

Sauk Prairie Police Commission



**Request for Proposals
Solar Photovoltaic System
Police Station**

2020

**SAUK PRAIRIE POLICE COMMISSION
REQUEST FOR PROPOSAL (RFP)
DESIGN AND CONSTRUCTION
SOLAR PHOTOVOLTAIC SYSTEM**

1. GENERAL

The Sauk Prairie Police Commission (“OWNER”) is requesting proposals for the installation of a roof top mounted solar photovoltaic (PV) system. The PV system is to be mounted on the roof of the new police station. The Police Station is currently being designed and planned to be constructed in 2021/2022. The CONTRACTOR will be required to coordinate the work with the general contractor (to be determined), and the architect, MSA Professionals Services, Inc.

Selection of the CONTRACTOR proposals shall be based on the equipment selected, overall cost, maintenance requirements, system output, visual appearance of the system, and CONTRACTOR’s proven experience and licensing. The OWNER reserves the right to reject any or all bids and to waive irregularity in the bidding or the bidding process and accept the bid that is most advantageous to the OWNER.

2. PHASING

There will be two phases for the expected services – Phase I - Preliminary Design & Initial Budgeting and Phase II - Final Design/Implementation (construction).

Phase I - The selected CONTRACTOR will be responsible to consider the project and assist the OWNER in evaluating feasibility, determine scale, magnitude, Preliminary design of the desired system in a preliminary design, coordinate with the building Architect/Engineer and support all associated grant applications. This phase is to be completed by January 29, 2021.

Phase II - The CONTRACTOR shall provide a turn-key installation of a robust, operating solar PV system which will include equipment, materials, shipping, site preparation, labor, state and local permitting, interconnection, commissioning, web based monitoring and operation/maintenance training. Work not specifically identified in this Request for Proposal, but necessary to provide a fully operational and functional system shall be included in the CONTRACTOR’s Proposal. The PV system is to be completed and fully commissioned by May 2, 2022.

Note: It will be at the Owners complete discretion as to whether the project will proceed into Phase II.

3. CERTIFICATION

Although not required, preference will be given to North American Board of Certified Energy Practitioners (NABCEP) certified installers. Respondents are encouraged to submit information indicating their qualifications to undertake the project in question. Company profiles, lists of relevant state licenses and industry certifications, proof of insurance, bonding safety ratings, project team background and qualifications, business references, and any solar project experience (e.g., total number and capacity of systems installed, differentiated by installation type; experience with certain technology brands; experience with grid interconnection).

4. PERMITS

The CONTRACTOR shall obtain all required local and state permits, certificates, or approvals as required for system installation by local and state jurisdiction. The CONTRACTOR shall request necessary inspections for installation and commissioning from the respective authority(ies).

5. SYSTEM DESIGN

The solar PV system will be comprised of a roof top mounted unit, with a capacity at or below 20 kW and web based monitoring capability. The interconnection design shall include the power inverter(s), disconnects, and overcurrent protection installed in a suitable location. The CONTRACTOR shall communicate with the Village of Prairie du Sac's Electric Utility and comply with their interconnection requirements, per PSC 119. Wiring methods shall comply with Article 690 of the National Electrical Code ANSI/NFPA-70. The CONTRACTOR will be responsible for the complete design of the solar system based on the available roof top area and other site conditions. Preliminary Drawings for the Construction of the Police Station are included in Appendix A.

The project design is currently under development for a tentative bid release in January 2021. It will be the responsibility of the Solar Panel Designer/Provider (CONTRACTOR) to coordinate with the project Architect/Engineer for the integration of the PV system into the building construction as necessary for a complete and effectively operational system.

6. WARRANTY

The PV modules shall have a minimum 20 year limited warranty which provides for the repair or replacement in the event of failure. The power inverters shall have at a minimum a standard three year performance warranty providing repair or replacement in the event of failure. The CONTRACTOR shall provide the OWNER with a full one year warranty on the entire PV system including all materials, components, equipment, workmanship and labor. The CONTRACTOR may include pass-through warranties from the manufacturers of the modules and inverter system components.

7. EQUIPMENT

Supply the PV modules as required for the approved PV system design. The modules must be tested and labeled by Underwriters Laboratories (UL) or another nationally recognized testing agency. Provide the following information in the submittal:

- manufacturer
- model
- number of modules
- generating capacity per module
- total DC capacity rating
- NREL PVWatts energy production estimate

Supply the power inverter(s) as required for the approved PV system design. The inverter(s) must be tested and labeled by Underwriters Laboratories (UL) UL 1741 or

another nationally recognized testing agency. Provide the following information in the submittal:

- manufacturer
- model
- efficiency
- anti-islanding capability
- rated output AC voltage
- DC input voltage range
- output frequency

Supply the information and specifications on balance of system components, including but not limited to:

- racking/support structure material
- racking/support structure design details/description
- racking structure foundation/anchor type
- array fastener material
- electrical components
- description of the web-based real-time monitoring system

8. SYSTEM ACCEPTANCE TESTING

The CONTRACTOR will provide system acceptance testing at time of commissioning. The testing shall determine that the PV system is functionally operative and meets the design requirements. The tests shall also verify that the system, as installed, is safe for personnel and will establish or verify system energy and power rating.

9. CONTRACTOR INSURANCE AND SAFETY

The CONTRACTOR shall maintain and pay for such insurance issued listing the OWNER as an additional insured.

The CONTRACTOR shall be solely responsible for the safety of its work crew and shall perform all work in accordance with OSHA standards and other applicable regulations, as well as any conditions specific to the construction site.

10. FEE PROPOSAL

CONTRACTOR's proposal shall include a fee for Phase I and a fee for Phase II. The OWNER shall not be liable for any costs incurred to prepare or submit a proposal for this project.

11. NON-DISCRIMINATION STATEMENT

The OWNER does not discriminate on the basis of race, color, religion, age, marital or veterans' status, sex, national origin, disability, or any other legally protected status in the admission or access to, or treatment or employment in, its services, programs or activities.

12. GENERAL SUBMITTAL REQUIREMENTS

At a minimum, each CONTRACTOR responding to this invitation shall submit one (1) unbound copy of their proposal and one (1) digital copy in PDF format. RFP's are to be submitted as a sealed Proposal to:

Attn: Chief Jerry Strunz
RE: Police Station Solar
Sauk Prairie Police Commission
726 Water St # A
Sauk City, WI 53583

Sealed proposals will be received no later than October 30, 2020; 4:00 PM CST.

Questions regarding project coordination can be directed to:

Carter Arndt, AIA
Senior Project Architect
MSA Professional Services, Inc.
1230 S. Blvd
Baraboo, WI 53913
608-355-8884
carndt@msa-ps.com

Questions regarding the requests for proposals can be directed to:

Chief Jerry Strunz
Sauk Prairie Police Commission
726 Water St # A
Sauk City, WI 53583
(608) 643-2427
jerrys@saukprairiepd.com

APPENDIX 1
Plans for the Construction of Police Station
MSA Professional Services, Inc.

PROJECT:

