



Division of Operations
Mitchell Region Design Office
 Better Lives Through Better Transportation
 1300 S Ohlman St - PO Box 1206, Mitchell, SD 57301
 Phone: 605-995-8129 | Fax: 605-995-8135
dot.sd.gov

July 31, 2024

TO: Interested Bidders

ADDENDUM 1

RE: **IM 0907(93)310, Aurora County – PCN 09P1**
Road Closure Gates on I90 at Exit 310 (US281)

The following addenda to the contract proposal and plans will be inserted and made a part of your contract proposal and plans for the above referenced project:

PROPOSAL

Discard the DOT-123 Contract Proposal form and replace with the enclosed revised DOT-123 Contract Proposal form.

PLANS

Discard Sheets 2, 4, 18-30, 32-37, 39-40 & 42-44 and replace with the enclosed revised Sheets 2, 4, 18-30, 32-37, 39-40 & 42-44.

Quantities for items on the DOT-123 Contract Proposal form and quantities on Sheet 2 of the plans were revised according to the table below as shown for Sheet 2.

Other sheets in the plans were also revised as described in the table below.

Sheet	Revision	Date
2	Change to Quantities: -635E0150 Breakaway Base Luminaire Pole with Twin Arms, 50' Mounting Height, decreased from 14 to 10 -635E3700 Roadway Luminaire, LED with Photoelectric Cell, decreased from 50 to 42 -635E5020 2' Diameter Footing decreased from 294 to 258 -635E5301 Type 1 Electrical Junction Box, increased from 13 to 15 -635E8120 2" Rigid Conduit, Schedule 40, decreased from 11240 to 11175 -635E8220 2" Rigid Conduit, Schedule 80, decreased from 1385 to 1290 -635E9011 1/C #1 AWG Copper Wire, decreased from 10665 to 9145 -635E9012 1/C #2 AWG Copper Wire, decreased from 5320 to 3800 -635E9020 1/C #10 AWG Copper Wire, decreased from 20380 to 19875 -635E9710 2/C #10 AWG Copper Pole and Bracket Cable decreased from 3250 to 2990	7-24-2024 - RR
4	Revised Plan note for "Luminaires", and "Table of Footing Data"	7-24-2024 - RR
18-19	Revised tables to reflect removal of Luminaire Poles	7-24-2024 - RR
20	Changes to plan Overview	7-24-2024 - RR
21	Revised EOQ table	7-24-2024 - RR
22-30, 32-37, 39-40, 42	Changes to wire call outs, change of pole name labels	7-24-2024 - RR
43-44	Removal of poles from wiring diagrams, change of pole name labels	7-24-2024 - RR

Proposal and Plans (and Addenda, when applicable) can be accessed at the following link:
<https://apps.sd.gov/HC65BidLetting/RegionDefault.aspx> Prior to submitting a bid, it is the bidder's responsibility to examine the project in accordance with Section 2.5 of the specifications. It is also the bidder's responsibility to acknowledge and account for any addenda issued prior to bid opening.

Very truly yours,

DEPARTMENT OF TRANSPORTATION
Travis Dressen, Region Engineer

Monte Rice, Region Design Engineer

cc: Bennett – Construction and Maintenance
Bartlett/Rapp - Road Design - Utilities
B. Hoffman – Bid Letting
R. Johnson/Paul/Kruger – Operations Support
Hudecek – Certification
Hansen – Civil Rights
Reiss – Planning & Programs
Peppel/Holthaus/Brandner – Mitchell Area
Weisz – Operations
Horstman – Materials
Leiferman – Project Development

**SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION
CONTRACT PROPOSAL**

DOT-123
February 2021
1 of 2
Rev. 7/31/24 MR

CODE	PROJECT			MAINT UNIT	CONTROL REFERENCE	AFE	FUNCTION	BEGIN MRM	END MRM
	PRE	ROUTE	AGR						
	IM	0907	93		310	09P1			

CITY AND/OR COUNTY: Aurora County

BUDGET SOURCE: Construction Program

REGION MATERIALS CERTIFICATION REQUIRED: YES NO **WIP #:** _____
CERTIFIED INSPECTORS/TESTERS REQUIRED: YES NO
TO BE INSTALLED ON CM&P: YES NO

TYPE, PURPOSE AND LOCATION OF WORK: Road Closure Gates & Lighting on I90 at Exit 310 (US281).

ESTIMATE OF QUANTITIES AND COST

BID ITEM NUMBER	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
009E0010	Mobilization	Lump Sum	LS	Lump Sum	
009E1000	Incentive/Disincentive Pay	0	Day	\$1,500.00	\$0.00
250E0010	Incidental Work	Lump Sum	LS	Lump Sum	
632E0014	1.75' Diameter Breakaway Support Concrete Footing	76	Ft		
632E1235	W6x20 Steel Post	135.6	Ft		
632E1240	W8x18 Steel Post	82.9	Ft		
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	471.6	SqFt		
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	24	SqFt		
634E0110	Traffic Control Signs	250	SqFt		
634E0120	Traffic Control Miscellaneous	Lump Sum	LS	Lump Sum	
634E0275	Type 3 Barricade	1	Each		
634E0420	Type C Advance Warning Arrow Board	1	Each		
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	16	Each		
635E0150	Breakaway Base Luminaire Pole with Twin Arms, 50' Mounting Height	10	Each		
635E3700	Roadway Luminaire, LED with Photoelectric Cell	42	Each		
635E4010	1 Section Vehicle Signal Head	12	Each		
635E5020	2' Diameter Footing	258	Ft		
635E5301	Type 1 Electrical Junction Box	15	Each		
635E5400	Electrical Service Cabinet	2	Each		
635E8120	2" Rigid Conduit, Schedule 40	11175	Ft		
635E8220	2" Rigid Conduit, Schedule 80	1290	Ft		
635E9010	1/C #0 AWG Copper Wire	6920	Ft		
635E9011	1/C #1 AWG Copper Wire	9145	Ft		
635E9012	1/C #2 AWG Copper Wire	3800	Ft		
635E9018	1/C #8 AWG Copper Wire	10460	Ft		
635E9020	1/C #10 AWG Copper Wire	19875	Ft		
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	2990	Ft		
900E0045	Drop Arm Road Closure Gate	4	Each		
TOTAL					

**SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION
CONTRACT PROPOSAL**

DOT-123
February 2021
2 of 2
Rev. 7/31/24 MR

CODE	PROJECT			MAINT UNIT	CONTROL REFERENCE	AFE	FUNCTION	BEGIN MRM	END MRM
	PRE	ROUTE	AGR						
	IM	0907	93		310	09P1			

CONTRACTOR'S PROPOSAL STATEMENT

The undersigned agrees to offer the labor and material in the quantities, at the unit price, for the purpose, in the place, and in accordance with attached provisions. The Contractor will provide services in compliance with the Americans with Disabilities Act of 1990 and any amendments.

SUBSTANTIAL COMPLETION DATE December 20, 2024

PROPOSED START DATE _____

FIELD WORK COMPLETION DATE June 27, 2025

SIGNATURE _____

SUBSCRIBED AND SWORN TO BEFORE ME THE

PRINTED NAME _____

DAY OF _____, 20__

COMPANY _____

NOTARY _____

STR. ADDRESS _____

My Commission Expires:

CITY, STATE, ZIP _____

PHONE NUMBER _____

DATE _____ (SEAL)

FEDERAL TAX ID NUMBER _____

TO BE FILLED OUT BY STATE PERSONNEL:

The parties agree that the Department of Transportation may execute this contract by electronic signature.

RECOMMENDED FOR APPROVAL:

CONSTRUCTION & MAINTENANCE ENGINEER DATE

AREA / REGION / OPS ENGINEER DATE

DIRECTOR OF OPERATIONS DATE

INTERNAL SERVICES / AUDITS DATE

ACCEPTED BY SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

NAME _____ TITLE _____ DATE _____

IF FEDERAL FUNDS WILL BE EXPENDED UNDER THIS AGREEMENT, ACCEPTANCE BY PROJECT DEVELOPMENT IS REQUIRED

PROJECT DEVELOPMENT ENGINEER DATE

NONSECTION ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
250E0010	Incidental Work	Lump Sum	LS
632E0014	1.75' Diameter Breakaway Support Concrete Footing	76.0	Ft
632E1235	W6x20 Steel Post	135.6	Ft
632E1240	W8x18 Steel Post	82.9	Ft
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	471.6	SqFt
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	24.0	SqFt
634E0110	Traffic Control Signs	250.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	1	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	16	Each
635E0150	Breakaway Base Luminaire Pole with Twin Arms, 50' Mounting Height	10	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	42	Each
635E4010	1 Section Vehicle Signal Head	12	Each
635E5020	2' Diameter Footing	258.0	Ft
635E5301	Type 1 Electrical Junction Box	15	Each
635E5400	Electrical Service Cabinet	2	Each
635E8120	2" Rigid Conduit, Schedule 40	11,175	Ft
635E8220	2" Rigid Conduit, Schedule 80	1,290	Ft
635E9010	1/C #0 AWG Copper Wire	6,920	Ft
635E9011	1/C #1 AWG Copper Wire	9,145	Ft
635E9012	1/C #2 AWG Copper Wire	3,800	Ft
635E9018	1/C #8 AWG Copper Wire	10,460	Ft
635E9020	1/C #10 AWG Copper Wire	19,875	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	2,990	Ft
900E0045	Drop Arm Road Closure Gate	4	Each

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf> >

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at: <https://sdeastwanted.sd.gov/maps/default.aspx> >

< [South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species](https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04): <https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04> >

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06. Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

INCIDENTAL WORK

Incidental work includes, but is not limited to, the restoration of all disturbed areas to the satisfaction of the Engineer.

LUMINAIRE POLES

Luminaire poles L8, L9, L17-L30 will have a mounting height of 50-feet with 6-foot arms.

Luminaire poles L1-L7, L10-L16, will have a mounting height of 50-feet with twin 8-foot arms.

The pole fabricator will be responsible for the determining the diameter, length, and number of anchor bolts.

LUMINAIRES

The lighting design used the following parameters to provide 1.1 and greater average maintained foot-candles and uniformity ratios of 3:1 (average maintained to minimum maintained foot-candles) and 6:1 (maximum to minimum maintained foot candles):

Pole Setback:	32' for Median I-90, 12' US281
Lamp Loss Factor (LLF):	0.8
Width of Lighted Area:	40 Ft. for I90, 36' for US281
Configuration:	One-Sided/Staggered/Median
Mounting Height:	50 Ft.
Arm Length	Twin 8 Ft./Single 6 Ft.

The following luminaires, or an approved equivalent, will be used for luminaire poles L6, L7, L13-L26, SGL2, SGL3:

- a.) AEL Autobahn: ATBO-P455-MVOLT-R2-P7-PCLL
- b.) Cooper Lighting ARCH-L-PA3-190-740-U-T2R-PR7-LLPC
- c.) Solar Max SMX-177-WiE-NV-LL5-PH-4070-T212-P

The following luminaires, or an approved equivalent, will be used for luminaire poles L1-L5, L8-L12, SGL1, SGL4:

- a.) AEL Autobahn: ATB2-P603-MVOLT-R3-P7-PCLL
- b.) Cooper Lighting ARCH-L-PA3-230-740-U-T2U-PR7-LLPC
- c.) Solar Max SMX-230-WiE-NV-LL5-PH-4070-T302-P

TABLE OF FOOTING DATA

Site Designation	Footing Diameter	* Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
L6,L7, L13-L26	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"
L1-L5, L8-L12	2' - 0"	9' - 0"	1' - 8"	60' - 0"	8-#7 x 8' - 6"
SGL1-SGL4	2' - 0"	10' - 0"	1' - 8"	65' - 3"	8-#7 x 9' - 6"

* Footing depth will be below ground level.

** The size of all spirals will be #3.

SUBSURFACE

Soils in the vicinity of the closure gates and luminaires consist of brown silt clay.

Footings installed along the interstate and ramps may encounter groundwater and caving soils below I90 ditch grade elevation.

Concrete placement operations should closely follow excavation procedures. The longer the excavations are left open, the more likely that caving will occur.

