



August 16, 2024

City of Aurora  
Planning & Development Services  
15151 E. Alameda Parkway, Suite 5200  
Aurora, Colorado 80012  
Ph: 303.739.7186

## Re: Port Colorado – Sub-Area 2 – Master Plan (DA-1793-05) Submittal #5 – Response to Submission Review #4

Staff's comments for Port Colorado Sub-Area 2 Master Plan have been addressed and responses are attached.

### OWNER OF EACH RESPONSE

Red: LAI Design Group   Blue: Westwood/Civil   Green: FHI/Traffic

### SUMMARY OF KEY COMMENTS FROM ALL DEPARTMENTS

- Tab # 13 Repeat: identify a trigger for the design of the bridge. See comments and redlines from Engineering regarding the PIP. (Item 4) **RE: Acknowledged**
- See comments and redlines from Traffic Engineering regarding the TIA, PIP, and TAB 8. (Item 5) **RE: Acknowledged**
- See the attached comments from CDOT. (Item 6) **RE: Acknowledged**

### PLANNING DEPARTMENT COMMENTS

Reviewed by: Rachid Rabbaa [rrabbaa@auroragov.org](mailto:rrabbaa@auroragov.org) / 303-739-7541 / PDF comment color is teal.

1. **Community Comments**
  - 1A. Please see the CDOT comments. PDF **RE: Acknowledged**
2. **Completeness and Clarity of the Application**  
**Tab #13 - Public Improvement Plan.**
  - 2A. See comments 4A to 4C below from Engineering. **RE: Acknowledged**
3. **Zoning, Land Use Comments, and Transportation Issues**
  - 3A. No additional comments. **RE: Acknowledged**

### REFERRAL COMMENTS FROM OTHER DEPARTMENTS AND AGENCIES

4. **Civil Engineering** Reviewed by: Julie Bingham, [jbingham@auroragov.org](mailto:jbingham@auroragov.org) / 303-739-7403 / Comments in green.  
**Tab 13 (PIP)**
  - 4A. Repeat: identify a trigger for the design of the bridge.  
**RE: Trigger has been added to narrative**
  - 4B. The design for the bridge over Bear Gulch should be triggered by the construction of Bear Gulch improvements OR 70% of traffic volume is met on 48th. (LOS E).  
**RE: Note has been added to narrative**
  - 4C. Please remove this statement entirely from the PIP. A deferral can be considered for the construction of 48th if traffic volumes don't warrant the construction, but this would be considered at the site plan level. 48th Avenue should be identified as required for the adjacent planning areas in the PIP.



RE: Statement has been removed

5. **Traffic Engineering** Reviewed by: Steven Gomez / [segomez@auroragov.org](mailto:segomez@auroragov.org) / 303-739- 7336 / Comments in gold.

**Traffic Impact Analysis**

5A. Update ALL signalized LOS, delay and queues to be consistent with worksheets, graphics, etc.

RE: Acknowledged

5B. Review and update ALL text to be consistent with latest traffic volumes access, configuration, intersection laneage, etc.

RE: Acknowledged.

5C. Update signal timing and analysis per comments.

RE: Acknowledged.

5D. See comments throughout report.

RE: Acknowledged.

**PIP**

5E. Verify intersection control with TIS.

RE: Intersection control has been verified with TIS

5F. Show signalized intersection on Plan sheets, typ.

RE: Signals added to plan sheets

**TAB#8**

5G. Add note to PIP.

RE: Note has been added

6. **Department of Transportation:** Reviewed by Steve Loeffler / [steven.loeffler@state.co.us](mailto:steven.loeffler@state.co.us)

6A. Comments are attached. ***Respond to each major item specifically in your comment response letter and make revisions as necessary.***

RE: Acknowledged.

6B. A comment response letter is REQUIRED.

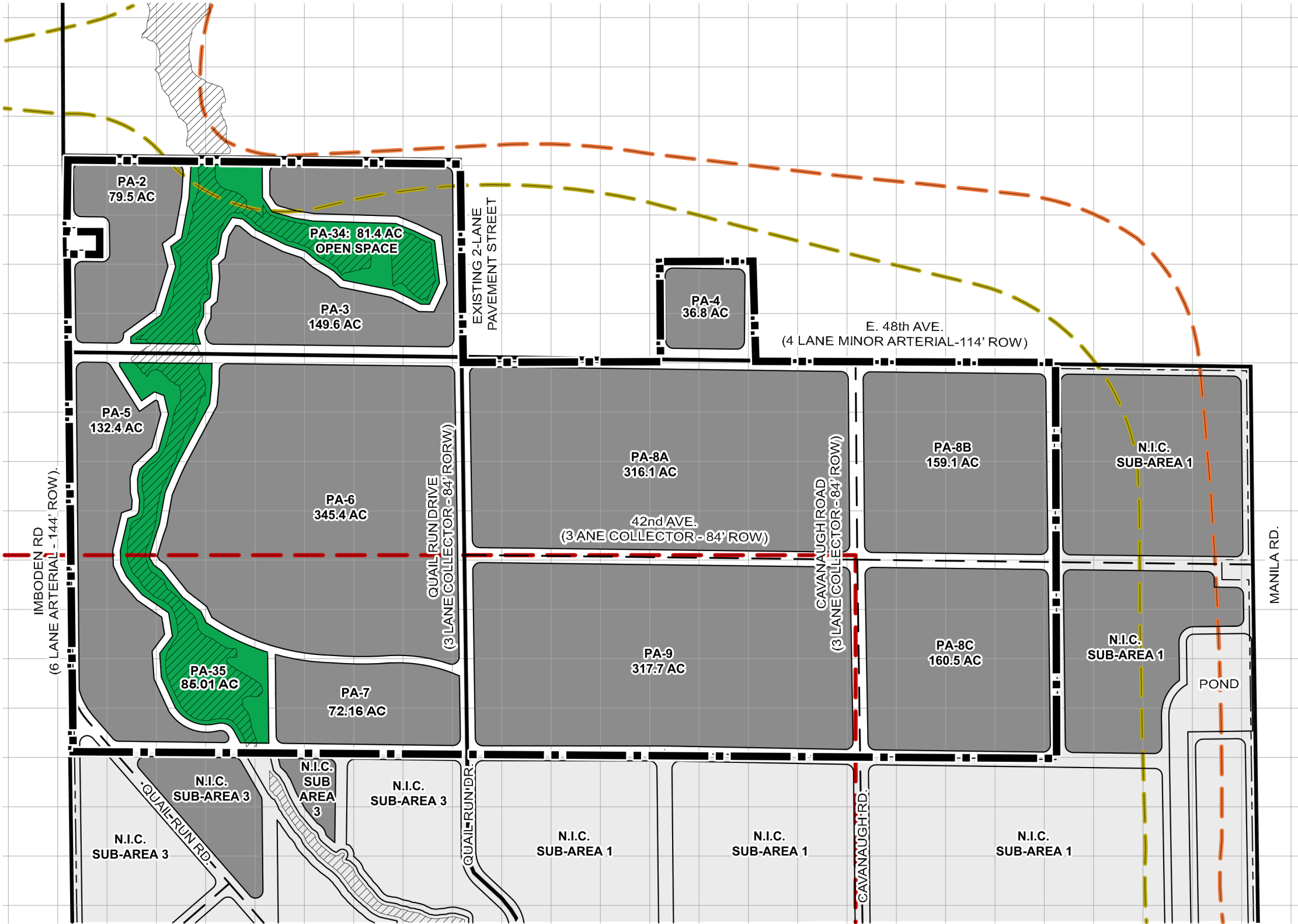
RE: Acknowledged.

If you require additional information or have any or have any questions about our submittal items, please do not hesitate to call or e-mail me (303) 734-1777 or [jcarpenter@laidesigngroup.com](mailto:jcarpenter@laidesigngroup.com). We look forward to working with the City in completing this process in order to contribute to the City of Aurora.

Sincerely,

Jennifer Carpenter  
Principal

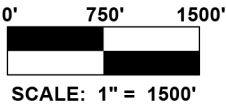
Port Colorado  
Sub-Area 2  
Planning Area Plan  
Tab #8



LEGEND

- SUB-AREA #2 BOUNDARY
- MP BOUNDARY
- EXISTING ROADS
- PLANNED ROADS
- 10 ACRE REFERENCE GRID
- NOISE CONTOUR (60-65 LDN)
- NOISE CONTOUR (65+ LDN)
- AIRPORT INFLUENCE AREA
- I-2 (INDUSTRIAL)
- OPEN SPACE (OS-D)
- BEAR GULCH FLOODPLAIN

| Sub-Area   | PA | Gross Acreage | MP Zone Designation |
|------------|----|---------------|---------------------|
| Sub-Area 2 | 2a | 79.49         | I-2                 |
|            | 3  | 149.56        | I-2                 |
|            | 4  | 36.81         | I-2                 |
|            | 5  | 132.40        | I-2                 |
|            | 6  | 345.37        | I-2                 |
|            | 7  | 72.16         | I-2                 |
|            | 8a | 316.15        | I-2                 |
|            | 8b | 159.11        | I-2                 |
|            | 8c | 160.51        | I-2                 |
|            | 9  | 317.66        | I-2                 |
|            | 34 | 81.42         | I-2                 |
|            | 35 | 85.01         | I-2                 |
| Total Ac.  |    | 1935.65       |                     |



ISSUE RECORD

- 1st Submittal - 09/21/2022
- 2nd Submittal - 12/05/2022
- 3rd Submittal - 05/10/2023
- 4th Submittal - 06/21/2024



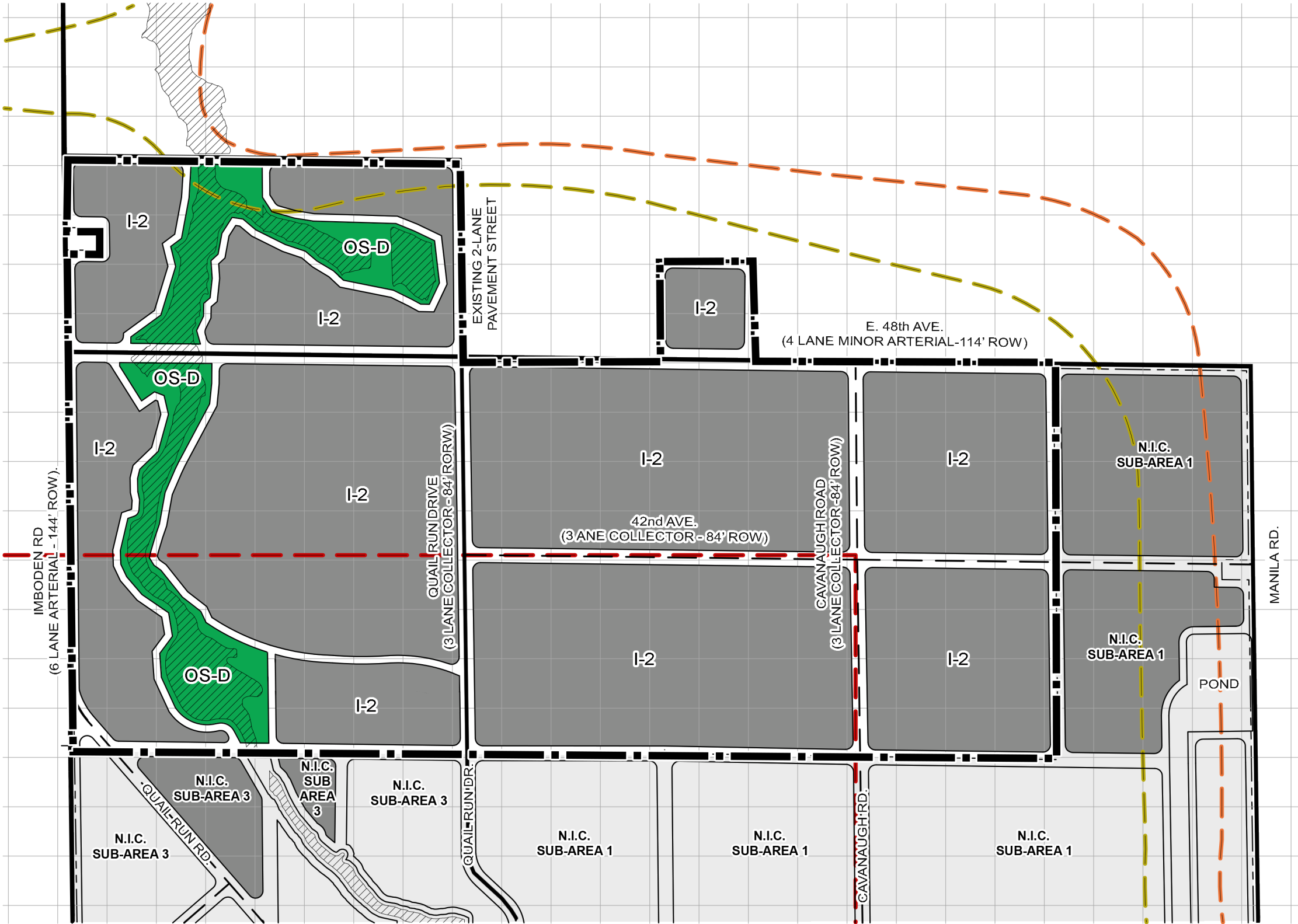
Westwood



Note: Images and Graphics are solely for reference purposes only.

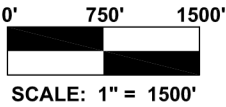


Port Colorado  
Sub-Area 2  
Land Use Plan  
Tab #8



LEGEND

- SUB-AREA #2 BOUNDARY
- MP BOUNDARY
- EXISTING ROADS
- PLANNED ROADS
- 10 ACRE REFERENCE GRID
- NOISE CONTOUR (60-65 LDN)
- NOISE CONTOUR (65+ LDN)
- AIRPORT INFLUENCE AREA
- INDUSTRIAL PLANNING AREA
- OPEN SPACE PLANNING AREA
- BEAR GULCH FLOODPLAIN



ISSUE RECORD

- 1st Submittal - 09/21/2022
- 2nd Submittal - 12/05/2022
- 3rd Submittal - 05/10/2023
- 4th Submittal - 06/21/2024



Westwood



Note: Images and Graphics are solely for reference purposes only.





Transport Colorado MP (#1283749)

TAB #8: MP Land Use Map Matrix (FORM D) Page 1 of 1

Submitted: September 15, 2022

Resubmitted: December 7, 2022

ZONE: I-2

| A.<br>Land Use Item   | B.<br>Planning<br>Area Map<br>Number | C.<br>Map Area Code | D.<br>Gross Land<br>Area in<br>Acres | E.<br>Land Use Formula   | F.<br>Maximum<br>Potential<br>Density by<br>Code<br>(in DU's) | G.<br>Actual<br>Proposed<br>Maximum<br>Density<br>(in DU's) | H.<br>Phasing, Details and Comments<br>(Include phase number or triggering<br>event) |
|---|--------------------------------------|---------------------|--------------------------------------|--|---|---|--|
| 1. Flood Plain  | PA-34                                | NA                  | 81.42                                | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
| 1. Flood Plain  | PA-35                                | NA                  | 100.82                               | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
| 2. Required Land<br>Dedication Areas<br>for Parks, Schools,<br>Fire Stations, Police<br>Stations, Libraries | NA                                   | NA                  | NA                                   | NA   | NA  | NA  | NA   |
| 3. Development<br>Areas   | PA-2                                 | NA                  | 79.49                                | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-3                                 | NA                  | 149.56                               | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-4                                 | NA                  | 36.81                                | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-5                                 | NA                  | 132.4                                | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-6                                 | NA                  | 345.37                               | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-7                                 | NA                  | 56.35                                | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-8a                                | NA                  | 316.15                               | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-8b                                | NA                  | 159.11                               | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-8c                                | NA                  | 160.51                               | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
|   | PA-9                                 | NA                  | 317.66                               | No limit on density  | NA  | NA  | RE: PIP Narrative and Plan   |
| 4. Total Map Acreage (total figures above)  |                                      |                     | 1,935.65                             | <p>*Note: the Public Land dedication requirement from the Annexation Agreement(s) shall be satisfied by the provision of open space as excess acreage above and beyond the area occupied by the floodplain in PA-34 and PA-3. A minimum total of 56.96 acres of open space shall be provided in Sub-Area 2</p> |   |   |  |
| 5. Less 1/2 of Perimeter Streets Not Owned by Applicant   |                                      |                     |                                      |  |   |   |  |
| 6. Applicant's Acreage Listed in Application  |                                      |                     | 1,935.65                             |  |   |   |  |
| 7. Total Flood Plain Acreage  |                                      |                     | 173.7                                |  |   |   |  |
| 8. Total Adjusted Gross MP Acreage<br>(Line 4 minus line 7)   |                                      |                     | 1,762.50                             |  |   |   |  |

**RE: TransPort Colorado MP Sub-Area 2 (#1283749)**  
**Tab #8: MP Standard Notes**

Submitted: September 21, 2022  
Resubmitted: December 5, 2022

Note added to PIP

add note to PIP

1. Traffic signal costs. Owner and/or developers are responsible for 100 percent of signal costs for interior intersections. The cost of signals at perimeter intersections will be prorated. Signal locations and cost sharing will be determined at contextual site plan.
2. Street lights. Streetlights must be constructed along all public streets as required by city code section 126-236.
3. Archeological finds. The owner, developer and/or contractors will notify the city if archeological artifacts are uncovered during construction.
4. Parks. Neighborhood park sites shall not exceed 3 percent maximum finished grades.
5. Master drainage plan. No subdivision shall be approved prior to the city's approval of the master drainage plan. In the event of any plan conflicts with the MP, including, but not limited to, the size, location and regional detention ponds and/or drainage way locations, cross sections and widths, the master drainage plan, as approved by the city, shall govern. Drainage ponds drop structures and other facilities are subject to CSP review.
6. 404 permit. The developer is responsible to comply with any requirements of the army corps of engineers (if any) with regards to 404 permitting and wetlands mitigation.
7. Emergency access. The developer shall provide two points of paved emergency access and a looped water supply to each phase of the development as approved by the city. The developer shall provide emergency crossings that meet all city standards. The developer/applicant is required to provide all offsite roadways necessary to provide the two distinct points of access to the overall site.
8. The master utility study, master drainage study and master transportation study are incorporated as a part of the MP. Final approval of these documents is required before acceptance of an application for the first CSP within the project.
9. Landscaping standards. Unless otherwise noted herein in a waiver, the landscaping standards outlined in this MP, Tab 11 shall apply to all future contextual site plans submitted.
10. Future amendments. Any future amendments to architecture, landscape architecture and other urban design standards and related drawings must demonstrate an equal or better quality than the approved MP standards.
11. *MP adjustments. Except for the adjustments listed below, this MP will be interpreted to mean that all standards contained in the MP will meet or exceed all city code requirements.*
12. Design Standards. A MP amendment as per the requirements of sections 3.9, 3.12, 3.13 and 3.14 of the MP manual will be required to be submitted either with the application for the MP or as an amendment to the MP to be submitted with the application for the first CSP in the development.
13. Major arterial medians to be publicly maintained shall be designed and constructed in accordance with P&OSD public median standards. (these policies are pending completion.)
14. Major arterial medians to be privately maintained shall be designed and constructed in accordance with P&OSD private median standards. (these policies are pending completion.)
15. Temporary Fire Station Requirements: In the event that a permanent fire station is not operational, the Aurora Fire Department may require that a temporary fire station be opened when, as a result of the department's risk analysis, such temporary station is deemed necessary by any one of the following benchmark criteria. Criteria include, but may not be limited to, the following: the number of alarms in the first due area, for the projected fire station, exceeds an annual rate of 100 per year. The total response time of the first due company exceeds 8 minutes, 90% of the time. The number of family dwelling units exceeds 100 or the

amount of commercial/industrial square footage exceeds 2 million square feet. If and when a temporary station is deemed necessary, the developer has agreed to provide a 1 ¾ acre site for a temporary fire station within close proximity to the (*TransPort*) development. This site would be separate from the site designated for the permanent station. The temporary fire station will be available for use by the Aurora Fire Department for 10 years, or as otherwise determined by an agreement between the Aurora Fire Department and the developer(s).

