

Landmark Van Dorn Area Transportation Update

21 July, 2008

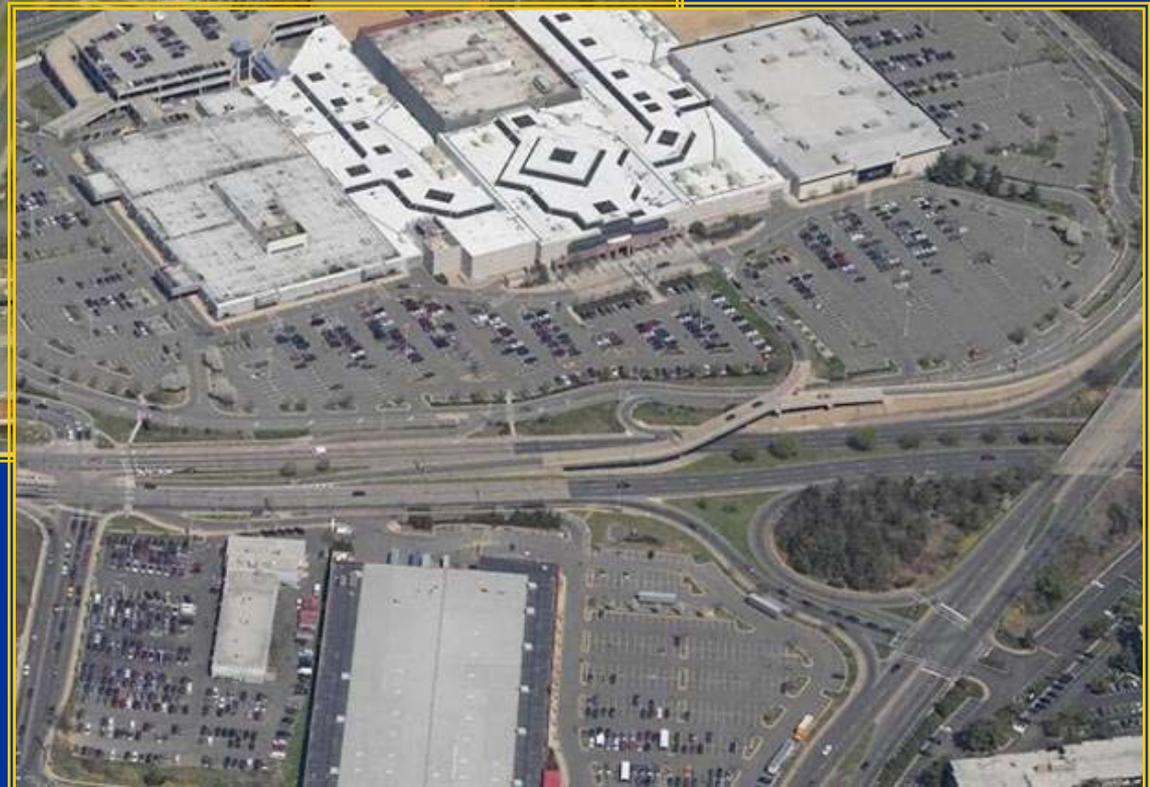
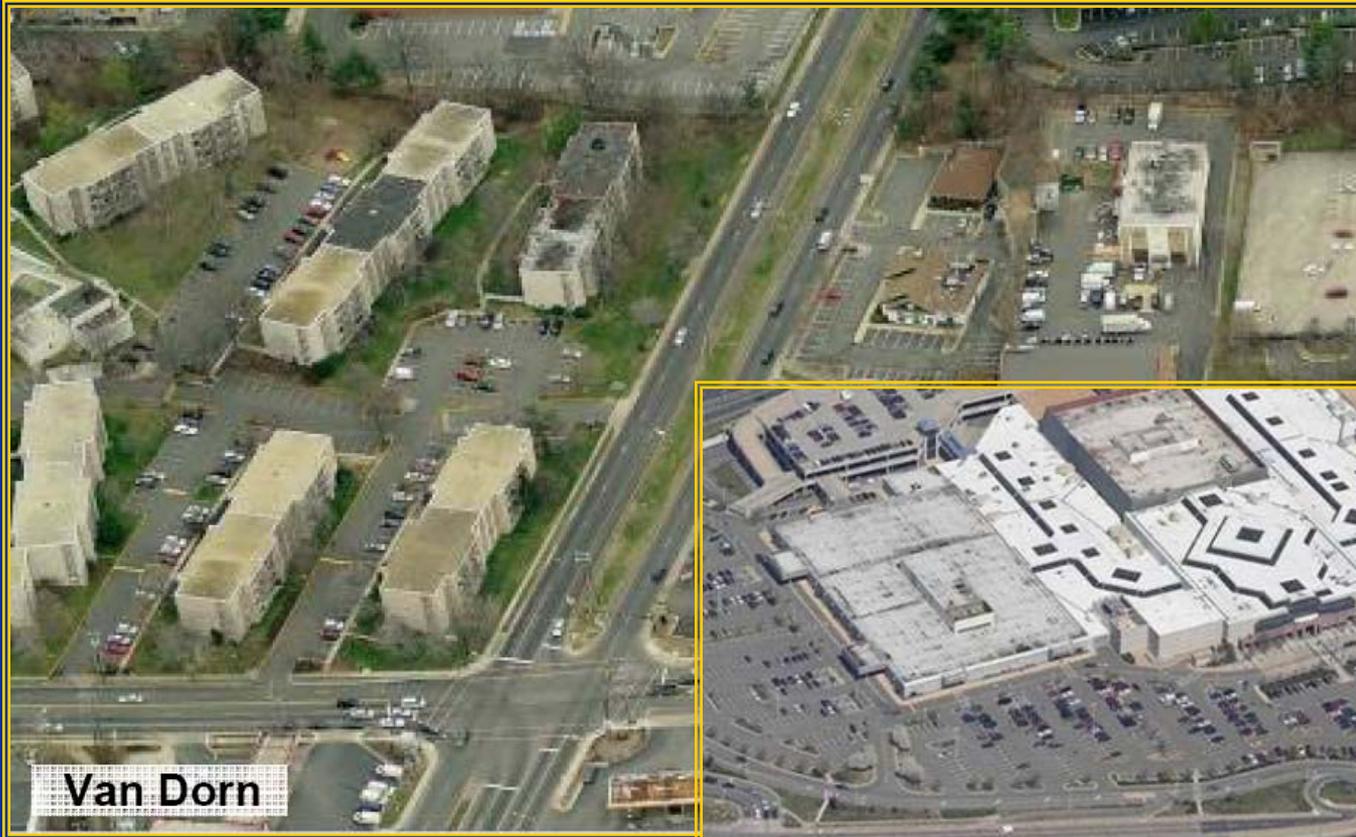
Topics

- Existing Conditions Review
- City Transportation Plan
- Vision 2030
- Transportation System Goals
- Plan Framework Create grid of walkable local streets
 1. Create Town Center that spans Duke Street.
 2. Connect the Town Center and community to the Metro.
 3. Provide Multimodal access throughout network.
- Travel Demand Management
- Next Steps

Review: Existing Conditions

- Arterial grid concentrates traffic on Van Dorn Street
- Duke Street, the City's most important east-west arterial roadway
- Superblocks, no local grid
- Transit use 18%
- Auto-dependent, pedestrian-hostile development pattern of parcels

Auto Dominated



City Transportation Master Plan

- Emphasis on choice, not on new roadways
- Three corridors with dedicated transit lanes
- Bicycle and pedestrian emphasis.
- Adopted April, 2008.

City Guiding Principles

Alexandria will:

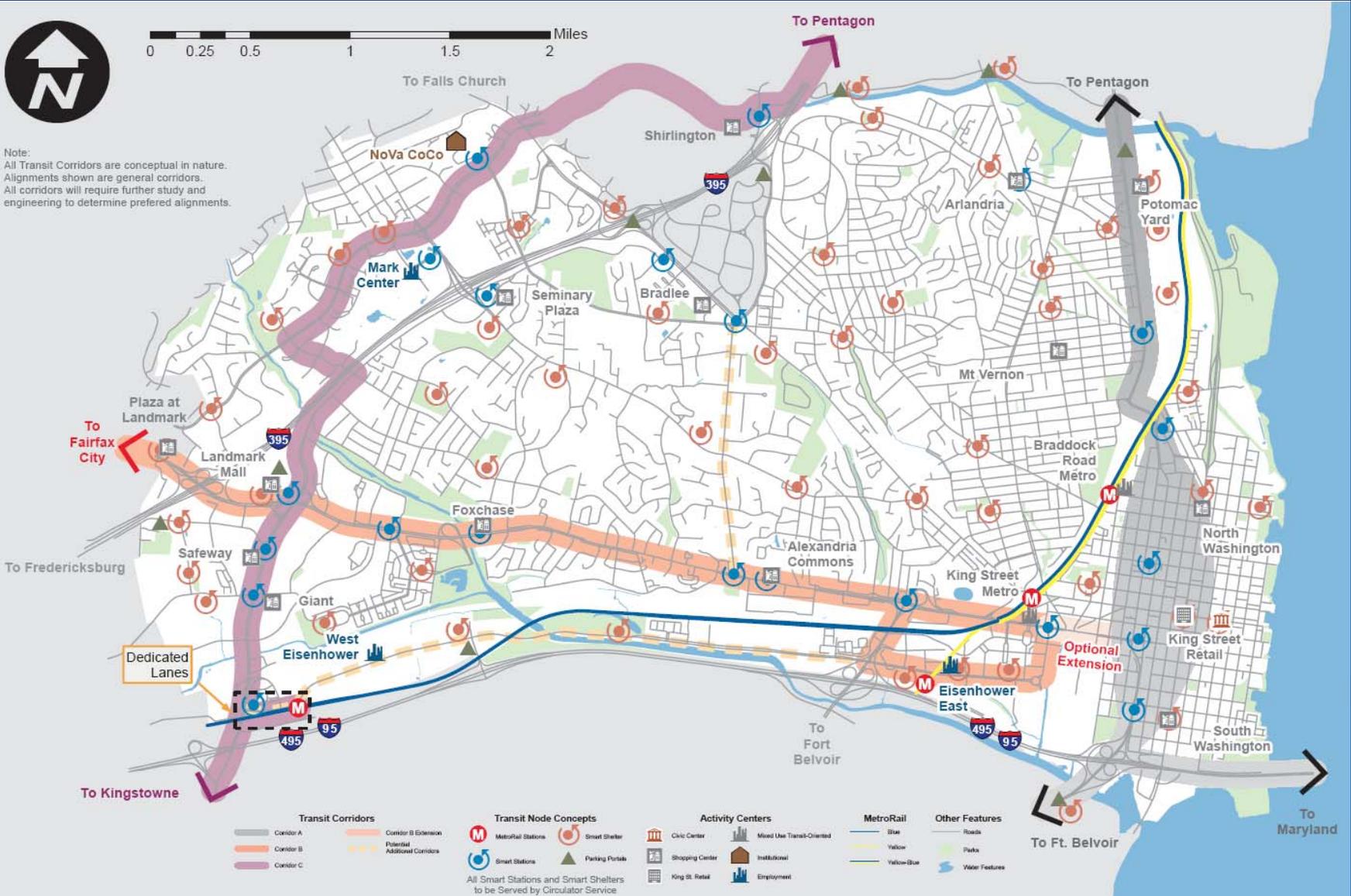
- Develop innovative local and regional transit options.
- Provide quality pedestrian and bicycle accommodations.
- Provide all its citizens, regardless of age or ability, with accessibility and mobility.
- Increase the use of communications technology in transportation systems.
- Further transportation policies that support livable urban land use and encourage neighborhood preservation, in accordance with the City Council Strategic Plan.
- Lead the region in promoting environmentally friendly transportation policies.
- Ensure accessible, reliable and safe transportation for older and disabled citizens.