If caving soils are encountered, it may be necessary to use casing or drilling fluids to maintain an open excavation. Casing will be of sufficient strength to withstand handling and installation procedures. Casing material may consist of Sonotube, corrugated metal pipe, PVC, smooth metal pipe or any other material as approved by the Engineer. Drilling fluids can be water or other slurries as approved by the Engineer. Concrete placed through drilling fluids will be tremied. If caving is not an issue but water is present, it will be removed prior to concrete placement, or the concrete will be tremied.

WIRE SPlicing FOR LIGHTING

All wire splices for lighting will be made using TE Connectivity GTAP connectors, NSI Industries Polaris Blue connectors, or an approved equal.

DROP ARM ROAD CLOSURE GATE

The Drop Arm Road Closure Gates will be located as shown in the plans. See Special Details for dimensions.


All steel channel, angle, and flat bar will be ASTM A36 steel.

The gate arm pivots, supports, and guides and all associated hardware will be galvanized in accordance with the Standard Specifications. All rough edges and burrs will be ground smooth prior to galvanizing.

Poles will be in accordance with the Standard Specifications for Luminaire Poles. The pole fabricator will be responsible for the determining the diameter, length, and number of anchor bolts.

All lockable 3R NEMA enclosures will be keyed alike. Costs for lockable 3R NEMA enclosures and keys will be incidental to the contract unit price per each for "Drop Arm Road Closure Gate."

The gate arm will be fabricated from high strength rectangular fiberglass (1/8 inch thick) and ASTM 221 6061-T6 rectangular aluminum tubing.

	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	4 of 62

Plotting Date: 07/29/2024
Revised 7-24-2024 - RR

Worm gear winch and cable will be Dutton-Lalson model WG2000 or an approved equivalent.

Gate warning lights will be LED. The light at the end of the arm will be steady burn. The other lights will flash at the rate required by the MUTCD. Spacing of the lights will vary based on arm length, the contractor is responsible for determining the spacing.

All costs associated with making the Drop Arm Road Closure Gates operational including but not limited to the pole, gate, switches, transformers, LED signal modules, all wiring in the gate arm, cube flasher units, cap flasher units, rigid steel conduit and miscellaneous hardware require to construct the drop arm road closure gate will all be incidental to the contract unit per each for "Drop Arm Road Closure Gate."

SNOW GATE DIMENSIONS

Site Designation	Drop Arm Gate (EA)	Gate Arm Length (ft)
SGL1-SGL4	1	25

YELLOW BEACONS ON I-90 WARNING SIGNS

Yellow beacons will be installed on top of the proposed "I-90 CLOSED WHEN FLASHING" signs. The flashing beacons on each sign will alternate as they flash. The Contractor will make all necessary connections to make the flashing beacon system operational.

All costs for the yellow beacons, conduit, and wire to be installed on the warning signs to make the yellow beacons fully functional will be incidental to the contract unit price per each for "1 Section Vehicle Signal Head". See Special Details for the conduit to be installed on the warning signs.

NEW PERMANENT SIGNING

All signs will be manufactured in accordance with the sheeting manufacturer's recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films.

All Flat Aluminum Signs, Nonremovable Copy High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type IV. All Flat Aluminum Signs, Nonremovable Copy Super/Very High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type XI.

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware will be incidental to the contract unit price per square foot for "Flat Aluminum Sign, Nonremovable Copy High Intensity" or "Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity".




Plotting Date: 07/29/2024
Revised 7-23-2024 RR

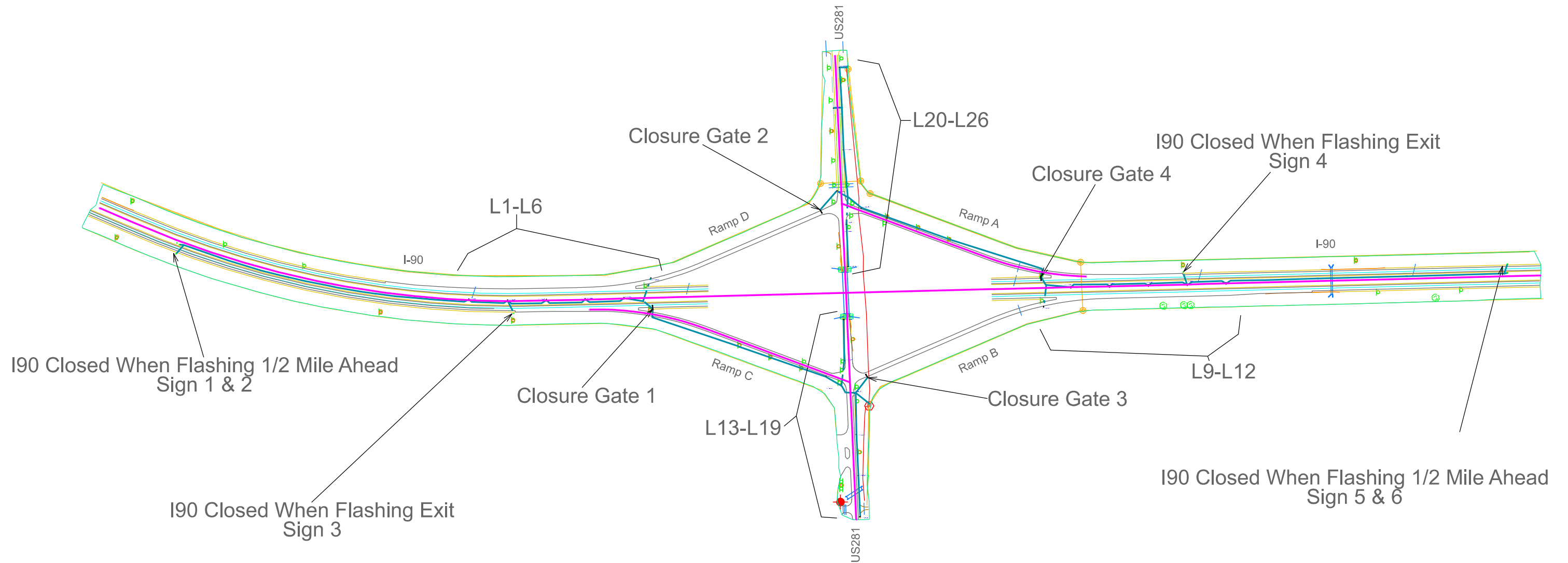
Location to Location	Rigid Conduit		Copper Wire					Pole and Bracket Cable		
	Schedule 40	Schedule 80	1/C #10 AWG	1/C #8 AWG	1/C #2 AWG	1/C #1 AWG	1/C #0 AWG	2/C #10 AWG		
	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft		
Lighting										
L1	L2	245			760		760			
L2	L3	245			760		760			
L3	L4	245			760		760			
L4	L5	245			760		760			
L5	JL1	130			760		760			
JL1	L6			145			450			
JL1	SGL1			90		280		280		
SGL1	JL2	560		55				1,900		
JL2	L17	565						1,750		
L17	JL3	120						375		
JL3	L18	60		105			510			
L18	L19	265					820			
JL3	JL4	55		60				310		
JL4	SGL3	130					405			
L16	JL4	120						375		
JL4	Elect. Service	115						355		
JL4	L16	15					50			
JL4	L15	260					805			
L15	L14	260					805			
L14	L13	260					805			
Elect. Service	JL5	25					80	80		
JL5	L26	55					170	170		
L26	JL6	255					790	790		
JL6	L25			60			185			
JL6	L24	265					820	820		
L24	JL7	295					915	915		
JL7	L23			85			265			
L23	SGL2	160					495			
JL7	L21			170			525			
L21	L20	265					820			
JL7	L22	115					355	355		
L22	JL8	595						1,840		
JL8	SGL4	575		55				1,950		
SGL4	JL9			85		265		265		
JL9	L7			125			390			
JL9	L8	160				760		495		
L8	L9	245				760		760		
L9	L10	245				760		760		
L10	L11	245				760		760		
L11	L12	245				760		760		
For Advance Signs										
Sign 1	JS1			85		265				
Sign 2	JS1	40				125				
JS1	JS2	670				2,070				
JS2	JS5	540				1,670				
JS5	L1	545				1,685				
L2	Sign3			95		295				
L12	JS3	570				1,765				
JS3	JS6	545				1,685				
JS6	JS4	600				1,855				
JS4	Sign5	25				80				
JS4	Sign6			75		235				
Subtotal:		11,175		1,290		19,875	10,460	3,800	9,145	6,920



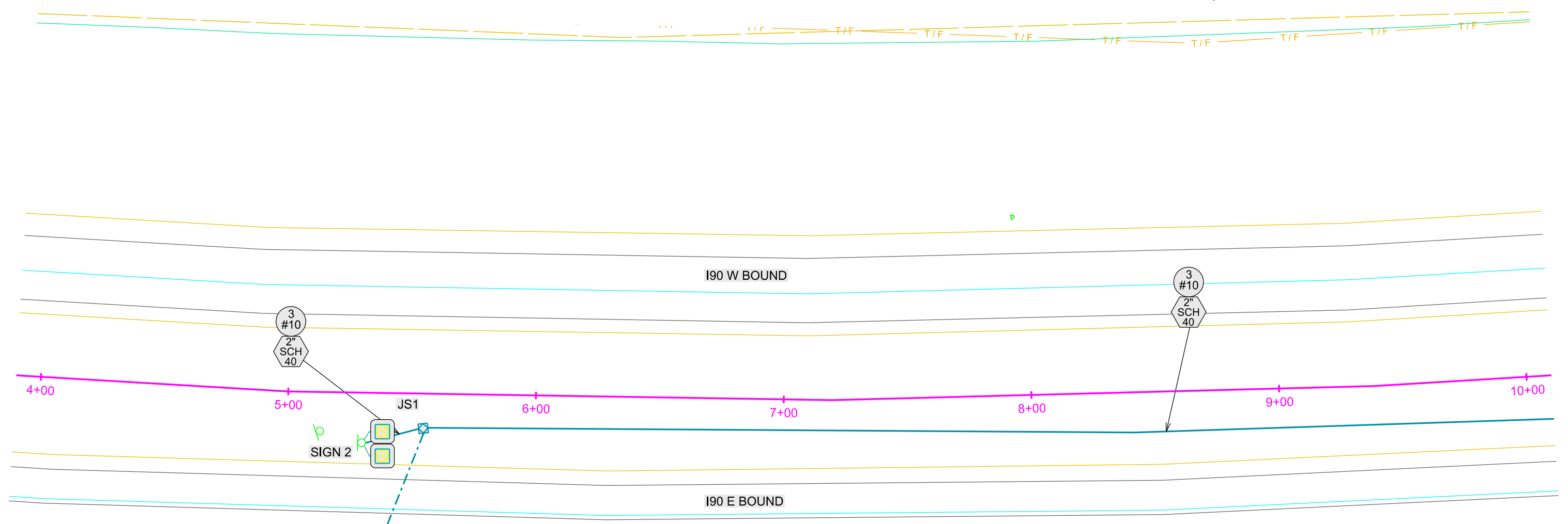
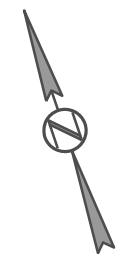
Location to Location	Rigid Conduit		Copper Wire					Pole and Bracket Cable		
	Schedule 40		Schedule 80		1/C	1/C	1/C	1/C	1/C	2/C
	2"	2"			#10	#8	#2	#1	#0	#10
	Ft	Ft			AWG	AWG	AWG	AWG	AWG	AWG
	Ft	Ft			Ft	Ft	Ft	Ft	Ft	Ft
Luminaire										
L1										130
L2										130
L3										130
L4										130
L5										130
L6										65
L7										65
L8										130
L9										130
L10										130
L11										130
L12										130
L13										65
L14										65
L15										65
L16										65
L17										65
L18										65
L19										65
L20										65
L21										65
L22										65
L23										65
L24										65
L25										65
L26										65
L27										65
L28										65
L29										65
L30										65
SGL1										130
SGL2										65
SGL3										65
SGL4										130
Subtotal:	0	0			0	0	0	0	0	2,990
Total:	11,175	1,290			19,875	10,460	3,800	9,145	6,920	2,990

OVERVIEW I90 & US HWY 281

	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	20 of 62
<small>Plotting Date: 07/29/2024 Revised 7-23-2024 - RR</small>			



