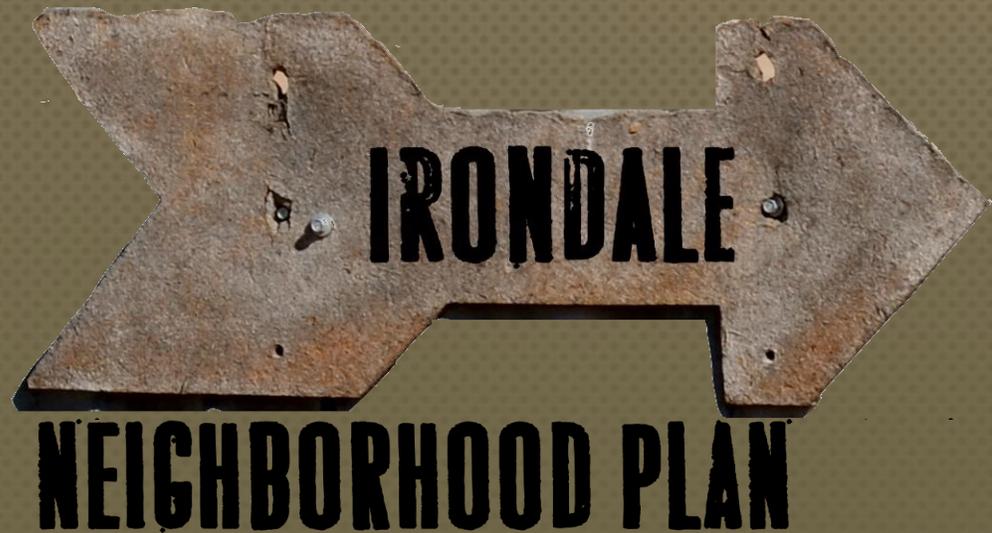


IRONDALE NEIGHBORHOOD + INFRASTRUCTURE PLAN



CITY COUNCIL
STUDY SESSION
5/14/18

TODAY'S FOCUS

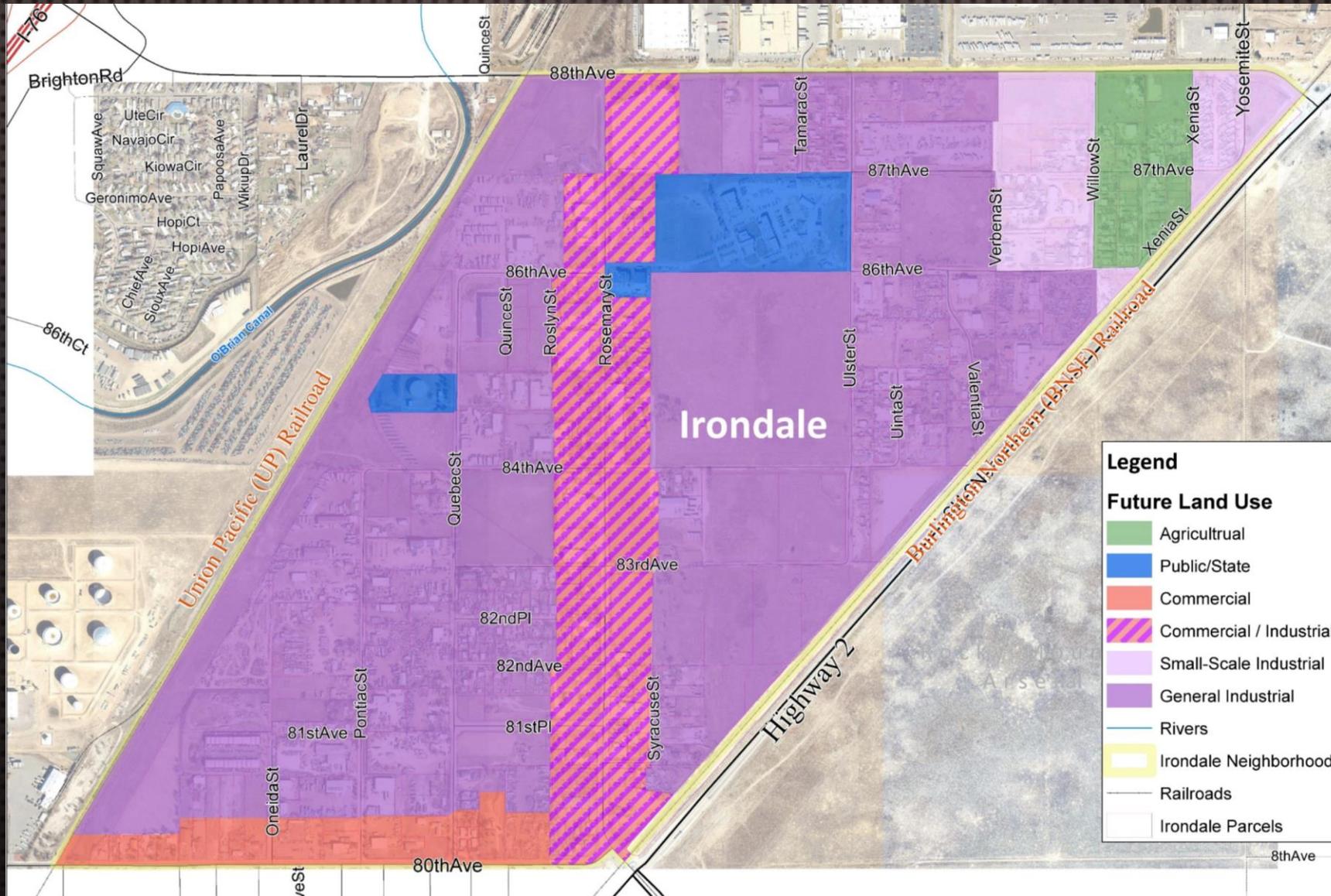
- **BACKGROUND**
- **FUTURE LAND USE**
- **CAPITAL IMPROVEMENTS**
- **DRAINAGE NETWORK DISCUSSION WITH COUNCIL INPUT**
- **INPUT AND CLARIFICATIONS FOR FINAL PLAN**

