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CIVIL EAST CONSTRUCTION

VOLUME 11A STATIONS

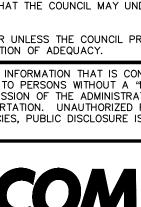
THE PROPOSED SOUTHWEST LRT PROJECT IS NOT FINAL BUT IS STILL UNDER ENVIRONMENTAL REVIEW AND THE PROJECT IS SUBJECT TO CHANGE. THESE PLANS ARE NOT FINAL.

THE COUNCIL. THROUGH THE DEVELOPMENT OF THESE PLANS, DOES NOT INTEND THAT THEY WILL PREJUDICE OR COMPROMISE ANY STATE OR FEDERAL ENVIRONMENTAL REVIEW OR OTHER LEGAL REQUIREMENTS. THESE PLANS DO NOT LIMIT THE PROJECT DESIGN ALTERNATIVES OR MITIGATIVE MEASURES THAT THE COUNCIL MAY UNDERTAKE IF THE PROPOSED SWLRT PROJECT PROCEEDS TO CONSTRUCTION.

THE COUNCIL WILL NOT TAKE FINAL ACTION ON THIS MATTER UNLESS THE COUNCIL PROCEEDS WITH THE PROJECT AFTER THE FTA'S RECORD OF DECISION AND THE COUNCIL'S DETERMINATION OF ADEQUACY.

THIS RECORD MAY CONTAIN SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

60% SUBMISSION DATE: 09/28/15





CIVIL EAST CONSTRUCTION

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_	2 E0-MEC-SCH-001	MECHANICAL SCHEDULES		78	E1-BLK-STR-ELV-210	WEST PARTIAL ELEVATIONS – FRAMING		140	E2-WDL-ARC-PLN-110	WEST PARTIAL PLATFORM PLAN	
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_	7 E1-HOP-ARC-PLN-112	EAST PARTIAL PLATFORM PLAN		93	E1-BLK-ELE-PLN-412	COMMUNICATIONS UNDERSLAB CONDUIT PLAN		157	E2-WDL-STR-PLN-151	UPPER ROOF FRAMING PLANS	
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_	7 E1-HOP-STR-PLN-111	MIDDLE PARTIAL FOUNDATION PLAN		100	E2-LOU-ARC-PLN-101	PLATFORM PLAN		166	E2-WDL-PLM-PLN-111	EAST PARTIAL PLUMBING PLAN AND RISER DIAGRAMS	
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É	1 E1-HOP-STR-ELV-210	WEST PARTIAL ELEVATIONS - FRAMING		104	E2-LOU-ARC-PLN-150	LOWER ROOF PLANS		170	E2-WDL-ELE-PLN-304	ELECTRICAL CANOPY PLAN - TRACK 2 SIDE	
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5		PLAN		109	E2-LOU-ARC-ELV-210	WEST PARTIAL ELEVATIONS		173	E2-WDL-ELE-PLN-421	COMMUNICATIONS CANOPY PLAN - TRACK 1 SIDE	
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<u> </u>		COMMUNICATIONS UNDERSLAB CONDUIT PLAN		117	E2-LOU-STR-PLN-150	UPPER ROOF FRAMING PLANS		180	E2-BLT-ARC-PLN-110	MIDDLE PARTIAL PLATFORM PLAN	
	B E1-HOP-ELE-PLN-412	(2 OF 2)		119	E2-LOU-STR-FLN-131	ELEVATIONS – FRAMING		181	E2-BLT-ARC-PLN-111	EAST PARTIAL PLATFORM PLAN	
	4 E1-HOP-ELE-PLN-421	COMMUNICATIONS CANOPY PLAN		120	E2-LOU-STR-ELV-210	WEST PARTIAL ELEVATIONS – FRAMING		182	E2-BLT-ARC-PLN-150	ROOF PLANS	
_	5 E1-HOP-ELE-PLN-461	COMMUNICATIONS CONDUIT SCHEDULE (1 OF 2)		121	E2-LOU-STR-ELV-211	MIDDLE PARTIAL ELEVATIONS – FRAMING		183	E2-BLT-ARC-RCP-180	REFLECTED CEILING PLANS	
. —	6 E1-HOP-ELE-PLN-462	COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)		122	E2-LOU-STR-ELV-212	EAST PARTIAL ELEVATIONS – FRAMING		184	E2-BLT-ARC-ELV-200	ELEVATIONS	
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. —	E1-BLK-ARC-PLN-150	LOWER ROOF PLANS		129	E2-LOU-ELE-PLN-302	ELECTRICAL UNDERSLAB CONDUIT PLAN (2 OF 2)		192	E2-BLT-STR-PLN-112	EAST PARTIAL FOUNDATION PLAN	
< ⊢	B E1-BLK-ARC-PLN-151	UPPER ROOF PLANS		130	E2-LOU-ELE-PLN-303	ELECTRICAL CANOPY PLAN - TRACK 1 SIDE		193	E2-BLT-STR-PLN-150	ROOF FRAMING PLANS	
Ŀ	E1-BLK-ARC-RCP-180	REFLECTED CEILING PLANS									
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<u>.</u>										CIVIL EAST - VOLUME 11A	SHEET

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CIVIL EAST - VOLUME 11A STATIONS VOLUME INDEX OF PLAN SHEETS

SHEET 1

DISCIPLINE: GENERAL

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60% SUBMISSION - 09/28/15

		CIVIL EAST				CIVIL EAST	CIVIL EAST						
SHT#	SHEET NAME	SHEET DESCRIPTION	STATION STATION REV	SHT#	SHEET NAME	SHEET DESCRIPTION	STATION	STATION REV	SHT#	SHEET NAME		SHEET DESCRIPTION	STATION STATION
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199	E2-BLT-PLM-PLN-100	PLAN		268	E3-WST-STR-PLN-411	VC EAST MAIN ROOF FRAMING PLAN			1				
200	E2-BLT-PLM-PLN-101	EAST PARTIAL UNDERFLOOR PLUMBING PLAN		269	E3-WST-STR-PLN-412	VC WEST MAIN ROOF FRAMING PLAN			i				
201	E2-BLT-PLM-PLN-110	WEST AND MIDDLE PARTIAL PLUMBING PLAN		270	E3-WST-STR-PLN-413	VC EAST PARTIAL ROOF FRAMING PLAN							
202	E2-BLT-PLM-PLN-111	EAST PARTIAL PLUMBING PLAN AND RISER DIAGRAMS		271	E3-WST-STR-PLN-414	VC WEST PARTIAL ROOF FRAMING PLAN							
203	E2-BLT-ELE-PLN-301	ELECTRICAL UNDERSLAB CONDUIT PLAN (1 OF 2)		272	E3-WST-STR-PLN-415	VC EAST BRIDGE LEVEL FRAMING PLAN							
204	E2-BLT-ELE-PLN-302	ELECTRICAL UNDERSLAB CONDUIT PLAN (2 OF 2)		273	E3-WST-STR-PLN-416	VC WEST BRIDGE LEVEL FRAMING PLAN							
205	E2-BLT-ELE-PLN-303	ELECTRICAL CANOPY PLAN		274	E3-WST-STR-PLN-417	VC EAST STAIR LANDING LEVEL FRAMING PLAN			ł				
206	E2-BLT-ELE-PLN-411	COMMUNICATIONS UNDERSLAB CONDUIT PLAN (1 OF 2)		275 276	E3-WST-STR-PLN-418 E3-WST-STR-ELV-501	VC WEST STAIR LANDING LEVEL FRAMING PLAN VC EAST TRACK 1 ELEVATION							
		COMMUNICATIONS UNDERSLAB CONDUIT PLAN		277	E3-WST-STR-ELV-502	VC WEST TRACK 1 ELEVATION			ł				
207	E2-BLT-ELE-PLN-412	(2 OF 2)		278	E3-WST-STR-SCT-503	VC EAST SECTION VIEWS			1				
208	E2-BLT-ELE-PLN-421	COMMUNICATIONS CANOPY PLAN		279	E3-WST-STR-SCT-504	VC WEST SECTION VIEWS			1				
209	E2-BLT-ELE-PLN-461	COMMUNICATIONS CONDUIT SCHEDULE (1 OF 2)				WEST AND MIDDLE PARTIAL UNDERFLOOR PLUMBING			1				
210	E2-BLT-ELE-PLN-462	COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)		279	E3-WST-PLM-PLN-100	PLAN							
		WEST LAKE STATION		280	E3-WST-PLM-PLN-101	EAST PARTIAL UNDERFLOOR PLUMBING PLAN							
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212	E3-WST-ARC-PLN-101	PLATFORM PLAN		283	E3-WST-PLM-PLN-130	VC UNDERFLOOR WEST PLATFORM LEVEL PLUMBING			1				
213	E3-WST-ARC-PLN-110	WEST PARTIAL PLATFORM PLAN				PLAN							
214	E3-WST-ARC-PLN-111 E3-WST-ARC-PLN-112	MIDDLE PARTIAL PLATFORM PLAN EAST PARTIAL PLATFORM PLAN		284	E3-WST-PLM-PLN-131	VC WEST PLATFORM LEVEL PLUMBING PLAN							
216	E3-WST-ARC-PLN-120	VC PLATFORM LEVEL PLAN (WEST)		285	E3-WST-PLM-PLN-135	VC UNDERFLOOR EAST PLATFORM LEVEL PLUMBING PLAN							
217	E3-WST-ARC-PLN-121	VC INTERMEDIATE LEVEL PLAN (WEST)		286	E3-WST-PLM-PLN-136	VC EAST PLATFORM LEVEL PLAN			1				
218	E3-WST-ARC-PLN-122	VC BRIDGE LEVEL PLAN (WEST)		287	E3-WST-MEC-PLN-130	VC WEST PLATFORM LEVEL HVAC PLAN							
219	E3-WST-ARC-PLN-125	VC PLATFORM LEVEL PLAN (EAST)		288	E3-WST-MEC-PLN-131	VC WEST INTERMEDIATE LEVEL HVAC PLAN							
220	E3-WST-ARC-PLN-126	VC INTERMEDIATE LEVEL PLAN (EAST)		289	E3-WST-MEC-PLN-132	VC WEST BRIDGE LEVEL HVAC PLAN			1				
221	E3-WST-ARC-PLN-127	VC BRIDGE LEVEL PLAN (EAST)		290	E3-WST-MEC-PLN-133	VC EAST PLATFORM LEVEL HVAC PLAN							
222	E3-WST-ARC-PLN-150	ROOF PLANS		291	E3-WST-MEC-PLN-134	VC EAST INTERMEDIATE LEVEL HVAC PLAN							
223	E3-WST-ARC-PLN-160	VC ROOF PLAN (WEST)		292	E3-WST-MEC-PLN-135	VC EAST BRIDGE LEVEL HVAC PLAN							
224	E3-WST-ARC-PLN-161	VC ROOF PLAN (WEST)		293	E3-WST-ELE-PLN-301	ELECTRICAL UNDERSLAB CONDUIT PLAN (1 OF 2)							
225	E3-WST-ARC-PLN-162	VC ROOF PLAN (EAST)		294	E3-WST-ELE-PLN-302	ELECTRICAL CANODY PLAN			-				
226 227	E3-WST-ARC-RCP-180 E3-WST-ARC-RCP-190	REFLECTED CEILING PLANS VC RCP PLATFORM LEVEL (WEST)		295	E3-WST-ELE-PLN-303	ELECTRICAL CANOPY PLAN ELECTRICAL LIGHTING PLAN - VC PLATFORM LEVEL							
228	E3-WST-ARC-RCP-191	VC RCP INTERMEDIATE LEVEL (WEST)		296	E3-WST-ELE-PLN-304	(WEST)							
229	E3-WST-ARC-RCP-192	VC RCP INTERMEDIATE LEVEL 017 (WEST)				ELECTRICAL LIGHTING PLAN - VC INTERMEDIATE LEVEL			1				
230	E3-WST-ARC-RCP-193	VC RCP BRIDGE LEVEL (WEST)		297	E3-WST-ELE-PLN-305	(WEST)							
231	E3-WST-ARC-RCP-194	VC RCP PLATFORM \ INTERMEDIATE LEVEL 017 (EAST)				ELECTRICAL LIGHTING PLAN - VC INTERMEDIATE LEVEL			1				
232	E3-WST-ARC-RCP-195	VC RCP BRIDGE LEVEL (EAST)		298	E3-WST-ELE-PLN-306	(WEST)							
33 ≥33	E3-WST-ARC-ELV-200	ELEVATIONS		299	E3-WST-ELE-PLN-307	ELECTRICAL LIGHTING PLAN - VC BRIDGE LEVEL			1				
234	E3-WST-ARC-ELV-201	VC ELEVATIONS		233	E3-VV01-EEE-1 EN-307	(WEST)							
> 235	E3-WST-ARC-ELV-210	WEST PARTIAL ELEVATIONS		300	E3-WST-ELE-PLN-308	ELECTRICAL LIGHTING PLAN - VC PLATFORM LEVEL							
236	E3-WST-ARC-ELV-211	MIDDLE PARTIAL ELEVATIONS				(EAST)							
^m 237 ≥ 238	E3-WST-ARC-ELV-212 E3-WST-ARC-ELV-220	EAST PARTIAL ELEVATIONS VC TRACK 1 - PARTIAL ELEVATION (WEST)		301	E3-WST-ELE-PLN-309	ELECTRICAL LIGHTING PLAN - VC BRIDGE LEVEL (WEST)							
중 ※ 239	E3-WST-ARC-ELV-220	VC TRACK 1 - PARTIAL ELEVATION (WEST)		302	E3-WST-ELE-PLN-320	ELECTRICAL VC TRACK 1 - PARTIAL ELEVATION (WEST)		+ + -	ł				
240	E3-WST-ARC-ELV-222	VC TRACK 2 - PARTIAL ELEVATION (WEST)		303	E3-WST-ELE-PLN-321	ELECTRICAL VC TRACK 1 - PARTIAL ELEVATION (WEST)		 	1				
241	E3-WST-ARC-ELV-223	VC TRACK 2 - PARTIAL ELEVATION (WEST)		304	E3-WST-ELE-PLN-322	ELECTRICAL VC TRACK 2 - PARTIAL ELEVATION (WEST)			1				
242	E3-WST-ARC-ELV-224	VC SIDE ELEVATIONS (WEST)		305	E3-WST-ELE-PLN-323	ELECTRICAL VC TRACK 2 - PARTIAL ELEVATION (WEST)			1				
<u></u> 243	E3-WST-ARC-ELV-225	VC TRACK 2 - PARTIAL ELEVATION (EAST)		306	E3-WST-ELE-PLN-324	ELECTRICAL VC SIDE ELEVATIONS (WEST)			1				
244	E3-WST-ARC-ELV-226	VC TRACK 1 - PARTIAL ELEVATION (EAST)		307	E3-WST-ELE-PLN-325	ELECTRICAL VC TRACK 2 - PARTIAL ELEVATION (EAST)							
<u>245</u>	E3-WST-ARC-ELV-227	VC TRACK 2 - PARTIAL ELEVATION (EAST)		308	E3-WST-ELE-PLN-326	ELECTRICAL VC TRACK 1 - PARTIAL ELEVATION (EAST)		 					
246	E3-WST-ARC-ELV-228	VC SIDE ELEVATIONS (EAST)		309	E3-WST-ELE-PLN-327	ELECTRICAL VC TRACK 2 - PARTIAL ELEVATION (EAST)			ł				
247 248	E3-WST-ARC-SCT-300	TYPICAL PLATFORM SECTION VC LONGITUDINAL SECTION (WEST)		310	E3-WST-ELE-PLN-328	ELECTRICAL VC TRACK 2 - PARTIAL ELEVATION (EAST)		+	ł				
248	E3-WST-ARC-SCT-310 E3-WST-ARC-SCT-311	VC LONGITUDINAL SECTION (WEST) VC LONGITUDINAL SECTION (WEST)		311	E3-WST-ELE-PLN-411	COMMUNICATIONS UNDERSLAB CONDUIT PLAN (1 OF 2)							
250	E3-WST-ARC-SCT-311	VC SECTIONS (WEST)				COMMUNICATIONS UNDERSLAB CONDUIT PLAN		+ + +	1				
251	E3-WST-ARC-SCT-313	VC SECTIONS (WEST)		312	E3-WST-ELE-PLN-412	(2 OF 2)							
252	E3-WST-ARC-SCT-314	VC SECTIONS (WEST)		313	E3-WST-ELE-PLN-421	COMMUNICATIONS CANOPY PLAN			1				
≥ 253	E3-WST-ARC-SCT-316	VC LONGITUDINAL SECTION (EAST)		314	E3-WST-ELE-PLN-431	COMMUNICATIONS VC PLATFORM LEVEL PLAN (WEST)			1				
₹ 254	E3-WST-ARC-SCT-317	VC LONGITUDINAL SECTION (EAST)		315	E3-WST-ELE-PLN-432	COMMUNICATIONS VC BRIDGE LEVEL PLAN (WEST)							
255	E3-WST-ARC-SCT-318	VC SECTION (EAST)		316	E3-WST-ELE-PLN-433	COMMUNICATIONS VC PLATFORM LEVEL PLAN (EAST)			1				
256	E3-WST-STR-PLN-101	PLATFORM PLAN		317	E3-WST-ELE-PLN-434	COMMUNICATIONS VC BRIDGE LEVEL PLAN (EAST)			l				
257	E3-WST-STR-PLN-110	WEST PARTIAL FOUNDATION PLAN		318	E3-WST-ELE-PLN-461	COMMUNICATIONS CONDUIT SCHEDULE (1 OF 2)			ł				
258 259	E3-WST-STR-PLN-111 E3-WST-STR-PLN-112	MIDDLE PARTIAL FOUNDATION PLAN EAST PARTIAL FOUNDATION PLAN		319	E3-WST-ELE-PLN-462	COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)		 	ł				
259	E3-WST-STR-PLN-112	ROOF FRAMING PLANS						1	ł				
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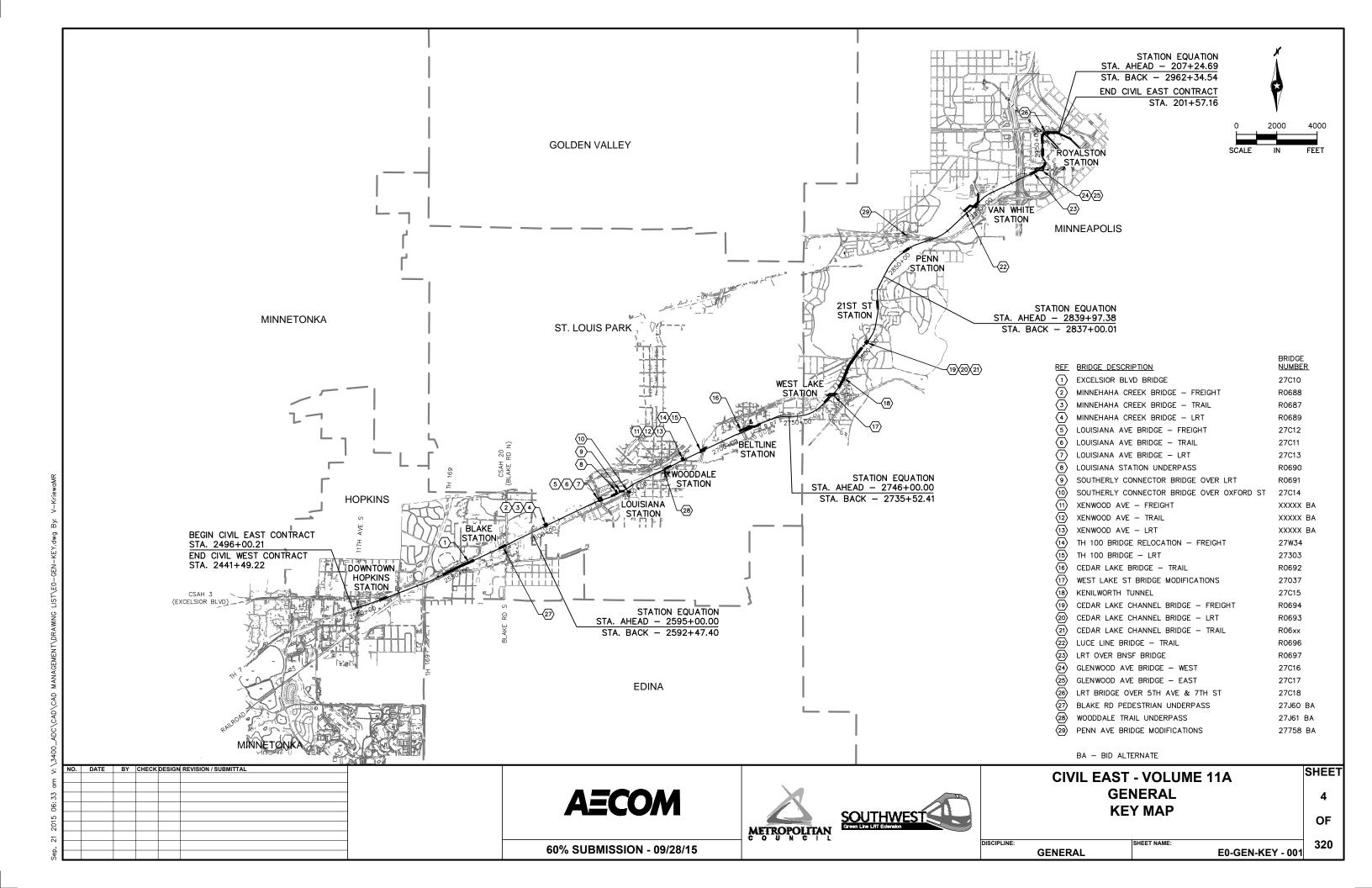


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TRACK LINETYPES TRACK SYMBOLS — — — — ROADWAY Q PROPOSED DIRECTIONAL LANE USE * - TRACK € (LRT) — TRACK € (FRT) EXISTING DIRECTIONAL LANE USE **₩** RETAINING WALL BALLAST CURB PEDESTRIAN FLASHER ---- TUNNEL WALL AUTOMATIC GATE RAIL TURNOUT RAIL CROSSOVER (DOUBLE) FENCE / RAILING RAIL CROSSOVER (SINGLE) —— ID —— ID —— INTRUSION DETECTION φ POINT OF SWITCH (PS) CIVIL LINETYPES OCS POLE FOUNDATION - ---- - ROADWAY C RAIL LUBRICATOR TRACK (LRT) — TRACK ℚ (FRT) POINT OF INTERSECTION (PI) OF TURNOUT (TO) - RETAINING WALL W2-200RAILROAD CURVE NUMBER ---- BALLAST CURB ---- TUNNEL WALL ALL TURNOUTS AND CROSSOVERS TO BE EQUIPPED WITH POWER CONCRETE CURB AND GUTTER SWITCH MACHINES AND SWITCH HEATERS - SIDEWALK - DRIVEWAY CIVIL SYMBOLS - BRIDGE ----- SAWCUT ACCESSIBLE PEDESTRIAN CURB RAMP _x ____x ____ FENCE (DESIGN VARIES) PROPOSED DIRECTIONAL LANE USE - · - · · - · - · - WATER EDGE — – – — EX ROW 2₽ EXISTING DIRECTIONAL LANE USE — - - - - - PROP ROW ---- PROP TCE AUTOMATIC GATE HANDICAP PARKING STALL STOP BAR TACTILE WARNING STRIP \Box MEDIAN NOSE TPSS BUILDING (TPSS-SW###)

SURVEY NOTES

- 1. THE HORIZONTAL DATUM OF THIS MAP IS BASED ON THE HENNEPIN COUNTY COORDINATE SYSTEM WHICH IS RELATED TO THE MINNESOTA STATE PLANE COORDINATE SYSTEM NAD 83 (2007) ADJUSTMENT SOUTH ZONE.
- 2. THE PLANIMETRIC FEATURES SHOWN ON THIS MAP ARE AS PREPARED BY AERO-METRIC, INC. FROM AERIAL DATA AND IMAGERY COLLECTED IN APRIL 2012, AS SUPPLEMENTED BY FIELD SURVEYS COMPLETED BY
- 3. HORIZONTAL POSITIONAL ACCURACY: USING THE NATIONAL STANDARD FOR SPATIAL DATA ACCURACY, THE DATA SET TESTED 0.14 FEET HORIZONTAL ACCURACY AT A 95% CONFIDENCE LEVEL.
- 4. VERTICAL POSITIONAL ACCURACY: USING THE NATIONAL STANDARD FOR SPATIAL DATA ACCURACY, THE DATA SET TESTED 0.10 FEET VERTICAL ACCURACY AT 95% CONFIDENCE LEVEL.

AECOM

SIGNAL OR INTERMEDIATE OR PLATFORM OR XING OR TUNNEL HOUSE OR ANY COMBINATION OF THESE





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ABBREVIATIONS

ALGEBRAIC DIFFERENCE AVE AVENUE BGN BP BEGIN BEGINNING POINT BVCE BEGINNING VERTICAL CURVE ELEVATION BEGINNING VERTICAL CURVE STATION RI VD **ROULEVARD** BURLINGTON NORTHERN SANTA FE RAILWAY BNSF CURB AND GUTTER C&G CENTERI INF € CIR CIRCLE CANADIAN PACIFIC CPRAIL CANADIAN PACIFIC RAILWAY CURVE TO SPIRAL
COUNTY STATE AID HIGHWAY CS CSAH D&U DF DRAINAGE AND UTILITY DIRECT FIXATION DR DRIVE DTL DETAIL DRIVEWAY ACTUAL SUPERELEVATION (INCHES) Εa ĒΒ EAST BOUND $\mathsf{EL} \ \mathsf{or} \ \mathsf{ELEV}$ **ELEVATION** FP FND POINT ESMT FASEMENT UNBALANCED SUPERELEVATION (INCHES) **EVCE** ENDING VERTICAL CURVE ELEVATION ENDING VERTICAL CURVE STATION **EVCS** ΕX **HCRRA** HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY LEFT HAND ΙN LANF LRT LIGHT RAIL TRANSIT CURVE LENGTH (FEET) SPIRAL LENGTH (FEET) Lc L_S MIN MINIMUM MILES PER HOUR MPI S CITY OF MINNEAPOLIS MINNEAPOLIS PARK AND RECREATION BOARD **MPRB** NORTH NORTH BOUND NIC NO NOT IN CONTRACT NUMBER OMF OPERATIONS AND MAINTENANCE FACILITY ocs OVERHEAD CONTACT SYSTEM OH PC OVERHEAD POINT OF CURVE PERMANENT EASEMENT PITO POINT OF INTERSECTION OF TURNOUT PKWY PARKWAY POT POINT ON TANGENT

POINT OF SWITCH POINT OF TANGENT

RADIUS (FEET)

RIGHT HAND

RIGHT OF WAY SOUTH SOUTH BOUND SPIRAL TO CURVE SIGNAL COMMUNICATION

RAIL LUBRICATOR

SPIRAL TO TANGENT

TANGENT TO SPIRAL

VERTICAL CURVE

WEST BOUND

DESIGN VELOCITY (MPH)

TRUNK HIGHWAY

ROAD

STREET

NOITATE

THROUGH TOP OF RAIL

TYPICAL UNDERGROUND

POINT OF VERTICAL INTERSECTION

RATE OF CHANGE VERTICAL CURVE

TEMPORARY CONSTRUCTION EASEMENT

TRACTION POWER SUBSTATION

PS PT

R RD

RL

r RH

ROW

STA TCE

THRU

TOR

TS TYP

UG

VC

WB

SIG-COMM

TRAIL INDEX

ABBREVIATED NAME TRAIL 1 FULL NAME / LOCATION UNDER RED CIRCLE DR, LRT, AND YELLOW CIRCLE DR TRAIL 2 FROM TRAIL 1 TO GREEN CIRCLE DR OPUS STATION ACCESS FROM BREN RD E FROM BREN RD W TO TRAIL 5 TRAIL 3 TRAIL 4 TRAIL 5 FROM OPUS STATION TO GREEN CIRCLE DR TRAIL 6 FROM TRAIL 5 TO SMETANA RD CEDAR LAKE LRT REGIONAL TRAIL/FROM SHADY OAK STATION TO 11TH AVE CEDAR LAKE TRAIL CEDAR LAKE TRAIL CEDAR LAKE LRT REGIONAL TRAIL/WEST OF EXCELSIOR CEDAR LAKE TRAIL CEDAR LAKE LRT REGIONAL LRT TRAIL/BETWEEN EXCELSIOR AND KENILWORTH TRAIL CONNECTION MIDTOWN GREENWAY MIDTOWN GREENWAY/EAST OF KENILWORTH TRAIL CONNECTION TRAIL A KENILWORTH TRAIL (SECONDARY)/BETWEEN CEDAR-ISLES CHANNEL AND 21ST STREET STATION TRAIL B KENILWORTH TRAIL (SECONDARY)/BETWEEN 21ST STREET STATION AND PENN STATION TRAIL B CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION TRAIL C 10' CONNECTOR TRAÎL FROM CEDAR LAKE LRT REGIONAL TRAIL TO TYLER AVE. 10' CONNECTOR TRAIL/BELTLINE STATION TO CEDAR LAKE LRT REGIONAL TRAIL TRAIL D KENILWORTH TRAIL KENILWORTH TRAIL (MAIN)/W LAKE ST TO PENN STATION CEDAR LAKE TRAIL CEDAR LAKE TRAIL (MAIN)/PENN STATION TO TH 394 KENILWORTH TRAIL (SECONDARY)/EAST OF W LAKE ST TRAIL E TRAIL F KENILWORTH TRAIL (SECONDARY)/WEST OF CEDAR LAKE PKWY KENILWORTH TRAIL (SECONDARY)/WEST OF PENN STATION TRAIL G CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION

10' CONNECTOR TRAIL/EAST OF PENN STATION TO KENWOOD PKWY TRAIL G TRAIL H TRAIL CEDAR LAKE TRAIL (MAIN)/AT-GRADE CROSSING AT PENN STATION CEDAR LAKE TRAIL CEDAR LAKE TRAIL (SECONDARY)/NORTHWEST OF PENN STATION CEDAR LAKE TRAIL (SECONDARY)/NORTHWEST OF PENN STATION TRAIL J TRAIL K TRAIL L CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION TRAIL N 8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO EDGEBROOOK DRIVE TRAIL O 8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO W LAKE STREET 8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO LOUISIANA AVE TRAIL P 10' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO TH 7 SERVICE ROAD TRAIL Q TRAIL R 20' CONNECTOR TRAIL FROM VAN WHITE STATION TO CEDAR LAKE TRAIL TRAIL S TRAIL T 8' CONNECTOR TRAIL FROM VAN WHITE STATION TO VAN WHITE MEMORIAL BLVD TRAIL U 10' TRAIL PARALLEL TO CEDAR LAKE PKWY LUCE LINE TRAIL LUCE LINE REGIONAL TRAIL/ON BRIDGE OVER LIGHT RAIL CONNECTOR TRAIL TO LUCE LINE REGIONAL TRAIL WEST OF LIGHT RAIL CONNECTOR TRAIL TO LUCE LINE REGIONAL TRAIL WEST OF LIGHT RAIL TRAIL W

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ABBREVIATIONS MISCELLANEOUS SOUTHWEST CORRIDOR LIGHT RAIL TRANSIT ELEVATOR/ ELEVATION WITHOUT W/O BASELINE ELEVATOR MACHINE ROOM MINNESOTA WEST/WIDTH MN/DOT MINNESOTA DEPARTMENT OF TRANSPORTATION CENTERLINE WCO WALL CLEANOUT ENGR(ING) ENGINEER(ING) WORKING POINT WOOD **TEMPORARY** WP WD TEMP MPLS MINNEAPOLIS ENTRANCE/ ENTRY TRACTION/ELECTRIC MT METRO TRANSIT T/E TH POUND/ NUMBER EDEN PRAIRIE WDW WINDOW THICK(NESS MTD MOUNT(FD) EQ **THRES** THRESHOLD MTKA MINNETONKA DRAWING CODES AIR CONDITIONING EQUIP EQUIPMENT THRU THROUGH MTL METAL ÁCS ACCESS ETL EMERGENCY TELEPHONE T.O. TOP OF AD AREA DRAIN FXIST FXISTING N/A NOT APPLICABLE TOW TOP OF WALL DOWNTOWN HOPKINS STATION AMERICANS WITH DISABILITIES ACT ADA EXT EXTERIOR **TPSS** TRACTION POWER SUBSTATION BLAKE STATION NORTH ADDL ADDITIONAL TUNN THINNEL LOUISIANA STATION NIC NOT IN CONTRACT LOU ADJ ADJACENT TICKET VENDING MACHINE TVM WDL WOODDALE STATION NUMBER AESS ARCHITECTURALLY EXPOSED STRUCT STL FCO FLOOR CLEANOUT TYP BELTLINE STATION AFF ABOVE FINISH FLOOR FINISHED FLOOR NOT TO SCALE WEST LAKE STATION ALUM ALUMINUM UNO UNLESS NOTED OTHERWISE 21S 21ST STREET STATION FIXT ANC **ANCILLARY** PEN PENN STATION ANOD **ANODIZED** ocs OVERHEAD CONTACT SYSTEM VWT VAN WHITE STATION FLASH FLASHING VARIABLE MESSAGE SIGN VMS ROYALSTON STATION OVERHEAD APPROX FLUORESCENT OMF OPERATIONS AND MAINTENANCE FACILITY ARCH FACE/ FRONT OF OPFR OPFRABLE ATS AUTOMATIC TRANSFER SWITCH FRP FIBERGLASS REINFORCED PANEL OPNG OPFNING **SYMBOLS** AVE FOOT/ FEET OPP OPPOSITE AWM ARCHITECTURAL WOVEN MESH FTG FOOTING FUTR FUTURE PΑ PUBLIC ADDRESS BATT BATTERY ELEVATION NUMBER PART PARTIAL GA BOARD GAUGE BD PERP PERPENDICULAR SHEET NUMBER BASELINE GALV GALVANIZED GC GL BUILDING GENERAL CONTRACTOR BI DG DRAWING CODE PLBG PLUMBING BLOCK(ING) GLASS/ GLAZING **BLKG** PLYWOOD GPM GALLONS PER MINUTE BOULEVARÓ BLVD PNL(S) GR BENCH MARK PRECAST **BNDRY** BOUNDARY GS GROUND SURFACE SECTION NUMBER PRE-FAB PRE-FABRICATED BASE OF/ BOTTOM OF B.O. POUND PER SQUARE INCH SHEET NUMBER BETWEEN DRAWING CODE PTD PAINT(ED) HAND HOLE POLYVINYL CHLORIDE PROPOSED/PROPERTY PVC HOLLOW STRUCTURAL SECTION PROP CAR COUNCIL AUTHORIZED REPRESENTATIVE CCTV CCTV CAMERA **HDWR** HARDWARE QTY QUANTITY(IES) PRECAST CONCRETE HOLLOW METAL CEM CEMENT(ITIOUS) DETAIL NUMBER HORIZONTAL CAST IRON HORIZ REVEAL CIP HIGH PERFORMANCE CAST IN PLACE SHEET NUMBER RAD **RADIUS** CJ HOP CONTROL JOIN HOPKINS RD ROOF DRAIN DRAWING CODE CENTERLINE HR CAST IN PLACE CONCRETE REFERENCE CLG CLR HTR HEATER CEILING REINFORCE(MENT)(ING) REINF HVAC HEATING, VENTLATION AND AIR CONDITIONING REQD CMU CONCRETE MASONARY UNIT REQUIREMENTS CO IDENTIFICATION/INSIDE DIAMETER REV REVISE (REVISION) ARCHITECTURAL OR COL COLUMN INCH(ES) RM ROOM COLUMN GRID DECORATIVE CONCRETE СОММ COMMUNICATION(S) INCL RO ROUGH OPENING CONCRETE ROW RIGHT-OF-WAY CONSTANT INSUL INSULATION RVS REVERSE CONSTR JT CONSTRUCTION JOINT INT INTERIOR WOOD FRAMING RWL RAIN WATER LEADER CONTINUE(OUS) INV COORD COORDINATE SOUTH CSK CT CTG COUNTERSUN J-ROX JUNCTION BOX SCHED SCHEDULE WINDOW TYPE CERAMIC TILE JOINT STATION COMMUNICATION CABINET SCC COATING WOOD BLOCKING SEC STATION ELECTRICAL CABINET IDR LEADER SQUARE FEET DEEP SHEATHING SHTHG DEC DECORATIVE LLH LONG LEG HORIZONTAL DIAMETER LLV LONG LEG VERTICAL - CONSTRUCTION TYPE DIA SIMILAR RIGID INSULATION LOC DIM(S) LOCATION DIMENSION(S) SLP ST. LOUIS PARK DUCTILE IRON PIPE LOUVER(S) SLNT SEALANT DIR DIRECTIVE SHT SHEET DISP MACH MACHINE SKYLIGHT MAINT MAINTENANCE METAL RAIL TYPE BATT INSULATION SPEC SPECIFICATION MAS MASONRY SPKR SPEAKER MAT SPO SOUTHWEST PROJECT OFFICE DRN DRAIN MAX MAXIMUM SQUARE SQ DFTAIL MCP METAL CEILING PANEL SS ST STAINLESS STEEL METAL/STEEL MECH DWG DRAWING MECHANICAL PANEL TYPE STRFFT MFD MEDIUM STA STATION MEMB MEMBRANE STD STANDARD MANUFACTURER(ED) FACH MFR STL STEEL FACH FACE МН MANHOLF STOR STORAGE EXPANSION JOINT MID MIDDLE STRUCT STRUCTURE(AL) **ELEVATION** MIN MINIMUM ELECTRIC(AL) STORED VALUE VALIDATOR NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL SHEET **CIVIL EAST - VOLUME 11A AECOM STATIONS** ARCHITECTURAL ABBREVIATIONS, **SOUTHWEST** OF SYMBOLS, AND DRAWING CODES

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ARCHITECTURE

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E0-ARC-ABR-020

- 2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC-360-10)
- AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318–11). 5. REINFORCING STEEL
- AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"

GENERAL

- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, ELEVATIONS AND DIMENSIONS. CHANGES REQUIRED DUE TO EXISTING CONDITIONS SHALL BE SUBJECT TO A/E APPROVAL PRIOR TO ANY CONSTRUCTION.
- CONTRACTOR SHALL SUBMIT ALL REQUIRED SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION OR DELIVERY OF MATERIALS TO THE SITE
- NOTES, TYPICAL DETAILS AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS, CIVIL, ARCHITECTURAL ELECTRICAL AND MECHANICAL DRAWINGS, IF THERE IS A DISCREPANCY BETWEEN DRAWINGS AND SPECIFICATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE C.A.R. PRIOR TO PERFORMING WORK.
- AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFFTY OF PERSONS AND PROPERTY. THE ENGINEER'S PRESENCE OR REVIEW OF WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORT, BRACING, SHORING, ETC. OF BOTH EXISTING AND NEW CONSTRUCTION, INCLUDING UTILITIES, AS WILL BE REQUIRED FOR THE SAFE INSTALLATION OF NEW CONSTRUCTION AND THE COMPLETE PROTECTION OF PUBLIC, WORKMEN AND PROPERTY, TOTAL RESPONSIBILITY IN THIS REGARD SHALL REST WITH THE CONTRACTOR.

- PLATFORMS AND VC STRUCTURES SHALL BE PLACED ON SELECT GRANULAR MATERIAL OR OTHER FOUNDATION SYSTEMS AS OUTLINED IN THE PROJECT GEOTECHNICAL
- MINIMUM FROST DEPTH AND FOOTING DEPTH SHALL BE 5'-0" FEET BELOW FINISHED GRADE FOR UNHEATED
- PILE SUPPORTED FOOTINGS SHALL BE SUPPORTED BY 12" CIP PILES OR MICROPILES AS SHOWN ON THE

4. CONCRETE

- 1. ALL CONCRETE SHALL CONFORM TO CURRENT EDITION OF THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI
- CONCRETE FOR FOOTINGS, PIERS, WALLS BEAMS AND SLAB ON GRADE SHALL BE STONE CONCRETE AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
- CONSTRUCTION JOINTS SHALL BE PROVIDED AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.
- SIZE OF CONCRETE PLACEMENT SHALL NOT EXCEED THE FOLLOWING, UNLESS OTHERWISE NOTED: SLABS ON GRADE: PLACE IN LONG STRIPS AS SHOWN ON THE DRAWINGS. WALL SECTIONS: 40'-0" IN LENGTH BUT NOT FURTHER THAN 15 FEET
- SURFACE OF ALL CONSTRUCTION JOINTS SHALL BE ROUGHENED BEFORE CONCRETE SETS. CONCRETE SURFACE SHALL BE PREPARED BEFORE A NEW POUR AS SPECIFIED IN THE "ACI MANUAL OF CONCRETE INSPECTION" SP-2.
- SLEEVES, MECHANICAL OPENINGS, CONDUITS, PIPES RECESSES, DEPRESSIONS, CURBS AND ALL EMBEDDED ITEMS SHALL BE PROVIDED FOR AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND AS REQUIRED BY EQUIPMENT MANUFACTURERS. MINIMUM CONCRETE BETWEEN SLEEVES SHALL BE 6 INCHES.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

- 7. NOT ALL ITEMS EMBEDDED IN CONCRETE ARE INDICATED ON THE STRUCTURAL DRAWINGS. SEE ARCHITECTURAL WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS
- 8. CONCRETE FLOORS SHALL BE CONSTRUCTED TO THE FLATNESS TOLLERANCES INDICATED IN SPECIFICATIONS.

- 1. ALL REINFORCING STEEL SHALL CONFORM TO THE CURRENT ASTM SPECIFICATIONS A-615 GRADE 60 UNLESS OTHERWISE NOTED ON THE DRAWINGS. REINFORCING STEEL, EXCEPT FOR FOOTING REINFORCEMENT, SHALL BE EPOXY COATED.
- 2. REINFORCEMENT DETAILS SHALL CONFORM TO THE MANUAL OF STANDARDS FOR DETAILING OF CONCRETE REINFORCEMENT ACI
- REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON THE
- ALL BARS SHALL BE CONTINUOUS UNLESS NOTED OTHERWISE. BARS SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED IF NECESSARY AND HOOKED AT DISCONTINUOUS
- 5. ALL STEEL WELDED FABRIC SHALL CONFORM TO ASTM A-185, WITH MINIMUM ULTIMATE TENSILE STRENGTH OF
- REINFORCING BARS SHALL BE SECURELY HELD IN PROPER POSITION WHILE PLACING CONCRETE. REBAR SPLICE LENGTH SHALL CONFORM TO THE LATEST EDITION OF BUILDING CODE REQUIREMENTS, FOR REINFORCED CONCRETE, ACI 318. SPLICE ALL REBARS AWAY FROM THE TENSION ZONE. TOP BARS SHALL BE SPLICED AT MIDSPANS AND BOTTOM BARS OVER SUPPORTS U.O.N.
- 7. REINFORCEMENT IN ALL SLABS-ON-GRADE SHALL NOT BE CONTINUOUS THROUGH EXPANSION AND ISOLATION JOINTS. AT THE CONTRACTION OR CONSTRUCTION JOINTS ONLY ALTERNATE BARS SHALL BE CONTINUOUS.
- 8. ALL REINFORCEMENT INCLUDING WELDED WIRE MESH IN SLABS ON GRADE SHALL BE SUPPORTED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR PLACING OF CONCRETE. SUPPORT REINFORCEMENT ON CONCRETE BLOCKS 4" SQUARE HAVING COMPRESSIVE STRENGTH FQUAL TO THAT OF THE SLAB. PROVIDE WELDED WIRE MESH IN FLAT SHEETS
- THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES, BEFORE THE CONCRETE IS POURED, THE CONTRACTOR SHALL CONSULT MECHANICAL AND ELECTRICAL DRAWINGS, AS WELL AS THE STRUCTURAL DRAWINGS FOR THR LOCATION, NUMBER, AND SIZE OF ALL OPENINGS, SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS

STRUCTURAL STEEL

- 1. UNLESS OTHERWISE NOTED, STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
 - WIDE FLANGES, A.S.T.M. 992
 - CHANNELS, A.S.T.M. A-36
- STRUCTURAL TUBES, A.S.T.M. A-500 (Gr. B) PLATES, A.S.T.M. A-36 FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL
- CONFORM TO THE AISC SPECIFICATION FOR DESIGN. ANCHOR RODS SHALL CONFORM TO A.S.T.M. A-307
- TEMPLATES SHALL BE PROVIDED FOR ALL ANCHOR RODS CAST IN PLACE. HIGH STRENGTH BOLTS SHALL CONFORM TO A.S.T.M.
- A-325. NON-HIGH STRENGTH BOLTS SHALL CONFORM TO A.S.T.M. A-307. WASHERS SHALL CONFORM TO A.S.T.M. F-436 AND NUTS TO A.S.T.M. A-583.
- ALL AVAILABLE STRENGTHS FOR BOLTS SHALL BE THOSE GIVEN IN THE AISC SPECIFICATIONS.
- STRUCTURAL STEEL CONNECTIONS SHALL BE OF THE TYPES SHOWN ON THE DRAWINGS AND SHALL BE DESIGNED FOR THE CAPACITIES AND REQUIREMENTS SHOWN. CONTRACTOR SHALL SUBMIT TO A/E FOR APPROVAL DESIGN CALCULATIONS AND DETAILS OF ALL CONNECTIONS, REPAIRED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MN.
- A MINIMUM OF TWO (2) BOLTS SHALL BE PROVIDED IN EACH CONNECTION.
- ALL STEEL SURFACES NOT SHOP PRIMED SHALL BE FIELD PRIMED OR TOUCHED-UP PRIMED. EXCEPT AS MODIFIED BY THE SPECIFICATIONS.

- 10. GALVANIZING WHEN REQUIRED AS CALLED ON PLANS SHALL BE HOT-DIP GALVANIZNING IN ACCORDANCE WITH A.S.T.M. A-123 & A-155.
- 11. CONTRACTOR SHALL SUBMIT, FOR REVIEW, STRUCTURAL STEEL SHOP DRAWINGS PREPARED BY AN AISC CERTIFIED

- WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES SHALL BE E70XX, LOW HYDROGEN
- ALL FILLET WELD SIZES NOT SHOWN ON THE DRAWING SHALL NOT BE LESS THAN THE MINIMUM SIZE AS PER AISC SPECIFICATIONS.
- ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER AND SHALL BE SUBJECT TO QUALITY CONTROL INSPECTION AS REQUIRED BY THE STATE OF MINNESOTA BUILDING CODE.

- UNLESS OTHERWISE NOTED ON THE DRAWINGS, GROUT SHALL BE CEMENTITIOUS GROUT CONFORMING TO SPECIFICATIONS.
- FOR ANCHOR BOLTS AND DOWELS, USE EPOXY GROUT, SUCH AS MASTER BUILDERS, INC. BRUTEM AB OR EQUAL.
- 3. GROUT SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTRUCTIONS.

9. DESIGN LOADS

1.	STATION PLA PLATFORM	TFORMS ROOF	VIRTICAL CIR	CULATION ROOF
LIVE LOAD (PSF)	125	35	125	20
SNOW LOAD (PSF)	-	35	-	42
STRUCTURE DEAD LOAD (PSF)	VARIES	S.W.	140	S.W.
SUPERIMPOSED DEAD LOAD (PSF)	_	10	5	10

NOTE: STEEL SELF WEIGHT WILL BE CALCULATED IN STRUCTURAL ANALYSIS PROGRAM PLATFORMS

2. ROOF SNOW LOAD

- GROUND SNOW LOAD: Pg = 50 PSF SNOW EXPOSURE FACTOR: Ce = 0.9 SNOW IMPORTANCE FACTOR: I = 1.0THERMAL FACTOR: Ct = 1.2FLAT ROOF SNOW LOAD: Pf = 35 PSF
- SNOW DRIFT HAS BEEN CONSIDERED WHERE APPLICABLE.
- RISK CATEGORY: I ULTIMATE DESIGN WIND SPEED: 115 MPH WIND EXPOSURE CATEGORY: B
- INTERNAL PRESSURE COEFFICIENT: 0.18 COMPONENTS & CLADDING MINIMUM PRESSURE: 20 PSF 4. SEISMIC LOADS:
- SEISMIC USE GROUP SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.064g, SD1 = .0438g SITE CLASS: DBASIC SEISMIC-FORCE-RESISTING SYSTEM: ORDINARY STEEL MOMENT FRAMES DESIGN BASE SHEAR: 0.018W SEISMIC DESIGN CATEGORY A
- MODIFICATION FACTOR, R = 3.5ALLOWABLE DESIGN FLOOR DEFLECTIONS ARE AS FOLLOWS: DL+LL = L/240LL = L/360 TYPICAL LL+SDL = L/600 OR 3/8" CMU SUPPORTING
- 6. BUILDING ALLOWABLE LATERAL DRIFT = L/400

SPANDREL BEAMS

VIRTICAL CIRCULATION

- 2. ROOF SNOW LOAD: GROUND SNOW LOAD: Pa = 50 PSF SNOW EXPOSURE FACTOR: Ce = 1.0 SNOW IMPORTANCE FACTOR: I = 1.0THERMAL FACTOR: Ct = 1.2
- FLAT ROOF SNOW LOAD: Pf = 42 PSFSNOW DRIFT HAS BEEN CONSIDERED WHERE APPLICABLE.
- 3. WIND LOADS: RISK CATEGORY: 1 BASIC DESIGN WIND SPEED: 115 MPH WIND EXPOSURE CATEGORY: C
- INTERNAL PRESSURE COEFFICIENT: 0.18 COMPONENTS & CLADDING MINIMUM PRESSURE: 20 PSF
- 4. SEISMIC LOADS: SEISMIC USE GROUP SPECTRAL RESPONSE COEFFICIENTS: Sps = 0.064g, Sp1 = .0438g SITE CLASS: D BASIC SEISMIC-FORCE-RESISTING SYSTEM: ORDINARY STEEL MOMENT FRAMES DESIGN BASE SHEAR: 0.02W SEISMIC DESIGN CATEGORY A
- MODIFICATION FACTOR, R = 3.5ALLOWABLE DESIGN FLOOR DEFLECTIONS ARE AS FOLLOWS: LL = L/360 TYPICAL LL+SDL = L/600 OR 3/8" CMU SUPPORTING
- 6. BUILDING ALLOWABLE LATERAL DRIFT = L/400

SPANDREL BEAMS

AECOM





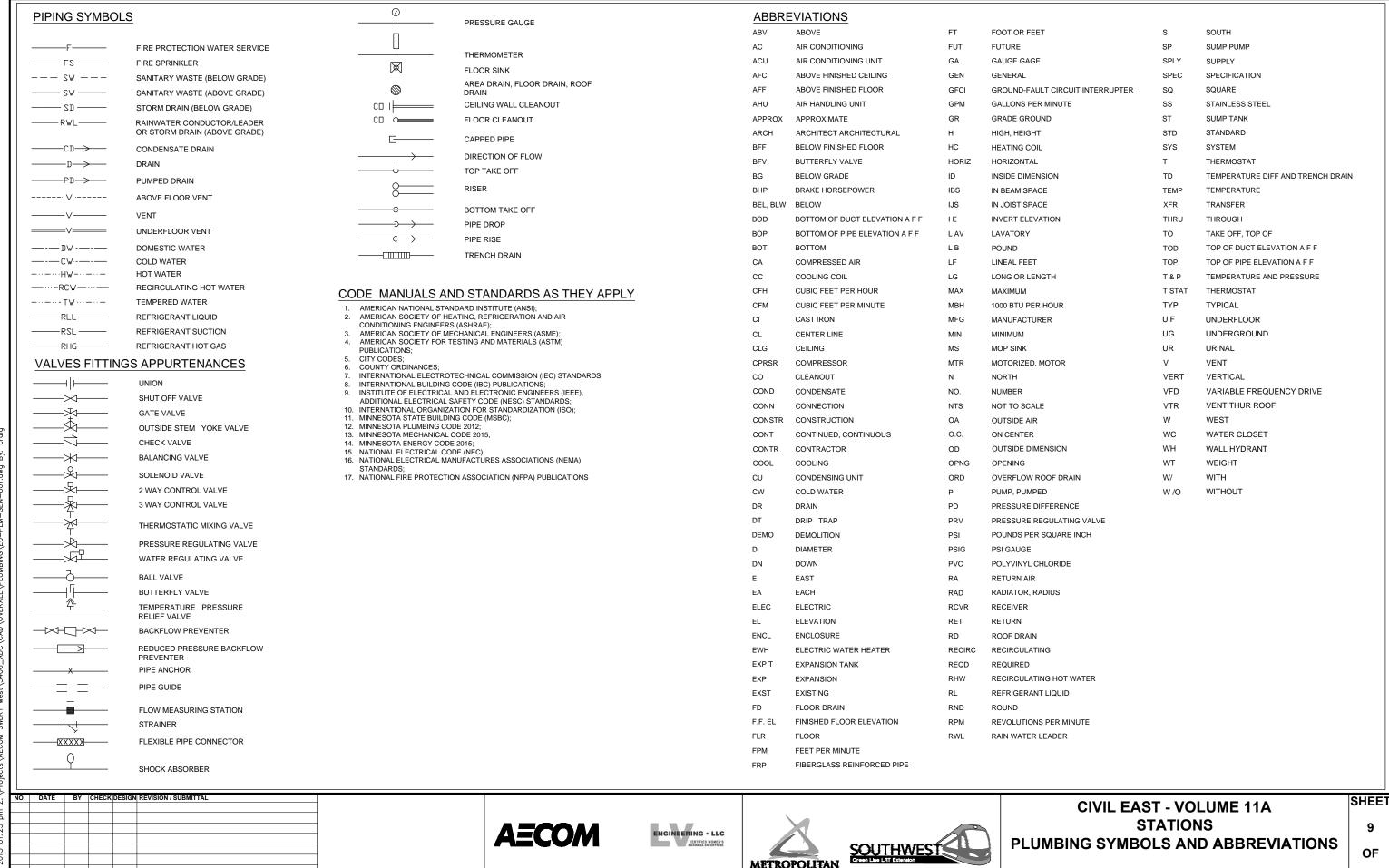
CIVIL EAST - VOLUME 11A STATIONS STRUCTURAL GENERAL NOTES

OF 319

SHEET

STRUCTURES

E0-STR-GEN-001



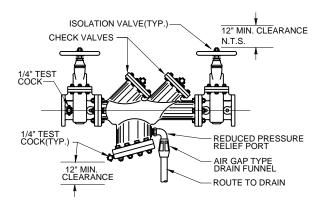
DISCIPLINE

PLUMBING

319

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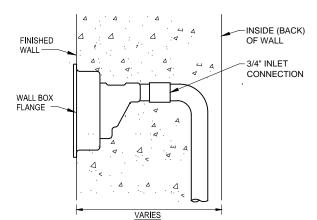
BACKFLOW PREVENTER DETAIL

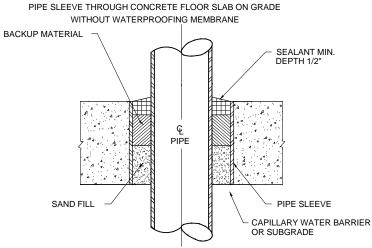
CLEANOUT

-18 GAUGE ROUND

- ACCESS COVER

- FINISHED WALL





 DRAINAGE FIXTURE UNITS

 LAV
 TOILET
 MOP SINK
 FD
 URINAL

 QUANTITY
 1
 1
 1
 1
 1

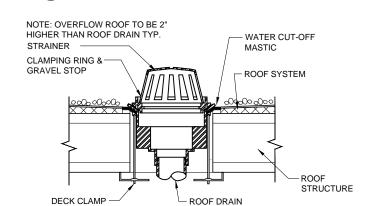
 D.F.U.
 1
 6
 3
 4
 6

 TOTAL D.F.U.
 1
 6
 3
 4
 6

SUPPLY FIX	(TUR	E UN	ITS						
	LAV	TOILET	MOP SINK	WH	URINAL				
QUANTITY	1	1	1	1	1				
FIXTURE UNIT	1.5 1.5	10	1.5 1.5	5	6				
TOTAL FIXTURE UNITS	1	10	1	5	6				
TOTAL DEMAND: CW = 23 F.U. : HW = 3 F.U.									

PIPE SLEEVE THROUGH CONCRETE FLOOR SLAB ON GRADE

ELEC	ELECTRIC POINT OF USE WATER HEATER													
UNIT		MANUFACTURER MODEL		TANK	ELECT	RICAL								
NO.	LOCATION	NO.	WATTS	GAL.	VOLTS	PH	FULL LOAD AMPS	REMARKS						
EWH-1	RESTROOM	RHEEM, EGSP2	2000	6	120	1	16.7	5 GAL ACCEPTABLE						



FREEZEPROOF WALL HYDRANT

ROOF DRAIN DETAIL

AREA AND ROOF DRAIN SCHEDULE TAG DRAIN SIZE STRAINER MATERIAL LOCATION BASIS OF DESIGN REMARKS RD VARIES BRONZE ROOF JAY R SMITH MODEL 1310 OFD VARIES BRONZE ROOF JAY R SMITH MODEL 1310														
TAG			LOCATION	BASIS OF DESIGN	REMARKS									
RD	VARIES	BRONZE	ROOF	JAY R SMITH MODEL 1310										
OFD	VARIES	BRONZE	ROOF	JAY R SMITH MODEL 1310										
TD-1	4"	STAINLESS STEEL	PLATFORM	JAY R SMITH MODEL 9814	6" WIDE, PRECAST POLYMER CONCRETE TRENCH. PROVIDE WITH HEEL PROOF GRATES.									
AD-1	4"	NICKEL BRONZE	VARIOUS	JAY R SMITH MODEL 2010	ROUND NICKEL BRONZE STRAINER									
IDE C														

DIA. OF STORM DRAIN, INCHES	DRAINAGE AREA
3	822
4	1,880
5	3,340
6	5,350
8	11,500
10	20,700

	PLUI	MBING FIXT	URE S	SCHE	DULE			
1	TAG	TYPE	WASTE	VENT	CW	HW	BASIS OF DESIGN	REMARKS
	WH-1	WALL HYDRANT		3/4"			WOODFORD MODEL B65	
	LAV-1	LAVATORY	11/2"	11/2"	3/4"	3/4"	AMERICAN STANDARD - LUCERNE	WALL HUNG; AMERICAN STANDARD RELIANT FAUCET
	MS-1	MOP SINK	3"	11/2"	3/4"	3/4"	MUSTEE MODEL 62M	FLOOR MOUNT, 24x24x8 1/4"; CHICAGO FAUCET 835-CP
	WC-1	WATER CLOSET	4"	2"	1 1/4"		AMERICAN STANDARD - AFWALL	WALL HUNG; SLOAN 110-111 FLUSHOMETER
	UR-1	URINAL	2"	11/2"	3/4"		AMERICAN STANDARD - TRIMBROOK	WALL HUNG; SLOAN ROYAL 186 FLUSHOMETER
	FD-1	FLOOR DRAIN	3"	11/2"			JAY R SMITH 2010	ROUND NICKEL BRONZE STRAINER
1 [TRAP PRIMER					JAY R SMITH 2699	
	STANDPIPE 3" 11/2"				6" PIPE; 24" LONG CONNECTED TO 3" TRAP AND DRAIN			

SU	MP TANK			BAS	SED ON: ZOELI	ER								
	BASIN SIZE INLETS OUTLETS													
ITEM				PE BASIN SIZE INLETS MATERIAL DIA. IN. DEPTH IN. NO. SIZE IN. ABV. BO					OUT	TLET	-S		COVER	
NO.	LOCATION	SERVING	TYPE	MATERIAL			NO. S	SIZE IN.	ABV. BOT. IN. NO	D. S	SIZE IN.	ABV. BOT. IN.	MATERIAL	REMARKS
CT 4	OUTSIDE	ELEV PIT	PREFABRICATED	FIBERGLASS	24 6	4	1	1	21 1	,	2	v	NON-CORROSIVE	PROVIDE WITH 12-INCH EXTENSION ZOELLER AND A-PAK II ALARM SYSTEM ZOELLER MODEL 10-0126.
S1-1	ELEVATOR PIT	DRAINAGE	PREFABRICATED	I IDLINGLAGG	24 (۱ ۲	'	4	2' '	'	2	^	NON-CORROSIVE	PROVIDE WITH 12-INCIT EXTENSION ZOLLLEN AND AFFAIR II ALARM STSTEM ZOLLLEN MODEL 10-0120.
	ELEVATOR PIT OUTSIDE	ELEV PIT		FIDE DOL AGO	04	,	4		04 4		0	V	NON CORROSIVE	PROVIDE WITH 40 INCH EXTENSION ZOELLED AND A DAIL II ALADM OVOTEM ZOELLED MODEL 40 0400
ST-2	ELEVATOR PIT	DRAINAGE	PREFABRICATED	FIBERGLASS	24 8	4	1	4	21 1	ı	2	X	NON-CORROSIVE	PROVIDE WITH 12-INCH EXTENSION ZOELLER AND A-PAK II ALARM SYSTEM ZOELLER MODEL 10-0126.

SL	SUMP PUMP											SED ON:	ZOELLER									
						МОТО	2		SUMP													
ITEM					GPM	DISCH.	DISCH.	ELECTRICAL		BASIN SIZE IN		INLETS OUT		OUTLETS		COVER						
NO.	LOCATION	SERVING	MODEL	. TYPE	EACH	HD FT	SIZE IN	HP	RPM	CHARACTERISITCS	MATERIAL	DIA. IN.	DEPTH IN.	NO.	SIZE IN.	ABV. BOT. IN.	NO.	SIZE IN.	ABV. BOT. IN.	MATERIAL	ACCESSORIES	REMARKS
SP-1	IEI EVATOR SHIMR	ELEV PIT DRAINAGE	4186	SIMPLEX	50	25	2	1 1/2	3450	230/3/60	FIBERGLASS	24	84	1	4	21	1	2	Х	STEEL	(4) 10-0225 FLOATS, HIGH WATER ALARM MODEL 10-0092 CONTROL PANEL	(2) ELECTRICAL CIRCUITS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	Г
	NO.	NO. DATE	NO. DATE BY	NO. DATE BY CHECK	NO. DATE BY CHECK DESIGN	NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL









CIVIL EAST - VOLUME 11A STATIONS PLUMBING DETAILS AND SCHEDULES

PLUMBING SHEET NAME:

PLUMBING E0-PLM-

E0-PLM-DTL-001 319

SHEET

10

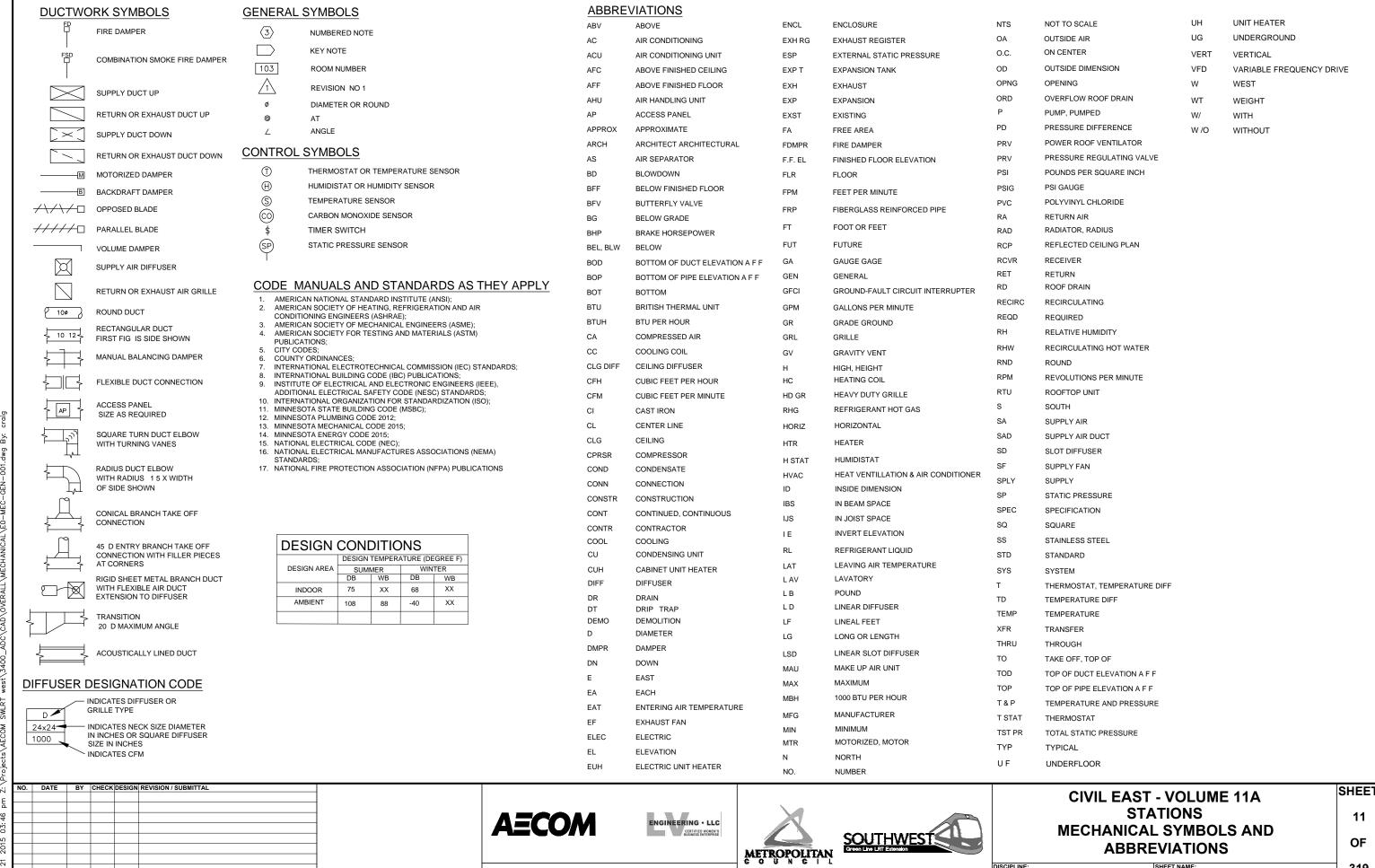
OF

60% SUBMISSION - 09/28/15

כאבונו אפטן (כאבוניאבר (ן במשחות לבס ברי בש

CLEANOUT-TEE

CLEANOUT



MECHANICAL

E0-MEC-GEN-001

AIR CON	OITIO	NING UNI	Т																				
					OUTSIDE	TSP.	ESP.	SUPF	PLY FAN	SUPPLY MO	OTOR			ı	ох со	OLING				ELECTRIC H	HEATING		
UNIT NO	SERVES	MFR.	MODEL NO	SUPPLY	AIR	INCHES	INCHES					REFRIG.	TOTAL	SENS.	E.A	۸.T.	L.A	.Τ.					NOTES:
INO .				CFIVI	CFM	WG	WG	BHP	HP	ELECTRICAL	RPM	TYPE	MBH	MBH	DB	WB	DB	WB	FILTERS	TYPE	KW	WEIGHT (LB.)	
ACU -1	HOIST WAY	CARRIER	42BHE162D4L61516DE	1500	XX	.91	.5	.55	.75	208 V	1086	410A	62.85	35.13	75	67	53.6		2 IN. MERV 8 PLEATED	N/A	N/A	293	1,,2,5
ACU -2	EMR	CARRIER	40GV	471	xx	XX	.5	xx	xx	208 V	xx	410A	XX	xx	xx	xx	XX	XX	XX	XX	xx	26.4	1,,2,5
ACU -3	HOIST WAY	CARRIER	42BHE162D4L61516DE	1500	xx	.91	.5	.55	.75	208 V	1086	410A	62.85	35.13	75	67	53.6	53.3	2 IN. MERV 8 PLEATED	N/A	N/A	293	1,,2,5
ACU -4	EMR	CARRIER	40GV	471	XX	XX	.5	XX	XX	208 V	XX	410A	XX	XX	XX	XX	XX	XX	XX	XX	XX	26.4	1,,2,5
ACU -5	AMENITY	CARRIER	FV4C	1000	XX	XX	.5	XX	.5	208 V	XX	410A	29.76	11.49	75	72	64.36	63.9	XX	N/A	15	150	1,,2,5

NOTES:
1. HUNG FROM DECK WITH VIBRATION ISOLATION.
2. FUSED DISCONNECT BY DIV 16

4. XX
5. FILTERS MUST BE EASILY ACCESSIBLE

INTA	KE / REL	IEF HOOI	os -									
UNIT NO.	LOCATION	SERVES	MODEL NO.	FUNCTION		THROAT DIM.	STATIC PRESS. " W.G.	THROAT VELOCITY F.P.M.	DAMPER TYPE	WEIGHT (LB.)	ACCESSORIES	REMARKS
Х	HOISTWAY	HOISTWAY	WRH	RELIEF	N/A	24 X 20	х	500	CONTROL	98	ROOF CURB, ACTUATOR, OPEN/CLOSE INDICATOR	FIRE FIGHTER KEYED SMOKE EXHAUST

GRI	LLE, REGIS	TER 8	DIFFU	SER S	CHED	ULE		
MARK	MANUFACTURER	MODEL	TYPE	BORDER	SIZE	NECK SIZE	USE	REMARKS
Α	TITUS	355R	GRILLE	N/A	SEE DWG	N/A	RETURN	
В	TITUS	355R	GRILLE	N/A	SEE DWG	N/A	RETURN	
С	TITUS	TMS	DIFFUSER	N/A	SEE DWG	N/A	SUPPLY	
D	TITUS	XX	REGISTER	N/A	SEE DWG	N/A	SUPPLY	

AIR	CONDITION	ONING CON	DENS	ER										
			CAP	ACITY					MINIMUM		ELECTF	RICAL		
UNIT NO.	LOCATION	MFR/MODEL NO.	TOTAL MBH	NOM. TONS	REFRIGERANT TYPE	AMB. TEMP. °F	SUCT. TEMP. °F	COND. FAN HP	CIRCUIT AMPACITY	AIR FLOW CFM	VOLTS	PH	WEIGHT (LB.)	NOTES
CU -1	UNDER STAIR	CARRIER 24AHA448A005	xx	4	R-410a	xx	xx	xx	xx	N/A	208	3	213	1,3,4
CU -2	HUNG UNDER STAIR	CARRIER 38GVC	18	xx	R-410a	xx	xx	xx	xx	N/A	208	3	112.2	1,2,3
CU -3	UNDER STAIR	CARRIER 24AHA448A005	xx	4	R-410a	xx	xx	xx	xx	N/A	208	3	213	1,3,4
CU -4	HUNG UNDER STAIR	CARRIER 38GVC	18	XX	R-410a	XX	xx	xx	xx	N/A	208	3	112.2	1,2,3
CU -5	AMENITY ROOF	CARRIER 24AHA	xx	2.5	R-410a	XX	XX	XX	XX	N/A	208	3	213	1,3,4

CO	NDENS/	TE PU	MPS										
ITEM NO.	DESCRIPTION	LOCATION	MANUFACTURER	MODEL	FLUID	GPM EACH	TOTAL HD FT	MOTOR HP	RPM	TYPE	VOLTS/PH	WEIGHT (LB.)	REMARKS
CP-1		LOBBY	DIVERSITECH	IQP120	WATER	1.6	xx	xx	XX	XX	120/XX	5.43	
CP-2		LOBBY	DIVERSITECH	IQP120	WATER	1.6	xx	xx	XX	XX	120/XX	5.43	
CP-3		AMENITY	DIVERSITECH	IQP120	WATER	1.6	XX	XX	XX	XX	120/XX	5.43	

SERVICE

TYPE

UNIT HEATER

UNIT HEATER

WALL HEATER

WALL HEATER

DUCT HEATER

NOTES:

STAND ALONE FUSED DISCONNECT BY DIVISION 16

MOUNT ABOVE TRANSFORMER.

HORIZONTAL CONFIGURATION

MOUNTED ON 4-INCH HOUSEKEEPING PAD

EXH	AUST FANS	3													
					TOTAL							ELECTF	RICAL		
FAN NO.	LOCATION	SERVES	MANUFACTURER MODEL NO	CFM	STATIC PRESS	FAN RPM	OUTLET VELOCITY	TYPE	DRIVE	BHP	HP	VOLTS	PH	WEIGHT (LB.)	NOTES
EX -1	BRIDGE LOBBY	BRIDGE LOBBY	COOK 60SQN-B	150	.5	1919	xx	INLINE	BELT	XX	1/4	115	1	50	1,2
EX -2	PLATFORM LOBBY	PLATFORM LOBBY	COOK 60SQN-B	100	.5	1625	XX	INLINE	BELT	XX	1/4	115	1	50	1,2
EX -3	BRIDGE LOBBY	BRIDGE LOBBY	COOK 60SQN-B	150	.5	1919	XX	INLINE	BELT	XX	1/4	115	1	50	1,2
EX -4	PLATFORM LOBBY	PLATFORM LOBBY	COOK 60SQN-B	100	.5	1625	XX	INLINE	BELT	XX	1/4	115	1	50	1,2

UNIT NO.

EUH -1

EUH -2

EWH -1

EWH -2

NOTES:
1. STAND ALONE FUSED DISCONNECT BY DIVISION 16
2. UNIT HEATER HUNG AT X FT AFF
3. HORIZONTAL CONFIGURATION

ELECTRIC HEATERS

LOCATION

EMR

AMENITY

AMENITY

AMENITY

NOTES:
1. STAND ALONE FUSED DISCONNECT BY DIVISION 16
2. MOUNTED FROM DECK
3. XX

ENERGY RECOVERY VENTILATORS	S
------------------------------------	---

	KG I KEU	OVERTV	CIVILAI	UKS																			
					OUT. AIR	TEMP. F°	EXH. AIR	TEMP. F°	%	EFFECTIVENE	SS		PRESS.				ELECT	RICAL				INTER-	
UNIT NO.	LOCATION	SERVING	TYPE	MODEL NO. *	ENT.	LVG.	ENT.	LVG.	SENSIBLE	WINTER ENTHALPIC		AIRFLOW CFM				BLOWER DRIVE	VOLTS	PH.	FILTER TYPE	WEIGHT (LB.)	ACCESSORIES	LOCK WITH	REMARKS
ERV -1	DRIVER AMENITY	DRIVER AMENITY	STATIC PLATE	EV200	-40	43.5	68	х	77	72	58	180	.3	1	.1	Х	120	1	MERV 8	70	Х	Х	Х

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL









CIVIL EAST - VOLUME 11A STATIONS MECHANICAL SCHEDULES

ELECTRICAL DATA

AMPS

14.5

4.8

4.8

VOLTS PHASE

208

208

WEIGHT (LB.)

24

10

10

3

4

REMARKS

1,2,3

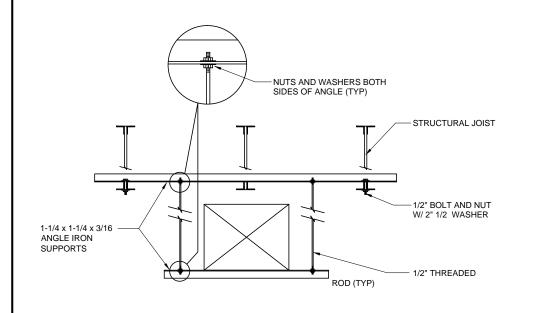
1,2,3

319

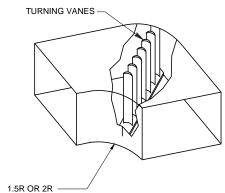
60% SUBMISSION - 09/28/15

E0-MEC-SCH-001 **MECHANICAL**

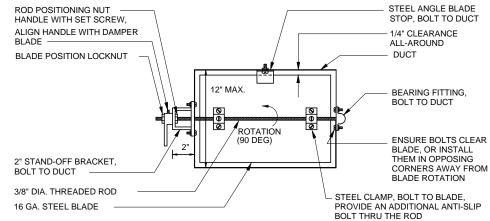
SHEET 12 OF



HANGER DETAIL



1.5R OR 2R — TYPICAL ELBOW DETAIL



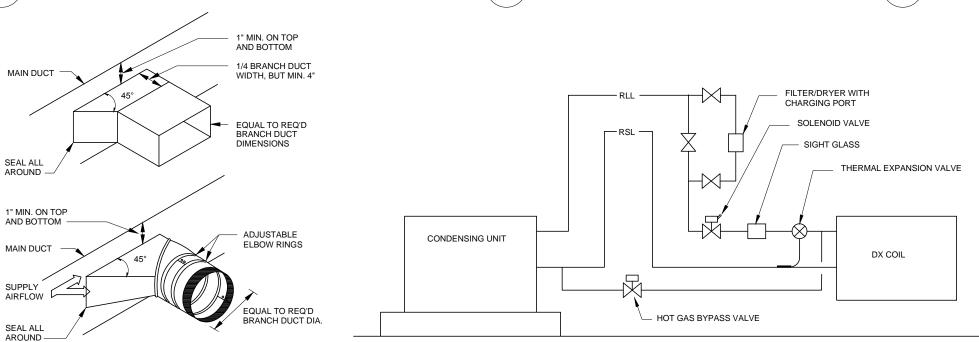
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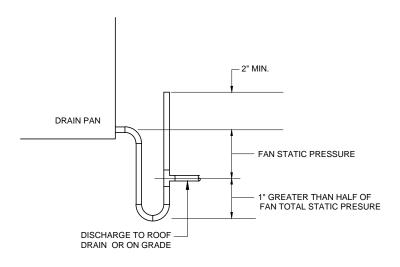
- 1. DAMPERS FOR ROUND DUCTS SHALL BE SIMILAR TO THE DAMPER SHOWN ABOVE.
- ENSURE THAT FULL 90° DAMPER BLADE MOVEMENT IS UNOBSTRUCTED.
 FOR DUCT HEIGHTS MORE THAN 12", PROVIDE FACTORY-FABRICATED OPPOSED BLADE DAMPERS

MANUAL DAMPER

(ADJUSTABLE SINGLE-BLADE BALANCING TYPE)

N.T.S.





NOTE

- 1. DRAIN LINE SHALL BE INSULATED.
- DRAIN LINE SHALL PENETRATE THE ROOF LINE OR SLAB WITHIN THE CONFINEMENT OF THE HVAC EQUIPMENT CURB OR PAD.
- 6 CONDENSATE DRAIN TRAP DETAIL
 N.T.S.

\bigcap	TYPICAL	BRANCH	TAKE-OFF	FITTING	
(+)	N.T.S.				

5 REFRIGERANT SCHEMATIC
N.T.S.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

AECOM

60% SUBMISSION - 09/28/15







CIVIL EAST - VOLUME 11A STATIONS MECHANICAL DETAILS

OF

DISCIPLINE: MECHANICAL

NAME: E0-MEC-DTL-001

OF 319

SHEET

ONELINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	СВ	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED
->- +\x-	d	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: * FVR - FULL VOLTAGE REVERSING RVNR - REDUCED VOLTAGE NON-REVERSING 2S1W - TWO SPEED, ONE WINDING 2S2W - TWO SPEED, TWO WINDING
 *	*	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE AMPERE RATING NOTED IF OTHER THAN 30A
* * * * * * * * * * * * * * * * * * * *	* F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING EXAMPLE 15
->-x-	Z ^P ₂	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE
480V Δ TO 120/208Y 30 KVA K-*	Т	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 13. ALL OTHER DRY TYPE TRANSFORMERS SHALL HAVE A K-4 RATING. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING
* A TO 5	_	CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES
* TO 120	_	POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
\bigcirc	G	GENERATOR RECEPTACLE OR GENERATOR, RATINGS AND CONNECTIONS AS NOTED
100A MTS N S	1	MANUAL TRANSFER SWITCH NO. 1 (MTS-1) "N" INDICATES NORMAL SOURCE "S" INDICATES STANDBY SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
5KW	E	UNIT HEATER - ELECTRIC HEATING COIL AND FAN
_		UNIT HEATER - STEAM OR WATER HEATING COIL AND FAN
5	(M)	MOTOR, NUMERAL INDICATES HORSEPOWER
— (*	_	SPECIAL CAPACITOR * SC - SURGE CAPACITOR PF - POWER FACTOR CORRECTION CAPACITOR
مله		PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	_	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN

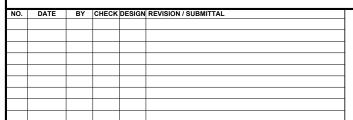
ONELINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
+++	_	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
+	_	CONDUCTORS ELECTRICALLY CONNECTED
DM	_	DAMPER MOTOR
→ ⊛—	_	PILOT LIGHT, COLOR AS NOTED R - RED G - GREEN B - BLUE W - WHITE A - AMBER
OR H	_	PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE
→ ^{LA}	1	LIGHTNING ARRESTER
<u></u>	•	GROUND OR GROUND ROD
30A ————————————————————————————————————	_	FUSE, AMPERE RATING AS NOTED
_		HEAT TRACE CABLE
—v17v—		STRIP HEATER OR HEATING ELEMENT
\dashv	_	CONTACT, NORMALLY OPEN (NO)
→ /	_	CONTACT, NORMALLY CLOSED (NC)
—(CR)—	_	CONTROL RELAY COIL, NUMBER AS INDICATED
TD	-	TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED TDE-TIME DELAY AFTER ENERGIZATION-ON DELAY TDD-TIME DELAY AFTER DE-ENERGIZATION-OFF DELAY
~~~		NOTC-NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED
<u>~</u> T <u>~</u>		NCTO-NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED
-0-0-		NOTO-NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED
-0+0-		NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
	TS OR	TEMPERATURE SWITCH OR THERMOSTAT
-	<b>O</b>	NORMALLY OPEN, CLOSES ON RISING TEMPERATURE
-050-		NORMALLY OPEN, CLOSES ON DROPPING TEMPERATURE
-050-		NORMALLY CLOSED, OPENS ON RISING TEMPERATURE
<u>~</u> 5		NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
	_	INDICATES LIMITS OF EQUIPMENT OR WIRING ENCLOSURE

EL	ECTRICAL ABBREVIATIONS
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
A,AMP	AMPERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
С	CONDUIT
CAR	COUNCIL AUTHORIZED REPRESENTATIVE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DOOR INTERLOCK
DN	DOWN
EC	EMPTY CONDUIT
ELEC ELEV	ELECTRICAL ELEVATION
EM	EMERGENCY
FBO	FURNISHED BY OTHERS
FO	FIBER OPTIC
FU	FUSE
GCP	GENERATOR CONTROL PANEL
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	GENERATOR
G,GRD	GROUND
GF	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
НН	HANDHOLE
HPB	HEATER PUSH BUTTON
HT	HEIGHT
HTR	HEATER
HZ	HERTZ
INST	INSTANTANEOUS
KSK	KIOSK
LA	LIGHTNING ARRESTER
LGTS	LIGHTS
LP	LIGHTING PANEL
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MH MTG	MANHOLE MOUNTING
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OL	OVERLOAD
PH	PHASE
P,POL	POLE
PR	PAIR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
REC	RECEPTACLE
SC	SURGE CAPACITOR
SCR	STATION COMMUNICATIONS ROOM
SEC	SECONDS OR SECONDARY
SER	STATION ELECTRICAL ROOM
SH	SHIELDED OR SHEET
SN	SOLID NEUTRAL

ELE	C ABBREVIATIONS CONT.
SW	SWITCH
SWGR	SWITCHGEAR
TC	TIME DELAY ON CLOSING
TEL	TELEPHONE
TO	TIME DELAY ON OPENING
TVM	TICKET VENDING MACHINE
TW	TWISTED
TYP	TYPICAL
UG	UNDERGROUND
V	VOLTS
W	WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER

- HOMERUNS SHOWN CONCEALED SHALL BE INDICATIVE OF ENTIRE CIRCUIT INSTALLATION. THE SAME SHALL APPLY FOR HOMERUNS SHOWN EXPOSED. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
- 2. CONDUIT AND WIRE (NOT SHOWN) FOR FIXTURES, SWITCHES AND/OR RECEPTACLES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AND SHALL BE:

- 2.1. 1" (MIN.) CONDUIT RUN
  2.2. EXPOSED IN UNFINISHED AREAS.
  2.3. CONCEALED ABOVE HUNG CEILINGS AND IN WALLS IN FINISHED AREAS.
- NO. 12 COPPER (MIN.) TYPE "THWN/THHN" NO. OF WIRES REQUIRED.
- 3. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE CAR MAY BE MADE BY THE CONTRACTOR TO ACCOMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
- 4. SWITCHES SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. RECEPTACLES SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED, EXCEPT RECEPTACLES IN OFFICES OR AREAS WITH HUNG CEILINGS, WHICH SHALL BE MOUNTED 1'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.











STAINLESS STEEL

# **CIVIL EAST - VOLUME 11A ELECTRICAL SYMBOLS AND ABBREVIATIONS**

1 OF 2

SHEET

14

DISCIPLINE: **ELECTRICAL** 

E0-ELE-GEN-001

OF 319

SYMBOL	DESCRIPTION
A 2 3 b	LED, COMPACT FLUORESCENT OR H.I.D. TYPE LUMINAIRE "A" - LUMINAIRE TYPE "b" - CONTROLLED BY SWITCH "b" "3" - CIRCUIT NUMBER
A3	LED OR FLUORESCENT TYPE LUMINAIRE, NOTATIONS SAME AS ABOVE
A b	WALL OUTLET AND LED, COMPACT FLUORESCENT OR H.I.D. TYPE LUMINAIRE, NOTATIONS SAME AS ABOVE
A	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS "A" - LUMINAIRE TYPE
$\otimes$	CEILING MOUNTED EXIT SIGN
⊢⊗∤	WALL OUTLET EXIT SIGN. ARROW INDICATES DIRECTION OF EGRESS
E	REMOTE EMERGENCY CEILING LUMINAIRE
HE	REMOTE EMERGENCY WALL LUMINAIRE
•	POLE MOUNTED LUMINAIRE "A" - LUMINAIRE TYPE "1" - CIRCUIT NUMBER
	BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR INSTALLED EXPOSED. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR INSTALLED CONCEALED. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	BRANCH CIRCUIT CONDUIT INSTALLED EXPOSED TURNING UP. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
•	BRANCH CIRCUIT CONDUIT INSTALLED EXPOSED TURNING DOWN. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	BRANCH CIRCUIT CONDUIT INSTALLED CONCEALED TURNING UP. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	BRANCH CIRCUIT CONDUIT INSTALLED CONCEALED TURNING DOWN. CONDUIT TO CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	CONDUIT STUBBED OUT AND CAPPED
2(3"C., 3#3/0 & 1#2 GRD.)	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR
~	FLEXIBLE METAL CONDUIT "WHIP" FOR RECESSED LIGHTING FIXTURES AND LIQUID TIGHT MOTOR CONNECTIONS

SYMBOL	DESCRIPTION
1,3 LP-1	HOMERUN, CIRCUITS 1 AND 3 RUN TO PANEL LP-1
— <b>B</b> U-1	HOMERUN TO EMERGENCY BATTERY UNIT BU-1
— <b>—</b> TM	HOMERUN TO TELEPHONE BACKBOARD
2-2/C#16TS	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
2-3/C#16TS	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
3(4"C)	THREE 4-INCH CONDUITS
<del></del>	"T" FITTING IN CONDUIT
<b>\$</b> b	SINGLE POLE SWITCH "b" INDICATES SWITCHLEG SHALL CONTROL LIGHT FIXTURES WITH "b" DESIGNATION
\$ ^M	SINGLE POLE, DOUBLE THROW MOMENTARY CONTACT SWITCH, CENTER OFF
\$ ^P	SINGLE POLE SWITCH AND PILOT LIGHT
D	DIMMER LIGHTING CONTROL SWITCH
C	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED
ТМ	TIME SWITCH
OR LP-**	LIGHTING PANELBOARD
OR DP-** \( \bigcup \overline{DP-**} \)	DISTRIBUTION PANELBOARD
* 4	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W  * C - MOUNTED ABOVE COUNTER-TOP GF - GROUND FAULT INTERRUPTER TYPE WP - WEATHERPROOF T - TRANSIENT VOLTAGE SURGE SUPPRESSOR 4 - CIRCUIT NUMBER
<b>O</b> -	20A, 240V, 2P, 3W, RECEPTACLE
J	JUNCTION BOX
Р	PULL BOX
(OS)	OCCUPANCY SENSOR
PC	PHOTOCELL
НН	HANDHOLE

SYMBOL	DESCRIPTION
DAMP	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A DAMP LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
WET	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
CORROSIVE	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR CORROSION RESISTANT CONSTRUCTION SUITABLE FOR USE IN A CORROSIVE LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	FIRE ALARM SYSTEMS
(1) R/C 200	FIRE ALARM HEAT DETECTOR 135°F FIXED TEMPERATURE UNLESS OTHERWISE NOTED. "200" DENOTES 200°F TYPE, "R" DENOTES FIXED TEMPERATURE RATE-OF-RISE TYPE.
(S)	FIRE ALARM SMOKE DETECTOR PHOTOCELL TYPE UNLESS OTHERWISE NOTED. "I" DENOTES IONIZATION TYPE.
<u> </u>	FIRE ALARM DUCT SMOKE DETECTOR
FACP	FIRE ALARM CONTROL PANEL
FA	REMOTE FIRE ALARM ANNUNCIATOR PANEL
Ê	FIRE ALARM MASTER BOX
∇ F	FIRE ALARM HORN, MOUNT UP 7'-6"
F	FIRE ALARM STROBE, MOUNT UP 6'-8"
T F	FIRE ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT UP 6'-8"
•	FIRE ALARM MANUAL PULL STATION, MOUNT UP 4'-0"
FO	FIRE ALARM BELL
I P	WEATHERPROOF HI-INTENSITY FIRE ALARM STROBE LIGHT

SYMBOL DESCRIPTION						
COMMUNICATIONS SYSTEMS						
▼ĸ	TELEPHONE HANDSET, DESK TYPE K = KEY SYSTEM					
<b>▼</b> K	TELEPHONE HANDSET, WALL TYPE K = KEY SYSTEM					
$\nabla$	PAGE/PARTY TELEPHONE HANDSET, DESK TYPE					
$\overline{\forall}$	PAGE/PARTY TELEPHONE HANDSET, WALL TYPE (MOUNT UP 4'-6")					
⑤-H1,H2	PAGING SPEAKER, WALL MOUNTED "H1, H2" DENOTES HORN TYPE "W" DENOTES WIDE ANGLE TYPE					
DSA	PAGING SPEAKER, WALL MOUNTED, BI-DIRECTIONAL H = HORN TYPE					
<u> </u>	PAGING SPEAKER, FLUSH MOUNTED CEILING TYPE					
s	PAGING SPEAKER, SURFACE MOUNTED CEILING TYPE					
VC	REMOTE WALL MOUNTED VOLUME CONTROL FOR CEILING SPEAKER (MOUNT UP 5'-0")					
А	PAGING SPEAKER AMPLIFIER ASSEMBLY					
TM	TELEPHONE CABINET OR BACKBOARD AS NOTED					
▼P	DATA INPUT/OUTPUT CABLE OUTLET "P" DENOTES PROCESS COMPUTER SYSTEM					
	SECURITY SYSTEMS					
SA	SECURITY ALARM PANEL					
DS	SECURITY ALARM DOOR SWITCH					
⟨ <b>K</b> ⟩-	SECURITY ALARM KEY PAD					
	SECURITY SYSTEM CARD ACCESS READER					
<b>(3</b> )	SECURITY ALARM MOTION DETECTOR					
CCTV	CLOSED CIRCUIT TV CAMERA					
1						

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL









## CIVIL EAST - VOLUME 11A ELECTRICAL SYMBOLS AND ABBREVIATIONS 2 OF 2

15 OF 319

SHEET

60% SUBMISSION - 09/28/15

ELECTRICAL SHEET NAME: E0-ELE-GEN-002

			120-277V						
В	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-4-55LA-3253-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FNISH, 1966 RATED, 120-27TV	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 5823 LUMENS	530mA	20' POLE	
С	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-2-55LA-3253-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE II DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 5994 LUMENS	530mA	15' POLE	
D	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-4-75LA-4853-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 8646 LUMENS	530mA	20' POLE	
E	SINGLE HEAD UTILITY POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM EC-1-2-100LA-4853-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE II DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED, COOL WHITE, 11896 LUMENS	530mA	20' POLE	
F	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-4-160LA-481A-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 14955 LUMENS	1050mA	20' POLE	
G1	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-4-100LA-6453-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-27TV	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 11558 LUMENS	530mA	20' POLE	
G2	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-4-100LA-6453-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 11558 LUMENS	530mA	15' POLE	
Н	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-2-70LA-3270-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE II DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 7385 LUMENS	700mA	15' POLE	
ı	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-4-70LA-3270-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 7293 LUMENS	700mA	15' POLE	
J	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-3-100LA-6453-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE III DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 11700 LUMENS	530mA	20' POLE	
к	TWIN HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-2@90-4-100LA-6453-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, 1966 RATED, 120-27TV	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 11558 LUMENS EACH	530mA	20' POLE	
L	TWIN HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-2@180-4-160LA-481A-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLYAPPLIED POWDER COAT FNISH, IP66 RATED, 120-277V	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 14955 LUMENS EACH	1050mA	20' POLE	
М	WALLPACK LUMINAIRE	LITHONIA TWH LED TWHLED-30C-1000-4K-T3M-MVOLT-PE-DBLXD	DIE CAST ALUMINUM HOUSING HAS AN IMPACT-RESISTANT, TEMPERED GLASS LENS THAT IS FULLY GASKETED. ZINK-INFUSED SUPER DURABLE TGIC THERMOSET POWDER COAT FINISH.	TYPE III MEDIUM DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 6391 LUMENS	1000mA	SURFACE	

ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED

POWDER COAT FINISH, IP66 RATED,

LUMINAIRE SCHEDULE

SINGLE HEAD POLE MOUNTED LUMINAIRE

PHILIPS GARDCO ECOFORM ECF-1-3-75LA-4853-CW-UNV-BLP-

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

MP Consultants



# **CIVIL EAST - VOLUME 11A ELECTRICAL LUMINAIRE SCHEDULE**

1 OF 3

60% SUBMISSION - 09/28/15

VOLTAGE LAMP TYPE DRIVER MOUNTING

20' POLE

BLACK

SEE LED/COOL PANELBOARD WHITE, 8753 SCHEDULE LUMENS

TYPE III

DISTRIBUTION

**ELECTRICAL** 

E0-ELE-SCH-501

SHEET

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N	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-5-160LA-481A-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMNUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V	TYPE V DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 14465 LUMENS	1050mA	20' POLE	BLACK
0	POST TOP POLE MOUNTED LUMINAIRE	HOLOPHANE PTUE-70-4K-AS-P3-B-S	CAST ALUMNUM HOUSING, ASYMMETRIC POLYCARBONATE REFRACTOR, GASKETED, 4000K, SPIKE FINIAL, SUPFITTER, 120-277V	TYPE V DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 5183 LUMENS	350mA	15' POLE	BLACK
Р			NOTUSED						BLACK
Q	POST TOP POLE MOUNTED LUMINAIRE	HOLOPHANE PTUE-70-4K-AS-P3-B-S	CAST ALUMNUM HOUSING, ASYMMETRIC POLYCARBONATE REFRACTOR, GASKETED, 4000K, SPIKE FINIAL, SUPFITTER, 120-277V	TYPE II DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 5427 LUMENS	530mA	15' POLE	BLACK
R	POSTTOP POLE MOUNTED LUMINAIRE	HOLOPHANE PTUE-70-4K-AS-P3-B-S	CAST ALUMNUM HOUSING, ASYMMETRIC POLYCARBONATE REFRACTOR, GASKETED, 4000K, SPIKE FINIAL, SUPFITTER, 120-277V	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 5736 LUMENS	530mA	15' POLE	BLACK
S	TWN HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-2@90-4-55LA-3253-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V	TYPE IV DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 5823 LUMENS EACH	530mA	15' POLE	BLACK
T	TWIN HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-2@90-2-55LA-3253-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMNUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V	TYPE II DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 5994 LUMENS EACH	530mA	15' POLE	BLACK
U	SINGLE HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-1-105LA-4870-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMNUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPLIED POWDER COAT FINISH, IP66 RATED, 120-277V	TYPE V DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 10494 LUMENS	700mA	20' POLE	BLACK
V	SINGLE HEAD POLE MOUNTED LUMINAIRE			TYPE II DISTRIBUTION	SEE PANELBOARD SCHEDULE	250W HIGH PRESSURE SODIUM	N/A	20' POLE	BLACK
w	TWIN HEAD POLE MOUNTED LUMINAIRE	PHILIPS GARDCO ECOFORM ECF-2@90-3-70LA-3270-CW-UNV-BLP-	ONE PIECE DIE CAST ALUMINUM HOUSING, ONE PIECE DIE CAST DOOR FRAME, ELECTROSTATICALLY APPUED POWDER COAT FINISH, IP66 RATED, 120-277V	TYPE III DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED/COOL WHITE, 7576 LUMENS	700mA	15' POLE	BLACK
Υ	WALLPACK LUMINAIRE			UP AND DOWN DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED		WALL	BLACK
Z	WALLPACK LUMINAIRE			DOWN DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED		WALL	BLACK
A1	RECESSED CAN LUMINAIRE			WIDE DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED		RECESSED	WHITE TRIM

LUMINAIRE SCHEDULE

TYPE DESCRIPTION

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## **CIVIL EAST - VOLUME 11A ELECTRICAL LUMINAIRE SCHEDULE** 2 OF 3

**ELECTRICAL** 

E0-ELE-SCH-502

60% SUBMISSION - 09/28/15

OPTICS VOLTAGE LAMP TYPE DRIVER MOUNTING FINISH

SHEET

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OF

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<b>TYPE</b>	DESCRIPTION	MANUFACTURER	HOUSING	OPTICS	VOLTAGE	LAMP TYPE	DRIVER	MOUNTING	FINISH
B1	WALLPACK LUMINAIRE			UP AND DOWN DISTRIBUTION	SEE PANELBOARD SCHEDULE	LED		WALL	ALUMINUM
C1	LINEAR LUMINAIRE			N/A	SEE PANELBOARD SCHEDULE	LED		SURFACE	WHITE
D1	LINEAR LUMINAIRE			N/A	SEE PANELBOARD SCHEDULE	LED		RECESSED	WHITE TRIM
E1	2X2 LUMINAIRE			N/A	SEE PANELBOARD SCHEDULE	LED		RECESSED	WHITE TRIM
F1	HANDRAIL LED	WAGNER LUMENRAIL LED LULS40K20120TS-12		N/A	SEE PANELBOARD SCHEDULE	LED		HANDRAIL	N/A

LUMINAIRE SCHEDULE

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

MP Consultants

CONSULTING ENGINEERING
MINNEAPOLIS MINNESOTA





**CIVIL EAST - VOLUME 11A ELECTRICAL LUMINAIRE SCHEDULE** 3 OF 3

**ELECTRICAL** 

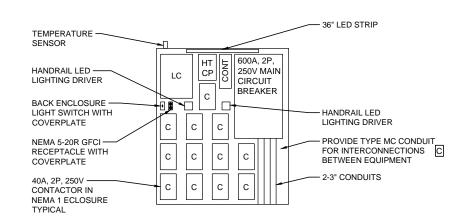
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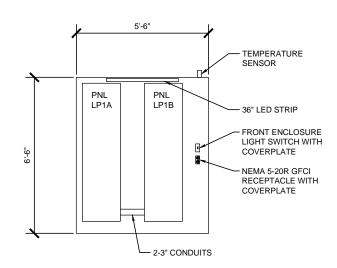
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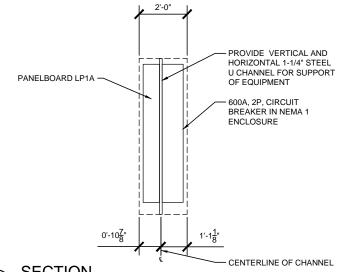




- ELECTRICAL **ENCLOSURE** SEC-001 XCEL SERVICE POINT 120V/240V, 1P, 3W - PANELBOARD - PANELBOARD LP1B C/T ENCLOSURE -CIRCUIT BREAKER - GROUND RING GENERAL NOTES: 1. ALL FEEDERS AND BUSSING ARE 600A.



FRONT ELEVATION



**SECTION** 

SCALE: N.T.S.

**ELECTRICAL SERVICE ONE LINE DIAGRAM** 

SCALE: N.T.S.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL



60% SUBMISSION - 09/28/15





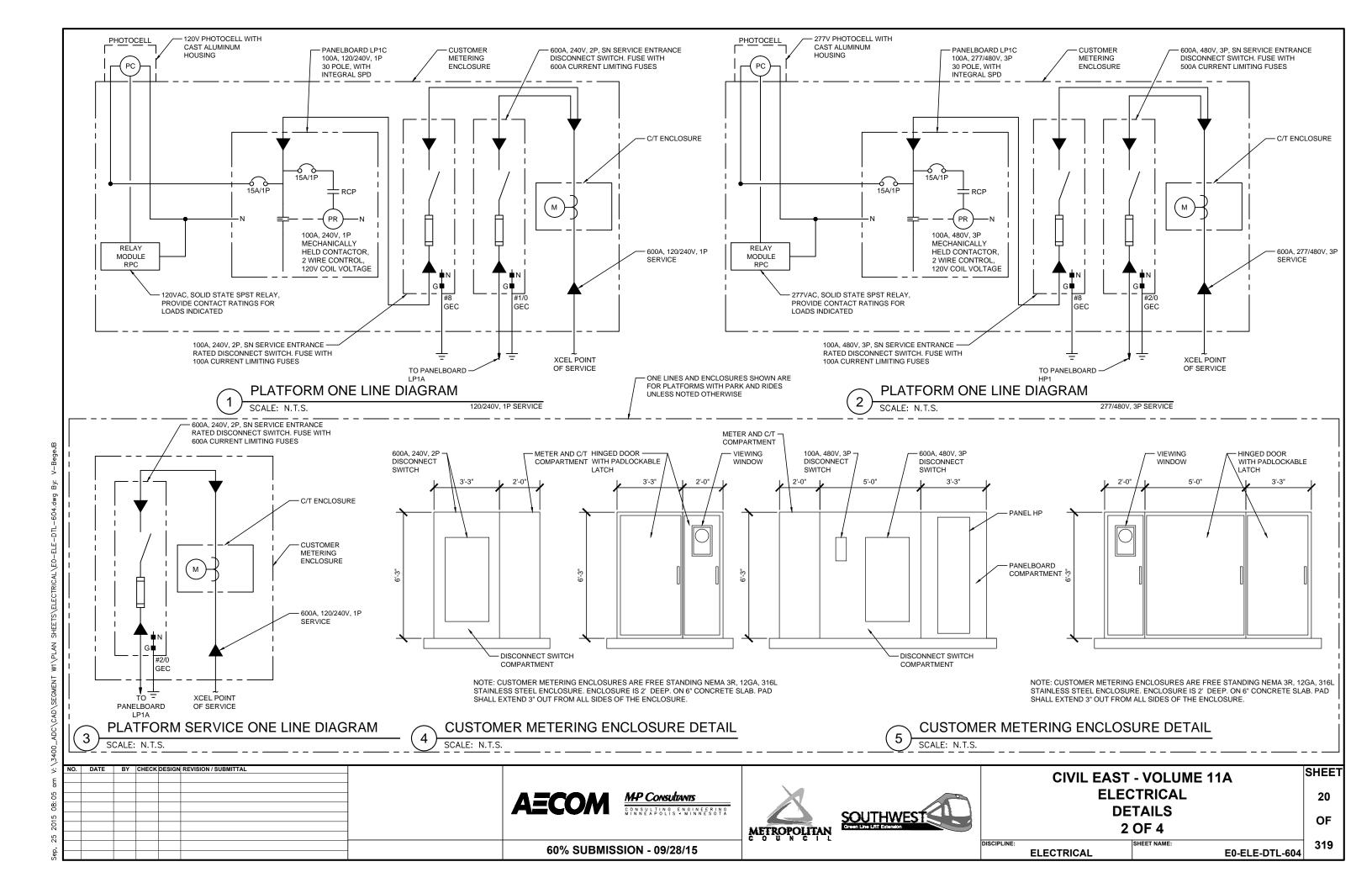
<b>CIVIL EAST - VOLUME 11A</b>
<b>ELECTRICAL</b>
DETAILS
1 OF 4

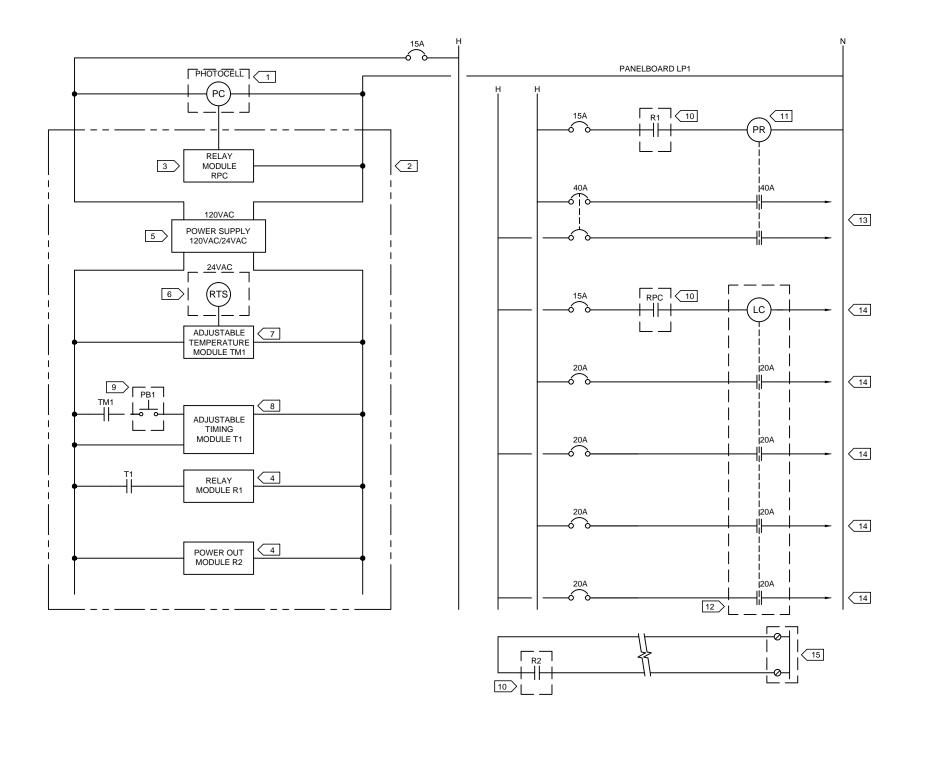
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DISCIPLINE: SHEET NAME: **ELECTRICAL** 

E0-ELE-DTL-603





KEYNOTES:

- 1. PHOTOCELL WITH CAST ALUMINUM HOUSING, REMOTE MOUNT AT LOCATION WITH MINIMAL NIGHT LIGHTING.
- 2. DIN RAIL MOUNTED MODULES. LOCATED IN THE ELECTRICAL ENCLOSURE.
- 3. SOLID STATE SPST RELAY, 120VAC INPUT/OUTPUT. PROVIDE CONTACT RATINGS FOR LOADS INDICATED.
- 4. SOLID STATE SPST RELAY, 24VAC INPUT/OUTPUT. PROVIDE CONTACT RATINGS FOR LOADS INDICATED.
- 5. SOLID STATE POWER SUPPLY, 120VAC IN 24VAC OUT.
- 6. HERMETICALLY SEALED TEMPERATURE SENSOR. MOUNT ON TOP OF ENCLOSURE. PROVIDE PROTECTIVE METAL HOUSING.
- 7. SOLID STATE ADJUSTABLE TEMPERATURE MODULE. PROVIDE WITH BRACKET AND SOCKET FOR DIN RAIL MOUNTING.
- 8. SOLID STATE, DELAYED TIME, TIMER. PROVIDE TOTAL OF 12 TIMERS.
- 9. 16MM 5/8" ANTI-VANDAL MOMENTARY STAINLESS STEEL METAL PUSH BUTTON SWITCH WITH SCREW TERMINALS. MOUNT IN PASSENGER SHELTER COLUMN WITH STAINLESS STEEL COVERPLATE. PROVIDE TOTAL OF 12 PUSH BUTTONS AND COVERPLATES.
- 10. CONTACTS LOCATED AT DIN RAIL MOUNTED RELAY MODULES.
- 11. 40A, 2P, 250V MECHANICALLY HELD, LATCHING TYPE, 2 WIRE CONTROL, NEMA 1 ENCLOSURE, PANEL MOUNTED CONTACTOR. PROVIDE TOTAL OF 12 CONTACTORS
- 12. 20A, 4 POLE, 250V MECHANICALLY HELD, LATCHING TYPE, 2 WIRE CONTROL, NEMA 1 ENCLOSURE, PANEL MOUNTED LIGHTING CONTACTOR.
- 13. TO RADIANT HEATERS.
- 14. TO LUMINAIRES.
- 15. TO SCADA TERMINALS ON PLC. LOCATED IN COMMUNICATIONS CABINET SCC-001, VERIFY TERMINALS.

PLATFORM CONTROL WIRING DETAIL

SCALE: N.T.S.

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**CIVIL EAST - VOLUME 11A ELECTRICAL DETAILS** 3 OF 4

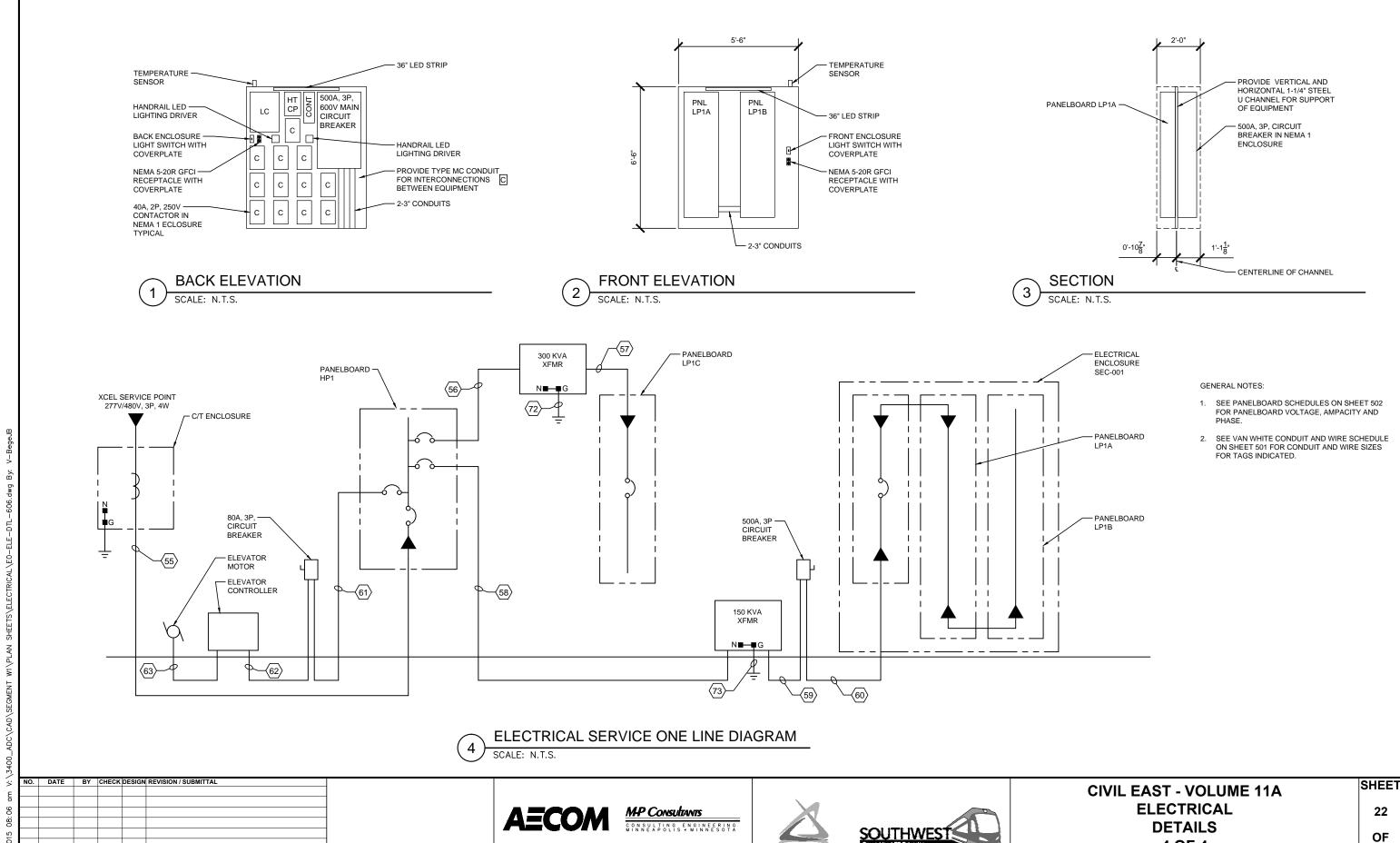
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SHEET NAME: **ELECTRICAL** 

E0-ELE-DTL-605



4 OF 4 SHEET NAME:

**ELECTRICAL** 

319

E0-ELE-DTL-606

# CODE SUMMARY - CENTER PLATFORM DOWNTOWN HOPKINS STATION

### **CODE REFERENCES**

MINNESOTA STATE BUILDING CODE 2015
NFPA 130 - STANDARD FOR FIXED GUIDEWAY TRANSIT 2014
AND PASSENGER RAIL SYSTEMS

IBC REVIEW

A. <u>DESCRIPTION</u> LOCATION: HOPKINS, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'-4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA)
5420 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 3904 SQUARE FEET 1952 SQUARE FEET (1 @ 96'-0" X 20'-4") WEST CANOPY 1952 SQUARE FEET (1 @ 96'-0" X 20'-4") EAST CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3 (15 S.F. PER PERSON)

C. <u>OCCUPANCY SEPARATIONS</u>

NONE ARE REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. <u>IBC EXITING SUMMARY</u>

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361
REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2)
WIDTH PROVIDED = 2 RAMPS AT 145" = 290"
2 MEANS OF EGRESS PROVIDED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

# PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

PLATFORM COLOR AND FINISH SCHEDULE  TYPE STATION STRUCTURAL STEEL PLATFORM CONC PLATFORM CONC CONC WALL FINISH COLOR RAILING INFILL ALUM WDW FRAME EXTERIOR LINEAR METAL CEILING ALUM COMP CANOPY TRANSLUCENT PLASTIC COLOR PANEL PANEL COLOR PANEL COLOR PANEL COLOR PANEL COLOR PANEL PA												
