

**PLANNING AND DEVELOPMENT DEPARTMENT MEMORANDUM  
#15-2019**

**DATE:** February 25, 2019  
**TO:** Honorable Mayor Carol Dodge and City Council Members  
**THROUGH:** Heather Geyer, City Manager *HG*  
**FROM:** Brook Svoboda, Director of Planning and Development *BS*  
Ashley Kaade, Senior Planner *AK*  
**SUBJECT:** CR-22 – 120<sup>th</sup> Avenue Subregional TIP Application

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**PURPOSE**

To approve CR-22 affirming the City's commitment to provide 20 percent local match for the 120<sup>th</sup> Avenue Adams County Subregional Transportation Improvement Program (TIP) project.

**BACKGROUND**

For the 2020-2023 TIP funding cycle, the Denver Regional Council of Governments (DRCOG) created Subregional Forums at the county level to distribute the subregional share of available federal transportation dollars. The Adams County Subregional Forum is responsible for allocating \$32.933M through a competitive process for projects within and/or benefitting Adams County. Applications for funding consideration are due February 27, 2019. Project sponsors are required to provide a minimum of 20 percent local match.

In August 2015, the City of Northglenn completed the 120<sup>th</sup> Avenue Corridor Study, included as Attachment 1, to determine recommended ultimate improvements to 120<sup>th</sup> Avenue between Washington St. and Claude Ct. in anticipation of the new rail transit station, the eventual redevelopment of Karl's Farm and the potential development of other vacant properties in the area. The study recommendations, which provide the basis for the City's Subregional TIP application, include the following project components:

- Widen 120th Avenue from two to three lanes in each direction from Washington St. to Claude Ct.
- New right and left turn lanes at intersections
- Modify or replace four existing traffic signals and add one new traffic signal at Race Street
- Widen median and install pedestrian refuge at Irma Drive
- 10' wide multi-use trail, where possible, on both north and south sides
- Drainage improvements

The City of Thornton also has plans to widen an adjacent stretch of 120<sup>th</sup> Avenue to a three-lane cross-section on the southern side heading eastbound from Northglenn project limits to slightly east of the old railroad tracks. Thornton has agreed to partner on the TIP application submission and provide 20 percent of the cost of its portion of the project for local match.

The City retained consultant Felsburg Holt & Ullevig (FHU) to update the 2015 study project cost estimate and assist with the Subregional TIP application. The updated cost estimate is provided as Attachment 2. The 2019 project cost estimate reflects construction inflation, inclusion of an environmental study and sound wall mitigation, and addition of the City of

Thornton portion of the project. It is important to note the final cost of the project in the application will likely be slightly increased to account for inflation in later project years.

The following provides a summary of approximate project costs and local match commitments.

Total Project Cost: ~\$18.9M  
Total Local Match Required: ~\$3.8M

#### Local Match Breakdown

City of Northglenn Commitment: ~\$3.65M  
City of Thornton Commitment: ~\$165,000

#### Northglenn Commitment Considerations

Previously Identified in CIP, Budget Year 2020: \$500,000  
Potential Private Developer Contribution (Karl's Farm): ~\$1.8M  
Remaining Gap: ~\$1.35M

The 120<sup>th</sup> Avenue project is the most expensive among a list of potential projects which are expected to be submitted for Adams County Subregional funding consideration. There is potential that the Forum may offer to fund the project at a lesser amount. At this time, it is important for Council to be aware of the possibility; however, it is not feasible to anticipate where the project will fall in terms of score and available funding. Staff will engage Council for additional feedback if this scenario occurs.

If Council chooses not to move forward with the Subregional TIP application, or if the project is not selected for funding, the private developer for the Karl's Farm redevelopment will be responsible for installing improvements directly related to its site, which includes widening 120<sup>th</sup> Avenue west-bound along its frontage and installing new turn lanes and a new traffic signal at Race Street.

#### **STAFF RECOMMENDATION**

Attached to this memorandum is a proposed resolution which, if approved, would affirm the City's commitment to provide a 20 percent local match for the 120<sup>th</sup> Avenue Adams County Subregional TIP project. Staff recommends approval of this proposed resolution.

#### **BUDGET/TIME IMPLICATIONS**

The Adams County Subregional Forum will make project recommendations in March. Various DRCOG Boards will approve projects in April and May 2019 and the final TIP will be adopted between June and August 2019.

If the 120<sup>th</sup> Avenue project is selected to receive Subregional TIP funding, the City would begin expending funds for its local match in Budget Year 2020. The City's portion of the local match would be paid from the Capital Projects Fund using the 4.000 Mill Levy Property Tax funding that is restricted for road reconstruction projects. The project would disburse funding in Budget Years 2020-2023.

#### **STAFF REFERENCE**

If Council members have any comments or questions they may contact Brook Svoboda, Director of Planning & Development, 303.450.8937, [bsvoboda@northglenn.org](mailto:bsvoboda@northglenn.org).

**ATTACHMENTS**

1. 120<sup>th</sup> Avenue Corridor Study
2. 2019 Update Project Cost Estimate

CR-22 – 120<sup>th</sup> Avenue Subregional TIP Application

# 120TH AVENUE CORRIDOR STUDY WASHINGTON STREET TO CLAUDE COURT

## CITY OF NORTHGLENN



AUGUST 2015

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## INTRODUCTION

This study was commissioned to determine recommended ultimate improvements to 120th Avenue between Washington Street and Claude Court in anticipation of the new rail transit station at East Lake, the eventual re-development of Karl's Farm and the potential development of other vacant properties in the area. The City of Northglenn seeks a safe and efficient roadway facility that provides for appropriate access to adjacent properties, presents a pleasing pedestrian and driver experience and maintains an overall roadway "character" consistent with prior planning efforts for the City's arterial corridors.

## TRAFFIC

A traffic study was conducted to determine the future traffic demand expected on 120th Avenue. The focus of this study was to estimate the potential trip generation and distribution of those new trips from the current undeveloped area north and east of Washington Street and 120th Avenue bounded on the north 128th Avenue and on the east by the Claude Court. Working with the Community Development staff, a land use scenario was developed for roughly 220 acres of undeveloped property including Karl's Farm within this area. Assuming this land use scenario, a total trip generation estimate was prepared. The trip generation analysis assumed full build out of the 960 parking spaces planned by RTD at the East Lake Transit Station. Through conversation with City staff, a general trip distribution and resulting trip assignment was made to a proposed roadway network within the same area. The emphasis was directing traffic to 120th Avenue via either Irma Drive or Race Street. Claude Court was assumed to be a "non-through" street to 124th Avenue.

To determine future (2034) "background" traffic, a nominal growth rate was applied to existing traffic volumes obtained from traffic counts conducted as part of this study. The estimated total traffic demand is the sum of the new trips, assigned to the network, plus the future (2034) "background" traffic. Using total traffic demand, the operational character of the existing 120th Avenue roadway was then checked and improvements designed to:

- Create a consistent six lane cross section from west of Washington Street to east of the railroad tracks.
- Respond to the turning movement demand on and off of 120th Avenue at Washington Center Parkway, Irma Drive, Race Street and Claude Court by identifying required auxiliary (right turn and left turn) lane requirements.

Recommendations for signal synchronization were also included to improve the efficiency of 120th Avenue to accommodate the through traffic.

The proposed concept plan is shown at the end of this report.

The results of this detailed analysis are presented in the Appendix and summarized below:

Figure 1 - Intersection Level of Service  
2034 Traffic Conditions

Intersection	Intersection Level of Service (LOS)			
	2034 Traffic Conditions			
	AM Peak		PM Peak	
	Roadway Geometry			
	Existing	Improved	Existing	Improved
Washington Center Parkway	C	A	F	C
Irma Drive	F	C	F	C
Race Street	D	B	E	C
Claude Court	E	C	F	C

## DRAINAGE

### 1.0 GENERAL LOCATION AND SITE DESCRIPTION

This report represents a Conceptual Drainage Report for the reconstruction and widening of 120th Avenue from Washington Street to east of Claude Court (railroad tracks) in Northglenn, Colorado. 120th Avenue is currently a four/six lane minor arterial that will be reconstructed and/or widened to a six lane divided arterial roadway. 120th Avenue is primarily surrounded by residential property and housing on the south and commercial properties on the north.