16. Permanent Fire Station Requirements: The Aurora Fire Department may require that a Permanent Station be opened when, as a result of the department's risk analysis, such Permanent Station is deemed necessary by any one of the following benchmark criteria. Criteria include, but may not be limited to, the following: The number of total responses in the first due area, for the projected fire station, exceeds an annual rate of 400 per year. The total response time of the first due company exceeds 8 minutes 90% of the time, and the response time of the next due engine company, truck company and battalion chief exceeds 12 minutes 90% of the time. The number of single-family units exceeds 500, or the amount of Commercial/Industrial square footage exceeds 4 million square feet.





A REPORT FOR  
THE CITY OF AURORA

# Public Improvement Plan

## Port Colorado Sub-Area 2

JULY 2023

PREPARED FOR:

Transport Colorado, LLC  
1331 17<sup>th</sup> Street, Suite 1000  
Denver, Colorado 80202

PREPARED BY:

**Westwood**

# Public Improvement Plan

**Transport Colorado  
Sub-Area 2**

Adams County, Colorado

**Prepared For:**

Steven Marshall  
Transport Colorado, LLC  
1331 17<sup>th</sup> Street, Suite 1000  
Denver, CO 80202  
(303) 353-1088

**Prepared By:**

Daniel Osmulski, P.E.  
Westwood Professional Services, Inc.  
10333 E. Dry Creek Road, Suite 400  
Englewood, CO 80112  
(720) 249-3539

Project Number: R0037494.00  
Date: June 2024



# Table of Contents

**1.0 Introduction ..... 1**

**2.0 Public Improvements ..... 2**

**Sub-Area 2 Build-Out (Exhibit 1 of 11) ..... 2**

**3.0 Planning Area Improvements ..... 6**

**Overview ..... 6**

**Planning Area 2 (Exhibit 2 of 11) ..... 6**

**Planning Area 3 (Exhibit 3 of 11) .....7**

**Planning Area 4 (Exhibit 4 of 11) ..... 9**

**Planning Area 5 (Exhibit 5 of 11) .....10**

**Planning Area 6 (Exhibit 6 of 11) ..... 11**

**Planning Area 7 (Exhibit 7 of 11)..... 12**

**Planning Area 8A (Exhibit 8 of 11) ..... 143**

**Planning Area 8B (Exhibit 9 of 11)..... 15**

**Planning Area 8C (Exhibit 10 of 11) ..... 17**

**Planning Area 9 (Exhibit 11 of 11) .....18**

**4.0 Life Safety..... 19**

**5.0 Conclusion..... 20**

**6.0 References Cited..... 21**

# Figures

**Figure 1.0: Vicinity Map ..... 2**

# Appendices

**Appendix A: Public Improvement Plan Exhibits**

# 1.0 Introduction

## General Description

Transport Colorado contains approximately 6,500 acres of planned industrial and mixed-use commercial development in eastern Aurora, CO. The site is divided into six separate sub-areas which will be treated as individual projects. Sub-Area 2 is located in the northwestern portion of the site and contains approximately 1,935.65 acres of planned industrial development. The 1,935.65 acres relative to Sub Area 2 is exclusive of the existing right-of-way. Once the ultimate right-of-way for Sub Area 2 is dedicated, the Sub Area 2 acreage reduces to 1,880 acres. Excluding the 100 year FEMA floodplain, and the ultimate right-of-way, the developable area of Sub Area 2 is 1,787 acres. 75% of Sub-Area 2 will be data centers and 25% will be warehouses, although 100% of the developable land is still categorized as Industrial. The majority of the land surrounding the proposed site, with the exception of the Colorado Air and Space Port (Space Port), formerly known as Front Range Airport, is undeveloped farm/ranching land. Land uses within the subject sub-area are heavy industrial and light industrial. The improvements necessary for the build-out of Sub-Area 2 will include the construction of arterial, collector and local roads; water, sanitary, and stormwater infrastructure; and parks/open space.

## Scope of Work

The purpose of this Public Improvement Plan (PIP) for Sub-Area 2 is to provide development details for the planning areas (PAs) within Sub-Area 2. This report will serve as a companion document to the Framework Development Plan (FDP) for Sub-Area 2. The improvements discussed herein are specifically in regard to the infrastructure requirements for Sub-Area 2 and have been analyzed in coordination with the PIP Amendment for the overall development (Ref. 1). Historic land uses have not changed from those shown in the FDP prepared by N.E.S. Inc. in 2005 (Ref. 3).

## Project Location

The Transport Colorado development is approximately six (6) miles southeast of Denver International Airport (DIA) and twenty (20) miles east of downtown Denver within Township 3 South, Range 64 West of the 6<sup>th</sup> Principal Meridian. Sub-Area 2 includes the south half of Section 17, all of Sections 20 and 21, the west ½ of Section 22 and the northwest quarter of the southeast quarter of Section 16. Refer to Figure 1 below for a vicinity map of the project and surrounding areas.

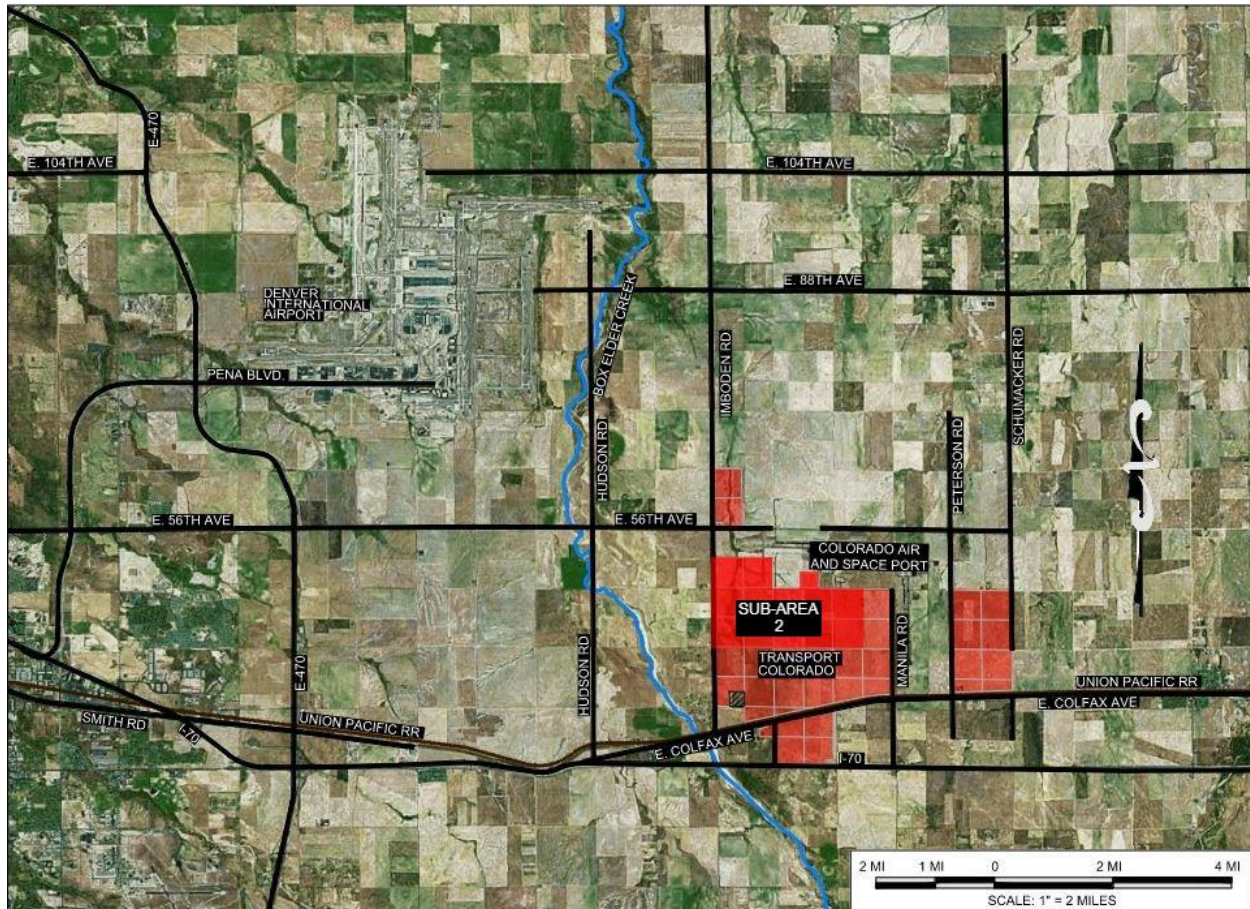


Figure 1.0: Vicinity Map

## 2.0 Public Improvements

### Sub-Area 2 Build-Out (Exhibit 1 of 11)

#### General

The infrastructure necessary for the build-out of Sub-Area 2 includes the construction of roadways, watermain, sanitary and storm sewer mains, drainage channels and detention ponds. The alignments and locations of these improvements are preliminary and subject to change as development progresses. They will be finalized in future Infrastructure Site Plan (ISP), Site Plan (SP) and construction drawing (CD) submittals. All utilities and roads will be designed in accordance with the City of Aurora (COA) standards and specifications. Exhibit 1 shows a color-coded view of the proposed improvements for Sub-Area 2. The exhibit shows how Sub-Area 2, and its respective utilities and roadways would be constructed if developed independently of the other sub-areas.

Construction within Transport is already underway and a variety of ISPs, SWMPs, and construction plans are in review with the City of Aurora. Please refer to Exhibit 1 for mapping of

these improvements. This PIP assumes that the infrastructure identified in Exhibit 1 is constructed at the time of the initial development of Sub-Area 2.

### Roadway System

Per the Port Colorado – Subarea 2 Traffic Impact Analysis (Ref. 9), the following roadway improvements will be required for the build-out of Sub-Area 2. All roadway improvements will be constructed per COA standards and specifications. Some roadways are currently under construction. Traffic volumes on these streets may require additional improvements. Roadways constructed along the periphery. The remaining half-sections will be constructed when adjacent property or sub-area is developed or based on traffic needs. Roadways constructed along the periphery will be constructed to their full widths as planning areas are developed. The roadway improvements required for Sub-Area 2 are described in more detail below.

- Construct the east half of a 6-lane major arterial for Imboden Road from the subarea boundary in Sections 17 and 20.
- Construct the full width of a 4-lane minor arterial for E. 48<sup>th</sup> Avenue from Imboden Road to Quail Run Drive, including construction of a bridge for the crossing of Bear Gulch. Construction of the bridge is not specifically tied to the development of any planning area, since the adjacent planning areas do not independently, or cumulatively, trigger the need for a four lane arterial roadway cross-section, to support the traffic volumes. Bridge will be constructed when either traffic counts warrant four lane arterial construction or with construction of Bear Gulch. A Conditional Letter of Map Revision (CLOMR) will be required for the bridge.
- Construct the south half of a 4-lane minor arterial for E. 48<sup>th</sup> Avenue from Quail Run Drive to the eastern boundary of PA-4.
- Construct the full width of a 4-lane minor arterial for E. 48<sup>th</sup> Ave. along the southern boundary of PA-4.
- Construct the south half of a 4-lane minor arterial for E. 48<sup>th</sup> Avenue from the eastern boundary of PA-4 to the eastern boundary of PA-8B (the eastern boundary of Sub-Area 2).
- Construct the west half of a 3-lane collector for Quail Run Drive from northern boundary of Sub-Area 2 to the southern boundary of Sub-Area 2.
- Construct the full section of a 3-lane collector for E. 42<sup>nd</sup> Avenue from Quail Run Drive to the eastern boundary of Sub-Area 2.
- Construct the full section of a 3-lane collector for Cavanaugh Road from the southern boundary of Sub-Area 2 to E. 48<sup>th</sup> Avenue.

The full buildout of Sub-Area 2 will also require improvements at the intersection of E. 48<sup>th</sup> Avenue/Imboden Road. These improvements include:

- A westbound left turn lane at 48<sup>th</sup> Avenue and Imboden Road.
- A ~~possible~~ traffic signal at East 48<sup>th</sup> Avenue and Quail Run Drive.

The improvements listed above are based on assumed land uses. As actual users purchase and develop their property, these improvements may be reevaluated and revised.

Existing roadways surrounding Sub-Area 2 include:

- Imboden Road, 2-lane asphalt roadway.

Trigger will be construction of bear gulch and has been clarified in text

Repeat: identify a trigger for the design of the bridge.

The design for the bridge over Bear Gulch should be triggered by the construction of Bear Gulch improvements OR 70% of traffic volume is met on 48th. (LOS E)

Trigger has been clarified in text

text has been updated

if/when warranted

Note has been added above

TAB 8



- The east half of Quail Run Drive, 3-lane Collector, asphalt.
- Manila Road, 2-lane asphalt roadway.
- Quail Run Drive, north of East 48<sup>th</sup> Avenue, 2-lane gravel roadway
- East 48<sup>th</sup> Avenue, 2-lane asphalt roadway.
- Front Range Parkway, 2-lane asphalt road.

East 48<sup>th</sup> Avenue exists today as a 2-lane roadway. Subarea 2 Traffic Impact Analysis (Ref. 9) short term scenario is a 2040 buildout of the entirety of Subarea 2, the projected traffic can be served by the existing 2-lane roadway for a significant portion of this buildout period. While roadway right-of-way (ROW) will be dedicated as each adjacent planning area develops, the construction of East 48<sup>th</sup> Avenue may be postponed until the daily volume exceeds 10,500 trips. 10,500 trips is the lower limit for the LOS D, for a 2-lane roadway, as presented in NEATS.

### Water Distribution System

As shown in the Master Utility Report (Ref. 1), it is now understood through its capital improvement project will be bringing a 30" waterline to East 32<sup>nd</sup> Avenue in 2024. It is anticipated that the SA 2 development will require a waterline and the waterlines that are currently being installed within the Sub-Area 2.

The water lines required for the build-out of Sub-Area 2 are shown in the Master Utility Report. The layout shown is preliminary and may be revised as development progresses. The water distribution system will be designed to integrate with the network that will be installed for the buildout of the Sub-Area 2. Water lines will be designed and constructed to meet the overall development. Water lines will be designed and constructed to meet the specifications. Adequate looping within the sub-area and planning area will be established to minimize disruption in service due to water main breaks. The water distribution system will be established with the following improvements:

- A 16" water line in East 48<sup>th</sup> Avenue along the Sub-Area 2 boundary.
- A 16" water line in East 42<sup>nd</sup> Avenue between Quail Run Drive and East 48<sup>th</sup> Avenue of Sub-Area 2.
- A 16" water line in Cavanaugh Road between the south end of East 48<sup>th</sup> Avenue and East 42<sup>nd</sup> Avenue.
- A 16" waterline in Imboden Road from East 32<sup>nd</sup> Avenue to East 48<sup>th</sup> Avenue.

Additionally, water lines will be installed where roads are being improved to provide access to avoid the replacement of asphalt or concrete in the future.

Please remove this statement entirely from the PIP. A deferral can be considered for the construction of 48th if traffic volumes don't warrant the construction, but this would be considered at the site plan level. The Sub-Area 2 development will require a waterline and the waterlines that are currently being installed within the Sub-Area 2. 48th should be identified as required for the adjacent planning areas in the PIP.

Statement has been removed.

48th is noted above in section 2.0 Public improvements under roadway system heading as well as under relevant PAs in PIP text under roadway system section of section 3.0 Planning area improvements

### Sanitary Sewer Collection System

Sub-Area 2 will be served by Individual Sewage Disposal Systems (ISDS). It is understood that systems generating 2,000 gpd or less will be permitted by the Adams County Health Department, and systems generating more than 2,000 gpd will be regulated by the Colorado Department of Public Health and Environment (CDPHE). The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 1).