CONDUIT LAYOUT I90



KEY	ITEM	EST QUANT	UNIT
⚡	Breakaway Base Luminaire Pole w/6' Arm 50' Mounting Height (L6, L7, L13-L26)	16	EACH
⚡	Breakaway Base Luminaire Pole w/8' Twin Arm 50' Mounting Height (L1-L5, L8-L12)	10	EACH
⚡	Drop Arm Closure Gate w/8' Twin Luminaire Arm, 50' Mounting Height, and 25' Drop Arm Closure Gate (SGL1,SGL4)	2	EACH
⚡	Drop Arm Closure Gate w/6' Luminaire Arm, 50' Mounting Height, and 25' Drop Arm Closure Gate (SGL2,SGL3)	2	EACH
	Roadway Luminaire, LED with Photocell (L1-L26, SGL1-SGL4)	42	EACH
	2' Diameter Footing (L1-L30, SGL1-SGL4)	258	EACH
☑	Type 1 Electrical Junction Box (JL1-JL9, JS1-JS6)	15	EACH
▲	Electrical Service Cabinet	2	EACH
⚡	Galvanized Steel Utility Pole Not a Bid Item	2	EACH
M	Meter Socket Not a Bid Item	2	EACH

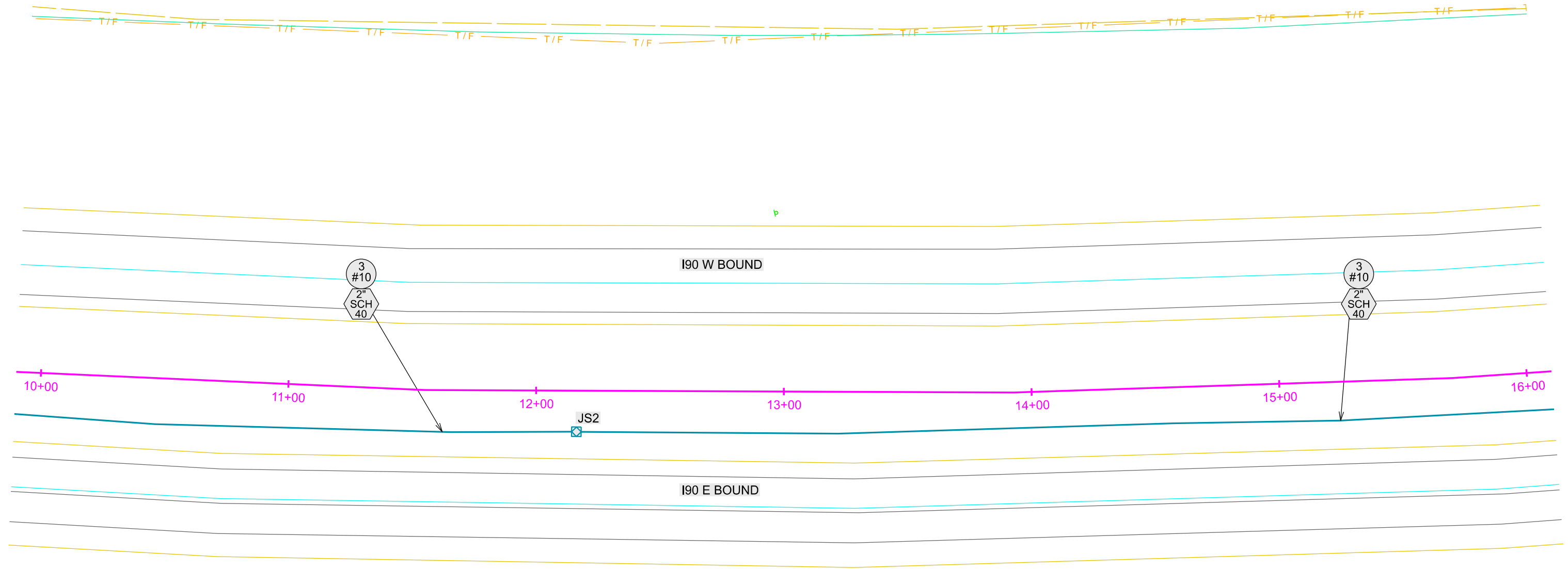
KEY	ITEM	EST QUANT	UNIT
2" SCH 40	2" Rigid Conduit, Schedule 40	11175	FT
2" SCH 80	2" Rigid Conduit, Schedule 80	1290	FT
#10	1/C #10 AWG Copper Wire	19875	FT
#8	1/C #8 AWG Copper Wire	10460	FT
#2	1/C #2 AWG Copper Wire	3800	FT
#1	1/C #1 AWG Copper Wire	9145	FT
#0	1/C #0 AWG Copper Wire	6920	FT
	2/C #10 AWG Copper Pole & Bracket Cable	2990	FT
Signal Head	1 Section Vehicle Signal Head	12	EACH

CONDUIT LAYOUT I90




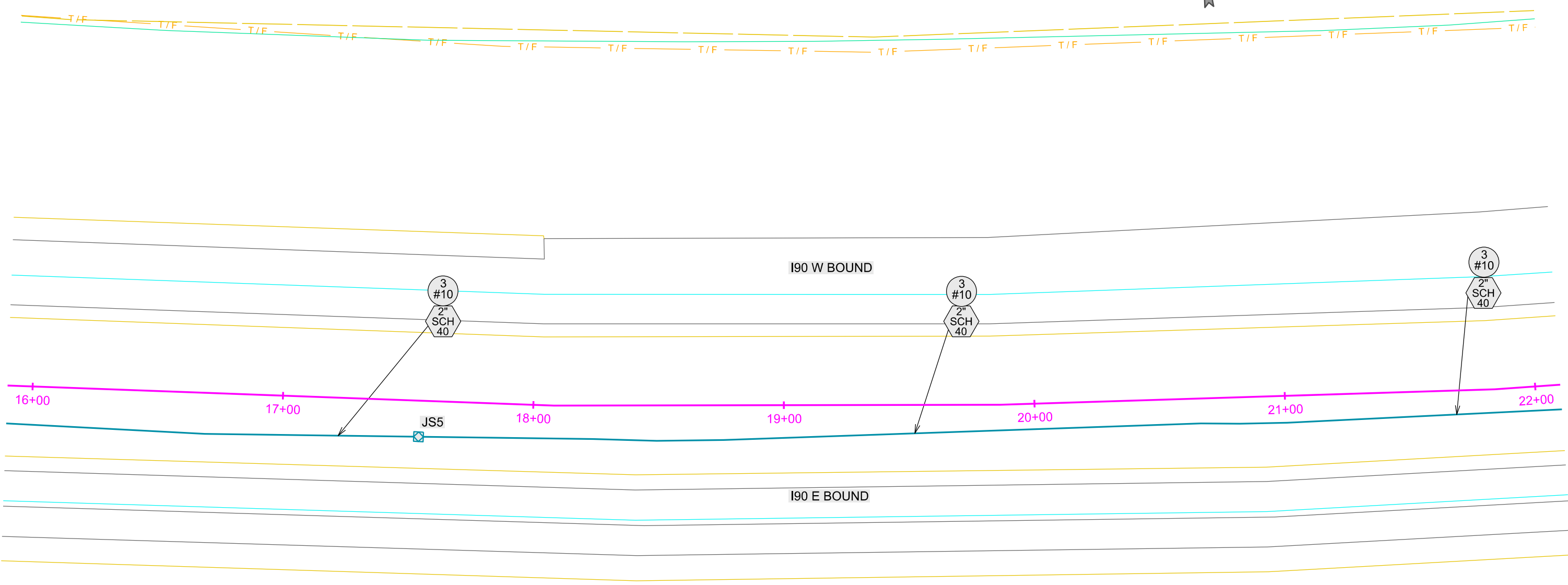
PROJECT	SECTION	SHEET
IM 0907(93)310	Non	22 of 62

Plotting Date: 07/29/2024
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CONDUIT LAYOUT I90

	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	23 of 62
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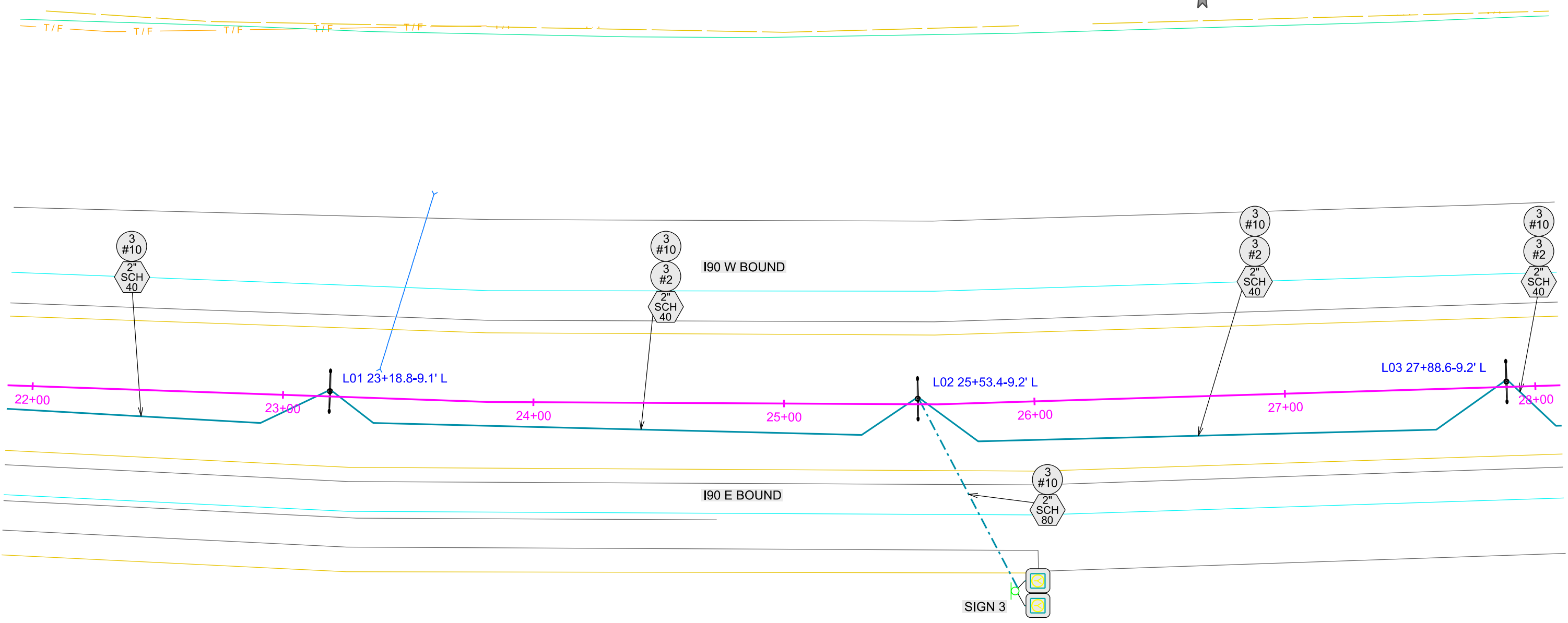