TYPE	STATION	STRUCTURAL STEEL PAINT COLOR	PLATFORM CONC COLOR	PLATFORM CONC FINISH	CONC WALL COLOR	CONC WALL FINISH	RAILING INFILL MATERIAL	ALUM WDW FRAME FINISH	EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH	ALUM COMP CANOPY SOFFIT AND FASCIA COLOR	TRANSLUCENT PLASTIC PANEL	
CENTER	DOWNTOWN HOPKINS STATION	PPG 518-6 KNIGHT'S ARMOR	CEMSTONE SPLIT ROCK	TBD	CEMSTONE SPLIT ROCK	TBD	SS CABLE		HUNTER DOUGLAS WOODWRIGHT 8434 GREY BARNWOOD CEDAR		3FORM KODA XT YELLOW Y-03	

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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CIVIL EAST - VOLUME 11A
DOWNTOWN HOPKINS STATION
CODE SUMMARY / FINISH SCHEDULE

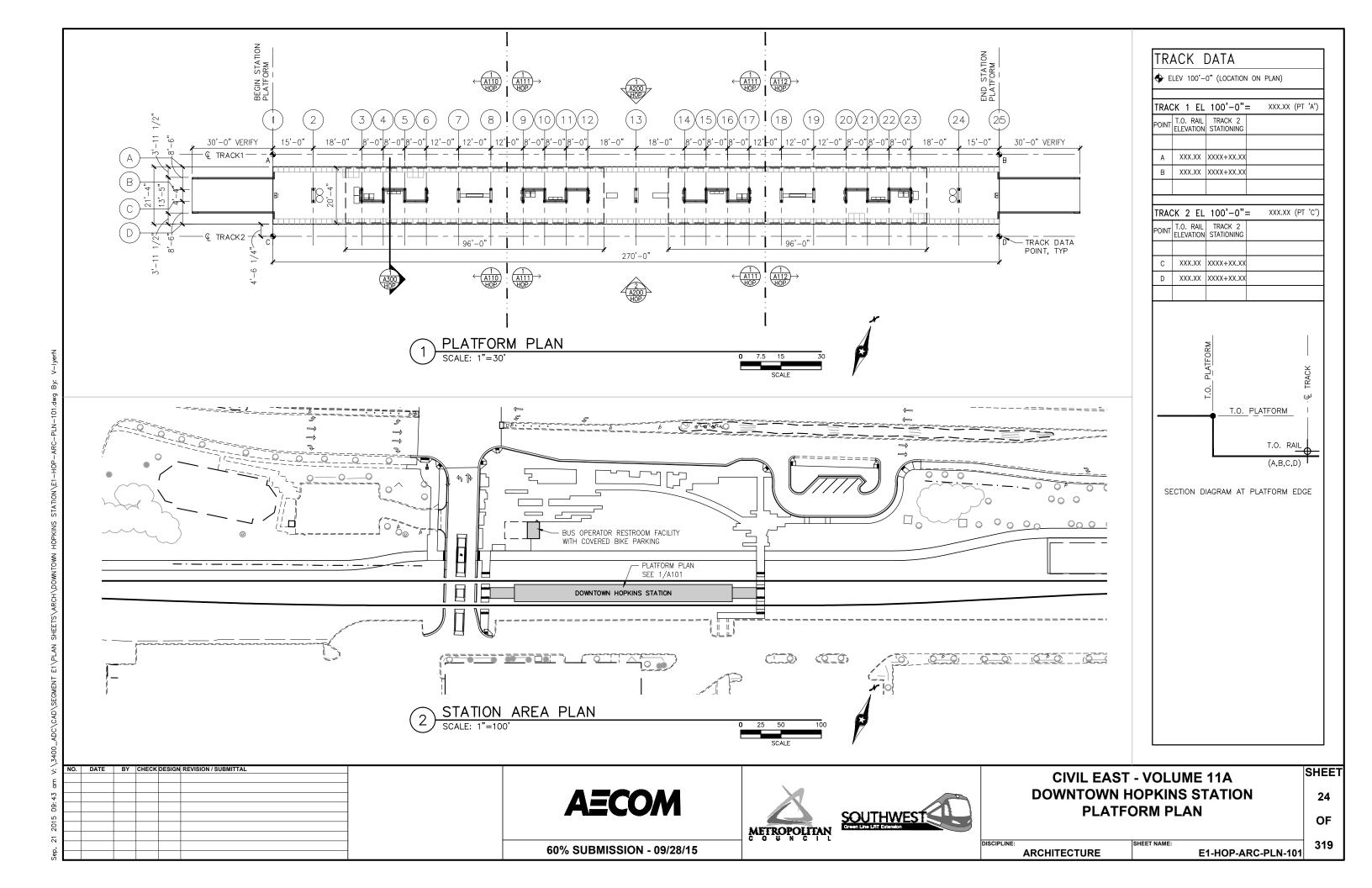
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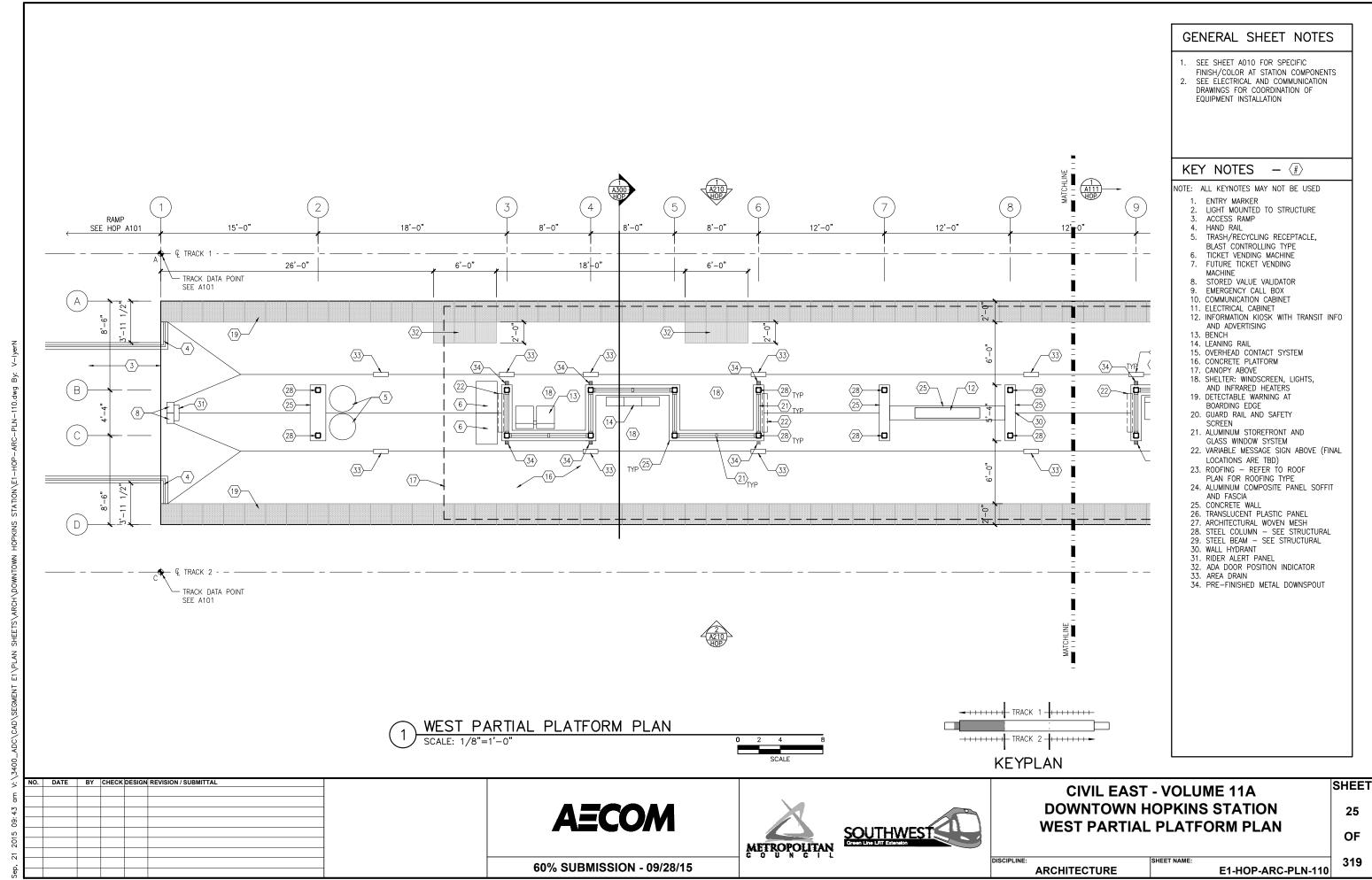
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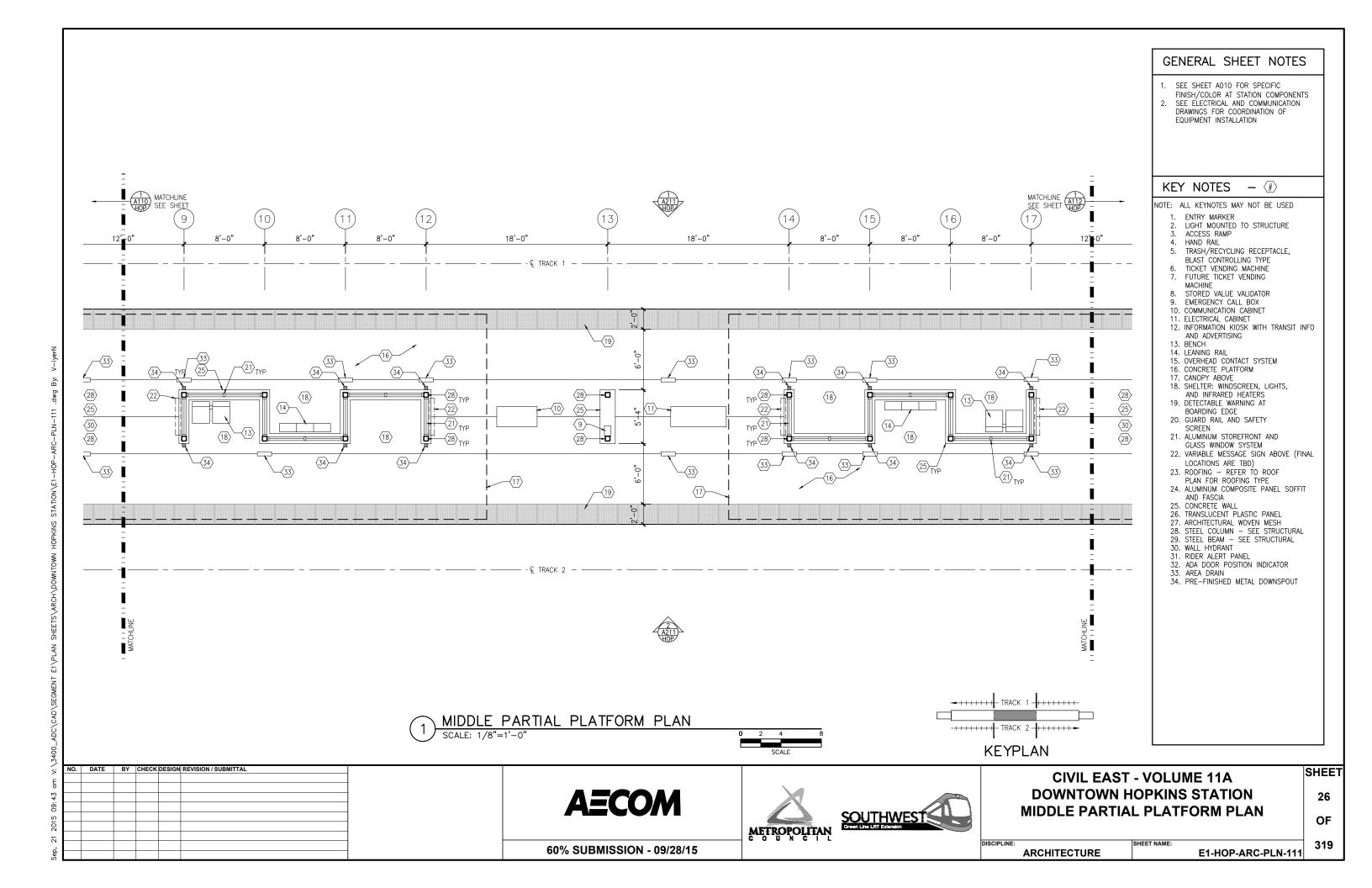
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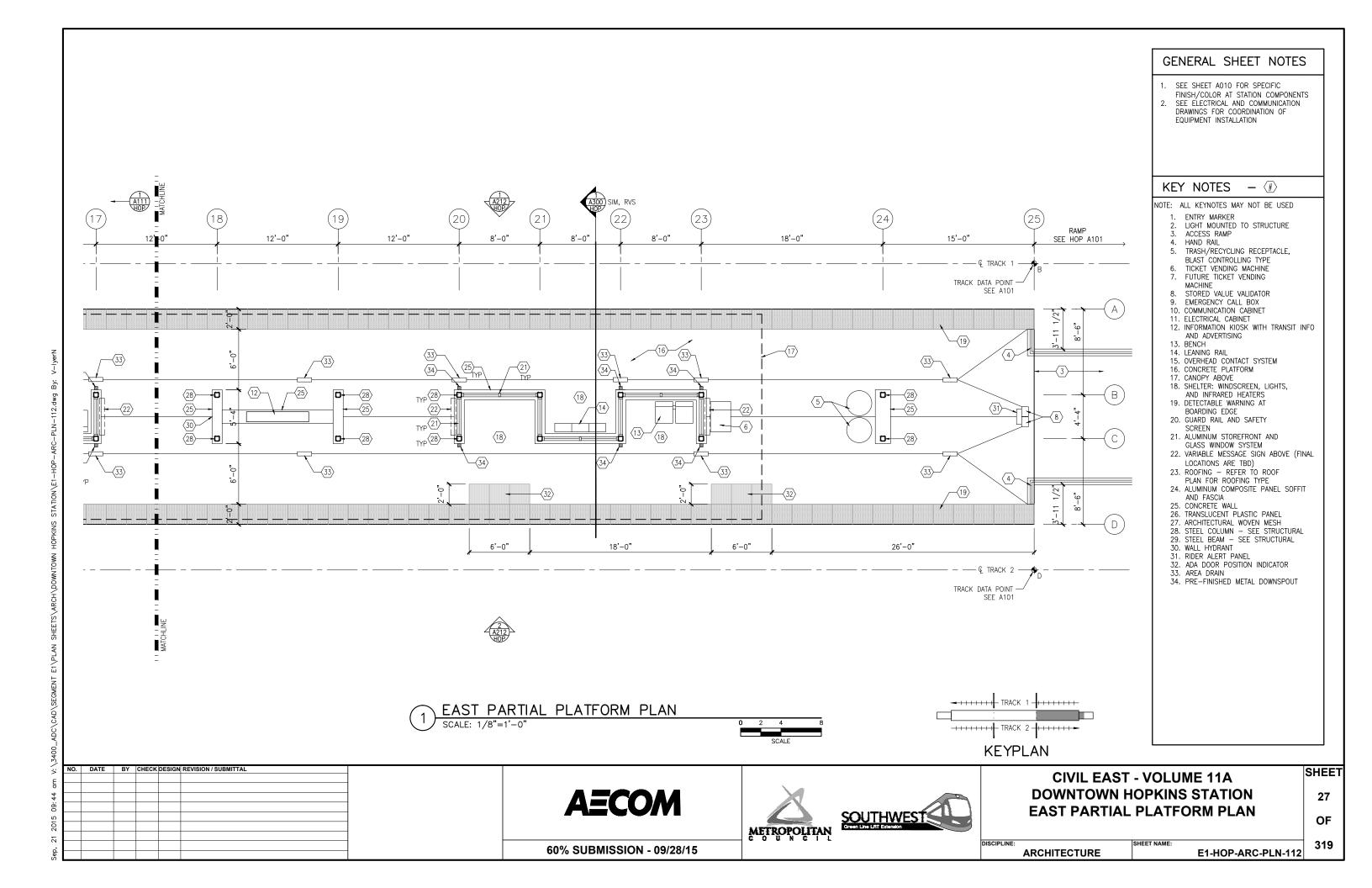
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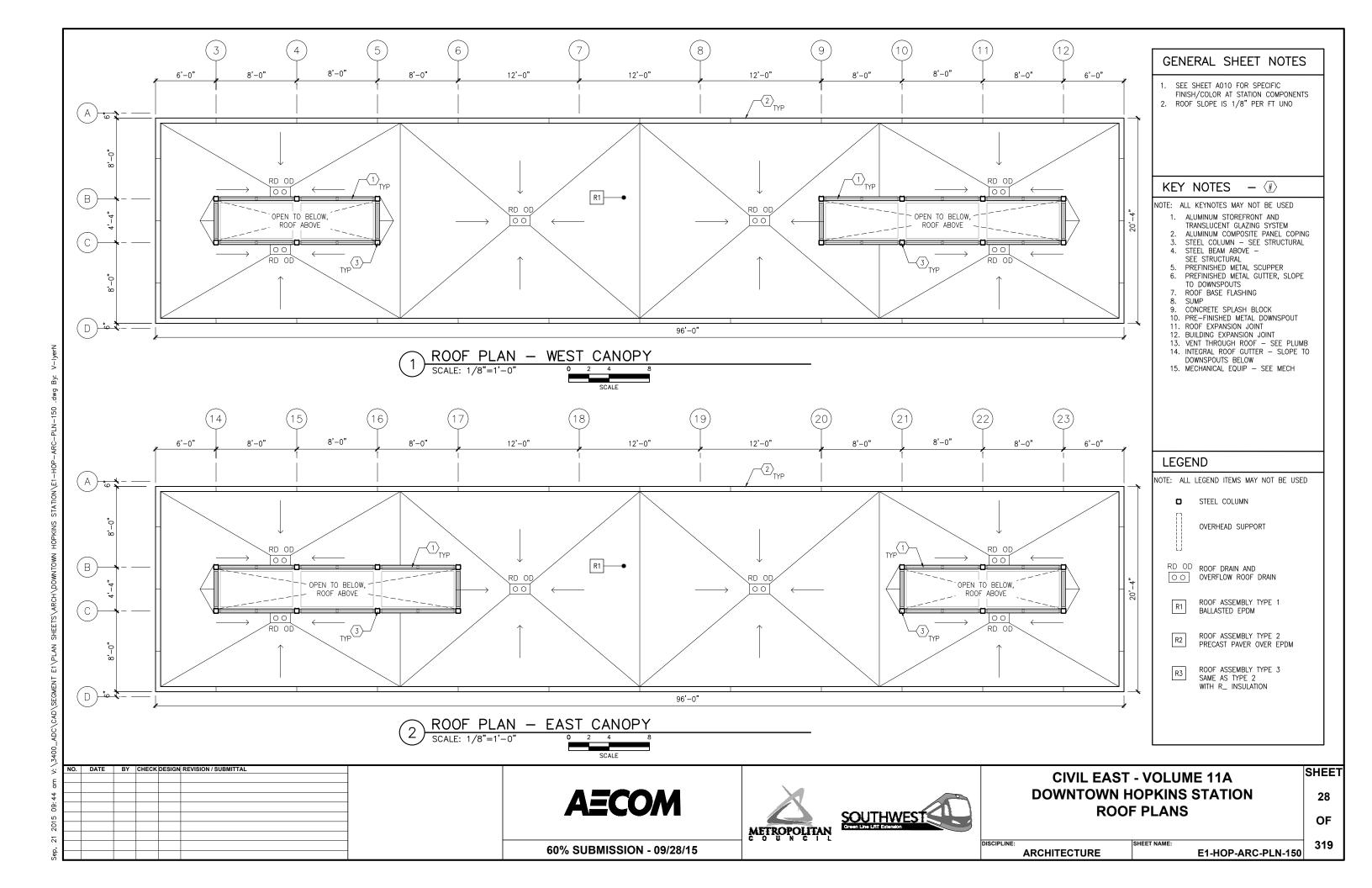
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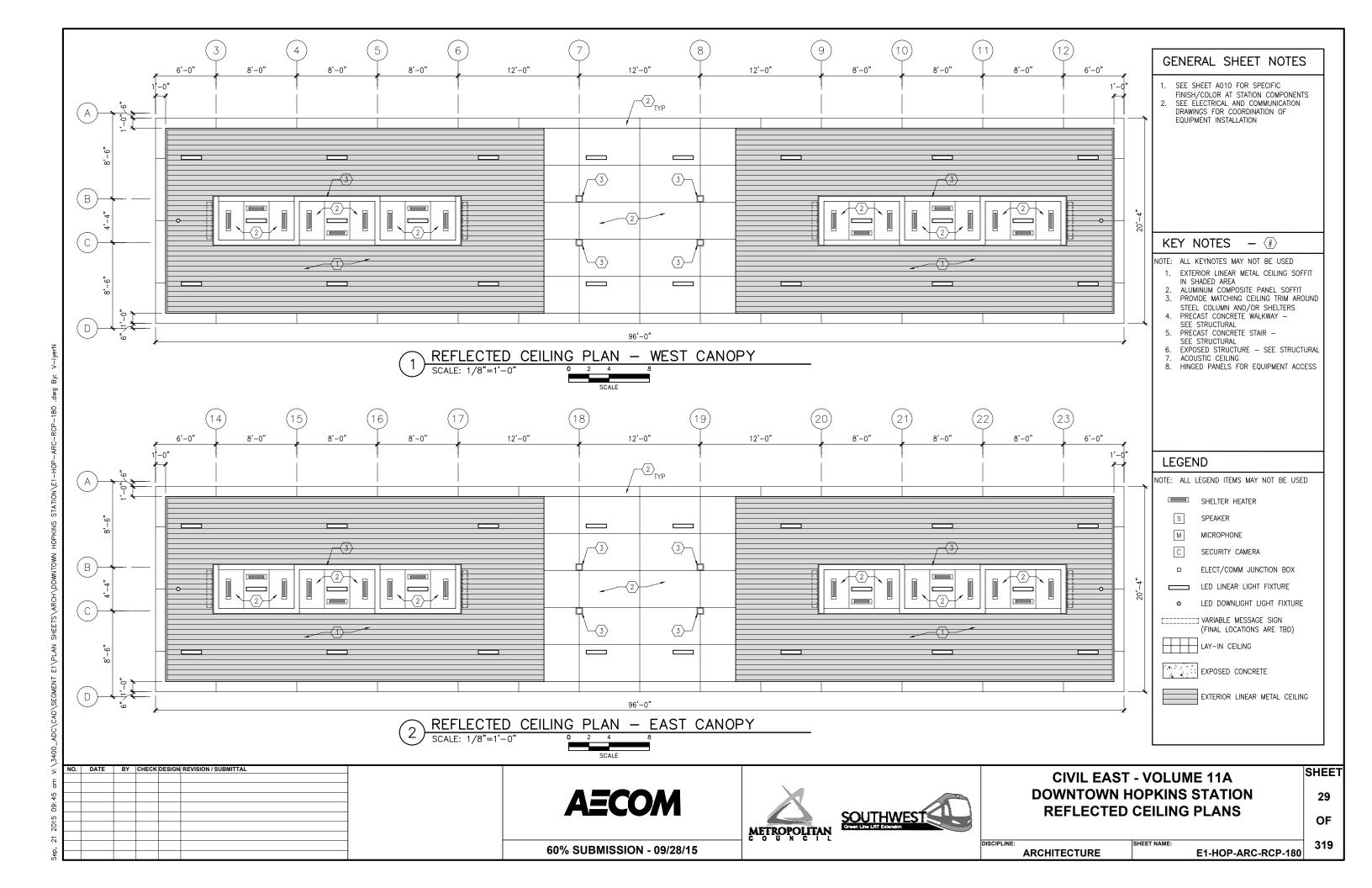


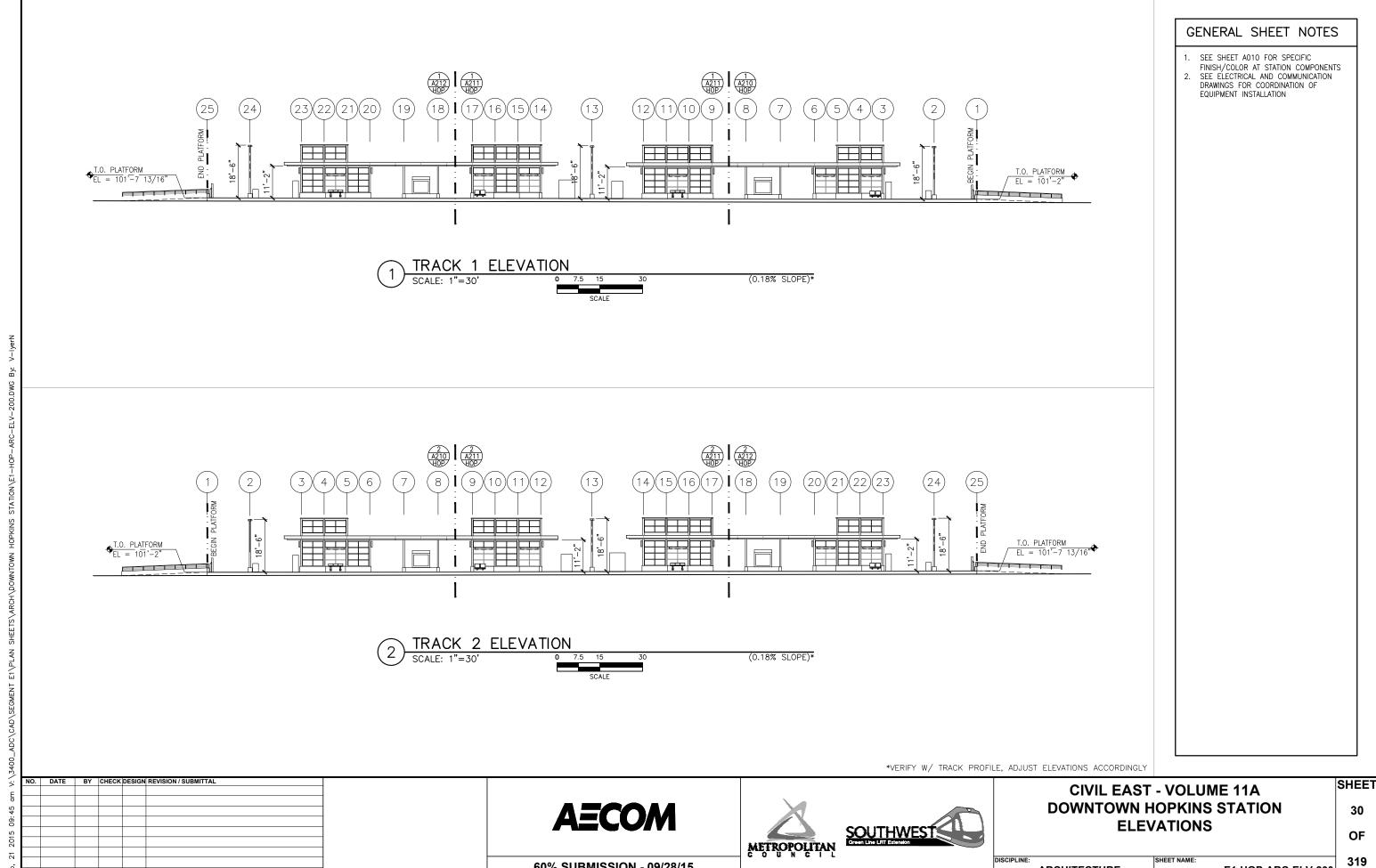






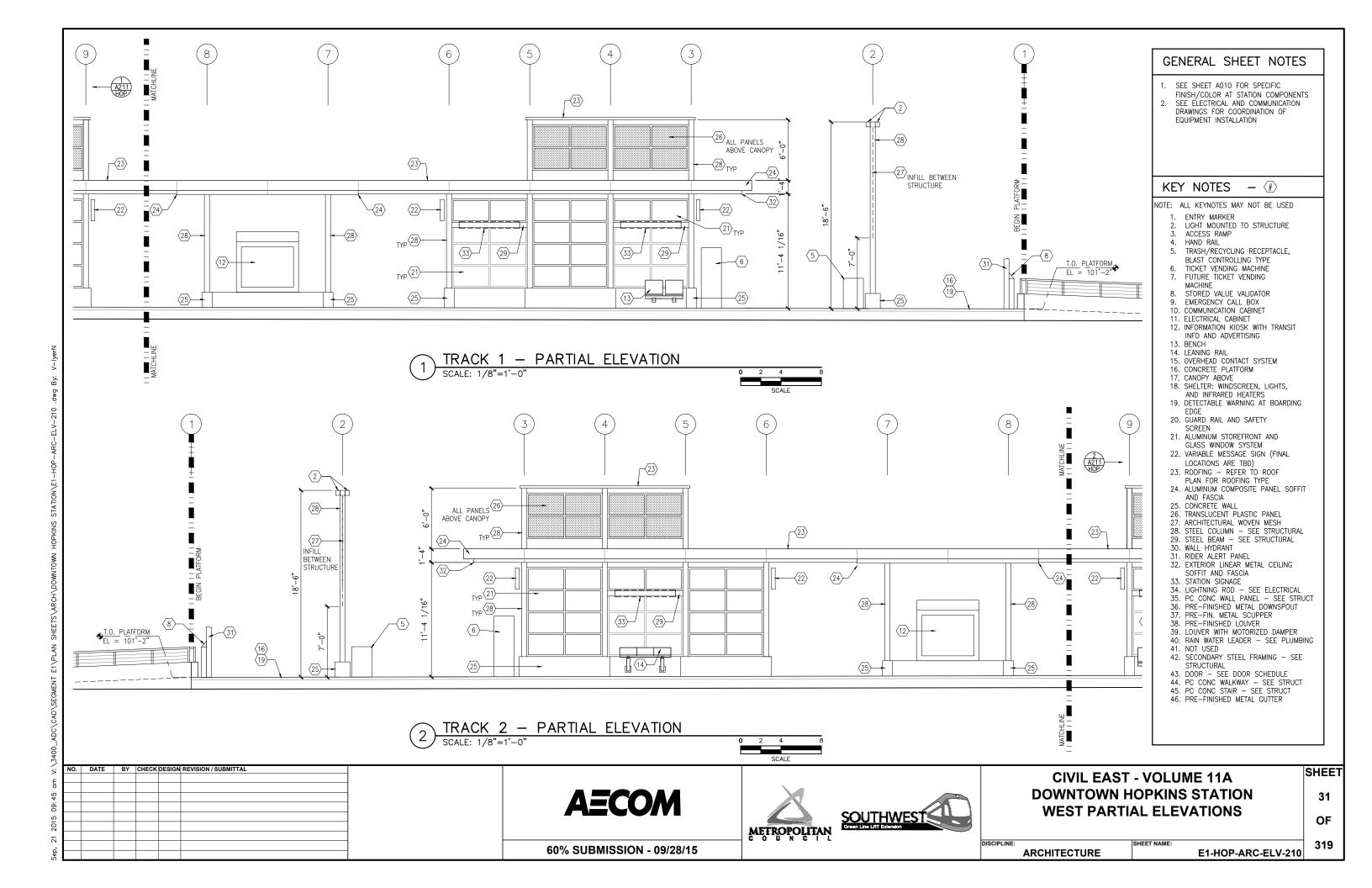


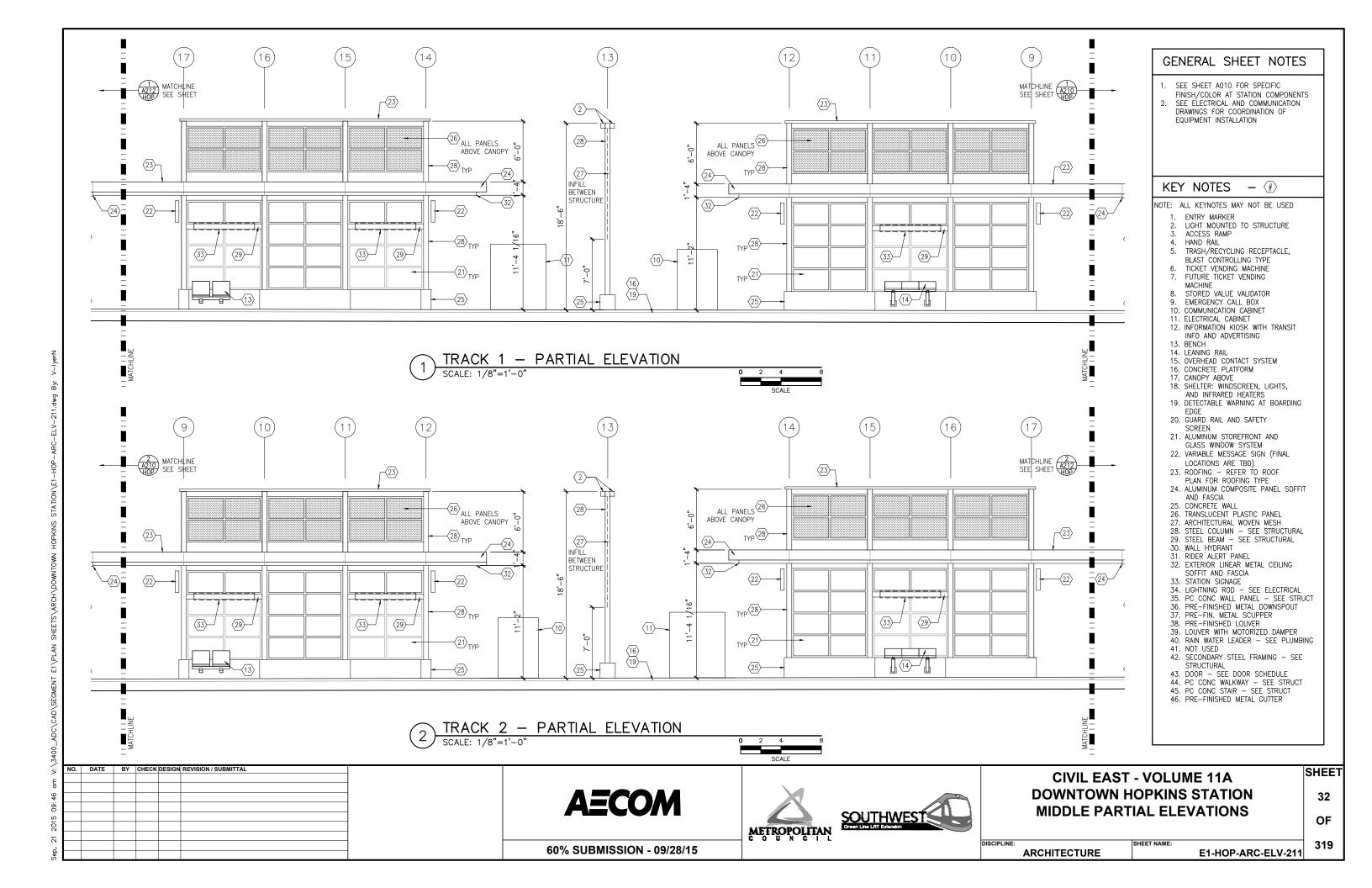


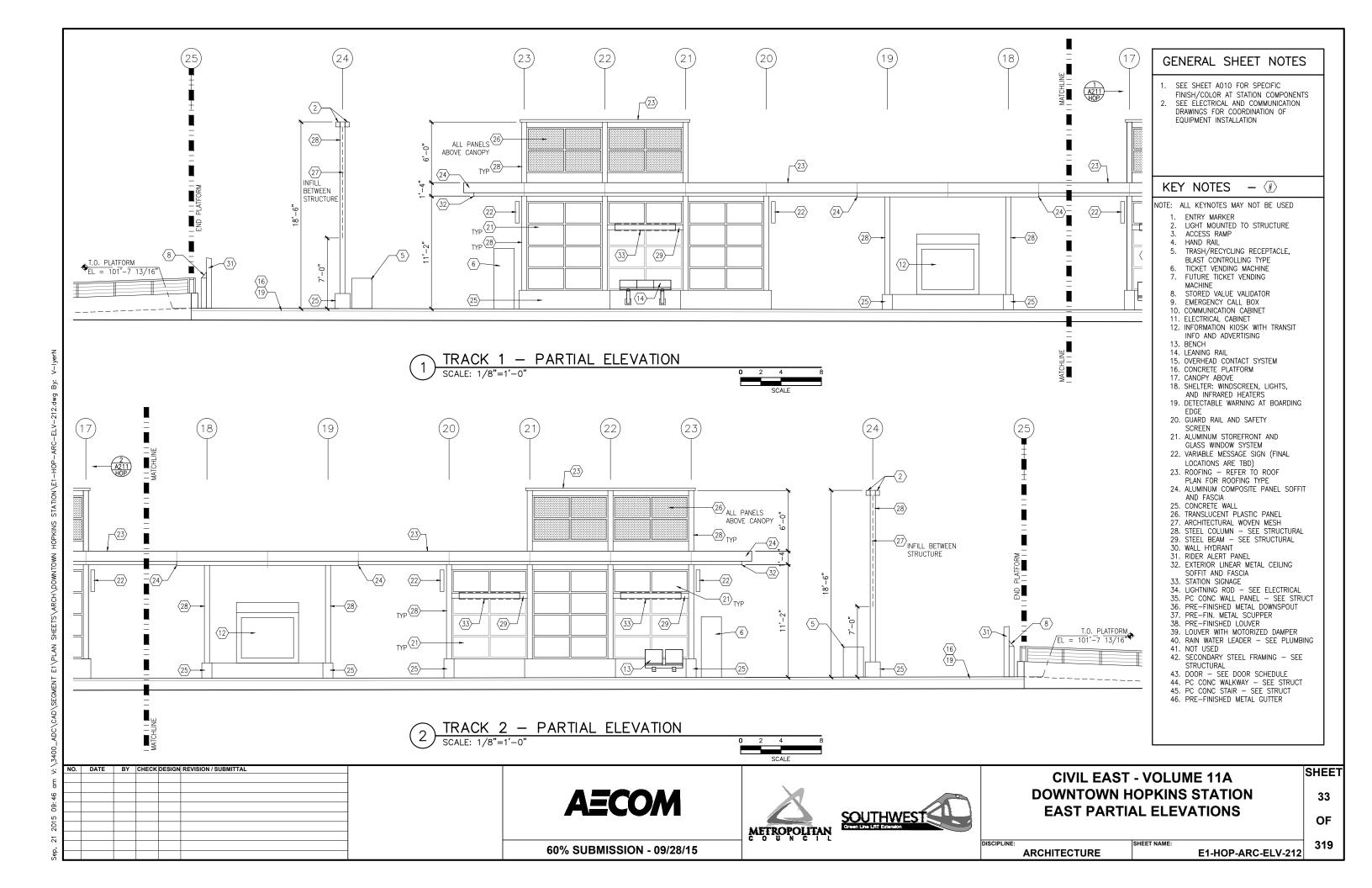


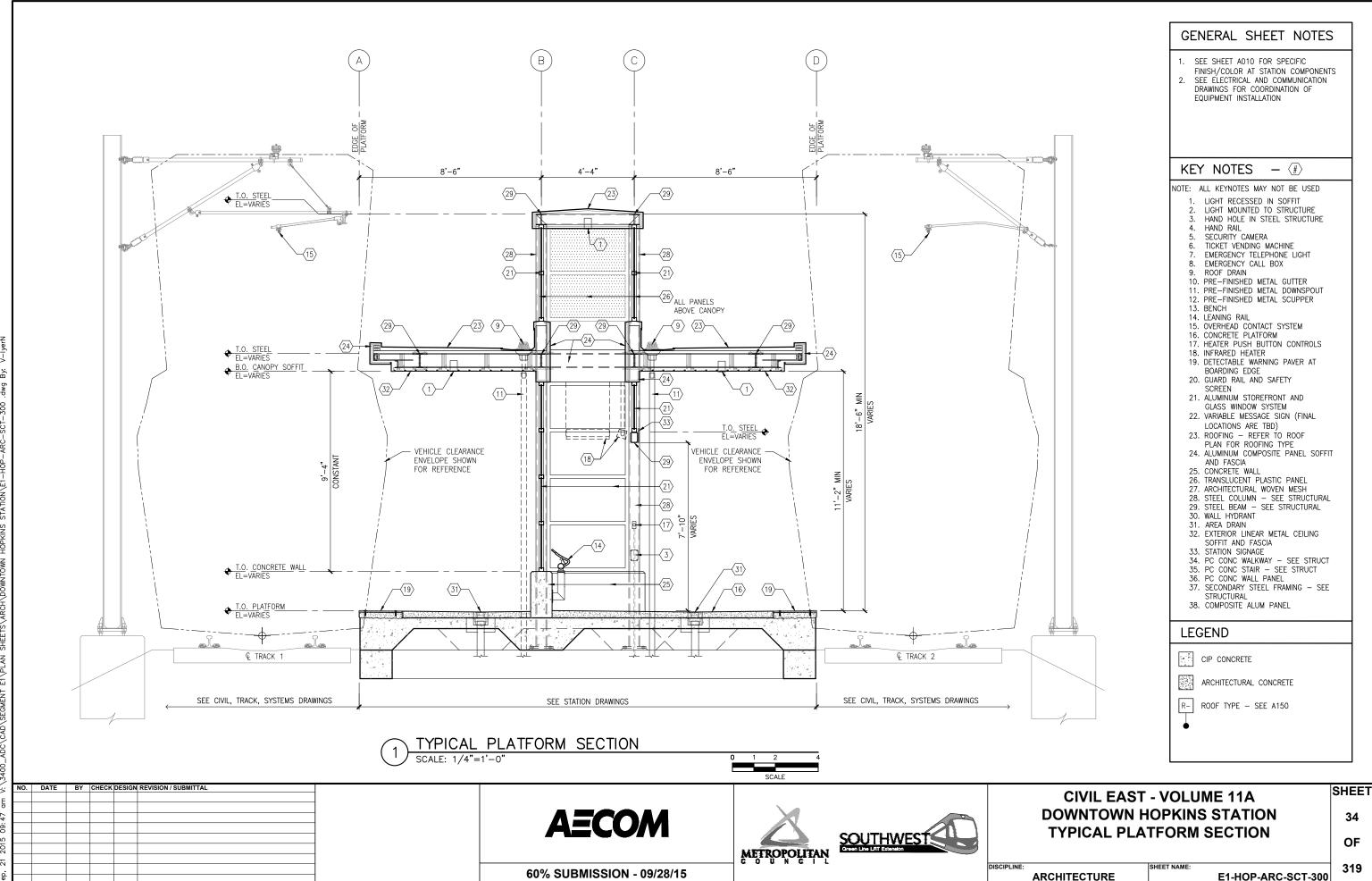
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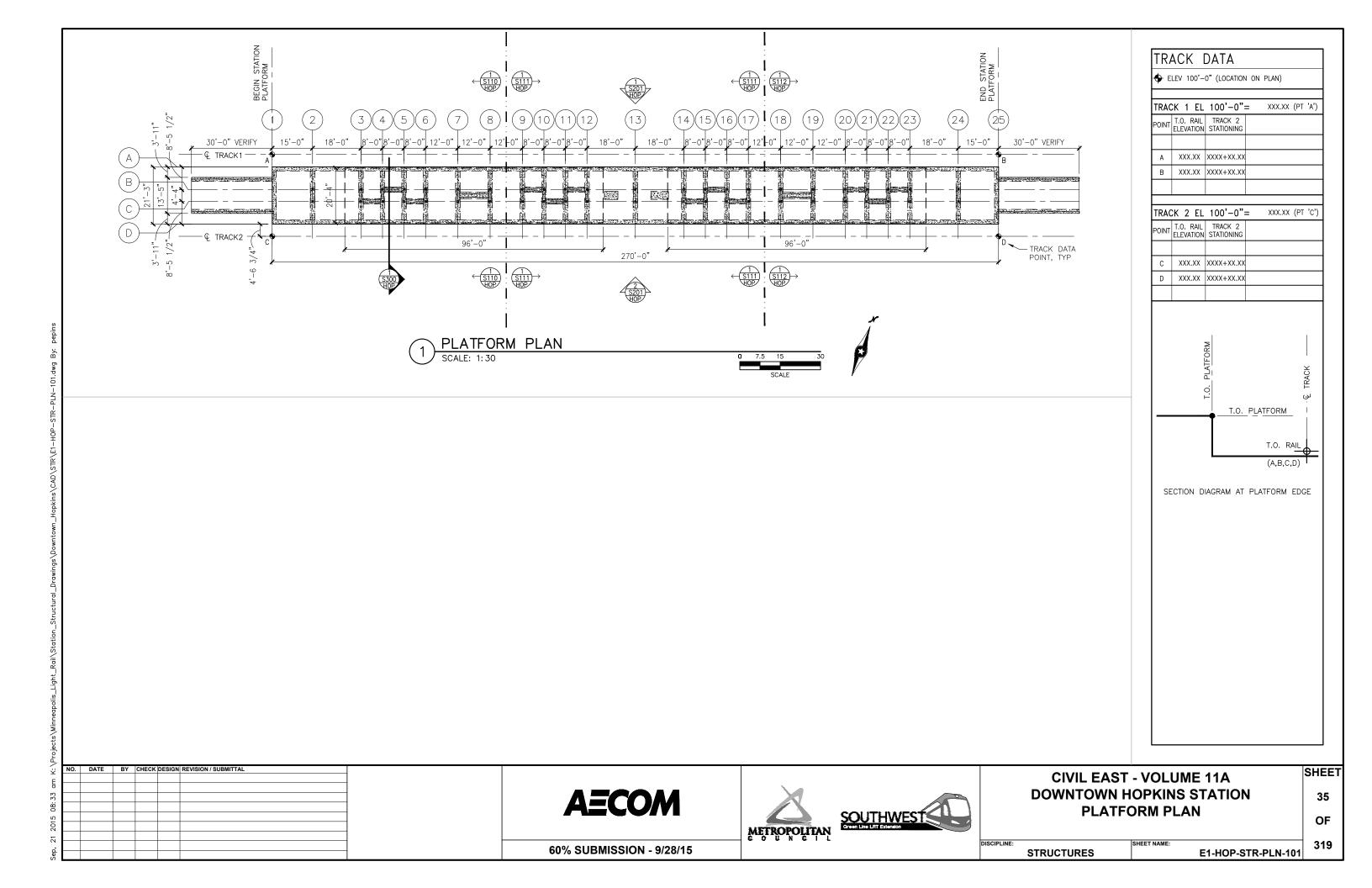
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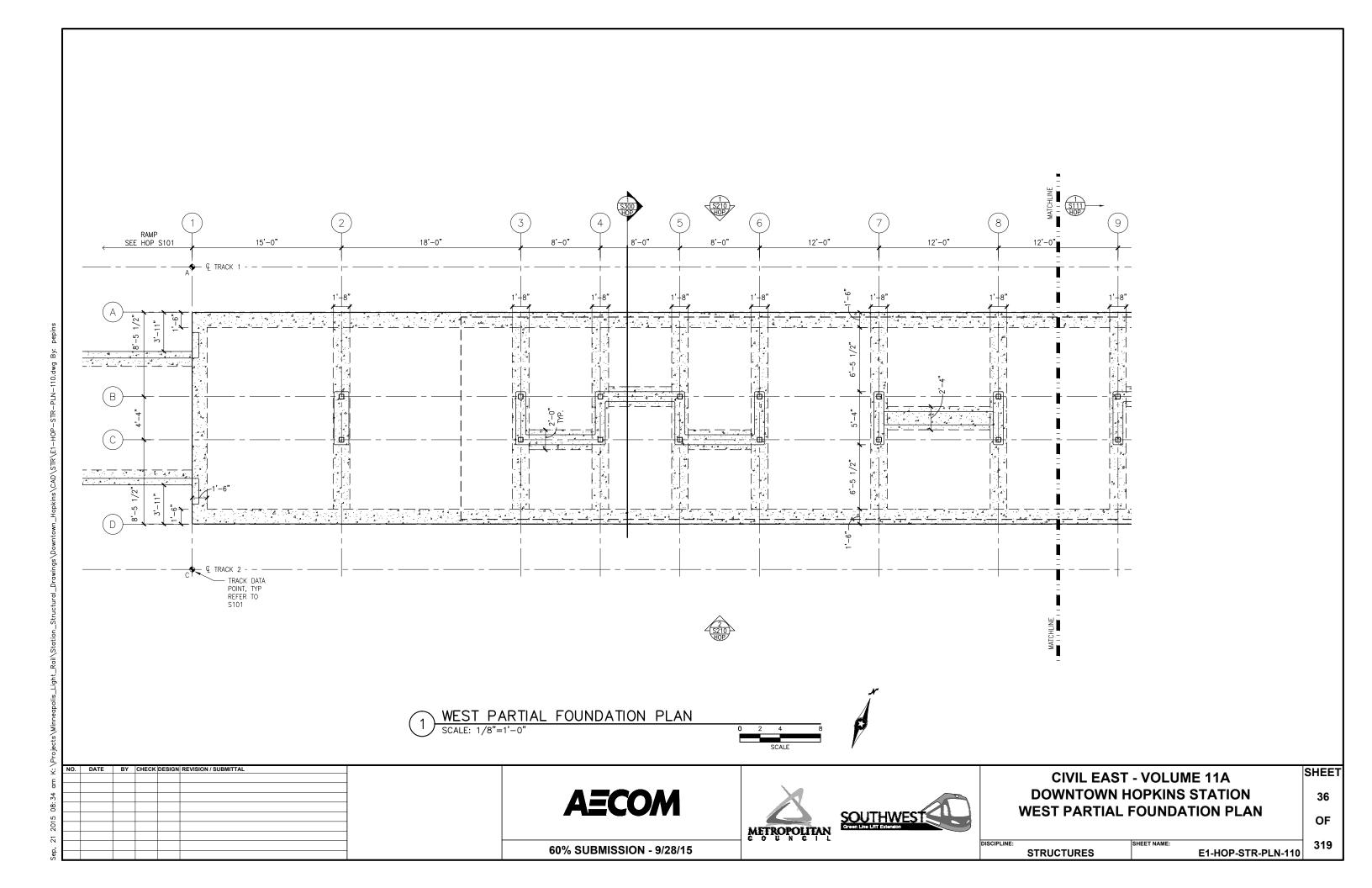


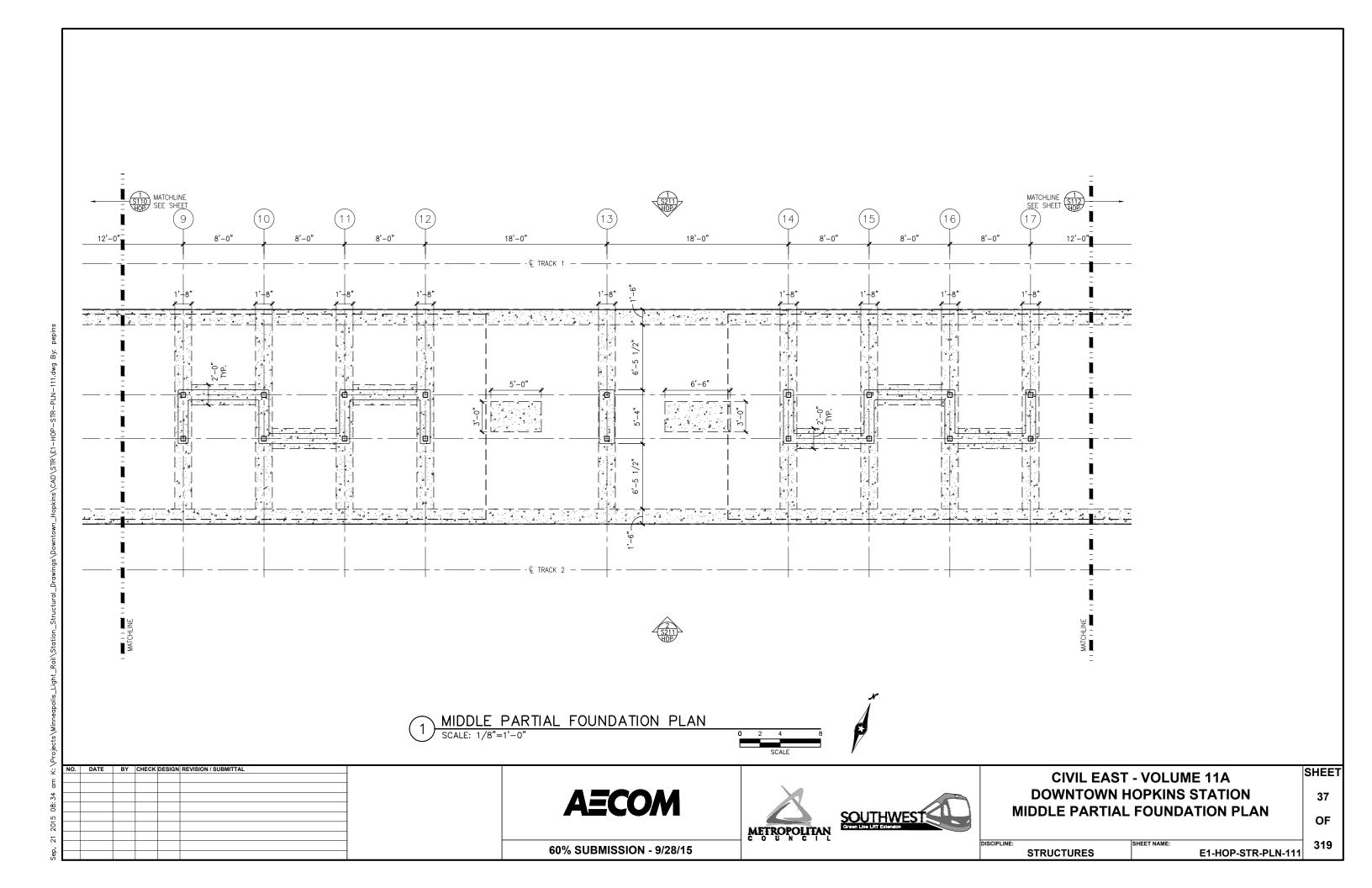


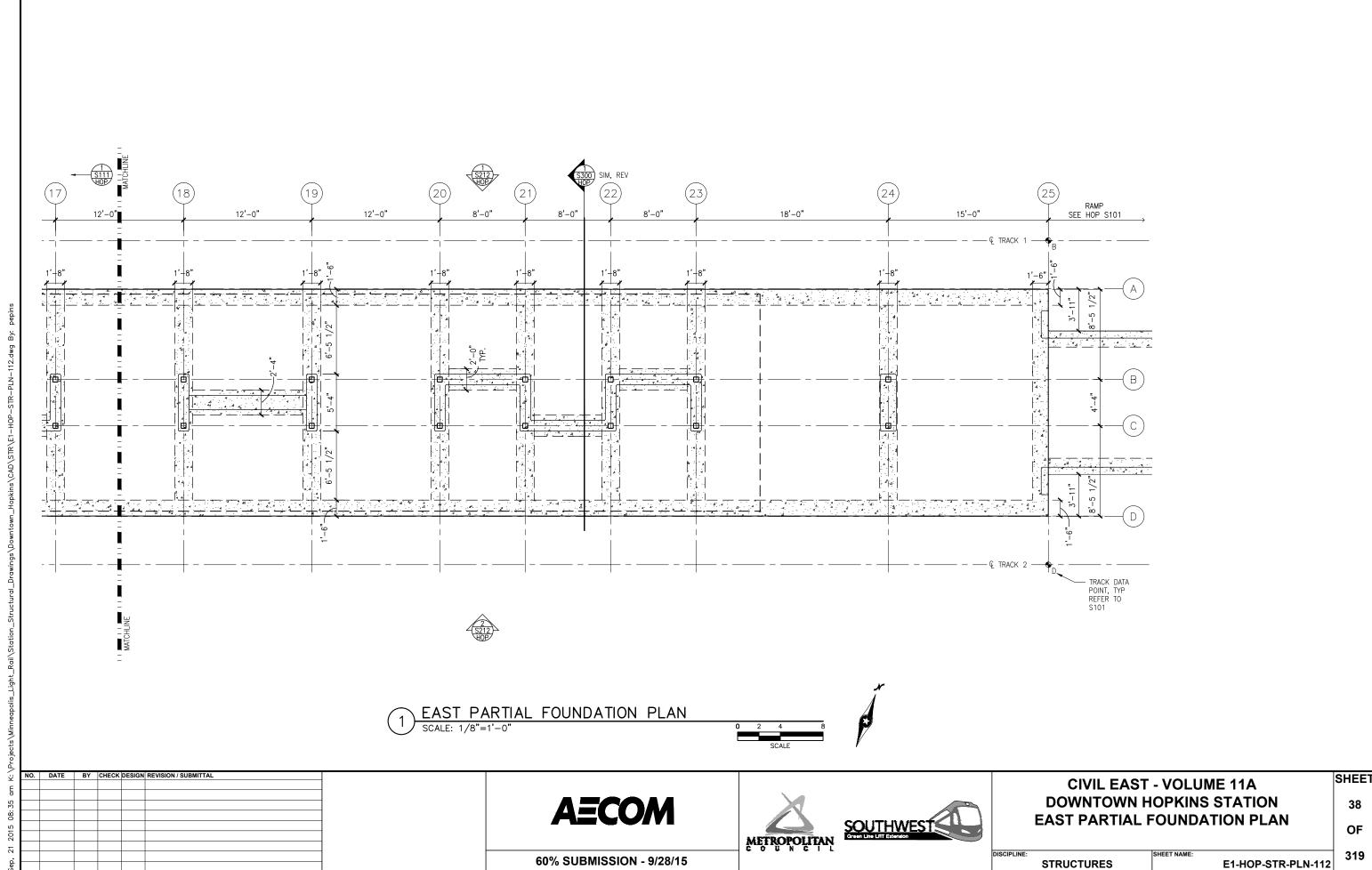




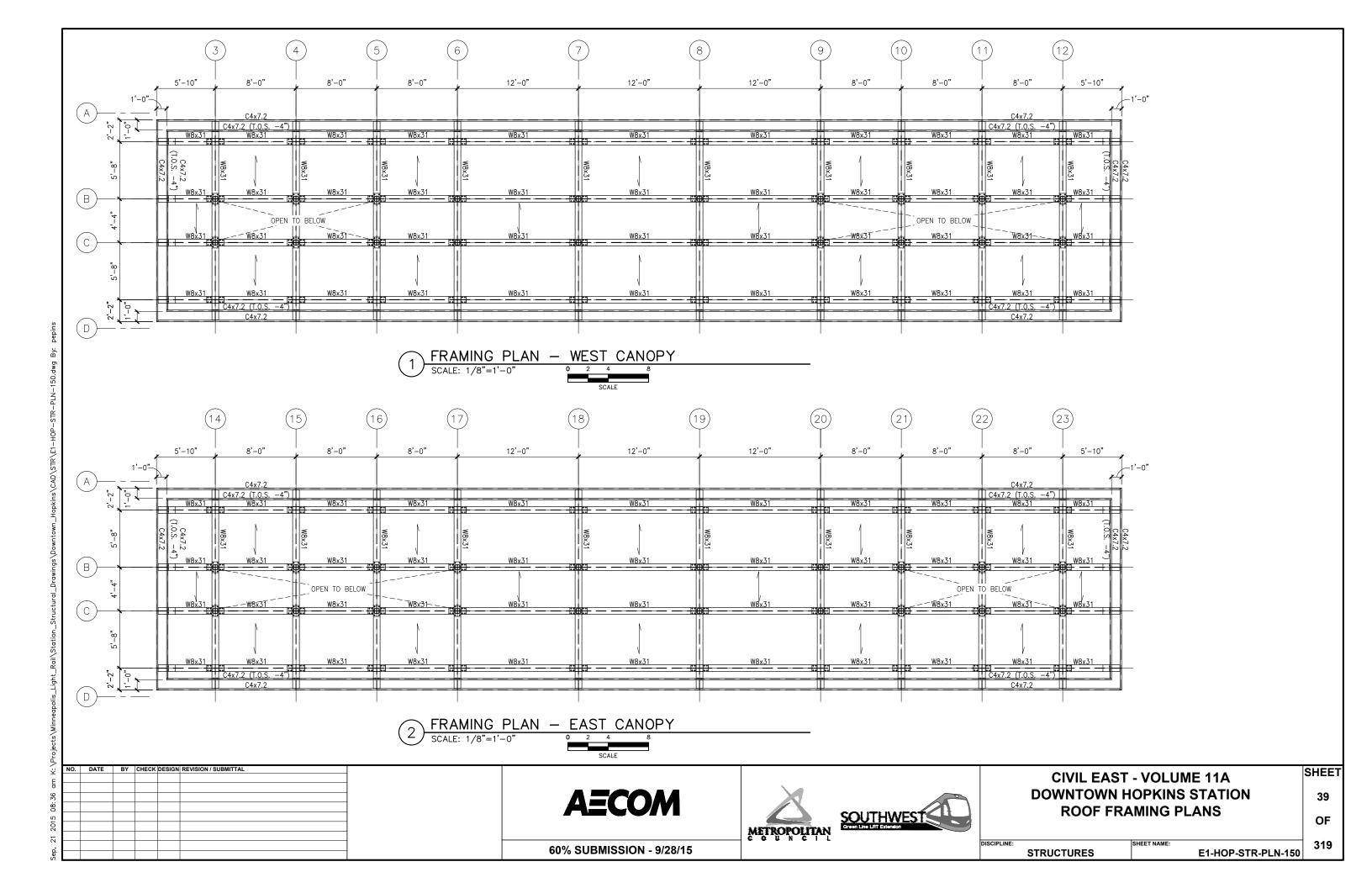








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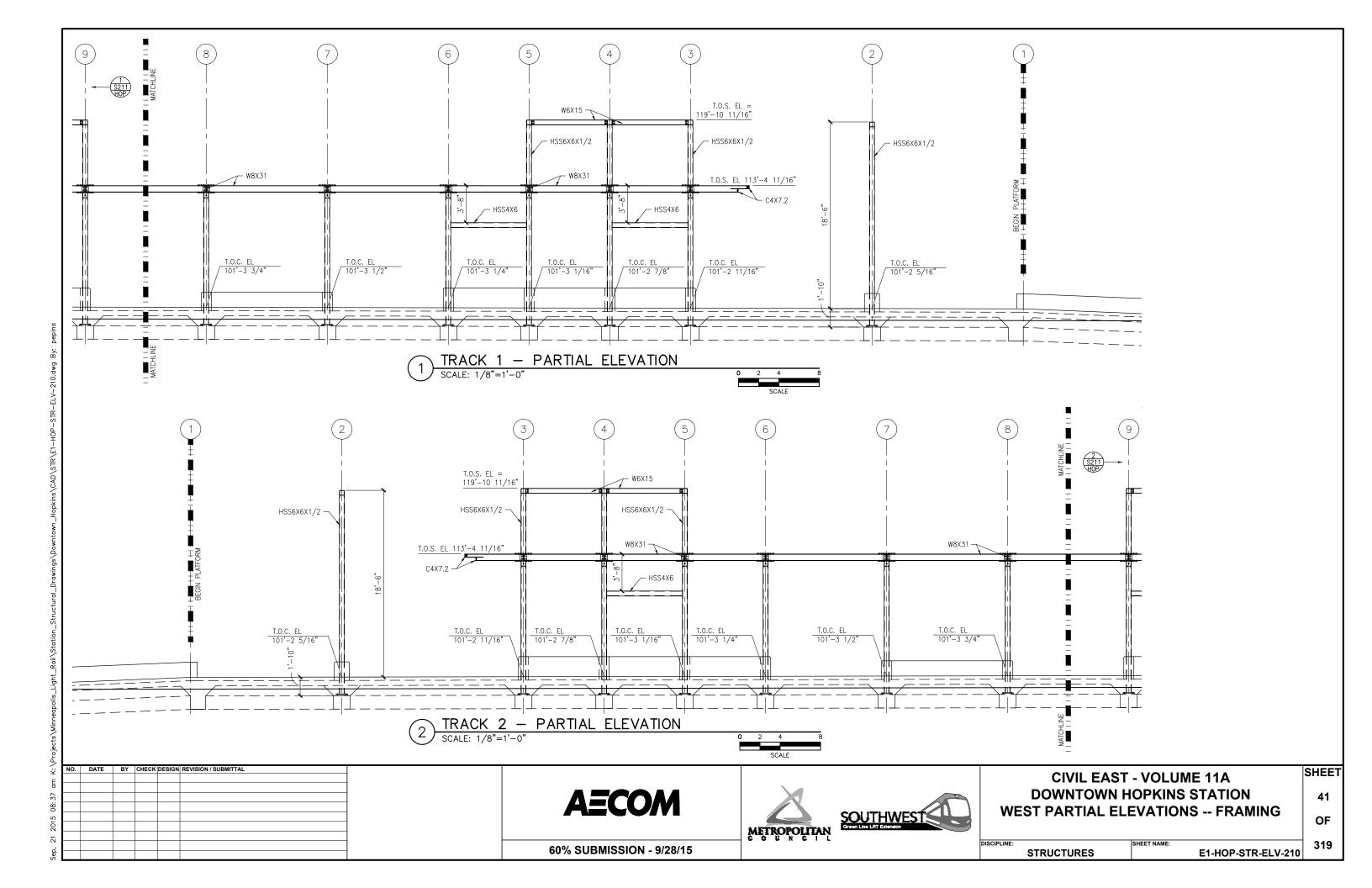


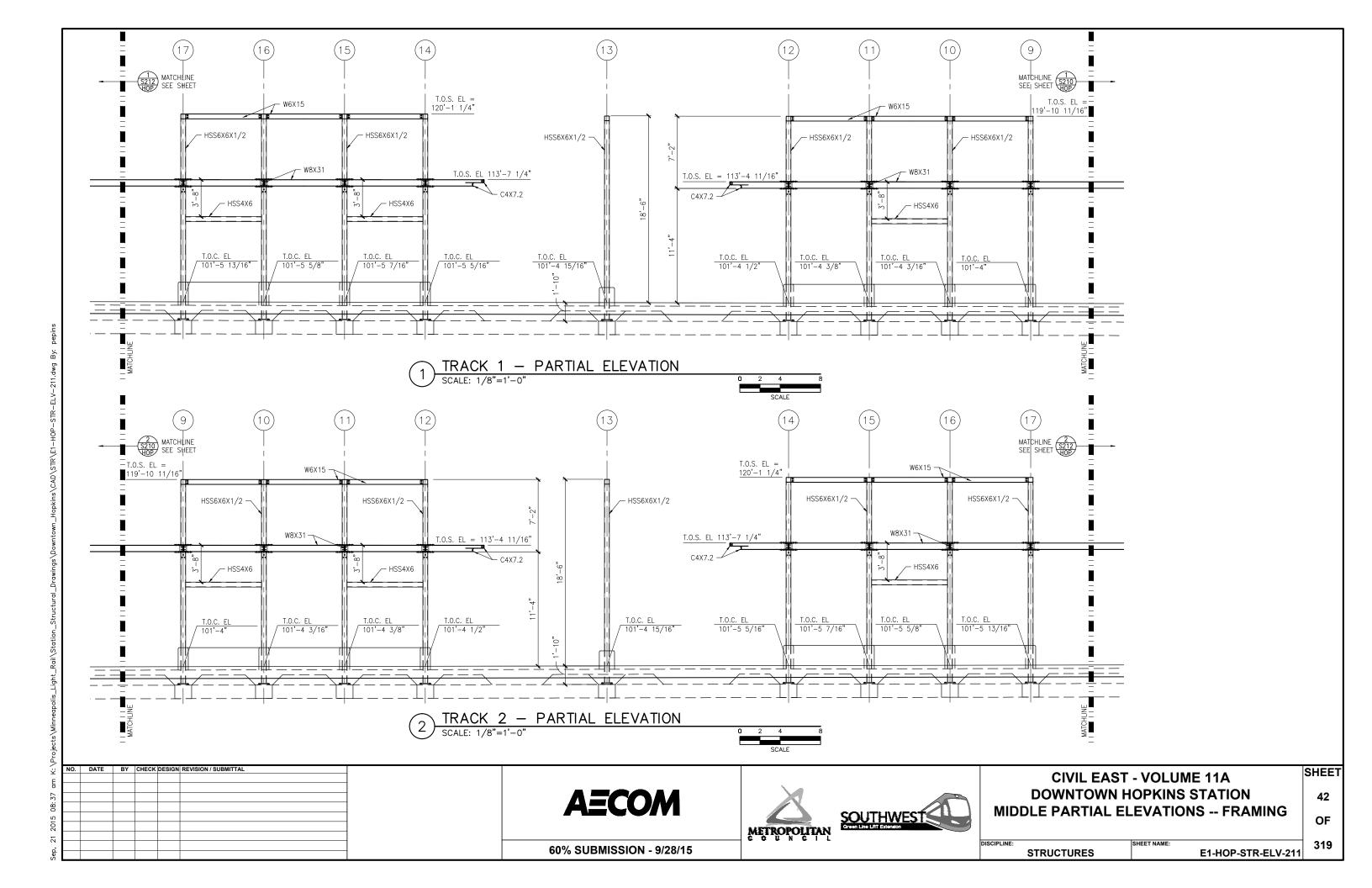
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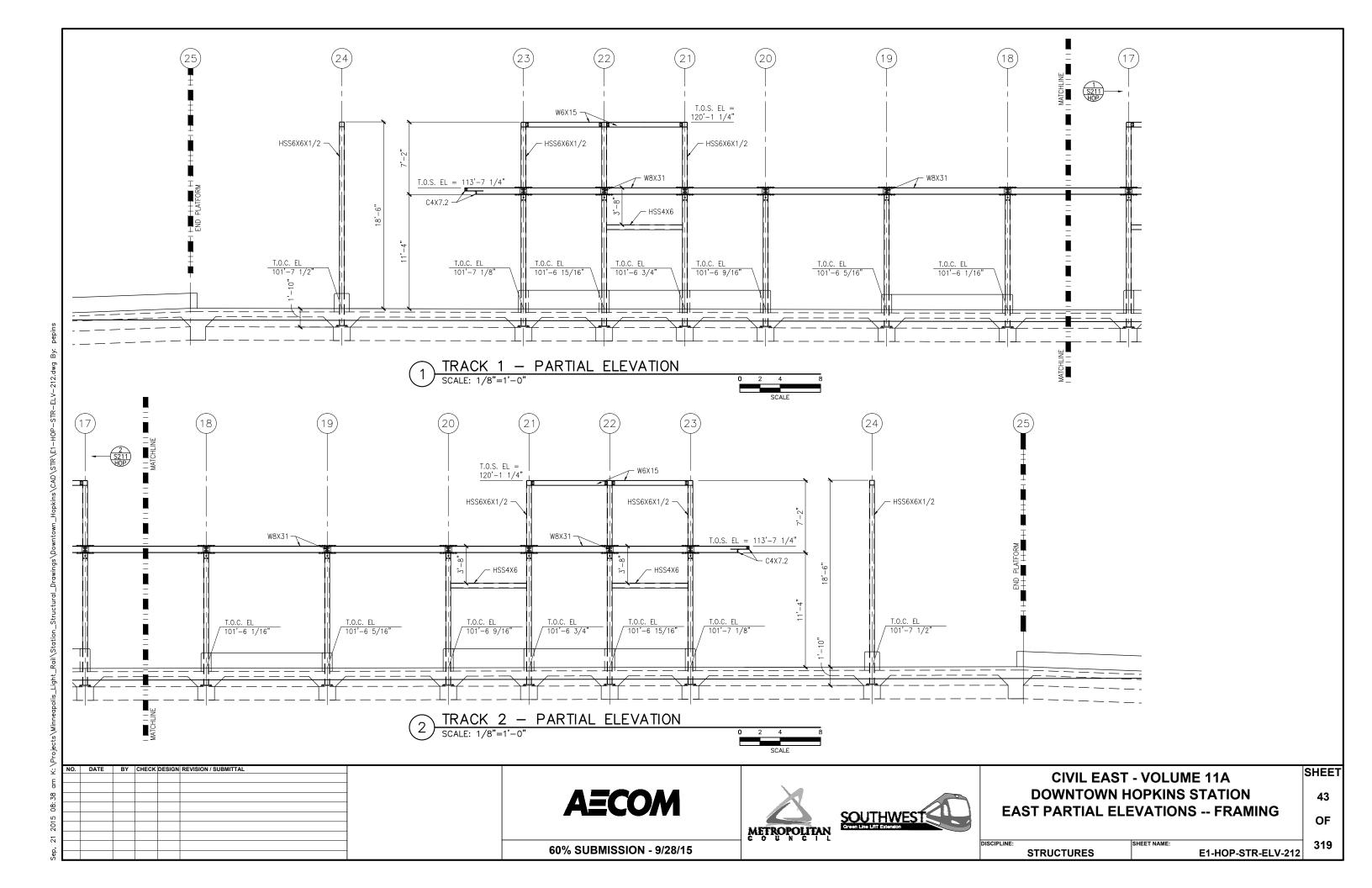
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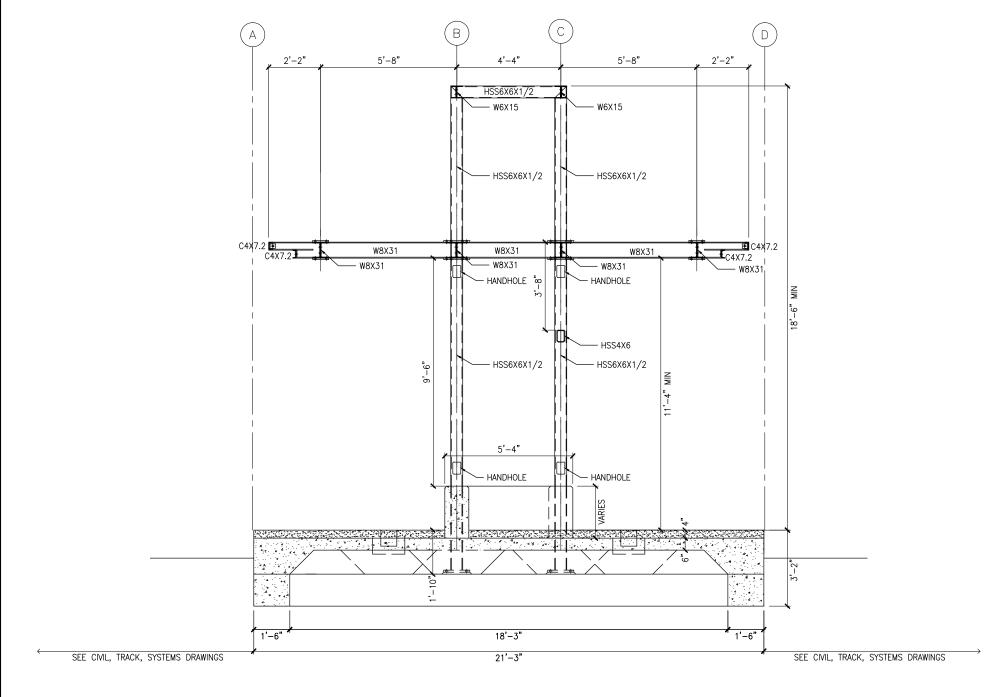
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**STRUCTURES** 

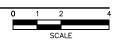








TYPICAL PLATFORM SECTION
SCALE:1/4"=1'-0"



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**CIVIL EAST - VOLUME 11A DOWNTOWN HOPKINS STATION TYPICAL PLATFORM SECTION** 

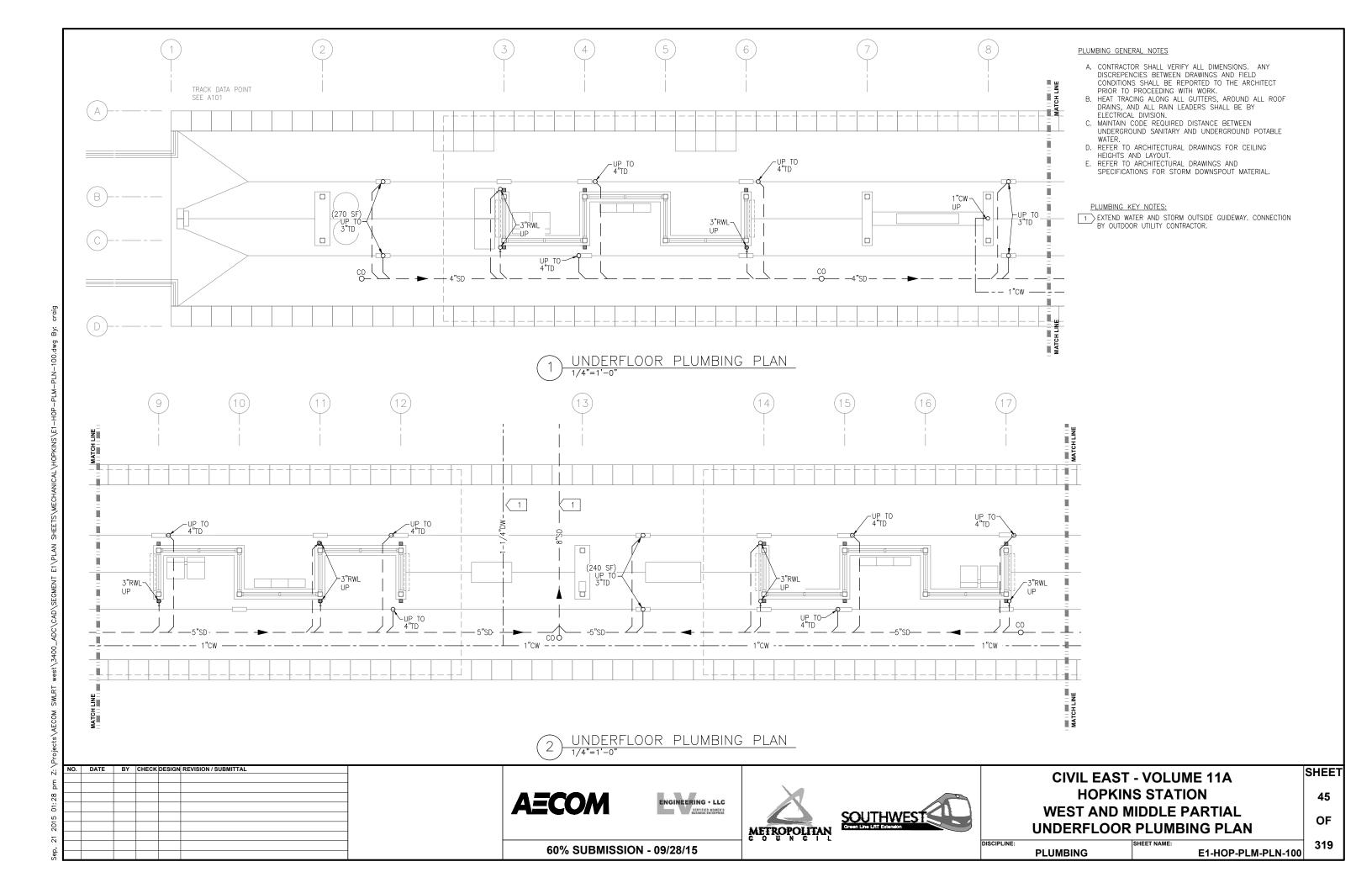
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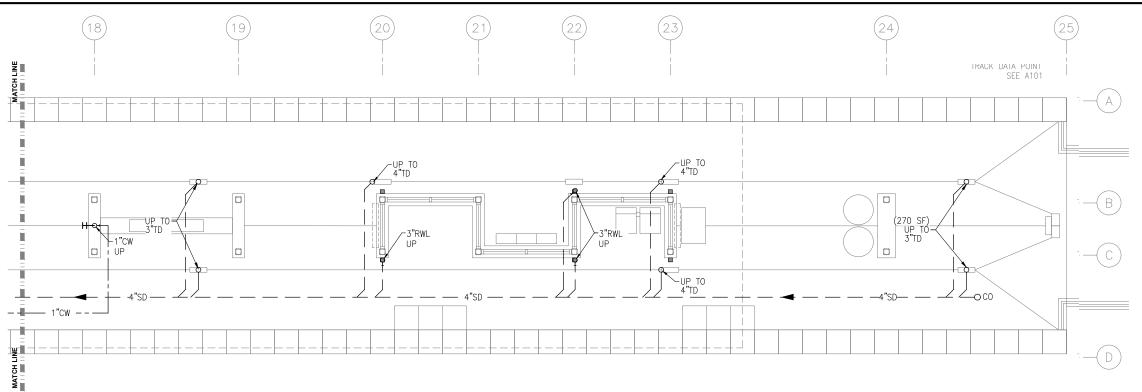
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E1-HOP-STR-SCT-300 STRUCTURES





PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO
- PROCEEDING WITH WORK.

  B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.

  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS
- AND LAYOUT.

  E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

## PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

UNDERFLOOR PLUMBING PLAN

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**CIVIL EAST - VOLUME 11A HOPKINS STATION EAST PARTIAL UNDERFLOOR PLUMBING PLAN** 

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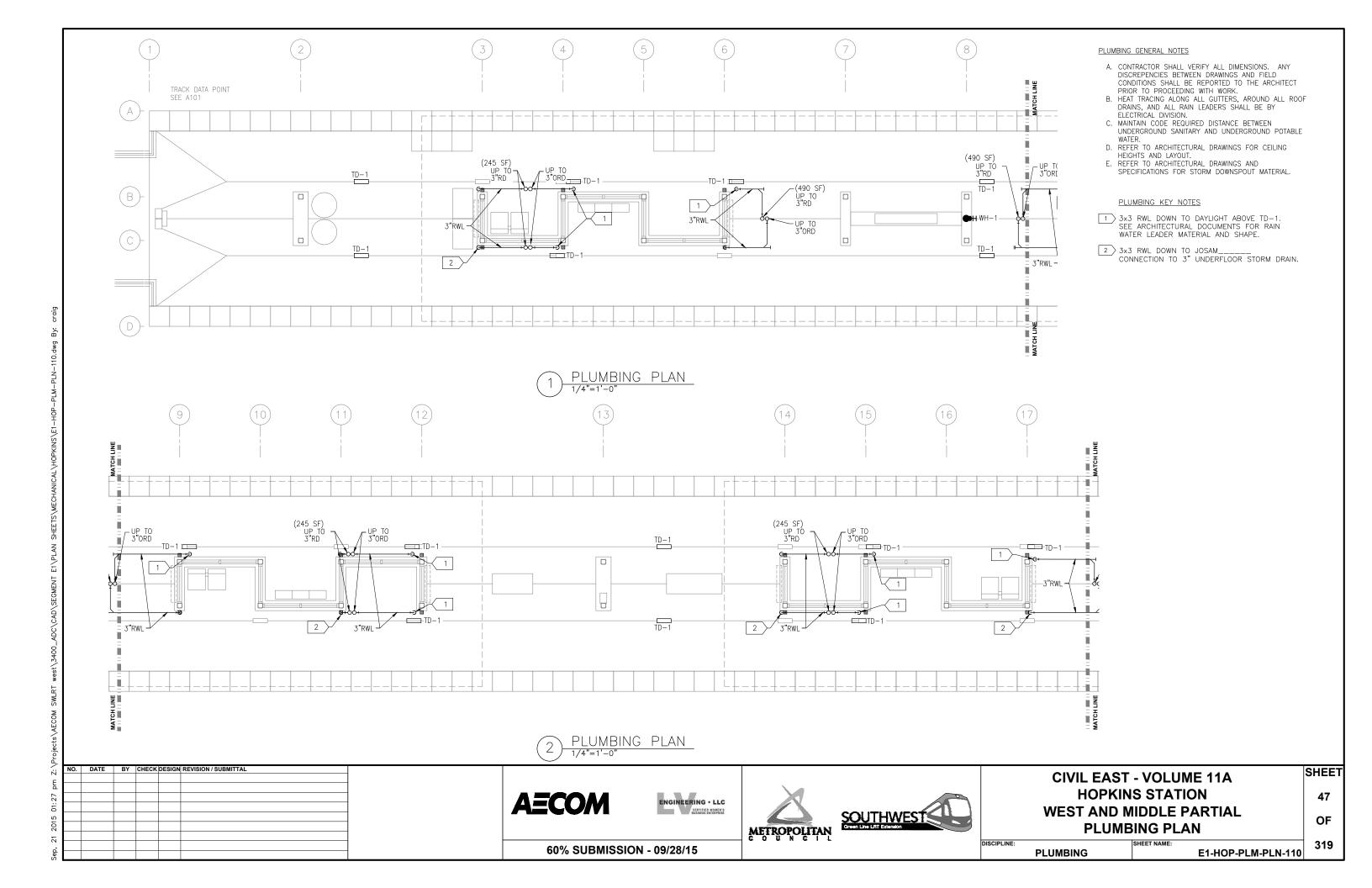
60% SUBMISSION - 09/28/15

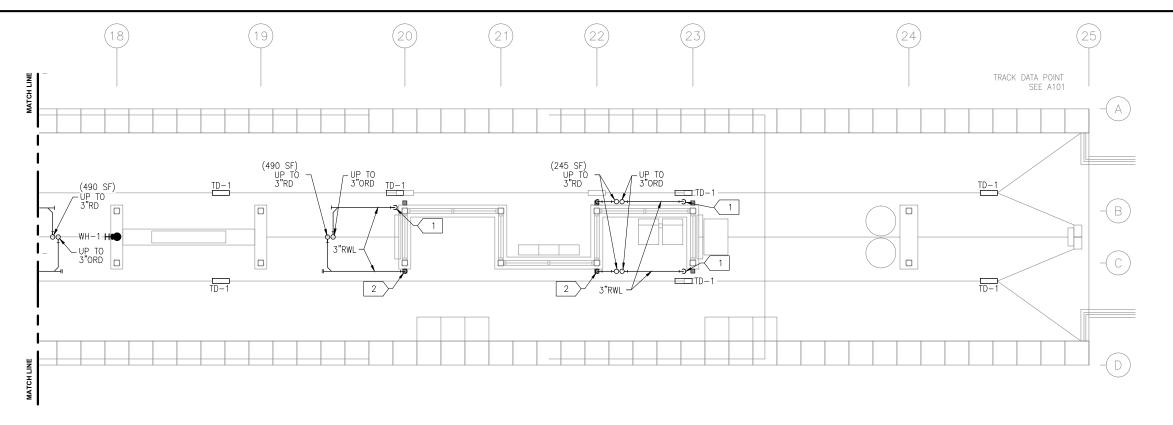
**PLUMBING** 

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DISCIPLINE:

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PLUMBING PLAN

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT

PRIOR TO PROCEEDING WITH WORK.

B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.

C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.

D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING

HEIGHTS AND LAYOUT.

E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

#### PLUMBING KEY NOTES

 $1 \rightarrow 3x3$  RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.

2 3x3 RWL DOWN TO JOSAM_ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

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**CIVIL EAST - VOLUME 11A HOPKINS STATION EAST PARTIAL PLUMBING PLAN AND RISER DIAGRAMS** 

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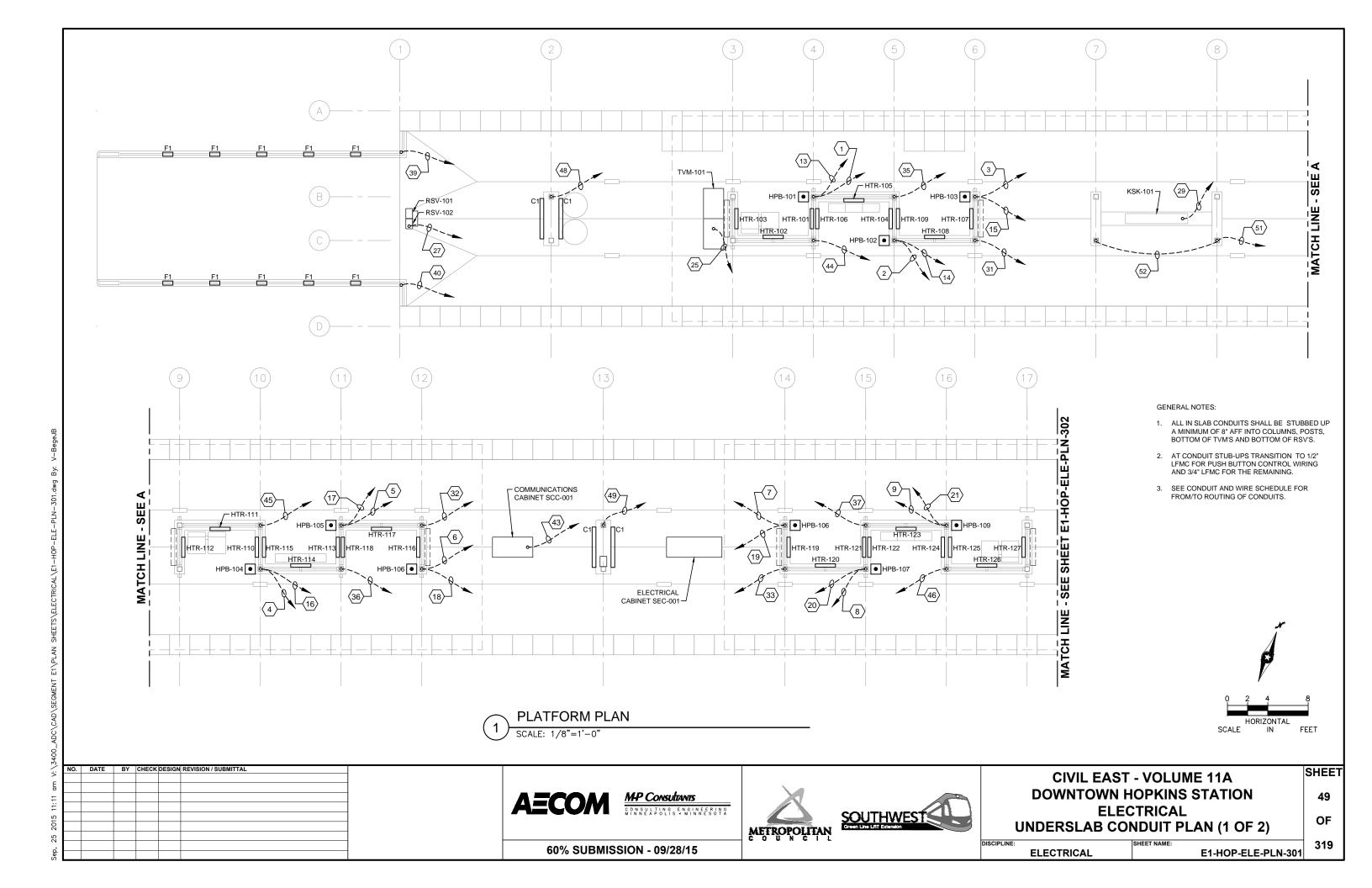
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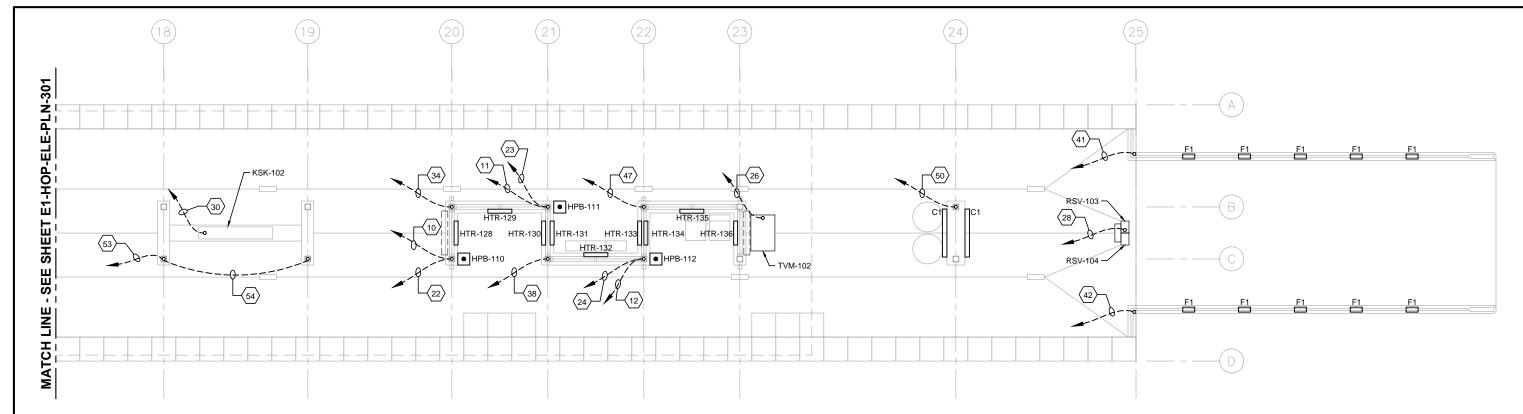
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**PLUMBING** 

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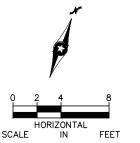


PLATFORM PLAN

SCALE: 1/8"=1'-0"

### GENERAL NOTES:

- ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
- AT CONDUIT STUB-UPS TRANSITION TO 1/2"
   LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
- 3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.



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**CIVIL EAST - VOLUME 11A DOWNTOWN HOPKINS STATION ELECTRICAL UNDERSLAB CONDUIT PLAN (2 OF 2)** 

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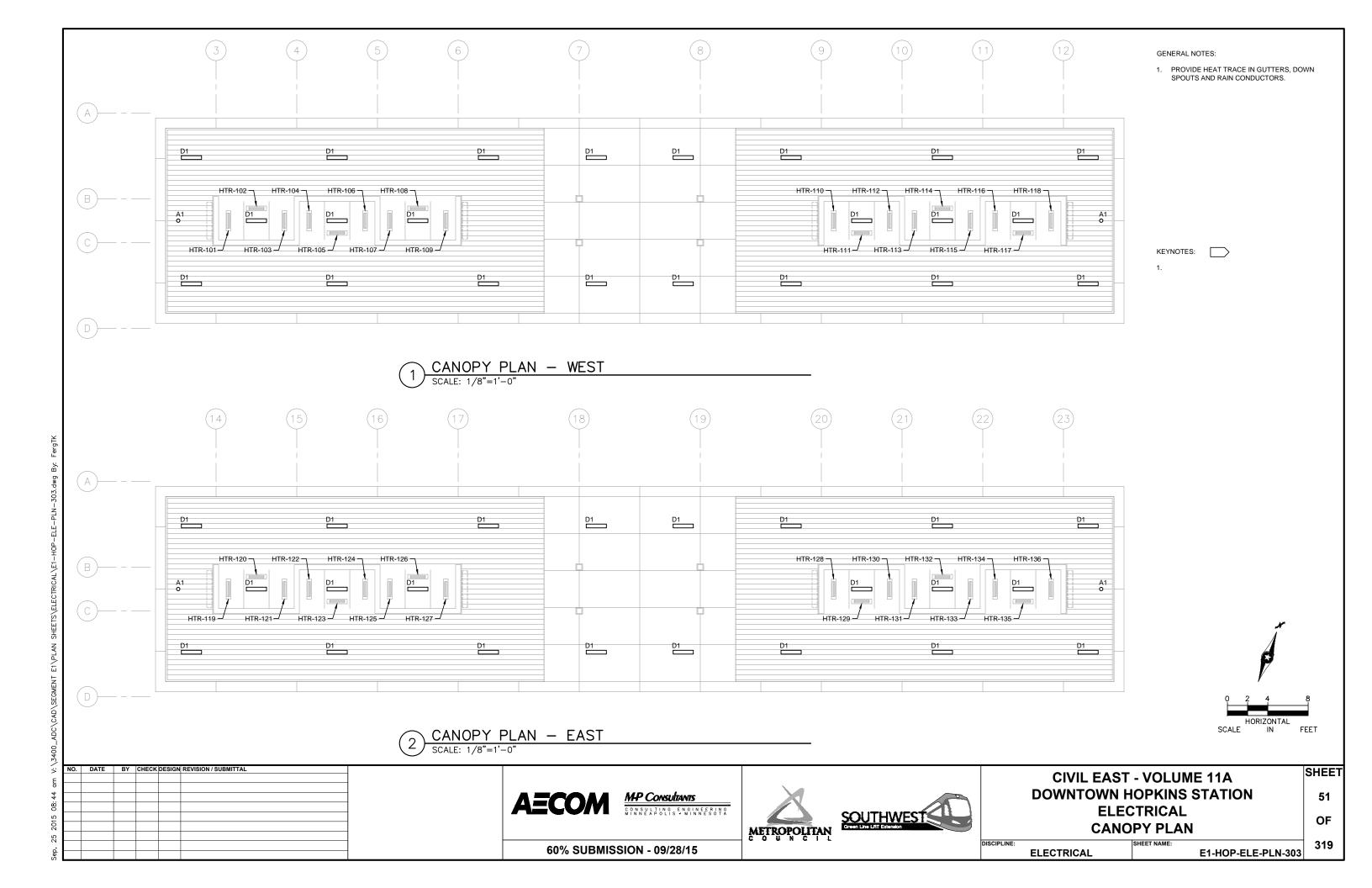
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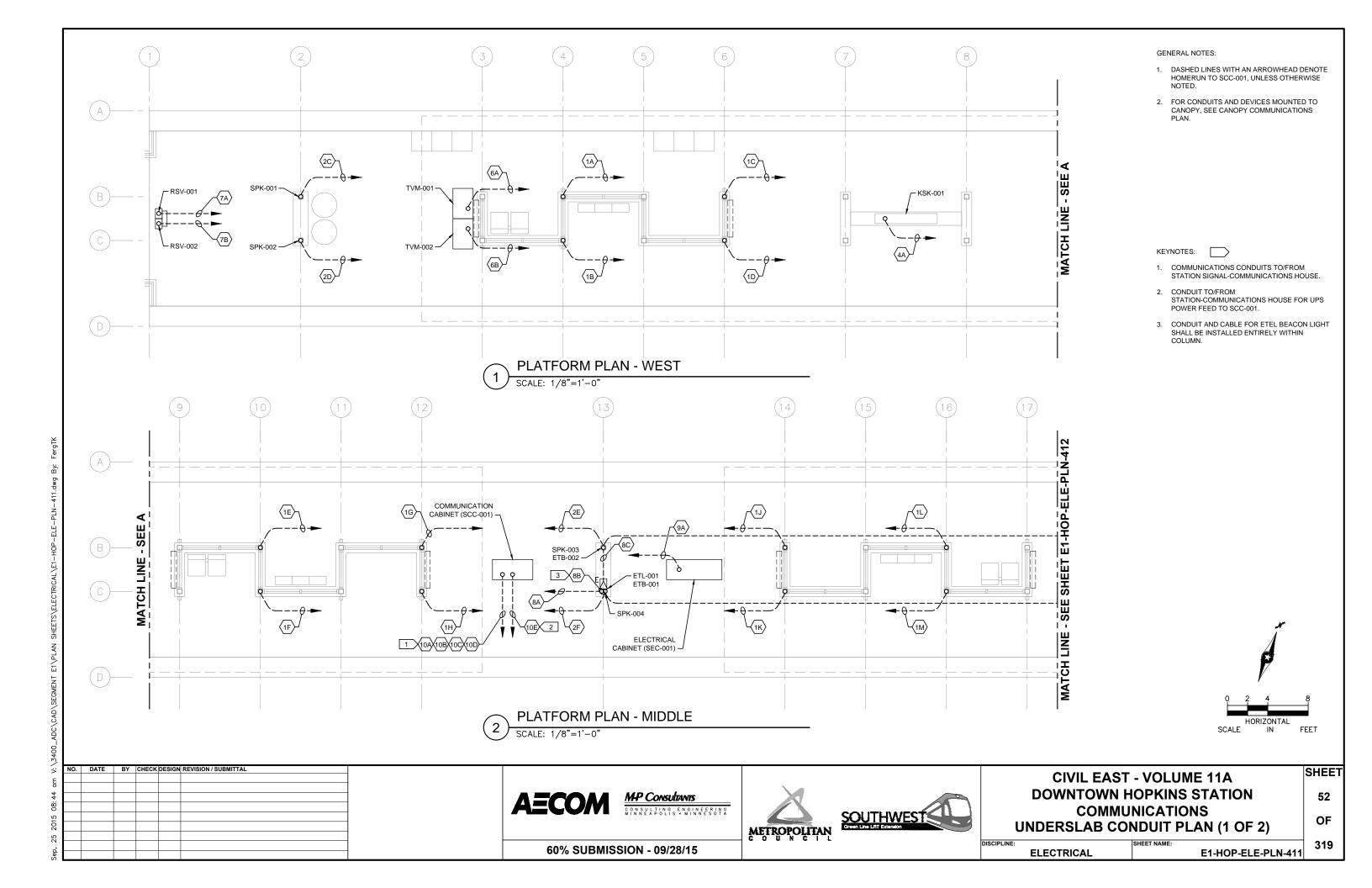
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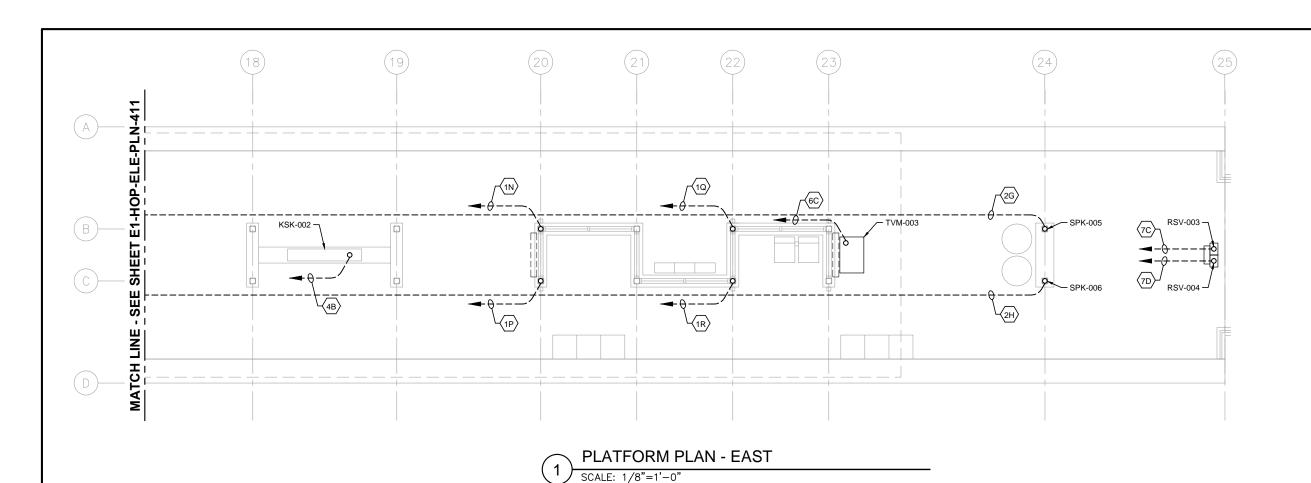
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GENERAL NOTES:

- DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE
- 2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS

KEYNOTES:

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**CIVIL EAST - VOLUME 11A DOWNTOWN HOPKINS STATION COMMUNICATIONS UNDERSLAB CONDUIT PLAN (2 OF 2)** 

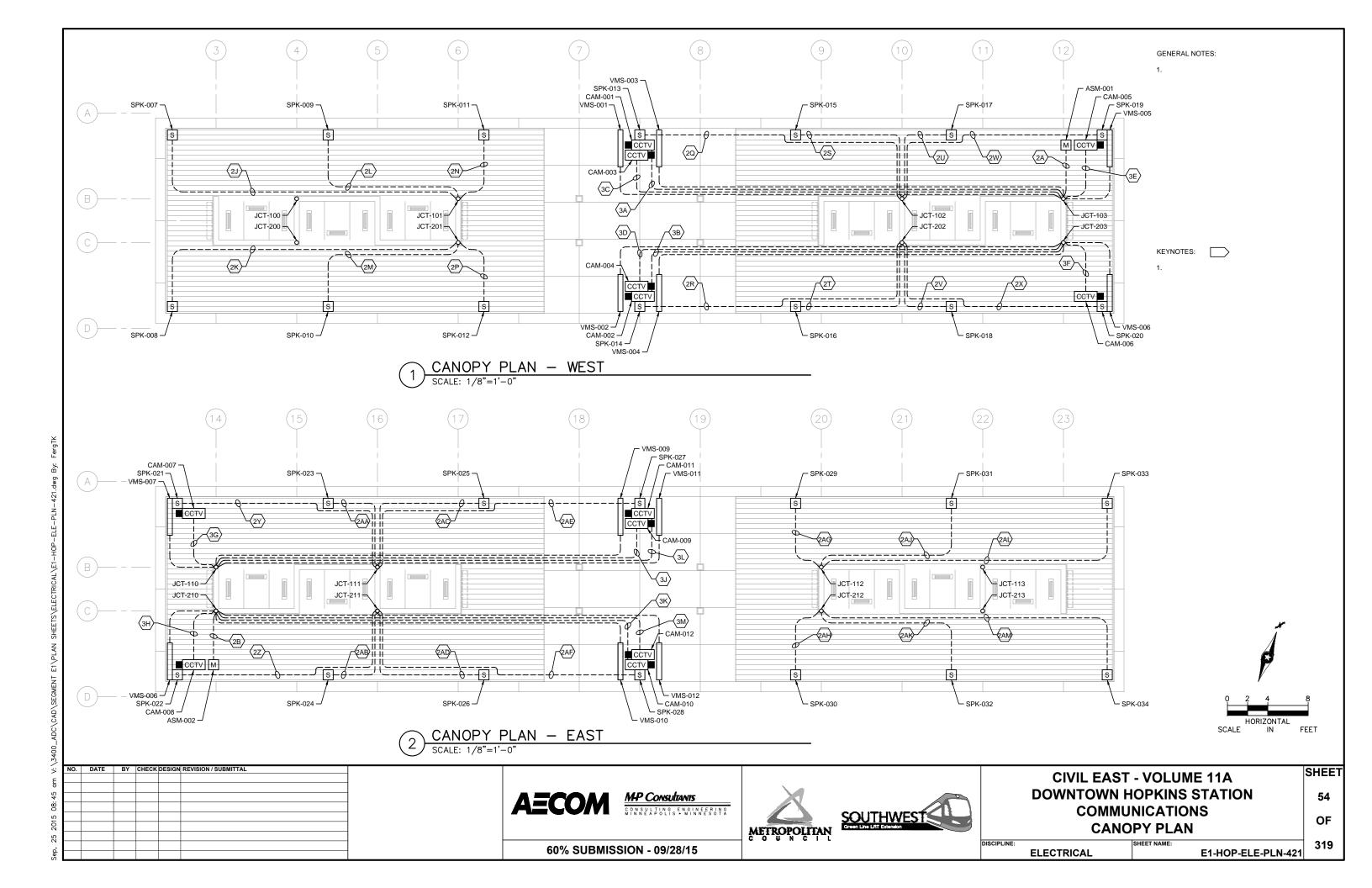
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**ELECTRICAL** 

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60% SUBMISSION - 09/28/15



**ELECTRICAL** 

**CIVIL EAST - VOLUME 11A DOWNTOWN HOPKINS STATION COMMUNICATIONS** 

SHEET 55 OF 319 E1-HOP-ELE-SCH-461

**CONDUIT SCHEDULE (1 OF 2)** 

1	COMMUNICATIONS CONDUIT SCHEDULE	
J.		

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	то	CONDUIT SIZE
10A	HOP -CON-0001	S/C HOUSE TO SCC-001	S/C MANHOLE	HOP -SCC-001	3"
10B	HOP -CON-0002	S/C HOUSE TO SCC-001	S/C MANHOLE	HOP -SCC-001	3"
10C	HOP -CON-0003	S/C HOUSE TO SCC-001	S/C MANHOLE	HOP -SCC-001	3"
10D	HOP -CON-0004	S/C HOUSE TO SCC-001	S/C MANHOLE	HOP -SCC-001	3"
10E	HOP -CON-0005	UPS POWER FEED: SCH TO SCC	HOP -SCH-001	HOP -SCC-001	3"
1A	HOP -CON-0101	SCC TO JUNCTION 100	HOP -SCC-001	HOP -JCT-100	2"
1B	HOP -CON-0102	SCC TO JUNCTION 200	HOP -SCC-001	HOP -JCT-200	2"
1C	HOP -CON-0103	SCC TO JUNCTION 101	HOP -SCC-001	HOP -JCT-101	2"
1D	HOP -CON-0104	SCC TO JUNCTION 201	HOP -SCC-001	HOP -JCT-201	2"
1E	HOP -CON-0105	SCC TO JUNCTION 102	HOP -SCC-001	HOP -JCT-102	2"
1F	HOP -CON-0106	SCC TO JUNCTION 202	HOP -SCC-001	HOP -JCT-202	2"
1G	HOP -CON-0107	SCC TO JUNCTION 103	HOP -SCC-001	HOP -JCT-103	2"
1H	HOP -CON-0108	SCC TO JUNCTION 203	HOP -SCC-001	HOP -JCT-203	2"
1J	HOP -CON-0109	SCC TO JUNCTION 110	HOP -SCC-001	HOP -JCT-110	2"
1K	HOP -CON-0110	SCC TO JUNCTION 210	HOP -SCC-001	HOP -JCT-210	2"
1L	HOP -CON-0111	SCC TO JUNCTION 111	HOP -SCC-001	HOP -JCT-111	2"
1M	HOP -CON-0112	SCC TO JUNCTION 211	HOP -SCC-001	HOP -JCT-211	2"
1N	HOP -CON-0113	SCC TO JUNCTION 112	HOP -SCC-001	HOP -JCT-112	2"
1P	HOP -CON-0114	SCC TO JUNCTION 212	HOP -SCC-001	HOP -JCT-212	2"
1Q	HOP -CON-0115	SCC TO JUNCTION 113	HOP -SCC-001	HOP -JCT-113	2"
1R	HOP -CON-0116	SCC TO JUNCTION 213	HOP -SCC-001	HOP -JCT-213	2"
2A	HOP -CON-0201	MICROPHONE 1 - NOISE SENSING	HOP -JCT-103	HOP -ASM-001	1"
2B	HOP -CON-0202	MICROPHONE 2 - NOISE SENSING	HOP -JCT-210	HOP -ASM-002	1"
2C	HOP -CON-0203	SPEAKER 1 - POLE	HOP -SCC-001	HOP -SPK-001	1-1/2"
2D	HOP -CON-0204	SPEAKER 2 - POLE	HOP -SCC-001	HOP -SPK-002	1-1/2"
2E	HOP -CON-0205	SPEAKER 3 - POLE	HOP -SCC-001	HOP -SPK-003	1-1/2"
2F	HOP -CON-0206	SPEAKER 4 - POLE	HOP -SCC-001	HOP -SPK-004	1-1/2"
2G	HOP -CON-0207	SPEAKER 5 - POLE	HOP -SCC-001	HOP -SPK-005	1-1/2"
2H	HOP -CON-0208	SPEAKER 6 - POLE	HOP -SCC-001	HOP -SPK-006	1-1/2"
2J	HOP -CON-0209	SPEAKER 7 - CANOPY	HOP -JCT-101	HOP -SPK-007	1"
2K	HOP -CON-0210	SPEAKER 8 - CANOPY	HOP -JCT-201	HOP -SPK-008	1"
2L	HOP -CON-0211	SPEAKER 9 - CANOPY	HOP -JCT-101	HOP -SPK-009	1"
2M	HOP -CON-0212	SPEAKER 10 - CANOPY	HOP -JCT-201	HOP -SPK-010	1"
2N	HOP -CON-0213	SPEAKER 11 - CANOPY	HOP -JCT-101	HOP -SPK-011	1"
2P	HOP -CON-0214	SPEAKER 12 - CANOPY	HOP -JCT-201	HOP -SPK-012	1"
2Q	HOP -CON-0215	SPEAKER 13 - CANOPY	HOP -JCT-102	HOP -SPK-013	1"
2R	HOP -CON-0216	SPEAKER 14 - CANOPY	HOP -JCT-202	HOP -SPK-014	1"
2S	HOP -CON-0217	SPEAKER 15 - CANOPY	HOP -JCT-102	HOP -SPK-015	1"
2T	HOP -CON-0218	SPEAKER 16 - CANOPY	HOP -JCT-202	HOP -SPK-016	1"
2U	HOP -CON-0219	SPEAKER 17 - CANOPY	HOP -JCT-102	HOP -SPK-017	1"
2V	HOP -CON-0220	SPEAKER 18 - CANOPY	HOP -JCT-202	HOP -SPK-018	1"
2W	HOP -CON-0221	SPEAKER 19 - CANOPY	HOP -JCT-102	HOP -SPK-019	1"
2X	HOP -CON-0222	SPEAKER 20 - CANOPY	HOP -JCT-202	HOP -SPK-020	1"
2Y	HOP -CON-0223	SPEAKER 21 - CANOPY	HOP -JCT-111	HOP -SPK-021	1"
2Z	HOP -CON-0224	SPEAKER 22 - CANOPY	HOP -JCT-211	HOP -SPK-022	1"
2AA	HOP -CON-0225	SPEAKER 23 - CANOPY	HOP -JCT-111	HOP -SPK-023	1"
2AB	HOP -CON-0226	SPEAKER 24 - CANOPY	HOP -JCT-211	HOP -SPK-024	1"

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	TO	CONDUIT SIZE	
2AC	HOP -CON-0227	SPEAKER 25 - CANOPY	HOP -JCT-111	HOP -SPK-025	1"	
2AD	HOP -CON-0228	SPEAKER 26 - CANOPY	HOP -JCT-211	HOP -SPK-026	1"	
2AE	HOP -CON-0229	SPEAKER 27 - CANOPY	HOP -JCT-111	HOP -SPK-027	1"	
2AF	HOP -CON-0230	SPEAKER 28 - CANOPY	HOP -JCT-211	HOP -SPK-028	1"	
2AG	HOP -CON-0231	SPEAKER 29 - CANOPY	HOP -JCT-112	HOP -SPK-029	1"	
2AH	HOP -CON-0232	SPEAKER 30 - CANOPY	HOP -JCT-212	HOP -SPK-030	1"	
2AJ	HOP -CON-0233	SPEAKER 31 - CANOPY	HOP -JCT-112	HOP -SPK-031	1"	
2AK	HOP -CON-0234	SPEAKER 32 - CANOPY	HOP -JCT-212	HOP -SPK-032	1"	
2AL	HOP -CON-0235	SPEAKER 33 - CANOPY	HOP -JCT-112	HOP -SPK-033	1"	
2AM	HOP -CON-0236	SPEAKER 34 - CANOPY	HOP -JCT-212	HOP -SPK-034	1"	
3A	HOP -CON-0301	CAMERA 1	HOP -JCT-100	HOP CAM-001	1"	
3B	HOP -CON-0302	CAMERA 2	HOP -JCT-200	HOP CAM-002	1"	
3C	HOP -CON-0303	CAMERA 3	HOP -JCT-100	HOP CAM-003	1"	
3D	HOP -CON-0304	CAMERA 4	HOP -JCT-200	HOP CAM-004	1"	
3E	HOP -CON-0305	CAMERA 5	HOP -JCT-100	HOP CAM-005	1"	
3F	HOP -CON-0306	CAMERA 6	HOP -JCT-200	HOP CAM-006	1"	
3G	HOP -CON-0307	CAMERA 7	HOP -JCT-120	HOP CAM-007	1"	
3H	HOP -CON-0308	CAMERA 8	HOP -JCT-220	HOP CAM-008	1"	
3J	HOP -CON-0309	CAMERA 9	HOP -JCT-120	HOP CAM-009	1"	
3K	HOP -CON-0310	CAMERA 10	HOP -JCT-220	HOP CAM-010	1"	
3L	HOP -CON-0311	CAMERA 11	HOP -JCT-120	HOP CAM-011	1"	
3M	HOP -CON-0312	CAMERA 12	HOP -JCT-220	HOP CAM-012	1"	
4A	HOP -CON-0401	KIOSK 1 (F)	HOP -SCC-001	HOP -KSK-001	2"	
4B	HOP -CON-0402	KIOSK 2 (F)	HOP -SCC-001	HOP -KSK-002	2"	
5A	HOP -CON-0501	VMS 1	HOP -JCT-100	HOP -VMS-001	1"	
5B	HOP -CON-0502	VMS 2	HOP -JCT-200	HOP -VMS-002	1"	
5C	HOP -CON-0503	VMS 3	HOP -JCT-100	HOP -VMS-003	1"	
5D	HOP -CON-0504	VMS 4	HOP -JCT-200	HOP -VMS-004	1"	
5E	HOP -CON-0505	VMS 5	HOP -JCT-100	HOP -VMS-005	1"	
5F	HOP -CON-0506	VMS 6	HOP -JCT-200	HOP -VMS-006	1"	
5G	HOP -CON-0507	VMS 7	HOP -JCT-120	HOP -VMS-007	1"	
5H	HOP -CON-0508	VMS 8	HOP -JCT-220	HOP -VMS-008	1"	
5J	HOP -CON-0509	VMS 9	HOP -JCT-120	HOP -VMS-009	1"	
5K	HOP -CON-0510	VMS 10	HOP -JCT-220	HOP -VMS-010	1"	
5L	HOP -CON-0511	VMS 11	HOP -JCT-120	HOP -VMS-011	1"	
5M	HOP -CON-0512	VMS 12	HOP -JCT-220	HOP -VMS-012	1"	
6A	HOP -CON-0601	TVM 1	HOP -SCC-001	HOP -TVM-001	2"	
6B	HOP -CON-0602	TVM 2	HOP -SCC-001	HOP -TVM-002	2"	
7A	HOP -CON-0701	VALIDATOR 1	HOP -SCC-001	HOP -RSV-001	1-1/2"	
7B	HOP -CON-0702	VALIDATOR 2	HOP -SCC-001	HOP -RSV-002	1-1/2"	
7C	HOP -CON-0703	VALIDATOR 3	HOP -SCC-001	HOP -RSV-003	1-1/2"	
7D	HOP -CON-0704	VALIDATOR 4	HOP -SCC-001	HOP -RSV-004	1-1/2"	
8A	HOP -CON-0801	EMERGENCYTELEPHONE 1 - PHONE	HOP -SCC-001	HOP -ETL-001	1-1/2"	
8B	HOP -CON-0802	EMERGENCYTELEPHONE 1 - BEACON LIGHT 1	HOP -ETL-001	HOP -ETB-001	1"	
8C	HOP -CON-0803	EMERGENCYTELEPHONE 1 - BEACON LIGHT 2	HOP -ETL-001	HOP -ETB-002	1"	
9A	HOP -CON-0901	STATION ELECTRICAL CABINET	HOP -SCC-001	HOP -SEC-001	2"	

# COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

MP Consultants

CONSULTING ENGINEERING
MINNEAPOLIS MINNESOTA





# **CIVIL EAST - VOLUME 11A DOWNTOWN HOPKINS STATION COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)**

319 E1-HOP-ELE-SCH-462

SHEET

56

OF

60% SUBMISSION - 09/28/15

**ELECTRICAL** 

# CODE SUMMARY - CENTER PLATFORM BLAKE STATION

## **CODE REFERENCES**

MINNESOTA STATE BUILDING CODE 2015
NFPA 130 - STANDARD FOR FIXED GUIDEWAY TRANSIT 2014
AND PASSENGER RAIL SYSTEMS

IBC REVIEW

A. <u>DESCRIPTION</u> LOCATION: HOPKINS, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'-4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA)
5416 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 3169 SQUARE FEET
731 SQUARE FEET (LOWER @ 36'-8" X 13'-8" AND UPPER @ 34'-6" X 6'-8") WEST CANOPY
1707 SQUARE FEET (LOWER @ 84'-8" X 13'-8" AND UPPER @ 82'-6" X 6'-8") MIDDLE CANOPY
731 SQUARE FEET (LOWER @ 36'-8" X 13'-8" AND UPPER @ 34'-6" X 6'-8") EAST CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3 (15 S.F. PER PERSON)

C. <u>OCCUPANCY SEPARATIONS</u>

NONE ARE REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. <u>IBC EXITING SUMMARY</u>

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361
REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2)
WIDTH PROVIDED = 2 RAMPS AT 145" = 290"
2 MEANS OF EGRESS PROVIDED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

# PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

					PLATFORM	COLOR AND FIR	VISH SCHEDU	JLE			
TYPE	STATION	STRUCTURAL STEEL PAINT COLOR	PLATFORM CONC COLOR	PLATFORM CONC FINISH	CONC WALL COLOR	CONC WALL FINISH	RAILING INFILL MATERIAL	ALUM WDW FRAME FINISH	EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH	ALUM COMP CANOPY SOFFIT AND FASCIA COLOR	ARCH WOVEN MESH
CENTER	BLAKE STATION	PPG 518-6 KNIGHT'S ARMOR	CEMSTONE SPLIT ROCK	TBD	CEMSTONE SPLIT ROCK	TBD	SS CABLE	CLEAR ANODIZED	HUNTER DOUGLAS WOODWRIGHT 8436 GOLDEN DOUGLAS FIR	ALUCOBOND MERCEDES DEEP BLUE	TBD

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 

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CIVIL EAST - VOLUME 11A

BLAKE STATION

CODE SUMMARY / FINISH SCHEDULE

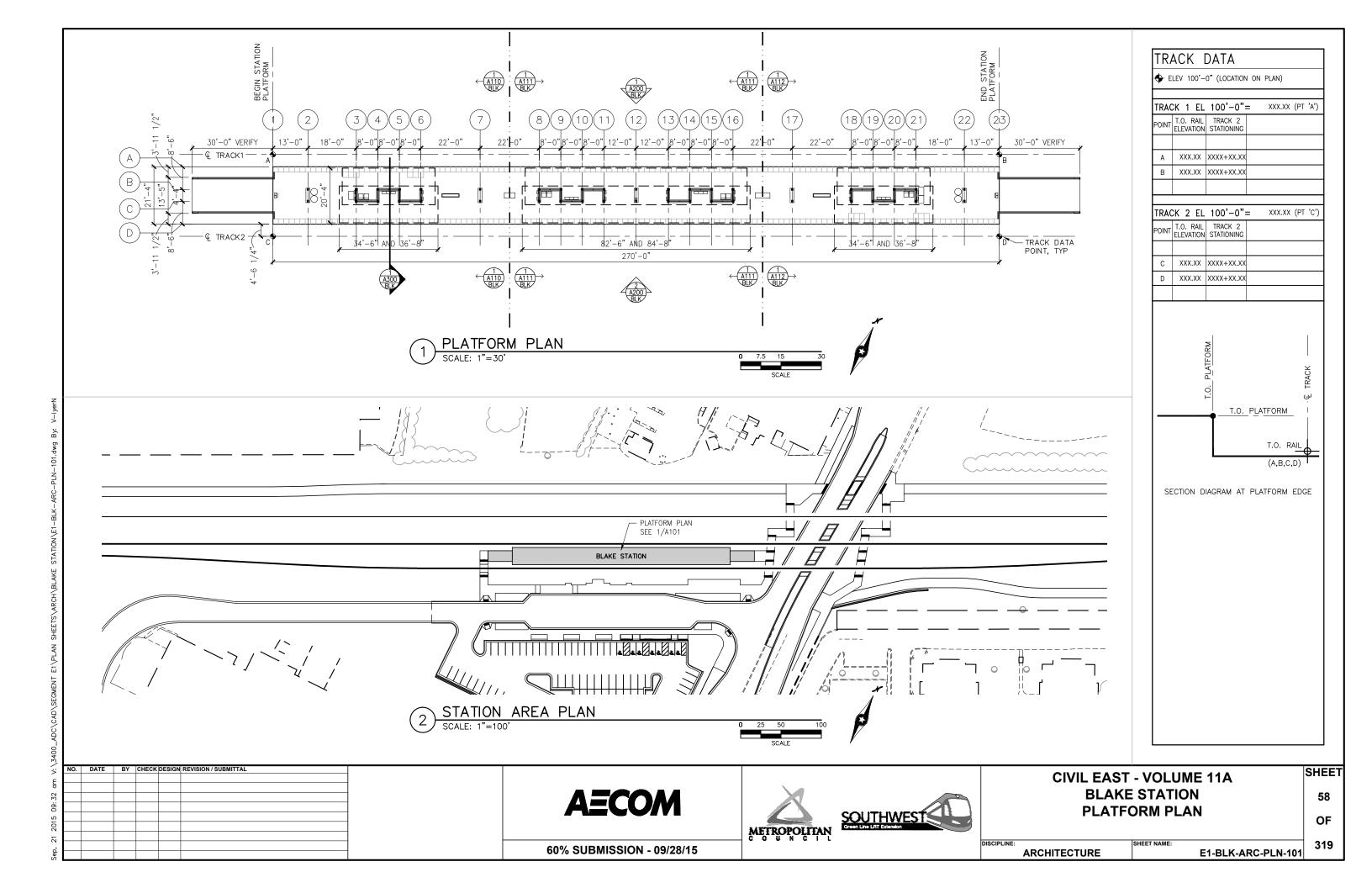
OF 319

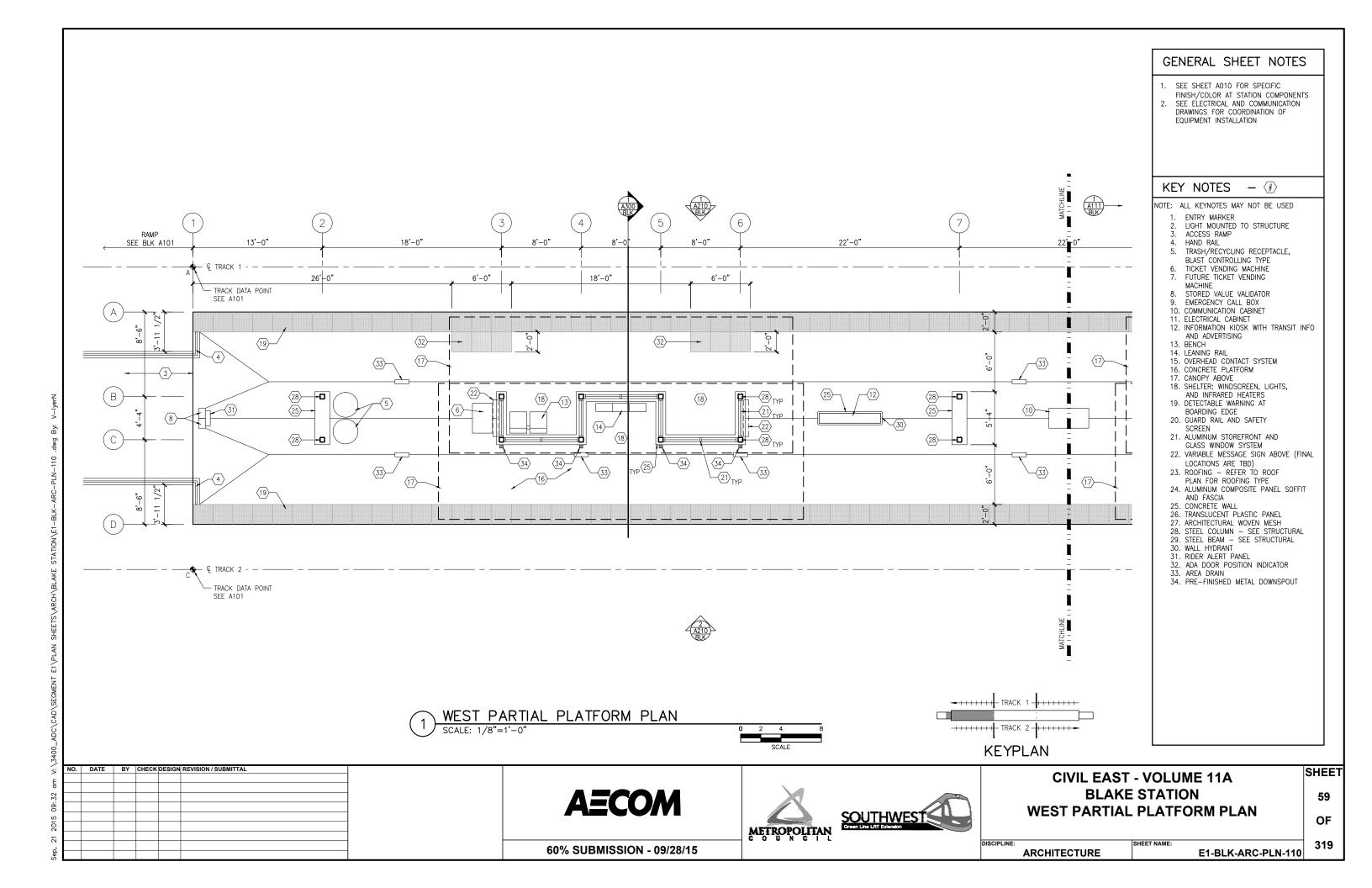
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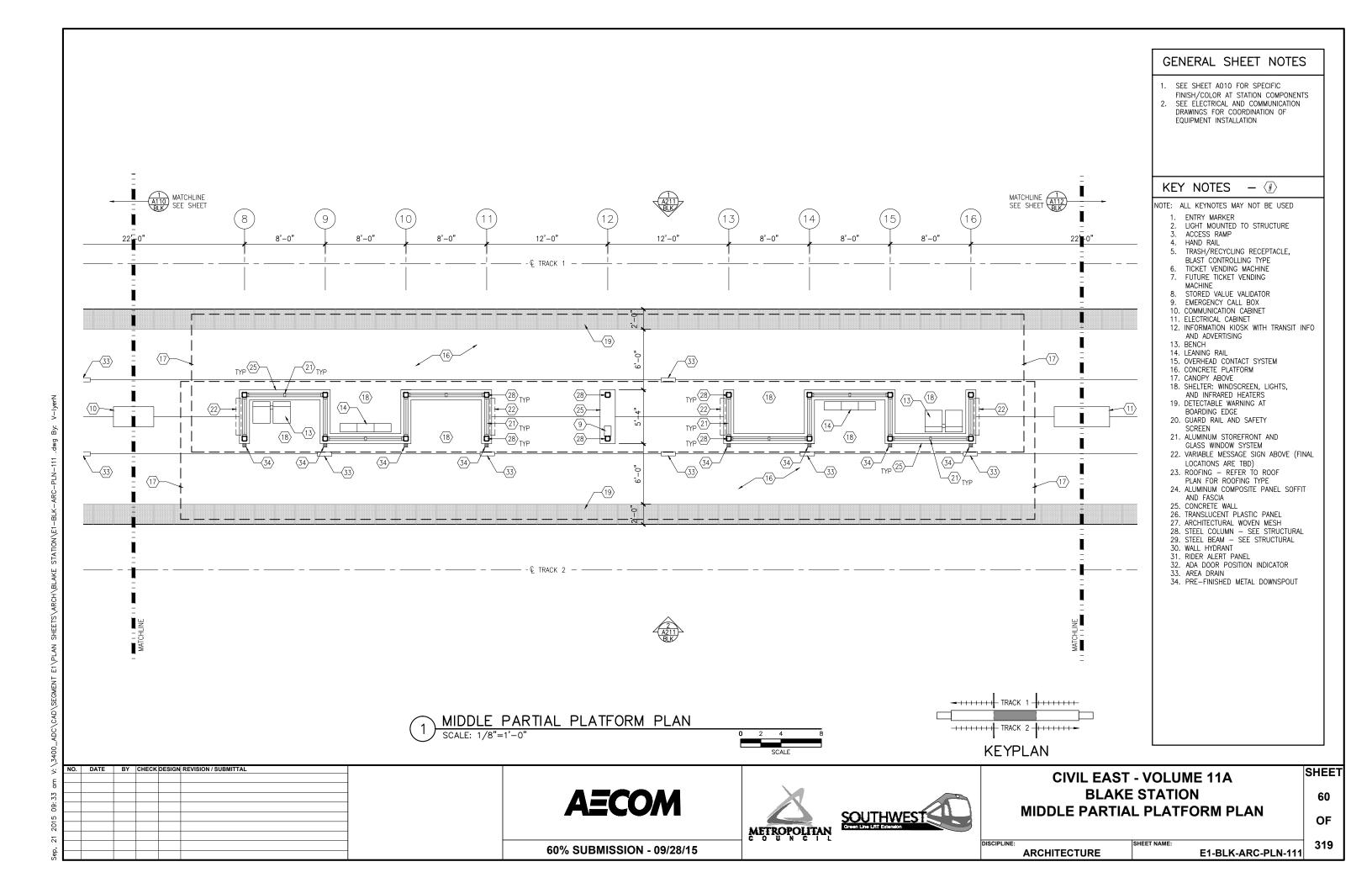
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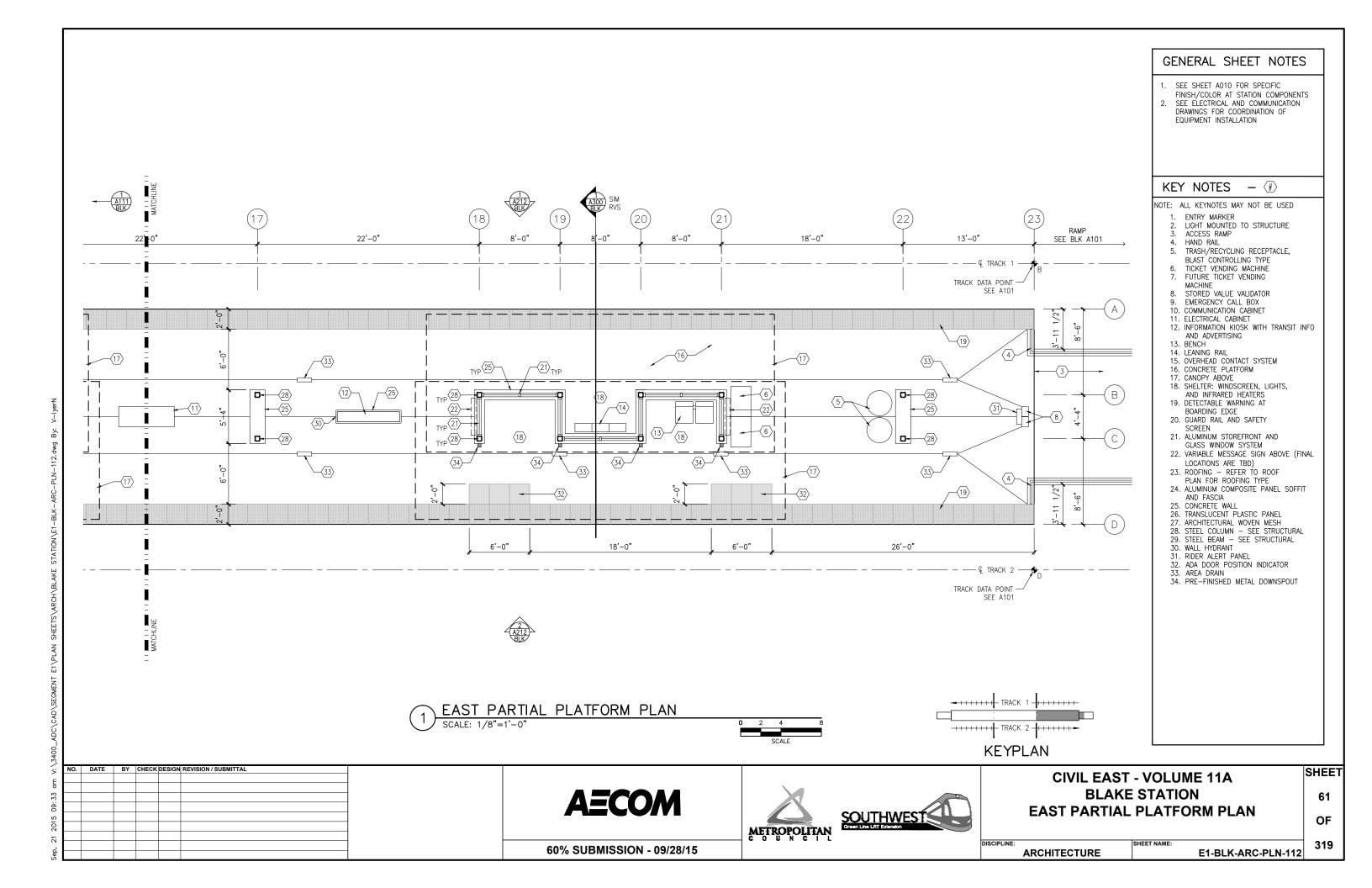
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ARCHITECTURE

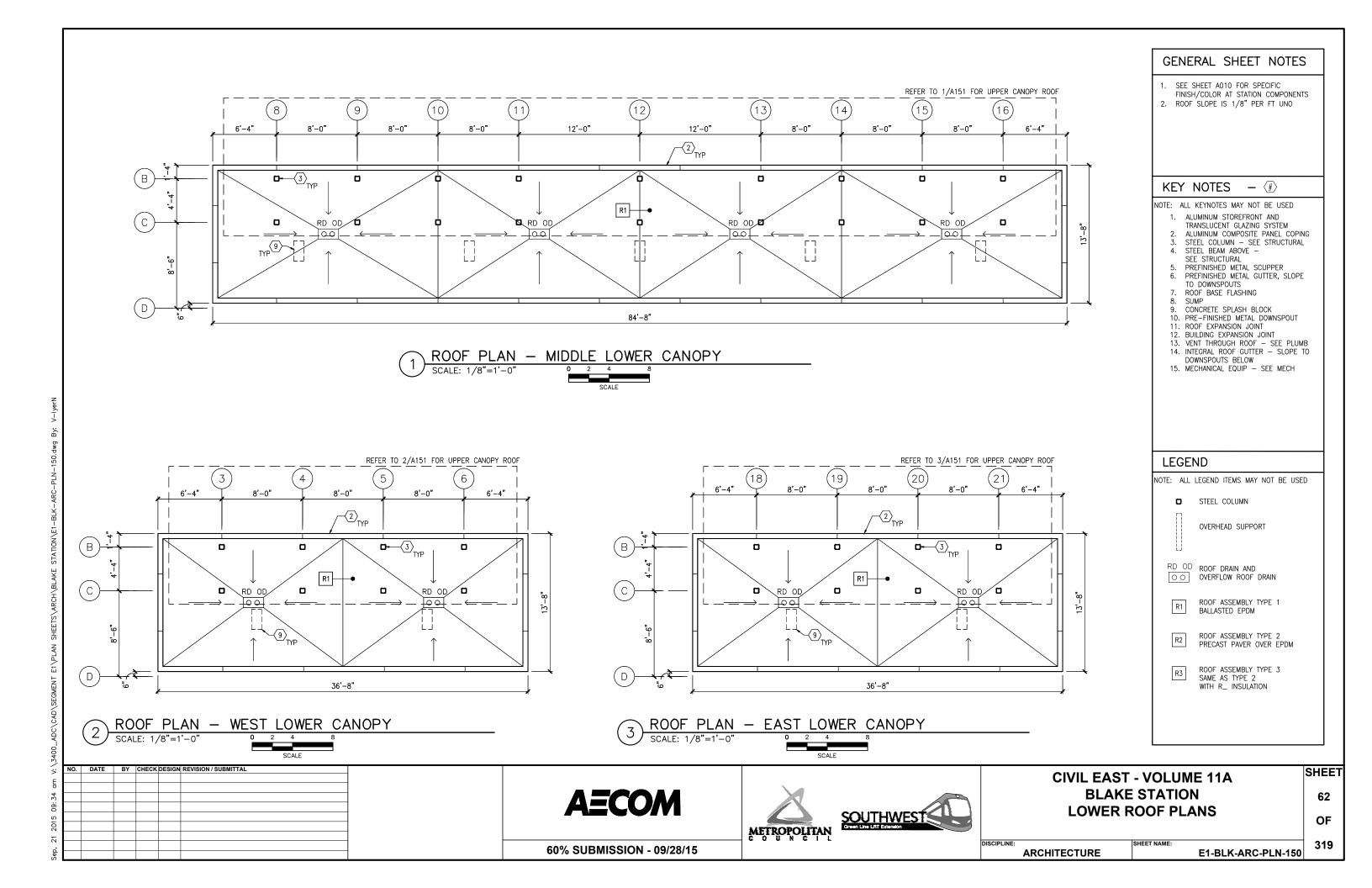
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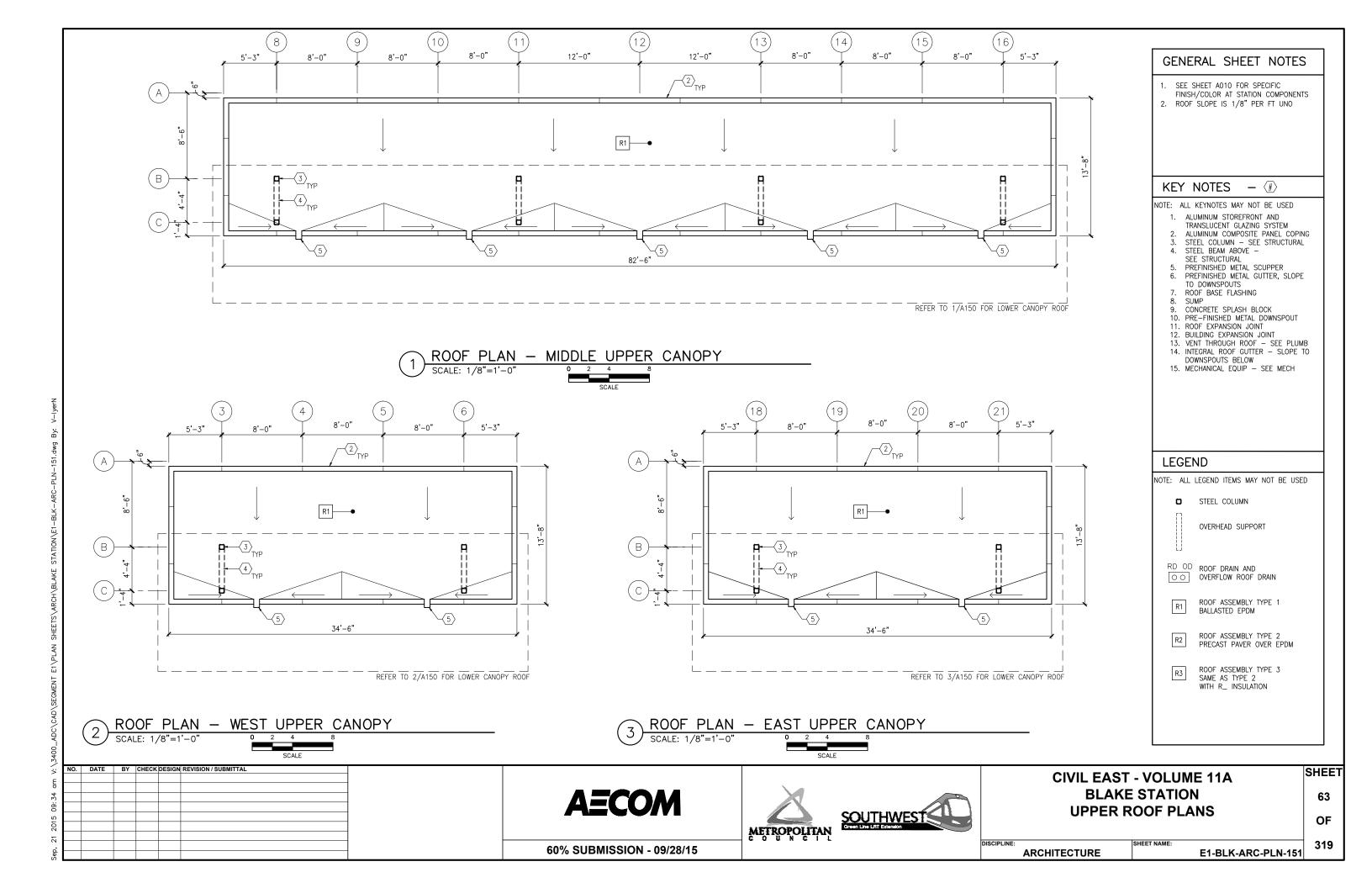


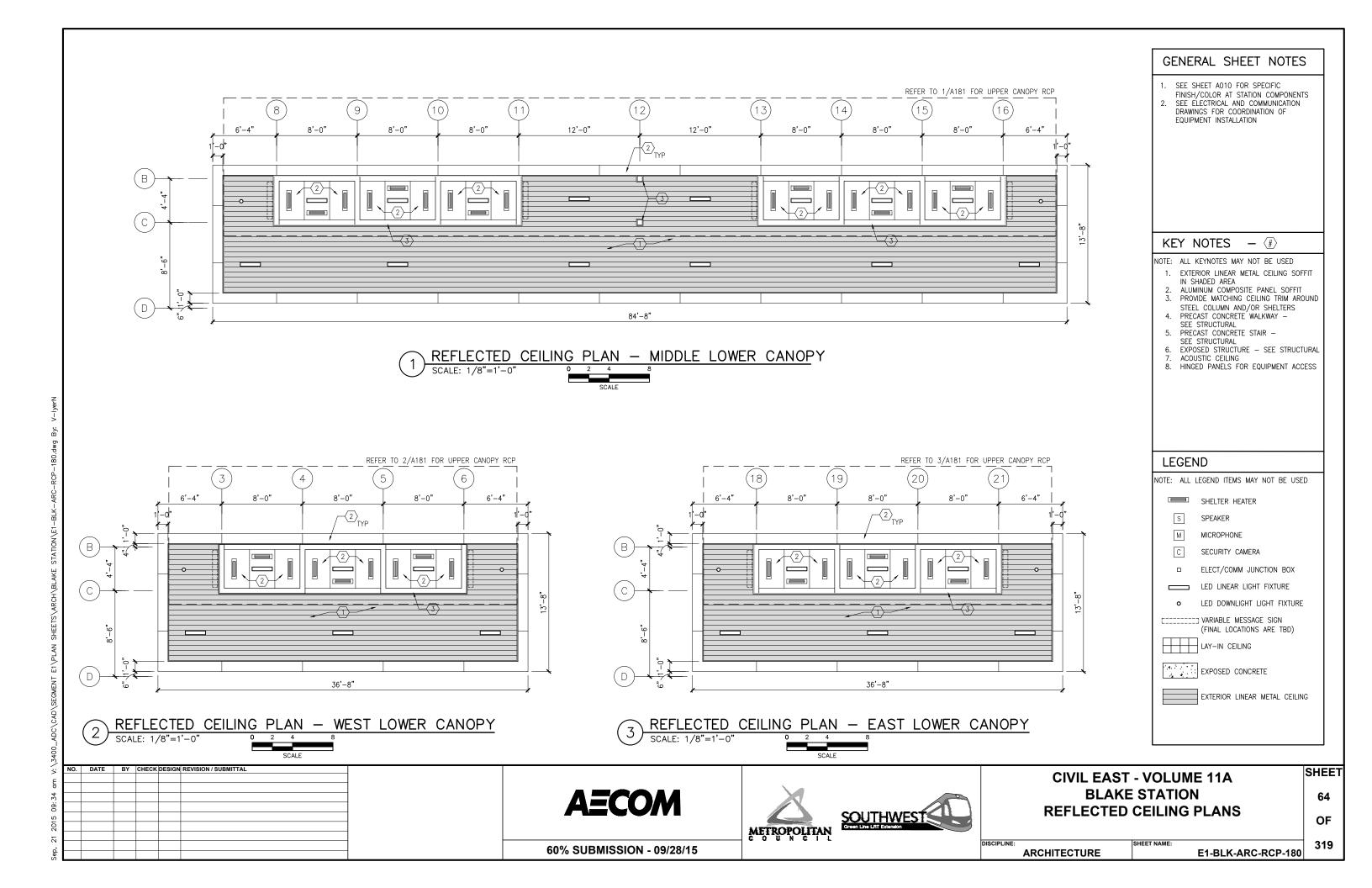


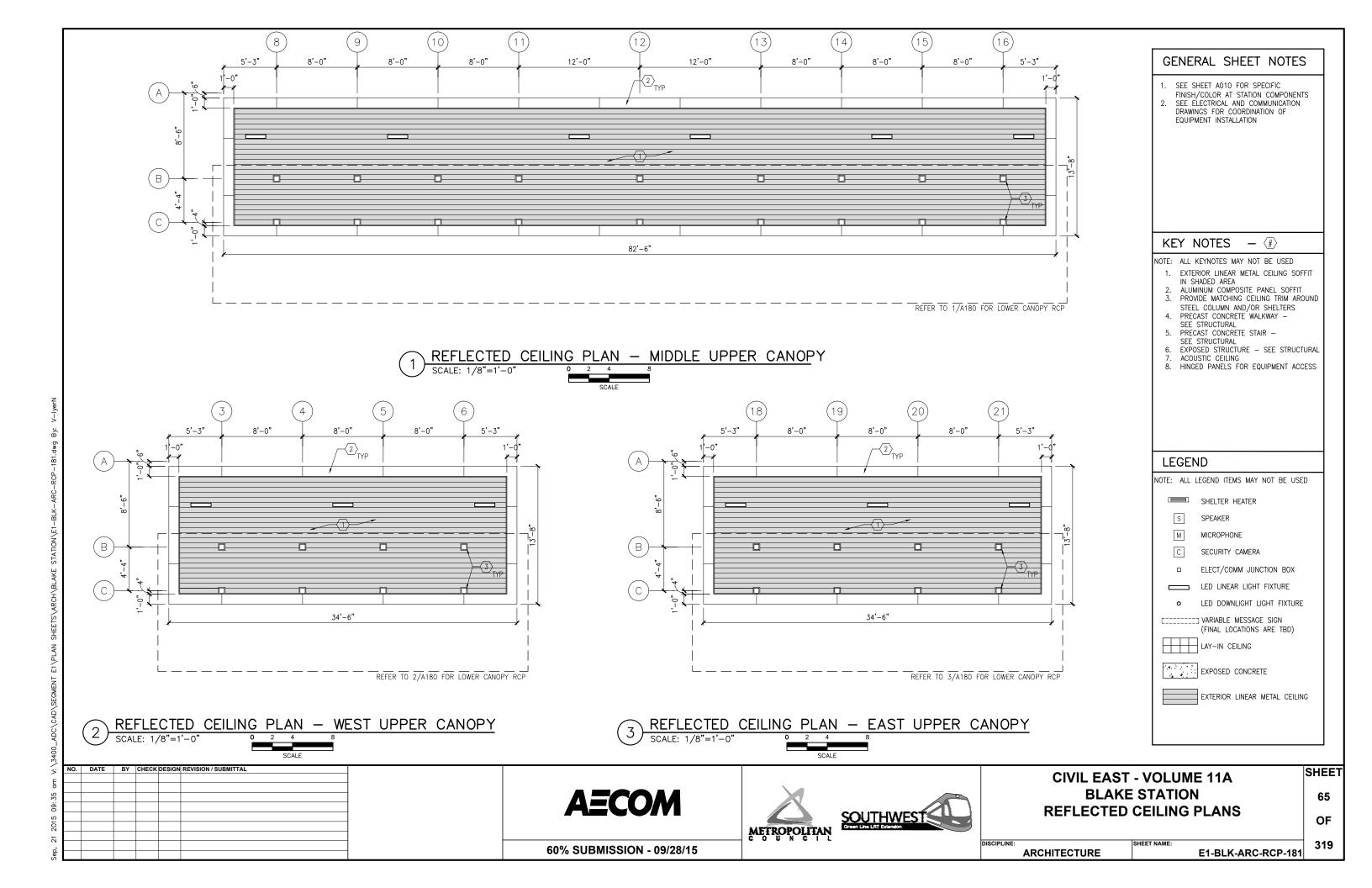


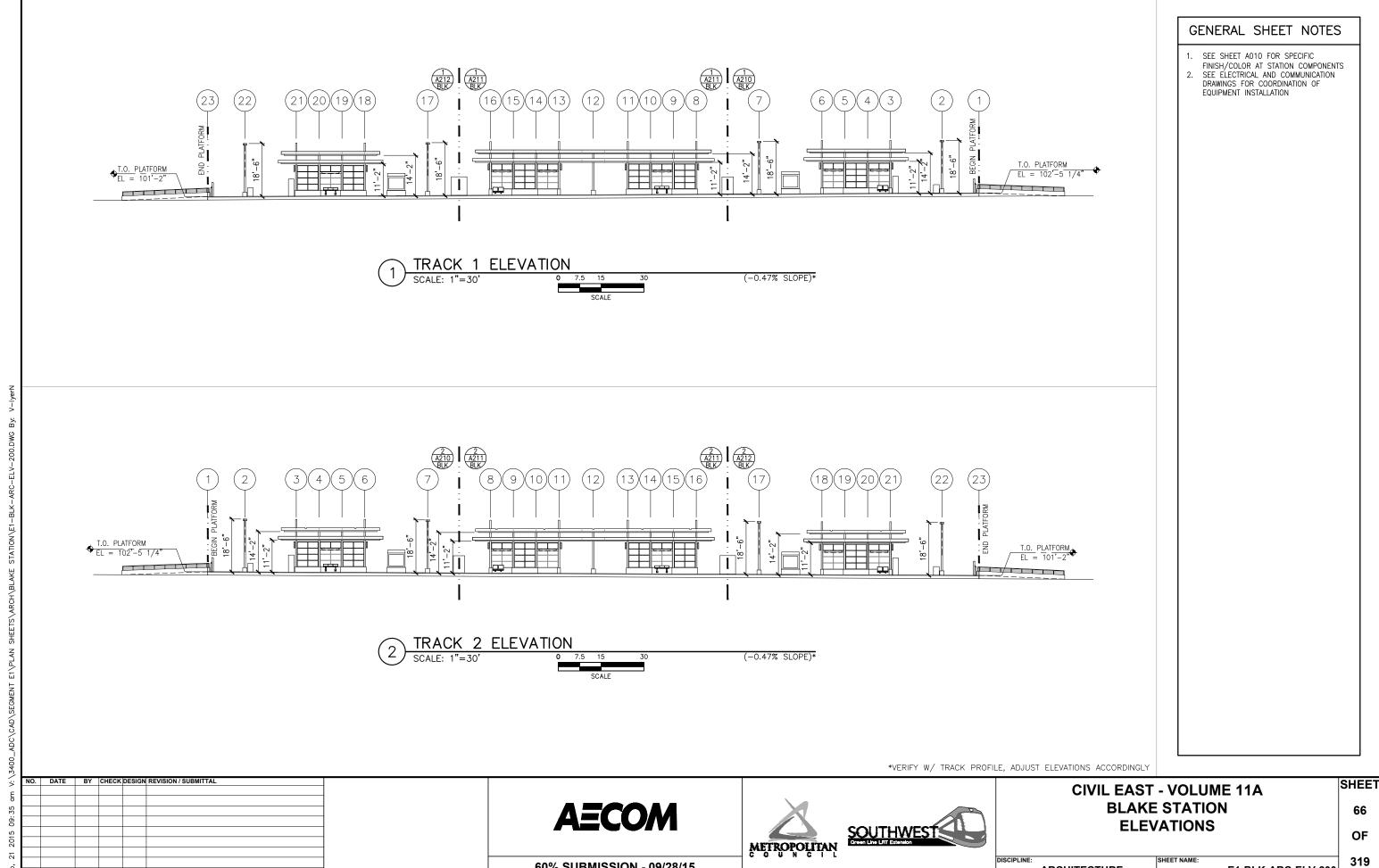








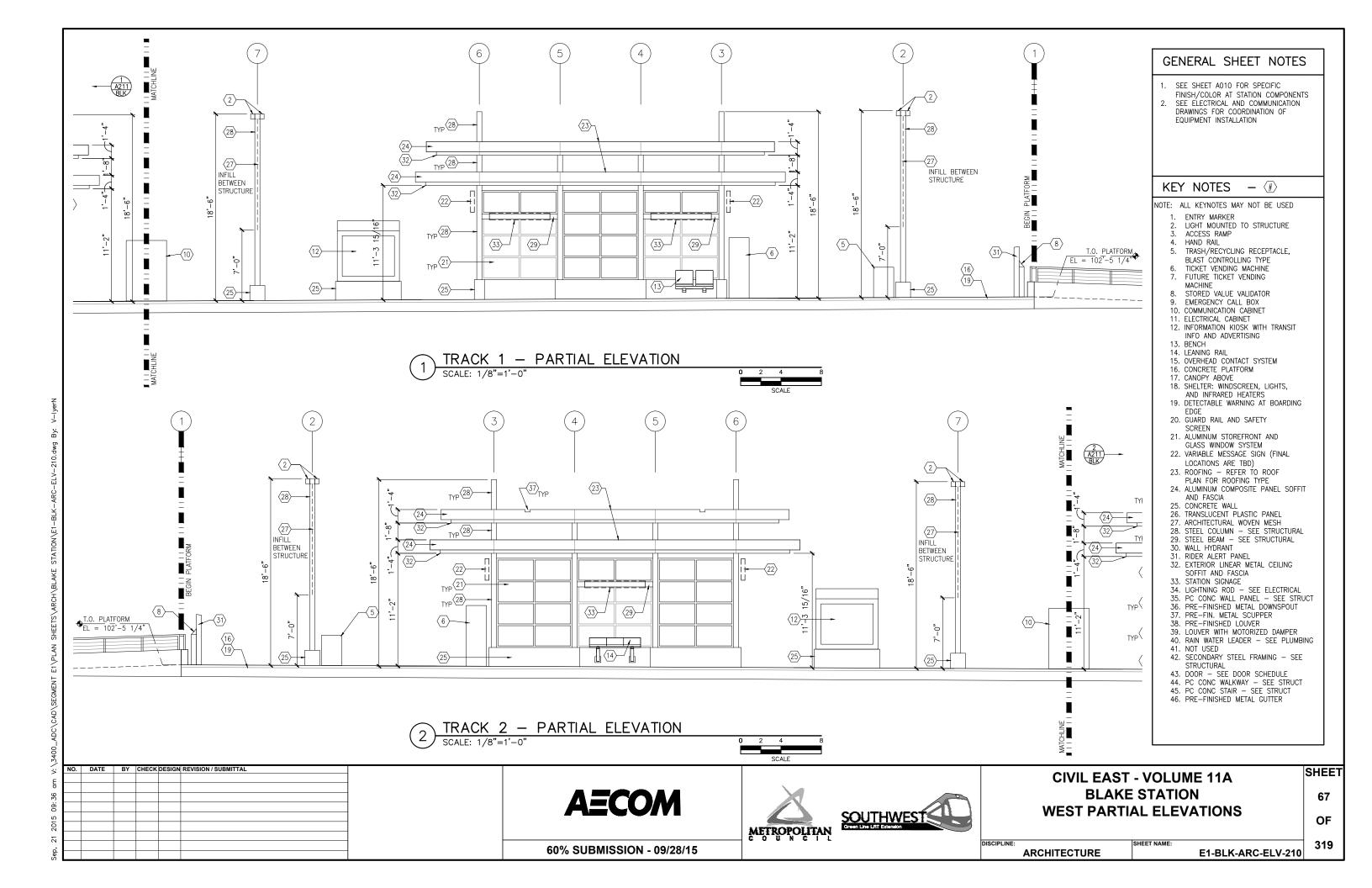


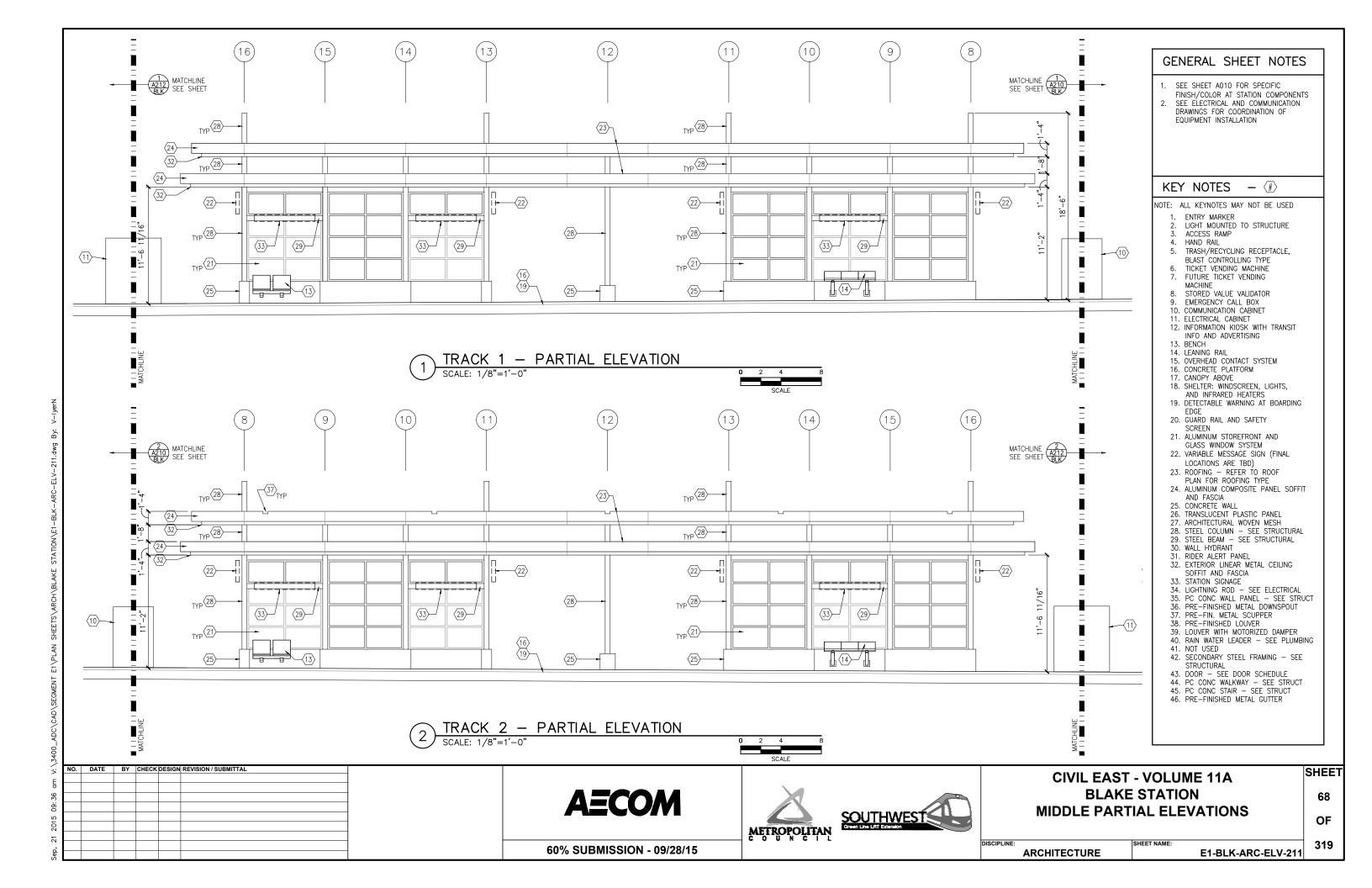


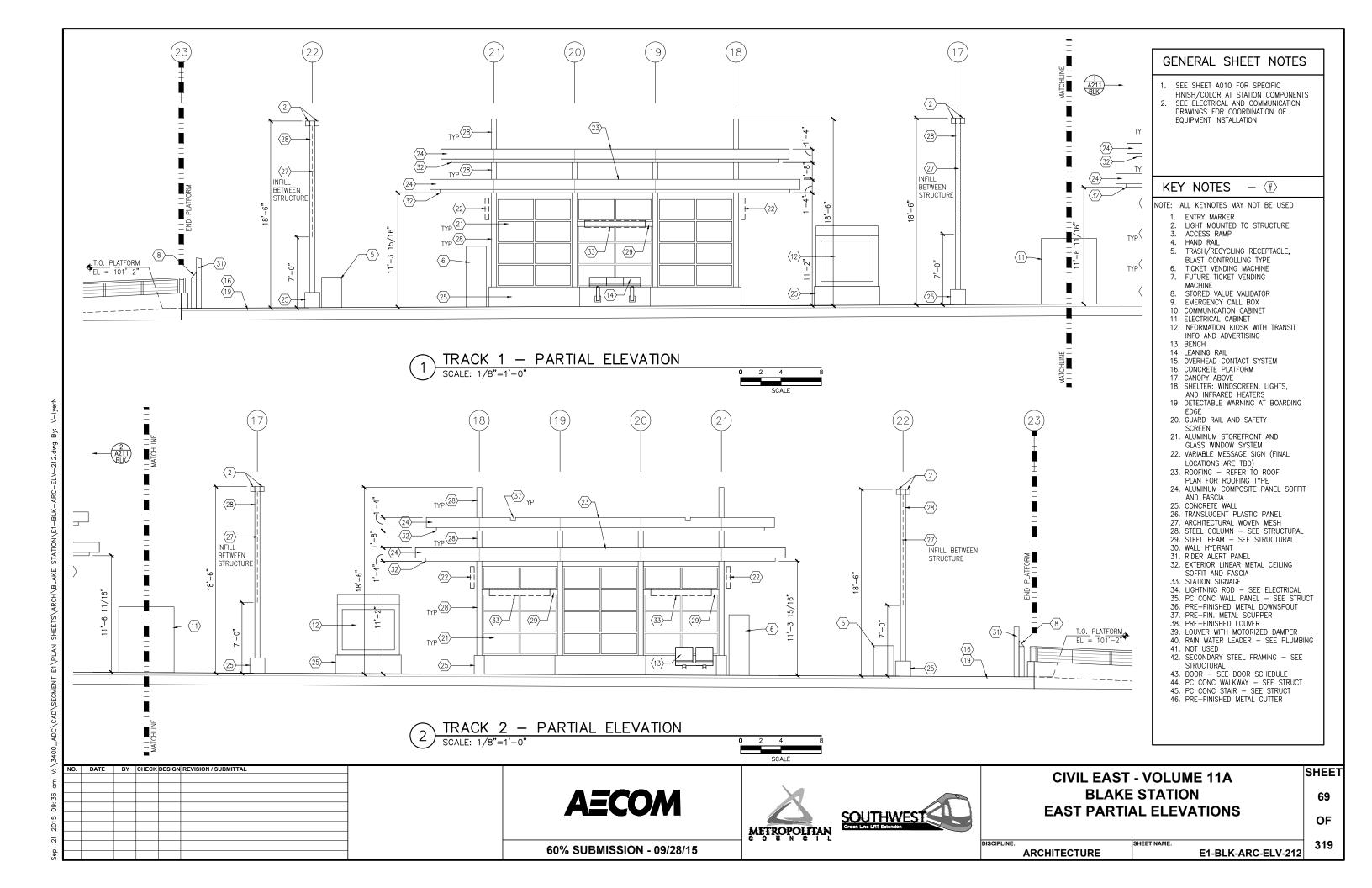
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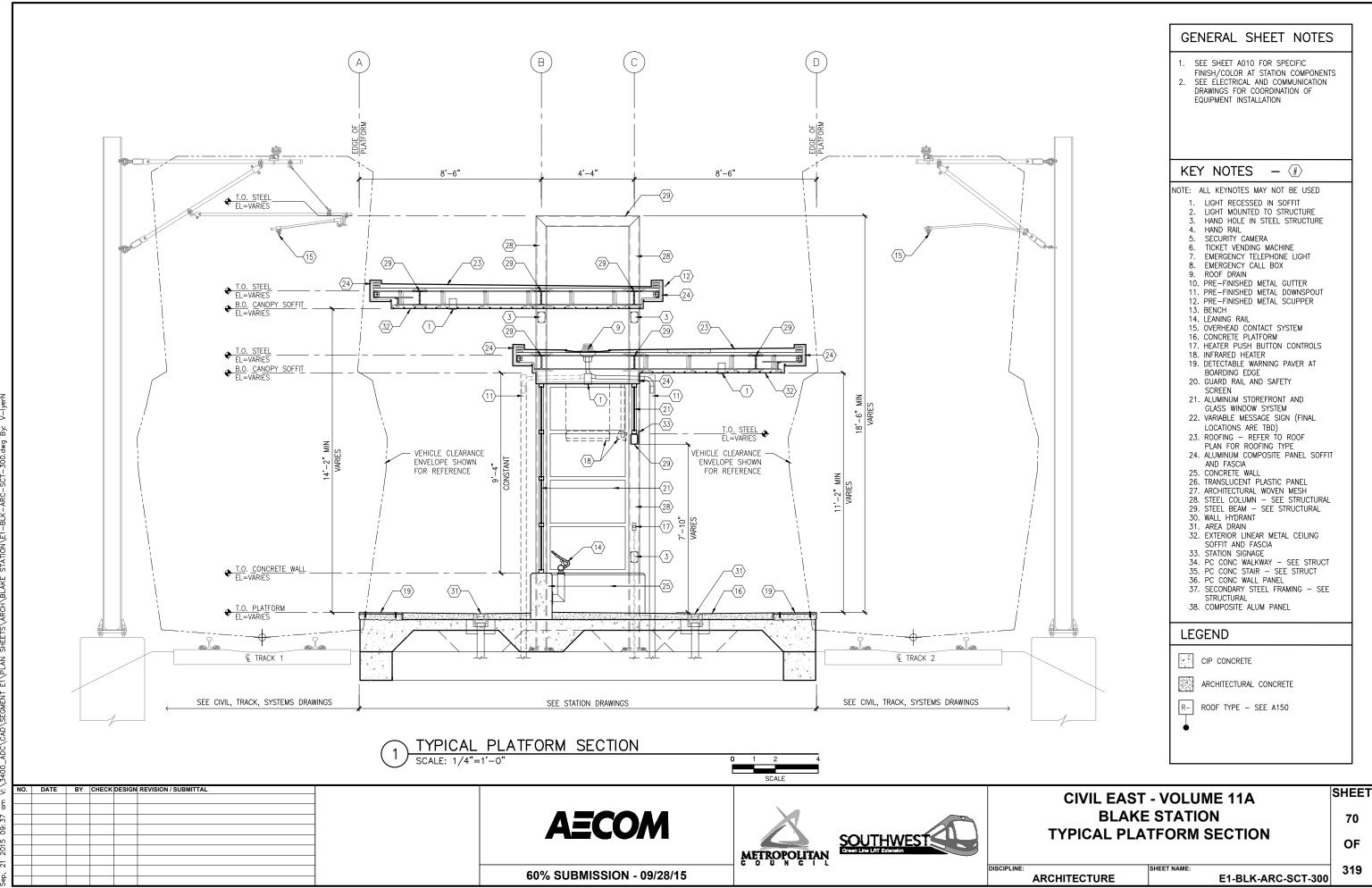
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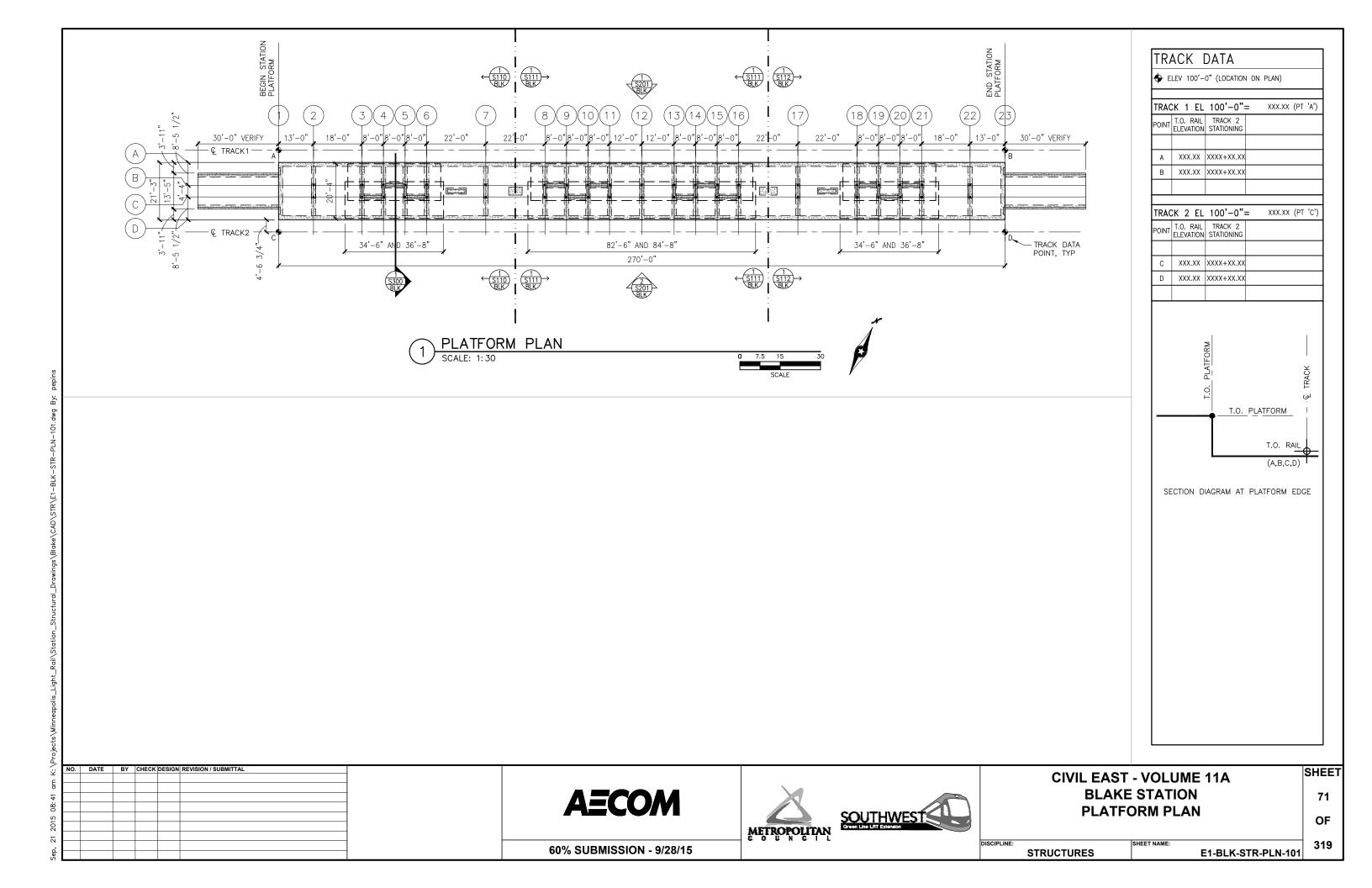
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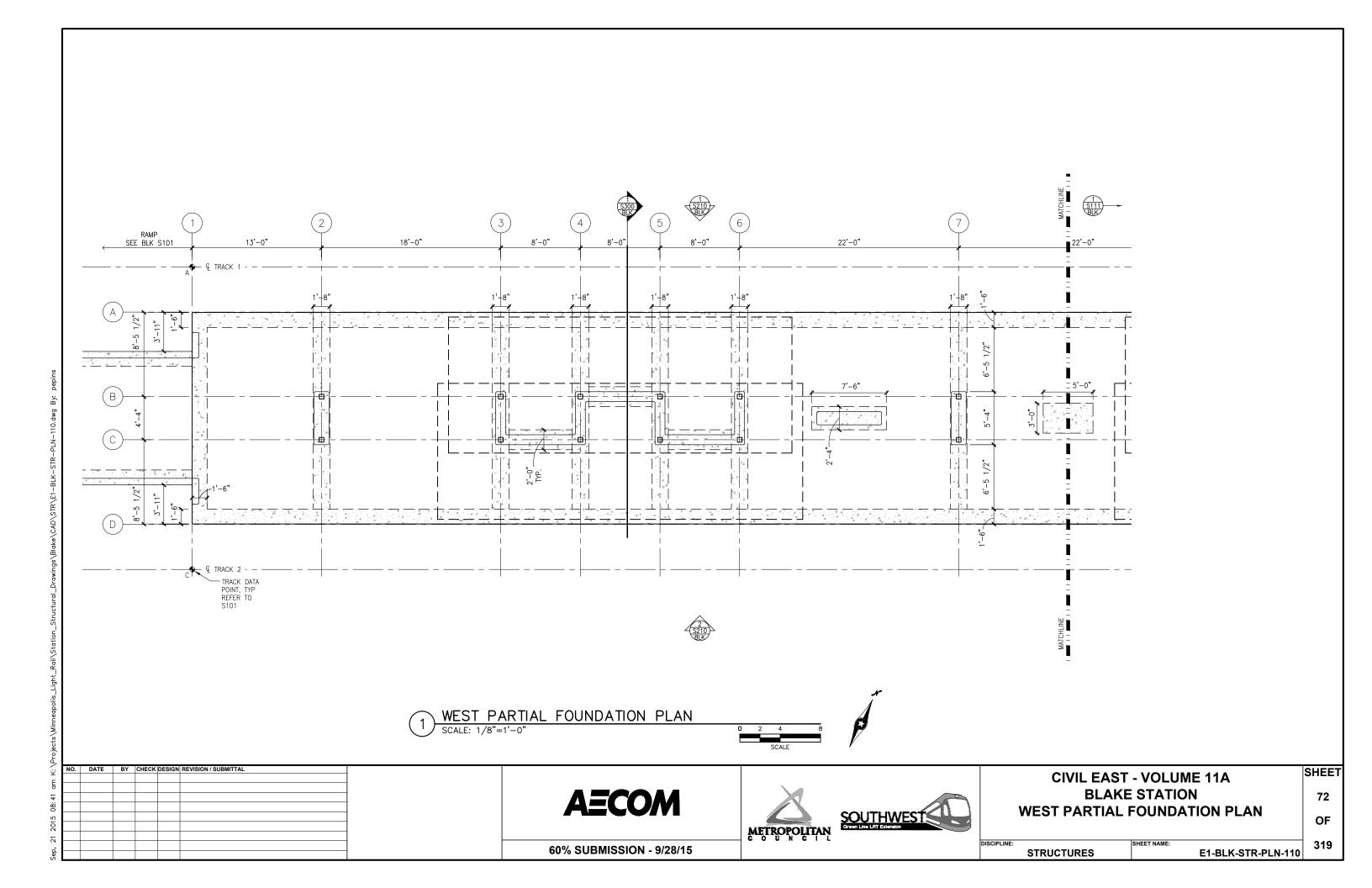


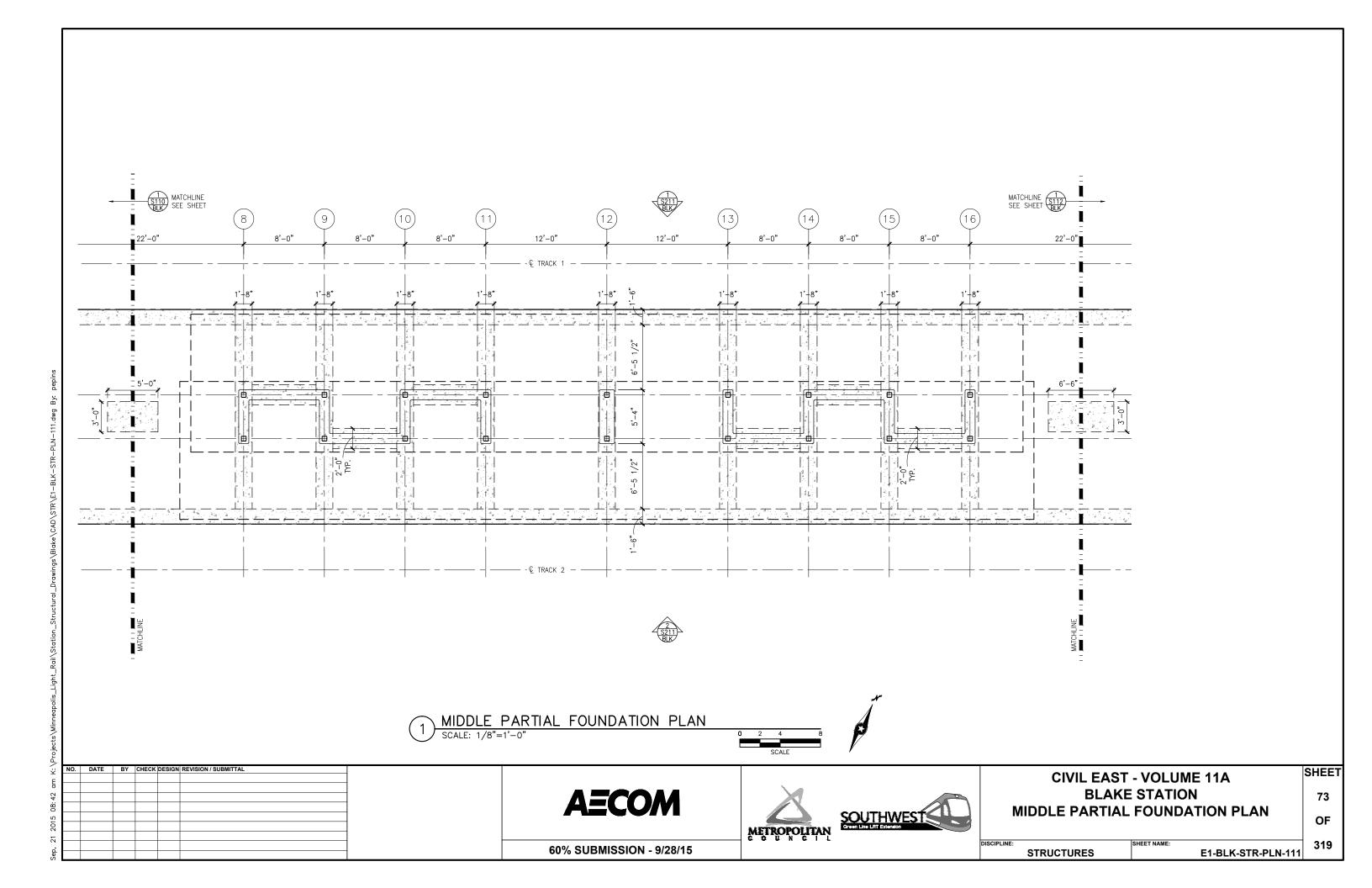


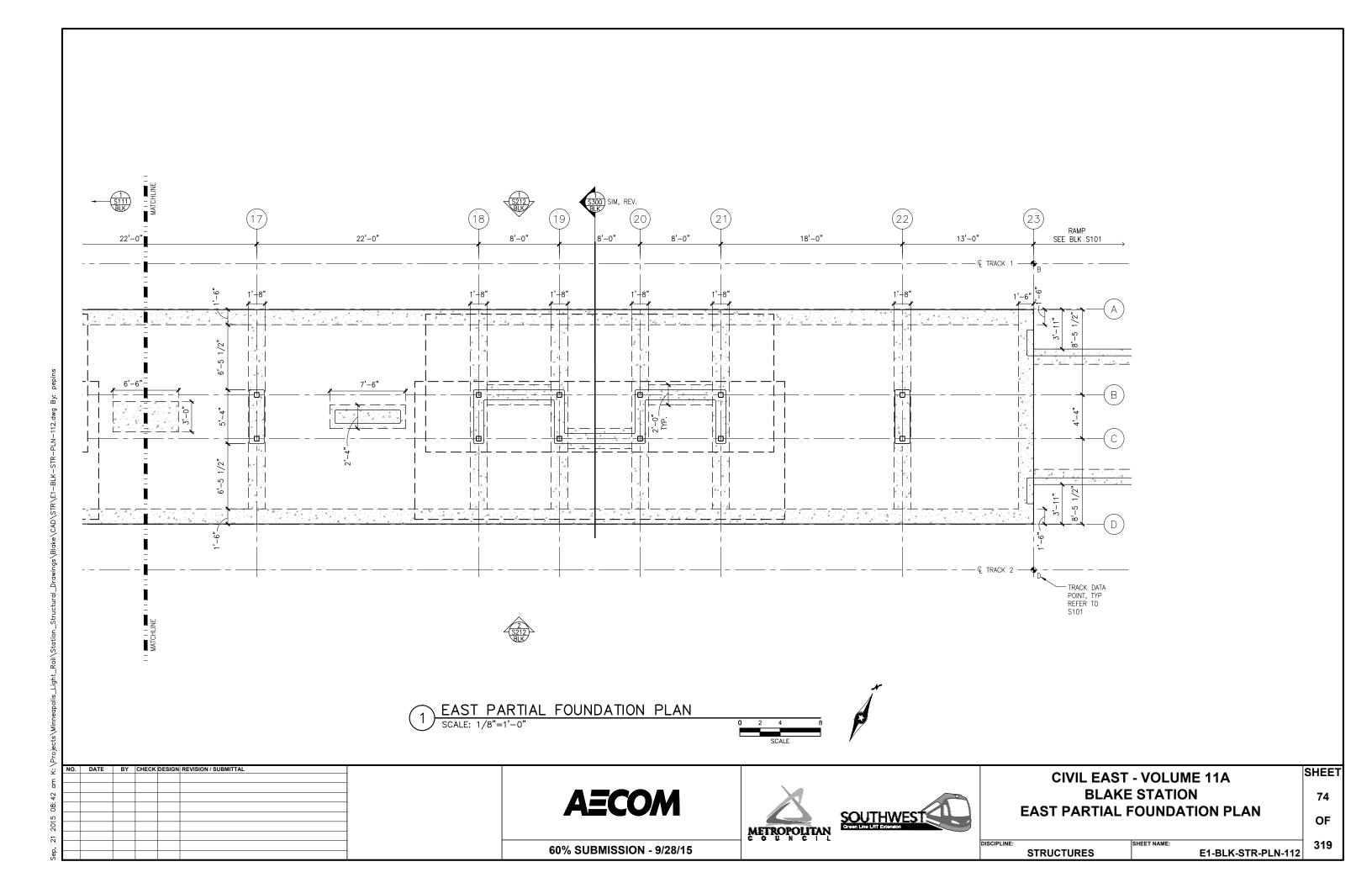


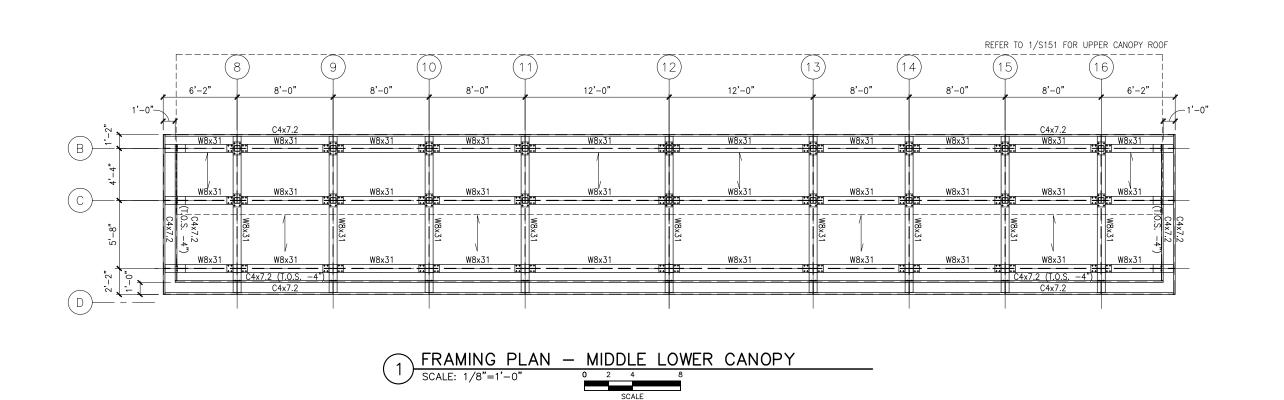


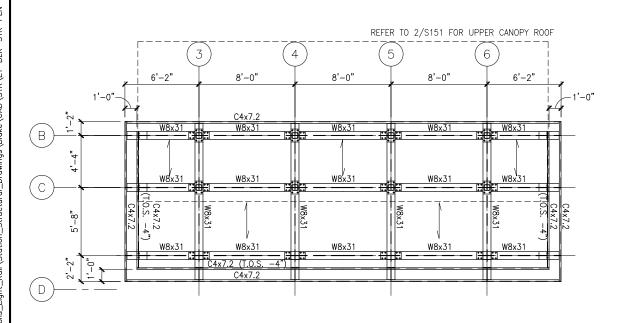


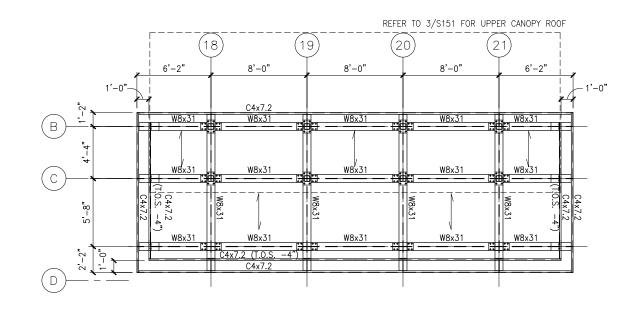














FRAMING PLAN — EAST LOWER CANOPY

SCALE: 1/8"=1'-0"

SCALE: 8

SCALE: 9

SCA

BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 





CIVIL EAST - VOLUME 11A
BLAKE STATION
LOWER ROOF FRAMING PLANS

OF 319

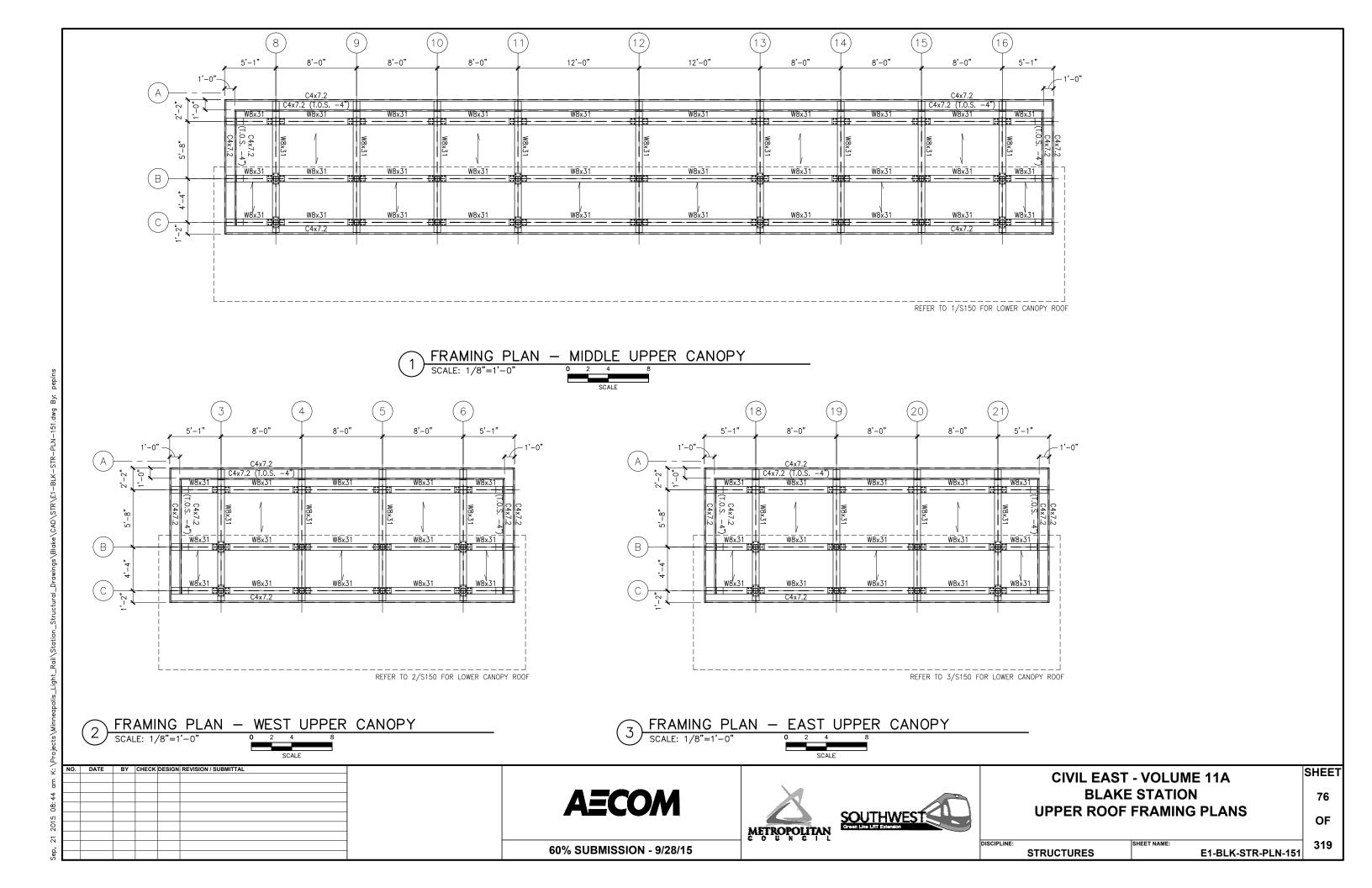
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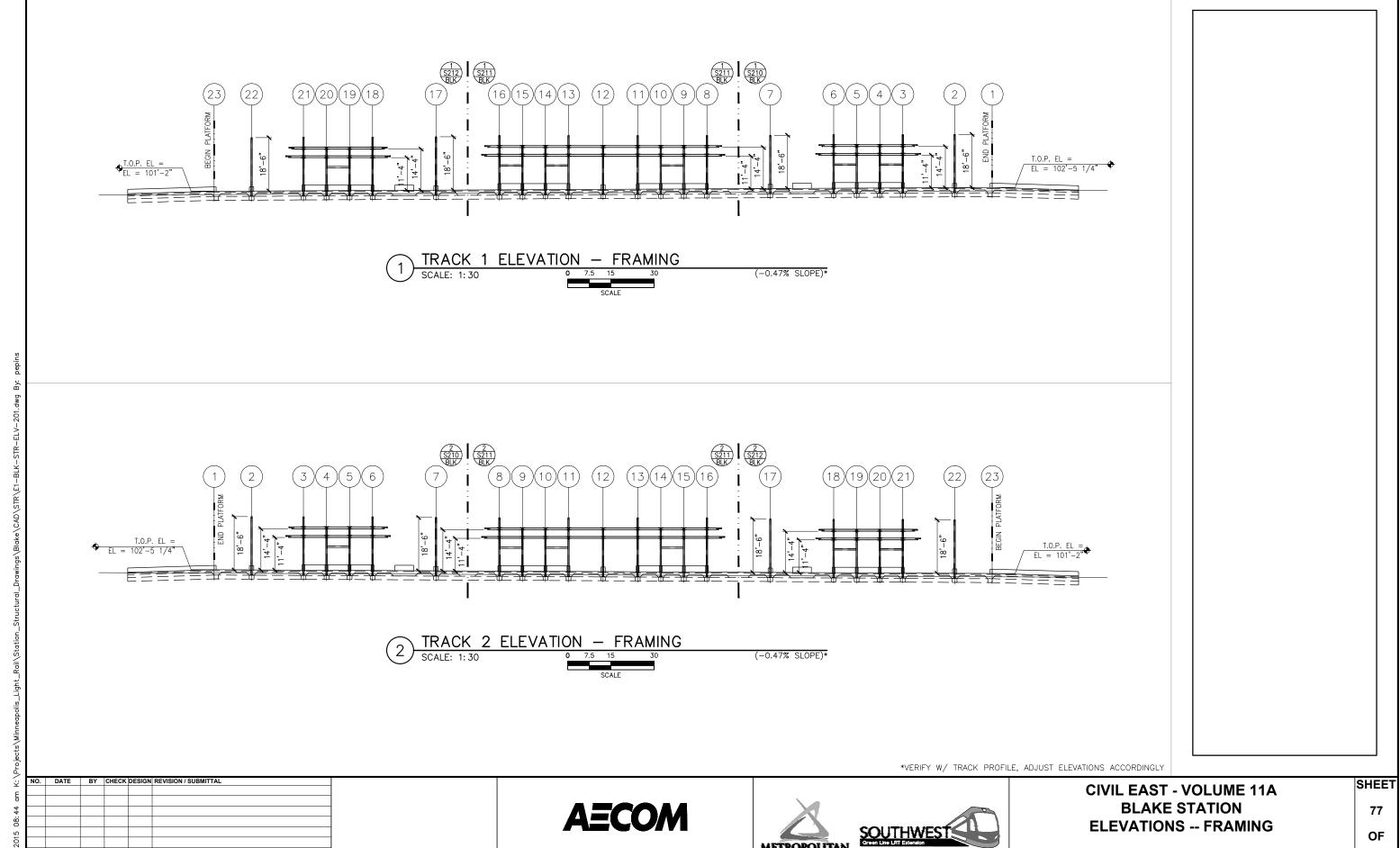
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STRUCTURES

E1-BLK-STR-PLN-150

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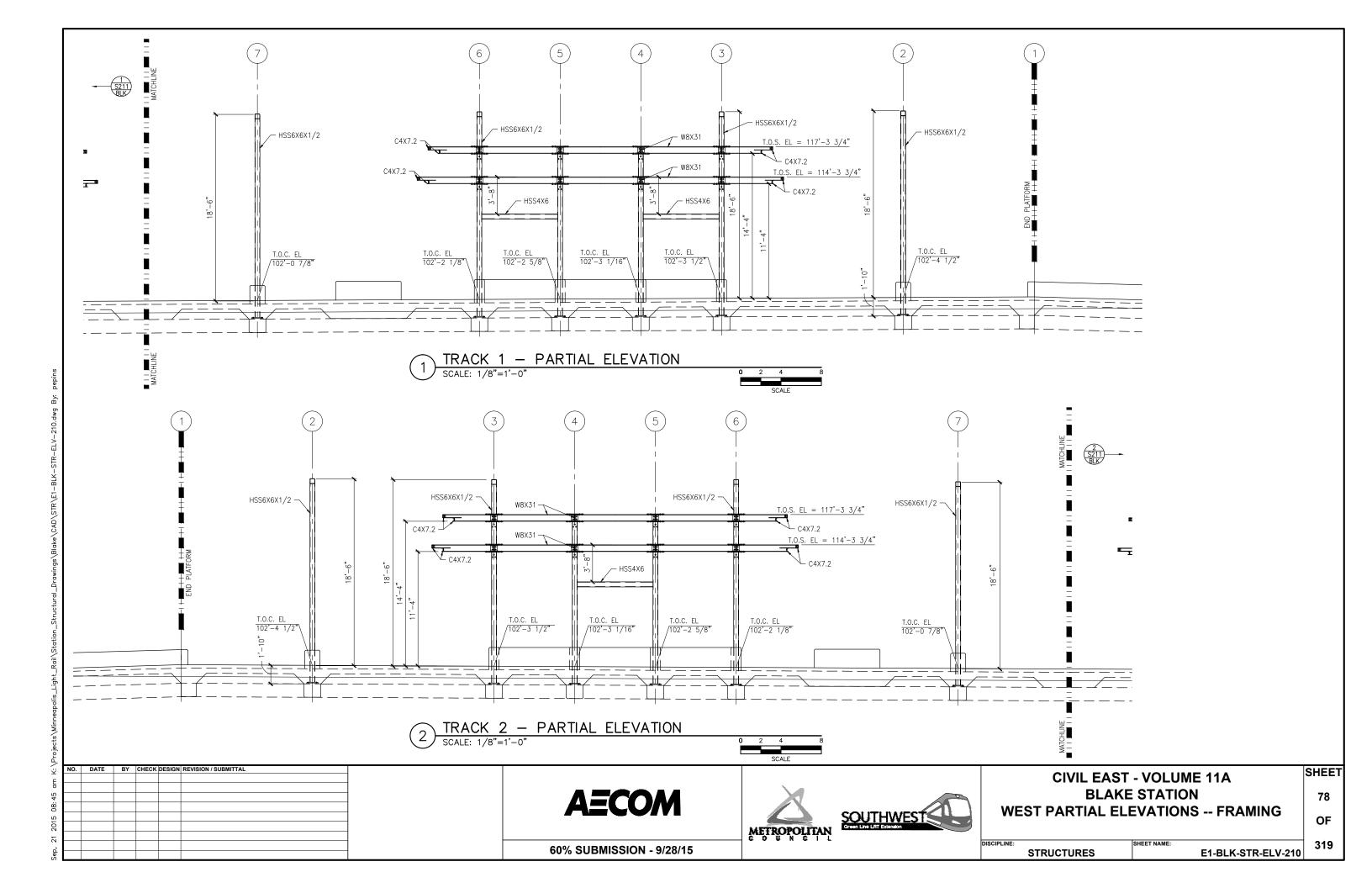
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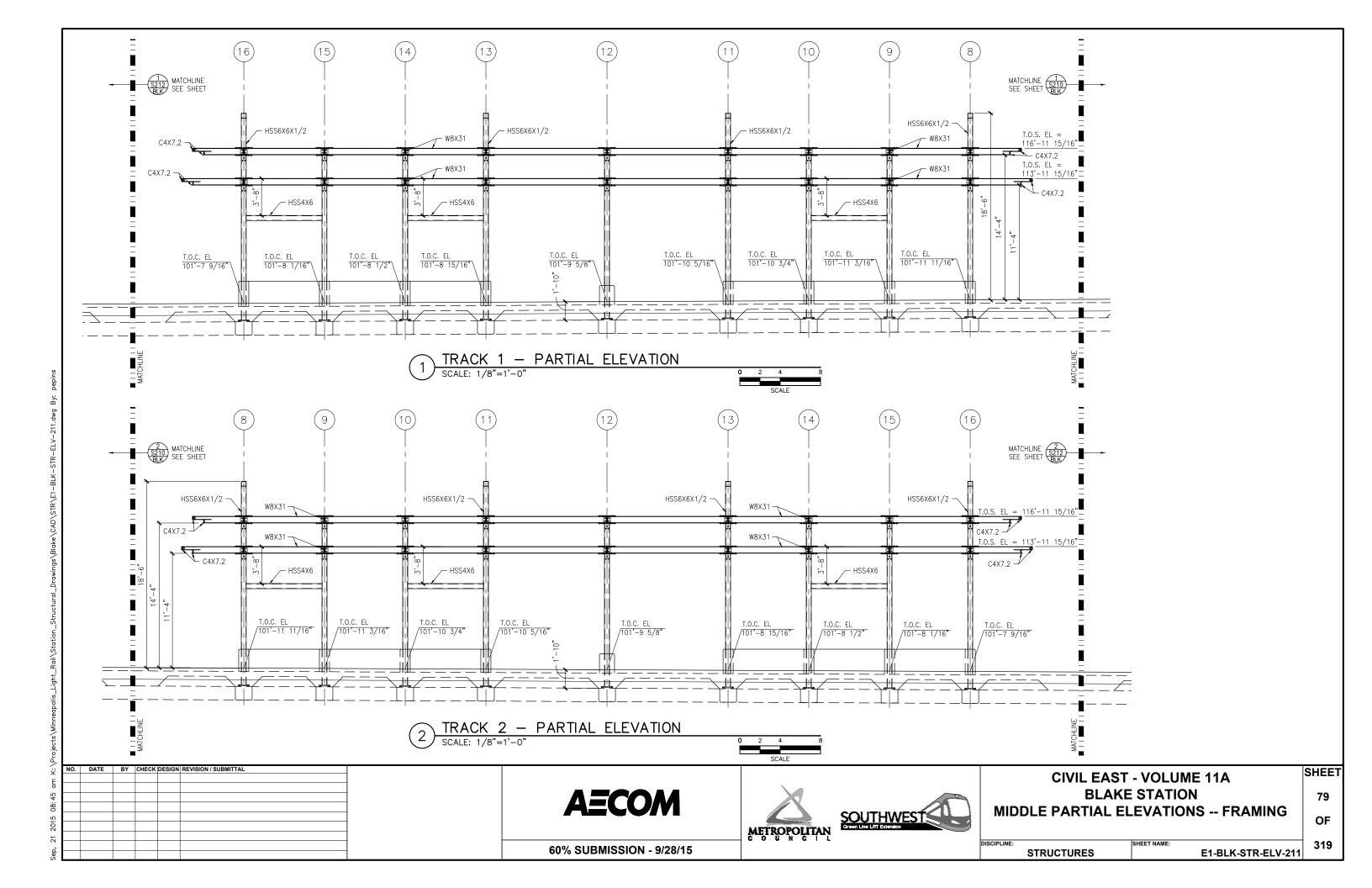
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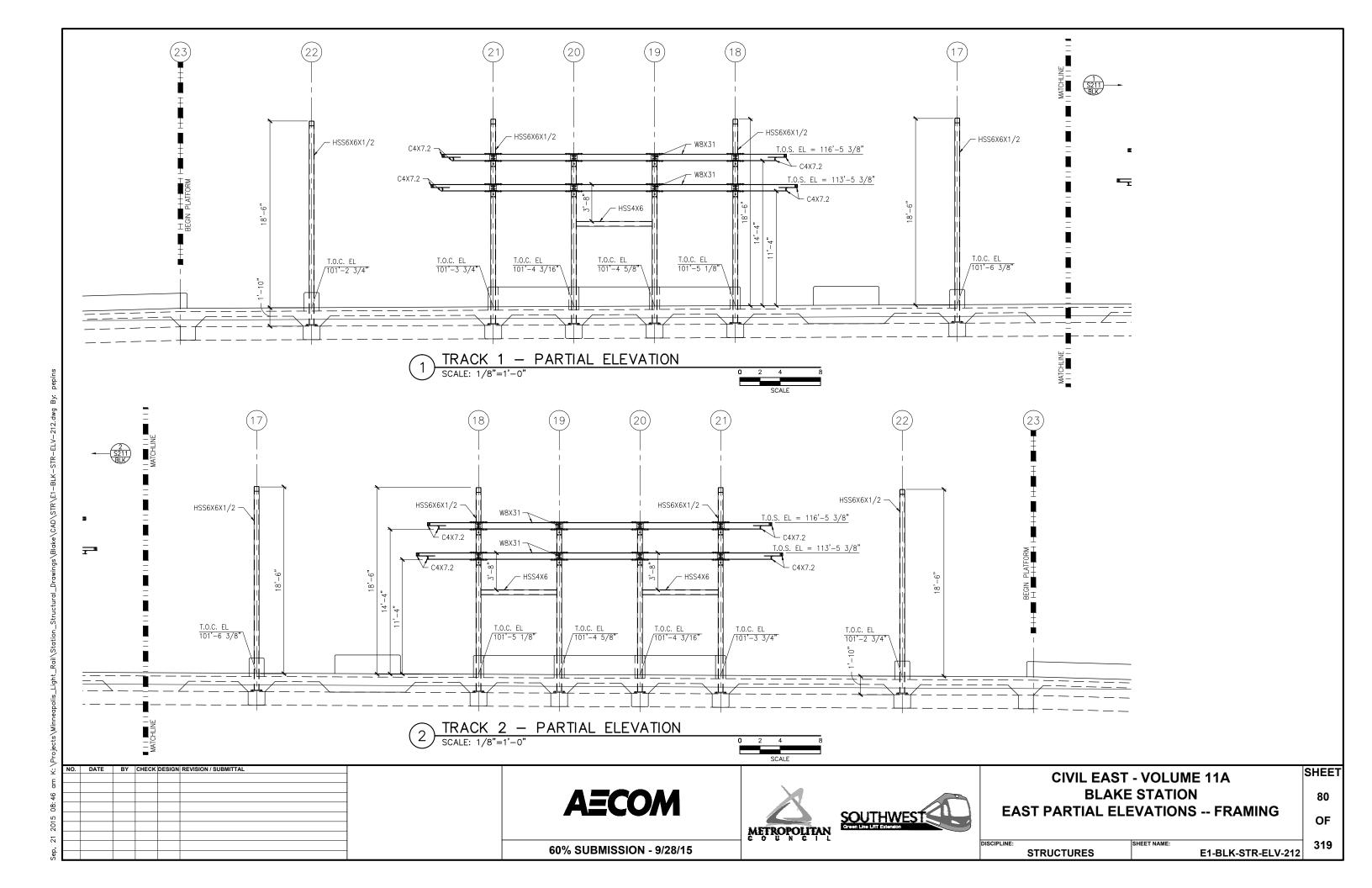
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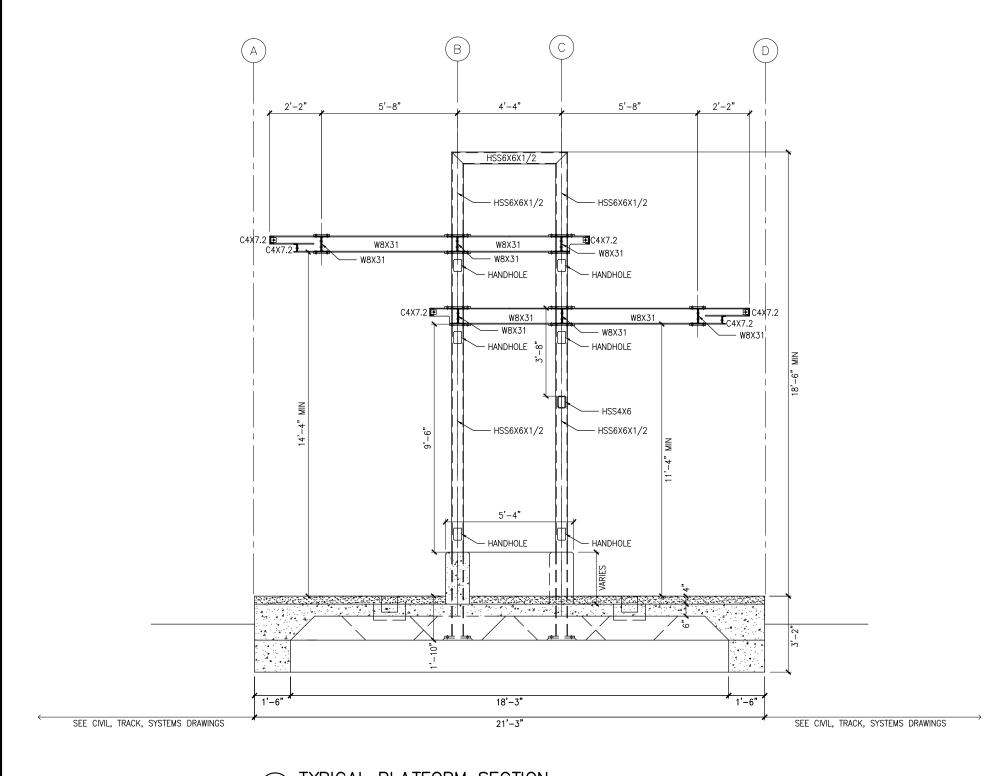
**STRUCTURES** 

Sen 21 2015 C













NO.	DATE	D T	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 





# CIVIL EAST - VOLUME 11A BLAKE STATION TYPICAL PLATFORM SECTION

OF 319

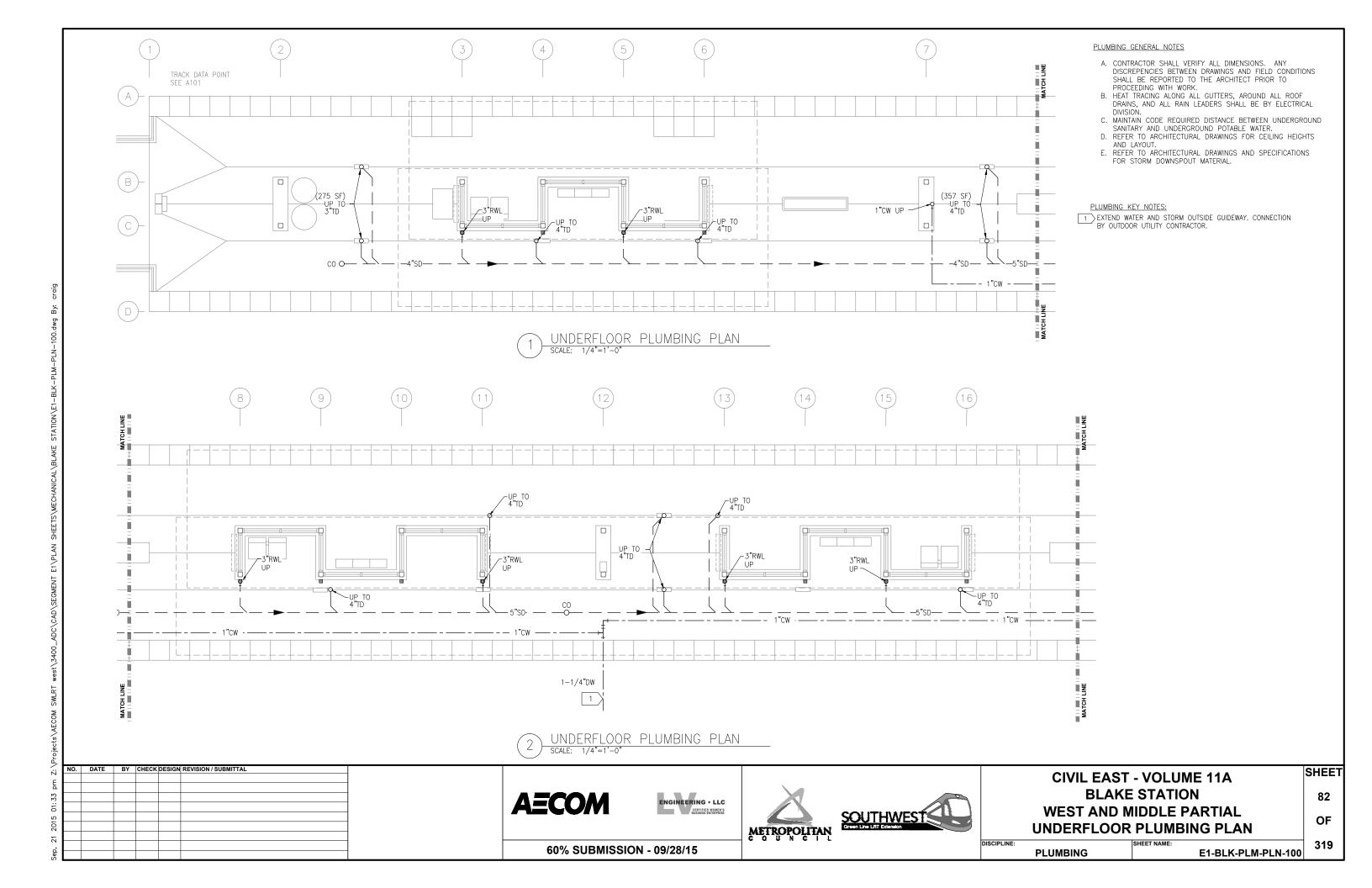
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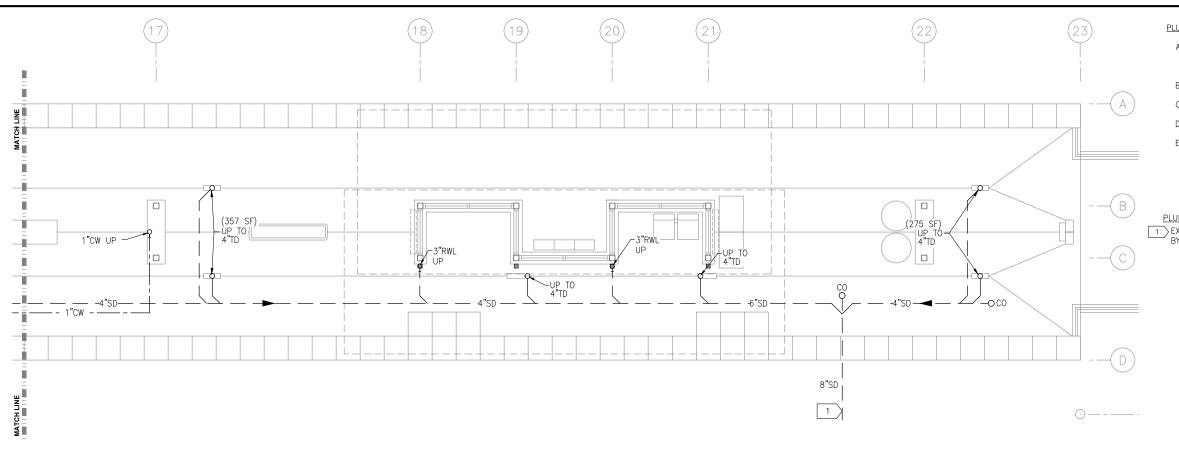
DISCIPLINE:

E1-BLK-STR-SCT-300

60% SUBMISSION - 9/28/15

STRUCTURES





PLUMBING GENERAL NOTES

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY
  DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS
  SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING
  WITH WORK.
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS,
- AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.

  C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
- D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND
- LAYOUT.

  E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

#### PLUMBING KEY NOTES:

1) EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

UNDERFLOOR PLUMBING PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 







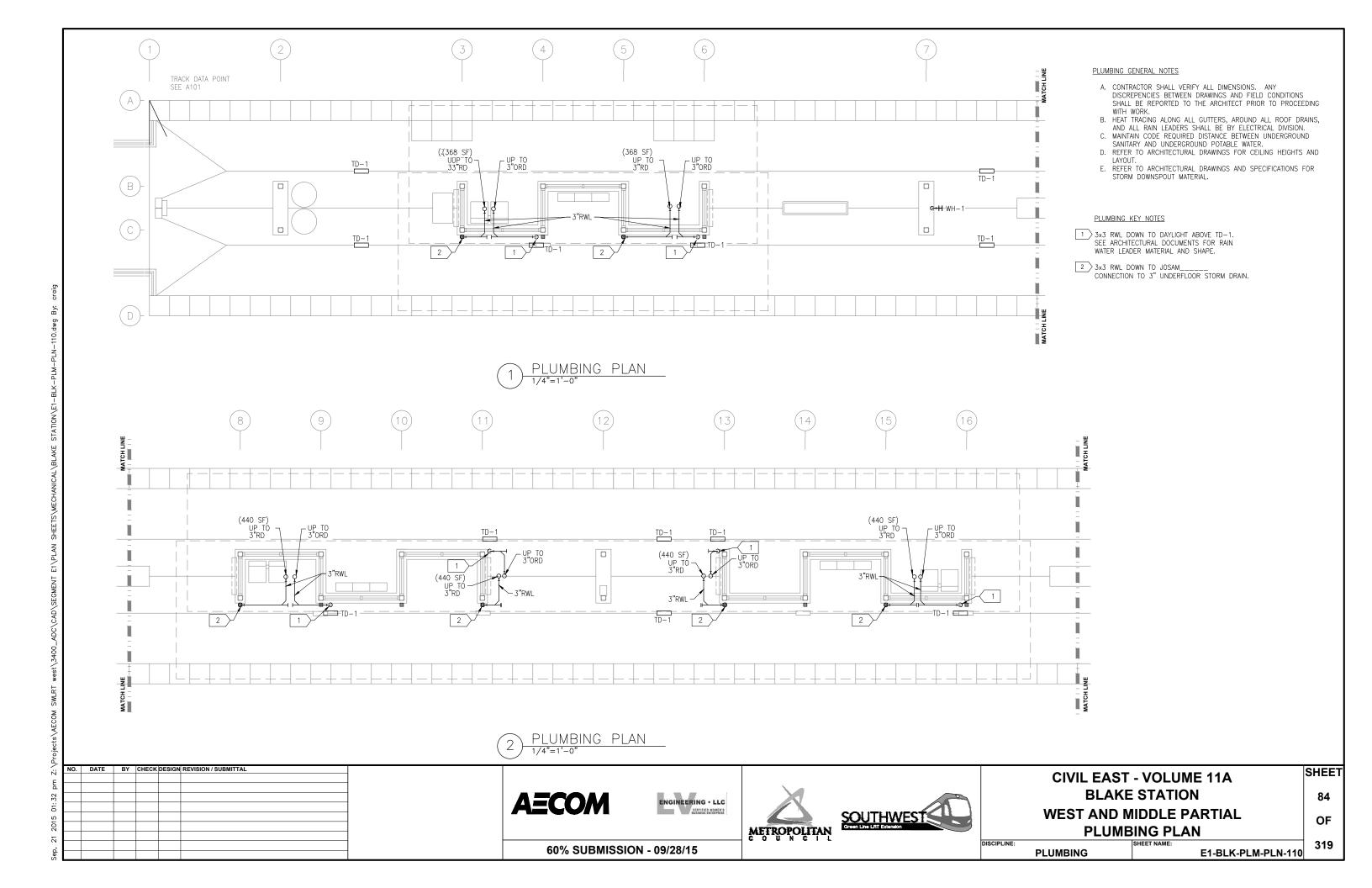
**CIVIL EAST - VOLUME 11A BLAKE STATION EAST PARTIAL UNDERFLOOR PLUMBING PLAN** 

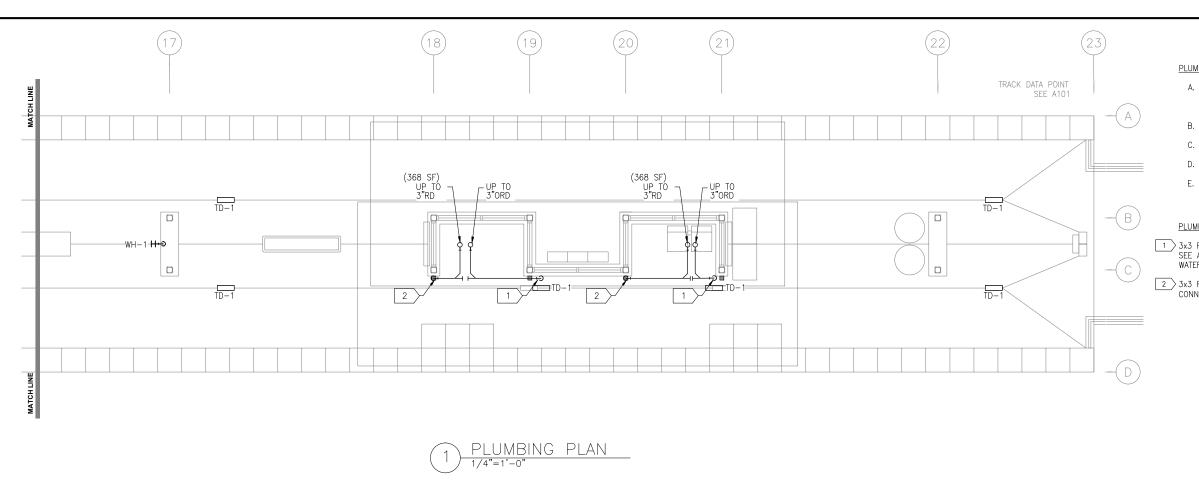
OF 319

60% SUBMISSION - 09/28/15

**PLUMBING** 

E1-BLK-PLM-PLN-101





#### PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- WITH WORK.

  B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.

  C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
- D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND
- E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

### PLUMBING KEY NOTES

- 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.
- 2 3x3 RWL DOWN TO JOSAM_ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 

60% SUBMISSION - 09/28/15







**CIVIL EAST - VOLUME 11A BLAKE STATION EAST PARTIAL PLUMBING PLAN** 

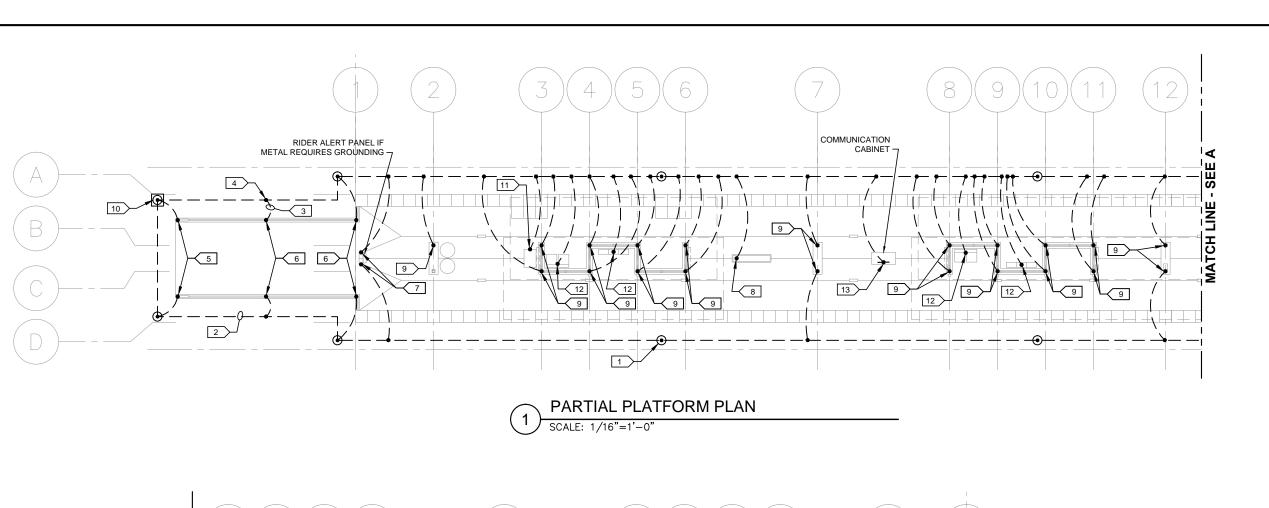
**AND RISER DIAGRAMS** 

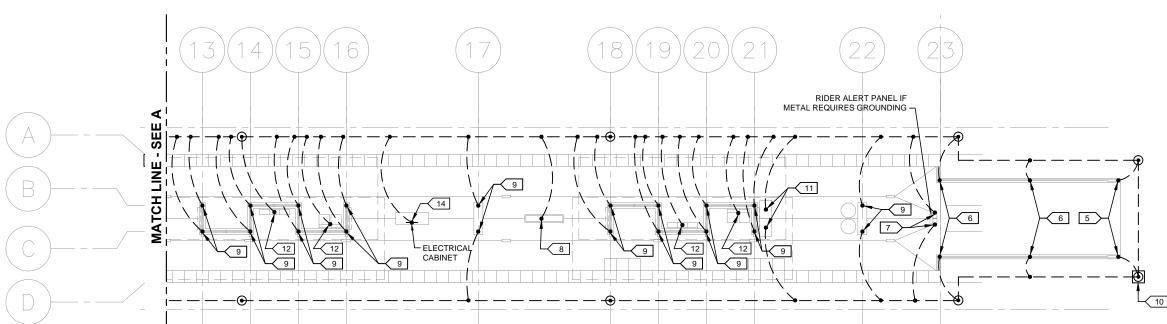
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OF

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E1-BLK-PLM-PLN-111 **PLUMBING** 



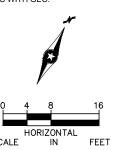


### KEYNOTES:

- 1. GROUND ROD, TYPICAL.
- 2. GROUND LOOP, TYPICAL.
- 3. GEC, TYPICAL.
- 4. EXOTHERMIC WELD, TYPICAL.
- 5. GEC CONNECTION TO SIGN.
- 6. GEC CONNECTION TO RAILING POST.
- 7. GEC CONNECTION TO RSV.
- 8. GEC CONNECTION TO KIOSK. 9. GEC CONNECTION TO COLUMN.
- 10. GROUND TEST WELL.
- 11. GEC CONNECTION TO TVM.
- 12. GEC CONNECTION TO SEAT OR LEAN RAIL.
- 13. GEC CONNECTION TO COMMUNICATIONS CABINET GROUND BUS.
- 14. #3/0 GEC CONNECTION TO ELECTRICAL ENCLOSURE GROUND BUS.

### GENERAL NOTES:

- 1. ALL METALLIC OBJECTS SHALL BE GROUNDED AND THE GROUNDING PLAN IS INTENDED TO DEMONSTRATE THE GROUNDING OF THE PLATFORM, GUIDEWAY AND EQUIPMENT WITHIN THE VICINITY. OBJECTS NOT SHOWN GROUNDED DOES RELIEVE THE CONTRACTOR FROM THE DESIGN INTENT.
- 2. GROUND LOOP SHALL BE #3/0 BARE COPPER LOOP SHALL BE INSTALLED 48" BELOW GRADE OR 6" BELOW THE FROST LINE, WHICHEVER IS GREATER. GROUND LOOP IS SHOWN DIAGRAMMATICALLY. INSTALL GROUND LOOP UNDER PLATFORM PERIMETER TO PROTECT FROM WORK PERFORMED OUTSIDE THE PLATFORM LIMITS BY OTHER TRADES. GROUND TEST WELLS SHALL REMAIN ACCESSIBLE AS SHOWN
- 3. GROUNDING ELECTRODE CONDUCTORS (GEC) SHALL BE #2/0 BARE COPPER UNLESS NOTED OTHERWISE.
- 4. ALL EXOTHERMIC WELDS TO COLUMNS, TVM'S, RSV'S, SEATS, LEAN RAILS AND EQUIPMENT CABINETS SHALL BE ABOVE GRADE AND VISIBLE. PAINT WELDS TO MATCH SURFACE COLOR. VERIFY COLOR WITH CAR.
- 5. INSTALL GROUND ROD SO THAT 8' IS BELOW THE FROST LINE.
- 6. IF RAILING HAS AN ISOLATION GAP, JUMPER BETWEEN GAPS WITH GEC.



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PARTIAL PLATFORM PLAN

60% SUBMISSION - 09/28/15







**CIVIL EAST - VOLUME 11A BLAKE STATION ELECTRICAL GROUNDING PLAN** 

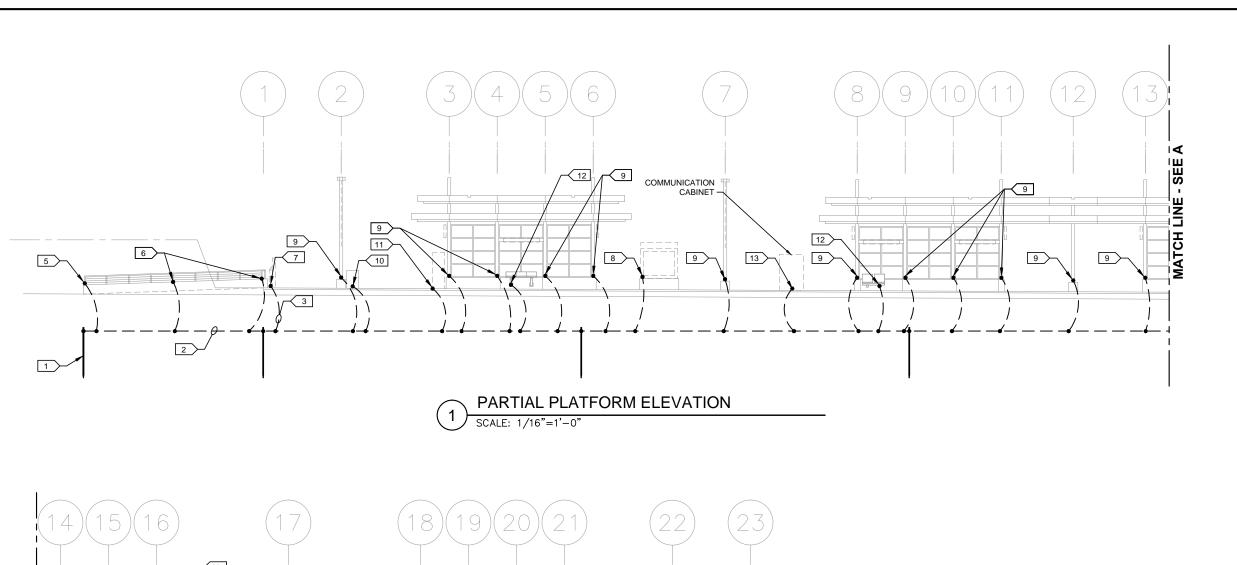
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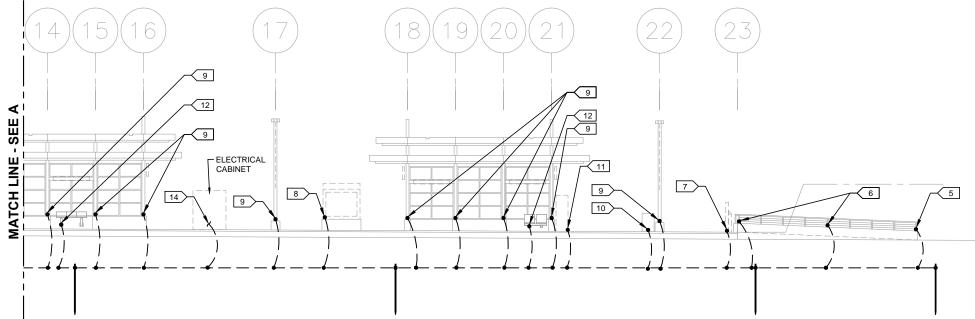
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DISCIPLINE: **ELECTRICAL** 

E1-BLK-ELE-PLN-201