Although no major drainage ways or facilities are present in the area, the present flows are conveyed northerly on Race Street to a channel located southerly of the City of Northglenn's maintenance facility. The drainage area associated with 120th Avenue is very linear and is roughly south to 119th Avenue north to the north right-of-way (ROW) line of 120th Avenue. According to FEMA flood maps, this site is not located in a flood hazard area.

Proposed construction includes widening 120th Avenue and installing storm sewers to accommodate the 10-year event from the tributary drainage area. Flows exceeding the capacity of the system will be conveyed by the street section. This report has been prepared with the assumption that surrounding and contributing land (south of 120th Avenue) will remain as currently developed (2015). Likewise, it is assumed that any future development will also include adequate on-site detention to reduce the discharges to the current existing conditions with a runoff coefficient equal to existing and as shown in the drainage calculations found in the Appendix.

### 2.0 DRAINAGE FACILITY DESIGN

The hydrologic analysis and hydraulic design for the site is based on criteria established in the Northglenn Storm Drainage Design and Technical Criteria Manual. The Rational Method was used to calculate peak runoff rates during the 10-year storm event. 100-year peak runoffs were also calculated and are found in the tables in the Appendix. Street inlets were also sized based on the 10-year flows and were sized based on curb opening inlets similar to CDOT Type R inlets.

Final pipe sizes and slopes will be finalized during the Preliminary and Final Design processes. Potholes of utilities will also be used to determine the final design.

Water quality for this project will be provided by a regional water quality facility that will likely be part of a regional storm water detention facility. Neither the sizing nor the design of either the regional water quality facility or the regional storm water detention facility is being developed as part of this conceptual design.

The existing storm sewer is primarily corrugated metal pipe (CMP). The life of the pipe has likely been reached and should be replaced before failure of the pipes begins to occur. Reinforced concrete pipe (RCP) is the selected replacement pipe type due to it being longer lasting and is more hydraulically efficient due to its relatively smooth interior, especially compared to CMP. The outfall in Race Street north is believed to be CMP as well and should be replaced with the reconstruction of the street.



## DRAINAGE

### 3.0 CONCEPTUAL DRAINAGE FACILITY SYSTEM

The primary drainage outfall system is located on the south side of 120th Avenue. The south side was selected for several reasons: the largest contributing drainage area is south of 120th Avenue and the number of inlets is greatest on the south and minimizes inlet cross pipe sizes; the increased number of inlets on the outfall side allows the most opportunities to adjust pipe slopes and depths; a large portion of the existing drainage system is on the south and reconstruction will likely be easier in a corridor already constructed around an existing storm sewer system; and lastly the existing utilities, including the existing irrigation system, are currently located around the existing storm sewer system.

The generalized conceptual storm sewer system is as follows based on the north-south street grid:

#### Washington St. to Sylvia Dr.

- Q10 = 18 cfs, Q100 = 30.4 cfs
- Street Slope = 2%
- 10-yr. Pipe = 21" RCP

#### Irma Dr. to Race St.

- Q10 = 46.6 cfs, Q100 = 77.9 cfs
- Street Slope = 0.18%
- 10-yr. Pipe = 42" RCP

#### Sylvia Dr. to Washington Ctr.

- Q10 = 26.4 cfs, Q100 = 44.5 cfs
- Street Slope = 1.6%
- 10-yr. Pipe = 24" RCP

#### Race St. to Claude Ct.

- Q10 = 9.9 cfs, Q100 = 16.5 cfs
- Street Slope = 3.1%
- 10-yr. Pipe = 30" RCP

#### Washington Ctr. to Lafayette St.

- Q10 = 33.4 cfs, Q100 = 56.2 cfs
- Street Slope = 1.6%
- 10-yr. Pipe = 30" RCP

#### Claude Ct. East to Railroad

- Q10 = 21.3 cfs, Q100 = 38.7 cfs
- Street Slope = 3%
- 10-yr. Pipe = 30" RCP

#### Lafayette St. to Irma Dr.

- Q10 = 39.4 cfs, Q100 = 66.2 cfs
- Street Slope = 0.3%
- 10-yr. Pipe = 36" RCP

## ROADWAY IMPROVEMENTS

The current roadway section varies where generally, there are two through lanes eastbound and three through lanes westbound starting just west of Irma Drive. In the eastbound direction the section narrows to two lanes with the lane drop at Sylvia Drive. It remains a two lane section eastbound until east of the railroad where, in Thornton, it changes to a 3 lane section.

The alignment was designed to use the north curb line along the Washington Center shopping complex (within Thornton). This places the centerline (the project control line) slightly south of the center of the right-of-way. The exception is at Washington Center Parkway where a right turn is recommended. A right turn lane at Lafayette Street is not shown in this design but could be considered during the preparation of the preliminary/final design.

An intersection or access point for the proposed Karl's Farm is not recommended or shown. Access to the future development of the Karl's Farm property is recommended to be focused to and from the collector street network of Irma Drive on the west, Race Street to the east, or to a potential future street between Irma Drive and Race Street approximately on the 122nd Avenue alignment. Connections to Irma Drive and Race Street should be a minimum of 500 feet north of 120th Avenue. An intersection or access point for the proposed Karl's Farm directly to 120th Avenue is not recommended or shown on the Concept Plan.

Salient features of the proposed roadway include:

**Section:** 6-lane major arterial section with raised medians and turn lanes at major crossing roadways. Right turn lanes are recommended at each crossing public street. Double left turn lanes (eastbound to northbound) are recommended at Washington Center Parkway, Irma Drive and Race Street. The following design criteria is recommended:

- Design speed = 50 mph (posted speed = 45 mph)
- Through lanes = 12 feet
- Turn lanes (right and left) = 11 feet
- Outside gutter = 2 feet
- Median gutter = 1 foot
- Side Streets = 11 feet

**Traffic Control:** the design will replace or modify four signals (Washington Center Parkway, Irma Drive and Claude Court) and install one new signal (at Race Street). The signal control for intersections along 120th is recommended to be an eight phase, coordinated system. Generally, it is recommended that a protected only phase be provided where there are double left turns. Final design should consider the phase treatments for the other turning movements.

**ROW:** The design presented avoids taking of additional right-of-way. However, there are several locations within the corridor (the southwest corner of Irma Drive and the southwest corner of Claude Court) that right-of-way is limited. Should the shopping center (and the City of Thornton) wish to provide a westbound to northbound right turn lane at Washington Center Parkway (or Lafayette Street), new right-of-way will be needed. Temporary easements thought out the project will be needed during construction.

**Utilities:** *The utilities that exist in the corridor include:*

- |                                          |                                        |
|------------------------------------------|----------------------------------------|
| • Xcel Energy (electric)                 | • Water                                |
| • Xcel Energy (gas)                      | • Telephone (underground)              |
| • The East Lake Ditch (City of Thornton) | • Fiber Optics (underground) – 2 lines |
| • The Union Ditch (City of Thornton)     | • Storm Sewer                          |



## LANDSCAPE

**Lighting:** Lighting is currently provided on both the north and south sides of 120th Avenue along then entire corridor. The Xcel standard “cobra head” fixtures are currently installed. There is the desire to create a metered system along 120th Avenue where the City owns and controls this system.

The concept plan unifies landscape treatments from Washington Street to Claude Court with an emphasis on xeriscape plantings and rock mulch. Irrigated turf areas are minimized to reduce water consumption and maintenance activities. Canopy trees bordering the street particularly along the residential sections help to reduce traffic noise, make the trail more comfortable with increased shade and provide a psychological buffer between the vehicular and pedestrian/bicycle traffic.

## PEDESTRIAN TREATMENTS

**Walkways:** Where possible, a 10’ wide trail to provide continuous pedestrian connections on both the south and north sides of 120th Avenue is incorporated. Intermittent benches and directional signage to recreational and other important regional landmarks is included. The irrigation canal may either need to be placed in a conduit or contained by retaining walls in order to maintain the 10 foot multi-use trail section.

**Crossings:** A major crossing for bicycle and pedestrian movements is incorporated at Irma to encourage safer and more direct access between the south and the north properties. The eastern leg of 120th Avenue at Irma Drive contains a widened median to provide a refuge. A pedestrian crossing button should be provided so as to not trap pedestrians/bicyclist in the median area. The Race Street intersection is a secondary node for bicycle and pedestrian features.

**Bicycles:** Due to the nature of the arterial with its high traffic volume, an on-street bike lane is not included in the design. Instead, a combined multi-use 10’ wide trail with pavement markings to delineate directional flow will be provided. In some isolated areas, the open irrigation ditch will need to be covered or contained by retaining walls in order to accommodate this widened trail section.