CONDUIT LAYOUT I90



PROJECT	SECTION	SHEET
IM 0907(93)310	Non	24 of 62

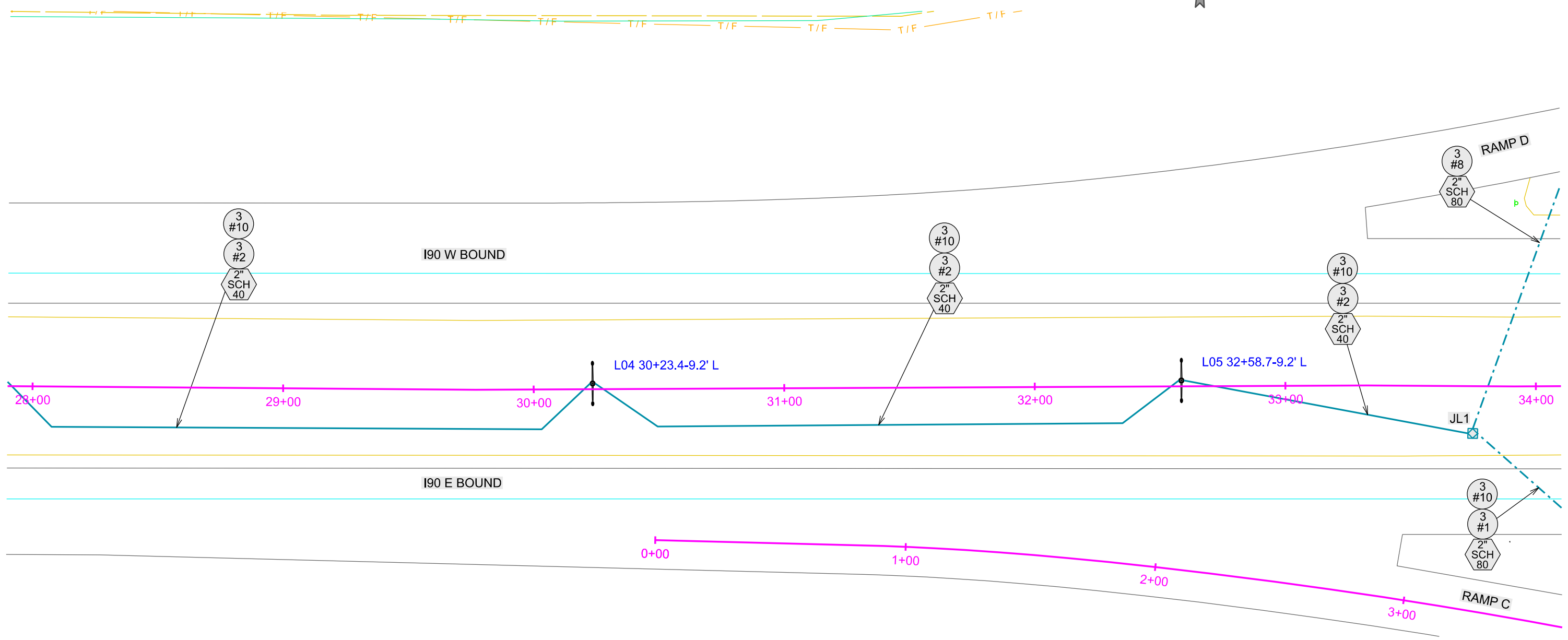
Plotting Date: 07/29/2024
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CONDUIT LAYOUT I90

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	25 of 62

Plotting Date: 07/29/2024
Revised 7-24-2024 - RR

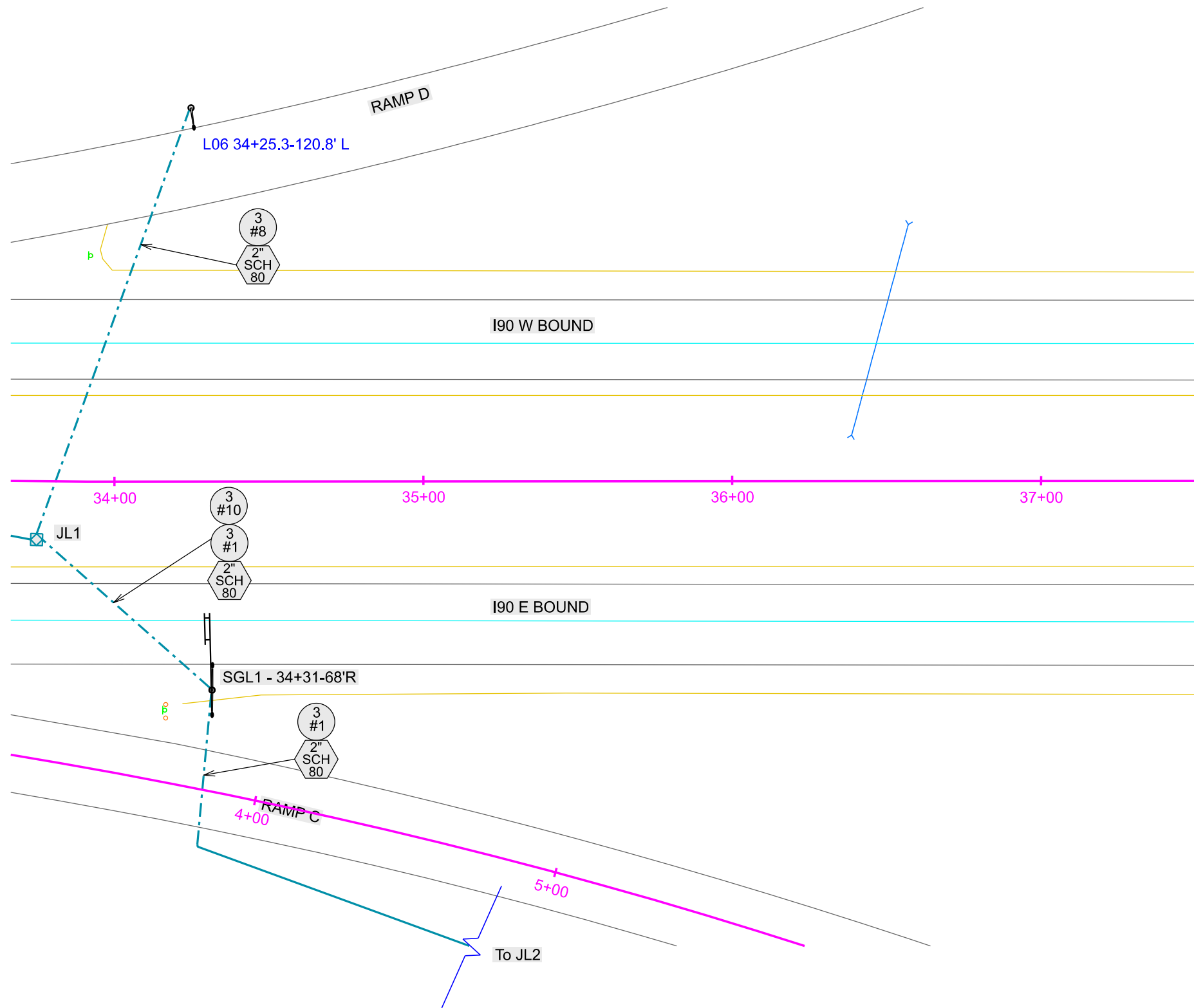


CONDUIT LAYOUT I90



PROJECT	SECTION	SHEET
IM 0907(93)310	Non	26 of 62

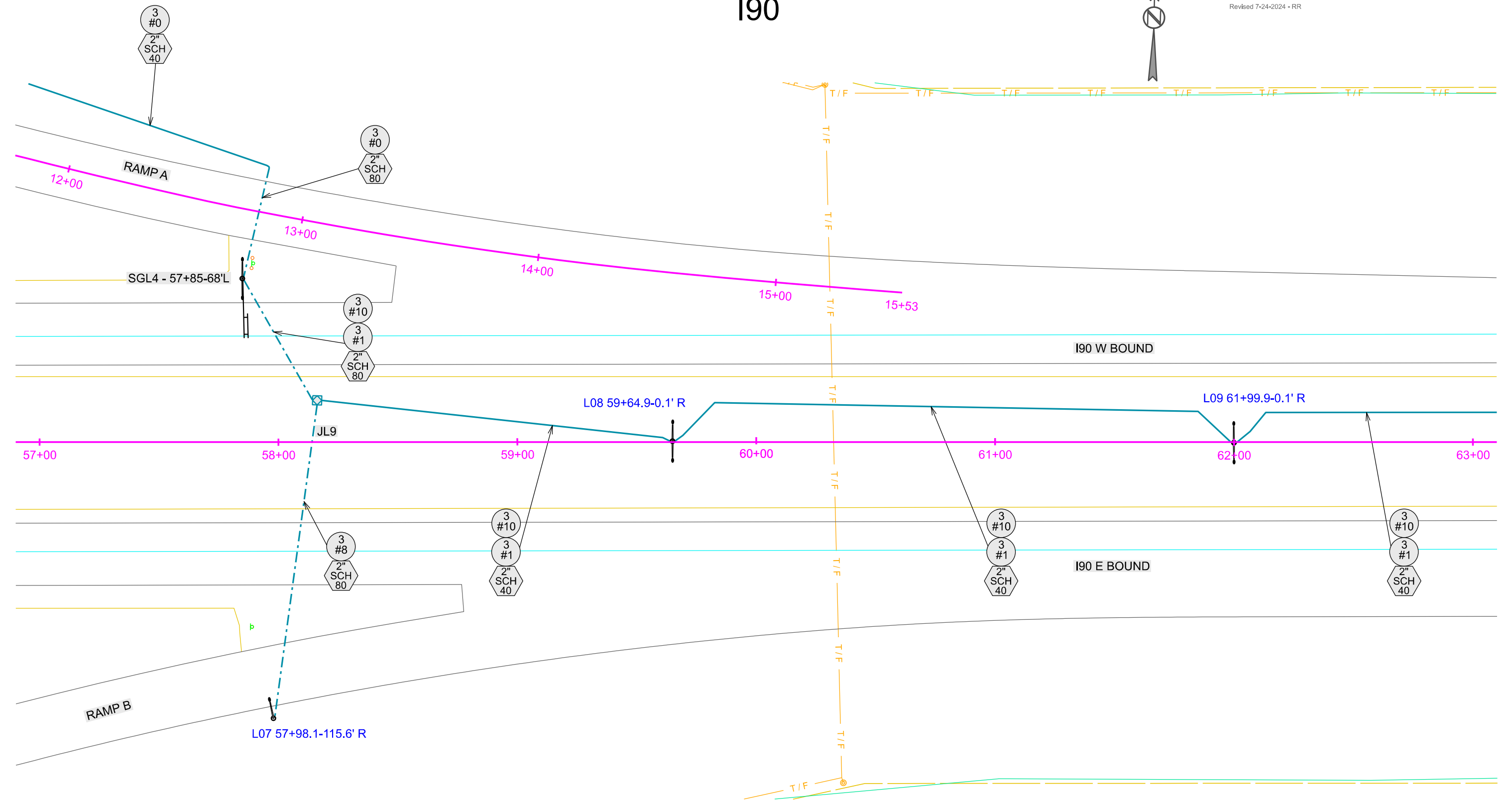
Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



CONDUIT LAYOUT I90

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	27 of 62

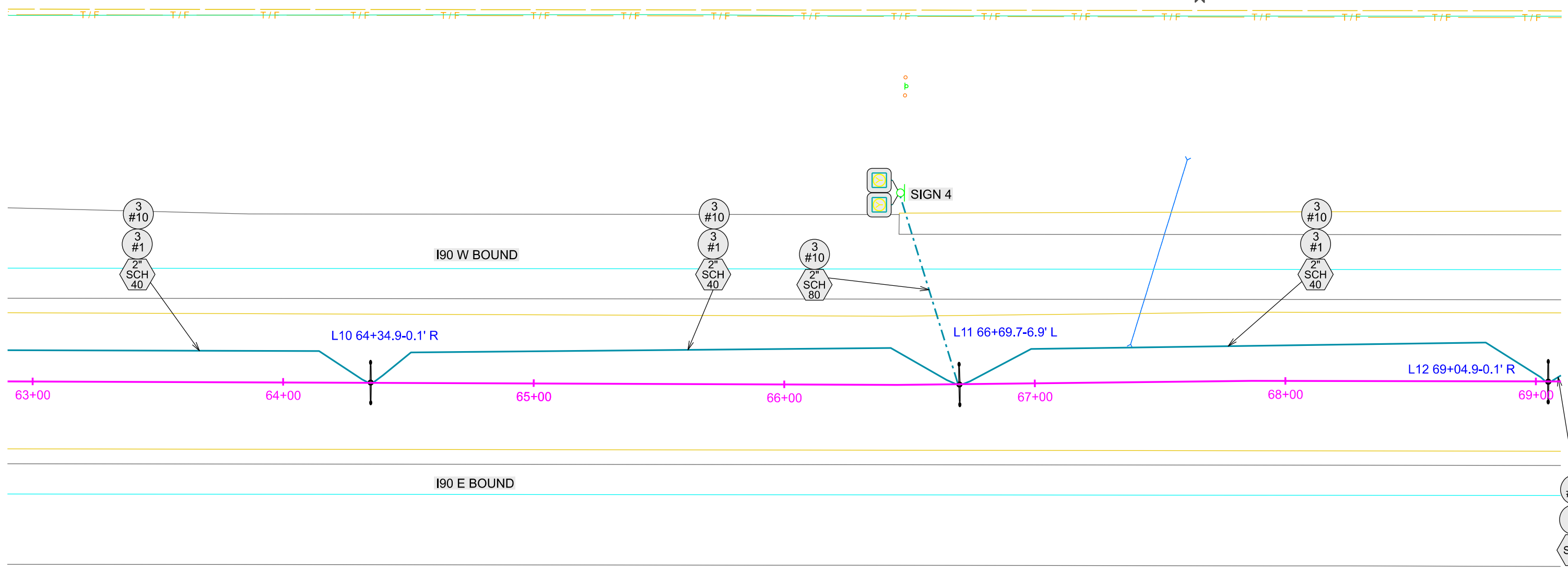
Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



