City of Ormond Beach

City Commission Meeting

City Hall Commission Chambers

22 South Beach St., Ormond Beach FL 32174

August 25, 2026, 7:00 PM

Jason Leslie, Mayor
Lori Tolland, Zone 1
Travis Sargent, Zone 2
Kristin Deaton, Zone 3
Harold Briley, Zone 4

Agenda

1. CALL TO ORDER

2. INVOCATION

3. PLEDGE OF ALLEGIANCE

4. AUDIENCE REMARKS - REGARDING ITEMS NOT ON THE AGENDA & ON THE CONSENT AGENDA

5. APPROVAL OF MINUTES

A. Minutes from City Commission meeting - July 28, 2026

B. Minutes from City Commission meeting - August 4, 2026

6. CONSENT AGENDA

The action proposed is stated for each item on the Consent Agenda. Unless a City Commissioner removes an item from the Consent Agenda, no discussion on individual items will occur and a single motion will approve all items.

A. Woodridge Drive Drainage Improvements

RESOLUTION NO. 2026-100: A RESOLUTION ACCEPTING A PROPOSAL FROM JD WEBER CONSTRUCTION, INC. FOR UNDERGROUND UTILITY CONSTRUCTION MANAGEMENT SERVICES REGARDING THE WOODRIDGE DRIVE DRAINAGE IMPROVEMENTS PROJECT; AUTHORIZING THE EXECUTION OF A WORK AUTHORIZATION AND PAYMENT THEREFOR; AND SETTING FORTH AN EFFECTIVE DATE.

B. FAA Infrastructure Investment and Jobs Act (IIJA) - Ormond Beach Municipal Airport Airfield Remarking and Rejuvenation

RESOLUTION NO. 2026-101: A RESOLUTION AUTHORIZING THE EXECUTION OF A GRANT AGREEMENT BETWEEN THE CITY AND THE FEDERAL AVIATION ADMINISTRATION REGARDING FUNDING FOR THE AIRPORT AIRFIELD REJUVENATION AND REMARKING PROJECT AT THE ORMOND BEACH MUNICIPAL AIRPORT; AUTHORIZING THE EXECUTION OF ALL DOCUMENTS NECESSARY AND INCIDENTAL THERETO FOR THE CITY TO ACCEPT THE GRANT AWARD; AND SETTING FORTH AN EFFECTIVE DATE.

C. **Disposition Item:** City Manager's Monthly Report - August 2026

7. PUBLIC HEARINGS

A. Eighteen-Month Moratorium on Data Centers (SECOND READING)

ORDINANCE NO. 2026-11: AN ORDINANCE OF THE CITY OF ORMOND BEACH, FLORIDA, IMPOSING A TEMPORARY MORATORIUM FOR EIGHTEEN MONTHS ON THE RECEIPT, CONSIDERATION OF APPLICATIONS OR ISSUANCE OF ANY BUILDING PERMITS, SITE PLAN APPROVALS, DEVELOPMENT ORDERS, DEVELOPMENT AGREEMENTS, SPECIAL EXCEPTION USES, CONDITIONAL USES, REZONINGS, AND COMPREHENSIVE PLAN AMENDMENTS, AND ANY OTHER OFFICIAL ACTION THE CITY OF ORMOND BEACH ACTING BY AND THROUGH ITS ELECTED AND APPOINTED OFFICIALS AND THEIR DESIGNEES RELATED TO DATA CENTERS, LARGE SCALE DATA CENTERS AND OTHER LARGE LOAD UTILITY USERS; PROVIDING LEGISLATIVE FINDINGS; PROVIDING THE DURATION; PROVIDING SEVERABILITY; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; AND PROVIDING FOR AN EFFECTIVE DATE.

B. Zoning Map Amendment, 651 South Ridgewood Avenue (SECOND READING)

ORDINANCE NO. 2026-12: AN ORDINANCE AMENDING PARAGRAPH C, OFFICIAL ZONING MAP, OF SECTION 2-01, ESTABLISHED, OF ARTICLE I, ESTABLISHMENT OF ZONING DISTRICTS AND OFFICIAL ZONING MAP, OF CHAPTER 2, DISTRICT AND GENERAL REGULATIONS, OF THE CITY OF ORMOND BEACH LAND DEVELOPMENT CODE, BY AMENDING THE OFFICIAL ZONING MAP TO REZONE CERTAIN REAL PROPERTY TOTALING 0.39± ACRES LOCATED AT 651 SOUTH RIDGEWOOD AVENUE, VOLUSIA COUNTY PROPERTY APPRAISER PARCEL NUMBER 4242-20-32-0100 FROM VOLUSIA COUNTY R-5, URBAN SINGLE-FAMILY RESIDENTIAL TO ORMOND BEACH R-3, SINGLE-FAMILY MEDIUM DENSITY, AUTHORIZING REVISION OF OFFICIAL ZONING MAP; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

C. Comprehensive Plan Amendments, Capital Improvement Element Schedules (SECOND READING)

ORDINANCE NO. 2026-13: AN ORDINANCE ADOPTING CERTAIN UPDATED SCHEDULES TO THE CAPITAL IMPROVEMENTS ELEMENT OF THE CITY OF ORMOND BEACH COMPREHENSIVE PLAN; PROVIDING WHEN SUCH UPDATES SHALL TAKE EFFECT; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

D. Street Renaming, Yoon Way (SECOND READING)

ORDINANCE NO. 2026-14: AN ORDINANCE CHANGING THE STREET NAME OF “YOON WAY” TO “CORNER SQUARE WAY” SAID STREET BEING LOCATED ALONG WEST GRANADA BOULEVARD, APPROXIMATELY 1,450 LINEAR FEET WEST OF THE INTERSECTION OF WEST GRANADA BOULEVARD AND CLYDE

MORRIS BOULEVARD; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; PROVIDING FOR TRANSMITTAL AND RECORDING IN THE PUBLIC RECORDS OF VOLUSIA COUNTY; AND SETTING FORTH AN EFFECTIVE DATE.

8. DISCUSSION AND DIRECTION ITEMS

A. Data Centers

9. REPORTS, SUGGESTIONS, REQUESTS

10. ADJOURNMENT

Website Address – www.ormondbeach.org

NOTICE – Pursuant to Section 286.0105 of the Florida Statutes, if any person decides to appeal any decision made by the City Commission with respect to any matter considered at this public meeting, such person will need a record of the proceedings and for such purpose, such person may need to ensure that a verbatim record of the proceedings is made, including the testimony and evidence upon which the appeal is to be based.



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City of Ormond Beach

City Commission Meeting

City Hall Commission Chambers

22 South Beach St., Ormond Beach FL 32174

July 28, 2026, 7:00 PM

Jason Leslie, Mayor
Lori Tolland, Zone 1
Travis Sargent, Zone 2
Kristin Deaton, Zone 3
Harold Briley, Zone 4

Minutes

1. CALL TO ORDER

Mayor Leslie called the meeting to order at 07:02 PM.

Present: Mayor Jason Leslie, Commissioners Lori Tolland, Travis Sargent, Kristin Deaton, and Harold Briley, City Manager Joyce Shanahan, City Attorney Randy Hayes, Assistant City Managers Claire Whitley and Shawn Finley, and City Clerk Susan Dauderis.

2. INVOCATION

Pastor Charlie Freeman, Church of Jesus, provided the invocation.

3. PLEDGE OF ALLEGIANCE

Mayor Leslie led the Pledge of Allegiance.

4. ADOPTION OF FISCAL YEAR 2026-2027 TENTATIVE MILLAGE RATE

City Clerk Susan C. Dauderis read by legal title only:

A. Adoption of Tentative Millage Rate

RESOLUTION NO. 2026-85: A RESOLUTION ADOPTING PROPOSED MILLAGE RATES FOR THE 2026-2027 FISCAL YEAR; ESTABLISHING THE DATE, TIME AND PLACE FOR THE FIRST PUBLIC HEARING ON THE PROPOSED MILLAGE RATES AND THE TENTATIVE BUDGET; DIRECTING COMMUNICATION; EXPRESSING LEGISLATIVE INTENT; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Sargent moved, seconded by Commissioner Briley, to approve Resolution No. 2026-85.

Mayor Leslie stated the tentative millage rate for the City of Ormond Beach necessary to fund the Fiscal Year 2026-2027 budget was 4.3202 mills. He noted the rate was 3.37 percent above the rolled back rate of 4.1794 mills. He stated the tentative debt service millage was 0.0590 for the 2010 General Obligation Bond Sinking Fund.

Ms. Jennifer Bright, exempt address, stated she was a candidate for Zone 2 City Commissioner. She requested clarity for the taxpayers on what a flat millage meant if the taxes went up for residents. She discussed the Capital Improvement Program funding sources and costs for taxpayers. She voiced concerns regarding the City

Attorney's Office costs and fees, suggesting staff hire an in-house land use attorney to help reduce the fees.

Mr. Ray Cardona, exempt address, stated he was the president of the Ormond Beach Professional Firefighter association and expressed support of the budget as it was submitted. He discussed the needs of the Fire Department.

Ms. Amy Valcik, 236 Ormwood Drive, thanked staff and the Commission for the work done on the budget and voiced support of the proposed budget. She discussed the city's quality of life and resident expectations of the city. She highlighted the importance of institutional knowledge and her family's history in the area. She urged the Commission to protect and preserve the city standards.

Mr. John Olivari, 6 Noblewoods Way, discussed his role on and the role of the Budget Advisory Board, highlighting the work the board did each budget season. He stated the city had the lowest millage in Volusia County, noting the future impacts to the millage rate.

Ms. Angie Shull, 110 Deer Lake Circle, thanked the Commission for their work on the budget. She expressed a desire for more transparency for the public due to the misinformation spread. She discussed the low tax rate.

Mayor Leslie restated the tentative operating of 4.3202 mills was 3.37 percent above the rolled back rate of 4.1794 mills. He stated the resolution also included the tentative debt service millage of 0.0590 for the 2010 General Obligation Bond Sinking Fund.

Call Vote:	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
	Commissioner Deaton	Yes
	Commissioner Briley	Yes
Carried.	Mayor Leslie	Yes

Mayor Leslie announced the tentative operating millage rate was set at 4.3202, which was 3.37 percent above the rolled back millage rate of 4.1794 mills.

5. AUDIENCE REMARKS - REGARDING ITEMS NOT ON THE AGENDA & ON THE CONSENT AGENDA

Ms. Bright discussed Items 7A, 7B, 7C, and 7F. She requested any consent agenda items provide full documentation for transparency.

Ms. Sheila Lind, 35 Grizzly Bear Path, discussed conversations she had with many groups regarding the reopening of the Riverbend Golf Course and provided the City Clerk with a copy of letters from the groups. She highlighted statistics from the National Golf Foundation report.

Mr. Alan Burton, 915 Ocean Shore Boulevard, disclosed he was running for Zone 1 City Commissioner. He expressed the importance of volunteer work and encouraged the Commission to host a clean-up day at the Riverbend Golf Course. He suggested native plants be planted at the golf course.

Mr. Damien Curry, 65 Seton Trail, disclosed he was running for Mayor and the reasons

behind running. He questioned the date changes of the City Commission meetings.

Mr. Paul Hughes, 4 Lauren Court, expressed concerns regarding the paving within the Tomoka Oaks neighborhood. He questioned the timing of the project and the other upgrades needed to the traffic infrastructure in the area.

Commissioner Deaton requested Mr. Shawn Finley, Assistant City Manager, speak to the repaving; whereby, Mr. Finley explained the paving of the road was identified roughly 3 years ago.

Commissioner Sargent stated the roads were approved by the Commission to be repaved in February.

Ms. Becky Parker, 211 John Anderson Dr, highlighted upcoming events hosted by Ormond Beach MainStreet and provided statistics from prior events. She discussed the importance of the partnership with the city and other sponsors.

Ms. Marsha Blew, 12 Honey Bear Path, discussed the costs associated with the Ormond Beach Municipal Airport Tree Obstruction Mitigation project. She expressed concerns regarding the grant with the Florida Department of Transportation (FDOT) instead of with the Federal Aviation Administration (FAA) and FDOT combined, specifically the avoidance of an environmental study. She noted the need for the environmental study regardless of funding source. She discussed the airport's specialty licensing compared to a regular license. She stated she previously sent correspondence on the topic via email to the Commissioners and spoke at prior meetings.

Mayor Leslie requested an update regarding the topic from Mr. Brain Rademacher, Economic Development Director.

Ms. Stephanie Mason-Teague, 78 East Granada Boulevard, highlighted the Ormond Memorial Art Museum (OMAM) and Gardens and the partnership with the city. She noted OMAM took any funds entrusted to them very seriously and always vowed to be good trustees and stewards with the funds. She reviewed upcoming events hosted by OMAM.

Mr. Tom Fitzgibbon, 51 South St. Andrews Street, stated he lived in Tomoka Oaks and expressed concerns regarding the upcoming development of Tomoka Reserve and the increased traffic. He requested the Commission take a close look at the traffic study when the item was sent to the Commission for review.

Mr. Doug Thomas Jr, 120 River Bluff Drive, reviewed his history with the city and thanked those involved with the Parks and Recreation Department. He shared a story regarding his history within the city, and expressed concerns of fewer parks and recreational spaces. He requested the Commission continue investing in the department.

Ms. Michelle Zirkelbach, 328 River Bluff Drive, stated she had not received answers to her questions, noting the public record requests she previously submitted. She provided the details of the request and voiced concerns regarding the lack of records provided.

Commissioner Sargent read into the record an email from Ms. Karin Augat requesting a completed National Environmental Policy Act (NEPA) study review required by FAA before moving forward with the obstruction removal project at the municipal airport. He

read background provided by Ms. Augat and voiced her concerns regarding the extra costs associated with not completing the NEPA study.

Mayor Leslie requested Ms. Susan Dauderis, City Clerk, provide the email to the Commission.

6. APPROVAL OF MINUTES

Mayor Leslie advised the minutes from the June 9, 2026, City Commission meeting were sent to the Commission for review and posted on the city's website for public viewing. He asked if there were any corrections, additions, or omissions. He stated, hearing no corrections, the minutes would stand approved as presented.

Commissioner Briley moved, seconded by Commissioner Sargent, for approval of the June 9, 2026, City Commission meeting minutes.

Motion passed by voice vote.

A. Minutes from City Commission meeting - June 9, 2026

7. CONSENT AGENDA

Mayor Leslie advised the actions proposed for the items on the Consent Agenda were so stated on the agenda. He asked if any member of the Commission had questions or wished to discuss any items separately.

Commissioner Briley requested Items 7I be pulled from the Consent Agenda.

Commissioner Deaton and Commissioner Tolland requested Items 7C be pulled from the Consent Agenda.

Commissioner Sargent moved, seconded by Commissioner Briley, for approval of the Consent Agenda, absent Items 7C, 7F, and 7I.

Call Vote:	Commissioner Sargent	Yes
	Commissioner Deaton	Yes
	Commissioner Briley	Yes
	Commissioner Tolland	Yes
Carried.	Mayor Leslie	Yes

A. Ormond Memorial Art Museum Renewal

RESOLUTION NO. 2026-86: A RESOLUTION AUTHORIZING EXECUTION OF A SERVICE AGREEMENT BETWEEN THE CITY AND THE ORMOND MEMORIAL ART MUSEUM, INC.; AUTHORIZING THE EXPENDITURE OF FUNDING; AND SETTING FORTH AN EFFECTIVE DATE.

B. Volusia-Flagler Transportation Planning Organization Funding Agreement

RESOLUTION NO. 2026-87: A RESOLUTION AUTHORIZING THE EXECUTION OF AN AGREEMENT BETWEEN THE CITY OF ORMOND BEACH AND THE VOLUSIA-FLAGLER TRANSPORTATION PLANNING ORGANIZATION IN SUPPORT OF PLANNING AND FUNDING OF VOLUSIA COUNTY TRANSPORTATION SYSTEM

PROJECTS; AUTHORIZING THE EXPENDITURE OF FUNDING AND SETTING FORTH AN EFFECTIVE DATE.

D. City Commission Meeting Schedule Change

RESOLUTION NO. 2026-89: A RESOLUTION AMENDING THE CITY COMMISSION MEETING SCHEDULE FOR THE MONTHS OF JULY, AUGUST AND SEPTEMBER 2026; PROVIDING EXCEPTIONS THERETO; AND SETTING FORTH AN EFFECTIVE DATE.

E. Bid Award - Andy Romano Beachfront Park Shade Structures Replacement Project

RESOLUTION NO. 2026-90: A RESOLUTION ACCEPTING THE BID OF AG PIFER CONSTRUCTION, INC. REGARDING THE ANDY ROMANO BEACHFRONT PARK SHADE STRUCTURES REPLACEMENT PROJECT, UNDER BID NO. 2026-22; REJECTING ALL OTHER BIDS; AUTHORIZING THE EXECUTION OF A CONTRACT AND PAYMENT THEREFOR; AND SETTING FORTH AN EFFECTIVE DATE.

G. Request to Utilize State Forfeiture Funds

RESOLUTION NO. 2026-92: A RESOLUTION AUTHORIZING THE EXPENDITURE OF $30,330.00 FROM THE LAW ENFORCEMENT TRUST (FORFEITURE) FUND FOR THE SOLE SOURCE PROCUREMENT OF A TRAFFIC MANAGEMENT SOFTWARE PROGRAM FROM URBAN SDK, INC.; AUTHORIZING EXECUTION OF A CONTRACT; AND SETTING FORTH AN EFFECTIVE DATE.

H. Additional Funding for Directional Drilling Services, Mid-Florida Directional Drilling, LLC.

RESOLUTION NO. 2026-93: A RESOLUTION AUTHORIZING AN ADDITIONAL EXPENDITURE FOR DIRECTIONAL DRILLING SERVICES PROVIDED BY MID-FLORIDA DIRECTIONAL DRILLING, LLC ON AN AS-NEEDED BASIS; AND SETTING FORTH AN EFFECTIVE DATE.

J. Naming the Multipurpose Fields 9-12 at the Sports Complex

RESOLUTION NO. 2026-95: A RESOLUTION NAMING THE AREA COMPRISING THE MULTIPURPOSE FIELDS 9, 10, 11 AND 12 AT THE ORMOND BEACH SPORTS COMPLEX THE “LOHMAN FAMILY FIELDS”; ACCEPTING A MONETARY DONATION TOWARD THE FIELD 11 AND 12 LIGHTING PROJECT; AND SETTING FORTH AN EFFECTIVE DATE.

K. Pre-Approval of the FAA Federal Contract Tower Grant

RESOLUTION NO. 2026-96: A RESOLUTION AUTHORIZING THE SUBMITTAL OF A GRANT APPLICATION TO THE FAA UNDER THE FEDERAL CONTRACT TOWER COMPETITIVE GRANT PROGRAM FOR FUNDING REGARDING THE AIR TRAFFIC CONTROL TOWER REHABILITATION PROJECT AT THE ORMOND BEACH MUNICIPAL AIRPORT; AUTHORIZING THE EXECUTION OF ALL DOCUMENTS NECESSARY AND INCIDENTAL THERETO FOR THE CITY TO ACCEPT THE GRANT AWARD; AND SETTING FORTH AN EFFECTIVE DATE.

L. **Disposition Item:** Intent To Bid - Lime Sludge Hauling And Disposal Services

M. **Disposition Item:** Intent To Bid - Water And Wastewater Chemicals

N. **Disposition Item:** City Manager's Monthly Report, July 2026

City Clerk Susan C. Dauderis read by legal title only:

C. Halifax Humane Society Agreement Funding Increase

RESOLUTION NO. 2026-88: A RESOLUTION AUTHORIZING ADDITIONAL FUNDING FOR ANIMAL SERVICES FROM THE HALIFAX HUMANE SOCIETY; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Briley moved, seconded by Commissioner Deaton, for approval of Resolution No. 2026-88, as read by title only.

Commissioner Deaton requested Mr. Finley speak on the item; whereby, Mr. Finley explained the item was previously approved with a work authorization, noting the additional cost was already budgeted. He discussed the total costs from prior years and services provided by the Halifax Humane Society. Commissioner Deaton clarified the approval was for spending up to $160,000; whereby, Mr. Finley stated that was correct.

Commissioner Tolland inquired about changes to the billing costs; whereby, Ms. Claire Whitley, Assistant City Manager, stated there was a new pricing structure in place for 2025 and noted 2026 was the first year the city was also utilizing the Edgewater Animal Shelter. Commissioner Tolland questioned if the city was collaborating with other entities due to Halifax Humane Society not wanting to take the animals; whereby, Ms. Whitley stated Volusia County was leading a project regarding that.

Ms. Joyce Shanahan, City Manager, indicated there were talks of Volusia County donating land for the proposed project. She noted the struggles the city had with Halifax Humane Society.

Commissioner Sargent questioned if the Volusia County project was started due to the Halifax Humane Society not accepting dangerous dogs; whereby, Ms. Shanahan stated that was part of it, noting they were unable to meet the demands of the municipalities within the county.

Call Vote:	Commissioner Deaton	Yes
	Commissioner Briley	Yes
	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
Carried.	Mayor Leslie	Yes

City Clerk Susan C. Dauderis read by legal title only:

F. Authorization to Accept a Settlement Related to the National Opioid Litigation Matter

RESOLUTION NO. 2026-91: A RESOLUTION AUTHORIZING THE EXECUTION OF A LOCAL GOVERNMENT PARTICIPATION AGREEMENT, INCLUDING ALL DOCUMENTS NECESSARY AND INCIDENTAL THERETO REGARDING THE SETTLEMENT WITH PUBLIX SUPER MARKETS, INC.; AUTHORIZING THE CITY ATTORNEY TO EXECUTE FUTURE PARTICIPATION FORMS AND LITIGATION DOCUMENTS, IN CONNECTION WITH THE NATIONAL OPIOID LITIGATION MATTER; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Sargent moved, seconded by Commissioner Tolland, for approval of Resolution No. 2026-91, as read by title only.