<http://alexandriava.gov/tes/info/>

Future Transit Corridors



Note:
 All Transit Corridors are conceptual in nature.
 Alignments shown are general corridors.
 All corridors will require further study and
 engineering to determine preferred alignments.





Currently Funded Projects

- Pedestrian Safety and Access on Duke, S Walker to Oasis Drive
- Pedestrian Improvements at S Pickett & Edsall Road
- Holmes Run Greenway between Ripley & I-395
- Transit Corridor Study

Future Improvements

■ Pedestrian:

- Holmes Run Trail
- Pickett Street
- Landmark Mall
- Duke Street
- Van Dorn Street
- Connections between Cameron Station and Van Dorn Metro
- Connections between Duke Street and Eisenhower Avenue Bus Stops
- Cameron Station Boulevard
- Edsall Road and Pickett Street
- Stevenson Avenue

Source: *Bike and Pedestrian Mobility Plan*

Future Improvements

- Transit:
 - Bus or light rail on dedicated lanes or rail.
 - Smart shelters and stops
- Bike:
 - Holmes Run Trail
 - Eisenhower Avenue/Eisenhower Avenue Trail
 - Van Dorn Street
 - Duke Street
 - Connect Cameron Station to the Van Dorn Street Metro area
 - Connect the Duke Street Corridor to Eisenhower Avenue

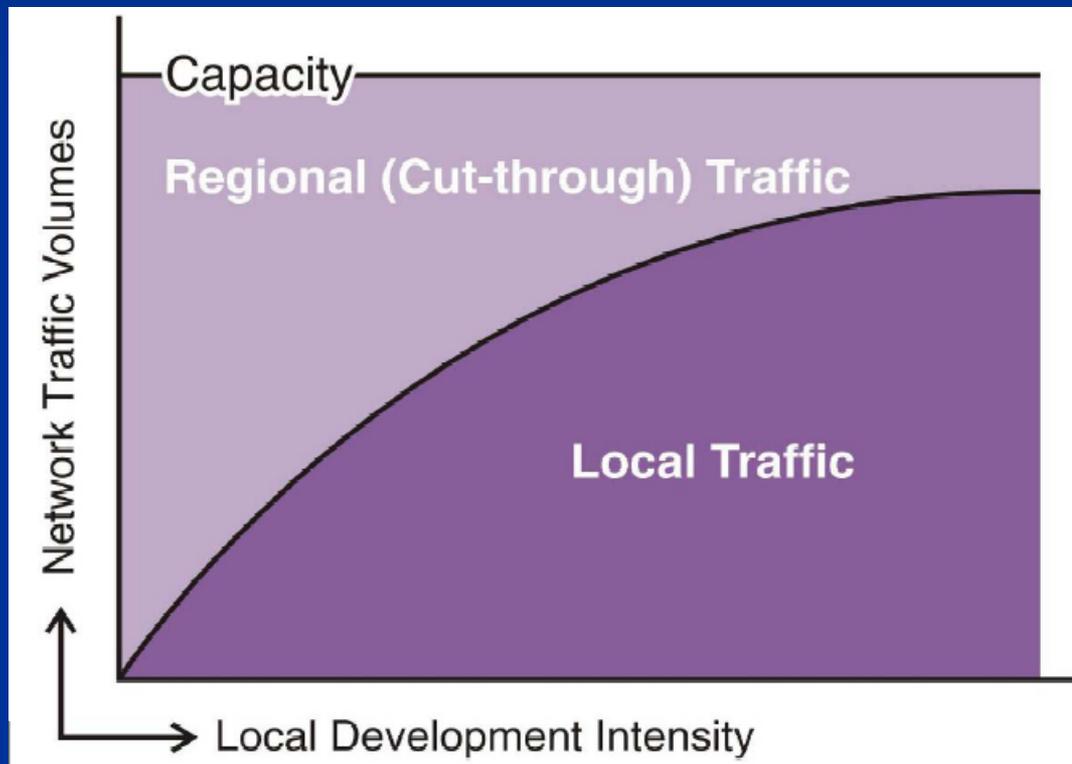
2030 Vision for Transportation

- ❖ Improved transit options, an upgraded street grid and appropriate land uses will transform the area into a vibrant destination with traffic typical of a successful urban place.

■ Premise:

- Higher density land use will bring more trips.
- Local trips will displace through trips.

- Local trips will displace through trips



Transportation System Goals

Goals from 19 May

- Increase transit ridership... with effective transit service along Van Dorn between the Mall & Metro.
- Create safe, convenient and attractive pedestrian and bicycle access to all transit nodes...
- Provide off street, dedicated pedestrian and bicycle paths...
- Create a more urban street grid system where feasible with walkable blocks...

Ideas for Further Examination from 19 May

- Improved access to the Van Dorn Street Metro Station.
- Potential for VRE Station.
- Transit center at Landmark Mall
- Balance between pedestrian and vehicular traffic friendly streets
- Coordination of transportation issues with Fairfax County
- Synchronization of traffic signals along Van Dorn Street.

To Meet Goals

Create Framework Plan:

1. Create grid of walkable local streets
2. Create Town Center that spans Duke Street.
3. Connect the Town Center and community to the Metro.
4. Provide Multimodal access throughout network.

1. Create Grid of Walkable Streets: Framework

STREETS - A hierarchy of streets that provides a clear way to move – by car, transit, bike and foot

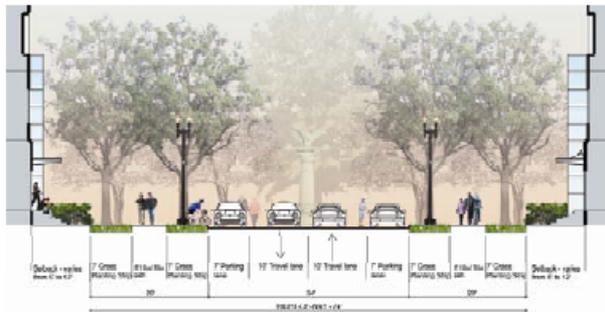


MAJOR TRANSIT STREETS AND BOULEVARDS

Provides transit services

Typically edged by a mix of uses

Often serves as the “Community’s Face” e.g. Connecticut Avenue, the 14th street corridor in DC, Canal street in New Orleans



MAJOR RESIDENTIAL STREETS

Edged by residential uses, punctuated at strategic intervals by neighborhood serving retail.

Very often is a place to “see and be seen”

A good example is Connecticut Avenue in Northwest Washington DC

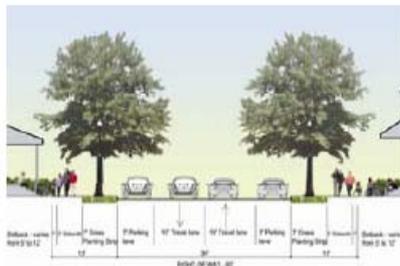


MIXED USE MAIN STREETS

Close to transit

Typically edged by retail, residential and some services

Examples include King Street in Alexandria, the U Street Corridor, P Street near Logan Circle, M Street in Georgetown



RESIDENTIAL STREETS

Smaller, intimate streets that facilitate interaction between neighbors

Grid of Walkable Streets: Planning Principles

- Van Dorn and Duke major Transit Boulevards
- Mixed use walking streets parallel
- Local streets at 400 to 600 foot intervals
- Additional pedestrian links

Grid of Walkable Streets



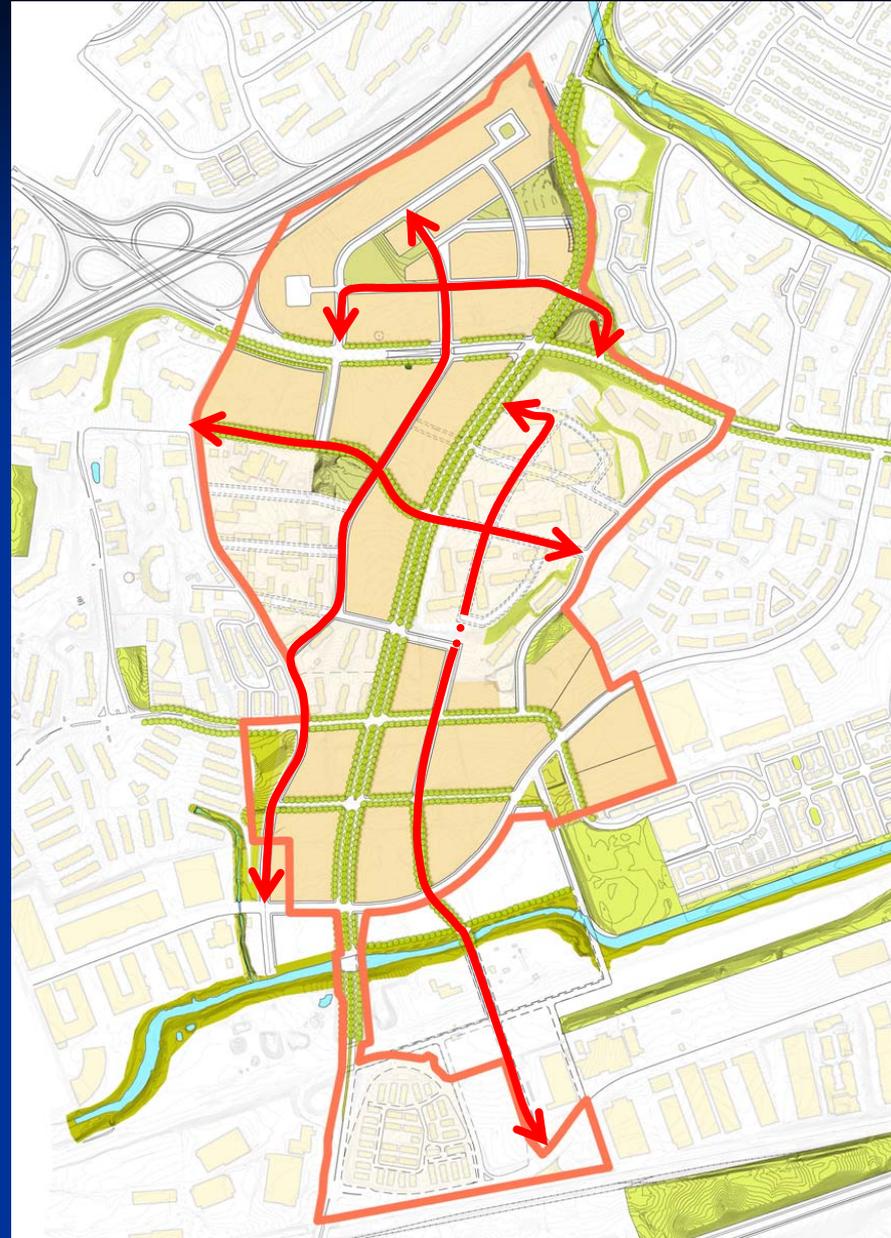
Grid of Walkable Streets

Local framework streets parallel to Van Dorn Street and Duke Street

North-south parallel to Van Dorn Street

East-west parallel to Duke Street.