CONDUIT LAYOUT I90

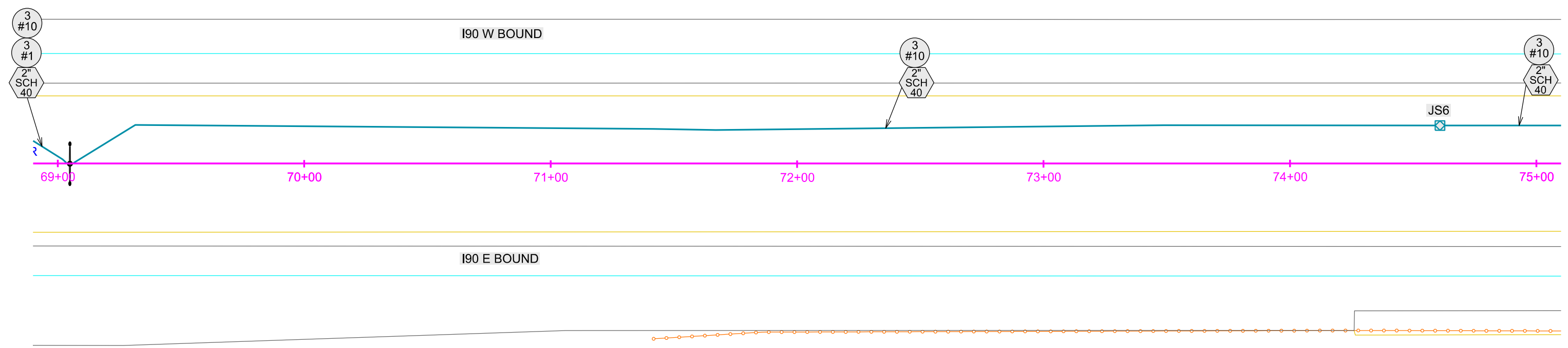
SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	28 of 62

Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



CONDUIT LAYOUT I90

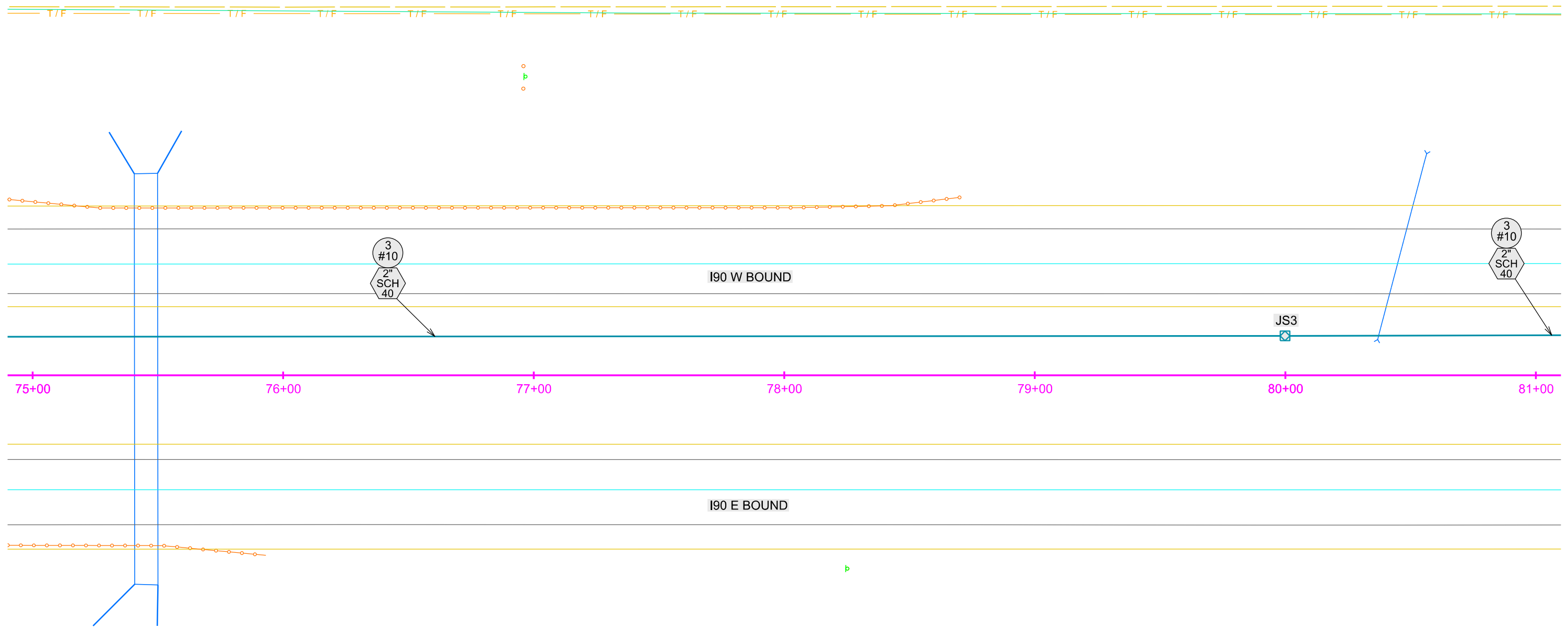
SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	29 of 62
Plotting Date: 07/29/2024			
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CONDUIT LAYOUT I90

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	30 of 62

Plotting Date: 07/29/2024
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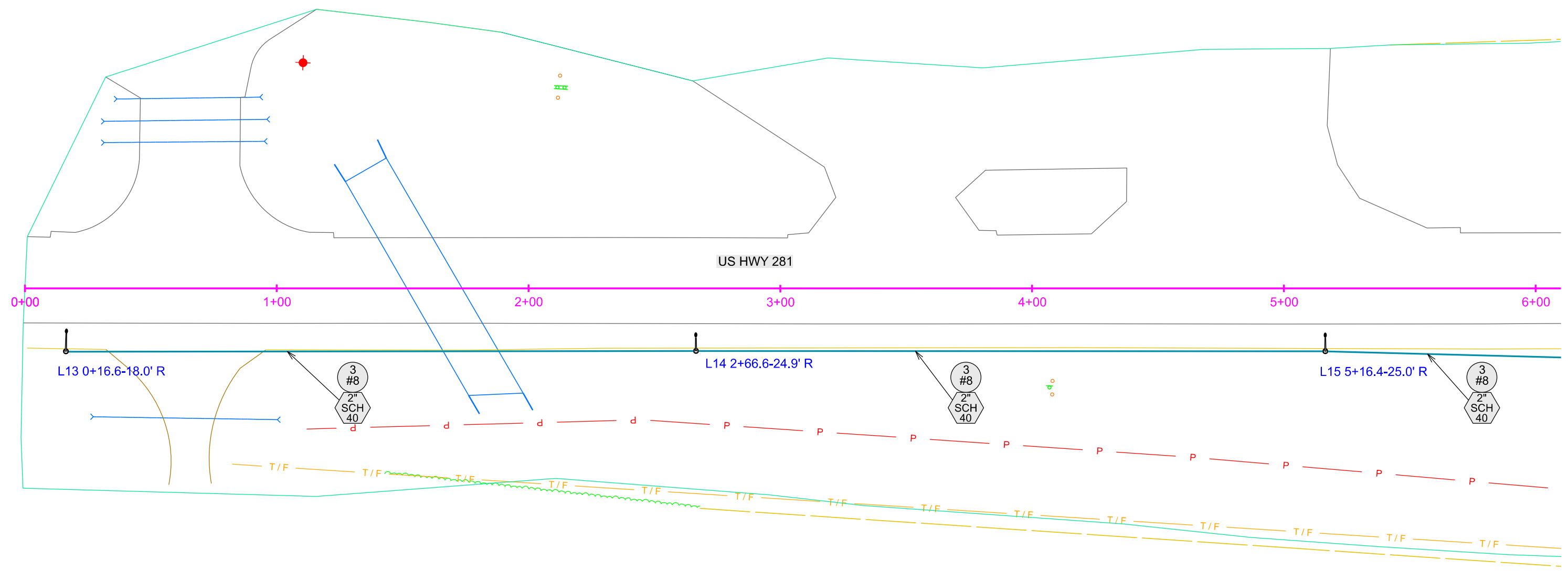


CONDUIT LAYOUT US HWY 281



PROJECT	SECTION	SHEET
IM 0907(93)310	Non	32 of 62

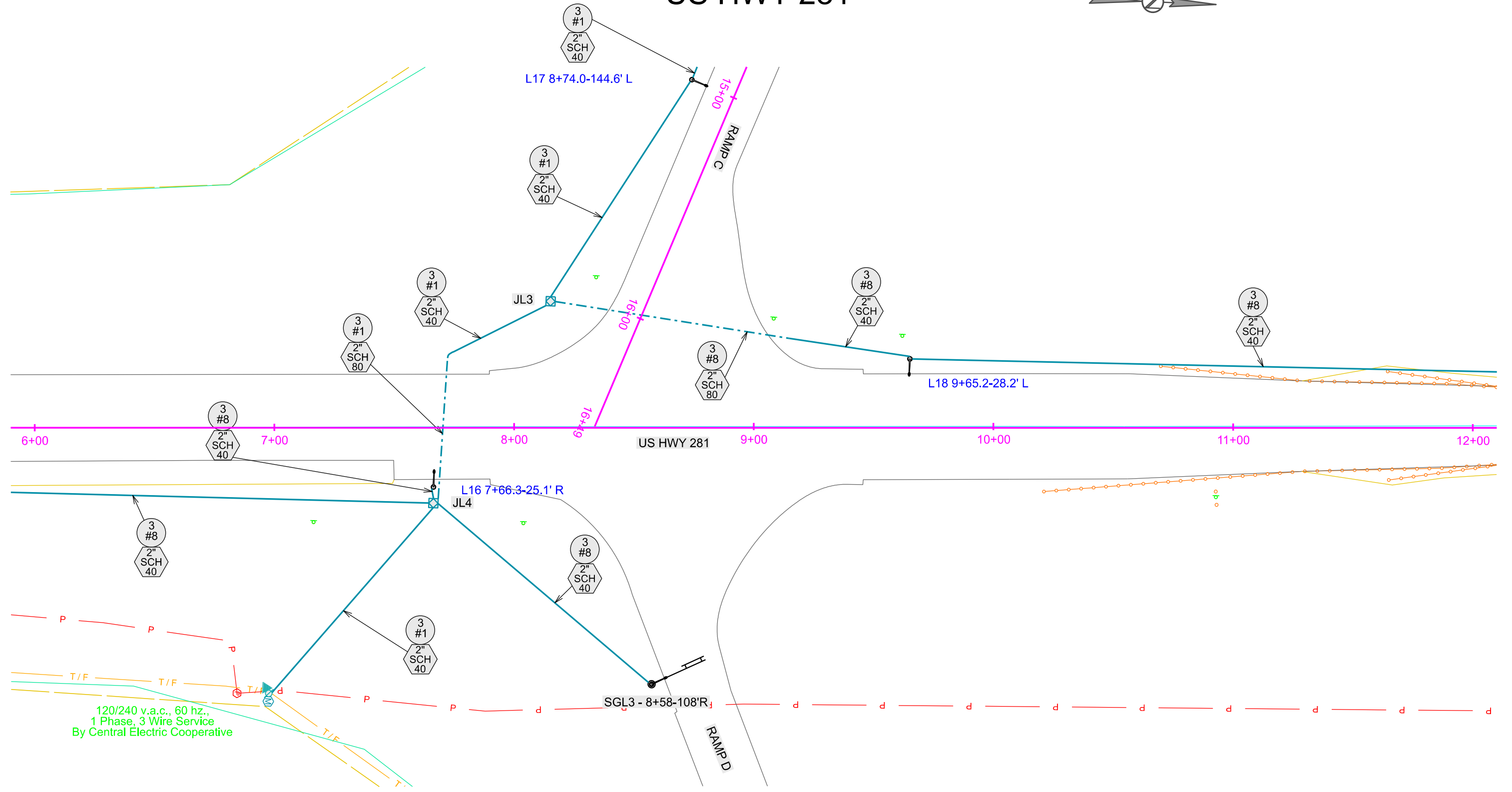
Plotting Date: 07/29/2024
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CONDUIT LAYOUT US HWY 281