The 2018 COA Wastewater Capital Improvement Plan shows a force main connecting to the site at Bear Gulch and East 64<sup>th</sup> Avenue and conveying flows to the west. If the City infrastructure downstream of Bear Gulch and East 64<sup>th</sup> Avenue is not in place at the buildout of Sub-Area 2, a



new Wastewater Treatment Plant (WWTP) will be considered at that location (in the northern portion of Sub-Area 4). This scenario will need to be assessed periodically and if required, detailed design will begin when ISDS loading reaches 70% of the predicted Sub-Area 2 flows to ensure the WWTP is in service as subsequent sub-areas are developed.

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Sub-Area 2 will include the following sanitary improvements:

- A 30" line flowing north along the eastern side of Bear Gulch from the southern boundary of Sub-Area 2 to East 48th Avenue.
- A 42" line flowing north along the east side of Bear Gulch from East 48th Avenue to the northern boundary of Sub-Area 2.
- A 15" line flowing east in East 48th Avenue from Imboden Road to the east side of Bear Gulch.
- A 36" line flowing west in East 48th Avenue from Cavanaugh Road to the east side of Bear Gulch.
- A 12" line in East 42nd Avenue from Quail Run Drive and the eastern limits of Sub-Area 2 to Channel BG C9 / C10.
- A 12" line flowing east in E. 42<sup>nd</sup> Avenue from the east boundary for Sub-Area 2 to Manila Road.
- An 18" line flowing east in E. 48<sup>th</sup> Avenue from Cavanaugh Road to the lift station.

In addition to the improvements listed above, a lift station and a force main will be required to serve Sub-Area 2. The lift station and force main will be located east of Sub-Area 2, along East 48<sup>th</sup> Avenue, west of Manila Road, and will serve Planning Areas 8B and 8C and the southeast corner of PA-9, east of the ridge line. Where the force main in East 48th Avenue is referenced in this document, it should be known that final design could require that a combination of two force main pipes will be installed to accommodate initial, interim and ultimate flows.

### **Storm Drainage System**

On-site runoff will be routed through street flow, piped systems, open channels and detention ponds. The determination of public vs private infrastructure improvements will be shown on all construction plans put forth in the future. These ponds will release to their respective drainage basins. There are eight stormwater ponds planned for Sub-Area 2. Three of these are in-line ponds in Bear Gulch that are designed to provide detention for the 100-yr storm with Excess Urban Runoff Volume (EURV) and Water Quality (WQCV) being provided by individual users when they develop their properties at a later date. A pond is proposed in PA-4, which will provide full-spectrum detention that will include EURV. The other ponds within the Bear Gulch watershed, BG-D5 and BG-D11, are in-line to channel BG-C10 BG-C9. The other 2 ponds, HD-D3 and HD-D2 are located in the Henry David Draw Watershed and are located in-line to channel HD-C2. These improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3) and the Master Drainage Compliance Letter, including with this Sub-Area 2 application. All regional ponds are within the Maintenance Eligibility Program (MEP), at which point they will be publicly maintained.

## **Parks and Open Space**

Sub-Area 2 will contain common open space and landscape buffers. Open space will include channels and detention ponds. A trail will be included around Bear Gulch. Refer to Exhibit 1 for locations of the channels, detention ponds, and trails.

# **3.0 Planning Area Improvements**

## **Overview**

Sub-Area 2 of the Transport Colorado site has been divided into 12 planning areas (PA-2, PA-3, PA-4, PA-5, PA-6, PA-7, PA-8A, PA-8B, PA-8C, PA-9, PA-34, and PA-35), two of which (PA-34 and PA-35) have been set aside for open space and storm drainage improvements.

Generally, any planning area can be constructed at any time if the following improvements are provided (offsite improvements may be required to meet traffic and/or fire/life safety needs):

- Two points of access for life safety.
- A looped water system capable of supplying adequate fire flow and domestic service.
- An approved sanitary sewer system, including ISDS or connection to the COA sewer system.
- Stormwater storage and conveyance to downstream facilities.

## **Planning Area 2 (Exhibit 2 of 11)**

### **General**

Planning Area 2 contains approximately 79.49 acres. The infrastructure necessary for the build-out of this area includes the construction of arterial roadways, water mains, sanitary sewer mains, storm sewers, drainage channels and a detention pond. The proposed infrastructure shown on Sheet 2 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 2 are described in more detail below.

- Construct the east half of a 6-lane major arterial for Imboden Road along the western boundary of Planning Area 2.
- Construct the north half of a 4-lane minor arterial for E. 48<sup>th</sup> Avenue from Imboden Road to the eastern boundary of Planning Area 2, at the western limit of Bear Gulch.

### **Water Distribution System**

If Planning Area 2 is to be developed first, it will be served by the existing water mains that have been installed with the aforementioned ongoing improvements. A connection will be made to the existing 24" water main at the corner of E. 48<sup>th</sup> Avenue and Quail Run Drive. The waters required for the build-out of Planning Area 2 are shown on Exhibit 2 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the

planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-2 are described below.

- A 16" line flowing west in East 48th Avenue from Quail Run Drive to Imboden Road.
- A 16" line flowing north in Imboden Road from East 48th Avenue to the northern boundary of PA-2, including a PRV.

### **Sanitary Sewer System**

Planning Area 2 will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2) for this FDP submittal.

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 2 will include the following sanitary improvements:

- An 8" stub crossing Bear Gulch for future connection to the main trunk line.

### **Storm Drainage System**

On-site runoff will be routed through street flow, piped systems, and floodplain improvements to an in-line detention pond in Bear Gulch at the north end of the planning area. This pond is designed to provide detention for the 100-yr storm with EURV and WQCV being provided by individual users at a later date. This pond will release into the existing floodplain north of the planning area into Bear Gulch. Off-site flows from the south will be conveyed through the site via the existing Bear Gulch floodplain. Existing downstream infrastructure will be evaluated at ISP and preliminary design stage. These improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3).

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and Mile High Flood District (MHFD) when the preliminary drainage report and site plans are developed.

## **Planning Area 3 (Exhibit 3 of 11)**

### **General**

Planning Area 3 contains approximately 149.56 acres. The infrastructure necessary for the build-out of this area includes the construction of arterial roadways, water mains, sanitary sewer mains, storm sewers, drainage channels and a detention pond. The proposed infrastructure shown on Sheet 3 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be

constructed to their full widths. The roadway improvements required for Planning Area 3 are described in more detail below.

- Construct the north half of a 4-lane minor arterial for E. 48th Avenue from the western boundary of PA-3 to Quail Run Drive.
- Construct the west half of a 3-lane collector for Quail Run Drive from E. 48th Ave north adjacent to the planning area.

### **Water Distribution System**

If Planning Area 3 is to be developed first, it will be served by the existing water mains that have been installed with the afore mentioned ongoing improvements. A connection will be made to the existing 24" water main at the corner of E. 48th Avenue and Quail Run Drive. The water lines required for the build-out of Planning Area 3 are shown on Exhibit 3 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-3 are described below.

- A 16" line flowing west in E. 48th Avenue from Quail Run Drive to the western limit of Bear Gulch.

### **Sanitary Sewer System**

Planning Area 3 will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref 1.) for this FDP submittal.

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 3 will include the following sanitary improvements:

- A 42" line along the western boundary of PA-3 to serve as a main trunk of the regional sewer system.
- A 36" line flowing west along E. 48th Avenue from Quail Run Drive to the western boundary of PA-3, the eastern limits of Bear Gulch.
- 8" and 12" stubs connecting to the main trunk, on either side of the east-west finger of PA-34.

### **Storm Drainage System**

On-site runoff will be routed through street flow, piped systems, and the existing floodplain to convey flows to the in-line detention pond in Bear Gulch that divides PA-2 and PA-3. This pond is designed to provide detention for the 100-yr storm with EURV and WQCV being provided by individual users at a later date. This pond will release at historic rates into the existing floodplain north of the planning area into Bear Gulch. Existing downstream infrastructure will be evaluated at ISP and preliminary design stage. Modifications to the existing Bear Gulch floodplain will be evaluated at a later stage. These improvements are discussed in more detail in

the companion Master Drainage Report for Transport Colorado (Ref. 3). A trail will be installed around Bear Gulch within the limits of Planning Area 3.

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

## **Planning Area 4 (Exhibit 4 of 11)**

### **General**

Planning Area 4 contains approximately 36.81 acres. The infrastructure necessary for the build-out of this area includes the construction of arterial roadways, water mains, sanitary sewer mains, storm sewers, and a detention pond. The proposed infrastructure shown on Sheet 4 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 4 are described in more detail below.

- Construct the north half of a 4-lane minor arterial for E. 48th Avenue from the western boundary of PA-4 to the eastern boundary of PA-4.

### **Water Distribution System**

If Planning Area 4 is to be developed first, it will be served by the existing water mains that have been installed with the aforementioned ongoing improvements. A connection will be made to the existing 24" water main at the corner of E. 48th Avenue and Quail Run Drive. The water lines required for the build-out of Planning Area 4 are shown on Exhibit 4 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-4 are described below.

- A 16" line flowing west along E. 48th Avenue from the eastern boundary of PA-4 to Quail Run Drive.

### **Sanitary Sewer System**

Planning Area 4 will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2).

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 4 will include the following sanitary improvements:

- A 36" line flowing west along E. 48th Avenue from the eastern boundary of PA-4 to the



ISDS near Bear Gulch.

- An 8" stub connected to the 36" line in E. 48<sup>th</sup> Avenue.

### **Storm Drainage System**

On-site runoff will be routed through street flow and piped systems to an offline full spectrum pond at the northeast corner of the site. This full spectrum pond is designed to provide detention for the 100-yr storm, EURV and WQCV. This pond will release to the north. These improvements are discussed in more detail in the companion Master Drainage report for Transport Colorado (Ref. 3).

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

### **Planning Area 5 (Exhibit 5 of 11)**

#### **General**

Planning Area 5 contains approximately 132.40 acres. The infrastructure necessary for the build-out of this area includes the construction of arterial roadways, water mains, sanitary sewer mains, storm sewers, drainage channels and detention ponds. The proposed infrastructure shown on Exhibit 5 is preliminary and subject to change as the planning area is developed.

#### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 5 are described in more detail below.

- Construct the east half of a 6-lane major arterial for Imboden Road from the southern boundary of PA-5 to E. 48<sup>th</sup> Avenue.
- Construct the south half of a 4-lane minor arterial for E. 48<sup>th</sup> Avenue from Imboden Road to the eastern boundary of PA-5, the western limits of Bear Gulch.

#### **Water Distribution System**

If Planning Area 5 is to be developed first, it will be served by the existing water mains that have been installed with the aforementioned ongoing improvements. A connection will be made to the existing 24" water main at the corner of E. 32<sup>nd</sup> Avenue and Quail Run Road. The water lines required for the build-out of Planning Area 5 are shown on Exhibit 5 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-5 are described below.

- A 16" line flowing north along Imboden Road from E. 32<sup>nd</sup> Avenue to E. 48<sup>th</sup> Avenue.
- A 16" line between Imboden Road to the eastern limits of PA-5, the western limits of Bear Gulch.

## **Sanitary Sewer System**

To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2).

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 5 will include the following sanitary improvements:

- A 15" line flowing east along East 48<sup>th</sup> Avenue from Imboden Road to the ISDS near Bear Gulch.
- A 30" line flowing north along the east side of bear gulch to the ISDS near Bear Gulch,
- An 8" stub connected to the 15" line in E. 48<sup>th</sup> Avenue.
- An 8" stub crossing Bear Gulch for the future connection to the 30" main trunk line, on the east side of Bear Gulch.

## **Storm Drainage System**

On-site runoff will be routed through street flow, piped systems, and the existing floodplain to two on-line regional detention ponds on Bear Gulch at the north and south ends of the planning area. These ponds are designed to provide detention for the 100-yr storm with EURV and WQCV being provided by individual users at a later date. The northern pond will release to a proposed crossing that flows northerly across E. 48<sup>th</sup> Avenue. The southern pond releases into the existing Bear Gulch floodplain. Modifications to the existing Bear Gulch floodplain will be evaluated at a later time. Existing downstream infrastructure will be evaluated at ISP and preliminary design stage. There improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3).

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

## **Planning Area 6 (Exhibit 6 of 11)**

### **General**

Planning Area 6 contains approximately 345.37 acres of planned mixed-use development. The infrastructure necessary for the build-out of this area includes the construction of collector and arterial roadways, water mains, sanitary sewer mains, storm sewers, drainage channels and detention ponds. The proposed infrastructure shown on Exhibit 6 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 6 are described in more detail below.

- Construct the south half of a 4-lane minor arterial for East 48th Avenue from the eastern limits of Bear Gulch to Quail Run Drive. Since the Bear Gulch bridge will require a CLOMR, this portion of the East 48<sup>th</sup> Avenue roadway will not be specifically attributed to a planning area. It is anticipated however that the CLOMR will be initiated at the time of PA-6 development.
- Construct the west half of a 3-lane collector for Quail Run Drive along the eastern boundary of PA-6.

### Water Distribution System

If Planning Area 6 is to be developed first, it will be served by the existing water mains that have been installed with the afore mentioned ongoing improvements. A connection will be made to the existing 24" water main at the corner of E. 48<sup>th</sup> Avenue and Quail Run Drive. The water lines required for the build-out of Planning Area 6 are shown on Exhibit 6 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-6 are described below.

- A 16" line flowing west in East 48th Avenue from Quail Run Drive to the western boundary of Bear Gulch.

### Sanitary Sewer System

Planning Area 6 will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2).

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 6 will include the following sanitary improvements:

- A 36" line flowing west in East 48th Avenue from Quail Run Drive to the eastern limit of Bear Gulch.
- ~~A 30" line flowing northerly along the western boundary of PA-6 to serve as a main trunk of the regional sewer system.~~

### Storm Drainage System

On-site runoff will be routed through street flow, piped systems, and open channels to two on-line regional detention ponds in Bear Gulch at the north and south ends of the planning area. These ponds are designed to provide detention for the 100-yr storm with EURV and WQCV being provided by individual users at a later date. The northern pond will release to a proposed crossing that drains across East 48th Avenue. The southern pond release into the existing Bear Gulch floodplain. Modifications to the existing Bear Gulch floodplain will be evaluated at a later time. These improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3). A trail will be installed around Bear Gulch within the limits of Planning Area 6.

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

## **Planning Area 7 (Exhibit 7 of 11)**

### **General**

Planning Area 7 contains approximately 72.16 acres. The infrastructure necessary for the build-out of this area includes the construction of collector roadways, water mains, sanitary sewer mains, storm sewers, drainage channels and detention ponds. The proposed infrastructure shown on Exhibit 7 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 7 are described in more detail below.

- Construct the west half of a 3-lane collector for Quail Run Drive along the eastern boundary of PA-7.

### **Water Distribution System**

If Planning Area 7 is to be developed first, it will be served by the existing water mains that have been installed with the afore mentioned ongoing improvements. A connection will be made to the existing 24" water main in Quail Run Drive. The water lines required for the build-out of Planning Area 7 are shown on Exhibit 7 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-7 are described below.

- A connection will be made to the existing 24" waterline in Quail Run Drive.

### **Sanitary Sewer System**

Planning Area 7 will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or city sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2).

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 7 will include the following sanitary improvements:

- A 30" line along the eastern side of Bear Gulch from the southern boundary of PA-7 to the ISDS to serve as a main trunk of the regional sewer system.
- An 8" line along the southern boundary of PA-7 connected the main trunk.
- A 12" stub at the northern boundary of PA-7 connected to the main trunk.

### **Storm Drainage System**

On-site runoff will be routed through street flow, piped systems, open channels and the existing Bear Gulch floodplain to an on-line regional detention pond in Bear Gulch at the north end of the planning area. The pond is designed to provide detention for the 100-yr storm with EURV and WQCV being provided by individual users at a later date. The pond will release into the existing Bear Gulch floodplain. Modifications to the existing Bear Gulch floodplain will be evaluated at a later time. These improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3). A trail will be installed around Bear Gulch within the limits of Planning Area 7.

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

### **Planning Area 8A (Exhibit 8 of 11)**

#### **General**

Planning Area 8A contains approximately 316.15 acres. The infrastructure necessary for the build-out of this area includes the construction of arterial and collector roadways, water mains, sanitary sewer mains, storm sewers, a drainage channel and a detention pond. The proposed infrastructure shown on Exhibit 8 is preliminary and subject to change as the planning area is developed.

#### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 8A are described in more detail below.

- Construct the south half of a 4-lane minor arterial for East 48th Avenue from Cavanaugh Road to Quail Run Drive.
- Construct the north half of East 42<sup>nd</sup> Avenue from Cavanaugh Road to Quail Run Drive.
- Construct the west half of a 3-lane collector for Cavanaugh Road from East 48<sup>th</sup> Avenue to East 42<sup>nd</sup> Avenue.
- Construct the east sidewalk along Quail Run Drive, along the planning area frontage.

#### **Water Distribution System**

If Planning Area 8A is to be developed first, it will be served by the existing water mains that have been installed with the afore mentioned ongoing improvements. A connection will be made to the existing 24" water main at the corner of E. 48<sup>th</sup> Avenue and Quail Run Drive. The water lines required for the build-out of Planning Area 8A are shown on Exhibit 8 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-8A are described below.



- A 16" line flowing north in Cavanaugh Road along the east boundary of PA-8A.
- A 16" line flowing east in E. 42<sup>nd</sup> Avenue from Quail Run Drive to Cavanaugh Road.
- A 16" line flowing east along E. 48<sup>th</sup> Avenue from Quail Run Drive to Cavanaugh Road.

### **Sanitary Sewer System**

Planning Area 8A will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2).

