



PININFARINA BUS SHELTERS

CITY WIDE PROTOTYPES - MIAMI BEACH, FL

100% CD's

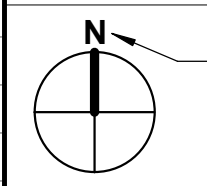
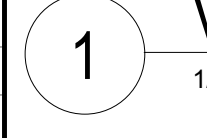
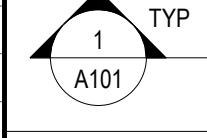
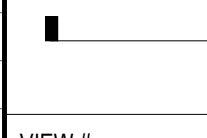

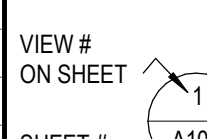

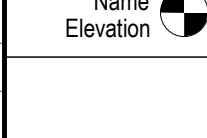

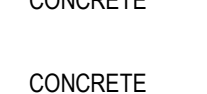

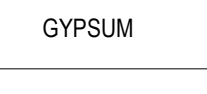
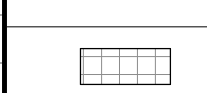

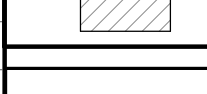
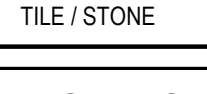
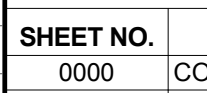
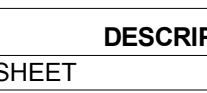
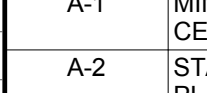
07.03.2019

BOARD OF COMMISSIONERS	PROJECT TEAM			
MAYOR DAN GELBER	<div>MIAMIBEACH</div> <div>OWNER</div> <div>CITY OF MIAMI BEACH</div>	<div><div>TLC</div><div>ENGINEERING FOR ARCHITECTURE</div></div> <div>M.E.P.F. ENGINEER</div> <div>TLC ENGINEERING FOR ARCHITECTURE 5757 Blue Lagoon Drive, Suite 400 Miami, FL 33126 TEL: 305-263-3863</div>	<div><div></div><div>PININFARINA</div></div> <div>ARCHITECTURAL DESIGNER</div> <div>PININFARINA OF AMERICA CORP. 501 Brickell Key Drive, Suite 200 Miami, FL 33131 TEL: 305-424-1653</div>	<div>ARCHITECT OF RECORD:</div> <div><div>ACAI</div><div>associates, inc</div><div>architecture engineering roofing consulting construction management</div></div> <div>AAC001323 EB0004379 CGC010769 2937 W. Cypress Creek Rd., Suite 200 Fort Lauderdale, FL 33309 Tel: 954.484.4000 Fax: 954.484.5588 www . acaiarchitects . com</div> <div>PROFESSIONAL IN CHARGE ADOLFO J. COTILLA, JR., AIA REGISTRATION NUMBER AR-0008011</div>
COMMISSIONER - SEAT 1 MICKY STEINBERG				<div>SEAL</div>
COMMISSIONER - SEAT 2 MARK SAMUELIAN				
COMMISSIONER - SEAT 3 MICHAEL GONGORA				
COMMISSIONER - SEAT 4 JOY MALAKOFF				
COMMISSIONER - SEAT 5 RICKY ARRIOLA	<div>VICE MAYOR - SEAT 6 JOHN ELIZABETH ALEMAN</div>			<div>ACAI PROJECT NUMBER: 17-012 G01</div>



GENERAL NOTES	
A. GENERAL CONTRACTOR RESPONSIBILITIES:  1. ALL WORK TO COMPLY WITH ALL LOCAL, STATE, NATIONAL, AND FEDERAL REGULATIONS HAVING JURISDICTION OVER THIS PROJECT. 2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH BUILDING REGULATIONS AND IN A QUALITY WORKMANSHIP LIKE MANNER. 3. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD. ANY DISCREPANCY BETWEEN THE EXISTING CONDITIONS AND THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO THE PREPARATION OF BID AND START OF WORK. 4. IF FIELD CONDITIONS NECESSITATE ANY CHANGES OR MODIFICATIONS, THE CHANGES OR MODIFICATIONS MUST BE APPROVED BY THE ARCHITECT AND OWNER PRIOR TO PROCEEDING WITH WORK. 5. ALL EXISTING WORK NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED BY THE CONSTRUCTION PROCESS. 6. THE CONTRACTOR SHALL COORDINATE ALL APPLICABLE WORK WITH ALL ASSOCIATED TRADES. 7. THE CONTRACTOR SHALL ESTABLISH ALL ITEMS WHICH REQUIRE IMMEDIATE PROCESSING DUE TO LONG LEAD OPERATING TIME. A LIST OF THESE ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND OWNER WITHIN ONE WEEK AFTER THE CONTRACT IS AWARDED. 8. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE TO THE ARCHITECT AND OWNER WITHIN ONE WEEK AFTER THE AWARD OF THE CONTRACT. 9. ALL SUBCONTRACTORS SHALL SUBMIT SHOP DRAWINGS THROUGH THE CONTRACTOR. ONCE CHECKED, THE CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION AND INSTALLATION. 10. MANUFACTURER'S DIRECTIONS FOR APPLICATION, INSTALLATION, AND METHODS SHALL BE FOLLOWED AND HEREWITH MADE A PART OF CONSTRUCTION DOCUMENTS. 11. INSURANCE: THE CONTRACTOR AND EACH SUBCONTRACTOR NEEDS WORKMANS COMPENSATION AS REQUIRED BY LAW AND OWNER REQUIREMENTS AND SUFFICIENT PROTECTION FOR CLAIMS FOR PERSONAL INJURY, INCLUDING DEATH, SHOULD THEY ARISE FROM OPERATIONS UNDER CONTRACT. 12. CONTRACTOR IS TO EXERCISE SPECIAL CARE IN THE HANDLING OF MATERIALS, EQUIPMENT, AND RUBBISH TO AVOID INCONVENIENCE AND ANNOYANCE TO ADJACENT BUILDINGS AND TENANT AREAS. 13. ALL PHASING AND ALTERNATE DAILY ROUTES DURING CONSTRUCTION SHALL BE DEVELOPED BY THE CONTRACTOR AS PART OF THEIR MEANS AND METHODS. COORDINATE ALL PHASING WITH THE OWNER. 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF SAFETY BARRICADES TO ENSURE SAFETY INSIDE THE BUILDING DURING CONSTRUCTION IN AREAS AFFECTED BY THIS CONTRACT. 15. MEANS AND EGRESS SHALL BE CONTINUOUSLY MAINTAINED FREE OF ALL OBSTRUCTIONS IN CASE OF FIRE OR OTHER EMERGENCY. 16. NO SUBSTITUTIONS ARE TO BE MADE WITHOUT APPROVAL BY THE ARCHITECT AND OWNER. CONTRACTOR TO SUBMIT SUBSTITUTE MATERIAL SPECIFICATIONS FOR APPROVAL IN WRITING TO THE ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK. 17. CONTRACTOR SHALL HAVE AN ENGLISH-SPEAKING SUPERVISOR/REPRESENTATIVE ON THE WORK SITE AT ALL TIMES, WHO SHALL BE THOROUGHLY KNOWLEDGEABLE OF ALL PLANS, SPECIFICATIONS, AND OTHER CONTRACT DOCUMENTS AND HAS THE AUTHORITY TO ACT IN THE CONTRACTOR'S BEHALF. 18. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED. 19. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK.  B. PROGRESS CLEANING:  1. MAINTAIN AREAS FREE OF WASTE MATERIALS, DEBRIS, AND RUBBISH. MAINTAIN SITE IN A CLEAN AND ORDERLY CONDITION. 2. CONDUCT CLEANING AND DISPOSAL OPERATIONS TO COMPLY WITH LOCAL ORDINANCES AND ANTI-POLLUTION LAWS: A) DO NOT DISPOSE OF VOLATILE WASTES SUCH AS MINERAL SPIRITS, OIL, OR PAINT THINNER IN STORM OR SANITARY SEWER. B) DO NOT DISPOSE OF WASTES INTO STREAMS OR WATERWAYS. USE MATERIALS WHICH WILL NOT CREATE HAZARDS TO HEALTH OR PROPERTY, AND WHICH WILL NOT DAMAGE SURFACES. 3. USE ONLY MATERIALS AND METHODS RECOMMENDED BY MANUFACTURER OF MATERIAL BEING CLEANED. 4. PROVIDE CONTAINERS AND LOCATE ON SITE FOR COLLECTION OF WASTE MATERIALS, RUBBISH, AND DEBRIS WHEN APPLICABLE. 5. EXECUTE CLEANING TO ENSURE THAT BUILDING, GROUNDS, AND PUBLIC PROPERTIES ARE MAINTAINED FREE FROM ACCUMULATIONS OF WASTE MATERIALS AND RUBBISH. 6. USE EXPERIENCED WORKMEN OR PROFESSIONALS FOR FINAL CLEANING. 7. REMOVE WASTE, DEBRIS, AND SURPLUS MATERIALS FROM SITE. CLEAN GROUNDS, REMOVE STAINS, SPILLS, AND FOREIGN SUBSTANCES RESULTING FROM CONSTRUCTION WORK FROM PAVED AREAS, AND SWEEP CLEAN, RAKE OTHER EXTERIOR SURFACES AS APPLICABLE.  C. TEMPORARY CONTROLS:  1. NOISE CONTROL: PROVIDE ALL NECESSARY REQUIREMENTS FOR NOISE CONTROL DURING CONSTRUCTION PERIODS. CONFORM WITH APPLICABLE OSHA REQUIREMENTS AND LOCAL ORDINANCES HAVING JURISDICTION. 2. DUST CONTROL: EXECUTE WORK BY METHODS TO MINIMIZE RAISING DUST FROM CONSTRUCTION OPERATIONS. PROVIDE POSITIVE MEANS TO PREVENT AIR-BORN DUST FROM DISPERSING INTO ATMOSPHERE. 3. DEBRIS CONTROL: MAINTAIN ALL AREAS FREE OF EXTRANEOUS DEBRIS. PROVIDE CONTAINERS FOR DEPOSIT OF DEBRIS. 4. POLLUTION CONTROL: PROVIDE METHODS, MEANS, AND FACILITIES TO PREVENT CONTAMINATION OF SOIL, WATER, AND ATMOSPHERE FROM DISCHARGE OF NOXIOUS, TOXIC SUBSTANCES, AND POLLUTANTS PRODUCED BY CONSTRUCTION OPERATIONS.  D. REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS:  1. CLEAN AND REPAIR DAMAGE CAUSED BY INSTALLATION OR USE OF TEMPORARY WORK. 2. RESTORE EXISTING FACILITIES USED DURING CONSTRUCTION TO ORIGINAL CONDITION. RESTORE PERMANENT FACILITIES USED DURING CONSTRUCTION TO SPECIFY CONDITION.  E. CONTRACT CLOSEOUT:  1. SUBMIT WRITTEN CERTIFICATION THAT CONTRACT DOCUMENTS HAVE BEEN REVIEWED, WORK HAS BEEN INSPECTED, AND THE WORK IS COMPLETE IN ACCORDANCE WITH CONTRACT DOCUMENTS AND READY FOR ARCHITECT'S REVIEW. 2. PROVIDE SUBMITTALS TO ARCHITECT THAT ARE REQUIRED BY GOVERNING OR OTHER AUTHORITIES. 3. SUBMIT FINAL APPLICATION FOR PAYMENT IDENTIFYING TOTAL ADJUSTED CONTRACT PRICE, PREVIOUS PAYMENTS, AND AMOUNT OF REMAINING DUE. 4. ADJUST OPERATING PRODUCTS AND EQUIPMENT TO INSURE SMOOTH AND UNHINDERED OPERATION. 5. INSTRUCT OWNER'S PERSONNEL IN OPERATION, ADJUSTMENT AND MAINTENANCE OF EQUIPMENTS AND SYSTEMS USING THE OPERATION AND MAINTENANCE DATA AS THE BASIS OF INSTRUCTION. 6. REMOVE TEMPORARY PROTECTION AND LABELS NOT REQUIRED TO REMAIN.  F. PROJECT SPECIFIC NOTES:  1. THESE DRAWINGS ARE FOR A PROTOTYPICAL BUS SHELTER AND REPRESENT ONE PART OF THE OVERALL CONTRACT DOCUMENTS REQUIRED FOR THE INSTALLATION OF A BUS SHELTER ON A SPECIFIC SITE. SITE SPECIFIC DRAWINGS INCLUDING CIVIL, ELECTRICAL AND OTHER DISCIPLINES ILLUSTRATING OTHER WORK REQUIRED FOR A COMPLETE BUS SHELTER INSTALLATION WILL BE REQUIRED. 2. THE ELEMENTS SHOWN HEREIN ARE INTENDED TO BE TYPICAL AND REPETITIVE. THE LOCATION AND ORIENTATION OF THE ELEMENTS SHALL BE COORDINATED WITH THE SITE / CIVIL DRAWINGS. ANY DEVIATIONS TO THESE DRAWINGS REQUIRED DUE TO SPECIFIC SITE CONDITIONS SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO PROCEEDING. 3. THE BUS SHELTER AND SIGNAGE STRUCTURE IS INTENDED TO BE PLACED AT SPECIFIC LOCATIONS AS PART OF THIS PROJECT. LOCATION SPECIFIC ENGINEERING ISSUES ARE NOT PART OF THESE DRAWINGS. ANY DEVIATIONS REQUIRED FROM THESE DRAWING DUE TO SPECIFIC SITE CONDITIONS SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO PROCEEDING.  G. SHOP DRAWINGS & QUALITY CONTROL:  1. THESE DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN, AND EXTENT OF THE WORK ONLY. THEY ARE NOT INTENDED TO BE SCALED OR TO SERVE AS SHOP DRAWINGS OR PORTIONS THEREOF. 2. DO NOT SCALE DRAWINGS. DIMENSIONS PROVIDED ON THESE DRAWINGS ARE GENERAL TO SHOW BASIC ARRANGEMENTS AND EXTENTS. CONTRACTOR WILL NEED TO USE 3D MODELS SUPPLIED BY PININFARINA AS A BASIS FROM WHICH TO DEVELOP SHOP DRAWINGS. 3. CONTRACTOR SHALL UTILIZE A SOLE FABRICATOR TO ASSEMBLE THE COMPLETE SHELTER STRUCTURE, COMPONENTS, AND EQUIPMENT. THE SHOP DRAWINGS FROM THIS FABRICATOR SHALL INDICATE ALL WORK NECESSARY FOR THE SHELTER CONSTRUCTION AND BE SIGNED & SEALED BY A FL REGISTERED ENGINEER, SUITABLE MANUFACTURERS INCLUDE: A. LANDSCAPE FORMS B. FORMS AND SURFACES C. FUTURE SYSTEMS INC. D. BRASCO INTERNATIONAL 4. THE BUS SHELTERS ARE INTENDED TO BE A HIGH QUALITY, SEAMLESS, AND ALL-INCLUSIVE FABRICATION. THIRD PARTY COMPONENTS AND EQUIPMENT MUST BE SEAMLESSLY INTEGRATED INTO THE STRUCTURE FOLLOWING THESE DRAWINGS AS A GUIDELINE. 5. THE STRUCTURAL COMPONENTS AND ANY ADDITIONAL CONNECTIONS / MATERIALS REQUIRED TO BRIDGE GAPS BETWEEN THE STRUCTURE AND OTHER COMPONENTS AND EQUIPMENT SHALL BE OF THE SAME FINISH AND AS SEAMLESS AS FEASIBLE. 6. ELEMENTS OF THE SHELTER STRUCTURE DEPICTED IN THESE DRAWINGS SHALL BE SIZED, FABRICATED AND DETAILED TO ALLOW ASSEMBLY IN THE FIELD WITH EASE AND WITHOUT THE NEED OF CRANES OR SIMILAR ERECTION METHODS. SEE STRUCTURAL DRAWINGS FOR INTENT OF SEPARATION OF INDIVIDUAL STRUCTURAL ELEMENTS. 7. SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE CITY, ACAI, AND PININFARINA PRIOR TO BEGINNING ANY FABRICATION OR CONSTRUCTION. 8. SUBMITTALS FOR ALL COMPONENTS AND EQUIPMENT SHOWN ON THESE DRAWINGS ARE REQUIRED FOR THE SHELTER CONSTRUCTION SHALL BE REVIEWED AND APPROVED BY THE CITY, ACAI, AND PININFARINA PRIOR TO ANY WORK BEGINNING. 9. CONTRACTOR SHALL REVIEW & STAMP EACH SUBMITTAL PRIOR TO SUBMITTING TO THE CITY, ACAI AND PININFARINA TO ENSURE IT IS IN ACCORDANCE WITH THESE DRAWINGS. 10. CITY ACAI / PININFARINA REVIEW OF THE SHOP DRAWINGS / SUBMITTALS IS LIMITED TO CHECKING FOR CONFORMANCE WITH THE INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THESE DRAWINGS. THE CONTRACTOR REMAINS TOTALLY RESPONSIBLE FOR ALL DIMENSIONS, QUANTITIES, CONSTRUCTION METHODS AND MEANS, TECHNIQUES, SEQUENCES IN THE WORK, AND PROCEDURES.  H. SAMPLES & MOCK-UP:  1. PROVIDE SAMPLES OF THE FOLLOWING FOR REVIEW AND APPROVAL BY THE CITY, ACAI, AND PININFARINA: A. STRUCTURE & OTHER CONNECTIONS / MATERIALS AND FINISHES B. PV INTEGRATED GLAZING WITH CERAMIC FRIT PATTERN, ONE FOR EACH COLOR C. VERTICAL GLAZING WITH COLOR, SAMPLE PATTERN, SAMPLE LOCATION, AND SAMPLE CITY NAME D. CONCRETE SURFACE REFLECTIVE PAINT E. SEATING MATERIAL AND FINISH F. LEANING RAIL MATERIAL AND FINISH 2. AFTER SHOP DRAWING APPROVAL, AND PRIOR TO FULL-SCALE PROTOTYPE FOR EACH SHELTER TYPE (7 TOTAL) FOR REVIEW AND APPROVAL BY THE CITY, ACAI, AND PININFARINA, INCLUDE A MOCK-UP OF THE REFLECTIVE PAINT BORDER AND CITY NAME LOGO. CONTRACTOR SHALL COORDINATE A LOCATION WITHIN THE CITY WHERE THE MOCK-UPS CAN BE INSTALLED, AND MAY BE UTILIZED AS ACTUAL SHELTERS IF APPROVED BY THE TEAM. PROTOTYPES SHALL BE PRODUCED WITHIN 60 DAYS FROM CONTRACT EXECUTION.  I. GLAZING REQUIREMENTS  1. VERTICAL GLAZED PANELS A. SIZES, SHAPES, AND INSTALL CONFIGURATION AS SHOWN IN THE DRAWINGS. B. 81/8" LAMINATED, RATED FOR LARGE MISSILE IMPACT. C. INTER-LAYER: DIACHROMATIC FILM WITH A COLOR RANGE FROM CYAN TO MAGENTA. D. ACCEPTABLE MANUFACTURERS: a. BENDHEIM (BASIS OF DESIGN) b. SKYLINE DESIGN c. SCHOTT d. 3M 2. HORIZONTAL ROOF GLAZING WITH INTEGRATED PV CELLS (AND WITHOUT) A. SIZES, SHAPES, AND INSTALL CONFIGURATION AS SHOWN IN THE DRAWINGS. B. ANY SHELTER THAT WILL NOT BE HARD-WIRED SHALL HAVE THE PV CELLS. C. ROOF SYSTEM SHALL BE LAMINATED, AND IMPACT RATED FOR LARGE MISSILE IMPACT. INTER-LAYER SHALL CONSIST OF INTEGRATED 6X6" PV CRYSTALLINE SOLAR CELLS. CUSTOM PATTERN CERAMIC FRIT SHALL BE APPLIED TO UNDERSIDE OF BOTTOM LAYER. SEE DETAILS AND ELECTRICAL DRAWINGS FOR MORE INFORMATION. D. ACCEPTABLE MANUFACTURERS: a. SOLAR ONYX (BASIS OF DESIGN) b. CRAWFORD TRACY c. SOLARIA d. DEAMOR e. ENERGY GLASS f. PILKINGTON g. WALTERS & WOLF 3. SHOP DRAWINGS FOR GLAZING INSTALLATION SHALL BE FULLY INTEGRATED INTO THE OVERALL SHOP DRAWINGS REQUIRED IN SECTION "H" OF THESE NOTES. SEPARATE SHOP DRAWINGS OF THE GLAZING INSTALLATION WILL NOT BE ACCEPTABLE.  J. AD-BOX REQUIREMENTS  1. SIZES, SHAPE, AND INSTALL CONFIGURATION AS SHOWN IN THE DRAWINGS. 2. THE AD-BOX DEPICTED IN THESE DRAWINGS IS INTENDED TO HOUSE A VARIETY OF OPTIONS INCLUDING A 4X6" STANDARD STATIC AD POSTER, A 55" DIGITAL DISPLAY, & A 75" DIGITAL DISPLAY. 3. DETAILING OF THE AD-BOX IN THESE DRAWINGS FOR DESIGN INTENT ONLY. FULL SHOP DRAWINGS OF THE AD-BOX, INCLUDING THE INTEGRATION OF THE COMPONENTS LISTED ABOVE, SHALL BE REQUIRED. 4. REMOVABLE ACCESS PANELS SHALL BE SUPPLIED ON EACH FACE. 5. SHOP DRAWINGS FOR THE AD-BOX SHALL BE FULLY INTEGRATED INTO THE OVERALL SHOP DRAWINGS REQUIRED IN SECTION "H" OF THESE NOTES. SEPARATE SHOP DRAWINGS OF THE AD-BOX WILL NOT BE ACCEPTABLE.  K. SHELTER STRUCTURE PAINT  1. HIGH PERFORMANCE LATEX COATING DIRECTLY APPLIED TO SHELTER STRUCTURE, DISPLAY HOUSING, AD-BOX FRAME, AND LEANING RAIL FRAME. 2. REQUIREMENTS FOR SUSTAINABLE DESIGN: ENVIRONMENTAL QUALITY CREDIT (LOW-EMITTING PAINT), MATERIAL RESOURCE CREDIT (BUILDING LIFE-CYCLE IMPACT REDUCTION, PERSISTENT, BIOM ACCUMULATIVE, AND TOXIC SOURCE REDUCTION- LEAD AND CADMIUM). 3. COATING SYSTEM: NEVERADE 2K PERFORMANCE COATING SYSTEM WITH KYNAR CRX EMULSION-BASED, FIELD-APPLIED, WATER BASED, FLUOROPOLYMER LIQUID COATING SYSTEM. 4. 2K CORROSION RESISTANT EPOXY PRIMER AND NEVERADE 2K PERFORMANCE TOP COAT. SPECIFICATION AS FOLLOWS: A. ACCELERATED WEATHERING: 3000 HOURS IN ACCORDANCE WITH ASTM D 4587 B. WEIGHT SOLIDS: 39-55 PERCENT C. SOLIDS BY VOLUME: 35-45 PERCENT D. VOC: LESS THAN 100 G/L E. FINISH: TO BE SELECTED BY ARCHITECT F. OVERALL FILM THICKNESS: 5 TO 6 MILS (0.13 TO 0.15mm) WET. 5. ACCEPTABLE OR APPROVED EQUAL MANUFACTURERS: A. ARV ENGINEERED COATINGS (BASIS OF DESIGN) B. THERMAC C. SHERWIN WILLIAMS 6. COLOR TO BE SELECTED BY ARCHITECT. PROVIDE 6X6 COLOR SAMPLES FOR REVIEW.  L. FABRIC MATERIAL (TEMPORARY SHELTERS):  1. SUNBRELLA OR EQUAL. PROVIDE COLOR SAMPLES FOR REVIEW.	

ARCHITECTURAL ABBREVIATIONS			
ACoust.	ACOUSTICAL	GL.	GENERAL CONTRACTOR PROVIDED
ADJ.	ADJUSTABLE	GCP.	GLASS
AFF.	ABOVE FINISH FLOOR	GWB.	GYPSUM WALL BOARD
A/C	AIR CONDITIONING UNIT	HDWR.	HARDWARE
AHU	AIR HANDLING UNIT	HM.	HOLLOW METAL
ALUM.	ALUMINUM	HORIZ.	HORIZONTAL
APPROX.	APPROXIMATELY	HP.	HIGH POINT
BD.	BOARD	HVAC.	HEATING, VENTILATION & A/C
BLDG.	BUILDING	IN.	IN INCHES
BLK.	BLOCK	INSUL.	INSULATION
BLKG.	BLOCKING	LT. WT.	LIGHT WEIGHT
B.O.	BOTTOM OF	MAX.	MAXIMUM
BUR.	BUILT UP ROOF	MECH.	MECHANICAL
CAB.	CABINET	MEP.	MECHANICAL, ELECTRICAL & PLUMBING
CB.	CATCH BASIN	MFG.	MANUFACTURING
CEM.	CEMENT	MIN.	MINIMUM
CG.	CORNER GUARD	MISC.	MISCELLANEOUS
CT.	CERAMIC TILE	MO.	MASONRY OPENING
CJ.	CONTROL JOINT	MTL.	METAL
CLKG.	CAULKING	NIC.	NOT IN CONTRACT
CLNG.	CEILING	NTS.	NOT TO SCALE
CLR.	CLEAR	OC.	ON CENTER
CLO.	CLOSET	OH.	OPPOSITE HAND
CMU.	CONCRETE MASONRY UNIT	OI.	OWNER INSTALLED
C.O.	CLEAN OUT	OP.	OWNER PROVIDED
COL.	COLUMN	OVHD.	OVERHEAD
CONC.	CONCRETE	PPE.	PERSONAL PROTECTIVE EQUIPMENT
CONST.	CONSTRUCTION	P.T.	PRESSURE TREATED
CONT.	CONTINUOUS	PTD.	PAINTED
CL.	CENTER LINE	QTY.	QUANTITY
C.P.T.	COMMON PATH OF TRAVEL	RCP.	REFLECTED CEILING PLAN
DTL.	DETAIL	RE.	REFERENCE
DF.	DRINKING FOUNTAIN	REF.	REFERENCE
DIA.	DIAMETER	REQD.	REQUIRED
DIM.	DIMENSION	R.D.	ROOF DRAIN
DN.	DOWN	R.O.	ROUGH OPENING
D.O.	DOOR OPENING	SBBC.	SCHOOL BOARD OF BROWARD COUNTY
DWG.	DRAWING	SCHED.	SCHEDULE
EA.	EACH	SCW.	SOLID CORE WOOD
EF.	EXHAUST FAN	SHT.	SHEET
EJ.	EXPANSION JOINT	SIM.	SIMILAR
ELEC.	ELECTRICAL	SPEC.	SPECIFICATIONS
ELEV.	ELEVATION	S.S.	STAINLESS STEEL
EQ.	EQUAL	STD.	STANDARD
EW.	EYE WASH	STL.	STEEL
EXIST.	EXISTING	STOR.	STORAGE
FBC.	FLORIDA BUILDING CODE	STRUCT.	STRUCTURAL
FD.	FLOOR DRAIN	SUSP.	SUSPENDED
FE.	FIRE EXTINGUISHER	T.D.	TRAVEL DISTANCE
FEC.	FIRE EXTINGUISHER CABINET	TEL.	TELEPHONE
F.F.	FINISH FLOOR	TYP.	TYPICAL
FIN.	FINISH	U.L.	UNDERWRITERS LAB
FL.	FLOOR	U.N.O.	UNLESS NOTED OTHERWISE
FP.	FIRE PROTECTION	VCT.	VINYL COMPOSITE TILE
F.T.	FIRE TREATED	V I F.	VERIFY IN FIELD
FT.	FEET/FOOT	W/.	WITH
GALV.	GALVANIZED	W.C.	WATER CLOSET
GA.	GAUGE	W.P.	WATERPROOFING
GCI.	GENERAL CONTRACTOR INSTALLED	YD.	YARD
SUMMARY OF WORK			
NEW PROTOTYPICAL BUS SHELTERS TO BE DEPLOYED CITYWIDE UNDER SITE SPECIFIC SEPERATE PERMITS.			
PROTOTYPE SIZES INCLUDE THE FOLLOWING: 1. MINIMAL (10' X 6.5') 2. STANDARD / ENHANCED (20' X 6.5') 3. MINIMAL (10'X3') 4. STANDARD / ENHANCED (20' X3') 5. TEMPORARY (10' X 6.5') & (10' X 3')		"ENHANCED" SHELTERS SHALL BE HARD-WIRED AND INCLUDE THE FOLLOWING AMENITIES: 1. DIGITAL AD DISPLAYS 2. PASSENGER INFORMATION SYSTEM 3. CCTV SECURITY CAMERAS 4. SPEAKERS	
STANDARD AND MINIMAL SHELTERS SHALL HAVE THE FUTURE ABILITY TO BECOME HARD-WIRED AND RECEIVE THE SAME AMENITIES.			
APPLICABLE CODES			
THE FOLLOWING IS A LIST OF APPLICABLE CODES FOR THE PROJECT, WHERE DIFFERENT REQUIREMENTS ARE SPECIFIED BETWEEN CODES, THE MOST STRINGENT AND RESTRICTIVE REQUIREMENTS ARE APPLICABLE AND ARE NOTED IN THIS OUTLINE.			
FLORIDA BUILDING CODE 6TH EDITION (2017) BUILDING FLORIDA BUILDING CODE 6TH EDITION (2017) ACCESSIBILITY FLORIDA BUILDING CODE 6TH EDITION (2017) MECHANICAL FLORIDA BUILDING CODE 6TH EDITION (2017) ELECTRICAL FLORIDA BUILDING CODE 6TH EDITION (2017) PLUMBING FLORIDA FIRE PREVENTION CODE EDITION (2015)			
BUILDING/ZONING: FIRE JURISDICTION:		MIAMI BEACH, FLORIDA MIAMI BEACH, FLORIDA	
BUILDING DATA			
CONSTRUCTION TYPE (FBC TABLE 601)		TYPE VB	
OCCUPANCY CLASSIFICATION (FBC CHAPTER 3 & 4)		MISCELLANEOUS - GROUP U	

SYMBOL LEGEND		
SYMBOL		DESCRIPTION
 INDICATES DIRECTION OF TRUE NORTH		NORTH ARROW
 VIEW TITLE 1/8" = 1'-0"		VIEW NUMBER, TITLE, & SCALE
 VIEW # ON SHEET SHEET #		BUILDING SECTION TAG
 VIEW # ON SHEET SHEET #		WALL / PARTIAL SECTION TAG
 VIEW # ON SHEET SHEET #		ELEVATION TAGS
 VIEW # ON SHEET SHEET #		CALLOUT TAGS
 0		COLUMN GRID DESIGNATIONS
 Name Elevation		ELEVATION TAG
TYPICAL MATERIALS		
	CONCRETE	 MASONRY
	CONCRETE	 PLYWOOD
	GYPSUM	 WOOD
	STUCCO	 STEEL
	INSULATION	 ALUMINUM
	TILE / STONE	
ARCHITECTURAL INDEX		
SHEET NO.	DESCRIPTION	100% CDs
0000	COVER SHEET	07/03/19
A-0	GENERAL NOTES	07/03/19
A-1	MINIMAL 10' x 6.5' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19
A-2	STANDARD / ENHANCED 20' x 6.5' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19
A-3	MINIMAL 10 x 3' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19
A-4	STANDARD / ENHANCED 20' x 3' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19
A-5	TEMPORARY 10' x 6.5' & 10' x 3' SHELTER	07/03/19
A-6	SECTION & DETAILS	07/03/19
A-7	EXTERIOR DETAILS	07/03/19
STRUCTURAL INDEX		
SHEET NO.	DESCRIPTION	100% CDs
S-001	ABBREVIATIONS SYMBOLS AND GENERAL NOTES	07/03/19
S-101	GENERAL NOTES	07/03/19
S-102	MINIMAL 10' x 6.5' - FOUNDATION PLAN, FRAMING PLAN, DETAILS	07/03/19
S-103	ENHANCED 20' x 6.5' - FOUNDATION PLAN, FRAMING PLAN, DETAILS	07/03/19
S-104	MINIMAL 10' x 3' - FOUNDATION PLAN, FRAMING PLAN, DETAILS	07/03/19
S-105	ENHANCED 20' x 3' - FOUNDATION PLAN, FRAMING PLAN, DETAILS	07/03/19
S-106	TEMPORARY 10x6' FOUNDATION PLAN, FRAMING PLAN, DETAILS	07/03/19
S-107	EXISTING FOUNDATIONS	07/03/19
S-201	STRUCTURAL DETAILS	07/03/19
S-202	STRUCTURAL DETAILS	07/03/19
ELECTRICAL INDEX		
SHEET NO.	DESCRIPTION	100% CDs
E-001	ELECTRICAL SYMBOL LEGEND AND GENERAL NOTES	07/03/19
E-101	MINIMAL 10' x 6.5' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19
E-102	ENHANCED 20' x 6.5' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19
E-103	MINIMAL 10 x 3' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19
E-104	ENHANCED 20' x 3' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS	07/03/19

SUBMITTALS:  
PHASE  
100% CD's  
PERMIT SET REVISED

DATE  
07.03.2019  
07.22.2019

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT TEAM  
PROFESSIONAL IN CHARGE

ADOLFO J. COTILLA, JR., AIA

REGISTRATION NUMBER AR-0008011

APPROVED BY AJC

DESIGNED BY PININFARINA / ACAI

DRAWN BY

SR

CHECKED BY

GVG

DATE

DESIGN CONSULTANT

MIAMIBEACH

PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

GENERAL NOTES

SHEET TITLE

ARCHITECT OF RECORD

17-012 G01

PROJECT NUMBER

A-0

SHEET NUMBER

TO THE BEST OF MY KNOWLEDGE AND ABILITY THESE PLANS ARE COMPLETE AND COMPLY WITH THE APPLICABLE BUILDING CODES

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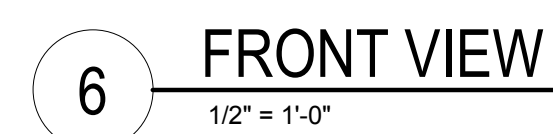
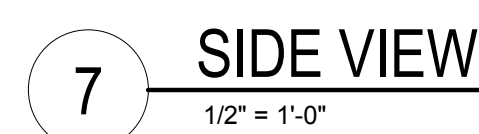
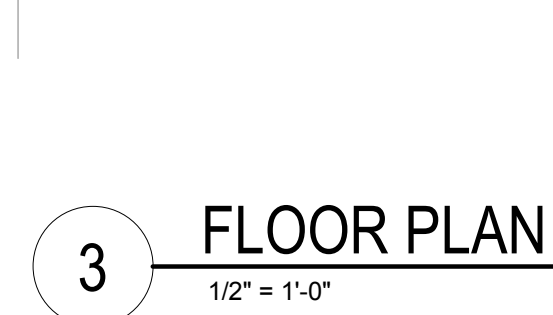
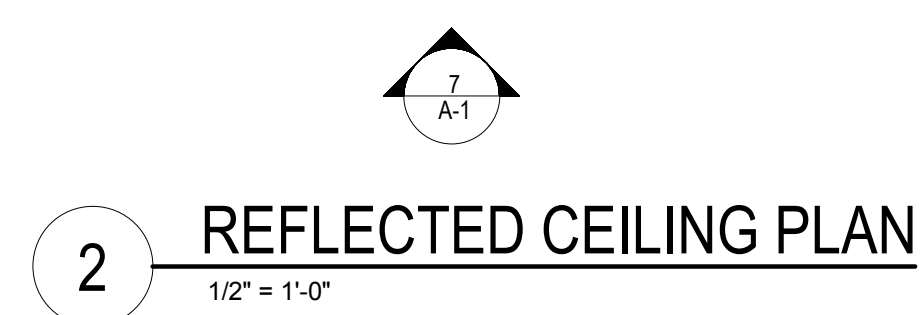
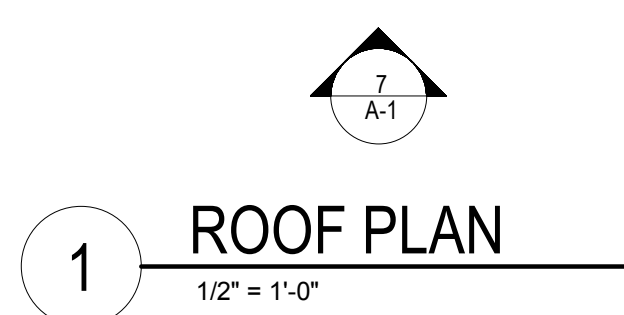
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NOTE:

NON-HARD WIRED SHELTERS SHALL HAVE THE FUTURE ABILITY TO BE CONVERTED TO HARDWIRED, AND ADD THE SECURITY CAMERAS, P.I.S. SYSTEMS, AND SPEAKERS DEFINED ABOVE.

