRIC SHALL CONFORM TO CHAIN LINK FENCE MANUFACTURERS INSTITUTE (CLFMI) PRODUCT MANUAL.
3.
- INSTALL FENCE IN COMPLIANCE W/ ASTM F567.
4.
- INSTALL SWING GATES IN COMPLIANCE W/ ASTM F900.
5.
- DO NOT BEGIN INSTALLATION AND ERECTION BEFORE FINAL GRADING IS COMPLETED UNLESS OTHERWISE PERMITTED. INSTALL FENCING AND GATES AS SHOWN ON PLANS.
6.
- DRILL OR HAND-EXCAVATE (USING POST - HOLE DIGGERS) HOLES FOR POSTS TO DIAMETERS AND SPACING INDICATED. IN FIRM, UNDISTURBED OR COMPACTED SOIL. IF NOT INDICATED ON DRAWINGS, EXCAVATE HOLES FOR EACH POST TO MINIMUM DIAMETER RECOMMENDED BY FENCE MANUFACTURER, BUT NOT LESS THAN FOUR (4) TIMES LARGEST CROSS-SECTION OF POST.
7.
- REMOVE POST HOLE SPOILS FROM SITE. DO NOT SET SPOILS ON AGGREGATE WITHOUT ADEQUATE PROTECTION.
8.
- PROTECT PORTION OF POSTS ABOVE GROUND FROM CONCRETE SPLATTER. PLACE CONCRETE AROUND POSTS AND VIBRATE OR TAMP FOR CONSOLIDATION. CHECK EACH POST FOR VERTICAL AND TOP ALIGNMENT AND HOLD IN POSITION DURING PLACEMENT AND FINISHING OPERATIONS. UNLESS OTHERWISE SHOWN, EXTEND CONCRETE FOOTING TWO (2) INCHES ABOVE GRADE AND TROWEL TO A CROWN TO SHED WATER.
9.
- INSTALL BARBED WIRE IN ACCORDANCE W/ MANUFACTURERS INSTRUCTIONS.
10.
- APPLY FABRIC TO OUTSIDE OF FRAMEWORK.



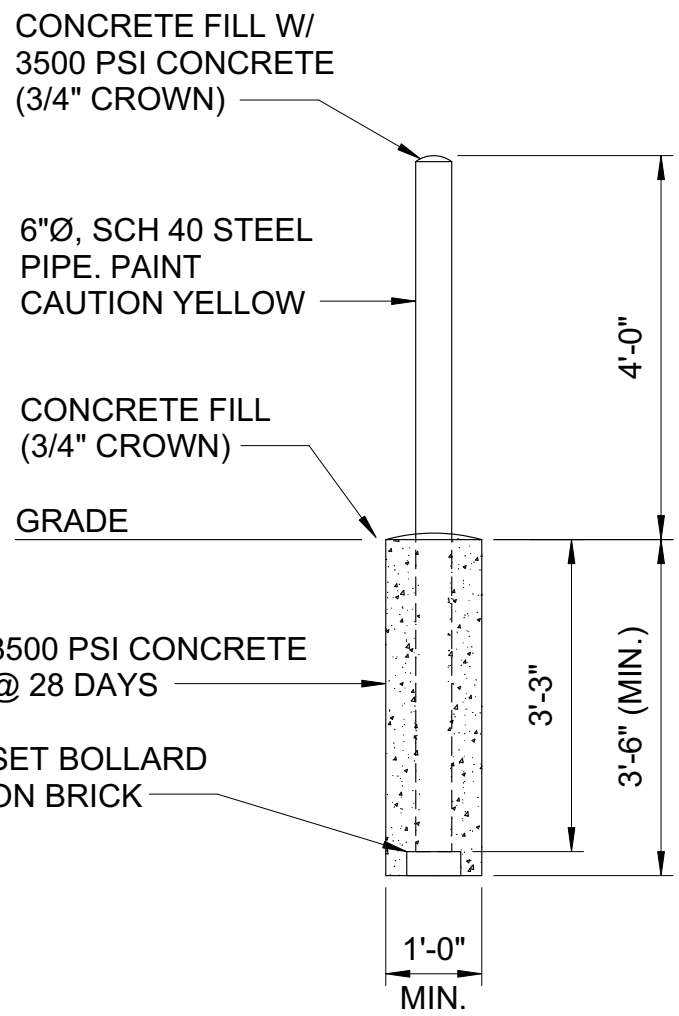
TYPICAL FENCE ELEVATION

SCALE: NONE



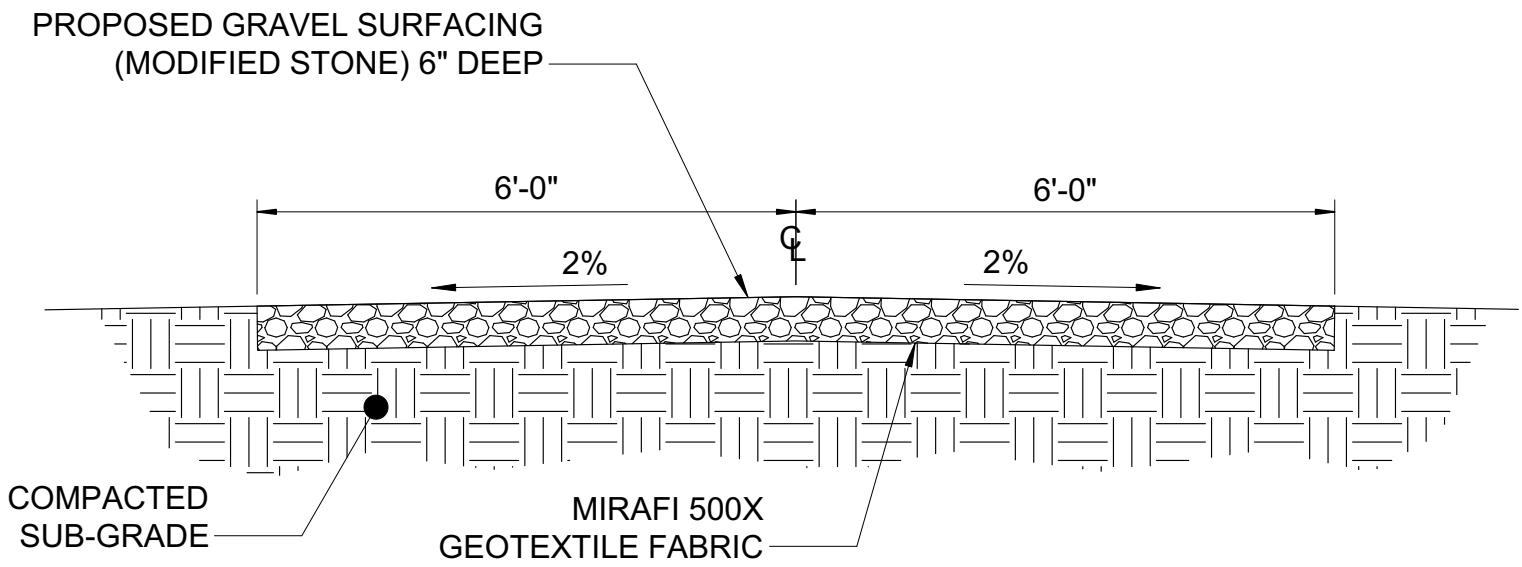
TYPICAL FENCE SECTION

SCALE: NONE



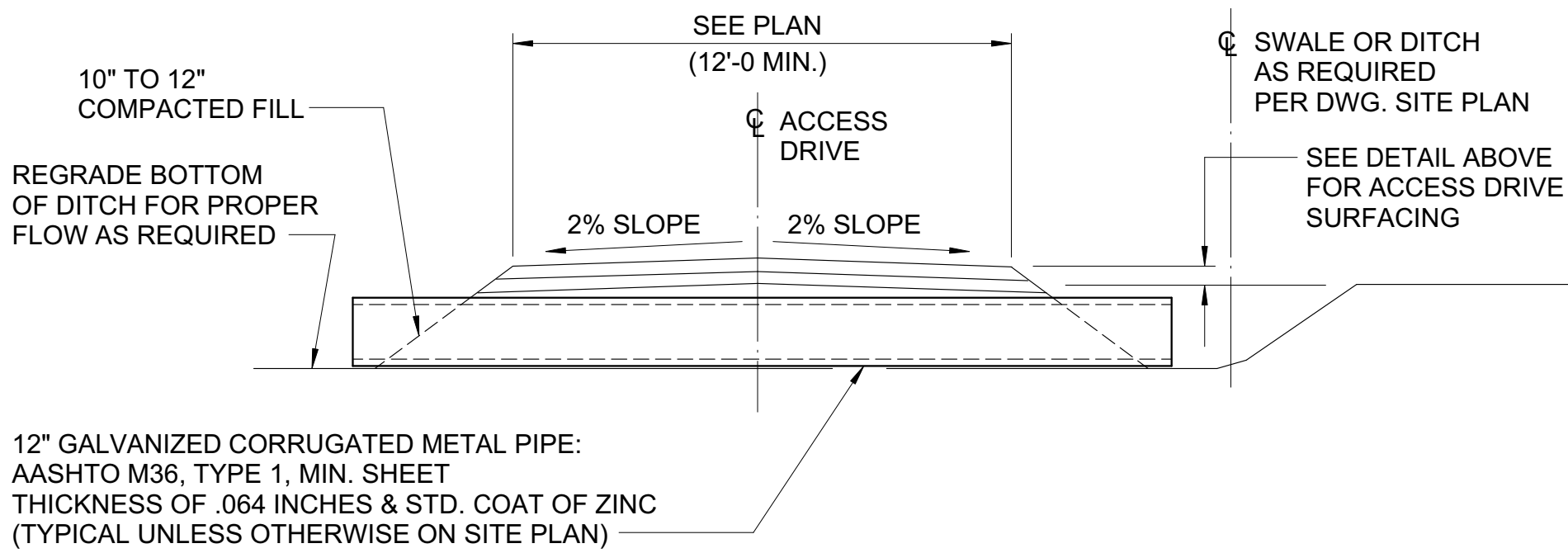
BOLLARD DETAIL

SCALE: NONE



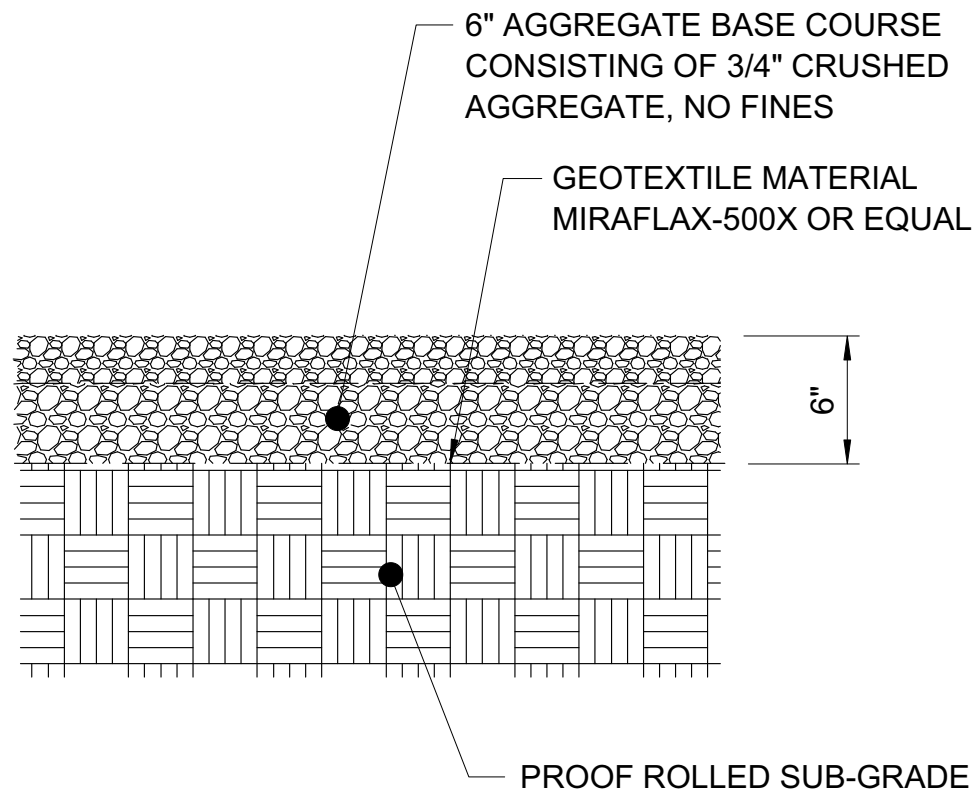
GRAVEL DRIVEWAY TYPICAL SECTION

SCALE: NONE



TYPICAL ACCESS DRIVE & CULVERT DETAIL

SCALE: NONE (IF APPLICABLE)



AGGREGATE BASE DETAIL

SCALE: NONE



09/01/21

2	09/01/21	ADDED KNOX BOX (ITEM 12)	GJB
1	06/25/21	FOR CONSTRUCTION	GJB
0	05/25/21	FOR ZONING	GJB
B	03/30/21	FOR APPROVAL	GJB
A	03/18/21	FOR APPROVAL	GJB
Rev.	Date:	Description:	Mgr.



MOTOROLA
SOLUTIONS



6615 TOWPATH ROAD, SUITE 200
EAST SYRACUSE, NY 13057
PHONE: (315) 701-1300



5130 WEST 6TH STREET
CLEVELAND, OH. 44141

HARPER
ENGINEERING, INC.
TELECOM GROUP

815 Superior Ave. Suite 1514
Cleveland, OH. 44114
Phone: (216) 344-3855
Fax: (216) 344-3856

SCALE: AS NOTED
DRAWN BY: GJB
CHECKED BY: GJB
DATE: 03/02/21
FILE: 20-216-005

CIVIL DETAILS

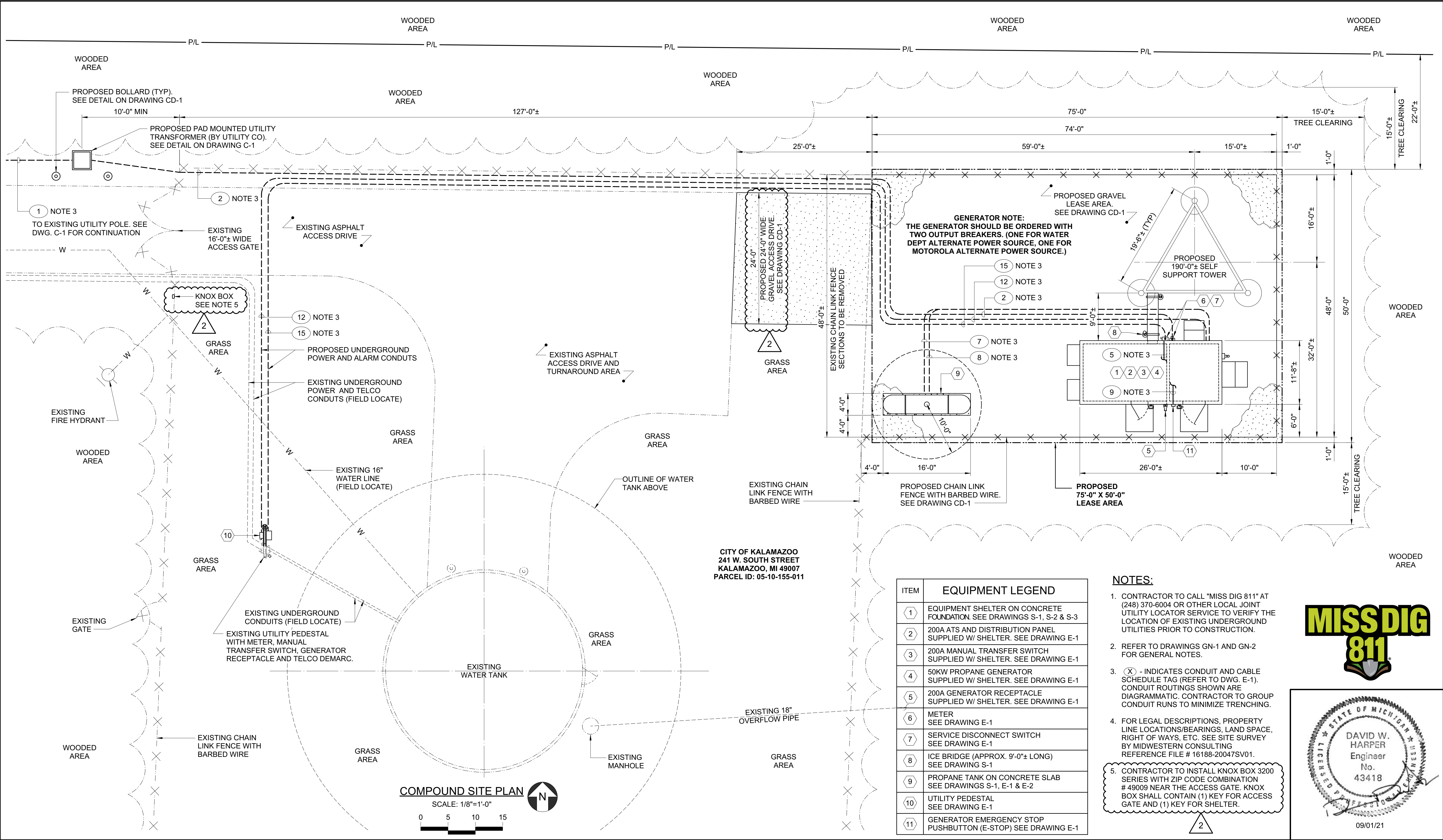
5111 OSHTIMO
N. 6TH STREET
KALAMAZOO, MI 49009

Drawing / Rev.

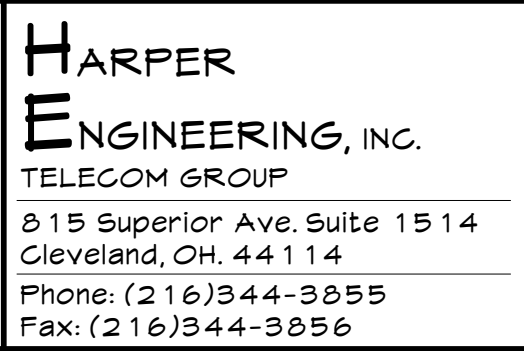
CD-1/2

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2	09/01/21	ADDED KNOX BOX & REVISED GRAVEL DRIVE	GJB
1	06/25/21	FOR CONSTRUCTION	GJB
0	05/25/21	FOR ZONING	GJB
C	05/03/21	RELOCATED UTILITY TRANSFORMER	GJB
B	03/30/21	FOR APPROVAL	GJB
A	03/18/21	FOR APPROVAL	GJB
Rev.	Date:	Description:	Mgr.



COMPOUND SITE PLAN		
SCALE: AS NOTED	5111 OSHTOMO N. 6TH STREET KALAMAZOO, MI 49009	Drawing / Rev.
DRAWN BY: GJB		A-1/2
CHECKED BY: GJB		
DATE: 03/02/21		
FILE: 20-216-005		

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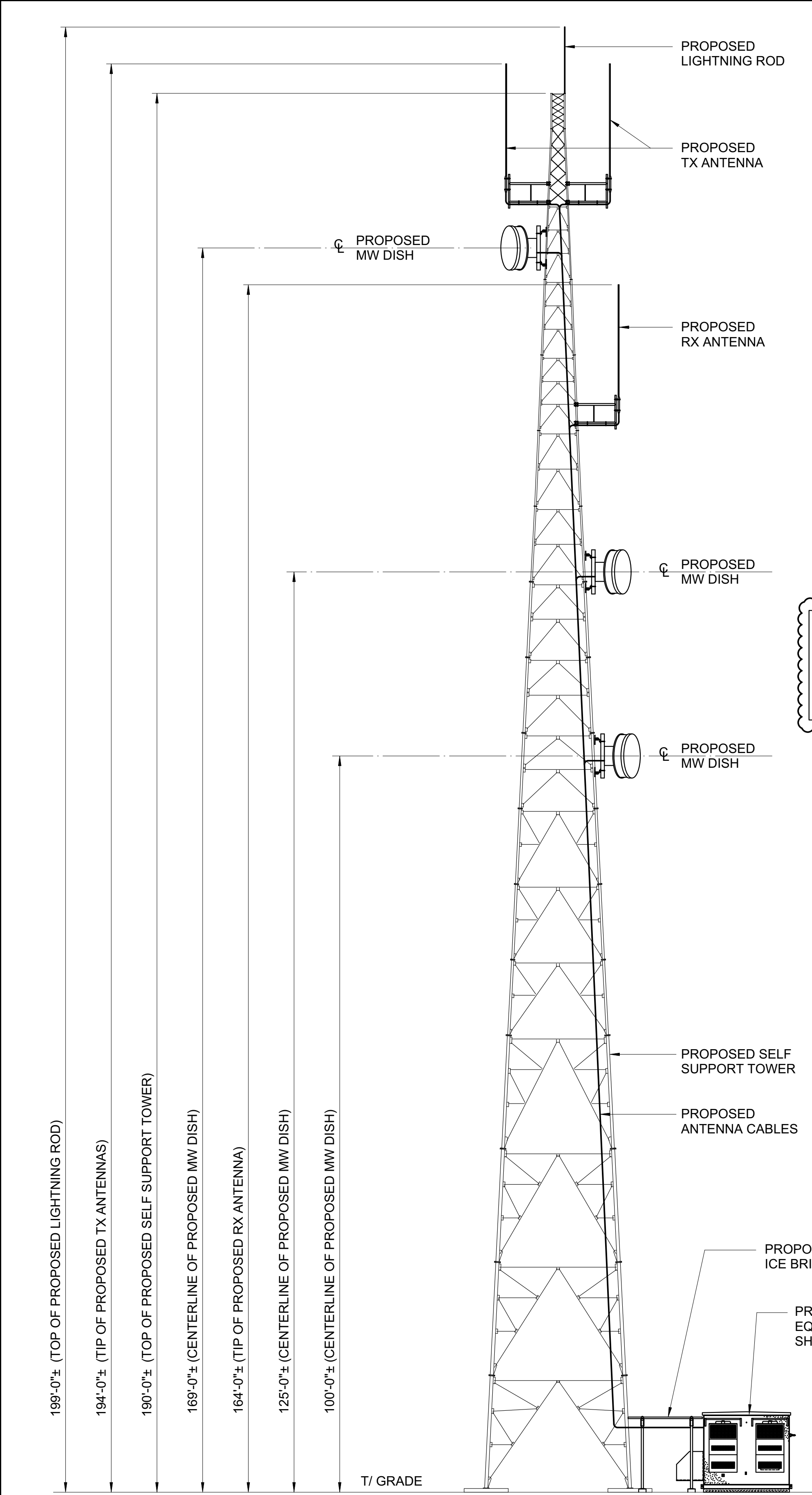
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

ITEM	EQUIPMENT LEGEND
1	EQUIPMENT SHELTER ON CONCRETE FOUNDATION. SEE DRAWINGS S-1, S-2 & S-3
2	200A ATS AND DISTRIBUTION PANEL SUPPLIED W/ SHELTER. SEE DRAWING E-1
3	200A MANUAL TRANSFER SWITCH SUPPLIED W/ SHELTER. SEE DRAWING E-1
4	50KW PROPANE GENERATOR SUPPLIED W/ SHELTER. SEE DRAWING E-1
5	200A GENERATOR RECEPTACLE SUPPLIED W/ SHELTER. SEE DRAWING E-1
6	METER SEE DRAWING E-1
7	SERVICE DISCONNECT SWITCH SEE DRAWING E-1
8	ICE BRIDGE (APPROX. 9'-0"± LONG) SEE DRAWING S-1
9	PROPANE TANK ON CONCRETE SLAB SEE DRAWINGS S-1, E-1 & E-2
10	UTILITY PEDESTAL SEE DRAWING E-1
11	GENERATOR EMERGENCY STOP PUSHBUTTON (E-STOP) SEE DRAWING E-1

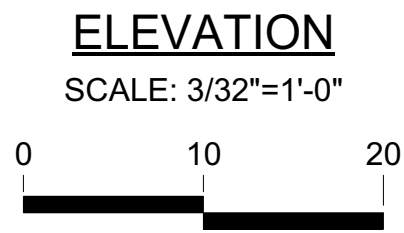
NOTES:

- CONTRACTOR TO CALL "MISS DIG 811" AT (248) 370-6004 OR OTHER LOCAL JOINT UTILITY LOCATOR SERVICE TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- REFER TO DRAWINGS GN-1 AND GN-2 FOR GENERAL NOTES.
- (X) - INDICATES CONDUIT AND CABLE SCHEDULE TAG (REFER TO DWG. E-1). CONDUIT ROUTINGS SHOWN ARE DIAGRAMMATIC. CONTRACTOR TO GROUP CONDUIT RUNS TO MINIMIZE TRENCHING.
- FOR LEGAL DESCRIPTIONS, PROPERTY LINE LOCATIONS/BEARINGS, LAND SPACE, RIGHT OF WAYS, ETC. SEE SITE SURVEY BY MIDWESTERN CONSULTING REFERENCE FILE # 16188-20047SV01.
- CONTRACTOR TO INSTALL KNOX BOX 3200 SERIES WITH ZIP CODE COMBINATION # 49009 NEAR THE ACCESS GATE. KNOX BOX SHALL CONTAIN (1) KEY FOR ACCESS GATE AND (1) KEY FOR SHELTER.





NOTE:
TOWER WILL HAVE NO LIGHTS
AND WILL BE GALVANIZED
STEEL (GRAY IN COLOR)



SITE: 5111 OSHTEMO										ANTENNA / APPURTENANCE LOCATION CHART					E = EXISTING
LATITUDE: N. 42° 18' 49.7"															N = NEW
LONGITUDE: W. 85° 42' 16.5"															F = FUTURE
GROUND ELEV.: 1038.8' AMSL APPROX.															
ANTENNA INFORMATION										FEEDLINE NFORMATION					
ANTENNA ID	MANUFACTURER	MODEL	TYPE	LENGTH	BOTTOM ELEV.	RAD CENTER	TOP ELEV.	AZIMUTH	QTY.	TYPE	MANUFACTURER	MODEL	SIZE	QTY.	
TX1	dbSPECTRA	DSDS7C12P36UD	OMNI	20'-6"	XXX'	XXX'	194'	XX	1	COAX	COMMSCOPE	AVA7-50	1 5/8"	1	
TX2	dbSPECTRA	DSDS7C12P36UD	OMNI	20'-6"	XXX'	XXX'	194'	XX	1	COAX	COMMSCOPE	AVA7-50	1 5/8"	1	
RX1	dbSPECTRA	DSDS7C12P36UD	OMNI	20'-6"	XXX'	XXX'	164'	XX	1	COAX	COMMSCOPE	AVA5-50	7/8"	1	
MW1	COMMSCOPE	VHLP6-6W	MW	6'	XXX'	169'	XXX'	240.28° TO 5102	1	CAT5	COMMSCOPE	EW52	2.2"x1.3"	1	
MW2	COMMSCOPE	VHLP6-6W	MW	6'	XXX'	125'	XXX'	240.28° TO 5102	1	CAT5	COMMSCOPE	EW52	2.2"x1.3"	1	
MW3	COMMSCOPE	VHLP6-6W	MW	6'	XXX'	100'	XXX'	142.23° TO 5112	1	CAT5	COMMSCOPE	EW52	2.2"x1.3"	1	

REFER TO TOWER MANUFACTURER DRAWINGS FOR BEACON AND OBSTRUCTION LIGHTING HEIGHTS (IF REQUIRED)

GENERAL NOTES:

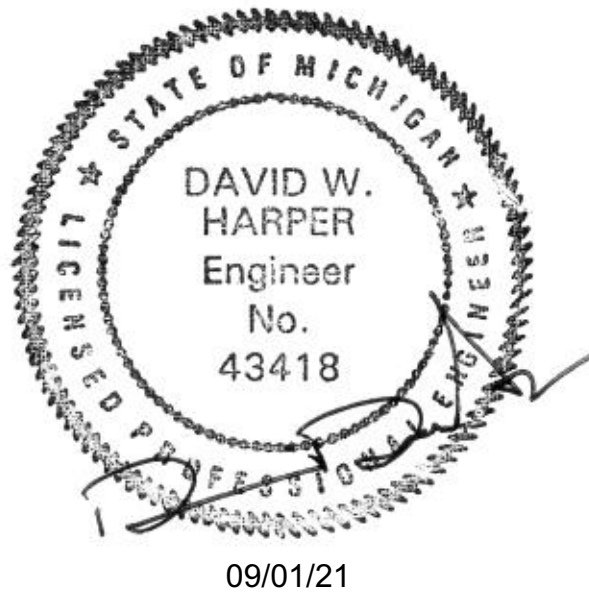
HARPER ENGINEERING, INC. HAS NOT COMPLETED A STRUCTURAL ANALYSIS FOR THE EXISTING OR PROPOSED LOADING OF ANY STRUCTURES AT THIS TIME. FINAL STRUCTURAL ANALYSIS TO BE COMPLETED BY OTHERS PRIOR TO CONSTRUCTION ACTIVITIES COMMENCE.

ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR TO THE TOP AND BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE EQUIPMENT ROOM WALL). ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 75 FEET.

THE CONTRACTORS SHALL CONDUCT TESTING TO MOTOROLA SPECIFICATIONS WITH PERSONNEL TRAINED IN THE EQUIPMENT AND METHODS. RESULTS TO BE SUBMITTED TO MOTOROLA.

DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE EQUIPMENT ROOM.

ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA. JUST BEFORE ENTERING THE EQUIPMENT ROOM AS WELL AS INSIDE THE EQUIPMENT ROOM, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. SEE MOTOROLA SPECS FOR COLOR CODING SCHEME.



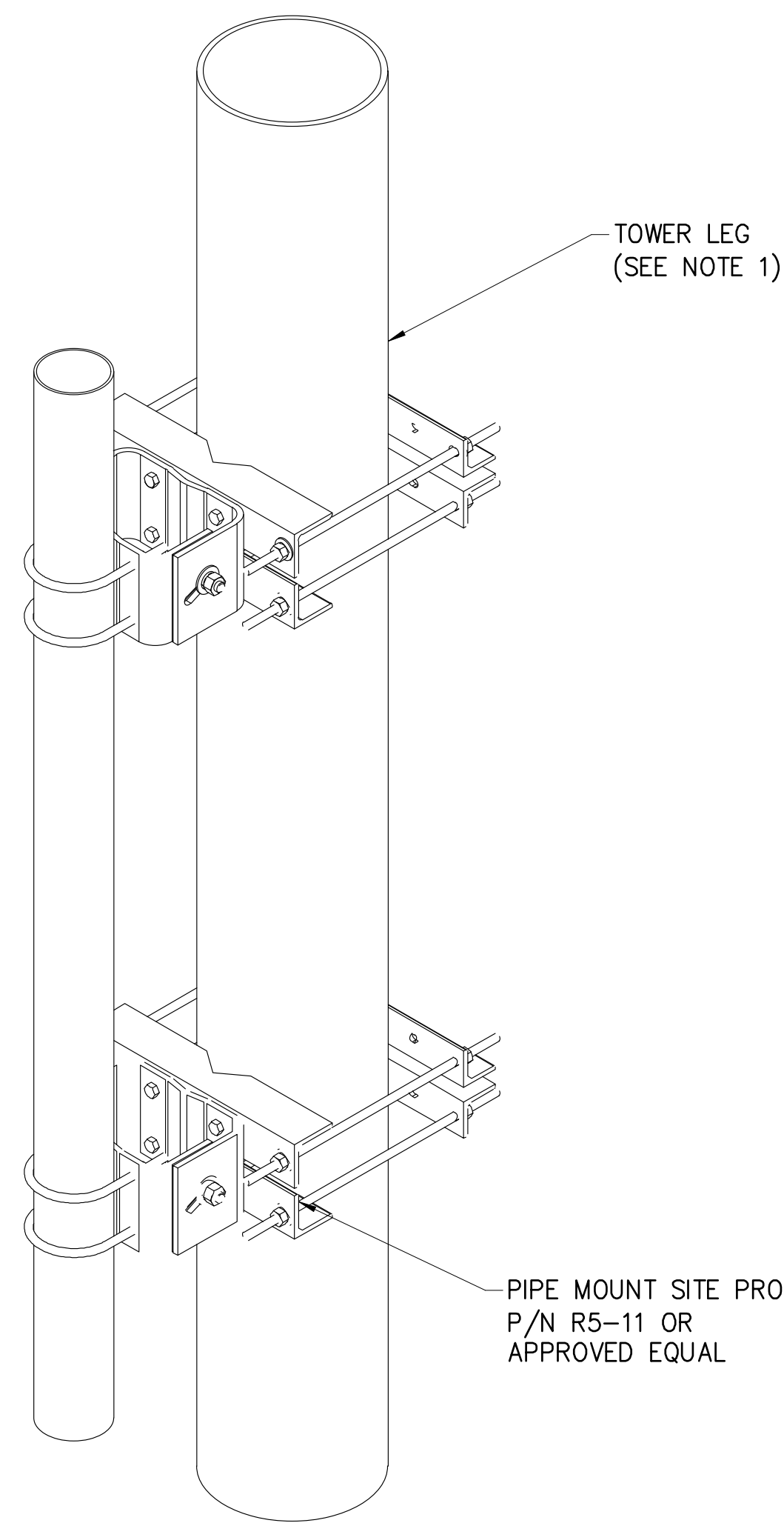
										HARPER ENGINEERING, INC. TELECOM GROUP 215 Superior Ave. Suite 1514 Cleveland, OH. 44114 Phone: (216)344-3855 Fax: (216)344-3856		TOWER ELEVATION AND ANTENNA INFO			THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER. IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.		
2	09/01/21	ADDED TOWER NOTE	GJB									SCALE: AS NOTED		5111 OSHTIMO N. 6TH STREET KALAMAZOO, MI 49009		Drawing / Rev. A-2/2	
1	06/25/21	FOR CONSTRUCTION	GJB									DRAWN BY: GJB					
0	05/25/21	FOR ZONING	GJB									CHECKED BY: GJB					
A	03/18/21	FOR APPROVAL	GJB									DATE: 03/02/21					
Rev.	Date:	Description:	Mgr.									FILE: 20-216-005					



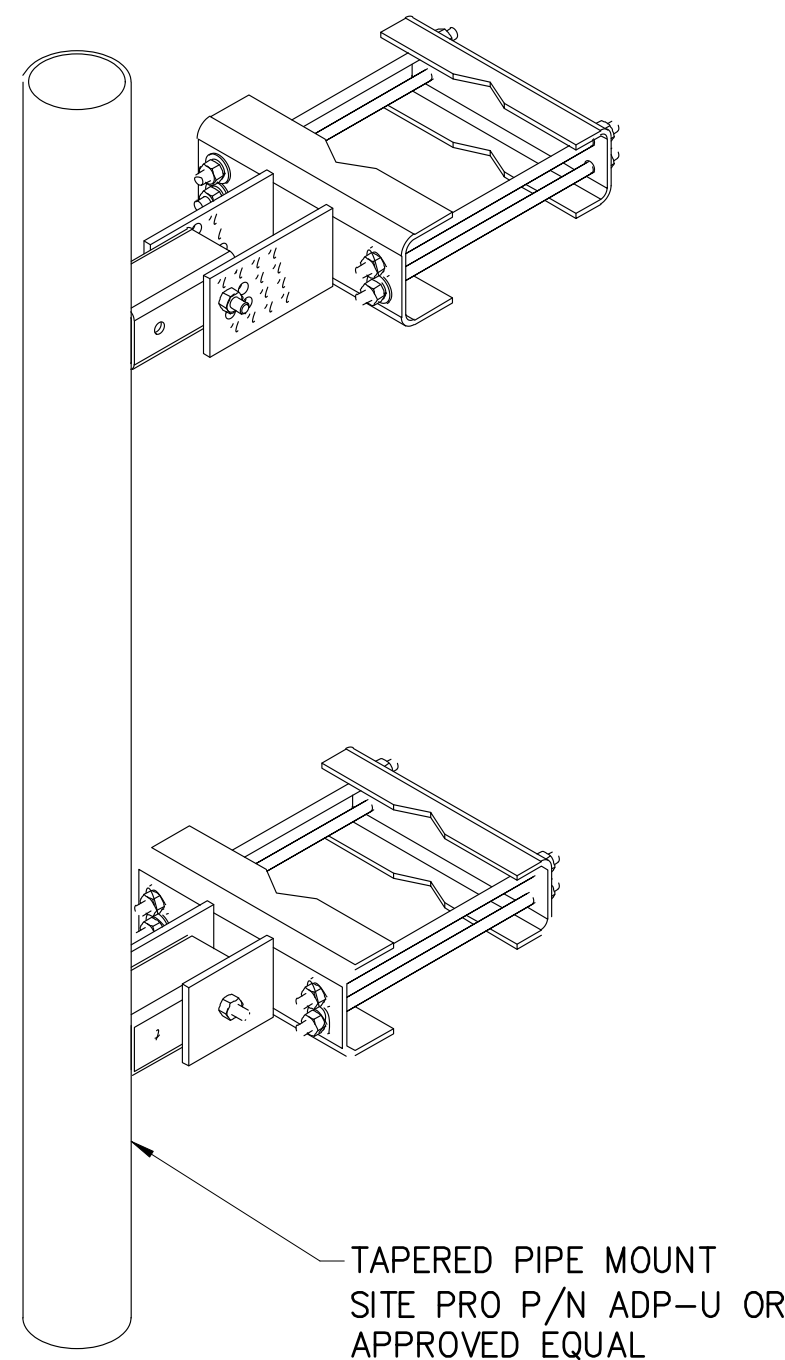
NOTES:

1. ANTENNAS, CONNECTORS, JUMPERS, TRANSMISSION LINES, TO BE FURNISHED BY MOTOROLA, AND INSTALLED BY CONTRACTOR.
2. CONTRACTOR TO USE STRAIN RELIEF EVERY 200 FEET (MIN.) FOR TRANSMISSION LINES. TO BE INSTALLED BEFORE INSTALLATION OF TRANSMISSION LINES.
3. CONTRACTOR TO WATERPROOF ALL EXTERNAL CONNECTORS.
4. CONTRACTOR TO INSTALL GALVANIZED OR STAINLESS STEEL MOUNTING HARDWARE.
5. CONTRACTOR TO ATTACH CABLES TO TOWER EVERY 3 FOOT (MAX.)
6. CONTRACTOR SHALL PERFORM A SWEEP TEST ON TRANSMISSION AND TEST LINES PRIOR TO INSTALLATION. IMMEDIATELY NOTIFY MOTOROLA OF ANY LINE DEFICIENCIES
7. ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS WILL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE EQUIPMENT ROOM). TRANSMISSION LINE GROUND KITS WILL BE INSTALLED EVERY 50 TO 75 FEET.
8. VERIFY IN FIELD OR REVIEW THE TOWER STRUCTURAL ANALYSIS FOR MEMBER SIZE PRIOR TO ORDERING ANTENNA MOUNTS.
9. CONTRACTOR SHALL VERIFY THE RF CONFIGURATION & STRUCTURAL ANALYSIS BEFORE INSTALLATION.