SAUK PRAIRIE POLICE STATION

640 13TH STREET, PRAIRIE DU SAC, WI 53578

PROGRESS SET
09/30/2020



NORTH-EAST VIEW



NORTH-WEST VIEW



SOUTH-WEST VIEW



SOUTH-EAST VIEW

PROJECT DATE:	09/30/2020	DRAWN BY:	JLP	NO.	DATE
		DESIGNED BY:	ECA		
		CHECKED BY:	ECA		

PRELIMINARY

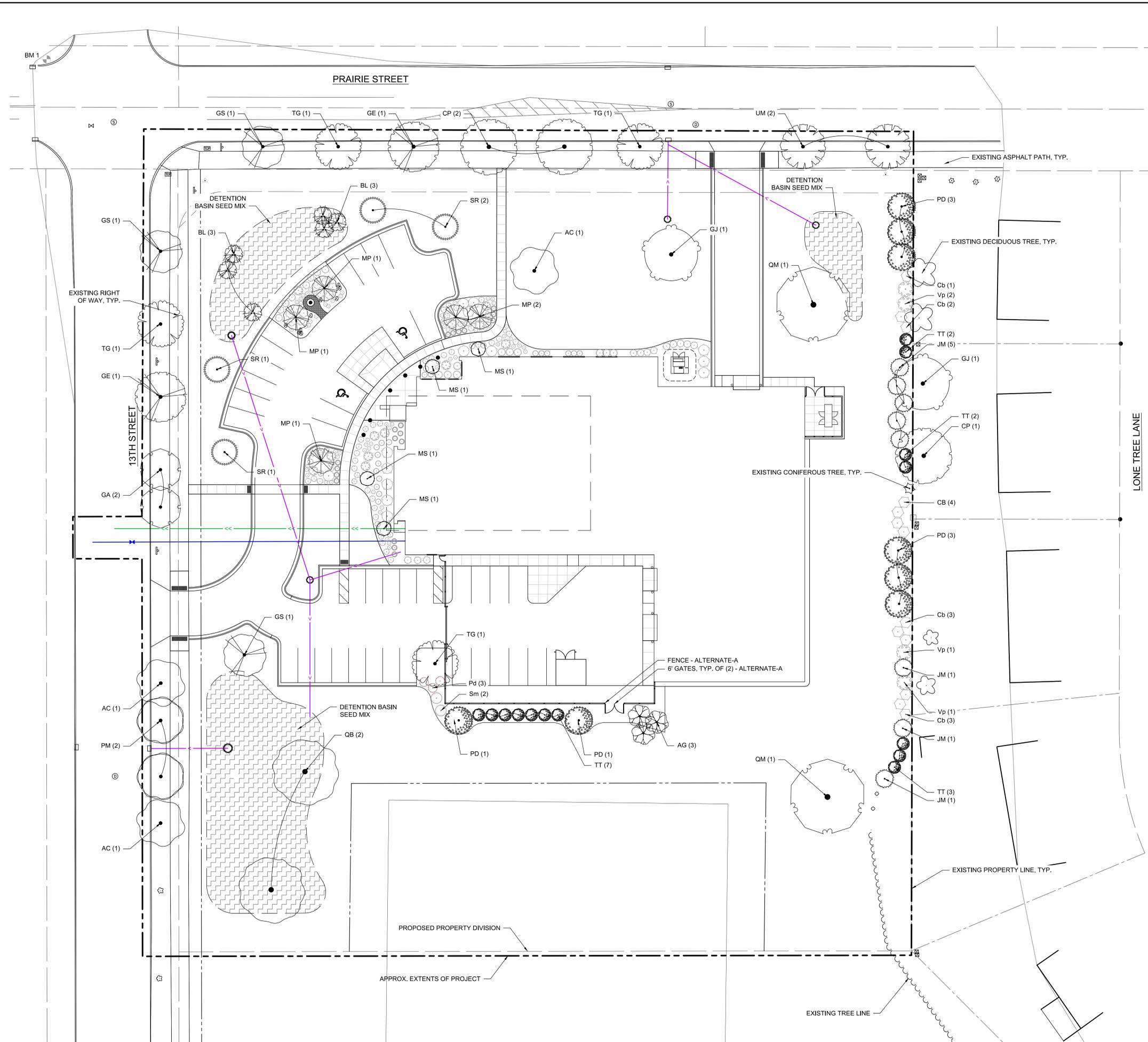


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PRAIRIE DU SAC, WISCONSIN

EXTERIOR 3D-VIEWS

PROJECT NO:
01621002
SHEET
T1.2



KEY:

-  EXISTING DECIDUOUS TREE
-  EXISTING CONIFEROUS TREE
-  DETENTION BASIN SEED MIX
-  GRAVEL MULCH
-  TURF GRASS

NOTES:

1. GENERAL PLANTING NOTES.

LANDSCAPE PLAN

0 20 40
1" = 20'-0" (30x42)

PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	LIG				
	LIG				
	DRS				

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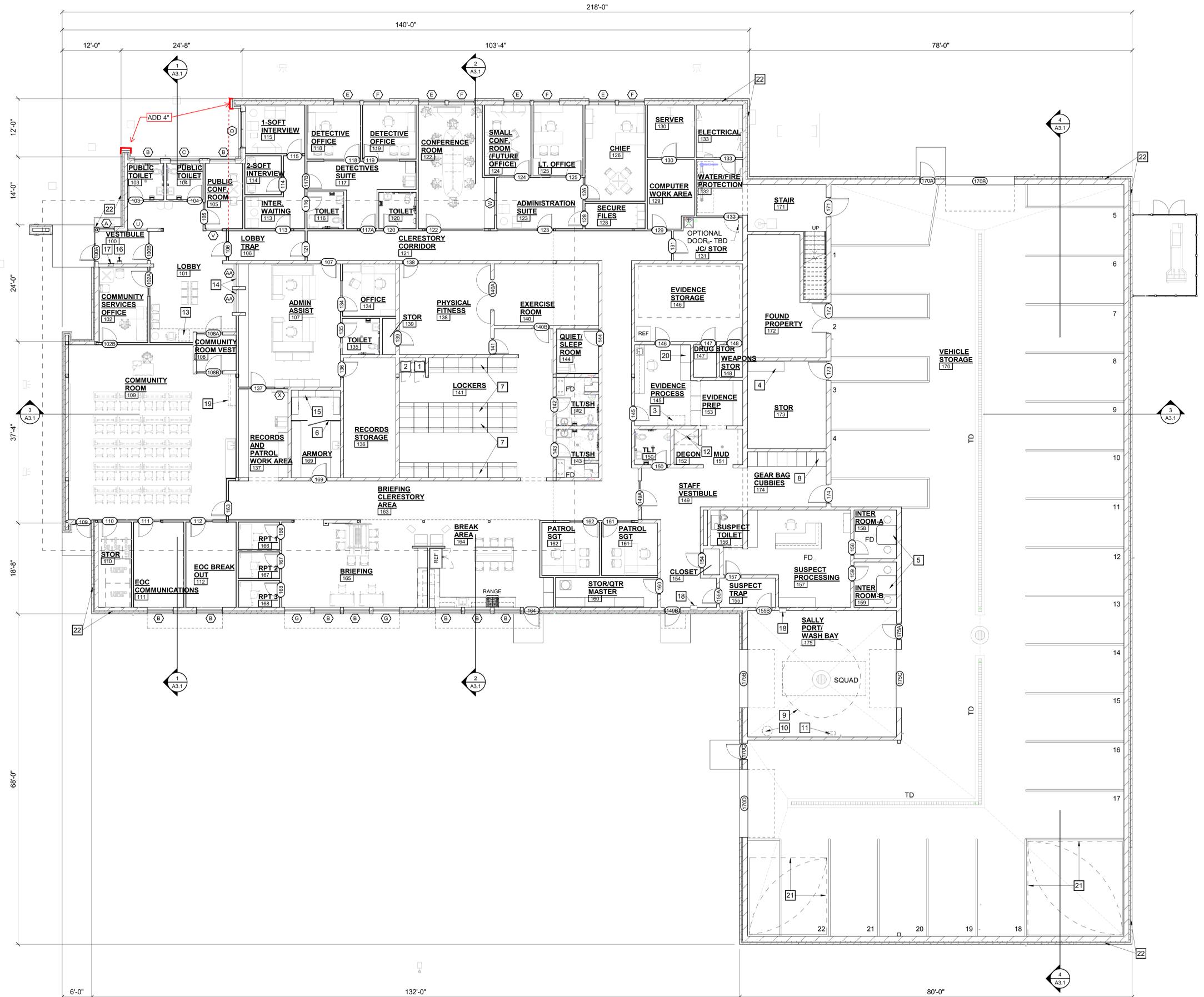
LANDSCAPE PLAN
 PROJECT NO. 01621002
 SHEET L1.0

GENERAL PLAN NOTES:

- A. ALL DIMENSIONING IS TO FACE OF CMU, STUD, FRAMING OR CONCRETE.
- B. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
- C. THE CONTRACT DOCUMENTS CONSIST OF THE SPECIFICATION MANUAL AND DRAWINGS WHICH ARE INTENDED TO BE COMPLEMENTARY AND TO BE USED IN CONJUNCTION WITH ONE ANOTHER.
- D. IF DISCREPANCIES OCCUR BETWEEN THE SPECIFICATION MANUAL AND THE DRAWINGS, NOTIFY THE ARCHITECT FOR A RESOLUTION.
- E. ALL EXTERIOR WALL AND ROOF OPENINGS BY ALLTRADES SHALL BE FLASHED AND CAULKED BY THE METAL BUILDING ERECTOR.
- F. OPENINGS FOR PLUMBING, VENTILATING, AND ELECTRICAL WORK IN WALLS, FLOORS, CEILING, AND ROOF SHALL BE PROVIDED BY THE GC. LOCATION AND SIZE SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS.
- G. SLOPE FLOOR SLABS TO FLOOR DRAINS. SEE FOUNDATION PLAN AND COORDINATE WITH PLUMBING DRAWINGS. (MAX FLOOR SLOPE 1/4" PER FT.)
- H. CONTRACTOR TO COORDINATE STRUCTURAL, ARCHITECTURAL, HVAC, AND PLUMBING PLANS FOR DETAILS, DIMENSIONS, ELEVATIONS, OPENINGS, INSERTS, ETC. NOTIFY ARCHITECT OF ANY VARIANCE BEFORE COMMENCING CONSTRUCTION.
- I. IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE, UNLESS APPROVED BY THE ENGINEER.