Commissioner Sargent requested clarification on what the item was approving; whereby, Mr. Randy Hayes, City Attorney, provided background on the item and explained the item was for authorization to provide authority for signing the forms associated with the settlement.

Mayor Leslie noted the item did not cost the city anything; whereby, Mr. Hayes stated that was correct, the city spent no money on the item and was receiving funds from it.

Commissioner Sargent and Mr. Hayes discussed the efficiency the item provided.

Call Vote:	Commissioner Briley	Yes
	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
	Commissioner Deaton	Yes
Carried.	Mayor Leslie	Yes

City Clerk Susan C. Dauderis read by legal title only:

I. Legislative Designation of Lowell Lohman Road

RESOLUTION NO. 2026-94: A RESOLUTION APPROVING AND AUTHORIZING DESIGNATION OF THAT PORTION OF NORTH HALIFAX DRIVE BETWEEN GRANADA BOULEVARD AND JOHN ANDERSON DRIVE AS “LOWELL LOHMAN ROAD”; AUTHORIZING FABRICATION OF SIGNS BY THE FLORIDA DEPARTMENT OF TRANSPORTATION; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Briley moved, seconded by Commissioner Sargent, for approval of Resolution No. 2026-94, as read by title only.

Commissioner Briley discussed Mr. Lowell Lohman and his family, giving thanks for their contributions to the community.

Commissioner Tolland, Commissioner Sargent, Commissioner Deaton, and Mayor Leslie expressed their gratitude for the Lohman family and their contributions.

Call Vote:	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
	Commissioner Deaton	Yes
	Commissioner Briley	Yes
Carried.	Mayor Leslie	Yes

Consent Agenda Comments
There were no further comments on the Consent Agenda.

8. PUBLIC HEARINGS

Mayor Leslie opened the Public Hearings.

City Clerk Susan C. Dauderis read by legal title only:

A. Eighteen-Month Moratorium on Data Centers

ORDINANCE NO. 2026-11: AN ORDINANCE OF THE CITY OF ORMOND BEACH, FLORIDA, IMPOSING A TEMPORARY MORATORIUM FOR EIGHTEEN MONTHS ON THE RECEIPT, CONSIDERATION OF APPLICATIONS OR ISSUANCE OF ANY BUILDING PERMITS, SITE PLAN APPROVALS, DEVELOPMENT ORDERS, DEVELOPMENT AGREEMENTS, SPECIAL EXCEPTION USES, CONDITIONAL USES, REZONINGS, AND COMPREHENSIVE PLAN AMENDMENTS, AND ANY OTHER OFFICIAL ACTION THE CITY OF ORMOND BEACH ACTING BY AND THROUGH ITS ELECTED AND APPOINTED OFFICIALS AND THEIR DESIGNEES RELATED TO DATA CENTERS, LARGE SCALE DATA CENTERS AND OTHER LARGE LOAD UTILITY USERS; PROVIDING LEGISLATIVE FINDINGS; PROVIDING THE DURATION; PROVIDING SEVERABILITY; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; AND PROVIDING FOR AN EFFECTIVE DATE.

Commissioner Deaton moved, seconded by Commissioner Sargent, for approval of Ordinance No. 2026-11, on first reading, as read by title only.

Mr. Randy Hayes, City Attorney, reviewed the item, noting it would provide for an 18-month moratorium on all data centers. He discussed the process to ban data centers and explained the moratorium was the first step.

Mayor Leslie inquired if Mr. Hayes would provide periodic updates to the Commission on the status of all data center items; whereby, Mr. Hayes stated the Commission would be involved in the process due to the Comprehensive Plan and Land Development Code needing to be updated.

Commissioner Deaton expressed urgency on the topic, noting 18 months was a long time.

Mr. Hayes reviewed the time frame, explaining staff would work quickly to get the ban in place. He further stated the review times from outside entities could slow the process down.

Commissioner Tolland expressed the desire to get the ban in place legally and as quickly as possible.

Commissioner Sargent indicated he did not want to wait for a state update to the legislation, noting the urgency to get the ban in place. He stated he supported a workshop on the topic.

Mayor Leslie inquired if the city moved forward with the ban, would it affect the moratorium; whereby, Mr. Hayes stated the moratorium would remain in effect until the ban was in place as long as it was within the 18-month time frame. Mr. Hayes clarified he did not believe it would take staff 18 months to complete the ban, but preferred to keep the moratorium window at 18 months due to any unforeseen circumstances.

Mayor Leslie confirmed no applications would be accepted with the moratorium in place; whereby, Mr. Hayes indicated that was correct.

Commissioner Briley inquired if the data center ban could be a City Charter question for the voters on the ballot; whereby, Mr. Hayes stated staff could look into it, noting there were limitations on what could be included in the city's charter. Commissioner Briley stated he did not think data centers would like coastal cities prone to bad weather.

Commissioner Sargent noted there were candidates in the governor's election that were pushing for data centers.

Ms. Donna Craig, 23 Rivershore Drive, unincorporated Volusia County, stated there were arguments for both sides of data centers and discussed the evolution of technology. She discussed the importance of protecting the city's resources and quality of life.

Ms. Bright thanked the Commission for the 18-month moratorium noting the need for a ban for long-term protection. She discussed the negative impacts data centers had on local infrastructure.

Ms. Suzanne Scheiber, 548 Sandy Oaks Boulevard, expressed concerns regarding the city's delayed response to the citizens' request for the data center ban. She discussed the need for a ban on large scale data centers, a Land Development Code amendment to accept the ban, and other municipalities that enacted a ban. She encouraged the Commission to make the ban an immediate priority.

Ms. Amber Bobak, 397 Collins Street, disclosed she was running for Zone 4 City Commission. She discussed the urgent need for a data center ban.

Mr. Richard Hertz, no address provided, urged the Commission to immediately ban the data centers and reviewed the negative impacts they had on the environment and economy.

Ms. Catherine Pante, exempt address, voiced concerns regarding the time it took for the moratorium to be presented to the Commission and the length of the moratorium, noting the need for immediate action. She reviewed other municipalities that enacted immediate data center bans. She provided suggestions on how to speed up the banning process, referencing legislation and other municipalities.

Mayor Leslie inquired what the Commission could do to further expedite the banning process; whereby, Mr. Hayes stated the plan in place was the quickest the city could legally do, noting the Commission had not met since the beginning of June.

Commissioner Tolland stated the Commission and residents were on the same page supporting the data center ban, noting the urgency and understanding of following the city's plan.

Commissioner Deaton inquired if an emergency ban could be enacted while the moratorium was in place; whereby, Mr. Hayes stated it was a land use issue, noting emergency ordinances typically do not include land use regulation. He further explained for an emergency ban to be allowed, there would need to be an imminent threat to the city. She questioned what the repercussions were if the Commission approved an

emergency ban; whereby, Mr. Hayes stated there was potential for a lawsuit and further litigation costs. She asked if the city's comprehensive plan could be addressed after a ban was in place; whereby, Mr. Hayes stated the Planning Department needed to review definitions of data centers as small businesses, the city, and hospitals could utilize small data centers that were needed to run business operations and that needed to be addressed in the Comprehensive Plan before a ban was enacted.

Mr. Hayes clarified the 18 month window was not how long staff would take to get the ban in place but rather a tool for the city to use to prevent the data centers from coming in while a ban was being worked on. He stated staff would work quickly as they understood the Commission's direction for a ban to be put in place as soon as possible.

Commissioner Deaton inquired how soon the process could start; whereby, Mr. Steven Spraker, Planning Director, stated he would provide a timeline of the ban at the August 4, 2026 City Commission meeting.

Mayor Leslie inquired if the moratorium could be reduced to six months; whereby, Mr. Spraker stated the 18 months was a window and would provide a timeline at the next meeting which would be as quick as possible. Mr. Spraker noted the comprehensive plan amendments would require several outside entities to review the amendments before they could go for final the approval and their review could slow the process down.

Mayor Leslie questioned if anyone wanted to make a motion to reduce the moratorium to six months; whereby, Commissioner Briley stated six months was not long enough due to the need for the comprehensive plan amendment and review process.

Mr. Hayes reviewed what would happen if the moratorium expired and a renewal was needed.

Ms. Shanahan assured Mayor Leslie staff would work expeditiously on the data center ban to ensure there were no delays.

Call Vote:	Commissioner Sargent	Yes
	Commissioner Deaton	Yes
	Commissioner Briley	Yes
	Commissioner Tolland	Yes
Carried.	Mayor Leslie	Yes

City Clerk Susan C. Dauderis read by legal title only:

B. Seward Johnson 2026 Sculpture Tour Timeframe Extension, Downtown Public Art

RESOLUTION NO. 2026-97: A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF ORMOND BEACH, FLORIDA, PROVIDING A TIME EXTENSION TO ORMOND BEACH ARTS DISTRICT, INC., FOR THE PUBLIC DISPLAY OF SEWARD JOHNSON SCULPTURES APPROVED WITH RESOLUTION 2025-166 WITHIN THE DOWNTOWN OVERLAY DISTRICT; PROVIDING FOR CONDITIONS; PROVIDING FOR THE EXECUTION OF A HOLD HARMLESS AND INDEMNITY AGREEMENT IN FAVOR OF THE CITY; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Sargent moved, seconded by Commissioner Tolland, for approval of Resolution No. 2026-97, as read by title only.

Mr. Spraker reviewed the request for a time extension for the Seward Johnson Sculptures, noting there were no additional costs associated with the request. He stated staff was recommending approval.

Commissioner Sargent, Commissioner Tolland, Commissioner Briley, and Mayor Leslie expressed appreciation to all those involved for the extension.

Call Vote:	Commissioner Deaton	Yes
	Commissioner Briley	Yes
	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
Carried.	Mayor Leslie	Yes

Mayor Leslie closed the Public Hearings.

9. STAFF ACTION ITEMS

A. Florida League of Cities Voting Delegate

Ms. Susan Dauderis, City Clerk, explained the item was for the Commission to determine a voting delegate for the Florida League of Cities Annual Conference business session.

Mayor Leslie inquired if any Commissioners planned to attend; whereby, Commissioner Tolland questioned if staff attended the conference.

Commissioner Sargent indicated it was not needed to send someone to the conference, if no one planned to attend.

Commissioner Tolland moved, seconded by Commissioner Deaton, to proceed with no voting delegate.

Motion passed by voice vote.

10. REPORTS, SUGGESTIONS, REQUESTS

Events, Updates, Requests, and Congratulations

Ms. Shanahan provided details on upcoming meetings, city events, and the launch of OB Connect.

Commissioner Tolland thanked staff, the Budget Advisory Board, and the Commission for their work on the budget. She highlighted the city as being featured as number two on the Travel and Leisure most livable retirement town list. She provided a handout of questions regarding the tree and landscape ordinance for the Commission to consider for discussion at the August 4, 2026, City Commission meeting.

Commissioner Sargent thanked staff for their work and support during the budget process. He reviewed some history and current ongoings of OMAM. He expressed appreciation of the first responders and encouraged others to check in on loved ones.

Commissioner Deaton highlighted the fields maintained by Parks & Recreation.

Commissioner Briley thanked the Parks & Recreation department for their work on the 4th of July celebration.

Mayor Leslie reviewed concerns submitted by Volusia County Council Member Troy Kent regarding the Cassen Park dock. He discussed events he attended and inquired if the Commission was supportive of a time capsule, which they were; whereby, Ms. Shanahan stated staff could bring suggestions as to what could be included.

Commissioner Briley noted there was a time capsule at City Hall from 35 years ago and was unsure when that one was planned to be opened.

Short Term Rentals

Commissioner Tolland expressed concerns regarding short-term rentals and inquired if the Commission would approve sending letters to the sites that host the properties informing them of the city's regulations.

Commissioner Briley stated it would not be beneficial to send letters to the big companies. He explained the Property Appraiser had a staff member or two who would monitor the sites and send letters to the owners educating them on the rules and regulations. He suggested reaching out to see if they still had that practice in place.

Ms. Shanahan stated staff could look into it.

Commissioner Sargent was supportive of getting the issue under control.

Commissioner Deaton suggested sending letters to local property management companies.

Mayor Leslie was supportive of staff checking in with the Property Appraiser.

E-Bikes

Mayor Leslie inquired if the Commission would like to direct Mr. Hayes to look into the e-bike ordinances; whereby, Mr. Hayes indicated the City of Daytona Beach recently adopted an ordinance and he could look into theirs.

Commissioner Tolland stated she reached out to the Volusia County Sheriff's Office and was waiting to see how they planned to handle it.

Commissioner Deaton requested staff look into the City of Deltona's recently adopted ordinance, noting the number of complaints she received.

Mr. Hayes inquired if the Commission was concerned about age and speed restrictions; whereby, Commissioner Deaton and Mayor Leslie agreed speed was the main issue.

Commissioner Sargent expressed concerns regarding the overreach of some municipalities.

Riverbend Golf Course

Mayor Leslie encouraged the Commission to tour the club house at the Riverbend Golf Course.

Ms. Shanahan stated the direction from the Commission was to send a letter to the FAA, and explained the letter was sent and they were pending a response.

Commissioner Deaton inquired if staff was recently at the club house to speak on its condition; whereby, Mr. Brain Rademacher, Economic Development Director, explained staff was there recently and it was no different than the last visit, noting there was some disrepair.

Commissioner Sargent reviewed some issues from a few years prior.

11. ADJOURNMENT

Mayor Leslie adjourned the meeting at 9:21 PM.

APPROVED: August 25, 2026

BY: _____
Jason Leslie, Mayor

ATTEST:

_____
Susan Carroll Dauderis,
City Clerk

City of Ormond Beach

City Commission Meeting

City Hall Commission Chambers

22 South Beach St., Ormond Beach FL 32174

August 4, 2026, 7:00 PM

Jason Leslie, Mayor
Lori Tolland, Zone 1
Travis Sargent, Zone 2
Kristin Deaton, Zone 3
Harold Briley, Zone 4

Minutes

1. CALL TO ORDER

Mayor Leslie called the meeting to order at 07:02 PM.

Present: Mayor Jason Leslie, Commissioners Lori Tolland, Travis Sargent, Kristin Deaton, and Harold Briley, City Manager Joyce Shanahan, Deputy City Attorney Ann-Margret Emery, Assistant City Managers Claire Whitley and Shawn Finley, and City Clerk Susan Dauderis.

2. INVOCATION

Reverend Larry Temple, Life Community Church, provided the invocation.

3. PLEDGE OF ALLEGIANCE

Mayor Leslie led the Pledge of Allegiance.

4. PRESENTATIONS AND PROCLAMATIONS

A. Volusia County Stormwater Mitigation Update

Mayor Nancy Miller, City of Daytona Beach Shores, reviewed the role of the Volusia County Elected Officials Stormwater Mitigation and Flooding subcommittee. She reviewed the city's involvement with the subcommittee, stormwater projects, and the funds received by Transform386. She played a video highlighting the subcommittee.

5. AUDIENCE REMARKS - REGARDING ITEMS NOT ON THE AGENDA & ON THE CONSENT AGENDA

Ms. Marsha Blew, 12 Honey Bear Path, reviewed the reason the Ormond Beach Municipal Airport runway extension project kept getting brought up, noting prior meetings of the Aviation Advisory Board. She questioned if the Riverbend Golf Course would remain in the Airport Masterplan. She clarified the Commission stated there was no runway extension, noting the Aviation Advisory Board says differently. She voiced concerns regarding an extension. She questioned the outcome from the city's meeting with the Federal Aviation Administration (FAA).

Mayor Leslie stated staff requested Item 8C be pulled from the agenda and called cards for that item during the Audience Remarks item.

Ms. Jennifer Bright, exempt address, voiced concerns regarding the landscaping ordinance and the challenges against it, fees, and updates to the Land Development Code. She stated she supported the review of the ordinance to allow for a more fair workable process for residents.

Mr. Derrick Weader, no address provided, provided copies of a cease and desist letter sent to him from a law firm on behalf of Mayor Leslie and one from him to Mayor Leslie. He discussed his First Amendment rights as a citizen.

Ms. Michelle Zirkelbach, 328 Riverbluff Drive, reviewed hardships she encountered while working through the city's public record process. She stated she would be submitting future requests for more information. She apologized for emailing incorrect information to the Commission and stated her concerns were with Nova Road and the traffic regarding the proposed Tractor Supply store.

Mayor Leslie inquired if Ms. Zirkelbach's records request was sorted out; whereby, Ms. Shanahan confirmed it was, noting staff would reach out to assist her through the record request process. He stated the next cards were related to Item 8C since the item was pulled off the agenda.

Ms. Missy Herrero, 111 North St. Andrews Drive, voiced concerns regarding the landscaping ordinance length and requested any revisions be laid out in layman terms.

Ms. Zirkelbach, reviewed concerns of tree removal, flooding, and other environmental concerns. She voiced support for adding more trees and holding developers to a higher standard. She inquired who complained about the current ordinance and why they complained. She highlighted the importance of the Tree City designation for the city.

Ms. Amber Bobak, no address provided, reviewed the regulations and requested more time to see if the regulations work and not to change them too soon. She highlighted the need for the ordinance and its impact on stormwater.

6. CONSENT AGENDA

Mayor Leslie advised the actions proposed for the items on the Consent Agenda were so stated on the agenda. He asked if any member of the Commission had questions or wished to discuss any items separately.

Commissioner Briley moved, seconded by Commissioner Sargent, for approval of the Consent Agenda.

Call Vote:	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
	Commissioner Deaton	Yes
	Commissioner Briley	Yes
Carried.	Mayor Leslie	Yes

A. Sovereignty Submerged Lands Easement, Halifax River Utility Crossing

RESOLUTION NO. 2026-98: A RESOLUTION AUTHORIZING THE EXECUTION OF A SOVEREIGNTY SUBMERGED LANDS EASEMENT BETWEEN THE CITY AND THE BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA FOR THE HALIFAX RIVER UTILITY CROSSING PROJECT; AND SETTING FORTH AN EFFECTIVE DATE.

B. Request to Purchase - International MV with 2,500 Gallon Tank

RESOLUTION NO. 2026-99: A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF A PURCHASE AUTHORIZATION FOR THE PURCHASE OF ONE (1) 2026 INTERNATIONAL MV607 TRUCK WITH A 2,500 GALLON TANK, UNDER FLORIDA SHERIFFS ASSOCIATION BID NO. FSA 25-VEH23.0; DECLARING VEHICLE #354 TO BE SURPLUS PROPERTY AND AUTHORIZING THE DISPOSITION THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

C. **Disposition Item:** Stanley Steamer Auto Renewal

Consent Agenda Comments
There were no further comments on the Consent Agenda.

7. PUBLIC HEARINGS

Mayor Leslie opened the Public Hearings.

City Clerk Susan C. Dauderis read by legal title only:

A. Zoning Map Amendment, 651 South Ridgewood Avenue

ORDINANCE NO. 2026-12: AN ORDINANCE AMENDING PARAGRAPH C, OFFICIAL ZONING MAP, OF SECTION 2-01, ESTABLISHED, OF ARTICLE I, ESTABLISHMENT OF ZONING DISTRICTS AND OFFICIAL ZONING MAP, OF CHAPTER 2, DISTRICT AND GENERAL REGULATIONS, OF THE CITY OF ORMOND BEACH LAND DEVELOPMENT CODE, BY AMENDING THE OFFICIAL ZONING MAP TO REZONE CERTAIN REAL PROPERTY TOTALING 0.39± ACRES LOCATED AT 651 SOUTH RIDGEWOOD AVENUE, VOLUSIA COUNTY PROPERTY APPRAISER PARCEL NUMBER 4242-20-32-0100 FROM VOLUSIA COUNTY R-5, URBAN SINGLE-FAMILY RESIDENTIAL TO ORMOND BEACH R-3, SINGLE-FAMILY MEDIUM DENSITY, AUTHORIZING REVISION OF OFFICIAL ZONING MAP; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Sargent moved, seconded by Commissioner Briley, for approval of Ordinance No. 2026-12, on first reading, as read by title only.

Mr. Steven Spraker, Planning Director, reviewed the item, noting it was a zoning map amendment for 651 Ridgewood Avenue. He explained there were no changes to the house.

Commissioner Briley clarified the item was administrative housekeeping; whereby, Mr. Spraker confirmed.

Call Vote:	Commissioner Sargent	Yes
	Commissioner Deaton	Yes

	Commissioner Briley	Yes
	Commissioner Tolland	Yes
Carried.	Mayor Leslie	Yes

City Clerk Susan C. Dauderis read by legal title only:

B. Comprehensive Plan Amendments, Capital Improvement Element Schedules

ORDINANCE NO. 2026-13: AN ORDINANCE ADOPTING CERTAIN UPDATED SCHEDULES TO THE CAPITAL IMPROVEMENTS ELEMENT OF THE CITY OF ORMOND BEACH COMPREHENSIVE PLAN; PROVIDING WHEN SUCH UPDATES SHALL TAKE EFFECT; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Sargent moved, seconded by Commissioner Tolland, for approval of Ordinance No. 2026-13, on first reading, as read by title only.

Mr. Spraker explained the amendment was an annual item, noting staff recommended approval.

Call Vote:	Commissioner Deaton	Yes
	Commissioner Briley	Yes
	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
Carried.	Mayor Leslie	Yes

City Clerk Susan C. Dauderis read by legal title only:

C. Street Renaming, Yoon Way

ORDINANCE NO. 2026-14: AN ORDINANCE CHANGING THE STREET NAME OF "YOON WAY" TO "CORNER SQUARE WAY" SAID STREET BEING LOCATED ALONG WEST GRANADA BOULEVARD, APPROXIMATELY 1,450 LINEAR FEET WEST OF THE INTERSECTION OF WEST GRANADA BOULEVARD AND CLYDE MORRIS BOULEVARD; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; PROVIDING FOR TRANSMITTAL AND RECORDING IN THE PUBLIC RECORDS OF VOLUSIA COUNTY; AND SETTING FORTH AN EFFECTIVE DATE.

