

POND SITING REPORT ADDENDUM

Floodplain Compensation Pond

Orange Avenue

Roadway Conceptual Analysis (RCA)

**from Osceola County Line (Mary Louis Lane) to
Florida's Turnpike, Orange County**

Orange County Project Number: Y23-818

Prepared for:

**Orange County Board of County Commissioners
Orange County, Florida**

Prepared by:

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March 2026



Professional Engineer Certificate

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Dewberry Engineers, Inc., a corporation authorized to operate as an engineering business, FEID No. 13-0746510, by the State of Florida, Department of Professional Regulation, and Board of Professional Engineers. I have reviewed or approved the evaluation, findings, opinions and conclusions as reported in this Pond Siting Report Addendum.

The Pond Siting Report includes a summary of data collection efforts and design analysis of floodplain compensation pond sites for the Orange Avenue Roadway Conceptual Analysis Study from the Osceola County Line to Florida's Turnpike in Orange County, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of civil engineering as applied through design standards and criteria set forth by the federal, state, and local regulatory agencies as well as professional judgment and experience.

Signature: _____

Name: Kevin Knudsen, P. E.

P.E. Number: 41062

Date: February 11, 2026

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EXECUTIVE SUMMARY

Orange County Public Works proposes capacity improvements along Orange Avenue between Mary Louis Lane (Osceola County Line) and Florida's Turnpike, in Orange County, Florida. A Stormwater Alternatives analysis was performed as part of the Roadway Conceptual Analysis (RCA) Study completed in December 2019. This analysis identified two pond sites to accommodate the roadway widening. One pond (Pond 402A) is a proposed joint use pond located in the northwest quadrant of the Orange Avenue and Mary Louis Lane intersection. The pond will be constructed with the 'Tupperware West' development project and designed to accommodate the stormwater attenuation and treatment for the roadway from Mary Louis Lane to the culvert crossing. The second pond (Pond D) is located north of the culvert crossing within the existing roadway right-of-way. This linear pond will provide stormwater attenuation and treatment for the northern portion of the project. These two original pond sites will be used for the stormwater treatment and attenuation.

The RCA also included a preliminary floodplain evaluation that was used to establish initial commitments for offsite floodplain compensation (FPC) volumes. Based on previously permitted floodplain elevations, it was determined that 0.91 acre-feet of FPC be provided to mitigate the roadway floodplain impacts on a cup-for-cup basis. The RCA determined that any additional floodplain impacts should be provided within the County owned right-of-way.

Subsequently, floodplain impacts were evaluated along the project and floodplain modelling was utilized to establish a base flood elevation. This analysis determined that an additional offsite FPC site would be necessary to offset the proposed loss of historic floodplain storage created by the roadway widening.

The purpose of this Pond Siting Report Addendum is to discuss, analyze, and identify the potential FPC pond sites required for the proposed roadway improvements based on environmental, hydrology and hydraulics, and economic factors.

There is limited suitable property directly adjacent to the floodplain and two alternative FPC sites have been identified along the project limits. The analysis estimates the FPC right-of-way needs using a volumetric analysis. The total FPC pond cost estimate found in this report is a budget tool used by the County to estimate total acquisition costs associated with each FPC site and to budget the appropriate funds for acquisition.

Please note that the volumetric analysis of the FPC sites is performed with preliminary data, reasonable engineering judgement, and assumptions. Pond sites and configurations may change during final design as more detailed information on Seasonal High Water Table (SHWT), wetland hydrologic information, and final roadway profile become available. Please refer to **Table ES-1: Recommended Floodplain Compensation Pond Sites**. The table summarizes the additional impacts caused by the project for the recommended FPC pond.

Table ES-1: Recommended Floodplain Compensation Pond Site

Basin	Preferred Pond Alternative	FPC Pond Access Easement Area (ac)	FPC Pond Right-of-way Area (ac)	Total Required FPC Pond Right-of-Way Area (ac)	Cost (\$)
FIA-1	FPC-1	0.00	7.46	7.46	\$912,000
Total				7.46	\$912,000

1.0 INTRODUCTION

Orange County Public Works proposes capacity improvements to Orange Avenue between the Osceola County Line at Mary Louis Lane and Florida's Turnpike, a distance of approximately 0.85 miles, in Orange County, Florida. The **Project Location Map** is shown in **Figure 1**. Currently, Orange Avenue is a two-lane rural roadway with roadside swales. The roadway serves as an important north-south connector between Osceola and Orange Counties.

A Roadway Conceptual Analysis (RCA) Study for the Orange Avenue improvements was completed in December, 2019. As part of the study, a Stormwater Alternatives Analysis was performed that identified potential pond sites and floodplain compensation (FPC) areas. Two pond sites were recommended to accommodate the runoff from the roadway improvements. The stormwater pond for the southern segment of the project will be a joint use facility with the proposed "Tupperware West" development on the northeast corner of Orange Avenue and Mary Louis Lane. This pond will provide stormwater storage and attenuation and will be designed, permitted and constructed as part of the proposed development. Stormwater runoff from the northern segment of the project will be accommodated in a linear pond located along the west side of the proposed roadway within existing right-of-way. These recommended pond sites are adequate to meet the stormwater requirements for the project.

The roadway improvements traverse a FEMA regulated floodplain, Zone A. The roadway widening will require placing embankment within the floodplain, which will require compensation on a cup for cup basis. The preliminary floodplain impacts analysis in the RCA Study calculated that 0.91 acre-feet of FPC would be required to offset the roadway widening based on the anticipated roadway typical section, seasonal high water (SHW) elevation and base flood elevation (BFE). This FPC is to be provided in the joint-use 'Tupperware West' pond for the southern segment of the roadway. Further analysis has determined that the actual BFE is higher than what was utilized for the RCA Study, increasing the FPC required.

The purpose of the Pond Siting Report Addendum is to discuss, analyze, and identify additional floodplain compensation sites required to mitigate floodplain impacts created by the roadway improvements based on environmental, hydrology and hydraulics, and economic factors. This report will determine the design requirements and location of floodplain compensation facilities required for the proposed improvements. The design of the floodplain compensation ponds will comply with the standards set forth by the Orange County Municipal Code, FDOT Drainage Manual, and the South Florida Water Management District (SFWMD) ERP manual.

Figure 1 – Project Location Map



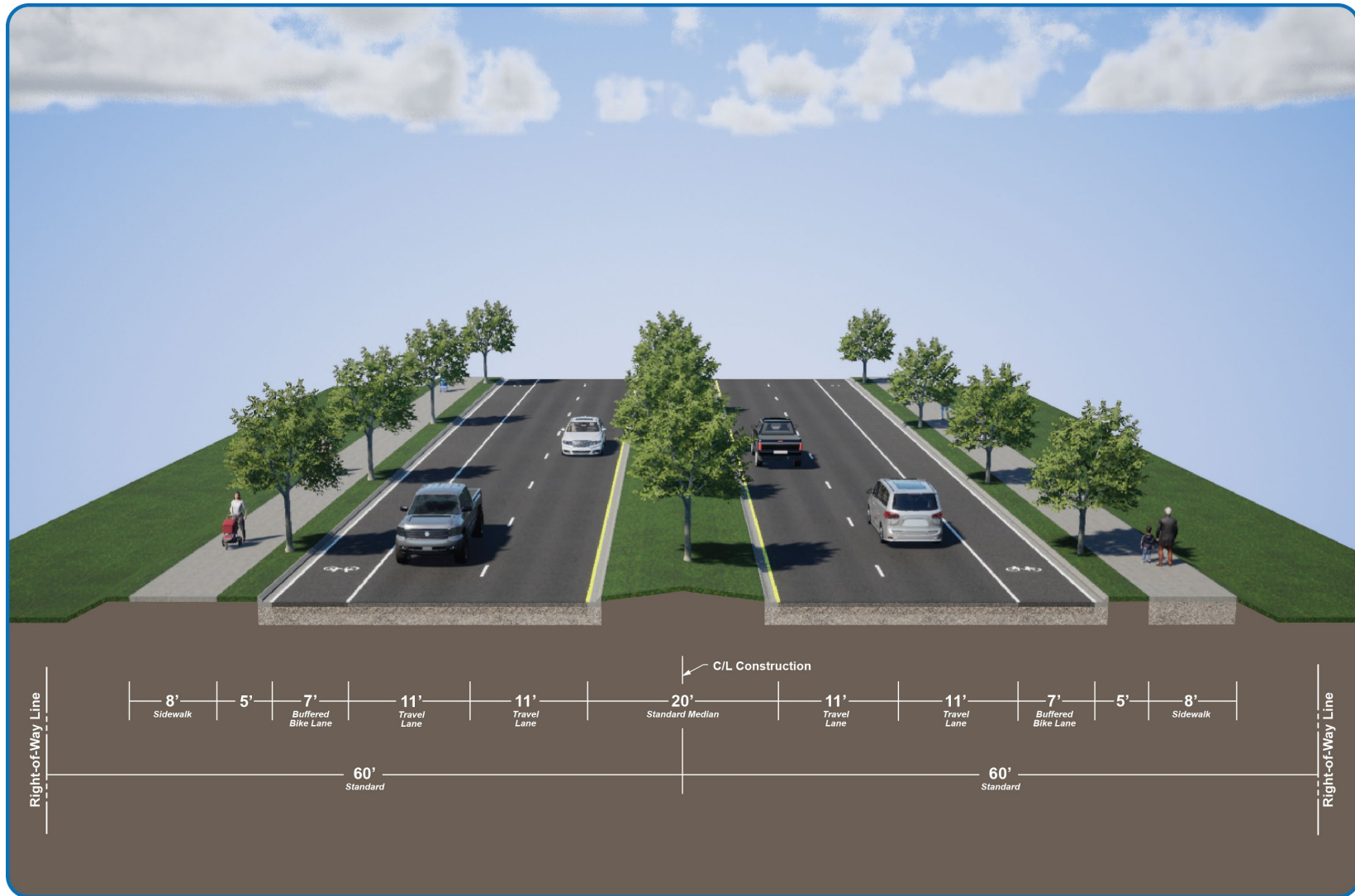

Orange Avenue - Osceola County Line to Florida's Turnpike
Location Map

Figure 1

2.0 PROJECT DESCRIPTION

The Orange Avenue improvements extend from the Osceola County Line to Florida's Turnpike and are located in Section 35 of Township 24 South, Range 29 East. The previously approved RCA Study developed conceptual design alternatives for the widening of Orange Avenue from the existing 2-lane roadway to a 4-lane roadway. The recommended roadway improvements include two 11-foot travel lanes and a 7' buffered bicycle lane in each direction separated by a 20' raised grass median. An 8-foot wide concrete sidewalk will be provided along both sides of the roadway. The roadway **Typical Section** is shown in **Figure 2**.

Figure 2 – Typical Section



3.0 DATA COLLECTION

The study team collected and reviewed data from the following sources:

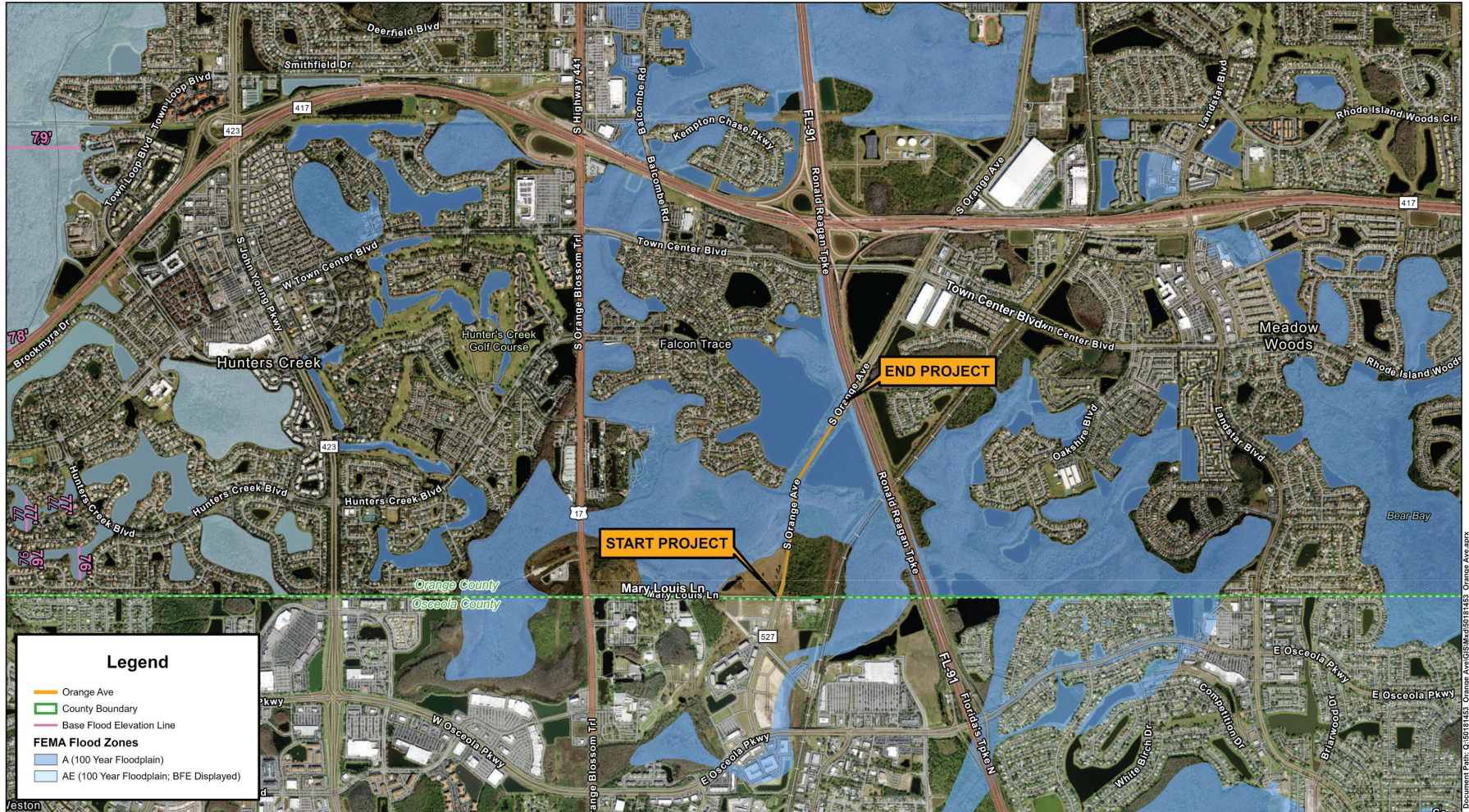
- Roadway Conceptual Analysis (RCA) Report for Orange Avenue from the Orange/Osceola County Line to Florida's Turnpike dated December 2019
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 12095C061OF Effective Date 9/25/2009 in Orange County, FL
- United States Geological Survey (USGS) Quadrangle Maps
- Existing SFWMD Permits
- Field Reconnaissance

4.0 BASE FLOOD ELEVATION

4.1 Base Flood Elevation Determination

According to the Federal Emergency Management Agency (FEMA), the relevant Flood Insurance Rate Map (FIRM) panel number is 12095C061OF dated 9/25/2009. The FEMA FIRM indicates that the roadway is located within Zones A and X of the FEMA flood hazard areas. Zone A makes up part of the 100-year floodplain where predicted flood water elevations have not been established. Areas in Zone X (unshaded) are areas outside of the 100-year and 500-year floodplains and pose minimal flood hazards. The flood zone is depicted as being above the roadway, however there is no history of floodwaters overtopping the roadway. It is anticipated that portions of the roadway improvements will encroach upon the flood zones. Please refer to **Figure 3** for the FEMA Floodplain Map. There are no federally regulated floodways within the project limits.

Figure 3 – FEMA Floodplain Map



FEMA Floodplain Map
Orange Avenue from County Line to Florida's Turnpike

Orange County, Florida

Saved: 10/23/2025

N
Data Source:
Image Source: ESRI
County: Osceola County
Florida: FEMA
BFE: FEMA

0 1,100 2,200 Feet

Figure 3

Development within the 100-year floodplain has the potential for placing citizens and property at risk of flooding and producing changes in floodplain elevations and plan view extent. Development (such as roadways, housing developments, strip malls and other commercial facilities) within floodplains increases the potential for flooding by limiting flood storage capacity and exposing people and property to flood hazards. Development also reduces vegetated buffers that protect water quality and destroys important habitats for fish and wildlife.

Since the Zona A floodplain elevation has not been established, the actual BFE for Zone A area was determined through the development of a project-specific hydrologic and hydraulic (H&H) model using StormWise v4.08.03 software. The following approach was used to develop the modeling input:

- Areas that will be directly impacted by the proposed widening (i.e. Wetland 1 West and Wetland 1 East) are modeled as stage-storage nodes and their respective max stages for the 100-Year/72-Hour storm event correlate to the project's proposed BFEs.
- Wetland 1 West and Wetland 1 East are connected via a partially submerged triple-72" cross drain which spans under existing Orange Avenue. Initial stages for both nodes are set at elevation 82.00 (NAVD88), which correlate to the interconnected wetland system's SHW elevation as determined by the project's surveyed biological indicators.
- Sub-basin areas upstream of the Wetland 1 West node were evaluated using USGS Regression Equations. A safety factor was applied to the resultant peak Q's to account for standard error and dummy hydrographs were developed to simulate dynamic conditions for upstream runoff contributing to the Wetland 1 West node.

The modeling analysis determined a 100-Year BFE of:

- 84.12 (NAVD88) for the Zone A Floodplain area located along Southbound Orange Avenue (Wetland 1 West node) and
- 83.43 (NAVD88) for the Zone A Floodplain area along Northbound Orange Avenue (Wetland 1 East node).

Modeling input and results are included in **Appendix A** along with an Offsite Basin Exhibit.

5.0 FLOODPLAIN IMPACTS

5.1 Floodplain Impacts and Compensation

The roadway improvements will impact the floodplain and an FPC site will be required to offset the loss of floodplain storage. For the purpose of this study, a cup-for-cup approach was taken to provide the required FPC volumes and identify potential alternate FPC sites. FPC volumes were calculated to be the available volume between the SHW elevation of the proposed compensation site and the 100-year base BFE of the floodplain impact area.

Floodplain impacts were evaluated along both the northbound and southbound travel lanes. Along the northbound pavement, due to the roadway realignment and removal of the existing roadway embankment, there is no net reduction in the FPC volume. For the floodplain impacts along the southbound pavement, it was determined that an additional offsite parcel would be necessary to offset the proposed loss of historic storage. This is primarily due to the higher BFE along the west side of the road and the project's proposed typical section which widens Orange Avenue primarily west of its current alignment. Given the lack of suitable upland property located within the floodplain impact area, two hydraulically feasible locations were identified and analyzed.

The proposed roadway typical section and profile grade were utilized to determine the floodplain impacts of the roadway improvements. **Appendix B** includes information associated with the **Floodplain Impact and Compensation** analysis. This includes Floodplain Cross Sections and corresponding Floodplain Impact/Compensation Calculations which show a resultant onsite deficit of 7.84 Acre-Feet. Accounting for the 0.91 Acre-Feet of FPC that will be provided by 'Tupperware West' per the RCA, an additional 6.93 Acre-Feet of compensation is required.

Floodplain Impact & Compensation Summary (Southbound Orange Avenue)			
Floodplain Impact Total (Onsite)	=	8.46	Ac-Ft
Floodplain Compensation Total (Onsite)	=	0.62	Ac-Ft
Floodplain Compensation (Tupperware West)	=	0.91	Ac-Ft
Minimum Offsite Floodplain Compensation Required	=	6.93	Ac-Ft

Two alternate FPC areas adjacent to the floodplain were evaluated in this study. It should be noted that a location directly adjacent to a floodplain is preferred for compensation to meet the cup-for-cup compensation requirement. Design-level information is not yet available for the two identified FPC sites, therefore the sites were analyzed using 2018 LiDAR data provided by SFWMD and GIS parcel data downloaded from the Orange County property appraiser website.

5.2 FPC Pond Evaluation

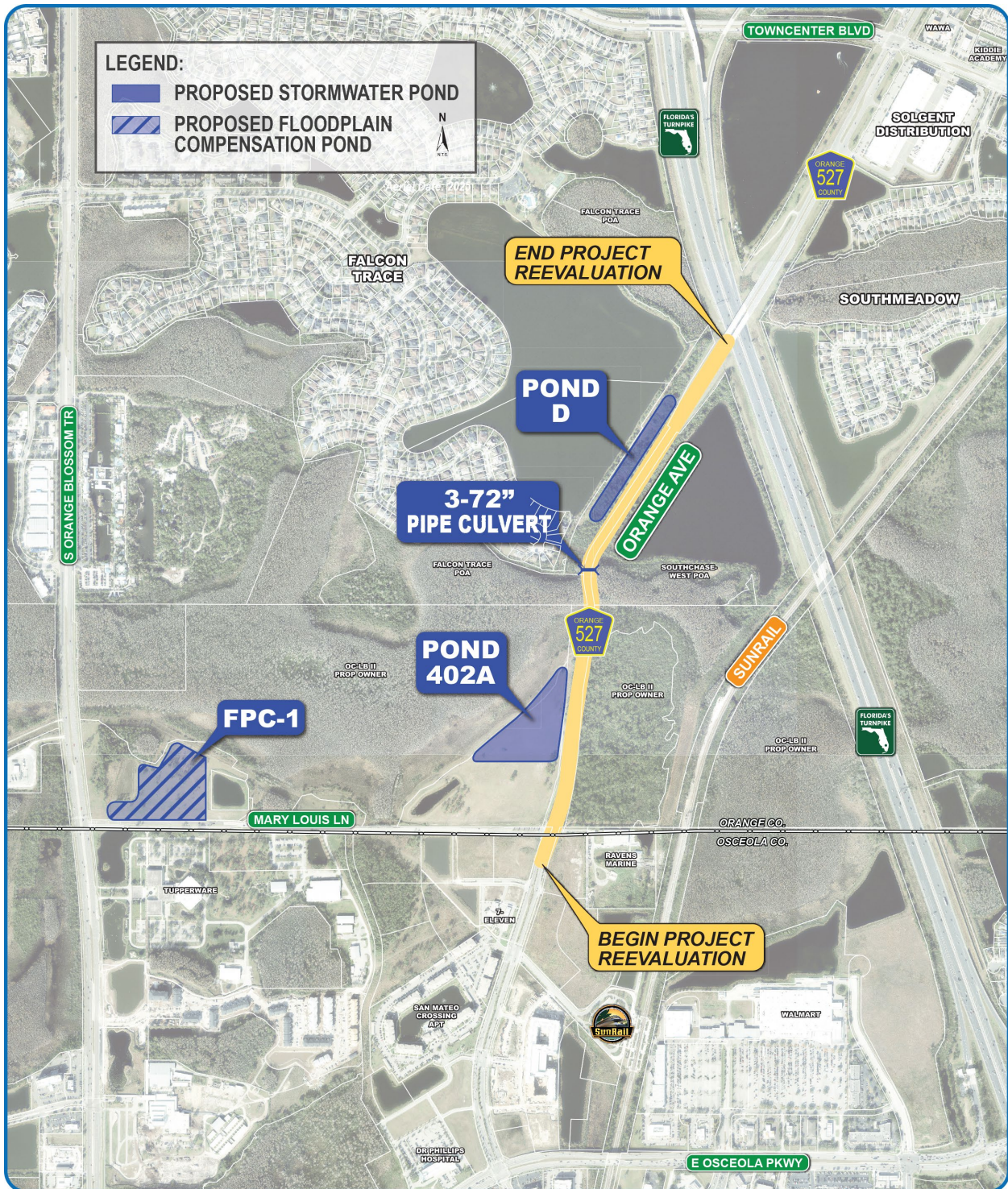
5.2.1 FPC Pond 1


FPC Pond 1 is located at the northeast corner of US 441 and Mary Louis Lane. The site is within one (1) parcel 34-24-29-8729-01-000 and is owned by OC-IB II Property Owner LLC. The site is approximately 16.4 acres in size and is located adjacent to and directly connected to the floodplain. There are currently no features or buildings located on the site, although development plans for the site have been previously submitted. The elevation of the site ranges from 82.0 (NAVD 88) to 84.2 (NAVD 88), with an average elevation of 83.1 (NAVD 88). The seasonal high water elevation is estimated to be 82.0 (NAVD 88). Approximately 7.46 acres of the site will be needed to provide the required FPC, See **Figure 4**.

5.2.2 FPC Pond 2

FPC Pond 2 is located at the northwest corner of Orange Avenue and Mary Louis Lane within the 'Tupperware West' development. The site is within one (1) parcel 34-24-29-8729-02-000 and is also owned by OC-IB II Property Owner LLC. The site is approximately 19.0 acres in size and is located adjacent to and directly connected to the floodplain. There are currently no features or buildings located on the site. This site is the 'Tupperware West' site and is currently under development review by Orange County as an apartment complex. This is also the site that includes the joint use pond and 0.91 acre-feet of floodplain compensation for the Orange Avenue improvements. The elevation of the site ranges from 82.9 (NAVD 88) to 84.0 (NAVD 88), with an average elevation of 83.2 (NAVD 88). The seasonal high water elevation is estimated to be 82.0 (NAVD 88). Approximately 7.02 acres of the site will be needed to provide the required FPC. See **Figure 5**.