[illegible]

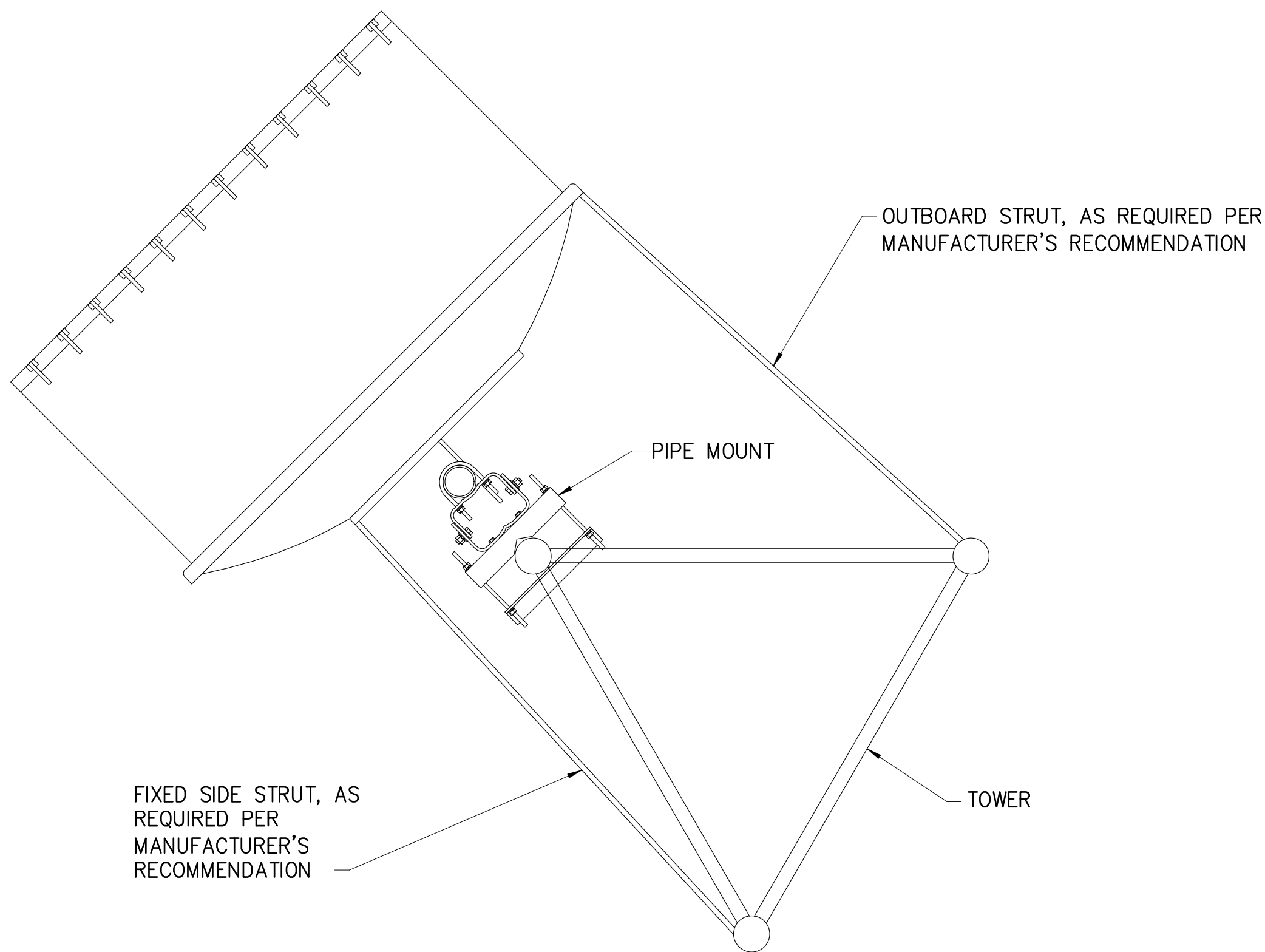
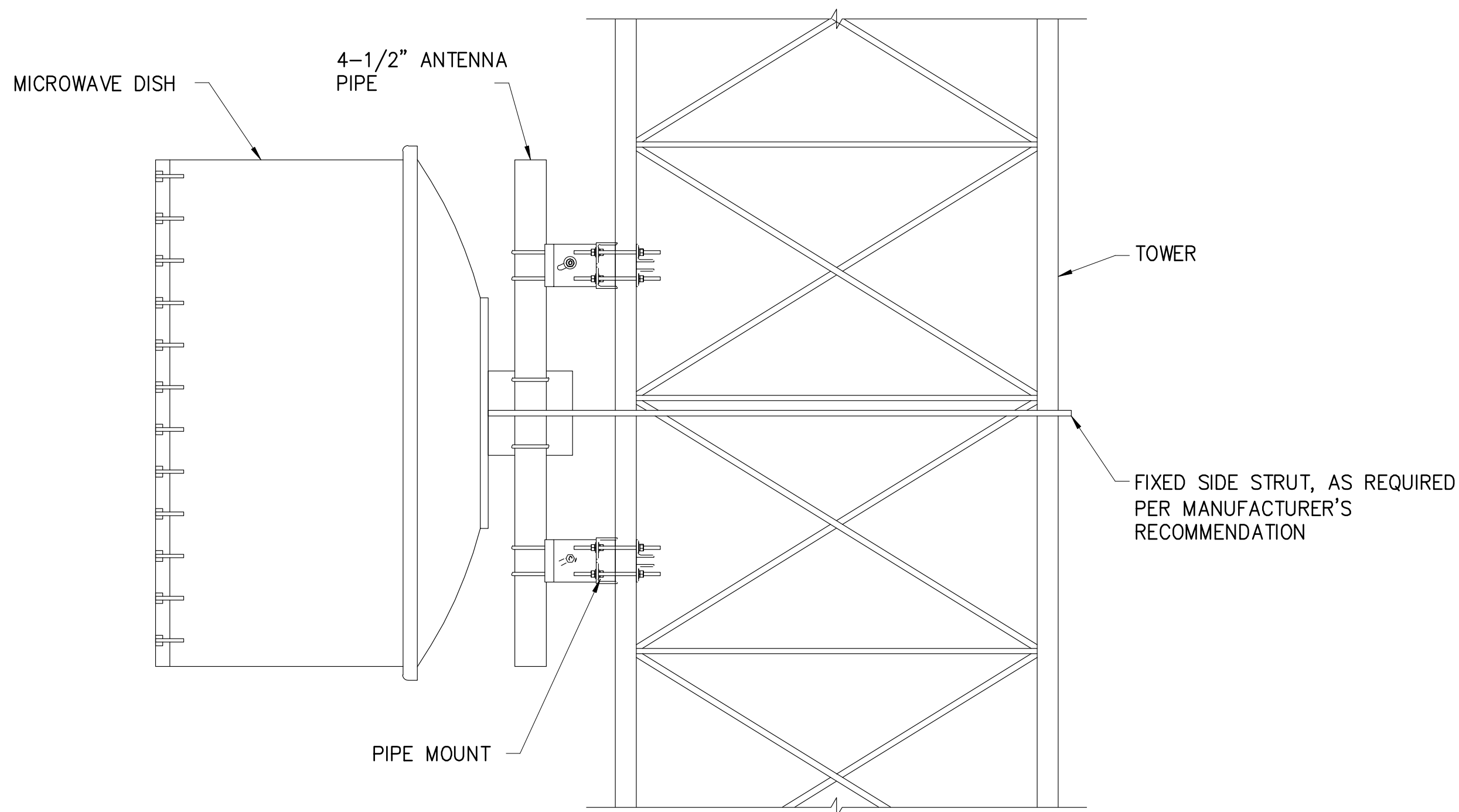


- NOTES:
1. VERIFY IN FIELD OR REVIEW THE TOWER STRUCTURAL ANALYSIS FOR MEMBER SIZE PRIOR TO ORDERING ANTENNA MOUNTS.
 2. CONTRACTOR SHALL VERIFY THE RF CONFIGURATION & STRUCTURAL ANALYSIS BEFORE INSTALLATION.



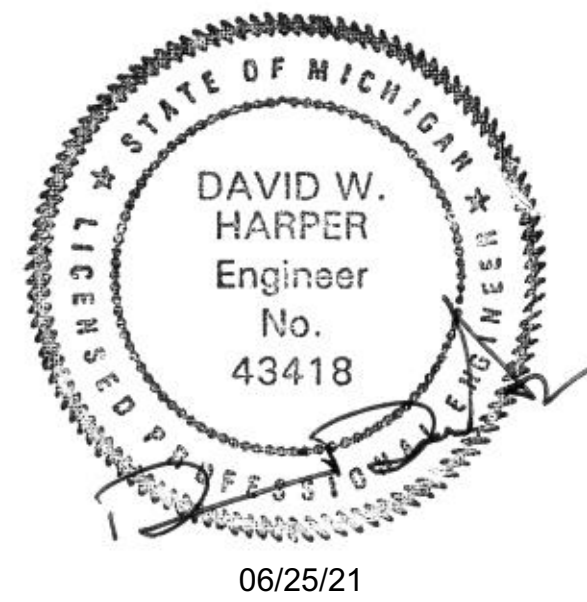
1 Microwave Dish Mounts

NOT TO SCALE



2 Microwave Dish Mounting

NOT TO SCALE



Rev.	Date:	Description:	Mgr.
1	06/25/21	FOR CONSTRUCTION	GJB
0	05/25/21	FOR ZONING	GJB
B	03/30/21	FOR APPROVAL	GJB
A	03/18/21	FOR APPROVAL	GJB



5130 WEST 6TH STREET
CLEVELAND, OH. 44141

HARPER
ENGINEERING, INC.
TELECOM GROUP
815 Superior Ave. Suite 1514
Cleveland, OH. 44114
Phone: (216) 344-3855
Fax: (216) 344-3856

SCALE: AS NOTED
DRAWN BY: GJB
CHECKED BY: GJB
DATE: 03/02/21
FILE: 20-216-005

ANTENNA DETAILS

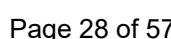
5111 OSHTMO
N. 6TH STREET
KALAMAZOO, MI 49009

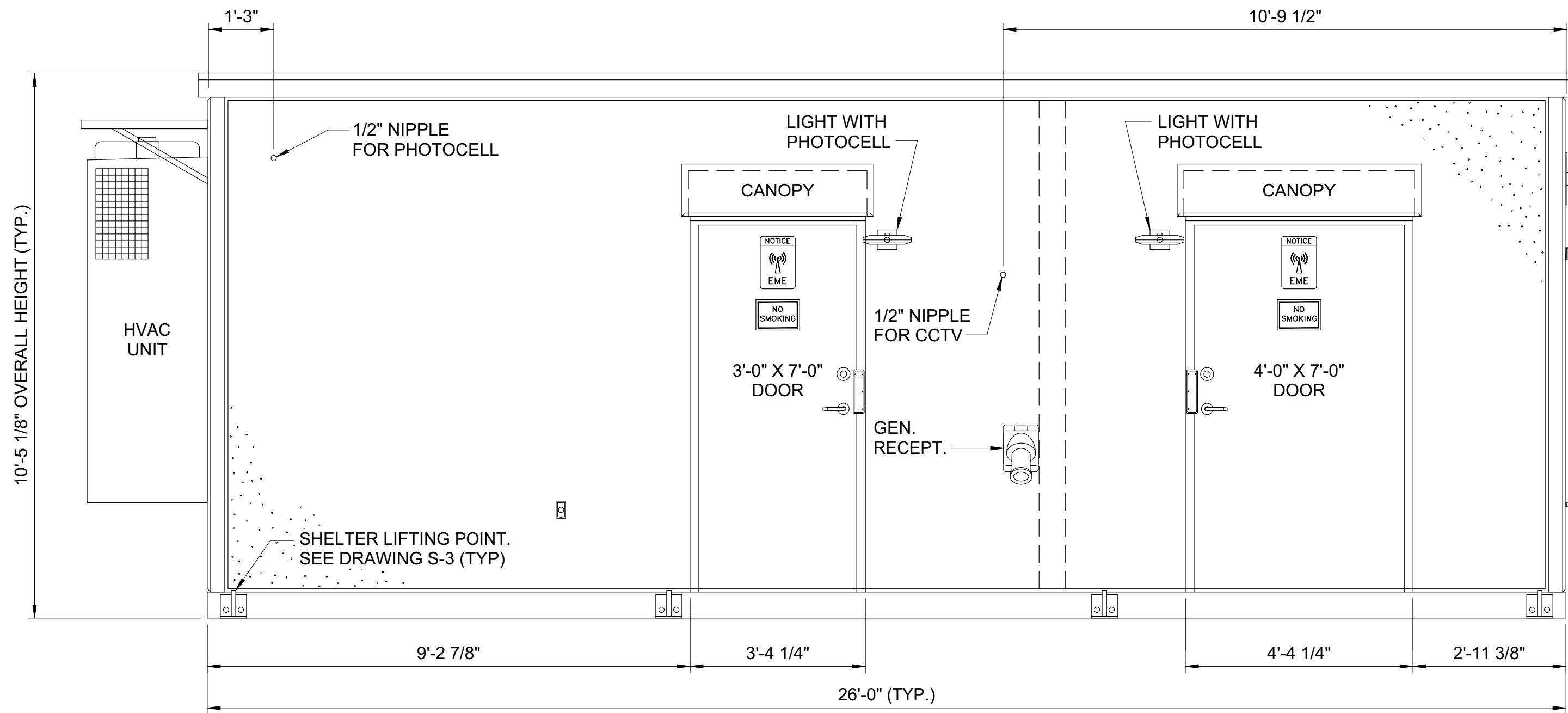
Drawing / Rev.

A-4/1

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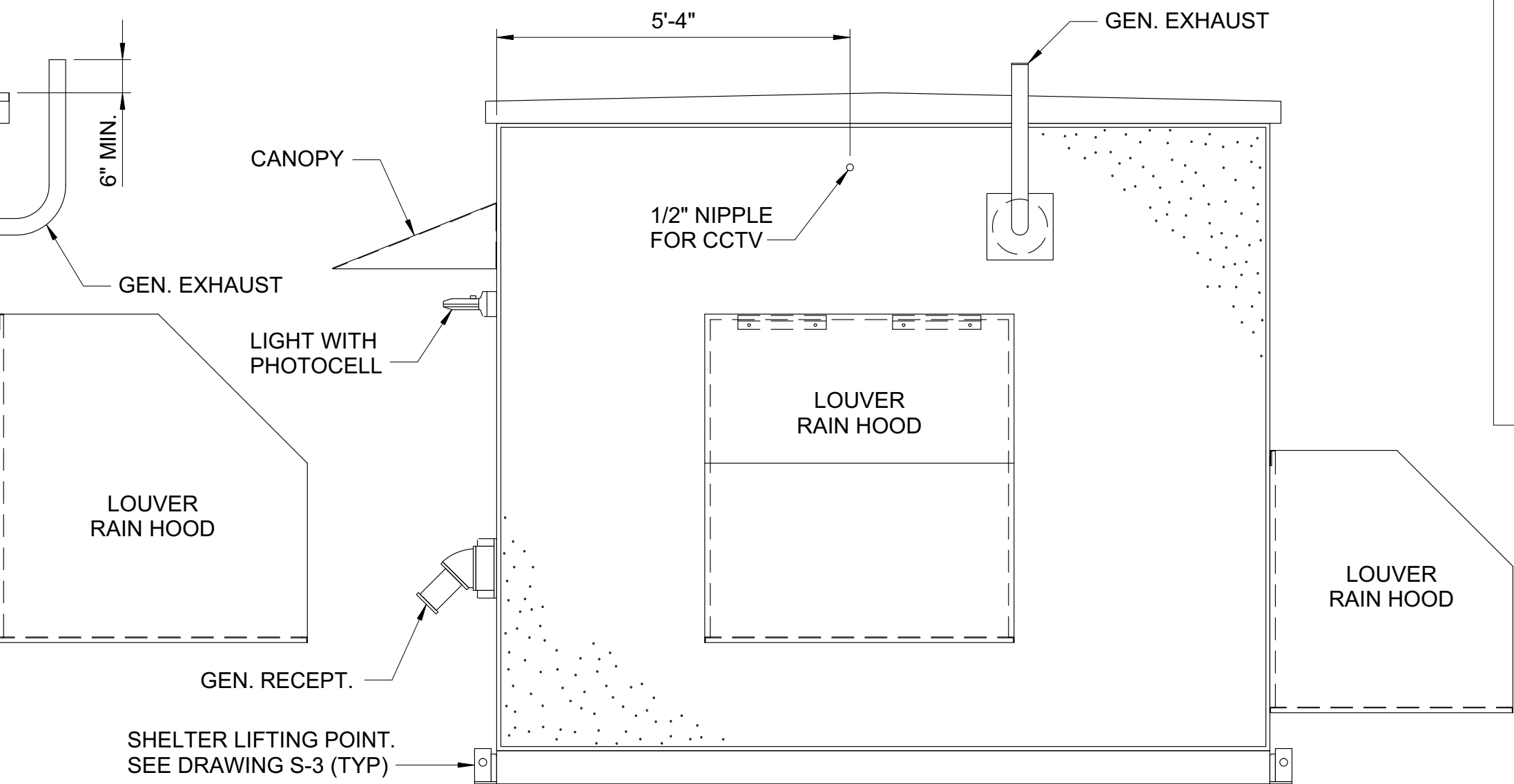
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FRONT ELEVATION A

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



RIGHT ELEVATION B

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



NOTES:

1. INFORMATION CONTAINED IN THESE DRAWINGS REFERRING TO THE PROPOSED EQUIPMENT SHELTER WERE OBTAINED FROM STANDARD EQUIPMENT SHELTER DRAWINGS PROVIDED BY MOTOROLA AND PRODUCED BY THE SHELTER MANUFACTURER. THE INFORMATION CONTAINED IN THESE PLANS SHOULD BE CONSIDERED AS A GUIDE & THE CONTRACTOR IS SPECIFICALLY DIRECTED TO OBTAIN & USE THE SPECIFIED SHELTER MANUFACTURER'S PLANS PROVIDED BY MOTOROLA SPECIFIC FOR THIS SITE.
2. GENERAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EXTERIOR LOOSE SHIP ITEMS (DOOR, CANOPY, SECURITY LIGHTS, ETC).

DESIGN LOADS

OCCUPANCY TYPE (RISK CAT.): IV

FLOOR LIVE LOAD: 300 psf

ROOF LICE LOAD: 150 psf

$P_f = (0.7) \times (C_e) \times (I_s) \times (C_t) \times (P_g)$

EXPOSURE FACTOR $C_e = 1.0$

IMPORTANCE FACTOR $I_s = 1.20$

THERMAL FACTOR $C_t = 1.2$

GROUND SNOW LOAD $P_g = 60$

WIND DESIGN

WIND SPEED: 120 MPH 3 SECOND GUST

EXPOSURE D

$a = 3ft$

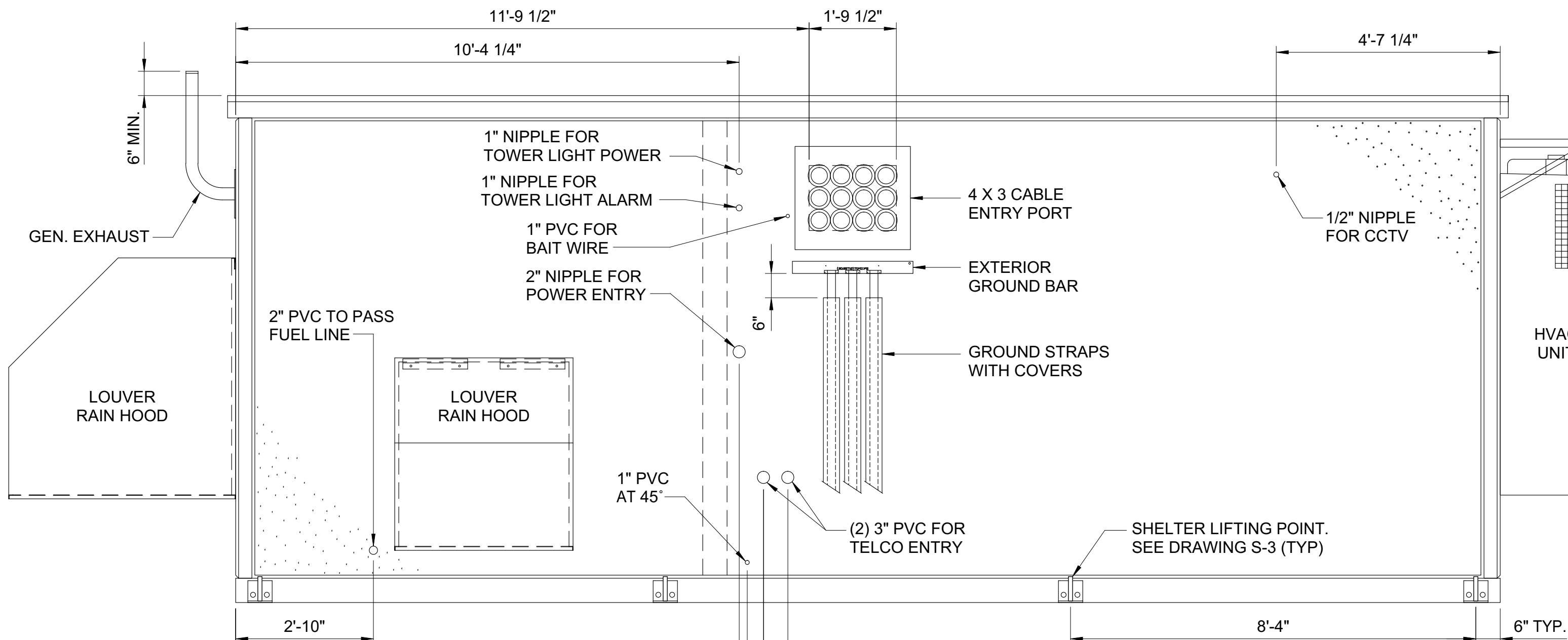
$GC_{pi} = \pm 0.18$ (PER ASCE 7)

SHIPPING WEIGHT: 77,000 LBS

BUILDING FOOT PRINT: 304 SQ. FT.

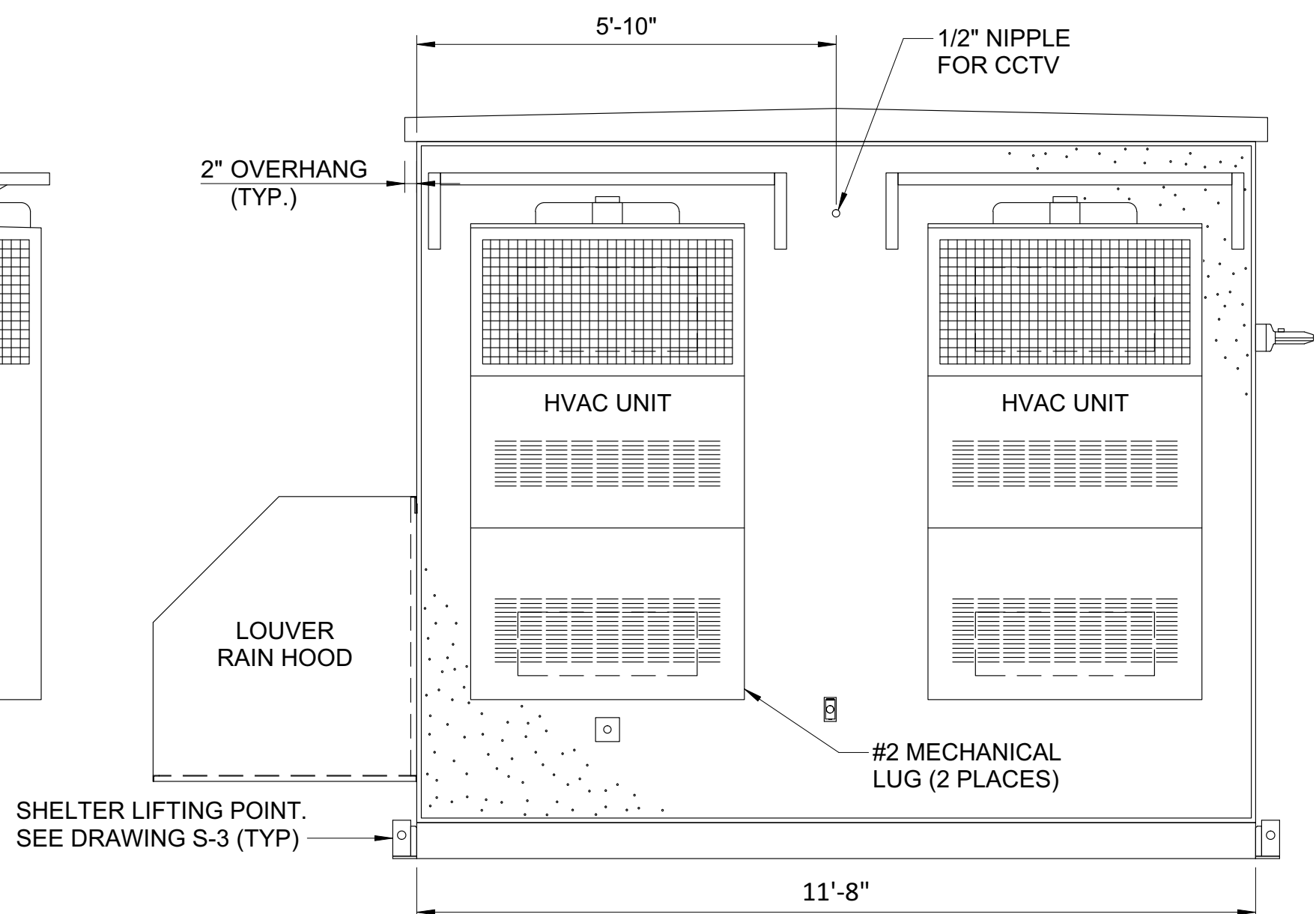
SPECIAL CONDITIONS / LIMITATIONS

1. THIS STRUCTURE IS NOT DESIGNED FOR INSTALLATION IN A FLOOD HAZARD AREA.
2. THIS STRUCTURE IS NOT DESIGNED FOR HUMAN OCCUPANCY EXCEPT FOR SHORT TIME PERIODS FOR EQUIPMENT MAINTENANCE.
3. THERMOBOND WILL NOT BE RESPONSIBLE FOR INSTALLATION OF ANY SPRINKLER SYSTEM, WHICH MAY BE REQUIRED BY LOCAL BUILDING OFFICIAL.
4. THERMOBOND WILL NOT BE RESPONSIBLE FOR ANY ANTENNA INSTALLATION ASSOCIATED WITH THIS BUILDING.
5. THIS BUILDING SHALL NOT BE LOCATED AT A SITE THAT EXCEEDS THE LISTED DESIGN LOADS.
6. IF BATTERIES WITH AN ELECTROLYTE CAPACITY OF MORE THAN 50 GAL. ARE TO BE INSTALLED IN THIS BUILDING, ONE OF THE FOLLOWING MUST BE INSTALLED BY OTHERS ON SITE:
 - A. AN EXHAUST FAN WITH A HYDROGEN LIMIT SWITCH THAT LIMITS THE HYDROGEN TO 1% OF THE TOTAL VOLUME OF THE ROOM.
 - B. CONTINUOUS VENTILATION SHALL BE PROVIDED AT A RATE NOT LESS THAN 1 CU. FT. PER MINUTE PER SQ. FT. OF FLOOR AREA OF THE ROOM.



REAR ELEVATION C

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



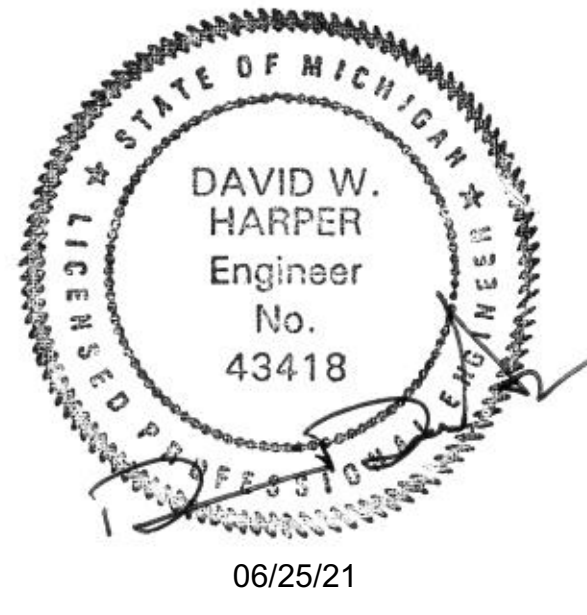
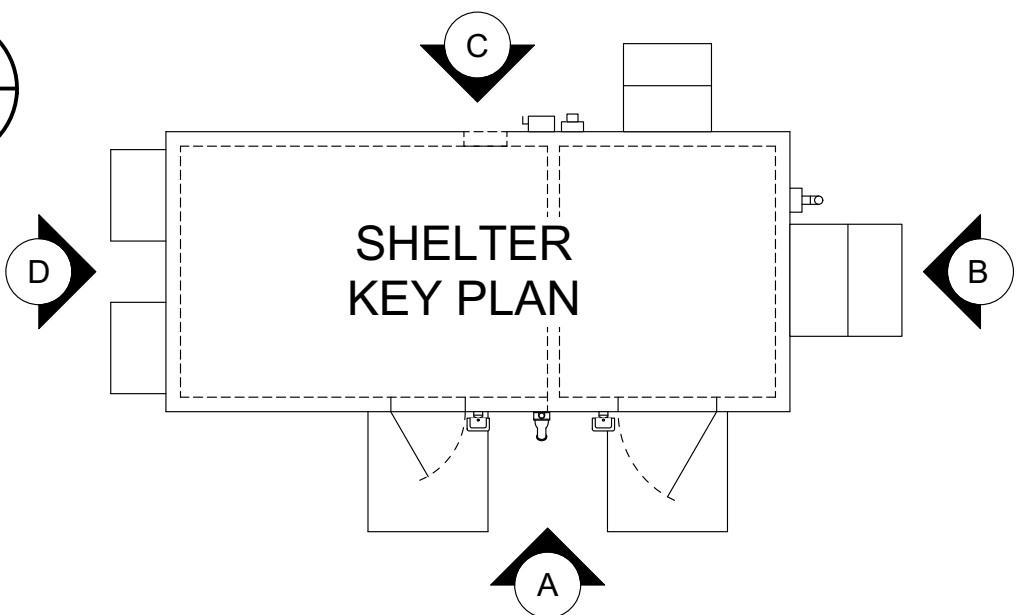
LEFT ELEVATION D

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



GENERATOR NOTE:

THE GENERATOR SHOULD BE ORDERED WITH TWO OUTPUT BREAKERS. (ONE FOR WATER DEPT ALTERNATE POWER SOURCE, ONE FOR MOTOROLA ALTERNATE POWER SOURCE.)



Rev.	Date:	Description:	Mgr.
1	06/25/21	FOR CONSTRUCTION	GJB
0	05/25/21	FOR ZONING	GJB
A	03/18/21	FOR APPROVAL	GJB



5130 WEST 6TH STREET
CLEVELAND, OH. 44141

HARPER
ENGINEERING, INC.
TELECOM GROUP
815 Superior Ave. Suite 1514
Cleveland, OH. 44114
Phone: (216) 344-3855
Fax: (216) 344-3856

SHELTER ELEVATIONS

SCALE: AS NOTED

DRAWN BY: GJB

CHECKED BY: GJB

DATE: 03/02/21

FILE: 20-216-005

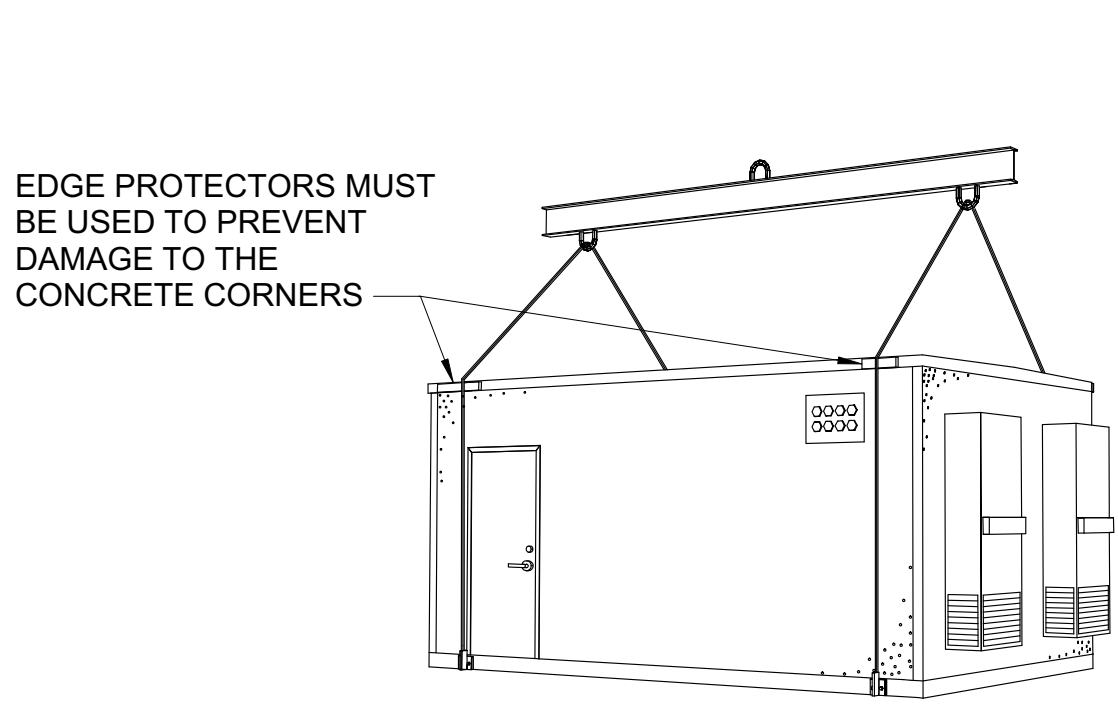
5111 OSHTMO
N. 6TH STREET
KALAMAZOO, MI 49009

Drawing / Rev.