Commissioner Sargent moved, seconded by Commissioner Briley, for approval of Ordinance No. 2026-14, on first reading, as read by title only.

Mr. Spraker reviewed the history of the street name change request. He stated staff recommended approval and reviewed the process staff took to confirm the proposed street name was available.

Commissioner Sargent inquired if the nearby development would be able to change its name if desired; whereby, Mr. Spraker confirmed that was up to the developer, but the name could be changed.

Commissioner Deaton thanked the Commission and staff for the work on the item, noting

support from the Yoon family.

Call Vote:	Commissioner Briley	Yes
	Commissioner Tolland	Yes
	Commissioner Sargent	Yes
	Commissioner Deaton	Yes
Carried.	Mayor Leslie	Yes

Mayor Leslie closed the Public Hearings.

8. DISCUSSION AND DIRECTION ITEMS

A. Osceola Elementary School First Right of Refusal

Ms. Shanahan requested direction from the Commission regarding a response for staff to provide to Volusia County Schools (VCS) and the sale of the Osceola Elementary School.

Mr. Finley quickly reviewed the property sale and conversations had with VCS representatives. He noted staff had no recommendation but needed direction from the Commission regarding a response to VCS.

Commissioner Sargent inquired if there were any potential stormwater uses for the property; whereby, Mr. Finley noted there could be. Commissioner Sargent expressed support of purchasing the property, noting concerns regarding funding and inquired if VCS would be amenable to a five-year payment plan. He stated he believed there could be room to negotiate as there was no longer an Ormond Beach school on the beachside.

Commissioner Briley discussed the stormwater infrastructure at the property and supported the purchase of the property. He highlighted the desire for recreational facilities on the beachside. He suggested potentially selling a portion of the property to Hillside Cemetery as they were out of room for any additional plots. He noted the residential zoning of the property and expressed concerns regarding development.

Mr. Finley confirmed the zoning was residential, noting the future land use was public-institutional.

Commissioner Deaton inquired about VCS keeping the property on the market looking for a higher price; whereby, Mr. Finley stated that was what staff was informed. Commissioner Deaton stated she supported a price point of $2,500,000 and reviewed potential funding options. She recommended selling Nova Field One to help offset the cost of the purchase price. She questioned if the demolition would happen with the property on the market; whereby, Mr. Finley stated VCS indicated they planned to demolish many of the buildings before selling, noting the city could request credit for any buildings not demolished. She suggested potentially selling other city properties to keep the city's reserve fund in a good spot.

Commissioner Tolland agreed to the importance of recreational facilities on the beachside and the potential of the property. She expressed support of selling Nova Field One. She questioned the potential funds to be used and expressed concerns utilizing the reserve funds. She questioned VCS intentions; whereby, Mr. Finley stated he was under the impression they wanted the funds and were willing to work with the city.

Commissioner Briley stated frustration with VCS keeping the property on the market to get higher offers.

Commissioner Tolland inquired if the city made an offer of $2,500,000, would VCS accept it; whereby, Mr. Finley stated he would ask.

Commissioner Briley agreed with Commissioner Tolland's offer price.

Commissioner Sargent stated he would like to see the starting offer at $2,350,000 as the city no longer had a beachside school.

Commissioner Deaton clarified if all were agreeable to purchasing the property, a letter of intent should be sent.

Mayor Leslie expressed concerns the proposed tax reform legislation, park upkeep, and surplus city properties that could be sold, such as 56 North Beach Street. He suggested during the due diligence period, staff could appraise city property that could be sold.

Commissioner Deaton voiced concerns about future residential development on the property if the city did not purchase it.

Commissioner Briley expressed concerns about flooding if the property were developed for residential.

Mayor Leslie inquired if there was a lift station on the property; whereby, Mr. Finley confirmed there was. Mayor Leslie questioned the plan for the property.

Commissioner Deaton and Commissioner Tolland reviewed the tight timeline on purchasing the property.

Ms. Shanahan discussed reallocating funds from planned projects.

Mayor Leslie reviewed the Community Redevelopment Agency (CRA) funds and intended use of 56 North Beach Street.

Ms. Shanahan stated some projects were put on hold depending on the priorities of the current Commission.

Commissioner Briley noted the Ormond Beach Historical Society had interest in some of the 56 North Beach Street property.

Commissioner Sargent voiced support of selling the 56 North Beach Street property and reiterated the value of the Osceola property.

Mayor Leslie inquired if staff could prepare a plan during the six-month due diligence period; whereby, Mr. Finley stated that could be done during that time, noting the period would last past the November election. Mr. Finley explained the offer could be reevaluated after that time.

Mayor Leslie stated he would support the purchase with a six-month due diligence period, if Nova Field One and 56 North Beach Street were listed for sale.

Commissioner Deaton requested staff look into grant funding options and other alternative funding mechanisms.

Commissioner Briley expressed support of selling Nova Field One but did not support the selling of 56 North Beach Street at the time.

Mayor Leslie questioned why Commissioner Briley did not support selling the 56 North Beach Street property; whereby, Commissioner Briley discussed the property's value. Mayor Leslie inquired if the 56 North Beach Street property was within the CRA area and if CRA funds could be utilized to pay back the general funds that were used to purchase it; whereby, Ms. Shanahan indicated it could not.

Commissioner Briley, Commissioner Tolland, and Commissioner Deaton discussed utilizing a portion of the city's general reserve fund.

Mayor Leslie indicated 56 North Beach Street would be discussed at a later date.

The Commission discussed potential offer price points and negotiations.

Mr. Finley reviewed the appraisals the city completed for the Osceola property.

Mr. GG Galloway, 1305 Oak Forest Drive, stated there were no other large properties on the beachside, noting the Commission should not negotiate amongst themselves.

The Commissioner agreed to an up to $2,500,000 offer for VCS on the Osceola property.

Mayor Leslie confirmed there was a consensus on selling Nova Field One; whereby, Ms. Shanahan stated that was a separate topic and would need to be discussed.

B. Data Center Timeline

Mr. Spraker reviewed the planned timeline for the Commission requested Data Center ban, noting if there was any room to push the timeline forward for an earlier completion date, staff would move it up.

Mayor Leslie inquired if the Commission would support a page on the city's website to track the progress of the ban.

Ms. Robin Mangali, no address provided, discussed problems in her neighborhood and community, highlighting issues with data centers. She requested the Commission consider a complete ban on data centers.

Ms. Cat Pante, exempt address, stated the residents' safety should be the priority of the Commission. She provided details from other municipalities and their bans on data centers. She urged the Commission to take proactive steps in protecting the residents by banning data centers.

Ms. Suzanne Scheiber, 548 Sandy Oaks Boulevard, discussed the resident contributions

to the Belvedere Fuel Farm issue and the fight for the citizens' quality of life. She reviewed the desire for a data center ban. She inquired how the city determined which lawsuits to fight.

Commissioner Deaton expressed support of the data center ban and inquired if an emergency ban could be enacted; whereby, Ms. Ann-Margret Emery, Deputy City Attorney, explained it could, noting the importance of the amendment to the city's comprehensive plan.

Commissioner Sargent voiced support of the webpage and the timeline. He suggested sending a letter to all municipalities within Volusia County and to Volusia County to inform them of the steps the city was taking regarding the data center ban.

Commissioner Tolland agreed to sending a letter and confirmed there was no way a data center plan would be entertained by the city with the moratorium in place.

Mayor Leslie expressed support of the timeline and inquired if there were properties that would be potentially available for data centers; whereby, Mr. Spraker stated not to his knowledge, noting the I-2 designation from Volusia County was of concern.

Mayor Leslie stated there was a six-month moratorium being put in place by Volusia County. Mayor Leslie questioned the definition of a data center; whereby, Mr. Spraker noted that would be determined by the Commission at the August 25, 2026, City Commission meeting during the proposed discussion item.

Commissioner Deaton suggested including a statement in the letter to the municipalities encouraging them to also ban data centers.

Commissioner Briley indicated it would be beneficial to speak with Volusia County to extend their moratorium time frame and expressed support of the proposed timeline.

Commissioner Sargent noted concerns of surrounding areas that would work for data center sites.

Commissioner Tolland stated many data centers would not be interested in coastal cities due to many reasons, including bad weather.

C. Landscape Regulations Review

Mayor Leslie restated staff was pulling the item from the agenda. He inquired when the item would be brought back to the Commission; whereby, Mr. Finley stated he did not know a date at the time and would let the Commission know at a future meeting.

9. REPORTS, SUGGESTIONS, REQUESTS

Events, Updates, Requests, and Congratulations

Ms. Shanahan stated staff would work on the Landscape Regulations Review and Osceola Elementary School items and bring them back at a future meeting.

Commissioner Tolland requested the landscape ordinance show the changes previously made; whereby, Ms. Shanahan stated a redlined copy would be provided.

Commissioner Sargent requested documentation on the landscape item be included in the packet when it returns. He inquired about an update on Andy Romano Beachfront Park and the Fortunato Park pier; whereby, Mr. Finley provided a construction update on Andy Romano Beachfront Park and the grant and design process update for Fortunato Park and Riviera Park piers. Commissioner Sargent asked when the next scheduled Aviation Advisory Board meeting was; whereby, Mr. Rademacher confirmed it was Monday, August 10, 2026. He discussed upcoming events and encouraged all residents to vote in the upcoming election.

Commissioner Deaton proposed Nova Field One be listed for sale and utilize the funds towards the Osceola Elementary School purchase; whereby, the entire Commission agreed.

Commissioner Briley discussed upcoming events.

Commissioner Tolland thanked Mr. Finley and all staff for their work on the stormwater projects and highlighted different projects and funds secured by staff. She discussed upcoming events.

Mayor Leslie reviewed events he attended.

Riverbend Golf Course

Commissioner Sargent stated he reached out to a contact provided by a resident at the July 28, 2026, City Commission meeting. He asked questions regarding golf course operations and provided information he obtained. He discussed the suggestion of a feasibility study and associated costs if the city were to proceed.

Mayor Leslie inquired why it was recommended the city pay for a feasibility study, noting he believed it should be a part of the due diligence of the buyer responding to the city issued bid; whereby, Commissioner Sargent stated he was just passing along the information.

Mayor Leslie discussed the prior direction from the Commission to staff regarding the Riverbend property and questioned why Commissioner Sargent reached out to the contact; whereby, Commissioner Sargent noted a resident provided many handouts at the last meeting and requested the Commissioners reach out. Mayor Leslie inquired if Commission Sargent was still in favor of the Request for Proposals being issued; whereby, Commissioner Sargent confirmed he was still in favor, he was just doing what was requested by the resident.

Budget Workshop

Mayor Leslie stated the next meeting was three weeks away and inquired if the Commission wanted to meet sooner to review the budget.

Commissioner Tolland inquired when he wanted to meet; whereby, Mayor Leslie suggested a special meeting to discuss during the next couple of weeks.

Ms. Shanahan stated there was not a budget workshop scheduled; whereby, Mayor Leslie discussed the potential need for another budget workshop.

Commissioner Sargent stated he believed the Commission provided staff direction on the budget and questioned the goal of another meeting; whereby, Mayor Leslie stated there were significant budget cuts proposed at the last workshop and inquired if those cuts needed further direction.

Commissioner Deaton stated she proposed $1,000,000 in cuts and no conclusion was made on those; whereby, Commissioner Sargent asked if a special meeting was needed or if it could be discussed during the next City Commission meeting.

Commissioner Tolland noted the Primary Election was being held during the next couple of weeks; whereby, Mayor Leslie stated his desire for the meeting.

Commissioner Sargent indicated he was supportive to wait until the next scheduled City Commission meeting and did not want to burden staff with an additional meeting.

Commissioner Deaton questioned the time constraints on the budget; whereby, Ms. Shanahan stated direction would be needed at the next meeting before the budget comes back for approval. Commissioner Deaton suggested changing the Healthcare workshop scheduled for August 25, 2026, to a budget workshop; whereby, Mayor Leslie expressed concerns with two discussion items at one workshop.

Commissioner Tolland stated if the Commission wanted to meet, she would, noting she did not think it was necessary; whereby, Commissioner Briley stated if the millage rate was not changing, the budget could be discussed at a later date.

Commissioner Tolland clarified she believed the items proposed to be cut were based on if the property tax reform legislation passed at the General Election.

Mayor Leslie stated if there was no consensus he would not call a special meeting.

Commissioner Deaton questioned if the Commission would approve a request to schedule a future workshop to discuss future budget cuts.

Ms. Shanahan questioned when the Commission would like to schedule the meeting; whereby, Mayor Leslie stated it could be discussed at the August 25, 2026, meeting.

10. ADJOURNMENT

Mayor Leslie adjourned the meeting at 9:13 PM.

APPROVED: August 25, 2026

BY: _____
Jason Leslie, Mayor

ATTEST:

_____
Susan Carroll Dauderis,
City Clerk

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	6.A.
Section	CONSENT AGENDA	**Category**	Consent - Resolution
Subject	Woodridge Drive Drainage Improvements		
Recommended Action	Staff recommends approval of the work authorization to JD Weber Construction in the amount of $311,457.10 for the Woodridge Drive Drainage Improvements project.		
Strategic Goal	Water Quality & The Environment - Protect and enhance our environment and invest in infrastructure projects and assets that build resilience benefits to reduce flooding risk and increase sustainability.		
Department Staff Contact	Public Works - Engineering Shawn Finley, Assistant City Manager		

Summary

The purpose of this item is to address the documented history of drainage issues at the intersection of Woodridge Drive and North Beach Street.

In 2015, the Engineering Department retained Zev Cohen and Associates (ZCA) to assess the area and propose improvements for the intersection with Woodridge Drive. ZCA recommended the installation of a secondary outfall pipe opposite Woodridge Drive, directing flow to the Halifax River to alleviate conditions as outlined in their analysis of the current situation. At the time, City staff was unable to secure an easement from property owners necessary for the installation of the proposed 36-inch outfall pipe to the Halifax River.

The flooding issues have persisted, and this area is subjected to flooding, most often during short, high-intensity rainfalls. The addition of the recommended outfall will provide relief, allowing this area better conveyance of runoff already flowing to the river.

An opportunity has been presented allowing for the construction of this outfall. This pipe is proposed to be installed on a property that will provide an easement to the City for installation and maintenance upon completion of construction. A proposal was provided by JD Weber Construction in the amount of $311,457.10.

Financial Impact

This project will be funded through Fund 107 - Stormwater. There are sufficient funds available from other projects this fiscal year that were completed under budget to cover the $311,457.10 cost.

Citizen Impact

This improvement aims to enhance safety and quality of life for local residents by effectively managing stormwater runoff.

Attachments

1. 26-100 Woodridge Dr drain imp-JD Weber (P26-0104G)
2. Work Authorization - JD Weber
3. Woodridge Dr Flood Analysis (12-23-15)

RESOLUTION NO. 2026-100

A RESOLUTION ACCEPTING A PROPOSAL FROM JD WEBER CONSTRUCTION, INC. FOR UNDERGROUND UTILITY CONSTRUCTION MANAGEMENT SERVICES REGARDING THE WOODRIDGE DRIVE DRAINAGE IMPROVEMENTS PROJECT; AUTHORIZING THE EXECUTION OF A WORK AUTHORIZATION AND PAYMENT THEREFOR; AND SETTING FORTH AN EFFECTIVE DATE.

WHEREAS, pursuant to the Continuing Contract for Underground Utility Construction Management Services between the City and JD Weber Construction, Inc., the appropriate City staff members have negotiated with JD Weber Construction, Inc. to provide underground utility construction management services for the Woodridge Drive drainage improvements project ("the Project"), as described on the attached Work Authorization and Scope of Work, at a cost not to exceed $311,457.10, and

WHEREAS, the City Manager has certified that funds for the Project in the amount of $311,457.10 have been appropriated to the credit of the Stormwater Fund (107) and that these funds will not be appropriated for any other purpose, and

WHEREAS, the City Commission concurs with the foregoing recommendations, now therefore,

BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF ORMOND BEACH, FLORIDA, THAT:

SECTION ONE. The proposal submitted by JD Weber Construction, Inc. to perform the Project at a total cost not to exceed $311,457.10 is hereby accepted.

SECTION TWO. The Mayor and the City Manager are hereby authorized and directed to execute a Work Authorization with JD Weber Construction, Inc. for the performance of the Project at the said price, and to pay the cost thereof from the Stormwater Fund.

SECTION THREE. This Resolution shall take effect immediately upon its adoption.

APPROVED AND AUTHENTICATED this 25th day of August, 2026.

_____
JASON LESLIE
Mayor

ATTEST:

_____
SUSAN CARROLL DAUDERIS
City Clerk

WORK AUTHORIZATION

In accordance with and incorporating the terms of the Contract for Underground Utility Construction Management Services on a Continuing Basis dated September 17, 2025, between the City of Ormond Beach, Florida, and J.D. Weber Construction, Co., the following Scope of Work and Schedule of Payments are agreed to by the parties to the Agreement:

Project Title: Woodridge Drive Drainage Improvements

Project Description: All labor, equipment, and materials necessary to install a 36-inch outfall pipe at the intersection of Woodridge Drive and North Beach Street, as detailed on the attached proposal dated July 24, 2026.

Estimated Project Construction Cost: $311,000

Schedule of Payments and Fee Basis

Required Work Task	Fee Basis	Fee
Woodridge Drive Drainage Improvements	Guaranteed Maximum Price	$311,457.10
Total Fee Authorized:	**Not to Exceed**	**$311,457.10**

Funding Source: Stormwater Fund (107)

Estimated Time for Completion: 60 Days from Authorization to Proceed

AUTHORIZED:
CITY OF ORMOND BEACH

By: _____
Jason Leslie
Mayor

Date: _____

By: _____
Joyce A. Shanahan
City Manager

Date: _____

ACCEPTED:
J.D. WEBER CONSTRUCTION, CO.

By: _____
Joseph D. Weber
President

Date: _____

I. COMPLIANCE WITH FLORIDA PUBLIC RECORDS LAW

Contractor expressly agrees that it shall comply with the public records law provided in Florida Statutes, Chapter 119, and specifically to:

(a) Keep and maintain public records required by the City to perform the contracted service.
(b) Upon request from the City Clerk, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
(c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the City.
(d) Upon completion of the contract transfer, at no cost to the City, all public records in possession of the contractor or keep and maintain public records required by the City to perform the service. If the contractor transfers all public records to the City upon completion of the contract, the contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the contractor keeps and maintains public records upon the completion of the contract, the contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City Clerk, in a format that is compatible with the information technology systems of the City.
(e) Failure of the Contractor to comply with Public Records Law as provided by Florida Statutes, Chapter 119, shall subject the Contractor to penalties under Chapter 119.10 and subject this Agreement to termination for cause by the City.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

CITY CLERK
22 SOUTH BEACH STREET
ORMOND BEACH, FLORIDA 32174 (386) 610-0400
CITYCLERK@ORMONDBEACH.ORG

Ref: Fla. Stat. §119.0701(2016)

II. VERIFICATION OF EMPLOYMENT STATUS USING E-VERIFY SYSTEM

1. Section 448.09, *Florida Statutes*, makes it unlawful for any person to knowingly employ, hire, recruit, or refer, either for herself or himself, or on behalf of another, for private or public employment within the state, an alien who is not duly authorized to work in the United States. Contractor warrants that it is registered with the U.S. Department of Homeland Security's E-Verify system, and is compliant with the requirements of Sections 448.09 and 448.095, *Florida Statutes*.
2. Contractor agrees that if the contractor enters into an agreement with a subcontractor, the subcontractor must provide the contractor with an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien, and contractor warrants it shall maintain any such affidavits for the duration of the contract. If the City has a good faith belief that a subcontractor knowingly violated Section 448.09 (1), the City shall promptly notify the contractor and order the contractor to immediately terminate the contract with the subcontractor.
3. In the event the City has a good faith belief that the contractor has knowingly violated Section 448.09 (1), *Florida Statutes*, the City shall terminate the contract, and as provided by statute, the contractor may not be awarded a public contract for at least one (1) year after the date of termination. The contractor may also be held liable for any additional costs incurred by the City as a result of the termination of the contract.