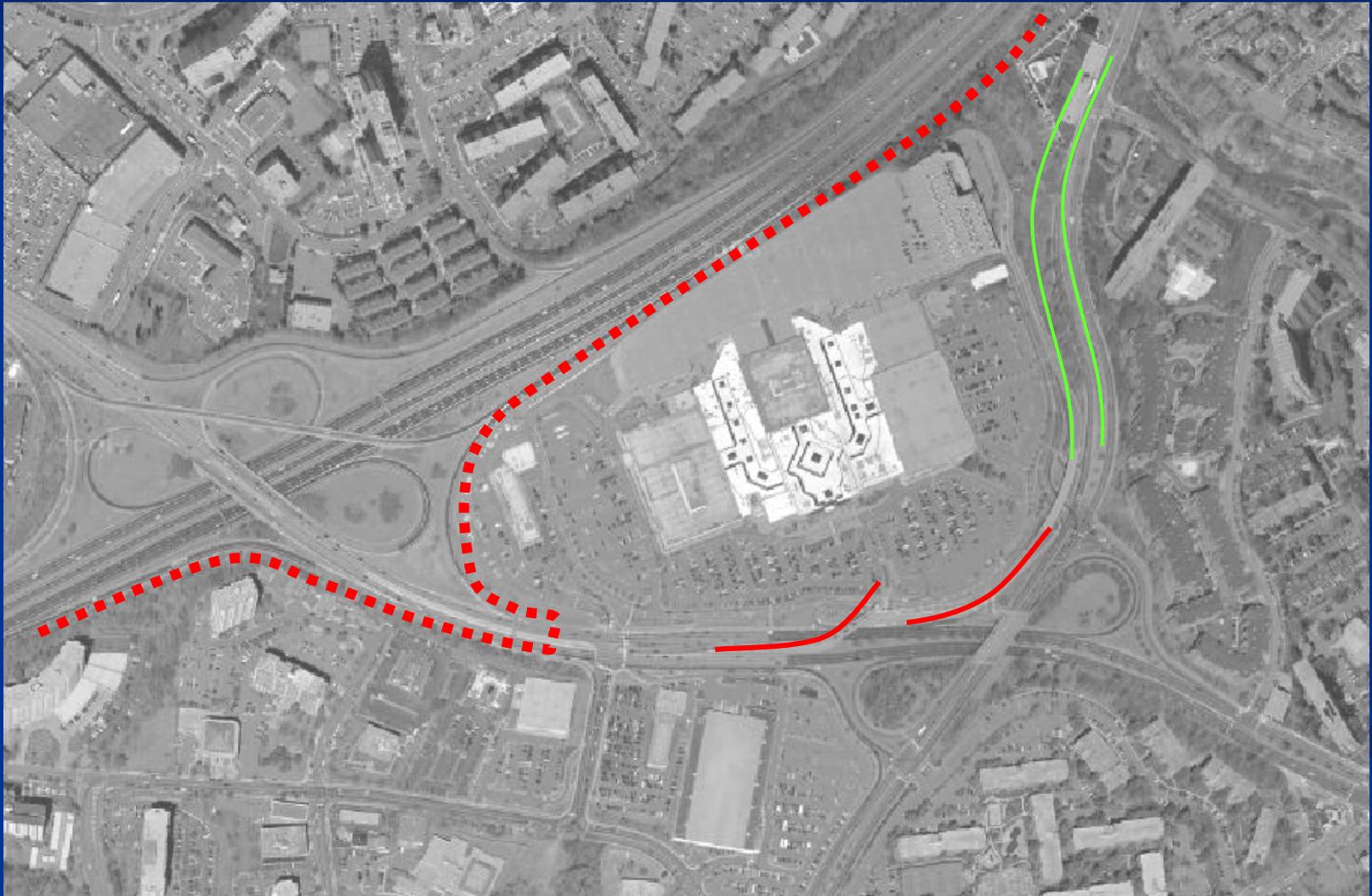
Provide options for local traffic to avoid arterial streets.



2. Create Town Center That Spans Duke Street

- **Multimodal Linkage from the Mall site to the Community**
- **Maintain regional connections.**

Access Challenges



West End Town Center Access

- Ideas and Alternatives from Workshops:
 - Flyover from Interstate
 - New Bridge over Interstate
 - New Bridge(s) over Duke Street
 - Depressed Roadway / “Dupont Circle”
 - At Grade Intersections

West End Town Center Access

- Additional Ideas
 - Four intersections on Duke
 - Flyover west of Van Dorn
 - Right in only
 - General Growth Properties (GGP) Alternative.

Findings

- Interstate flyovers and a bridge across I-395 are highly questionable,
- Best new bridge location is east of Walker,
- Three intersections at grade on Duke are preferable to four,
- Circle not traffic feature,
- Many advantages to depressed section with frontage streets.

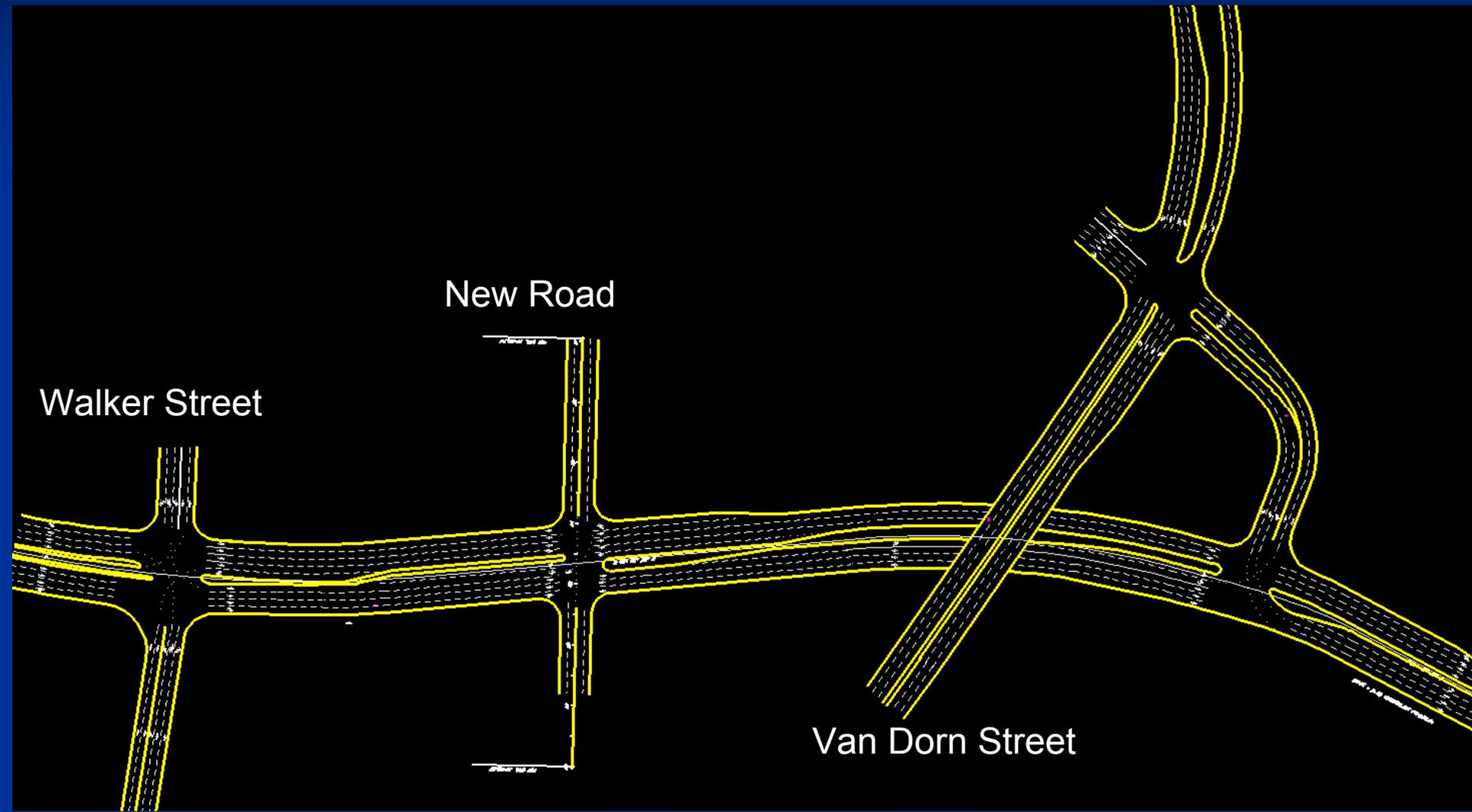
Final Study Alternatives

- At Grade Intersections
- Depressed Roadway
- General Growth Properties (GGP)