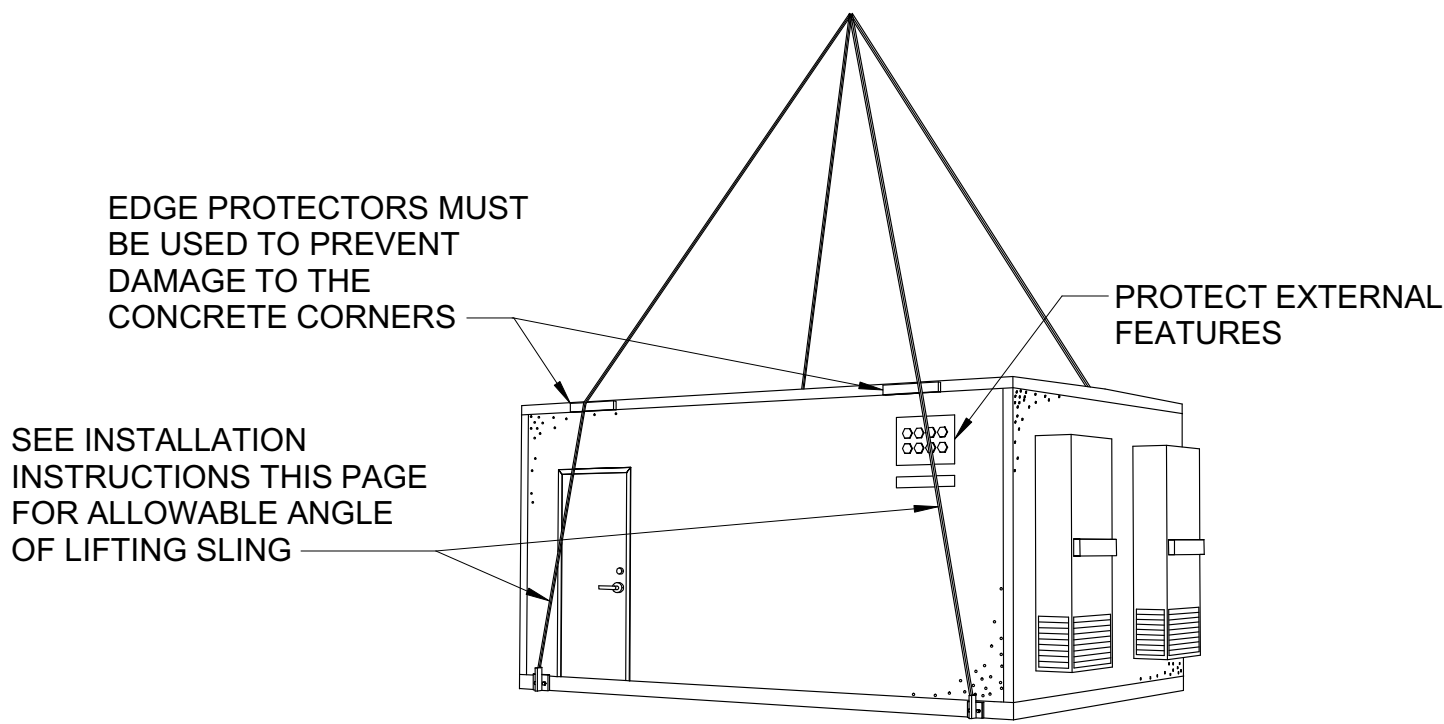
S-2/1

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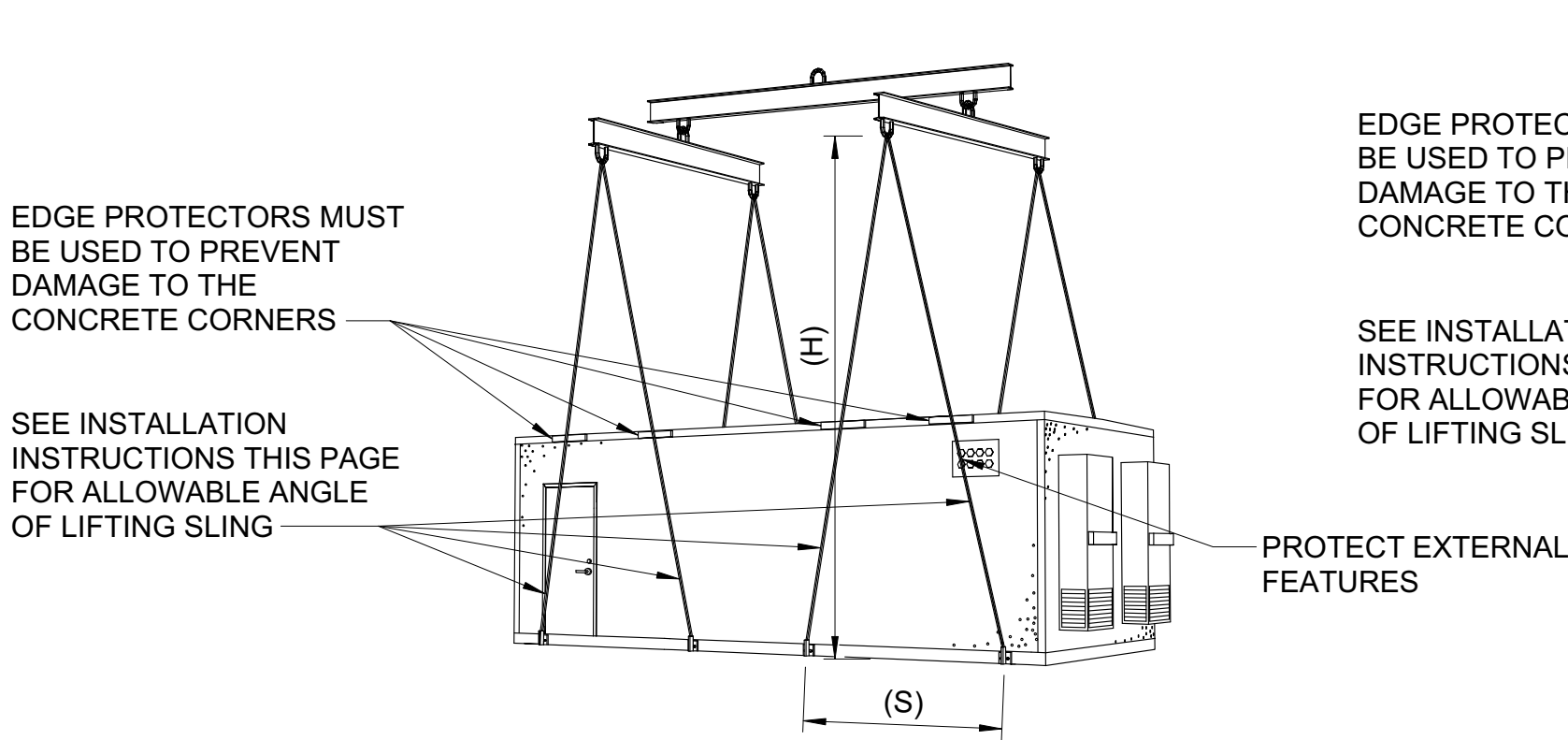
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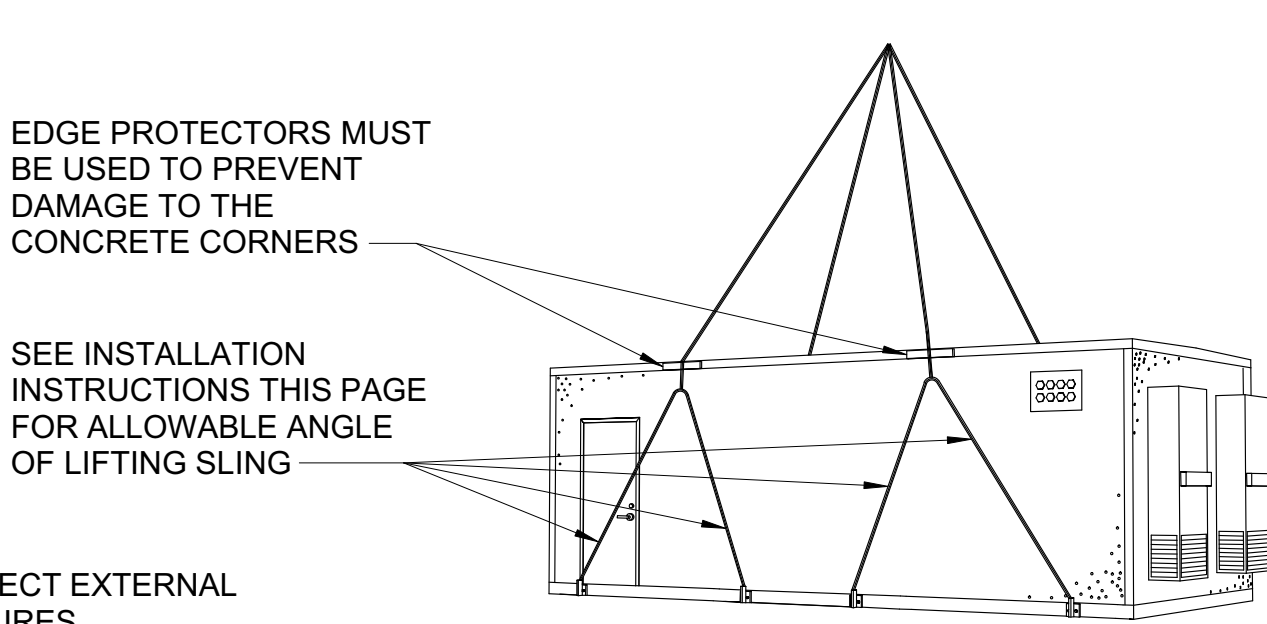
(4) POINT OPTION 1 BUILDING LIFT
(PREFERRED METHOD)
(SLINGS VERTICAL)



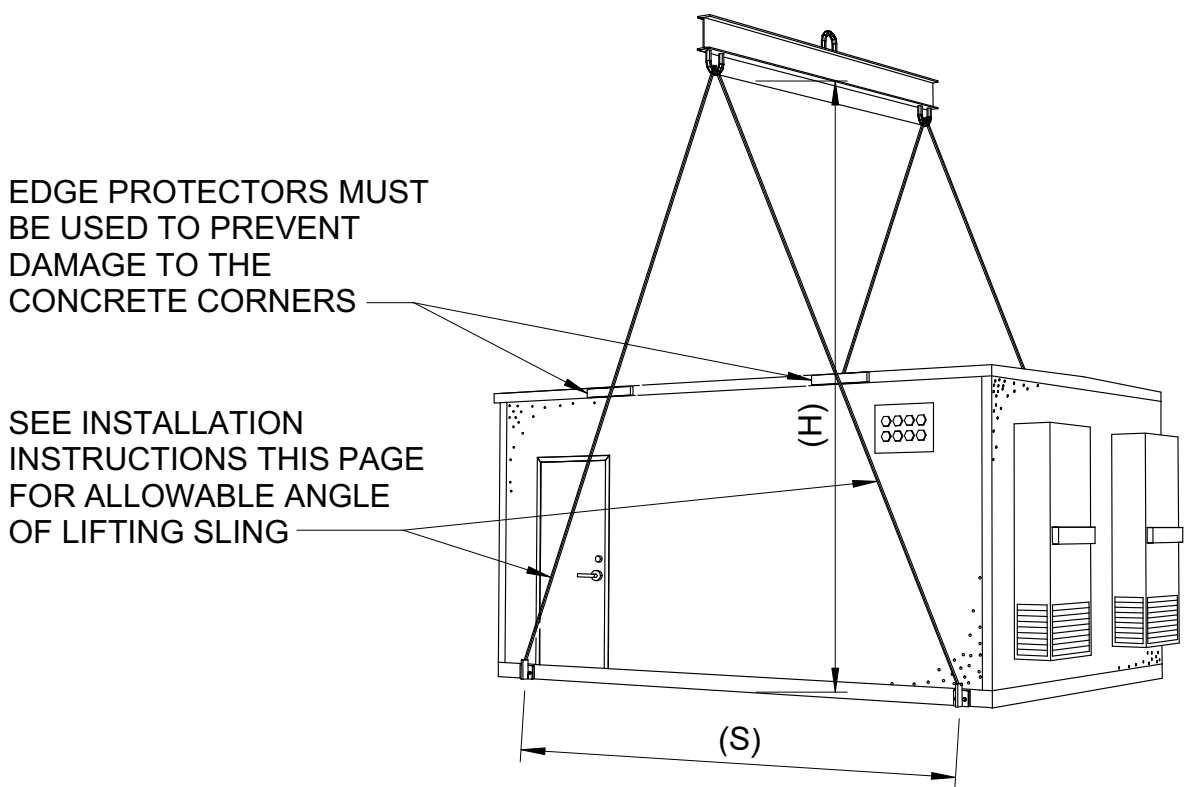
(4) POINT OPTION 3
BUILDING LIFT



(8) POINT OPTION 1 BUILDING LIFT
(PREFERRED METHOD)



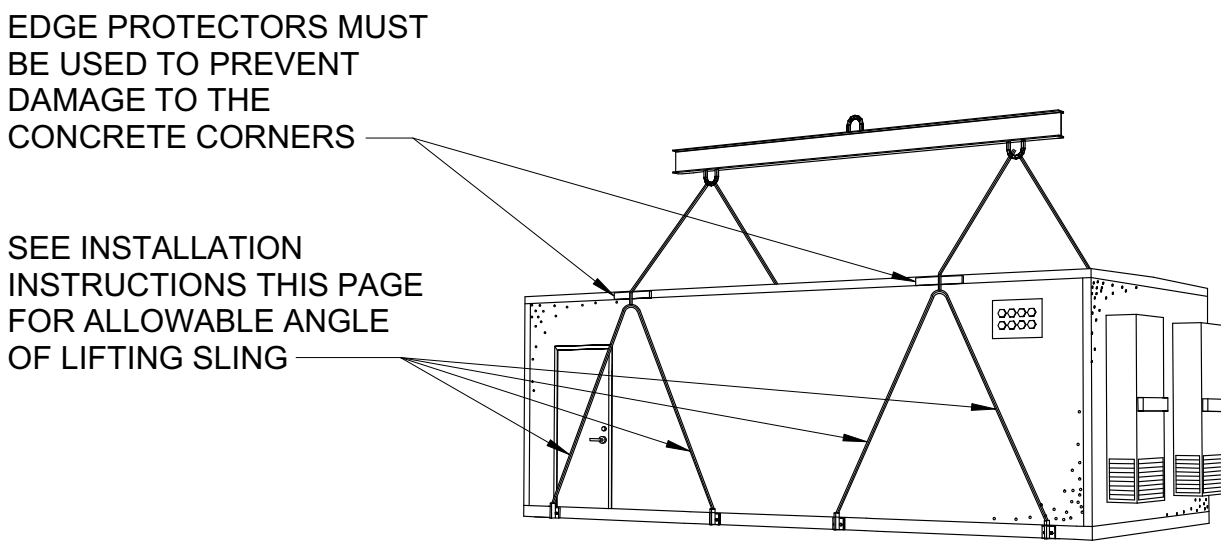
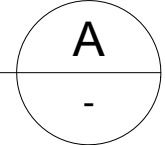
(8) POINT OPTION 3
BUILDING LIFT



(4) POINT OPTION 2
BUILDING LIFT
(SEE TABLE 1)

TABLE 1 (4) POINT LIFT OPTION 2	
LIFT DEVICE SEPARATION (S)	MINIMUM HOOK HEIGHT (H)
10'-0"	13'-9"
11'-0"	15'-2"
12'-0"	16'-6"
13'-0"	17'-10"
14'-0"	19'-3"
15'-0"	20'-8"
16'-0"	22'-0"
17'-0"	23'-5"
18'-0"	24'-9"
19'-0"	26'-2"
20'-0"	27'-6"

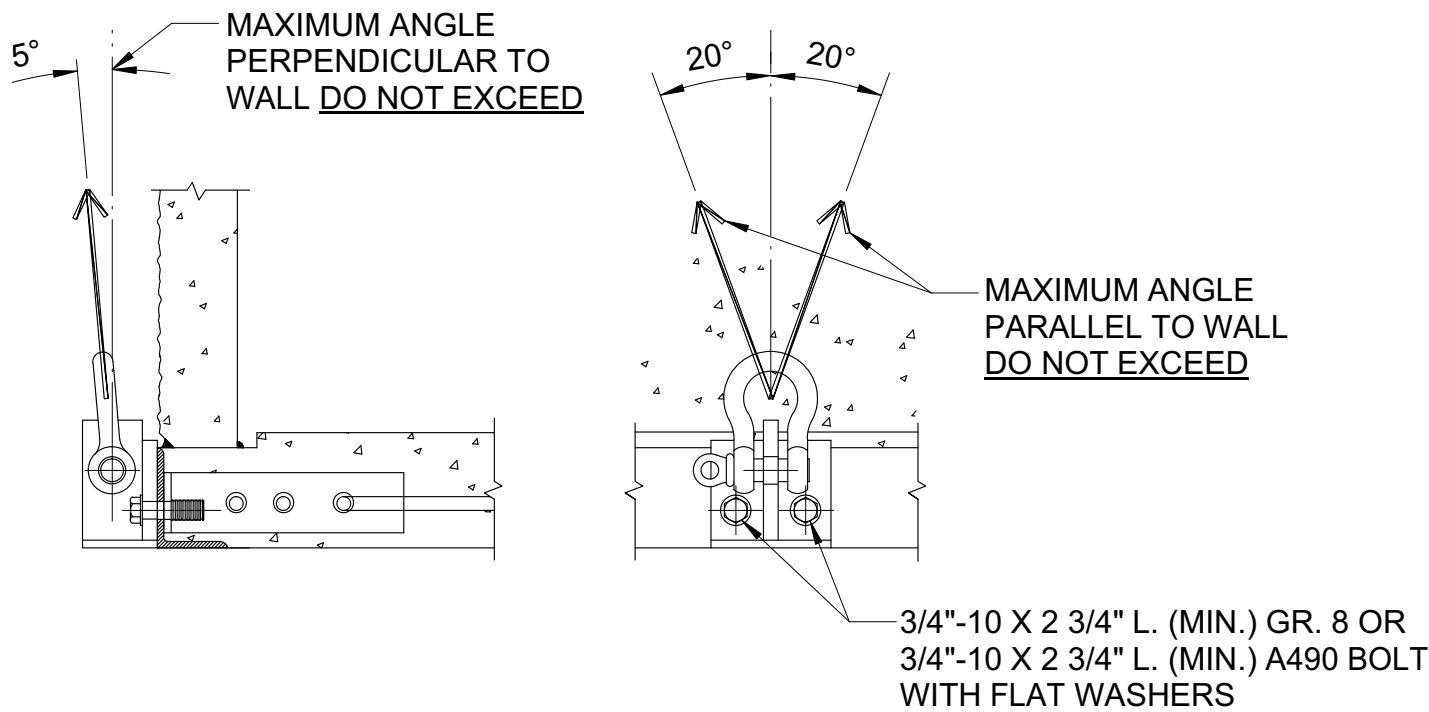
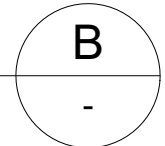
4 POINT LIFT OPTIONS
SCALE: N.T.S



(8) POINT OPTION 2
BUILDING LIFT
(SEE TABLE 2)

TABLE 2 (8) POINT LIFT OPTION 1	
LIFT DEVICE SEPARATION (S)	MINIMUM HOOK HEIGHT (H)
6'-0"	13'-9"
7'-0"	15'-2"
8'-0"	16'-6"
9'-0"	17'-10"
10'-0"	19'-3"
11'-0"	20'-8"
12'-0"	22'-0"

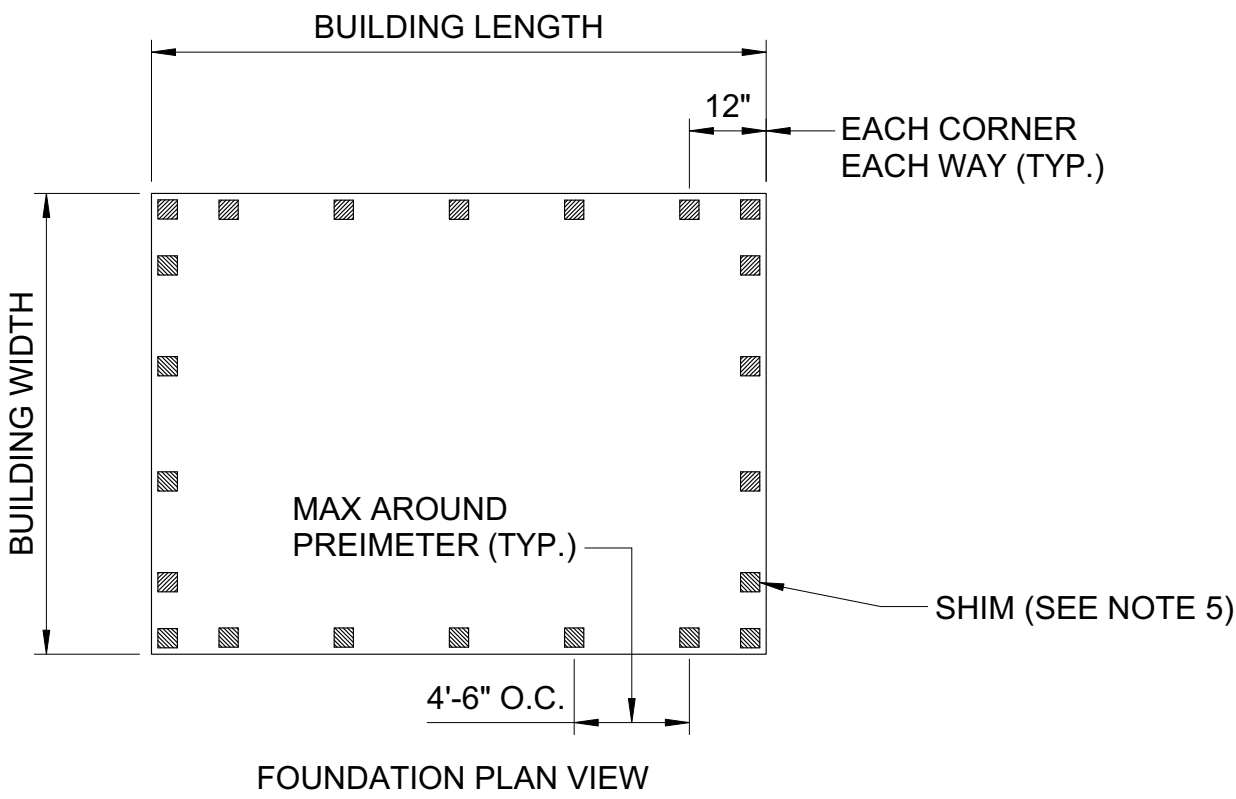
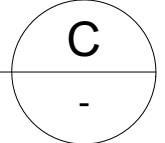
8 POINT LIFT OPTIONS
SCALE: N.T.S



BOLT INSTALLATION:

1. SNUG (NO PLAY) PLUS 1/8 TURN MAX.
2. DO NOT DRIVE WITH HIGH PRESSURE IMPACT WRENCH.

END INSTALLATION AND SLING LIMITS
SCALE: N.T.S



SHELTER MUST BE SHIMMED

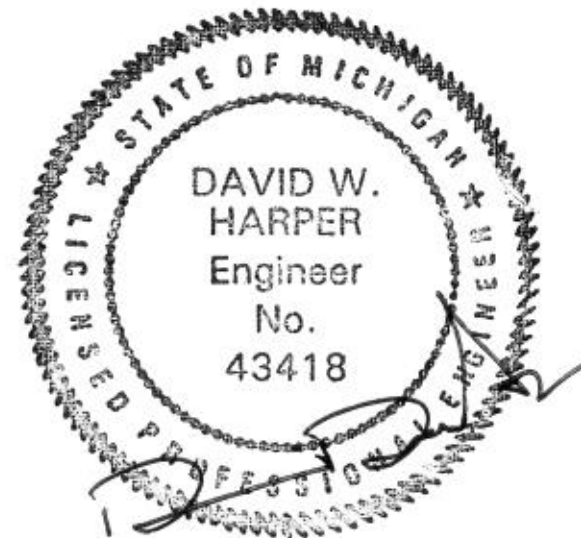
SHELTER SHIMMING
SCALE: N.T.S

INSTALLATION NOTES:

1. ALL FOUNDATION WORK IS BY OTHERS AND SUBJECT TO LOCAL INSPECTION.
2. FOUNDATION SURFACE SHALL BE LEVEL TO WITHIN +/- 1/8" PER 10 LINEAL FEET IN ANY DIRECTION.
3. FOUNDATION SHALL BE SQUARE TO WITHIN +/- 1/4".
4. TIE DOWN PLATES, IF USED, MUST BE ENTIRELY ABOVE GRADE.
5. SHELTER MUST BE SHIMMED TO LEVEL ABOVE IRREGULARITIES IN THE SLAB AND BUILDING FLOOR SYSTEM. SHIM HARDNESS NOT LESS THAN 60 DUROMETER. OR COMPRESSIVE STRENGTH 9,000 PSI MINIMUM. SHIMS NOT LESS THAN 3" SQUARE, THICKNESS AS REQUIRED.
6. INSPECT FOUNDATION FOR DEBRIS AND REMOVE BEFORE SETTING SHELTER.

RIGGING NOTES:

1. SHELTER MUST BE LIFTED ONLY AT POINTS PROVIDED, USING APPROPRIATE SPREADER BARS AND SLINGS, AND WITHIN THE LIMITS SHOWN ON THIS DRAWING.
2. UNLESS OTHERWISE APPROVED OR INDICATED, LIFT ONLY THE SHELTER SELF-WEIGHT. DO NOT LIFT THE SHELTER WITH ADDITIONAL EQUIPMENT INSIDE.
3. INSPECT EACH LIFT DEVICE FOR CRACKS, WARPING OR OTHER DEFECTS BEFORE INSTALLING ON SHELTER. DO NOT USE A LIFTING DEVICE THAT HAS ANY CRACKS, QUESTIONABLE WELDS, IRREGULAR OR ELONGATED HOLES, OR IS BENT OUT OF SHAPE.
4. INSPECT BOLTS BEFORE INSTALLATION. DO NOT USE ANY BOLTS THAT HAVE DAMAGED THREADS, ARE BENT, APPEAR ELONGATED OR ARE MALFORMED IN ANY WAY.
5. DO NOT ROUTE SLING NEAR HVAC SYSTEMS.
6. REMOVE OR PROTECT DOOR HARDWARE AND OTHER PROTRUSIONS FROM DAMAGE.
7. RIGGER IS TO PROVIDE ALL EQUIPMENT ABOVE THE THERMOBOND EXTERIOR LIFTING DEVICE. THE RIGGER IS RESPONSIBLE FOR ENSURING THAT THE SAFETY REQUIREMENTS LISTED HEREIN ARE MET.
8. RIGGING SHALL CONFORM TO APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
9. IF SHELTER IS DELIVERED WITH TEMPORARY SHIPPING WALLS OR ANY OTHER TEMPORARY STRUCTURE INSTALLED FOR TRANSPORT, DO NOT REMOVE BEFORE SHELTER PLACEMENT.
10. DO NOT USE SINGLE HOLE POSITIONS FOR LIFTING.
11. DO NOT SET THE SHELTER ON AN UNEVEN OR UNSTABLE SURFACE.



06/25/21

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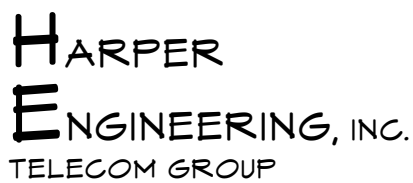
MOTOROLA
SOLUTIONS



6615 TOWPATH ROAD, SUITE 200
EAST SYRACUSE, NY 13057
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5130 WEST 6TH STREET
CLEVELAND, OH. 44141



815 Superior Ave. Suite 1514
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Fax: (216) 344-3856

SHELTER INSTALLATION DETAILS

SCALE: AS NOTED
DRAWN BY: GJB
CHECKED BY: GJB
DATE: 03/02/21
FILE: 20-216-005

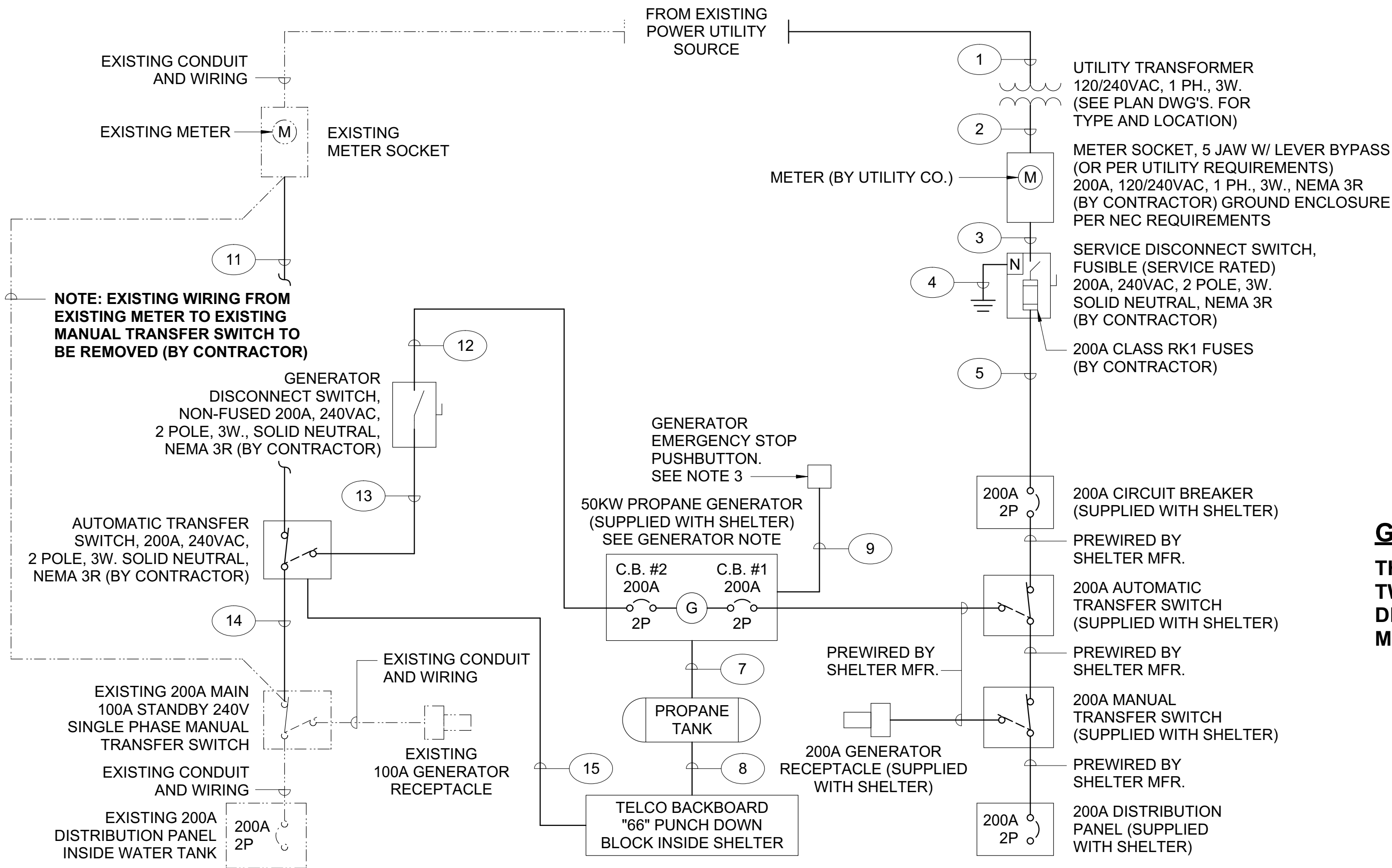
5111 OSHTOMO
N. 6TH STREET
KALAMAZOO, MI 49009

Drawing / Rev.