PARTIAL PLATFORM ELEVATION SCALE: 1/16"=1'-0"

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# **CIVIL EAST - VOLUME 11A BLAKE STATION ELECTRICAL GROUNDING ELEVATION**

**ELECTRICAL** 

KEYNOTES: 1. GROUND ROD, TYPICAL. 2. GROUND LOOP, TYPICAL.

3. GEC, TYPICAL.

4. EXOTHERMIC WELD, TYPICAL. 5. GEC CONNECTION TO SIGN.

8. GEC CONNECTION TO KIOSK.

ENCLOSURE.

GENERAL NOTES:

9. GEC CONNECTION TO COLUMN. 10. GEC CONNECTION TO TRASH BARREL. PROVIDE GEC CONNECTION BETWEEN TRASH

11. GEC CONNECTION TO TVM. PROVIDE GEC CONNECTION BETWEEN TVM'S. 12. GEC CONNECTION TO SEAT OR LEAN RAIL.

13. GEC CONNECTION TO COMMUNICATIONS

14. #3/0 GEC CONNECTION TO ELECTRICAL

1. ALL METALLIC OBJECTS SHALL BE GROUNDED AND THE GROUNDING PLAN IS INTENDED TO DEMONSTRATE THE GROUNDING OF THE PLATFORM, GUIDEWAY AND EQUIPMENT WITHIN THE VICINITY. OBJECTS NOT SHOWN GROUNDED DOES RELIEVE THE CONTRACTOR FROM FULLING TO DESIGN INTENT. 2. GROUND LOOP SHALL BE #3/0 BARE COPPER. LOOP SHALL BE INSTALLED AT 48" BELOW GRADE OR 6" BELOW THE FROST LINE, WHICHEVER IS GREATER, LOOP SHALL BE INSTALLED AT LEAST 8' PERPENDICULAR FROM THE STATION PERIMETER FOUNDATION. 3. GROUNDING ELECTRODE CONDUCTORS (GEC) SHALL BE #2/0 BARE COPPER UNLESS NOTED

4. ALL EXOTHERMIC WELDS TO COLUMNS, TVM'S, SVC'S. SEATS. LEAN RAILS. WATER HYDRANTS. TRASH BARRELS AND EQUIPMENT CABINETS SHALL BE ABOVE GRADE AND VISIBLE. PANT

WELDS TO MATCH SURFACE COLOR. VERIFY COLOR WITH CAR.

5. PROVIDE GROUND ROD SO THAT 8' IS BELOW

6. IF RAILING HAS SPLICES, JUMPER SPLICES

THE FROST LINE.

WITH GEC.

ENCLOSURE GROUND BUS.

6. GEC CONNECTION TO RAILING POST. 7. GEC CONNECTION TO SVC. PROVIDE GEC CONNECTION BETWEEN SVC'S.

E1-BLK-ELE-PLN-202

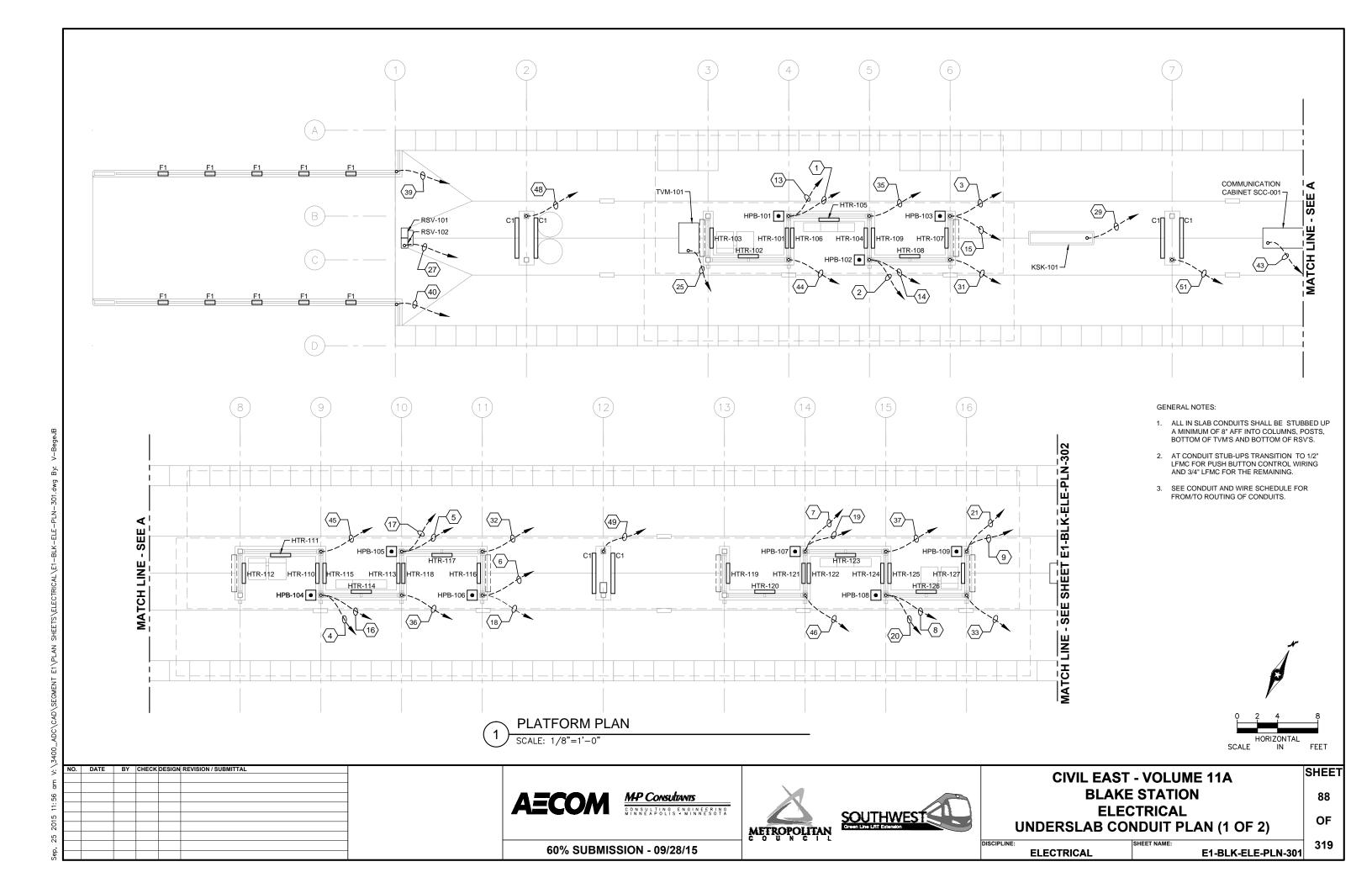
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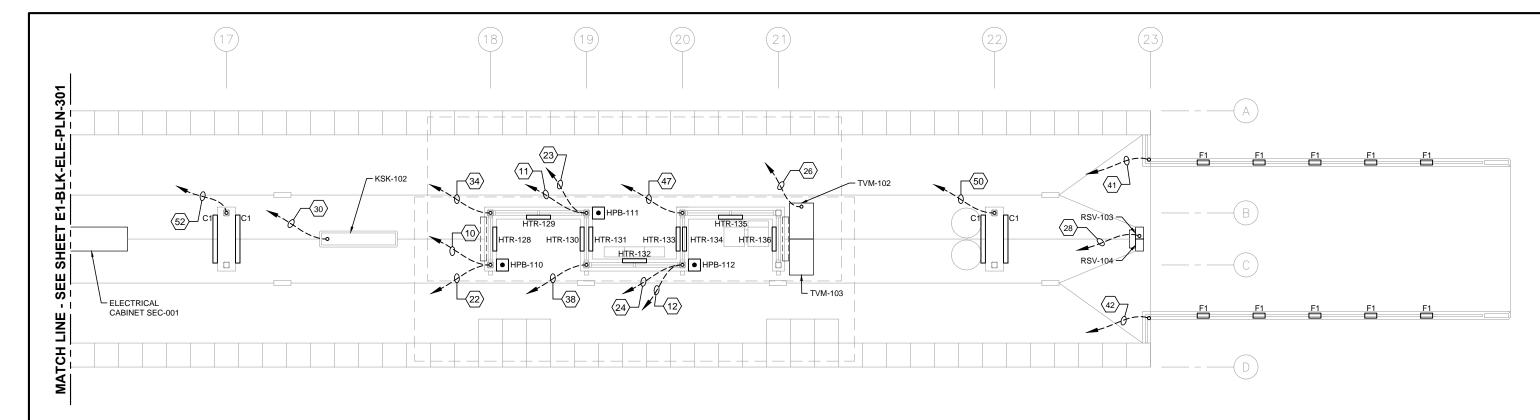
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60% SUBMISSION - 09/28/15

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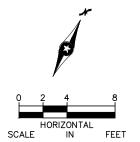


# PLATFORM PLAN

SCALE: 1/8"=1'-0"

### GENERAL NOTES:

- ALL IN SLAB CONDUITS SHALL BE STUBBED UP
   A MINIMUM OF 8" AFF INTO COLUMNS, POSTS,
   BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
- AT CONDUIT STUB-UPS TRANSITION TO 1/2"
   LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
- 3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.



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CIVIL EAST - VOLUME 11A
BLAKE STATION
ELECTRICAL
UNDERSLAB CONDUIT PLAN (2 OF 2)

PLAN (2 OF 2)

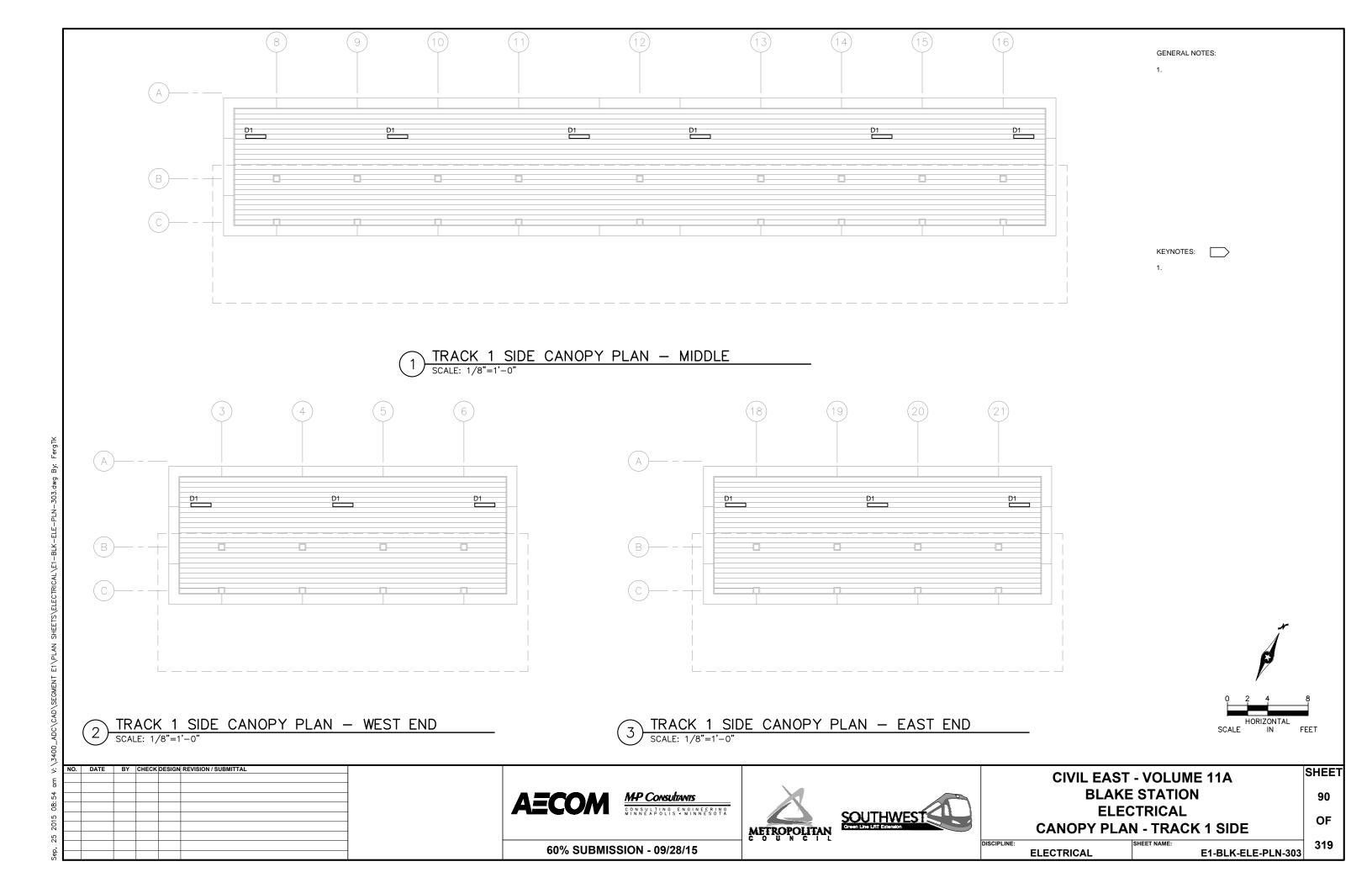
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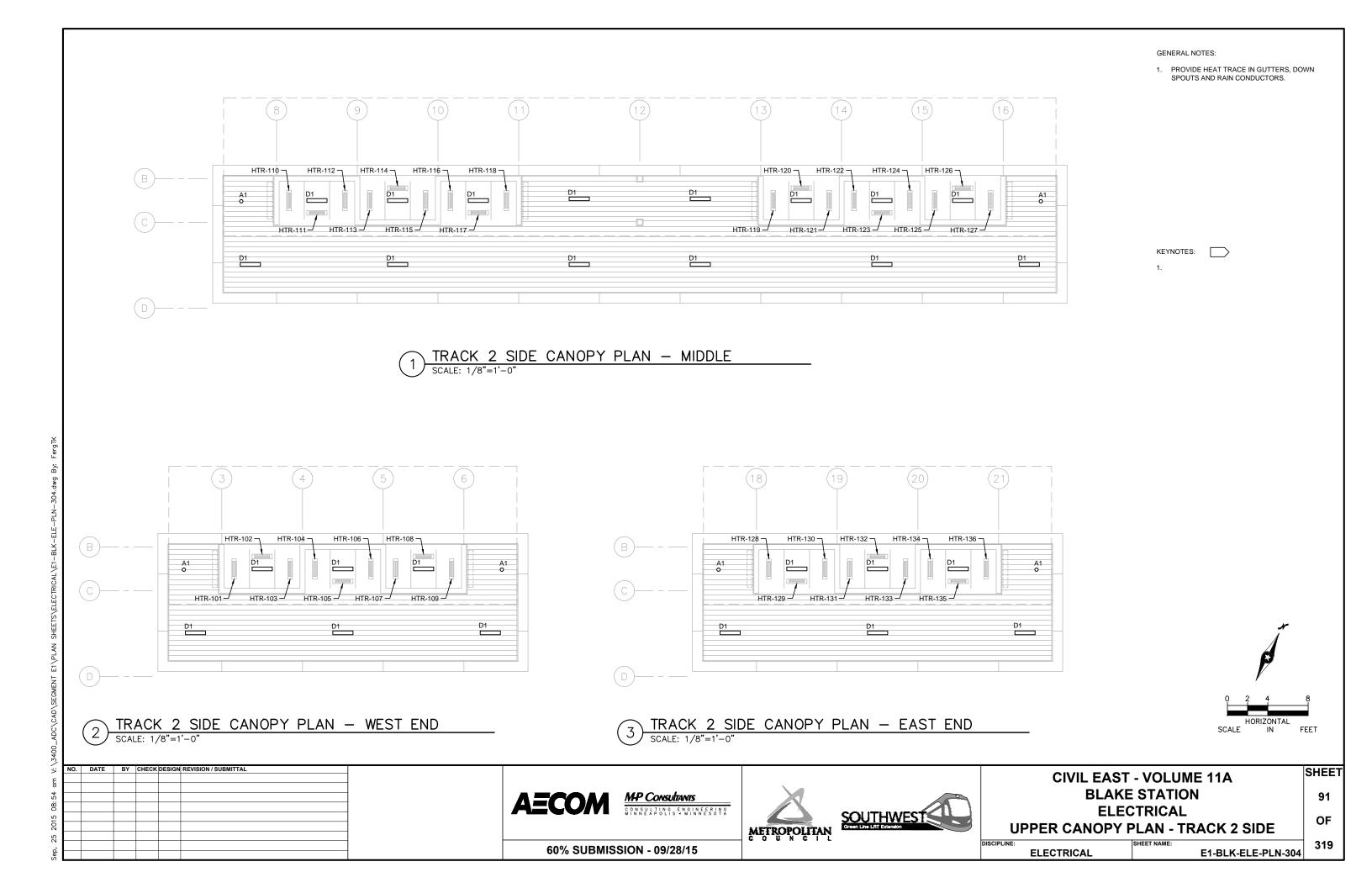
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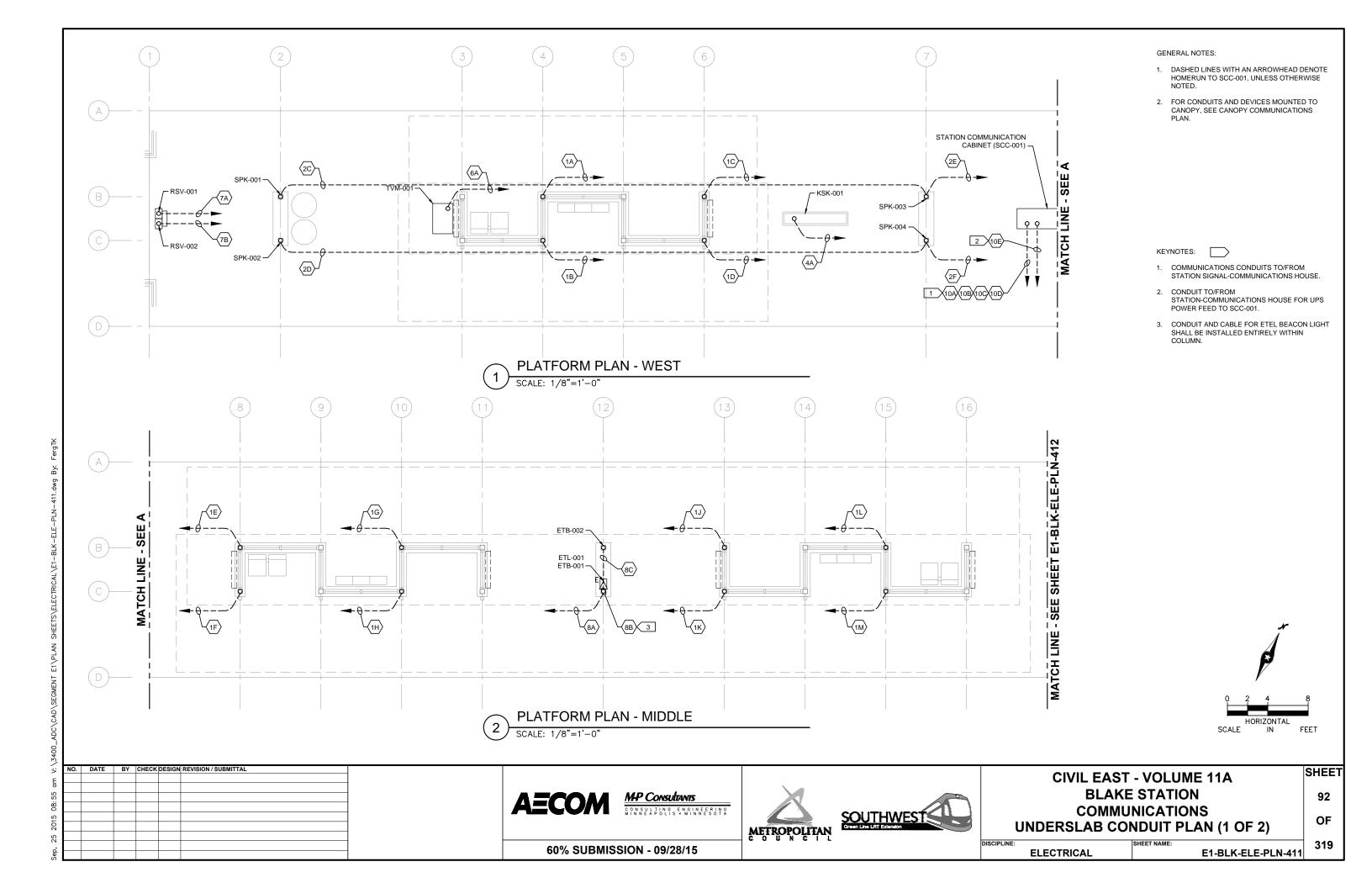
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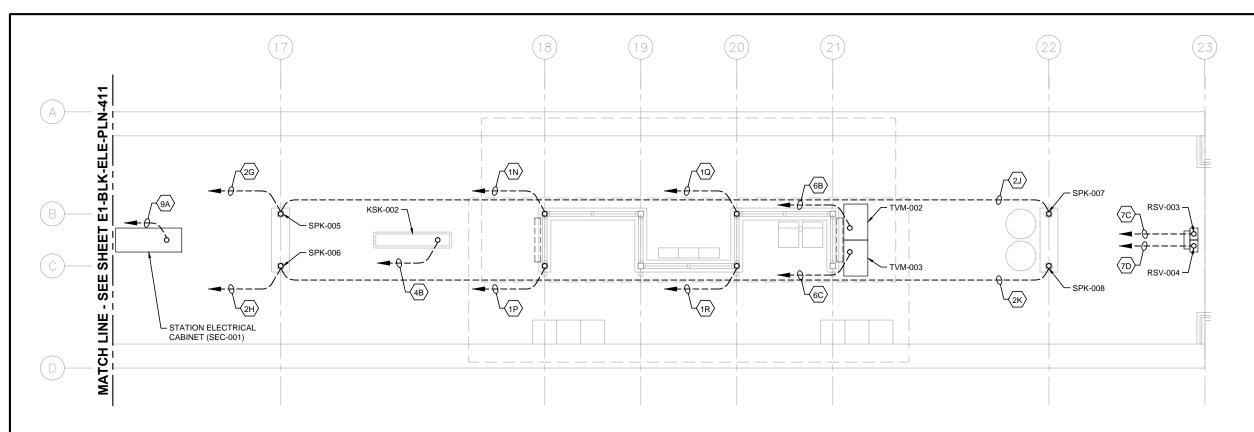
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GENERAL NOTES:

- DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE
- 2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS

KEYNOTES:

PLATFORM PLAN - EAST

SCALE: 1/8"=1'-0"

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**CIVIL EAST - VOLUME 11A BLAKE STATION COMMUNICATIONS UNDERSLAB CONDUIT PLAN (2 OF 2)** 

OF 319

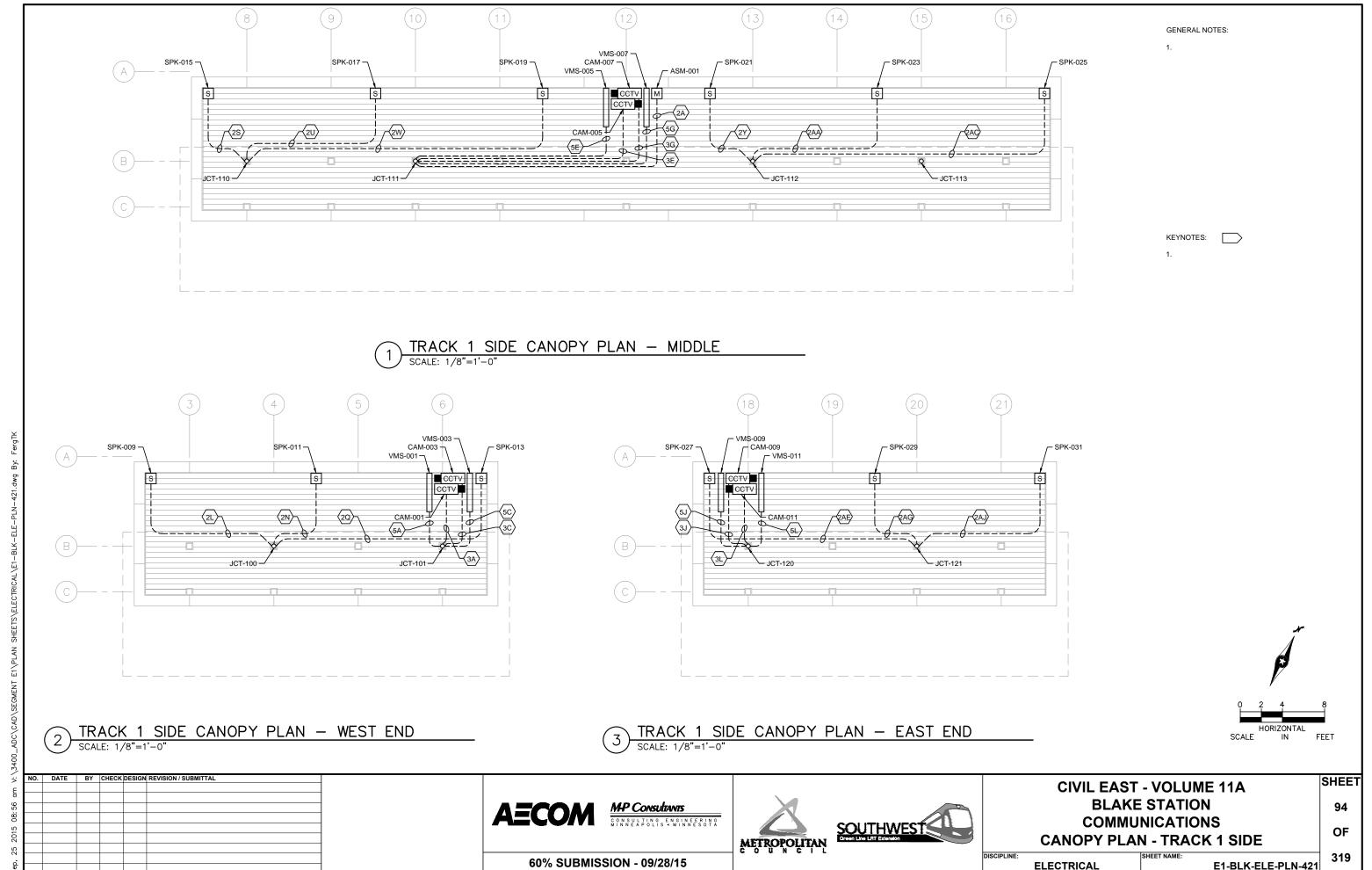
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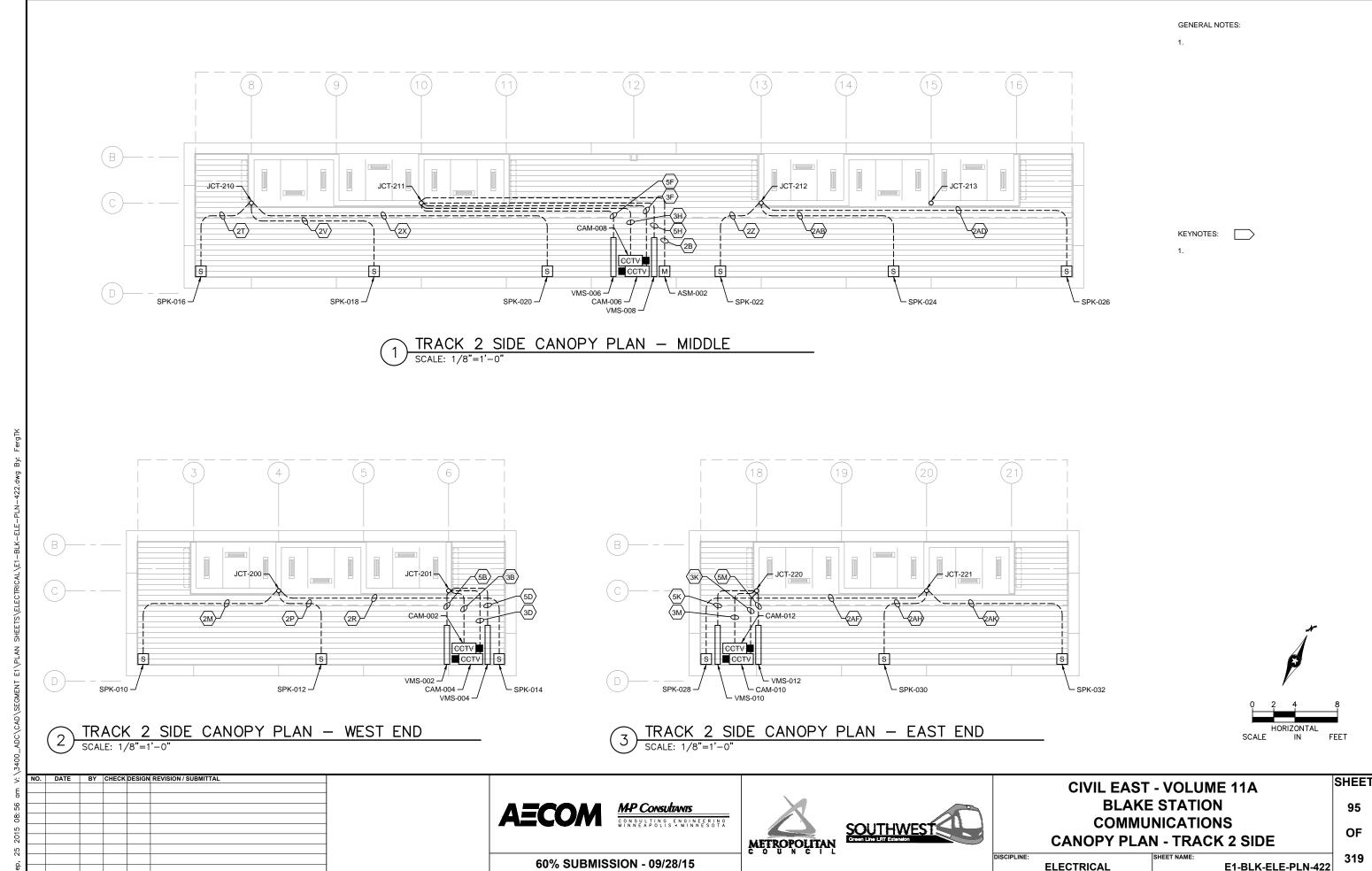
60% SUBMISSION - 09/28/15

**ELECTRICAL** 

E1-BLK-ELE-PLN-412



**ELECTRICAL** 



**ELECTRICAL** 

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	то	CONDUIT SIZE
10A	BLK -CON-0001	S/C HOUSE TO SCC-001	S/C MANHOLE	BLK -SCC-001	3"
10B	BLK -CON-0002	S/C HOUSE TO SCC-001	S/C MANHOLE	BLK -SCC-001	3"
10C	BLK -CON-0003	S/C HOUSE TO SCC-001	S/C MANHOLE	BLK -SCC-001	3"
10D	BLK -CON-0004	S/C HOUSE TO SCC-001	S/C MANHOLE	BLK -SCC-001	3"
10E	BLK -CON-0005	UPS POWER FEED: SCH TO SCC	BLK -SCH-001	BLK -SCC-001	3"
1A	BLK -CON-0101	SCC TO JUNCTION 100	BLK -SCC-001	BLK -JCT-100	2"
1B	BLK -CON-0102	SCC TO JUNCTION 200	BLK -SCC-001	BLK -JCT-200	2"
1C	BLK -CON-0103	SCC TO JUNCTION 101	BLK -SCC-001	BLK -JCT-101	2"
1D	BLK -CON-0104	SCC TO JUNCTION 201	BLK -SCC-001	BLK -JCT-201	2"
1E	BLK -CON-0105	SCC TO JUNCTION 110	BLK -SCC-001	BLK -JCT-110	2"
1F	BLK -CON-0106	SCC TO JUNCTION 210	BLK -SCC-001	BLK -JCT-210	2"
1G	BLK -CON-0107	SCC TO JUNCTION 111	BLK -SCC-001	BLK -JCT-111	2"
1H	BLK -CON-0108	SCC TO JUNCTION 211	BLK -SCC-001	BLK -JCT-211	2"
1J	BLK -CON-0109	SCC TO JUNCTION 112	BLK -SCC-001	BLK -JCT-112	2"
1K	BLK -CON-0110	SCC TO JUNCTION 212	BLK -SCC-001	BLK -JCT-212	2"
1L	BLK -CON-0111	SCC TO JUNCTION 113	BLK -SCC-001	BLK -JCT-113	2"
1M	BLK -CON-0112	SCC TO JUNCTION 213	BLK -SCC-001	BLK -JCT-213	2"
1N	BLK -CON-0113	SCC TO JUNCTION 120	BLK -SCC-001	BLK -JCT-120	2"
1P	BLK -CON-0114	SCC TO JUNCTION 220	BLK -SCC-001	BLK -JCT-220	2"
1Q	BLK -CON-0115	SCC TO JUNCTION 121	BLK -SCC-001	BLK -JCT-121	2"
1R	BLK -CON-0116	SCC TO JUNCTION 221	BLK -SCC-001	BLK -JCT-221	2"
2A	BLK -CON-0201	MICROPHONE 1 - NOISE SENSING	BLK -JCT-111	BLK -ASM-001	1"
2B	BLK -CON-0202	MICROPHONE 2 - NOISE SENSING	BLK -JCT-211	BLK -ASM-002	1"
2C	BLK -CON-0203	SPEAKER 1 - POLE	BLK -SPK-003	BLK -SPK-001	1-1/2"
2D	BLK -CON-0204	SPEAKER 2 - POLE	BLK -SPK-004	BLK -SPK-002	1-1/2"
2E	BLK -CON-0205	SPEAKER 3 - POLE	BLK -SCC-001	BLK -SPK-003	1-1/2"
2F	BLK -CON-0206	SPEAKER 4 - POLE	BLK -SCC-001	BLK -SPK-004	1-1/2"
2G	BLK -CON-0207	SPEAKER 5 - POLE	BLK -SCC-001	BLK -SPK-005	1-1/2"
2H	BLK -CON-0208	SPEAKER 6 - POLE	BLK -SCC-001	BLK -SPK-006	1-1/2"
2J	BLK -CON-0209	SPEAKER 7 - POLE	BLK -SPK-005	BLK -SPK-007	1-1/2"
2K	BLK -CON-0210	SPEAKER 8 - POLE	BLK -SPK-006	BLK -SPK-008	1-1/2"
2L	BLK -CON-0211	SPEAKER 9 - CANOPY	BLK -JCT-100	BLK -SPK-009	1"
2M	BLK -CON-0212	SPEAKER 10 - CANOPY	BLK -JCT-200	BLK -SPK-010	1"
2N	BLK -CON-0213	SPEAKER 11 - CANOPY	BLK -JCT-100	BLK -SPK-011	1"
2P	BLK -CON-0214	SPEAKER 12 - CANOPY	BLK -JCT-200	BLK -SPK-012	1"
2Q	BLK -CON-0215	SPEAKER 13 - CANOPY	BLK -JCT-100	BLK -SPK-013	1"
2R	BLK -CON-0216	SPEAKER 14 - CANOPY	BLK -JCT-200	BLK -SPK-014	1"
28	BLK -CON-0217	SPEAKER 15 - CANOPY	BLK -JCT-110	BLK -SPK-015	1"
2T	BLK -CON-0218	SPEAKER 16 - CANOPY	BLK -JCT-210	BLK -SPK-016	1"
2U	BLK -CON-0219	SPEAKER 17 - CANOPY	BLK -JCT-110	BLK -SPK-017	1"
2V	BLK -CON-0220	SPEAKER 18 - CANOPY	BLK -JCT-210	BLK -SPK-018	1"
2W	BLK -CON-0221	SPEAKER 19 - CANOPY	BLK -JCT-110	BLK -SPK-019	1"
2X	BLK -CON-0222	SPEAKER 20 - CANOPY	BLK -JCT-210	BLK -SPK-020	1"
2Y	BLK -CON-0223	SPEAKER 21 - CANOPY	BLK -JCT-112	BLK -SPK-021	1"
2Z	BLK -CON-0224	SPEAKER 22 - CANOPY	BLK -JCT-212	BLK -SPK-022	1"
2AA	BLK -CON-0225	SPEAKER 23 - CANOPY	BLK -JCT-112	BLK -SPK-023	1"
2AB	BLK -CON-0226	SPEAKER 24 - CANOPY	BLK -JCT-212	BLK -SPK-024	1"
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COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

MP Consultants

CONSULTING ENGINEERING
MINNEAPOLIS MINNESOTA



**CIVIL EAST - VOLUME 11A BLAKE STATION COMMUNICATIONS CONDUIT SCHEDULE (1 OF 2)** 

OF 319

SHEET

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**ELECTRICAL** 

60% SUBMISSION - 09/28/15

E1-BLK-ELE-SCH-461

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	TO	CONDUIT SIZE
2AC	BLK -CON-0227	SPEAKER 25 - CANOPY	BLK -JCT-112	BLK -SPK-025	1"
2AD	BLK -CON-0228	SPEAKER 26 - CANOPY	BLK -JCT-212	BLK -SPK-026	1"
2AE	BLK -CON-0229	SPEAKER 27 - CANOPY	BLK -JCT-121	BLK -SPK-027	1"
2AF	BLK -CON-0230	SPEAKER 28 - CANOPY	BLK -JCT-221	BLK -SPK-028	1"
2AG	BLK -CON-0231	SPEAKER 29 - CANOPY	BLK -JCT-121	BLK -SPK-029	1"
2AH	BLK -CON-0232	SPEAKER 30 - CANOPY	BLK -JCT-221	BLK -SPK-030	1"
2AJ	BLK -CON-0233	SPEAKER 31 - CANOPY	BLK -JCT-121	BLK -SPK-031	1"
2AK	BLK -CON-0234	SPEAKER 32 - CANOPY	BLK -JCT-221	BLK -SPK-032	1"
3A	BLK -CON-0301	CAMERA 1	BLK -JCT-101	BLK CAM-001	1"
3B	BLK -CON-0302	CAMERA 2	BLK -JCT-201	BLK CAM-002	1"
3C	BLK -CON-0303	CAMERA 3	BLK -JCT-101	BLK CAM-003	1"
3D	BLK -CON-0304	CAMERA 4	BLK -JCT-201	BLK CAM-004	1"
3E	BLK -CON-0305	CAMERA 5	BLK -JCT-111	BLK CAM-005	1"
3F	BLK -CON-0306	CAMERA 6	BLK -JCT-211	BLK CAM-006	1"
3G	BLK -CON-0307	CAMERA 7	BLK -JCT-111	BLK CAM-007	1"
3H	BLK -CON-0308	CAMERA 8	BLK -JCT-211	BLK CAM-008	1"
3J	BLK -CON-0309	CAMERA 9	BLK -JCT-120	BLK CAM-009	1"
3K	BLK -CON-0310	CAMERA 10	BLK -JCT-220	BLK CAM-010	1"
3L	BLK -CON-0311	CAMERA 11	BLK -JCT-120	BLK CAM-011	1"
3M	BLK -CON-0312	CAMERA 12	BLK -JCT-220	BLK CAM-012	1"
4A	BLK -CON-0401	KIOSK 1 (F)	BLK -SCC-001	BLK -KSK-001	2"
4B	BLK -CON-0402	KIOSK 2 (F)	BLK -SCC-001	BLK -KSK-002	2"
5A	BLK -CON-0501	VMS 1	BLK -JCT-101	BLK -VMS-001	1"
5B	BLK -CON-0502	VMS 2	BLK -JCT-201	BLK -VMS-002	1"
5C	BLK -CON-0503	VMS 3	BLK -JCT-101	BLK -VMS-003	1"
5D	BLK -CON-0504	VMS 4	BLK -JCT-201	BLK -VMS-004	1"
5E	BLK -CON-0505	VMS 5	BLK -JCT-111	BLK -VMS-005	1"
5F	BLK -CON-0506	VMS 6	BLK -JCT-211	BLK -VMS-006	1"
5G	BLK -CON-0507	VMS 7	BLK -JCT-111	BLK -VMS-007	1"
5H	BLK -CON-0508	VMS 8	BLK -JCT-211	BLK -VMS-008	1"
5J	BLK -CON-0509	VMS 9	BLK -JCT-120	BLK -VMS-009	1"
5K	BLK -CON-0510	VMS 10	BLK -JCT-220	BLK -VMS-010	1"
5L	BLK -CON-0511	VMS 11	BLK -JCT-120	BLK -VMS-011	1"
5M	BLK -CON-0512	VMS 12	BLK -JCT-220	BLK -VMS-012	1"
6A	BLK -CON-0601	TVM 1	BLK -SCC-001	BLK -TVM-001	2"
6B	BLK -CON-0602	TVM 2	BLK -SCC-001	BLK -TVM-002	2"
6C	BLK -CON-0603	TVM 3	BLK -SCC-001	BLK -TVM-003	2"
7A	BLK -CON-0701	VALIDATOR 1	BLK -SCC-001	BLK -RSV-001	1-1/2"
7B	BLK -CON-0702	VALIDATOR 2	BLK -SCC-001	BLK -RSV-002	1-1/2"
7C	BLK -CON-0703	VALIDATOR 3	BLK -SCC-001	BLK -RSV-003	1-1/2"
7D	BLK -CON-0704	VALIDATOR 4	BLK -SCC-001	BLK -RSV-004	1-1/2"
8A	BLK -CON-0801	EMERGENCYTELEPHONE 1 - PHONE	BLK -SCC-001	BLK -ETL-001	1-1/2"
8B	BLK -CON-0802	EMERGENCYTELEPHONE 1 - BEACON LIGHT 1	BLK -ETL-001	BLK -ETB-001	1"
8C	BLK -CON-0803	EMERGENCYTELEPHONE 1 - BEACON LIGHT 2	BLK -ETL-001	BLK -ETB-002	1"
9A	BLK -CON-0901	STATION ELECTRICAL CABINET	BLK -SCC-001	BLK -SEC-001	2"

# COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

MP Consultants

CONSULTING ENGINEERING MINNESOTA



**CIVIL EAST - VOLUME 11A BLAKE STATION COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)** 

E1-BLK-ELE-SCH-462 **ELECTRICAL** 

60% SUBMISSION - 09/28/15

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OF

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BLAKE CONDUIT AND WIRE SCHEDULE								
CONDUIT NUMBER	SIZE	WIRE	FROM	то	REMARKS	NOTES		
1	1"	2#8, 1#10G	HEATERS HTR-101, 102, 103	LP1A	POWER TO HEATERS			
2	1"	2#8, 1#10G	HEATERS HTR-104, 105, 106	LP1A	POWER TO HEATERS			
3	1"	2#8, 1#10G	HEATERS HTR-107, 108, 109	LP1A	POWER TO HEATERS			
4	1"	2#8, 1#10G	HEATERS HTR-110, 111, 112	LP1A	POWER TO HEATERS			
5	1"	2#8, 1#10G	HEATERS HTR-113, 114, 115	LP1A	POWER TO HEATERS			
6	1"	2#8, 1#10G	HEATERS HTR-116, 117, 118	LP1A	POWER TO HEATERS			
7	1"	2#8, 1#10G	HEATERS HTR-119, 120, 121	LP1A	POWER TO HEATERS			
8	1"	2#8, 1#10G	HEATERS HTR-122, 123, 124	LP1A	POWER TO HEATERS			
9	1"	2#8, 1#10G	HEATERS HTR-125, 126, 127	LP1A	POWER TO HEATERS			
10	1"	2#8, 1#10G	HEATERS HTR-128, 129, 130	LP1A	POWER TO HEATERS			
11	1"	2#8, 1#10G	HEATERS HTR-131, 132, 133	LP1A	POWER TO HEATERS			
12	1"	2#8, 1#10G	HEATERS HTR-134, 135, 136	LP1A	POWER TO HEATERS			
13	1"	2#14, 1#14G	HPB-101	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
14	1"	2#14, 1#14G	HPB-102	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
15	1"	2#14, 1#14G	HPB-103	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
16	1"	2#14, 1#14G	HPB-104	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
17	1"	2#14, 1#14G	HPB-104	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS  CONTROL FOR HEATERS			
17	1"	2#14, 1#14G 2#14, 1#14G	HPB-105 HPB-106	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS  CONTROL FOR HEATERS			
19	1"							
		2#14, 1#14G	HPB-107	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
20	1"	2#14, 1#14G	HPB-108	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
21	1"	2#14, 1#14G	HPB-109	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
22	1"	2#14, 1#14G	HPB-110	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
23	1"	2#14, 1#14G	HPB-111	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
24	1"	2#14, 1#14G	HPB-112	OFF DELAY TIME CIRCUIT	CONTROL FOR HEATERS			
25	1"	2#10, 1#10G	TVM-101	LP1A	POWER TO TVMs			
26	1"	4#10, 2#10G	TVM-102, TVM-103	LP1A	POWER TO TVM			
27	1"	4#12, 2#12G	RSV-101, RSV-102	LP1A	POWER TO RSVs			
28	1"	4#12, 2#12G	RSV-103, RSV-104	LP1A	POWER TO RSVs			
29	1"	2#12, 1#12G	KSK-101	LP1B	POWER TO KLOSK			
30	1"	2#12, 1#12G	KSK-102	LP1B	POWER TO KLOSK			
31	1"	2#12, 1#12G	CANOPY LUMINAIRES	LP1A	POWER TO LUMINAIRES			
32	1"	2#12, 1#12G	CANOPY LUMINAIRES	LP1A	POWER TO LUMINAIRES			
33	1"	2#12, 1#12G	CANOPY LUMINAIRES	LP1A	POWER TO LUMINAIRES			
34	1"	2#12, 1#12G	CANOPY LUMINAIRES	LP1A	POWER TO LUMINAIRES			
35	1"	2#10, 1#10G	HEAT TAPE	HTCP	POWER TO HEAT TAPE	2, 3		
36	1"	2#10, 1#10G	HEAT TAPE	HTCP	POWER TO HEAT TAPE	2, 3		
37	1"	2#10, 1#10G	HEAT TAPE	HTCP	POWER TO HEAT TAPE	2, 3		
38	1"	2#10, 1#10G	HEAT TAPE	HTCP	POWER TO HEAT TAPE	2, 3		
39	1"	2#10, 1#10G	RAMP RAILING LUMINAIRE	RAMP RAILING LUMINAIRE DRIVER	POWER TO RAMP RAILING LUMINAIRE	1		
40	1"	2#10, 1#10G	RAMP RAILING LUMINAIRE	RAMP RAILING LUMINAIRE DRIVER	POWER TO RAMP RAILING LUMINAIRE	1		
41	1"	2#10, 1#10G	RAMP RAILING LUMINAIRE	RAMP RAILING LUMINAIRE DRIVER	POWER TO RAMP RAILING LUMINAIRE	1		
42	1"	2#10, 1#10G	RAMP RAILING LUMINAIRE	RAMP RAILING LUMINAIRE DRIVER	POWER TO RAMP RAILING LUMINAIRE	1		
43	1"	4#10, 1#10G	COMMUNICATIONS CABINET SCC-001	LP1B	POWER TO COMMUNICATIONS CABINET			
44	1"	4#12, 2#12G	VMSs	LP1B	POWER TO VMS			
45	1"	4#12, 2#12G	VMSs	LP1B	POWER TO VMS			
46	1"	4#12, 2#12G	VMSs	LP1B	POWER TO VMS			
47	1"	4#12, 2#12G	VMSs	LP1B	POWER TO VMS			
48	1"	2#10, 2#10G	POLE LUMINAIRES	LP1A	POWER TO POLE LUMINAIRES			
49	1"	2#10, 2#10G	POLE LUMINAIRES	LP1A	POWER TO POLE LUMINAIRES			
50	1"	2#10, 2#10G	POLE LUMINAIRES	LP1A	POWER TO POLE LUMINAIRES			
51	1"	2#10, 2#10G	POLE LUMINAIRES	LP1A	POWER TO POLE LUMINAIRES			
52	1"	2#10, 2#10G	POLE LUMINAIRES	LP1A	POWER TO POLE LUMINAIRES			
53								
54								
55								

ELECTRICAL CONDUIT & CABLE SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	

AECOM MPC





CIVIL EAST - VOLUME 11A
BLAKE STATION
ELECTRICAL
CONDUIT AND WIRE SCHEDULE

98 OF 319

SHEET

60% SUBMISSION - 09/28/15

ELECTRICAL SHEE

E1-BLK-ELE-SCH-503

Sep, 25 2015 08:57 am V:\3400_ADC\CAD\SEGMENT E1\PLA

## **CODE SUMMARY - CENTER PLATFORM LOUISIANA STATION**

### **CODE REFERENCES**

MINNESOTA STATE BUILDING CODE 2015 NFPA 130 - STANDARD FOR FIXED GUIDEWAY TRANSIT 2014 AND PASSENGER RAIL SYSTEMS

IBC REVIEW

A. <u>DESCRIPTION</u>

LOCATION: ST. LOUIS PARK, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'-4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA) 5416 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 3169 SQUARE FEET 731 SQUARE FEET (LOWER @ 36'-8" X 13'-8" AND UPPER @ 34'-6" X 6'-8") WEST CANOPY 1707 SQUARE FEET (LOWER @ 84'-8" X 13'-8" AND UPPER @ 82'-6" X 6'-8") MIDDLE CANOPY 731 SQUARE FEET (LOWER @ 36'-8" X 13'-8" AND UPPER @ 34'-6" X 6'-8") EAST CANOPY

B. <u>OCCUPANCY CLASSIFICATION</u> (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3 (15 S.F. PER PERSON)

C. <u>OCCUPANCY SEPARATIONS</u>

NONE ARE REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. <u>IBC EXITING SUMMARY</u>

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361 REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2) WIDTH PROVIDED = 2 RAMPS AT 145" = 290" 2 MEANS OF EGRESS PROVIDED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

## PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

PLATFORM COLOR AND FINISH SCHEDULE											
TYPE	STATION	STRUCTURAL STEEL PAINT COLOR	PLATFORM CONC COLOR	PLATFORM CONC FINISH	CONC WALL COLOR	CONC WALL FINISH	RAILING INFILL MATERIAL	ALUM WDW FRAME FINISH	EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH	ALUM COMP CANOPY SOFFIT AND FASCIA COLOR	ARCH WOVEN MESH
CENTER	LOUISIANA STATION	PPG 518-6 KNIGHT'S ARMOR	CEMSTONE SPLIT ROCK	TBD	CEMSTONE SPLIT ROCK	TBD	SS CABLE	CLEAR ANODIZED	HUNTER DOUGLAS WOODWRIGHT 8446 CLIPPER TEAK	ALUCOBOND CARAMEL LATTE COOL	TBD

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 





**CIVIL EAST - VOLUME 11A LOUISIANA STATION CODE SUMMARY / FINISH SCHEDULE** 

**ARCHITECTURE** 

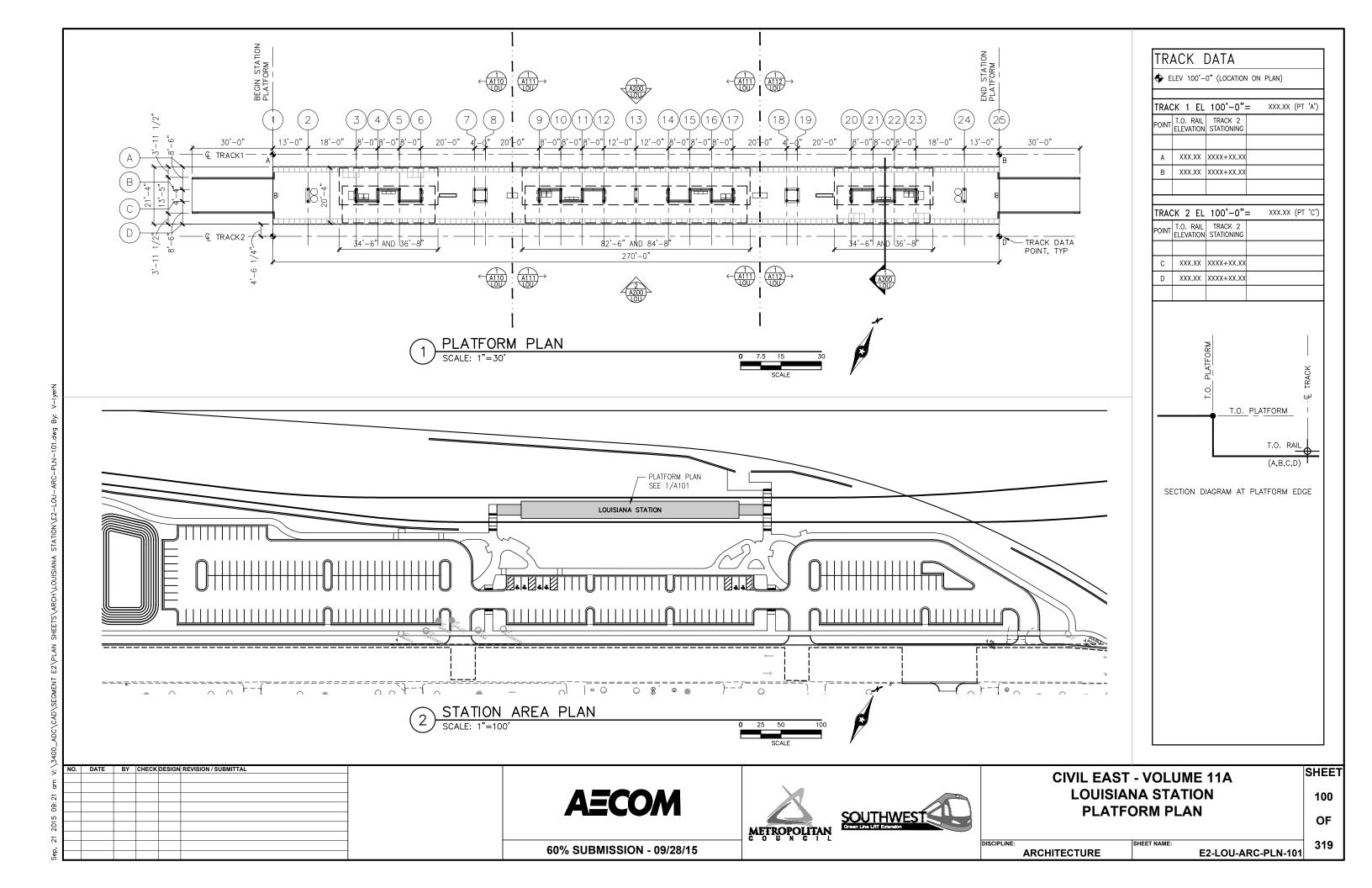
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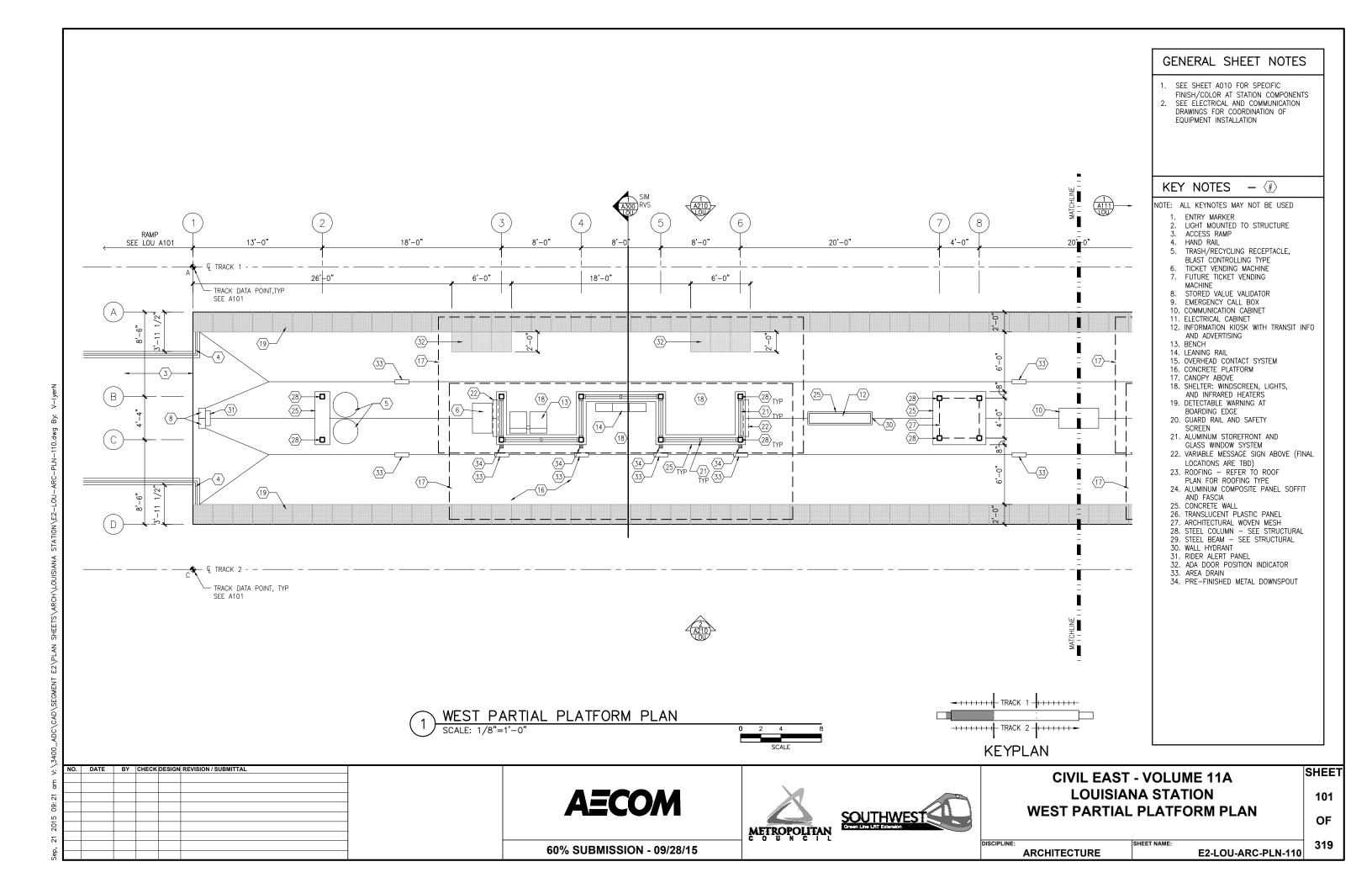
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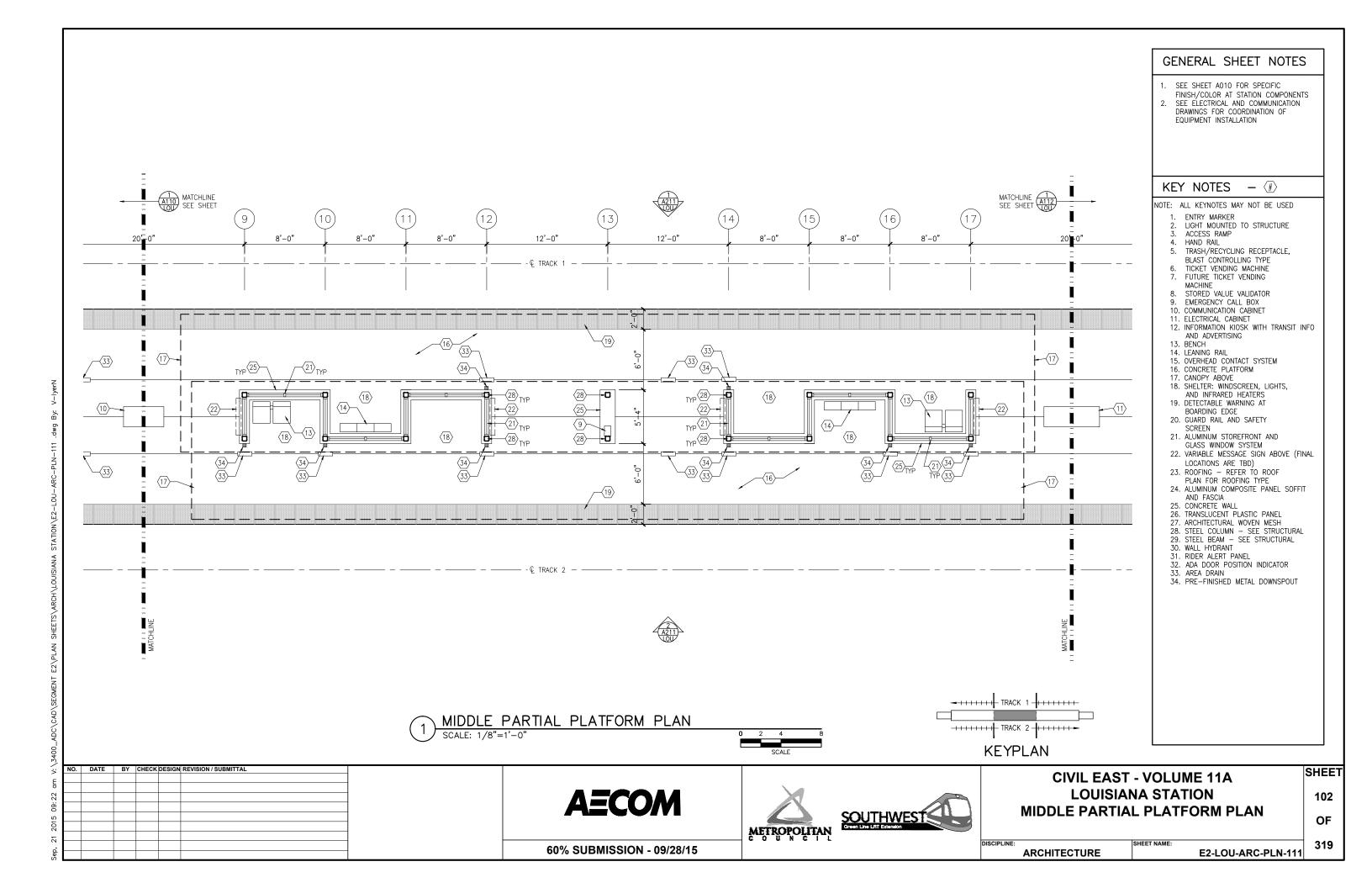
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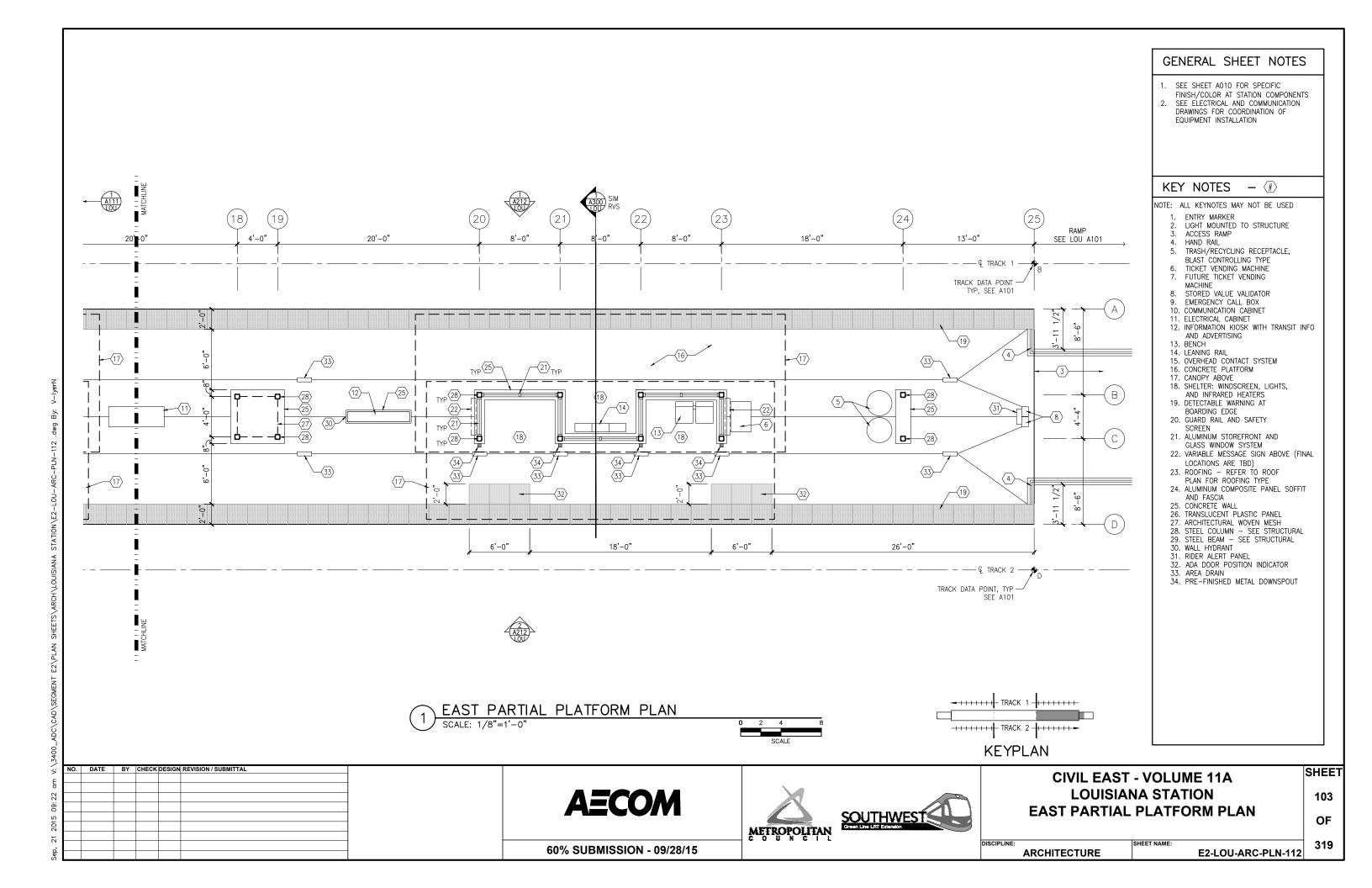
60% SUBMISSION - 09/28/15

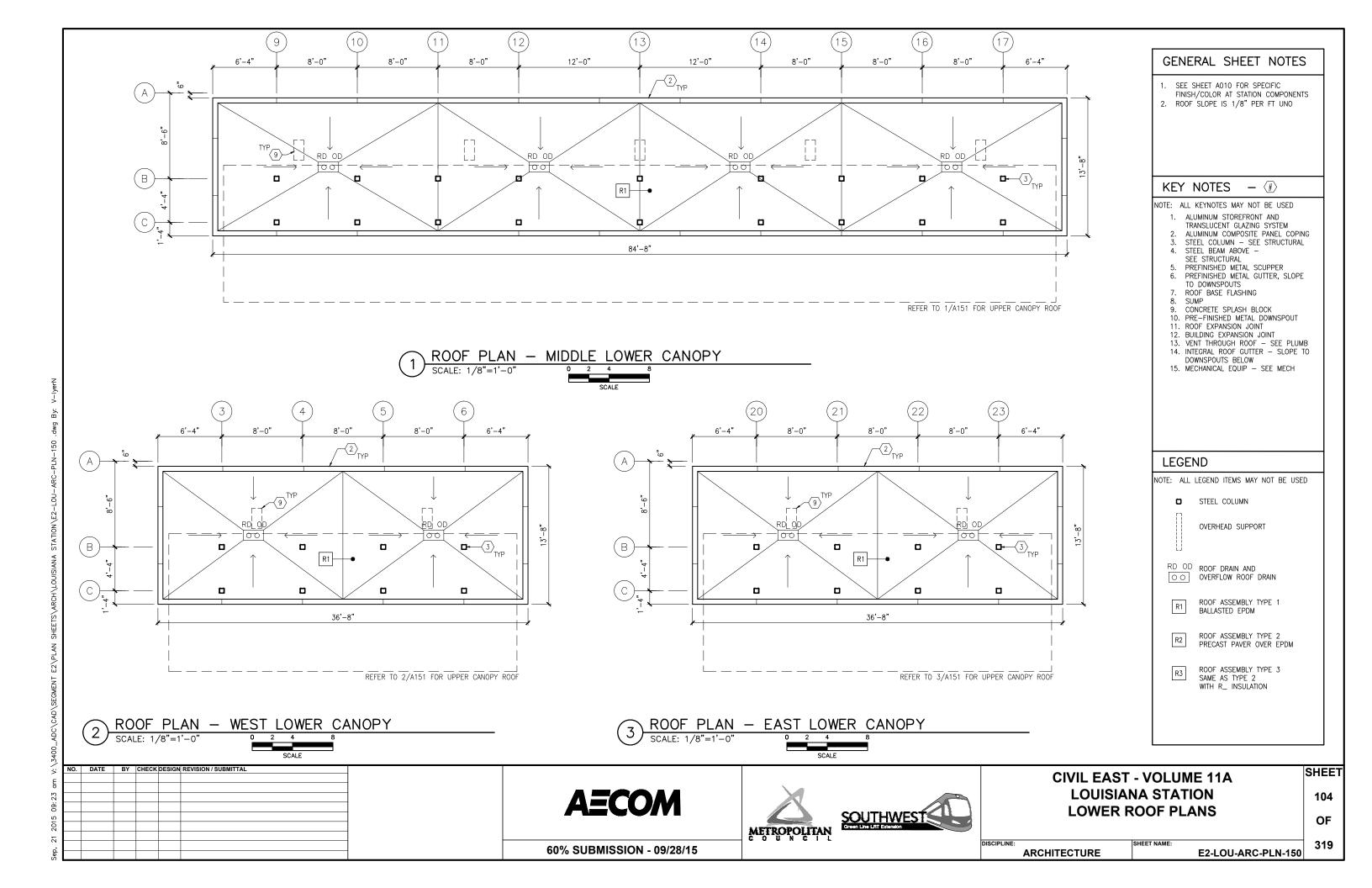
E2-LOU-ARC-COD-010

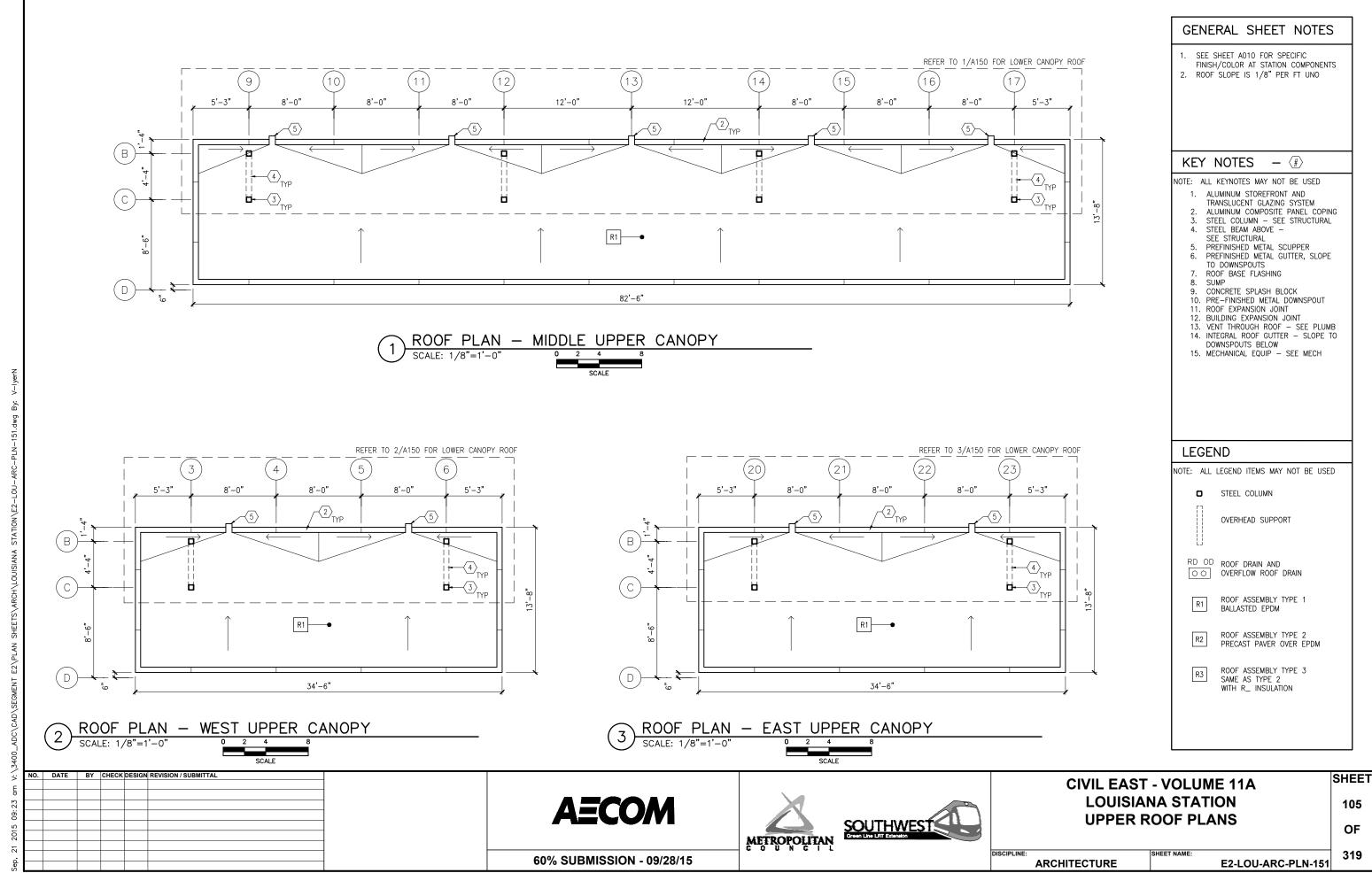


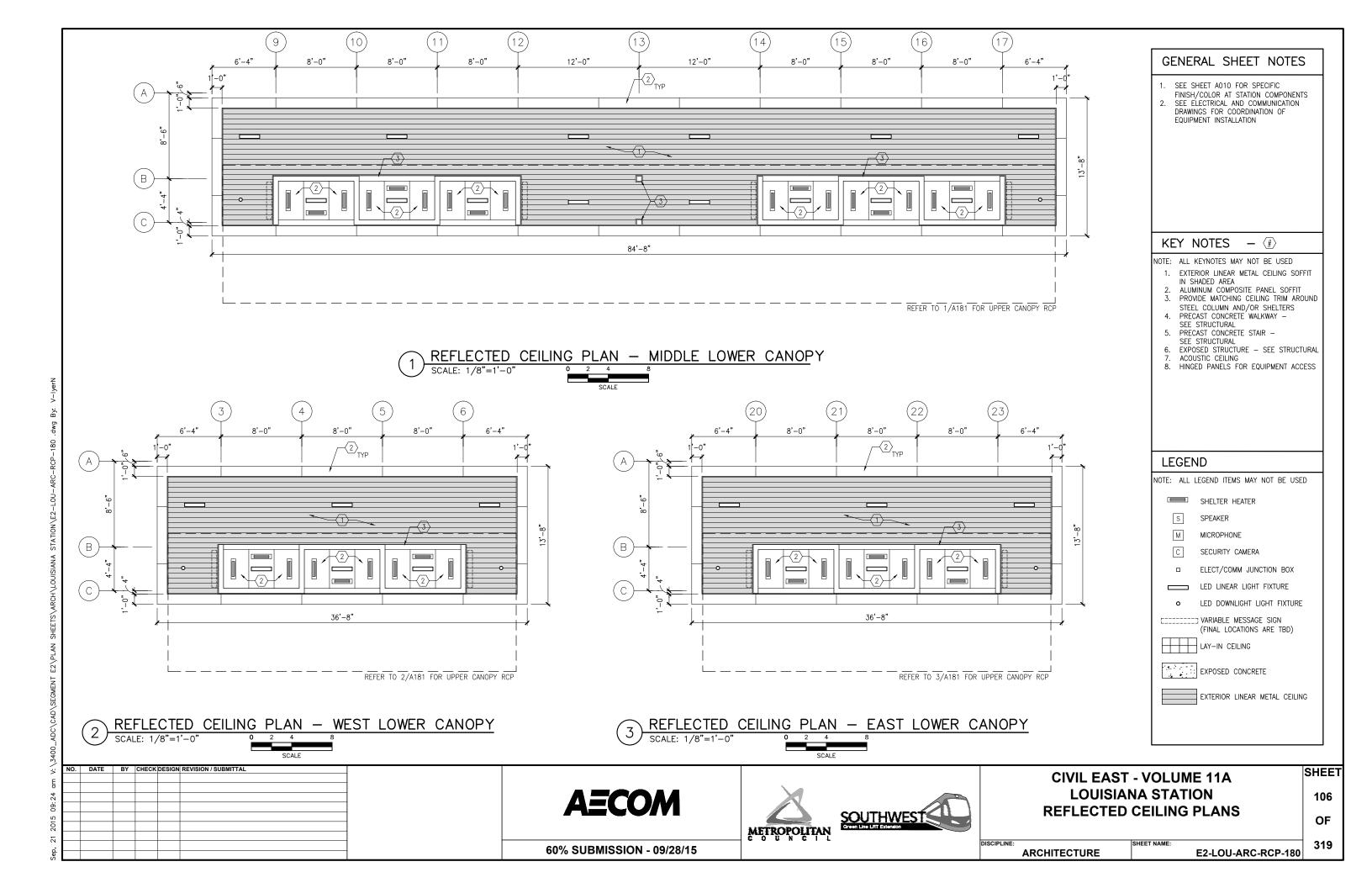


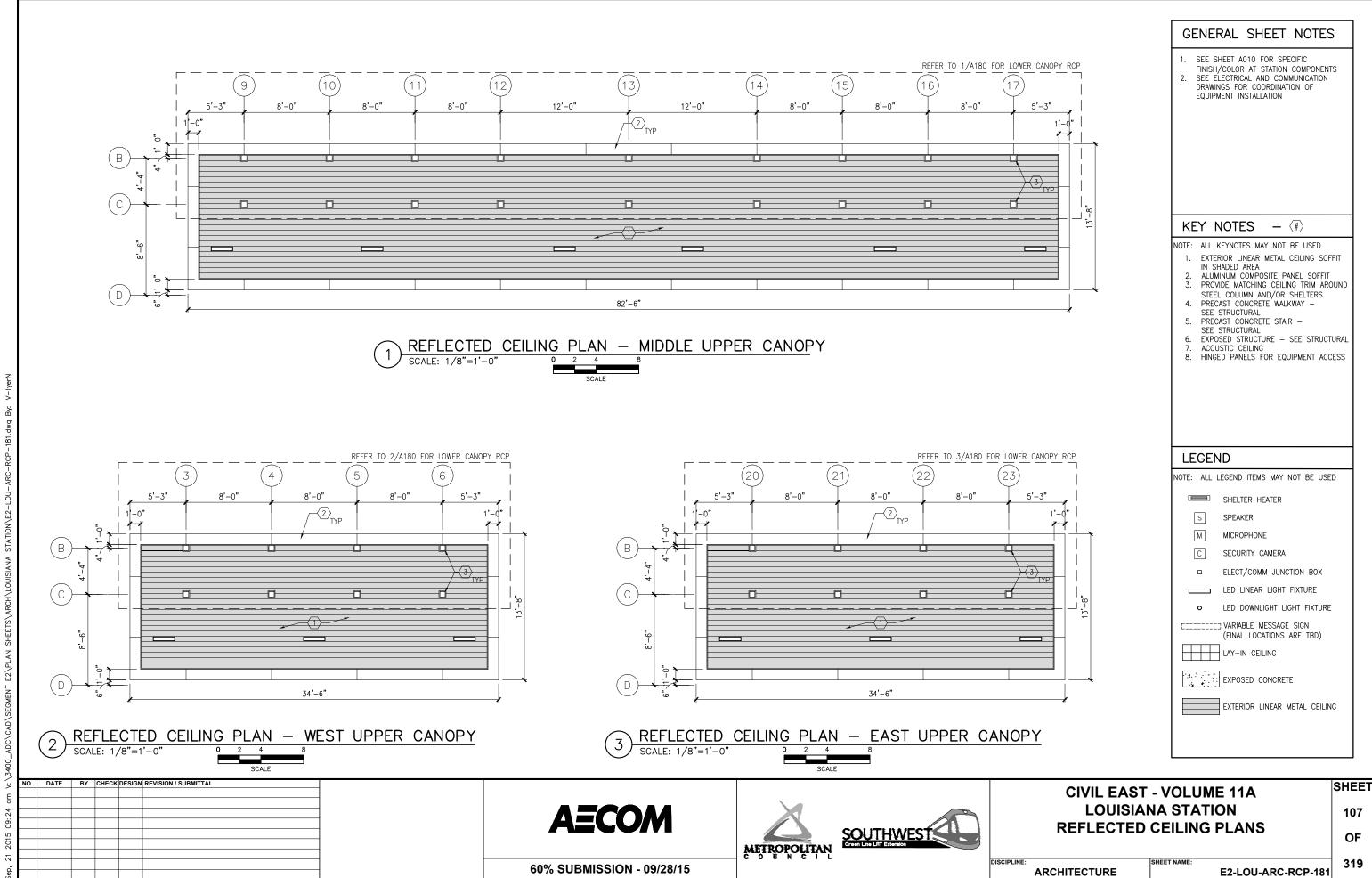


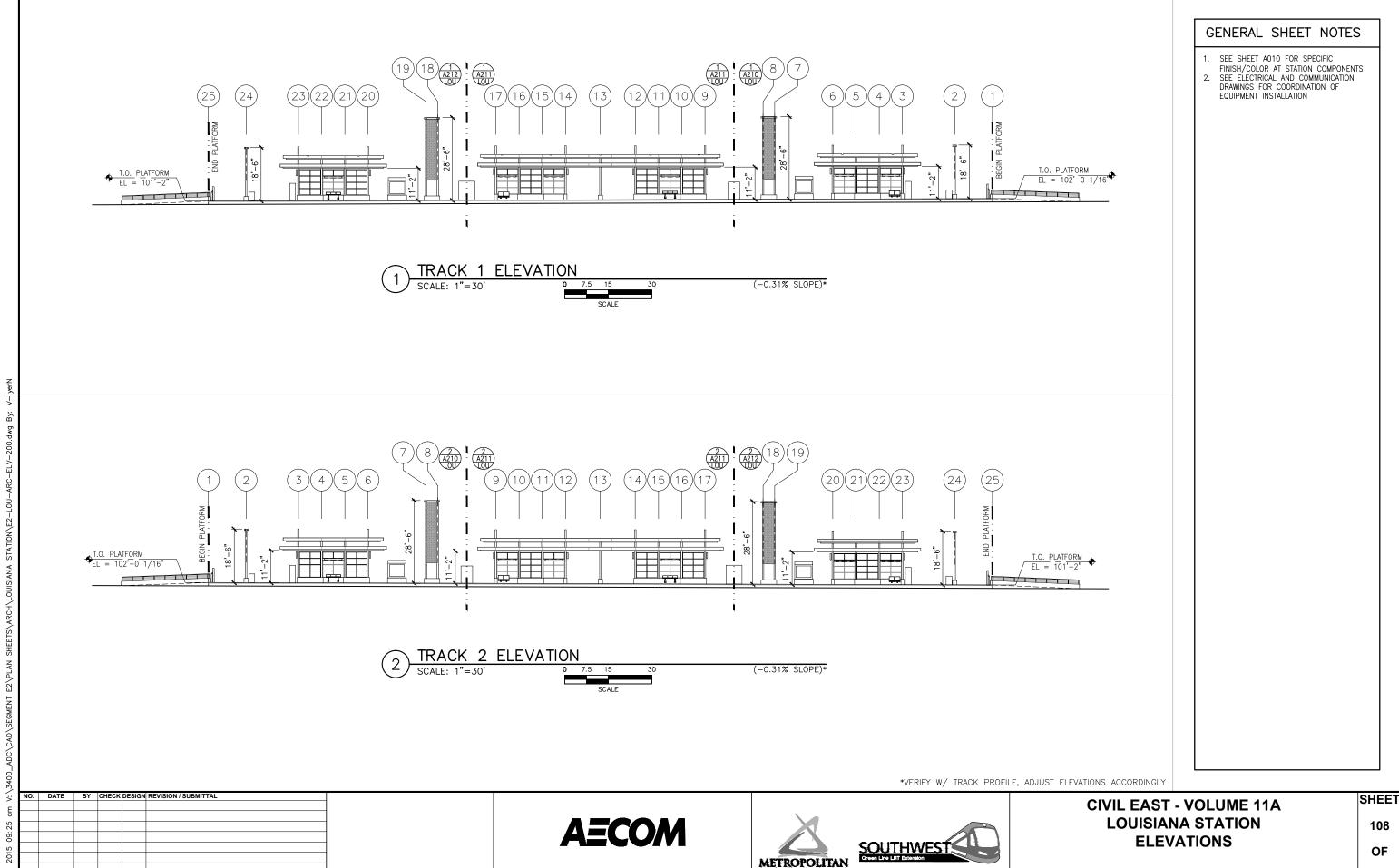












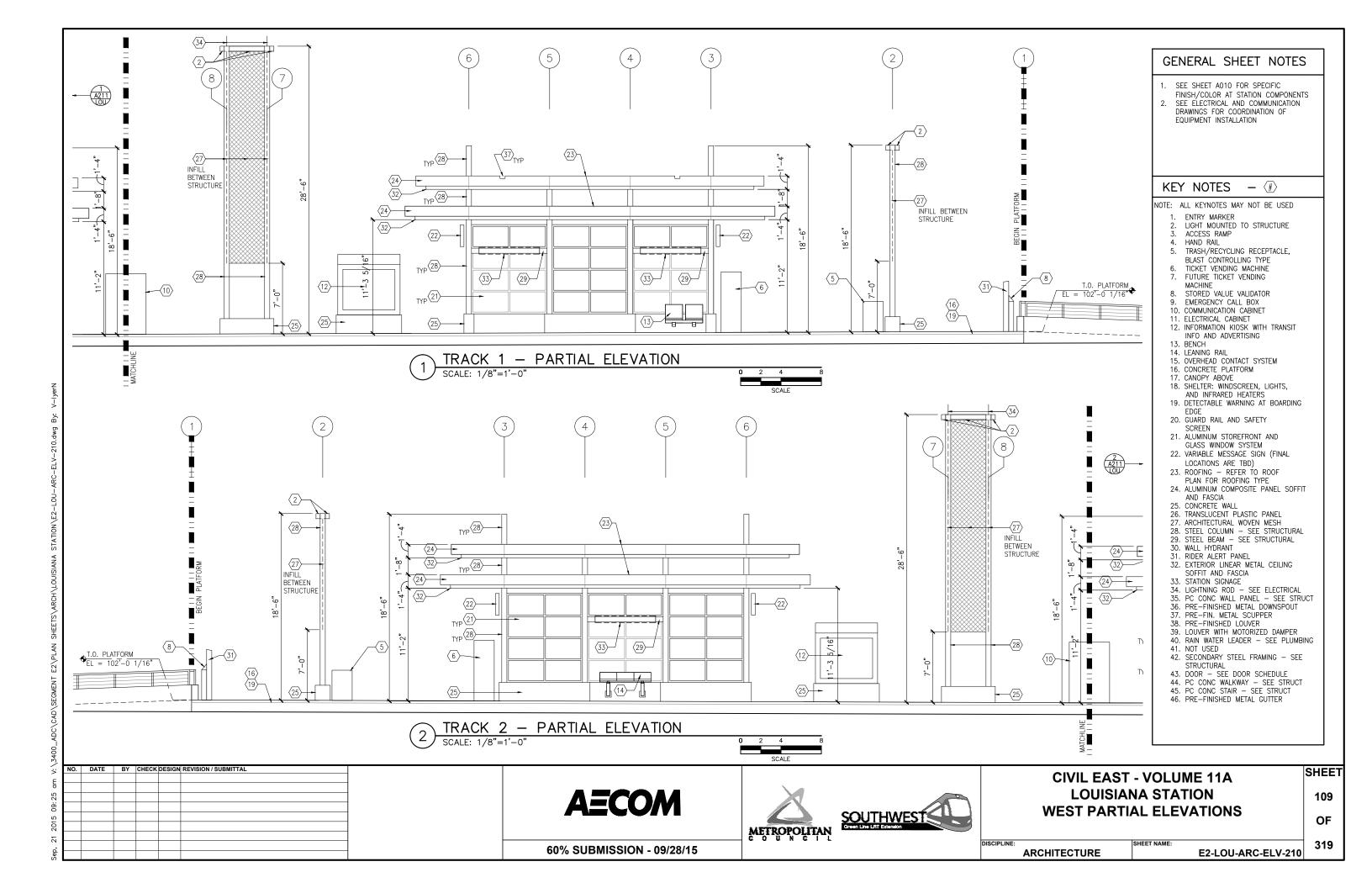
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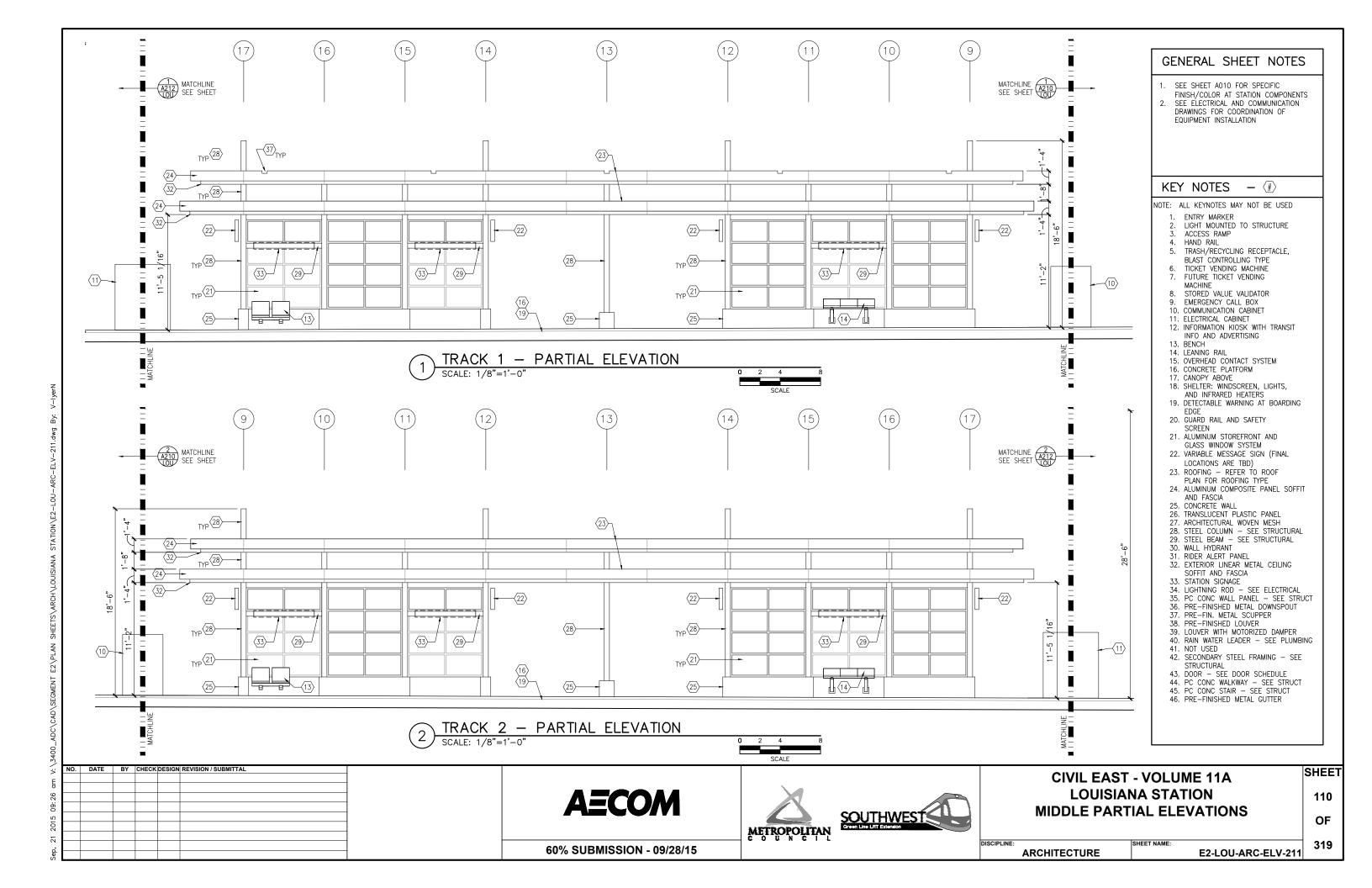
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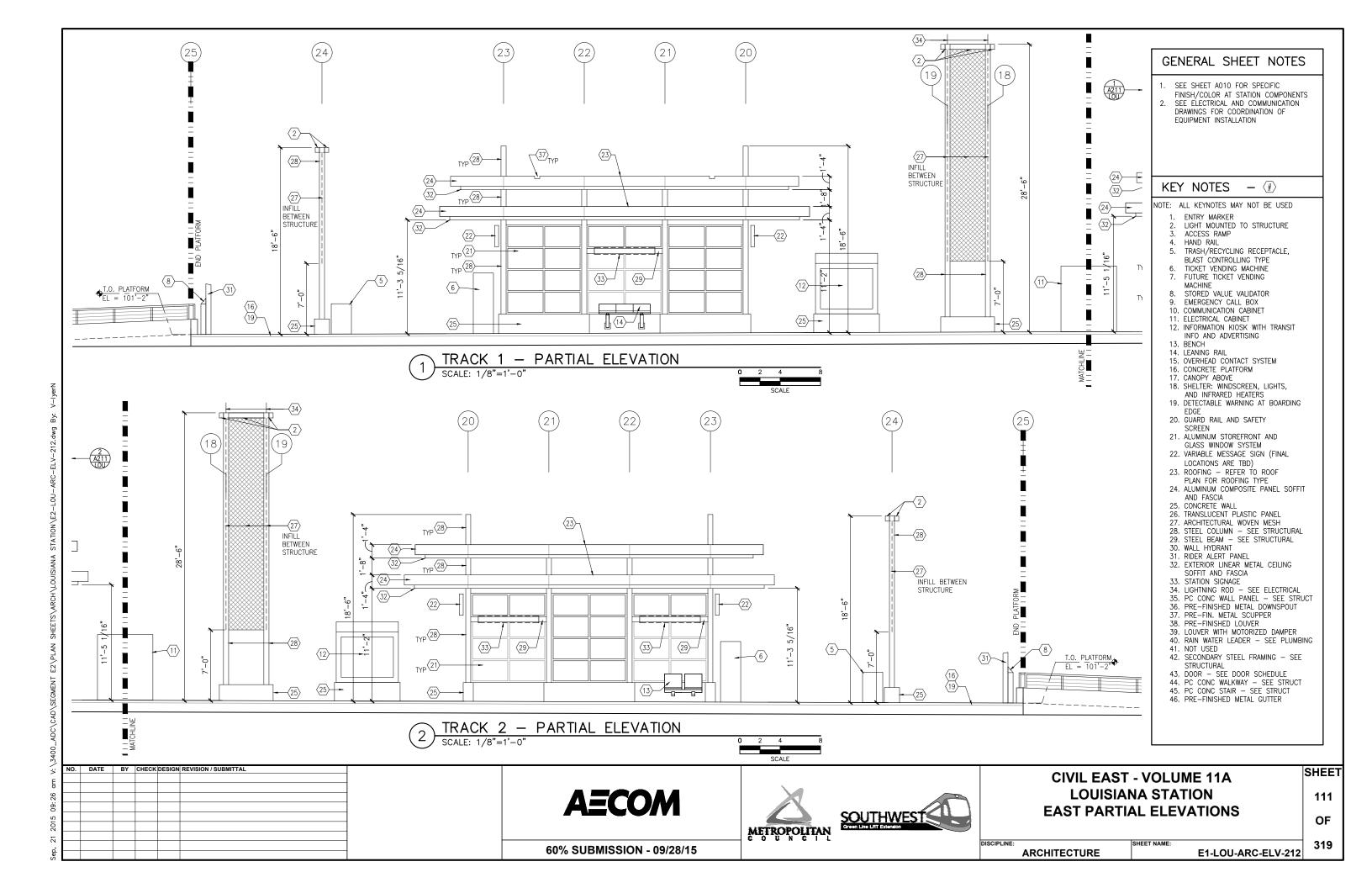
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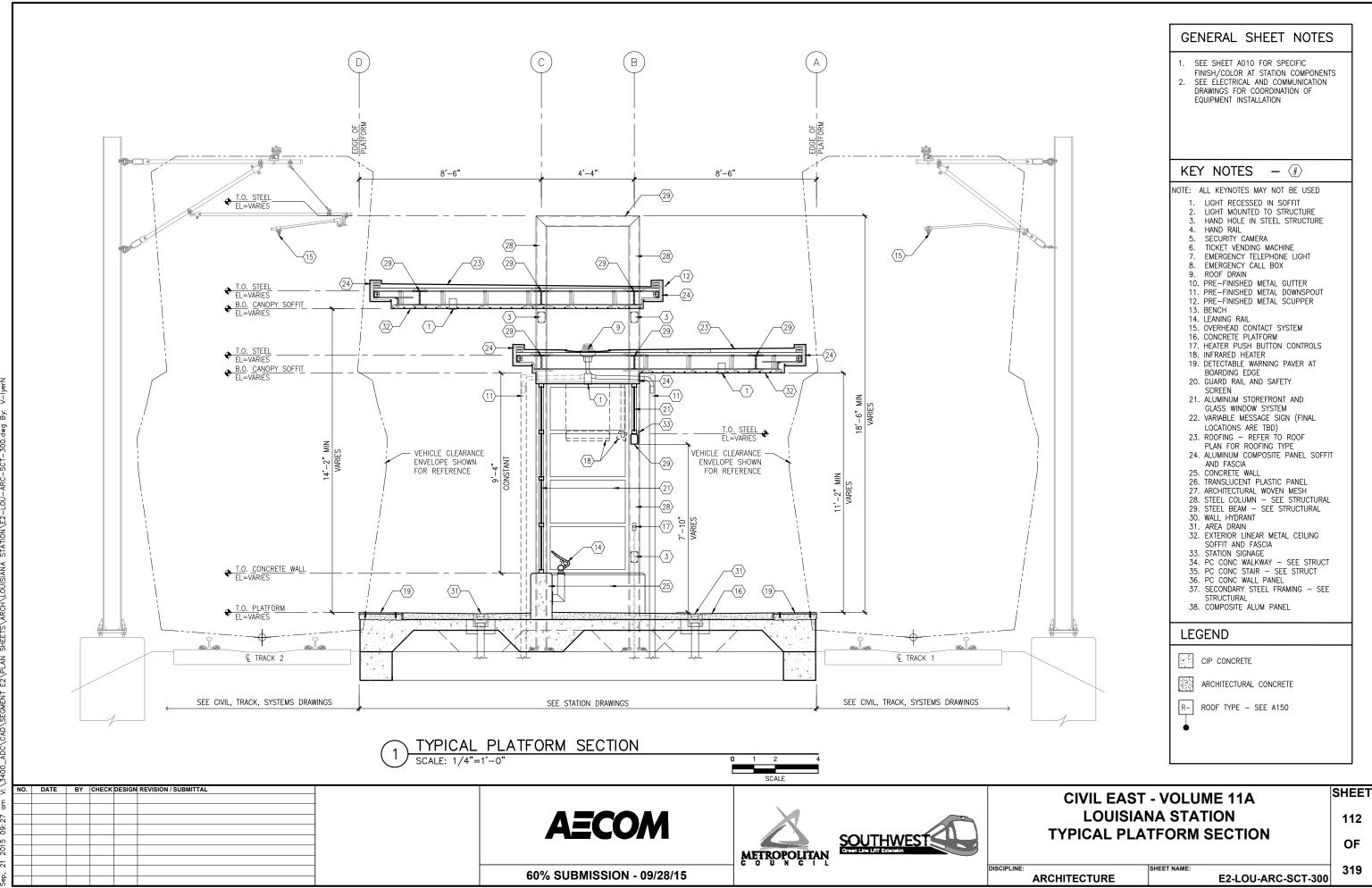
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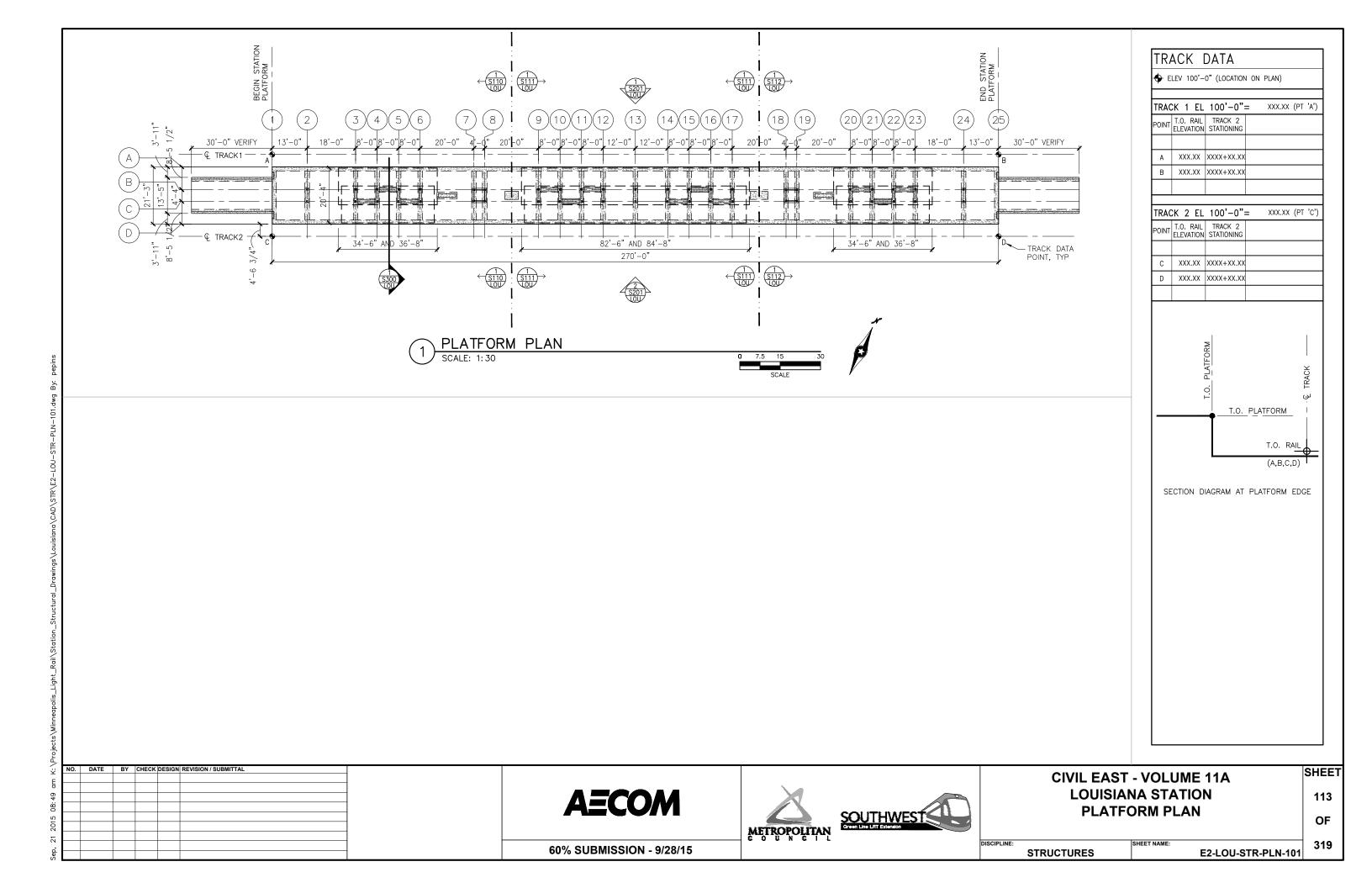
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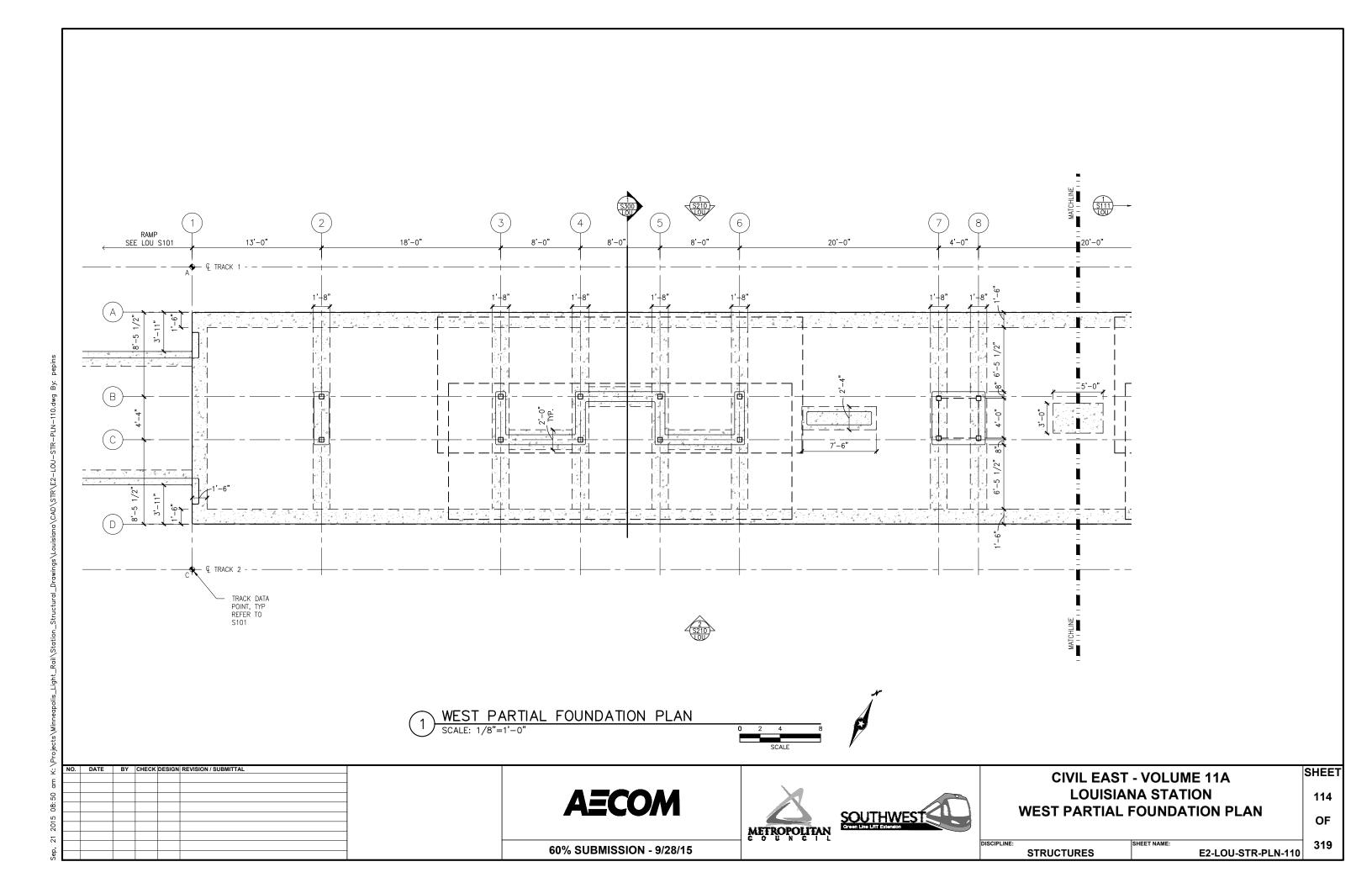


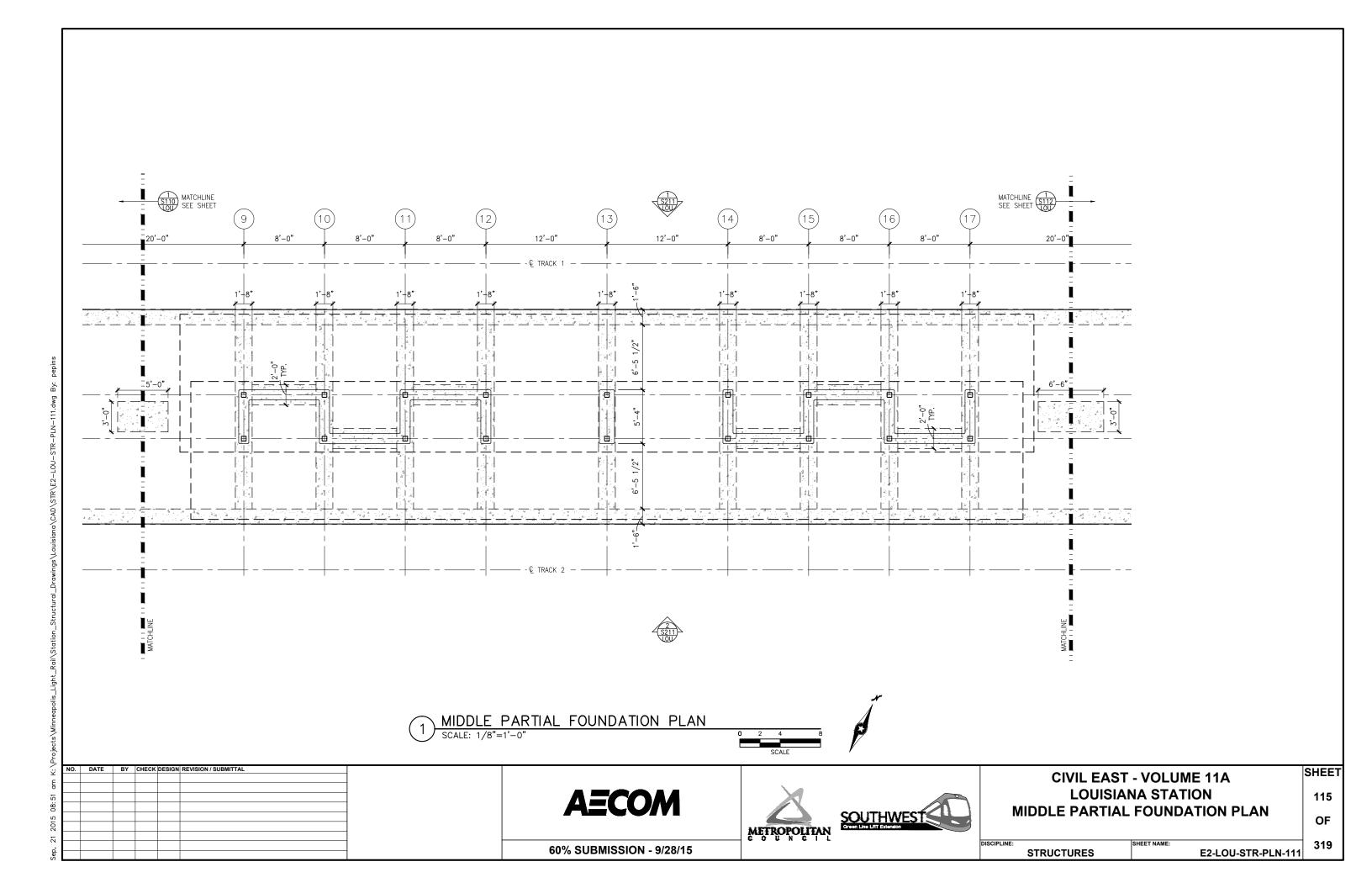


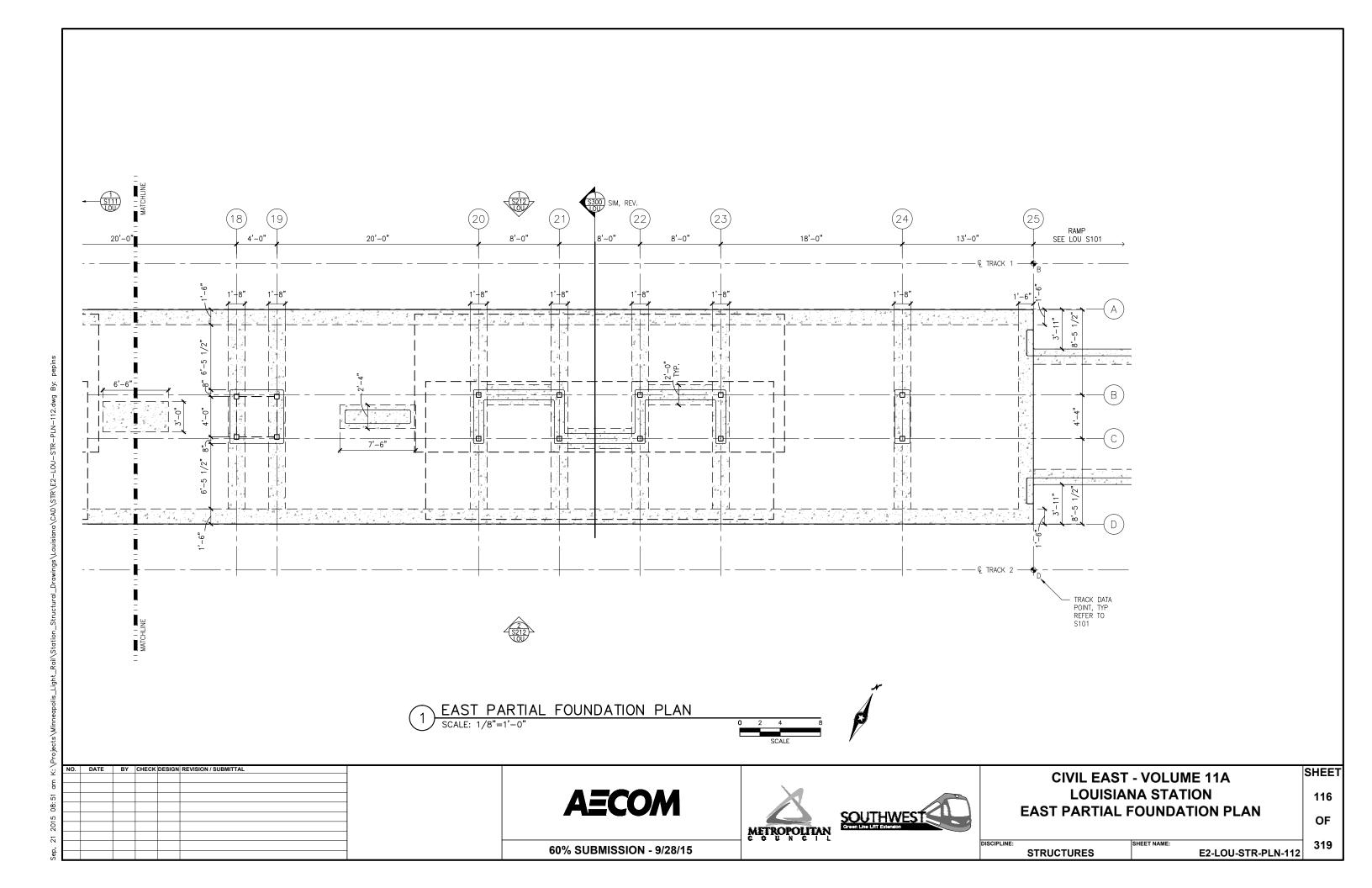


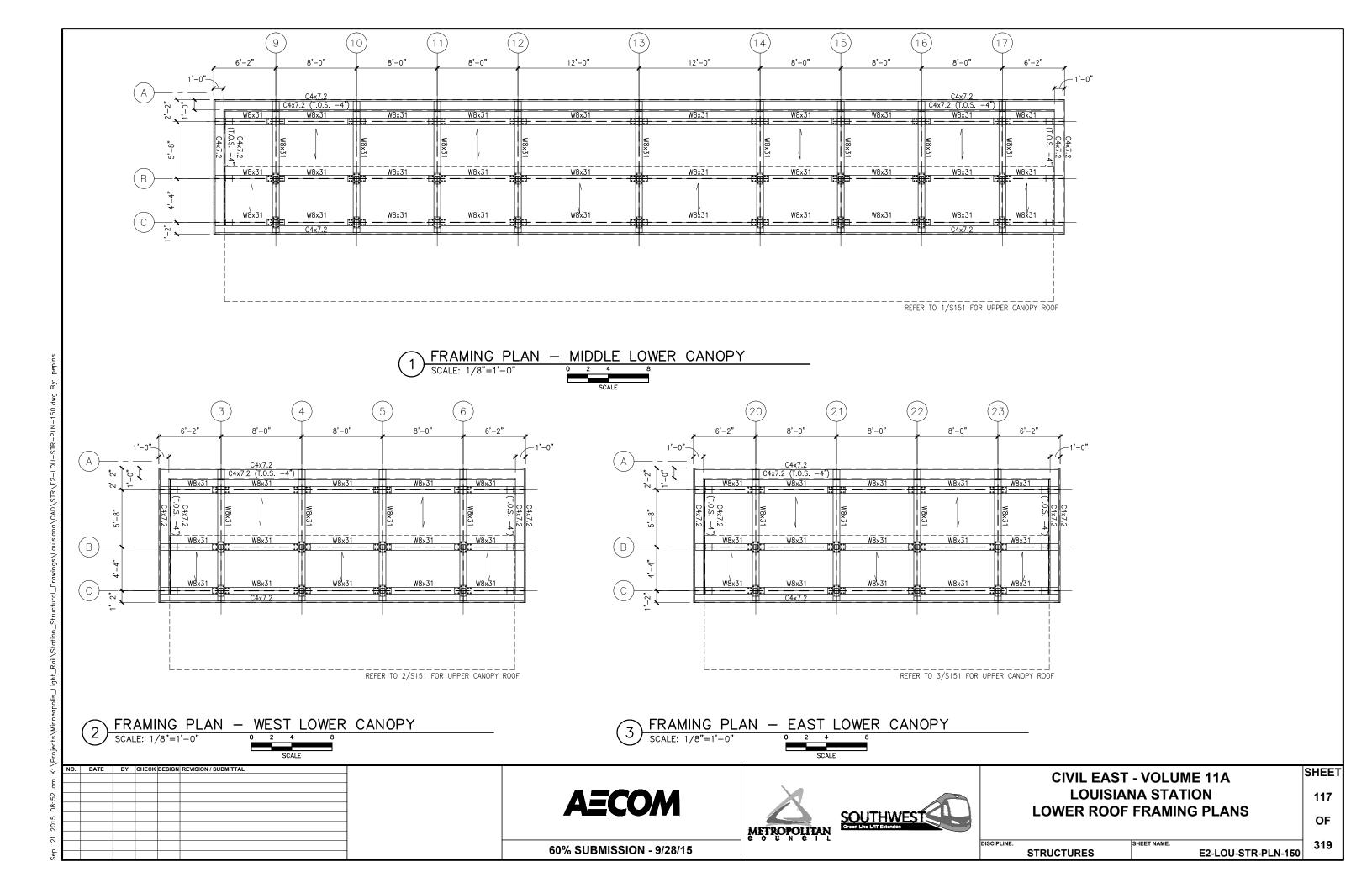


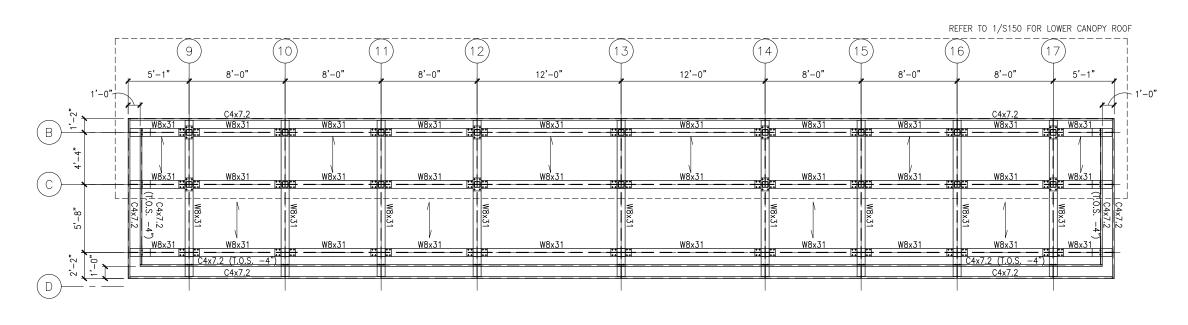


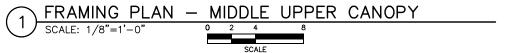


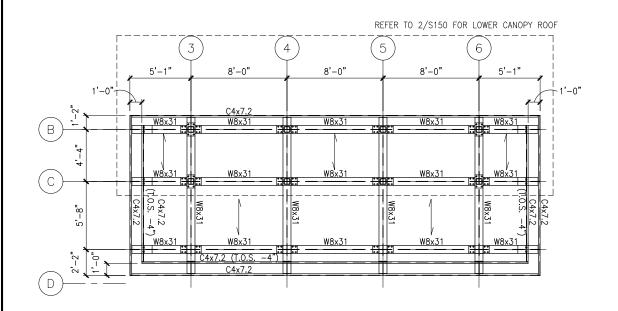


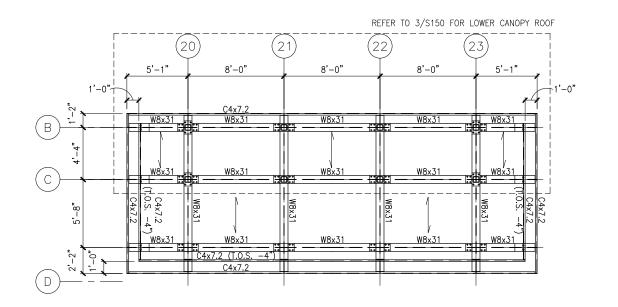














FRAMING PLAN — EAST UPPER CANOPY

SCALE: 1/8"=1'-0"

O 2 4 8
SCALE: 1/8"=1'-0"

O 2 4 8
SCALE: 1/8"=1'-0"

BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 





CIVIL EAST - VOLUME 11A LOUISIANA STATION UPPER ROOF FRAMING PLANS

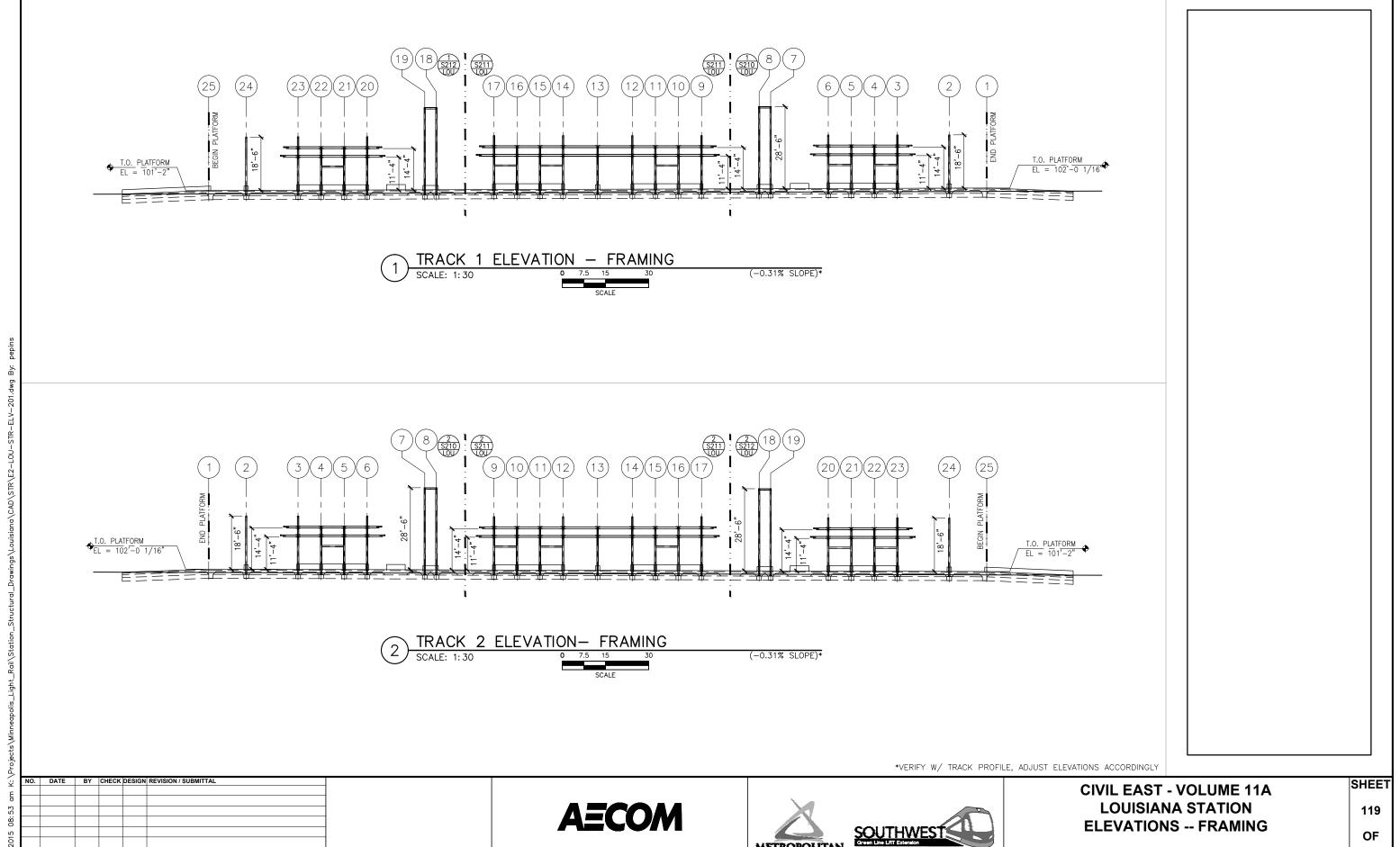
118 OF

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SHEET

60% SUBMISSION - 9/28/15 STRUCTURES

E2-LOU-STR-PLN-151



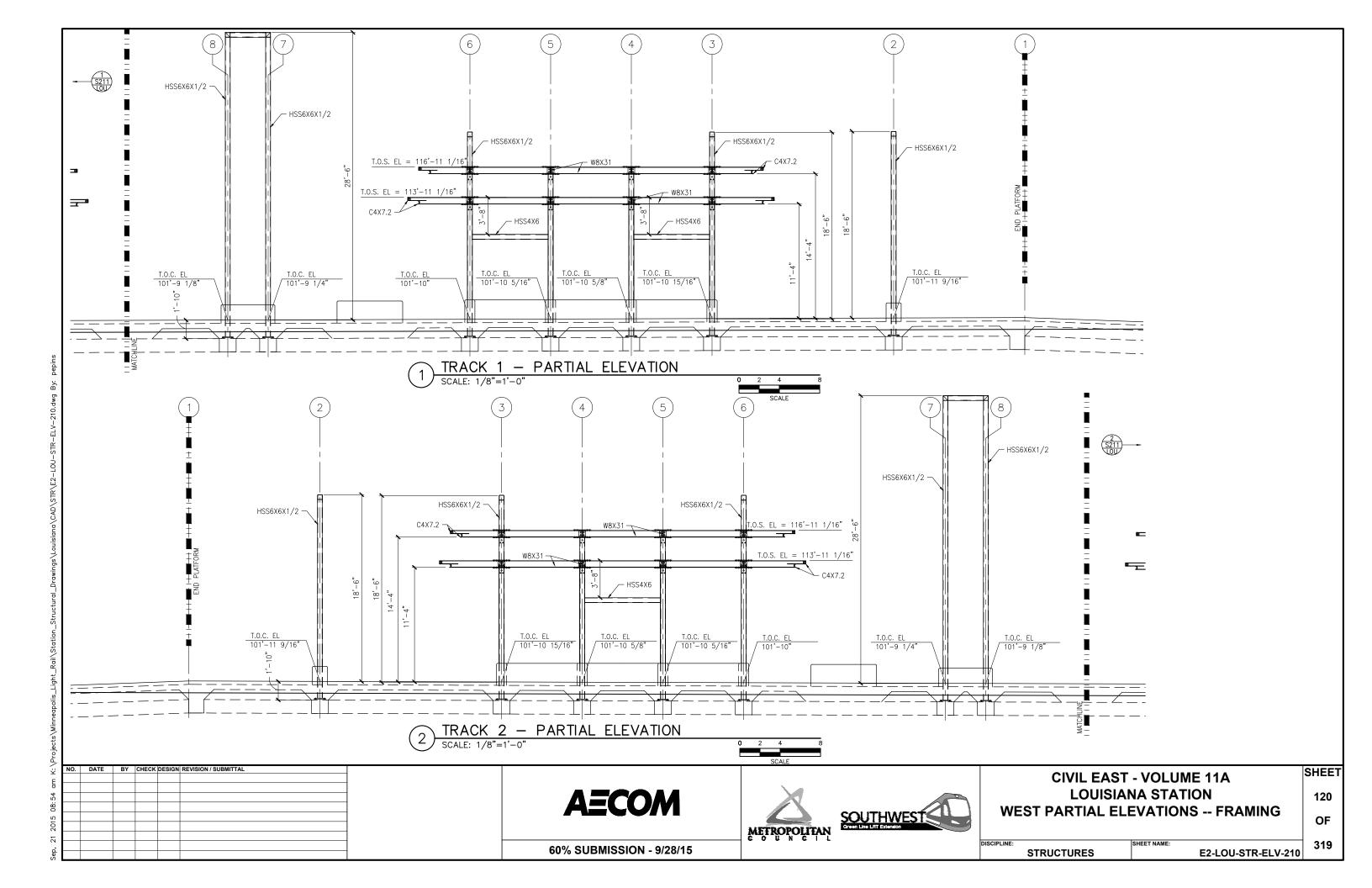
60% SUBMISSION - 9/28/15

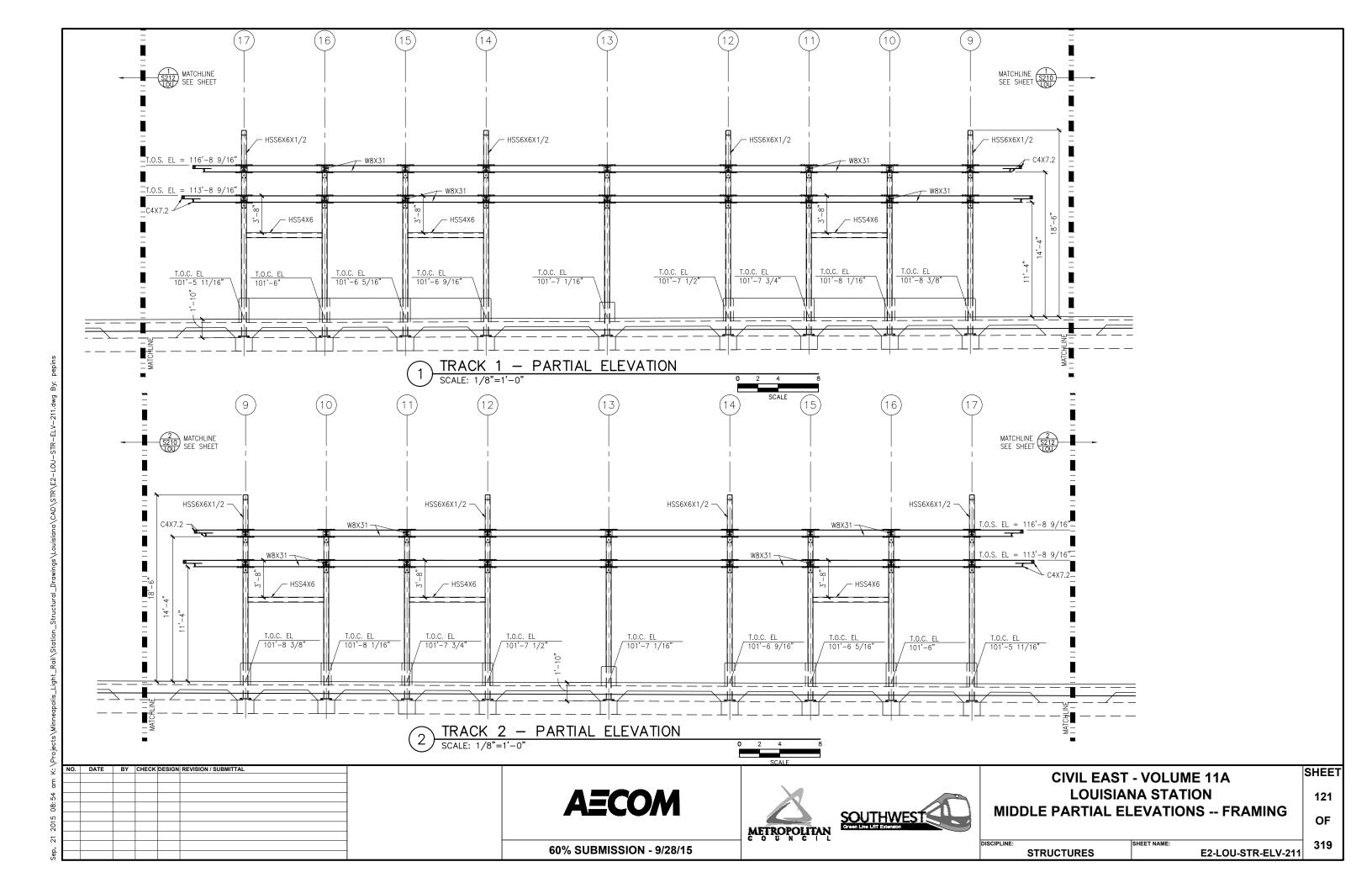
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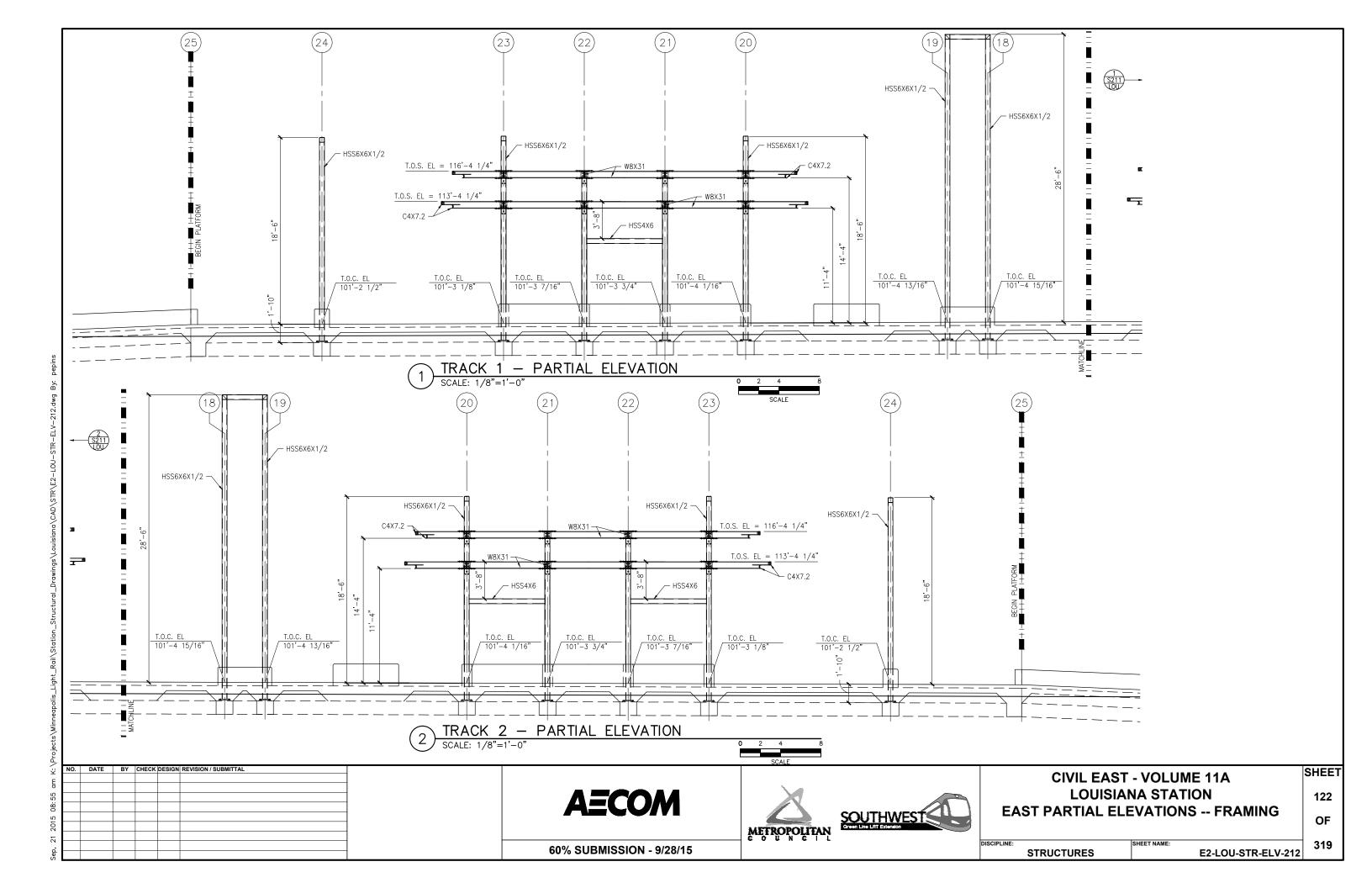
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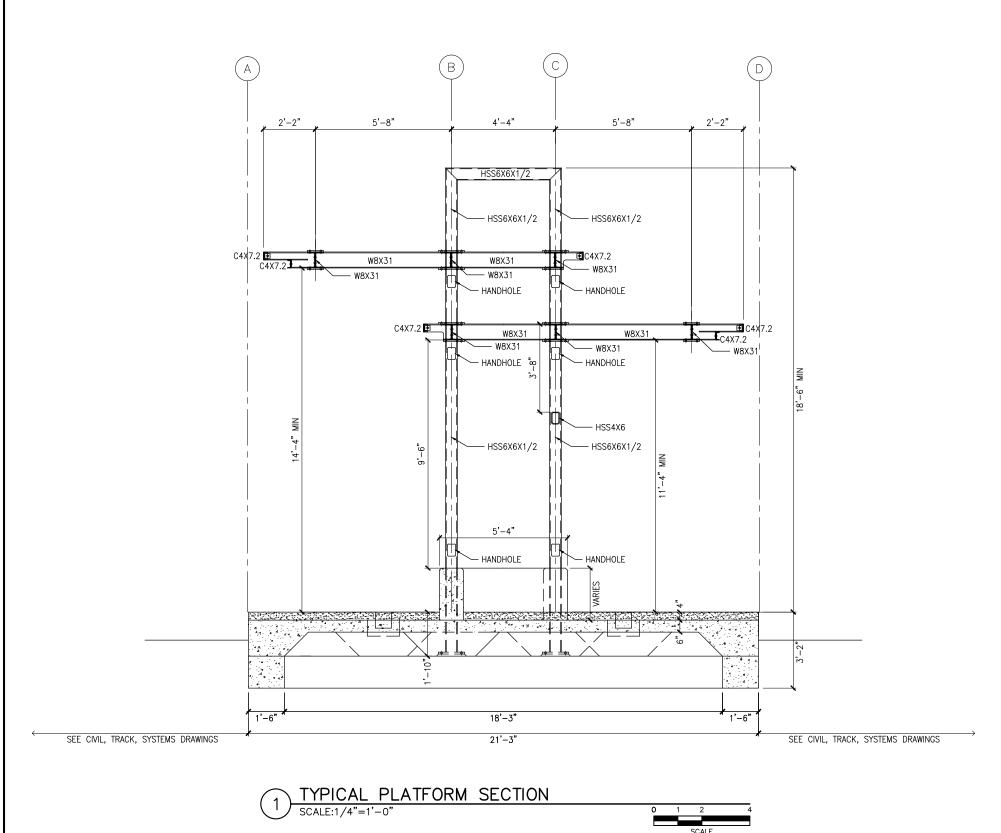
E2-LOU-STR-ELV-201

**STRUCTURES** 











**AECOM** 





**CIVIL EAST - VOLUME 11A LOUISIANA STATION TYPICAL PLATFORM SECTION** 

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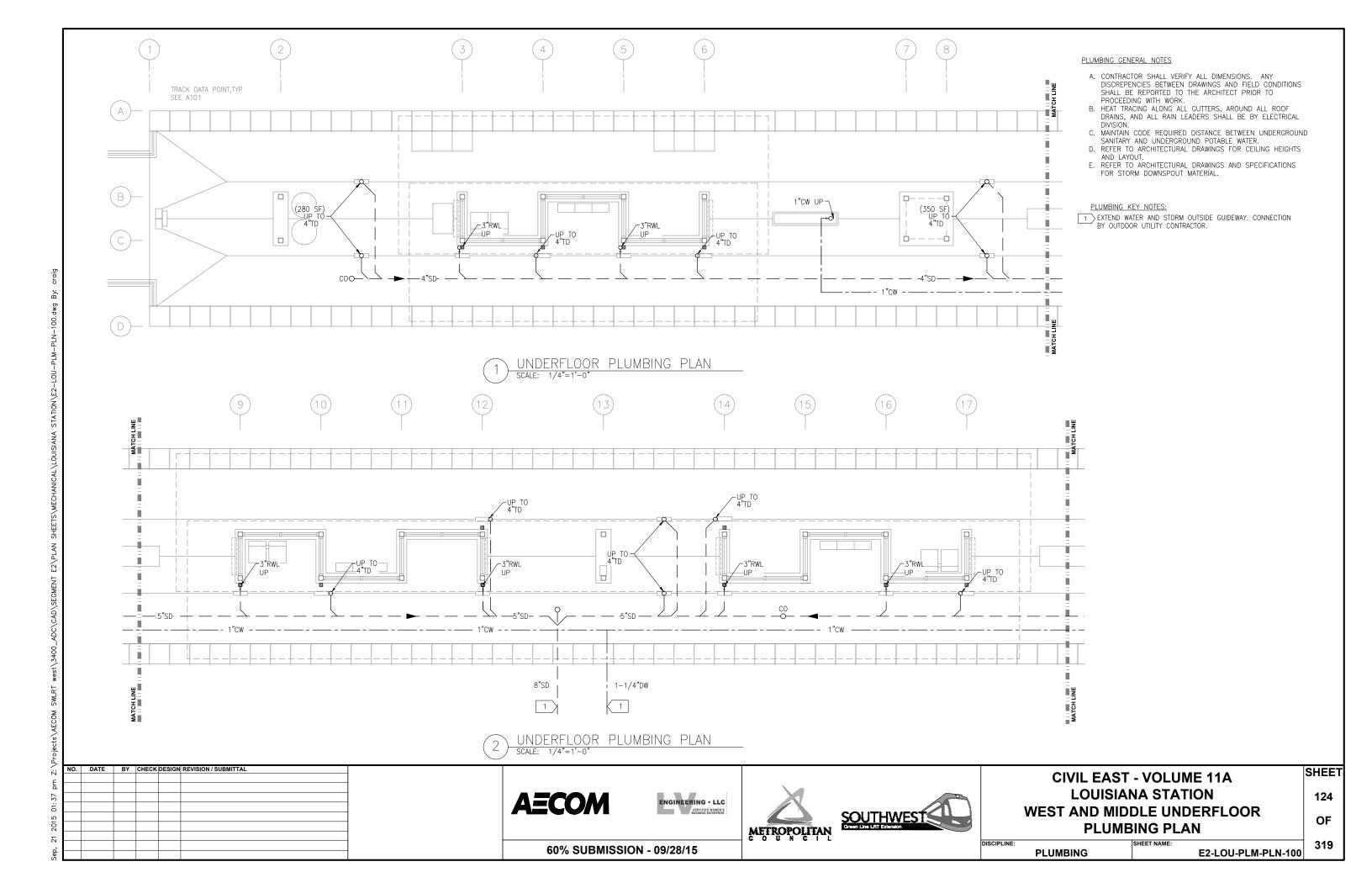
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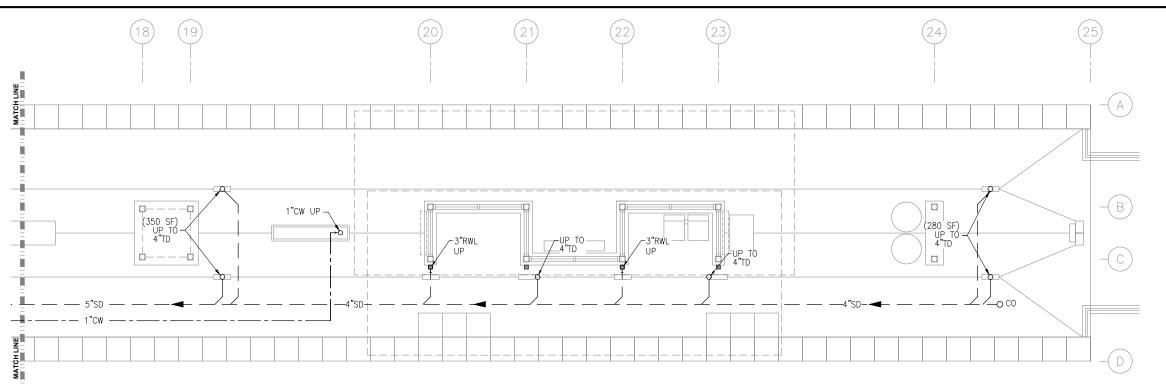
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E2-LOU-STR-SCT-300

STRUCTURES

60% SUBMISSION - 9/28/15





PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.

  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS
- E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

### PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

UNDERFLOOR PLUMBING PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 







**CIVIL EAST - VOLUME 11A LOUISIANA STATION EAST PARTIAL UNDERFLOOR PLUMBING PLAN** 

OF

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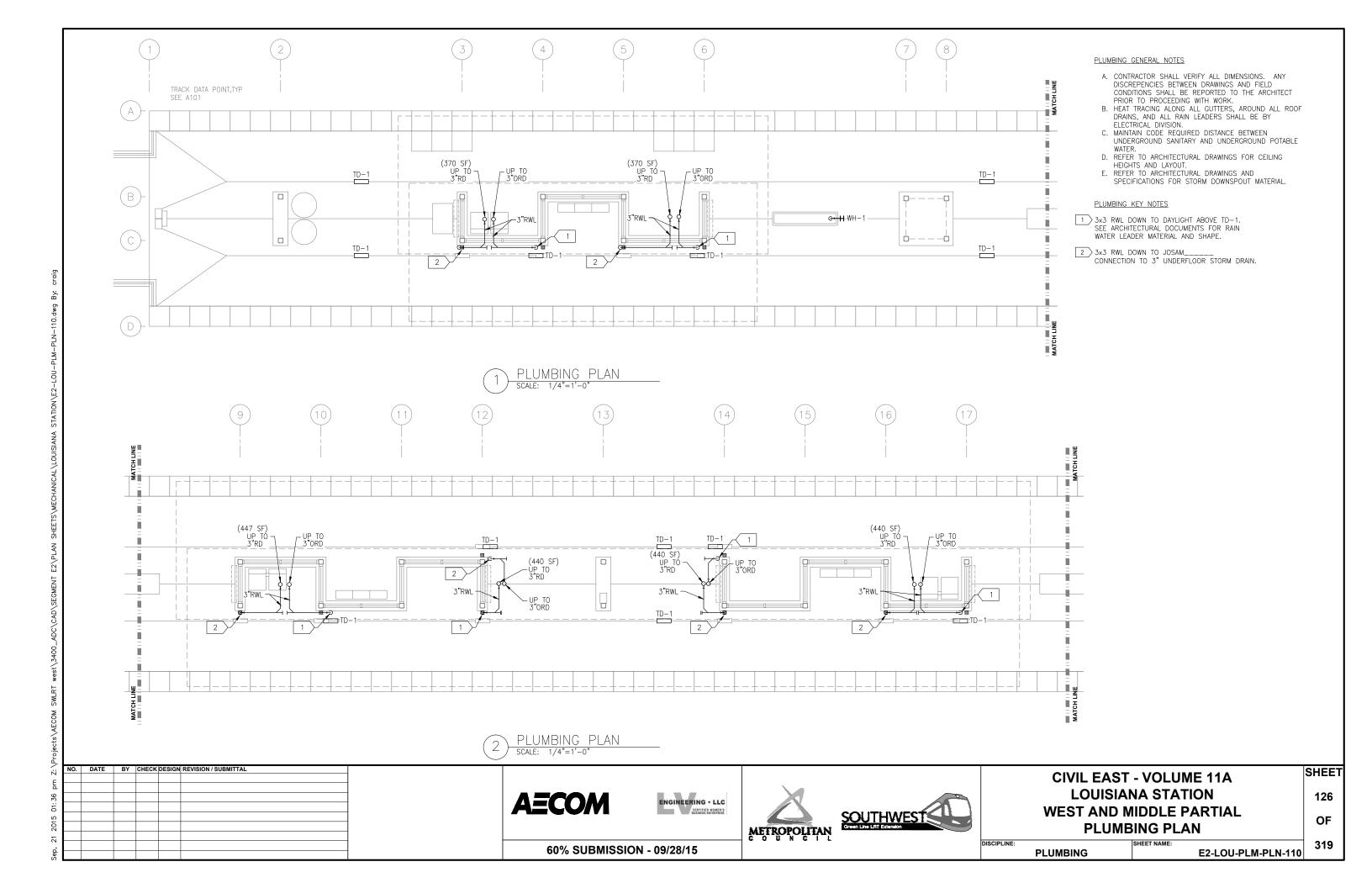
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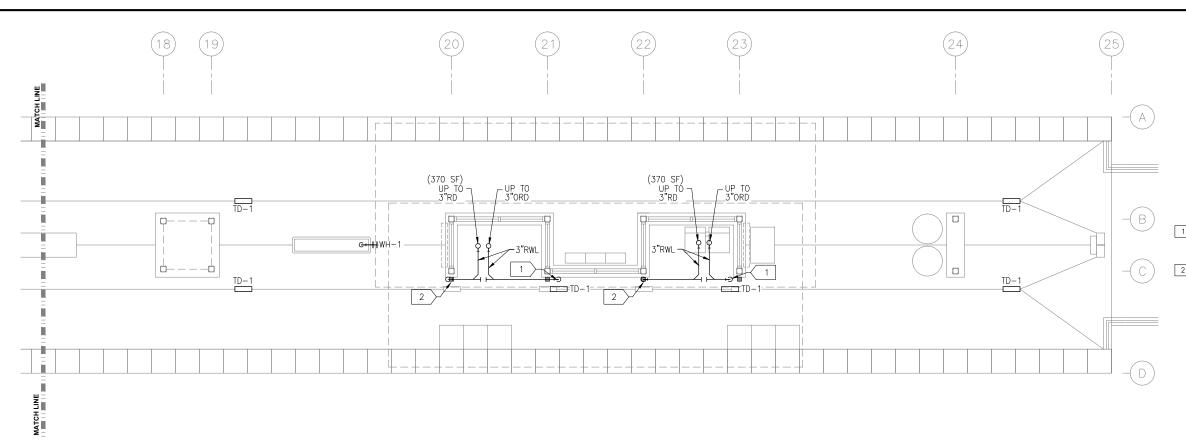
E2-LOU-PLM-PLN-101 **PLUMBING** 

60% SUBMISSION - 09/28/15

DISCIPLINE:

319





### PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.

  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS
- E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

## PLUMBING KEY NOTES

- 1 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.
- 2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

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

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL



60% SUBMISSION - 09/28/15







**CIVIL EAST - VOLUME 11A LOUISIANA STATION EAST PARTIAL PLUMBING PLAN AND RISER DIAGRAM** 

127 OF

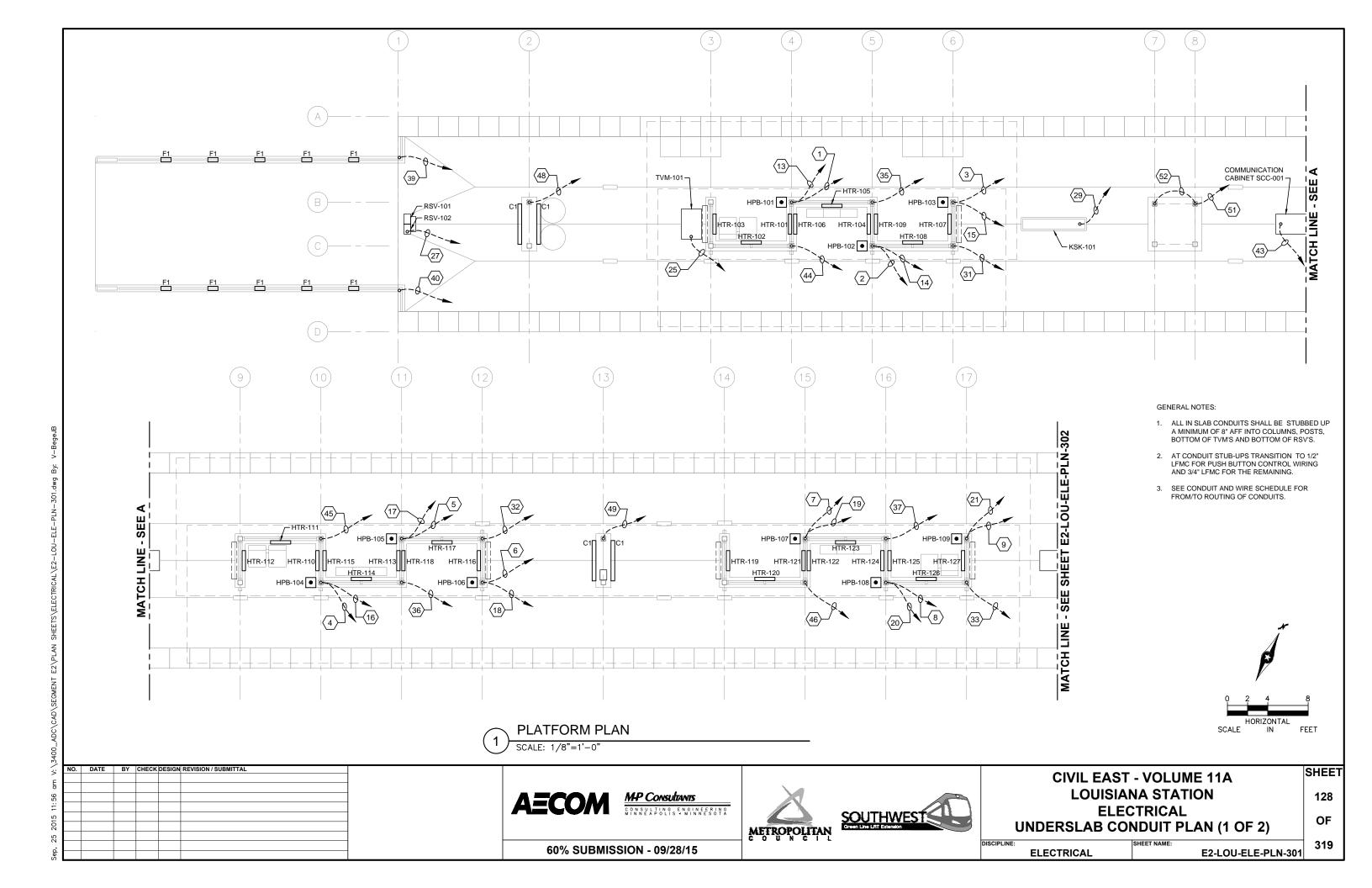
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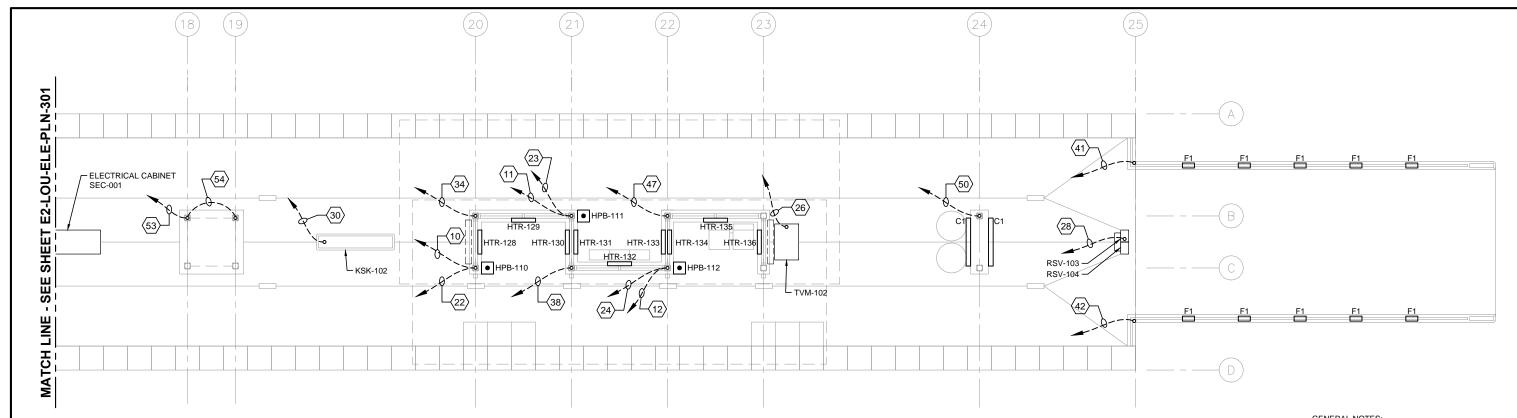
