

**GENERAL SITE NOTES:**

THE REQUIREMENTS AND INFORMATION SET OUT BELOW ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND DO NOT ENCOMPASS ALL PROJECT REQUIREMENTS DESCRIBED BY THE PROJECT PLANS AND SPECIFICATIONS AND/OR APPLICABLE LAWS, REGULATIONS AND/OR BUILDING CODES.

- CONSTRUCTION OF ALL PROJECT SITE IMPROVEMENTS SUBJECT TO ADA ACCESS COMPLIANCE, INCLUDING ACCESSIBLE PATH OF TRAVEL, CURB RETURNS, PARKING STALL(S) AND UNLOADING AREAS, BARRIER FREE AMENITIES AND/OR OTHER APPLICABLE SITE IMPROVEMENTS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT, CALIFORNIA TITLE 24, AND THE CALIFORNIA BUILDING CODE, CURRENT EDITION(S).
- CONTRACTOR SHALL FIELD VERIFY ALL GRADES AND SLOPES PRIOR TO THE PLACEMENT OF CONCRETE AND/OR PAVEMENT FOR CONFORMANCE WITH ADA ACCESS COMPLIANCE REQUIREMENTS. EXAMPLES OF MINIMUM AND MAXIMUM LIMITS RELATED TO ADA ACCESS COMPLIANCE INCLUDE, BUT ARE NOT LIMITED TO:
  - ACCESSIBLE PATH OF TRAVEL CROSS-SLOPE SHALL NOT EXCEED 2%
  - ACCESSIBLE PATH OF TRAVEL LONGITUDINAL SLOPES SHALL NOT EXCEED 5%
  - RAMP LONGITUDINAL SLOPES SHALL NOT EXCEED 8.33%
  - WALKS SHALL NOT HAVE LESS THAN 48 INCHES IN UNOBSTRUCTED WIDTH
  - ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION
  - LANDINGS AT THE TOP AND BOTTOM OF ACCESSIBLE RAMPS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION
  - GUTTERS AND ROAD SURFACES DIRECTLY ADJACENT TO AND WITHIN 2 FEET OF A CURB RAMP SHALL HAVE A COUNTER SLOPE NOT TO EXCEED 5%
  - OPEN PAVED PLAY AREAS SHALL NOT EXCEED 2% IN ANY DIRECTION
- CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IDENTIFIED BY THE PROFESSIONAL ENGINEERING SEAL AND SIGNATURE ON THESE PLANS, OF ANY SITE CONDITION(S) AND/OR DESIGN INFORMATION THAT PREVENTS THE CONTRACTOR FROM COMPLYING WITH THE LAWS, REGULATIONS AND/OR BUILDING CODES GOVERNING ADA ACCESS COMPLIANCE.
- DRAINAGE SHALL NOT BE ALLOWED ONTO ADJACENT PROPERTY.
- ALL FILL MATERIAL USED SHALL BE PLACED IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS. A SOILS COMPACTION REPORT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS REQUIRED BY THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AS REQUIRED BY THE PROJECT SPECIFICATIONS, AND BY GOVERNING PUBLIC AGENCIES.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO START OF ANY WORK.
- CONTRACTOR SHALL NOTIFY THE SCHOOL DISTRICT TO TURN OFF IRRIGATION A MINIMUM OF 5 DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL COORDINATE WITH THE SCHOOL DISTRICT THROUGHOUT THE COURSE OF THE PROJECT FOR WATERING AND NON-WATERING TIMES. CONTRACTOR SHALL NOTIFY THE DISTRICT AS SOON AS WORK IS COMPLETED TO THE POINT WHERE IRRIGATION SYSTEMS MAY BE TURNED BACK ON.
- ENSURE THAT ALL EXISTING STRIPING IS NOT VISIBLE AFTER APPLYING SEAL COAT AND PRIOR TO RESTRIPING AND REPAINTING. OTHERWISE, ADDITIONAL SEAL COAT APPLICATION MAY BE REQUIRED.
- PRIOR TO ACCEPTANCE OF NEW PAVING AND APPLICATION OF SEAL COAT AND/OR STRIPING, THE CONTRACTOR SHALL COMPLETE A WATER TEST OF THE NEW PAVEMENT WITH THE ENGINEER OF RECORD PRESENT TO VERIFY THAT NO LOW SPOTS OR "BIRD BATHS" ARE PRESENT, PER THE PROJECT SPECIFICATIONS.
- LAYOUT ALL PAVEMENT MARKINGS TO MATCH EXISTING UNLESS NOTED OTHERWISE ON PLANS.
- PAINT ALL CURBS AND WHEELSTOPS TO MATCH EXISTING WITHIN PROJECT LIMITS, UNLESS SHOWN OTHERWISE ON THE PLANS.
- ALL CONCRETE SHALL HAVE WEAKENED PLANE JOINTS AT 10 FEET OR LESS ON CENTER AND ONE HALF INCH PREMOLDED EXPANSION JOINTS AT 30 FEET OR LESS MINIMUM, MATCH EXISTING SCORE PATTERN DIMENSIONS ON ALL CONCRETE WALKS AND PAVEMENT.
- NO CONCRETE MAY BE POURED UNTIL ALL FORMS AND REINFORCEMENTS HAVE BEEN REVIEWED AND APPROVED BY THE PROJECT INSPECTOR.
- REPLACE ALL DAMAGED TURF AND IRRIGATION FACILITIES RESULTING FROM THE WORK REQUIRED.
- ADJUST ALL UTILITY LIDS TO FINISHED GRADE WITHIN CONSTRUCTION AREA PER DETAIL [E(X)100] UNLESS NOTED OTHERWISE. REMOVE AND REPLACE ALL BROKEN OR DAMAGED LIDS AND BOXES. ALL LIDS WITHIN TRAFFIC AREAS SHALL BE TRAFFIC RATED.
- ANY EXISTING UTILITIES AND/OR IMPROVEMENTS WHICH ARE TO REMAIN, THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE OWNER AND AGENCY HAVING AUTHORITY, AT THE CONTRACTOR'S SOLE EXPENSE.
- ANY EXISTING UTILITIES AND/OR IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE OWNER AND AGENCY HAVING AUTHORITY, AT THE CONTRACTOR'S SOLE EXPENSE.
- CONTRACTOR TO MATCH EXISTING PAVEMENT GRADE AT ALL NEW PAVEMENT LOCATIONS UNLESS NOTED OTHERWISE ON THE PLANS.
- ASPHALT CONCRETE REMOVAL AND REPLACEMENT LIMITS SHOWN ARE APPROXIMATE AND ARE BASED ON PAVEMENT CONDITIONS OBSERVED DURING A PRE-DESIGN SITE REVIEW. ADJUST LOCATIONS AND LIMITS AS REQUIRED BY ACTUAL FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DOWELED CONNECTION AT JOINT OF NEW CONCRETE TO EXISTING CONCRETE PER DETAIL [D(X)100]

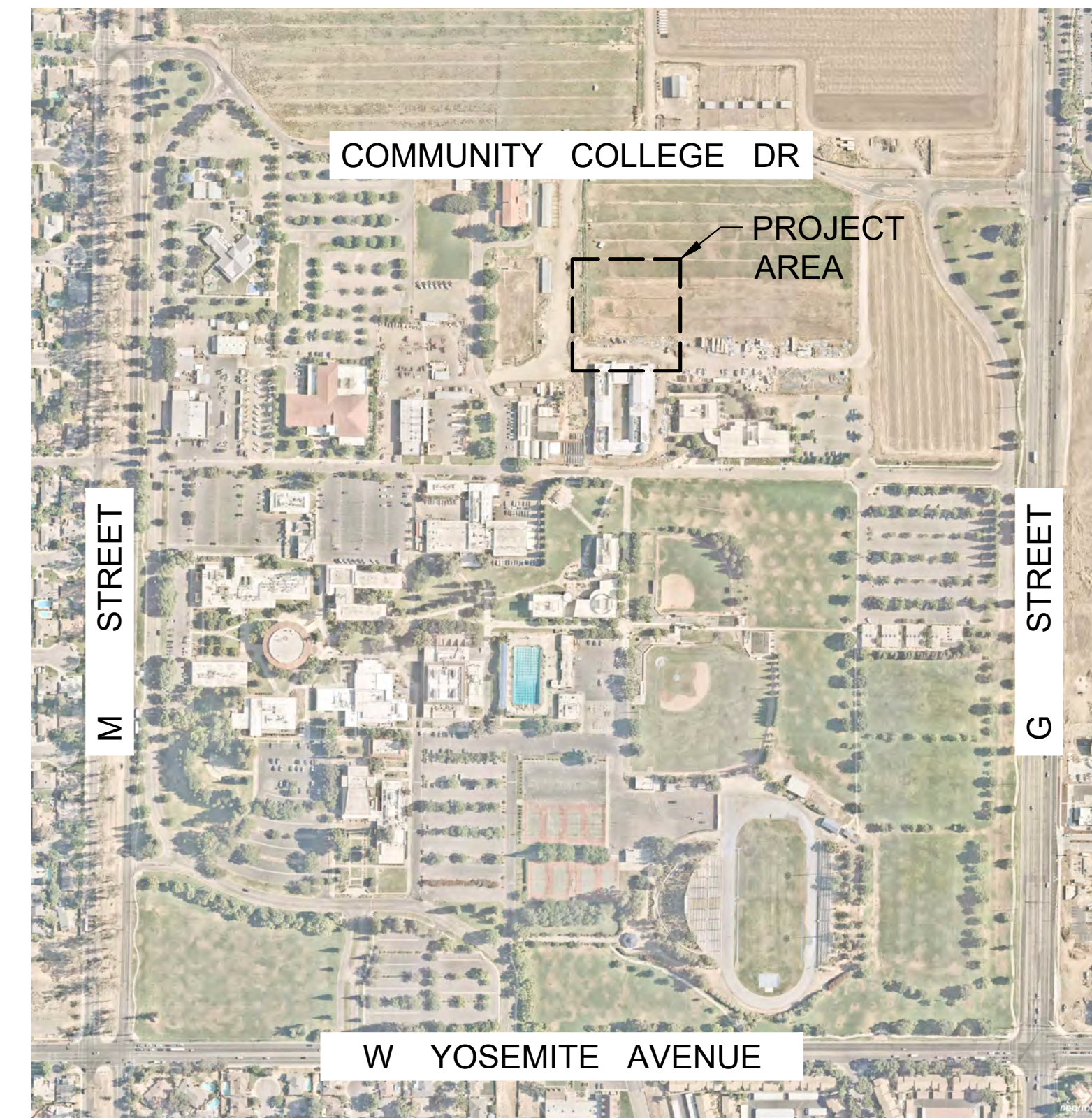
**GENERAL NOTES:**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE CONSTRUCTION DRAWINGS, THE CONTRACT SPECIFICATIONS AND, WHERE APPLICABLE, THE CITY STANDARDS AND THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE SCHOOL DISTRICT'S USE OF THE FACILITIES AND OTHER CONTRACTORS WHO MAY BE DOING CONSTRUCTION WITHIN THE PROJECT SITE.
- THE CONTRACTOR SHALL CONTACT DISTRICT OFFICIALS FOR DETERMINATION OF DEPTH AND LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION IN THE PROJECT SITE.
- BEFORE COMMENCING WORK, THE CONTRACTOR SHALL NOTIFY ALL UTILITY AUTHORITIES OR UTILITY COMPANIES HAVING POSSIBLE INTEREST IN THE WORK OF THE CONTRACTOR'S INTENTION TO EXCAVATE PROXIMATE TO EXISTING FACILITIES AND THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITIES IN THE WORK AREA, NOTIFY U.S.A. AT 1(800) 642-2444, TWO (2) DAYS PRIOR TO EXCAVATION.
- ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST CURRENT CALIFORNIA BUILDING CODE (CBC).
- CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- A "DSA CERTIFIED" CLASS 3 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
- A DSA-ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION SHALL BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK (SECTION 4-317(C), PART 1, TITLE 24, CCR).
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND EMERGENCY ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

**GENERAL DEMOLITION NOTES:**

- THE "LIMIT OF DEMOLITION" SHOWN IS APPROXIMATE AND IS GENERALLY CONSIDERED TO BE THE MINIMUM REMOVAL REQUIREMENTS. CONTRACTOR MUST COORDINATE AS NOTED IN THE LEGEND.
- CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEMOLISHED MATERIALS OFF SITE.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY IMPROVEMENTS NOT SPECIFICALLY DESIGNATED FOR REMOVAL.
- THE ON-SITE UNDERGROUND UTILITIES SHOWN ON THIS SHEET ARE AT APPROXIMATE LOCATIONS. THE EXTENT, LOCATIONS AND SIZES ARE UNKNOWN. THE CONTRACTOR SHALL POTHOLE TO LOCATE AND VERIFY THE UNDERGROUND UTILITY LINES PRIOR TO REMOVAL.
- CONTRACTOR TO PROTECT AND PRESERVE IN PLACE ANY FOUND SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE RESET BY A CALIFORNIA LICENSED SURVEYOR AND THE APPROPRIATE PAPERWORK FILED WITH THE CITY OR COUNTY, AT CONTRACTOR'S EXPENSE.
- ALL HAZARDOUS MATERIALS ENCOUNTERED DURING SITE DEMOLITION SHALL BE REMEDIATED AND DISPOSED OF PER STATE AND EPA REQUIREMENTS.
- REMOVE EXISTING IMPROVEMENTS AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS SHOWN ON THESE PLANS.
  - FOR CONCRETE REMOVAL, REMOVE TO THE NEXT NEAREST TOOLED JOINT OR EXPANSION JOINT OF IMPROVEMENTS DESIGNATED TO REMAIN.
  - FOR ASPHALTIC PAVEMENT REMOVAL, SAWCUT TO A STRAIGHT, CLEAN EDGE AT LOCATIONS INDICATED ON THE PLANS.

# MERCED COLLEGE GREENHOUSE COMPLEX GREENHOUSE COMPLEX



## SITE MAP

NOT TO SCALE

**SITE ADDRESS:**

MERCED COLLEGE  
3600 M STREET  
MERCED, CA. 95348

**SCOPE OF WORK:**

- CONSTRUCTION OF NEW GREENHOUSE COMPLEX INCLUDING: THREE GREENHOUSES, TWO LOAFING BARN, ONE STORAGE SHED, AND ONE DSA PRE-CHECKED SHADE CANOPY

**PROJECT CONTACTS:**

**OWNER:** MARCUS METCALF  
SR. DIRECTOR OF CAPITAL PROJECTS AND FACILITIES  
3600 M STREET  
MERCED CA 95348  
PHONE: (209) 384-6000

**CIVIL ENGINEER:** BLAIR, CHURCH & FLYNN  
CONSULTING ENGINEERS  
451 CLOVIS AVE., SUITE 200  
CLOVIS, CA 93612  
PHONE: (559) 326-1400

**ELECTRICAL ENGINEER:** THOMA ELECTRIC, INC.  
3562 EMPLEO ST.  
SAN LUIS OBISPO, CA 93406  
PHONE: (805) 543-3850

**APPLICABLE CODES:**

2022 CALIFORNIA ADMIN. CODE, TITLE 24, PART 1, CCR  
2022 CALIFORNIA BUILDING CODE, TITLE 24, PART 2, CCR

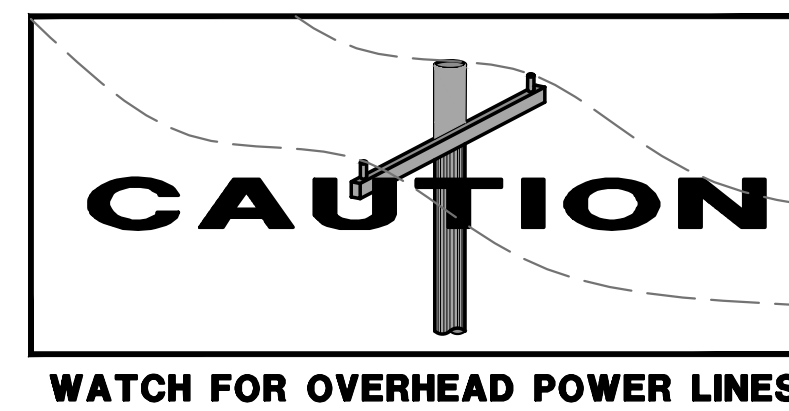
**GREENHOUSE CONTRACTOR SCOPE OF WORK:**

- INSTALL OWNER PROVIDED GREENHOUSES.
- SITE UTILITIES WILL BE PROVIDED UNDER A SEPARATE CONTRACT UP TO 5 FEET OF THE EXTERIOR OF THE GREENHOUSE BUILDINGS. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING UTILITY CONNECTIONS TO THE BUILDING.
- ALL UTILITIES AND EQUIPMENT WITHIN THE GREENHOUSE BUILDING FOOTPRINTS SHALL BE PROVIDED BY THE GREENHOUSE CONTRACTOR.

**GREENHOUSE BID ALTERNATE SCOPE OF WORK:**

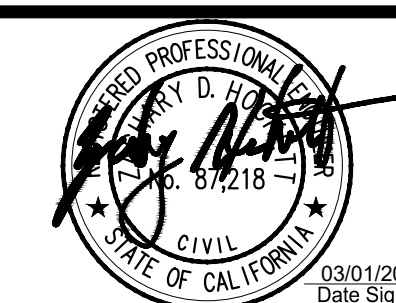
- INSTALLATION OF "GREENHOUSE 3" AND ALL ASSOCIATED EQUIPMENT AND UTILITIES WITHIN THE FOOTPRINT OF GREENHOUSE 3.

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SHEET NUMBER	SHEET TITLE
<b>CIVIL</b>	
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C100	ACCESS COMPLIANCE PLAN
C101	TOPOGRAPHIC SURVEY LEGEND
C102	TOPOGRAPHIC SURVEY
C103	DEMOLITION PLAN
C104	SITE PLAN & HORIZONTAL CONTROL
C105	GRADING AND DRAINAGE PLAN
C106	UTILITY PLAN
X100	SITE DETAILS
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<b>ARCHITECTURAL</b>	
A100	MAIN GREENHOUSE FLOOR & FOUNDATION PLANS
A101	MAIN GREENHOUSE REFLECTED CEILING PLAN
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A201	SMALL GREENHOUSE ELEVATIONS & SECTIONS
A300	AG STORAGE FOUNDATION & FLOOR & CEILING PLANS
A301	AG STORAGE ELEVATIONS & SECTION
A400	POTTING SHADE FLOOR & FOUNDATION PLAN
A401	POTTING SHADE CEILING PLAN
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E-002	ELECTRICAL SINGLE LINE DIAGRAM
E-003	PANEL SCHEDULES
E-004	PANEL SCHEDULES
E-101	ELECTRICAL SITE PLAN
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<b>DSA PRE-CHECK SHADE STRUCTURE</b>	
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LS1.1	GENERAL INFO
LS1.2	DSA 103
LS1.3	DSA 103
LS4.0	FOUNDATION PLAN
LS4.1	FRAMING AND CONNECTION DETAILS
LS4.2	MULTI RIB ROOFING PLAN
LS4.3	MEGA RIB ROOFING PLAN
LS4.4	STANDING SEAM ROOFING PLAN
LS5.0	OPTIONAL ELECTRICAL ACCESS
TOTAL SHEET COUNT: 50	



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455 Clovis Avenue,  
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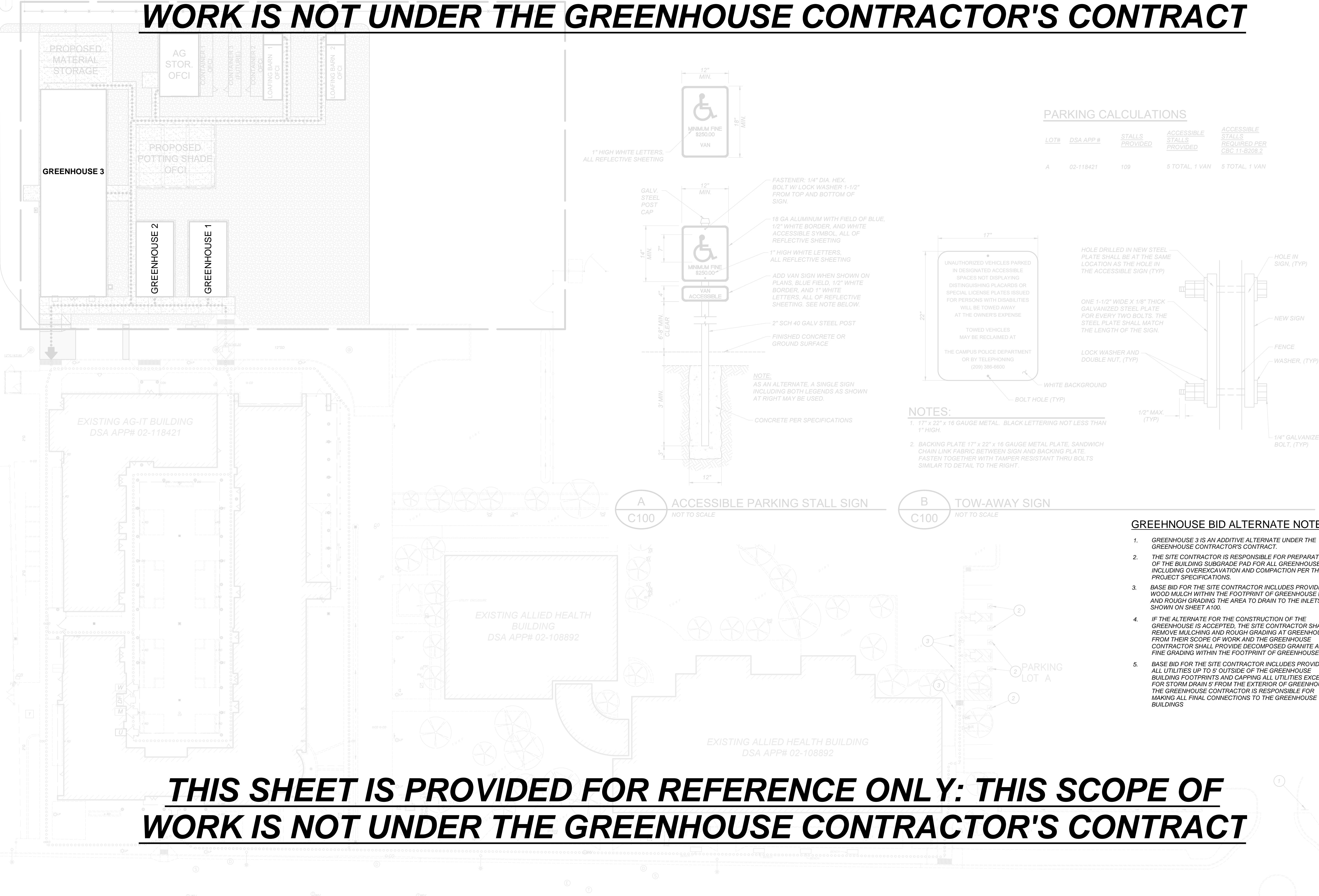
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MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
COVER SHEET	C000
DR. BY: AH	CH. BY: AH
DATE: 03/01/2024	SCALE AS NOTED



# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

FOR DSA USE ONLY  
DSA APP# 02-121754



### PARKING CALCULATIONS

LOT#	DSA APP#	STALLS PROVIDED	ACCESSIBLE STALLS PROVIDED	ACCESSIBLE STALLS REQUIRED PER CBC 11-8208.2
A	02-118421	109	5 TOTAL, 1 VAN	5 TOTAL, 1 VAN

### SITE LEGEND:

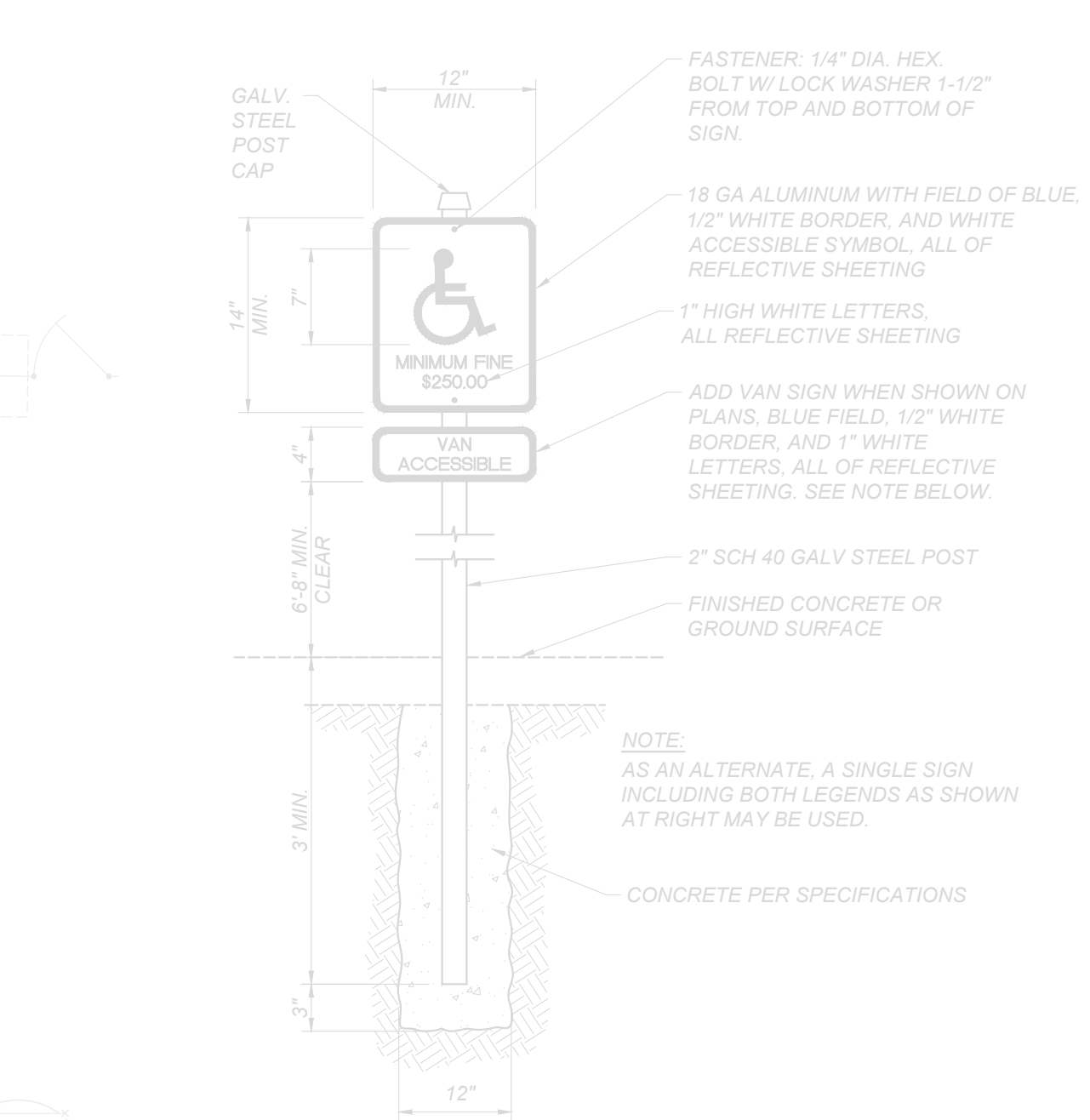
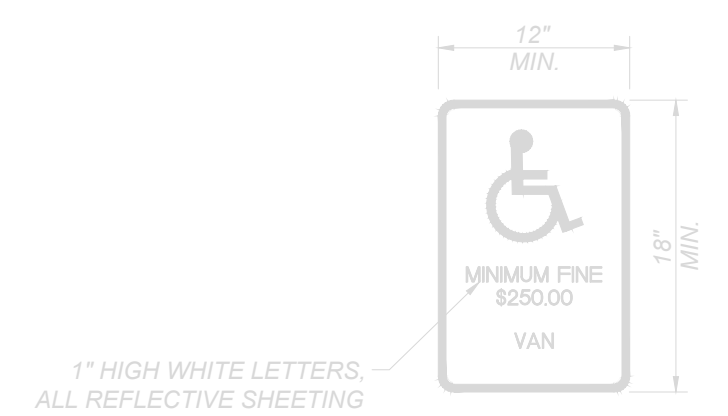
- LIMITS OF WORK
- EXISTING ACCESSIBLE PATH OF TRAVEL
- ACCESSIBLE PATH OF TRAVEL
- EXISTING ACCESSIBLE DRINKING FOUNTAIN PER DSA APP# 02-118421
- EXISTING ACCESSIBLE WOMEN'S RESTROOM PER DSA APP# 02-118421
- EXISTING ACCESSIBLE MEN'S RESTROOM PER DSA APP# 02-118421
- EXISTING ACCESSIBLE UNISEX RESTROOM PER DSA APP# 02-118421
- CONTRACTOR TO VERIFY THAT TOW AWAY SIGNAGE MEETS THE MINIMUM REQUIREMENTS OF DETAIL [B/C100]. IF SIGNAGE DOES NOT MEET THE MINIMUM REQUIREMENTS, CONTRACTOR SHALL INSTALL NEW SIGNAGE ON EXISTING POST PER DETAIL [B/C100].
- EXISTING ACCESSIBLE PARKING STALL PER DSA APP# 02-118421
- CONTRACTOR TO VERIFY THAT PARKING STALL SIGNAGE MEETS THE MINIMUM REQUIREMENTS OF DETAIL [A/C100]. IF SIGNAGE DOES NOT MEET THE MINIMUM REQUIREMENTS, CONTRACTOR SHALL INSTALL NEW SIGNAGE ON EXISTING POST PER DETAIL [A/C100].

### NOTES:

- DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE PATH-OF-TRAVEL (P.O.T.) IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE P.O.T. WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OF PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NON-COMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS, AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NON-COMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.
- DURING CONSTRUCTION, IF P.O.T. ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NON-COMPLYING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.
- THE ENGINEER HAS SURVEYED/INSPECTED THE PATH OF TRAVEL (P.O.T.) AS INDICATED ON THE PLANS AND HAS FOUND IT TO BE, OR HAS INDICATED ON THE PLANS REMEDIAL WORK WHICH WOULD CAUSE IT TO BE, A BARRIER FREE ACCESSIBLE ROUTE.
  - AT LEAST 48" IN WIDTH, OR AS APPROVED BY CODE, WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE; OR VERTICAL LEVEL CHANGES EXCEEDING 1/4"
  - WITH A FIRM, STABLE, AND SLIP RESISTANT WALKING SURFACE, WITH A FINISHING SLOPE OF 1:30 OR LESS, UNLESS OTHERWISE INDICATED, AND A GROSS SLOPE OF 1:48 OR LESS.
  - IS FREE OF OVERHEAD OBSTRUCTIONS WITHIN 80" ABOVE THE WALKING SURFACE.
  - IS FREE OF OBJECTS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE.
- PASSING SPACES (11B-403.5.3) OF 60"x60" MIN. ARE LOCATED NOT MORE THAN 200' APART, WALKS WITH CONTINUOUS GRADIENTS HAVE 60" IN LENGTH OF LEVEL AREAS (11B-403.7) NOT MORE THAN 400' APART. THERE IS NO DROP-OFF OVER 4" AT THE EDGE OF WALK OR LANDING UNLESS IDENTIFIED BY A GUARD, A HANDRAIL, OR WARNING CURB AT LEAST 6" IN HEIGHT ABOVE THE WALK (11B-303.5).

### GREENHOUSE BID ALTERNATE NOTES:

- GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
- IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCHING AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN 5' FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS.



### NOTES:

- 17" x 22" x 16 GAUGE METAL. BLACK LETTERING NOT LESS THAN 1" HIGH.
- BACKING PLATE 17" x 22" x 16 GAUGE METAL PLATE, SANDWICH CHAIN LINK FABRIC BETWEEN SIGN AND BACKING PLATE. FASTEN TOGETHER WITH TAMPER RESISTANT THRU BOLTS SIMILAR TO DETAIL TO THE RIGHT.

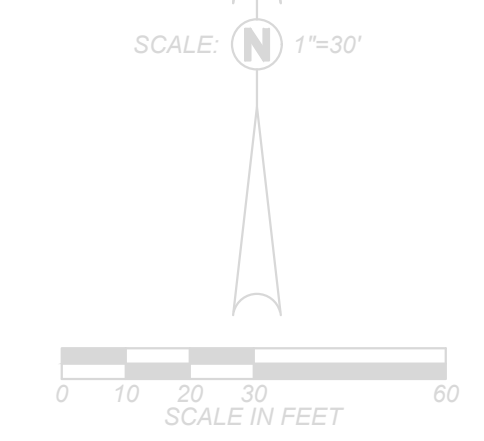
**A ACCESSIBLE PARKING STALL SIGN**  
C100 NOT TO SCALE

**B TOW-AWAY SIGN**  
C100 NOT TO SCALE



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CONSULTANT	REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX	
		GREENHOUSE COMPLEX	CONST. DOCUMENTS
		ACCESS COMPLIANCE PLAN	C100
DR. BY: AH	DATE: 03/01/2024	SCALE AS NOTED	



GENERAL TOPOGRAPHIC SURVEY LEGEND:

(NOT ALL SYMBOLS SHOWN APPEAR ON THE PLANS)

AB	ABUTMENT	PA	PATIO	BO	BOLLARD	SL	STREET LIGHT	AL	AIR LINE; SIZE AS NOTED
AC	ASPHALTIC CONCRETE	PGTH	PROPANE GAS TRENCH	CO	CLEANOUT	SLSE	PIPE SLEEVE; DIAMETER AS SHOWN	C	COMMUNICATION LINE
ACE	ASPHALTIC CONCRETE EDGE	POS	POINT ON SLOPE	CO98	COMMUNICATION PULLBOX	SL	SLOPE	350	MAJOR GRADE CONTOUR LINE
AD	ASPHALTIC CONCRETE DIKE	RCP	REINFORCED CONCRETE	CVA	COMMUNICATION VAULT	SLPB	STREET LIGHT PULLBOX	345	MINOR GRADE CONTOUR LINE
AWT	ALL-WEATHER TRACK	RCP	REINFORCED CONCRETE	312.55	SURVEY CONTROL MONUMENT	SLV	PIPE SLEEVE; DIAMETER AS SHOWN	CW 2"	CHILLED WATER LINE; SIZE AS NOTED
BD	BRIDGE DECK	RIEL	RIPARIAN EDGE OF LAKE	DF	DRINKING FOUNTAIN	S	SEWER MANHOLE	CWR 2"	CHILLED WATER RETURN LINE; SIZE AS NOTED
BFC	BOTTOM FACE OF CURB	RIEP	RIPARIAN EDGE OF POND	DS	DOORSTOP	SP	SERVICE POLE	CWS 2"	CHILLED WATER SUPPLY LINE; SIZE AS NOTED
BGST	STEPS	RIES	RIPARIAN EDGE OF STREAM	DW	DRYWELL	SPB	SIGNAL PULLBOX	---	LIMIT OF DIRT
BGTR	TOP OF ROOF	RIEW	RIPARIAN EDGE OF WETLAND	EG	ELECTRICAL GROUND	*	SPRINKLER	---	LIMIT OF TURF
BGV	BUILDING VENTS	RIFL	RIPARIAN FLOWLINE	ELC	ELECTRICAL CONDUIT	SPD	STEEL POST; DIAMETER AS SHOWN	DL 1"	DRAIN LINE; SIZE AS NOTED
BOD	BOTTOM OF DITCH	RIMC	RIPARIAN MISC.	E	ELECTRICAL METER	SS	SAND SEPARATOR; SIZE AS NOTED	EMS	EMERGENCY MANAGEMENT SYSTEM
BR	BARRICADE	RIP	RIP-RAP SLOPE PROTECTION	EPB	ELECTRICAL PULLBOX	STP	STAND PIPE; DIAMETER AS NOTED	FA	FIRE ALARM LINE
BRK	BRICK	RK	ROCK	E	ELECTRICAL VAULT LID	STUMP	TREE STUMP; DIAMETER AS SHOWN	F 8"	FIRE LINE; SIZE AS NOTED
BRK	BRICK	RW	RETAINING WALL	ETS	GAS ELECTRONIC TESTING STATION	MW	SURVEY MONUMENT WELL	FO	FIBER OPTIC LINE
BW	BARRIER WALL	SB	SPEED BUMP	FDC	FIRE DEPARTMENT CONNECTION	TEL	TELEPHONE; DIAMETER AS SHOWN	FO	FIBER OPTIC LINE
CB	CATCH BASIN	SDCD	STORM DRAIN CROSS DRAIN	Q	FIRE HYDRANT	T	TELEPHONE MANHOLE	---	DRAIN TUBE
CD	CONCRETE DRIVE APPROACH	SDFL	STORM DRAIN FLOWLINE	FP	FENCE POST	TN	TENNIS NET POLE	HW 2"	HOT WATER LINE; SIZE AS NOTED
CE	CONCRETE EDGE	SDGR	STORM DRAIN GRATE	FPD	FLAG POLE	TP	TELEPHONE POLE	HW 2"	HOT WATER RETURN LINE; SIZE AS NOTED
CE	CONCRETE EDGE	SDMG	STORM DRAIN MANHOLE W/ GRATE	GS	GAS LINE; DIAMETER AS SHOWN	TPB	TELEPHONE PULLBOX	HWS 2"	HOT WATER SUPPLY LINE; SIZE AS NOTED
CMP	CORRUGATED METAL PIPE	SSFL	SEWER FLOWLINE	G	GAS REGULATOR	TPPB	TELEVISION PULLBOX	HYD	HYDRAULIC LINE
CON	CONCRETE	SDTH	STORM DRAIN TRENCH	GLV	IRRIGATION GATE VALVE	T	TREE; SPREAD SHOWN GRAPHICALLY AND TRUNK DIAMETER AS SHOWN	ID 18"	IRRIGATION DISTRICT; SIZE AS NOTED
COTH	COMMUNICATION TRENCH	SSGT	STORM DRAIN GREASE TRAP	G	GAS METER	TSB	TELEPHONE SPLICE BOX	---	IRON FENCE
CR	CROWN OF ROAD	SSST	SEWER TANK (SEPTIC)	GDP	GOAL POST	TSP	TRAFFIC SIGNAL POLE	IRR 2"	IRRIGATION MAIN LINE; SIZE AS NOTED
CRQ	QUARTER CROWN	SSTH	SEWER TRENCH	GR	GRATE; DIAMETER AS SHOWN	TSPB	TRAFFIC SIGNAL PULLBOX	L 1"	IRRIGATION LATERAL LINE; SIZE AS NOTED
CS	CONCRETE SLAB	SWK	SIDEWALK	GS	GATE STOP	UP	UTILITY POLE	ITS	INTELLIGENT TRAFFIC SYSTEM
CULV	CULVERT	SWL	SWALE	GR	GAS RISER	V	VACUUM BREAKER	IT	JOINTLY TRENCHED UTILITIES
CW	CONCRETE WALL	TBC	TOP BACK OF CURB	GRD	GAS VALVE	V	VENT PIPE; DIAMETER AS SHOWN	OC	OVERHEAD COMMUNICATIONS LINE
DD	DOWN DRAIN	TBW	TOP BACK OF WALK	GRD	GROUNDING ROD	W	WELL	OE	OVERHEAD ELECTRIC LINE
DFL	DITCH FLOWLINE	TF	TOP OF FOOTING	GRY	GUY WIRE	WB	WATER METER	DEC	OVERHEAD ELECTRIC AND COMMUNICATION LINE
DWY	DRIVEWAY	TFC	TOP FACE OF CURB	H	HOSE BIBB	WP	WELL PUMP	DET	OVERHEAD ELECTRIC AND TELEPHONE LINE
EGTH	ELECTRICAL TRENCH	TFW	TOP FACE OF WALK	H	HANDRAIL	WPD	CIRCULAR WOOD POST; DIAMETER AS SHOWN	OETV	OVERHEAD ELECTRIC AND TELEVISION LINE
EGR	EDGE OF DIRT ROAD	TLTH	TELEPHONE TRENCH	ICB	IRRIGATION CONTROLLER	WPD	SQUARE WOOD POST; SIZE AS SHOWN	OETV	OVERHEAD ELECTRIC, TELEVISION AND TELEPHONE LINE
EGR	EDGE OF GRAVEL ROAD	TOB	TOP OF BANK	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER LINE; DIAMETER AS SHOWN	OTS	OVERHEAD TRAFFIC SIGNAL LINE
EOD	EDGE OF OILED DIRT	TOE	TOE OF SLOPE	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	OTV	OVERHEAD TELEVISION LINE
EP	EDGE OF PAVEMENT	TOP	TOP OF SLOPE	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	OU	OVERHEAD UTILITY LINE
ES	EDGE OF SHOULDER	TRDD	TRUNCATED DOMES	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	P 8"	PETROLEUM LINE; SIZE AS NOTED
ET	EDGE OF TRAVELED WAY	TVTH	TV TRENCH	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	RW 2"	RECYCLED WATER IRRIGATION LINE; SIZE AS NOTED
FF	FINISH FLOOR	TW	TOP OF WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	S&SD 8"	SEWER AND STORM DRAIN LINE; SIZE AS NOTED
FOTH	FIBER OPTIC TRENCH	UTH	UNIDENTIFIED TRENCH/SCAR LINE	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	SPM 8"	SEWER FORCE MAIN; SIZE AS NOTED
GB	GRADE BREAK	VGFL	VALLEY GUTTER FLOWLINE	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	ST 2"	STEAM LINE; SIZE AS NOTED
GFL	GUTTER FLOWLINE	VGR	VALLEY GUTTER	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	TFO	TRAFFIC FIBER OPTIC LINE
GRA	GRAVEL SPOT SHOT	WALBA	BARRIER WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	TS	TRAFFIC SIGNAL LINE
GRAE	EDGE OF GRAVEL	WALBW	BLOCK WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	TV	TELEVISION LINE
GSTH	GAS TRENCH	WALCW	CONCRETE WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	UNK	UNKNOWN UTILITY LINE
HDR	WOOD HEADER	WALHW	HEAD WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	X	WIRE FENCE
HW	HEAD WALL	WALRW	RETAINING WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	PROPERTY LINE
KR	K-RAIL	WALWW	WING WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	CITY LIMIT
LIP	LIP OF GUTTER	WCR	WHEELCHAIR RAMP	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	EASEMENT 1
LSOE	DECOMPOSED GRANITE EDGE	WLPD	WELL PAD	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	EASEMENT 2
LSOG	DECOMPOSED GRANITE	WTH	WATER TRENCH	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	RIGHT-OF-WAY LINE
LSOC	GROUND COVER	WW	WING WALL	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	RIGHT-OF-WAY CENTER LINE
LSOF	GOLF COURSE FAIRWAY	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE
LSOG	GOLF COURSE GREEN	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE
LSOT	GOLF COURSE TEE	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE
LSLN	TURF	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE
LSSA	SAND	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE
LSSP	SLOPE PROTECTION	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE
LSST	GOLF COURSE SAND TRAP	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE
LSTF	TURF	W	EXISTING ELEVATION	ICB	IRRIGATION REMOTE CONTROL VALVE	W	WATER VALVE	---	SETBACK LINE

NOTE:

THIS TOPOGRAPHIC SURVEY LOCATES SPECIFIC PHYSICAL FEATURES OF THE SITE AND THEIR ELEVATION AS DETERMINED NECESSARY BY THE PROJECT ENGINEER. THE INFORMATION SHOWN REFLECTS THE DATA OBTAINED BY FIELD SURVEY CONDUCTED ON JANUARY 23, 2020.

SITE BENCHMARK:

BRASS CAP ON UNIVERSITY DRIVE APPROXIMATELY 148% SOUTHWEST OF THE ALLIED HEALTH BUILDING WEST  
ELEV = 175.98 NAVD88 DATUM

UTILITY NOTE:

UTILITY INFORMATION SHOWN HEREON IS BASED ON RECORD INFORMATION SUPPLIED TO THE ENGINEER BY UTILITY COMPANIES, PUBLIC AGENCIES AND THE PROPERTY OWNER, TOGETHER WITH OBSERVATION OF VISIBLE EVIDENCE BY A FIELD SURVEY. THE ENGINEER CAN MAKE NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF THE UNDERGROUND UTILITY FACILITIES SHOWN. PRIOR TO ANY SITE EXCAVATIONS, THE CONTRACTOR SHALL CONTACT THE OWNER AND UNDERGROUND SERVICE ALERT (USA) AND REQUEST THAT THEY IDENTIFY THE LOCATION OF ALL UNDERGROUND UTILITIES AT THE SITE.

**Blair, Church & Flynn**  
CONSULTING ENGINEERS

03/01/2024  
Date Signed: \_\_\_\_\_

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REF. & REV.

**MERCED COLLEGE GREENHOUSE COMPLEX**

GREENHOUSE COMPLEX  
TOPOGRAPHIC SURVEY LEGEND

CONST. DOCUMENTS

DR. BY: AH  
CH. BY: JH  
DATE: 03/01/2024  
SCALE AS NOTED

**C101**

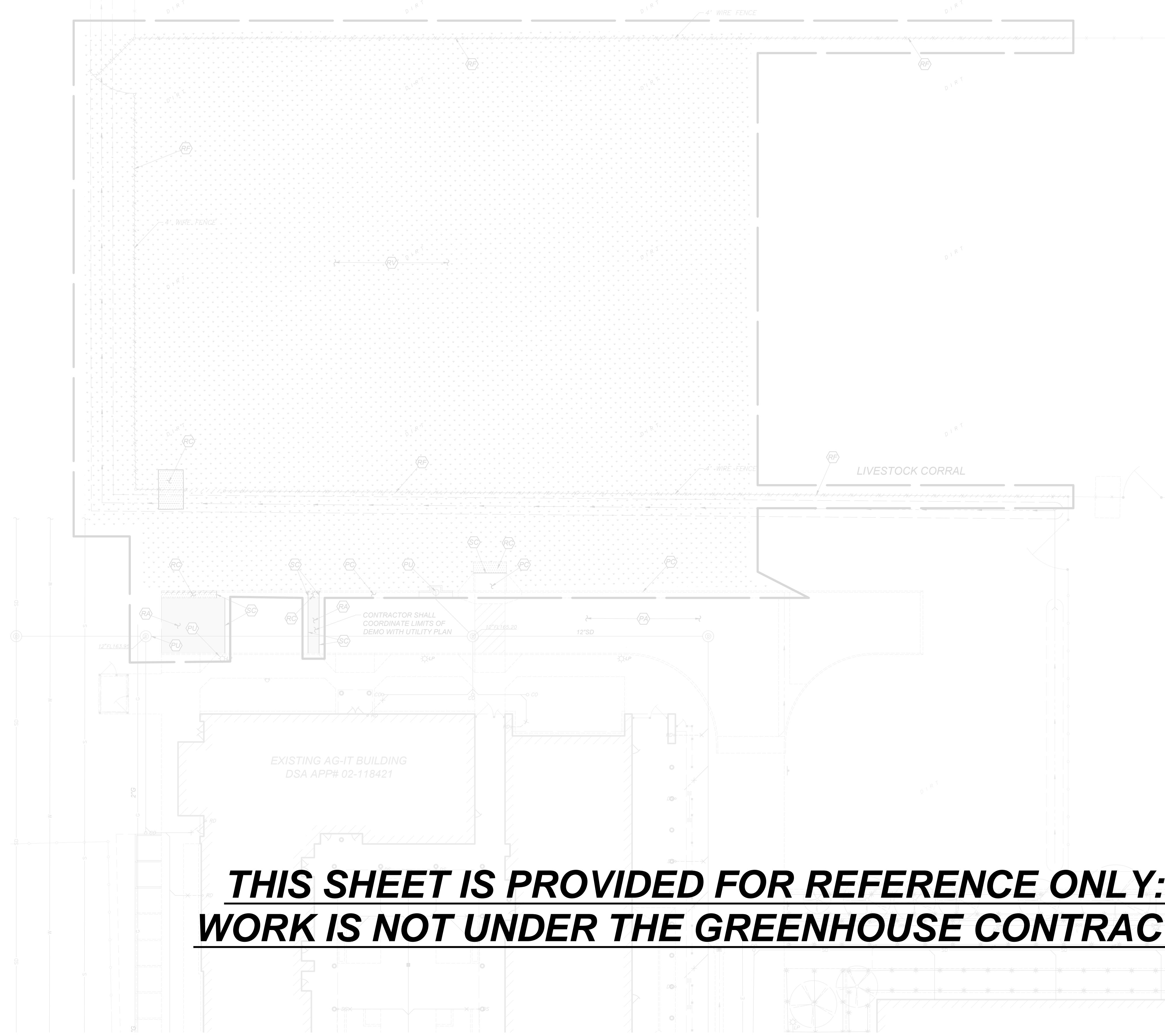
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# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

FOR DSA USE ONLY  
DSA APP# 02-121754



### GENERAL DEMOLITION NOTES:

1. THE "LIMIT OF DEMOLITION" SHOWN IS APPROXIMATE AND IS GENERALLY CONSIDERED TO BE THE MINIMUM REMOVAL REQUIREMENTS. CONTRACTOR MUST COORDINATE AS NOTED IN THE LEGEND.
2. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEMOLISHED MATERIALS OFF SITE.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY IMPROVEMENTS NOT SPECIFICALLY DESIGNATED FOR REMOVAL.
4. THE ON-SITE UNDERGROUND UTILITIES SHOWN ON THIS SHEET ARE AT APPROXIMATE LOCATIONS. THE EXTENT, LOCATIONS AND SIZES ARE UNKNOWN. THE CONTRACTOR SHALL POthOLE TO LOCATE AND VERIFY THE UNDERGROUND UTILITY LINES PRIOR TO REMOVAL.
5. CONTRACTOR TO PROTECT AND PRESERVE IN PLACE ANY FOUND SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE RESET BY A CALIFORNIA LICENSED SURVEYOR AND THE APPROPRIATE PAPERWORK FILED WITH THE CITY OR COUNTY, AT CONTRACTOR'S EXPENSE.
6. ALL HAZARDOUS MATERIALS ENCOUNTERED DURING SITE DEMOLITION SHALL BE REMEDIATED AND DISPOSED OF PER STATE AND EPA REQUIREMENTS.
7. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL UTILITY AGENCIES PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION.
8. ANY EXISTING UTILITIES AND/OR IMPROVEMENTS WHICH ARE TO REMAIN, THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE OWNER AND AGENCY HAVING AUTHORITY, AT THE CONTRACTOR'S SOLE EXPENSE.
9. REMOVE EXISTING IMPROVEMENTS AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS SHOWN ON THESE PLANS.
  - a) FOR CONCRETE REMOVAL, REMOVE TO THE NEXT NEAREST TOOLED JOINT OR EXPANSION JOINT OF IMPROVEMENTS DESIGNATED TO REMAIN.
  - b) FOR ASPHALTIC PAVEMENT REMOVAL, SAWCUT TO A STRAIGHT, CLEAN EDGE AT LOCATIONS INDICATED ON THE PLANS.
10. REFER TO ELECTRICAL PLANS FOR ADDITIONAL DEMOLITION REQUIREMENTS

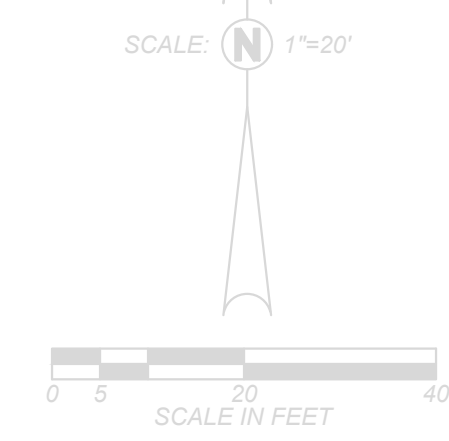
### DEMOLITION LEGEND:

- REMOVE EXISTING IMPROVEMENTS AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS SHOWN ON THESE PLANS UNLESS OTHERWISE NOTED ON THE PLAN. THE REMOVAL OF IMPROVEMENTS MUST BE COORDINATED WITH ALL PLAN SHEETS. CONTRACTOR MUST ALSO COORDINATE REMOVAL OF IMPROVEMENTS WITH UTILITY AGENCIES. PROTECT ALL IMPROVEMENTS NOT DESIGNATED FOR REMOVAL. SEE NOTE 1
- LIMITS OF VEGETATION REMOVAL - 4" MINIMUM DEPTH
- LIMITS OF ASPHALTIC CONCRETE IMPROVEMENT REMOVAL
- LIMITS OF CONCRETE IMPROVEMENT REMOVAL
- PA PROTECT ASPHALT CONCRETE PAVEMENT TO REMAIN
- FC PROTECT CONCRETE IMPROVEMENTS TO REMAIN
- PU PROTECT UTILITY TO REMAIN
- RA REMOVE ASPHALT CONCRETE PAVEMENT STRUCTURAL SECTION
- FC REMOVE CONCRETE IMPROVEMENTS
- WF REMOVE WIRE FENCES AND GATE
- RV REMOVE VEGETATION
- SC SAWCUT
- LIMIT OF WIRE FENCE REMOVAL
- LIMIT OF CONCRETE CURB REMOVAL

# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

EXISTING AG-IT BUILDING  
DSA APP# 02-118421

CONTRACTOR SHALL COORDINATE LIMITS OF DEMO WITH UTILITY PLAN



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MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX DEMOLITION PLAN	CONST. DOCUMENTS C103
DR. BY: AH	DATE: 03/01/2024
CH. BY: JH	SCALE AS NOTED

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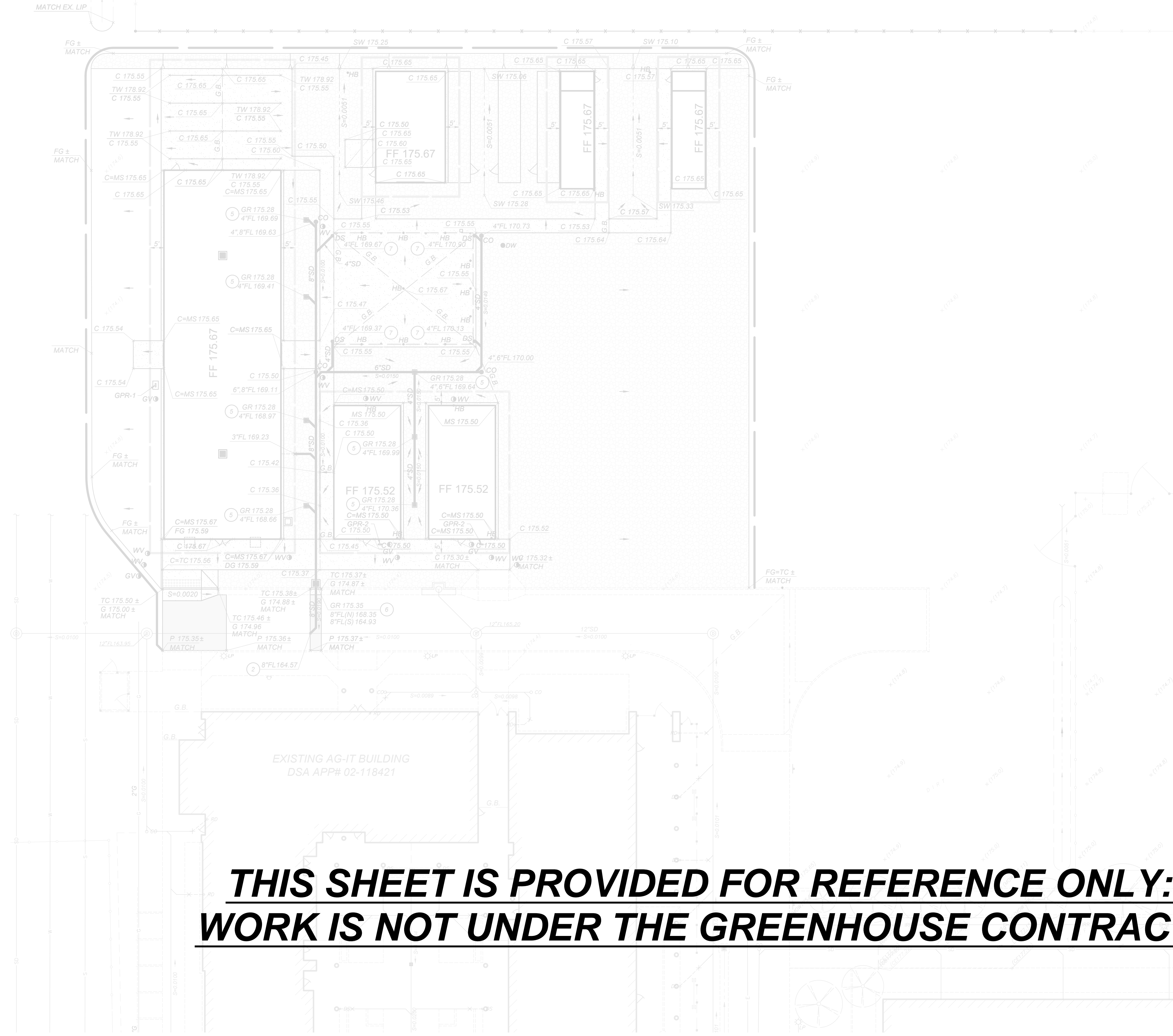






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### GENERAL GRADING AND DRAINAGE NOTES:

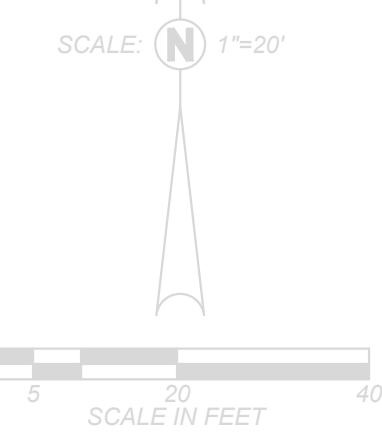
- THE REQUIREMENTS AND INFORMATION SET OUT BELOW ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND DO NOT ENCOMPASS ALL PROJECT REQUIREMENTS DESCRIBED BY THE PROJECT PLANS AND SPECIFICATIONS AND/OR APPLICABLE LAWS, REGULATIONS AND/OR BUILDING CODES.
- CONSTRUCTION OF ALL PROJECT SITE IMPROVEMENTS SUBJECT TO ADA ACCESS COMPLIANCE, INCLUDING ACCESSIBLE PATH OF TRAVEL, CURB RETURNS, PARKING STALL(S) AND UNLOADING AREAS, BARRIER FREE AMENITIES AND/OR OTHER APPLICABLE SITE IMPROVEMENTS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT, CALIFORNIA TITLE 24, AND THE CALIFORNIA BUILDING CODE, CURRENT EDITION(S).
    - ACCESSIBLE PATH OF TRAVEL CROSS-SLOPE SHALL NOT EXCEED 2%
    - ACCESSIBLE PATH OF TRAVEL LONGITUDINAL SLOPES SHALL NOT EXCEED 5%
    - RAMP LONGITUDINAL SLOPES SHALL NOT EXCEED 8.33%
    - WALKS SHALL NOT HAVE LESS THAN 48 INCHES IN UNOBSTRUCTED WIDTH
    - ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION
    - LANDINGS AT THE TOP AND BOTTOM OF ACCESSIBLE RAMPS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION
    - GUTTERS AND ROAD SURFACES DIRECTLY ADJACENT TO AND WITHIN 2 FEET OF A CURB RAMP SHALL HAVE A COUNTER SLOPE NOT TO EXCEED 5%
  - CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IDENTIFIED BY THE PROFESSIONAL ENGINEERING SEAL AND SIGNATURE ON THESE PLANS, OF ANY SITE CONDITION(S) AND/OR DESIGN INFORMATION THAT PREVENTS THE CONTRACTOR FROM COMPLYING WITH THE LAWS, REGULATIONS AND/OR BUILDING CODES GOVERNING ADA ACCESS COMPLIANCE.
  - GROUND SLOPES AWAY FROM BUILDING PADS IN LANDSCAPED OR DIRT AREAS SHALL BE NO LESS THAN 5% FOR AT LEAST TEN (10) FEET, OR AS OTHERWISE NOTED ON THE PLANS.
  - DRAINAGE SHALL NOT BE ALLOWED ONTO ADJACENT PROPERTY.
  - ALL FILL MATERIAL USED TO SUPPORT THE FOUNDATIONS OF ANY BUILDING OR STRUCTURE SHALL BE PLACED UNDER THE DIRECTION OF A LICENSED GEOTECHNICAL ENGINEER, AND IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS. A SOILS COMPACTION REPORT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS REQUIRED BY THE PROJECT SPECIFICATIONS.
  - THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AS REQUIRED BY THE PROJECT SPECIFICATIONS, AND BY GOVERNING PUBLIC AGENCIES.
  - THIS PROJECT IS SUBJECT TO AN EROSIONIVITY WAIVER GRANTED BY THE STATE WATER RESOURCES CONTROL BOARD; HOWEVER, THE EROSIONIVITY WAIVER IS BASED ON CONSTRUCTION BEING COMPLETED BEFORE THE BEGINNING OF NOVEMBER. IF THE PROJECT EXTENDS INTO NOVEMBER, A SWPPP MAY BE REQUIRED. CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER OF RECORD IMMEDIATELY IF THE PROJECT IS PROJECTED TO EXTEND INTO NOVEMBER FOR ANY REASON. SEE THE PROJECT SPECIFICATIONS.
  - AS A FIRST ORDER OF WORK, THE CONTRACTOR SHALL POT HOLE THE EXISTING UTILITY LINES AT THE POINT OF CONNECTION TO VERIFY THE LOCATION, SIZE, PIPE MATERIAL AND ELEVATION SO THAT THE ENGINEER CAN MAKE ELEVATION AND/OR ALIGNMENT ADJUSTMENTS IF NECESSARY. THE CONTRACTOR SHALL ALSO POT HOLE WHERE PROPOSED UTILITIES ARE SHOWN TO CROSS OR BE PROXIMATE TO EXISTING UTILITIES. NOTIFY THE ENGINEER OF ANY CONFLICTS AND OBTAIN DIRECTION BEFORE PROCEEDING.
  - ADJUST UTILITY LIDS WITHIN NEW CONSTRUCTION AREA TO FINISHED GRADE PER DETAIL [EX100]. REPLACE ALL BROKEN LIDS WITH NEW. PROVIDE TRAFFIC RATED LIDS WITHIN VEHICLE LOADING AREAS.
  - CONTRACTOR TO WATER TEST PAVEMENT WITHIN NEW IMPROVEMENT AREA. CONTRACTOR TO REPLACE PAVEMENT WHERE BIRD BATHS OCCUR AFTER TEST AS DIRECTED BY THE INSPECTOR OR ENGINEER.

### GRADING LEGEND:

C	CONCRETE
FF	FINISHED FLOOR
G	GUTTER
MS	MOWSTRIP
P	PAVEMENT
SW	SWALE
TC	TOP OF CURB
TW	TOP OF WALL
(344.5)	EXISTING ELEVATION
C228.78	NEW FINISHED GRADE
→	DIRECTION OF DRAINAGE
---	BUILDING OVER-EXCAVATION LIMITS; SEE DETAIL [H(X)100]
G.B.	GRADE BREAK
---	LIMITS OF GRADING
S=0.0020	PIPE SLOPE AND DIRECTION OF FLOW
---	SWALE
6"SD	PVC STORM DRAIN PIPELINE; SIZE AS NOTED TRENCH AND BACKFILL PER [D(X)200]
S=0.0020	FLOWLINE SLOPE AND DIRECTION OF FLOW
■	U23 STORM DRAIN INLET
■	V12 STORM DRAIN INLET
①	NOT USED
②	CONNECT TO EXISTING STORM DRAIN WITH WATER-TIGHT CONNECTION
③	NOT USED
④	NOT USED
⑤	V12 STORM DRAIN INLET PER DETAIL [F(X)200]
⑥	U23 STORM DRAIN INLET PER DETAIL [H(X)200]
⑦	HARD-PIPED CONNECTION TO SHADE CANOPY DOWNSPOUT PER DETAIL [E(X)200]
●CO	SURFACE CLEANOUT PER DETAIL [C(X)200]
●DS	DOWNSPOUT

### STABILIZATION NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING ALL EARTH AND SURFACES DISTURBED AS PART OF THIS PROJECT, INCLUDING LAY DOWN AREAS AND AREAS OUTSIDE THE LIMITS OF THE PROJECT WHICH ARE DISTURBED BY THE PROJECT
- STABILIZATION SHALL BE HYDRO-SEEDING, OR SIMILAR PER THE CONSTRUCTION GENERAL PERMIT ORDER SECTION III.H



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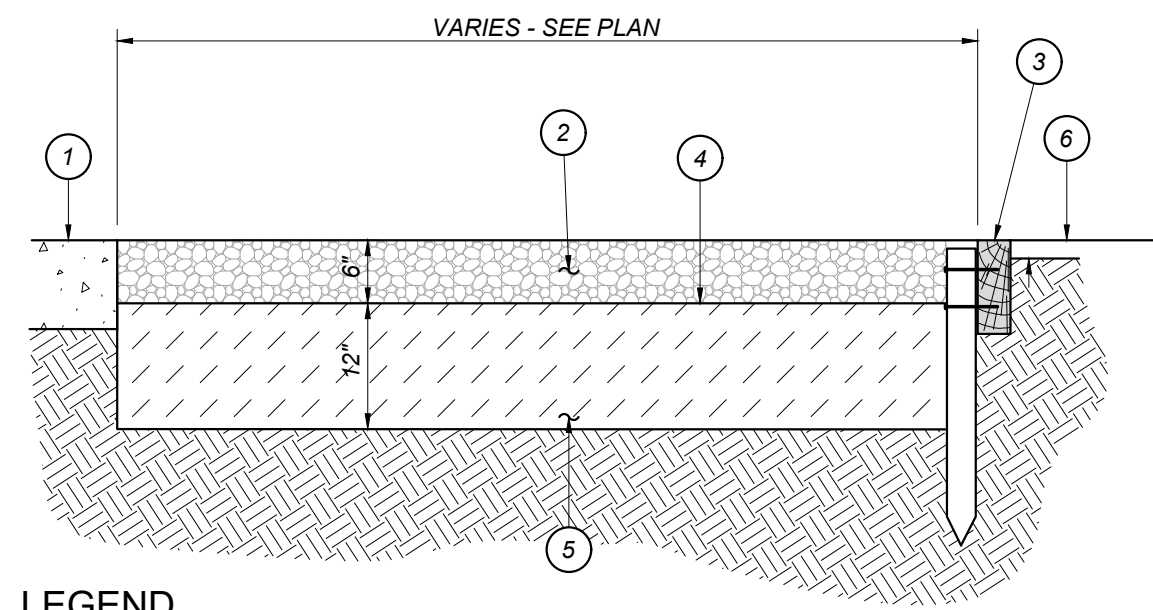
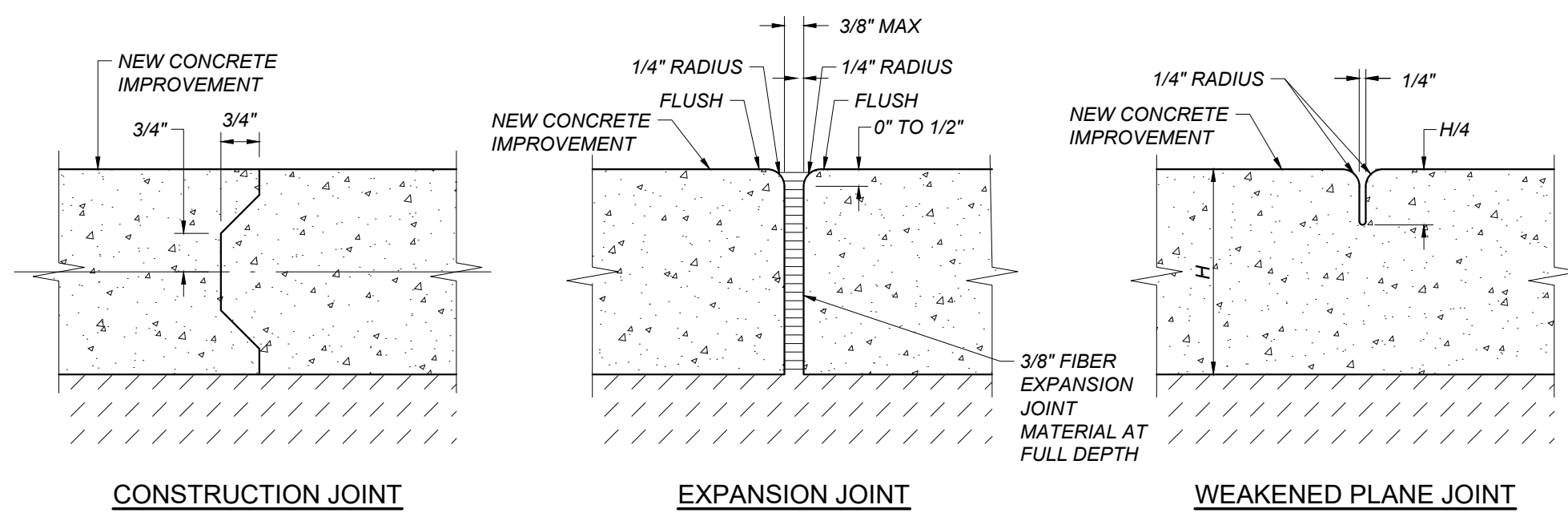
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GREENHOUSE COMPLEX	CONST. DOCUMENTS
GRADING AND DRAINAGE PLAN	C105
DR. BY: AH	SCALE AS NOTED
CH. BY: JH	
DATE: 03/01/2024	

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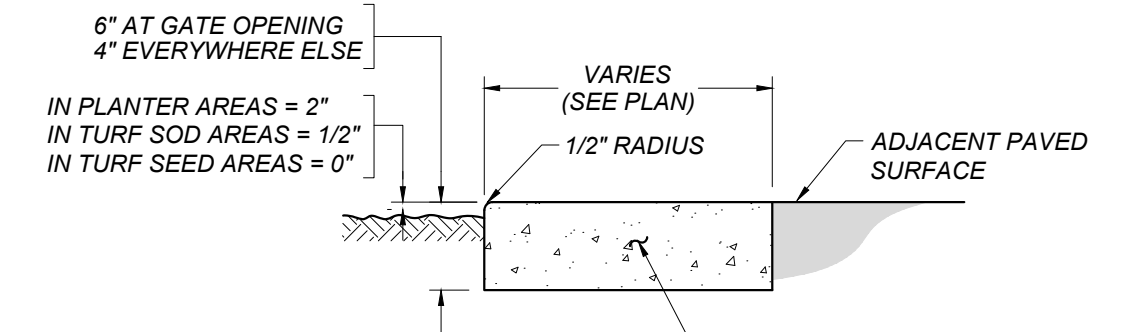






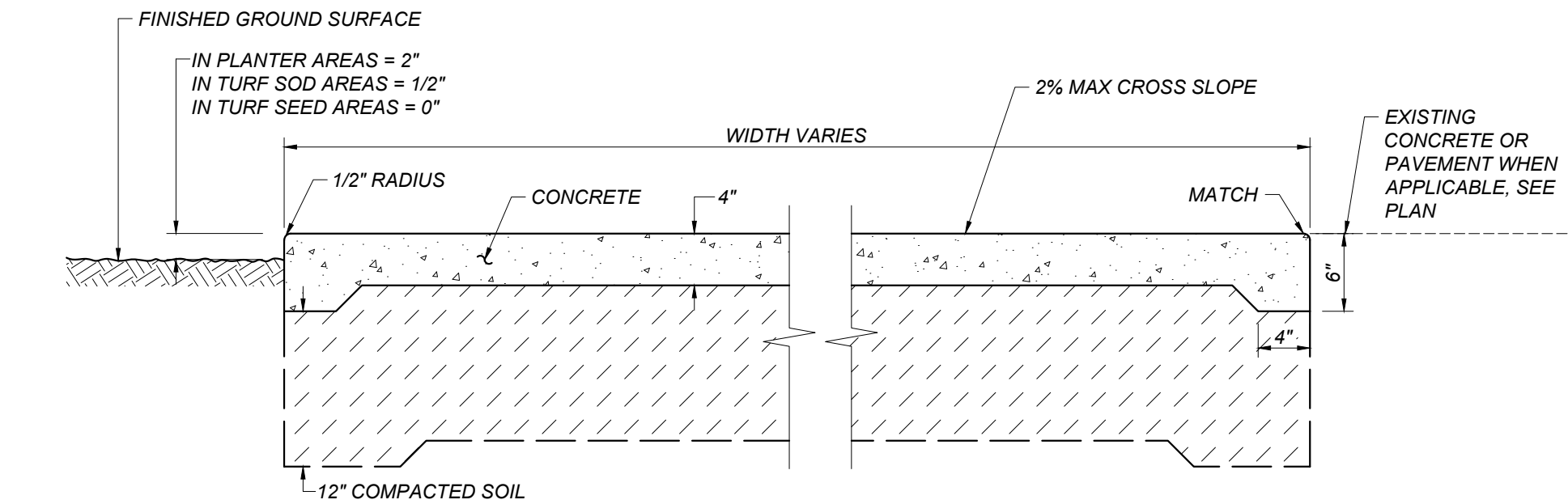
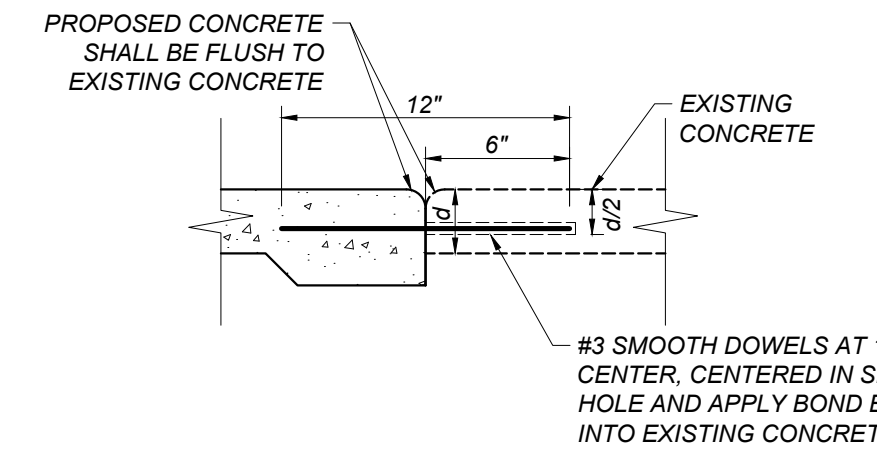
**LEGEND**

1. ADJACENT PAVED SURFACE OR CURB. WHERE DG IS ADJACENT TO WALKABLE SURFACE, TOP OF DG IS TO BE LEVEL WITH PAVEMENT'S FINISH SURFACE.
2. 3/4" MAX TYPE 2 AGGREGATE BASE, COMPACTED TO 95%.
3. COMPOSITE WOOD 2x4 HEADER WITH BEVELED JOINTS. SECURE WITH METAL STAKES AT 6" O.C. AND AT EACH SIDE OF JOINT OR CORNER.
4. NON-WOVEN GEOTEXTILE FABRIC, MINIMUM 4.0 OZ/SY. WRAP UP 1.5" HIGH ON ALL SIDES OF HEADER.
5. SUBGRADE. SCARIFY TO A DEPTH OF 12" MOISTURE CONDITION AND RECOMPACT TO 95% RELATIVE DENSITY.
6. FINISH GRADE IN PLANTING AREA SHALL BE 2" BELOW TOP OF HEADER FOR MULCH, 0.5" BELOW FOR TURF SOD, FLUSH FOR TURF SEED OR STOLON.