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 8A will include the following sanitary improvements:

- A 36" line flowing west in East 48<sup>th</sup> Avenue from Cavanaugh Road to the eastern limits of Bear Gulch at the ISDS in PA-6.
- 15" line flowing north along channel BG C9/C10 to East 48<sup>th</sup> Avenue.

### **Storm Drainage System**

On-site runoff will be routed through street flow, piped systems, and open channels to a detention pond at the northwest end of PA-8A and a pond at the northeast end of PA-8B. These ponds are designed to provide detention for the 100-year storm with EURV and WQCV being provided by individual users at a later date. The ponds will release to proposed crossings that drain northerly across East 48<sup>th</sup> Avenue. Off-site flows from the south will be conveyed through the open channel flowing through the planning area from East 42<sup>nd</sup> Avenue into the detention pond described above. These improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3).

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

## **Planning Area 8B (Exhibit 9 of 11)**

### **General**

Planning Area 8B contains approximately 159.11 acres. The infrastructure necessary for the build-out of this area includes the construction of arterial and collector roadways, water mains, sanitary sewer mains, storm sewers, a drainage channel and a detention pond. The proposed infrastructure shown on Exhibit 9 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be

constructed to their full widths. The roadway improvements required for Planning Area 8B are described in more detail below.

- Construct the south half of a 4-lane minor arterial for E. 48th Avenue from Cavanaugh Road to the eastern boundary of PA-8B.
- Construct the east half of a 3-lane collector for Cavanaugh Road from the southern boundary of PA-8B to E. 48<sup>th</sup> Avenue.
- Construct the north half of a 3-lane collector for E. 42<sup>nd</sup> Avenue from Cavanaugh Road to the eastern boundary of PA-8B.

### **Water Distribution System**

If Planning Area 8B is to be developed first, it will be served by the existing water mains that have been installed with the afore mentioned ongoing improvements. A connection will be made to the existing 16" water main at the corner of E. 38<sup>th</sup> Avenue and Cavanaugh Road. The water lines required for the build-out of Planning Area 8B are shown on Exhibit 9 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-8B are described below.

- A 16" line flowing east along E. 48<sup>th</sup> Avenue along the northern boundary of PA-8B
- A 16" line flowing east in E. 42<sup>nd</sup> Avenue from Cavanaugh Road to the eastern boundary of PA-8B.
- A 16" line flowing north in Cavanaugh Road from E. 42<sup>nd</sup> Avenue to E. 48<sup>th</sup> Avenue.

### **Sanitary Sewer System**

Planning Area 8B will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2) for.

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 8B will include the following sanitary improvements:

- An 18" line flowing easterly from Cavanaugh Road to the location of proposed lift station on the northern boundary of Sub Area 1 along East 48<sup>th</sup> Avenue.
- A force main flowing westerly in E. 48<sup>th</sup> Avenue from the lift station to the ridge line at East 48<sup>th</sup> Avenue.
- 36" line connecting the force main to the ISDS at the east limit of Bear Gulch in SA-6.

### **Storm Drainage System**

On-site runoff will be routed through street flow, piped systems and open channels to the in-line regional detention pond at the northern end of Planning Area 8B. This pond is designed to provide detention for the 100-yr storm with WQCV and EURV being provided by individual users at a later date. This pond will release into an existing drainageway via a proposed crossing. Surrounding offsite flows will be conveyed to the detention pond via an open channel. These

improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3).

Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

## **Planning Area 8C (Exhibit 10 of 11)**

### **General**

Planning Area 8C contains approximately 160.51 acres. The infrastructure necessary for the build-out of this area includes the construction of collector roadways, water mains, sanitary sewer mains, storm sewers, and a detention pond. The proposed infrastructure shown on Sheet 10 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 8C are described in more detail below.

- Construct the east half of a 3-lane collector for Cavanaugh Road from the southern boundary of PA-8C to E. 42<sup>th</sup> Avenue.
- Construct the south half of a 3-lane collector for E. 42<sup>nd</sup> Avenue from the eastern boundary of PA-8C to Cavanaugh Road.

### **Water Distribution System**

If Planning Area 8C is to be developed first, it will be served by the existing water mains that have been installed with the aforementioned ongoing improvements. A connection will be made to the existing 16" water main at the corner of E. 38<sup>th</sup> Avenue and Cavanaugh Road. The water lines required for the build-out of Planning Area 8C are shown on Exhibit 10 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-8C are described below.

- A 16" line flowing east in E. 42<sup>nd</sup> Avenue from Cavanaugh Road to the eastern boundary of PA-8C
- A 16" line flowing north in Cavanaugh Road from the southern boundary of PA-8C to E. 42<sup>nd</sup> Avenue.

### **Sanitary Sewer System**

Planning Area 8C will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2).

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The build-out of Planning Area 9 will include the following sanitary improvements:

- 12" line in East 42<sup>nd</sup> Avenue from the eastern boundary of PA-8C to Manila Road,
- 36" line along Manila Road, between East 42<sup>nd</sup> Avenue to East 48<sup>th</sup> Avenue,
- 36" line along East 48<sup>th</sup> Avenue between Manila Road and the lift station
- A force main flowing west in E. 48<sup>th</sup> Avenue from the lift station to the ridge line at East 48<sup>th</sup> Avenue
- 36" line connecting the force main to the ISDS at the east limit of Bear Gulch in SA-6.

### **Storm Drainage System**

The runoff of PA -8C will be routed through street flow and piped systems to an in-line regional detention pond to the north of PA-8C in the Henry David Draw watershed and to an in-line regional detention pond in Sub Area 1, in the northwest corner of the southeast quarter of Section 22. These ponds are designed to provide detention for the 100-yr storm with WQCV and EURV provided by individual users at a later date. The ponds will release through proposed culverts that crosses under E. 42<sup>nd</sup> Avenue. These improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3).

Development of on-site planning may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the COA and MHFD when the preliminary drainage report and site plans are developed.

## **Planning Area 9 (Exhibit 11 of 11)**

### **General**

Planning Area 9 contains approximately 317.66 acres. The infrastructure necessary for the build-out of this area includes the construction of collector roadways, water mains, sanitary sewer mains, storm sewers, drainage channels and detention ponds. The proposed infrastructure shown on Sheet 11 is preliminary and subject to change as the planning area is developed.

### **Roadway System**

All roadways will be constructed per COA standards and specifications. Half-section roads will be constructed along the periphery of the planning area. The remaining half-sections will be constructed when the adjacent property is developed. Collector roads and local streets will be constructed to their full widths. The roadway improvements required for Planning Area 9 are described in more detail below.

- Construct the south half of a 3-lane collector for East 42<sup>nd</sup> Avenue from Cavanaugh Road to Quail Run Drive.
- Construct the west half of a 3-lane collector for Cavanaugh Road from East 38<sup>th</sup> Avenue to East 42<sup>nd</sup> Avenue.
- Construct the east sidewalk along Quail Run Drive, along the planning area frontage.

### **Water Distribution System**

If Planning Area 9 is to be developed first, it will be served by the existing water mains that have been installed with the aforementioned ongoing improvements. A connection will be made to

the existing 24" water main flowing north in Quail Run Drive. A second connection will be made to the existing 16" water main at Cavanaugh Road and East 38<sup>th</sup> Avenue. The water lines required for the build-out of Planning Area 9 are shown on Exhibit 11 in the appendix. The layout shown is preliminary and may be revised as development progresses. Water lines will be designed and constructed per COA standards and specifications. Adequate looping within the planning area will be provided to minimize disruption in service due to water main breaks. The water lines to be installed with the development of PA-9 are described below.

- A 16" line flowing north in Cavanaugh Road along the east boundary of PA-9, and
- A 16" line flowing east in E. 42<sup>nd</sup> Avenue from Quail Run Drive to Cavanaugh Road.

### **Sanitary Sewer System**

Planning Area 9 will be served by Individual Sewage Disposal Systems (ISDS). To ensure the infrastructure is in place when the time comes for individual users to connect to the regional or City sewer system, sanitary mains will be installed as adjacent roads are constructed. The sewer mains have been sized according to COA design criteria and account for flows from the off-site parcels that fall within the service area boundary shown in the Master Utility Report (Ref. 2).

Per COA criteria, sanitary sewer lines are to be constructed to the south and west of roadway centerlines. The western build-out of Planning Area 9 will include the following sanitary improvements:

- A 12" line flowing east to channel BG C9/C10
- 15" line flowing north along channel BG C9/C10 to East 42<sup>nd</sup> Avenue.
- 36" line in East 48<sup>th</sup> Avenue, west of Quail Run Drive to the ISDS, at the eastern limits of Bear Gulch in PA-6

The eastern build-out of Planning Area 9 will include the following sanitary sewer improvements:

- 12" line in East 42<sup>nd</sup> Avenue, extending from the ridge line in PA-9 to Manila Road
- 36" line along Manila Road, between East 42<sup>nd</sup> Avenue to East 48<sup>th</sup> Avenue,
- 36" line along East 48<sup>th</sup> Avenue between Manila Road and the lift station
- A force main flowing west in East 48<sup>th</sup> Avenue from the lift station to the ridge line at East 48<sup>th</sup> Avenue
- 36" line connecting the force main to the ISDS at the east limit of Bear Gulch in SA-6

### **Storm Drainage System**

The runoff of PA -9 will be routed through street flow, piped systems and an open channel to an in-line regional detention pond at the northwestern portion of PA-9 in the Bear Gulch watershed. This pond is designed to provide detention for the 100-yr storm with WQCV and EURV provided by individual users at a later date. This pond will release through a proposed culvert that crosses under East 42<sup>nd</sup> Avenue. These improvements are discussed in more detail in the companion Master Drainage Report for Transport Colorado (Ref. 3).



Development of on-site planning areas may trigger the requirement for construction of off-site channel or detention improvements. The need for off-site drainage improvements will be evaluated by the City of Aurora and MHFD when the preliminary drainage report and site plans are developed.

## **4.0 Life Safety**

The developer will construct a looped water supply and fire hydrants as required by the adopted fire code and city ordinances for each individual planning area. Some initial development will be supplied with a single water service to promote water quality within the system.

It is anticipated that this development will initially be serviced by Bennet Fire Station #92. As the site develops, a temporary fire station may be required before a permanent location is established on-site. If required, the developer will provide a temporary fire station by means of a modular structure at the direction of the Fire Chief or his or her designee. Dedicated for public land use, the temporary and permanent fire stations will be located in Sub-Area 1 as shown on Exhibit 3. These locations are show in in more detail in the Master Plan Documents for Sub-Area 1.

A Whelen Warning System is anticipated for this site and will be located in Sub-Area 1 with the permanent fire station.

The developer will construct on-site, and off-site infrastructure needed to establish two points of emergency access to the overall site and each internal phase of construction. The developer will work with the city of Aurora to provide for acceptable water system design solutions related to the City's plan for water system connectivity to the project.

## **5.0 Conclusion**

This Public Improvement Plan Report was prepared as a companion document to the Master Plan for Sub-Area 2. It outlines the infrastructure improvements required for development of Sub-Area 2. As detailed above, the development of Sub-Area 2 is anticipated to be broken up into 12 planning areas, 2 of which are for drainage and open space. These improvements are preliminary and may change as planning areas area developed.

## 6.0 References Cited

1. **Port Colorado Master Utility Plan – Amendment #2**, Westwood, Inc., June 2020
2. **Port Colorado Sub-Area 6 Master Utility Study**, Westwood, Inc., June 2020
3. **Transport Colorado Master Drainage Report Amendment #3**, Westwood, Inc., August 2022 (Under Review)
4. **Transport Colorado Framework Development Plan**, CVL Consultants of Colorado, Inc. April 2019
5. **Port Colorado Revised Traffic Impact Analysis**, Felsburg Holt & Ullevig, Feb. 2022
6. **Transport/Front Range Airport Area Master Utilities Plan**, Matrix Design Group, Inc. 2007
7. **City of Aurora Wastewater Capital Improvement Plan**, City of Aurora, January 2018
8. **City of Aurora Water Capital Improvement Plan**, City of Aurora, May 2018
9. **Port Colorado – Subarea 2 – Traffic Impact Analysis**, Felsburg Holt & Ullevig, September 2022

**APPENDIX A**  
**Public Improvement Plan Exhibits**



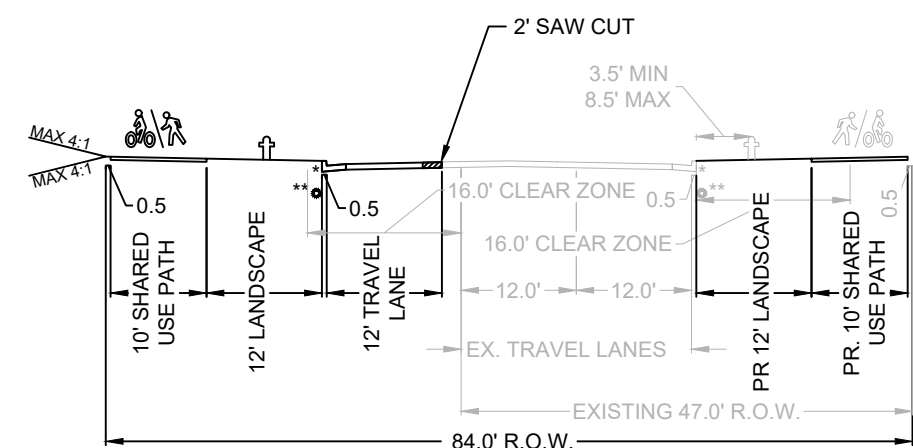
Diagram illustrating the cross-section of a 144' P.O.W. (Proposed Right-of-Way) road layout. The layout includes the following components from left to right:

- 0.5' Shared Use Path
- 10' Landscape
- 3.5' MIN 8.5' MAX Shoulder
- 10' Travel Lane
- 12' Travel Lane
- 12' Travel Lane
- 13' RAISED MEDIAN TURN LANE
- 13' RAISED MEDIAN TURN LANE
- 4.1' Shoulder
- 12.0' Travel Lane
- 12.0' Travel Lane
- 14.0' Shoulder
- 3.5' MIN 8.5' MAX Shoulder
- 10' Landscape
- 10' Shared Use Path

Additional features and labels include:

- FUTURE CONSTRUCTION (indicated above the first 10' Travel Lane)
- TEMP GRADING (indicated above the 4.1' Shoulder)
- TEMP 4' SHOULDER (indicated above the 4.1' Shoulder)
- SPLASH BLOCK (SEE STD. 88.5) (located at the intersection of the 13' RAISED MEDIAN TURN LANE and the 4.1' Shoulder)
- 144' P.O.W. (Proposed Right-of-Way) (indicated at the bottom center)

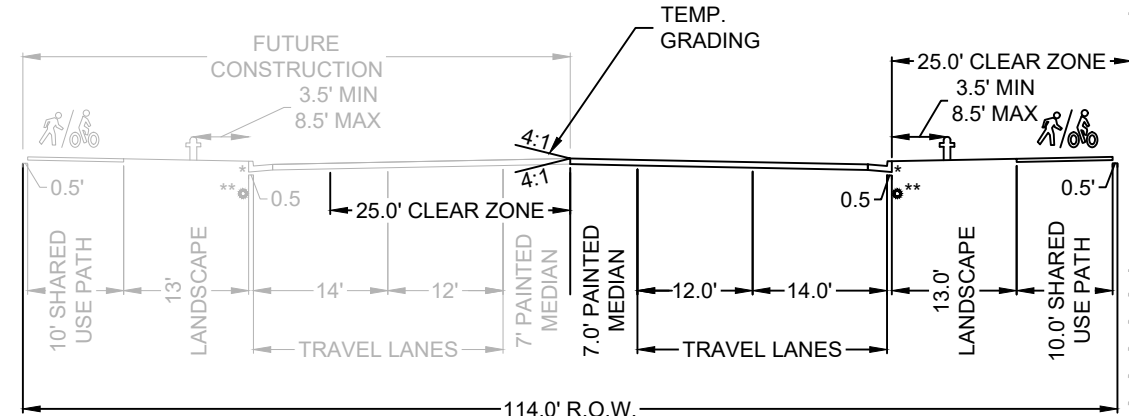
\* VERT. CURB & GUTTER (STD. \$7.1)  
\*\* EDGE DRAIN (STD. \$1.19)  
(IMBODEN ROAD)



\* VERT. CURB & GUTTER (STD. S7.1)  
\*\* EDGE DRAIN (STD. S1.19)

Figure 10-1: Standard Cross Section of a Two-Lane Highway with 12' Travel Lanes. The diagram shows a cross-section of a highway with a total right-of-way (ROW) of 84.0 feet. From left to right, the components are: a 10.0-foot shared use path, a 0.5-foot shoulder, a 12.0-foot landscaped area, a 12.0-foot travel lane, a 14.0-foot painted median, another 12.0-foot travel lane, another 12.0-foot landscaped area, another 0.5-foot shoulder, and another 10.0-foot shared use path. Clear zones of 16.0 feet are indicated above the travel lanes, with a minimum of 3.5 feet and a maximum of 8.5 feet for the landscaped areas. A bicyclist is shown on the left shared use path, and a car is shown on the right shared use path.