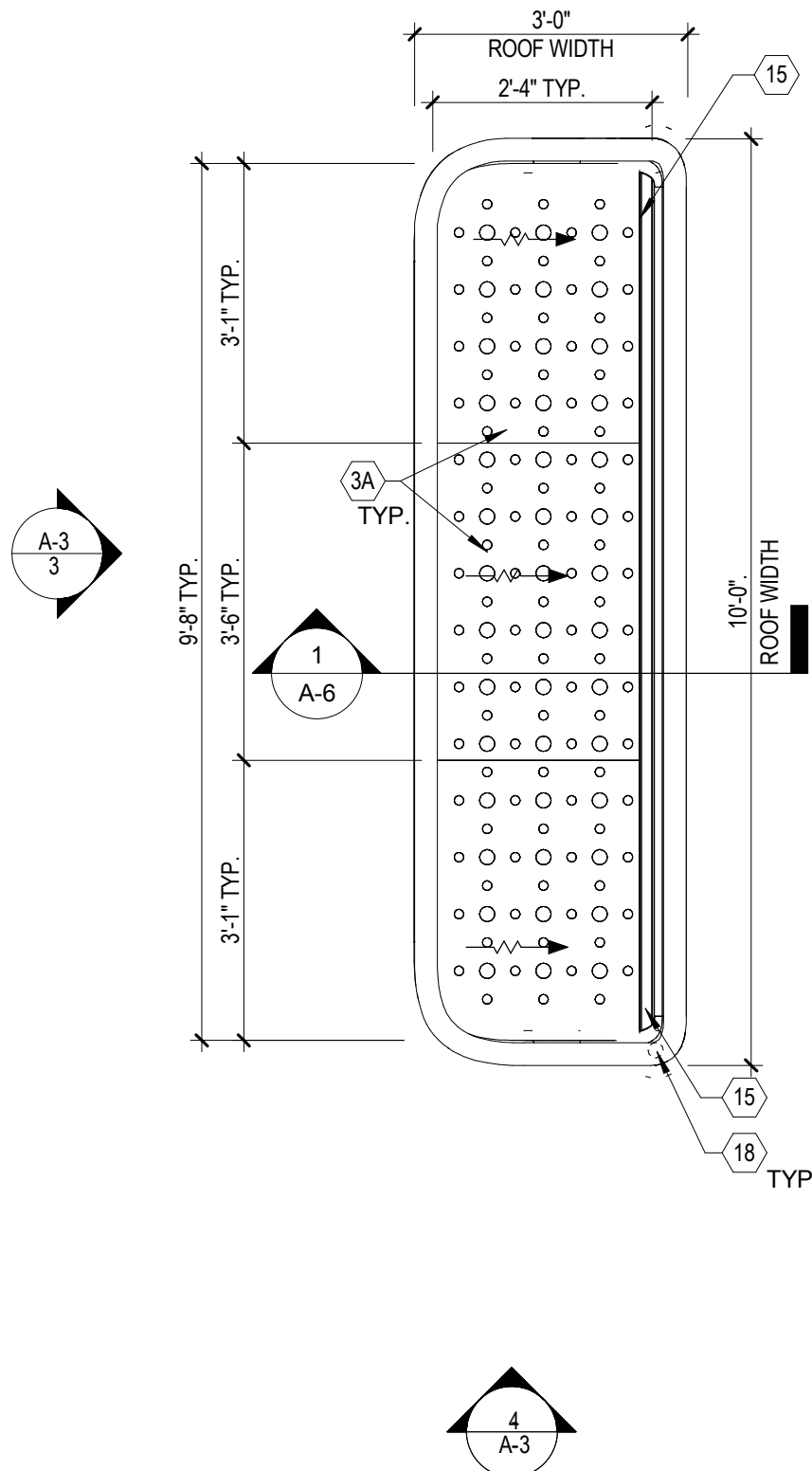
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AND ABILITY THESE PLANS ARE  
COMPLETE AND COMPLY WITH THE  
APPLICABLE BUILDING CODES

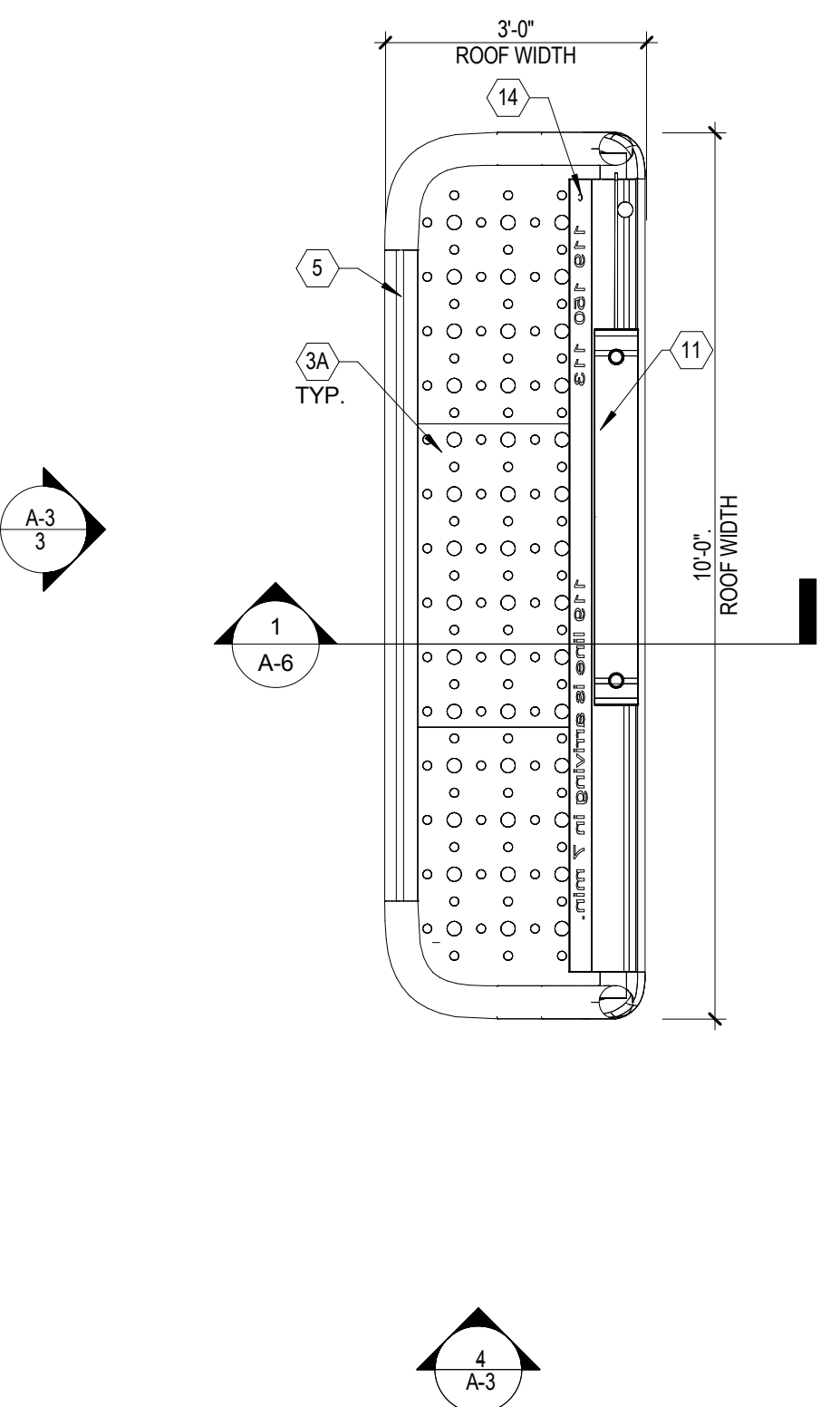




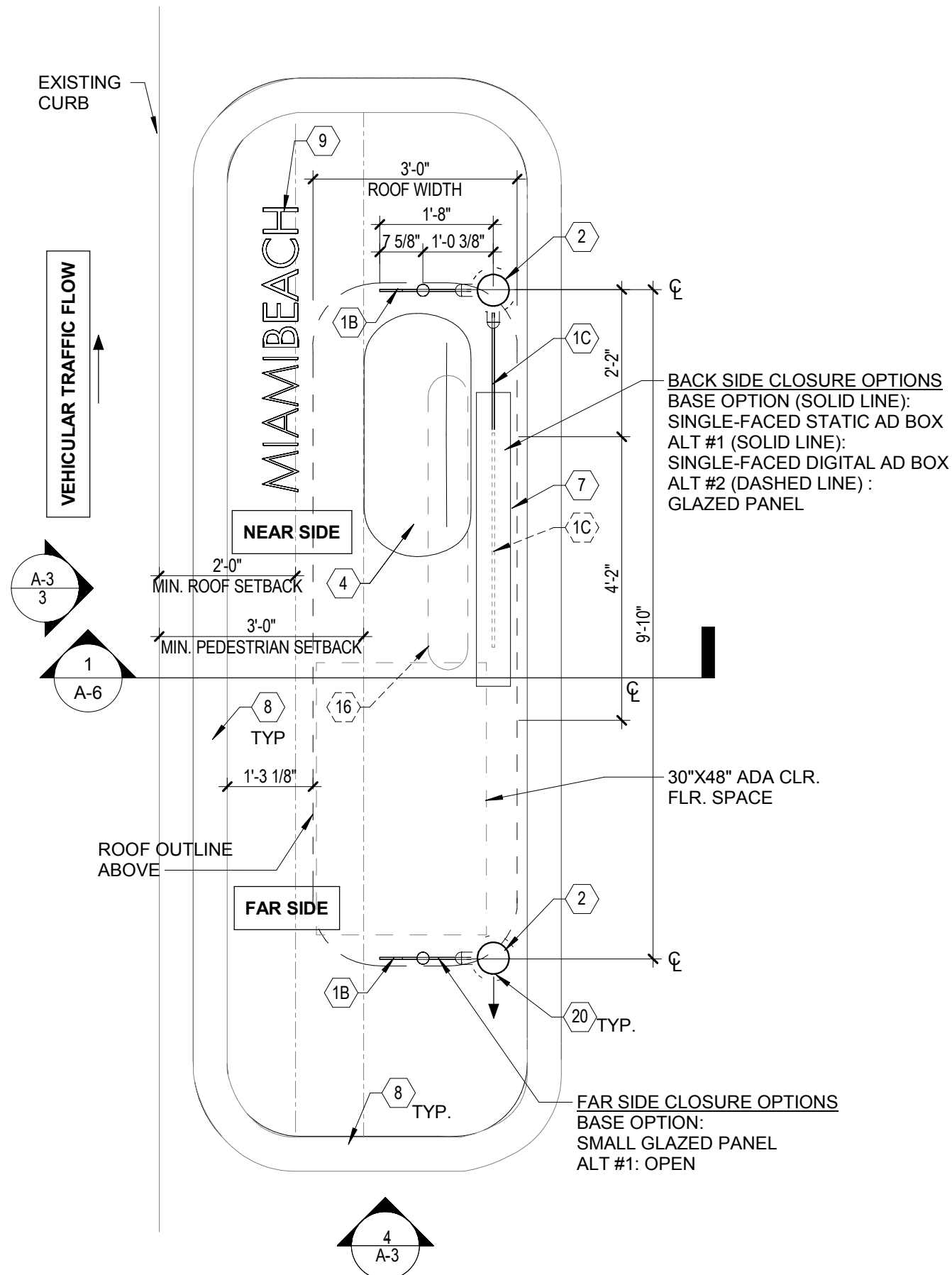




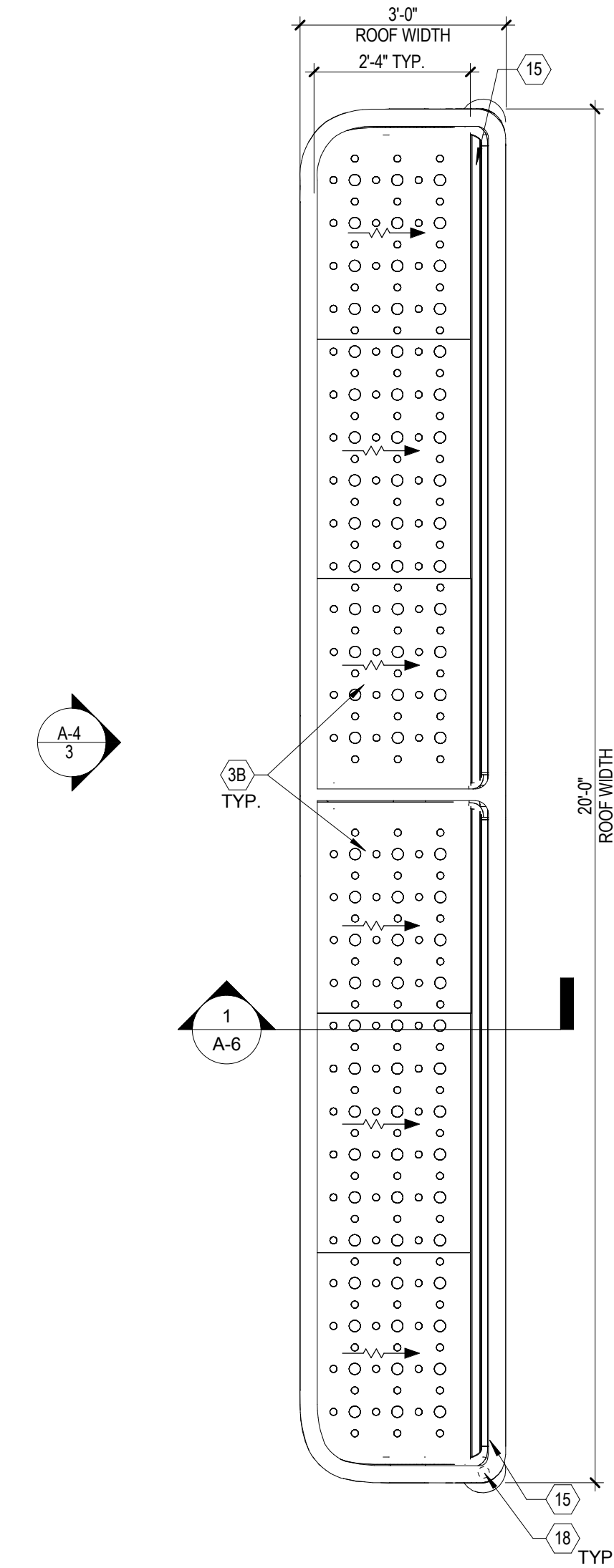
2 ROOF PLAN  
1/2" = 1'-0"



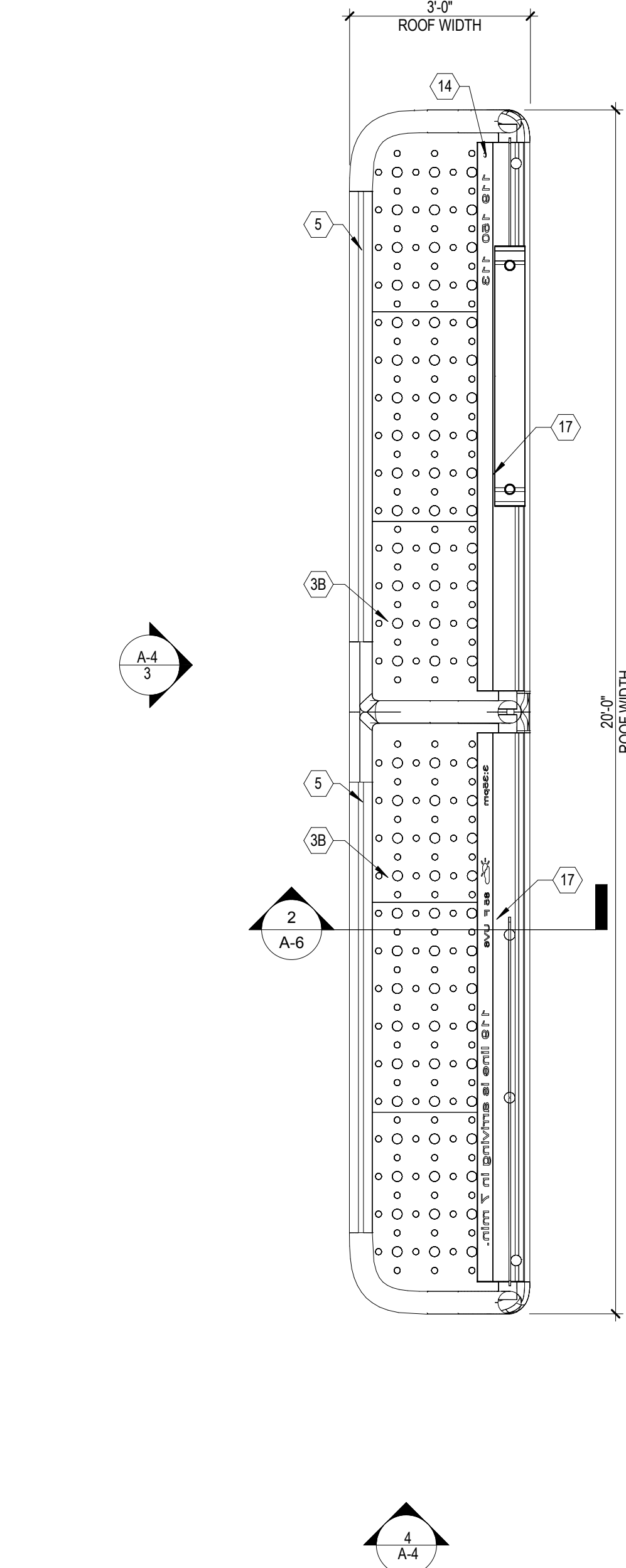
1 REFLECTED CEILING PLAN  
1/2" = 1'-0"



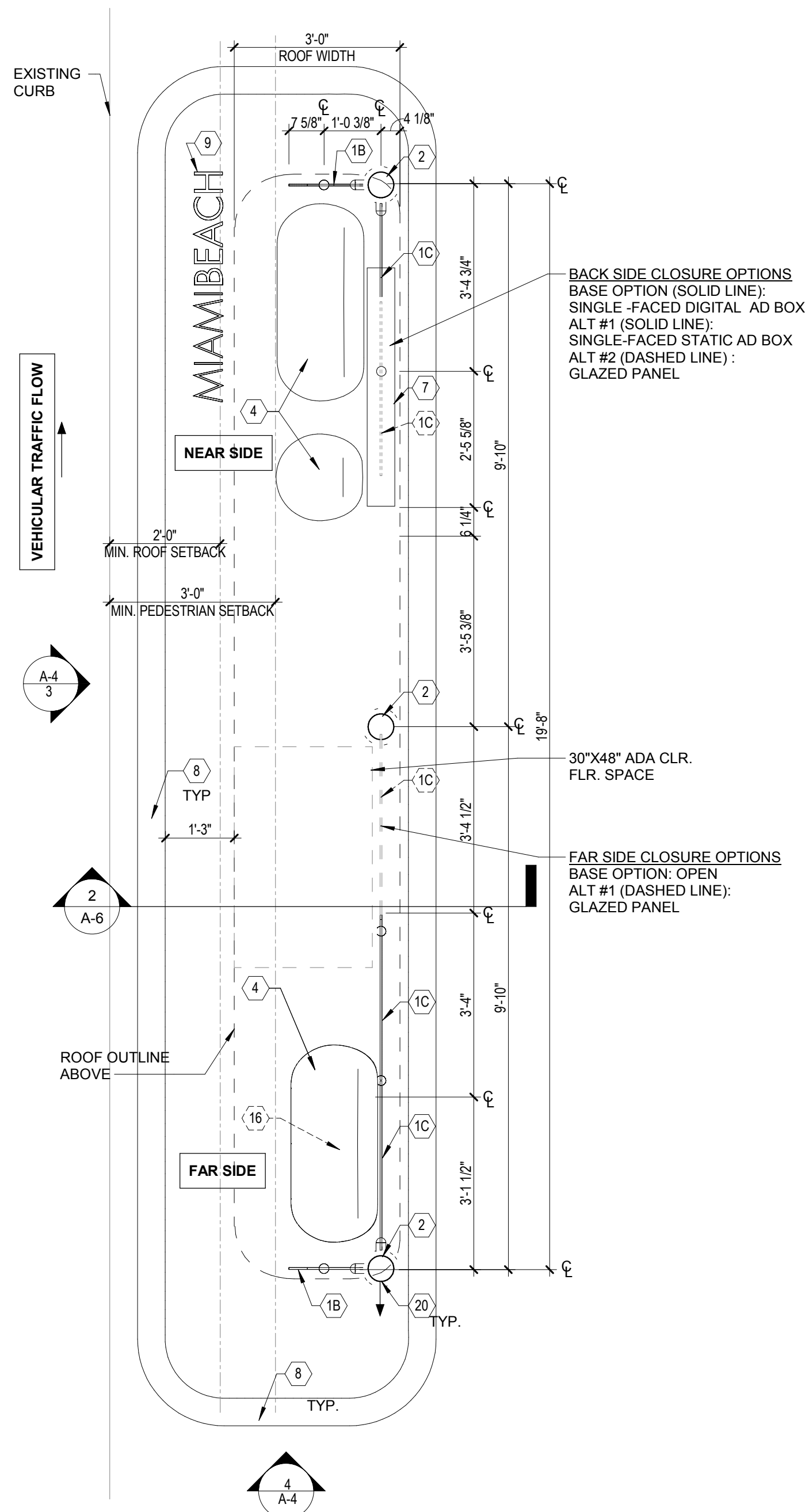




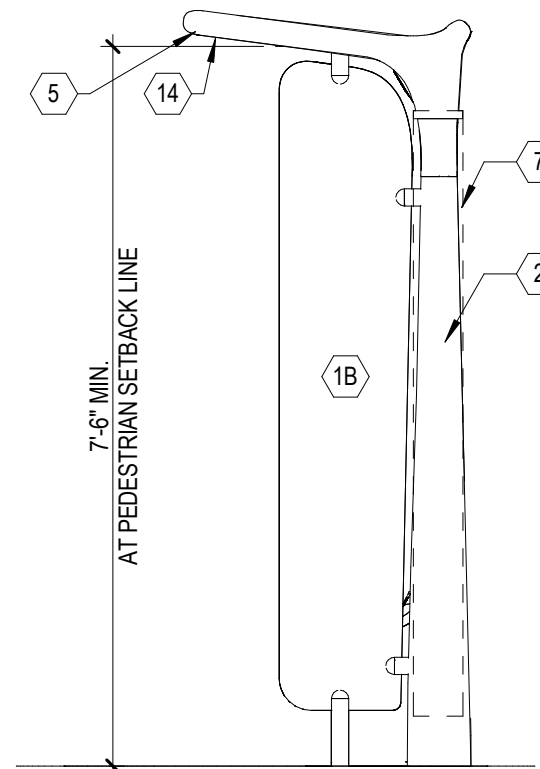
1 ROOF PLAN  
1/2" = 1'-0"



2 REFLECTED CEILING PLAN  
1/2" = 1'-0"

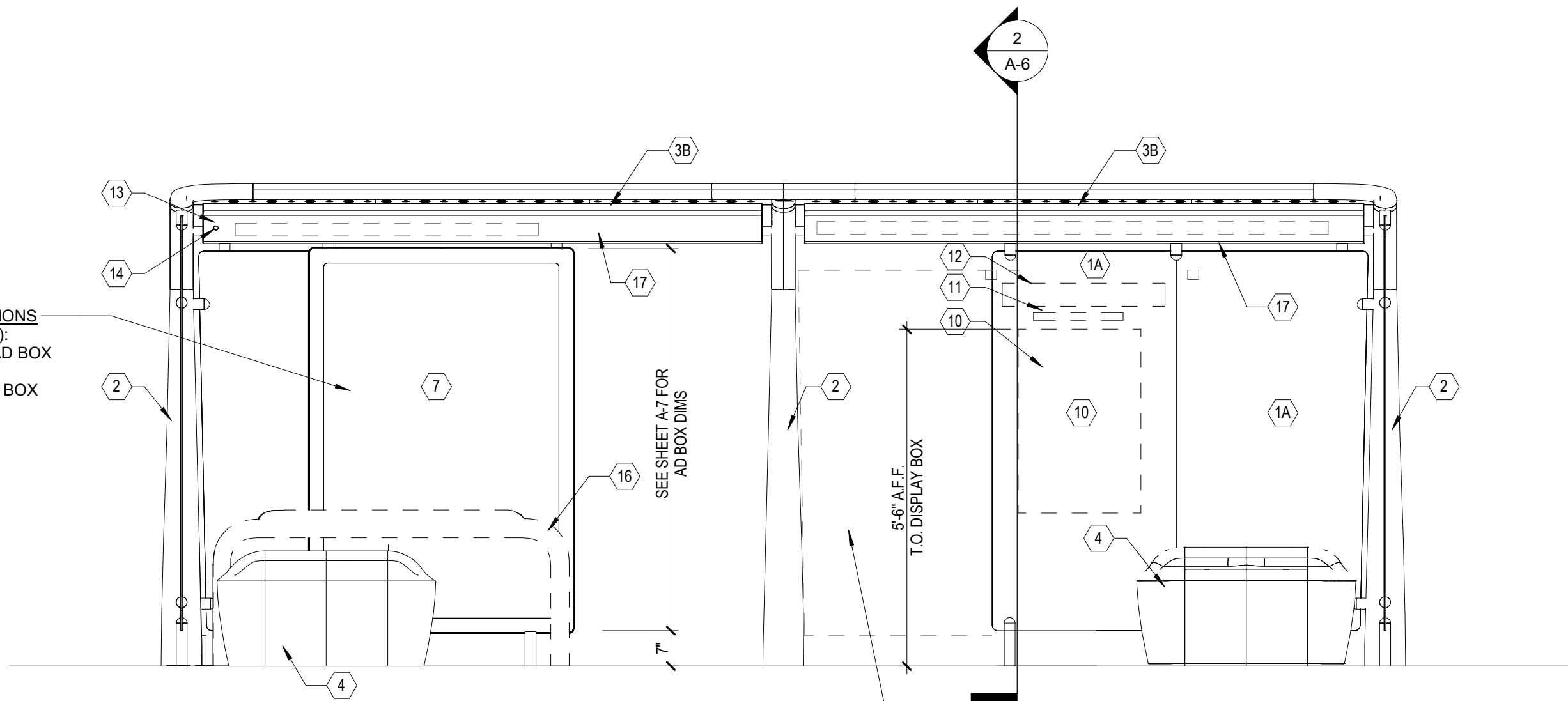


5 FLOOR PLAN  
1/2" = 1'-0"



4 SIDE VIEW  
1/2" = 1'-0"

BACK SIDE CLOSURE OPTIONS  
BASE OPTION (SOLID LINE):  
SINGLE-FACED DIGITAL AD BOX  
ALT #1:  
SINGLE-FACED STATIC AD BOX  
ALT #2: GLAZED PANEL



3 FRONT VIEW  
1/2" = 1'-0"

FAR SIDE CLOSURE OPTIONS  
BASE OPTION: OPEN  
ALT #1 (DASHED LINE):  
GLAZED PANEL

## FLOOR/ROOF PLAN KEY NOTES

- 1A) OPTIONAL LARGE GLAZED SIDE PANEL, 3/8" THICK, LAMINATED IMPACT GLAZING WITH DIACHROMATIC INTER-LAYER, SEE PLACEMENT OPTIONS AND TYPICAL DETAILS ON SHEET A-7
- 1B) OPTIONAL SMALL GLAZED SIDE PANEL, 3/8" THICK, LAMINATED IMPACT GLAZING WITH DIACHROMATIC INTER-LAYER, SEE PLACEMENT OPTIONS AND TYPICAL DETAILS ON SHEET A-7
- 1C) REAR GLAZED PANEL, 3/8" THICK, LAMINATED IMPACT GLAZING WITH DIACHROMATIC INTER-LAYER, SEE PLACEMENT OPTIONS AND TYPICAL DETAILS ON SHEET A-7
- 2) TAPERED ALUMINUM STRUCTURE WITH OFF-WHITE INDUSTRIAL COAT FINISH, COLOR PER SPECIFICATION
- 3A) IMPACT GLAZING ROOF SYSTEM WITH INTEGRATED PV CRYSTALLINE SOLAR CELLS, SEE DETAILS ON SHEET A-7
- 3B) IMPACT GLAZING ROOF SYSTEM WITHOUT PV CELLS (ONLY AT LOCATIONS THAT ARE HARDWIRED), CUSTOM CERAMIC FRIT PATTERN APPLIED TO UNDERSIDE OF GLAZING, SEE DETAILS ON SHEET A-7
- 4) CAST CONCRETE ORTHOPEDIC SEATING, SEE SHEET A-7 FOR TYPICAL DETAILS.
- 5) INTEGRATED LED LINEAR LIGHTING RECESSED INTO THE STRUCTURE, SEE ELECTRICAL DRAWINGS
- 6) DOUBLE-FACED AD BOX (DIGITAL OR STATIC), SEE SHEET A-7 FOR TYPICAL DETAILS, SEE PLACEMENT OPTIONS
- 7) SINGLE-FACED AD BOX (DIGITAL OR STATIC), SEE SHEET A-7 FOR TYPICAL DETAILS, ADVERTISEMENT PANEL, SEE PLACEMENT OPTIONS
- 8) 6" WIDE REFLECTIVE TRAFFIC COATING PAINT OR DURABLE TRAFFIC TAPE, WHITE
- 9) MIAMI BEACH CITY LOGO, REFLECTIVE CONCRETE SURFACE PAINT, WHITE
- 10) SERVICE MAP LOCATION IN ALUMINUM FRAMED ACCESSIBLE DISPLAY BOX, SURFACE MOUNTED, SEE DETAILS ON A-7
- 11) STATION IDENTIFIER SIGN LOCATION, EMBOSSED ON GLAZING
- 12) MIAMI BEACH CITY LOGO LOCATION, EMBOSSED ON GLAZING
- 13) PASSENGER INFORMATION SYSTEM, INTEGRATED AND RECESSED INTO THE DISPLAY HOUSING, SEE MINIMUM TECHNICAL REQUIREMENTS, REQUIRED AT ALL HARD-WIRED SHELTERS.
- 14) CCTV CAMERA INTEGRATED INTO DISPLAY HOUSING, LOCATED AT END OF SHELTER TO BE ABLE TO VIEW ON-COMING TRAFFIC, SEE MINIMUM TECHNICAL REQUIREMENTS, REQUIRED AT ALL HARD-WIRED SHELTERS.
- 15) CUSTOM, SEAMLESS INTEGRATED ALUMINUM GUTTER WITH OVERFLOW OPENINGS, SLOPED TO FAR-SIDE COLUMN
- 16) OPTIONAL LEANING RAIL, IN PLACE OF CONCRETE SEATING, SEE DETAILS ON A-7
- 17) DISPLAY HOUSING WITH REMOVABLE FRONT ACCESS PANEL, HOUSING BODY SHALL BE ALUMINUM, COLOR TO MATCH THE STRUCTURAL COMPONENTS. ACCESS PANEL SHALL BE TINTED ACRYLIC, COLOR TO MATCH BACKGROUND OF P.I.S. DISPLAY SO THAT THE FRONT OF THE HOUSING APPEARS SEAMLESS. OPENINGS FOR CAMERA, P.I.S. DISPLAY AND SPEAKER SHALL BE CUSTOM MADE FOR TIGHT FITTING AND SEAMLESS INTEGRATION. REFER TO MINIMUM TECHNICAL REQUIREMENTS.
- 18) OPENING IN CENTER COLUMN FOR GUTTER
- 19) ROUND OUTDOOR SPEAKER, INTEGRATED AND RECESSED INTO THE DISPLAY HOUSING, SEE MINIMUM TECHNICAL REQUIREMENTS, REQUIRED AT ALL HARD-WIRED SHELTERS.
- 20) INTEGRAL DOWNSPOUT IN FAR SIDE COLUMN, DISCHARGE TO SIDE OF SHELTER

### NOTE:

NON-HARD WIRED SHELTERS SHALL HAVE THE FUTURE ABILITY TO BE CONVERTED TO HARDWIRED, AND ADD THE SECURITY CAMERAS, P.I.S. SYSTEMS, AND SPEAKERS DEFINED ABOVE.

SUBMITTALS:  
PHASE DATE  
100% CD's 07.03.2019  
PERMIT SET REVISED 07.22.2019

### REVISIONS:

NO.	DESCRIPTION	DATE

### PROJECT TEAM

PROFESSIONAL IN CHARGE

ADOLFO J. COTILLA, JR., AIA

REGISTRATION NUMBER AR-0008011

APPROVED BY AJC

DESIGNED BY PININFARINA / ACAI

DRAWN BY SR

CHECKED BY GVG

DATE

DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

STANDARD / ENHANCED 20' x 3' - FLOOR PLAN, REFLECTED CEILING PLAN, ELEVATIONS

SHEET TITLE

ACAI

associates, inc.

architecture engineering

roofing consulting

construction management

AAC001323-EB0004379-CGC010769

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17-012 G01

PROJECT NUMBER

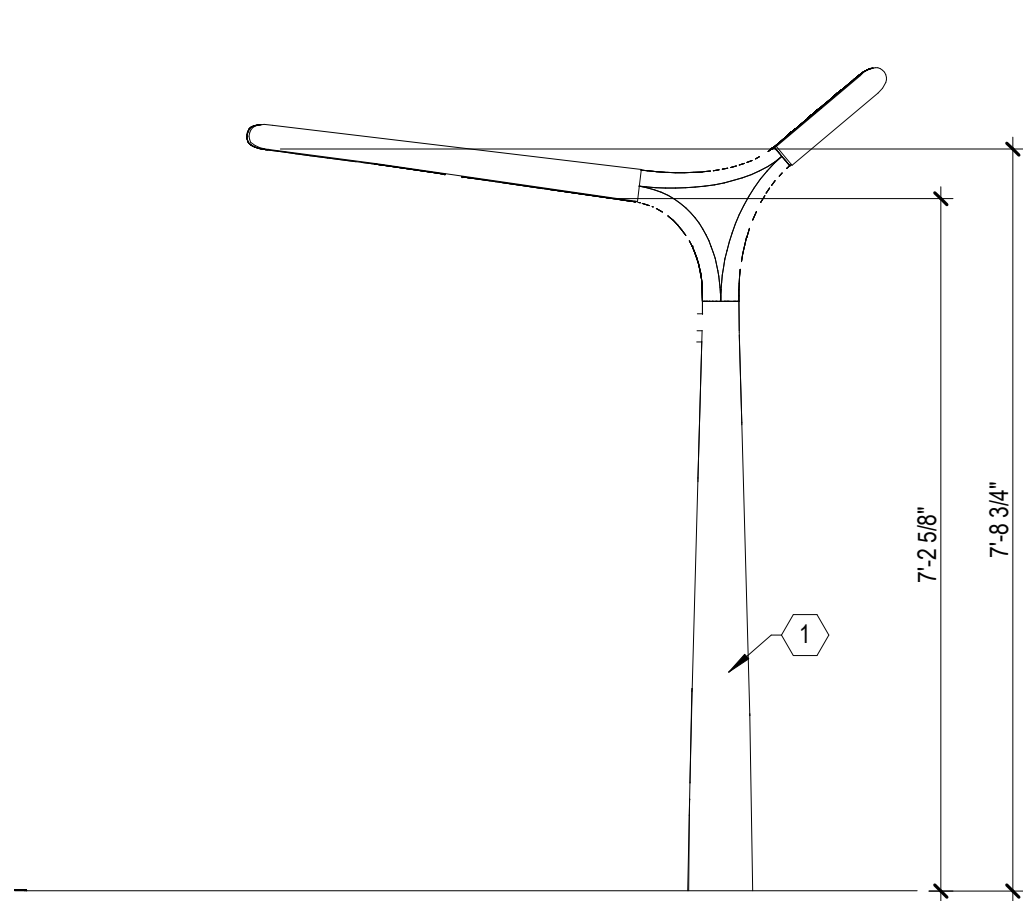
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SHEET NUMBER

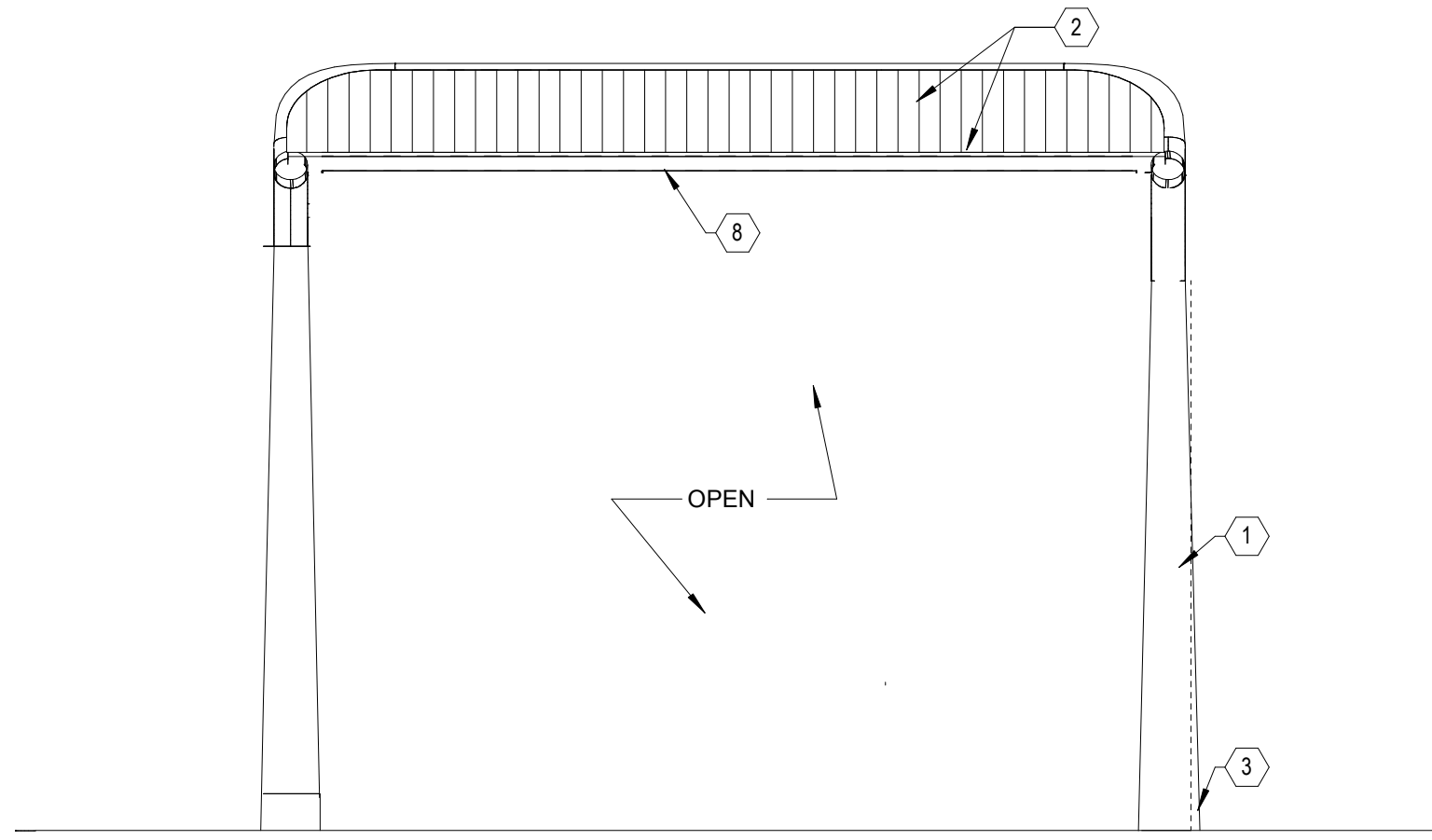
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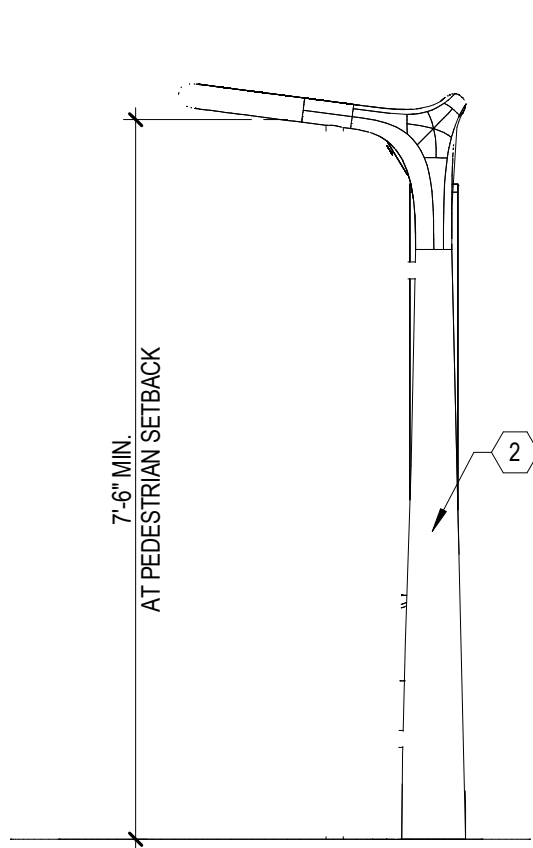




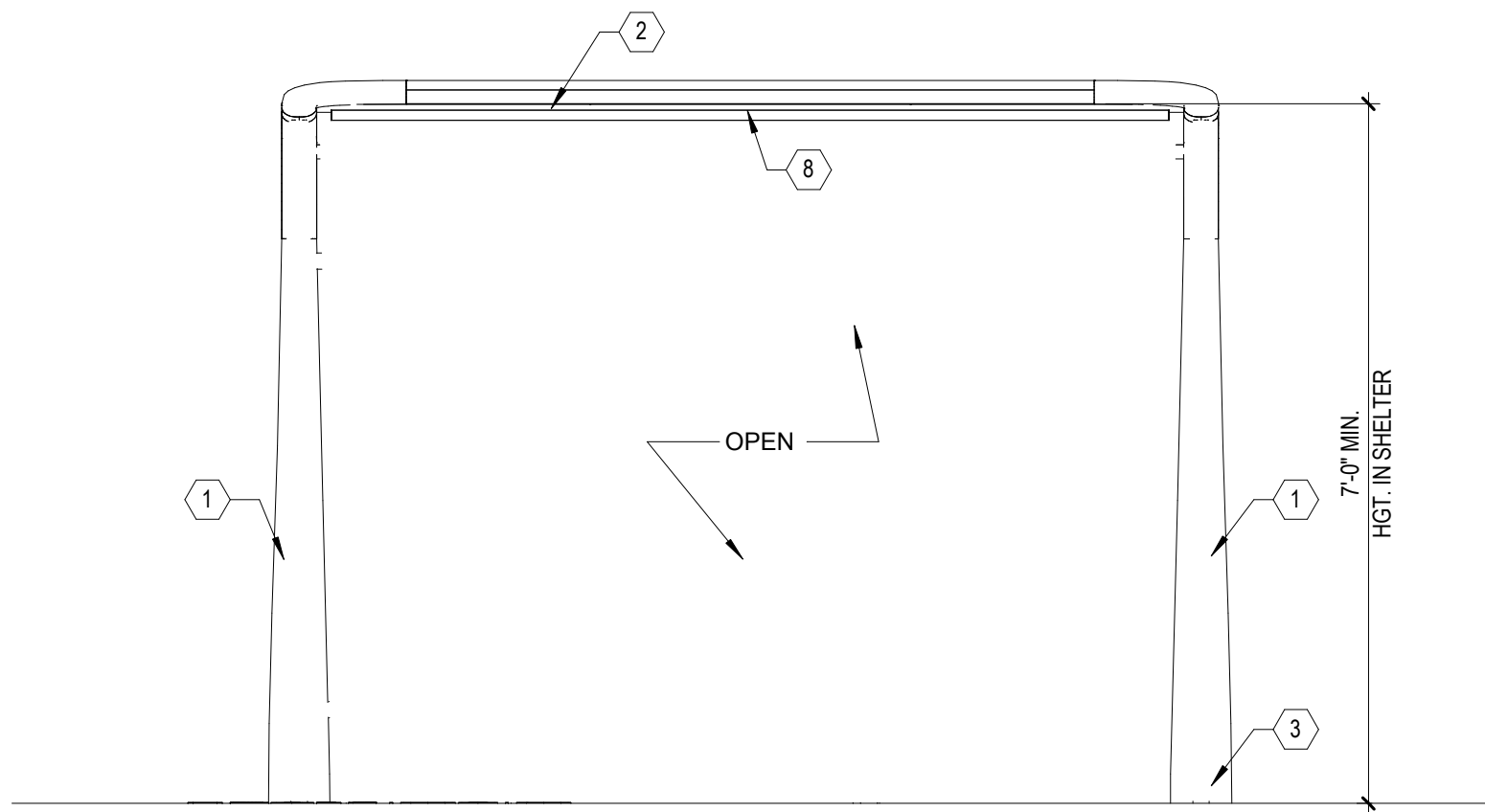
4 SIDE VIEW  
1/2" = 1'-0"