**NOTE:**

WHERE MOWSTRIP IS ADJACENT TO OR IN A VEHICULAR PATH, PROVIDE 2 EVENLY SPACED, CONTINUOUS #4 REBAR WITH #4 REBAR AT 36" O.C. PERPENDICULAR TO THE LONGITUDINAL AXIS OF THE MOWSTRIP

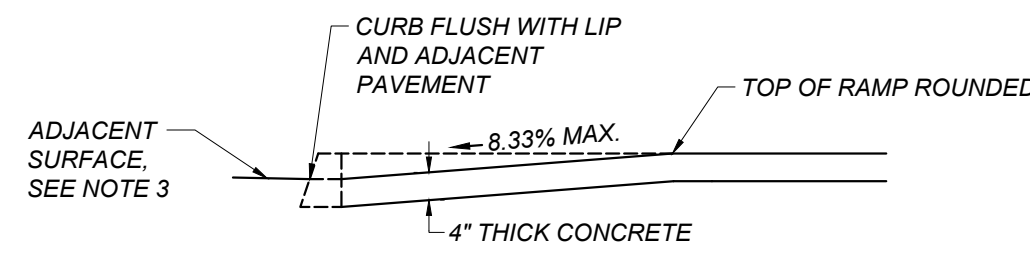


**A REGULAR-DUTY CONCRETE**  
 X100 NOT TO SCALE

**B STABILIZED DECOMPOSED GRANITE SURFACE**  
 X100 NOT TO SCALE

**C CONCRETE MOWSTRIP**  
 X100 NOT TO SCALE

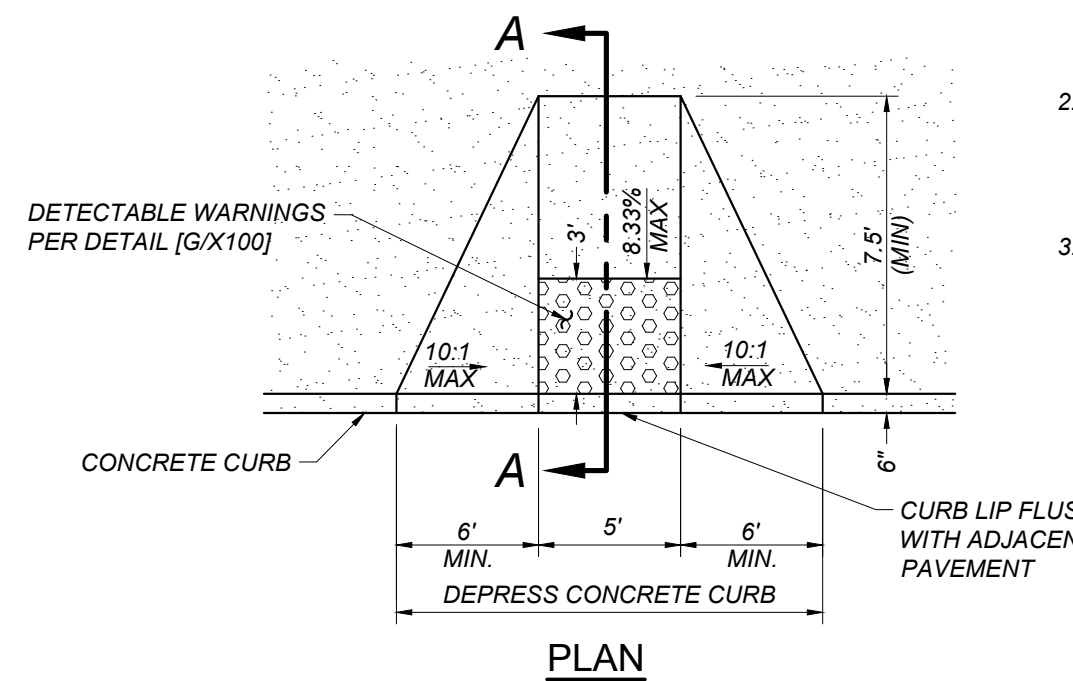
**D DOWEL BAR DETAIL**  
 X100 NOT TO SCALE



**SECTION A-A**

**NOTES:**

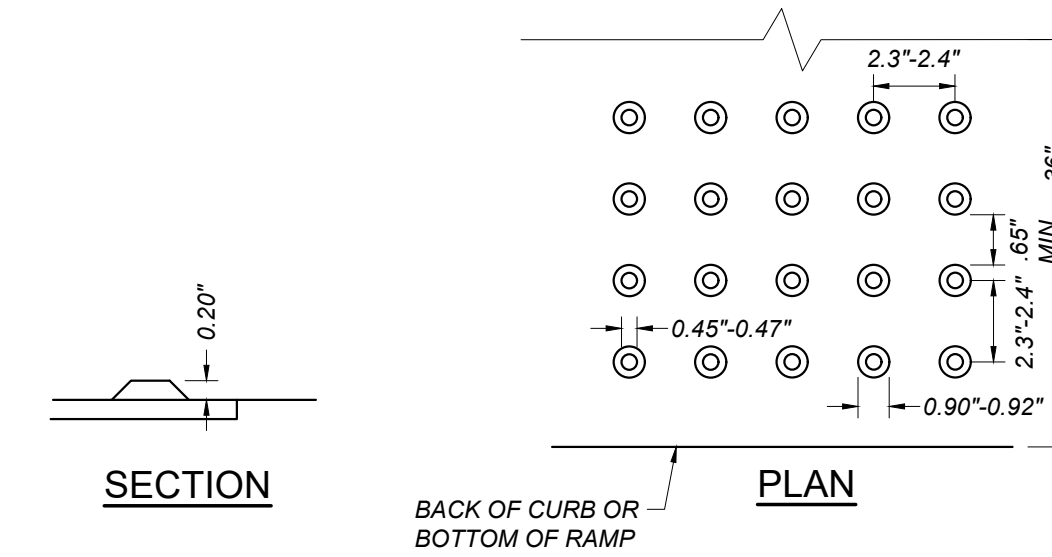
1. RAMP LONGITUDINAL SLOPES SHALL NOT EXCEED 8.33%. RAMP CROSS SLOPES SHALL NOT EXCEED 2%.
2. LANDINGS AT THE TOP AND BOTTOM OF ACCESSIBLE RAMPS SHALL NOT EXCEED 2% IN ANY DIRECTION.
3. GUTTERS AND ROAD SURFACES DIRECTLY ADJACENT TO AND WITHIN 2 FEET OF A CURB RAMP MAY HAVE A COUNTER SLOPE NOT EXCEEDING 5%.



**PLAN**

**NOTES:**

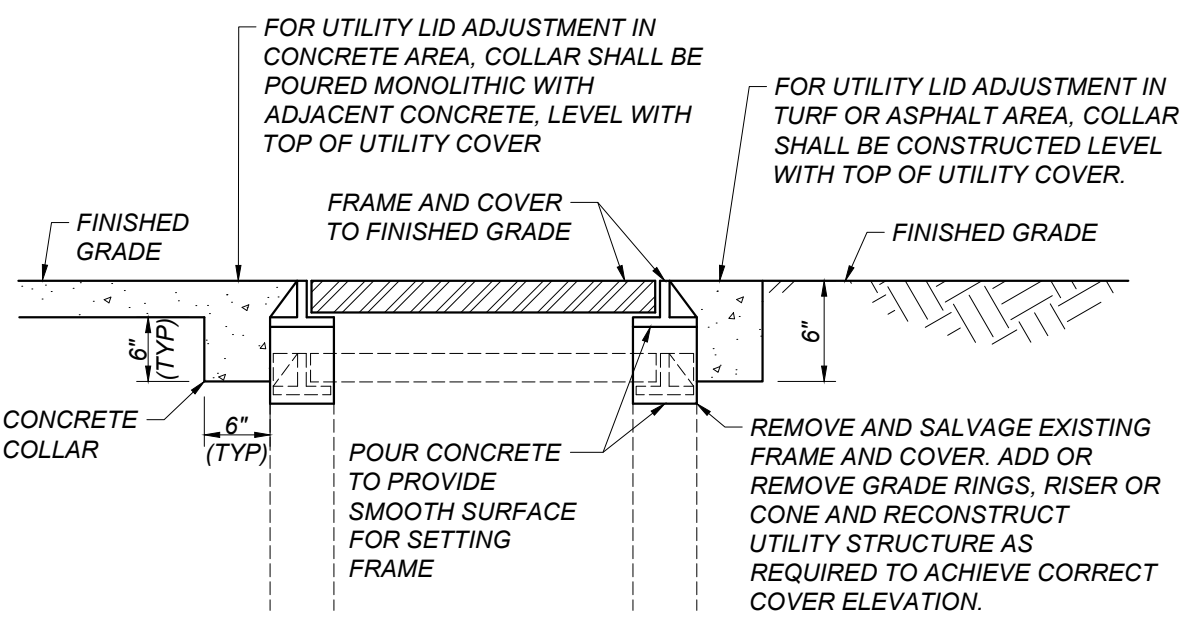
1. THE DETECTABLE WARNING SURFACE SHALL BE YELLOW AND APPROXIMATE FS 33538 OF SAE AMSSTD-595A.
2. WHERE DETECTABLE WARNING SURFACE DOES NOT PROVIDE A 70% CONTRAST WITH ADJACENT WALKING SURFACES, A 1-INCH WIDE MINIMUM VISUALLY CONTRASTING SURFACE SHALL SEPARATE THE DETECTABLE WARNING FROM THE ADJACENT SURFACE.
3. THE DOMES SHALL BE MANUFACTURED BY ARMOR TILE INC. OR APPROVED EQUAL.
4. ONLY APPROVED DSA/AC DETECTABLE WARNING PRODUCTS AND DIRECTIONAL SURFACES SHALL BE INSTALLED AS PROVIDED IN THE CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 1, CHAPTER 5, ARTICLES 2, 3 AND 4.



**SECTION**

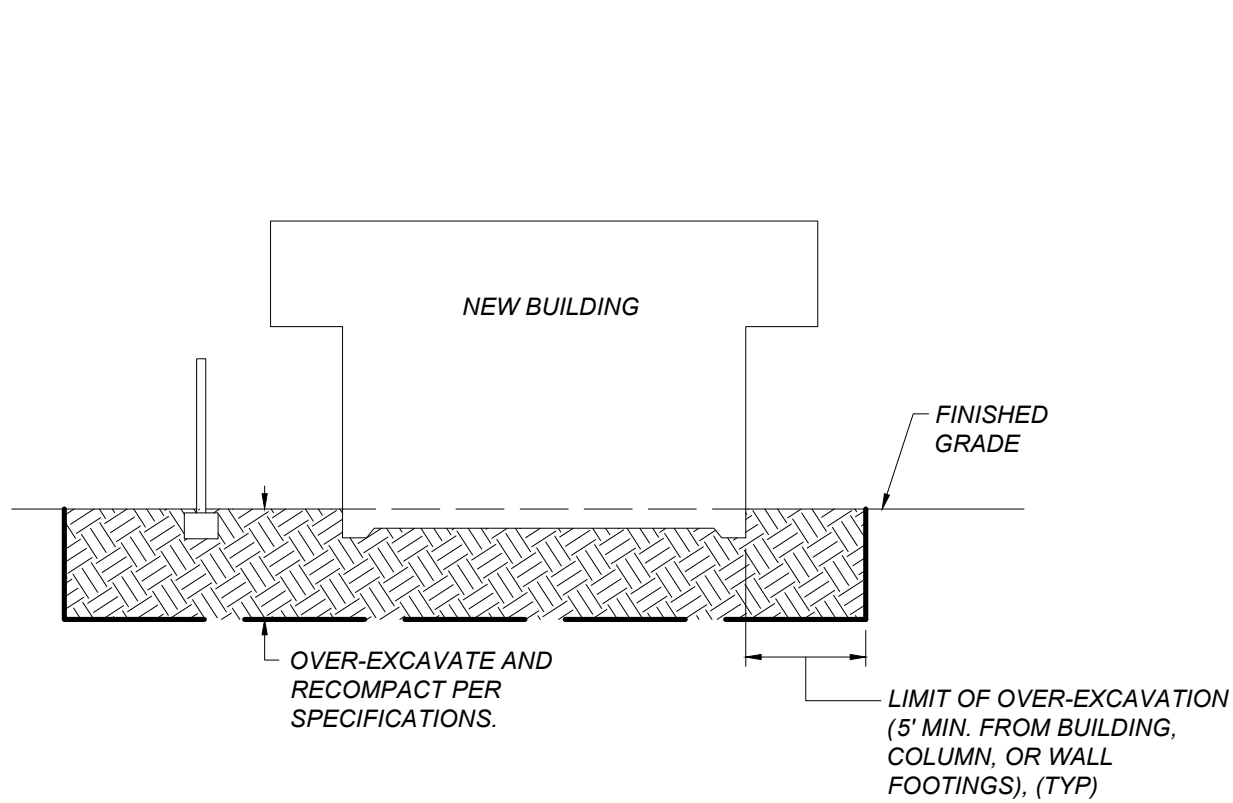
**PLAN**

**G DETECTABLE WARNINGS**  
 X100 NOT TO SCALE

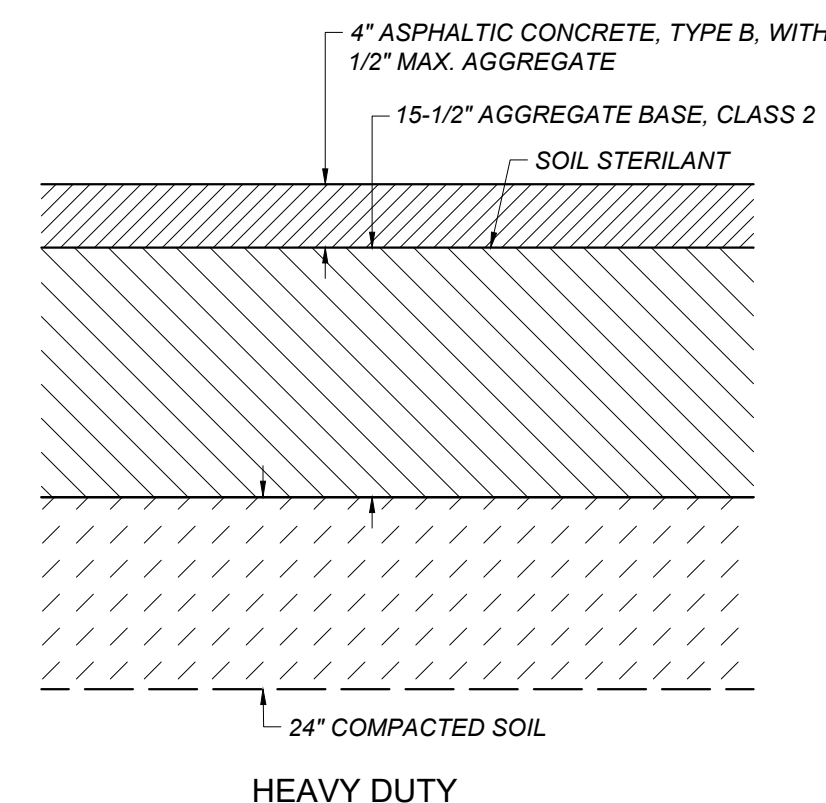


**E ADJUST UTILITY LID**  
 X100 NOT TO SCALE

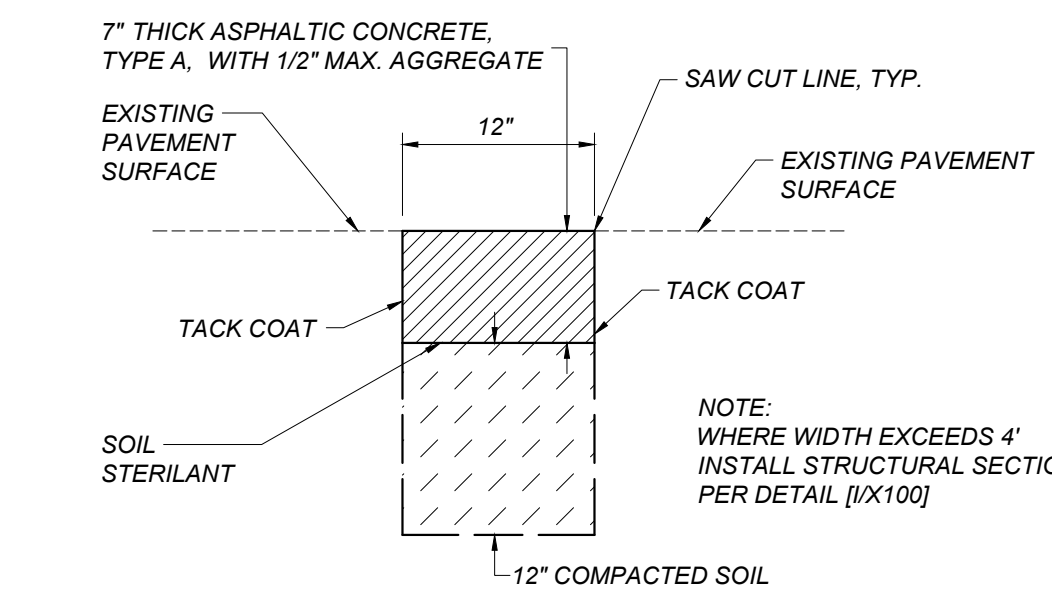
**F CONCRETE CURB RAMP**  
 X100 NOT TO SCALE



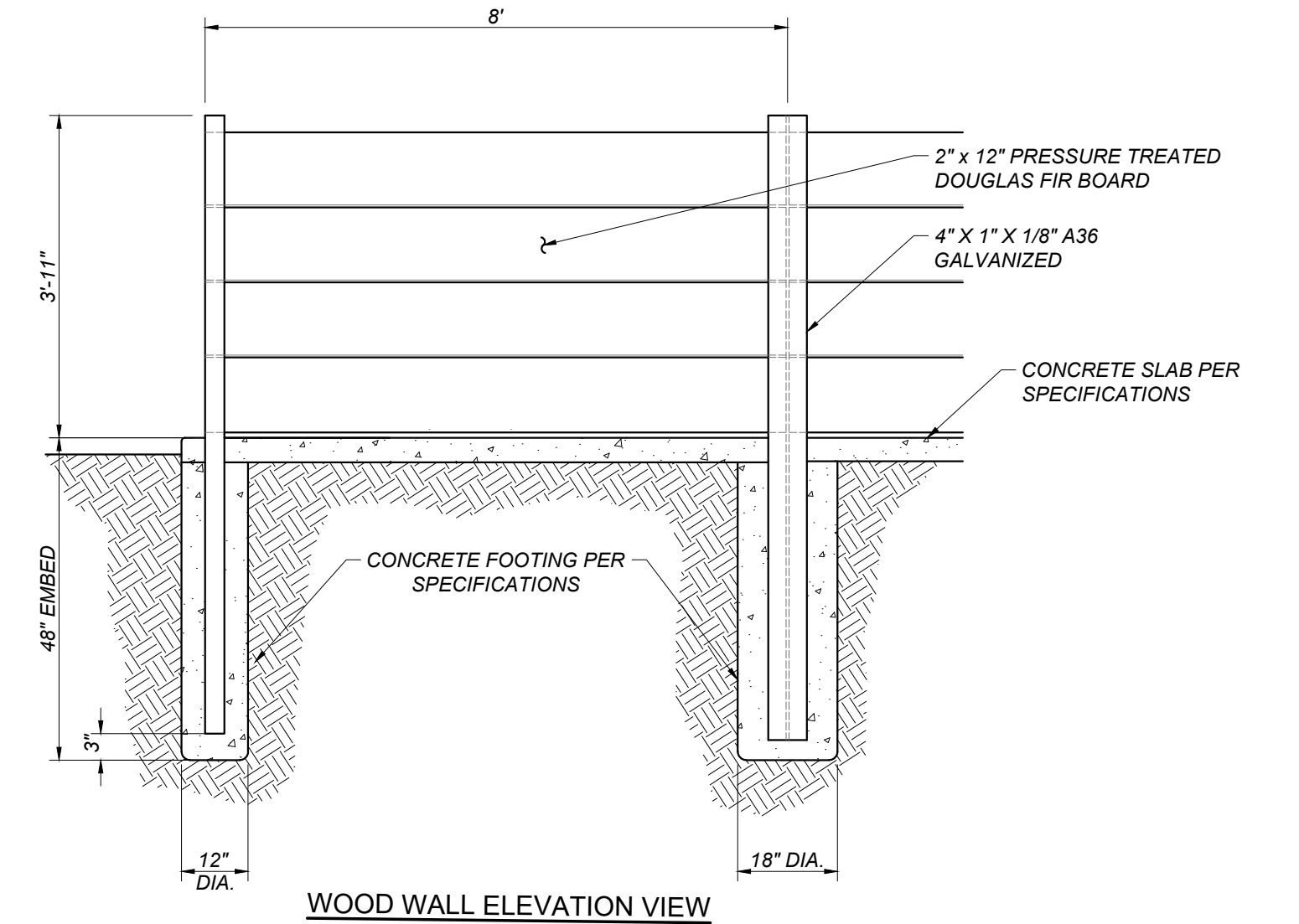
**H OVER-EXCAVATION DETAIL**  
 X100 NOT TO SCALE



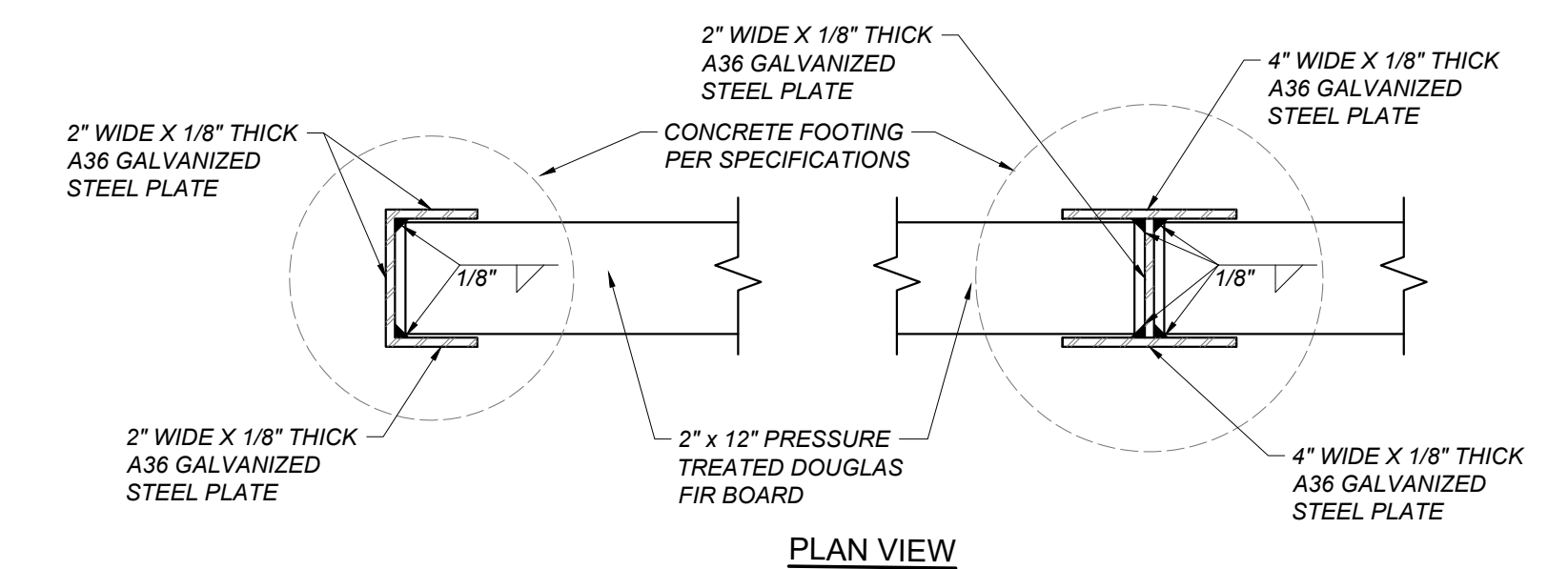
**I HEAVY DUTY ASPHALT CONCRETE PAVEMENT**  
 X100 NOT TO SCALE



**J ASPHALT CONCRETE PLUG**  
 X100 NOT TO SCALE



**WOOD WALL ELEVATION VIEW**

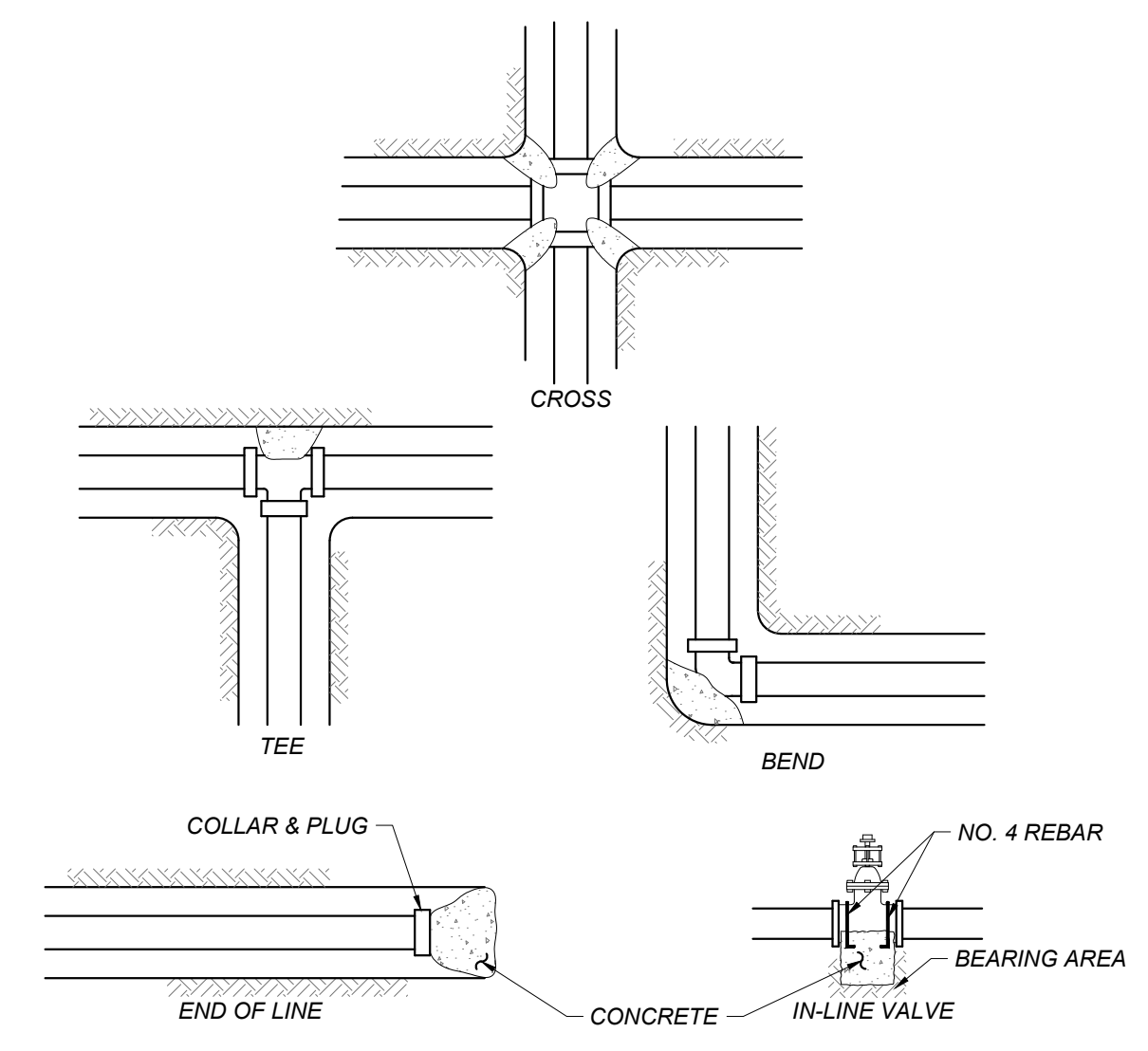


**PLAN VIEW**

**K MATERIAL STORAGE BAY WOOD WALL**  
 X100 NOT TO SCALE

NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1

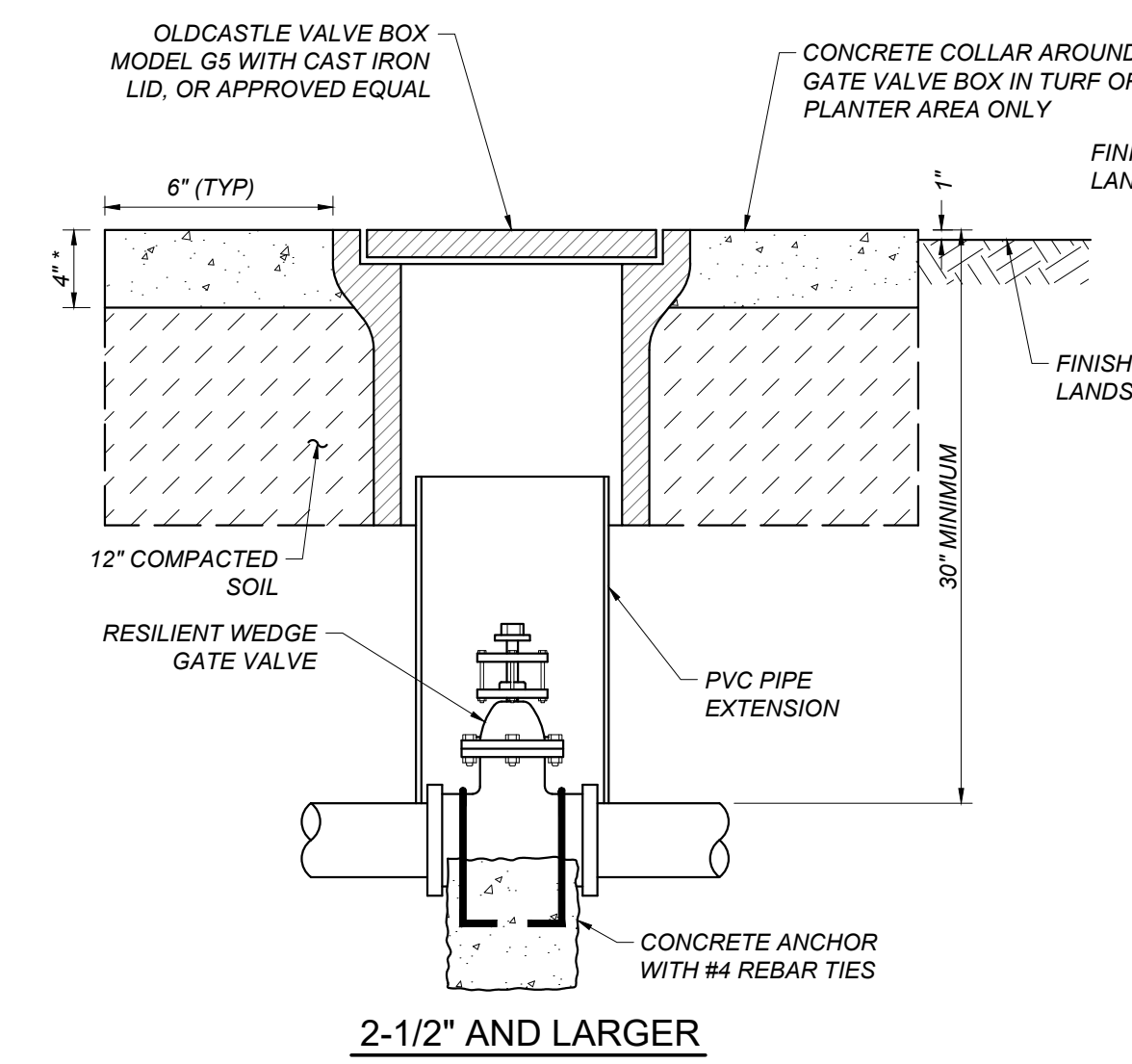




Pipe Diameter	Table Of Bearing Areas Required (In Square Feet)*				
	4" Or Smaller	6"	8"	10"	12"
Cross, Tee, 90° Bend, Plug, Hydrant, Valve	6.3	13.2	22.7	34.2	48.3
45° Bend	3.4	7.1	12.3	18.5	26.1
22 1/2° Bend	1.7	3.6	9.4	9.4	13.3
11 1/4° Bend	0.9	1.8	4.7	4.7	6.7

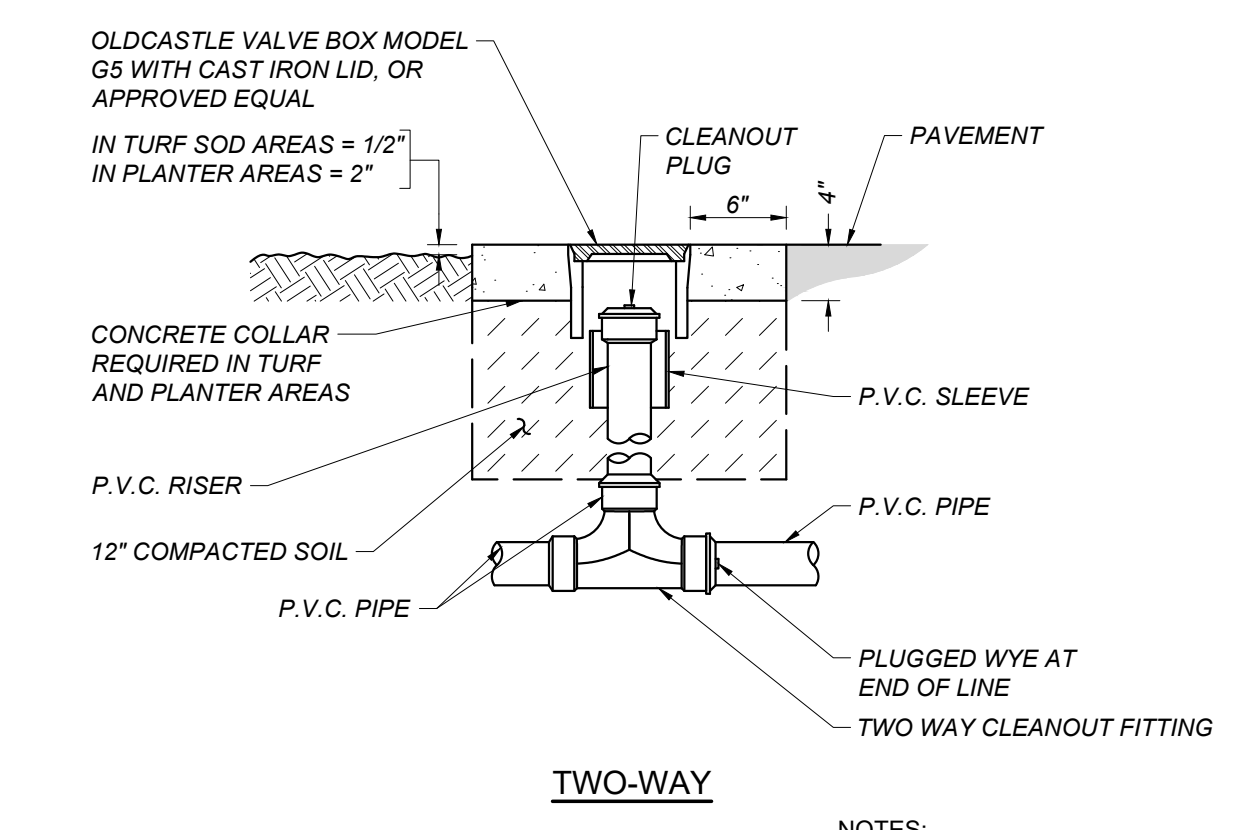
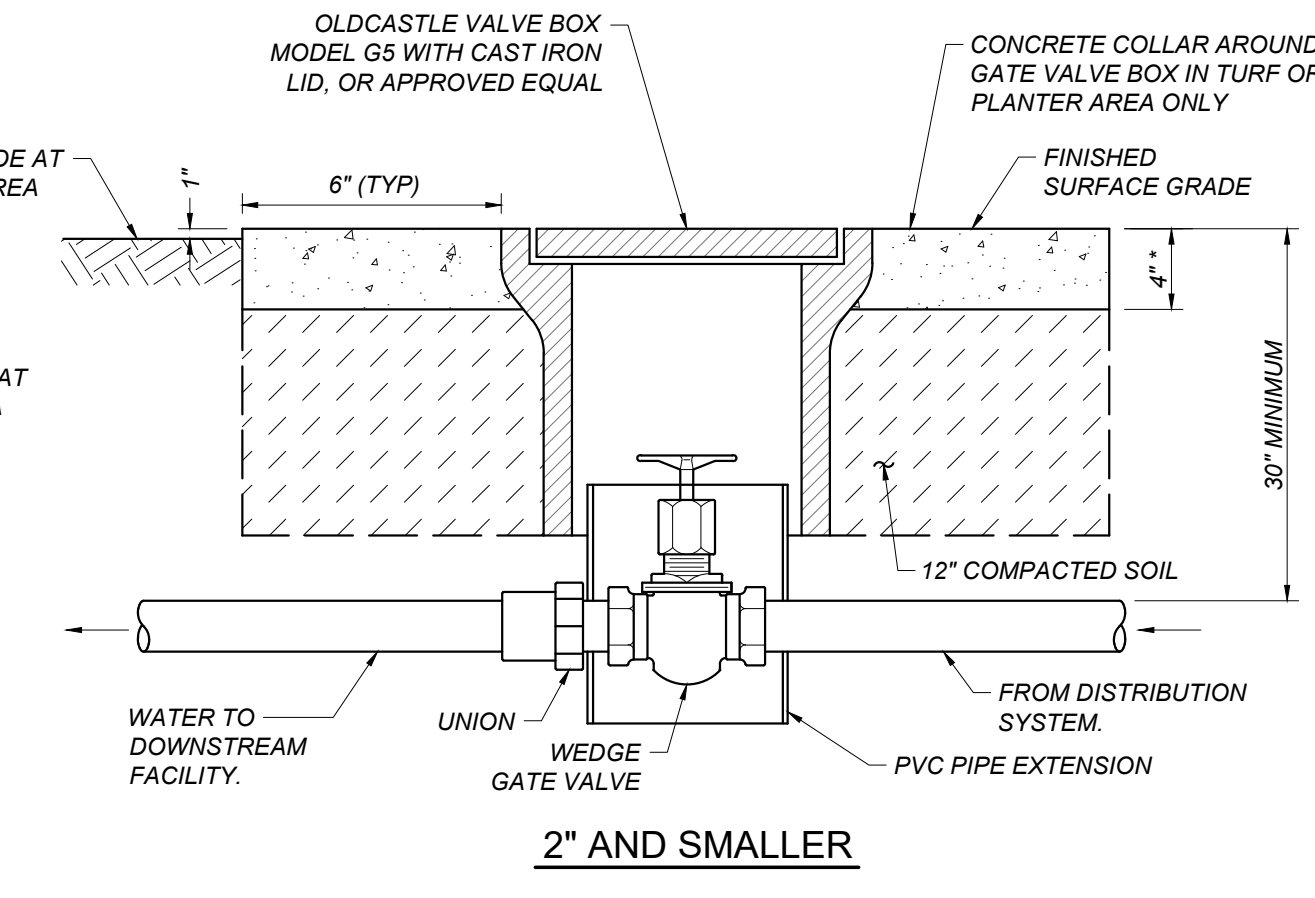
\* TABLE CALCULATED BASED ON NFPA 24, CURRENT EDITION TABLE A.10.8.2(b), WITH 250 PSI WATER PRESSURE AND 1500 PSF SOIL BEARING PRESSURE.

**A CONCRETE THRUST BLOCKS**  
 X200 NOT TO SCALE

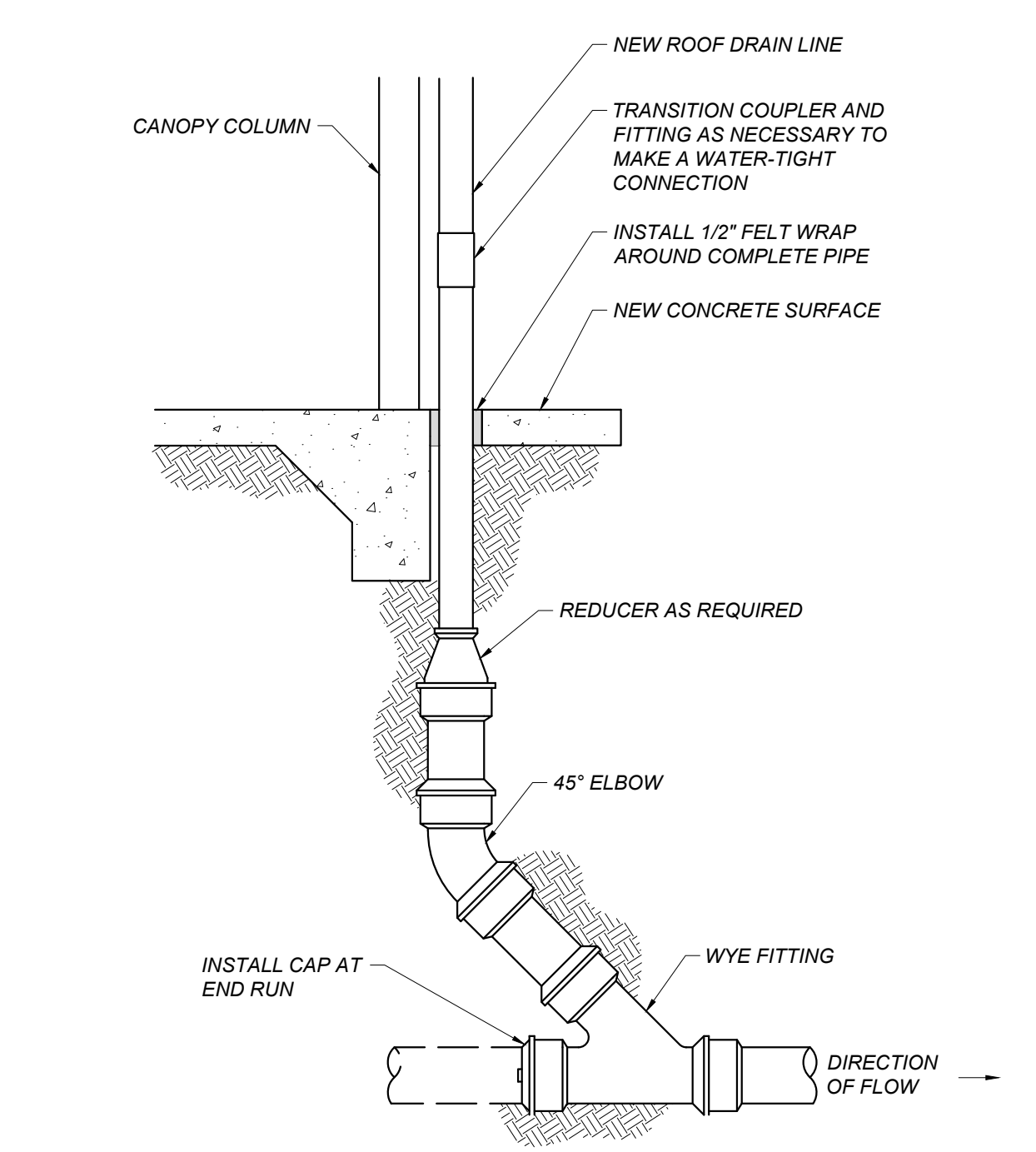


**NOTE:**  
 \* COLLAR TO BE 6" THICK IN VEHICULAR TRAFFIC AREAS

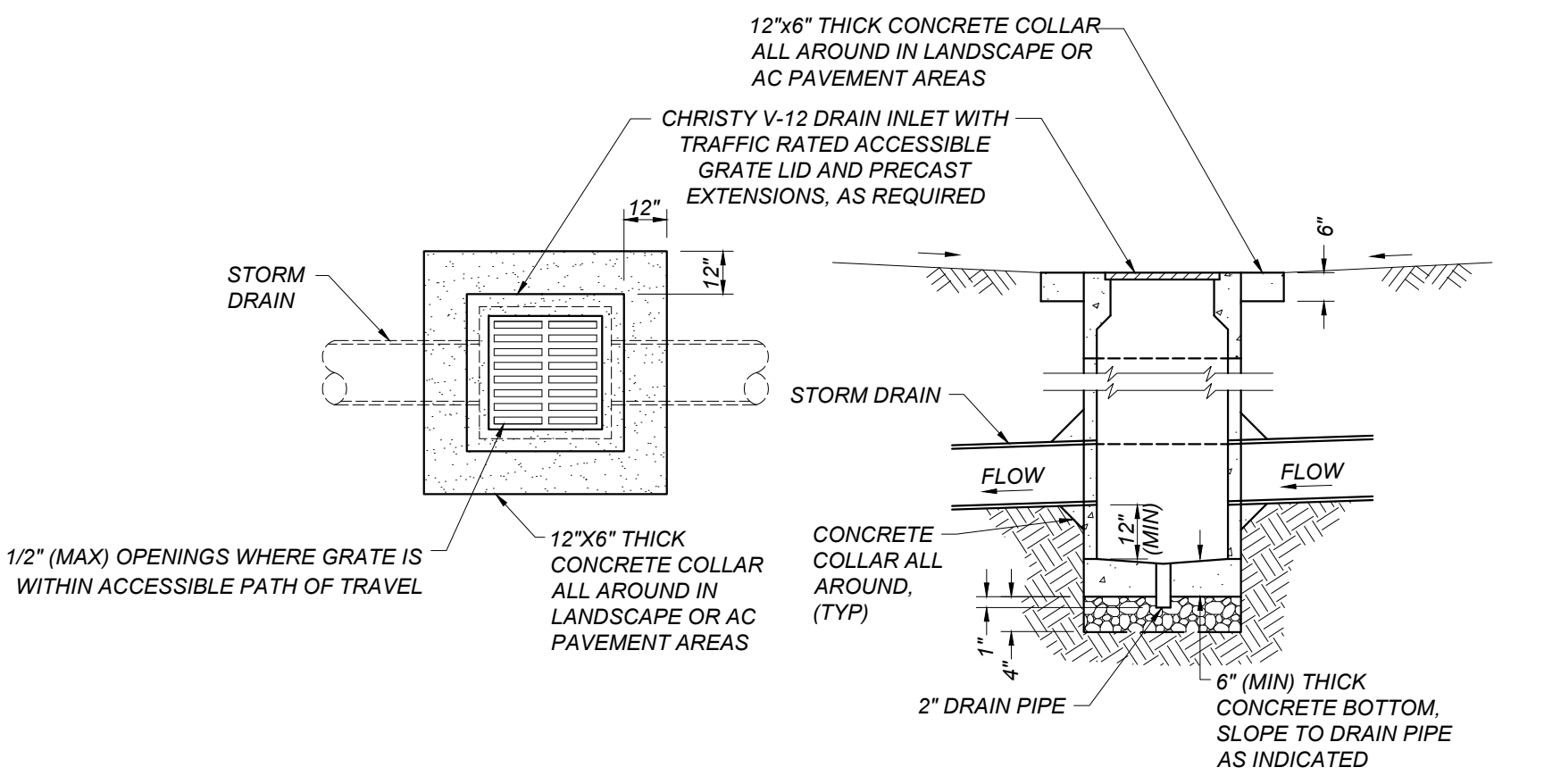
**B GATE VALVE AND LID**  
 X200 NOT TO SCALE



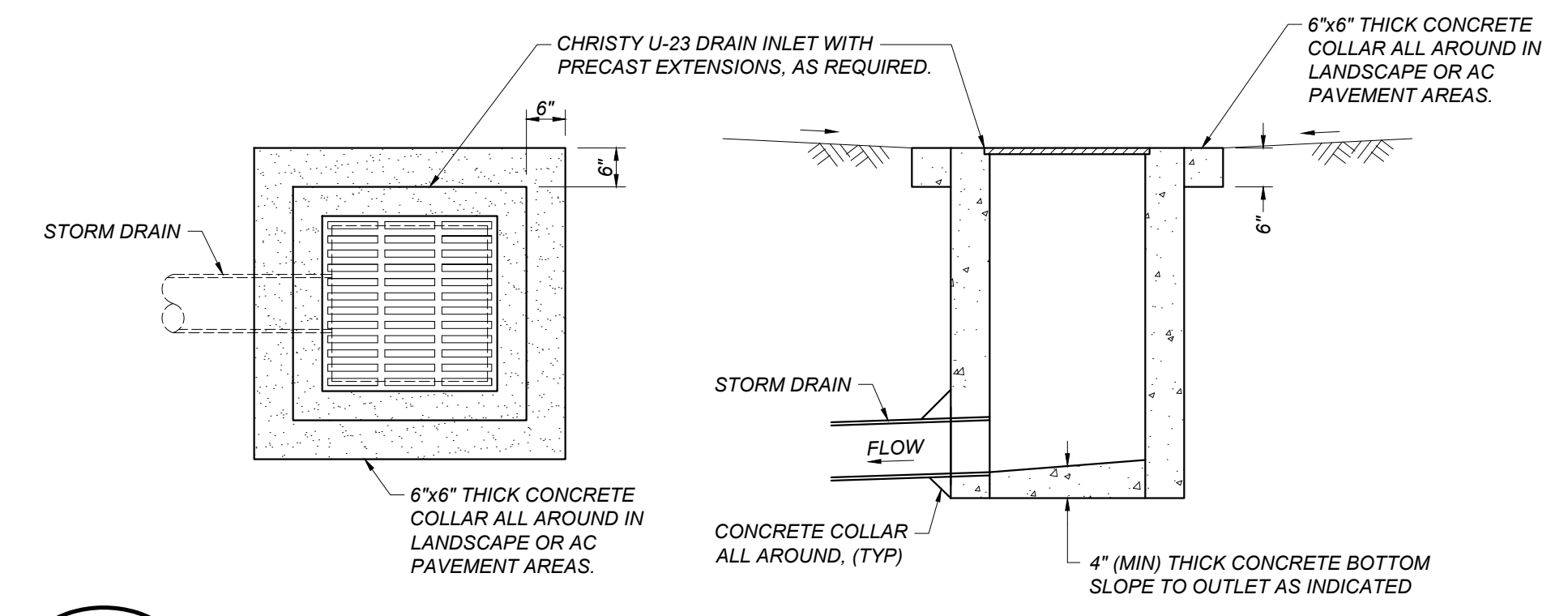
**D HOSE BIBB INSTALLATION**  
 X200 NOT TO SCALE



**E SHADE CANOPY DOWN-SPOUT CONNECTION**  
 X200 NOT TO SCALE



**F V-12 DRAIN INLET WITH CONCRETE COLLAR**  
 X200 NOT TO SCALE



**G TRENCH DETAIL FOR UTILITY LINES**  
 X200 NOT TO SCALE

**H U-23 DRAIN INLET WITH CONCRETE COLLAR**  
 X200 NOT TO SCALE

**Blair, Church & Flynn**  
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03/01/2024  
 Date Signed: [Signature]

CONSULTANT	REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX
Blair, Church & Flynn Consulting Engineers 455 Clovis Avenue, Suite 200 Clovis, California 93612 Tel (559) 326-1400 Fax (559) 326-1500		GREENHOUSE COMPLEX UTILITY DETAILS
		CONST. DOCUMENTS
		DR. BY: AH CH. BY: JH DATE: 03/01/2024 SCALE AS NOTED
		<b>X200</b>

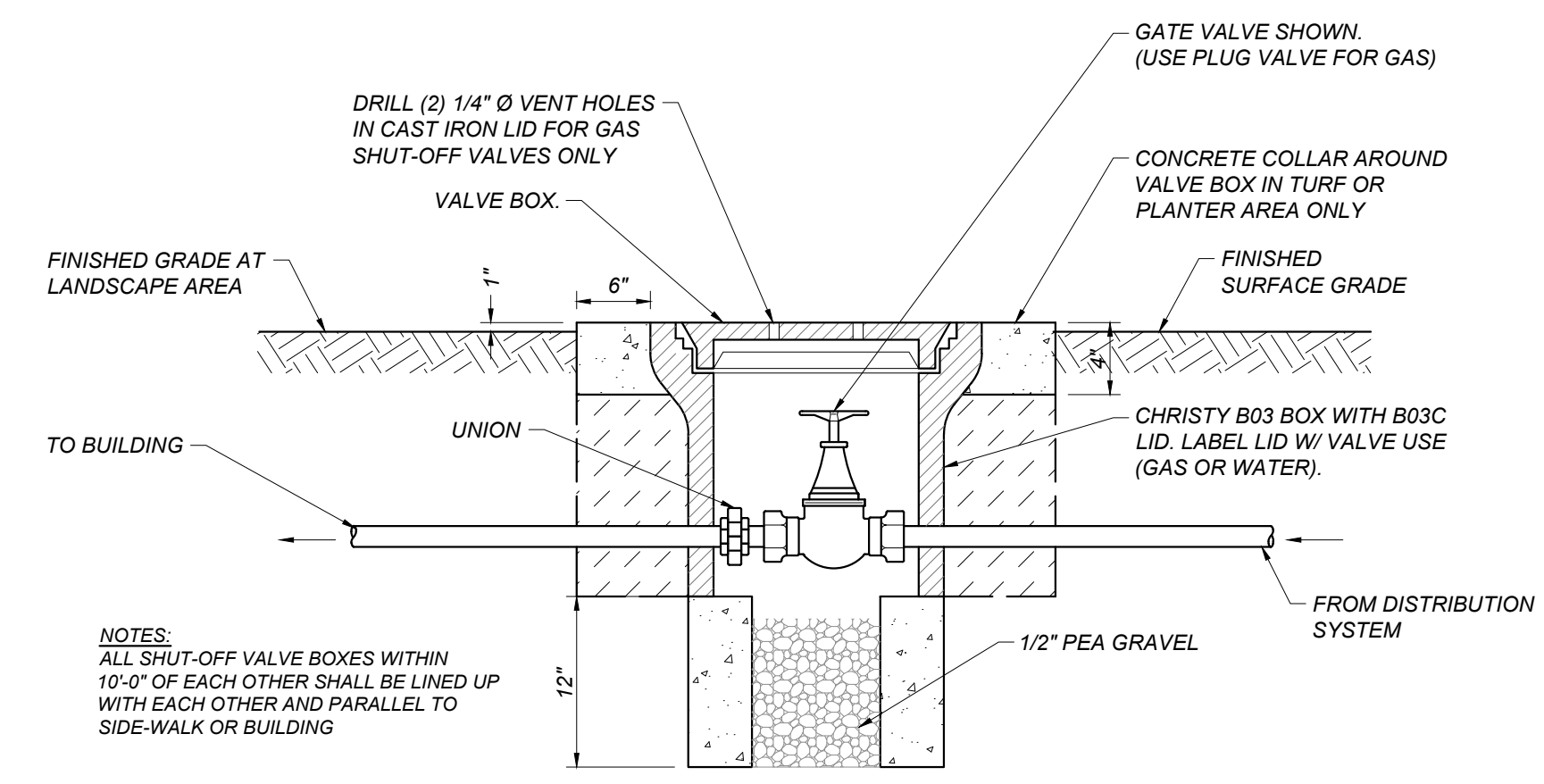


**GAS NOTES:**

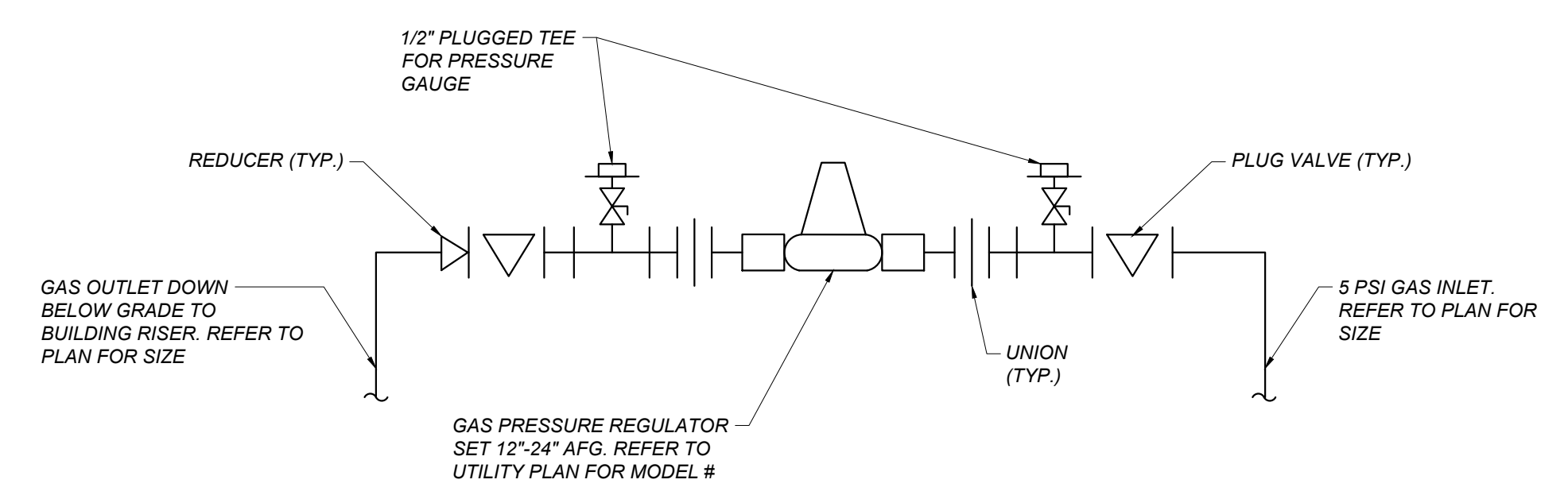
1. GAS PIPING, INSIDE BUILDING AND ABOVE GRADE, 2" AND SMALLER: SCHEDULE 40 GALVANIZED STEEL PIPE, ASTM A53, 150 PSI GALVANIZED MALLEABLE IRON SCREWED FITTINGS, ANSI B16.3, ANSI B31.8. FLEXIBLE CONNECTIONS SHALL BE CORRUGATED STAINLESS STEEL, CSA (US) APPROVED.
2. GAS PIPING, OUTSIDE OF BUILDING, BELOW GRADE: POLYETHYLENE PIPE AND FITTINGS, ANSI B31.8, ASTM D2513, WHERE ALLOWED BY ADMINISTRATIVE AUTHORITY, DRISCOPIG 6500, DUPONT ALDYL "A", PLEXCO. OTHERWISE, PIPING SHALL BE COATED SCHEDULE 40 STEEL, ASTM A53.
3. BALL VALVE, SHUT-OFF VALVE: FULL PORT, LEAD-FREE BRASS BODY, CAP, STEM, DISK AND BALL, SCREWED CONNECTION, LEVER HANDLE, PTFE SEAT AND STEM PACKING, MIN. 400 PSI CWP, CSA-US AND UL LISTED, NIBCO T-PP-600A-LF OR APPROVED EQUAL.
4. GAS PRESSURE REDUCING VALVE: CAPACITY AND PRESSURE RATINGS AS INDICATED ON DRAWINGS, AMERICAN METER.
5. GAS PIPING INSTALLATION SHALL COMPLY WITH CPC AND NFPA 54 (NATIONAL FUEL GAS CODE). SHALL BE PITCHED TO DRAIN TO DRIP LEGS AT LOW POINTS WHERE OTHER THAN DRY GAS CONDITIONS EXIST. NO UNIONS SHALL BE INSTALLED EXCEPT AT CONNECTIONS TO EQUIPMENT. PROVIDE SHUTOFF AND DIRT LET (SEDIMENT TRAP) AT EACH EQUIPMENT CONNECTION. ONLY EQUIPMENT MOUNTED ON VIBRATION ISOLATORS SHALL BE CONNECTED WITH FLEXIBLE CONNECTORS. UNDER-FLOOR PIPING SHALL BE SLEEVED AND VENTED. PLASTIC PIPE AND FITTINGS SHALL BE JOINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. METAL TO PLASTIC TRANSITION FITTINGS SHALL BE INSTALLED AT ALL TRANSITIONS. PROVIDE 14-GAUGE INSULATED TRACER WIRE SECURED TO PIPE AT 10' INTERVALS WITH NYLON TIES. TERMINATE TRACER 6" ABOVE GRADE AT BOTH ENDS.
6. ODOR FADE WARNING: THE ODORANT IN PROPANE (LP) AND NATURAL GAS IS COLORLESS AND THE INTENSITY OF ITS ODOR CAN FADE UNDER SOME CIRCUMSTANCES. CONTACT THE UTILITY COMPANY FOR MORE INFORMATION.
7. SUBMIT INSTALLER TRAINING CERTIFICATIONS FROM POLYETHYLENE PIPING MANUFACTURER CERTIFIED TRAINER, INCLUDING COPY OF TRAINERS CERTIFICATION. TRAINING SHALL HAVE BEEN COMPLETED NO MORE THAN 6 MONTHS PRIOR TO STARTING WORK.
8. TESTING: THERE SHALL BE NO DROP IN PRESSURE DURING TEST EXCEPT THAT DUE TO AMBIENT TEMPERATURE CHANGES. ALL COMPONENTS OF SYSTEM NOT RATED FOR TEST PRESSURE SHALL BE ISOLATED FROM THE SYSTEM BEFORE TEST IS MADE. MAINTAIN 100 PSI AIR PRESSURE FOR 4 HOURS.