KEYNOTES - FLOOR PLAN

- 1 WASHER BY OWNER
- 2 DRYER BY OWNER
- 3 SS ROLLING TABLE
- 4 PORTABLE WORKBENCH
- 5 WALL MOUNTED SS TABLE
- 6 WIRE MESH PARTITION WITH GATE
- 7 LOCKERS
- 8 GEAR BAG CUBBIES
- 9 DASHED LINE INDICATES OVERHEAD SPRAY HOSE
- 10 WALL MOUNTED CAR VACUUM
- 11 WASH SPRAYER
- 12 EMERGENCY SHOWER
- 13 DRUG DROP BOX - OWNER PROVIDED, CONTRACTOR INSTALLED
- 14 BULLET-PROOF GLASS
- 15 WEAPON LOCKER RACK
- 16 AFTER-HOURS EMERGENCY PHONE
- 17 RECESSED PAYMENT DROP BOX
- 18 WALL MOUNTED HAND GUN LOCKER
- 19 COAT RACK
- 20 FUME HOOD
- 21 WALL MOUNTED SS TABLE
- 22 SEE SHEET A1.3 FOR WALL ASSEMBLY TYPE TAGS, TYP



OVERALL FLOOR PLAN

1/8" = 1'-0" (30"x42")
1/16" = 1'-0" (15"x21")

TOTAL AREA: 26,455 SF

PROJECT DATE:	09/30/2020	DESIGNED BY:	JLP	DATE:	
DESIGNED BY:	ECA	CHECKED BY:	ECA		
CHECKED BY:	ECA				

PRELIMINARY



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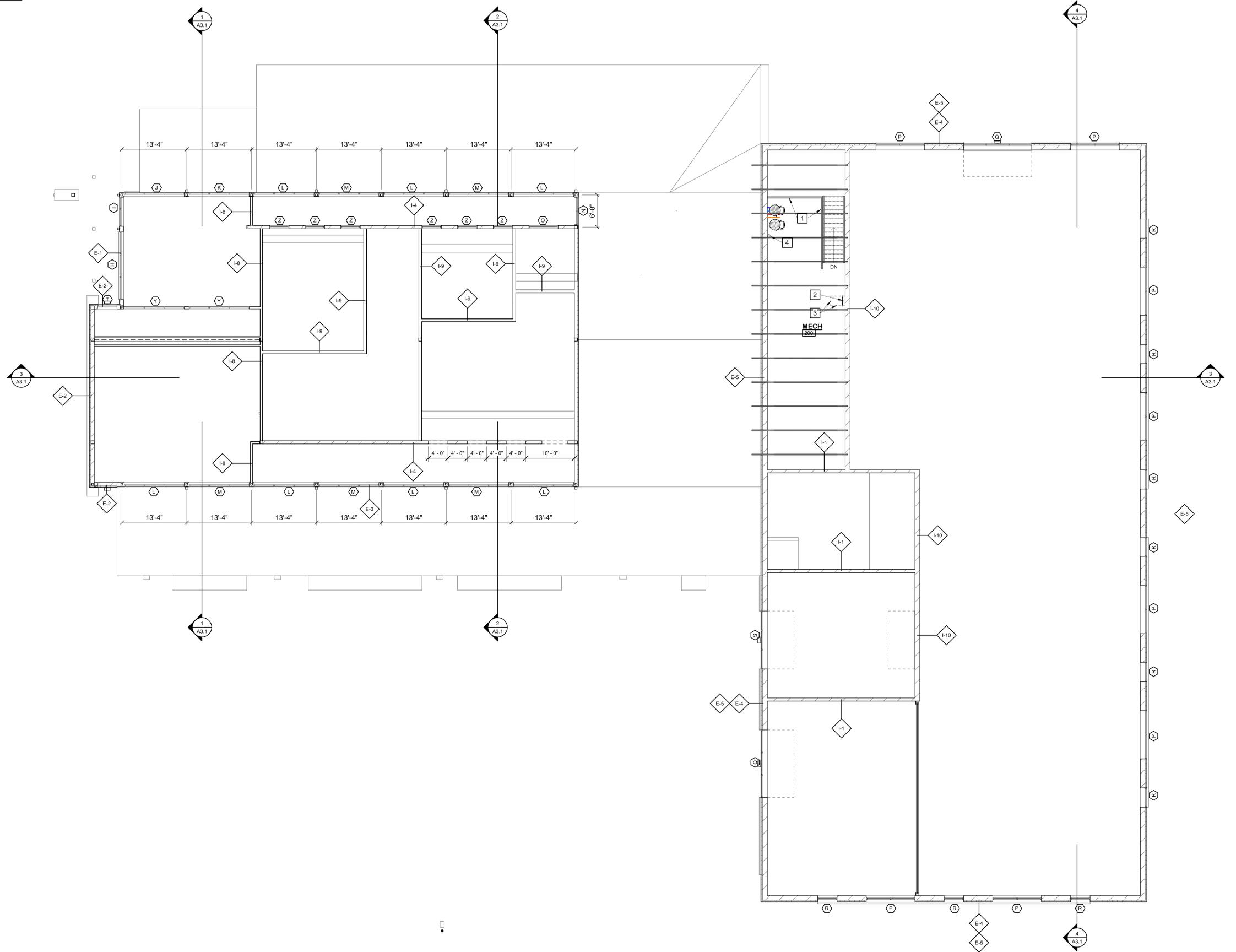
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SAUK PRAIRIE POLICE COMMISSION
PRAIRIE DU SAC, WISCONSIN

OVERALL FLOOR PLAN

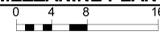
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KEYNOTES - CLERESTORY / MEZZANINE PLAN #

- 1 TOP MOUNTED NON-REMOVABLE GUARDRAIL
- 2 ROOF ACCESS LADDER
- 3 DASHED LINE REPRESENTS ROOF ACCESS ABOVE
- 4 FIRE EXTINGUISHER w/ WALL BRACKET



CLERESTORY / MEZZANINE PLAN
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



TOTAL AREA: 975 SF

PROJECT DATE:	09/30/2020	DRWN BY:	JLP	NO.	DATE
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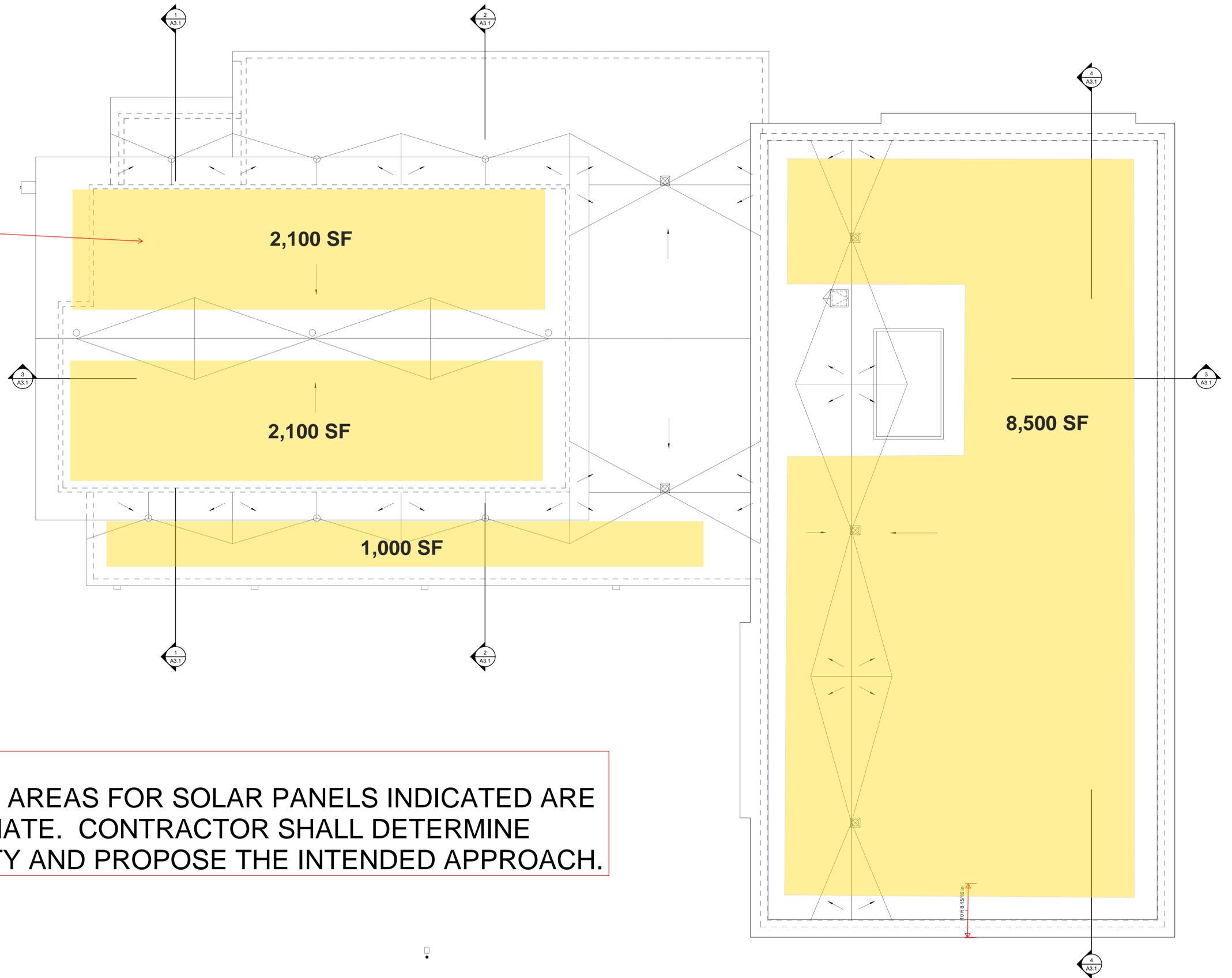
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CLERESTORY / MEZZANINE PLAN

PROJECT NO:
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A1.2

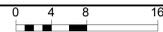
PANELS ON JUST THE UPSLOPING NORTH SIDE ARE ACCEPTABLE



NOTE:
THE ROOF AREAS FOR SOLAR PANELS INDICATED ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE FEASIBILITY AND PROPOSE THE INTENDED APPROACH.