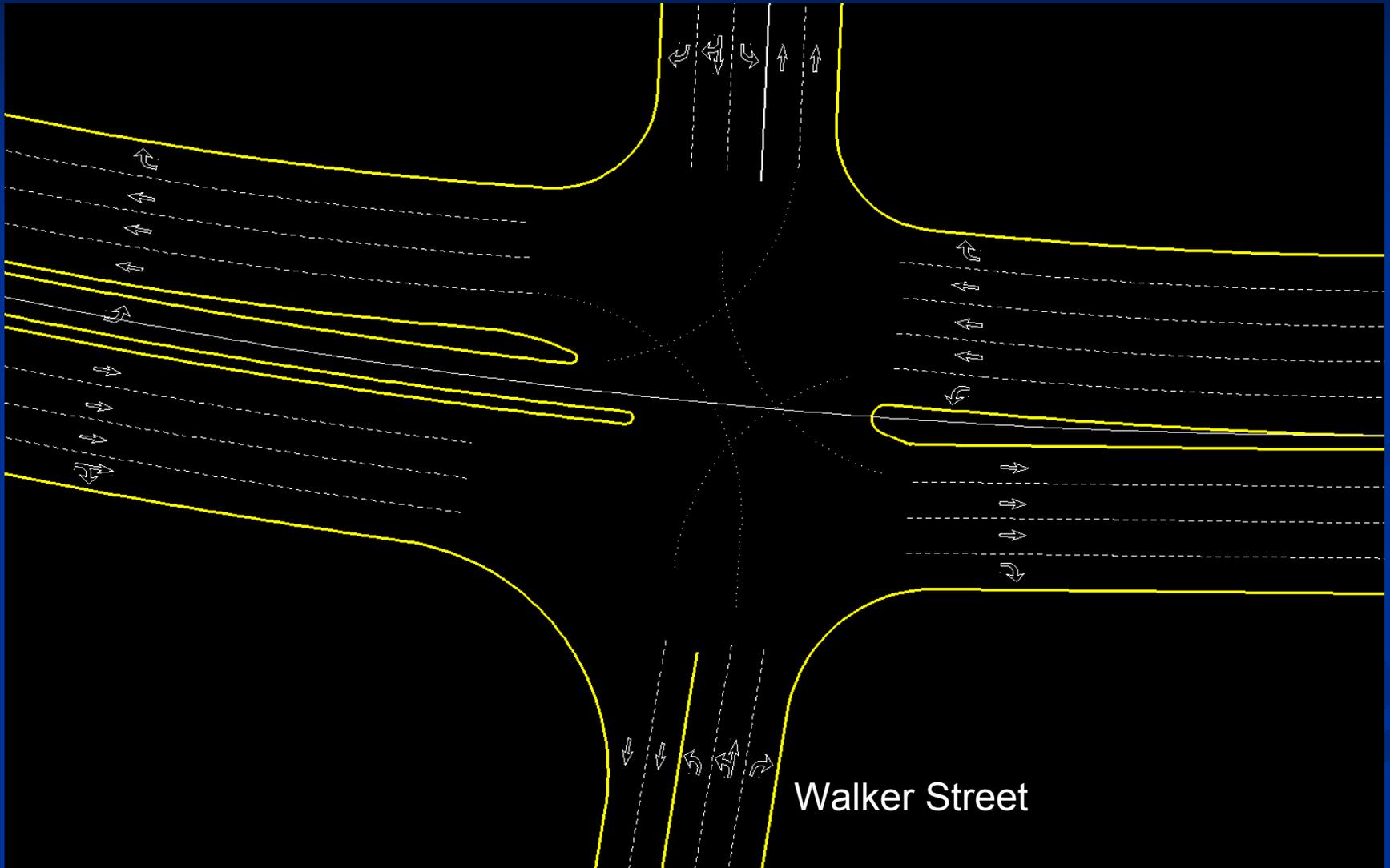
At Grade Alternative

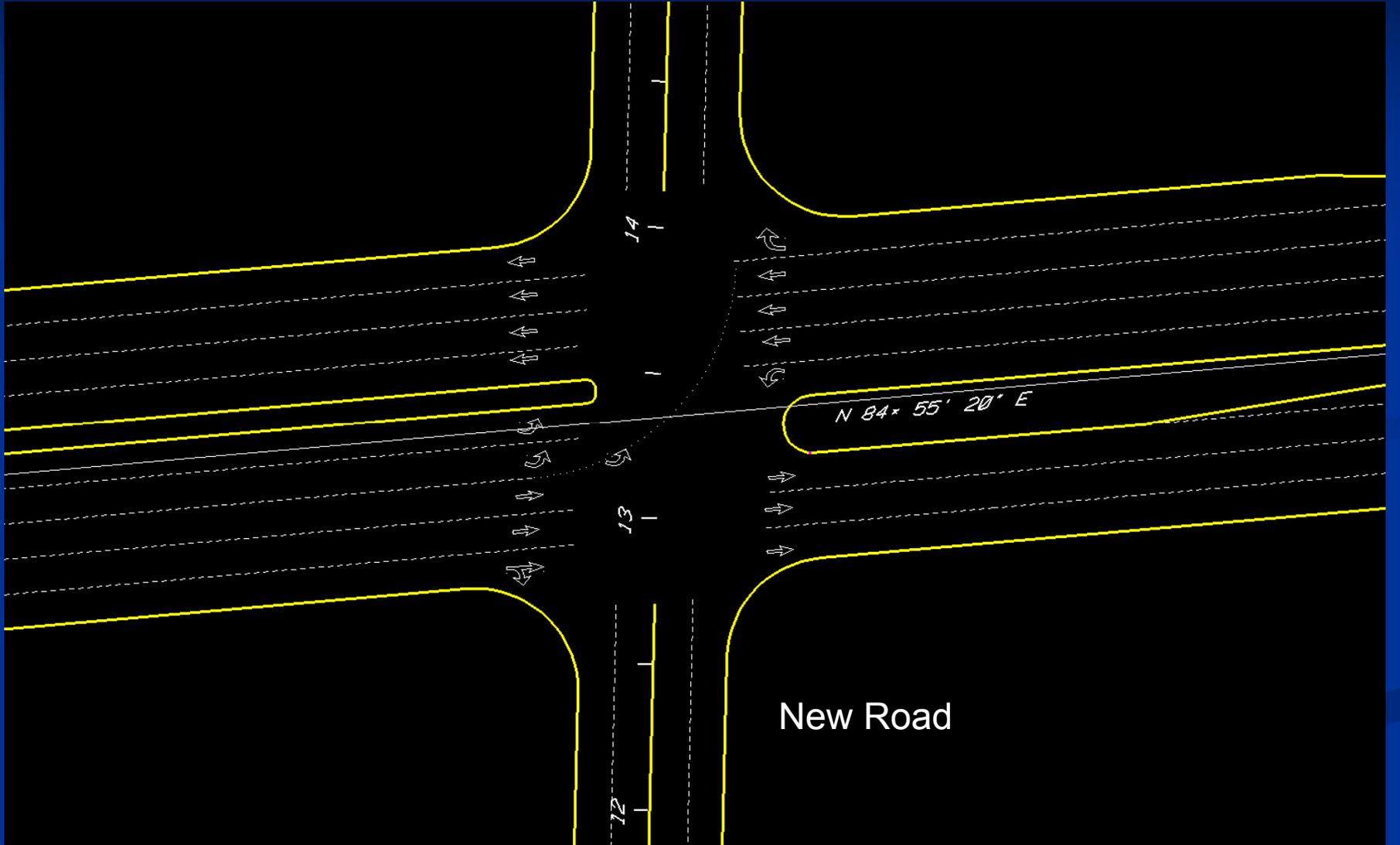


At Grade Alternative



Intersection at Walker





New Road

$N 84^{\circ} 55' 20'' E$

14

13

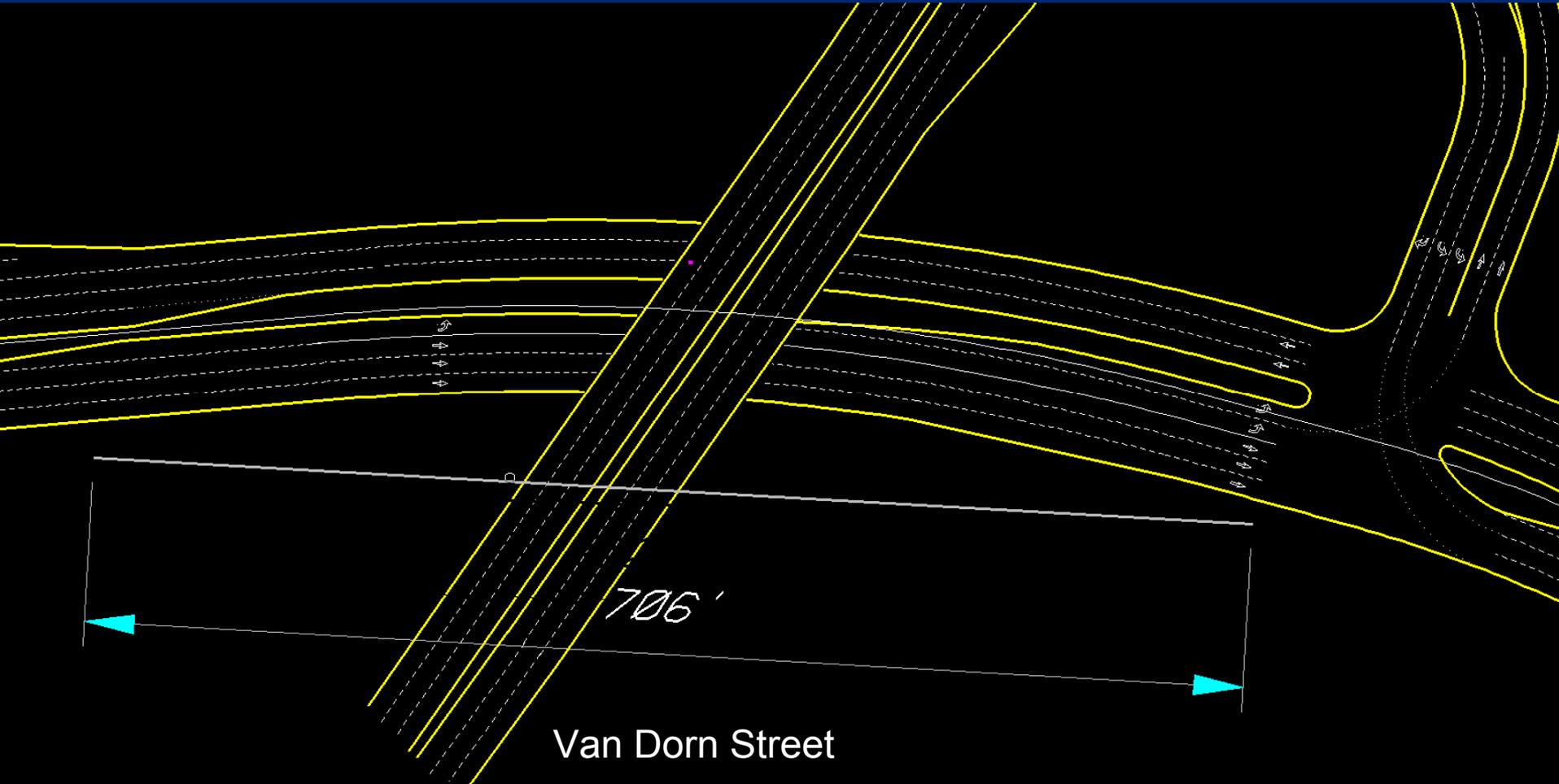
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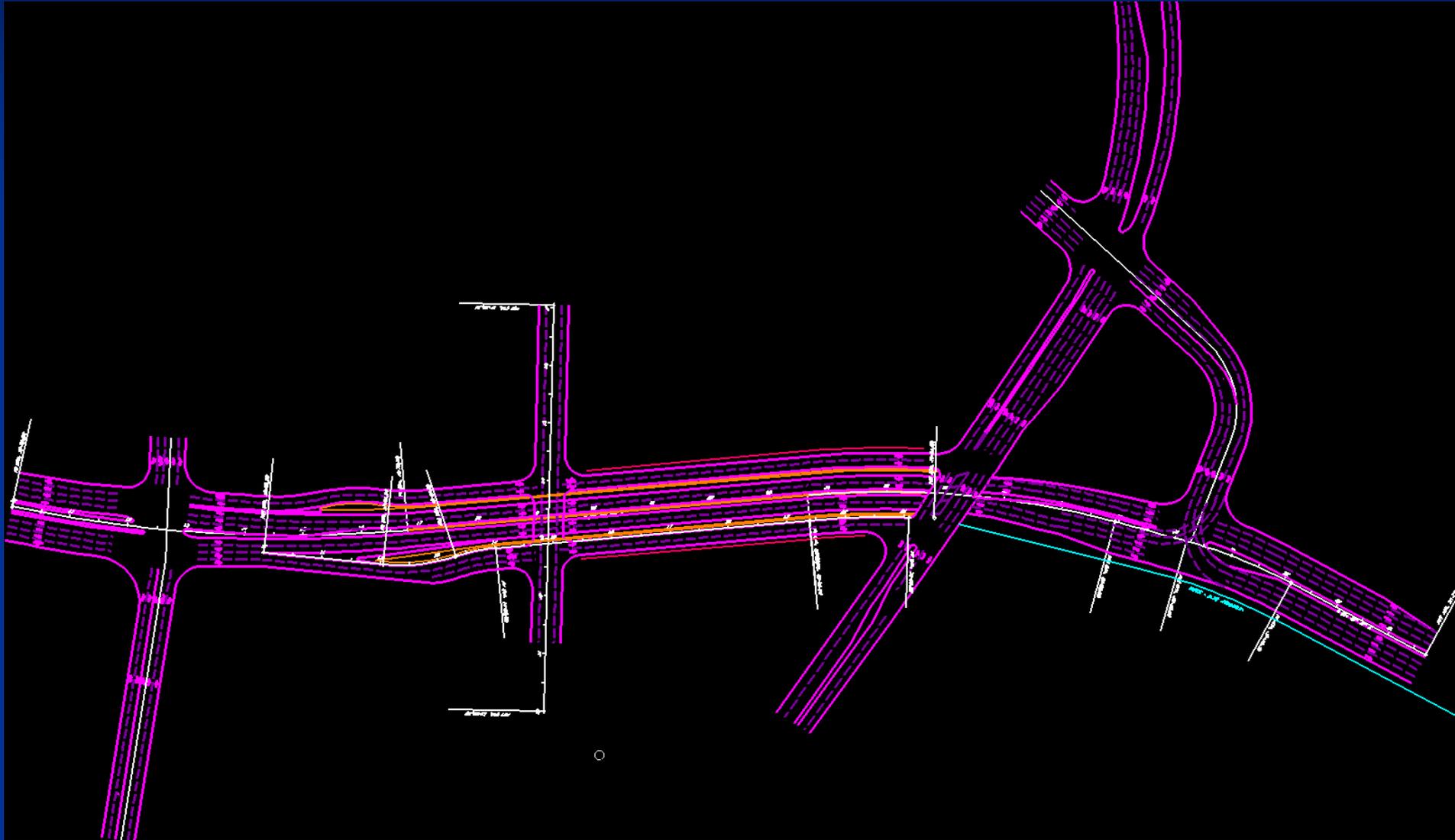
At Van Dorn