**MODEL IDENTIFIERS:**

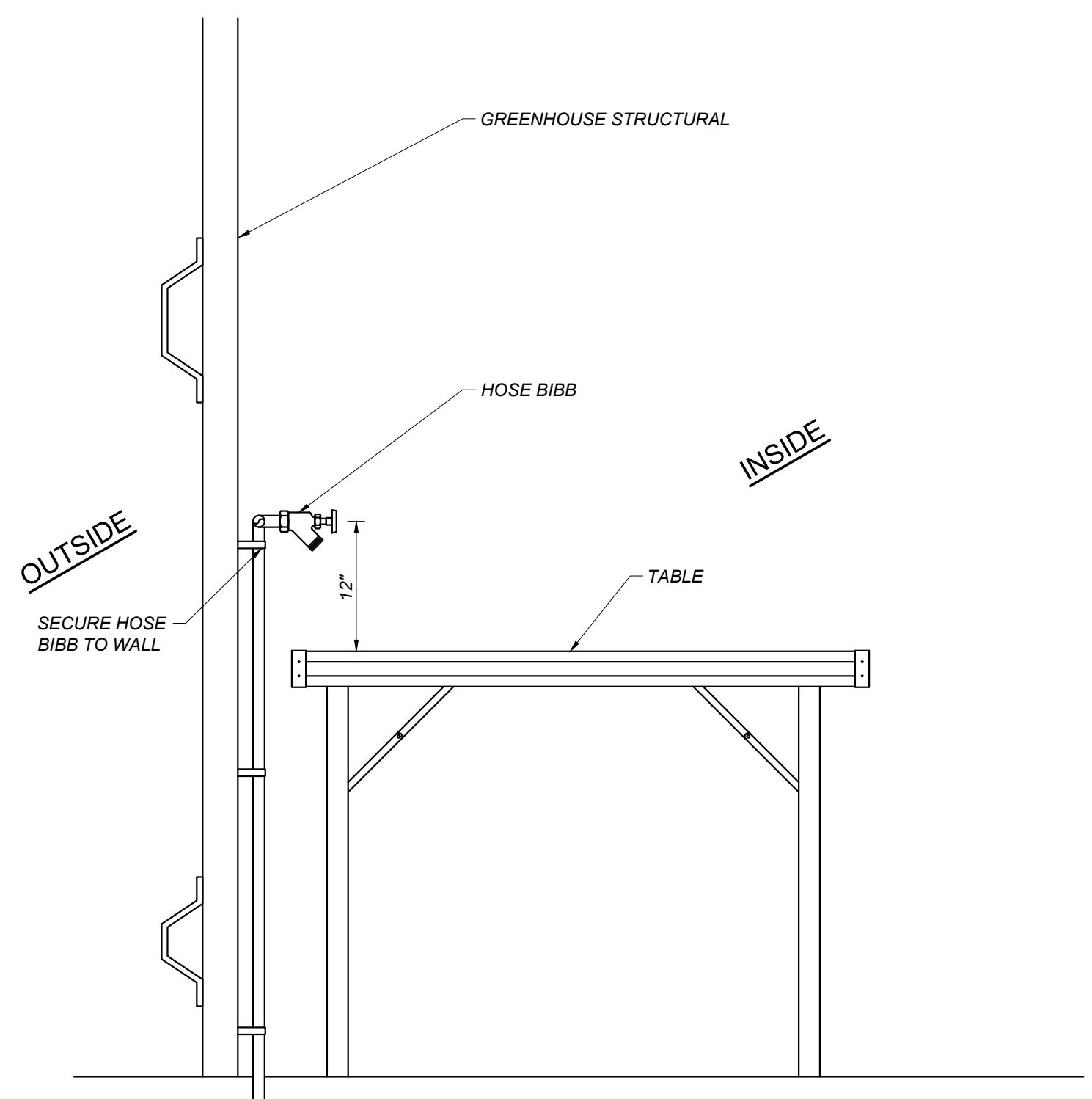
- LARGE GREENHOUSE GPR-1 MAXITROL #325-7AL2100-B (OR EQUAL) CSA 6.22/ANSI Z21.80 LISTED GAS PRESSURE REGULATOR WITH OVER-PRESSURE DEVICE 210D AND IMBLUE TECHNOLOGY, 1-1/4" INLET AND OUTLET SIZE, 1,250 CFH CAPACITY AT 5 PSI INLET PRESSURE AND SET AT 11"W.C. OUTLET PRESSURE
- LARGE GREENHOUSE(S) GPR-2 MAXITROL #325-5L48 (OR EQUAL) CSA 6.22/ANSI Z21.80 LISTED GAS PRESSURE REGULATOR WITH OVER-PRESSURE DEVICE AND IMBLUE TECHNOLOGY, 3/4" INLET AND OUTLET SIZE, 320 CFH CAPACITY AT 5 PSI INLET PRESSURE AND SET AT 11"W.C. OUTLET PRESSURE



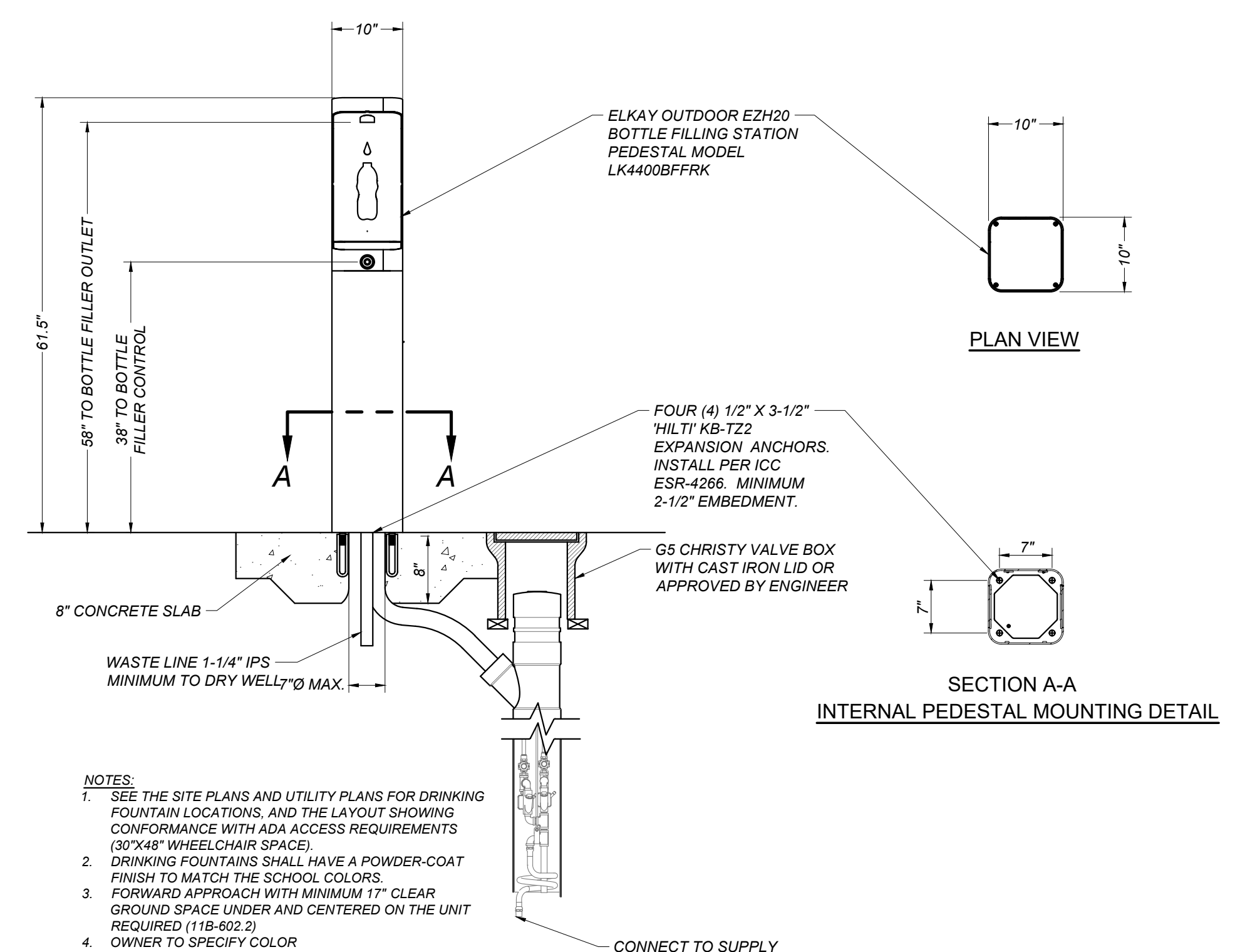
**A** SHUT-OFF VALVE IN BOX DETAIL  
X201 NOT TO SCALE



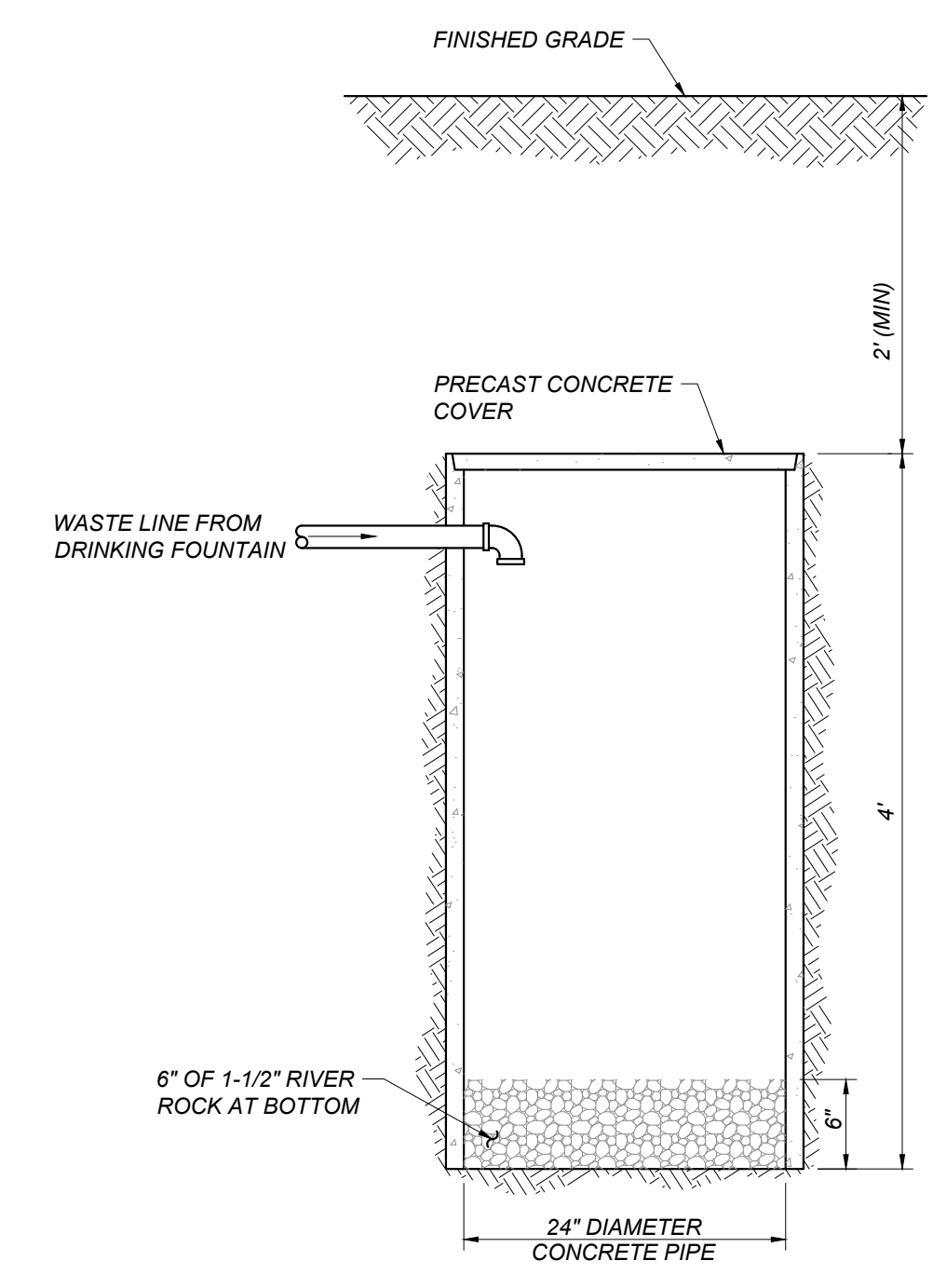
**B** GAS PRESSURE REGULATOR VALVE DETAIL  
X201 NOT TO SCALE



**C** INTERIOR HOSE BIB DETAIL  
X201 NOT TO SCALE



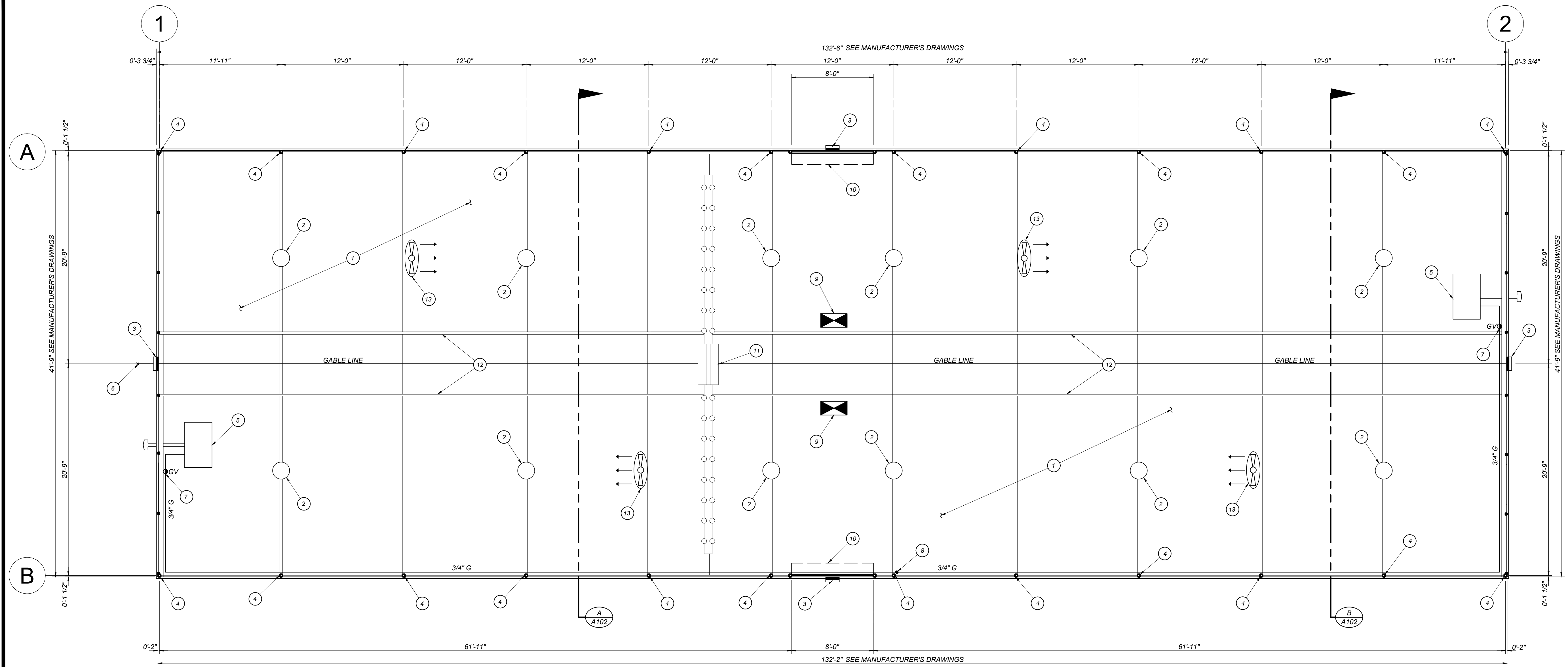
**D** BOTTLE FILLING STATION  
X201 NOT TO SCALE



**E** DRY WELL  
X201 NOT TO SCALE

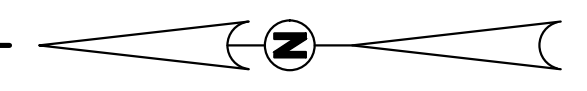






- KEYNOTES**
- 1 ROOF PURLIN WITH #12 FASTENERS
  - 2 HIGH-BAY LIGHT FIXTURE, SEE ELECTRICAL PLANS
  - 3 WALLPACK LIGHT FIXTURE, SEE ELECTRICAL PLANS
  - 4 STRUCTURAL STEEL COLUMN, SEE MANUFACTURER'S PLANS FOR ADDITIONAL INFORMATION.
  - 5 MODINE PTP300S GAS FIRED HEATER
  - 6 WADSWORTH ENVROSTEP WEATHER STATION WITH MAST, MOUNTED TO EXTERIOR GABLE PEAK
  - 7 GAS SHUT-OFF BALL VALVE
  - 8 1" GAS RISER ATTACHED TO STEEL COLUMN WITH UNISTRUT SUPPORTS ANCHORED TO COLUMN AT 3' SPACING. RUN 3/4" GAS LATERALS AT 9'-6" AFF IN BOTH DIRECTIONS TO THE GAS-FIRED HEATERS AT BOTH ENDS OF THE BUILDING, UNISTRUT SUPPORTS AT MINIMUM 3' SPACING ANCHORED TO GREENHOUSE FRAMING
  - 9 EWA10 90NM LOCK DRIVE ELECTRIC MOTORIZED ROOF VENT MACH. FOR RACK & PINION OPERATION.
  - 10 8' X 8' STANDARD WINANDY STEEL ROLL-UP DOOR
  - 11 CHERRY CREEK WATERING BOOM WITH BALDOR DC AND CHAIN DRIVE-1/4 HP, 2.5 AMPS (2 ROWS) SINGLE WATER BAR SETUP WITH TEEJET SPRAYS (0.8GPM) EVERY 18" WHIP HOSE WATERING ASSEMBLY COMPASS CAPTURE CONTROLLER W/ AREA CAPTURE PROGRAM.
  - 12 2" X 2" SQ. STEEL WATERING BOOM TRACK
  - 13 SCHAEFER VK12, 12" DIA. HAF FAN, 115V, 1/10HP, 1.3A (TYP. 4)

**A**  
**A101** PROPOSED MAIN GREENHOUSE REFLECTED CEILING PLAN  
 3/16" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**GREENHOUSE BID ALTERNATE NOTES:**

1. GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
3. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
4. IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCHING AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
5. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN 5' FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS

**GREENHOUSE NOTES:**

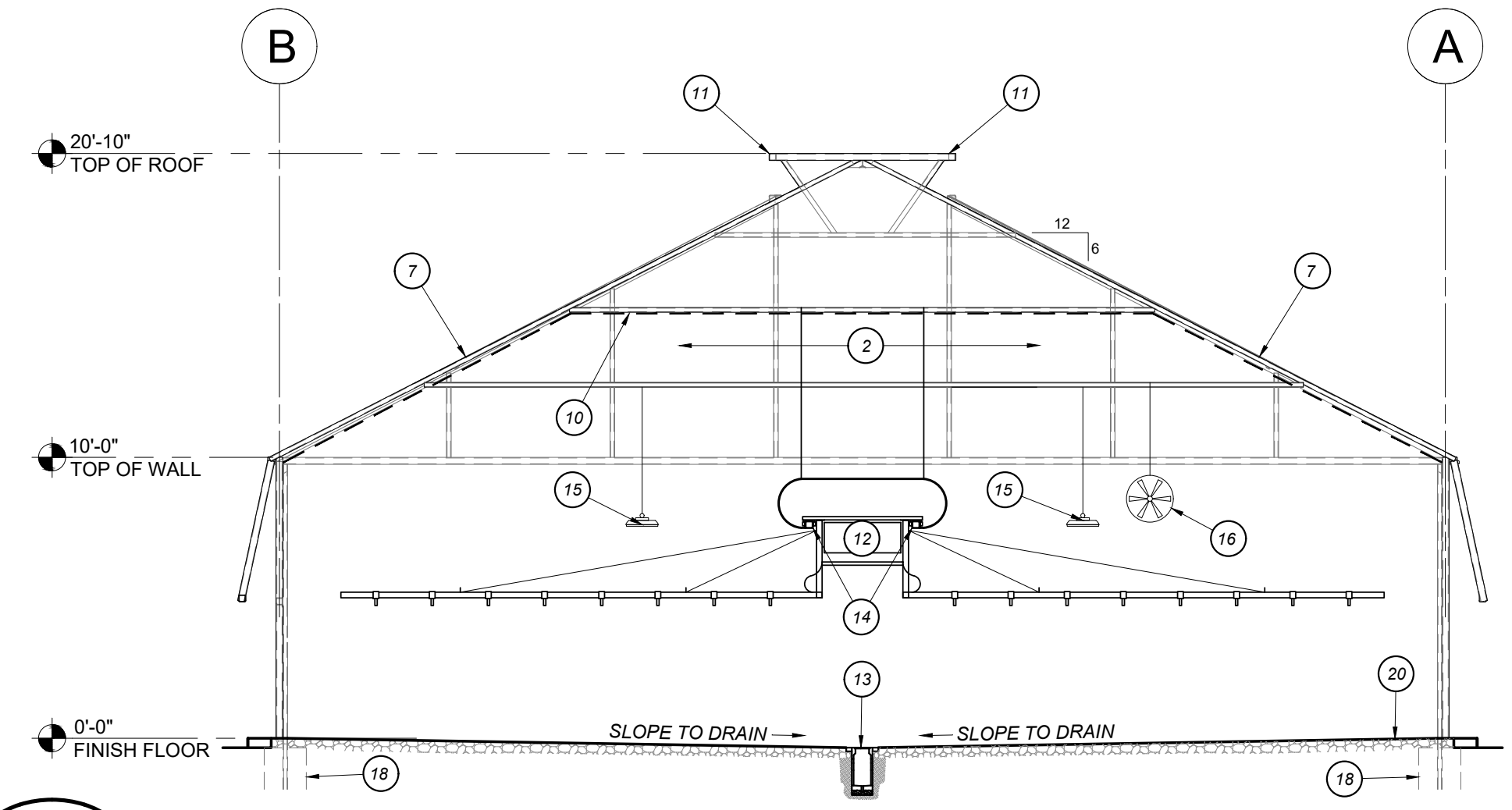
1. GREENHOUSE STRUCTURE AND EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND GUIDELINES. IF THERE IS A DISCREPANCY BETWEEN THESE PLANS AND THE MANUFACTURER'S INSTRUCTIONS, THE MANUFACTURER'S INSTRUCTIONS SHALL GOVERN. CONTRACTOR SHALL BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO STARTING CONSTRUCTION.

**Blair, Church & Flynn**  
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 Clovis, California 93612  
 Tel (559) 326-1400  
 Fax (559) 326-1500

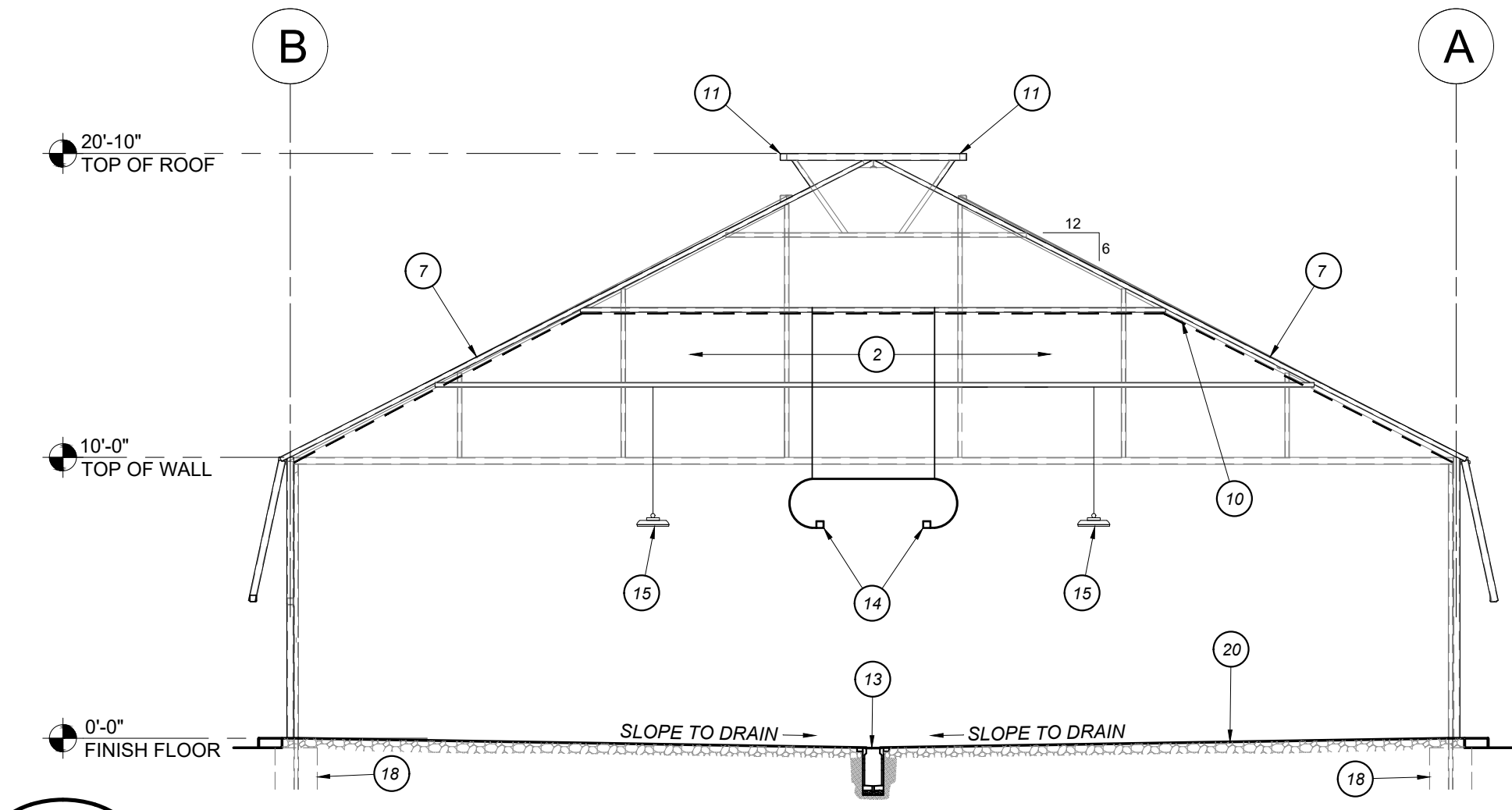
03/01/2024  
 Date Signed: \_\_\_\_\_

CONSULTANT	REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX	
Blair, Church & Flynn Consulting Engineers 455 Clovis Avenue, Suite 200 Clovis, California 93612 Tel (559) 326-1400 Fax (559) 326-1500		GREENHOUSE COMPLEX MAIN GREENHOUSE REFLECTED CEILING PLAN	CONST. DOCUMENTS A101
		DR. BY: AH	SCALE AS NOTED
		CH. BY: JH	
		DATE: 03/01/2024	

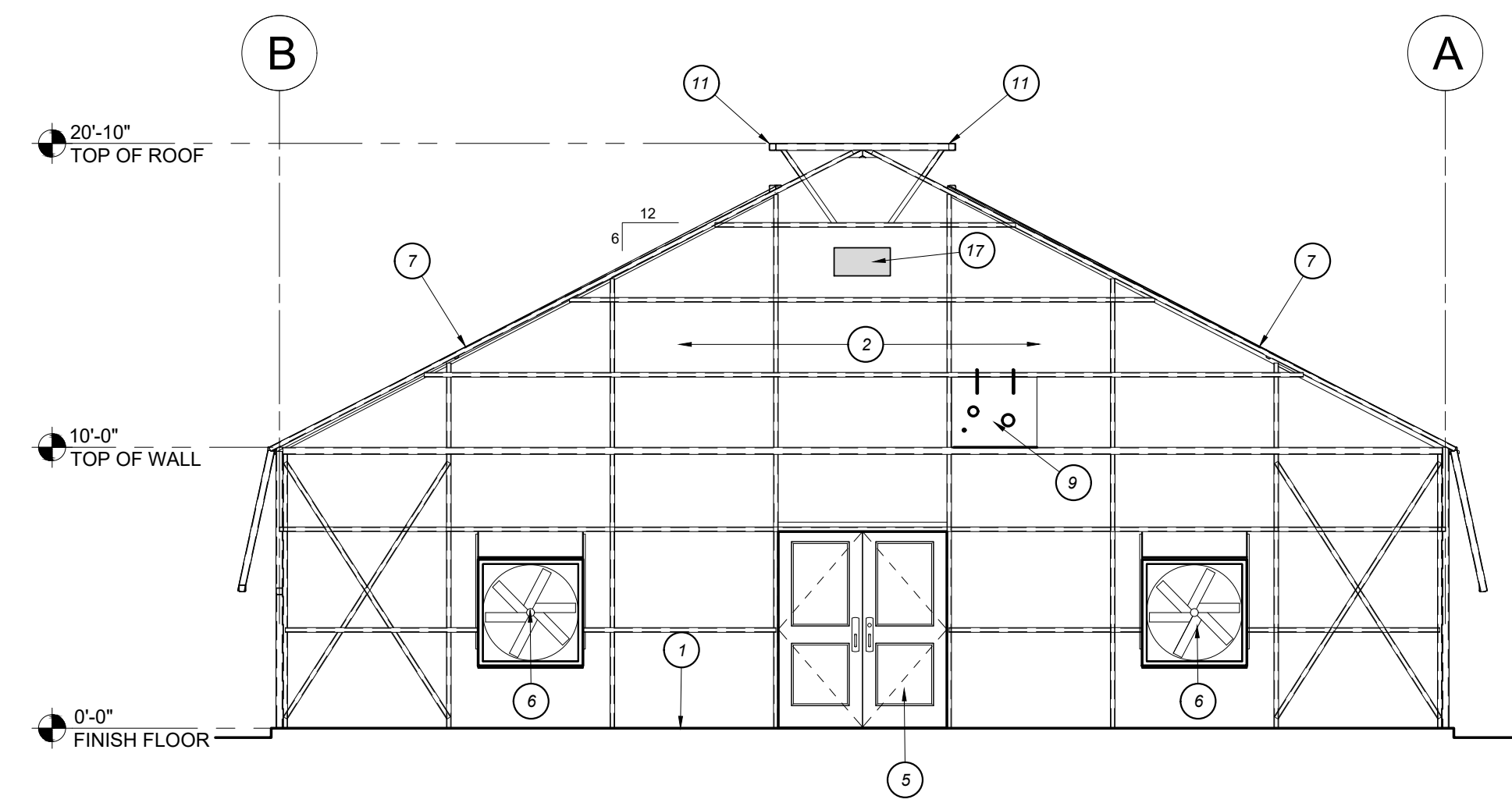




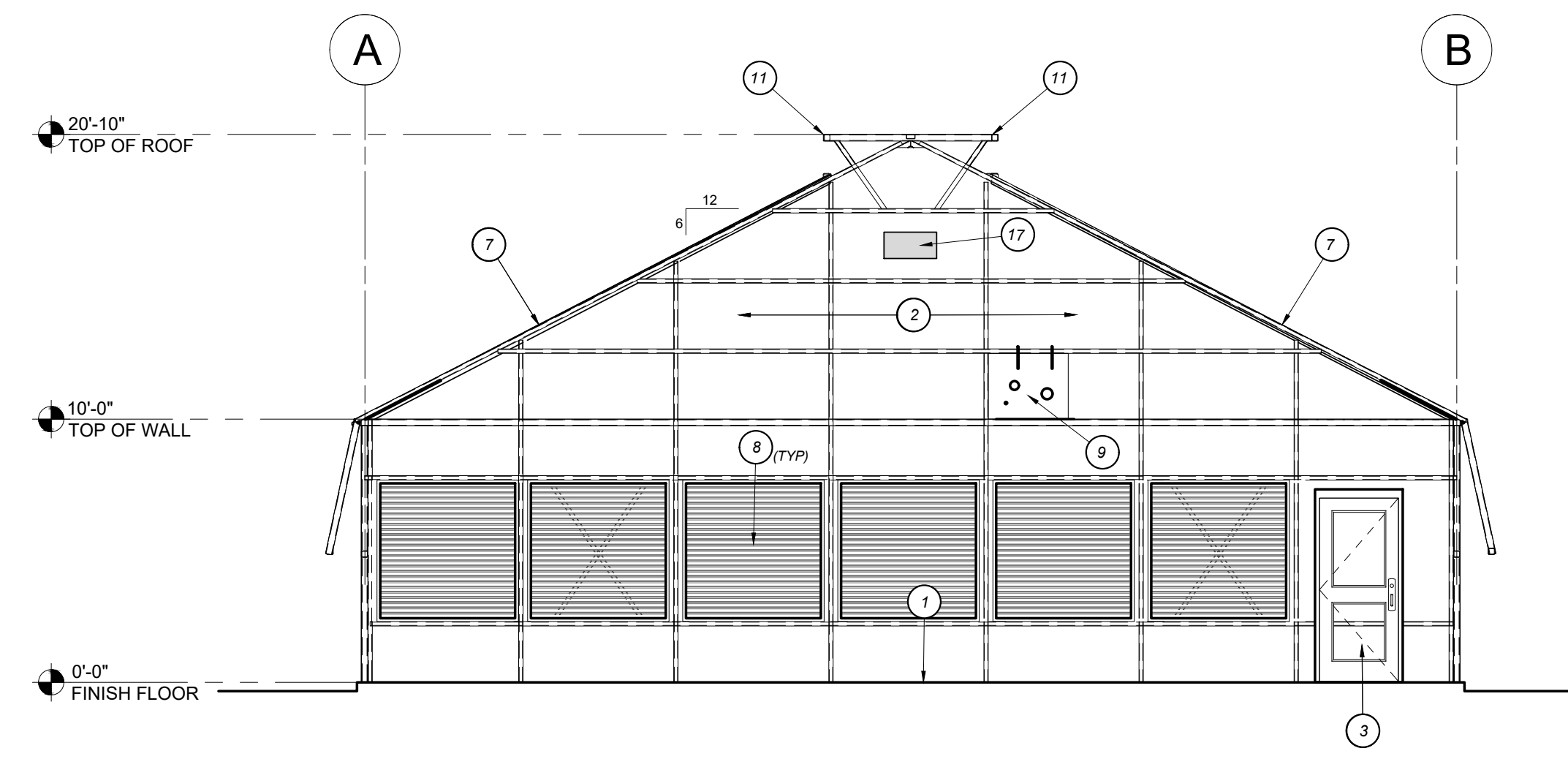
**A BUILDING SECTION**  
 A102 3/16" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



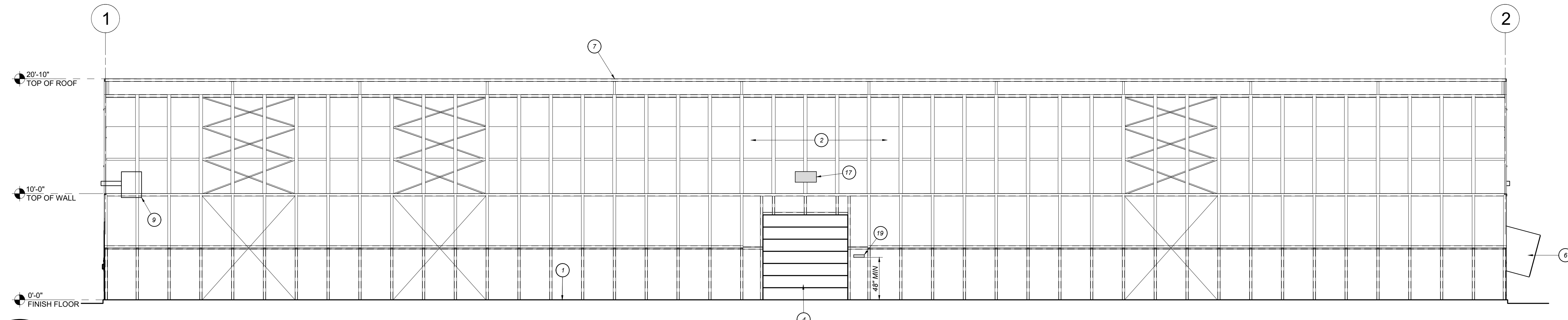
**B BUILDING SECTION**  
 A102 3/16" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**C SOUTH EXTERIOR ELEVATION**  
 A102 3/16" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**D NORTH EXTERIOR ELEVATION**  
 A102 3/16" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**E TYPICAL SIDE ELEVATION**  
 A102 3/16" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2

**KEYNOTES**

- 1 GREENHOUSE INTERIOR CONCRETE SLAB PER DETAIL (W/600), HEAVY BROOM FINISH.
- 2 STRUCTURAL STEEL FRAMING. SEE MANUFACTURER'S PLANS FOR ADDITIONAL INFORMATION.
- 3 3' X 7' X 1-3/4" THICK STANDARD WINANDY HALF GLASS SINGLE DOOR (WITH STANDARD DOUBLE LEVER "BEST" STYLE CORE LOCK SET)
- 4 8' X 8' STANDARD WINANDY SHEET STEEL ROLL UP DOOR, (TYP. 2)
- 5 6' X 7' X 1-3/4" THICK STANDARD WINANDY HALF GLASS DOUBLE DOOR (WITH STANDARD DOUBLE LEVER "BEST" STYLE CORE LOCK SET)
- 6 ACME EXHAUST FAN, (2) DCA42J, 1 HP, W/W.S. W/GS. W/SLANT WALL HOUSING, WINLET & OUTLET GUARD, WITH SHUTTER, 115 V
- 7 ROOF PURLINE WITH #12 FASTENERS
- 8 ACME WAAC6363MT MOTORIZED PAD INLET SHUTTER, 115V, 0.1 AMPS, (TYP. 6)
- 9 MODINE PTP300S GAS FIRED HEATER
- 10 TGU MOTORIZED SHADE SYSTEM WITH ALUMINET 50% ICFR SHADE CLOTH SHOWN DASHED
- 11 36" ELECTRIC MOTORIZED RACK & PINION RIDGE VENTS. SEE MANUFACTURER'S PLANS
- 12 CHERRY CREEK WATERING BOOM WITH BALDOR DC AND CHAIN DRIVE-1/4 HP, 2.5 AMPS (2 ROWS) SINGLE WATER BAR SETUP WITH TEEJET SPRAYS (0.8GPM) EVERY 18" WHIP HOSE WATERING ASSEMBLY COMPASS CAPTURE CONTROLLER W/ AREA CAPTURE PROGRAM.
- 13 V12 STORM DRAIN INLET PER DETAIL (F/X200)
- 14 2" X 2" SQ. STEEL WATERING BOOM TRACK
- 15 HIGH-BAY LIGHT FIXTURE. SEE ELECTRICAL PLANS
- 16 SCHAEFER VK12, 12" DIA. HAF FAN, 115V, 1/10HP, 1.3A (TYP. 4)
- 17 WALLPACK LIGHT FIXTURE. SEE ELECTRICAL PLANS
- 18 COLUMN FOOTINGS WHERE THEY OCCUR
- 19 MOUNT SIGN TO WALL ADJACENT TO ROLL UP DOOR THAT READS "MAINTENANCE ACCESS ONLY" SIGN SHALL BE WHITE BACKGROUND WITH 1" HIGH LETTERING THAT COMPLIES WITH SECTION 11B-703 OF THE CBC
- 20 3/4" PEA GRAVEL, 3" THICK OVER, 12" OF COMPACTED SUBGRADE

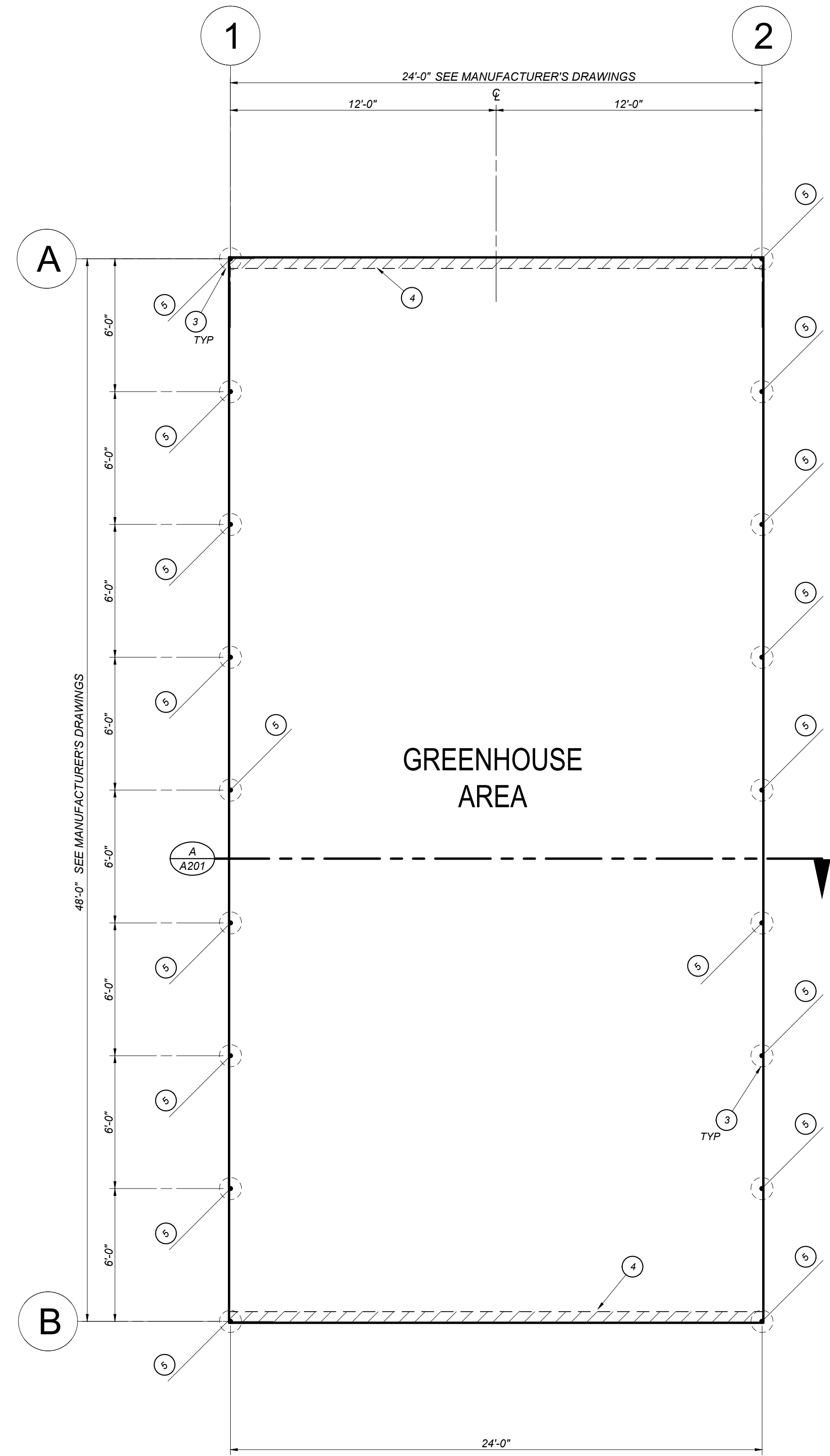
**GREENHOUSE BID ALTERNATE NOTES:**

1. GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
3. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
4. IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCHING AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
5. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN 5' FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS

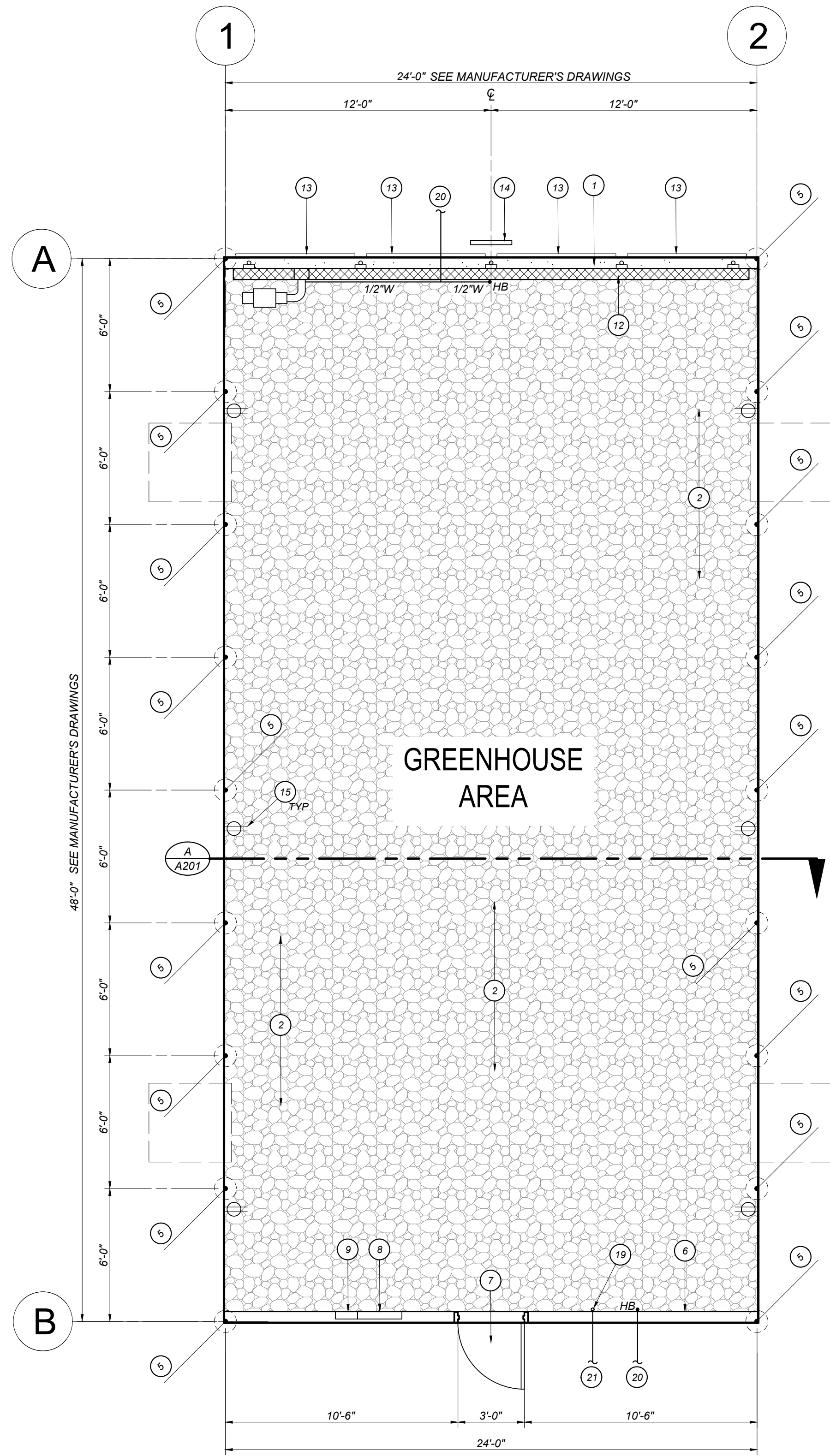
**Blair, Church & Flynn**  
 CONSULTING ENGINEERS  
 455 Clovis Avenue, Suite 200  
 Clovis, California 93612  
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03/01/2024  
 Date Signed: \_\_\_\_\_

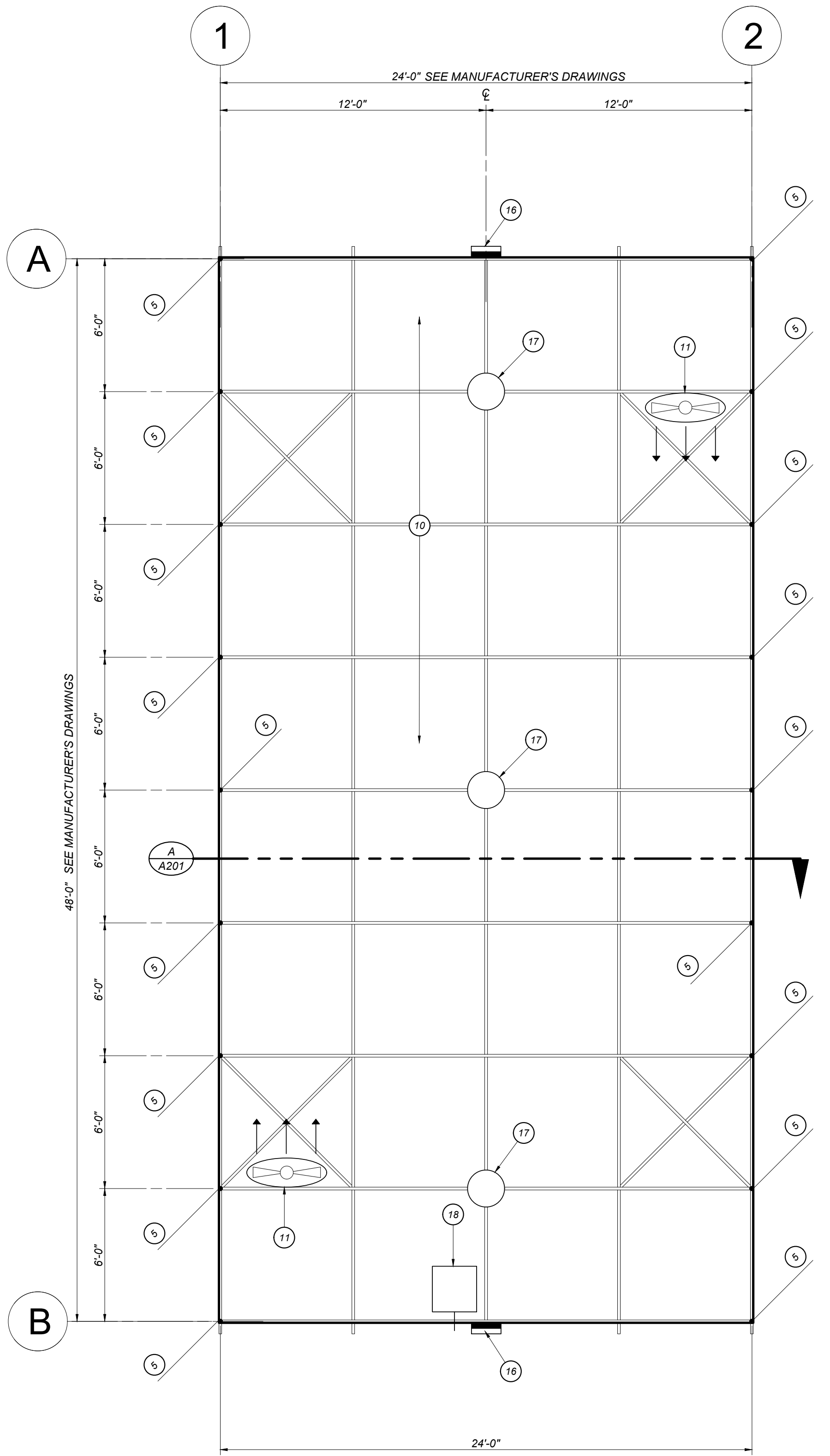
CONSULTANT	REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX	
Blair, Church & Flynn Consulting Engineers 455 Clovis Avenue, Suite 200 Clovis, California 93612 Tel (559) 326-1400 Fax (559) 326-1500		GREENHOUSE COMPLEX MAIN GREENHOUSE ELEVATIONS & SECTION	CONST. DOCUMENTS A102
		DR. BY: AH	SCALE AS NOTED
		CH. BY: JH	
		DATE: 03/01/2024	



**A** PROPOSED SMALL GREENHOUSE 1 & 2 FOUNDATION PLAN  
 A200 1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



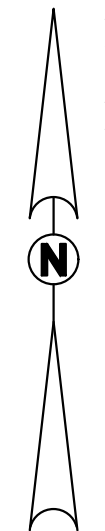
**B** PROPOSED SMALL GREENHOUSE 1 & 2 FLOOR PLAN  
 A200 1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**C** PROPOSED SMALL GREENHOUSE 1 & 2 REFLECTED CEILING PLAN  
 A200 1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2

- KEYNOTES**
- 1 GREENHOUSE INTERIOR CONCRETE SLAB PER DETAIL (I/A600), HEAVY BROOM FINISH.
  - 2 3" THICK, 3/4" GRAVEL OVER 12" COMPACTED SUBGRADE
  - 3 12 INCH DIAMETER X 30 INCH DEEP CONCRETE FOOTING
  - 4 6 INCH WIDE CONCRETE FOOTING X 8 INCH DEEP WITH REBAR #4 HORIZONTAL
  - 5 STRUCTURAL STEEL COLUMN. SEE MANUFACTURER'S PLANS FOR ADDITIONAL INFORMATION.
  - 6 EXTERIOR WALL
  - 7 3' X 6'-8" PLYCO SERIES 20 INSULATED DOOR (WITH FALCON LEVER/LOCKSET INCLUDES ADA THRESHOLDS AND COMMANDER PACK RHOS)
  - 8 ELECTRICAL PANEL
  - 9 WADSWORTH ENVIROSTEP CONTACTOR PANEL, 115V, 2 AMPS (TYP. 1)
  - 10 ROOF PURLIN WITH #12 FASTENERS
  - 11 SCHAEFER VK12, 12" DIA. HAF FAN, 115V, 1/10HP, 1.3A (TYP. 4)
  - 12 QUIETAIRE EVAPORATIVE COOLING SYSTEM (1) 15' LONG X 4" THICK PADS X 36" TALL, SUBMERSIBLE PUMP
  - 13 ACME WAAC6363MT MOTORIZED PAD INLET SHUTTER, 115V, 0.1 AMPS, (TYP. 4)
  - 14 WADSWORTH ENVIROSTEP WEATHER STATION WITH MAST
  - 15 ELECTRICAL EQUIPMENT, SEE ELECTRICAL PLANS
  - 16 WALLPACK LIGHT FIXTURE, SEE ELECTRICAL PLANS
  - 17 HIGH-BAY LIGHT FIXTURE, SEE ELECTRICAL PLANS
  - 18 MODINE 'HOT DAWG' GAS-FIRED HEATER
  - 19 1" GAS RISER ATTACHED TO WALL STRUTS/PURLINS. RUN UP WALL AND CONNECT TO GAS-FIRED HEATER WITH A GAS SHUT-OFF BALL VALVE ADJACENT TO THE HEATER ASSEMBLY
  - 20 SEE UTILITY PLAN FOR WATER LINE CONNECTION FOR HOSE BIBBS AND EVAPORATION COOLER
  - 21 SEE UTILITY PLAN FOR GAS LINE CONNECTION FOR GAS-FIRED HEATER

- GREENHOUSE BID ALTERNATE NOTES:**
1. GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
  2. THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
  3. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
  4. IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCHING AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
  5. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN 5' FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS



<p>Blair, Church &amp; Flynn          Consulting Engineers          455. Clovis Avenue,          Suite 200          Clovis, California 93612          Tel (559) 326-1400          Fax (559) 326-1500</p>	CONSULTANT REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX	
	03/01/2024 Date Signed:	GREENHOUSE COMPLEX SMALL GREENHOUSE FOUNDATION & FLOOR & CEILING PLANS	CONST. DOCUMENTS DR. BY: AH CH. BY: AH DATE: 03/01/2024 SCALE AS NOTED A200



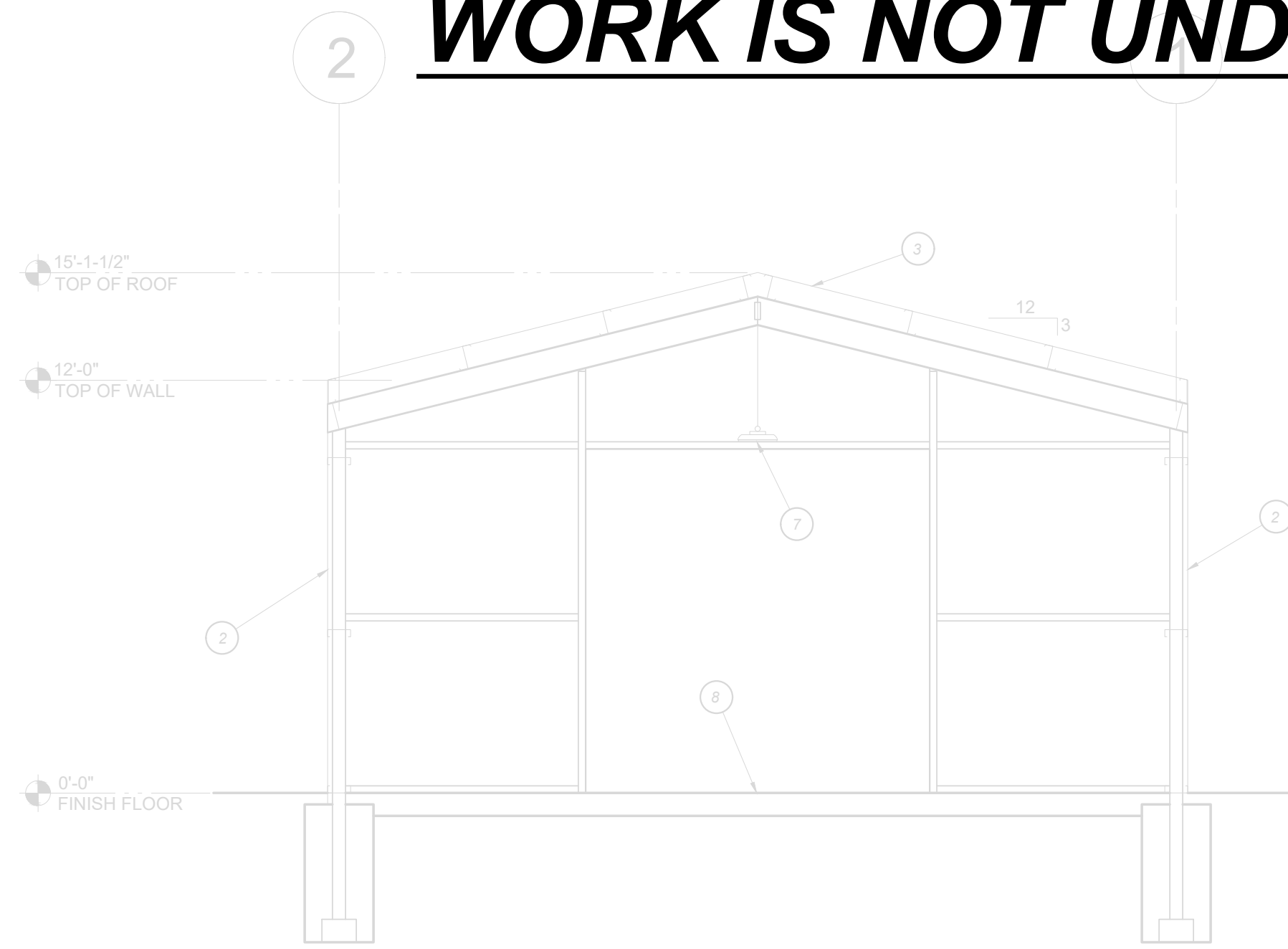




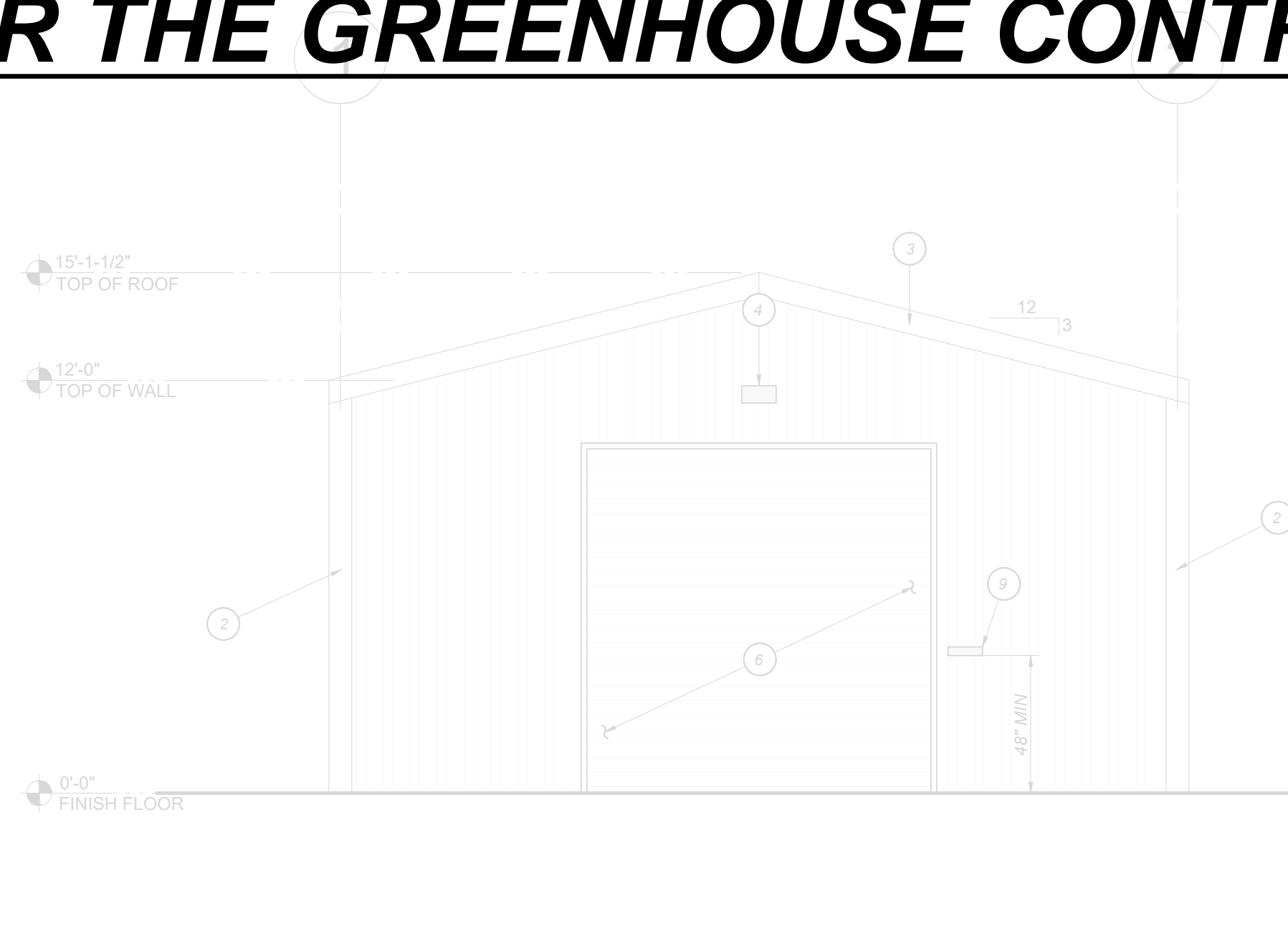


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**A**  
A301 **BUILDING SECTION**  
1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**B**  
A301 **SOUTH EXTERIOR ELEVATION**  
1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**C**  
A301 **NORTH EXTERIOR ELEVATION**  
1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2

**KEYNOTES**

- 1 METAL PANEL, TYPE 1: BORGHA HR345 PANEL, COLOR: TO BE SELECTED BY OWNER
- 2 METAL TRIM, SEE DETAILS FOR ADDITIONAL INFORMATION
- 3 METAL ROOF, BORGHA SUPER PANEL, 26 GAUGE, COLOR ZINCALUME AZ55 PLUS.
- 4 WALLPACK LIGHT FIXTURE, SEE ELECTRICAL PLANS
- 5 3' X 7' METAL DOOR
- 6 10' X 10' METAL ROLL-UP DOOR
- 7 HIGH-BAY LIGHT FIXTURE, SEE ELECTRICAL PLANS
- 8 INTERIOR CONCRETE SLAB PER DETAIL (10X600), HEAVY BROOM FINISH
- 9 MOUNT SIGN TO WALL ADJACENT TO ROLL UP DOOR THAT READS "MAINTENANCE ACCESS ONLY" SIGN SHALL BE WHITE BACKGROUND WITH 1" HIGH LETTERING THAT COMPLIES WITH SECTION 11B-703 OF THE CBC



**D**  
A301 **WEST EXTERIOR ELEVATION**  
1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**E**  
A301 **EAST EXTERIOR ELEVATION**  
1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2

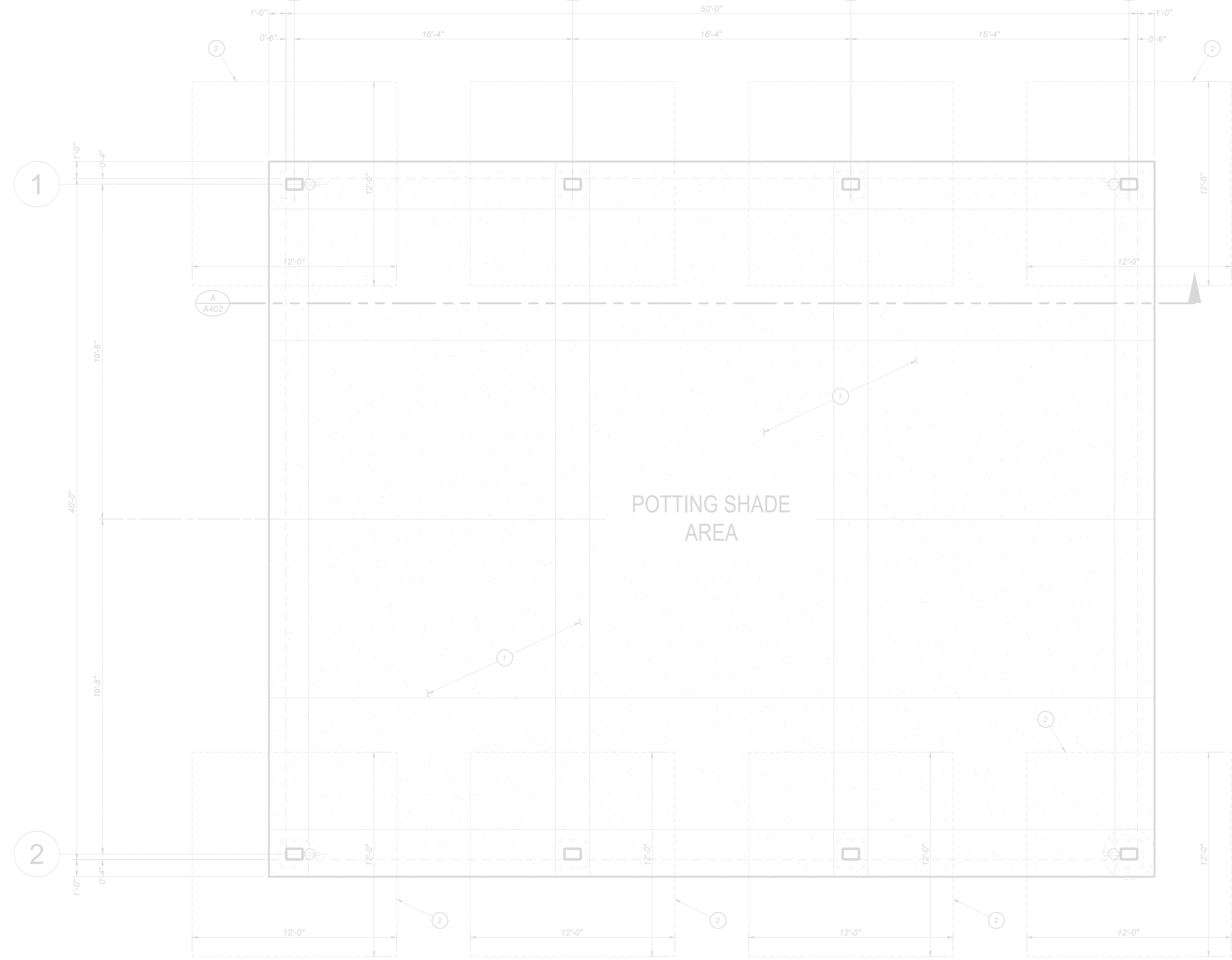
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<p><b>Blair, Church &amp; Flynn</b> CONSULTING ENGINEERS</p>		CONSULTANT	REF. & REV.	<b>MERCED COLLEGE GREENHOUSE COMPLEX</b>
		Blair, Church & Flynn Consulting Engineers 455. Clovis Avenue, Suite 200 Clovis, California 93612 Tel (559) 326-1400 Fax (559) 326-1500	GREENHOUSE COMPLEX AG STORAGE ELEVATIONS & SECTION	<b>CONST. DOCUMENTS</b> DR. BY: AH CH. BY: JH DATE: 03/01/2024 SCALE AS NOTED

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**KEYNOTES**

- ① CONCRETE SIDEWALK PER DETAIL [A/X100]
- ② 24 INCH DIAMETER X 48 INCH DEEP CONCRETE COLUMN FOOTING
- ③ 8 INCH WIDE CONCRETE FOOTING X 8 INCH DEEP WITH REBAR #4 HORIZONTAL
- ④ STRUCTURAL STEEL COLUMN. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
- ⑤ EXTERIOR WALL
- ⑥ 5/8 INCH DIAMETER HIGH STRENGTH CABLE AT SIDEWALL
- ⑦ 5/8 INCH DIAMETER HIGH STRENGTH CABLE AT ROOF
- ⑧ ROOF PURLIN WITH #12 FASTENERS
- ⑨ 3' X 7' METAL DOOR
- ⑩ 10' X 10' METAL DOOR
- ⑪ ELECTRICAL PANEL

A PROPOSED POTTING SHADE FOUNDATION AND FLOOR PLAN

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Fax (559) 326-1500

03/01/2024  
Date Signed: \_\_\_\_\_

CONSULTANT

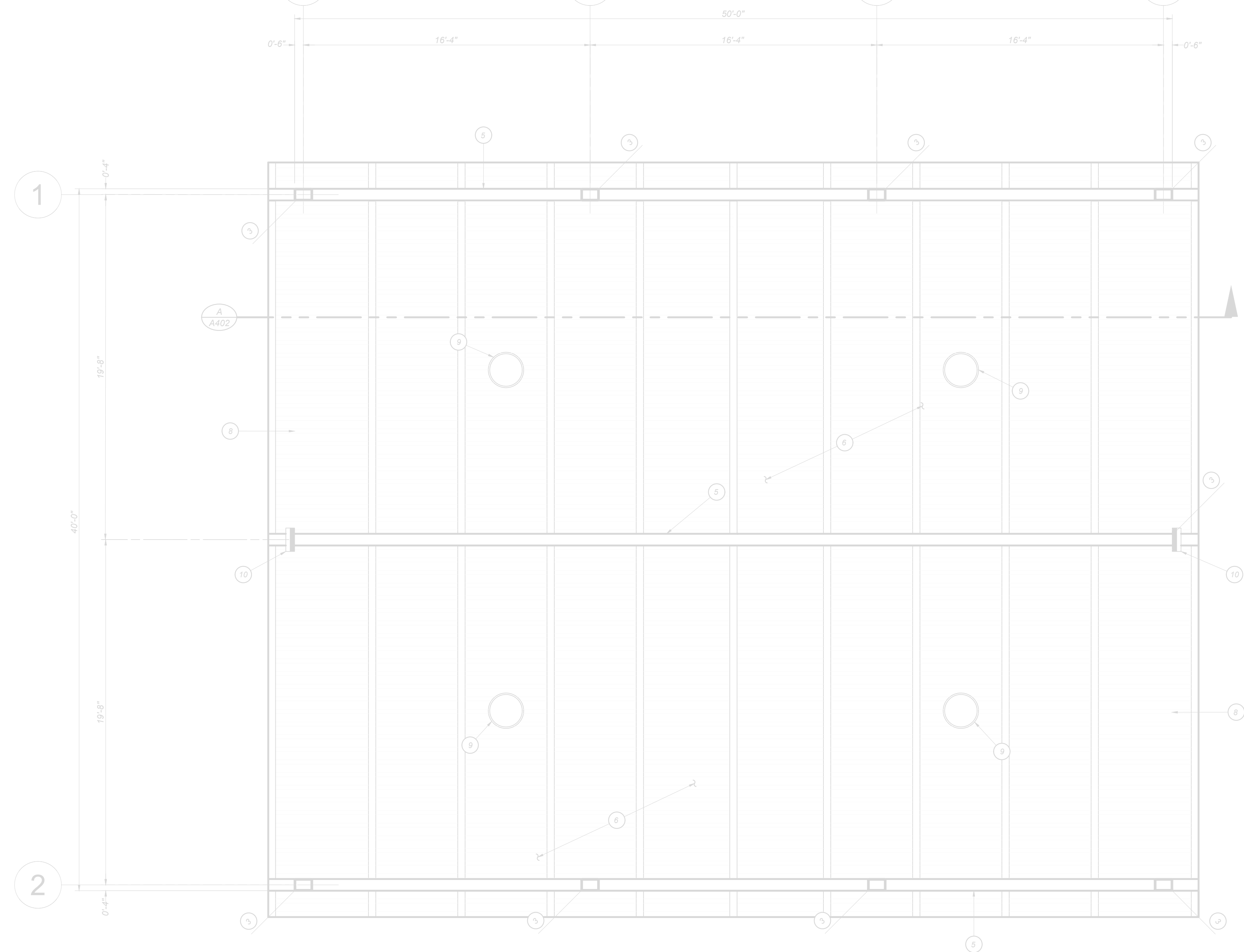
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	GREENHOUSE COMPLEX POTTING SHADE FLOOR & FOUNDATION PLAN
	CONST. DOCUMENTS
	DR. BY: AH CH. BY: JH DATE: 03/01/2024 SCALE AS NOTED
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- KEYNOTES**
- ① CONCRETE SIDEWALK PER DETAIL [A/X100]
  - ② 36 INCH DIAMETER X 54 INCH DEEP CONCRETE COLUMN FOOTING
  - ③ STRUCTURAL STEEL COLUMN. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
  - ④ STRUCTURAL STEEL COLUMN. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
  - ⑤ W14 X 22 STEEL BEAM
  - ⑥ 8'X 2-1/2" 14 GA Z ROOF PURLIN - TYP.
  - ⑦ 26 GA RIBBED METAL SHEETING
  - ⑧ 7" WIDE ROOF GUTTER WITH 10 WIDE GRATE
  - ⑨ LED HIGH BAY FIXTURE
  - ⑩ 100 W LED WALLPACK LIGHT

A  
PROPOSED POTTING SHADE REFLECTED CEILING PLAN

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03/01/2024  
Date Signed: \_\_\_\_\_

