

Attachment B

Item 2 - Updated Sedalia Central WWTF Kick Presentation Slides



New Central WWTF Improvements and Demolition of North Pump Station and Force Main



*City of Sedalia, Missouri
April 21, 2026*





Introductions – Team Leads



Pat Young
Project Manager



Jessica Adams-Weber
CMAR Advisor



Brandon Coleman
Design Manager



David Carani
Regulatory & Financing



Introductions – Facility Team Leads



Erin Jearls
Pumping & Conveyance Lead



Kyle Sims
Headworks



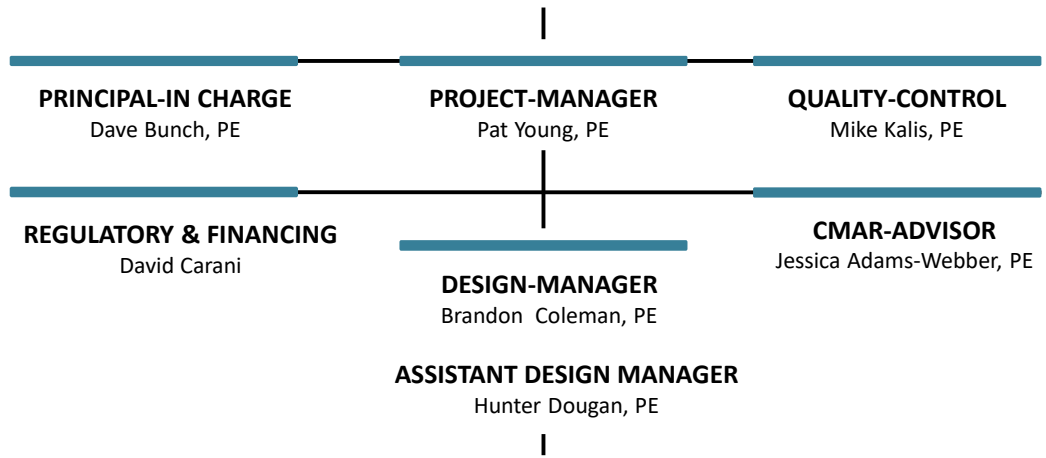
Sam Brown
Secondary Treatment



Isaac Crabtree
Disinfection



Cole Duckworth
Biosolids



FACILITY LEADS

PUMPING & CONVEYANCE

Erin Jearls, PE – **Lead**
 Bennet Kidd, EIT
 Jeff Allen, RG - **Force mains**
 Cameron McCormick, PM – **Site Piping**
 Rob Kirkpatrick, SR/WA - **Easements**

HEADWORKS

Kyle Sims, PE - **Lead**
 Chris Heimgartner, PE

SECONDARY TREATMENT

Sam Brown, PE - **Lead**
 Mai Bui, PE

DISINFECTION

Isaac Crabtree, PE - **Lead**
 Hunter Dougan, PE

BIOSOLIDS

Cole Duckworth, PE - **Lead**
 Kyle Malin, PE

TECHNICAL SUPPORT

CIVIL

Ron Hardee, PE – **Quality Control**
 Mitch Wiebelhaus, PE – **Lead**
 Riley Ferguson, PE – **Engineer**
 Johnny Yakle, PLS - **Surveying**

ARCHITECTURAL

Richard McKinley, RA – **Quality Control**
 Erica Buttman – **Lead**
 Emma Herr – **Engineer**

STRUCTURAL

Dave Wiseman, PE – **Quality Control**
 Basant Satpathy, PE – **Lead**
 Victoria McCann, PE – **Engineer**
 Alpha Omega – **Geotechnical Analysis**

ELECTRICAL

Nate Witte, PE – **Quality Control**
 Caleb Dady, PE – **Lead**
 Corey Rossiter, PE – **Engineer**

INSTRUMENTATION & CONTROLS

Dilrukshan Silva – **Quality Control**
 Thomas Boyd, PE – **Lead**
 Peter Kempf, EIT – **Engineer**

MECHANICAL

Tim Sandmeyer, PE – **Quality Control**
 Kevan Prinds, PE – **Lead**
 Jonathan Brack, PE – **Engineer**

BIM

Justin Kuntz, PE – **Model Manager**
 Jacob Schneider – **Civil 3D**
 Emma Herr – **Architectural**
 Mark Johnson, **Structural**
 Lance Pirtle, PE – **Electrical**
 Irena Bredeman – **I & C**
 Brandon Keller – **Mechanical**
 Brett Cooper, PE - **FLS**

FLS

Steven Thornburg, NFPA – **Quality Control**
 Brett Cooper, PE – **Lead**
 Michael Shumpert, PE – **Support**

City of Sedalia Staff

Email correspondence to William Bracken, Chris Davies, Ben Maness, and Brittany Willbanks. Include Elizabeth Nations on Invoices.

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- **WWTF Plant Manager**

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Project Areas



North Force main



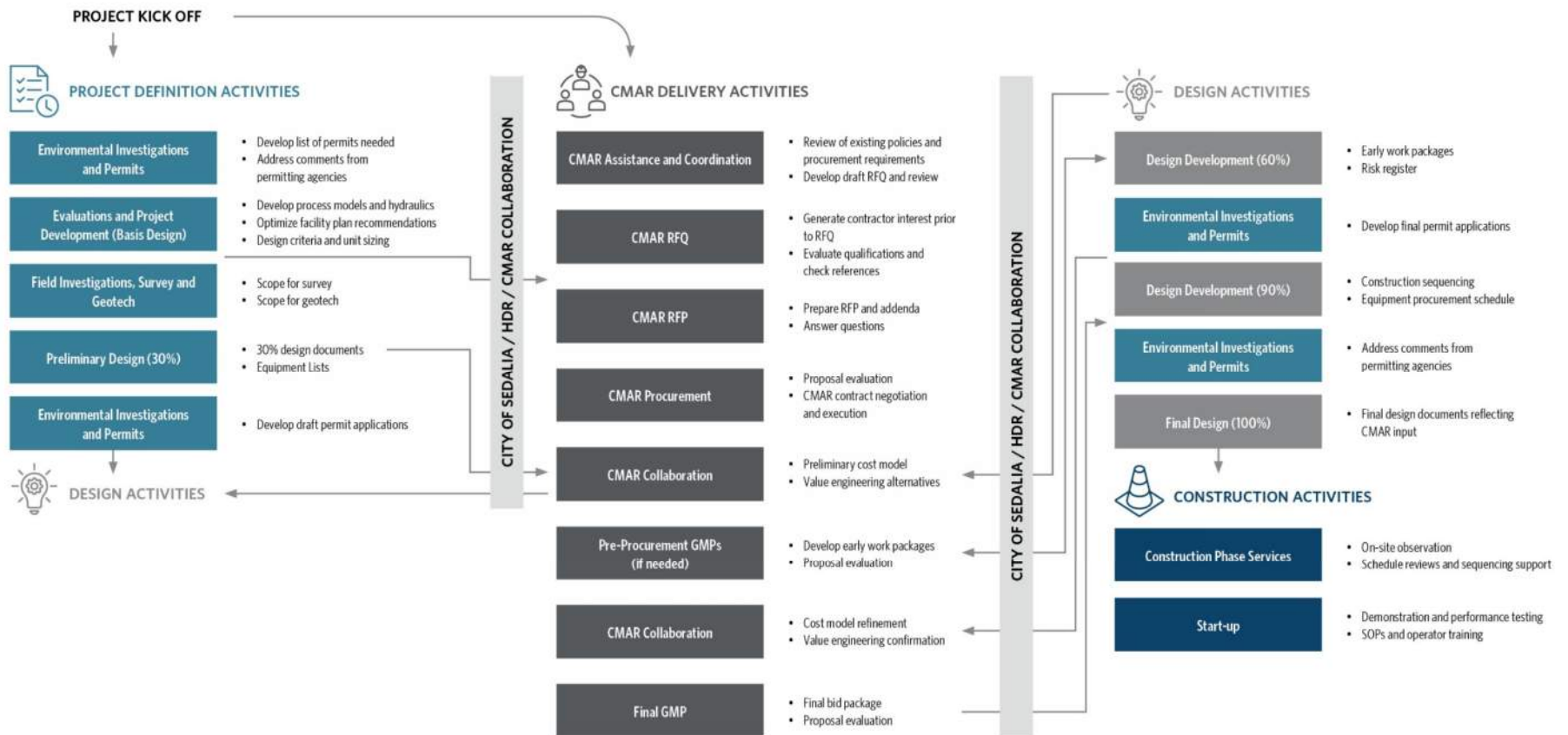
North WWTF (Pump Station)



Central WWTF



Project Approach

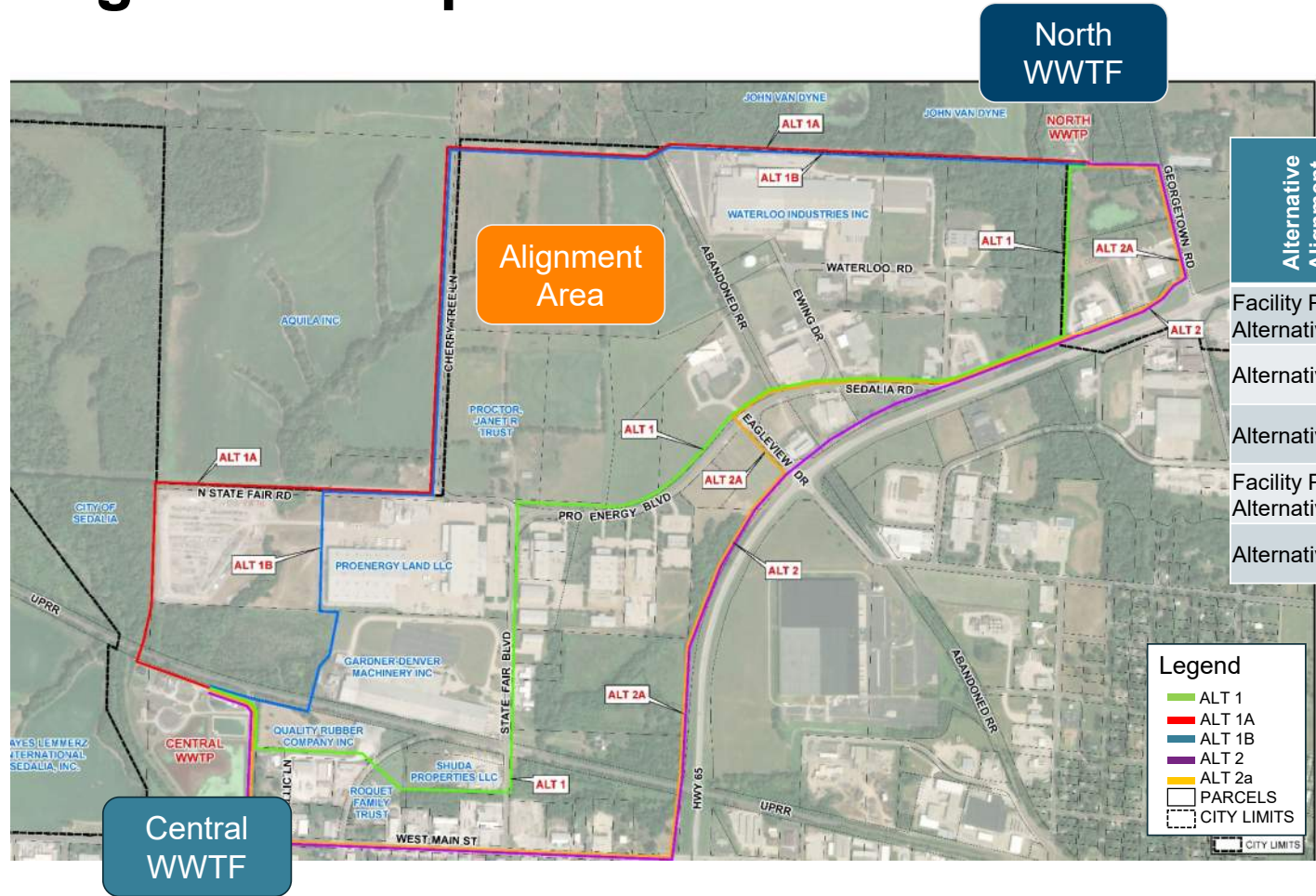


Alignment Map

City prefers Alignments 1A and B. This will be refined in upcoming workshops.



Table 2 – Alignment Characteristics for the Alternatives Identified in the Facility Plan and Additional Alternatives Identified by HDR.