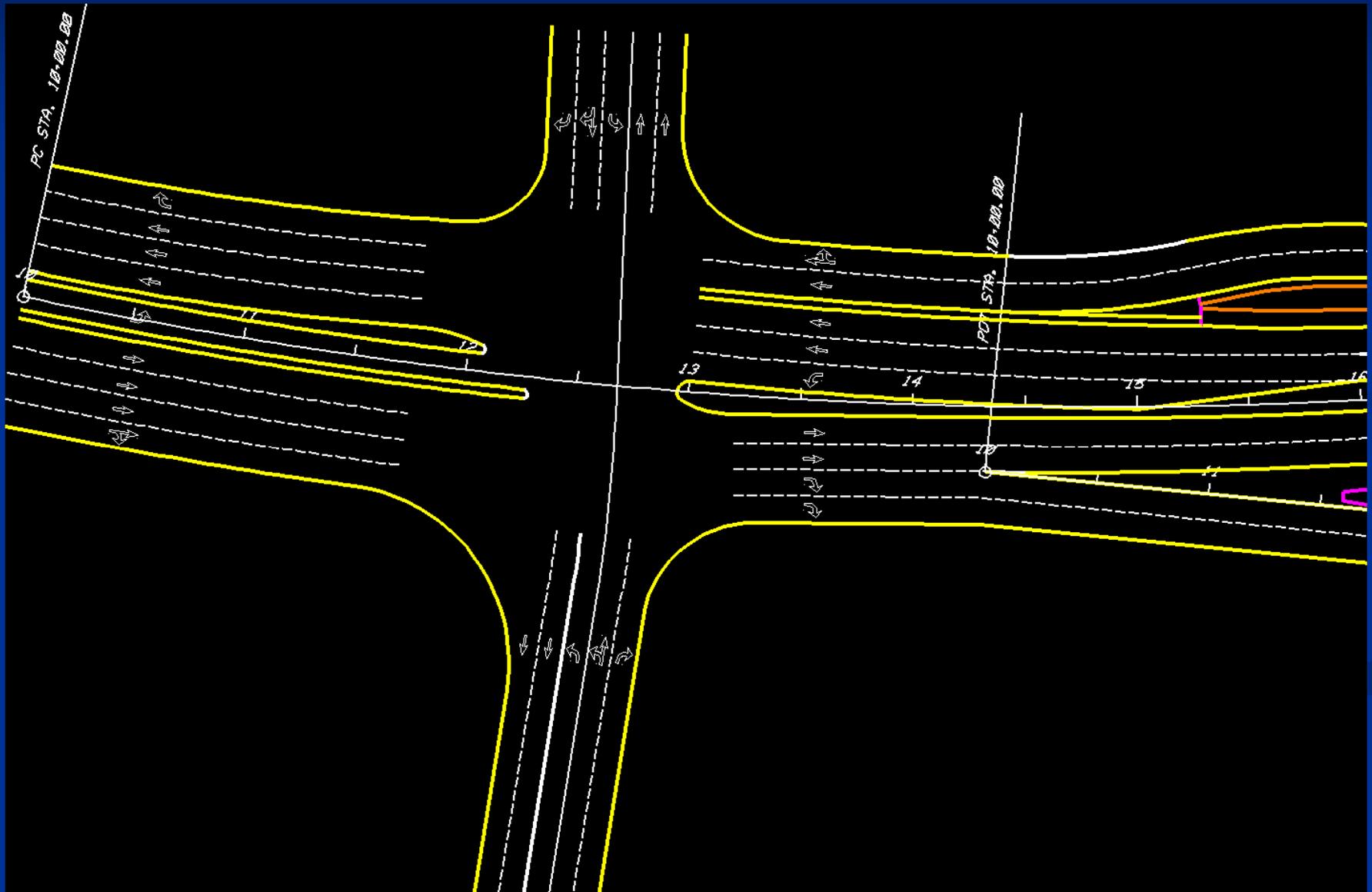
Depressed Roadway Alternative



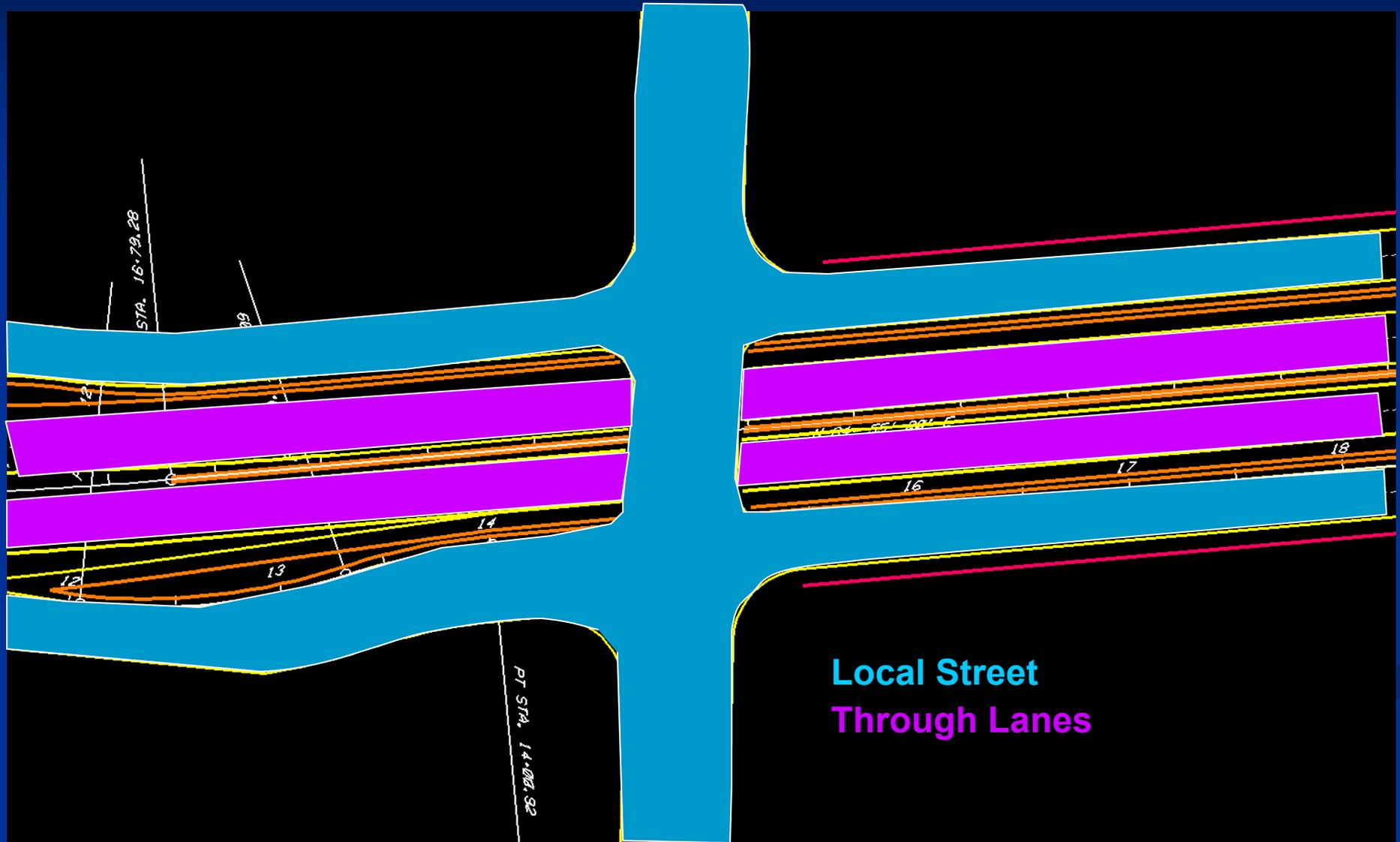
Depressed Roadway



Intersection at Walker

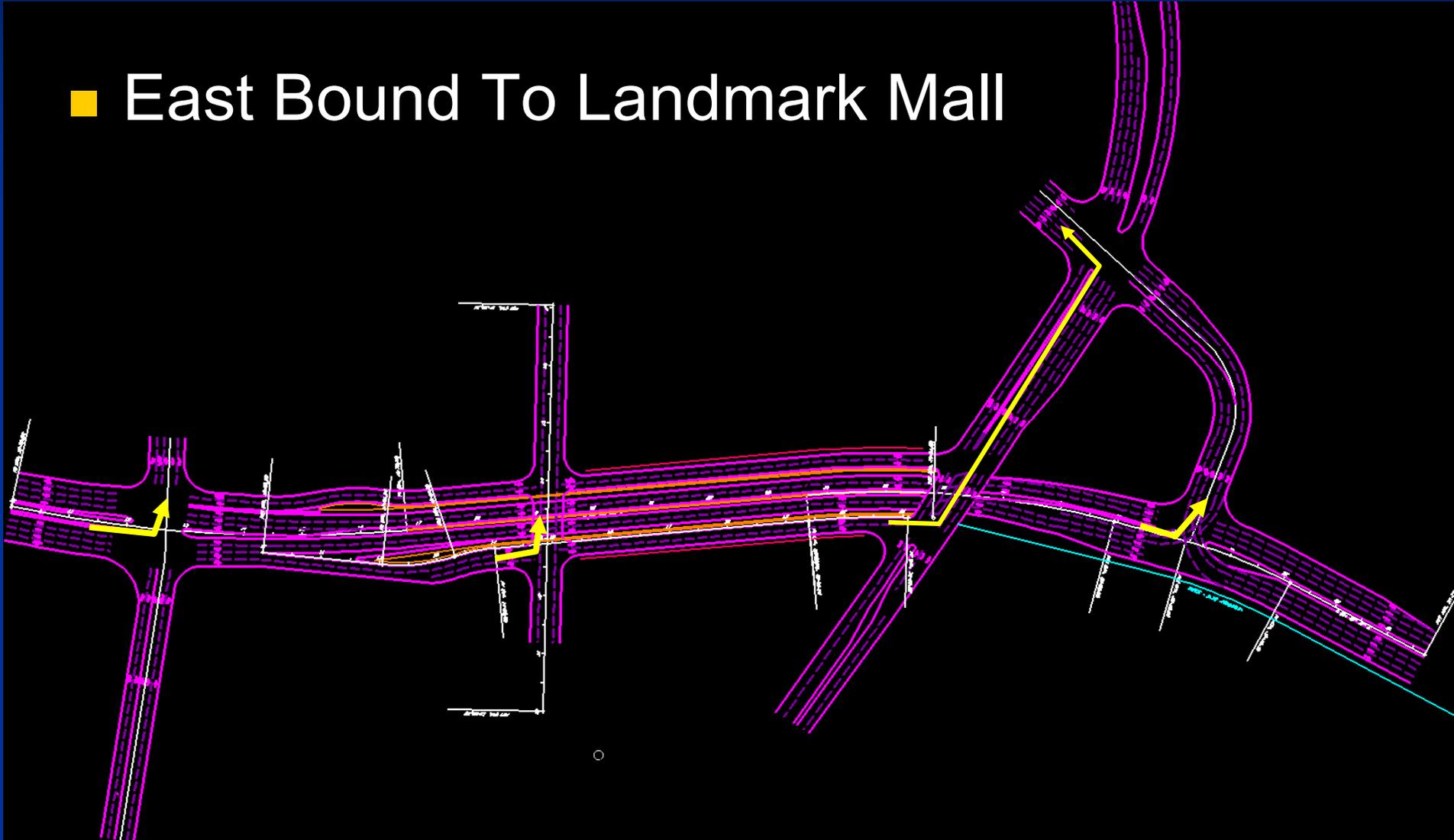


Intersection at New Road



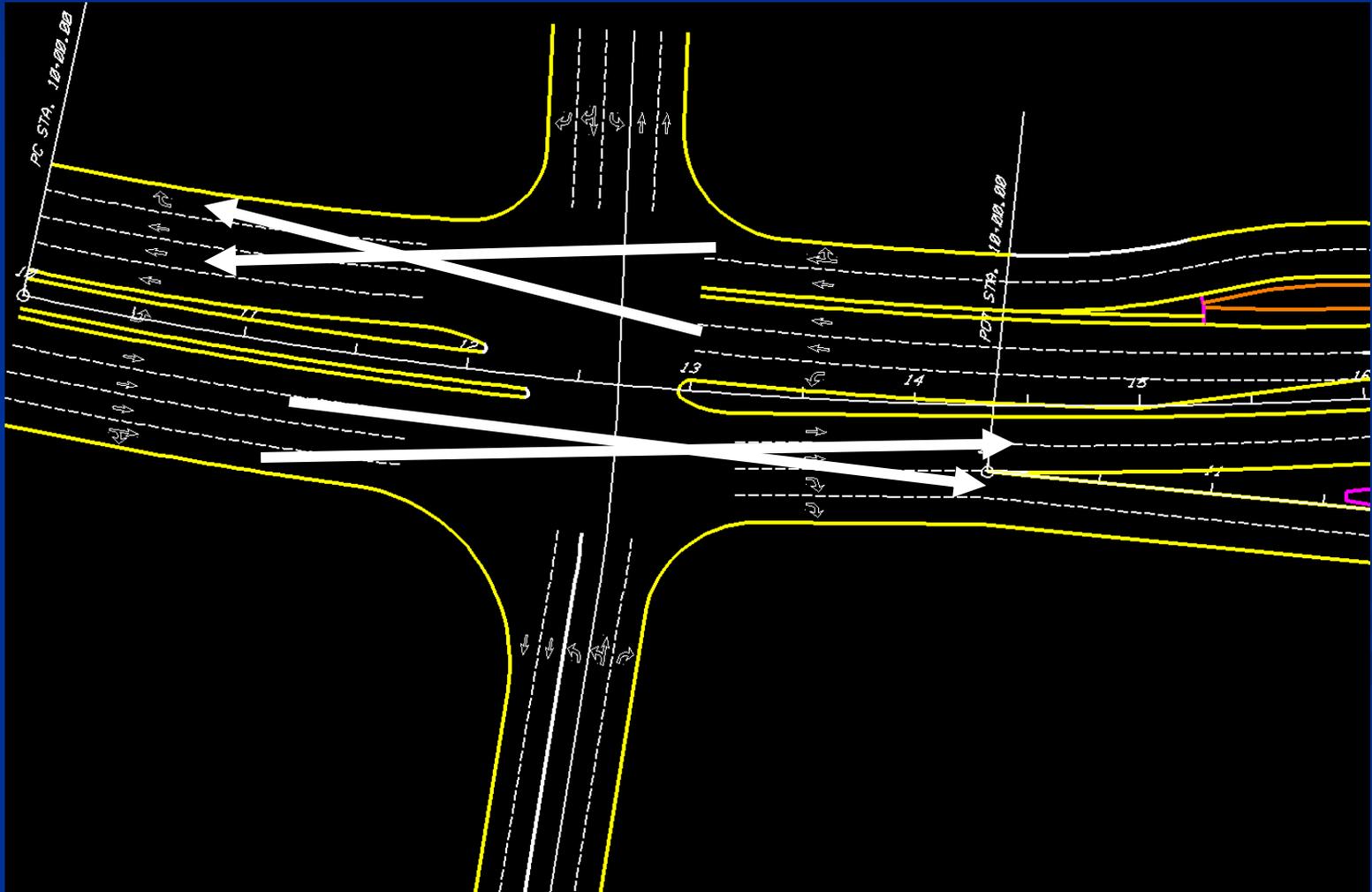
Capacity Challenges

- East Bound To Landmark Mall



Capacity Challenges

- Entry and Exit to Freeway / Local Roadways



Sufficient Capacity?

- Initial calculations indicate intersections are near or over capacity.
- At Grade better due to lack of weave.
- Sufficient capacity exists to continue evaluating the three alternatives.

Evaluation Considerations

- Aesthetics
- Pedestrian and bicycle circulation
- Unified Town Center
- Transit connections
- Duke Street through traffic service
- Local traffic circulation
- Disruption during construction
- Feasibility and cost
- Potential for external regulatory approval

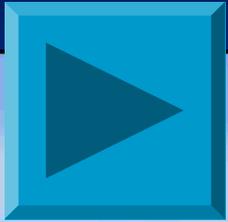
Advantages and Disadvantages

- At Grade Options:
 - Lower cost