Figure 4 – FPC-1

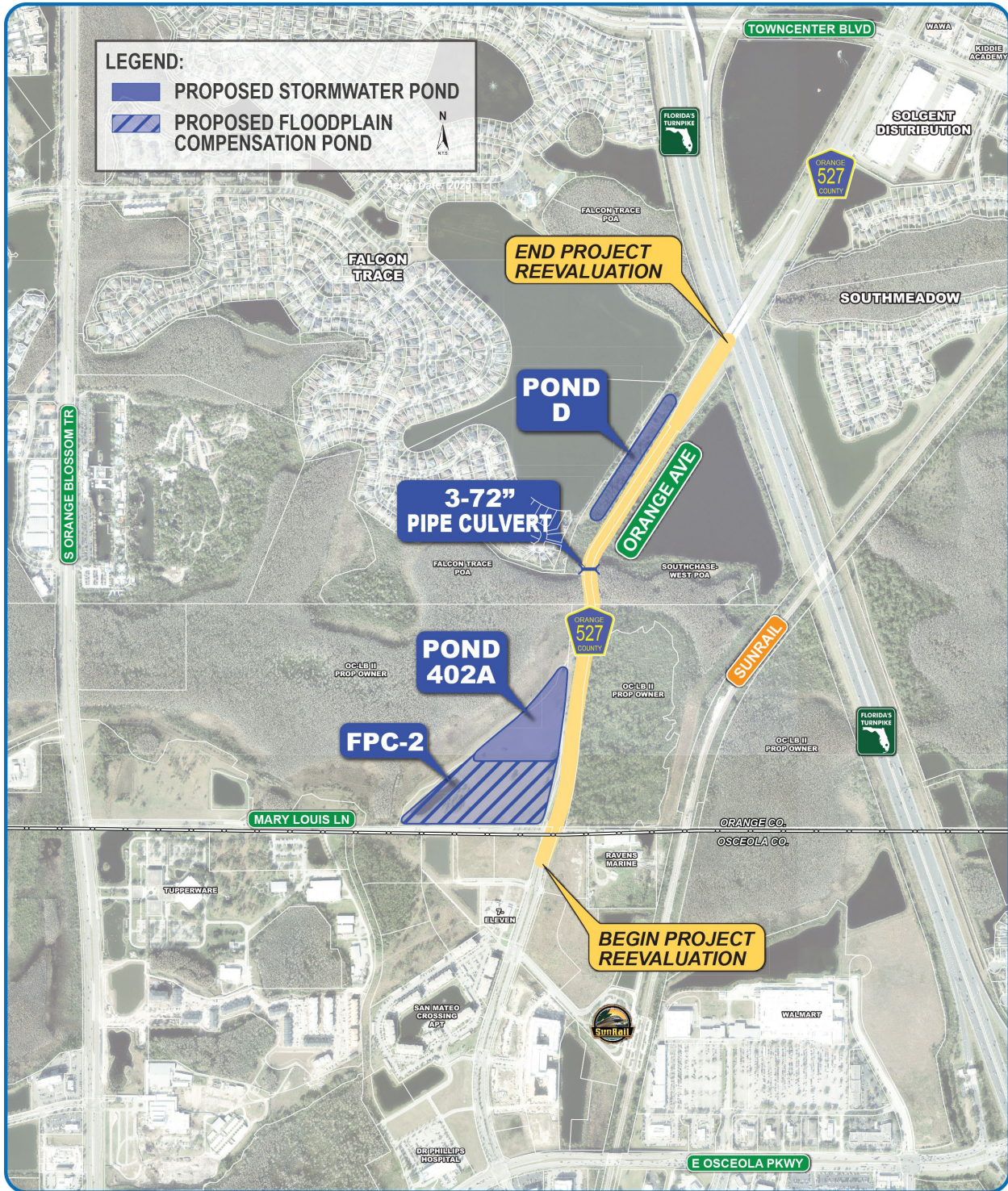




Orange Avenue - Osceola County Line to Florida's Turnpike
FPC-1

Figure 4

Figure 5 – FPC-2



6.0 RESULTS

Table 6-1: Impact and Cost Analysis Matrix

Impact and Cost Analysis Matrix												
Alternative	FEMA		Arch / Historical Impact Potential	Wetland Impacts (Y/N)	Threatened or Endangered Species Impacts (Y/N)	Hazardous Materials & Contamination Potential	Major Utility Conflict Potential (Y/N)	Existing Land Use	Total Pond Area (ac)	Total R/W Costs	Comments	Rankings
	Impacts (ac)	Zone										
FPC-1	0	X	None	N	N	Medium	N	Undeveloped	7.46	\$912,000	Site ranked medium risk for contamination due to historic borrow pit on property.	1
FPC-2	0	X	None	N	N	Low	N	Undeveloped	7.02	\$901,450	'Tupperware West' site that includes proposed apartment complex. County has an agreement with developer to provide stormwater treatment in a joint-use pond and some FPC for the Orange Avenue improvements. Use of this site as a FPC pond may nullify the agreement and require acquisition and construction of a roadway stormwater pond and additional FPC.	2

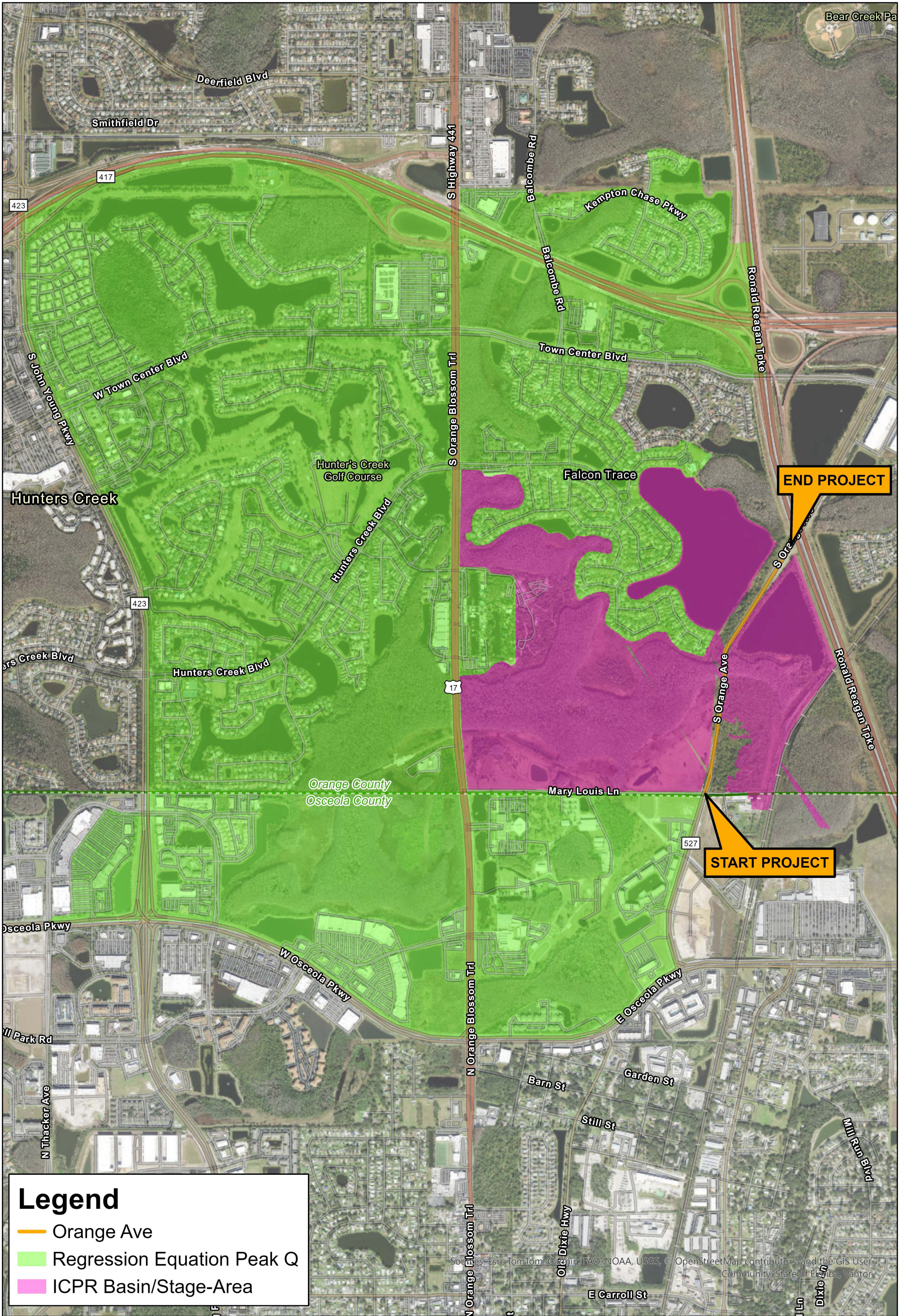
7.0 CONCLUSIONS

Potential FPC ponds have been sized and located along the project limits for this study. The analysis for proposed FPC pond alternatives estimates right-of-way needs using a volumetric analysis, which accounts for the required floodplain compensation volumes required. A portion of the floodplain compensation will be provided by the adjacent 'Tupperware West' apartment project through an agreement with the developer. Please note that the estimated right-of-way areas for the proposed FPC pond was based on preliminary data, volumetric calculations, and reasonable engineering judgment. The recommended FPC pond size and configuration may change during final design as more detailed information on SHWT, floodplain elevations, natural ground elevations and final roadway profile design become available. Pond FPC-1 is the recommended site. Please refer to **Table 7-1** for **Recommended Floodplain Compensation Pond Size**.

FIA	FPC	SHWT Elevation (ft)	100-yr Flood Elevation (ft)	Required Compensation Volume (ac-ft)	Pond Right-of-Way Area Including Access (ac)
FIA-1	FPC – 1	82.00	84.12	6.93	7.46
Total:				6.93	7.46

Table 7-1: Recommended Floodplain Compensation Pond Size

Appendix A – Base Flood Elevation Determination



Legend

- Orange Ave
- Regression Equation Peak Q
- ICPR Basin/Stage-Area

Offsite Basin Map
Orange Ave from County Line to Florida's Turnpike

Orange County

Saved: 10/23/2025

N

 Feet
 0 500 1,000

Dewberry
Data Source: Dewberry
 Image Source: ESRI

Path: Q:\50181453_Orange Ave\GIS\Mxd\50181453_Orange Ave.aprx

Simple Basin: 100-02

Scenario: Scenario1
Node: WL 1 West
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 18.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 1.4600 ac
Curve Number: 86.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: 100-03

Scenario: Scenario1
Node: WL 1 West
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 2.2100 ac
Curve Number: 94.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: 100-04

Scenario: Scenario1
Node: WL 1 West
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number

Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 0.3000 ac
Curve Number: 96.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: 100-05

Scenario: Scenario1
Node: WL 1 West
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 39.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 6.7900 ac
Curve Number: 77.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: 200-01

Scenario: Scenario1
Node: U/S Rail
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 36.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0

Area: 1.5200 ac
Curve Number: 88.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: 200-02

Scenario: Scenario1
Node: WL 1 East
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 21.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 0.6100 ac
Curve Number: 89.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: 200-03

Scenario: Scenario1
Node: WL 1 East
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 40.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 1.7800 ac
Curve Number: 89.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00

% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: Offsite West

Scenario: Scenario1
Node: WL 1 West
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 164.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 333.8100 ac
Curve Number: 95.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: U/S Rail

Scenario: Scenario1
Node: U/S Rail
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 150.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 39.1800 ac
Curve Number: 87.0
Ia/S: 0.00
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

Simple Basin: WL 1 East

Scenario: Scenario1
 Node: WL 1 East
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 150.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH323
 Peaking Factor: 323.0
 Area: 63.9300 ac
 Curve Number: 94.0
 Ia/S: 0.00
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment:

Node: U/S Rail

Scenario: Scenario1
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 82.00 ft
 Warning Stage: 84.00 ft
 Alert Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
82.00	15.8648	691071
83.00	26.2080	1141620
84.00	39.6197	1725834

Comment: SHW based on biological indicators
 Stage-Area based on LiDAR
 Warning Stage = highest elev defined for node

Node: WL 1 East

Scenario: Scenario1
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 82.00 ft
 Warning Stage: 84.00 ft

Alert Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
82.00	23.7073	1032690
83.00	60.0224	2614576
84.00	64.8794	2826147

Comment: SHW based on biological indicators

Stage-Area based on LiDAR

Warning Stage = highest elev defined for node

Node: WL 1 West

Scenario: Scenario1
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 82.00 ft
 Warning Stage: 84.40 ft
 Alert Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
82.00	164.7775	7177708
83.00	226.0421	9846394
84.00	340.3820	14827040
85.00	357.4011	15568392

External Hydrograph
Offsite

Comment: SHW based on biological indicators

Stage-Area based on LiDAR

Warning Stage = Low pt of exist Orange Ave

Node: WL 99

Scenario: Scenario1
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 81.95 ft
 Warning Stage: 81.95 ft
 Alert Stage: 0.00 ft
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	81.95
0	0	0	9999.0000	81.95

Comment: Central FL Rail
 SFWMD 49-02327
 FPID 423446-9-52-01
 TW = downstream crown of CBC

Pipe Link: ExistCD		Upstream	Downstream
Scenario:	Scenario1	Invert: 76.40 ft	Invert: 76.10 ft
From Node:	WL 1 West	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	WL 1 East	Geometry: Circular	Geometry: Circular
Link Count:	3	Max Depth: 6.00 ft	Max Depth: 6.00 ft
Flow Direction:	Both	Bottom Clip	
Damping:	0.0000 ft	Default: 0.00 ft	Default: 0.00 ft
Length:	45.00 ft	Op Table:	Op Table:
FHWA Code:	1	Ref Node:	Ref Node:
Entr Loss Coef:	0.50	Manning's N: 0.0000	Manning's N: 0.0000
Exit Loss Coef:	1.00	Top Clip	
Bend Loss Coef:	0.00	Default: 0.00 ft	Default: 0.00 ft
Bend Location:	0.00 dec	Op Table:	Op Table:
Energy Switch:	Energy	Ref Node:	Ref Node:
		Manning's N: 0.0000	Manning's N: 0.0000

Comment:

Weir Link: Orange		Bottom Clip	
Scenario:	Scenario1	Default: 0.00 ft	
From Node:	WL 1 West	Op Table:	
To Node:	WL 1 East	Ref Node:	
Link Count:	1	Top Clip	
Flow Direction:	Both	Default: 0.00 ft	
Damping:	0.0000 ft	Op Table:	
Weir Type:	Broad Crested Vertical	Ref Node:	
Geometry Type:	Irregular	Discharge Coefficients	
Invert:	84.40 ft	Weir Default: 2.800	
Control Elevation:	84.40 ft	Weir Table:	
Cross Section:	Orange	Orifice Default: 0.600	
		Orifice Table:	

Comment:

Weir Link: Rail	
Scenario:	Scenario1
From Node:	U/S Rail
To Node:	WL 99
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	85.53 ft
Control Elevation:	85.53 ft
Cross Section:	Rail
	Bottom Clip
	Default: 0.00 ft
	Op Table:
	Ref Node:
	Top Clip
	Default: 0.00 ft
	Op Table:
	Ref Node:
	Discharge Coefficients
	Weir Default: 2.800
	Weir Table:
	Orifice Default: 0.600
	Orifice Table:
Comment:	

Pipe Link: RailCBC	Upstream	Downstream
Scenario:	Scenario1	
From Node:	U/S Rail	
To Node:	WL 99	
Link Count:	4	
Flow Direction:	Both	
Damping:	0.0000 ft	
Length:	37.00 ft	
FHWA Code:	0	
Entr Loss Coef:	0.50	
Exit Loss Coef:	1.00	
Bend Loss Coef:	0.00	
Bend Location:	0.00 dec	
Energy Switch:	Energy	
	Invert: 79.60 ft	Invert: 79.50 ft
	Manning's N: 0.0130	Manning's N: 0.0130
	Geometry: Rectangular	Geometry: Rectangular
	Max Depth: 2.50 ft	Max Depth: 2.50 ft
	Max Width: 6.00 ft	Max Width: 6.00 ft
	Fillet: 0.00 ft	Fillet: 0.00 ft
	Bottom Clip	
	Default: 0.00 ft	Default: 0.00 ft
	Op Table:	Op Table:
	Ref Node:	Ref Node:
	Manning's N: 0.0000	Manning's N: 0.0000
	Top Clip	
	Default: 0.00 ft	Default: 0.00 ft
	Op Table:	Op Table:
	Ref Node:	Ref Node:
	Manning's N: 0.0000	Manning's N: 0.0000
Comment:		

Weir Link: WL 1 East Popoff	
Scenario:	Scenario1
From Node:	WL 1 East
To Node:	U/S Rail
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	82.00 ft
	Bottom Clip
	Default: 0.00 ft
	Op Table:
	Ref Node:
	Top Clip
	Default: 0.00 ft
	Op Table:
	Ref Node:
	Discharge Coefficients

Control Elevation: 82.00 ft
 Cross Section: WL 1 East Popoff

Weir Default: 2.800
 Weir Table:
 Orifice Default: 0.600
 Orifice Table:

Comment:

Simulation: 100 Yr-72 Hr SFWMD

Scenario: Scenario1
 Run Date/Time: 6/13/2025 2:29:07 PM
 Program Version: StormWise 4.08.03

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	240.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Lookup Tables

Rainfall Folder:
 Reference ET Folder:
 Unit Hydrograph
 Folder:

Boundary Stage Set:
 Extern Hydrograph Set: 100 Yr-72 Hr
 Curve Number Set:

Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

Time Marching: SAOR
 Max Iterations: 6
 Over-Relax Weight: 0.5 dec
 Fact:
 dZ Tolerance: 0.0010 ft
 Max dZ: 1.0000 ft

 Link Optimizer Tol: 0.0001 ft

 Edge Length Option: Automatic

 Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area 100 ft2
 (2D):
 Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
 ET for Manual Basins: False
 Ia/S: 0.20 dec

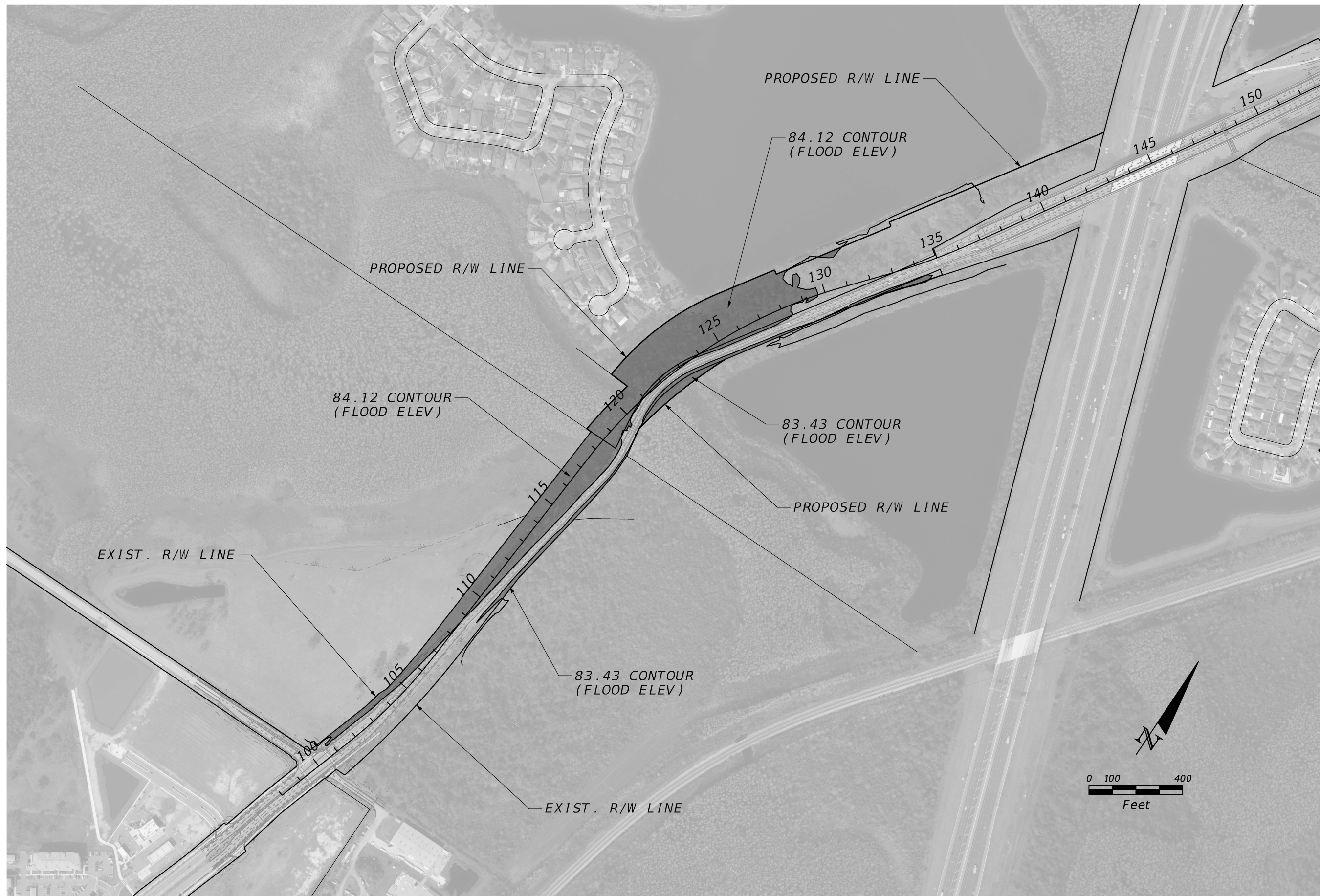
 Smp/Man Basin Rain Global
 Opt:
 OF Region Rain Opt: Global
 Rainfall Name: ~SFWMD-72
 Rainfall Amount: 13.80 in
 Storm Duration: 72.0000 hr
 Dflt Damping (1D): 0.0050 ft
 Min Node Srf Area 100 ft2
 (1D):
 Energy Switch (1D): Energy

Comment:

Node Max Conditions : Multi Item | (sim, name) [Scenario1]

Sim Name	Node Name	Warning Stage [ft]	Alert Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
100 Yr-72 Hr SFWMD	U/S Rail	84.00	0.00	83.42	-0.0093	441.91	441.50	1385270
100 Yr-72 Hr SFWMD	WL 1 East	84.00	0.00	83.43	0.0008	456.85	441.81	2706279
100 Yr-72 Hr SFWMD	WL 1 West	84.40	0.00	84.12	0.0010	865.81	450.58	14917533
100 Yr-72 Hr SFWMD	WL 99	81.95	0.00	81.95	0.0000	441.50	0.69	0