BACKGROUND

- **PRIOR STUDY SESSIONS**
 - 11/13/17
 - 1/22/18
- **2 PRIOR NEIGHBORHOOD MEETINGS**
- **3 TECHNICAL ADVISORY COMMITTEE MEETINGS**
- **PRIOR COUNCIL INPUT GIVEN ON: LAND USE, ANNEXATION, ZONING, AREAS OF CONCERN**

DRAFT

FUTURE LAND USE MAP



CAPITAL IMPROVEMENTS - CATEGORIES

QUICK WINS

- Shorter timeframe
- Typically less expensive or already has allocated funding.
- Visible Improvements that help get buy-in
- *i.e. Tree removal from the roadway*

LONG HAUL

- Longer time horizon for completion
- may not have designated funding sources
- May require additional collaboration to enact.
- *i.e. Undergrounding Utilities along Rosemary*

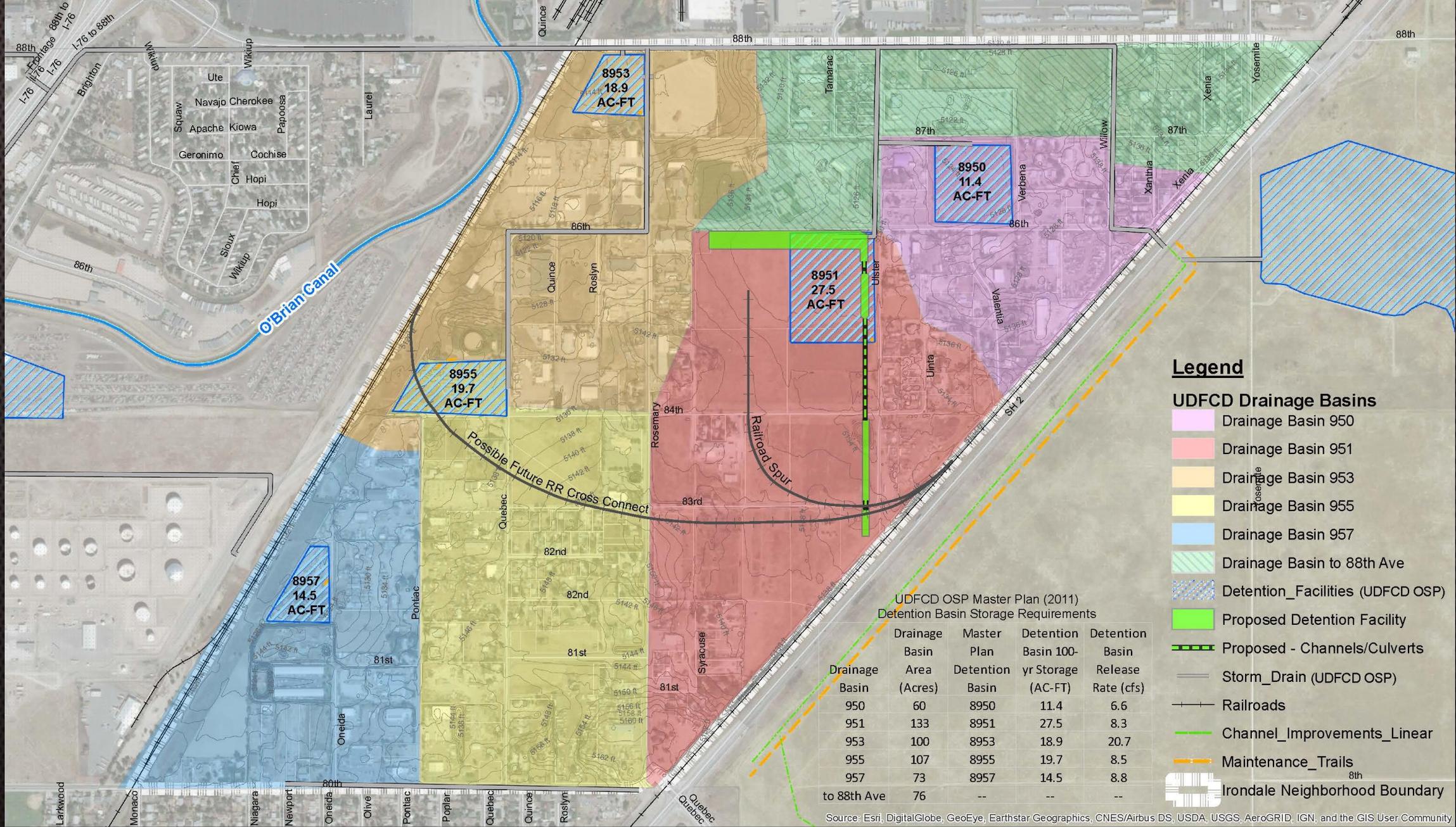
CAPITAL IMPROVEMENTS – HIGH IMPACT

Highest Local Impacts

- Ulster Improvements
- Purchase & Develop regional detention

Regional Impacts

- Widening 88th
- Widening Rosemary



Legend

- UDFCD Drainage Basins**
- Drainage Basin 950
 - Drainage Basin 951
 - Drainage Basin 953
 - Drainage Basin 955
 - Drainage Basin 957
 - Drainage Basin to 88th Ave
 - Detention_Facilities (UDFCD OSP)
 - Proposed Detention Facility
 - Proposed - Channels/Culverts
 - Storm_Drain (UDFCD OSP)
 - Railroads
 - Channel_Improvements_Linear
 - Maintenance_Trails
 - Irondale Neighborhood Boundary

UDFCD OSP Master Plan (2011)
Detention Basin Storage Requirements

Drainage Basin	Area (Acres)	Master Plan Detention Basin	Detention Basin 100-yr Storage (AC-FT)	Detention Basin Release Rate (cfs)
950	60	8950	11.4	6.6
951	133	8951	27.5	8.3
953	100	8953	18.9	20.7
955	107	8955	19.7	8.5
957	73	8957	14.5	8.8
to 88th Ave	76	--	--	--