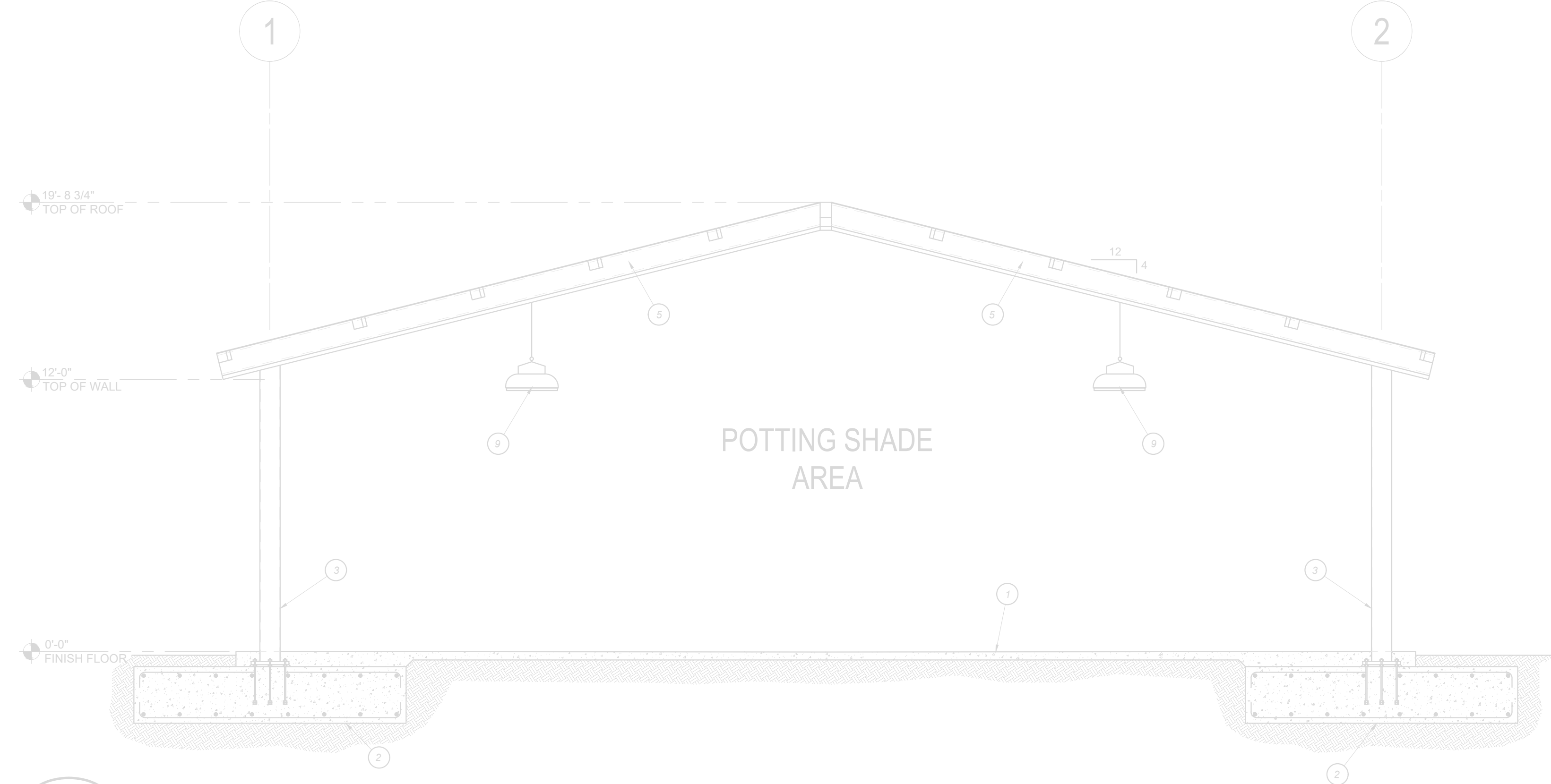
CONSULTANT

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	GREENHOUSE COMPLEX POTTING SHADE CEILING PLAN
	CONST. DOCUMENTS
DR. BY: AH	24
CH. BY: _____	_____
DATE: 03/01/2024	_____
SCALE AS NOTED	A401

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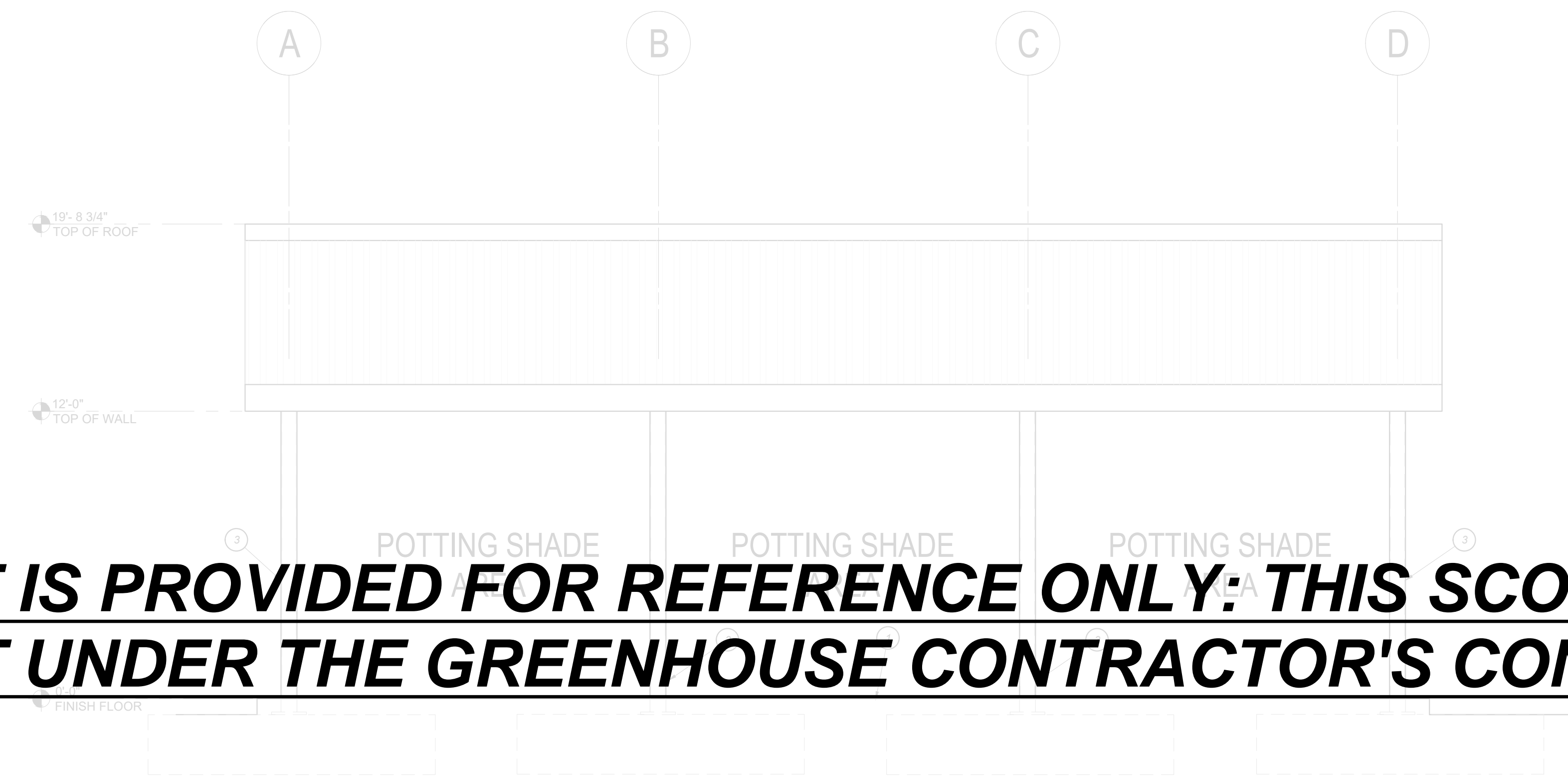
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- KEYNOTES**
- ① CONCRETE SIDEWALK PER DETAIL [A/X100]
  - ② 36 INCH DIAMETER X 54 INCH DEEP CONCRETE COLUMN FOOTING
  - ③ STRUCTURAL STEEL COLUMN. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
  - ④ STRUCTURAL STEEL COLUMN. SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION.
  - ⑤ W14 X 22 STEEL BEAM
  - ⑥ 8"X2-1/2" 14 GA Z ROOF PURLIN - TYP.
  - ⑦ 26 GA RIBBED METAL SHEETING
  - ⑧ 7" WIDE ROOF GUTTER WITH 10 WIDE GRATE
  - ⑨ LED HIGH BAY FIXTURE

**A** POTTION SHADE SECTION  
A402 1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2



**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

**B** SIDE EXTERIOR ELEVATION  
A402 1/4" = 1'-0" NOTE: THIS WORK IS EXEMPT FROM DSA STRUCTURAL SAFETY AND FIRE LIFE SAFETY REVIEW PER DSA IR A-22 SECTION 1.2.1 AND 2.1.2

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03/01/2024  
Date Signed: *[Signature]*  
PROFESSIONAL ENGINEER  
STATE OF CALIFORNIA  
No. 57218

CONSULTANT	REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX
Blair, Church & Flynn Consulting Engineers 455 Clovis Avenue, Suite 200 Clovis, California 93612 Tel (559) 326-1400 Fax (559) 326-1500		GREENHOUSE COMPLEX POTTING SHADE ELEVATION & SECTION
		CONST. DOCUMENTS
		DR. BY: AH CH. BY: JH DATE: 03/01/2024 SCALE AS NOTED
		<b>A402</b>

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# GENERAL NOTES

- CODE COMPLIANCE: ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH CODES, STANDARDS, AND ORDINANCES AS SET FORTH BY THE AUTHORITIES HAVING JURISDICTION AND THEIR LATEST ADOPTED EDITIONS (IN EFFECT AT TIME OF BUILDING PERMIT APPLICATION) OF THE FOLLOWING PUBLICATIONS:
  - CALIFORNIA CODE OF REGULATIONS TITLE 24; INCLUDES 2022 CALIFORNIA ELECTRICAL CODE, 2022 CALIFORNIA FIRE CODE, 2022 CALIFORNIA BUILDING CODE, ETC. WITH LOCAL AMENDMENTS AS APPLICABLE.
  - AMERICANS WITH DISABILITIES ACT (ADA).
- SAFETY: THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EQUIPMENT IN A SAFE AND RESPONSIBLE MANNER. KEEP DEAD FRONT EQUIPMENT IN PLACE WHILE EQUIPMENT IS ENERGIZED. CONDUCT ALL CONSTRUCTION OPERATIONS IN A SAFE MANNER FOR EMPLOYEES AS WELL AS OTHER WORKPERSONS OR ANYONE VISITING THE JOB SITE. PROVIDE BARRIERS, FLAGS, TAPE, ETC. AS REQUIRED FOR SAFETY. THE CONTRACTOR SHALL HOLD ALL PARTIES HARMLESS OF NEGLIGENCE SAFETY PRACTICES, WHICH MAY CAUSE INJURY TO OTHERS ON OR NEAR THE JOB SITE.
- FIRE RATED ASSEMBLIES SHALL MAINTAIN RATINGS AS SPECIFIED IN THE CALIFORNIA BUILDING CODE CHAPTER 7. CONTRACTOR SHALL PROVIDE AND INSTALL PHYSICAL ENCLOSURE AROUND FIXTURES, PANELS, ETC. AS REQUIRED. ALL ASSEMBLIES TO BE PENETRATED SHALL BE INSTALLED WITH APPLICABLE THROUGH-PENETRATION FIRESTOP SYSTEM AS DETERMINED BY UL CLASSIFICATION. BEFORE CONSTRUCTION, VERIFY AND COMPLY WITH REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION.
- MOUNTING HEIGHTS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
  - +15" AFF: RECEPTACLES, TELEPHONE, TV & DATA OUTLETS. (MEASURED BOTTOM OF OUTLET BOX)
  - +48" AFF: OUTLET ABOVE COUNTER (MEASURED TOP OF OUTLET BOX)
  - +48" AFF: LIGHT SWITCHES. (MEASURED TOP OF OUTLET BOX)
  - +48" AFF: FIRE ALARM MANUAL PULL STATIONS, T-STATS. (MEASURED TOP OF OUTLET BOX)
  - THE LOWER OF +80" AFF TO BOTTOM OF LENS, OR 6" BELOW CEILING: FIRE ALARM VISUALS.

ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHT AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM. [CBC 11B-308.1.1]

ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM [CBC 11B-308.1.2]

BEFORE ROUGH-IN, VERIFY ALL MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL EQUIPMENT ELECTRICAL CONNECTIONS, STUB-UPS, RECEPTACLES, OUTLETS, ETC. WITH ARCHITECT OR OWNER. PLACE DEVICES LOCATED ABOVE COUNTERS, SHELVING, ETC. AND IN BATHROOMS SO AS NOT TO CONFLICT WITH EDGES OF WAINSCOTING, COUNTER SPLASH, SHELVING, ETC. ARCHITECTURAL SHEETS SHALL GOVERN.

- LABEL PANELS, CABINETS, BACKBOARDS, MAIN DEVICES, SAFETY SWITCHES, CONTACTORS AND OTHER SPECIFICALLY DESIGNATED EQUIPMENT SHOWN ON PLANS. USE ENGRAVED LAMINATED PLASTIC NAMEPLATES ATTACHED BY SCREWS OR RIVETS. FOR FEEDERS, NEATLY AND INDELIBLY LABEL CONDUIT DESTINATIONS ON BOTH VISIBLE ENDS OF CONDUIT RUNS WHERE CONDUITS TERMINATE AT DESIGNATED ENCLOSURES, STRUCTURES OR EQUIPMENT (INCLUDING PULL AND SPLICE BOXES).

- EQUIPMENT ANCHORAGE NOTE  
ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2022 CBC, SECTIONS 1613A AND 1616A AND ASCE 7-10 SECTIONS 13.3, 13.4 & 13.6.

THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS PER 202 CBC SECTION 1616A.1.18:

- FURNITURE (EXCEPT STORAGE CABINETS AS NOTED IN 2022 CBC TABLE 13.5-1)
- TEMPORARY OR MOVABLE EQUIPMENT WITH EXCEPTIONS NOTED IN 2022 CBC SECTION 1616A.1.18 ITEM 2.
- ARCHITECTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS IN SEISMIC DESIGN CATEGORIES D, E, OR F THAT MEET ALL OF THE CRITERIA LISTED IN 2022 SECTION 1616A.1.18 ITEM 3.
- EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.
- EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER.

### ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.8, 13.6.7, 13.6.5.6 AND 2022 CBC, SECTIONS 1617A. 1.1 THROUGH 1617A.1.24.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE HCAI PRE-APPROVALS (OPM#). I.E. OPM-0043-1 MASON-WEST.

COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD (SEOR) SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

- CONDUIT SHALL NOT BE INSTALLED WITHIN CONCRETE SLABS UNLESS SPECIFICALLY NOTED.

### MECHANICAL SYSTEMS

- MECHANICAL UNIT CONDUITS: TO PREVENT DAMAGE DUE TO VIBRATION, BOTH POWER AND CONTROL WIRING CONDUITS FEEDING EXTERIOR MECHANICAL UNITS SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR WITH LIQUID TIGHT FLEXIBLE TYPE AT FINAL CONNECTION TO UNIT AND BETWEEN ROOF JACK AND DISCONNECT SWITCH WHERE DISCONNECT IS MOUNTED ON UNIT.
- MECHANICAL CONTROLS ROUGH-IN: PROVIDE AND INSTALL J-BOX, RING AND CONDUIT (SIZE ALL AS REQUIRED) FROM EACH MECHANICAL CONTROLS LOCATION TO CONTROLLED MECHANICAL UNITS.
- MECHANICAL EQUIPMENT CONTROLS: MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOW VOLTAGE WIRE AND CONNECTIONS (BELOW 120 VOLT) TO AND FROM ALL MECHANICAL CONTROL DEVICES. ALL LOW VOLTAGE CONTROL WIRE SHALL BE IN CONDUIT, UNLESS OTHERWISE NOTED.

### GREENHOUSE BID ALTERNATE NOTES:

- GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
- IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCH AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN 5' FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS

# LEGEND

## LIGHT FIXTURES

- CEILING SURFACEMOUNT
- WALL SURFACEMOUNT
- DUPLEX RECEPT.
- PENDANT MOUNT
- RECESSED DOWNLIGHT
- RECESSED WALLWASH
- RECESSED FIXTURE
- STRIP FIXTURE
- SURFACE FIXTURE
- TRACK LIGHT
- DIRECTIONAL FLOOD
- EMERGENCY FIXTURE
- POLE LIGHT
- POLE LIGHT- DECORATIVE
- UPLIGHT- FLUSH IN GRADE
- BOLLARD
- TANDER-WIRED LAMPS
- UNDERCABINET LIGHT
- WALL SURFACEMOUNT LINEAR TYPE
- PENDANT LINEAR FIXTURE
- RECESSED WALLMOUNT
- WALLPACK
- EXIT LIGHT- WALL
- EXIT LIGHT- CEILING (ARROW INDICATES DIRECTION)
- LETTER ADJACENT INDICATES FIXTURE TYPE

## SWITCHES

- \$ SPST
- \$2 DPST
- \$3 3-WAY
- \$4 4-WAY
- \$D DIMMER
- \$T TIMER SWITCH
- \$P W/THERMAL OVERLOAD
- \$W W/PILOT LIGHT
- \$X KEY OPERATED
- \$S DUAL LEVEL SWITCHING
- .a SWITCHLEG DESIGNATION
- OS OCCUPANCY SENSOR

## POWER/COMM.

- ⊕ SINGLE RECEPT.
- ⊕ DUPLEX RECEPT.
- ⊕ DUPLEX- HALF O.S. CNTRLD.
- ⊕ DOUBLE DUPLEX, HALF O.S. CNTRLD.
- ⊕ DOUBLE DUPLEX
- ⊕ SPECIAL CONFIGURATION
- ⊕ FLOORMOUNT 208V, 1Ø RECEPT
- ⊕ DUPLEX- FLOOR OUTLET
- ⊕ GROUND FAULT CIRCUIT INTERRUPT
- ⊕ MOUNTED ABOVE COUNTER
- ⊕ JUNCTION BOX
- ⊕ TELEPHONE OUTLET
- ⊕ DATA OUTLET
- ⊕ PHONE/DATA COMBO OUTLET
- ⊕ MOUNTED ABOVE COUNTER
- ⊕ TELEVISION OUTLET
- ⊕ SAFETY DISCONNECT
- ⊕ DROP CORD RECEPT
- ⊕ ABOVE-CLGMOUNT J-BOX
- ⊕ TV OUTLET-FLOORMOUNT
- ⊕ TELEPHONE FLOOR OUTLET
- ⊕ DATA FLOOR OUTLET
- ⊕ PHONE/DATA COMBO FLOOR OUTLET
- ⊕ INTERMEDIATE DISTRIBUTION FRAME
- ⊕ MAIN DISTRIBUTION FRAME
- ⊕ ACCESS POINT

## MISCELLANEOUS

- ⊕ MOTOR
- ⊕ THERMOSTAT
- ⊕ CIRCUIT BREAKER
- ⊕ FUSIBLE SWITCH
- ⊕ GROUND
- ⊕ PHASE
- ⊕ CLOCK
- ⊕ CLOCKS/SPEAKER COMBINATION
- ⊕ WALL MOUNTED CLOCK
- ⊕ PUSHBUTTON
- ⊕ FLUSHMOUNT PANEL
- ⊕ SURFACEMOUNT PANEL
- ⊕ FLUSHMOUNT CABINET
- ⊕ SURFACEMOUNT CABINET
- ⊕ DAMPER MOTOR
- ⊕ HUMIDISTAT
- ⊕ MAGNETIC CONTACTOR
- ⊕ COMBINATION STARTER

## CONDUIT/WIRE

- NEW
- UNDERGROUND
- ⊕ NEW POWER HOMERUN (3 HOTS & NEUT SHOWN)
- ⊕ ISOLATED GROUND
- ⊕ EXISTING TO REMAIN
- ⊕ (E) POWER HOMERUN
- ⊕ WIRE LINE- CONTINUOUS
- ⊕ CONDUIT STUB (W/MARKER)
- ⊕ VERTICAL CONDUIT RUN
- ⊕ CONDUIT SEAL
- ⊕ FLEXIBLE CONNECTION
- ⊕ LOW VOLTAGE
- ⊕ SURFACEMOUNT RACEWAY
- ⊕ INDICATES LINE CONTINUES
- ⊕ CORD W/PLUG

## FIRE ALARM

- ⊕ FIRE ALARM CONTROL PANEL
- ⊕ REMOTE POWER SUPPLY
- ⊕ HORN- AUDIBLE DEVICE
- ⊕ VISUAL- VISUAL DEVICE
- ⊕ AUDIBLE/VISUAL
- ⊕ SPEAKER/VISUAL
- ⊕ FLOW SWITCH
- ⊕ TAMPER SWITCH
- ⊕ MANUAL PULL STATION
- ⊕ SMOKE DETECTOR
- ⊕ DUCT SMOKE DETECTOR
- ⊕ SMOKE/CO DETECTOR
- ⊕ HEAT DETECTOR
- ⊕ BELL
- ⊕ END OF LINE RESISTOR
- ⊕ CHIME

## CONVENTIONS

- ⊕ NUMBERED SHEET NOTES: REFERS TO NOTES ON SAME SHEET AS REFERENCED
- ⊕ DETAIL REFERENCE: -DETAIL DESIGNATION -SHEET NUMBER REFERENCE
- ⊕ FEEDER SCHEDULE DESIGNATION (EXAMPLE: 3103 = 310 AMPERE, 600V, 3 CURRENT CARRYING CONDUCTORS)

NOTE: INTERPRET IN CONTEXT

## ABBREVIATIONS

- A AMPERE
- AF AMP FUSE RATING
- AFF ABOVE FINISH FLOOR
- AFG ABOVE FINISH GRADE
- AIC AMPERES INTERRUPT CAPACITY
- AS AMP SWITCH RATING
- BFG BELOW FINISH GRADE
- CB CIRCUIT BREAKER
- CEC CA. ELECTRICAL CODE
- CKT CIRCUIT
- C CONDUIT
- C.O. CONDUIT ONLY
- (E) EXISTING
- EC ELECTRICAL CONTRACTOR
- EF-# EXHAUST FAN
- (EXN) (E) IN (N) LOCATION
- (EXR) (E) TO BE (R)
- (F) FUTURE
- FA FIRE ALARM
- FACP FIRE ALARM CONTROL PANEL
- G GROUNDING CONDUCTOR
- GC GENERAL CONTRACTOR
- GFI GROUND FAULT CKT INTERRUPTER
- GND GROUND
- GRS GALVANIZED RIGID STEEL
- GWS GANGED WITH SWITCH
- IG ISOLATED GROUND
- LTG LIGHTING
- MC MECHANICAL CONTRACTOR
- MCB MAIN CIRCUIT BREAKER
- MLO MAIN LUGS ONLY
- MSB MAIN SWITCHBOARD
- MTTB MAIN TELEPHONE TERMINAL BOARD
- (N) NEW
- NIC NOT IN CONTRACT
- NL NIGHT LIGHT
- P POLE
- PV PHOTOVOLTAIC
- (R) RELOCATE(D)
- (TBR) TO BE REMOVED
- TYP TYPICAL
- UC UNDERCABINET
- UG UNDERGROUND
- UON UNLESS OTHERWISE NOTED
- V VOLT
- VA VOLT AMPERES
- W WATT, WIRE
- WP WEATHERPROOF (NEMA 3R)

DSA APP# 02-121754

# LUMINAIRE SCHEDULE

Δ	TYPE	ILLUSTRATION	MANUFACTURER	CATALOG NUMBER	VOLTAGE	TOTAL INPUT WATTS (W)	LAMP TYPE	NOMINAL LUMEN OUTPUT (L)	LAMP COLOR TEMP (K)	MOUNTING TYPE	DESCRIPTION	REMARKS
	A1		LITHONIA	JEBL 18000LM FRGL MVOLT 40K 80CRI WBF C56G16 STOWSD SBOR10	120-277V	135	LED	18000	4000	PENDANT	13" DIA, LED ROUND HIGH BAY, FROSTED GLASS LENS, WET LISTED, IP65, NSF RATED. 0-10V DIMMING, INTEGRAL OCC SNSOR	
	C1		BEGHELLI	BS100LED-X4FT HT HO W/IT40 120V-277V CH w/ EOSL2 LOG ESRPL	120-277V	100	LED	12196	4000	SUSPENDED, CHAIN HUNG	VAPOR-TIGHT LED LIGHT WITH FIXTURE MOUNTED MOTION WIRELESS CONTROL NODE, OCC. SENSOR WITH DAYLIGHT HARVESTING.	PROVIDE QTY. OF COMPATABLE WIRELESS DIMMING CONTROL SWITCHES PER PLANS.
	C2		BEGHELLI	BS100LED-X4FT HT LO W/IT40 120V-277V CH w/ EOSL2 LOG ESRPL	120-277V	80	LED	10560	4000	SUSPENDED, CHAIN HUNG	VAPOR-TIGHT LED LIGHT WITH FIXTURE MOUNTED MOTION WIRELESS CONTROL NODE, OCC. SENSOR WITH DAYLIGHT HARVESTING.	PROVIDE QTY. OF COMPATABLE WIRELESS DIMMING CONTROL SWITCHES PER PLANS.
	EM 1		BEGHELLI	TA PLUS LED SE UNV AT SL, WALL	120-277V	10	LED	1444	4000	SURFACE, WALL	WALL MOUNTED EM UNIT W/ 90-MINUTE BACKUP BATTERY. WET LISTED, NSF RATED.	
	EM 2		BEGHELLI	TA PLUS LED SE UNV AT SL, CEILING	120-277V	10	LED	1491	4000	SURFACE, CEILING	CEILING MOUNTED EM UNIT W/ 90-MINUTE BACKUP BATTERY. WET LISTED, NSF RATED.	
	S1		LITHONIA	WDGE2 LED P2SW 40K 80CRI VW MVOLT SRM_PIRFC3V DDBXD	120-277V	15	LED	2023	4000	SURFACE, WALL	LED WALL PACK WITH CUT-OFF DISTRIBUTION, INTEGRAL PHOTOCONTROL & BI-LEVEL MOTION SENSOR.	
	S1E		LITHONIA	WDGE2 LED P2SW 40K 80CRI VW MVOLT SRM_PIRFC3V DDBXD E10WH	120-277V	15	LED	2023	4000	SURFACE, WALL	TYPE S1E IS THE SAME AS S1 EXCEPT WITH INTEGRAL EMERGENCY BATTERY	
	S2		LITHONIA	DSXF3 LED 6 P2 40K 70CRI WFL MVOLT YK062 PE DDBXD	120-277V	138	LED	21005	4000	SURFACE, WALL	LED FLOOD LIGHT WITH WIDE FLOOD DISTRIBUTION & INTEGRAL PHOTOCONTROL	

ISSUE DATE: 8/10/2023

REV. DATE: .....

### NOTES

- LUMINAIRE SUPPLIED VOLTAGE TO BE VERIFIED BY ELECTRICAL CONTRACTOR.
- WHERE NOT SPECIFIED; FINISHES TO BE VERIFIED WITH DISTRICT.

for MERCED COLLEGE GREEN HOUSE

TE# 23-8061

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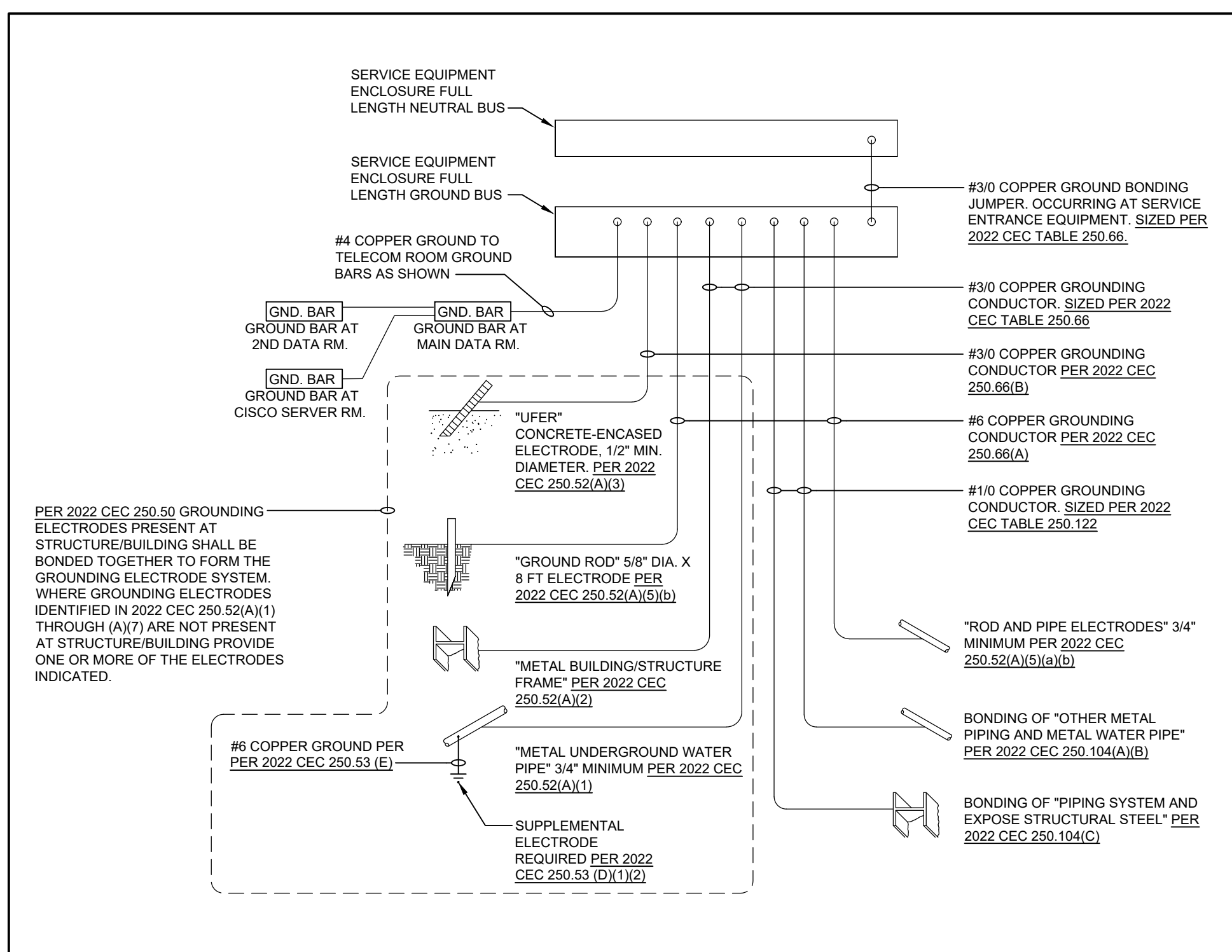
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STATE OF CALIFORNIA  
EXPIRES: 09/30/24

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REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX	
	GREENHOUSE COMPLEX	CONST. DOCUMENTS
	ELECTRICAL SYMBOLS LEGEND AND GENERAL NOTES	DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
		E-001





**1 GROUND/BOND DETAIL**  
SCALE: NTS

# WARNING

## ARC FLASH HAZARD

<b>LINE SIDE of MAIN</b>	<b>FLASH PROTECTION BOUNDARY: 40 inches</b>
	<b>HAZARD RISK CATEGORY: CLASS 2</b>
	<b>INCIDENT ENERGY RANGE: 4 - 8 cal/cm<sup>2</sup></b>
<b>LINE SIDE of MAIN</b>	<b>FLASH PROTECTION BOUNDARY: 20 inches</b>
	<b>HAZARD RISK CATEGORY: CLASS 0</b>
	<b>INCIDENT ENERGY RANGE: 0 - 2 cal/cm<sup>2</sup></b>

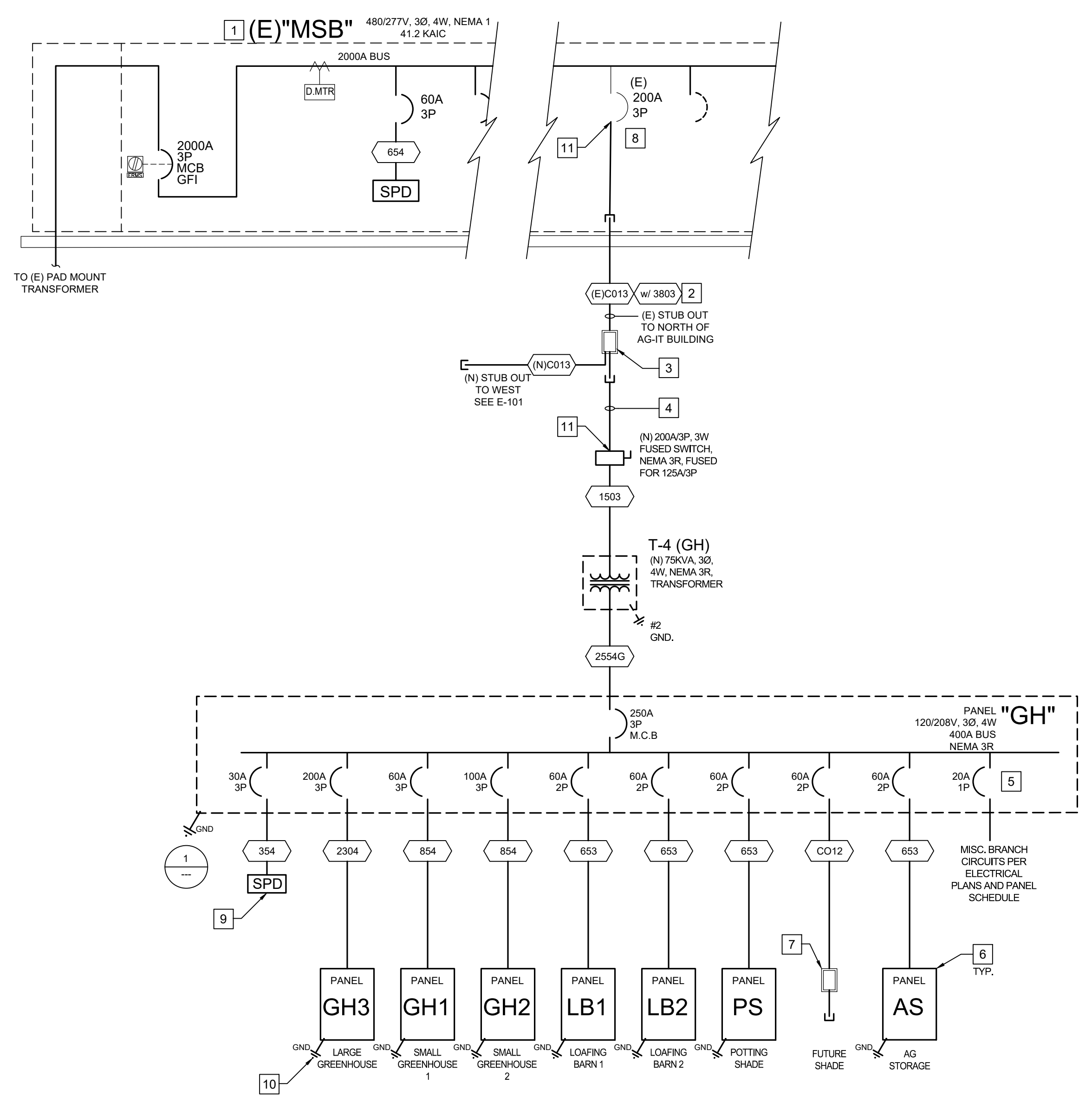
PSE TQS#: #####. #      Date Issued: April 2004      Study Rev.: 0

LOCATION: BUS NAME	PROTECTIVE DEVICE: UPSTREAM DEVICE
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NOTE:  
IN ACCORDANCE WITH CEC 110.16, PROVIDE ARC FLASH PROTECTION WARNING LABELS ON EACH SWITCHBOARD, PANELBOARD, AND TRANSFORMER. LABELS SHALL BE PER ANSI Z535.4 GUIDELINES PER THE ABOVE EXAMPLE.

**2 TYPICAL ARC FLASH SIGNAGE DETAIL**  
NO SCALE

- GREENHOUSE BID ALTERNATE NOTES:**
1. GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
  2. THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
  3. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
  4. IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCHING AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
  5. BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN'S FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS



**ELECTRICAL SINGLE LINE DIAGRAM**

**EQUIPMENT ELECTRICAL B.O.D. LIST** for MERCED COLLEGE GREENHOUSE TE# 23-8061

TAG	DESCRIPTION	QTY	VOLTAGE	PHASE	WATTS	AMPS	HP	FLA
EF-X.X	ACME EXHAUST FAN	2	230 (208)	1			1	
IS-X.X	ACME INLET SHUTTER	14	120	1	17			
HT-X.X	MODINE GAS FIRED HEATER	4	120	1			1/4	
ECS-X.X	EVAPORATIVE COOLING SYSTEM (PUMP)	3	120	1		2.9	1/3	
F-X.X	SCHAEFNER INTERNAL FAN	8	120	1			1/10	
RV-X.X	ROOF VENT (LOCK DRIVE MOTOR)	2	120	1		2.6		
RS-X.X	ROOF SHADE SYSTEM (DRIVE MOTOR)	1	120	1		2.5	1/5	
WB-X.X	DOUBLE RAIL WATERING BOOM (CHAIN DRIVE MOTOR)	1	120	1		2.5	1/4	

(ITEMS RCVD 1-31-24)  
**NOTES:**  
 • "X.X" DESIGNATION IN EQUIPMENT TAG INDICATES PANEL AND EQUIPMENT NUMBER AS REFLECTED ON ELECTRICAL FLOOR PLANS.  
 • ROUTE ALL GREENHOUSE EQUIPMENT BRANCH CIRCUITS THROUGH CONTACTOR PANELS AND COORDINATE WITH DISTRICTS CONTROLS CONTRACTOR

**REFERENCE NOTES**

1. (E) MAIN SWITCHBOARD IN AG-IT BLDG. MAIN ELECTRICAL ROOM.
2. LOCATE THE (E) U/G CONDUIT AND PULL BOX INSTALLED IN AREA OF GREENHOUSE PROJECT, SEE SHEET E-101. UTILIZE THE (E) CONDUIT TO INSTALL THE SPECIFIED FEEDER CONDUCTORS BETWEEN (E) "MSB" AND "GH" DISCONNECT SWITCH.
3. (E) U/G PULL BOX WITH CONDUIT FROM 480-VOLT "MSB".
4. EXTEND NEW CONDUIT PER ELECTRICAL PLANS TO NEW DISTRIBUTION EQUIPMENT. SEE SHEET E-101.
5. REFER TO THE PANEL SCHEDULE FOR FURTHER INFORMATION.
6. PROVIDE POWER PANEL IN PROJECT BUILDINGS PER ELECTRICAL PLANS AND PANEL SCHEDULES.
7. PROVIDE PULL BOX WITH CONDUIT ONLY FOR FUTURE USE. SEE SHEET E-101.
8. UTILIZE (E) 200A SPARE CIRCUIT BREAKER IN AG-IT "MSB".
9. PROVIDE A TRANSIENT VOLTAGE SURGE PROTECTION DEVICE (SPD) WITH A MINIMUM 80KA RATING. INCORPORATE INTO PANEL "GH" OR MOUNT ADJACENT TO PANEL "GH" IN A NEMA 3R ENCLOSURE.
10. PROVIDE BUILDING SUB PANELS WITH GROUNDING ELECTRODE SYSTEM AND GROUNDING CONDUCTORS PER CEC 250 (TYP.)
11. PROVIDE OFFSET COMPRESSION LUGS TO ACCOMMODATE OVERSIZED FEEDER TO FIT THE (N) OR (E) OCPD FACTORY LUG SIZE.

FEEDER NO.	RACEWAY QUANTITY/SIZE	CONDUCTORS
CO12	(1) 2" C	CONDUIT ONLY WITH PULL ROPE.
CO13	(1) 3" C	CONDUIT ONLY WITH PULL ROPE.
353	(1) 3/4" C	(3) #10 THWN & (1) #10 GND.
653	(1) 1" C	(3) #6 THWN & (1) #10 GND.
854	(1) 1-1/4" C	(4) #4 THWN & (1) #6 GND.
1503	(1) 3" C	(3) #10 THWN & (1) #6 GND.
2304	(1) 2-1/2" C	(4) #4/0 THWN & (1) #4 GND.
2554G	(1) 3" C	(4) #250 KCMIL THWN & (1) #2 GND.
3803	(1) 3" C	(3) #500 KCMIL THWN & (1) #3 GND.
4204	(1) 4" C	(4) #600 KCMIL THWN & (1) #2 GND.

**SINGLE LINE DIAGRAM GENERAL NOTES**

- A. SERVICE ENTRANCE EQUIPMENT SHALL BE IN ACCORDANCE WITH CEC REQUIREMENTS.
- B. ALL CONDUCTORS SHALL BE COPPER WITH TYPE [THHN/THWN] INSULATION UNLESS OTHERWISE NOTED.
- C. ALL SWITCHES, CIRCUIT BREAKERS AND OTHER EQUIPMENT, AS SPECIFIED, SHALL HAVE TERMINATION PROVISIONS LISTED AND IDENTIFIED FOR USE WITH 75 DEG. CONDUCTORS, AND ALL FEEDER CONDUCTORS, AND CONDUITS, ARE SIZE BASED ON USE OF 75 DEG. C COPPER WIRES TYPE THWN/THHN.
- D. ALL EQUIPMENT SHALL HAVE AN APPROVED TESTING LABORATORY LABEL ATTACHED [UL, CSA, ETC.] (CEC 110-2).
- E. SERVICE ENTRANCE AND DOWNSTREAM EQUIPMENT SHALL HAVE A U.L. APPROVED SERIES RATING EQUAL TO OR GREATER THAN THE AVAILABLE FAULT CURRENT. LABEL EQUIPMENT ACCORDINGLY WHEN SERIES RATINGS APPLY. IF NO SERIES RATING IS AVAILABLE, EQUIPMENT SHALL BE FULLY-RATED FOR THE AVAILABLE FAULT CURRENT.
- F. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SUPPLYING GEAR SIZED TO FIT IN THE AVAILABLE SPACE IN THE ELECTRIC ROOM/EQUIPMENT PAD. THE DIMENSIONS SHOWN ARE BASED UPON EATON / SQUARE D EQUIPMENT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONAL INFORMATION NOT SHOWN ON THE ELECTRICAL PLANS. CONTRACTOR SHALL SUBMIT A 1/4" SCALE DRAWING OF ALL SWITCHGEAR, AND TERMINATION CABINETS ON FLOOR PLAN WITH SUBMITTAL.
- G. SINGLE LINE DIAGRAM IS A GRAPHIC REPRESENTATION OF THE POWER DISTRIBUTION. REFER TO ELECTRICAL FLOOR PLANS FOR EQUIPMENT ORIENTATION / LAYOUT.

Mar 01, 2024 - 12:06pm - asackel - K:\EN\2023\23-8061\23-8061\_E002\_SLD.dwg

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REF. & REV.	<b>MERCED COLLEGE GREENHOUSE COMPLEX</b>	<b>CONST. DOCUMENTS</b>
	<b>GREENHOUSE COMPLEX</b>	
	<b>ELECTRICAL</b>	
	<b>SINGLE LINE DIAGRAM</b>	<b>E-002</b>
		DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED

Drawing: K:\EN\2023\23-8061\23-8061\_E002\_SLD.dwg E-002 8/27/24







BUS RATING: 100A 120/208V, 1PH, 3W										(N) PANEL AS										SURFACE MOUNT, NEMA 1 LOCATION: AG STORAGE BLDG. WITH EQUIPMENT GND BUS FED FROM PANEL 'GH'									
MAIN: 60A /2P MAIN CIRCUIT BREAKER										CONNECTED VA																			
SPACES: 30 FULL SIZE BOLT-ON CB SPACES										PHASE A										PHASE B									
AIC RATING: 10 KAIC PANEL										COND SIZE										POLES									
CKT %WD	DIST (FT)	LOAD NOTES	TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	PHASE	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %WD											
0.59%	40		R	1	EAST RECEPTACLES	20	1	12	540	12	1	20	EXT. LIGHTING	2	L		32	0.04%											
0.97%	65		R	3	EAST RECEPTACLES	20	1	12	540	12	1	20	INT. LIGHTING	4	L		58	0.67%											
0.69%	50		L	5	EAST AG CONTAINER LIGHTS	20	1	12	500	12	1	20	WEST RECEPTACLES	6	R		20	0.30%											
0.86%	70		L	7	WEST AG CONTAINER LIGHTS	20	1	12	500	12	1	20	WEST RECEPTACLES	8	R		45	0.89%											
0.83%	60		L	9	(F) AG CONTAINER LIGHTS	20	1	12	500				SPACE	10															
0.41%	10		R	11	REMOTE IDF CABINET RECEPTACLE	20	1	12	1500				SPACE	12															
					13	SPACE							SPACE	14															
					15	SPACE							SPACE	16															
					17	SPACE							SPACE	18															
					19	SPACE							SPACE	20															
					21	SPACE							SPACE	22															
					23	SPACE							SPACE	24															
					25	SPACE							SPACE	26															
					27	SPACE							SPACE	28															
					29	SPACE							SPACE	30															

CON:	2125	3680
25%:	261	230
SUB:	0	0
TOT:	2386	3910
AMPS:	20	33

LOAD (VA)	LOAD TYPE LEGEND
3840 R	RECEPTACLE
1965 L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
0 M	MECHANICAL
0 K	KITCHEN APPLIANCE
0 N	NON-CONTINUOUS MISC.
0 C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)

BUS RATING: 225A 120/208V, 3PH, 4W										(N) PANEL GH3										SURFACE MOUNT, NEMA 3R LOCATION: LARGE GREENHOUSE WITH EQUIPMENT GND BUS FED FROM PANEL 'GH'									
MAIN: 200A /2P MAIN CIRCUIT BREAKER										CONNECTED VA																			
SPACES: 42 FULL SIZE BOLT-ON CB SPACES										PHASE A										PHASE B									
AIC RATING: 10 KAIC PANEL										COND SIZE										POLES									
CKT %WD	DIST (FT)	LOAD NOTES	TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	PHASE	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %WD											
0.26%	26		R	1	EAST RECEPTACLES	20	1	12	360	12	1	20	EXT. LIGHTING	2	L		72	0.39%											
0.61%	62		R	3	EAST RECEPTACLES	20	1	12	360	12	1	20	INT. LIGHTING	4	L		170	2.40%											
0.43%	86		R	5	EAST RECEPTACLES	20	1	12	360	12	1	20	SOUTH INT. LIGHTING	6	L		95	2.19%											
1.23%	124		R	7	EAST RECEPTACLES	20	1	12	360	12	1	20	WEST RECEPTACLES	8	R		8	0.08%											
1.58%	160		R	9	EAST RECEPTACLES	20	1	12	360	12	1	20	WEST RECEPTACLES	10	R		52	0.51%											
0.42%	35		M	11	"EF-2"	15	2	14	480	12	1	20	WEST RECEPTACLES	12	R		88	0.44%											
0.42%	35		M	13	"	15	-	14	480	12	1	20	WEST RECEPTACLES	14	R		112	1.11%											
0.68%	45		M	15	"HT-3.1"	15	1	14	348	12	1	20	WEST RECEPTACLES	16	R		154	0.76%											
2.43%	160		M	17	"HT-3.2"	15	1	14	480	14	2	15	"EF-1"	18	M		15	0.18%											
1.96%	150		M	19	"F-3.1", "F-3.2", "F-3.3", "F-3.4"	15	1	14	300	14	-	15	"	20	M		15	0.18%											
1.43%	105		M	21	"RV-3.2"	15	1	14	312	14	1	15	"RS-3.1"	22	M		12	0.16%											
0.41%	30		R	23	COMMUNICATION CABINET	20	1	12	300	14	1	15	"RS-3.1"	24	M		95	1.29%											
0.20%	30		M	25	GH CONTROL PANEL	20	1	12	240	14	1	15	"WB-3.1"	26	M		105	1.59%											
0.20%	30		M	27	GH CONTACTOR PANEL	20	1	12	240	12	1	15	"ECS-3.1"	28	M		155	1.84%											
0.41%	30		M	29	ROOF SHADE CONTROL PANEL	20	1	12	348	14	1	15	"IS-3.1", "IS-3.2", "IS-3.3", "IS-3.4", "IS-3.5", "IS-3.6"	30	M		170	0.76%											
0.41%	30		M	31	ROOF VENT CP 1	20	1	12	500				SPACE	32															
0.41%	30		M	33	ROOF VENT CP 2	20	1	12	500				SPACE	34															
					35	SPACE							SPACE	36															
					37	SPACE							SPACE	38															
					39	SPACE							SPACE	40															
					41	SPACE							SPACE	42															

CON:	3986	4212	3922
25%:	50	205	210
SUB:	0	0	0
TOT:	4036	4417	4132
AMPS:	34	37	34

LOAD (VA)	LOAD TYPE LEGEND
3560 R	RECEPTACLE
1858 L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
6702 M	MECHANICAL
0 K	KITCHEN APPLIANCE
0 N	NON-CONTINUOUS MISC.
0 C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)

BUS RATING: 100A 120/208V, 1PH, 3W										(N) PANEL LB2										SURFACE MOUNT, NEMA 1 LOCATION: LOADING BARN 2 WITH EQUIPMENT GND BUS FED FROM PANEL 'GH'									
MAIN: 60A /2P MAIN CIRCUIT BREAKER										CONNECTED VA																			
SPACES: 18 FULL SIZE BOLT-ON CB SPACES										PHASE A										PHASE B									
AIC RATING: 10 KAIC PANEL										COND SIZE										POLES									
CKT %WD	DIST (FT)	LOAD NOTES	TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	PHASE	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %WD											
					1	SPACE							EXT. LIGHTING	2	L		56	0.05%											
					3	SPACE							INT. LIGHTING	4	L		42	0.33%											
					5	SPACE							20A CART CHARGER	6	C		28	1.48%											
					7	SPACE							20A CART CHARGER	8	C		40	2.11%											
					9	SPACE							20A CART CHARGER	10	C		50	2.64%											
					11	SPACE							RECEPTACLES	12	R		52	0.77%											
					13	SPACE							SPACE	14															
					15	SPACE							SPACE	16															
					17	SPACE							SPACE	18															

CON:	3870	2750
25%:	968	553
SUB:	0	0
TOT:	4838	3303
AMPS:	40	28

LOAD (VA)	LOAD TYPE LEGEND
540 R	RECEPTACLE
320 L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
0 M	MECHANICAL
0 K	KITCHEN APPLIANCE
0 N	NON-CONTINUOUS MISC.
5760 C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)

BUS RATING: 100A 120/208V, 1PH, 3W										(N) PANEL LB1										SURFACE MOUNT, NEMA 1 LOCATION: LOADING BARN 1 WITH EQUIPMENT GND BUS FED FROM PANEL 'GH'									
MAIN: 60A /2P MAIN CIRCUIT BREAKER										CONNECTED VA																			
SPACES: 18 FULL SIZE BOLT-ON CB SPACES										PHASE A										PHASE B									
AIC RATING: 10 KAIC PANEL										COND SIZE										POLES									
CKT %WD	DIST (FT)	LOAD NOTES	TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	PHASE	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %WD											
0.45%	56		L	1	INT. LIGHTING	20	1	12	290	12	1	20	EXT. LIGHTING	2	L		56	0.05%											
					3	SPACE							20A CART CHARGER	4	C		28	1.48%											
					5	SPACE							20A CART CHARGER	6	C		40	2.11%											
					7	SPACE							20A CART CHARGER	8	C		50	2.64%											
					9	SPACE							RECEPTACLES	10	R		52	0.77%											
					11	SPACE							SPACE	12															
					13	SPACE							SPACE	14															
					15	SPACE							SPACE	16															
					17	SPACE							SPACE	18															

CON:	2780	3840
25%:	560	960
SUB:	0	0
TOT:	3340	4800
AMPS:	28	40

LOAD (VA)	LOAD TYPE LEGEND
540 R	RECEPTACLE
320 L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
0 M	MECHANICAL
0 K	KITCHEN APPLIANCE
0 N	NON-CONTINUOUS MISC.
5760 C	CONTINUOUS MISC. (125% OF CONNECTED LOAD CEC 215.2)

BUS RATING: 100A 120/208V, 1PH, 3W										(N) PANEL PS										SURFACE MOUNT, NEMA 3R LOCATION: POTTING SHADE WITH EQUIPMENT GND BUS FED FROM PANEL 'GH'									
MAIN: 60A /2P MAIN CIRCUIT BREAKER										CONNECTED VA																			
SPACES: 12 FULL SIZE BOLT-ON CB SPACES										PHASE A										PHASE B									
AIC RATING: 10 KAIC PANEL										COND SIZE										POLES									
CKT %WD	DIST (FT)	LOAD NOTES	TYPE	CKT	DESCRIPTION	TRIP	POLES	COND SIZE	PHASE	COND SIZE	POLES	TRIP	DESCRIPTION	CKT	LOAD TYPE	NOTES	DIST (FT)	CKT %WD											
1.19%	60				1	RECEPTACLES	20	1	12	720	12	1	20	EXT. LIGHTING	2	L		75	0.06%										
					3	SPACE							INT. LIGHTING	4	L		80	1.78%											
					5	SPACE							SPACE	6															
					7	SPACE							SPACE	8															
					9	SPACE							SPACE	10															
					11	SPACE							SPACE	12															

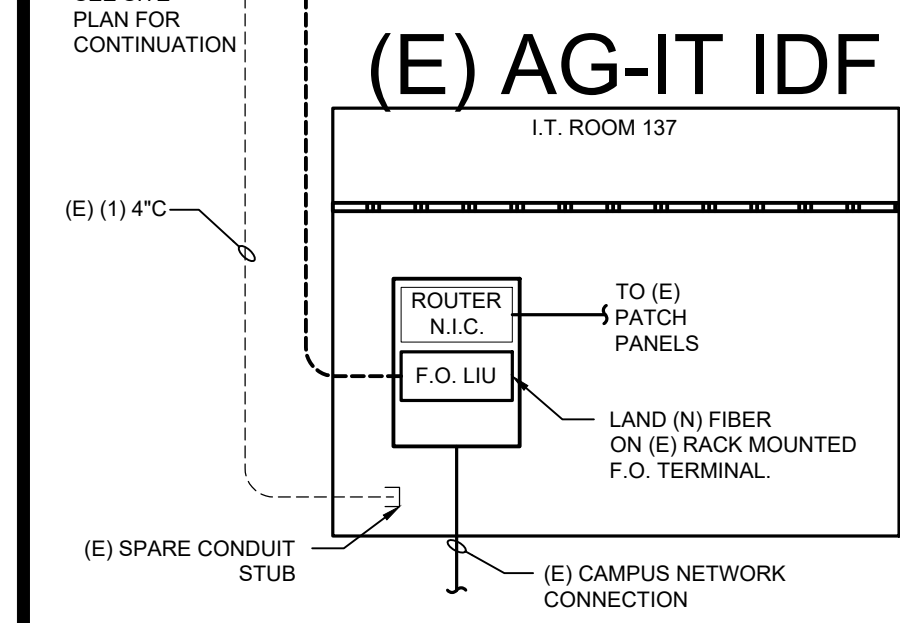
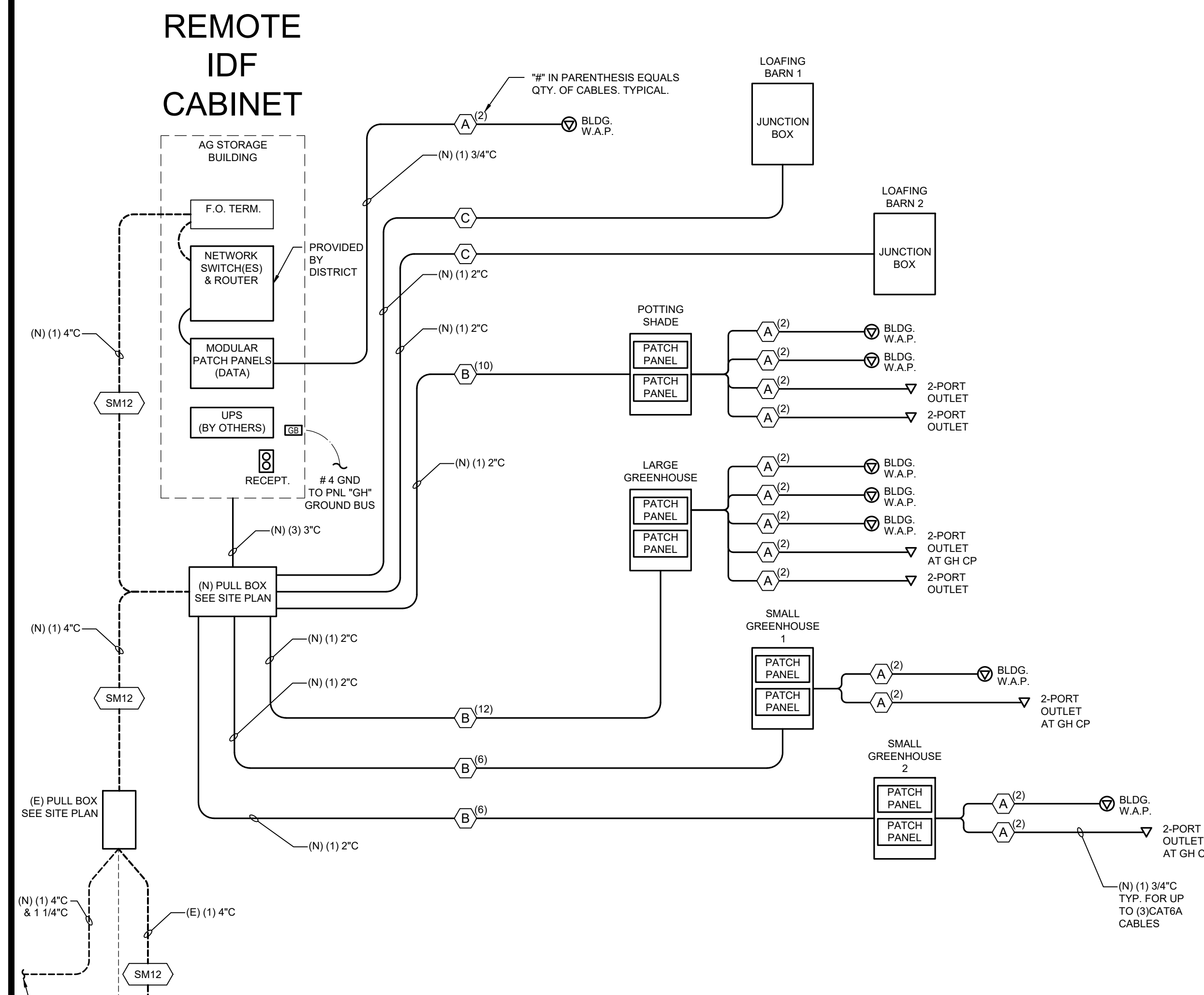
  

CON:	750	810
25%:	6	263
SUB:	0	0
TOT:	758	1013
AMPS:	6	8

LOAD (VA)	LOAD TYPE LEGEND
840 R	RECEPTACLE
840 L	LIGHTING (125% OF CONNECTED LOAD CEC 215.2)
0 M	MECHANICAL
0 K	





CABLING SCHEDULE	
SYMBOL	DESCRIPTION
A	BERK-TEK, LANMARK-RDT INDOOR, PLENUM RATED CAT6A CABLING, BLUE IN COLOR.
B	BERK-TEK, LANMARK-10G CAT6A OSP CABLING, BLACK IN COLOR.
C	CONDUIT ONLY.
SM12	(12) STRANDS SINGLE-MODE, OS2, G.657 A1, INDOOR/OUTDOOR FIBER CABLE, PLENUM RATED. TO BE INSTALLED THROUGH UNDERGROUND RACEWAYS AS INDICATED.

**BASIS OF DESIGN**

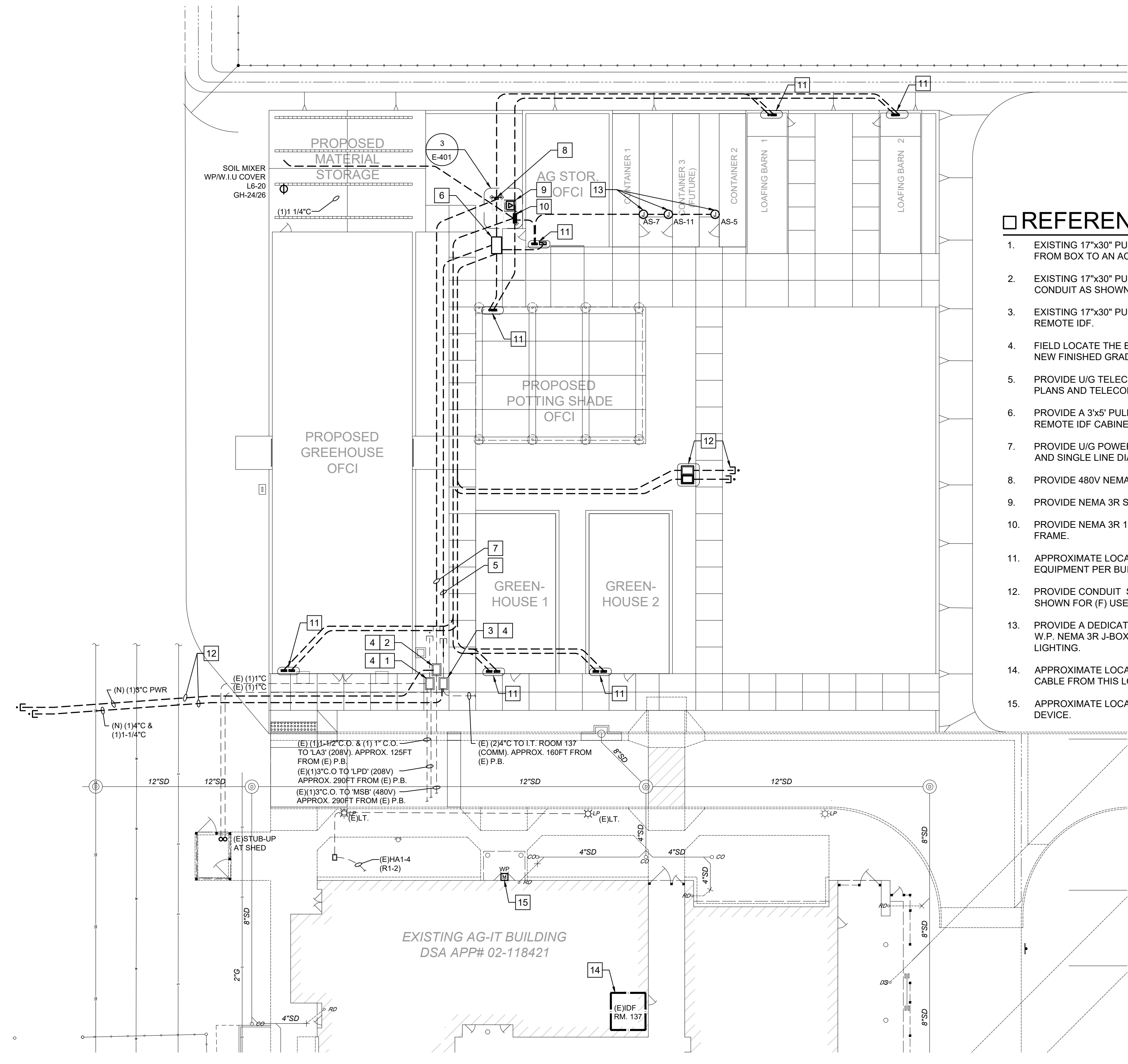
CABLING SPEC.		
MANUF.	MANUFACTURER'S PART NO. / SERIES NO.	DESCRIPTION
LEVITON	0122WP-T4101D20	INDOOR/OUTDOOR, PLENUM RATED, LOOSE TUBE 'OS2', G657 A1 COMPLIANT 12-STRAND, SINGLE MODE FIBER OPTIC CABLE
BERK-TEK	LANMARK-RDT	INDOOR, PLENUM RATED, CAT6A CABLE
BERK-TEK	LANMARK-10G CAT6A OSP	OUTDOOR, CAT6A CABLE (PERMITTED IN UNDERSLAB APPLICATIONS ONLY)

REMOTE INTERMEDIATE DISTRIBUTION FRAME ('IDF') CABINET		
MANUF.	MANUFACTURER'S PART NO. / SERIES NO.	DESCRIPTION
HUBBLE	RE4XB	REMOTE EQUIPMENT CABINET, BLACK, 5U, #12-24 THREADED HOLES
LEVITON	OPT-X 2000 (6R1UH-S03)	1RU, RACK-MOUNTED, FIBER OPTIC SPLICE ENCLOSURE
LEVITON	49255-Q48	48 PORT, 1RU MODULAR PATCH PANEL (CAT6A) - COMPATIBLE WITH LEVITON QUICKPORT CONNECTORS

NOTE: FOR PURPOSES OF EQUIPMENT SIZE AND FIT, THIS DESIGN IS BASED UPON THE EQUIPMENT SHOWN IN THIS SCHEDULE. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FORM, FIT AND FUNCTION OF EQUIPMENT SUBSTITUTED AT BID TIME. ALL TELECOMMUNICATIONS EQUIPMENT NOT LISTED HERE SHALL BE SUBMITTED FOR APPROVAL PER SPECIFICATIONS.

**1 TELECOM RISER DIAGRAM**

SCALE: NTS



**REFERENCE NOTES**

- EXISTING 17"x30" PULL BOX LABELED "208V ELECTRICAL". STUB A 2" FROM BOX TO AN ACCESSIBLE LOCATION TO THE NORTH FOR (F) USE.
- EXISTING 17"x30" PULL BOX LABELED "480V ELECTRICAL". EXTEND CONDUIT AS SHOWN.
- EXISTING 17"x30" PULL BOX LABELED "COMM". EXTEND CONDUIT TO (N) REMOTE IDF.
- FIELD LOCATE THE BOXES AND ADJUST COVERS TO BE FLUSH WITH NEW FINISHED GRADE.
- PROVIDE U/G TELECOM DISTRIBUTION CONDUIT(S) PER BUILDING PLANS AND TELECOM RISER DIAGRAM (TYP).
- PROVIDE A 3"x5" PULL BOX FOR TELECOM DISTRIBUTION FROM THE REMOTE IDF CABINET. SEE TELECOM RISER DIAGRAM.
- PROVIDE U/G POWER DISTRIBUTION CONDUIT(S) PER BUILDING PLANS AND SINGLE LINE DIAGRAM (TYP.).
- PROVIDE 480V NEMA 3R DISCONNECT SWITCH.
- PROVIDE NEMA 3R STEP-DOWN TRANSFORMER ON CONCRETE PAD.
- PROVIDE NEMA 3R 120/208V POWER PANEL "GH" ON STEEL SUPPORT FRAME.
- APPROXIMATE LOCATION OF BUILDING POWER & LOW VOLTAGE EQUIPMENT PER BUILDING PLANS AND RISER DIAGRAM.
- PROVIDE CONDUIT STUB-OUTS FROM POWER AND COMM. BOXES AS SHOWN FOR (F) USE.
- PROVIDE A DEDICATED CIRCUIT, 20A DISCONNECT SWITCH (SPST), AND W.P. NEMA 3R J-BOX FOR EACH AG CONTAINER TO CONNECT INTERIOR LIGHTING.
- APPROXIMATE LOCATION OF AG-IT IDF ROOM. EXTEND FIBER OPTIC CABLE FROM THIS LOCATION TO (N) REMOTE IDF.
- APPROXIMATE LOCATION OF NEAREST FIRE ALARM NOTIFICATION DEVICE.

