

# **APPENDIX B**

## **ACCESS MANAGEMENT EXHIBITS**



## Technical Memo

**To** File  
**From:** Josh Brannin, PE  
**Date:** 03/28/17  
**Project:** 625.12 – Capitol Boulevard Corridor Phase 1 – Feasibility and Pre-Design  
**Subject** Business and Neighborhood Circulation and Access

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### 1 General

High traffic volume combined with poor access management and connectivity along Capitol Boulevard has put a burden on the commercial property owners, traffic, and adjacent neighborhoods. Using the goals and guidelines set forth in the Capitol Boulevard Corridor Plan (CBCP), strategic locations were selected for neighborhood gateways, traffic calming solutions, and new connections. Attached Figures 7-19 and 7-27 from the CBCP demonstrate possible connections, gateways, and traffic calming locations. Features outside the Capitol Boulevard corridor are not included on the conceptual plans.

### 2 Street and Bicycle Connectivity

The CBCP recommends new street connections and improved connectivity at the following locations:

- ◆ North-South connector between Trospen Road and Lee Street east of Capitol Boulevard.
- ◆ New road (6<sup>th</sup> Avenue) connecting Trospen Road to Lee Street, Gerth Street, and T Street west of Capitol Boulevard.
- ◆ Connectivity through the commercial properties at the southwest quadrant of Capitol Boulevard/Trospen Road.
- ◆ Connecting 7<sup>th</sup> Avenue between 65<sup>th</sup> Way and Y Street.
- ◆ Constructing new neighborhood connectors at Charles Street and Boston Street between X Street and W Street.
- ◆ Connecting X Street to Linderson Way

#### 2.1 North-South Connector (Trospen Rd to Lee St)

The City has begun programming funds for this new connector and right-of-way as a separate design project. The feasibility study and operations analysis considered these improvements, and they are included in the conceptual plans. This connector will provide an alternate route for neighborhood access east of Capitol

Boulevard and it will provide improved access to the commercial properties. The road will potentially connect to the WSDOT Olympic Region parcel when it is redeveloped.

As part of this roadway connection, Linda Street will be converted into a local access road with 90-degree parking on the north side of the street. Dustpans are proposed at the east and west ends of Linda Street as a gateway and traffic calming solution. The added parking will benefit the adjacent businesses providing them with improved economic activity.

The road is designed as a neighborhood connector with bike lanes and planting areas on each side of the street. An additional 15-foot planting space between the sidewalk and residential properties on the east side of the street is proposed serving as a buffer between the residential neighborhood and the commercial properties. Bulb outs are provided at the Ruby Street and Lee Street intersections to calm traffic and provide a pedestrian friendly environment.

## 2.2 6<sup>th</sup> Avenue Connection (Trospers to T Street)

The Capitol Boulevard/Trospers Road Intersection Alternatives Analysis recommended constructing a new street (6<sup>th</sup> Avenue) between Trospers Road and Lee Street at the I-5 Northbound Ramp/Trospers Road intersection. The alternative proposed relocating the ramp terminal to 6<sup>th</sup> Avenue and constructing 3-leg roundabouts at the terminal and 6<sup>th</sup> Avenue/Trospers Road and a 4-leg roundabout at Capitol Boulevard/Trospers Road.

The new street would serve as an arterial connection to I-5 and will help relieve traffic volume and congestion from the Capitol Boulevard/Trospers Road intersection. It will also allow for improved connectivity to the commercial properties southwest of Capitol Boulevard/Trospers Road (see Section 2.3).

The CBCP discusses constructing a local connector, 6<sup>th</sup> Avenue, between Lee Street and T street. Considering the recommended alternative for improvements at Capitol Boulevard/Trospers Road, we recommend constructing an arterial at this location and continuing the cross section to the T Street/Capitol Boulevard intersection. This would allow converting the Lee Street/Capitol Boulevard intersection to a right-in/right-out intersection and removing the traffic signal improving access management along Capitol Boulevard.

Initial operations analysis indicates the 6<sup>th</sup> Avenue/Lee Street intersection would operate within an acceptable level of service with stop control on the minor leg, Lee Street. We recommend revisiting the operations analysis after the Capitol Boulevard/Trospers Road Intersection Improvement project is complete and traffic has adapted to the revisions.

We recommend using a cross section with two 11 to 12-foot lanes, 5-foot bike lanes, and 6-foot sidewalks continuing down T Street to the proposed roundabout at Capitol Boulevard. The optimal intersection alignment at 6<sup>th</sup> Avenue/Lee Street would require significant right-of-way acquisition including building demolition, residential relocations, and a potential full parcel acquisition of a multi-family development.

## 2.3 Commercial Property Connectivity (SW Capitol/Trospers)

The conceptual plans do not include any connectivity improvements within the commercial properties at the southwest quadrant of Capitol Boulevard/Trospers Road. However, the proposed roundabouts at Trospers Road and T Street along with the median will provide improved access management and economic potential. In

addition, the proposed roundabout at the I-5 northbound ramp terminal on 6<sup>th</sup> Avenue between Trospen Road and Lee Street can be modified to include a fourth leg. The fourth leg would connect 6<sup>th</sup> Avenue to Capitol Boulevard and have access to the properties. This access would be allowed under the 2016 WSDOT Design Manual as it would be 350-feet or more from the center of the 6<sup>th</sup> Avenue roundabout.

If the properties are redeveloped, we recommend the City work with the developer to explore improved access to the parcels as well as improved connectivity within the development.

## 2.4 7<sup>th</sup> Avenue Extension

The 7<sup>th</sup> Avenue extension is located outside the Capitol Boulevard corridor and was not evaluated in depth as part of this project. A private development project in 2016 extended a portion of the street to the north side of the City parcel along the BPA/Bonneville transmission line. The final 150 feet is owned by the City. However, the two sections of 7<sup>th</sup> Avenue are offset requiring a small right-of-way take to align the street. We recommend completing this connection in the future as a developer project or separate City project as it will provide improved connectivity to Dennis Street and Linderson Way for the neighborhood north of the BPA/Bonneville transmission lines and east of Capitol Boulevard.