## CONSTRUCTION COSTS



**Engineer's Estimate of Probable Cost and Quantities**

McIntyre Street: W. 44th Avenue to W. 54th Avenue

City of Northglenn Costs Only

Date: May 31, 2015

120th Avenue from Washington St. to East of Claude Ct. (Railroad)

Item No.	Description	Unit	Estimated Quantity	Unit Cost	Extented Cost
201	Clearing and Grubbing	LS	1	\$100,000.00	\$100,000.00
202	Removal of Pipe	LF	0	\$20.00	\$0.00
202	Removal of Concrete/Asphalt Median Cover	SY	10200	\$12.00	\$122,400.00
202	Removal of Sidewalk	SY	5700	\$32.00	\$182,400.00
202	Removal of Curb and Gutter	LF	22200	\$5.00	\$111,000.00
202	Removal of Asphalt Mat	SY	38100	\$4.50	\$171,450.00
202	Removal of Asphalt Mat (Planing)	SY	500	\$3.25	\$1,625.00
202	Removal of Pavement Markings	SF	1000	\$2.00	\$2,000.00
202	Removal of Ground Sign	EACH	20	\$103.00	\$2,060.00
202	Removal of Traffic Signal Equipment (Intersection)(CIP)	LS	1	\$5,000.00	\$5,000.00
203	Unclassified Excavation (CIP)	CY	3100	\$10.50	\$32,550.00
203	Potholing	HOURL	120	\$250.00	\$30,000.00
208	Erosion Control Temporary	LS	1	\$250,000.00	\$250,000.00
210	Reset Ground Sign	EACH	20	\$240.00	\$4,800.00
210	Adjust Manhole	EACH	20	\$625.00	\$12,500.00
210	Adjust Valve Box	EACH	40	\$475.00	\$19,000.00
214	Landscaping Restoration and Irrigation System Restoration	LS	1	\$6,500.00	\$6,500.00
304	Aggregate Base Course (Class 6)	CY	3100	\$22.00	\$68,200.00
306	Reconditioning	SY	38100	\$4.30	\$163,830.00
403	Hot Mix Asphalt (Grading SX) (75) (PG 64-22)(2")	TON	4300	\$85.00	\$365,500.00
403	Hot Mix Asphalt (Grading S) (75) (PG 64-22) (10")	TON	20100	\$75.00	\$1,507,500.00
403	Hot Mix Asphalt (Patching) (Asphalt)	TON	600	\$200.00	\$120,000.00
411	Emulsified Asphalt (Slow Setting)	GAL	5000	\$3.00	\$15,000.00
504	Landscaping, Median and Pedestrian Treatments	LS	1	\$650,000.00	\$650,000.00
603	18 Inch Reinforced Concrete Pipe (CIP)	LF	936	\$91.00	\$85,176.00
603	24 Inch Reinforced Concrete Pipe (CIP)	LF	620	\$120.00	\$74,400.00
603	30 Inch Reinforced Concrete Pipe (CIP)	LF	1670	\$140.00	\$233,800.00
603	36 Inch Reinforced Concrete Pipe (CIP)	LF	408	\$160.00	\$65,280.00
603	42 Inch Reinforced Concrete Pipe (CIP)	LF	1250	\$185.00	\$231,250.00
604	Inlet Type R L 10 (5 Foot)	EACH	7	\$4,500.00	\$31,500.00
604	Inlet Type R L 10 (10 Foot)	EACH	9	\$5,500.00	\$49,500.00
604	Manhole Box Base (15 Foot)	EACH	1	\$7,000.00	\$7,000.00
608	Concrete Sidewalk (6 Inch)	SY	11100	\$39.50	\$438,450.00
608	Concrete Curb Ramp	SY	170	\$100.00	\$17,000.00
609	Concrete Curb & Gutter Type 2 (Section I-B)	LF	12900	\$16.00	\$206,400.00
609	Concrete Curb & Gutter Type 2 (Section II-B)	LF	9200	\$18.00	\$165,600.00
610	Median Cover Material (Patterned Concrete) (4 Inch)	SF	15300	\$7.00	\$107,100.00
613	3 Inch Electrical Conduit (Plastic)	LF	12200	\$16.00	\$195,200.00
613	Wiring (Signals)	LS	1	\$30,000.00	\$30,000.00
613	Wiring (Luminaires)	LS	1	\$244,000.00	\$244,000.00
613	Luminaire & 30' Pole	EACH	35	\$4,500.00	\$157,500.00
614	Modify Traffic Signal	EACH	4	\$300,000.00	\$1,200,000.00
614	Traffic Signal	EACH	1	\$350,000.00	\$350,000.00
620	Field Office Class 2	EACH	1	\$32,400.00	\$32,400.00
621	Detour Pavement (As Directed by Engineer)	SY	2000	\$34.00	\$68,000.00
625	Construction Surveying	LS	1	\$75,000.00	\$75,000.00
625	Mobilization	LS	1	\$500,000.00	\$500,000.00
629	Survey Monument (Type 3A)	EACH	10	\$730.00	\$7,300.00
630	Uniformed Traffic Control	HOURL	100	\$114.00	\$11,400.00
630	Construction Traffic Control	LS	1	\$400,000.00	\$400,000.00
630	Concrete Barrier (Temporary)	LF	500	\$32.50	\$16,250.00
630	Impact Attenuator (Sand Filled Plastic Barrel) (Temporary)	EACH	5	\$1,800.00	\$9,000.00
700	F/A Minor Contract Revisions	FA	1	\$250,000.00	\$250,000.00
700	F/A Asphalt Cement Cost Adjustment	FA	1	\$65,000.00	\$65,000.00
700	F/A Dewatering Pretreatment	FA	1	\$20,000.00	\$20,000.00
700	F/A Erosion Control	FA	1	\$75,000.00	\$75,000.00

Total: \$9,361,821.00  
 Concept Contingency (30%): \$2,809,000.00  
 Engineering(12%): \$1,405,000.00  
\$13,575,821.00

## ENVIRONMENTAL CONDITIONS/PERMITS

EST conducted a review of the potential environmental impacts that would be encountered during the course of this project.

Potential Significant Natural and Cultural Resources and/or Hazardous Material Conditions in the Project Areas