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DISCIPLINE:

E2-LOU-PLM-PLN-111

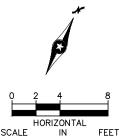
**PLUMBING** 





## GENERAL NOTES:

- ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
- AT CONDUIT STUB-UPS TRANSITION TO 1/2"
   LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
- 3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.



SHEET

129

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL 60% SUBMISSION - 09/28/15

MP Consultants

PLATFORM PLAN SCALE: 1/8"=1'-0"

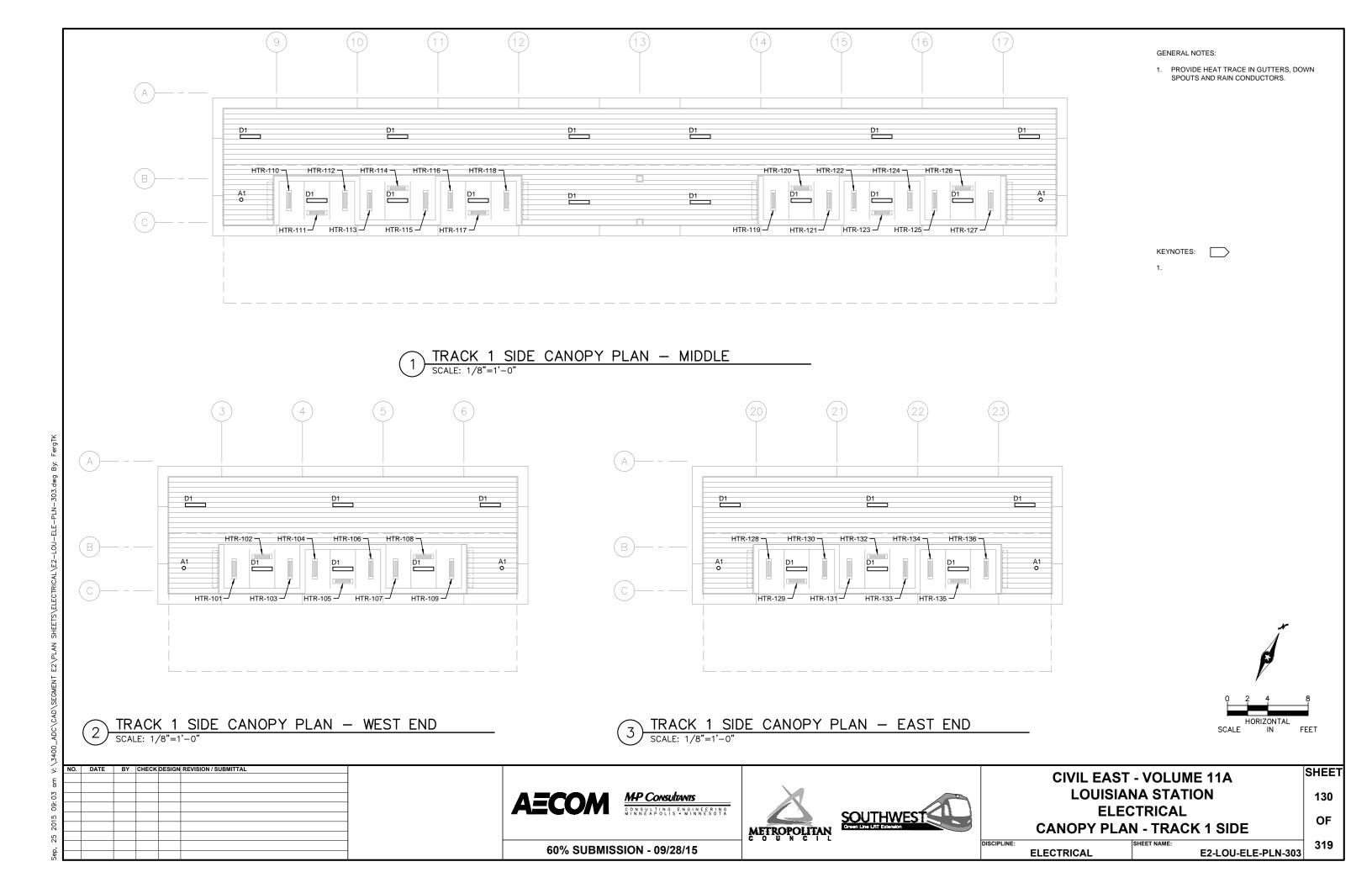


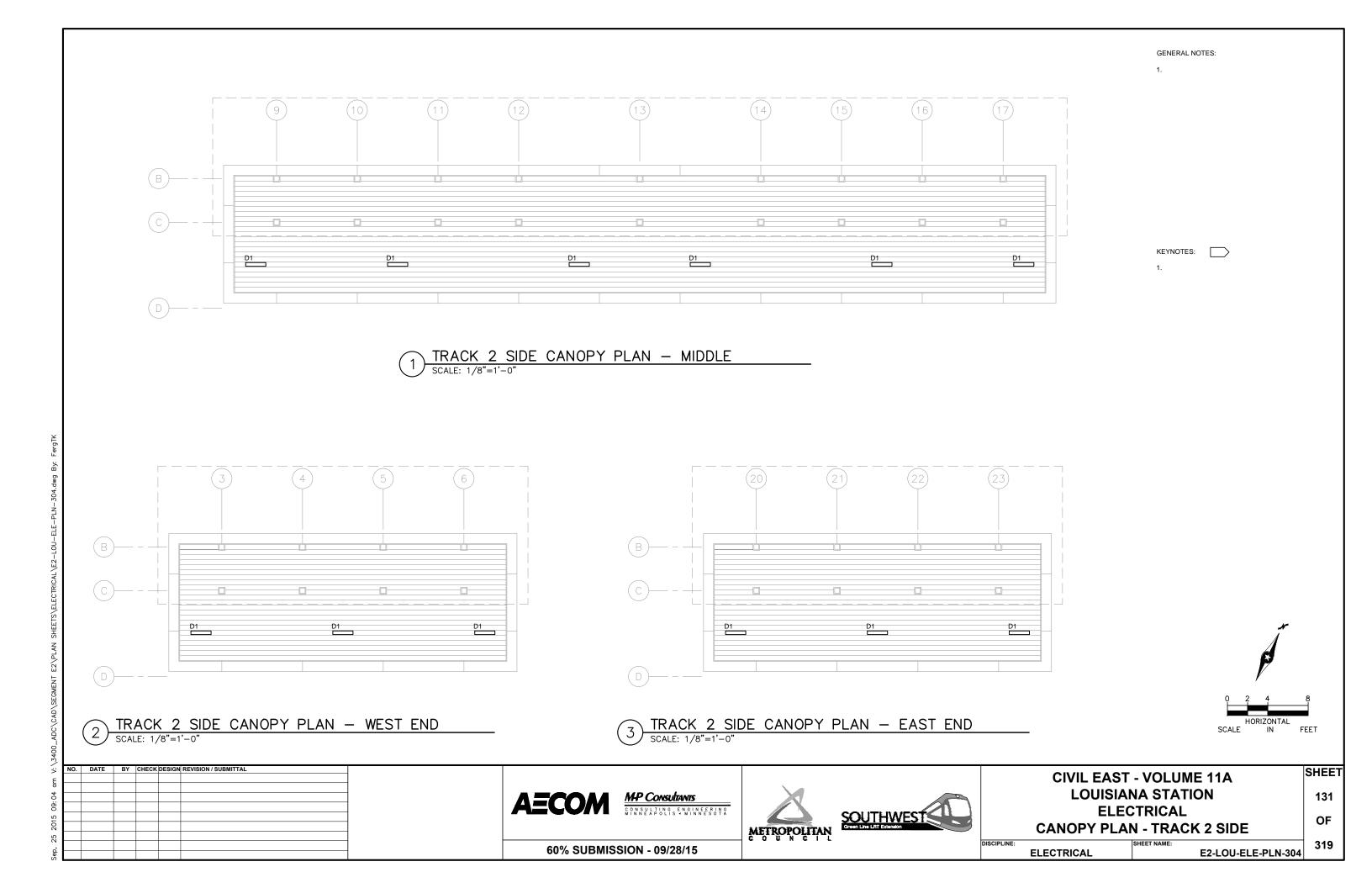


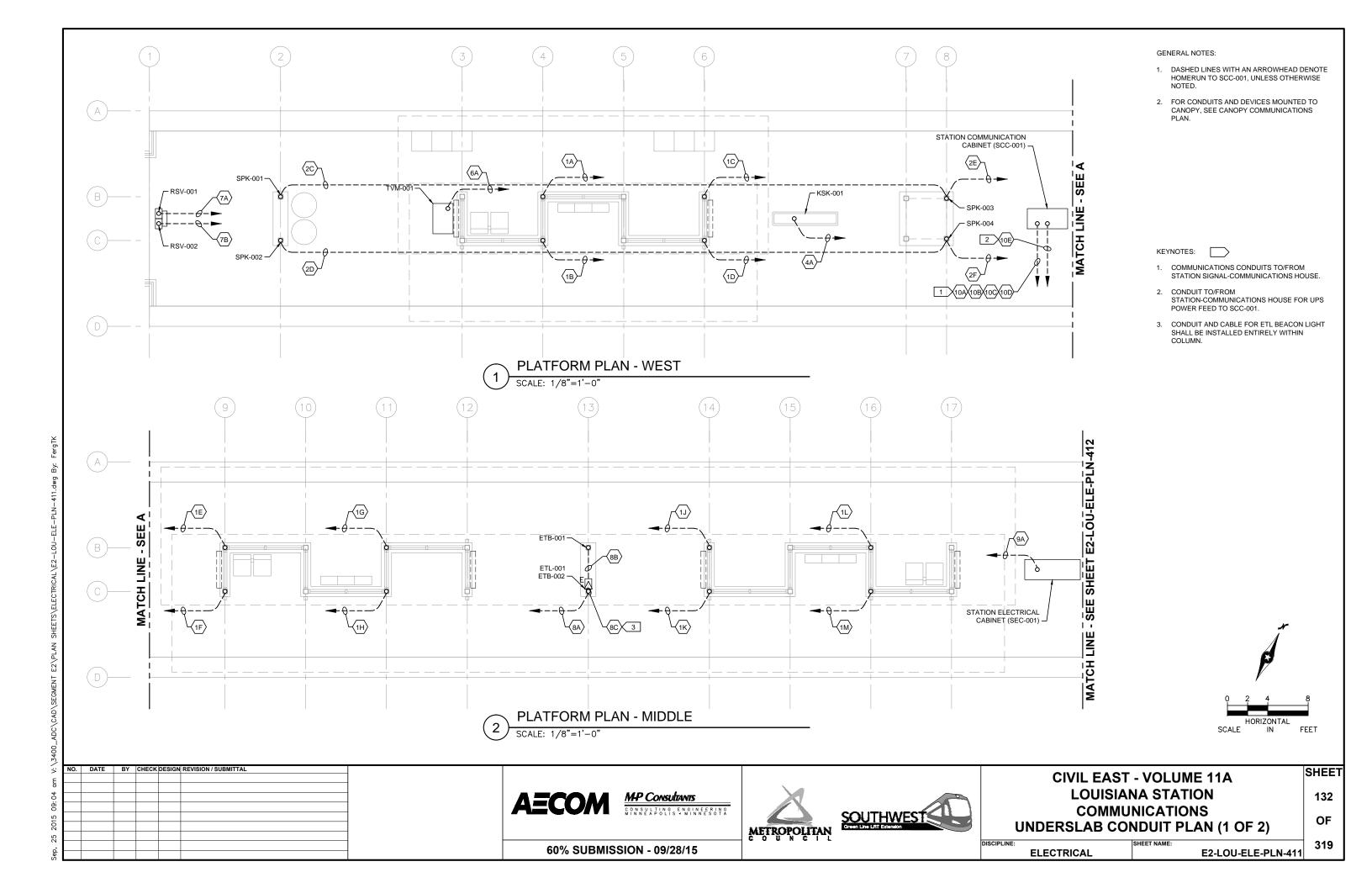
**CIVIL EAST - VOLUME 11A LOUISIANA STATION ELECTRICAL UNDERSLAB CONDUIT PLAN (2 OF 2)** 

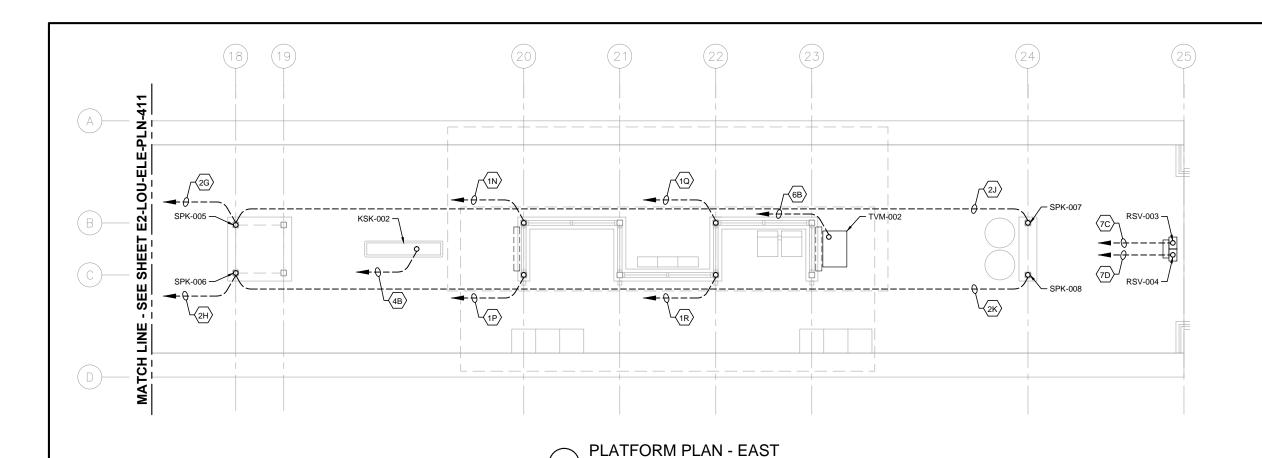
OF 319

E2-LOU-ELE-PLN-302 **ELECTRICAL** 









SCALE: 1/8"=1'-0"

GENERAL NOTES:

- DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE
- 2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS

KEYNOTES:

SHEET

133

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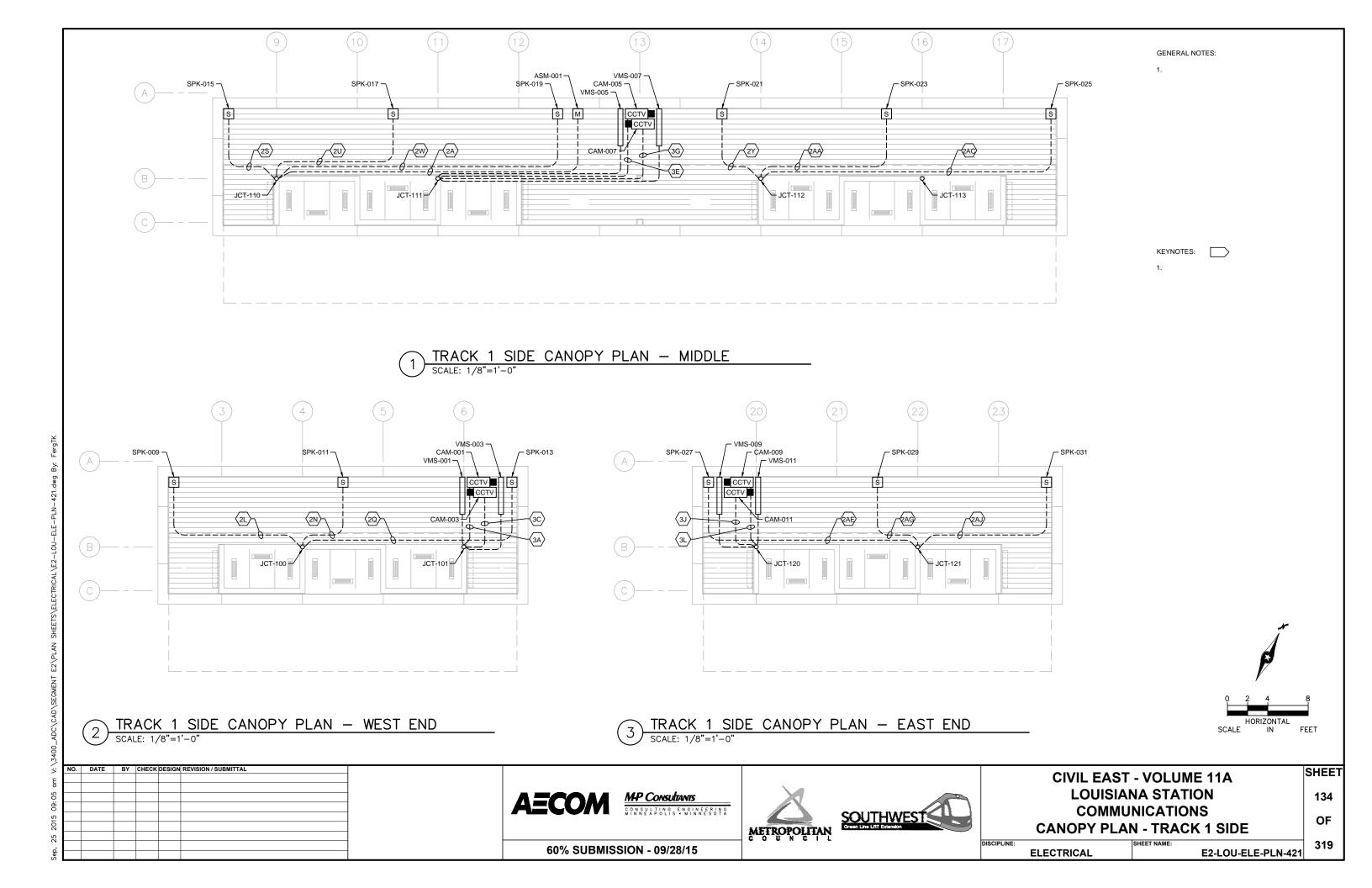
**CIVIL EAST - VOLUME 11A LOUISIANA STATION COMMUNICATIONS UNDERSLAB CONDUIT PLAN (2 OF 2)** 

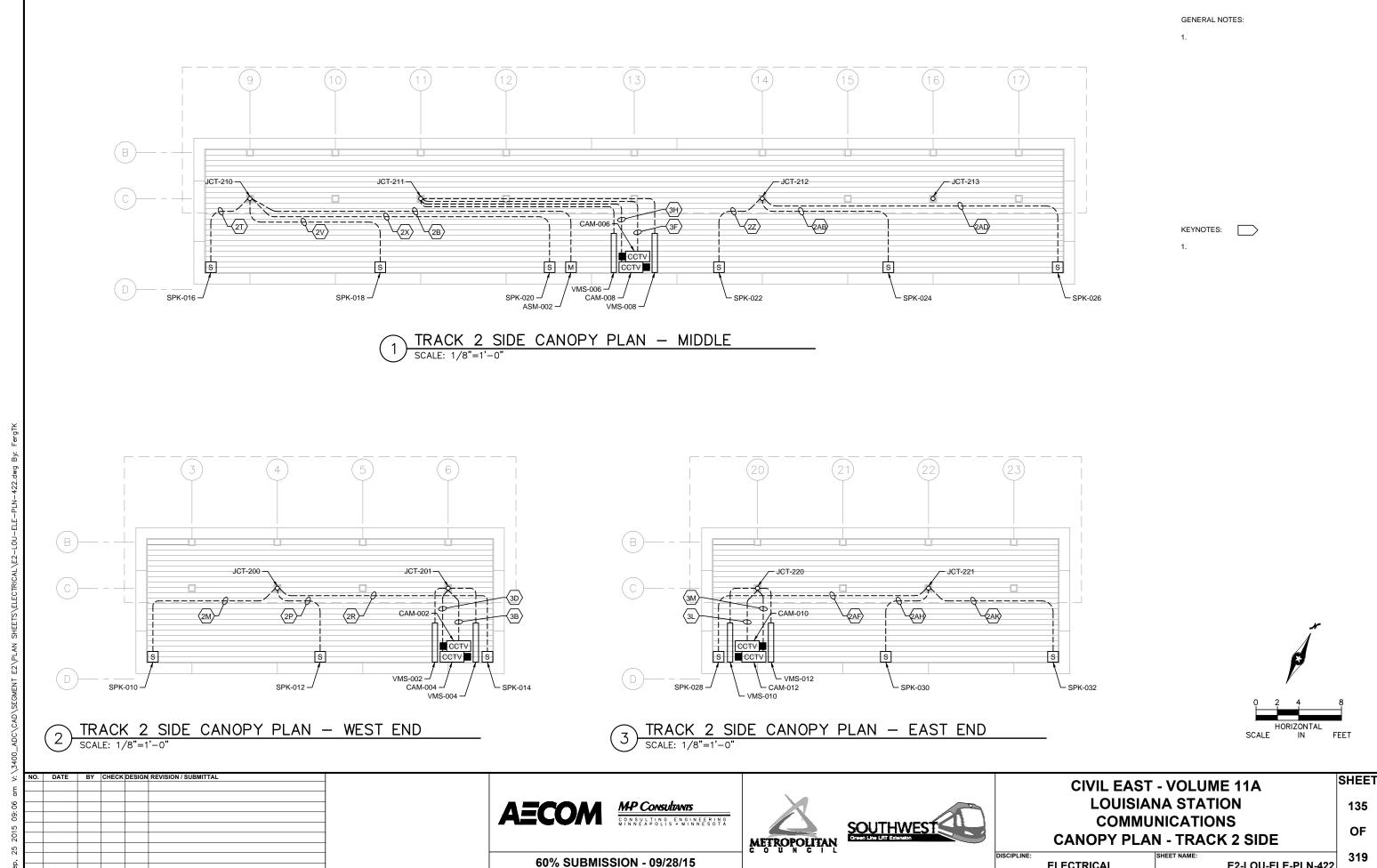
OF 319

60% SUBMISSION - 09/28/15

**ELECTRICAL** 

E2-LOU-ELE-PLN-412





E2-LOU-ELE-PLN-422

**ELECTRICAL** 

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	TO	CONDUIT SIZE
10A	LOU -CON-0001	S/C HOUSE TO SCC-001	S/C MANHOLE	LOU -SCC-001	3"
10B	LOU -CON-0002	S/C HOUSE TO SCC-001	S/C MANHOLE	LOU -SCC-001	3"
10C	LOU -CON-0003	S/C HOUSE TO SCC-001	S/C MANHOLE	LOU -SCC-001	3"
10D	LOU -CON-0004	S/C HOUSE TO SCC-001	S/C MANHOLE	LOU -SCC-001	3"
10E	LOU -CON-0005	UPS POWER FEED: SCH TO SCC	LOU -SCH-001	LOU -SCC-001	3"
1A	LOU -CON-0101	SCC TO JUNCTION 100	LOU -SCC-001	LOU -JCT-100	2"
1B	LOU -CON-0102	SCC TO JUNCTION 200	LOU -SCC-001	LOU -JCT-200	2"
1C	LOU -CON-0103	SCC TO JUNCTION 101	LOU -SCC-001	LOU -JCT-101	2"
1D	LOU -CON-0104	SCC TO JUNCTION 201	LOU -SCC-001	LOU -JCT-201	2"
1E	LOU -CON-0105	SCC TO JUNCTION 110	LOU -SCC-001	LOU -JCT-110	2"
1F	LOU -CON-0106	SCC TO JUNCTION 210	LOU -SCC-001	LOU -JCT-210	2"
1G	LOU -CON-0107	SCC TO JUNCTION 111	LOU -SCC-001	LOU -JCT-111	2"
1H	LOU -CON-0107	SCC TO JUNCTION 211	LOU -SCC-001	LOU -JCT-211	2"
1J	LOU -CON-0108	SCC TO JUNCTION 112	LOU -SCC-001	LOU -JCT-112	2"
1K	LOU -CON-0109	SCC TO JUNCTION 212	LOU -SCC-001	LOU -JCT-212	2"
1L	LOU -CON-0110	SCC TO JUNCTION 113	LOU -SCC-001	LOU -JCT-113	2"
1M	LOU -CON-0110	SCC TO JUNCTION 213	LOU -SCC-001	LOU -JCT-213	2"
1N	LOU -CON-0111	SCC TO JUNCTION 120	LOU -SCC-001	LOU -JCT-120	2"
1P	LOU -CON-0112	SCC TO JUNCTION 121	LOU -SCC-001	LOU -JCT-220	2"
1Q	LOU -CON-0113	SCC TO JUNCTION 220	LOU -SCC-001	LOU -JCT-121	2"
1R	LOU -CON-0114	SCC TO JUNCTION 221	LOU -SCC-001	LOU -JCT-221	2"
2A	LOU -CON-0201	MICROPHONE 1 - NOISE SENSING	LOU -JCT-111	LOU -ASM-001	1"
2B	LOU -CON-0202	MICROPHONE 2 - NOISE SENSING	LOU -JCT-211	LOU -ASM-002	1"
2C	LOU -CON-0203	SPEAKER 1 - POLE	LOU -SPK-003	LOU -SPK-001	1-1/2"
2D	LOU -CON-0204	SPEAKER 2 - POLE	LOU -SPK-004	LOU -SPK-002	1-1/2"
2E	LOU -CON-0205	SPEAKER 3 - POLE	LOU -SCC-001	LOU -SPK-003	1-1/2"
2F	LOU -CON-0206	SPEAKER 4 - POLE	LOU -SCC-001	LOU -SPK-004	1-1/2"
2G	LOU -CON-0207	SPEAKER 5 - POLE	LOU -SCC-001	LOU -SPK-005	1-1/2"
2H	LOU -CON-0208	SPEAKER 6 - POLE	LOU -SCC-001	LOU -SPK-006	1-1/2"
2J	LOU -CON-0209	SPEAKER 7 - POLE	LOU -SPK-005	LOU -SPK-007	1-1/2"
2K	LOU -CON-0210	SPEAKER 8 - POLE	LOU -SPK-006	LOU -SPK-008	1-1/2"
2L	LOU -CON-0211	SPEAKER 9 - CANOPY	LOU -JCT-100	LOU -SPK-009	1"
2M	LOU -CON-0212	SPEAKER 10 - CANOPY	LOU -JCT-200	LOU -SPK-010	1"
2N	LOU -CON-0213	SPEAKER 11 - CANOPY	LOU -JCT-100	LOU -SPK-011	1"
2P	LOU -CON-0214	SPEAKER 12 - CANOPY	LOU -JCT-200	LOU -SPK-012	1"
2Q	LOU -CON-0215	SPEAKER 13 - CANOPY	LOU -JCT-100	LOU -SPK-013	1"
2R	LOU -CON-0216	SPEAKER 14 - CANOPY	LOU -JCT-200	LOU -SPK-014	1"
28	LOU -CON-0217	SPEAKER 15 - CANOPY	LOU -JCT-110	LOU -SPK-015	1"
2T	LOU -CON-0218	SPEAKER 16 - CANOPY	LOU -JCT-210	LOU -SPK-016	1"
2U	LOU -CON-0219	SPEAKER 17 - CANOPY	LOU -JCT-110	LOU -SPK-017	1"
2V	LOU -CON-0220	SPEAKER 18 - CANOPY	LOU -JCT-210	LOU -SPK-018	1"
2W	LOU -CON-0221	SPEAKER 19 - CANOPY	LOU -JCT-110	LOU -SPK-019	1"
2X	LOU -CON-0222	SPEAKER 20 - CANOPY	LOU -JCT-210	LOU -SPK-020	1"
2Y	LOU -CON-0223	SPEAKER 21 - CANOPY	LOU -JCT-112	LOU -SPK-021	1"
2Z	LOU -CON-0224	SPEAKER 22 - CANOPY	LOU -JCT-212	LOU -SPK-022	1"
2AA	LOU -CON-0225	SPEAKER 23 - CANOPY	LOU -JCT-112	LOU -SPK-023	1"
2AB	LOU -CON-0226	SPEAKER 24 - CANOPY	LOU -JCT-212	LOU -SPK-024	1"

COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

MP Consultants

CONSULTING ENGINEERING MINNESOTA

SOUTHWEST!

**CIVIL EAST - VOLUME 11A LOUISIANA STATION** COMMUNICATIONS **CONDUIT SCHEDULE (1 OF 2)** 

136 OF

SHEET

E2-LOU-ELE-SCH-461

60% SUBMISSION - 09/28/15

**ELECTRICAL** 

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	TO	CONDUIT SIZE
2AC	LOU -CON-0227	SPEAKER 25 - CANOPY	LOU -JCT-112	LOU -SPK-025	1"
2AD	LOU -CON-0228	SPEAKER 26 - CANOPY	LOU -JCT-212	LOU -SPK-026	1"
2AE	LOU -CON-0229	SPEAKER 27 - CANOPY	LOU -JCT-121	LOU -SPK-027	1"
2AF	LOU -CON-0230	SPEAKER 28 - CANOPY	LOU -JCT-221	LOU -SPK-028	1"
2AG	LOU -CON-0231	SPEAKER 29 - CANOPY	LOU -JCT-121	LOU -SPK-029	1"
2AH	LOU -CON-0232	SPEAKER 30 - CANOPY	LOU -JCT-221	LOU -SPK-030	1"
2AJ	LOU -CON-0233	SPEAKER 31 - CANOPY	LOU -JCT-121	LOU -SPK-031	1"
2AK	LOU -CON-0234	SPEAKER 32 - CANOPY	LOU -JCT-221	LOU -SPK-032	1"
3A	LOU -CON-0301	CAMERA 1	LOU -JCT-101	LOU CAM-001	1"
3B	LOU -CON-0302	CAMERA 2	LOU -JCT-201	LOU CAM-002	1"
3C	LOU -CON-0303	CAMERA 3	LOU -JCT-101	LOU CAM-003	1"
3D	LOU -CON-0304	CAMERA 4	LOU -JCT-201	LOU CAM-004	1"
3E	LOU -CON-0305	CAMERA 5	LOU -JCT-111	LOU CAM-005	1"
3F	LOU -CON-0306	CAMERA 6	LOU -JCT-211	LOU CAM-006	1"
3G	LOU -CON-0307	CAMERA 7	LOU -JCT-111	LOU CAM-007	1"
3H	LOU -CON-0308	CAMERA 8	LOU -JCT-211	LOU CAM-008	1"
3J	LOU -CON-0309	CAMERA 9	LOU -JCT-120	LOU CAM-009	1"
3K	LOU -CON-0310	CAMERA 10	LOU -JCT-220	LOU CAM-010	1"
3L	LOU -CON-0311	CAMERA 11	LOU -JCT-120	LOU CAM-011	1"
3M	LOU -CON-0312	CAMERA 12	LOU -JCT-220	LOU CAM-012	1"
4A	LOU -CON-0401	KIOSK 1 (F)	LOU -SCC-001	LOU -KSK-001	2"
4B	LOU -CON-0402	KIOSK 2 (F)	LOU -SCC-001	LOU -KSK-002	2"
5A	LOU -CON-0501	VMS 1	LOU -JCT-101	LOU -VMS-001	1"
5B	LOU -CON-0502	VMS 2	LOU -JCT-201	LOU -VMS-002	1"
5C	LOU -CON-0503	VMS 3	LOU -JCT-101	LOU -VMS-003	1"
5D	LOU -CON-0504	VMS 4	LOU -JCT-201	LOU -VMS-004	1"
5E	LOU -CON-0505	VMS 5	LOU -JCT-111	LOU -VMS-005	1"
5F	LOU -CON-0506	VMS 6	LOU -JCT-211	LOU -VMS-006	1"
5G	LOU -CON-0507	VMS 7	LOU -JCT-111	LOU -VMS-007	1"
5H	LOU -CON-0508	VMS 8	LOU -JCT-211	LOU -VMS-008	1"
5J	LOU -CON-0509	VMS 9	LOU -JCT-120	LOU -VMS-009	1"
5K	LOU -CON-0510	VMS 10	LOU -JCT-220	LOU -VMS-010	1"
5L	LOU -CON-0511	VMS 11	LOU -JCT-120	LOU -VMS-011	1"
5M	LOU -CON-0512	VMS 12	LOU -JCT-220	LOU -VMS-012	1"
6A	LOU -CON-0601	TVM 1	LOU -SCC-001	LOU -TVM-001	2"
6B	LOU -CON-0602	TVM 2	LOU -SCC-001	LOU -TVM-002	2"
7A	LOU -CON-0701	VALIDATOR 1	LOU -SCC-001	LOU -RSV-001	1-1/2"
7B	LOU -CON-0702	VALIDATOR 2	LOU -SCC-001	LOU -RSV-002	1-1/2"
7C	LOU -CON-0703	VALIDATOR 3	LOU -SCC-001	LOU -RSV-003	1-1/2"
7D	LOU -CON-0704	VALIDATOR 4	LOU -SCC-001	LOU -RSV-004	1-1/2"
8A	LOU -CON-0801	EMERGENCYTELEPHONE 1 - PHONE	LOU -SCC-001	LOU -ETL-001	1-1/2"
8B	LOU -CON-0802	EMERGENCY TELEPHONE 1 - BEACON LIGHT 1	LOU -ETL-001	LOU -ETB-001	1"
8C	LOU -CON-0803	EMERGENCY TELEPHONE 1 - BEACON LIGHT 2	LOU -ETL-001	LOU -ETB-002	1"
9A	LOU -CON-0901	STATION ELECTRICAL CABINET	LOU -SCC-001	LOU -SEC-001	2"

## COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 

MP CONSULTANTS

CONSULTING ENGINEERING MINNEAPOLIS - MINNESOTA





CIVIL EAST - VOLUME 11A LOUISIANA STATION COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)

137 OF 319

SHEET

PLINE: SHEET NAME: E2-LOU-ELE-SCH-462

60% SUBMISSION - 09/28/15

2015 09:07 am V: \3400_ADC\CAD\SEGMENT E2\PLAN SH

## CODE SUMMARY - CENTER PLATFORM WOODDALE STATION

## **CODE REFERENCES**

MINNESOTA STATE BUILDING CODE 2015
NFPA 130 - STANDARD FOR FIXED GUIDEWAY TRANSIT 2014
AND PASSENGER RAIL SYSTEMS

IBC REVIEW

A. <u>DESCRIPTION</u>

LOCATION: ST. LOUIS PARK, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'-4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA)
5416 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 3169 SQUARE FEET
731 SQUARE FEET (LOWER @ 36'-8" X 13'-8" AND UPPER @ 34'-6" X 6'-8") WEST CANOPY
1707 SQUARE FEET (LOWER @ 84'-8" X 13'-8" AND UPPER @ 82'-6" X 6'-8") MIDDLE CANOPY
731 SQUARE FEET (LOWER @ 36'-8" X 13'-8" AND UPPER @ 34'-6" X 6'-8") EAST CANOPY

B. <u>OCCUPANCY CLASSIFICATION</u> (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3 (15 S.F. PER PERSON)

C. <u>OCCUPANCY SEPARATIONS</u>

NONE ARE REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. <u>IBC EXITING SUMMARY</u>

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361
REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2)
WIDTH PROVIDED = 2 RAMPS AT 145" = 290"
2 MEANS OF EGRESS PROVIDED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

# PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

					PLATFORM	COLOR AND FI	NISH SCHED	ULE			
TYPE	STATION	STRUCTURAL STEEL PAINT COLOR	PLATFORM CONC COLOR	PLATFORM CONC FINISH	CONC WALL COLOR	CONC WALL FINISH	RAILING INFILL MATERIAL	ALUM WDW FRAME FINISH	EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH	ALUM COMP CANOPY SOFFIT AND FASCIA COLOR	ARCH WOVEN MESH
CENTER	WOODDALE STATION	PPG 518-6 KNIGHT'S ARMOR	CEMSTONE MENDOTA BUFF	TBD	CEMSTONE MENDOTA BUFF	TBD	SS CABLE	CLEAR ANODIZED	HUNTER DOUGLAS WOODWRIGHT 8449 WINDJAMMER TEAK	ALUCOBOND NATURAL ZINC	TBD

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 





CIVIL EAST - VOLUME 11A
WOODDALE STATION
CODE SUMMARY / FINISH SCHEDULE

OF 319

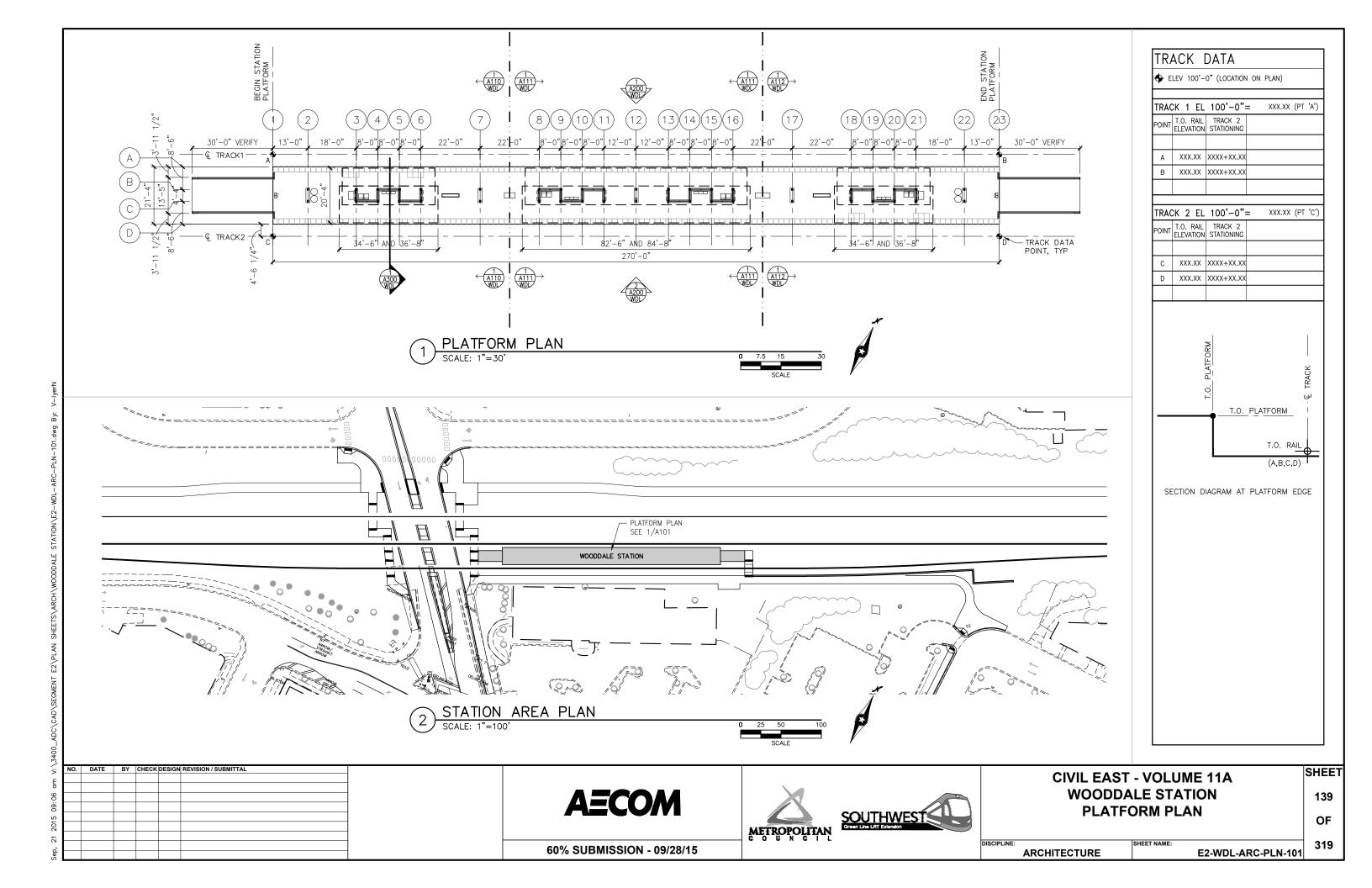
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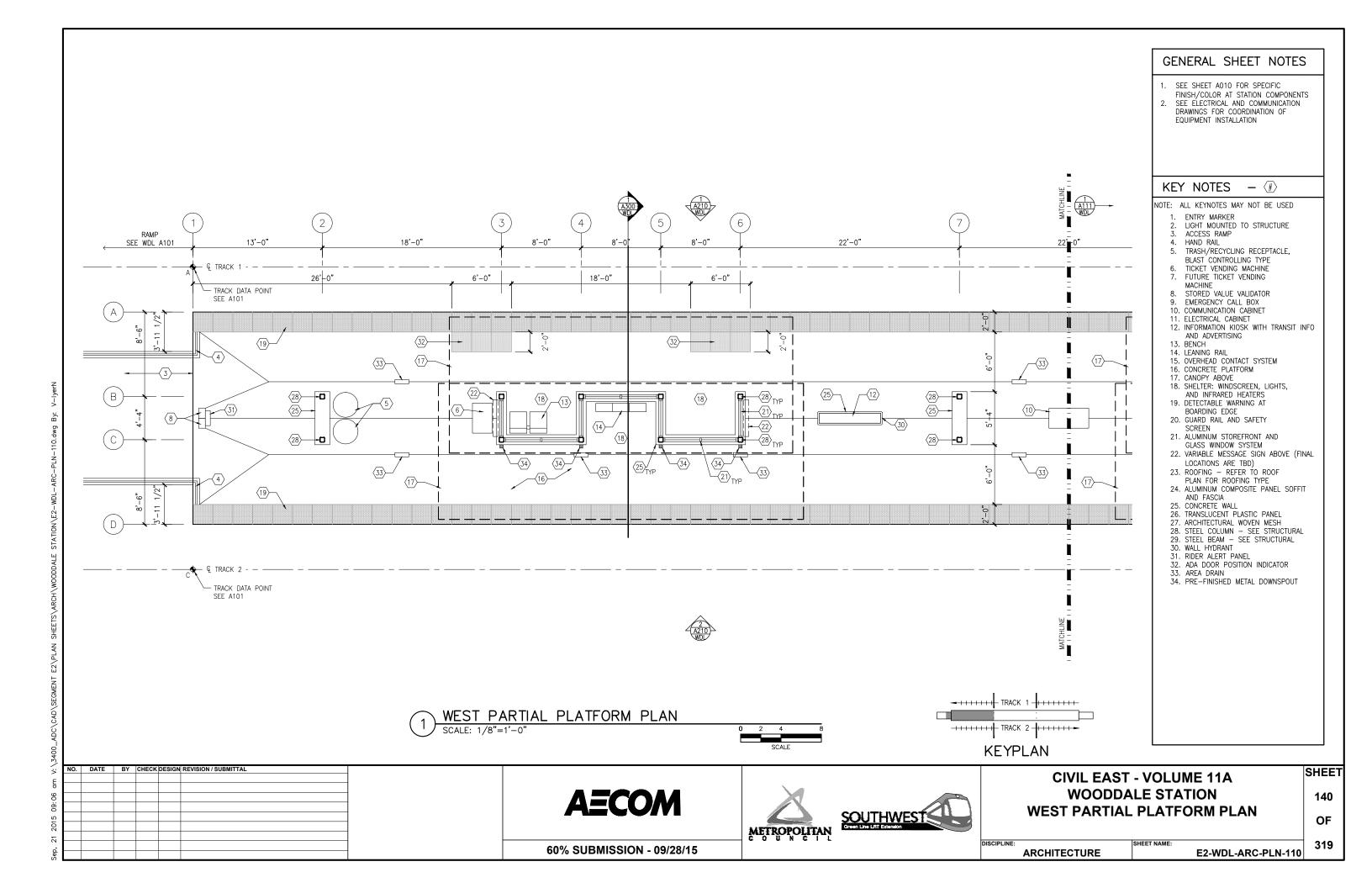
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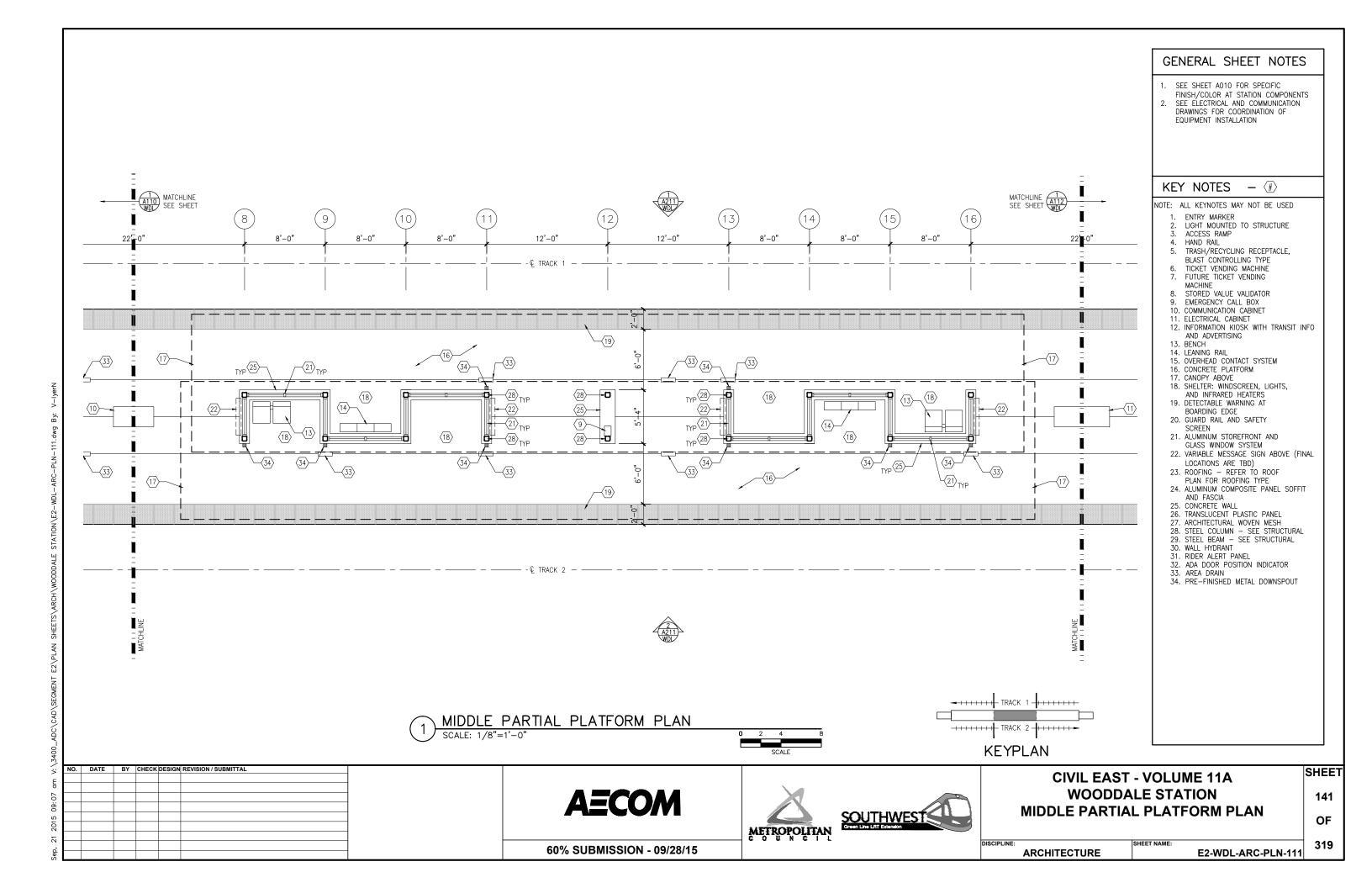
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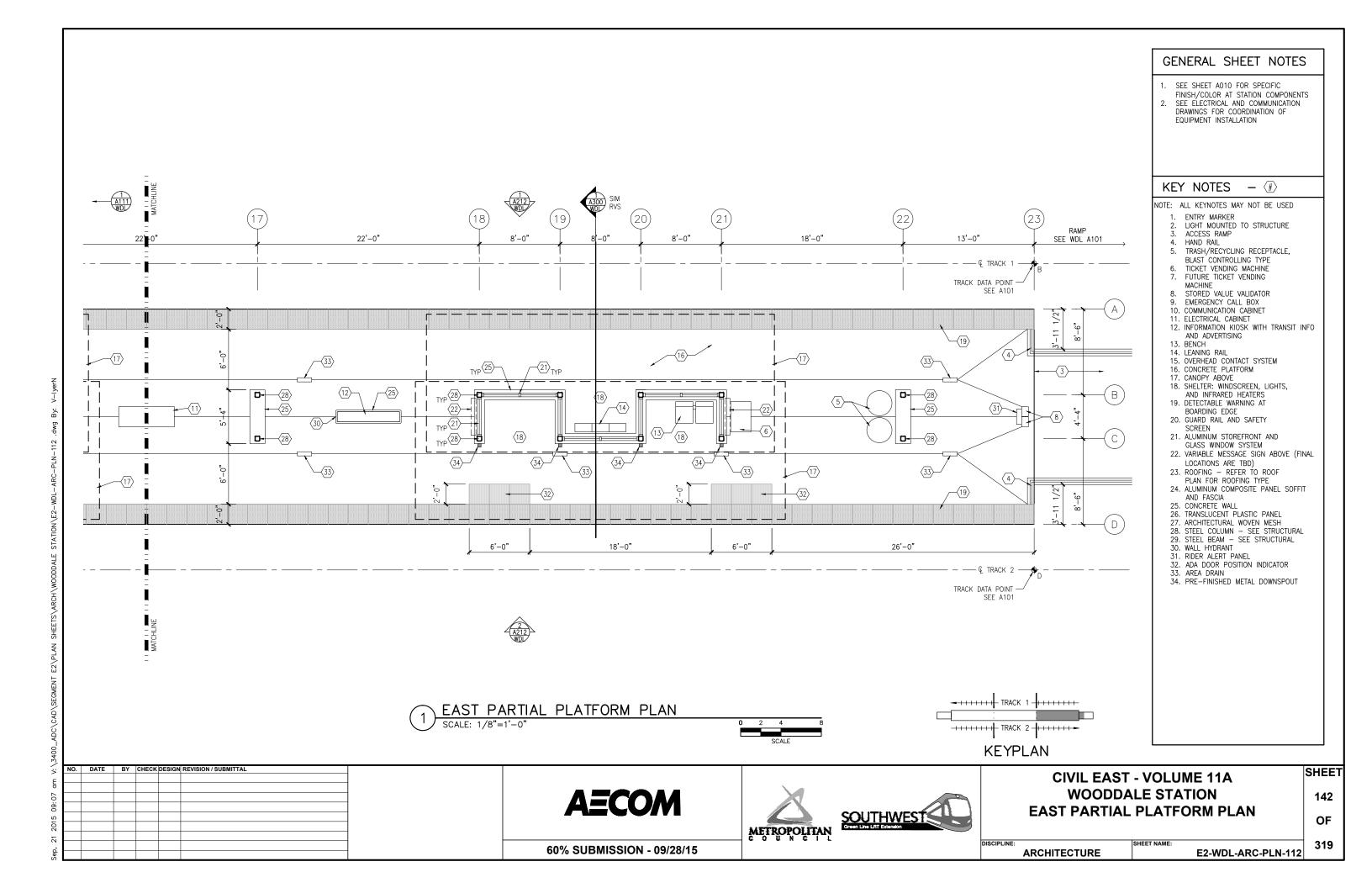
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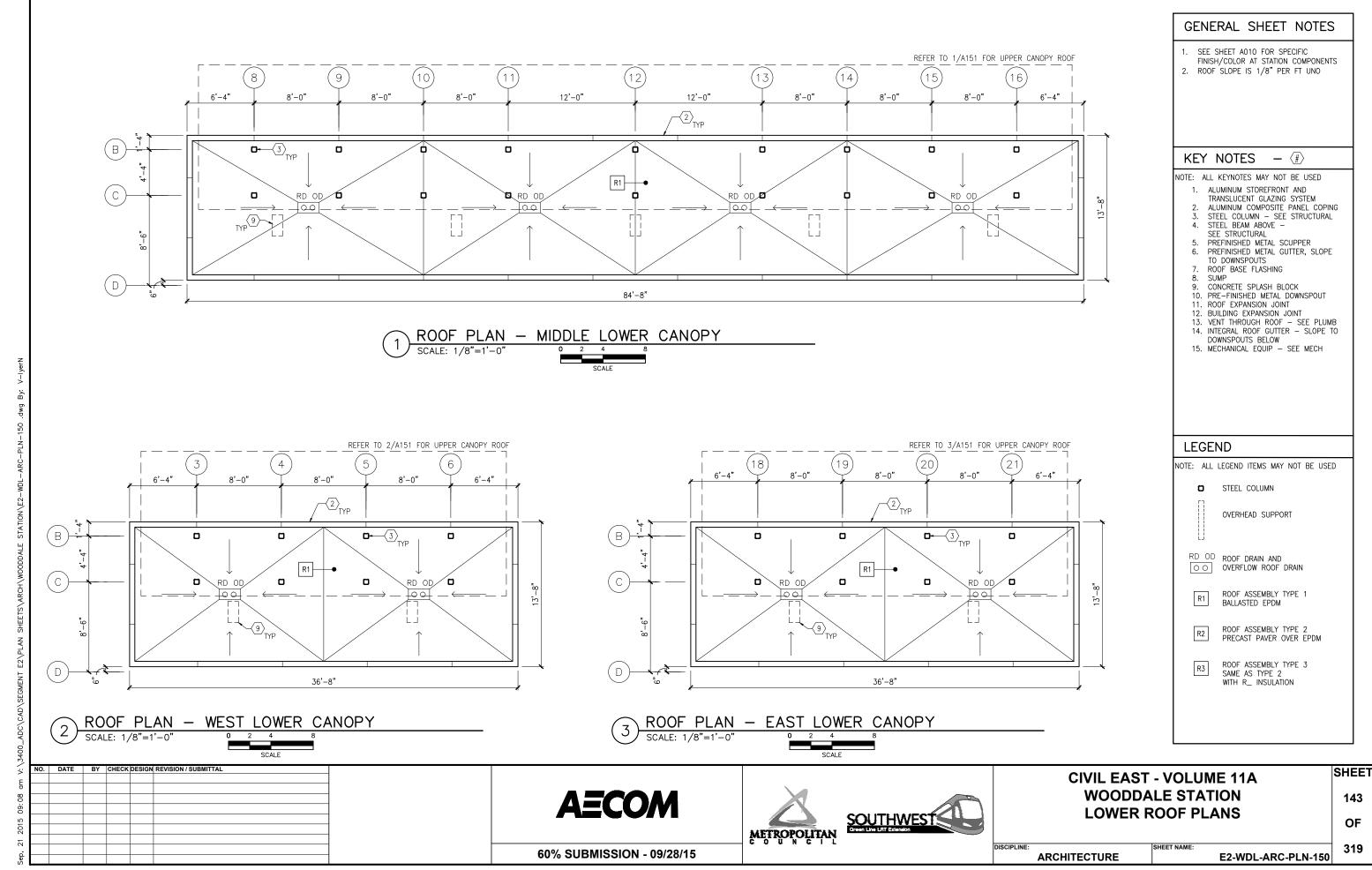
60% SUBMISSION - 09/28/15

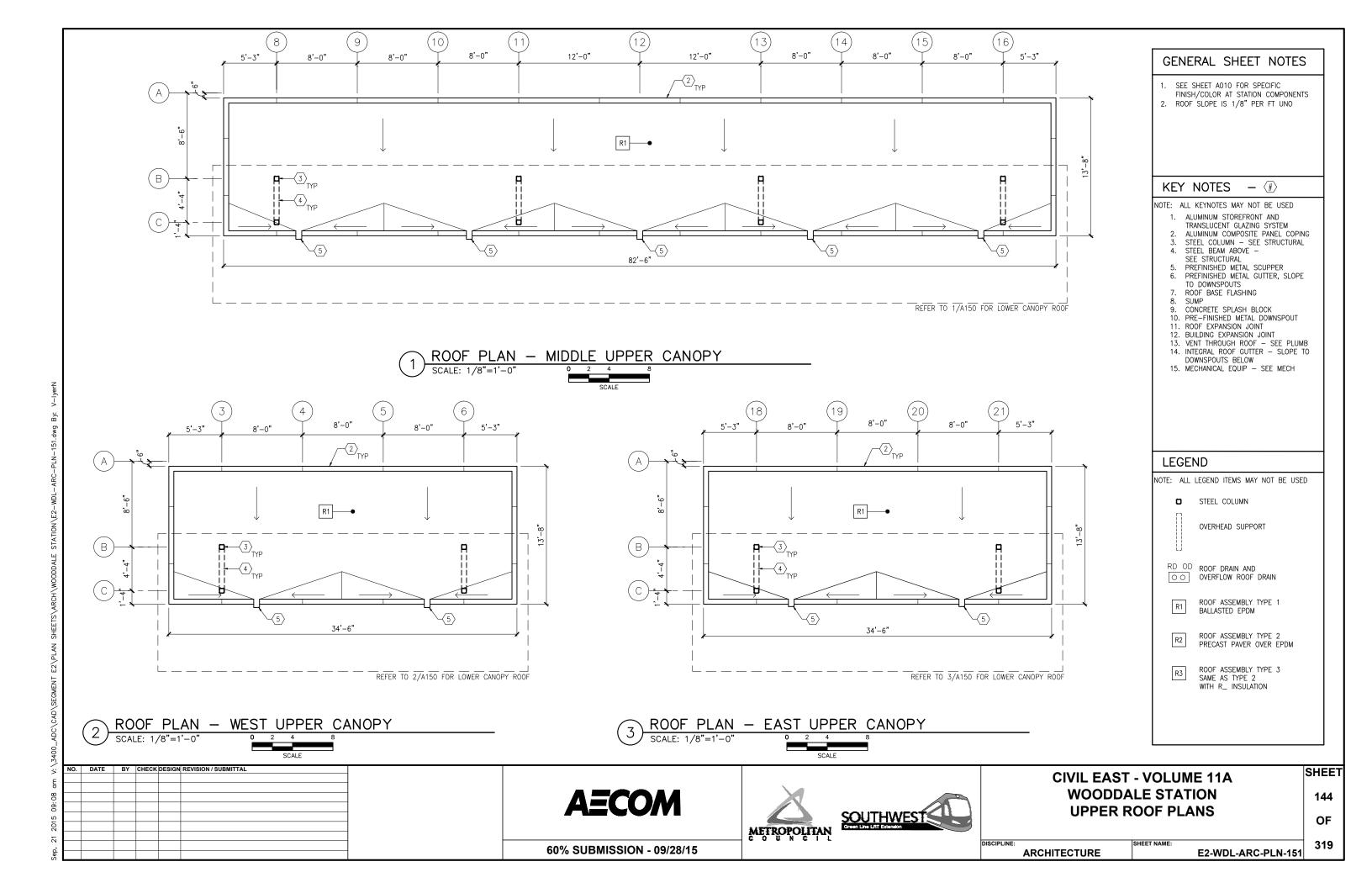


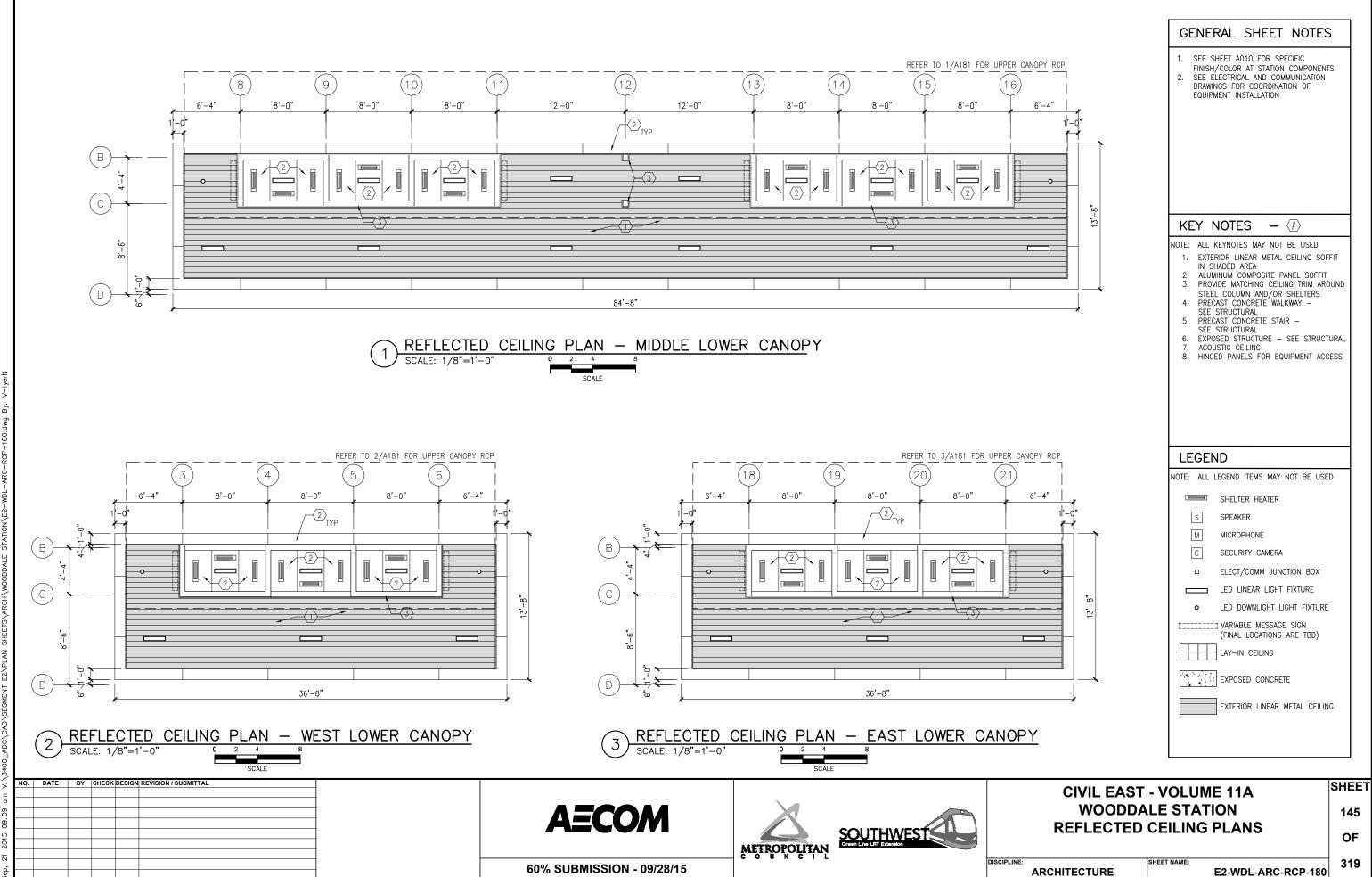


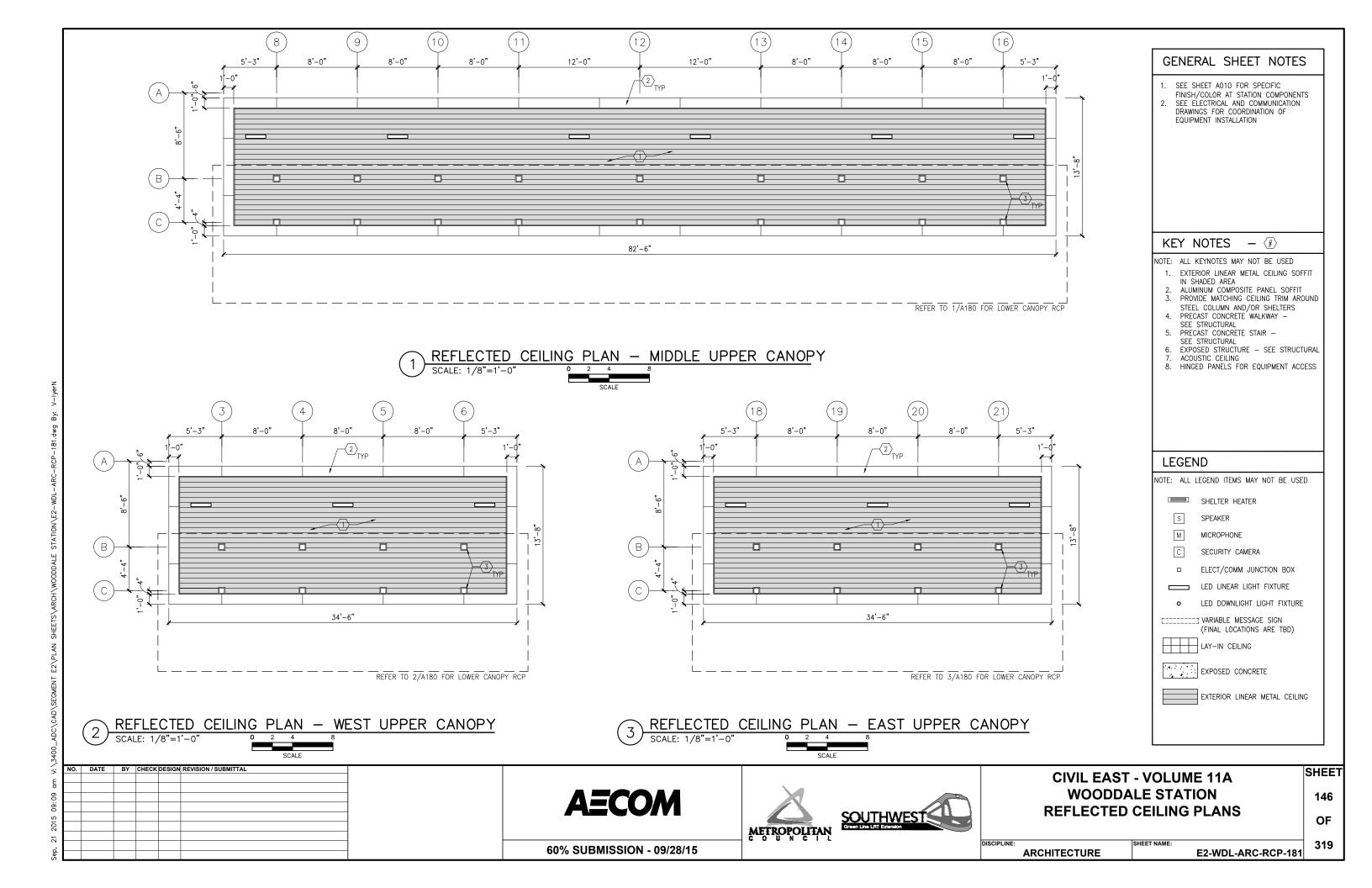


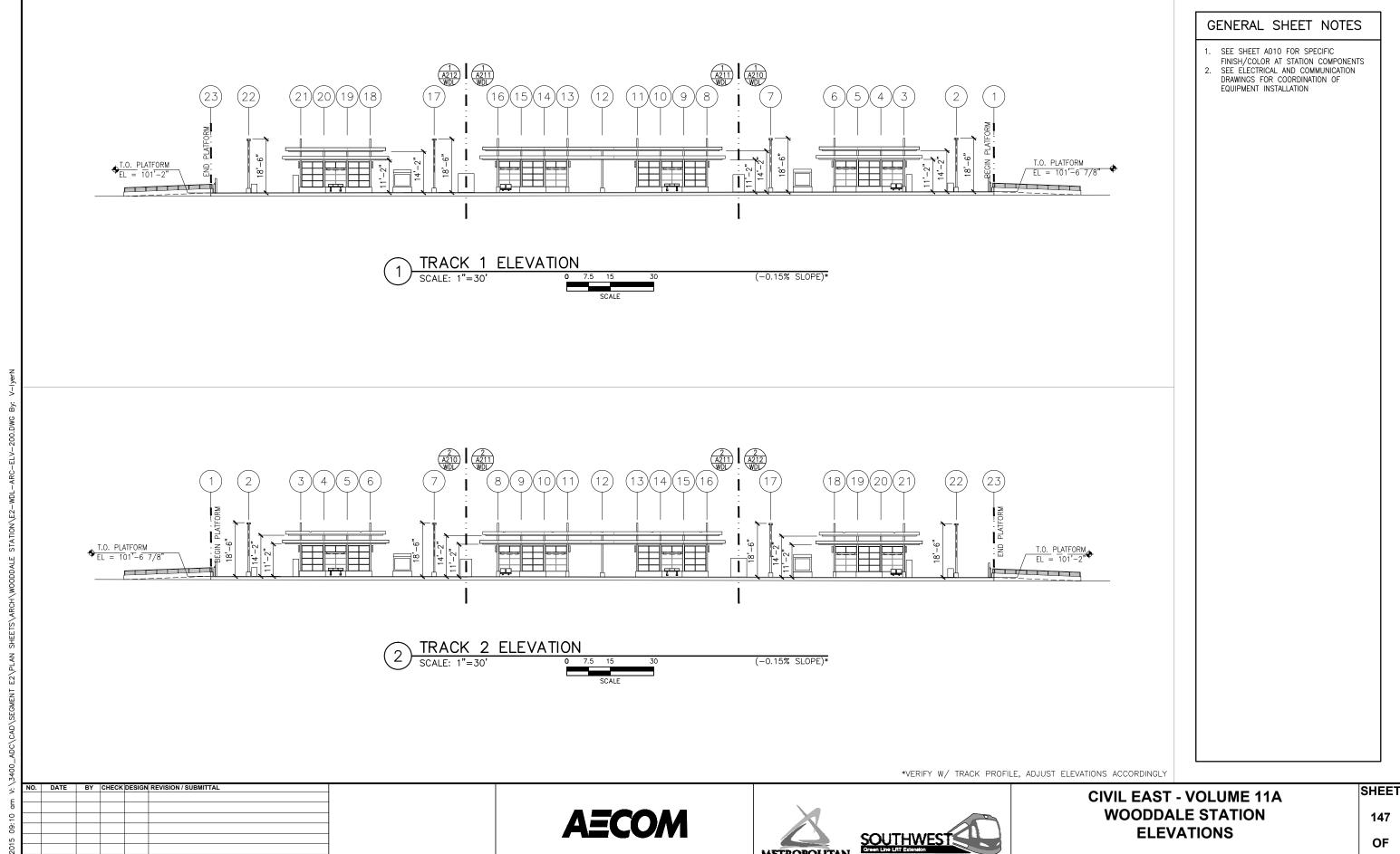












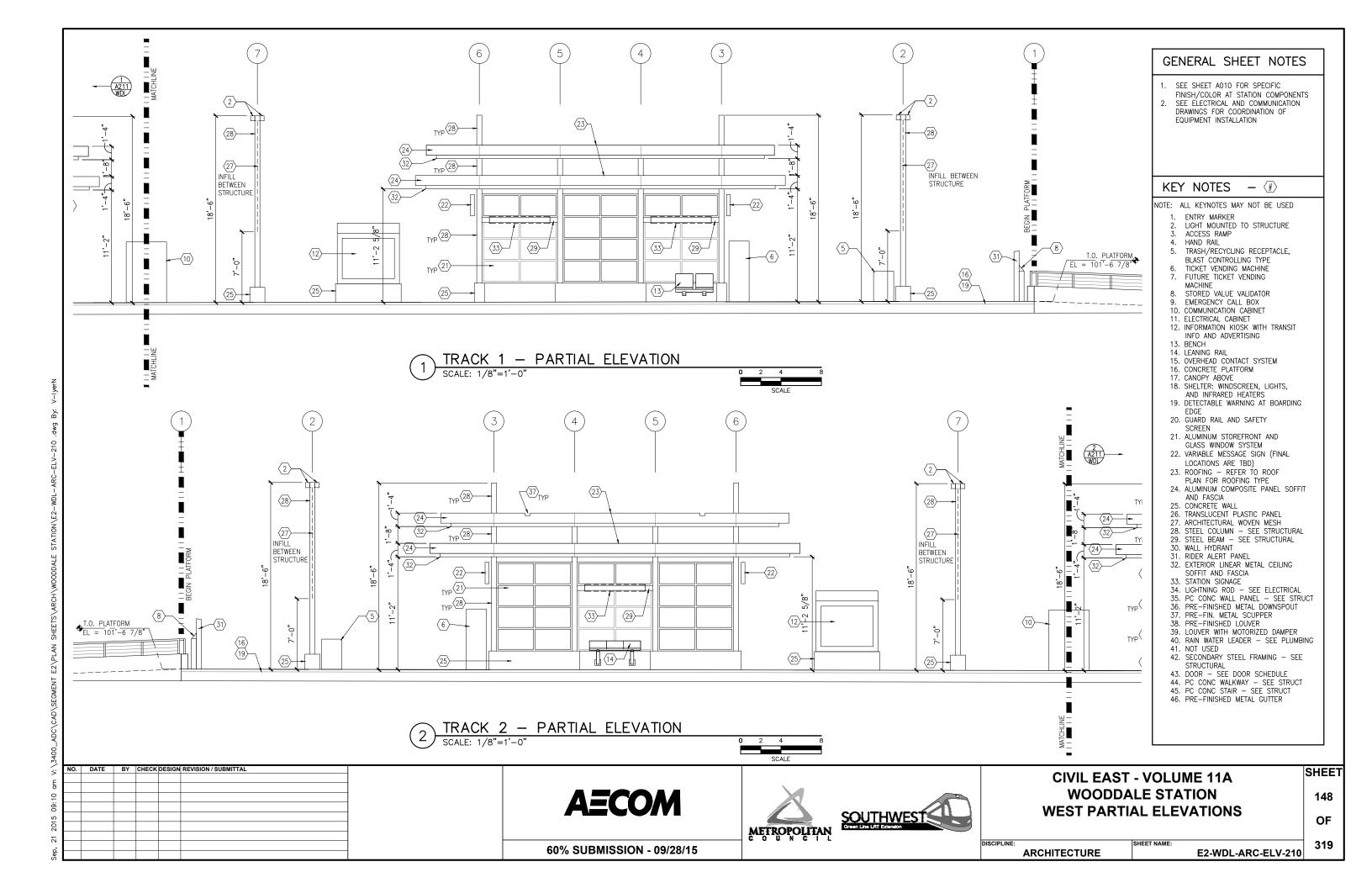
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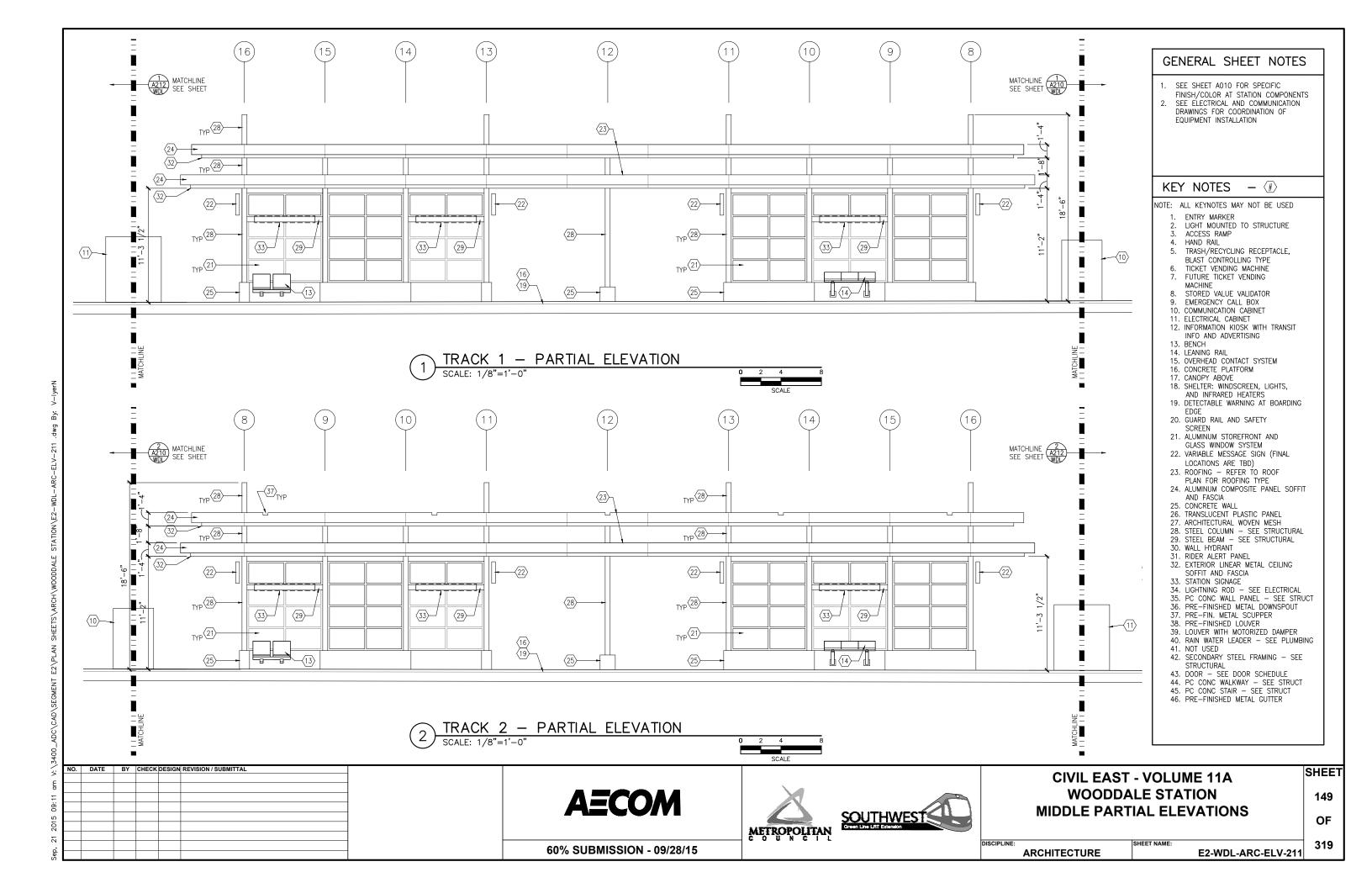
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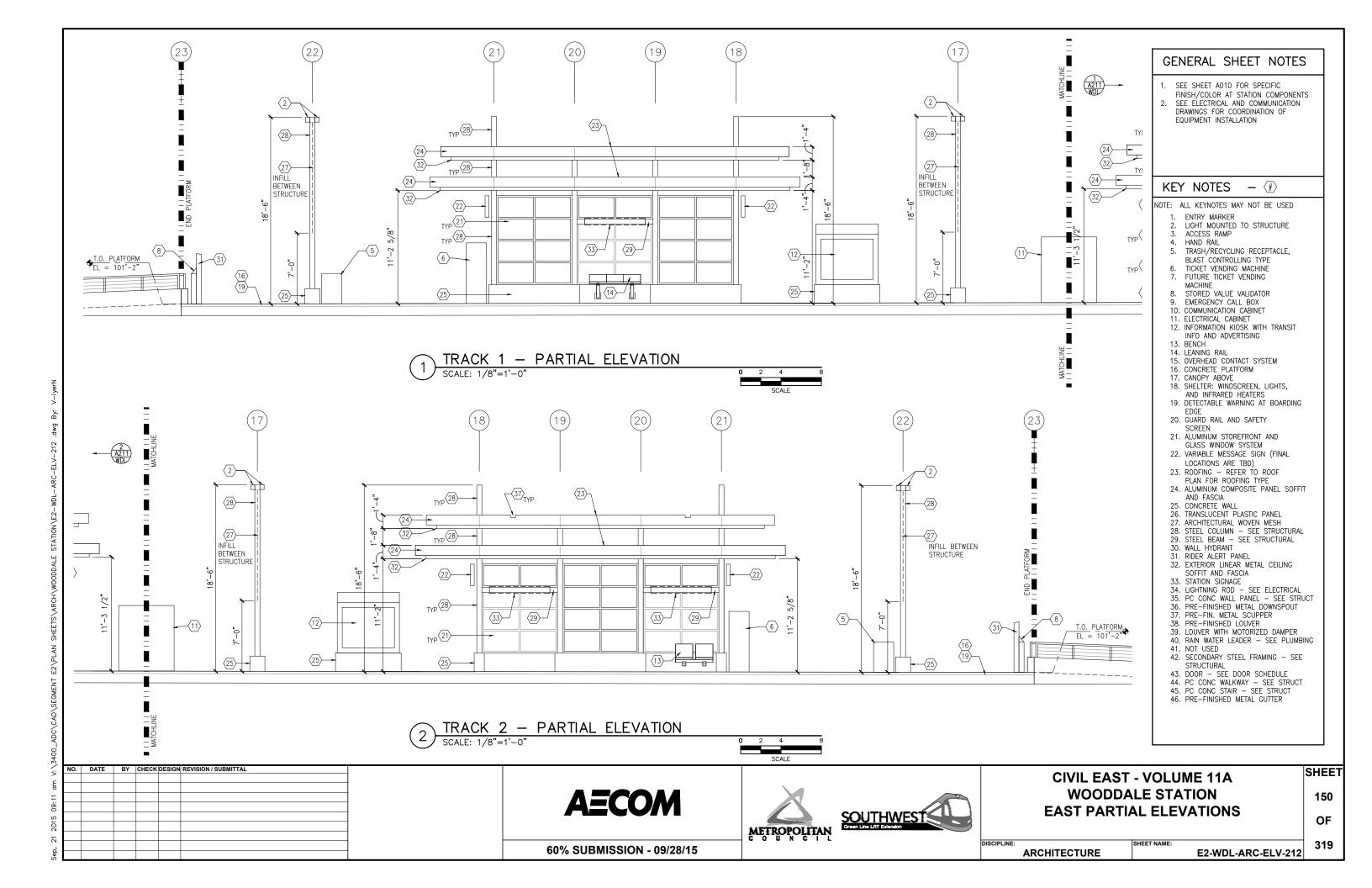
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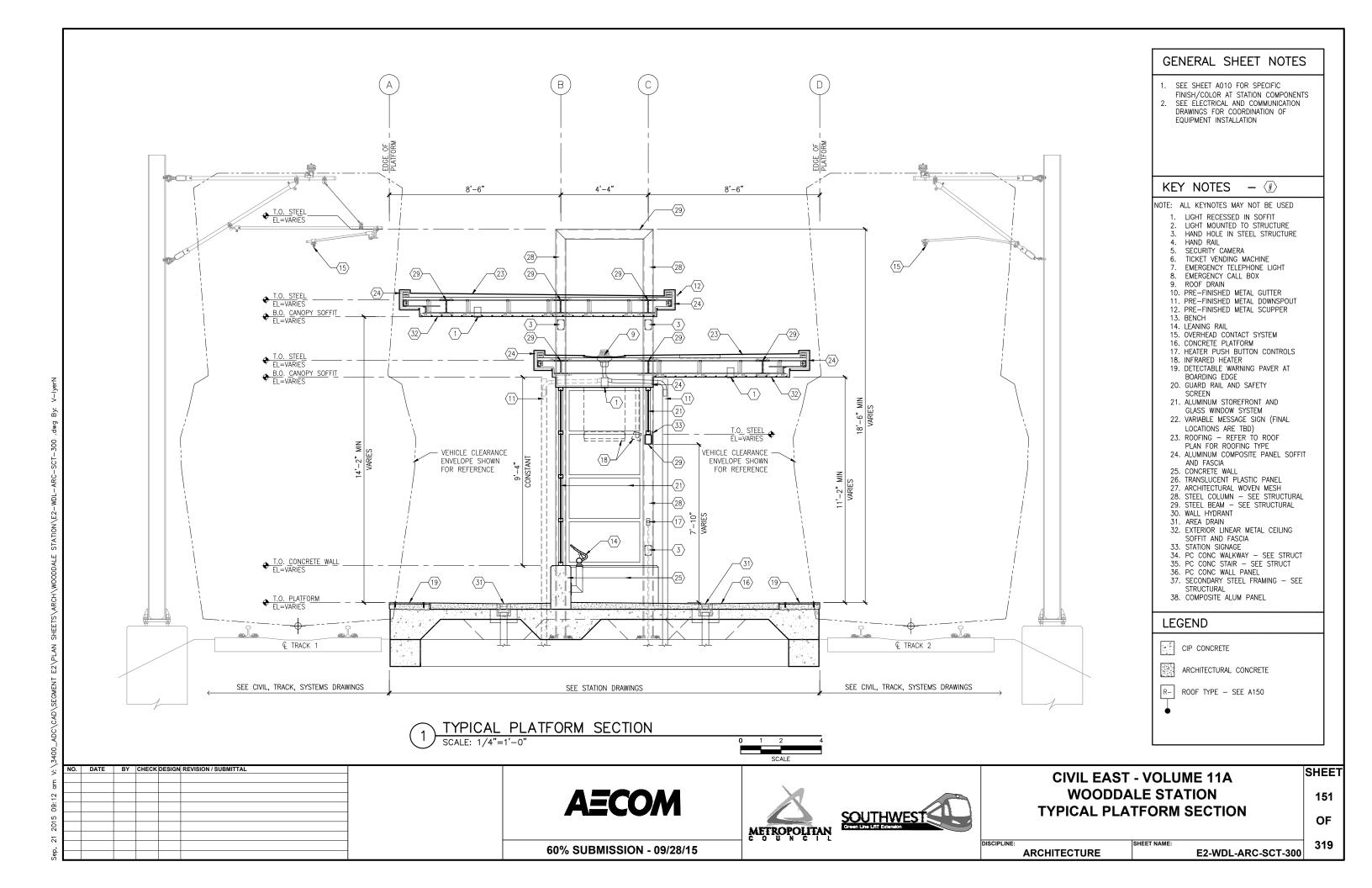
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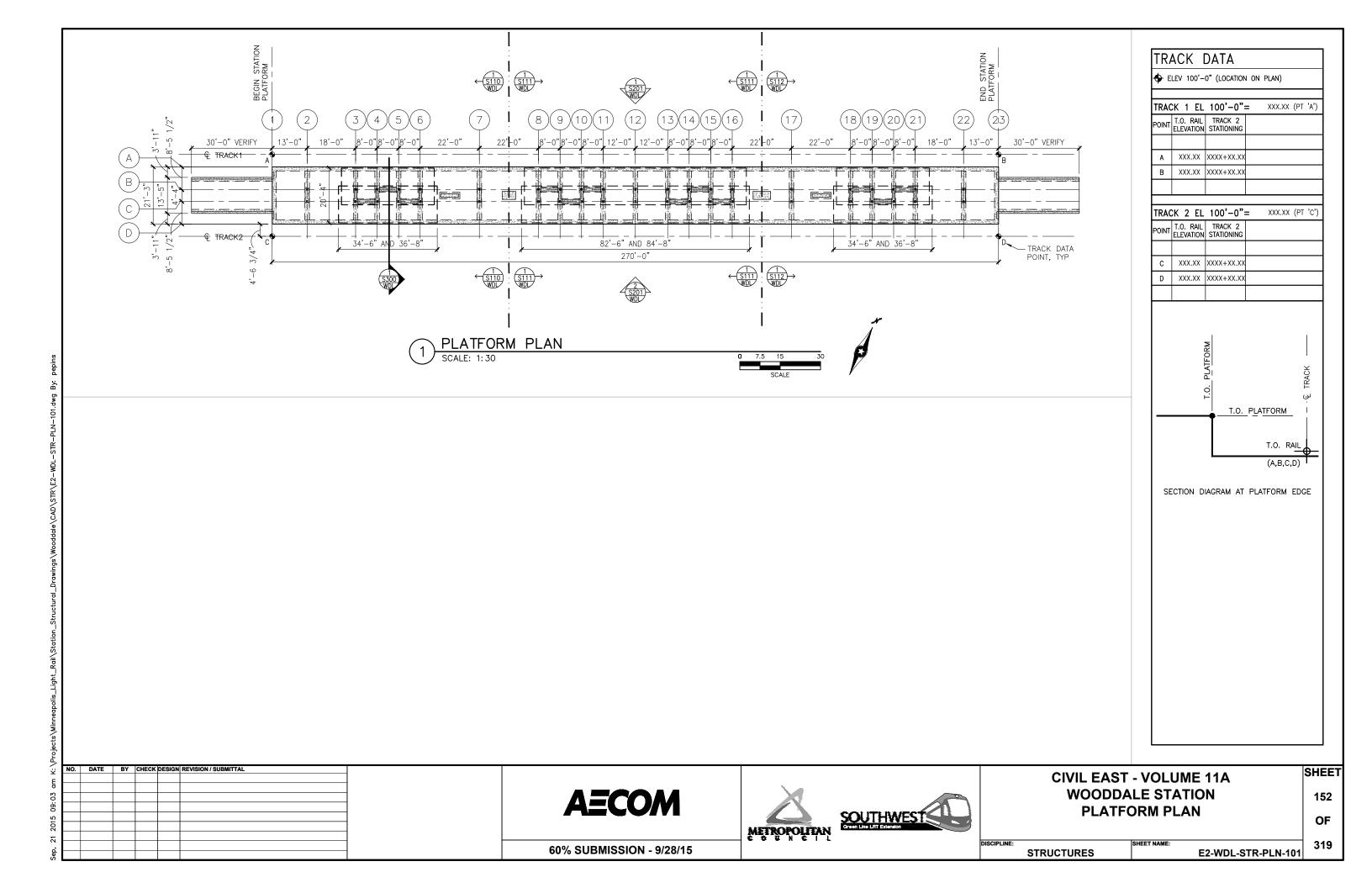
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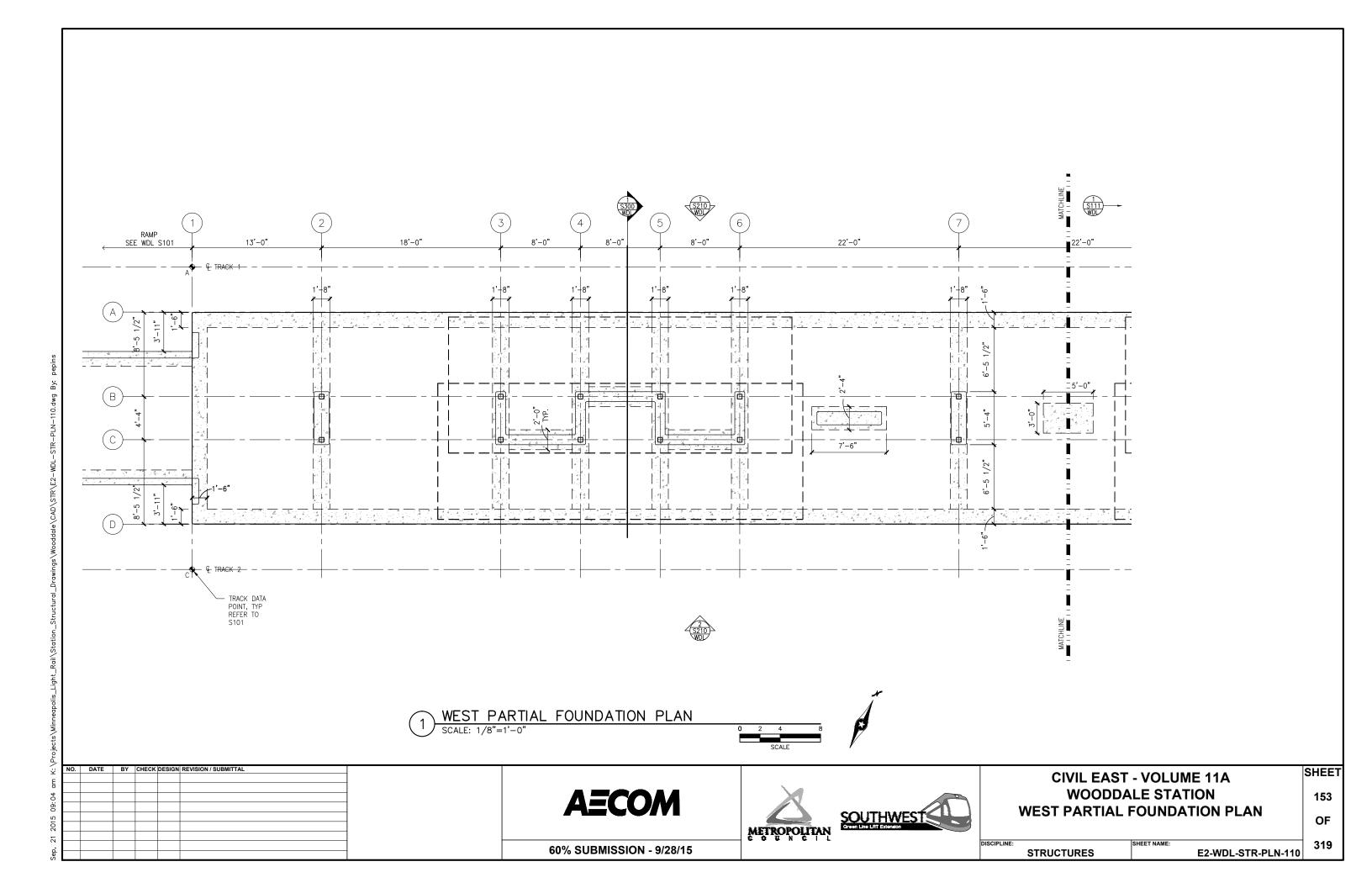


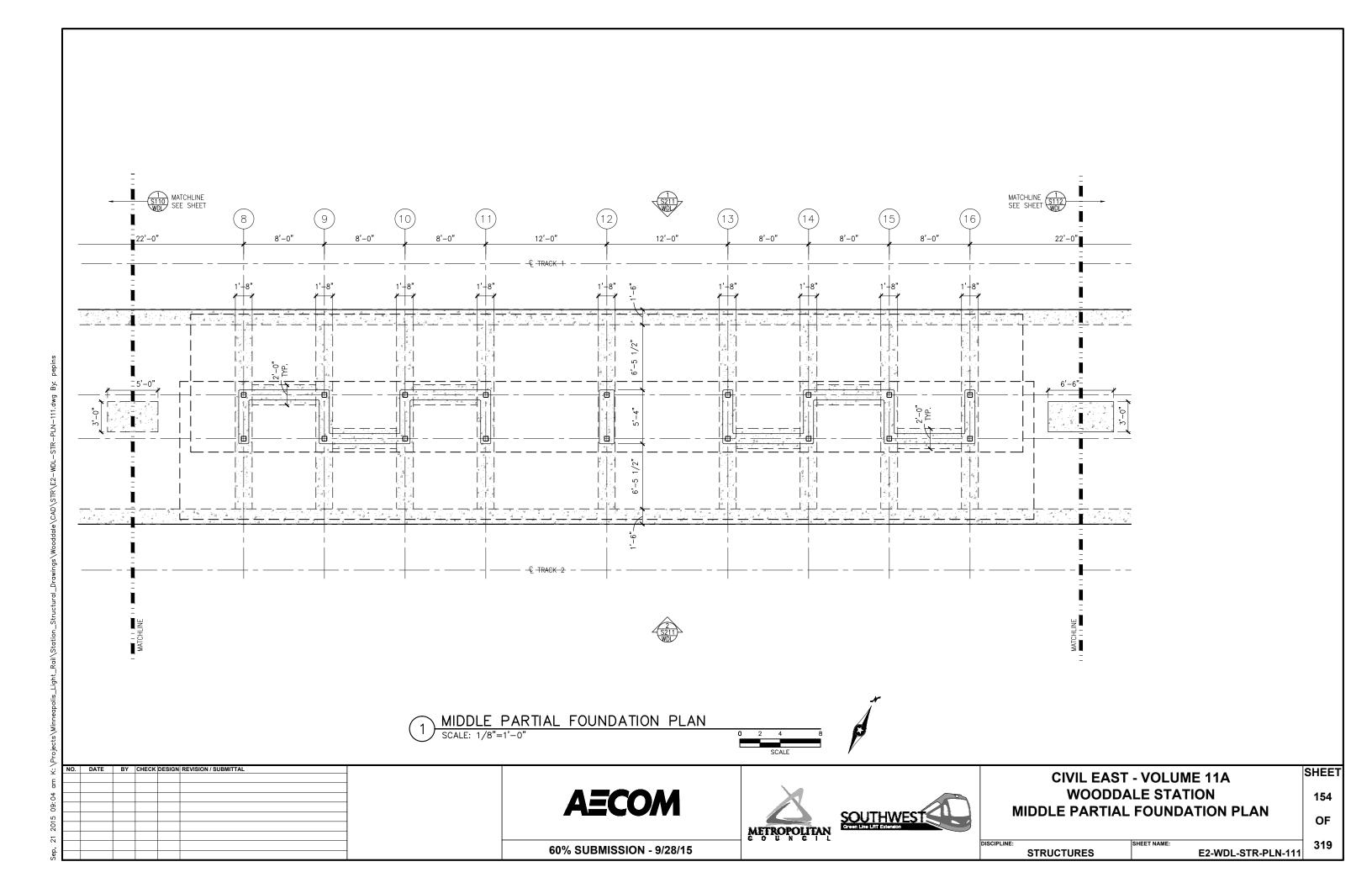


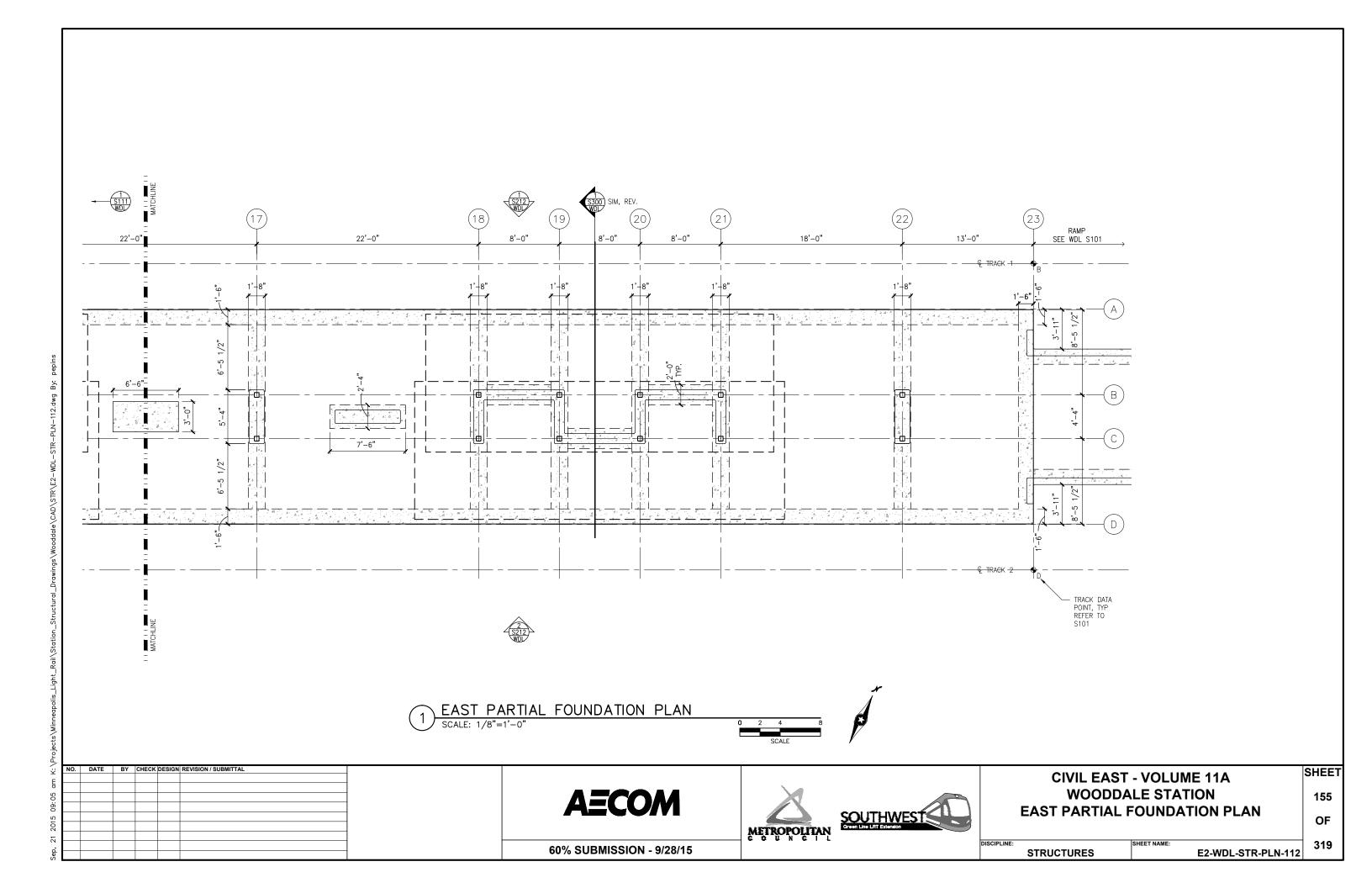


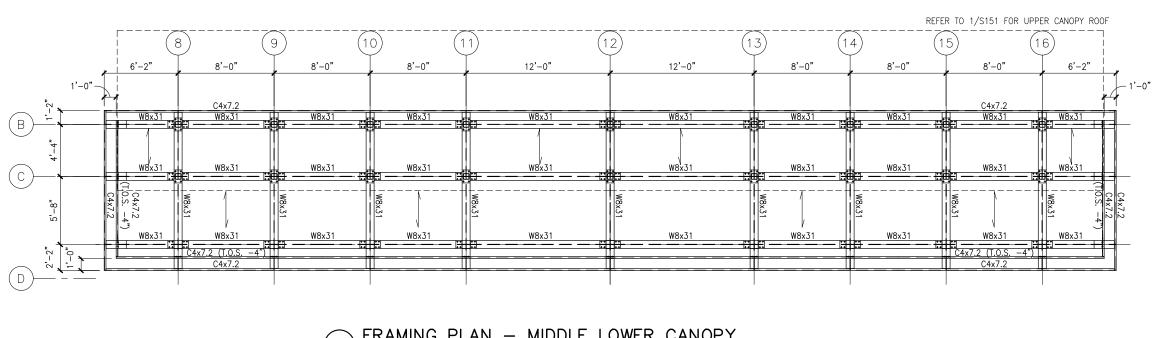




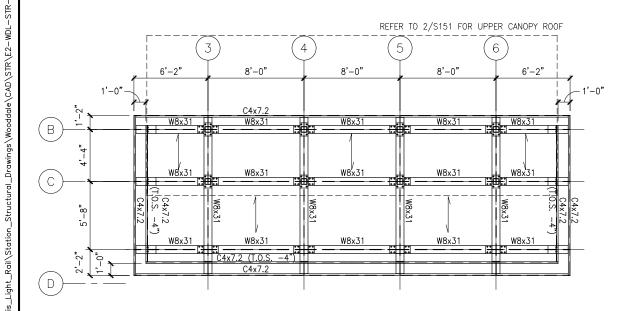


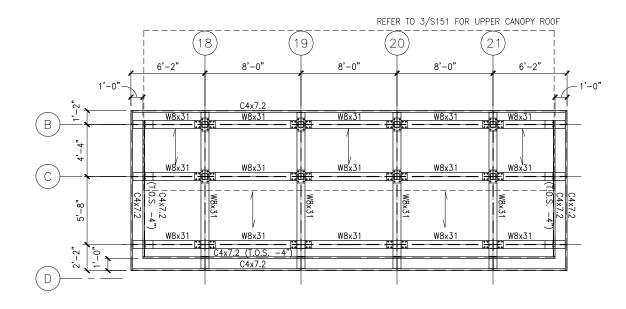
















BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 





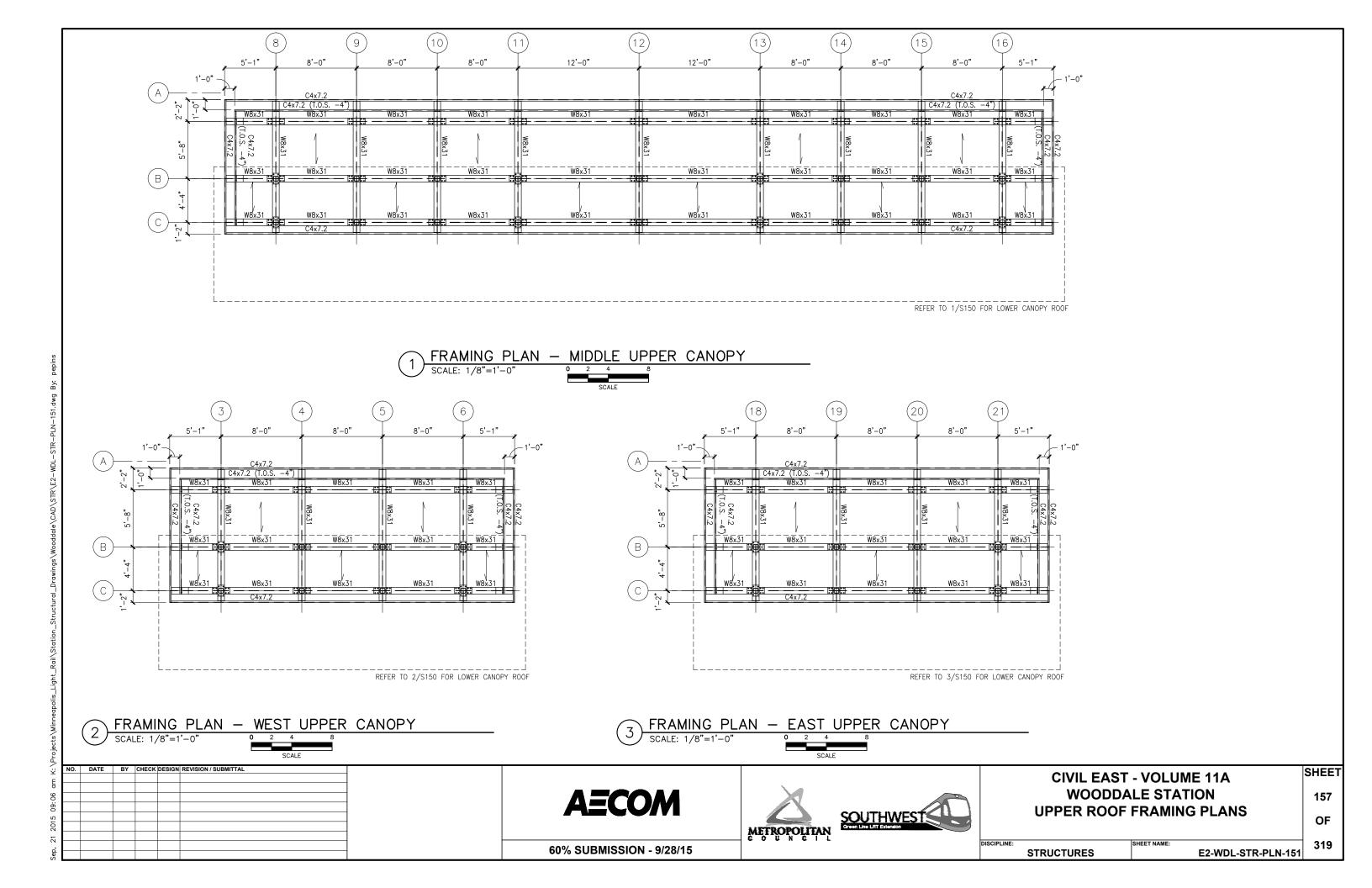
**CIVIL EAST - VOLUME 11A WOODDALE STATION LOWER ROOF FRAMING PLANS** 

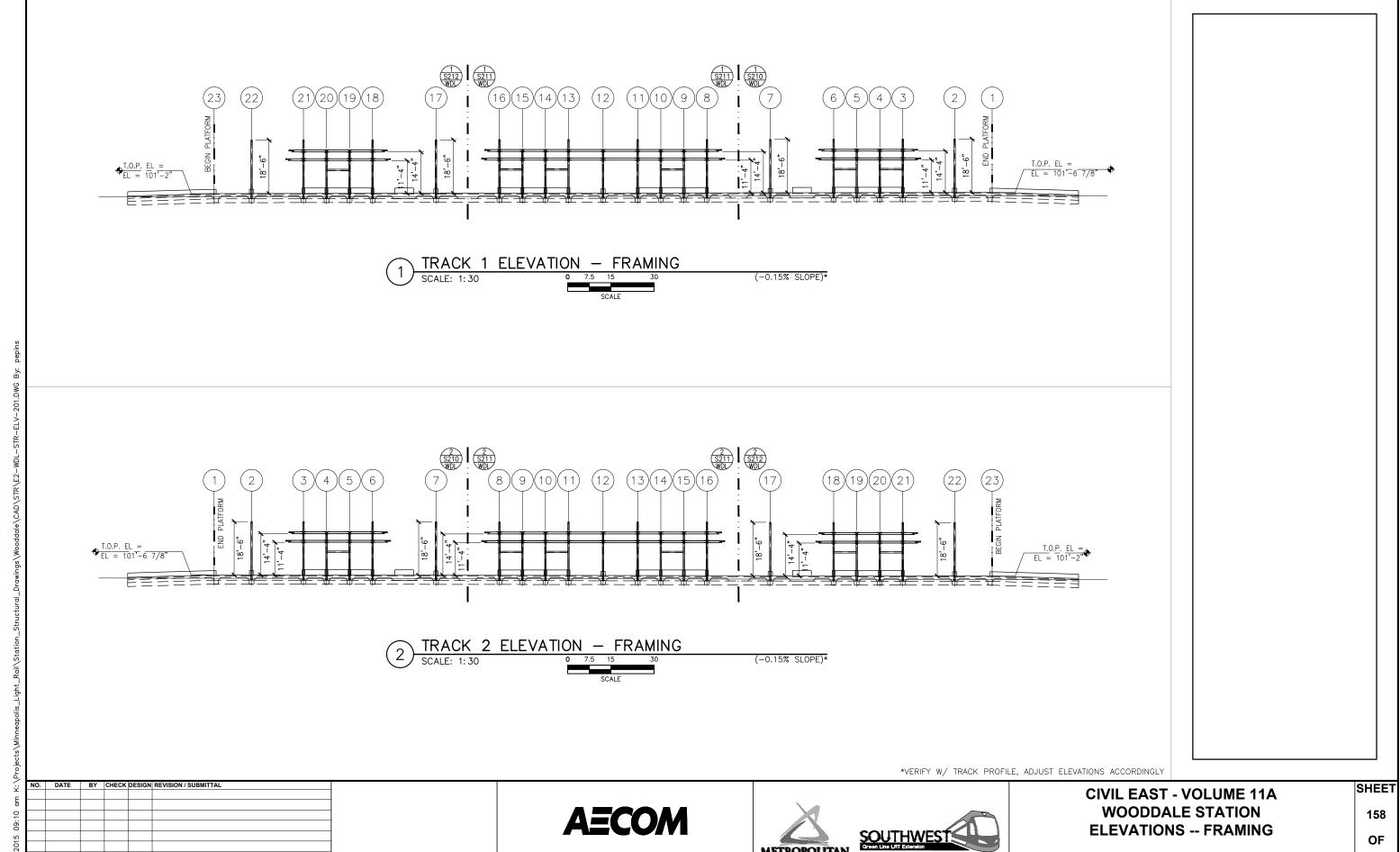
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SHEET

60% SUBMISSION - 9/28/15

E2-WDL-STR-PLN-150 **STRUCTURES** 



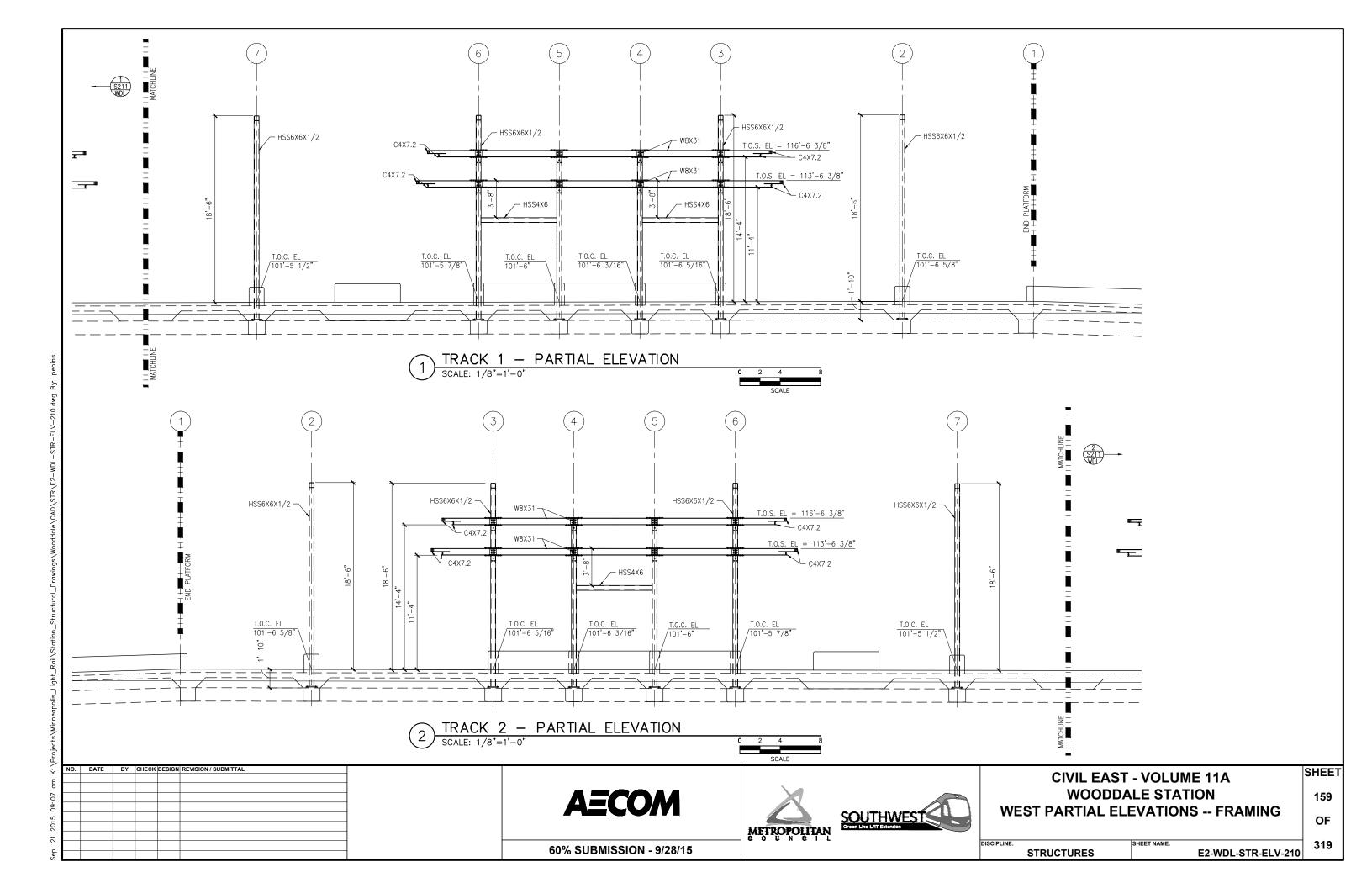


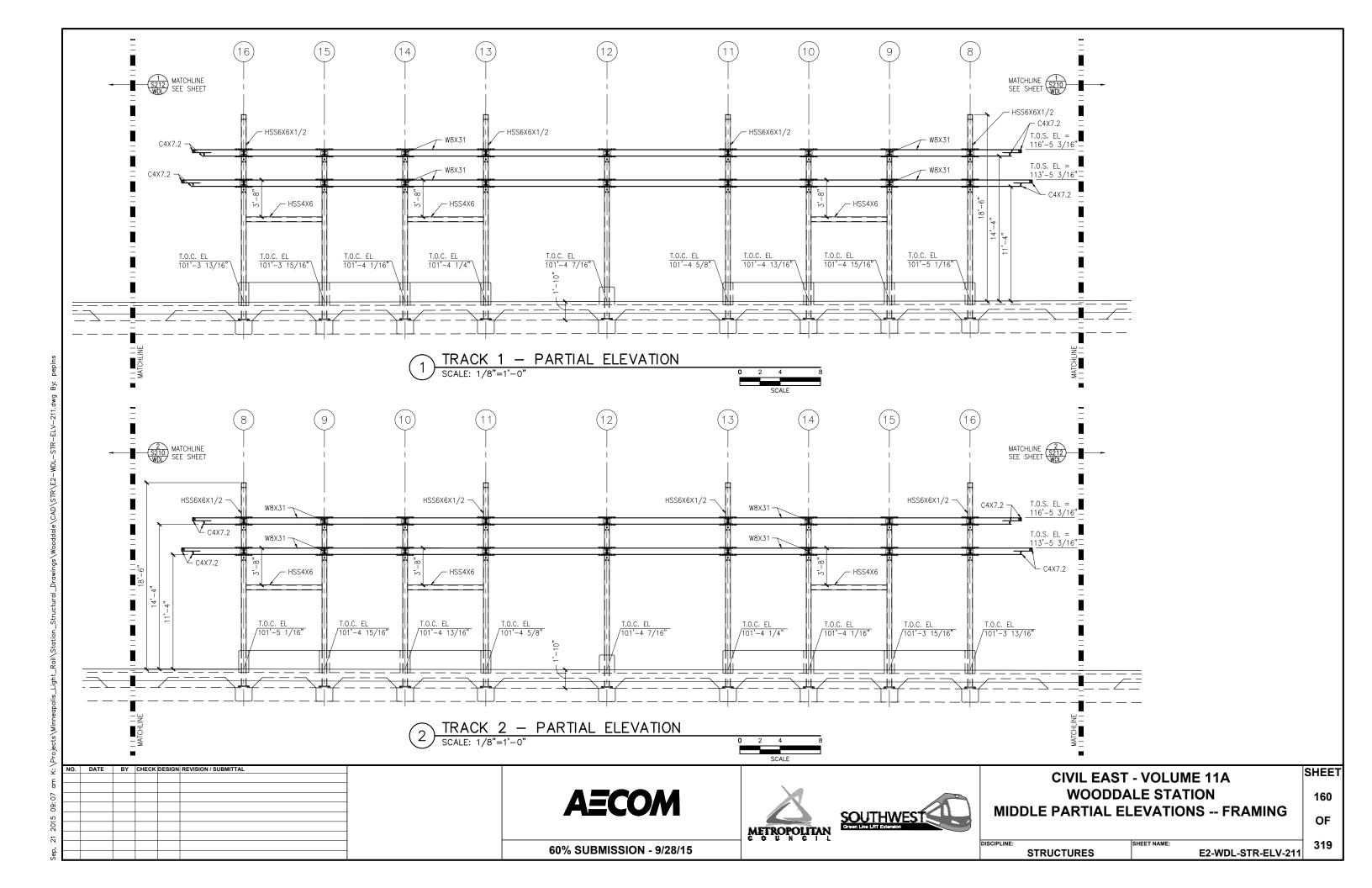
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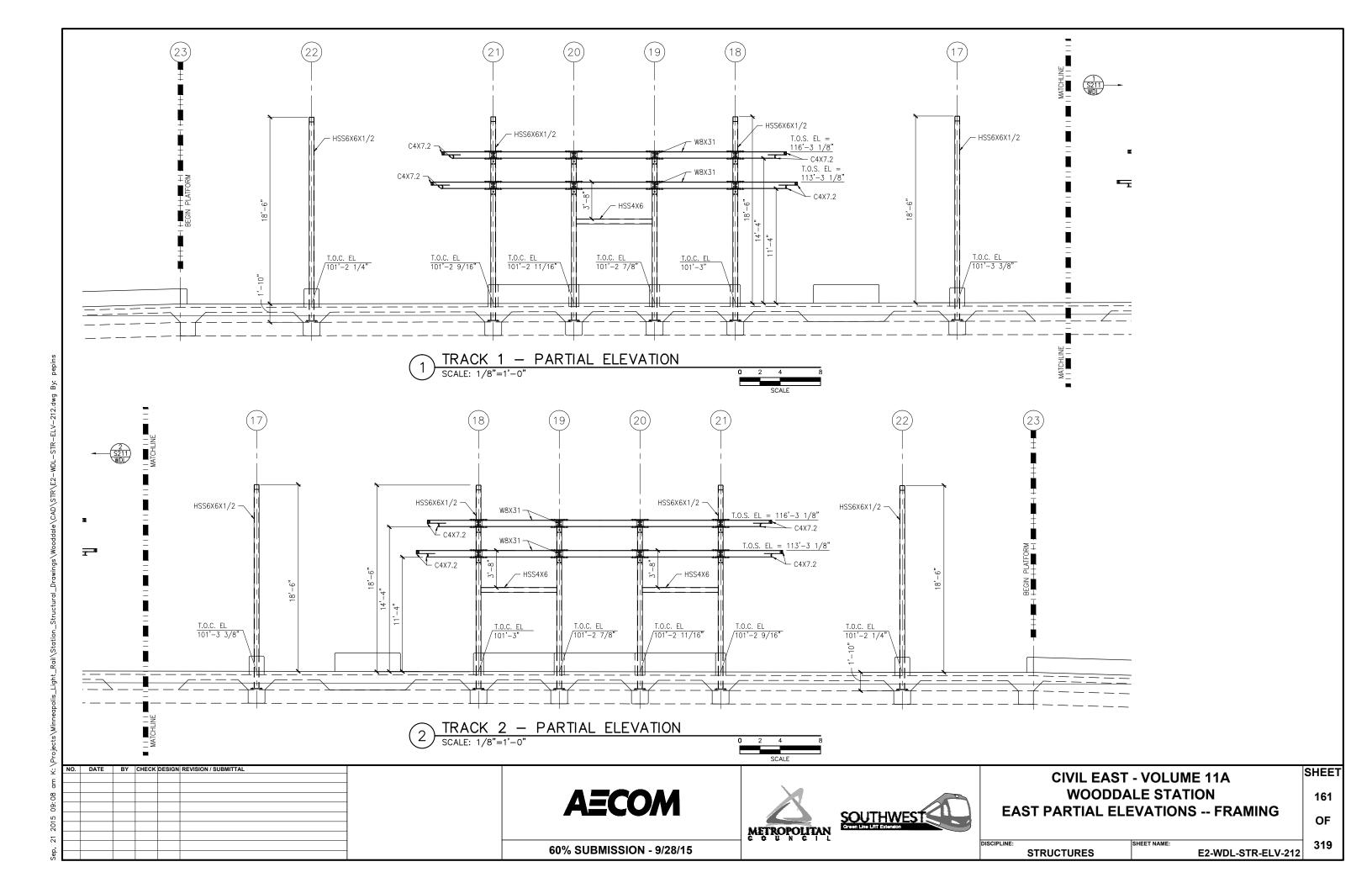
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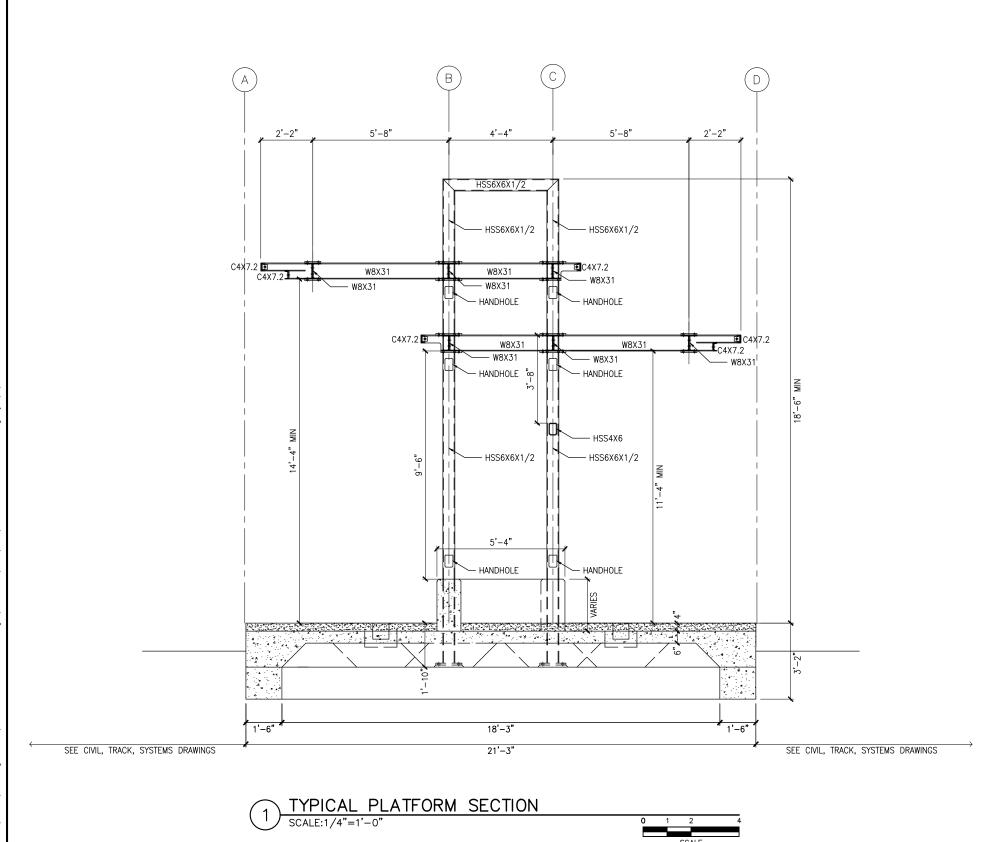
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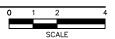
**STRUCTURES** 











**AECOM** 





**CIVIL EAST - VOLUME 11A WOODDALE STATION TYPICAL PLATFORM SECTION** 

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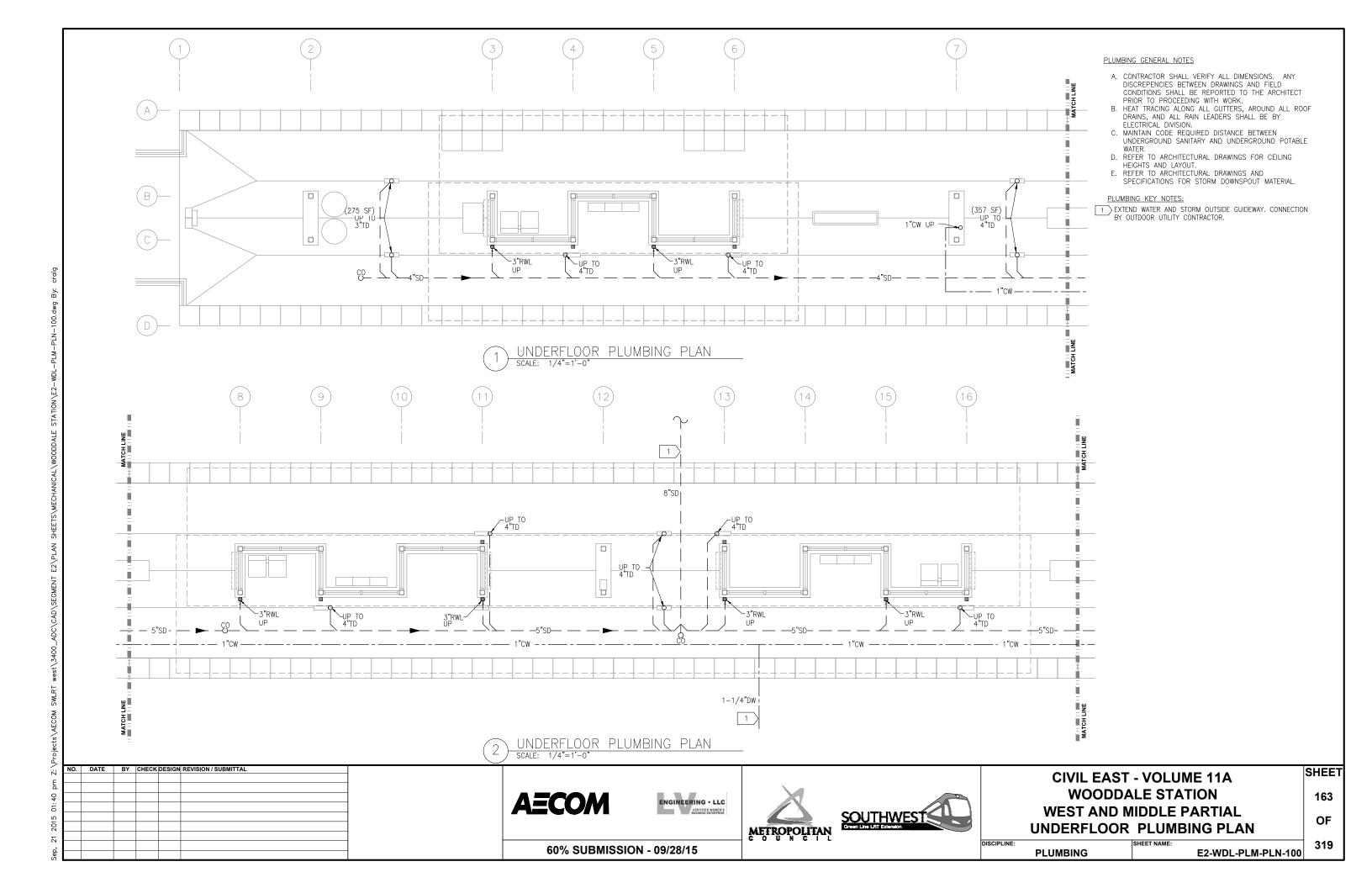
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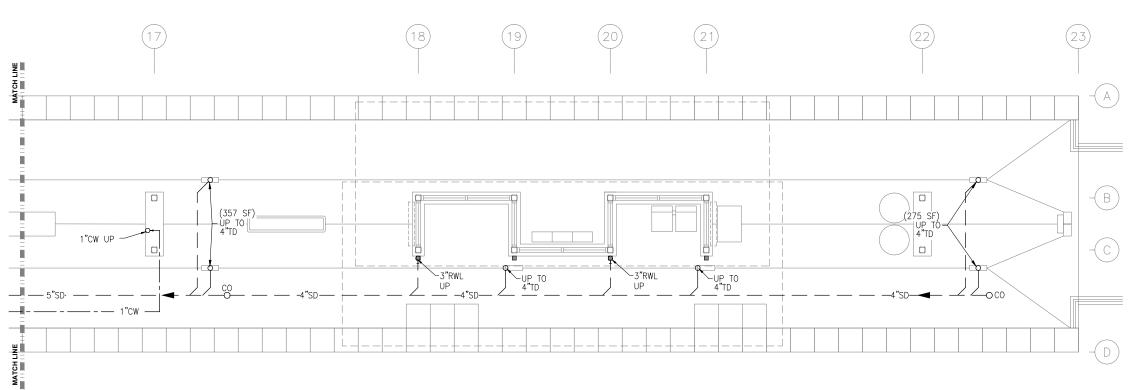
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60% SUBMISSION - 9/28/15

STRUCTURES

E2-WDL-STR-SCT-300





UNDERFLOOR PLUMBING PLAN

#### PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.

  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS
- AND LAYOUT.

  E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

### PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 







**CIVIL EAST - VOLUME 11A WOODDALE STATION EAST PARTIAL UNDERFLOOR PLUMBING PLAN** 

OF 319

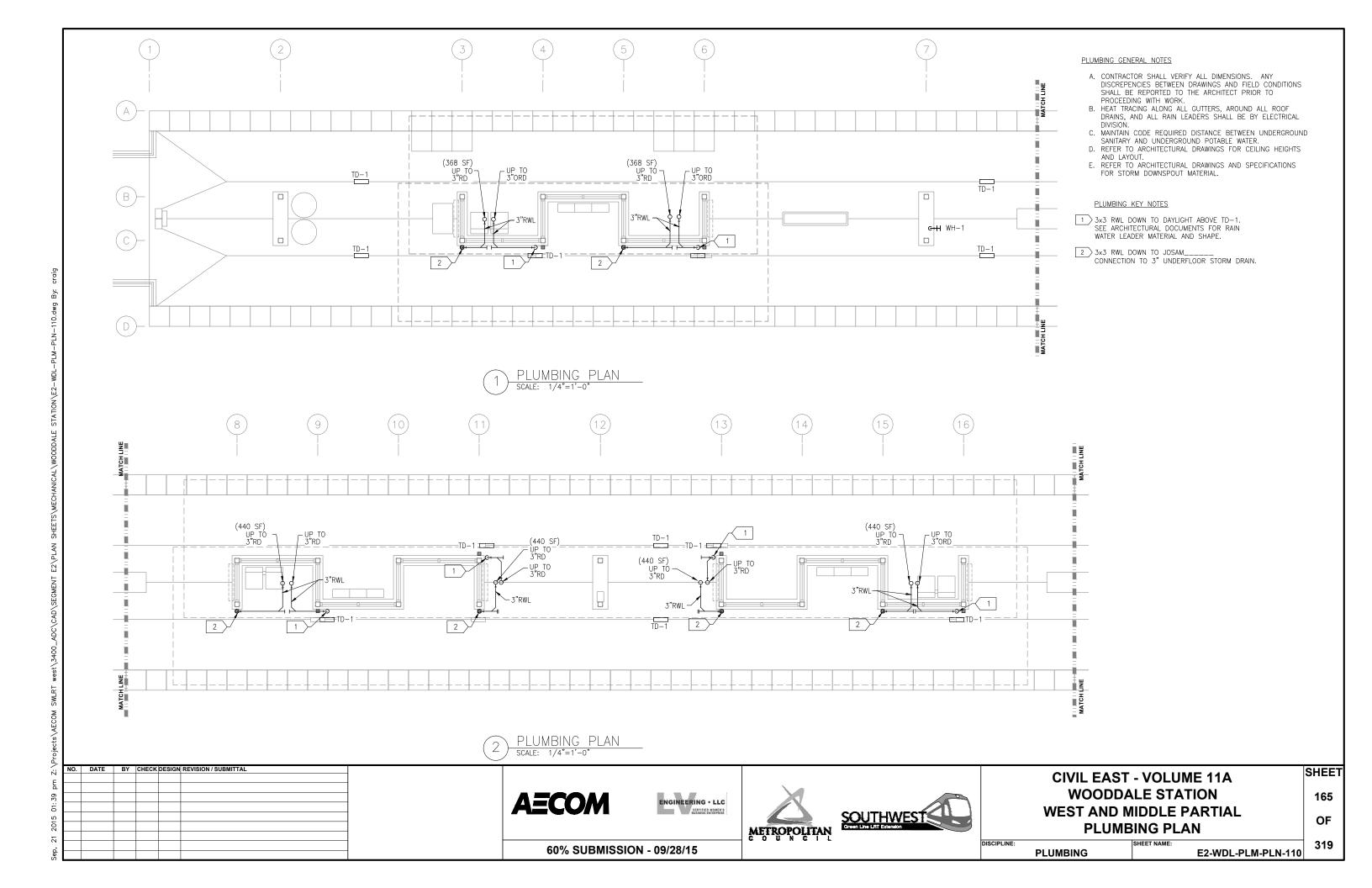
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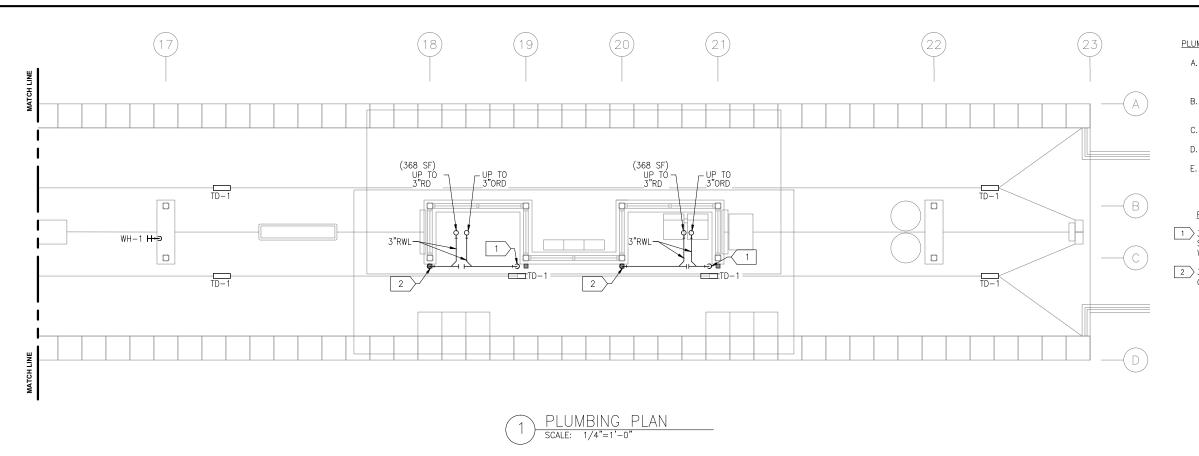
164

60% SUBMISSION - 09/28/15

**PLUMBING** 

E2-WDL-PLM-PLN-101





#### PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.

  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS
- E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

### PLUMBING KEY NOTES

- 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.
- 2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 







**CIVIL EAST - VOLUME 11A WOODDALE STATION EAST PARTIAL PLUMBING PLAN AND RISER DIAGRAMS** 

**PLUMBING** 

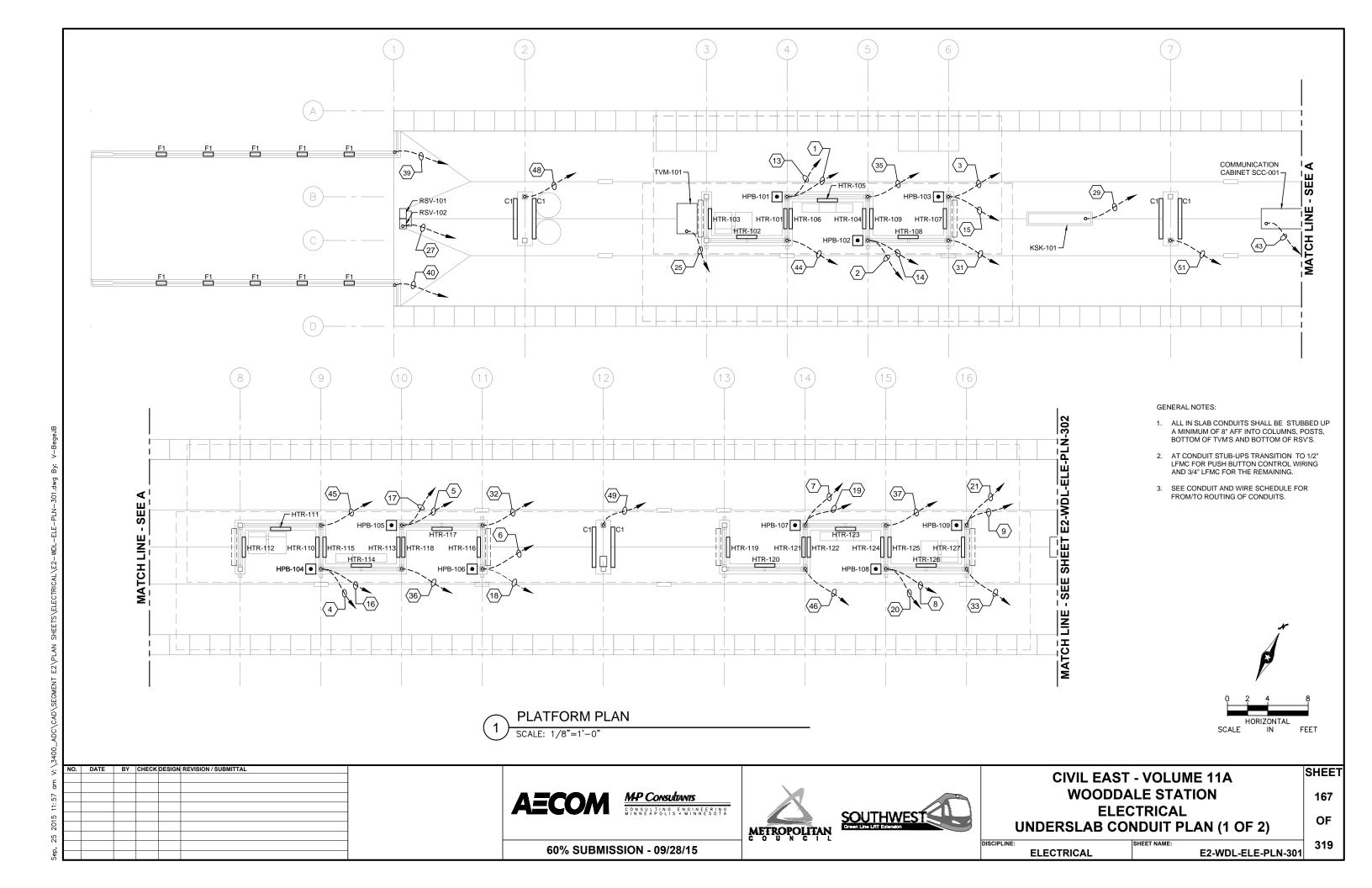
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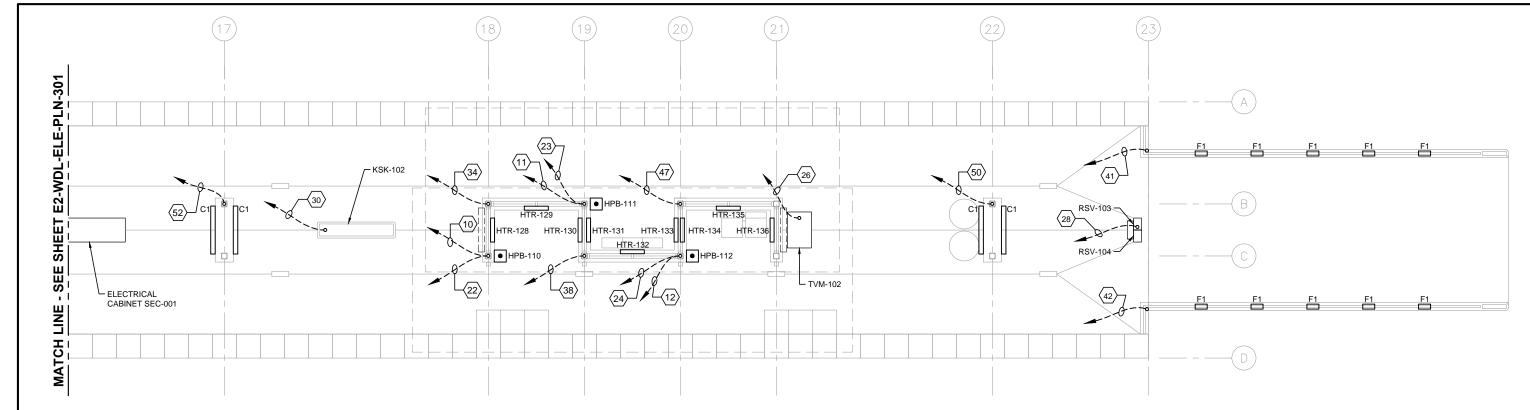
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60% SUBMISSION - 09/28/15

E2-WDL-PLM-PLN-111



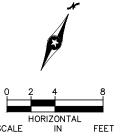


PLATFORM PLAN

SCALE: 1/8"=1'-0"

#### GENERAL NOTES:

- ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
- AT CONDUIT STUB-UPS TRANSITION TO 1/2"
   LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
- 3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.



SHEET

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OF

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NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL



60% SUBMISSION - 09/28/15

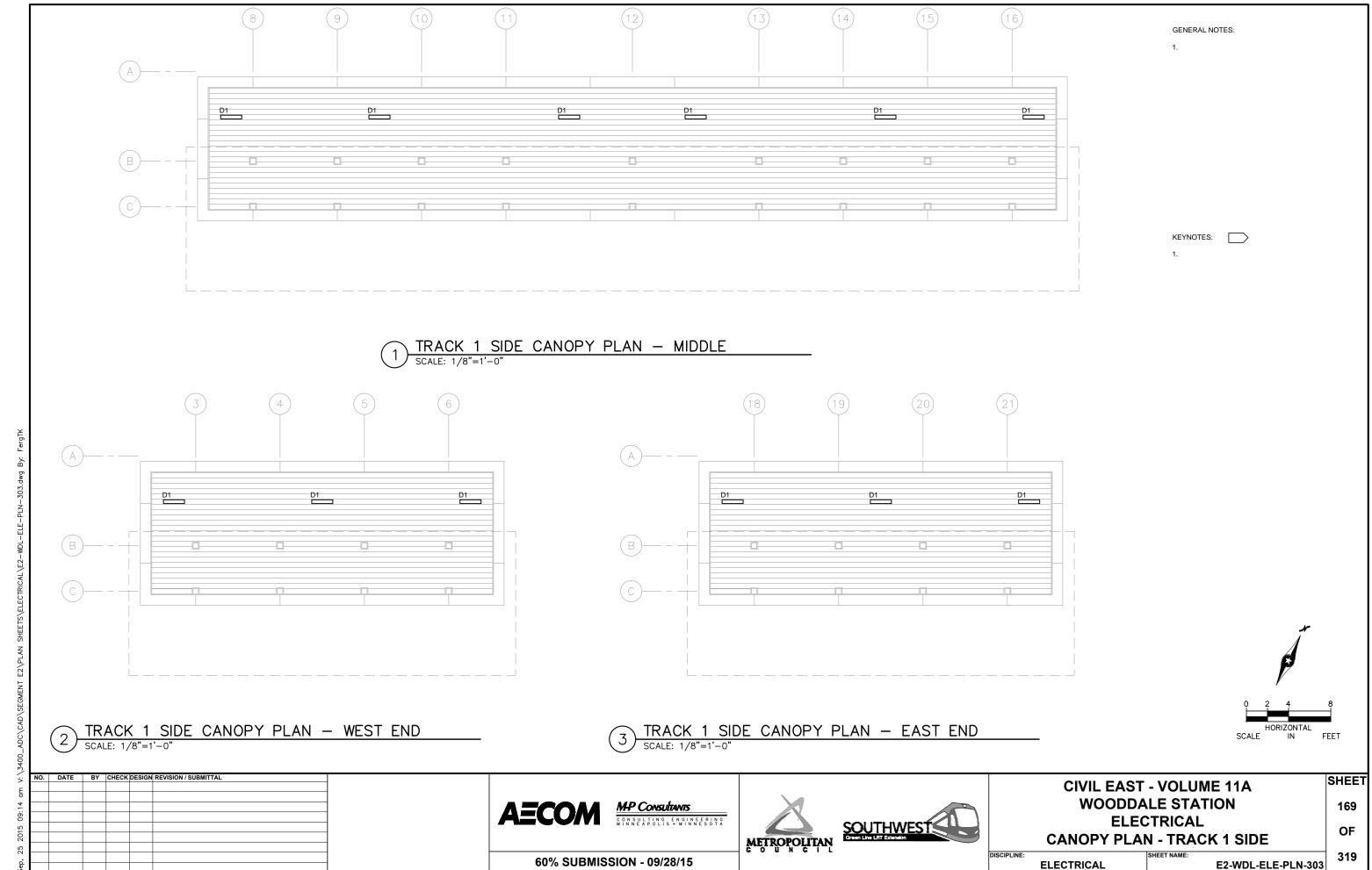


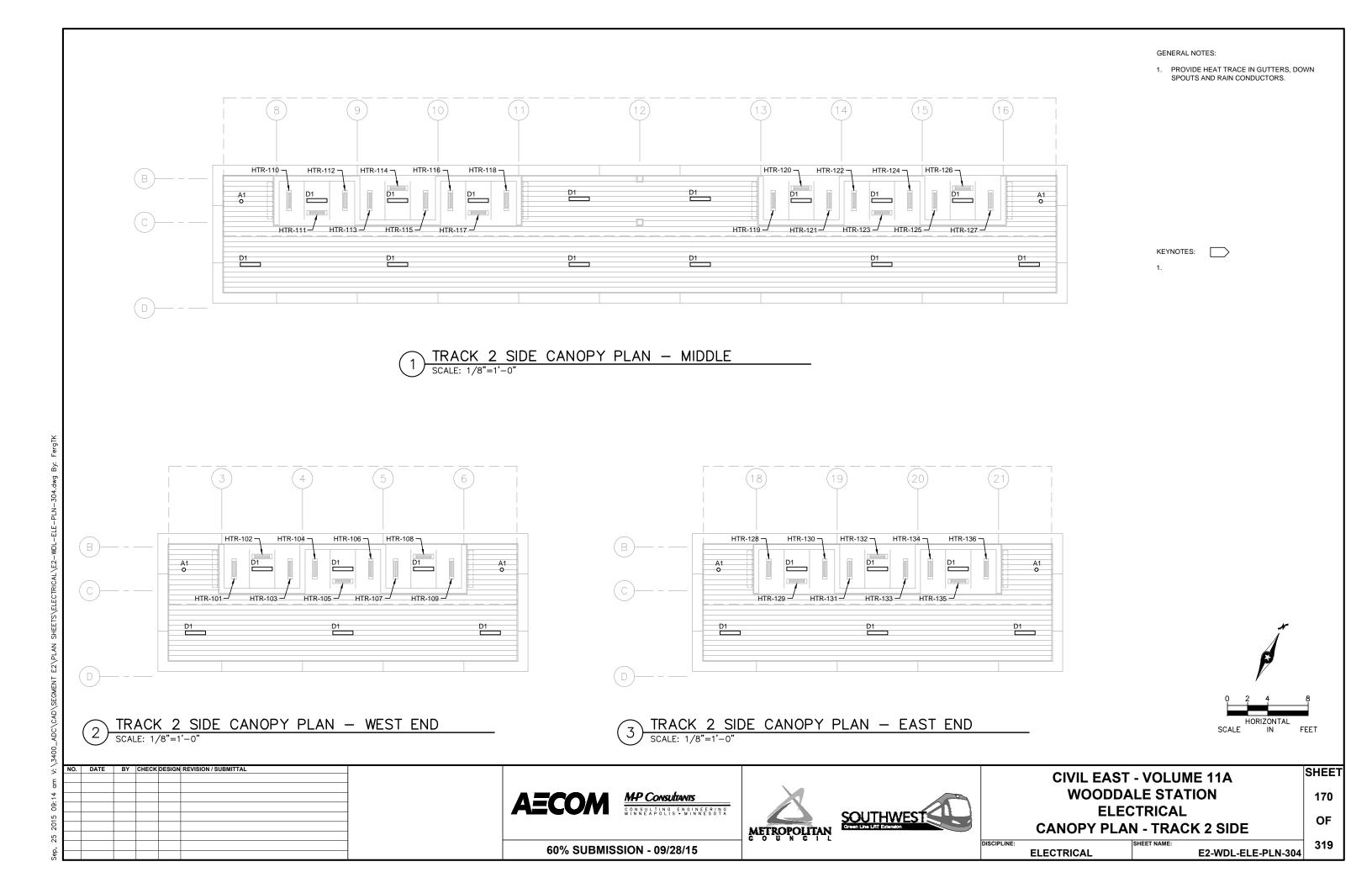


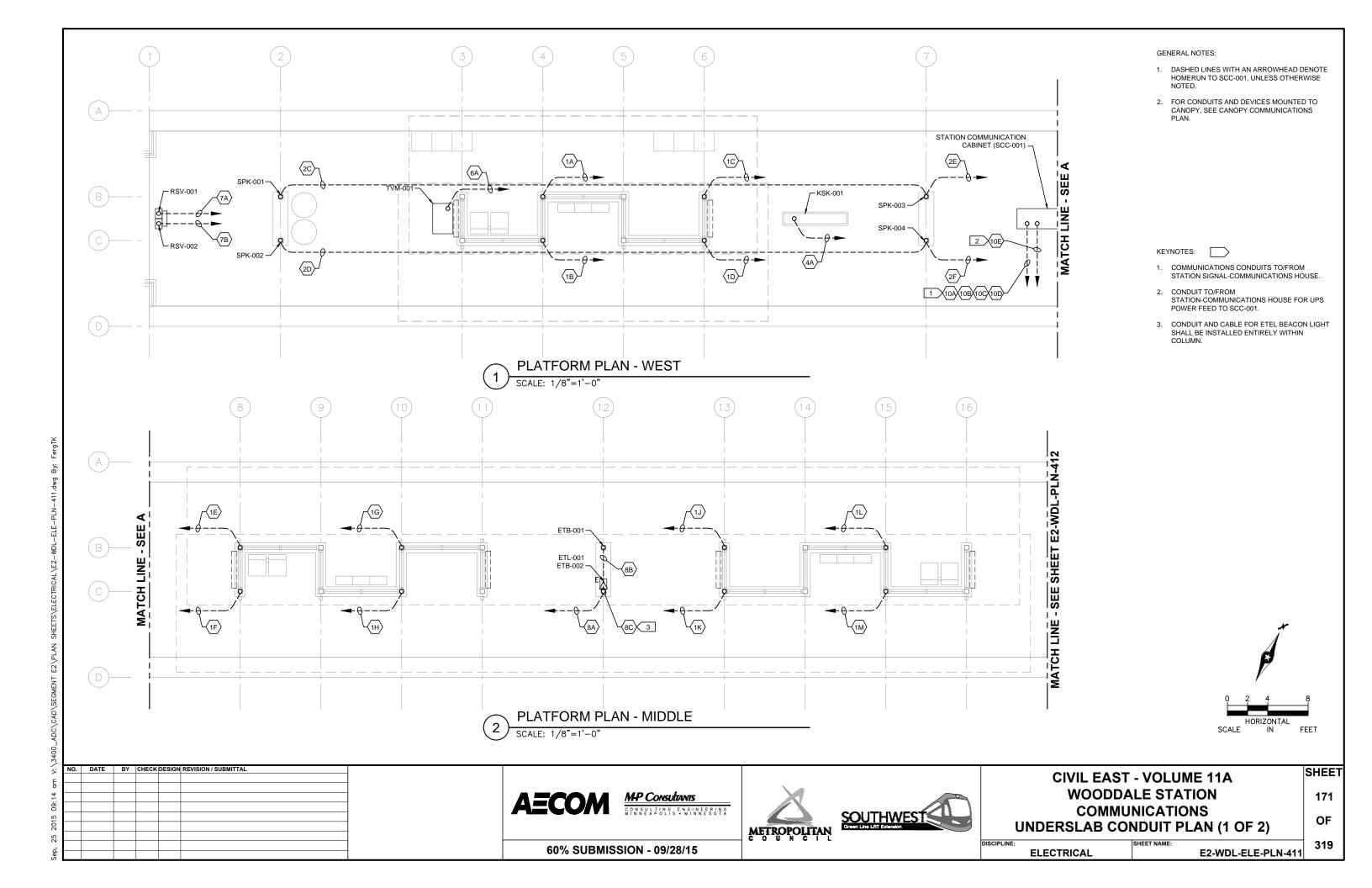
**CIVIL EAST - VOLUME 11A WOODDALE STATION ELECTRICAL UNDERSLAB CONDUIT PLAN (2 OF 2)** 

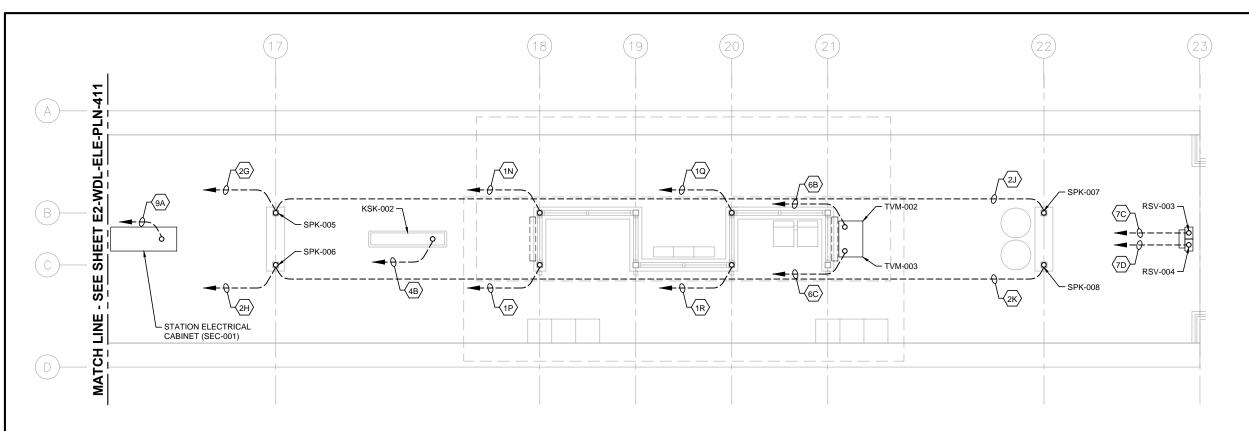
E2-WDL-ELE-PLN-302

**ELECTRICAL** 









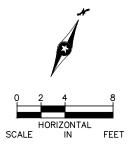
GENERAL NOTES:

- DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE
- 2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS

KEYNOTES:

PLATFORM PLAN - EAST

SCALE: 1/8"=1'-0"



NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL







**CIVIL EAST - VOLUME 11A WOODDALE STATION COMMUNICATIONS UNDERSLAB CONDUIT PLAN (2 OF 2)** 

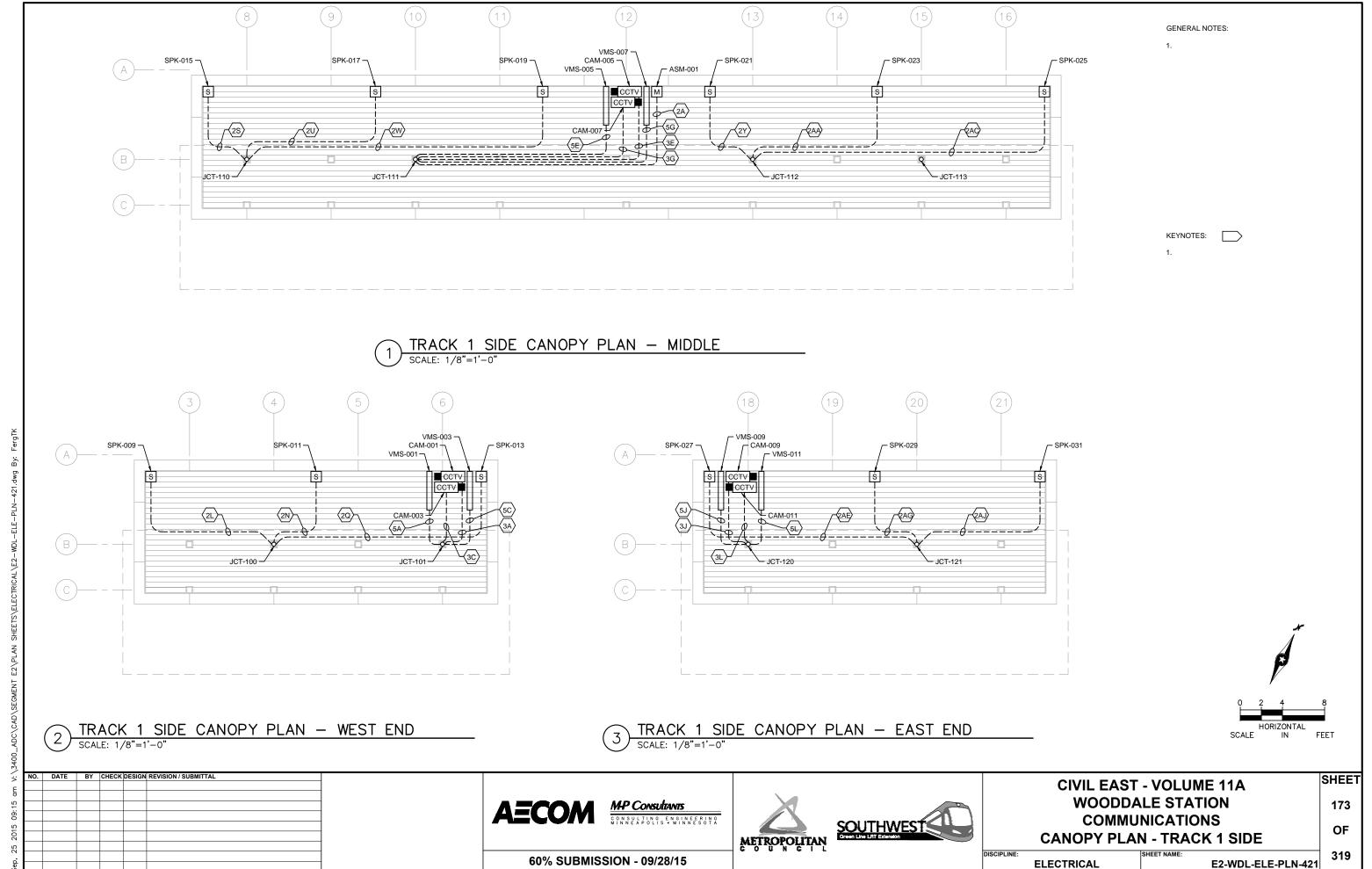
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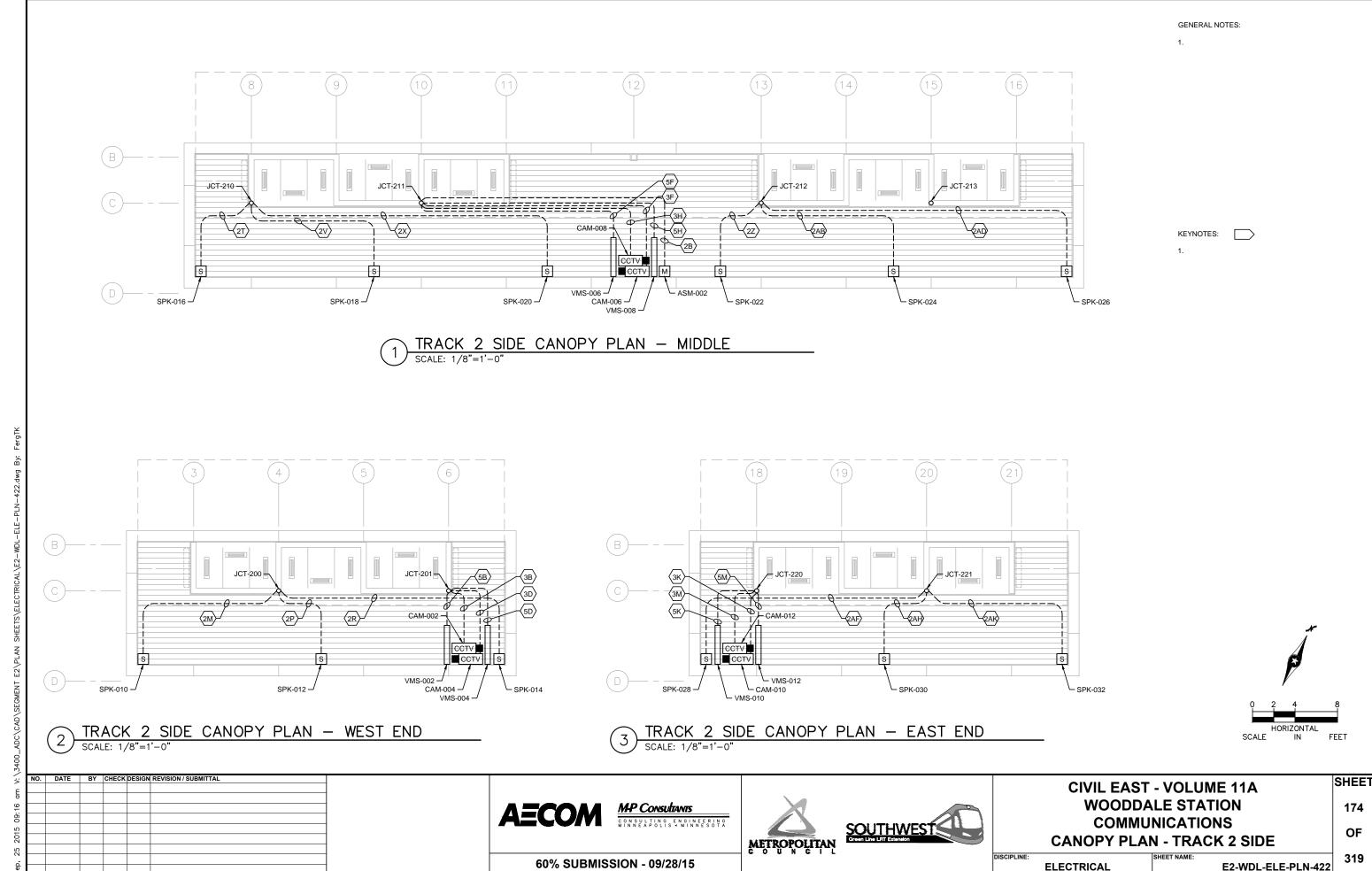
SHEET

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E2-WDL-ELE-PLN-412 **ELECTRICAL** 

60% SUBMISSION - 09/28/15





**ELECTRICAL** 

CC	ONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	то	CONDUIT SIZE
	10A	WDL -CON-0001	S/C HOUSE TO SCC-001	S/C MANHOLE	WDL -SCC-001	3"
	10B	WDL -CON-0002	S/C HOUSE TO SCC-001	S/C MANHOLE	WDL -SCC-001	3"
	10C	WDL -CON-0003	S/C HOUSE TO SCC-001	S/C MANHOLE	WDL -SCC-001	3"
	10D	WDL -CON-0004	S/C HOUSE TO SCC-001	S/C MANHOLE	WDL -SCC-001	3"
	10E	WDL -CON-0005	UPS POWER FEED: SCH TO SCC	WDL -SCH-001	WDL -SCC-001	3"
	1A	WDL -CON-0101	SCC TO JUNCTION 100	WDL -SCC-001	WDL -JCT-100	2"
	1B	WDL -CON-0102	SCC TO JUNCTION 200	WDL -SCC-001	WDL -JCT-200	2"
	1C	WDL -CON-0103	SCC TO JUNCTION 101	WDL -SCC-001	WDL -JCT-101	2"
	1D	WDL -CON-0104	SCC TO JUNCTION 201	WDL -SCC-001	WDL -JCT-201	2"
	1E	WDL -CON-0105	SCC TO JUNCTION 110	WDL -SCC-001	WDL -JCT-110	2"
	1F	WDL -CON-0106	SCC TO JUNCTION 210	WDL -SCC-001	WDL -JCT-210	2"
	1G	WDL -CON-0107	SCC TO JUNCTION 111	WDL -SCC-001	WDL -JCT-111	2"
	1H	WDL -CON-0108	SCC TO JUNCTION 211	WDL -SCC-001	WDL -JCT-211	2"
	1J	WDL -CON-0109	SCC TO JUNCTION 112	WDL -SCC-001	WDL -JCT-112	2"
	1K	WDL -CON-0110	SCC TO JUNCTION 212	WDL -SCC-001	WDL -JCT-212	2"
	1L	WDL -CON-0111	SCC TO JUNCTION 113	WDL -SCC-001	WDL -JCT-113	2"
	1M	WDL -CON-0112	SCC TO JUNCTION 213	WDL -SCC-001	WDL -JCT-213	2"
	1N	WDL -CON-0113	SCC TO JUNCTION 120	WDL -SCC-001	WDL -JCT-120	2"
	1P	WDL -CON-0114	SCC TO JUNCTION 220	WDL -SCC-001	WDL -JCT-220	2"
	1Q	WDL -CON-0115	SCC TO JUNCTION 121	WDL -SCC-001	WDL -JCT-121	2"
	1R	WDL -CON-0116	SCC TO JUNCTION 221	WDL -SCC-001	WDL -JCT-221	2"
	2A	WDL -CON-0201	MICROPHONE 1 - NOISE SENSING	WDL -JCT-111	WDL -ASM-001	1"
	2B	WDL -CON-0202	MICROPHONE 2 - NOISE SENSING	WDL -JCT-211	WDL -ASM-002	1"
	2C	WDL -CON-0203	SPEAKER 1 - POLE	WDL -SPK-003	WDL -SPK-001	1-1/2"
	2D	WDL -CON-0204	SPEAKER 2 - POLE	WDL -SPK-004	WDL -SPK-002	1-1/2"
	2E	WDL -CON-0205	SPEAKER 3 - POLE	WDL -SCC-001	WDL -SPK-003	1-1/2"
	2F	WDL -CON-0206	SPEAKER 4 - POLE	WDL -SCC-001	WDL -SPK-004	1-1/2"
	2G	WDL -CON-0207	SPEAKER 5 - POLE	WDL -SCC-001	WDL -SPK-005	1-1/2"
	2H	WDL -CON-0208	SPEAKER 6 - POLE	WDL -SCC-001	WDL -SPK-006	1-1/2"
	2J	WDL -CON-0209	SPEAKER 7 - POLE	WDL -SPK-005	WDL -SPK-007	1-1/2"
	2K	WDL -CON-0210	SPEAKER 8 - POLE	WDL -SPK-006	WDL -SPK-008	1-1/2"
	2L	WDL -CON-0211	SPEAKER 9 - CANOPY	WDL -JCT-100	WDL -SPK-009	1"
	2M	WDL -CON-0212	SPEAKER 10 - CANOPY	WDL -JCT-200	WDL -SPK-010	1"
	2N	WDL -CON-0213	SPEAKER 11 - CANOPY	WDL -JCT-100	WDL -SPK-011	1"
	2P	WDL -CON-0214	SPEAKER 12 - CANOPY	WDL -JCT-200	WDL -SPK-012	1"
	2Q	WDL -CON-0215	SPEAKER 13 - CANOPY	WDL -JCT-100	WDL -SPK-013	1"
	2R	WDL -CON-0216	SPEAKER 14 - CANOPY	WDL -JCT-200	WDL -SPK-014	1"
	2S	WDL -CON-0217	SPEAKER 15 - CANOPY	WDL -JCT-110	WDL -SPK-015	1"
	2T	WDL -CON-0218	SPEAKER 16 - CANOPY	WDL -JCT-210	WDL -SPK-016	1"
	2U	WDL -CON-0219	SPEAKER 17 - CANOPY	WDL -JCT-110	WDL -SPK-017	1"
	2V	WDL -CON-0220	SPEAKER 18 - CANOPY	WDL -JCT-210	WDL -SPK-018	1"
	2W	WDL -CON-0221	SPEAKER 19 - CANOPY	WDL -JCT-110	WDL -SPK-019	1"
	2X	WDL -CON-0222	SPEAKER 20 - CANOPY	WDL -JCT-210	WDL -SPK-020	1"
	2Y	WDL -CON-0223	SPEAKER 21 - CANOPY	WDL -JCT-112	WDL -SPK-021	1"
	2Z	WDL -CON-0224	SPEAKER 22 - CANOPY	WDL -JCT-212	WDL -SPK-022	1"
	2AA	WDL -CON-0225	SPEAKER 23 - CANOPY	WDL -JCT-112	WDL -SPK-023	1"
	2AB	WDL -CON-0226	SPEAKER 24 - CANOPY	WDL -JCT-212	WDL -SPK-024	1"

COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

MP Consultants

CONSULTING ENGINEERING MINNESOTA





# **CIVIL EAST - VOLUME 11A WOODDALE STATION** COMMUNICATIONS **CONDUIT SCHEDULE (1 OF 2)**

175 OF 319

SHEET

**ELECTRICAL** 

E2-WDL-ELE-SCH-461

60% SUBMISSION - 09/28/15

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	TO	CONDUIT SIZE
2AC	WDL -CON-0227	SPEAKER 25 - CANOPY	WDL -JCT-112	WDL -SPK-025	1"
2AD	WDL -CON-0228	SPEAKER 26 - CANOPY	WDL -JCT-212	WDL -SPK-026	1"
2AE	WDL -CON-0229	SPEAKER 27 - CANOPY	WDL -JCT-121	WDL -SPK-027	1"
2AF	WDL -CON-0230	SPEAKER 28 - CANOPY	WDL -JCT-221	WDL -SPK-028	1"
2AG	WDL -CON-0231	SPEAKER 29 - CANOPY	WDL -JCT-121	WDL -SPK-029	1"
2AH	WDL -CON-0232	SPEAKER 30 - CANOPY	WDL -JCT-221	WDL -SPK-030	1"
2AJ	WDL -CON-0233	SPEAKER 31 - CANOPY	WDL -JCT-121	WDL -SPK-031	1"
2AK	WDL -CON-0234	SPEAKER 32 - CANOPY	WDL -JCT-221	WDL -SPK-032	1"
3A	WDL -CON-0301	CAMERA 1	WDL -JCT-101	WDL CAM-001	1"
3B	WDL -CON-0302	CAMERA 2	WDL -JCT-201	WDL CAM-002	1"
3C	WDL -CON-0303	CAMERA 3	WDL -JCT-101	WDL CAM-003	1"
3D	WDL -CON-0304	CAMERA 4	WDL -JCT-201	WDL CAM-004	1"
3E	WDL -CON-0305	CAMERA 5	WDL -JCT-111	WDL CAM-005	1"
3F	WDL -CON-0306	CAMERA 6	WDL -JCT-211	WDL CAM-006	1"
3G	WDL -CON-0307	CAMERA 7	WDL -JCT-111	WDL CAM-007	1"
3H	WDL -CON-0308	CAMERA 8	WDL -JCT-211	WDL CAM-008	1"
3J	WDL -CON-0309	CAMERA 9	WDL -JCT-120	WDL CAM-009	1"
3K	WDL -CON-0310	CAMERA 10	WDL -JCT-220	WDL CAM-010	1"
3L	WDL -CON-0311	CAMERA 11	WDL -JCT-120	WDL CAM-011	1"
3M	WDL -CON-0312	CAMERA 12	WDL -JCT-220	WDL CAM-012	1"
4A	WDL -CON-0401	KIOSK 1 (F)	WDL -SCC-001	WDL -KSK-001	2"
4B	WDL -CON-0402	KIOSK 2 (F)	WDL -SCC-001	WDL -KSK-002	2"
5A	WDL -CON-0501	VMS 1	WDL -JCT-101	WDL -VMS-001	1"
5B	WDL -CON-0502	VMS 2	WDL -JCT-201	WDL -VMS-002	1"
5C	WDL -CON-0503	VMS 3	WDL -JCT-101	WDL -VMS-003	1"
5D	WDL -CON-0504	VMS 4	WDL -JCT-201	WDL -VMS-004	1"