Appendix B – Floodplain Impact and Compensation



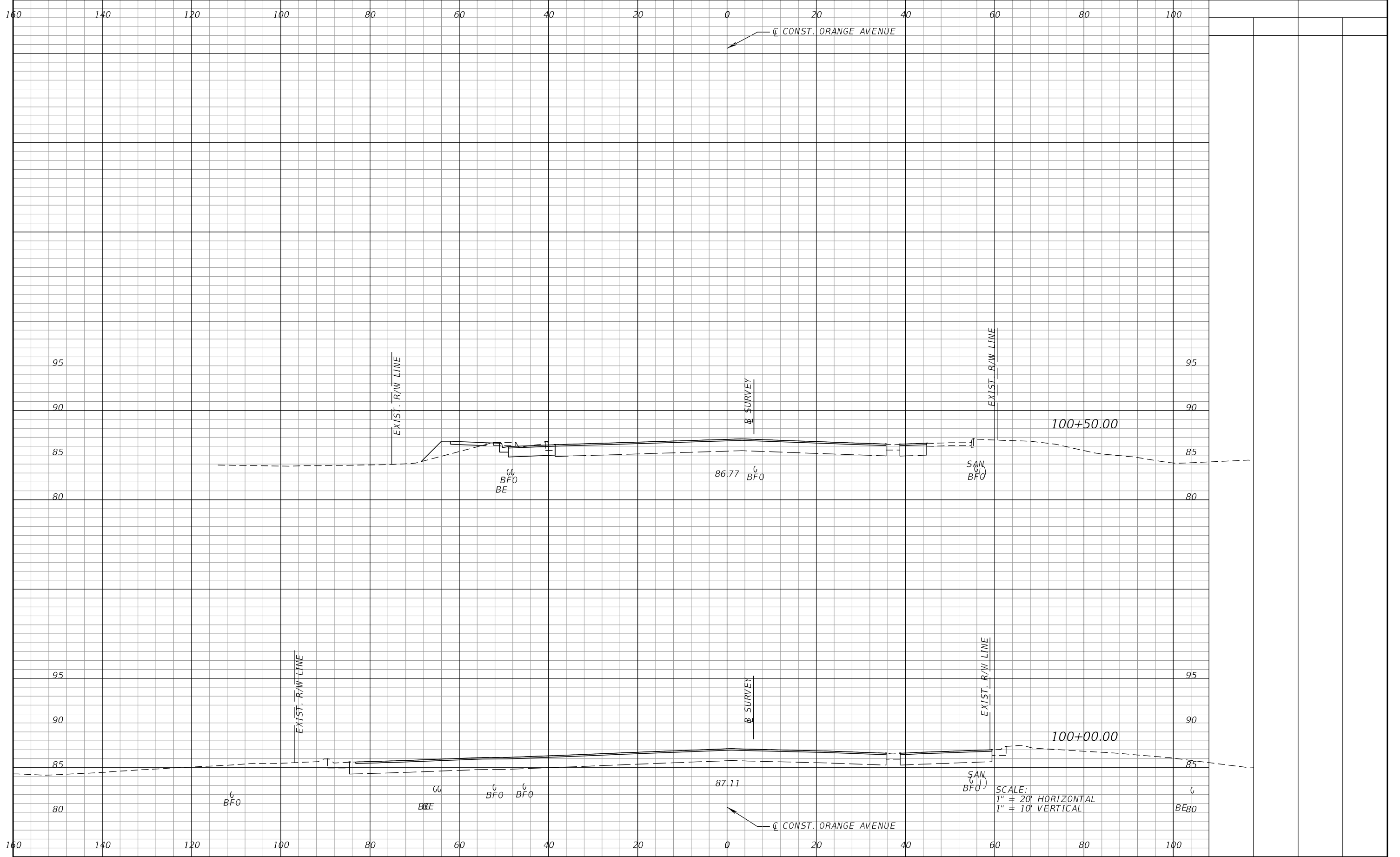
REVISIONS	
DATE	DESCRIPTION

Dewberry
 800 N. MAGNOLIA AVE. ORLANDO, FL. 32803
 407-843-5120 / DEWBERRY.COM
 FBPR CERT. OF AUTHORIZATION NO. 8794
 SARAH CHRISTINE PHILLIPS, P.E.
 P.E. LICENSE NUMBER 88133

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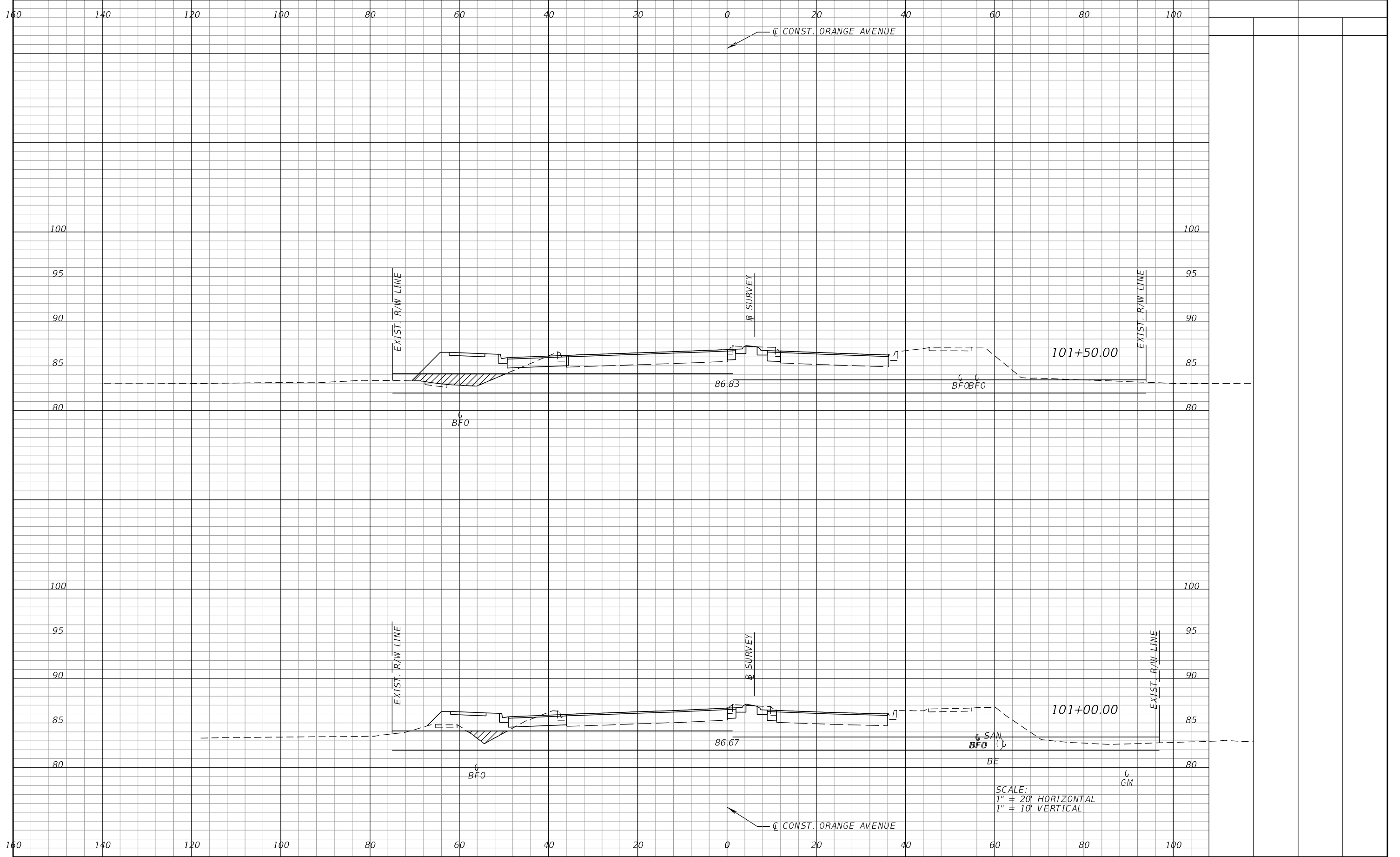
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SHEET NO.



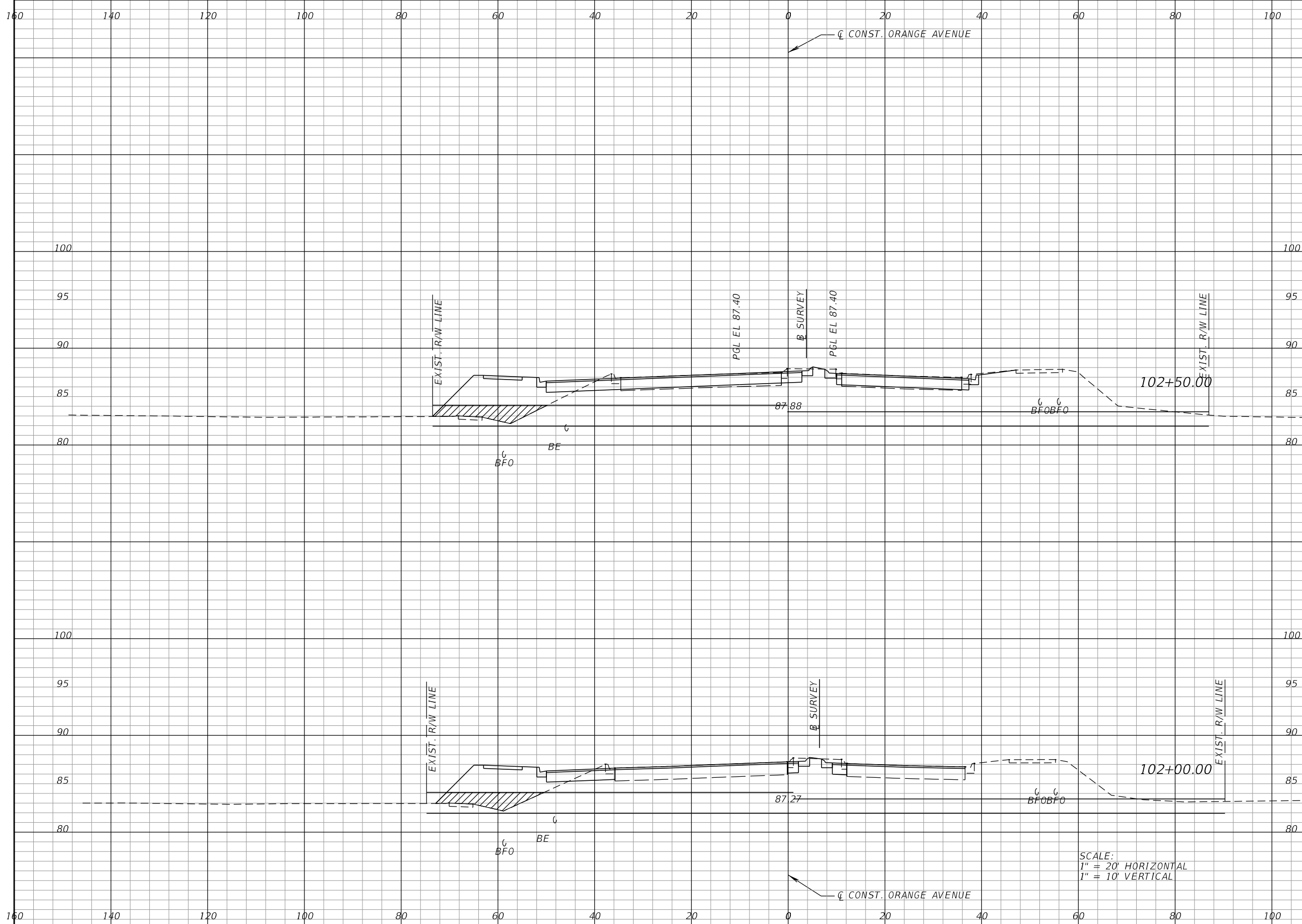
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FLOODPLAIN CROSS SECTIONS



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FLOODPLAIN CROSS SECTIONS



Regular		Exc.		Embankment	
A	V	A	V	A	V

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



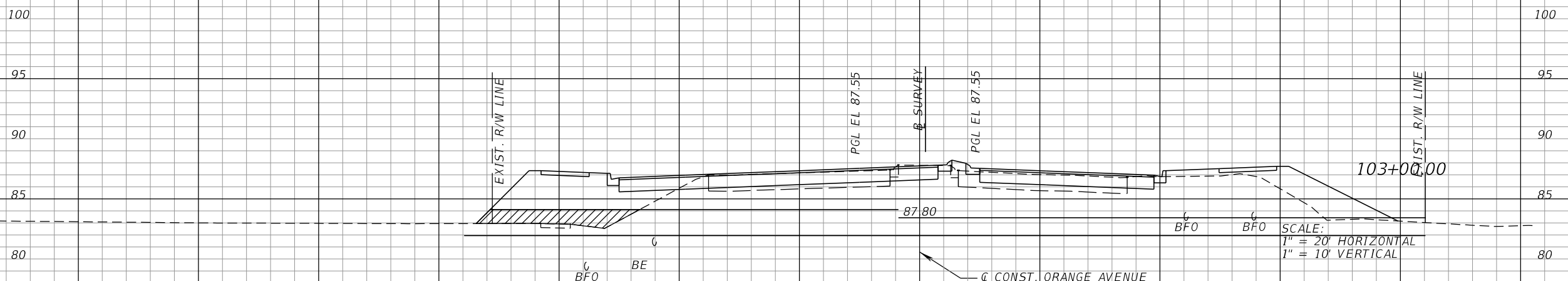
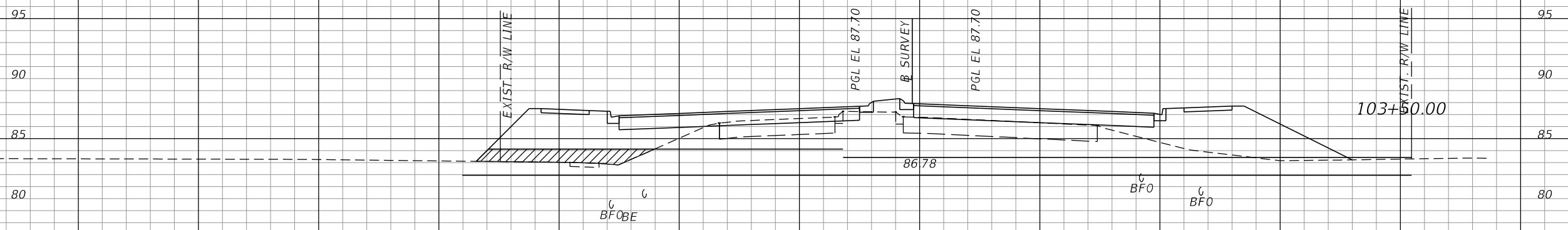
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SHEET NO.

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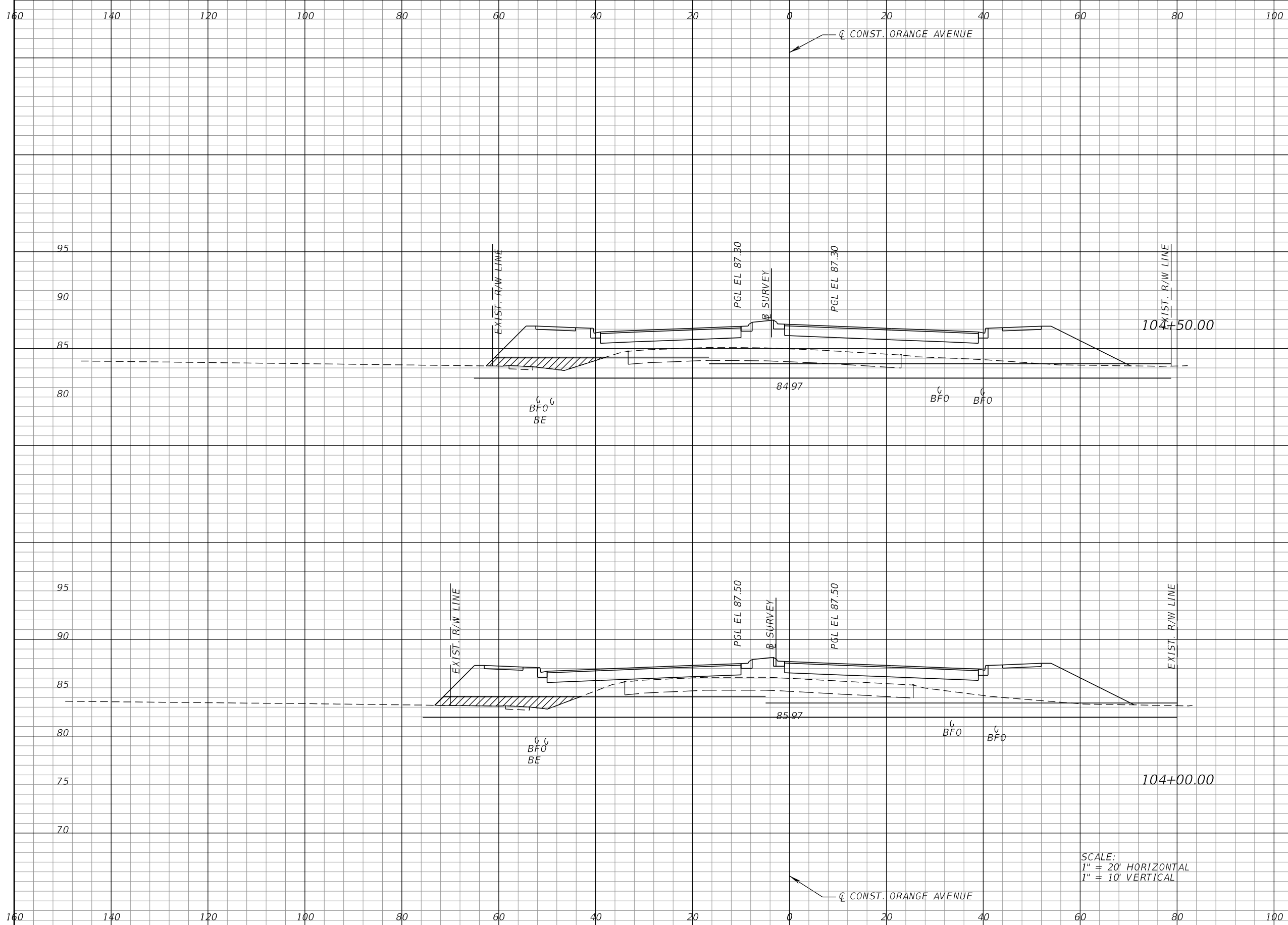
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CL CONST. ORANGE AVENUE



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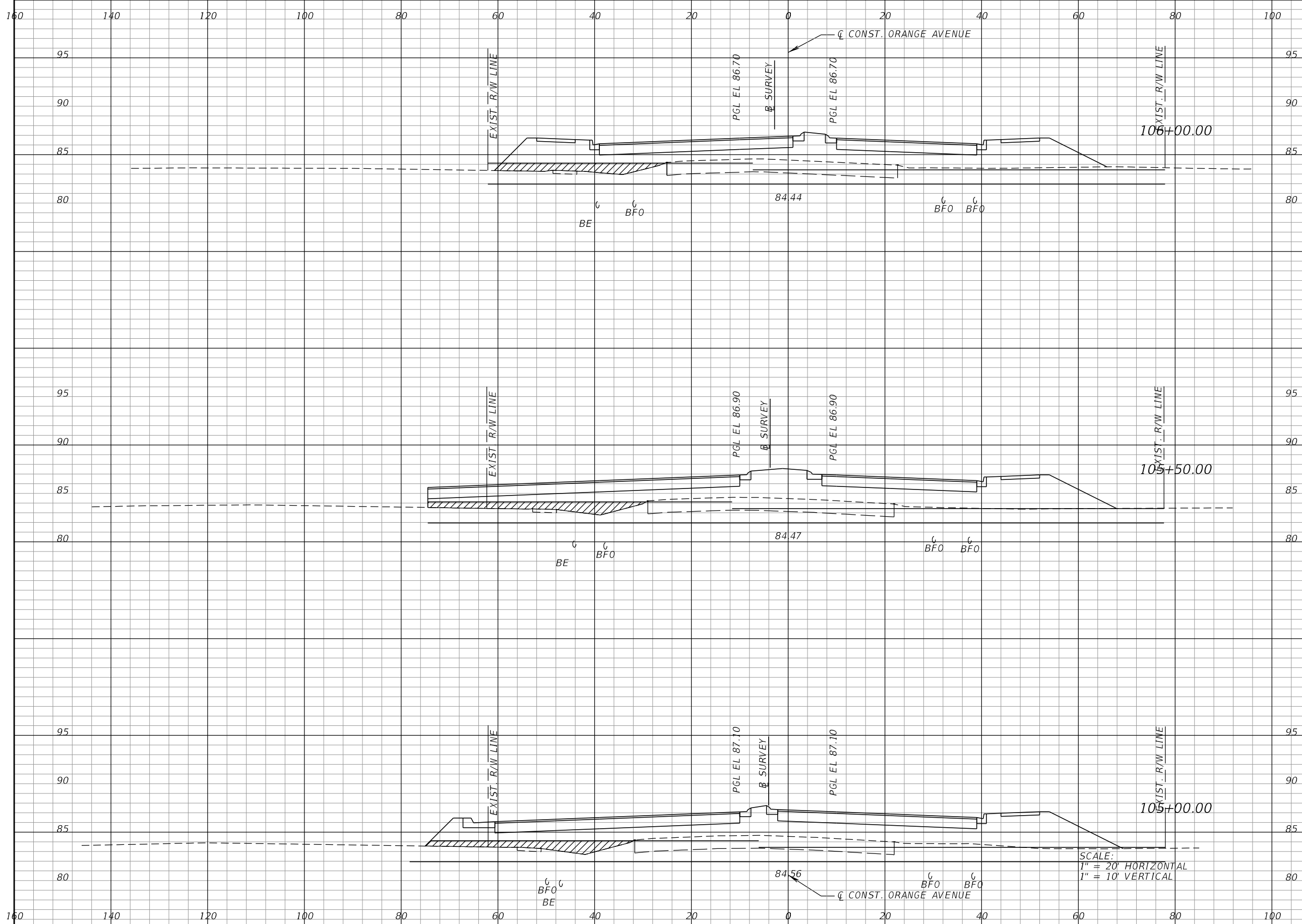