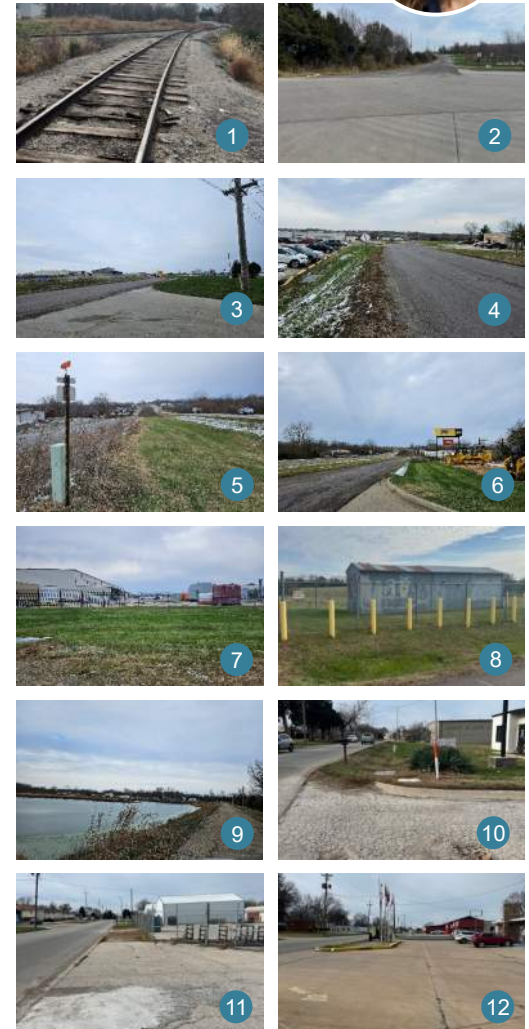
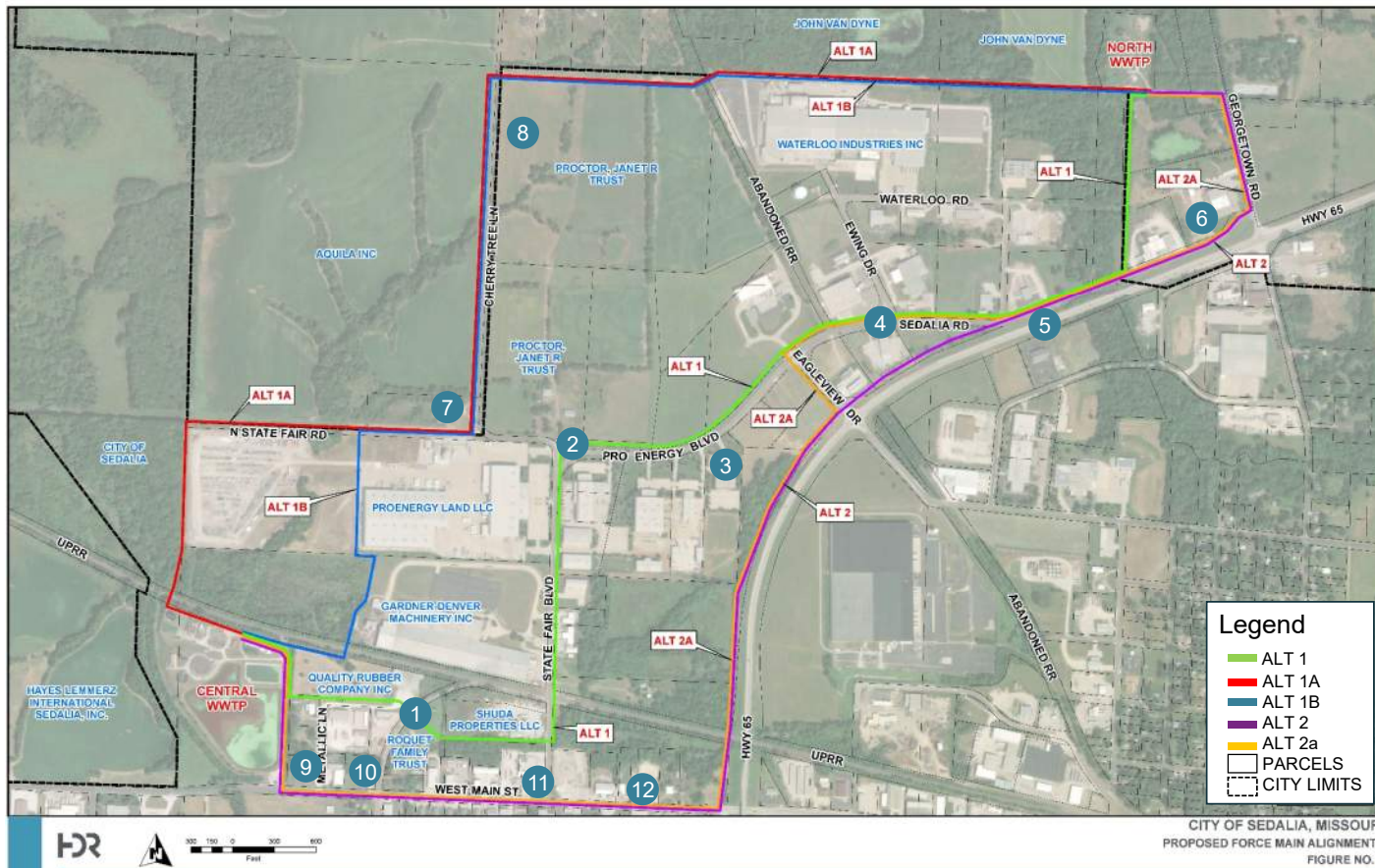
Alternative Alignment	Length in feet	Air Release Valves #	Railroad Crossings	Road Crossings	Driveway Crossings	Easements
Facility Plan Alternative 1	10,610 (3,190) ¹	5	2	5	11	19
Alternative 1A	11,310 (7,400) ¹	6	1	1	0	8 ⁴
Alternative 1B	10,720 (5,430) ¹	6	1	1	1	10 ⁴
Facility Plan Alternative 2	12,270 (2,900) ¹	7	2	2	5 ²	34 ³
Alternative 2A	13,050 (2,900) ¹	7	2	3	11 ²	36 ³

¹ Number in parentheses indicates the portion of alignment away from an existing road (cross country).
² Assumes West Main Street right-of-way requires pavement replacement.
³ Potential reduction by 18 easements if installed in pavement right-of-way (ROW) but resulting in increased pavement removal and replacement.
⁴ Two of the properties for Alt 1A and one of the properties for Alt 1B are owned by the City of Sedalia.



City prefers Alignments 1A and B.
This will be refined in upcoming
workshops.

Alignment Map



Alignment Map

City prefers Alignments 1A and B.
This will be refined in upcoming workshops.



ALIGNMENT ALTERNATIVE	CONSIDERATIONS
<p>Facility Plan Alternative 1 (Alt 1):</p> <ul style="list-style-type: none"> ▪ North WWTP due south to Sedalia Rd. ▪ West along Sedalia Rd/Proenergy Blvd. ▪ South along N. State Fair Blvd. ▪ West along property lines to Central WWTP 	<ul style="list-style-type: none"> ▪ Anticipated pipeline installed within private property along Sedalia Rd/Proenergy Blvd. and N. State Fair Blvd, east of Proenergy. ▪ Minimizes congested areas along Georgetown Rd., Hwy 65, Cherry Tree Ln. & W. Main St. ▪ Possible utilization of existing easement for existing 36-inch sewer south of North WWTP to Sedalia Rd. ▪ Approximately (Approx) 70% of the alignment follows road right-of-way (ROW), maximizing operations and maintenance (O&M) access. ▪ Approximately 30% of the alignment is away from main roads may limit O&M access from North WWTP to Sedalia Rd. ▪ More pavement replacement needed than Alt 1A & 1B, but less tree removal. ▪ Most easements along property lines. ▪ Easement acquisition cutting across property may hinder property owner's future expansion (SHUDA Properties, Roquet Family Trust)
<p>Alternative 1A (Alt 1A):</p> <ul style="list-style-type: none"> ▪ North WWTP west along property lines to Cherry Tree Ln. ▪ South along Cherry Tree Ln. ▪ West to City of Sedalia property line ▪ South to Central WWTP 	<ul style="list-style-type: none"> ▪ Anticipated pipeline installed within private property along Cherry Tree Ln. ▪ Minimizes congested areas along Georgetown Rd., Hwy 65, W. Main St., N. State Fair Blvd. & Sedalia Rd./Proengery Blvd. ▪ Approx. 35% of the alignment follows ROW (better O&M access). ▪ Approx. 65% of the alignment has limited O&M access from North WTWP to Cherry Tree Ln. and from Cherry Tree Ln. to Central WWTP. ▪ Less pavement replacement needed than Alt 1, but more tree removal; environmental clearances may be needed. ▪ All easements along property lines.

City prefers Alignments 1A and B. This will be refined in upcoming workshops.



ALIGNMENT ALTERNATIVE	CONSIDERATIONS
<p>Alternative 1B (Alt 1B):</p> <ul style="list-style-type: none"> ▪ North WWTP west along property lines to Cherry Tree Ln. ▪ South along Cherry Tree Ln. ▪ West along property line ▪ South through Proenergy Land LLC and Gardner Denver Machinery Inc ▪ West to Central WWTP 	<ul style="list-style-type: none"> ▪ Anticipated pipeline installed within private property along Cherry Tree Ln. ▪ Minimizes congested areas along Georgetown Rd., Hwy 65, W. Main St., N. State Fair Blvd. & Sedalia Rd./ Proengery Blvd. ▪ Approx. 35% of the alignment follows ROW (better O&M access). ▪ Approx. 65% of the alignment has limited O&M access from North WTWP to Cherry Tree Ln. and from Cherry Tree Ln. to Central WWTP. ▪ Less pavement replacement needed than Alt 1, but more tree removal; environmental clearances may be needed. ▪ Most easements along property lines. ▪ Easement acquisition cutting across property may hinder property owner's future expansion (Proenergy, Gardner Denver Machinery) ▪ The alignment across the Proenergy property follows the outer limits of an existing storm water detention basin.
<p>Facility Plan Alternative 2 (Alt 2):</p> <ul style="list-style-type: none"> ▪ North WWTP west then south along Georgetown Rd ▪ West and south along Hwy 65 ▪ West along W. Main St. to Central WWTP 	<ul style="list-style-type: none"> ▪ Anticipated pipeline installed within private property along Georgetown Rd., Sedalia Rd., Hwy 65 & W. Main St. ▪ Minimizes congested areas along Proenergy Blvd., Cherry Tree Ln. & N. State Fair Blvd. ▪ Parallel to Hwy 65 ROW may limit O&M access. ▪ Significantly impacts W. Main St.; Construction pavement replacement within ROW. ▪ Tree removal and environmental clearances may be needed. ▪ All easements along property lines.
<p>Alternative 2A (Alt 2A):</p> <ul style="list-style-type: none"> ▪ North WWTP west then south along Georgetown Rd. ▪ West along Hwy 65 and Sedalia Rd. ▪ South to and along Hwy 65 ▪ West along W. Main St. to Central WWTP 	<ul style="list-style-type: none"> ▪ Anticipated pipeline installed within private property along Georgetown Rd., Sedalia Rd., Eagleview Dr., Hwy 65 & W. Main St. ▪ Minimizes congested areas along Proenergy Blvd., Cherry Tree Ln. & N. State Fair Blvd. ▪ Parallel to Hwy 65 ROW may limit O&M access, although less than Alt 2. ▪ Significantly impacts W. Main St.; Construction pavement replacement within ROW. ▪ Tree removal and environmental clearances may be needed. ▪ All easements along property lines.

Central WWTF Improvements – Concept and Renderings





Preliminary Activities

- Geotech
- Site Survey
- Structure Laser Scanning
- Lagoon Survey – If Applicable

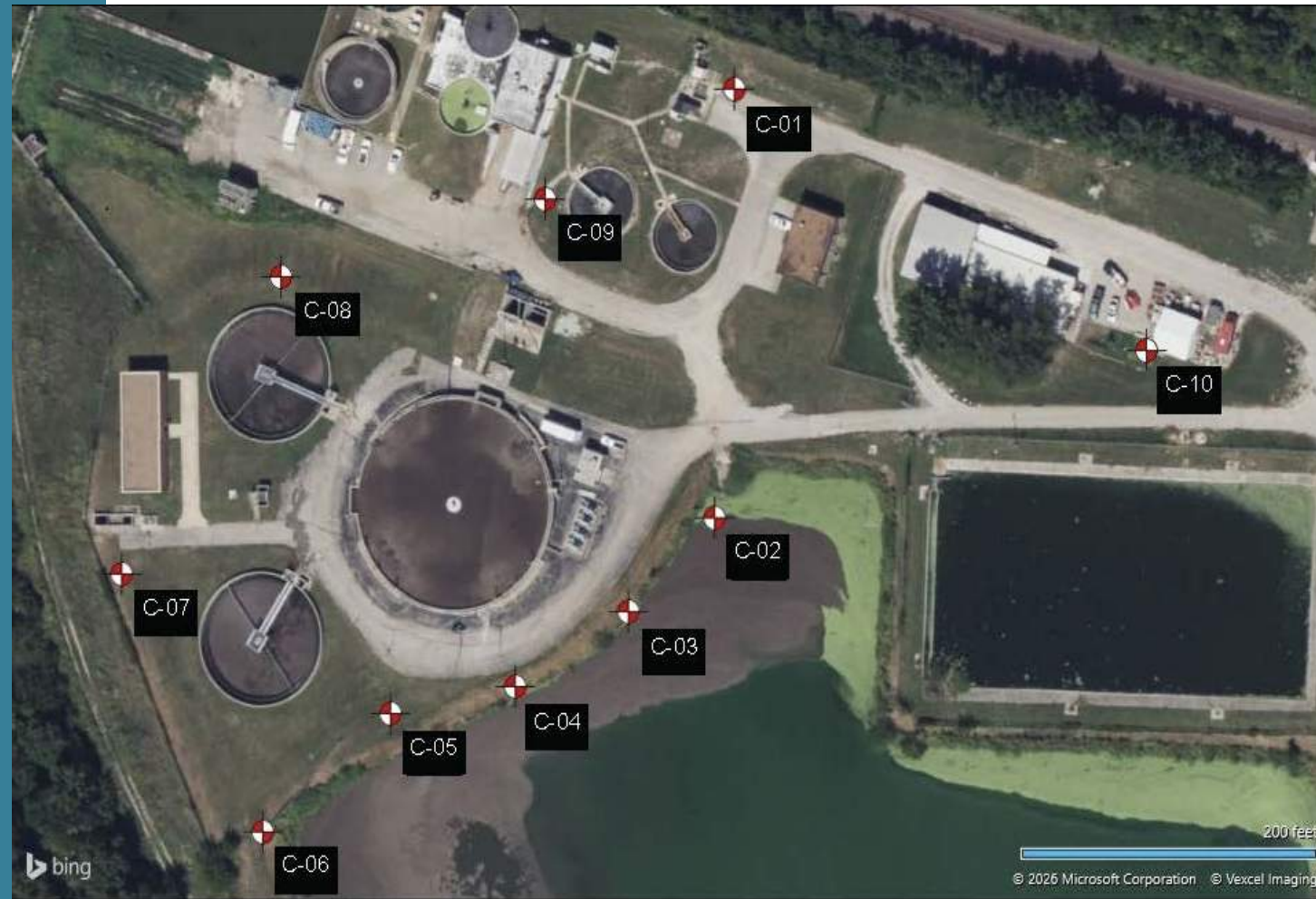


HDR reviewing City historical sampling data. Data likely contains PFAS/PFOS information only. HDR to finalize contract with lagoon survey subconsultant.