 - Less construction disruption
 - Easier phasing and
 - Higher overall capacity.
- Depressed Roadway:
 - Unify Town Center
 - Pedestrian and bike opportunities
 - Local traffic mobility
 - Urban Duke Street frontage adds value.

Design and Construction Costs

- Depressed Roadway: \$ 90 to \$ 110 Million
- At Grade: \$ 15 to \$ 25 Million.
- At Grade with additional bridge: \$ 20 to \$ 35 Million.

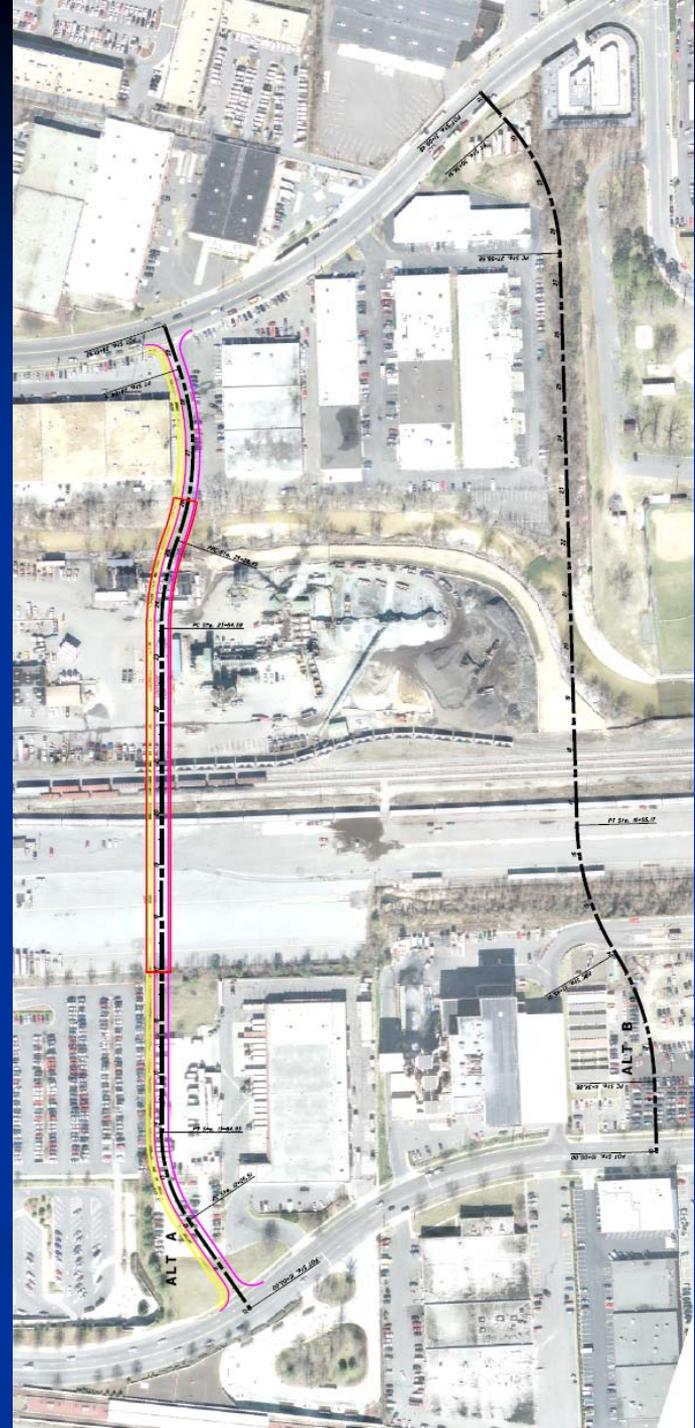
Traffic Simulation of Alternatives



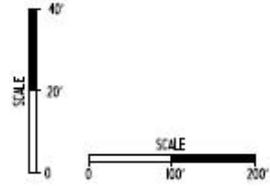
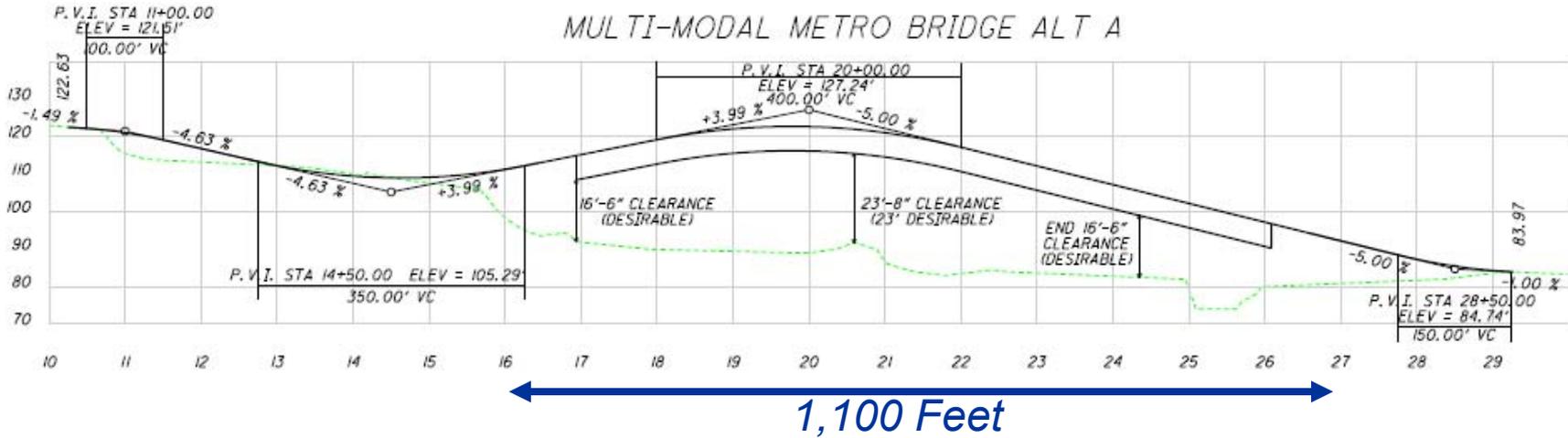
3. Connect the Town Center and Community to the Metro

- Multimodal bridge from Metro to Pickett
- Dedicated lane(s) between Metro and Town Center.

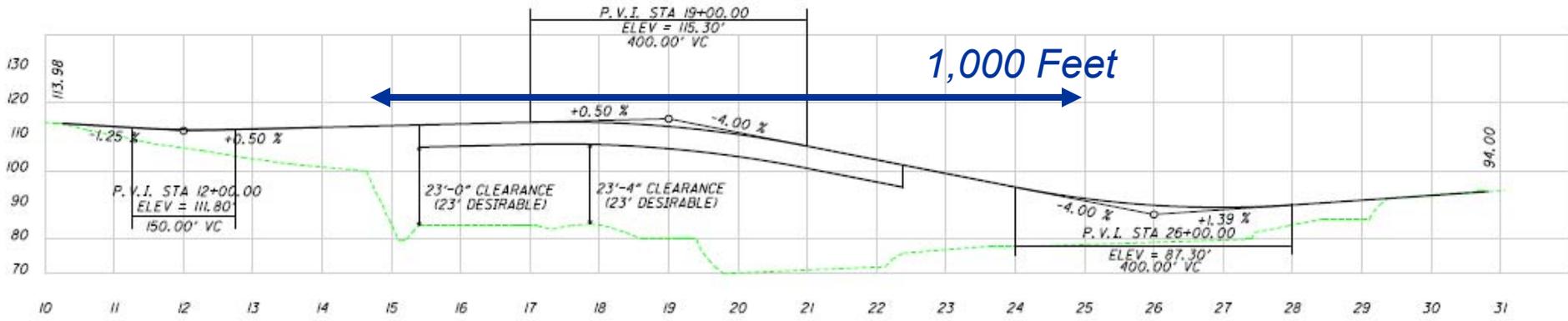
Multimodal Bridge



MULTI-MODAL METRO BRIDGE ALT A



MULTI-MODAL METRO BRIDGE ALT B



4. Provide Multimodal access throughout network

- TDM for area to encourage transit
- Adopt City Vision for Dedicated lanes, smart stations and smart shelters.