GARAGE TOW
1/8" = 1'-0" (30"x42")
1/16" = 1'-0" (15"x21")



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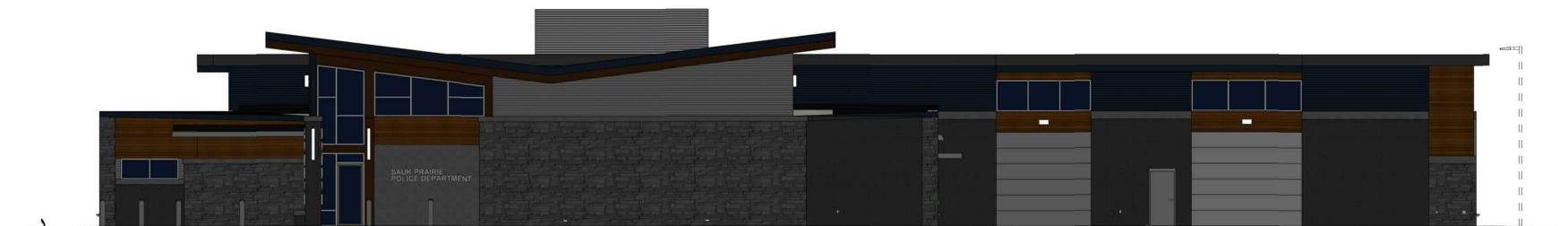
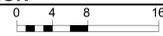
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ROOF PLAN

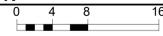
PROJECT NO:
01621002
SHEET
A1.5



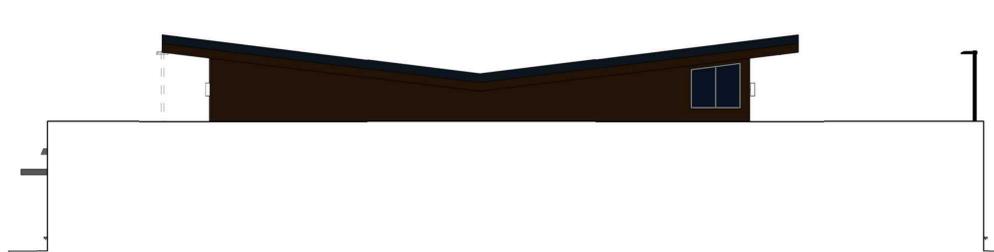
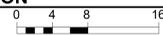
NORTH ELEVATION
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



WEST ELEVATION
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



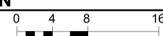
SOUTH ELEVATION
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



EAST CLERESTORY ELEVATION
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



EAST ELEVATION
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



PROJECT DATE:		DRAWN BY:		DESIGNED BY:		CHECKED BY:	
09/30/2020		JLP		ECA		ECA	

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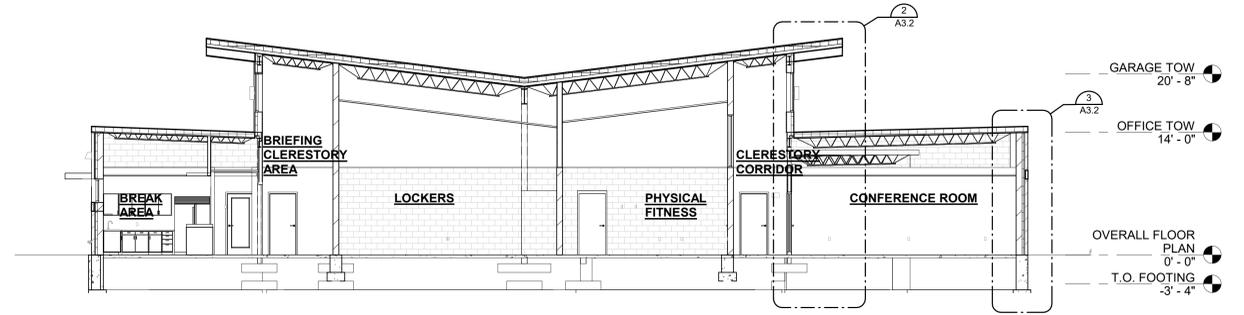
EXTERIOR ELEVATIONS

PROJECT NO:
01621002
SHEET
A2.1



1 SECTION THROUGH COMMUNITY ROOM

A3.1 1/8" = 1'-0" (30"x42")
1/16" = 1'-0" (15"x21")



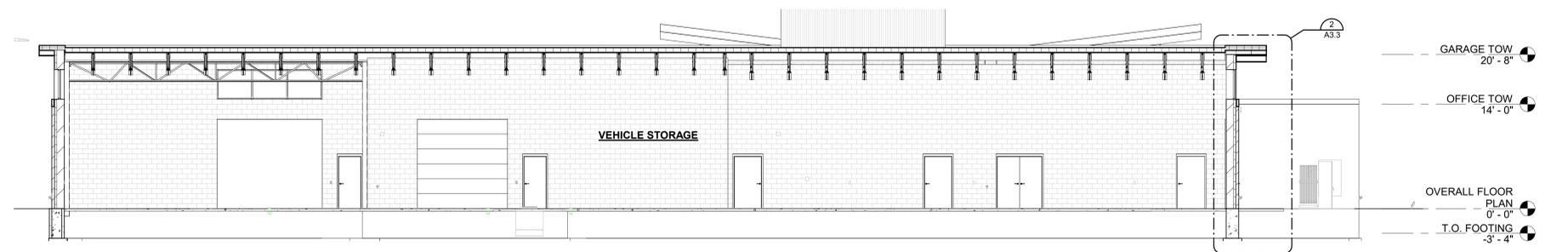
2 BUILDING CROSS SECTION

A3.1 1/8" = 1'-0" (30"x42")
1/16" = 1'-0" (15"x21")



3 BUILDING LONGITUDINAL SECTION

A3.1 1/8" = 1'-0" (30"x42")
1/16" = 1'-0" (15"x21")



4 SECTION THROUGH VEHICLE STORAGE

A3.1 1/8" = 1'-0" (30"x42")
1/16" = 1'-0" (15"x21")

NOTE: THESE ARE PRELIMINARY TO REPRESENT THE BUILDING ROOF LINES. INTERIOR DEVELOPMENT WILL TAKE PLACE IN THE NEXT PHASE OF DESIGN.