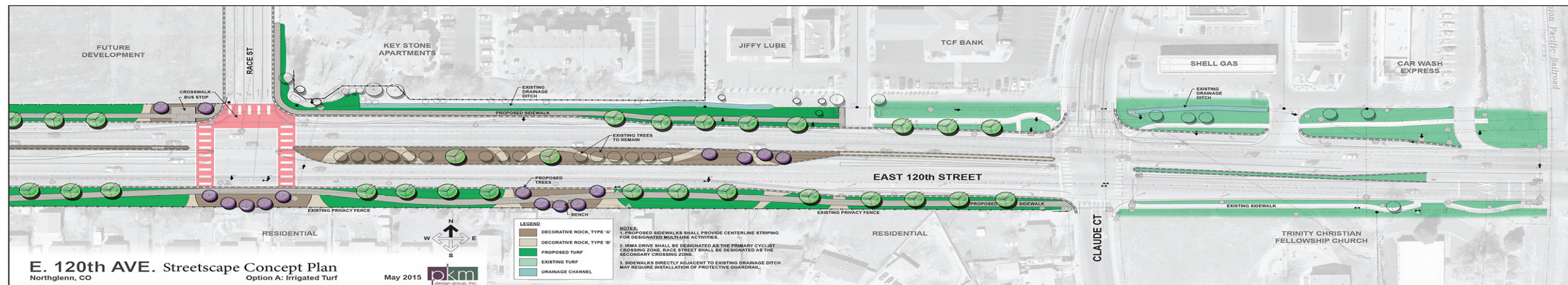
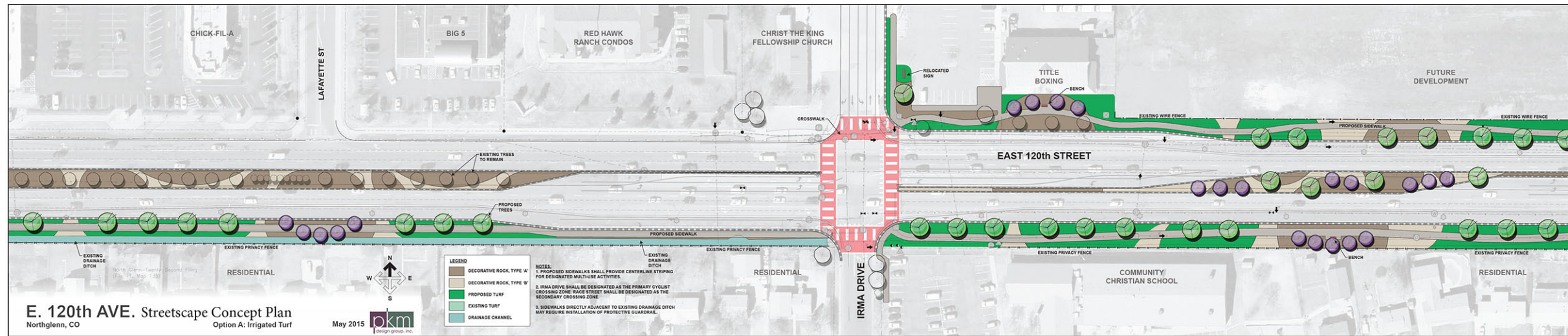
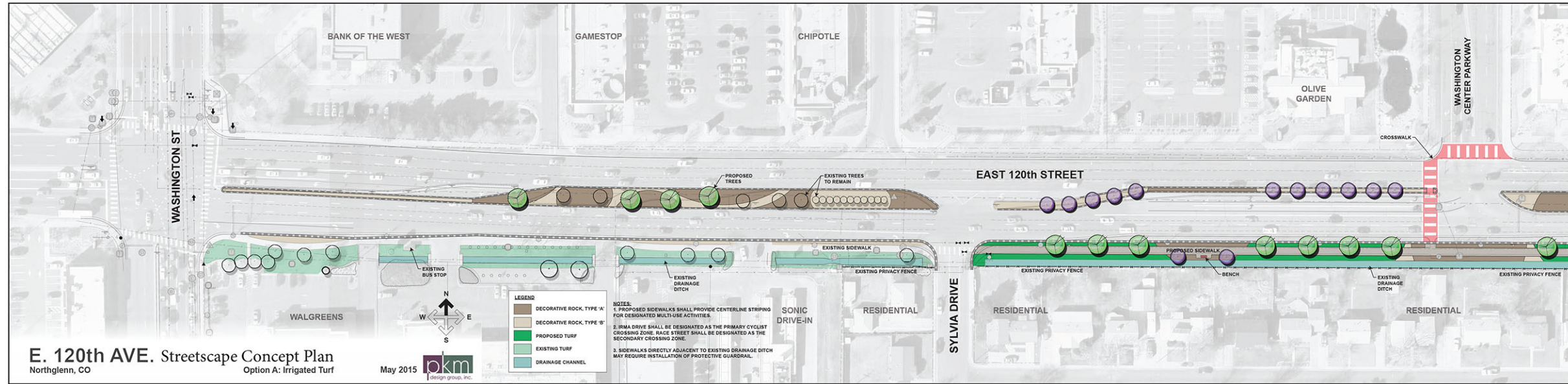
1. Irrigation Canal - cultural resource
2. Lead based paint
3. Contaminated soil or groundwater
4. Migratory birds
5. Prairie dog burrows- burrowing owl habitat
6. Wetlands/stream
7. Railroad tracks - cultural resource
8. T&E species habitat
9. Temporary closure of City parks or trails

A detailed discussion of these conditions is presented in the Appendix.

## CONCEPT LANDSCAPE & ROADWAY PLANS

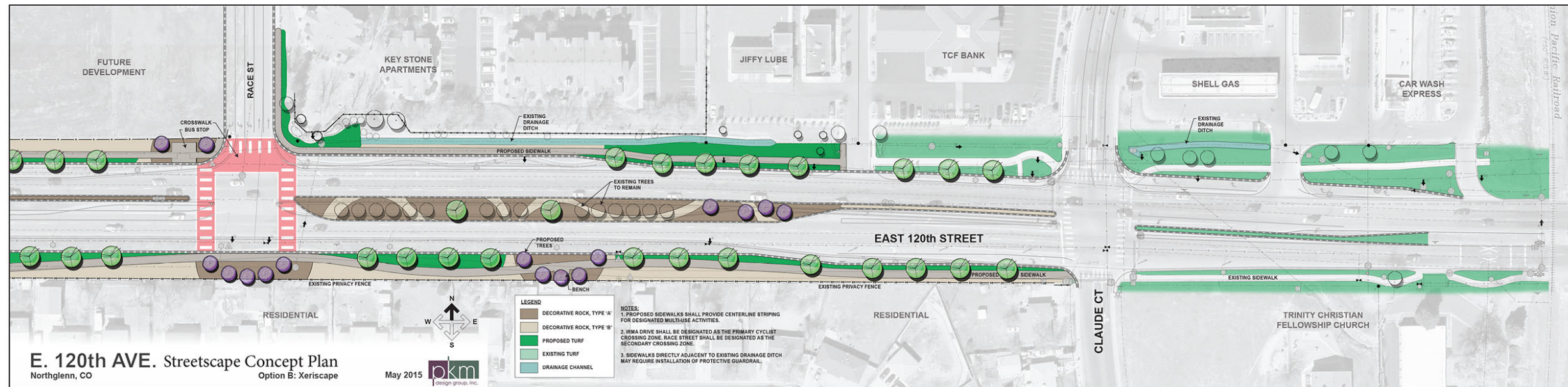
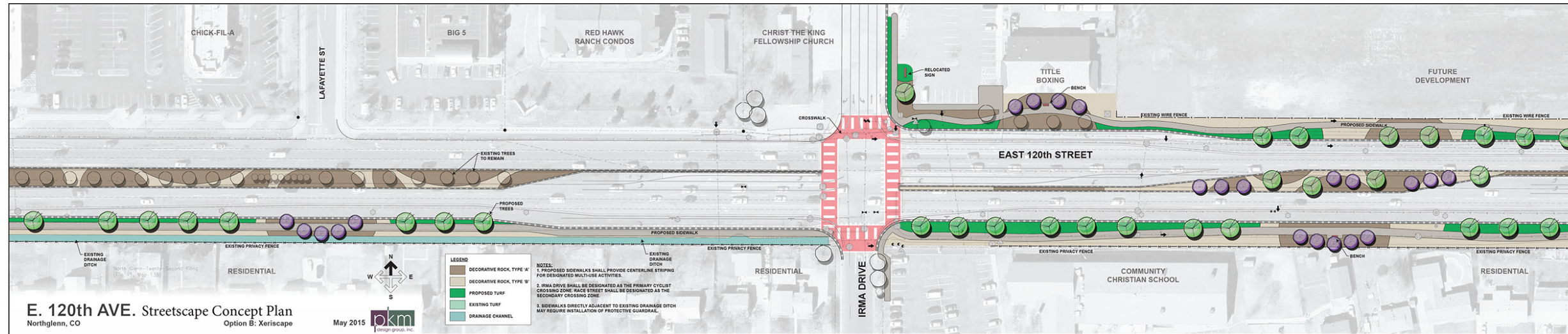
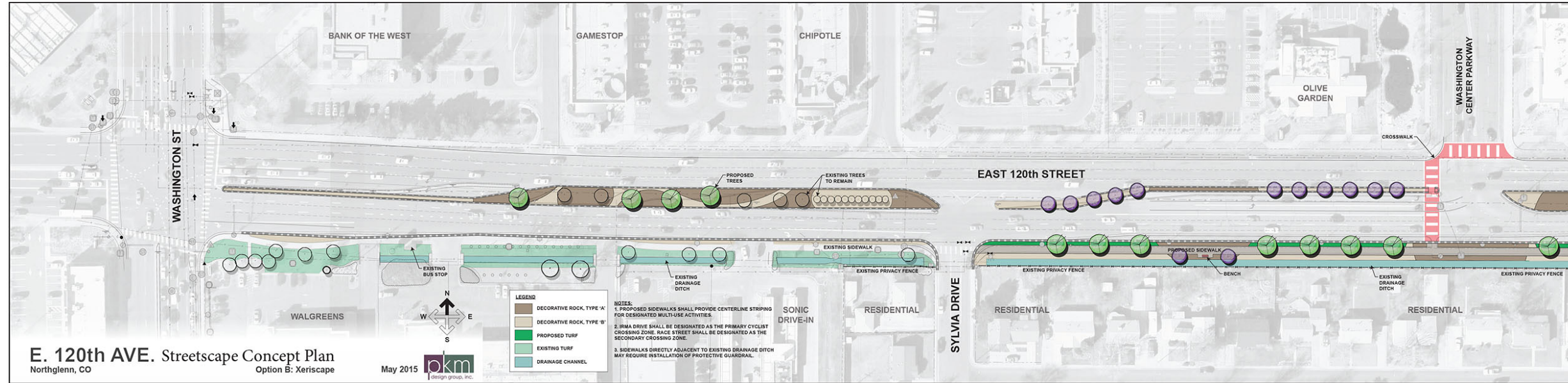