Geotech Activities

*Central WWTF
Suggested Borings*



Geotech Activities

*North WWTF
Suggested Borings*

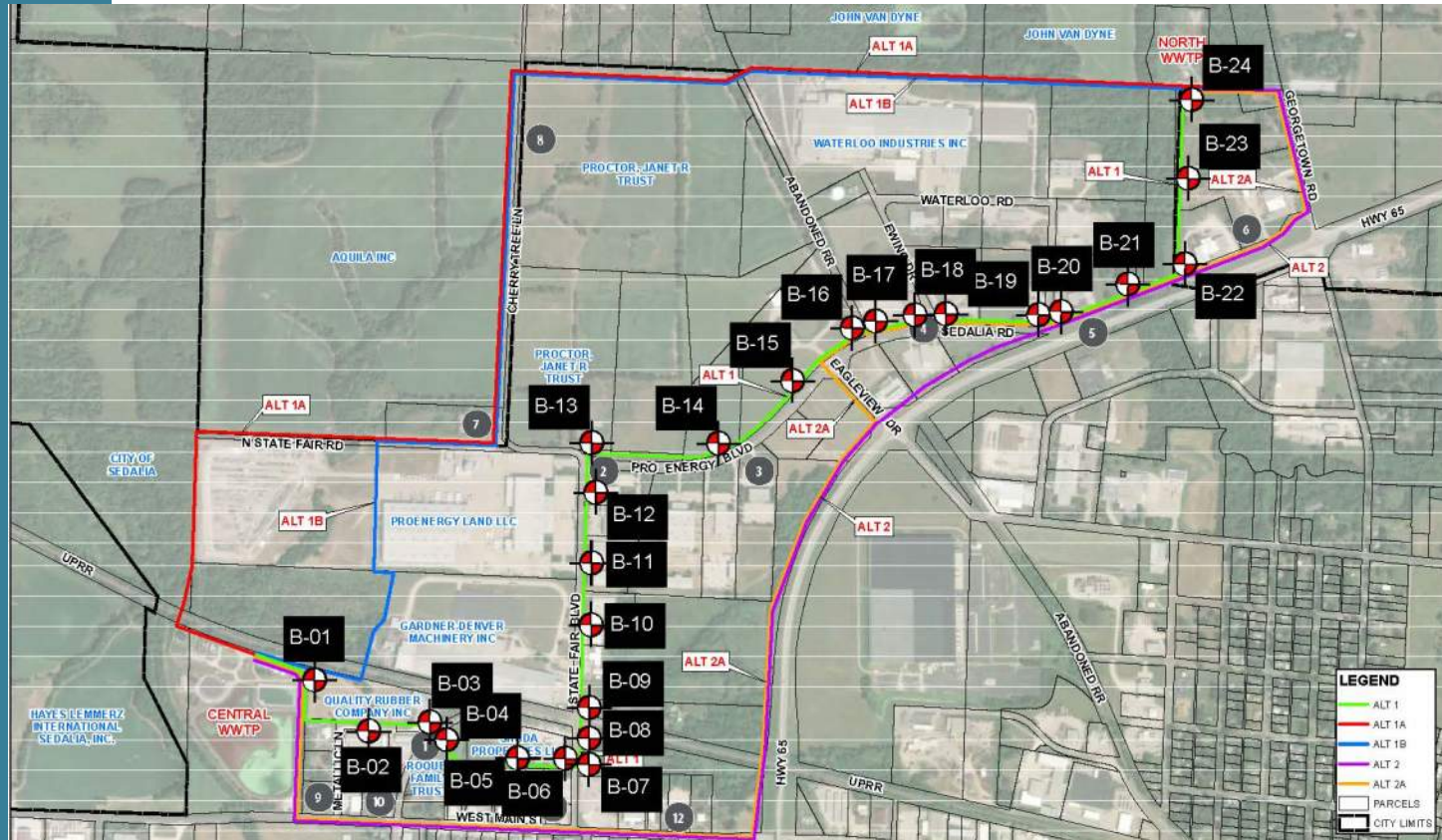


City prefers Alignments 1A and B. This will be refined in upcoming workshops.



Geotech Activities

Forcemain Suggested Borings



Boring locations will be finalized after forcemain alignment is selected

Survey Activities

Central WWTF
Survey

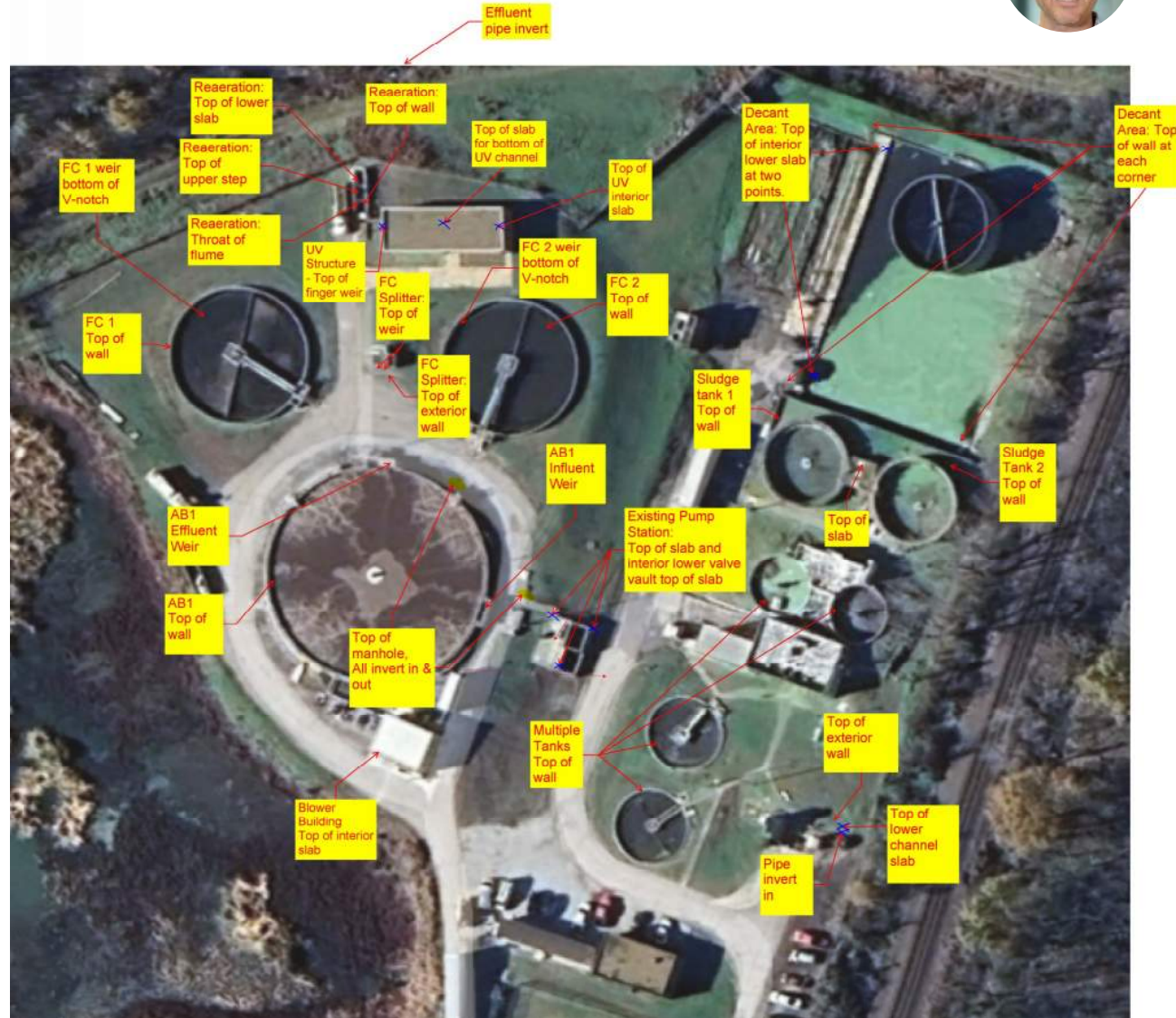


WWTF
Site
TOPO

Lagoon Floor
Depth
Measurement

Survey Activities

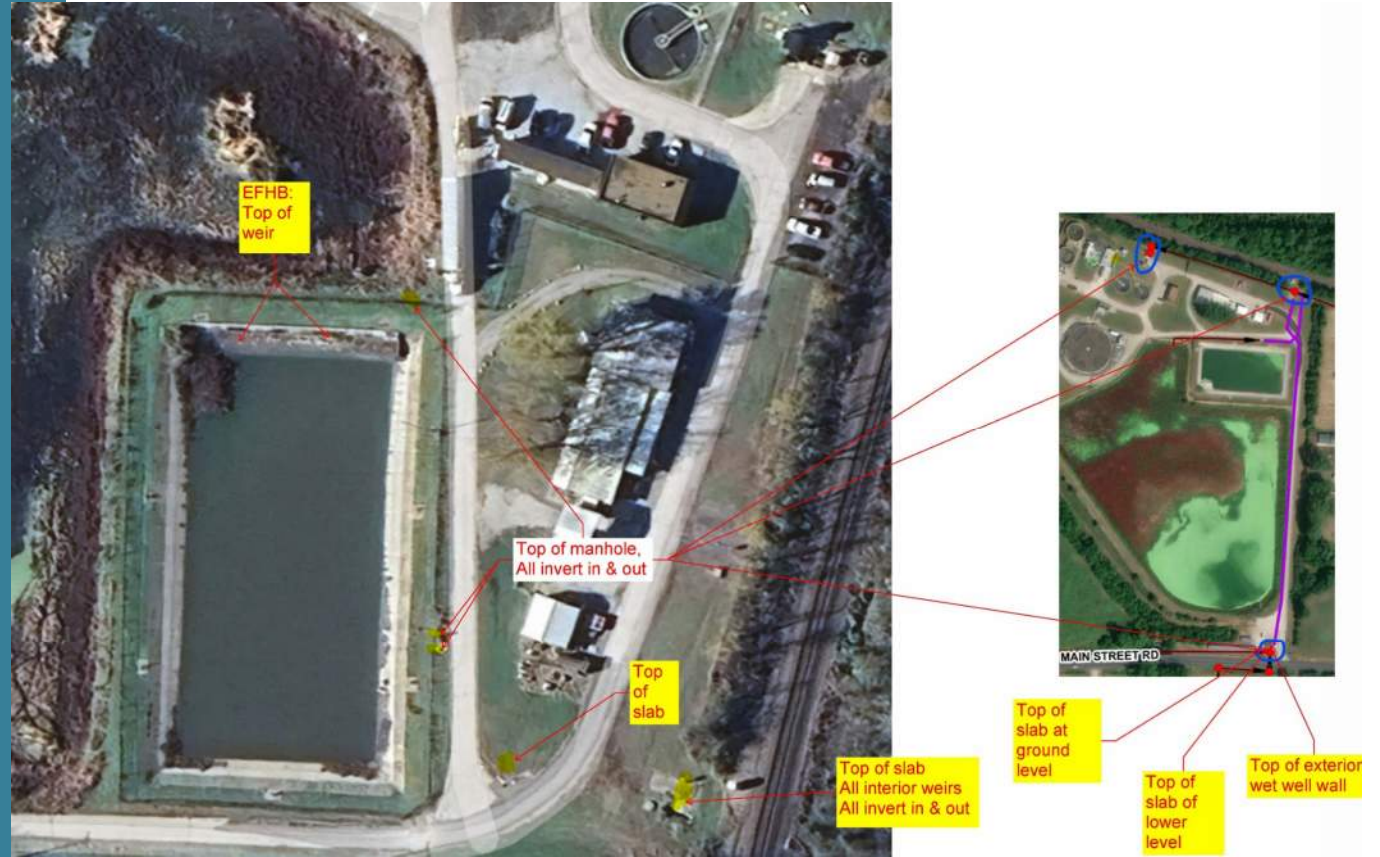
Central WWTF
Survey Area





Survey Activities

Central WWTF Survey



Survey Activities

North WWTF
Survey



HDR reviewing City historical sampling data. Data likely contains PFAS/PFOS information only. HDR to finalize contract with lagoon survey subconsultant.