## 2.5 Charles and Boston Street Extensions

The Charles Street and Boston Street extensions would provide residents and business owners/customers on W Street with a direct connection to the proposed roundabout at X Street/Capitol Boulevard. Without a connection between W Street and X Street the residents at business owners/customers would need to travel 0.25 miles north on Capitol Boulevard to U-turn at the T Street roundabout to access southbound Capitol Boulevard. This is not ideal and has the potential to negatively impact economic potential for the business and property values for the residents.

The Charles Street extension would require right-of-way purchase and potential relocations for residential and commercial properties. The parking lot for the business is wide enough for a neighborhood connector. However, removing the parking would limit the uses for the commercial property and could require full parcel acquisition or a variance from the City allowing a parking reduction.

The City owns right-of-way at the proposed location for the Boston Street extension. However, the right-of-way is offset from the south leg of Boston Street. While this is not ideal, traffic crossing X Street at this location would be minimal.

We recommend including these extensions with the final design scope for the X Street roundabout. Depending on the right-of-way and improvement costs, the extensions could be included with the construction of the X Street roundabout, bid as a separate project, or placed in the City's comprehensive plan requiring the connections if the adjacent properties are redeveloped.

## 2.6 X Street Extension

The X Street extensions is located outside the Capitol Boulevard corridor and was not evaluated in depth as part of this project. Providing an additional connection between Linderson Way and Capitol Boulevard would greatly

improve neighborhood connectivity. With roundabouts proposed at X Street and T Street, these two streets are the most logical connections. The X Street connection would greatly improve connectivity to the neighborhood north of the BPA/Bonneville transmission lines and east of Capitol Boulevard. The connection would require right-of-way acquisition with potential residential relocations and full parcel acquisitions.

As part of the Capitol Boulevard/Trospen Road Intersection Alternatives Analysis, we evaluated extending T Street to Linderson Way. The T Street connection would provide additional connectivity with the interchange improvements proposed at 6<sup>th</sup> Avenue and would allow Lee Street and Linderson Way north of T Street to be converted to a local connector. However, this extension would require significant right-of-way and multi-family relocations. An initial Environmental Justice (EJ) evaluation indicated the multi-family parcels impacted are likely considered EJ properties. While there are benefits in providing this extension, the benefits did not provide enough value to include it in the Capitol Boulevard/Trospen Road Intersection Improvement project.

## 3 Neighborhood Gateways and Traffic Calming

The CBCP recommends constructing neighborhood gateways and traffic calming devices throughout the residential neighborhoods adjacent to Capitol Boulevard. Suggested neighborhood gateways and traffic calming locations are shown on Figure 7-27 of the CBCP.

### 3.1 Gateways

#### 3.1.1 Linda Street

As part of the Capitol Boulevard/Trospen Road Intersection Improvement project, we recommend adding dust pans to the east and west ends of Linda Street and adding 90-degree parking on the north side of Linda Street. This will drastically change the character of the street giving it more of a parking lot driveway feel vs. a local connector. These improvements will add parking for the adjacent commercial properties improving economic potential.

#### 3.1.2 Ruby Street

The proposed north-south connector between Trospen Road and Lee Street will include bulb outs at the intersection with Ruby Street. These bulb outs will provide an opportunity for a gateway and will help calm traffic in the neighborhood.

#### 3.1.3 Lee Street

The conceptual plan includes narrowing East Lee Street and providing 6 to 10-foot planting areas between the curb and sidewalk. The proposed improvements would serve as a neighborhood gateway and gateway for the potential redevelopment of the WDSOT Olympic Region site.

#### 3.1.4 6<sup>th</sup> Avenue Extension (South of Lee Street)

We did not evaluate a gateway for the 6<sup>th</sup> Avenue Extension south of Lee Street. We recommend constructing 6<sup>th</sup> Avenue as an arterial and converting Lee Street to a local connector as described above. The Lee

Street/Capitol Boulevard intersection would then be reconfigured to provide right-in/right-out access only with bulb outs acting as a neighborhood gateway.

### 3.1.5 T Street

We did not evaluate a gateway for T Street. We recommend constructing T Street as an arterial and converting as described above. The Lee Street/Capitol Boulevard intersection would then be reconfigured to provide right-in/right-out access only with bulb outs acting as a neighborhood gateway.

### 3.1.6 U Street

We recommend constructing a combined neighborhood gateway/traffic calming solution at U Street and Margo Place. Viable solutions include a mini roundabout or bulb outs combined with landscaping.

### 3.1.7 W Street

We propose constructing a gateway on W Street approximately 260 feet east of Capitol Boulevard as shown in the conceptual plans. The gateway would consist of constructing the roadway width and providing a planting area between the sidewalk and curb. The improvements would require reconfiguration of the adjacent parking lot on the north side of W Street. The parking lot reconfiguration would move the parking lot entrance to the west side of the parcel and would not remove parking stalls. Cost for the improvement would be minimal and could be included in the X Street roundabout project or as a standalone project.

### 3.1.8 X Street

Neighborhood gateways are not proposed on X Street at this time. Driveway locations on the west side provide limited opportunities for a gateway near the boundary between commercial and residential properties. In addition, the proposed roundabout has the potential to serve as a gateway for the community. We recommend evaluating X Street gateways further during the final design for the X Street roundabout in coordination with Charles Street and Boston Street extensions.

### 3.1.9 Z Street

We recommend constructing a gateway on Z Street by narrowing the roadway with offset bulb outs as shown in the conceptual plans. Commercial and residential driveway locations necessitate the offset bulb outs as the driveways are not lined up within 675 feet of Capitol Boulevard.

## 3.2 Traffic Calming

The traffic calming locations listed in the CBPC are outside the Capitol Boulevard corridor and were evaluated as part of this project. Viable traffic calming solutions at these locations include mini roundabouts or bulb outs. Intersections along Capitol Boulevard will include bulb outs for neighborhood street connections with tight radiuses on the curb returns as traffic calming solutions.