JD WEBER CONSTRUCTION

TOTAL SITE DEVELOPMENT



Proposal
777 N. Beach St. Outfall
Ormond Beach, FL

TO: City of Ormond Beach — DATE: 7/24/2026

ATTN: Shawn Finley — PAGE: 1 OF 1

	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
I.	MISC BID ITEMS				
	A. MOBILIZATION	1	LS	$ 6,000.00	$ 6,000.00
	B. SURVEY LAYOUT AND AS-BUILTS	1	LS	$ 2,900.00	$ 2,900.00
	C. MAINTENANCE OF TRAFFIC	1	LS	$ 800.00	$ 800.00
	D. TESTING AND FINALIZATION	1	LS	$ 18,600.00	$ 18,600.00
	E. CLEAR & GRUBB EASEMENT	4,000	SF	$ 2.80	$ 11,200.00
	F. SILT FENCE W/ WIRE	450	LF	$ 6.00	$ 2,700.00
	MISC BID ITEMS SUBTOTAL				**$ 42,200.00**
II.	STORM DRAINAGE SYSTEM				
	A. PIPE				
	1. 36" HP HDPE	496	LF	$ 163.20	$ 80,947.20
	2. 12" PERF. HDPE IN ROCK TRENCH	138	LF	$ 93.00	$ 12,834.00
	3. 12" HDPE	124	LF	$ 51.00	$ 6,324.00
	4. VIDEO INSPECTION	758	LF	$ 9.00	$ 6,822.00
	5. 36" CHECK VALVE	1	EA	$ 45,960.00	$ 45,960.00
	6. 12" CHECK VALVE	1	EA	$ 6,870.00	$ 6,870.00
	B. STRUCTURES				
	1. TYPE E INLETS	3	EA	$ 5,270.00	$ 15,810.00
	2. 36" HEADWALL	1	EA	$ 19,840.00	$ 19,840.00
	3. DEWATERING	1	LS	$ 9,800.00	$ 9,800.00
	4. YARD DRAIN	2	EA	$ 2,900.00	$ 5,800.00
	STORM DRAINAGE SYSTEM SUBTOTAL				**$ 211,007.20**
XI.	RESTORATION				
	A. SOD AT R.O.W.	178	SY	$ 4.90	$ 872.20
	B. REMOVE & REPLACE RETAINING WALL	237	LF	$ 242.10	$ 57,377.70
	RESTORATION BID ITEMS SUBTOTAL				**$ 58,249.90**
	GRAND TOTAL				**$ 311,457.10**

*******NOTES*******

1. All development permits, impact fees and inspection fees are not included in this proposal.

Bid based on plans and specifications by:
Newkirk Engineering

Date: 7/24/2026 Date: _____

Signed: Joe Weber Jr. Accpeted By: _____

JD Weber Construction

P.O Box 730386 - Ormond Beach, Florida 32173-0386 - Office: 386-671-2727 ; Fax: 386-671-2471

ZEV COHEN
& ASSOCIATES, INC.
Main Office: Ormond Beach
St. Augustine • Amelia Island • Edgewater

300 Interchange Blvd
Ormond Beach, FL 32174
386-677-2482 • Fax: 386-677-2505
Website: www.ZevCohen.com

VIA EMAIL

December 23, 2015

Mr. John Noble, P.E.
City Engineer
City of Ormond Beach
P.O. Box 277
Ormond Beach, FL 32175-0277

RE: Woodridge Dr. Flooding Analysis
ZC 15108

Project Description:

Zev Cohen & Associates, Inc. (ZCA) has been contracted by the City of Ormond Beach to investigate and analyze the existing flooding conditions on Woodridge Dr. near the intersection of North Beach Street. We understand that several residential properties have been experiencing flooding during high tide conditions and/or heavy storm events. Subject properties have catch basins at the end of their driveways and the stormwater spills out of these catch basins and backs up to these properties.

ZCA was provided with an aerial topo map along with a map of existing stormwater network at the vicinity of the subject area by the City of Ormond Beach. Please note that the elevations shown in the lidar map are based on the NAVD 1988 datum and the elevations included in the City's stormwater network are based on the NGVD 1929 datum. However, elevation conversions are not necessary as the lidar map was solely used to determine the basin limits only. The purpose of this project is to identify the likely causes, determine the magnitude of flooding and provide recommendations toward improving the flood conditions.

Stormwater Modeling & Findings

ZCA created an existing conditions drainage basin map by utilizing the aerial topo map. Nodes were created by utilizing the stormwater network map. Interconnected Pond Routing (ICPR) software was used to model the existing conditions during mean annual-24hr, 5yr-24hr and 25yr-24hr storm events by utilizing the low tide, mid tide and high tide conditions at the outfall location (Halifax River). The tidal conditions used in the ICPR models were provided by the City of Ormond Beach. Table No. 1 is a summary of the high water elevations at the node (inlet) across from the residents experiencing flooding on Woodridge Dr.;

TABLE No. 1 – EXISTING CONDITIONS:

	Top El. (ft)	Mean Annual (ft)	5-Yr/24-Hr (ft)	25-Yr/24-Hr (ft)
Node 89 – Low Tide Condition	4.61	5.70	5.96	6.48
Node 89 – Mid Tide Condition	4.61	5.52	5.82	6.40
Node 89 – High Tide Condition	4.61	6.01	6.24	6.73

ZCA visited the site and met with the resident living at 762 N. Beach St. on September 10, 2015. Based on our site observations, drainage on Woodridge Dr. sheet flows east towards Beach St. and there is a low lying area at the end of Woodridge Dr. which prevents the stormwater run-off from sheet flowing to the Beach St. storm system. Another factor that contributes to the flooding is that there is only one 36" outfall serving +/- 75 acre area that is heavily developed as a residential community.

During heavy storm events and high tide conditions, the stormwater spills out of the inlet tops on Woodridge Dr. and flows east towards the low lying area across from 762 N. Beach St., ponding then rises up and floods the adjacent resident's property before the stormwater can exit the system through the single outfall. The outfall is approximately 1,600 feet away from the subject area experiencing flooding. We have been informed by the City staff that structural flooding is infrequent. However, the driveways and the yards of the residents at the subject vicinity experience frequent flooding.

In our professional opinion, the first cause of flooding is due to high tidal conditions creating an increased hydraulic grade line within the existing storm system. This condition cannot be improved; however, the poor drainage is also caused by undersized storm pipes with high hydraulic roughness coefficients (corrugated metal pipes) coupled with a single source outfall to the Halifax River. These conditions can be improved by enhancing the piping system or improving the surface drainage.

The City had a survey done on Woodridge Dr. in order to determine if the roadway elevations can be effectively raised to eliminate the "bowl affect" at the end of the Woodridge Dr. so that the stormwater runoff can continue flowing to Beach St. without negatively affecting the residential properties. After reviewing the survey, it appears that raising the roadway elevations will result in stormwater runoff towards the residential homes due to low finished floor elevations at 762 and 772 N. Beach St. which would create additional drainage issues. It will also take away the existing storage area along the roadway which is lower than the finished floor elevations of the homes. Based on these conditions, ZCA does not recommend raising the roadway elevations on Woodridge Dr.

For purposes of this study, ZCA added a second outfall system consisting of a 36" storm drain connecting Woodbridge Drive directly with the Halifax River. Utilizing the same modeling conditions, the hydraulics were significantly improved. The following Table Number 2 shows the hypothetical results for each of the tide conditions and each of the three storm events.

TABLE No. 2 – IMPROVED CONDITIONS:

	Top El. (ft)	**Mean Annual (ft)**	**5-Yr/24-Hr (ft)**	**25-Yr/24-Hr (ft)**
Node 89 – Low Tide Condition	4.61	3.91	4.44	4.72
Node 89 – Mid Tide Condition	4.61	3.92	4.66	5.15
Node 89 – High Tide Condition	4.61	5.07	5.24	5.58

Recommendations:

Below are our recommendations going forward toward improving the flooding conditions at Woodridge Dr.;

- City's Stormwater Crew shall inspect the storm pipes for debris and clogs which may be preventing the system from performing at full capacity
- Further pursue adding a secondary outfall pipe across from Woodridge Dr. to the Halifax River (see improved conditions basin map and stormwater pipe network map enclosed in the stormwater calculations package for the approximate location of the recommended secondary outfall pipe). Additional survey information and refinement of the model will be required prior to creating construction level engineering plans.

15108
KD/HK
15108_Woodridge Dr. Report (12-23-15)
cc: Alex Blake, P.E.
M. Dwight DuRant, P.E.
FILE

WOODRIDGE DRIVE
FLOODING ANALYSIS

ZC 15108
CITY OF ORMOND BEACH

December 23, 2015

ZEV COHEN
& ASSOCIATES, INC.

300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
Engineers • Planners • Landscape Architecture

M. DWIGHT DURANT, P.E.
HALUK "LUKE" KILIC
RYAN DUGGAN, E.I.

ZEV COHEN & ASSOCIATES, INC.
300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
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- C. BASIN DATA

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- B. NODAL DIAGRAM
- C. STORMWATER PIPE NETWORK MAP

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  2. PRE DEVELOPMENT HYDROGRAPHS
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  1. PRE DEVELOPMENT INPUT
  2. PRE DEVELOPMENT HYDROGRAPHS
  3. PRE DEVELOPMENT HYDROGRAPHS
  4. HYDRAULIC GRADE LINE ANALYSIS

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  3. POST-DEVELOPMENT OUTPUT
  4. HYDRAULIC GRADE LINE ANALYSIS
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  1. POST-DEVELOPMENT INPUT
  2. POST-DEVELOPMENT HYDROGRAPHS
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  1. POST-DEVELOPMENT INPUT
  2. POST-DEVELOPMENT HYDROGRAPHS
  3. POST-DEVELOPMENT OUTPUT
  4. HYDRAULIC GRADE LINE ANALYSIS

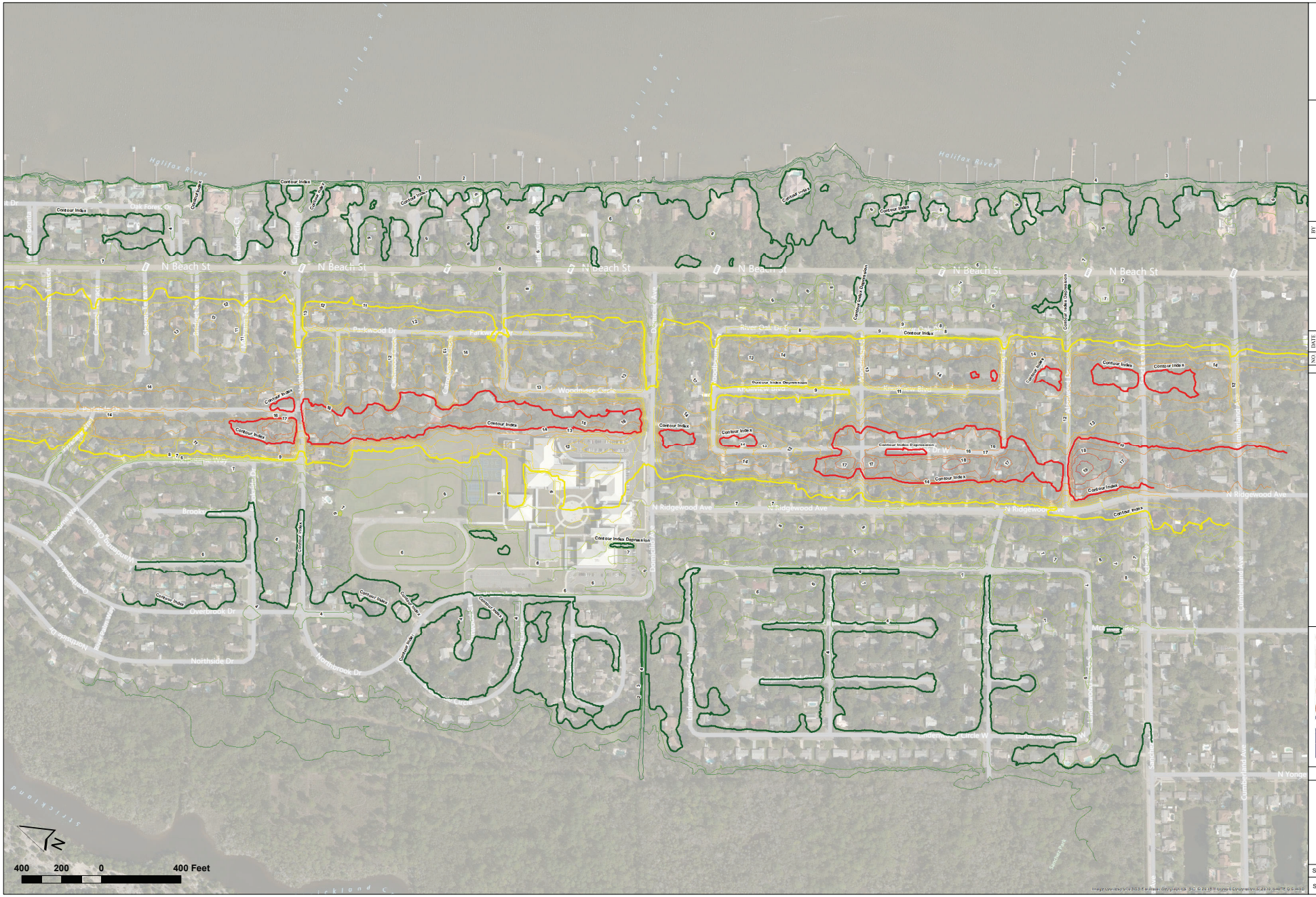
APPENDIX A - MISCELLANEOUS TABLES AND CHARTS

I. EXHIBITS

AERIAL CONTOUR MAP
STORM WATER PIPE NETWORK MAP

ZEV COHEN
& ASSOCIATES, INC.

300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
Engineers • Planners • Landscape Architecture



ORMOND BEACH
300 INTERCHANGE BLVD. STE. 401 ORMOND BEACH FL 32174
(386) 677-4808 FAX (386) 677-4809

ST AUGUSTINE
4475 U.S. 1 S. PLAZA SUITE # 201 ST. AUGUSTINE FL 32086
(904) 940-6811 FAX (904) 940-6814

AMELIA ISLAND
1941 ATLANTIC AVE. STE #210 FERNANDINA BEACH FL 32034
(904) 556-0900 FAX (904) 556-0905

ZEVCOHEN AND ASSOCIATES, INC. 2010

NO	DATE	BY

REVISIONS:

Topography Exhibit
Woodridge Flood Analysis
Ormond Beach, Florida

FLORIDA

VOLUSIA COUNTY

ZEVCOHEN ASSOCIATES INC
CIVIL ENGINEERS - LANDSCAPE ARCHITECTS
PLANNERS - SURVEYORS - ENVIRONMENTAL
WWW.ZEVCOHEN.COM

PROJECT NO: 15108 | CREATED BY: JMB
ISSUE DATE: 07/28/2014 | CHECKED BY: HK
DESIGNED BY: HK | FILE:

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SCALE

SHEET



Utilities Exhibit
Woodridge Flood Analysis
Ormond Beach, Florida

VOLUSIA COUNTY FLORIDA

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WWW.ZEVCOHEN.COM

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ORMOND BEACH
300 INTERCHANGE BLVD, STE. 401 · ORMOND BEACH, FL 32174
(386) 677-6466 · FAX (386) 677-6535

ST AUGUSTINE
4475 U.S. 1 S. (PLAZA 5 SUITE # 401) · ST. AUGUSTINE, FL 32086
(904) 940-6940 · FAX (904) 940-6941

AMELIA ISLAND
1914 ATLANTIC AVE., STE. #210 · FERNANDINA BEACH, FL 32034
(904) 432-0808 · FAX (904) 432-0809

REVISIONS:
NO | DATE | BY
NO | DATE | BY

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SCALE

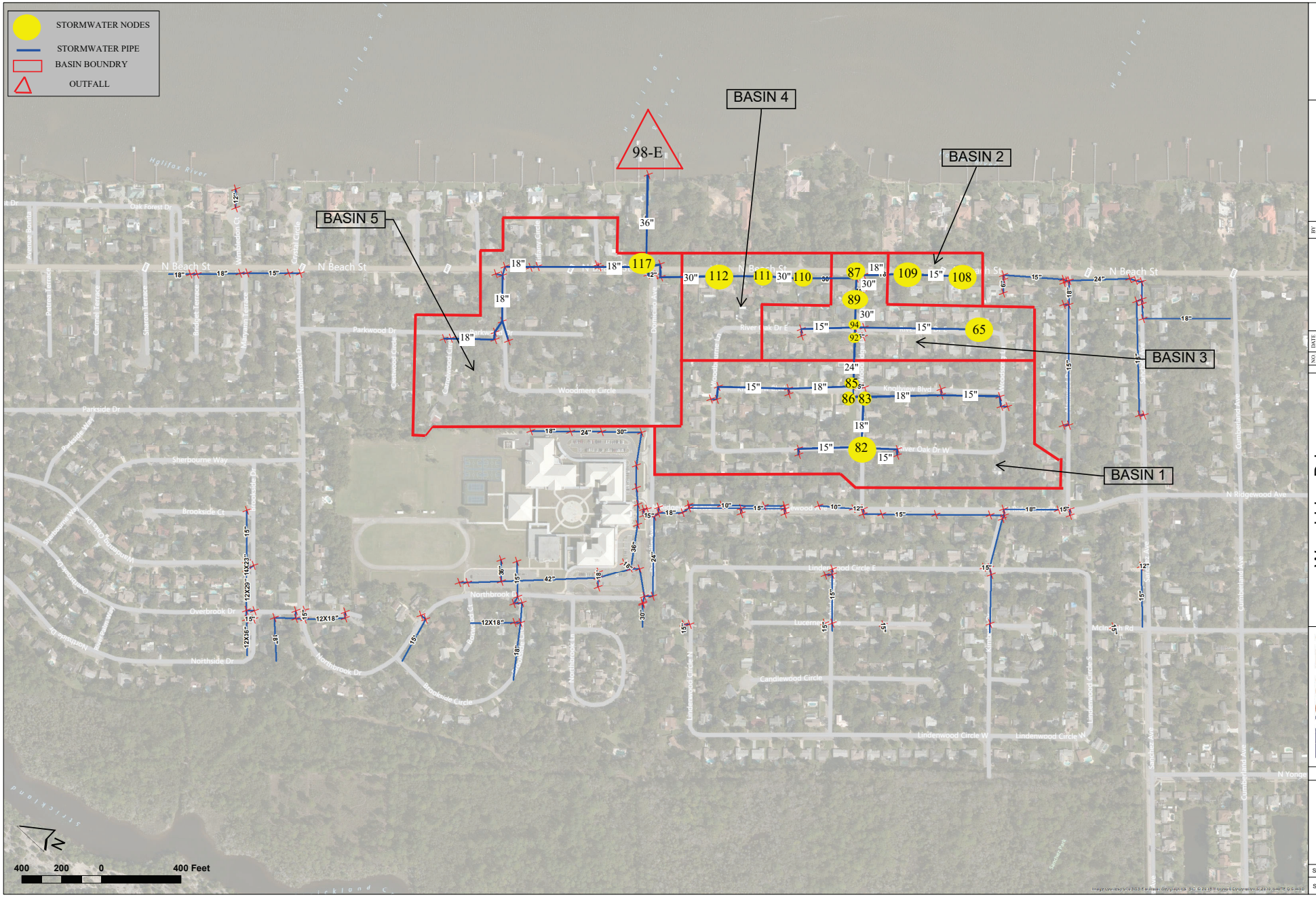
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II. EXISTING CONDITONS

BASIN MAP
NODAL DIAGRAM
BASIN DATA

ZEV COHEN
& ASSOCIATES, INC.

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386.677.2482 • Fax 386.677.2505
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ORMOND BEACH
300 RIVER VIEWS BLVD, STE. 4C ORMOND BEACH FL 32174
(386) 677-4456 (O) (386) 677-4755

ST AUGUSTINE
4475 U.S. 1 S. PLAZA 3 SUITE # 201, ST AUGUSTINE FL 32086
(904) 940-6447 (O) (904) 940-6449

AMELIA ISLAND
1944 PLANTATION RD. STE #210, FERNANDINA BEACH FL 32034
(904) 277-0690 (O) (904) 277-0699

ZEVCOHEN & ASSOCIATES INC
2010

NO	DATE	BY

REVISIONS:

Woodridge Drive Flooding Analysis Basin Map Ormond Beach, Florida

FLORIDA

VOLUSIA COUNTY

ZEVCOHEN ASSOCIATES INC
CIVIL ENGINEERS - LANDSCAPE ARCHITECTS
PLANNERS - ENVIRONMENTAL - SURVEYORS
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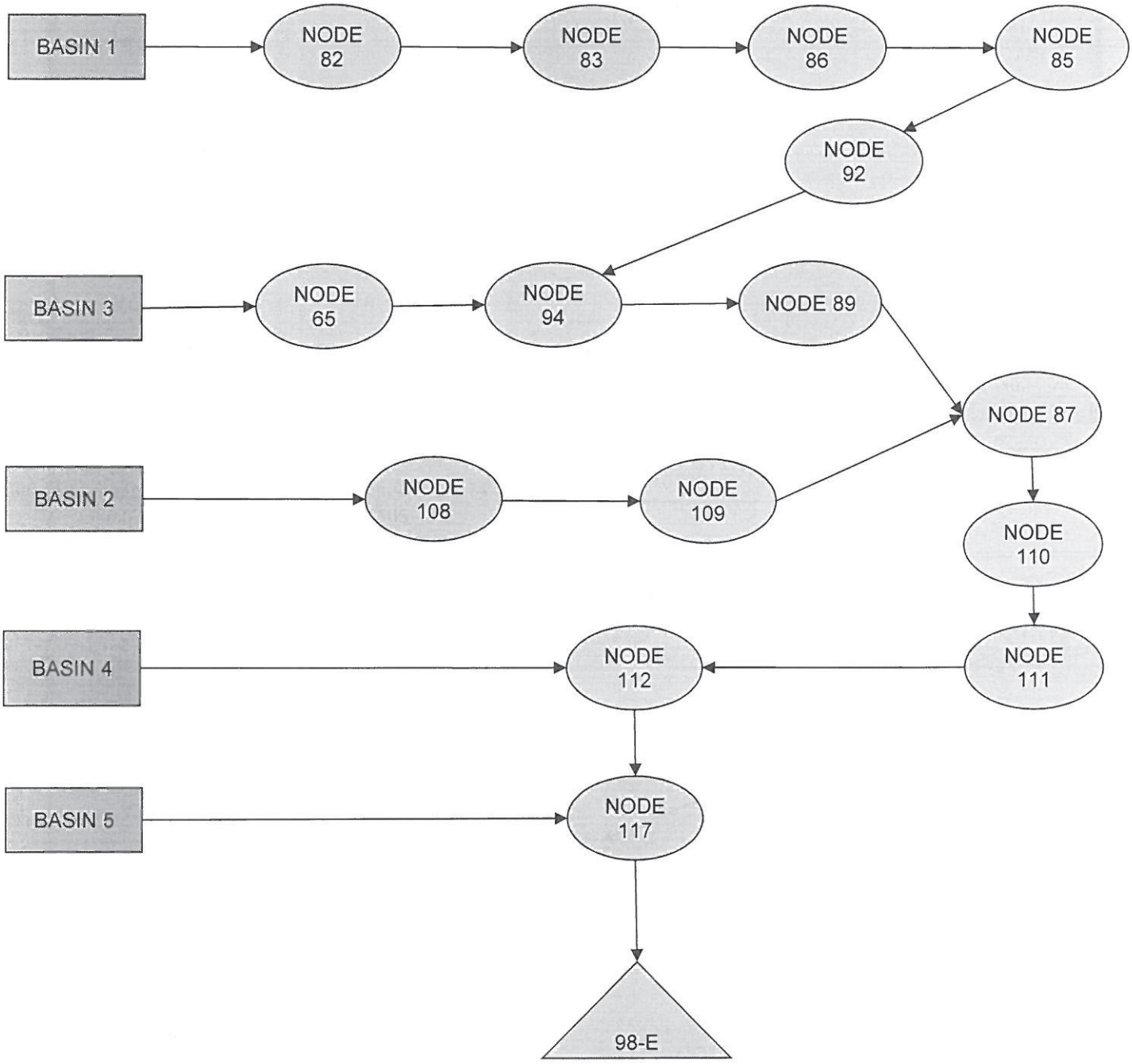
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SHEET