# CONCEPT LANDSCAPE PLANS



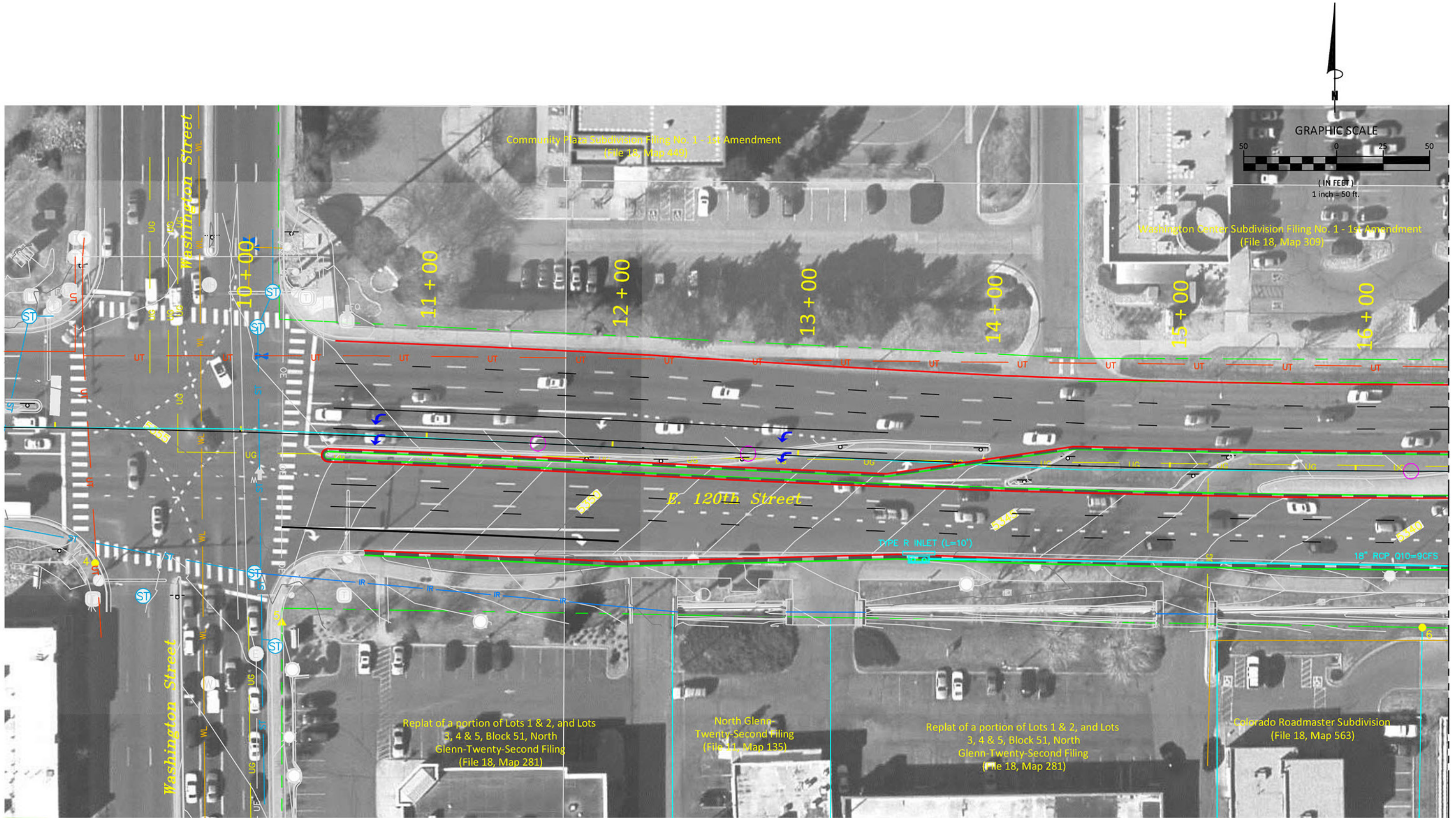


# CONCEPT LANDSCAPE PLANS



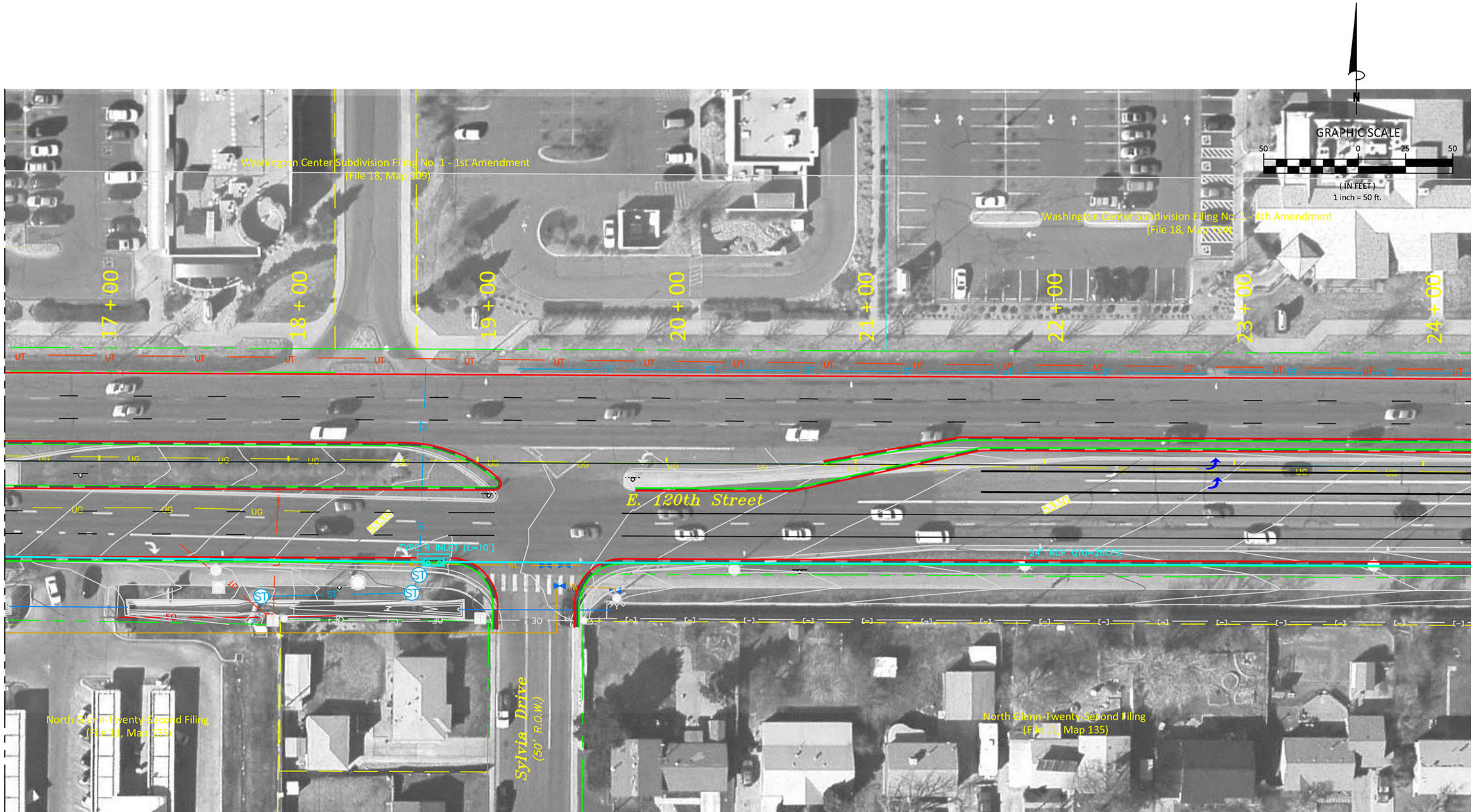


# CONCEPT ROADWAY PLANS



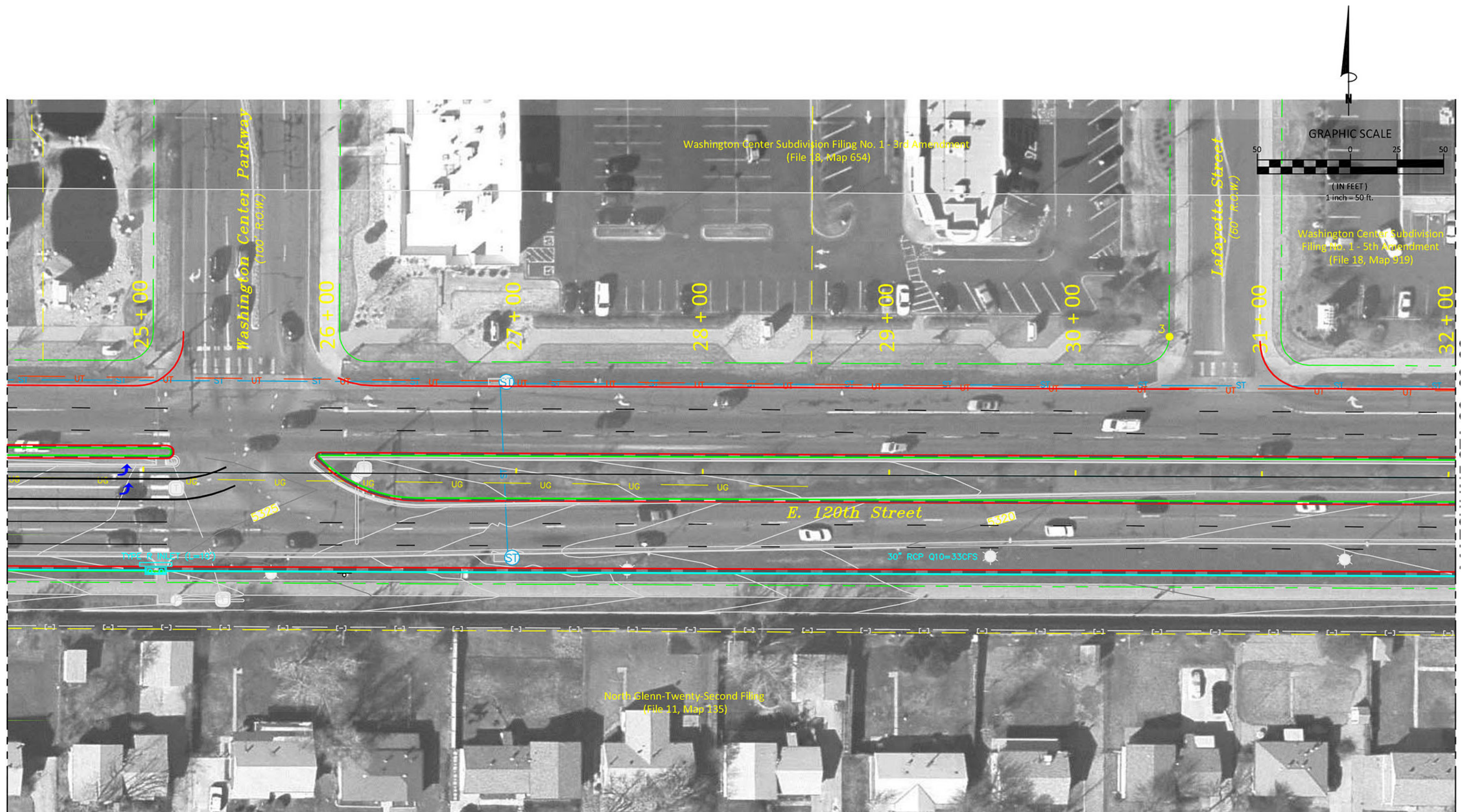


# CONCEPT ROADWAY PLANS





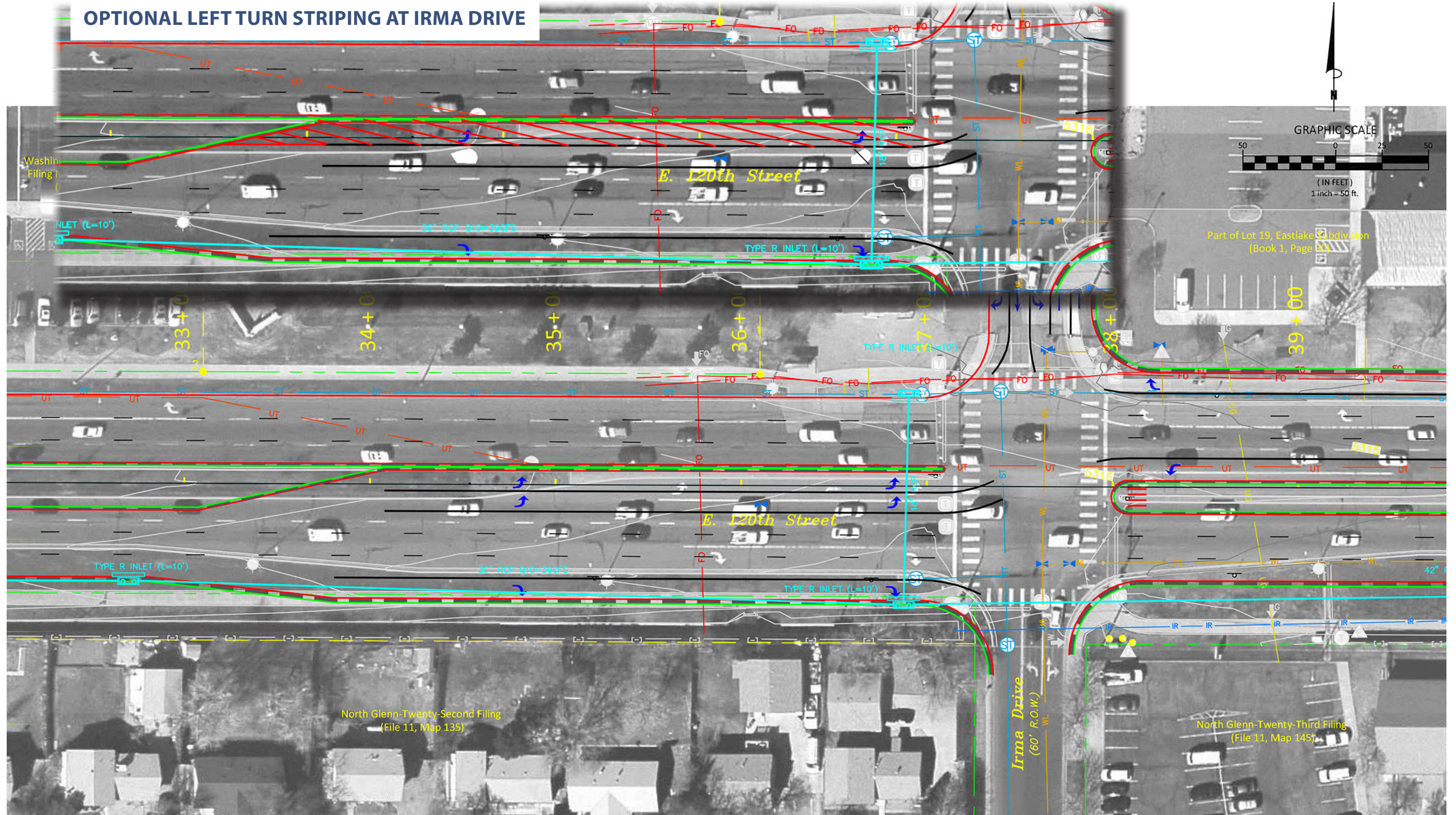
# CONCEPT ROADWAY PLANS





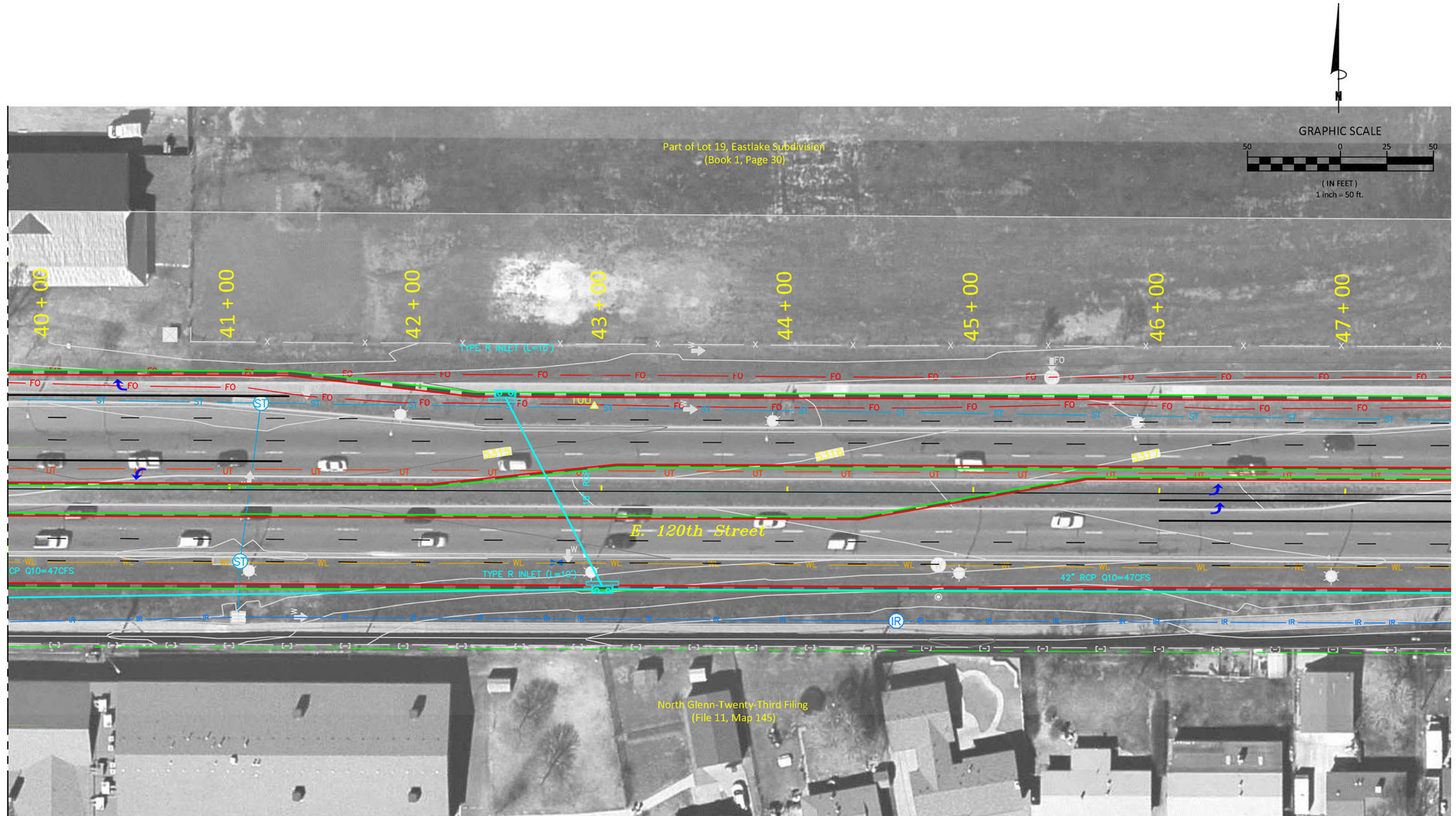
### CONCEPT ROADWAY PLANS

#### OPTIONAL LEFT TURN STRIPING AT IRMA DRIVE



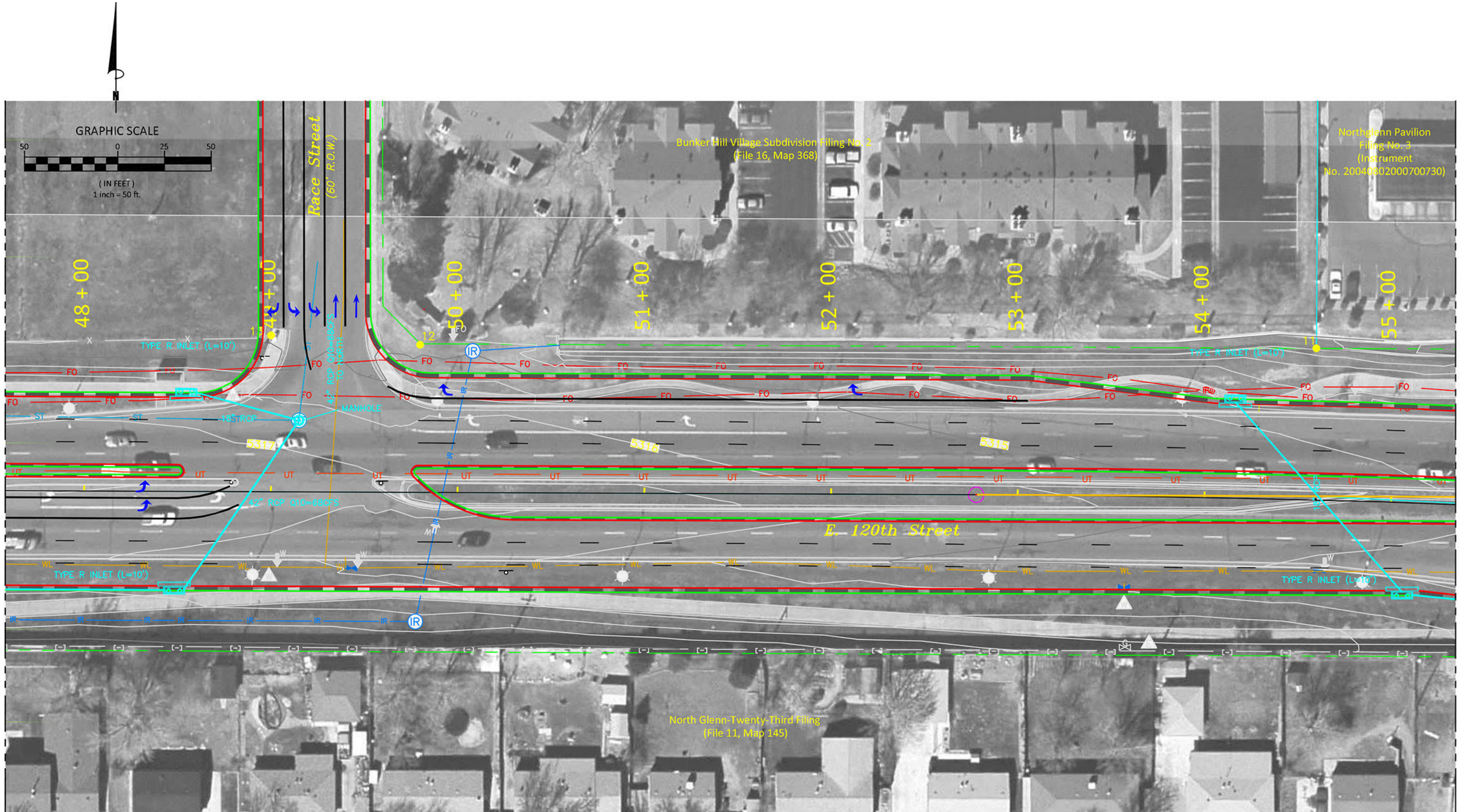


# CONCEPT ROADWAY PLANS





# CONCEPT ROADWAY PLANS





# CONCEPT ROADWAY PLANS





# CONCEPT ROADWAY PLANS





**Engineer's Estimate of Probable Cost and Quantities**  
**120th Avenue Subregional TIP Project**

Item No.	Description	Unit	Estimated Quantity	Unit Cost (edited)	Extended Cost
201	Clearing and Grubbing	LS	1	\$105,000.00	\$105,000.00
202	Removal of Pipe	LF	0	\$20.00	\$0.00
202	Removal of Concrete/Asphalt Median Cover	SY	10288	\$13.70	\$140,945.60
202	Removal of Sidewalk	SY	5738	\$34.60	\$198,534.80
202	Removal of Curb and Gutter	LF	22670	\$10.80	\$244,836.00
202	Removal of Asphalt Mat	SY	38100	\$7.40	\$281,940.00
202	Removal of Asphalt Mat (Planing)	SY	2900	\$2.50	\$7,250.00
202	Removal of Pavement Markings	SF	1000	\$0.60	\$600.00
202	Removal of Ground Sign	EACH	20	\$81.20	\$1,624.00
202	Removal of Traffic Signal Equipment (Intersection)(CIP)	LS	1	\$10,367.00	\$10,367.00
202	Removal of Type R Inlet - south side	EACH	1	\$1,400.00	\$1,400.00
203	Unclassified Excavation (CIP)	CY	3900	\$24.60	\$95,940.00
203	Potholing	HOUR	120	\$253.00	\$30,360.00
207	Subgrade Prep	SY	375	\$3.50	\$1,312.50
208	Erosion Control Temporary	LS	1	\$250,000.00	\$250,000.00
208	Erosion Bales	EACH	100	\$23.00	\$2,300.00
208	Silt Fence	LF	200	\$2.50	\$500.00
210	Reset Ground Sign	EACH	20	\$323.50	\$6,470.00
210	Reset Fire Hydrant	EACH	1	\$15,000.00	\$15,000.00
210	Adjust Manhole	EACH	20	\$872.00	\$17,440.00
210	Adjust Valve Box	EACH	40	\$359.00	\$14,360.00
212	Sod	SF	2000	\$3.50	\$7,000.00