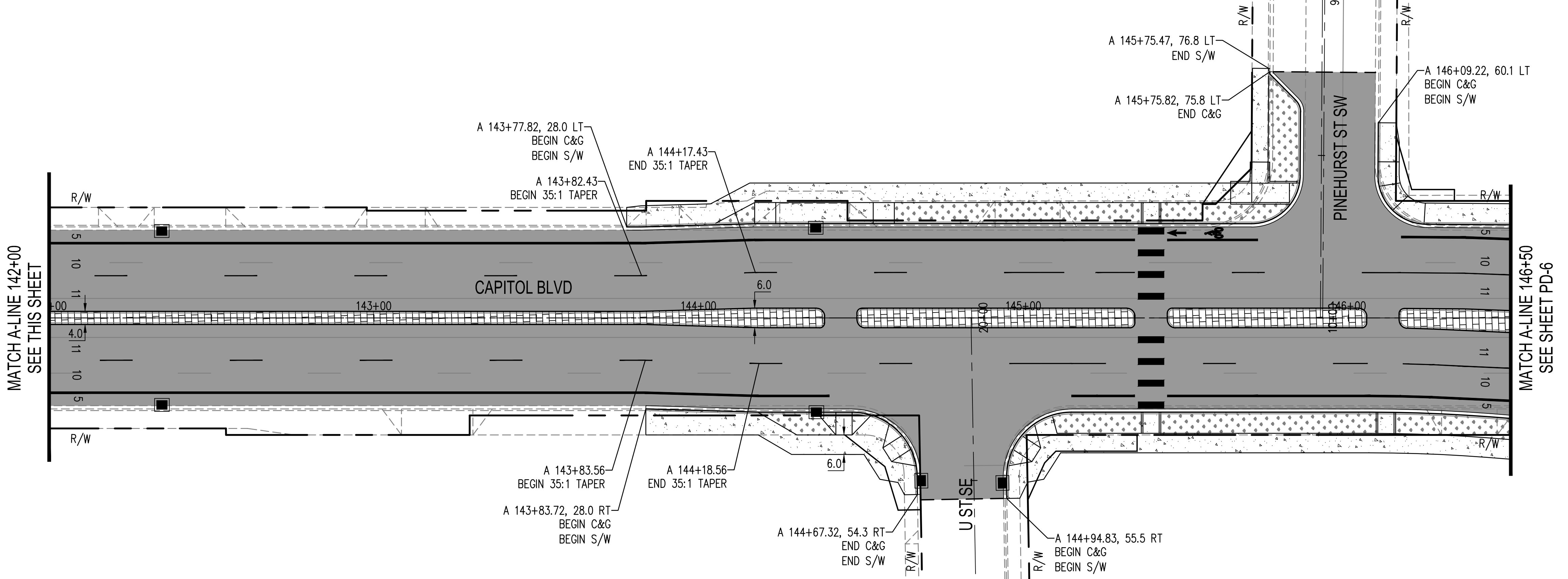
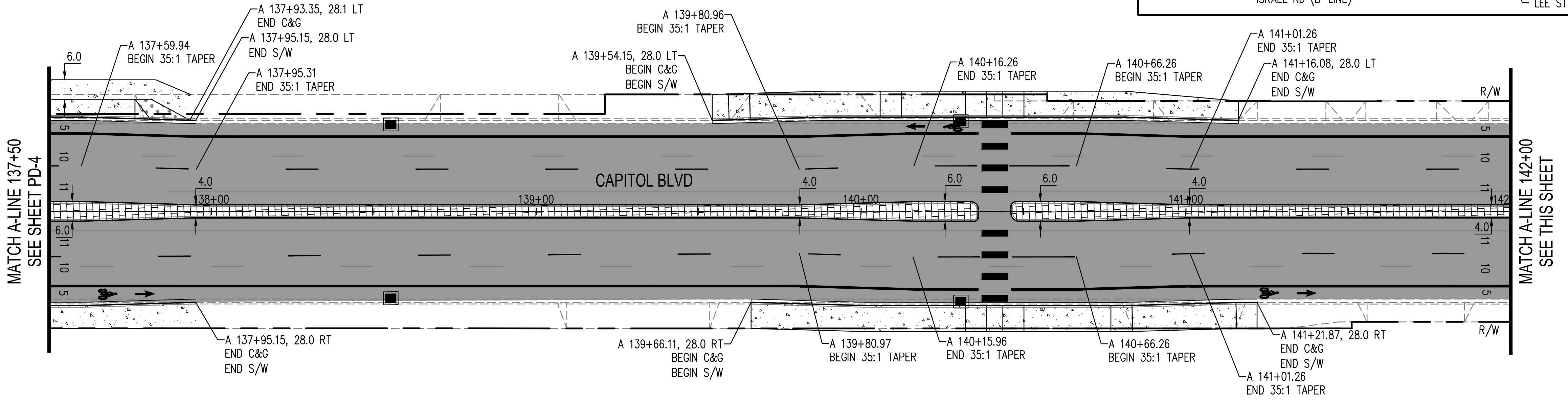
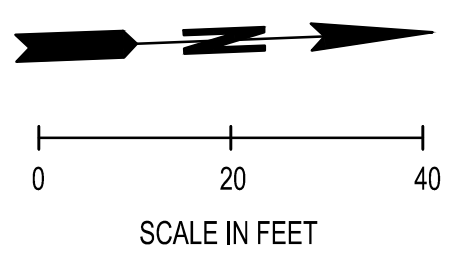
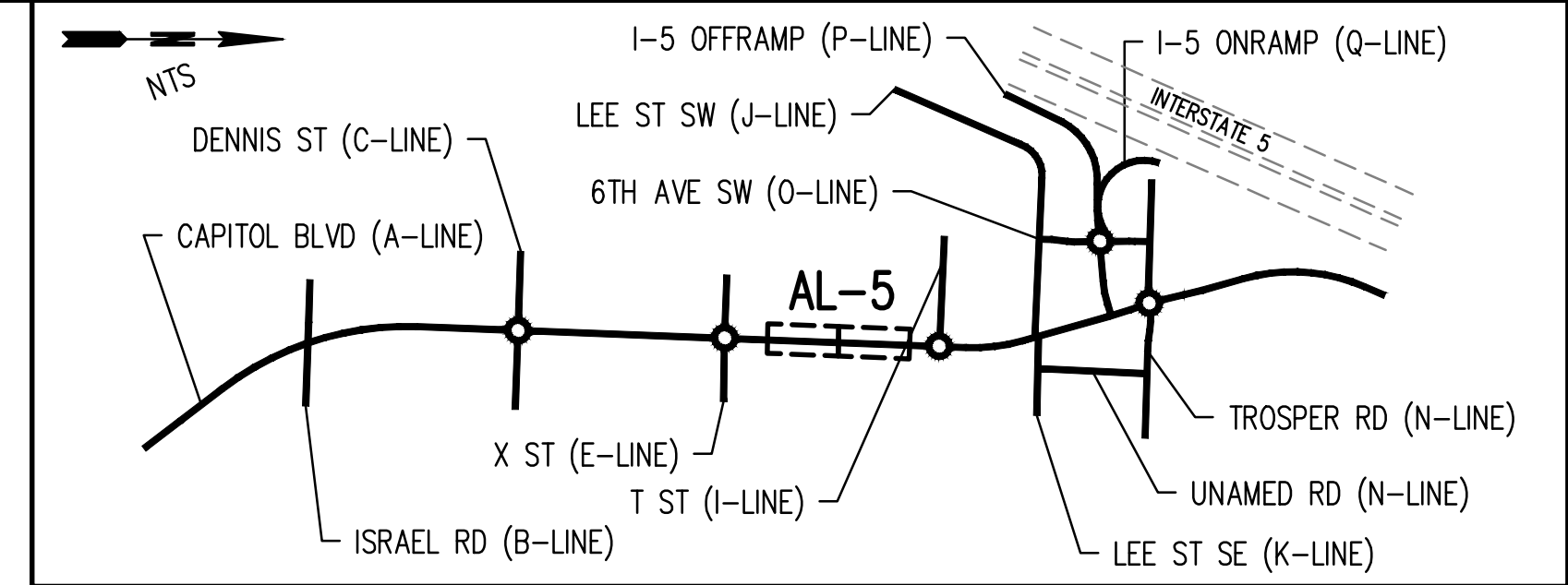