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Project Name: WOODRIDGE DRIVE | File No. ZC 15108
Date: December 23, 2015 | By HK/RMD
Description:

EXISTING CONDITIONS NODAL DIAGRAM



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Project Name: WOODRIDGE DRIVE | File No. ZC 15108
Date: December 23, 2015 | By #REF!
Description: BASIN DATA
BASIN 1

AREA AND CN CALCULATIONS

Cover (Soil Group)	CN	Area (sf)	Area (ac)	CN*Area (ac)
Open Space (A)	39	232,806 sf	5.344 ac	208.435
Impervious	98	931,223 sf	21.378 ac	2095.038
Total		**1,164,029 sf**	**26.722 ac**	**2303.473**

Total Area = 26.722 ac
Composite CN = 86.2

TIME OF CONCENTRATION CALCULATIONS

Sheet Flow (Tc)	Surface Description (table 3-1)	Grass	
	Mannings Roughness Coefficient, n (table 3-1)	0.24	
	Flow Length, L (total "L" less than or equal to 300')	300	Ft
	P (rainfall in inches recognized by the SCS)	5	Inches
	Land Slope, s	0.0104	Ft/Ft
	$Tt = (0.007*(nL)^{0.8}) / ((P^{0.5})*(s^{0.4}))$	0.60	Hours
		35.7	Minutes
Shallow Conc. Flow	Surface Description (paved or unpaved)	Paved	
	Flow Length, L	536	Ft
	Watercourse Slope, s	0.0013	Ft/Ft
	Average Velocity, V (calculated from below)	0.73	Ft/sec
	Tc = L / 3600*V	0.20	Hours
		12.2	Minutes
	Unpaved >> $V = 16.1345*s^{0.5}$ Paved >> $V = 20.3282*s^{0.5}$		

Total Tc = 47.9 Minutes

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Project Name: WOODRIDGE DRIVE | File No. ZC 15108
Date: December 23, 2015 | By #REF!
Description: BASIN DATA
BASIN 2

AREA AND CN CALCULATIONS

Cover (Soil Group)	CN	Area (sf)	Area (ac)	CN*Area (ac)
Open Space (A)	39	22,477 sf	0.516 ac	20.124
Impervious	98	89,908 sf	2.064 ac	202.272
Total		**112,385 sf**	**2.580 ac**	**222.396**

Total Area = 2.580 ac
Composite CN = 86.2

TIME OF CONCENTRATION CALCULATIONS

Sheet Flow (Tc)	Surface Description (table 3-1)	Grass	
	Mannings Roughness Coefficient, n (table 3-1)	0.24	
	Flow Length, L (total "L" less than or equal to 300')	152	Ft
	P (rainfall in inches recognized by the SCS)	5	Inches
	Land Slope, s	0.04	Ft/Ft
	$Tt = (0.007*(nL)^{0.8}) / ((P^{0.5})*(s^{0.4}))$	0.20	Hours
		12.1	Minutes
Shallow Conc. Flow	Surface Description (paved or unpaved)	Paved	
	Flow Length, L	15	Ft
	Watercourse Slope, s	0.0010	Ft/Ft
	Average Velocity, V (calculated from below)	0.64	Ft/sec
	Tc = L / 3600*V	0.01	Hours
		0.4	Minutes
	Unpaved >> $V = 16.1345*s^{0.5}$		
	Paved >> $V = 20.3282*s^{0.5}$		

Total Tc = 12.5 Minutes

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Project Name: WOODRIDGE DRIVE | File No. ZC 15108
Date: December 23, 2015 | By #REF!
Description:

BASIN DATA
BASIN 3

AREA AND CN CALCULATIONS

Cover (Soil Group)	CN	Area (sf)	Area (ac)	CN*Area (ac)
Open Space (A)	39	96,500 sf	2.215 ac	86.398
Impervious	98	386,000 sf	8.861 ac	868.411
Total		**482,500 sf**	**11.077 ac**	**954.809**

Total Area = 11.077 ac
Composite CN = 86.2

TIME OF CONCENTRATION CALCULATIONS

Sheet Flow (Tc)	Surface Description (table 3-1)	Grass	
	Mannings Roughness Coefficient, n (table 3-1)	0.24	
	Flow Length, L (total "L" less than or equal to 300')	207	Ft
	P (rainfall in inches recognized by the SCS)	5	Inches
	Land Slope, s	0.0104	Ft/Ft
	$Tt = (0.007*(nL)^{0.8}) / ((P^{0.5})*(s^{0.4}))$	0.44	Hours
		26.5	Minutes
Shallow Conc. Flow	Surface Description (paved or unpaved)	Paved	
	Flow Length, L	162	Ft
	Watercourse Slope, s	0.0010	Ft/Ft
	Average Velocity, V (calculated from below)	0.64	Ft/sec
	Tc = L / 3600*V	0.07	Hours
		4.2	Minutes
	Unpaved >> $V = 16.1345*s^{0.5}$		
	Paved >> $V = 20.3282*s^{0.5}$		

Total Tc = 30.7 Minutes

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Project Name: WOODRIDGE DRIVE | File No. ZC 15108
Date: December 23, 2015 | By #REF!
Description:

BASIN DATA
BASIN 4

AREA AND CN CALCULATIONS

Cover (Soil Group)	CN	Area (sf)	Area (ac)	CN*Area (ac)
Open Space (A)	39	61,608 sf	1.414 ac	55.159
Impervious	98	246,433 sf	5.657 ac	554.417
Total		**308,041 sf**	**7.072 ac**	**609.576**

Total Area = 7.072 ac
Composite CN = 86.2

TIME OF CONCENTRATION CALCULATIONS

Sheet Flow (Tc)	Surface Description (table 3-1)	Grass	
	Mannings Roughness Coefficient, n (table 3-1)	0.24	
	Flow Length, L (total "L" less than or equal to 300')	151	Ft
	P (rainfall in inches recognized by the SCS)	5	Inches
	Land Slope, s	0.013	Ft/Ft
	$Tt = (0.007*(nL)^{0.8}) / ((P^{0.5})*(s^{0.4}))$	0.31	Hours
		18.9	Minutes
Shallow Conc. Flow	Surface Description (paved or unpaved)	Paved	
	Flow Length, L	662	Ft
	Watercourse Slope, s	0.0010	Ft/Ft
	Average Velocity, V (calculated from below)	0.64	Ft/sec
	Tc = L / 3600*V	0.29	Hours
		17.2	Minutes
	Unpaved >> $V = 16.1345*s^{0.5}$ Paved >> $V = 20.3282*s^{0.5}$		

Total Tc = 36.0 Minutes

ZEV COHEN & ASSOCIATES, INC.
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Project Name: WOODRIDGE DRIVE | File No. ZC 15108
Date: December 23, 2015 | By #REF!
Description: BASIN DATA
BASIN 5

AREA AND CN CALCULATIONS

Cover (Soil Group)	CN	Area (sf)	Area (ac)	CN*Area (ac)
Open Space (A)	39	243,813 sf	5.597 ac	218.290
Impervious	98	975,254 sf	22.389 ac	2194.097
Total		**1,219,067 sf**	**27.986 ac**	**2412.387**

Total Area = 27.986 ac
Composite CN = 86.2

TIME OF CONCENTRATION CALCULATIONS

Sheet Flow (Tc)	Surface Description (table 3-1)	Grass	
	Mannings Roughness Coefficient, n (table 3-1)	0.24	
	Flow Length, L (total "L" less than or equal to 300')	164	Ft
	P (rainfall in inches recognized by the SCS)	5	Inches
	Land Slope, s	0.018	Ft/Ft
	$Tt = (0.007*(nL)^{0.8}) / ((P^{0.5})*(s^{0.4}))$	0.29	Hours
		17.7	Minutes
Shallow Conc. Flow	Surface Description (paved or unpaved)	Paved	
	Flow Length, L	355	Ft
	Watercourse Slope, s	0.0040	Ft/Ft
	Average Velocity, V (calculated from below)	1.29	Ft/sec
	Tc = L / 3600*V	0.08	Hours
		4.6	Minutes
	Unpaved >> $V = 16.1345*s^{0.5}$		
	Paved >> $V = 20.3282*s^{0.5}$		
Channel Flow	Cross Sectional Flow Area, a	1.76	Sf
	Wetted Perimeter, Pw	2.35	Ft
	Hydraulic Radius, r = a/Pw	0.74893617	Ft
	Channel Slope, s	0.0077	Ft/Ft
	Mannings Roughness Coefficient, n	0.022	
	$V = (1.49*r^{2/3}*s^{\wedge 1/2}) / n$	4.90	Ft/sec
	Flow Length, L	1217	Ft
	Tt = L / 3600*V	0.07	Hours
		4.1	Minutes

Tc = 26.4 Minutes

III. IMPROVED CONDITIONS

NODAL DIAGRAM
STORMWATER PIPE NETWORK MAP
BASIN MAP

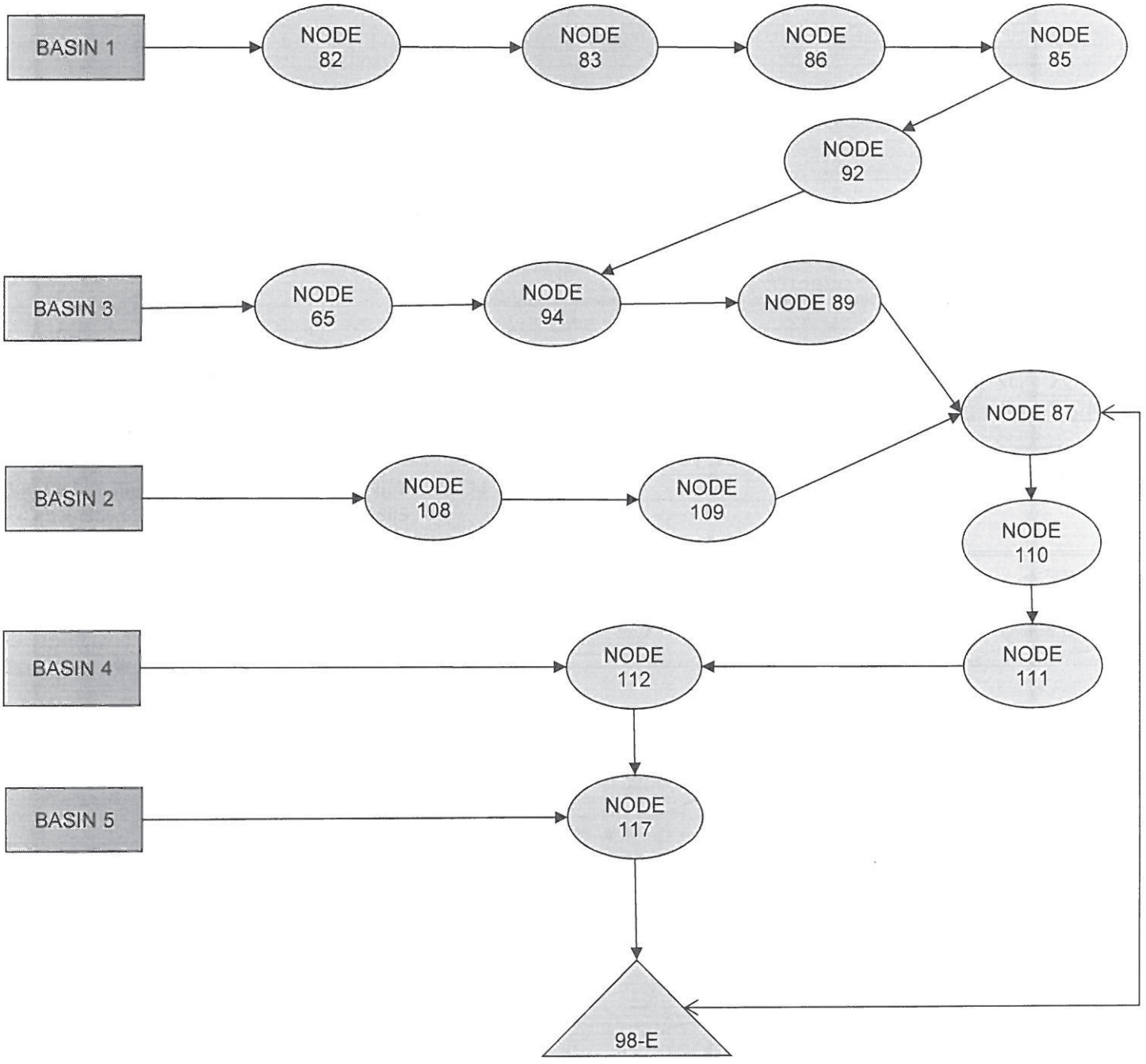
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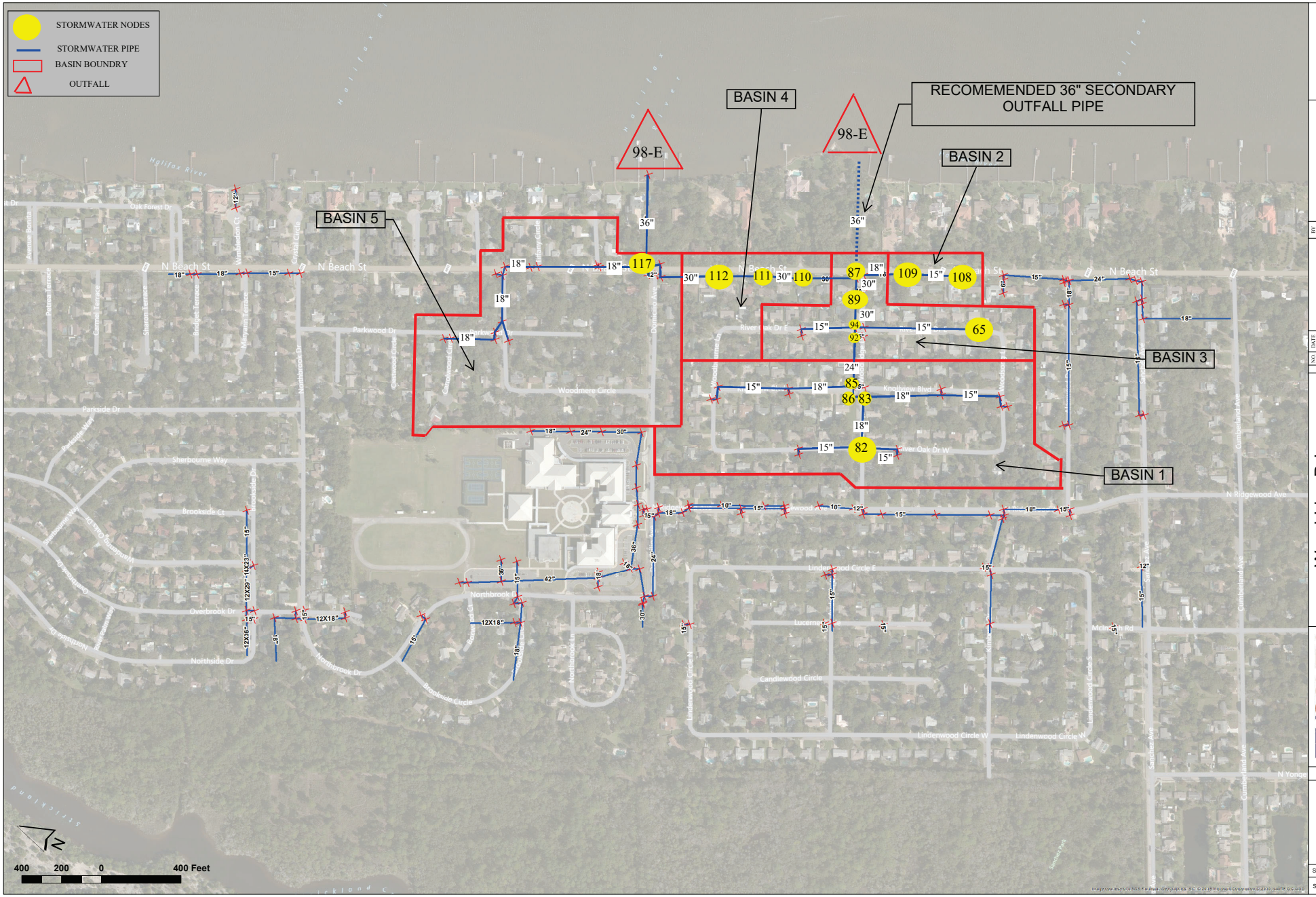
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386.677.2482 • Fax 386.677.2505
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300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
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Project Name: WOODRIDGE DRIVE
Date: December 23, 2015
Description:
File No. ZC 15108
By HK/RMD

IMPROVED CONDITIONS NODAL DIAGRAM





ORMOND BEACH
300 RIVER EDGE BLVD, STE. 4C ORMOND BEACH FL 32174
(386) 677-4456 (O) (386) 677-4755

ST AUGUSTINE
4475 U.S. 1 S. PLAZA 3 SUITE # 201, ST AUGUSTINE, FL 32086
(904) 940-6111 (O) (904) 940-6112

AMELIA ISLAND
1944 PLANTATION RD, STE #210, FERNANDINA BEACH FL 32034
(904) 940-6111 (O) (904) 940-6112

NO	DATE	BY

REVISIONS:

Woodridge Drive Flooding Analysis Basin Map Ormond Beach, Florida

FLORIDA

VOLUSIA COUNTY

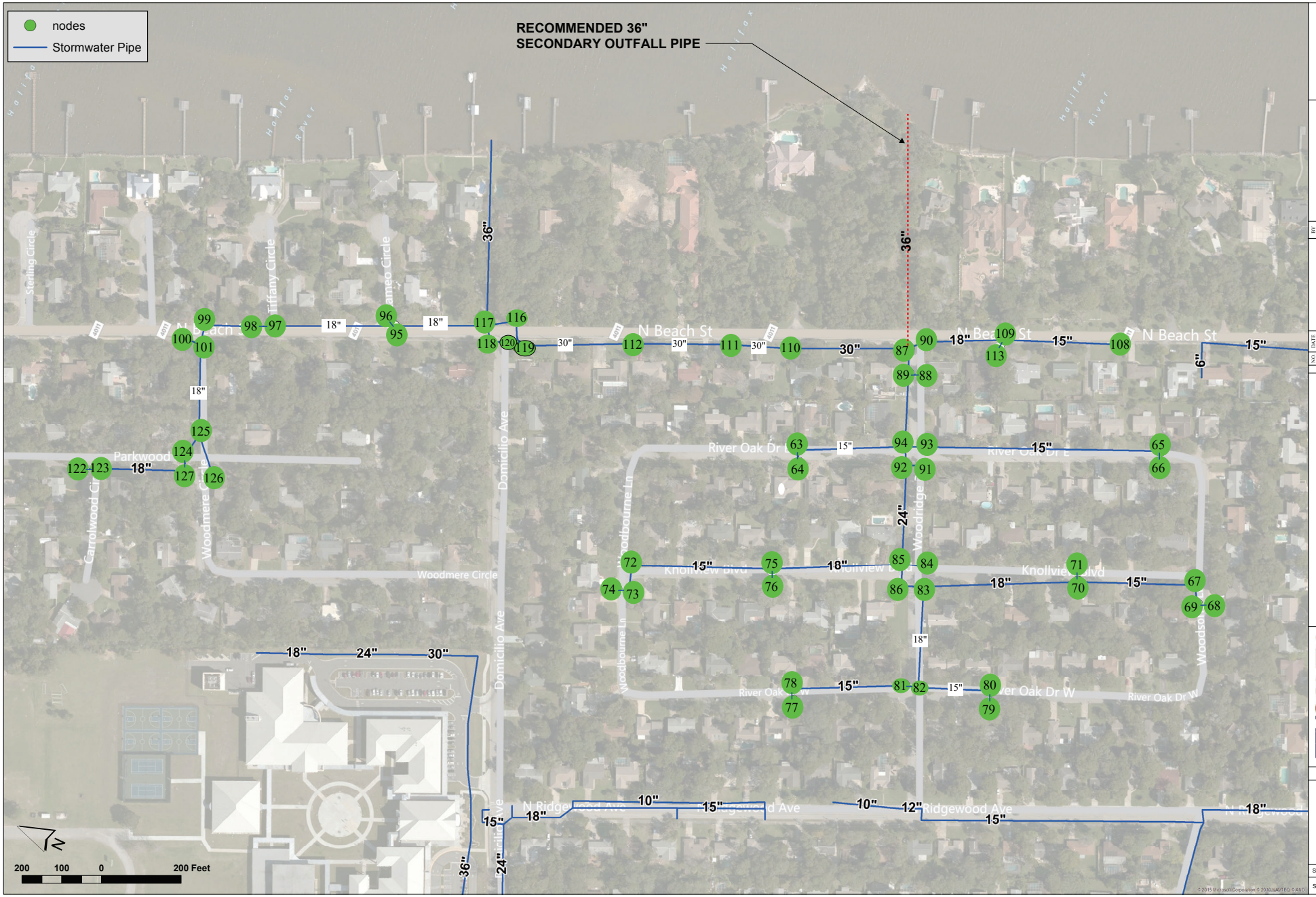
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DESIGNED BY: HK | FILE:

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ORMOND BEACH
300 INTERCHANGE BLVD., STE. 401, ORMOND BEACH, FL 32174
(386) 677-4404, (FAX) 677-2485

ST AUGUSTINE
4475 U.S. 1 S., BLDG A-3, SUITE # 401, ST. AUGUSTINE, FL 32086
(904) 940-6940, (FAX) 940-6941

AMELIA ISLAND
1944 ATLANTIC AVE., STE. #210, FERNANDINA BEACH, FL 32034
(904) 432-8282, (FAX) 432-8283

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2010

NO	DATE	BY
1		BY

REVISIONS:

Utilities Exhibit
Woodridge Flood Analysis
Ormond Beach, Florida

FLORIDA

VOLUSIA COUNTY

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IV. STORMWATER ROUTING PROGRAM
EXISTING CONDITIONS

MEAN ANNUAL RAIN EVENT
5 YEAR 24 HOUR RAIN EVENT
25 YEAR 24 HOUR RAIN EVENT

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386.677.2482 • Fax 386.677.2505
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LOW TIDE CONDITION

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==========
==== Basins ====
==========

Name: Basin 1 | Node: 82 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	47.90
Area(ac):	26.720	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 2 | Node: 108 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	12.50
Area(ac):	2.580	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 3 | Node: 65 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	30.70
Area(ac):	11.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 4 | Node: 112 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	36.00
Area(ac):	7.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 5 | Node: 117 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	26.40
Area(ac):	27.980	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

==========

==== Nodes ==========

Name: 108 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.510
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.51	0.0002
6.55	0.1000

Name: 109 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.690
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.69	0.0002
6.70	0.1000

Name: 110 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.050
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.05	0.0002
6.10	0.1000

Name: 111 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.440
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.00	0.0002
6.44	0.0002
6.45	0.1000

Name: 112 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.140
Type: Stage/Area

Stage(ft)	Area(ac)

0.00	0.0002
2.00	0.0002
4.00	0.0002
6.14	0.0002
6.15	0.1000

Name: 117 Base Flow(cfs): 0.00 Init Stage(ft): -1.000
Group: BASE Warn Stage(ft): 6.710
Type: Stage/Area

Stage(ft)	Area(ac)
-1.00	0.0002
1.00	0.0002
4.00	0.0002
6.00	0.0002
6.71	0.0002
6.75	0.1000

Name: 65 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 7.620
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
7.62	0.0002
7.65	0.1000

Name: 82 Base Flow(cfs): 0.00 Init Stage(ft): 9.000
Group: BASE Warn Stage(ft): 17.370
Type: Stage/Area

Stage(ft)	Area(ac)
9.00	0.0002
11.00	0.0002
13.00	0.0002
15.00	0.0002
17.37	0.0002
17.40	0.1000

Name: 83 Base Flow(cfs): 0.00 Init Stage(ft): 7.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 85 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 86 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 87 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 5.410
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
5.41	0.0002
5.45	0.1000

Name: 89 Base Flow(cfs): 0.00 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 4.610
Type: Stage/Area

Stage(ft)	Area(ac)
1.00	0.0002
3.00	0.0002
4.61	0.0002
4.65	0.1000

Name: 92 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 94 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 98-E Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 0.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	0.00
12.00	0.00
18.00	0.00
24.00	0.00

==== Pipes ====

Name: 108>109 From Node: 108 Length(ft): 272.00
Group: BASE To Node: 109 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	3.560	3.040
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 109>87 From Node: 109 Length(ft): 400.00
Group: BASE To Node: 87 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	3.040	0.960
Manning's N:	0.022000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	110>111	From Node:	110	Length(ft): 150.00
Group:	BASE	To Node:	111	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.050	1.090		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	111>112	From Node:	111	Length(ft): 260.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.090	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	112>117	From Node:	112	Length(ft): 407.00
Group:	BASE	To Node:	117	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.640	0.110		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	117>98-E	From Node:	117	Length(ft): 500.00
Group:	BASE	To Node:	98-E	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	36.00	36.00		Entrance Loss Coef: 0.00
Rise(in):	36.00	36.00		Exit Loss Coef: 1.00
Invert(ft):	-0.800	-1.000		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	65>94	From Node:	65	Length(ft): 670.00
Group:	BASE	To Node:	94	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	15.00	15.00		Entrance Loss Coef: 0.00
Rise(in):	15.00	15.00		Exit Loss Coef: 1.00
Invert(ft):	5.560	4.590		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	82>83	From Node:	82	Length(ft): 278.00
Group:	BASE	To Node:	83	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	18.00	18.00		Entrance Loss Coef: 0.00
Rise(in):	18.00	18.00		Exit Loss Coef: 1.00
Invert(ft):	9.140	7.360		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	83>86	From Node:	83	Length(ft): 35.00
Group:	BASE	To Node:	86	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	7.360	7.290		Bend Loss Coef: 0.00
Manning's N:	0.013000	0.013000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	85>92	From Node:	85	Length(ft): 266.00
Group:	BASE	To Node:	92	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	5.910	4.790		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	86>85	From Node:	86	Length(ft): 35.00
Group:	BASE	To Node:	85	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	7.290	7.220		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>110	From Node:	87	Length(ft): 300.00
Group:	BASE	To Node:	110	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	1.050		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	89>87	From Node:	89	Length(ft): 85.00
Group:	BASE	To Node:	87	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.240	0.960		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	92>94	From Node:	92	Length(ft): 35.00
Group:	BASE	To Node:	94	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	4.790	4.590		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name:	94>89	From Node: 94	Length(ft): 171.00
Group:	BASE	To Node: 89	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	30.00	30.00	Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00	Exit Loss Coef: 1.00
Invert(ft):	4.590	1.240	Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

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==== Hydrology Simulations ==========

==========

Name: 25 Year
Filename: Q:\07130\AdICPR\25 Year.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 9.50

Time(hrs)	Print Inc(min)
36.000	15.00

Name: 5 YR
Filename: Q:\15108\ICPR\5 YR.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 6.20

Time(hrs)	Print Inc(min)
30.000	15.00

Name: Mean Annual
Filename: Q:\07130\AdICPR\Mean Annual.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 5.00

Time(hrs)	Print Inc(min)
36.000	15.00

==========

```
==== Routing Simulations ========================================================================
================================================================================================

         Name: 25 Year             Hydrology Sim: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.I32

      Execute: Yes         Restart: No           Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
        Start Time(hrs): 0.000                    End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes

------------------------------------------------------------------------------------------------
         Name: 5 YR                Hydrology Sim: 5 YR
     Filename: Q:\15108\ICPR\5 YR.I32

      Execute: Yes         Restart: No           Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
        Start Time(hrs): 0.000                    End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes

------------------------------------------------------------------------------------------------
         Name: Mean Annual         Hydrology Sim: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.I32

      Execute: Yes         Restart: No           Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
        Start Time(hrs): 0.000                    End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
```

BASE	Yes

Woodridge Flooding Analysis - Low Tide Condition
ZC 15108
Stormwater Calculations
12.23.15 MDD/HK

Simulation	Basin	Group	Time Max hrs	Flow Max cfs	Volume in	Volume ft3
25 Year	Basin 1	BASE	12.50	65.017	7.81	757734.49
25 Year	Basin 2	BASE	12.06	12.485	7.81	73181.07
25 Year	Basin 3	BASE	12.28	34.755	7.81	313796.30
25 Year	Basin 4	BASE	12.32	20.369	7.81	200538.83
25 Year	Basin 5	BASE	12.20	95.239	7.81	793595.58
5 YR	Basin 1	BASE	12.50	39.056	4.62	448002.52
5 YR	Basin 2	BASE	12.06	7.549	4.62	43267.51
5 YR	Basin 3	BASE	12.28	20.928	4.62	185519.47
5 YR	Basin 4	BASE	12.32	12.243	4.62	118566.40
5 YR	Basin 5	BASE	12.20	57.309	4.62	469202.46
Mean Annual	Basin 1	BASE	12.50	29.601	3.48	338021.40
Mean Annual	Basin 2	BASE	12.06	5.743	3.49	32645.66
Mean Annual	Basin 3	BASE	12.28	15.883	3.48	139971.25
Mean Annual	Basin 4	BASE	12.32	9.281	3.49	89459.24
Mean Annual	Basin 5	BASE	12.20	43.469	3.49	354015.65

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Woodridge Flooding Analysis - Low Tide Condition
ZC 15108
Stormwater Calculations
12.23.15 MDD/HK

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
108	BASE	25 Year	13.13	7.180	6.510	0.0050	72804	12.00	11.889	11.57	2.581
109	BASE	25 Year	14.33	6.507	6.690	0.0048	137	11.57	2.581	11.61	2.501
110	BASE	25 Year	13.96	6.332	6.050	-0.0217	24571	19.27	15.171	19.27	15.171
111	BASE	25 Year	13.33	6.439	6.440	-0.0090	139	19.27	15.171	19.26	15.172
112	BASE	25 Year	12.90	6.743	6.140	-0.0484	262004	14.32	19.128	14.25	25.609
117	BASE	25 Year	12.50	7.226	6.710	-0.0070	56255	12.25	79.683	12.50	64.571
65	BASE	25 Year	18.06	9.243	7.620	0.0050	235251	12.25	34.671	30.82	2.699
82	BASE	25 Year	15.97	19.510	17.370	-0.0412	310062	12.50	64.989	14.00	11.169
83	BASE	25 Year	16.89	9.942	10.930	0.0033	125	14.00	11.169	14.72	11.295
85	BASE	25 Year	16.95	9.396	10.930	-0.0072	128	14.98	11.333	15.26	11.158
86	BASE	25 Year	17.09	9.667	10.930	0.0050	117	14.72	11.295	14.98	11.333
87	BASE	25 Year	14.33	6.307	5.410	-0.0063	97520	19.13	14.840	19.27	15.171
89	BASE	25 Year	18.59	6.476	4.610	-0.0134	202803	13.71	13.335	25.45	14.425
92	BASE	25 Year	17.94	7.363	9.930	0.0050	128	15.26	11.158	15.51	11.156
94	BASE	25 Year	18.08	7.097	9.930	-0.0047	146	13.67	13.355	13.71	13.335
98-E	BASE	25 Year	0.00	0.000	0.000	0.0000	660	12.50	64.571	0.00	0.000
108	BASE	5 YR	12.85	6.936	6.510	-0.0054	46354	12.00	7.150	11.74	2.762
109	BASE	5 YR	13.23	5.999	6.690	0.0049	137	11.74	2.762	11.77	2.638
110	BASE	5 YR	12.57	5.866	6.050	0.0050	141	16.52	14.068	16.52	14.068
111	BASE	5 YR	12.46	6.001	6.440	0.0050	139	16.52	14.068	16.50	14.069
112	BASE	5 YR	12.40	6.236	6.140	-0.0158	41700	14.50	16.249	14.50	16.294
117	BASE	5 YR	12.30	6.214	6.710	-0.0048	312	12.26	57.865	12.30	57.001
65	BASE	5 YR	15.65	8.768	7.620	0.0050	166416	12.25	20.847	22.53	2.561
82	BASE	5 YR	15.07	18.770	17.370	-0.0312	202951	12.50	39.052	15.00	10.978
83	BASE	5 YR	12.68	9.522	10.930	0.0040	127	15.00	10.978	14.63	11.090
85	BASE	5 YR	15.42	8.795	10.930	0.0050	151	15.97	11.025	15.04	10.975
86	BASE	5 YR	12.68	9.267	10.930	0.0050	133	14.63	11.090	15.97	11.025
87	BASE	5 YR	13.51	5.711	5.410	0.0050	32761	19.14	14.096	16.52	14.068
89	BASE	5 YR	15.59	5.964	4.610	-0.0097	147173	14.95	13.145	18.13	13.678
92	BASE	5 YR	15.47	6.813	9.930	0.0050	130	15.04	10.975	15.39	10.981
94	BASE	5 YR	15.55	6.554	9.930	-0.0037	276	14.83	13.155	14.95	13.145
98-E	BASE	5 YR	0.00	0.000	0.000	0.0000	660	12.30	57.001	0.00	0.000
108	BASE	Mean Annual	12.69	6.812	6.510	-0.0058	32829	12.00	5.417	11.85	2.842
109	BASE	Mean Annual	12.99	5.790	6.690	-0.0046	137	11.85	2.842	11.89	2.631
110	BASE	Mean Annual	12.53	5.363	6.050	0.0050	141	15.84	13.582	15.85	13.535
111	BASE	Mean Annual	12.51	5.354	6.440	-0.0050	139	15.85	13.535	15.84	13.537
112	BASE	Mean Annual	12.27	5.367	6.140	-0.0036	155	14.30	15.688	14.30	15.757
117	BASE	Mean Annual	12.26	5.268	6.710	0.0050	327	12.25	49.273	12.26	49.103
65	BASE	Mean Annual	14.96	8.570	7.620	0.0050	137705	12.25	15.805	19.06	2.494
82	BASE	Mean Annual	14.51	18.433	17.370	-0.0303	154058	12.50	29.601	14.52	10.763
83	BASE	Mean Annual	13.09	9.521	10.930	0.0040	127	14.52	10.763	14.51	10.763
85	BASE	Mean Annual	14.58	8.437	10.930	0.0050	189	14.50	10.763	14.53	10.763
86	BASE	Mean Annual	13.09	9.266	10.930	0.0050	133	14.51	10.763	14.50	10.763
87	BASE	Mean Annual	13.48	5.482	5.410	0.0050	7819	17.43	13.843	15.84	13.582
89	BASE	Mean Annual	14.74	5.701	4.610	-0.0091	118658	14.65	12.948	17.43	13.339

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Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
92	BASE	Mean Annual	14.69	6.614	9.930	0.0050	250	14.53	10.763	14.55	10.763
94	BASE	Mean Annual	14.73	6.321	9.930	-0.0028	307	14.65	12.948	14.65	12.948
98-E	BASE	Mean Annual	0.00	0.000	0.000	0.0000	660	12.26	49.103	0.00	0.000

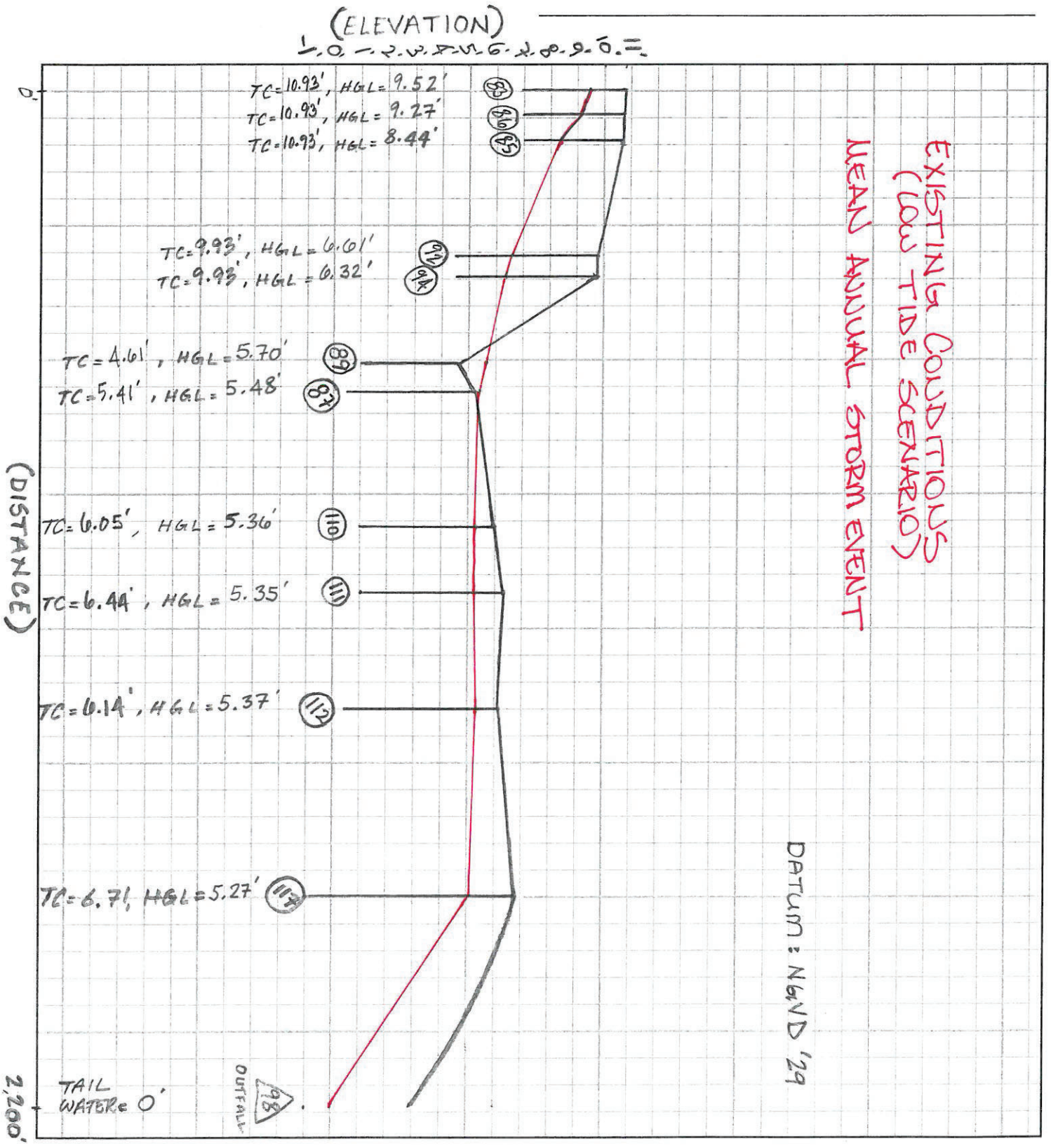
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Woodridge Flooding Analysis - Low Tide Condition
ZC 15108
Stormwater Calculations
12.23.15 MDD/HK

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
108>109	BASE	25 Year	11.57	2.58	0.106	13.13	7.180	14.33	6.507
109>87	BASE	25 Year	11.61	2.50	0.385	14.33	6.507	14.33	6.307
110>111	BASE	25 Year	19.27	15.17	-1.692	13.96	6.332	13.33	6.439
111>112	BASE	25 Year	19.26	15.17	0.964	13.33	6.439	12.90	6.743
112>117	BASE	25 Year	14.25	25.61	1.566	12.90	6.743	12.50	7.226
117>98-E	BASE	25 Year	12.50	64.57	-1.815	12.50	7.226	12.40	1.578
65>94	BASE	25 Year	30.82	2.70	-0.010	18.06	9.243	18.08	7.097
82>83	BASE	25 Year	14.00	11.17	0.069	15.97	19.510	16.89	9.942
83>86	BASE	25 Year	14.72	11.30	0.145	16.89	9.942	17.09	9.667
85>92	BASE	25 Year	15.26	11.16	0.032	16.95	9.396	17.94	7.363
86>85	BASE	25 Year	14.98	11.33	-0.160	17.09	9.667	16.95	9.396
87>110	BASE	25 Year	19.27	15.17	1.004	14.33	6.307	13.96	6.332
89>87	BASE	25 Year	25.45	14.43	0.730	18.59	6.476	14.33	6.307
92>94	BASE	25 Year	15.51	11.16	1.771	17.94	7.363	18.08	7.097
94>89	BASE	25 Year	13.71	13.34	-0.206	18.08	7.097	18.59	6.476
108>109	BASE	5 YR	11.74	2.76	0.103	12.85	6.936	13.23	5.999
109>87	BASE	5 YR	11.77	2.64	0.522	13.23	5.999	13.51	5.711
110>111	BASE	5 YR	16.52	14.07	-2.098	12.57	5.866	12.46	6.001
111>112	BASE	5 YR	16.50	14.07	1.551	12.46	6.001	12.40	6.236
112>117	BASE	5 YR	14.50	16.29	-0.848	12.40	6.236	12.30	6.214
117>98-E	BASE	5 YR	12.30	57.00	-1.815	12.30	6.214	12.27	1.446
65>94	BASE	5 YR	22.53	2.56	0.012	15.65	8.768	15.55	6.554
82>83	BASE	5 YR	15.00	10.98	0.049	15.07	18.770	12.68	9.522
83>86	BASE	5 YR	14.63	11.09	0.156	12.68	9.522	12.68	9.267
85>92	BASE	5 YR	15.04	10.98	-0.062	15.42	8.795	15.47	6.813
86>85	BASE	5 YR	15.97	11.03	-0.062	12.68	9.267	15.42	8.795
87>110	BASE	5 YR	16.52	14.07	1.195	13.51	5.711	12.57	5.866
89>87	BASE	5 YR	18.13	13.68	0.822	15.59	5.964	13.51	5.711
92>94	BASE	5 YR	15.39	10.98	0.597	15.47	6.813	15.55	6.554
94>89	BASE	5 YR	14.95	13.14	-0.079	15.55	6.554	15.59	5.964
108>109	BASE	Mean Annual	11.85	2.84	0.087	12.69	6.812	12.99	5.790
109>87	BASE	Mean Annual	11.89	2.63	0.540	12.99	5.790	13.48	5.482
110>111	BASE	Mean Annual	15.85	13.54	-2.282	12.53	5.363	12.51	5.354
111>112	BASE	Mean Annual	15.84	13.54	1.610	12.51	5.354	12.27	5.367
112>117	BASE	Mean Annual	14.30	15.76	-0.076	12.27	5.367	12.26	5.268
117>98-E	BASE	Mean Annual	12.26	49.10	-1.815	12.26	5.268	12.26	1.282
65>94	BASE	Mean Annual	19.06	2.49	0.011	14.96	8.570	14.73	6.321
82>83	BASE	Mean Annual	14.52	10.76	0.044	14.51	18.433	13.09	9.521
83>86	BASE	Mean Annual	14.51	10.76	0.016	13.09	9.521	13.09	9.266
85>92	BASE	Mean Annual	14.53	10.76	-0.022	14.58	8.437	14.69	6.614
86>85	BASE	Mean Annual	14.50	10.76	-0.017	13.09	9.266	14.58	8.437
87>110	BASE	Mean Annual	15.84	13.58	-1.462	13.48	5.482	12.53	5.363
89>87	BASE	Mean Annual	17.43	13.34	-1.698	14.74	5.701	13.48	5.482
92>94	BASE	Mean Annual	14.55	10.76	0.515	14.69	6.614	14.73	6.321
94>89	BASE	Mean Annual	14.65	12.95	-0.029	14.73	6.321	14.74	5.701

