LEVENS AND ELLENDALE INTERSECTION IMPROVEMENTS

Proposed Redesign of SW Levens Street and W Ellendale Ave in Dallas, Oregon.

PROJECT OVERVIEW

SITE LOCATION

EXISTING CONDITIONS

INTERSECTION FEATURES AN ELEMENTARY SCHOOL TO THE SW AND RETIREMENT VILLAGE TO THE N. INTERSECTION IS PART OF A MAJOR TRUCK ROUTE THROUGH DALLAS. AERIAL IMAGE FROM KELLER ASSOCIATES

PROJECT OBJECTIVES AND DESIGN ALTERNATIVES

- Improved Traffic Flow, Improved Pedestrian Safety, Improved Stormwater Management.

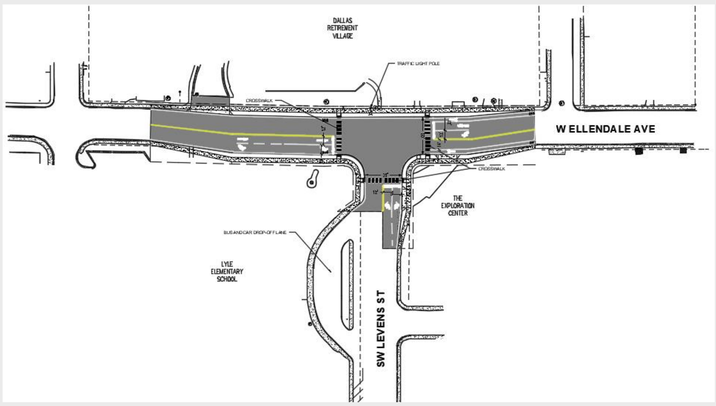
ROUNDABOUT

- Reduced congestion ✓
- Improved safety ✓
- More expensive ✗
- Increased impervious area ✗

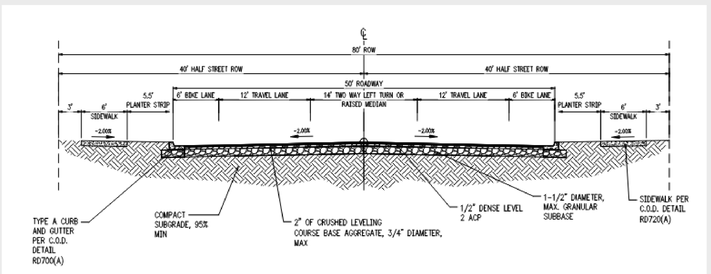
SIGNALIZED INTERSECTION

- Less expensive ✓
- Understood traffic pattern ✓
- Poor truck mobility ✗
- Comparatively less safe ✗

- THESE FACTORS LEAD OUR TEAM TO PURSUE THE SIGNALIZED INTERSECTION AS OUR DESIGN SOLUTION.

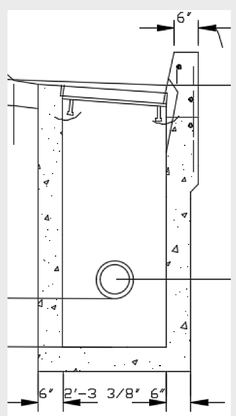


PROPOSED SITE PLAN



PROPOSED TYPICAL SECTION
PER C.O.D. STD DWG RD001

WATERSHED AREA



CATCH BASIN SECTION VIEW
PER C.O.D. STD DWG RD366(A)

LEAD INNOVATION OPERATING NETWORK (L.I.O.N.) ENGINEERING
SEAN FREITAG, ZAKARY HANKINS, RILEY MCADAMS, LIAM MURPHY, CADE YOSHIMURA

TRANSPORTATION ENGINEERING

Traffic Control Design

- Traffic Counts for current design and future estimates provided by Keller Associates.
- Traffic Analysis done using Synchro in accordance with the MUTCD.
- Proposed Design improves intersection from **Level Of Service F** for Future Demands to **Level of Service C.**

Traffic Signal Warrants/Signage and Striping

- Intersection met two warrants for a traffic signal (8-Hour Vehicular Volume and Roadway Network).
- All signage and striping will conform to MUTCD Standards.
- Key Signage and Striping Features: Dual-Mast signal pole, 12' Travel Lanes, Bike Lanes, Crosswalk Striping, and Improved Signage.