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 1" = 10' VERTICAL



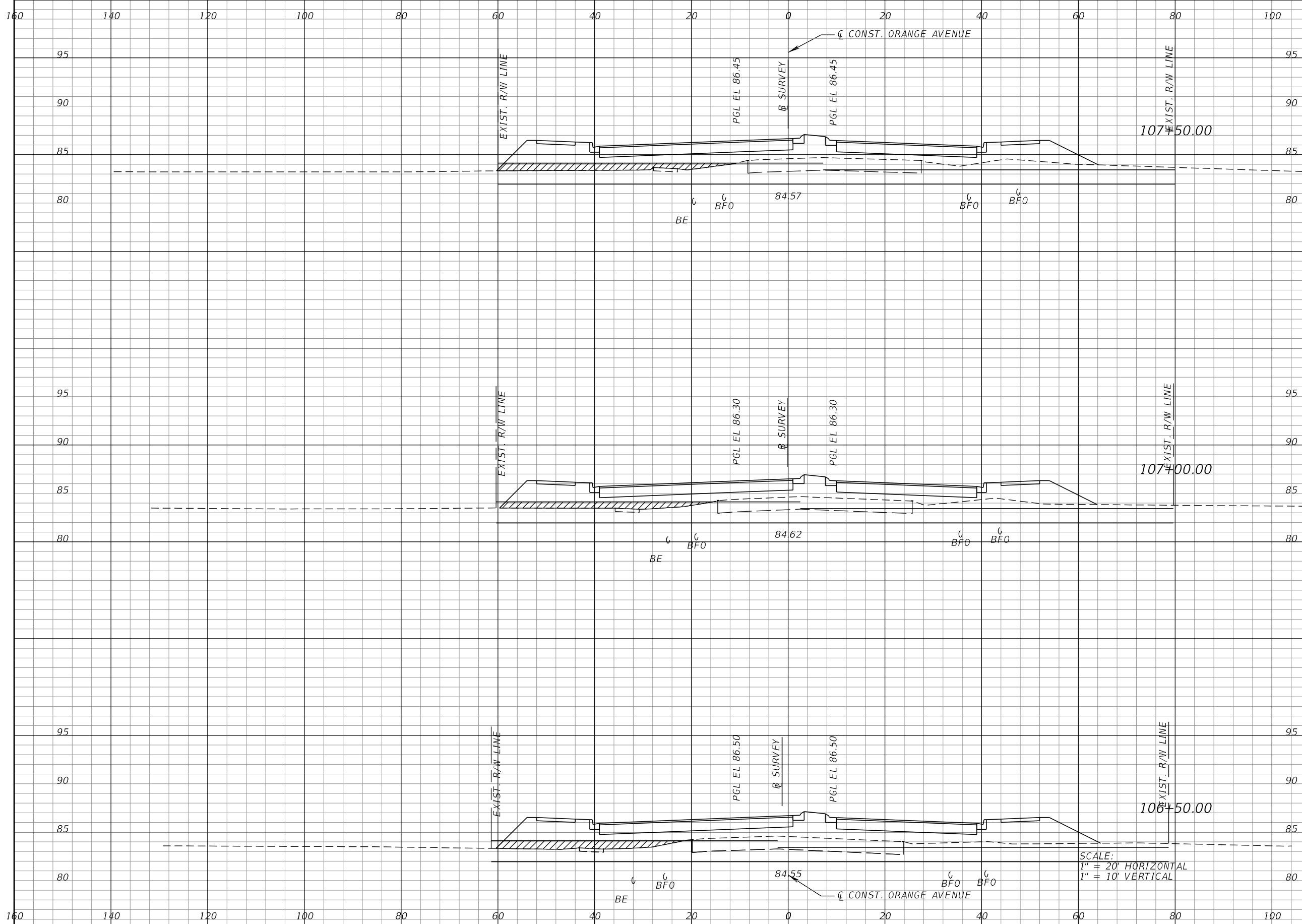
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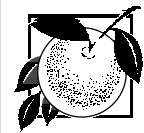
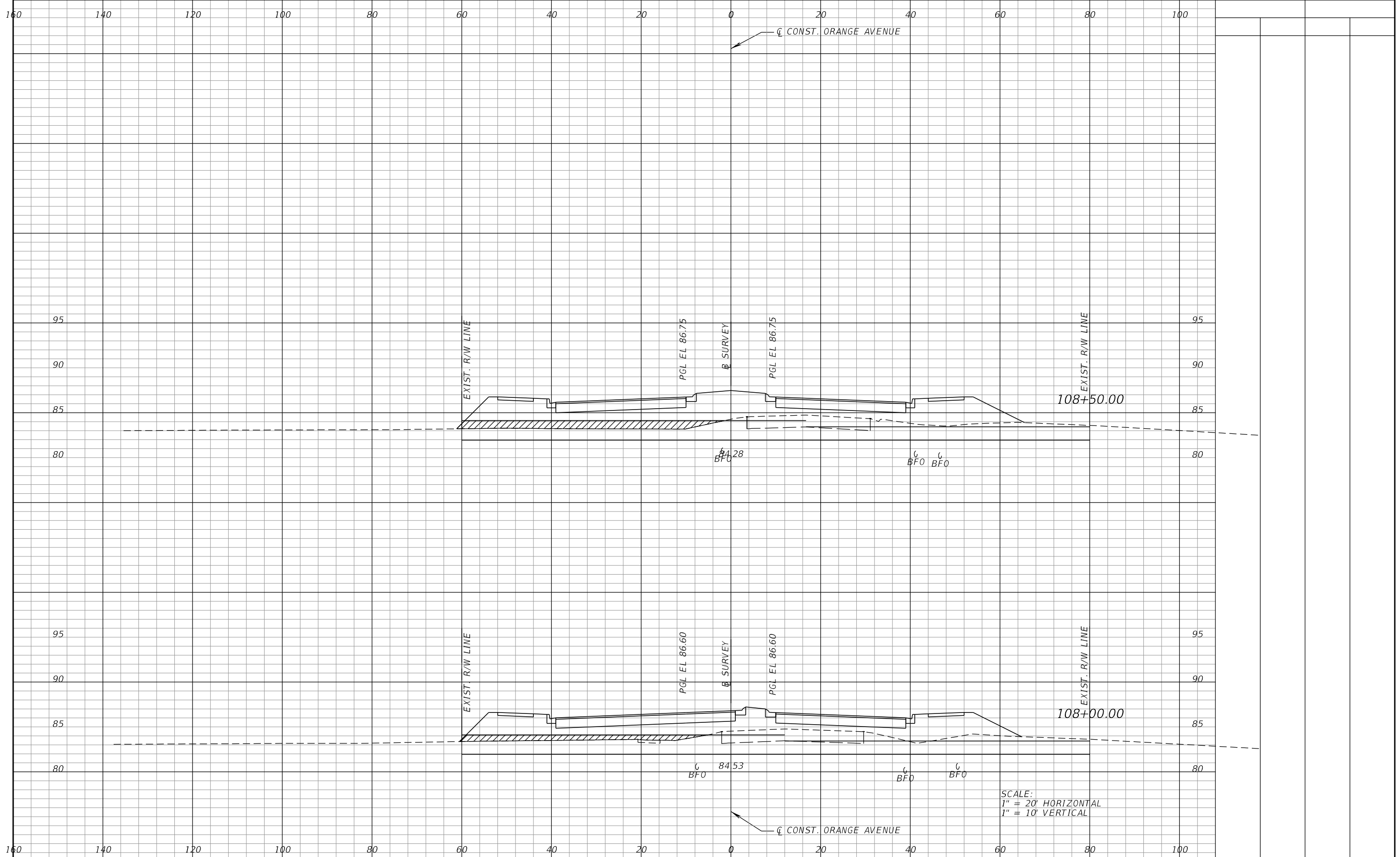
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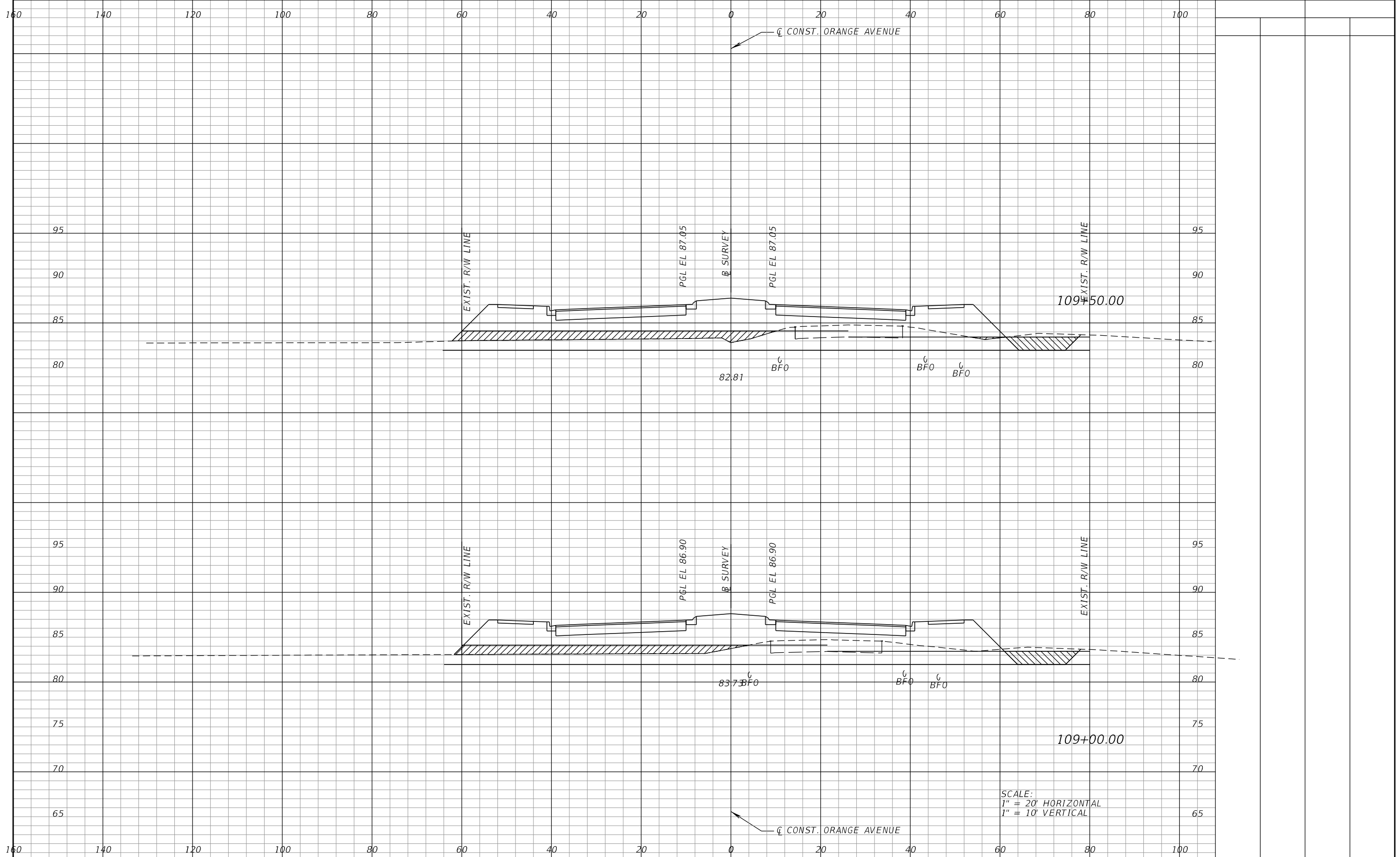
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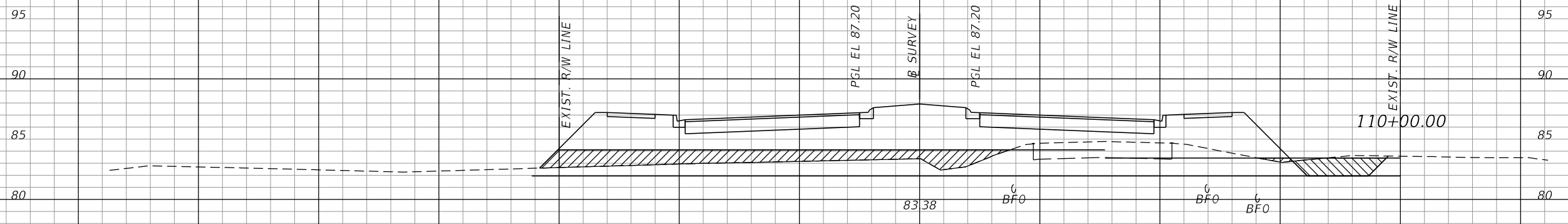
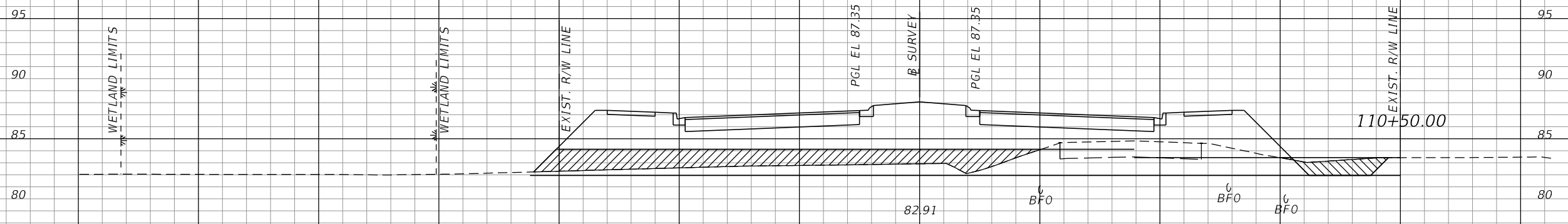


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CL CONST. ORANGE AVENUE



CL CONST. ORANGE AVENUE

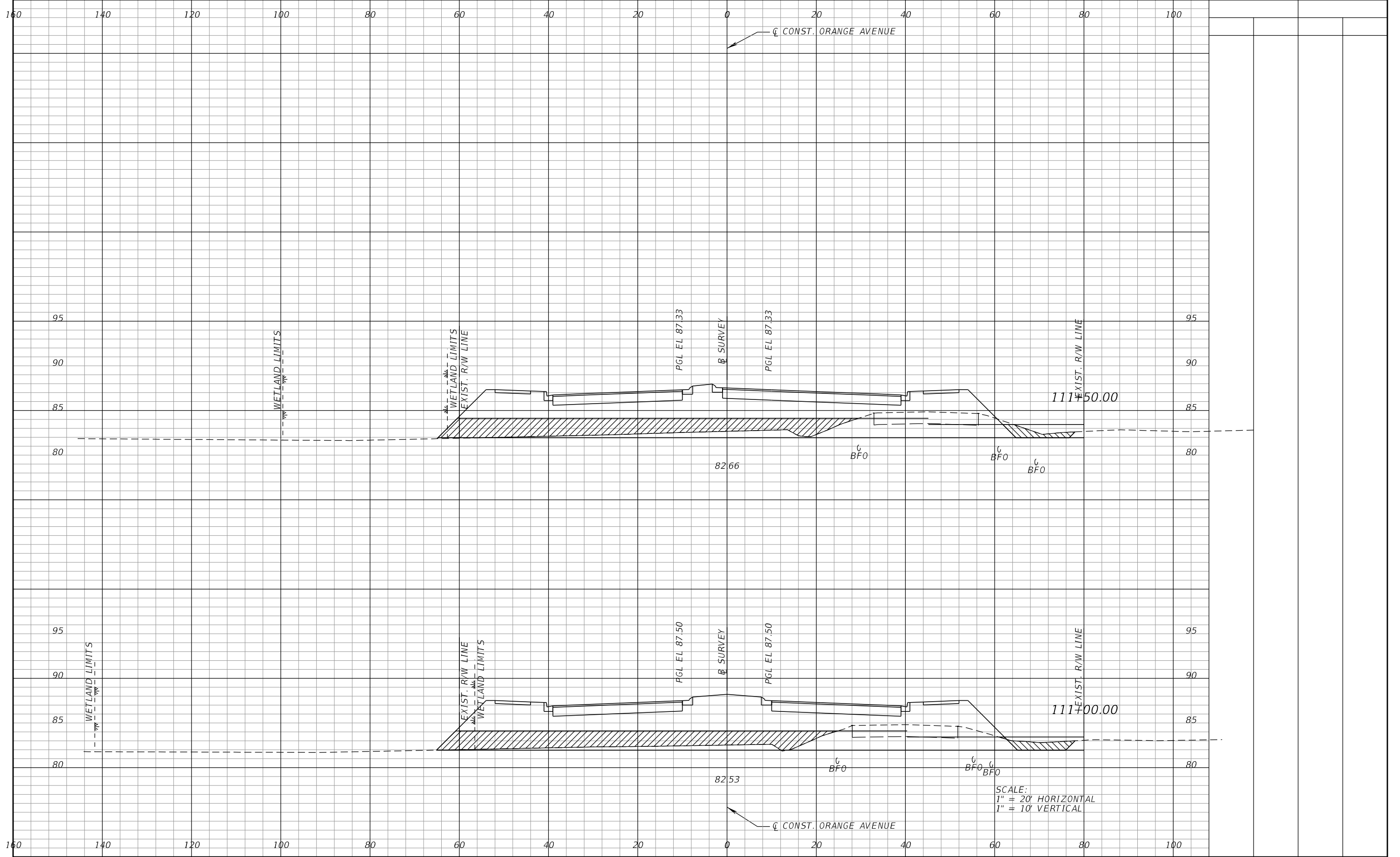
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1" = 10' VERTICAL