\* VERT. CURB & GUTTER (STD. S7.1)  
 \*\* EDGE DRAIN (STD. S1.19)  
 (CAVANAUGH ROAD, E 42ND AVENUE)

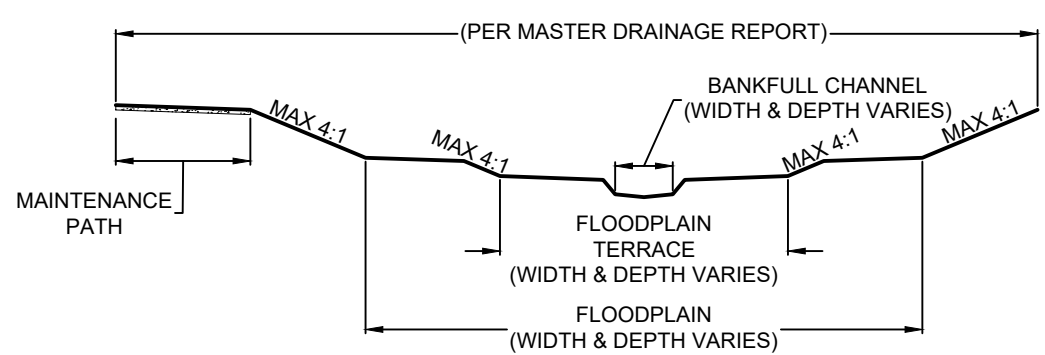


\* VERT. CURB & GUTTER (STD. S7.1)  
\*\* EDGE DRAIN (STD. S1.19)

Figure 1: Typical cross-section of a two-lane highway with a 14-ft travel lane. The diagram shows a symmetrical cross-section with a central 2.0' painted median. On each side of the median are two travel lanes, each 14.0' wide. The total width of the travel lanes is 28.0'. On the outer edges of the travel lanes are 0.5' shoulders. The total width of the travel lanes and shoulders is 30.0'. On the far left and right are 19.5' shared use paths. The total width of the cross-section is 114.0' R.O.W. A Jersey barrier is shown at the top center, separating the two sides of the highway.

\* VERT. CURB &  
GUTTER (STD. S7.1)

DRAINAGE CHANNEL SECTIONS:

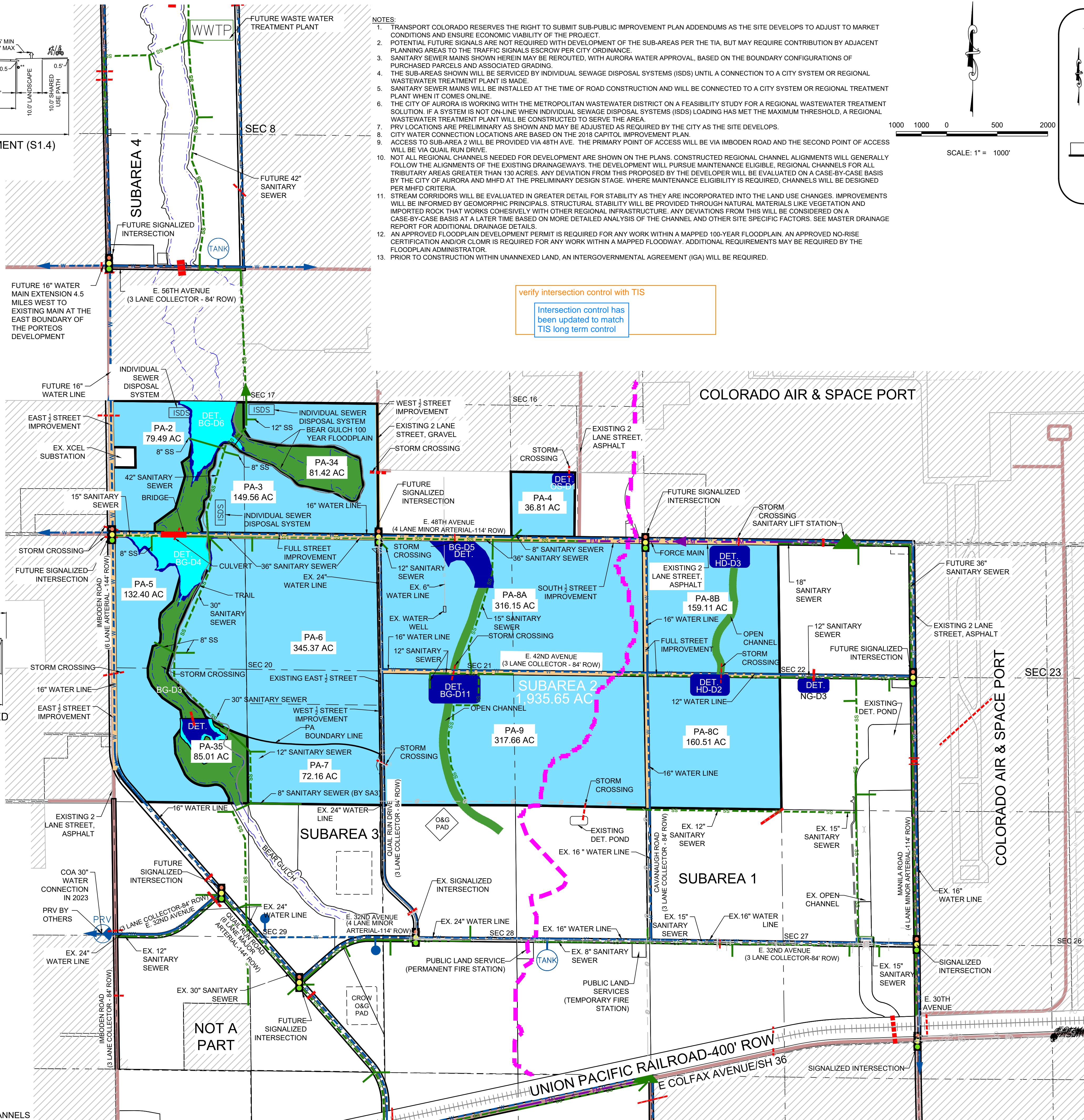


(WIDTH & DEPTH VARIES)

**TYPICAL CHANNEL SECTION**

FOR MILEHIGH FLOOD DISTRICT (MHFD) MAINTENANCE ELIGIBLE CHANNELS

WIDTH AND DEPTH VARIES BASED ON GEOMORPHIC DESIGN

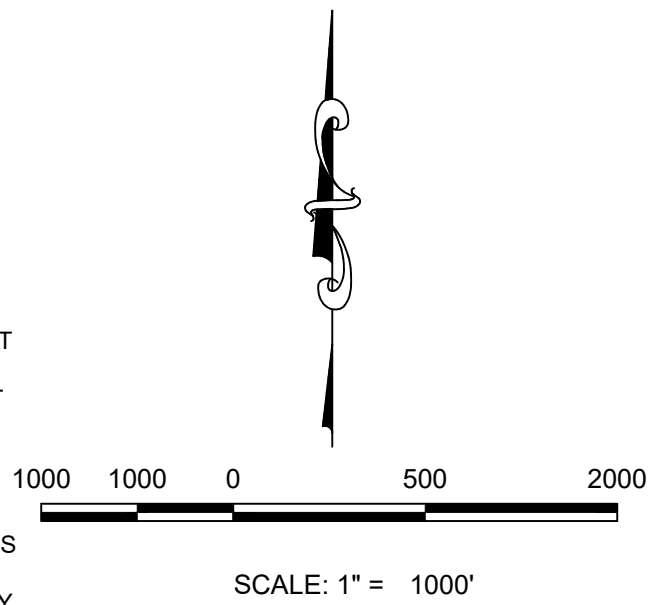


## NOTES

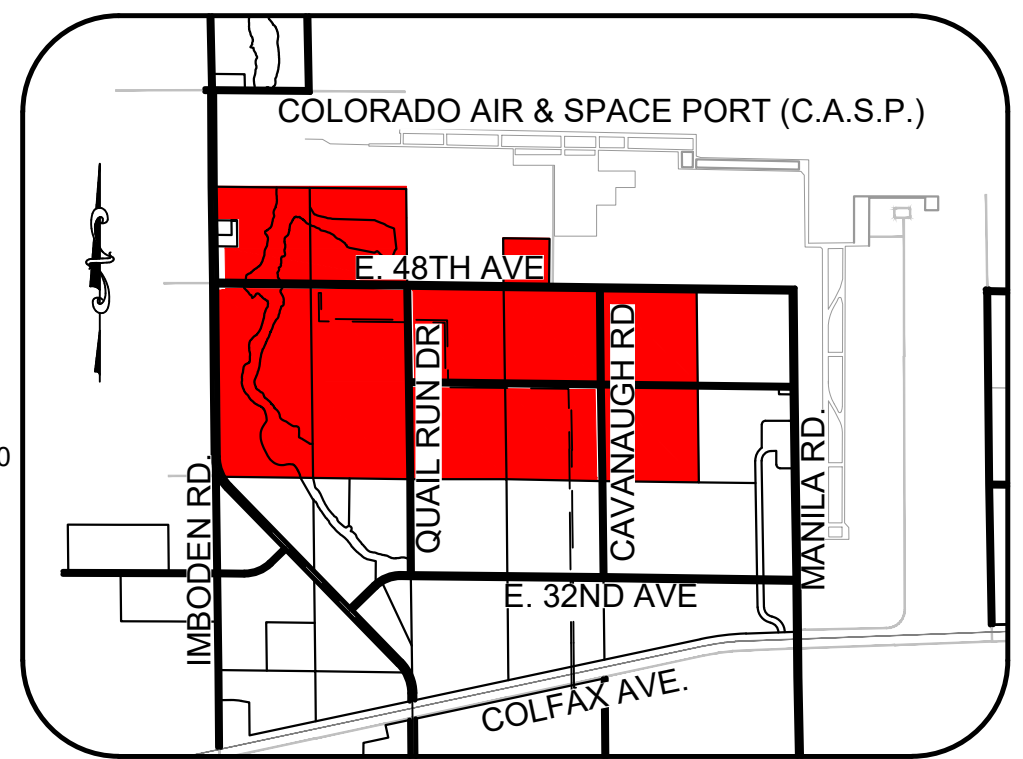
1. TRANSPORT COLORADO RESERVES THE RIGHT TO SUBMIT SUB-PUBLIC IMPROVEMENT PLAN ADDENDUMS AS THE SITE DEVELOPS TO ADJUST TO MARKET CONDITIONS AND ENSURE ECONOMIC VIABILITY OF THE PROJECT.
2. POTENTIAL FUTURE SIGNALS ARE NOT REQUIRED WITH DEVELOPMENT OF THE SUB-AREAS PER THE TIA, BUT MAY REQUIRE CONTRIBUTION BY ADJACENT PLANNING AREAS TO THE TRAFFIC SIGNALS ESCROW PER CITY ORDINANCE.
3. SANITARY SEWER SERVICE SHALL BE PROVIDED TO THE REKOUTED, WITH AURORA WATER APPROVAL, BASED ON THE BOUNDARY CONFIGURATIONS OF PURCHASED PARCELS AND ASSOCIATED GRADING.
4. THE SUB-AREAS SHOWN WILL BE SERVICED BY INDIVIDUAL SEWAGE DISPOSAL SYSTEMS (SDS) UNTIL A CONNECTION TO A CITY SYSTEM OR REGIONAL WASTEWATER TREATMENT PLANT IS MADE.
5. SANITARY SEWER MAINS WILL BE INSTALLED AT THE TIME OF ROAD CONSTRUCTION AND WILL BE CONNECTED TO A CITY SYSTEM OR REGIONAL TREATMENT PLANT WHEN IT COMES ON-LINE.
6. THE CITY OF AURORA IS WORKING WITH THE METROPOLITAN WASTEWATER DISTRICT ON A FEASIBILITY STUDY FOR A REGIONAL WASTEWATER TREATMENT SOLUTION. IF A SYSTEM IS NOT ON-LINE WHEN INDIVIDUAL SEWAGE DISPOSAL SYSTEMS (SDS) LOADING HAS MET THE MAXIMUM THRESHOLD, A REGIONAL WASTEWATER TREATMENT PLANT WILL BE CONSTRUCTED TO SERVE THE AREA.
7. PRV LOCATIONS ARE PRELIMINARY AS SHOWN AND MAY BE ADJUSTED AS REQUIRED BY THE CITY AS THE SITE DEVELOPS.
8. CITY WATER CONNECTION LOCATIONS ARE BASED ON THE 2018 CAPITAL IMPROVEMENT PLAN.
9. ACCESS TO SUB-AREA 2 WILL BE PROVIDED VIA 48TH AVE. THE PRIMARY POINT OF ACCESS WILL BE VIA IMBODEN ROAD AND THE SECOND POINT OF ACCESS WILL BE VIA QUAIL RUN DRIVE.
10. NOT ALL REGIONAL CHANNELS NEEDED FOR DEVELOPMENT ARE SHOWN ON THE PLANS. CONSTRUCTED REGIONAL CHANNEL ALIGNMENTS WILL GENERALLY FOLLOW THE ALIGNMENTS OF THE EXISTING DRAINAGEWAYS. THE DEVELOPMENT WILL PURSUE MAINTENANCE ELIGIBLE, REGIONAL CHANNELS FOR ALL TRIBUTARY AREAS GREATER THAN 130 ACRES. ANY DEVIATION FROM THIS PROPOSED BY THE DEVELOPER WILL BE EVALUATED ON A CASE-BY-CASE BASIS BY THE CITY OF AURORA AND MHFD AT THE PRELIMINARY DESIGN STAGE. WHERE MAINTENANCE ELIGIBILITY IS REQUIRED, CHANNELS WILL BE DESIGNED TO MEET THE FOLLOWING CRITERIA:
  11. STREAM CORRIDORS WILL BE EVALUATED IN GREATER DETAIL, FOR STABILITY AS THEY ARE INCORPORATED INTO THE LAND USE CHANGES. IMPROVEMENTS WILL BE INFORMED BY GEOMORPHIC PRINCIPALS. STRUCTURAL STABILITY WILL BE PROVIDED THROUGH NATURAL MATERIALS LIKE VEGETATION AND IMPORTED ROCK THAT WORKS COHESIVELY WITH OTHER REGIONAL INFRASTRUCTURE. ANY DEVIATIONS FROM THIS WILL BE CONSIDERED ON A CASE-BY-CASE BASIS AT A LATER TIME BASED ON MORE DETAILED ANALYSIS OF THE CHANNEL AND OTHER SITE SPECIFIC FACTORS. SEE MASTER DRAINAGE REPORT FOR ADDITIONAL DRAINAGE DETAILS.
  12. AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED FOR ANY FLOOD WITHIN A MAPPED 100-YEAR FLOODPLAIN. AN APPROVED NO-RISE CERTIFICATION AND/OR CLOMR IS REQUIRED FOR ANY FLOOD WITHIN A MAPPED FLOODWAY. ADDITIONAL REQUIREMENTS MAY BE REQUIRED BY THE FLOODPLAIN ADMINISTRATOR.
13. PRIOR TO CONSTRUCTION WITHIN UNANNEXED LAND, AN INTERGOVERNMENTAL AGREEMENT (IGA) WILL BE REQUIRED.

verify intersection control with TIS

Intersection control has been updated to match TIO long-term control.






















SCALE: 1" = 1000

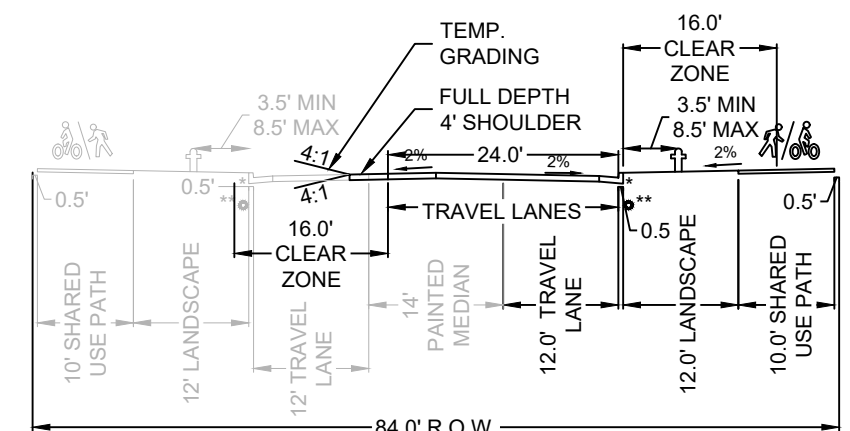


## KEYMAP

N.T.S.

OPEN CHANNEL/STREAM  
MANAGEMENT CORRIDOR  
DETENTION POND (DET.)

- |   |  |
|---|--|
|    | FUTURE POND EXPANSION                              |
|    | UNANNEXED ADAMS COUNTY                             |
|    | PLANNING AREA                                      |
|    | EXISTING DRAINAGE AREA                             |
|    | EXISTING ROADWAY (ASPHALT, UNLESS OTHERWISE NOTED) |
|    | ROADWAY IMPROVEMENTS                               |
|    | PLANNING AREA BOUNDARY                             |
|    | SECTION/HALF SECTION LINE                          |
|    | WATER MAINS  |
|    | SANITARY SEWER MAINS                               |
|    | SANITARY SEWER FORCE MAINS                         |
|    | EXISTING RAILROAD                                  |
|    | CULVERT CROSSINGS                                  |
|    | RIDGE LINE   |
|    | SANITARY SEWER LIFT STATION                        |
|   | WASTE WATER TREATMENT PLANT                        |
|  | INDIVIDUAL SEWAGE DISPOSAL SYSTEMS                 |
|  | SIGNALIZED INTERSECTION                            |
|  | PROPOSED TRAIL                                     |



\* VERT. CURB & GUTTER (STD. S7.1)  
\*\* EDGE DRAIN (STD. S1.19)

(QUAIL RUN DR. NORTH OF 48TH AVE.)