**LEGEND (PROPOSED)**

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- CEMENT CONC. CURB AND GUTTER
- CEMENT CONC. TRAFFIC CURB
- YELLOW CENTERLINE
- WIDE LINE
- WHITE SKIP LINE
- ASPHALT
- CEMENT CONC. SIDEWALK
- RAISED MEDIAN
- PERPENDICULAR CEMENT CONC. CURB RAMP
- PARALLEL CEMENT CONC. CURB RAMP
- CROSSWALK
- YIELD LINE

**LEGEND (EXISTING)**

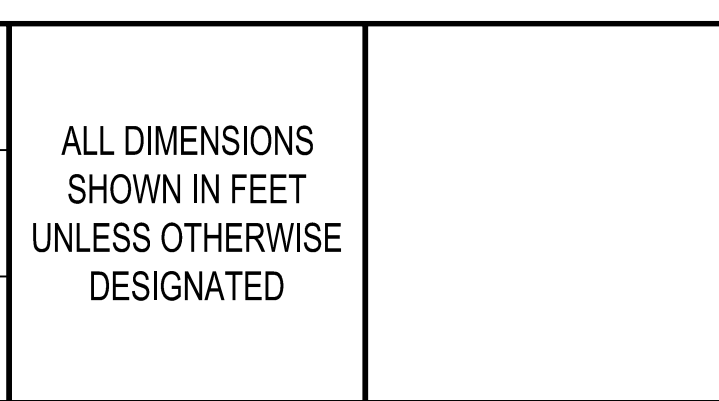
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- TRAFFIC CURB
- SIDEWALK
- EDGE OF PAVEMENT
- SKIP LINE
- YELLOW CENTERLINE
- FENCE



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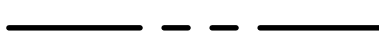
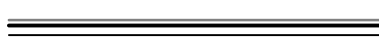

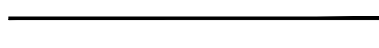



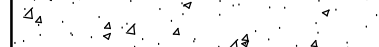

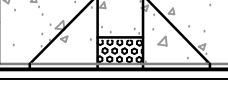
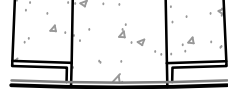