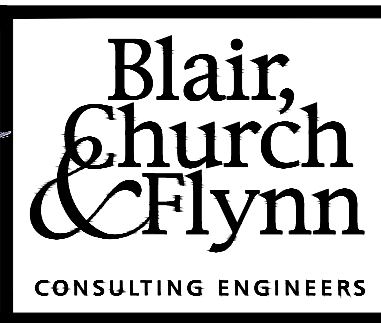
**ELECTRICAL SITE PLAN**

SCALE: 1" = 20' 0"  
NORTH

**GREENHOUSE 3 BID ALTERNATE NOTES:**

- GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
- IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCHING AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN 5' FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS

Mar 01, 2024 - 12:06pm - asadkhat - K:\EN\2023\23-0801\101\_SITE PLAN.dwg



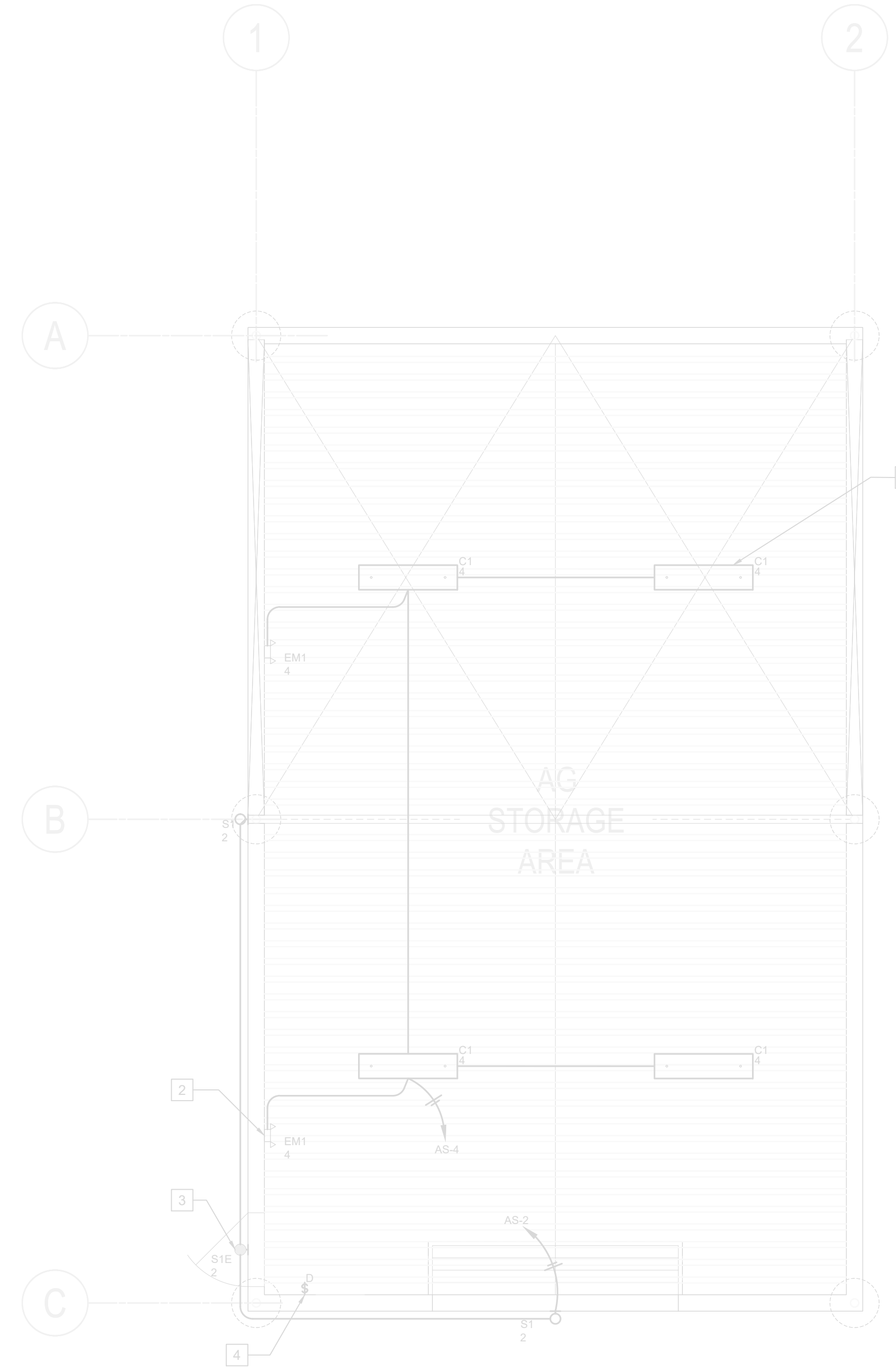
CONSULTANT	REF. & REV.
Blair, Church & Flynn Consulting Engineers 453 Clovis Avenue, Suite 200 Clovis, California 93612 Tel (559) 326-5400 Fax (559) 326-5500	

MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
ELECTRICAL SITE PLAN	DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
	E-101

Drawing K:\EN\2023\23-0801\101\_SITE PLAN.dwg, 03/01/2024, 12:06pm

**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

DSA APP# 02-121754



**REFERENCE NOTES**

1. PROVIDE CHAIN HUNG LED VAPOR-TIGHT LIGHT WITH DIMMING CONTROL NODE AND MOTION SENSOR.
2. PROVIDE EMERGENCY LIGHTING UNIT EQUIPMENT. COORDINATE LOCATION WITH STRUCTURE ELEMENT FOR MOUNTING. CONNECT WITH A CONSTANT HOT FROM THE INTERIOR LIGHTING CIRCUIT FOR CONTINUOUS CHARGING OF THE BATTERY.
3. PROVIDE LED WALL PACK LIGHT WITH INTEGRAL PHOTOCONTROL AND BI-LEVEL MOTION SENSOR. TYPE 'S1E' LIGHTS HAVE AN INTEGRAL EMERGENCY BATTERY PACK. CONNECT WITH A CONSTANT HOT FOR CONTINUOUS CHARGING OF BATTERY.
4. PROVIDE WIRELESS LIGHTING CONTROL SWITCH(ES) WITH W.P. COVER PLATE COMPATIBLE WITH SUPPLIED 0-10V DIMMING LUMINAIRES.

AG STORAGE LIGHTING PLAN

**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENGI\2023\23-8061\23-8061\_E201-E-205\_BLDG LIT PLANS.dwg

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San Luis Obispo, CA 93406  
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THOMA #23-8061

REGISTERED PROFESSIONAL ENGINEER  
Blair, Church & Flynn  
No. 20823  
ELECTRICAL  
STATE OF CALIFORNIA  
EXPIRES: 09/30/24

**Blair,  
Church  
& Flynn**  
CONSULTING ENGINEERS

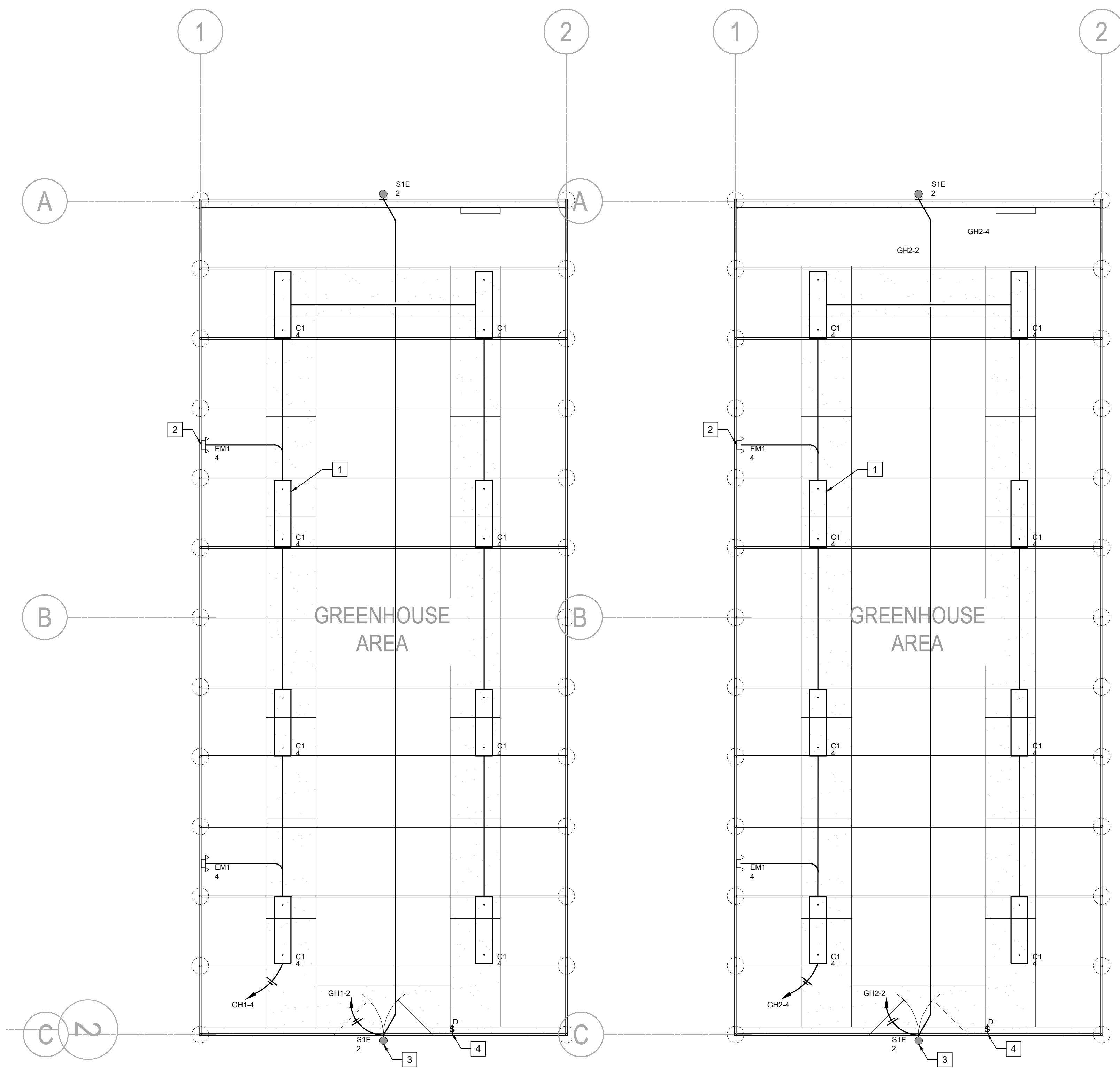
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REF. & REV.

MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
AG STORAGE LIGHTING PLAN	DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
	E-201

Drawing K:\ENGI\2023\23-8061\23-8061\_E201-E-205\_BLDG LIT PLANS.dwg E:201 E:205.dwg





**REFERENCE NOTES**

1. PROVIDE CHAIN HUNG LED VAPOR-TIGHT LIGHT WITH DIMMING CONTROL NODE AND MOTION SENSOR.
2. PROVIDE EMERGENCY LIGHTING UNIT EQUIPMENT. COORDINATE LOCATION WITH STRUCTURE ELEMENT FOR MOUNTING. CONNECT WITH A CONSTANT HOT FROM THE INTERIOR LIGHTING CIRCUIT FOR CONTINUOUS CHARGING OF THE BATTERY.
3. PROVIDE LED WALL PACK LIGHT WITH INTEGRAL PHOTOCONTROL AND BI-LEVEL MOTION SENSOR. TYPE 'S1E' LIGHTS HAVE AN INTEGRAL EMERGENCY BATTERY PACK, CONNECT WITH A CONSTANT HOT FOR CONTINUOUS CHARGING OF BATTERY.
4. PROVIDE WIRELESS LIGHTING CONTROL SWITCH(ES) WITH W.P. COVER PLATE COMPATIBLE WITH SUPPLIED 0-10V DIMMING LUMINAIRES.

**GREENHOUSE 1 & 2 LIGHTING PLANS**  
 SCALE: 1/4" = 1'-0"  
 NORTH

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENGI\2023\23-0861\23-0861\_E201-E-205\_BLDG LIT PLANS.dwg

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**Blair, Church & Flynn**  
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REF. & REV.

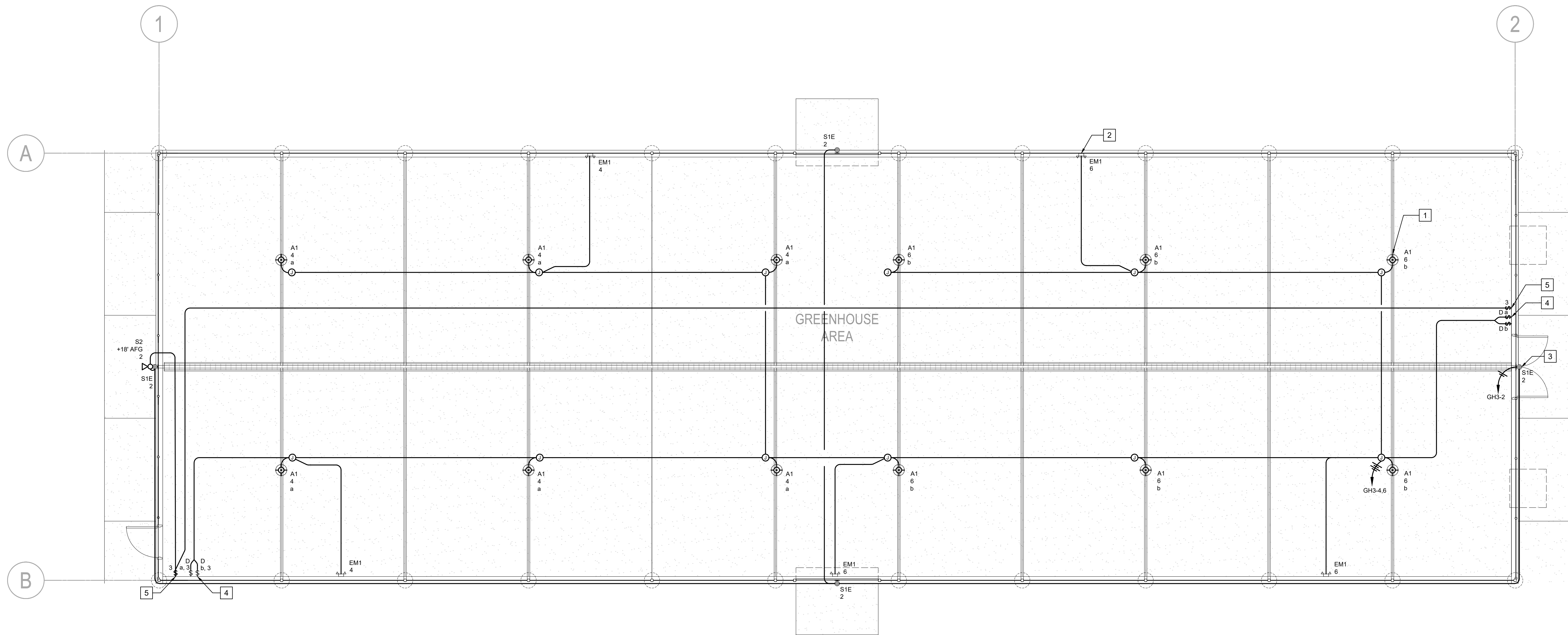
MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
GREENHOUSE 1 & 2 LIGHTING PLANS	E-202
DR. BY: AS/PM	SCALE AS NOTED
CH. BY: JT	
DATE: 03/01/2024	

Drawing K:\ENGI\2023\23-0861\23-0861\_E201-E-205\_BLDG LIT PLANS.dwg E:202-807-807-807

REFERENCE NOTES

1. PROVIDE PENDANT MOUNTED LED WITH ON BOARD DIMMING / MOTION SENSOR.
2. PROVIDE EMERGENCY LIGHTING UNIT EQUIPMENT. COORDINATE LOCATION WITH STRUCTURE ELEMENT FOR MOUNTING. CONNECT WITH A CONSTANT HOT FROM THE INTERIOR LIGHTING CIRCUIT FOR CONTINUOUS CHARGING OF THE BATTERY.
3. PROVIDE LED WALL PACK LIGHT WITH INTEGRAL PHOTOCONTROL AND BI-LEVEL MOTION SENSOR. TYPE 'S1E' LIGHTS HAVE AN INTEGRAL EMERGENCY BATTERY PACK. CONNECT WITH A CONSTANT HOT FOR CONTINUOUS CHARGING OF BATTERY.
4. INTERIOR LIGHTING CONTROL SWITCHES WITH W.P. COVER PLATE COMPATIBLE WITH 0-10V DIMMING LUMINARIES.
5. PROVIDE LINE VOLTAGE SWITCH WITH W.P. COVER PLATE FOR MANUAL ON/OFF CONTROL OF EXTERIOR FLOOD LIGHT.

DSA APP# 02-121754



MAIN GREENHOUSE LIGHTING PLANS

SCALE: 3/16" = 1' 0"

NORTH

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENGI\2023\23-0861\_E201-E-205\_BLDG LTO PLANS.dwg

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THOMA #23-8061

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REF. & REV.

MERCED COLLEGE GREENHOUSE COMPLEX

GREENHOUSE COMPLEX  
MAIN GREENHOUSE  
LIGHTING PLANS

CONST. DOCUMENTS

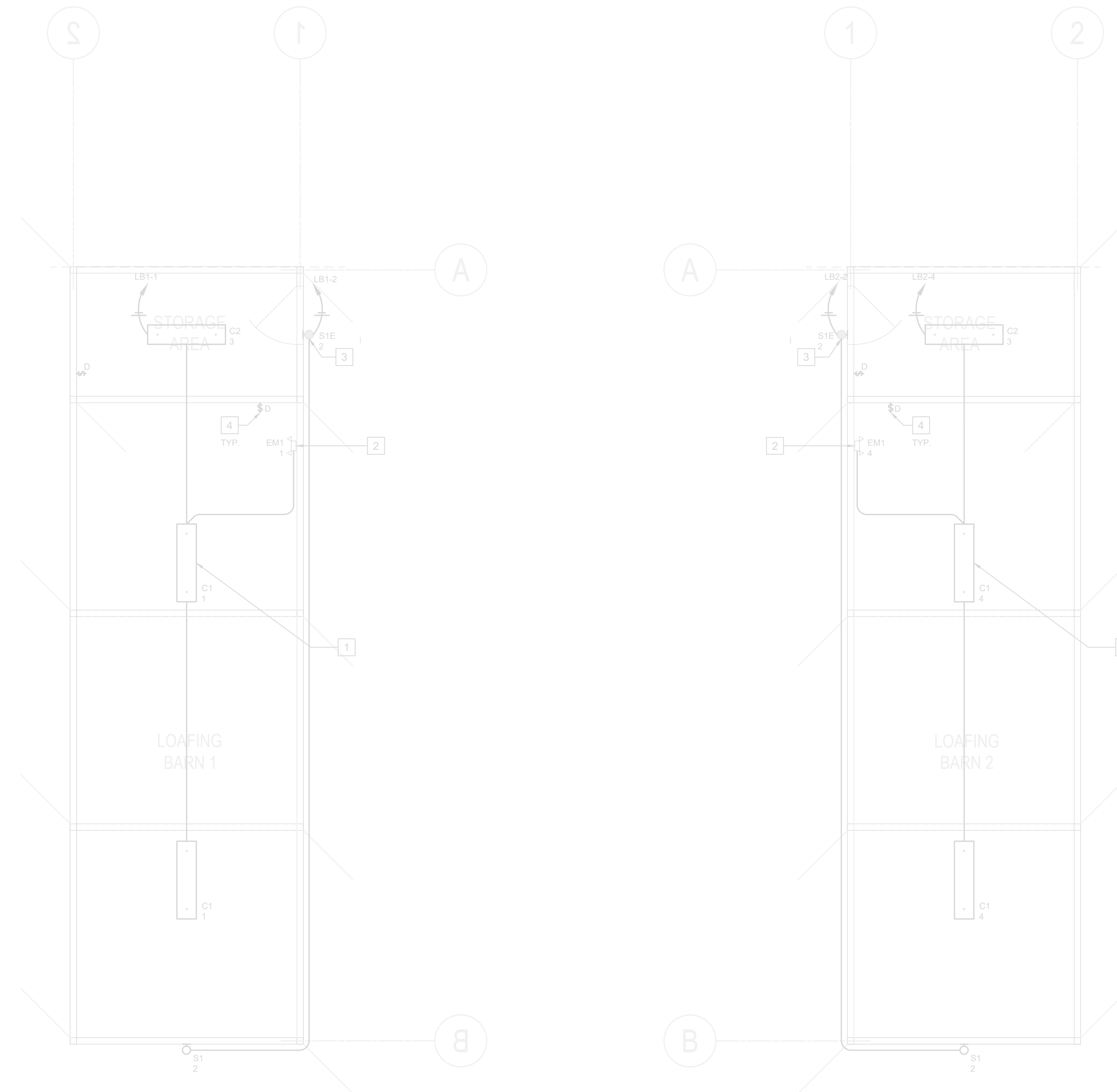
DR. BY: AS/PM  
CH. BY: JT  
DATE: 03/01/2024  
SCALE AS NOTED

E-203

Drawing: K:\ENGI\2023\23-0861\_E201-E-205\_BLDG LTO PLANS.dwg, E:\2023\807.dwg, 03/01/2024, 12:06pm

**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

DSA APP# 02-121754



**REFERENCE NOTES**

1. PROVIDE CHAIN HUNG LED VAPOR-TIGHT LIGHT WITH DIMMING CONTROL NODE AND MOTION SENSOR.
2. PROVIDE EMERGENCY LIGHTING UNIT EQUIPMENT. COORDINATE LOCATION WITH STRUCTURE ELEMENT FOR MOUNTING. CONNECT WITH A CONSTANT HOT FROM THE INTERIOR LIGHTING CIRCUIT FOR CONTIOUS CHARGING OF THE BATTERY.
3. PROVIDE LED WALL PACK LIGHT WITH INTEGRAL PHOTOCONTROL AND BI-LEVEL MOTION SENSOR. TYPE 'S1E' LIGHTS HAVE AN INTEGRAL EMERGENCY BATTERY PACK. CONNECT WITH A CONSTANT HOT FOR CONTINUOUS CHARGING OF BATTERY.
4. PROVIDE WIRELESS LIGHTING CONTROL SWITCH(ES) WITH W.P. COVER PLATE COMPATIBLE WITH SUPPLIED 0-10V DIMMING LUMINAIRES.

LOADING BARN LIGHTING PLAN

**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENGI\2023\23-8061\23-8061\_E201-E-205\_BLDG LITD PLANS.dwg

Drawing K:\ENGI\2023\23-8061\23-8061\_E201-E-205\_BLDG LITD PLANS.dwg E:201-E-205

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REF. & REV.

MERCED COLLEGE GREENHOUSE COMPLEX  
GREENHOUSE COMPLEX  
LOADING BARN LIGHTING PLAN  
CONST. DOCUMENTS  
DR. BY: AS/PM  
CH. BY: JT  
DATE: 03/01/2024  
SCALE AS NOTED  
E-204

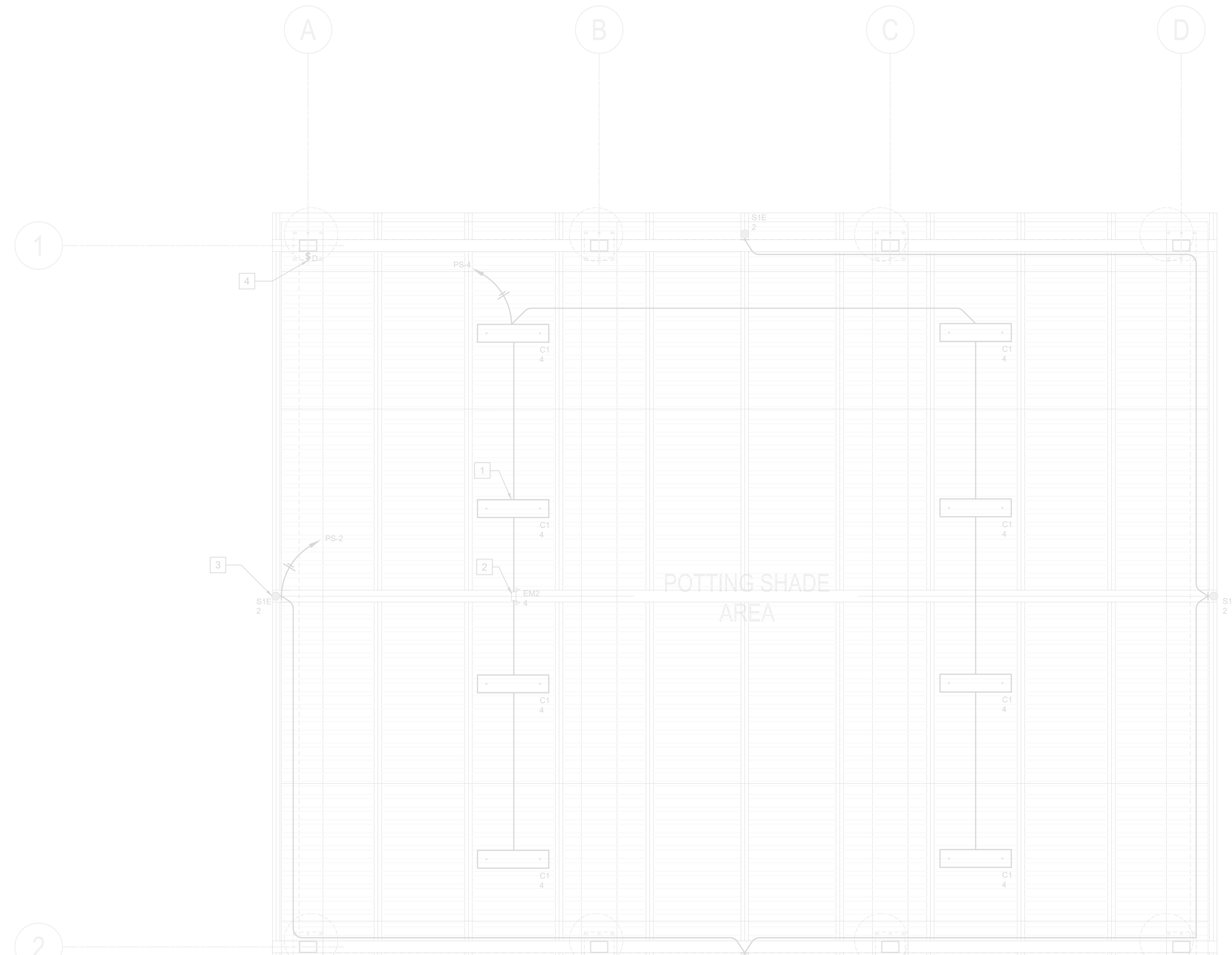


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DSA APP# 02-121754

**REFERENCE NOTES**

1. PROVIDE CHAIN HUNG LED VAPOR-TIGHT LIGHT WITH DIMMING CONTROL NODE AND MOTION SENSOR.
2. PROVIDE EMERGENCY LIGHTING UNIT EQUIPMENT. COORDINATE LOCATION WITH STRUCTURE ELEMENT FOR CEILING MOUNTING. CONNECT WITH A CONSTANT HOT FROM THE INTERIOR LIGHTING CIRCUIT FOR CONTIOUS CHARGING OF THE BATTERY.
3. PROVIDE LED WALL PACK LIGHT WITH INTEGRAL PHOTOCONTROL AND BI-LEVEL MOTION SENSOR. TYPE 'SIE' LIGHTS HAVE AN INTEGRAL EMERGENCY BATTERY PACK. CONNECT WITH A CONSTANT HOT FOR CONTINUOUS CHARGING OF BATTERY.
4. PROVIDE WIRELESS LIGHTING CONTROL SWITCHES) WITH W.P. COVER PLATE COMPATABLE WITH SUPPLIED 0-10V DIMMING LUMINAIRES.



**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

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

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENR\2023\23-8861\23-8861\_E201-E-205\_BLDG LTO PLANS.dwg

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EXPIRES: 09/30/24

**Blair, Church & Flynn**  
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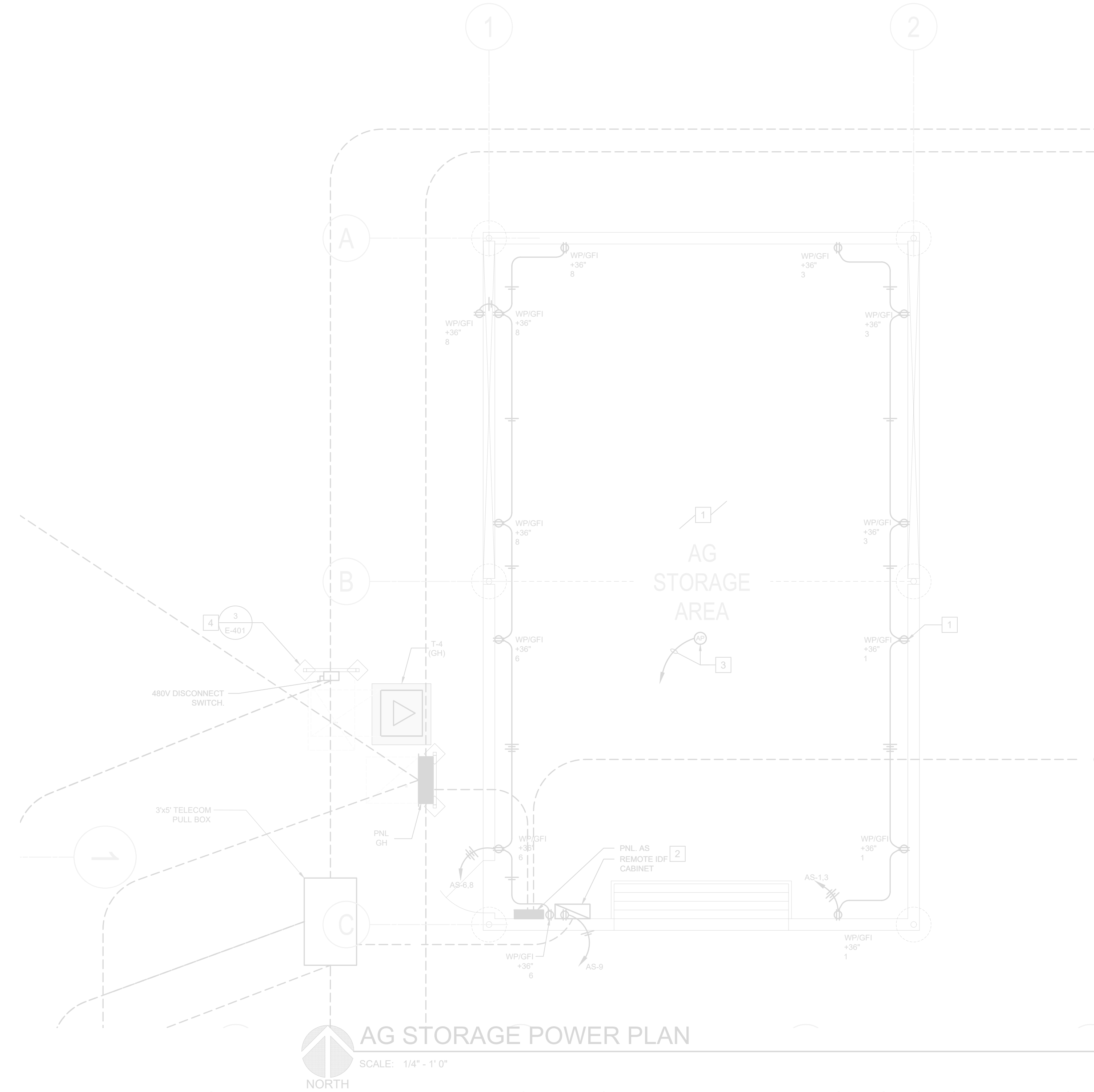
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REF. & REV.

MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
POTTING SHADE LIGHTING PLAN	DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
	E-205

**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

DSA APP# 02-121754



**REFERENCE NOTES**

1. COORDINATE DEVICE MOUNTING LOCATIONS WITH APPROVED SHOP DRAWINGS. (TYP.)
2. PROVIDE BACKING PLATE OR SUPPORT TO STRUCTURE FOR POWER PANEL AND COMMUNICATIONS CABINET. (TYP.)
3. (F) WIRELESS NETWORK ACCESS POINT AT CEILING. PROVIDE CONDUIT AND J-BOX ONLY. EXTEND CONDUIT TO COMMUNICATIONS CABINET. ACCESS POINT FURNISHED AND INSTALLED BY DISTRICT.
4. SEE DETAIL FOR LAYOUT OF ELECTRICAL EQUIPMENT.

AG STORAGE POWER PLAN

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



**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENGI\2023\23-0801\23-0801\_E-301-E-305\_BLDG PWR PLANS.dwg



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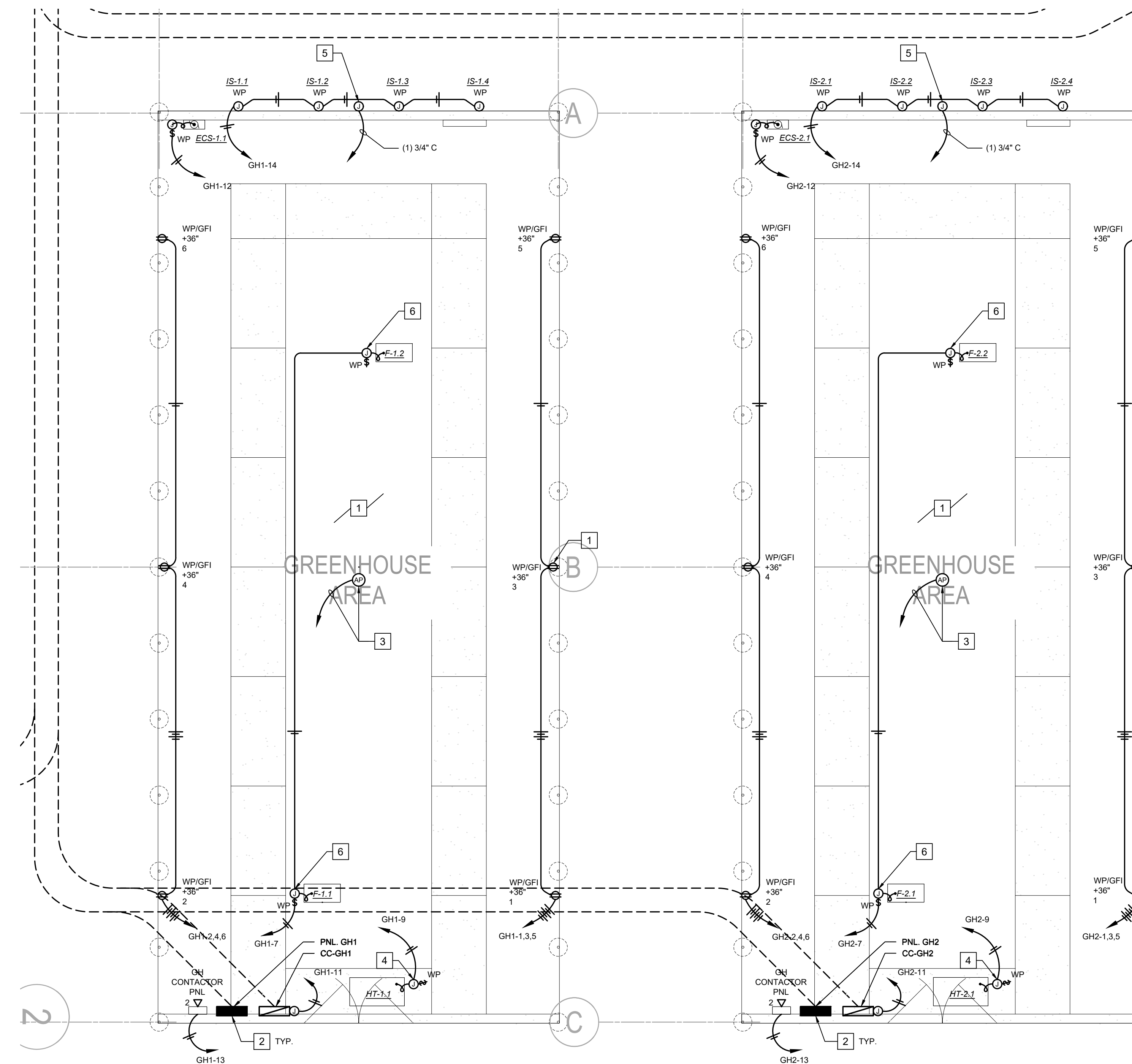
CONSULTANT  
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REF. & REV.

MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
AG STORAGE POWER PLAN	DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
	E-301

Drawing K:\ENGI\2023\23-0801\23-0801\_E-301-E-305\_BLDG PWR PLANS.dwg E-301 - R02.dwg  
03/01/2024 10:47:11 AM





**REFERENCE NOTES**

- COORDINATE DEVICE MOUNTING LOCATIONS WITH APPROVED SHOP DRAWINGS. (TYP.)
- PROVIDE BACKING PLATE OR SUPPORT TO STRUCTURE FOR PANELS AND COMMUNICATIONS CABINET. (TYP.)
- (F) WIRELESS NETWORK ACCESS POINT AT CEILING. PROVIDE CONDUIT AND J-BOX ONLY. EXTEND CONDUIT TO COMMUNICATIONS CABINET. ACCESS POINT FURNISHED AND INSTALLED BY DISTRICT.
- CONNECT HEATER THROUGH LOCKING W.P. DISCONNECT SWITCH.
- WEATHER STATION MOUNTED TO EXTERIOR. PROVIDE CONDUIT TO GREENHOUSE CONTROL PANEL AND CONTROL WIRE PER MANUFACTURERS REQUIREMENTS. COORDINATE FINAL LOCATION WITH DISTRICT.
- CONNECT INTERNAL FAN BRANCH CIRCUIT THROUGH GREENHOUSE CONTACTOR PANEL AND COORDINATE WITH DISTRICT CONTROLS CONTRACTOR.

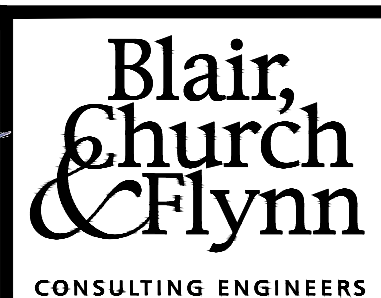
**GREENHOUSE BID ALTERNATE NOTES:**

- GREENHOUSE 3 IS AN ADDITIVE ALTERNATE UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF THE BUILDING SUBGRADE PAD FOR ALL GREENHOUSES INCLUDING OVEREXCAVATION AND COMPACTION PER THE PROJECT SPECIFICATIONS.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING WOOD MULCH WITHIN THE FOOTPRINT OF GREENHOUSE #3 AND ROUGH GRADING THE AREA TO DRAIN TO THE INLETS AS SHOWN ON SHEET A100.
- IF THE ALTERNATE FOR THE CONSTRUCTION OF THE GREENHOUSE IS ACCEPTED, THE SITE CONTRACTOR SHALL REMOVE MULCHING AND ROUGH GRADING AT GREENHOUSE 3 FROM THEIR SCOPE OF WORK AND THE GREENHOUSE CONTRACTOR SHALL PROVIDE DECOMPOSED GRANITE AND FINE GRADING WITHIN THE FOOTPRINT OF GREENHOUSE 3.
- BASE BID FOR THE SITE CONTRACTOR INCLUDES PROVIDING ALL UTILITIES UP TO 5' OUTSIDE OF THE GREENHOUSE BUILDING FOOTPRINTS AND CAPPING ALL UTILITIES EXCEPT FOR STORM DRAIN 5' FROM THE EXTERIOR OF GREENHOUSE 3. THE GREENHOUSE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO THE GREENHOUSE BUILDINGS

**GREENHOUSE 1 & 2 POWER PLANS**

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

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENR\2023\23-0881\23-0881\_E301-E-305\_BLDG\_PWR\_PLANS.dwg



CONSULTANT	Blair, Church & Flynn Consulting Engineers 453 Clovis Avenue, Suite 200 Clovis, California 93612 Tel (559) 326-5400 Fax (559) 326-5300	REF. & REV.	MERCED COLLEGE GREENHOUSE COMPLEX
			GREENHOUSE COMPLEX
			GREENHOUSE 1 & 2 POWER PLANS
			CONST. DOCUMENTS
			DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
			E-302

Drawing: K:\ENR\2023\23-0881\23-0881\_E301-E-305\_BLDG\_PWR\_PLANS.dwg E-302 - R02.dwg  
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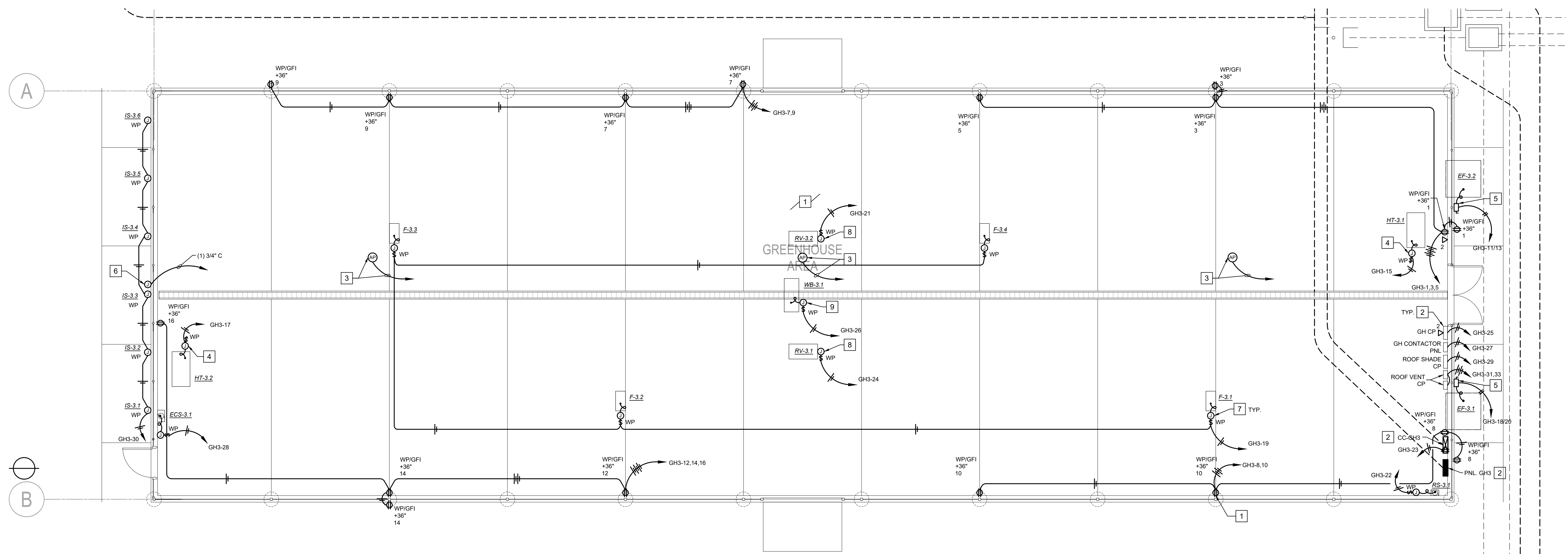
**GREENHOUSE BID ALTERNATE NOTES:**

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**REFERENCE NOTES**

- COORDINATE DEVICE MOUNTING LOCATIONS WITH APPROVED SHOP DRAWINGS. (TYP.)
- PROVIDE BACKING PLATE OR SUPPORT TO STRUCTURE FOR PANELS AND COMMUNICATIONS CABINET. (TYP.)
- (F) WIRELESS NETWORK ACCESS POINT AT CEILING. PROVIDE CONDUIT AND J-BOX ONLY. EXTEND CONDUIT TO COMMUNICATIONS CABINET. ACCESS POINT FURNISHED AND INSTALLED BY DISTRICT.
- CONNECT HEATER THROUGH LOCKING W.P. DISCONNECT SWITCH.
- CONNECT EXHAUST FANS THROUGH FUSED W.P. NEMA 3R DISCONNECT.
- WEATHER STATION MOUNTED TO EXTERIOR GABLE PEAK. PROVIDE CONDUIT TO GREENHOUSE CONTROL PANEL AND CONTROL WIRE PER MANUFACTURERS REQUIREMENTS. COORDINATE FINAL LOCATION WITH DISTRICT.
- CONNECT INTERNAL FAN BRANCH CIRCUIT THROUGH GREENHOUSE CONTACTOR PANEL AND COORDINATE WITH DISTRICT CONTROLS CONTRACTOR. TYPICAL.
- CONNECT ROOF VENT BRANCH CIRCUIT THROUGH ROOF VENT CONTROL PANELS. COORDINATE WITH DISTRICT CONTROLS CONTRACTOR.
- COORDINATE WATER BOOM POWER AND CONTROLS REQUIREMENTS WITH MANUFACTURERS RECOMMENDATIONS AND DISTRICT CONTROLS CONTRACTOR.

DSA APP# 02-121754



**MAIN GREENHOUSE POWER PLANS**  
 SCALE: 3/16" = 1' 0"  
 NORTH

Mar 01, 2024 - 12:06pm - asakelk - K:\ENGI\2023\23-0881\23-0881\_E301-E-305\_BLDG PWR PLANS.dwg



**Thoma ENGINEERING**  
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 San Luis Obispo, CA 93406  
 Phone: (805) 543-3850  
 THOMA #23-8061

REGISTERED PROFESSIONAL ENGINEER  
 No. 20823  
 ELECTRICAL  
 STATE OF CALIFORNIA  
 EXPIRES: 09/30/24

**Blair, Church & Flynn**  
 CONSULTING ENGINEERS

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REF. & REV.

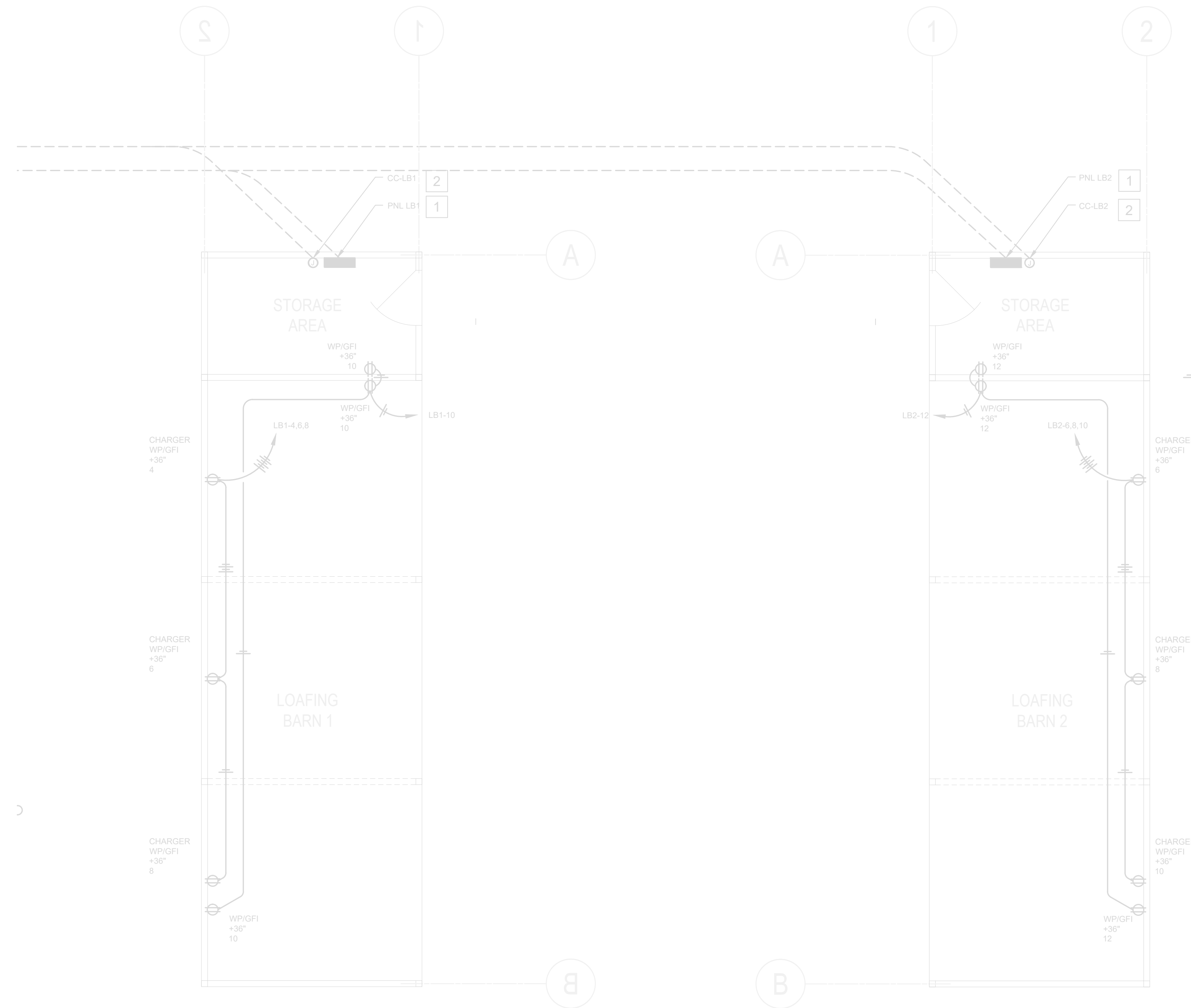
<b>MERCED COLLEGE GREENHOUSE COMPLEX</b>	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
MAIN GREENHOUSE POWER PLAN	E-303
DR. BY: AS/PM	CH. BY: JT
DATE: 03/01/2024	SCALE AS NOTED

Drawing File: K:\ENGI\2023\23-0881\23-0881\_E301-E-305\_BLDG PWR PLANS.dwg | Plot Date: 03/01/2024 10:47:11 AM



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DSA APP# 02-121754



**REFERENCE NOTES**

1. PROVIDE BACKING PLATE OR SUPPORT TO STRUCTURE FOR PANEL AND COMMUNICATIONS CABINET (TYP.)
2. PROVIDE A 12"x12" BUILDING COMMUNICATION J-BOX ATTACHED TO STRUCTURE.

**THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

Mar 01, 2024 - 12:06pm - asadkhat - K:\ENGI\2023\23-0801\23-0801\_E301-E305\_BLDG PWR PLANS.dwg

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REF. & REV.

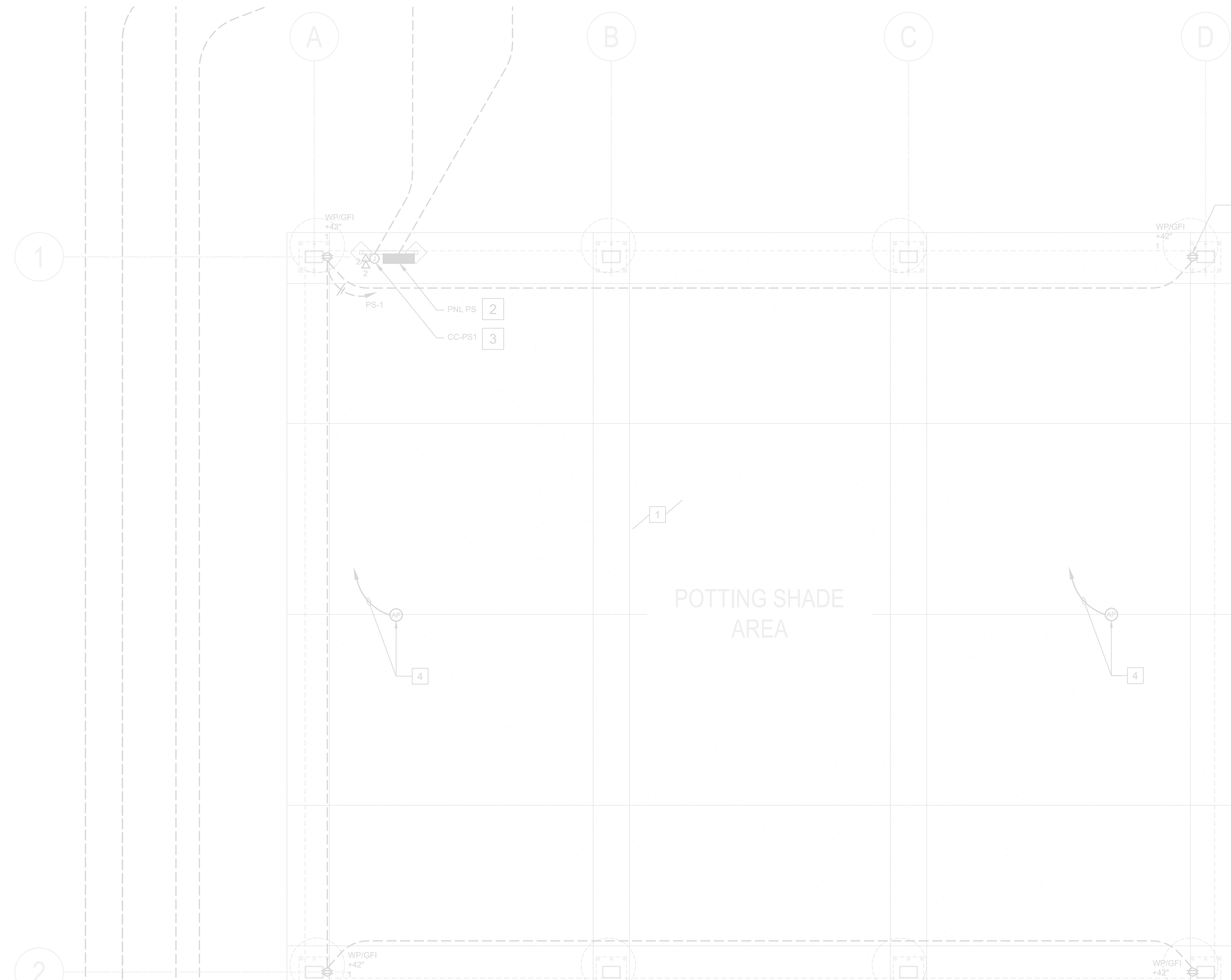
MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
LOAFING BARNS POWER PLAN	DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
	<b>E-304</b>

# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

DSA APP# 02-121754

### REFERENCE NOTES

1. COORDINATE DEVICE MOUNTING LOCATIONS WITH APPROVED SHOP DRAWINGS. (TYP.)
2. PROVIDE BUILDING NEMA 3R PANELBOARD MOUNTED TO UNISTRUT SUPPORT FRAME.
3. PROVIDE BUILDING COMMUNICATIONS 12"x12" NEMA 3R J-BOX MOUNTED TO UNISTRUT SUPPORT FRAME WITH W.P. TELECOM OUTLET.
4. (F) WIRELESS NETWORK ACCESS POINT AT CEILING. PROVIDE CONDUIT AND J-BOX ONLY. EXTEND CONDUIT TO COMMUNICATIONS CABINET. ACCESS POINT FURNISHED AND INSTALLED BY DISTRICT.



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



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THOMA #23-8061



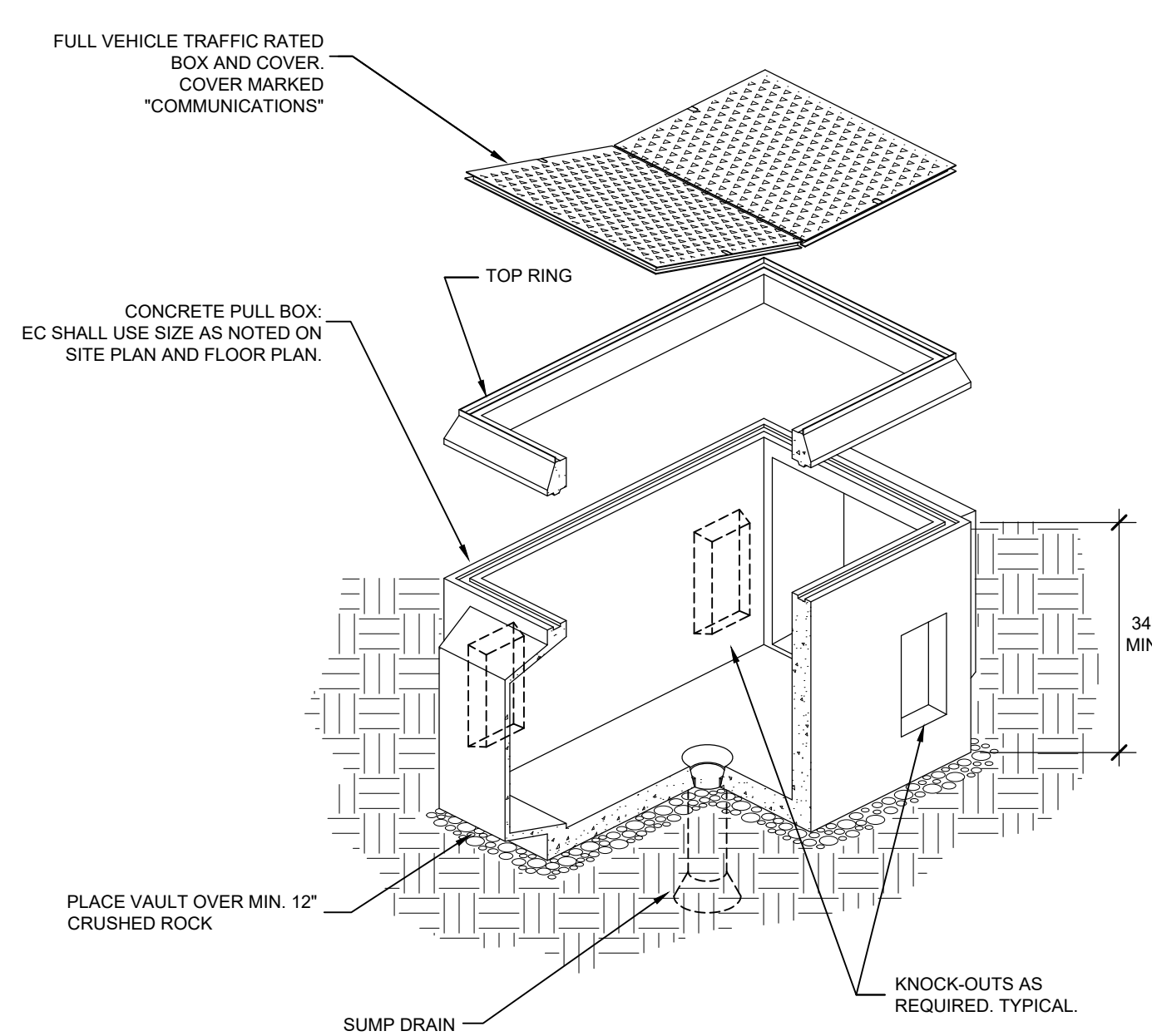
**Blair, Church & Flynn**  
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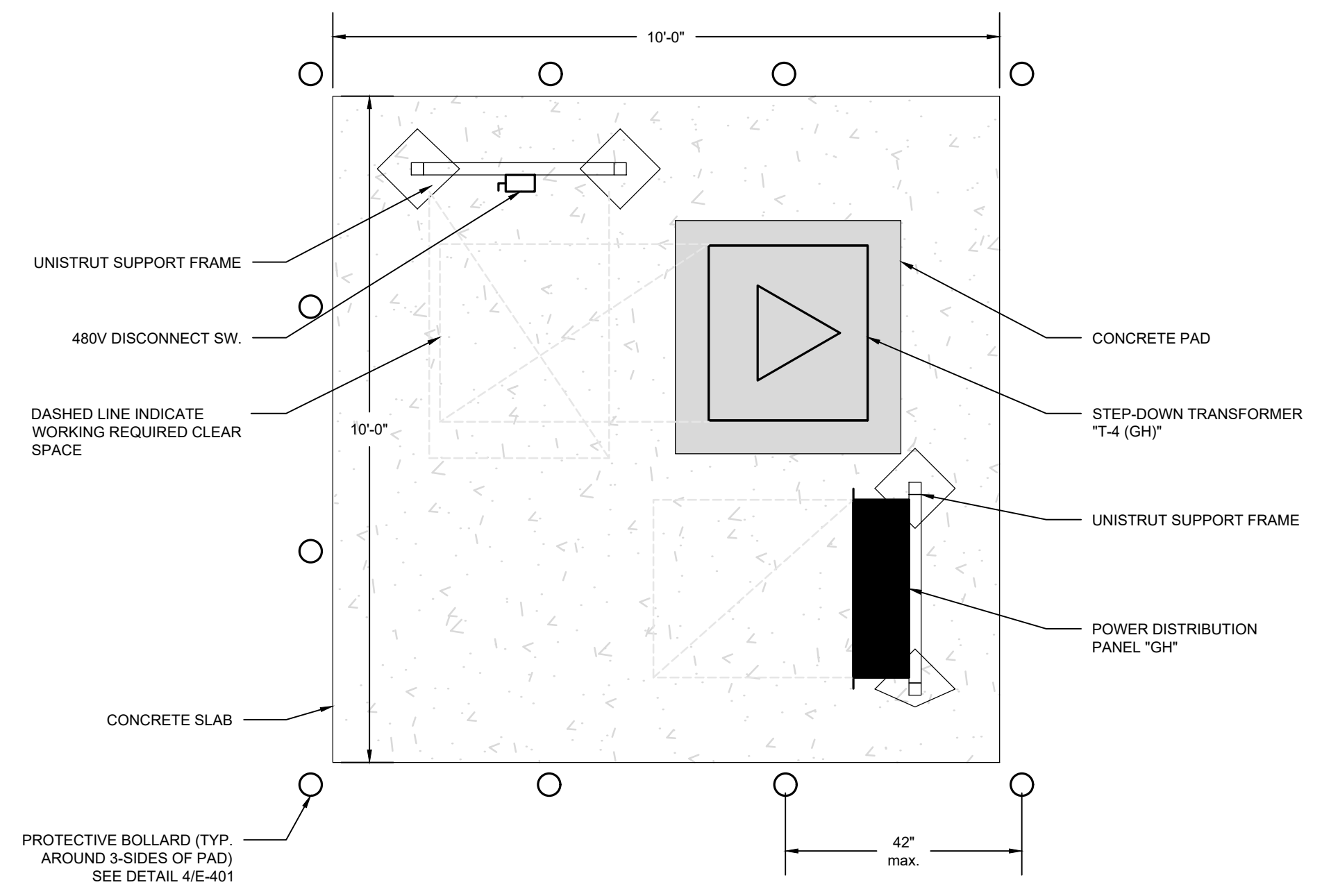
REF. & REV.

MERCED COLLEGE GREENHOUSE COMPLEX	
GREENHOUSE COMPLEX	CONST. DOCUMENTS
POTTING SHADE POWER PLAN	DR. BY: AS/PM CH. BY: JT DATE: 03/01/2024 SCALE AS NOTED
<b>E-305</b>	

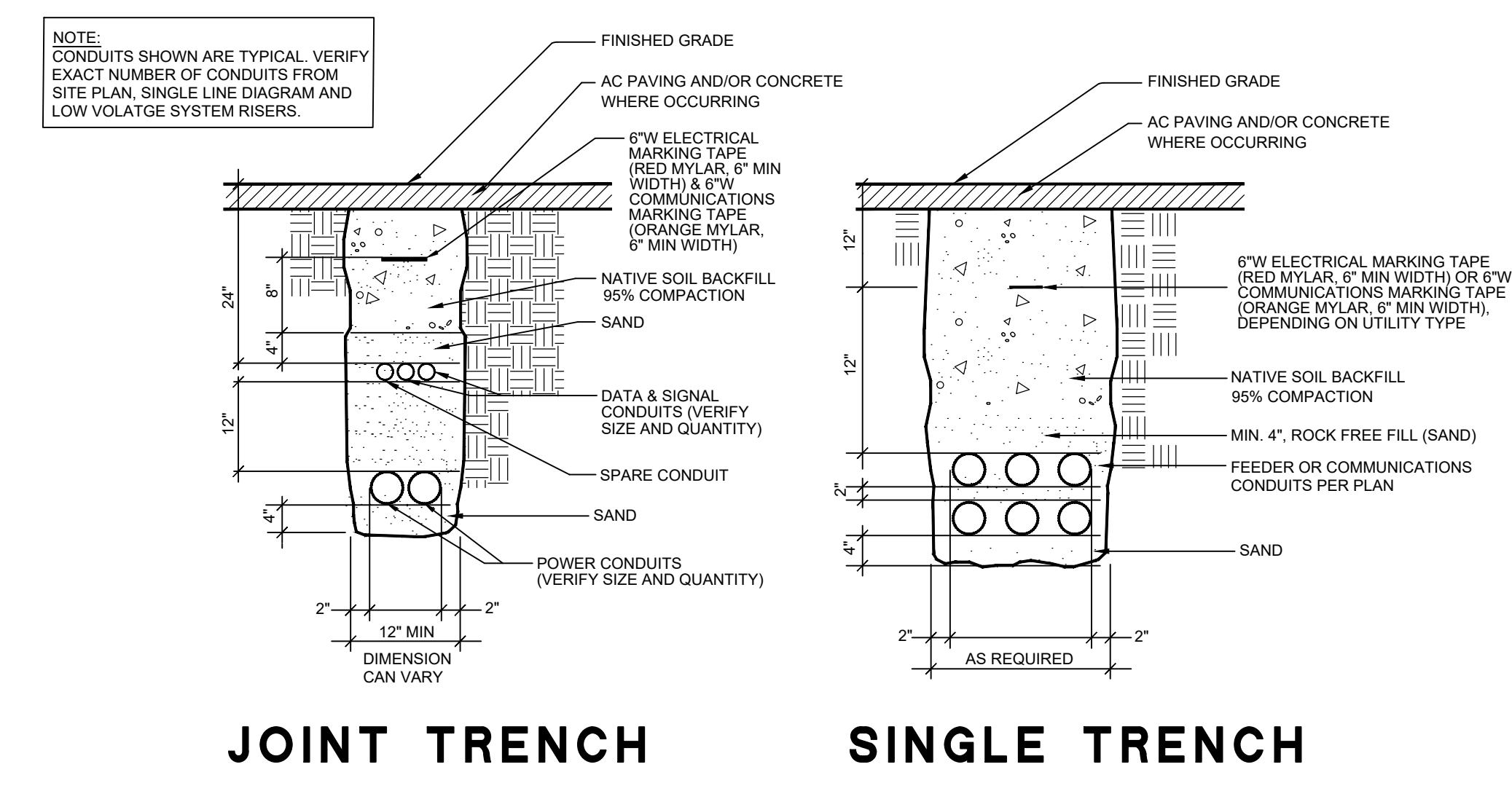




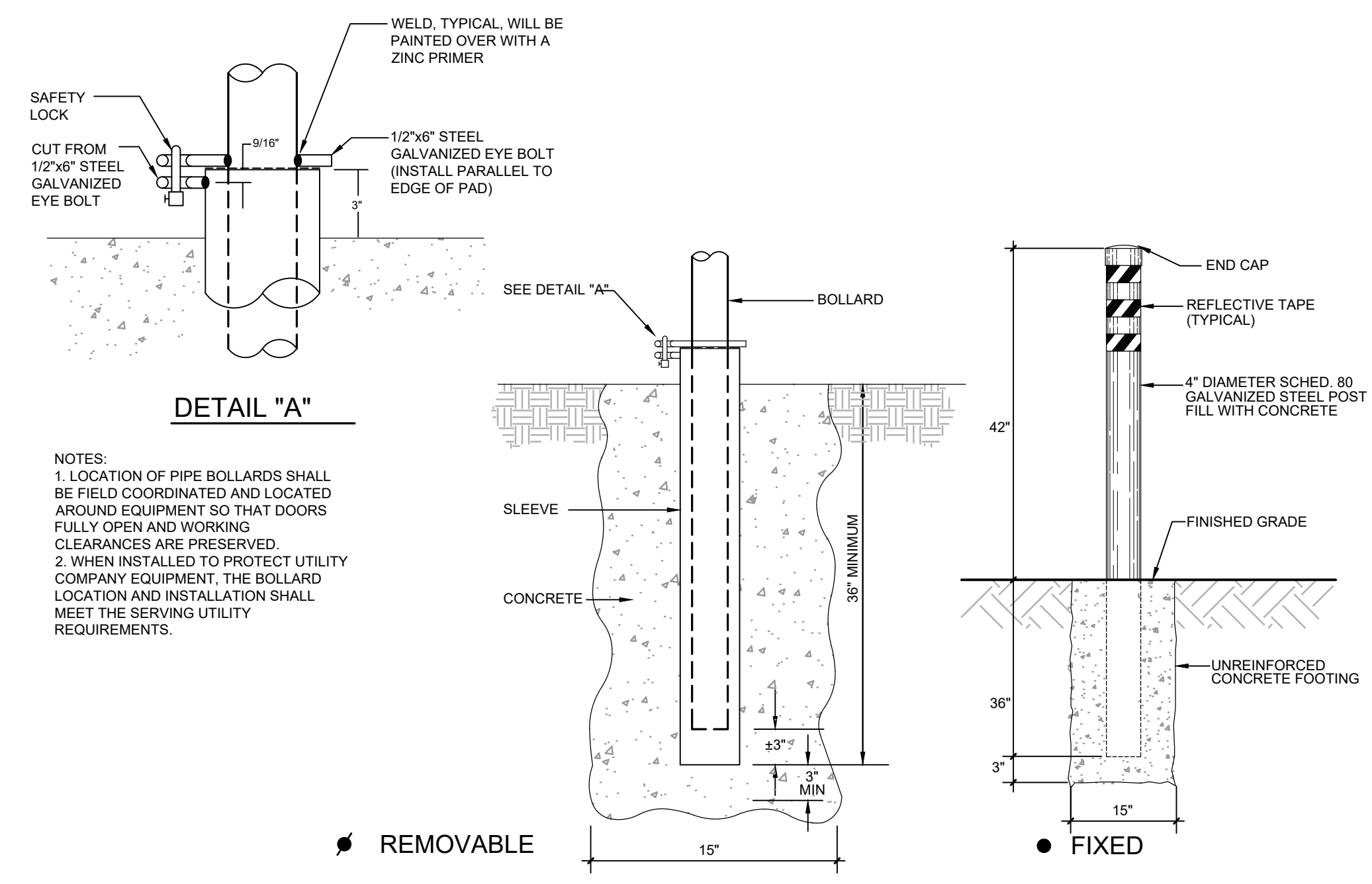
**5 COMMUNICATIONS PULL BOX**  
SCALE:



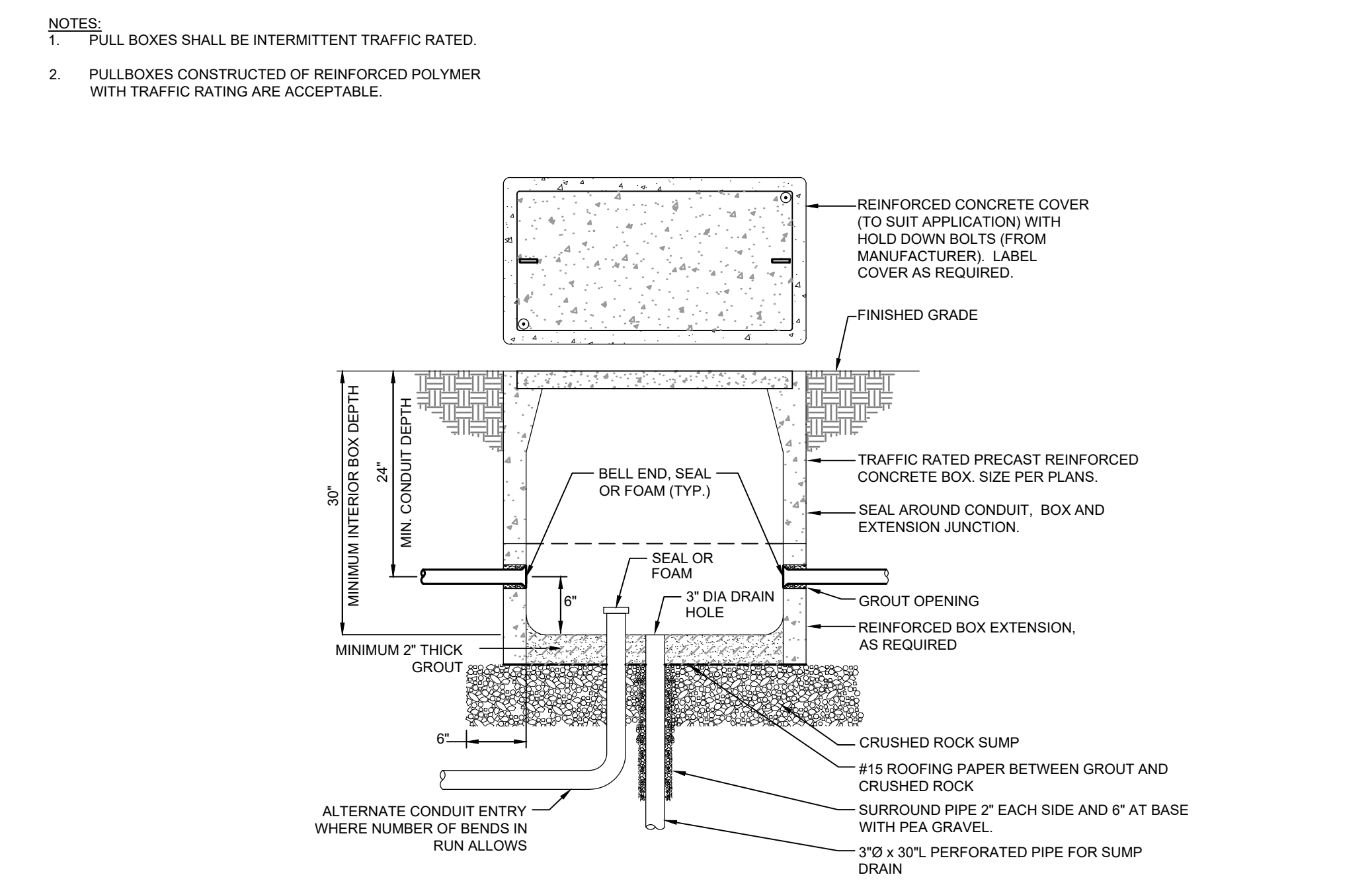
**3 GREENHOUSE COMPLEX ELECT. EQUIP. LAYOUT**  
SCALE: NTS



**1 TYPICAL CONDUIT IN TRENCH**  
SCALE: NTS



**4 TYP. PROTECTIVE PIPE BOLLARD**  
SCALE:



**2 TYPICAL PULL BOX, 24\"/>**

Mar 01, 2024 - 12:07pm - asadkhat - K:\ENGIN\2023\23-8861\23-8861\_E401\_DETAILS.dwg

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**MERCED COLLEGE GREENHOUSE COMPLEX**  
GREENHOUSE COMPLEX  
ELECTRICAL DETAILS  
CONST. DOCUMENTS  
DR. BY: AS/PM  
CH. BY: JT  
DATE: 03/01/2024  
SCALE AS NOTED  
**E-401**

Drawing: K:\ENGIN\2023\23-8861\23-8861\_E401\_DETAILS.dwg E-401 - 8/27/24



# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

DESIGN CRITERIA	DESCRIPTION	DESIGN VALUES
BASE LOCATION LOCATED AT BOTTOM OF BASE PLATE/TOP OF FOOTING		
DEAD AND LIVE LOAD		
ROOF LIVE LOAD		
ROOF DEAD LOAD (SUPERIMPOSED ON FRAME)		
ROOF PANEL DEAD LOAD		
COLLATERAL DEAD LOAD		
ROOF LIVE LOAD, L <sub>r</sub>		20 PSF
GROUND SNOW LOAD, F <sub>s</sub>		20 PSF
RISK CATEGORY		II
ROOF SNOW LOAD, S <sub>r</sub>		20 PSF
FOR SNOW LOAD CONDITIONS ONLY - SITE APPLICATION REVIEWER SHALL VERIFY THE STRUCTURE SHALL BE LOCATED AT LEAST 20 FEET FROM ANY ADJACENT STRUCTURE FOR SNOW DRIFT.		
SNOW LOAD SLOPE FACTOR, C <sub>s</sub>		1.0
SNOW LOAD EXPOSURE FACTOR, C <sub>e</sub>		1.0
SNOW LOAD IMPORTANCE FACTOR, I <sub>s</sub>		1.0
THERMAL FACTOR, C <sub>t</sub>		1.2
LOWEST ANTICIPATED SERVICE TEMPERATURE		30
WIND DESIGN		
BASIC WIND SPEED (3 SECOND GUST), V <sub>3S</sub> , V <sub>10S</sub>		100 MPH, 78 MPH
RISK CATEGORY		II
EXPOSURE CATEGORY		C
FACTORS: K <sub>d</sub> , K <sub>e</sub> , K <sub>z</sub>		0.85, 1.0, 0.85
q <sub>h</sub> = 0.00256 K <sub>d</sub> K <sub>e</sub> K <sub>z</sub> V <sup>2</sup>		18.50 PSF
C <sub>mf</sub> PER ASCE FIGURE 27.3-5 ROOF ANGLE 18.43 - CLEAR / OBSTRUCTED		CASE A (1.1 / -1.2) CASE B (0.01 / -0.69)
C <sub>mf</sub> PER ASCE FIGURE 27.3-5 ROOF ANGLE 18.43 - CLEAR / OBSTRUCTED		CASE A (-0.17 / -1.09) CASE B (-0.96 / -1.65)
C <sub>mf</sub> PER ASCE FIGURE 27.3-7 PARALLEL TO RIDGE - CLEAR / OBSTRUCTED (<h)		CASE A (-0.8 / -1.2) CASE B (0.8 / 0.5)
C <sub>mf</sub> PER ASCE FIGURE 27.3-7 PARALLEL TO RIDGE - CLEAR / OBSTRUCTED (>h, <2h)		CASE A (-0.6 / -0.9) CASE B (0.5 / 0.5)
C <sub>mf</sub> PER ASCE FIGURE 27.3-7 PARALLEL TO RIDGE - CLEAR / OBSTRUCTED (>2h)		CASE A (-0.3 / -0.6) CASE B (0.3 / 0.3)
COMPONENTS & CLADDING - C <sub>g</sub> (PRESSURE/SUCTION) CLEAR / OBSTRUCTED		ZONE 3 - (2.29 / -2.11) / (1.0 / -3.0) ZONE 2 - (1.77 / -1.83) / (0.8 / -2.3) ZONE 1 - (1.15 / -1.05) / (0.5 / -1.5)
SEISMIC DESIGN		
LATERAL FORCE RESISTING SYSTEM		STEEL - ORDINARY CANTILEVER COLUMN
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE
SEISMIC IMPORTANCE FACTOR, I <sub>e</sub>		1.0
SEISMIC SITE CLASS		D
MCE <sub>s</sub> SPECTRAL RESPONSE ACCELERATION @ 0.2 s, S <sub>s</sub>		2.60
MCE <sub>1</sub> SPECTRAL RESPONSE ACCELERATION @ 0.2 s, S <sub>1</sub>		0.90
SHORT PERIOD SITE COEFFICIENT, F <sub>a</sub>		1.20
LONG PERIOD COEFFICIENT, F <sub>v</sub>		1.70
FUNDAMENTAL PERIOD OF THE STRUCTURE, T (WORST CASE FOR ALL STRUCTURES)		0.152 s
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, S <sub>DS</sub>		2.08 <input type="checkbox"/> 1.02 <input type="checkbox"/>
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, S <sub>DS</sub> - USED TO DETERMINE C <sub>s</sub> (WITH CAP PER ASCE 7 12.8.1.3) SOIL PROPERTIES MAY NOT BE CLASSIFIED AS SITE CLASS E.		
DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-s PERIODS, S <sub>D1</sub>		1.02
SITE SPECIFIC RESPONSE ANALYSIS NOT REQUIRED PER ASCE 7 11.4.8 EXCEPTION 2		
T <sub>s</sub> = 0.49 s		T < 1.5 * T <sub>s</sub>
RESPONSE MODIFICATION FACTOR, R		1.25
OVERSTRENGTH FACTOR, O		1.25
REDUNDANCY FACTOR, ρ		1.0
HORIZONTAL OR VERTICAL IRREGULARITIES		NONE
SEISMIC RESPONSE COEFFICIENT, C <sub>s</sub> (20' WIDE, 30' WIDE, 40' WIDE)		1.16 1.00 1.00
DESIGN BASE SHEAR, V (20' WIDE, 30' WIDE, 40' WIDE) (WORST CASE)		10.62 PSF <input type="checkbox"/> 12.70 PSF <input type="checkbox"/> 12.85 PSF <input type="checkbox"/>
ALLOWABLE SOIL BEARING FOR FOUNDATIONS		VARIABLES - SEE FOUNDATION CHARTS
FLOOD DESIGN - DESIGN IS ASSUMED TO NOT BE IN FLOOD HAZARD AREA		
IF PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED & SIGNED FROM A SOILS ENGINEER IS REQUIRED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED.		