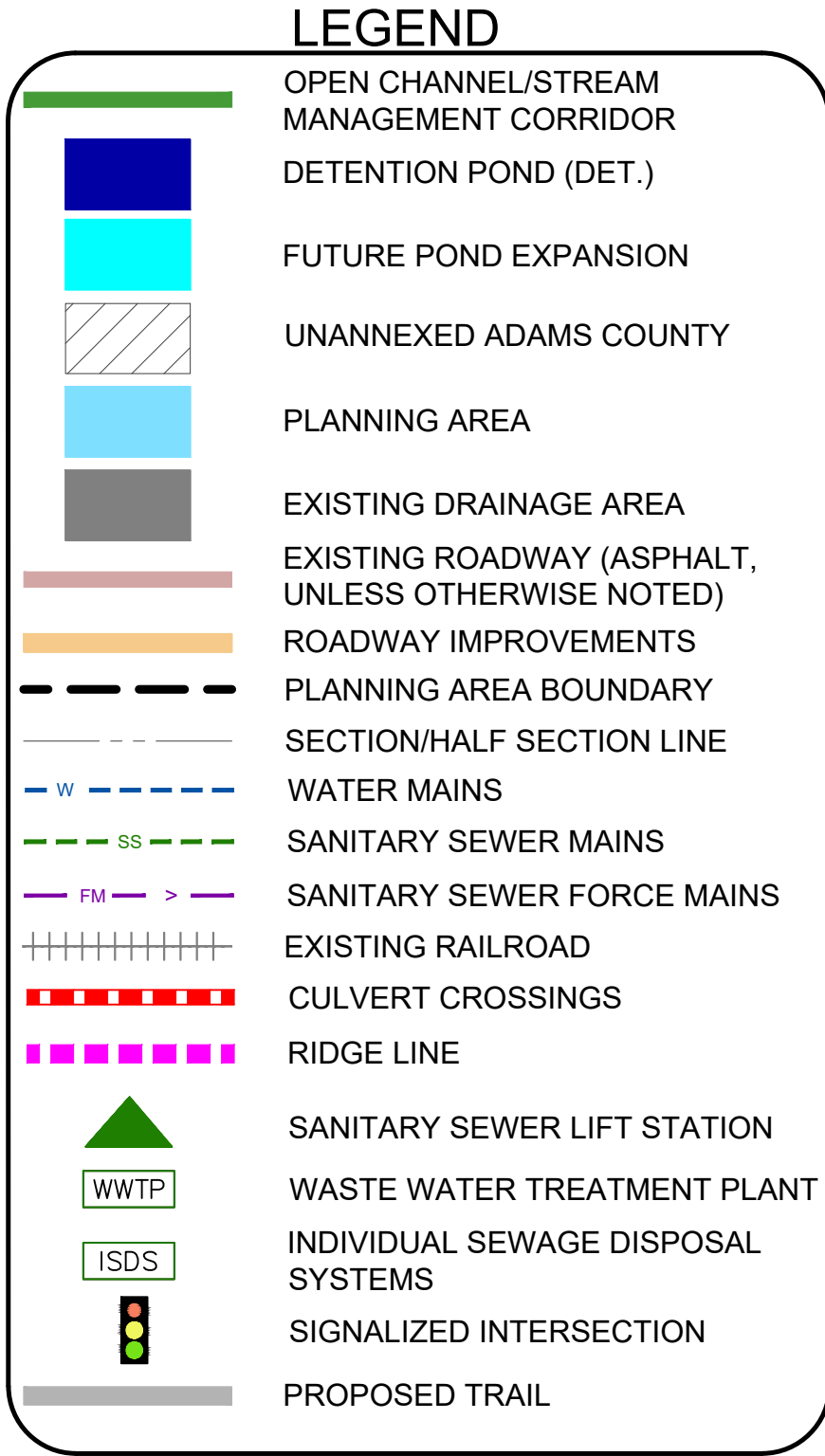
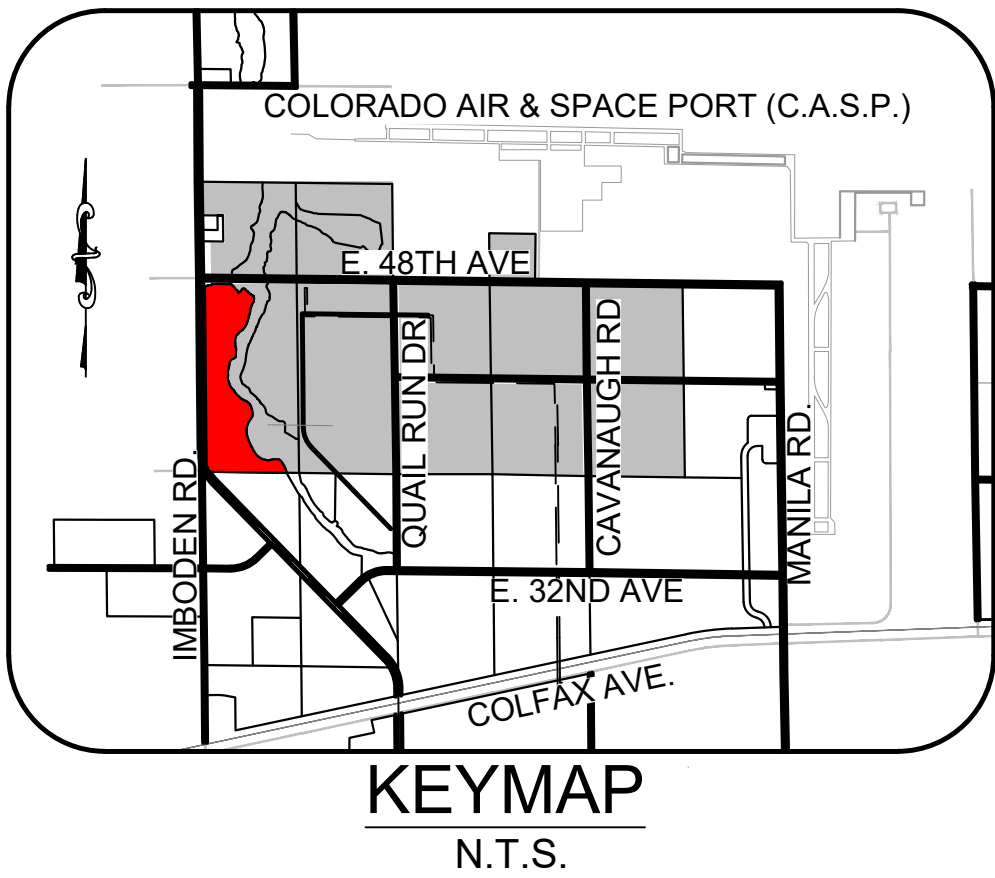
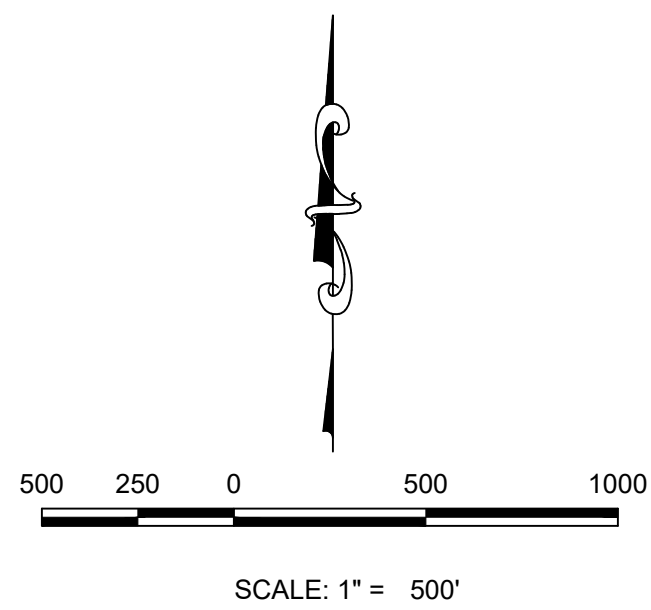
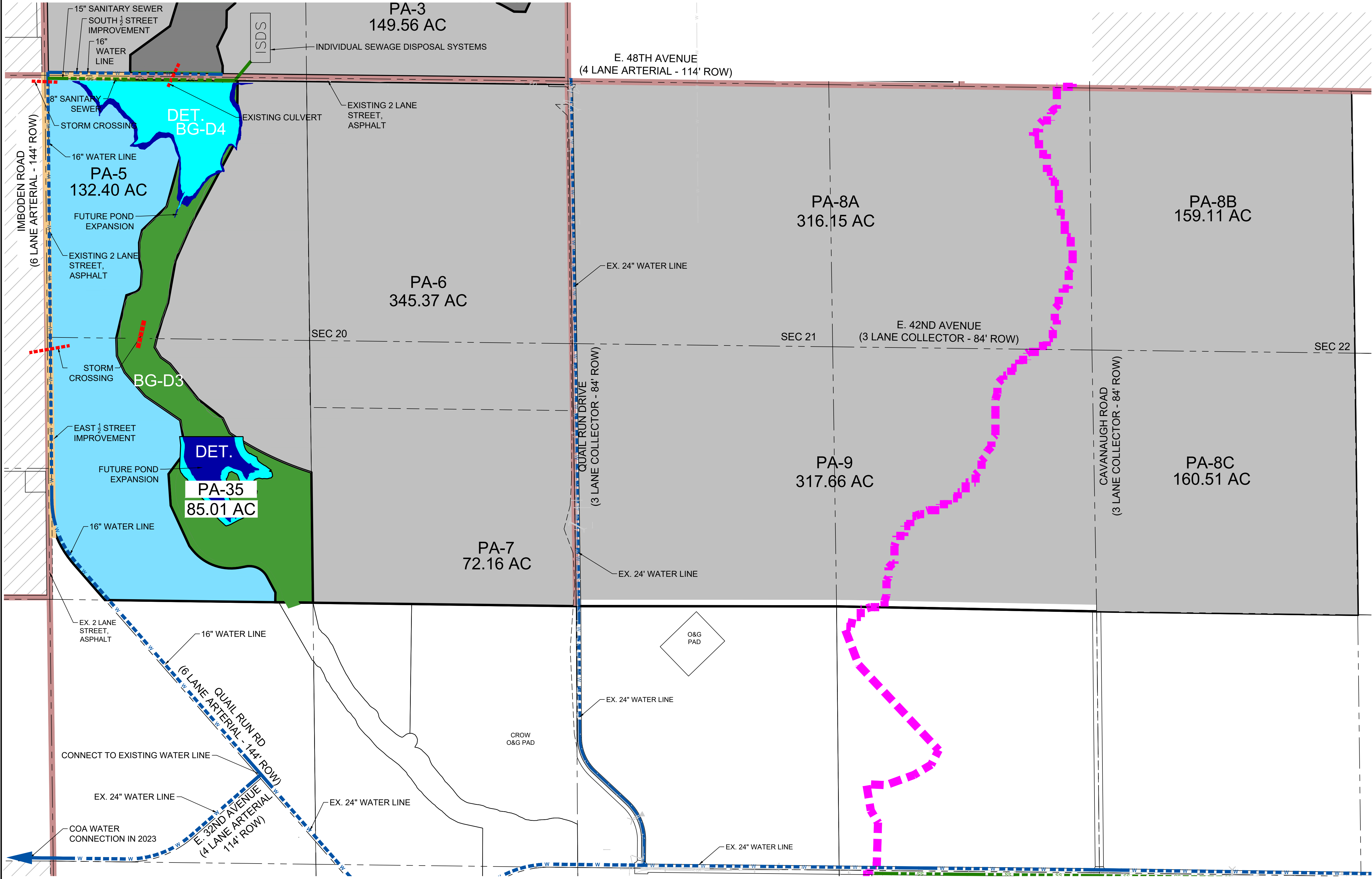








N:\PROJECTS\TRANSPORT COLORADO\CAD\ENGINEERING\SHSHEET SETS\SUBAREA 2\PIPs\SUBAREA 2 PIP.DWG, DUOSMULSKI, 6/20/2024 4:07 PM

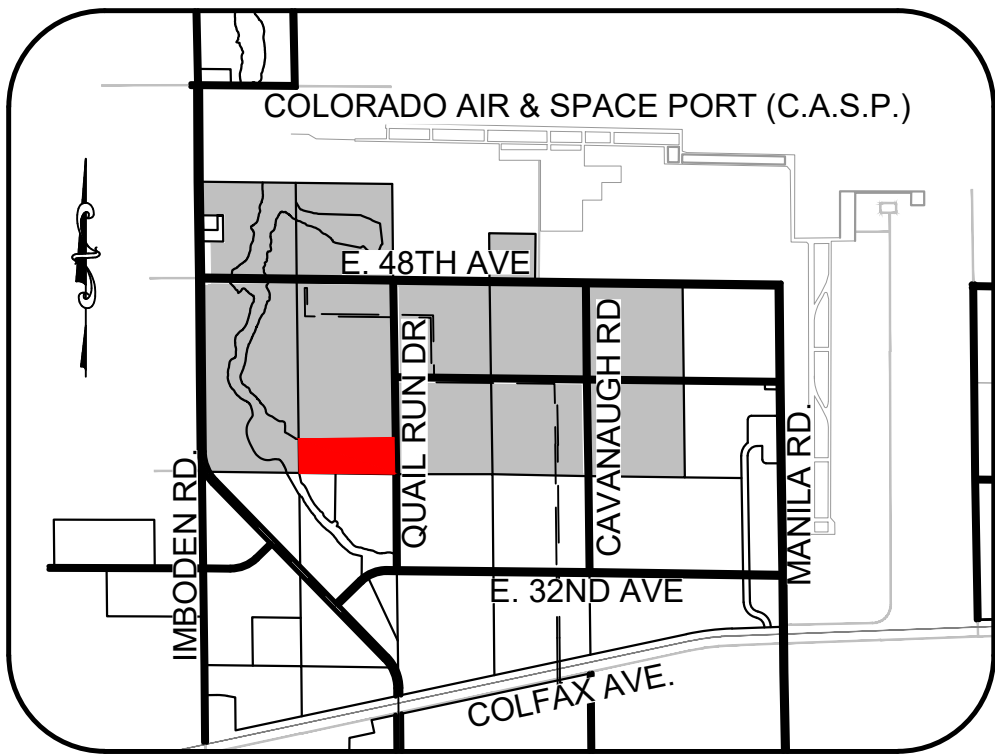
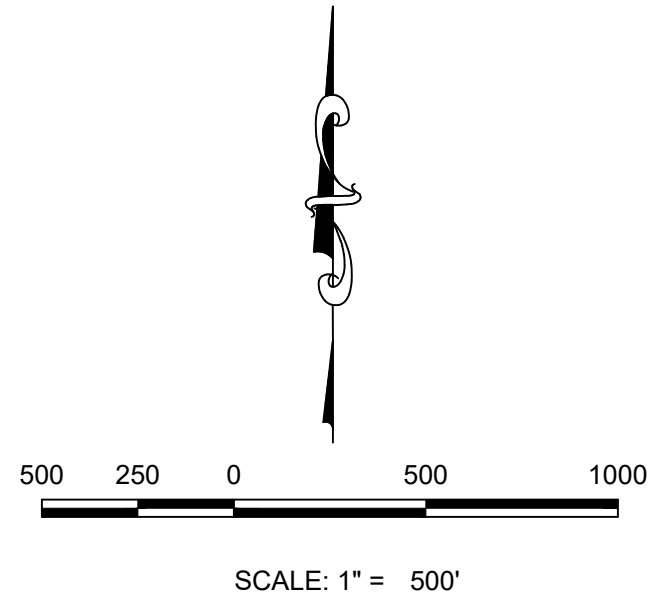
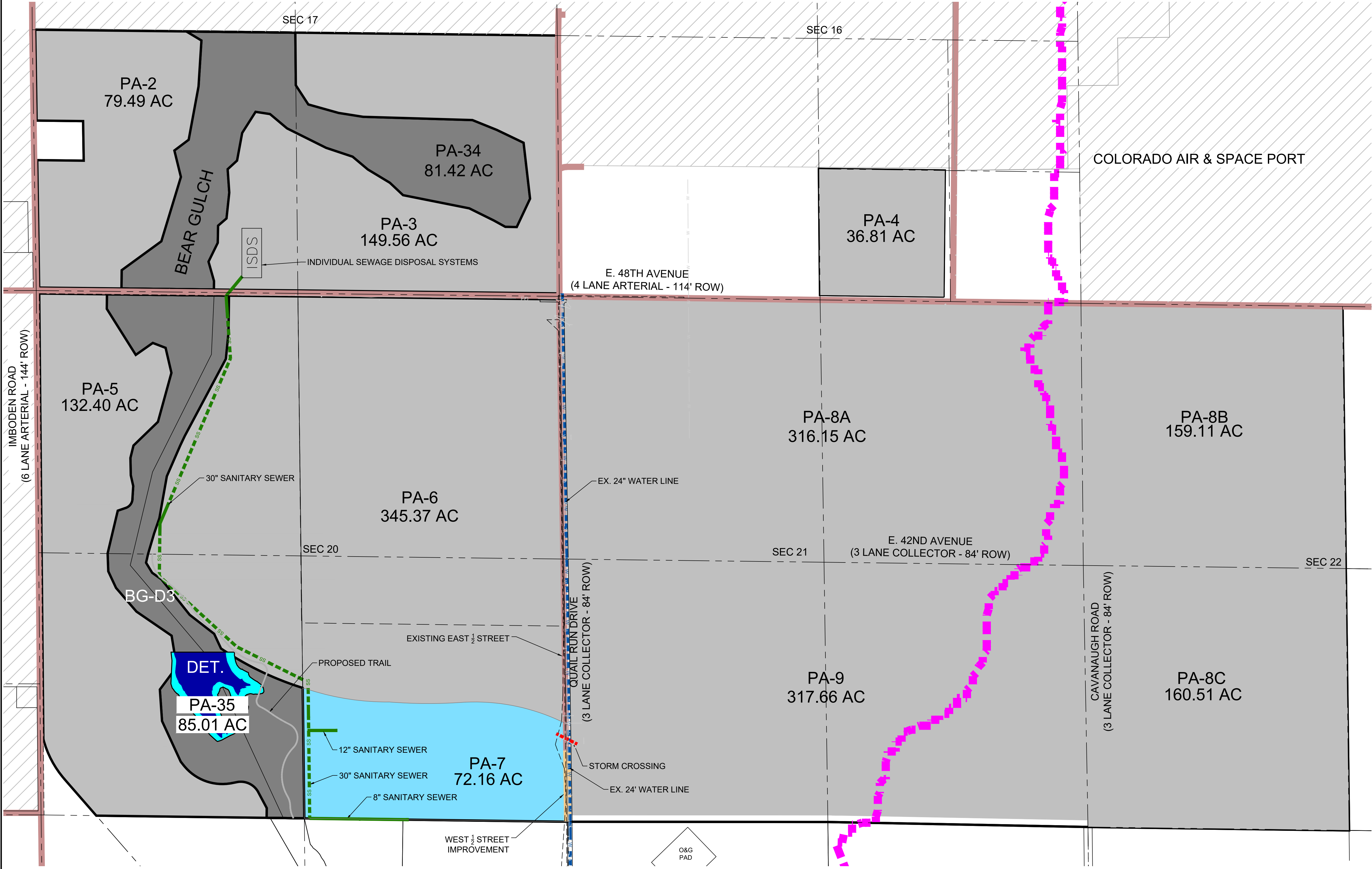


| SHEET NUMBER | DRAWN BY: | CHECKED BY: | DATE:    | SCALE:   | TRANSPORT COLORADO, LLC<br>1331 17TH STREET, SUITE 1000<br>DENVER, COLORADO 80202 |  | TRANSPORT COLORADO, LLC<br>1331 17TH STREET, SUITE 1000<br>DENVER, COLORADO 80202 |  | Westwood<br>10333 E DRY CREEK RD., SUITE 240<br>ENGLEWOOD, CO 80112<br>TEL: 720.482.9526<br>Westwoodps.com<br>Westwood Professional Services, Inc. |  | Revisions |  | No. | Date | Init. | Appr. | Date |
|--------------|-----------|-------------|----------|----------|---|--|---|--|--|--|-----------|--|-----|------|-------|-------|------|
|              |           |             |          |          |   |  |   |  |  |  |           |  |     |      |       |       |      |
| 5            | KAM       | MEL         | 07/21/23 | AS SHOWN | SUB-AREA 2  |  | PUBLIC IMPROVEMENT PLAN   |  | PA-5   |  |           |  |     |      |       |       |      |