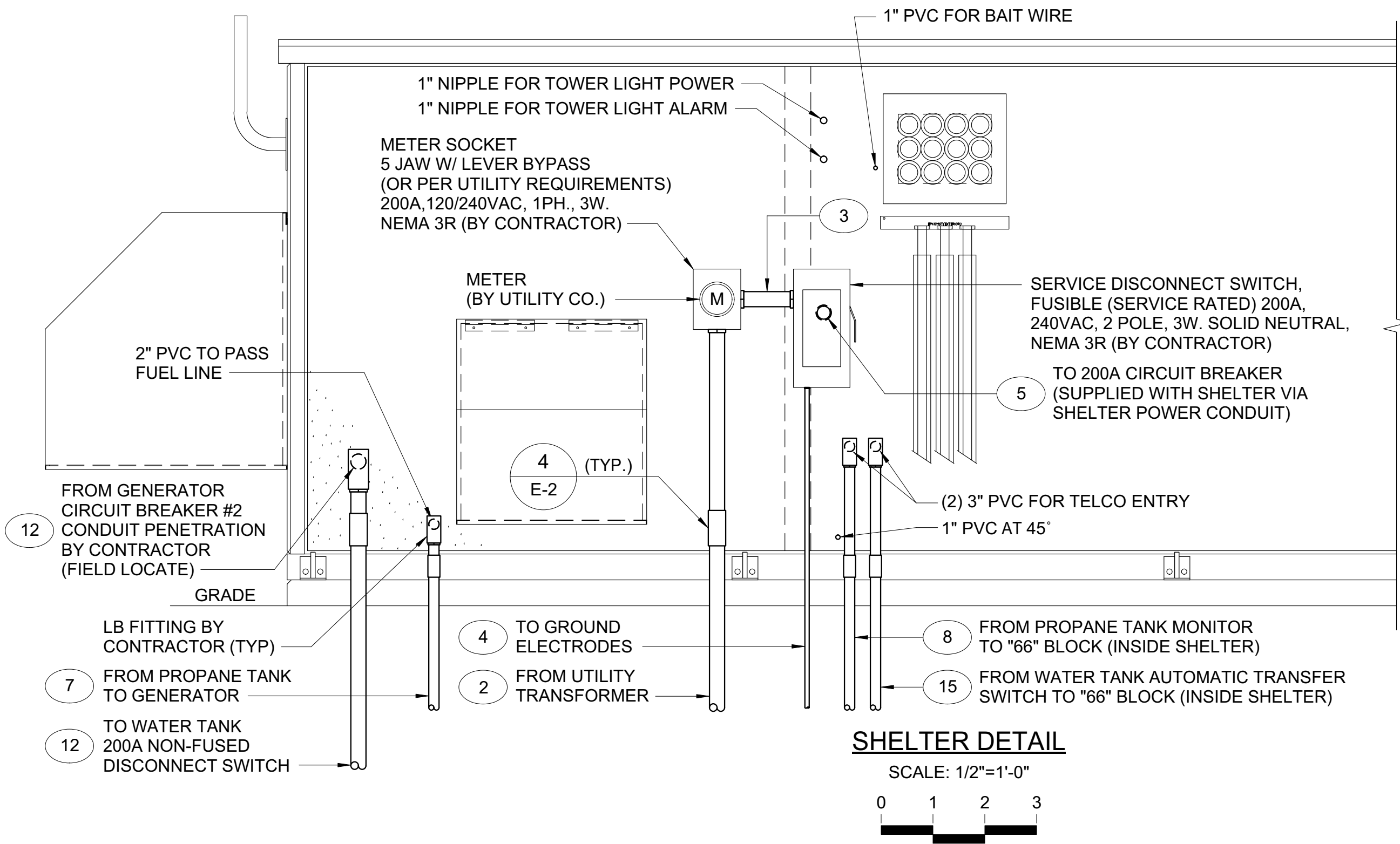
S-3/1

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SINGLE LINE DIAGRAM
SCALE: NONE

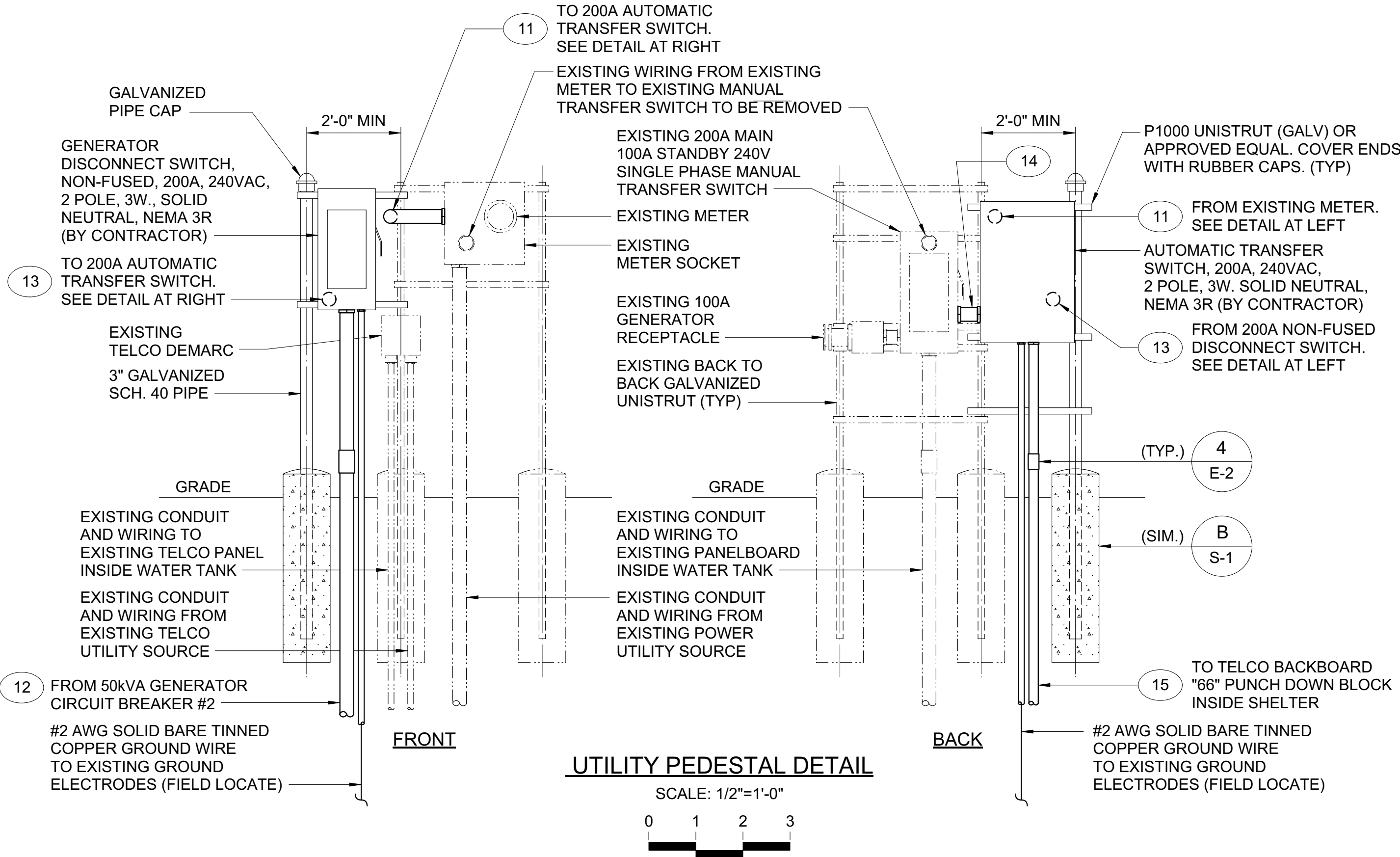


SHELTER DETAIL
SCALE: 1/2"=1'-0"
0 1 2 3

- GENERAL NOTES:**
1. IN CASE OF CONFLICT BETWEEN THIS DRAWING, PLAN DRAWINGS OR MANUFACTURER SPEC., CONTRACTOR SHALL NOTIFY ENGINEER OR MOTOROLA REPRESENTATIVE.
 2. CONTRACTOR SHALL FURNISH AND INSTALL ENGRAVED PLASTIC LABELS "MOTOROLA" ON THE FACE OF EACH PIECE OF EQUIPMENT AND ABOVE THE ELECTRIC METER.
 3. CONTRACTOR SHALL FURNISH AND INSTALL REMOTE GENERATOR EMERGENCY STOP PUSH BUTTON PER NEC 445.18 (B) AND GENERATOR MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL FURNISH AND INSTALL ENGRAVED PLASTIC LABEL "GENERATOR EMERGENCY STOP". LOCATION OF EMERGENCY STOP PUSHBUTTON TO BE DETERMINED BY CONSTRUCTION MANAGER.

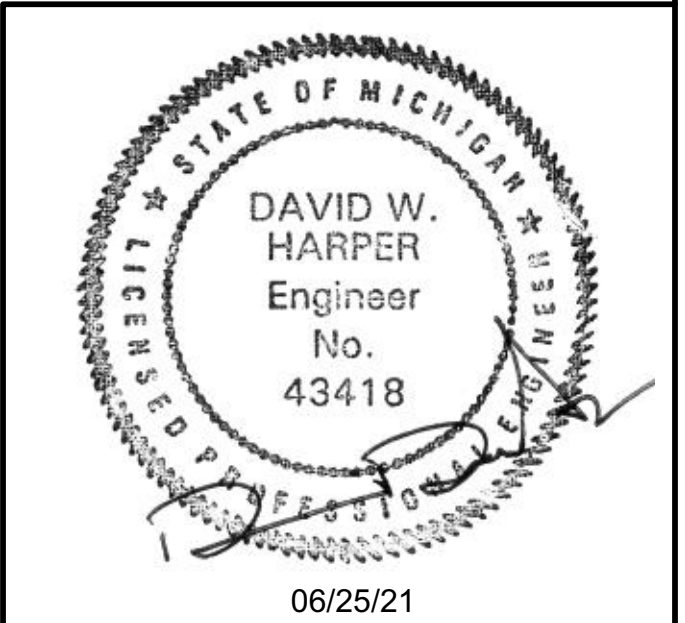
GENERATOR NOTE:

THE GENERATOR SHOULD BE ORDERED WITH TWO OUTPUT BREAKERS. (ONE FOR WATER DEPT ALTERNATE POWER SOURCE, ONE FOR MOTOROLA ALTERNATE POWER SOURCE.)



UTILITY PEDESTAL DETAIL
SCALE: 1/2"=1'-0"
0 1 2 3

UTILITIES TO BE INSTALLED PER LOCAL UTILITY REQUIREMENTS. CONTRACTOR TO VERIFY WIRE, PULL STRING, CONDUIT SCHEDULE AND ROUTING WITH TOWER OWNER AND MOTOROLA REPRESENTATIVE PRIOR TO COMMENCING ANY/ALL UTILITY WORK.			
CONDUIT	CABLE/CONDUIT	FROM	TO
1	INCOMING PRIMARY CABLE (SEE DWG. A-1 AND/OR C-1) FOR UNDERGROUND SERVICE: CONTRACTOR TO INSTALL (2) 4" PVC SCHEDULE 40 CONDUITS WITH NYLON PULL ROPES, CABLE FURNISHED AND INSTALLED BY UTILITY. FOR OVERHEAD SERVICE: POLES AND CABLE FURNISHED AND INSTALLED BY UTILITY.	EXISTING POWER UTILITY SOURCE	UTILITY TRANSFORMER
2	3#4/0 AWG CU. (TYPE USE-2) 3" RMC OR IMC CONDUIT	UTILITY TRANSFORMER	METER BASE
3	3#3/0 AWG CU. & 1#2 AWG CU. GND. (TYPE THWN-2) 3" RMC OR IMC CONDUIT	METER BASE	200A SERVICE DISCONNECT SWITCH (NORM SERVICE)
4	1#2 AWG CU. GND. (TYPE THWN-2) 3/4" LFMC CONDUIT	NEUTRAL BUS - SERVICE DISCONNECT SWITCH	GROUND ELECTRODES
5	3#3/0 AWG CU. & 1#2 AWG CU. GND. (TYPE THWN-2) VIA EXISTING 2" NIPPLE THROUGH SHELTER WALL	200A SERVICE DISCONNECT SWITCH (NORM SERVICE)	200A CIRCUIT BREAKER (ATS - NORMAL) VIA SHELTER POWER ENTRY
6	NOT USED	N/A	N/A
7	PROPANE FUEL LINE 2" PVC SCHEDULE 40 CONDUIT	PROPANE TANK	50KW PROPANE GENERATOR
8	TANK LEVEL & ALARM WIRING PER MANUFACTURER'S SPECIFICATIONS 1" RMC OR IMC CONDUIT	PROPANE TANK	TO TELCO BACKBOARD "66" PUNCH DOWN BLOCK INSIDE SHELTER
9	2#12 AWG CU & 1#12 AWG CU GND (TYPE THWN) 3/4" RMC OR IMC CONDUIT	50KW PROPANE GENERATOR	GEN. EMERGENCY STOP PUSHBUTTON (E-STOP)
10	NOT USED	N/A	N/A
11	3#3/0 AWG CU. & 1#2 AWG CU. GND. (TYPE THWN-2) 3" RMC OR IMC CONDUIT	EXISTING METER BASE	200A AUTOMATIC TRANSFER SWITCH (ATS - NORMAL)
12	3#4/0 AWG CU. & 1#2 AWG CU. GND. (TYPE THWN-2) 3" RMC OR IMC CONDUIT	50KW PROPANE GENERATOR (CIRCUIT BREAKER #2)	200A NON-FUSED DISCONNECT SWITCH (BACK UP SERVICE)
13	3#4/0 AWG CU. & 1#2 AWG CU. GND. (TYPE THWN-2) 3" RMC OR IMC CONDUIT	200A NON-FUSED DISCONNECT SWITCH (BACK UP SERVICE)	200A AUTOMATIC TRANSFER SWITCH (ATS - BACK UP)
14	3#4/0 AWG CU. & 1#2 AWG CU. GND. (TYPE THWN-2) 3" RMC OR IMC CONDUIT	200A AUTOMATIC TRANSFER SWITCH (ATS - LOAD)	EXISTING 200A MANUAL TRANSFER SWITCH
15	ALARM WIRING (TYPE THWN) 2" RMC OR IMC CONDUIT	200A AUTOMATIC TRANSFER SWITCH (ATS - ALARMS)	TO TELCO BACKBOARD "66" PUNCH DOWN BLOCK INSIDE SHELTER

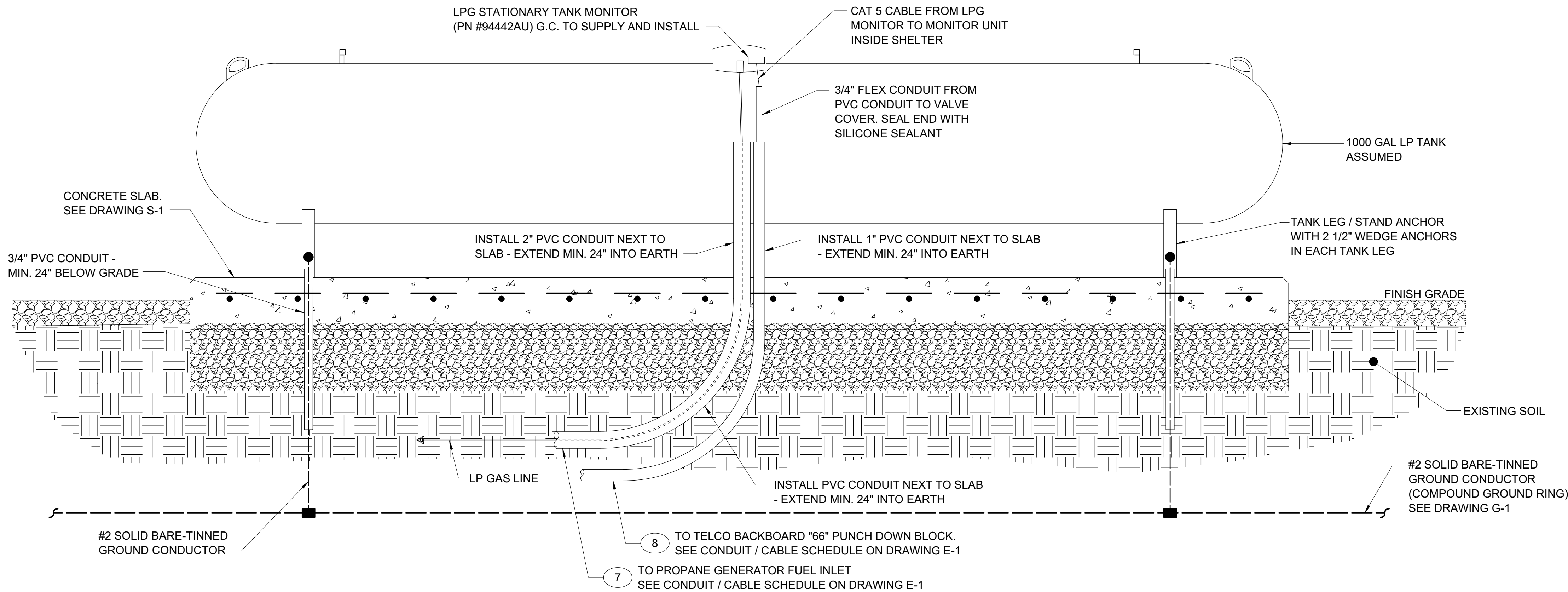


1	06/25/21	FOR CONSTRUCTION	GJB	 MOTOROLA SOLUTIONS	 PYRAMID Network Services, LLC 6615 TOWPATH ROAD, SUITE 200 EAST SYRACUSE, NY 13057 PHONE: (315) 701-1300	 EMERALD DESIGN & CONSTRUCTION 5130 WEST 6TH STREET CLEVELAND, OH. 44141	HARPER ENGINEERING, INC. TELECOM GROUP 215 Superior Ave. Suite 1514 Cleveland, OH. 44114 Phone: (216) 344-3855 Fax: (216) 344-3856	UTILITY DETAILS			THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER. IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.	
0	05/25/21	FOR ZONING	GJB					5111 OSHTOMO				Drawing / Rev. E-1/1
C	05/03/21	REVISED CONDUIT 2 WIRE SIZE	GJB					N. 6TH STREET				
B	03/30/21	FOR APPROVAL	GJB					KALAMAZOO, MI 49009				
A	03/18/21	FOR APPROVAL	GJB									
Rev.	Date:	Description:	Mgr.									

LP TANK MONITOR

- G.C. TO SUPPLY MONITOR UNIT
- G.C. TO SUPPLY CAT 5 FROM MONITOR UNIT TO ALARM UNIT IN SHELTER
- G.C. TO SUPPLY CAT 5 FROM ALARM UNIT IN SHELTER TO ALARM PUNCH DOWN
- UNIT TO BE POWERED FROM RECEPTACLE IN SHELTER

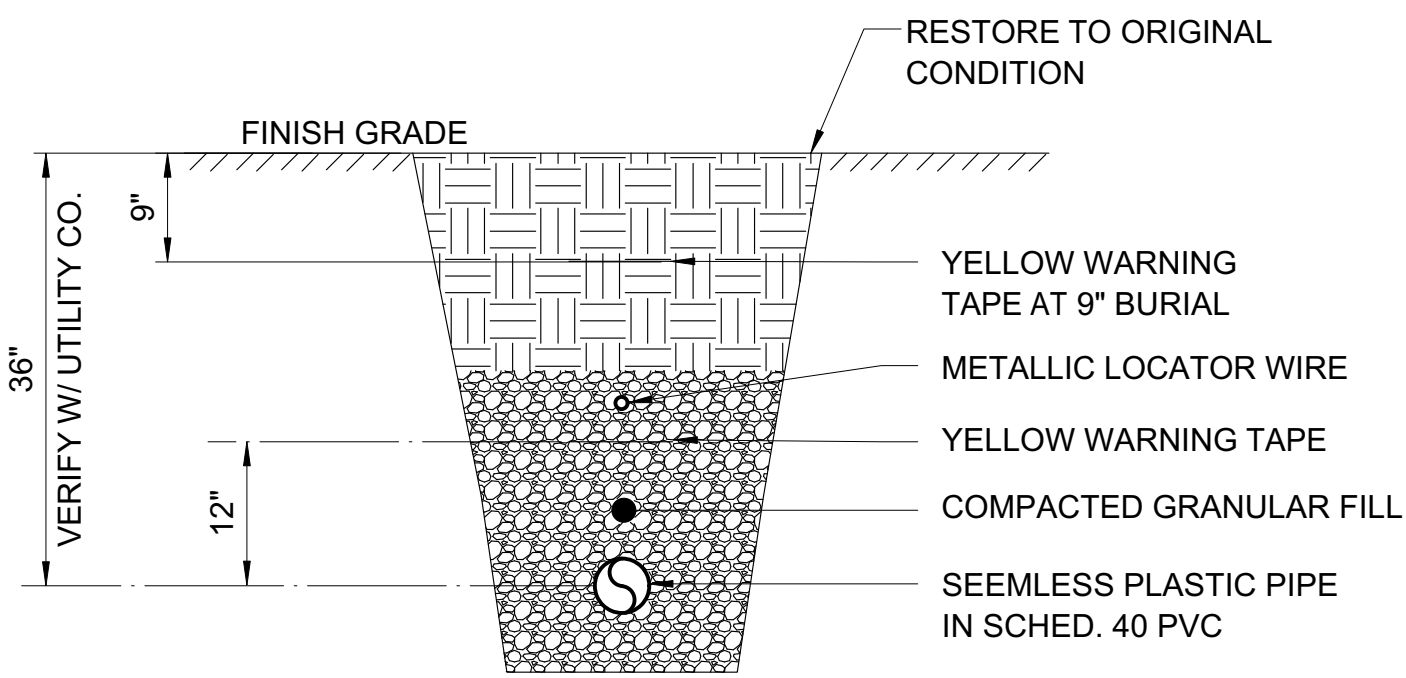
THE CONTRACTOR IS RESPONSIBLE FOR PURCHASING AND INSTALLING A PROPANE TANK MONITOR (MICRO-DESIGN, INC., MODEL No. LPG STM 94442AU) WITH BATTERY BACKUP (APC MODEL ES 350)



LP TANK DETAIL

SCALE: NONE

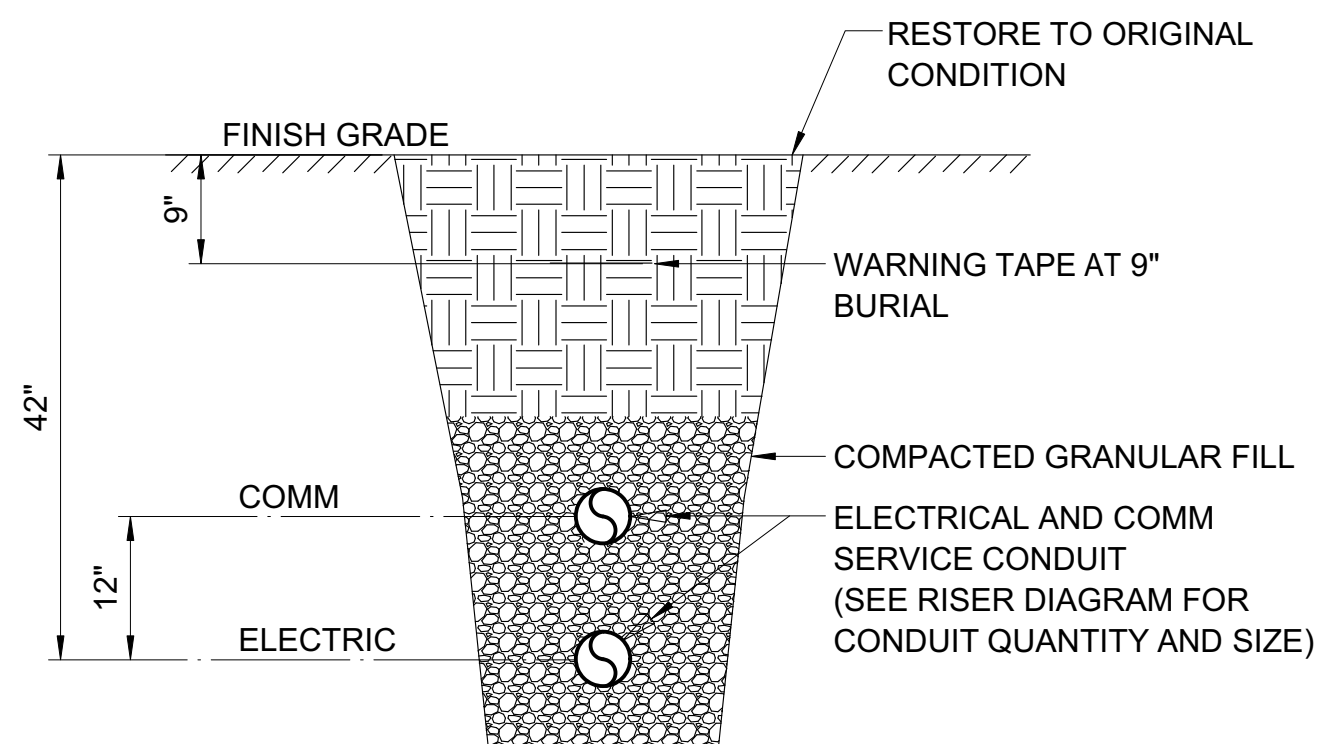
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LP GAS SERVICE FROM LP TANK TO GENERATOR

SCALE: NONE

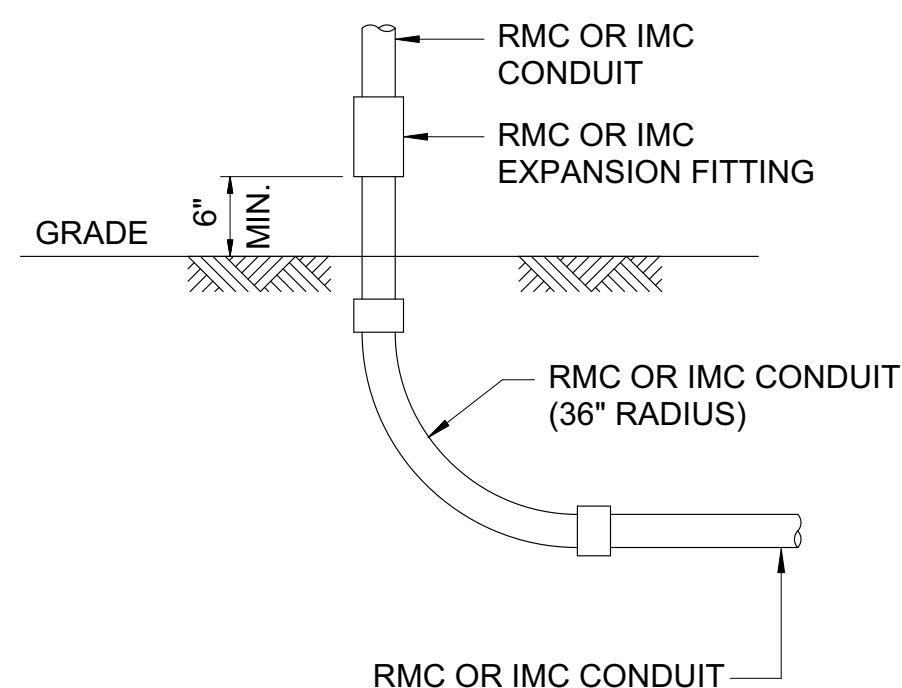
2
-



BURIED UTILITY

SCALE: NONE

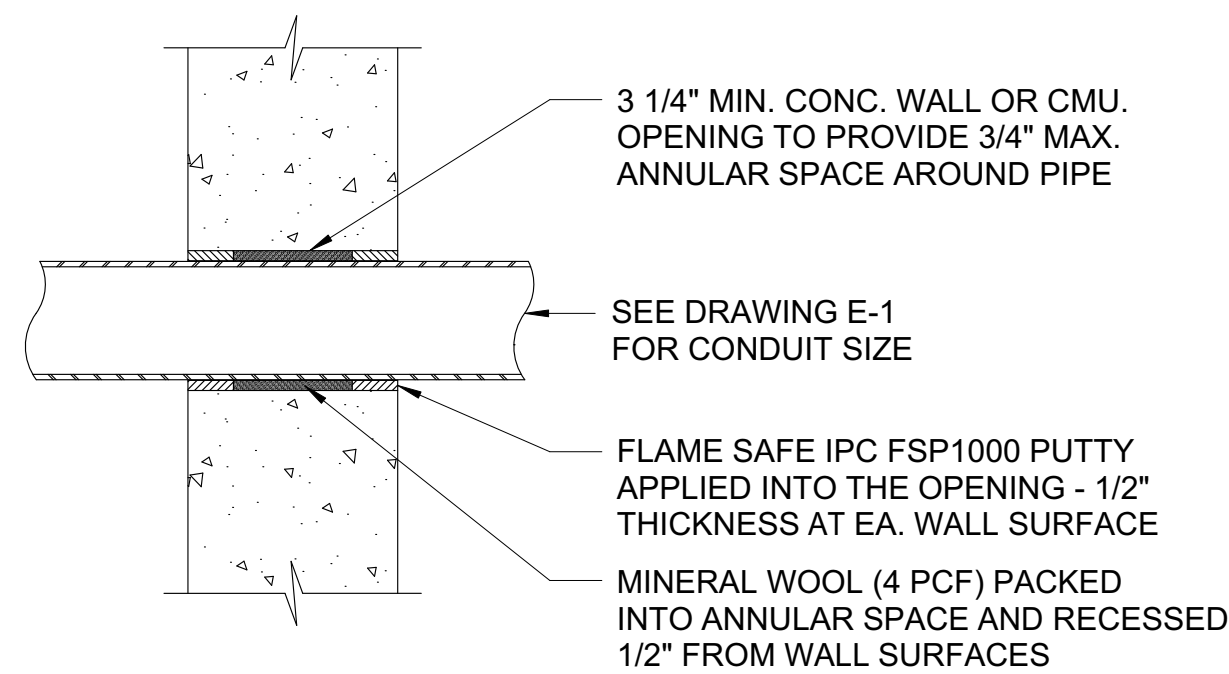
3
-



CONDUIT STUB-UP DETAIL

SCALE: NONE

4
-



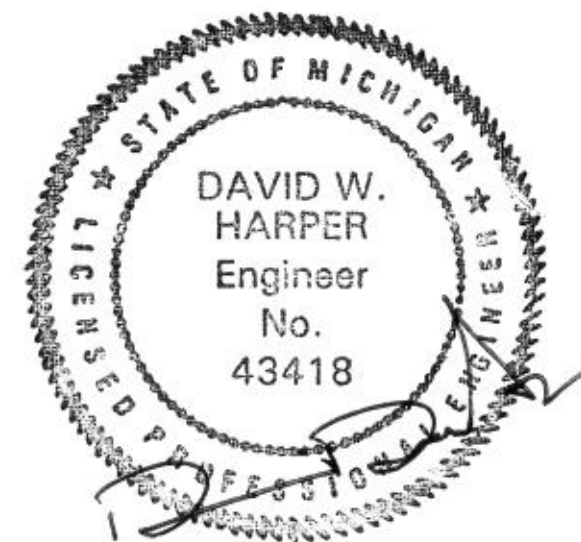
CONDUIT PENETRATION DETAIL

SCALE: NONE

5
-

NOTE:
CONTRACTOR TO INSURE WATER-TIGHTNESS AT ALL WALL PENETRATIONS.

CONCRETE WALL FIRE STOPPING PENETRATION



06/25/21

Rev.	Date:	Description:	Mgr.
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MOTOROLA
SOLUTIONS



6615 TOWPATH ROAD, SUITE 200
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PHONE: (315) 701-1300



5130 WEST 6TH STREET
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LP TANK & ELECTRICAL DETAILS

SCALE: AS NOTED
DRAWN BY: GJB
CHECKED BY: GJB
DATE: 03/02/21
FILE: 20-216-005

5111 OSHTOMO
N. 6TH STREET
KALAMAZOO, MI 49009

Drawing / Rev.

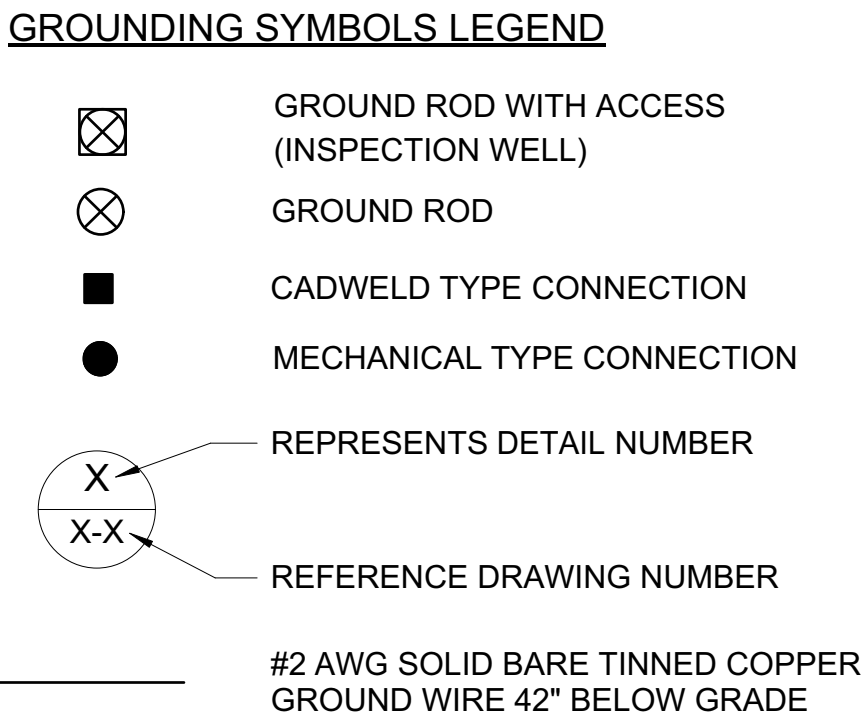
E-2/1

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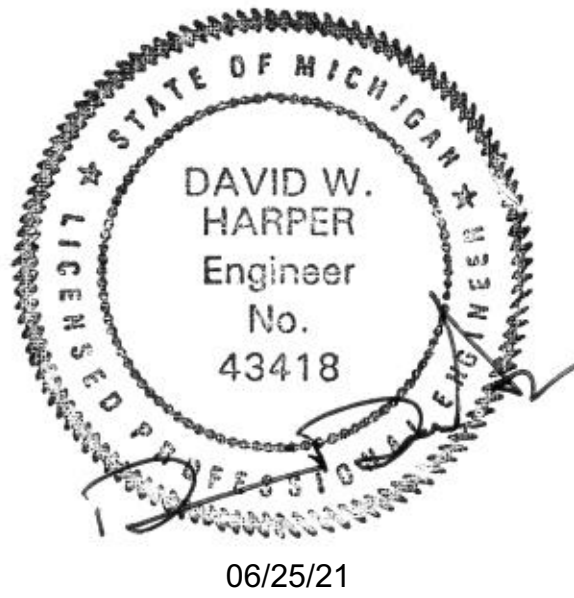
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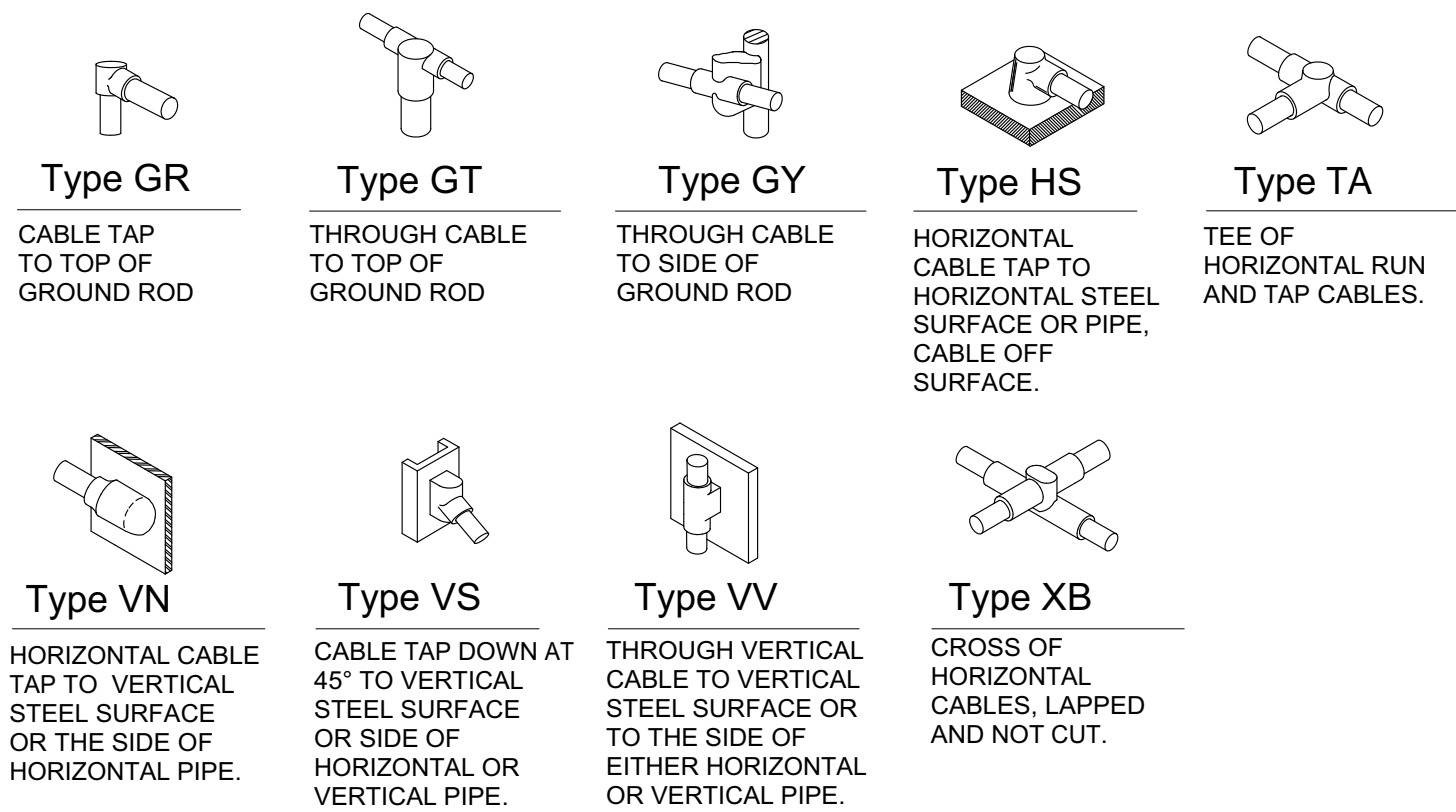
1. ALL FENCE POSTS WITHIN 6' OF ANY METALLIC ITEMS INCLUDING EQUIPMENT, UTILITY PEDESTAL / ICE BRIDGE SUPPORT POSTS, ETC. SHALL BE BONDED TO THE GROUND RING.
2. FENCE FABRIC TO BE BONDED PER MOTOROLA R-56 STANDARDS REV C.
3. FENCE FABRIC RUNS LESS THAN 40' SHALL BE BONDED ON ONE END. FENCE FABRIC RUNS GREATER THAN 40' SHALL BE BONDED ON BOTH ENDS.
4. FENCE TOP RAIL TO BE BONDED TO CORNER POSTS ON BOTH ENDS
5. ANY DISCREPANCIES BETWEEN THIS DRAWING PACKAGE AND EXISTING FIELD CONDITIONS MUST BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. ALL GROUND WIRES THAT TRANSITION FROM ABOVE GRADE TO BELOW GRADE SHALL BE ROUTED IN A 3/4" PVC CONDUIT FROM THE CONNECTION TO A MINIMUM OF 18" BELOW GRADE. BOTH ENDS OF THE PVC CONDUIT SHALL BE SEALED WITH SILICONE CAULK.
7. TAMPER PROOF HARDWARE SHALL BE USED FOR ALL EXPOSED GROUND BARS INSTALLED AT COMPOUND LEVEL.