Pedestrian Access Routes and ADA Ramp Design

- 3 Proposed Crosswalks with new receiving sidewalk
- 6 Proposed Curb Ramps per C.O.D. STD DWG RD755(A)
- Ramps are ADA Compliant in Location, Dimension, and Slopes.

WATER RESOURCES ENGINEERING

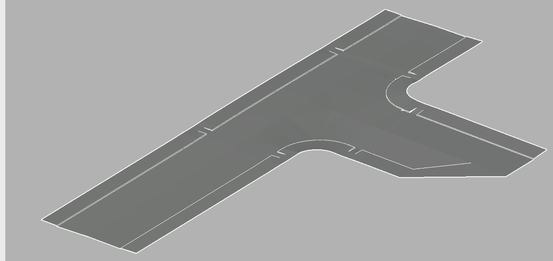
Methodology:

- Determined peak runoff through HEC-HMS, using rainfall data and impervious area calculations.

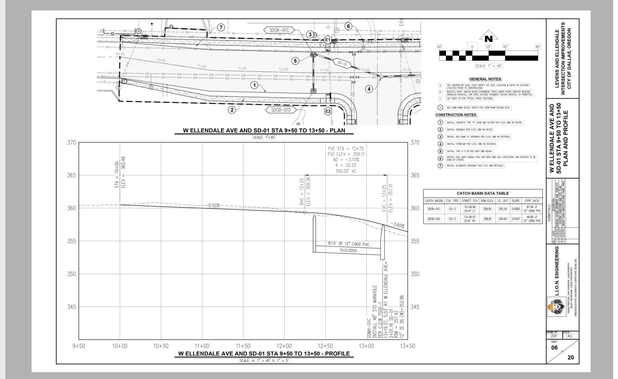
Stormwater Alternatives and Selection

- Considered Catch Basins, Bioswales and Rain Gardens.
- Selected Catch Basins because of Cost Efficiency, Space and Drainage Capacity.

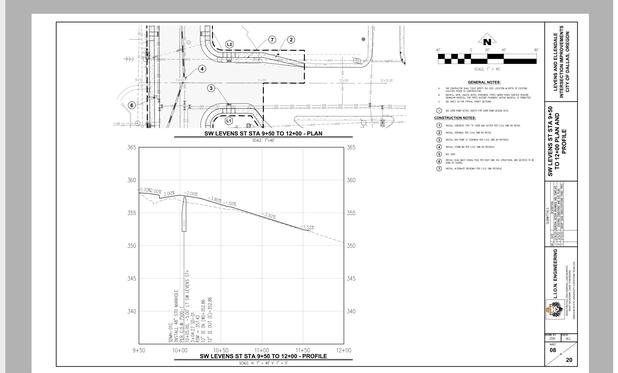
DESIGN DRAWINGS



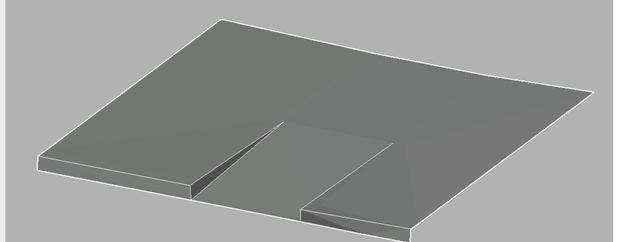
3D SITE RENDERING



ELLENDALE PLAN AND PROFILE SHEET



LEVENS PLAN AND PROFILE SHEET



CURB RAMP 3D RENDERING