Date: 03/26/2018



Irondale: Conceptual Stormwater Infrastructure



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

DRAINAGE IMPROVEMENTS – HIGH INVESTMENT

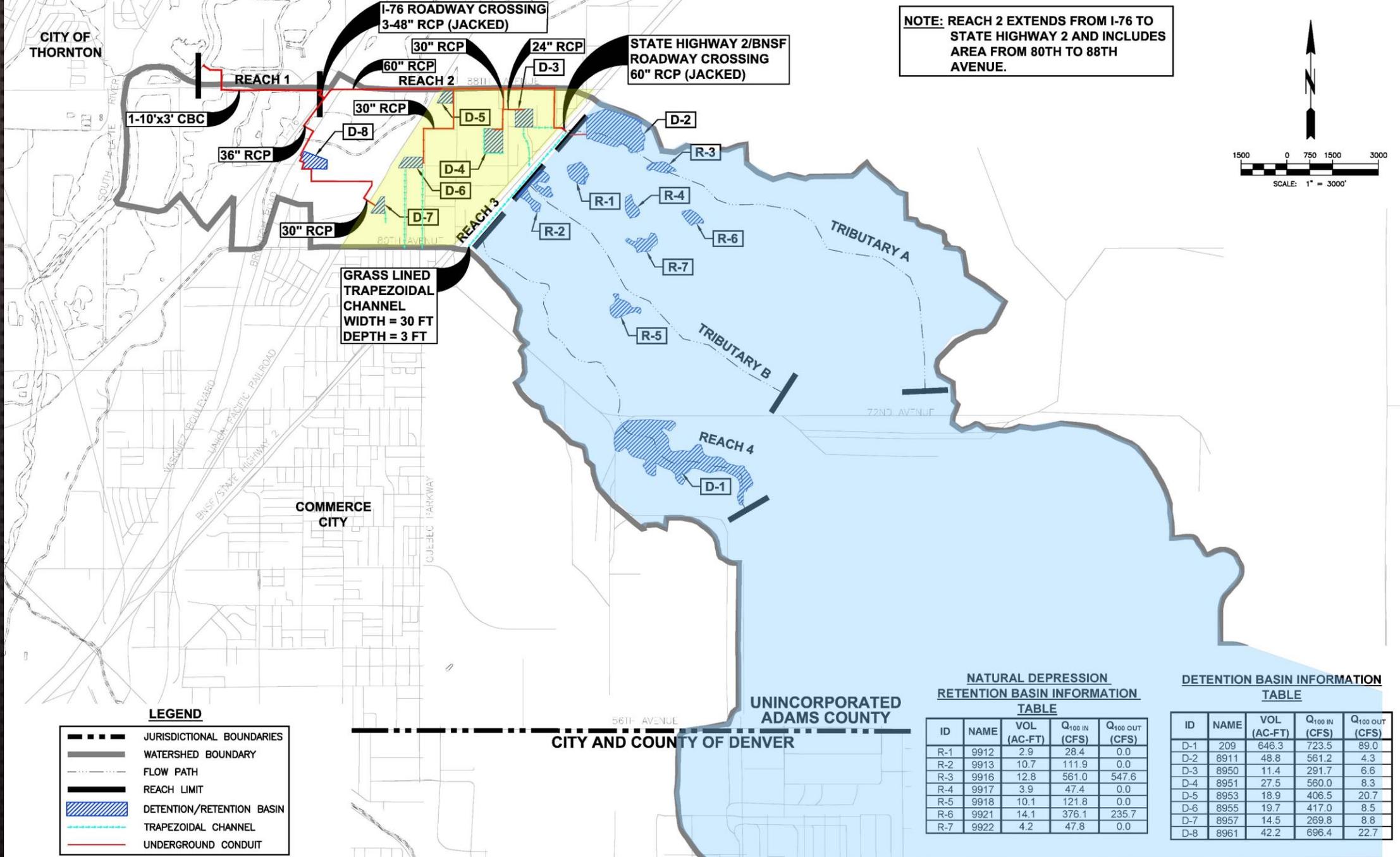
No.	Facility	Improvements	Estimated Cost
UDFCD—OSP	Storm Sewer system – first section (Reach 1 in OSP)	Outfall to South Platte River, 4,600 LF of 10' x 3' RCBC (box culvert), I-76 trenchless crossing: three 48-inch dia RCP, roadway grading on 88th Ave near Bull Seep.	\$\$\$\$\$\$
	Storm Sewer system – second section (Reach 2)	O'Brian Canal trenchless crossing, UPRR trenchless crossing, SH 2 & BNSF trenchless crossing	\$\$\$\$\$\$
	Regional Detention/Retention Basins and pipes/channels to convey runoff to basins. (Reach 2)	5 regional detention/retention basins within the Irondale neighborhood with conveyance infrastructure. Locations shown on the OSP are conceptual. Actual detention basin design and location to be determined during development process or through master planning led by the City.	\$\$\$\$\$\$
	Upstream detention in Rocky Mountain Arsenal (Reach 4)	Detention/retention facilities in RMA	\$\$\$\$\$\$

ESTIMATED COST	
\$1 million - \$5 million	\$\$\$\$\$
> \$5 million	\$\$\$\$\$\$

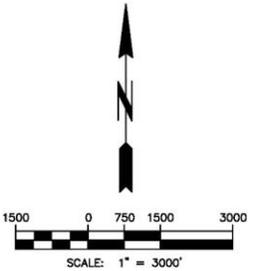
DRAINAGE NETWORK DISCUSSION

Drainage Overview - Watershed

- RMANWR
- Irondale Neighborhood
- Outfall System



NOTE: REACH 2 EXTENDS FROM I-76 TO STATE HIGHWAY 2 AND INCLUDES AREA FROM 80TH TO 88TH AVENUE.