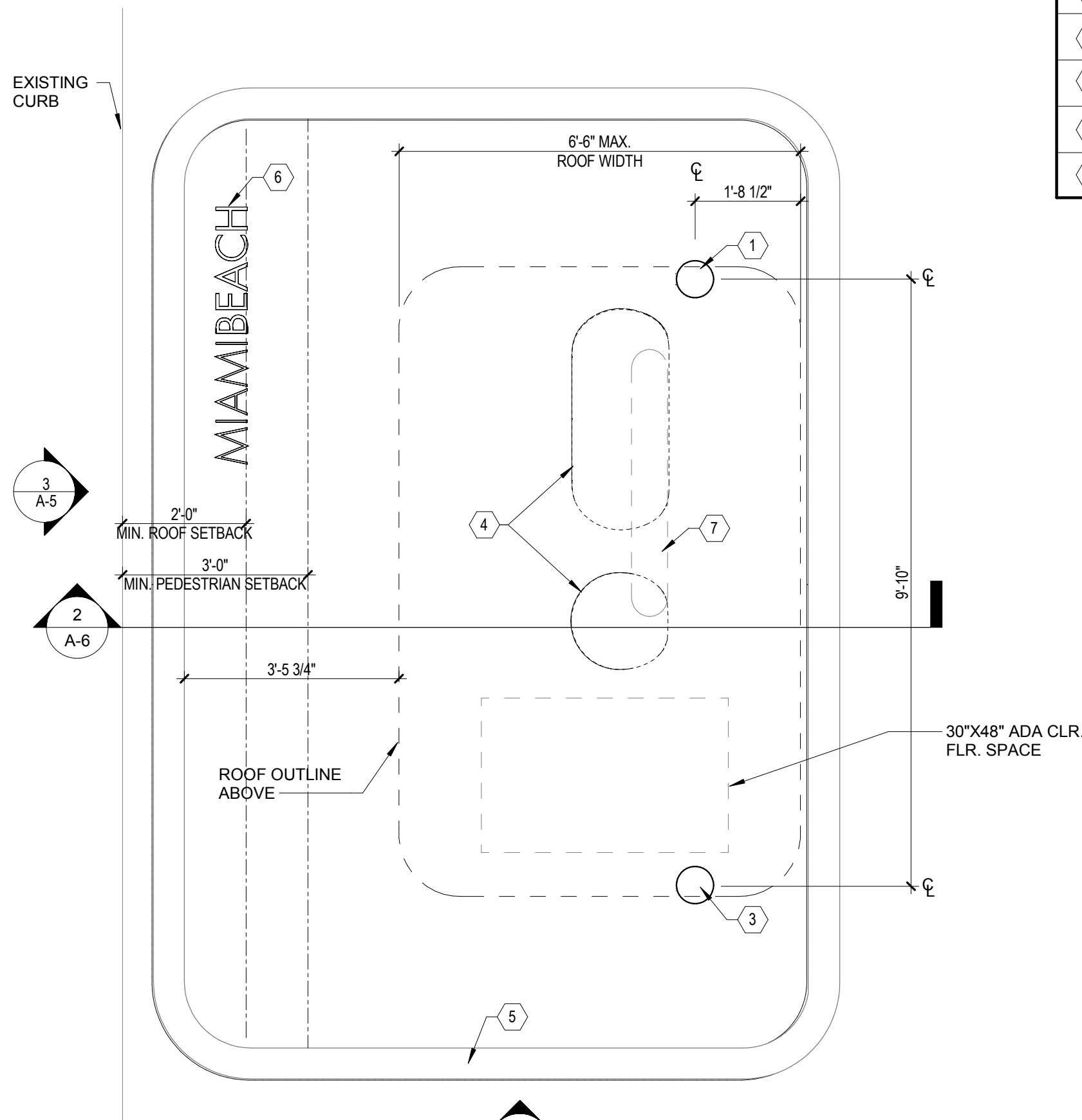
3 FRONT VIEW  
1/2" = 1'-0"



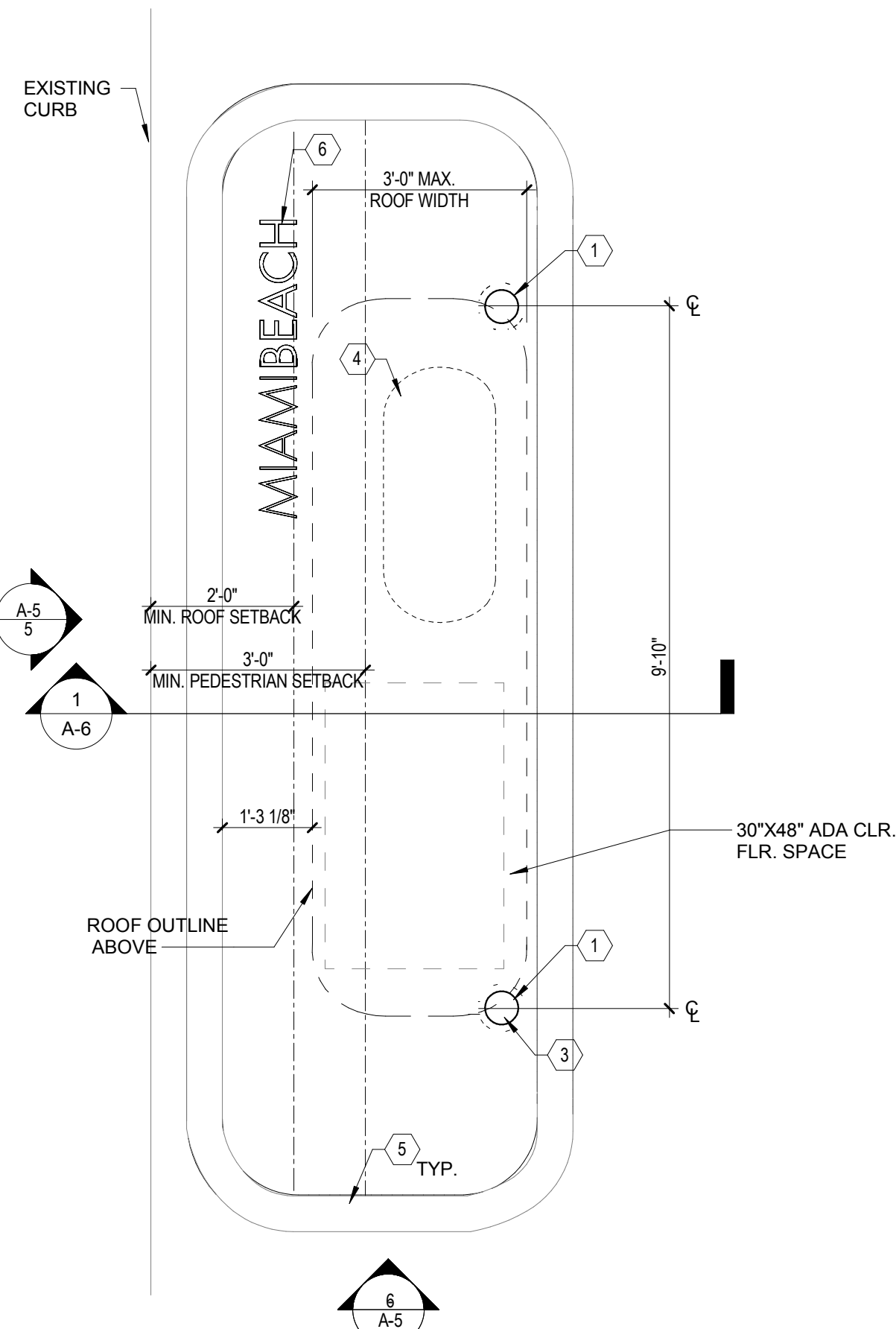
6 SIDE VIEW  
1/2" = 1'-0"



5 FRONT VIEW  
1/2" = 1'-0"



1 FLOOR PLAN  
1/2" = 1'-0"



2 FLOOR PLAN  
1/2" = 1'-0"

FLOOR/ROOF PLAN KEY NOTES	
1	TAPERED ALUMINUM STRUCTURE WITH OFF-WHITE INDUSTRIAL COAT FINISH, COLOR PER SPECIFICATION.
2	BREAKAWAY FABRIC ROOFING MATERIAL PER SPECIFICATION.
3	INTEGRAL DOWNSPOUT IN FAR SIDE COLUMN, DISCHARGE TO SIDE OF SHELTER
4	OPTIONAL CAST CONCRETE ORTHOPEDIC SEATING. SEE DETAILS ON A-7.
5	6" WIDE REFLECTIVE TRAFFIC COATING PAINT OR DURABLE TRAFFIC TAPE, WHITE
6	MIAMI BEACH CITY LOGO, REFLECTIVE CONCRETE SURFACE PAINT, WHITE
7	OPTIONAL LEANING RAIL, IN PLACE OF CONCRETE SEATING. SEE DETAILS ON A-7
8	INTEGRAL SLOPED GUTTER. SEE STRUCTURAL DRAWINGS.

SUBMITTALS:	
PHASE	DATE
100% CD's	07.03.2019
PERMIT SET REVISED	07.22.2019

REVISIONS:		
NO.	DESCRIPTION	DATE

PROJECT TEAM	
PROFESSIONAL IN CHARGE	
ADOLFO J. COTILLA, JR., AIA	
REGISTRATION NUMBER	AR-0008011
APPROVED BY	AJC
DESIGNED BY	PININFARINA / ACAI
DRAWN BY	SR
CHECKED BY	GVG

DATE
DESIGN CONSULTANT
MIAMI BEACH
PININFARINA BUS SHELTERS
CITY OF MIAMI BEACH

TEMPORARY 10' x 6.5' & 10' x 3' SHELTER

SHEET TITLE

ACAI	
associates, inc.	
architecture engineering	
roofing · consulting	
construction management	
AAC001323 · EB0004379 · CGC010769	
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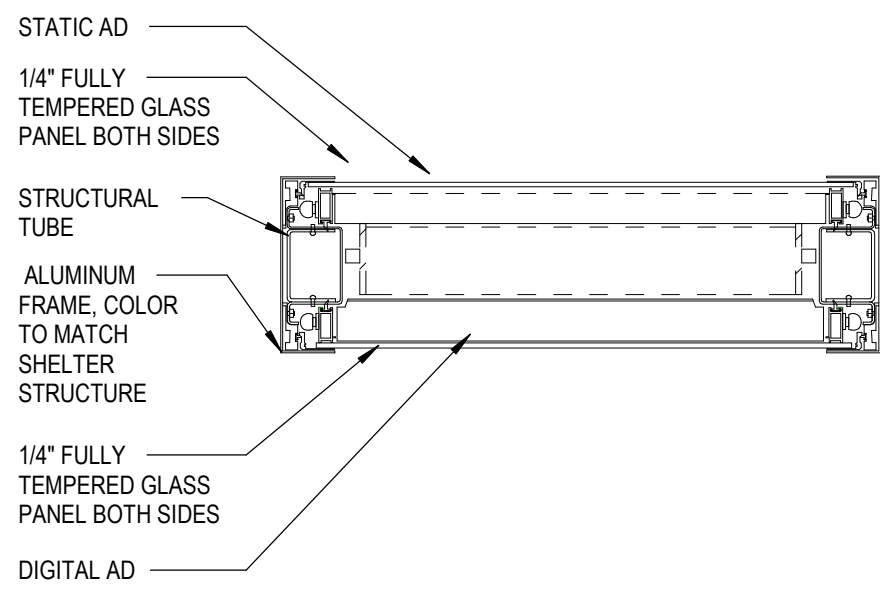
17-012 G01	
PROJECT NUMBER	
A-5	
SHEET NUMBER	
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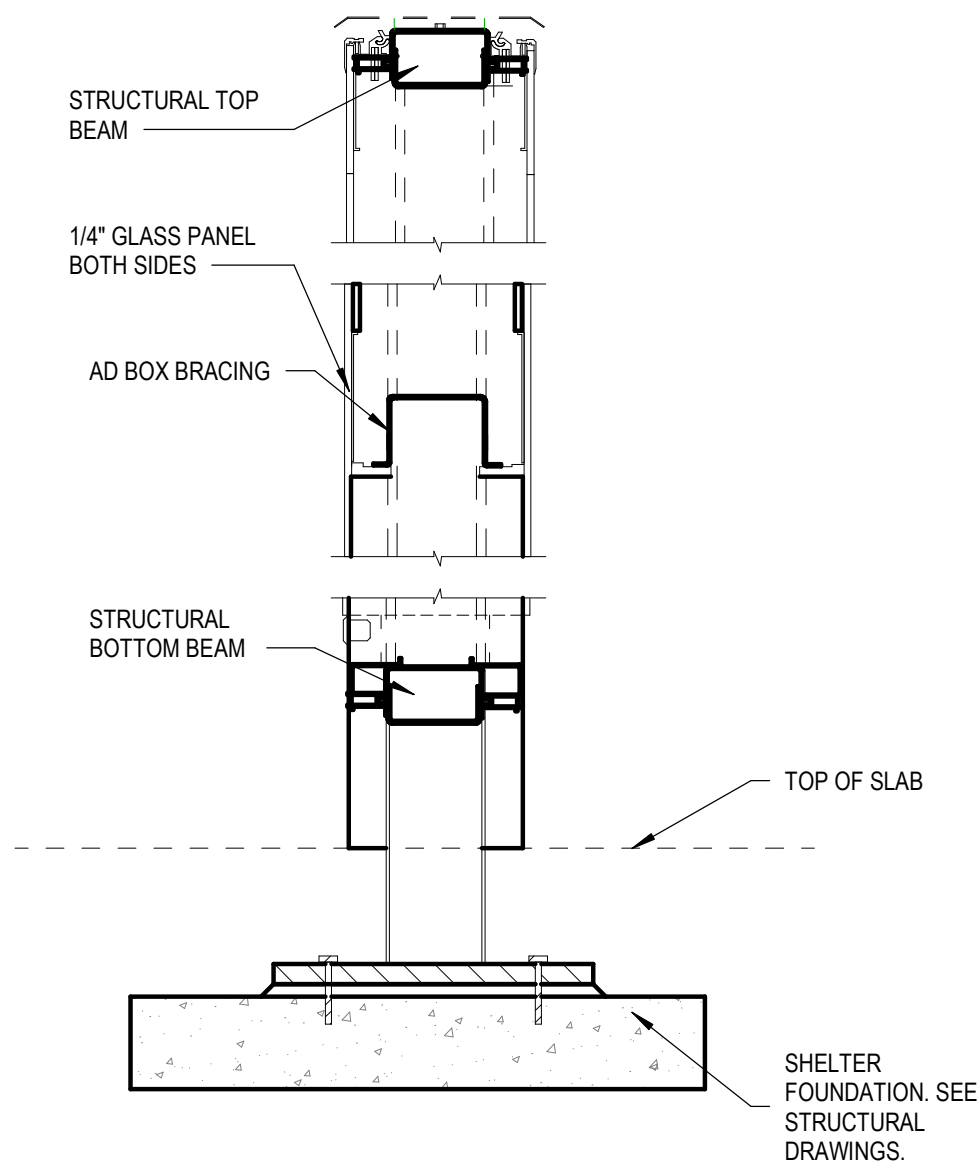




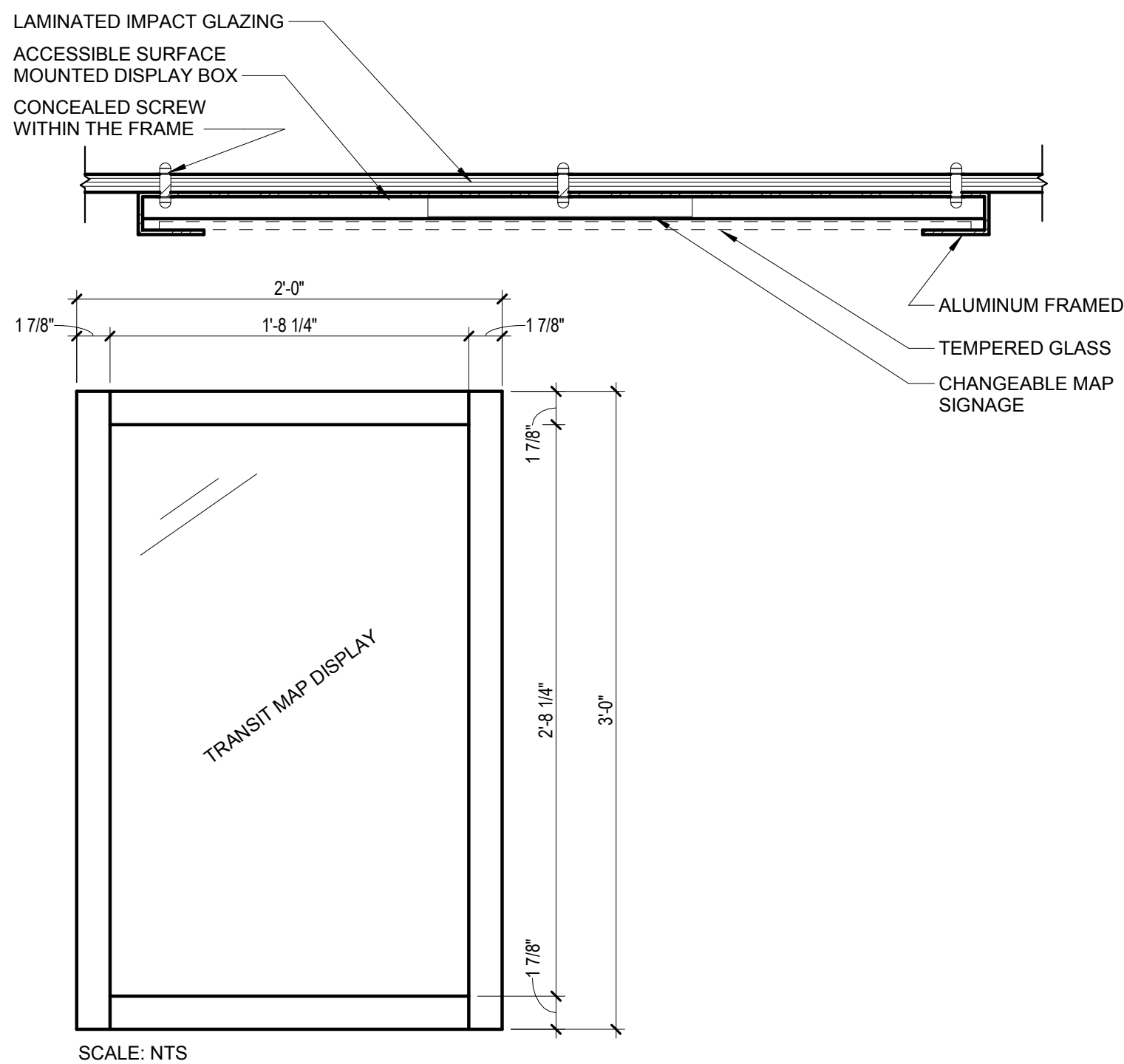
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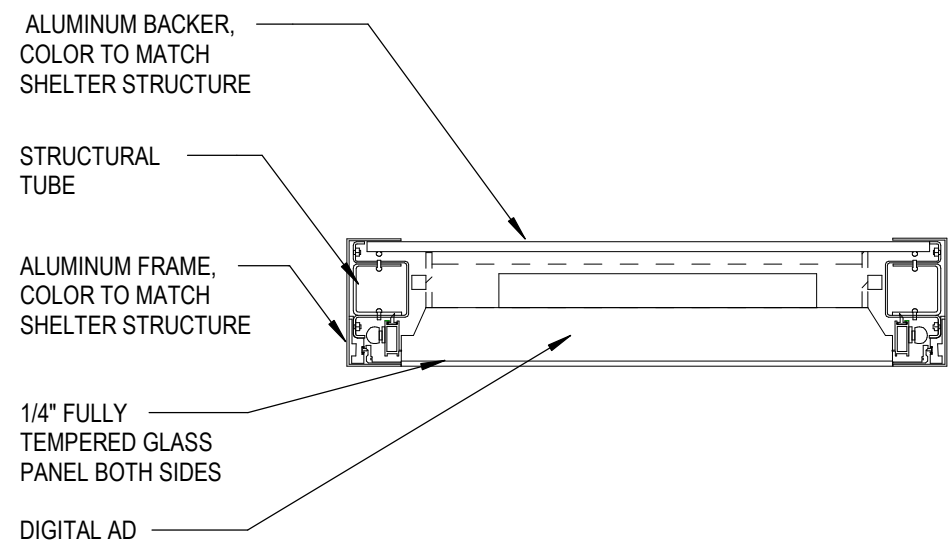
6 DOUBLE SIDED AD BOX (STATIC AND DIGITAL)  
1/2" = 1'-0"



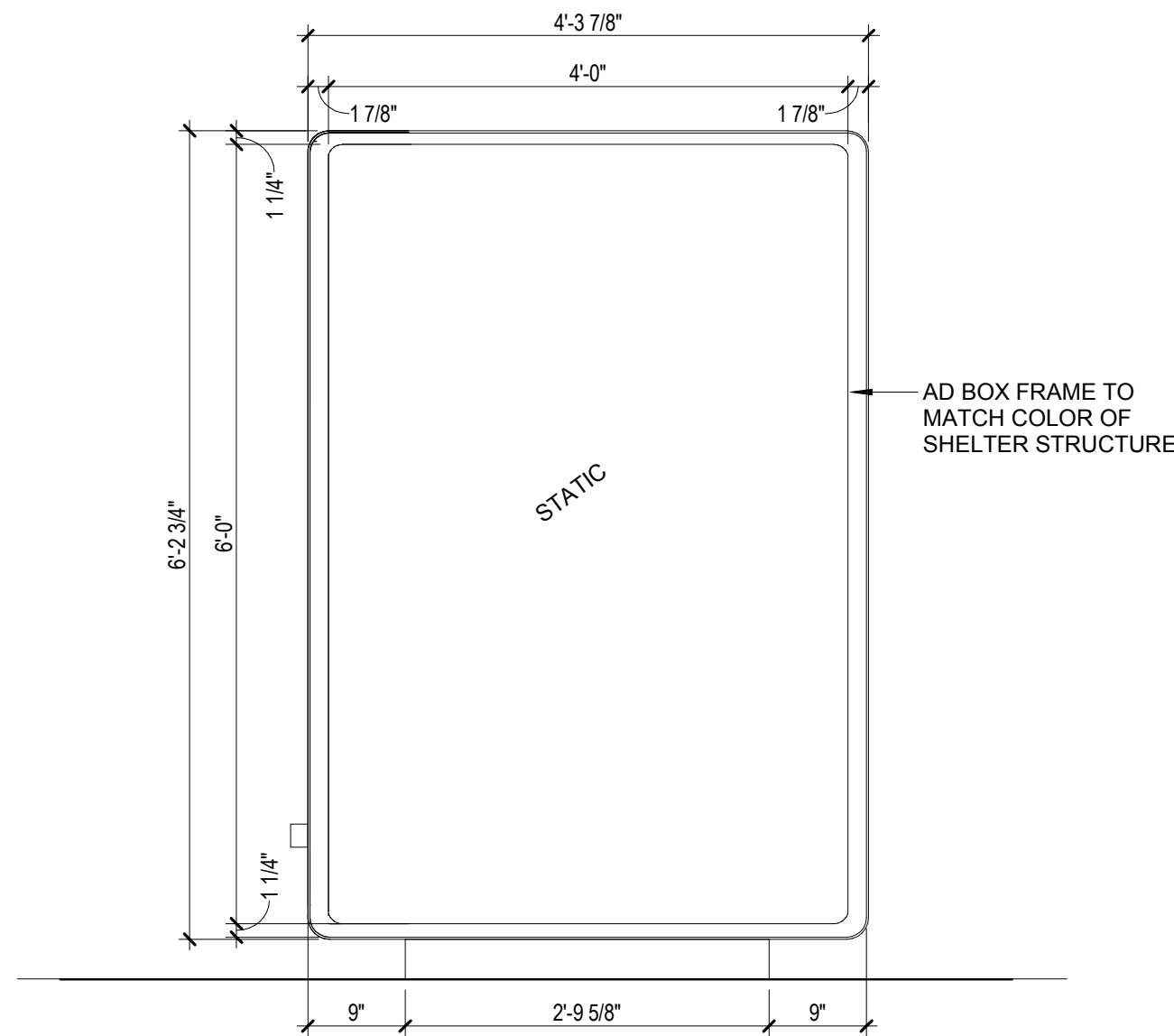
7 AD BOX SECTION  
1/2" = 1'-0"



10 SURFACE MOUNTED DISPLAY CASE  
3" = 1'-0"

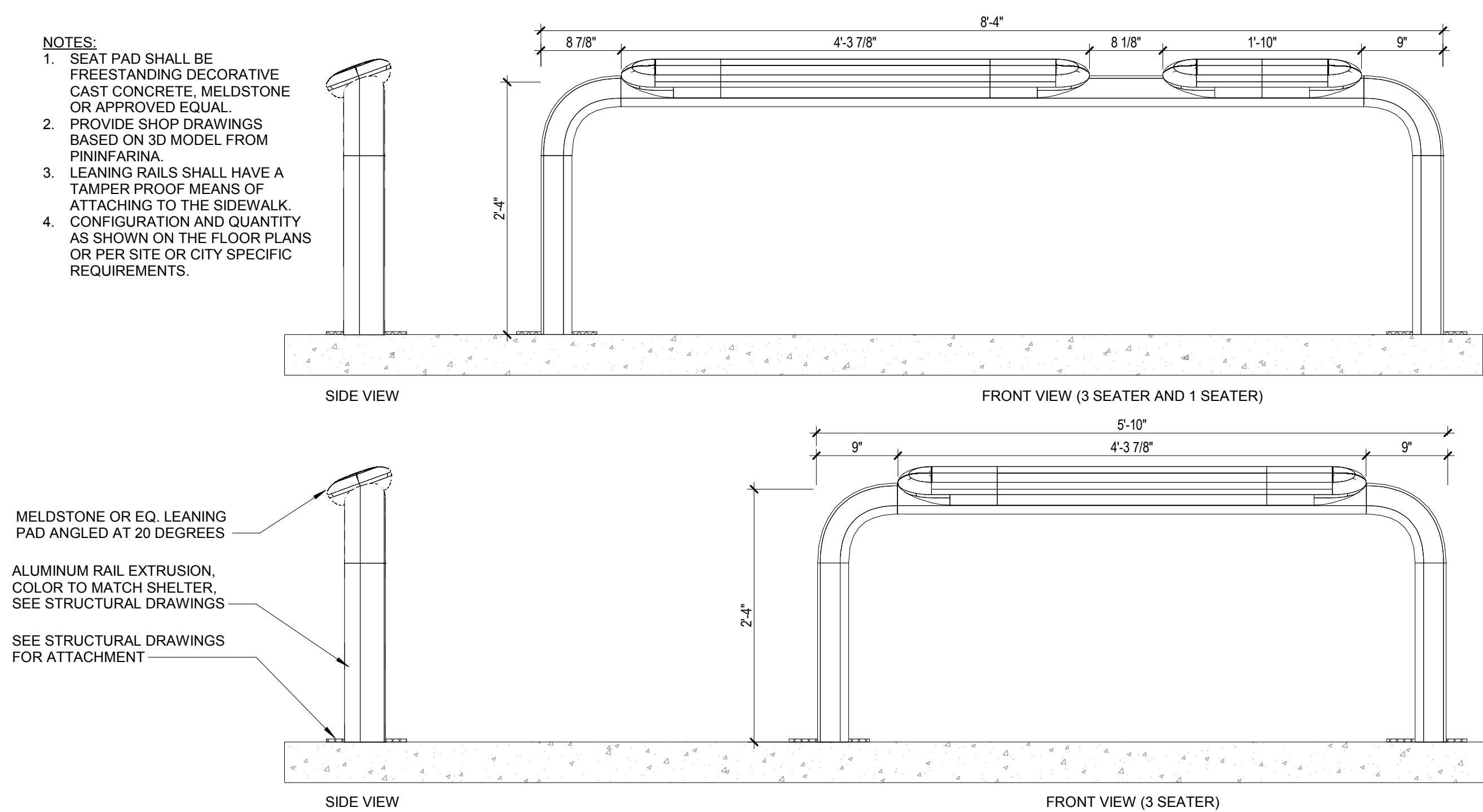


5 SINGLE SIDED DIGITAL AD BOX  
1/2" = 1'-0"

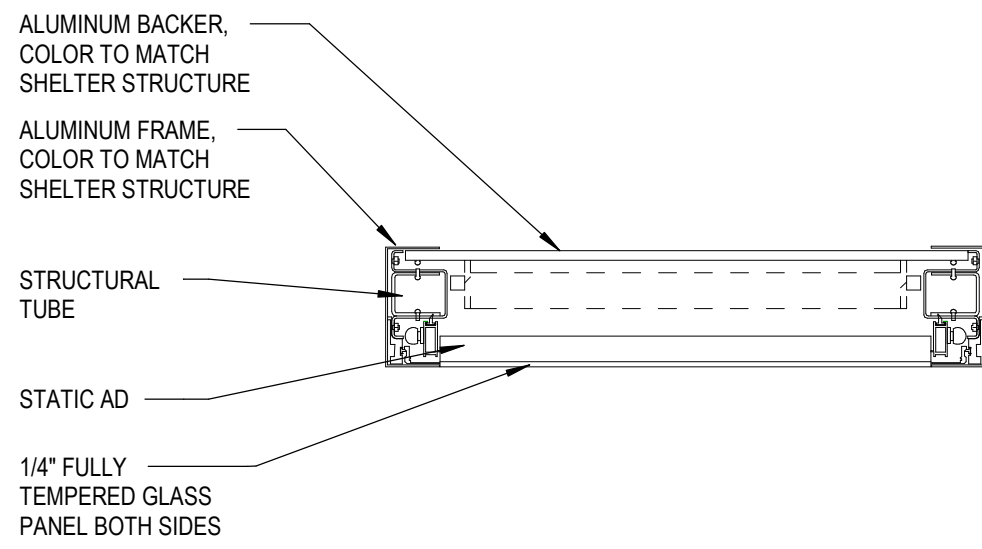


3 4'x6' STATIC AD BOX  
3/4" = 1'-0"

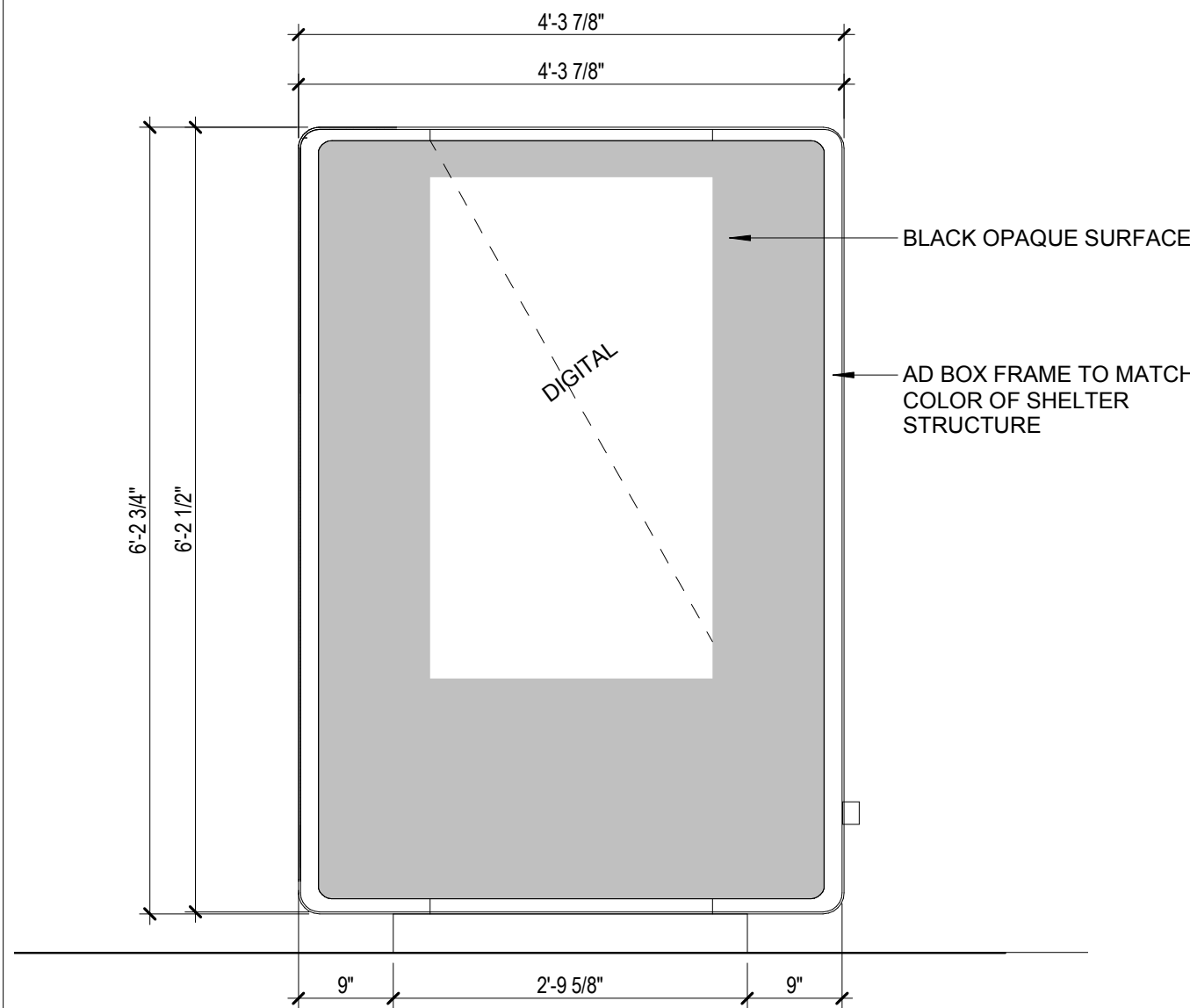
- NOTES:
1. SEAT PAD SHALL BE PRECASTING DECORATIVE CAST CONCRETE, MELDSTONE OR APPROVED EQUAL.
  2. PROVIDE SHOP DRAWINGS BASED ON 3D MODEL FROM PININFARINA.
  3. LEANING RAILS SHALL HAVE A TAMPER PROOF MEANS OF ATTACHING TO THE SIDEWALK. CONFIGURATION AND QUANTITY AS SHOWN ON THE FLOOR PLANS OR PER SITE OR CITY SPECIFIC REQUIREMENTS.
  4. CONFIGURATION AND QUANTITY AS SHOWN ON THE FLOOR PLANS OR PER SITE OR CITY SPECIFIC REQUIREMENTS.



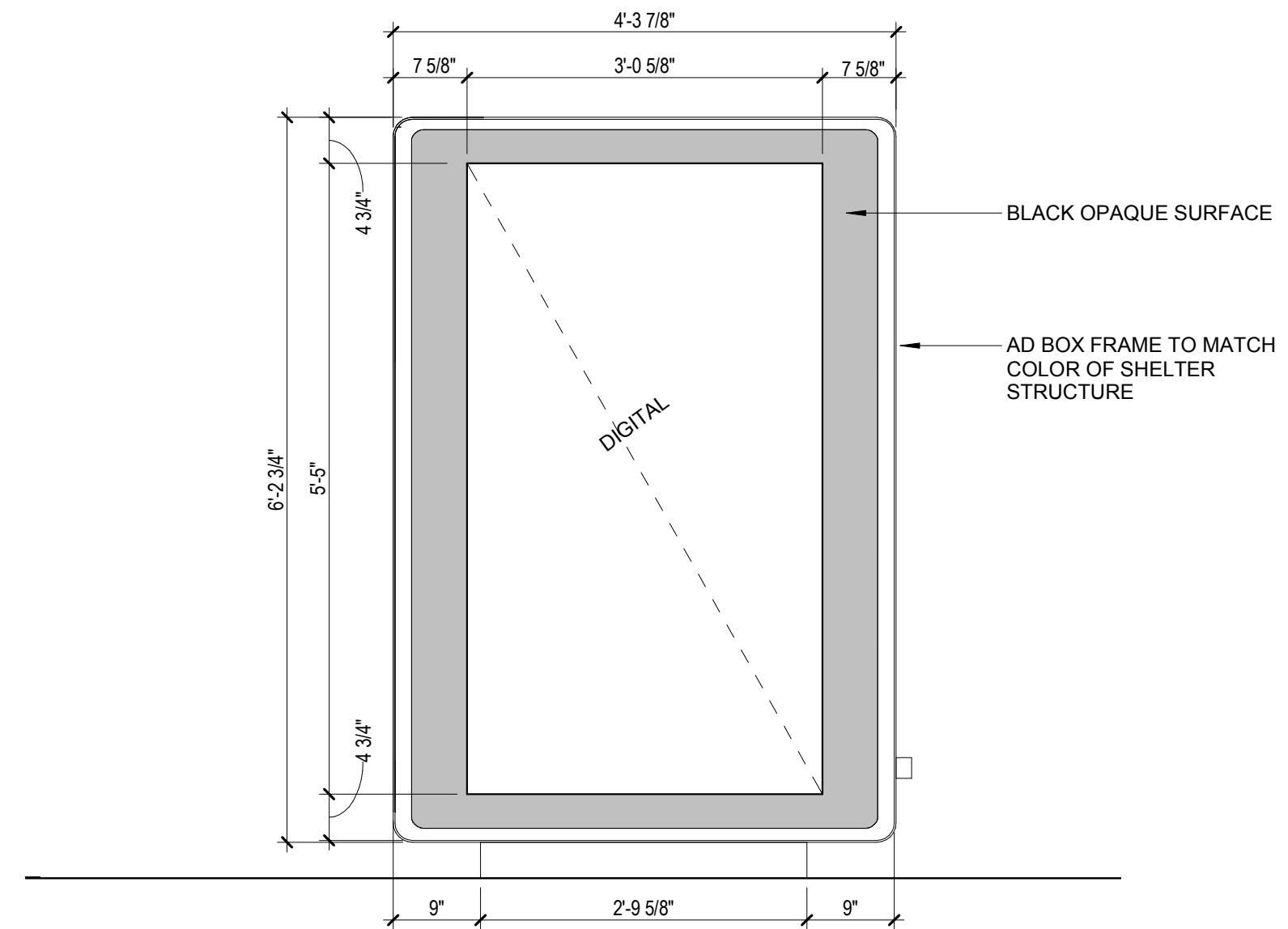
9 LEANING RAIL  
3" = 1'-0"



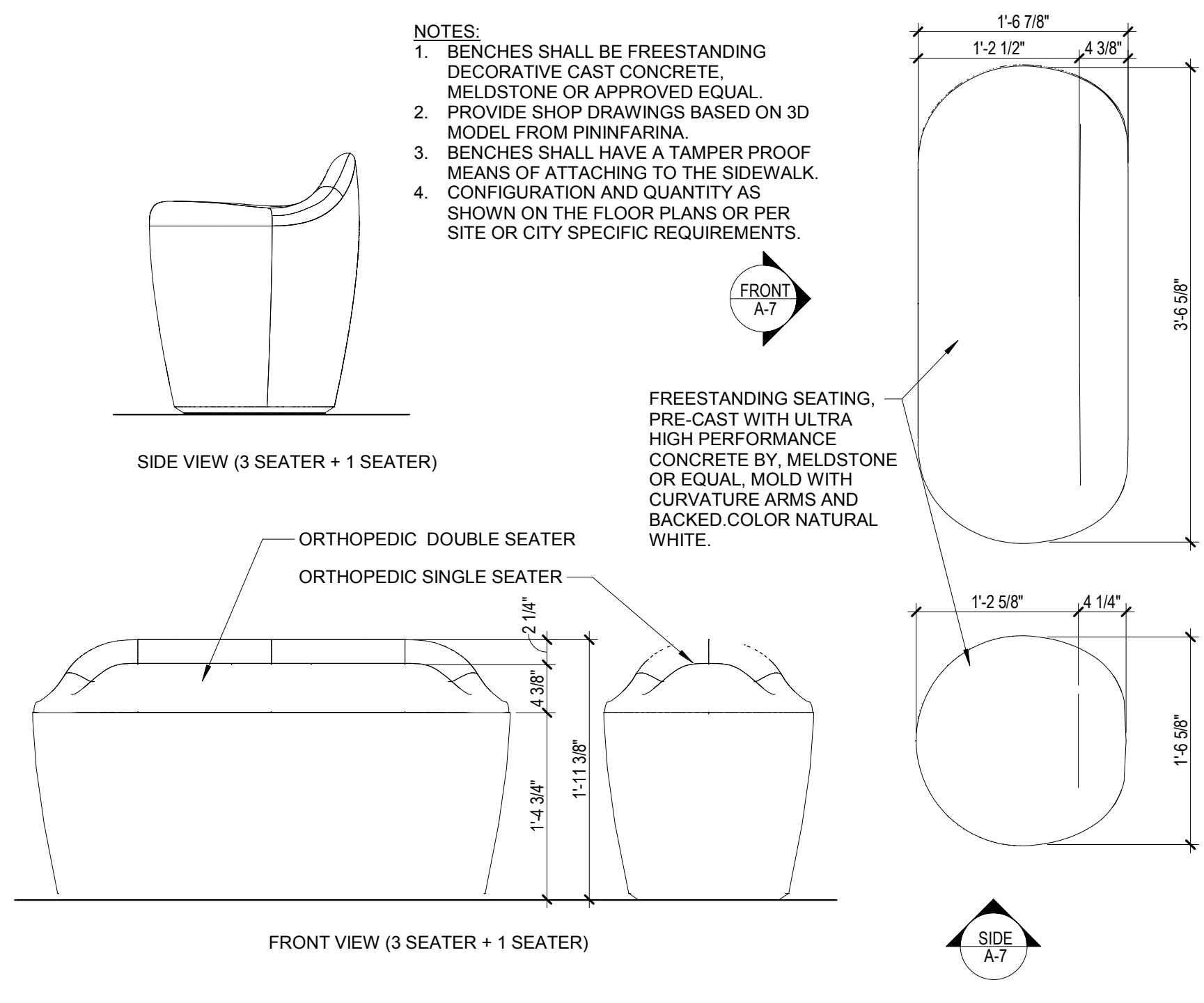
4 SINGLE SIDED STATIC AD BOX  
1/2" = 1'-0"



2 55" DIGITAL AD BOX  
3/4" = 1'-0"



1 75" DIGITAL AD BOX  
3/4" = 1'-0"



8 CONCRETE SEATING  
1" = 1'-0"

SUBMITTALS:  
PHASE DATE  
100% CD's 07.03.2019  
PERMIT SET REVISED 07.22.2019

REVISIONS:		
NO.	DESCRIPTION	DATE

PROJECT TEAM  
PROFESSIONAL IN CHARGE

ADOLFO J. COTILLA, JR., AIA

REGISTRATION  
NUMBER AR-0008011

APPROVED BY AJC

DESIGNED BY  
PININFARINA / ACAI

DRAWN BY SR

CHECKED BY  
GVG

DATE

DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS  
SHELTERS

CITY OF MIAMI BEACH

EXTERIOR DETAILS

SHEET TITLE

ACAI  
associates, inc.  
architecture engineering  
roofing consulting  
construction management

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17-012 G01

PROJECT NUMBER

A-7

SHEET NUMBER  
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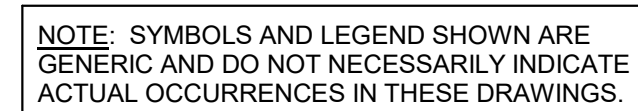
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HD	HOT DIPPED
HOG	HOT DIPPED GALVANIZED
HORIZ	HORIZONTAL
HSS	HEADED STUD ANCHOR
HT	HOLLOW STRUCTURAL SECTION
	HEIGHT
I	MOMENT OF INERTIA
ID	INSIDE DIAMETER
I.F.	INSIDE FACE
IN.	INCH
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP (1000 LB)
KLF	KIPS PER LINEAL FOOT
KSI	KIPS PER SQUARE INCH
KWY	KEYWAY

W	WIDE FLANGE SECTION
WI	WITH
WO	WITHOUT
WD	WOOD
WF	WALL FOOTING
WP	WATERPROOF
W.P.	WORKING POINT
WS	WELDED STUD
WT	WEIGHT/STRUCTURAL TEE SECTION
WWF	WELDED WIRE FABRIC
@	AT DESIGNATION
#	POUNDS / REBAR SIZE NUMBER
+/-	PLUS OR MINUS
L	ANGLE
C.L.	CENTER LINE
&	AND
Sx	SECTION MODULUS
Ix	MOMENT OF INERTIA



PLAN NOTE



**NOTE:** SYMBOLS AND LEGEND SHOWN ARE  
GENERIC AND DO NOT NECESSARILY INDICATE  
ACTUAL OCCURRENCES IN THESE DRAWINGS.

SPOT ELEVATION, TYPICALLY  
TOP OF ITEM TAGGED (T/WALL  
T/FOUNDATION, ETC)

9. THE STRUCTURAL ENGINEER'S OBLIGATIONS TO REVIEW SHOP DRAWINGS AND OTHER SUBMITTALS AND TO RETURN THEM IN A TIMELY MANNER ARE CONDITIONED UPON THE PRIOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS OR SUBMITTALS BY THE CONTRACTOR AS REQUIRED IN THE CONSTRUCTION CONTRACT AND THE CONTRACTOR'S SUBMITTAL OF THE SHOP DRAWINGS AND OTHER SUBMITTALS IN ACCORDANCE WITH A WRITTEN SCHEDULE DISTRIBUTED IN ADVANCE TO THE ENGINEER IDENTIFYING THE DATES FOR THE SUBMITTAL OF THE VARIOUS SHOP DRAWINGS AND SUBMITTALS.
10. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF TLC ENGINEERING FOR ARCHITECTURE IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHALL NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK.
11. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXCEED LIFE SPAN AND TO ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE OWNER. THIS PROGRAM SHALL INCLUDE ITEMS SUCH AS, BUT NOT LIMITED TO, PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATINGS FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.
12. IN THE PROFESSIONAL OPINION OF TLC ENGINEERING FOR ARCHITECTURE, INC. THE STRUCTURAL CONTRACT DOCUMENTS FOR THIS PROJECT HAVE BEEN PREPARED IN ACCORDANCE WITH THE DESIGN CRITERIA AS SET FORTH IN THE FLORIDA BUILDING CODE (FBC), 6TH EDITION (2017).
13. TOP OF CONCRETE ELEVATION OF 0'-0" IS USED AS A REFERENCE ELEVATION. ACTUAL TOP OF CONCRETE ELEVATION VARIES. SEE CIVIL DRAWINGS FOR ACTUAL ELEVATION.
14. THE USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS AND USE OF CAD FILES BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF REPRODUCTION OF SHOP DRAWINGS SIGNIFY HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OF THE CONTRACTOR'S ASSUMPTION OF ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.