N:\PROJECTS\TRANSPORT COLORADO\CAD\ENGINEERING\SHET SETS\SUBAREA 2\PIP.DWG, DUOSMULSKI, 6/20/2024 4:07 PM



**LEGEND**

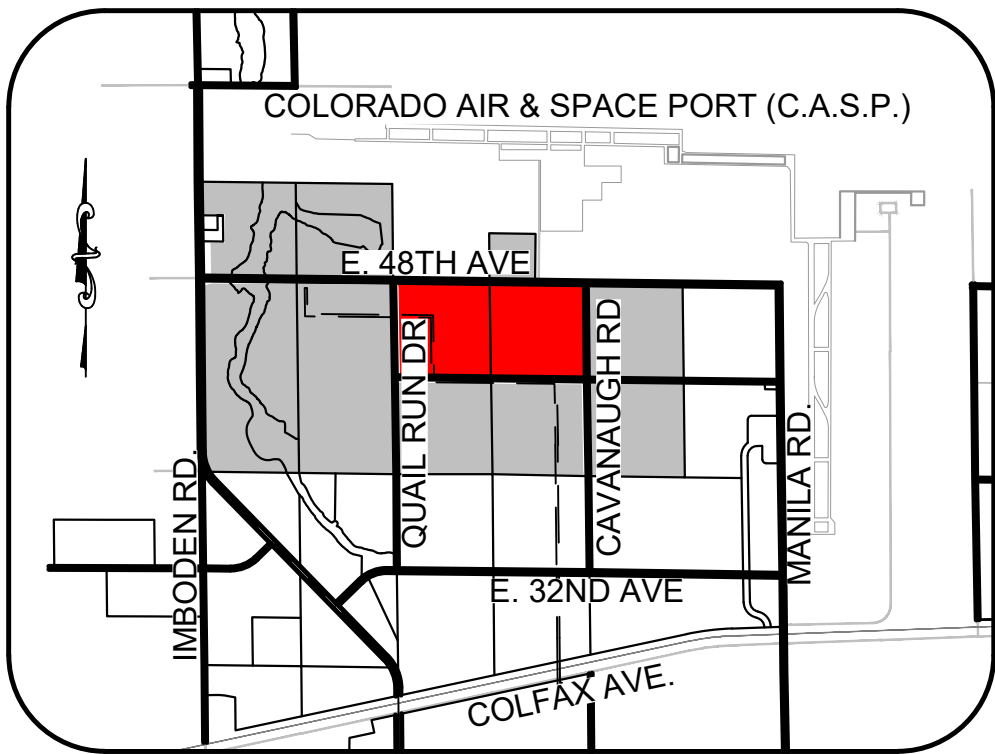
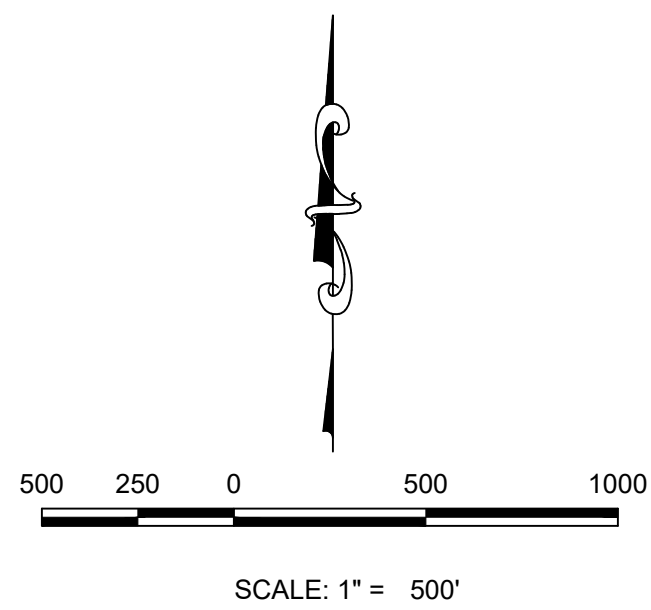
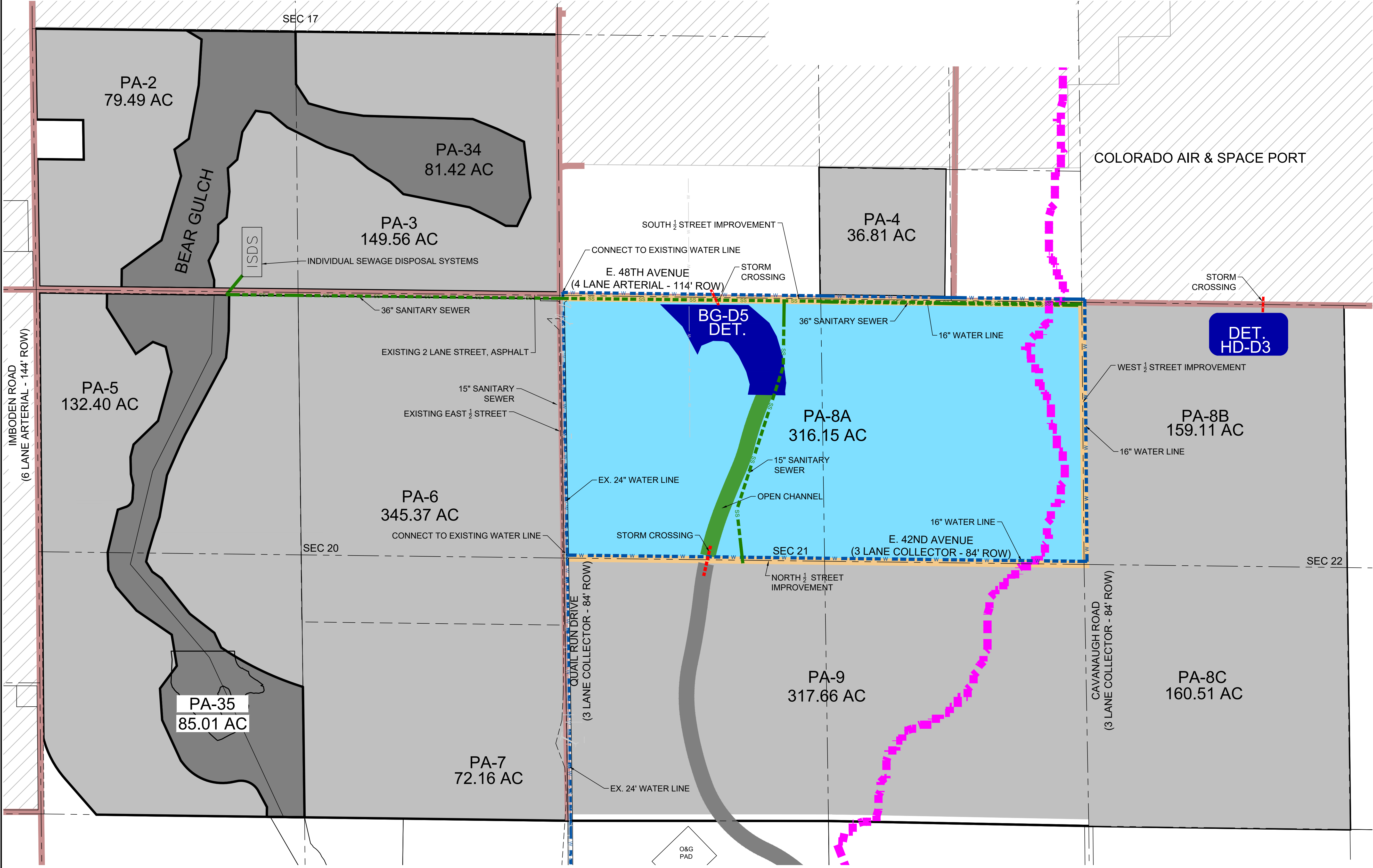
- OPEN CHANNEL/STREAM MANAGEMENT CORRIDOR
- DETENTION POND (DET.)
- FUTURE POND EXPANSION
- UNANNEXED ADAMS COUNTY
- PLANNING AREA
- EXISTING DRAINAGE AREA
- EXISTING ROADWAY (ASPHALT, UNLESS OTHERWISE NOTED)
- ROADWAY IMPROVEMENTS
- PLANNING AREA BOUNDARY
- SECTION/HALF SECTION LINE
- WATER MAINS
- SANITARY SEWER MAINS
- SANITARY SEWER FORCE MAINS
- EXISTING RAILROAD
- CULVERT CROSSINGS
- RIDGE LINE
- SANITARY SEWER LIFT STATION
- WASTE WATER TREATMENT PLANT
- INDIVIDUAL SEWAGE DISPOSAL SYSTEMS
- SIGNALIZED INTERSECTION
- PROPOSED TRAIL

| SHEET NUMBER | DRAWN BY: | CHECKED BY: | DATE:    | SCALE: | AS SHOWN | FILE NO: | R0032061 | TRANSPORT COLORADO<br>SUB-AREA 2<br>PUBLIC IMPROVEMENT PLAN<br>PA-7 | TRANSPORT COLORADO, LLC<br>1331 17TH STREET, SUITE 1000<br>DENVER, COLORADO 80202 | Revisions |       |       | No. |
|--------------|-----------|-------------|----------|--------|----------|----------|----------|---|---|-----------|-------|-------|-----|
|              |           |             |          |        |          |          |          |   |   | Date      | Init. | Appr. |     |
| 7            | KAM       | MEL         | 07/21/23 |        |          |          |          |   |   |           |       |       |     |
|              |           |             |          |        |          |          |          |   |   |           |       |       |     |

**Westwood**  
10333 E DRY CREEK RD., SUITE 240  
ENGLEWOOD, CO 80112  
TEL: 720.482.9526  
Westwoodps.com  
Westwood Professional Services, Inc.



N:\PROJECTS\TRANSPORT COLORADO\CAD\ENGINEERING\SHSHEET SETS\SUBAREA 2\PIPS\SUBAREA 2 PIP.DWG, DUOSMULSKI, 6/20/2024 4:07 PM



KEYMAP  
N.T.S.

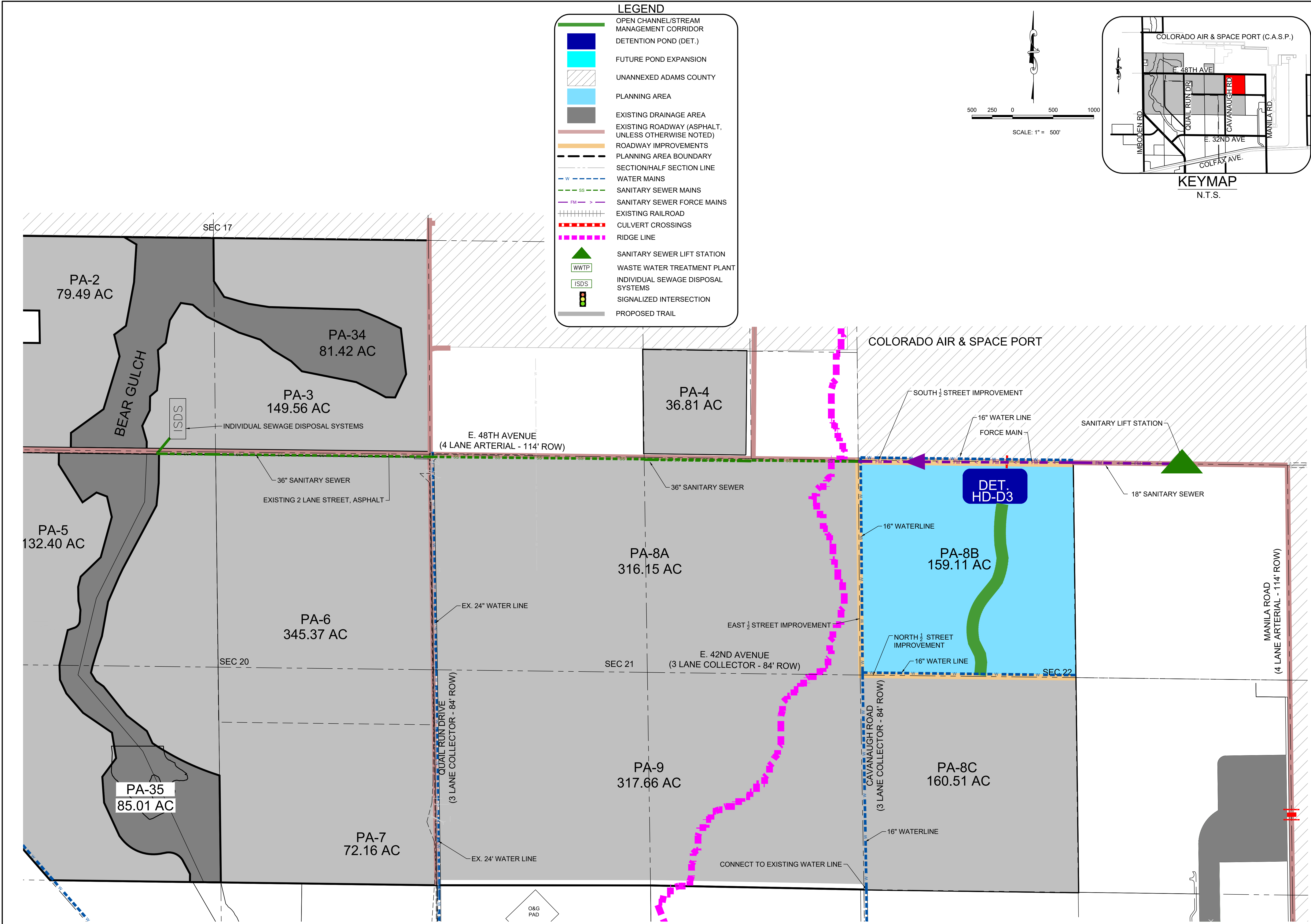
LEGEND

- OPEN CHANNEL/STREAM MANAGEMENT CORRIDOR
- DETENTION POND (DET.)
- FUTURE POND EXPANSION
- UNANNEXED ADAMS COUNTY
- PLANNING AREA
- EXISTING DRAINAGE AREA
- EXISTING ROADWAY (ASPHALT, UNLESS OTHERWISE NOTED)
- ROADWAY IMPROVEMENTS
- PLANNING AREA BOUNDARY
- SECTION/HALF SECTION LINE
- WATER MAINS
- SANITARY SEWER MAINS
- SANITARY SEWER FORCE MAINS
- EXISTING RAILROAD
- CULVERT CROSSINGS
- RIDGE LINE
- SANITARY SEWER LIFT STATION
- WASTE WATER TREATMENT PLANT
- INDIVIDUAL SEWAGE DISPOSAL SYSTEMS
- SIGNALIZED INTERSECTION
- PROPOSED TRAIL

| SHEET NUMBER | DRAWN BY:   |          | SCALE: | TRANSPORT COLORADO<br>SUB-AREA 2<br>PUBLIC IMPROVEMENT PLAN<br>PA-8A | TRANSPORT COLORADO, LLC<br>1331 17TH STREET, SUITE 1000<br>DENVER, COLORADO 80202 | <div>Westwood</div> <div>10333 E DRY CREEK RD.<br/>SUITE 240<br/>ENGLEWOOD, CO 80112<br/>TEL: 720.482.9526<br/>Westwoodps.com<br/>Westwood Professional Services, Inc.</div> | No. | Revisions | Date | Appr. | Date |
|--------------|-------------|----------|--------|--|---|--|-----|-----------|------|-------|------|
|              | KAM         | AS SHOWN |        |  |   |  |     |           |      |       |      |
|              | CHECKED BY: | FILE NO: |        |  |   |  |     |           |      |       |      |
|              | MEL         | R0032061 |        |  |   |  |     |           |      |       |      |
|              | DATE:       | 07/21/23 |        |  |   |  |     |           |      |       |      |
| 8            |             |          |        |  |   |  |     |           |      |       |      |