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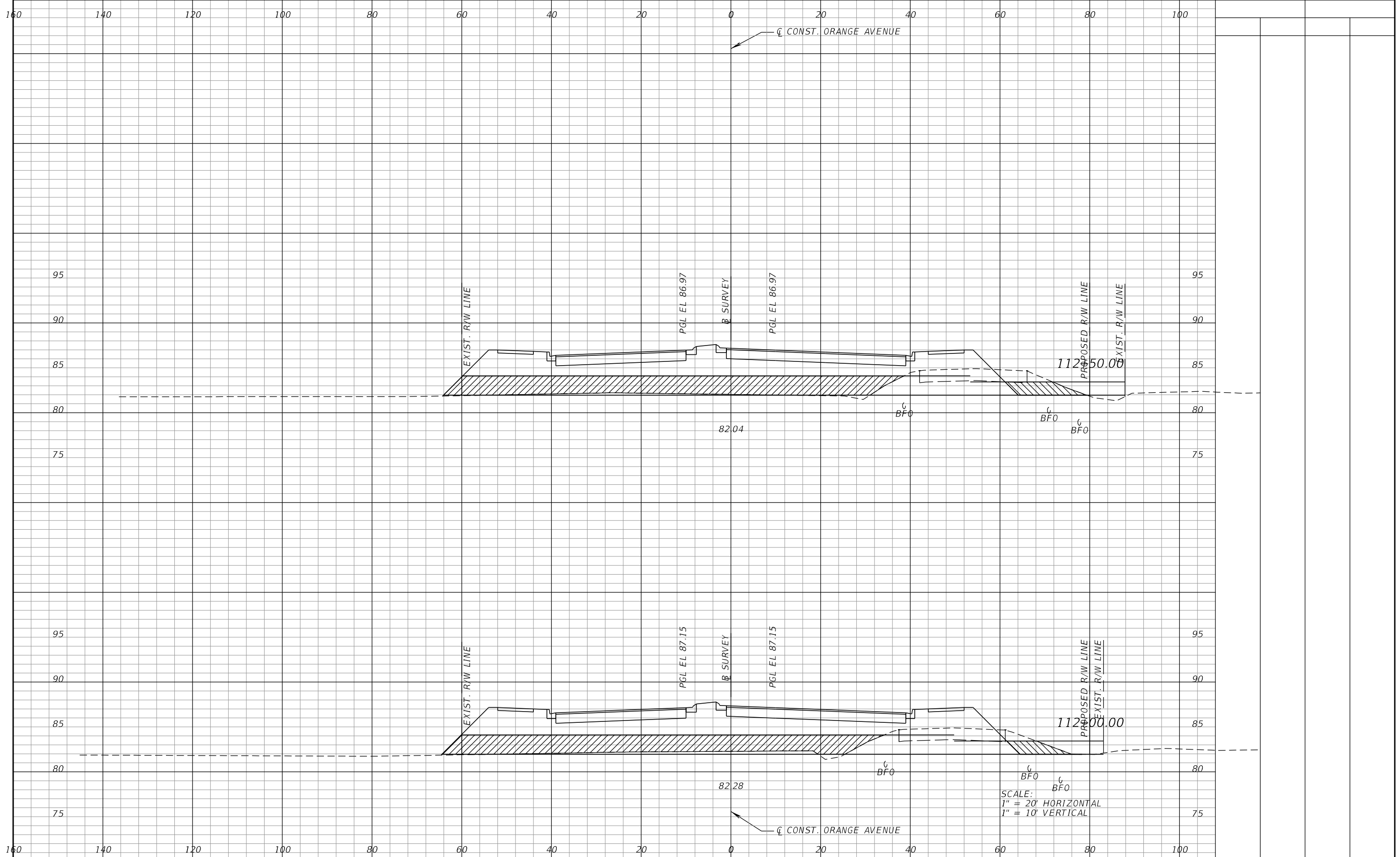
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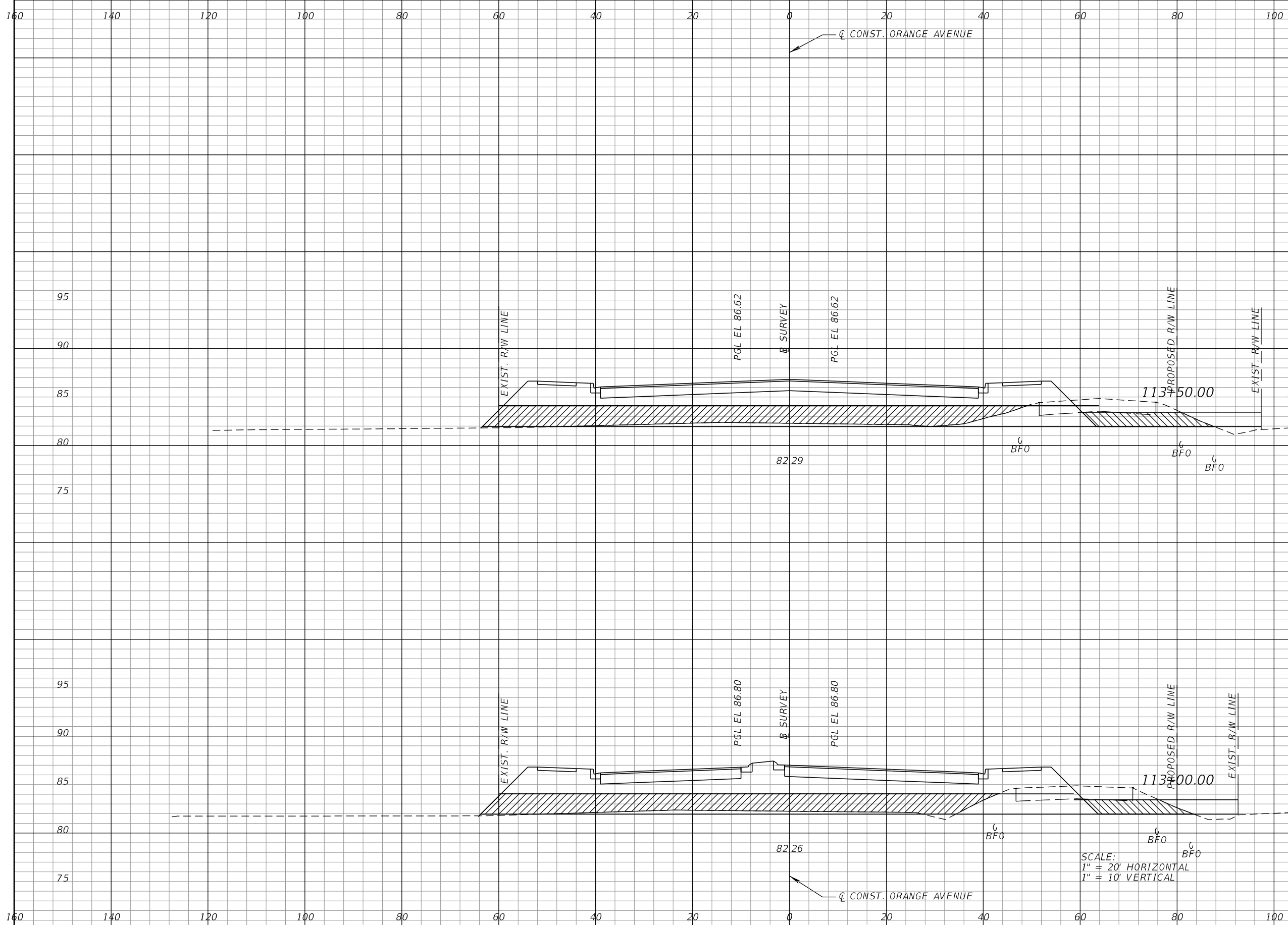
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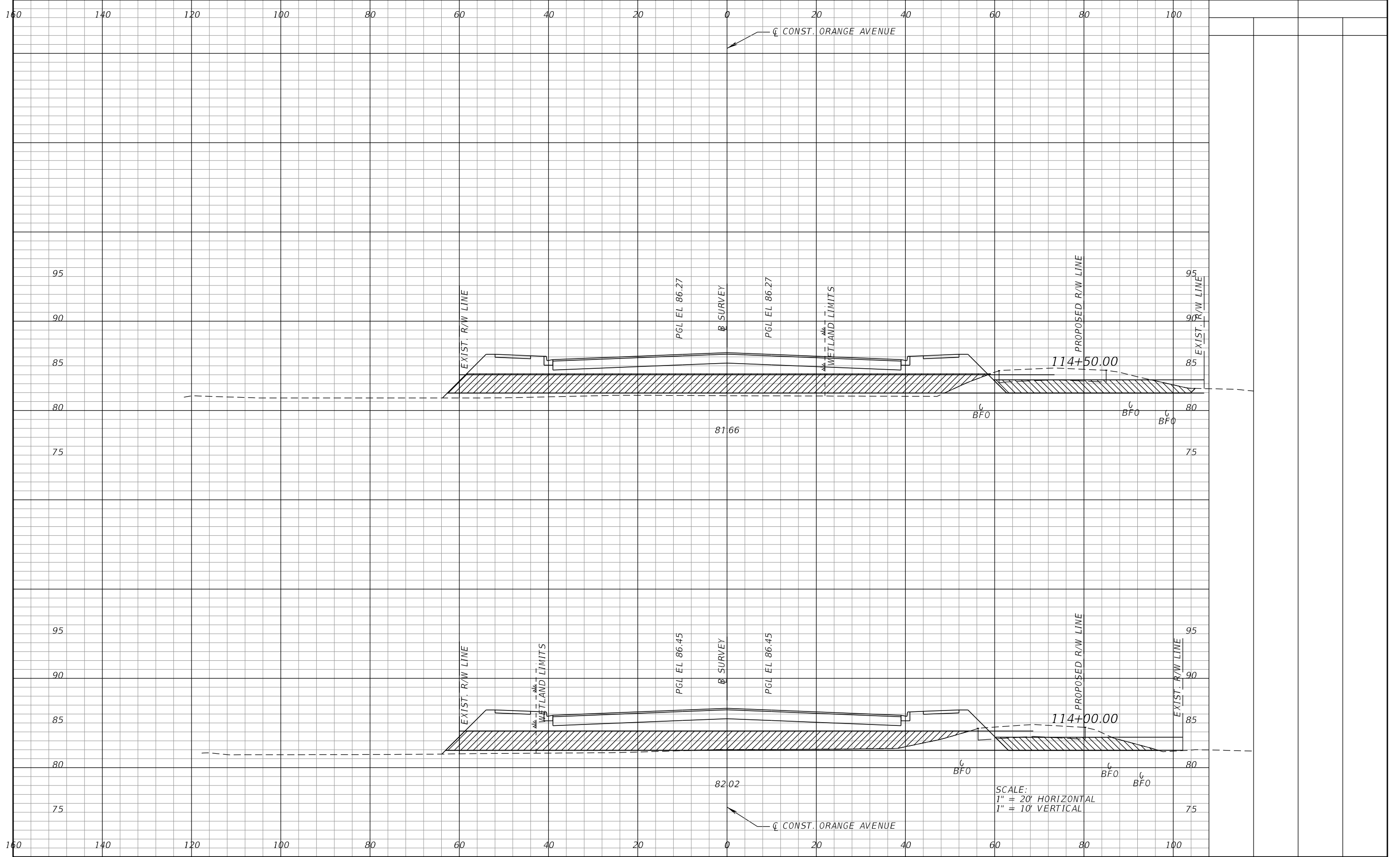
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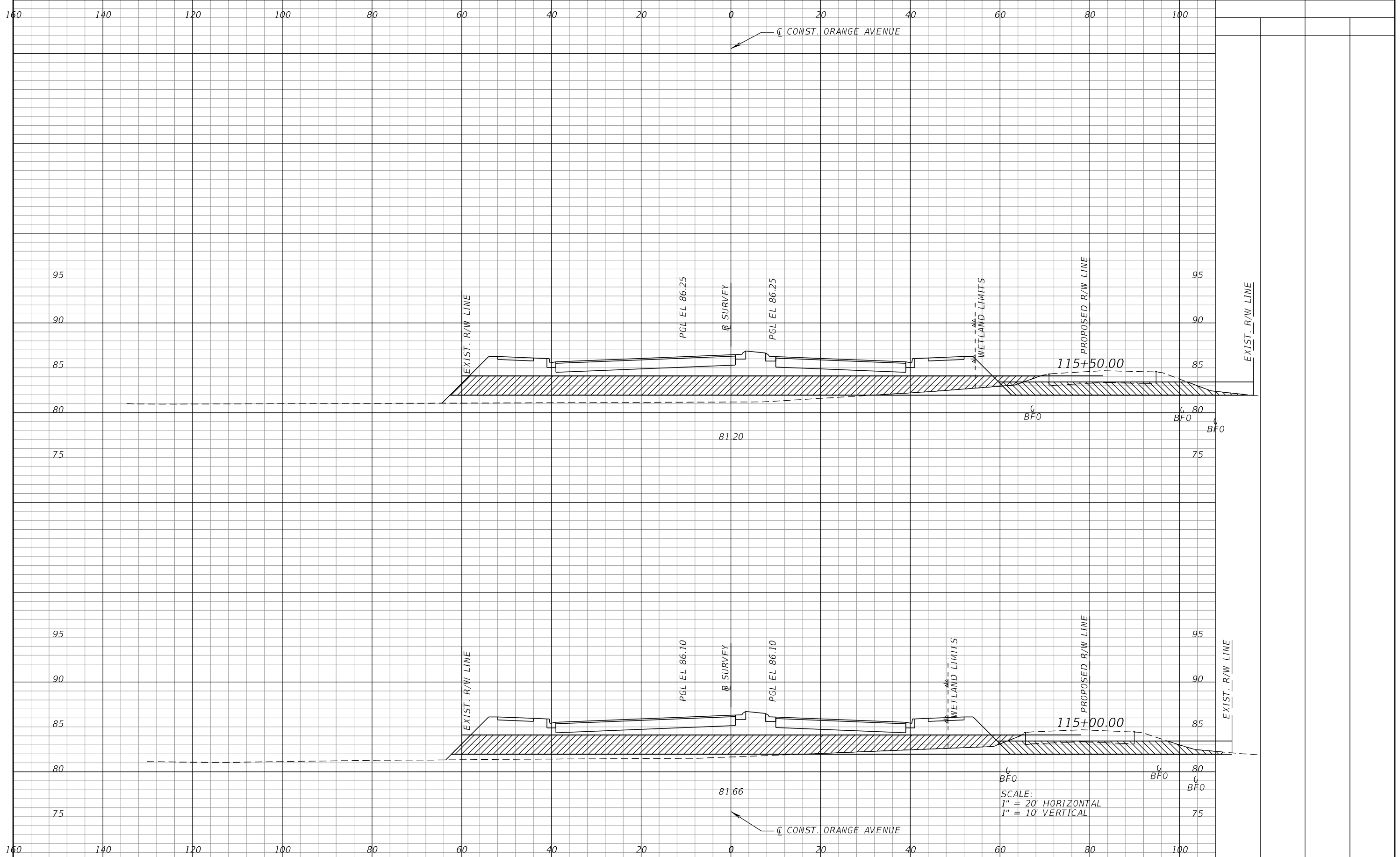
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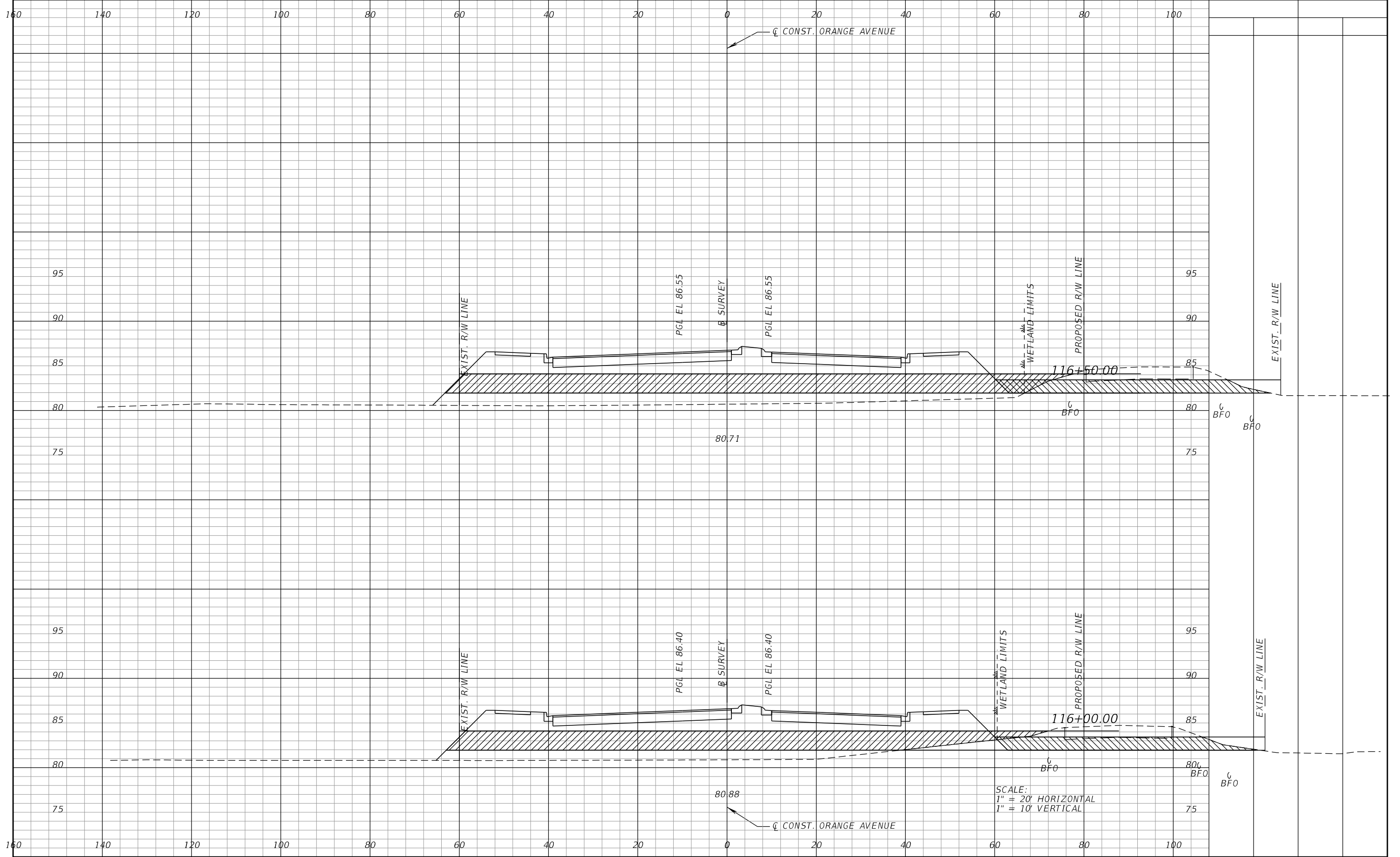
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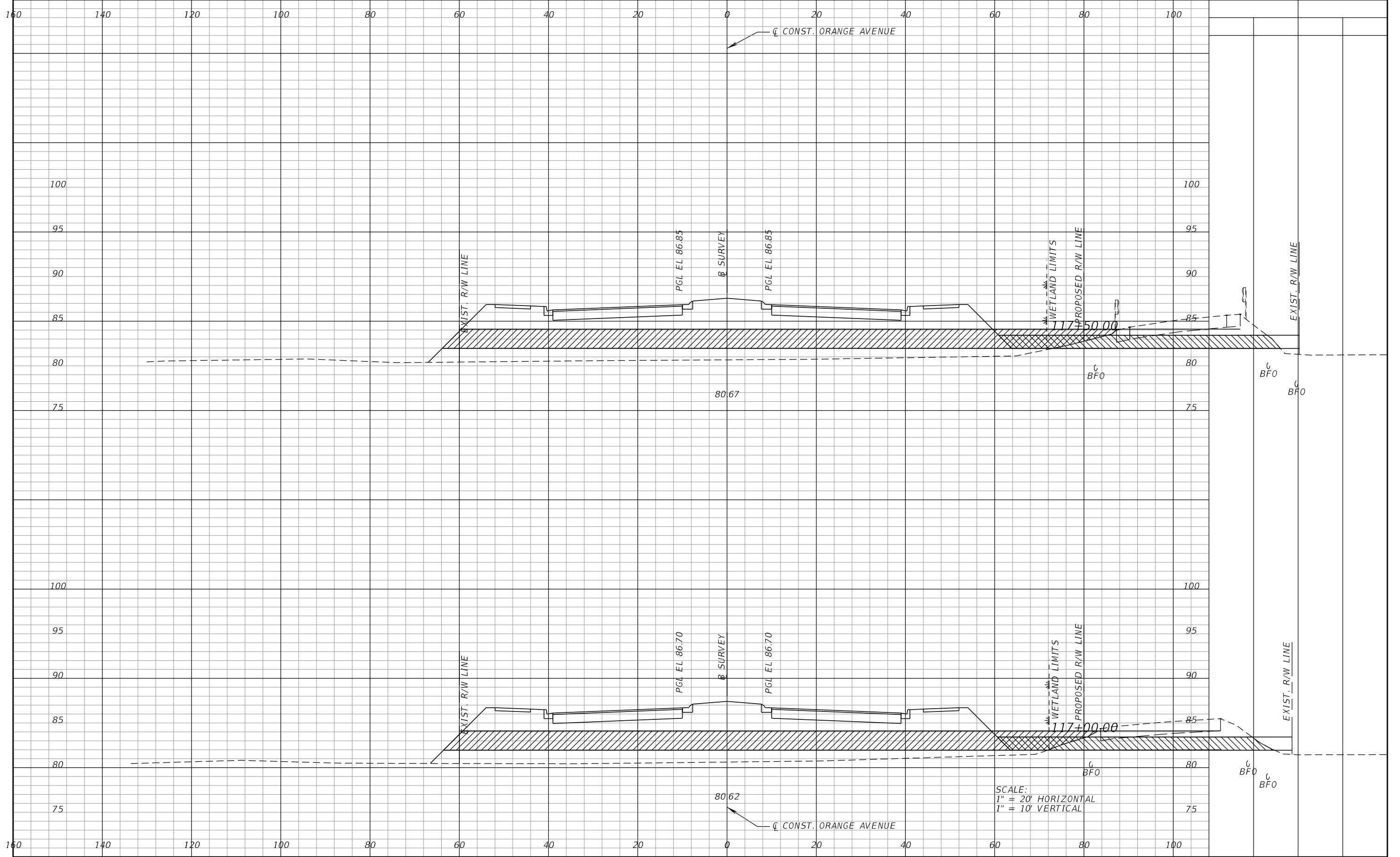
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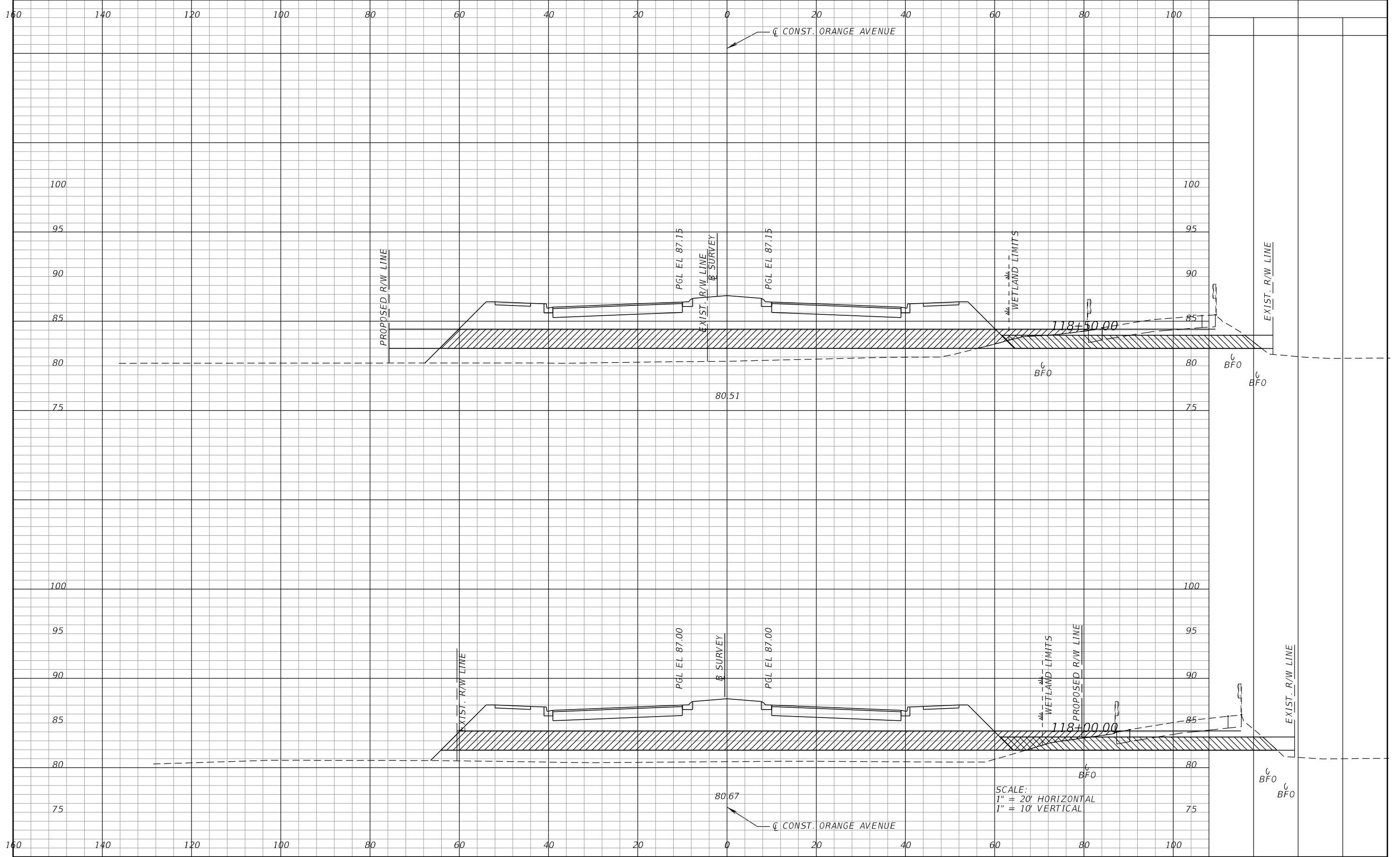
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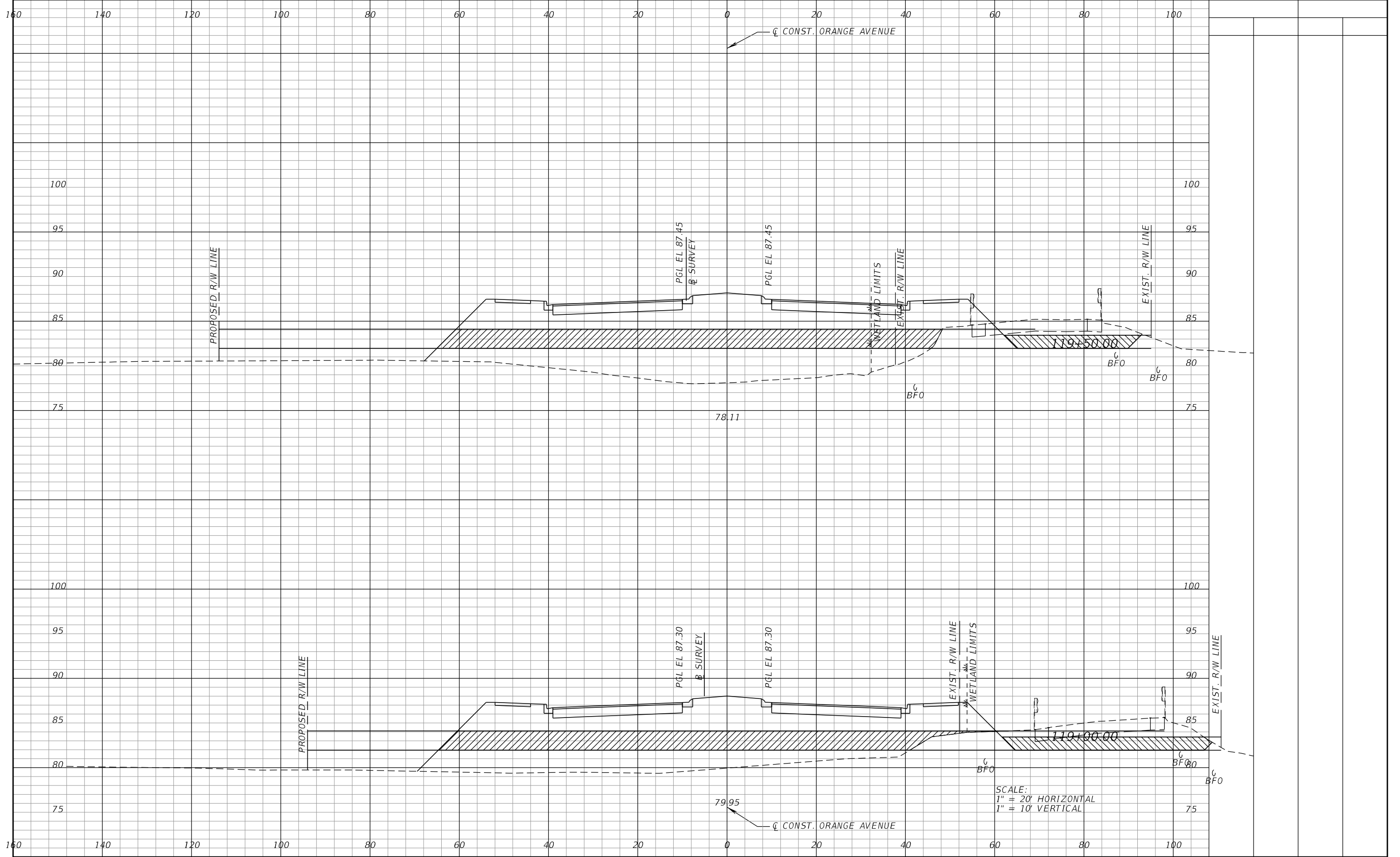
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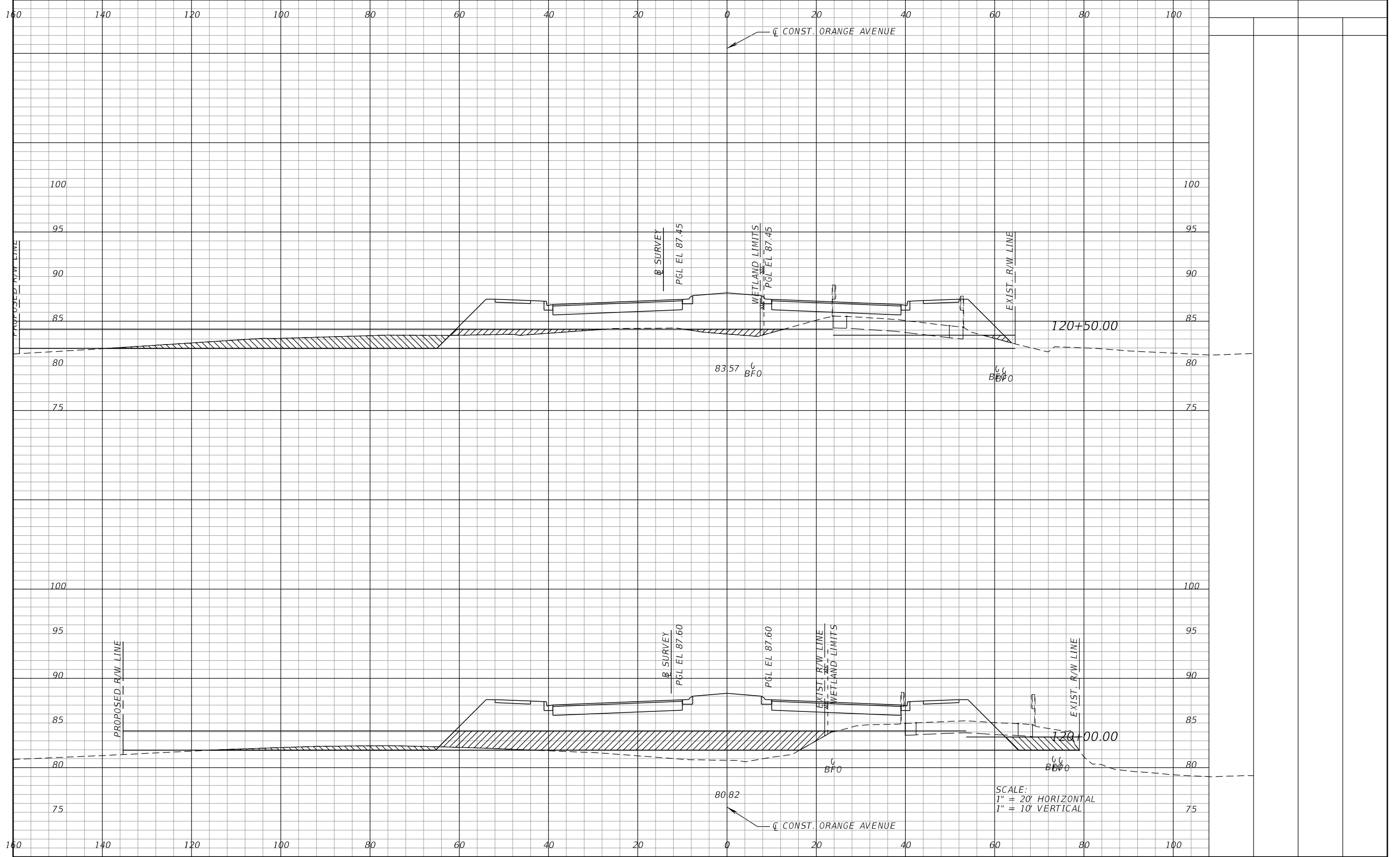
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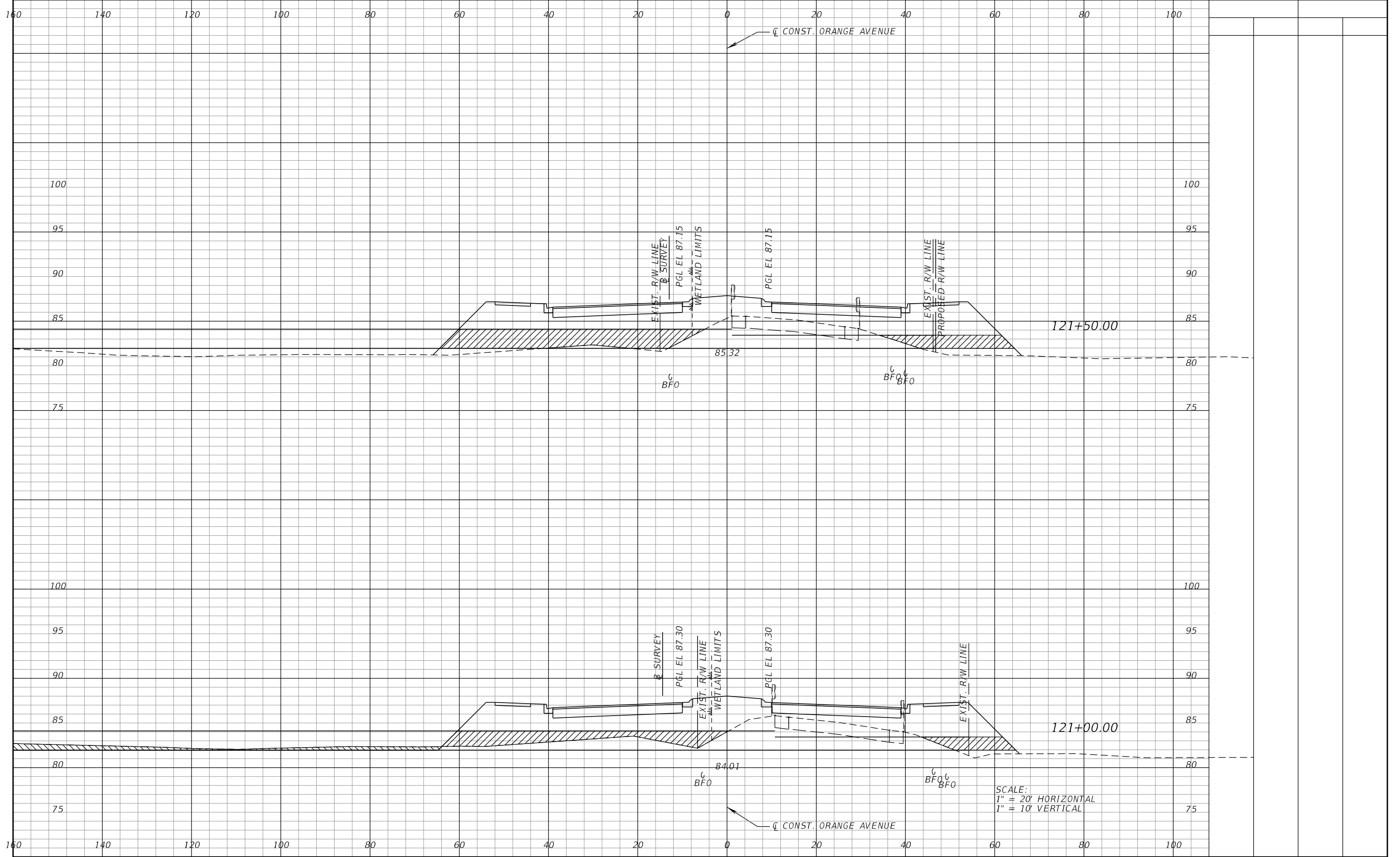
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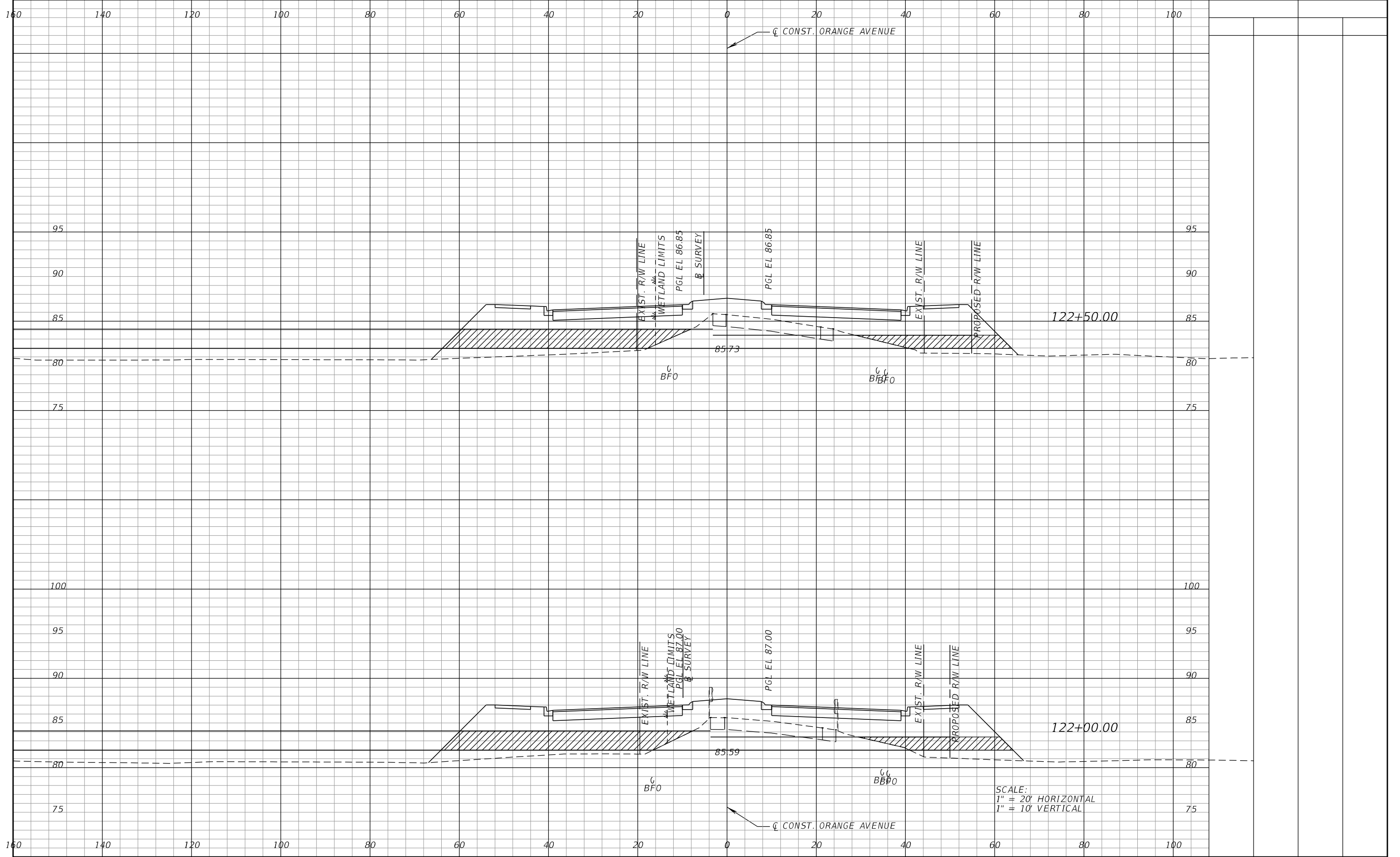