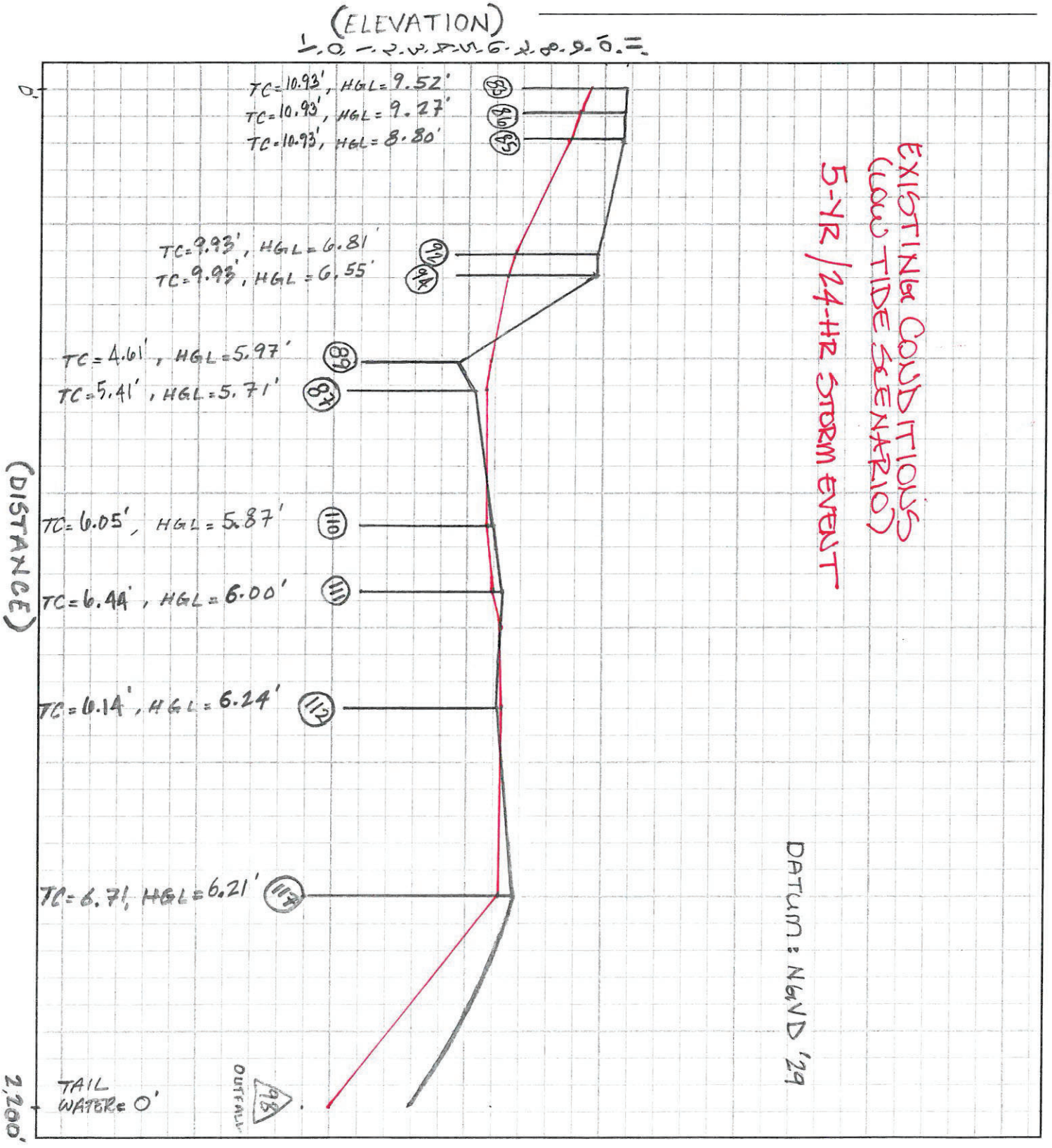
Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft

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(ELEVATION)
1.0 - 2.0 - 3.0 - 4.0 - 5.0 - 6.0 - 7.0 - 8.0 - 9.0 - 10.0
0'
2,200'
(DISTANCE)
TC=10.93', HGL=9.52'
TC=10.93', HGL=9.27'
TC=10.93', HGL=8.44'
TC=9.93', HGL=6.61'
TC=9.93', HGL=6.32'
TC=4.61', HGL=5.70'
TC=5.41', HGL=5.48'
TC=6.05', HGL=5.36'
TC=6.44', HGL=5.35'
TC=6.14', HGL=5.37'
TC=6.71, HGL=5.27'
TAIL WATER= 0'
OUTFALL
EXISTING CONDITIONS (LOW TIDE SCENARIO)
MEAN ANNUAL STORM EVENT
DATUM: NGVD '29

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Civil Engineering • Environmental • Planning
Landscape Architecture

WOODRIDGE DR.
Project Name FLOODING ANALYSIS File No. 15108
Date 12/15/2015 By H.K. Sheet ___ of ___
Description HGL ANALSIS



WOODRIDGE DR.

Project Name FLOODING ANALYSIS File No. 15108

Date 12/15/2015 By H.K. Sheet ___ of ___

Description HGL ANALSIS

(ELEVATION)

1.0 - 2.3 - 4.5 - 6.2 - 8.9 - 0.=

(DISTANCE)

0'

2,200'

TC=10.93', HGL= 9.94' (83)
TC=10.93', HGL= 9.67' (96)
TC=10.93', HGL= 9.40' (95)

TC=9.93', HGL= 7.36' (92)
TC=9.93', HGL= 7.10' (94)

TC=4.61', HGL= 6.48' (89)
TC=5.41', HGL= 6.31' (87)

TC=6.05', HGL= 6.33' (110)

TC=6.44', HGL= 6.44' (111)

TC=6.14', HGL= 6.74' (112)

TC=6.71, HGL= 7.23' (114)

TAIL WATER= 0'

OUTFALL 98

EXISTING CONDITIONS
CLOSED TIDE SCENARIO)
25-YR / 24-HR STORM EVENT

DATUM: NGVD '29

MID TIDE CONDITION

ZEV COHEN
& ASSOCIATES, INC.

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================================================================================
==== Basins ====================================================================
================================================================================

        Name: Basin 1                 Node: 82                    Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

    Unit Hydrograph: Uh256                    Peaking Factor: 256.0
      Rainfall File: Flmod             Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000               Time of Conc(min): 47.90
          Area(ac): 26.720                 Time Shift(hrs): 0.00
       Curve Number: 86.20              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: Basin 2                 Node: 108                   Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

    Unit Hydrograph: Uh256                    Peaking Factor: 256.0
      Rainfall File: Flmod             Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000               Time of Conc(min): 12.50
          Area(ac): 2.580                  Time Shift(hrs): 0.00
       Curve Number: 86.20              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: Basin 3                 Node: 65                    Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

    Unit Hydrograph: Uh256                    Peaking Factor: 256.0
      Rainfall File: Flmod             Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000               Time of Conc(min): 30.70
          Area(ac): 11.070                 Time Shift(hrs): 0.00
       Curve Number: 86.20              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: Basin 4                 Node: 112                   Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

    Unit Hydrograph: Uh256                    Peaking Factor: 256.0
      Rainfall File: Flmod             Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000               Time of Conc(min): 36.00
          Area(ac): 7.070                  Time Shift(hrs): 0.00
       Curve Number: 86.20              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


--------------------------------------------------------------------------------
        Name: Basin 5                 Node: 117                   Status: Onsite
       Group: BASE                    Type: SCS Unit Hydrograph CN

    Unit Hydrograph: Uh256                    Peaking Factor: 256.0
      Rainfall File: Flmod             Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000               Time of Conc(min): 26.40
          Area(ac): 27.980                 Time Shift(hrs): 0.00
       Curve Number: 86.20              Max Allowable Q(cfs): 999999.000
            DCIA(%): 0.00