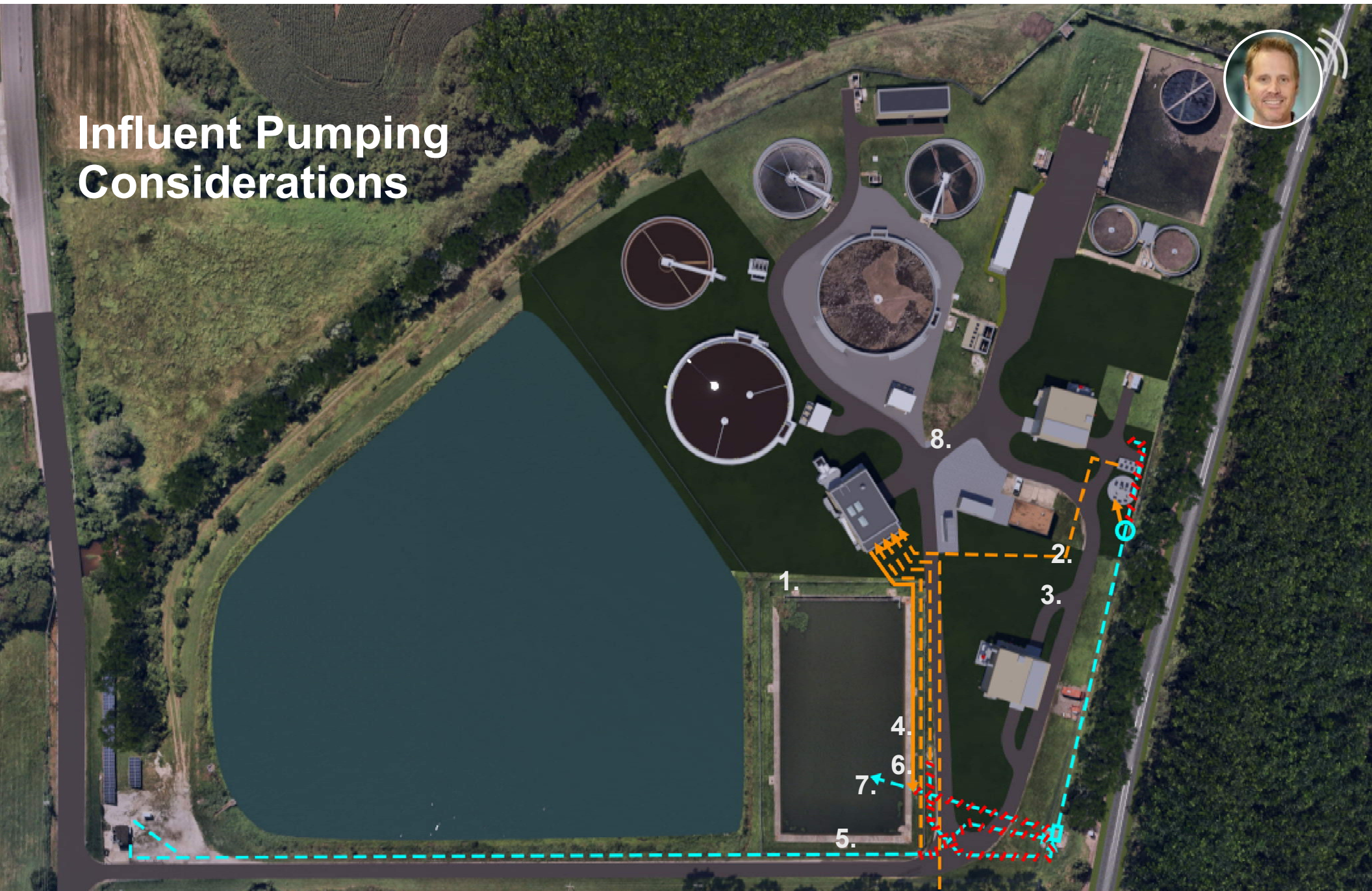
Lagoon Survey Activities



Central & North Lagoon

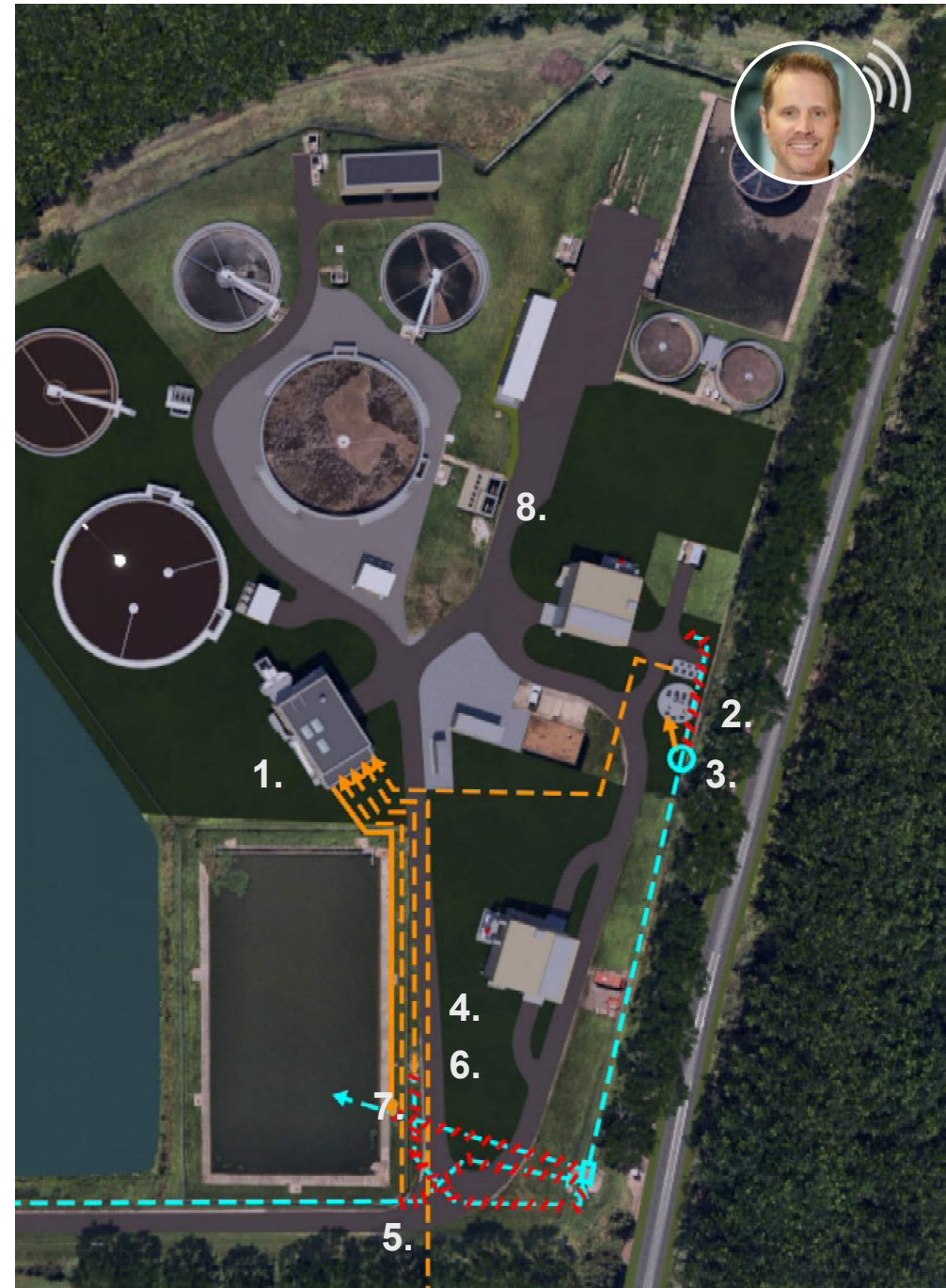
Proposed scope of lagoon surveys will be adjusted based upon review of City's existing information

Influent Pumping Considerations



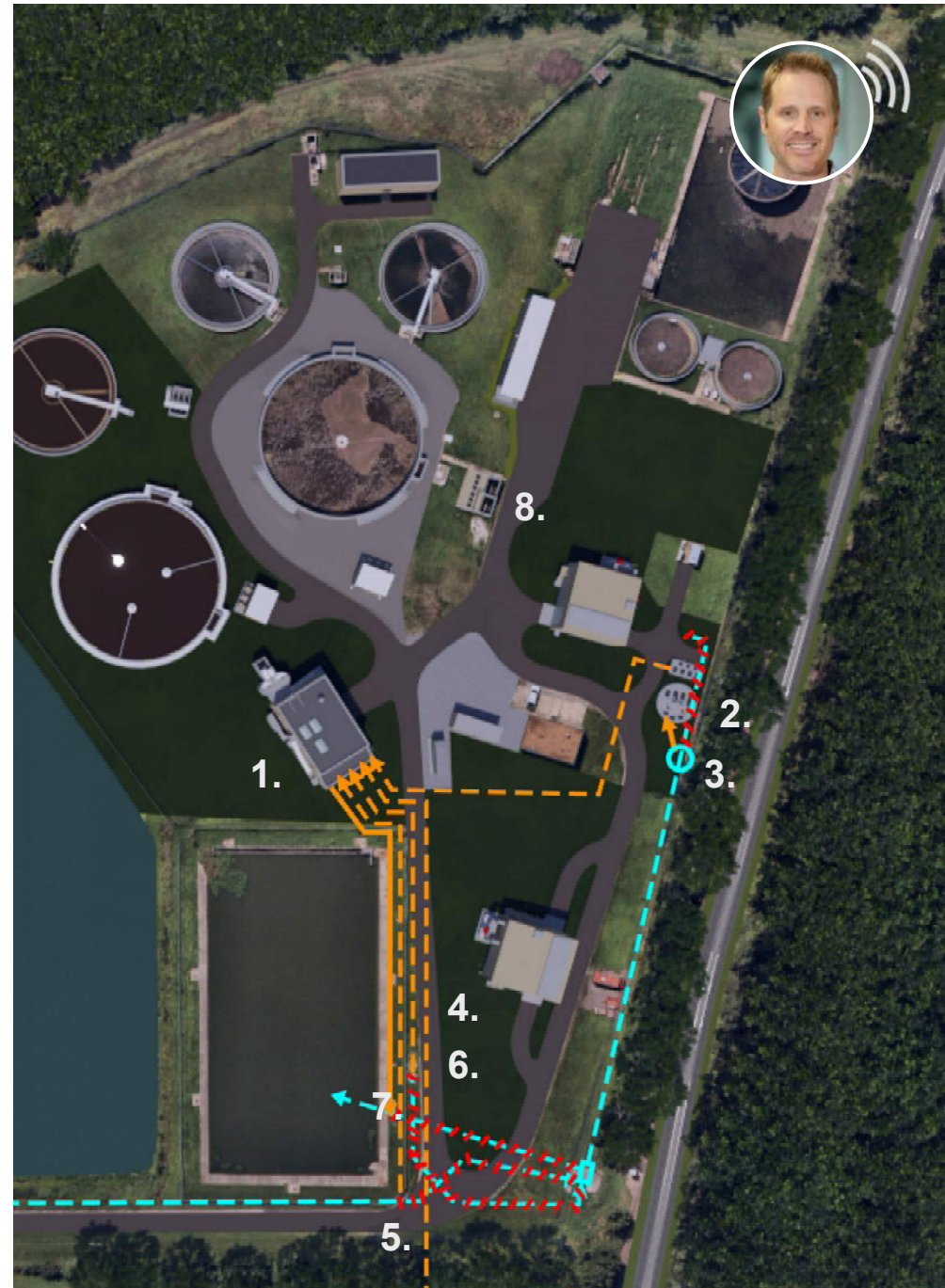
Potential Solutions Influent Pumping Considerations

1. Construction of new Headworks Building with Fine Screening and Grit Removal to serve as centralized point for all influent flows.
2. Construction of new dedicated Central Influent PS to allow for conversion of existing Secondary PS to full RAS/WAS pumping. New Central Influent PS sized for existing gravity flows and plant drain flows.
3. Intercept location to redirect Central WWTF gravity influent to new Central Influent PS.
4. New offsite North FM to pump directly to new Headworks Building in lieu of existing Secondary PS. Allows for full fine screening and grit removal of North flows and eliminates repumping at Central WWTF.



Influent Pumping Considerations

5. Intercept location to redirect existing South Lagoon PS FM to new Headworks Building to eliminate repumping.
6. Intercept location to redirect existing EFHB Drain PS FM to new Headworks Building to eliminate repumping.
7. Intercept location for directing excess flows to existing EFHB. Overflows would be directed from new Headworks Building to provide a simplified and single location for managing all influent and excess flows.
8. Conversion of existing Secondary PS to RAS/WAS pumping. Allows for elimination of the new dedicated RAS/WAS PS from the project scope and associated savings.



New North PS – Prioritization of Improvements

City is open to circular wet well with trash basket for pump protection to prioritize expenditures at Central WWTF. This will be evaluated in future workshops.



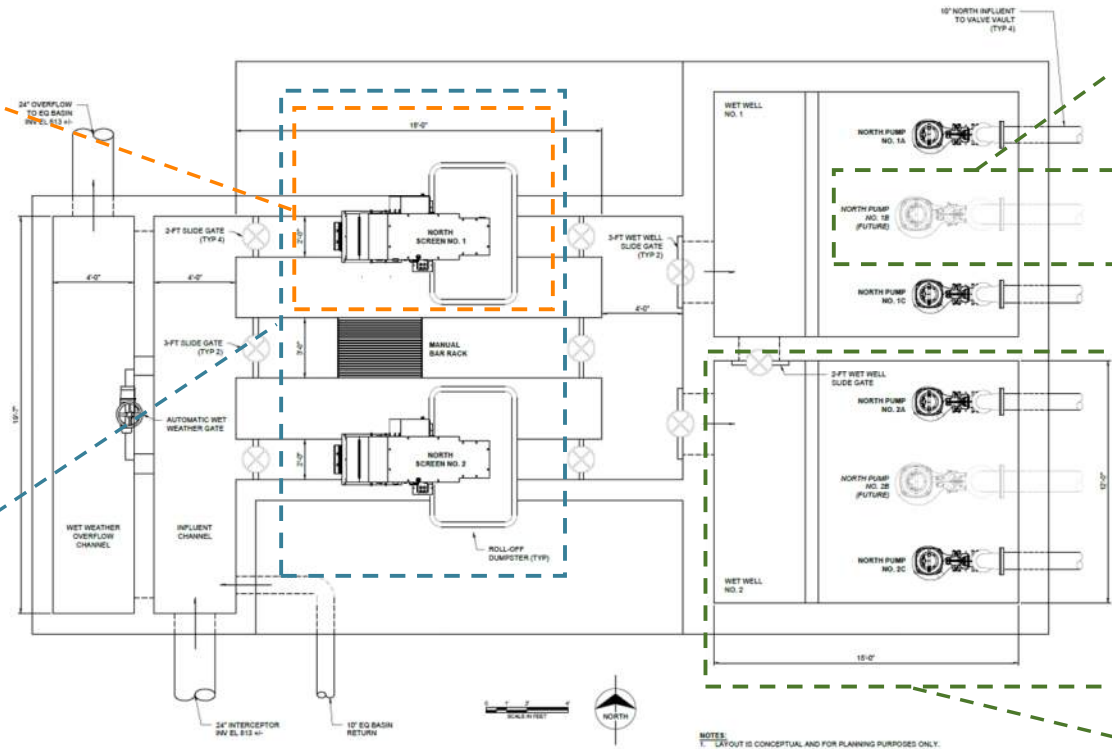
Could eliminate 2nd mechanical screen, use manual barrack as backup.

Could eliminate all screening, use trash basket. Perform screening as a future improvement.

Could construct circular style wetwell for cost savings at WWTF

Install needed capacity into Phase 1 wetwell.

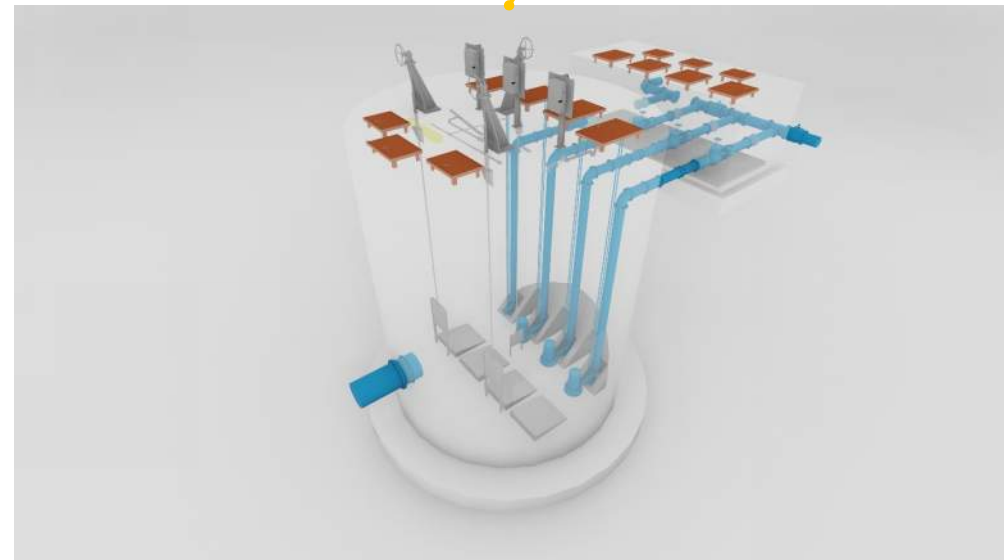
Phase slab/walls for future wetwell.



Name
Drawing
Number No.

New Central WWTF IPS

- ✓ Sized to convey only existing gravity influent flows and all plant drain flows
- ✓ North FM redirected to new Headworks Building, eliminate repumping
- ✓ Lagoon PS redirected to new Headworks Building, eliminate repumping
- ✓ Submersible pump configuration



Screening and Grit Removal Considerations

- ✗ Existing equipment is aged and not fully protective of downstream facilities.
- ✗ Located outdoors which impacts operations and maintenance.
- ✗ Currently plan doesn't provide for grit removal of North FM flows.