SCALE:
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 1" = 10' VERTICAL



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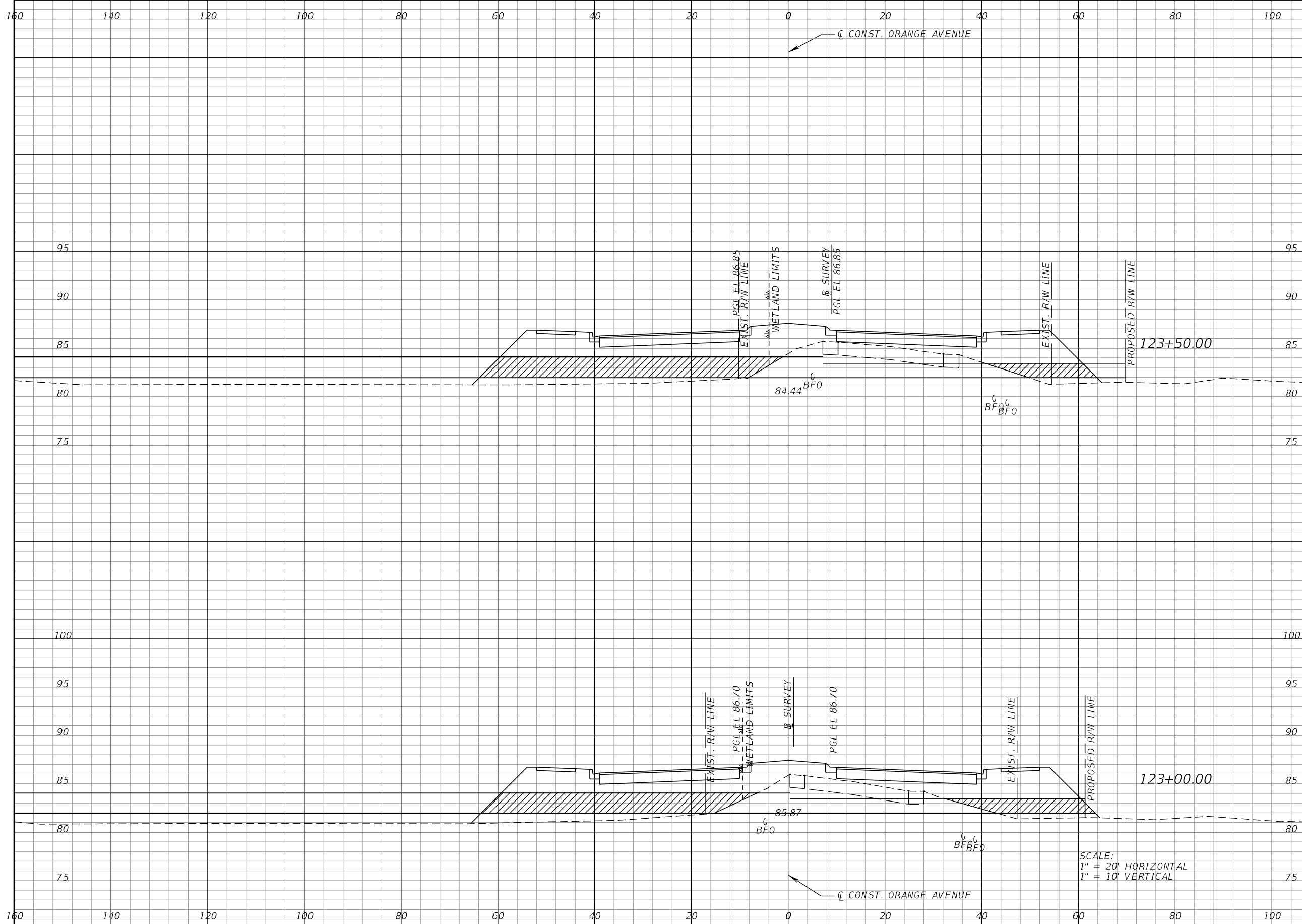


SCALE:
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123+50.00

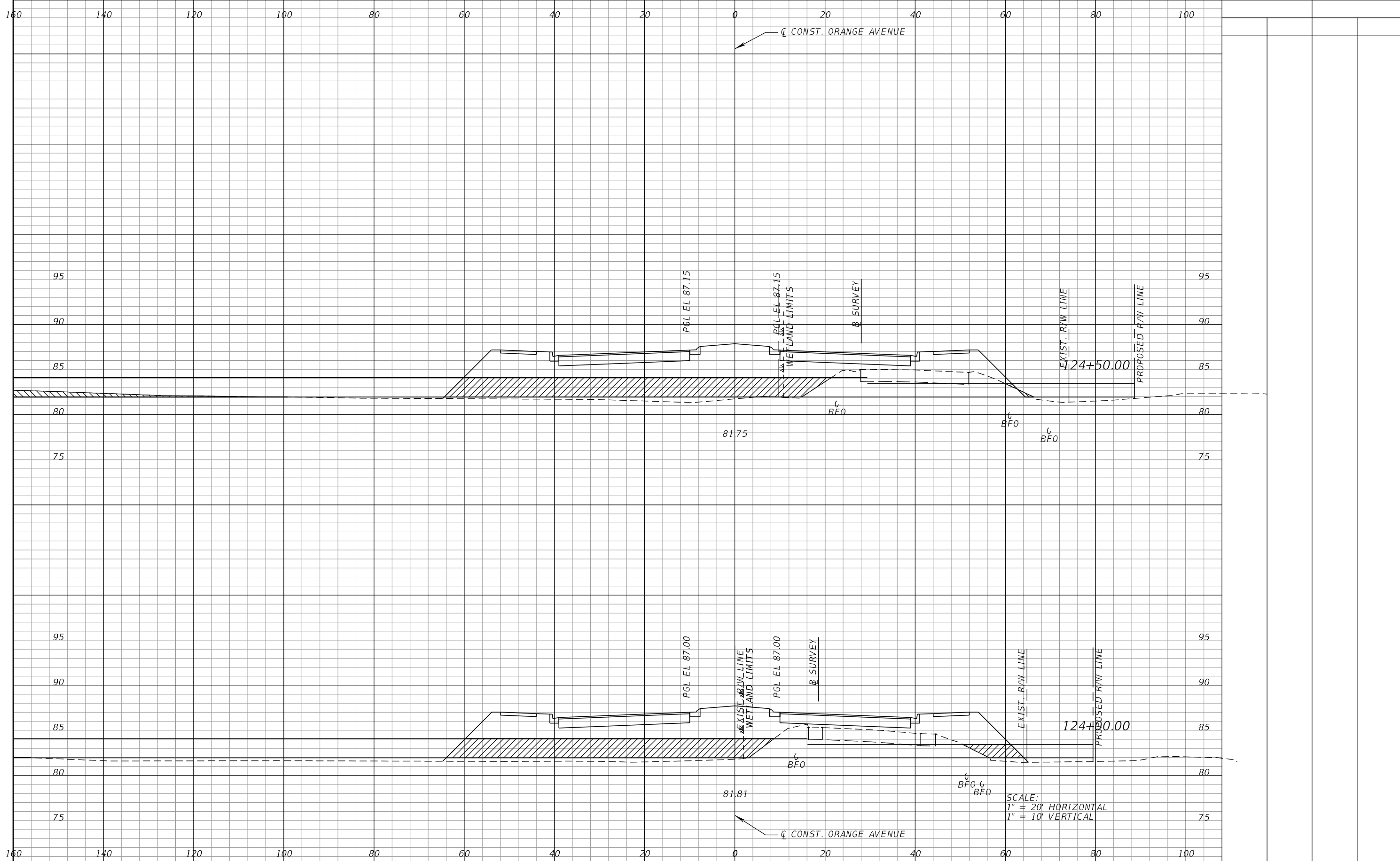
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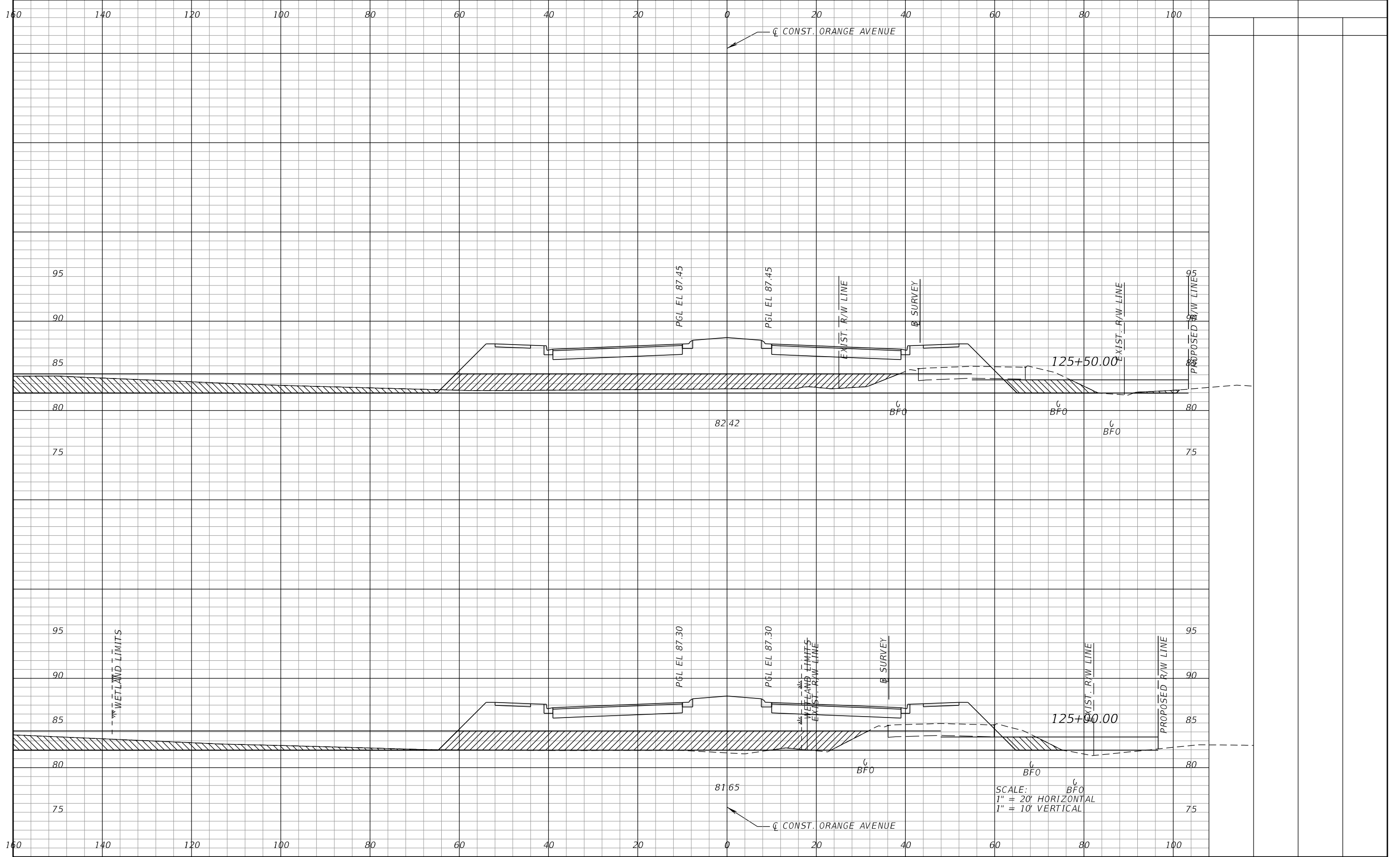
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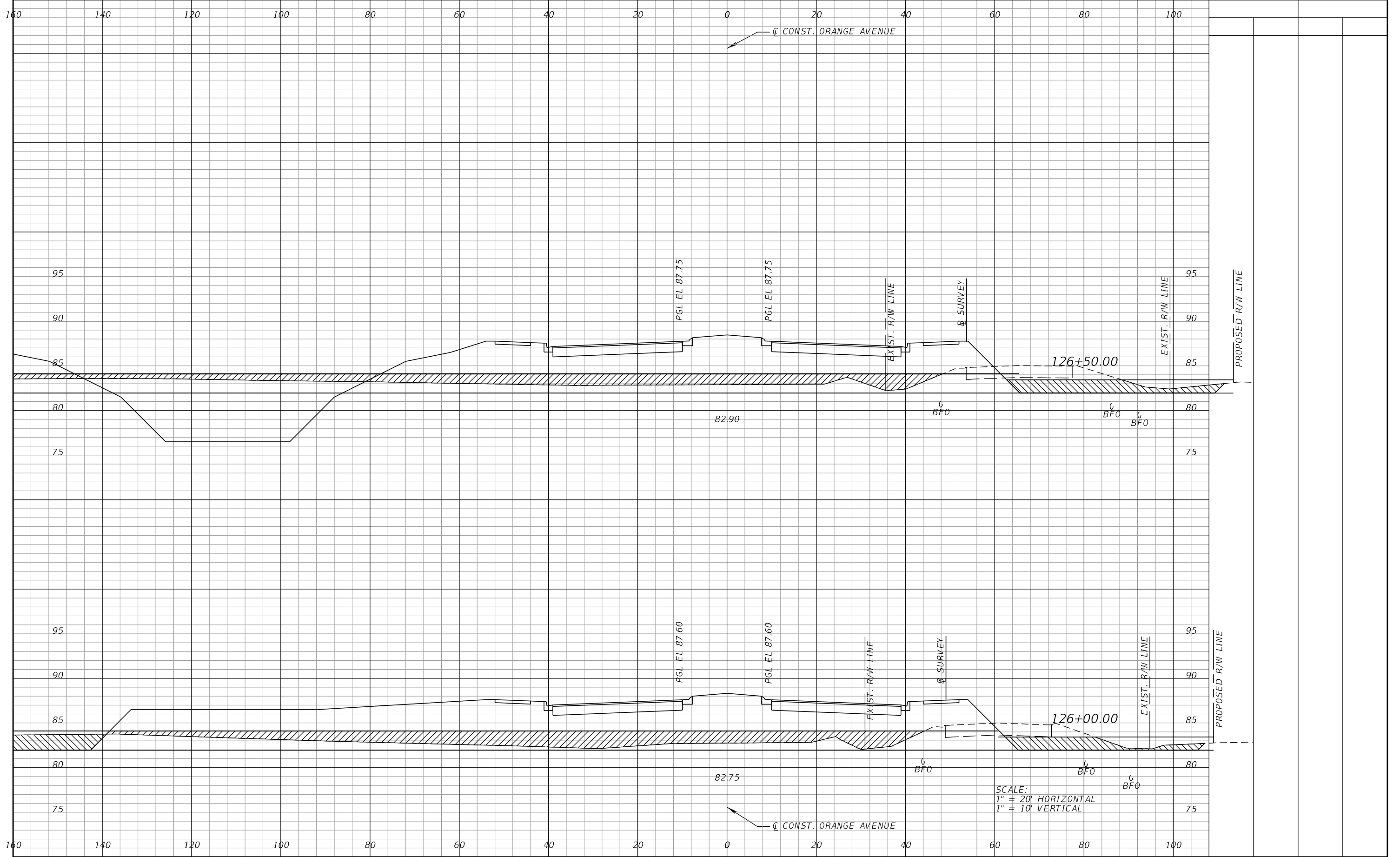
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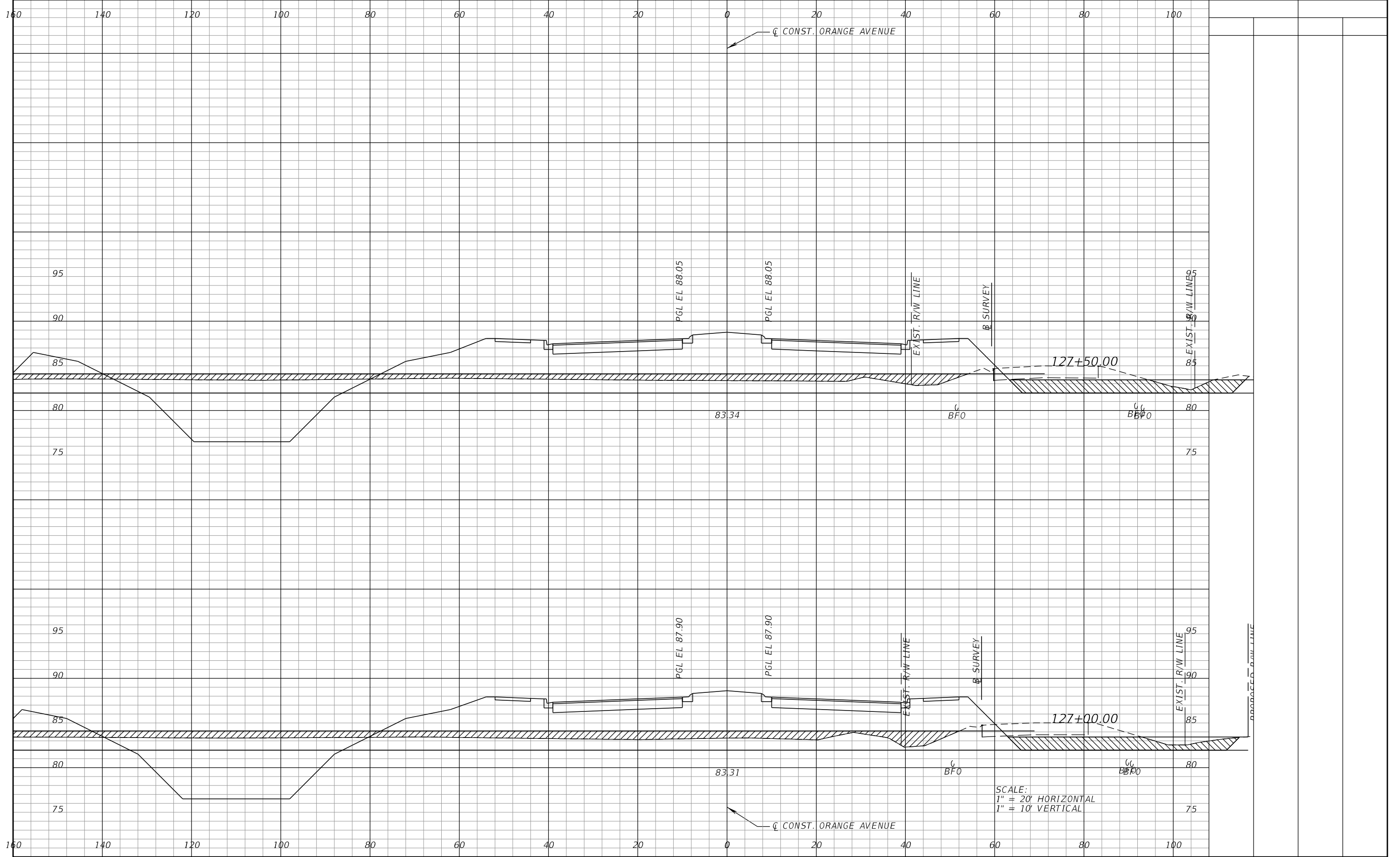
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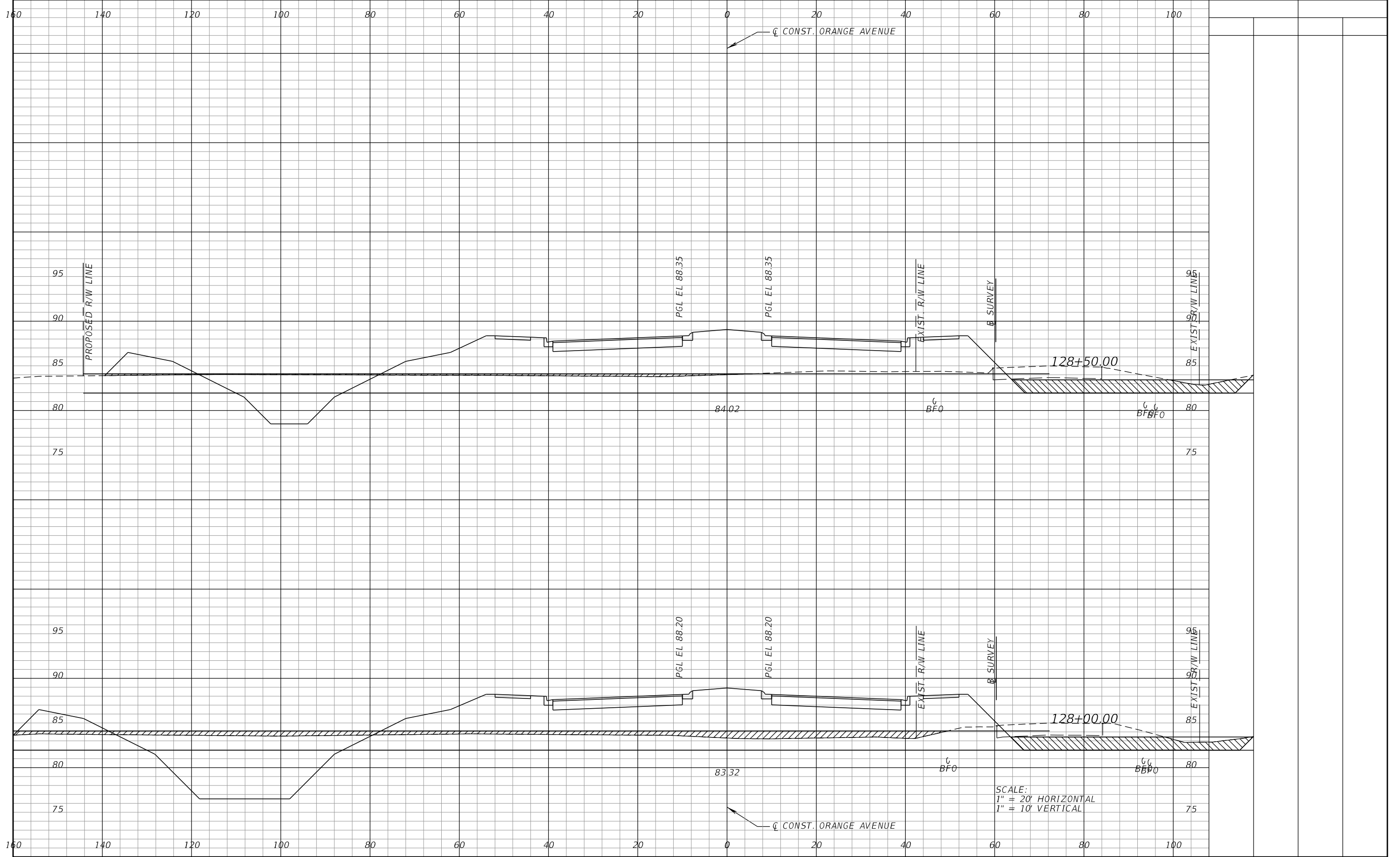
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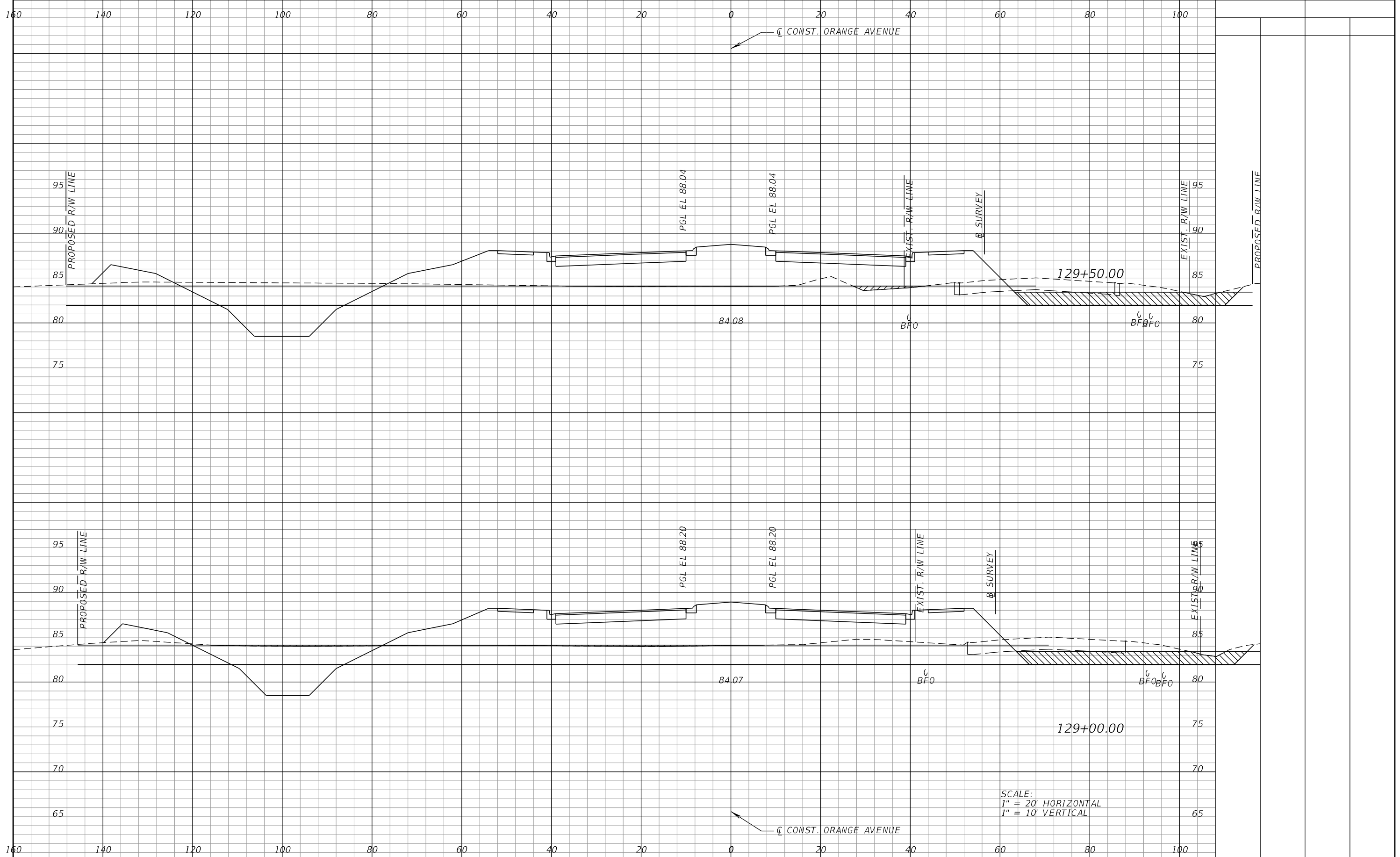
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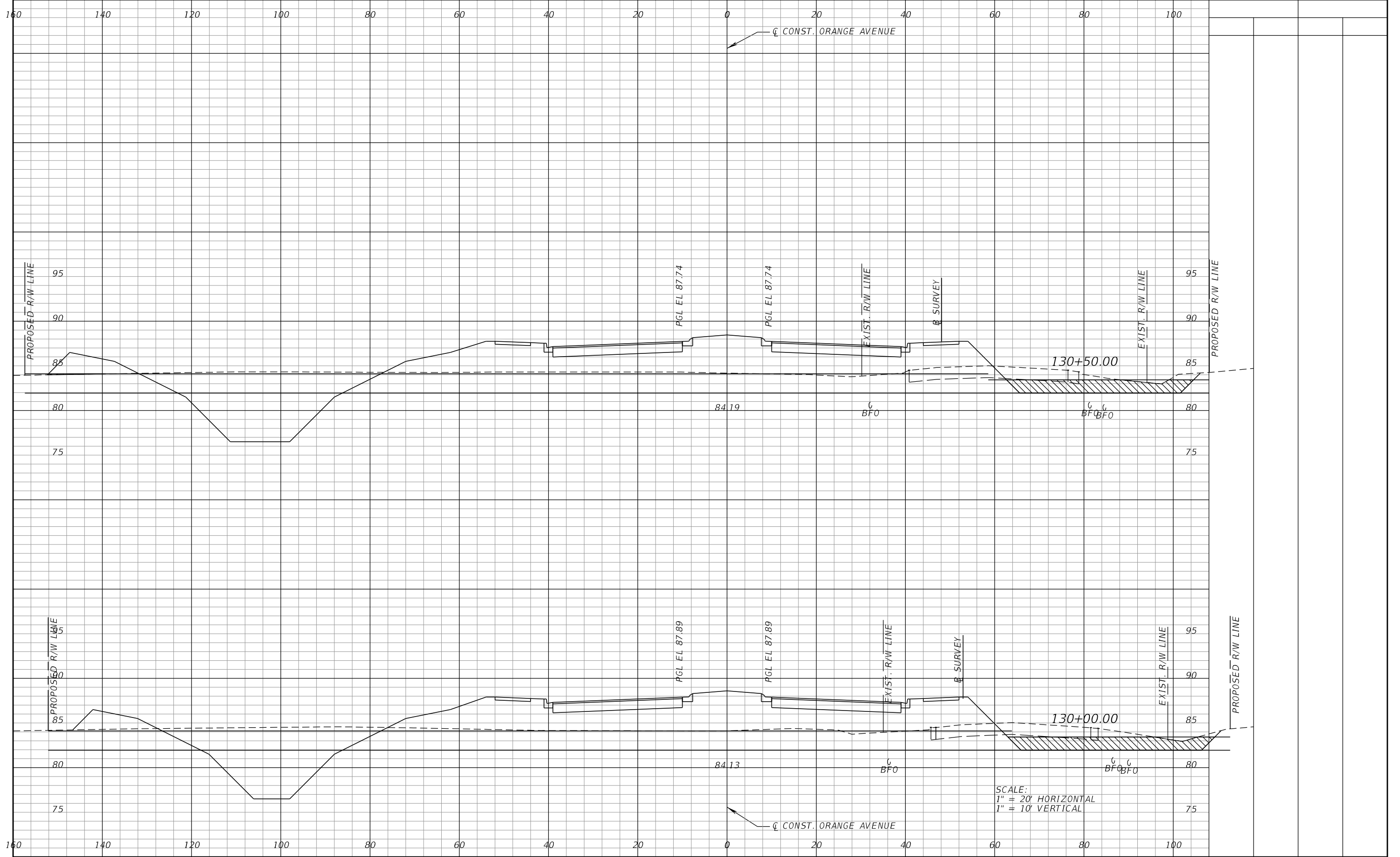