SEISMIC USE GROUP	I
SEISMIC DESIGN CATEGORY	A
SEISMIC IMPORTANCE FACTOR	1.0

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SUBMITTALS:	
PHASE	DATE
100% CD's	07.03.2019
PERMIT SET REVISED	07.22.2019

REVISIONS:		
NO.	DESCRIPTION	DATE

PROJECT TEAM  
PROFESSIONAL IN CHARGE

CATHY G. TIEDGE, PE

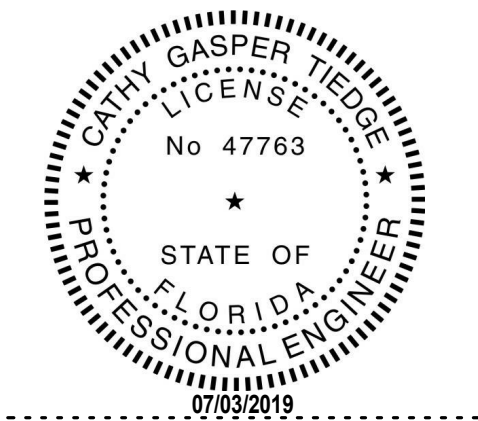
REGISTRATION  
NUMBER FL-47763

APPROVED BY CGT

DESIGNED BY CGT

DRAWN BY AED

CHECKED BY CGT



DESIGN CONSULTANT



MINIMAL 10' X 6' -  
FOUNDATION PLAN,  
FRAMING PLAN,  
DETAILS

SHEET TITLE

ACAI  
associates, inc.  
architecture engineering  
roofing consulting  
construction management

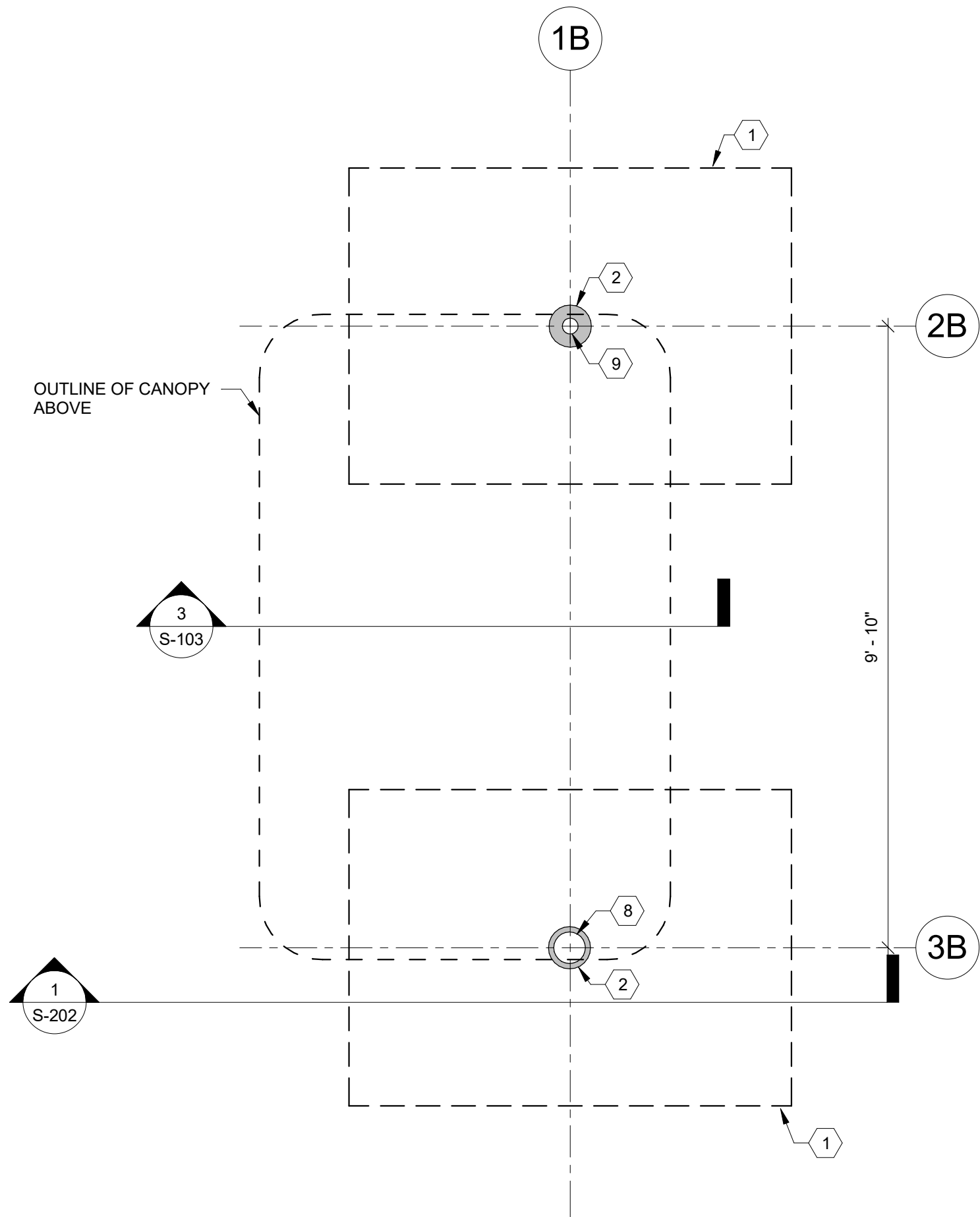
AAC001323-EB0004379-CGC010769  
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Fort Lauderdale, Florida 33309  
Tel: 954.484.4000 Fax: 954.484.5588  
www.acaiarchitects.com  
ARCHITECT OF RECORD

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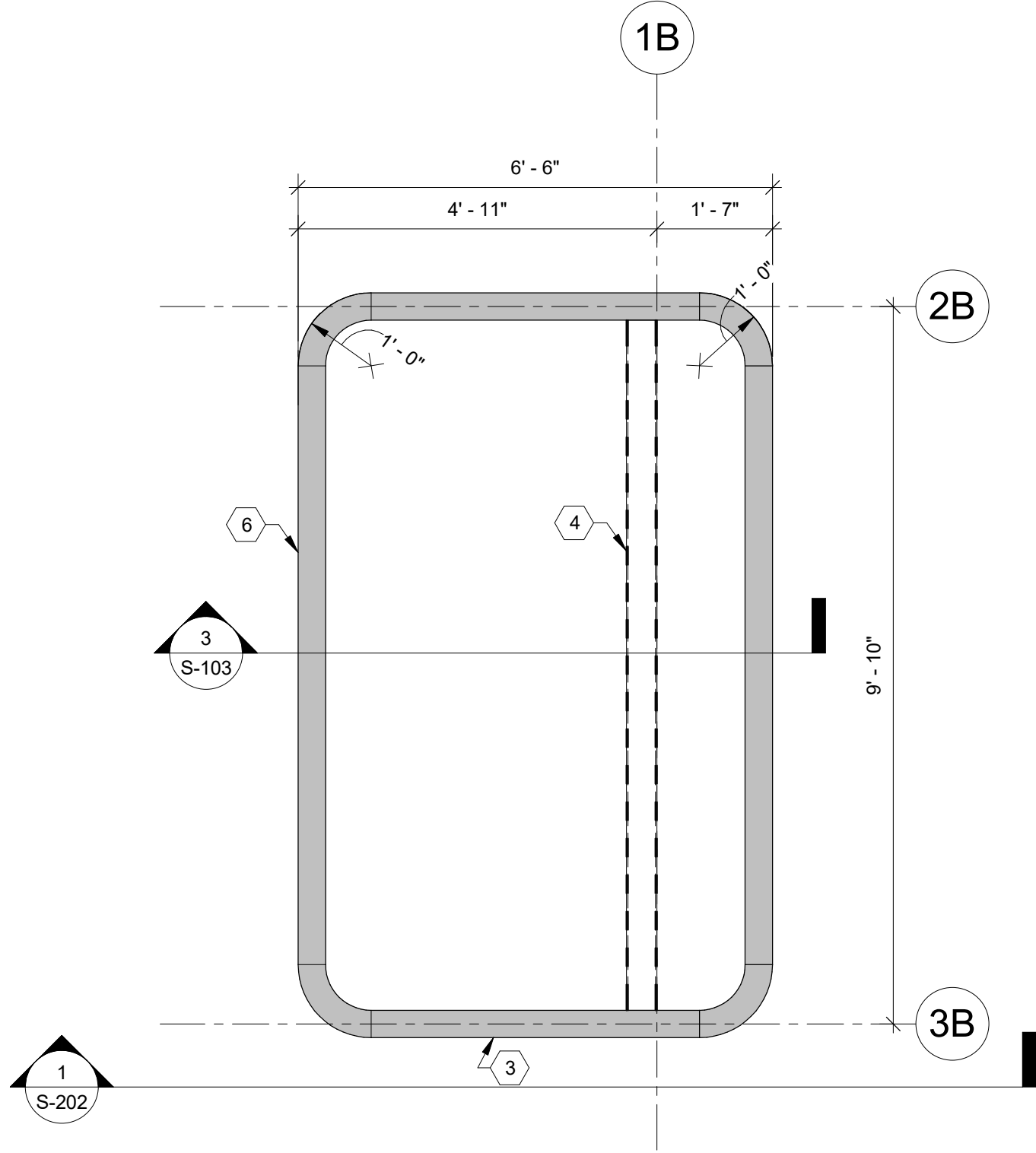
PROJECT NUMBER

S-101

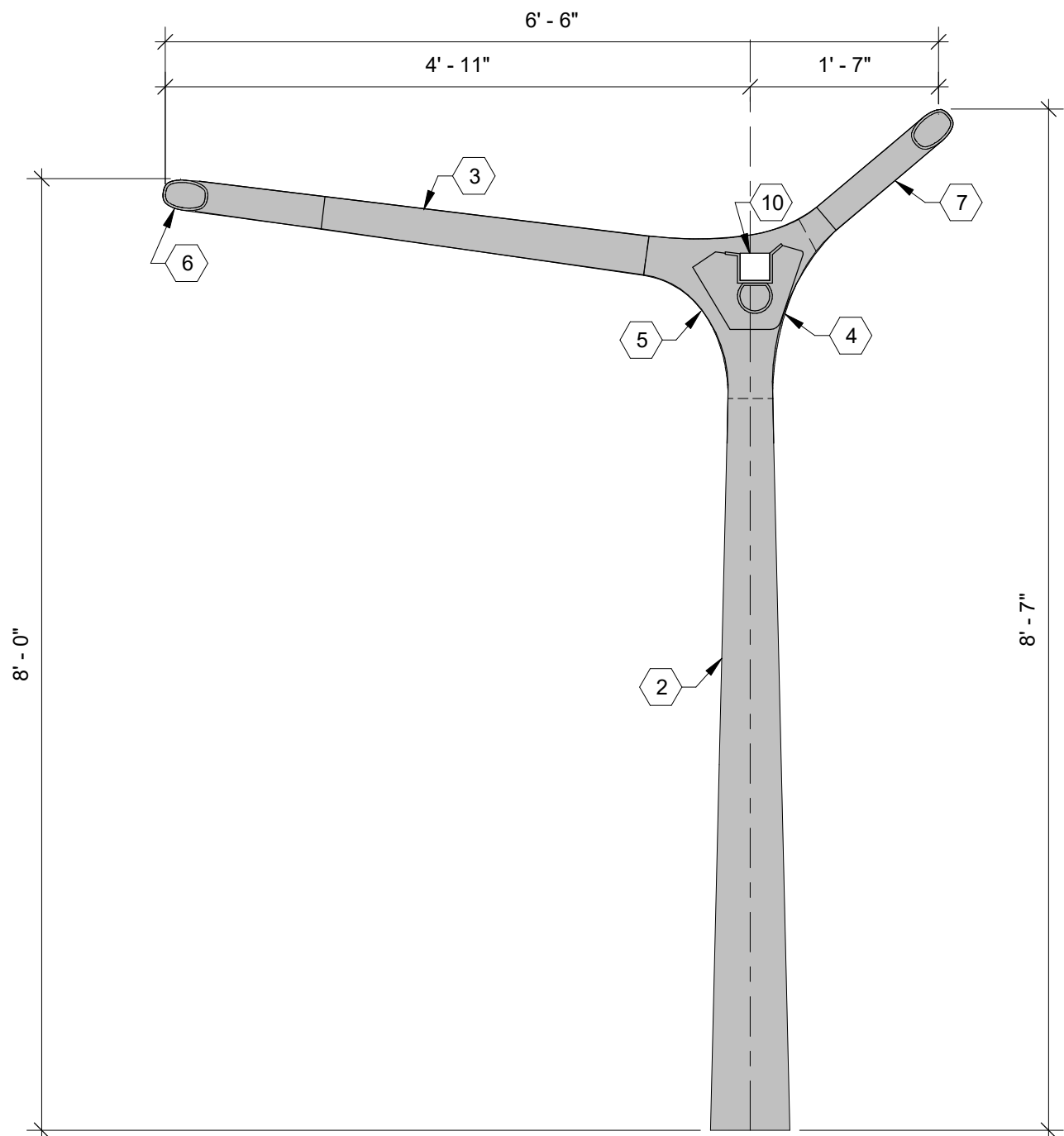
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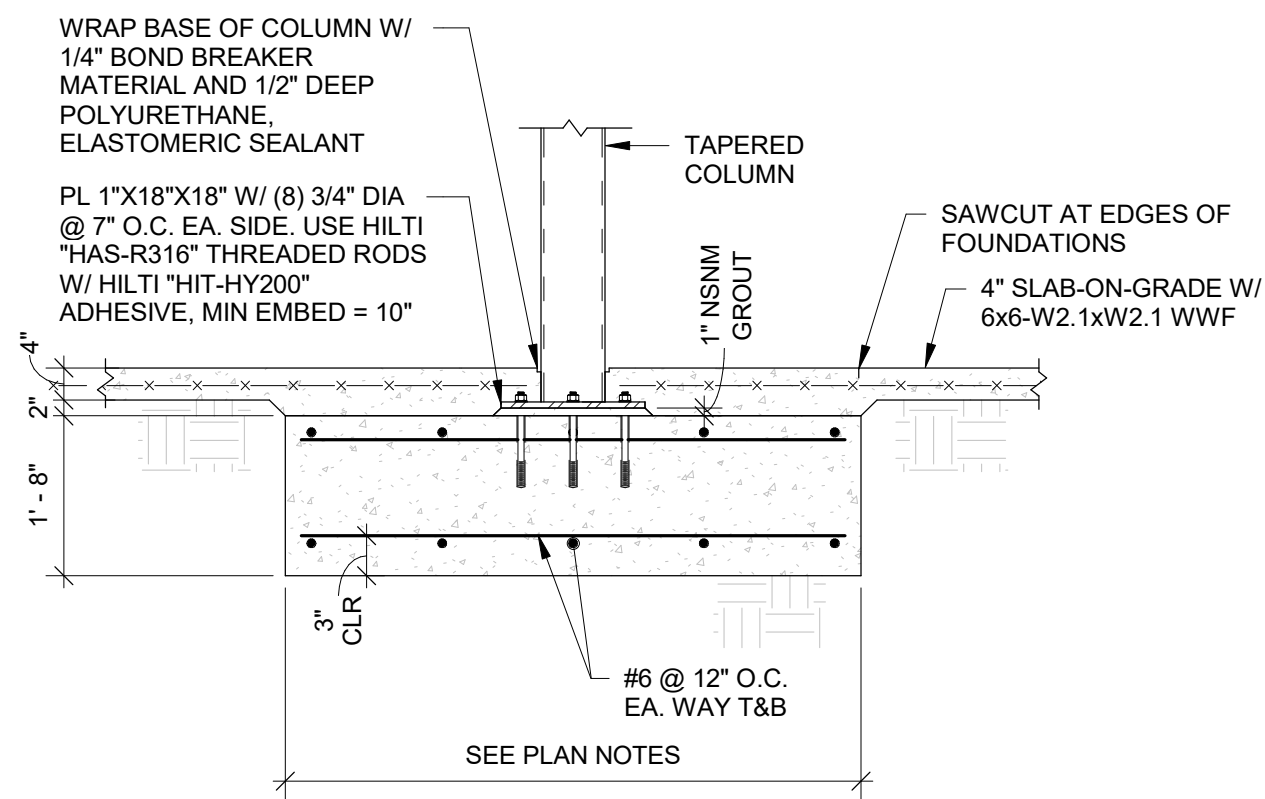
1 10' X 6' FOUNDATION PLAN  
1/2" = 1'-0"



2 10' X 6' ROOF PLAN  
1/2" = 1'-0"



3 SECTION - 6' SHELTER  
3/4" = 1'-0"



4 TYPICAL COLUMN TO FOUNDATION DETAIL  
1/2" = 1'-0"

NOTE: VERIFY ALL DIMENSIONS WITH  
ARCHITECTURAL DRAWINGS AND 3D MODELS.

#### 10' X 6' PLAN NOTES

- 7'-0" x 5'-0" x 1'-8" FOOTING, REINF. W/ #6 @ 12" O.C. EA. WAY T&B.
- ALUMINUM VARIABLE TAPERED COLUMN: 8" WIDE BASE, 4-1/2" WIDE TOP SEE 6 / S-201 FOR ADDITIONAL INFORMATION.
- ALUMINUM TAPERED ROUND BEAM 3" OD AT EXTERIOR, 4" OD AT SUPPORT, MIN 0.25" WALL THICKNESS.
- ALUMINUM BEAM: SEE 8 / S-201 FOR PROFILE W/ GUTTER
- ALUMINUM CUSTOM FABRICATED CONNECTION
- ALUMINUM PERIMETER BEAM: SEE 3 / S-201 FOR PROFILE.
- ALUMINUM BEAM: 3" OD WITH A 1/4" WALL THICKNESS.
- INTEGRAL DOWNSPOUT-DISCHARGE TO SIDE OF SHELTER.
- INTEGRAL CONDUIT PATHWAY.
- OPENING IN FABRICATED CONNECTION FOR DOWNSPOUT - SEE PLAN FOR DOWNSPOUT LOCATION.





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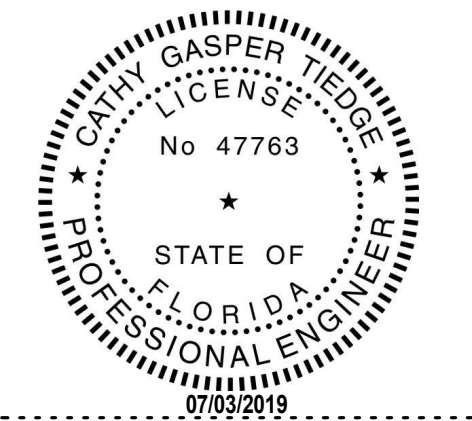
REGISTRATION  
NUMBER FL-47763

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DESIGNED BY CGT

DRAWN BY AED

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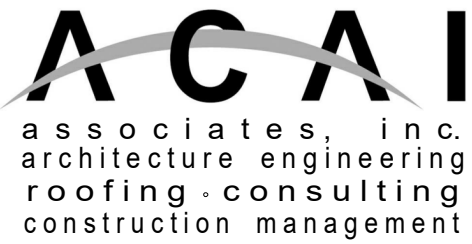


DESIGN CONSULTANT



ENHANCED/STANDARD  
20' X 6' -  
FOUNDATION PLAN ,  
FRAMING PLAN,  
DETAILS

SHEET TITLE



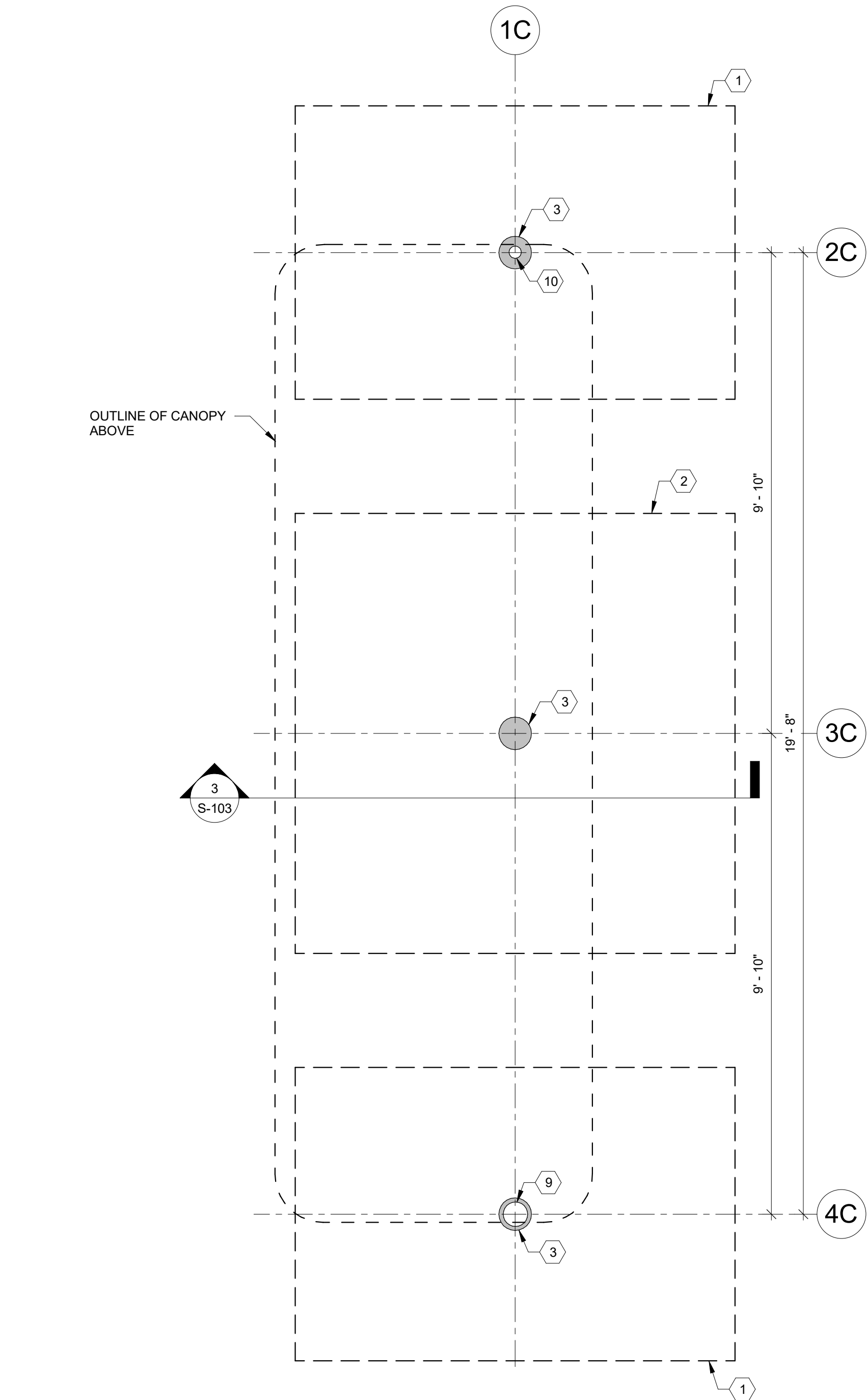
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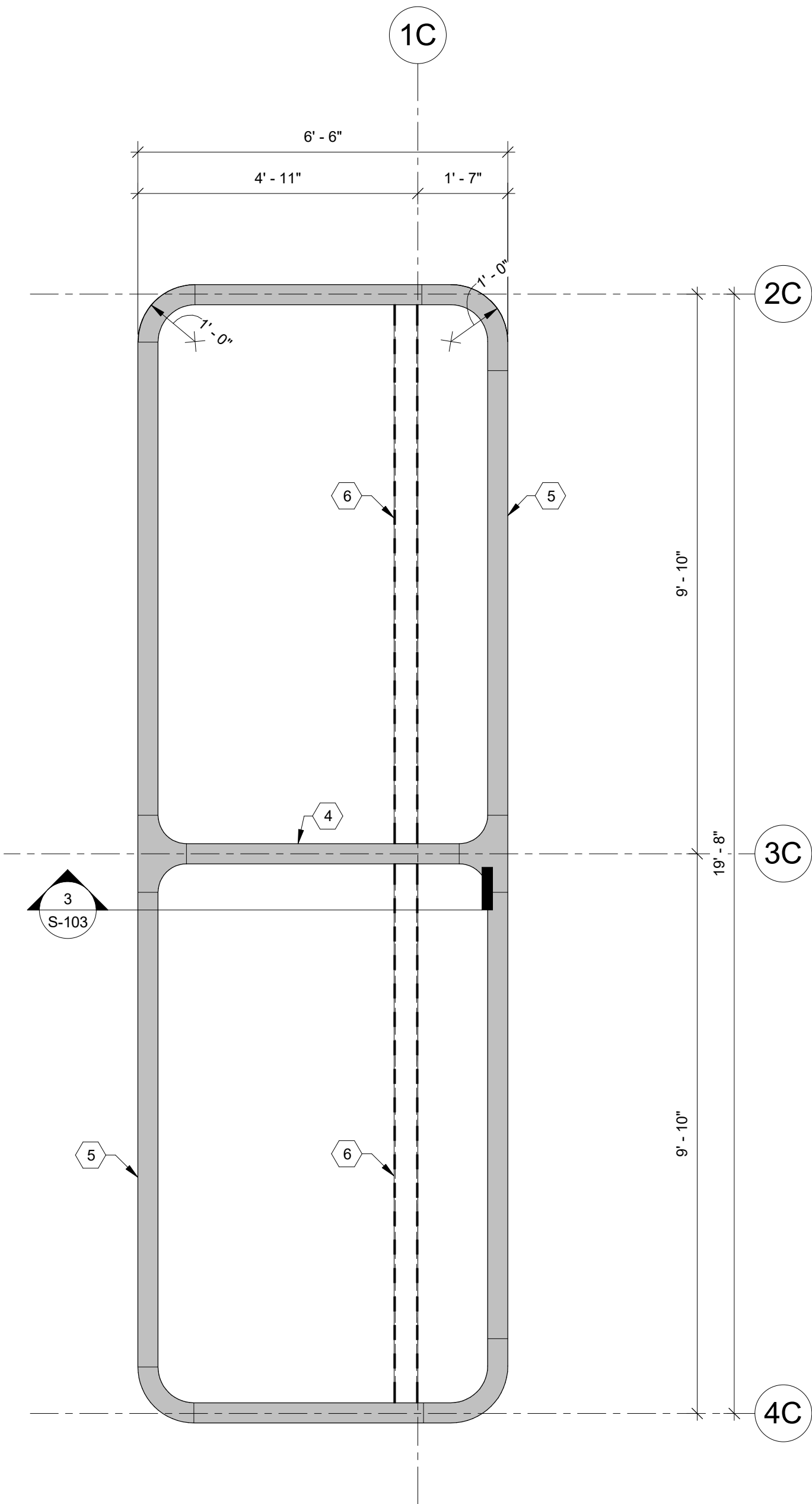
PROJECT NUMBER

S-102

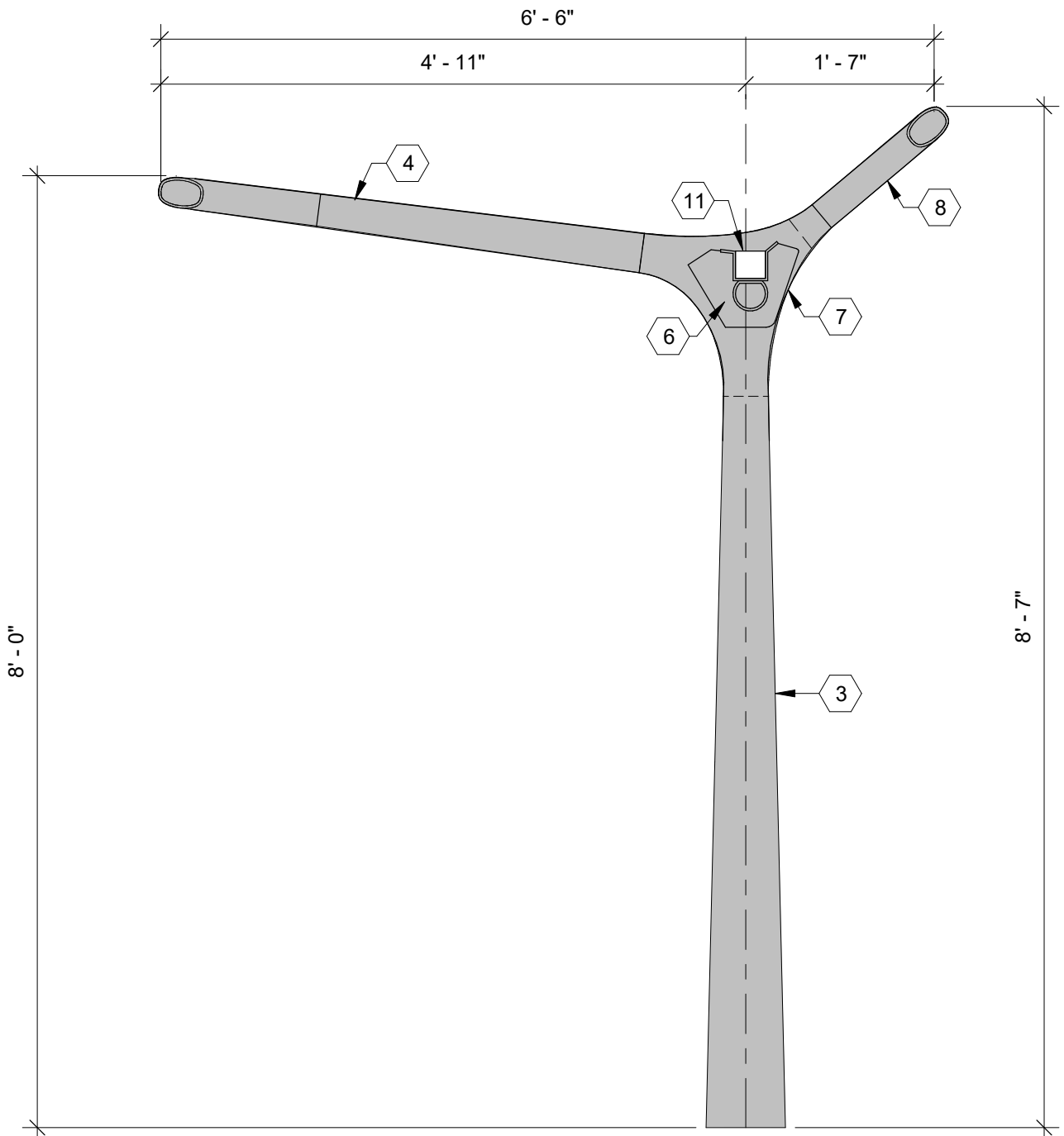
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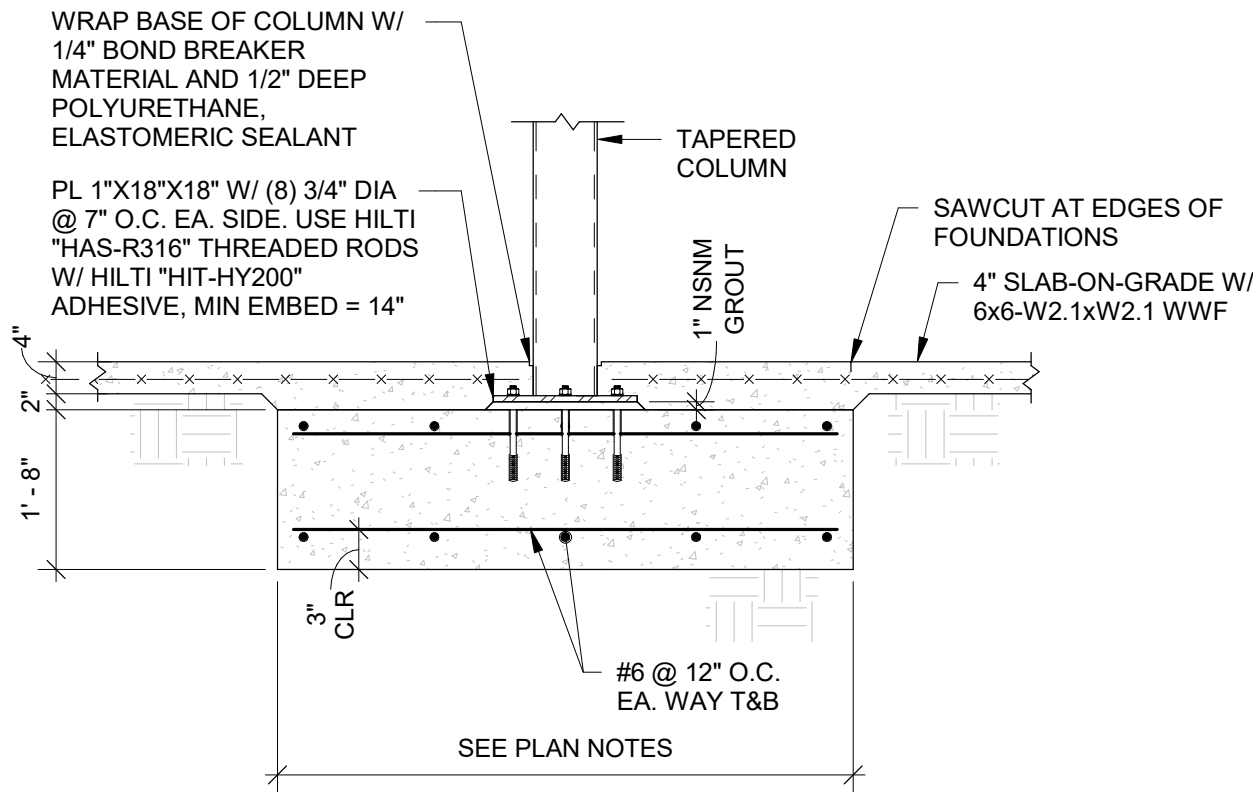
1 20' X 6' FOUNDATION PLAN  
1/2" = 1'-0"



2 20' X 6' ROOF PLAN  
1/2" = 1'-0"



3 SECTION - 6' SHELTER  
3/4" = 1'-0"



4 TYPICAL COLUMN TO FOUNDATION DETAIL  
1/2" = 1'-0"

NOTE: VERIFY ALL DIMENSIONS WITH  
ARCHITECTURAL DRAWINGS AND 3D MODELS.

20' X 6' PLAN NOTES

- 9'-0" x 6'-0" x 1'-8" FOOTING, REINF. W/ #6 @ 12" O.C. EA. WAY T&B.
- 9'-0" SQ. x 1'-8" FOOTING, REINF. W/ #6 @ 12" O.C. EA. WAY T&B.
- ALUMINUM VARIABLE TAPERED COLUMN: 8" WIDE BASE, 4-1/2" WIDE TOP. SEE 6 / S-201 FOR ADDITIONAL INFORMATION.
- ALUMINUM TAPERED ROUND BEAM 3" OD AT EXTERIOR, 4" OD AT SUPPORT, MIN 0.25" WALL THICKNESS.
- ALUMINUM PERIMETER BEAM: SEE 3 / S-201 FOR PROFILE.
- ALUMINUM BEAM: SEE 8 / S-201 FOR PROFILE W/ GUTTER.
- ALUMINUM CUSTOM FABRICATED CONNECTION.
- ALUMINUM BEAM: 3" OD WITH A 1/4" WALL THICKNESS.
- INTEGRAL DOWNSPOUT-DISCHARGE TO SIDE OF SHELTER.
- INTEGRAL CONDUIT PATHWAY.
- OPENING IN FABRICATED CONNECTION FOR DOWNSPOUT - SEE PLAN FOR DOWNSPOUT LOCATION.