STRUCTURAL SEPARATION			
ALL DEFLECTIONS SHOWN ALSO INCLUDE THE P-DELTA ROTATION PER IBC PC-7		SEPARATION IS THE SUM OF 2 OF THESE SELECTED DEFLECTION	
DEFLECTIONS ARE FOR (1) STRUCTURE		DEFLECTIONS ARE FOR (1) STRUCTURE	
SOIL CLASSES PER CBC TABLE 1806A.2			
MAXIMUM DRIFT δ <sub>h,max</sub>	SIDE COLUMNS	Soil Class 5	Soil Class 4
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.40	[ ] 2.55
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.15	[ ] 2.30
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.20	[ ] 2.35
MINIMUM SEPARATION (δ <sub>m</sub> = C <sub>d</sub> δ <sub>h,max</sub> ) C <sub>d</sub> = 1.25		[ ] 2.69	[ ] 2.84
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.40	[ ] 2.55
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.15	[ ] 2.30
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.20	[ ] 2.35
MINIMUM SEPARATION (δ <sub>m</sub> = C <sub>d</sub> δ <sub>h,max</sub> ) C <sub>d</sub> = 1.25		[ ] 2.69	[ ] 2.84
20' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 3.00	[ ] 3.15
30' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.69	[ ] 2.84
40' WIDE (8' EAVE HT, 10' EAVE HEIGHT, 12' EAVE HT) (INCHES)		[ ] 2.75	[ ] 2.90

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STEP 1: (20' BAYS ARE THE MOST ECONOMIC) - FRAME LENGTHS ASSUME 2' OVERHANGS (UNO BY ARCHITECT - 2' MAX DIMENSION)

FRAME DIMENSIONS	SUGGESTED	OTHER
FRAME WIDTH	[ ] 20' [ ] 30' [ ] 40'	[ ] (40' MAX)
FRAME LENGTH	[ ] 44' [ ] 64' [ ] 84' [ ] 104'	[ ] (NO MAX)

STEP 2: SELECT ROOF DECK FOR YOUR PROJECT

- "M" REPRESENTS MCELROY METAL "MULTI-RIB" ROOF PANEL
- "G" REPRESENTS MCELROY METAL "MEGA-RIB" ROOF PANEL
- "S" REPRESENTS MCELROY METAL "MEDALLION-LOK" 16" STANDING SEAM ROOF PANEL

ROOF PANEL	ROOF PANEL TYPE
[ ] M [ ] G [ ] S	

STEP 3: IDENTIFY THE S<sub>s</sub> ACCELERATION (g) FOR YOUR PROJECT

- S<sub>s</sub> VALUE DETERMINES THE REQUIRED SEISMIC DESIGN FORCES
- S<sub>s</sub> VALUE DEPENDS ON THE PROJECT'S GEOGRAPHICAL LOCATION (VALUES RANGE FROM 0.00 TO 3.73)
- FIND S<sub>s</sub> VALUES FOR YOUR PROJECT ON THE USGS WEBSITE (SEARCH INTERNET FOR "USGS SEISMIC DESIGN MAPS")

PROJECT SITE - S <sub>s</sub> ACCELERATION (g)
---

STEP 4: IDENTIFY THE S<sub>s</sub> REGION FOR YOUR PROJECT

- THE REGIONS ARE DEPENDANT ON THE S<sub>s</sub> VALUE DETERMINED IN STEP 3
- THE S<sub>s</sub> REGION DICTATES THE MAXIMUM DEAD LOAD PERMITTED ON THE FRAME

DESCRIPTION	S <sub>s</sub> REGION		MAX DEAD LOAD
	S <sub>s</sub> REGIONS		
	0 < S <sub>s</sub> <= 2.14		5 PSF
	2.14 < S <sub>s</sub> <= 2.50		5 PSF
	2.50 < S <sub>s</sub> <= 2.60		5 PSF

STEP 5: IDENTIFY THE ROOF DEAD LOAD FOR YOUR PROJECT

- THE ROOF DEAD LOAD WILL ALWAYS BE INCLUDED
- THE COLLATERAL LOAD REPRESENTS ADDITIONAL LOAD THAT CAN BE SUPPORTED BY THE FRAME
- BE SURE THE TOTAL ROOF DEAD LOAD FOR YOUR PROJECT IS LESS THAN OR EQUAL TO THE MAX DEAD LOAD SHOWN IN STEP 4 FOR YOUR S<sub>s</sub> VALUE
- S<sub>ds</sub> VALUE USED IN CALCULATION IS THE CAPPED S<sub>ds</sub> (SEE DESIGN CRITERIA)

TOTAL ROOF DEAD LOAD		EXAMPLES
ROOF DECK	----- PSF	M=1.1PSF; G=1.2PSF; S=1.3PSF (SEE STEP 2)
COLLATERAL	----- PSF	LIGHTNING/FIRE SUPPRESSION/SOLAR PANELS, ETC
TOTAL	----- PSF	ADD ROOF DECK AND COLLATERAL LOADS (MAX 5 PSF)

STEP 6: IDENTIFY THE FOUNDATION REQUIREMENTS FOR YOUR PROJECT

- IDENTIFY SOIL CLASS FOR PROJECT SITE PER SITE SPECIFIC SOIL CONDITIONS
- USE THIS TO SELECT CORRECT FOUNDATION SIZE ON FOUNDATION SHEET
- AREA OVER 4000 SQFT REQUIRES A GEOHAZARD REPORT

FOUNDATION REQUIREMENTS		
[ ] GEOTECHNICAL REPORT NOT REQUIRED	[ ] GEOTECHNICAL REPORT REQUIRED	
SOIL CLASS 5 (BEARING) 1500 PSF [ ]	SOIL CLASS 4 (BEARING) 2000 PSF [ ]	SOIL CLASS 3 (BEARING) 3000 PSF [ ]
SOIL CLASS 5 (LATERAL BEARING) 200 PSF/FT	SOIL CLASS 5 (LATERAL BEARING) 300 PSF/FT	SOIL CLASS 5 (LATERAL BEARING) 400 PSF/FT
COHESION 130 PSF	FRICTION COEFFICIENT 0.25	FRICTION COEFFICIENT 0.30

STEP 7: SELECT MISCELLANEOUS OPTIONS FOR YOUR PROJECT

- MAXIMUM CLEAR HEIGHT IS 12'-0" (SEE "ARCHITECTURAL VIEWS" SHEET FOR REFERENCE)
- MARK UP PC DRAWINGS WITH SIZE AND LOCATION OF CUTOUTS BEFORE SUBMITTING TO DSA

MISCELLANEOUS		DESIGN	OPTIONS
CLEAR HEIGHT	[ ] 8' [ ] 10' [ ] 12'	[ ]	(12' MAX)
ELECTRICAL CUTOUTS	[ ] YES [ ] NO	[ ]	[ ] NO
GUTTERS	[ ] YES [ ] NO	[ ]	[ ] NO

STEP 8: SELECT APPLICABLE SHEET INDEX FOR YOUR PROJECT

- REFERENCE THE BASE FRAME (STEP 1) AND THE ROOF PANEL TYPE (STEP 2)
- IDENTIFY THE APPLICABLE SHEET INDEX

BASE FRAME	SHEET INDEX								
	RG 20			RG 30			RG 40		
ROOF PANEL TYPE	M	G	S	M	G	S	M	G	S
SELECT ONE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
GENERAL NOTES	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0	LS1.0
FOUNDATION PLAN	LS2.0	LS2.0	LS2.0	LS3.0	LS3.0	LS3.0	LS4.0	LS4.0	LS4.0
FRAMING PLAN	LS2.1	LS2.1	LS2.1	LS3.1	LS3.1	LS3.1	LS4.1	LS4.1	LS4.1
FRAME CONNECTION DETAILS	LS2.1	LS2.1	LS2.1	LS3.1	LS3.1	LS3.1	LS4.1	LS4.1	LS4.1

STEP 9: INCLUDE APPLICABLE SHEETS WITH YOUR DSA SUBMITTAL

- INCLUDE "MISC DESIGN OPTIONS" SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS OR GUTTERS

STEP 10: IDENTIFY PROJECT NAME AND LOCATION

PROJECT NAME:	SCHOOL DISTRICT:

STEP 11: CROSS OUT EXAMPLE 103 FORMS & INCORPORATE REQUIRED SPECIAL INSPECTIONS 103 FORMS THAT ARE PROJECT SPECIFIC

WIND

V = \_\_\_\_\_ mph < 110 mph

WIND DIRECTION: \_\_\_\_\_

EXPOSURE:  C  D  E

SEISMIC

DESIGN BASED ON SITE CLASS D NO GEOTECHNICAL INVESTIGATION REQUIRED

S<sub>s</sub> = \_\_\_\_\_ F<sub>a</sub> = 1.2

DESIGN BASED ON SITE CLASS DETERMINED PER CHAPTER 20 OF ASCE 7-16 GEOTECHNICAL INVESTIGATION PROVIDED

SITE CLASS:  C  D  E

S<sub>s</sub> = \_\_\_\_\_ F<sub>a</sub> = \_\_\_\_\_ PER ASCE 7-16 SUPPL 3, TABLE 11.4-1

DESIGN BASED ON SITE SPECIFIC GROUND MOTION HAZARD ANALYSIS PER CHAPTER 21 OF ASCE 7-16

SHORT-TERM DESIGN SPECTRAL RESPONSE PARAMETER, S<sub>ds</sub>, SHALL BE AS SPECIFIED IN GEOTECHNICAL INVESTIGATION AREA OVER 4000 SQFT REQUIRES A GEOHAZARD REPORT

COS APPROVAL REQUIRED NOT ELIGIBLE FOR OTC REVIEW

SITE CLASS:  C  D  E

S<sub>ds</sub> = F<sub>a</sub> S<sub>s</sub> = \_\_\_\_\_

SITE CLASS C: 0.7 \* S<sub>s</sub> + 0.7 \* \_\_\_\_\_ <= X.XX

SITE CLASS E: S<sub>s</sub> + \_\_\_\_\_ <= X.XX

C<sub>s</sub> = X.XXX USED IN DESIGN

SEISMIC DESIGN CATEGORY:  D  E

\*SITE SPECIFIC S<sub>ds</sub> VALUE BEFORE APPLYING REDUCTION ALLOWED BY ASCE 7 SECTION 12.8.1.3

ABBREVIATIONS:

ACI	AMERICAN CONCRETE INSTITUTE	MPH	MILES PER HOUR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	M	MULTI-RIB ROOF PANEL (MCELROY)
ASM	ASSEMBLY (INTERNAL REFERENCE)	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATLS	NO	NUMBER
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
CBC	CALIFORNIA BUILDING CODE	OSHA	OCCUPATIONAL HEALTH AND SAFETY ADMIN
CJP	COMPLETE JOINT PENETRATION	PCF	POUNDS PER CUBIC FOOT
CLR	CLEAR	PJ	PRETENSIONED JOINT
DEG	DEGREE	PLCS	PLACES
DIA	DIAMETER	PLT	PLATE
DM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DSA	DIVISION OF THE STATE ARCHITECT	PSI	POUNDS PER SQUARE INCH
EQ	EQUAL	QTY	QUANTITY
FT	FEET	REF	REFERENCE
GA	GAGE	SO	SQUARE
IN	INCHES	SS	STANDING SEAM ROOF PANEL (MCELROY)
KSI	KIPS PER SQUARE INCH	TYP	TYPICAL
MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
MIN	MINIMUM	USGS	U.S. GEOLOGICAL SURVEY
MISC	MISCELLANEOUS	W/	WITH

ARCHITECTURAL REQUIREMENTS

DESCRIPTION	DESIGN VALUES
TYPE OF CONSTRUCTION	II-B
OCCUPANCY CLASSIFICATION	A-3
NUMBER OF STORES	1
FIRE SPRINKLER SYSTEM	NOT BY ICON/WEIGHT NOT INCLUDED IN DESIGN
MOST COMMON R20 MIN/MAX SQ.FT (SEE STEP 1)	480/2,080
MOST COMMON R30 MIN/MAX SQ.FT (SEE STEP 1)	720/3,120
MOST COMMON R40 MIN/MAX SQ.FT (SEE STEP 1)	960/4,160

AREA OVER 4000 SQFT REQUIRES GEOHAZARD REPORT

ALLOWABLE AREA FOR II-B / A-3 IS 9500 SQ.FT

2022 CALIFORNIA ELECTRICAL CODE (PART 1, TITLE 24, CCR)

2022 CALIFORNIA MECHANICAL CODE (CMC) (PART 4, TITLE 24, CCR)

2022 CALIFORNIA PLUMBING CODE (CPC) (PART 5, TITLE 24, CCR)

2022 CALIFORNIA ENERGY CODE (PART 6, TITLE 24, CCR)

2022 CALIFORNIA FIRE CODE (CFC) (PART 9, TITLE 24, CCR)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (PART 11, TITLE 24, CCR)

2022 CALIFORNIA REFERENCE STANDARDS CODE (PART 12, TITLE 24, CCR)

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:

2022 CBC, CHAPTER 35

2022 CFC, CHAPTER 80

SCOPE OF WORK NARRATIVE

THESE DRAWINGS ILLUSTRATE THE FABRICATION AND INSTALLATION REQUIREMENTS FOR A FREE-STANDING PREFABRICATED STEEL SHED STRUCTURE. THE ENTIRE STRUCTURAL SYSTEM IS COMPOSED OF HOLLOW STRUCTURAL STEEL MEMBERS SUPPORTED BY CONCRETE FOUNDATIONS. THE FLEXIBILITY INCLUDED HEREIN ALLOWS THE STRUCTURE TO COMPLY WITH A WIDE VARIETY OF PROJECT SITES AND LOADING REQUIREMENTS.

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DIV. OF THE STATE ARCHITECT  
APP: 02-121754 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 02/21/2024

ICON STD	RG/DSA-PC
DRAWN BY	JD
DATE	3/21/2023
REV	
REV DATE	

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PROFESSIONAL SEAL  
STATE OF CALIFORNIA  
Aug 31, 2023

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GENERAL

- GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY TO ALL PARTS OF THIS PROJECT. IF THERE IS A CONFLICT WITH DETAILS AND NOTES ON OTHER SHEETS, WHEN SUCH CONFLICTS ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER FOR THIS PROJECT.
- WORK SHALL CONFORM TO THE REQUIREMENTS, AS AMENDED BY CBC, C.A.C. TITLE 24, AND ALL STATE AND FEDERAL REGULATIONS.
- OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT PRIOR TO PROCEEDING WITH ANY WORK INVOLVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS, ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
- THESE CONSTRUCTION DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO, BRACING, TEMPORARY SUPPORTS, AND SHORING. OBSERVATION VISIT TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT/ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER DURING THE CONSTRUCTION SHALL BE DISTINGUISHED FROM CONSTRUCTION AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER, WHETHER OF MATERIAL OR WORK, ARE FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE CONSTRUCTION.
- ASTM DESIGNATIONS AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS, EXCEPT AS AMENDED BY CBC CHAPTER 35.
- CONFORM TO APPLICABLE CAL/OSHA CONSTRUCTION SAFETY REGULATIONS FOR ALL WORK PERFORMED DURING CONSTRUCTION. JOB SITE SAFETY IS STRICTLY THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THE ARCHITECT/ENGINEER OR OWNER.
- THE ENGINEER AND THEIR CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, HANDLING, REMOVAL OR DISPOSAL OF HAZARDOUS MATERIALS AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
- SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, OR IF A CHANGE IN THE SCOPE OF WORK IS PROPOSED, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED CHANGE(S) SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
- THE SCHOOL DISTRICT INSPECTOR ON RECORD SHALL INSPECT AND APPROVE THE ERECTED FRAME PRIOR TO ROOF INSTALLATION.
- SEE REQUIREMENTS FOR LOCATION IN ANY FIRE HAZARD SEVERITY ZONE FOR WILDLAND URBAN INTERFACE AREAS (WUI) AS SPECIFIED IN THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE. PROVIDE PROTECTION AND DETAILS OF ALL AREAS COMPLYING WITH THE WUI REQUIREMENTS. SEE CBC CHAPTER 7A FOR REQUIREMENTS.
- LOCATING THIS STRUCTURE CLOSER THAN 20 FEET TO OTHER STRUCTURES MAY AFFECT THE ALLOWABLE AREA FOR THE EXISTING CONSTRUCTION PER THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE.
- IEWS AND DETAILS ARE NOT DRAWN TO SCALE (UNLESS NOTED OTHERWISE). DO NOT SCALE THESE DRAWINGS.

STRUCTURAL AND MISCELLANEOUS STEEL

- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION MANUAL REFERENCED BY THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
- PIPE SECTIONS SHALL CONFORM TO ASTM A53, Fy = 35 KSI, GRADE B OR A501 UNLESS NOTED OTHERWISE.
- STRUCTURAL TUBING (HSS SHAPES) SHALL CONFORM TO ASTM A-500, GRADE B (OR C), Fy = 46 KSI MIN.
- IF MATERIAL AVAILABILITY IS LIMITED, MEMBER THICKNESS CAN BE INCREASED BEYOND WHAT IS SHOWN IN THESE DRAWINGS (MAXIMUM INCREASE OF 1/8").
- ALL CHANNELS, ANGLES, AND MISC. STEEL SHALL CONFORM TO ASTM A-36, Fy = 36 KSI.
- ALL PLATE STEEL SHALL CONFORM TO ASTM A-572, Fy= 50 KSI.
- ALL COLD FORM STEEL SHALL CONFORM TO ASTM A-653, CS = TYPE B, Fy = 50 KSI Fu = 65 KSI.
- STRUCTURAL STEEL AND DECK SHALL BE IDENTIFIED FOR CONFORMITY PER CBC 2202A.1.
- ALL ROOF DECKS SHALL HAVE KYNAR 500 METAL COATING.
- ALL ROOF DECKS SHALL CONFORM TO ASTM A-792, Fy = 50 KSI.
- ALL BASE CONNECTIONS ARE A PART OF THE LATERAL FORCE RESISTING SYSTEM.

NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEERING RESPONSIBILITY

- PER TITLE 24, PART 1, SECTION 4-316(e) OF THE CALIFORNIA CODE OF REGULATIONS, THIS NOTICE SHALL BE GIVEN TO DSA PRIOR TO THE APPROVAL OF PLANS AND SPECIFICATIONS.
- FOR THE SITE SPECIFIC PROJECT, J. R. MILLER & ASSOCIATES IS NOT THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE.
- FOR THE SITE SPECIFIC PROJECT, J.R. MILLER & ASSOCIATES' RESPONSIBILITY IS LIMITED TO THE PREPARATION OF THE PLANS AND SPECIFICATIONS FOR THE SHELTERS OF THIS PC ONLY.
- STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM J.R. MILLER & ASSOCIATES' RESPONSIBILITY FOR THE SITE SPECIFIC PROJECT.
- ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING SHALL BE DELEGATED TO A QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, STRUCTURAL OBSERVATION OF CONSTRUCTION, REVIEW OF INSPECTION REPORTS, AND SIGNING OFF OF THE VERIFIED REPORT FOR COMPLETED WORK.
- J.R. MILLER & ASSOCIATES WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE SHELTERS OF THIS PC WHICH ARISE DURING PLAN REVIEW AND CONSTRUCTION.

CONSTRUCTION NOTES

- A DSA-CERTIFIED CLASS 3 (MINIMUM) PROJECT INSPECTOR IS REQUIRED FOR THIS PROJECT.
- CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
- A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS ARE THAT ALL THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK, (SECTION 4-317(c), PART 1, TITLE 24, CCR)
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES

# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

- PROPER MATERIAL ID AND WELDING.
- WELD TILLER METAL MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION OF COMPLIANCE WITH CODE AND SPECIFICATIONS.

BOLTING:

- ALL BOLTS SHOWN ON THESE DRAWINGS ARE HOT DIPPED GALVANIZED ASTM F3125 GRADE A325 HIGH STRENGTH BOLTS (UNO), WITH THE NUTS CONFORMING TO HOT DIPPED GALVANIZED ASTM A-563 GRADE D4.
  - HIGH STRENGTH BOLTS SHALL BE VERIFIED AND INSPECTED PER CBC 1705A2.1.
  - BEFORE ERECTING THE FRAME, VERIFY ALL BOLTS AND NUTS ARE CLEAN OF DEBRIS AND BURRS - INCLUDING THE HARDWARE ALREADY FASTENED INSIDE THE MEMBERS. CHASING SOME OF THE BOLTS AND NUTS MAY BE REQUIRED.
  - HARDENED STEEL WASHERS SHALL CONFORM TO ASTM F-436.
  - THE BOLTING INSTALLATION REQUIREMENTS OUTLINED BELOW ARE CRITICAL TO THE STRUCTURE'S DESIGN AND PERFORMANCE. THE INSTALLER IS REQUIRED TO COORDINATE THIS PHASE OF CONSTRUCTION WITH THE SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD PRIOR TO THE ERECTION OF THE FRAME. BE INSTALLED AND INSPECTED PER THE APPLICABLE VERSION OF AISC'S USING HIGH-STRENGTH BOLTS", CBC 1705A.2.1; AISC 341-16 J7; AISC 350-16 N5.6.
- APRETENSIONED JOINTS MUST BE INSTALLED AND INSPECTED TO MEET ONE OF THE FOLLOWING REQUIREMENTS:
- TURN-OF-NUT PRETENSIONING: PER SECTION 8.2.1 OF THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS, WASHERS ARE NOT REQUIRED FOR THIS METHOD, THE NUT OR HEAD SHALL BE ROTATED AS SPECIFIED IN TABLE 8.2. THE PART NOT TURNED SHALL BE PREVENTED FROM ROTATING.
  - CALIBRATED WRENCH: PER THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS, WASHERS ARE REQUIRED (NOT SUPPLIED BY ICON) THESE SHALL BE INSTALLED PER THE INSTALLATION TORQUE DETERMINED IN THE PRE-INSTALLATION VERIFICATION OF THE FASTENER ASSEMBLY PER SECTION 7. THE PART NOT TURNED SHALL BE PREVENTED FROM ROTATING.
  - IDENTIFIED ON THE FRAME CONNECTION DETAILS WITH "PT REQUIRED"

B) ALL OTHER JOINTS MUST BE INSTALLED AND INSPECTED TO MEET THE REQUIREMENTS OF THE SNUG-TIGHTENED JOINTS. SNUG TIGHT CONDITION EXISTS WHEN ALL PILES IN A CONNECTION HAVE BEEN PULLED INTO FIRM CONTACT BY THE BOLTS IN THE JOINT AND ALL OF THE BOLTS IN THE JOINT HAVE BEEN TIGHTENED SUFFICIENTLY TO PREVENT REMOVAL OF THE NUTS WITHOUT THE USE OF A WRENCH.

FOUNDATIONS:

- ALLOWABLE SOIL PRESSURES ASSUME CLASS 5 SOIL CLASSIFICATION PER CBC TABLE 1806A, UNLESS NOTED OTHERWISE. PASSIVE PRESSURE IS ASSUMED TO START 12" BELOW TOP OF FOOTING.
- PER CBC SECTION 1803A.2, GEOTECHNICAL REPORTS ARE NOT REQUIRED FOR ONE-STORY LIGHT-STEEL FRAME BUILDINGS OF TYPE II CONSTRUCTION AND 4,000 SQUARE FOOT OR LESS IN FLOOR AREA AND NOT LOCATED WITHIN EARTHQUAKE FAULT ZONES OR SEISMIC HAZARD ZONES AS SHOWN ON THE MOST RECENT MAPS PUBLISHED BY THE CGS. ALLOWABLE FOUNDATION AND LATERAL SOIL PRESSURE VALUES MAY BE DETERMINED FROM TABLE 1806A.2.
- FILL AND BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY IN ACCORDANCE WITH ASTM TEST METHOD D-1557 OR AS RECOMMENDED BY THE GEO-TECH ENGINEER. FLOODING NOT PERMITTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING, ETC. NECESSARY TO SUPPORT CUT AND/OR FILL BANKS DURING EXCAVATION, AND FORMING AND PLACEMENT OF CONCRETE.
- MINIMUM SETBACK FROM TOE OF SLOPE ON AN ASCENDING SLOPE SHALL BE 15 FEET AND MINIMUM SETBACK FROM TOE OF SLOPE ON A DESCENDING SLOPE SHALL BE 40 FEET.
- PER CBC SECTION 1803A.6, GEOHAZARD REPORTS ARE NOT REQUIRED FOR ONE-STORY LIGHT-STEEL FRAME BUILDINGS OF TYPE II CONSTRUCTION AND 4,000 SQUARE FOOT OR LESS IN FLOOR AREA AND NOT LOCATED WITHIN EARTHQUAKE FAULT ZONES OR SEISMIC HAZARD ZONES AS SHOWN ON THE MOST RECENT MAPS PUBLISHED BY THE CGS.
- GEOHAZRD REPORTS ARE TO COMPLY WITH DSA IR A-4 PER IR-7 SECTION 1.8.
- SITE SPECIFIC GEOTECHNICAL REPORT IS REQUIRED AT THE TIME OF SITE APPLICATION IF USING OTHER THAN CLASS 5 SOIL, PER DSA IR PC-7.
- LATERAL BEARING HAS BEEN INCREASED PER CBC 1806A.3.4 FOR THE 1/2" DEFLECTION & HAS BEEN DESIGNED FOR P-DELTA EFFECTS. NO 1/3 INCREASE HAS BEEN APPLIED.
- MINIMUM CLEARANCE BETWEEN PIERS SHALL BE 8'-0".

CONCRETE:

- MIX DESIGN REQUIREMENTS: (NORMAL WEIGHT CONCRETE)

STRENGTH Fc (28 DAYS)	W/C RATIO (NON-AIR ENTRAINED)	W/C RATIO (AIR ENTRAINED)	SLUMP (±1")	UNIT WEIGHT (NORMAL WEIGHT)
5000 PSI	0.44	0.35	5"	150 PCF

- CONCRETE MIX DESIGN PARAMETERS ARE GOOD FOR EXPOSURE CATEGORIES FD, F1 & F2. THE AIR ENTRAINMENT FOR THESE CATEGORIES SHALL BE AS FOLLOWS: FD-0, F1-4.5, F2-6
- CHANGES TO THE MIX DESIGN MUST BE APPROVED BY THE ENGINEER OR ARCHITECT OF RECORD AND DSA.
- AGGREGATES SHALL CONFORM TO THE ASTM C-33 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.005. MAX AGGREGATE SIZE = 1".
- CEMENT SHALL CONFORM TO ASTM C-150 (TYPE V) UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.
- CONCRETE SHALL NOT FREE FALL MORE THAN FIVE FEET.
- CONCRETE DURABILITY SHALL BE PER CBC 1904A.1 ACI 318-19, CHAPTER 19.
- CONCRETE SHALL BE TESTED PER CBC 1903A, TABLE 1705A.3, AND ACI 318-19, SECTION 26.12.
- NO ADMIXTURE SHALL CONTAIN CALCIUM CHLORIDE.

- DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL CONFORM TO THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES."
- MIN. COVER FOR CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
  - CAST AGAINST EARTH .....3"
  - CAST AGAINST FORM BELOW GRADE .....2"
  - FORMED SLABS (#11 BAR & SMALLER).....3/4"
  - SLABS ON GRADE (FROM TOP OF SLAB).....1"
- REINFORCING BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND. BENDS SHALL BE MADE COLD.
- REINFORCING SHALL BE LAP SPICED PER ACI 318-19, SECTION 25.5.
- PRIOR TO PLACING OF CONCRETE, REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE WELL SECURED IN POSITION.
- WELDING OF REINFORCING IS NOT ALLOWED.
- REINFORCING STEEL SHALL BE INSPECTED PER CBC 1705A.3.

POWDER-COAT FINISH SYSTEM:

ALL BUILDINGS THAT HAVE A POWDER-COATED FINISH SHALL MEET THE FOLLOWING SPECIFICATIONS:

- THE STEEL FRAME (HSS SECTIONS, COLD FORMED & PLATE STEEL) SHALL BE SHOT-BLASTED TO A NEAR WHITE CONDITION PER SSPC-10 SPECIFICATIONS.
- THE STEEL SHALL BE WASHED IN A ZINC PHOSPHATE IN AN MINIMUM THREE STAGE ELECTRO DEPOSITION PRE-TREATMENT PROCESS.
- IMMEDIATELY FOLLOWING PRE-TREATMENT THE STEEL SHALL BE TOTALLY COATED IN AN EPOXY PRIMER TO A UNIFORM THICKNESS OF A MINIMUM OF 0.7 TO 0.9 MILS. THE E-COATING SHALL PROVIDE A MINIMUM OF 1000 HOURS OF SALT SPRAY CORROSION PROTECTION TO THE STEEL.
- THE STEEL SHALL THEN HAVE A TGC POLYESTER COLOR COAT APPLIED OVER THE E-COATED SURFACE.
- THE FINISH THICKNESS OF THESE APPLICATIONS SHALL BE A MINIMUM OF 8 TO 12 MILS.
- ALL CARBON STEEL MEMBERS (COLUMNS, BEAMS, PLATES & COLD FORMED STEEL ETC.) NOT POWDER-COATED SHALL BE PAINTED WITH PRIME COAT PER THE "AISC CODE OF STANDARD PRACTICE" AND THE "AISC SPECIFICATION SECTION M3(UNLESS NOTED OTHERWISE).

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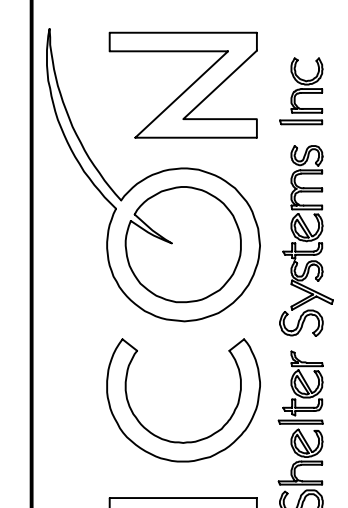
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Aug 31, 2023

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APP: 04-122188 PC  
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SS  FLS  ACS  CG   
DATE: 09/21/2023

GENERAL INFO



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LS1.1

PRE-CHECK (PC) DOCUMENT  
Code: 2022 CBC  
A separate project application for construction is required.

# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT



THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

IMPORTANT: This form is only a summary list of structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing.

\*\*NOTE: Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS
1. TYPE
2. PERFORMED BY
Continuous - Indicates that a continuous special inspection is required
Periodic - Indicates that a periodic special inspection is required
Test - Indicates that a test is required
GE (Geotechnical Engineer) - Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative.
LOR (Laboratory of Record) - Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335.
PI (Project Inspector) - Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA.
SI (Special Inspection) - Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

S1. GENERAL:
Test or Special Inspection Type Performed By Code References and Notes
a. Verify that:
- Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations.
- Foundation excavations are extended to proper depth and have reached proper material.
- Materials below footings are adequate to achieve the design bearing capacity.
Periodic GE\* \* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)

S2. SOIL COMPACTION AND FILL:
Test or Special Inspection Type Performed By Code References and Notes
a. Perform classification and testing of fill materials.
Test LOR\* \* Under the supervision of the geotechnical engineer.
b. Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative. (Refer to specific items identified in the Appendix (end of this form) form for exemptions where soils SI and testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil SI and test reporting requirements for the exempt items.)
c. Compaction testing.
Test LOR\* \* Under the supervision of the geotechnical engineer. (Refer to specific items identified in the Appendix (end of this form) for exemptions where soils testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil test reporting requirements for the exempt items.)

S3. DRIVEN DEEP FOUNDATIONS (PILES):
Test or Special Inspection Type Performed By Code References and Notes
a. Verify pile materials, sizes and lengths comply with the requirements.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative.
b. Determine capacities of test piles and conduct additional load tests as required.
Test LOR\* \* Under the supervision of the geotechnical engineer.
c. Inspect driving operations and maintain complete and accurate records for each pile.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative.
d. Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative.
e. Steel piles.
Provide tests and inspections per STEEL section below.
f. Concrete piles and concrete filled piles.
Provide tests and inspections per CONCRETE section below.
g. For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.
\* As defined on drawings or specifications.

S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):
Test or Special Inspection Type Performed By Code References and Notes
a. Inspect drilling operations and maintain complete and accurate records for each pier.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)

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Test or Special Inspection Type Performed By Code References and Note
b. Verify pier locations, diameters, plumbness, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
c. Confirm adequate end strata bearing capacity.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
d. Concrete piers.
Provide tests and inspections per CONCRETE section below.

S5. RETAINING WALLS:
Test or Special Inspection Type Performed By Code References and Notes
a. Placement, compaction and inspection of backfill.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative. (See section S2 above).
b. Placement of soil reinforcement and/or drainage devices.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative.
c. Segmental retaining walls; inspect placement of units, dowels, connectors, etc.
Continuous GE\* \* By geotechnical engineer or his or her qualified representative. See DSA IR 18-2.
d. Concrete retaining walls.
Provide tests and inspections per CONCRETE section below.
e. Masonry retaining walls.
Provide tests and inspections per MASONRY section below.

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Test or Special Inspection Type Performed By Code References and Notes
c. Verify in-situ concrete strength prior to stressing of post-tensioning tendons.
Periodic SI Table 1705A.3 Item 13. Special inspector to verify specified concrete strength test prior to stressing.
d. Inspect application of post-tensioning or prestressing forces and grouting of bonded prestressing tendons.
Continuous SI 1705A.3.4, Table 1705A.3 Item 9; ACI 318-14 Section 26.13

C3. PRECAST CONCRETE (IN ADDITION TO SECTION C1):
Test or Special Inspection Type Performed By Code References and Notes
a. Inspect fabrication of precast concrete members.
Continuous SI\* Table 1705A.3 Item 10. \* May be performed by PI when specifically approved by DSA.
b. Inspect erection of precast concrete members.
Periodic SI\* Table 1705A.3 Item 10. \* May be performed by PI when specifically approved by DSA.
c. For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category D, E or F, inspect such connections and reinforcement in the field for:
1. Installation of the embedded parts
2. Completion of the continuity of reinforcement across joints.
3. Completion of connections in the field.
Continuous SI Table 1705A.3; ACI 318-19 Section 26.13.1.3; ACI 550.5
d. Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.
Periodic SI Table 1705A.3; ACI 318-19 Section 26.13.1.3; ACI 550.5

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S6. OTHER SOILS:
Test or Special Inspection Type Performed By Code References and Notes
a. Soil Improvements
Test GE\* Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS (California Geological Survey) for final acceptance.
\* By geotechnical engineer or his or her qualified representative.
b. Inspection of Soil Improvements
Continuous GE\* \* By geotechnical engineer or his or her qualified representative.
c.

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C4. SHOTCRETE (IN ADDITION TO SECTION C1):
Test or Special Inspection Type Performed By Code References and Notes
a. Inspect shotcrete placement for proper application techniques.
Continuous SI 1705A.3.9, Table 1705A.3 Item 7, 1908A.1, 1908A.2, 1908A.3. See ACI 506.2-13 Section 3.4, ACI 506R-16.
b. Test post-installed anchors.
Test LOR 1910A.5. (See Appendix (end of this form) for exemptions.)

C6. OTHER CONCRETE:
Test or Special Inspection Type Performed By Code References and Notes
a.

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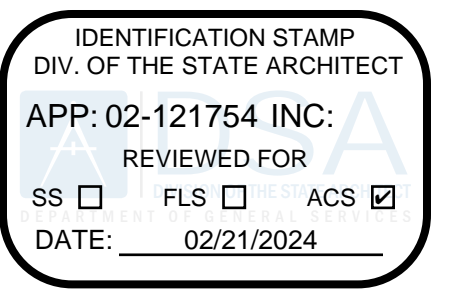
C1. CAST-IN-PLACE CONCRETE
Test or Special Inspection Type Performed By Code References and Notes
a. Verify use of required design mix.
Periodic SI Table 1705A.3 Item 5, 1910A.1.
b. Identify, sample, and test reinforcing steel.
Test LOR 1910A.2; ACI 318-19 Ch.20 and Section 26.6.1.2; DSA IR 17-10. (See Appendix (end of this form) for exemptions.)
c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.
Test LOR Table 1705A.3 Item 6; ACI 318-19 Sections 26.5 & 26.12.
d. Test concrete (F.).
Test LOR 1905A.1.17; ACI 318-19 Section 26.12.
e. Batch plant inspection.
See Notes SI Default of 'Continuous' per 1705A.3.3. If approved by DSA, batch plant inspection may be reduced to 'Periodic' subject to requirements in Section 1705A.3.3.1, or eliminated per 1705A.3.3.2. See IR 17-13. (See Appendix (end of this form) for exemptions.)
f. Welding of reinforcing steel.
Provide special inspection per STEEL, Category S/A4(d) & (e) and/or S/A5(g) & (h) below.

C2. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1):
Test or Special Inspection Type Performed By Code References and Notes
a. Sample and test prestressing tendons and anchorages.
Test LOR 1705A.3.4, 1910A.3
b. Inspect placement of prestressing tendons.
Periodic SI 1705A.3.4, Table 1705A.3 Items 1 & 9.

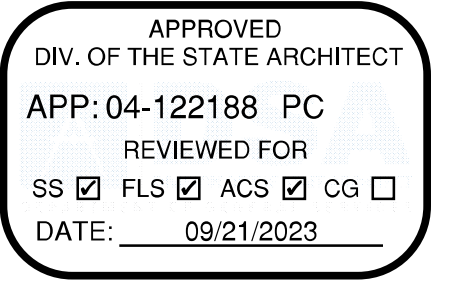
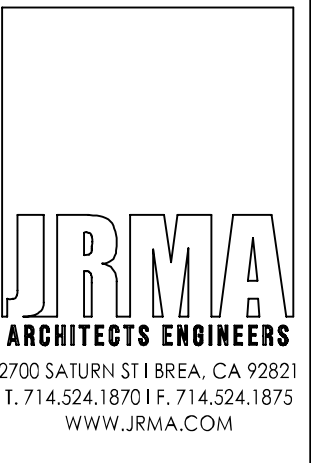
DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMINUM), 2022 CBC

S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES
Test or Special Inspection Type Performed By Code References and Notes
a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.
Periodic SI Table 1705A.2.1 Items 1a & 1b, 2202A.1; ABC 360-16 Section A3.1, J3.1, and N3.2; RCSC 2014 Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
b. Verify and document steel fabrication per DSA-approved construction documents.
Periodic SI Not applicable to cold-formed steel light-frame construction, except for trusses (1705A.2.4).
c. Buckling restrained braces.
Test LOR Testing and special inspections in accordance with IR 22-4.

S/A2. HIGH-STRENGTH BOLTS:
Test or Special Inspection Type Performed By Code References and Notes
a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.
Periodic SI Table 1705A.2.1 Items 1c, 2213A.1; RCSC 2014 Section 7.2; DSA IR 17-8.
b. Test high-strength bolts, nuts and washers.
Test LOR Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2; AISI 360-16 J3.1, J3.2, M2.3.6 N5.6; RCSC 2014 Section 9.1; DSA IR 17-9.
c. Bearing-type ('snug tight') connections.
Periodic SI Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2; AISI 360-16 J3.1, J3.2, M2.3.6 N5.6; RCSC 2014 Section 9.2 & 9.3; DSA IR 17-9.
d. Pretensioned and slip-critical connections.
\* SI Table 1705A.2.1 Items 2b & 2c, 1705A.2.6, 2204A.2; ABC 360-16 J3.1, J3.2, M2.3.6 N5.6; RCSC 2014 Section 9.2 & 9.3; DSA IR 17-9.
\* 'Continuous' or 'Periodic' depends on the righting method used.

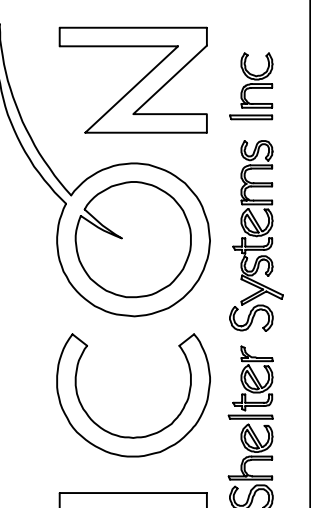


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DRAWN BY JD
DATE 3/21/2023
REV
REV DATE



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DSA 103



1455 LINCOLN AVE HOLLAND MI, 49423
616.396.0919
800.748.0985
616.396.0944 FX

LS1.2

PRE-CHECK (PC) DOCUMENT Code: 2022 CBC
A separate project application for construction is required.



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 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8  
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S/A3. WELDING:			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/> a. Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	Periodic	SI	1705A.2.5, Table 1705A.2.1 Items 4 & 5; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3.
<input checked="" type="checkbox"/> b. Verify weld filler material manufacturer's certificate of compliance.	Periodic	SI	DSA IR 17-3.
<input checked="" type="checkbox"/> c. Verify WPS, welder qualifications and equipment.	Periodic	SI	DSA IR 17-3.

S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/> a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	Continuous	SI	Table 1705A.2.1 Items 5a.1-4; AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
<input checked="" type="checkbox"/> b. Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	Periodic	SI	1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6; AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
<input type="checkbox"/> c. Inspect welding of stairs and railing systems.	Periodic	SI	1705A.2.1; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.
<input type="checkbox"/> d. Verification of reinforcing steel weldability other than ASTM A706.	Periodic	SI	1705A.3.1; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
<input type="checkbox"/> e. Inspect welding of reinforcing steel.	Continuous	SI	Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8; AWS D1.4; DSA IR 17-3.

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 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8  
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S/A8. SPRAYED FIRE-RESISTANT MATERIALS:			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Examine structural steel surface conditions. Inspect application; take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	Periodic	SI	1705A.15, 1705A.1, 1705A.2, 1705A.3, 1705A.4.
<input type="checkbox"/> b. Test density.	Test	LOR	1705A.15.1, 1705A.15.5, ASTM E736
<input type="checkbox"/> c. Bond strength adhesion/cohesion.	Test	LOR	1705A.15.1, 1705A.15.4, ASTM E605

S/A9. ANCHOR BOLTS AND ANCHOR RODS:			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/> a. Anchor Bolts and Anchor Rods	Test	LOR	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
<input type="checkbox"/> b. Threaded rod not used for foundation anchorage.	Test	LOR	Sample and test threaded rods not readily identifiable per procedures noted in DSA IR 17-11.

S/A10. STORAGE RACK SYSTEMS:			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Materials used, to verify compliance with one or more of the material test reports in accordance with the approved construction documents.	Periodic	SI	Table 1705A.13.7
<input type="checkbox"/> b. Fabricated storage rack elements.	Periodic	SI	1704A.2.5; Table 1705A.13.7

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Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections  
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Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests / special inspections noted. Items marked as **exempt** shall be identified on the approved construction documents. The project inspector shall verify all construction complies with the approved construction documents.

SOILS:	
<input type="checkbox"/> 1. Deep foundations acting as a cantilever footing with a design based on a geotechnical report for the following cases: A) free standing structures, poles, flag poles, poles supporting open mesh fences, etc., C) or D) covered walkway structure with an apex height less than 15'-0".	
<input type="checkbox"/> 2. Shallow foundations, etc. are exempt from special inspection, testing or geotechnical report and meeting the exception item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC Section 1804A.6), B) soil scarification/compaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaired landscaping and playground areas, or E) utility trench backfill.	

CONCRETE/MASONRY:	
<input type="checkbox"/> 1. Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment - see item 7 for "Welding" in the Appendix below) given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) or B) interior nonstructural wall partitions meeting criteria listed in exempt item 3 for "Welding" in the Appendix below	
<input type="checkbox"/> 2. Concrete batch plant inspection is not required for items given in CBC Section 1705A.3.2 subject to the requirements and limitations in that section.	
<input type="checkbox"/> 3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.	
<input type="checkbox"/> 4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.	

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 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8  
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S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3):			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	Continuous	SI	Table 1705A.2.1 Items 5a.1-4; AISC 360-16 (AISC 341-16 as applicable); DSA IR 17-3.
<input type="checkbox"/> b. Inspect single-pass fillet welds ≤ 5/16".	Periodic	SI	Table 1705A.2.1 Item 5a.5; AISC 360-16 (AISC 341-16 as applicable); DSA IR 17-3.
<input type="checkbox"/> c. Inspect end-welded studs (ASTM A-108) installation (including bend test).	Periodic	SI	2213A.2; AISC 360-16 (AISC 341-16 as applicable); AWS D1.1; DSA IR 17-3.
<input type="checkbox"/> d. Inspect floor and roof deck welds.	Periodic	SI	1705A.2.2, Table 1705A.2.1 Item 5a.6; AISC 360-16 (AISC 341-16 as applicable); AWS D1.3; DSA IR 17-3.
<input type="checkbox"/> e. Inspect welding of structural cold-formed steel.	Periodic	SI*	1705A.2.5; AWS D1.3; DSA IR 17-3. The quality control provisions of AISI S240-20 Chapter D shall also apply. * May be performed by the project inspector when specifically approved by DSA.
<input type="checkbox"/> f. Inspect welding of stairs and railing systems.	Periodic	SI*	1705A.2.1; AISC 360-16 (AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3. * May be performed by the project inspector when specifically approved by DSA.
<input type="checkbox"/> g. Verification of reinforcing steel weldability.	Periodic	SI	1705A.3.1; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
<input type="checkbox"/> h. Inspect welding of reinforcing steel.	Continuous	SI	Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8; AWS D1.4; DSA IR 17-3.

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 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8  
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S/A11. Other Steel			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> c. Storage rack anchorage installation.	Periodic	SI	ANSI/MH16.1 Section 7.3.2; Table 1705A.13.7
<input type="checkbox"/> d. Completed storage rack system to indicate compliance with the approved construction documents.	Periodic	SI*	Table 1705A.13.7; * May be performed by the project inspector when specifically approved by DSA.

S/A11. Other Steel			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a.			

### Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

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CONCRETE/MASONRY:	
<input type="checkbox"/> 5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.	

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<input type="checkbox"/> 3. Non-structural interior cold-formed steel framing spanning less than 15'-0", such as in interior partitions, interior soffits, etc. supporting only self weight and light-weight finishes or adhered tile, masonry, stone, or terra cotta veneer no more than 5/8" thickness and apex less than 20'-0" in height and not over an exit way. Maximum tributary load to a member shall not exceed the equivalent of that occurring from a 10'x10' opening in a 15' tall wall for a header or king stud.	
<input type="checkbox"/> 4. Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections S/A3, S/A4 and/or S/A5 of listing above).	
<input type="checkbox"/> 5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections S/A3, S/A4 and/or S/A5 of listing above).	
<input type="checkbox"/> 6. TV Brackets, projector mounts with a valid listing (see DSA IR A-5) and recreational equipment (e.g., playground structures, basketball backstops, etc.) (connections of such elements to superstructure elements using welding will require special inspection as noted in selected item(s) for sections S/A3, S/A4 and/or S/A5 located in the Steel/Aluminum category of listing above).	
<input type="checkbox"/> 7. Any support for exempt non-structural components given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) meeting the following: A) when supported on a floor/roof, <400# and resulting composite center of mass (including component's center of mass) ≤4' above supporting floor/roof, B) when hung from a wall or roof/floor, <20# for discrete units or <5 plf for distributed systems.	

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 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8  
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S/A6. NONDESTRUCTIVE TESTING:			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Ultrasonic	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
<input type="checkbox"/> b. Magnetic Particle	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
<input type="checkbox"/> c.	Test	LOR	

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 Application Number: 04-122188 School Name: PC Update School District: 04-122188  
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X1. OTHER:			
Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Load test for identified product(s).	Test	LOR	1709A.2, 1709A.3. Testing is not required for: 1) a product with a valid evaluation service report per DSA IR A-5, or 2) a product that can be justified by structural calculation.
<input type="checkbox"/> b. Installation torque for non-H5 bolts	Continuous	SI*	Applicable to communication towers identified as Essential Service Facility Projects (ESFP). Calibrated wrench use required, verified by SI during installation. DSA Policy PL 18-01: Communication Towers, Poles and Buildings Utilized by State Agencies for Essential Services Communications.*EXCEPTION: Non-ESFP may use PI without need for notification to DSA.
<input type="checkbox"/> c.			

### DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SIGNATURE), 2022 CBC

Application Number: 04-122188 School Name: PC Update School District: 04-122188  
 DSA File Number: Increment Number: 2023-04-19 08:36:32

Name of Architect or Engineer in general responsible charge:  
 \_\_\_\_\_  
 Professional Engineer License No. \_\_\_\_\_  
 State of California License No. \_\_\_\_\_

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA  
 DGS DSA 103-22 (Revised 12/01/2022) Page 18 of 19

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 02-121764 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 02/21/2024

ICON STD RG/DSA-PC  
 DRAWN BY JD  
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 REV DATE

**JRMA**  
 ARCHITECTS ENGINEERS  
 2700 SATURN ST BREA, CA 92821  
 714.524.1870 FAX 714.524.1875  
 WWW.JRMA.COM

Aug 31, 2023

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 APP: 04-122188 PC  
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 DATE: 09/21/2023

DSA 103

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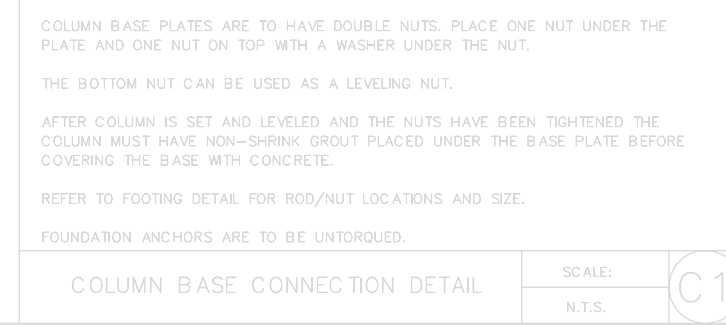
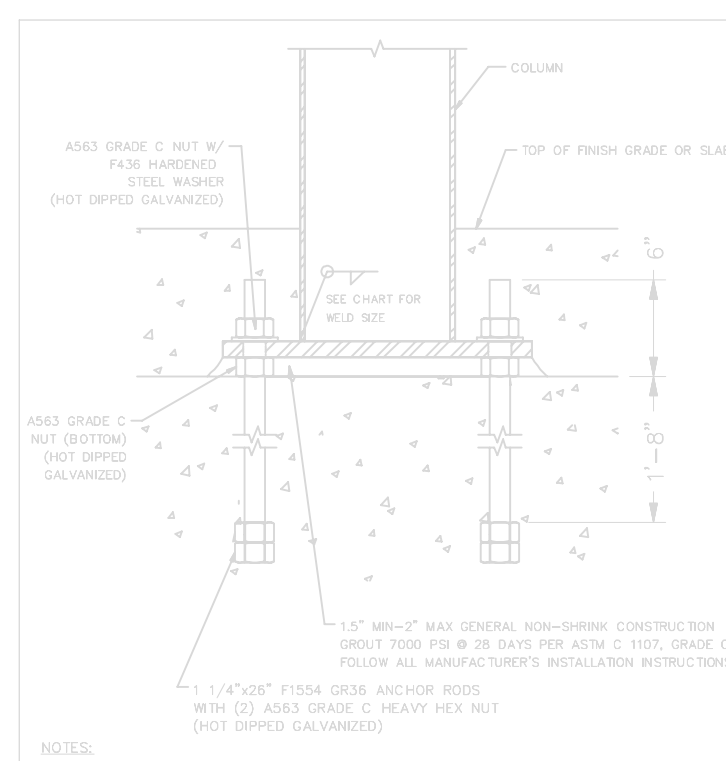
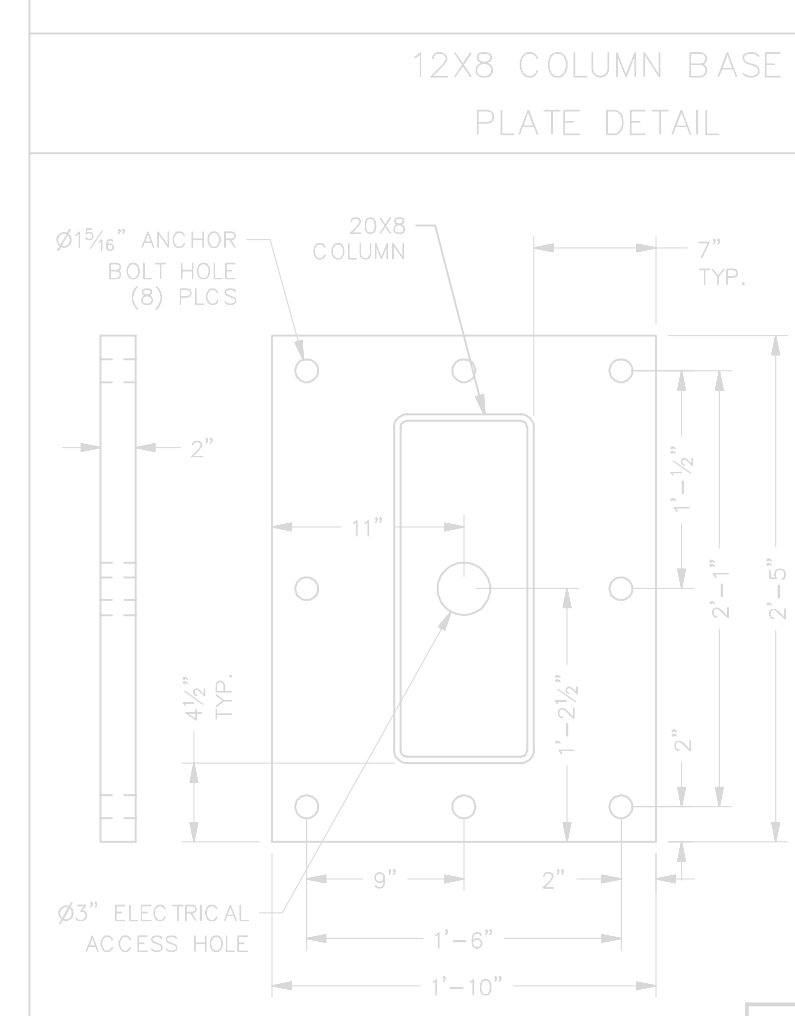
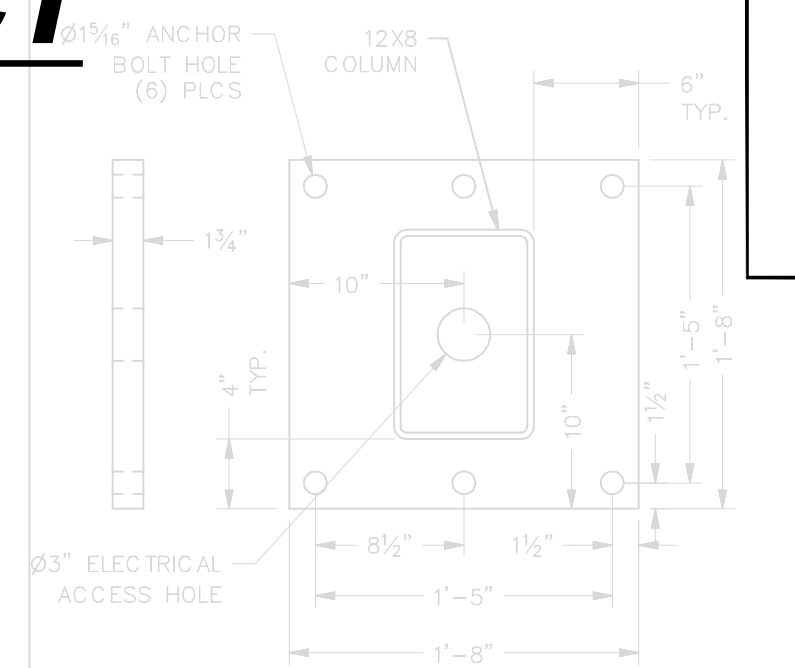
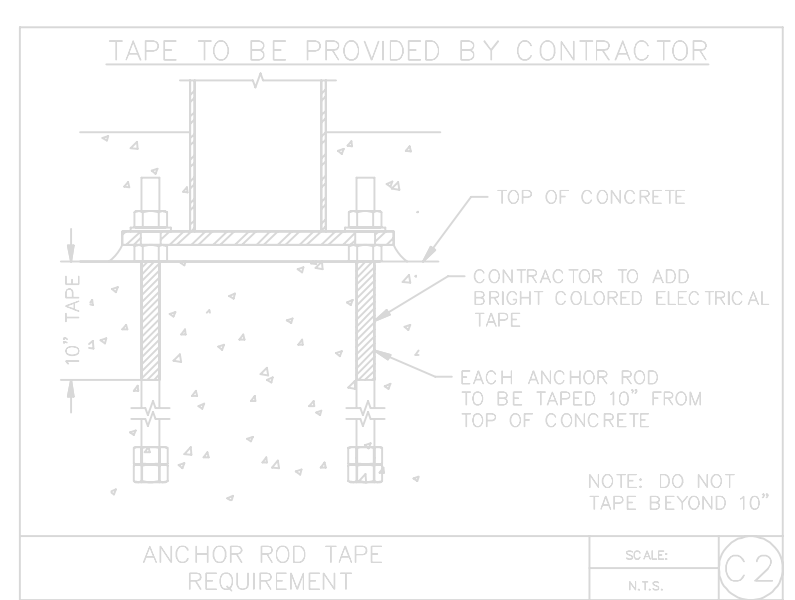
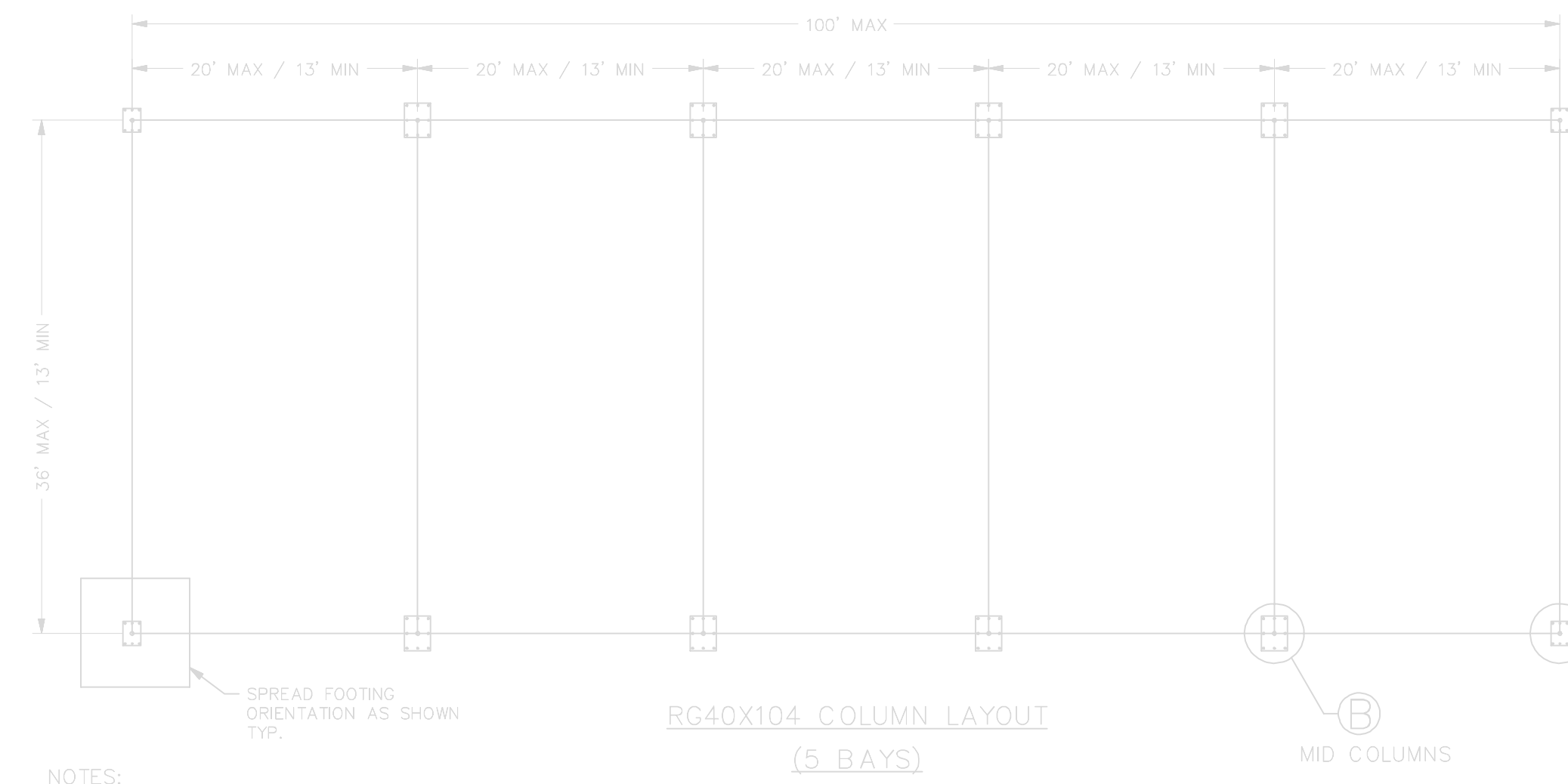
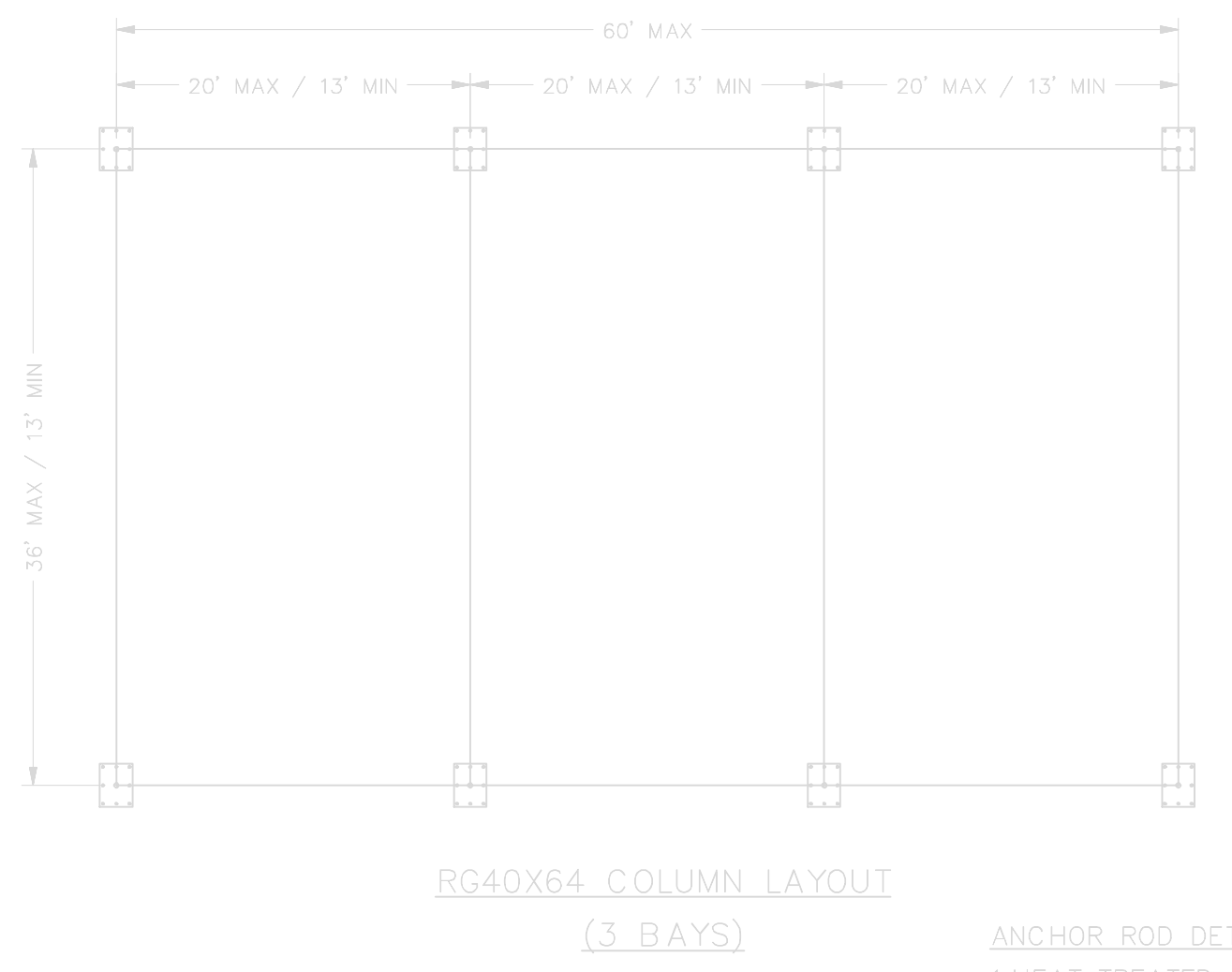
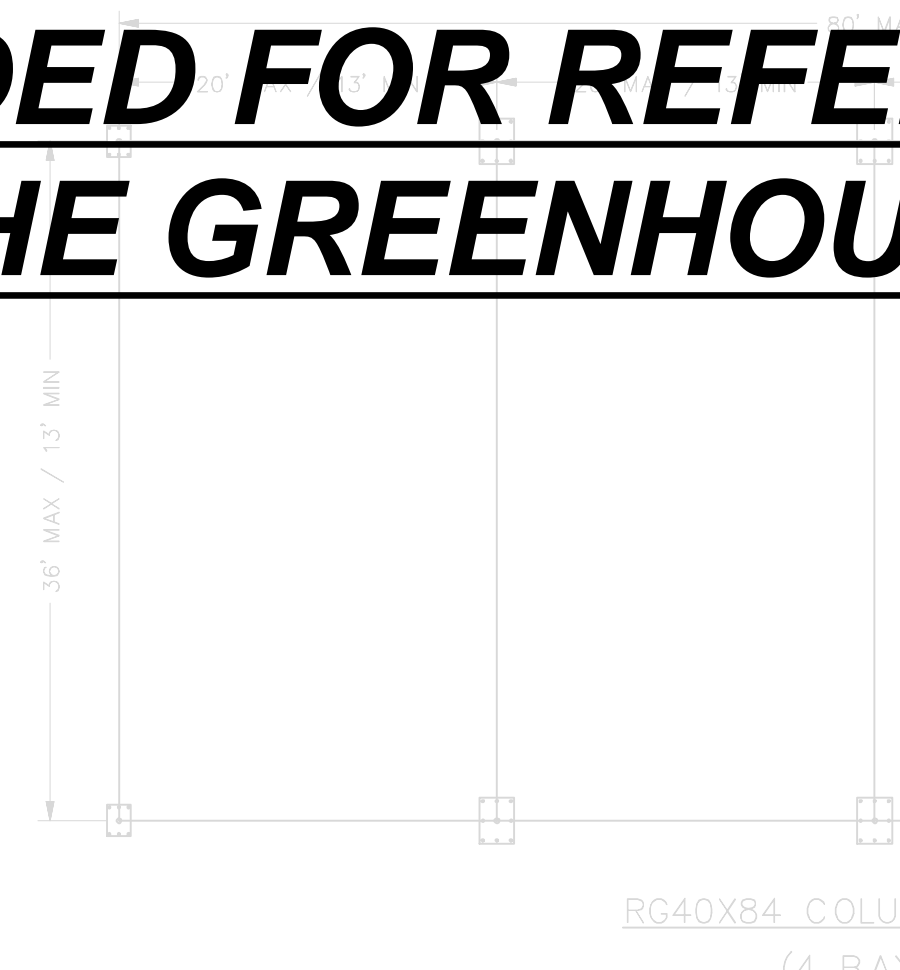
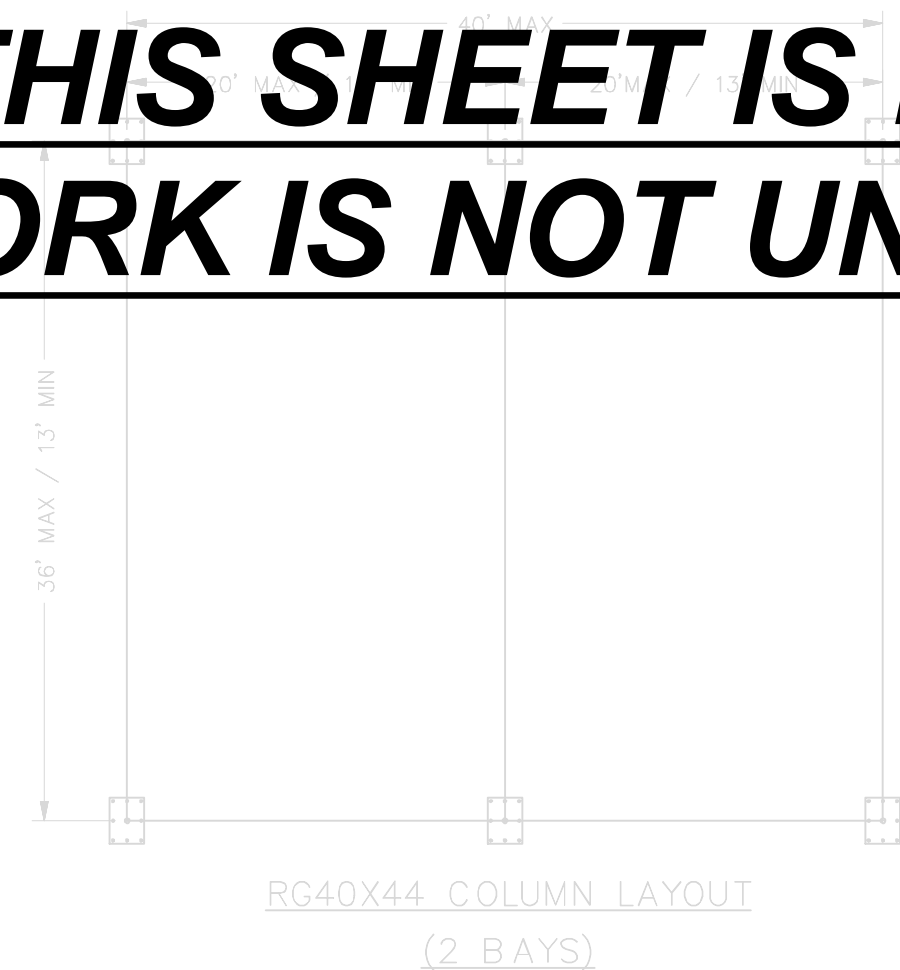
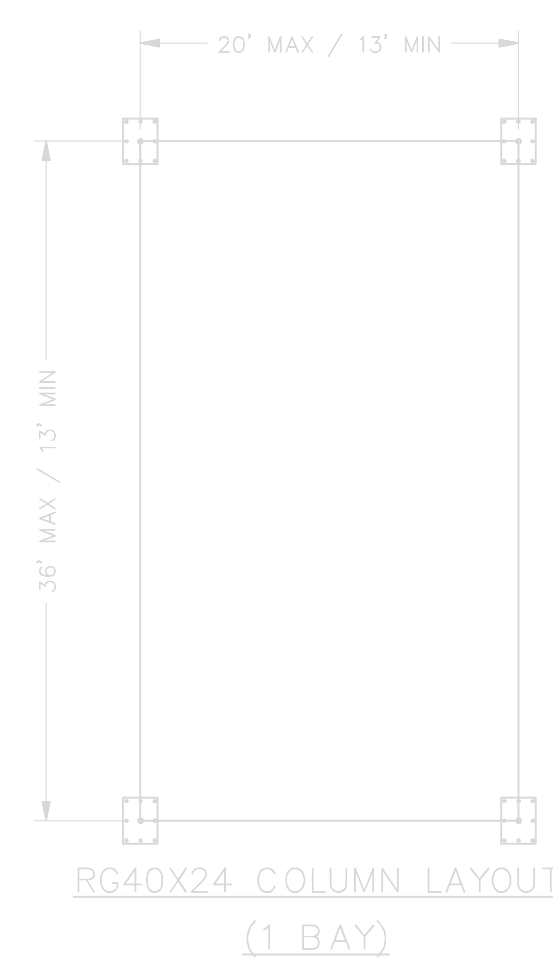
616.396.0919  
 800.748.0985  
 616.396.0944 FX

LS1.3

PRE-CHECK (PC) DOCUMENT  
 Code: 2022 CBC  
 A separate project application for construction is required.



# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT



**ANCHOR ROD DETAIL**  
 1. HEAT TREATED  
 2. MAX CARBON CONTENT - 27%  
 3. MAX MANGANESE CONTENT 0.6 TO 0.9%

**NOTES:**  
 COLUMN SIZE AND LOCATION WILL VARY DEPENDING ON MODEL TYPE ORDERED, PLEASE REFER TO JOB SPECIFIC BILL OF MATERIALS AND INSTALLATION MANUAL FOR CORRECT PLACEMENT AND SIZE.  
 WHERE CONCRETE SLAB SPECIFIED PORTLAND CEMENT CONCRETE PAVING SHALL HAVE A MEDIUM SALTED (MEDIUM BROOM) FINISH ON ALL SURFACES SLOPED LESS THAN 6% AND SLIP RESISTANT (HEAVY BROOM FINISH) ON ALL SURFACES SLOPED GREATER THAN 6% CBC SECTION 1133B.7.1

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 02-121754 IN: [ ]  
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 SS [ ] FLS [ ] ACS [ ]  
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 REV DATE [ ]

**JRMA**  
 ARCHITECTS ENGINEERS  
 2700 SATURN ST BREA, CA 92821  
 T. 714.524.1870 F. 714.524.1875  
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 Aug 31, 2023

APPROVED  
 DIV. OF THE STATE ARCHITECT  
 APP: 04-122188 PC  
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 DATE: 09/21/2023

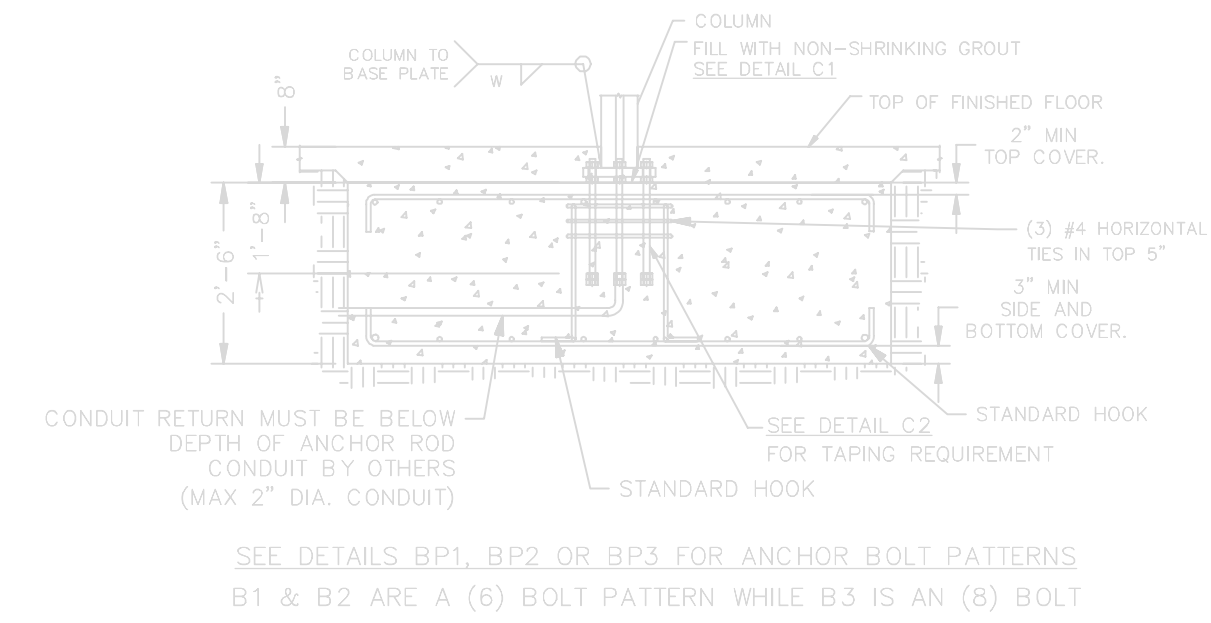
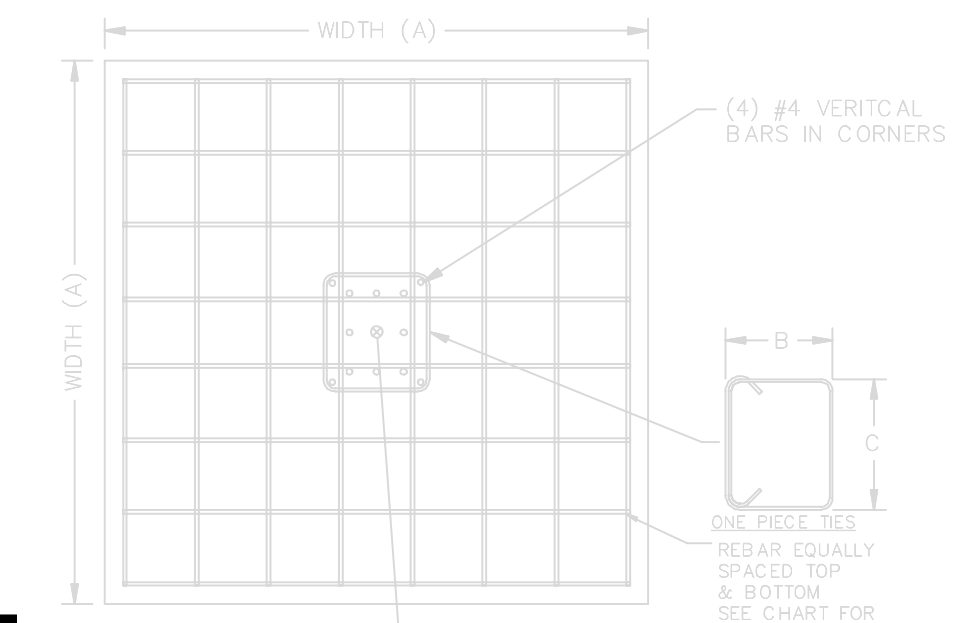
## 40' WIDE RECTANGULAR GABLE

ALL ANCHOR RODS SHALL BE 1.25"X26" U.N.O.

RG40 - SPREAD											
8' End Columns				8' End Columns				8' End Columns			
Soil Class 5 - 1500 psf Bearing				Soil Class 4 - 2000 psf Bearing				Soil Class 3 - 3000 psf Bearing			
Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size
120	30	15	6	120	30	15	6	96	30	12	6
8' Side Columns				8' Side Columns				8' Side Columns			
Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size
168	30	21	6	168	30	21	6	138	30	17	6
8' Eave - 1500 psf [ ]				8' Eave - 2000 psf [ ]				8' Eave - 3000 psf [ ]			
10' End Columns				10' End Columns				10' End Columns			
Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size
102	30	13	6	102	30	13	6	90	30	12	6
10' Side Columns				10' Side Columns				10' Side Columns			
Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size
126	30	19	6	126	30	19	6	108	30	14	6
12' End Columns				12' End Columns				12' End Columns			
Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size	Size (A) (in)	Depth (in)	T&B Rebar Qty	Rebar Size
144	30	18	6	144	30	18	6	114	30	14	6
1500 psf 12' Eave [ ]				2000 psf 12' Eave [ ]				3000 psf 12' Eave [ ]			

8' End Columns			
Tie Dimensions	Rebar Size	Weld	Fillet
B (in) C (in)	Rebar Size	Weld "W"	Fillet "W"
22 23.5 4	4	1/4	1/4
8' Side Columns			
B (in) C (in)	Rebar Size	Weld	Fillet
24 35.5 4	4	5/16	5/16
8' Eave - Rebar & Weld			
10' End Columns			
B (in) C (in)	Rebar Size	Weld	Fillet
22 23.5 4	4	3/8	3/8
10' Side Columns			
B (in) C (in)	Rebar Size	Weld	Fillet
22 23.5 4	4	1/2	1/2
12' End Columns			
B (in) C (in)	Rebar Size	Weld	Fillet
24 35.5 4	4	1/2	1/2
12' Eave - Rebar & Weld			

### SEE BASE PLATE DETAILS FOR CORRECT ANCHOR LAYOUT



# THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT

PRE-CHECK (PC) DOCUMENT  
 Code: 2022 CBC  
 A separate project application for construction is required.

40' WIDE RECTANGULAR GABLE FOUNDATION PLAN

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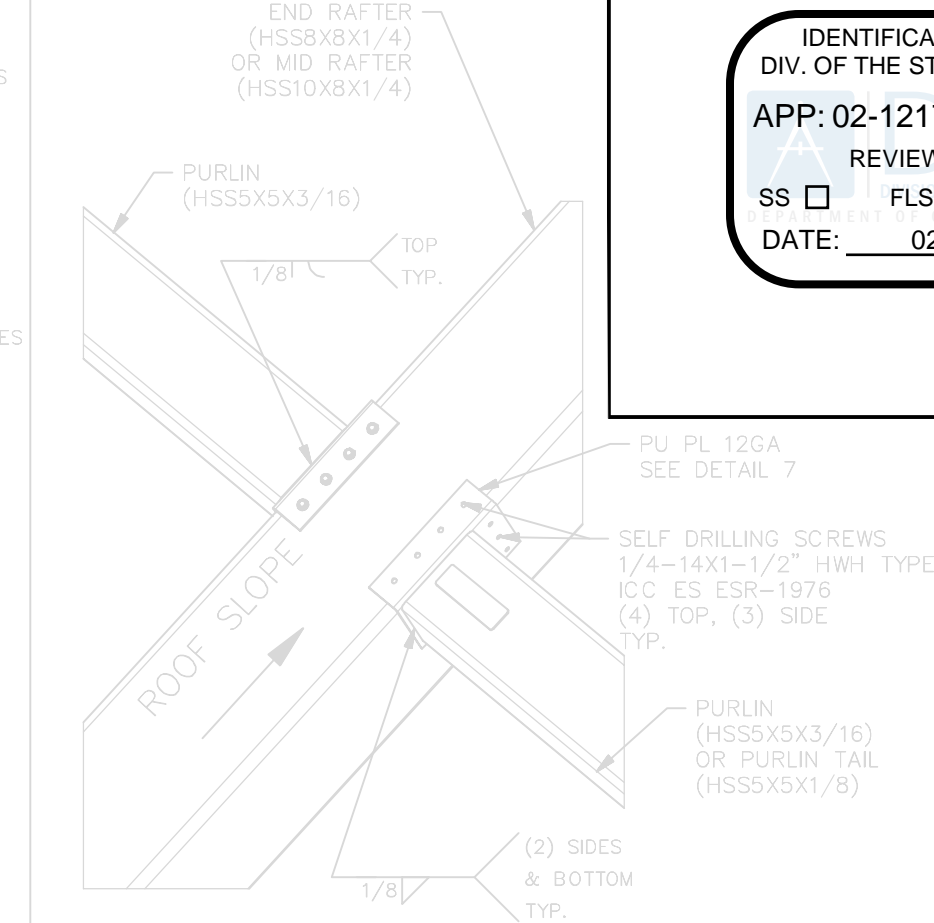
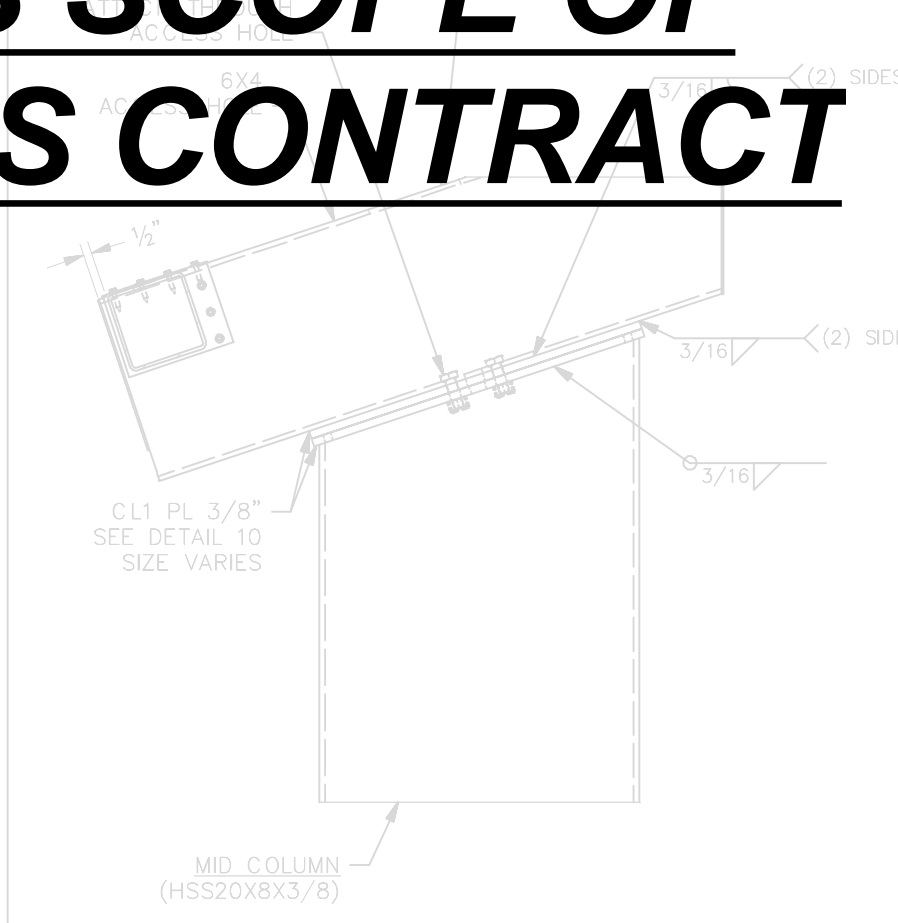
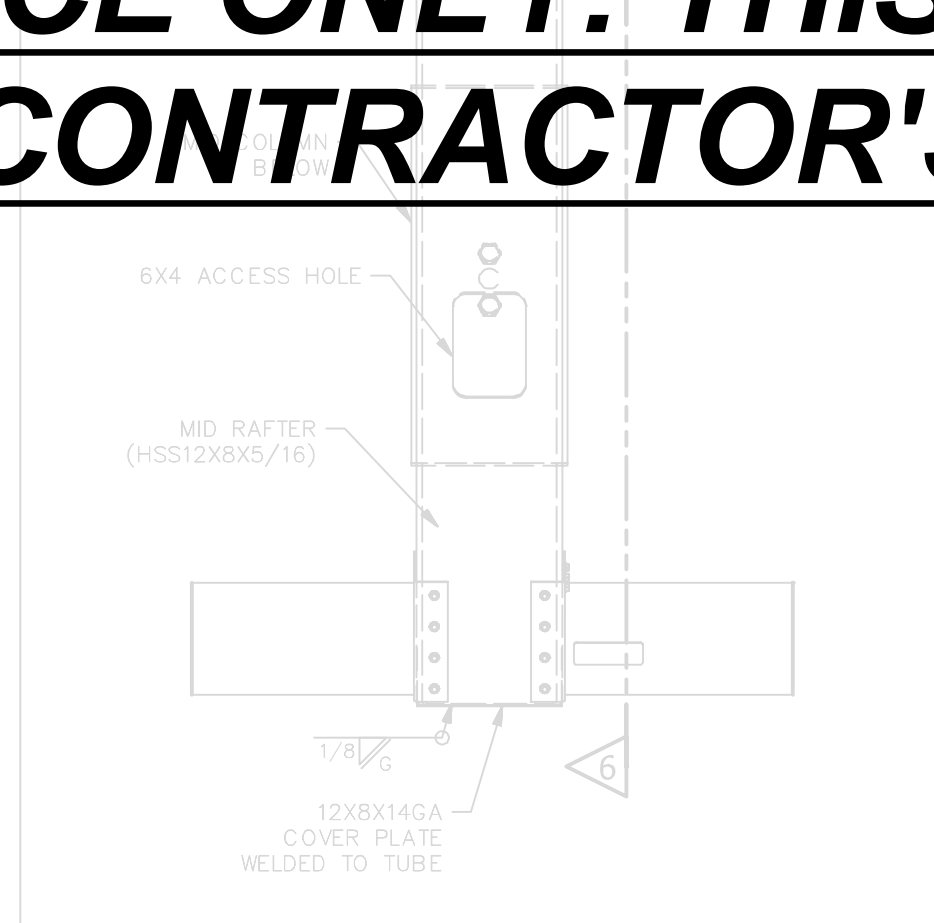
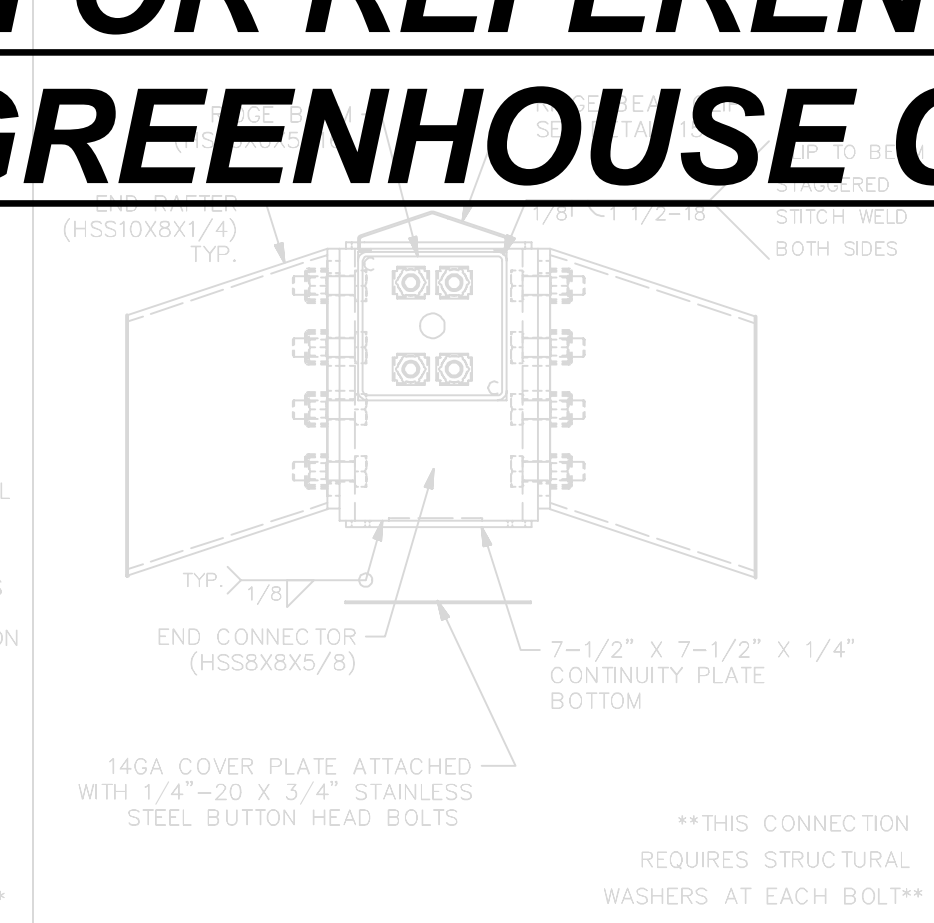
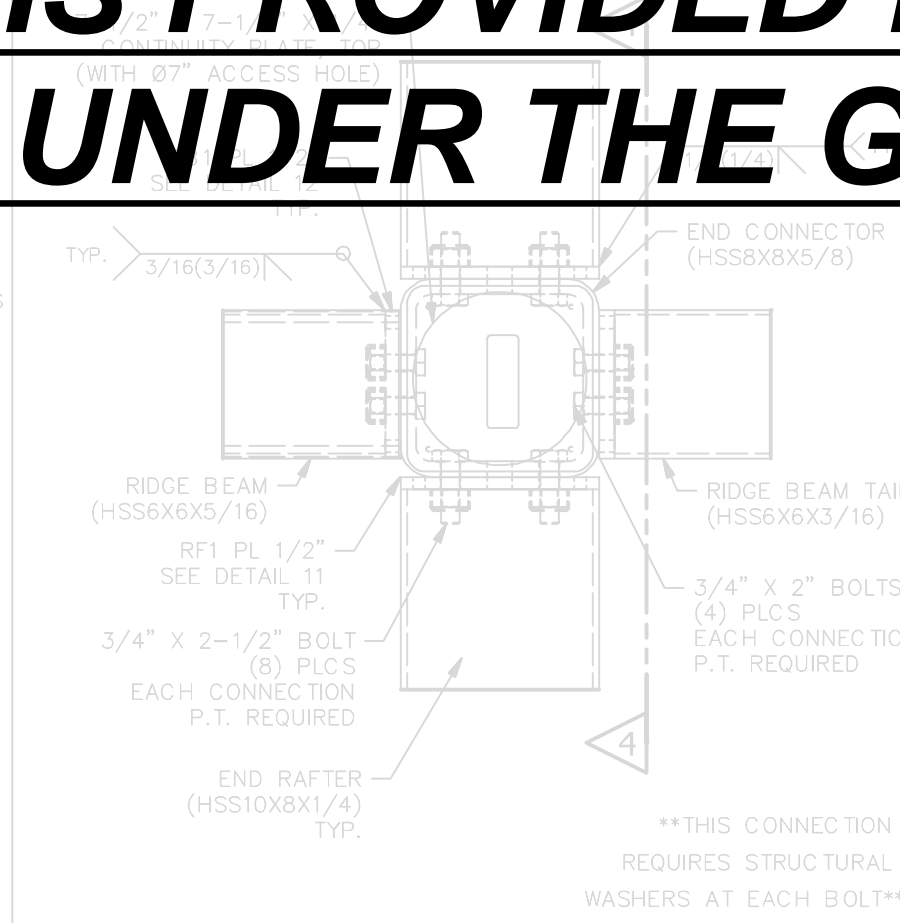
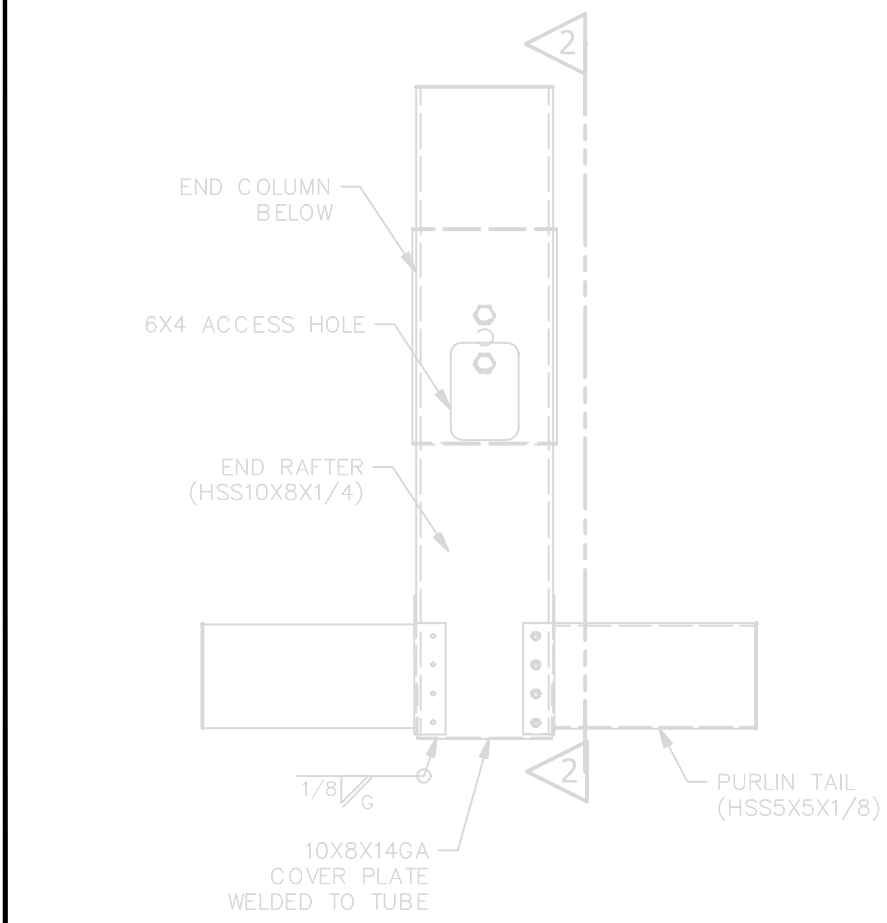
LS4.0



ALL STRUCTURAL FASTENERS (NUTS, BOLTS & WASHERS) ON THIS SHEET TO BE HOT DIP GALVANIZED

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SS  FLS  ACS   
DATE: 02/21/2024



PLAN - PURLIN & END RAFTER CONNECTIONS @ END COLUMN 1

VIEW - PURLIN & END RAFTER CONNECTIONS @ END COLUMN 2

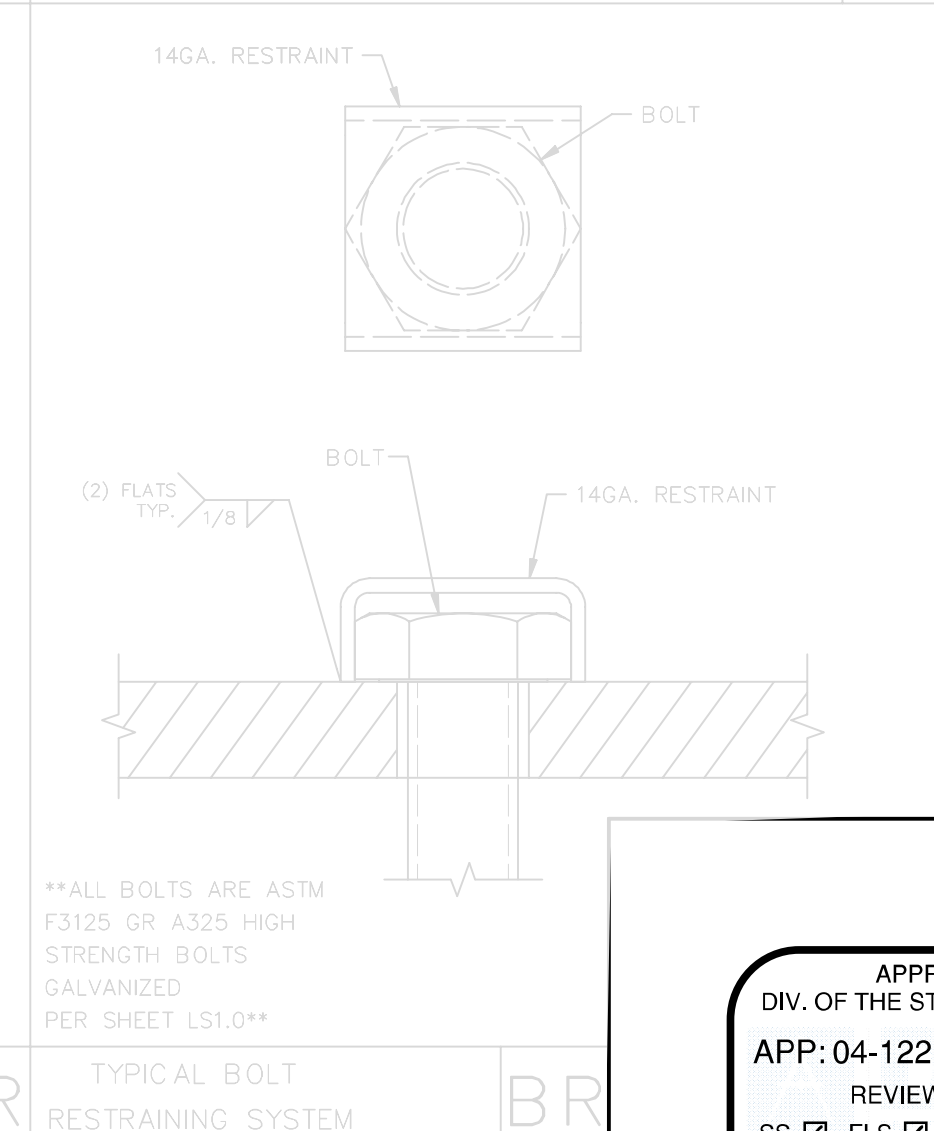
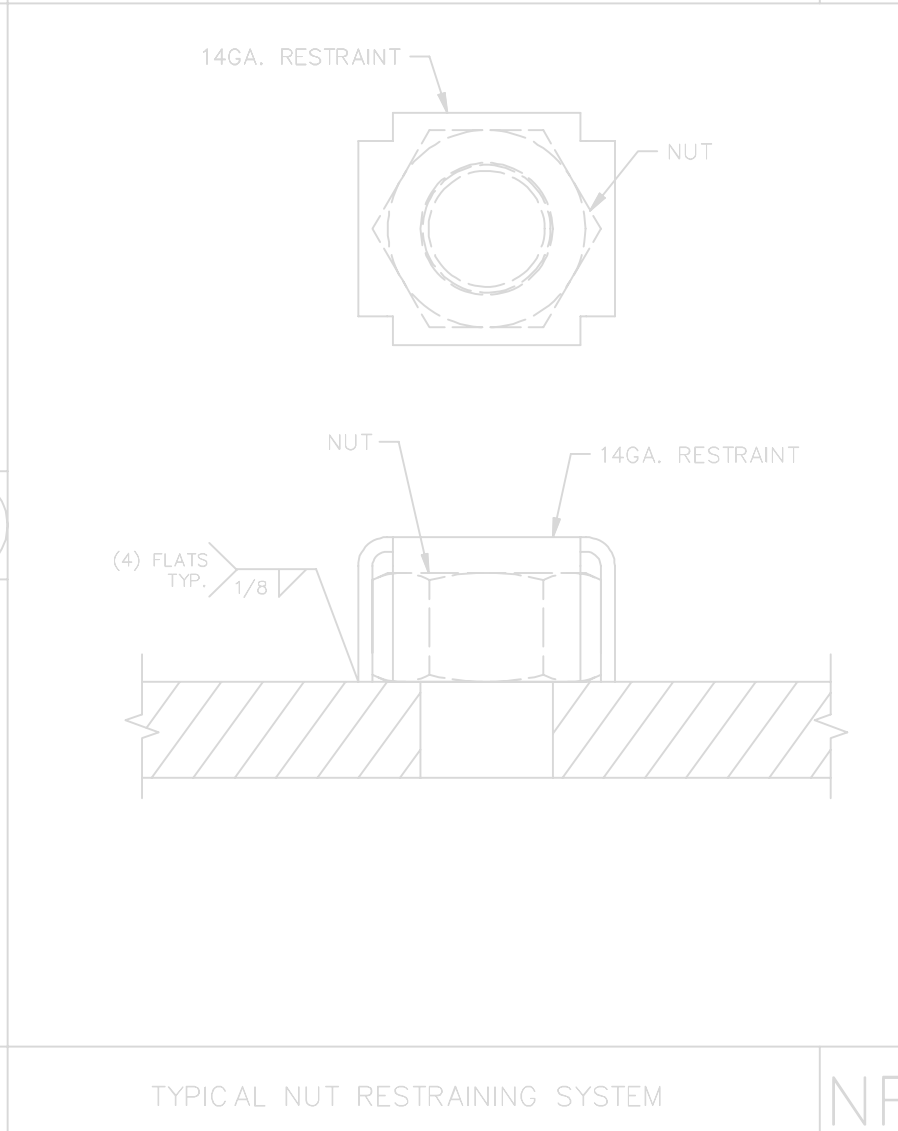
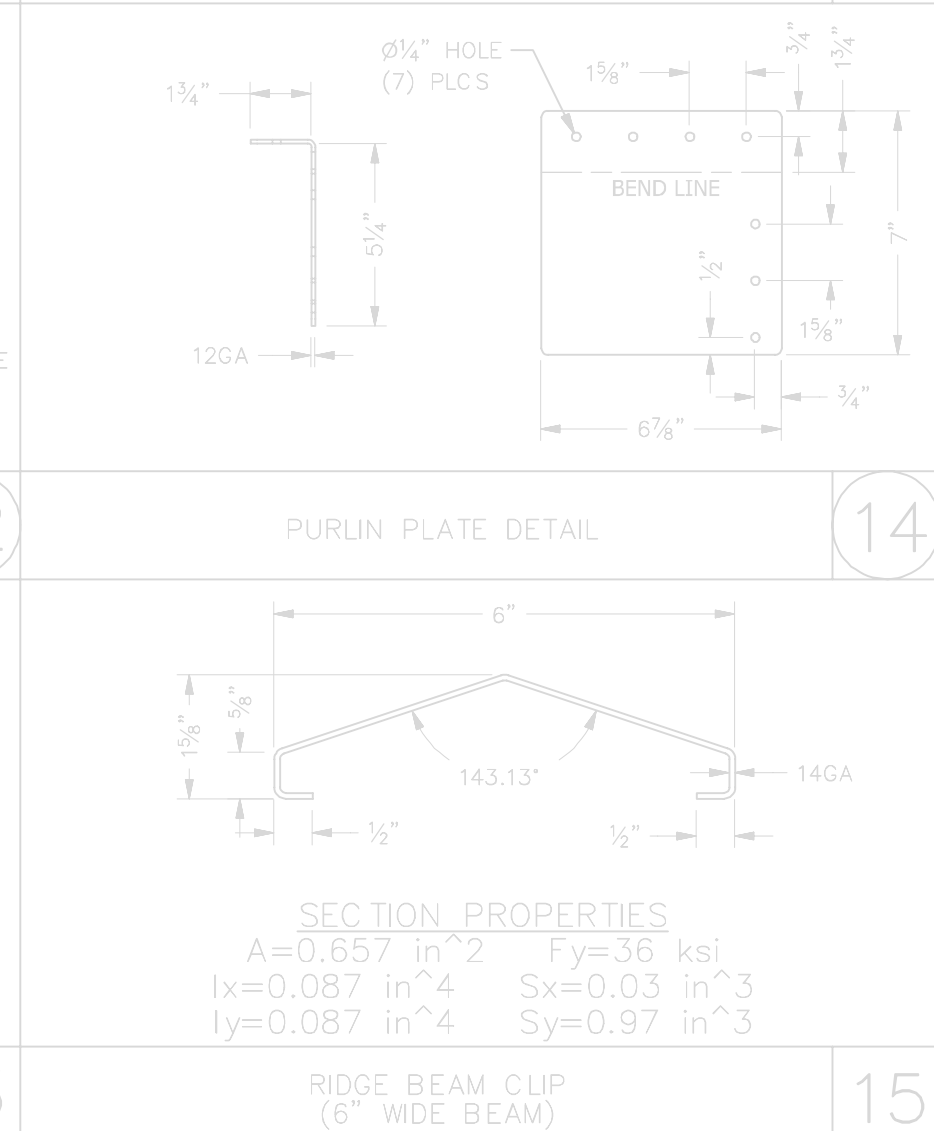
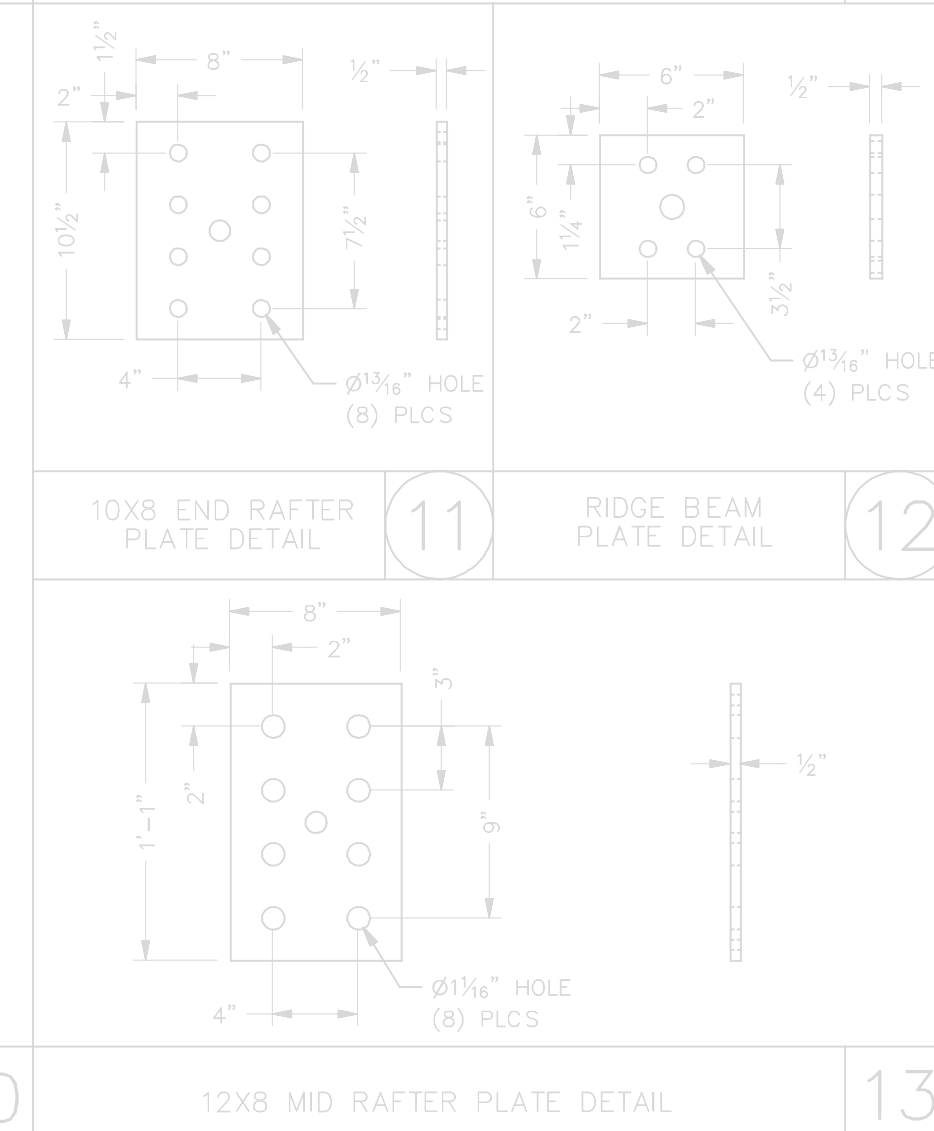
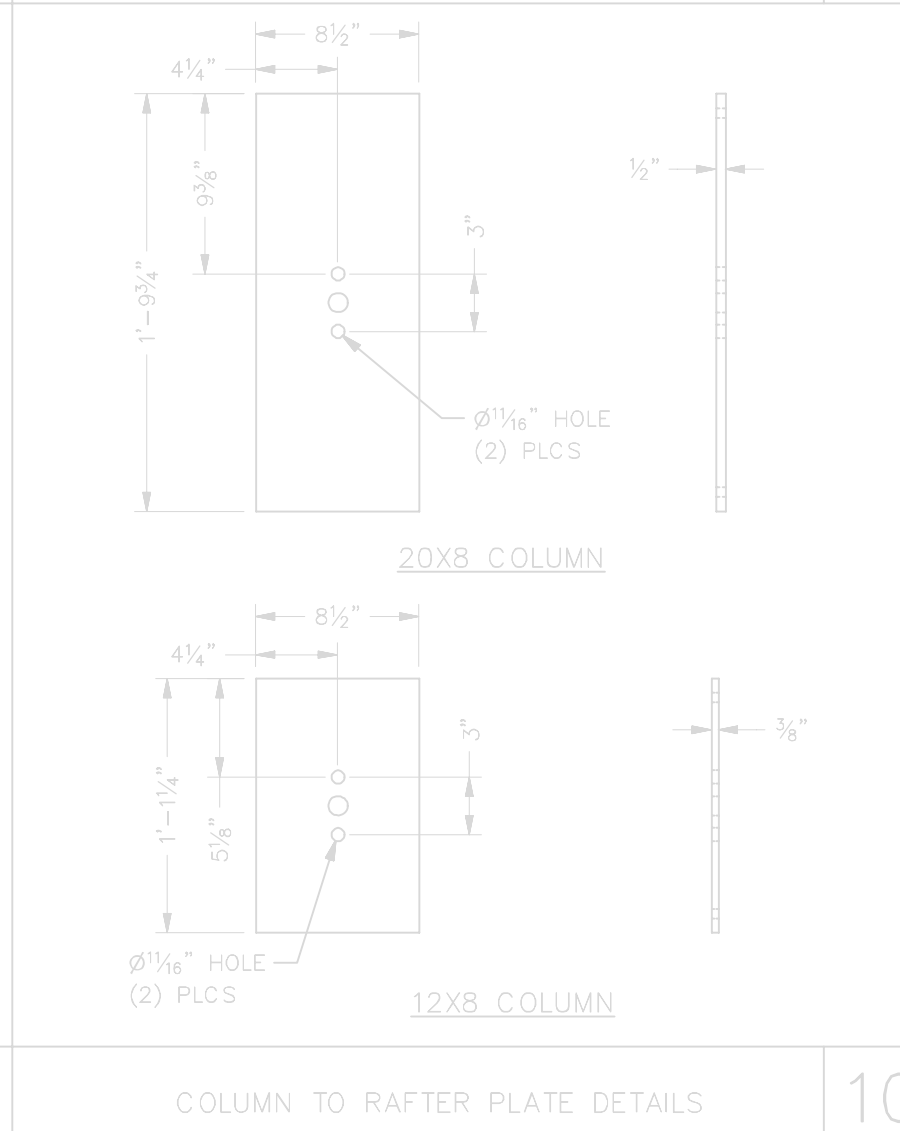
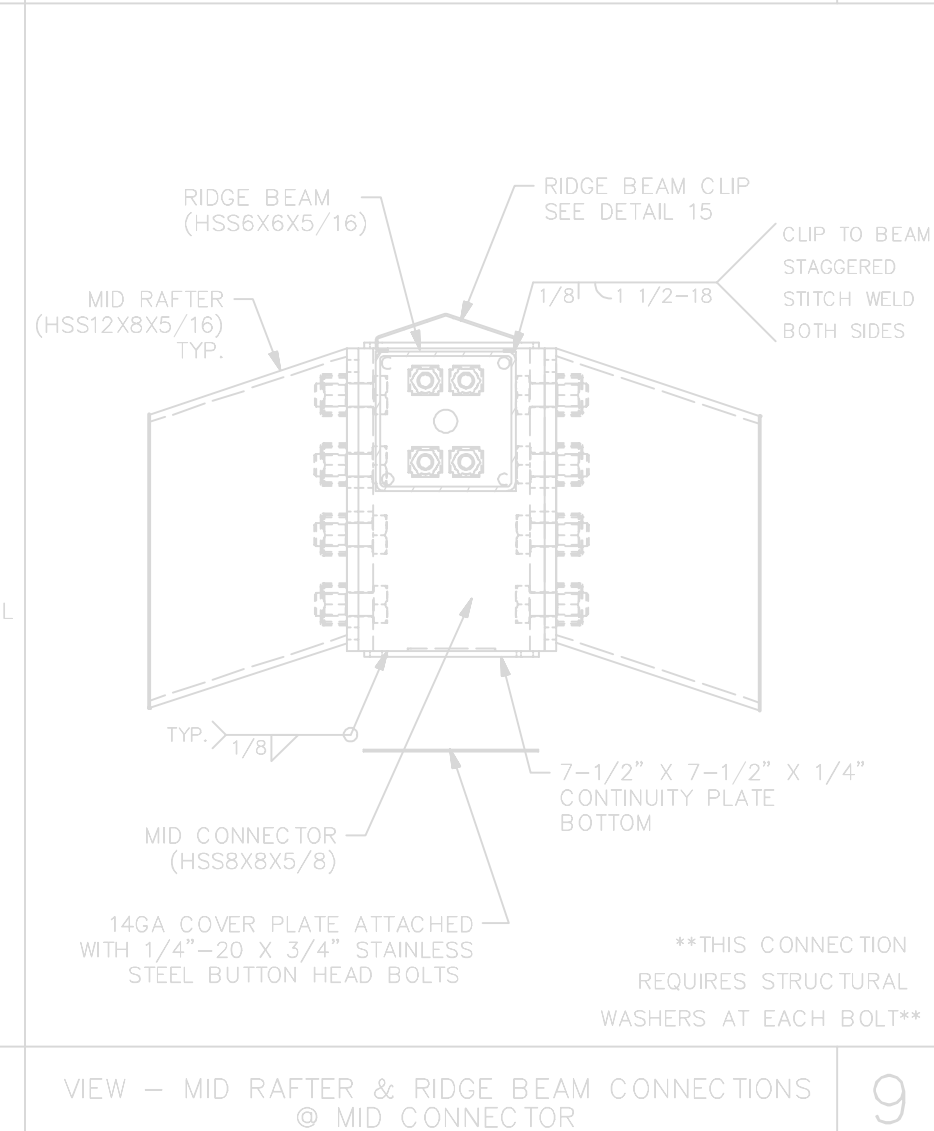
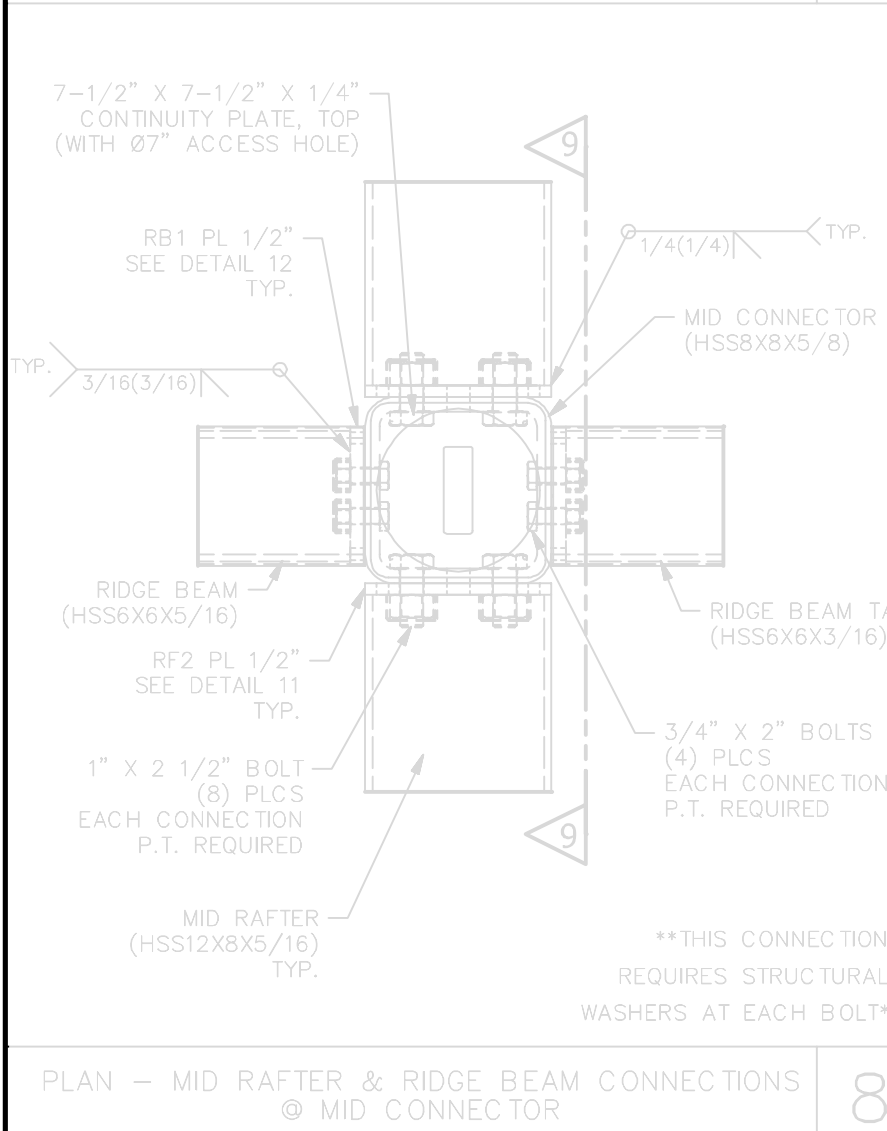
PLAN - END RAFTER & RIDGE BEAM CONNECTIONS @ END CONNECTOR 3

VIEW - END RAFTER & RIDGE BEAM CONNECTIONS @ END CONNECTOR 4

PLAN - PURLIN & MID RAFTER CONNECTIONS @ MID COLUMN 5

VIEW - PURLIN & MID RAFTER CONNECTIONS @ MID COLUMN 6

ISOMETRIC - PURLIN CONNECTIONS @ RAFTER 7



PLAN - MID RAFTER & RIDGE BEAM CONNECTIONS @ MID CONNECTOR 8

VIEW - MID RAFTER & RIDGE BEAM CONNECTIONS @ MID CONNECTOR 9

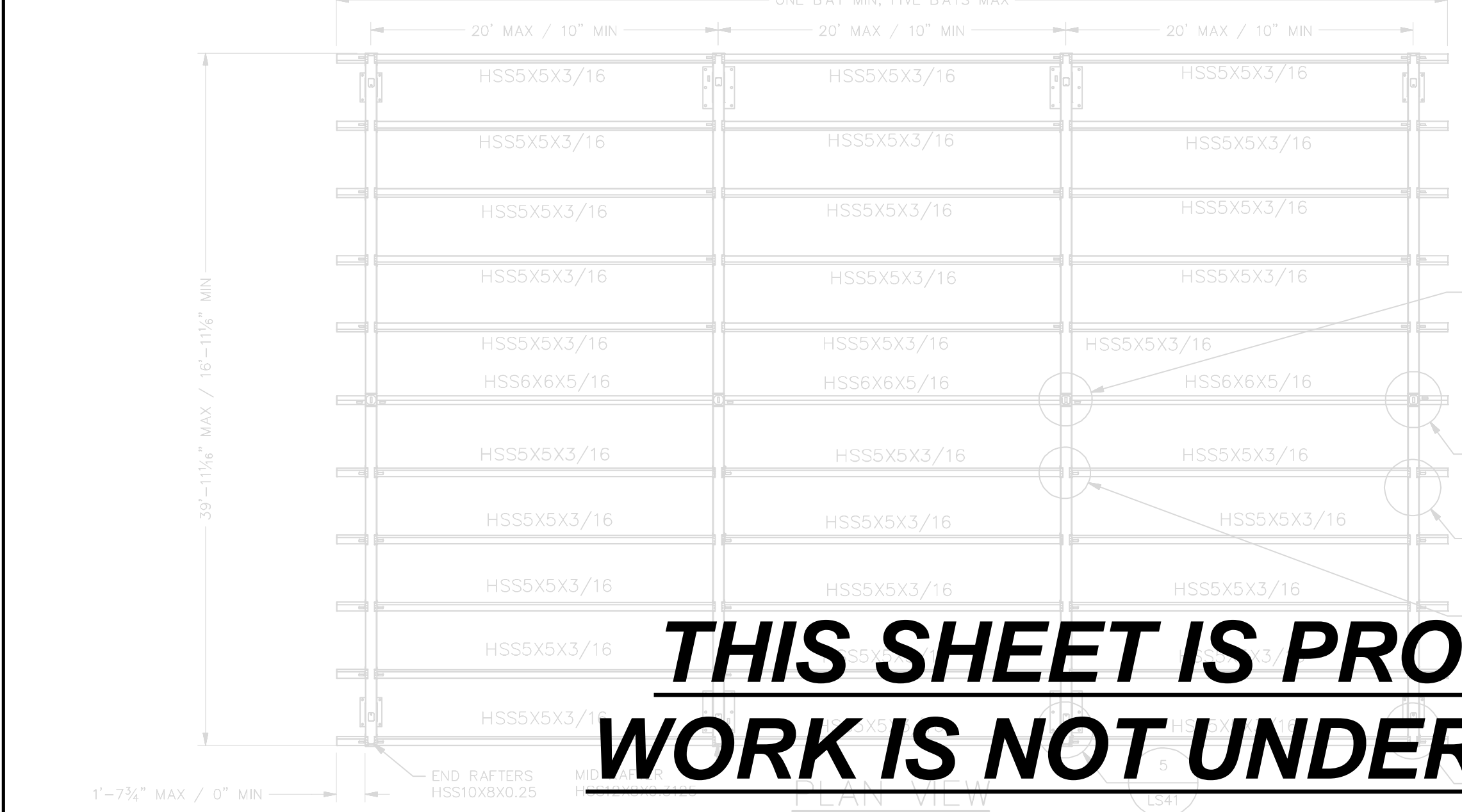
COLUMN TO RAFTER PLATE DETAILS 10

12x8 MID RAFTER PLATE DETAIL 13

RIDGE BEAM CLIP (6" WIDE BEAM) 15

TYPICAL NUT RESTRAINING SYSTEM NR

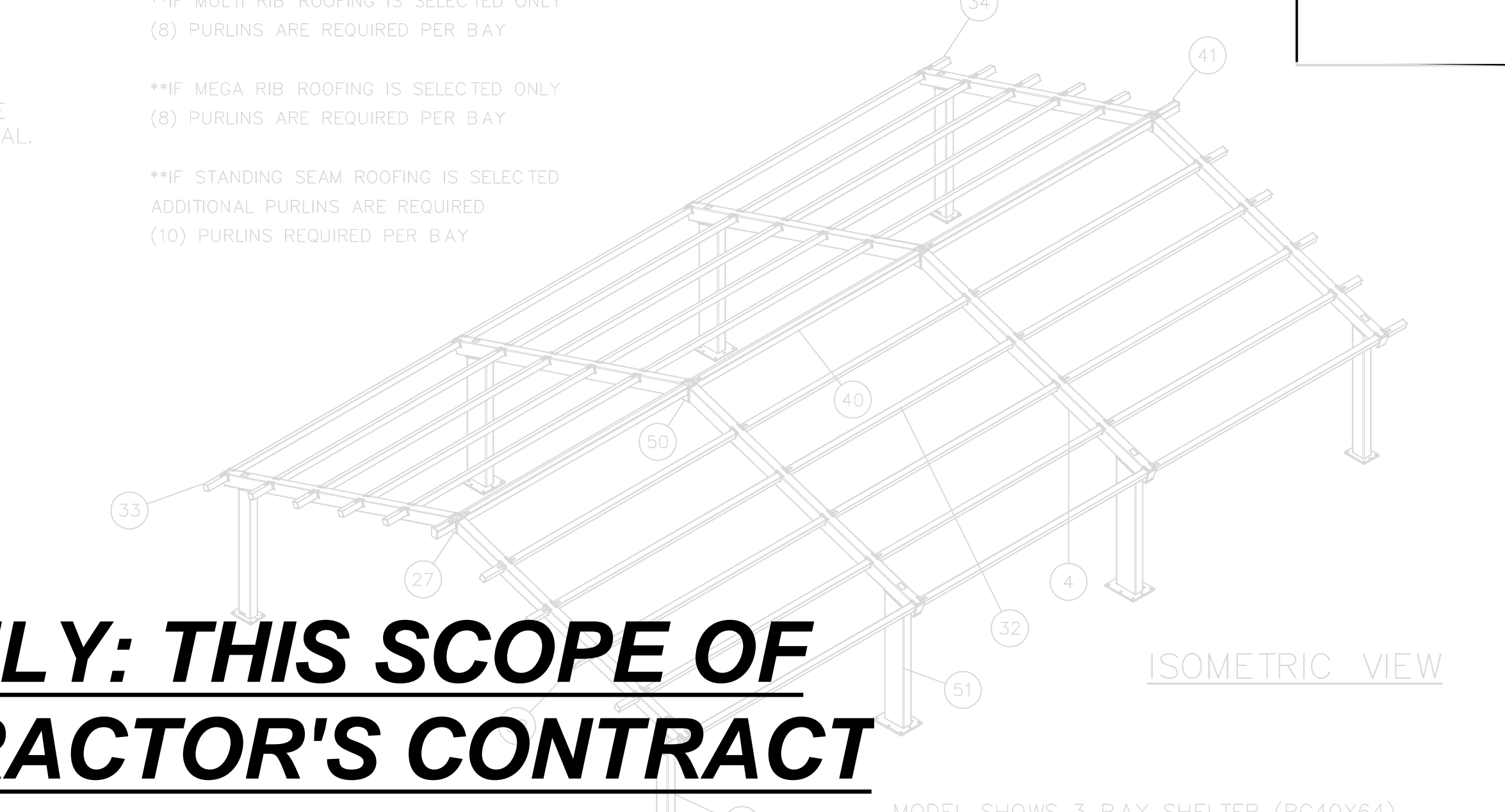
TYPICAL BOLT RESTRAINING SYSTEM BR



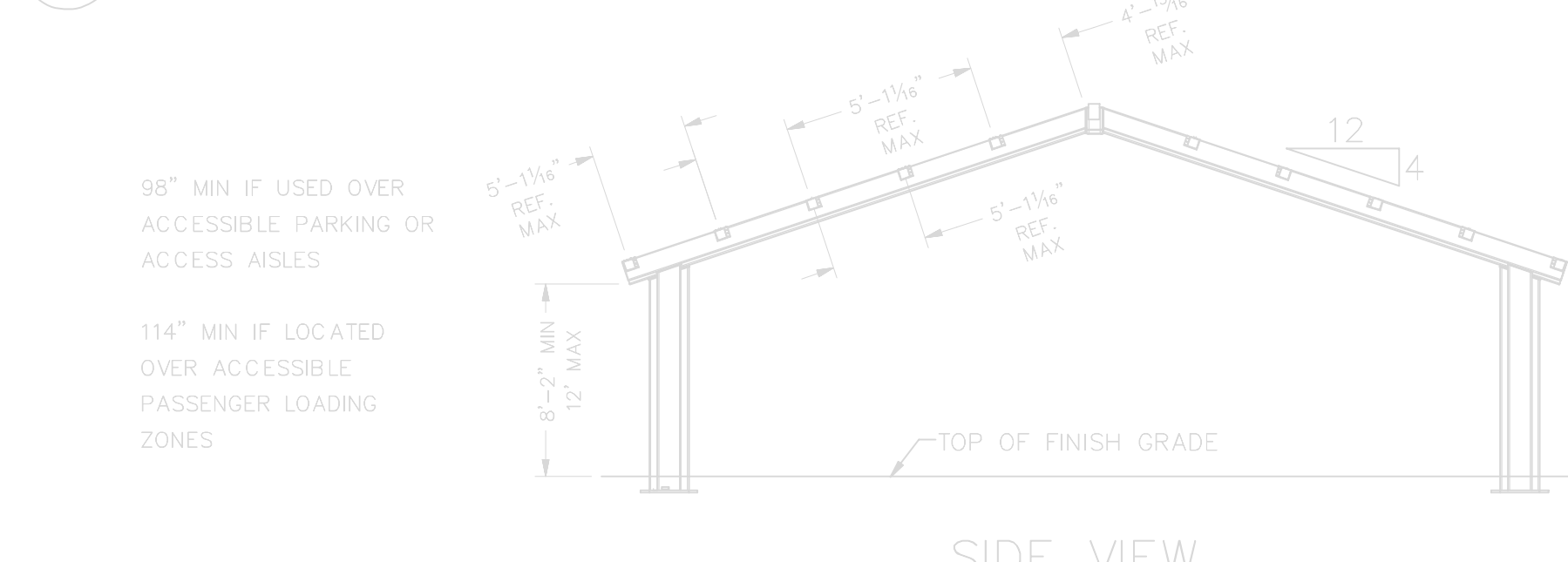
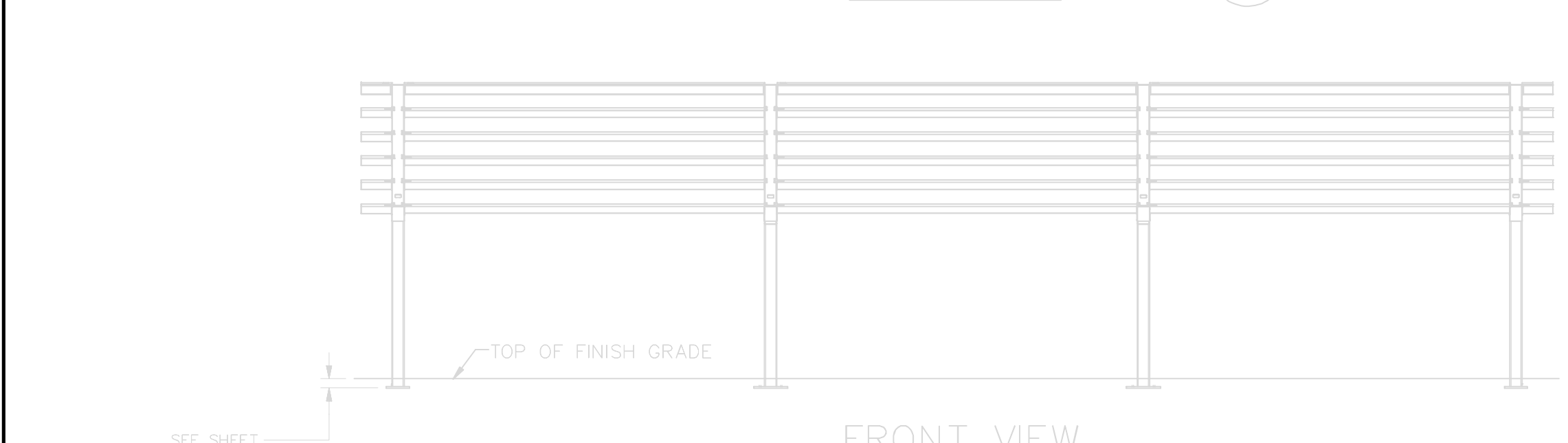
\*NOTE: QUANTITIES WILL VARY DEPENDING ON SHELTER SIZE ORDERED, PLEASE REFER TO JOB SPECIFIC BILL OF MATERIALS AND INSTALLATION MANUAL.