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DESIGNED BY	ECA	CHECKED BY	ECA	
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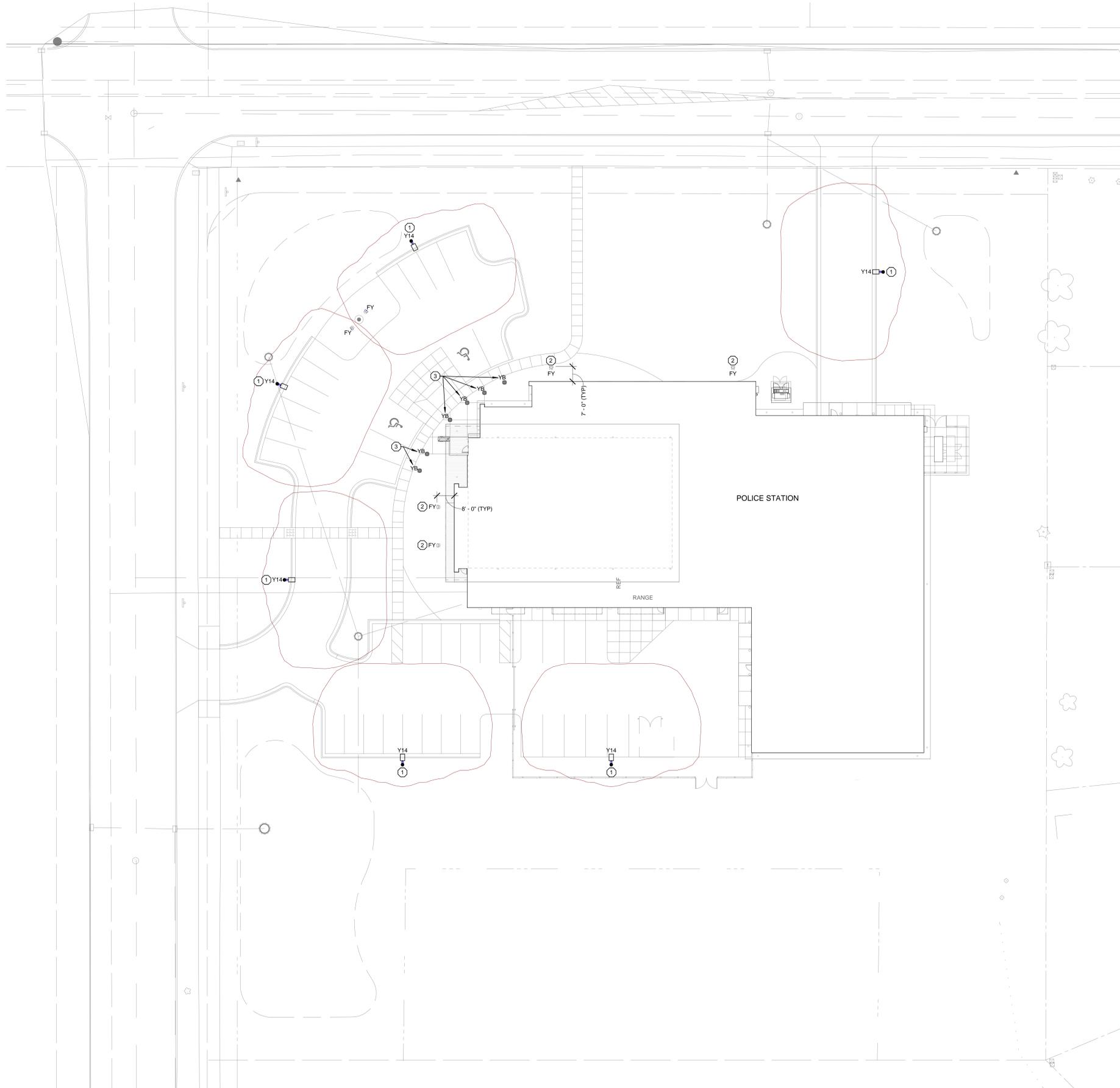


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CROSS SECTIONS

PROJECT NO:
01621002
SHEET
A3.1



- GENERAL NOTES:**
- UNLESS SHOWN OTHERWISE, ALL WIRING SHOWN IS (2/#10 AND #10 GROUND IN 1" PVC).
 - INSTALL PULL CORD IN ALL EMPTY CONDUITS.
 - UNLESS SHOWN OTHERWISE, ALL CONDUITS BURIED 2'-6" BELOW FINISHED GRADE.
 - PROVIDE SITE LIGHTING CONTROL PANEL PER DETAIL ³/_{E4.0}.
 - E.C. IS RESPONSIBLE FOR ALL WORK REQUIRED TO BRING SITE EXCAVATION AND TOPPING BACK TO ORIGINAL CONDITION IF TRENCHING IS DONE ON COMPACTED SURFACES.

- PLAN NOTES:** [⊗]
- PROVIDE POLE MOUNTED CONCRETE BASE PER DETAIL ⁴/_{E4.0}.
 - PROVIDE GROUND MOUNTING FIXTURE BASE PER DETAIL ⁵/_{E4.0}.
 - PROVIDE BOLLARD MOUNTED FIXTURE BASE PER DETAIL ¹²/_{E4.0}.

ELECTRICAL SITE PLAN
1" = 20'-0"

SHEET LIST	
Sheet Number	Sheet Name
E1.0	SITE PLAN
E1.1	OVERALL FLOOR PLAN
E1.2L	OVERALL FLOOR PLAN - LIGHTING
E1.2P	OVERALL FLOOR PLAN - POWER
E2.0	OVERALL FLOOR PLAN - FIRE ALARM
E2.1	FIRE ALARM DETAILS
E3.0	ONE-LINE DIAGRAM
E3.1	PANEL SCHEDULES
E4.0	DETAILS
E4.1	DETAILS
E4.2	SYMBOLS LIST & FIXTURE SCHEDULE

PROJECT DATE:	09/03/2020	DRAWN BY:	Author	No.	DATE
		DESIGNED BY:	Designer		
		CHECKED BY:	Checker		

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BY **MSA**
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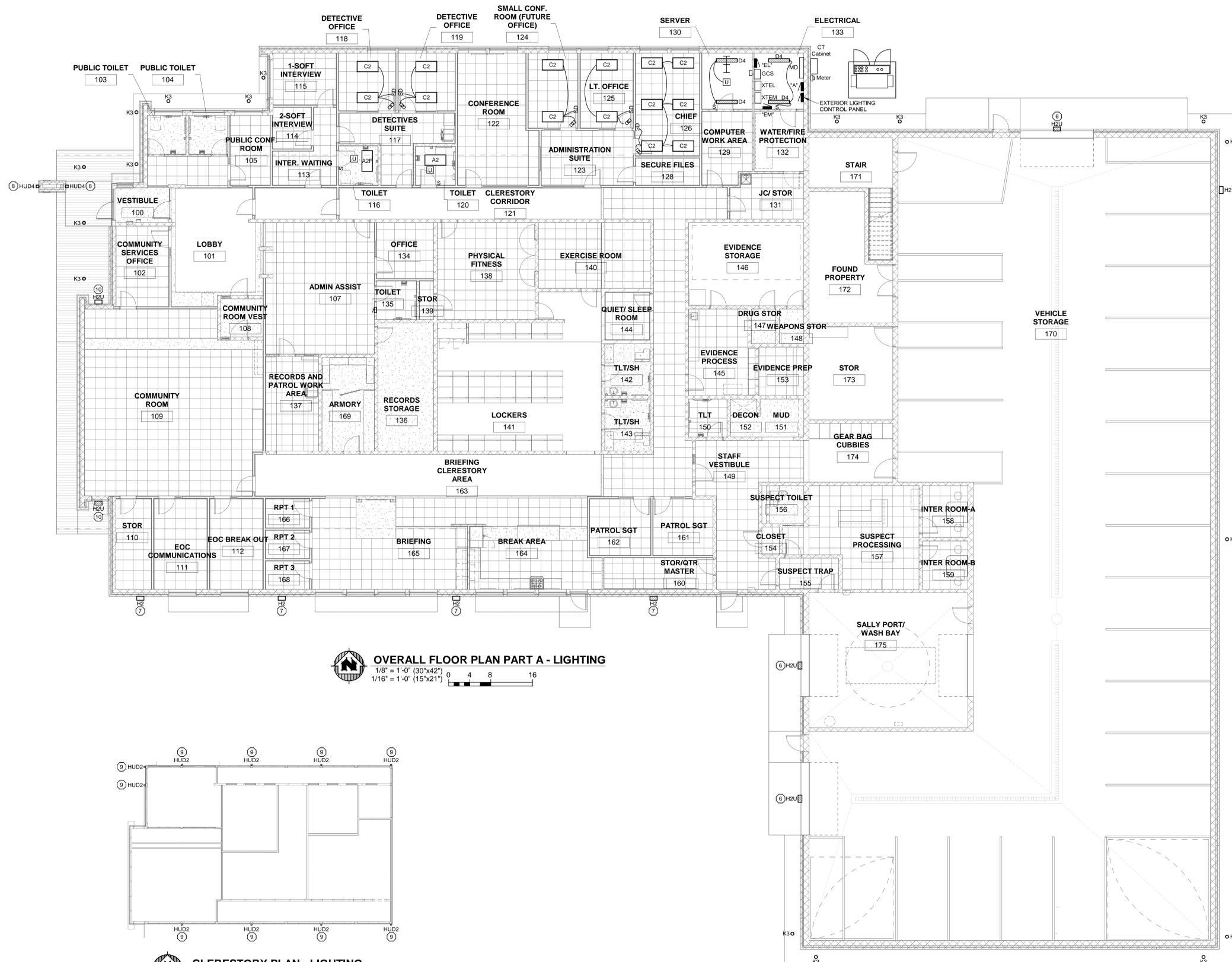
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SITE PLAN