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PROJECT TEAM  
PROFESSIONAL IN CHARGE

CATHY G. TIEDGE, PE

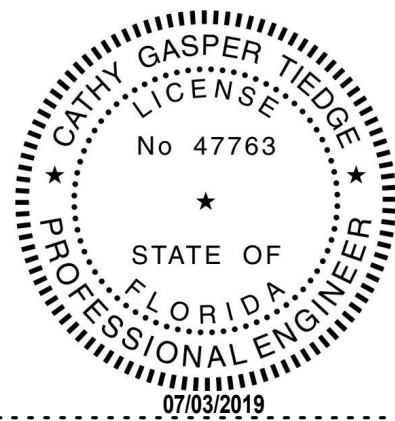
REGISTRATION NUMBER FL-47763

APPROVED BY CGT

DESIGNED BY CGT

DRAWN BY AED

CHECKED BY CGT



DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS  
SHELTERS

CITY OF MIAMI BEACH

MINIMAL 10' X 3' -  
FOUNDATION PLAN ,  
FRAMING PLAN,  
DETAILS

SHEET TITLE

ACAI  
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construction management

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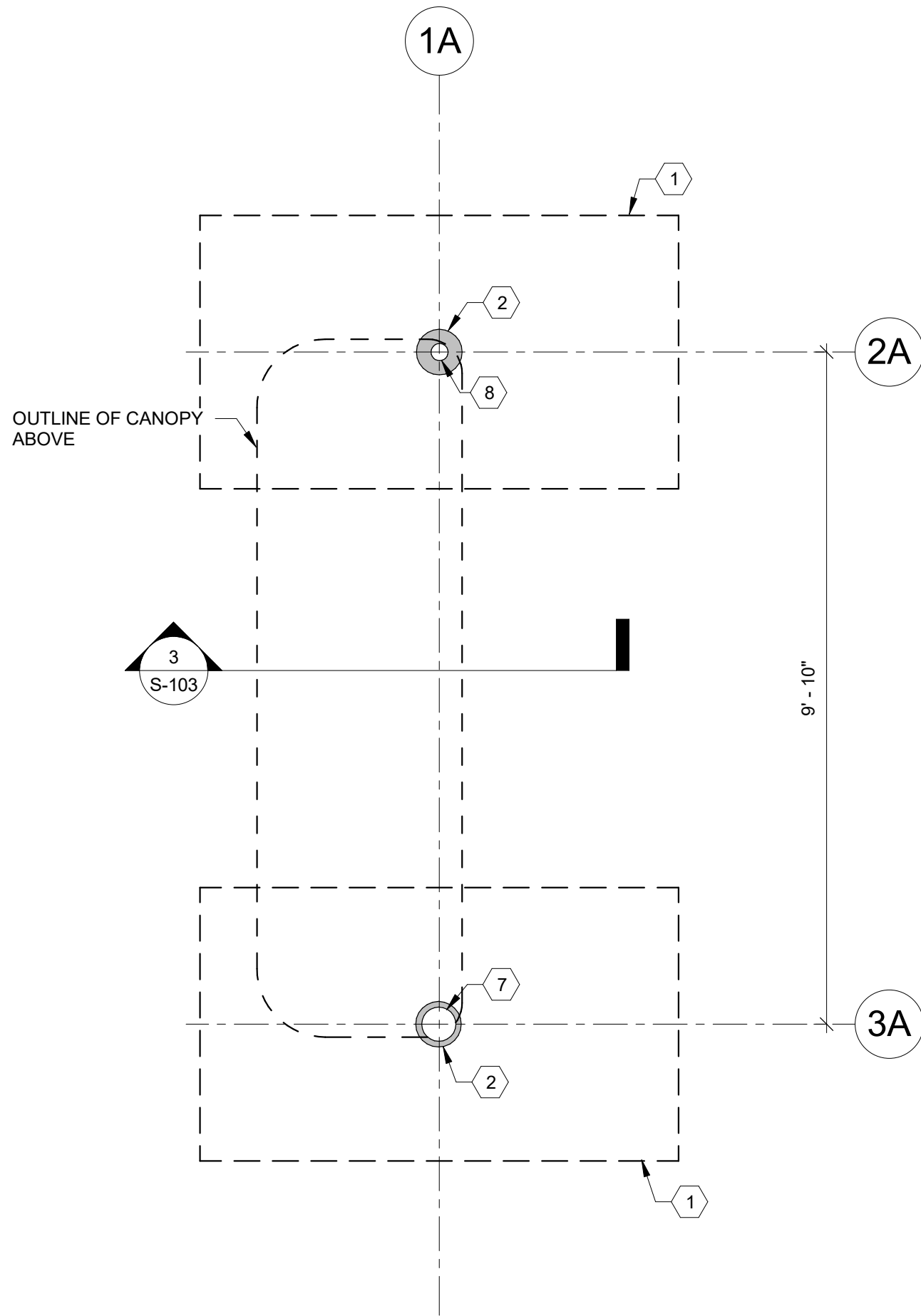
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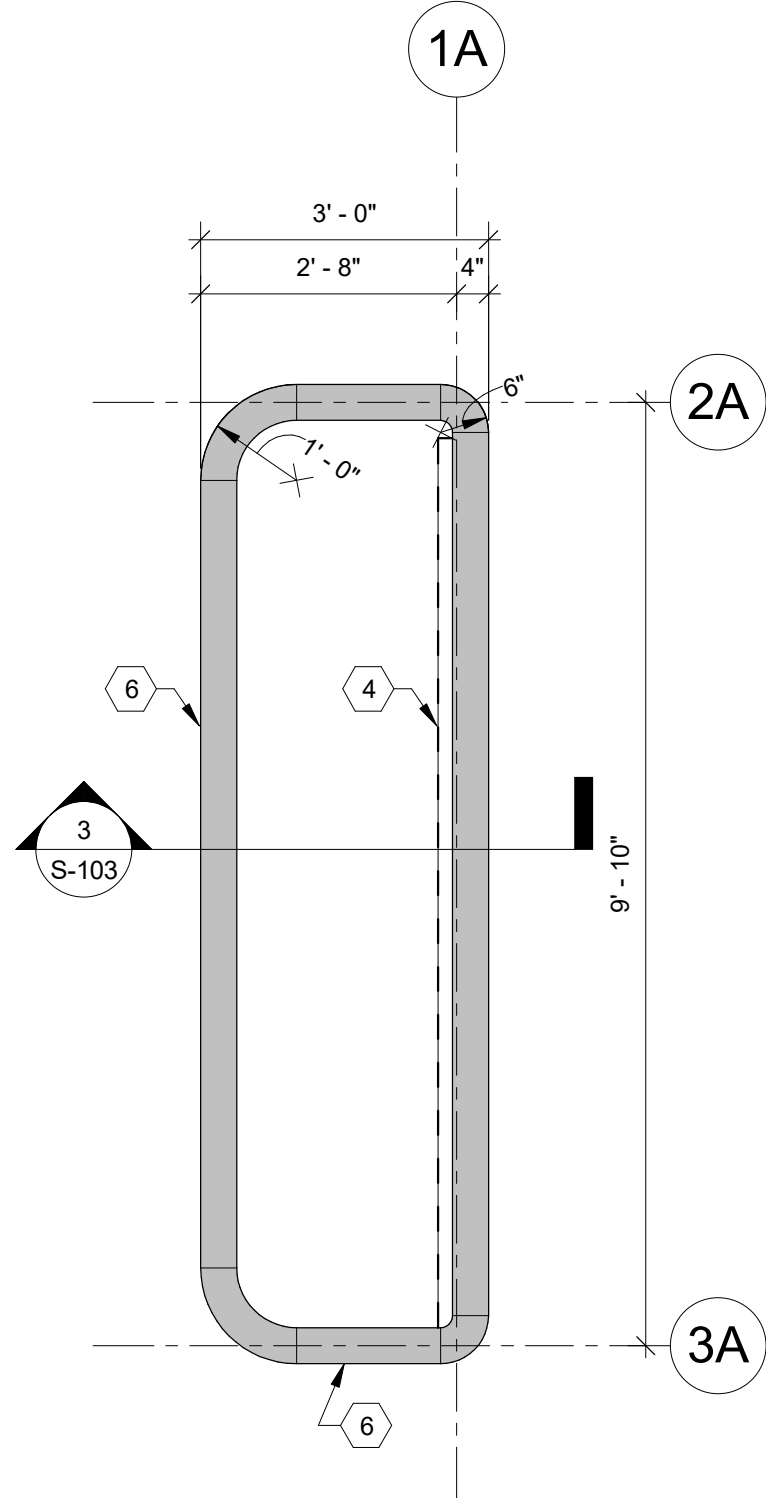
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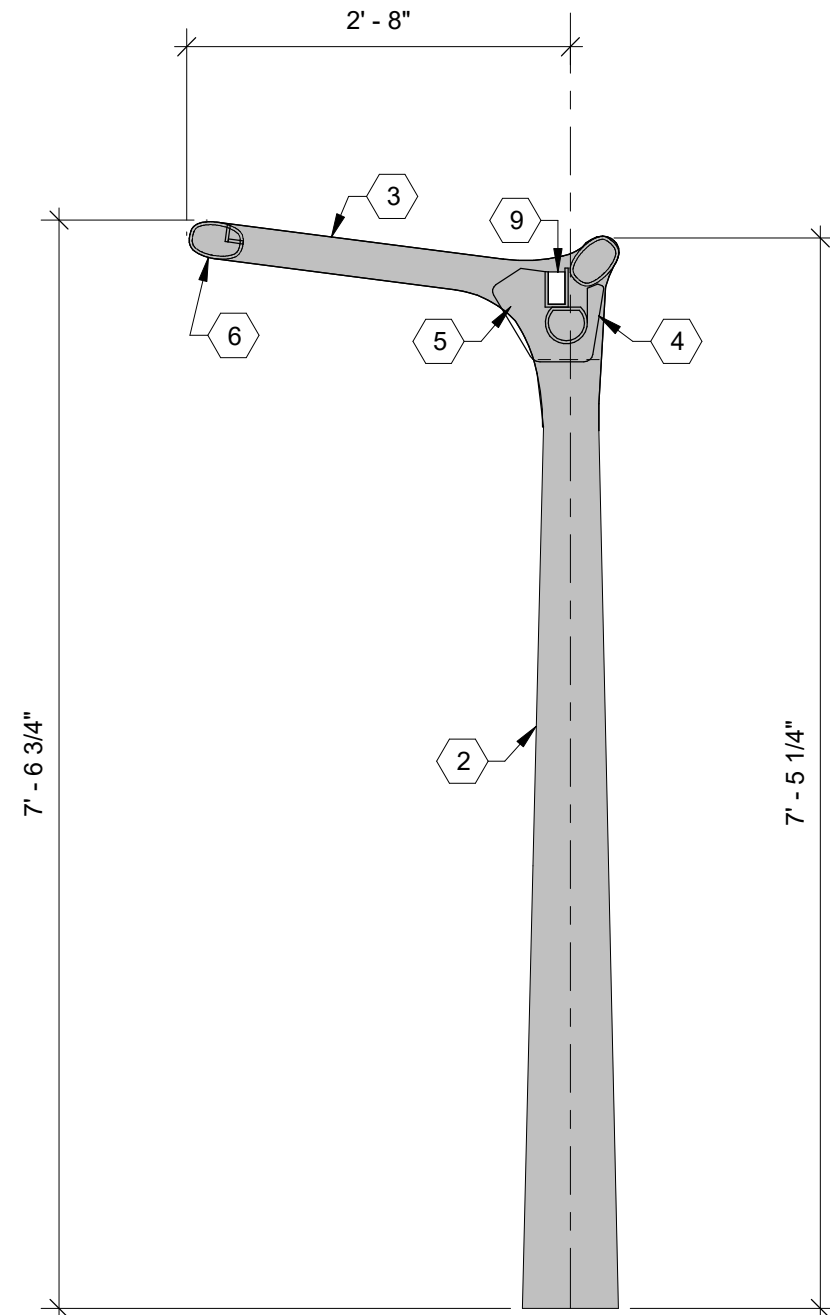
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1/2" = 1'-0"



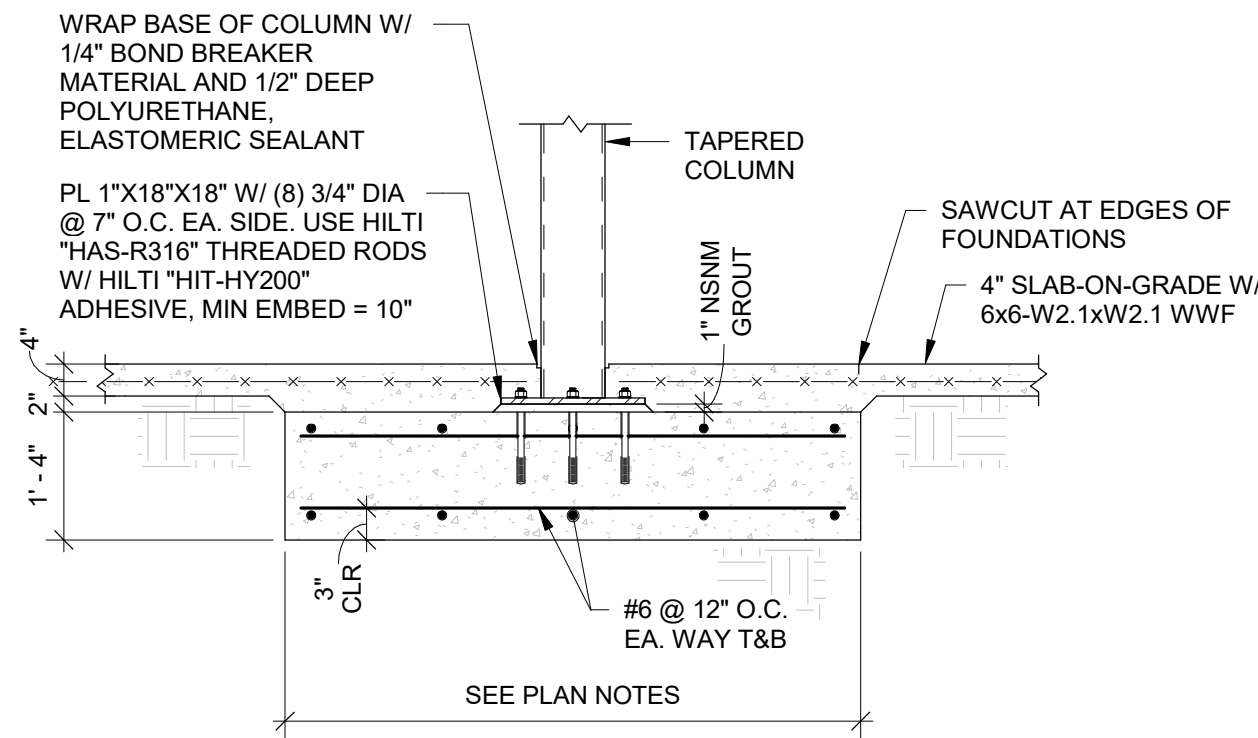
2 10' X 3' ROOF PLAN  
1/2" = 1'-0"



3 SECTION - 3' SHELTER  
3/4" = 1'-0"



4 TYPICAL COLUMN TO FOUNDATION DETAIL  
1/2" = 1'-0"



NOTE: VERIFY ALL DIMENSIONS WITH  
ARCHITECTURAL DRAWINGS AND 3D MODELS.

10' X 3' PLAN NOTES

- 1 7'-0" x 4'-0" x 1'-4" FOOTING, REINF. W/ #6 @ 12" O.C. EA. WAY T&B.
- 2 ALUMINUM VARIABLE TAPERED COLUMN: 8" WIDE BASE, 4-1/2" WIDE TOP
- 3 ALUMINUM BEAM: 3" OD WITH A 1/4" WALL THICKNESS.
- 4 ALUMINUM BEAM: SEE 9 / S-201 FOR PROFILE W/ GUTTER
- 5 ALUMINUM CUSTOM FABRICATED CONNECTION.
- 6 ALUMINUM PERIMETER BEAM: SEE 3/S-201 FOR PROFILE.
- 7 INTEGRAL DOWNSPOUT-DISCHARGE TO SIDE OF SHELTER.
- 8 INTEGRAL CONDUIT PATHWAY.
- 9 OPENING IN FABRICATED CONNECTION FOR DOWNSPOUT - SEE PLAN FOR DOWNSPOUT LOCATION.





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PROJECT TEAM  
PROFESSIONAL IN CHARGE

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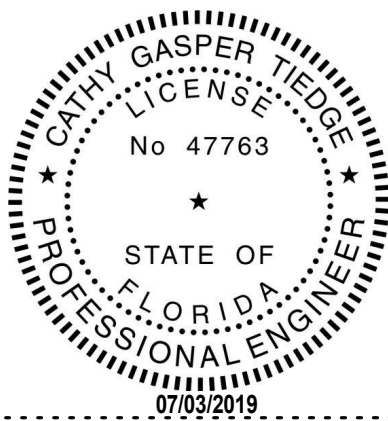
REGISTRATION NUMBER FL-47763

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CHECKED BY CGT



DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS  
SHELTERS  
CITY OF MIAMI BEACH

ENHANCED/STANDARD  
20' X 3' -  
FOUNDATION PLAN ,  
FRAMING PLAN,  
DETAILS

SHEET TITLE

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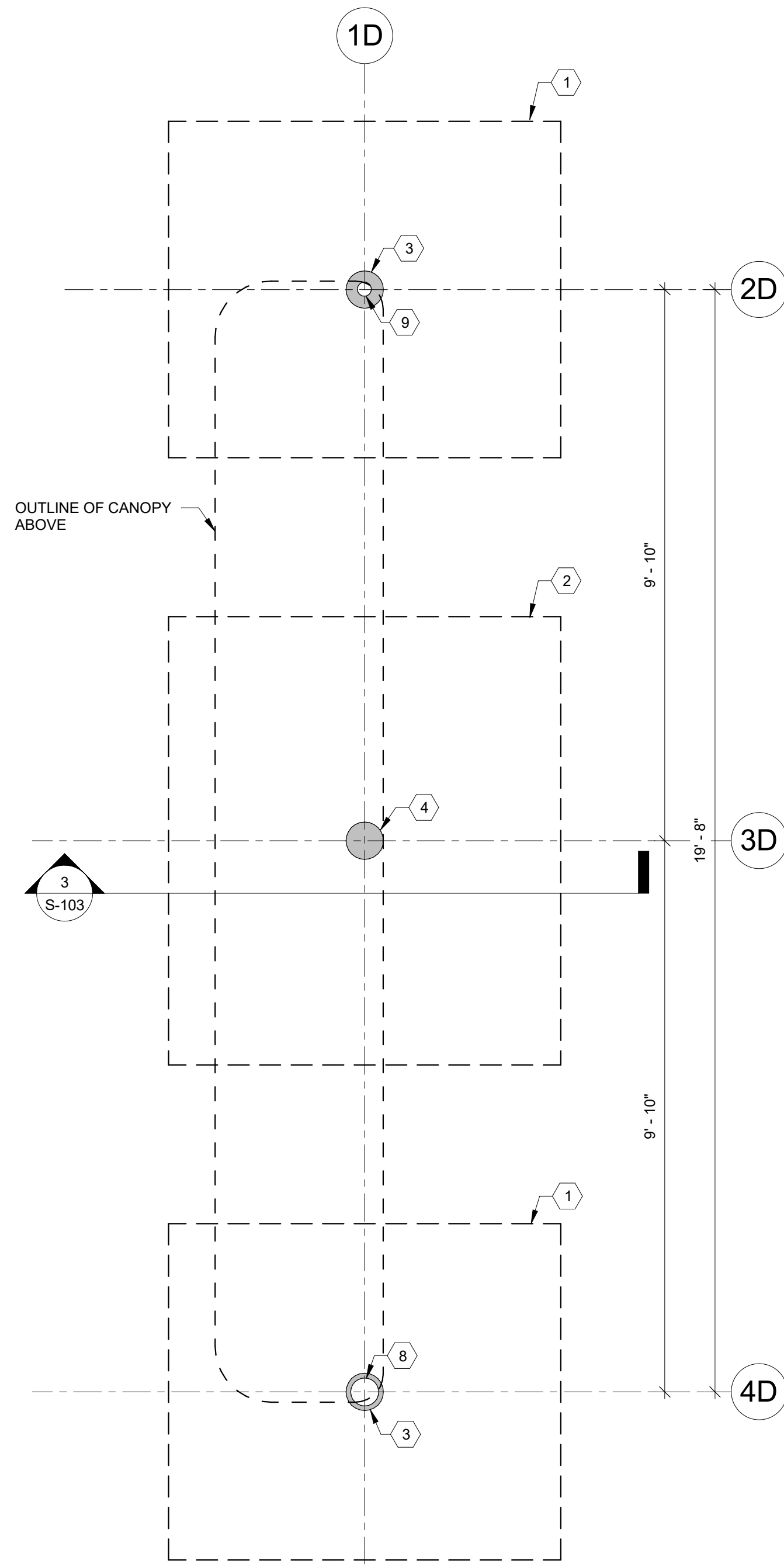
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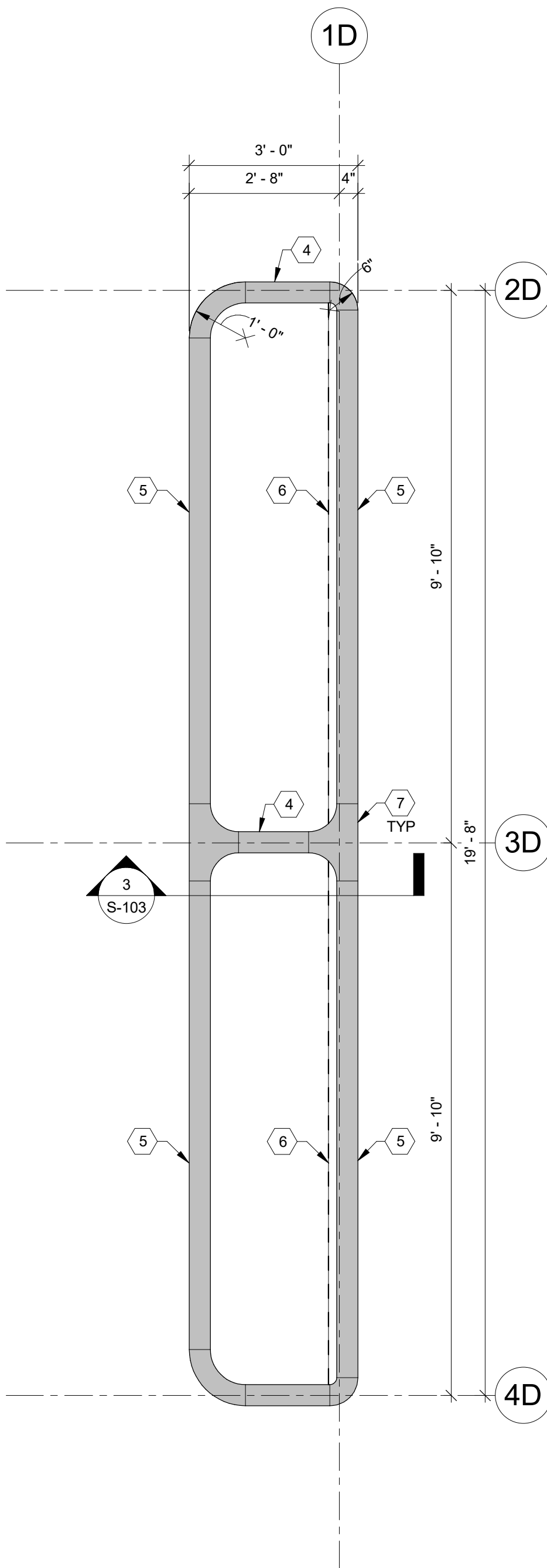
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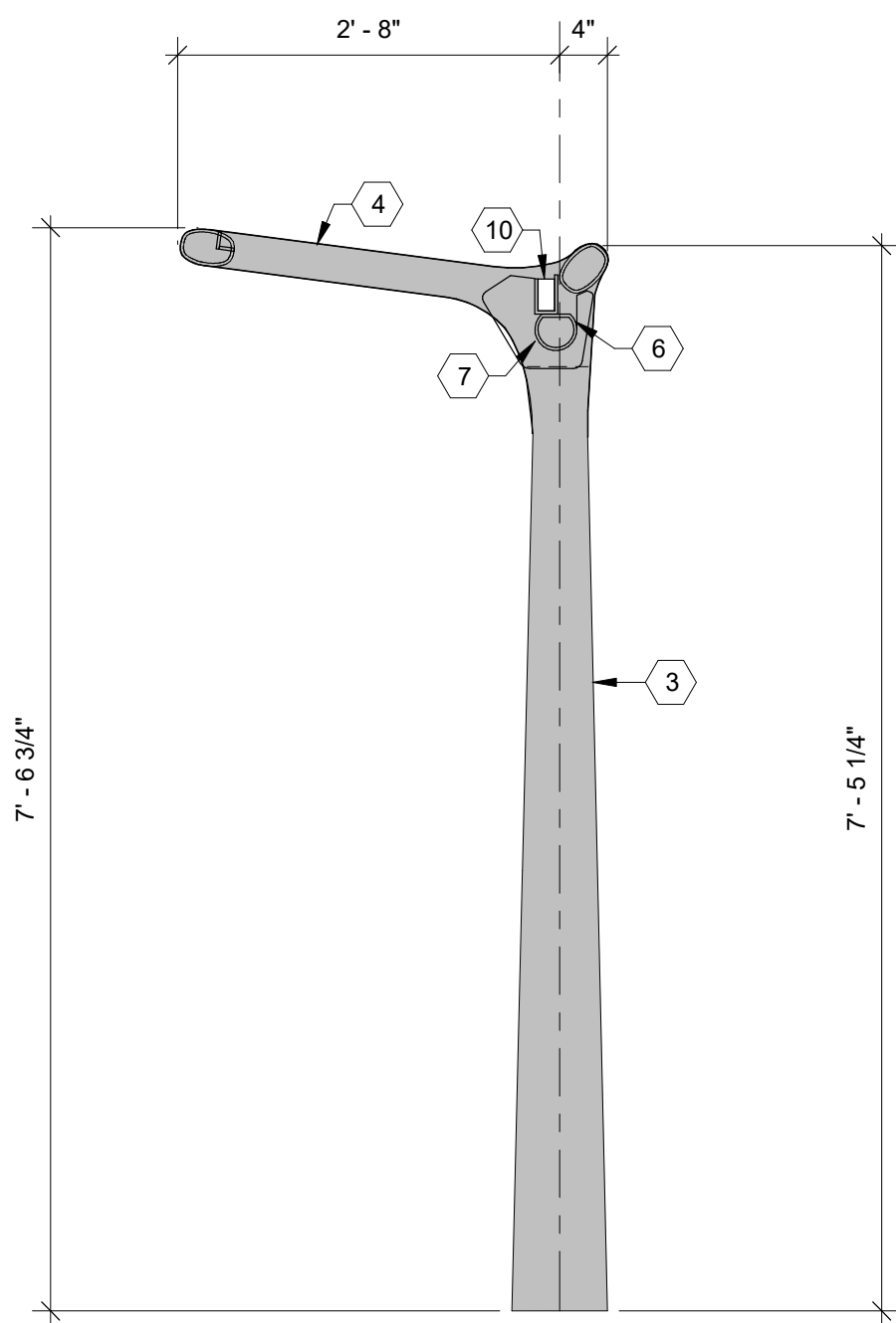
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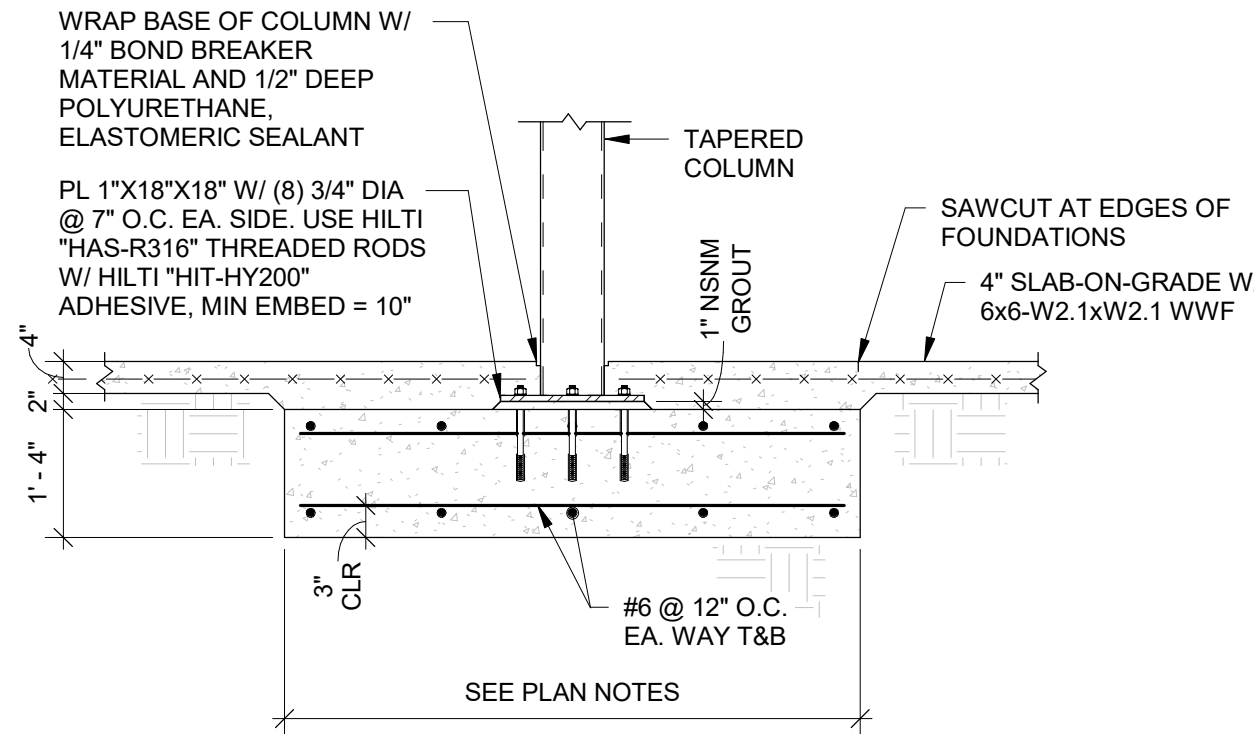
1 20' X 3' FOUNDATION PLAN  
1/2" = 1'-0"



2 20' X 3' ROOF PLAN  
1/2" = 1'-0"



3 SECTION - 3' SHELTER  
3/4" = 1'-0"



4 TYPICAL COLUMN TO FOUNDATION DETAIL  
1/2" = 1'-0"

NOTE: VERIFY ALL DIMENSIONS WITH  
ARCHITECTURAL DRAWINGS AND 3D MODELS.

20' X 3' PLAN NOTES

- 7'-0" x 6'-0" x 1'-4" FOOTING, REINF. W/ #6 @ 12" O.C. EA. WAY T&B
- 7'-0" x 8'-0" x 1'-4" FOOTING, REINF. W/ #6 @ 12" O.C. EA. WAY T&B
- ALUMINUM VARIABLE TAPERED COLUMN: 8" WIDE BASE, 4-1/2" WIDE TOP. SEE 6 / S-201 FOR ADDITIONAL INFORMATION.
- ALUMINUM BEAM: 3" OD WITH A 1/4" WALL THICKNESS.
- ALUMINUM PERIMETER BEAM: SEE 3 / S-201 FOR PROFILE.
- ALUMINUM BEAM: SEE 9 / S-201 FOR PROFILE W/ GUTTER.
- ALUMINUM CUSTOM FABRICATED CONNECTION.
- INTEGRAL DOWNSPOUT-DISCHARGE TO SIDE OF SHELTER.
- INTEGRAL CONDUIT PATHWAY.
- OPENING IN FABRICATED CONNECTION FOR DOWNSPOUT - SEE PLAN FOR DOWNSPOUT LOCATION.



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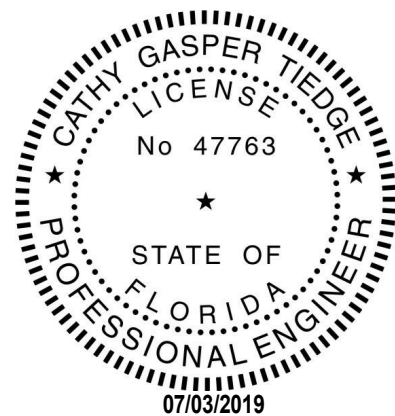
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DESIGN CONSULTANT

MIAMI BEACH

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TEMPORARY 10' X 3'  
FOUNDATION PLAN,  
FRAMING PLAN,  
DETAILS

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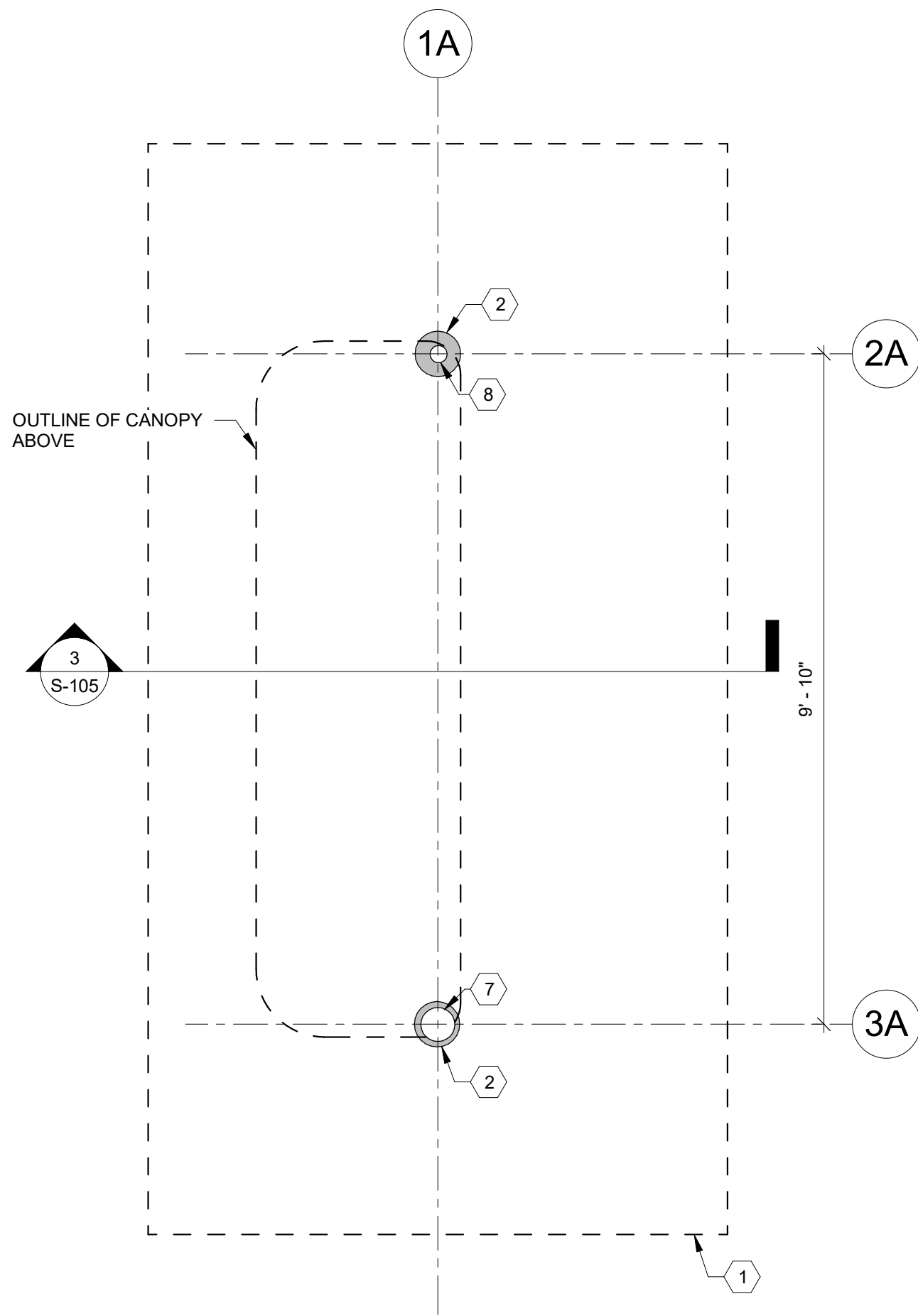
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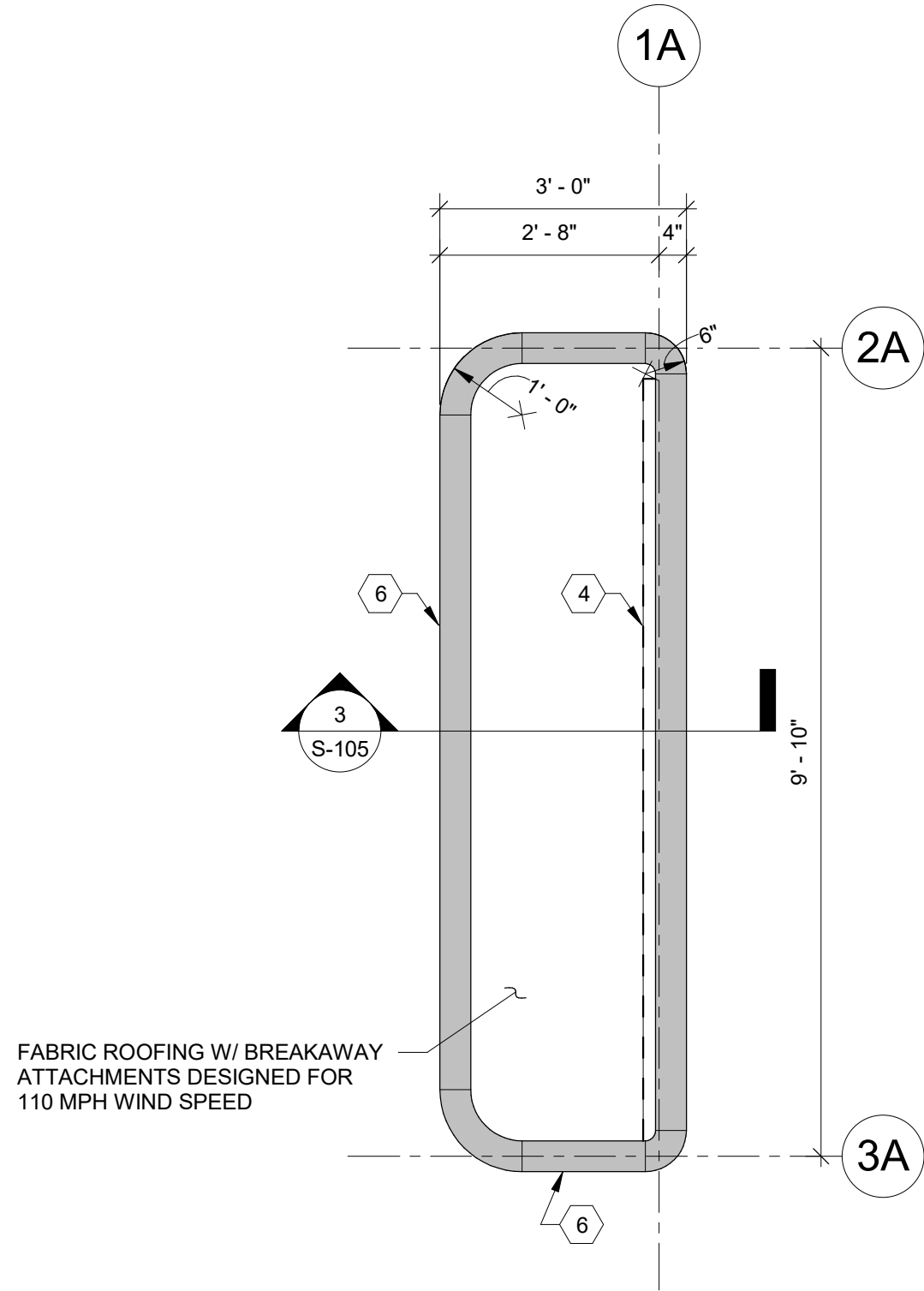
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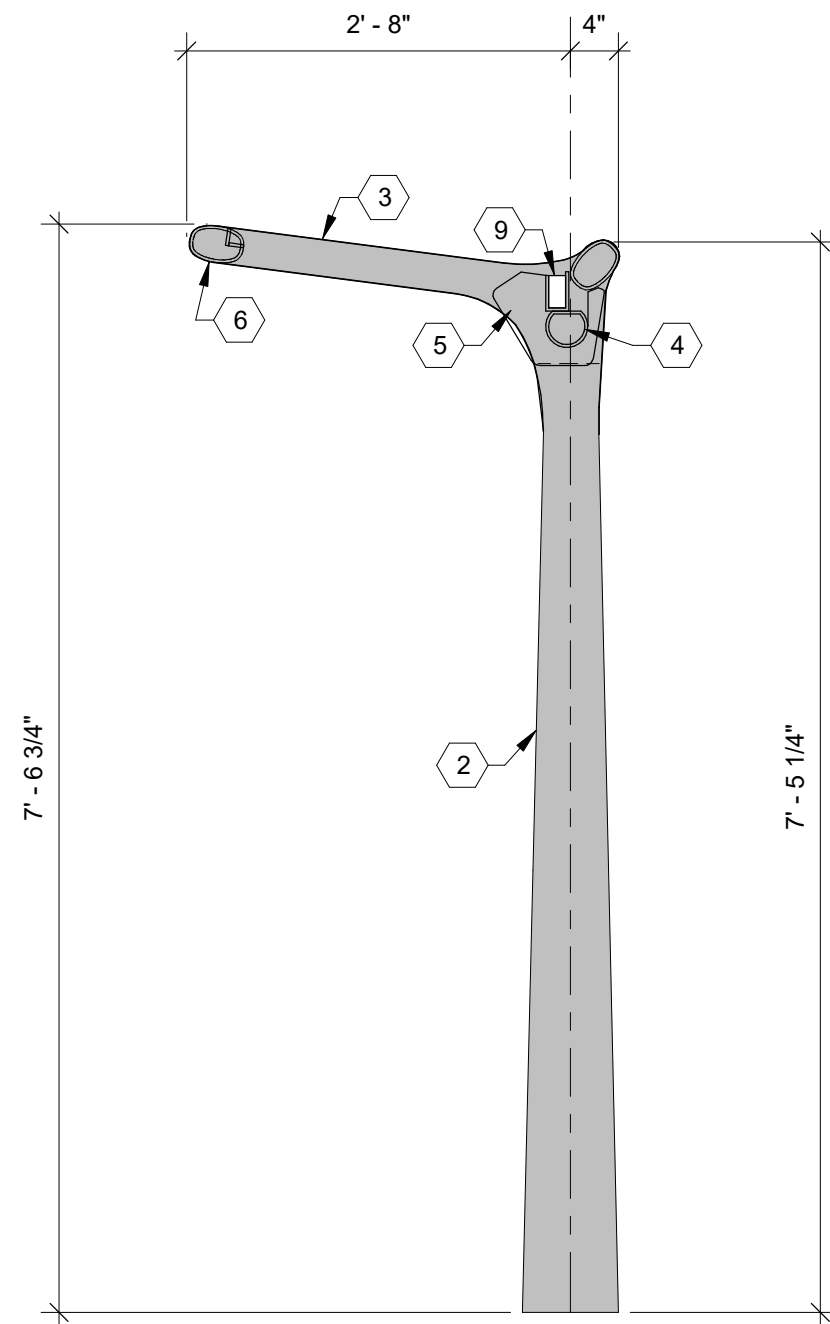
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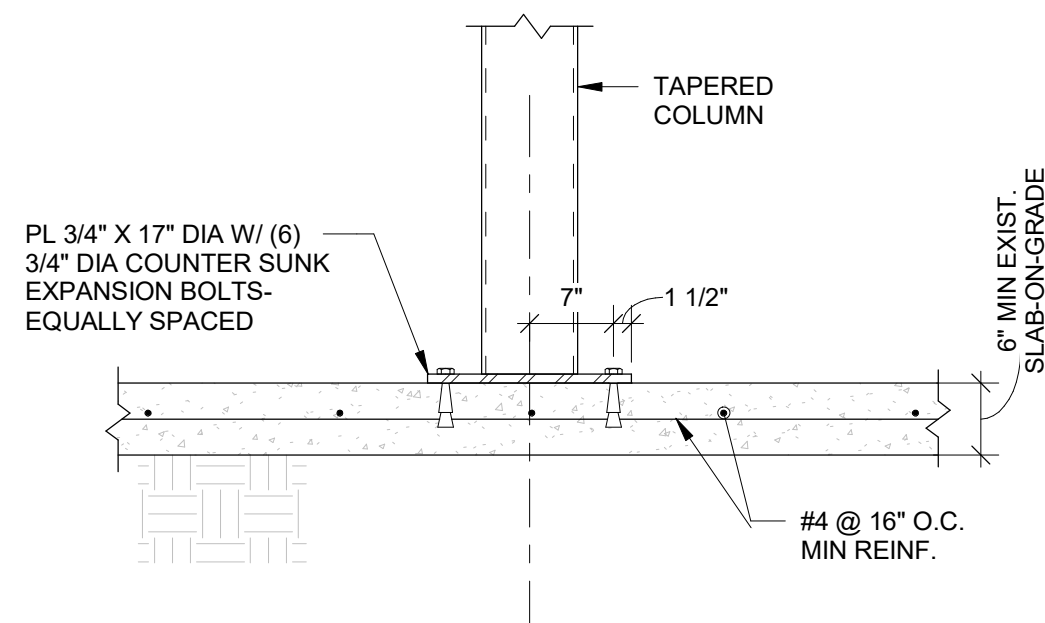
1 TEMPORARY 10' X 3' FOUNDATION PLAN  
1/2" = 1'-0"



2 TEMPORARY 10' X 3' ROOF PLAN  
1/2" = 1'-0"



3 TEMPORARY SECTION - 3' SHELTER  
3/4" = 1'-0"



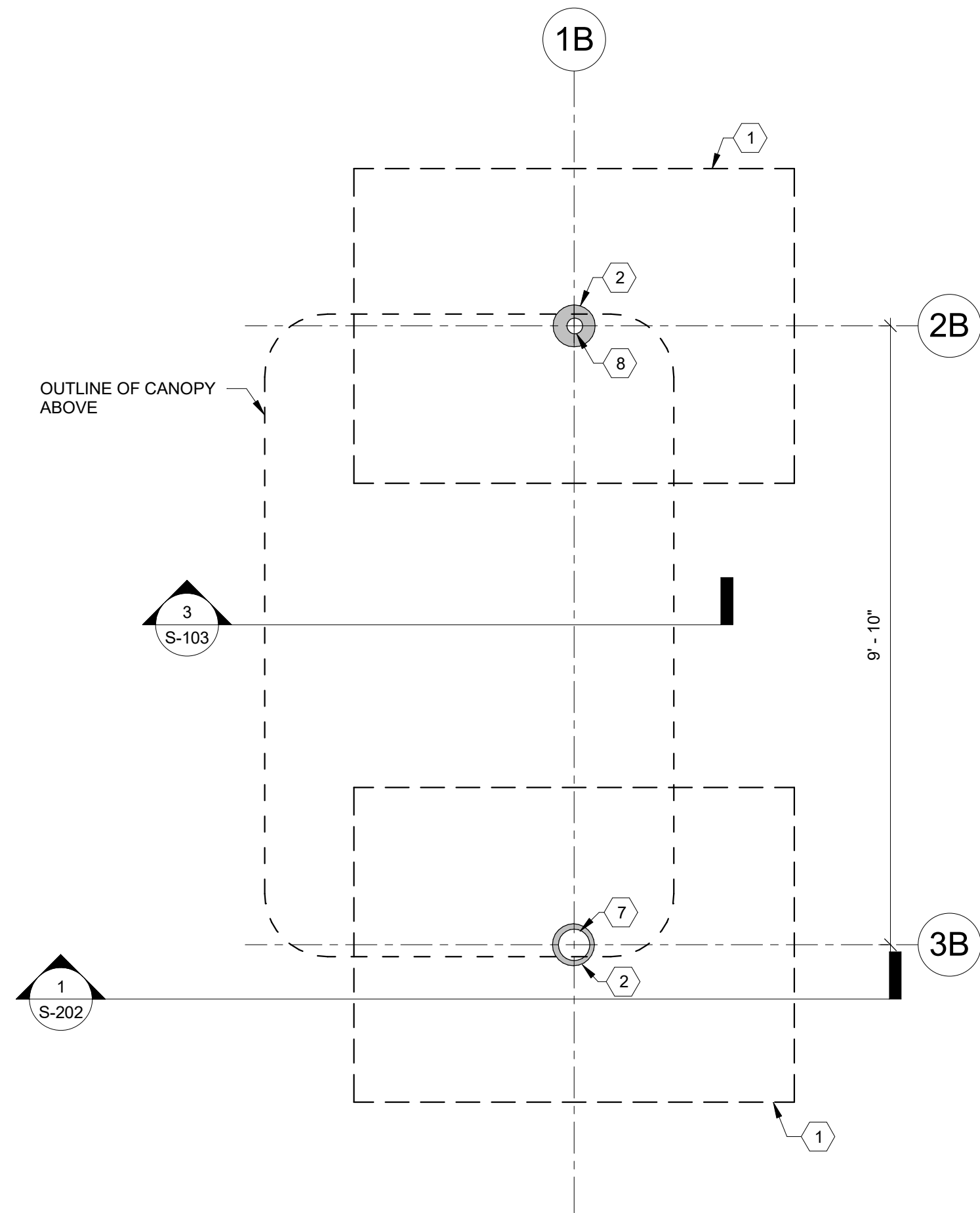
4 TEMPORARY COLUMN TO SLAB DETAIL  
3/4" = 1'-0"

NOTE:  
1. TEMPORARY BUS SHELTER DOES NOT HAVE ANY ADVERTISING BOARDS ATTACHED TO THE FRAMING MEMBERS.  
2. FABRIC ROOF TO HAVE BREAKAWAY ATTACHMENTS.  
3. FREE STANDING ELEMENTS WITH THEIR OWN SUPPORT AND FOUNDATION ARE ACCEPTABLE. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND 3D MODELS.  
4.