5E	WDL -CON-0505	VMS 5	WDL -JCT-111	WDL -VMS-005	1"
5F	WDL -CON-0506	VMS 6	WDL -JCT-211	WDL -VMS-006	1"
5G	WDL -CON-0507	VMS 7	WDL -JCT-111	WDL -VMS-007	1"
5H	WDL -CON-0508	VMS 8	WDL -JCT-211	WDL -VMS-008	1"
5J	WDL -CON-0509	VMS 9	WDL -JCT-120	WDL -VMS-009	1"
5K	WDL -CON-0510	VMS 10	WDL -JCT-220	WDL -VMS-010	1"
5L	WDL -CON-0511	VMS 11	WDL -JCT-120	WDL -VMS-011	1"
5M	WDL -CON-0512	VMS 12	WDL -JCT-220	WDL -VMS-012	1"
6A	WDL -CON-0601	TVM 1	WDL -SCC-001	WDL -TVM-001	2"
6B	WDL -CON-0602	TVM 2	WDL -SCC-001	WDL -TVM-002	2"
6C	WDL -CON-0603	TVM 3	WDL -SCC-001	WDL -TVM-003	2"
7A	WDL -CON-0701	VALIDATOR 1	WDL -SCC-001	WDL -RSV-001	1-1/2"
7B	WDL -CON-0702	VALIDATOR 2	WDL -SCC-001	WDL -RSV-002	1-1/2"
7C	WDL -CON-0703	VALIDATOR 3	WDL -SCC-001	WDL -RSV-003	1-1/2"
7D	WDL -CON-0704	VALIDATOR 4	WDL -SCC-001	WDL -RSV-004	1-1/2"
8A	WDL -CON-0801	EMERGENCY TELEPHONE 1 - PHONE	WDL -SCC-001	WDL -ETL-001	1-1/2"
8B	WDL -CON-0802	EMERGENCY TELEPHONE 1 - BEACON LIGHT 1	WDL -ETL-001	WDL -ETB-001	1"
8C	WDL -CON-0803	EMERGENCYTELEPHONE 1 - BEACON LIGHT 2	WDL -ETL-001	WDL -ETB-002	1"
9A	WDL -CON-0901	STATION ELECTRICAL CABINET	WDL -SCC-001	WDL -SEC-001	2"

# COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 





CIVIL EAST - VOLUME 11A
WOODDALE STATION
COMMUNICATIONS
CONDUIT SCHEDULE (2 OF 2)

176 OF 319

SHEET

60% SUBMISSION - 09/28/15

ELECTRICAL

E2-WDL-ELE-SCH-462

Sep, 25 2015 09:16 am V:\3400_ADC\CAD\SEGMENT E2

### **CODE SUMMARY - CENTER PLATFORM BELTLINE STATION**

### **CODE REFERENCES**

MINNESOTA STATE BUILDING CODE 2015 NFPA 130 - STANDARD FOR FIXED GUIDEWAY TRANSIT 2014 AND PASSENGER RAIL SYSTEMS

IBC REVIEW

A. <u>DESCRIPTION</u>

LOCATION: ST. LOUIS PARK, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'-4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA) 5420 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 3904 SQUARE FEET 1952 SQUARE FEET (1 @ 96'-0" X 20'-4") WEST CANOPY 1952 SQUARE FEET (1 @ 96'-0" X 20'-4") EAST CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3 (15 S.F. PER PERSON)

C. <u>OCCUPANCY SEPARATIONS</u>

NONE ARE REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. <u>IBC EXITING SUMMARY</u>

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361 REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2) WIDTH PROVIDED = 2 RAMPS AT 145" = 290" 2 MEANS OF EGRESS PROVIDED

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

## PLATFORM COLOR AND FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

						COLOR AND FI		ULE			
TYPE	STATION	STRUCTURAL STEEL PAINT COLOR	PLATFORM CONC COLOR	PLATFORM CONC FINISH	CONC WALL COLOR	CONC WALL FINISH	RAILING INFILL MATERIAL	ALUM WDW FRAME FINISH	EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH	ALUM COMP CANOPY SOFFIT AND FASCIA COLOR	TRANSLUCENT PLASTIC PANEL
CENTER	BELTLINE STATION		CEMSTONE SPLIT	TBD	CEMSTONE	TBD	SS CABLE	CLEAR ANODIZED	HUNTER DOUGLAS WOODWRIGHT		3FORM KODA XT GREEN G-06
CENTER	BELTLINE STATION	PPG 209-6 ASPARAGUS	CEMSTONE SPLIT	TBD		TBD	SS CABLE	CLEAR ANODIZED	HUNTER DOUGLAS WOODWRIGHT 8449 WINDJAMMER TEAK	ALUCOBOND CHERRY SMITH SILVER MICA COOL	(

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 





**CIVIL EAST - VOLUME 11A BELTLINE STATION CODE SUMMARY / FINISH SCHEDULE** 

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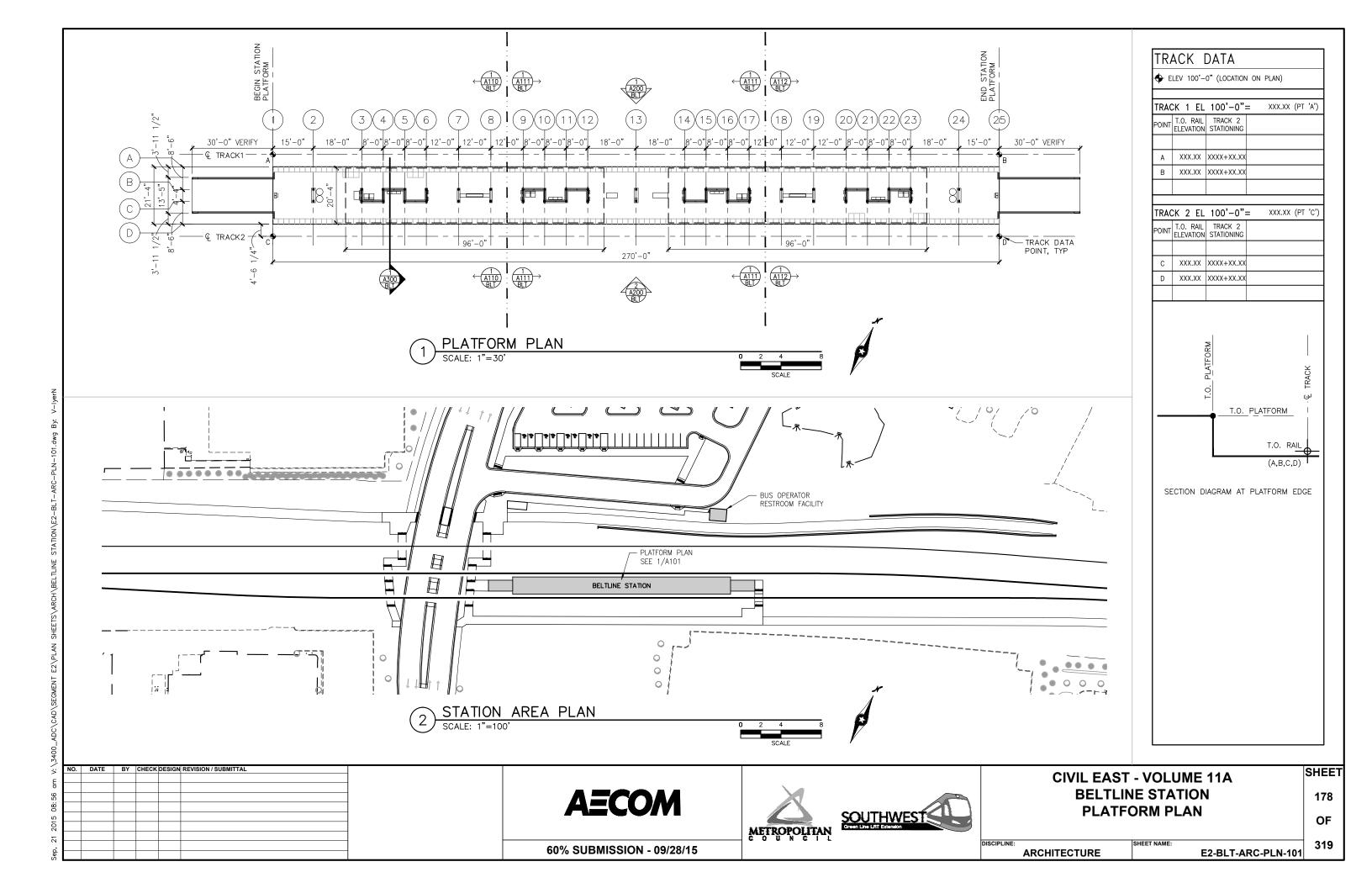
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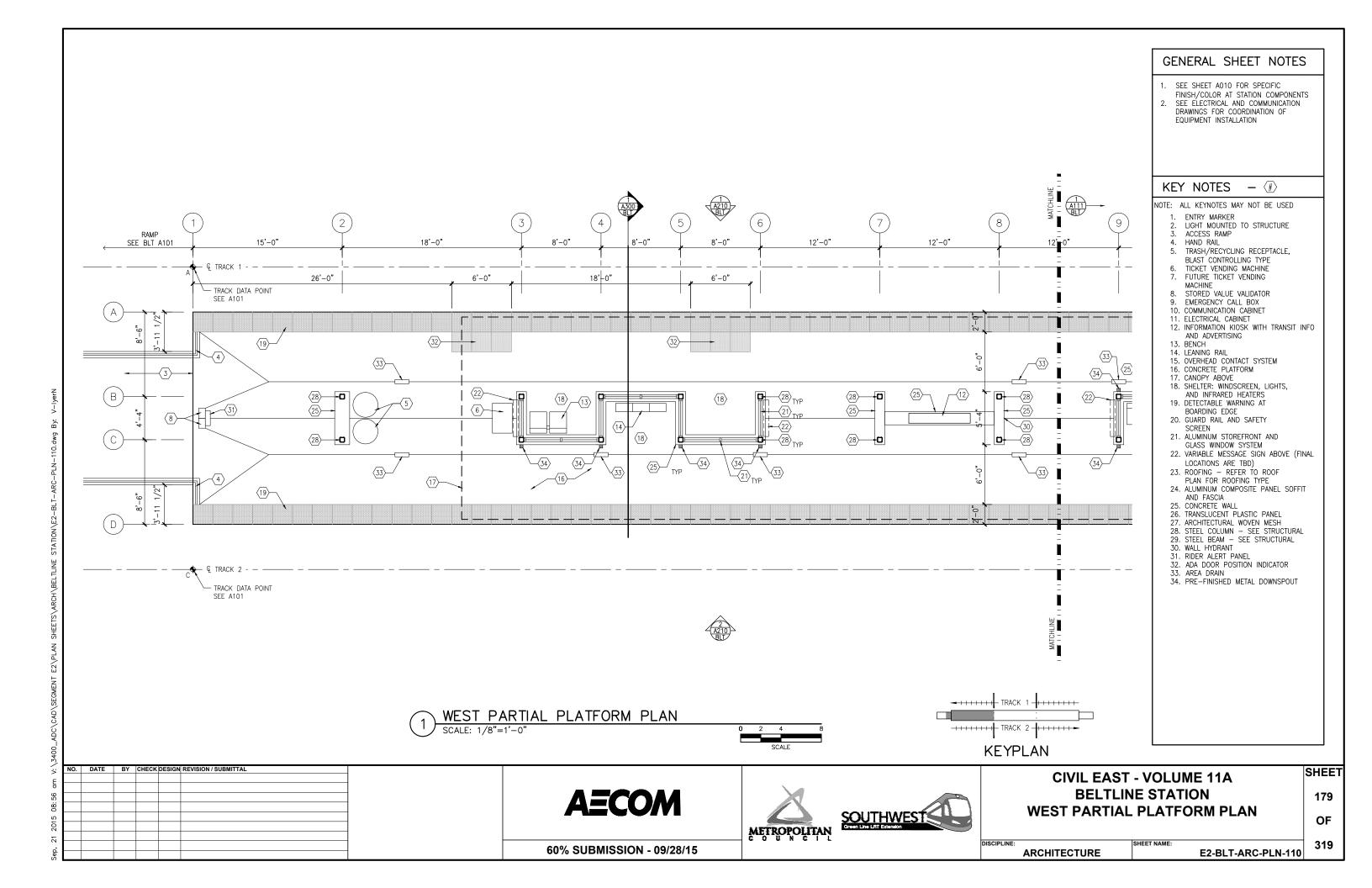
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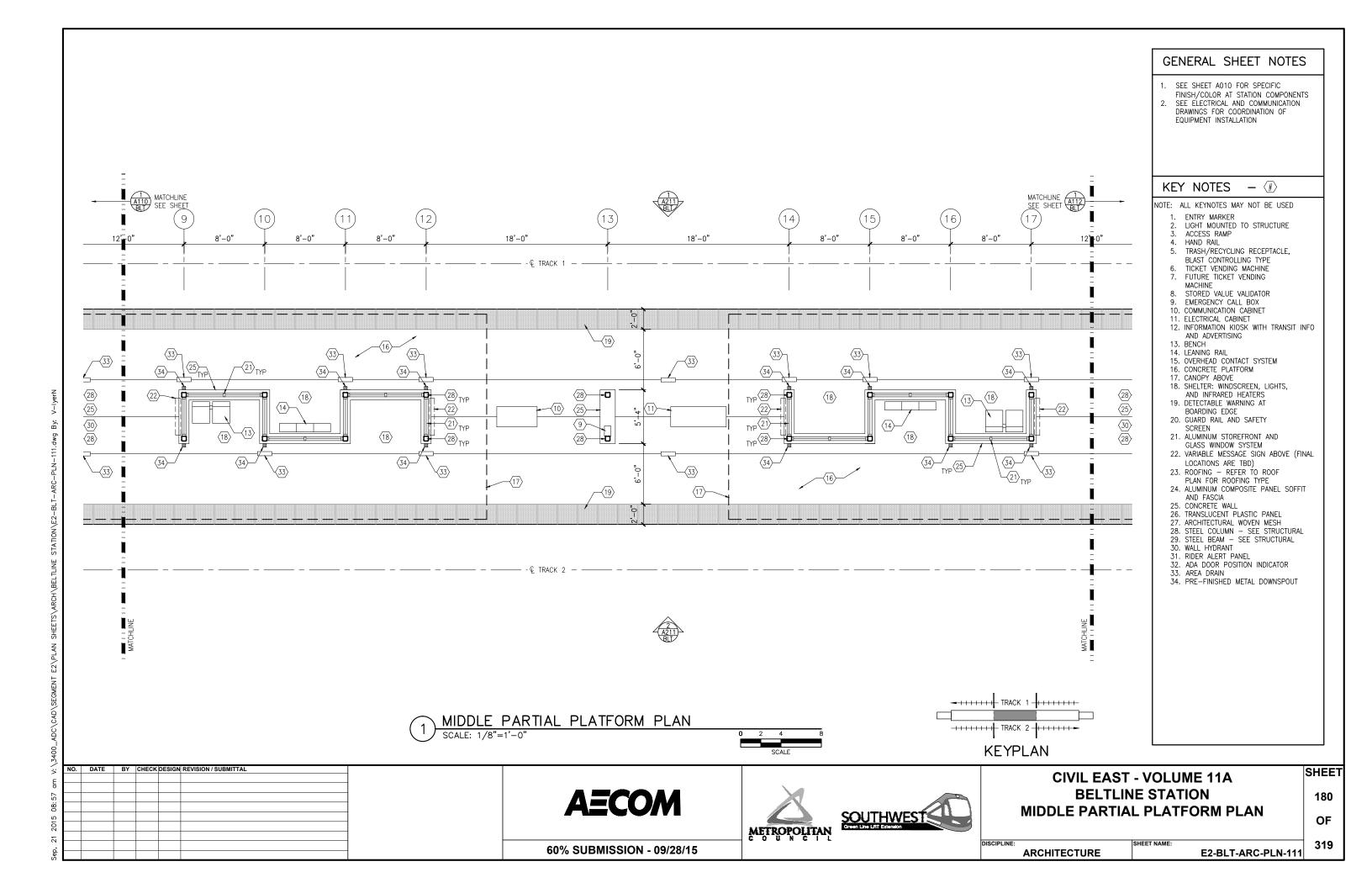
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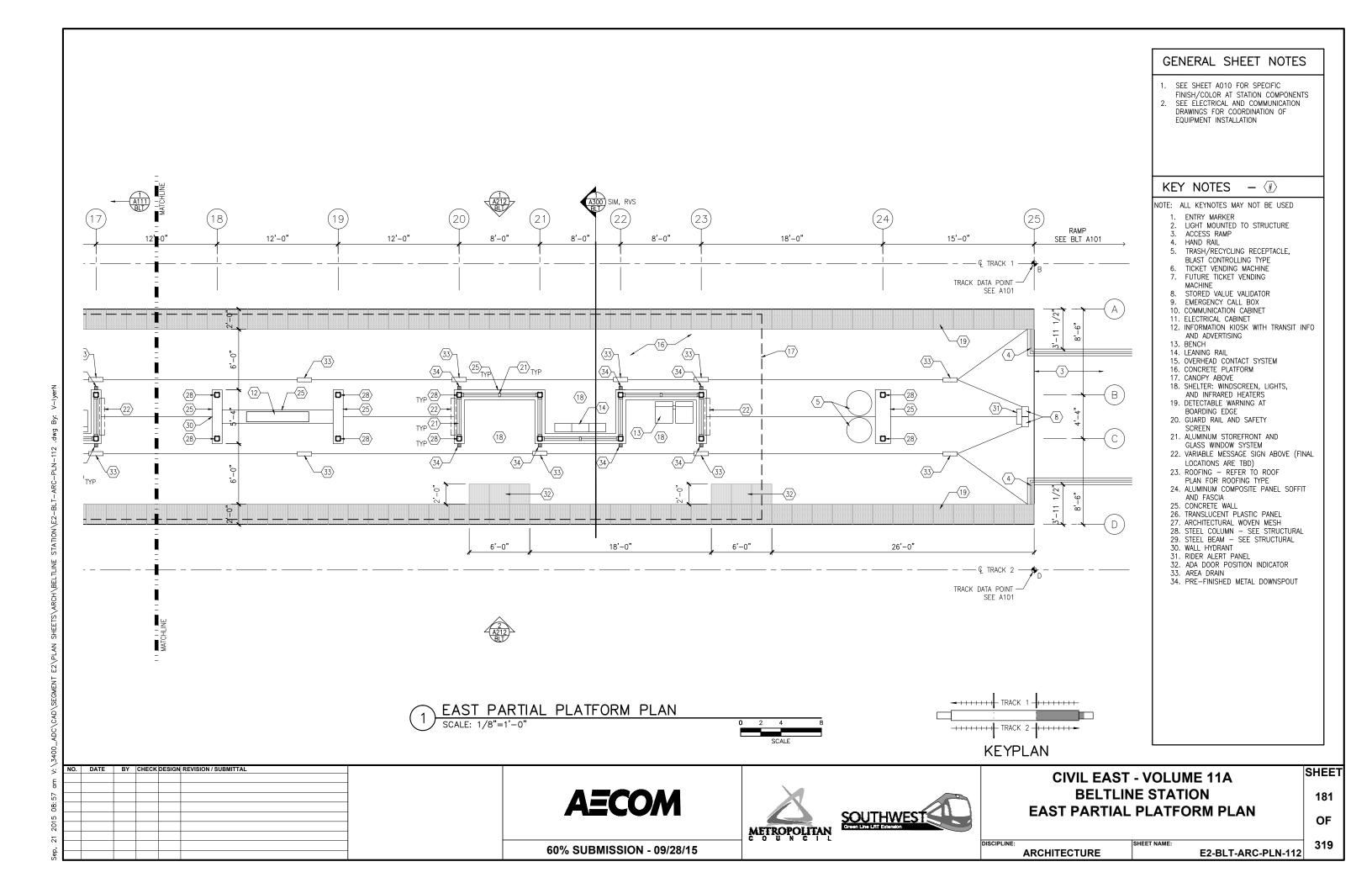
60% SUBMISSION - 09/28/15

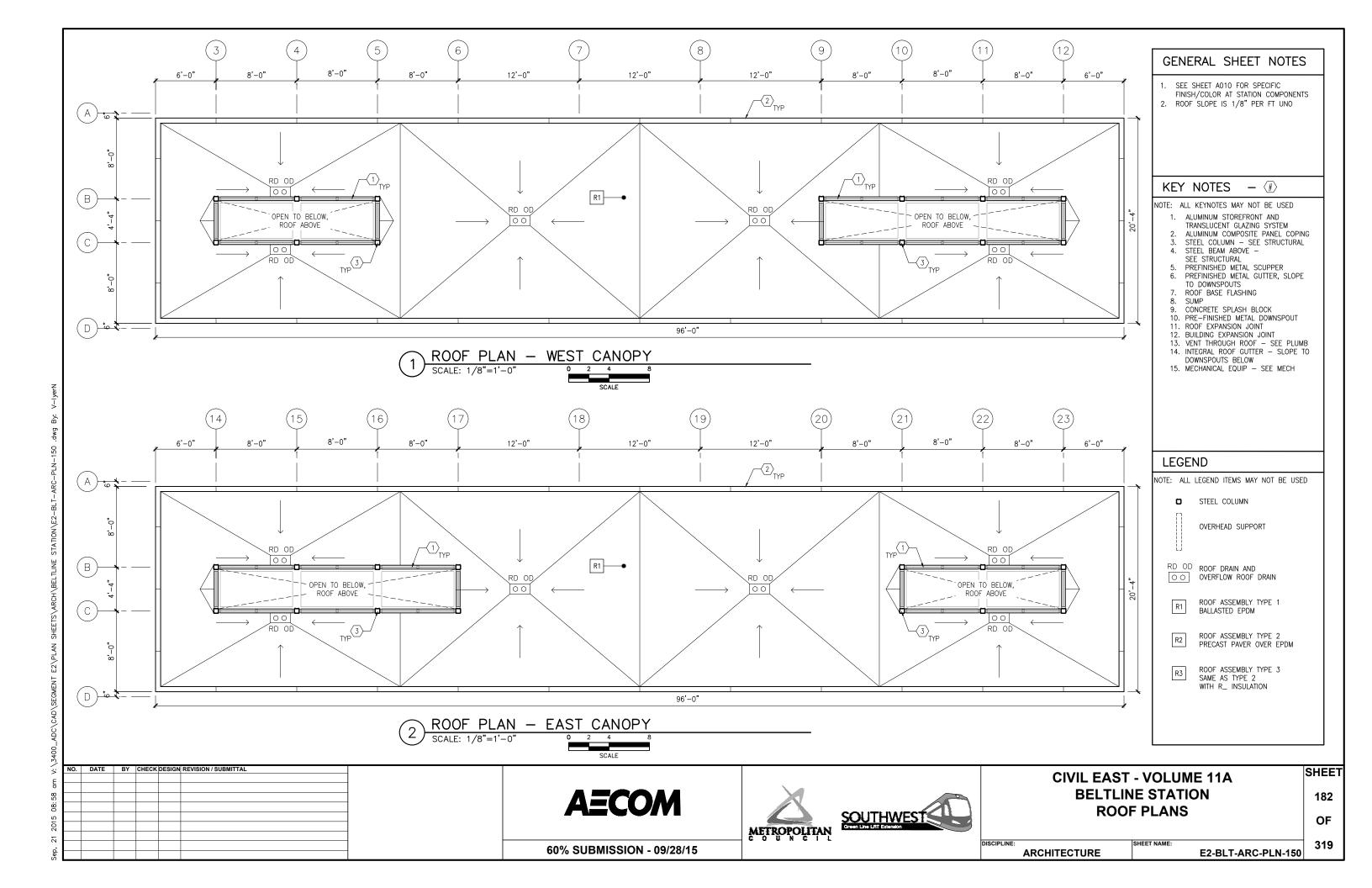
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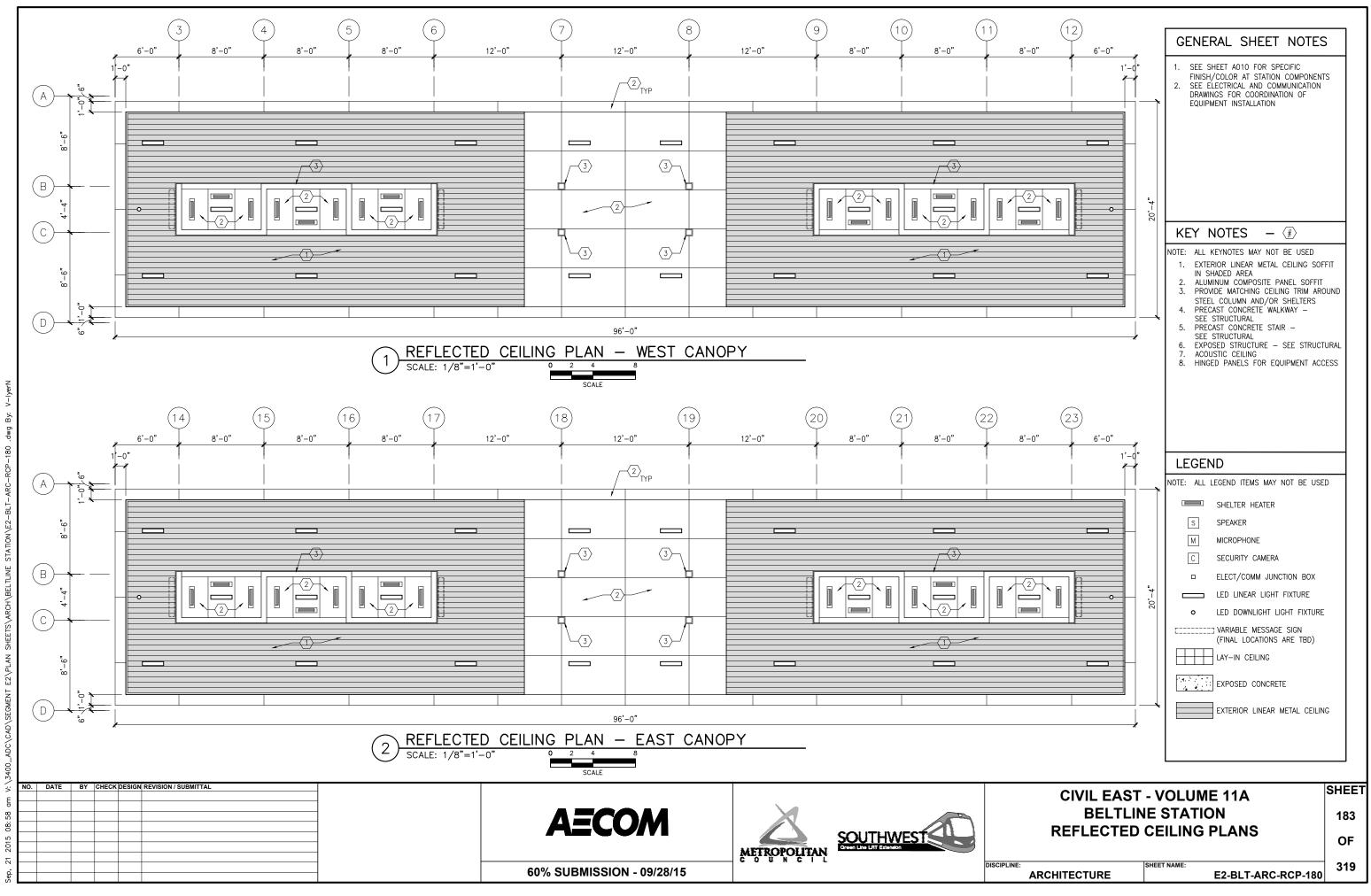


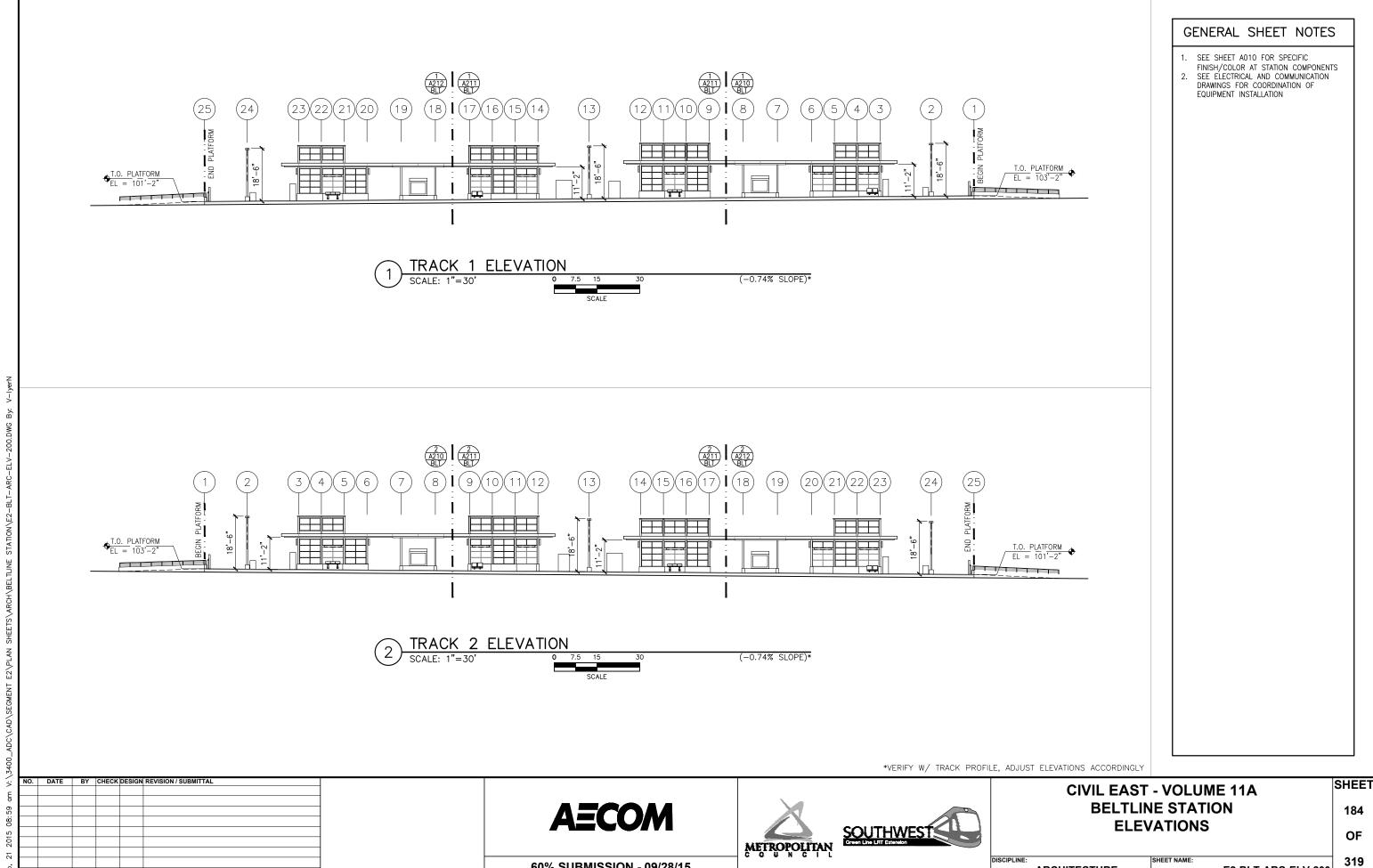








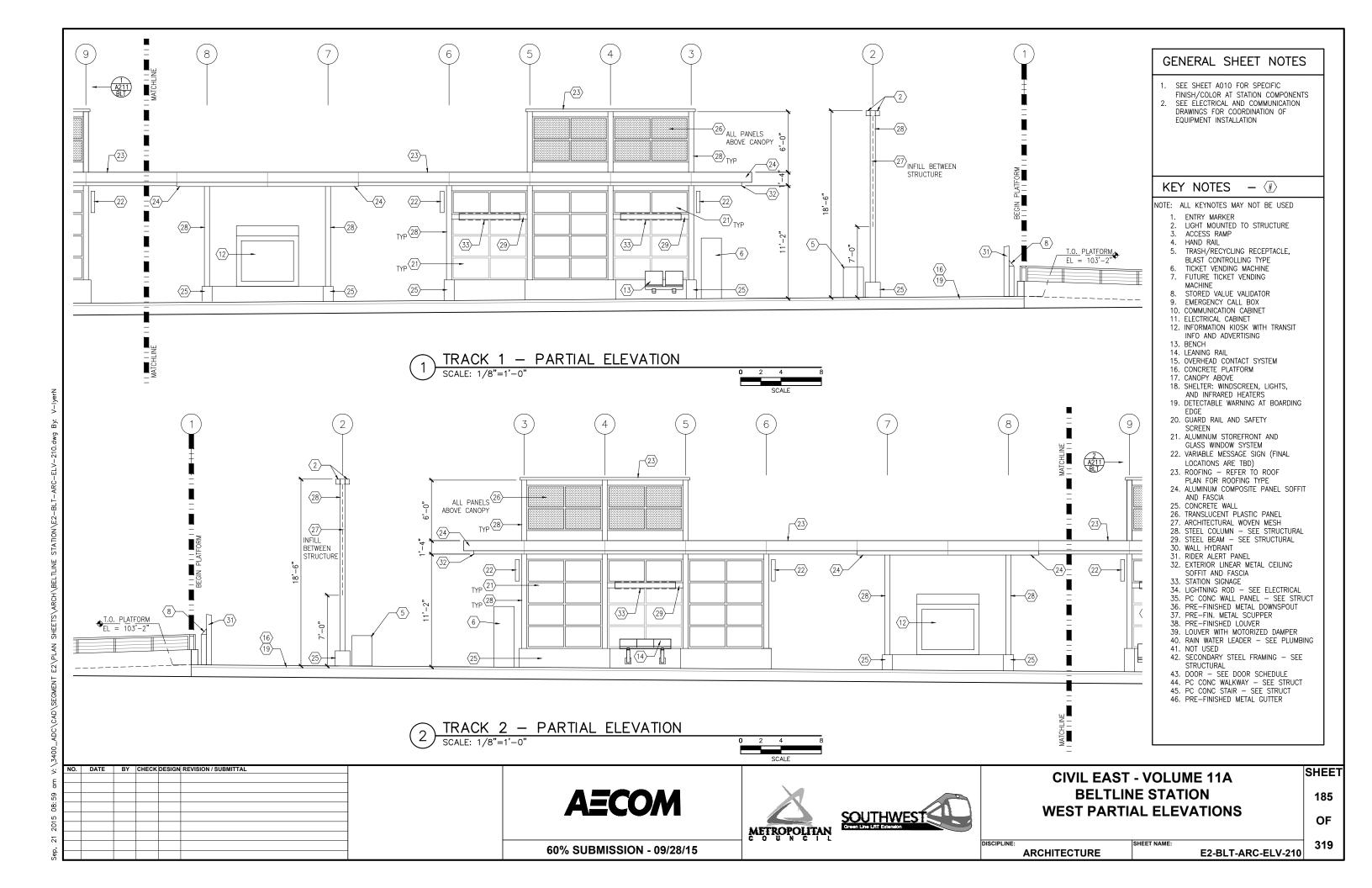


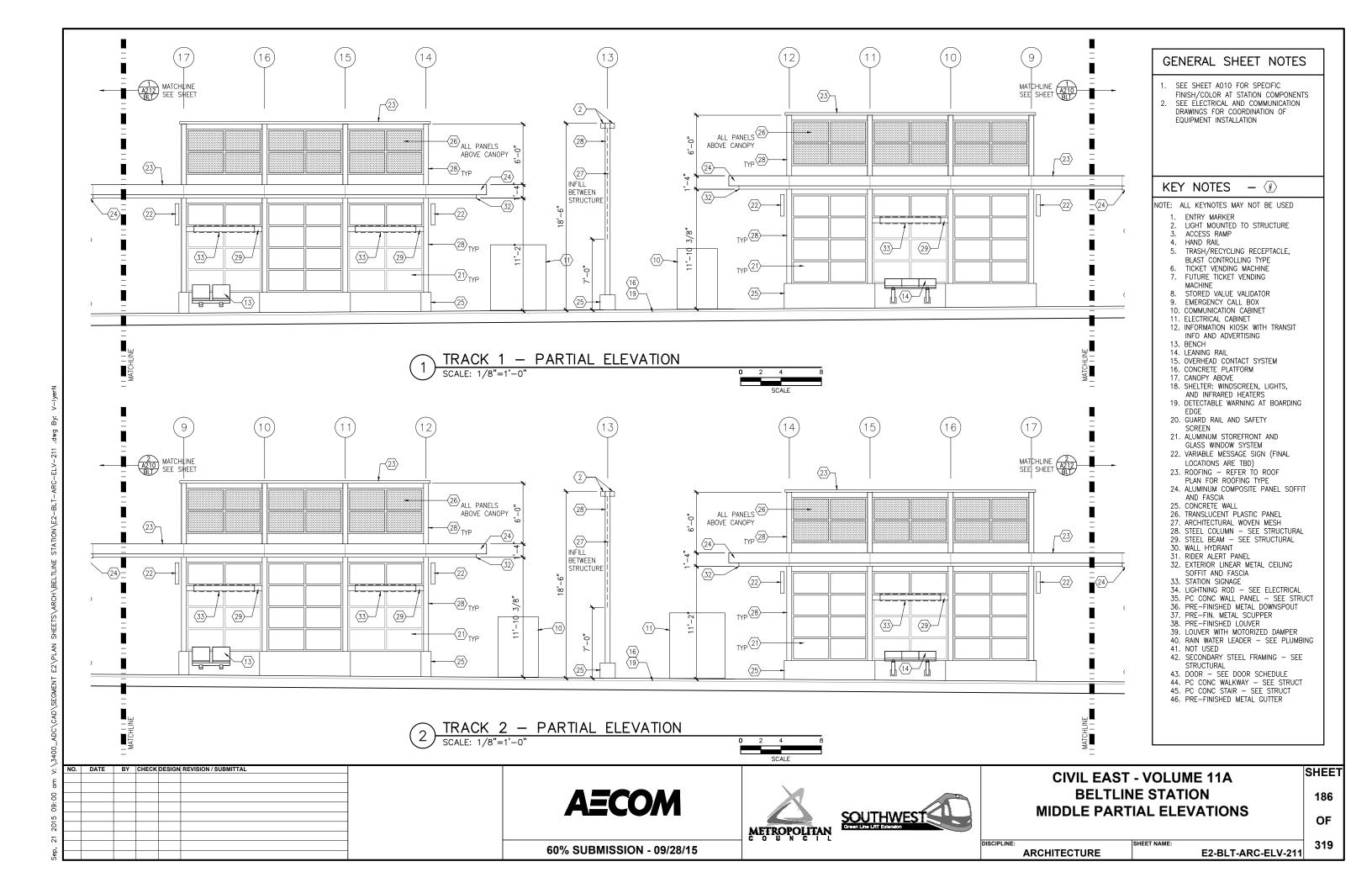


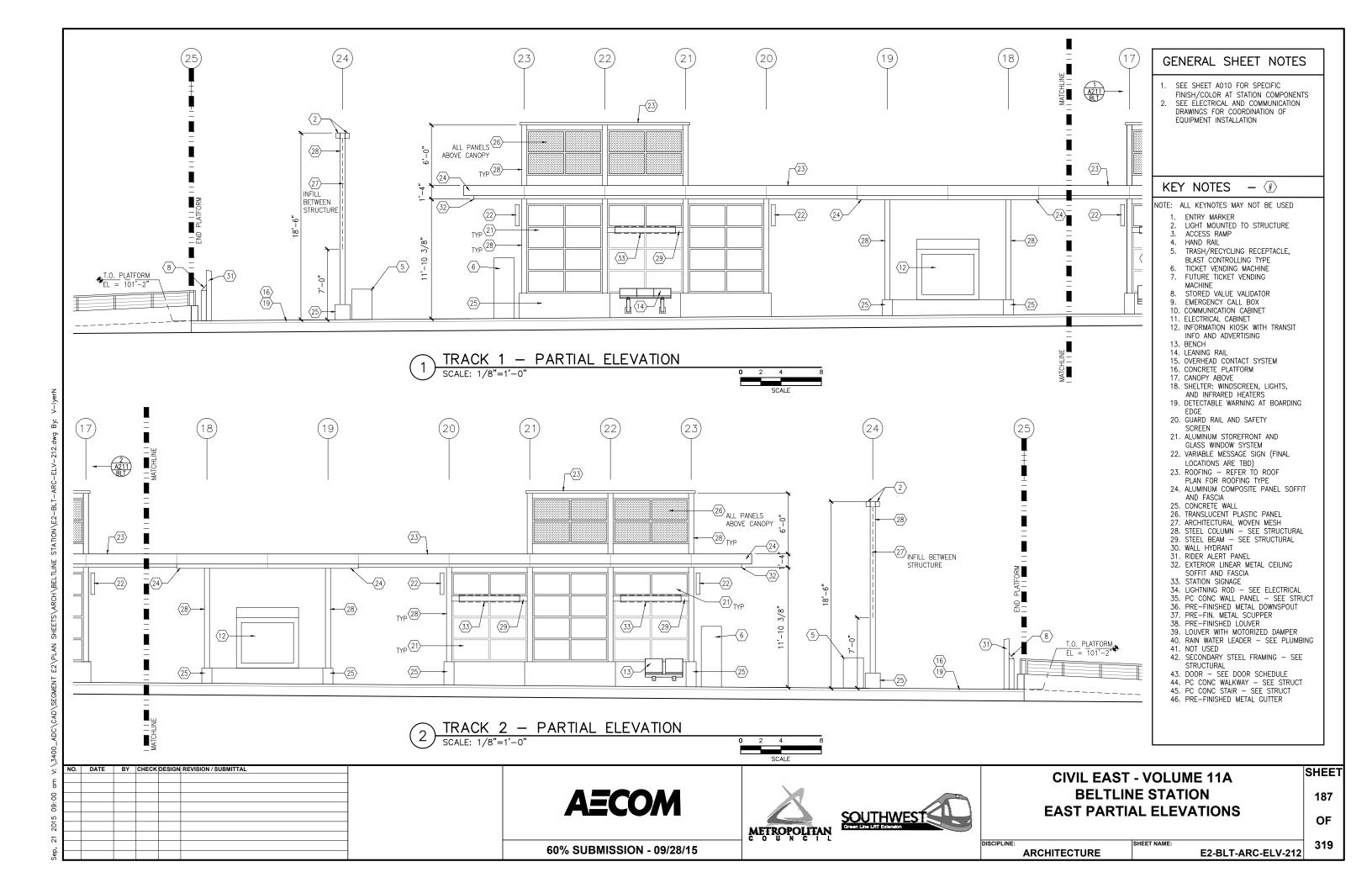
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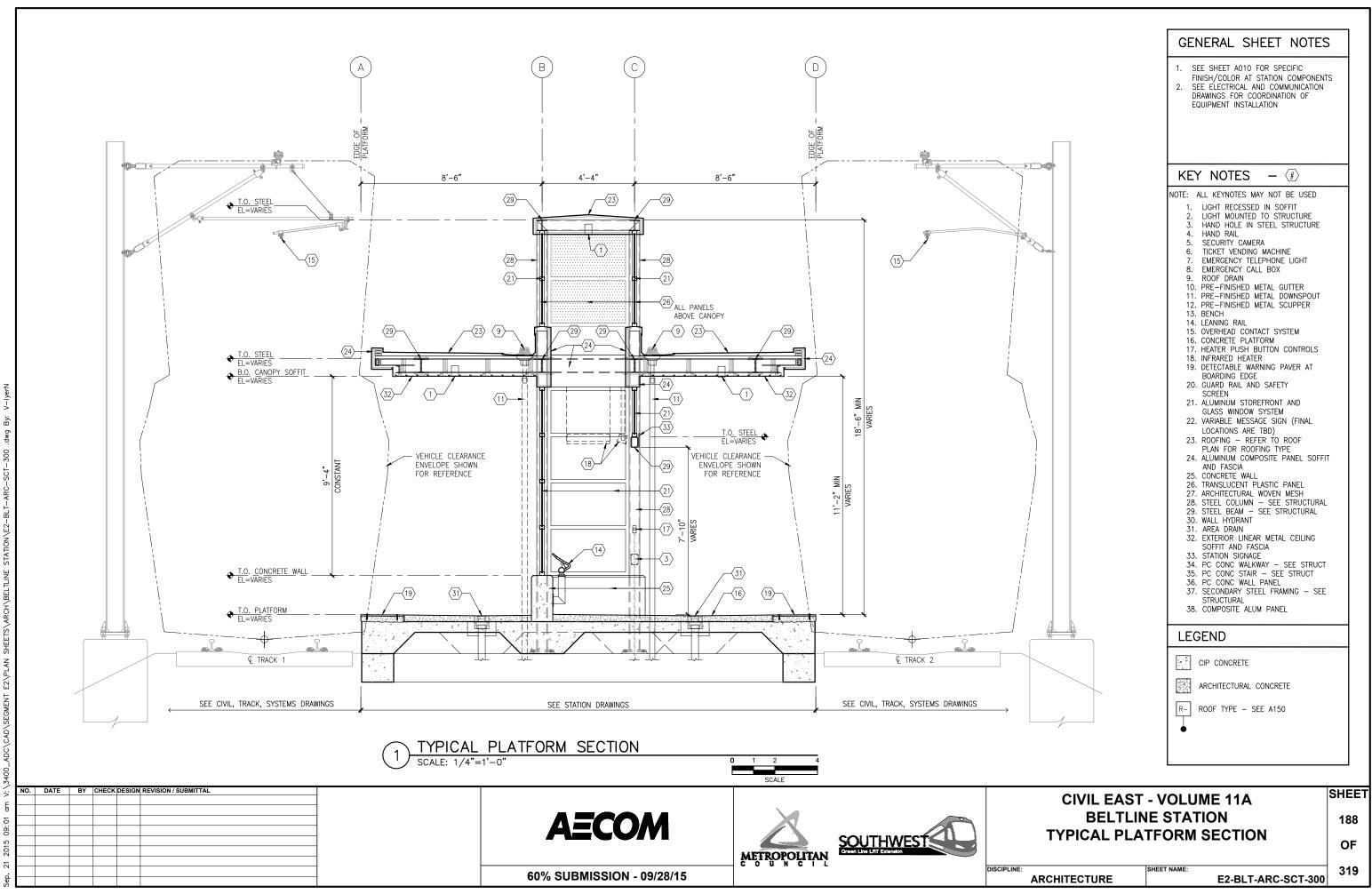
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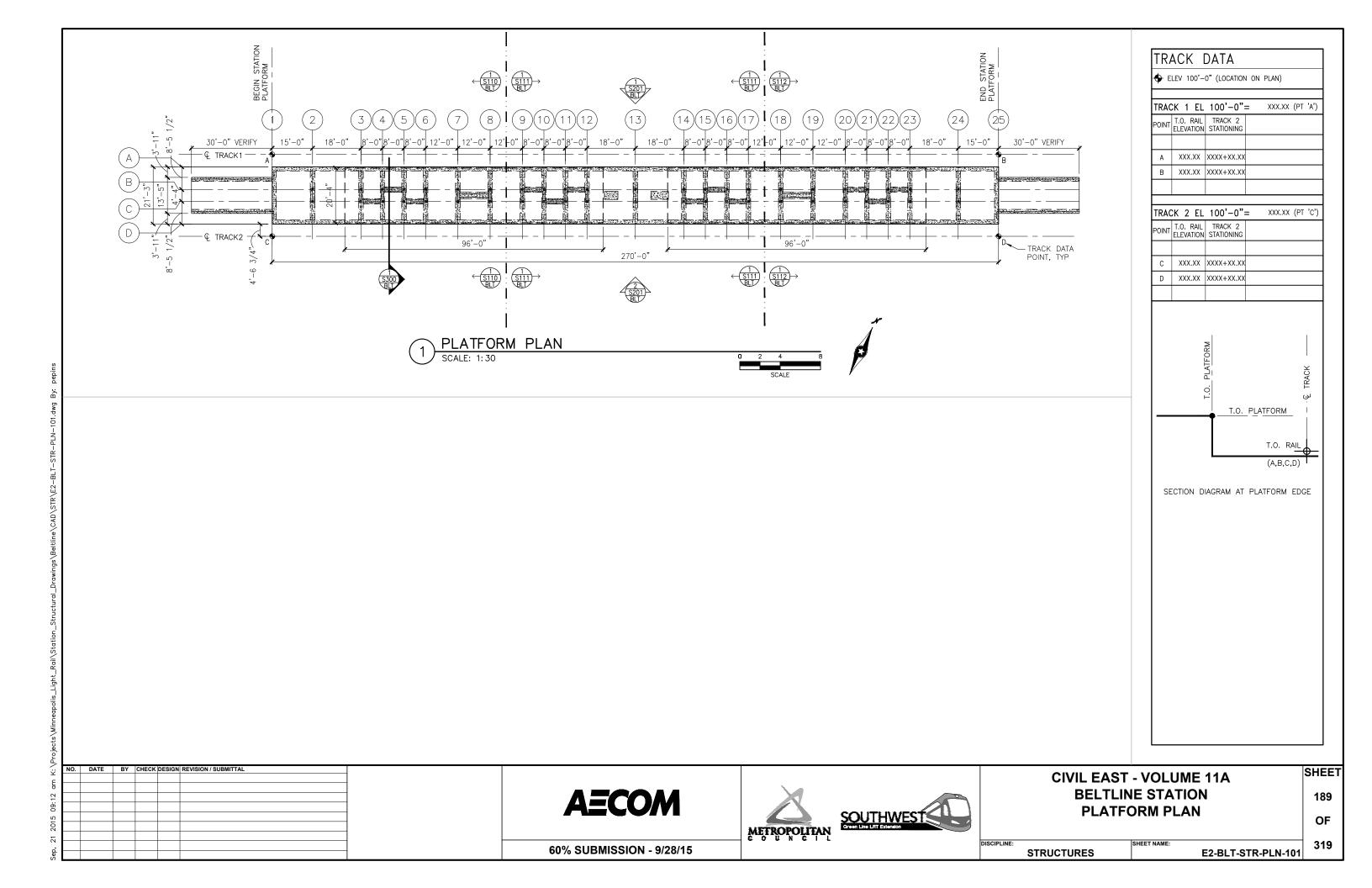
**ARCHITECTURE** 

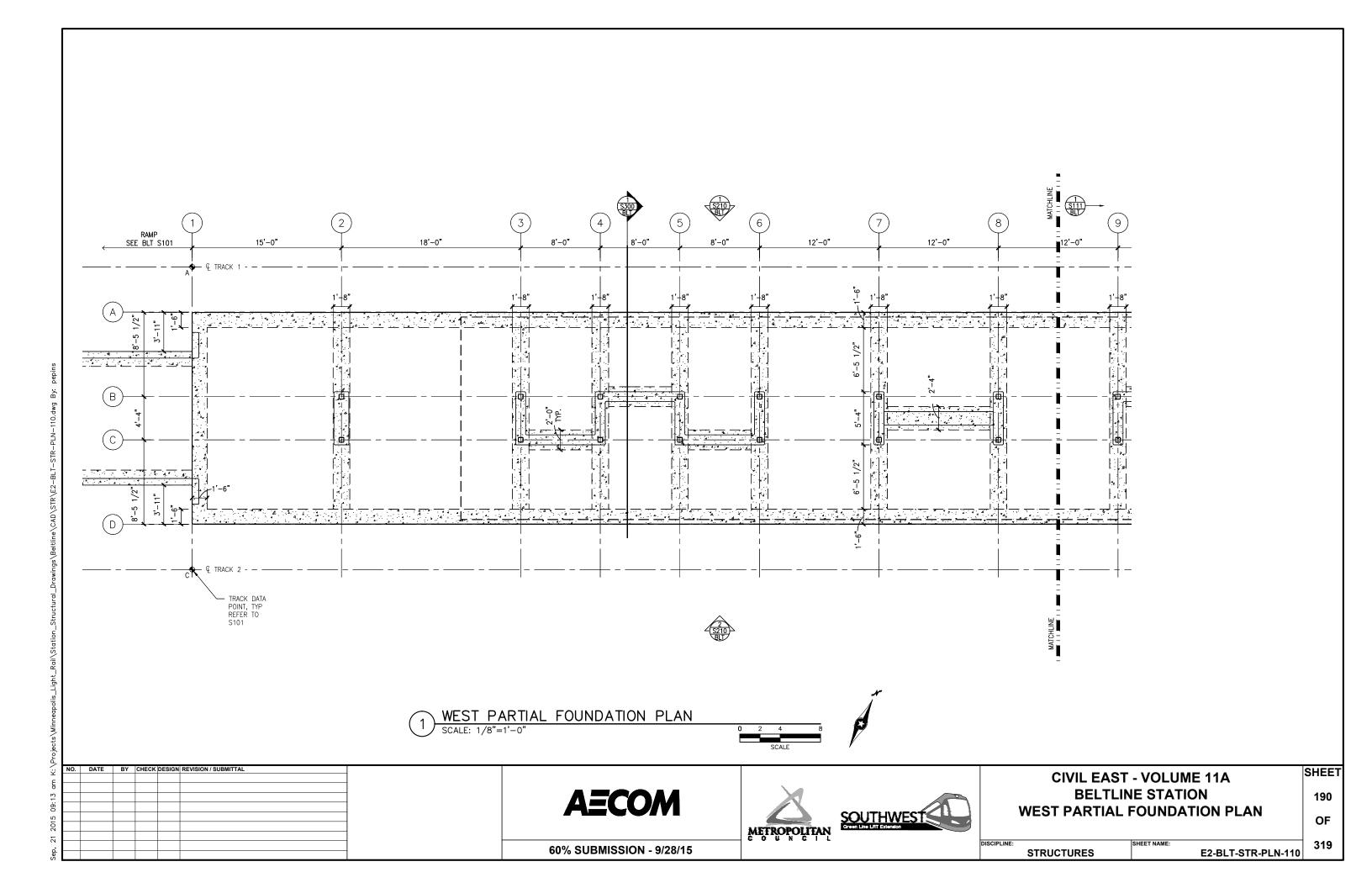


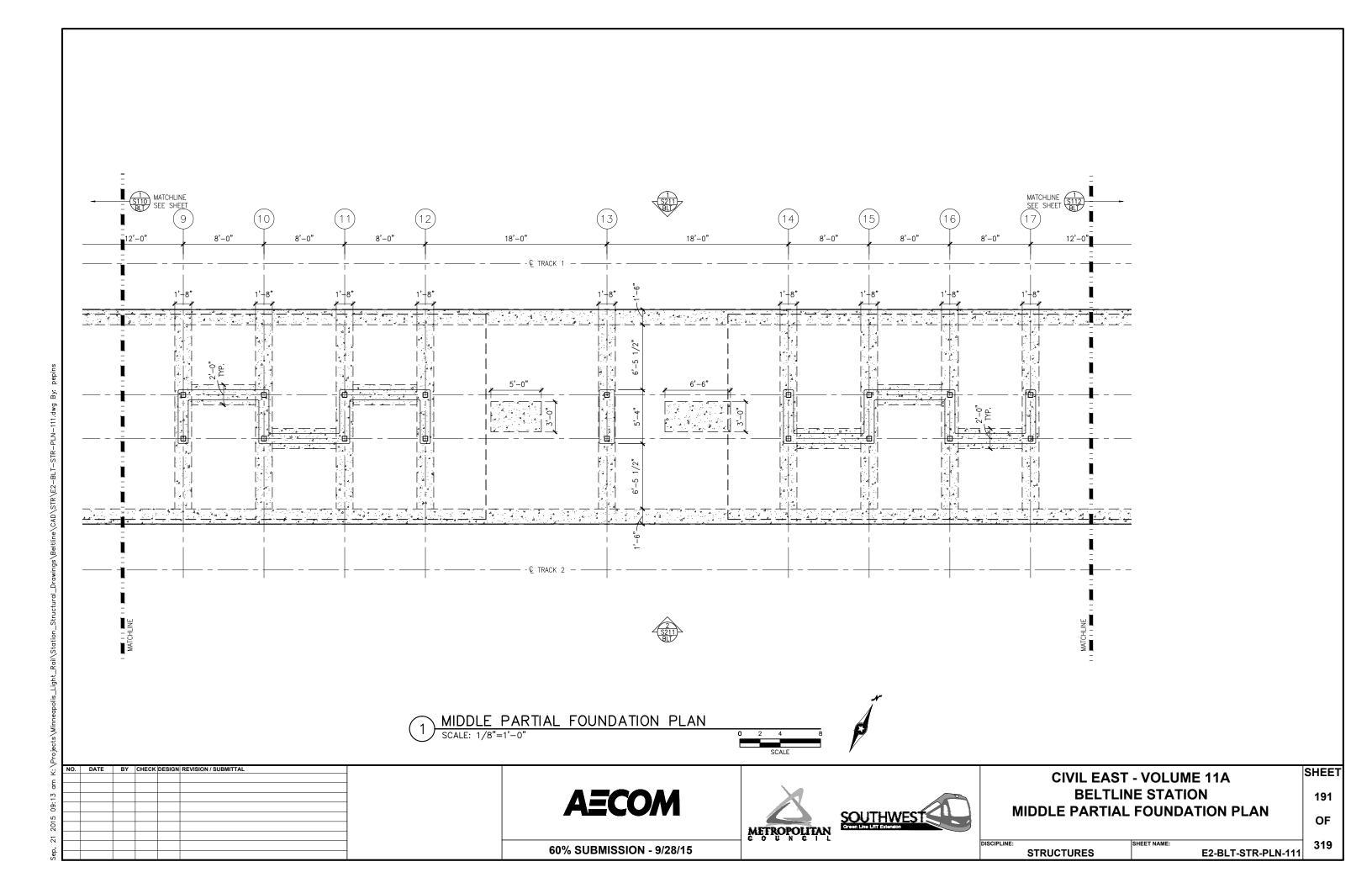


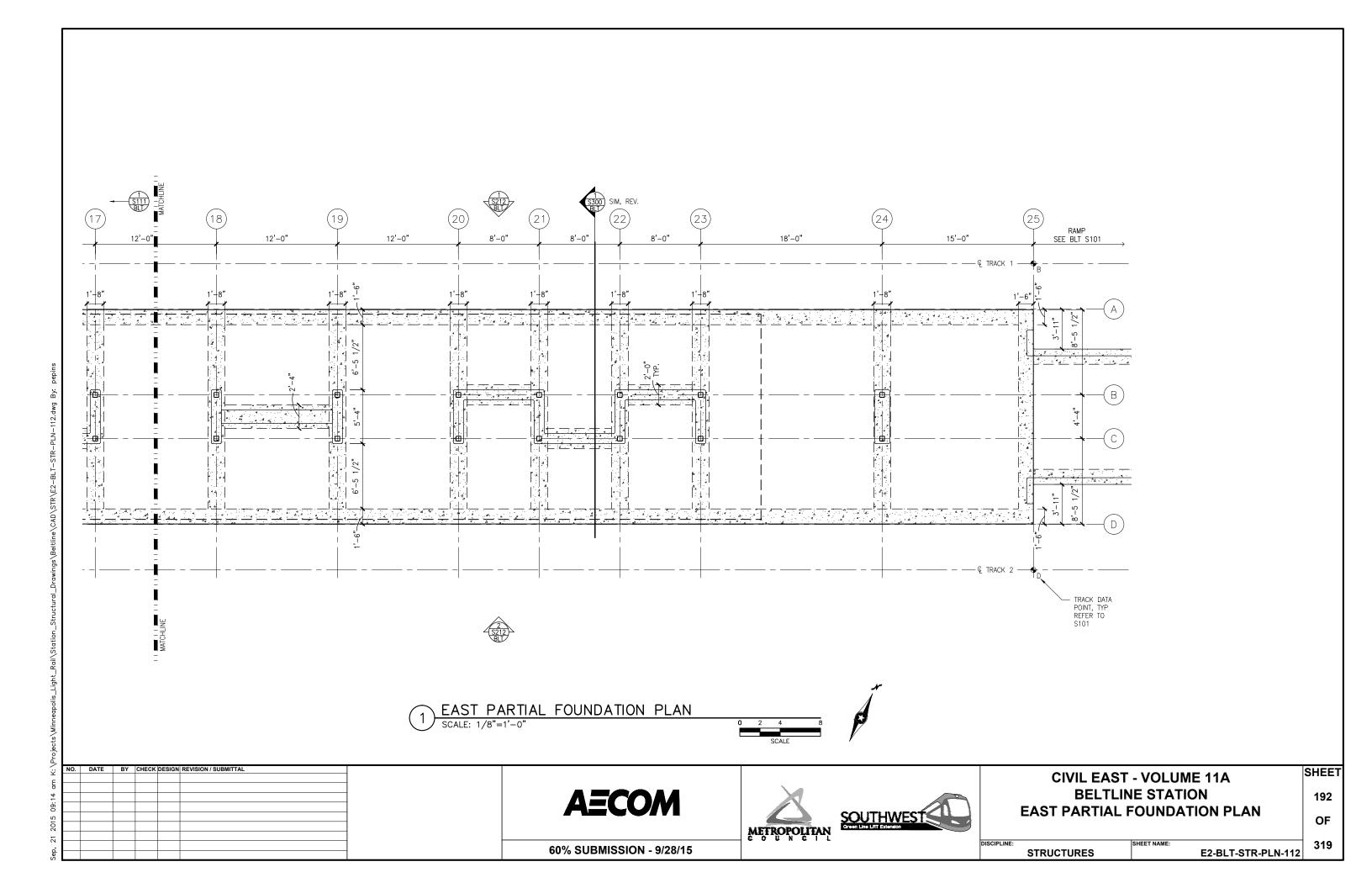


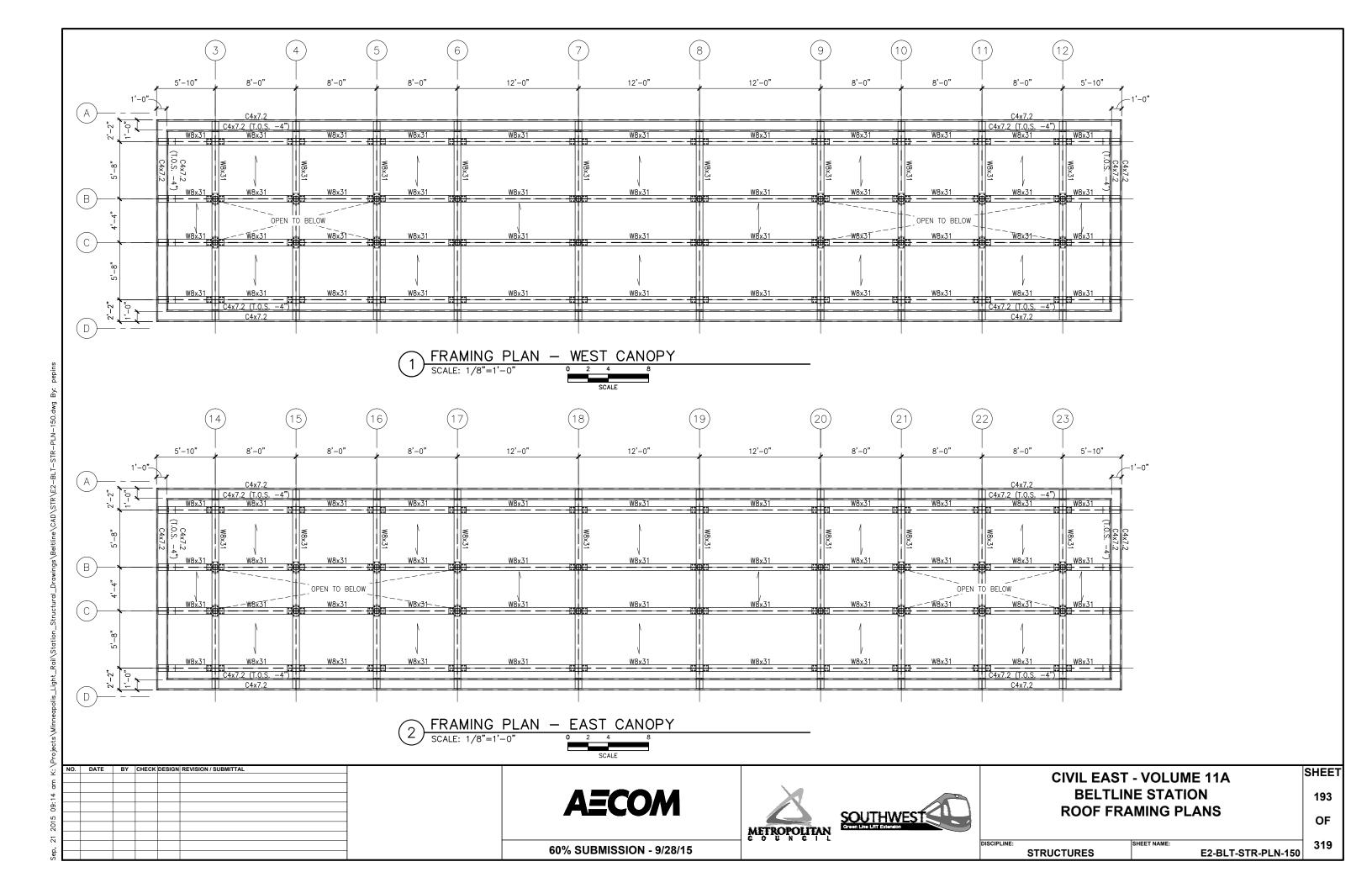


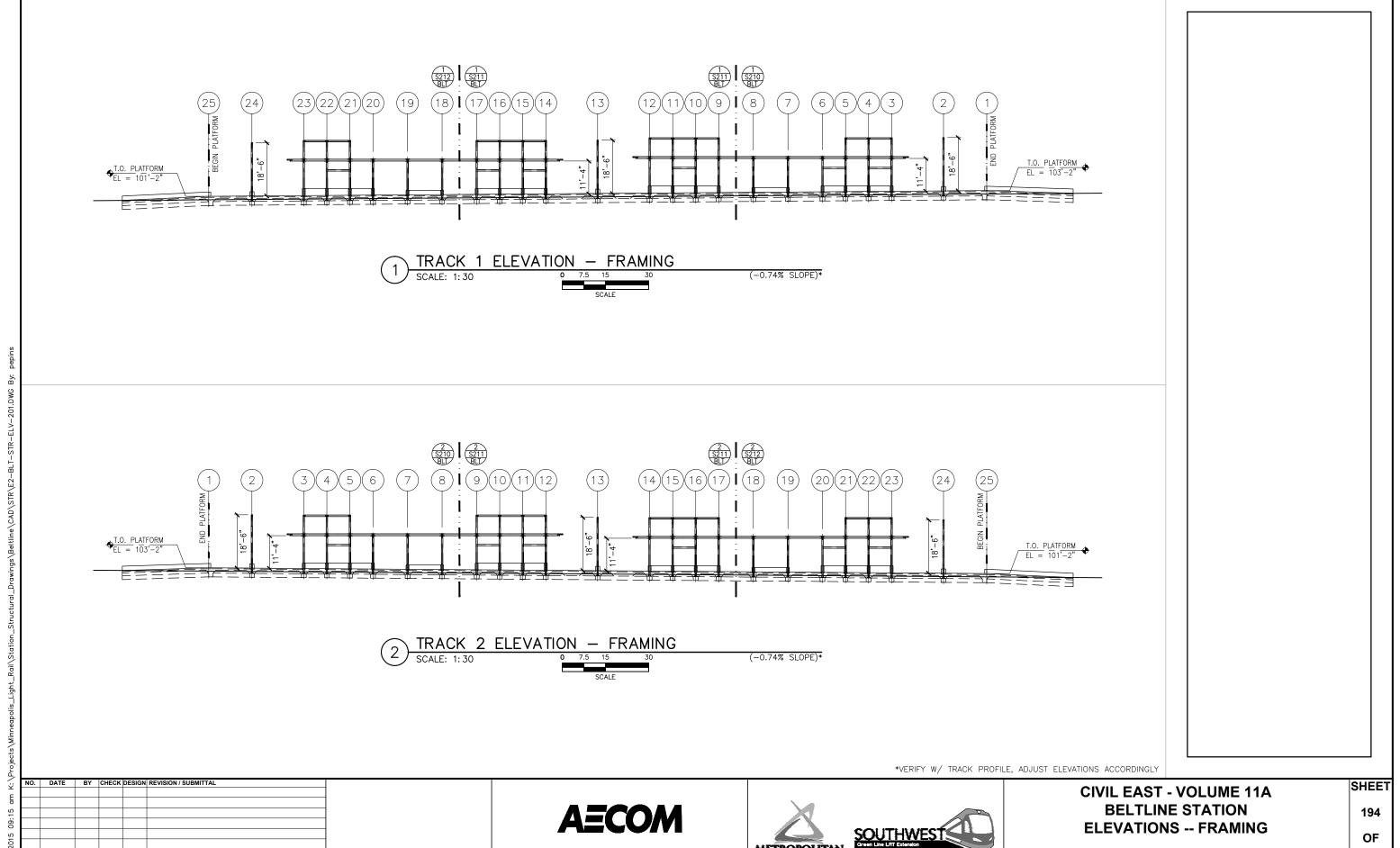










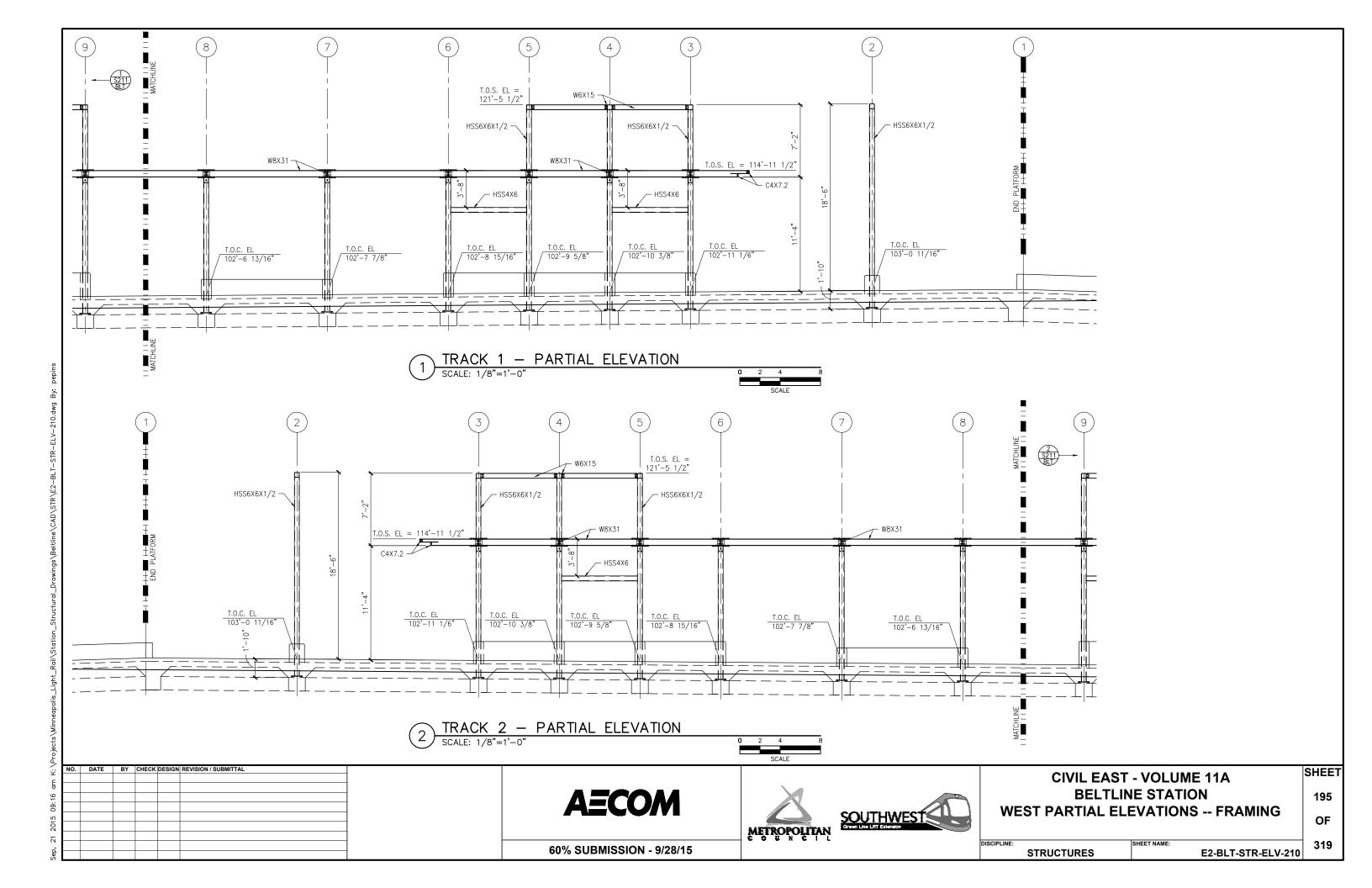


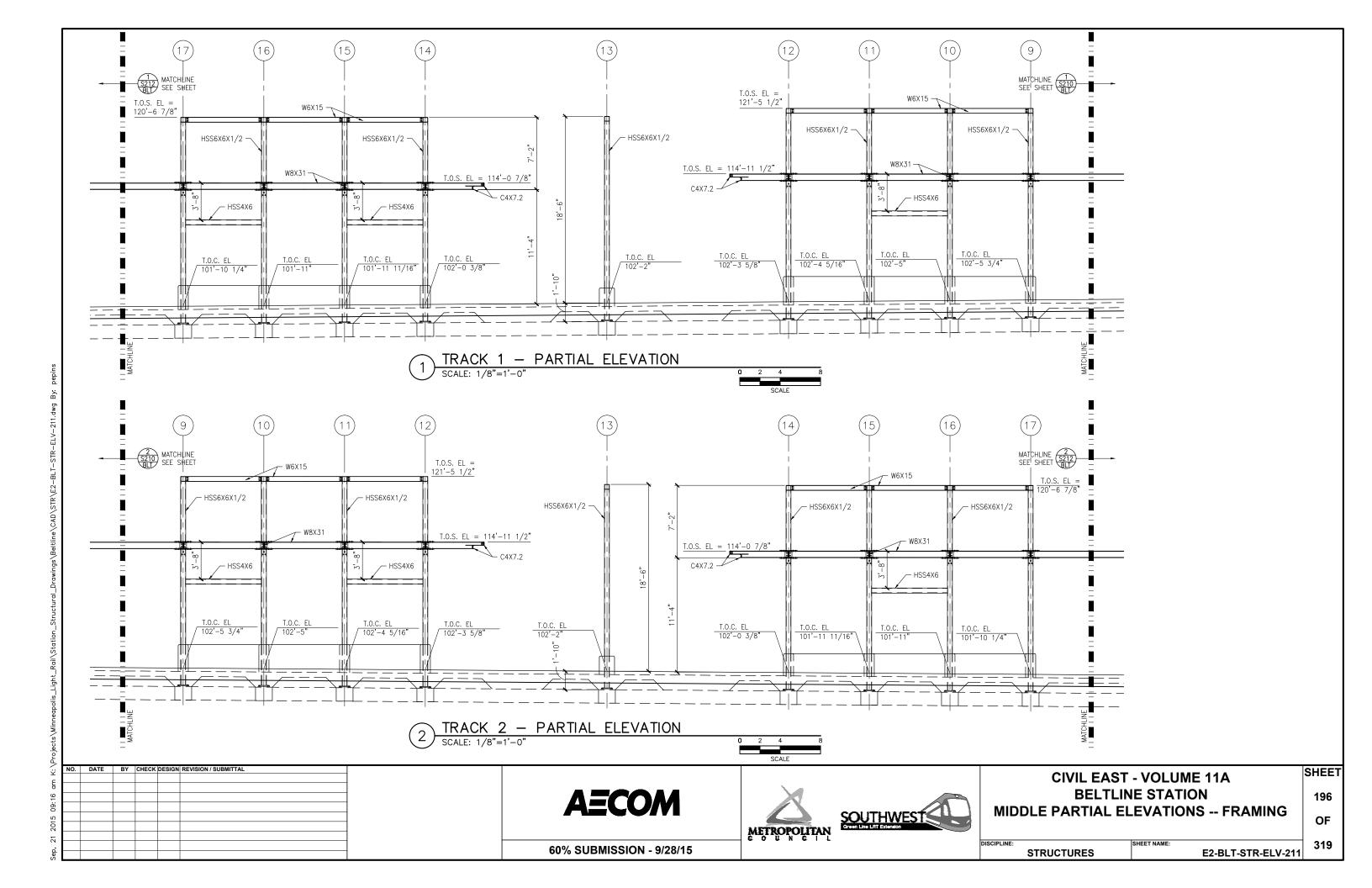
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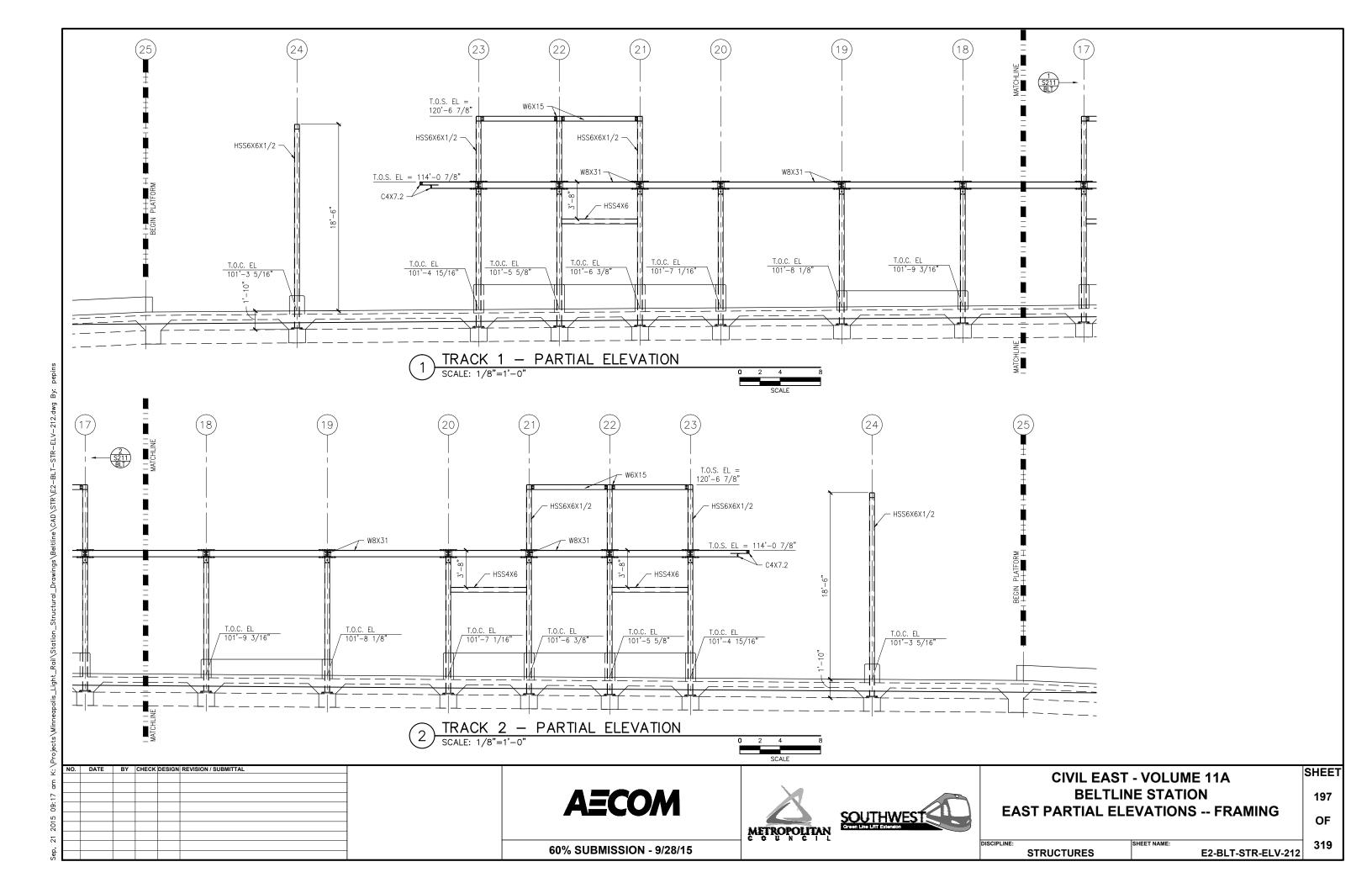
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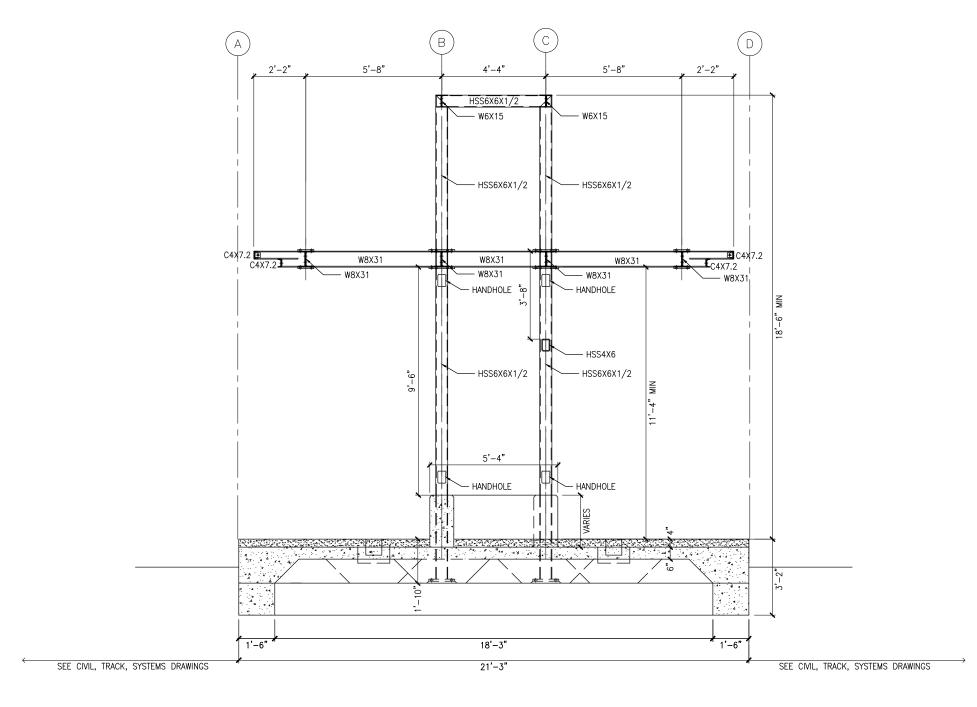
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**STRUCTURES** 













Ю.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	

**AECOM** 





# **CIVIL EAST - VOLUME 11A BELTLINE STATION TYPICAL PLATFORM SECTION**

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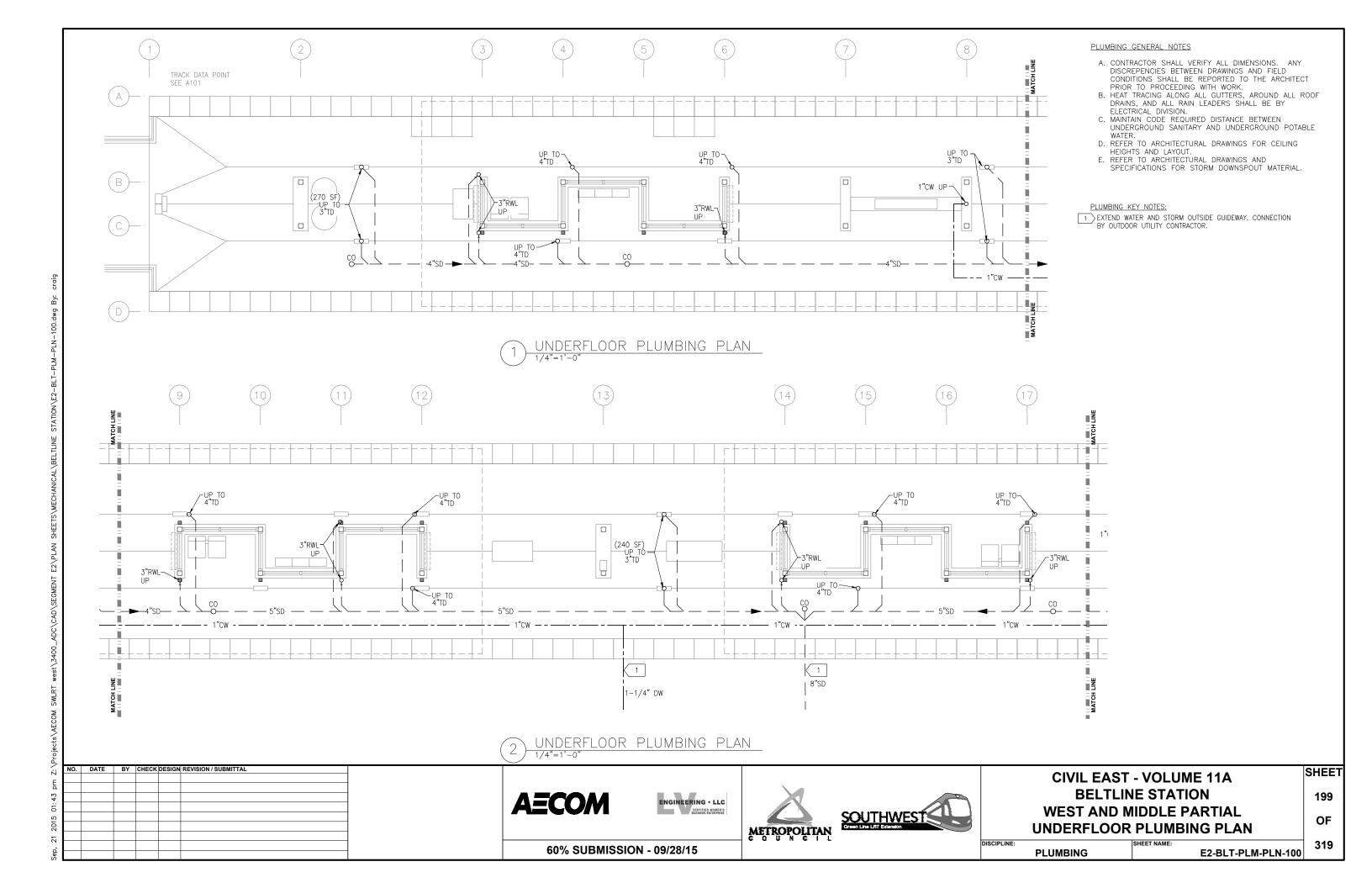
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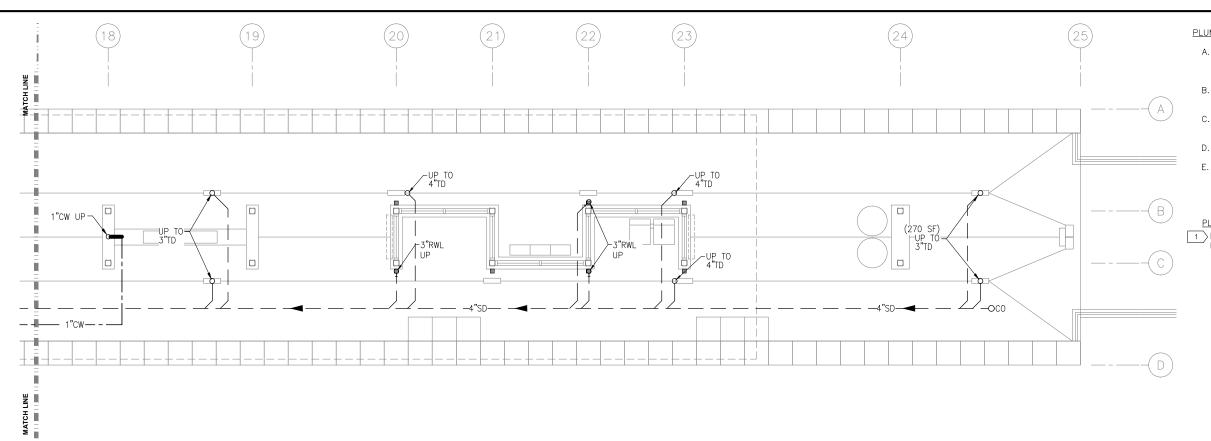
SHEET

STRUCTURES

E2-BLT-STR-SCT-300

60% SUBMISSION - 9/28/15





PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.

  B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF
- DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.

  C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE
- WATER.

  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING
- HEIGHTS AND LAYOUT.

  E. REFER TO ARCHITECTURAL DRAWINGS AND
- SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

UNDERFLOOR PLUMBING PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 







**CIVIL EAST - VOLUME 11A BELTLINE STATION EAST PARTIAL UNDERFLOOR PLUMBING PLAN** 

OF

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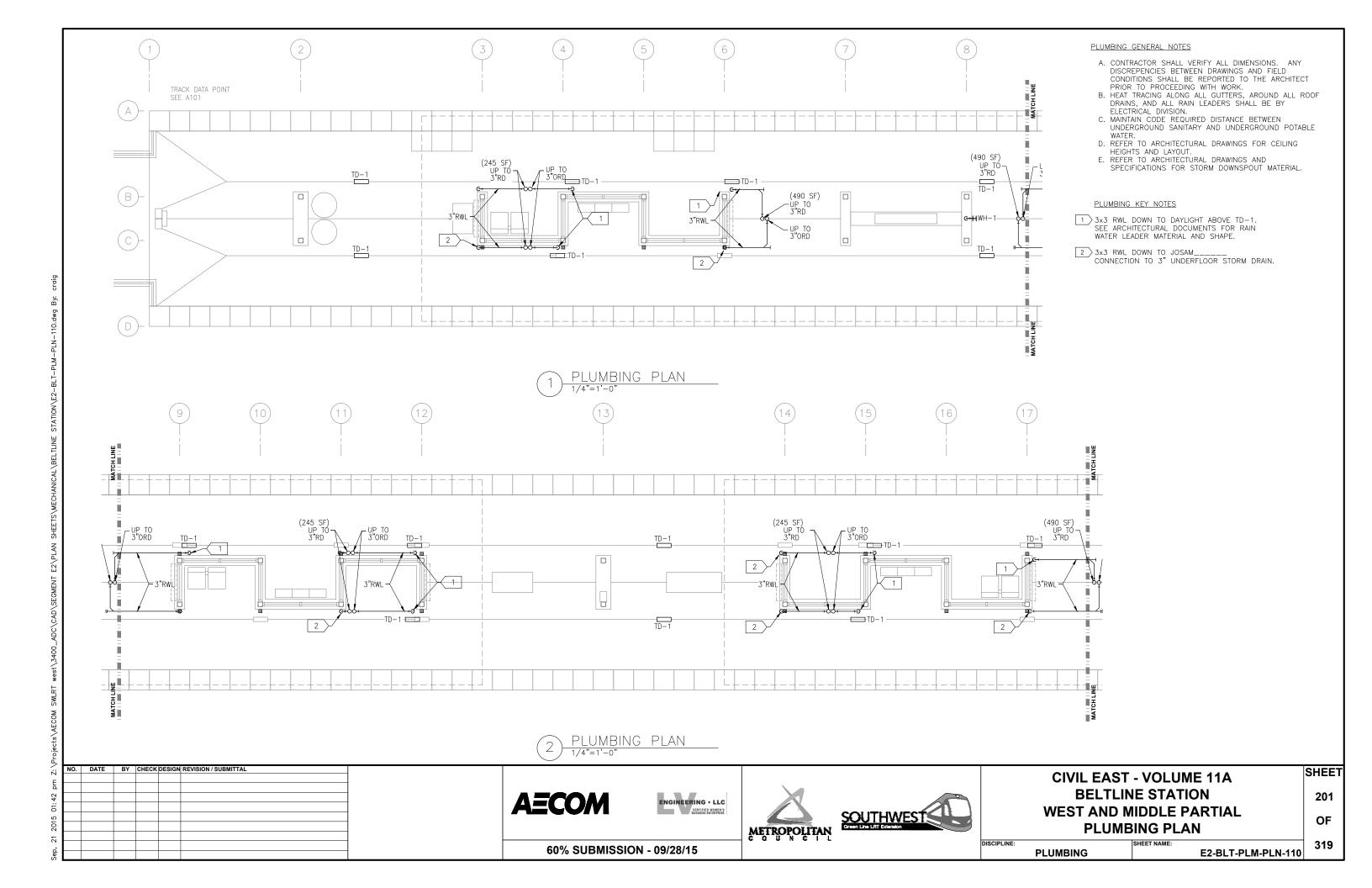
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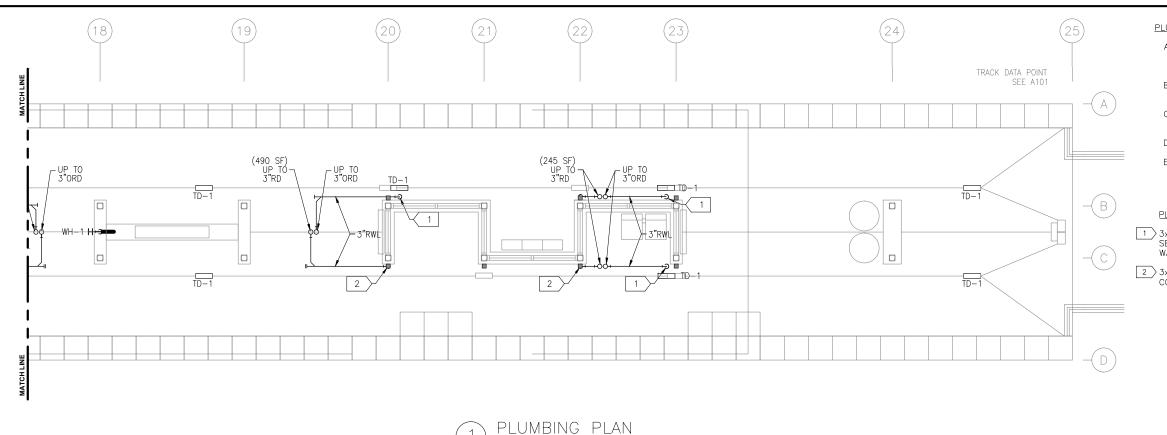
319

DISCIPLINE: **PLUMBING** 

E2-BLT-PLM-PLN-101

60% SUBMISSION - 09/28/15





### PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.

  B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF
- DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
  C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN
- UNDERGROUND SANITARY AND UNDERGROUND POTABLE
- D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
- E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

### PLUMBING KEY NOTES

- 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.
- 2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

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**CIVIL EAST - VOLUME 11A BELTLINE STATION EAST PARTIAL PLUMBING PLAN AND RISER DIAGRAMS** 

**PLUMBING** 

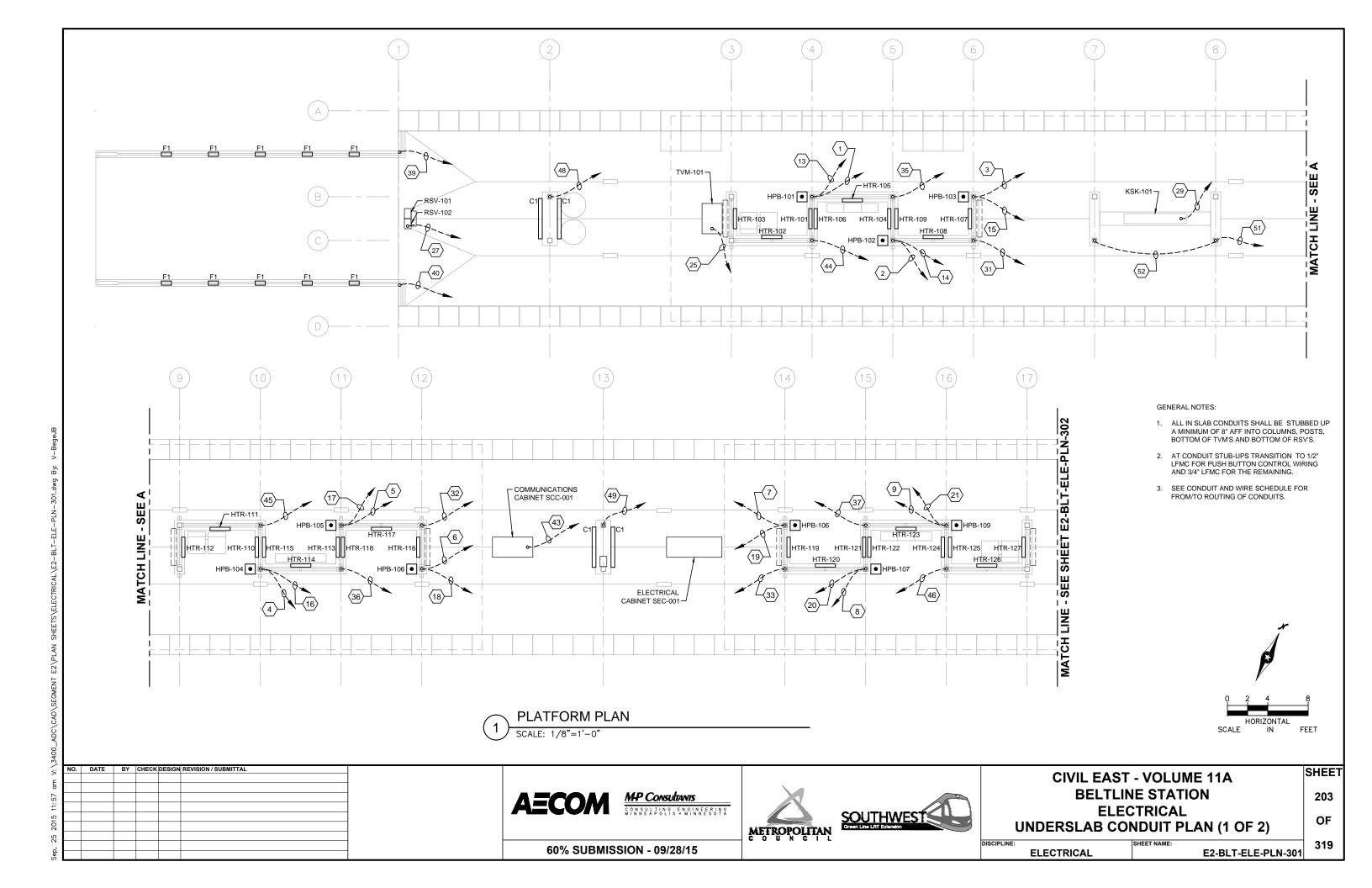
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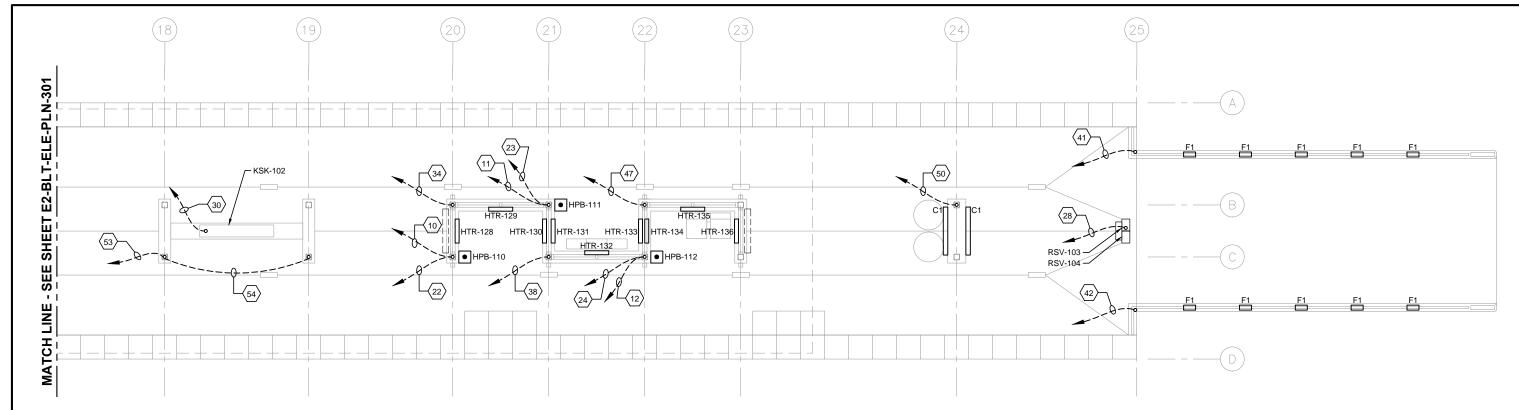
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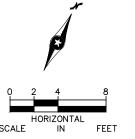




PLATFORM PLAN SCALE: 1/8"=1'-0"

### GENERAL NOTES:

- ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
- AT CONDUIT STUB-UPS TRANSITION TO 1/2"
   LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
- 3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.



SHEET

204

OF

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MP Consultants



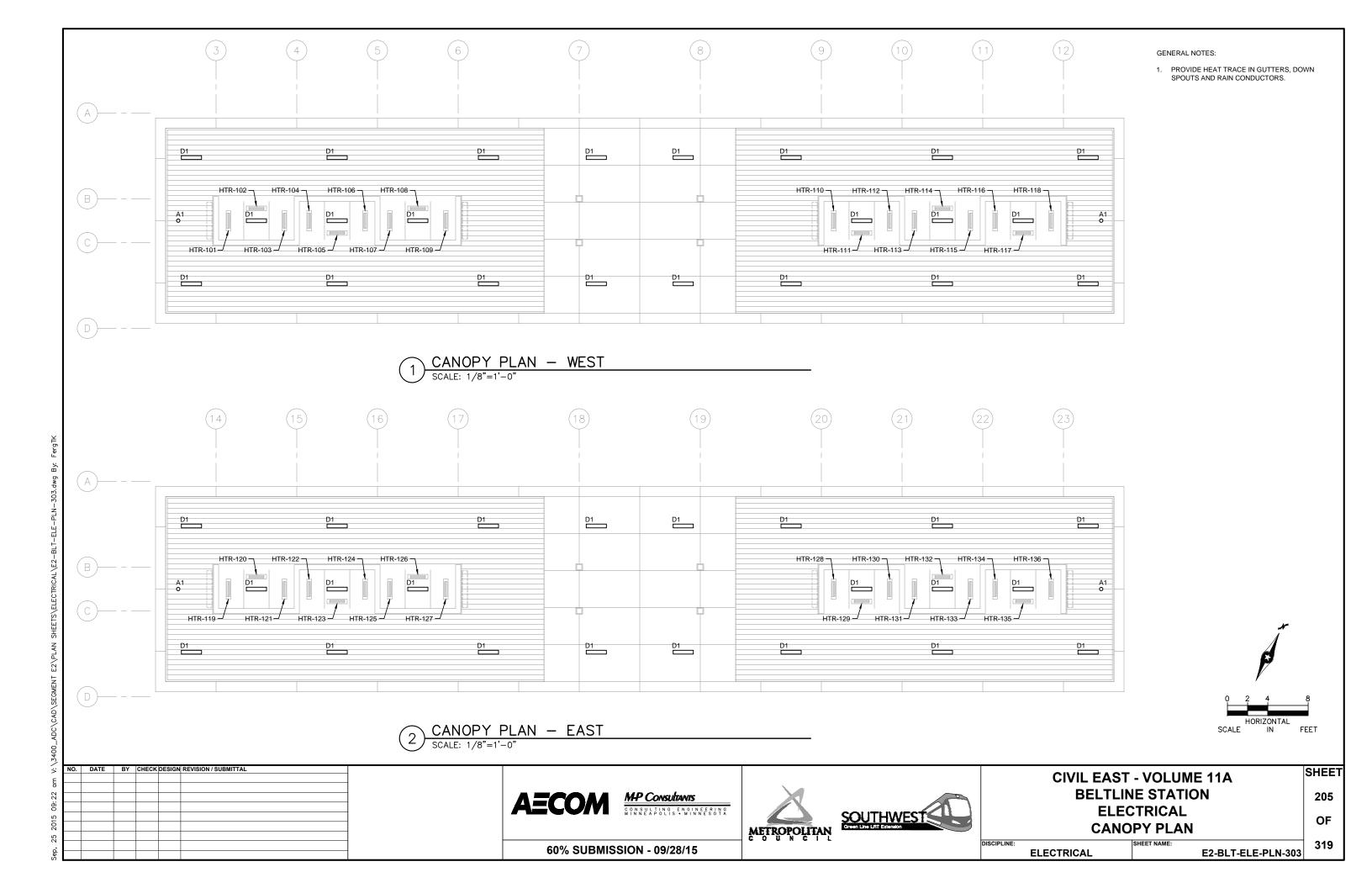
**CIVIL EAST - VOLUME 11A BELTLINE STATION ELECTRICAL UNDERSLAB CONDUIT PLAN (2 OF 2)** 

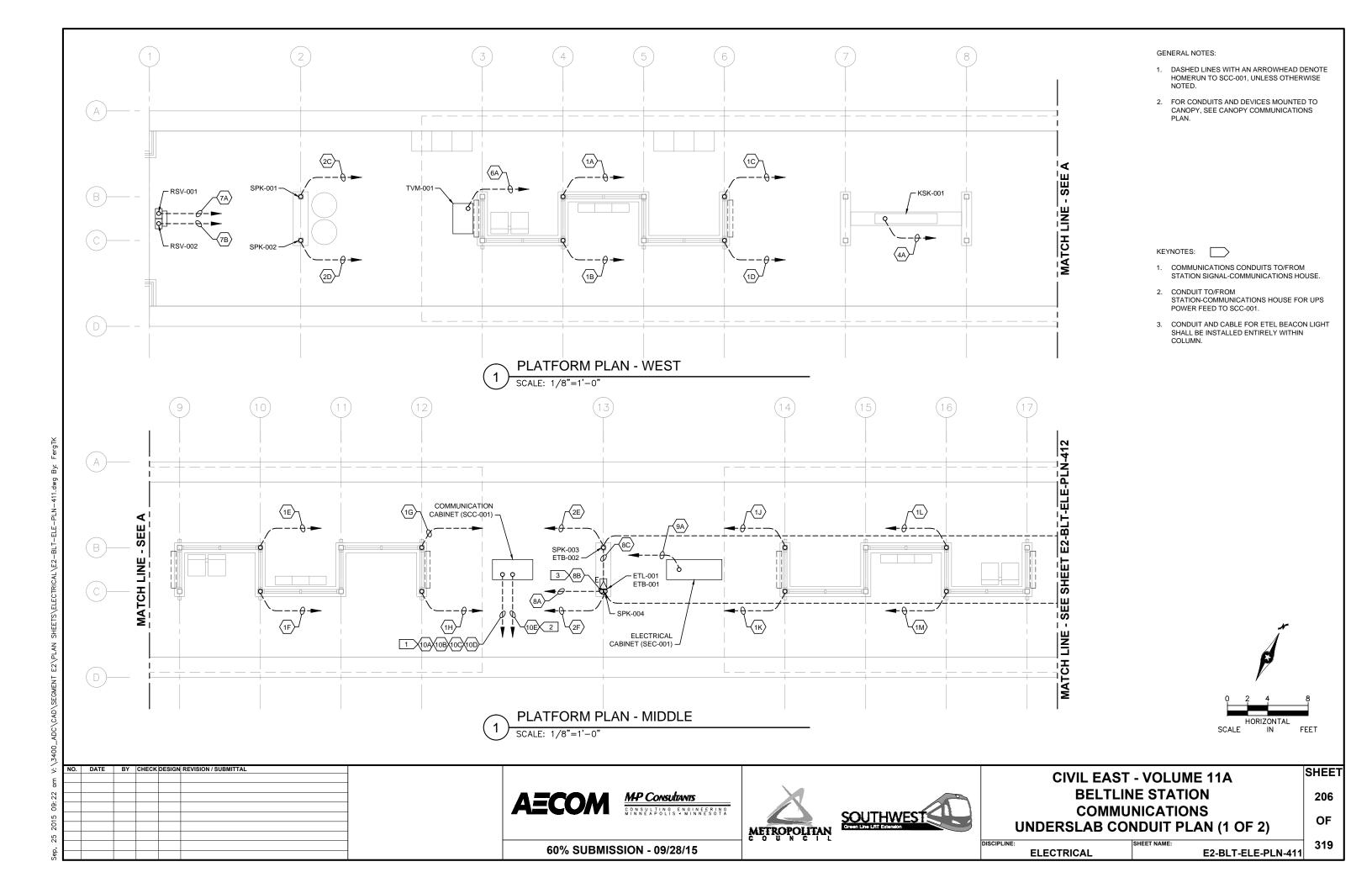
**ELECTRICAL** 

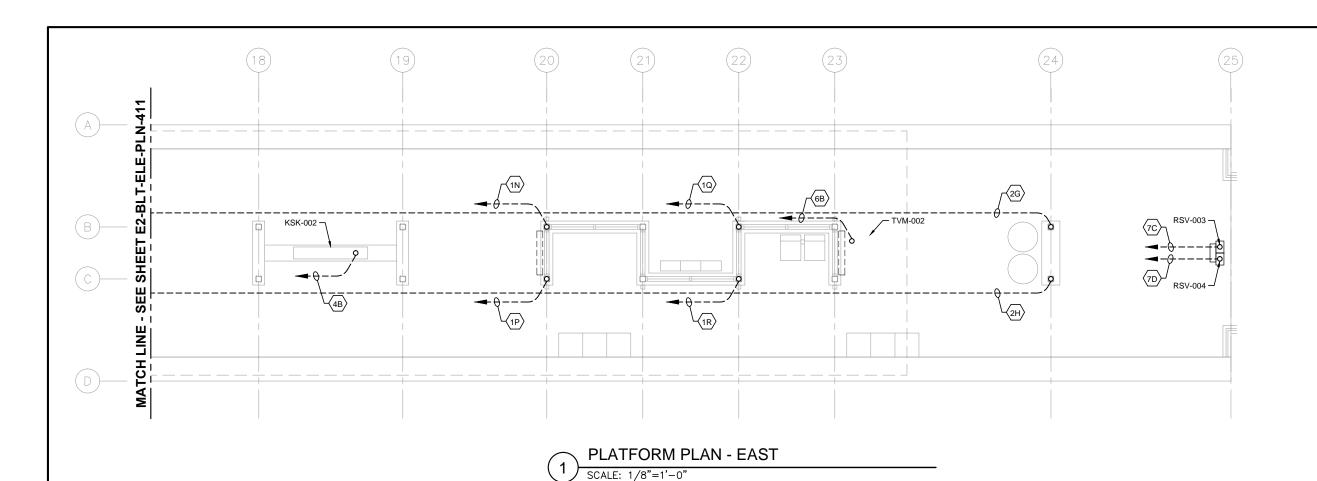
E2-BLT-ELE-PLN-302

60% SUBMISSION - 09/28/15

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GENERAL NOTES:

- DASHED LINES WITH AN ARROWHEAD DENOTE HOMERUN TO SCC-001, UNLESS OTHERWISE
- 2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS PLAN.

KEYNOTES:

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

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**CIVIL EAST - VOLUME 11A BELTLINE STATION COMMUNICATIONS UNDERSLAB CONDUIT PLAN (2 OF 2)** 

E2-BLT-ELE-PLN-412

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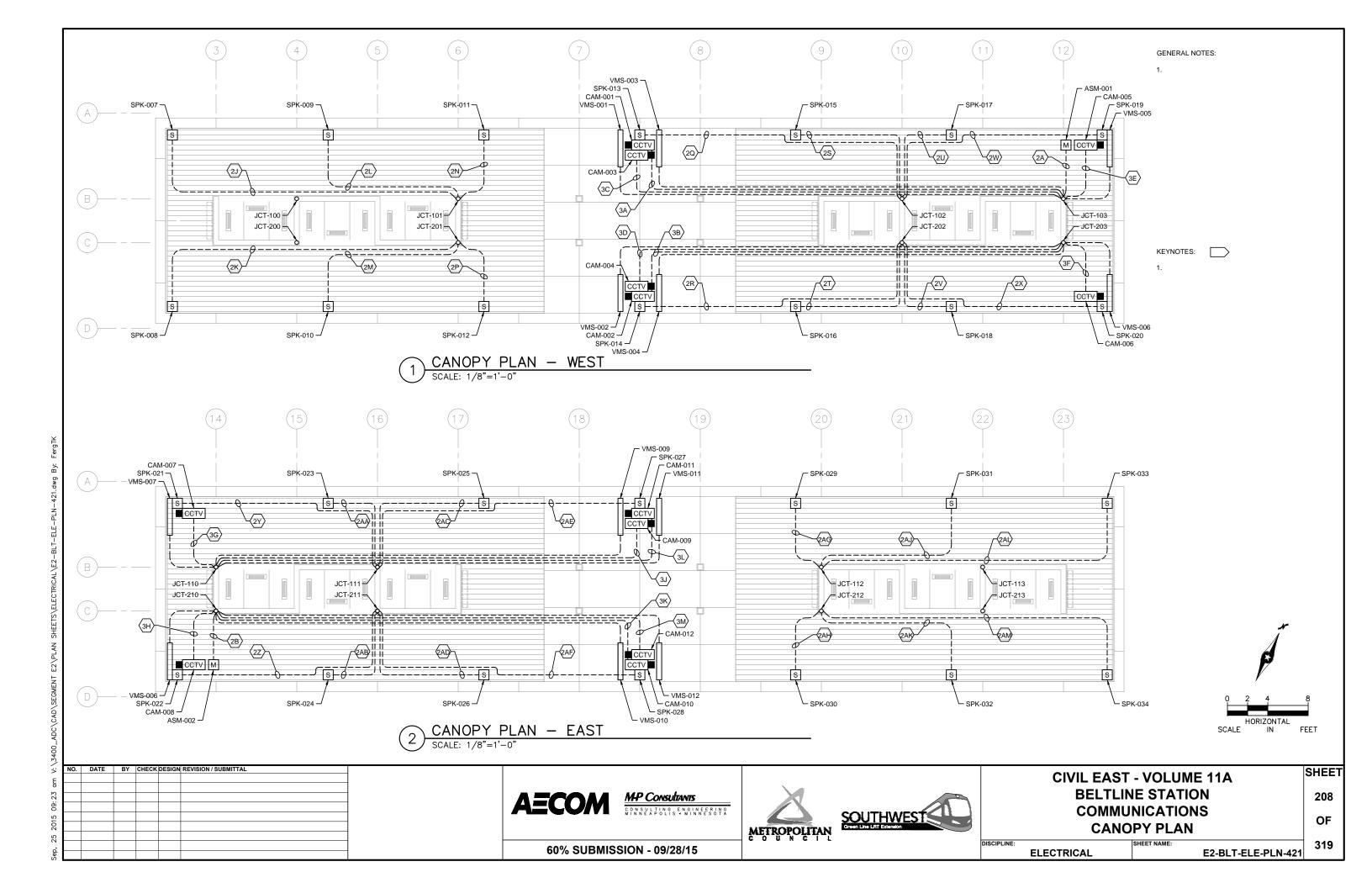
SHEET

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OF

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**ELECTRICAL** 



CONDUIT NO.	IO. DEVICE ID DESCRIPTION/USE		FROM	то	CONDUIT SIZE
10A	BLT -CON-0001	S/C HOUSE TO SCC-001	S/C MANHOLE	BLT -SCC-001	3"
10B	BLT -CON-0002	S/C HOUSE TO SCC-001	S/C MANHOLE	BLT -SCC-001	3"
10C	BLT -CON-0003	S/C HOUSE TO SCC-001	S/C MANHOLE	BLT -SCC-001	3"
10D	BLT -CON-0004	S/C HOUSE TO SCC-001	S/C MANHOLE	BLT -SCC-001	3"
10E	BLT -CON-0005	UPS POWER FEED: SCH TO SCC	BLT -SCH-001	BLT -SCC-001	3"
1A	BLT -CON-0101	SCC TO JUNCTION 100	BLT -SCC-001	BLT -JCT-100	2"
1B	BLT -CON-0102	SCC TO JUNCTION 200	BLT -SCC-001	BLT -JCT-200	2"
1C	BLT -CON-0103	SCC TO JUNCTION 101	BLT -SCC-001	BLT -JCT-101	2"
1D	BLT -CON-0104	SCC TO JUNCTION 201	BLT -SCC-001	BLT -JCT-201	2"
1E	BLT -CON-0105	SCC TO JUNCTION 102	BLT -SCC-001	BLT -JCT-102	2"
1F	BLT -CON-0106	SCC TO JUNCTION 202	BLT -SCC-001	BLT -JCT-202	2"
1G	BLT -CON-0107	SCC TO JUNCTION 103	BLT -SCC-001	BLT -JCT-103	2"
1H	BLT -CON-0108	SCC TO JUNCTION 203	BLT -SCC-001	BLT -JCT-203	2"
1J	BLT -CON-0109	SCC TO JUNCTION 110	BLT -SCC-001	BLT -JCT-110	2"
1K	BLT -CON-0110	SCC TO JUNCTION 210	BLT -SCC-001	BLT -JCT-210	2"
1L	BLT -CON-0111	SCC TO JUNCTION 111	BLT -SCC-001	BLT -JCT-111	2"
1M	BLT -CON-0112	SCC TO JUNCTION 211	BLT -SCC-001	BLT -JCT-211	2"
1N	BLT -CON-0113	SCC TO JUNCTION 112	BLT -SCC-001	BLT -JCT-112	2"
1P	BLT -CON-0114	SCC TO JUNCTION 212	BLT -SCC-001	BLT -JCT-212	2"
1Q	BLT -CON-0115	SCC TO JUNCTION 113	BLT -SCC-001	BLT -JCT-113	2"
1R	BLT -CON-0116	SCC TO JUNCTION 213	BLT -SCC-001	BLT -JCT-213	2"
2A	BLT -CON-0201	MICROPHONE 1 - NOISE SENSING	BLT -JCT-103	BLT -ASM-001	1"
2B	BLT -CON-0202	MICROPHONE 2 - NOISE SENSING	BLT -JCT-210	BLT -ASM-002	1"
2C	BLT -CON-0203	SPEAKER 1 - POLE	BLT -SCC-001	BLT -SPK-001	1-1/2"
2D	BLT -CON-0204	SPEAKER 2 - POLE	BLT -SCC-001	BLT -SPK-002	1-1/2"
2E	BLT -CON-0205	SPEAKER 3 - POLE	BLT -SCC-001	BLT -SPK-003	1-1/2"
2F	BLT -CON-0206	SPEAKER 4 - POLE	BLT -SCC-001	BLT -SPK-004	1-1/2"
2G	BLT -CON-0207	SPEAKER 5 - POLE	BLT -SCC-001	BLT -SPK-005	1-1/2"
2H	BLT -CON-0208	SPEAKER 6 - POLE	BLT -SCC-001	BLT -SPK-006	1-1/2"
2J	BLT -CON-0209	SPEAKER 7 - CANOPY	BLT -JCT-101	BLT -SPK-007	1"
2K	BLT -CON-0210	SPEAKER 8 - CANOPY	BLT -JCT-201	BLT -SPK-008	1"
2L	BLT -CON-0211	SPEAKER 9 - CANOPY	BLT -JCT-101	BLT -SPK-009	1"
2M	BLT -CON-0212	SPEAKER 10 - CANOPY	BLT -JCT-201	BLT -SPK-010	1"
2N	BLT -CON-0213	SPEAKER 11 - CANOPY	BLT -JCT-101	BLT -SPK-011	1"
2P	BLT -CON-0214	SPEAKER 12 - CANOPY	BLT -JCT-201	BLT -SPK-012	1"
2Q	BLT -CON-0215	SPEAKER 13 - CANOPY	BLT -JCT-102	BLT -SPK-013	1"
2R	BLT -CON-0216	SPEAKER 14 - CANOPY	BLT -JCT-202	BLT -SPK-014	1"
28	BLT -CON-0217	SPEAKER 15 - CANOPY	BLT -JCT-102	BLT -SPK-015	1"
2T	BLT -CON-0218	SPEAKER 16 - CANOPY	BLT -JCT-202	BLT -SPK-016	1"
2U	BLT -CON-0219	SPEAKER 17 - CANOPY	BLT -JCT-102	BLT -SPK-017	1"
2V	BLT -CON-0220	SPEAKER 18 - CANOPY	BLT -JCT-202	BLT -SPK-018	1"
2W	BLT -CON-0221	SPEAKER 19 - CANOPY	BLT -JCT-102	BLT -SPK-019	1"
2X	BLT -CON-0222	SPEAKER 20 - CANOPY	BLT -JCT-202	BLT -SPK-020	1"
2Y	BLT -CON-0223	SPEAKER 21 - CANOPY	BLT -JCT-111	BLT -SPK-021	1"
2Z	BLT -CON-0224	SPEAKER 22 - CANOPY	BLT -JCT-211	BLT -SPK-022	1"
2AA	BLT -CON-0225	SPEAKER 23 - CANOPY	BLT -JCT-111	BLT -SPK-023	1"
2AB	BLT -CON-0226	SPEAKER 24 - CANOPY	BLT -JCT-211	BLT -SPK-024	1"

COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	

**AECOM** 

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WELL SOLUTION SOLUTION



CIVIL EAST - VOLUME 11A
BELTLINE STATION
COMMUNICATIONS
CONDUIT SCHEDULE (1 OF 2)

209 OF 319

SHEET

SHEET NAME:

ELECTRICAL

SHEET NAME:

E2-BLT-ELE-SCH-461

60% SUBMISSION - 09/28/15

19:23 am V:\3400_ADC\CAD\SEGMENT E2

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	то	CONDUIT SIZE
2AC	BLT -CON-0227	SPEAKER 25 - CANOPY	BLT -JCT-111	BLT -SPK-025	1"
2AD	BLT -CON-0228	SPEAKER 26 - CANOPY	BLT -JCT-211	BLT -SPK-026	1"
2AE	BLT -CON-0229	SPEAKER 27 - CANOPY	BLT -JCT-111	BLT -SPK-027	1"
2AF	BLT -CON-0230	SPEAKER 28 - CANOPY	BLT -JCT-211	BLT -SPK-028	1"
2AG	BLT -CON-0231	SPEAKER 29 - CANOPY	BLT -JCT-112	BLT -SPK-029	1"
2AH	BLT -CON-0232	SPEAKER 30 - CANOPY	BLT -JCT-212	BLT -SPK-030	1"
2AJ	BLT -CON-0233	SPEAKER 31 - CANOPY	BLT -JCT-112	BLT -SPK-031	1"
2AK	BLT -CON-0234	SPEAKER 32 - CANOPY	BLT -JCT-212	BLT -SPK-032	1"
2AL	BLT -CON-0235	SPEAKER 33 - CANOPY	BLT -JCT-112	BLT -SPK-033	1"
2AM	BLT -CON-0236	SPEAKER 34 - CANOPY	BLT -JCT-212	BLT -SPK-034	1"
3A	BLT -CON-0301	CAMERA 1	BLT -JCT-100	BLT CAM-001	1"
3B	BLT -CON-0302	CAMERA 2	BLT -JCT-200	BLT CAM-002	1"
3C	BLT -CON-0303	CAMERA 3	BLT -JCT-100	BLT CAM-003	1"
3D	BLT -CON-0304	CAMERA 4	BLT -JCT-200	BLT CAM-004	1"
3E	BLT -CON-0305	CAMERA 5	BLT -JCT-100	BLT CAM-005	1"
3F	BLT -CON-0306	CAMERA 6	BLT -JCT-200	BLT CAM-006	1"
3G	BLT -CON-0307	CAMERA 7	BLT -JCT-120	BLT CAM-007	1"
3H	BLT -CON-0308	CAMERA 8	BLT -JCT-220	BLT CAM-008	1"
3J	BLT -CON-0309	CAMERA 9	BLT -JCT-120	BLT CAM-009	1"
3K	BLT -CON-0310	CAMERA 10	BLT -JCT-220	BLT CAM-010	1"
3L	BLT -CON-0311	CAMERA 11	BLT -JCT-120	BLT CAM-011	1"
3M	BLT -CON-0312	CAMERA 12	BLT -JCT-220	BLT CAM-012	1"
4A	BLT -CON-0401	KIOSK 1 (F)	BLT -SCC-001	BLT -KSK-001	2"
4B	BLT -CON-0402	KIOSK 2 (F)	BLT -SCC-001	BLT -KSK-002	2"
5A	BLT -CON-0501	VMS 1	BLT -JCT-100	BLT -VMS-001	1"
5B	BLT -CON-0502	VMS 2	BLT -JCT-200	BLT -VMS-002	1"
5C	BLT -CON-0503	VMS 3	BLT -JCT-100	BLT -VMS-003	1"
5D	BLT -CON-0504	VMS 4	BLT -JCT-200	BLT -VMS-004	1"
5E	BLT -CON-0505	VMS 5	BLT -JCT-100	BLT -VMS-005	1"
5F	BLT -CON-0506	VMS 6	BLT -JCT-200	BLT -VMS-006	1"
5G	BLT -CON-0507	VMS 7	BLT -JCT-120	BLT -VMS-007	1"
5H	BLT -CON-0508	VMS 8	BLT -JCT-220	BLT -VMS-008	1"
5J	BLT -CON-0509	VMS 9	BLT -JCT-120	BLT -VMS-009	1"
5K	BLT -CON-0510	VMS 10	BLT -JCT-220	BLT -VMS-010	1"
5L	BLT -CON-0511	VMS 11	BLT -JCT-120	BLT -VMS-011	1"
5M	BLT -CON-0512	VMS 12	BLT -JCT-220	BLT -VMS-012	1"
6A	BLT -CON-0601	TVM 1	BLT -SCC-001	BLT -TVM-001	2"
6B	BLT -CON-0602	TVM 2	BLT -SCC-001	BLT -TVM-002	2"
7A	BLT -CON-0701	VALIDATOR 1	BLT -SCC-001	BLT -RSV-001	1-1/2"
7B	BLT -CON-0702	VALIDATOR 2	BLT -SCC-001	BLT -RSV-002	1-1/2"
7C	BLT -CON-0703	VALIDATOR 3	BLT -SCC-001	BLT -RSV-003	1-1/2"
7D	BLT -CON-0704	VALIDATOR 4	BLT -SCC-001	BLT -RSV-004	1-1/2"
8A	BLT -CON-0801	EMERGENCYTELEPHONE 1 - PHONE	BLT -SCC-001	BLT -ETL-001	1-1/2"
8B	BLT -CON-0802	EMERGENCY TELEPHONE 1 - BEACON LIGHT 1	BLT -ETL-001	BLT -ETB-001	1"
8C	BLT -CON-0803	EMERGENCY TELEPHONE 1 - BEACON LIGHT 2	BLT -ETL-001	BLT -ETB-002	1"
9A	BLT -CON-0901	STATION ELECTRICAL CABINET	BLT -SCC-001	BLT -SEC-001	2"

# COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MINNEAPOLIS MINNESOTA



**CIVIL EAST - VOLUME 11A BELTLINE STATION COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)** 

OF 319

SHEET

210

60% SUBMISSION - 09/28/15

**ELECTRICAL** 

E2-BLT-ELE-SCH-462

## **CODE SUMMARY - CENTER PLATFORM WEST LAKE STATION**

### **CODE REFERENCES**

MINNESOTA STATE BUILDING CODE 2015 NFPA 130 - STANDARD FOR FIXED GUIDEWAY TRANSIT 2014 AND PASSENGER RAIL SYSTEMS

IBC REVIEW

A. DESCRIPTION

LOCATION: MINNEAPOLIS, MN

THE LIGHT RAIL TRANSIT STATION IS A PARTIALLY CANOPIED PLATFORM AREA. IT CONSISTS OF A PLATFORM 270' LONG BY 21'-4" ACCESSED BY A SLOPED WALK AT EACH END OF PLATFORM. PLATFORM IS OPEN TO EXTERIOR ON ALL FOUR SIDES.

A PASSENGER ELEVATOR AND OPEN STAIR (VERTICAL CIRCULATION) ARE PROVIDED FOR PEDESTRIAN STATION ACCESS FROM WEST LAKE STREET.

TYPICAL PLATFORM AREA: 5760 SQUARE FEET (GROSS AREA) 5420 SQUARE FEET (NET AREA AFTER STRUCTURAL ELEMENTS, FIXTURES AND PERMANENTLY INSTALLED FURNISHINGS ARE REMOVED)

CANOPY COVERAGE AREA AT PLATFORM: = 3904 SQUARE FEET 1952 SQUARE FEET (1 @ 96'-0" X 20'-4") WEST CANOPY 1952 SQUARE FEET (1 @ 96'-0" X 20'-4") EAST CANOPY

B. OCCUPANCY CLASSIFICATION (IBC 2015 SECTION 303.1)

WAITING AREAS IN TRANSPORTATION TERMINALS: GROUP 'A' DIVISION 3 (15 S.F. PER PERSON)

C. <u>OCCUPANCY SEPARATIONS</u>

NONE ARE REQUIRED ELEVATOR HOIST WAY DOES NOT PENETRATE FLOOR/CEILING OR ROOF/CEILING ASSEMBLIES - NO RATING REQUIRED ELEVATOR MACHINE ROOM DOES NOT ABUT, OR OPEN TO, THE ELEVATOR HOIST WAY - NO RATING REQUIRED

D. TYPE OF CONSTRUCTION (IBC 2015 TABLE 601)

TYPE IIB CONSTRUCTION

E. ALLOWABLE BUILDING AREA AND BUILDING HEIGHT (IBC 2015 TABLE 503)

2 STORIES AT 9,500 SQUARE FEET PER STORY

F. IBC EXITING SUMMARY

NO. OF OCCUPANTS = 5420 S.F. / 15 S.F./OCC = 361 REQUIRED EGRESS WIDTH = 361 X 0.2 = 72" (PER 1005.3.2) WIDTH PROVIDED = 2 RAMPS AT 145" = 290" 2 MEANS OF EGRESS PROVIDED THE VERTICAL CIRCULATION IS NOT CONSIDERED A MEANS OF EGRESS FROM THE STATION AND IS CONSIDERED UNOCCUPIED.

FINAL ANALYSIS OF TUNNEL EGRESS VIA THE GROUND LEVEL OF THE VERTICAL CIRCULATION (EAST TOWER) TO BE DETERMINED.

NFPA 130 EXITING SUMMARY

FURTHER ANALYSIS REQUIRED

## **PLATFORM COLOR AND** FINISH SCHEDULE

SEE STATION SPECIFICATIONS FOR MATERIAL IDENTIFICATION

					PLATFORM	COLOR AND FI	VISH SCHED	ULE			
TYPE	STATION	STRUCTURAL STEEL PAINT COLOR	PLATFORM CONC COLOR	PLATFORM CONC FINISH	CONC WALL COLOR	CONC WALL FINISH	RAILING INFILL MATERIAL	ALUM WDW FRAME FINISH	EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH	ALUM COMP CANOPY SOFFIT AND FASCIA COLOR	TRANSLUCENT PLASTIC PANEL
CENTER	WEST LAKE STATION	PPG 123-7 TANGERINE DREAM	CEMSTONE SPLIT ROCK	TBD	CEMSTONE SPLIT ROCK	TBD	SS CABLE	CLEAR ANODIZED	HUNTER DOUGLAS WOODWRIGHT 8449 WINDJAMMER TEAK	ALUCOBOND CHERRY SMITH SILVER MICA COOL	3FORM KODA XT ORANGE 0-04

			VERT	ICAL CIRCUL	ATION COLOR A	AND FINISH	SCHEDULE			
PRECAST WALL PRECAST COLOR COLO	OOR STRUCTURAL STEEL PAINT COLOR	PLATFORM CONC COLOR	PLATFORM CONC FINISH	CONC WALL COLOR	CONC WALL FINISH	ARCH WOVEN MESH	ALUM WDW FRAME FINISH	EXTERIOR LINEAR METAL CEILING SOFFIT AND FASCIA FINISH	ALUM COMP CANOPY	TRANSLUCENT PLASTIC PANEL
TBD TBD	PPG 123-7	CEMSTONE	TBD	CEMSTONE	TBD	GKD OMEGA		HUNTER DOUGLAS WOODWRIGHT		
I IBD I IBL	TANGERINE DREAM		IBD	SPLIT ROCK	l IBD	DIVERGENCE	CLEAR ANODIZED	8449 WINDJAMMER TEAK	SILVER MICA COOL	ORANGE 0-04

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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**CIVIL EAST - VOLUME 11A WEST LAKE STATION CODE SUMMARY / FINISH SCHEDULE** 

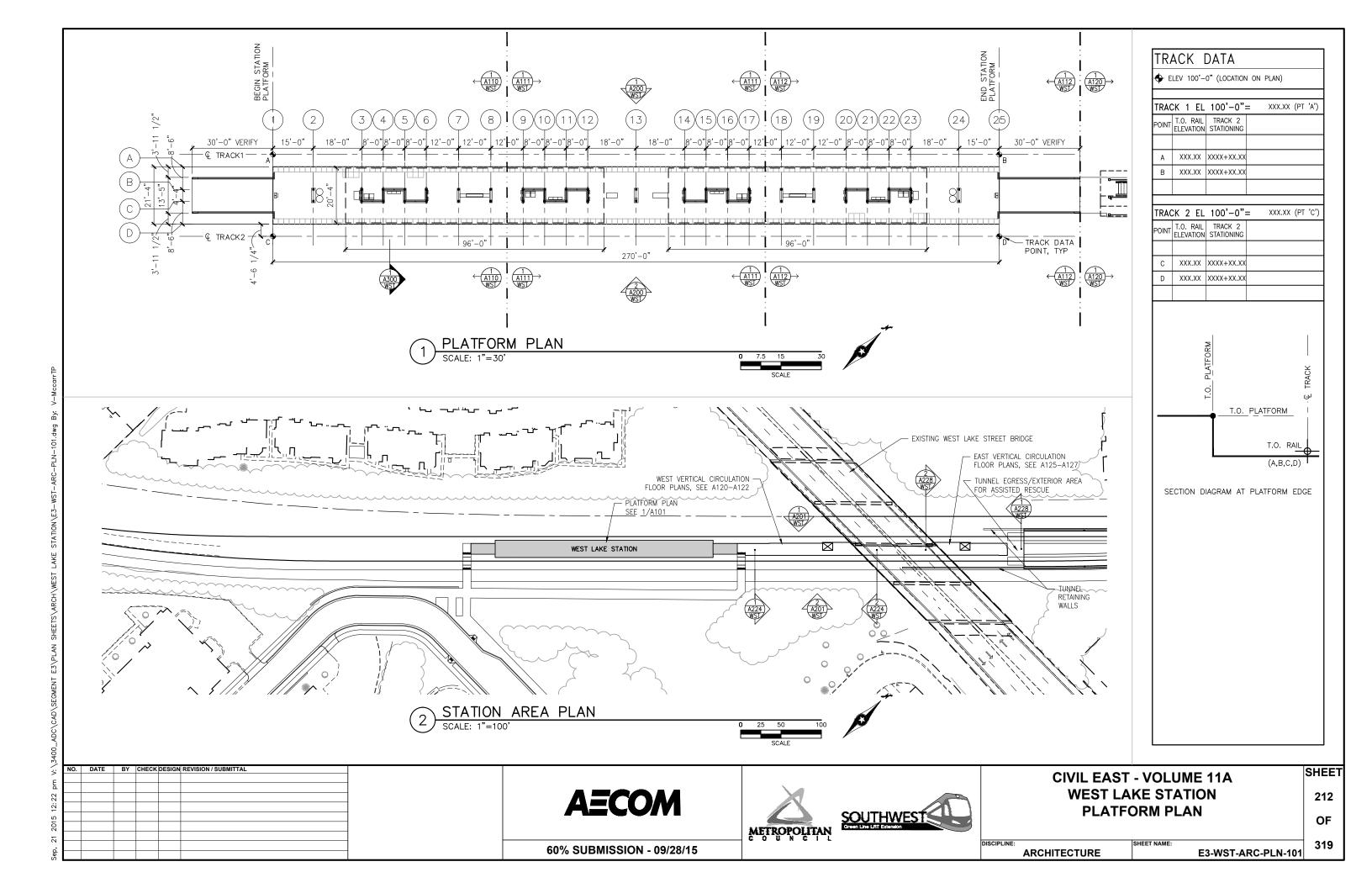
OF 319

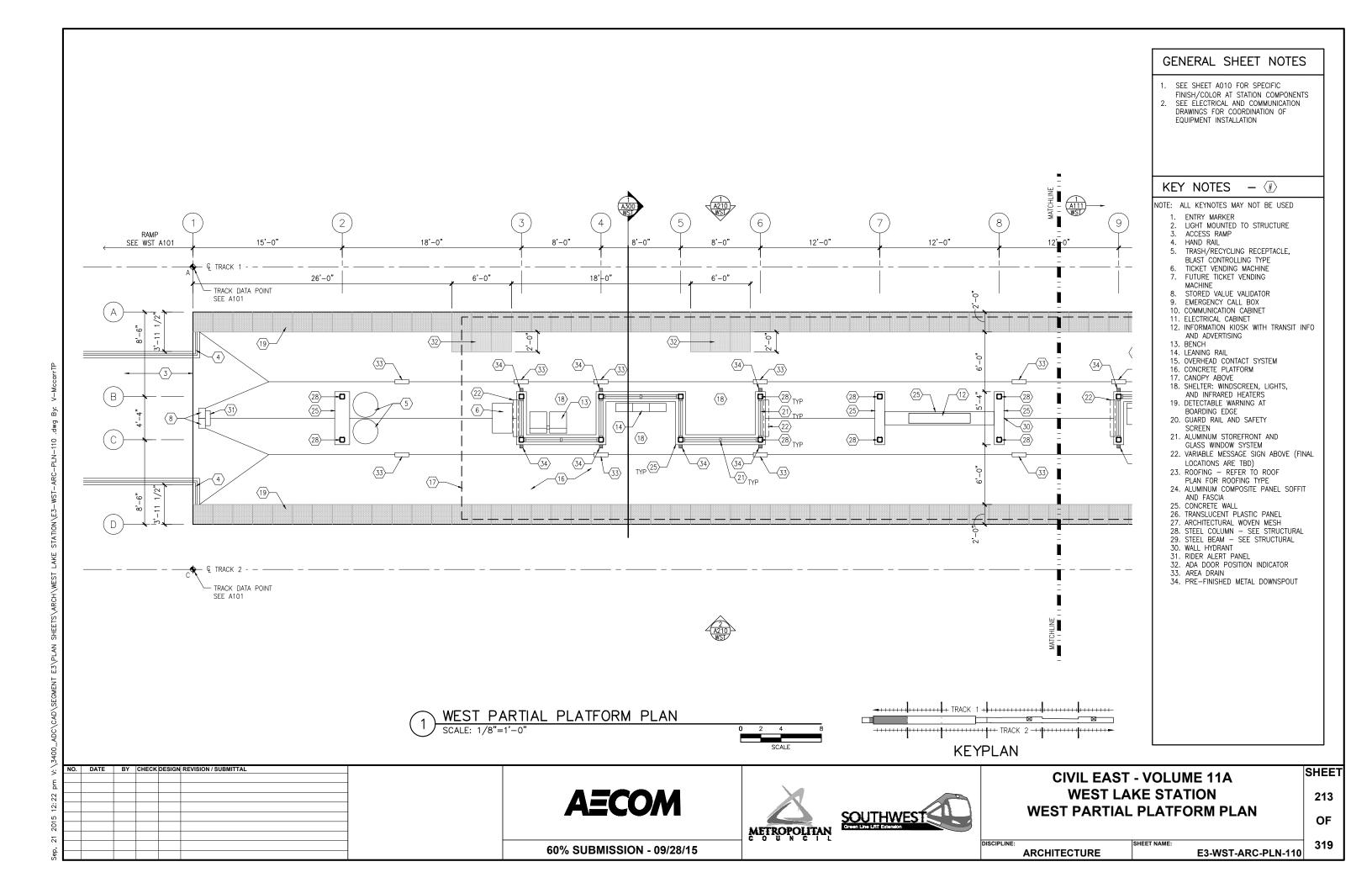
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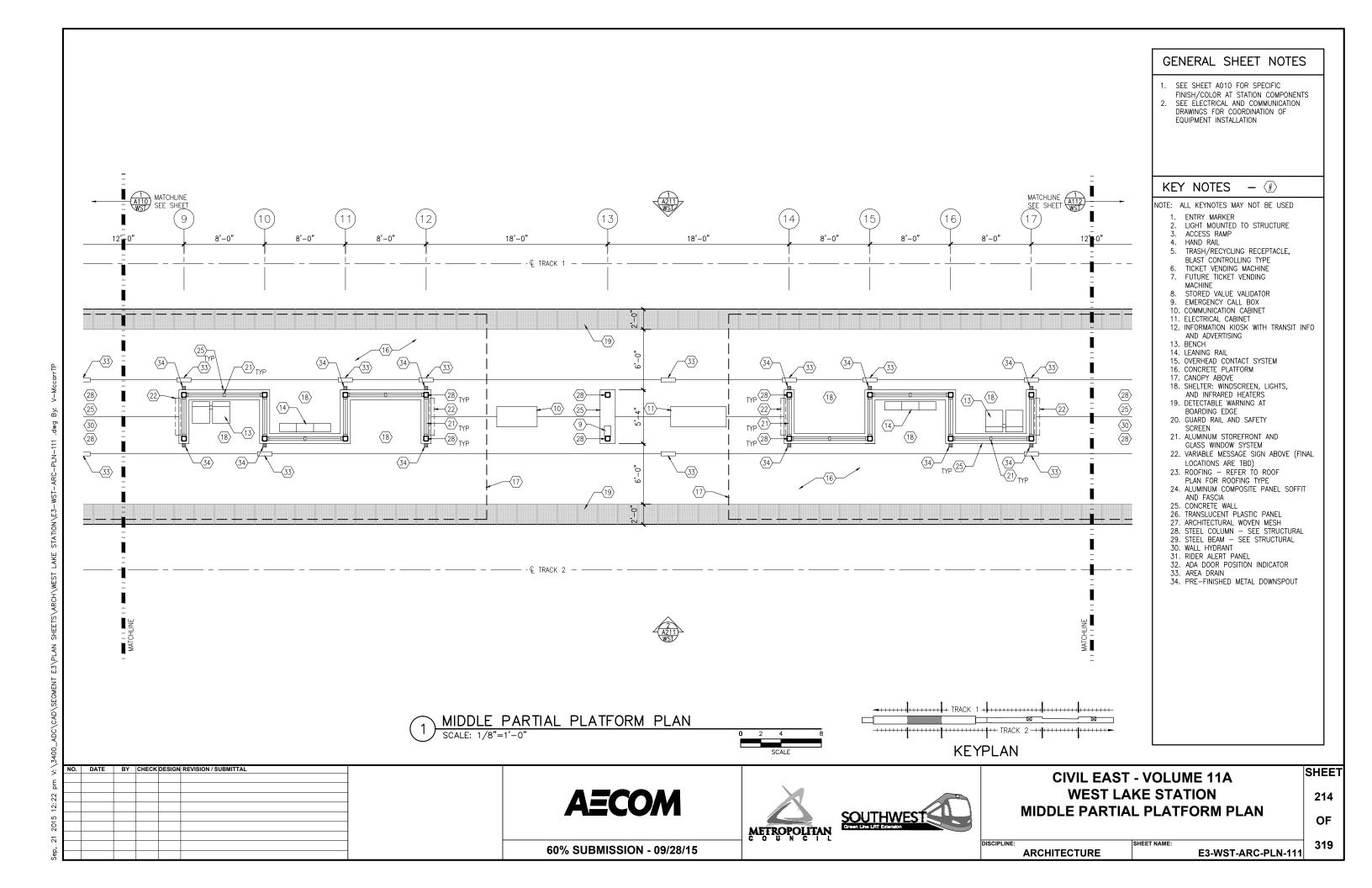
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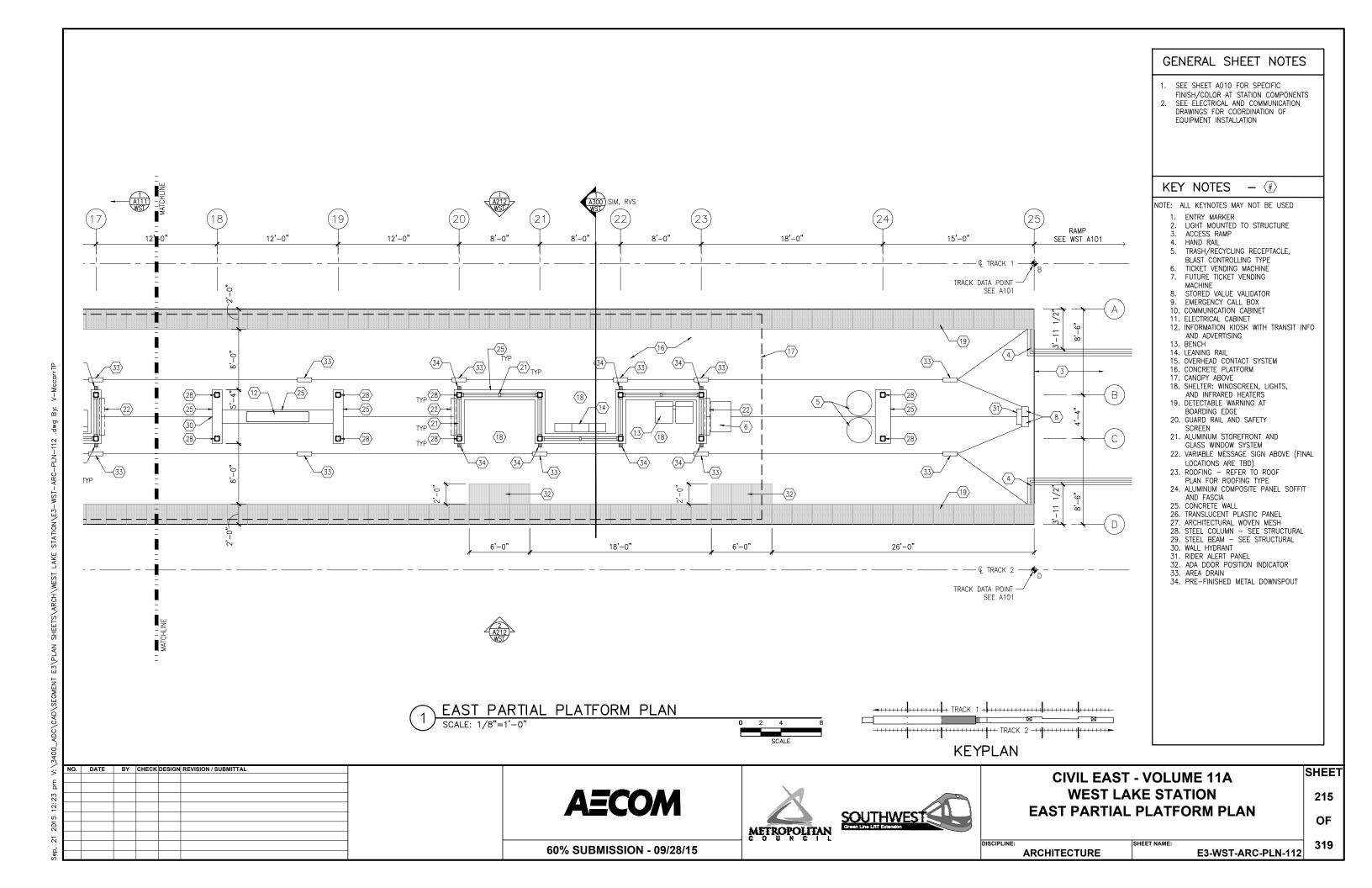
E3-WST-ARC-COD-010

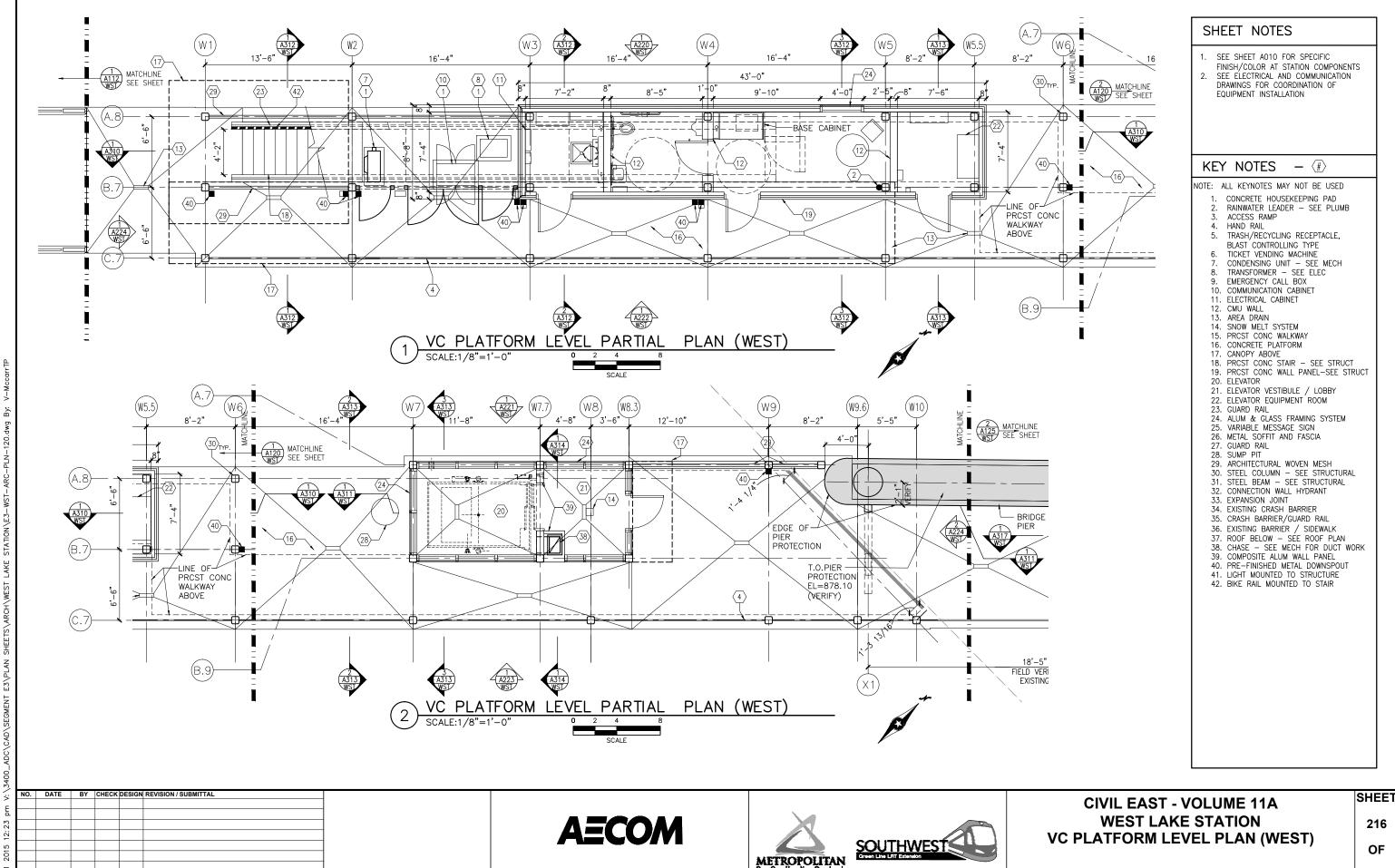
**ARCHITECTURE** 









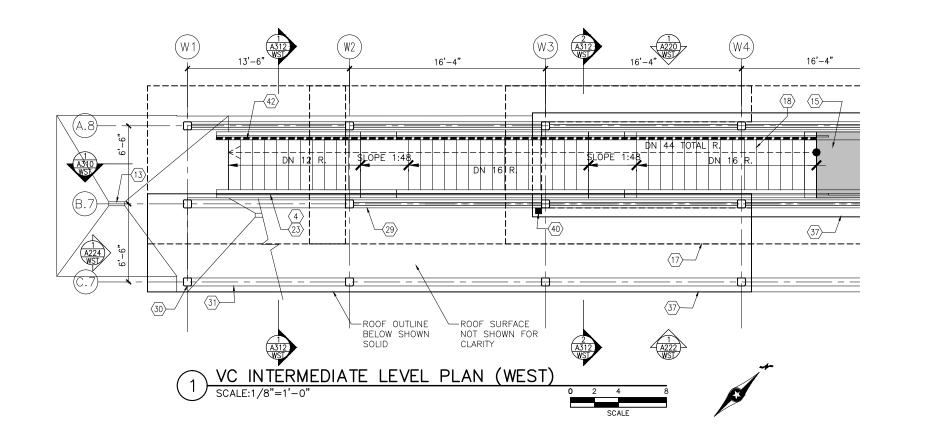


60% SUBMISSION - 09/28/15



**ARCHITECTURE** E3-WST-ARC-PLN-120

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### SHEET NOTES

- 1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
- 2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

# KEY NOTES − (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

- CONCRETE HOUSEKEEPING PAD
- RAINWATER LEADER SEE PLUMB ACCESS RAMP
- HAND RAIL
- 5. TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
- TICKET VENDING MACHINE
  CONDENSING UNIT SEE MECH
  TRANSFORMER SEE ELEC
- 9. EMERGENCY CALL BOX
- COMMUNICATION CABINET
- 11. ELECTRICAL CABINET
- 12. CMU WALL 13. AREA DRAIN
- 14. SNOW MELT SYSTEM
- 15. PRCST CONC WALKWAY
- 16. CONCRETE PLATFORM

- 17. CANOPY ABOVE

  18. PRCST CONC STAIR SEE STRUCT

  19. PRCST CONC WALL PANEL-SEE STRUCT
- 20. ELEVATOR
- 21. ELEVATOR VESTIBULE / LOBBY
  22. ELEVATOR EQUIPMENT ROOM
  23. GUARD RAIL
- 24. ALUM & GLASS FRAMING SYSTEM
- 25. VARIABLE MESSAGE SIGN
- 26. METAL SOFFIT AND FASCIA
- 27. GUARD RAIL 28. SUMP PIT
- 29. ARCHITECTURAL WOVEN MESH
- 30. STEEL COLUMN SEE STRUCTURAL
  31. STEEL BEAM SEE STRUCTURAL
- 32. CONNECTION WALL HYDRANT
- 33. EXPANSION JOINT 34. EXISTING CRASH BARRIER
- 35. CRASH BARRIER/GUARD RAIL
- 36. EXISTING BARRIER / SIDEWALK
- 37. ROOF BELOW SEE ROOF PLAN
  38. CHASE SEE MECH FOR DUCT WORK
  39. COMPOSITE ALUM WALL PANEL
- 40. PRE-FINISHED METAL DOWNSPOUT
- 41. LIGHT MOUNTED TO STRUCTURE
- 42. BIKE RAIL MOUNTED TO STAIR