New Headworks Building

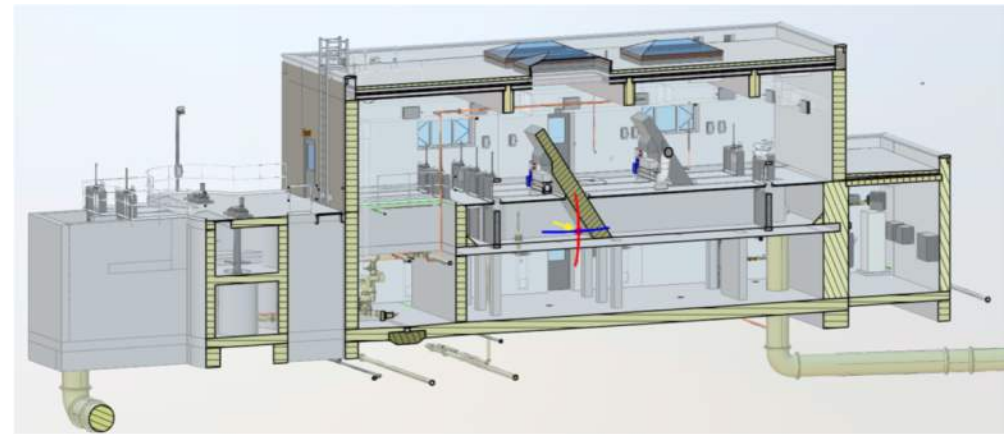
- ✓ Provide improved screening and grit removal in a protected facility
- ✓ Size for all influent flows
 - ✓ Would allow for reduced screening improvements at new North PS
- ✓ Central location for bringing together all influent flows as well as splitting excess flow to onsite holding.





Improved Fine Screening and Grit Removal

- Firm and standby screens with manual bar rack
- Bar or perforation type with dedicated screenings washer / compactor
- Grit removal for all plant influent
 - Vortex or stacked tray style
 - Self-priming of flooded suction style grit pumps.



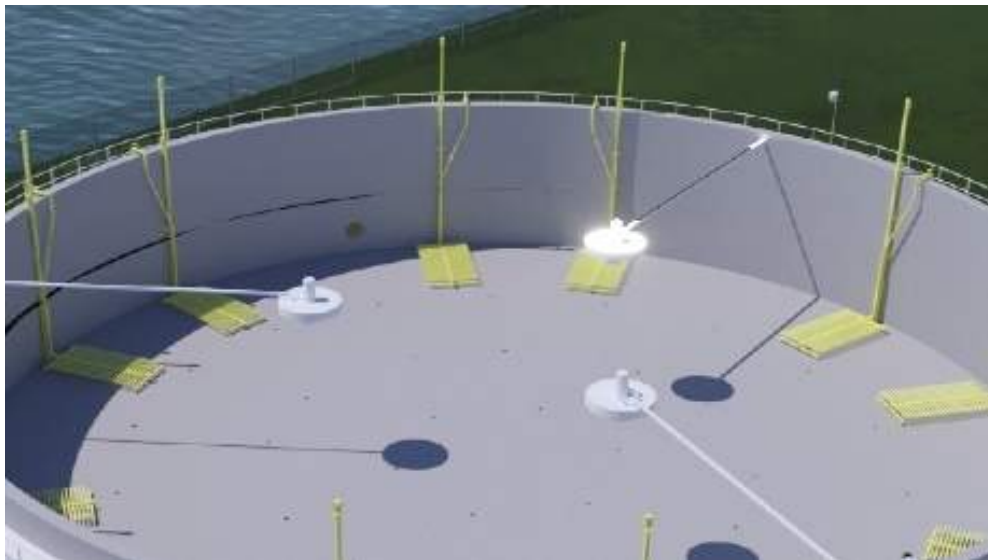
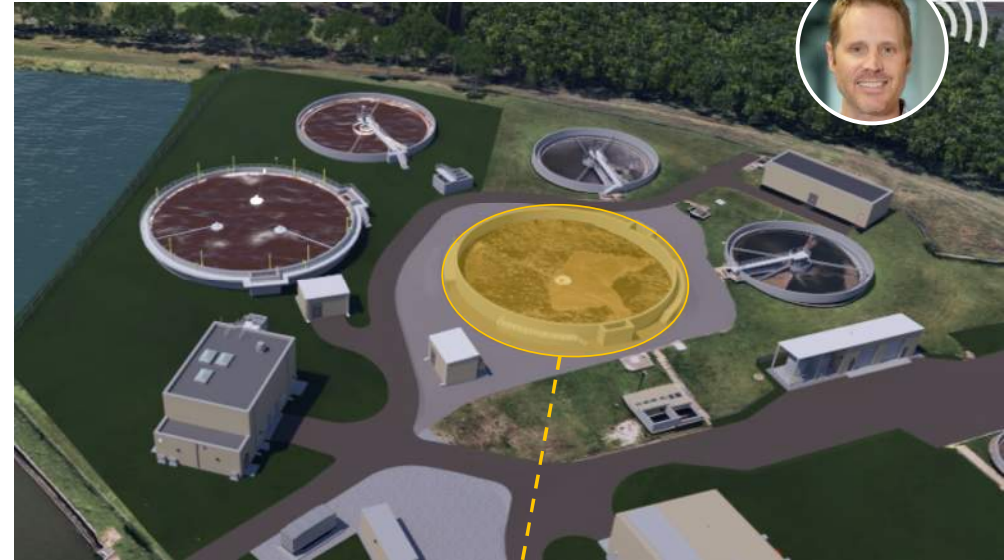
Improved Fine Screening and Grit Removal

- Could house new electrical distribution gear in attached electrical room.



Aeration Improvements

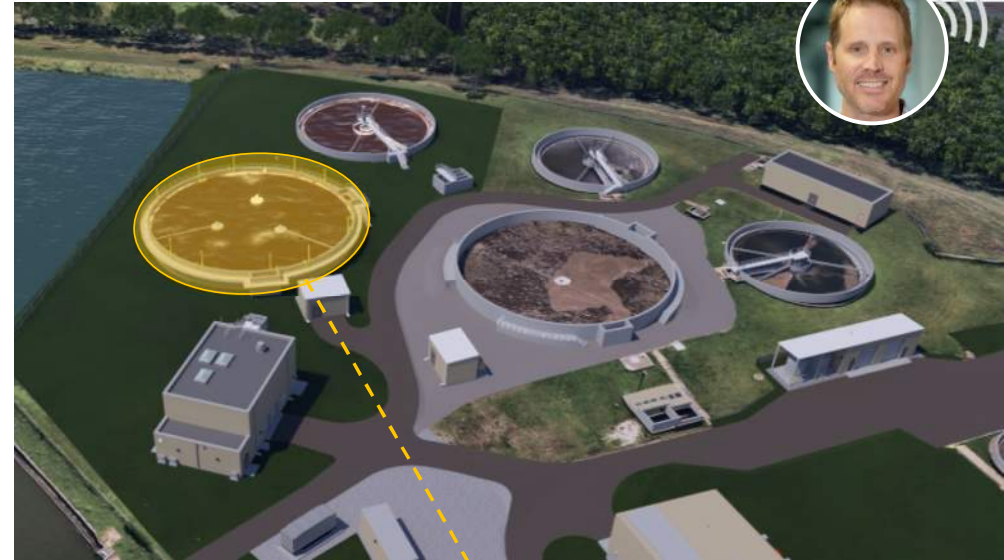
- Option to replace single large floating mixer with three new smaller ones to improve redundancy
- Option to replace mixer mooring cables with fixed mooring arm to improve retrieval.



Aeration Improvements

- ✓ Option to add like size 2nd basin to simplify operations:
 - ✓ 50/50 flow split
 - ✓ Same size blowers and floating mixers which allows for common spare parts
 - ✓ Benchsheet calculations identical
- Potential for future process intensification
 - Selective Wasting (InDense)
 - Mobile organic biofilm (MOB)
 - Adaptive Clarifier Inlet (Hydrograv)

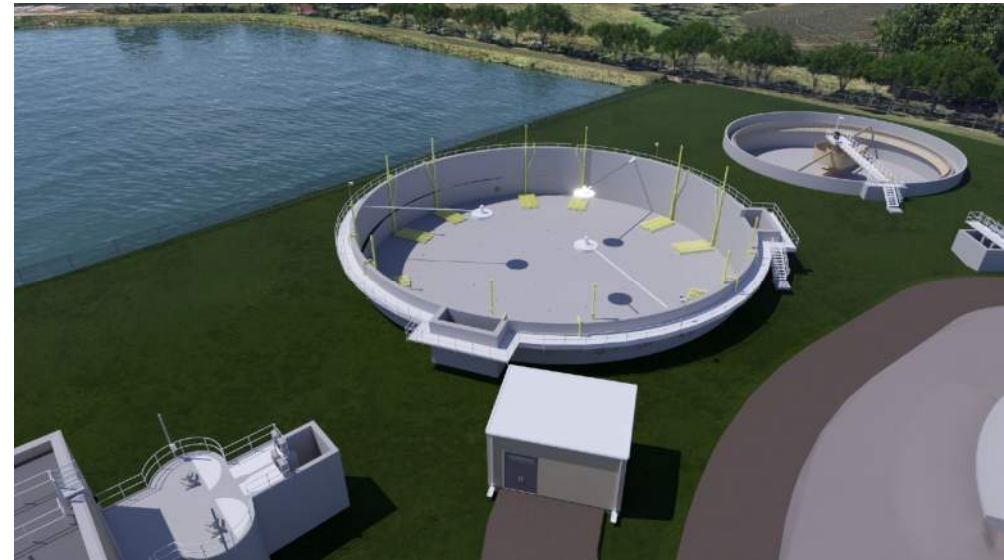
City preferred replace existing single mixer with three new mixers to match new proposed facility based on budget available.



Retrievable Diffuser Enhancements

- Match tube style or bid against strip type. Strip offers:
 - Greater surface area per diffuser to reduce total count
 - Larger and less racks
 - Optional silicone material to increase life from 7 to 9 years to 12 to 14 years

City is open to evaluating multiple diffuser types. This will be evaluated in future workshops.



Blower Improvements

- City prefers to match Sulzer Turbo blower style
- Mag bearing style
- HDR has successful experience with SRF coordinating sole source scopes



RAS/WAS PS Improvements

- Constructing a new Central WWTF Influent PS frees up existing Secondary Influent PS wetwell
- Convert existing wetwell to expanded RAS/WAS pumping
 - Raise wetwell walls
 - Station rehab (TBD): New pumps, hatches, valves, sump pump, concrete repairs, valves / piping.
 - Eliminates need to construct a new RAS/WAS PS

City is open to refurbishment and rehab of existing structure to RAS/WAS pumping only.





UV Improvements

- Confirm peak capacity of existing channel system
- Evaluate multiple lamp configurations to determine style best suited for improvements:
 - Horizontal low wattage lamps to match existing
 - Vertical high wattage lamps
 - Diagonal high wattage lamps

City is open to evaluating multiple UV module configurations.





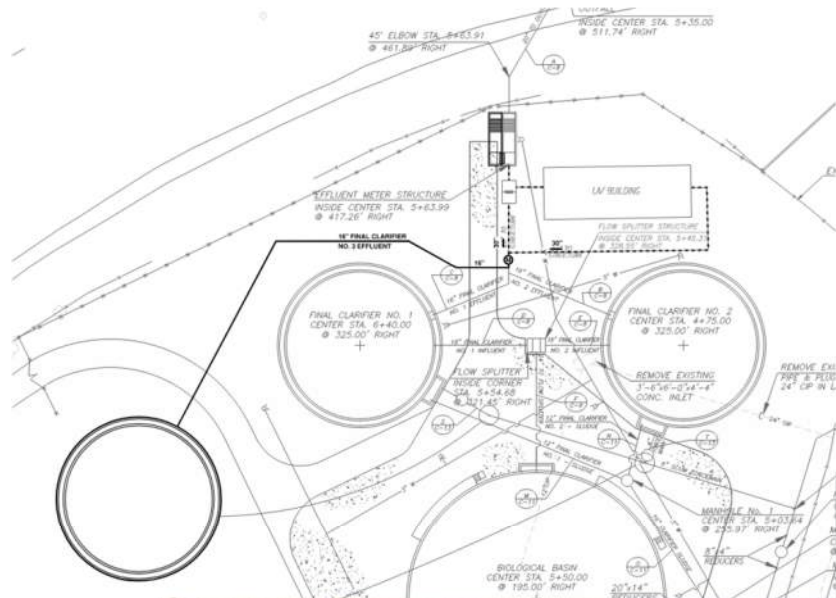
UV Improvements

- Extents of channel modifications may drive equipment decision.
- UV bypass can be used during modifications with work taking place in non-disinfection season (November to March)



Effluent Reaeration Improvements

- Option to expand reaeration steps in lieu of constructing new low profile aeration structure.
- Install new magnetic flow type meter to allow for flume demolition. Allows for improved flow condition to steps to eliminate "hydraulic jump".



WAS Pumping and TP Chemical Removal Imp

- New multi-purpose structure to save on costs.
- Outdoor double walled containment tanks (heat trace and insulated)



WAS Pumping and TP Chemical Removal Imp

- Could construct as PEMB to reduce cost and improve project schedule.
- Evaluate multiple pumping options: Rotary lobe, hose, progressive cavity.



WAS Stabilization and Mixing

- Option to replace existing aeration and mixing system with a "Tide-Flex" diffuser system.
 - Duck-bill style diffuser with integral back-flow prevention.
 - Improved mixing intensity.

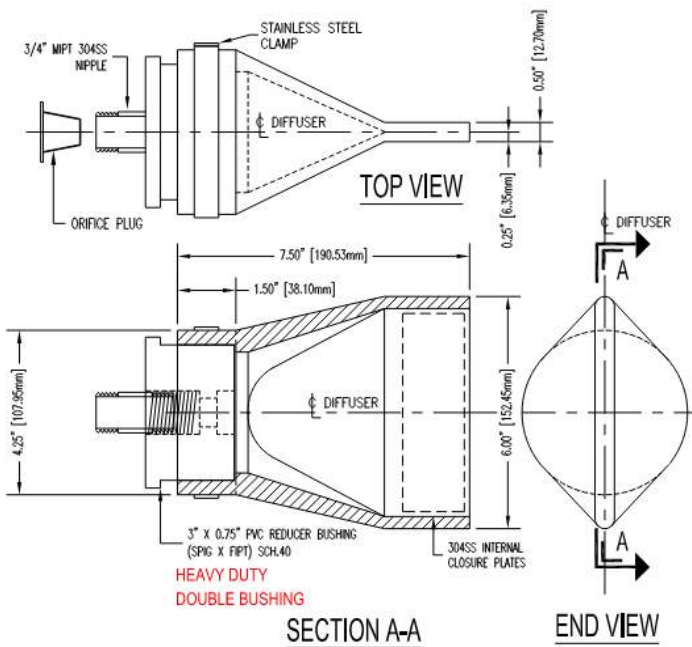


HDR will provide list of previous installations for City follow up.



WAS Stabilization and Mixing

- Multiple successful installations:
 - Plant 20, Wolcott, Cameron



New Dewatering Building Considerations

- City prefers belt filter press (BFP) technology.
 - **Option #1:** Reuse and relocate existing BFP to new Dewatering Building and sole source a 2nd BFP from BDP.
 - **Option #2:** Relocate BFP to South WWTF. Competitively bid two new BFP's for new Dewatering Building.
- Subject project will transition dewatering to WAS only, not a PS/WAS blend.