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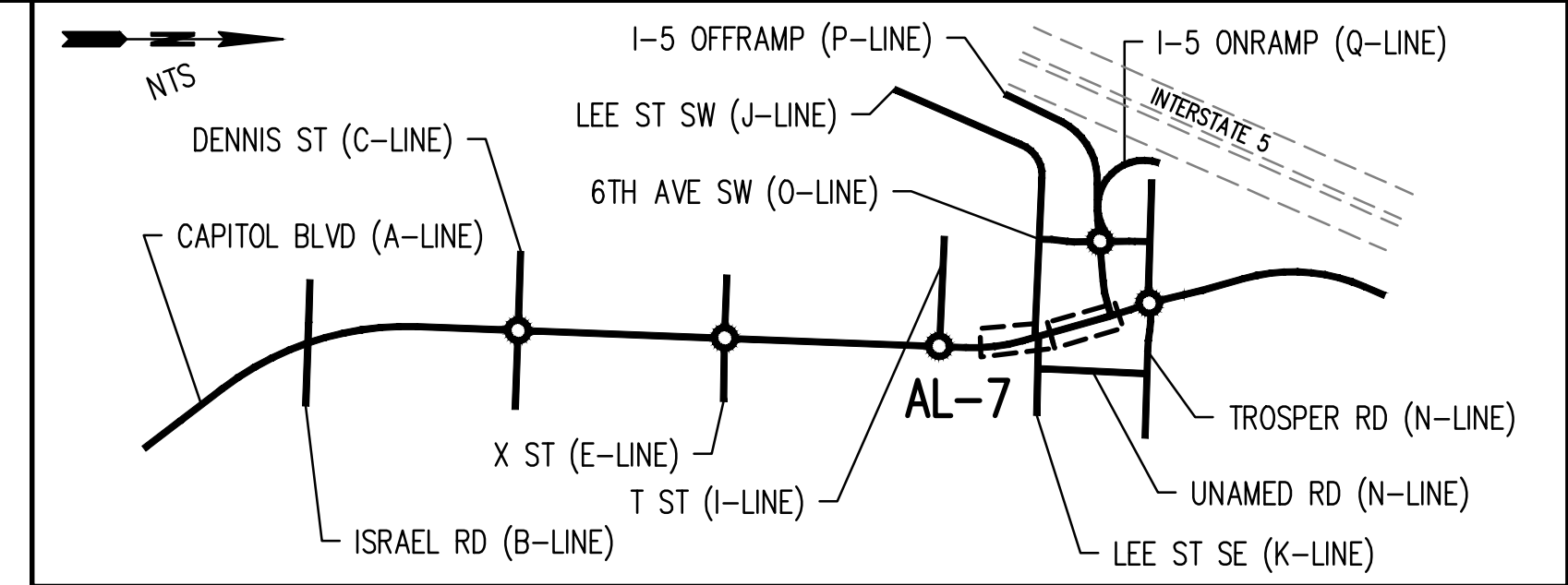
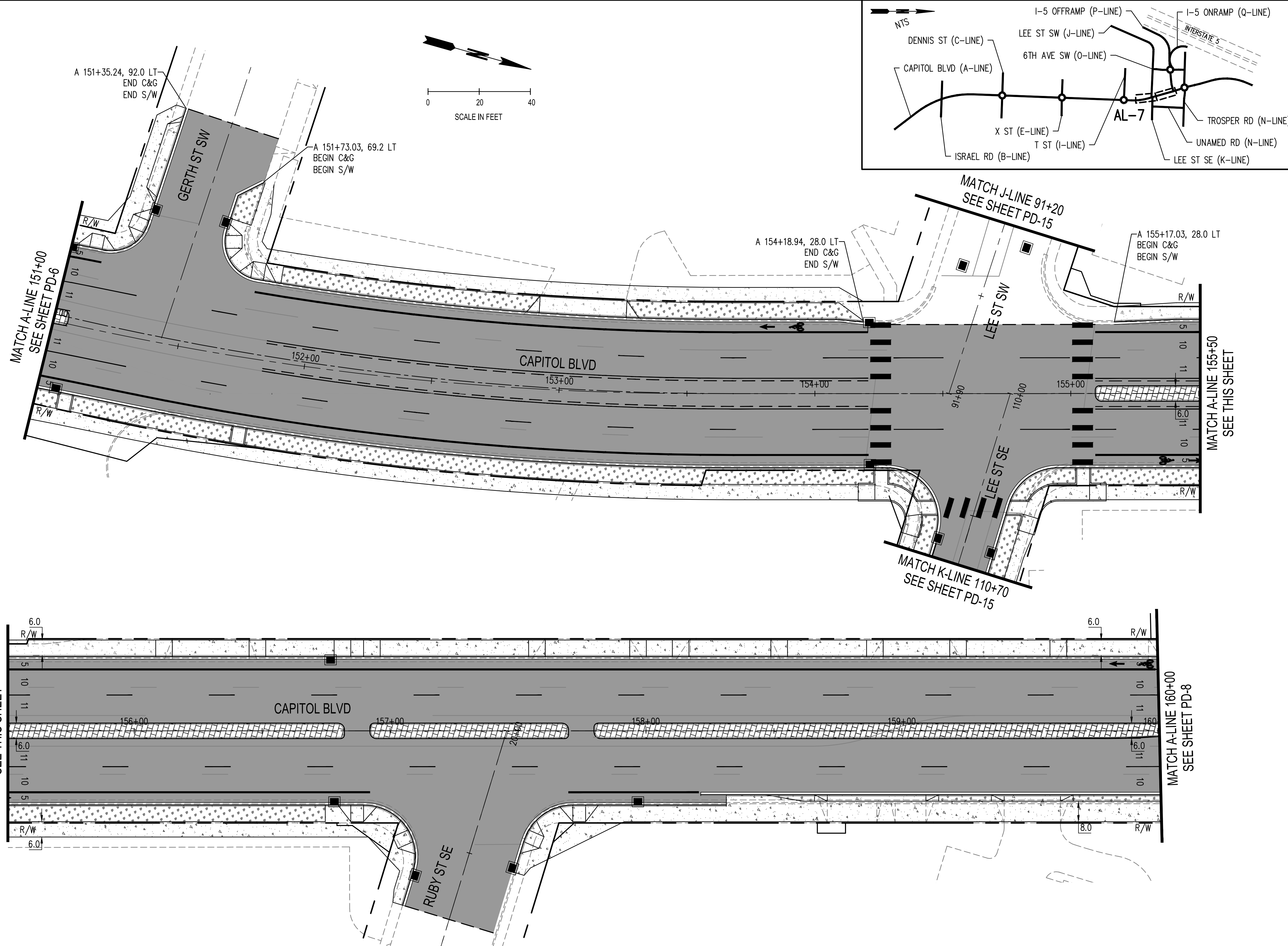


**LEGEND (PROPOSED)**

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-  WHITE SKIP LINE
-  ASPHALT
-  CEMENT CONC. SIDEWALK
-  RAISED MEDIAN
-  PERPENDICULAR CEMENT CONC. CURB RAMP
-  PARALLEL CEMENT CONC. CURB RAMP
-  CROSSWALK
-  YIELD LINE

**LEGEND (EXISTING)**

-  CEMENT CONC. TRAFFIC CURB/SIDEWALK
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-  EDGE OF PAVEMENT
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-  YELLOW CENTERLINE
-  FENCE

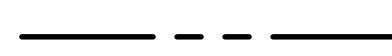








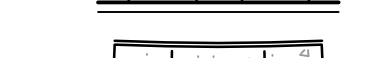





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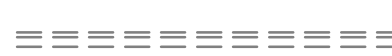
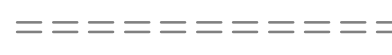