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NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL



**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC INTERMEDIATE LEVEL PLAN (WEST)** 

217 OF

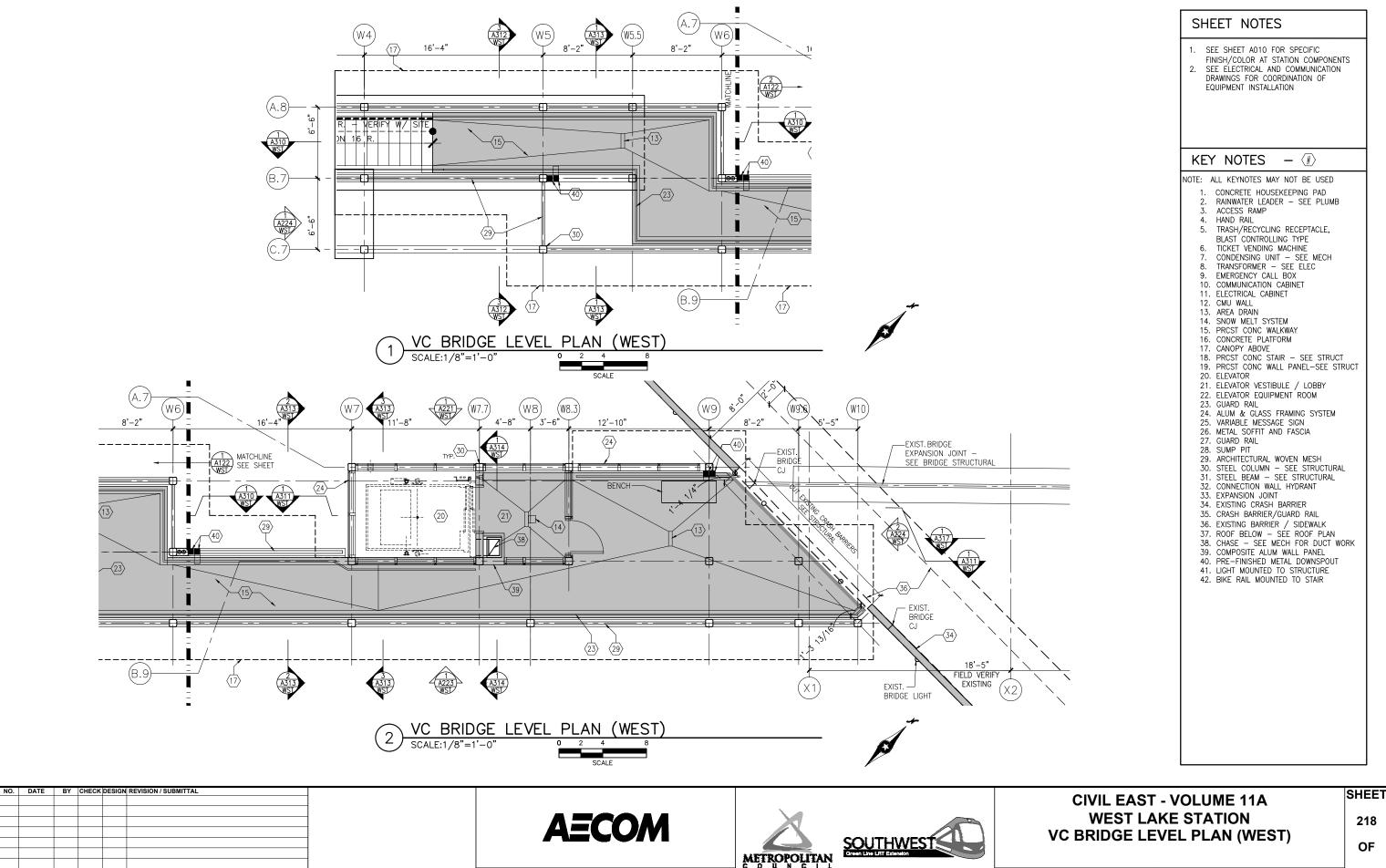
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**ARCHITECTURE** 

E3-WST-ARC-PLN-121

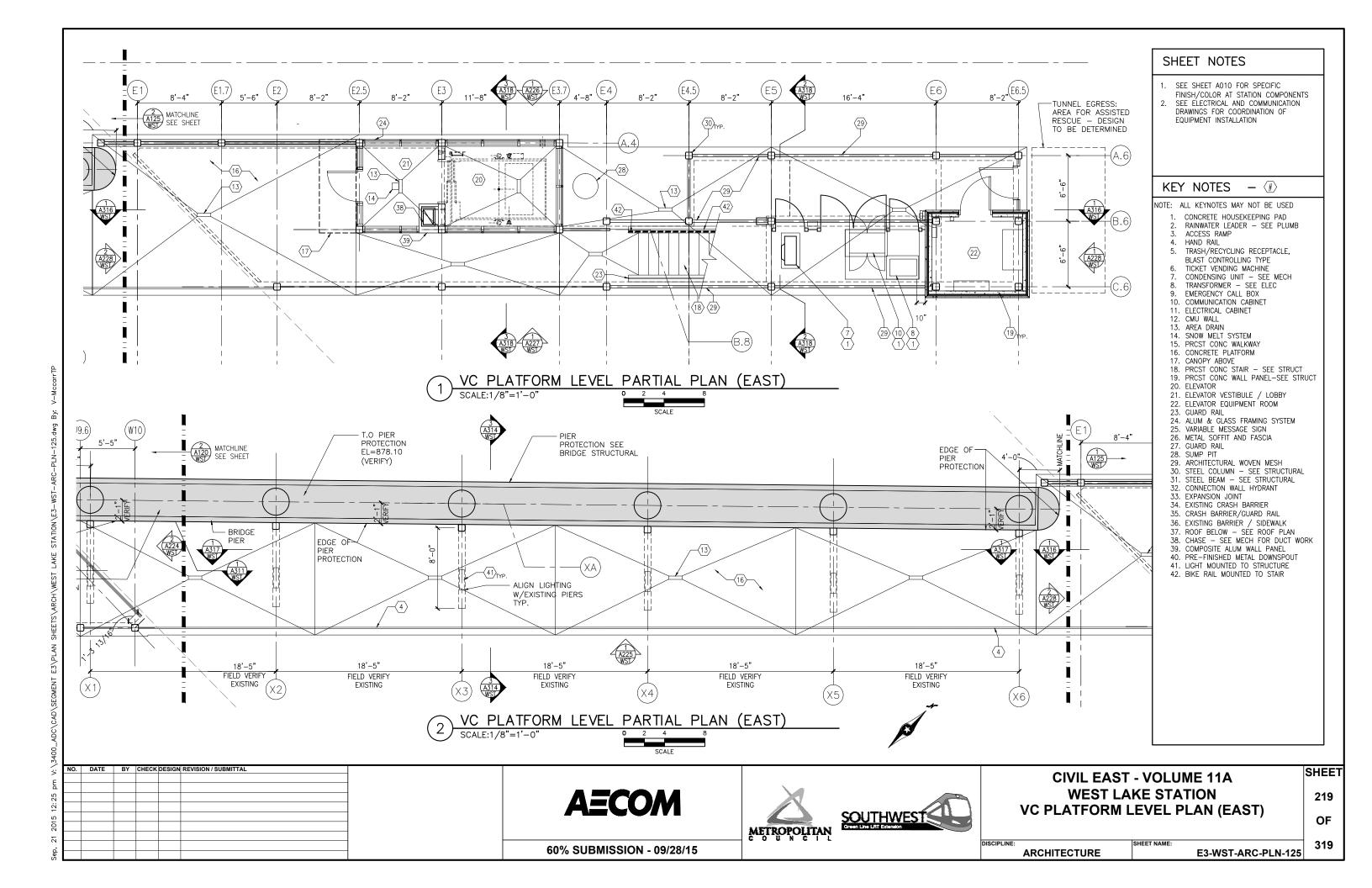


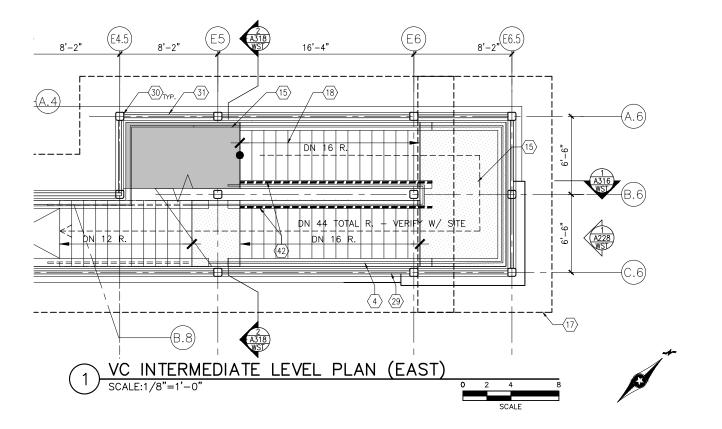
DISCIPLINE:

**ARCHITECTURE** 

319

E3-WST-ARC-PLN-122





## SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS

2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

## KEY NOTES − (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

- CONCRETE HOUSEKEEPING PAD
- RAINWATER LEADER SEE PLUMB
- ACCESS RAMP
- HAND RAIL
- 5. TRASH/RECYCLING RECEPTACLE,
- BLAST CONTROLLING TYPE
- TICKET VENDING MACHINE
  CONDENSING UNIT SEE MECH
  TRANSFORMER SEE ELEC
- 9. EMERGENCY CALL BOX
- COMMUNICATION CABINET
- 11. ELECTRICAL CABINET
- 12. CMU WALL 13. AREA DRAIN
- 14. SNOW MELT SYSTEM
- 15. PRCST CONC WALKWAY
- 16. CONCRETE PLATFORM

- 17. CANOPY ABOVE

  18. PRCST CONC STAIR SEE STRUCT

  19. PRCST CONC WALL PANEL-SEE STRUCT
- 20. ELEVATOR
- 21. ELEVATOR VESTIBULE / LOBBY
  22. ELEVATOR EQUIPMENT ROOM
  23. GUARD RAIL
- 24. ALUM & GLASS FRAMING SYSTEM
- 25. VARIABLE MESSAGE SIGN
- 26. METAL SOFFIT AND FASCIA
- 27. GUARD RAIL 28. SUMP PIT
- 29. ARCHITECTURAL WOVEN MESH
- 30. STEEL COLUMN SEE STRUCTURAL
  31. STEEL BEAM SEE STRUCTURAL
- 32. CONNECTION WALL HYDRANT
- 33. EXPANSION JOINT
  34. EXISTING CRASH BARRIER
  35. CRASH BARRIER/GUARD RAIL
- 36. EXISTING BARRIÉR / SIDEWALK
- 37. ROOF BELOW SEE ROOF PLAN
  38. CHASE SEE MECH FOR DUCT WORK
  39. COMPOSITE ALUM WALL PANEL
- 40. PRE-FINISHED METAL DOWNSPOUT
- 41. LIGHT MOUNTED TO STRUCTURE
- 42. BIKE RAIL MOUNTED TO STAIR

<b>AECOM</b>
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60% SUBMISSION - 09/28/15





# **CIVIL EAST - VOLUME 11A WEST LAKE STATION VC INTERMEDIATE LEVEL PLAN (EAST)**

220 OF

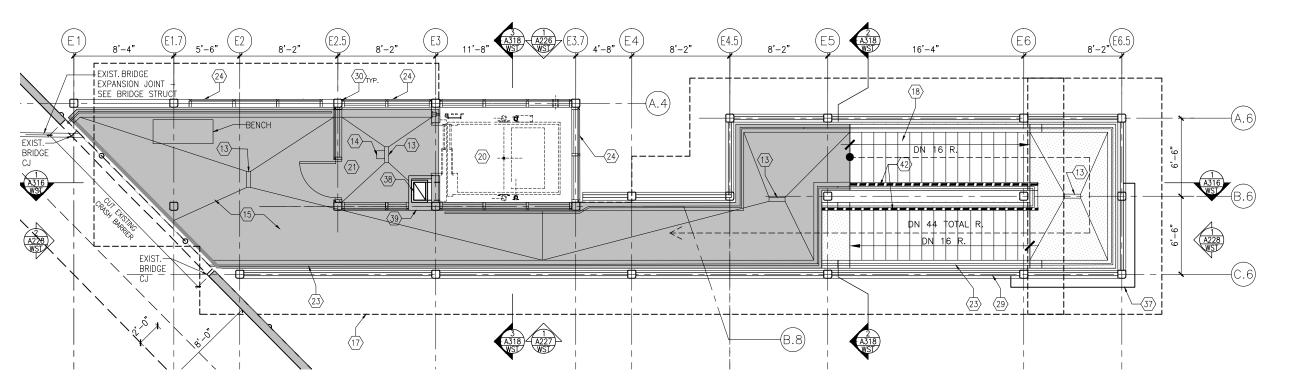
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SHEET

DISCIPLINE: **ARCHITECTURE** 

E3-WST-ARC-PLN-126

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL



VC BRIDGE LEVEL PLAN (EAST)

SCALE:1/8"=1'-0"

SHEET NOTES

1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS

2. SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

# KEY NOTES − (#)

NOTE: ALL KEYNOTES MAY NOT BE USED

- CONCRETE HOUSEKEEPING PAD
- RAINWATER LEADER SEE PLUMB
- ACCESS RAMP
- HAND RAIL
- TRASH/RECYCLING RECEPTACLE, BLAST CONTROLLING TYPE
- TICKET VENDING MACHINE
- CONDENSING UNIT SEE MECH TRANSFORMER SEE ELEC
- EMERGENCY CALL BOX
- COMMUNICATION CABINET
- 11. ELECTRICAL CABINET
- 12. CMU WALL 13. AREA DRAIN
- 14. SNOW MELT SYSTEM
- 15. PRCST CONC WALKWAY
- 16. CONCRETE PLATFORM
- 17. CANOPY ABOVE
- 18. PRCST CONC STAIR SEE STRUCT
- 19. PRCST CONC WALL PANEL-SEE STRUCT
- 20. ELEVATOR
- 21. ELEVATOR VESTIBULE / LOBBY
  22. ELEVATOR EQUIPMENT ROOM
  23. GUARD RAIL
- 24. ALUM & GLASS FRAMING SYSTEM
- 25. VARIABLE MESSAGE SIGN
- 26. METAL SOFFIT AND FASCIA
- 27. GUARD RAIL 28. SUMP PIT
- 29. ARCHITECTURAL WOVEN MESH
- 30. STEEL COLUMN SEE STRUCTURAL
- 31. STEEL BEAM SEE STRUCTURAL 32. CONNECTION WALL HYDRANT
- 33. EXPANSION JOINT
  34. EXISTING CRASH BARRIER
- 35. CRASH BARRIER/GUARD RAIL
- 36. EXISTING BARRIÉR / SIDEWALK
- 37. ROOF BELOW SEE ROOF PLAN
- 38. CHASE SEE MECH FOR DUCT WORK 39. COMPOSITE ALUM WALL PANEL
- 40. PRE-FINISHED METAL DOWNSPOUT
- 41. LIGHT MOUNTED TO STRUCTURE
- 42. BIKE RAIL MOUNTED TO STAIR

**AECOM** 

METROPOLITAN



**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC BRIDGE LEVEL PLAN (EAST)** 

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SHEET

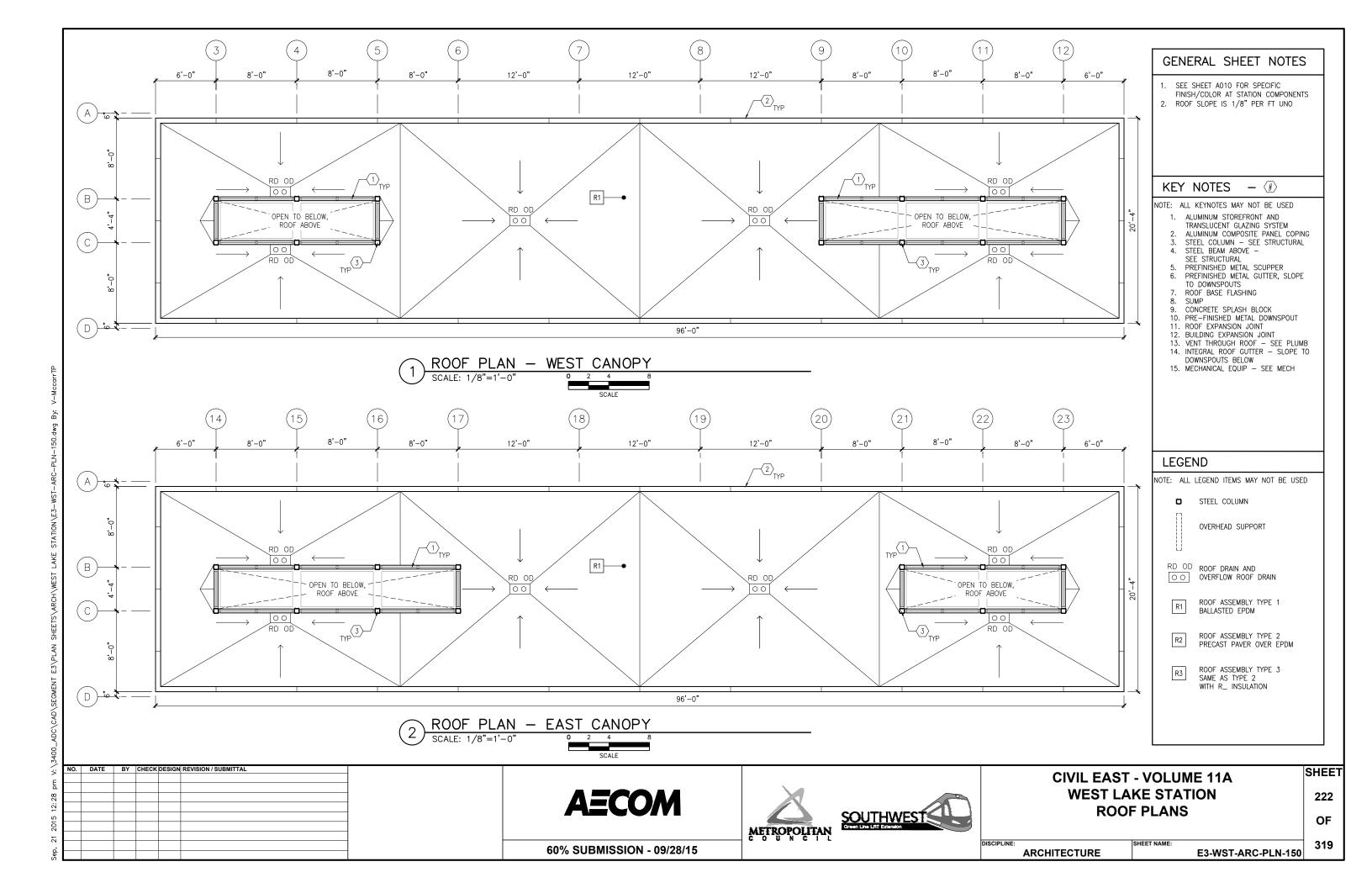
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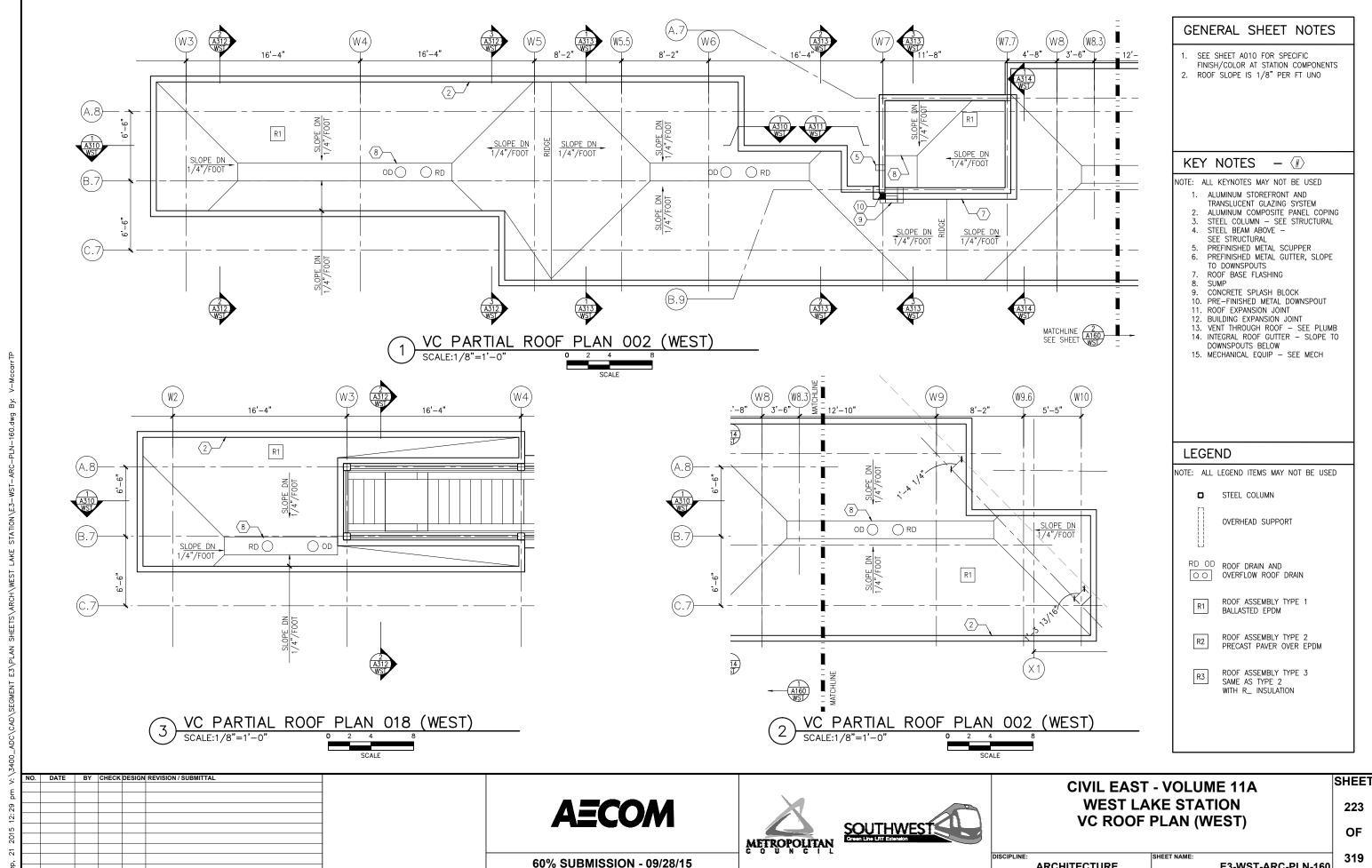
E3-WST-ARC-PLN-127

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

60% SUBMISSION - 09/28/15

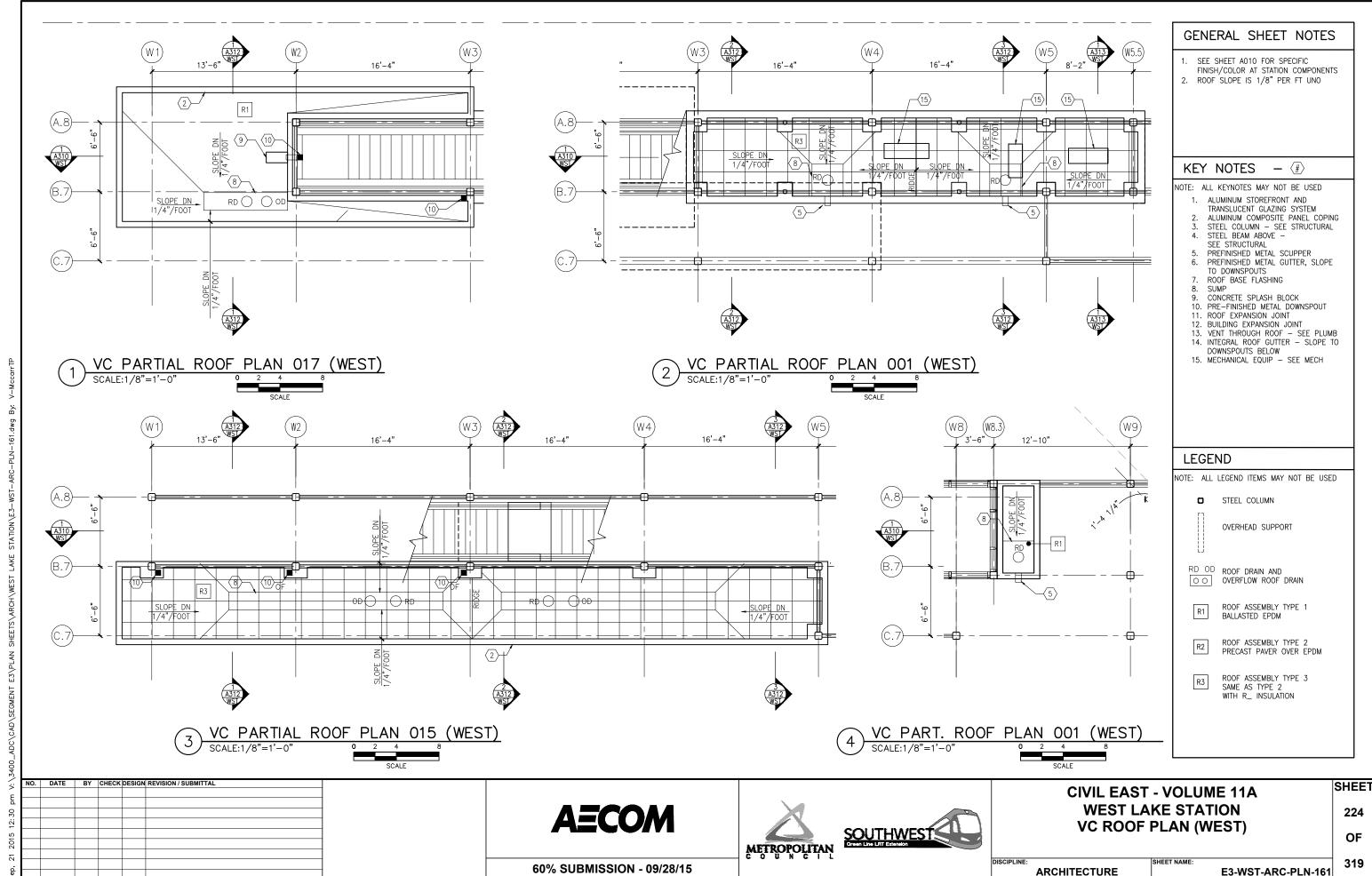
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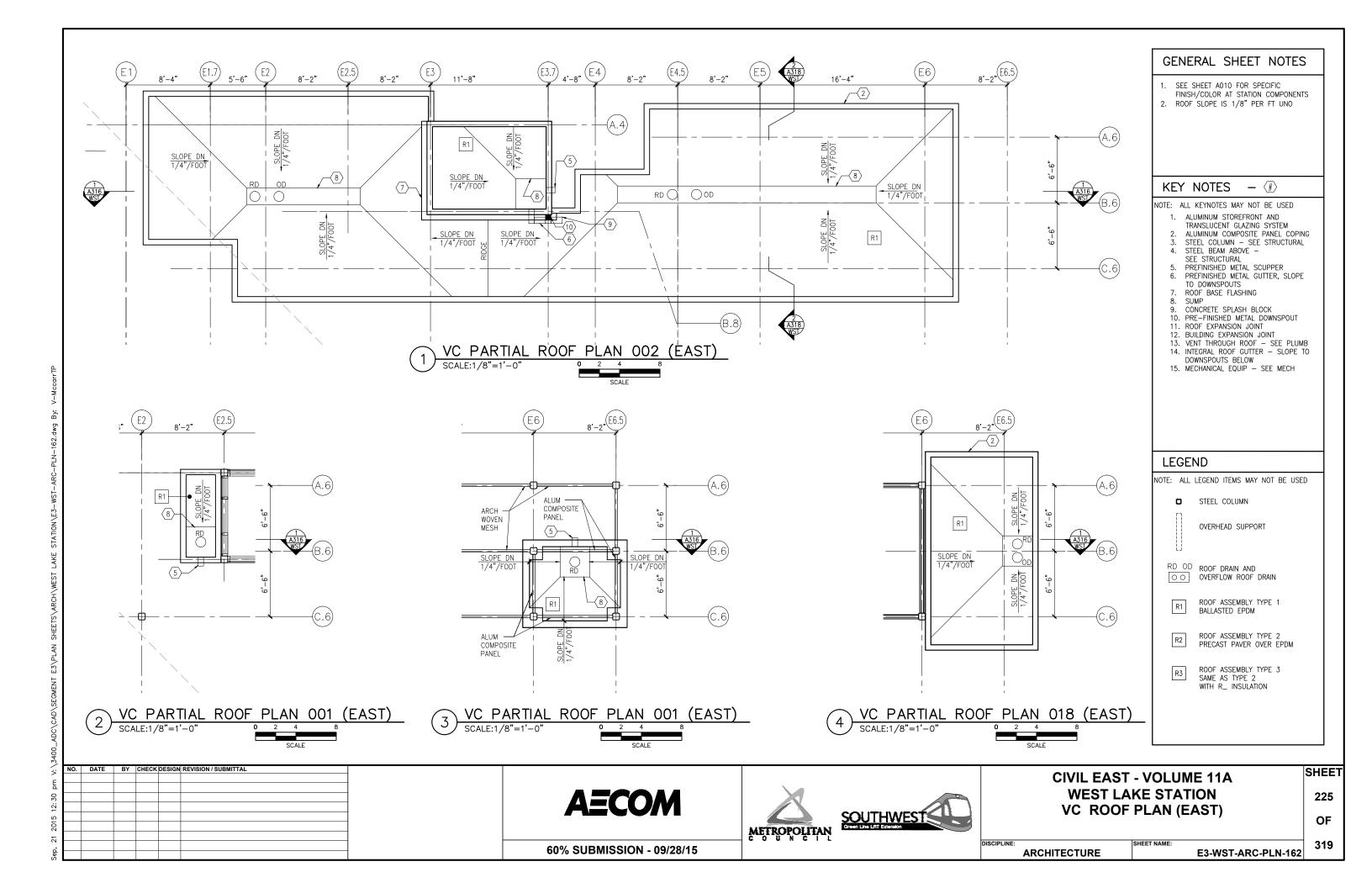


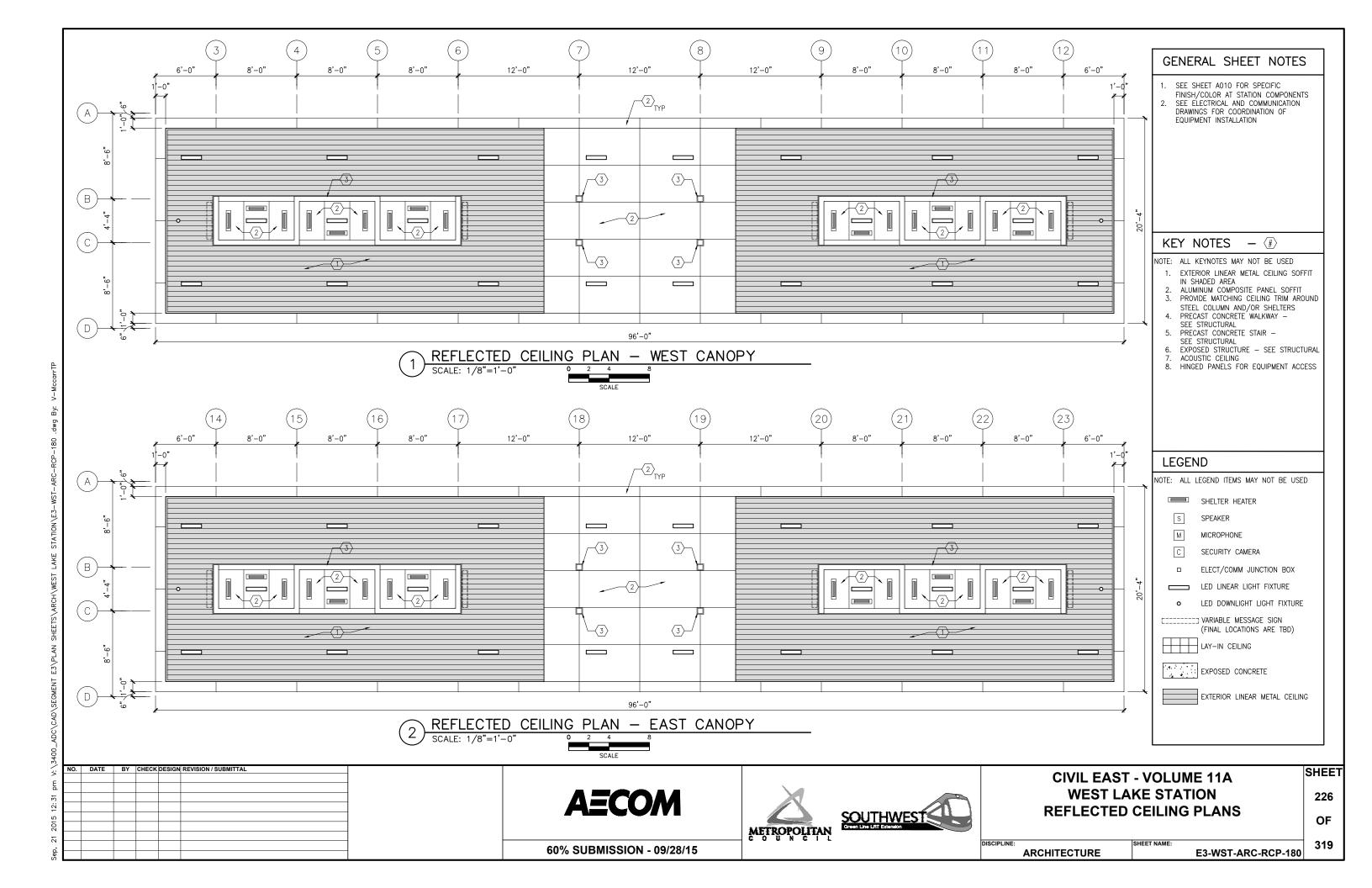


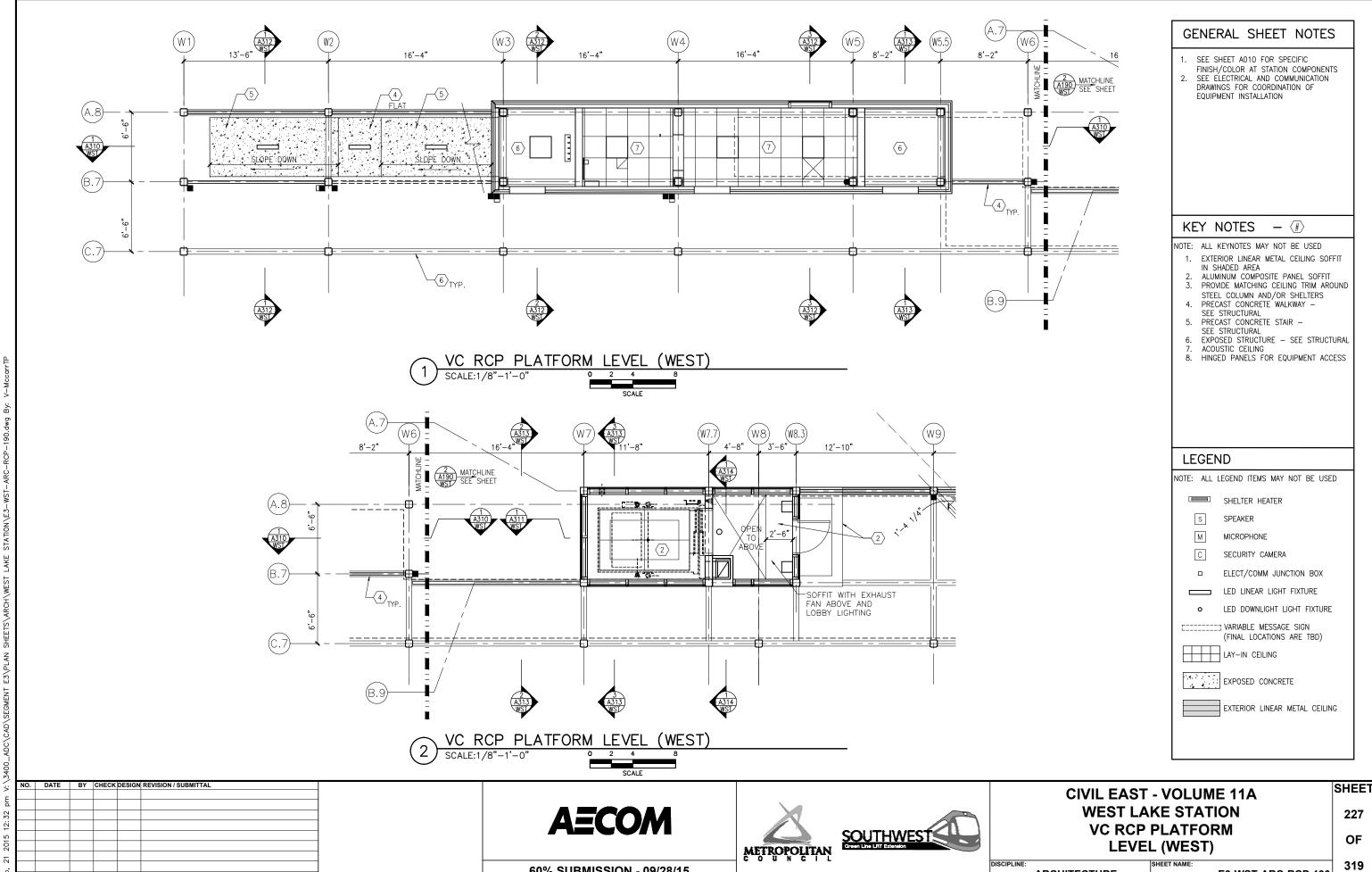
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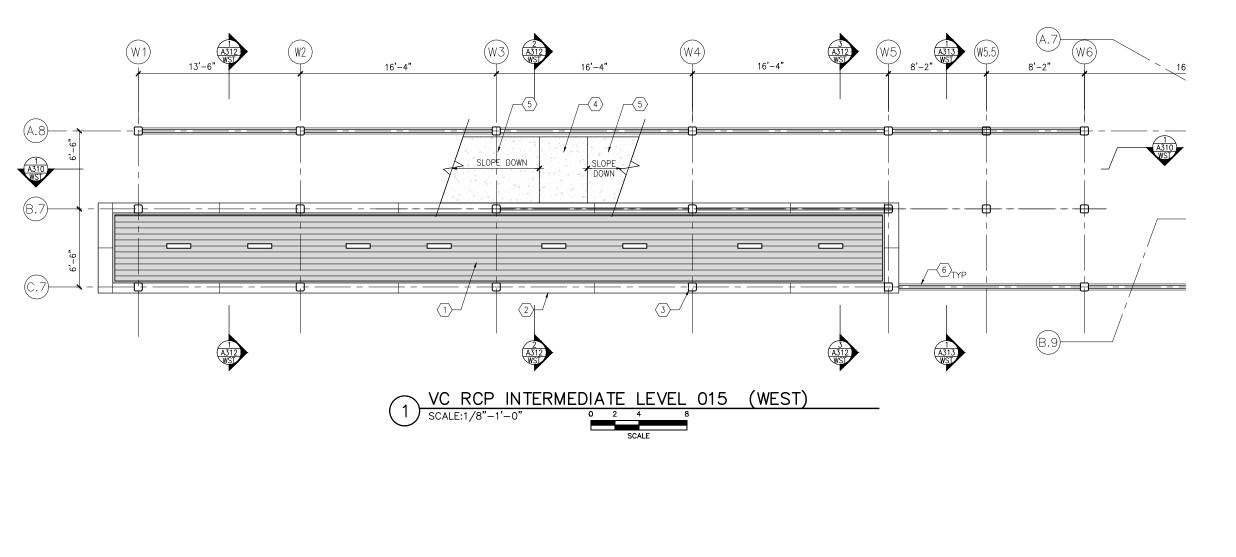






**ARCHITECTURE** 

E3-WST-ARC-RCP-190



## GENERAL SHEET NOTES

- 1. SEE SHEET A010 FOR SPECIFIC FINISH/COLOR AT STATION COMPONENTS
- SEE ELECTRICAL AND COMMUNICATION DRAWINGS FOR COORDINATION OF EQUIPMENT INSTALLATION

### KEY NOTES − ⟨#⟩

NOTE: ALL KEYNOTES MAY NOT BE USED

- 1. EXTERIOR LINEAR METAL CEILING SOFFIT IN SHADED AREA
- ALUMINUM COMPOSITE PANEL SOFFIT PROVIDE MATCHING CEILING TRIM AROUND
- STEEL COLUMN AND/OR SHELTERS
- 4. PRECAST CONCRETE WALKWAY –
  SEE STRUCTURAL
  5. PRECAST CONCRETE STAIR –
- SEE STRUCTURAL
- EXPOSED STRUCTURE SEE STRUCTURAL
- 8. HINGED PANELS FOR EQUIPMENT ACCESS

### LEGEND

NOTE: ALL LEGEND ITEMS MAY NOT BE USED

SHELTER HEATER

S SPEAKER

MICROPHONE

SECURITY CAMERA

□ ELECT/COMM JUNCTION BOX

LED LINEAR LIGHT FIXTURE

LED DOWNLIGHT LIGHT FIXTURE

VARIABLE MESSAGE SIGN (FINAL LOCATIONS ARE TBD)

LAY-IN CEILING

EXPOSED CONCRETE

EXTERIOR LINEAR METAL CEILING

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 

60% SUBMISSION - 09/28/15





**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC RCP INTERMEDIATE** LEVEL 015 (WEST)

OF

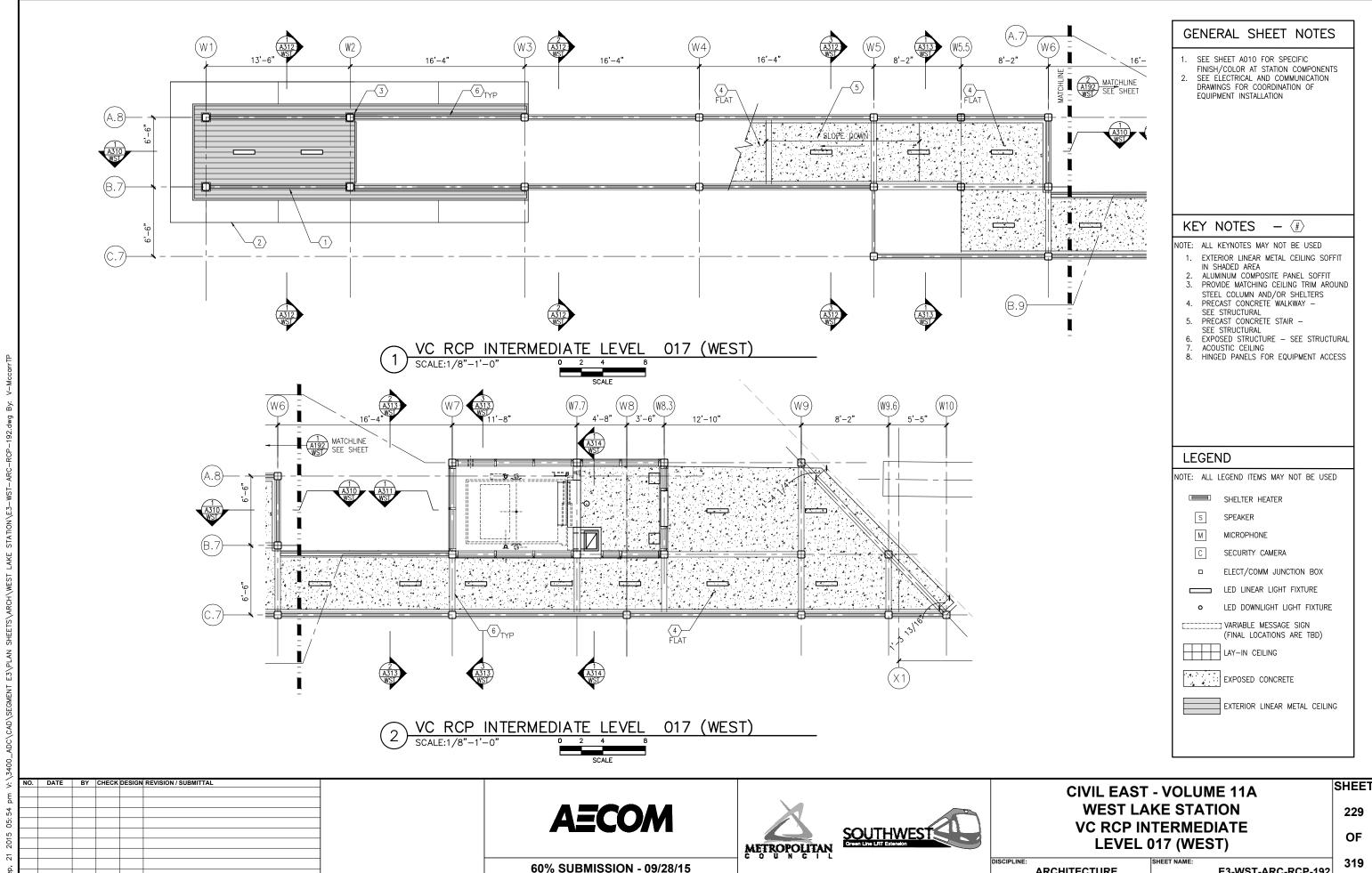
319

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SHEET

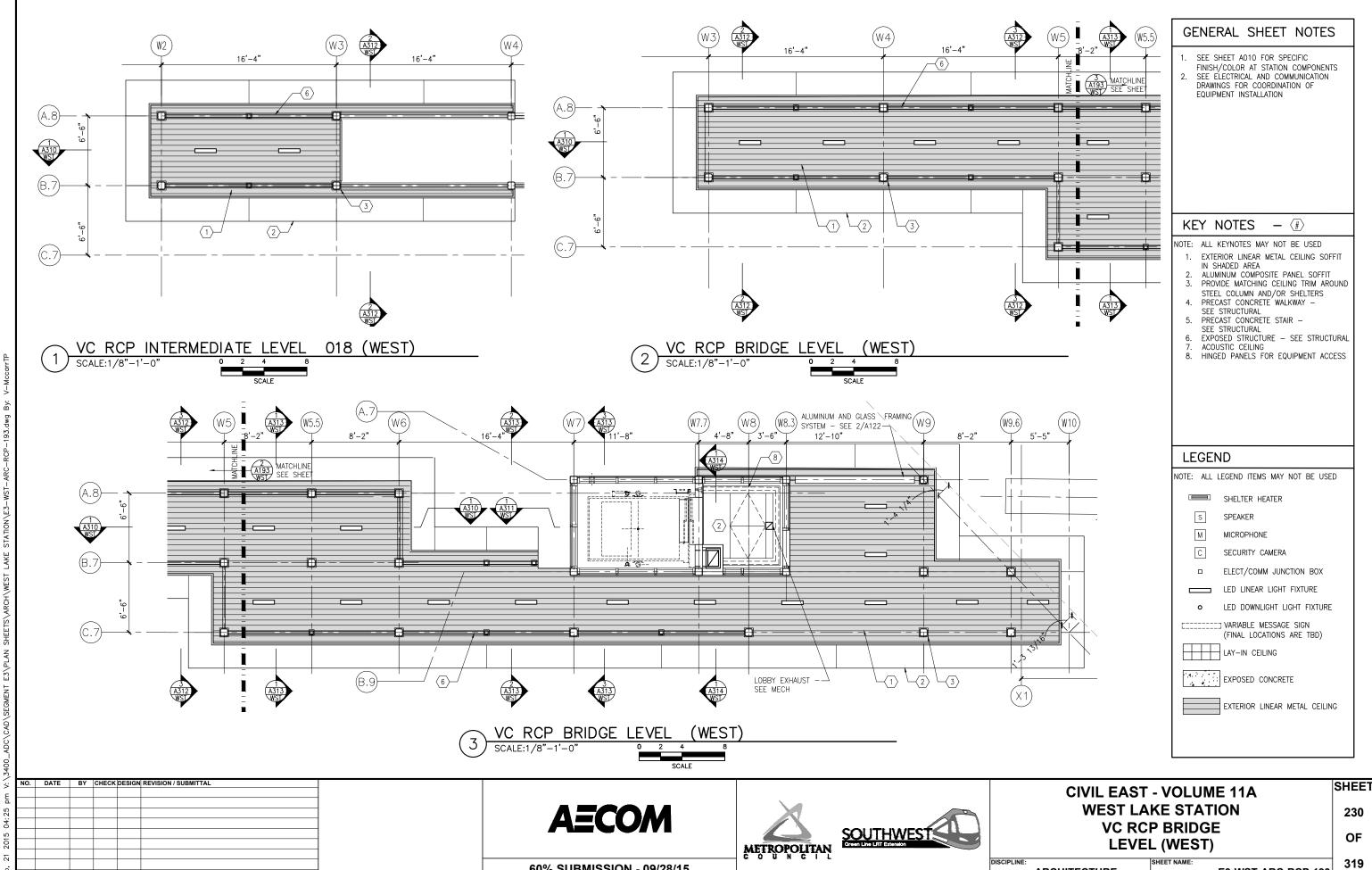
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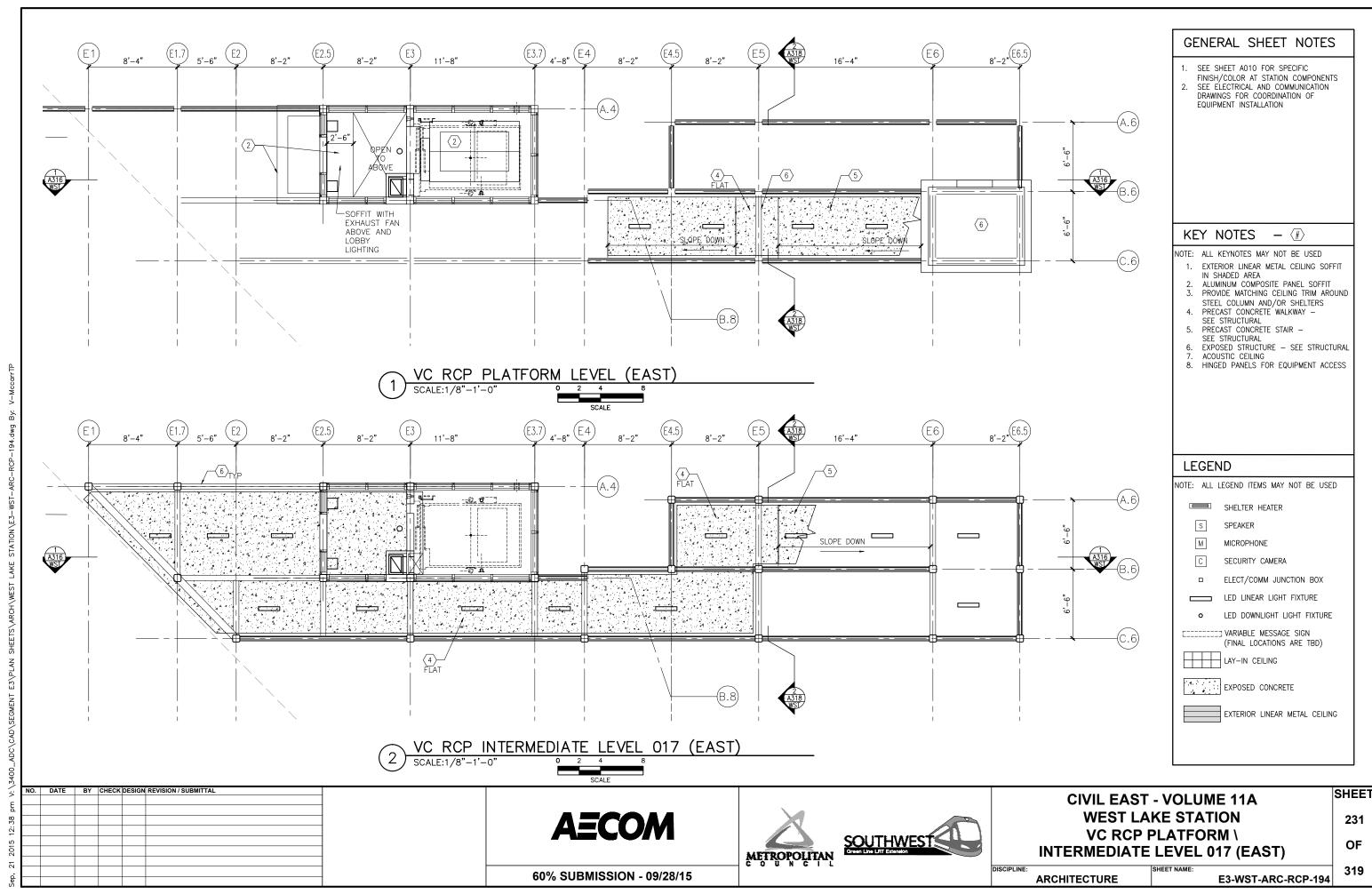
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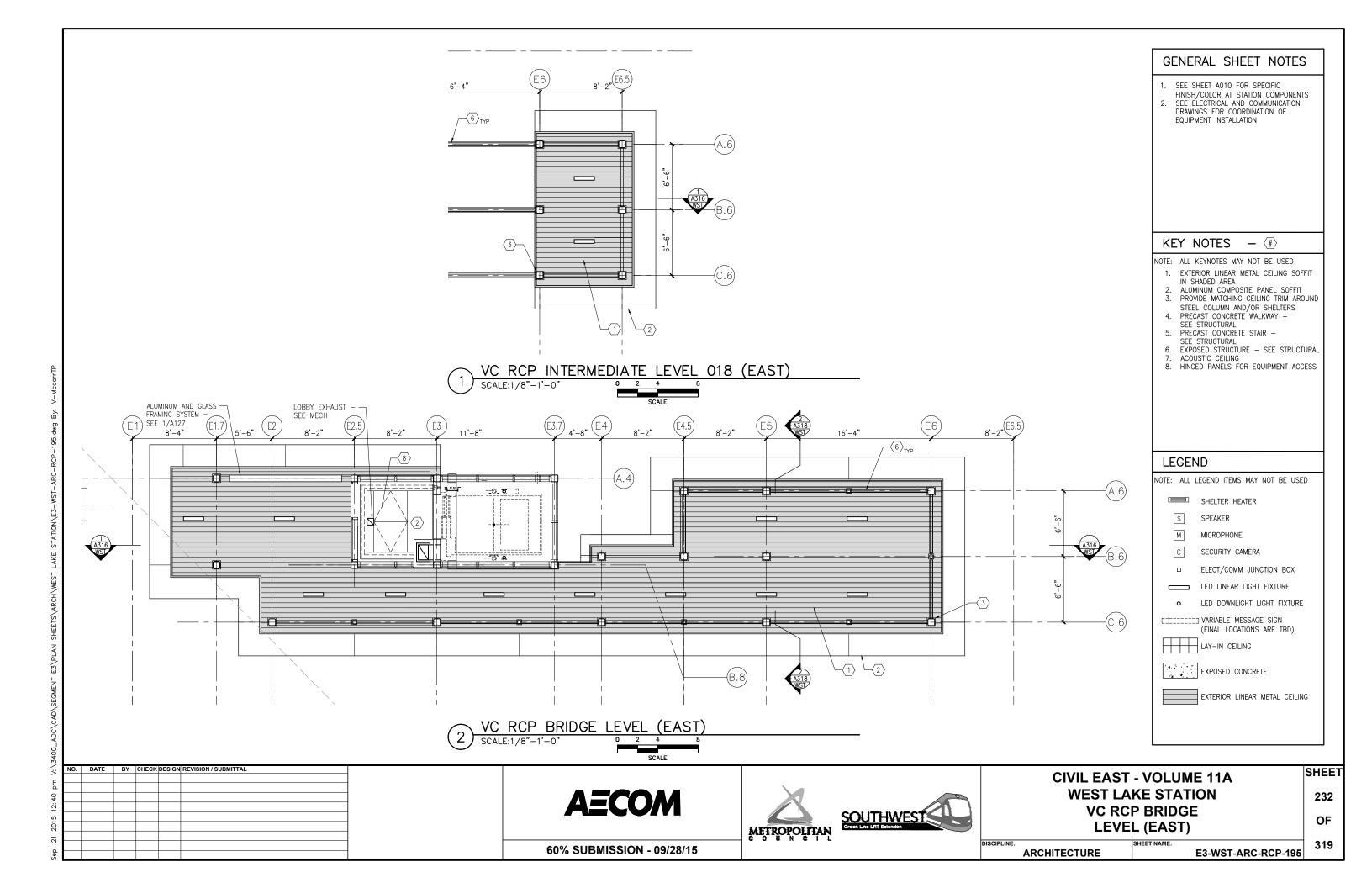
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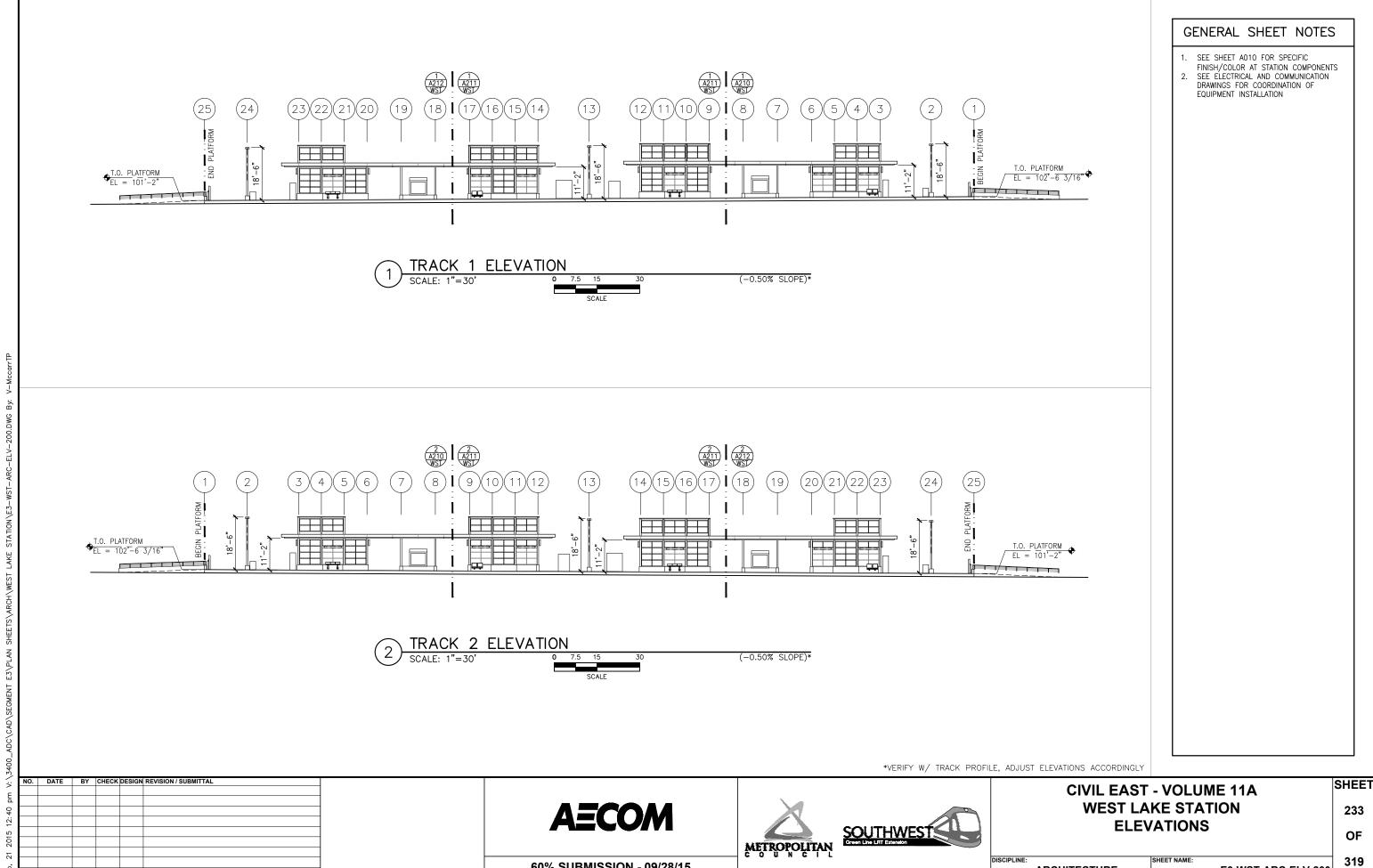


E3-WST-ARC-RCP-193

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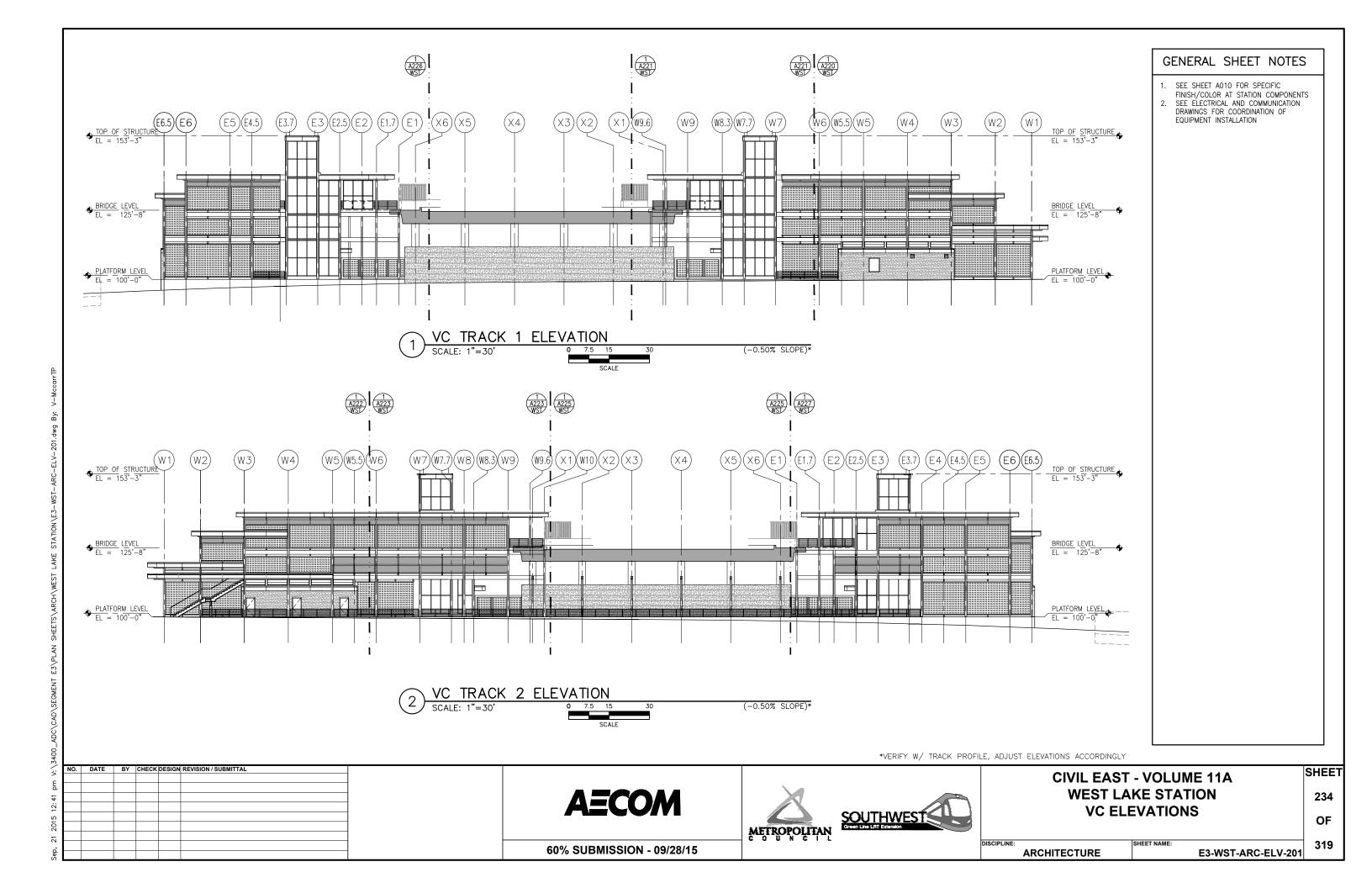


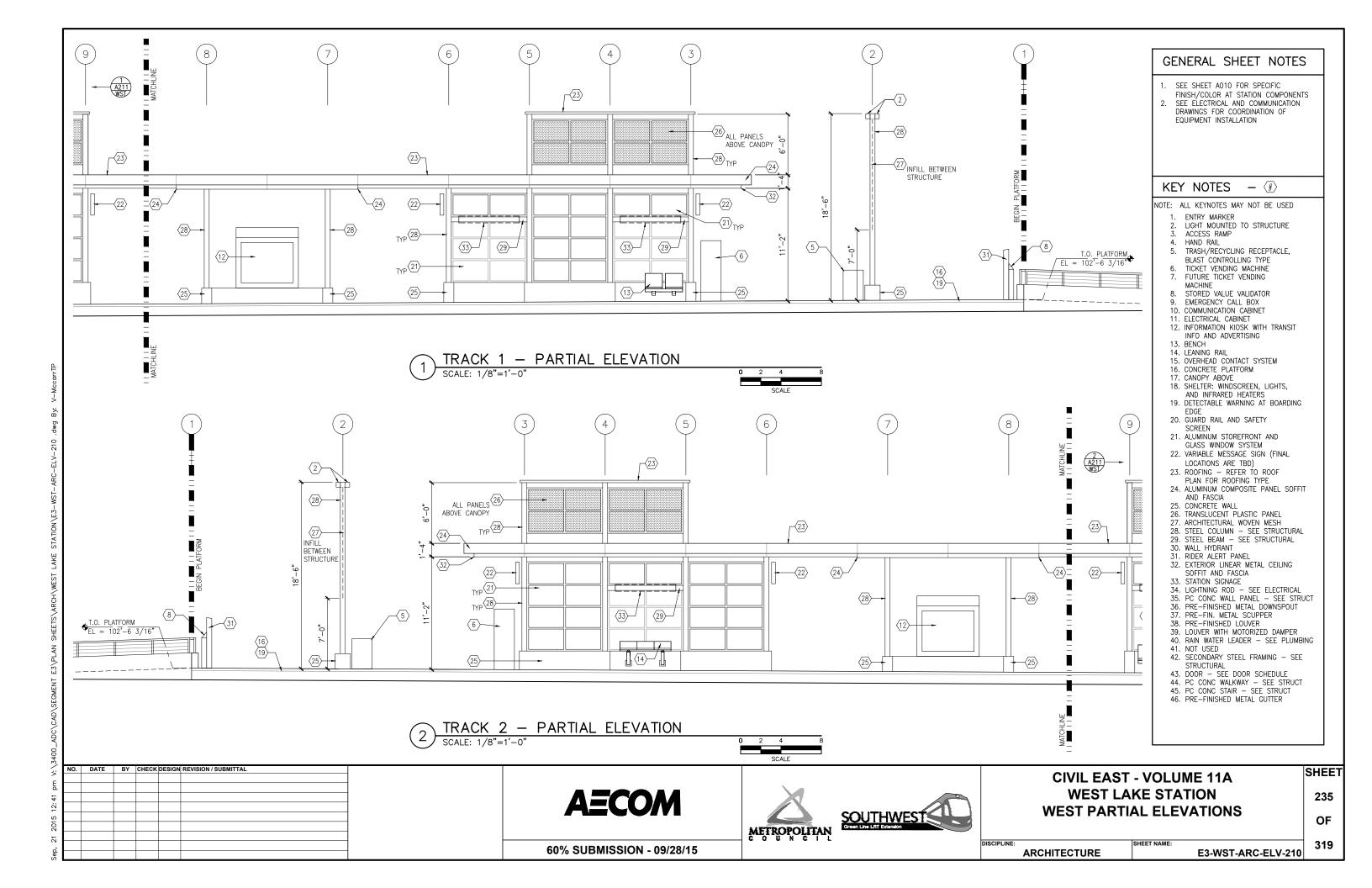


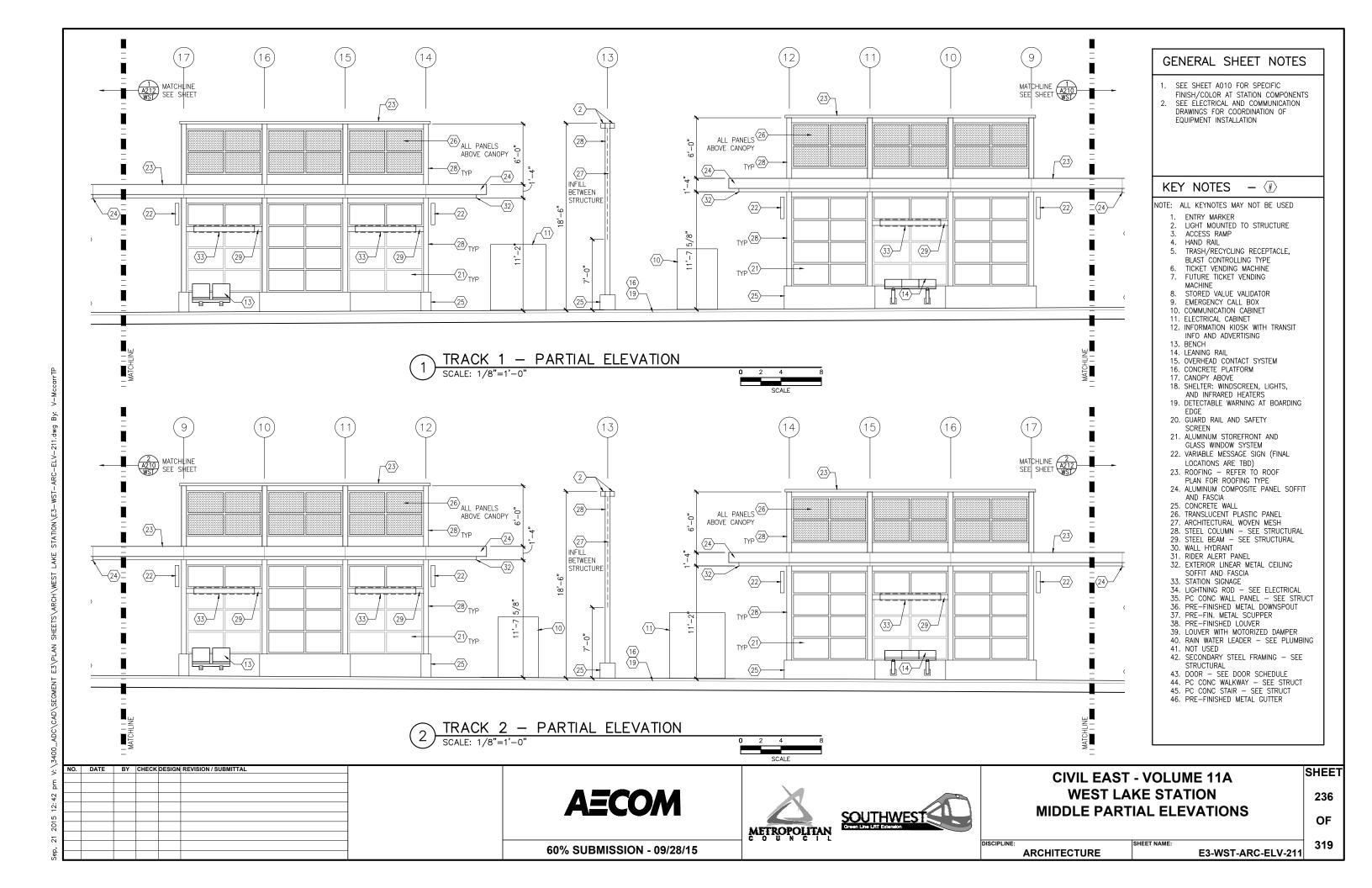


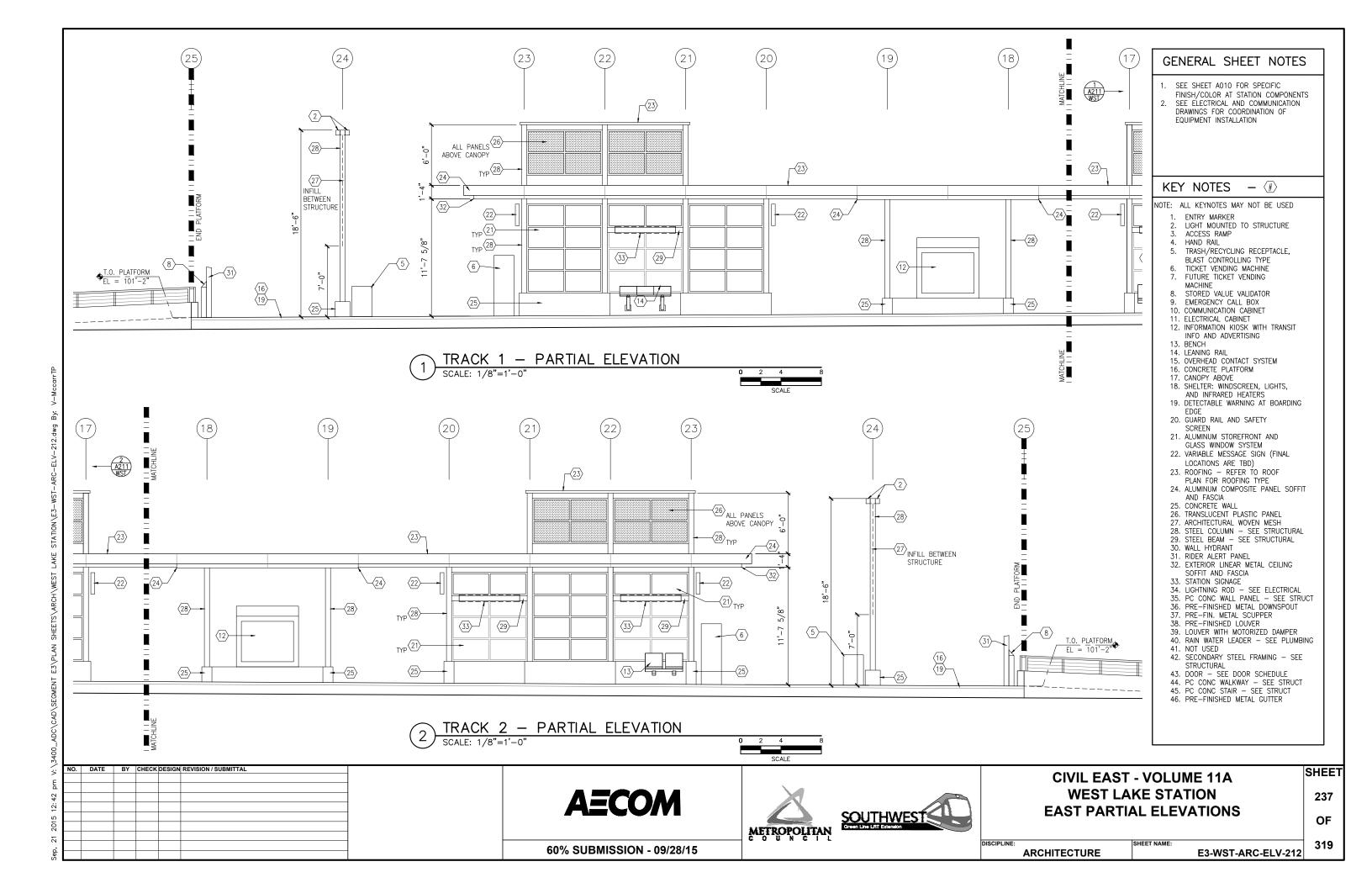
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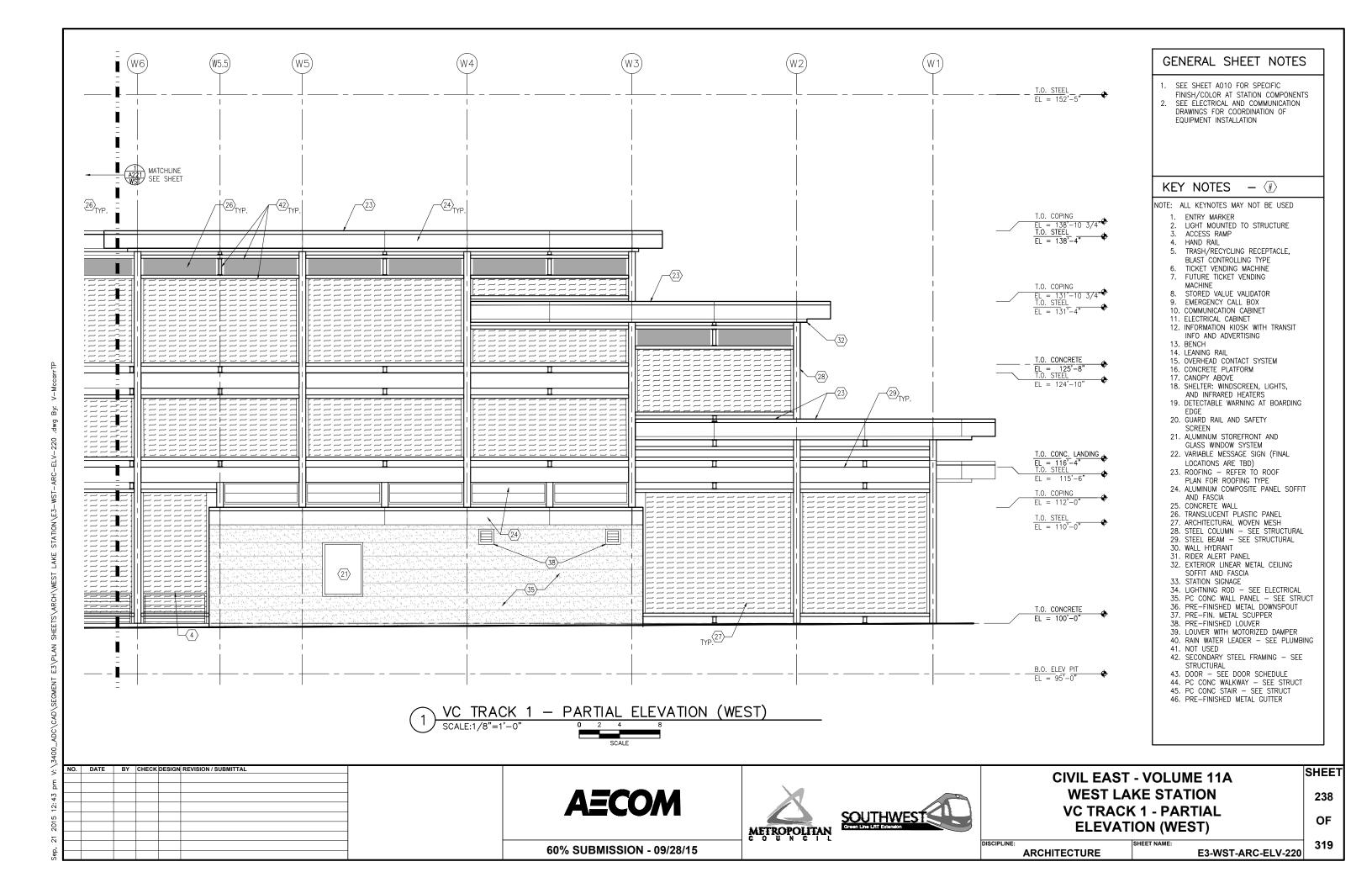
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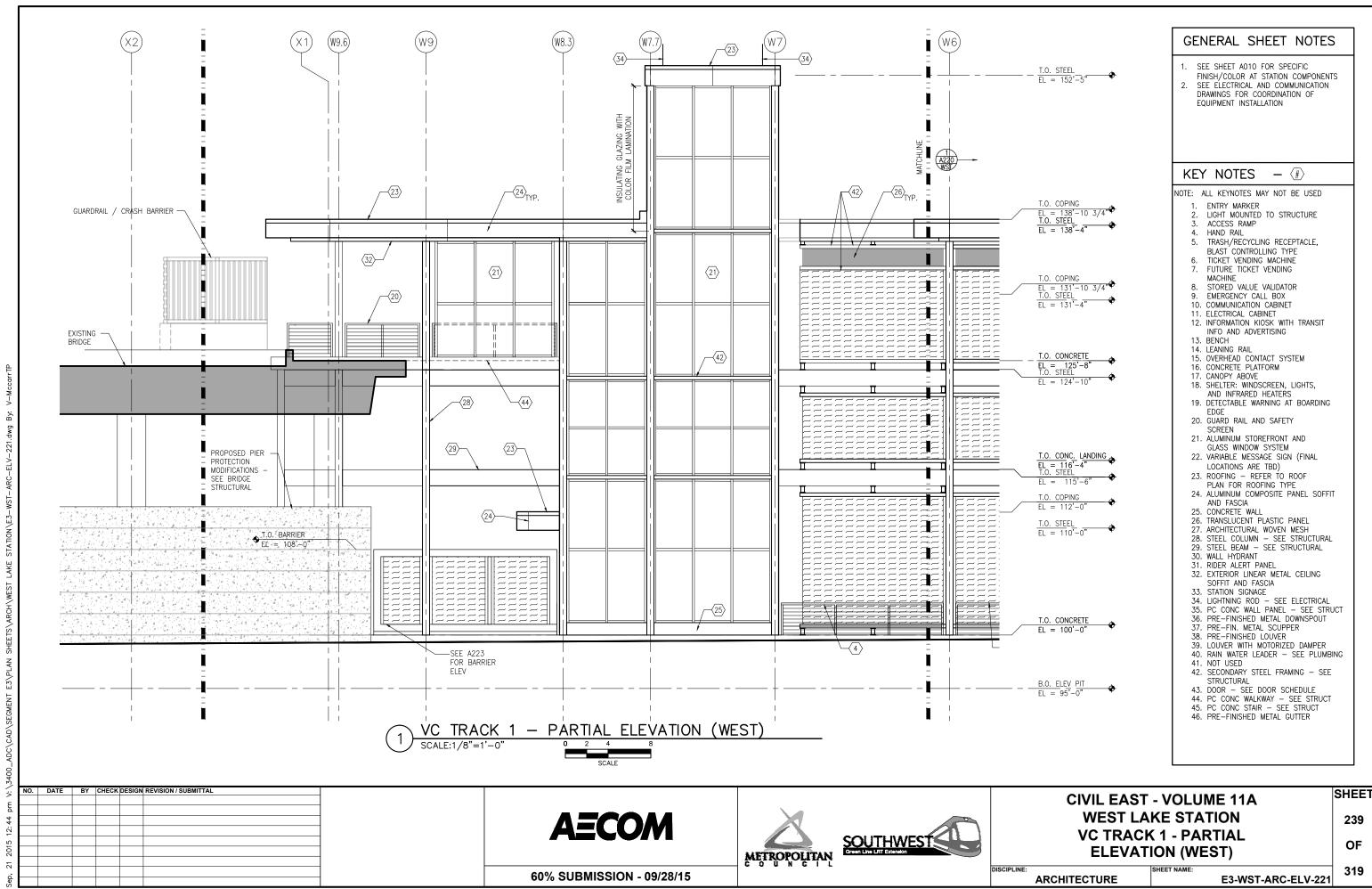


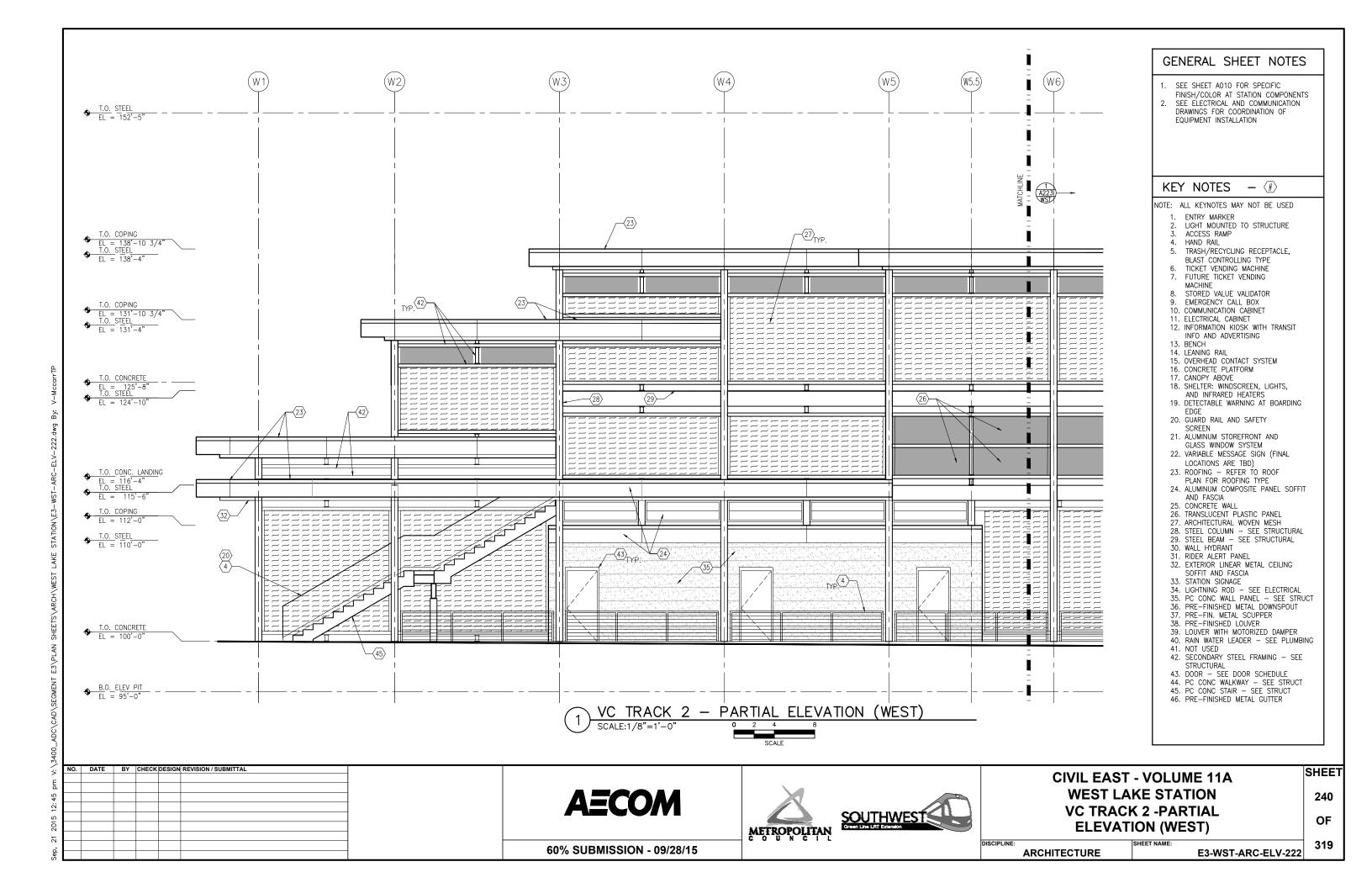


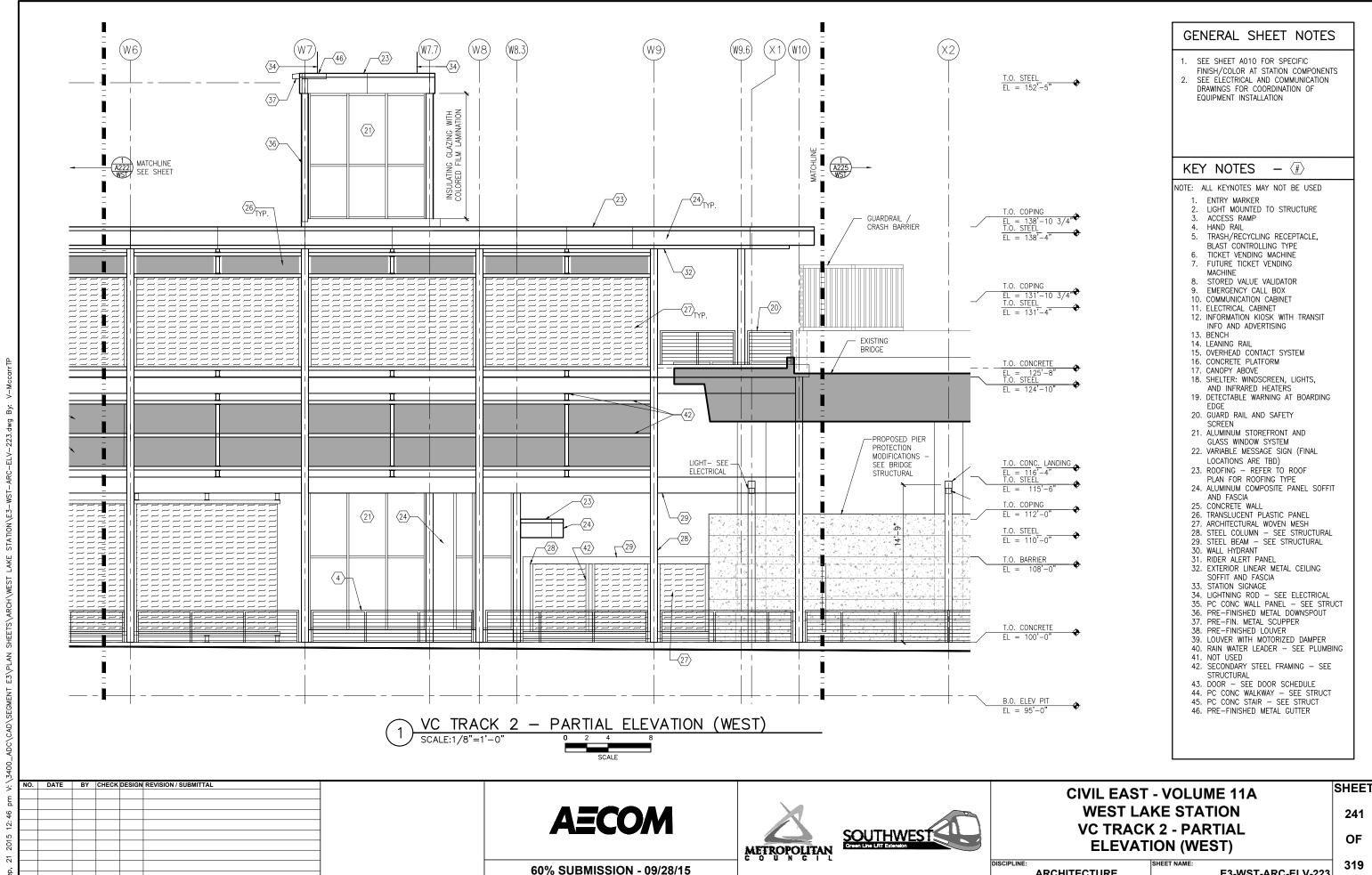








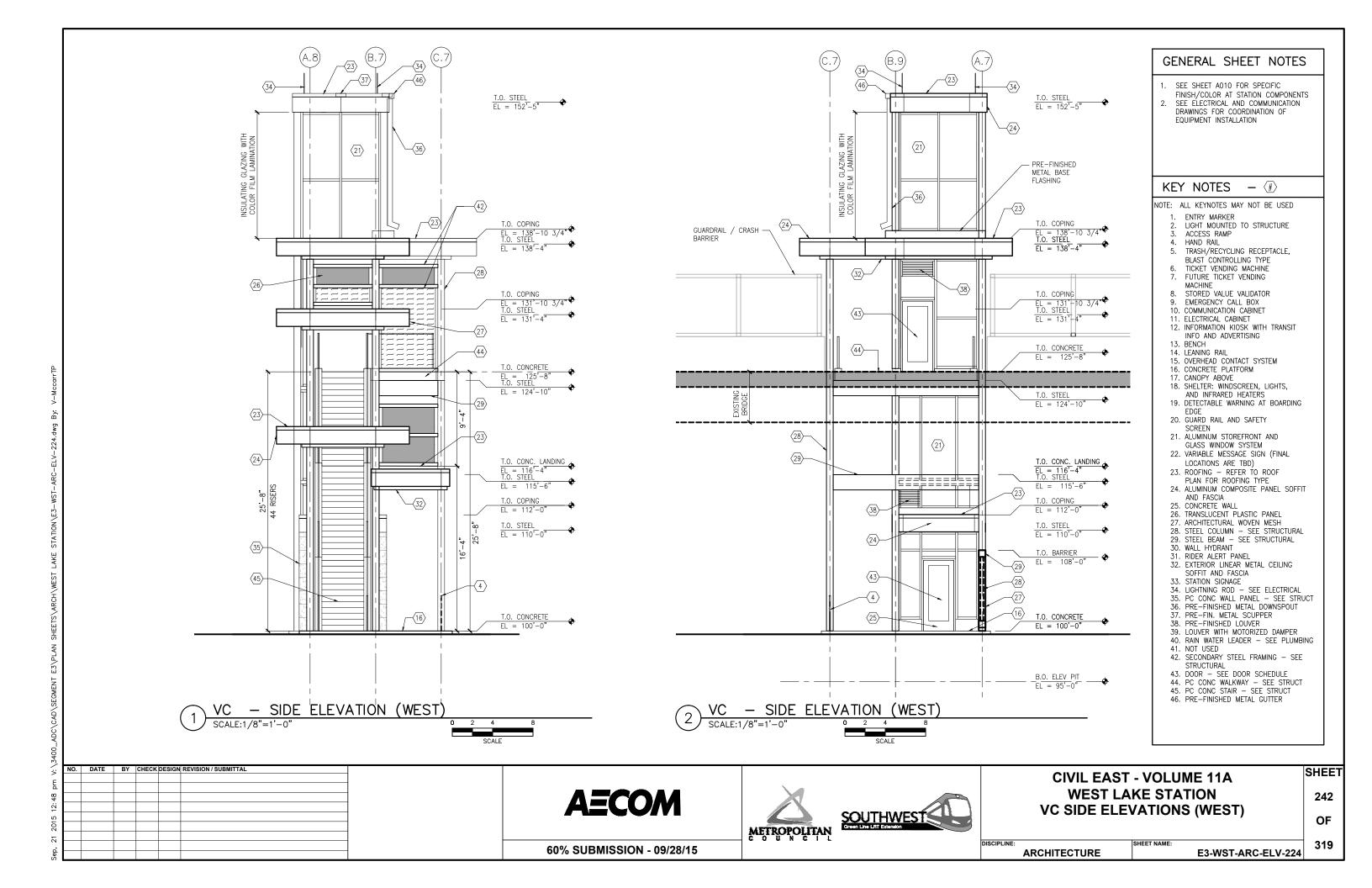


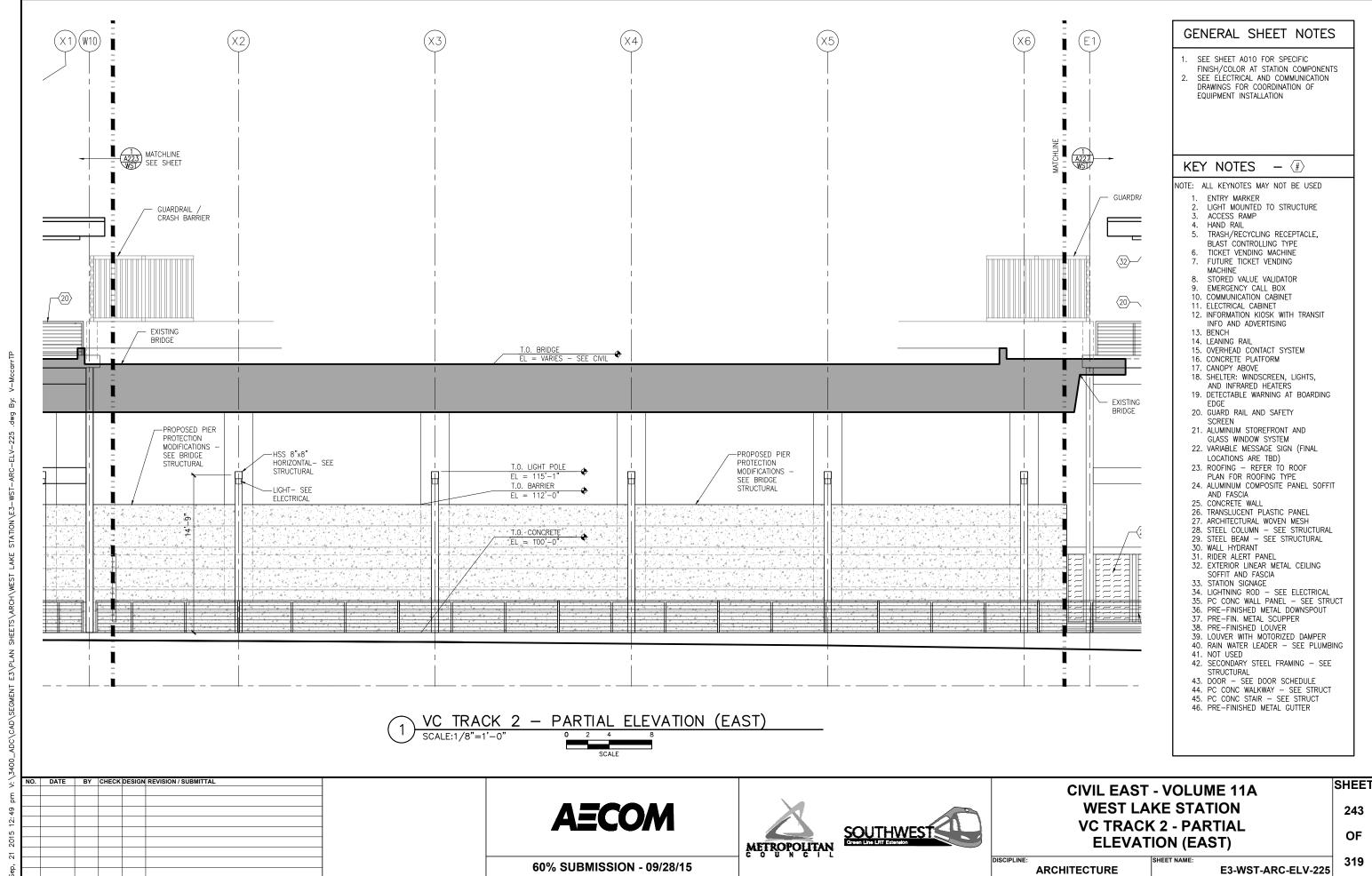


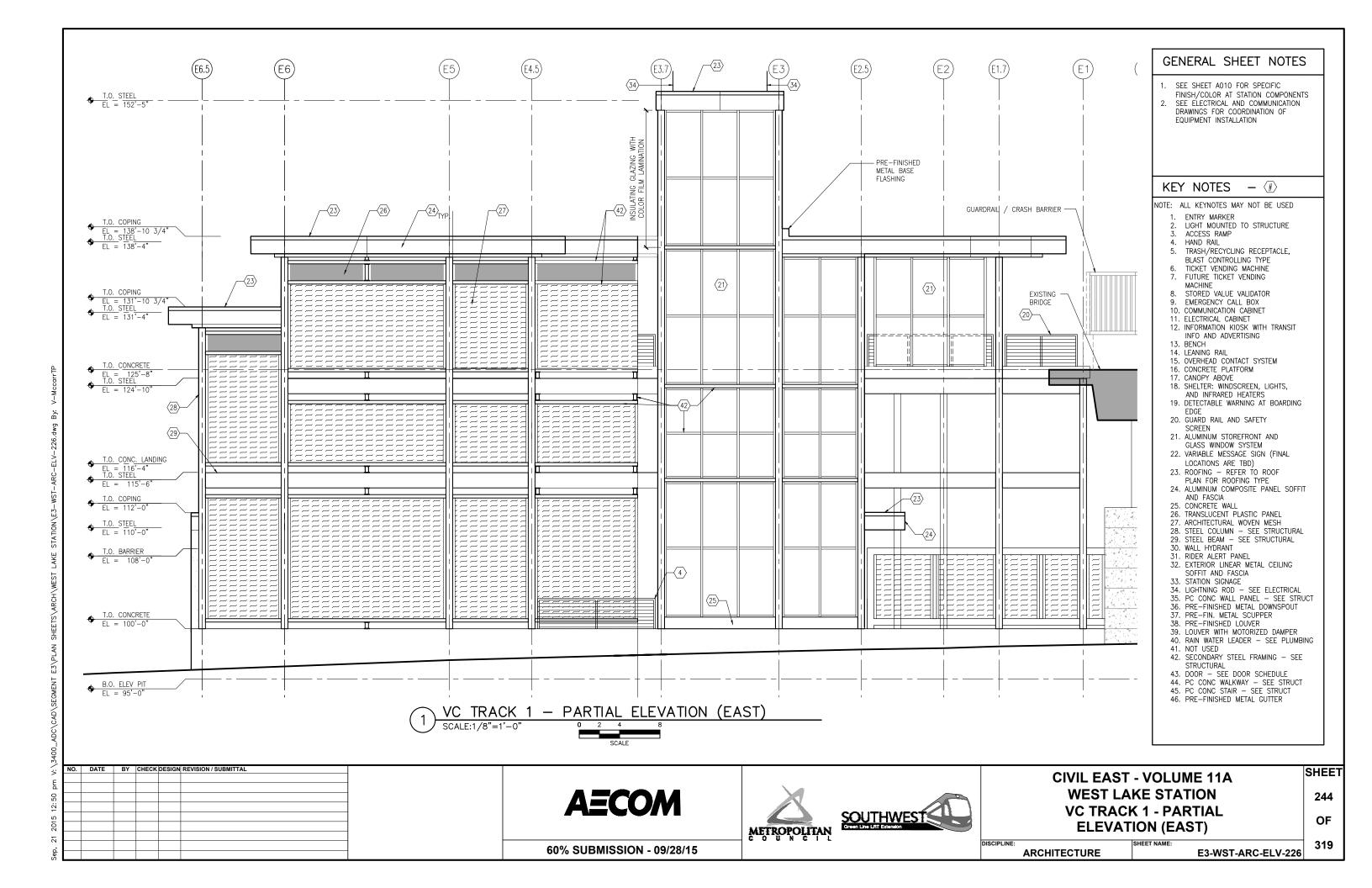
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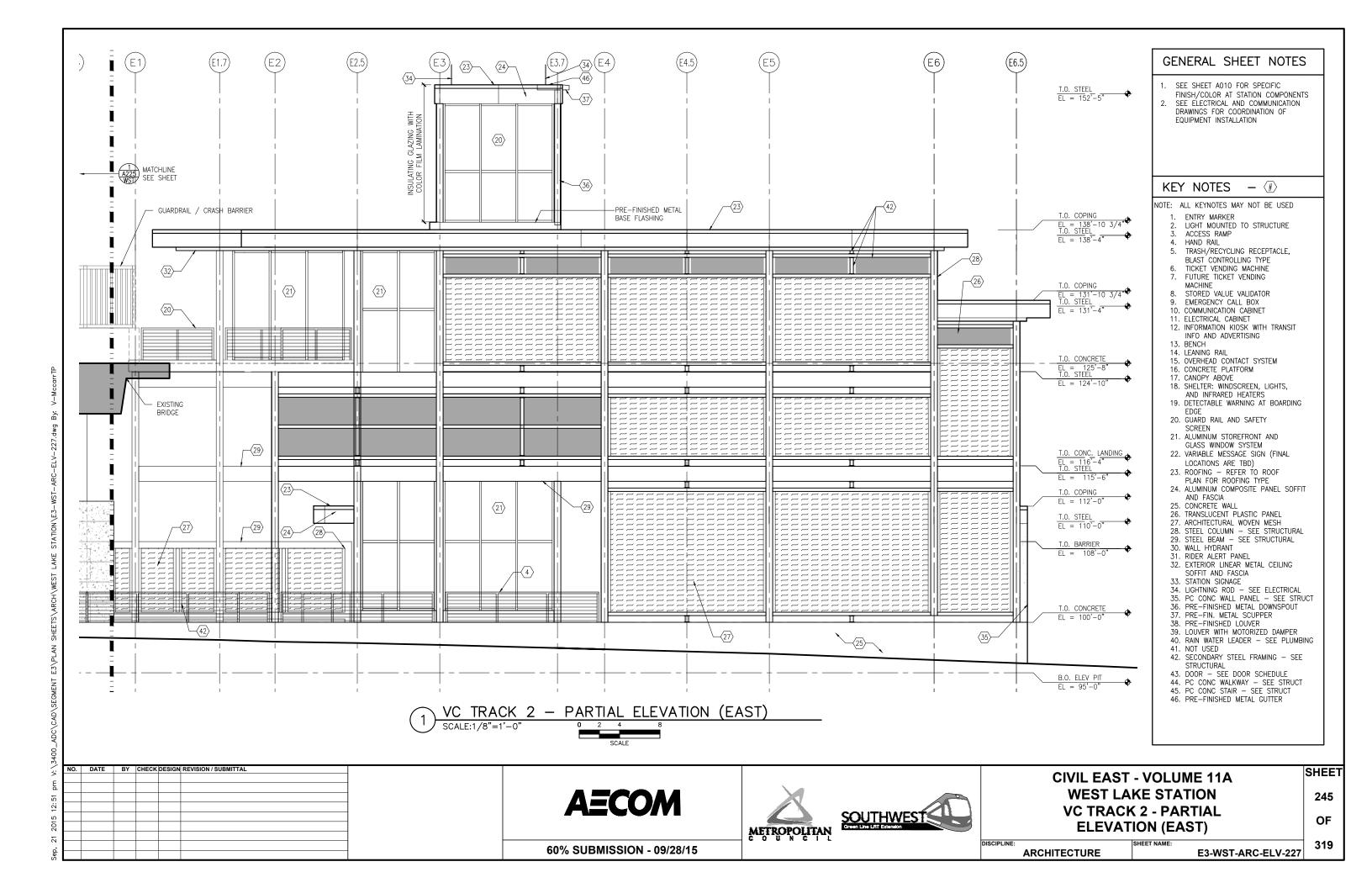
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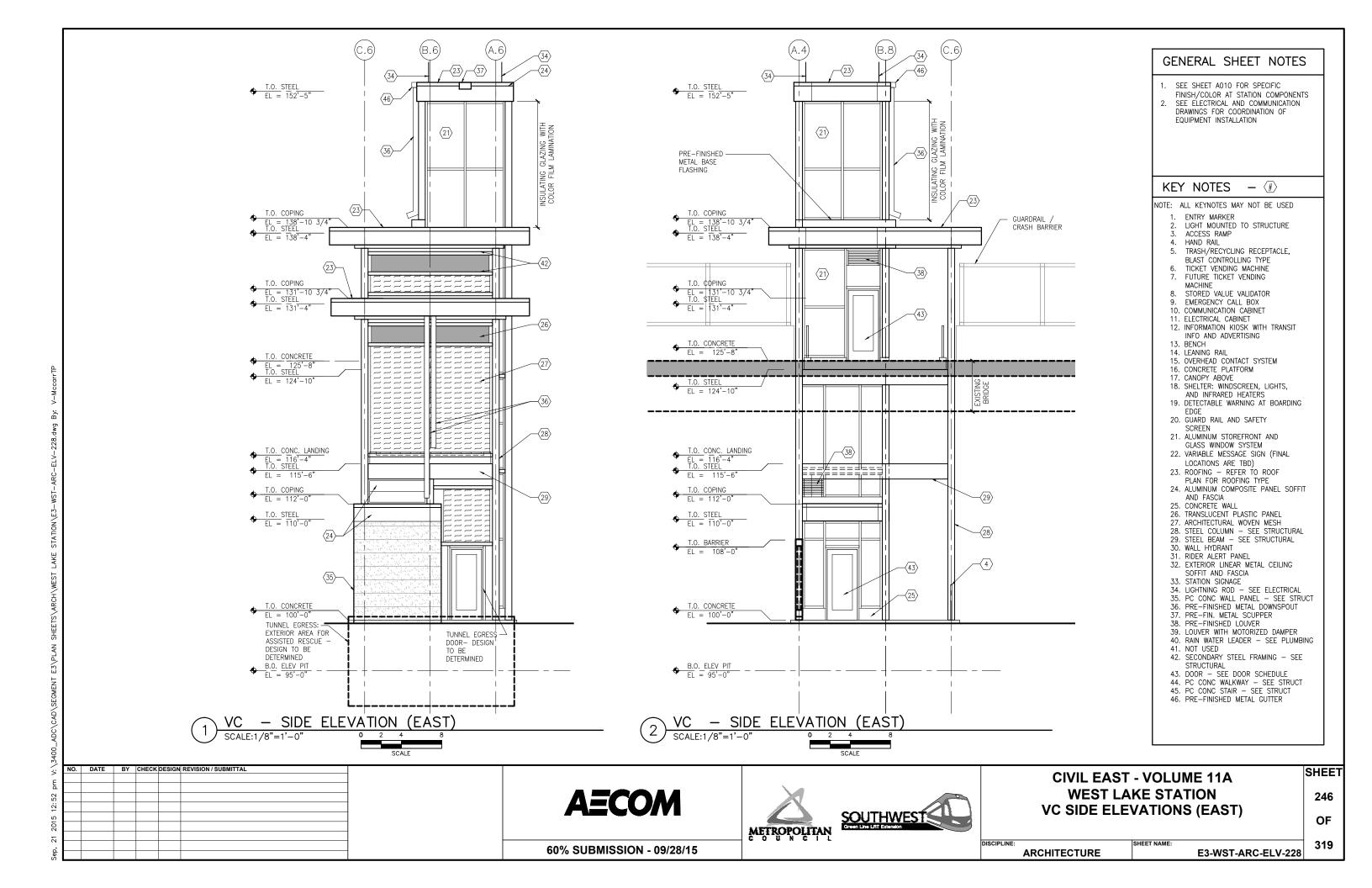
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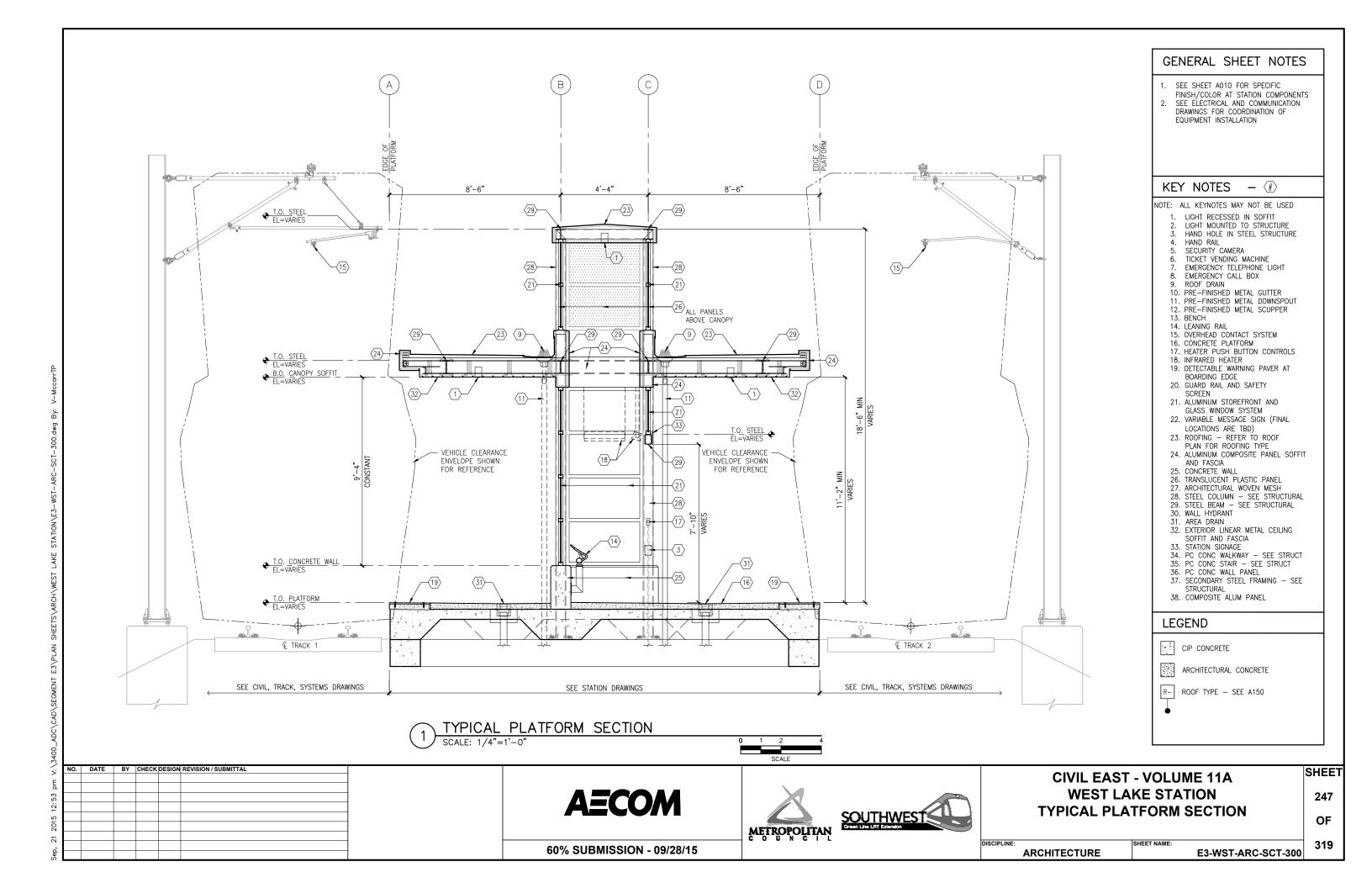


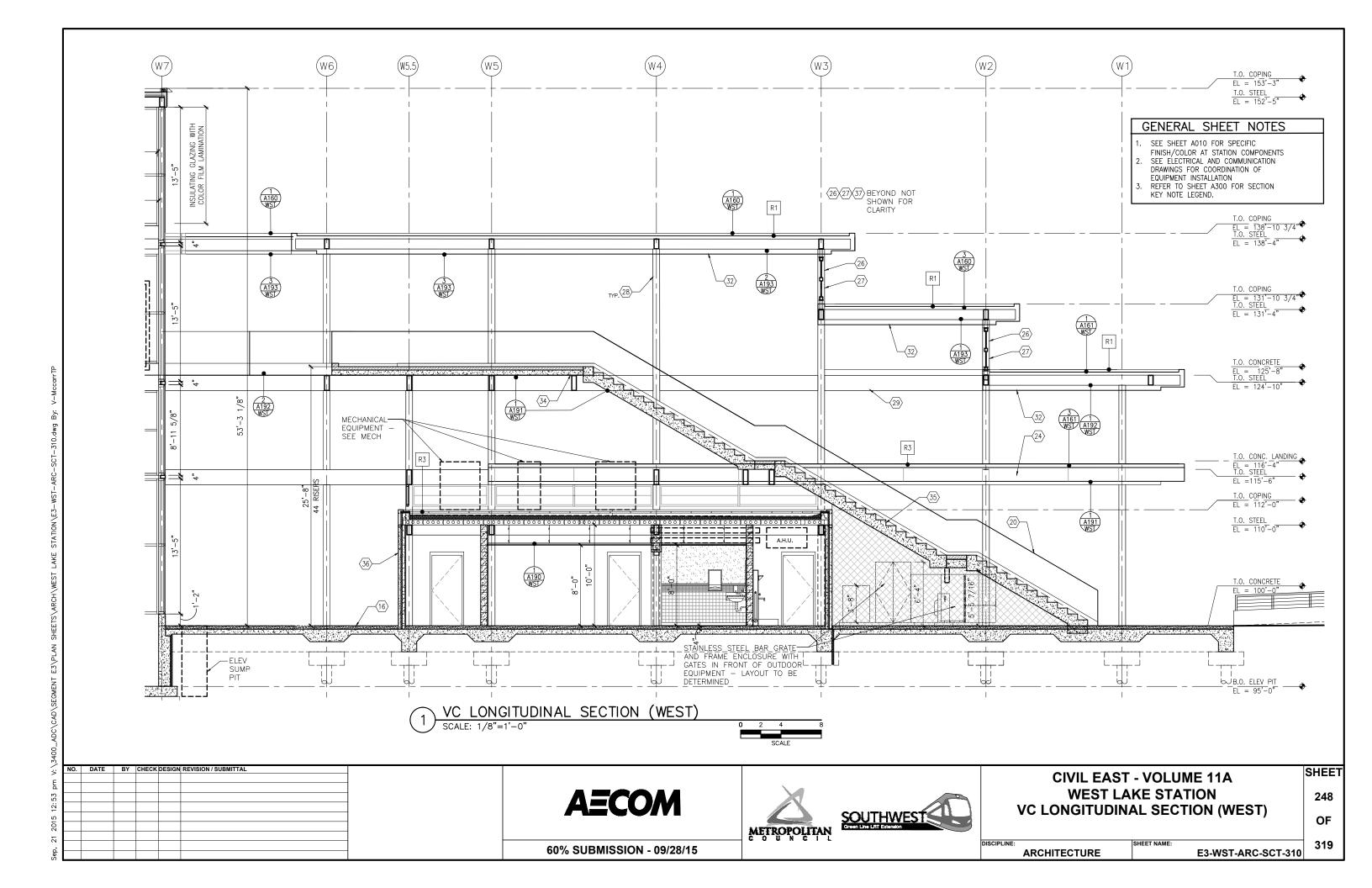


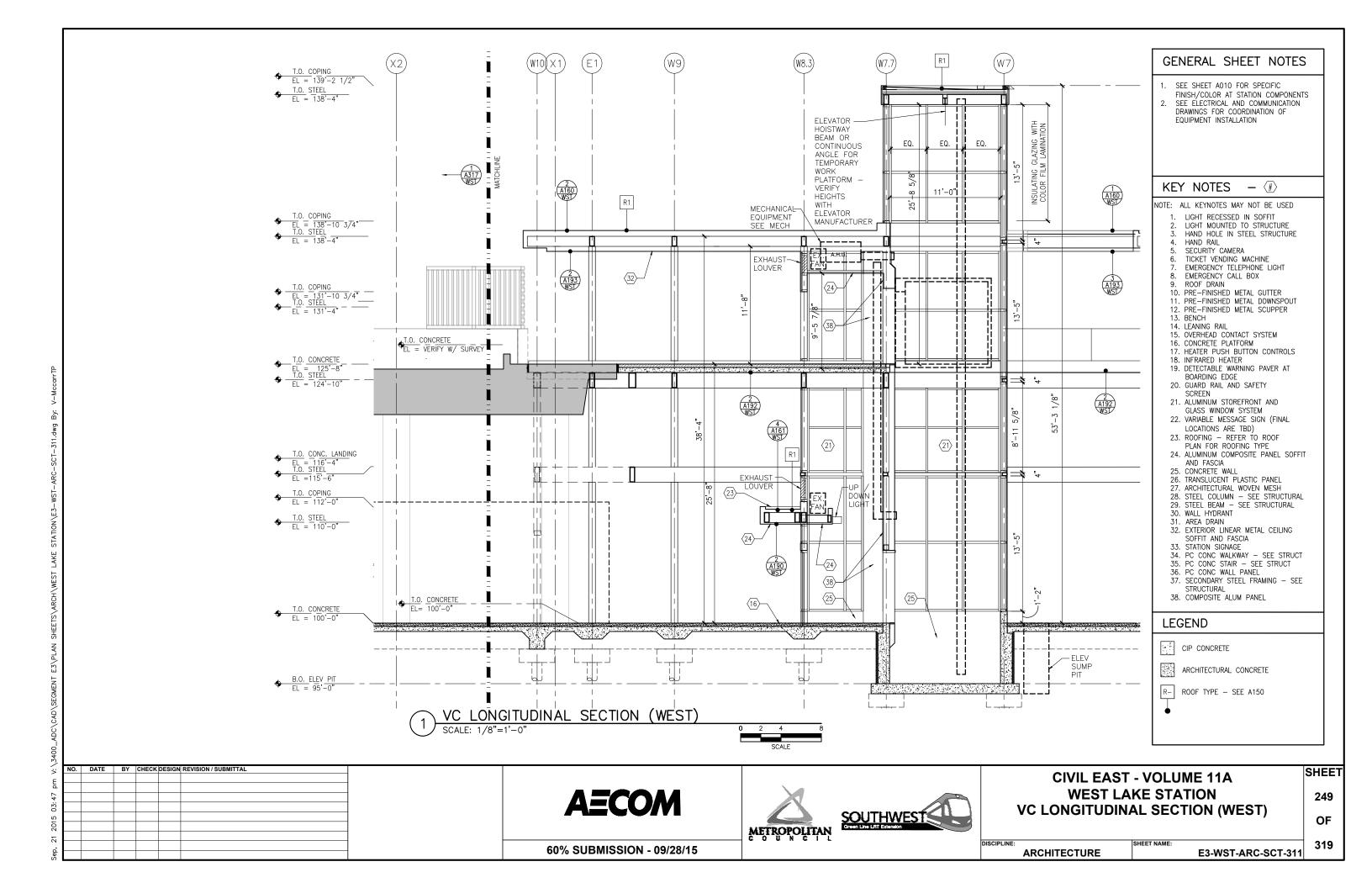


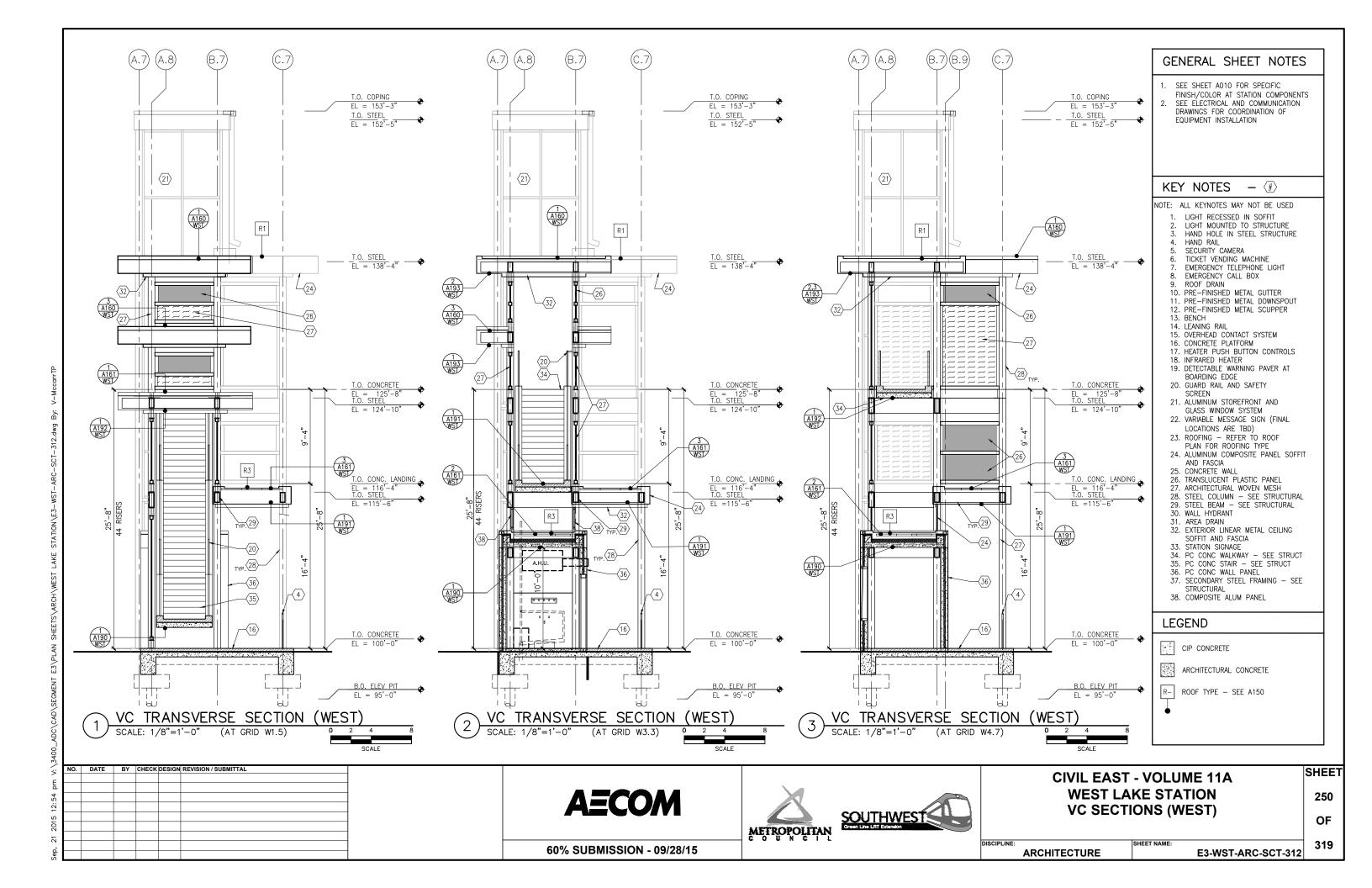


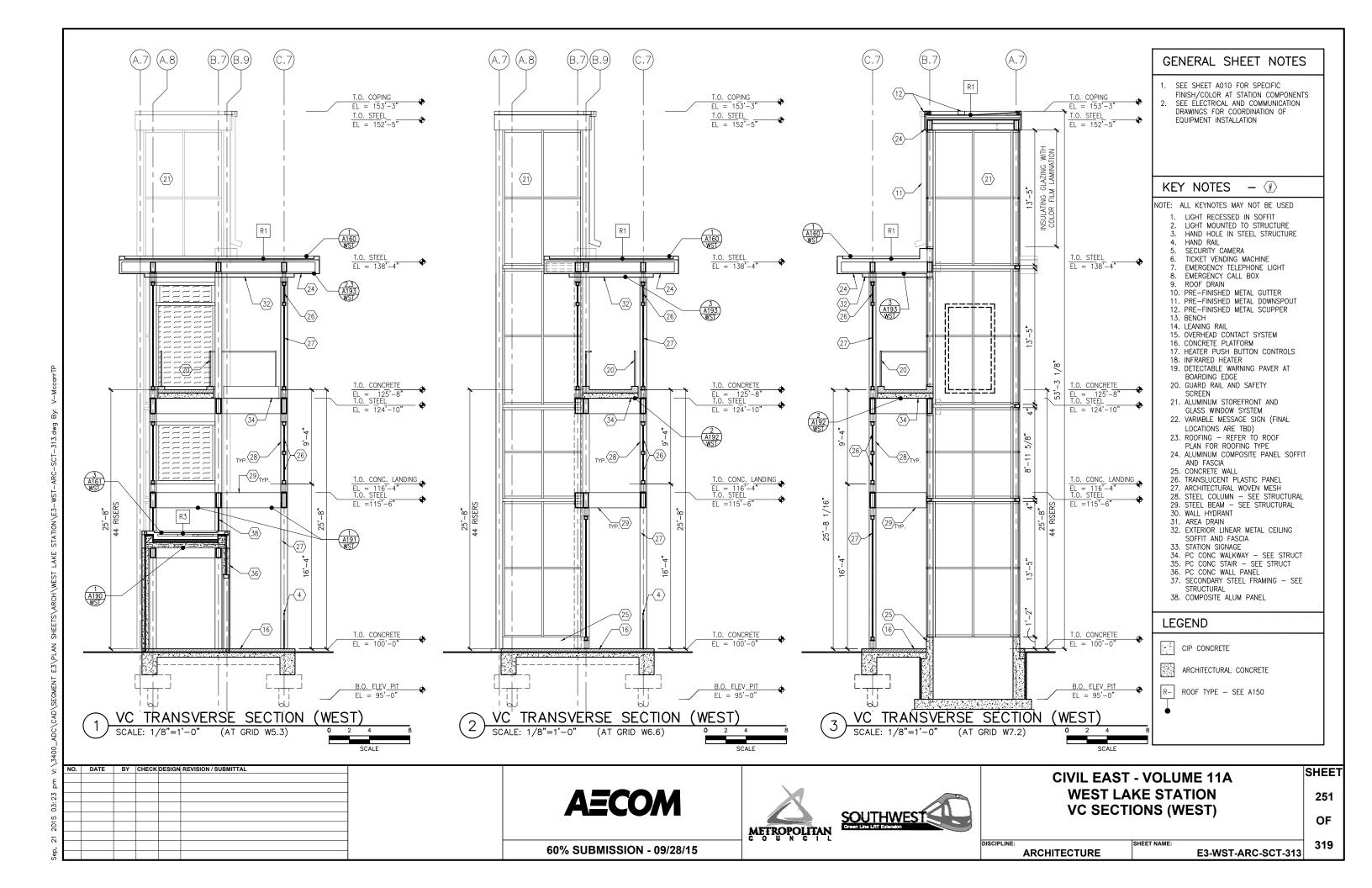


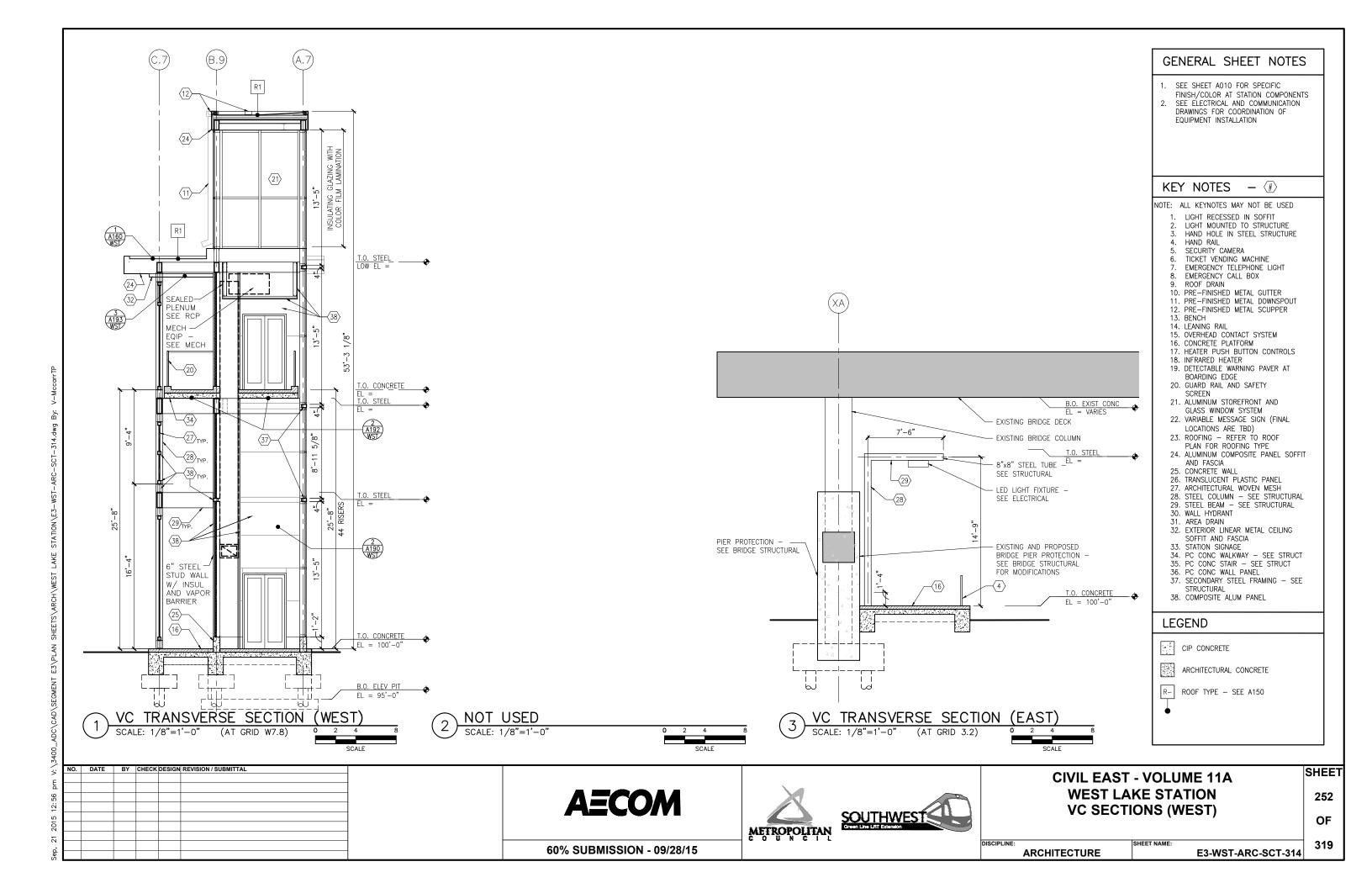


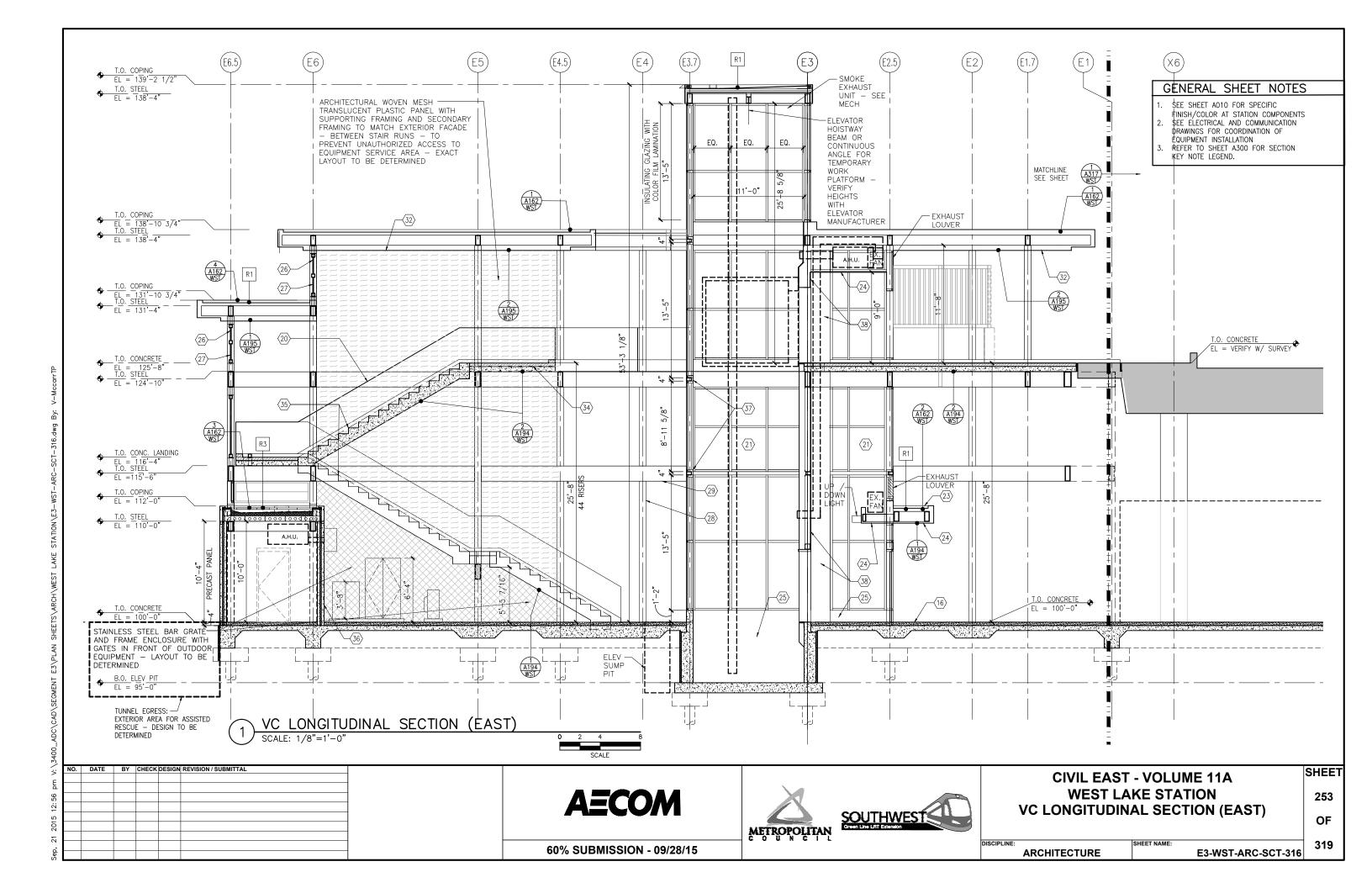


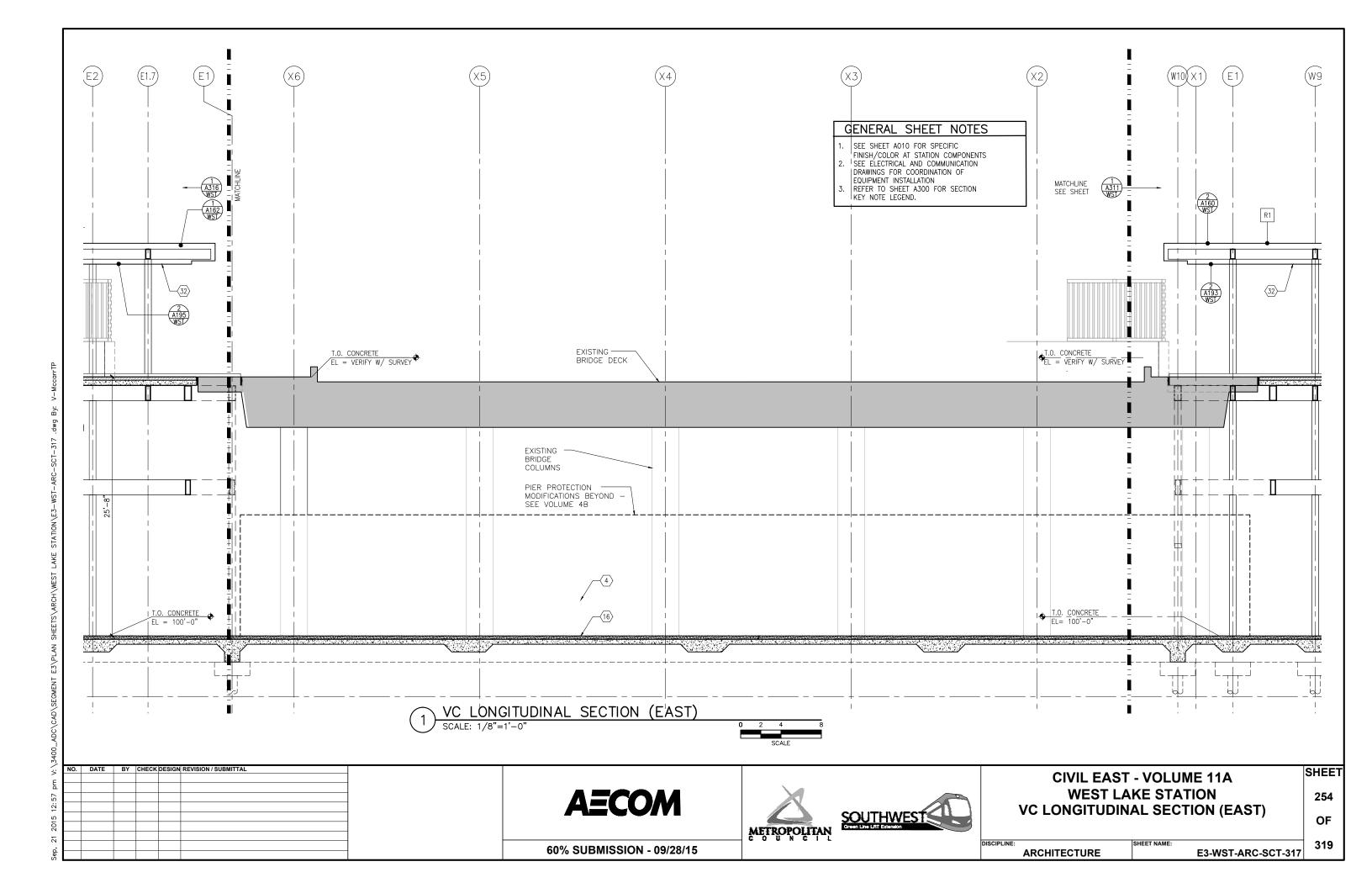


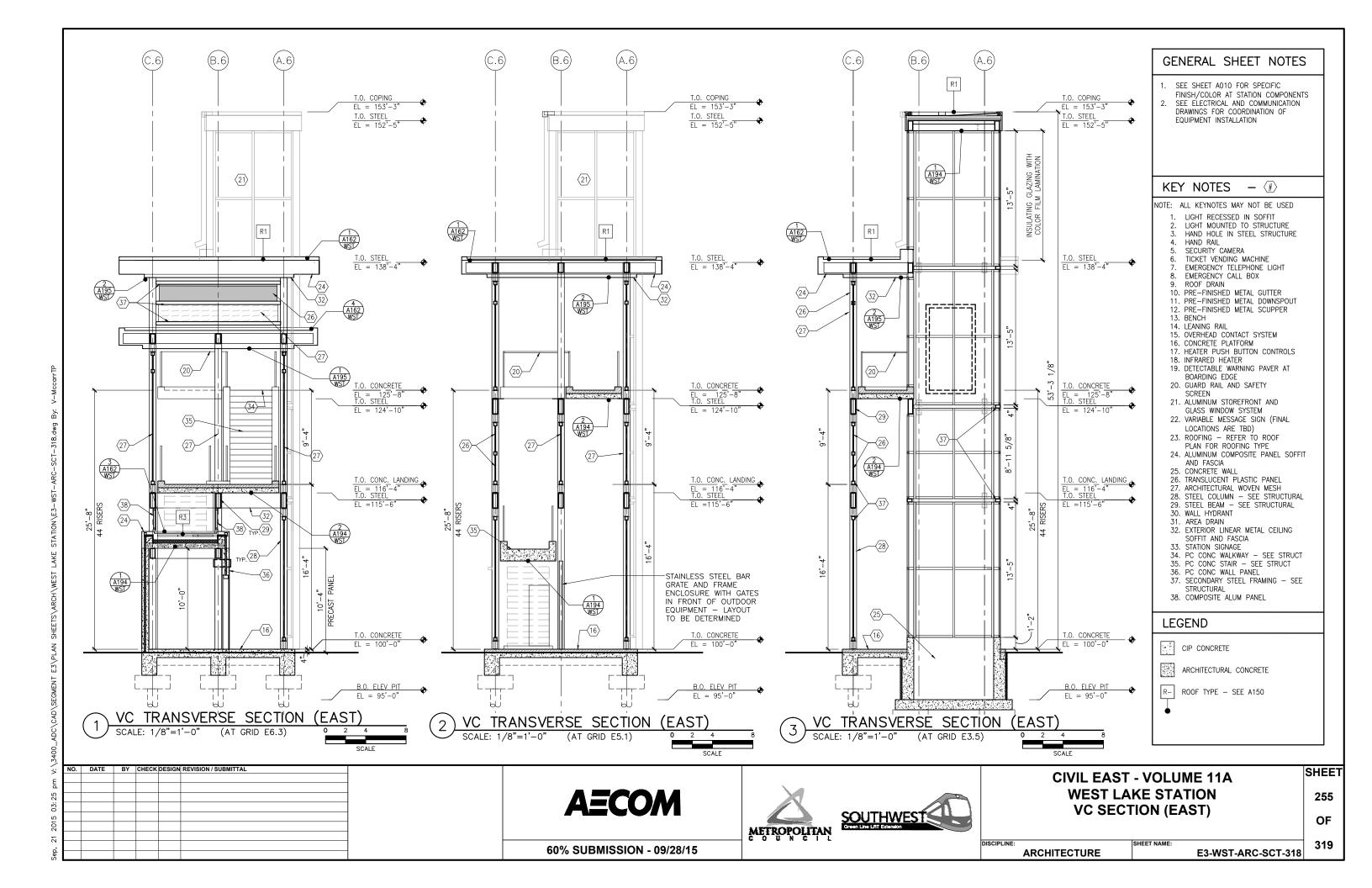


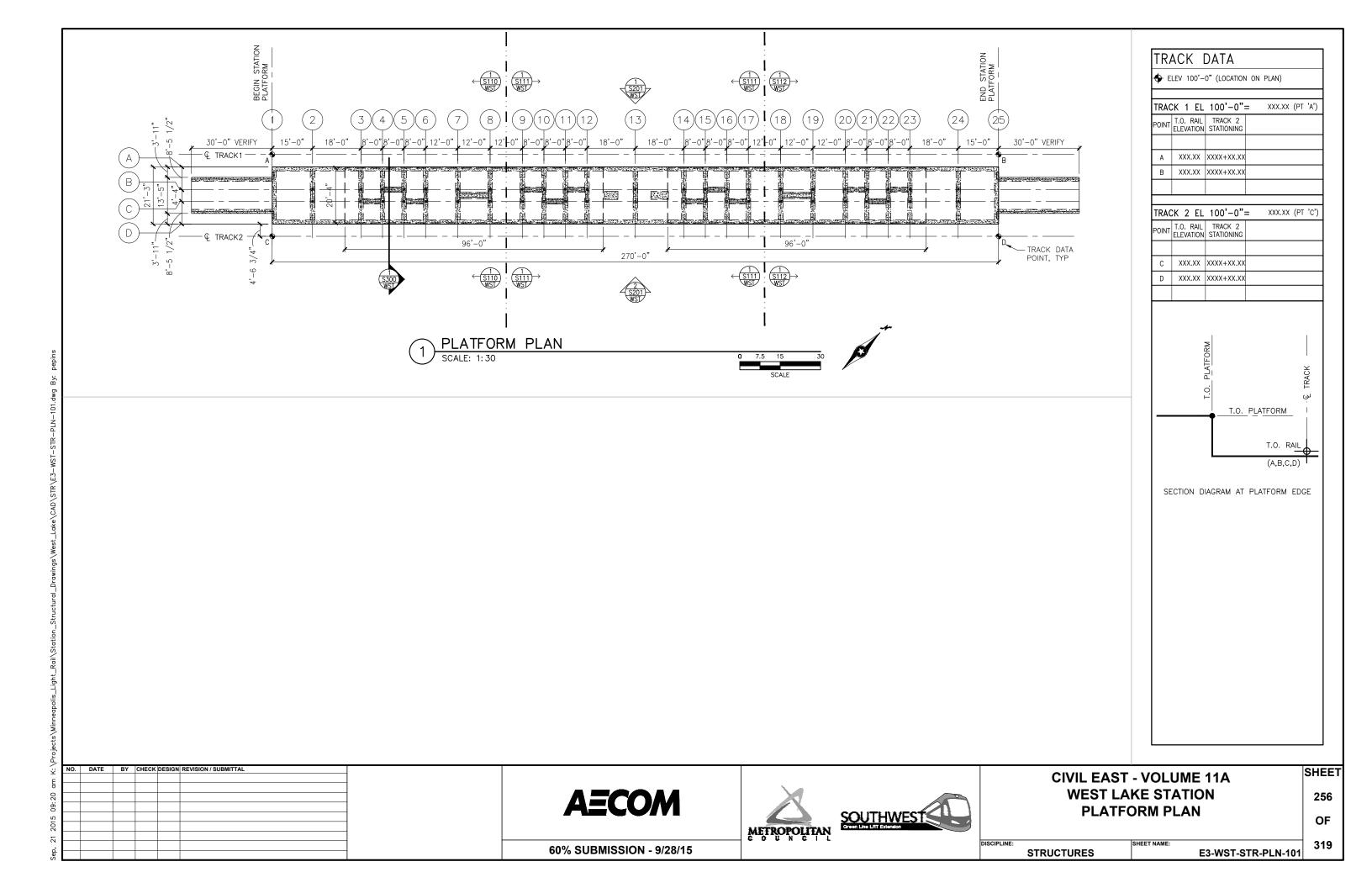


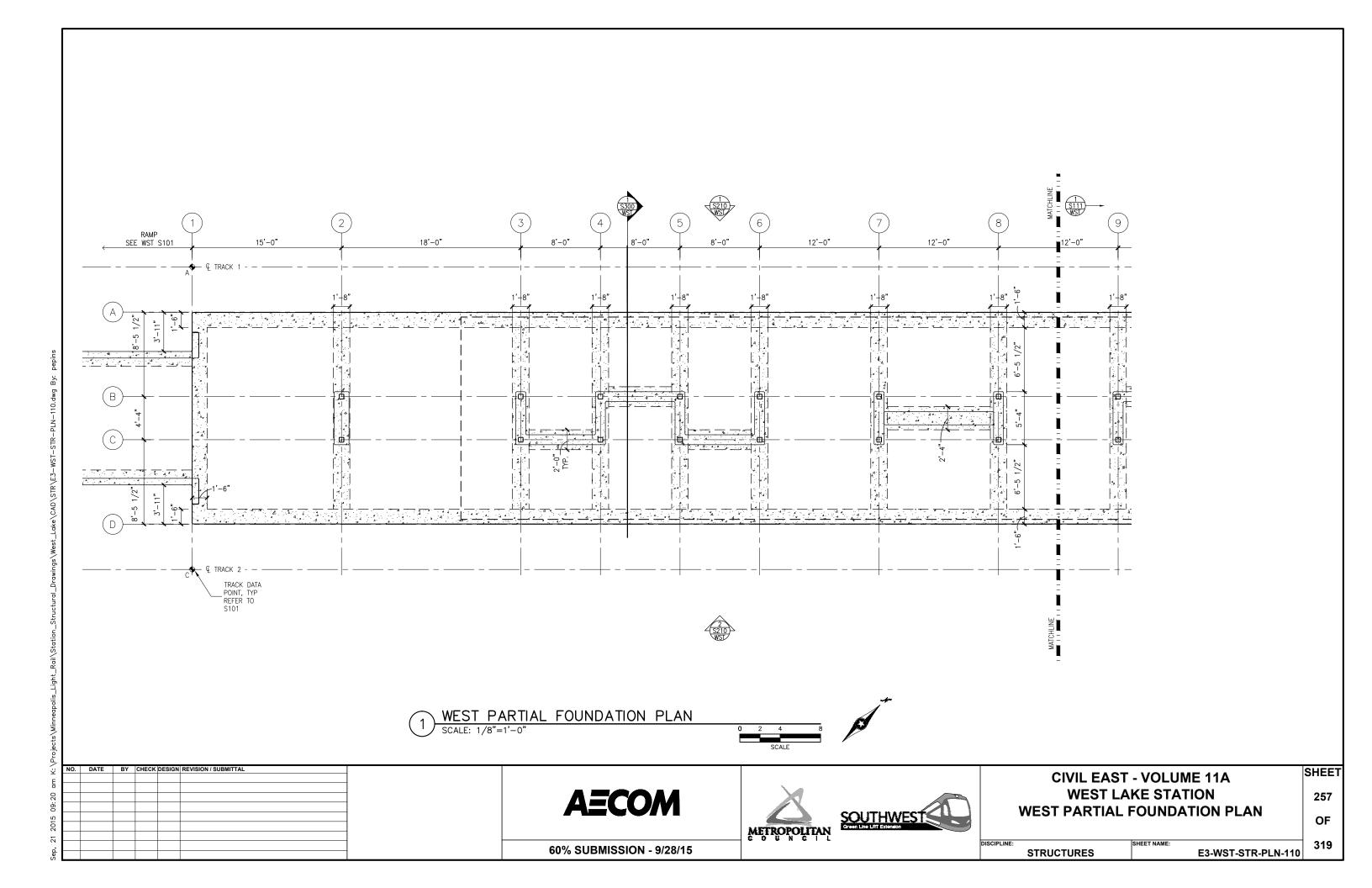


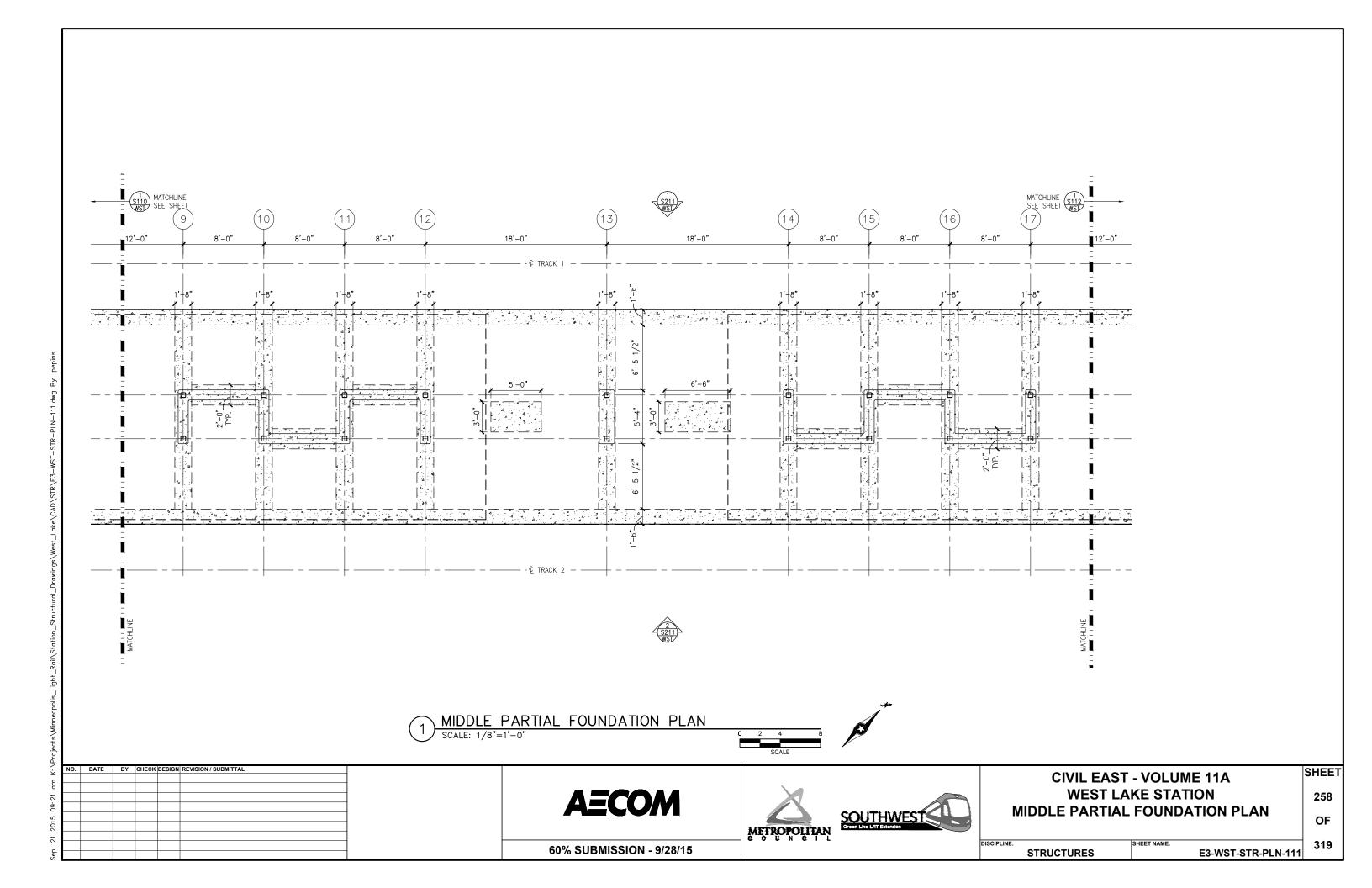


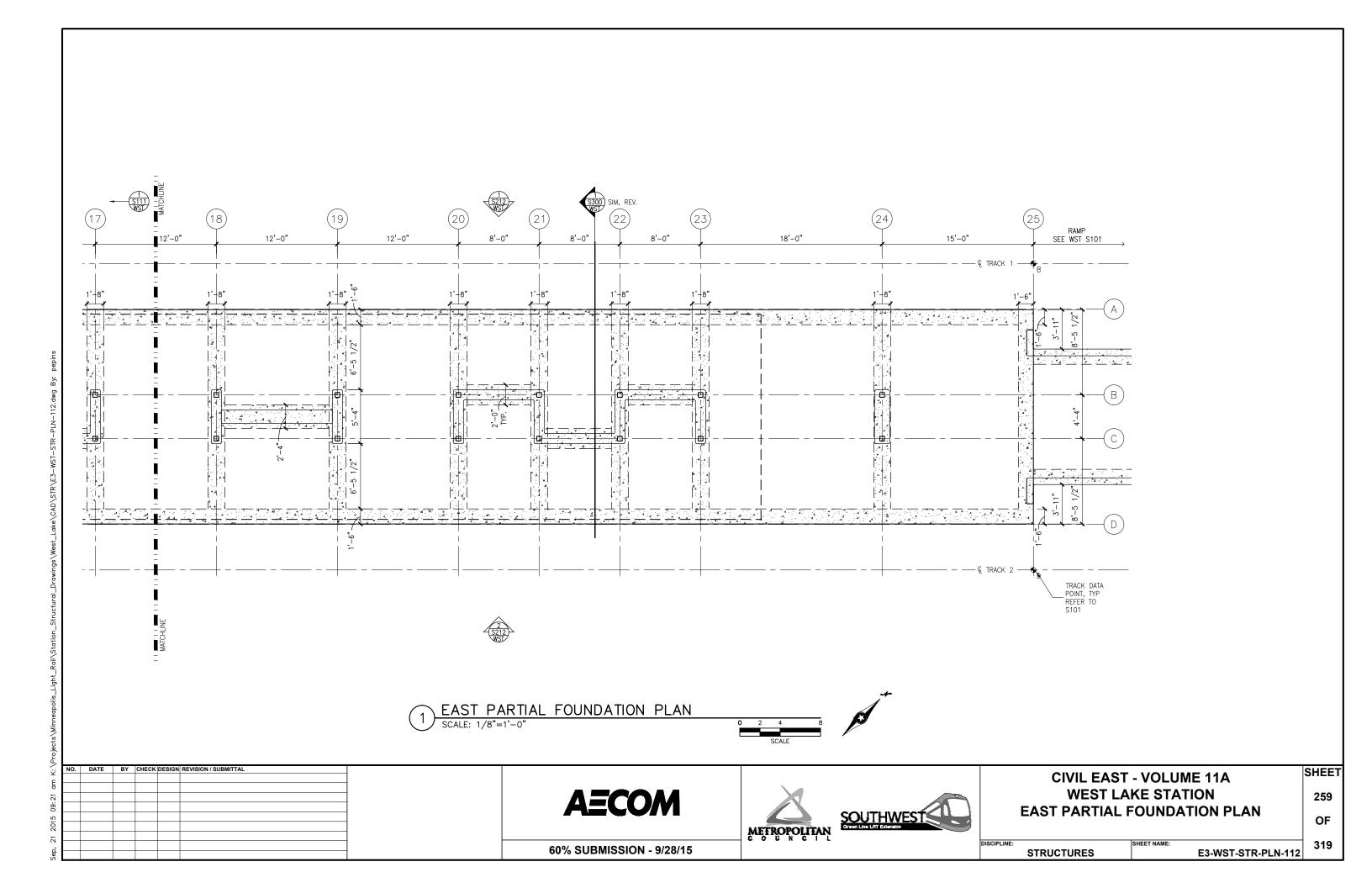


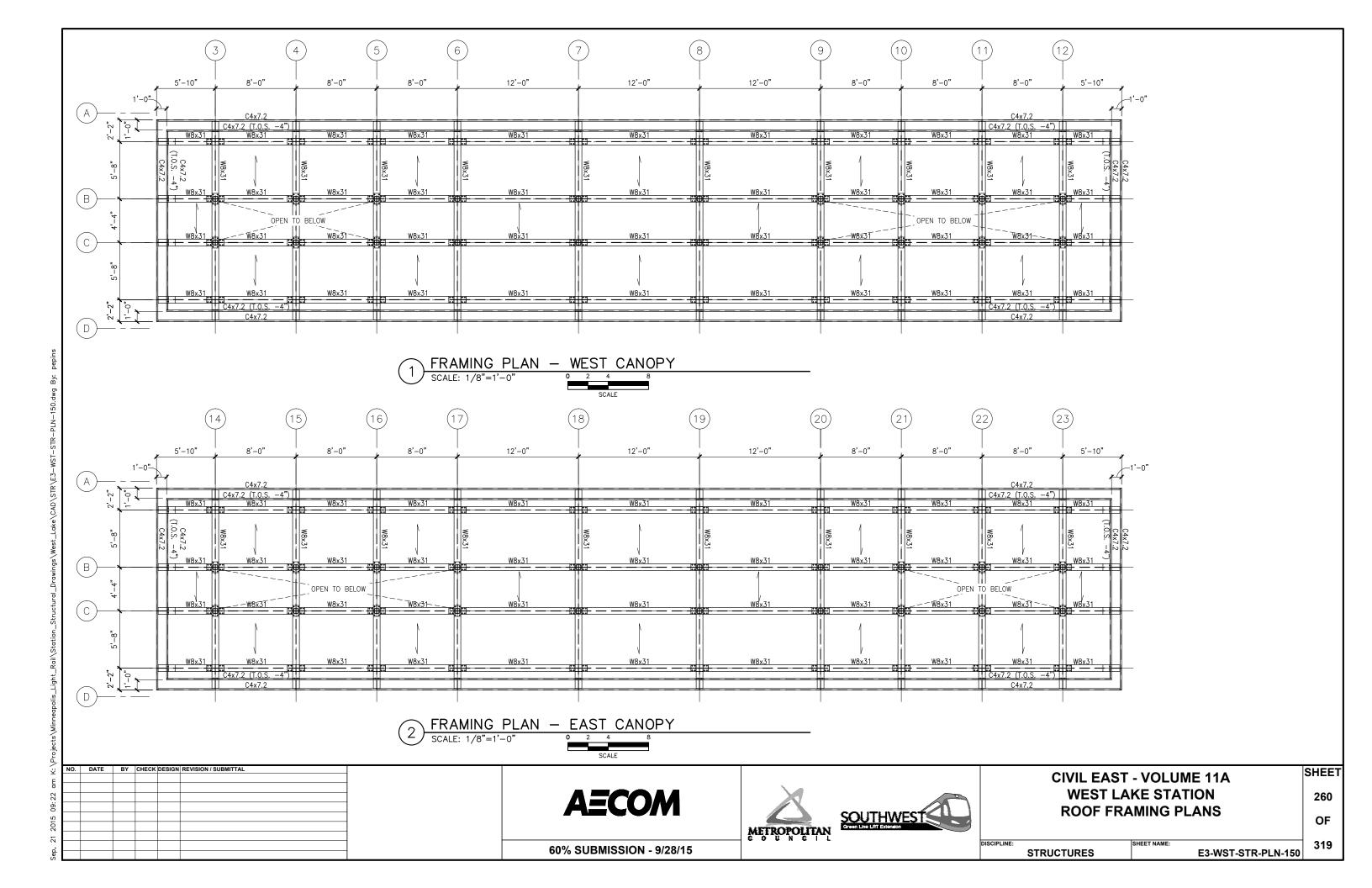


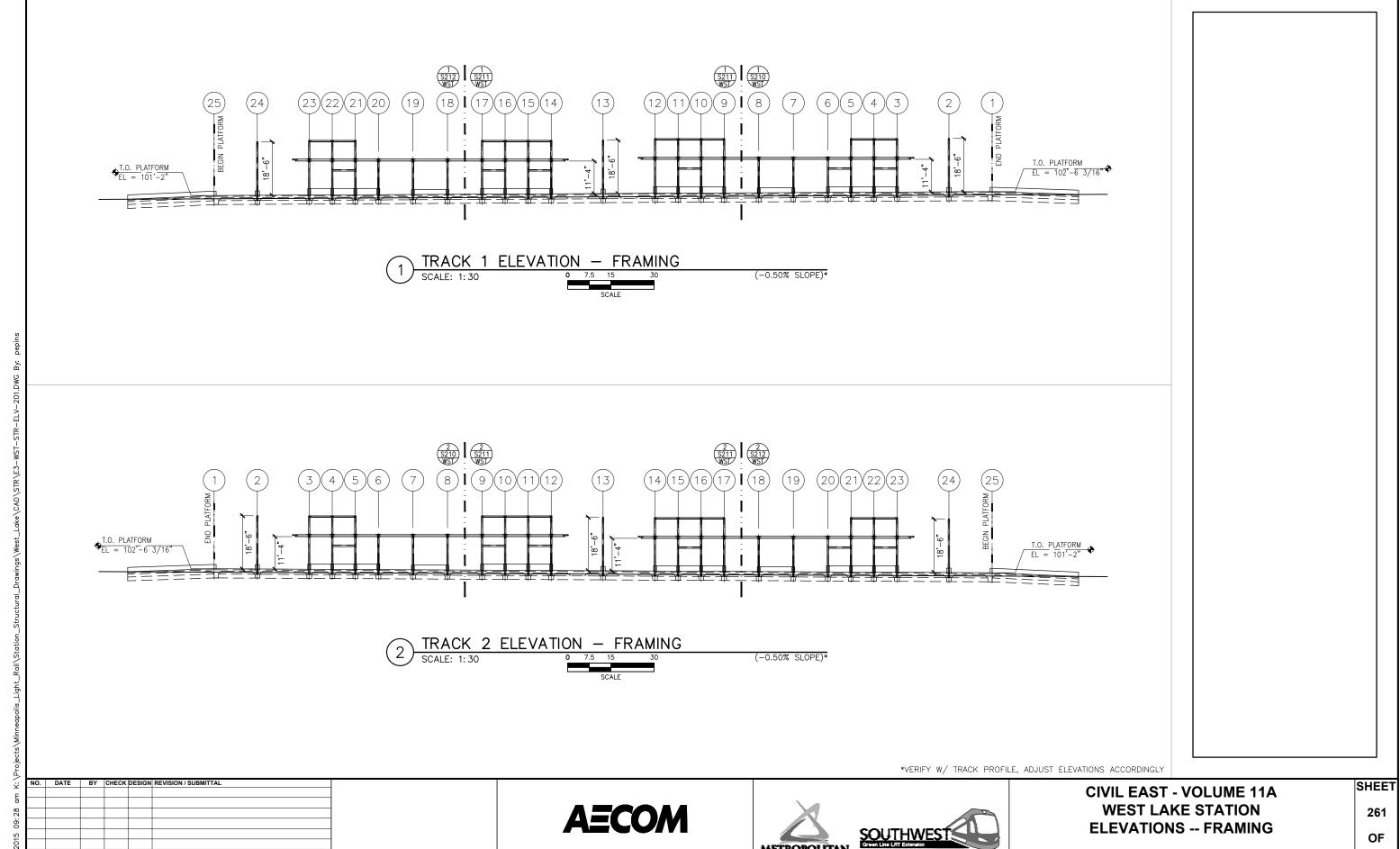










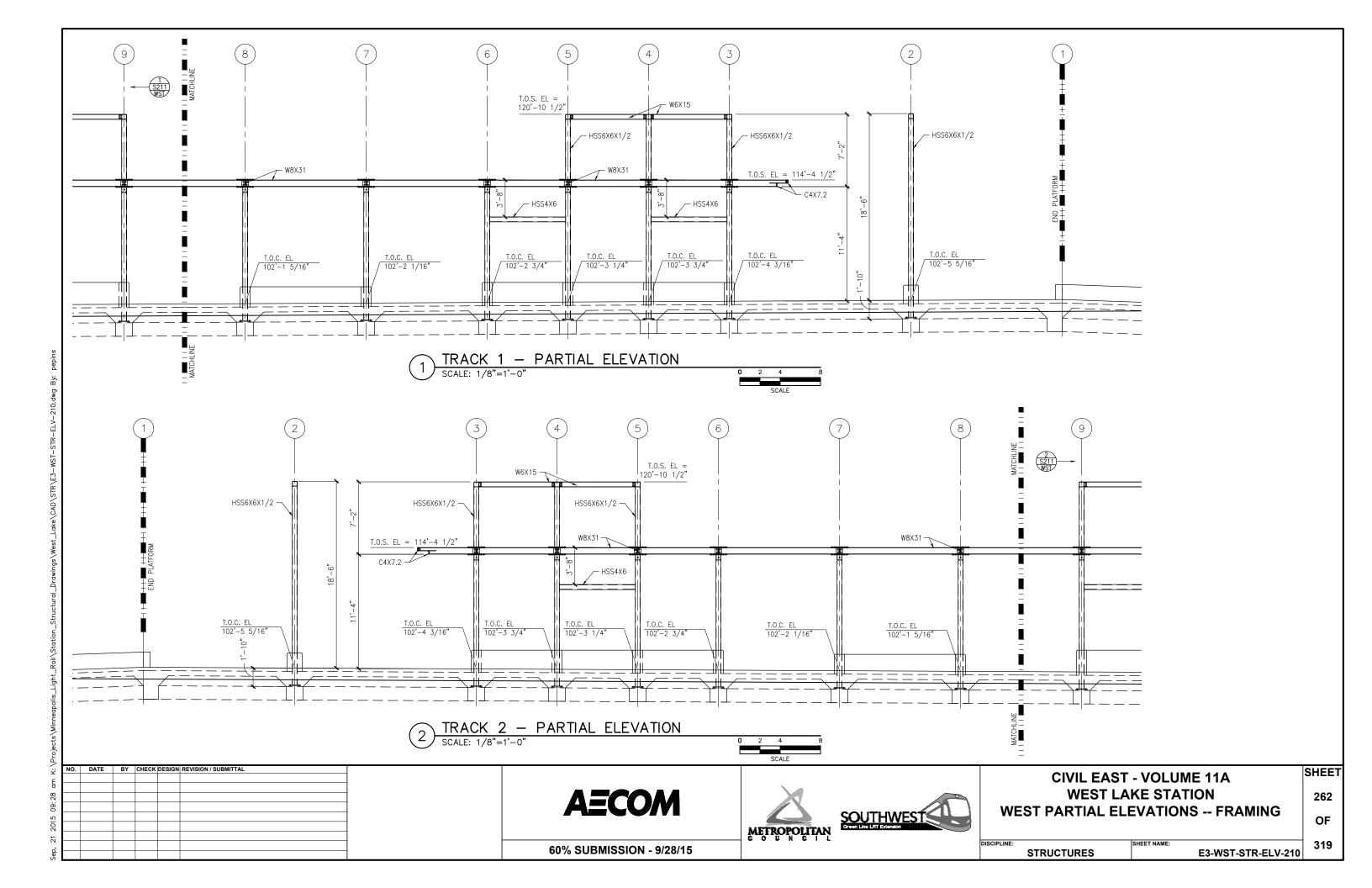


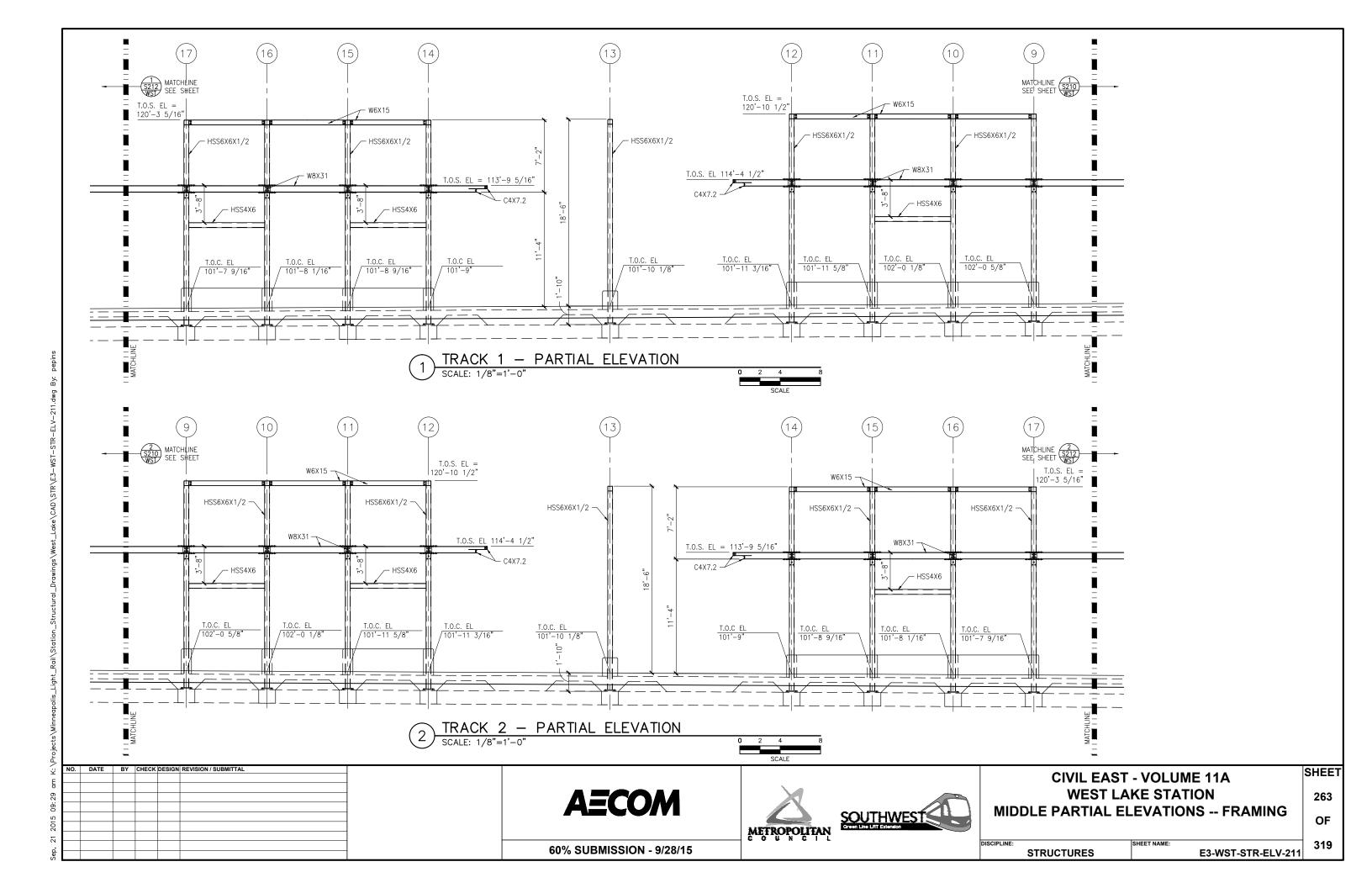
60% SUBMISSION - 9/28/15

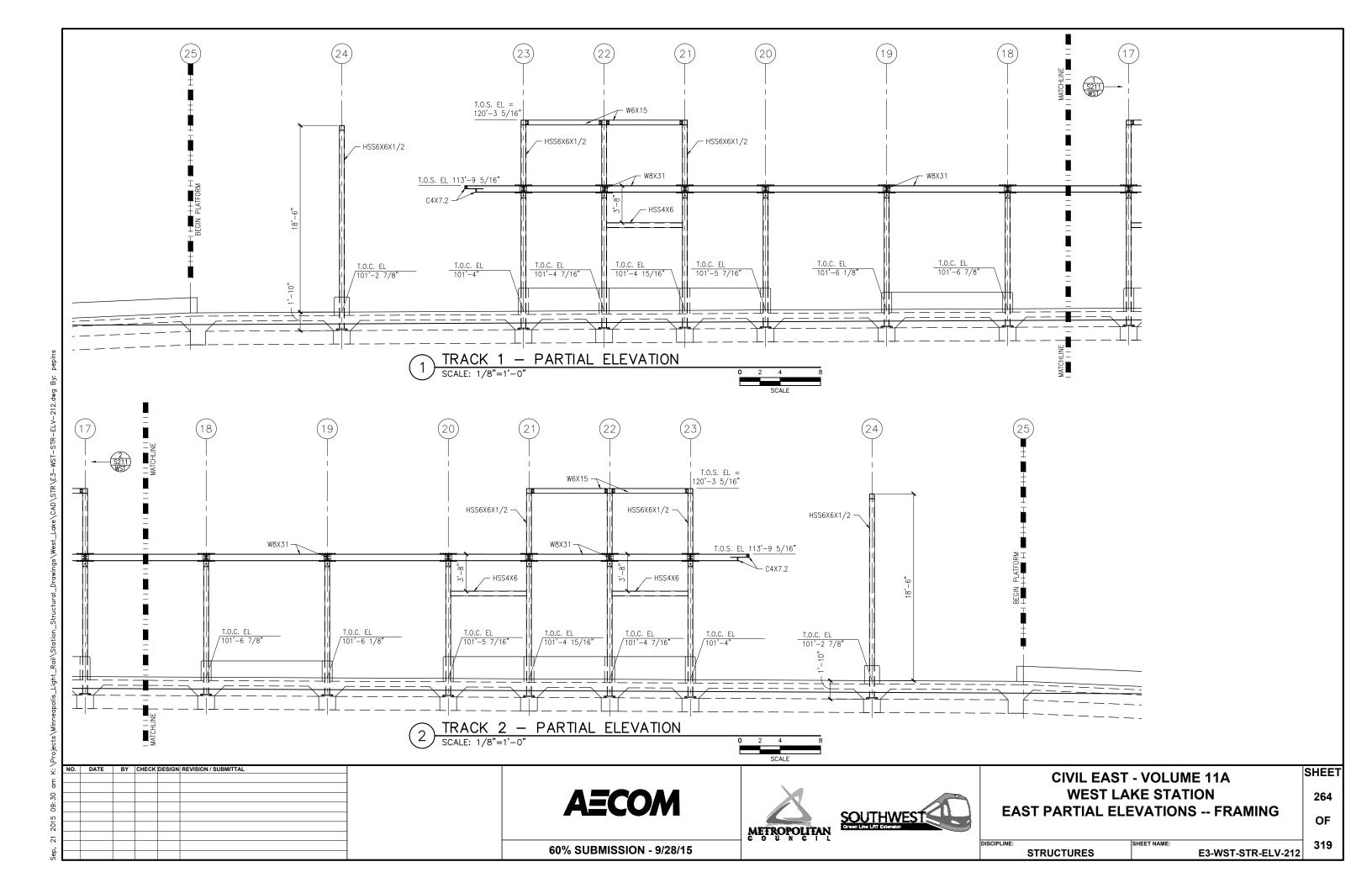
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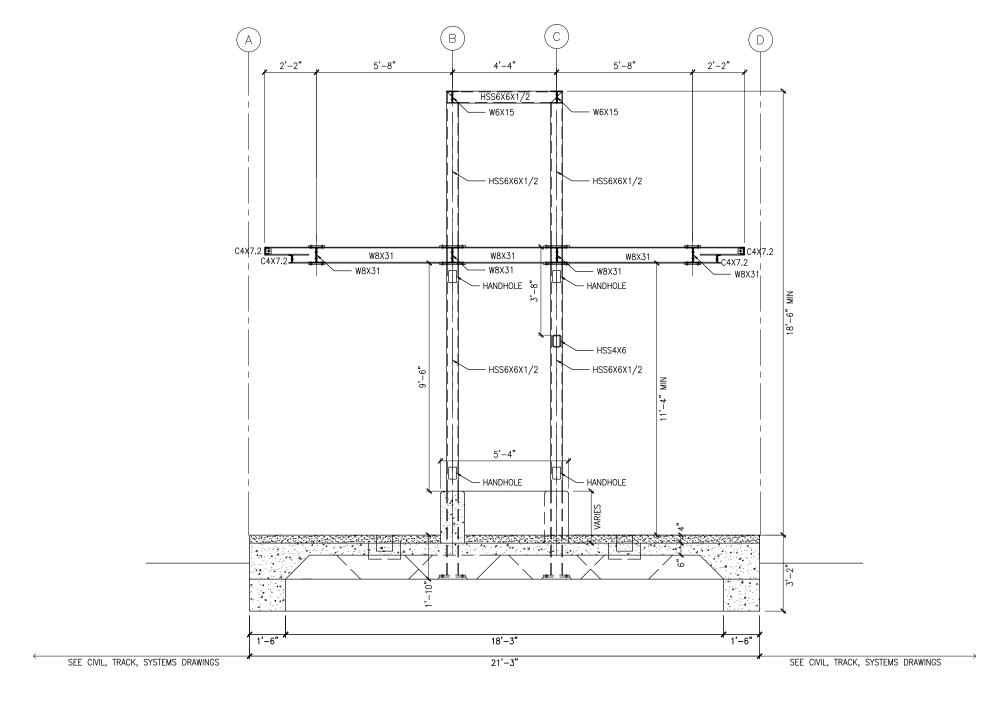
E3-WST-STR-ELV-201

**STRUCTURES** 









TYPICAL PLATFORM SECTION
SCALE: 1/4"=1'-0"



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**AECOM** 





**CIVIL EAST - VOLUME 11A WEST LAKE STATION TYPICAL PLATFORM SECTION** 

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SHEET

STRUCTURES

319 E3-WST-STR-SCT-300

60% SUBMISSION - 9/28/15

- DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.

#### **FOUNDATION NOTES:**

- 1. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES RELATING TO THE FOUNDATION PLAN SHALL GOVERN.
- 2. FOUNDATIONS SHALL BE CENTERED ON COLUMN GRID LINES, EG COLUMNS, WALLS, ETC. UNLESS NOTED OTHERWISE.
- 3. ALL FOUNDATION WORK RELATING TO THE INSTALLATION OF REBAR SHALL BE OBSERVED AND APPROVED BY THE ENGINEER.
- 4. WHERE SHOWN, BUT NOT SPECIFICALLY NOTED, PROVIDE STANDARD ACI 90° OR 180° HOOKS, AS APPLICABLE, TO REBAR.
- 5. FOUNDATION DESIGN IS BASED ON INFORMATION AND RECOMMENDATIONS PROVIDED BY AMERICAN ENGINEERING TESTING IN THEIR PRELIMINARY REPORT OF GEOTECHNICAL EXPLORATION AND REVIEW REPORT No. 01=05697.01 DATED 8/19/2014.
- 6. PERCHED GROUNDWATER MAY BE ENCOUNTERED WITHIN FOUNDATION EXCAVATIONS. REMOVE WATER TO FACILITATE FOUNDATION CONSTRUCTION.

# LEGEND:

TOF 96'-10 DENOTES TOP OF FOOTING ELEVATION AT 96'-10"

( ) 12" CIP STEEL PILE 80' LENGTH

STEEL TUBE COLUMN - SEE FRAMING PLANS



CAST IN PLACE CONCRETE PILE CAP 2'-6"L X 2'-6"W X 2'-6"D

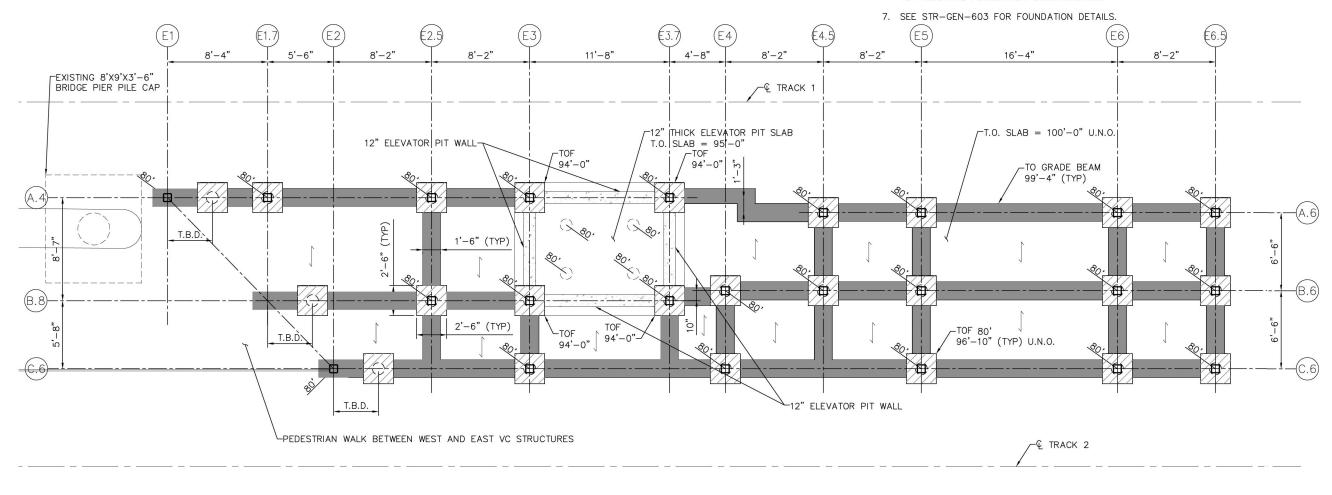


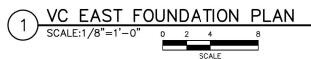
CAST IN PLACE CONCRETE GRADE BEAM "VARIES"L X 1'-6"W X 2'-6"D



6" SLAB-ON-GRADE WITH #4 @9" O.C. LONGITUDINAL & TRANSVERSE REINFORCEMENT PLACED AT MID-DEPTH.

> ELEVATION 100'-0" = SEE ARCHITECTURAL TRACK ELEVATION AT CENTER OF PEDESTRIAN CROSSING.





		<b>AECOM</b> Kimley»Horr
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**CIVIL EAST - VOLUME 11A WEST LAKE STATION** VC EAST **FOUNDATION PLAN** 

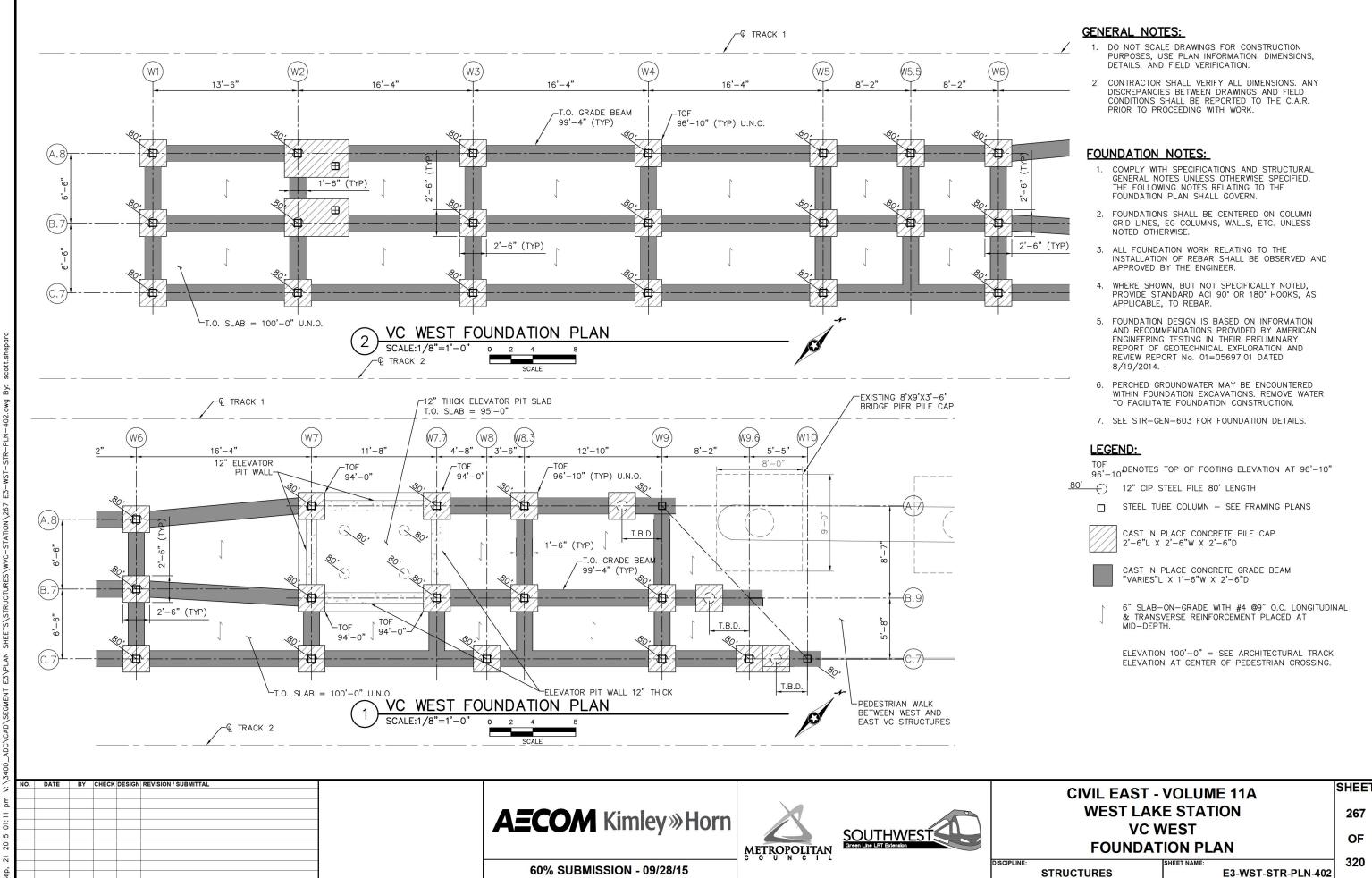
OF 320

SHEET

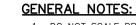
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DISCIPLINE 60% SUBMISSION - 09/28/15

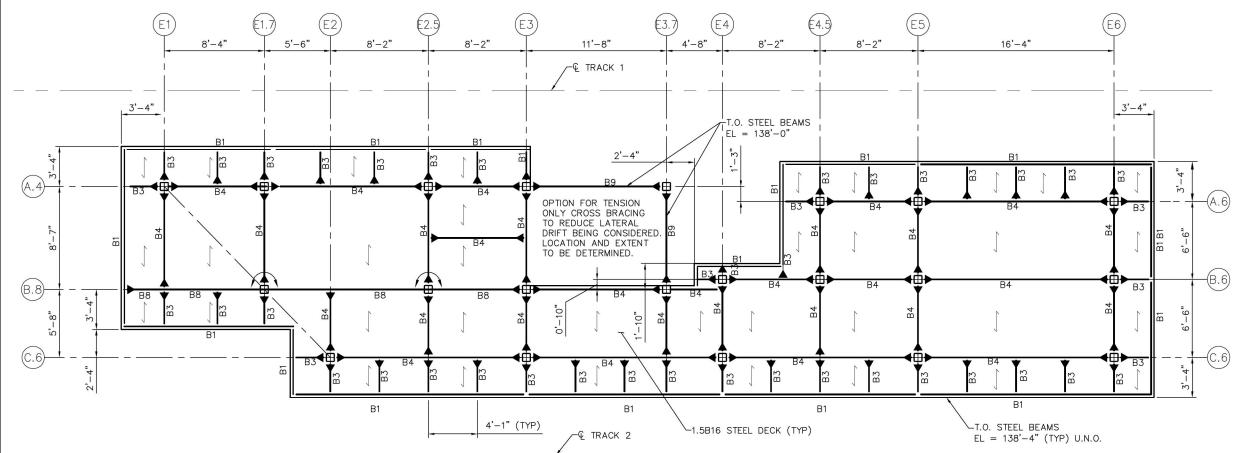
**STRUCTURES** E3-WST-STR-PLN-401



E3-WST-STR-PLN-402



- DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
- 3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.



VC EAST MAIN ROOF

SCALE:1/8"=1'-0"

## **ROOF PLAN NOTES**

- 1. TOP OF STEEL BEAMS ELEVATION AS NOTED ON
- 2. INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK.
- MOMENT CONNECTIONS ARE DENOTED THUS ()
   ON PLAN OR PREQUALIFIED SHOP WELDED OR
   FIELD WELDED CONNECTION.
- 4. INDICATES BEAM IS CONTINUOUS OVER COLUMN.
- 5. DENOTES HSS8X8X5/8 TUBE STEEL COLUMN
- 6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

SCHEDULE
SIZE
C12x20.7
W8x18
W12x16
HSS12x6x2
HSS12x6x½
HSS18x6x
HSS18x6x½
HSS16x8x½
HSS6x4x <del>1</del> 8

**AECOM** Kimley»Horn

METROPOLITAN



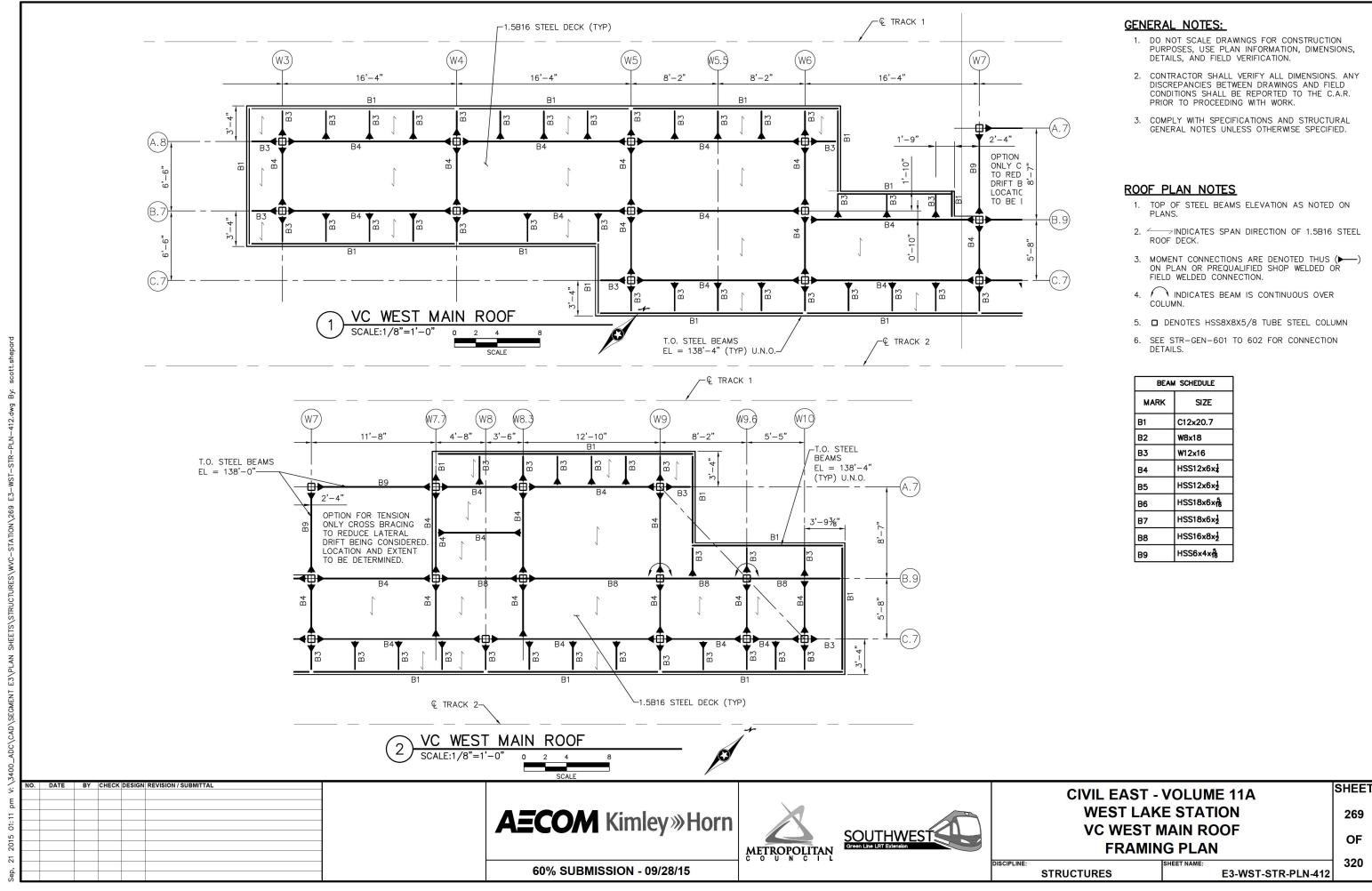
**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC EAST MAIN ROOF FRAMING PLAN** 

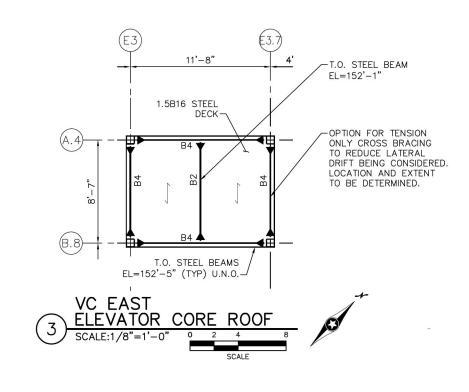
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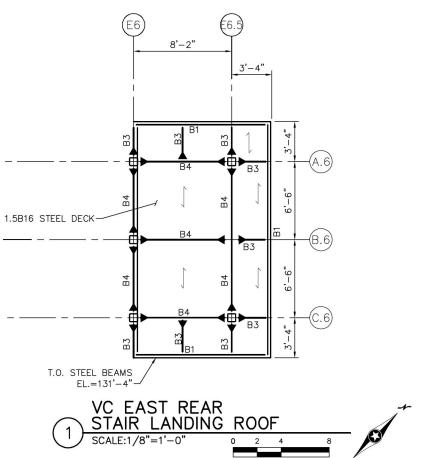
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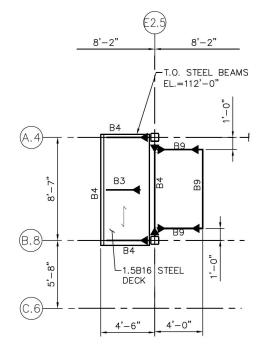
E3-WST-STR-PLN-411 **STRUCTURES** 

60% SUBMISSION - 09/28/15

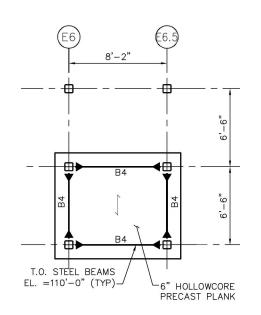


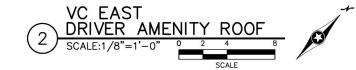












- DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK
- 3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## **ROOF PLAN NOTES**

- TOP OF STEEL BEAMS ELEVATION AS NOTED ON PLAN.
- 2. INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS NOTED OTHERWISE.
- 3. MOMENT CONNECTIONS ARE DENOTED THUS (▶——) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
- 4. INDICATES BEAM IS CONTINUOUS OVER
- 5. DENOTES HSS8X8X5/8 COLUMN
- 6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

BEAM	SCHEDULE
MARK	SIZE
B1	C12x20.7
B2	W8x18
В3	W12x16
B4	HSS12x6x ¹ / ₄
B5	HSS12x6x2
B6	HSS18x6x
B7	HSS18x6x2
B8	HSS16x8x2
B9	HSS6x4x16

**AECOM** Kimley»Horn

60% SUBMISSION - 09/28/15



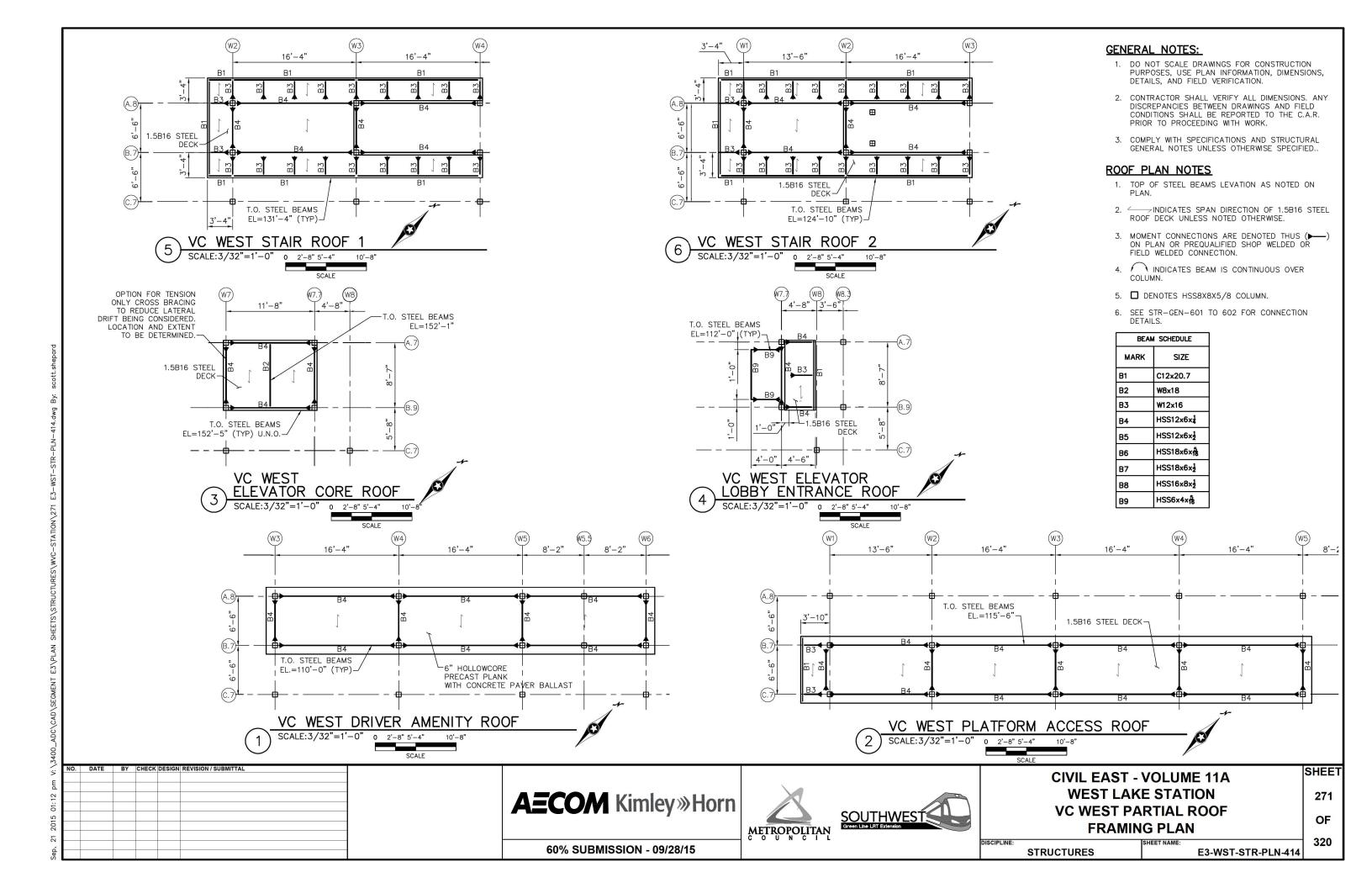


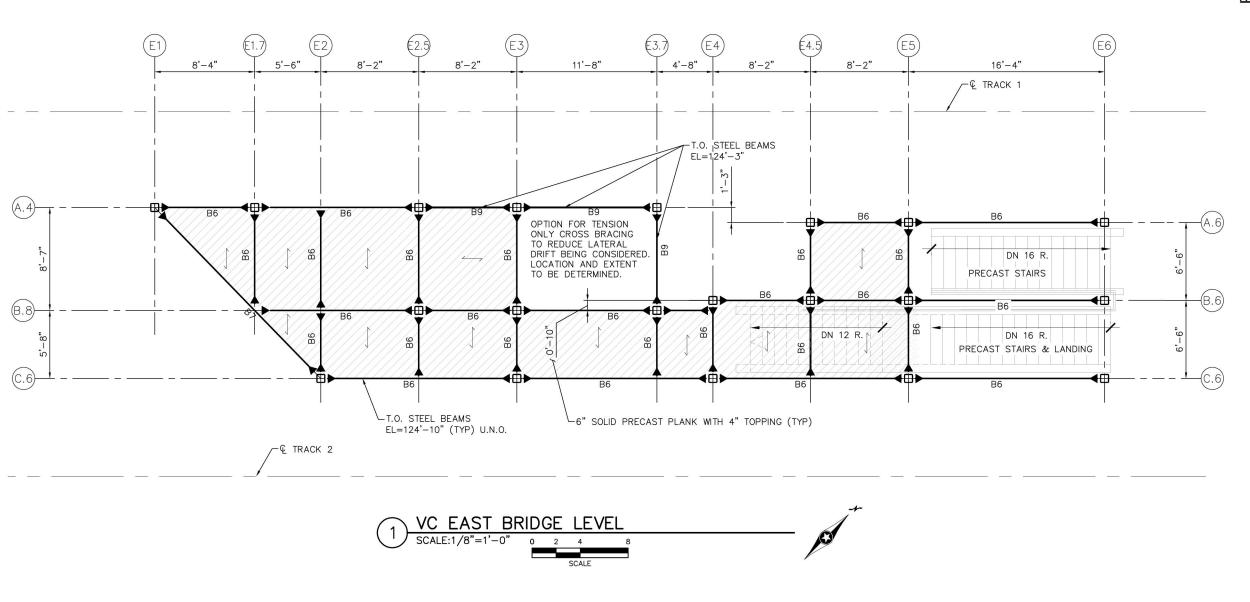
**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC EAST PARTIAL ROOF FRAMING PLAN** 

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SHEET

E3-WST-STR-PLN-413 **STRUCTURES** 





- DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
- 3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## **ROOF PLAN NOTES**

- 1. TOP OF STEEL BEAMS LEVATION AS NOTED ON
- 2. INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS NOTED OTHERWISE.
- 3. MOMENT CONNECTIONS ARE DENOTED THUS (▶——) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
- 4. INDICATES BEAM IS CONTINUOUS OVER
- 5. DENOTES HSS8X8X5/8 COLUMN.
- 6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

BEAM SCHEDULE					
MARK	SIZE				
B1	C12x20.7				
B2	W8x18				
В3	W12x16				
B4	HSS12x6x ²				
B5	HSS12x6x½				
B6	HSS18x6x <del>1</del> 6				
B7	HSS18x6x½				
B8	HSS16x8x½				
B9	HSS6x4x <del>1</del> 6				

**AECOM** Kimley»Horn

60% SUBMISSION - 09/28/15





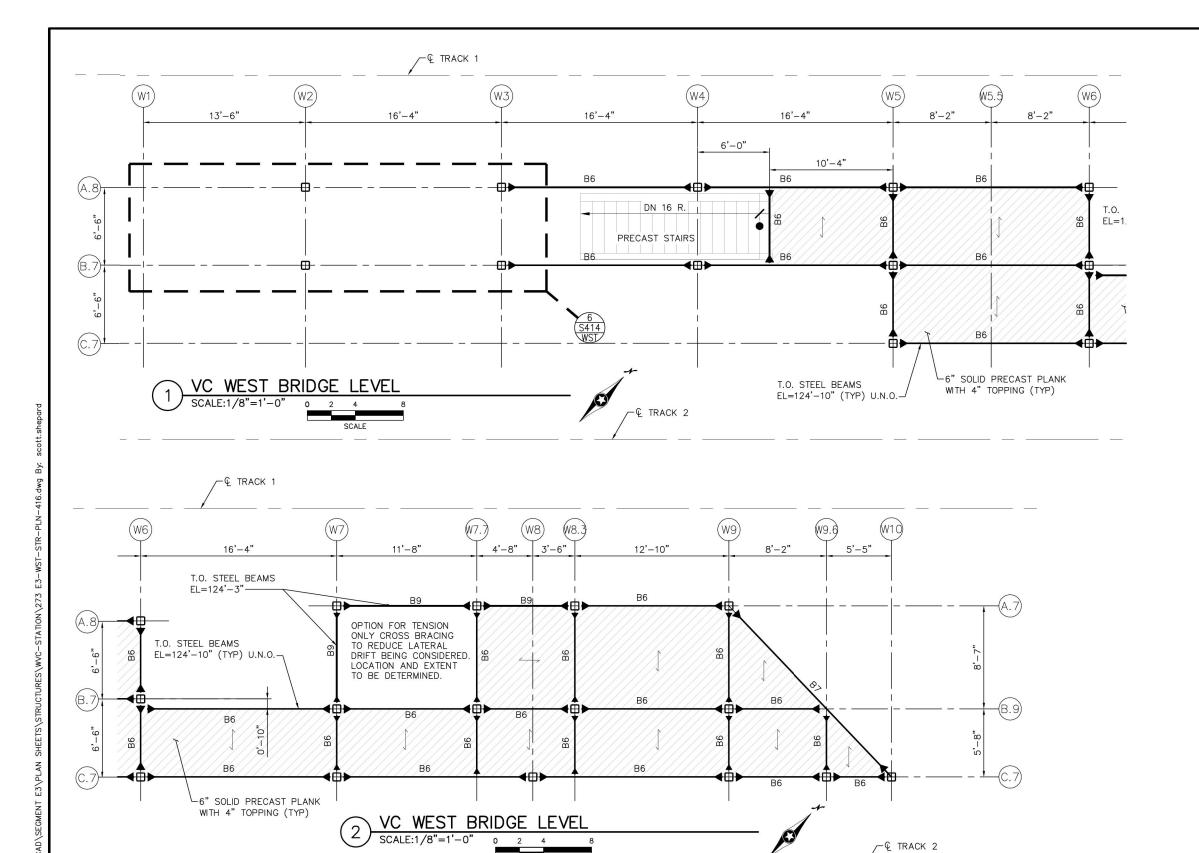
**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC EAST BRIDGE LEVEL FRAMING PLAN** 

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E3-WST-STR-PLN-415



- DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK
- 3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## **ROOF PLAN NOTES**

- 1. TOP OF STEEL BEAMS LEVATION AS NOTED ON
- 2. INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS NOTED OTHERWISE.
- 3. MOMENT CONNECTIONS ARE DENOTED THUS ( )
  ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
- 4. INDICATES BEAM IS CONTINUOUS OVER COLUMN.
- 5. DENOTES HSS8X8X5/8 COLUMN.
- 6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

BEAM SCHEDULE					
MARK	SIZE				
B1	C12x20.7				
B2	W8x18				
В3	W12x16				
B4	HSS12x6x ²				
B5	HSS12x6x½				
В6	HSS18x6x16				
B7	HSS18x6x½				
B8	HSS16x8x2				
В9	HSS6x4x <del>1</del> 8				

**CIVIL EAST - VOLUME 11A WEST LAKE STATION AECOM** Kimley»Horn SOUTHWEST COMPANY OF THE PROPERTY OF THE PROPE **VC WEST BRIDGE LEVEL PLAN** METROPOLITAN **FRAMING PLAN** 

E3-WST-STR-PLN-416

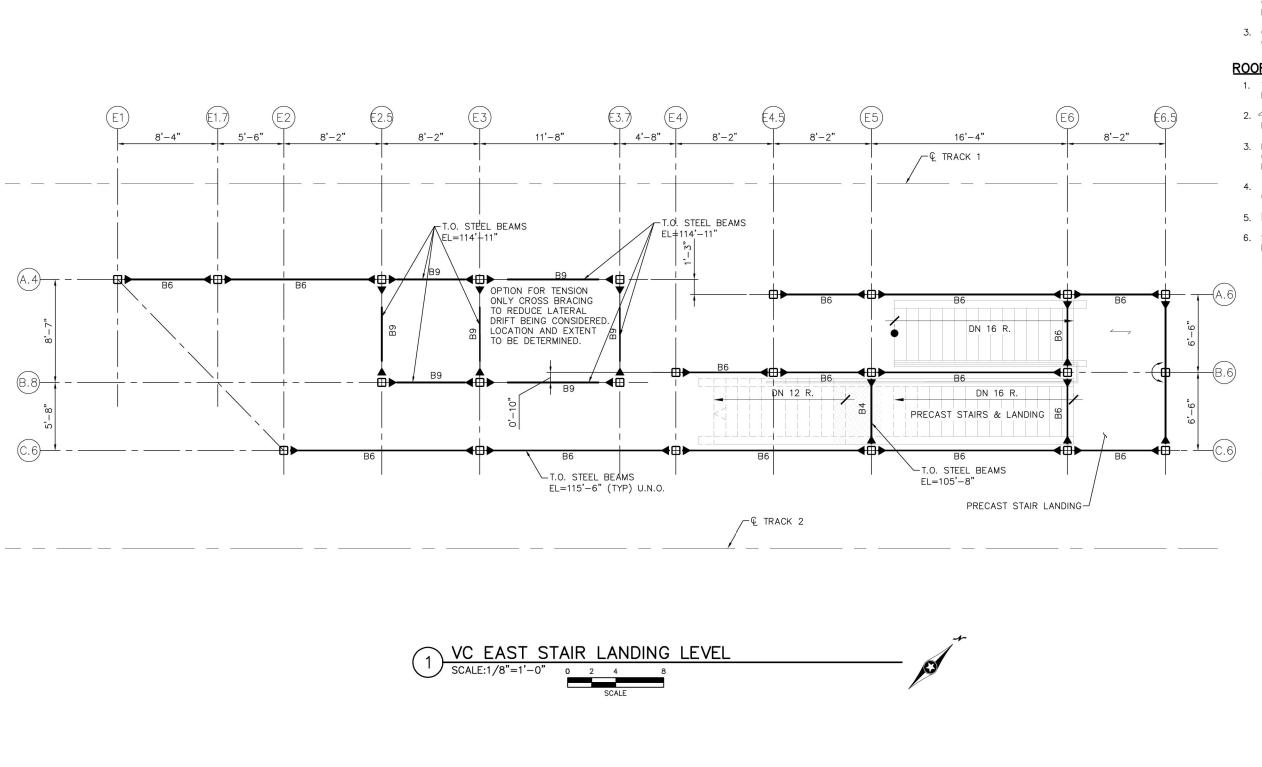
OF 320

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60% SUBMISSION - 09/28/15

**STRUCTURES** 



- DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK.
- 3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

## **ROOF PLAN NOTES**

- TOP OF STEEL BEAMS LEVATION AS NOTED ON PLAN.
- 2. ——INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS NOTED OTHERWISE.
- 3. MOMENT CONNECTIONS ARE DENOTED THUS (▶——) ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
- 4. INDICATES BEAM IS CONTINUOUS OVER COLUMN.
- 5. DENOTES HSS8X8X5/8 COLUMN.
- 6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

BEA	M SCHEDULE
MARK	SIZE
B1	C12x20.7
B2	W8x18
В3	W12x16
B4	HSS12x6x ¹
B5	HSS12x6x2
B6	HSS18x6x <del>1</del> 8
B7	HSS18x6x2
B8	HSS16x8x2
B9	HSS6x4x <del>16</del>

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**AECOM** Kimley»Horn

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CIVIL EAST - VOLUME 11A
WEST LAKE STATION
VC EAST STAIR LANDING LEVEL
FRAMING PLAN

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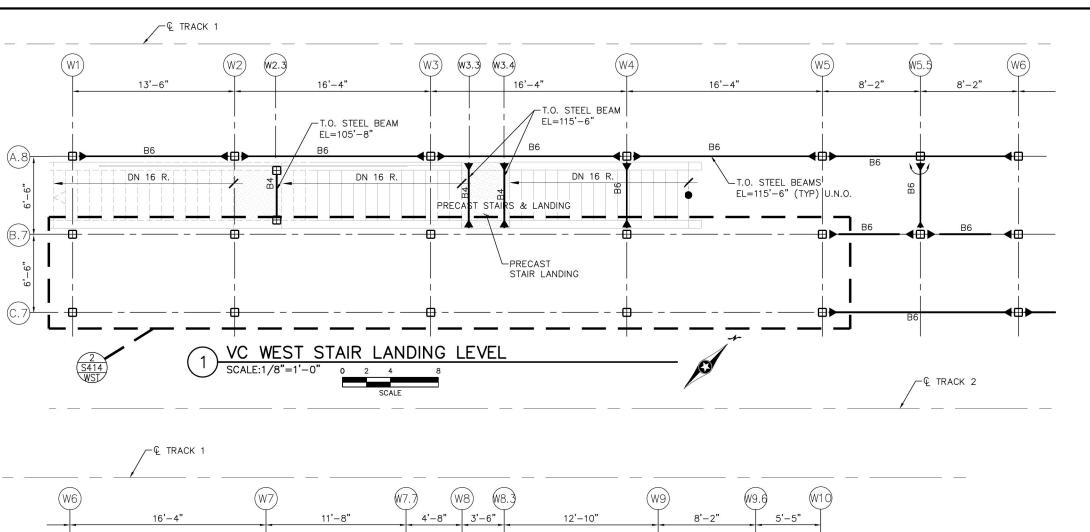
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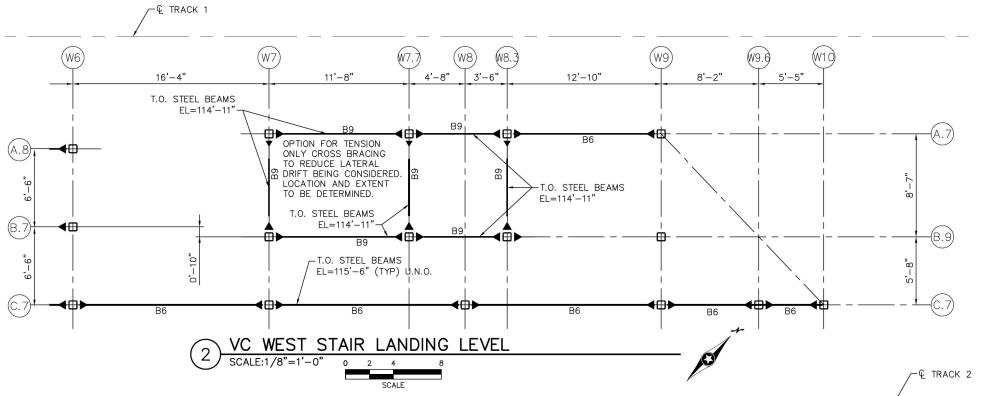
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E3-WST-STR-PLN-417

320 PLN-417





- DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES, USE PLAN INFORMATION, DIMENSIONS, DETAILS, AND FIELD VERIFICATION.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE C.A.R. PRIOR TO PROCEEDING WITH WORK
- 3. COMPLY WITH SPECIFICATIONS AND STRUCTURAL GENERAL NOTES UNLESS OTHERWISE SPECIFIED.

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- 1. TOP OF STEEL BEAMS LEVATION AS NOTED ON
- 2. INDICATES SPAN DIRECTION OF 1.5B16 STEEL ROOF DECK UNLESS NOTED OTHERWISE.
- 3. MOMENT CONNECTIONS ARE DENOTED THUS ( )
  ON PLAN OR PREQUALIFIED SHOP WELDED OR FIELD WELDED CONNECTION.
- 4. INDICATES BEAM IS CONTINUOUS OVER COLUMN.
- 5. DENOTES HSS8X8X5/8 COLUMN.
- 6. SEE STR-GEN-601 TO 602 FOR CONNECTION DETAILS.

SIZE 20.7
20.7
18
d6
12x6x <del>‡</del>
12x6x <del>1</del>
18x6x <del>5</del>
18x6x <del>1</del>
16x8x <del>1</del>
5x4x <del>1</del> 8

**AECOM** Kimley»Horn

60% SUBMISSION - 09/28/15

METROPOLITAN



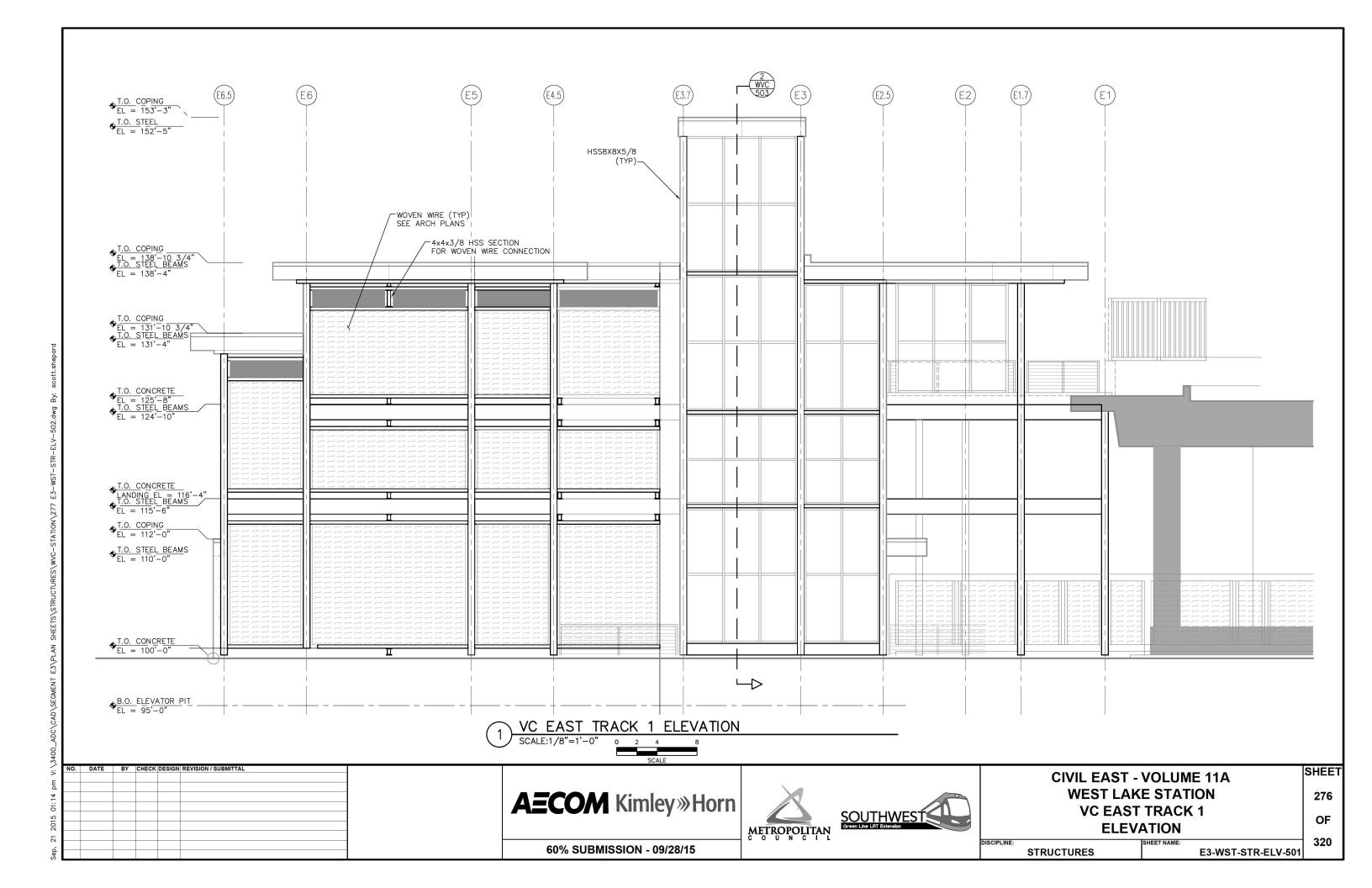
**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC WEST STAIR LANDING LEVEL FRAMING PLAN** 

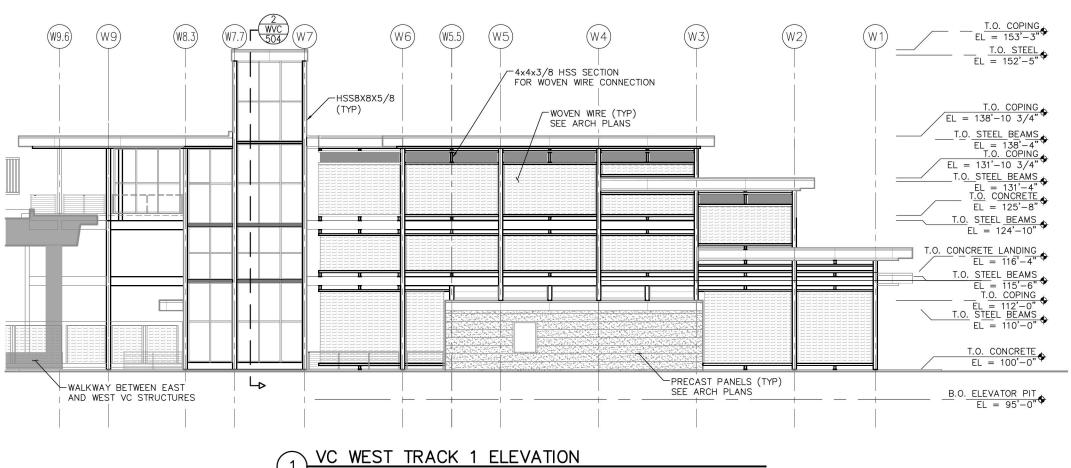
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**STRUCTURES** E3-WST-STR-PLN-418





**AECOM** Kimley»Horn





**CIVIL EAST - VOLUME 11A WEST LAKE STATION** VC WEST TRACK 1 **ELEVATION** 

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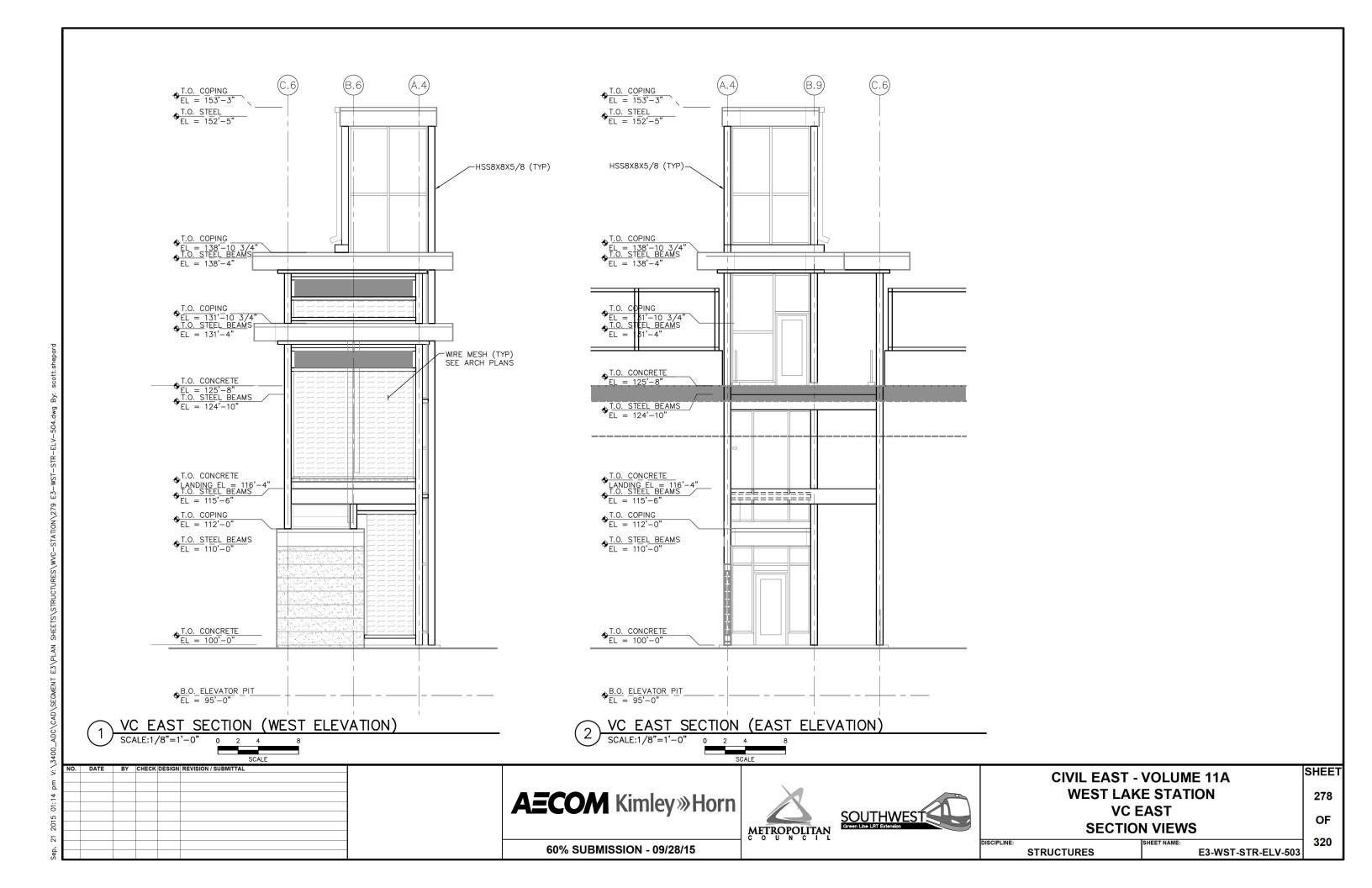
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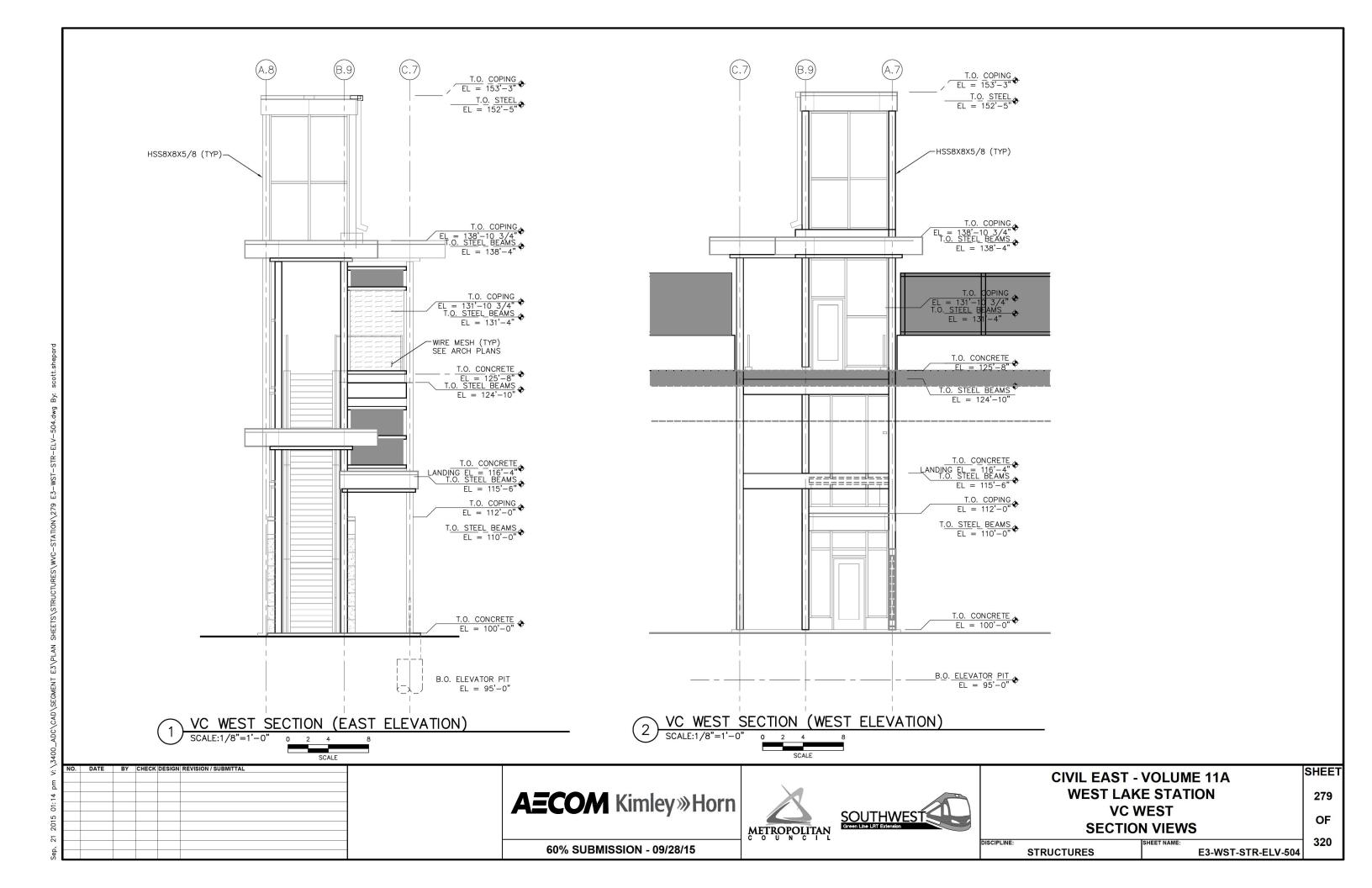
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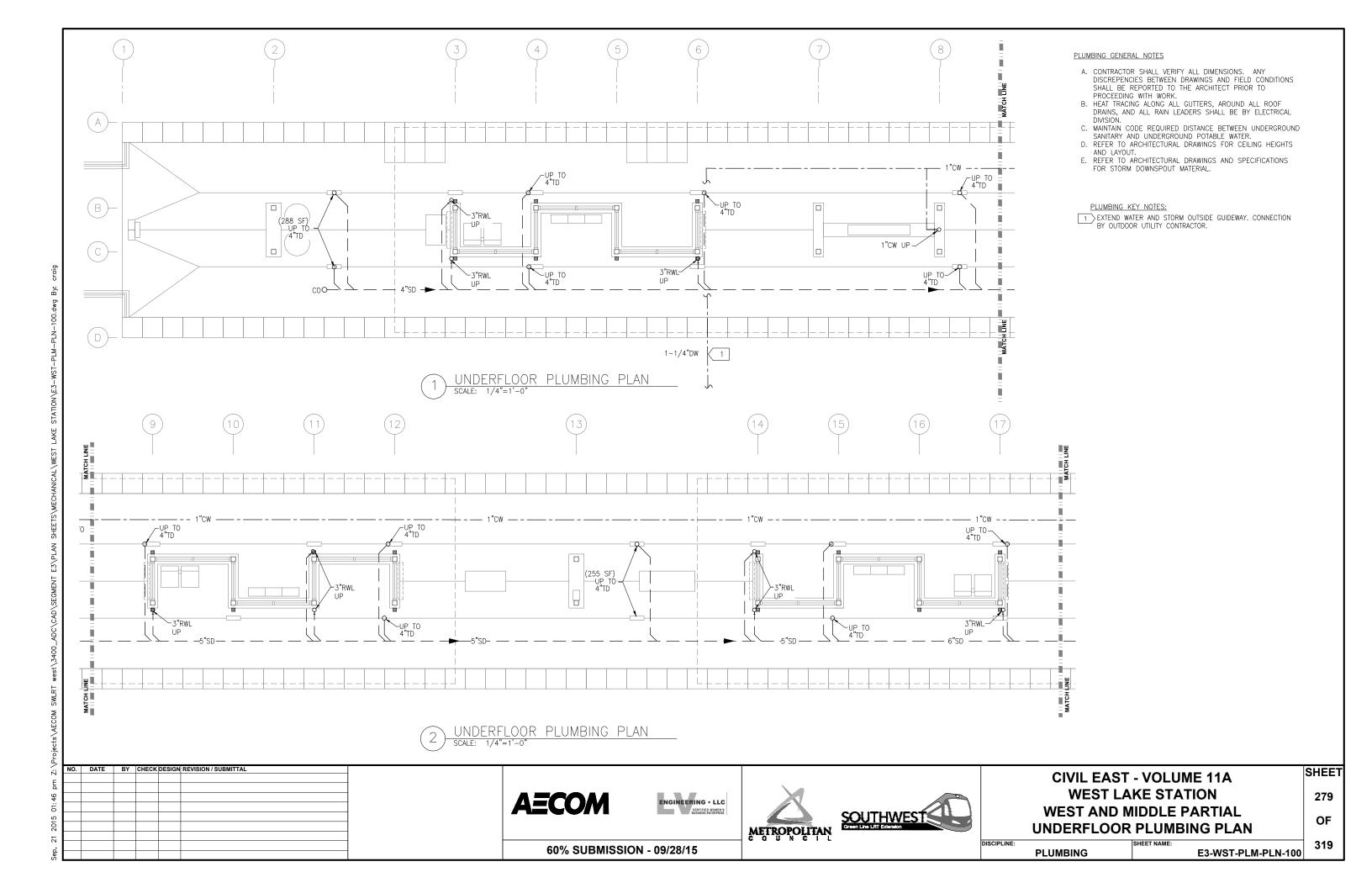
**STRUCTURES** 

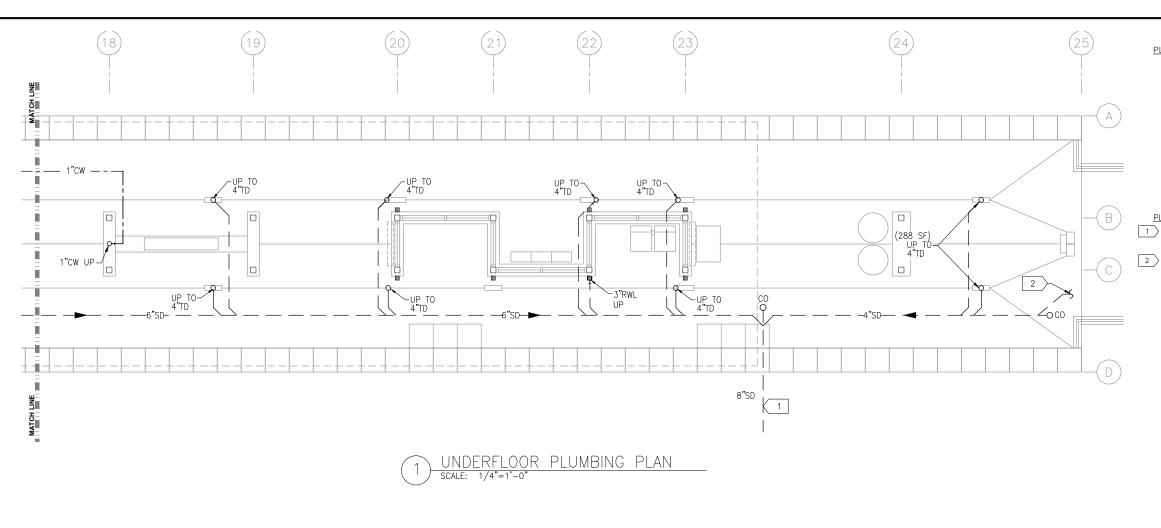
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- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.

  C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN
- UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING
- HEIGHTS AND LAYOUT.

  E. REFER TO ARCHITECTURAL DRAWINGS AND
- SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

#### PLUMBING KEY NOTES:

- 1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.
- 2 8" UNDERFLOOR STORM FROM VERTICAL CIRCULATION.

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

**AECOM** 







**CIVIL EAST - VOLUME 11A WEST LAKE STATION EAST PARTIAL UNDERFLOOR PLUMBING PLAN** 

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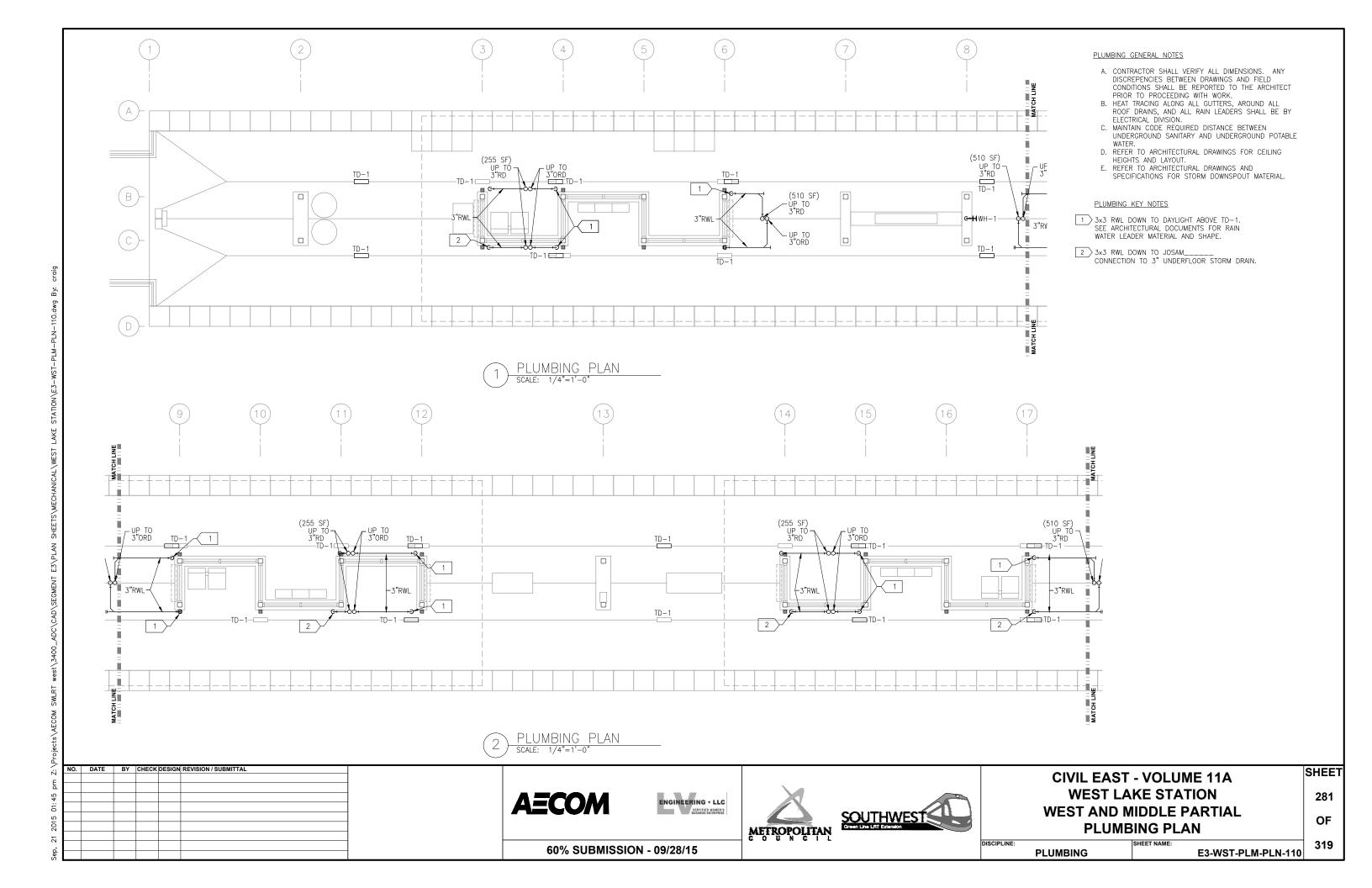
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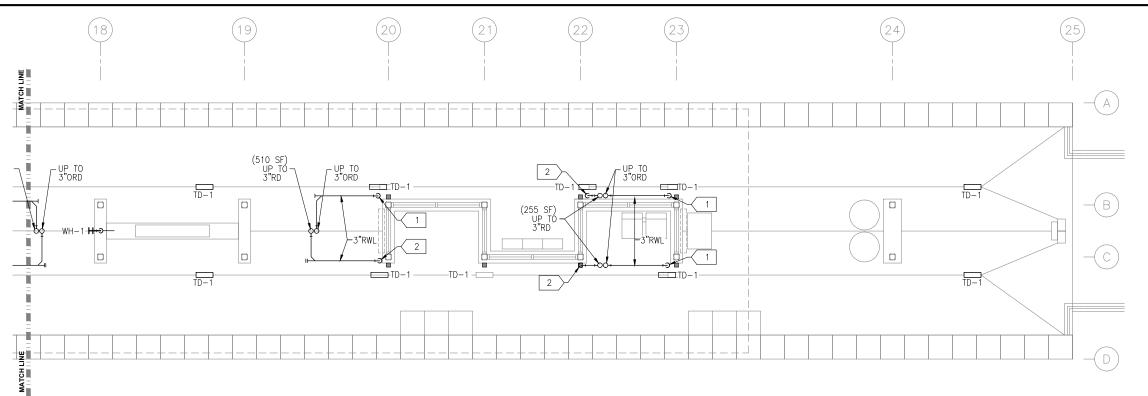
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60% SUBMISSION - 09/28/15

**PLUMBING** 





- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.

  D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS
- AND LAYOUT.
- E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

#### PLUMBING KEY NOTES

- 3x3 RWL DOWN TO DAYLIGHT ABOVE TD-1. SEE ARCHITECTURAL DOCUMENTS FOR RAIN WATER LEADER MATERIAL AND SHAPE.
- 2 3x3 RWL DOWN TO JOSAM_____ CONNECTION TO 3" UNDERFLOOR STORM DRAIN.

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

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL









**CIVIL EAST - VOLUME 11A WEST LAKE STATION EAST PARTIAL PLUMBING PLAN AND RISER DIAGRAMS** 

**PLUMBING** 

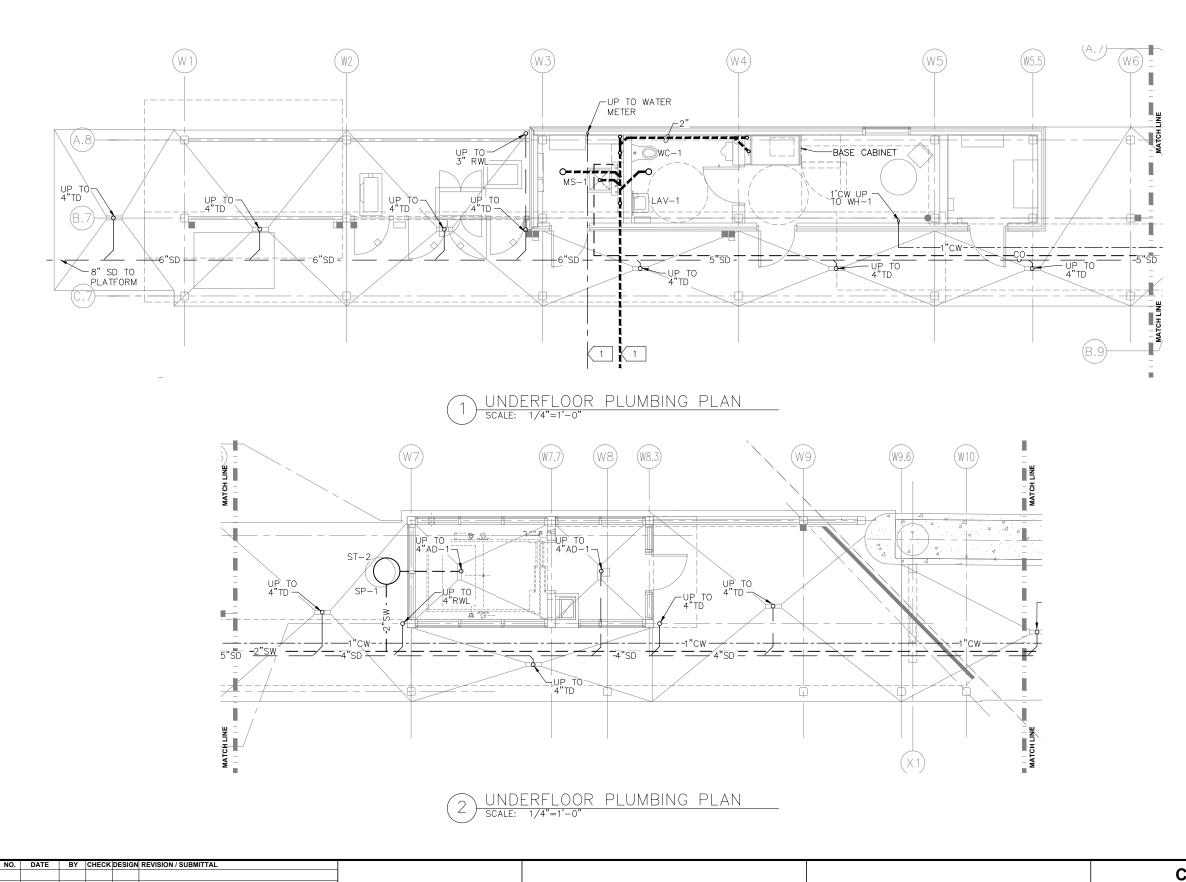
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OF

60% SUBMISSION - 09/28/15



- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
  ANY DISCREPENCIES BETWEEN DRAWINGS AND
  FIELD CONDITIONS SHALL BE REPORTED TO
  THE ARCHITECT PRIOR TO PROCEEDING WITH
  WORK
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
- D. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS AND LAYOUT.
  E. REFER TO ARCHITECTURAL DRAWINGS AND
- E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT MATERIAL.

#### PLUMBING KEY NOTES:

EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

CIVIL EAST - VOLUME 11A
WEST LAKE STATION
VC UNDERFLOOR WEST PLATFORM

LEVEL PLUMBING PLAN

DISCIPLINE: PLUMBING

E3-WST-PLM-PLN-130

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OF

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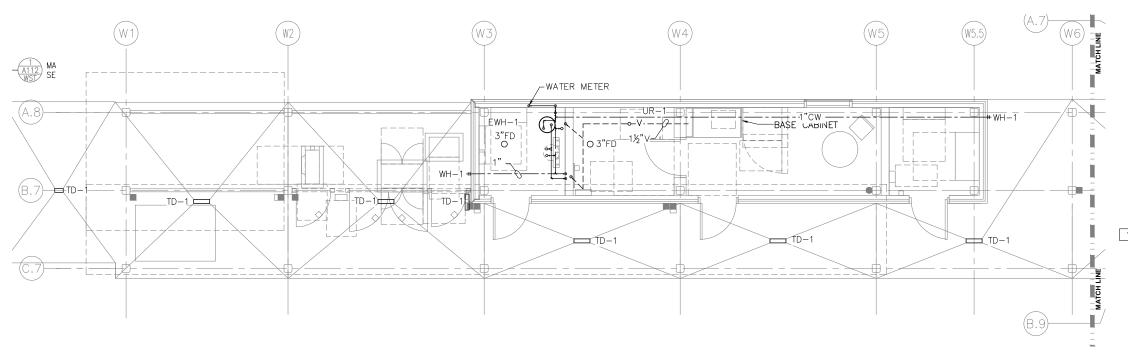
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ENGINEERING • LLC
CERTIFIED WOMEN'S
BUSINESS ENTERPRISE





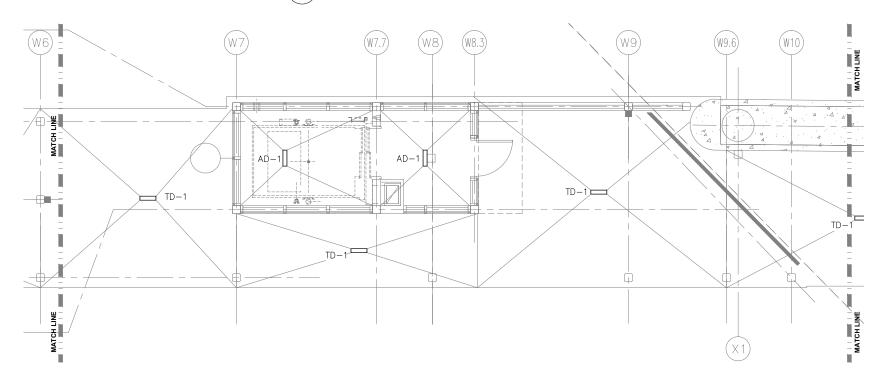
- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY DISCREPENCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH
- B. HEAT TRACING ALONG ALL GUTTERS, AROUND ALL ROOF DRAINS, AND ALL RAIN LEADERS SHALL BE BY ELECTRICAL DIVISION.
- C. MAINTAIN CODE REQUIRED DISTANCE BETWEEN UNDERGROUND SANITARY AND UNDERGROUND POTABLE WATER.
- D. REFER TO ARCHITECTURAL DRAWINGS FOR
- CELLING HEIGHTS AND LAYOUT.

  E. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR STORM DOWNSPOUT

#### PLUMBING KEY NOTES:

1 EXTEND WATER AND STORM OUTSIDE GUIDEWAY. CONNECTION BY OUTDOOR UTILITY CONTRACTOR.

# PLATFORM PLUMBING PLAN



PLATFORM PLUMBING PLAN

60% SUBMISSION - 09/28/15