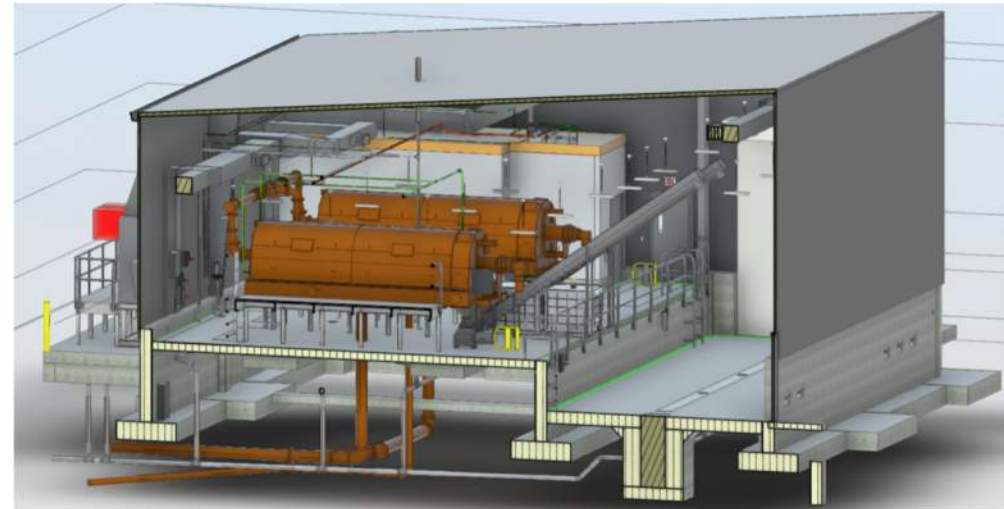
City will forward flow and load data to HDR. HDR will evaluate the PC's expected removal efficiency to determine if they can be removed early in construction to accommodate Dewatering Location 1.



New Dewatering Building Considerations

- Two likely options for location of New Dewatering Building
 - **Option #1:** Locate in footprint of existing Primary Clarifiers.
 - **Option #2:** Locate along entrance drive.

City's desire is to relocate existing BFP to South WWTF and procure two new BFPs for the Central WWTF. This will be evaluated in future workshops based on available budget.



Dewatering Location – Option 1

- **Advantages:**

- Shorter sludge piping runs.
- More centrally located within plant

- **Disadvantages:**

- Have to wait till startup of new liquids train so existing Primary Clarifiers can be demolished.
- Heavy truck traffic has to travel further into the plant and leads to premature failure of paved surfaces.



Budget Pending Improvements

- Demolition of abandoned Central WWTF trickling filter / decant pit. Coordinate with floodway / plain requirements.
- Demolition of North WWTF. Establish unit process priorities if funding is insufficient.





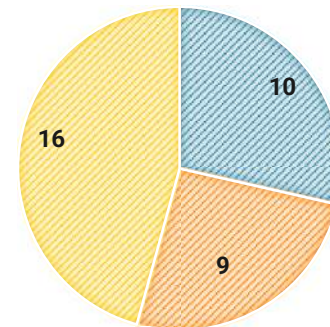
MOPO 101

- “Maintenance of Plant Operations”
- Plant to maintain continuous treatment throughout construction, and minimizes plant interruptions
- Provides structure for Engineer/CMAR/Owner sequencing coordination
- Clear space for new construction / major tie-ins

Nelson WWTF Specifics

- 35 MOPOs total
- Budget = \$12M
- Spent = \$4.5M

MOPO COMPLETION STATUS



■ Complete ■ In Progress ■ Future

Key MOPO's:

Plans include:

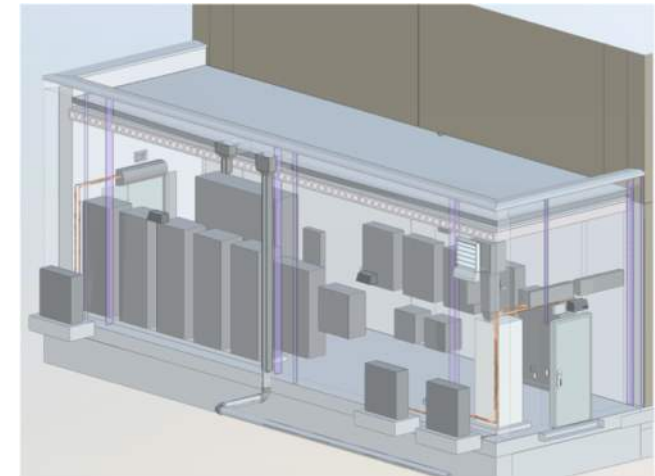
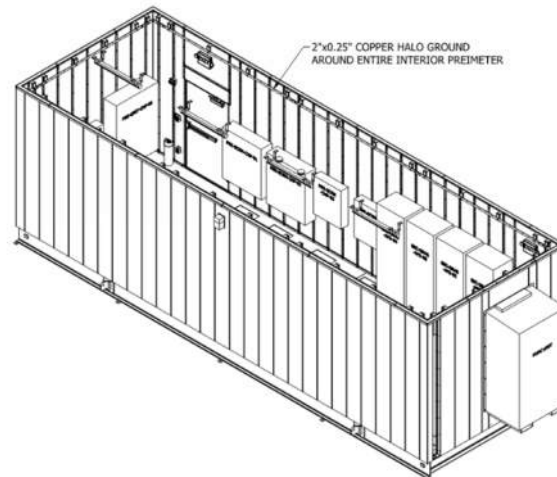
- North Pump Station Tie-in
- Central Pump Station Tie-in
- Lagoon Cleanout
- UV Disinfection Improvements
- Dewatering Switchover To New Location
- Electrical Switchover



Electrical Supply and Standby Power Improvements



- Options for new electrical gear
 - Free standing site constructed
 - Free standing prefabricated
 - Incorporate with new Headworks Building electrical room





SCADA

- City preference for “Remote Viewing” with “Local Control”.
- Early selection and incorporation with CMAR
- Include in remaining design review meetings for coordinated approach

Future Process Intensification Options

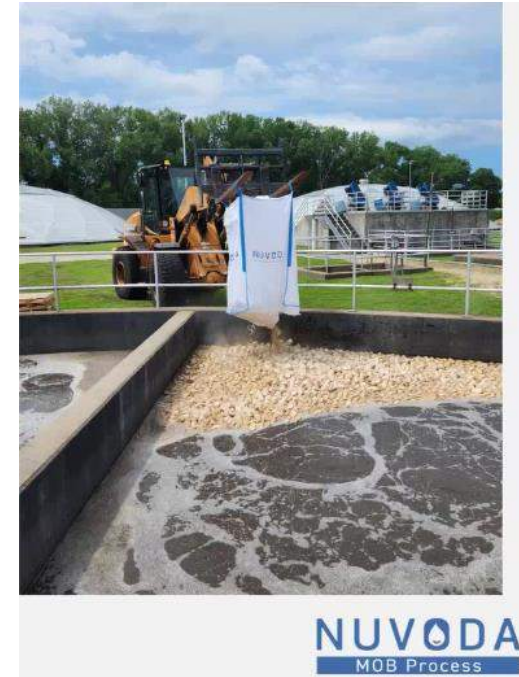
- Selective Wasting
 - In-Dense
 - Removal of poorer settling MLSS
 - Simple hydrocyclone skid system
 - Improve sludge retention time without additional tankage

In upcoming workshops HDR will evaluate like sized Aeration Basins, which is the City's preference, and HDR will evaluate process intensification options as a way to address future flow and loading requirements as needed.

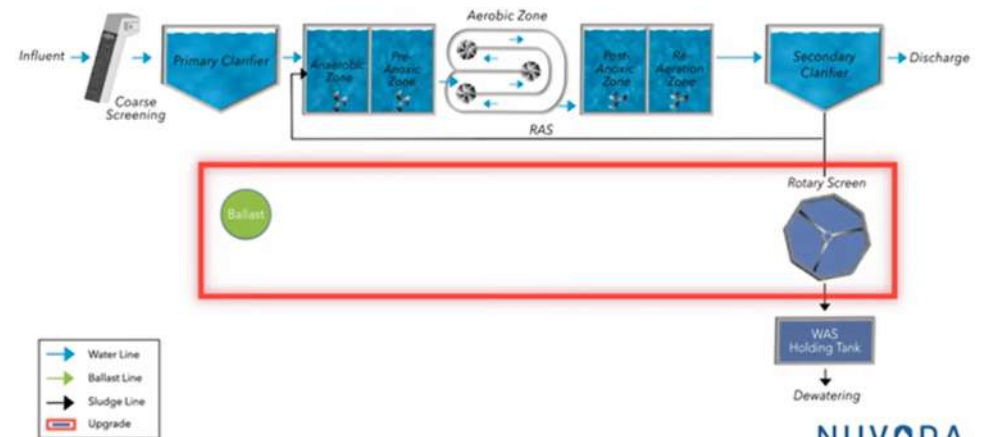


Future Process Intensification Options

- Mobile organic biofilm (MOB)
 - NUVODA
 - Process intensification through the addition of natural fiber to support attached growth process
 - Requires screening of WAS flowstream to retain natural fiber media
 - Easy retrofit for most treatment systems











The MOB Process



Future Process Intensification Options

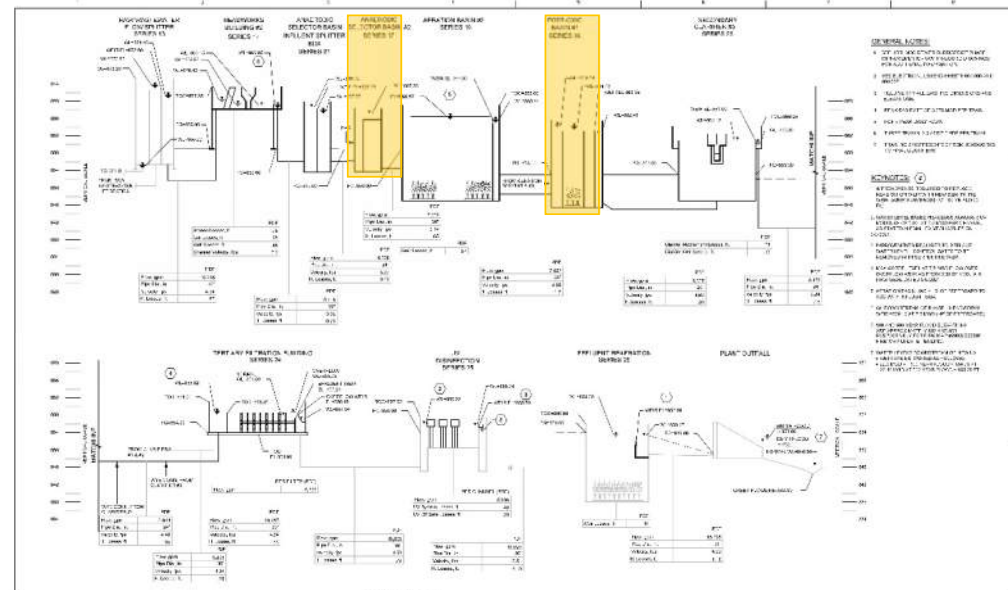


- Variable Clarifier Inlet
 - Hydrograv
 - Springfield MO SWTP HDR Pilot
 - Improved hydraulic and solids loading rates

 A photograph of a cylindrical clarifier tank with a white metal structure on top. The inlet is positioned low, and the sludge blanket is also low.	 A photograph of the same clarifier tank. The inlet is slightly higher than in the night scenario, and the sludge blanket is at a normal level.	 A photograph of the clarifier tank. The inlet is raised high, and the sludge blanket is also high. The outlet slots are open.	 A photograph of the clarifier tank. The inlet is raised to its highest position, and the sludge blanket is very high. The outlet slots are fully open.
 Dry weather, night time: The inflow of wastewater is low, as is the sludge blanket level. The movable inlet lies deep and the opening is small.	 Dry weather, day time: The inflow of wastewater is normal, as is the sludge blanket level. The inlet is slightly higher and the inlet slots are wider.	 Wet weather: The inflow of wastewater and additional rainwater is high, as is the sludge blanket level. The inlet is raised high and the outlet slots are fully open.	 Heavy storm weather: The inflow of wastewater and rainwater is very high, as is the sludge blanket level. The inlet is completely raised and the outlet slots are fully open.

Future Nutrient Requirements

- Anaerobic Selector Basins TP Removal
- Post Oxidation Basin Enhanced Ammonia/TN Removal
- Reserve Site Footprint and Hydraulic Space for Future facilities
- Future Piping and Electrical Provisions



DATE: 11/15/2017



NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITTING	11/15/2017
2	FOR CONSTRUCTION	11/15/2017
3	FOR CONSTRUCTION	11/15/2017
4	FOR CONSTRUCTION	11/15/2017
5	FOR CONSTRUCTION	11/15/2017
6	FOR CONSTRUCTION	11/15/2017
7	FOR CONSTRUCTION	11/15/2017
8	FOR CONSTRUCTION	11/15/2017
9	FOR CONSTRUCTION	11/15/2017
10	FOR CONSTRUCTION	11/15/2017



**LITTLE BLUE VALLEY
SEWER DISTRICT
MIDDLE BIG CREEK WWTF
PHASE 2 EXPANSION**

GENERAL HYDRAULIC PROFILE - PART 2

SCALE: 1" = 10'

DATE: 11/15/2017

DRAWN BY: [Name]

CHECKED BY: [Name]

PROJECT NO.: 000915

State of Missouri CMAR Enabling Legislation

- Projects > \$2M (commonly designed by engineers)
- QBS for engineer
- Disclose one week before RFQ (method and criteria)
- Publish once per week for two consecutive weeks
- Two-Step Procurement
 - **RFQ** – experience, past performance, safety record, personnel, proposed methodology. No cost allowed.
May shortlist 5 or fewer solely on quals.
 - **RFP** – Provide additional info, CMAR's proposed fee, and anticipated price for General Conditions.
 - **Interview** – At least top 2 ranked firms.
 - **Scoring** – Selection Criteria must be included in RFQ and RFP. Must select on best value. Qualifications minimum 40% and cost maximum 60%.
- After contract execution, all subcontract bids must be competitively bid including self-performed work.



CMAR Procurement

Before you pick a CMAR partner...

- Review Industry Templates
- Engage your Procurement Department
- Consult with your City Attorney (or outside counsel if necessary)
- Perform CMAR Market Sounding
- Solicit Feedback from Peer Utilities



Water and Wastewater Collaborative Delivery HANDBOOK
SIXTH EDITION

CONSTRUCTION MANAGEMENT AT-RISK PROCUREMENT GUIDE

CONSTRUCTION MANAGEMENT AT-RISK Procurement Template

Draft Scope of CMAR Services Template

AGREEMENT BETWEEN OWNER AND CONSTRUCTION MANAGER AT RISK
Prepared By
EJCDC ENGINEERS' JOINT CONTRACT DOCUMENTS COMMITTEE
ACEC
ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS
NSPE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

CONSTRUCTION MANAGEMENT AT-RISK (CMAR)
Contract Template: Agreement

Water Collaborative Delivery Association
Better Projects, Together.