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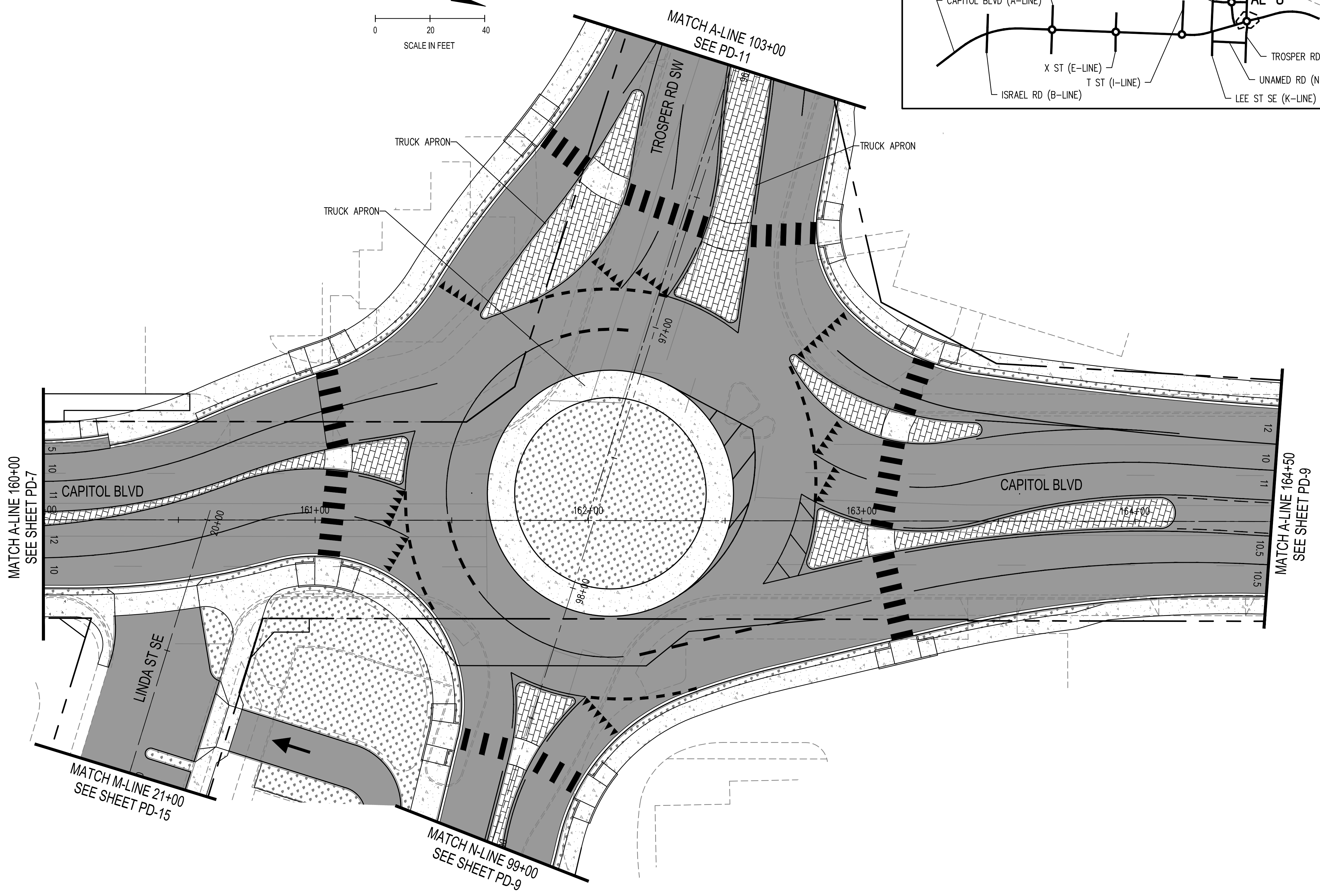
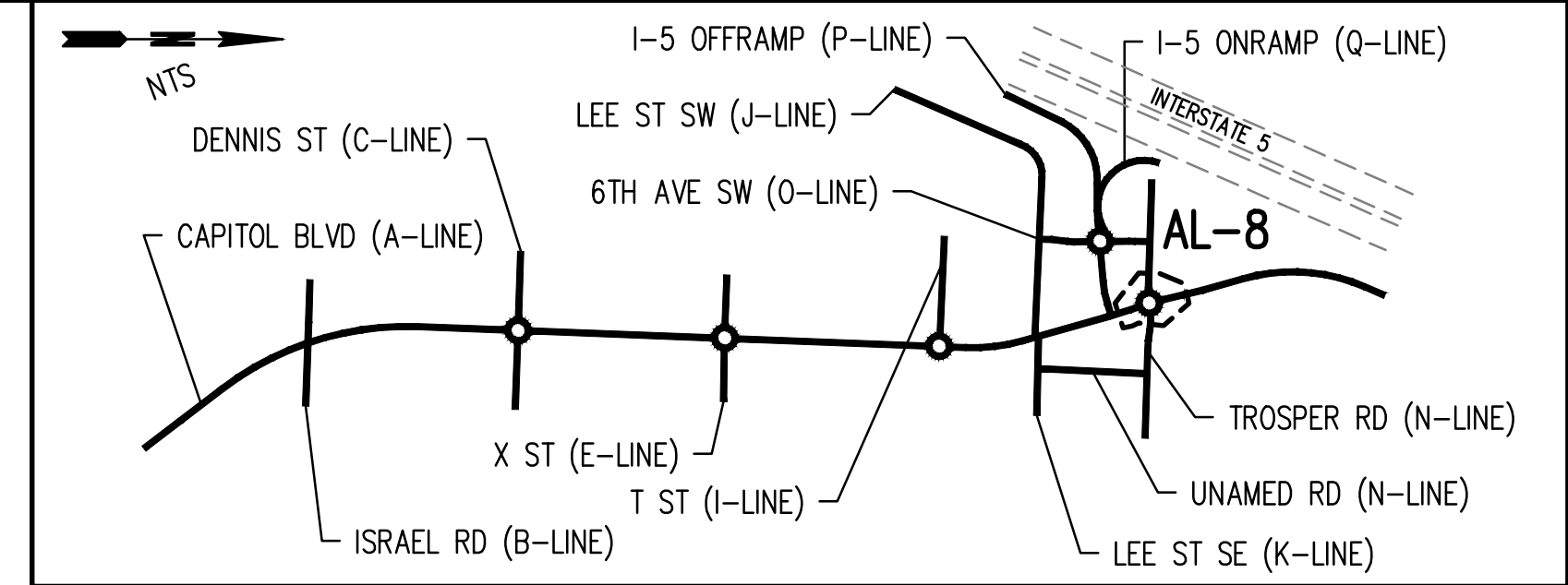
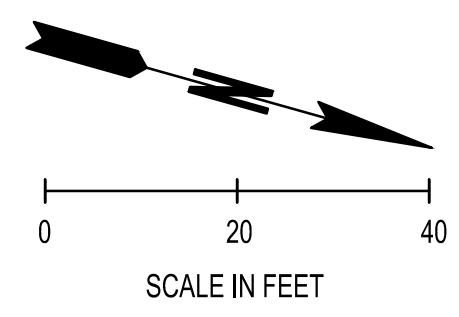