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	33 of 62

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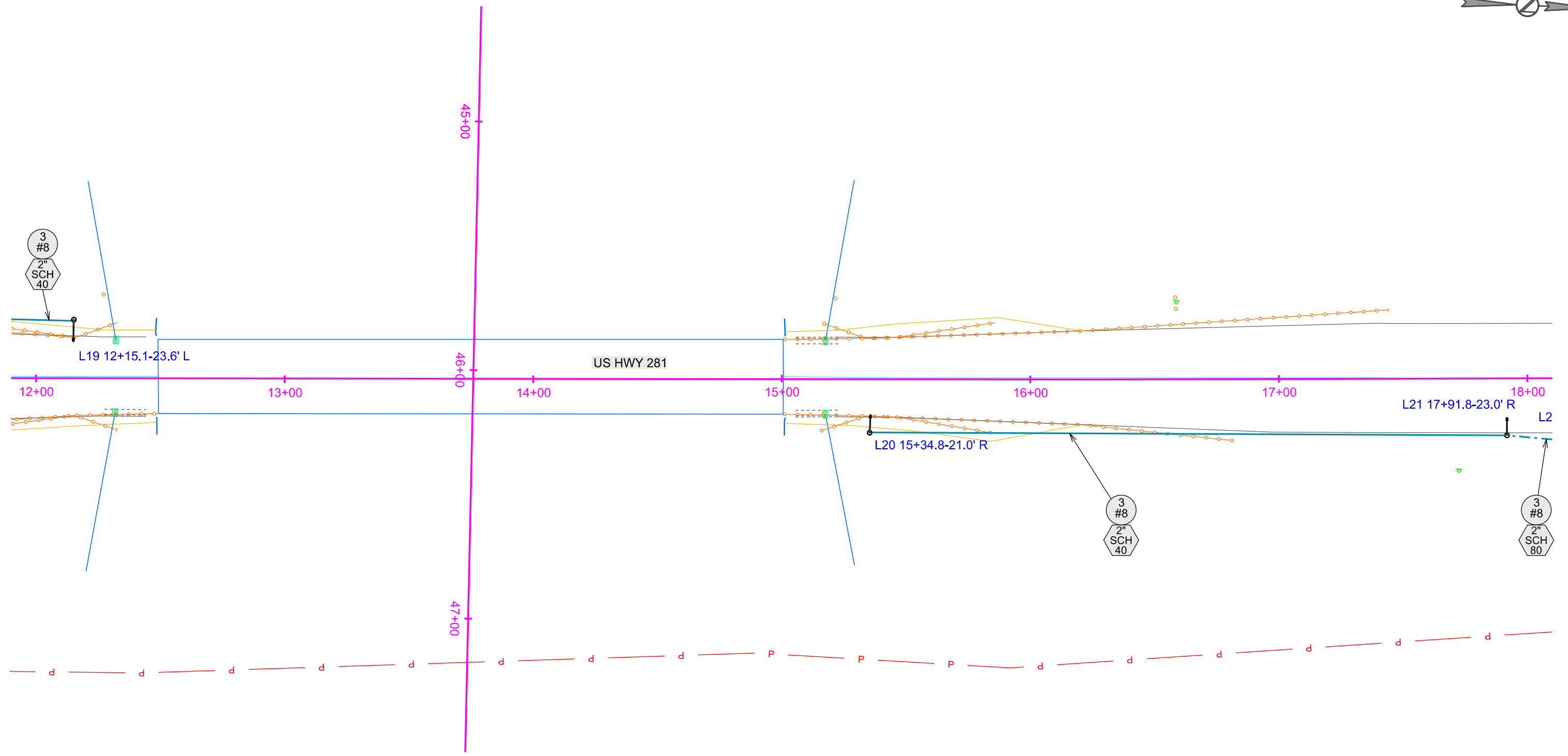


120/240 v.a.c., 60 Hz.,
1 Phase, 3 Wire Service
By Central Electric Cooperative

CONDUIT LAYOUT US HWY 281

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	34 of 62

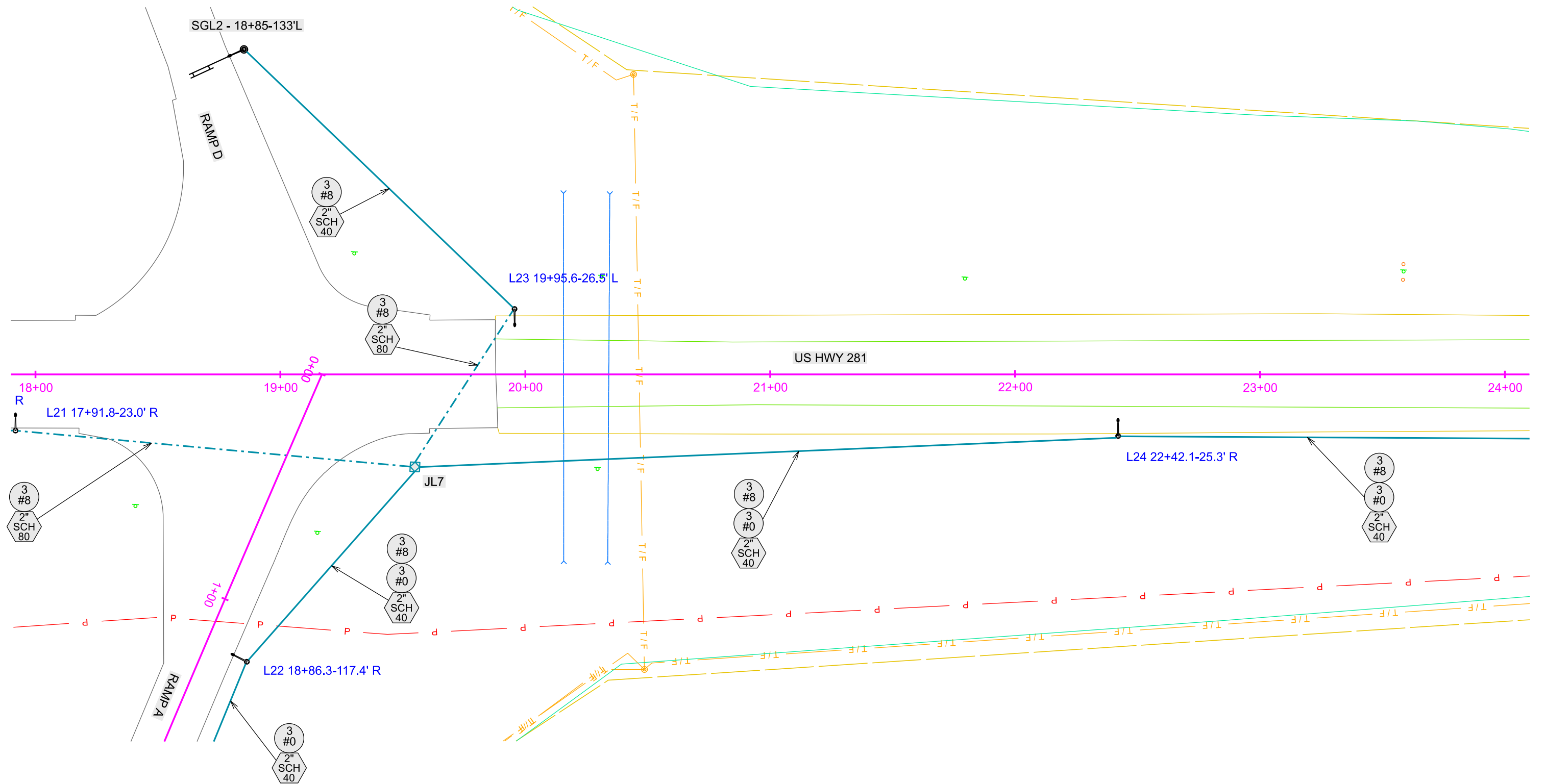
Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



CONDUIT LAYOUT US HWY 281

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	35 of 62

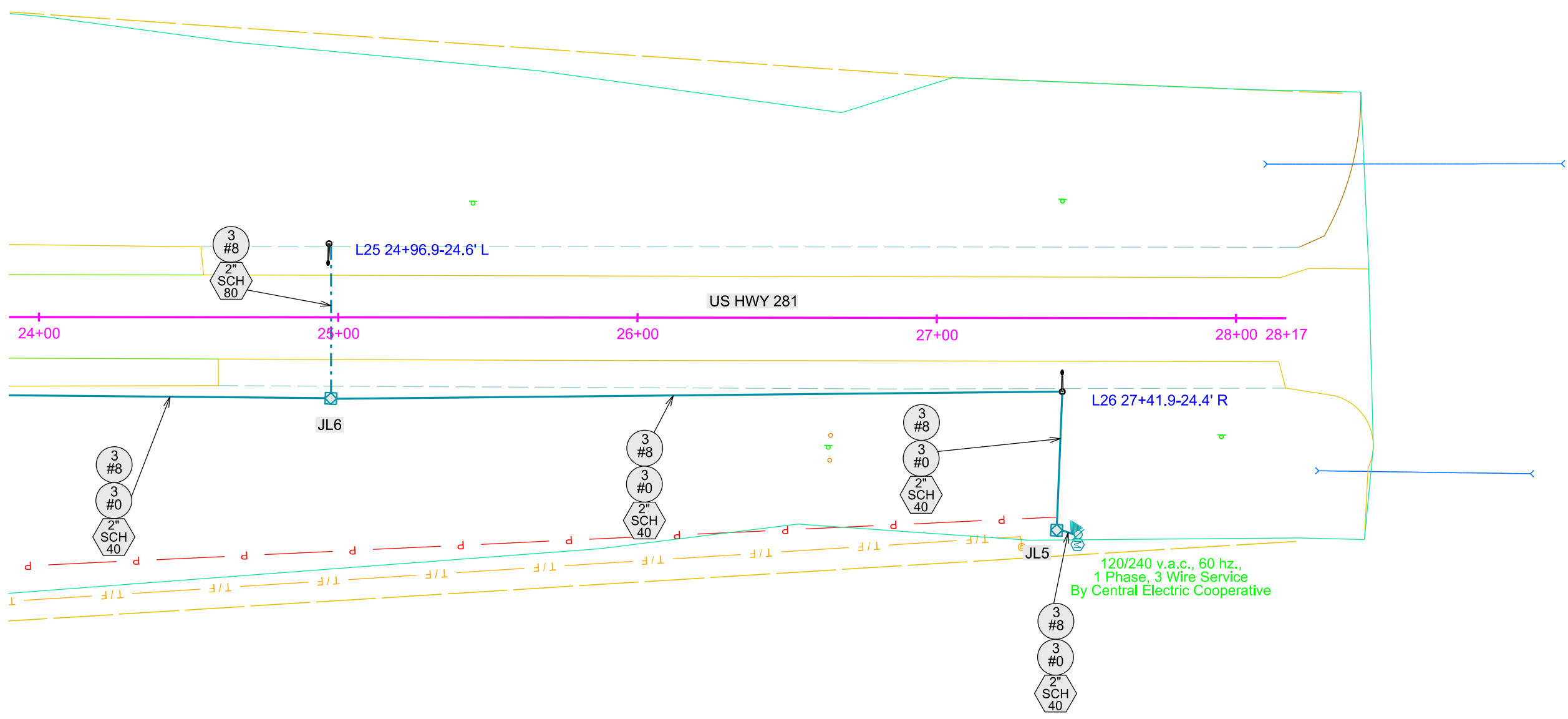
Plotting Date: 07/29/2024
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CONDUIT LAYOUT US HWY 281