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WQDA No. CMAR-104-2022
Printed by Water Design Build Group



Market Engagement

Market Sounding

- Email, meeting, conference call, bidding website
- In-depth interviews
- Feedback on:
 - Delivery Model
 - Anticipated Schedule
 - Procurement Approach
 - Project Budget
 - Contract Template

Market Sounding

- Telephone, email, or in-person
- Target local, specialized, and/or MBE/WBE subcontractors
- Feedback on specific bid packages
- General availability of:
 - Local construction services
 - Labor
 - Materials
 - Equipment costs



Construction Manager At-Risk Case Studies



Warrensburg East and West WWTFs

- GMP prior to CMAR going to market to allow early SRF loan closing

Status: Under Construction



Wolcott Wastewater Treatment Plant

- First AGS Facility in Kansas
- First CMAR Project for UG of Wyandotte County
- Trojan Sigma UV

Status: Project Completed



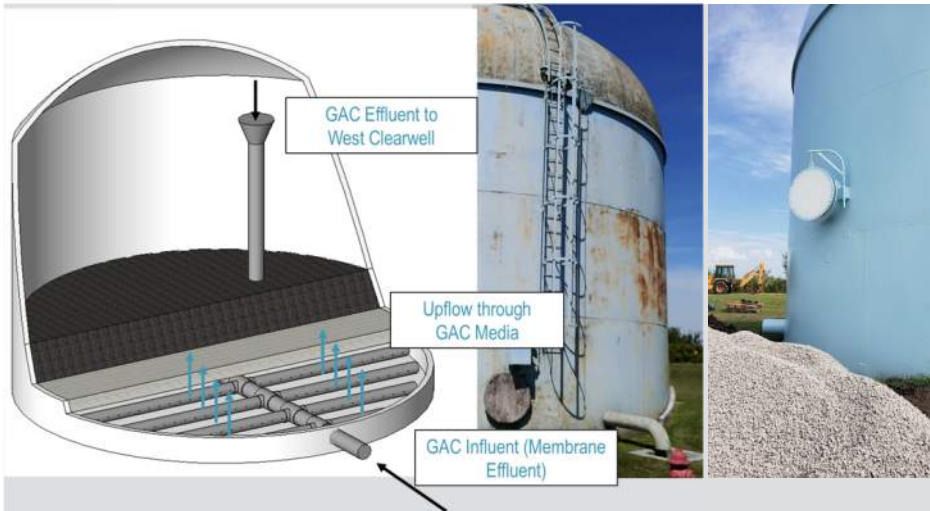
Slide 62

JA1 [@Matole, Roopa] can you update this project description for the 4MGD Ozone BAF project?

Adams-Weber, Jessica, 2026-03-20T21:10:49.326



Construction Manager At-Risk Case Studies



Maryville WTP

- Address T&O Issues
- Repurpose existing Clearwell to GAC Adsorber
- Early works packages
- Sequencing Strategies

Status: Project Completed



ROSS
CONSTRUCTION
Engineers & Constructors



St. Joseph Blower Replacement

- Temporary blower considerations
- Existing condition validation
- Extensive MOPO planning

Status: Final Design/GMP



Garney
CONSTRUCTION

CMAR | PDB

Two Step Selection Process

- RFQ – Shortlist - RFP
- “Best Value” Selection
- Technical + Price Proposal
- Establish Selection Criteria Consistent with Project Needs

1

RFQ

- Team Composition & Experience
- Key Personnel Experience
- Specific Qualifying Projects
- Project Approach
- Safety, Quality, Controls
- Financials
- GMP Development

SOQ

- Owner Ranks and Creates Shortlist

RFQ

- Preconstruction Phase Approach
- Construction Phase Approach
- Schedule
- Scope of Work Enhancements
- Contract Terms
- Cost Components
 - Fee on Cost of Work
 - General Conditions Cost
 - Preconstruction Phase Fee (if not prohibited)

Proposal

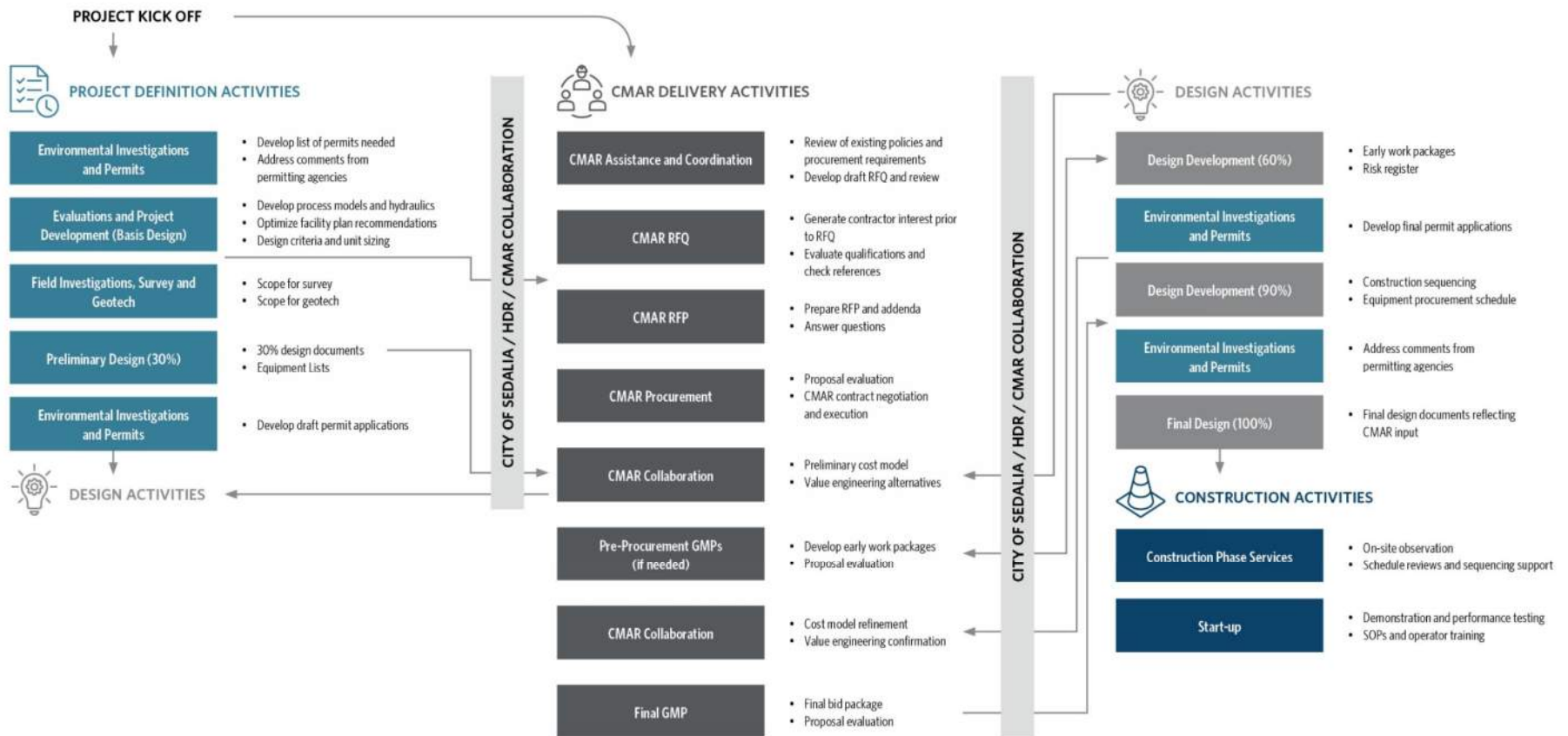
- Confidential One on One Meetings
- Interview(s)

Best Value Selection





Project Approach



Top Procurement Issues and Best Practices



Common CMAR Questions

- Carry over qualifications scores to proposal phase?
- How many to short list?
- Provide a draft contract?
- Publish your project estimate?
- Public evaluation criteria?
- Hold confidential one-on-one meetings?
- Allow for confidential questions?
- Separate price/fee submittals?
- Hold interviews?

Best Practice Guidance

- A toss-up! If **'yes'** consider sharing feedback
- No more than three
- Yes, as early as feasible after the short-list
- Yes, get industry feedback early
- Yes, be transparent
- Yes, now expected; commercial/technical
- Yes, but within limitations
- Yes, protect confidentiality
- Maybe. One-on-ones may be enough



RFQ/RFP Example

- [Maryville – 4mgd ozone](#)

Slide 67

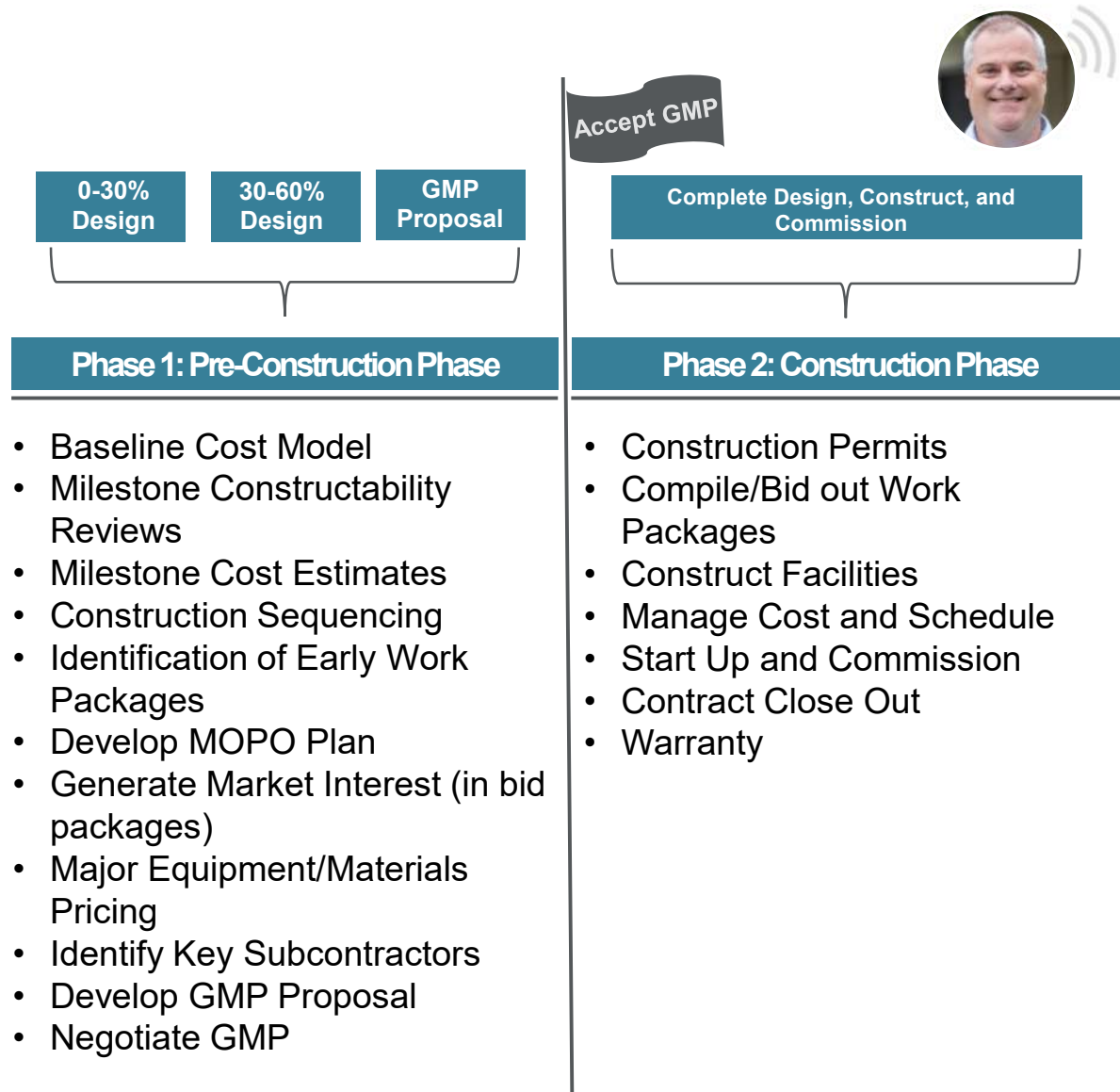
PY1 Let's decide which RFQ/P to give them. I prefer having a draft Sedalia Doc for them
Young, Patrick, 2026-03-20T20:00:00.106

JA1 0 [@Matole, Roopa] can you send Pat and Brandon the RFQ and RFP for the Maryville 4
MGD project?
Adams-Weber, Jessica, 2026-03-20T21:13:47.149

CMAR | PDB

Work Authorized in Two Phases

- Pre-Construction Phase
- Construction Phase
- One Agreement with Independent Authorization Gateways
- If GMP is Not Acceptable, then Pay for Services Rendered and Terminate (“off ramp”)



Risk Management From Concept to Contract

Best Practices

- Create risk transparency
- Provide conceptual risk allocation in RFQ
- Use a collaborative delivery contract template (not a DBB contract)
- Provide opportunity for comment
- Provide more detail as procurement progresses



RISK	CMAR	
	CMAR Firm	Owner/Designer
Land and easement acquisition		X
Technical requirements ¹		X
Project design ²		X
Environmental approvals & permits ³		X
Building and administrative permits	X	
Coordination with existing facilities	Shared	Shared
Proprietary process or equipment ⁴		X
Quality & quantity of influent (raw water)		X
Quality and quantity of effluent (finished water and residuals/biosolids)		X
Project performance ⁵		X
Design/Phase 1 schedule ⁶	Shared	Shared
Construction/Phase 2 schedule ⁶	X	
Construction cost overruns	X	
Construction warranty	X	
Differing site/facility conditions		X
Force majeure/uncontrollable conditions	Shared	Shared
Materials cost escalation ⁷	X	

6th Edition, Chapter 3, Figure 3-3



Risk Identification Requires a Holistic Approach

- Changes in law/regulation
- Acts of God
- Cost escalation
- Hazardous materials (existing)
- Site conditions
- Subsurface risks
- System performance

- Subcontractor performance
- Construction permits
- Warranty issues
- Hazardous materials (construction)
- Environmental Protection
- Schedule performance
- Cost performance

*“The ideal contract -- the one that will be most cost effective -- is the one that **assigns each risk to the party that is best equipped to manage and minimize that risk, recognizing the unique circumstances of the project.**”*