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH	UNIT WEIGHT
1	4		END COLUMN	HSS12x8x3/8	8'	564 lbmass
2	*		MID COLUMN	HSS20x8x3/8	8'	873 lbmass
3	4		END RAFTER	HSS10x8x1/4	12'	926 lbmass
4	*		MID RAFTER	HSS12x8x5/16	12'	972 lbmass
5	**		PURLIN	HSS5x5x3/16	234'	234 lbmass
6	**		PURLIN TAIL 1	HSS5x5x1/8	15'	15 lbmass
7	**		PURLIN TAIL 2	HSS5x5x1/8	15'	15 lbmass
8	*		RIDGE BEAM	HSS6x6x5/16	333'	333 lbmass
9	2		RIDGE BEAM TAIL	HSS6x6x3/16	34'	34 lbmass
10	2		END CONNECTOR	HSS8x8x5/8	54'	54 lbmass
11	*		MID CONNECTOR	HSS8x8x5/8	63'	63 lbmass

\*\*NOTE: MATERIAL WILL VARY DEPENDING ON SHELTER SIZE ORDERED.  
 END COLUMN 8' UTB - (HSS12x8x3/8)  
 MID COLUMN 8' UTB - (HSS20x8x3/8)



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MODEL DESIGNATION

RG40X24	1 BAY
RG40X44	2 BAY
RG40X64	3 BAY
RG40X84	4 BAY
RG40X104	5 BAY

APPROVED  
DIV. OF THE STATE ARCHITECT  
APP: 04-122188 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 09/21/2023

40' WIDE  
RECTANGULAR GABLE  
FRAMING &  
CONNECTION DETAILS

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HOLLAND MI, 49423  
616.396.0919  
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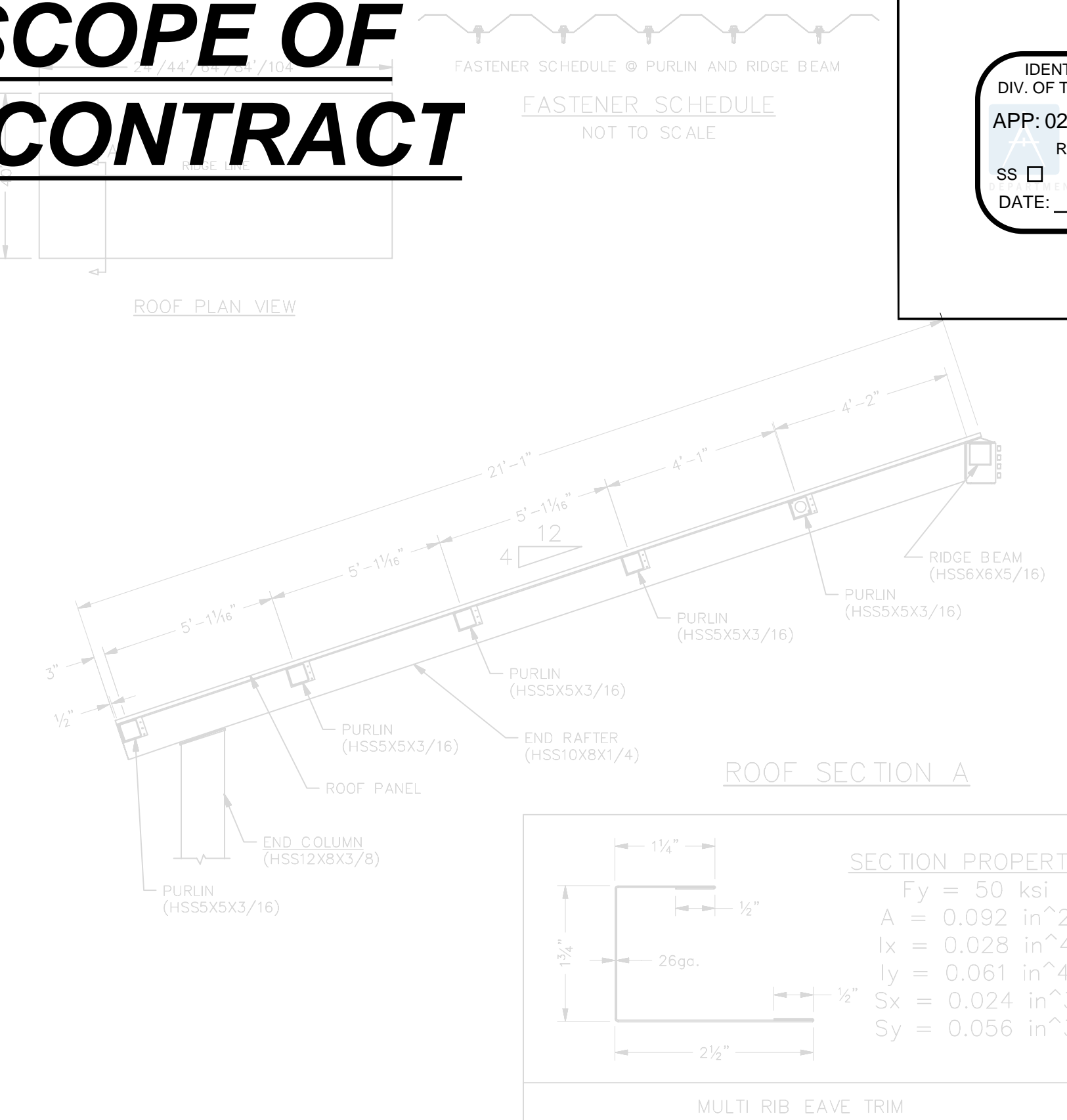
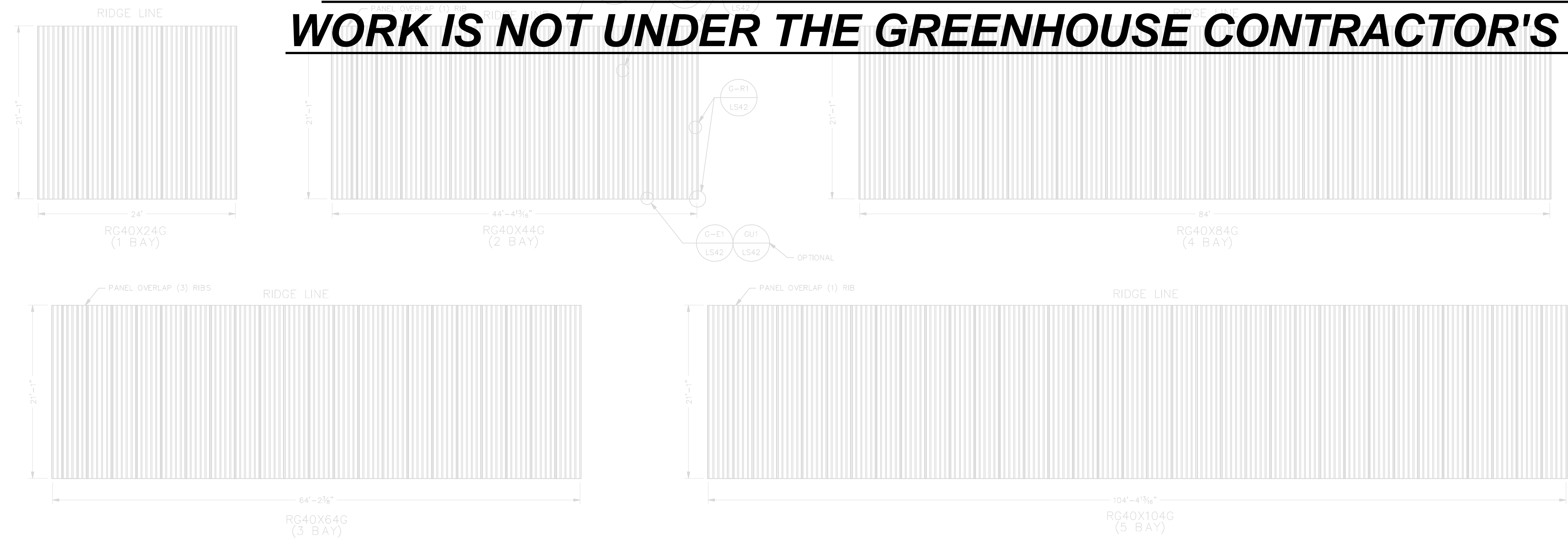
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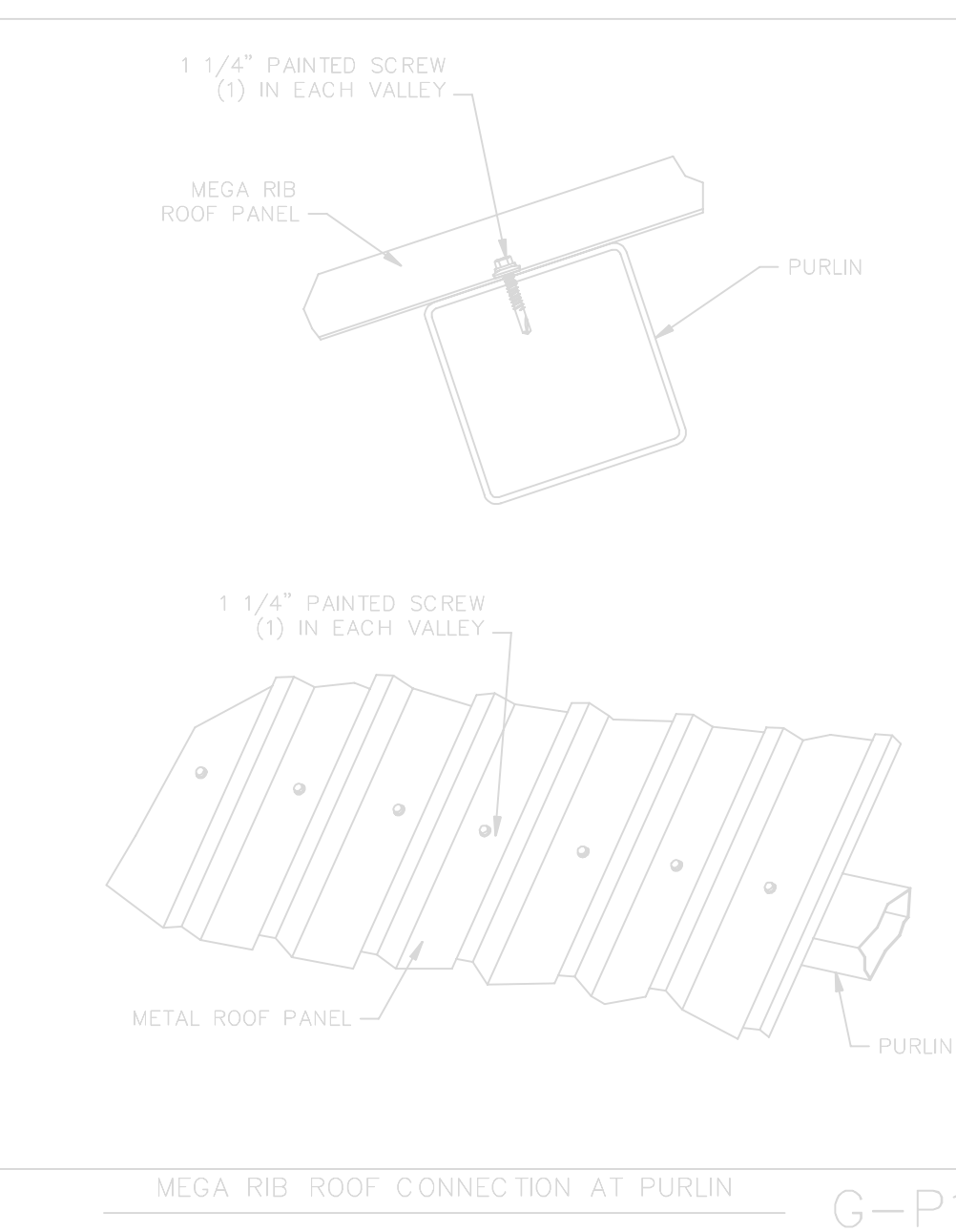
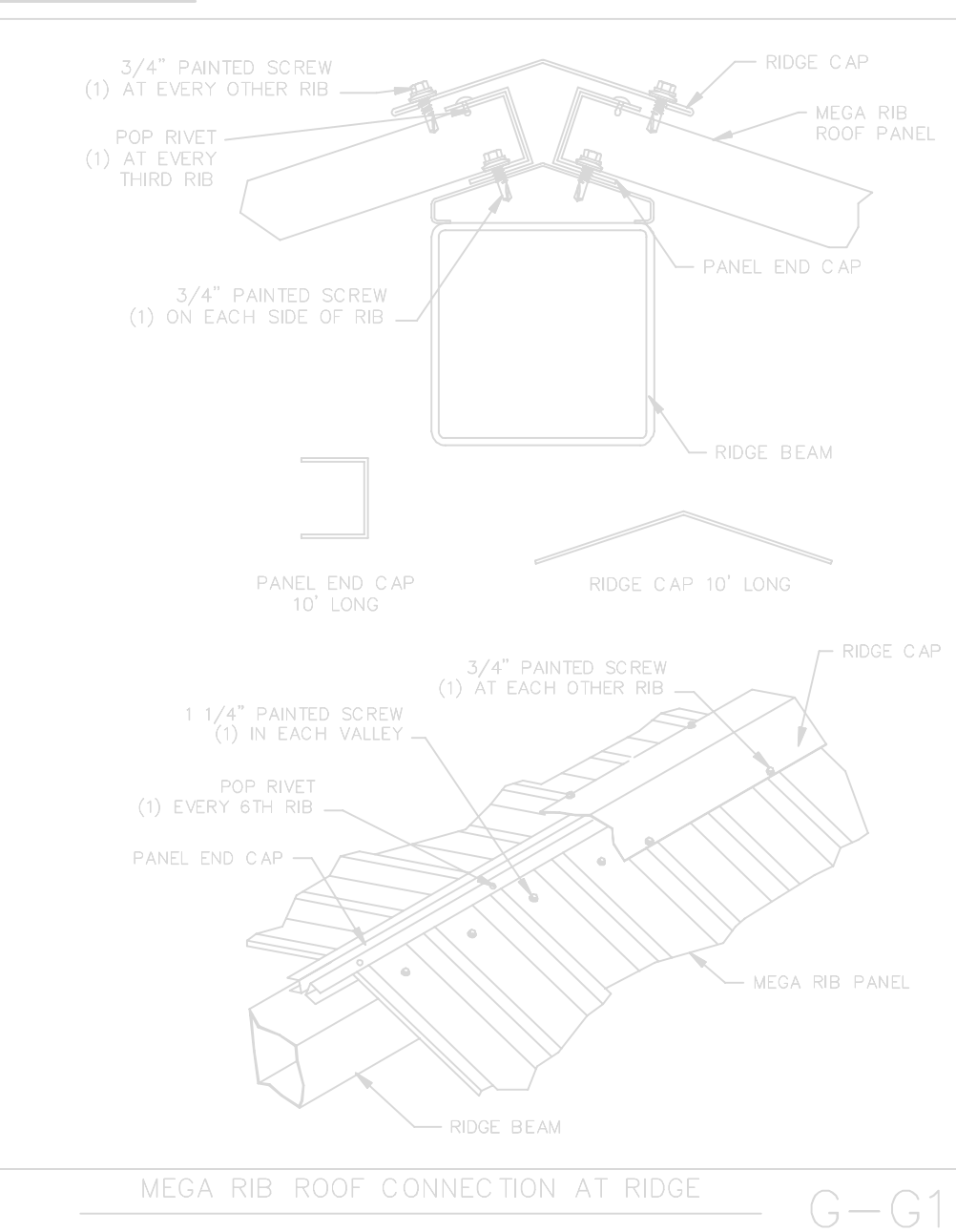
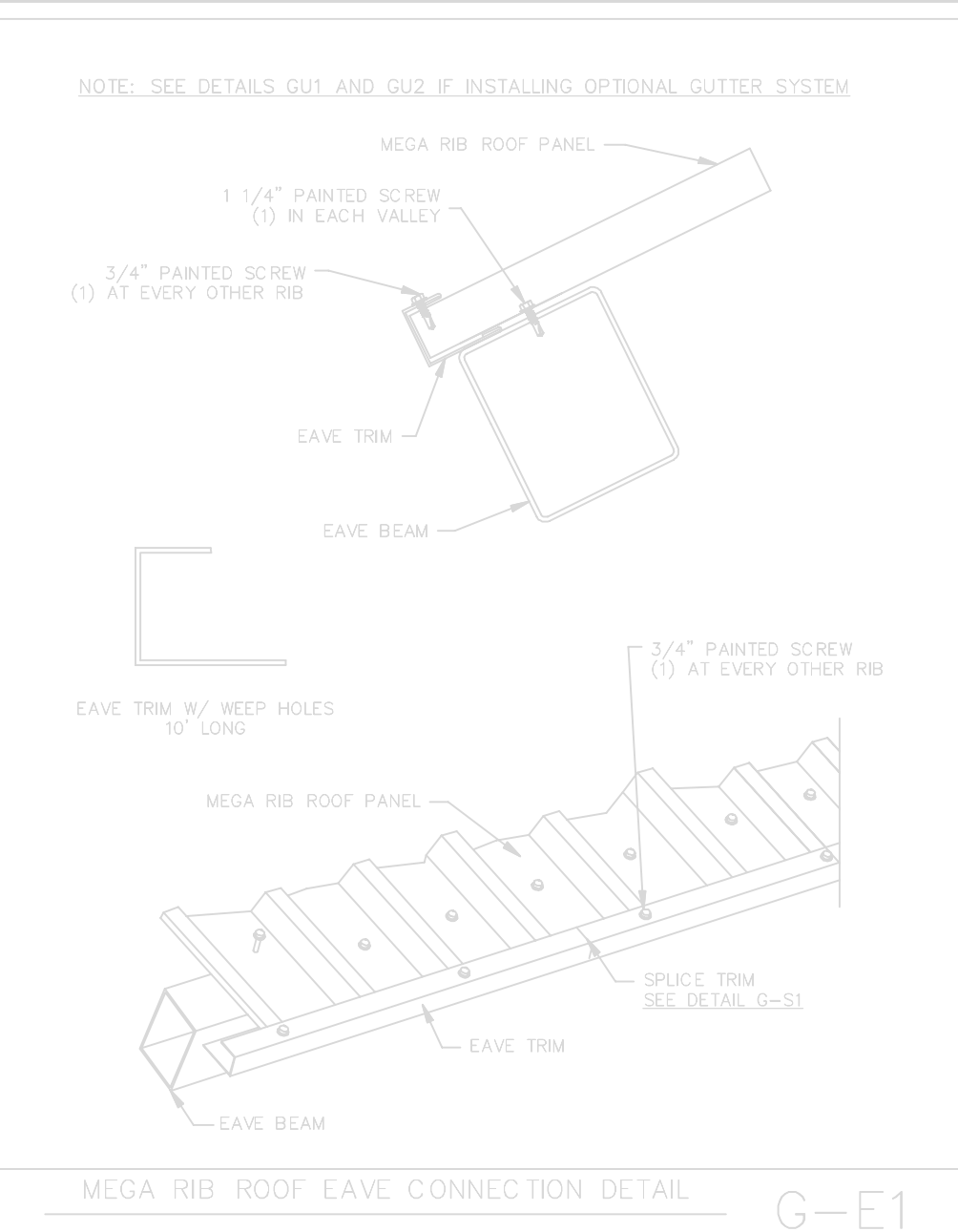
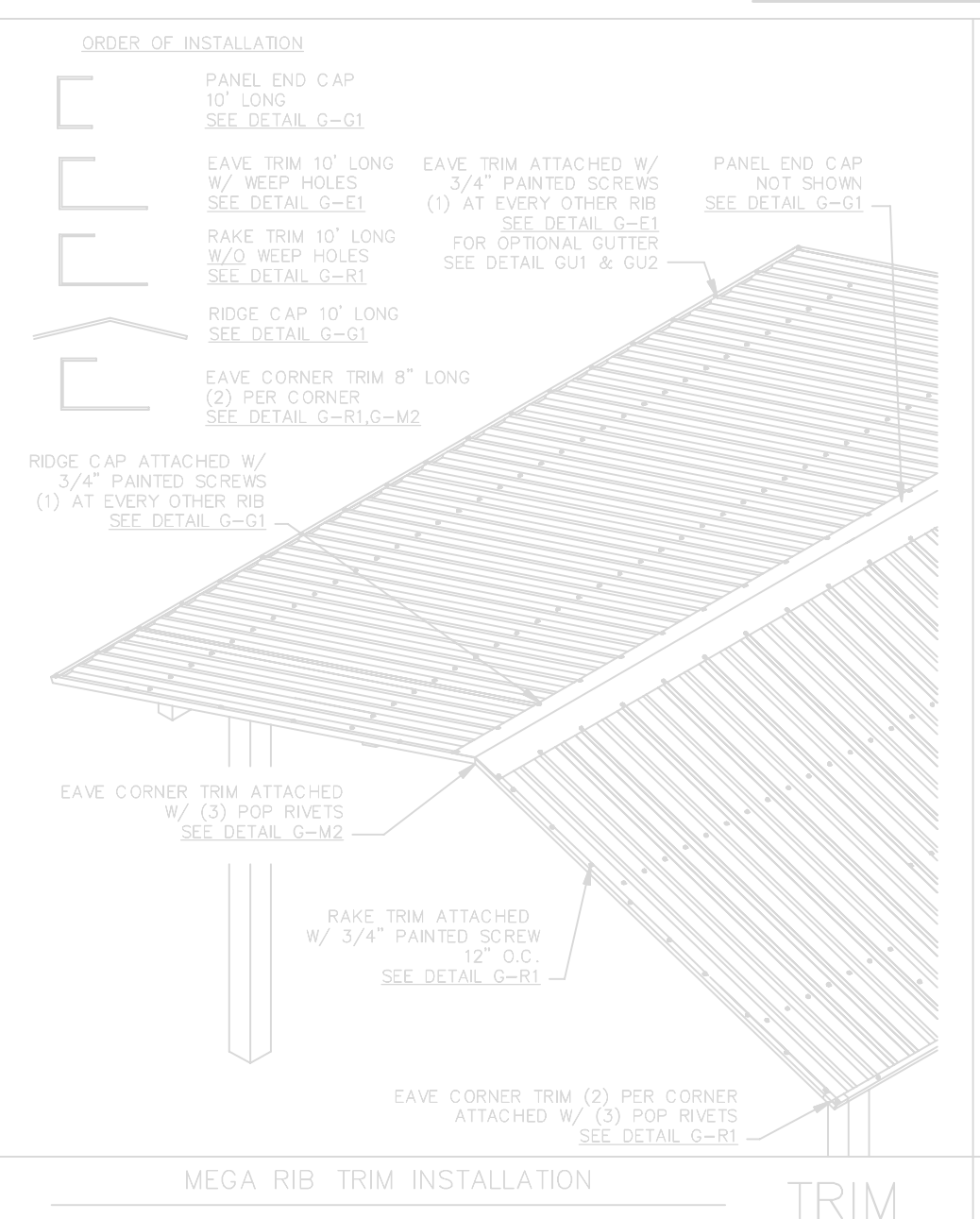
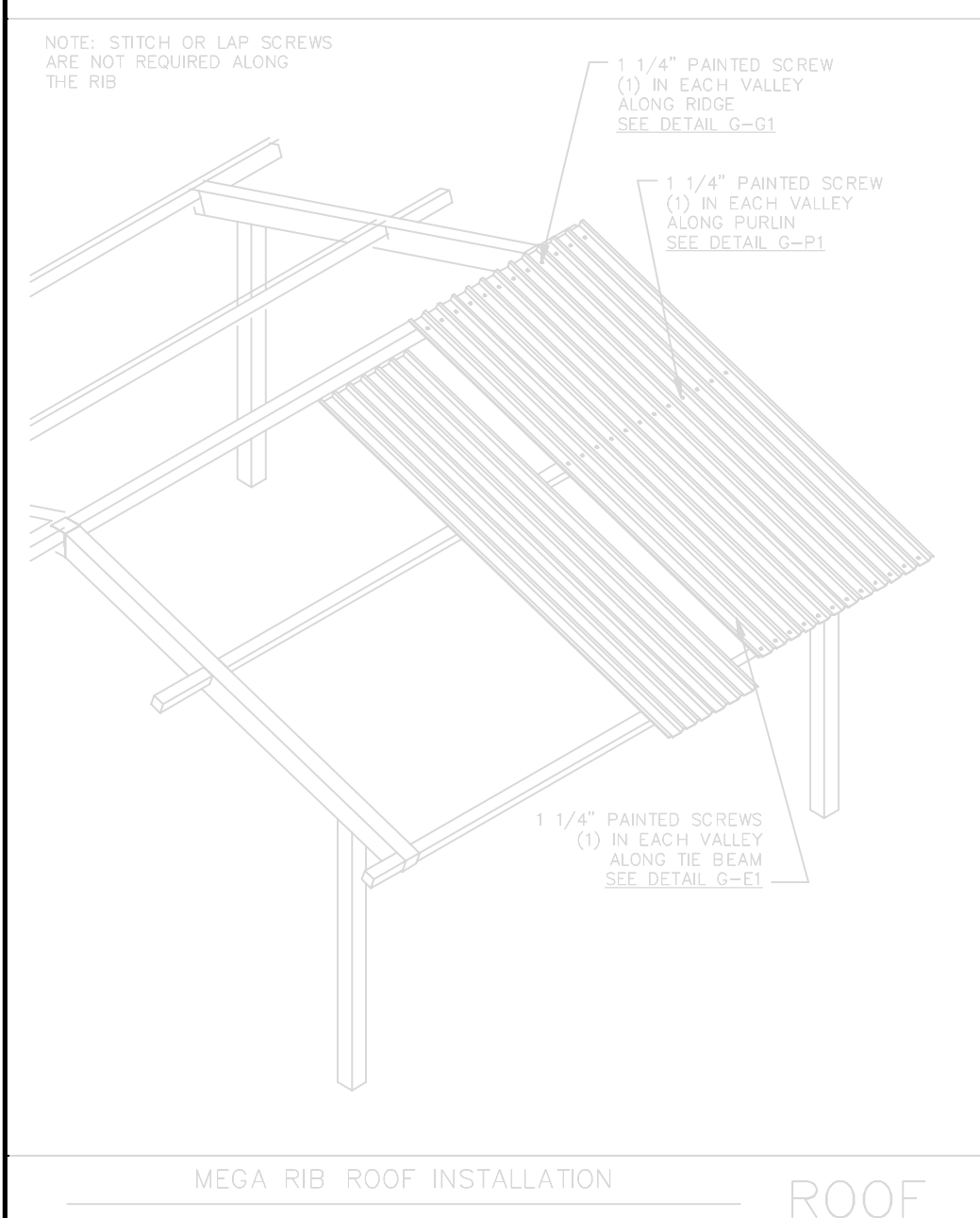
IDENTIFICATION STAMP  
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APP: 02-121754 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 02/21/2024

ICON STD	RG/DSA-PC
DRAWN BY	JD
DATE	3/21/2023
REV	
REV DATE	

**JRMA**  
ARCHITECTS ENGINEERS  
2700 SATURN ST BREA, CA 92821  
1.714.524.1870 F. 1.714.524.1875  
WWW.JRMA.COM

Professional Engineer Seal for J. R. M. A. dated Aug 31, 2023.

## 40' WIDE RECTANGULAR GABLE MEGA RIB ROOFING



### ROOF NOTES

ATTENTION INSTALLERS: METAL SHAVINGS LEFT ON ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH. DRILLING OR INSTALLING ROOF FASTENERS WILL CAUSE METAL SHAVINGS. THESE SHAVINGS MUST BE CAREFULLY REMOVED AT THE END OF EACH DAY BY EITHER SWEEPING OR BRUSHING THE INSTALLED ROOF.

**CLASS A ROOFING**

MEGA RIB PANEL SECTION  
24 ga. Fy=50 ksi Fu=65 ksi  
USE EVALUATION REPORT #270

**SECTION PROPERTIES (PER FT. OF WIDTH)**

**TOP IN COMPRESSION**  
Ix=0.091 in<sup>4</sup>  
Sx=0.1098 in<sup>3</sup>  
Mx=2.7433 in-kips

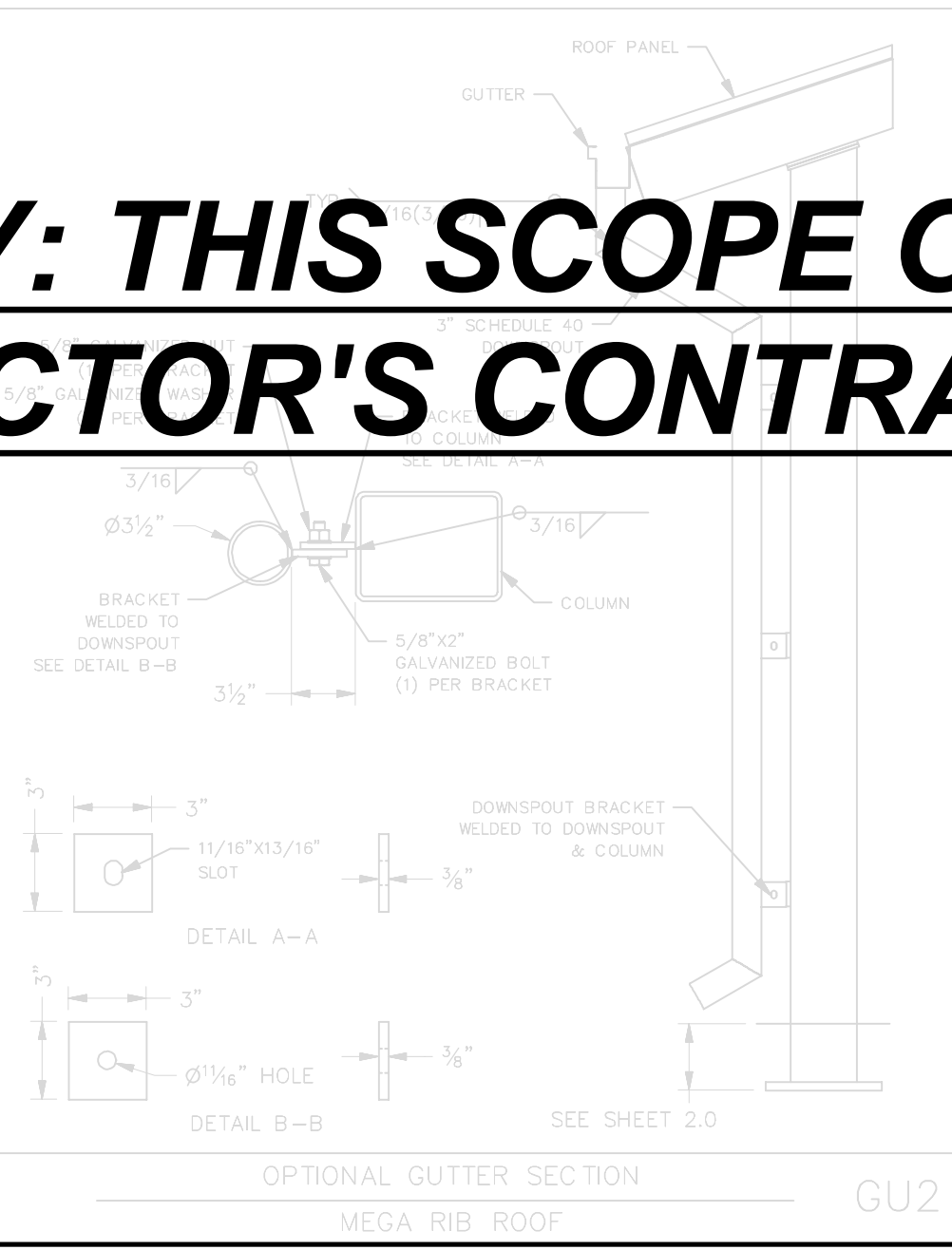
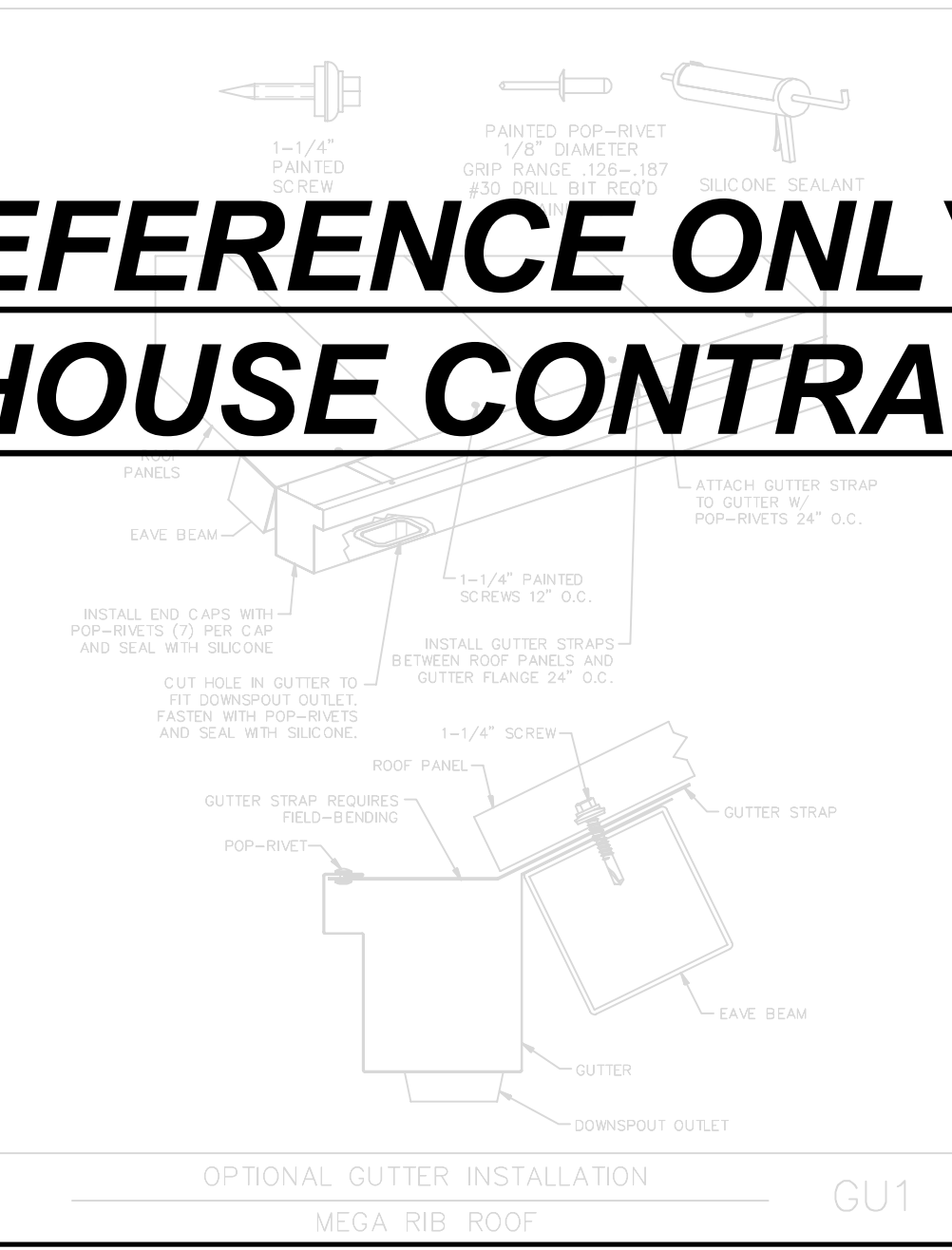
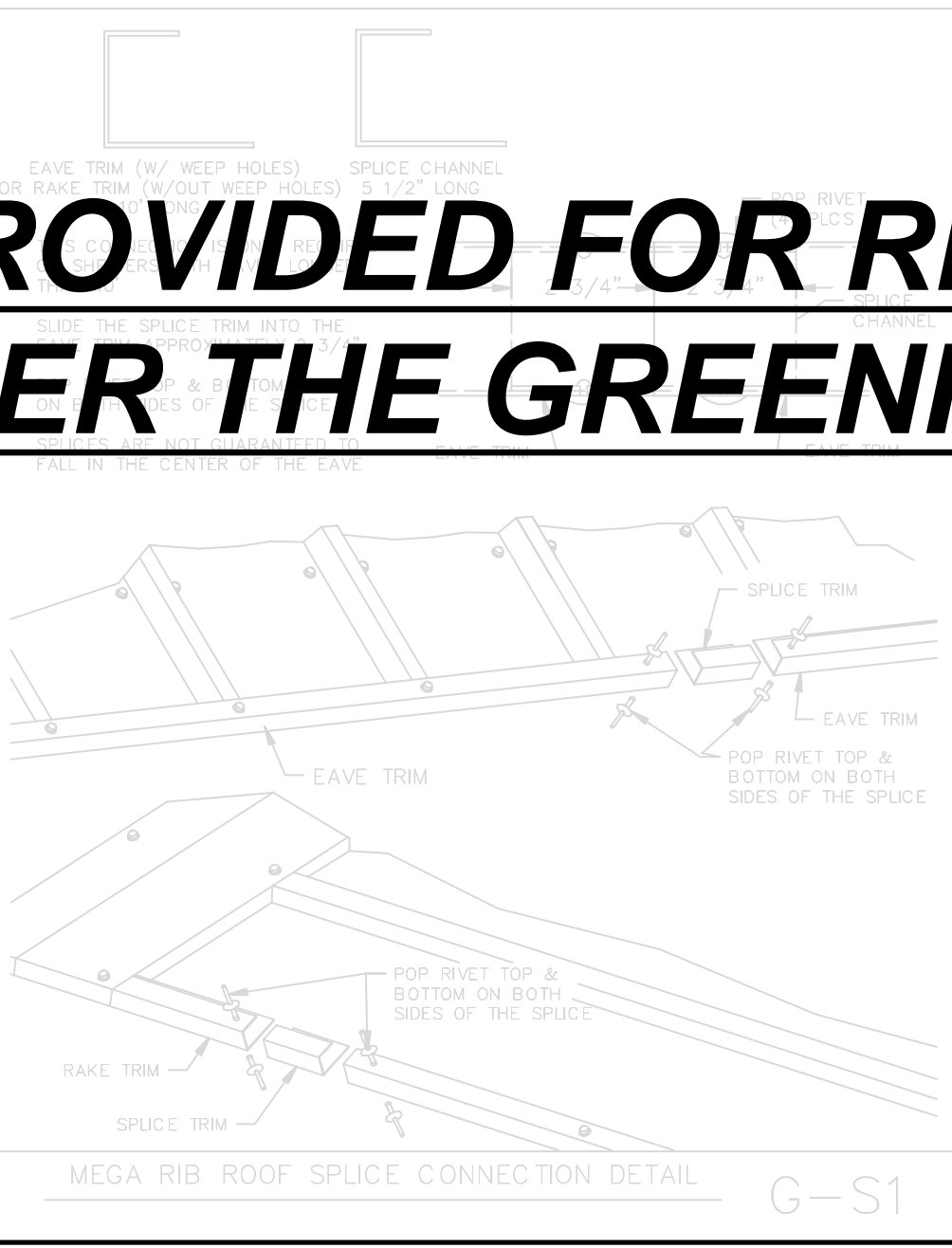
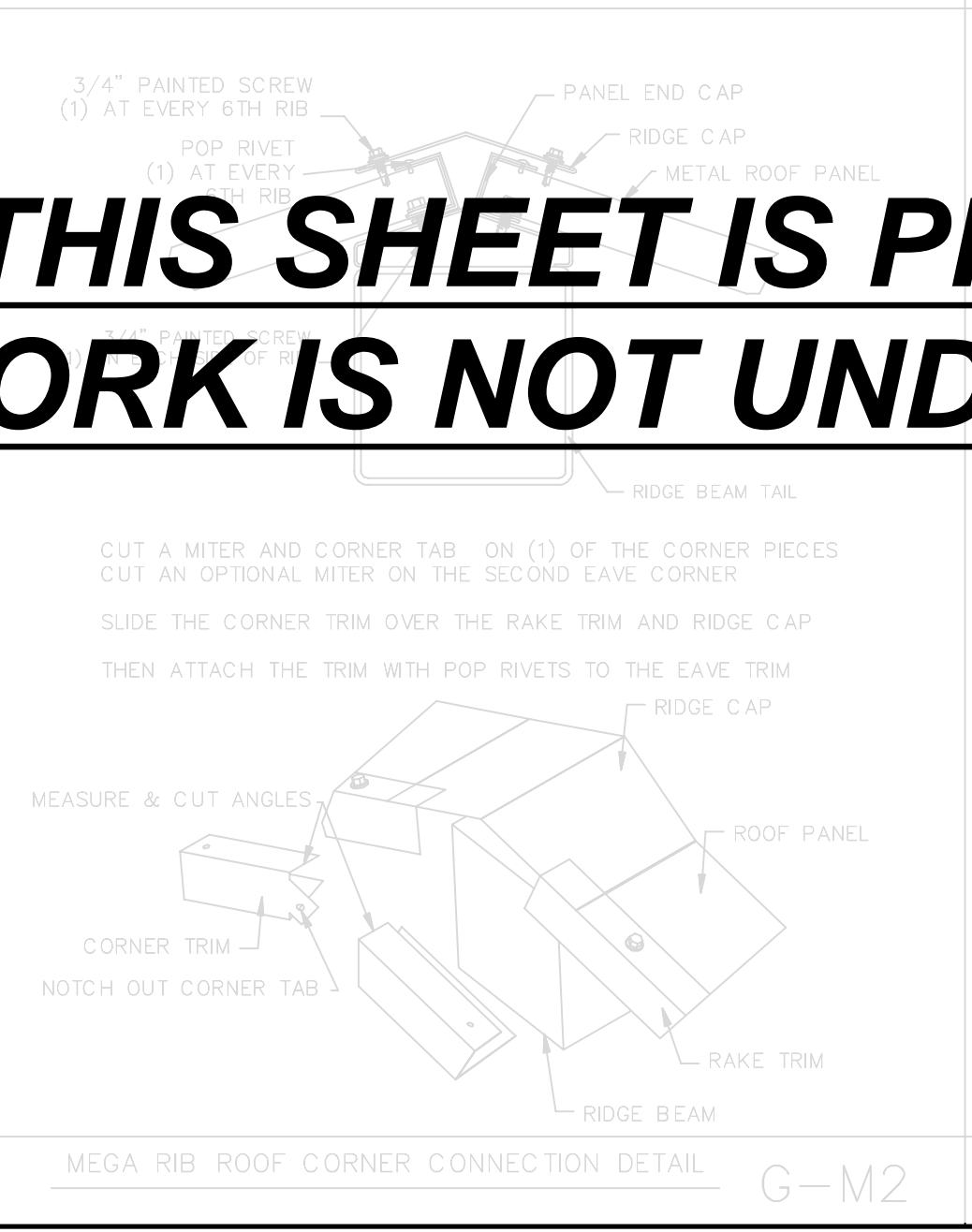
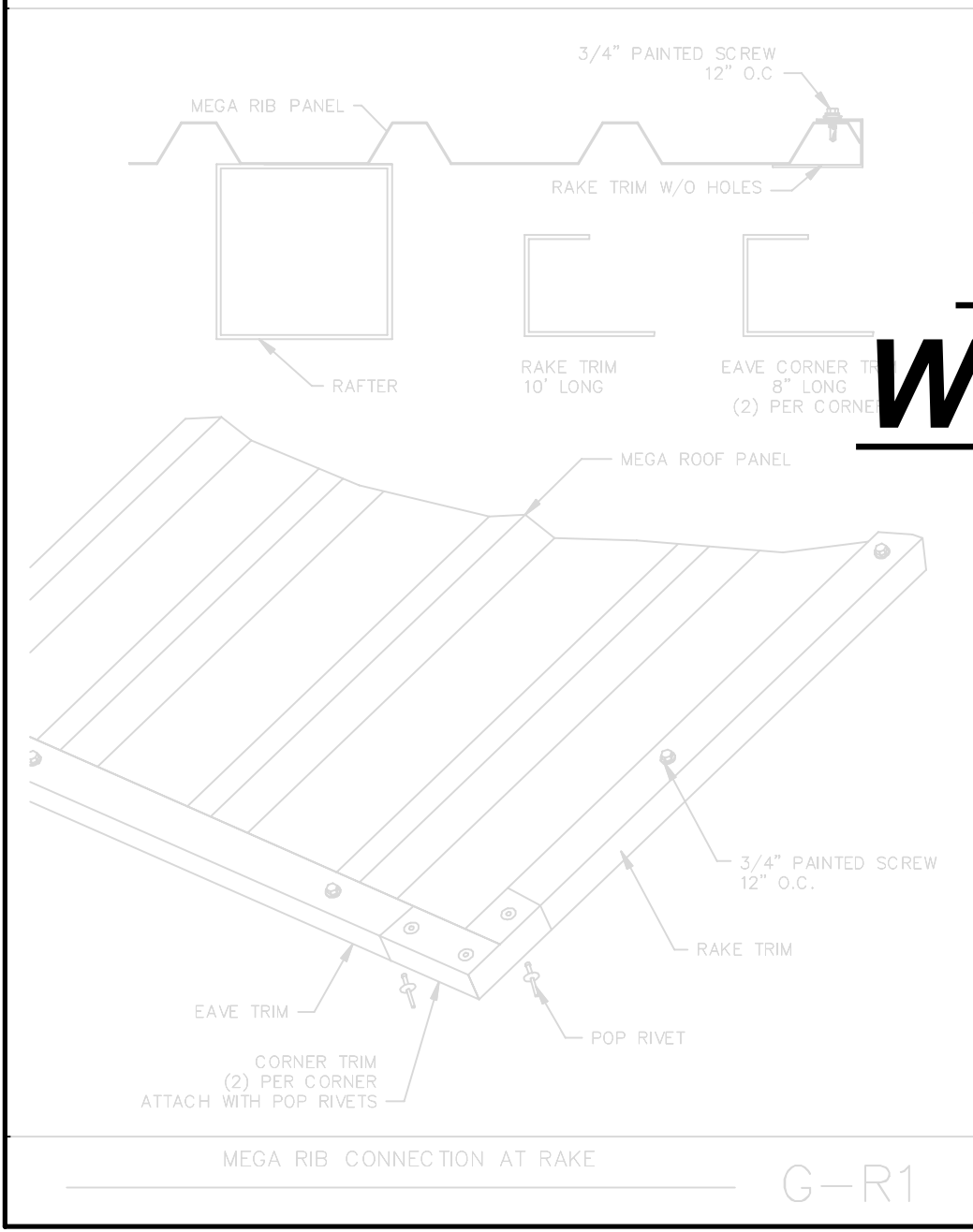
**BOTTOM IN COMPRESSION**  
Ix=0.089 in<sup>4</sup>  
Sx=0.0973 in<sup>3</sup>  
Mx=2.430 in-kips

INSTALLED CORRECTLY: THE SEALING MATERIAL IS NOT DEFORMED BEYOND THE EDGE OF THE METAL WASHER.

INSTALLED TOO TIGHT: THE SEALING MATERIAL IS DEFORMED BEYOND THE EDGE OF THE METAL WASHER.

INSTALLED TOO LOOSE: THE SEALING MATERIAL IS NOT VISIBLE AROUND THE EDGE OF THE METAL WASHER.

APPROVED  
DIV. OF THE STATE ARCHITECT  
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THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL INSTALLATION INSTRUCTION MATERIAL BEFORE STARTING WORK. THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

ERECTORS SHALL BE RESPONSIBLE TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS. FOR THE BEST APPEARANCE ALL TRIM AND FLASHING SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ALL EXPOSED FASTENERS EQUALLY SPACED. SOME FIELD CUTTING AND/OR FITTING OF PANELS, TRIM AND FLASHING IS TO BE EXPECTED BY THE ERECTOR. MINOR FIELD CORRECTIONS ARE PART OF NORMAL ERECTION WORK. THE INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSPERSON AND WORKMANSHIP SHALL MEET THE BEST INDUSTRY STANDARDS.

**PRE-CODED (PC) DOCUMENT**  
Code: 2022 CBC  
A separate project application for construction is required.

40' WIDE  
RECTANGULAR GABLE  
MEGA RIB ROOFING  
PLAN

**ICON Shelters Inc**

DISTINCTIVE STEEL SHELTERS  
WWW.ICONSHELTERS.COM  
COPYRIGHT 2024, ICON SHELTER SYSTEMS, INC.  
1455 LINCOLN AVE  
HOLLAND MI, 49423  
616.396.0919  
800.748.0985  
616.396.0944 FX

LS4.3  
PRINTED ON :







# **THIS SHEET IS PROVIDED FOR REFERENCE ONLY: THIS SCOPE OF WORK IS NOT UNDER THE GREENHOUSE CONTRACTOR'S CONTRACT**

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 02-121754 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 02/21/2024

ICON STD	RG/DSA-PC
DRAWN BY	JD
DATE	3/21/2023
REV	
REV DATE	

**JRMA**  
 ARCHITECTS ENGINEERS  
 2700 SATURN ST BREA, CA 92821  
 T. 714.524.1870 F. 714.524.1875  
 WWW.JRMA.COM

  
 Aug 31, 2023

APPROVED  
 DIV. OF THE STATE ARCHITECT  
 APP: 04-122188 PC  
 REVIEWED FOR  
 SS  FLS  ACS  CG   
 DATE: 09/21/2023

OPTIONAL ELECTRICAL ACCESS

**ICON**  
 Shelter Systems Inc

DISTINCTIVE STEEL SHELTERS  
 WWW.ICONSHelters.COM  
 COPYRIGHT 2024, ICON SHELTER SYSTEMS, INC.  
 1455 LINCOLN AVE  
 HOLLAND MI, 49423

616.396.0919  
 800.748.0985  
 616.396.0944 FX

LS5.0

ICON'S STANDARD CONDUIT PATHWAY RUNS THROUGH THE COLUMN, RAFTER, AND RIDGE BEAM THROUGH ALL BOLTED CONNECTIONS AS SHOWN. IF YOU HAVE SPECIAL ELECTRICAL REQUIREMENTS, PLEASE OUTLINE ANY CHANGES BELOW AS DESCRIBED.

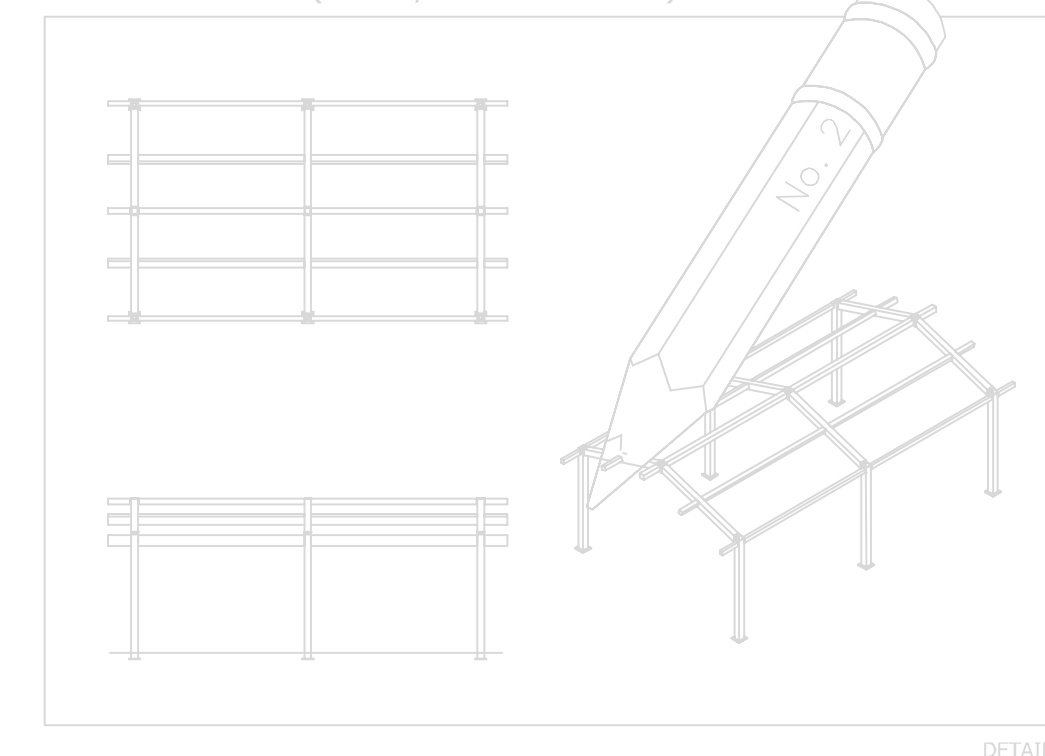
PLEASE NOTE: DESIGN LIMITATIONS ON HOLE/CUTOUT SIZES MAY APPLY. ICON WILL REACH OUT TO DISCUSS ANY SUCH LIMITATIONS AS NEEDED.

NOTE: ICON SHELTER FRAME IS NOT UL LISTED TO ACT AS A CONDUIT FOR ELECTRICAL WIRING. CONSULT LOCAL BUILDING CODES WHEN PLANNING YOUR ELECTRICAL SYSTEM.

**STEPS:**

1. CONDUIT HOLE SIZE (DETAIL A)
2. ELECTRICAL EXIT HOLES (DETAIL B)
3. ELECTRICAL ACCESS & COVER PLATES (DETAIL C)
4. ELECTRICAL CONDUIT PATHWAY (DETAIL D)

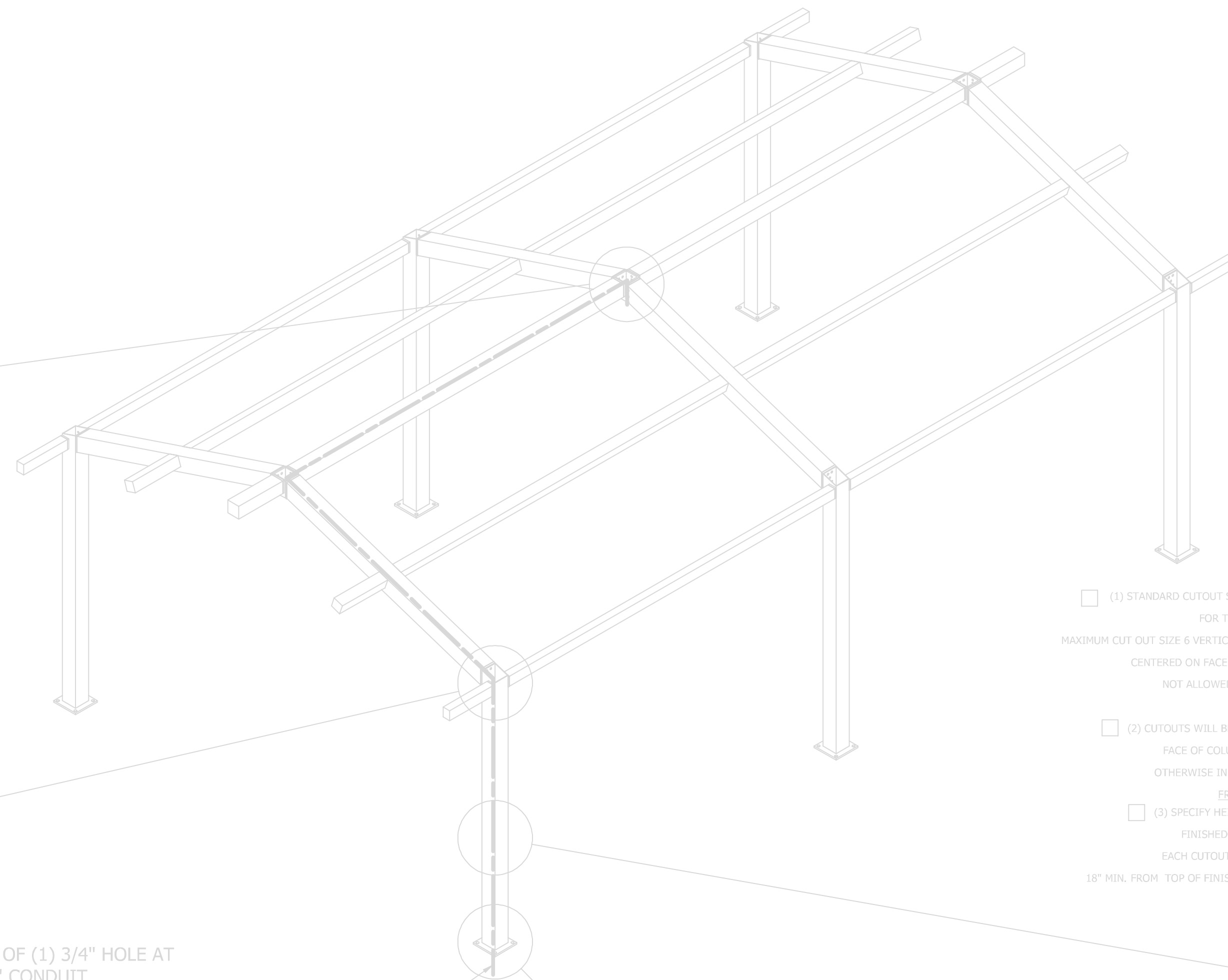
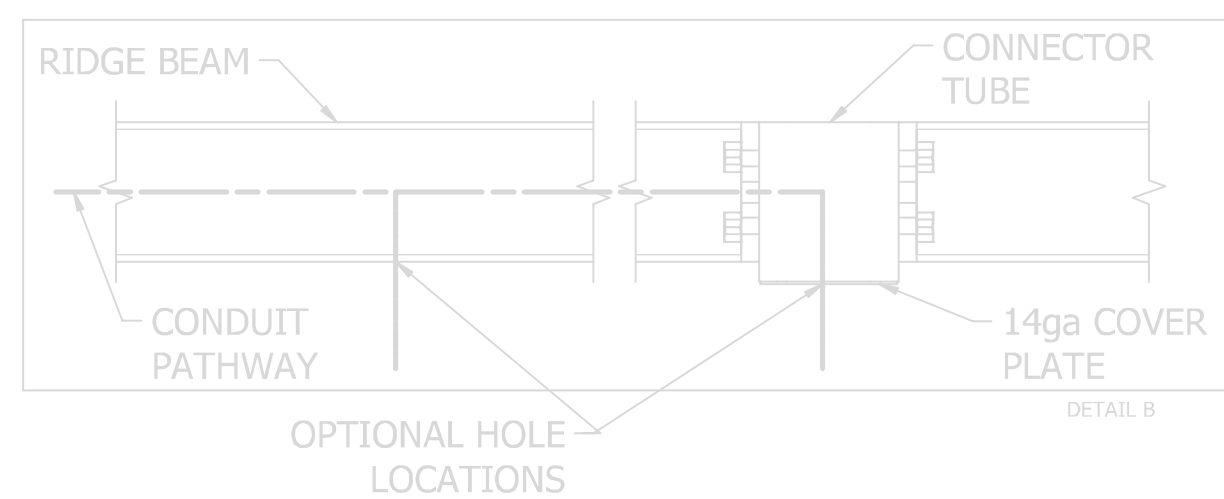
IF REQUIRED, PLEASE DRAW THE NECESSARY ELECTRICAL CONDUIT PATHWAY ON THE FRAME SHEET REQUIRED FOR BUILDING SIZE (LS2.1, LS3.1 & LS4.1)



**OPTIONAL EXIT HOLES**

IF REQUIRED, EXIT HOLES FOR LIGHTING, ETC. CAN BE PLACED IN THE RIDGE BEAM AND/OR CONNECTOR TUBE WITH 14ga COVER PLATE AS SHOWN (CHARGES APPLY) USE FRAME SHEET OF THIS PRELIMINARY TO SPECIFY REQUIRED EXIT HOLE LOCATIONS AND SIZES.

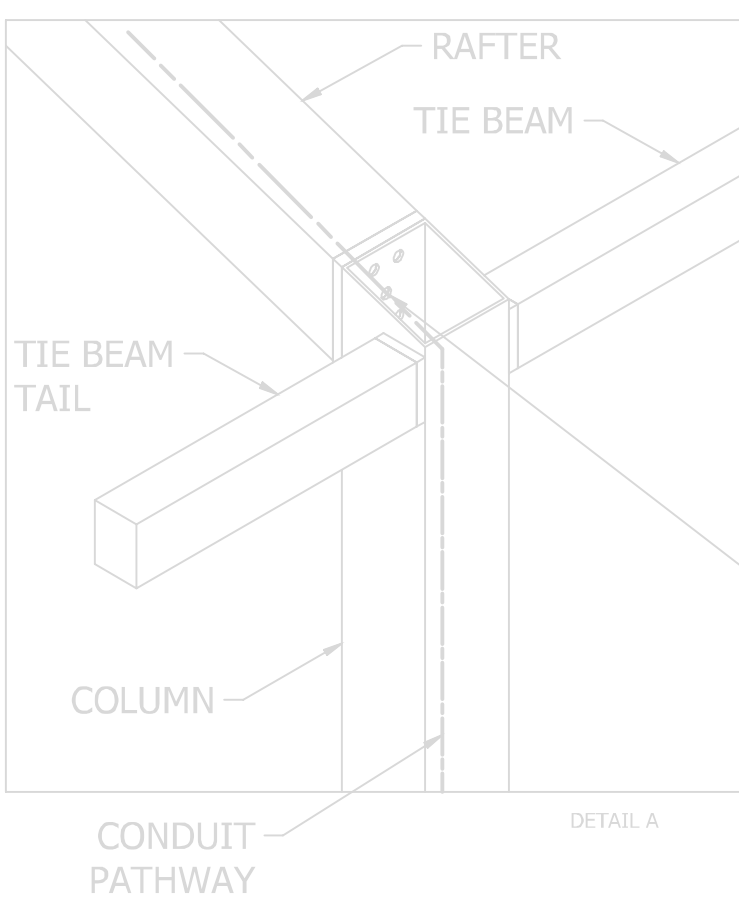
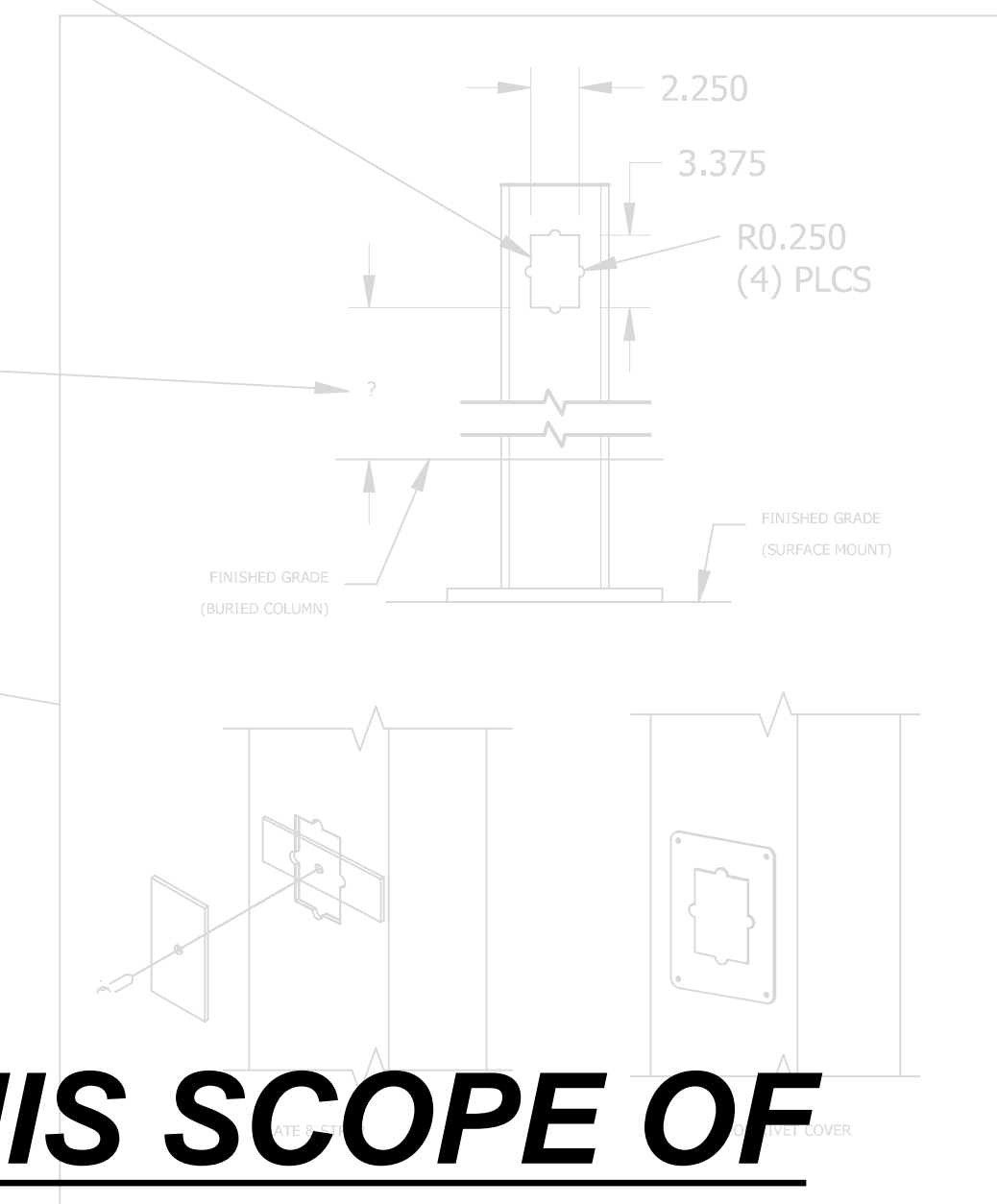
- (1) EXIT HOLE PER CONNECTOR
- (2) EXIT HOLES PER RIDGE BEAM



**OPTIONAL CUTOUTS**

USE FRAME SHEET OF THIS PRELIMINARY TO SPECIFY REQUIRED CUTOUT LOCATIONS (CHARGES APPLY) SEE REQUIRED INFO BELOW

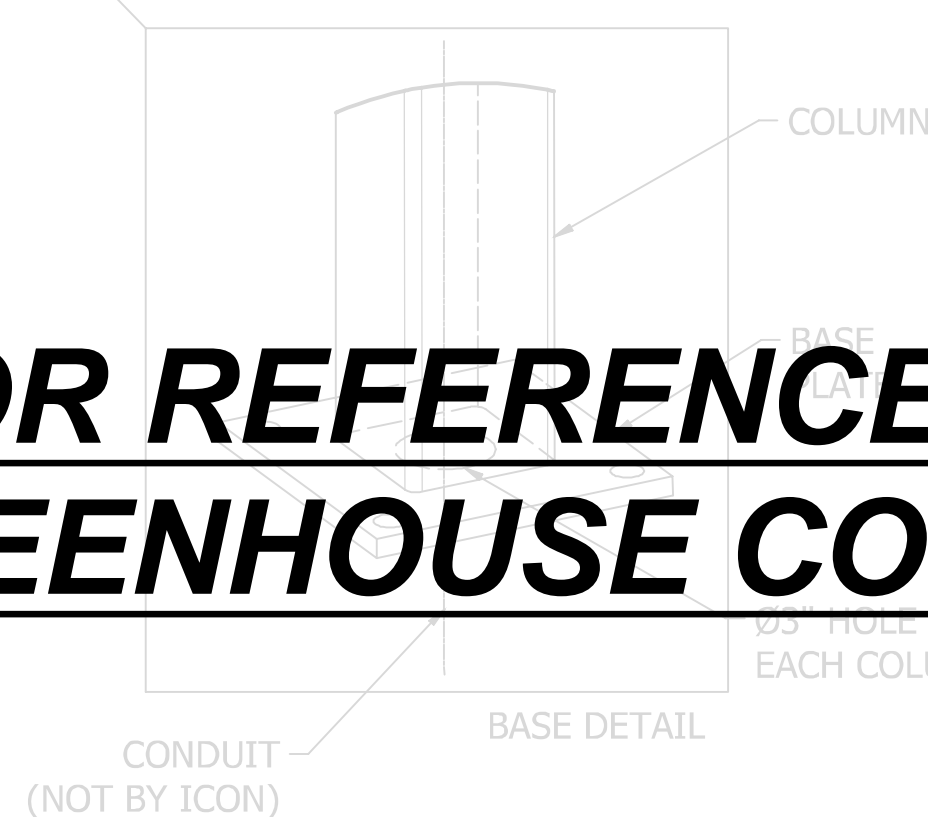
- (1) STANDARD CUTOUT SIZE SHOWN FOR TYPICAL GFCT. MAXIMUM CUT OUT SIZE 6 VERTICAL X 4 WIDE CENTERED ON FACE OF COLUMN. NOT ALLOWED IN 6" FACE
- (2) CUTOUTS WILL BE ON INSIDE FACE OF COLUMN UNLESS OTHERWISE INDICATED ON FRAME SHEET.
- (3) SPECIFY HEIGHT ABOVE FINISHED GRADE FOR EACH CUTOUT AS SHOWN 18" MIN. FROM TOP OF FINISHED GRADE



ICON PROVIDES A MINIMUM OF (1) 3/4" HOLE AT EACH CONNECTION FOR 1/2" CONDUIT. IF APPLICABLE, PLEASE SPECIFY REQUIRED CONDUIT SIZE: (CHARGES APPLY)

- 3/4" CONDUIT (1" HOLES)
- 1" CONDUIT (1 1/4" HOLES)

CONDUIT PATHWAY PROVIDED FOR EACH COLUMN.



PROVIDE GROUNDING PER CEC ARTICLE 250

PLEASE SPECIFY TYPE AND QUANTITY REQUIRED:

- PLATE & STRAP
  - POP-RIVET COVER PLATE (STAINLESS POP RIVET)
- HOW MANY REQUIRED? \_\_\_\_\_

NOTE: BUILDING DEPICTED ON THIS SHEET FOR ILLUSTRATION PURPOSES ONLY. ACTUAL LAYOUT AND FRAME MEMBER QUANTITIES VARY BY DESIGN. PLEASE REFER TO ELEVATION AND FRAME SHEETS IN THIS PC FOR ORDER-SPECIFIC CONFIGURATION.

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