1. ALL CABLE CABLE IN CONCRETE OR THROUGH WALL SHALL BE IN 3/4" PVC CONDUIT. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTOR SLEEVES.
2. GROUND ALL EXPOSED METALLIC OBJECTS USING A TWO-HOLE NEMA DRILLED CONNECTOR SUCH AS THOMAS & BETTS #32207 OR APPROVED EQUAL
3. THE CONTRACTOR SHALL NOTIFY THE PYRAMID NETWORK SERVICES, LLC REPRESENTATIVE WHEN THE GROUND RING IS INSTALLED SO THAT THE REPRESENTATIVE CAN INSPECT GROUND RING BEFORE IT IS CONCEALED.
4. ALL EXTERIOR GROUND CONDUCTORS INCLUDING GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE INCLUSIVE ANGLE OF ANY BEND SHALL NOT EXCEED 90'. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
5. ALL BELOW GROUND EXTERNAL CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO BURIED GROUND RING SHALL BE THE PARALLEL-TYPE. EXCEPT FOR THE GROUND RODS WHICH ARE TEE-TYPE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZED SUCH AS HOLUB LECTROSOL #15-501.
6. WHERE MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP) ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF A CONDUCTIVE ANTI-OXIDE COMPOUND ON ALL CONNECTORS. PROVIDE LOCK WASHERS ON ALL MECHANICAL CONNECTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT. THOROUGHLY REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTORS, REPAINT TO MATCH EXISTING AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE. ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE TYPES OF METALS BEING ATTACHED TO.
7. A RESISTANCE TO GROUND OF (10) OHMS OR LESS IS REQUIRED FOR ALL MOTOROLA SITES. THE CONTRACTOR SHOULD RETAIN HIS OWN TESTER AT HIS OWN EXPENSE. IN ADDITION, A THIRD PARTY SHOULD BE HIRED TO OBTAIN MEGGER AND SWEEP RESULTS ON ALL SITES INCLUSIVE OF WHAT RESULTS THE CONTRACTOR SUBMITS, TO INSURE PROPER QUALITY CONTROL ON ALL SITES. SCHEDULE FINAL MEGGER TEST SUCH THAT THE PYRAMID NETWORK SERVICES, LLC REPRESENTATIVE CAN BE PRESENT FOR FIELD VERIFICATION. REFER TO THE MOTOROLA MASTER SPECIFICATION FOR MEGGER TESTING PROCEDURES. IF THE FINAL GROUNDING RESISTANCE MEASUREMENT EXCEEDS 10 (TEN) OHMS, THE CONTRACTOR SHALL NOTIFY THE PYRAMID NETWORK SERVICES, LLC REPRESENTATIVE.
8. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL
9. THE GROUND CONDUCTORS SHALL BE RUN STRAIGHT FOR MINIMUM INDUCTANCE AND VOLTAGE DROP. SINCE CABLE BENDS INCREASE INDUCTANCE, THE MINIMUM REQUIRED BENDING RADIUS IS 8 INCHES WHEN BENDS ARE UNAVOIDABLE. ALL METAL WORK WITHIN 10 FEET OF THE GROUND RING SHALL BE DIRECTLY BONDED TO THIS GROUND SYSTEM, WITHOUT USING SERIES OR DAISY CHAIN CONNECTION ARRANGEMENTS.
10. PAINT, ENAMEL, LACQUER AND OTHER ELECTRICALLY NON-CONDUCTIVE COATINGS SHALL BE REMOVED FROM THREADS AND SURFACE AREAS WHERE CONNECTIONS ARE MADE TO ENSURE GOOD ELECTRICAL CONTINUITY.
11. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL NOT BE MADE UNLESS THE CONDUCTORS ARE SEPARATED BY A SUITABLE MATERIAL. THAT IS A PART OF THE ATTACHMENT DEVICE LISTED AND APPROVED FOR USE WITH THE SPECIFIC DISSIMILAR METALS MAY BE USED FOR THE PURPOSE.
12. ALL BELOW GRADE GROUND SYSTEM CONDUCTORS SHALL BE A MINIMUM DEPTH OF 30".



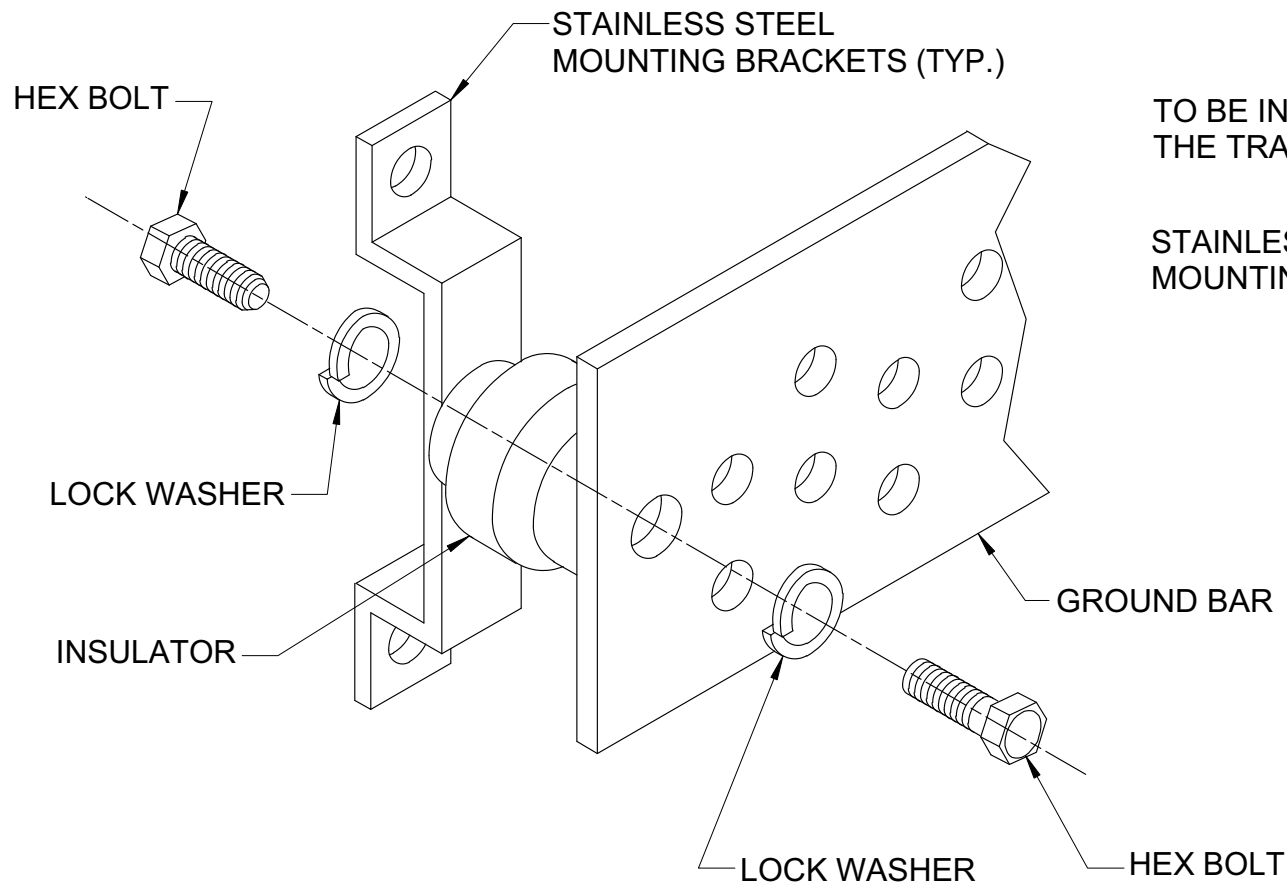
- ① **TIE-IN GROUNDING:** EXTEND #2 AWG SOLID BARE TINNED COPPER WIRES FROM EQUIPMENT SHELTER BURIED GROUND RING TO TOWER BURIED GROUND RING AND MAKE EXOTHERMIC CONNECTIONS.
- ② **EQUIPMENT SHELTER CIRCUIT BREAKER GROUNDING:** EXTEND #2 AWG SOLID BARE TINNED COPPER WIRE (SUPPLIED WITH SHELTER) FROM EQUIPMENT SHELTER 200A CIRCUIT BREAKER TO EQUIPMENT SHELTER BURIED GROUND RING AND MAKE APPROVED CONNECTIONS AT EACH END.
- ③ **GROUND ROD:** COPPERCLAD STEEL, 3/4" DIA. TEN (10) FEET LONG.
- ④ **GROUND ROD W/ACCESS:** COPPERCLAD STEEL, 3/4" DIA. TEN (10) FEET LONG WITH TEST ACCESS WELL. (1) REQUIRED AT FURTHEST CORNER OF FOUNDATION AWAY FROM TOWER.
- ⑤ **ICE BRIDGE / UTILITY PEDESTAL SUPPORT POST GROUNDING:** EXTEND #2 AWG SOLID BARE TINNED COPPER WIRE FROM BURIED GROUND RING TO ALL ICE BRIDGE / UTILITY PEDESTAL SUPPORT POSTS AND EXOTHERMICALLY WELD.
- ⑥ **SHELTER EXTERIOR GROUND BAR:** EXTEND (2) #2 AWG SOLID BARE TINNED COPPER WIRES FROM THE SHELTER EXTERIOR GROUND BAR TO BURIED GROUND RING AND MAKE EXOTHERMIC CONNECTIONS.
- ⑦ **TOWER GROUND BAR (BOTTOM):** MOUNT GROUND BAR DIRECTLY TO TOWER AT BOTTOM OF CABLE RUNS. SECURE TO TOWER WITH STAINLESS STEEL MOUNTING MATERIAL. EXTEND (2) #2 AWG SOLID BARE TINNED COPPER WIRES FROM THE TOWER GROUND BAR TO BURIED GROUND RING AND MAKE EXOTHERMIC CONNECTIONS.

[illegible]



CADWELD DETAILS

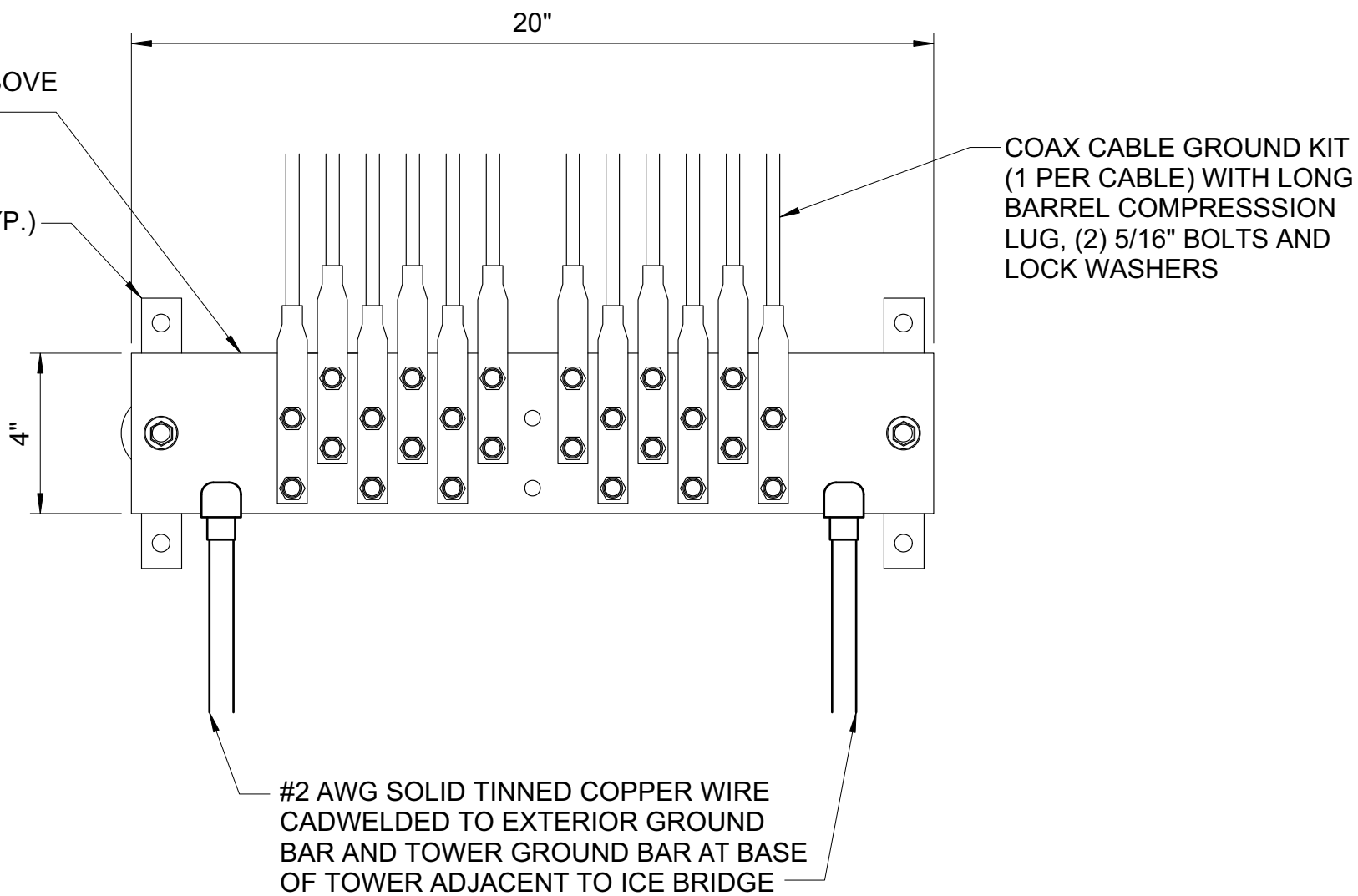
DETAIL 1
SCALE: NONE



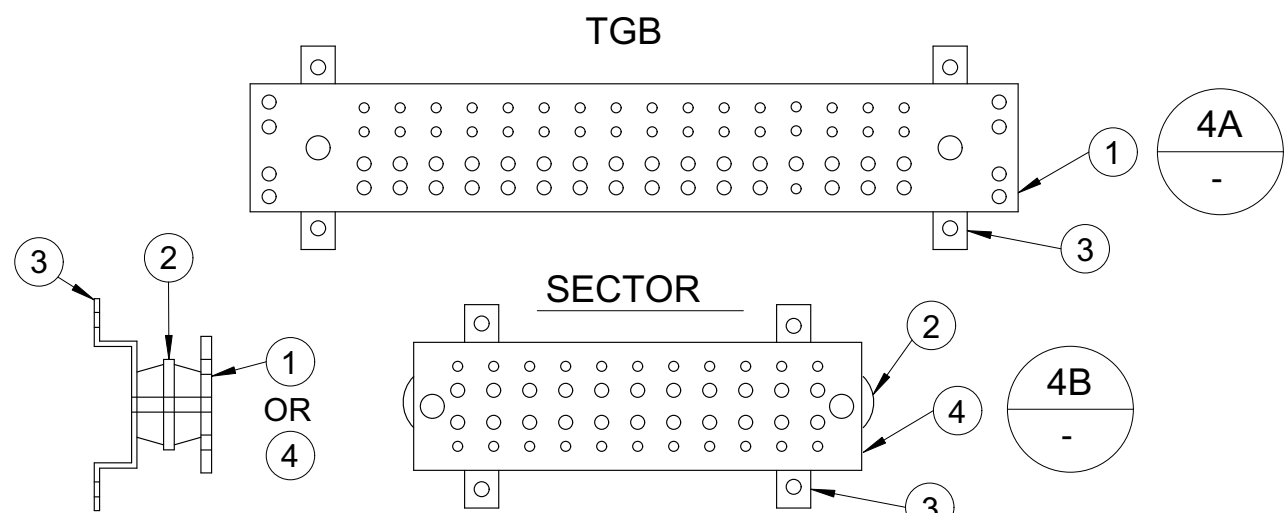
NOTE:

ISOLATORS TO BE USED ON GROUND BAR AT TOWER BASE ADJACENT TO ICE BRIDGE ONLY. GROUND BAR AT ANTENNA ELEVATION TO BE ATTACHED DIRECTLY TO TOWER STEEL.

GROUND BAR INSTALLATION 2
SCALE: NONE



TOWER GROUND BAR (TGB) 3
SCALE: NONE

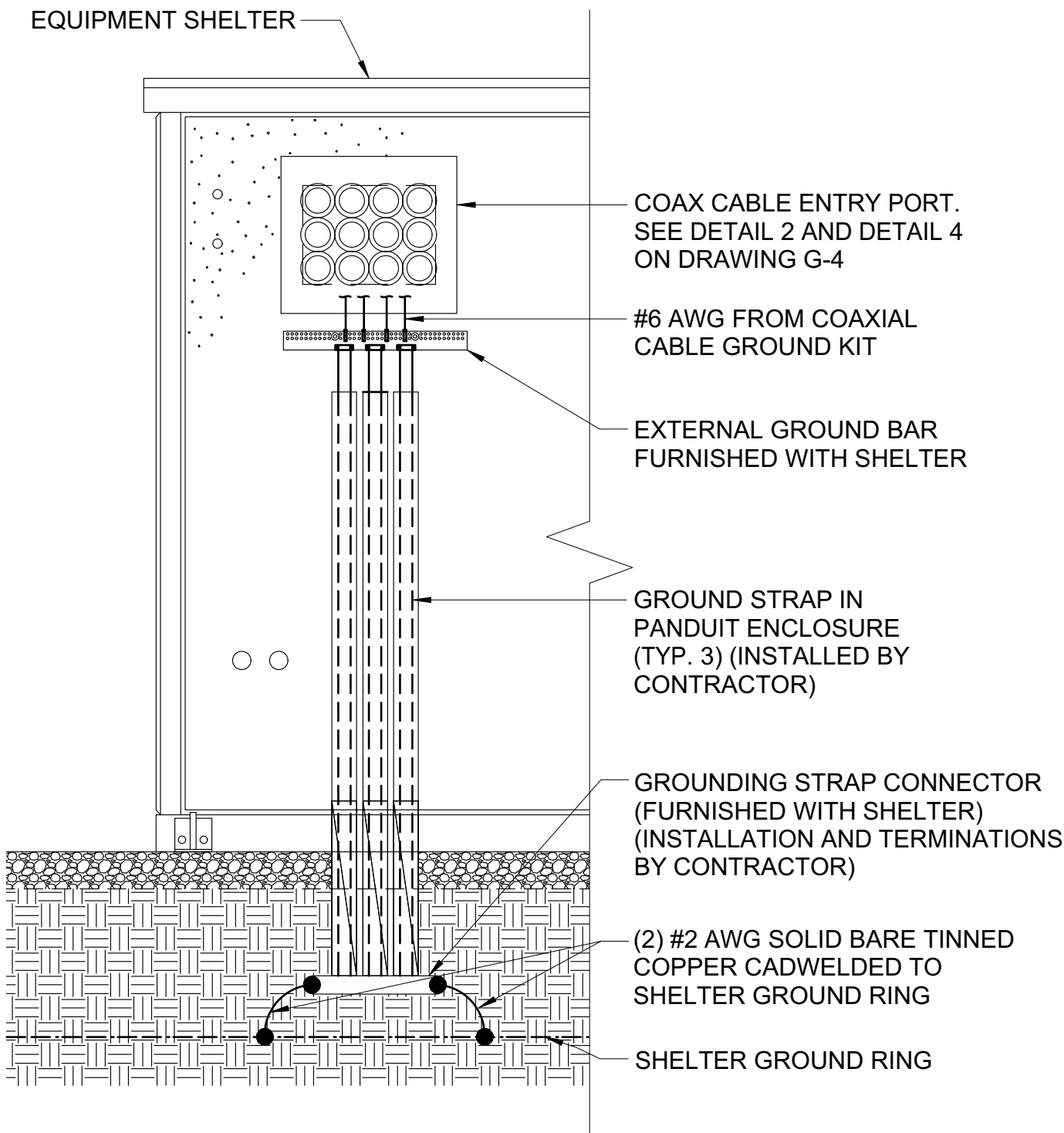


MATERIAL LIST

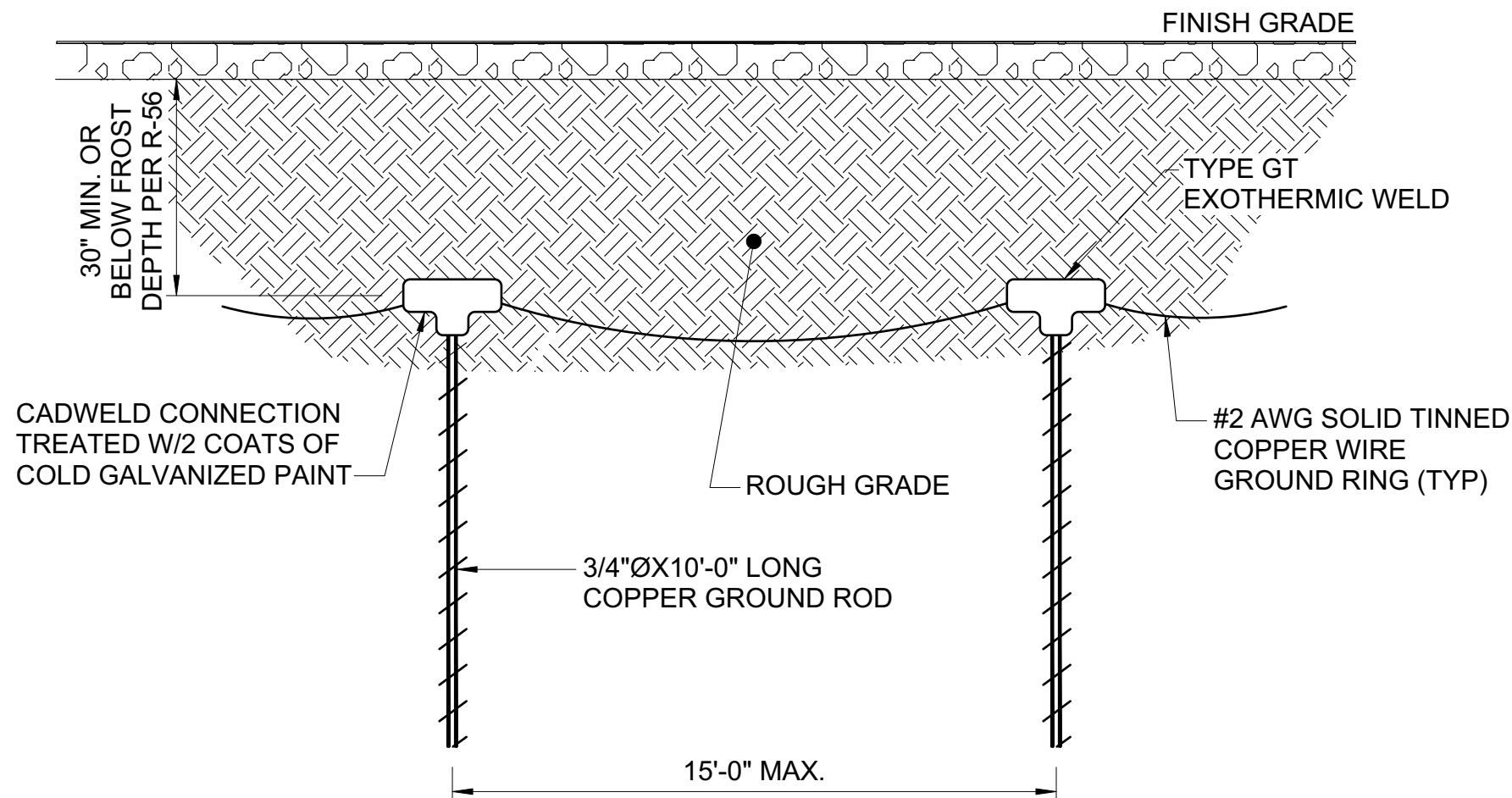
- TINNED COPPER GROUND BAR, 1/4"X 4"X 24" TESSCO CAT. NO. 482415 WITH THEFT DETERRENT HARWARE WALL MOUNTING KIT CAT. NO. 390980 OR APPROVED EQUAL.
- INSULATORS, TESSCO (PROVIDED WITH MOUNTING KIT) OR APPROVED EQUAL.
- WALL MOUNTING BRACKET, TESSCO (PROVIDED WITH MOUNTING KIT) OR APPROVED EQUAL.
- TINNED COPPER GROUND BAR, 1/4"X 4"X 12" TESSCO CAT. NO. 422409 WITH THEFT DETERRENT HARDWARE WALL MOUNTING KIT CAT. NO. 390980 OR APPROVED EQUAL.

TOWER GROUND BAR (TGB) OR SECTOR GROUND BAR DETAIL

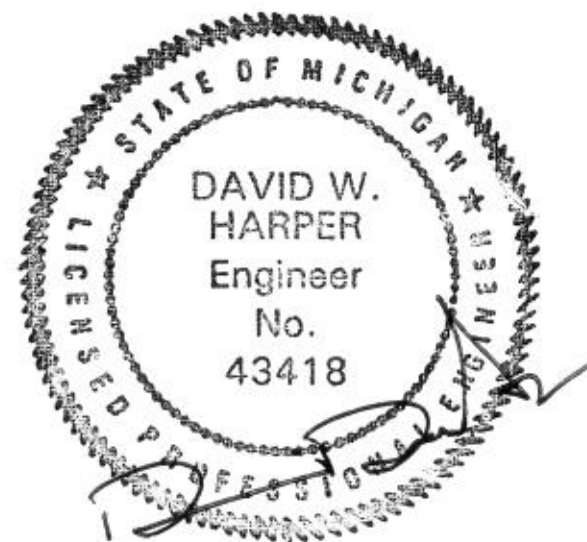
DETAIL 4A 4B
SCALE: NONE



SHELTER GROUNDING DETAIL 5
SCALE: NONE

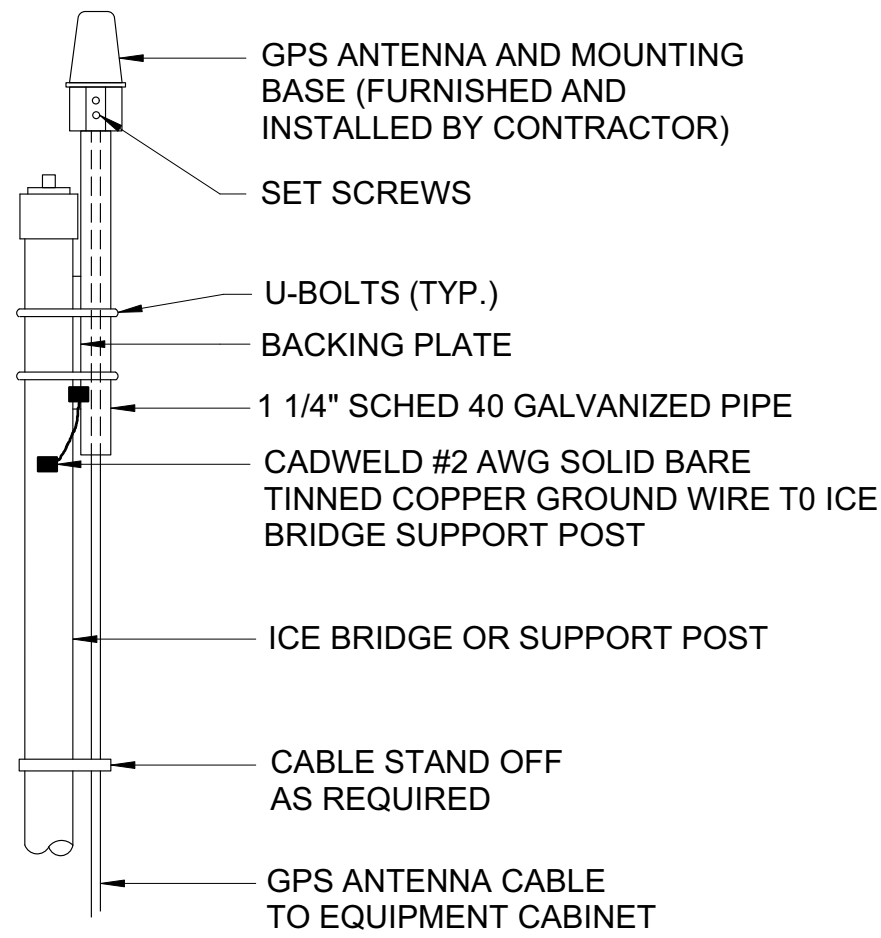


GROUNDING ROD DETAIL 6
SCALE: NONE



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1	06/25/21	FOR CONSTRUCTION	GJB	 MOTOROLA SOLUTIONS	 PYRAMID Network Services, LLC 6615 TOWPATH ROAD, SUITE 200 EAST SYRACUSE, NY 13057 PHONE: (315) 701-1300	 EMERALD DESIGN & CONSTRUCTION 5130 WEST 6TH STREET CLEVELAND, OH. 44141	HARPER ENGINEERING, INC. TELECOM GROUP 815 Superior Ave. Suite 1514 Cleveland, OH. 44114 Phone: (216)344-3855 Fax: (216)344-3856	SCALE: AS NOTED	5111 OSHTOMO N. 6TH STREET KALAMAZOO, MI 49009		Drawing / Rev.		
0	05/25/21	FOR ZONING	GJB					DRAWN BY: GJB			G-2/1		
B	03/30/21	FOR APPROVAL	GJB					CHECKED BY: GJB					
A	03/18/21	FOR APPROVAL	GJB					DATE: 03/02/21					
Rev.	Date:	Description:	Mgr.					FILE: 20-216-005			IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.		

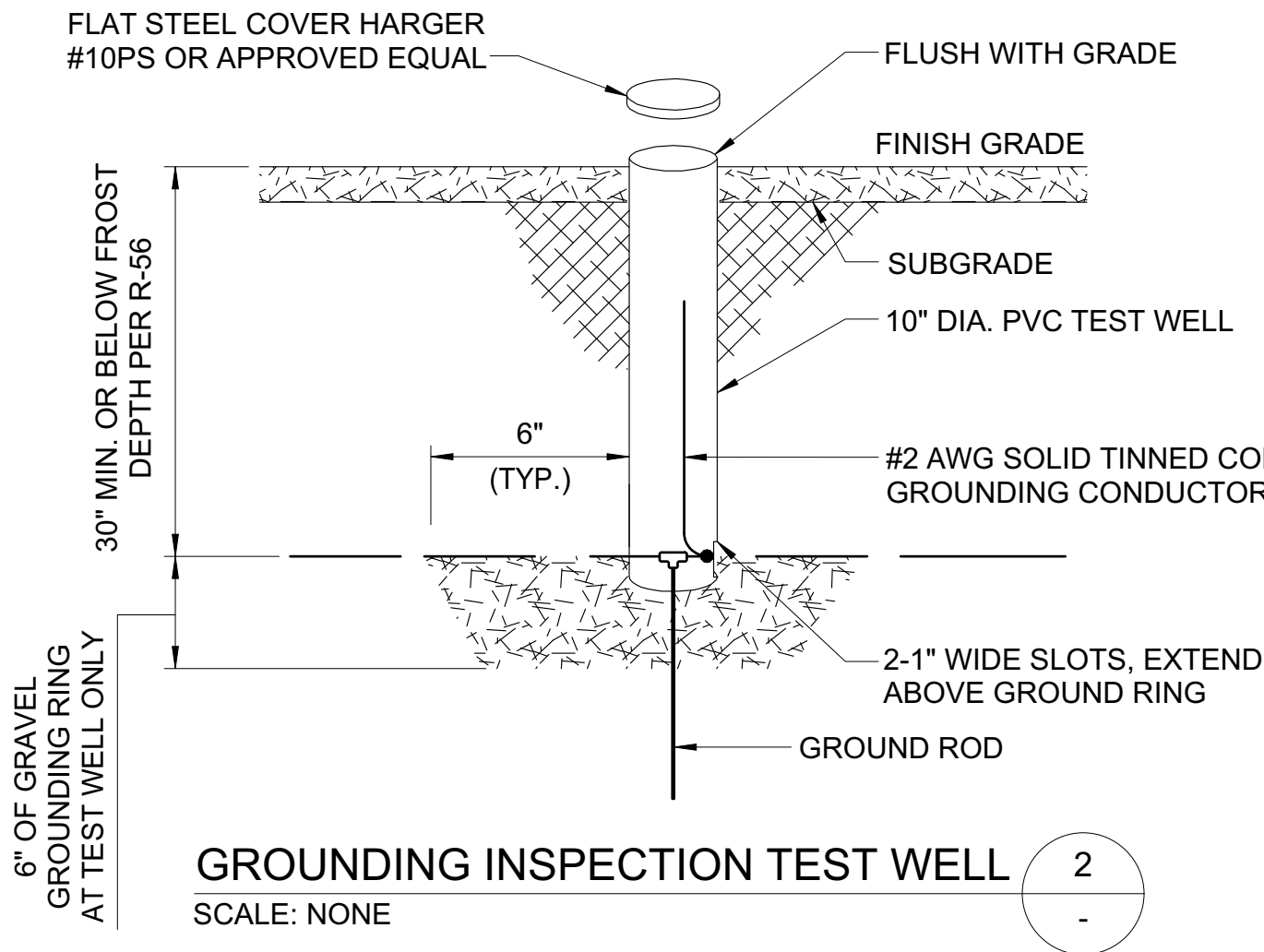
NOTE:
ALL GROUND WIRES THAT TRANSITION FROM ABOVE GRADE TO BELOW GRADE SHALL BE ROUTED IN A 3/4" PVC CONDUIT (NOT SHOWN FOR CLARITY) FROM THE CONNECTION TO A MINIMUM OF 18" BELOW GRADE. BOTH ENDS OF THE PVC CONDUIT SHALL BE SEALED WITH SILICONE CAULK.