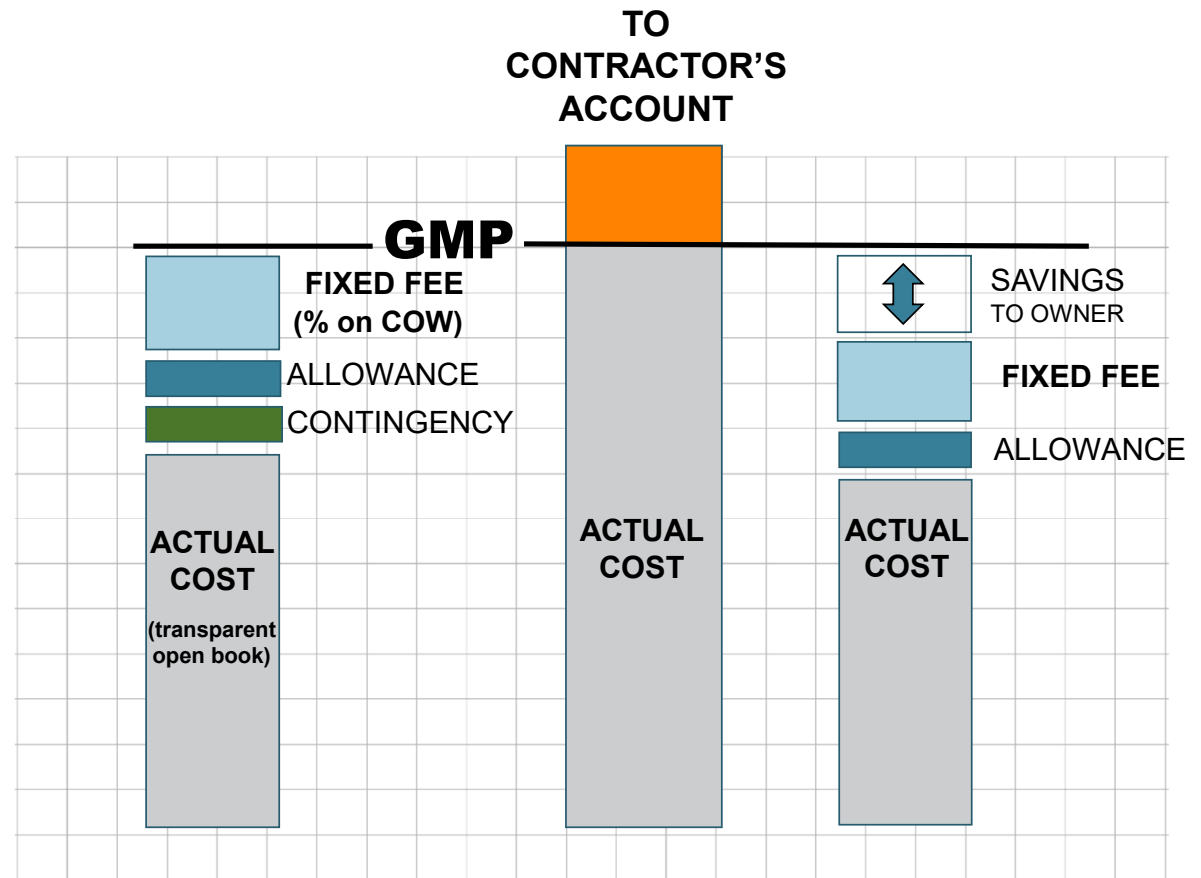
- Construction Industry Institute (CII)

GUARANTEED MAXIMUM PRICE CONTRACT

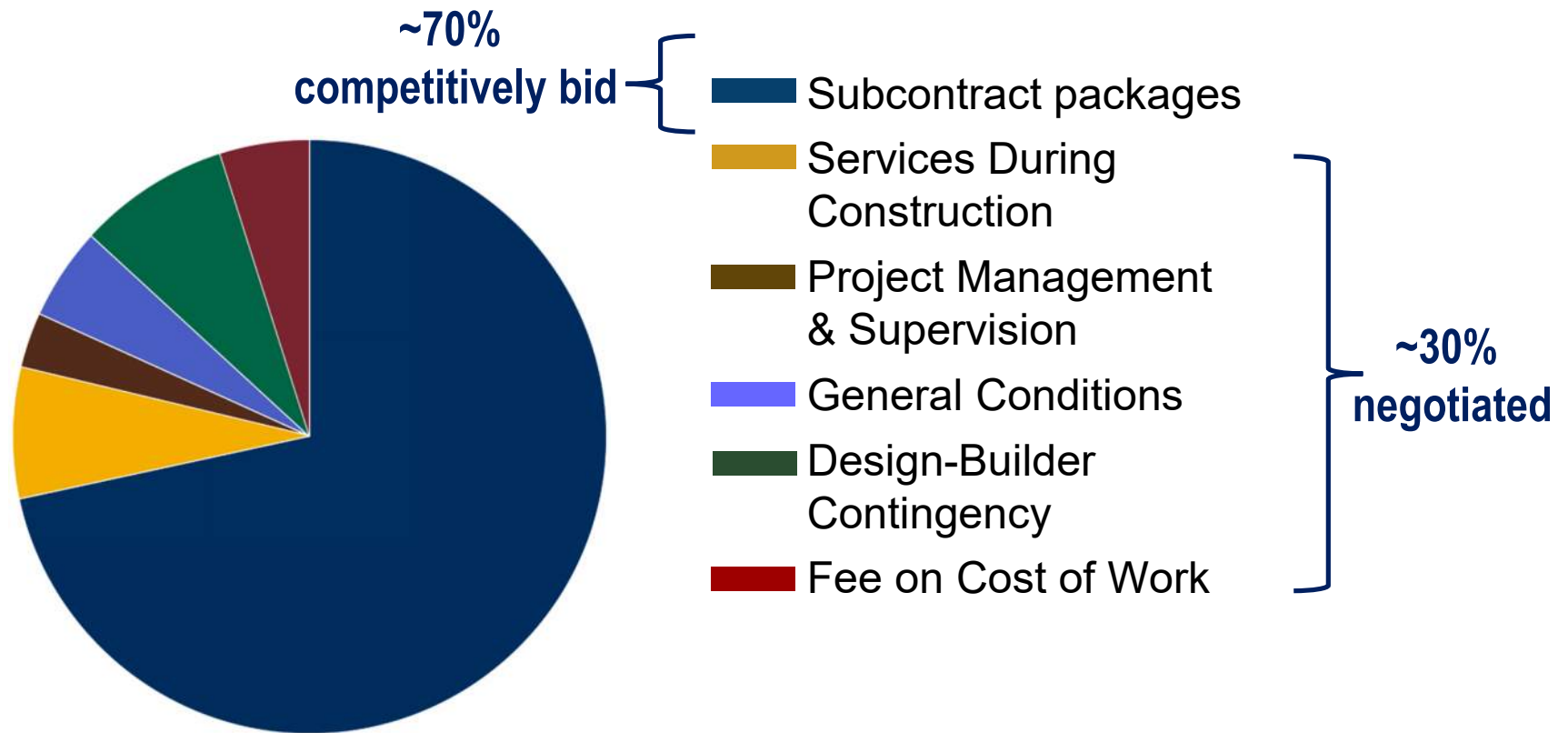


GMP

(CMAR & PDB Contracts)



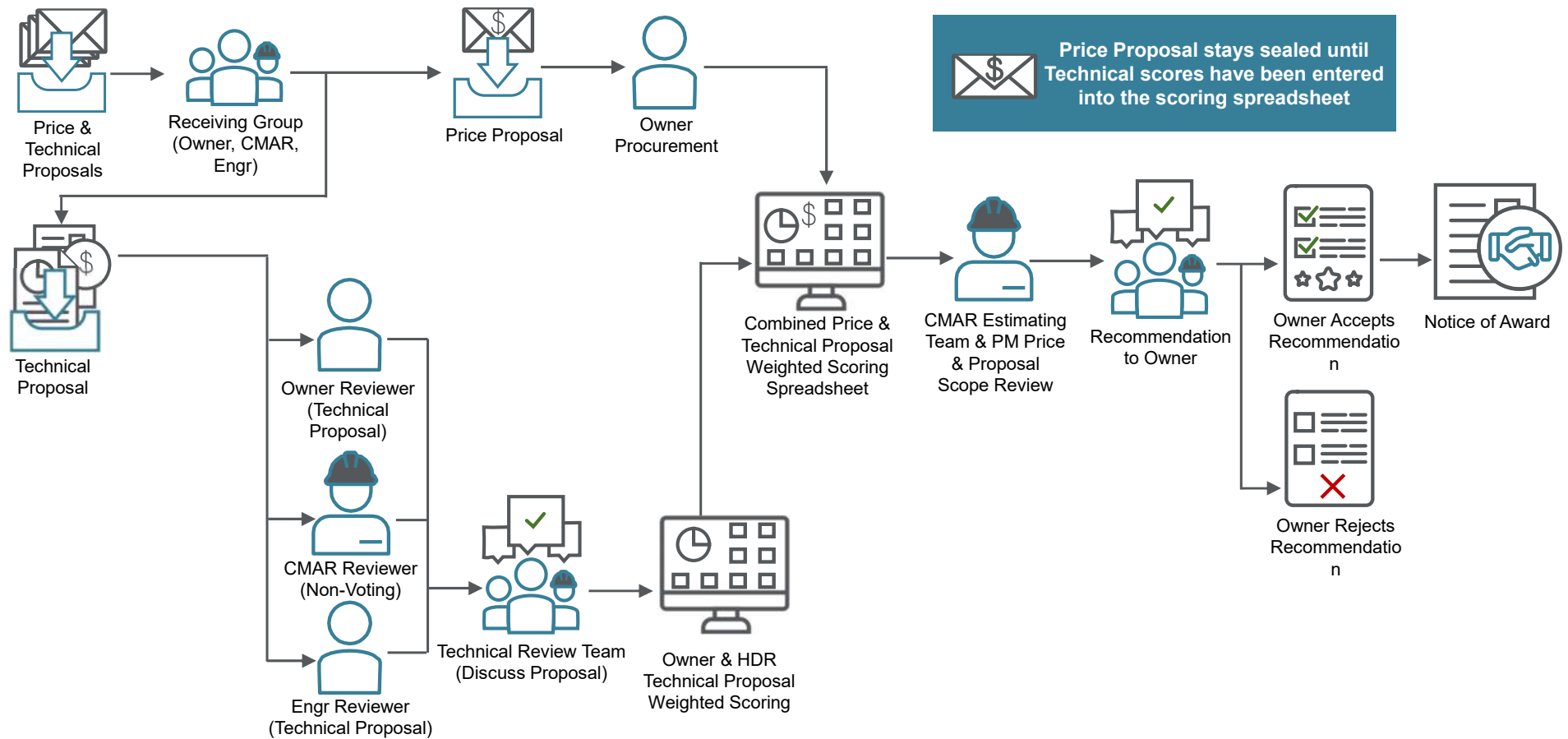
Components of the Guaranteed Maximum Price (GMP)





Potential Bid Receipt and Review Process

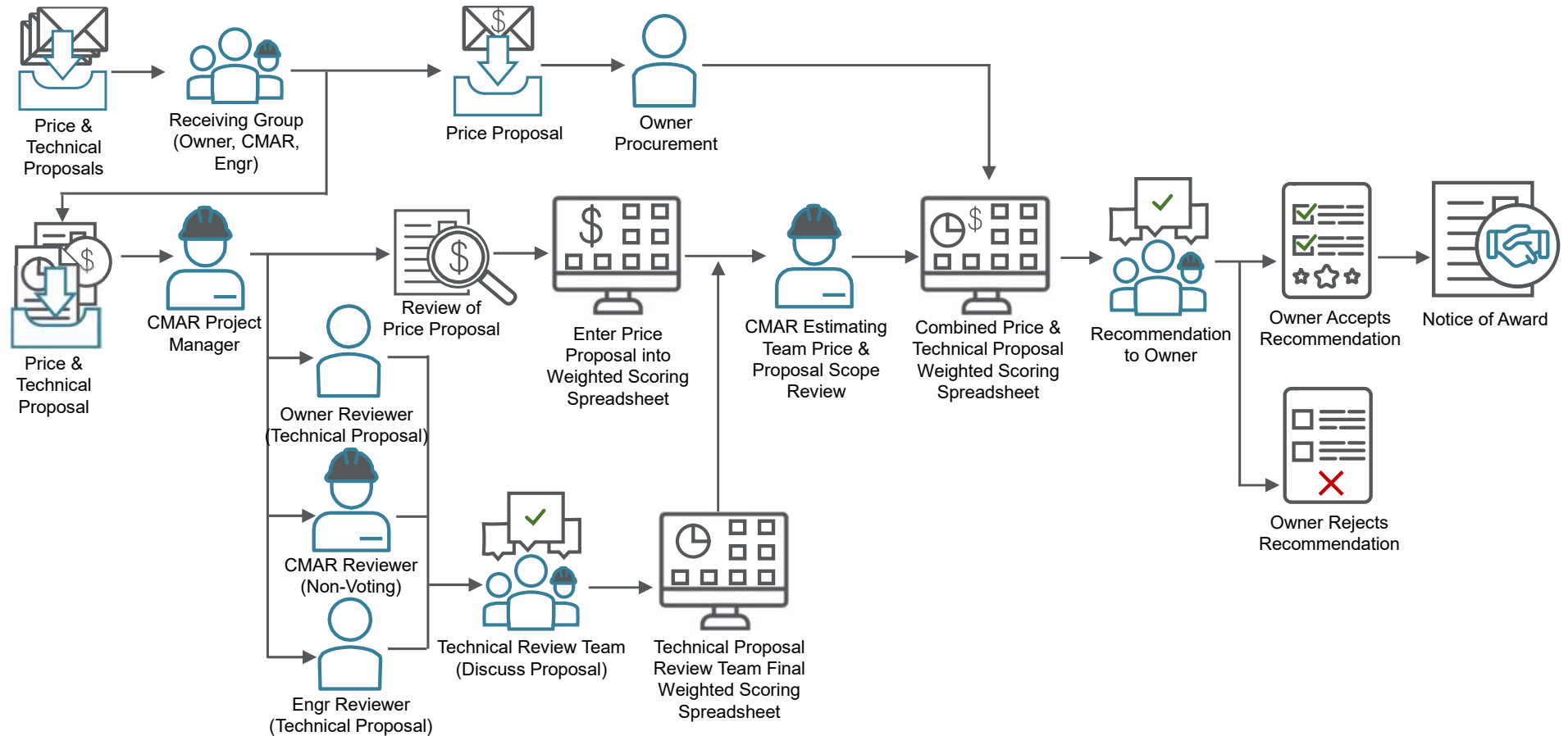
CMAR Bidding





Potential Bid Receipt and Review Process

CMAR Not Bidding



Next Steps

- HDR to schedule collaborative design workshops
- HDR to provide tentative dates to City for site survey and laser scanning
 - Geotech and potential lagoon survey supplements TBD