214	Landscaping Restoration and Irrigation System Restoration	LS	2	\$6,500.00	\$13,000.00
214	Deciduous Tree	EACH	4	\$600.00	\$2,400.00
304	Aggregate Base Course (Class 6)	CY	3752	\$46.00	\$172,592.00
306	Reconditioning	SY	38100	\$4.50	\$171,450.00
403	Hot Mix Asphalt (Grading SX) (75) (PG 64-22)(2")	TON	4300	\$85.00	\$365,500.00
403	Hot Mix Asphalt (Grading SX) (75) (PG 64-22)(3")	TON	452	\$150.00	\$67,800.00
403	Hot Mix Asphalt (Grading S) (75) (PG 64-22)(4")	TON	85	\$150.00	\$12,750.00
403	Hot Mix Asphalt (Grading S) (75) (PG 64-22)(7")	TON	45	\$150.00	\$6,750.00
403	Hot Mix Asphalt (Grading S) (75) (PG 64-22) (10")	TON	19812	\$75.00	\$1,485,900.00
403	Hot Mix Asphalt (Patching) (Asphalt)	TON	650	\$200.00	\$130,000.00
411	Emulsified Asphalt (Slow Setting)	GAL	5000	\$3.50	\$17,500.00
504	Landscaping, Median and Pedestrian Treatments	LS	1	\$650,000.00	\$650,000.00
603	Retaining Wall	SF	700	\$50.00	\$35,000.00
603	18 Inch Reinforced Concrete Pipe (CIP)	LF	936	\$104.00	\$97,344.00
603	24 Inch Reinforced Concrete Pipe (CIP)	LF	635	\$168.00	\$106,680.00
603	30 Inch Reinforced Concrete Pipe (CIP)	LF	1670	\$166.00	\$277,220.00
603	36 Inch Reinforced Concrete Pipe (CIP)	LF	408	\$231.00	\$94,248.00
603	42 Inch Reinforced Concrete Pipe (CIP)	LF	1250	\$226.00	\$282,500.00
604	Inlet Type R L 10 (5 Foot)	EACH	8	\$6,700.00	\$53,600.00
604	Inlet Type R L 10 (10 Foot)	EACH	9	\$5,500.00	\$49,500.00
604	Inlet Type R - Raise Grade - North Side	EACH	1	\$4,500.00	\$4,500.00
604	Manhole Box Base (15 Foot)	EACH	1	\$7,000.00	\$7,000.00
607	Sound Barrier	SF	31520	\$45.00	\$1,418,400.00
608	Concrete Sidewalk (6 Inch)	SY	11380	\$77.00	\$876,260.00
608	Concrete Curb Ramp	SY	270	\$148.00	\$39,960.00
609	Concrete Curb & Gutter Type 2 (Section I-B)	LF	12900	\$34.50	\$445,050.00

**Engineer's Estimate of Probable Cost and Quantities**  
**120th Avenue Subregional TIP Project**

Item No.	Description	Unit	Estimated Quantity	Unit Cost (edited)	Extented Cost