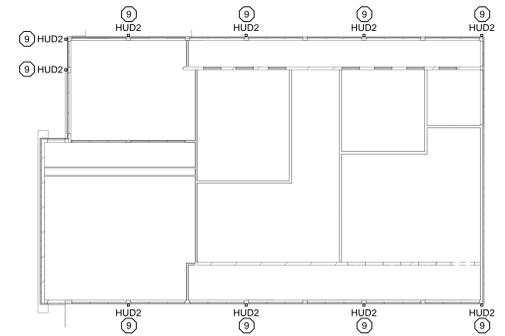
PROJECT NO:	01621002
SHEET:	E1.0

- GENERAL NOTES:**
- ALL EXTERIOR LIGHTING AND BUILDING PERIMETER LIGHTING FIXTURES SHALL BE CIRCUITED WITH THREE WIRES PLUS GROUND FOR FUTURE CONTROL CAPABILITY. SEE DETAIL (E40) CONTROLS ARE LOCATED NEXT TO PANEL (#10 WIRE MINIMUM).
 - ALL LIGHTING FIXTURES IN MECHANICAL ROOMS SHALL BE LAID OUT ON SITE AND DETERMINED BY THE MECHANICAL EQUIPMENT IN ROOM.
 - ALL EXIT LIGHTS THIS SHEET SHALL BE CIRCUITED TO
 - WHERE SHOWN, PROVIDE DUAL LEVEL LIGHTING PER DETAIL
 - SHADED FIXTURE () INDICATES FIXTURE CONNECTED TO EMERGENCY/NIGHT LIGHT CIRCUIT.
 - IN ROOMS WITH OCCUPANCY SENSORS, GENERAL ILLUMINATION IN ROOM SHALL BE CONTROLLED BY THE SENSOR THIS INCLUDES EMERGENCY LIGHTING IF SHOWN. PROVIDE A SECOND CONTACTOR THAT WILL BE USED TO BY THE HVAC CONTRACTOR TO PROVIDE AN INPUT INTO THE BUILDING AUTOMATION SYSTEM. CONTRACTOR TO DETERMINE BEST LOCATION FOR SENSOR IN FIELD WITH MANUFACTURE. SEE DETAIL (E40)
 - SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF CEILING MOUNTED LIGHT FIXTURES.

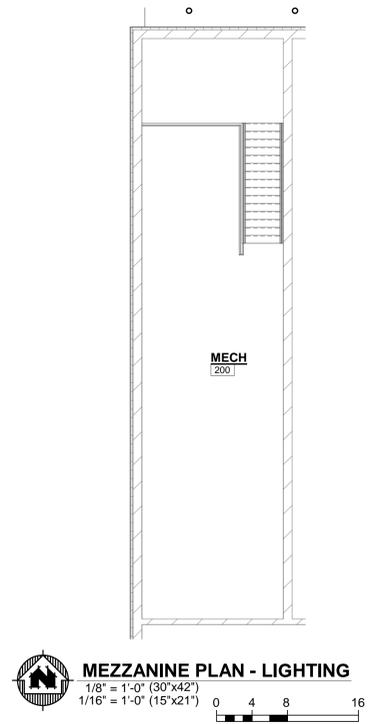
- PLAN NOTES:**
- CONTROL THROUGH BYPASS CONTROLLER PER DETAIL (E41)
 - MOTION DETECTION SHALL CONTROL ALL LIGHTING IN THIS AREA.
 - CONTROL THROUGH BAS SYSTEM. ROUTE THROUGH RELAY PER DETAIL
 - MOUNT AT ELEVATION OF 110'-0" TO CENTER OF FIXTURE.
 - IN THIS ROOM, CHAIN HANG FIXTURES AT 10'-0" AFF TO BOTTOM OF FIXTURE.
 - WALL MOUNT FIXTURE AT 13'-0" AFF TO BOTTOM OF FIXTURE.
 - WALL MOUNT FIXTURE AT 11'-0" AFF TO BOTTOM OF FIXTURE.
 - WALL MOUNT FIXTURE AT 7'-6" AFF TO BOTTOM OF FIXTURE.
 - WALL MOUNT FIXTURE AT 17'-6" AFF TO BOTTOM OF FIXTURE.
 - WALL MOUNT FIXTURE AT 9'-0" AFF TO BOTTOM OF FIXTURE.



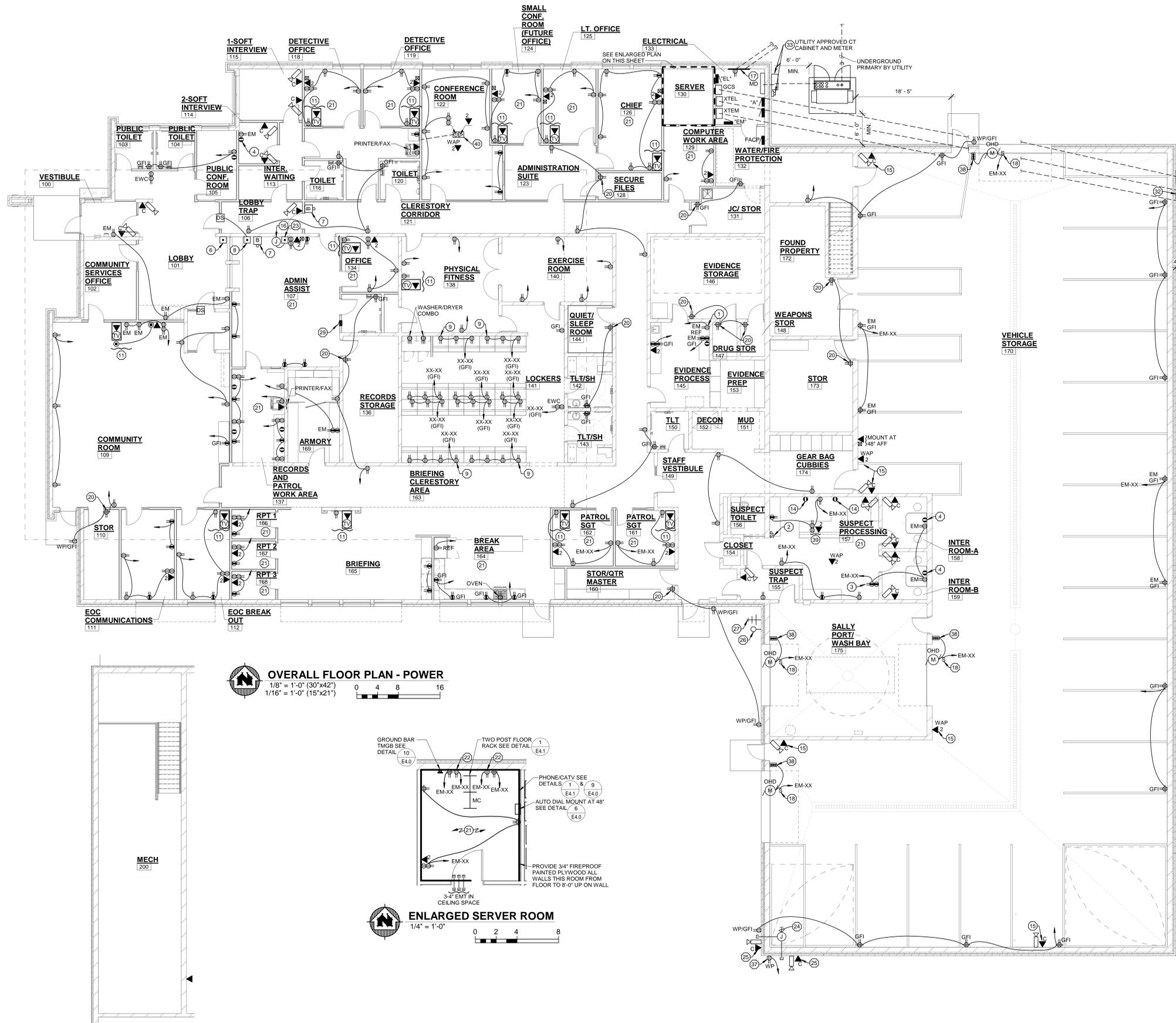
OVERALL FLOOR PLAN PART A - LIGHTING
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



CLERESTORY PLAN - LIGHTING
 1/16" = 1'-0" (30"x42")
 1/32" = 1'-0" (15"x21")



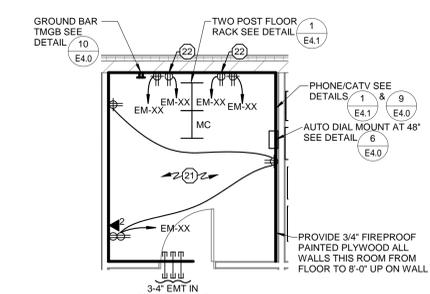
MEZZANINE PLAN - LIGHTING
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



- GENERAL NOTES:**
1. PROVIDE EXTERIOR RECEPTACLES PER DETAIL (E4.0).
 2. ALL CONDUITS STUBBED OUT OF BUILDING SHALL BE DONE PER DETAIL (E4.0).
 3. CONFIRM EXACT LOCATION OF ALL OUTLETS IN OFFICES WITH OWNER PRIOR TO ROUGH-IN.
 4. ALL RECEPTACLES FOR ELECTRIC WATER COOLERS (EWC) TO BE ROUGHED-IN BEHIND UNIT. CONFIRM EXACT LOCATION PRIOR TO ROUGH-IN. CONFIRM RECEPTACLE OR DIRECT CONNECTION.
 5. ALL RECEPTACLES MOUNTED WITHIN 6 FEET OF SINKS SHALL BE GFI TYPE.
 6. ALL LOW VOLTAGE CABLING IN AREAS WITH EXPOSED STRUCTURE SHALL BE IN CONDUIT.
 7. ROUTE ALL DATA CABLING BACK TO MC RACK. SEE DETAIL (E4.1).
 8. PROVIDE PIGTAIL ON CAMERA END AND COIL 10' OF SPARE CABLE AT THIS LOCATION.
 9. ROUTE ALL DISPATCH RADIO WIRE BACK TO MC RACK. SEE DETAIL (E4.2).