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	36 of 62

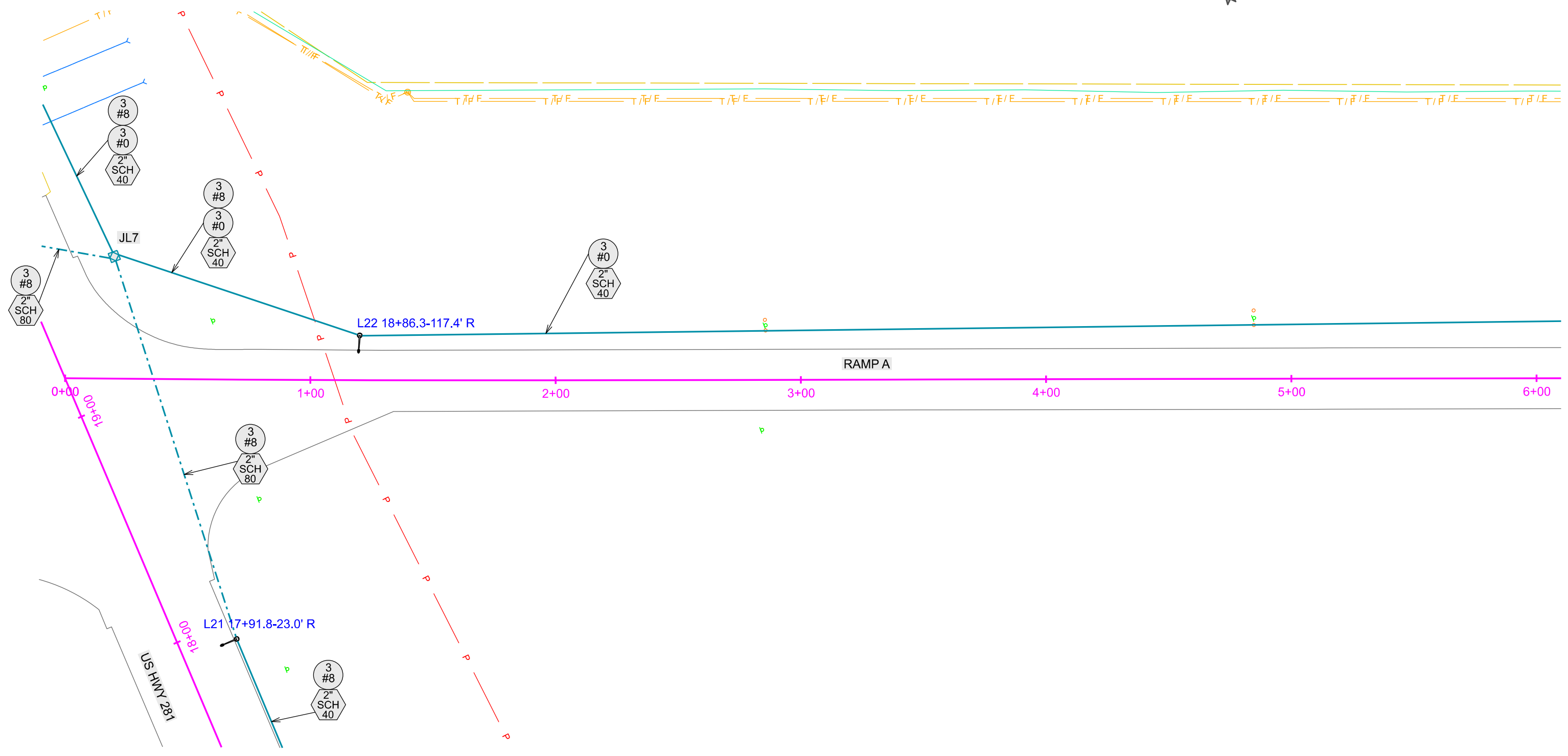
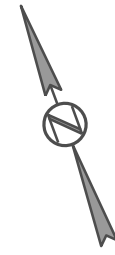
Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



CONDUIT LAYOUT I90 RAMP A

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	37 of 62

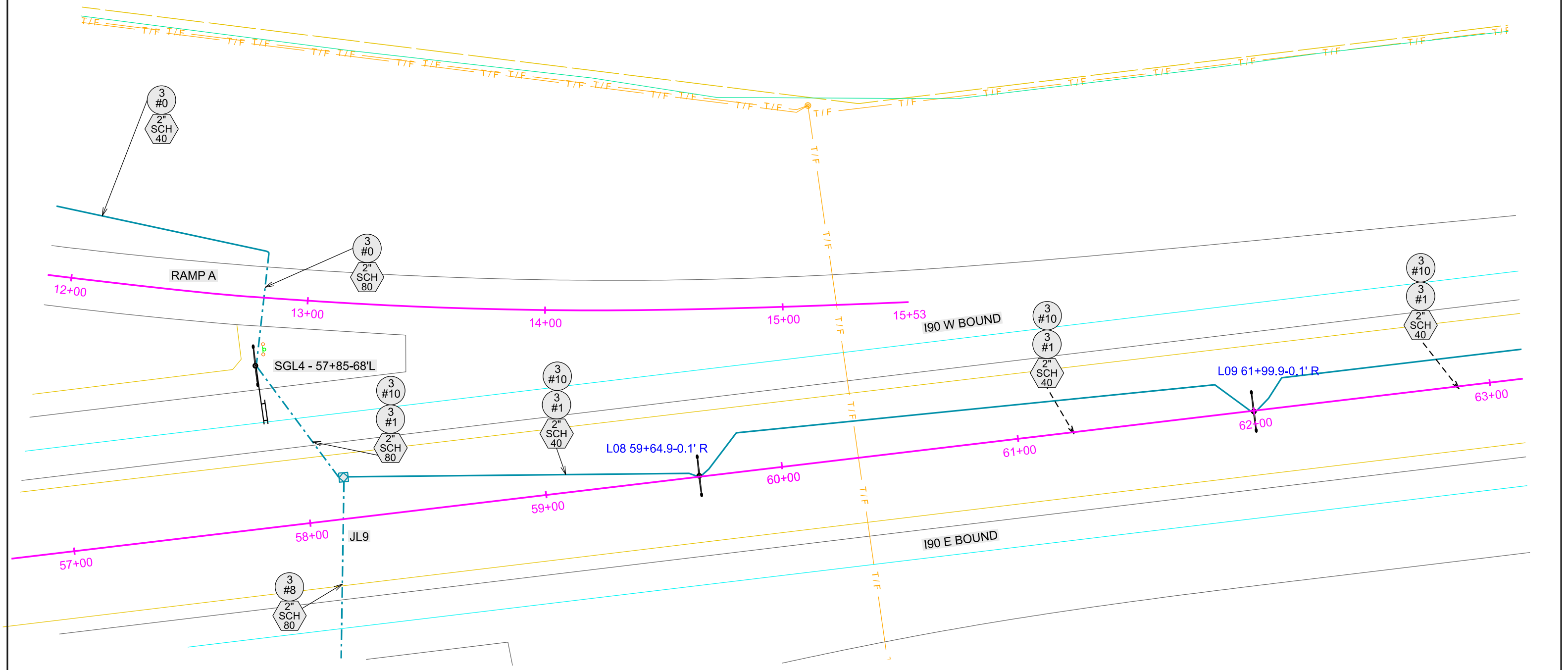
Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