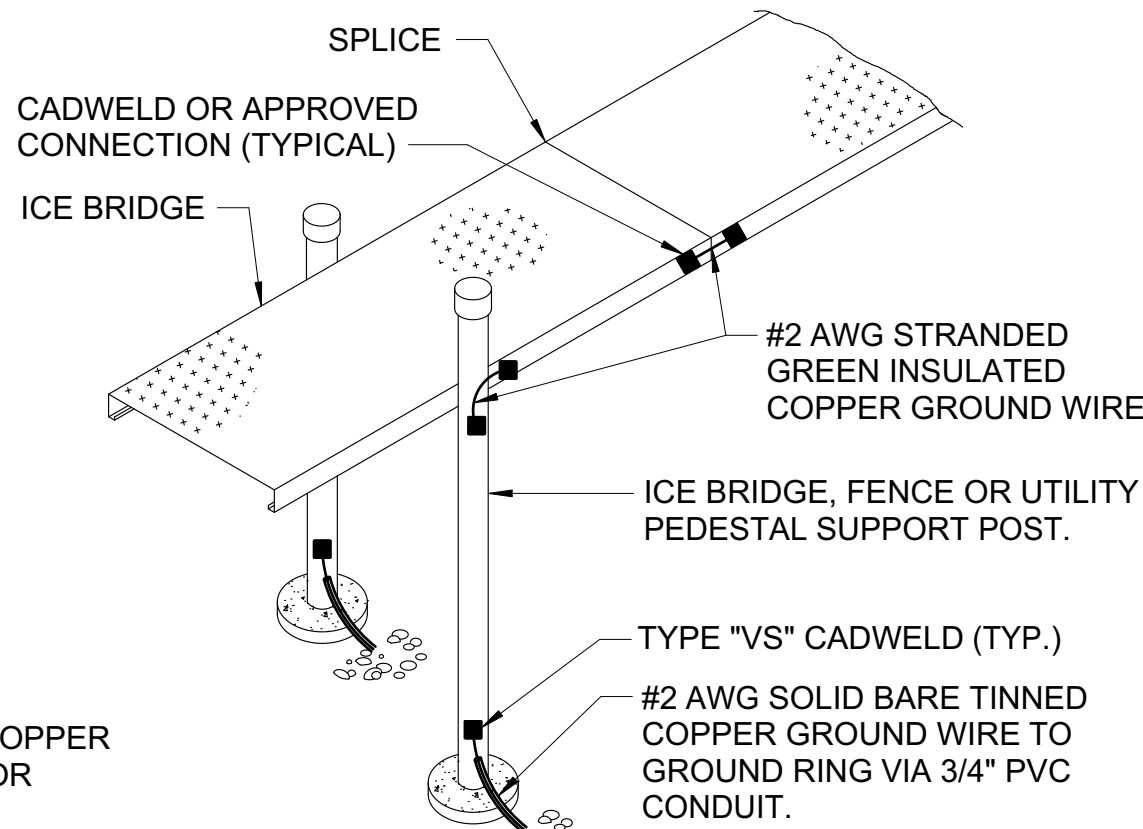
NOTE:
GPS SHOULD HAVE CLEAR VIEW OF THE SOUTHERN HORIZON

GPS ANTENNA INSTALLATION

DETAIL 1
SCALE: NONE

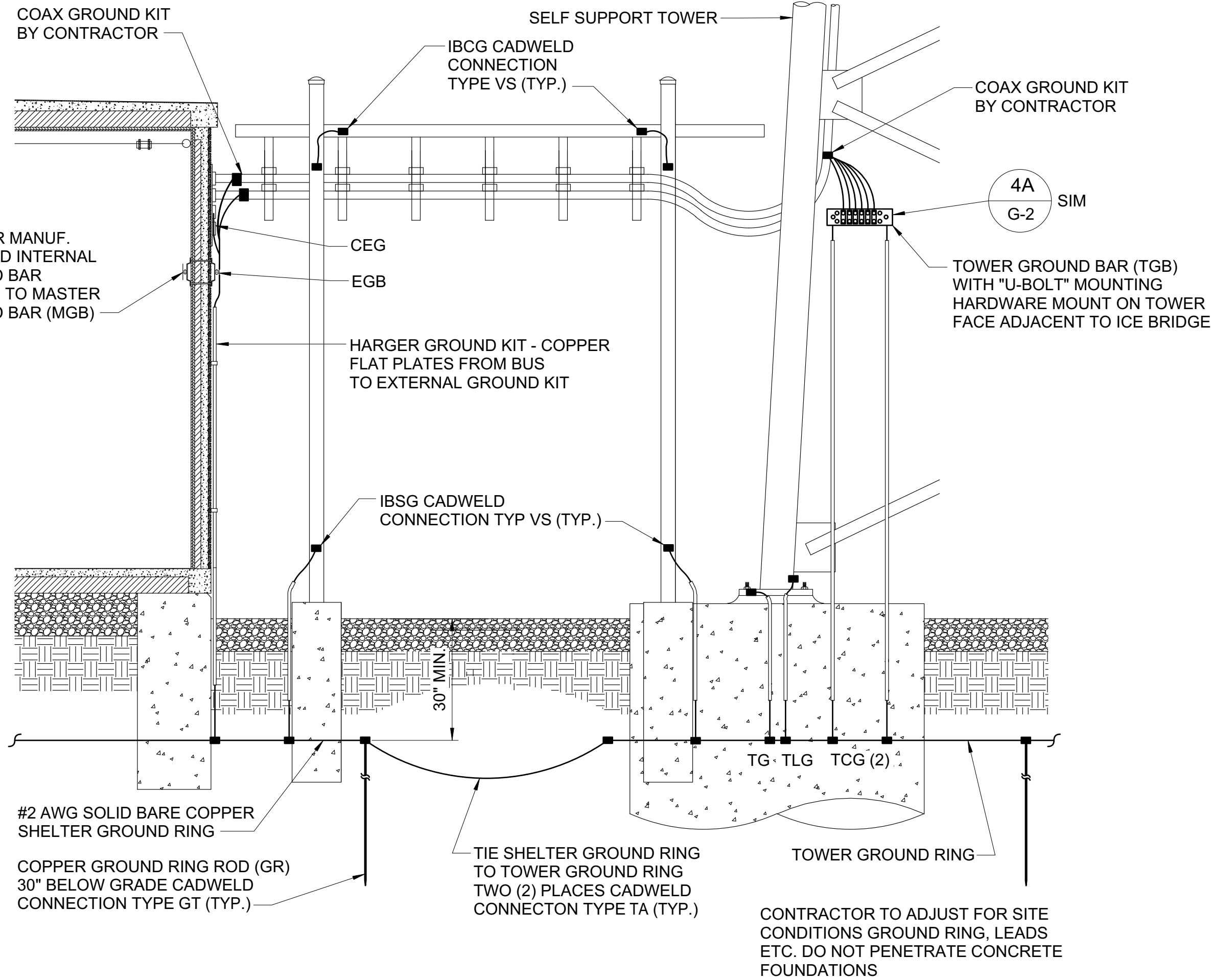


2
SCALE: NONE

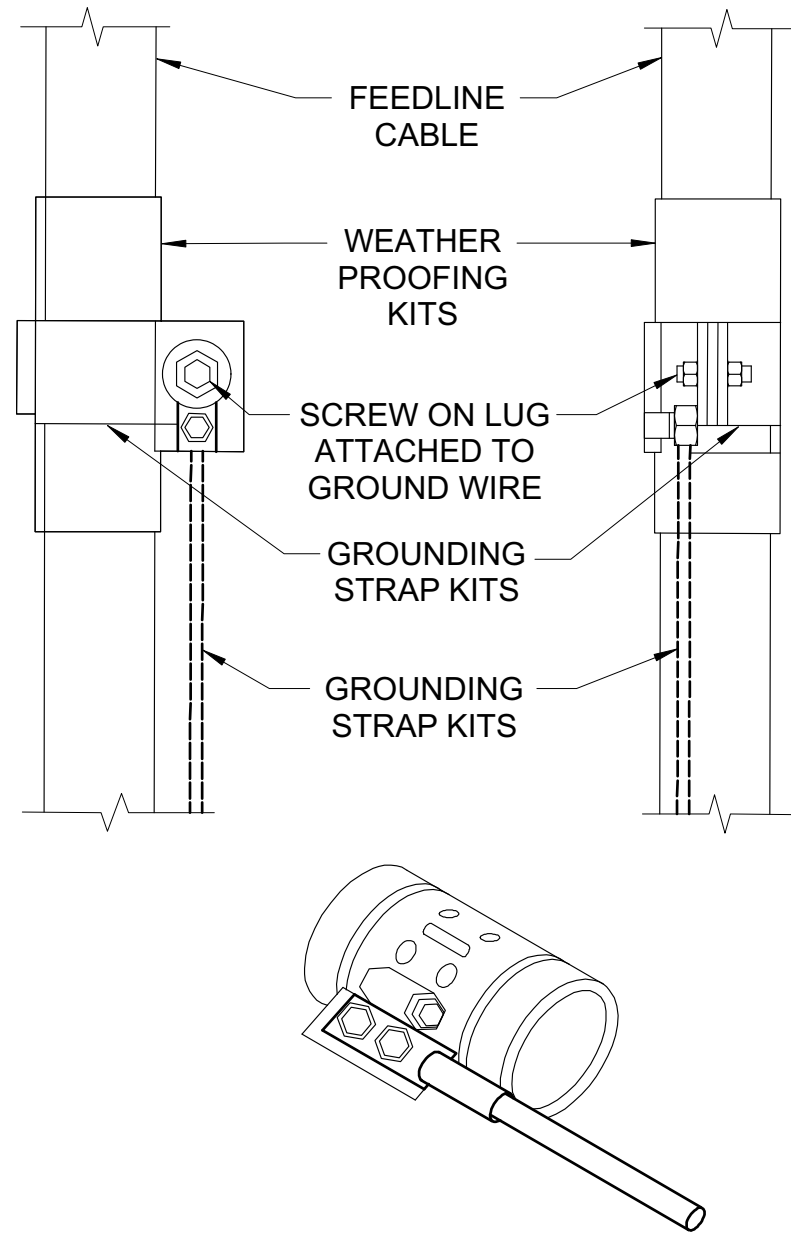


GROUNDING - STANDARD DETAIL
ICEBRIDGE & POSTS

DETAIL 3
SCALE: NONE



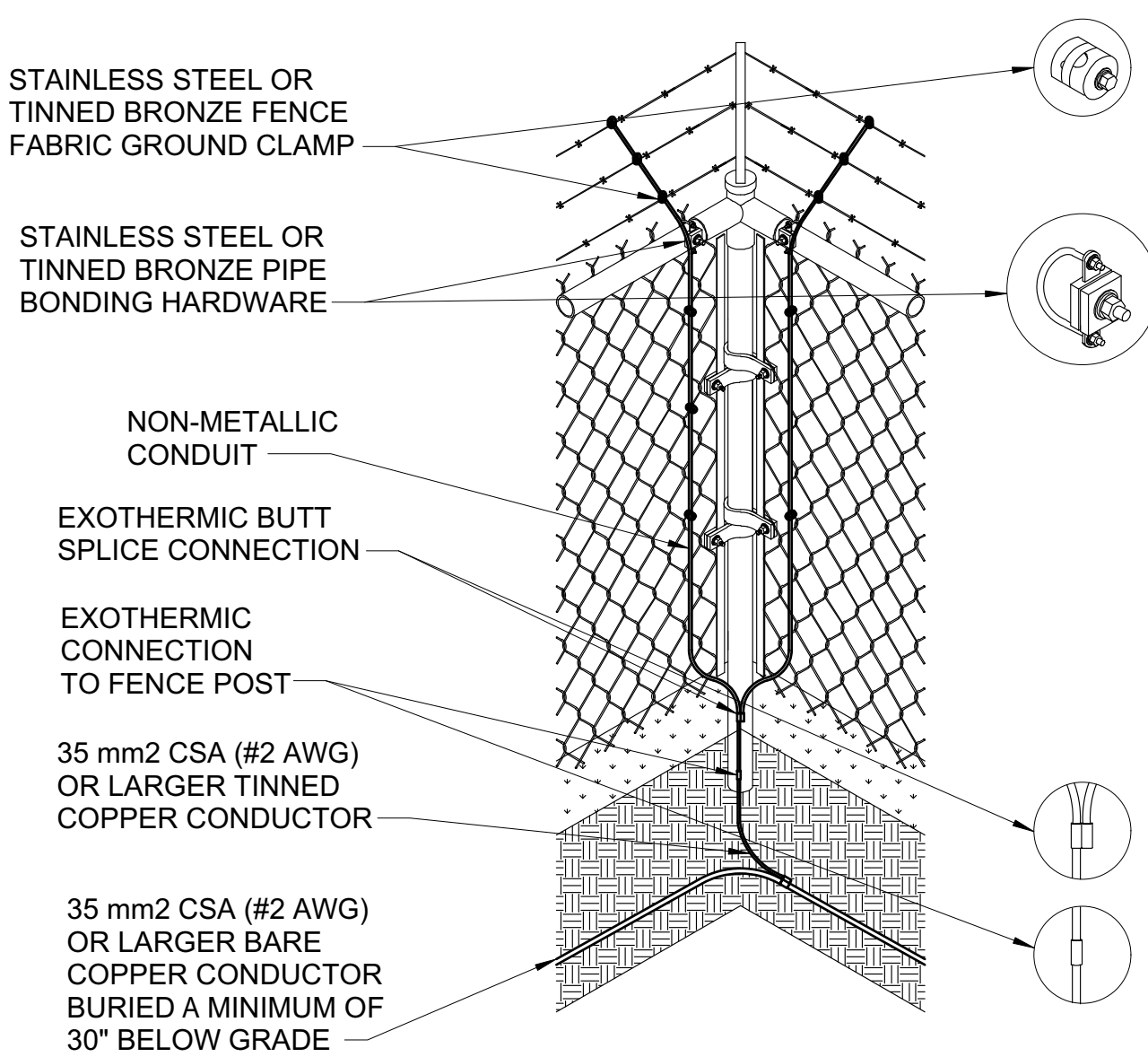
ICE BRIDGE AND TOWER GROUNDING ELEVATION 4
SCALE: NONE



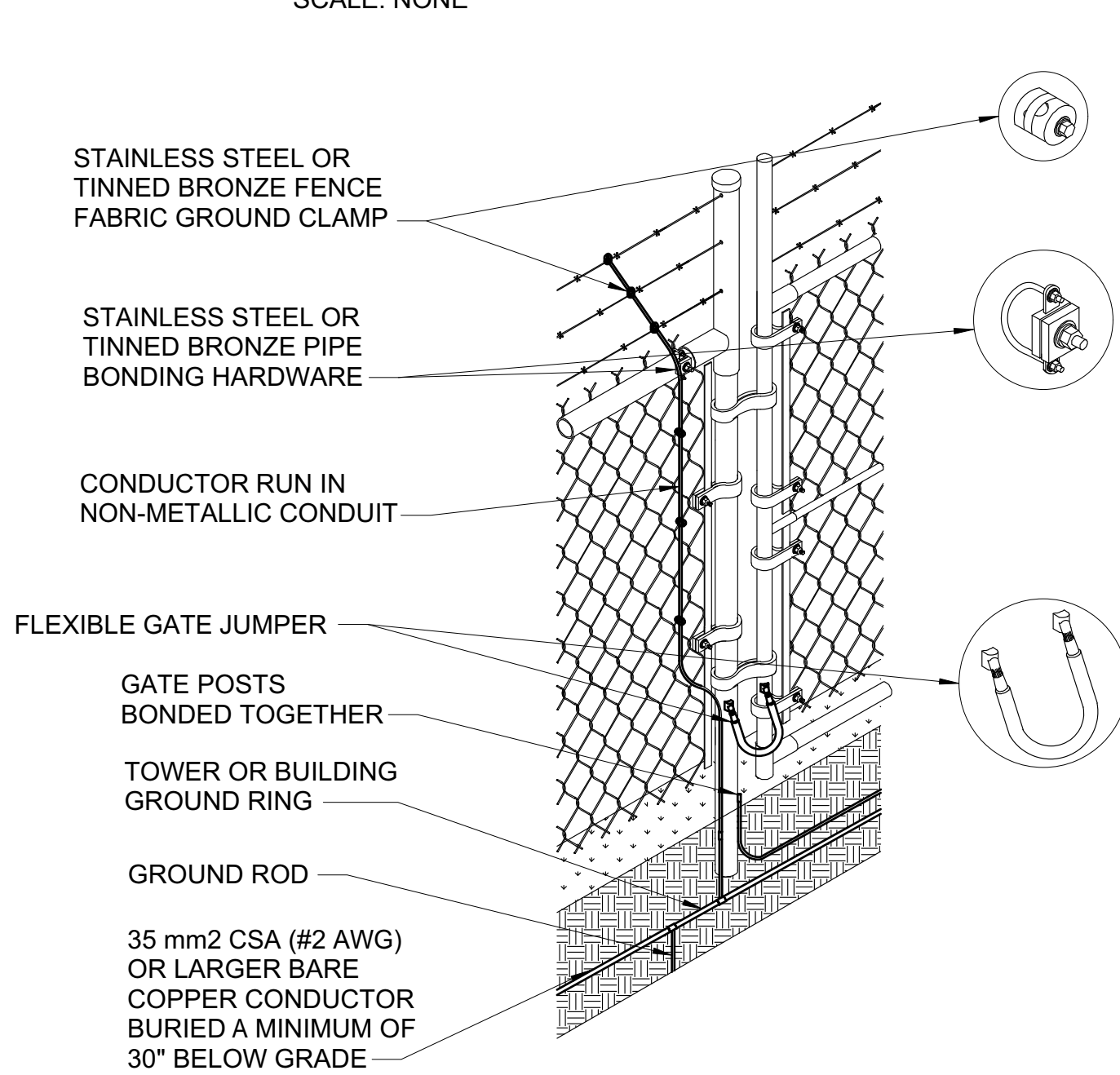
COAX CABLE GROUND KIT DETAIL 5
SCALE: NONE

NOTES:

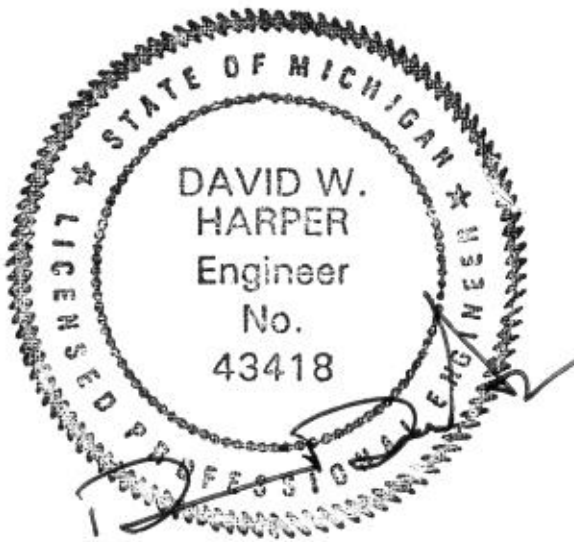
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
- THIS DETAIL IS TYPICAL FOR EACH COAX CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
- CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING SHELTER ENTRY PANEL
- CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE



FENCE FABRIC AND DETERRENT WIRING BONDING 6
SCALE: NONE



GATE BONDING 7
SCALE: NONE



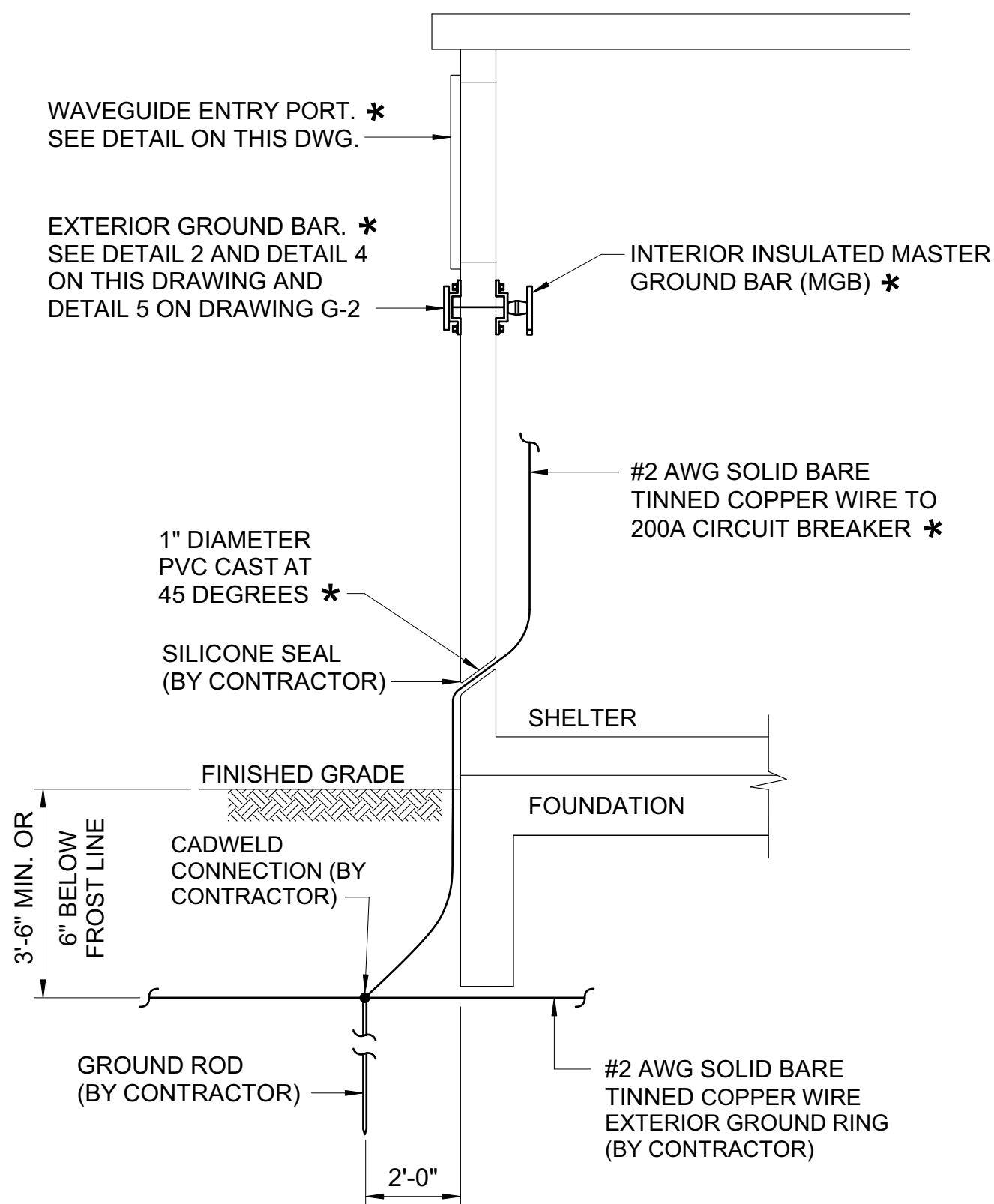
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0	05/25/21	FOR ZONING	GJB
A	03/18/21	FOR APPROVAL	GJB



GROUNDING DETAILS		
SCALE: AS NOTED	5111 OSHTEMO N. 6TH STREET KALAMAZOO, MI 49009	Drawing / Rev.
DRAWN BY: GJB		G-3/1
CHECKED BY: GJB		
DATE: 03/02/21		
FILE: 20-216-005		

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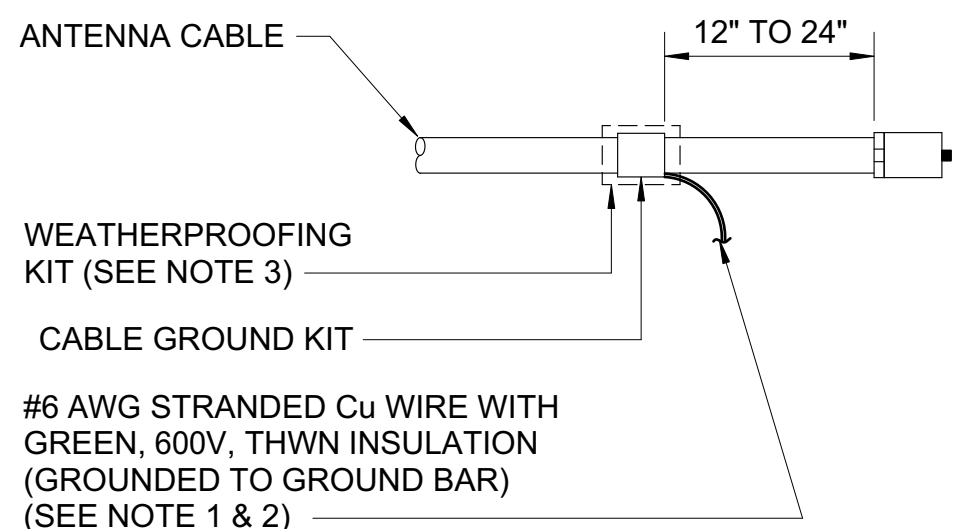
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* SUPPLIED BY SHELTER MFR.

MASTER GROUND BAR DETAIL

DETAIL 1
SCALE: NONE

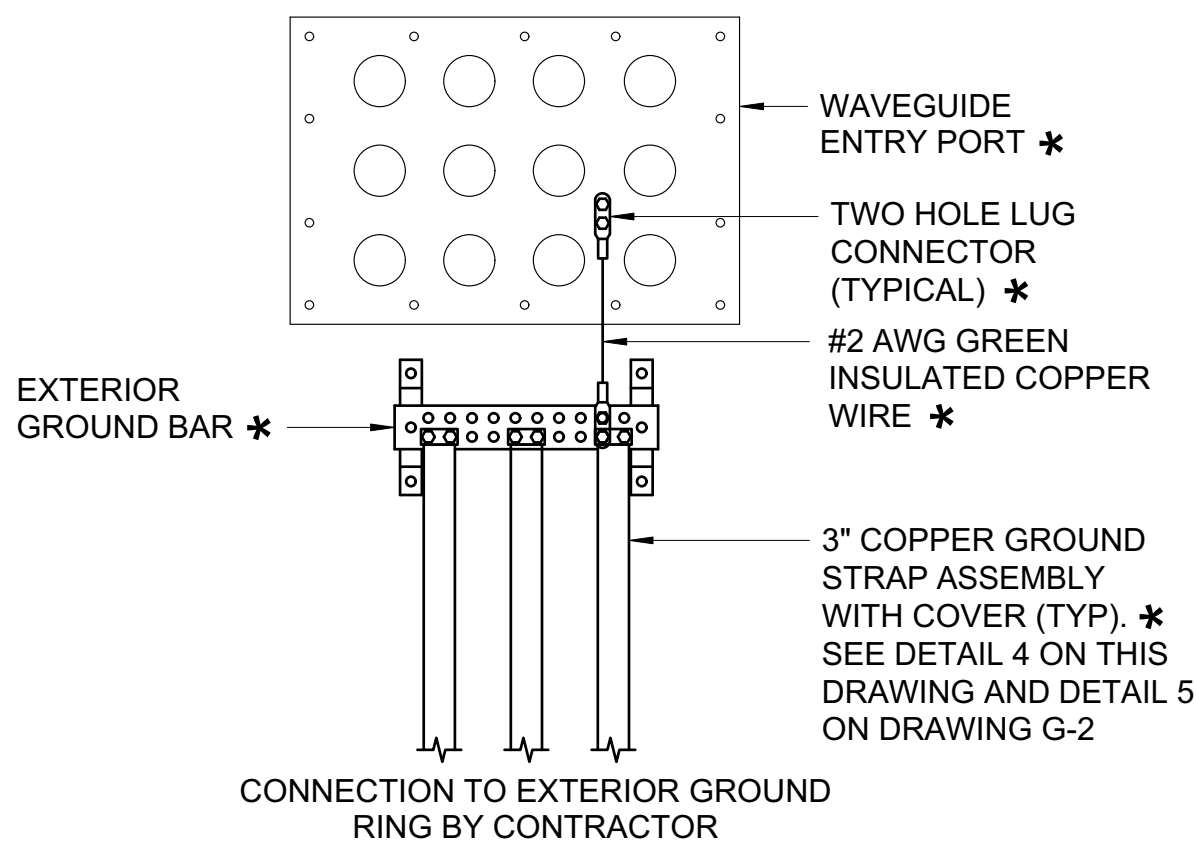


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHERPROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

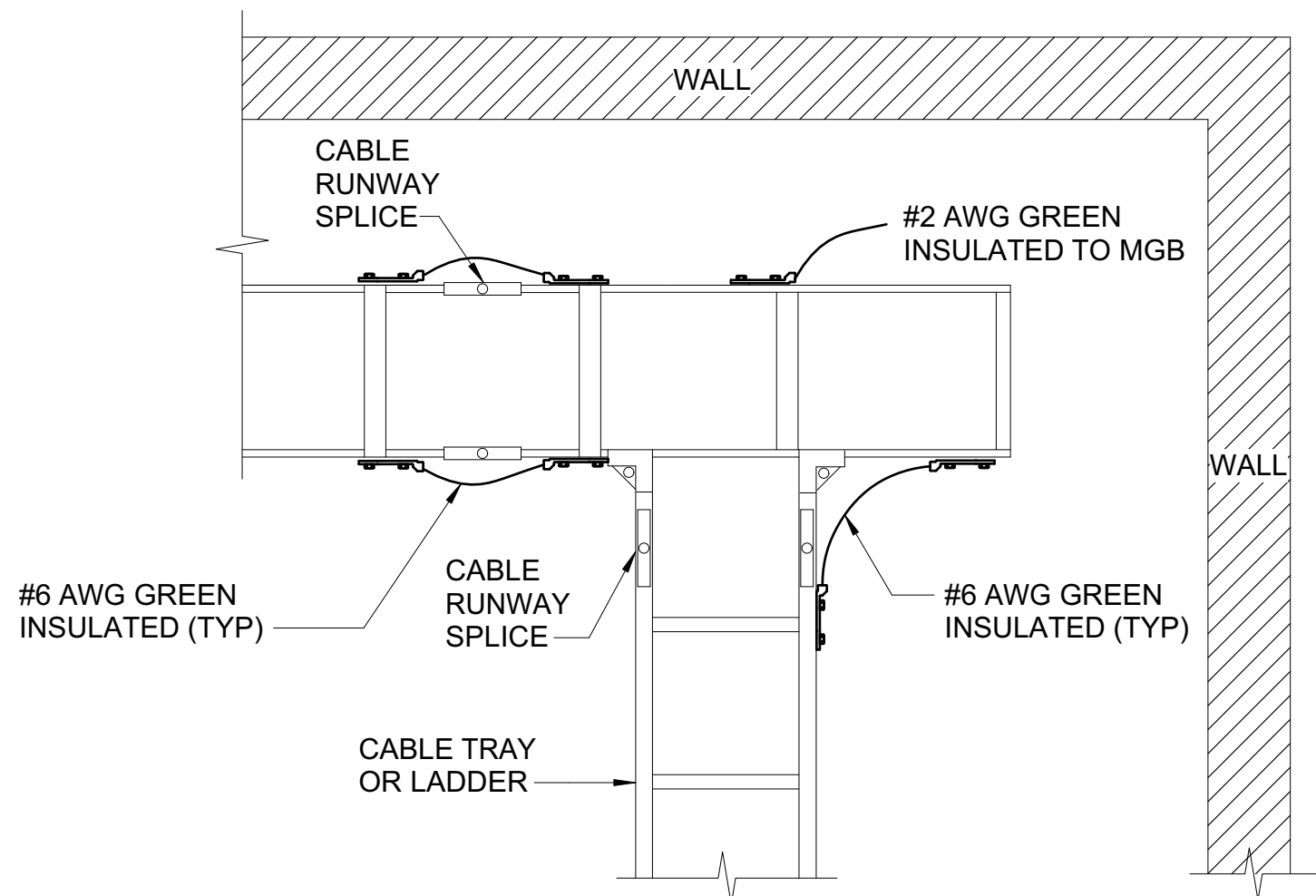
CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE

DETAIL 5
SCALE: NONE



WAVEGUIDE ENTRY PORT GROUND DETAIL

DETAIL 2
SCALE: NONE

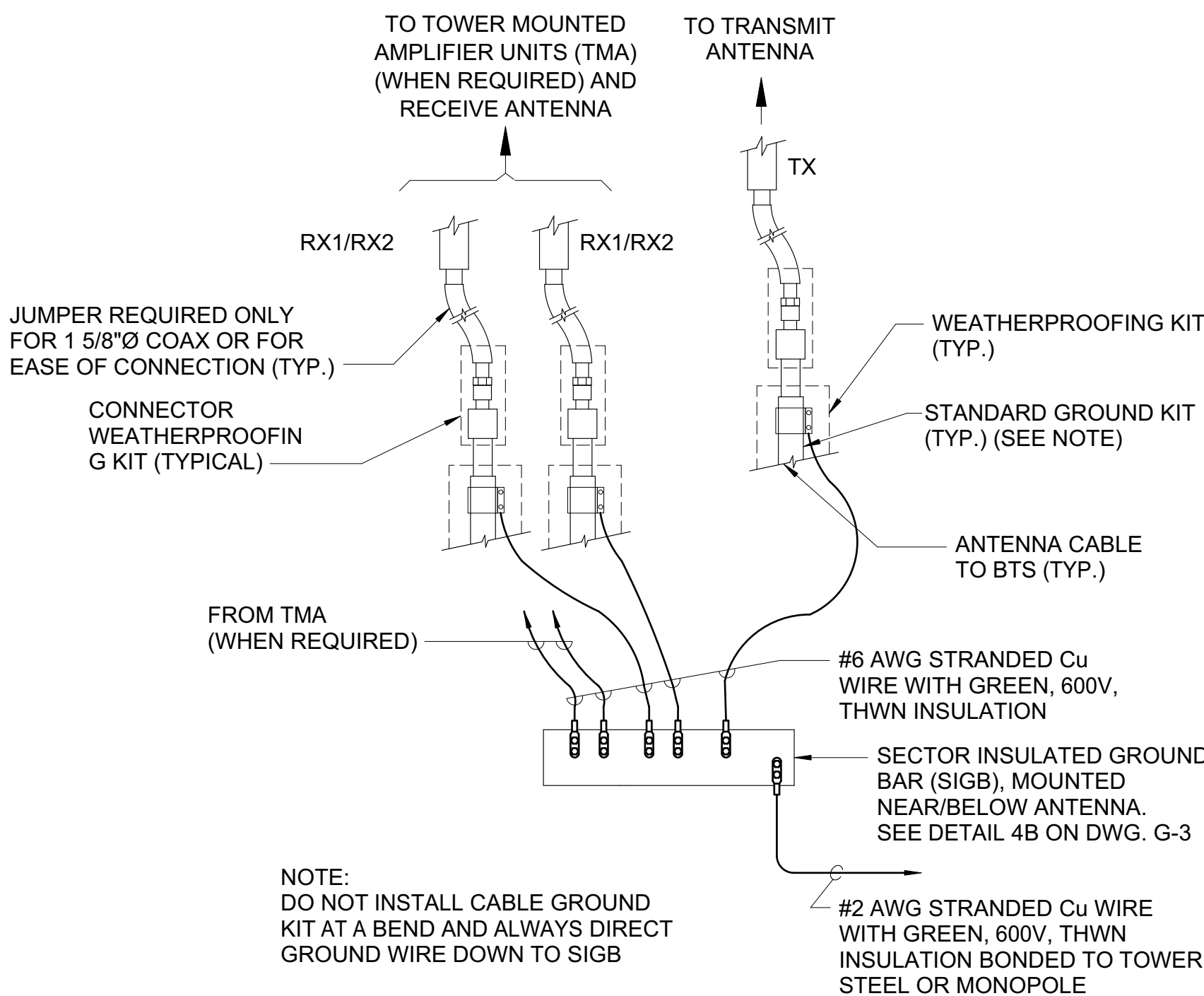


OVERHEAD VIEW - BONDING DETAIL

NOTE:

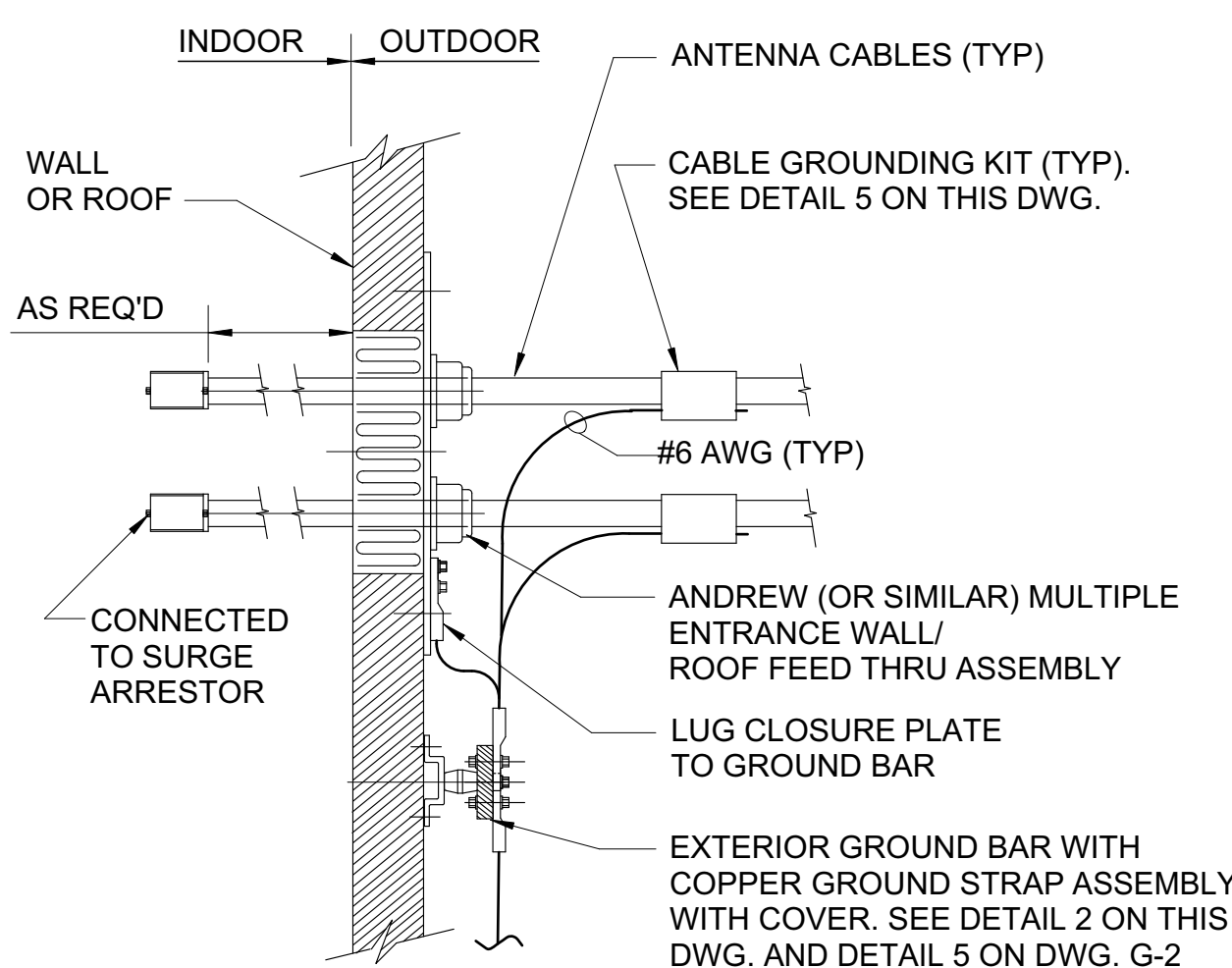
STRAPS (ON STRAIGHT RUNS) SHOULD BE AS SHORT AND STRAIGHT AS POSSIBLE.