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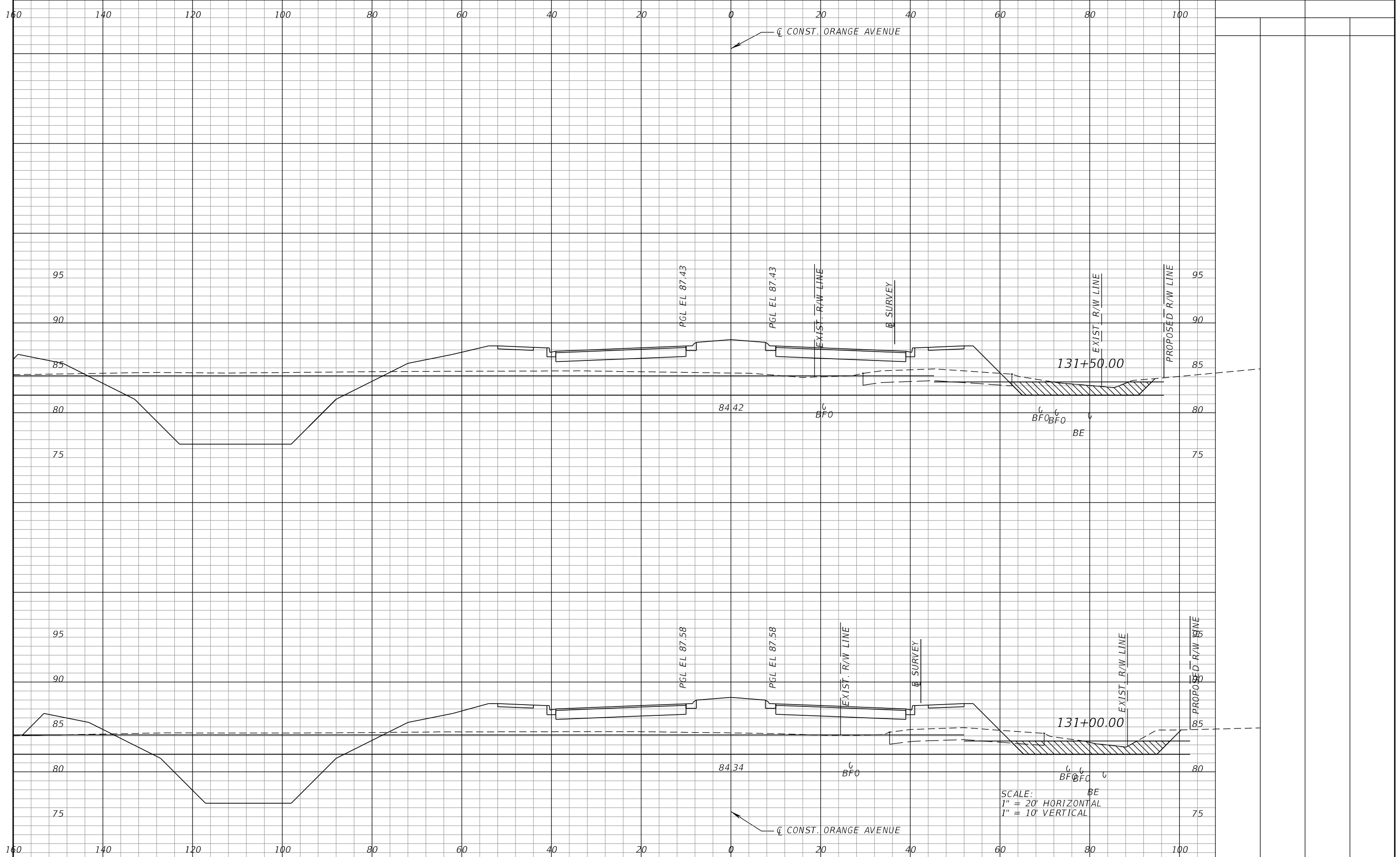
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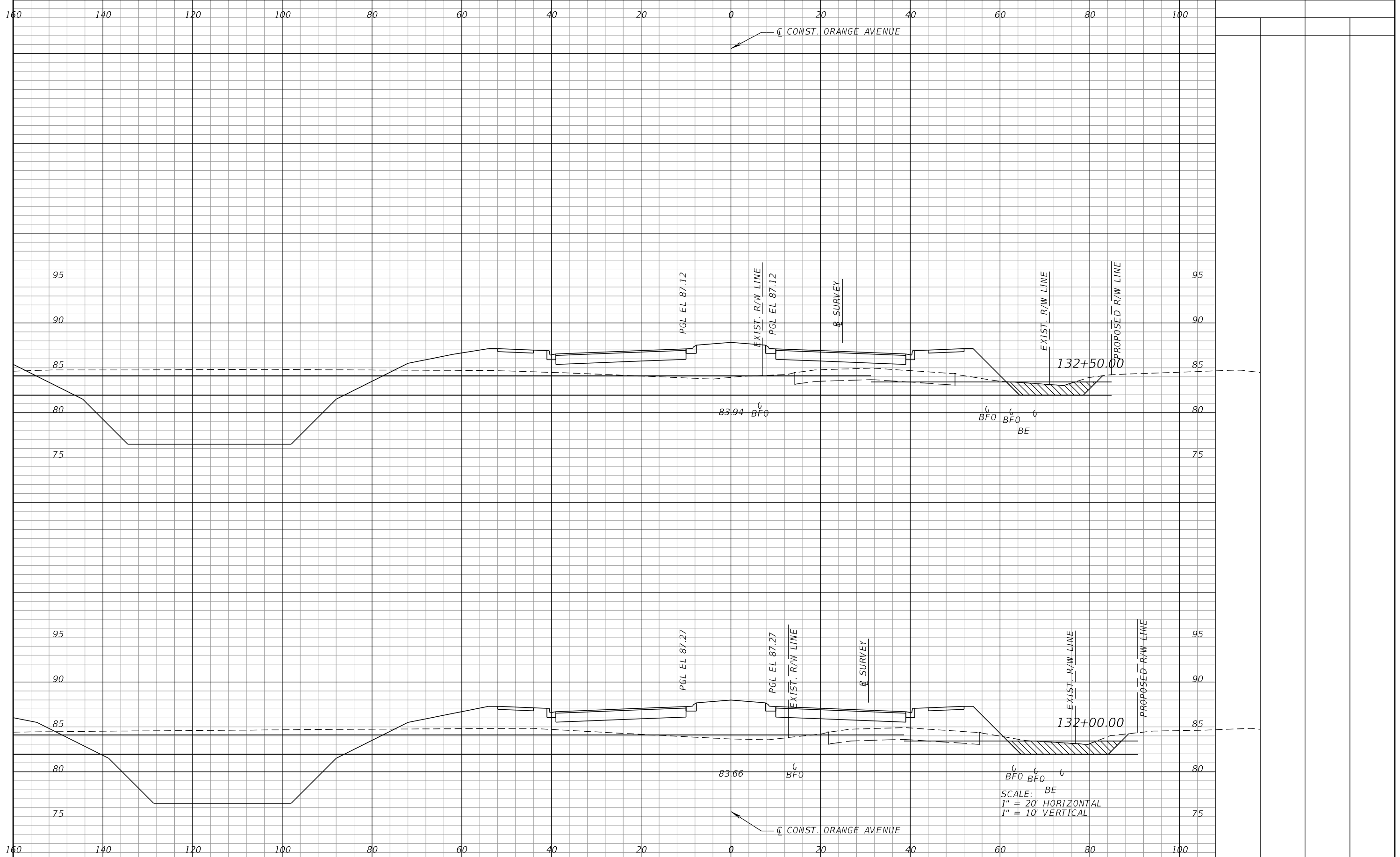
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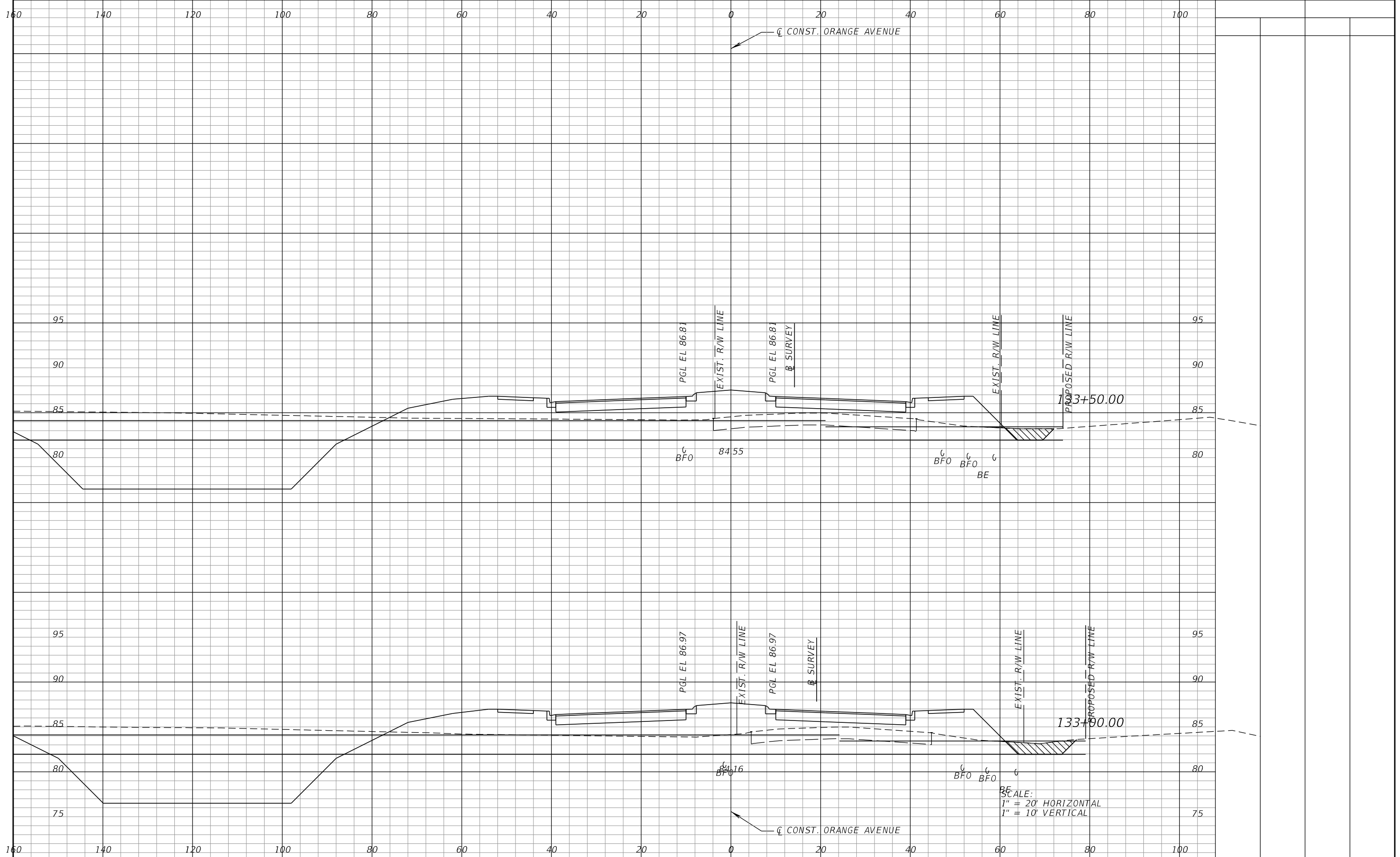