LEGEND

- JURISDICTIONAL BOUNDARIES
- WATERSHED BOUNDARY
- FLOW PATH
- REACH LIMIT
- DETENTION/RETENTION BASIN
- TRAPEZOIDAL CHANNEL
- UNDERGROUND CONDUIT

**NATURAL DEPRESSION
RETENTION BASIN INFORMATION
TABLE**

ID	NAME	VOL (AC-FT)	Q ₁₀₀ IN (CFS)	Q ₁₀₀ OUT (CFS)
R-1	9912	2.9	28.4	0.0
R-2	9913	10.7	111.9	0.0
R-3	9916	12.8	561.0	547.6
R-4	9917	3.9	47.4	0.0
R-5	9918	10.1	121.8	0.0
R-6	9921	14.1	376.1	235.7
R-7	9922	4.2	47.8	0.0

**DETENTION BASIN INFORMATION
TABLE**

ID	NAME	VOL (AC-FT)	Q ₁₀₀ IN (CFS)	Q ₁₀₀ OUT (CFS)
D-1	209	646.3	723.5	89.0
D-2	8911	48.8	561.2	4.3
D-3	8950	11.4	291.7	6.6
D-4	8951	27.5	560.0	8.3
D-5	8953	18.9	406.5	20.7
D-6	8955	19.7	417.0	8.5
D-7	8957	14.5	269.8	8.8
D-8	8961	42.2	696.4	22.7

TOPOGRAPHIC METHOD: LIDAR
 TOPOGRAPHIC MAPPING BY: MOSER & ASSOCIATES ENGINEERING
 CONTOUR INTERVAL: 2 FOOT
 DATE FLOWN: 2008

720 S. COLORADO BLVD. SUITE 410 S DENVER, CO 80246
 PHONE: 303-757-3655 FAX: 303-300-1635

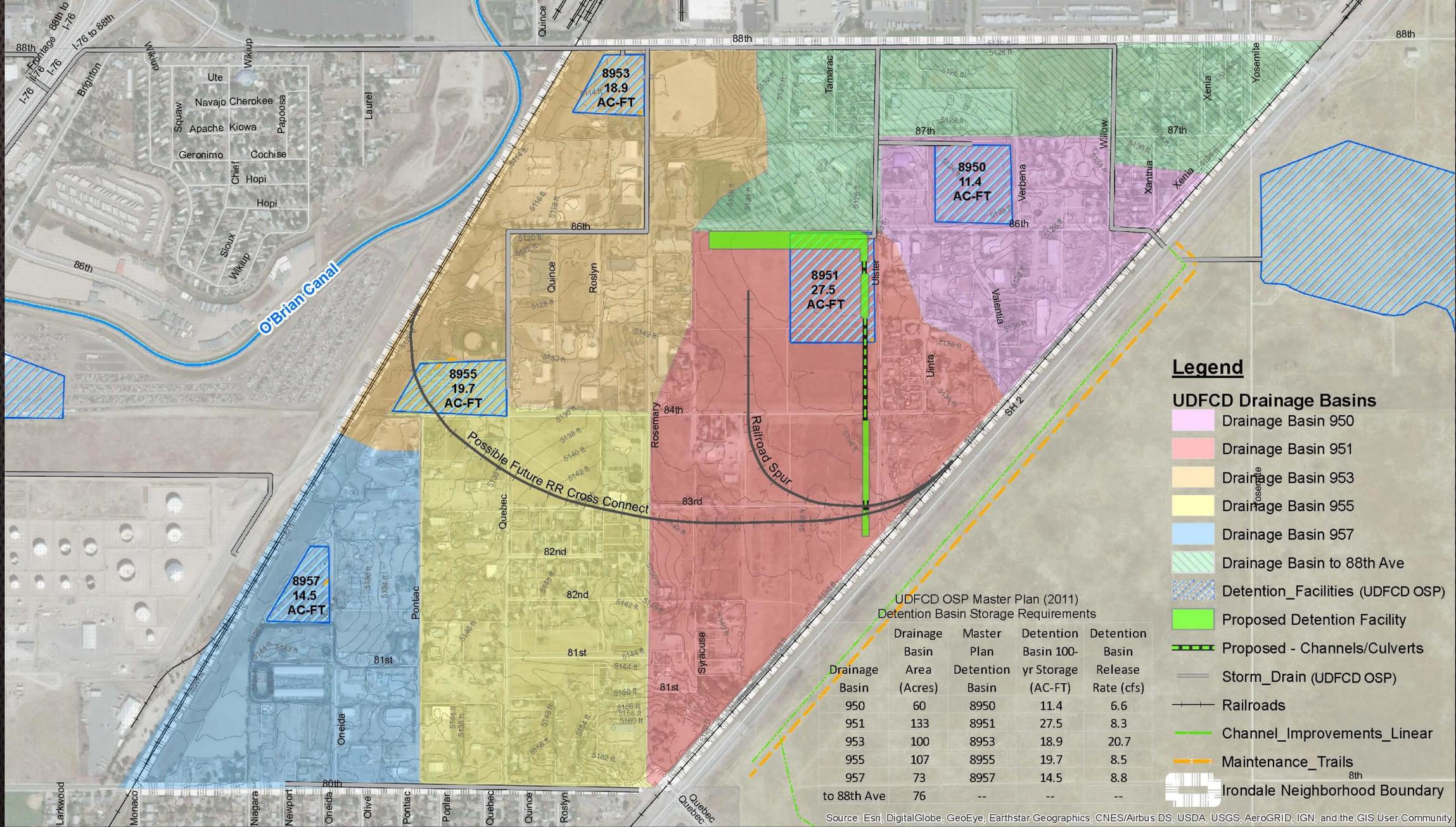
DESIGNED: AGC DATE 10/10/10
 DRAWN: RWM DATE 11/15/10
 CHECKED: RCO DATE 1/20/11
 REVISED: DATE