CABLE RUNWAY BONDING DETAIL 6
SCALE: NONE



CONNECTION OF GROUND WIRE TO GROUNDING BAR (SIGB)

DETAIL 3
SCALE: NONE



DETAIL 4
SCALE: NONE

NOTE:

ALL GROUND WIRES THAT TRANSITION FROM ABOVE GRADE TO BELOW GRADE SHALL BE ROUTED IN A 3/4" PVC CONDUIT (NOT SHOWN FOR CLARITY) FROM THE CONNECTION TO A MINIMUM OF 18" BELOW GRADE. BOTH ENDS OF THE PVC CONDUIT SHALL BE SEALED WITH SILICONE CAULK.

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A	03/18/21	FOR APPROVAL	GJB



MOTOROLA
SOLUTIONS



6615 TOWPATH ROAD, SUITE 200
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5130 WEST 6TH STREET
CLEVELAND, OH. 44141

HARPER
ENGINEERING, INC.
TELECOM GROUP
815 Superior Ave. Suite 1514
Cleveland, OH. 44114
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Fax: (216) 344-3856

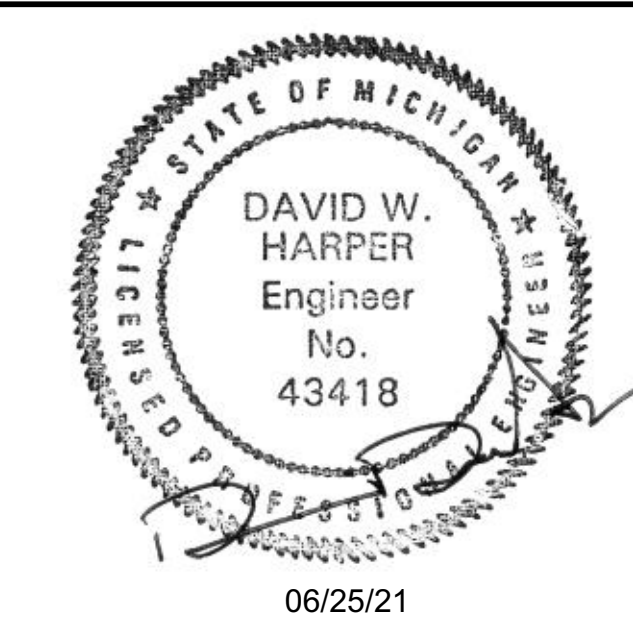
SCALE: AS NOTED
DRAWN BY: GJB
CHECKED BY: GJB
DATE: 03/02/21
FILE: 20-216-005

GROUNDING DETAILS

5111 OSHTIMO
N. 6TH STREET
KALAMAZOO, MI 49009

Drawing / Rev.

G-4/1



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GENERAL NOTES:

1. GENERAL

1.1. SUMMARY OF WORK

A. THE WORK MAY CONSIST OF BUT NOT BE LIMITED TO, THE INSTALLATION OF EQUIPMENT CABINETS, ANTENNAS ,AND LINES. FUEL TANKS, GROUNDING, ELECTRICAL WORK, ETC., ASSOCIATED WITH THE MOTOROLA EQUIPMENT AS INDICATED ON DRAWINGS AND AS SPECIFIED HEREIN. CONTRACTOR SHALL SUPPLY ALL PERMANENT MATERIALS/EQUIPMENT REQUIRED AND ALL LABOR, EQUIPMENT, TOOLS, UTILITIES, MINOR HARDWARE/MATERIALS, TRANSPORTATION AND FACILITIES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF SERVICES AND INSTALL WORK, WHETHER TEMPORARY OR PERMANENT. CONTRACTOR SHALL BE OBLIGATED TO PERFORM ALL THE WORK OUTLINED IN THESE DRAWINGS IN ACCORDANCE WITH THE CONTRACT AGREEMENT, FEDERAL REGULATIONS, STATE REQUIREMENTS, LOCAL CODES, COMMERCIAL/INDUSTRY STANDARDS, DETAILED SCOPE OF WORK AND THE DOCUMENTS IDENTIFIED BELOW. IN CASE OF A CONFLICT BETWEEN THE ABOVE LISTED DOCUMENTS REGARDING STANDARDS OF WORK, THE MORE STRINGENT CRITERIA SHALL APPLY. ANY ADDITIONAL COSTS OR DELAYS RESULTING FROM CORRECTION OF THE WORK TO COMPLY WITH THE ABOVE REQUIREMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

1.2. SITE VISIT

CONTRACTOR SHALL VISIT THIS SITE AND FAMILIARIZE ITSELF WITH THE SCOPE OF WORK REQUIRED PER THE DRAWINGS AND ALL LOCAL CONDITIONS AND LAWS AND REGULATIONS THAT MAY IN ANY MANNER AFFECT THE PRICE, PROGRESS AND PERFORMANCE OF WORK, INCLUDING ANY COSTS ASSOCIATED WITH IT. THE CONTRACTOR SHALL ALSO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND NOTIFY THE MOTOROLA REPRESENTATIVE OF ANY DISCREPANCIES OR INTERFERENCES WHICH AFFECT THE WORK OF THIS CONTRACT.

1.3. STANDARDS AND CODES

THE FOLLOWING DOCUMENTS (ATEST REVISION) SHALL BE CONSIDERED TO BE SPECIFICATION AND ARE INCORPORATED HEREIN BY REFERENCE. IN THE EVENT OF CONFLICT BETWEEN THE REQUIREMENTS OF THIS SPECIFICATION AND THE REQUIREMENTS OF THE REFERENCED DOCUMENTS, THE STRICTER SPECIFICATION SHALL GOVERN. WHERE PROVISIONS OF THE CODES AND STANDARDS ARE IN CONFLICT WITH THE BUILDING CODE IN FORCE FOR THIS PROJECT, THE BUILDING CODE SHALL GOVERN.

A. AMERICAN CONCRETE INSTITUTE:

ACI 301 – "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
ACI 305 "HOT WEATHER CONCRETING".
ACI 306 "COLD WEATHER CONCRETING".
ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
ACI 614 "RECOMMENDED PRACTICE FOR MEASURING, MIXING AND PLACING CONCRETE".
ACI 311 "RECOMMENDED PRACTICE FOR CONCRETE INSPECTION".
ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
ACI 613 "RECOMMENDED PRACTICE FOR SELECTING PROPORTIONS FOR CONCRETE".

B. AMERICAN NATIONAL STANDARDS INSTITUTE:

ANSI Z359 REQUIREMENTS FOR PERSONAL FALL ARREST SYSTEMS, SUBSYSTEMS AND COMPONENTS
ANSI Z87.1 OCCUPATIONAL AND EDUCATIONAL EYE AND FACE PROTECTION
ANSI Z89.1 PROTECTIVE HEADWEAR FOR INDUSTRIAL WORKERS – REQUIREMENTS
ANSI/IEEE C95.1 SAFETY LEVELS WITH RESPECT TO HUMAN EXPOSURE TO RADIO FREQUENCY ENERGY
ANSI/TIA/EIA STANDARD 222: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.

C. AMERICAN INSTITUTE OF STEEL CONSTRUCTION⁷

AISC MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION: LATEST EDITION

D. AMERICAN SOCIETY FOR TESTING AND MATERIALS:

ASTM A615 - "SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT".
ASTM C94-80 - "SPECIFICATION FOR READY-MIX CONCRETE".
ASTM C39-77 - "SPECIFICATION FOR TEST FOR COMPREHENSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMEN".
ASTM 33 - "SPECIFICATION FOR CONCRETE AGGREGATES".
ASTM C150 - "SPECIFICATION FOR PORTLAND CEMENT".
ASTM C172 - "SAMPLING FRESH CONCRETE".
ASTM C143 - "SLUMP OF PORTLAND CEMENT CONCRETE".
ASTM D698-91 - "TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT".
ASTM D1556-84 - "DENSITY OF SOIL IN PLACE BY THE SAND-CONE METHOD".
ASTM D1557 - "TEST FOR MOISTURE-UNIT WEIGHT RELATIONS OF SOILS AND SOIL-AGGREGATE MIXTURES USING 10-LB. HAMMER AND 18-IN. DROP". (PROCEDURE C)
ASTM D2487 - "STANDARD CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)".
ASTM D2922 - "DENSITY OF SOIL AND SOIL AGGREGATE IN PLACE BY NUCLEAR METHODS SHALLOW DEPTH".
ASTM D2940 - "STANDARD SPECIFICATION FOR GRADED AGGREGATE MATERIAL FOR BASES OR SUB-BASES FOR HIGHWAYS OR AIRPORTS".

E. AMERICAN WELDING SOCIETY:

AWS D12.1 – "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL, METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION".

F. CONCRETE REINFORCING STEEL INSTITUTE:

"MANUAL OF STANDARD PRACTICE"

G. FEDERAL AVIATION ADMINISTRATION:

DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR, AC 70/7460-1L: OBSTRUCTION MARKING AND LIGHTING.

DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR, 150-5345-43, FAA/DOD SPECIFICATION L-856: HIGH INTENSITY OBSTRUCTION LIGHTING SYSTEMS.

H. FEDERAL COMMUNICATIONS COMMISSION:

FEDERAL COMMUNICATIONS COMMISSION – RULES AND REGULATIONS PART 17, CONSTRUCTION, MARKING, AND LIGHTING OF ANTENNA STRUCTURES.

I. STRUCTURAL STEEL PAINTING COUNCIL:

SSPC-SP-1-63: SPECIFICATION FOR PAINTING STEEL STRUCTURES.

J. MOTOROLA R56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES (LATEST REVISION).

K. MOTOROLA'S CIVIL WORKS BID SPECIFICATIONS

L. NATIONAL FIRE PROTECTION ASSOCIATION:

NFPA 1 – FIRE PREVENTION CODE
NFPA 54 – NATURAL GAS FUEL CODE
NFPA 58 – LP GAS CODE
NFPA 70 – NATIONAL ELECTRICAL CODE
NFPA 101 – LIFE SAFETY CODE
NFPA 110 – EMERGENCY/STANDBY POWER SYSTEMS
NFPA 111 – STANDARD ON STORED ELECTRICAL ENERGY, EMERGENCY AND STANDBY POWER SYSTEMS
NFPA 780 – STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS

M. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:

OSHA 1926
OSHA DIRECTIVES CPL 2-1.29 - INTERIM INSPECTION PROCEDURES DURING COMMUNICATION TOWER CONSTRUCTION
ACTIVITIES.

N. MICHIGAN BUILDING CODE LATEST REVISION.

1.4. NOTICE TO PROCEED

WHEN THE SITE IS READY FOR INSTALLATION, MOTOROLA SHALL ISSUE A NOTICE TO PROCEED TO THE CONTRACTOR. UPON RECEIPT OF THE NOTICE OF PROCEED, THE CONTRACTOR SHALL SUBMIT TO MOTOROLA A SCHEDULE REFLECTING THE WORK PLAN. THE CONTRACTOR SHALL ADVISE THE MOTOROLA REPRESENTATIVE IMMEDIATELY OF ANY SCHEDULE CHANGES. THE CONTRACTOR SHALL ADJUST HIS WORK, AS REQUIRED, TO COORDINATE WITH THE MOTOROLA INSTALLATION TEAM IF THE SCHEDULES OVERLAP.

1.5. MOTOROLA REPRESENTATIVE

MOTOROLA SHALL DESIGNATE A REPRESENTATIVE. THIS PERSON IS THE ONLY CONTACT POINT AUTHORIZED TO MAKE ANY CHANGES TO THE CONTRACT PROVISIONS OR THE PLANS AND SPECIFICATIONS. ANY CHANGES MADE BY THE CONTRACTOR ARE AT THE CONTRACTOR'S RESPONSIBILITY AND RISK.

1.6. CONTRACTORS FIELD REPRESENTATIVE

CONTRACTOR SHALL ASSIGN A FIELD REPRESENTATIVE WHO IS FAMILIAR WITH THESE SPECIFICATIONS AND WILL REPRESENT THE CONTRACTOR AND HAVE THE AUTHORITY TO ACT FOR THE CONTRACTOR AND SUPERVISE ALL CONSTRUCTION ACTIVITIES. THE REPRESENTATIVE SHALL BE AVAILABLE WHEN CONSTRUCTION ACTIVITIES BEGIN. THE FIELD REPRESENTATIVE SHALL BE THE PRIMARY POINT OF CONTACT FOR MOTOROLA DURING THE CONSTRUCTION PHASE OF THE WORK.

1.7. PROJECT MEETINGS

THE CONTRACTOR SHALL CONDUCT THE INITIAL (PRE-CONSTRUCTION) MEETING (INCLUDING ALL SUB-CONTRACTORS) WITH THE MOTOROLA REPRESENTATIVE WITHIN TWO WEEKS AFTER AWARD OF THE CONTRACT. SUBSEQUENTLY, THE CONTRACTOR SHALL PROVIDE PROGRESS SCHEDULE UPDATES TO MOTOROLA ON A WEEKLY BASIS.

1.8. MATERIALS

CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AS REQUIRED FOR COMPLETE SYSTEMS INCLUDING: ALL PARTS OBVIOUSLY OR REASONABLY INCIDENTAL TO A COMPLETE INSTALLATION, WHETHER SPECIFICALLY INDICATED OR NOT. ALL SYSTEMS SHALL BE COMPLETELY ASSEMBLED, TESTED, ADJUSTED, AND DEMONSTRATED TO BE READY FOR OPERATION PRIOR TO MOTOROLA'S ACCEPTANCE.

MATERIALS AND WORKMANSHIP SHALL BE THE BEST OF THEIR RESPECTIVE KINDS (AS DEFINED BY INDUSTRY STANDARDS), FREE OF DEFECTS AND ALL MATERIALS SHALL BE NEW AND UNUSED IN ALL CASES, UNLESS OTHERWISE SPECIFIED. WHERE THE NAME OF A CONCERN OR MANUFACTURER IS MENTIONED ON DRAWINGS OR IN SPECIFICATIONS IN REFERENCE TO A REQUIRED SERVICE OR PRODUCT, AND NO QUALIFICATIONS OR SPECIFICATION OF SUCH IS INCLUDED, THEN THE MATERIAL SPECIFICATIONS, DETAILS OF MANUFACTURE, FINISH, ETC., SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICE, DIRECTION OR SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

1.9. VERIFICATION OF EXISTING CONDITIONS

BEFORE STARTING ANY OPERATION, THE CONTRACTOR SHALL EXAMINE EXISTING WORK, OR WORK PERFORMED BY OTHERS, TO WHICH ITS WORK IS TO ADJOIN OR BE APPLIED AND SHALL REPORT TO MOTOROLA PROJECT MANAGER ANY CONDITIONS THAT WILL PREVENT SATISFACTORY ACCOMPLISHMENT OF HIS WORK. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF ALL SURVEY DATA AS INDICATED IN THE PLANS AND SPECIFICATIONS AND/OR AS PROVIDED BY MOTOROLA. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES, ERRORS, OR OMISSIONS IN THE SURVEY DATA, HE SHALL IMMEDIATELY NOTIFY THE MOTOROLA REPRESENTATIVE IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED. FAILURE TO NOTIFY THE MOTOROLA REPRESENTATIVE OF DEFICIENCIES, ERRORS OR FAULTS PRIOR TO COMMENCEMENT OF WORK SHALL CONSTITUTE ACCEPTANCE THEREOF AND WAIVER OF ANY CLAIMS OF UNSUITABILITY, ERRORS, OMISSIONS OR INACCURACIES.

THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PRESERVING ALL ESTABLISHED SURVEY CONTROL POINTS. IF THE CONTRACTOR OR ANY OF HIS SUB-CONTRACTORS MOVE OR DESTROY ANY SURVEY CONTROL POINTS, THE COST INCURRED BY THE LAND OWNER OR MOTOROLA TO RE-ESTABLISH THEM WILL BE BORNE BY THE CONTRACTOR.

[illegible]

1.10. PERMITS

THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR SHALL MEET ALL OF THE REGULATORY REQUIREMENTS OF THE JURISDICTION GOVERNING CONSTRUCTION.

1.11. SITE INSPECTION

THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR ARRANGING WITH MOTOROLA FOR AN INSPECTION PRIOR TO COVERING UP ALL WORK THAT WILL BE COVERED IN FINISHED CONDITION. IT IS THE SITE GENERAL CONTRACTOR'S RESPONSIBILITY TO MANAGE THE SEQUENCE OF WORK AND REQUEST THE INSPECTIONS IN A TIMELY MANNER. THE SITE GENERAL CONTRACTOR SHALL NOT REQUEST AN INSPECTION UNLESS ALL OF THE RELATED WORK HAS BEEN COMPLETED. WORK SHALL NOT PROCEED TO THE NEXT STEP UNTIL THE PREVIOUS STEP HAS BEEN INSPECTED AND APPROVED BY THE LOCAL INSPECTORS AND THE MOTOROLA REPRESENTATIVE. THE PRESENCE OF THE OWNER OR MOTOROLA REPRESENTATIVE ON THE JOB SITE IN NO WAY RELIEVES THE SITE GENERAL CONTRACTOR OF THE ASSOCIATED RESPONSIBILITIES OF THE JOB. ANY WORK WHICH DOES NOT MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE CORRECTED OR REMOVED SOLELY AT THE SITE GENERAL CONTRACTOR'S EXPENSE.

THE FOLLOWING INFORMATION IS INCLUDED AS A GUIDE TO THE CONTRACTOR TO ASSIST IN DETERMINING THE TYPE AND FREQUENCY OF INSPECTIONS. THE LISTED INSPECTIONS REPRESENT THOSE REQUIRED FOR SMALL OR SIMPLE PROJECTS. LARGE OR COMPLEX PROJECTS MAY REQUIRE ADDITIONAL INSPECTIONS DEPENDING ON THE SEQUENCE OF WORK.

FOUNDATION EXCAVATIONS AND REBAR: TO BE MADE AFTER TRENCHES ARE EXCAVATED AND FORMS ERECTED, REINFORCEMENT PLACED, COMPACTION TESTED, SOIL TREATED, VAPOR BARRIER PLACED, AND ESSENTIALLY READY FOR CONCRETE PLACEMENT.

GROUNDING: TO BE MADE AFTER THE BELOW GROUND CADWELD CONNECTIONS HAVE BEEN COMPLETED, PRIOR TO COVERING UP THE TRENCHES.

ELECTRICAL WORK WITHIN WALLS: TO BE MADE AFTER THE ROOF, FRAMING, FIRE BLOCKING AND BRACING IS IN PLACE PRIOR TO THE INSTALLATION OF INSULATION OR WALL/CEILING MEMBRANES.

AS A GENERAL RULE, THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO MOTOROLA FOR INSPECTION OF ALL WORK PRIOR TO CONCEALMENT. THE CONTRACTOR HAS RESPONSIBILITIES RELATIVE TO ALL TYPES OF INSPECTIONS AND IS RESPONSIBLE FOR CONTACTING ALL OF THE INSPECTING ENTITIES TO DETERMINE HIS RESPONSIBILITIES. ALL OF THESE INSPECTING ENTITIES HAVE UNIQUE AND SEPARATE RESPONSIBILITIES. ONE INSPECTION FROM AN ENTITY WILL NOT SUBSTITUTE FOR AN INSPECTION FROM ANOTHER ENTITY.

1.12. SAFETY

THE CONTRACTOR, HIS EMPLOYEES, ANY SUB-CONTRACTORS, VENDORS, THEIR RESPECTIVE EMPLOYEES AND CONTRACTOR'S VISITORS SHALL COMPLY WITH ALL SAFETY STANDARDS, ACCIDENT PREVENTION REGULATIONS AND ENVIRONMENTAL REGULATIONS PROMULGATED BY FEDERAL, STATE OR LOCAL AUTHORITIES HAVING JURISDICTION AND SHALL AT ALL TIMES CONDUCT ALL OPERATIONS UNDER THE CONTRACT IN A MANNER TO AVOID THE RISK OF BODILY HARM TO ANY PERSONS AND THE RISK OF DAMAGE TO ANY PROPERTY, EQUIPMENT OR MATERIAL SUCH PARTIES SHALL ALSO COMPLY WITH ANY SAFETY PROGRAMS AND/OR RULES PROMULGATED BY OWNER AND/OR MOTOROLA.

1.13. ELECTRO MAGNETIC EMISSIONS

THE CONTRACTOR SHALL ACKNOWLEDGE ALL OR PORTIONS OF THE WORK MAY INVOLVE POSSIBLE EXPOSURE OF CONTRACTOR, SUB-CONTRACTORS, AND THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES AND OTHER VISITORS TO THE JOBSITE AND/OR MOTOROLA PREMISES TO ELECTRO-MAGNETIC ENERGY ("EME") WHILE PERFORMING WORK UNDER THIS CONTRACT, ESPECIALLY IF WORK IS PERFORMED ON EXISTING ANTENNA TOWERS WHERE ANTENNAS ARE LOCATED. THE CONTRACTOR REPRESENTS THAT CONTRACTOR, SUBCONTRACTORS, AND ALL OF THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES, AND OTHER AUTHORIZED REPRESENTATIVES WHO ARE PERFORMING SERVICES UNDER THIS AGREEMENT WILL COMPLY WITH ALL ANSI AND ANY OTHER APPLICABLE EME STANDARDS, RULES OR REGULATIONS, INCLUDING, BUT NOT LIMITED TO THOSE RULES OR REGULATIONS IMPOSED OR SUGGESTED BY MOTOROLA, IF ANY.

THE CONTRACTOR SHALL ADHERE TO ALL OSHA RULES, REGULATIONS AND ADOPTED POLICIES. ALL CONTRACTOR PERSONNEL SHALL HAVE UNDERGONE ELECTROMAGNETIC ENERGY (EME) TRAINING FOR PERSONNEL WORKING IN THE VICINITY OF ACTIVE ANTENNAS. AS SUCH IT IS RECOMMENDED THAT RF MONITORS BE USED BY THE TOWER PERSONNEL TO MONITOR EXPOSURE LEVELS. IF EME LEVELS AT THE SITE EXCEED THE MAXIMUM PERMISSIBLE EXPOSURE LIMITS, THE CONTRACTOR SHALL COORDINATE WITH THE INDIVIDUALS RESPONSIBLE FOR USE OF THE TRANSMITTER TO MAKE SURE THAT THE EQUIPMENT IS DEACTIVATED BEFORE WORK CAN BE RESUMED, WITHOUT CAUSING A SERIOUS DISRUPTION OF THE SERVICE.

1.14. SITE CLEANUP

THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE AT ALL TIMES DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, VEGETATION, AND RUBBISH, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. WHENEVER THE WORK-SITE IS LEFT UNATTENDED, THE CONTRACTOR SHALL BLOCK THE OPENING WITH WARNING TAPE TO DISCOURAGE TRESPASSING. THE PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE AT THE CONCLUSION OF SITE WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LANDSCAPE GRADING AND SEEDING OF THE DISTURBED SOIL. THE CONTRACTOR SHALL USE LOCAL GRASS SEED TO STABILIZE SOIL AND SHALL COVER DISTURBED AREAS WITH HAY MULCH TO REDUCE RUNOFF OF SEDIMENT TO DOWNSTREAM AREAS. THE CONTRACTOR SHALL RESTORE THE SITE TO ITS ORIGINAL CONDITION. ALL SLOPES AND DISTURBED AREAS NOT RECEIVING AGGREGATE SURFACING ARE TO BE PREPARED AND BROADCAST SEEDING AND FERTILIZED FOR EROSION PROTECTION. SEEDING FOR AREAS DISTURBED SHALL BE ESTABLISHED SEASONALLY AS REQUIRED BY LOCAL CODES.

THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE OR INTERRUPTION OF EXISTING UNDERGROUND OR OVERHEAD ELECTRIC SERVICES, UNDERGROUND GROUNDING AND FUEL LINES, EQUIPMENT AND BUILDINGS ON THE SITE, PLUS OFF SITE SERVICES, BURIED OR OVERHEAD, SURROUNDING THE EXISTING OR EXPANDED COMPOUND. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY OWNER(S) AND MOTOROLA AT NO ADDITIONAL COST TO THE PROPERTY OWNER OR MOTOROLA. BURNING WILL NOT BE PERMITTED.

1.15. FACILITY STARTUP & COMMISSIONING

THE CONTRACTOR AND/OR SUB CONTRACTORS SHALL DEMONSTRATE TO MOTOROLA THAT ALL SYSTEMS AND SUB-SYSTEMS INSTALLED UNDER THIS CONTRACT, OPERATE PROPERLY PRIOR TO THE FINAL ACCEPTANCE INSPECTION AND PROVIDE THE OPERATIONS AND MAINTENANCE MANUALS AT THIS TIME.

1.16. SHOP DRAWINGS/AS-BUILT DRAWINGS

THE MODIFICATIONS TO THE DRAWINGS AFTER CONSTRUCTION START SHALL RECEIVE ENGINEERING AND MOTOROLA APPROVAL PRIOR TO ANY CHANGES BEING MADE. THE ENGINEER OF RECORD SHALL MAKE THE REQUIRED CHANGE AND WILL SUBMIT CHANGES TO MOTOROLA AND ANY JURISDICTION HAVING AUTHORITY.

THE CONTRACTOR SHALL KEEP UP-TO-DATE MARKED-UP PRINTS OF THE PROJECT DRAWINGS. UPON COMPLETION OF WORK AT THE SITE, THE CONTRACTOR SHALL REVIEW THE COMPLETED AS-BUILT DRAWINGS, AND ASCERTAIN THAT ALL DATA FURNISHED ON THE DRAWINGS IS ACCURATE AND TRULY REPRESENTS THE WORK IS ACTUALLY INSTALLED. MARKINGS INDICATING CHANGES TO THE DRAWINGS SHALL BE RED OR GREEN AND CLEARLY VISIBLE. TWO (2) SETS OF "AS-BUILT" DRAWINGS SHALL BE FURNISHED TO THE MOTOROLA REPRESENTATIVE WITHIN 5 DAYS OF THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL ALSO SHOW THE FOLLOWING:

MODIFICATIONS TO SITE LAYOUT.
GROUNDING SYSTEM LAYOUT.
UNDERGROUND FUEL LINE RUN.
UNDERGROUND TELCO CABLE RUN.
UNDERGROUND ELECTRICAL RUN.

WHERE THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE SITE EQUIPMENT ROOM, ISOLATION TRANSFORMER, GENERATOR, ETC.) THAT REQUIRES PERIODIC MAINTENANCE, THE CONTRACTOR SHALL INCLUDE ALL OPERATION AND MAINTENANCE MANUALS AND ALL AS-BUILT DRAWINGS WHICH FULLY DESCRIBE THE ACTUAL INSTALLED EQUIPMENT.

1.17. TEST PROCEDURES AND RESULTS

CONTRACTOR WILL CONTRACT WITH A THIRD PARTY "INDEPENDENT" TESTING FIRM TO PERFORM & SUBMIT THE RESULTS OF A TESTS REQUIRED BY THE PROJECT SPECIFICATIONS AND DRAWINGS THAT FALL WITHIN THE SCOPE OF WORK. THESE RESULTS SHALL BE SUBMITTED TO THE DESIGNATED MOTOROLA REPRESENTATIVE. IN GENERAL, THE "INDEPENDENT" TESTING FIRM SHALL SUBMIT THE FOLLOWING TEST RESULTS:

MIX DESIGN/CONCRETE COMPRESSION TEST FOR ALL CONCRETE WORK.
FREQUENCY DOMAIN REFLECTOMETER (FDR) WITH PRECISION LOAD / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE
INSTALLATION WORK. ALL SWEEP AND TEST MUST BE WITHIN THE GUIDELINES OUTLINED IN MOTOROLA MOP.
FUEL LINE LEAKAGE TEST FOR FUEL TANK AND PIPING INSTALLATION WORK.
SLUMP TEST FOR CONCRETE WORK.
GROUNDING RESISTANCE TEST FOR GROUNDING WORK.
STRUCTURAL STEEL FABRICATION DRAWINGS.
STRUCTURAL (TOWER) STEEL MATERIALS, FINISH, ASSEMBLY, AND PROPER ASSEMBLY AND INSTALLATION OF ANTENNAS AND
TRANSMISSION LINES. ("THIRD PARTY CLIMB" AND REPORT INCLUDING PHOTO DOCUMENTATION)
ANY OTHER TEST THAT MAY BE REQUIRED.

1.18. CONTRACT CLOSEOUT – IN ACCORDANCE WITH MOTOROLA'S SUBCONTRACT AGREEMENT TERMS AND CONDITIONS

THE MOTOROLA REPRESENTATIVE WILL PROVIDE A CERTIFICATE OF COMPLETION AND APPROVE FINAL PAYMENT WHEN ALL PUNCH-LIST ITEMS HAVE BEEN CORRECTED, RECORD DRAWINGS SUBMITTED, AND ALL SYSTEMS ARE ACCEPTABLE. THE CONTRACTOR MUST ALSO RECEIVE A CERTIFICATE OF COMPLETION FROM THE MUNICIPALITY. AFTER FINAL PAYMENT, CONTRACTOR WILL SIGN A RELEASE OF LIEN.

1.19. WARRANTY

ALL WORK PERFORMED BY THE CONTRACTOR IN COMPLETING THE SCOPE IDENTIFIED ON THE DRAWINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION OF THE PROJECT. THIS GUARANTEE SHALL COVER ALL MATERIALS, EQUIPMENT OR WORKMANSHIP WHICH IN THE OPINION OF MOTOROLA IS RENDERED DEFECTIVE OR INFERIOR OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT DURING THE GUARANTEE PERIOD. IF, WITHIN THE GUARANTEE PERIOD, REPAIRS OR CHANGES ARE REQUIRED TO CORRECT THE GUARANTEE WORK. THEN UPON RECEIPT OF NOTICE, THE CONTRACTOR SHALL PROMPTLY AND WITHOUT EXPENSE TO MOTOROLA OR THE OWNER, PROCEED TO

PLACE IN SATISFACTORY CONDITION ALL OF SUCH GUARANTEED WORK AND CORRECT ALL DEFECTS THEREIN.
MAKE GOOD ALL DAMAGES TO THE STRUCTURE OR SITE OR EQUIPMENT OR CONTENTS THEREOF, WHICH, IN THE OPINION OF THE MOTOROLA REPRESENTATIVE, IS THE RESULT OF THE USE OF MATERIALS, EQUIPMENT, OR WORKMANSHIP WHICH ARE INFERIOR, DEFECTIVE, OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT;
MAKE GOOD ANY WORK, MATERIALS OR EQUIPMENT AND ADJACENT STRUCTURES DISTURBED IN FULFILLING THE GUARANTEE.