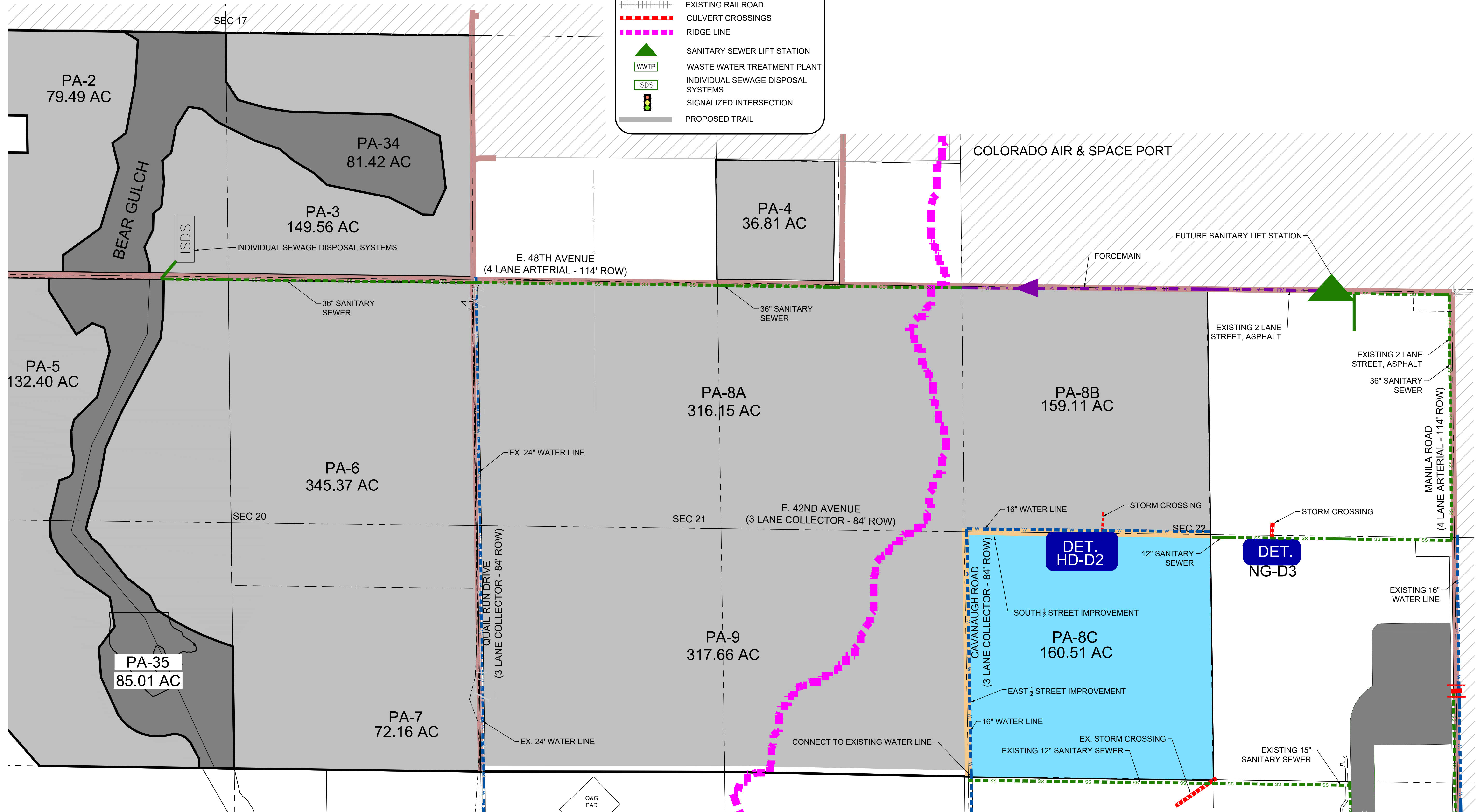
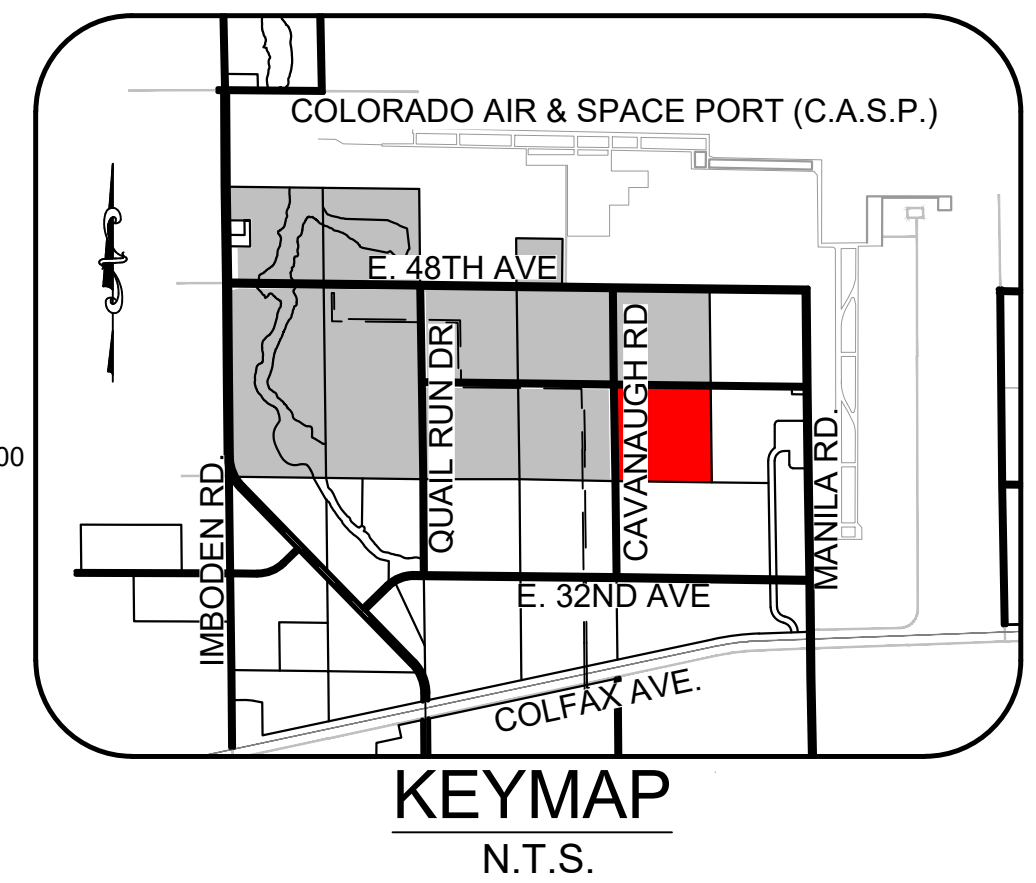
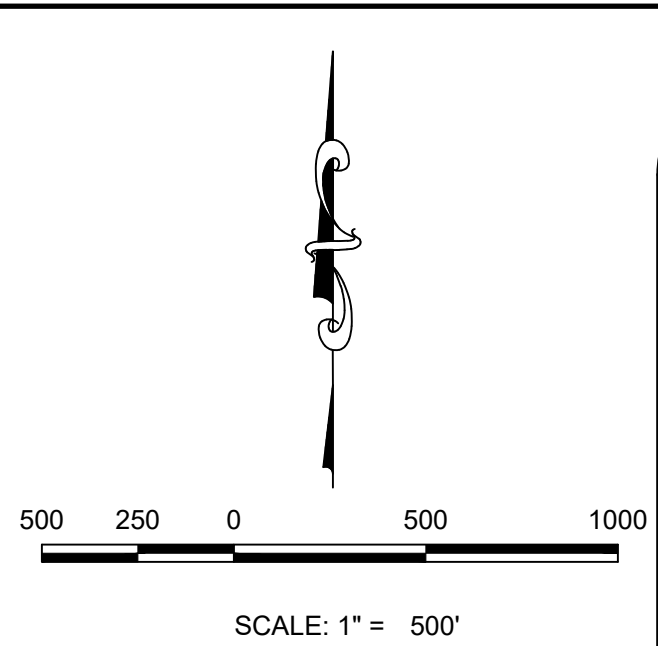


N:\PROJECTS\TRANSPORT COLORADO\CAD\ENGINEERING\SHSHEET SETS\SUBAREA 2\PIP.DWG, DUOSMULSKI, 6/20/2024 4:07 PM

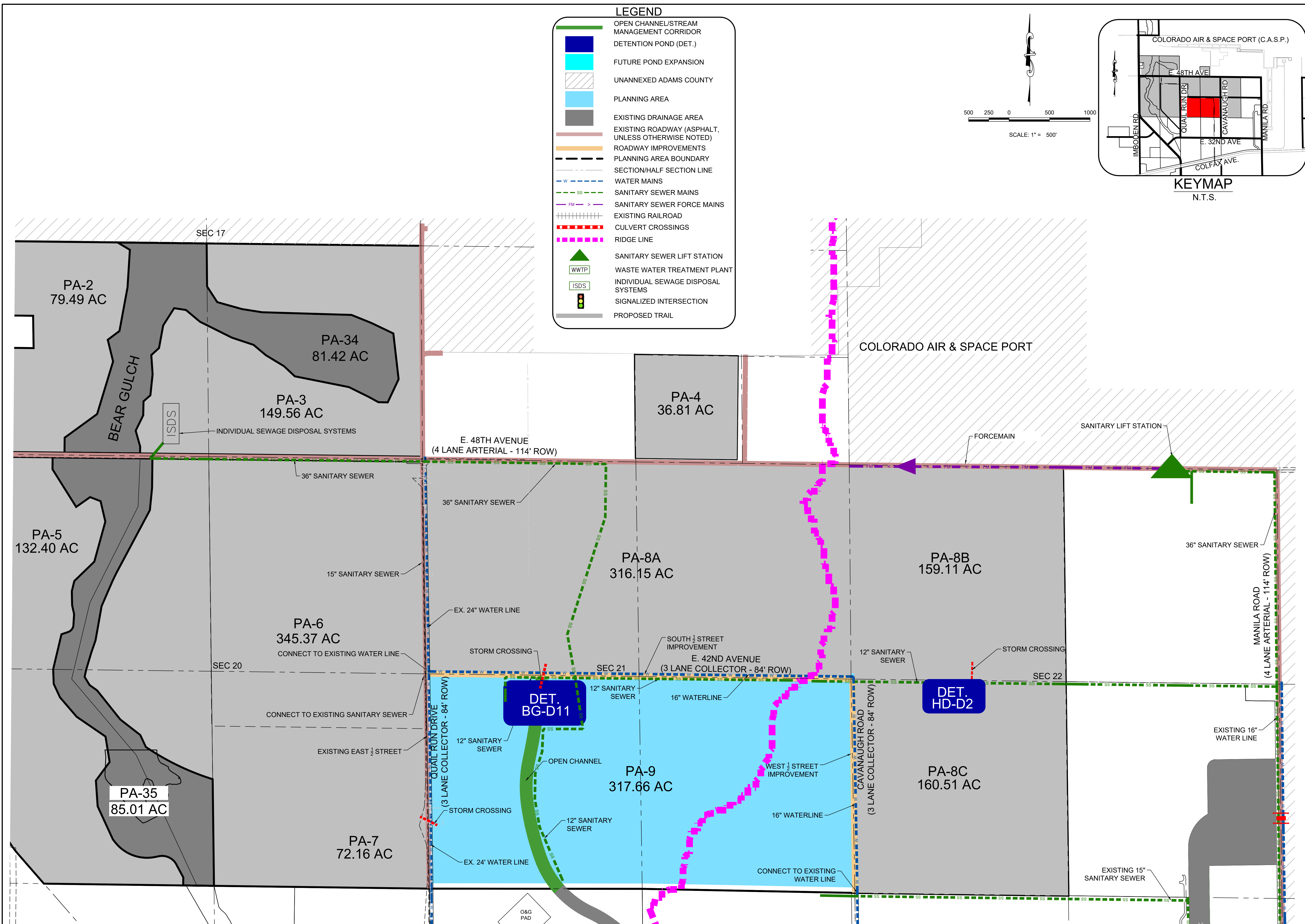


|              |               |                 |                |                 |                   |   |      |   |       |  |  |           |  |     |  |
|--------------|---------------|-----------------|----------------|-----------------|-------------------|---|------|---|-------|--|--|-----------|--|-----|--|
| SHEET NUMBER | DRAWN BY: KAM | CHECKED BY: MEL | DATE: 07/21/23 | SCALE: AS SHOWN | FILE NO: R0032061 | TRANSPORT COLORADO SUB-AREA 2 PUBLIC IMPROVEMENT PLAN PA-8B |      | TRANSPORT COLORADO, LLC 1331 17TH STREET, SUITE 1000 DENVER, COLORADO 80202 |       | <b>Westwood</b> 10333 E DRY CREEK RD., SUITE 240 ENGLEWOOD, CO 80112 TEL: 720.482.9526 Westwoodps.com Westwood Professional Services, Inc. |  | Revisions |  | No. |  |
|              |               |                 |                |                 |                   | No.   | Date | Init.   | Appr. | Date   |  |           |  |     |  |









|                        |           |           |                         |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|-----------|-----------|-------------------------|----------------------------------|-------|---|--|--|------|-----------|------|-------|-------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| SHEET NUMBER<br><br>11 | DRAWN BY: | KAM       | SCALE:                  | TRANSPORT COLORADO<br>SUB-AREA 2 |       | TRANSPORT COLORADO, LLC<br>1331 17TH STREET, SUITE 1000<br>DENVER, COLORADO 80202 | <div>Westwood</div> <div>10333 E DRY CREEK RD.<br/>SUITE 240<br/>ENGLEWOOD, CO 80112<br/>TEL: 720.482.9526</div> <div>Westwoods.com<br/>Westwood Professional Services, Inc.</div> | <table><tr><td>No.</td><td>Revisions</td><td>Date</td><td>Init.</td><td>Appr.</td><td>Date</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> | No.  | Revisions | Date | Init. | Appr. | Date |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        | No.       | Revisions | Date                    | Init.                            | Appr. |   |  |  | Date |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        |           |           |                         |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        |           |           |                         |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        |           |           |                         |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        |           |           |                         |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CHECKED BY:            | MEL       | FILE NO:  | PUBLIC IMPROVEMENT PLAN |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DATE:                  | 07/21/23  | R0032061  | PA-9                    |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        |           |           |                         |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        |           |           |                         |                                  |       |   |  |  |      |           |      |       |       |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



August 14, 2024

Traffic & Safety  
Region I  
2829 W Howard Place, 2<sup>nd</sup> Floor  
Denver, Colorado 80204

**RE: Port Colorado Subarea 2 TIS  
FHU Project No. 122260-01**

**Environmental Comments:**

Once File Search results are received Environmental review will continue.

For ANY ground disturbance/work within CDOT ROW---

Required:

Arch/History/Paleo:

Since this is a permit, a file search for Arch, Paleo and History is required. If the file search identifies anything, a more extensive report will be required. If nothing is identified, then the file search should be sufficient. For the file search contact:

Cultural/History File Search: <https://www.historycolorado.org/file-access> Email: [hc\\_filesearch@state.co.us](mailto:hc_filesearch@state.co.us)

Paleo File Search: Colorado University Museum of Natural History -

<https://www.colorado.edu/cumuseum/research-collecons/paleontology/policies-procedure>) Email: [jacob.vanveldhuizen@colorado.edu](mailto:jacob.vanveldhuizen@colorado.edu) and from the Denver Museum of Nature and Science – Email: [kristen.mackenzie@dmns.org](mailto:kristen.mackenzie@dmns.org) <https://www.dmns.org/science/earth-sciences/earth-sciences-collecons/>

If there is NO ground disturbance within CDOT ROW, the applicant shall submit an email/memo to the RI Environmental Permit Review Specialist stating this.

**RE: Comment Acknowledged.**

**Permits Comments:**

7.1.24 The Traffic Impact Analysis needs to be stamped by the Engineer from Felsburg Holt & Ullevig. -- Aaron Eyl 7.1.24

**RE: Final report will be stamped upon approval from City of Aurora.**

I have no comments at this time as it appears no work will be done in the CDOT ROW. Any work in the CDOT ROW requires CDOT permits. RLW July 8 2024

**RE: Comment Acknowledged**

**Traffic Comments:**

7-9-2024 - Chris Bland

(I) Under II.B. Roadway System, regarding I-70, believe consideration should be given to mentioning the existing Watkins Road interchange since this interchange, like Manila Road, is also near the project site.

**RE: Watkins and Manila interchanges have been added to the text.**



(2) Under II.B. Roadway System, regarding US 36, believe consideration should be given to mentioning some of the more major intersecting roadways, including, Imboden Road and Manila Road.

RE: Intersections of US-36 with Manila and Imboden have been added to the text.

(3) Under VI Summary and Recommendations, regarding the mentioning of accessing I-70 via a planned interchange at Imboden Road / Quail Run Road, believe consideration should be given to also mentioning the existing interchanges near the project site, namely Watkins Road and Manila Road. In addition, consideration should be given to mentioning how these interchanges will be developed in conjunction with the proposed developments and projected traffic volumes and in harmony with the CDOT I60I process and related ongoing corridor-wide TDM planning documents such as the I-70 East Corridor Multimodal TDM Plan.

RE: US 36 improvements were identified in the Port Colorado Master TIS (2022). City of Aurora did not identify those intersections for study in this Subarea study.

(4) Under VI Summary and Recommendations, believe consideration should be given to mentioning that Port Colorado will also have access to US 36 via planned improvements at several intersections.

RE: I60I process has been noted. Watkins Road improvements identified in the 2021 Arapahoe County study have also been noted. Improvements at Manila Road have also been mentioned, but noted that while they were identified in the master TIS they are not anticipated to be necessary for Subarea 2 given the construction of the Quail Run interchange.

Please let me know if you have any questions about this letter or need any additional information. Feel free to contact me via email ([philip.dunham@fhueng.com](mailto:philip.dunham@fhueng.com)) or call 303-721-1440 if you have any questions.



Philip Dunham, PE, PTOE  
Transportation Engineer