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**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC WEST PLATFORM LEVEL PLUMBING PLAN** 

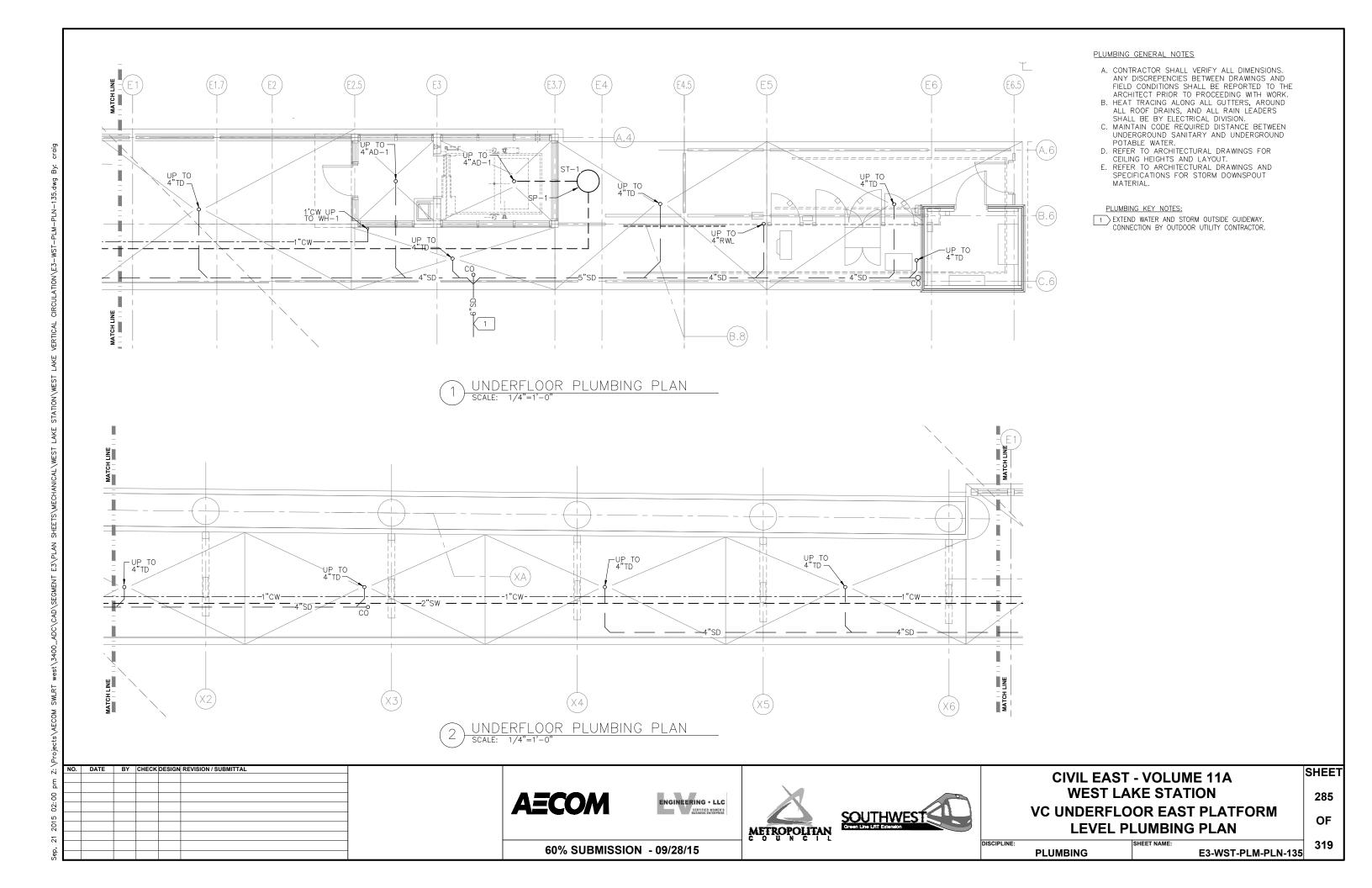
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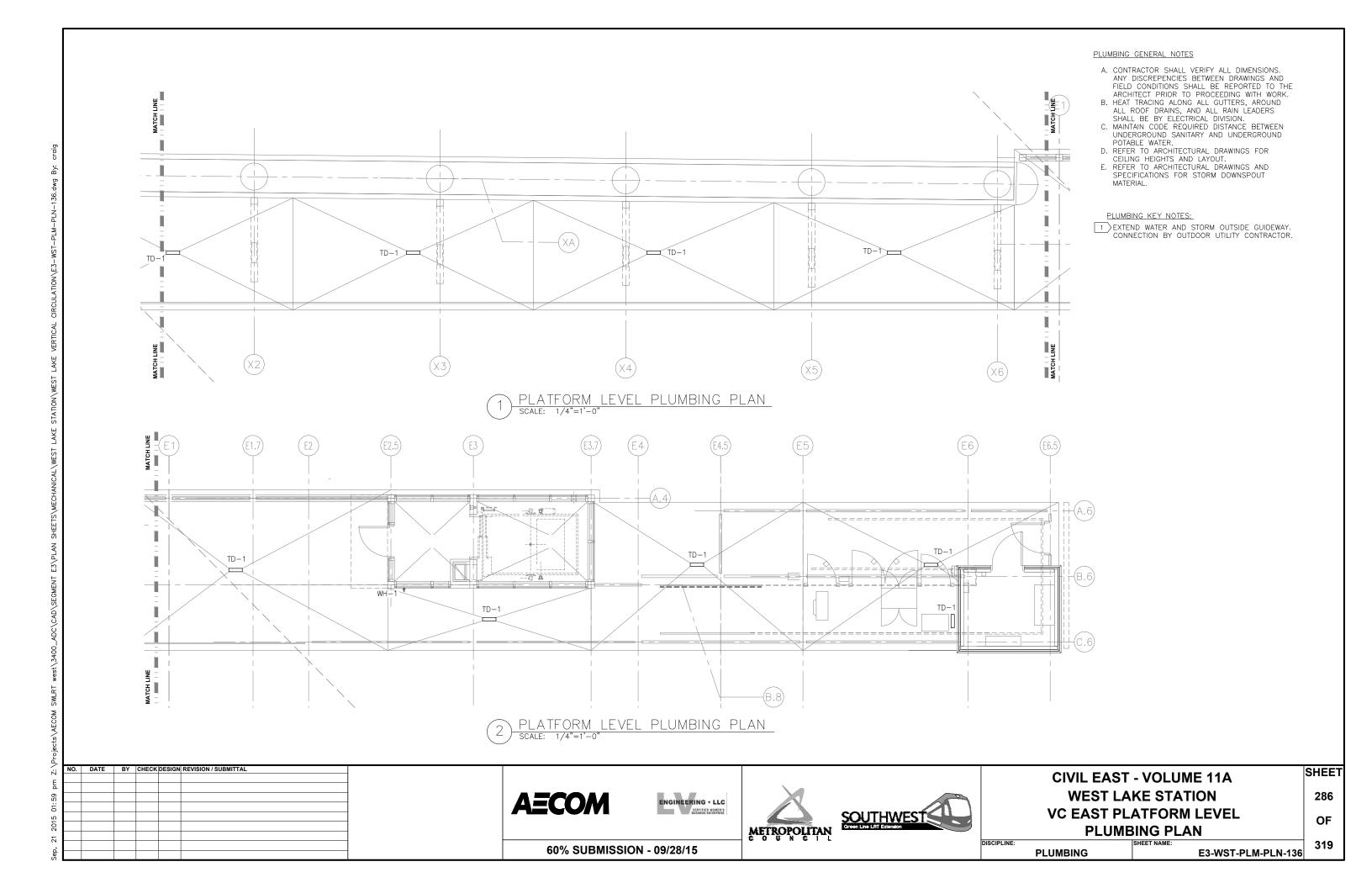
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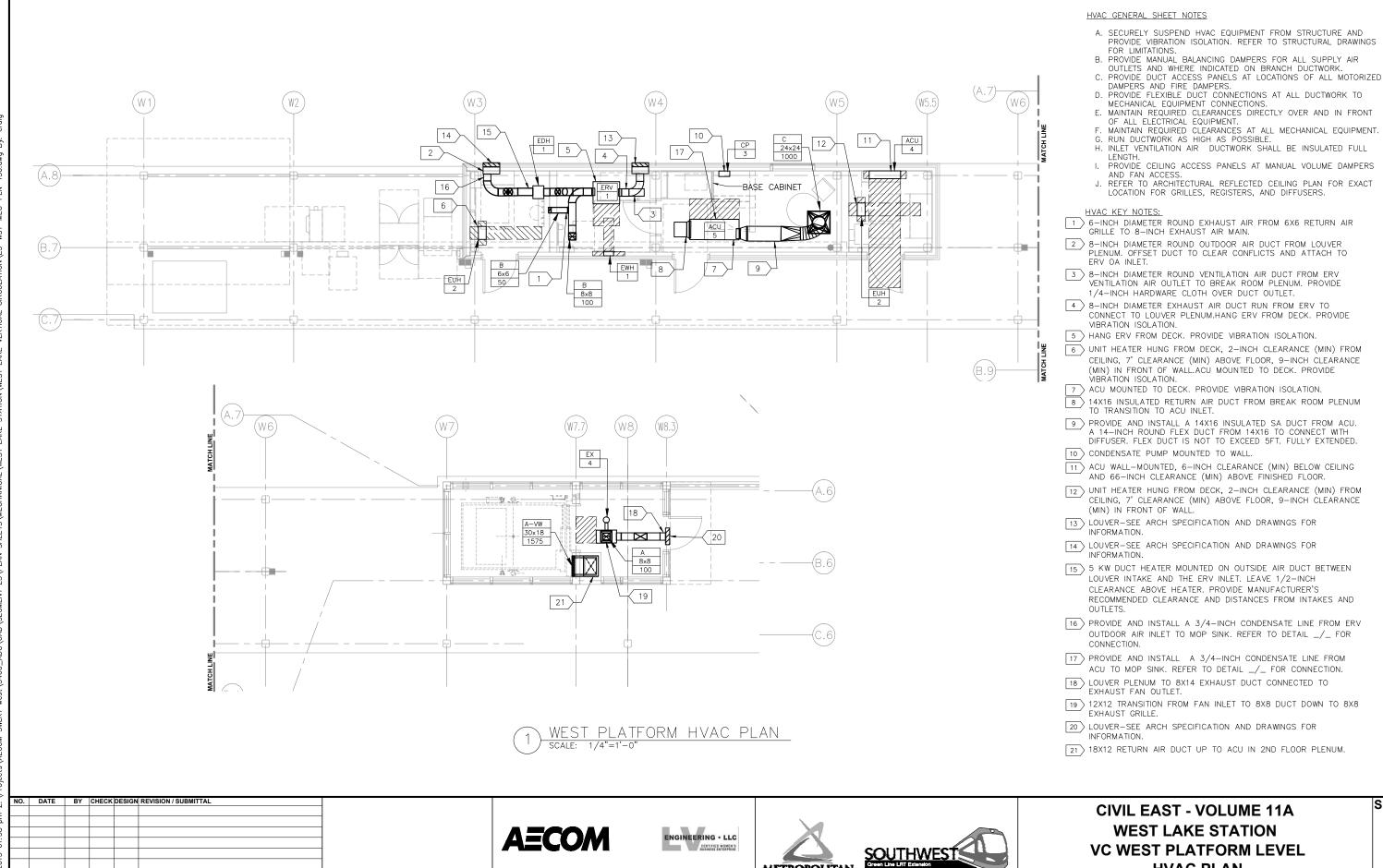
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DISCIPLINE: **PLUMBING** 

E3-WST-PLM-PLN-131







60% SUBMISSION - 09/28/15

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**HVAC PLAN** 

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OF

MECHANICAL

E3-WST-MEC-PLN-130

INTERMEDIATE HVAC PLAN

- HVAC GENERAL SHEET NOTES

  A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.
- B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
  C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL
  MOTORIZED DAMPERS AND FIRE DAMPERS.
- D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK TO
- MECHANICAL EQUIPMENT CONNECTIONS.

  E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
- F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL
- EQUIPMENT.
  G. RUN DUCTWORK AS HIGH AS POSSIBLE.
  H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
- I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME DAMPERS AND FAN ACCESS.
- J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

### HVAC KEY NOTES:

- 1 CONDENSING UNIT MOUNTED ON 4-INCH EQUIPMENT PAD.
- 2 CONDENSING UNIT MOUNTED ON 4-INCH EQUIPMENT PAD.
- 3 CONDENSING UNIT MOUNTED ON 4-INCH EQUIPMENT PAD.
- 12X18 RETURN DUCT UP TO ACU IN 2ND FLOOR PLENUM AND DOWN TO RETURN GRILLE IN HOISTWAY.

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**AECOM** 







**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC WEST INTERMEDIATE LEVEL HVAC PLAN** 

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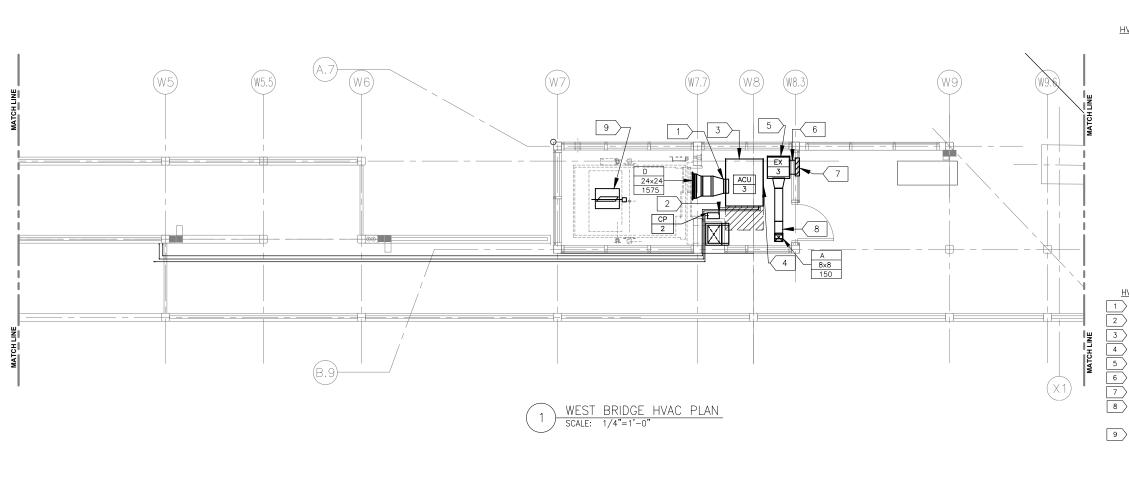
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60% SUBMISSION - 09/28/15

**MECHANICAL** 

E3-WST-MEC-PLN-131



- HVAC GENERAL SHEET NOTES

  A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.

  B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR
- OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
  C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL
- MOTORIZED DAMPERS AND FIRE DAMPERS.
  D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK
- TO MECHANICAL EQUIPMENT CONNECTIONS.
- E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
   F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL
- EQUIPMENT.
- RUN DUCTWORK AS HIGH AS POSSIBLE.
- H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
- PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME
- DAMPERS AND FAN ACCESS.

  J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

- 1 ACU SUPPLY OUTLET TO TRANSITION TO 24X24 TO REGISTER.
- 2 CONDENSATE PUMP MOUNTED ON WALL.
- 3 ACU MOUNTED TO DECK. PROVIDE VIBRATION ISOLATION.
- 4 RETURN AIR INLET DRAWING FROM PLENUM.
- 5 EXHAUST FAN HUNG FROM DECK. PROVIDE VIBRATION ISOLATION.
- 6 14X8 EXHAUST AIR DUCT TO LOUVER PLENUM.
- 7 LOUVER-SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION.
- 8 8X8 EXHAUST AIR DUCT FROM FROM EXHAUST GRILLE, TRANSITIONS TO A 12X12 DUCT TO CONNECT TO EXHAUST FAN INLENT.
- 9 24X20 OPENING TO MOTORIZED DAMPER FOR FIRE SERVICE SMOKE EVACUATION. OPENING IS LOCATED AT THE TOP OF HOISTWAY AND CONNECTS TO A GRAVITY RELIEF VENTILATOR MOUNTED ON THE

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**AECOM** 







**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC WEST BRIDGE LEVEL HVAC PLAN** 

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60% SUBMISSION - 09/28/15

**MECHANICAL** 

E3-WST-MEC-PLN-132

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EAST HVAC PLATFORM PLAN

- HVAC GENERAL SHEET NOTES

  A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.

  B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY
- AIR OUTLETS AND WHERE INDICATED ON BRANCH
- C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL MOTORIZED DAMPERS AND FIRE DAMPERS.

  D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK
- TO MECHANICAL EQUIPMENT CONNECTIONS.
- E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
- F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL EQUIPMENT.
- G. RUN DUCTWORK AS HIGH AS POSSIBLE.
  H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED
- I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME DAMPERS AND FAN ACCESS.
  J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR
- EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

- 1 LOUVER PLENUM TO 8X14 EXHAUST DUCT CONNECTED TO EXHAUST
- 2 12X12 TRANSITION FROM FAN INLET TO 8X8 DUCT DOWN TO 8X8 EXHAUST GRILLE.
- 3 LOUVER-SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION
- 4 CONDENSING UNIT MOUNTED ON 4-INCH EQUIPMENT PAD.
- 5 CONDENSING UNIT MOUNTED FROM STAIR AND WALL. 6'-6" CLEARANCE (MIN) ABOVE TRANSFORMER.
- 6 UNIT HEATER HUNG FROM DECK, 2-INCH CLEARANCE (MIN) FROM CEILING, 7' CLEARANCE (MIN) ABOVE FLOOR, 9-INCH CLEARANCE
- 7 ACU WALL-MOUNTED, 2-INCH CLEARANCE (MIN) BELOW CEILING AND 66-INCH CLEARANCE (MIN) ABOVE FINISHED FLOOR.
- 8 18X12 RETURN AIR DUCT UP TO ACU IN 2ND FLOOR PLENUM.

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**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC EAST PLATFORM LEVEL HVAC PLAN** 

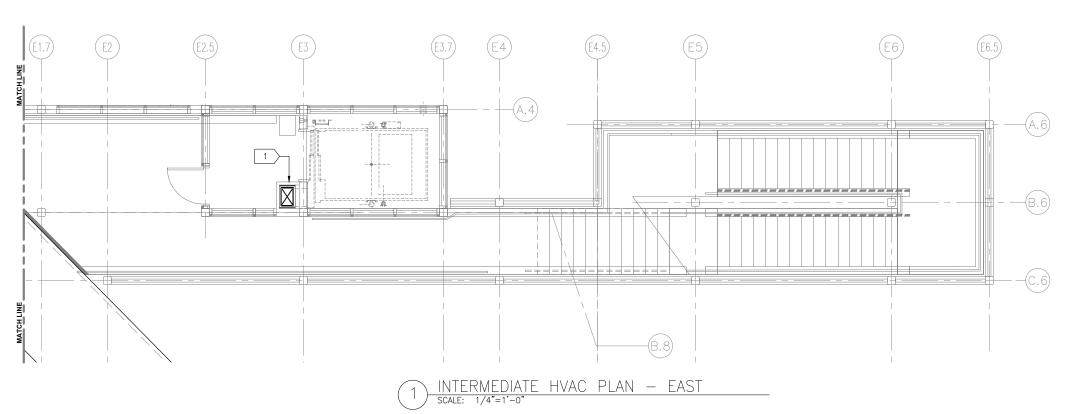
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E3-WST-MEC-PLN-133

60% SUBMISSION - 09/28/15



HVAC GENERAL SHEET NOTES

A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.

B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR

OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.

C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL
MOTORIZED DAMPERS AND FIRE DAMPERS.

D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK

TO MECHANICAL EQUIPMENT CONNECTIONS. E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.

F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL

G. RUN DUCTWORK AS HIGH AS POSSIBLE.

H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.

I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME

DAMPERS AND FAN ACCESS.

J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

1 > 12X18 RETURN DUCT UP TO ACU IN 2ND FLOOR PLENUM AND DOWN TO RETURN GRILLE IN HOISTWAY.

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**AECOM** 







**CIVIL EAST - VOLUME 11 WEST LAKE STATION VC EAST INTERMEDIATE LEVEL HVAC PLAN** 

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OF

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60% SUBMISSION - 09/28/15

**MECHANICAL** 

E3-WST-MEC-PLN-134

EAST BRIDGE HVAC PLAN

- HVAC GENERAL SHEET NOTES

  A. SECURELY SUSPEND HVAC EQUIPMENT FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION. REFER TO STRUCTURAL DRAWINGS FOR LIMITATIONS.

  B. PROVIDE MANUAL BALANCING DAMPERS FOR ALL SUPPLY AIR
- OUTLETS AND WHERE INDICATED ON BRANCH DUCTWORK.
- C. PROVIDE DUCT ACCESS PANELS AT LOCATIONS OF ALL MOTORIZED DAMPERS AND FIRE DAMPERS.
  D. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK
- TO MECHANICAL EQUIPMENT CONNECTIONS.
- E. MAINTAIN REQUIRED CLEARANCES DIRECTLY OVER AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
- F. MAINTAIN REQUIRED CLEARANCES AT ALL MECHANICAL EQUIPMENT.
- G. RUN DUCTWORK AS HIGH AS POSSIBLE.
- H. INLET VENTILATION AIR DUCTWORK SHALL BE INSULATED FULL LENGTH.
- I. PROVIDE CEILING ACCESS PANELS AT MANUAL VOLUME
- DAMPERS AND FAN ACCESS.

  J. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION FOR GRILLES, REGISTERS, AND DIFFUSERS.

- 1 ACU SUPPLY OUTLET TO TRANSITION TO 24X24 TO REGISTER.
- 2 CONDENSATE PUMP MOUNTED ON WALL.
- 3 ACU MOUNTED TO DECK. PROVIDE VIBRATION ISOLATION.
- 4 RETURN AIR INLET DRAWING FROM PLENUM.
- 5 EXHAUST FAN HUNG FROM DECK. PROVIDE VIBRATION ISOLATION.
- 6 14X8 EXHAUST AIR DUCT TO LOUVER PLENUM.
- 7 LOUVER-SEE ARCH SPECIFICATION AND DRAWINGS FOR INFORMATION.
- 8 8X8 EXHAUST AIR DUCT FROM FROM EXHAUST GRILLE, TRANSITIONS TO A 12X12 DUCT TO CONNECT TO EXHAUST FAN
- 9 24X20 OPENING TO MOTORIZED DAMPER FOR FIRE SERVICE SMOKE EVACUATION. OPENING IS LOCATED AT THE TOP OF HOISTWAY AND CONNECTS TO A GRAVITY RELIEF VENTILATOR MOUNTED ON

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**AECOM** 

60% SUBMISSION - 09/28/15







**CIVIL EAST - VOLUME 11A WEST LAKE STATION VC EAST BRIDGE LEVEL HVAC PLAN** 

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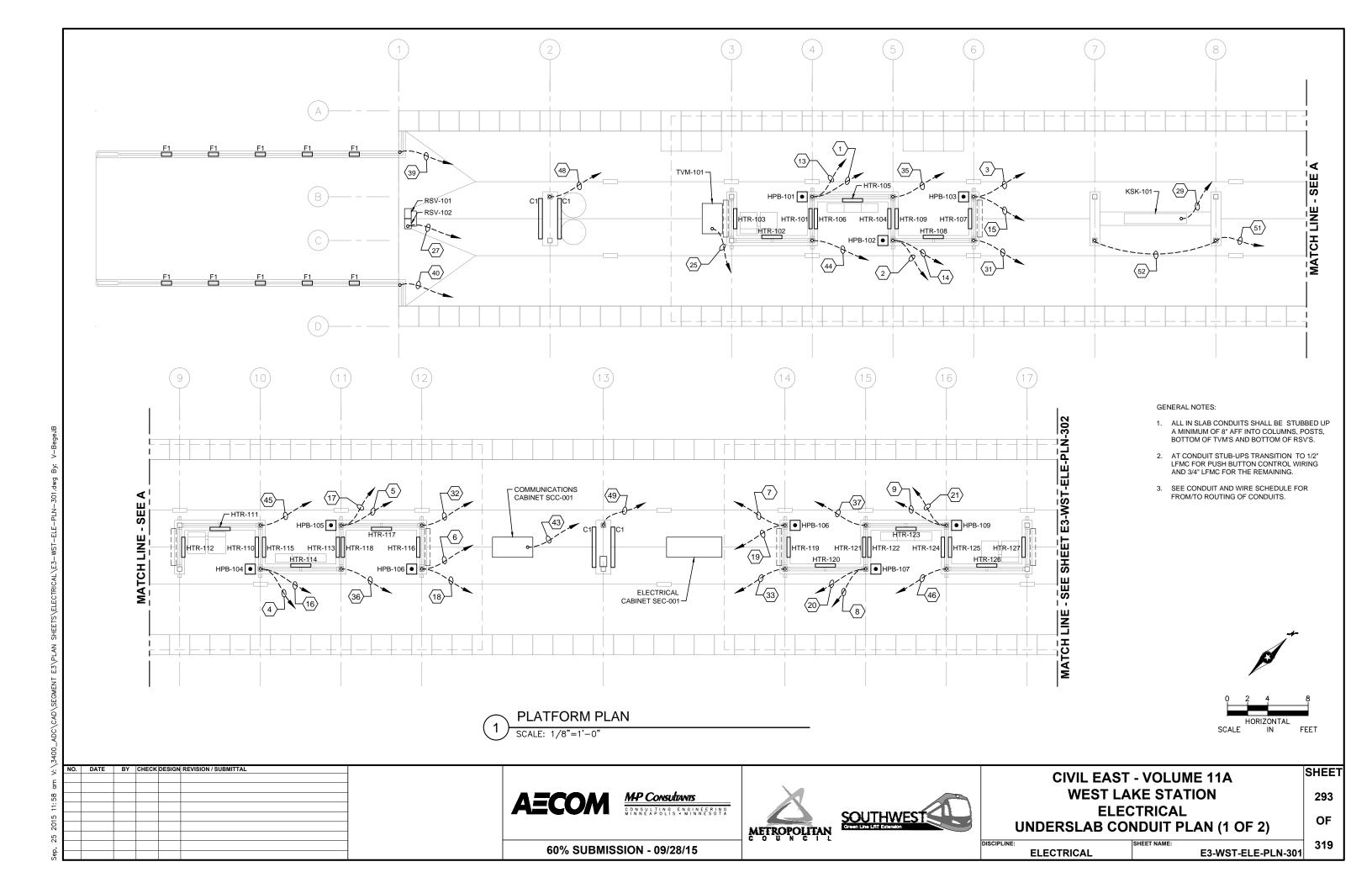
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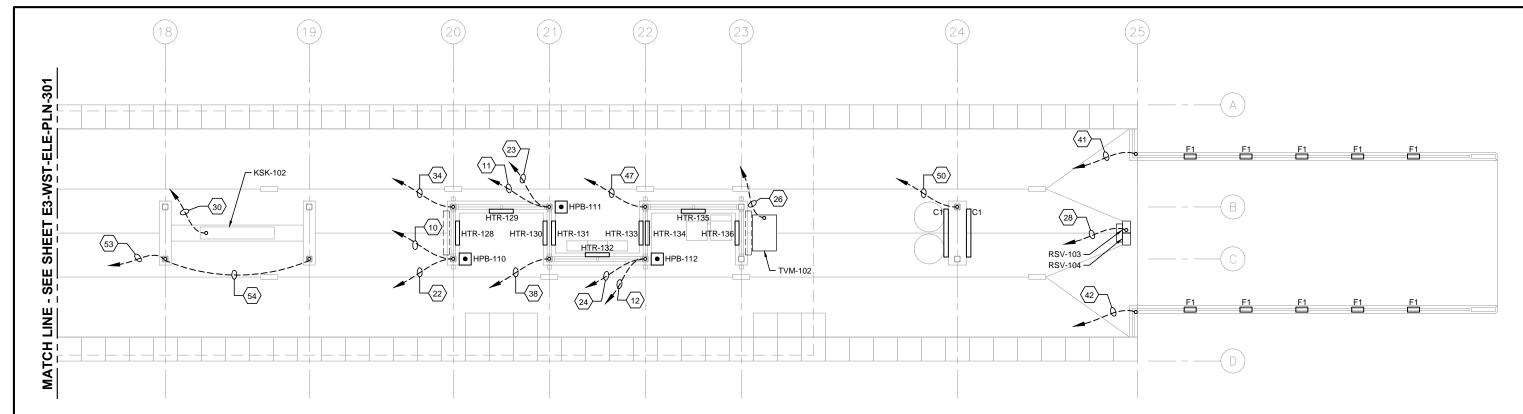
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**MECHANICAL** 

E3-WST-MEC-PLN-135



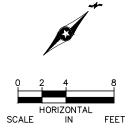


PLATFORM PLAN

SCALE: 1/8"=1'-0"

## GENERAL NOTES:

- ALL IN SLAB CONDUITS SHALL BE STUBBED UP A MINIMUM OF 8" AFF INTO COLUMNS, POSTS, BOTTOM OF TVM'S AND BOTTOM OF RSV'S.
- AT CONDUIT STUB-UPS TRANSITION TO 1/2"
   LFMC FOR PUSH BUTTON CONTROL WIRING AND 3/4" LFMC FOR THE REMAINING.
- 3. SEE CONDUIT AND WIRE SCHEDULE FOR FROM/TO ROUTING OF CONDUITS.



SHEET

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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL







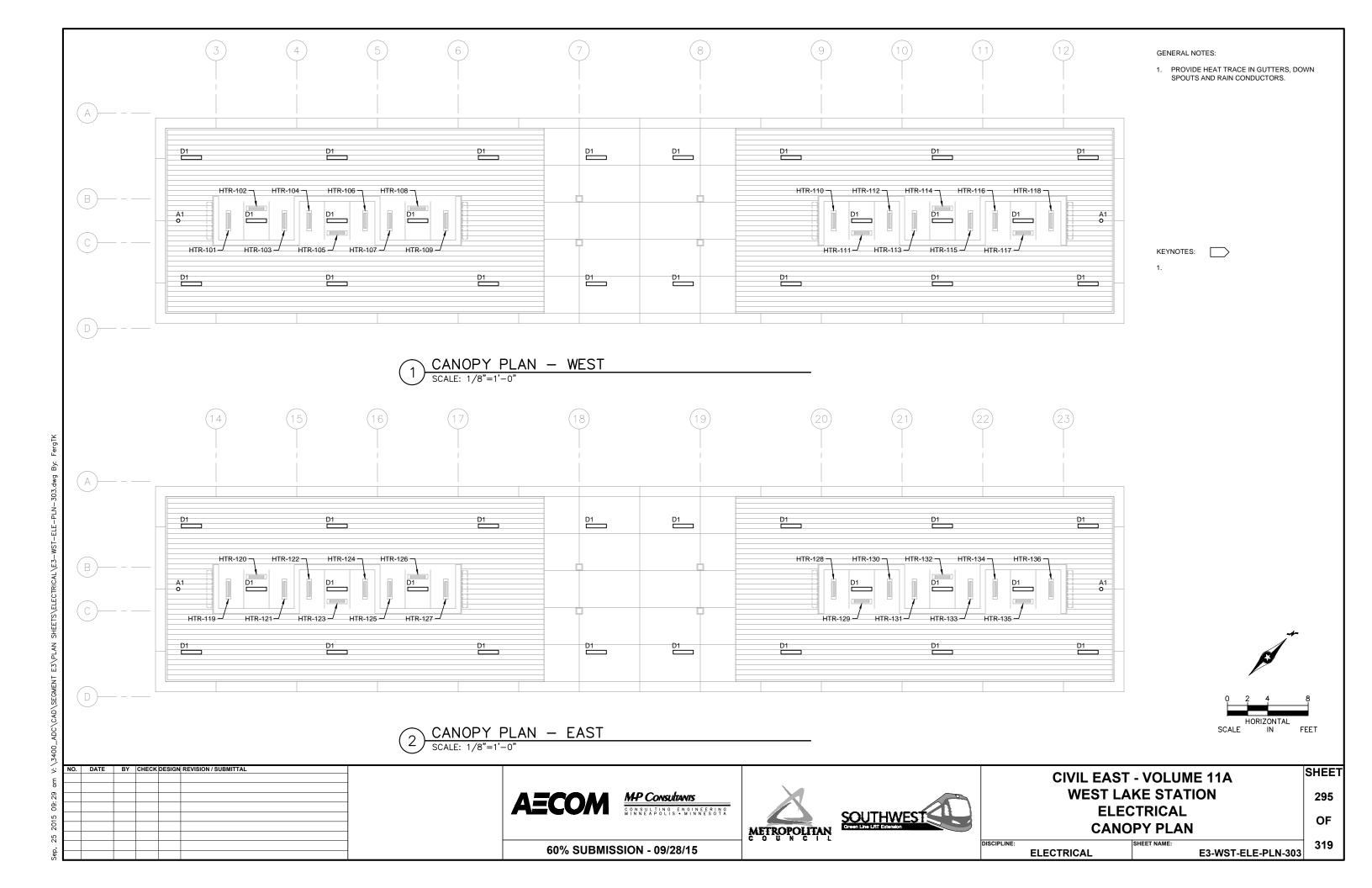
**CIVIL EAST - VOLUME 11A WEST LAKE STATION ELECTRICAL UNDERSLAB CONDUIT PLAN (2 OF 2)** 

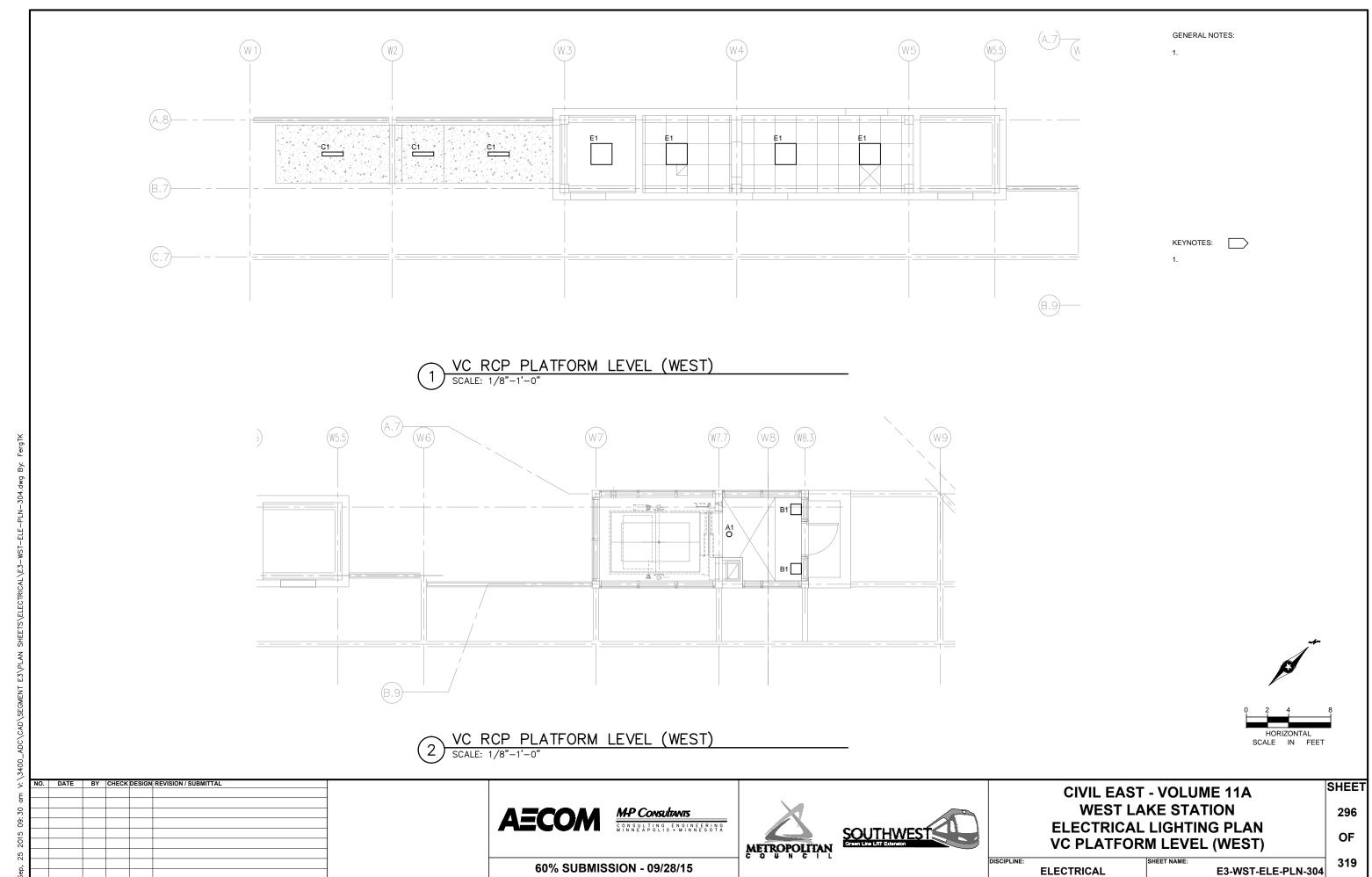
OF 319

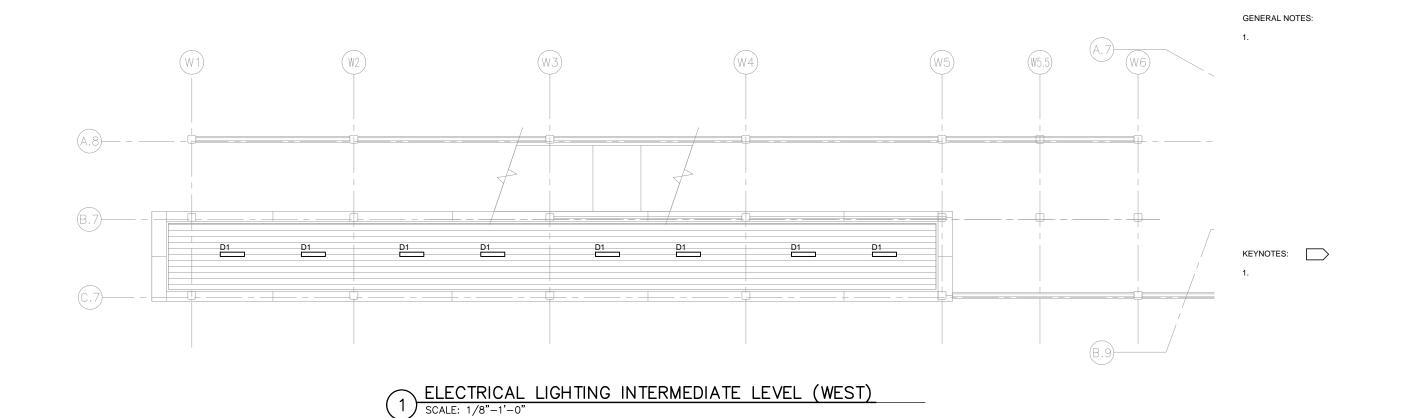
60% SUBMISSION - 09/28/15

**ELECTRICAL** 

E3-WST-ELE-PLN-302







HORIZONTAL SCALE IN FEET

SHEET

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OF

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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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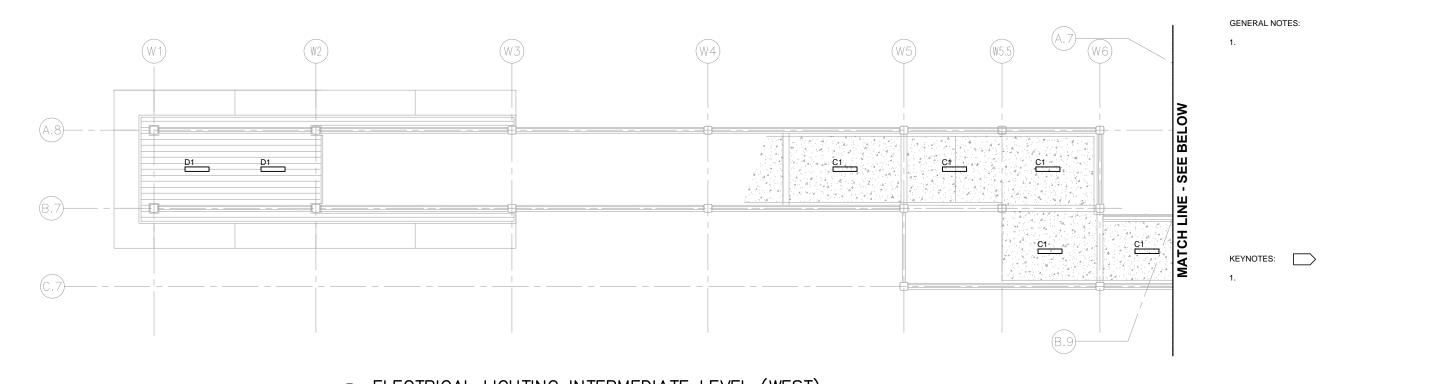




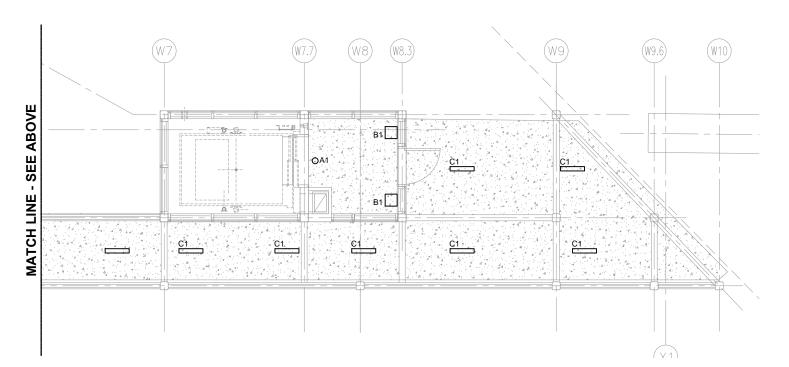
**CIVIL EAST - VOLUME 11A WEST LAKE STATION ELECTRICAL LIGHTING PLAN** VC INTERMEDIATE LEVEL (WEST)

DISCIPLINE: ELECTRICAL

E3-WST-ELE-PLN-305



1) ELECTRICAL LIGHTING INTERMEDIATE LEVEL (WEST) SCALE: 1/8"-1"-0"



2 ELECTRICAL LIGHTING INTERMEDIATE LEVEL (WEST)
SCALE: 1/8"-1'-0"



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

**AECOM** 







CIVIL EAST - VOLUME 11A
WEST LAKE STATION
ELECTRICAL LIGHTING PLAN
VC INTERMEDIATE LEVEL (WEST

WEST)	UF
NOT ELE DIN 200	319

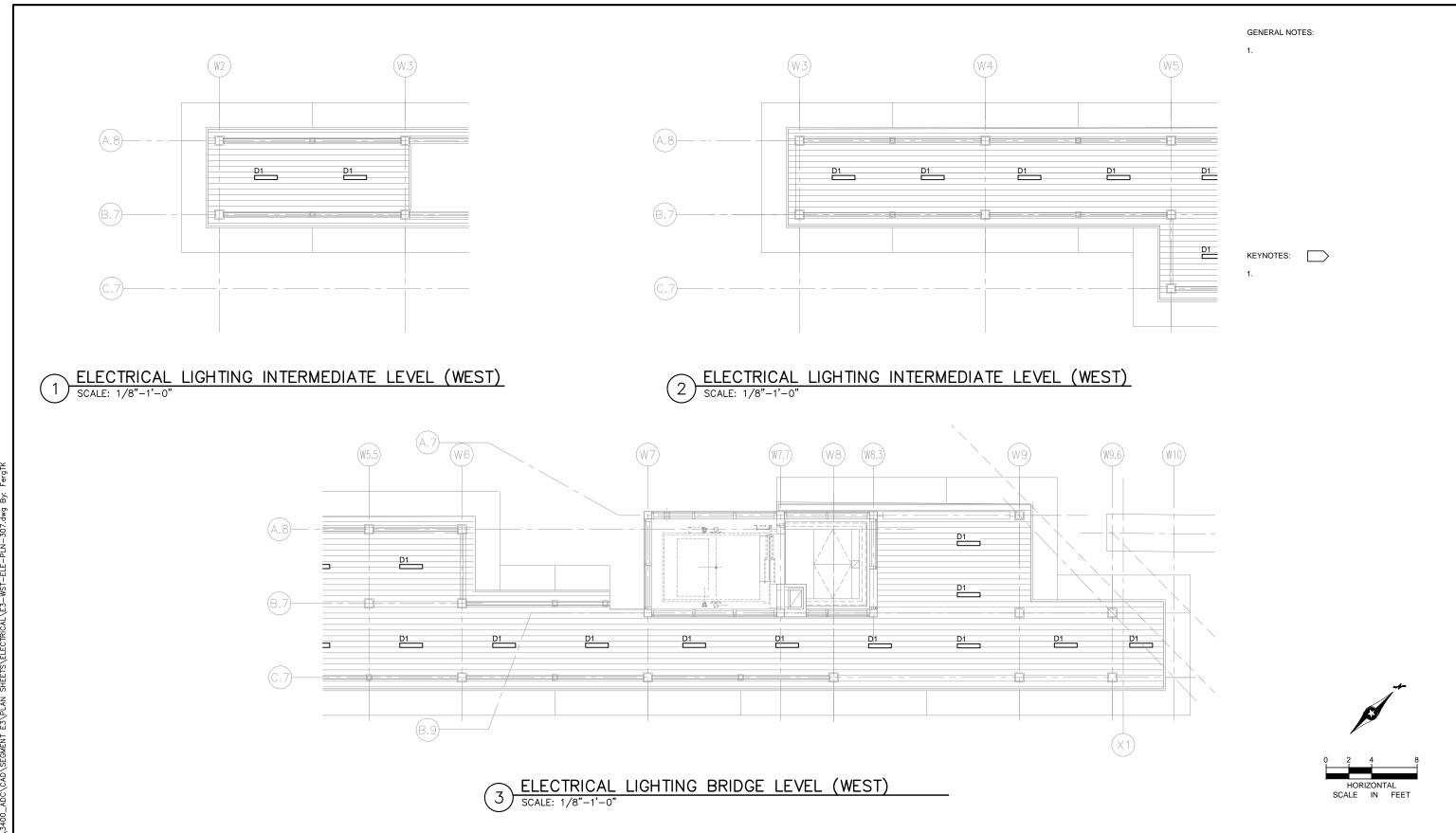
SHEET

298

60% SUBMISSION - 09/28/15

ELECTRICAL

E3-WST-ELE-PLN-306



NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL







**CIVIL EAST - VOLUME 11A WEST LAKE STATION ELECTRICAL LIGHTING PLAN** 

**VC BRIDGE LEVEL (WEST)** 

DISCIPLINE: **ELECTRICAL** 

60% SUBMISSION - 09/28/15

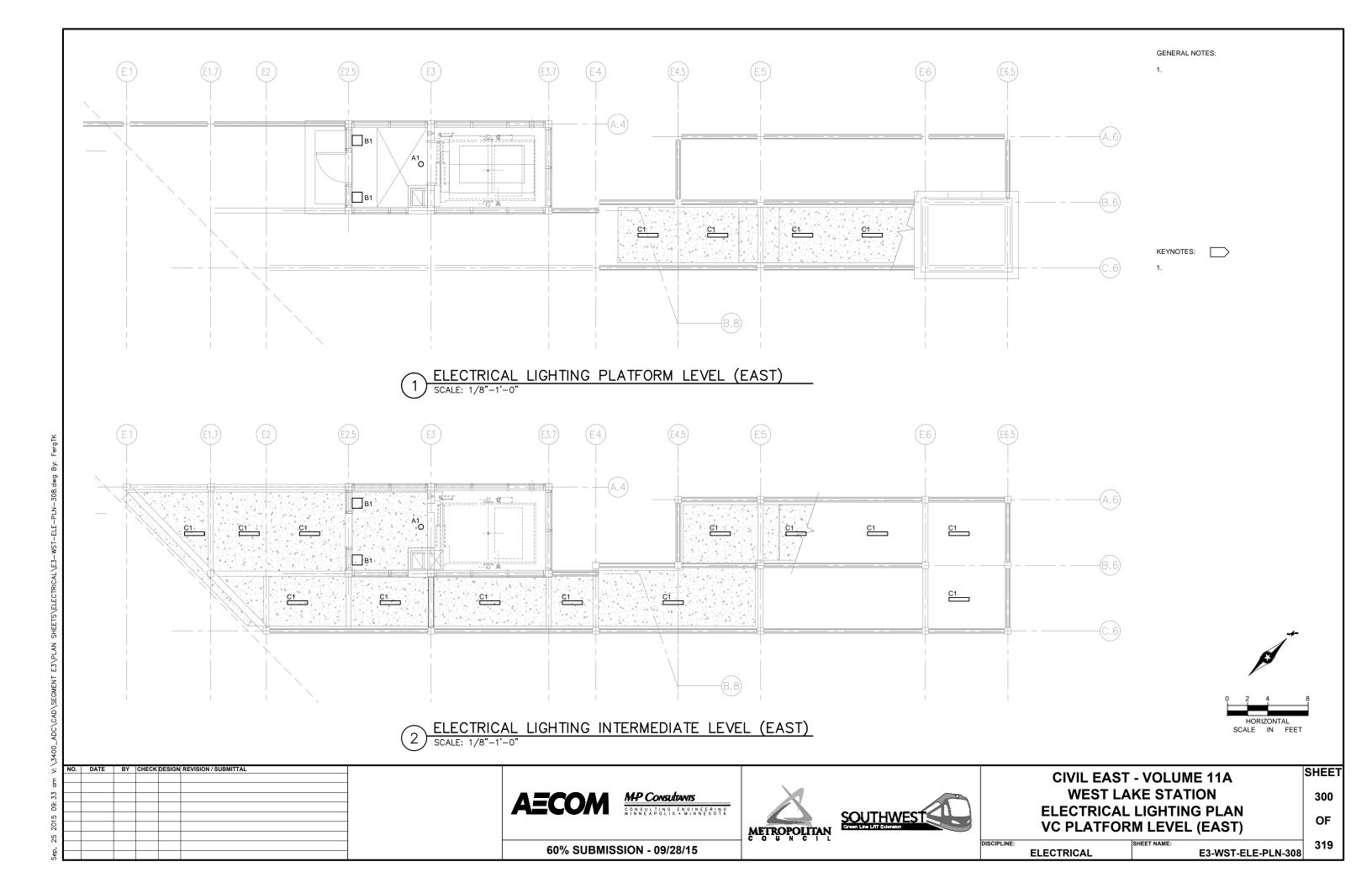
E3-WST-ELE-PLN-307

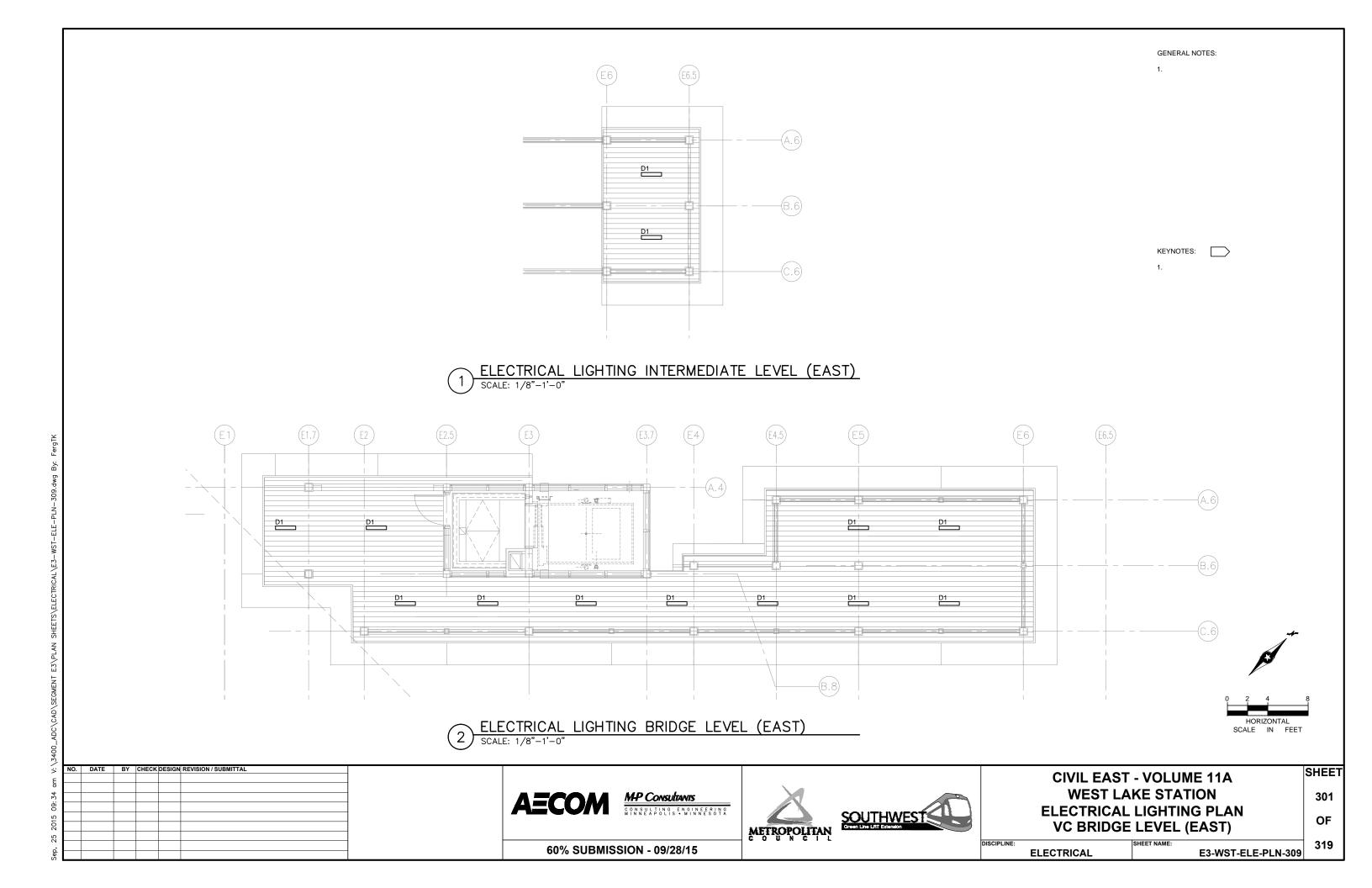
SHEET

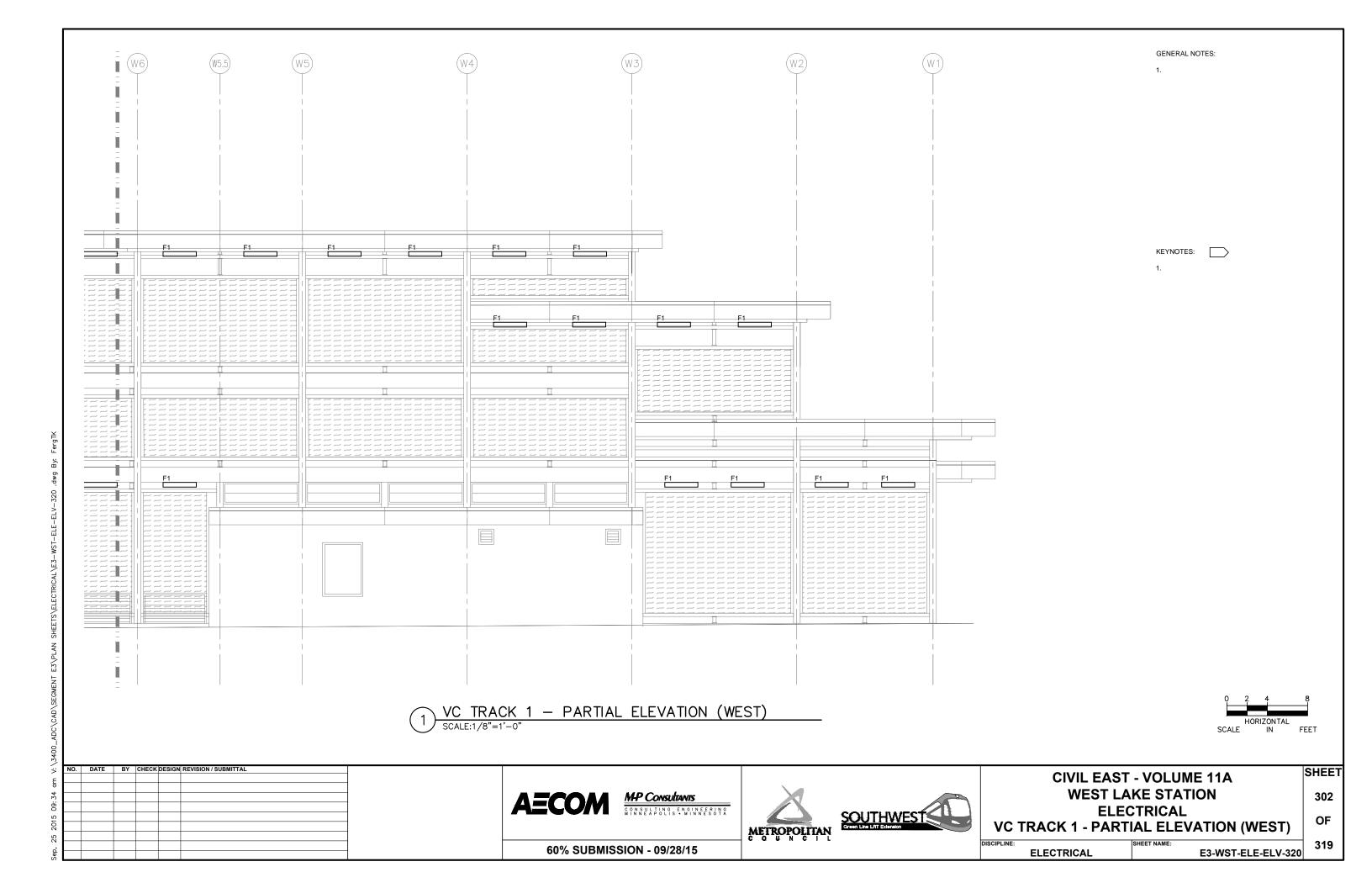
299

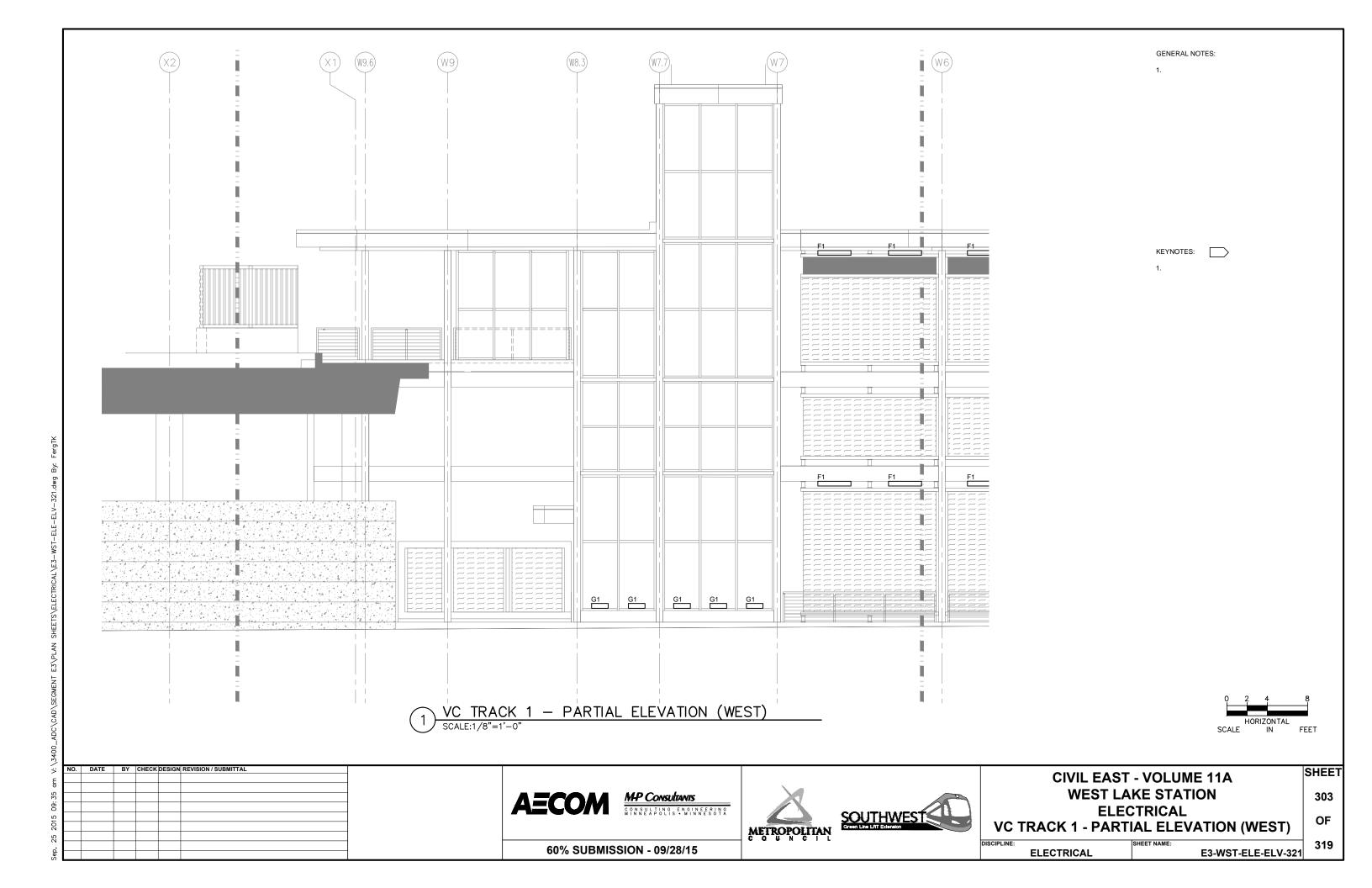
OF

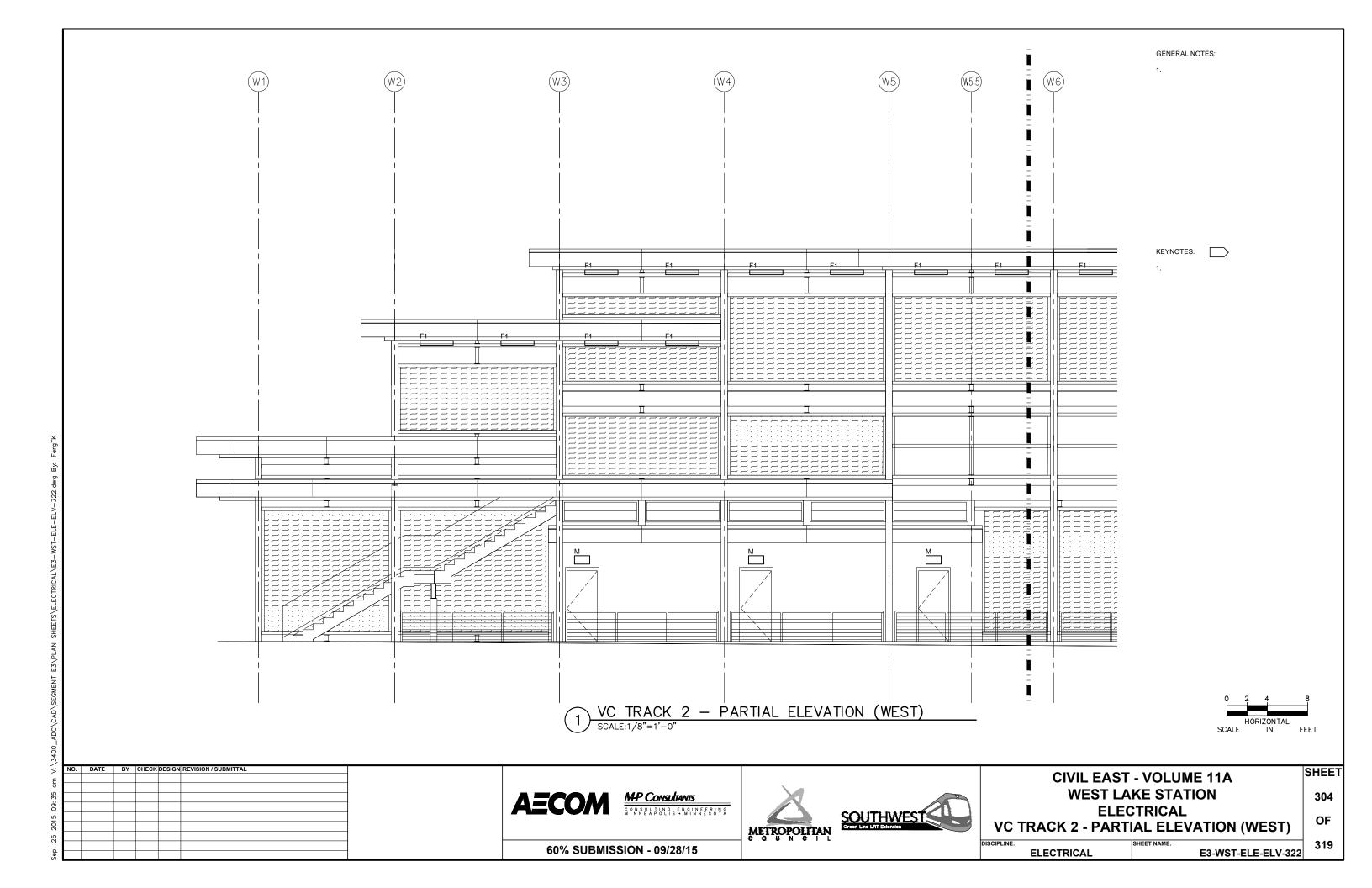
319

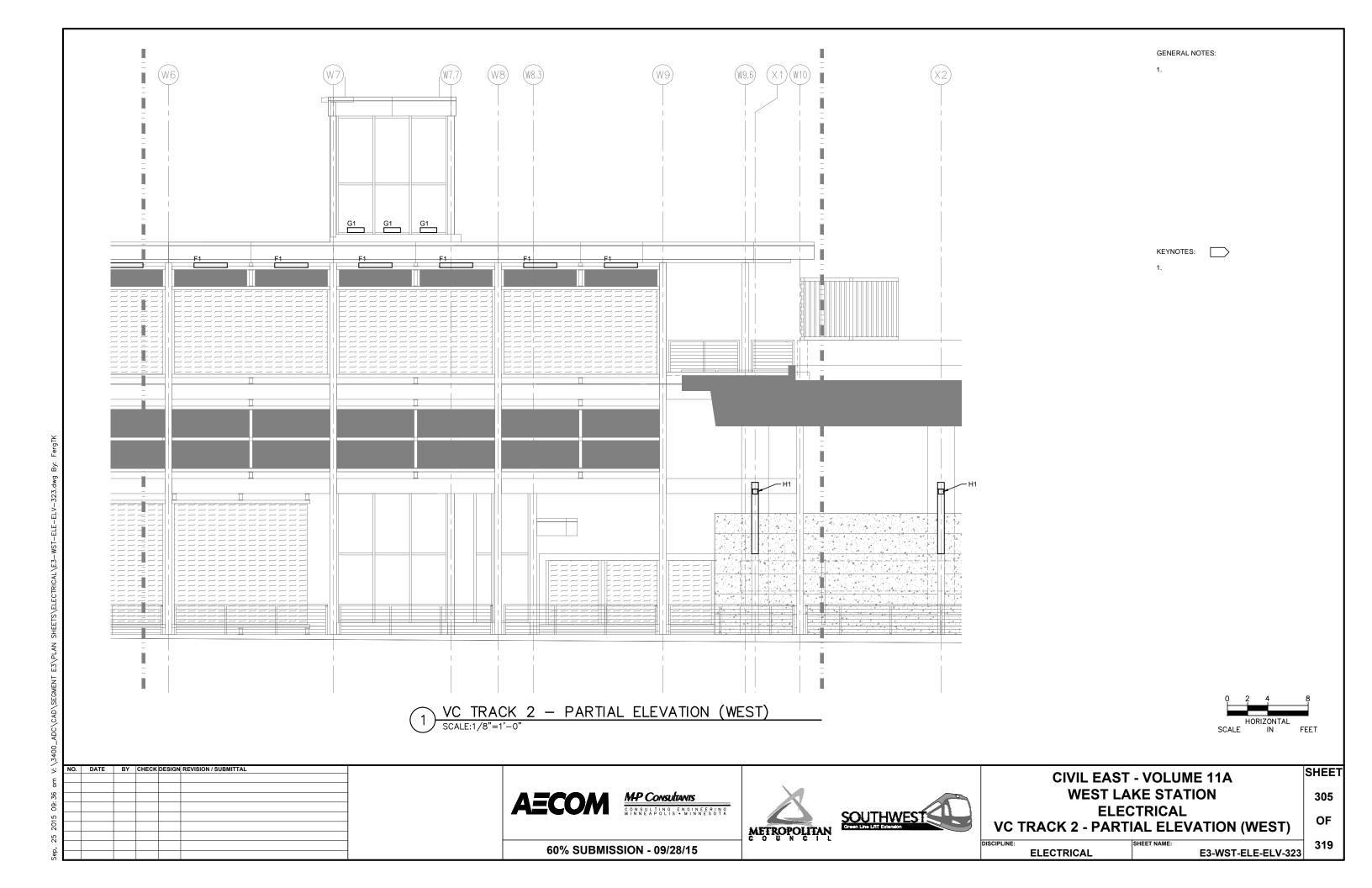


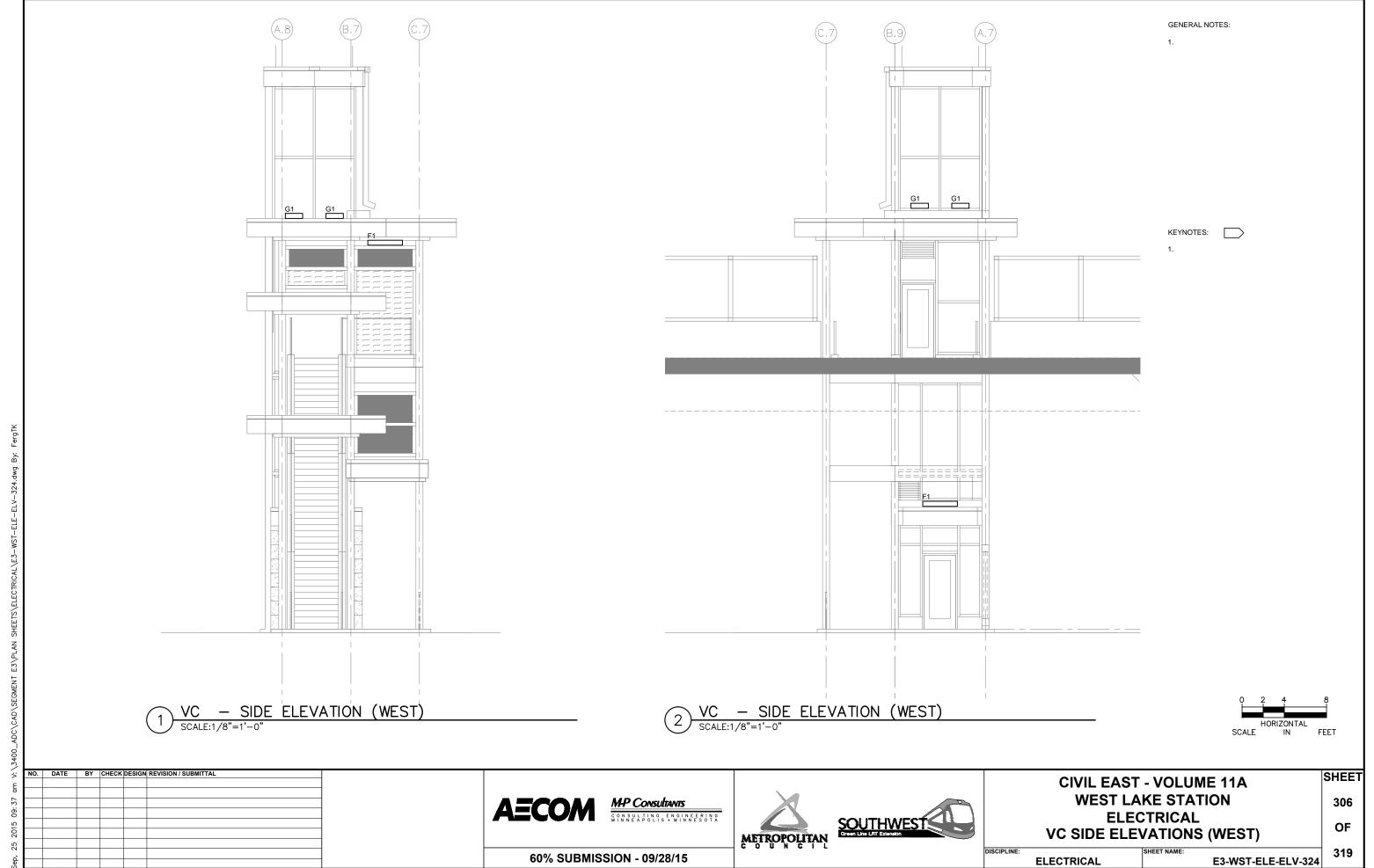


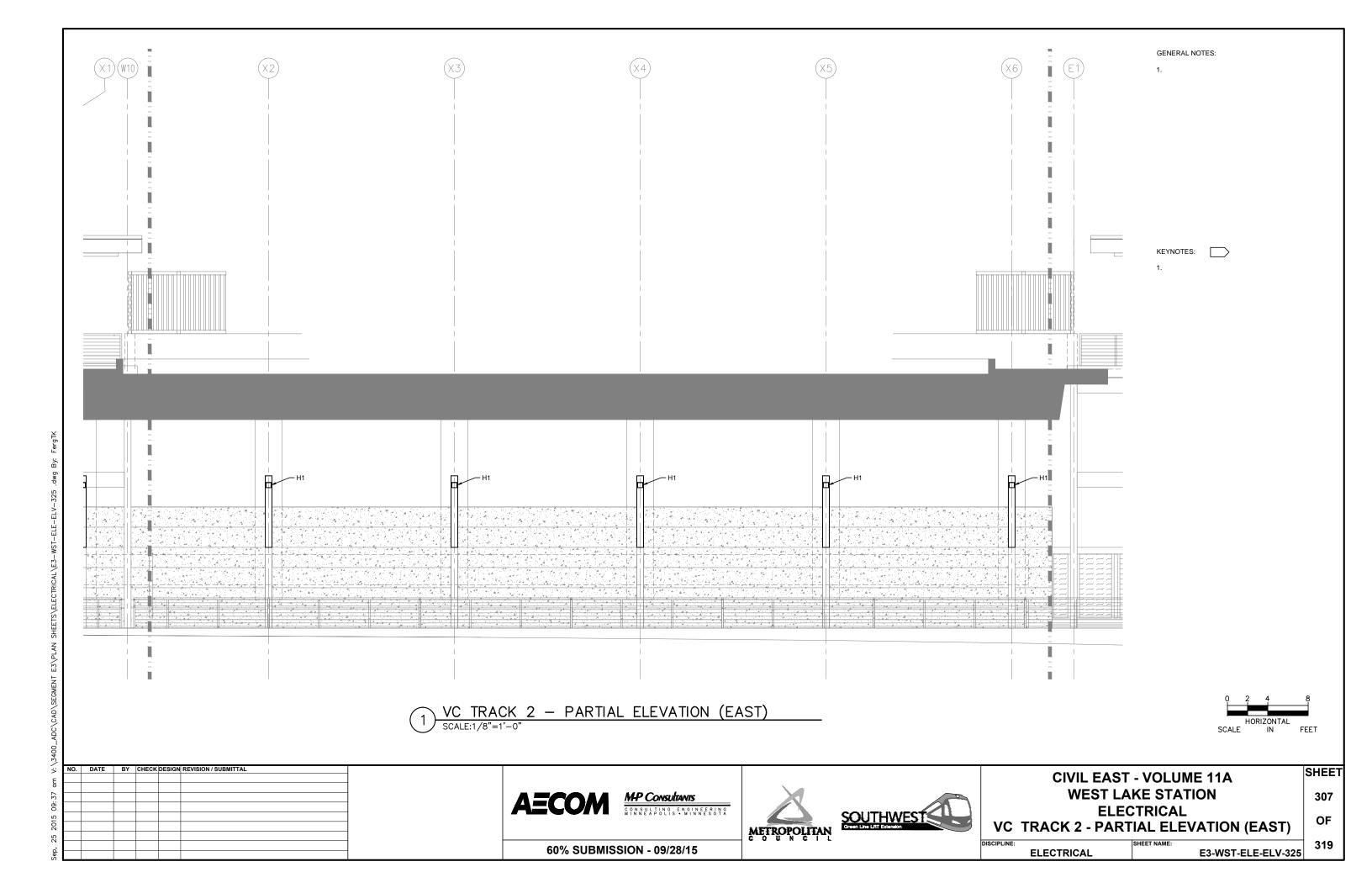


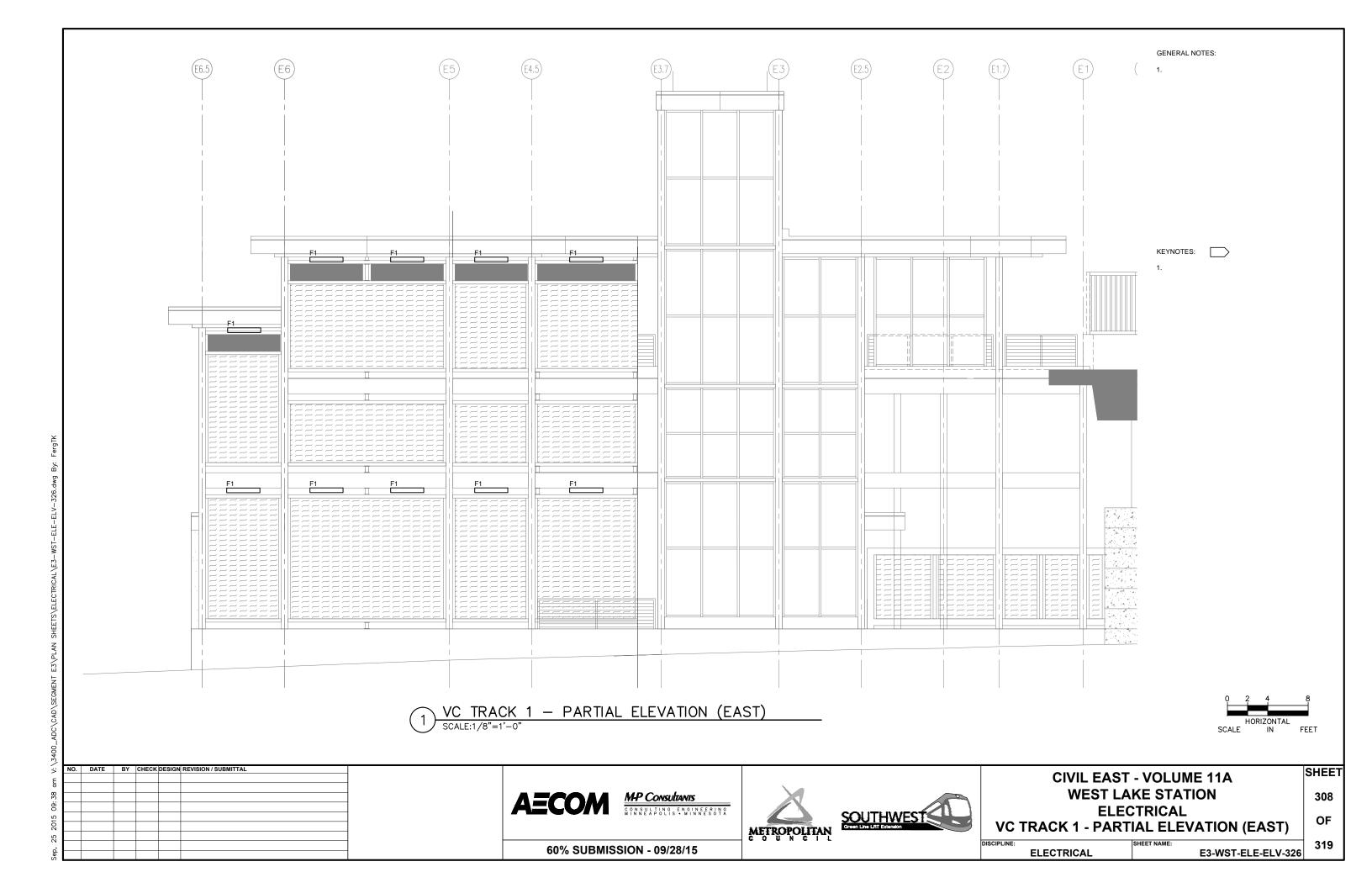


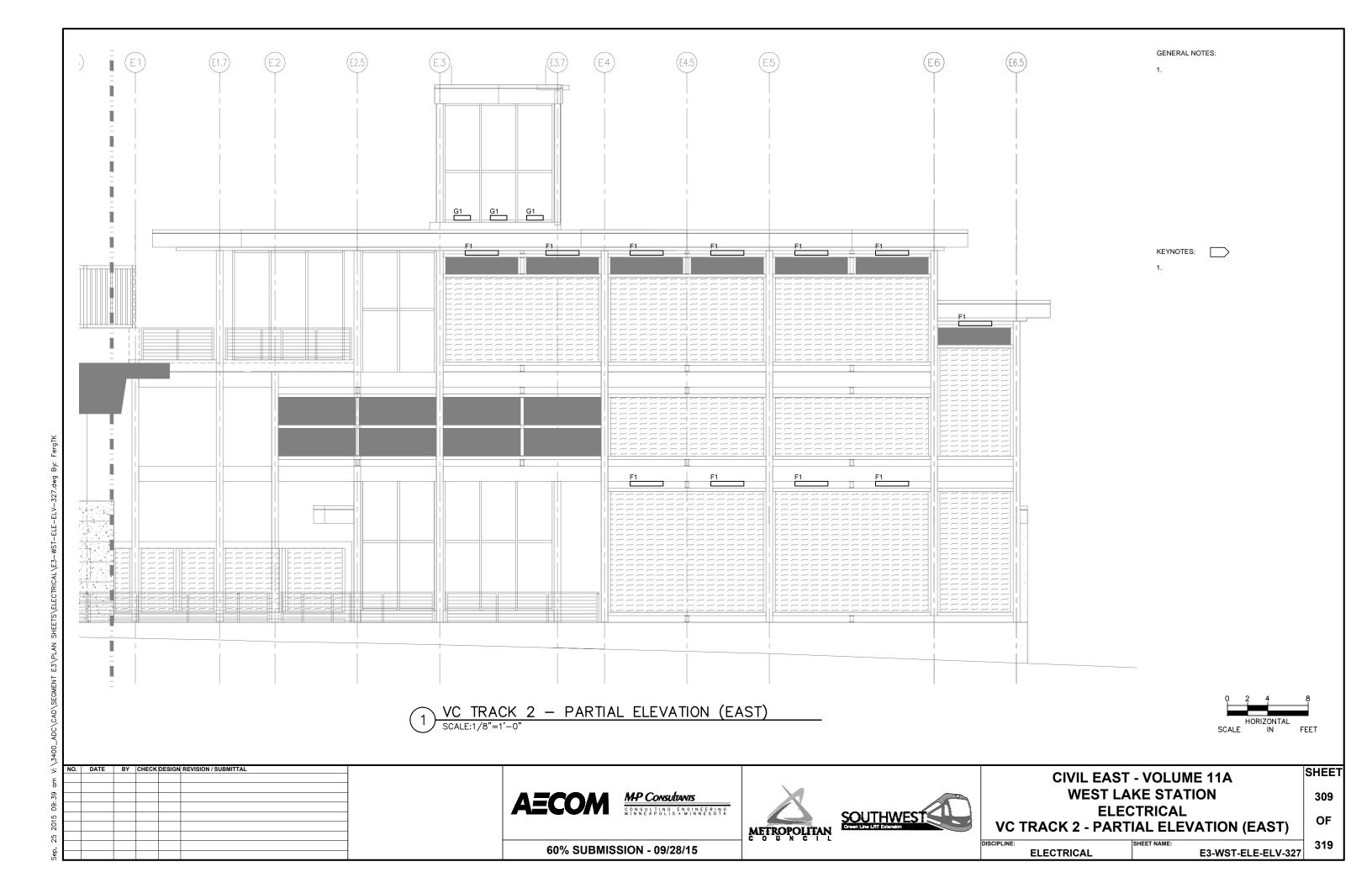


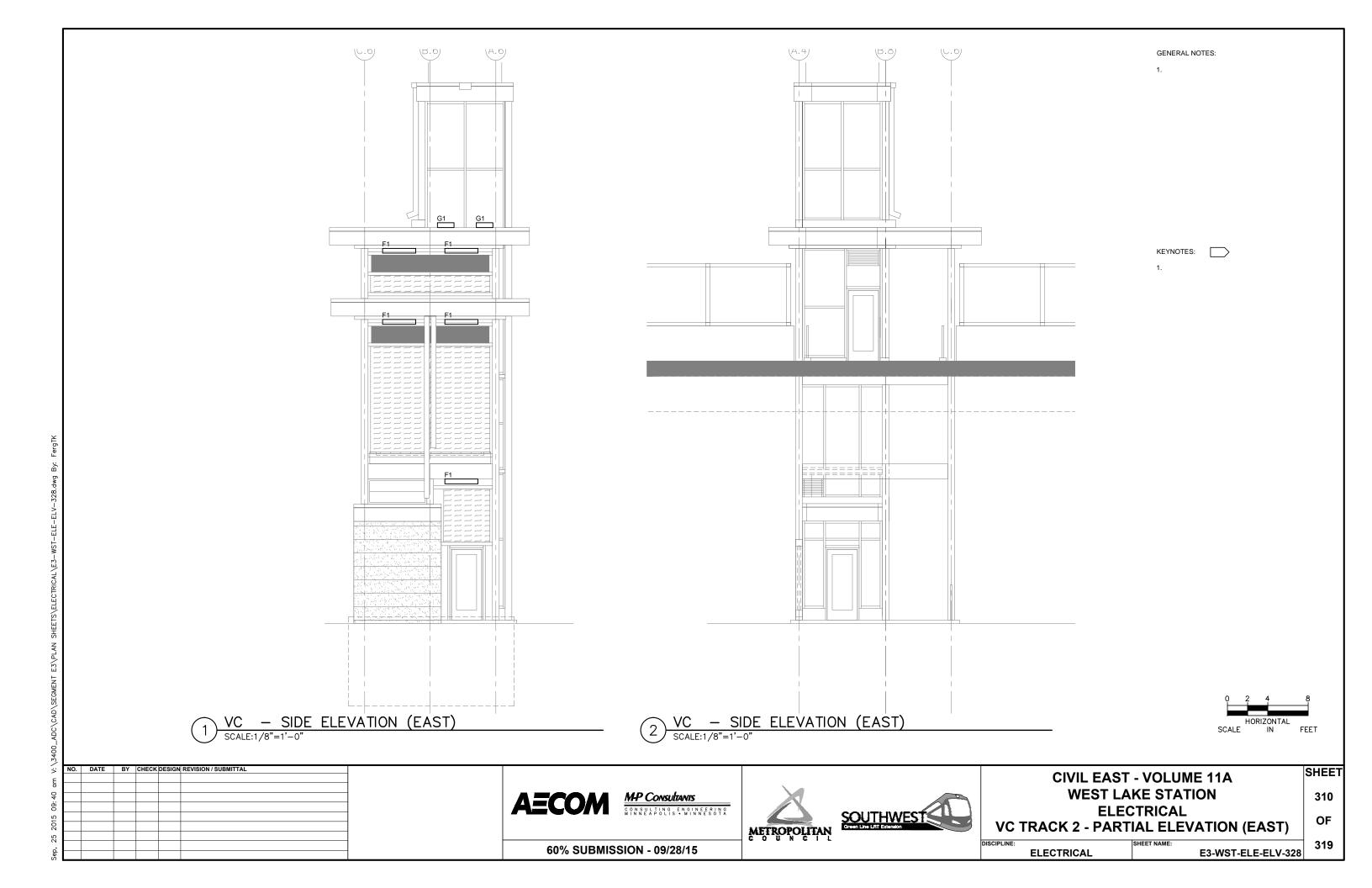


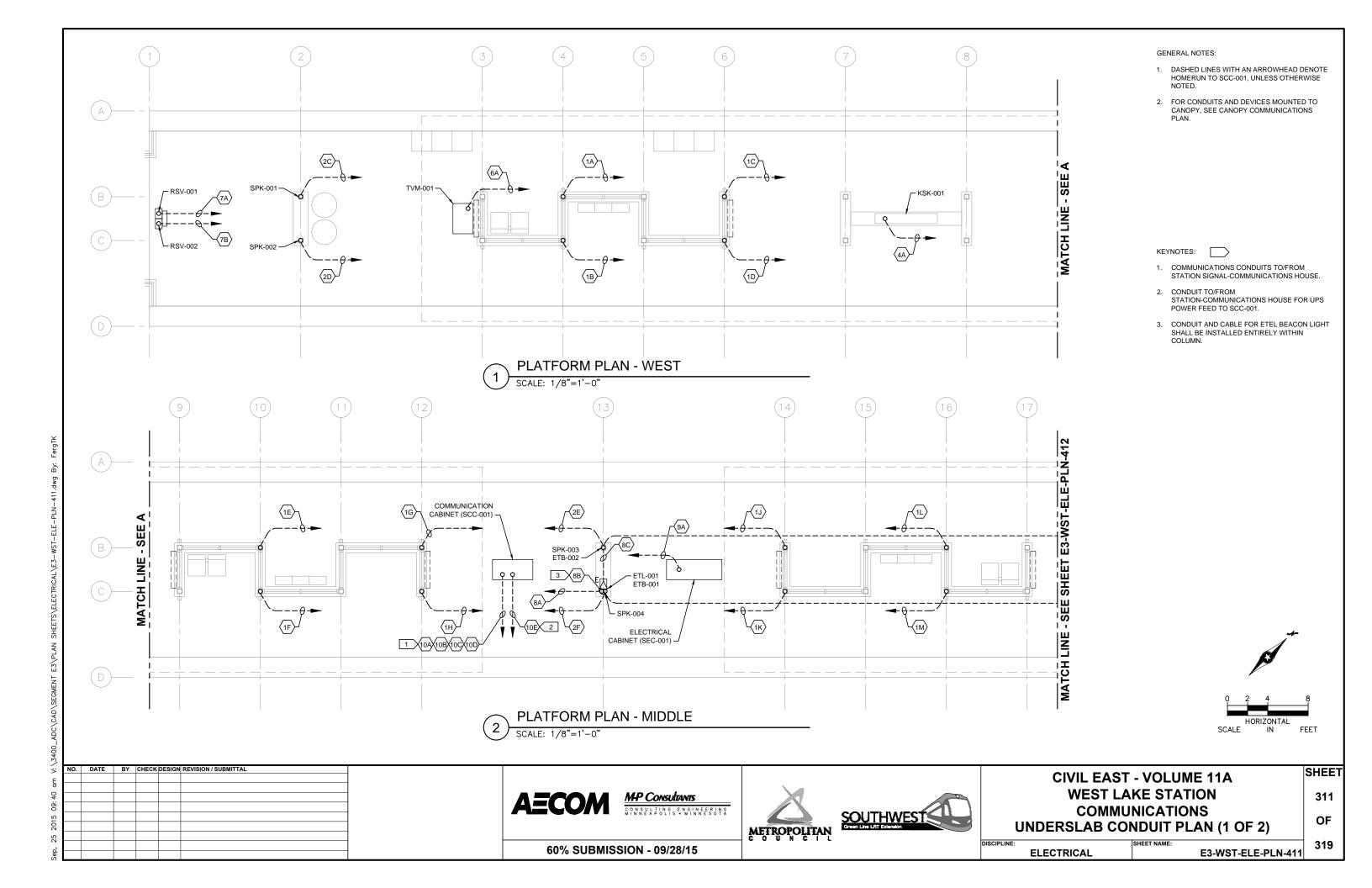


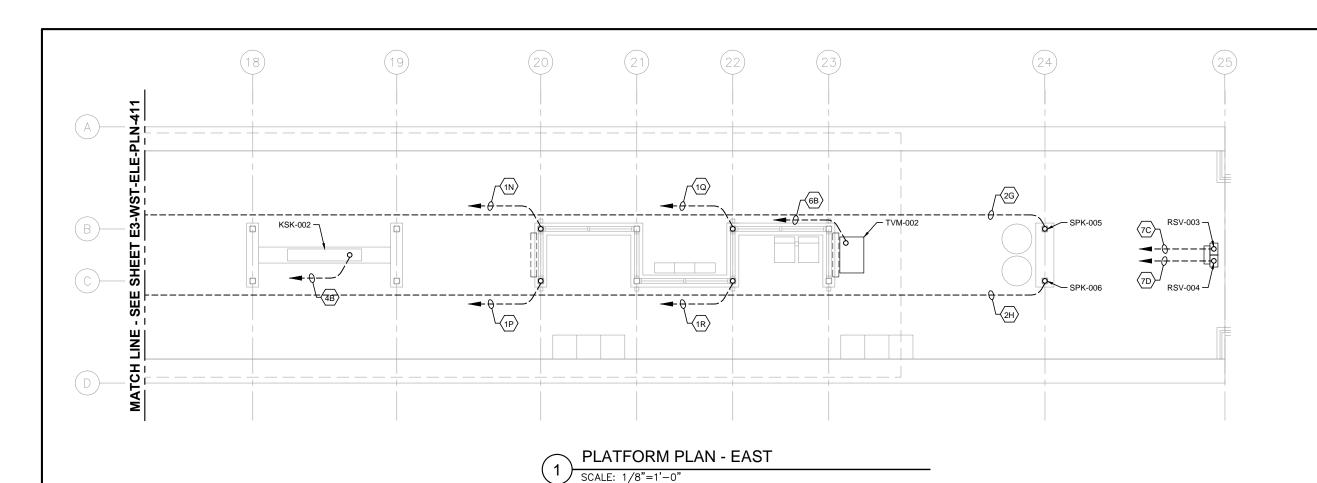












GENERAL NOTES:

- DASHED LINES WITH AN ARROWHEAD DENOTE
   HOMERUN TO SCC-001, UNLESS OTHERWISE
   NOTED
- 2. FOR CONDUITS AND DEVICES MOUNTED TO CANOPY, SEE CANOPY COMMUNICATIONS

KEYNOTES:

- COMMUNICATIONS CONDUITS TO/FROM STATION SIGNAL-COMMUNICATIONS HOUSE.
- CONDUIT TO/FROM STATION-COMMUNICATIONS HOUSE FOR UPS POWER FEED TO SCC-001.

0 2 4 8

HORIZONTAL
SCALE IN FEET

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CIVIL EAST - VOLUME 11A
WEST LAKE STATION
COMMUNICATIONS
UNDERSLAB CONDUIT PLAN (2 OF 2)

OF 2)

60% SUBMISSION - 09/28/15

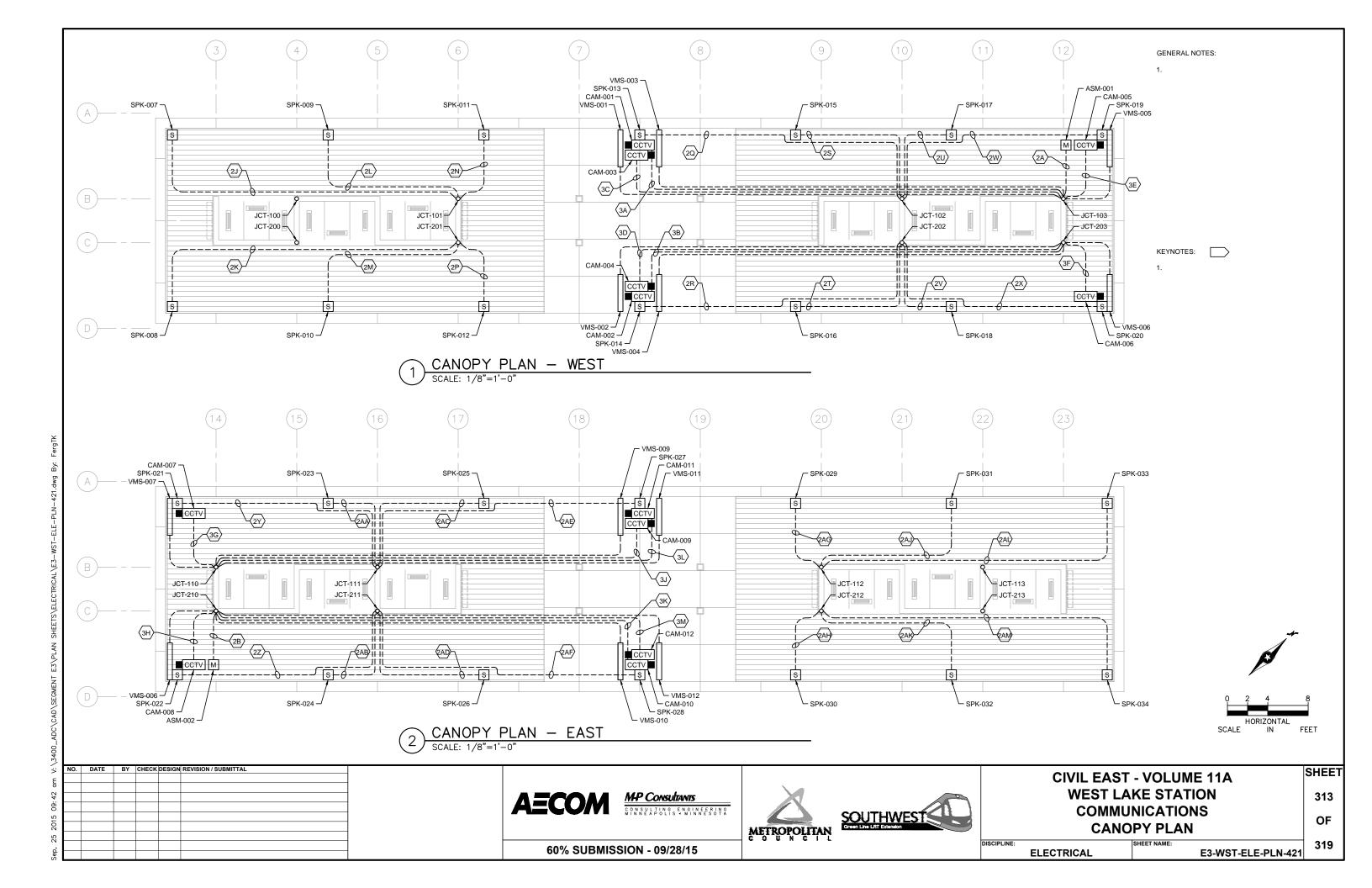
ELECTRICAL

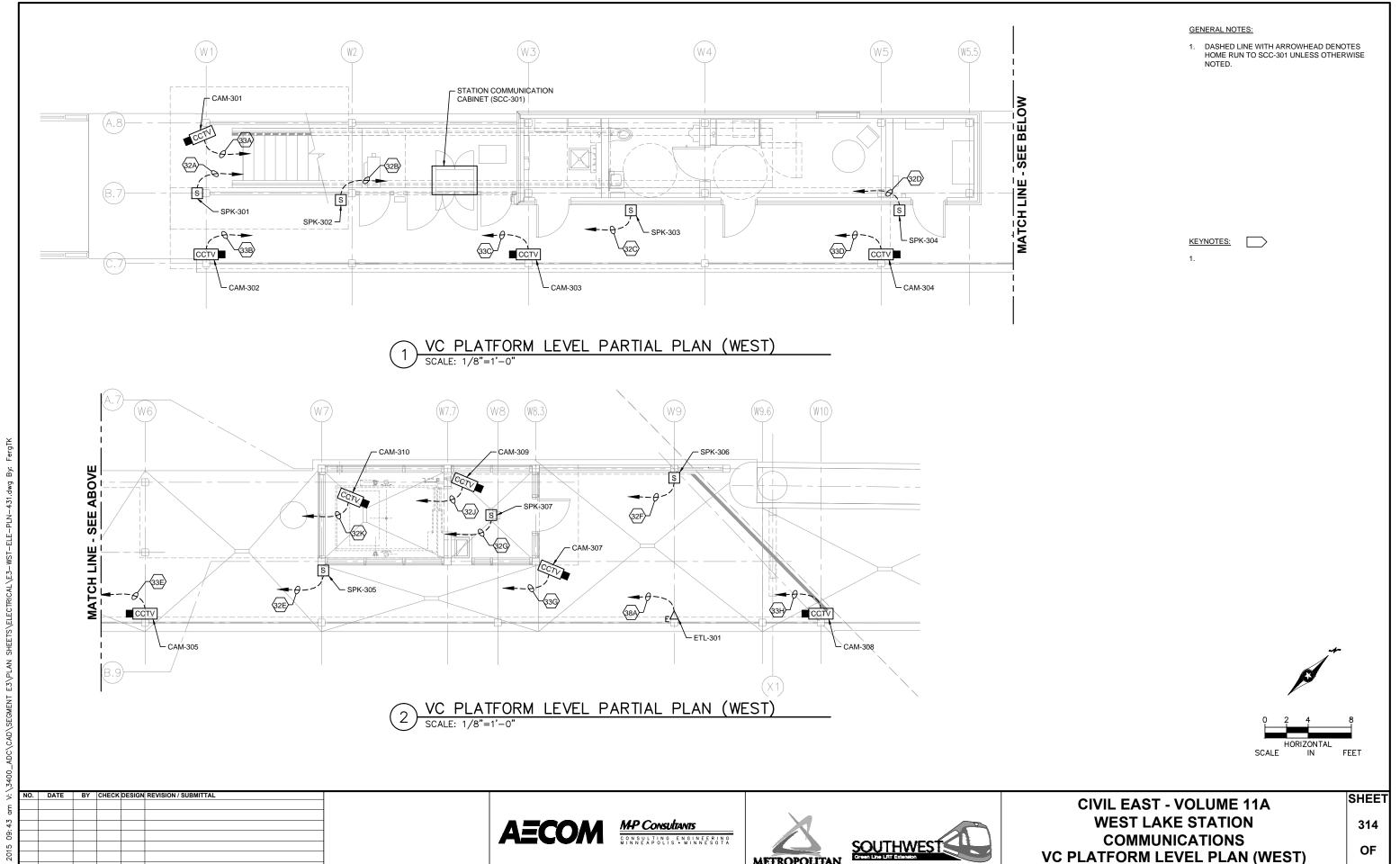
E3-WST-ELE-PLN-412

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SHEET

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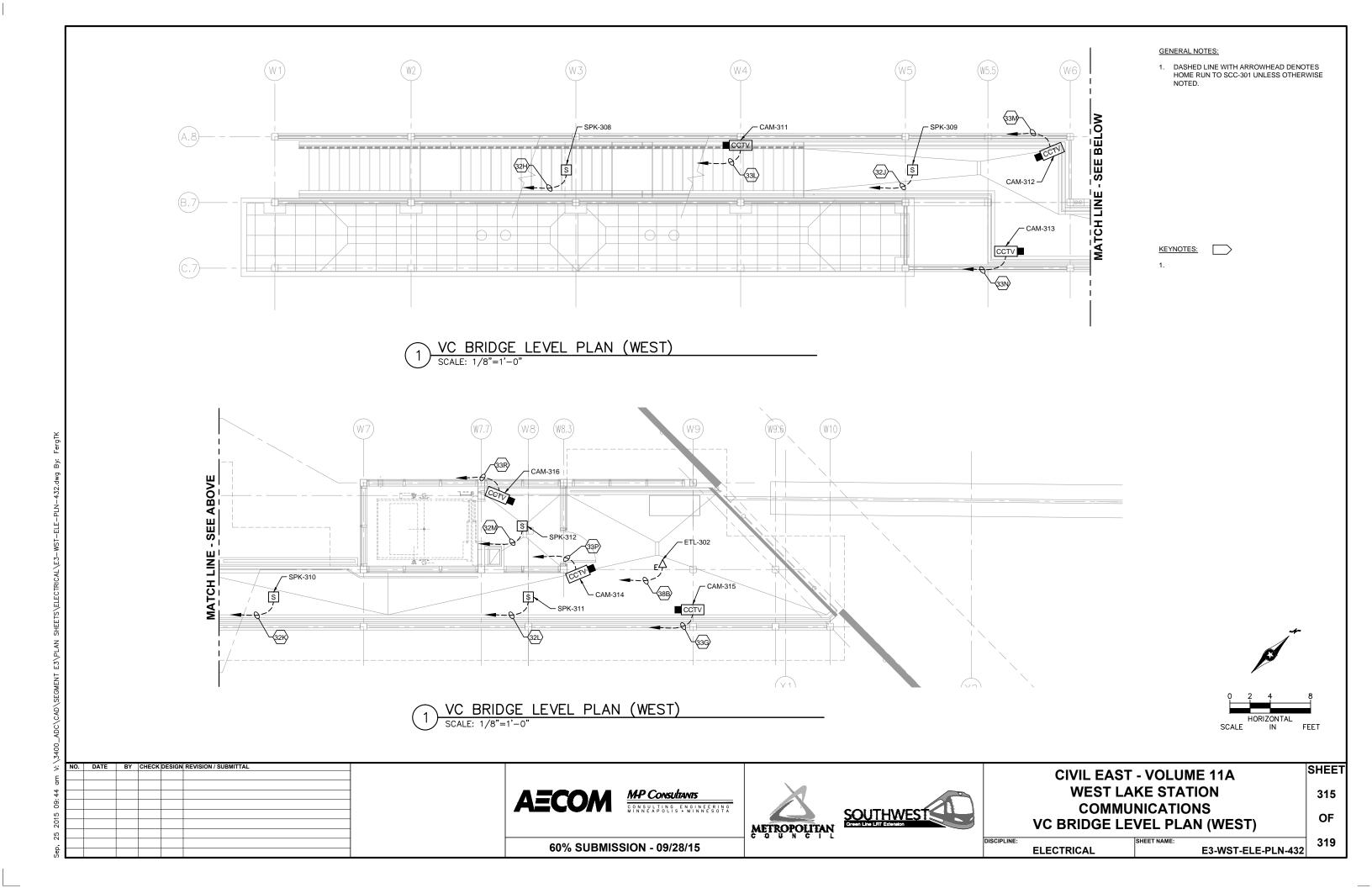


60% SUBMISSION - 09/28/15

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E3-WST-ELE-PLN-431

**ELECTRICAL** 





DASHED LINE WITH ARROWHEAD DENOTES HOME RUN TO SCC-401 UNLESS OTHERWISE NOTED.

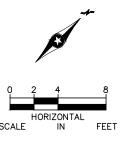
KEYNOTES:

VC PLATFORM LEVEL PARTIAL PLAN (EAST)
SCALE: 1/8"=1'-0"

- CAM-401

- SPK-401

- CAM-404



SHEET

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CAM-406



STATION COMMUNICATION CABINET (SCC-401)

**CIVIL EAST - VOLUME 11A WEST LAKE STATION COMMUNICATIONS VC PLATFORM LEVEL PLAN (EAST)** 

OF 319

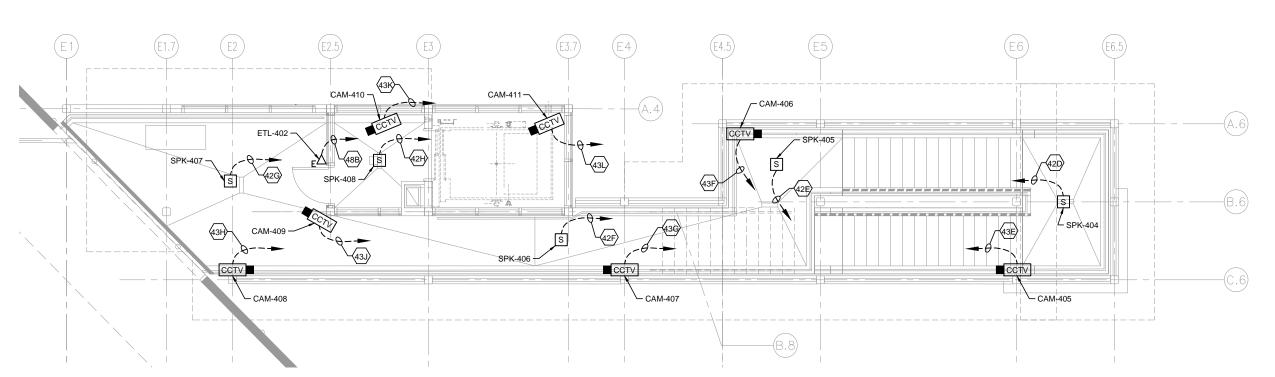
60% SUBMISSION - 09/28/15

- CAM-403

**ELECTRICAL** 

E3-WST-ELE-PLN-433

NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

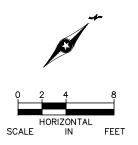


GENERAL NOTES:

DASHED LINE WITH ARROWHEAD DENOTES HOME RUN TO SCC-401 UNLESS OTHERWISE NOTED.

KEYNOTES:

VC BRIDGE LEVEL PLAN (WEST)
SCALE: 1/8"=1'-0"



NO. DATE BY CHECK DESIGN REVISION / SUBMITTAL

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**CIVIL EAST - VOLUME 11A WEST LAKE STATION COMMUNICATIONS VC BRIDGE LEVEL PLAN (EAST)** 

OF

SHEET

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**ELECTRICAL** 

E3-WST-ELE-PLN-434

60% SUBMISSION - 09/28/15

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	то	CONDUIT SIZE
10A	WST -CON-0001	S/C HOUSE TO SCC-001	S/C MANHOLE	WST -SCC-001	3"
10B	WST -CON-0002	S/C HOUSE TO SCC-001	S/C MANHOLE	WST -SCC-001	3"
10C	WST -CON-0003	S/C HOUSE TO SCC-001	S/C MANHOLE	WST -SCC-001	3"
10D	WST -CON-0004	S/C HOUSE TO SCC-001	S/C MANHOLE	WST -SCC-001	3"
10E	WST -CON-0005	UPS POWER FEED: SCH TO SCC	WST -SCH-001	WST -SCC-001	3"
1A	WST -CON-0101	SCC TO JUNCTION 100	WST -SCC-001	WST -JCT-100	2"
1B	WST -CON-0102	SCC TO JUNCTION 200	WST -SCC-001	WST -JCT-200	2"
1C	WST -CON-0103	SCC TO JUNCTION 101	WST -SCC-001	WST -JCT-101	2"
1D	WST -CON-0104	SCC TO JUNCTION 201	WST -SCC-001	WST -JCT-201	2"
1E	WST -CON-0105	SCC TO JUNCTION 102	WST -SCC-001	WST -JCT-102	2"
1F	WST -CON-0106	SCC TO JUNCTION 202	WST -SCC-001	WST -JCT-202	2"
1G	WST -CON-0107	SCC TO JUNCTION 103	WST -SCC-001	WST -JCT-103	2"
1H	WST -CON-0108	SCC TO JUNCTION 203	WST -SCC-001	WST -JCT-203	2"
1J	WST -CON-0109	SCC TO JUNCTION 110	WST -SCC-001	WST -JCT-110	2"
1K	WST -CON-0110	SCC TO JUNCTION 210	WST -SCC-001	WST -JCT-210	2"
1L	WST -CON-0111	SCC TO JUNCTION 111	WST -SCC-001	WST -JCT-111	2"
1M	WST -CON-0112	SCC TO JUNCTION 211	WST -SCC-001	WST -JCT-211	2"
1N	WST -CON-0113	SCC TO JUNCTION 112	WST -SCC-001	WST -JCT-112	2"
1P	WST -CON-0114	SCC TO JUNCTION 212	WST -SCC-001	WST -JCT-212	2"
1Q	WST -CON-0115	SCC TO JUNCTION 113	WST -SCC-001	WST -JCT-113	2"
1R	WST -CON-0116	SCC TO JUNCTION 213	WST -SCC-001	WST -JCT-213	2"
2A	WST -CON-0201	MICROPHONE 1 - NOISE SENSING	WST -JCT-103	WST -ASM-001	1"
2B	WST -CON-0202	MICROPHONE 2 - NOISE SENSING	WST -JCT-210	WST -ASM-002	1"
2C	WST -CON-0203	SPEAKER 1 - POLE	WST -SCC-001	WST -SPK-001	1-1/2"
2D	WST -CON-0204	SPEAKER 2 - POLE	WST -SCC-001	WST -SPK-002	1-1/2"
2E	WST -CON-0205	SPEAKER 3 - POLE	WST -SCC-001	WST -SPK-003	1-1/2"
2F	WST -CON-0206	SPEAKER 4 - POLE	WST -SCC-001	WST -SPK-004	1-1/2"
2G	WST -CON-0207	SPEAKER 5 - POLE	WST -SCC-001	WST -SPK-005	1-1/2"
2H	WST -CON-0208	SPEAKER 6 - POLE	WST -SCC-001	WST -SPK-006	1-1/2"
2J	WST -CON-0209	SPEAKER 7 - CANOPY	WST -JCT-101	WST -SPK-007	1"
2K	WST -CON-0210	SPEAKER 8 - CANOPY	WST -JCT-201	WST -SPK-008	1"
2L	WST -CON-0211	SPEAKER 9 - CANOPY	WST -JCT-101	WST -SPK-009	1"
2M	WST -CON-0212	SPEAKER 10 - CANOPY	WST -JCT-201	WST -SPK-010	1"
2N	WST -CON-0213	SPEAKER 11 - CANOPY	WST -JCT-101	WST -SPK-011	1"
2P	WST -CON-0214	SPEAKER 12 - CANOPY	WST -JCT-201	WST -SPK-012	1"
2Q	WST -CON-0215	SPEAKER 13 - CANOPY	WST -JCT-102	WST -SPK-013	1"
2R	WST -CON-0216	SPEAKER 14 - CANOPY	WST -JCT-202	WST -SPK-014	1"
2S	WST -CON-0217	SPEAKER 15 - CANOPY	WST -JCT-102	WST -SPK-015	1"
2T	WST -CON-0218	SPEAKER 16 - CANOPY	WST -JCT-202	WST -SPK-016	1"
2U	WST -CON-0219	SPEAKER 17 - CANOPY	WST -JCT-102	WST -SPK-017	1"
2V	WST -CON-0220	SPEAKER 18 - CANOPY	WST -JCT-202	WST -SPK-018	1"
2W	WST -CON-0221	SPEAKER 19 - CANOPY	WST -JCT-102	WST -SPK-019	1"
2X	WST -CON-0222	SPEAKER 20 - CANOPY	WST -JCT-202	WST -SPK-020	1"
2Y	WST -CON-0223	SPEAKER 21 - CANOPY	WST -JCT-111	WST -SPK-021	1"
2Z	WST -CON-0224	SPEAKER 22 - CANOPY	WST -JCT-211	WST -SPK-022	1"
2AA	WST -CON-0225	SPEAKER 23 - CANOPY	WST -JCT-111	WST -SPK-023	1"
2AB	WST -CON-0226	SPEAKER 24 - CANOPY	WST -JCT-211	WST -SPK-024	1"

COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	
						1
						1
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						1
						1
						1
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**CIVIL EAST - VOLUME 11A WEST LAKE STATION** COMMUNICATIONS **CONDUIT SCHEDULE (1 OF 2)** 

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E3-WST-ELE-SCH-461 **ELECTRICAL** 

60% SUBMISSION - 09/28/15

CONDUIT NO.	DEVICE ID	DESCRIPTION/USE	FROM	то	CONDUIT SIZE
2AC	WST -CON-0227	SPEAKER 25 - CANOPY	WST -JCT-111	WST -SPK-025	1"
2AD	WST -CON-0228	SPEAKER 26 - CANOPY	WST -JCT-211	WST -SPK-026	1"
2AE	WST -CON-0229	SPEAKER 27 - CANOPY	WST -JCT-111	WST -SPK-027	1"
2AF	WST -CON-0230	SPEAKER 28 - CANOPY	WST -JCT-211	WST -SPK-028	1"
2AG	WST -CON-0231	SPEAKER 29 - CANOPY	WST -JCT-112	WST -SPK-029	1"
2AH	WST -CON-0232	SPEAKER 30 - CANOPY	WST -JCT-212	WST -SPK-030	1"
2AJ	WST -CON-0233	SPEAKER 31 - CANOPY	WST -JCT-112	WST -SPK-031	1"
2AK	WST -CON-0234	SPEAKER 32 - CANOPY	WST -JCT-212	WST -SPK-032	1"
2AL	WST -CON-0235	SPEAKER 33 - CANOPY	WST -JCT-112	WST -SPK-033	1"
2AM	WST -CON-0236	SPEAKER 34 - CANOPY	WST -JCT-212	WST -SPK-034	1"
3A	WST -CON-0301	CAMERA 1	WST -JCT-100	WST CAM-001	1"
3B	WST -CON-0302	CAMERA 2	WST -JCT-200	WST CAM-002	1"
3C	WST -CON-0303	CAMERA 3	WST -JCT-100	WST CAM-003	1"
3D	WST -CON-0304	CAMERA 4	WST -JCT-200	WST CAM-004	1"
3E	WST -CON-0305	CAMERA 5	WST -JCT-100	WST CAM-005	1"
3F	WST -CON-0306	CAMERA 6	WST -JCT-200	WST CAM-006	1"
3G	WST -CON-0307	CAMERA 7	WST -JCT-120	WST CAM-007	1"
3H	WST -CON-0308	CAMERA 8	WST -JCT-220	WST CAM-008	1"
3J	WST -CON-0309	CAMERA 9	WST -JCT-120	WST CAM-009	1"
3K	WST -CON-0310	CAMERA 10	WST -JCT-220	WST CAM-010	1"
3L	WST -CON-0311	CAMERA 11	WST -JCT-120	WST CAM-011	1"
3M	WST -CON-0312	CAMERA 12	WST -JCT-220	WST CAM-012	1"
4A	WST -CON-0401	KIOSK 1 (F)	WST -SCC-001	WST -KSK-001	2"
4B	WST -CON-0402	KIOSK 2 (F)	WST -SCC-001	WST -KSK-002	2"
5A	WST -CON-0501	VMS 1	WST -JCT-100	WST -VMS-001	1"
5B	WST -CON-0502	VMS 2	WST -JCT-200	WST -VMS-002	1"
5C	WST -CON-0503	VMS 3	WST -JCT-100	WST -VMS-003	1"
5D	WST -CON-0504	VMS 4	WST -JCT-200	WST -VMS-004	1"
5E	WST -CON-0505	VMS 5	WST -JCT-100	WST -VMS-005	1"
5F	WST -CON-0506	VMS 6	WST -JCT-200	WST -VMS-006	1"
5G	WST -CON-0507	VMS 7	WST -JCT-120	WST -VMS-007	1"
5H	WST -CON-0508	VMS 8	WST -JCT-220	WST -VMS-008	1"
5J	WST -CON-0509	VMS 9	WST -JCT-120	WST -VMS-009	1"
5K	WST -CON-0510	VMS 10	WST -JCT-220	WST -VMS-010	1"
5L	WST -CON-0511	VMS 11	WST -JCT-120	WST -VMS-011	1"
5M	WST -CON-0512	VMS 12	WST -JCT-220	WST -VMS-012	1"
6A	WST -CON-0601	TVM 1	WST -SCC-001	WST -TVM-001	2"
6B	WST -CON-0602	TVM 2	WST -SCC-001	WST -TVM-002	2"
7A	WST -CON-0701	VALIDATOR 1	WST -SCC-001	WST -RSV-001	1-1/2"
7B	WST -CON-0702	VALIDATOR 2	WST -SCC-001	WST -RSV-002	1-1/2"
7C	WST -CON-0703	VALIDATOR 3	WST -SCC-001	WST -RSV-003	1-1/2"
7D	WST -CON-0704	VALIDATOR 4	WST -SCC-001	WST -RSV-004	1-1/2"
8A	WST -CON-0801	EMERGENCYTELEPHONE 1 - PHONE	WST -SCC-001	WST -ETL-001	1-1/2"
8B	WST -CON-0802	EMERGENCYTELEPHONE 1 - BEACON LIGHT 1	WST -ETL-001	WST -ETB-001	1"
8C	WST -CON-0803	EMERGENCYTELEPHONE 1 - BEACON LIGHT 2	WST -ETL-001	WST -ETB-002	1"
9A	WST -CON-0901	STATION ELECTRICAL CABINET	WST -SCC-001	WST -SEC-001	2"

# COMMUNICATIONS CONDUIT SCHEDULE

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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60% SUBMISSION - 09/28/15





# CIVIL EAST - VOLUME 11A WEST LAKE STATION COMMUNICATIONS CONDUIT SCHEDULE (2 OF 2)

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SHEET

DISCIPLINE:

ELECTRICAL

E3-WST-ELE-SCH-462