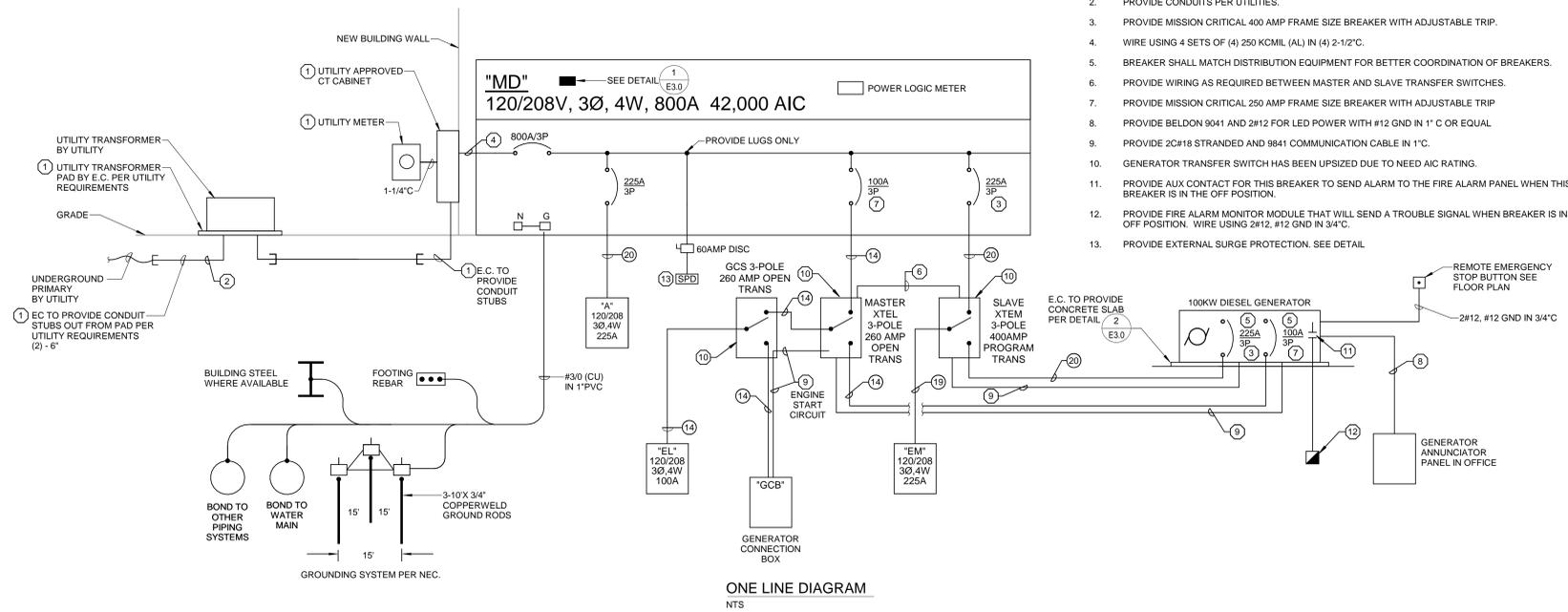
- PLAN NOTES:**
1. PROVIDE RECEPTACLE FOR UNDERCOUNTER FRIDGE.
 2. PLUMBING SOLENOID VALVE SWITCH (PILOT HANDLE), CONNECT TO SOLENOID VALVE, CONNECT TO CIRCUIT XX-XX PROVIDE ENGRAVED LABEL "WATER".
 3. RECEPTACLE FOR INTOXIMETER.
 4. PROVIDE 4X4 BOX WITH 1/2" C STUBBED INTO CEILING SPACE FOR MICROPHONE AT 44" TO TOP.
 5. PROVIDE DATA OUTLET MOUNT AT 10'-0".
 6. PROVIDE DOOR BELL BUTTON, MOUNT AT 44" TO CENTER SEE DETAIL (E4.0).
 7. PROVIDE DOOR BELL, SEE DETAIL (E4.0).
 8. PROVIDE BUTTON FOR DOOR STRIKE SEE DETAIL (E4.1).
 9. PROVIDE OUTLET IN LOCKER, COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN TYPICAL.
 10. MOUNT 1-GANG BOX AT 10'-0" AFF TO BOTTOM. PROVIDE SPEAKER WIRE IN 1/2" C BACK TO J-BOX SHOWN PER PLAN NOTE 20. SEE DETAIL (E4.2).
 11. MOUNT AT 66" AFF FLOOR TO BOTTOM.
 12. MOUNT AT 9'-0" AFF.
 13. PROVIDE HDMI CABLE WITH FEMALE CONNECTION ON END MOUNTED ON FACE PLATE. MOUNT EACH IN A BLANK BOX.
 14. PROVIDE 1-GANG BOX WITH 1/2" C INTO CEILING SPACE FOR INTERVIEW CAMERA AND SOUND RECORDING ACTIVATION SWITCH. MOUNT AT 44" TO TOP.
 15. MOUNT AT 10'-0" AFF TO BOTTOM.
 16. PROVIDE 1-GANG BOX WITH 1/2" C STUBBED INTO CEILING SPACE.
 17. PROVIDE TELEPHONE AND CATV SERVICE ENTRANCE PER DETAIL (E4.0).
 18. EC TO PROVIDE TOGGLE DISCONNECT SWITCH.
 19. PROVIDE A 2-GANG BLANK BOX FOR OWNER'S STEREO SYSTEM.
 20. LOCATE WITH ROOM LIGHT SWITCH.
 21. ALL RECEPTACLES IN THIS ROOM SHALL BE EMERGENCY (RED COLOR & RED PLATE).
 22. LOCATE OUTLET ON WALL AT 7'-0" AFF TO BOTTOM.
 23. PROVIDE PANIC BUTTON UNDER DESK ROUTE TO J-BOX SHOWN CONNECT TO AUTO DIALER IN SERVER ROOM. SEE DETAIL (E4.0).
 24. ROUTE 1/2" EMT TO LAY-IN CEILING AREA IN OFFICE.
 25. CAMERA MOUNTED IN SOFFIT. PROVIDE 1/2" CONDUIT STUB INTO LAY-IN CEILING. PROVIDE 1-GANG BOX IN SOFFIT AT CAMERA LOCATION. PROVIDE BLANK PLATE. ROUTE CAMERA CABLE THROUGH IT COORDINATE WITH OWNERS CAMERA INSTALLER.
 26. PROVIDE 1-1/2" WEATHERHEAD LOCATE AT THE ROOF PEAK UNDER THE OVERHANG. ROUTE 1-1/2" C BACK INTO THE CEILING SPACE CORRIDOR OUTSIDE OF ARMORY.
 27. RADIO ANTENNA BY OTHERS. ANTENNA WIRING BY EC. PROVIDE RG70 COAX (PLENUM RATED) 50 OR 60 OHMS PROVIDE MALE BARREL CONNECTORS ON ENDS COIL 10' OF SPARE COAX IN CORRIDOR CEILING SPACE.
 28. PROVIDE A FLUSH 4"x4"x4" BOX MOUNTED AT 22" AFF TO TOP WITH 1-1/2" C STUBBED INTO CORRIDOR AREA FOR RADIO ANTENNA WIRING STATE PER PLAN NOTE 34. PROVIDE BLANK DECORATIVE COVER WITH 3/4" BUSHED HOLE.
 29. PROVIDE FLUSH MOUNTED GENERATOR ANNUNCIATOR PANEL MOUNT AT 48" AFF TO TOP. LOCATE IN OFFICE.
 30. PROVIDE TWO 1-1/4" PVC CONDUIT STUBBED OUT OF THE BUILDING FOR FUTURE ELECTRICAL EQUIPMENT.
 31. MOUNT IN OVERSHELF. SEE ARCHITECTURAL ELEVATIONS FOR LOCATION.
 32. EMERGENCY STOP FOR GENERATOR. MOUNT AT 48" AFF TO TOP. PROVIDE ENGRAVED LABEL.
 33. MOUNT METER AND CT IN BACK UP WALL SO FROM METER TO CT CABINET IS FLUSH IN WALL. ALSO ALL CONDUITS FOR SECONDARY (BOTTOM OF CT) SHALL BE POURED IN FOUNDATION WALL.
 34. MOUNT DEVICES AT 56" AFF TO CENTER IN CABINET SEE ARCHITECTURAL ELEVATION OF XX/XX FOR LOCATION.
 35. PROVIDE PILOT HANDLED SWITCH NEXT TO PANEL "A" THIS SWITCH SHALL CONTROL A CONTACTOR FOR THE EXTERIOR SOFFIT LIGHTS. LABEL THIS SWITCH "SOFFIT REC".
 36. PROVIDE A CONTACTOR (TWO 4-POLE) IN A NEMA 1 ENCLOSURE AND LABEL SOFFIT RECEPTACLES CONTROL THROUGH PILOT SWITCH SHOWN PER PLAN NOTE 35.
 37. PROVIDE A DUPLEX RECEPTACLE MOUNTED FACE DOWN IN SOFFIT (FOR FUTURE GUTTER HEAT TAPE) PROVIDE WEATHERPROOF FLIP UP COVERS FOR THIS RECEPTACLE WIRE THROUGH CONTACTOR STATE PER PLAN NOTE 36 CONNECT TO GFI BREAKER.
 38. UP/STOP/DN SWITCH PROVIDED WITH OHD E.C. TO INSTALL.
 39. FLUSH MOUNT DEVICES IN CABINET FEED UNDER FLOOR UP TO WALL INTO CEILING SPACE.
 40. E.C. TO PROVIDE TYPE S FLOOR BOX. VERIFY LOCATION PRIOR TO ROUGH-IN. USE 3/4" C FOR POWER AND 1-1/4" C FOR DATA. ROUTE UNDER FLOOR, UP WALL INTO CEILING SPACE.