**LEGEND (PROPOSED)**

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-  YELLOW CENTERLINE
-  WIDE LINE
-  WHITE SKIP LINE
-  ASPHALT
-  CEMENT CONC. SIDEWALK
-  RAISED MEDIAN
-  PERPENDICULAR CEMENT CONC. CURB RAMP
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-  CROSSWALK
-  YIELD LINE

**LEGEND (EXISTING)**

-  CEMENT CONC. TRAFFIC CURB/SIDEWALK
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-  SKIP LINE
-  YELLOW CENTERLINE
-  FENCE



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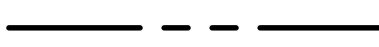
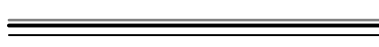

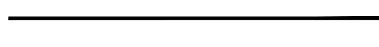



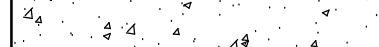
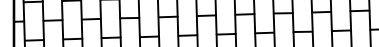
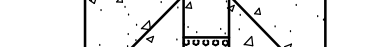
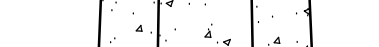


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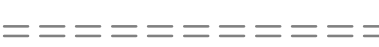







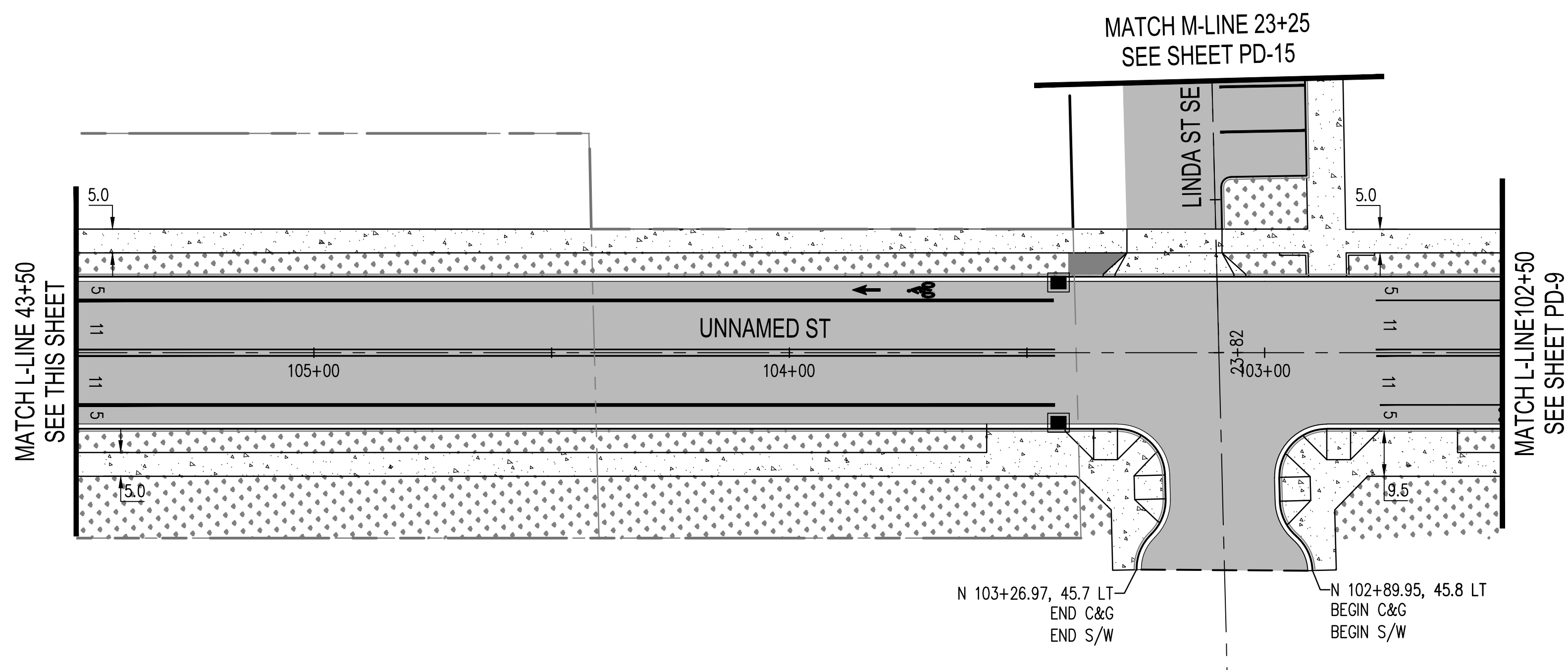
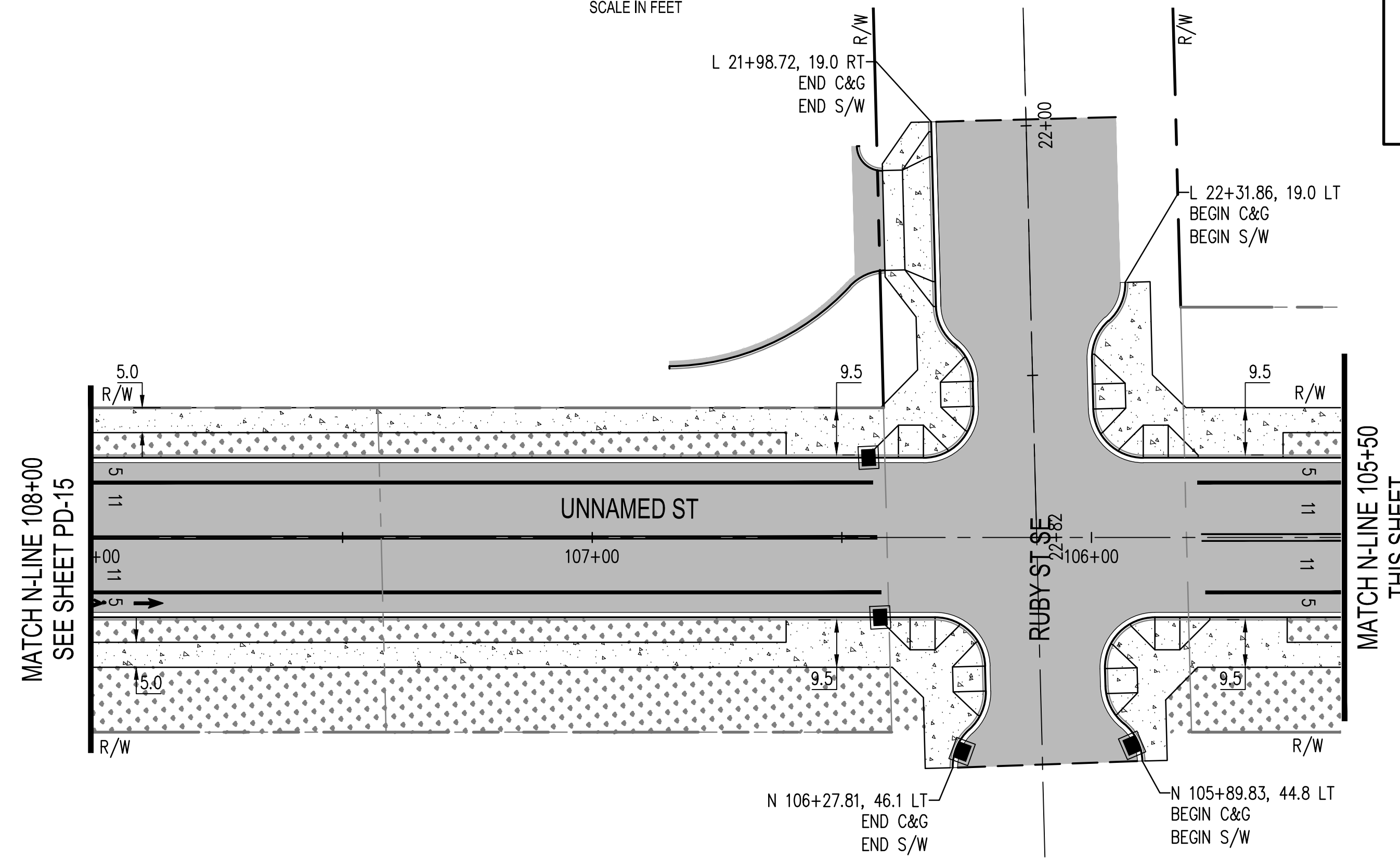
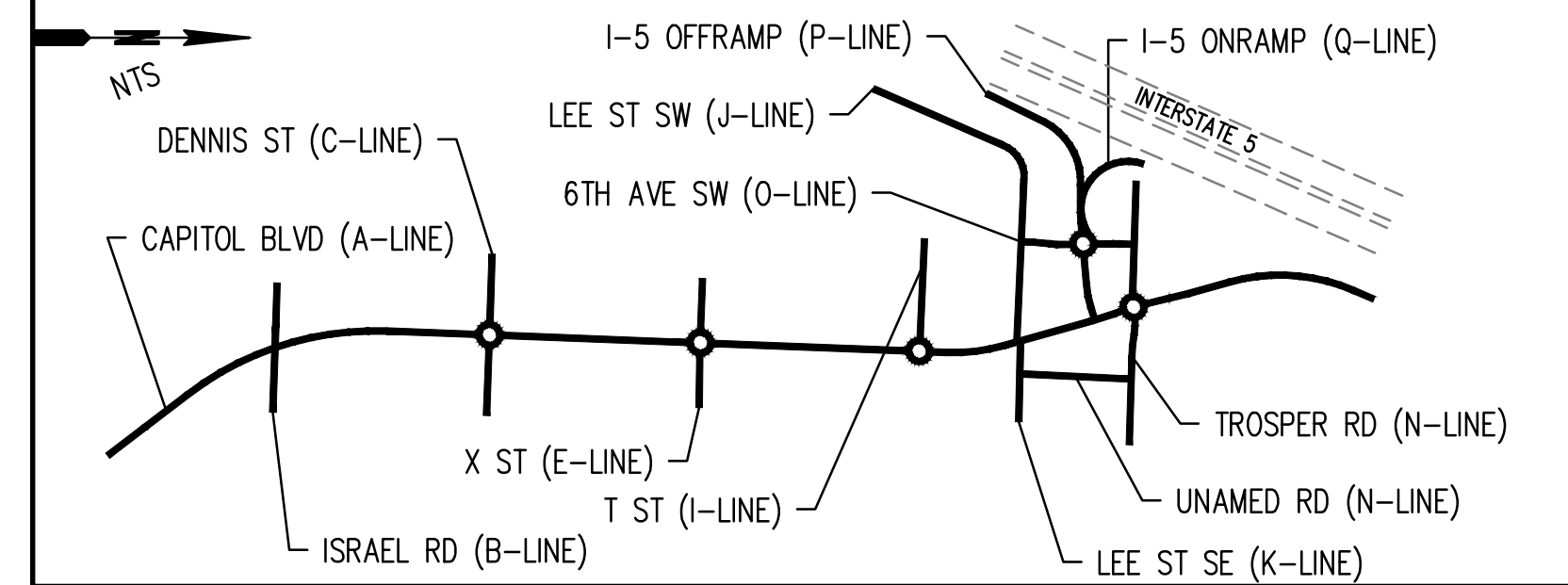
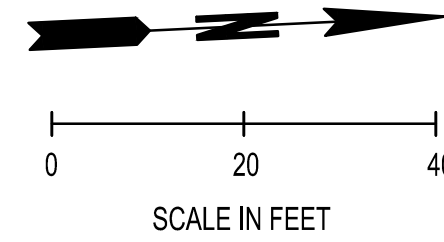
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**LEGEND (PROPOSED)**

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-  CEMENT CONC. TRAFFIC CURB
-  YELLOW CENTERLINE
-  WIDE LINE
-  WHITE SKIP LINE
-  ASPHALT
-  CEMENT CONC. SIDEWALK
-  RAISED MEDIAN
-  PERPENDICULAR CEMENT CONC. CURB RAMP
-  PARALLEL CEMENT CONC. CURB RAMP
-  CROSSWALK
-  YIELD LINE

**LEGEND (EXISTING)**

-  CEMENT CONC. TRAFFIC CURB/SIDEWALK
-  TRAFFIC CURB
-  SIDEWALK
-  EDGE OF PAVEMENT
-  SKIP LINE
-  YELLOW CENTERLINE
-  FENCE



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