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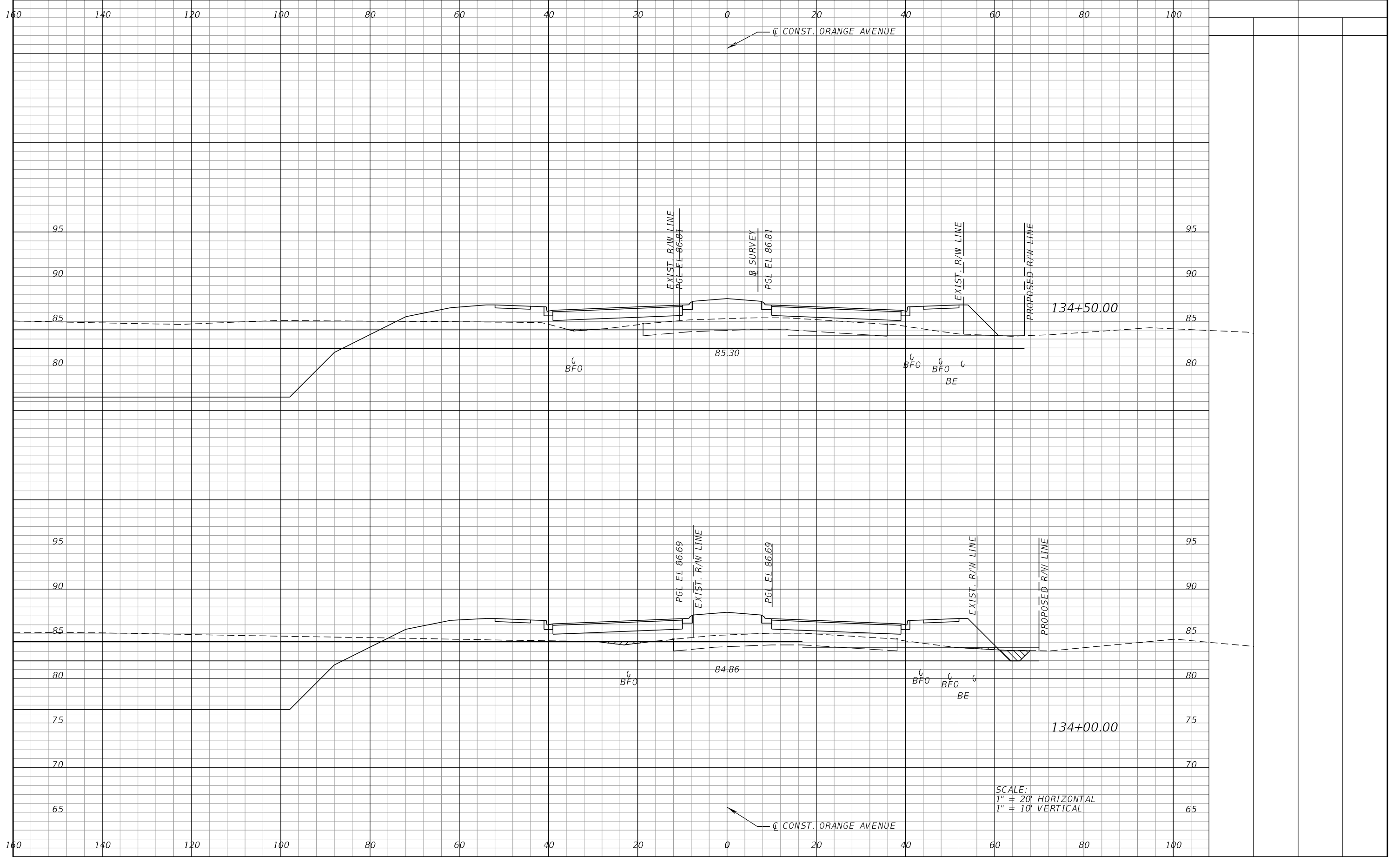
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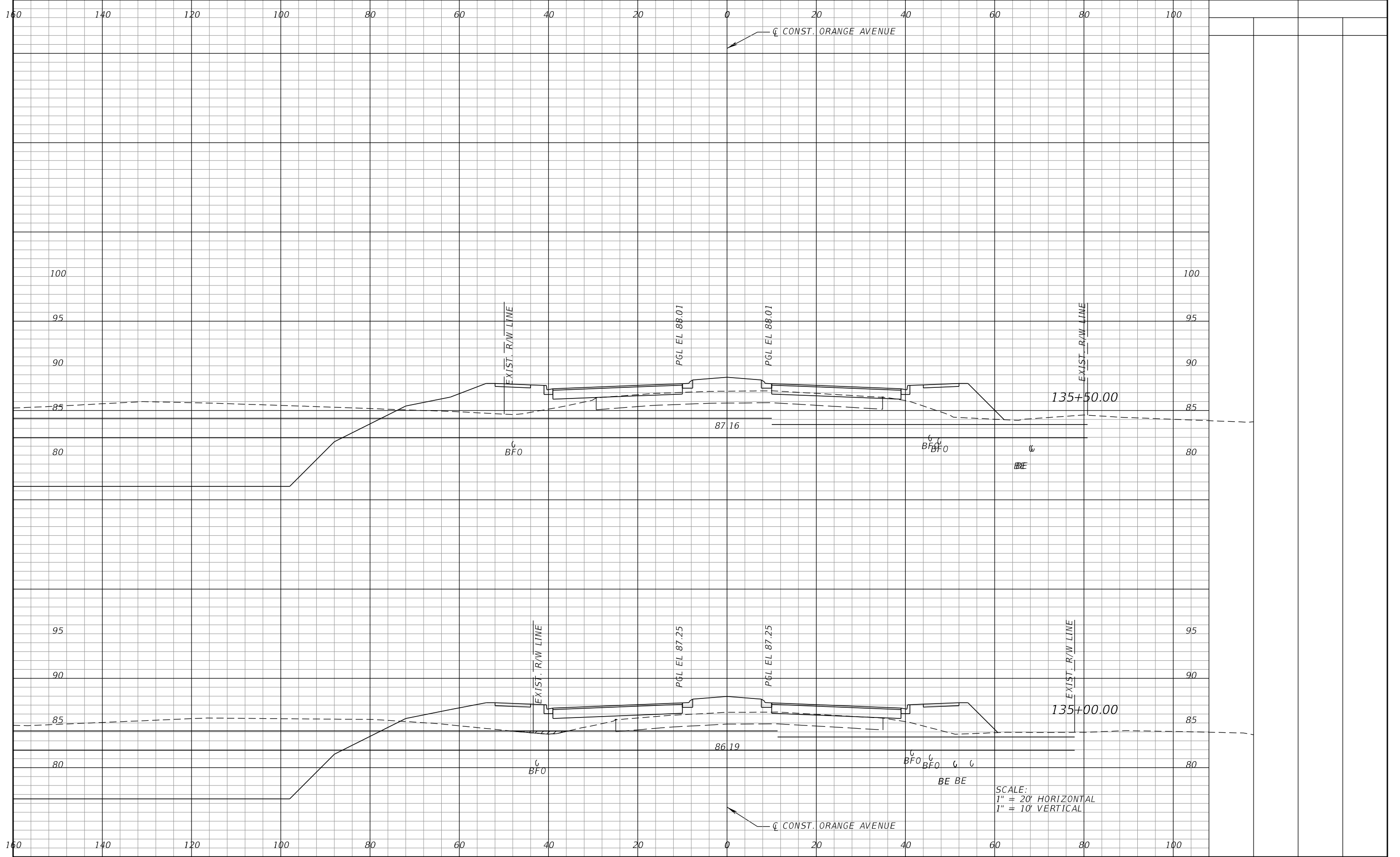


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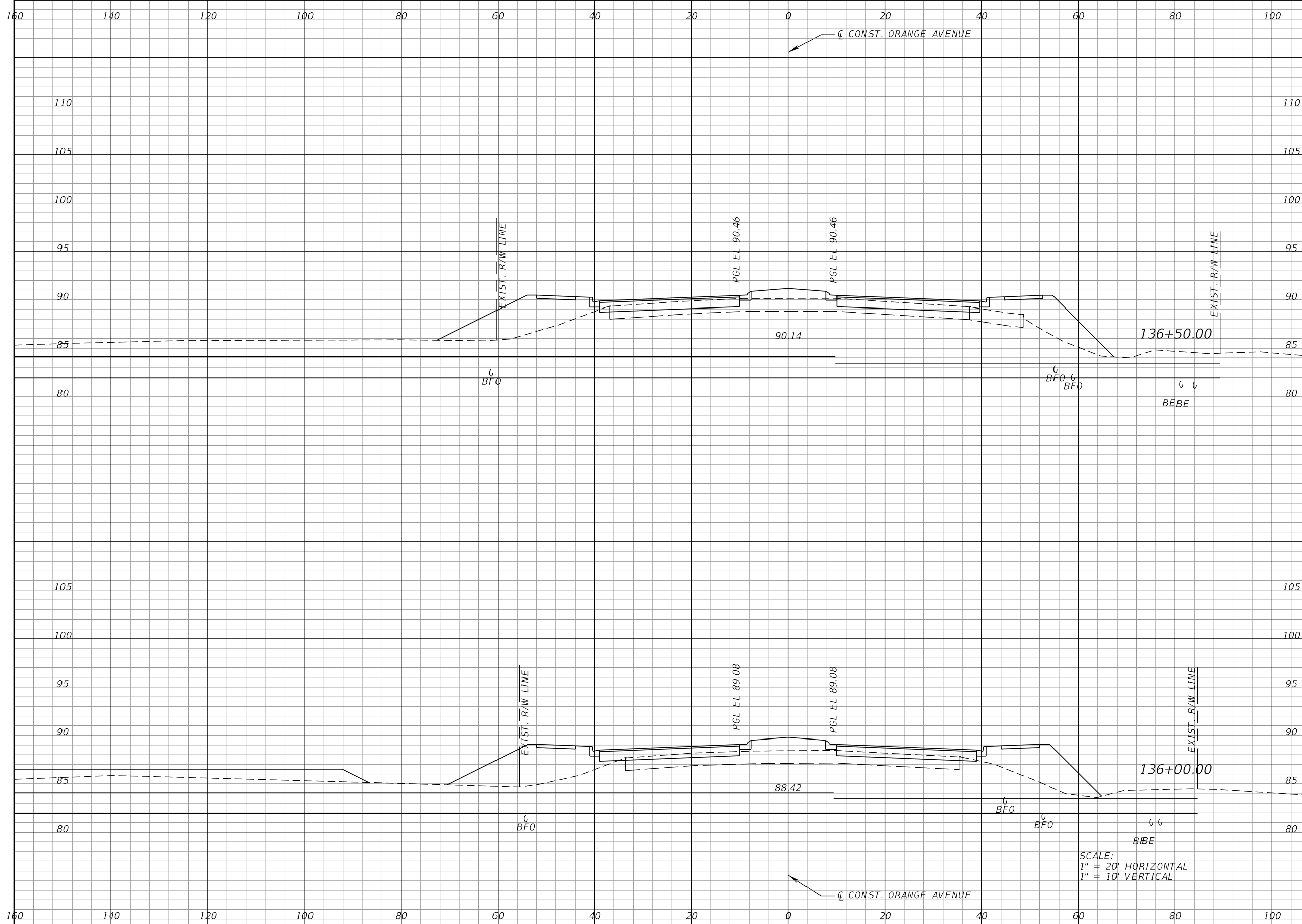
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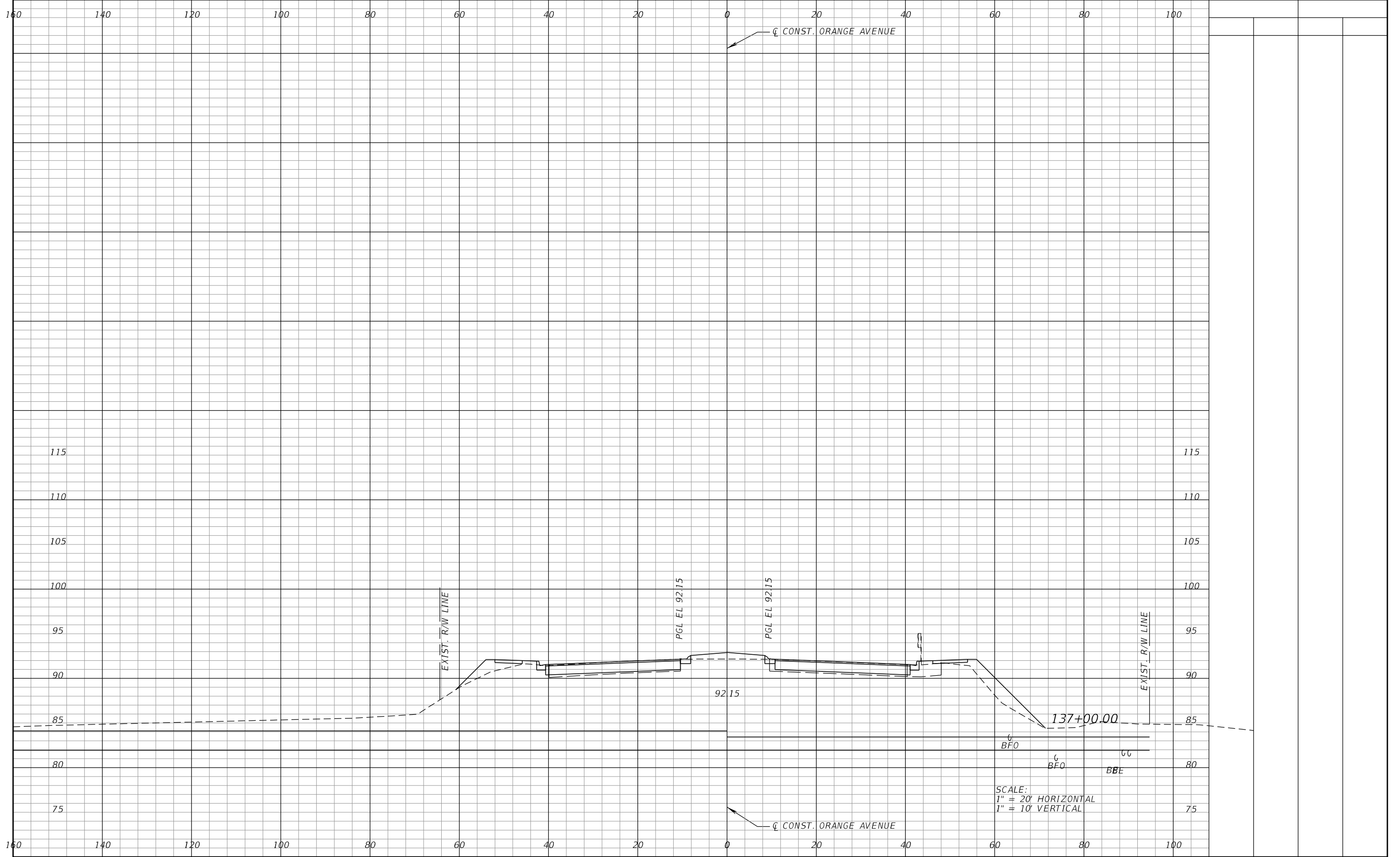


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FLOODPLAIN CROSS SECTIONS

Project Name: Orange Ave from Orange/Osceola County Line to Town Center Blvd
Prepared By: Chloe Gouda
Checked By: Sarah Phillips

Date Prepared: 9/18/2025
Date Checked: 9/19/2025

NORTHBOUND														
FLOODPLAIN IMPACTS								FLOODPLAIN COMPENSATION						
Station	Impacted Area (SF)	Impacted Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)	Compensation Area (SF)	Compensation Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)
109+00.00	0.00	0.000	0.000	0.00	0.00	0.0	0.0	20.13	0.000	0.000	0.01	0.01	503.3	18.6
109+50.00	1.13	0.000	0.000	0.00	0.00	28.3	1.0	19.60	0.000	0.000	0.02	0.03	1496.5	55.4
110+00.00	1.19	0.000	0.000	0.00	0.00	86.3	3.2	18.66	0.000	0.000	0.02	0.06	2452.9	90.8
110+50.00	0.00	0.000	0.000	0.00	0.00	116.0	4.3	16.35	0.000	0.000	0.02	0.08	3328.1	123.3
111+00.00	0.17	0.000	0.000	0.00	0.00	120.2	4.5	12.24	0.000	0.000	0.02	0.09	4042.7	149.7
111+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	10.82	0.000	0.000	0.01	0.11	4619.2	171.1
112+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	13.47	0.000	0.000	0.01	0.12	5226.6	193.6
112+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	18.99	0.000	0.000	0.02	0.14	6038.1	223.6
113+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	25.88	0.001	0.001	0.03	0.16	7159.7	265.2
113+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	32.88	0.001	0.001	0.03	0.20	8628.6	319.6
114+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	43.93	0.001	0.001	0.04	0.24	10548.7	390.7
114+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	59.06	0.001	0.001	0.06	0.30	13123.2	486.0
115+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	62.49	0.001	0.001	0.07	0.37	16161.9	598.6
115+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	67.43	0.002	0.001	0.07	0.45	19409.7	718.9
116+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	74.08	0.002	0.002	0.08	0.53	22947.4	849.9
116+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	80.46	0.002	0.002	0.09	0.62	26810.7	993.0
117+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	84.51	0.002	0.002	0.09	0.71	30934.9	1145.7
117+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	89.27	0.002	0.002	0.10	0.81	35279.4	1306.6
118+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	87.35	0.002	0.002	0.10	0.91	39694.9	1470.2
118+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	81.34	0.002	0.002	0.10	1.01	43912.0	1626.4
119+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	66.20	0.002	0.002	0.08	1.09	47600.2	1763.0
119+50.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	41.08	0.001	0.001	0.06	1.15	50282.1	1862.3
120+00.00	0.00	0.000	0.000	0.00	0.00	124.4	4.6	20.97	0.000	0.001	0.04	1.19	51833.3	1919.8
120+50.00	2.07	0.000	0.000	0.00	0.00	176.1	6.5	0.00	0.000	0.000	0.01	1.20	52357.4	1939.2
121+00.00	23.60	0.001	0.000	0.01	0.02	817.7	30.3	0.00	0.000	0.000	0.00	1.20	52357.4	1939.2
121+50.00	35.82	0.001	0.001	0.03	0.05	2303.1	85.3	0.00	0.000	0.000	0.00	1.20	52357.4	1939.2
122+00.00	39.85	0.001	0.001	0.04	0.10	4195.0	155.4	0.00	0.000	0.000	0.00	1.20	52357.4	1939.2
122+50.00	40.80	0.001	0.001	0.05	0.14	6211.3	230.0	0.00	0.000	0.000	0.00	1.20	52357.4	1939.2

FLOODPLAIN IMPACTS

Station	Impacted Area (SF)	Impacted Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)
123+00.00	35.77	0.001	0.001	0.04	0.19	8125.6	300.9
123+50.00	25.22	0.001	0.001	0.04	0.22	9650.4	357.4
124+00.00	13.57	0.000	0.000	0.02	0.24	10620.1	393.3
124+50.00	0.46	0.000	0.000	0.01	0.25	10970.7	406.3
125+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
125+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
126+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
126+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
127+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
127+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
128+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
128+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
129+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
129+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
130+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
130+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
131+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
131+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
132+00.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
132+50.00	0.00	0.000	0.000	0.00	0.25	10982.1	406.7
133+00.00	0.09	0.000	0.000	0.00	0.25	10984.3	406.8
133+50.00	0.38	0.000	0.000	0.00	0.25	10995.8	407.3
134+00.00	1.01	0.000	0.000	0.00	0.25	11030.6	408.5
134+50.00	0.04	0.000	0.000	0.00	0.25	11056.9	409.5
135+00.00	0.00	0.000	0.000	0.00	0.25	11057.9	409.6
135+50.00	0.00	0.000	0.000	0.00	0.25	11057.9	409.6

FLOODPLAIN COMPENSATION

Compensation Area (SF)	Compensation Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)
0.00	0.000	0.000	0.00	1.20	52357.4	1939.2
0.00	0.000	0.000	0.00	1.20	52357.4	1939.2
0.00	0.000	0.000	0.00	1.20	52357.4	1939.2
0.82	0.000	0.000	0.00	1.20	52378.0	1939.9
13.29	0.000	0.000	0.01	1.21	52730.9	1953.0
26.53	0.001	0.000	0.02	1.23	53726.6	1989.9
41.15	0.001	0.001	0.04	1.27	55418.6	2052.5
53.10	0.001	0.001	0.05	1.33	57774.7	2139.8
61.38	0.001	0.001	0.07	1.39	60636.6	2245.8
65.24	0.001	0.001	0.07	1.46	63801.9	2363.0
68.44	0.002	0.002	0.08	1.54	67143.9	2486.8
69.52	0.002	0.002	0.08	1.62	70592.8	2614.5
69.20	0.002	0.002	0.08	1.70	74060.7	2743.0
67.22	0.002	0.002	0.08	1.78	77471.2	2869.3
61.81	0.001	0.001	0.07	1.85	80696.9	2988.8
55.15	0.001	0.001	0.07	1.92	83621.0	3097.1
43.73	0.001	0.001	0.06	1.98	86093.0	3188.6
36.98	0.001	0.001	0.05	2.02	88110.7	3263.4
30.54	0.001	0.001	0.04	2.06	89798.6	3325.9
22.50	0.001	0.001	0.03	2.09	91124.5	3375.0
16.61	0.000	0.000	0.02	2.11	92102.3	3411.2
10.53	0.000	0.000	0.02	2.13	92780.8	3436.3
5.20	0.000	0.000	0.01	2.14	93174.2	3450.9
0.00	0.000	0.000	0.00	2.14	93304.3	3455.7
0.00	0.000	0.000	0.00	2.14	93304.3	3455.7
0.00	0.000	0.000	0.00	2.14	93304.3	3455.7

FPC REQUIRED = -1.89 AC-FT

Project Name: Orange Ave from Orange/Osceola County Line to Town Center Blvd
 Prepared By: Chloe Gouda Date Prepared: 9/18/2025
 Checked By: Sarah Phillips Date Checked: 9/25/2025

SOUTHBOUND														
FLOODPLAIN IMPACTS								FLOODPLAIN COMPENSATION						
Station	Impacted Area (SF)	Impacted Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)	Compensation Area (SF)	Compensation Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)
100+00.00	0.00	0.000		0.00	0.00	0.0	0.0	0.00	0.000		0.00	0.00	0.0	0.0
100+50.00	0.00	0.000	0.000	0.00	0.00	0.0	0.0	0.00	0.000	0.000	0.00	0.00	0.0	0.0
101+00.00	6.49	0.000	0.000	0.00	0.00	162.3	6.0	0.00	0.000	0.000	0.00	0.00	0.0	0.0
101+50.00	20.13	0.000	0.000	0.02	0.02	827.8	30.7	0.00	0.000	0.000	0.00	0.00	0.0	0.0
102+00.00	25.66	0.001	0.001	0.03	0.05	1972.4	73.1	0.00	0.000	0.000	0.00	0.00	0.0	0.0
102+50.00	27.13	0.001	0.001	0.03	0.08	3292.3	121.9	0.00	0.000	0.000	0.00	0.00	0.0	0.0
103+00.00	29.65	0.001	0.001	0.03	0.11	4712.0	174.5	0.00	0.000	0.000	0.00	0.00	0.0	0.0
103+50.00	29.00	0.001	0.001	0.03	0.14	6178.3	228.8	0.00	0.000	0.000	0.00	0.00	0.0	0.0
104+00.00	27.67	0.001	0.001	0.03	0.17	7595.2	281.3	0.00	0.000	0.000	0.00	0.00	0.0	0.0
104+50.00	21.66	0.000	0.001	0.03	0.20	8828.5	327.0	0.00	0.000	0.000	0.00	0.00	0.0	0.0
105+00.00	32.97	0.001	0.001	0.03	0.23	10194.1	377.6	0.00	0.000	0.000	0.00	0.00	0.0	0.0
105+50.00	34.59	0.001	0.001	0.04	0.27	11882.9	440.1	0.00	0.000	0.000	0.00	0.00	0.0	0.0
106+00.00	27.88	0.001	0.001	0.04	0.31	13444.7	498.0	0.00	0.000	0.000	0.00	0.00	0.0	0.0
106+50.00	27.98	0.001	0.001	0.03	0.34	14841.4	549.7	0.00	0.000	0.000	0.00	0.00	0.0	0.0
107+00.00	25.88	0.001	0.001	0.03	0.37	16187.9	599.6	0.00	0.000	0.000	0.00	0.00	0.0	0.0
107+50.00	31.24	0.001	0.001	0.03	0.40	17615.7	652.4	0.00	0.000	0.000	0.00	0.00	0.0	0.0
108+00.00	31.63	0.001	0.001	0.04	0.44	19187.4	710.6	0.000	0.000	0.000	0.00	0.00	0.0	0.0
108+50.00	49.18	0.001	0.001	0.05	0.49	21207.5	785.5	0.00	0.000	0.000	0.00	0.00	0.0	0.0
109+00.00	59.03	0.001	0.001	0.06	0.55	23912.6	885.7	0.00	0.000	0.000	0.00	0.00	0.0	0.0
109+50.00	66.07	0.002	0.001	0.07	0.62	27040.2	1001.5	0.00	0.000	0.000	0.00	0.00	0.0	0.0
110+00.00	83.09	0.002	0.002	0.09	0.71	30769.1	1139.6	0.00	0.000	0.000	0.00	0.00	0.0	0.0
110+50.00	0.00	0.000	0.001	0.05	0.75	32846.3	1216.5	0.00	0.000	0.000	0.00	0.00	0.0	0.0
111+00.00	150.50	0.003	0.002	0.09	0.84	36608.7	1355.9	0.00	0.000	0.000	0.00	0.00	0.0	0.0
111+50.00	155.86	0.004	0.004	0.18	1.02	44267.7	1639.5	0.00	0.000	0.000	0.00	0.00	0.0	0.0
112+00.00	181.52	0.004	0.004	0.19	1.21	52702.2	1951.9	0.00	0.000	0.000	0.00	0.00	0.0	0.0
112+50.00	200.13	0.005	0.004	0.22	1.43	62243.6	2305.3	0.00	0.000	0.000	0.00	0.00	0.0	0.0
113+00.00	196.31	0.005	0.005	0.23	1.66	72154.6	2672.4	0.00	0.000	0.000	0.00	0.00	0.0	0.0
113+50.00	203.52	0.005	0.005	0.23	1.89	82150.4	3042.6	0.00	0.000	0.000	0.00	0.00	0.0	0.0

FLOODPLAIN IMPACTS

Station	Impacted Area (SF)	Impacted Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)
130+00.00	0.00	0.000	0.000	0.00	8.46	368563.2	13650.5
130+50.00	0.89	0.000	0.000	0.00	8.46	368585.4	13651.3
131+00.00	0.36	0.000	0.000	0.00	8.46	368616.5	13652.5
131+50.00	0.00	0.000	0.000	0.00	8.46	368625.4	13652.8
132+00.00	0.00	0.000	0.000	0.00	8.46	368625.4	13652.8

FLOODPLAIN COMPENSATION

Compensation Area (SF)	Compensation Area (Ac)	Average Area (Ac)	INCREMENTAL VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ac-Ft)	CUMULATIVE VOLUME (Ft^3)	CUMULATIVE VOLUME (CY)
0.00	0.000	0.000	0.00	0.62	26963.3	998.6
0.00	0.000	0.000	0.00	0.62	26963.3	998.6
0.00	0.000	0.000	0.00	0.62	26963.3	998.6
0.00	0.000	0.000	0.00	0.62	26963.3	998.6
0.00	0.000	0.000	0.00	0.62	26963.3	998.6

FPC REQUIRED = 7.84 AC-FT