609	Concrete Curb & Gutter Type 2 (Section II-B)	LF	10040	\$38.00	\$381,520.00
610	Median Cover Material (Patterned Concrete) (4 Inch)	SF	16460	\$19.00	\$312,740.00
611	Concrete Cross Pan	SF	72	\$56.00	\$4,032.00
613	3 Inch Electrical Conduit (Plastic)	LF	12200	\$22.00	\$268,400.00
613	Wiring (Signals)	LS	1	\$23,870.00	\$23,870.00
613	Wiring (Luminaires)	LS	1	\$277,620.00	\$277,620.00
613	Luminaire & 30' Pole	EACH	35	\$4,500.00	\$157,500.00
613	Locate Potholes	HOURL	10	\$300.00	\$3,000.00
614	Modify Traffic Signal	EACH	4	\$300,000.00	\$1,200,000.00
614	Traffic Siganl	EACH	1	\$350,000.00	\$350,000.00
619	6' Waterline	LF	150	\$150.00	\$22,500.00
620	Field Office Class 2	EACH	1	\$26,966.00	\$26,966.00
621	Detour Pavement (As Directed by Engineer)	SY	2000	\$77.00	\$154,000.00
625	Construction Surveying	LS	1	\$90,000.00	\$90,000.00
625	Mobilization	LS	1	\$500,000.00	\$500,000.00
627	Preformed Thermoplastic Pavement Marking	SF	80	\$16.50	\$1,320.00
629	Survey Monument (Type 3A)	EACH	10	\$978.00	\$9,780.00
630	Traffic Sign	EACH	4	\$200.00	\$800.00
630	Uniformed Traffic Control	HOURL	100	\$97.50	\$9,750.00
630	Construction Traffic Control	LS	1	\$450,000.00	\$450,000.00
630	Concrete Barrier (Temporary)	LF	500	\$40.00	\$20,000.00
630	Impact Attenuator (Sand Filled Plastic Barrel) (Temporary)	EACH	5	\$3,815.00	\$19,075.00
700	F/A Minor Contract Revisions	FA	1	\$250,000.00	\$250,000.00
700	F/A Asphalt Cement Cost Adjustment	FA	1	\$65,000.00	\$65,000.00
700	F/A Dewatering Pretreatment	FA	1	\$20,000.00	\$20,000.00
700	F/A Erosion Control	FA	1	\$75,000.00	\$75,000.00

Total:	\$13,008,956.90
CAT EX	\$20,000.00
Concept Contingency (30%):	\$3,903,000.00
Engineering(12%):	\$1,952,000.00
	<u>\$18,883,956.90</u>

SPONSORED BY: MAYOR DODGE

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-22  
Series of 2019

\_\_\_\_\_  
Series of 2019

A RESOLUTION AUTHORIZING A FUNDING COMMITMENT FOR THE 120<sup>TH</sup> AVENUE ADAMS COUNTY SUBREGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECT

WHEREAS, the Adams County Council of Governments Subregional Forum is responsible for allocating federal transportation funding through a competitive Subregional Transportation Improvement Program (“TIP”) application process for projects within and/or benefitting Adams County; and

WHEREAS, the City of Northglenn completed the 120<sup>th</sup> Avenue Corridor Study, which determined recommended improvements to 120<sup>th</sup> Avenue between Washington Street and Claude Court in anticipation of the new rail transit station, redevelopment of Karl’s Farm, and potential development of vacant properties; and

WHEREAS, the City of Northglenn wishes to submit an Adams County Subregional TIP Application to obtain funding for improvements to the 120<sup>th</sup> Avenue Corridor; and

WHEREAS, the Adams County Subregional TIP Application requires local match funding to supplement the requested project funds; and

WHEREAS, the City Council desires to express its support for the submission of a Subregional TIP Application to obtain funding for the 120<sup>th</sup> Avenue Subregional TIP Project and affirm its commitment to the required 20% local match funding for the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT:

Section 1. The City Council of the City of Northglenn is in full support of submitting an Adams County Subregional Transportation Improvement Program (TIP) Application to obtain funding for the 120<sup>th</sup> Avenue Subregional TIP Project, and hereby affirms its commitment to funding in the amount of a twenty percent (20%) local match for the Project.

DATED at Northglenn, Colorado, this \_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_  
CAROL A. DODGE  
Mayor

ATTEST:

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JOHANNA SMALL, CMC  
City Clerk

APPROVED AS TO FORM:

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COREY Y. HOFFMANN  
City Attorney