1.20. RELATED DOCUMENTS

CONTRACTOR SHALL BECOME FAMILIAR WITH THE INFORMATION AND REQUIREMENTS CONTAINED
IN THE FOLLOWING DOCUMENTS RELATED TO THE PROJECT:

A. TOWER AND TOWER FOUNDATION DRAWINGS BY THE MANUFACTURER.

B. R-56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES BY MOTOROLA.

C. ALL OTHER PERTINENT DOCUMENTS.

ABBREVIATIONS:

ADJ AFF APPROX ASTM	AIR CONDITIONING ADJUSTABLE ABOVE FINISH FLOOR APPROXIMATELY AMERICAN SOCIETY FOR TESTING AND MATERIALS AMERICAN WIRE GAUGE	N N/A NIC NTS	NORTH NOT APPLICABLE NOT IN CONTRACT NOT TO SCALE
AWG		O/C,O.C. OD OPG OPP	ON CENTER OUTSIDE DIAMETER OPENING OPPOSITE
BLDG BLK BMR B/S	BUILDING BLOCK BASE MOBILE RADIO BUILDING STANDARD	PLYWD PR PROJ PROP PT	PLYWOOD PAIR PROJECT PROPERTY PRESSURE TREATED
CLG CLR CND,C CONC CONST CONT	CEILING CLEAR CONDUIT CONCRETE CONSTRUCTION CONTINUOUS	REQ'D RM RO	REQUIRED ROOM ROUGH OPENING
DBL DIA, Ø DIAG DIM DN DTL,DETL DWG	DOUBLE DIAMETER DIAGONAL DIMENSION DOWN DETAIL DRAWING	S SHT SIM SPEC SQ SS STL STRUCT SUSP SV	SOUTH SHEET SIMILAR SPECIFICATION SQUARE STAINLESS STEEL STEEL STRUCTURAL SUSPENDED SHEET VINYL
E EA ELE,ELEV ELECT EQ EQUIP EW EXIST EXT	EAST EACH ELEVATION ELECTRICAL EQUAL EQUIPMENT EACH WAY EXISTING EXTERIOR	THRU TNND TOC TOM TYP	THROUGH TINNED TOP OF CONCRETE TOP OF MASONRY TYPICAL
FIN FLUOR FLR FT	FINISH FLUORESCENT FLOOR FOOT	UBC UNO	UNIFORM BUILDING CODE UNLESS NOTED OTHERWISE
GA GALV GC GRND GWB GYP BD	GAUGE GALVANIZE(D) GENERAL CONTRACTOR GROUND GYPSUM WALL BOARD GYPSUM BOARD	VERT VF VIF W W/ WIN W/O WP	VERTICAL VERIFY IN FIELD VINYL TILE WEST WITH WINDOW WITHOUT WATERPROOF
HARD'WD HORIZ HR HT HVAC	HARDWOOD HORIZONTAL HOUR HEIGHT HEATING, VENTING & AIR CONDITIONING	⌘ & CL PL @ #	ANGLE AND CENTER LINE PROPERTY LINE AT NUMBER
ID IN INFO INSUL. INT	INSIDE DIA. INCH INFORMATION INSULATION INTERIOR		
LB(S)	POUND(S)		
MAX MECH MET,MTL MFR MGR MIN MISC	MAXIMUM MECHANICAL METAL MANUFACTURER MANAGER MINIMUM MISCELLANEOUS		

SYMBOLS:

	REVISION		DETAIL REFERENCE
	KEY NOTE		ELEVATION REFERENCE
	ROOM NUMBER		SECTION REFERENCE
	KEYED NOTE		

[illegible]

EASEMENT FOR ELECTRIC FACILITIES

Master Tract# ROW000916069013
SAP# 1057392836
Design# 11295501
Agreement# MI00000058663

CITY OF KALAMAZOO, a Michigan municipal corporation, whose address is 241 West South Street, Kalamazoo, Michigan 49007 (hereinafter "Owner")

for \$1.00 and other good and valuable consideration [exempt from real estate transfer tax pursuant to MCLA 207.505(f) and from State real estate transfer tax pursuant to MCLA 207.526(f)] grants and warrants to

CONSUMERS ENERGY COMPANY, a Michigan corporation, One Energy Plaza, Jackson, Michigan 49201 (hereinafter "Consumers")

a permanent easement to enter Owner's land (hereinafter "Owner's Land") located in the Township of Oshtemo, County of Kalamazoo, and State of Michigan as more particularly described in the attached Exhibit A to construct, operate, maintain, inspect (including aerial patrol), survey, replace, reconstruct, improve, remove, relocate, change the size of, enlarge, and protect a line or lines of electric facilities in, on, over, under, across, and through a portion of Owner's Land (hereinafter "Easement Area") as more fully described in the attached Exhibit B, together with any pole structures, poles, or any combination of same, wires, cables, conduits, crossarms, braces, guys, anchors, transformers, electric control circuits and devices, location markers and signs, communication systems, utility lines, protective apparatus and all other equipment, appurtenances, associated fixtures, and facilities, whether above or below grade, useful or incidental to or for the operation or protection thereof, and to conduct such other activities as may be convenient in connection therewith as determined by Consumers for the purpose of transmitting and distributing electricity. Consumers may attach additional lines outside the Easement Area, running laterally from a line within the Easement Area to the North edge of Owner's Land, in which event the Easement Area shall include a 12-foot-wide strip of land, being 6 feet on each side of each such lateral line.

Additional Work Space: In addition to the Easement rights granted herein, Owner further grants to Consumers, during initial construction and installation only, the right to temporarily use such additional work space reasonably required to construct said lines. Said temporary work space shall abut the Easement Area, on either side, as required by construction.

Access: Consumers shall have the right to unimpaired access to said line or lines, and the right of ingress and egress on, over, and through Owner's Land for any and all purposes necessary, convenient, or incidental to the exercise by Consumers of the rights granted hereunder.

Trees and Other Vegetation: Owner shall not plant any trees within the Easement Area. Consumers shall have the right from time to time hereafter to enter Owner's Land to trim, cut down, and otherwise remove and control any trees, brush, roots, and other vegetation within the Easement Area. Consumers shall have the right from time to time hereafter to enter Owner's Land to trim, cut down, and otherwise remove and control any trees, brush, or other vegetation located outside of the Easement Area which are of such a height or are of such a species whose mature height that in falling directly to the ground could come into contact with or land directly above Consumers' facilities.

Buildings/Structures: Owner agrees not to build, create, construct, or permit to be built, created, or constructed, any obstruction, building, septic system, drain field, fuel tank, pond, swimming pool, lake, pit, well, foundation, engineering works, installation or any other type of structure over, under, or on said Easement Area, whether temporary or permanent, natural or man-made, without a prior written agreement executed by Consumers' Real Estate Department expressly allowing the aforementioned.

Ground Elevation: Owner shall not materially alter the ground elevation within the Easement Area without a prior written agreement executed by Consumers Real Estate Department allowing said alteration.

Exercise of Easement: Consumers' nonuse or limited use of this Easement shall not preclude Consumers' later use of this Easement to its full extent.

Ownership: Owner covenants with Consumers that they are the lawful fee simple owner of the aforesaid lands, and that they have the right and authority to make this grant, and that they will forever warrant and defend the title thereto against all claims whatsoever.

Successors: This Easement shall bind and benefit Owner's and Consumers' respective heirs, successors, lessees, licensees, and assigns.

Counterparts: This Easement may be executed simultaneously in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument. It is not necessary that all parties execute any single counterpart if each party executes at least one counterpart.

Date: _____ Owner: CITY OF KALAMAZOO, a Michigan municipal corporation

By: Scott Borling
Its: City Clerk

Acknowledgment

The foregoing instrument was acknowledged before me in _____ County, _____,
on _____ by Scott Borling, City Clerk of the City of Kalamazoo, a Michigan municipal corporation,
Date
on behalf of the corporation.

Notary Public

Print Name

County, _____

Acting in _____ County

My Commission expires: _____

PROPERTY OWNERS MAIL
SIGNED EASEMENT TO:
Adam Hillman #225-34
Consumers Energy Company
2500 E Cork Street
Kalamazoo MI 49001

Prepared By:
Nicole Corts 09/23/2021, EP7-287
Consumers Energy Company
One Energy Plaza
Jackson, MI 49201

REGISTER OF DEEDS OFFICE USE
ONLY
Return recorded instrument to:
Carrie J. Main, EP7-287
Consumers Energy Company
One Energy Plaza
Jackson, MI 49201

Date: _____

Owner: CITY OF KALAMAZOO, a Michigan municipal corporation

By: Jim Ritsema
Its: City Manager

Acknowledgment

The foregoing instrument was acknowledged before me in _____ County, _____,
on _____ by Jim Ritsema, City Manager of the City of Kalamazoo, a Michigan municipal
Date
corporation, on behalf of the corporation.

Notary Public

Print Name

County, _____

Acting in _____ County

My Commission expires: _____

PROPERTY OWNERS MAIL
SIGNED EASEMENT TO:
Adam Hillman #225-34
Consumers Energy Company
2500 E Cork Street
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Prepared By:
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EXHIBIT A

Owner's Land

Land situated in the Township of Oshtemo, County of Kalamazoo, State of Michigan:

The North 200.00 feet of the West 943.00 feet of the Southwest 1/4 of the Northwest 1/4 of Section 10, Town 2 South, Range 12 West, except the South 134.00 feet of the West 283.00 feet thereof.

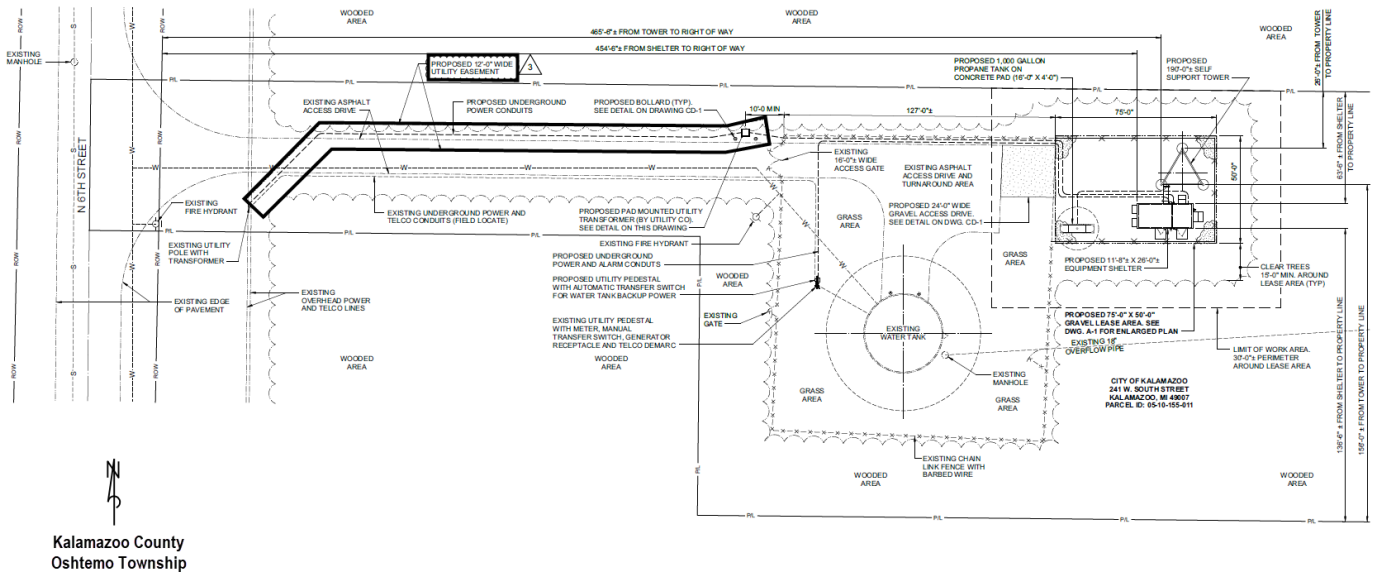
Also known as: 2740 North 6th Street, Kalamazoo, Michigan 49009

Parcel ID: 05-10-155-011

EXHIBIT B

Easement Area

Commencing at the Northwest corner of Section 10, Town 2 South, Range 12 West, Oshtemo Township, Kalamazoo County, Michigan; thence S 01°31'27"W 1375.25 feet along the West line of said Section 10 and the centerline of 6th Street; thence S 88°28'33" E 75.51 feet to the POINT OF BEGINNING; thence N 45°29'25" E 46.85 feet; thence S 88°37'54" E 183.94 feet; thence N81°34'22" E 15.73 feet to the point of ending. Being a part of the Northwest 1/4 of Section 10, Town 2 South, Range 12 West, Oshtemo Township, Kalamazoo County, Michigan and containing 3030.2 sq. ft. more or less and approximately as shown in the attached drawing.



Roll Call

The Kalamazoo City Commission met as a Committee of the Whole on Monday, December 6, 2021 at 5:00 p.m. This meeting was held as an electronic meeting under the authority of the Michigan Open Meetings Act (PA 267 of 1976) as amended by PA 254 of 2020.

COMMISSIONERS PRESENT:

Mayor David Anderson
Vice Mayor Don Cooney
Qianna Decker
Jeanne Hess
Stephanie Hoffman
Esteven Juarez
Chris Praedel

COMMISSIONERS ABSENT:

Esteven Juarez*

All members present indicated they were physically located in the City of Kalamazoo.

Also present were City Manager Jim Ritsema, Deputy City Manager Jeff Chamberlain, City Attorney Clyde Robinson, and City Clerk Scott Borling.

Commissioner Excused

Commissioner Hess, seconded by Vice Mayor Cooney, moved to excuse the absence of Commissioner Juarez. With a voice vote the motion passed.

Public Comments

Next, an opportunity was given for general public comments, but no comments were offered.

*Commissioner Juarez arrived at 5:04 p.m.

Review of Business
Meeting Agenda

Deputy City Manager Chamberlain reviewed items on the agenda for the 7:00 business meeting. Deputy City Manager Chamberlain announced there would be a work session to review the 2022 proposed budget on Monday, December 13th at 6:00 p.m.

2021-00
Presentation re:
Drinking Water Quality
and Testing

Public Services Director James Baker and Kalamazoo County Environmental Health Director Vern Johnson delivered a presentation entitled *Drinking Water Quality and Testing, Monday, December 6, 2021*. A copy of the slides from this presentation was filed with the papers for this meeting.

In response to questions and comments from City Commissioners, Director Baker provided the following information:

- the City had two iron removal plants: one at the Central Well Station and one at Station 11. One of goals of optimized corrosion control was to help with iron removal, as the same chemical addressed both issues. Automated corrosion control would help keep iron levels in balance. The City reported all water quality complaints to the Michigan Department of Environment, Great Lakes, and Energy (EGLE).
- the water system was managed geographically through pressure districts, which were based on elevation, not jurisdictions or neighborhoods. Regarding water treatment, there were only two quality set points for the entire system:

one set point for the area from Richland to Oshtemo, and a second set point for the City of Parchment.

- the four treatment technique violations were at stations primarily feeding into the Parchment district. The violations were related to the implementation of new set points in 2018, and at no time did the system fall below the 2003 set points.
- the question of whether the City was able to increase the number of lead service lines replaced each year was a policy question for the City Commission and Utility Policy Committee. The City was already using a contractor to do this work at a cost of \$7 million for the current project. In 2022 another project would begin with a \$5 million grant from EGLE. The Northside replacement project will have a total cost of \$20 million. Water system rates paid for all this infrastructure work. The City had found a sweet spot by using contractors for big projects and City crews to address needs as they arose.
- the Public Services Department was collaborating with Dr. Matt Reeves and his students at Western Michigan University for chemistry research. The City intended to continue this collaboration.
- the annual budget for the water system was \$20 million for operations and \$37 million for new capital projects in 2022.
- most water systems in Michigan used surface water rather than groundwater. The Kalamazoo and Lansing water systems were the largest groundwater systems in the state. Lansing had more customers than Kalamazoo, but Kalamazoo was able to put more water on the ground.
- the City was doing a lot from a lot of different angles to address lead, but when lead action levels go from 15 ppb to 13 ppb in a few years it could result in more action level exceedances.
- residents who were concerned about discolored water should run their cold water for five minutes, document the result with the date and time, and call the City to report this information. Water quality complaints seemed to increase right before the spring and fall flushing events.
- water affordability was a concern for the City. The Public Services Department received a water affordability planning grant, and that work was in process. Water improvements were paid for by the water system. City staff were always looking for state and federal programs, but the system was funded primarily through rates.
- customers should know there are many system improvements in process, whether they can see them or not.

Mayor Anderson explained that borrowing funds for capital projects increased operating expenses, which in turn could lead to water rate increases. Mayor Anderson highlighted the fact that rate income from the water system could not be used for other purposes. Mayor Anderson stated the City's groundwater was safe, but parts of the system infrastructure created issues with lead. Mayor Anderson noted the City responded to lead issues at the home level, and he urged

2021-00

Presentation re:
Drinking Water Quality
and Testing (cont'd)

2021-00

Presentation re:
Drinking Water Quality
and Testing (cont'd)

homeowners to contact the Public Services Department for free lead testing, service line replacement, and free filters.

Commissioner Praedel stated he was aware of the impact of rate increases on residents, but he also knew the City needed to address capital needs before they became emergencies.

Commissioner
Comments

Next an opportunity was given for comments from City Commissioners.

Commissioner Praedel thanked Director Baker and stated 847 service line replacements by November 30th was amazing. Commissioner Praedel stated he was encouraged to hear the words “proactive” and “planning” so much. Commissioner Praedel urged new Commissioners to sit with Director Baker and ask him questions about the City’s infrastructure.

Adjournment

The meeting adjourned at 6:31 p.m.

Scott A. Borling
City Clerk

Approved by the City Commission on: _____

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Roll Call

A regular meeting of the Kalamazoo City Commission was held on Monday, December 6, 2021 at 7:00 p.m. This meeting was held as an electronic meeting under the authority of the Michigan Open Meetings Act (PA 267 of 1976) as amended by PA 254 of 2020.

COMMISSIONERS PRESENT:

Mayor David Anderson
Vice Mayor Don Cooney
Qianna Decker
Jeanne Hess
Stephanie Hoffman
Esteven Juarez
Chris Praedel

COMMISSIONERS ABSENT:

None

All members present indicated they were physically located in the City of Kalamazoo.

Also present were City Manager Jim Ritsema, Deputy City Manager Jeff Chamberlain, City Attorney Clyde Robinson, and City Clerk Scott Borling.

Invocation

The invocation was given by Pastor James Harris, Sr. of Trenches Community Church.

Proclamations
2021-00

Commissioner Praedel read a proclamation *Celebrating 21 Years of Service of Tammy Taylor*. Ms. Taylor was present and received the proclamation.

2021-00

Commissioner Hess read a proclamation *Celebrating Kalamazoo County Ready 4's 10th Anniversary*. Kristyn Buhl-Lepisto, Executive Director of KC Ready 4's, received the proclamation.

2021-00

Mayor Anderson read a proclamation *Commemorating Mary Brown*.

Adoption of the Agenda

By unanimous consent the City Commission adopted its meeting agenda as presented.

Communications

City Manager Ritsema announced the City Commission would hold a work session on Monday, December 13th at 6:00 p.m. to discuss the 2022 Proposed Budget. City Manager Ritsema indicated the meeting would be held virtually via Zoom.

Presentation re: the Draft
Sustainability Strategy

Redevelopment Project Manager Jamie McCarthy and Community Planner Nolan Bergstrom delivered a presentation on the draft sustainability plan. A copy of the slides from this presentation was filed with the papers for this meeting.

Vice Mayor Cooney suggested having a goal of solar panels on every house.

In response to Vice Mayor Cooney, Ms. McCarthy stated the sustainability plan would be able to support goals like having solar panels on every house, but there were legislative roadblocks to this suggestion. Ms. McCarthy indicated the City might be able to partner with utilities to pilot solar power on a small scale.

Commissioner Decker expressed agreement with Vice Mayor Cooney's suggestion.

Next, when an opportunity was given for general public comments, the following people addressed the City Commission:

The following people expressed concerns about the emergency housing ordinance in general and/or opposition to the location of an emergency housing site on Stockbridge Avenue specifically; and requested the City solicit more input from neighborhood residents:

Dorothy Appleyard, City resident
 Raymond Gant, Kalamazoo resident
 Mattie Jordan-Woods, City resident
 Rashan Hilgal, City resident
 Tina McClinton, City resident
 Mario McDonald, City resident
 Richard Stewart, City resident

The following people expressed support for the emergency housing ordinance:

Chris Glasser, City resident and a member of the Edison Neighborhood Association (ENA) Board
 Ray Sweeney, City resident
 Cathy Bastien, non-resident
 Tobi Hanna-Davies, City resident, on behalf of ISAAC and the Truth Racial Healing and Transformation (TRHT) Housing Task Force
 Pat Vinge, City resident and member of the ISAAC Housing Task Force
 Michelle Davis, Executive Director of Housing Resources Incorporated

Chris Glasser, City resident and a member of the Edison Neighborhood Association (ENA) Board expressed support for ENA grant agenda item.

Jeff Weisman, City resident, spoke about the lack of parking and code enforcement on the City's northside. Mr. Weisman stated the perimeter lights around the Kalamazoo Transportation Center were not working, and he urged the City to take action rather than expecting residents to report outages.

An anonymous caller spoke about Section 7-18 of the Kalamazoo City Code and questioned why only licensed media were allowed at Public Safety press conferences.

Consent Agenda items were presented as follows with a recommendation to approve the items and authorize the City Manager to sign all documents on behalf of the city:

- approval of a one-year contract with Alexander Chemical Corporation for the purchase of 12.5% sodium hypochlorite, by volume, in the amount of \$162,662.50.
- approval of a supplemental change order to the code enforcement cleanup contract with Student Haulers for ongoing trash cleanup activities in the amount of \$160,000, bringing the total contract amount to \$280,000.
- approval of a professional service agreement with Hurley & Stewart, LLC for construction engineering services for the Parkview Avenue - Oakland

Public Comments

Consent Agenda

2021-00

2021-00

2021-00

Consent Agenda (cont'd)	to Tamsin Water Main Replacement and Street Improvements Project in the amount of \$262,000.
2021-00	- first reading of an ordinance to rezone 1011, 1017, 1029 Denner Street/1405 Alamo Avenue from Residential – Single Dwelling District (RS-5) to Residential Duplex District (RD-19); and schedule a public hearing for December 20, 2021.
2021-00	- first reading of an ordinance amending Chapter 2, Article V of the Kalamazoo City Code regarding the duties of the Historic Preservation Commission.
2021-00 Resolution 21-65	- adoption of a RESOLUTION granting a Payment in Lieu of Taxes (PILOT) to the Trinity Village Nonprofit Housing Corporation for the housing development located at 701 N. Pitcher Street, now known as Ashley Square Townhomes (Parcel No. 06-15-184-400), pursuant to Section 35-4 of the Kalamazoo City Code.
2021-00	- approval of an amended grant agreement with the Kalamazoo Eastside Neighborhood Association for \$275,000 to be used to purchase and rehabilitate a previously vacant and blighted property that will further the goals of the neighborhood listed in the Imagine Eastside Neighborhood Plan.
2021-00	- approval of an agreement for access to Verburg Park by the United States Environmental Protection Agency and Michigan Department of Environment, Great Lakes and Energy to conduct and monitor remedial activities on the Kalamazoo River from March 1, 2022 to May 31, 2023.
2021-00	- approval of an amendment to the 2003 HOME Investment Partnerships Program Subrecipient Grant Agreement for Trinity Village Non-Profit Housing Corp.
2021-00	- acceptance of a Wellhead Protection Grant in the amount of \$70,000 from the Michigan Department of Environment, Great Lakes, and Energy.
2021-00	- acceptance of a grant from the Irving S Gilmore Foundation in the amount of \$1,000,000 to support the second phase of the Kalamazoo Farmer's Market Redevelopment.
2021-00	- authorization for the City Manager to sign a Consent of Easement Holders form as part of a private restrictive covenant on 4717 West KL Avenue, a property associated with the release of petroleum from a former Mobile gasoline station.
2021-00	- approval of the purchase of 830 N. Rose, 826 N. Rose, 822 N. Rose, 812 N. Rose (pending title work), 110 W. Frank, 801 N. Burdick, 809 N. Burdick, 819 N. Burdick, 901 N. Burdick, 903 N. Burdick, and 907 N. Burdick Streets for the creation of housing as it relates to the homeownership new construction infill strategy, for a sales price not to exceed \$164,500.
2021-00	- approval of the purchase of 912 N. Rose, 908 N. Rose, 122 Darden Ct., 119 Darden Ct., 818 N. Rose, 814 N. Rose, 811 N. Burdick Streets to be

utilized for the creation of housing as it relates to the homeownership new construction infill strategy, for a sales price not to exceed \$5,000.	Consent Agenda (cont'd)
- approval of the Mayor's appointments and reappointments to the following boards and commissions: the reappointment of Jeff Breneman to the <u>Downtown Development Authority Board</u> for a term expiring on March 31, 2022. the reappointment of Carl Brown to the <u>Downtown Economic Growth Authority Board</u> for a term expiring on March 31, 2022. the reappointment of Grant Fletcher to the <u>Downtown Economic Growth Authority and Downtown Development Authority Boards</u> for a term expiring on March 31, 2024. reappointment of Stephanie Hinman to the <u>Downtown Economic Growth Authority and Downtown Development Authority Boards</u> for a term expiring on March 31, 2025. the reappointment of Susan Lindemann to the <u>Downtown Economic Growth Authority and Downtown Development Authority Boards</u> for a term expiring on March 31, 2025. the reappointment of Patti Owens to the <u>Downtown Economic Growth Authority and Downtown Development Authority Boards</u> for a term expiring on March 31, 2024. the appointment of Laura Worline to the <u>Downtown Economic Growth Authority and Downtown Development Authority Boards</u> for a term expiring on March 31, 2024. the appointment of Nick Boyd to the <u>Local Officers Compensation Commission</u> for a term expiring on March 31, 2028. the reappointment of Creed Stegall to the <u>Local Officers Compensation Commission</u> for a term expiring on March 31, 2028. the reappointment of Shirley Weathers to the <u>Local Officers Compensation Commission</u> for a term expiring on March 31, 2027. the reappointment of Robert Glasser to the <u>Natural Features Protection Review Board</u> for a term expiring on March 31, 2024. the reappointment of Paul MacNellis to the <u>Natural Features Protection Review Board</u> for a term expiring on March 31, 2024.	2021-00
- approval of the minutes from the City Commission meetings on November 15, 2021.	2021-00
- postpone until December 20, 2021 consideration of a purchase agreement for the sale of 440 South Burdick Street to Burdick@Cedar, LLC for the sale price of \$100,000.	2021-00

2021-00

- postpone until December 20, 2021 consideration of a purchase agreement for the sale of 478 Reed Street to John and Brook Green for \$250.

Vice Mayor Cooney, seconded by Commissioner Hess, moved to approve the consent agenda requests and authorize the City Manager to sign all documents on behalf of the City.

With a roll call vote this motion passed unanimously.

AYES: Commissioners Decker*, Hess, Hoffman, Juarez, Praedel**, Vice Mayor Cooney, Mayor Anderson

NAYS: None

* At the time of the vote, Commissioner Decker abstained from voting on Items G-7, G-13, and G-14 due to conflicts of interest.

**At the time of the vote, Commissioner Praedel abstained from voting on Item G-5.

Regular Agenda

Regular Agenda items were considered next.

2021-00Ordinance 2040 re:
Emergency Housing

Community Planning and Economic Development Director Rebekah Kik and City Planner Christina Anderson delivered a presentation entitled *Emergency Housing Ordinance*. A copy of the slides from the presentation was filed with the papers for this meeting.

In response to comments and questions from Commissioners, City staff provided the following information:

- the proposed ordinance would allow short-term opportunities to create housing for unhoused individuals, which would give the City time to work on long term strategies for homelessness.
- the temporary housing site permits would not be approved by the City Commission; the work and approval would be done by staff. The standards in the ordinance would guide staff in their review of permit applications, which would take place during existing project review meetings. Discussions about a permanent housing ordinance would start at the end of winter/beginning of spring.
- the City could share its efforts to address homelessness with other jurisdictions, but that was as far as the outreach efforts could go.
- in their review of permit applications, staff would take into account issues like flooding when considering specific sites.
- permit applicants would not necessarily be locked into a site until the end of 2023, but it was hoped these projects would be stable and not leave people hanging. The details would be worked out in the Memoranda of Understanding (MOU's).
- permit applicants would need to provide information on staffing levels and security, and site plans would need to allow for emergency access.

- City staff had been working on a temporary housing ordinance since early in 2021 when, during the polar vortex, community members came to the City with ideas for temporary housing structures like Conestoga huts and tiny houses on wheels.
- permit applicants would need to have a security plan; 24-hour staffing was one possible option, but it was not required.
- there were factors for staff to consider when determining occupancy limits. The goal was for these sites to be successful.
- the permit application online was a draft application, for review with the ordinance.
- applicants needed to do community outreach before any approvals were given, but applicants would need to have their plans together before doing outreach so they could answer questions.
- over the past several years, multiple advocates and housing and service providers had contacted the City about developing emergency housing. Most developers did not understand the City does not have a housing authority and does not build housing. The City's role was to set the table for housing development; builders and service providers needed to provide the meal.
- it was not possible to accurately say when the first temporary housing units would be occupied. It would take applicants at least three weeks to get through the City's permit approval process.
- service providers should talk with the City about available funding. The City had Housing for All funds; CARES and COVID funds from the US Department of Housing and Urban Development (HUD); and Foundation for Excellence funds.

Commissioner Praedel suggested City staff coach the service providers on doing community outreach.

Commissioner Juarez expressed concern about having too many occupants on a site. Commissioner Juarez thanked staff for their work and stated he did not like how it was getting twisted by people who had differing opinions. Commissioner Juarez questioned whether the ordinance should set a hard occupancy limit for the sites and noted the physical ability of a site to hold a certain number of units did not mean that number of units should be there.

Commissioner Hoffman credited Tianna Williams for the housing pod idea. Commissioner Hoffman stated poverty should not be concentrated in one area of the City, and the faith-based community needed to be involved with City's efforts to address homelessness. Commissioner Hoffman expressed support for the ordinance. Commissioner Hoffman indicated families with children were the largest population to be served, and she asked whether some of the temporary housing units could be for families. Commissioner Hoffman stated City staff should urge the service agencies to do community outreach.

Vice Mayor Cooney stated homelessness in Kalamazoo was an emergency, and he expressed support for the proposed emergency ordinance. Vice Mayor Cooney

2021-00

Ordinance 2040 re:
Emergency Housing
(cont'd)

2021-00

Ordinance 2040 re:
Emergency Housing
(cont'd)

remarked on the need to address concerns about the ordinance and get neighborhood input beyond the 300-foot public notice area. Vice Mayor Cooney agreed the City needed to avoid concentrating poverty.

Commissioner Hess observed that the creation of temporary housing sites would not eliminate the need for warming centers.

Mayor Anderson stated there had been a misrepresentation of the action the City Commission might take, and he noted the Commission was not approving a temporary housing site or the details for a site. Mayor Anderson stated the proposed ordinance would allow the City to take some action related to temporary housing sites, but the Commission would be entrusting City staff with the work. Mayor Anderson indicated a proposal for using City-owned property as a housing site would likely need approval from the City Commission. Mayor Anderson spoke about the problem of homelessness in Kalamazoo County and the number of shelters and shelter beds available in the City of Kalamazoo. Mayor Anderson remarked on the outreach requirements in the proposed ordinance, and he expressed concern about concentrating temporary housing in high-poverty neighborhoods. Mayor Anderson discussed best practice recommendations from other communities but noted the creation of structure and expectations at the housing sites would cause some people to drop out. Mayor Anderson stated the City would need to have the same urgency and attention when addressing homelessness among families, which accounted for more of the homeless population than those in encampments. Mayor Anderson urged staff to take care when evaluating applications and remarked the community would not support future attempts at creative housing options if this effort challenged the community. Mayor Anderson thanked Director Kik and City Planner Anderson for their thoughtful consideration of this issue.

City Attorney Robinson stated he would need to consult the property transaction policy resolution to see whether Commission approval would be required for City property to be used as a temporary housing site.

City Manager Ritsema remarked it would be more effective for Commissioners to reach out to elected officials in other jurisdictions regarding countywide housing policies, rather than leaving these conversations to staff.

Commissioner Hoffman, seconded by Commissioner Praedel, moved to adopt an **ORDINANCE** to amend Chapter 9, "Building and Building Regulations" to add Article VIII, "Emergency Housing", an emergency measure to allow for temporary housing facilities in Kalamazoo.

With a roll call vote this motion passed unanimously.

AYES: Commissioners Decker, Hess, Hoffman, Juarez, Praedel, Vice Mayor Cooney, Mayor Anderson

NAYS: None

2021-00

City Manager's Report

City Manager Ritsema offered the following reports and updates:

Deputy Public Safety Chief David Boysen provided the following update on the response of the Public Safety Department to the 40 recommendations from the OIR Group:

- 30 of the recommendations had been completed; 7 of the 10 remaining recommendations were basically complete, but the work needed to be vetted by a focus group, which was being formed.
- Three recommendations were still in process: mutual aid agreements with partner agencies; completion of complaint investigations from 2020; and communication of the investigation findings with complainants.
- Improvements had been made to Policy 430, First Amendment Assemblies, in the areas of communication, understanding crowd dynamics, intervention techniques (tear gas would be authorized only when active aggression and destruction of property was in progress), and dispersal scripts.
- Mutual aid agreements had been developed and were being reviewed by partners; completion was expected within 90-days.
- There were nine open complaint investigations related to the events of 2020. The Captain over the Office of Internal Affairs would be returning from military duty on Monday and would be tasked with completing these investigations.

City Clerk Borling presented to the City Commission a petition submitted by Carol Mullen, House Director of Chi Omega Sorority, requesting safety changes for Fraternity Village Drive.

City Attorney Robinson provided an overview of the proposed changes to the City Commission Rules regarding in-person and Committee of the Whole meetings. City Attorney Robinson noted the rules did not specify a date for returning to in-person meetings, and he asked for Commissioner input on that question.

Commissioner Praedel stated he was struggling to envision the enforcement of masking and social distancing rules, especially when there was a topic that attracted a lot of people to a Commission meeting.

In response to Commissioner Praedel, City Attorney Robinson recommended that the City Commission not attempt to legislate for the extreme situations. City Attorney Robinson noted the Fire Marshal's room capacity had probably been exceeded at various times. City Attorney Robinson suggested the opening of overflow areas if a large turnout was expected for a particular meeting.

Deputy City Manager Chamberlain stated the Community Room and Third Floor Conference Room would be used for overflow areas. Deputy City Manager Chamberlain described safety measures that were in place in both the Commission Chambers and Community Room.

Discussion followed regarding a date for returning to in-person meetings.

By consensus the City Commission decided to return to in-person meetings in 2022, beginning with the regular business meeting on January 3rd.

City Attorney Robinson recommended the City Commission postpone action on the proposed resolution until December 20th.

2021-00

City Manager's Report
(cont'd)

2021-00

City Clerk's Report

2021-00

Changes to the City
Commission Rules re:
In-Person Meetings

2021-00

Changes to the City
Commission Rules re:
In-Person Meetings

In response to a question from Commissioner Praedel, City Attorney Robinson stated a special meeting could be called to adopt the resolution if the December 20th meeting was cancelled due to inclement weather. City Attorney Robinson stated he wanted to change some of the language, now that the City Commission's disposition was known.

City Manager Ritsema noted the December 20th meeting would be a virtual meeting.

Commissioner
Comments

Finally, an opportunity was given for miscellaneous comments from City Commissioners.

Commissioner Juarez expressed excitement and spoke about the need for the City Commission and residents to work together.

Commissioner Decker stated the agenda items on which she abstained would help with the Complete Neighborhoods strategic goal. Commissioner Decker remarked on the need for timely communication with the community regarding actions that impacted them.

Commissioner Hess noted it was the last night of Hanukah, and she urged people to be light for each other in challenging times. Commissioner Hess remarked on Consent Agenda items and the proclamation recipients, and she thanked Director Baker and Pastor Harris.

Commissioner Praedel encouraged people to look at the proposed budget online and attend the work session on December 13th. Commissioner Praedel remarked on the Verberg Park improvements. Commissioner Praedel asked that someone reach out to the petitioner for safety improvements on Fraternity Village Drive. Commissioner Praedel requested improvements to the audio speakers in the City Commission Chambers.

Vice Mayor Cooney thanked his colleagues for their eloquence and dialogue. Vice Mayor Cooney spoke about gun violence in major cities and stated Kalamazoo's problems were manageable compared to other cities. Vice Mayor Cooney stated he would fight to make Kalamazoo a national model for addressing gun violence.

Mayor Anderson asked staff to follow up with Mr. Weisman regarding streetlights. Mayor Anderson highlighted the importance of various items approved on the Consent Agenda.

Adjournment

The meeting adjourned at 10:18 p.m.

Scott A. Borling
City Clerk

Approved by the City Commission on: _____

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