**COMMERCE CITY
URBAN DRAINAGE AND
FLOOD CONTROL DISTRICT**

**IRONDALE GULCH
OUTFALL SYSTEMS
PLAN**

**CONCEPTUAL DESIGN
PLAN**

FIGURE 8-1



Legend

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Date: 03/26/2018



Irondale: Conceptual Stormwater Infrastructure



REGIONAL VS. LOCAL DETENTION

REGIONAL DETENTION

Advantages

- Captures runoff from new development & historic areas
- Maintenance, inspection, safety focused on one facility
- Most efficient use of space.
Frees up space on development sites

Disadvantages

- Upfront planning, design & pond construction required
- Initial capital investment
- Upstream conveyance systems
- Timing is critical – pond is needed prior to development

REGIONAL VS. LOCAL DETENTION

LOCAL DETENTION

Advantages

- Easiest to implement
- Little off-site development needed
- Drainage basin level study not needed

Disadvantages

- Does not address neighborhood level drainage issues
- Numerous detention basins – difficult enforcement, inspection
- Difficult to connect to future drainage system
- Development land acreage lost to detention

RECOMMENDATION

REGIONAL DETENTION

Potential Implementation Strategies

- Neighborhood level comprehensive drainage and planning study
- Purchase land for detention basins
- Construct detention basins

FUNDING MECHANISMS

- **CIPP** – Capital Improvement Preservation Plan
- Taxes & Levies
 - *i.e. **SID** - Special Improvement District*
 - A PRIVATE, NOT-FOR-PROFIT ORGANIZATION ESTABLISHED UNDER STATE LAW THROUGH WHICH DISTRICT PROPERTY OWNERS ASSESS THEMSELVES TO PROVIDE FUNDING FOR EXTENDED SERVICES SUCH AS LOCAL INFRASTRUCTURE IMPROVEMENTS.
- **URA** - Urban Renewal Authority &/or **TIF** – Tax Increment Financing
- Development-Driven
 - *i.e. **Impact Fees specific to Irondale***
- Grant Assistance
 - *i.e. **CDBG** - Community Development Block Grant*

QUESTIONS -

1. Which detention approach do you favor?
2. What feedback do you have about funding mechanisms?
3. Are there additional infrastructure needs to be explored?

NEXT STEPS

- **Final Public Meeting**

Wednesday, May 16: 4 p.m. at Tradicion

- **Tentative First Reading – June 18**