CONDUIT LAYOUT I90 RAMP A

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	39 of 62

Plotting Date: 07/29/2024
Revised 7-24-2024 - RR

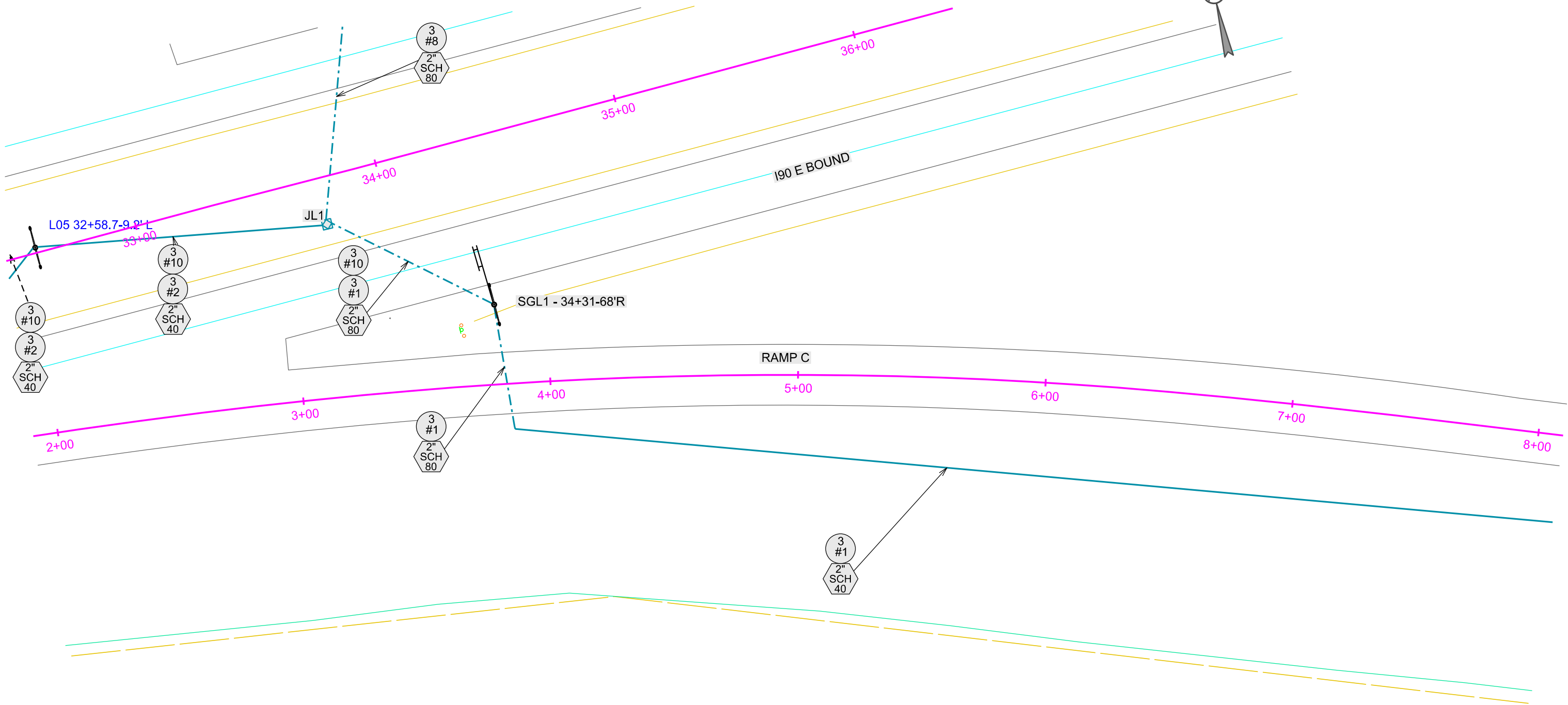


CONDUIT LAYOUT I90 RAMP C



PROJECT	SECTION	SHEET
IM 0907(93)310	Non	40 of 62

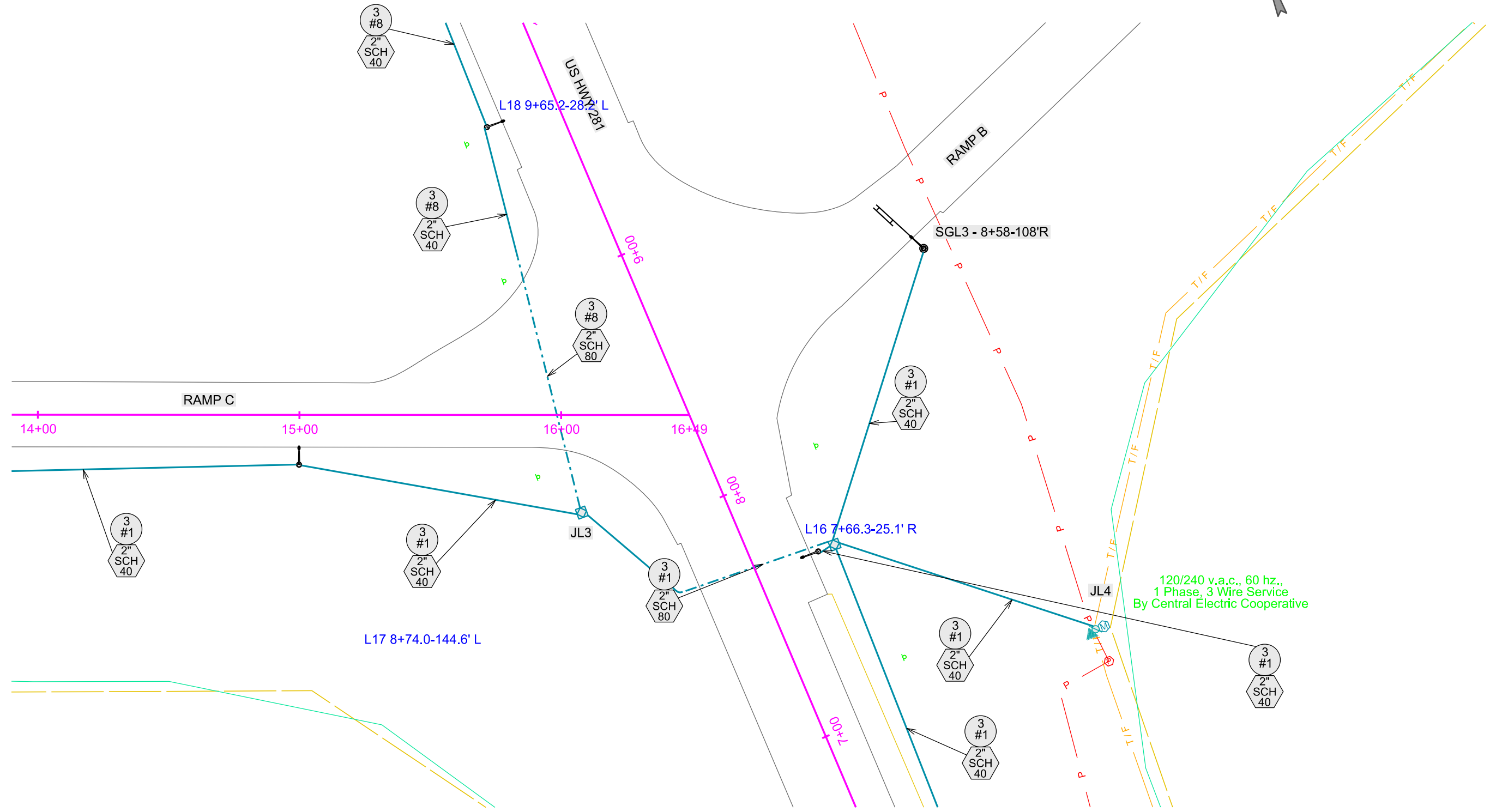
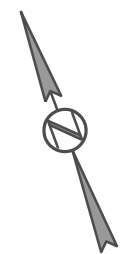
Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



CONDUIT LAYOUT I90 RAMP C

SD DOT	PROJECT	SECTION	SHEET
	IM 0907(93)310	Non	42 of 62

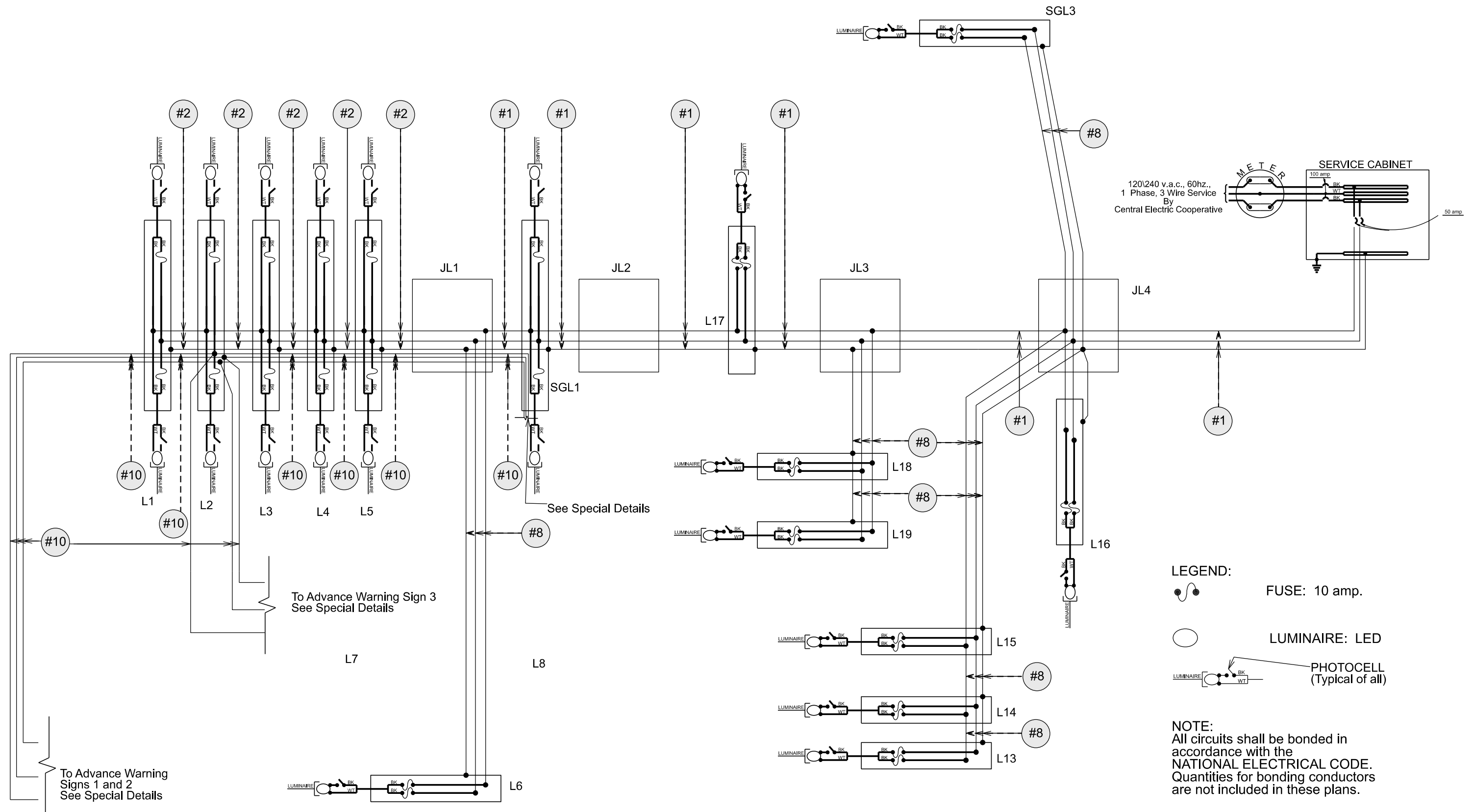
Plotting Date: 07/29/2024
Revised 7-24-2024 - RR



WIRING DIAGRAM

SD DOT	PROJECT	SECTION SHEET
	IM 0907(93)310	Non 43 of 62

Plotting Date: 07/29/2024
Revised 7/24/2024 - RR

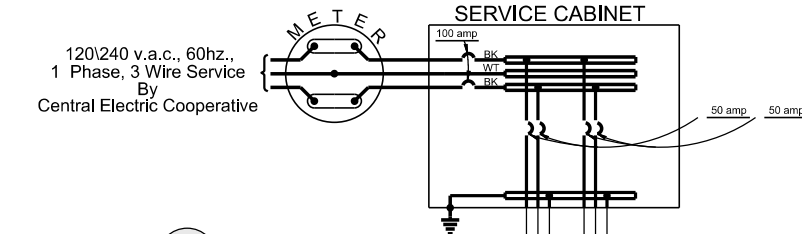
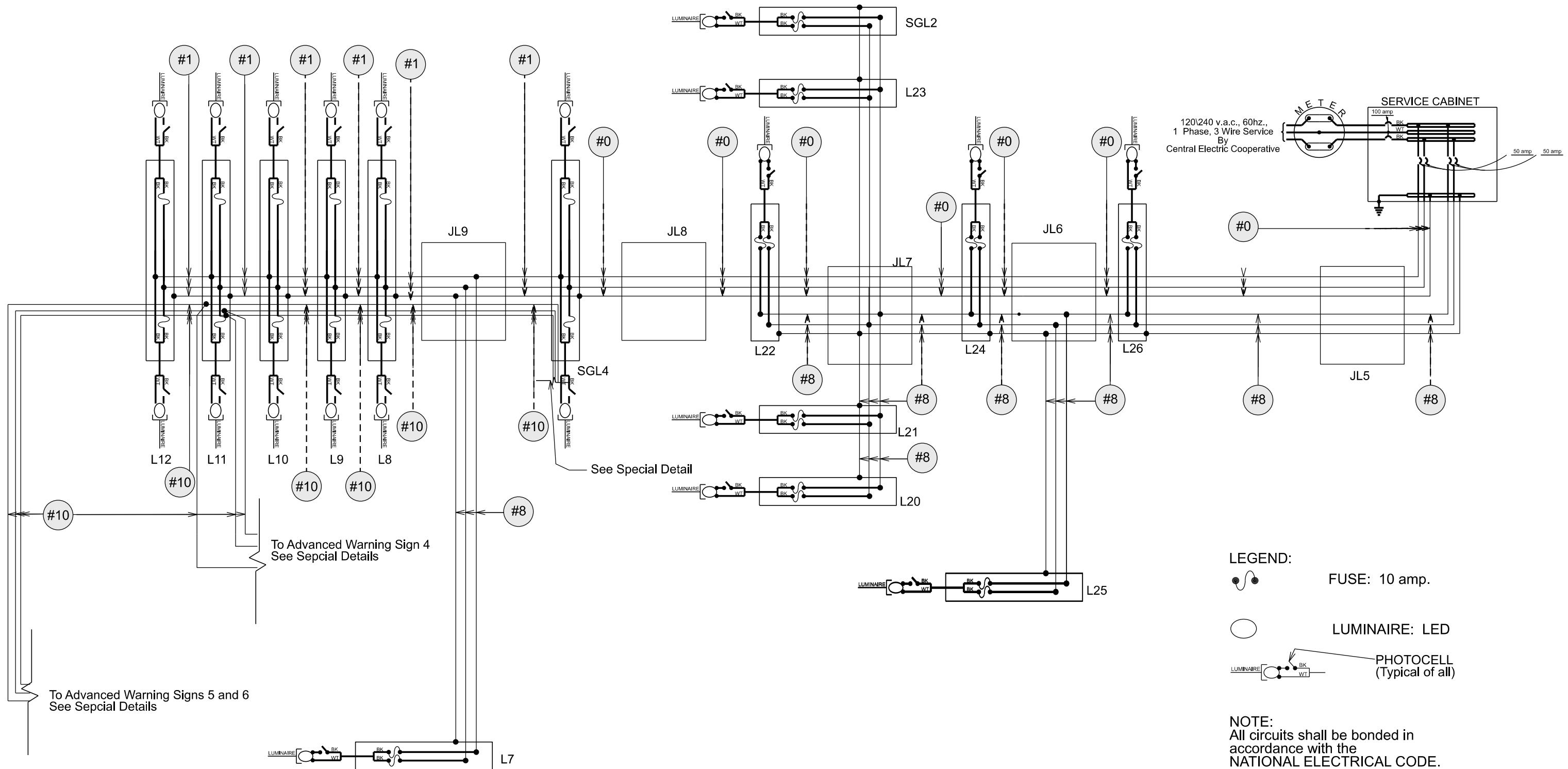


- LEGEND:**
- FUSE: 10 amp.
 - LUMINAIRE: LED
 - PHOTOCELL (Typical of all)

NOTE:
All circuits shall be bonded in accordance with the NATIONAL ELECTRICAL CODE. Quantities for bonding conductors are not included in these plans.

WIRING DIAGRAM

Plotting Date: 07/29/2024
Revised 7/24/2024 - RR



- LEGEND:**
- FUSE: 10 amp.
 - LUMINAIRE: LED
 - PHOTOCELL (Typical of all)

NOTE:
All circuits shall be bonded in accordance with the NATIONAL ELECTRICAL CODE. Quantities for bonding conductors are not included in these plans.