OVERALL FLOOR PLAN - POWER
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



ENLARGED SERVER ROOM
 1/4" = 1'-0"

MEZZANINE PLAN - POWER
 1/8" = 1'-0" (30"x42")
 1/16" = 1'-0" (15"x21")



- ONE-LINE PLAN NOTES:**
1. PROVIDE PER UTILITY REQUIREMENTS.
 2. PROVIDE CONDUITS PER UTILITIES.
 3. PROVIDE MISSION CRITICAL 400 AMP FRAME SIZE BREAKER WITH ADJUSTABLE TRIP.
 4. WIRE USING 4 SETS OF (4) 250 KCMIL (AL) IN (4) 2-1/2" C.
 5. BREAKER SHALL MATCH DISTRIBUTION EQUIPMENT FOR BETTER COORDINATION OF BREAKERS.
 6. PROVIDE WIRING AS REQUIRED BETWEEN MASTER AND SLAVE TRANSFER SWITCHES.
 7. PROVIDE MISSION CRITICAL 250 AMP FRAME SIZE BREAKER WITH ADJUSTABLE TRIP.
 8. PROVIDE BELDON 9041 AND 2#12 FOR LED POWER WITH #12 GND IN 1" C OR EQUAL.
 9. PROVIDE 2C#18 STRANDED AND 9841 COMMUNICATION CABLE IN 1" C.
 10. GENERATOR TRANSFER SWITCH HAS BEEN UPSIZED DUE TO NEED AIC RATING.
 11. PROVIDE AUX CONTACT FOR THIS BREAKER TO SEND ALARM TO THE FIRE ALARM PANEL WHEN THIS BREAKER IS IN THE OFF POSITION.
 12. PROVIDE FIRE ALARM MONITOR MODULE THAT WILL SEND A TROUBLE SIGNAL WHEN BREAKER IS IN THE OFF POSITION. WIRE USING 2#12, #12 GND IN 3/4" C.
 13. PROVIDE EXTERNAL SURGE PROTECTION. SEE DETAIL.

FEEDER SCHEDULE								
IDENTIFIER	AMPACITY	SINGLE-PHASE TWO-WIRE CIRCUIT		THREE-PHASE THREE-WIRE CIRCUIT		THREE-PHASE FOUR-WIRE CIRCUIT		EQUIPMENT GROUNDING CONDUCTOR
		CONDUIT	CIRCUIT CONDUCTORS	CONDUIT	CIRCUIT CONDUCTORS	CONDUIT	CIRCUIT CONDUCTORS	
COPPER CONDUCTORS								
1	10	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
2	15	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
3	20	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
4	25	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10
5	30	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10
6	35	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10
7	40	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10
8	45	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10
9	50	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10
10	60	3/4"	(2) #6	3/4"	(3) #6	1"	(4) #6	#10
11	70	1"	(2) #4	1"	(3) #4	1-1/4"	(4) #4	#8
12	80	1"	(2) #4	1"	(3) #4	1-1/4"	(4) #4	#8
13	90	1"	(2) #3	1"	(3) #3	1-1/4"	(4) #3	#8
14	100	1-1/4"	(2) #3	1-1/4"	(3) #3	1-1/4"	(4) #3	#8
ALUMINUM CONDUCTORS								
15	110	1-1/4"	(2) #10	1"	(3) #10	2"	(4) #10	#4
16	125	1-1/2"	(2) #10	2"	(3) #10	2"	(4) #10	#4
17	150	1-1/2"	(2) #10	2"	(3) #10	2"	(4) #10	#4
18	175	N/A	N/A	2"	(3) #10	2-1/2"	(4) #10	#4
19	200	N/A	N/A	2-1/2"	(3) 250KCMIL	2-1/2"	(4) 250KCMIL	#4
20	225	N/A	N/A	2-1/2"	(3) 300KCMIL	2-1/2"	(4) 300KCMIL	#2
21	250	N/A	N/A	2-1/2"	(3) 350KCMIL	3"	(4) 350KCMIL	#2
22	300	N/A	N/A	3"	(3) 500KCMIL	3"	(4) 500KCMIL	#2
23	350	N/A	N/A	(2) 2"	2 SETS OF (3) #40	(2) 2-1/2"	2 SETS OF (4) #40	#1
24	400	N/A	N/A	(2) 2-1/2"	2 SETS OF (3) 250KCMIL	(2) 2-1/2"	2 SETS OF (4) 250KCMIL	#1
25	450	N/A	N/A	(2) 2-1/2"	2 SETS OF (3) 300KCMIL	(2) 2-1/2"	2 SETS OF (4) 300KCMIL	#10
26	500	N/A	N/A	(2) 2-1/2"	2 SETS OF (3) 350KCMIL	(2) 3"	2 SETS OF (4) 350KCMIL	#10
27	600	N/A	N/A	(2) 3"	2 SETS OF (3) 500KCMIL	(2) 3-1/2"	2 SETS OF (4) 500KCMIL	#20
28	700	N/A	N/A	(3) 2-1/2"	3 SETS OF (3) 350KCMIL	(3) 3"	3 SETS OF (4) 350KCMIL	#30
29	800	N/A	N/A	(4) 2-1/2"	4 SETS OF (3) 250KCMIL	(4) 2-1/2"	4 SETS OF (4) 250KCMIL	#30
30	900	N/A	N/A	(4) 2-1/2"	4 SETS OF (3) 300KCMIL	(4) 2-1/2"	4 SETS OF (4) 300KCMIL	#40
31	1000	N/A	N/A	(4) 2-1/2"	4 SETS OF (3) 350KCMIL	(4) 3"	4 SETS OF (4) 350KCMIL	#40
32	1200	N/A	N/A	(4) 3"	4 SETS OF (3) 500KCMIL	(4) 3-1/2"	4 SETS OF (4) 500KCMIL	350KCMIL
33	1600	N/A	N/A	(6) 2-1/2"	6 SETS OF (3) 400KCMIL	(6) 3"	6 SETS OF (4) 400KCMIL	350KCMIL
34	1800	N/A	N/A	(6) 3"	6 SETS OF (3) 500KCMIL	(6) 3-1/2"	6 SETS OF (4) 500KCMIL	400KCMIL
35	2000	N/A	N/A	(6) 3"	6 SETS OF (3) 600KCMIL	(6) 3-1/2"	6 SETS OF (4) 600KCMIL	400KCMIL
36	2500	N/A	N/A	(8) 3"	8 SETS OF (3) 600KCMIL	(8) 3-1/2"	8 SETS OF (4) 600KCMIL	600KCMIL
37	3000	N/A	N/A	(10) 3-1/2"	10 SETS OF (3) 500KCMIL	(10) 3-1/2"	10 SETS OF (4) 500KCMIL	600KCMIL
38	4000	N/A	N/A	(12) 3-1/2"	12 SETS OF (3) 600KCMIL	(12) 4"	12 SETS OF (4) 600KCMIL	800KCMIL

PLAN NOTATION:
 ◇ SINGLE-PHASE, TWO-WIRE FEEDER, NUMBER IS THE FEEDER IDENTIFIER
 □ THREE-PHASE, THREE-WIRE FEEDER, NUMBER IS THE FEEDER IDENTIFIER
 ○ THREE-PHASE, FOUR-WIRE FEEDER, NUMBER IS THE FEEDER IDENTIFIER