Input from the Process

- Goals from May 19:
 - ✓ Increase transit ridership...with effective transit service along Van Dorn between the Mall & Metro.
 - ✓ Create safe, convenient and attractive pedestrian and bicycle access to all transit nodes...

Future Improvements

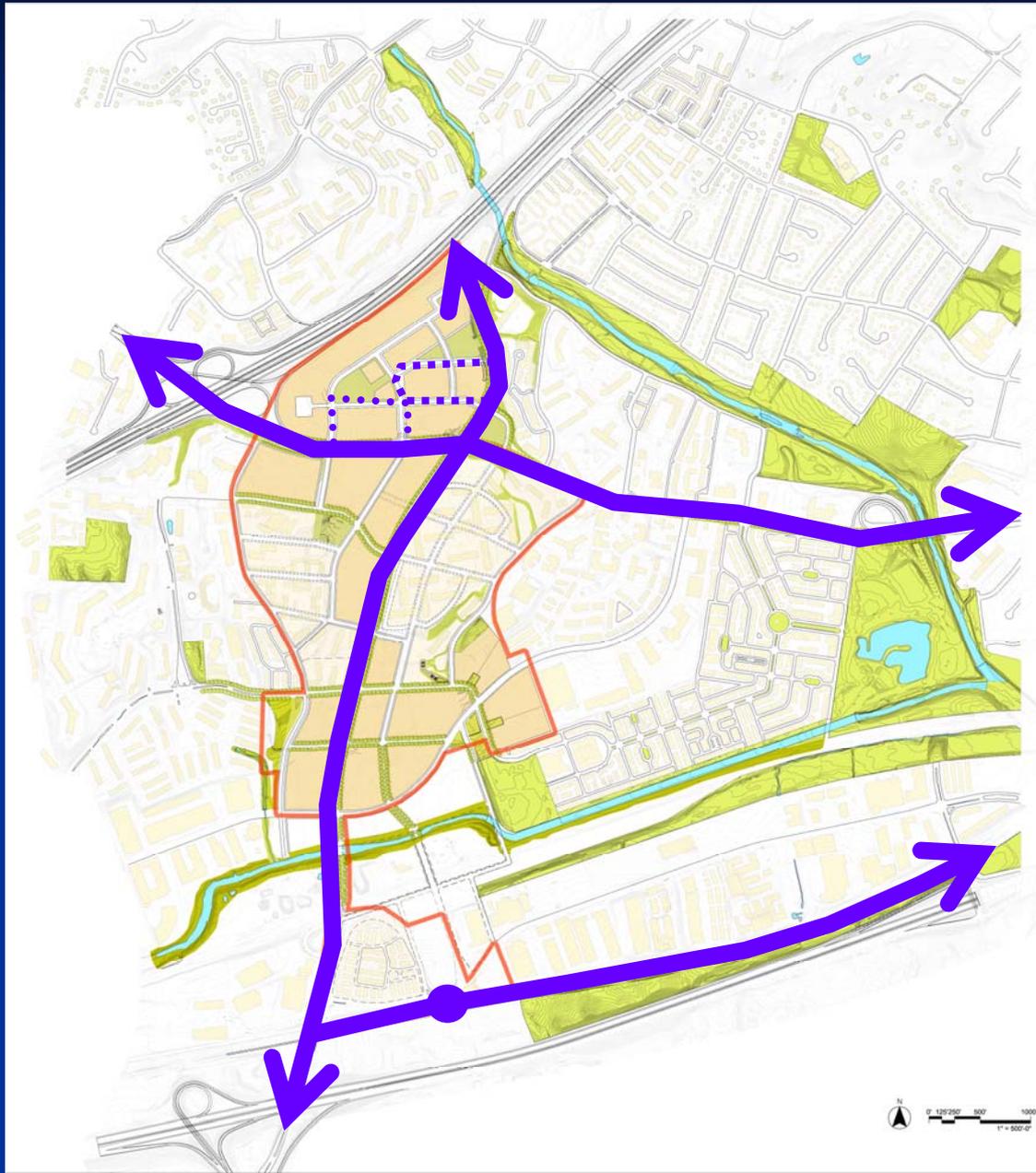
- Transit:
 - ✓ Bus or light rail on dedicated lanes or rail.
 - ✓ Smart shelters and stops



Transit: Primary Transit Network

- Bus or Light Rail Transit and Metro
- Prioritizes transit and supports City's Transportation Plan
 - ✓ "Major Transit Streets and Boulevards"
- Characteristics of Well Performing PTN:
 - ✓ 16+ hours per day
 - ✓ 7 days per week
 - ✓ Frequent/No schedule needed
 - ✓ Serves as Metro-Mall Shuttle
 - ✓ Physical presence (stations and lanes)
 - ✓ Continuous customer information

Transit: Primary Transit Network



Transit: Primary Transit Network

➤ Station Location Options

- ✓ Stations only on Van Dorn Street and Duke Street
 - Pro: Minimizes transit time for thru trips
 - Con: May require local circulator (how many transfers is too much?)
- ✓ Stations on Van Dorn Street, Duke Street, and in mall site
 - Pro: Directly serves major trip generator, may simplify transfers between BRT/LRT and buses
 - Con: Adds travel time for anyone not going to the mall

Transit: Primary Transit Network

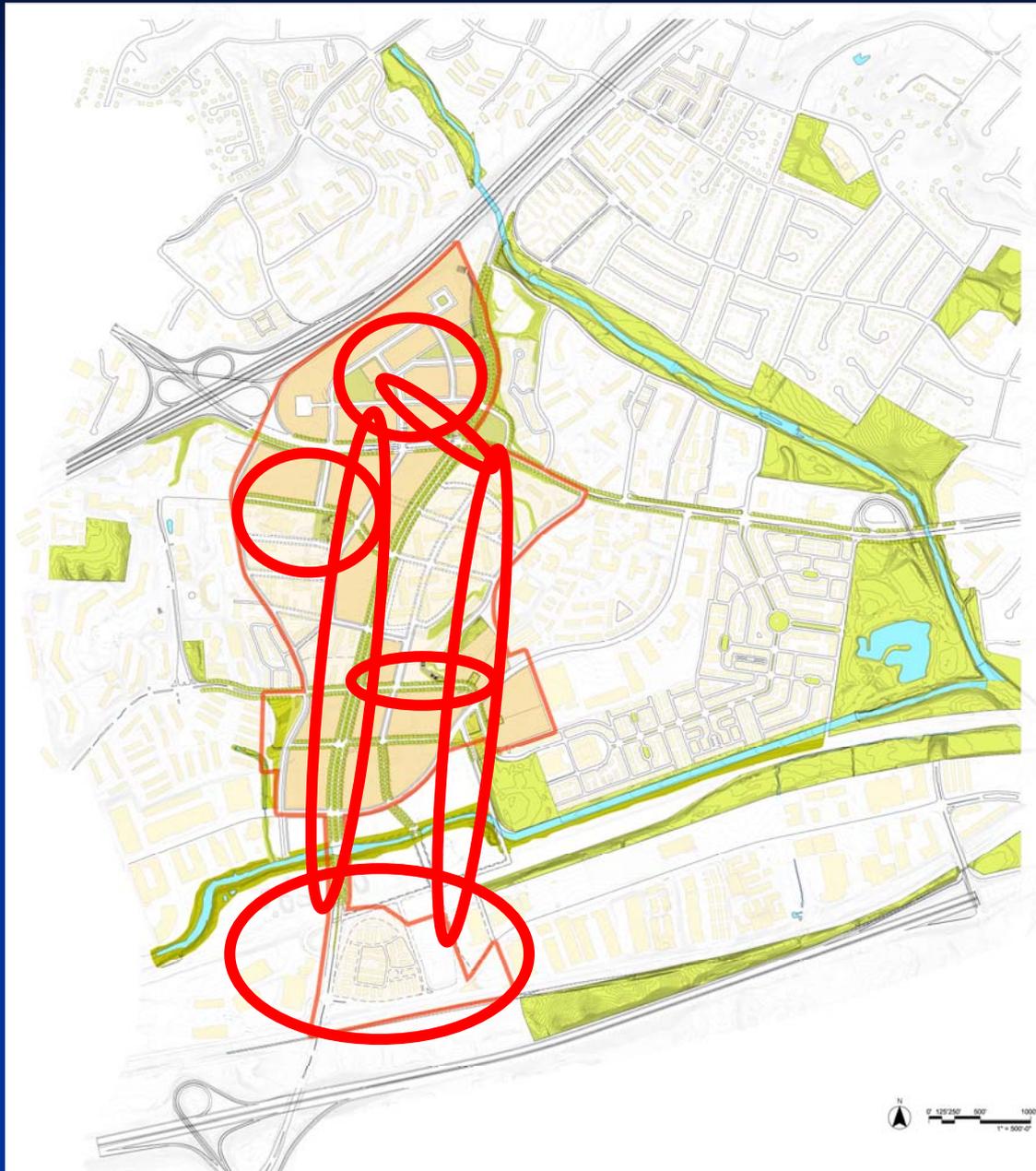
Examples of Bus Rapid Transit and Light Rail Transit operating in dedicated lanes.



Transit: Secondary Transit Network

- Local routes and circulators
 - ✓ Complements PTN for overall effectiveness
 - ✓ Coordinates with Alexandria's Transportation Management Plan Special Use Permit (TMPSUP) program`
 - ✓ "Major Residential Streets" and "Mixed Use Main Streets"
 - ✓ Supports walkability of local streets
- Characteristics
 - ✓ Scheduled to meet demand based on site/neighborhood land uses

Transit: Secondary Transit Network



Transit: Secondary Transit Network



Transit: Transit Transfer Center

- Where transportation and land use meet:
 - ✓ Opportunity to create a place, visual landmark, and support local identity
 - ✓ Serves as pedestrian refuge to narrow the crossing distance
 - ✓ Provide shelter and information, maybe retail?
 - ✓ Focal point for all modes: transit (BRT/LRT, DASH, MetroBus, Fairfax Connector), walking, biking, auto
 - ✓ Parking based on transit center's purpose