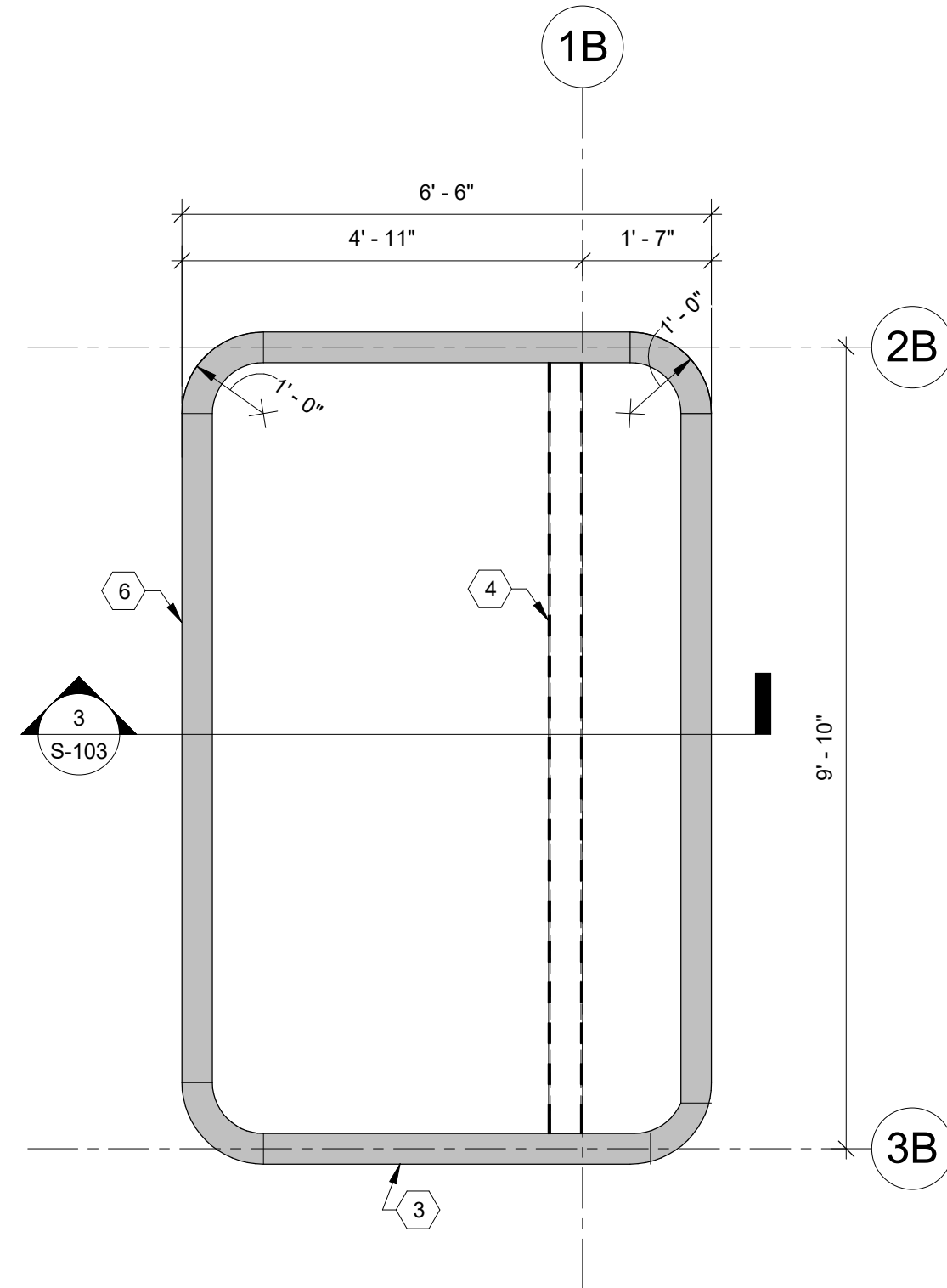
TEMPORARY 10' X 3' PLAN NOTES

1. MINIMUM SLAB REQUIREMENT: 8'-6" x 16'-0" x 0'-6" SLAB W/ #4 @ 16" O.C. EA. WAY AT CENTER OF SLAB.
2. ALUMINUM VARIABLE TAPERED COLUMN: 8" WIDE BASE, 4-1/2" WIDE TOP WITH A MIN 0.375" WALL THICKNESS.
3. ALUMINUM BEAM: 3" OD WITH A MIN 0.375" WALL THICKNESS.
4. ALUMINUM BEAM: SEE 9 / S-201 FOR PROFILE W/ GUTTER
5. CUSTOM FABRICATED ALUMINUM CONNECTION.
6. PERIMETER BEAM: SEE 3 / S-201 FOR PROFILE.
7. INTEGRAL DOWNSPOUT-DISCHARGE TO SIDE OF SHELTER.
8. INTEGRAL CONDUIT PATHWAY.
9. OPENING IN FABRICATED CONNECTION FOR DOWNSPOUT - SEE PLAN FOR DOWNSPOUT LOCATION.

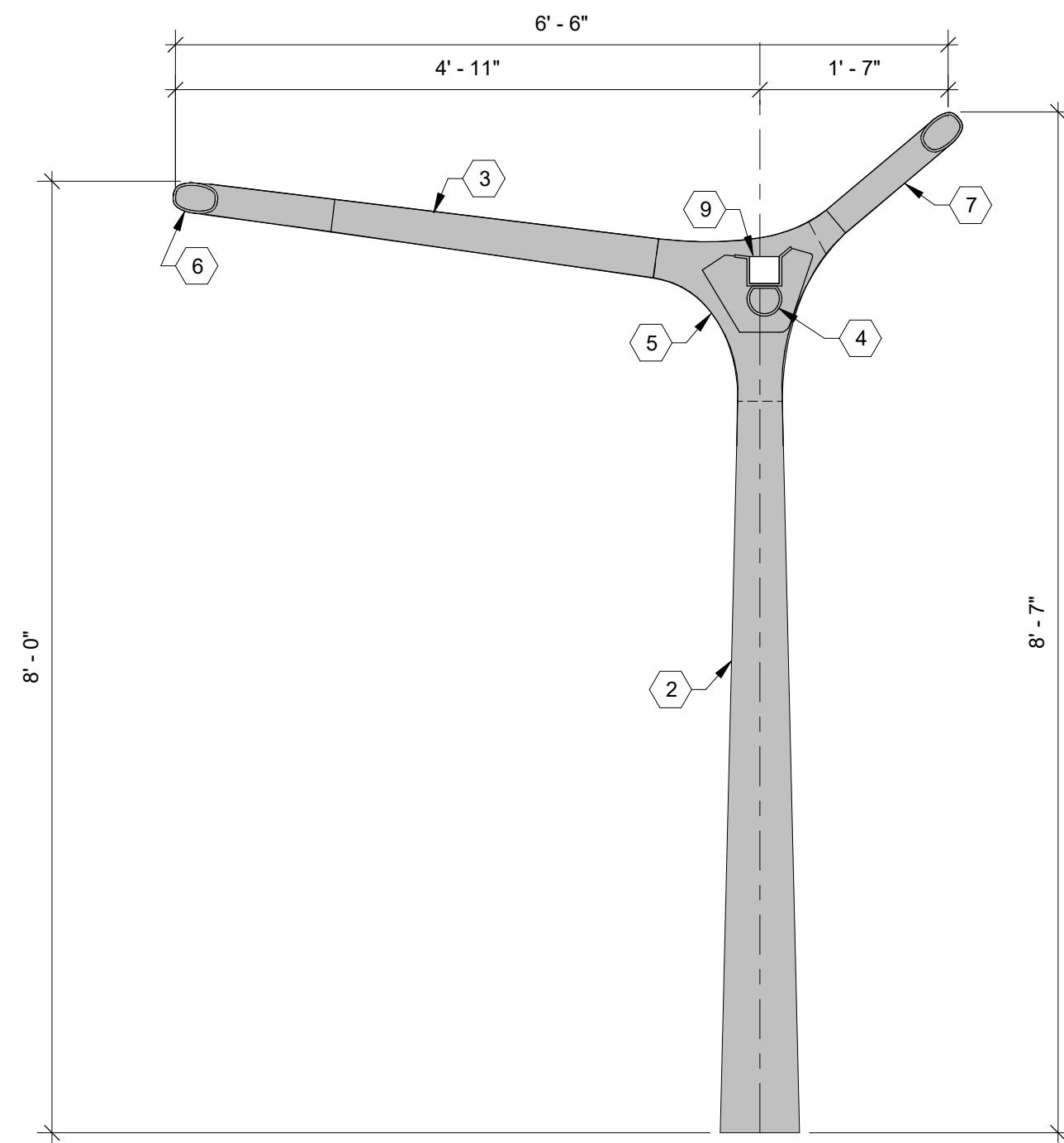




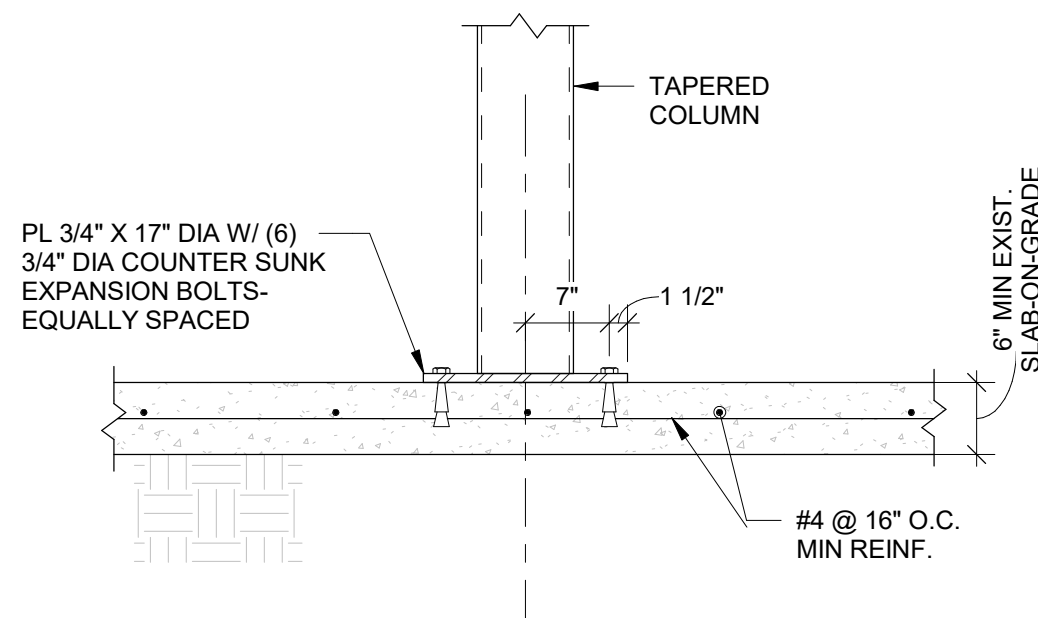
1 TEMPORARY 10' X 6' FOUNDATION PLAN  
1/2" = 1'-0"



2 TEMPORARY 10' X 6' ROOF PLAN  
1/2" = 1'-0"



3 TEMPORARY SECTION - 6' SHELTER  
3/4" = 1'-0"



4 TEMPORARY COLUMN TO SLAB DETAIL  
3/4" = 1'-0"

NOTE:  
1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND 3D MODELS.  
2. FREE STANDING ELEMENTS WITH THEIR OWN SUPPORT AND FOUNDATION ARE ACCEPTABLE.

TEMPORARY 10' X 6' PLAN NOTES

- 1 MINIMUM SLAB REQUIREMENT: 8'-6" x 16'-0" x 0'-6" SLAB W/ #4 @ 16" O.C. EA. WAY AT CENTER OF SLAB.
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- 8 INTEGRAL CONDUIT PATHWAY.
- 9 OPENING IN FABRICATED CONNECTION FOR DOWNSPOUT - SEE PLAN FOR DOWNSPOUT LOCATION.



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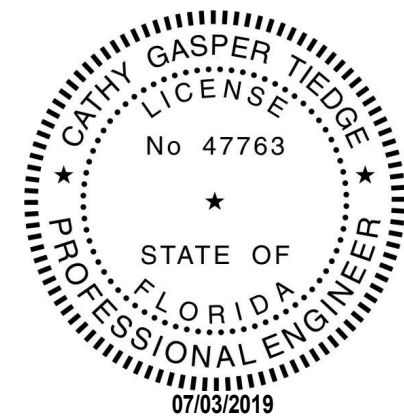
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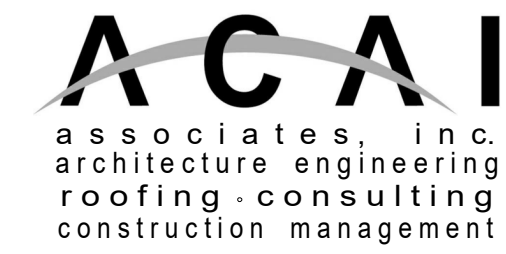
MIAMI BEACH

PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

TEMPORARY 10' X 6' FOUNDATION PLAN, FRAMING PLAN, DETAILS

SHEET TITLE



AAC001323-EB0004379-CGC010769  
2937 W. Cypress Creek Rd., Suite 200  
Fort Lauderdale, Florida 33309  
Tel: 954.484.4000 Fax: 954.484.5588  
www.acaiarchitects.com  
ARCHITECT OF RECORD

17-012 G01

PROJECT NUMBER

S-106

SHEET NUMBER  
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SUBMITTALS:	
PHASE	DATE
100% CD's	07.03.2019
PERMIT SET REVISED	07.22.2019

REVISIONS:		
NO.	DESCRIPTION	DATE

PROJECT TEAM  
PROFESSIONAL IN CHARGE

CATHY G. TIEDGE, PE

REGISTRATION NUMBER FL-47763

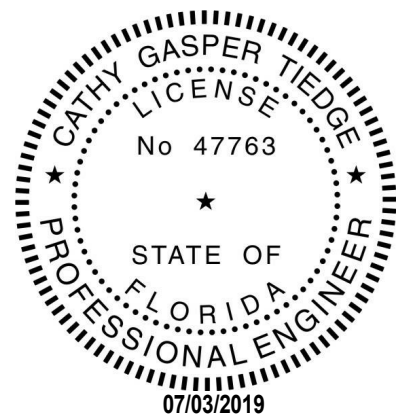
APPROVED BY CGT

DESIGNED BY CGT

DRAWN BY BAW

CHECKED BY

CGT



DESIGN CONSULTANT

**MIAMI BEACH**

PINFARINA BUS SHELTERS

CITY OF MIAMI BEACH

EXISTING FOUNDATIONS

SHEET TITLE

**ACAI**  
associates, inc.  
architecture engineering  
roofing consulting  
construction management

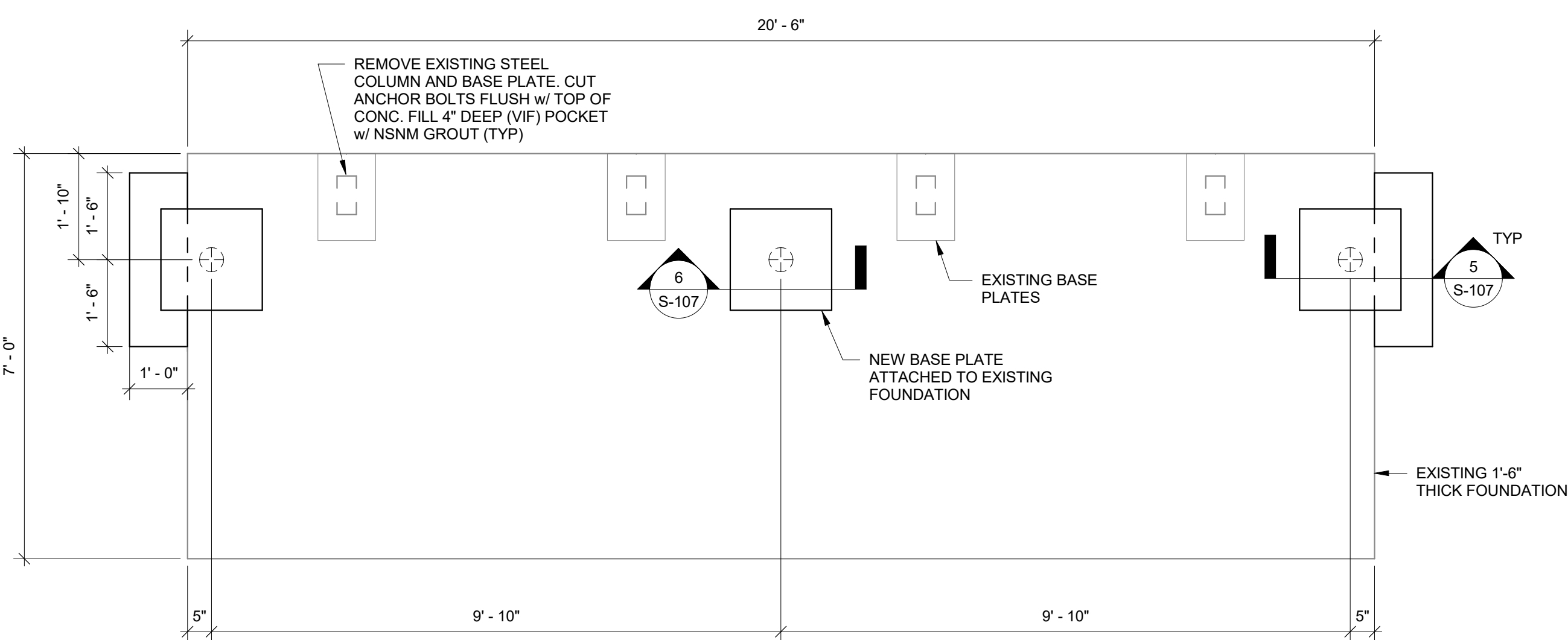
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ARCHITECT OF RECORD

17-012 G01

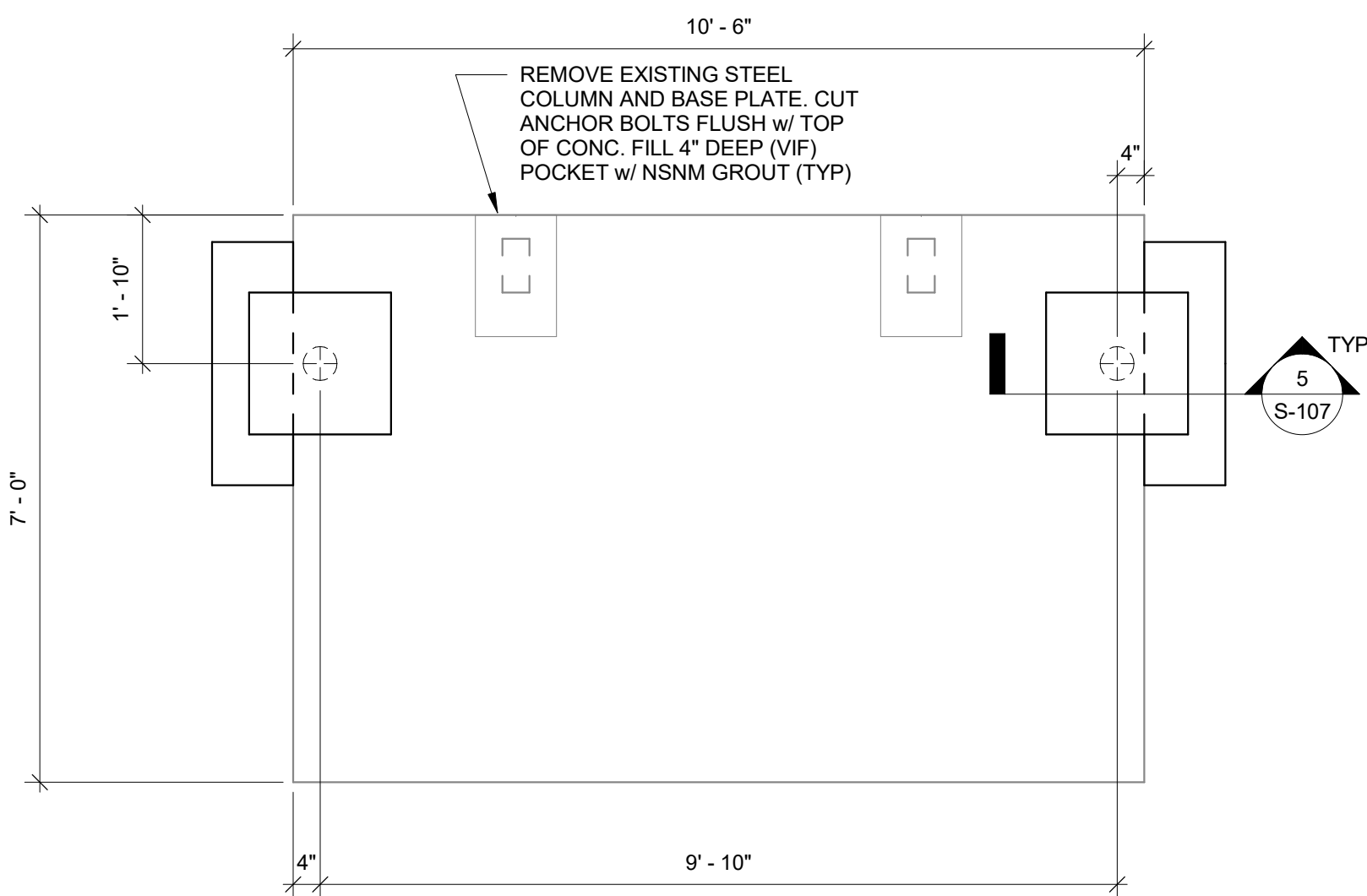
PROJECT NUMBER

**S-107**

SHEET NUMBER  
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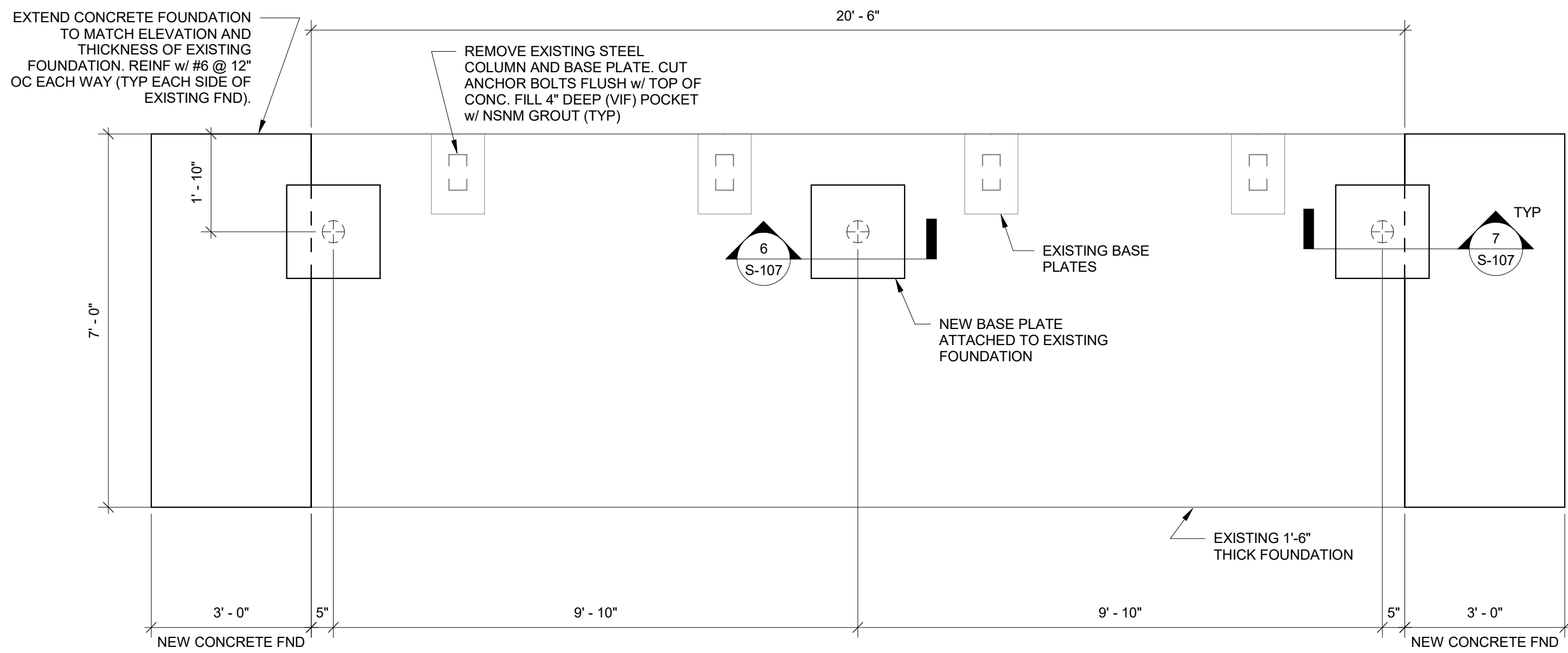
NOTE: ACCEPTABLE FOR USE WITH 20' x 3' SHELTER.



NOTE: ACCEPTABLE FOR USE WITH 10' x 3' AND 10' x 6' SHELTER.

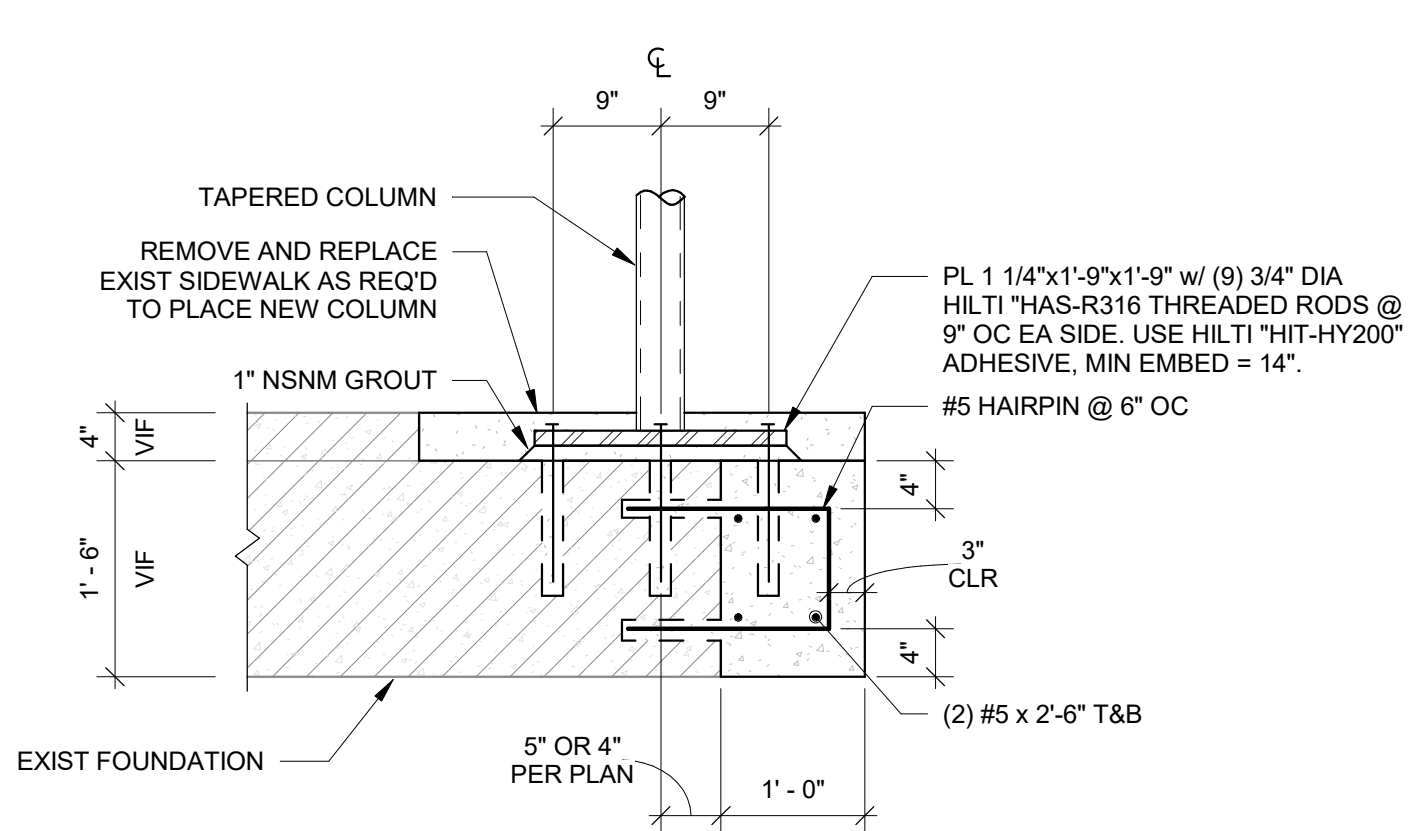
1 20' x 3' SHELTER AT EXISTING FOUNDATION (20'-6" x 7'-0")  
1/2" = 1'-0"

4 EXISTING FOUNDATION (10'-6" x 7'-0")  
1/2" = 1'-0"

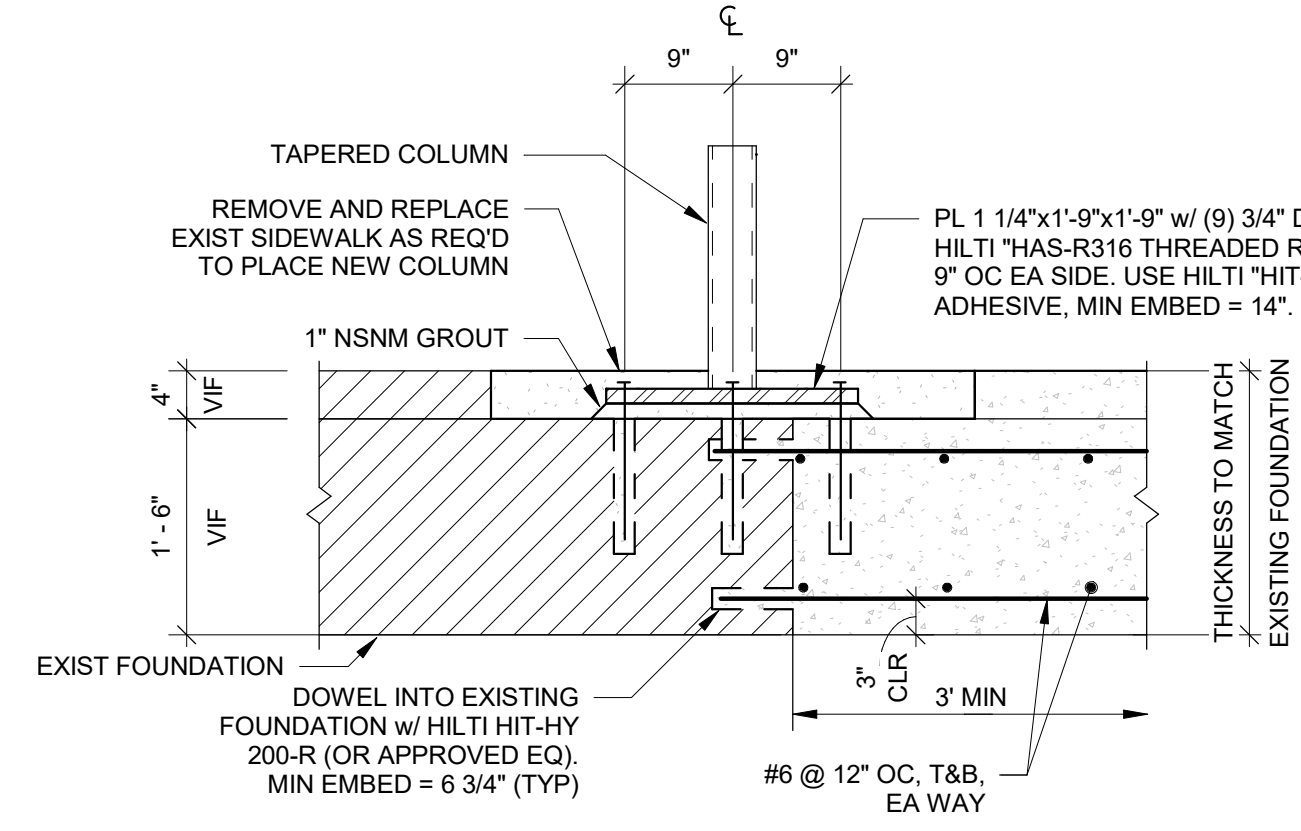


NOTE: ACCEPTABLE FOR USE WITH 20' x 6' SHELTER.

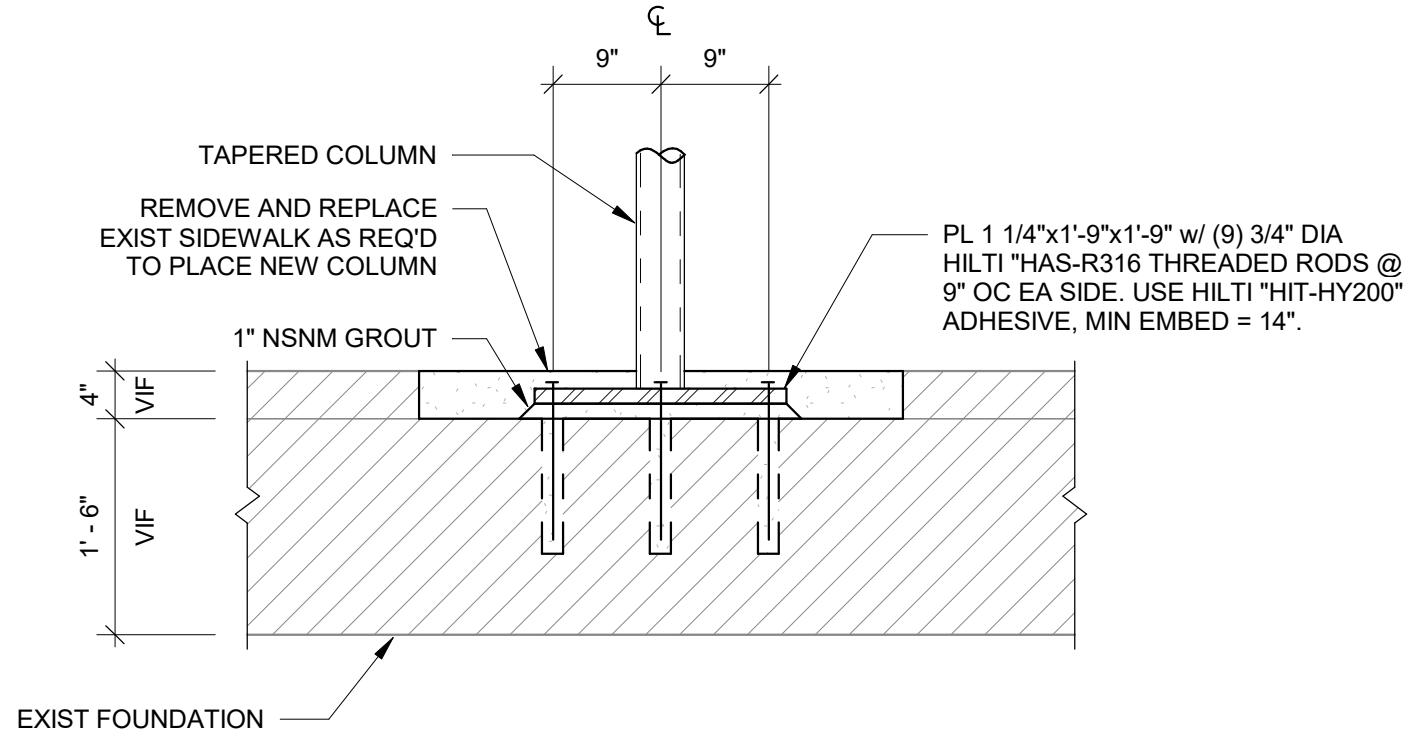
2 EXTENDED FOUNDATION FOR 20' x 6' SHELTER AT EXISTING FOUNDATION (20'-6" x 7'-0")  
1/2" = 1'-0"



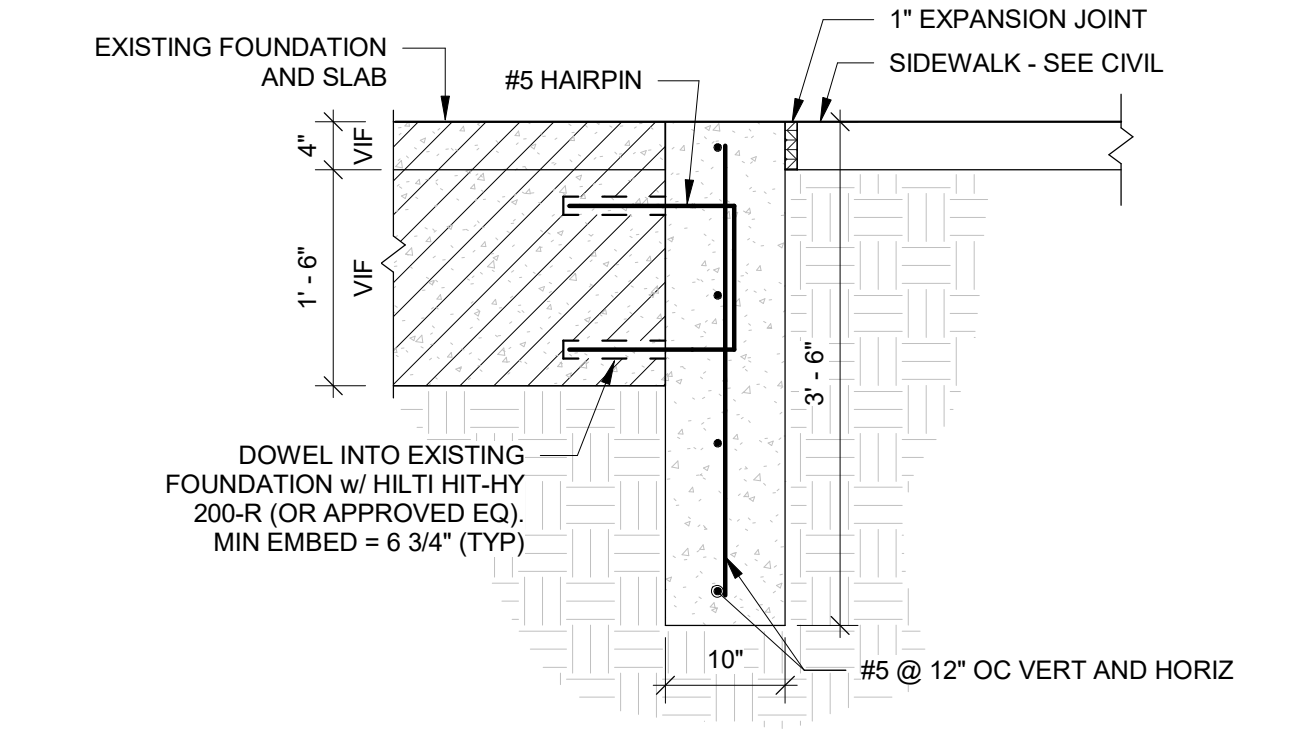
5 COLUMN CONNECTION AT EDGE OF EXIST FOUNDATION  
3/4" = 1'-0"



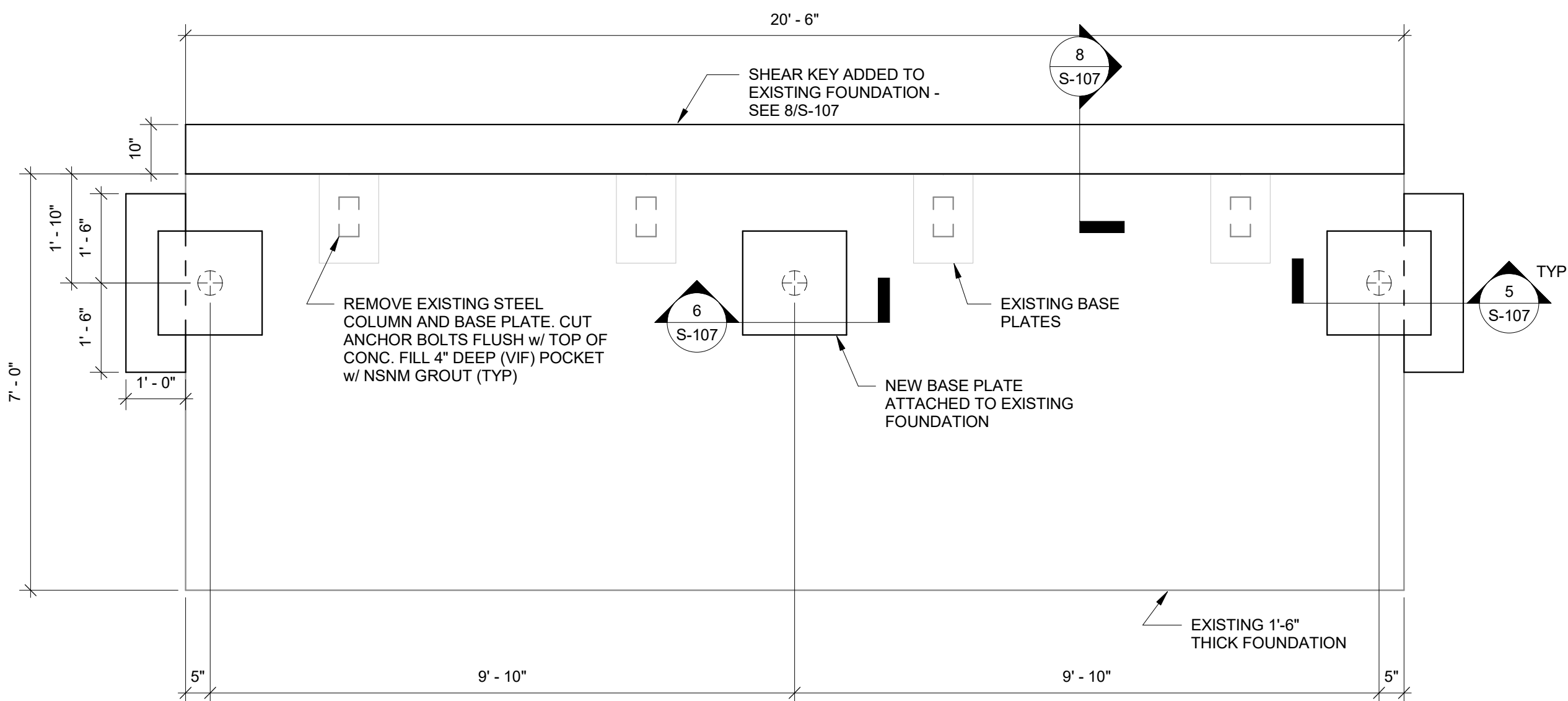
7 COLUMN CONNECTION AT EDGE OF EXIST FOUNDATION AT 20' x 6' SHELTER  
3/4" = 1'-0"



6 COLUMN CONNECTION AT INTERIOR OF EXIST FOUNDATION  
3/4" = 1'-0"



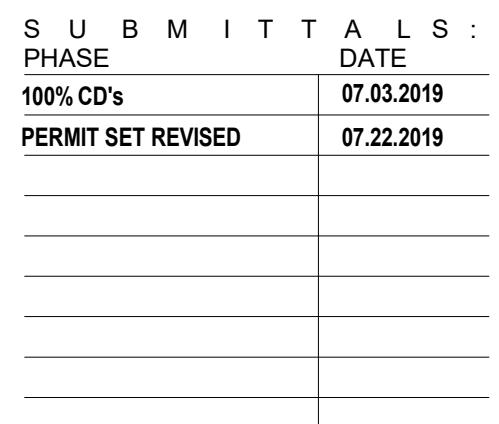
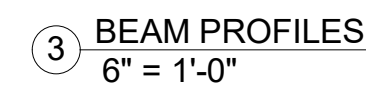
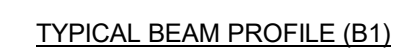
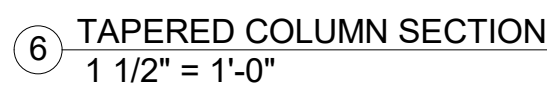
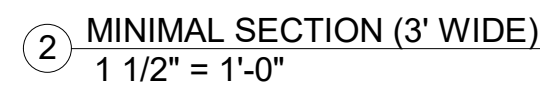
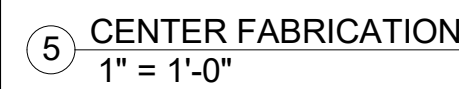
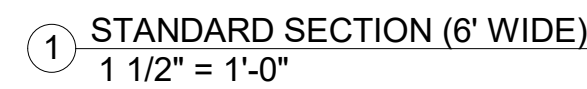
8 SHEAR KEY AT EXISTING FOUNDATION  
3/4" = 1'-0"



NOTE: ACCEPTABLE FOR USE WITH 20' x 6' SHELTER.

3 SHEAR KEY FOR 20' x 6' SHELTER AT EXISTING FOUNDATION (20'-6" x 7'-0")  
1/2" = 1'-0"





PROJECT TEAM  
PROFESSIONAL IN CHARGE

---

CATHY G. TIEDGE, PE

REGISTRATION  
NUMBER FL-47763

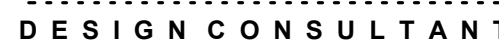
APPROVED BY \_\_\_\_\_ CGT

DESIGNED BY

CGT

D R A W N   B Y

C H F C K F D B Y



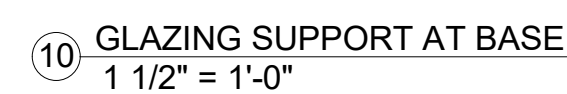
MIAMI BEACH

## PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

## STRUCTURAL DETAILS

-----  
S H E E T     T I T L E



**17-012 G01**

.....  
PROJECT NUMBER

**S-201**

**S H E E T   N U M B E R**

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AND ABILITY THESE PLANS ARE  
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APPLICABLE BUILDING CODES

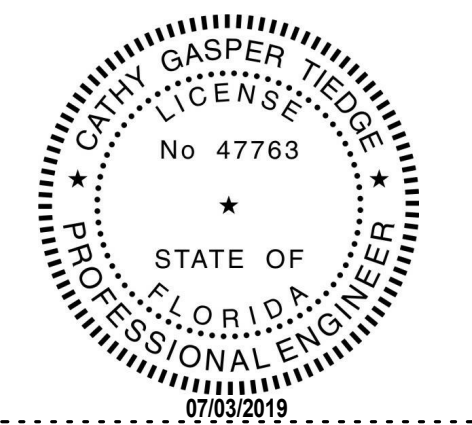


SUBMITTALS:		
PHASE	DATE	
100% CD's	07.03.2019	
PERMIT SET REVISED	07.22.2019	

REVISIONS:		
NO.	DESCRIPTION	DATE

PROJECT TEAM  
PROFESSIONAL IN CHARGE

CATHY G. TIEDGE, PE  
REGISTRATION NUMBER FL-47763  
APPROVED BY CGT  
DESIGNED BY CGT  
DRAWN BY AED  
CHECKED BY CGT



DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS SHELTERS

CITY OF MIAMI BEACH

STRUCTURAL  
DETAILS

SHEET TITLE

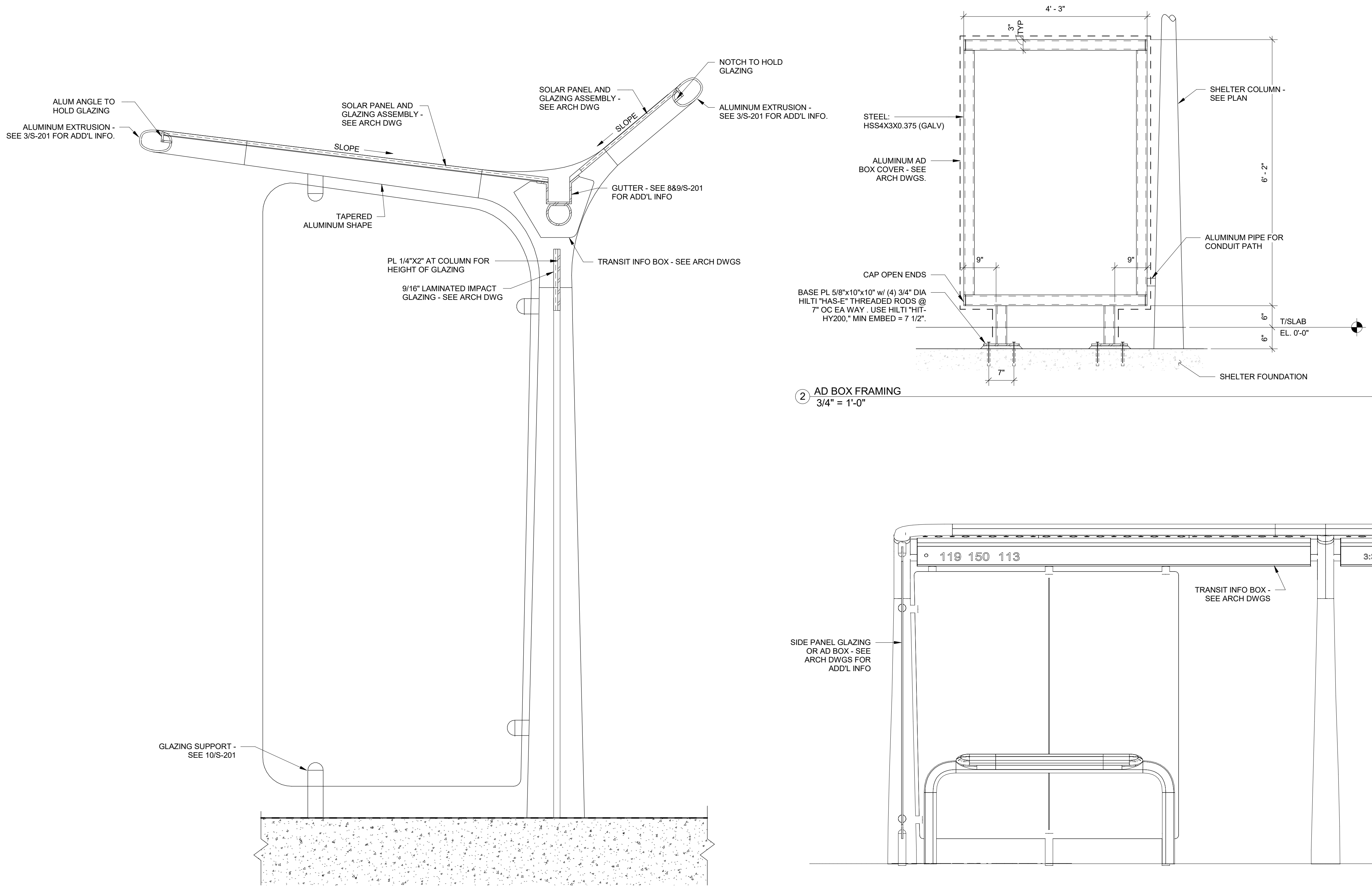
ACAI  
associates, inc.  
architecture engineering  
roofing consulting  
construction management

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2937 W. Cypress Creek Rd., Suite 200  
Fort Lauderdale, Florida 33309  
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17-012 G01  
PROJECT NUMBER

S-202  
SHEET NUMBER

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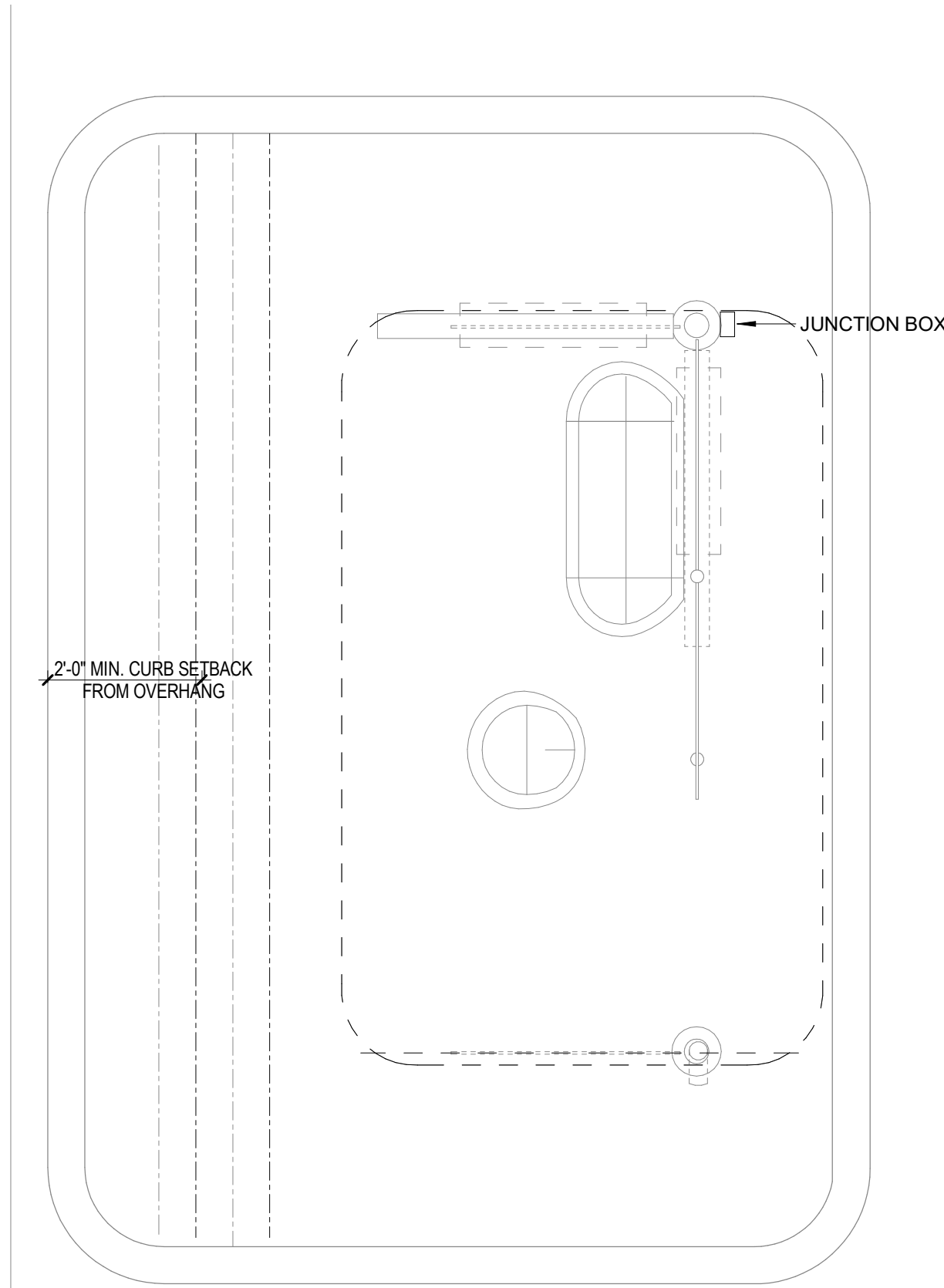
1 TYPICAL SECTION  
1 1/2" = 1'-0"

3 ELEVATION  
3/4" = 1'-0"

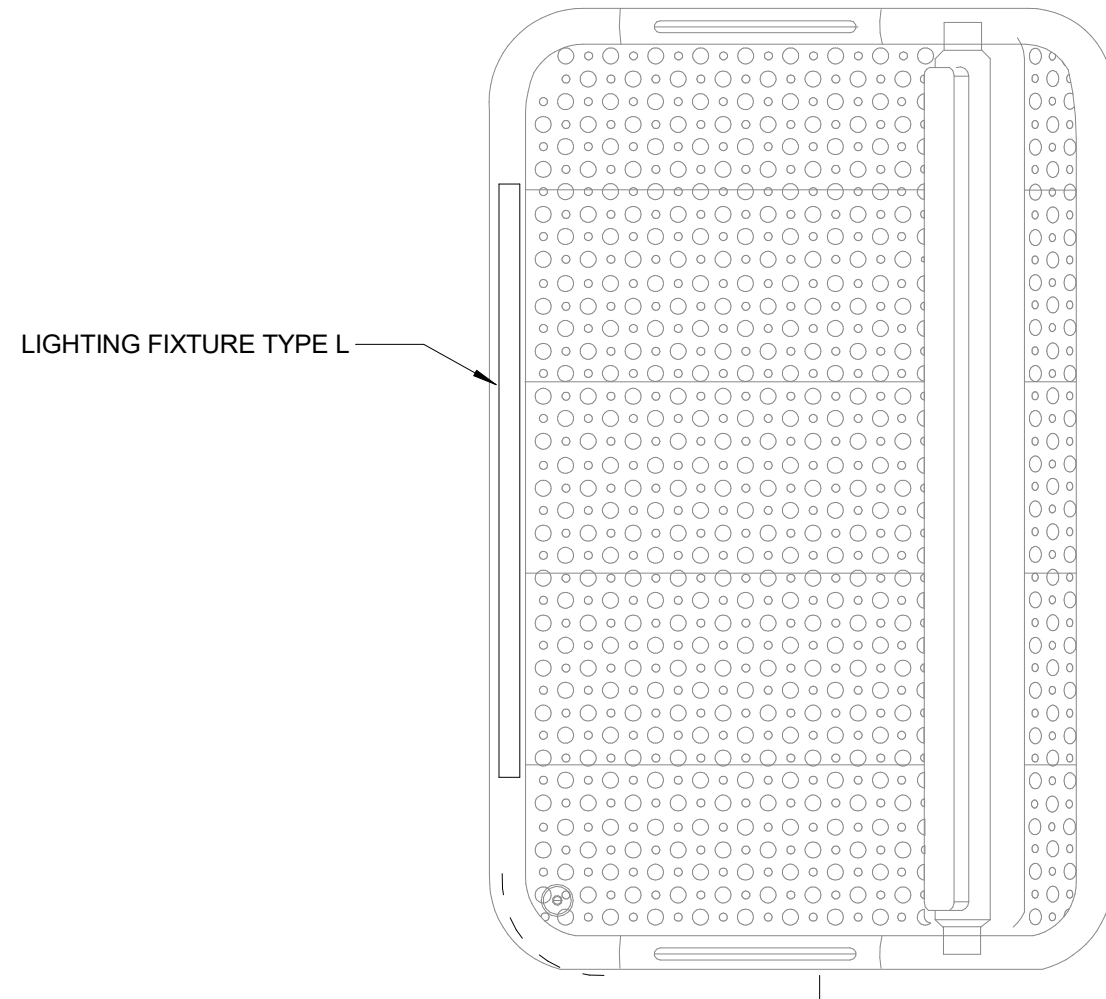


C:\Revit Local\616107 - Miami Beach Bus Shelters - R18 Manny.Gutierrez.rvt





3 FLOOR PLAN  
1/2" = 1'-0"



4 REFLECTED CEILING PLAN  
1/2" = 1'-0"

7.61	8.28	8.69	9.07	9.28	9.54	9.54	9.62	9.60	9.48	9.42	9.12	8.88	8.48	8.06
8.55	9.26	9.64	10	10	11	11	11	11	11	10	10	9.86	9.39	9.01
9.19	9.81	10	11	11	11	11	12	12	11	11	11	11	10	9.52
9.78	10	11	11	12	12	12	12	12	12	12	12	11	11	10
9.92	11	11	12	12	12	12	13	12	12	12	12	11	11	10
10	11	11	12	12	13	13	13	13	13	13	12	12	11	10
9.77	11	11	12	12	13	13	13	13	13	13	12	11	11	10
9.17	10	11	12	12	13	13	13	13	13	13	12	12	11	9.80

PHOTOMETRIC CALCULATION SUMMARY (PER MODULE)			
AVERAGE (fc)	MINIMUM (fc)	MAX (fc)	MIN/MAX (fc)
11	7.35	13	.556

LIGHT FIXTURE SCHEDULE							
TYPE	DESCRIPTION	MANUFACTURER	MODEL	VOLTAGE	TYPE	VA	COMMENTS
L	LINEAR EMBEDDED LED STRIP	ALDABRA	LIN 01 D30A1.0 LINEA 3000 OPAL (1.000)	24V	LED	13	

ELECTRICAL NOTE:  
  
TO FACILITATE OPTIONAL FUTURE CONNECTION TO GRID, CONTRACTOR SHALL PROVIDE EMPTY 2" CONDUIT RUN FROM UTILITY POINT OF SERVICE TO TRAFFIC RATED PULL BOX (16" LENGTH MINIMUM) AT POINT OF FUTURE OPTIONAL SERVICE ENTRANCE EQUIPMENT WHICH SHALL BE LOCATED AS NEAR TO SHELTERS AS SITE SPECIFIC CONDITIONS PERMIT (MAXIMUM TOTAL RUN DISTANCE OF 206 FEET). CONTRACTOR SHALL PROVIDE 2" EMPTY CONDUIT, 18" MINIMUM BELOW GRADE AND TERMINATE AT JUNCTION BOX ON NEAR SIDE POST UP TO THE HORIZONTAL ENCLOSURE OF THE BUS STOP STRUCTURE.

5757 Blue Lagoon Dr.  
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Miami, FL 33126  
Phone: 305-266-6553  
Fax: 305-266-6695  
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COA 15 TLC NO: 616107

SUBMITTALS:	
PHASE	DATE
100% CD's	07.03.2019
REVISED PERMIT SET	07.22.2019

REVISIONS:		
NO.	DESCRIPTION	DATE

PROJECT TEAM  
PROFESSIONAL IN CHARGE

MANUEL MOLLINEDO, PE

REGISTRATION NUMBER FL-63096

APPROVED BY TLC

DESIGNED BY TLC

DRAWN BY TLC

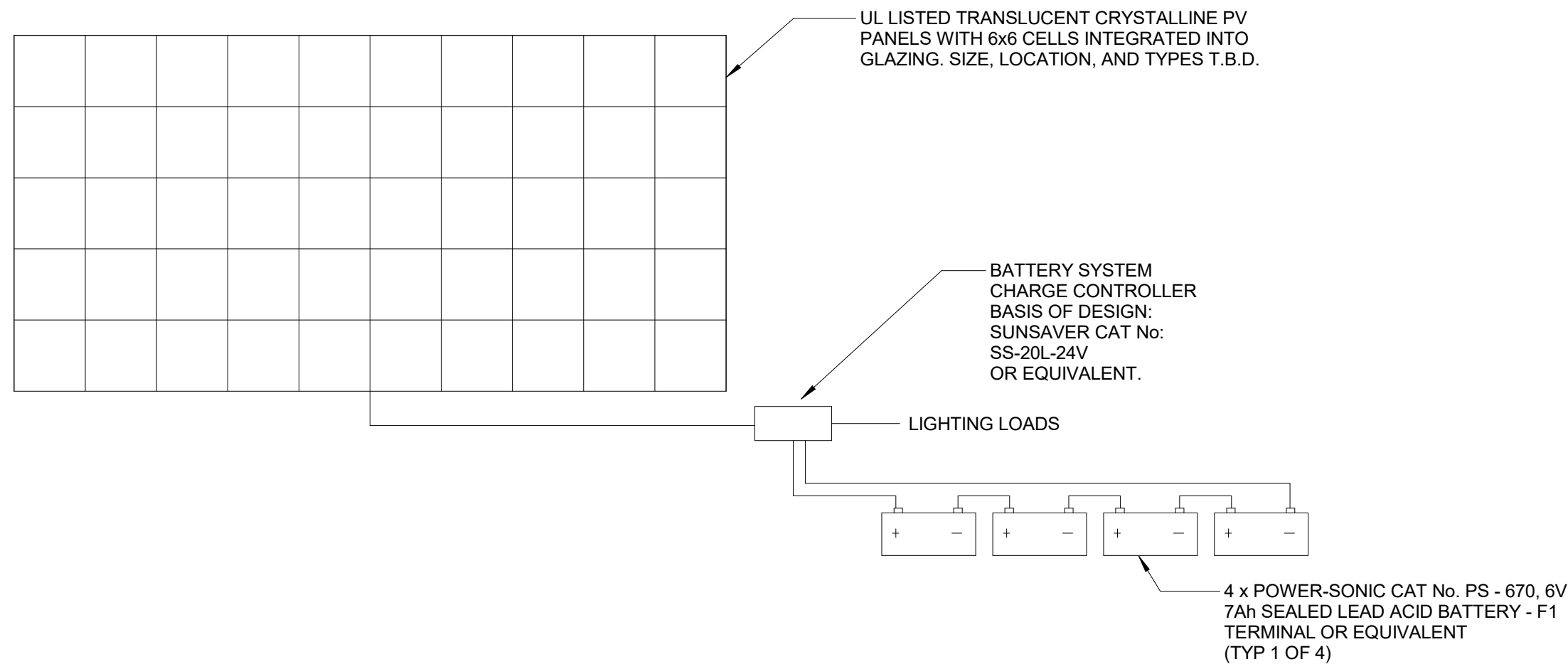
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TLC

Manuel Mollinedo, P.E.  
Florida License # 63096

6 MINIMAL SHELTER SECTION VIEW 10' x 6.5'  
1 1/2" = 1'-0"

MINIMAL 10' x 6.5' and 10 x 3'	Watts	Hours	Watt hours	Ah@24V	DOD@80%
Lighting (24V)	50	12	600	25	30
TOTALS	50	-----	600	25	30



1 ELECTRICAL POWER RISER AND LOAD SUMMARY MINIMAL  
3" = 1'-0"

07/03/2019  
DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS SHELTERS  
CITY OF MIAMI BEACH

MINIMAL 10' x 6.5' -  
FLOOR PLAN,  
REFLECTED CEILING  
PLAN - ELECTRICAL

SHEET TITLE

ACAI  
associates, inc.  
architecture engineering  
roofing consulting  
construction management

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2937 W. Cypress Creek Rd., Suite 200  
Fort Lauderdale, Florida 33309  
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17-012 G01  
PROJECT NUMBER  
E-101

SHEET NUMBER  
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### Branch Panel: P

Location:  
Supply From:  
Mounting: Surface  
Enclosure: TYPE 3R

Volts: 120/240 Single  
Phases: 1  
Wires: 3

A.I.C. Rating: 22,000  
Mains Type: MCB  
Mains Rating: 150 A  
MCB Rating: 60 A  
Neutral Rating: 100.00%

Notes:

CKT	Circuit Description	No te	Trip	Po l e	A		B		Po l e	Trip	No te	Circuit Description	CKT
1	P.I.S., DIGITAL AD DISPLAY, LIGHTING LOADS		20 A	2	1.2 kVA	1.2 kVA	0.0 kVA	0.0 kVA	1	20 A		QUAD RECEPTACLE	2
3		--	--	--	0.0 kVA	0.0 kVA			--	--	--	SPACE	4
5	SPACE	--	--	--			0.0 kVA	0.0 kVA	--	--	--	SPACE	6
7	SPACE	--	--	--					--	--	--	SPACE	8
Total Load:					2.4 kVA		0.0 kVA						
Total Amps:					20 A		0 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
				Total Conn. Load: 2.4 kVA
				Total Est. Demand: 2.40 kVA
				Total Conn. Current: 10 A
				Total Est. Demand Current: 10 A

Notes:

LIGHTING FIXTURE TYPE L

LIGHTING FIXTURE TYPE L

5

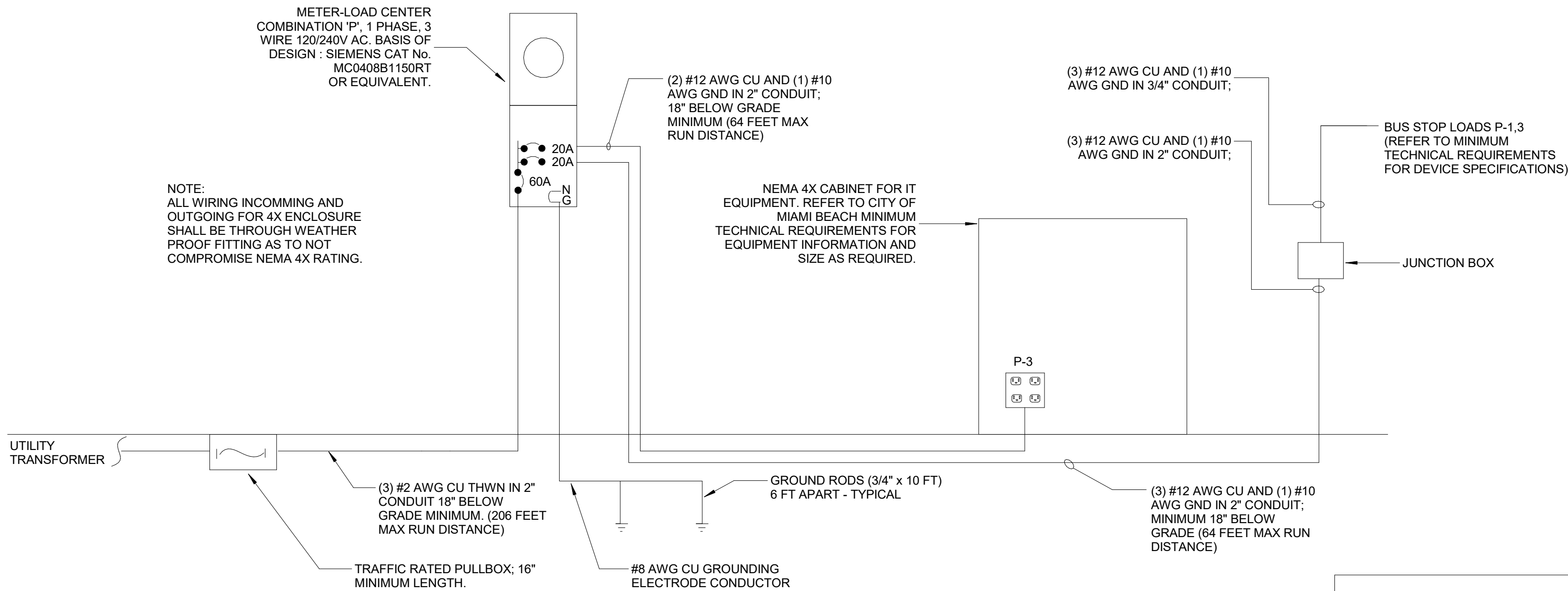
### REFLECTED CEILING PLAN

1/2" = 1'-0"

3

### FLOOR PLAN

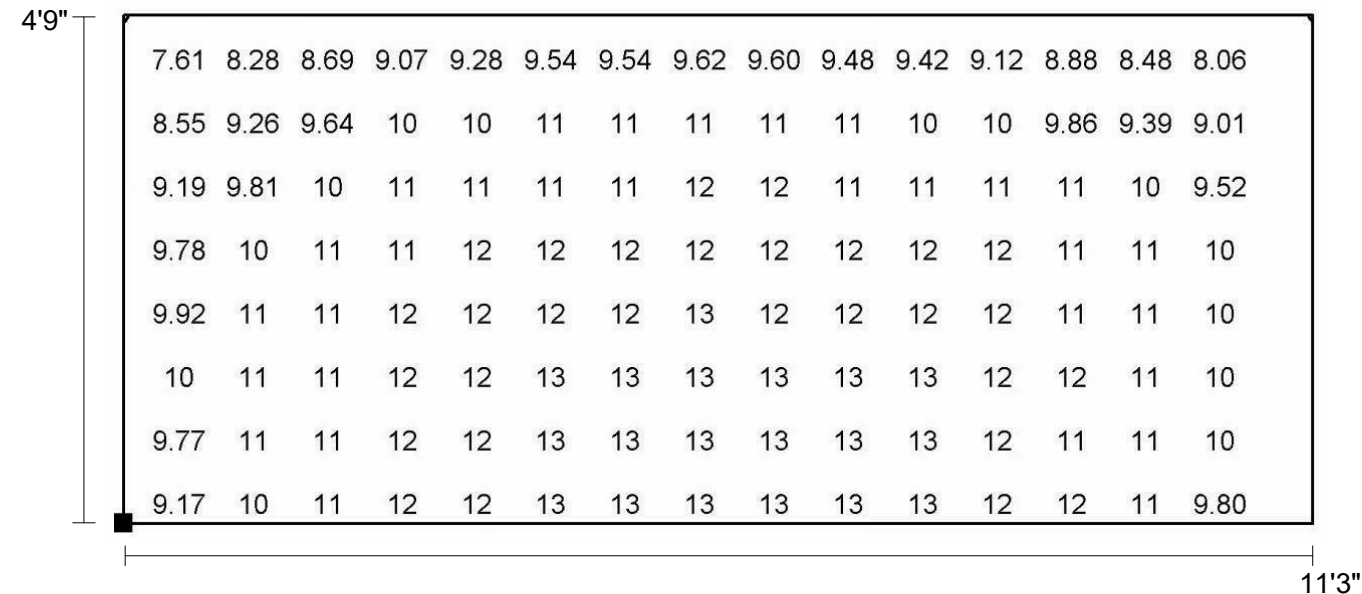
1/2" = 1'-0"



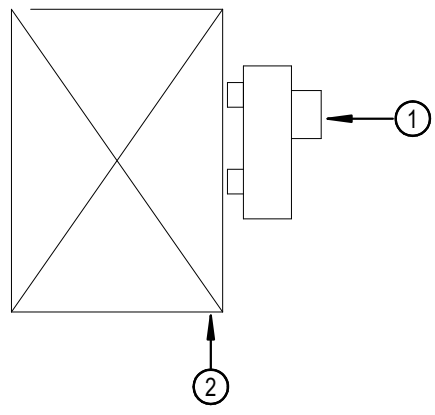
### ELECTRICAL POWER RISER AND LOAD SUMMARY EXTENDED 2

1

3" = 1'-0"



LIGHT FIXTURE SCHEDULE							
TYPE	DESCRIPTION	MANUFACTURER	MODEL	VOLTAGE	TYPE	VA	COMMENTS
L	LINEAR EMBEDDED LED STRIP	ALDABRA	LIN 01 D30A1.0 LINEA 3000 OPAL (1.000)	24V	LED	13	



#### KEY NOTES

- METER-LOAD CENTER COMBINATION "P" (30" x 14" x 5.0"), SINGLE PHASE, 3 WIRE 120/240V AC. BASIS OF DESIGN : SIEMENS CAT No. MC0408B1150RT OR EQUIVALENT MOUNTED ON UNISTRUT. METER-LOAD CENTER SHALL BE FIELD LOCATED AS NEAR TO SHELTERS AS SITE SPECIFIC CONDITIONS PERMIT.
- NEMA 4X CABINET FOR COMMUNICATIONS EQUIPMENT. SIZE AS REQUIRED. IT CABINET SHALL BE FIELD LOCATED AS NEAR TO SHELTERS AS SITE SPECIFIC CONDITIONS PERMIT. COORDINATE EXACT LOCATIONS WITH CITY AND ARCHITECT / ENGINEER.