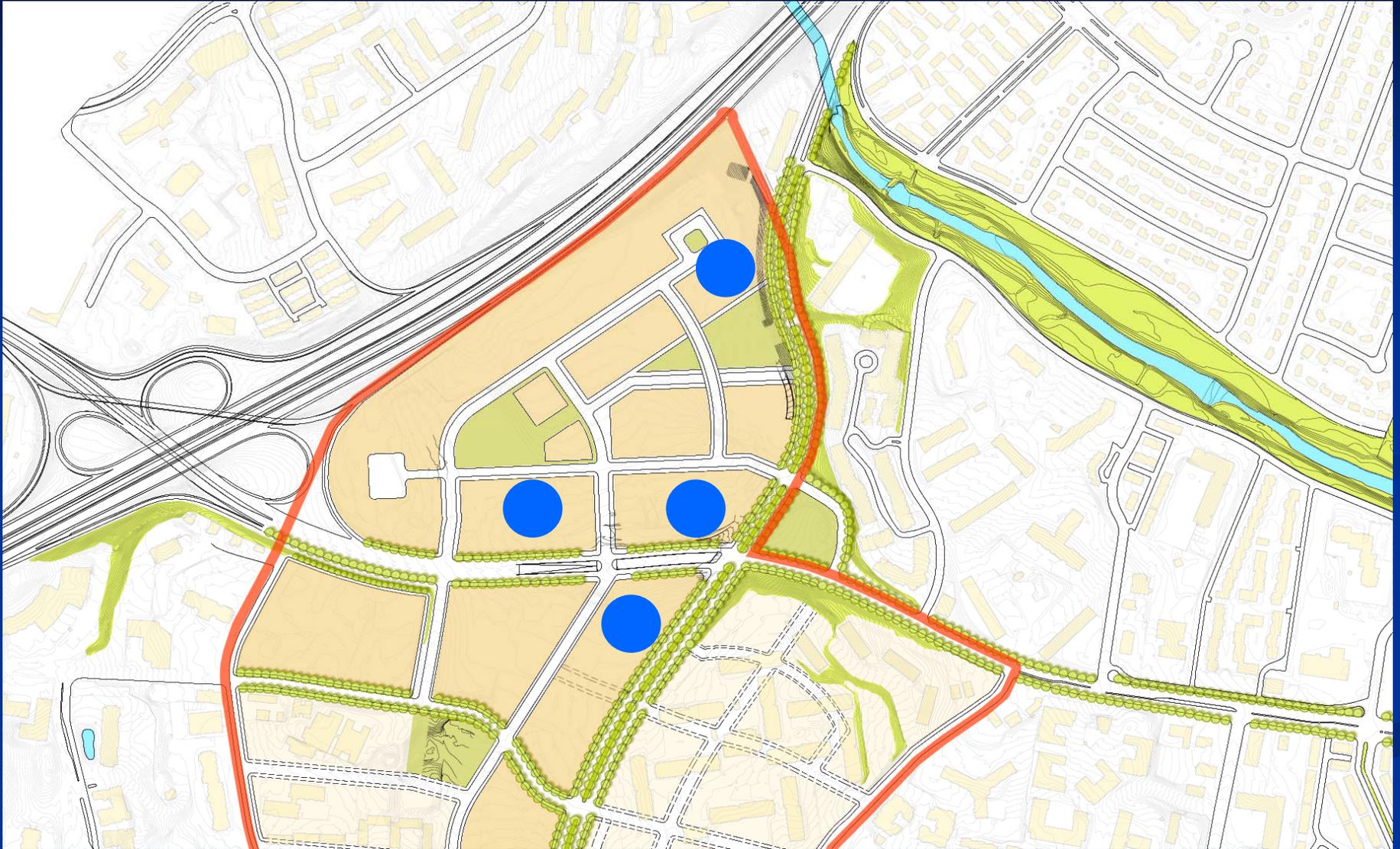


Transit Transfer Center: Location

➤ Options

- ✓ Southeast edge of mall (northwest corner of Duke St. and Van Dorn St.)
- ✓ Behind mall (near I-395 at Duke Street)
- ✓ Main commercial street of redeveloped mall site
- ✓ Northeast edge of BJ's parking lot (southwest corner of Duke St. and Van Dorn St.)

Transit Transfer Center: Location



Transit Transfer Center: Location

| Location | Advantages | Disadvantages |
|------------------------------------|--|--|
| Southeast edge of mall | <ul style="list-style-type: none">■ Creates pedestrian activity at street edge■ Supportive owner | <ul style="list-style-type: none">■ Adds turning movements at busy location |
| Behind mall | <ul style="list-style-type: none">■ Minimizes impact on other uses■ “Hides” the parking | <ul style="list-style-type: none">■ Longest travel distance for transit■ Disconnected from community |
| New main commercial street | <ul style="list-style-type: none">■ Directly serves West End Town Center, no need for local circulator■ Supportive owner | <ul style="list-style-type: none">■ Adds turning movements at busy location■ Furthest from land uses south of Van Dorn Street |
| Northeast edge of BJ’s parking lot | <ul style="list-style-type: none">■ Adds turning movement where capacity is available■ Closest to existing residential■ Creates pedestrian activity at street edge | <ul style="list-style-type: none">■ Existing land use has no currently plan to relocate |

May vary based on roadway network configuration.

Transportation Demand Management

- Strategies to maximize the efficiency of the complete transportation system by influencing travel behaviors:
 - ✓ Mode
 - ✓ Frequency
 - ✓ Time of trip
 - ✓ Route of trip
 - ✓ Trip length

- TDM strategies typically include:
 - ✓ managing parking and pricing
 - ✓ marketing transit and providing commuter subsidies
 - ✓ promoting walking, bicycling and ridesharing
 - ✓ encouraging telework and flexible work strategies

Transportation Demand Management

➤ Right Size Parking:

- ✓ Tailor off-street parking requirements to encourage use of the multi-modal transportation system and reduce use of single occupancy vehicles, where feasible
- ✓ Result of requiring fewer parking spaces can translate into available funding for desired amenities.
- ✓ Manage on-street parking using price, time, and by context
- ✓ Shared parking uses less land
- ✓ Unbundling cost of parking

Right Size Parking

| | <u>Typical Minimum Requirements</u> | <u>'Tailored' Minimum Requirements</u> | <u>Abolish Minimum Requirements</u> | <u>Set Maximum Requirements</u> |
|----------------------|---|---|---|--|
| Typical Tools | <ul style="list-style-type: none"> ■ Requirement > Average Demand ■ Hide all parking costs | Adjust for: <ul style="list-style-type: none"> ■ Density ■ Transit ■ Mixed Use ■ 'Park Once' District ■ On-street spaces | <ul style="list-style-type: none"> ■ Market decides ■ Garages funded by parking revenues ■ Manage on-street parking ■ Residential pkg permits allowed by vote | <ul style="list-style-type: none"> ■ Limit parking to road capacity ■ Manage on-street parking ■ Market rate fees encouraged/required |
| Traffic | High | ← | | → Low |
| Housing Costs | High | ← | | → Low |
| Pollution | High | ← | | → Low |

Transportation Demand Management

- District-wide Transportation Management Plan
 - ✓ Would include all existing and future land uses in this Study Area
 - ✓ TMA Coordinator
 - ✓ On-going monitoring and evaluation
 - ✓ Effectiveness based on travel characteristics of residents and employees
 - ✓ Coordinator adjusts strategies based on results
 - ✓ Current City policy is to encourage TDM districts (recently implemented in the Braddock Road Plan)

Transportation Demand Management

➤ TDM Tools and Strategies

- ✓ Broker parking to maximize utilization between uses
- ✓ Create district-wide parking cash-out program
- ✓ Bulk purchases of transit passes
- ✓ Consolidate and operate circulators to coordinate schedules and maximize efficiency
- ✓ Coordinate carpooling and Guaranteed Ride Home
- ✓ Clearinghouse for travel information (transit, bike storage, carpool, Guaranteed Ride Home)

TMA Example

➤ Lloyd District TMA (Portland, OR)

✓ 2015 Modal Share Targets:

- 42% transit
- 33% drive alone
- 10% rideshare
- 5% walk
- 10% bike

✓ Major Programs:

- LDTMA PASSport annual transit pass program
- Commuter Connection Transportation Store
- District bike locker program
- District pedestrian infrastructure fund
- Policy, advocacy, outreach, and educational events

Achievable Goals for Modal Shares

➤ Assumptions

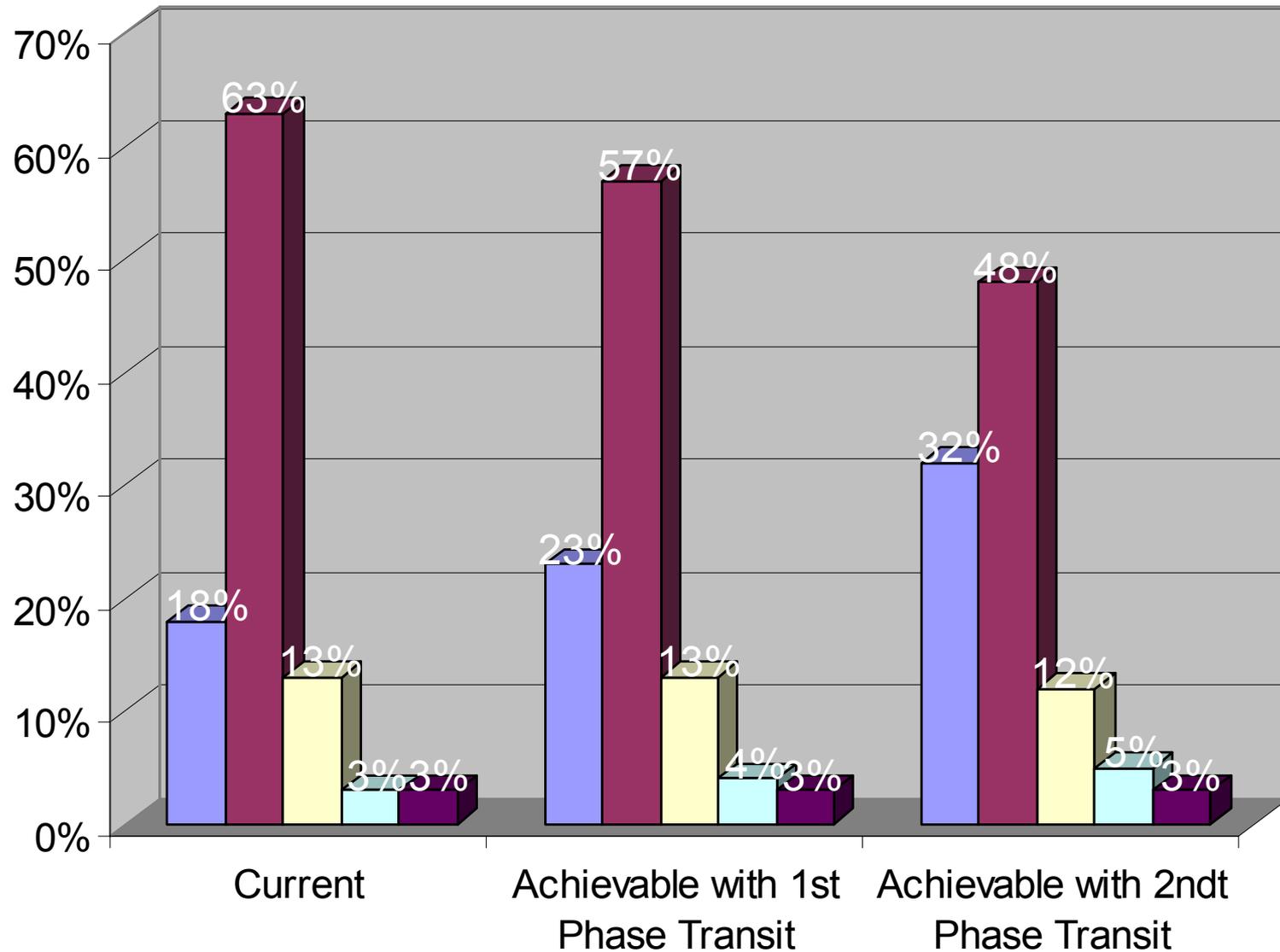
√ 1st Phase:

- Increases frequency and span of service
- Modern shelters with pedestrian improvements
- No dedicated lanes
- District-wide TMA Coordinator for new commercial and office developments

√ 2nd Phase:

- BRT or LRT in dedicated lanes
- Information technology at all stations/stops
- District-wide TMA Coordinator for all new developments

Achievable Goals for Modal Shares



■ Transit ■ Drive Alone ■ Rideshare ■ Walk ■ Bike and Other

Next Steps

- Finalize goals, principles – 21 July
- Traffic analysis results – Mid August
- Finalize transportation solutions –September
 - West Town Center/Duke Street
 - Transit infrastructure and policy
 - Transportation Demand Management
 - Street grid
 - Pedestrian and Bike networks
 - Multimodal bridge.
- Draft Transportation Element including implementation and phasing plan – September