SUBMITTALS	
PHASE	DATE
100% CD's	07.03.2019
REVISED PERMIT SET	07.22.2019

#### REVISIONS

NO.	DESCRIPTION	DATE

#### PROJECT TEAM

PROFESSIONAL IN CHARGE

MANUEL MOLLINEDO, PE

REGISTRATION NUMBER FL-63096

APPROVED BY TLC

DESIGNED BY TLC

DRAWN BY TLC

CHECKED BY TLC

Manuel Mollinedo, P.E.  
Florida License # 63096

07/03/2019  
DESIGN CONSULTANT

MIAMI BEACH

PININFARINA BUS  
SHELTERS

CITY OF MIAMI BEACH

ENHANCED 20' x 6.5' -  
FLOOR PLAN,  
REFLECTED CEILING  
PLAN - ELECTRICAL

SHEET TITLE

ACAI  
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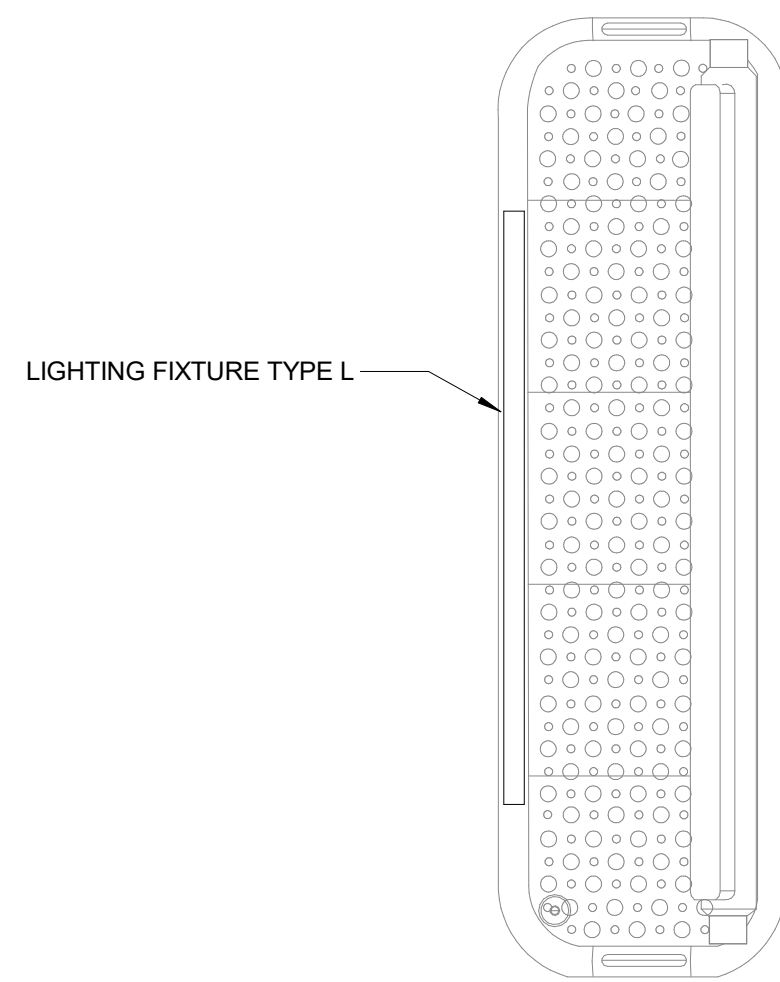
17-012 G01

PROJECT NUMBER

E-102

SHEET NUMBER  
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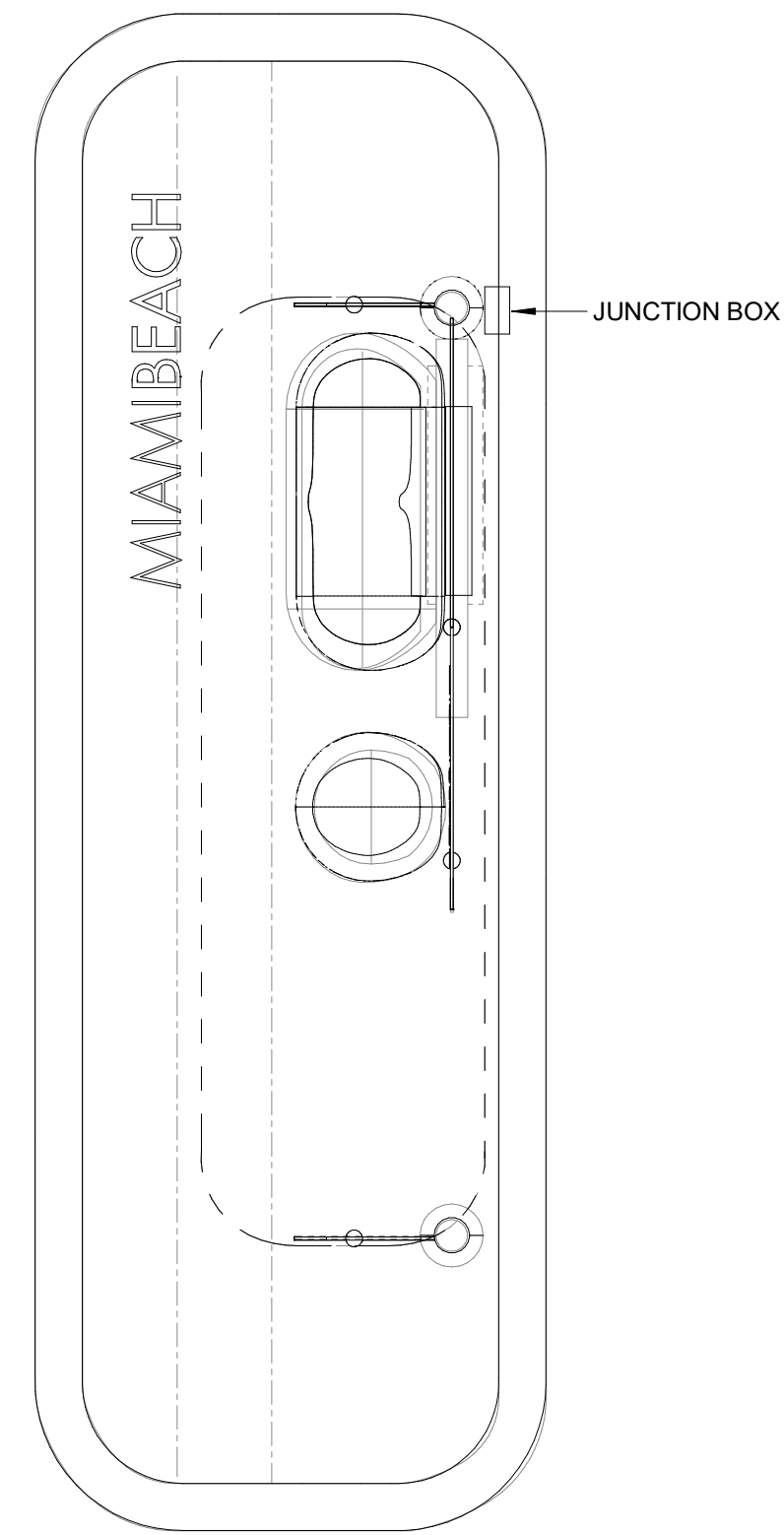
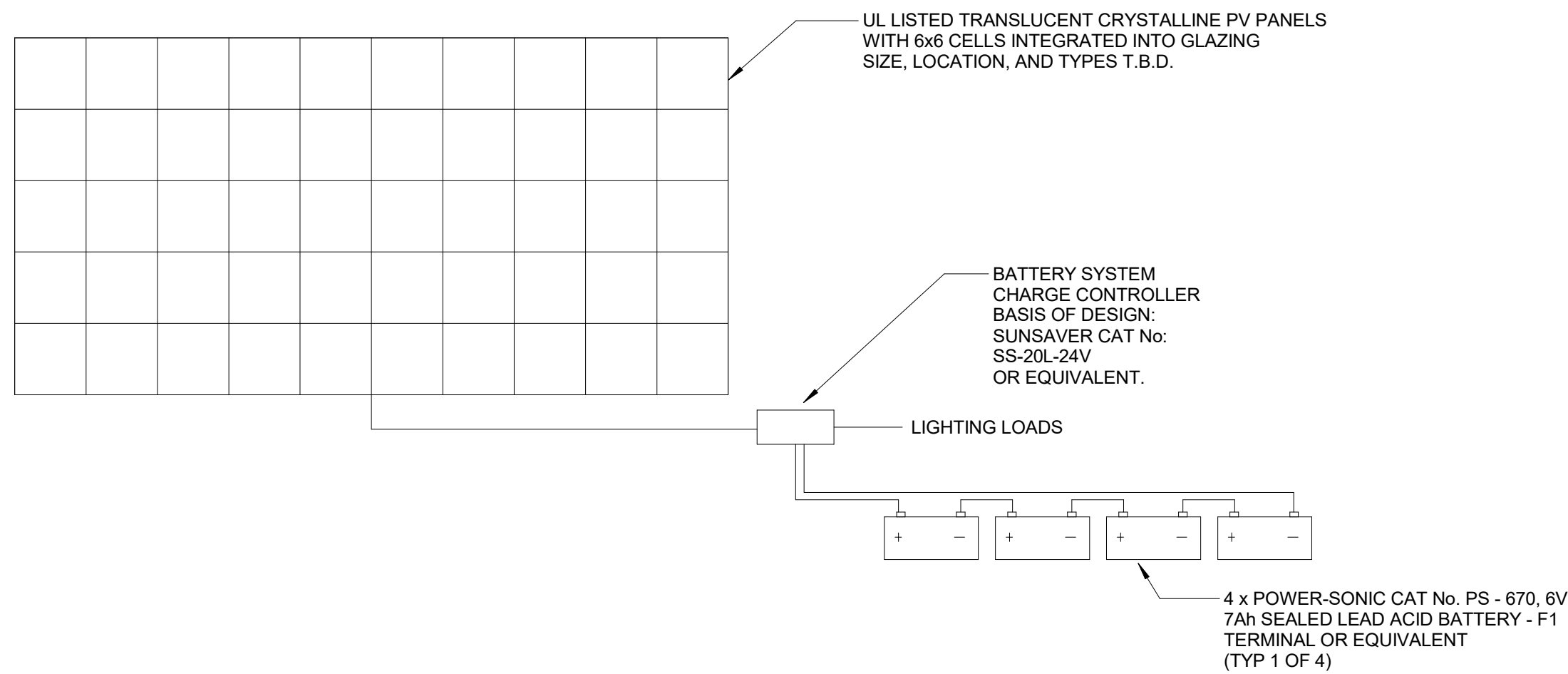




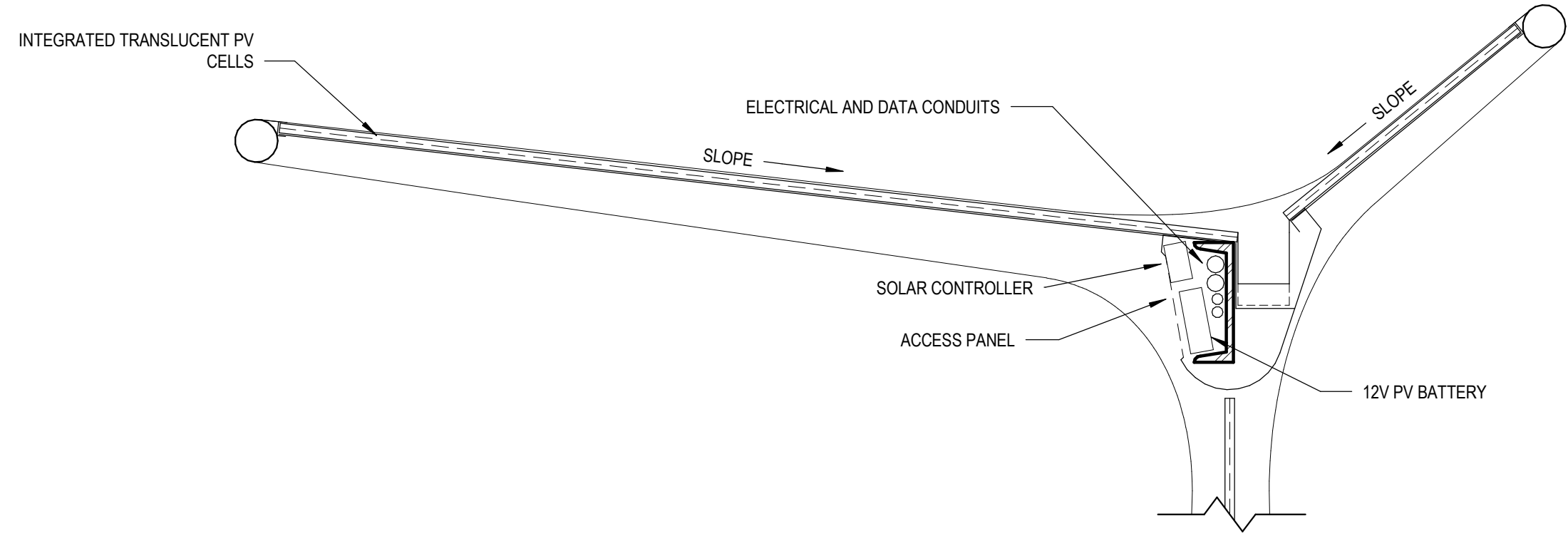
3 REFLECTED CEILING PLAN  
1/2" = 1'-0"

MINIMAL 10' x 6.5' and 10 x 3'	Watts	Hours	Watt hours	Ah@24V	DOD@80%
Lighting (24V)	50	12	600	25	30
TOTALS	50	-----	600	25	30

5 FLOOR PLAN  
1/2" = 1'-0"



4 MINIMAL SHELTER SECTION VIEW 10' x 3'  
1 1/2" = 1'-0"



ELECTRICAL NOTE:  
TO FACILITATE OPTIONAL FUTURE CONNECTION TO GRID, CONTRACTOR SHALL PROVIDE EMPTY 2" CONDUIT RUN FROM UTILITY POINT OF SERVICE TO TRAFFIC RATED PULL BOX (16" LENGTH MINIMUM) AT POINT OF FUTURE OPTIONAL SERVICE ENTRANCE EQUIPMENT WHICH SHALL BE LOCATED AS NEAR TO SHELTERS AS SITE SPECIFIC CONDITIONS PERMIT (MAXIMUM TOTAL RUN DISTANCE OF 206 FEET). CONTRACTOR SHALL PROVIDE 2" EMPTY CONDUIT, 18" MINIMUM BELOW GRADE AND TERMINATE AT JUNCTION BOX ON NEAR SIDE POST UP TO THE HORIZONTAL ENCLOSURE OF THE BUS STOP STRUCTURE.

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REGISTRATION NUMBER FL-63096  
APPROVED BY TLC  
DESIGNED BY TLC  
DRAWN BY TLC  
CHECKED BY TLC  
Manuel Mollinedo, P.E.  
Florida License # 63096

07/03/2019  
DESIGN CONSULTANT  
MIAMI BEACH  
PININFARINA BUS  
SHELTERS  
CITY OF MIAMI BEACH

MINIMAL 10 x 3' -  
FLOOR PLAN,  
REFLECTED CEILING  
PLAN - ELECTRICAL

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1 2 ELECTRICAL POWER RISER AND LOAD SUMMARY MINIMAL  
3" = 1'-0"

LIGHT FIXTURE SCHEDULE							
TYPE	DESCRIPTION	MANUFACTURER	MODEL	VOLTAGE	TYPE	VA	COMMENTS
L	LINEAR EMBEDDED LED STRIP	ALDABRA	LIN 01 D30A1.0 LINEA 3000 OPAL (1.000)	24V	LED	13	

7.61	8.28	8.69	9.07	9.28	9.54	9.54	9.62	9.60	9.48	9.42	9.12	8.88	8.48	8.06
8.55	9.26	9.64	10	10	11	11	11	11	11	10	10	9.86	9.39	9.01
9.19	9.81	10	11	11	11	11	12	12	11	11	11	11	10	9.52
9.78	10	11	11	12	12	12	12	12	12	12	12	11	11	10
9.92	11	11	12	12	12	12	13	12	12	12	12	11	11	10
10	11	11	12	12	13	13	13	13	13	13	12	12	11	10
9.77	11	11	12	12	13	13	13	13	13	13	12	11	11	10
9.17	10	11	12	12	13	13	13	13	13	13	12	12	11	9.80

PHOTOMETRIC CALCULATION SUMMARY (PER MODULE)			
AVERAGE (fc)	MINIMUM (fc)	MAX (fc)	MIN/MAX (fc)
11	7.35	13	.556



[illegible]

MANUEL MOLLINEDO, PE

APPROVED BY \_\_\_\_\_ TLC

.....  
DRAWN BY

\_\_\_\_\_  
TLC

Manuel Mollinedo, P.E.  
Florida License # 63096



MIAMI BEACH

**PININFARINA BUS  
SHELTERS**

CITY OF MIAMI BEACH

-----  
S H E E T     T I T L E

AAC001323-EB0004379-CGC010769  
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Fort Lauderdale, Florida 33309  
Tel: 954.484.4000 • Fax: 954.484.5588  
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-----  
**ARCHITECT OF RECORD**

-----  
PROJECT NUMBER

SHEET NUMBER

TO THE BEST OF MY KNOWLEDGE  
AND ABILITY THESE PLANS ARE  
COMPLETE AND COMPLY WITH THE  
APPLICABLE BUILDING CODES

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**FLOOR PLAN**

1/2" = 1'-0"

METER-LOAD CENTER  
COMBINATION "P", 1 PHASE, 3  
WIRE 120/240V AC. BASIS OF  
DESIGN : SIEMENS CAT No.  
MC0408B1150RT  
OR EQUIVALENT.

NOTE:  
ALL WIRING INCOMING AND  
OUTGOING FOR 4X ENCLOSURE  
SHALL BE THROUGH WEATHER  
PROOF FITTING AS TO NOT  
COMPROMISE NEMA 4X RATING.

UTILITY TRANSFORMER

(3) #2 AWG CU THWN IN 2" CONDUIT 18" BELOW GRADE MINIMUM. (206 FEET MAX RUN DISTANCE)

TRAFFIC RATED PULLBOX; 16" MINIMUM LENGTH.

(2) #12 AWG CU AND (1) #10 AWG GND IN 2" CONDUIT; 18" BELOW GRADE MINIMUM (64 FEET MAX RUN DISTANCE)

NEMA 4X CABINET FOR IT EQUIPMENT. REFER TO CITY OF MIAMI BEACH MINIMUM TECHNICAL REQUIREMENTS FOR EQUIPMENT INFORMATION AND SIZE AS REQUIRED.

P-3

GROUND RODS (3/4" x 10 FT) 6 FT APART - TYPICAL

#8 AWG CU GROUNDING ELECTRODE CONDUCTOR

(3) #12 AWG CU AND (1) #10 AWG GND IN 3/4" CONDUIT;

(3) #12 AWG CU AND (1) #10 AWG GND IN 2" CONDUIT;

BUS STOP LOADS P-1.3 (REFER TO MINIMUM TECHNICAL REQUIREMENTS FOR DEVICE SPECIFICATIONS)

JUNCTION BOX

(3) #12 AWG CU AND (1) #10 AWG GND IN 2" CONDUIT; MINIMUM 18" BELOW GRADE (64 FEET MAX RUN DISTANCE)

4'9"	7.61	8.28	8.69	9.07	9.28	9.54	9.54	9.62	9.60	9.48	9.42	9.12	8.88	8.48	8.06
	8.55	9.26	9.64	10	10	11	11	11	11	11	10	10	9.86	9.39	9.01
	9.19	9.81	10	11	11	11	11	12	12	11	11	11	11	10	9.52
	9.78	10	11	11	12	12	12	12	12	12	12	12	11	11	10
	9.92	11	11	12	12	12	12	13	12	12	12	12	11	11	10
	10	11	11	12	12	13	13	13	13	13	13	12	12	11	10
	9.77	11	11	12	12	13	13	13	13	13	13	12	11	11	10
	9.17	10	11	12	12	13	13	13	13	13	13	12	12	11	9.80

LIGHT FIXTURE SCHEDULE							
TYPE	DESCRIPTION	MANUFACTURER	MODEL	VOLTAGE	TYPE	VA	COMMENTS
L	LINEAR EMBEDDED LED STRIP	ALDABRA	LIN 01 D30A1.0 LINEA 3000 OPAL (1.000)	24V	LED	13	



**MINIMUM TECHNICAL REQUIREMENTS**



*City of Miami Beach*

**MINIMUM TECHNICAL REQUIREMENTS**

**for**

**the Bus Shelters project in the City of Miami Beach**

**RFP 2019-306-KB**

**July 2019**



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## 1 General

The City of Miami Beach (the City) intends to issue a Request for Proposal (RFP) to solicit competitive bids and proposals from contractors (the vendor) for the construction, operation, and maintenance of the City's Bus Shelters project (the Project).

The Project includes the installation of new bus shelters at identified project locations throughout the City of Miami Beach. The new Bus Shelters to be constructed will incorporate completely new shelters, replacing the previous facilities. The project will incorporate Closed Circuit Television (CCTV) cameras, passenger information system/estimated time of arrival signs, digital advertising display which may be interactive, audio speakers capable of producing sound output in accordance to ADA (American with Disabilities Act) Standards, and Content Management Software (CMS), at some of the shelters.

The Vendor shall establish and utilize a redundant cellular communications network to support all field devices and equipment installed for the bus shelters. The redundant cellular network shall utilize dual LTE air cards. The cost to establish, operate and maintain the communications network shall be included in the cost of the project. This cost shall include the vendor's ability to operate and maintain the systems and components described in this document at an uptime availability of 95%. The maximum response time to assess and diagnosis the cause of a failure to any systems and components is 6 hours. The maximum response time to restore functionality to any system or component that has failed is 24 hours, this includes failures that require device or component replacement.

### 1.1 Description of Work

This document provides a set of Minimum Technical Requirements for the construction, operation, and maintenance of the Project elements and is part of the Request for Proposal (RFP).

The proposed components include the construction, operations, and maintenance of the following:

#### **Systems**

- Closed Circuit Television (CCTV) Cameras
- Digital Advertisement Displays
- Passenger Information System/Estimated Time of Arrival Signs
- Outdoor Speakers
- Field cabinets
- Content Management Software (also compatible with existing bus components)

Components, devices and materials provided by the Vendor must be operated and maintained by the Vendor to allow for 95% uptime availability of these devices. The 95% uptime availability does not apply to the CCTV Camera, as this device will be operated and maintained by the City.

#### **Communications Infrastructure**

- Optional requirements, pending City approval: Additional field communications devices and routers must be provided and be able to support providing the public with unlimited, free WiFi access while in proximity of the bus shelters requiring this equipment. The City requires the ability to turn this feature off from a remote location, at their discretion. The Vendor shall be prepared to provide the WiFi services throughout the duration of the project. These services may be requested by the City to be included on the project at any stage of the project. These services will be the sole responsibility of the vendor to deploy, integrate, operate and maintain.

## 1.2 Additional General Requirements

Unless otherwise noted herein, the Vendor shall comply with all applicable requirements of Florida Department of Transportation's (FDOT) Standard Specifications for Road and Bridge Construction latest edition (here and after known as FDOT Standard Specifications).

The Vendor shall become familiar with the project design documents and utilize the Firm's expertise in the field of communications systems and modern bus shelter components to incorporate innovation in its project delivery while maintaining all requirements of the RFP.

The Vendor is responsible for delivering all systems, subsystems, devices, and ancillary components required to provide a complete project that fulfills the requirement of its contract. The vendor shall determine the exact location of these devices and components based on the proposed design elements. Any specific locations and provided quantities of the devices to meet the requirements must also meet the manufacturers' specifications for installation and functionality of all project devices and ancillary components. The City will provide specific information related to the quantities and locations of shelter type and the associated systems, devices, and components.

The Vendor shall ensure that all field devices and ancillary components comply with the City's design and Miami-Dade transit's existing systems and operational requirements. All proposed project components and devices must be 100% compatible with existing City of Miami Beach and/or Miami-Dade County Transit field devices, County bus components, proposed content management software, and operations. Validation for compatibility of project devices and components shall be performed by the Vendor. When installing devices and infrastructure, including but not limited to Digital displays, cabinets, poles, conduit, etc., the devices, all supporting infrastructure, and the routing and placement thereof shall be context sensitive in design with regard to the design, surrounding properties and urban form.

All subsystem devices and ancillary components shall possess the latest version of hardware and software (at the time of installation) and provide the City and/or Miami-Dade County Transit software updates at no additional cost when any software updates become available for the throughout the duration of the contract. Neither untried nor prototype units will be approved or accepted by the City. The Vendor shall not use reconditioned equipment. All subsystem devices and ancillary components shall be new Commercial Off-The-Shelf (COTS) products in current production.

The Vendor shall submit a list of all selected technologies/products, selection alternatives, reasons for selection, anticipated device locations, and mounting types to the City for review and approval. Approvals will be necessary for an initial typical section of each bus shelter type. Additional approval will be required at the discretion of the City.

The Vendor shall install the subsystem devices and ancillary components that are detailed in the City's approved final design plans and specifications including, but not limited to, all required structures.

The Vendor shall not install subsystem devices and ancillary components until the City has reviewed and approved the final device or component selection and associated specifications.

The Vendor is responsible for ensuring that the bus shelters are constructed to be compliant with all ADA Standards.

The Vendor shall ensure that all devices, systems, and components of the project must be manufactured, tested, certified, and registered through the Nationally Recognized Testing Laboratory (NRTL) Program.



The Vendor shall provide the City with access of up to two (2) users of the systems, components, and software used to fulfill the requirements of this project.

All devices and components installed in the field must have an Ingress Protection (IP) rating of 66.

## 1.3 Document Organization

This document summarizes the requirements unique to each project component in a section specifically devoted to the respective field device. For each project component, the following areas are discussed:

- Description
- Design Requirements
- Project Specific Requirements

## 2 CCTV Camera System

### 2.1 Description

CCTV cameras are anticipated at each enhanced bus shelter type and are incorporated into the bus shelter structure. Mainly used for security, these cameras provide City police and system operators with live streams of bus stop activity and traffic flow. Operations staff use these devices to monitor conditions for the proper coordination of resources. Proactive use of CCTV cameras will assist with enforcement productivity, dispatch response times, and performance measures by providing early detection, event verification, increased visual coverage and most importantly, rider safety. The City shall have the opportunity to include additional CCTV Cameras at bus shelter locations based on the proposed placement and coverage that the CCTV Cameras are specified to provide within the design documents.

### 2.2 Design Requirements

The new CCTV camera shall conform to the current specifications for video equipment and corresponding Design Standards associated with the project design. The Vendor shall furnish, construct, install, and integrate the Axis® P3225-LVE Mk II CCTV Camera system, or other vendors and/or models approved by the City, and Subsystem to provide the Miami Beach Police Department and transit operator with complete video coverage of the bus shelter locations. The installed system shall have the functionality to view the bus shelter and the provide coverage of the surrounding area through digital pan, tilt, and zoom (PTZ), position presets, and provide Wide-Dynamic Range (WDR) capabilities. The CCTV Camera Subsystems shall be compatible with the existing VMS (Milestone Video Management Software) in use by the City's Police Department.

The CCTV Camera must be installed including any necessary wiring between the camera and camera router/router cabinet by the bus shelter vendor.

The CCTV camera assembly shall be consistent with the design plans developed for the project. The Vendor shall furnish, install, integrate, and test CCTV cameras at locations as required to meet or exceed these MTR.

The Vendor shall construct, test, operate, and maintain a CCTV camera system that consists of cameras providing high-quality streaming video coverage. The Vendor shall ensure the CCTV camera views provide the Police Department with the ability to determine the nature of activity taking place at the bus stop, view bus arrivals and departures, and view roadway conditions in proximity to the bus shelter. Vendor shall

perform cleaning of camera lenses when deemed necessary by the City, as well as, during any maintenance activities. Other aspects of the maintenance of bus shelter CCTV Cameras will be performed by the City.

The Vendor will be responsible for any camera replacement that is required for full functionality of the camera and its components. Replacement of the camera, mounting equipment, and ancillary equipment is required to be assessed during any preventative, scheduled and emergency maintenance activities or as deemed necessary by the City. The Vendor is required to replace any camera that has been subject to damage from vandalism, natural disasters, and 3<sup>rd</sup> party damage. It is the responsibility of the vendor to recover funds for any third-party damage.

## **2.3 Project Specific Requirements**

### **2.3.1 Camera Type**

The Vendor shall use the Axis® P3225-LVE Mk II CCTV Camera system, and/or models approved by the City. The CCTV cameras shall have a built-in memory card slot that enables local storage of high-definition video, at least 1080 resolution with progressive scan (1080p). The Vendor is responsible for providing a memory card, installed at the time of the camera installation, for all cameras. The memory card must be a minimum of 128 gigabytes and be rated for high endurance and outdoor use.

### **2.3.2 CCTV Camera Wiring and Housing Type**

CCTV camera housings shall be of the dome type and shall have a clear dome. The CCTV must be able to operate in outdoor conditions with a temperature range of -40° F to 122° F, humidity range of 10 to 100% relative humidity. The weight of the camera shall not exceed 2lbs, have a base diameter of less than 6" (inches), and a height of less than 4.5" (inches).

The camera shall be powered via the Ethernet (Power-Over-Ethernet) power source or may be powered directly via 12-24VDC or 24VAC.

### **2.3.3 Video**

The CCTV camera shall support a minimum of H.264 encoding, have a resolution of up to 1920x1018, and support 25/30 frames per second (FPS) with WDR and 50/60 fps without WDR.

### **2.3.4 Camera Communications**

Router for the camera: The City will purchase install, operate and maintain will install the router required to communicate with the CCTV camera. The Vendor for the bus shelters shall provide a separate cabinet for camera router, equipped with the necessary power requirements to operate it and any necessary wiring from the camera to the router. The Vendor shall not have access to this cabinet once the camera router is installed. The Vendor must establish a protocol for managing access to the camera communications equipment when necessary for the Vendor to fulfill the requirements of this contract.



### 3 Advertisement Displays

#### 3.1 Description

The Vendor shall furnish, construct, install, integrate, operate and maintain both static advertisement displays and Digital Advertisement Displays (DAD) consisting of Outdoor LCD Displays within each of the enhanced bus shelter types of the project, at the minimum. The Vendor is required to ensure the proposed DAD is capable of fulfilling the design requirements of the bus shelter. Any proposed DAD are subject to approval by the City. Other bus shelters types, at selected locations mutually agreed between the Vendor and the City may also have DAD. The DAD shall be compatible with the proposed content management software platform. Based on direction provided by the City the DAD may be required to be interactive with a touchscreen (subject to City approval). Any proposed device must possess touchscreen capability. The use and inclusion of the touchscreen feature will be determined at the time of installation and will be at the discretion of the City. The DAD must be capable of having the interactive touchscreen display feature to be added at the time of installation or at a later date, if deemed necessary by the City.

The types of Advertisement Displays for this project are:

- Single Face – Free Standing Display (FSD) with a static advertisement display, illuminated for night applications
- Single Face – Free Standing Display (FSD) - typically 55" in size and mounted on ground level. The display is capable of displaying a full color LCD picture with a 16:9 aspect ratio, 3500 nits, with a Full HD Resolution (1920X1080)
- Single Face – Free Standing Display (FSD) - typically 75" in size and mounted on ground level. The display is capable of displaying a full color LCD picture with a 16:9 aspect ratio, 3500 nits, with a Full HD Resolution (1920X1080)
- Double Face – Free Standing Display (FSD) with a static advertisement displays, illuminated for night applications
- Double Face – Free Standing Display (FSD) - typically 55" in size and mounted on ground level. The display is capable of displaying a full color LCD picture with a 16:9 aspect ratio, 3500 nits, with a Full HD Resolution (1920X1080)
- Double Face – Free Standing Display (FSD) - typically 75" in size and mounted on ground level. The display is capable of displaying a full color LCD picture with a 16:9 aspect ratio, 3500 nits, with a Full HD Resolution (1920X1080) – **For the purposes of a cost estimate assume this type of display will be used.**

Any Double Face FSD must be capable of displaying a digital advertisement on one side and a static display, illuminated for night applications on the opposite side within the same unit.

The City of Miami Beach will provide a list of bus stop locations that will be reconstructed through this project. This list will include details specific to each type of bus shelter and the associated devices and components that are required for that location and /or bus shelter type. All installed devices shall be contextual to the surrounding properties and urban form.

#### 3.2 Design Requirements

The Vendor shall furnish, install, integrate, test, operate, and maintain Digital Advertisement Displays at locations as required to meet or exceed these MTR. The Digital Advertisement Display shall conform to the

design documentation and latest edition of Specifications available. DMS locations shall be based on the design and installed per the latest edition of Specifications.

The Vendor shall adhere to the requirements herein and in other contract documents for the procurement, installation, integration, operation, maintenance, training, documentation, and warranty requirements for full color, LCD assembly, including requirements of the County Code for size, and installation of digital and interactive displays (defined as Kiosk Signs in the County Code). Each assembly shall include but not be limited to the sign case with all associated internal components, display controller, and network-manageable sign controller, communications devices, controller cabinet, cabling, connectors, conduits, electrical service, surge suppression, and hardware and software associated with a complete installation.

All new and replacement signs shall be integrated into the vendor-provided control software and have the ability to display messages remotely generated from the end user's computer, as well as, other predetermined locations. The sign shall comply with the additional requirements and specifications and the following special requirements.

### **3.3 Project Specific Requirements**

#### **3.3.1 Digital Advertisement Displays Type**

The Digital Advertisement Displays furnished and installed shall be full color. The Vendor shall be responsible for determining the appropriate Digital Advertisement Displays type to be furnished and installed at each location. The Vendor shall only use one manufacturer and model of Digital Advertisement Displays, models may vary in size and functionality per location.



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## 4 Passenger Information Display System

### 4.1 Description

At a minimum, The Passenger Information Display System must provide messages regarding the next available route, location destination, and estimated time of arrival based on bus location. Additionally, the signs must possess the ability to provide current time, date, bus stop location, anticipated arrival of next bus, bus route number, bus stop name and routes serviced at the stop location on a digital display board within the bus shelter. Additional information being displayed on the sign shall be made available for display at the discretion of the City. The Vendor shall furnish, install, integrate, test, operate, and maintain displays, providing proper and exact information, at each bus stop location. The Passenger Information Display System must be compliant with all ADA Standards. Chapter 703, of the ADA Standards defines requirement related to signs and Chapter 8 (Section 810) defines requirement related to Transportation Facilities.

### 4.2 Design Requirements

The Vendor shall furnish, construct, install, calibrate, test, operate, and maintain a digital display capable of providing required information on a device capable of functioning outdoors, in extreme heat and humidity. All Passenger Information Display System devices shall have a minimum operating temperature range of - 4 degrees F to 158 degrees F and humidity range of 0 percent to 95 percent.

The Vendor shall furnish and install the displays at specific locations as required by the design to accommodate the MTR set forth herein.

### 4.3 Project Specific Requirements

#### 4.3.1 Display Type

The display will be an ultra-wide LCD screen that is the appropriate dimensions to fit within the design.

#### 4.3.2 Display Specifications

- 47.8" Resizing LCD
- Ultra-Wide screen (16:1.5)
- Resolution: 1920X178
- Aspect Ratio:16:1.5
- Contrast Ratio: 8000:1
- Brightness: 1600 nits
- Sunlight Readable – when considering glare and orientation of the shelter and Passenger Information Display System
- LED Backlight
- Slim Bezel
- Maximum Dimensions: 50"X6.1"X2.5"

#### 4.3.3 Ancillary Components

The display must include the panel, driving board and control module.

#### **4.3.4 Power Supply**

The Vendor shall ensure that the main power supply includes transient protection devices capable of powering 60 W for each sign.

#### **4.3.5 Software**

The Passenger Information Display System must be compatible for use with the proposed Content Management Software that will be provided by the Vendor for the contract. The Passenger Information Display System must be capable of providing content to the proposed software responsible for generating the audible messages that read the message content aloud.

## **5 Outdoor Speaker**

### **5.1 Description**

The speaker must be hardened and suitable for outdoor, commercial applications and be capable of interfacing with the Content Management Software for text-to-speech functionality associated with ADA (Americans with Disabilities Act) requirements for public information infrastructure.

### **5.2 Design Requirements**

The Vendor shall furnish and install the speaker(s) at locations as required to accommodate the MTR and design. The speaker shall conform to the latest specifications for use in the City. Device placement shall be based on the design and strictly adhere to manufacturer-established recommendations for optimal performance.

### **5.3 Project Specific Requirements**

#### **5.3.1 Speaker**

##### **5.3.1.1 General**

All equipment supplied shall be identical at each field installation location and shall be completely interchangeable.

##### **5.3.1.2 Electrical**

The field equipment shall utilize dedicated power sources. When existing power sources are used, they shall be tested to see if the power supply can sufficiently meet the needs of any existing equipment with the addition of the speaker. Speaker shall operate in the range of 20 - 40 Watts.

##### **5.3.1.3 Cables and Connectors**

Connectors shall be provided and installed that are compatible with the equipment provided.

##### **5.3.1.4 Physical Conditions**

Field equipment shall be hardened for outdoor conditions and require minimal maintenance. Field equipment shall be placed within an enclosure so that it is easily accessible for maintenance purposes. All audio equipment shall have a minimum operating temperature range of -4 degrees F to 158 degrees F and humidity range of 0 percent to 95 percent. The maximum dimensions of the speaker shall be 6.00" x 5.00"



and a maximum weight of 4 lbs. Volume levels of the speaker and audible messages must be adjustable remotely from the Content Management Software.

## **6 Additional Device Cabinet**

### **6.1 Description**

All bus shelter devices and equipment must fit within the dimensions provided by the bus shelter design. The cabinet required to separately house the CCTV camera router must have dimensions no greater than 12"x12"x8" and shall be NEMA 4 rated. The location of the CCTV camera router and cabinet are subject to approval from the City. Additional devices and components that are not considered in the design or are being used for the CCTV camera router must be housed in a separate cabinet with the location, size, style and mounting is subject to approval from the City.

Turnover to the City of this cabinet will take place after an inspection by the City is requested from the Vendor and approved by City staff or their delegate.

## **7 Content Management Software**

### **7.1 Description**

The Vendor shall furnish, install, integrate, test, operate, and maintain the Content Management software for the Digital Advertisement Displays, Passenger Information Display, Outdoor Speakers, and ancillary equipment.

The software must be equipped with an enterprise-level Content Management System (CMS) software solution. In lieu of utilizing separate vendor-provided management/ configuration software packages, the Vendor must utilize an "umbrella" software package solution capable of managing all devices via one GUI (Graphical User Interface) platform. The Vendor shall furnish and install devices (i.e. Digital Advertisement Displays, Passenger Information Display, and Outdoor Speakers compatible with the software being used as defined in these MTR. The Vendor shall integrate and test new digital display signs, and communication devices with the equipment's respective vendor-provided software. The Vendor shall furnish, install, and integrate all the equipment including the LAN and software licenses necessary for the operation of these devices from a location specified by the City using the respective vendor-provided software packages as well as the an "umbrella" software package solution capable of managing all devices via one GUI platform. The Vendor will operate and maintain the software.

### **7.2 Project Specific Requirements**

#### **7.2.1 Content Management Software Installation**

##### **7.2.1.1 Servers**

The Vendor shall furnish, install, integrate, test, operate, and maintain any server(s) required to operate the bus shelter devices managed or operated through the Content Management Software provided under this project. The new server(s) shall be installed on blade racks located in a designated telecommunications room with the proposed TMC.

## **7.2.1.2 Device Protocol Compliance**

For the devices being deployed that are to be communicated with, monitored and/or controlled via the software (location to be determined), the Vendor shall ensure that the protocol(s) used by these devices is compliant with the governing equipment and ITS protocols (e.g. ONVIF, NTCIP, etc.) stated in the specifications for that specific device. The Vendor shall coordinate with the City of Miami Beach and Miami-Dade County Transit, or its designated representative, as necessary in this regard.

## **7.2.1.3 Network Infrastructure**

The following sections describe the network infrastructure that must be installed by the Vendor before installation of the content management software configuration:

### **7.2.1.3.1 Hardware**

Due to the client/server nature of the device software, the Transmission Control Protocol/Internet Protocol (TCP/IP) shall be used to exchange data between applications and database servers. In the case of a web-based implementation of the vendor-provided software user interface, each workstation shall require TCP/IP access to the vendor-provided software application and database servers. The LAN cabling shall be provided by the Vendor to provide network connectivity from the workstations to the designated Miami-Dade County Transit telecommunications protocol. The Vendor shall assure as part of their work that TCP/IP connectivity exists between all vendor-provided software application server(s) and operator workstations equipped with the Content Management Software.

All proposed field devices shall be connected via TCP/IP and have network communication compatibility with the device application server(s).

It shall be the Vendor's responsibility to provide all necessary network hardware and cables to provide the required connectivity. Power service receptacles, modem/phone jacks, and Miami-Dade County Transit operations network data jacks shall be provided by the Vendor for the consoles. The Vendor shall communicate, collaborate, and coordinate via the City of Miami Beach Project Manager and Miami-Dade County Transit concerning the Content Management Software communications and power service requirements within the Miami-Dade County Transit operations facility so that all equipment furnished under this project is fully compliant with the power service provided within the facility for this purpose.

### **7.2.1.3.2 Software**

As the device software is configured, it will need access to various network servers that are available as part of the greater City of Miami Beach and/or Miami-Dade County Transit network. The Vendor shall make available the following network services and the associated parameters (e.g., host names, addresses, etc.) required for access during the device hardware and software configuration:

- Simple Mail Transfer Protocol (SMTP) Mail Server. As required, the vendor-provided device management/configuration software shall have access to the SMTP mail server to be able to send emails regarding major System events. The SMTP server connection shall be provided to the Vendor by the Miami-Dade County Transit.
- Domain Name System (DNS). As required, the vendor-provided device management/configuration software applications may utilize TCP/IP to exchange data and the applications can use either IP addresses or host names in their configuration files. Note that the use of DNS is preferred because using explicit IP addresses is less flexible than using hostnames. One of the device application servers shall be configured to provide DNS by the Vendor.



- Network Time Protocol (NTP). All Miami-Dade County Transit operations workstations shall be synchronized with a common time source. The time source shall be provided by the City of Miami Beach and/or Miami-Dade County Transit NTP server.

Regarding the configuration of the above mentioned services, the Vendor shall coordinate with the City of Miami Beach and/or Miami-Dade County Transit IT Department.

#### **7.2.1.4 Device Worksheets**

The Vendor shall coordinate with City of Miami Beach and/or Miami-Dade County Transit, or its designated representative, to collect and provide the required information about each device that is to be interconnected with; communicated through; communicated with; monitored and/or controlled via the device and content management/configuration software. The exact information to be provided for the devices involved shall be obtained from City of Miami Beach and/or Miami-Dade County Transit or their designated representative. The City of Miami Beach and/or Miami-Dade County Transit shall approve the format and naming conventions used to ensure compatibility with existing devices in the City's device database.

#### **7.2.2 Post Device Software Installation Services**

The Vendor shall provide the services described below:

##### **7.2.2.1 Populate Device Database Tables and Configuration Files**

The Vendor shall populate all device database tables and configuration files using the data collected in the device worksheets.

##### **7.2.2.2 Create Device Map Links**

The Vendor shall create the device map link layer(s) for each of the respective devices (i.e. DMS, Passenger Information Display System, Advertisement Displays). The Vendor shall display all field devices. The City and Miami-Dade County Transit shall approve the format and naming conventions used to ensure compatibility with existing devices in the City and County Transit's device GIS map link layer.

#### **7.2.3 Device Software Training**

The Vendor shall coordinate with the City of Miami Beach and Miami-Dade County Transit to schedule the Device Software administrator and operator training. The Vendor must present a minimum of five (5) dates/times for the City and County staff to select an available time for training. Two (2) weeks notice must be given to the City and County staff of when the training will take place. The Vendor is responsible for coordinating the location and content of the training. At a minimum the content of the training must incorporate modules for the following aspects of the project:

- Digital Advertisement Displays
- Passenger Information System/Estimated Time of Arrival Signs
- Outdoor Speakers
- Content Management Software (also compatible with existing bus components)