================================================================================
```

==== Nodes ==========

Name: 108 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.510
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.51	0.0002
6.55	0.1000

Name: 109 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.690
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.69	0.0002
6.70	0.1000

Name: 110 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.050
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.05	0.0002
6.10	0.1000

Name: 111 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.440
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.00	0.0002
6.44	0.0002
6.45	0.1000

Name: 112 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.140
Type: Stage/Area

Stage(ft)	Area(ac)

0.00	0.0002
2.00	0.0002
4.00	0.0002
6.14	0.0002
6.15	0.1000

Name: 117 Base Flow(cfs): 0.00 Init Stage(ft): -1.000
Group: BASE Warn Stage(ft): 6.710
Type: Stage/Area

Stage(ft)	Area(ac)
-1.00	0.0002
1.00	0.0002
4.00	0.0002
6.00	0.0002
6.71	0.0002
6.75	0.1000

Name: 65 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 7.620
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
7.62	0.0002
7.65	0.1000

Name: 82 Base Flow(cfs): 0.00 Init Stage(ft): 9.000
Group: BASE Warn Stage(ft): 17.370
Type: Stage/Area

Stage(ft)	Area(ac)
9.00	0.0002
11.00	0.0002
13.00	0.0002
15.00	0.0002
17.37	0.0002
17.40	0.1000

Name: 83 Base Flow(cfs): 0.00 Init Stage(ft): 7.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 85 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 86 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 87 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 5.410
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
5.41	0.0002
5.45	0.1000

Name: 89 Base Flow(cfs): 0.00 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 4.610
Type: Stage/Area

Stage(ft)	Area(ac)
1.00	0.0002
3.00	0.0002
4.61	0.0002
4.65	0.1000

Name: 92 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 94 | Base Flow(cfs): 0.00 | Init Stage(ft): 4.000
Group: BASE | Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 98-E | Base Flow(cfs): 0.00 | Init Stage(ft): 2.000
Group: BASE | Warn Stage(ft): 2.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	2.00
12.00	2.00
18.00	2.00
24.00	2.00

Pipes

Name: 108 | From Node: 108 | Length(ft): 272.00
Group: BASE | To Node: 109 | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	3.560	3.040
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 109>87 | From Node: 109 | Length(ft): 400.00
Group: BASE | To Node: 87 | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	3.040	0.960
Manning's N:	0.022000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	110>111	From Node:	110	Length(ft): 150.00
Group:	BASE	To Node:	111	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.050	1.090		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	111>112	From Node:	111	Length(ft): 260.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.090	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	112>117	From Node:	112	Length(ft): 407.00
Group:	BASE	To Node:	117	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.640	0.110		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	117>98-E	From Node: 117	Length(ft):	500.00
Group:	BASE	To Node: 98-E	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	36.00	36.00	Entrance Loss Coef:	0.00
Rise(in):	36.00	36.00	Exit Loss Coef:	1.00
Invert(ft):	-0.800	-1.000	Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	65>94	From Node: 65	Length(ft):	670.00
Group:	BASE	To Node: 94	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	15.00	15.00	Entrance Loss Coef:	0.00
Rise(in):	15.00	15.00	Exit Loss Coef:	1.00
Invert(ft):	5.560	4.590	Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	82>83	From Node: 82	Length(ft):	278.00
Group:	BASE	To Node: 83	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	18.00	18.00	Entrance Loss Coef:	0.00
Rise(in):	18.00	18.00	Exit Loss Coef:	1.00
Invert(ft):	9.140	7.360	Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	83>86		From Node:	83	
Group:	BASE		To Node:	86	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	24.00	24.00			
Rise(in):	24.00	24.00			
Invert(ft):	7.360	7.290			
Manning's N:	0.012000	0.012000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	35.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	85>92		From Node:	85	
Group:	BASE		To Node:	92	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	24.00	24.00			
Rise(in):	24.00	24.00			
Invert(ft):	5.910	4.790			
Manning's N:	0.022000	0.022000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	266.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	86>85		From Node:	86	
Group:	BASE		To Node:	85	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	24.00	24.00			
Rise(in):	24.00	24.00			
Invert(ft):	7.290	7.220			
Manning's N:	0.012000	0.012000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	35.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>110	From Node:	87	Length(ft): 300.00
Group:	BASE	To Node:	110	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	1.050		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>112	From Node:	87	Length(ft): 798.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	89>87	From Node:	89	Length(ft): 85.00
Group:	BASE	To Node:	87	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.240	0.960		* Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name:	92>94	From Node: 92	Length(ft): 35.00
Group:	BASE	To Node: 94	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	24.00	24.00	Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00	Exit Loss Coef: 1.00
Invert(ft):	4.790	4.590	Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	94>89	From Node: 94	Length(ft): 171.00
Group:	BASE	To Node: 89	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	30.00	30.00	Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00	Exit Loss Coef: 1.00
Invert(ft):	4.590	1.240	Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

==========
==== Hydrology Simulations ====
==========

Name: 25 Year
Filename: Q:\07130\AdICPR\25 Year.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 9.50

Time(hrs)	Print Inc(min)
36.000	15.00

Name: 5 YR
Filename: Q:\15108\ICPR\5 YR.R32

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 6.20

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          15.00

-----------------------------------------------------------------------------------------------
         Name: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 5.00

Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.00

===============================================================================================
==== Routing Simulations ======================================================================
===============================================================================================

         Name: 25 Year             Hydrology Sim: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
   Time Step Optimizer: 0.000
       Start Time(hrs): 0.000                     End Time(hrs): 36.00
    Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
       Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes


-----------------------------------------------------------------------------------------------
         Name: 5 YR                Hydrology Sim: 5 YR
     Filename: Q:\15108\ICPR\5 YR.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
   Time Step Optimizer: 0.000
       Start Time(hrs): 0.000                     End Time(hrs): 36.00
    Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
       Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: Mean Annual Hydrology Sim: Mean Annual
Filename: Q:\07130\AdICPR\Mean Annual.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 0.000
Start Time(hrs): 0.000 End Time(hrs): 36.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
36.000	15.000

Group	Run
BASE	Yes

Simulation	Basin	Group	Time Max hrs	Flow Max cfs	Volume in	Volume ft3
25 Year	Basin 1	BASE	12.50	65.017	7.81	757734.49
25 Year	Basin 2	BASE	12.06	12.485	7.81	73181.07
25 Year	Basin 3	BASE	12.28	34.755	7.81	313796.30
25 Year	Basin 4	BASE	12.32	20.369	7.81	200538.83
25 Year	Basin 5	BASE	12.20	95.239	7.81	793595.58
5 YR	Basin 1	BASE	12.50	39.056	4.62	448002.52
5 YR	Basin 2	BASE	12.06	7.549	4.62	43267.51
5 YR	Basin 3	BASE	12.28	20.928	4.62	185519.47
5 YR	Basin 4	BASE	12.32	12.243	4.62	118566.40
5 YR	Basin 5	BASE	12.20	57.309	4.62	469202.46
Mean Annual	Basin 1	BASE	12.50	29.601	3.48	338021.40
Mean Annual	Basin 2	BASE	12.06	5.743	3.49	32645.66
Mean Annual	Basin 3	BASE	12.28	15.883	3.48	139971.25
Mean Annual	Basin 4	BASE	12.32	9.281	3.49	89459.24
Mean Annual	Basin 5	BASE	12.20	43.469	3.49	354015.65

Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

Woodridge Dr. Flooding - Mid Tide Condition
ZC 15108
Stormwater Calculations
12.23.15 HK/RD

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
108	BASE	25 Year	13.17	7.184	6.510	-0.0060	73274	12.00	11.890	11.59	2.749
109	BASE	25 Year	13.91	6.507	6.690	0.0048	137	11.59	2.749	11.62	2.629
110	BASE	25 Year	13.58	6.329	6.050	-0.0057	24314	18.01	10.115	18.01	10.120
111	BASE	25 Year	13.13	6.416	6.440	0.0050	139	18.01	10.120	18.00	10.124
112	BASE	25 Year	12.88	6.659	6.140	-0.0209	225766	14.54	22.815	13.91	23.703
117	BASE	25 Year	12.50	7.217	6.710	-0.0306	55203	12.25	79.136	12.50	64.124
65	BASE	25 Year	17.82	9.241	7.620	0.0050	234991	12.25	34.677	28.42	2.726
82	BASE	25 Year	15.97	19.510	17.370	-0.0410	310056	12.50	65.012	19.17	11.210
83	BASE	25 Year	15.65	9.861	10.930	-0.0045	125	19.17	11.210	15.65	11.373
85	BASE	25 Year	15.65	9.321	10.930	0.0050	128	15.09	11.363	18.21	11.220
86	BASE	25 Year	15.38	9.596	10.930	0.0050	117	15.65	11.373	15.09	11.363
87	BASE	25 Year	13.92	6.298	5.410	0.0048	96607	19.00	19.645	18.01	20.161
89	BASE	25 Year	15.09	6.399	4.610	0.0050	194447	21.39	13.635	19.01	19.231
92	BASE	25 Year	15.23	7.265	9.930	0.0050	128	18.21	11.220	19.17	11.227
94	BASE	25 Year	15.17	6.996	9.930	0.0027	199	21.39	13.626	21.39	13.635
98-E	BASE	25 Year	0.00	2.000	2.000	0.0000	215	12.50	64.124	0.00	0.000
108	BASE	5 YR	12.85	6.935	6.510	-0.0068	46158	12.00	7.149	11.77	2.963
109	BASE	5 YR	12.91	5.973	6.690	-0.0048	137	11.77	2.963	11.81	2.661
110	BASE	5 YR	12.28	5.757	6.050	-0.0050	141	15.95	9.139	15.79	9.286
111	BASE	5 YR	12.27	5.871	6.440	0.0050	139	15.79	9.286	16.00	9.151
112	BASE	5 YR	12.26	6.061	6.140	0.0045	205	14.49	20.688	14.51	20.717
117	BASE	5 YR	12.26	6.058	6.710	0.0127	176	12.28	57.924	12.26	56.556
65	BASE	5 YR	15.48	8.766	7.620	0.0049	166057	12.25	20.850	21.43	2.573
82	BASE	5 YR	15.07	18.770	17.370	-0.0313	202901	12.50	39.054	14.91	10.984
83	BASE	5 YR	12.67	9.511	10.930	0.0044	127	14.91	10.984	14.88	10.984
85	BASE	5 YR	14.23	8.571	10.930	0.0050	178	14.87	10.983	14.94	10.986
86	BASE	5 YR	19.39	9.267	10.930	0.0050	133	14.88	10.984	14.87	10.983
87	BASE	5 YR	12.90	5.670	5.410	0.0046	28333	16.43	18.381	15.95	18.217
89	BASE	5 YR	13.95	5.819	4.610	0.0050	131505	15.51	13.260	16.30	17.837
92	BASE	5 YR	14.04	6.706	9.930	0.0050	212	14.94	10.986	14.96	10.990
94	BASE	5 YR	14.02	6.432	9.930	-0.0034	295	15.51	13.251	15.51	13.260
98-E	BASE	5 YR	0.00	2.000	2.000	0.0000	215	12.26	56.556	0.00	0.000
108	BASE	Mean Annual	12.67	6.805	6.510	-0.0069	32103	12.00	5.418	11.84	3.181
109	BASE	Mean Annual	12.68	5.715	6.690	-0.0039	137	11.84	3.181	11.93	2.654
110	BASE	Mean Annual	12.54	5.336	6.050	-0.0054	141	15.29	8.708	15.29	8.870
111	BASE	Mean Annual	12.54	5.319	6.440	0.0057	139	15.29	8.870	15.25	8.723
112	BASE	Mean Annual	12.52	5.307	6.140	0.0039	205	14.03	19.404	14.25	19.436
117	BASE	Mean Annual	12.26	5.107	6.710	0.0127	176	12.25	49.563	12.26	49.482
65	BASE	Mean Annual	14.96	8.570	7.620	0.0050	137698	12.25	15.805	18.76	2.501
82	BASE	Mean Annual	14.50	18.433	17.370	-0.0304	153999	12.50	29.600	14.51	10.769
83	BASE	Mean Annual	13.06	9.510	10.930	-0.0044	127	14.51	10.769	14.50	10.769
85	BASE	Mean Annual	14.51	8.437	10.930	0.0050	190	14.50	10.769	14.52	10.769
86	BASE	Mean Annual	16.60	9.268	10.930	0.0050	133	14.50	10.769	14.50	10.769
87	BASE	Mean Annual	12.68	5.370	5.410	0.0046	202	15.66	17.543	15.29	17.359
89	BASE	Mean Annual	13.65	5.521	4.610	0.0050	99204	14.66	12.958	15.29	17.016

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
92	BASE	Mean Annual	14.66	6.610	9.930	0.0049	252	14.52	10.769	14.51	10.769
94	BASE	Mean Annual	14.66	6.315	9.930	-0.0033	358	14.67	12.958	14.66	12.958
98-E	BASE	Mean Annual	0.00	2.000	2.000	0.0000	215	12.26	49.482	0.00	0.000

Woodridge Dr. Flooding - Mid Tide Condition
ZC 15108
Stormwater Calculations
12.23.15 HK/RD

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
108	BASE	25 Year	11.59	2.75	0.097	13.17	7.184	13.91	6.507
109>87	BASE	25 Year	11.62	2.63	0.533	13.91	6.507	13.92	6.298
110>111	BASE	25 Year	18.01	10.12	1.736	13.58	6.329	13.13	6.416
111>112	BASE	25 Year	18.00	10.12	-0.869	13.13	6.416	12.88	6.659
112>117	BASE	25 Year	13.91	23.70	4.056	12.88	6.659	12.50	7.217
117>98-E	BASE	25 Year	12.50	64.12	-17.774	12.50	7.217	0.00	2.000
65>94	BASE	25 Year	28.42	2.73	0.011	17.82	9.241	15.17	6.996
82>83	BASE	25 Year	19.17	11.21	0.075	15.97	19.510	15.65	9.861
83>86	BASE	25 Year	15.65	11.37	-0.194	15.65	9.861	15.38	9.596
85>92	BASE	25 Year	18.21	11.22	-0.025	15.65	9.321	15.23	7.265
86>85	BASE	25 Year	15.09	11.36	-0.146	15.38	9.596	15.65	9.321
87>110	BASE	25 Year	18.01	10.12	-0.569	13.92	6.298	13.58	6.329
87>112	BASE	25 Year	18.01	10.05	0.290	13.92	6.298	12.88	6.659
89>87	BASE	25 Year	19.01	19.23	-1.257	15.09	6.399	13.92	6.298
92>94	BASE	25 Year	19.17	11.23	0.489	15.23	7.265	15.17	6.996
94>89	BASE	25 Year	21.39	13.63	-0.026	15.17	6.996	15.09	6.399
108	BASE	5 YR	11.77	2.96	0.040	12.85	6.935	12.91	5.973
109>87	BASE	5 YR	11.81	2.66	0.463	12.91	5.973	12.90	5.670
110>111	BASE	5 YR	15.79	9.29	2.166	12.28	5.757	12.27	5.871
111>112	BASE	5 YR	16.00	9.15	1.346	12.27	5.871	12.26	6.061
112>117	BASE	5 YR	14.51	20.72	-1.206	12.26	6.061	12.26	6.058
117>98-E	BASE	5 YR	12.26	56.56	-17.774	12.26	6.058	0.00	2.000
65>94	BASE	5 YR	21.43	2.57	0.011	15.48	8.766	14.02	6.432
82>83	BASE	5 YR	14.91	10.98	0.038	15.07	18.770	12.67	9.511
83>86	BASE	5 YR	14.88	10.98	0.192	12.67	9.511	19.39	9.267
85>92	BASE	5 YR	14.94	10.99	-0.023	14.23	8.571	14.04	6.706
86>85	BASE	5 YR	14.87	10.98	-0.042	19.39	9.267	14.23	8.571
87>110	BASE	5 YR	15.95	9.14	1.106	12.90	5.670	12.28	5.757
87>112	BASE	5 YR	16.00	9.08	0.233	12.90	5.670	12.26	6.061
89>87	BASE	5 YR	16.30	17.84	0.827	13.95	5.819	12.90	5.670
92>94	BASE	5 YR	14.96	10.99	0.789	14.04	6.706	14.02	6.432
94>89	BASE	5 YR	15.51	13.26	-0.029	14.02	6.432	13.95	5.819
108	BASE	Mean Annual	11.84	3.18	0.033	12.67	6.805	12.68	5.715
109>87	BASE	Mean Annual	11.93	2.65	0.252	12.68	5.715	12.68	5.370
110>111	BASE	Mean Annual	15.29	8.87	2.259	12.54	5.336	12.54	5.319
111>112	BASE	Mean Annual	15.25	8.72	1.698	12.54	5.319	12.52	5.307
112>117	BASE	Mean Annual	14.25	19.44	1.304	12.52	5.307	12.26	5.107
117>98-E	BASE	Mean Annual	12.26	49.48	-17.774	12.26	5.107	0.00	2.000
65>94	BASE	Mean Annual	18.76	2.50	0.011	14.96	8.570	14.66	6.315
82>83	BASE	Mean Annual	14.51	10.77	0.041	14.50	18.433	13.06	9.510
83>86	BASE	Mean Annual	14.50	10.77	0.192	13.06	9.510	16.60	9.268
85>92	BASE	Mean Annual	14.52	10.77	-0.024	14.51	8.437	14.66	6.610
86>85	BASE	Mean Annual	14.50	10.77	-0.044	16.60	9.268	14.51	8.437
87>110	BASE	Mean Annual	15.29	8.71	1.596	12.68	5.370	12.54	5.336
87>112	BASE	Mean Annual	15.29	8.65	-0.239	12.68	5.370	12.52	5.307

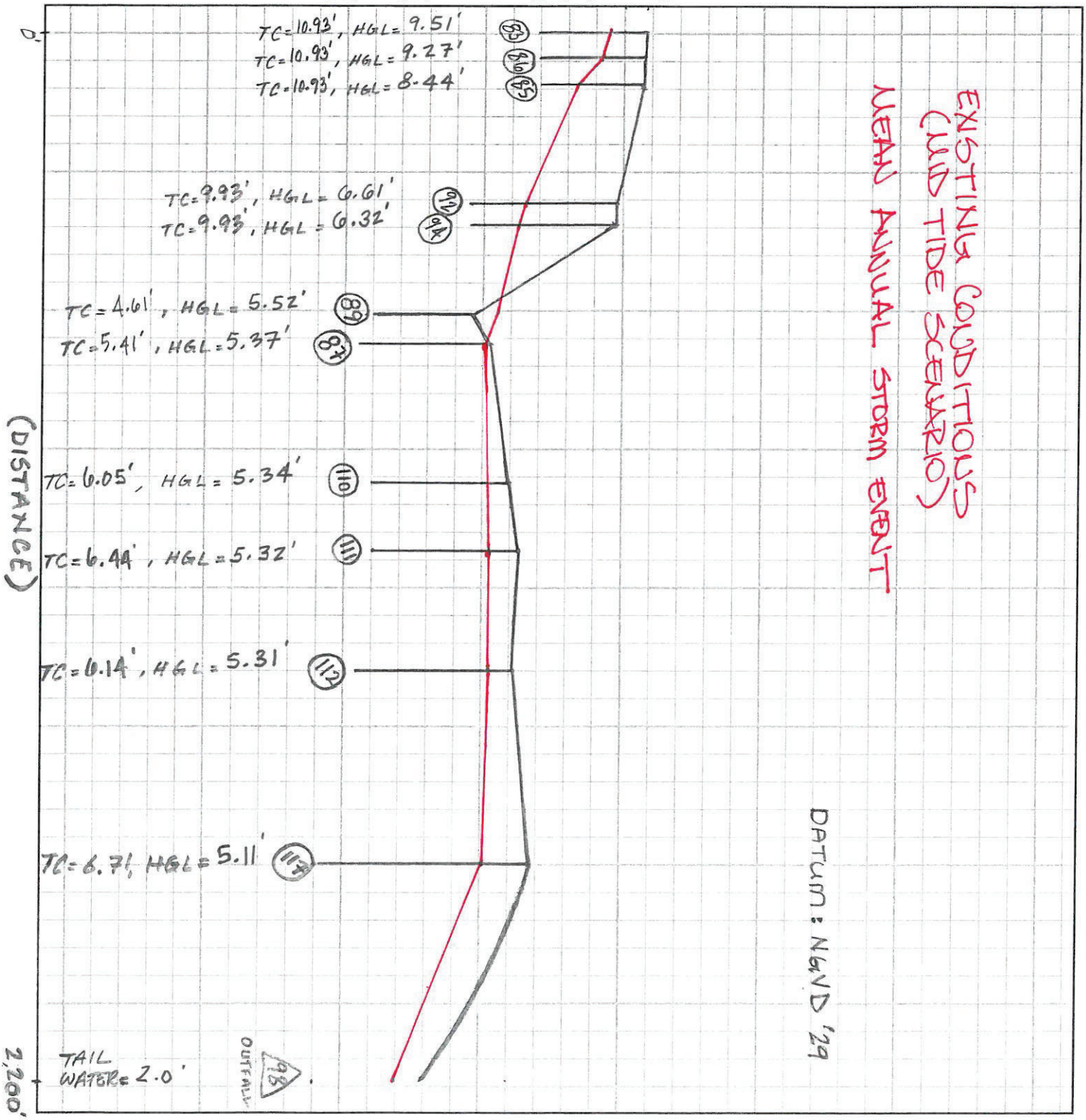
Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
89>87	BASE	Mean Annual	15.29	17.02	-1.092	13.65	5.521	12.68	5.370
92>94	BASE	Mean Annual	14.51	10.77	0.601	14.66	6.610	14.66	6.315
94>89	BASE	Mean Annual	14.66	12.96	-0.030	14.66	6.315	14.66	2.312

Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

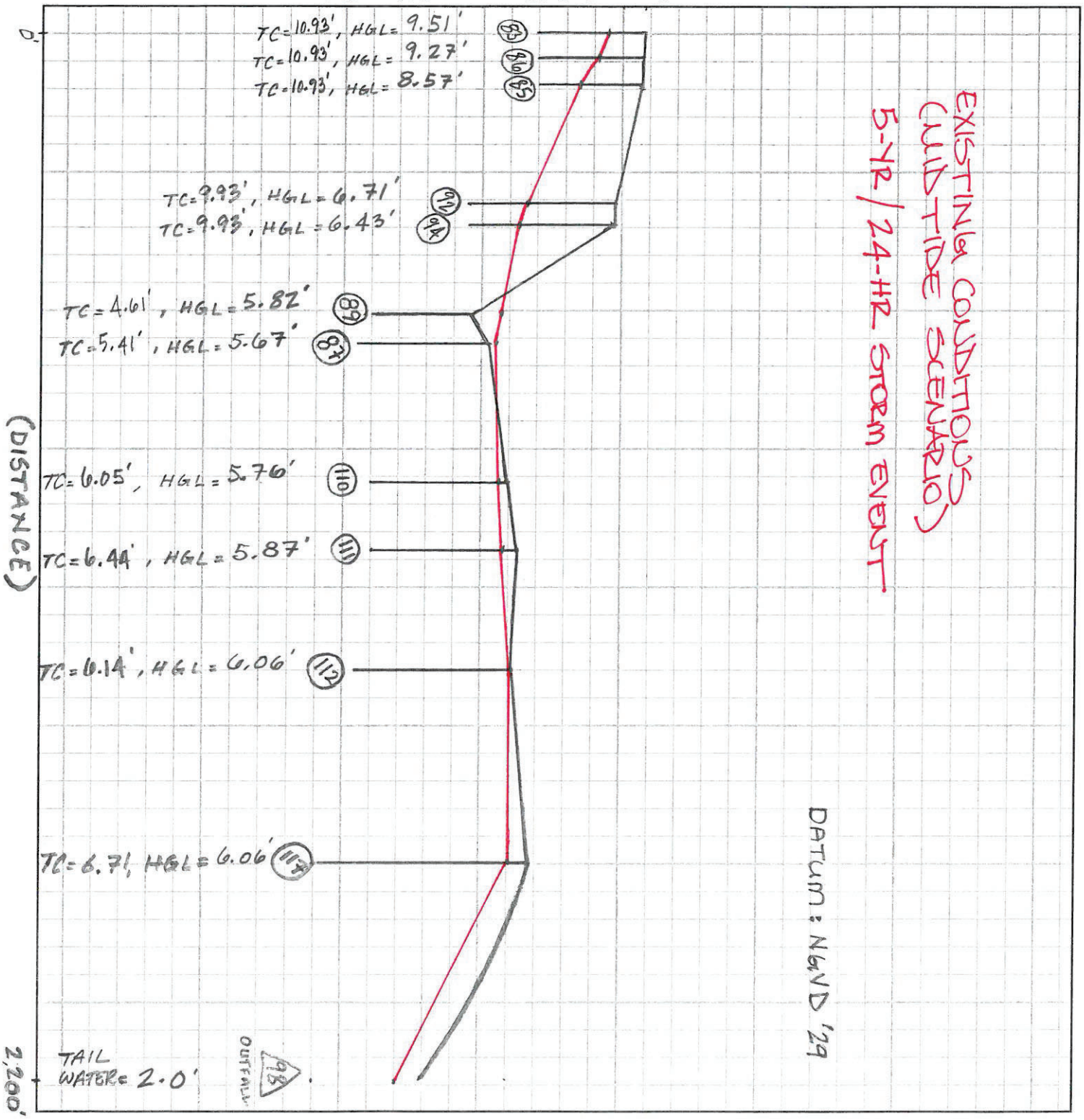
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WOODRIDGE DR.
Project Name FLOODING ANALYSIS File No. 15108
Date 12/15/2015 By H.K. Sheet ___ of ___
Description HGL ANALSIS



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WOODRIDGE DR.
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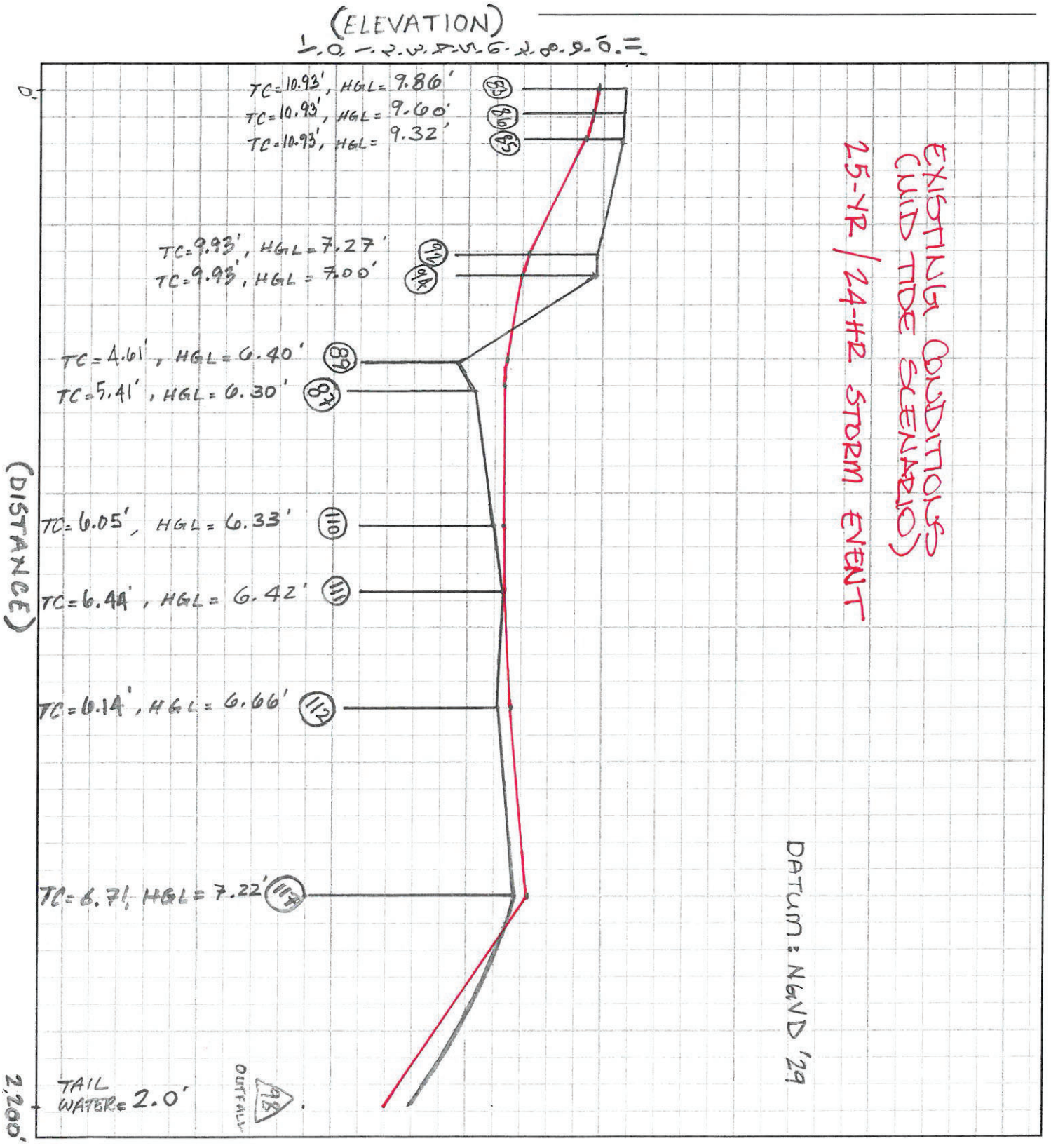
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Landscape Architecture

WOODRIDGE DR.

Project Name FLOODING ANALYSIS File No. 15108

Date 12/15/2015 By H.K. Sheet ___ of ___

Description HGL ANALSIS



HIGH TIDE CONDITION

ZEV COHEN
& ASSOCIATES, INC.

300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
Engineers • Planners • Landscape Architecture

==========
==== Basins ====
==========

Name: Basin 1 | Node: 82 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 | Peaking Factor: 256.0
Rainfall File: Flmod | Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 47.90
Area(ac): 26.720 | Time Shift(hrs): 0.00
Curve Number: 86.20 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: Basin 2 | Node: 108 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 | Peaking Factor: 256.0
Rainfall File: Flmod | Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 12.50
Area(ac): 2.580 | Time Shift(hrs): 0.00
Curve Number: 86.20 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: Basin 3 | Node: 65 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 | Peaking Factor: 256.0
Rainfall File: Flmod | Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 30.70
Area(ac): 11.070 | Time Shift(hrs): 0.00
Curve Number: 86.20 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: Basin 4 | Node: 112 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 | Peaking Factor: 256.0
Rainfall File: Flmod | Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 36.00
Area(ac): 7.070 | Time Shift(hrs): 0.00
Curve Number: 86.20 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: Basin 5 | Node: 117 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 | Peaking Factor: 256.0
Rainfall File: Flmod | Storm Duration(hrs): 24.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 26.40
Area(ac): 27.980 | Time Shift(hrs): 0.00
Curve Number: 86.20 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

==========

==== Nodes ==
==

Name: 108 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.510
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.51	0.0002
6.55	0.1000

Name: 109 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.690
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.69	0.0002
6.70	0.1000

Name: 110 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.050
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.05	0.0002
6.10	0.1000

Name: 111 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.440
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.00	0.0002
6.44	0.0002
6.45	0.1000

Name: 112 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.140
Type: Stage/Area

Stage(ft)	Area(ac)

0.00	0.0002
2.00	0.0002
4.00	0.0002
6.14	0.0002
6.15	0.1000

Name: 117 Base Flow(cfs): 0.00 Init Stage(ft): -1.000
Group: BASE Warn Stage(ft): 6.710
Type: Stage/Area

Stage(ft)	Area(ac)
-1.00	0.0002
1.00	0.0002
4.00	0.0002
6.00	0.0002
6.71	0.0002
6.75	0.1000

Name: 65 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 7.620
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
7.62	0.0002
7.65	0.1000

Name: 82 Base Flow(cfs): 0.00 Init Stage(ft): 9.000
Group: BASE Warn Stage(ft): 17.370
Type: Stage/Area

Stage(ft)	Area(ac)
9.00	0.0002
11.00	0.0002
13.00	0.0002
15.00	0.0002
17.37	0.0002
17.40	0.1000

Name: 83 Base Flow(cfs): 0.00 Init Stage(ft): 7.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 85 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 86 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 87 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 5.410
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
5.41	0.0002
5.45	0.1000

Name: 89 Base Flow(cfs): 0.00 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 4.610
Type: Stage/Area

Stage(ft)	Area(ac)
1.00	0.0002
3.00	0.0002
4.61	0.0002
4.65	0.1000

Name: 92 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 94 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 98-E Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 4.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	4.00
12.00	4.00
18.00	4.00
24.00	4.00

Pipes

Name: 108 From Node: 108 Length(ft): 272.00
Group: BASE To Node: 109 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	3.560	3.040
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 109>87 From Node: 109 Length(ft): 400.00
Group: BASE To Node: 87 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	3.040	0.960
Manning's N:	0.022000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	110>111	From Node:	110	Length(ft): 150.00
Group:	BASE	To Node:	111	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.050	1.090		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	111>112	From Node:	111	Length(ft): 260.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.090	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	112>117	From Node:	112	Length(ft): 407.00
Group:	BASE	To Node:	117	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.640	0.110		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 117>98-E | From Node: 117 | Length(ft): 500.00
Group: BASE | To Node: 98-E | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	36.00	36.00
Rise(in):	36.00	36.00
Invert(ft):	-0.800	-1.000
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 65>94 | From Node: 65 | Length(ft): 670.00
Group: BASE | To Node: 94 | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	5.560	4.590
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 82>83 | From Node: 82 | Length(ft): 278.00
Group: BASE | To Node: 83 | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	9.140	7.360
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	83>86	From Node: 83	Length(ft):	35.00
Group:	BASE	To Node: 86	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	24.00	24.00	Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00	Exit Loss Coef:	1.00
Invert(ft):	7.360	4.590	Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	85>92	From Node: 85	Length(ft):	266.00
Group:	BASE	To Node: 92	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	24.00	24.00	Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00	Exit Loss Coef:	1.00
Invert(ft):	5.910	4.490	Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	86>85	From Node: 86	Length(ft):	35.00
Group:	BASE	To Node: 85	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	24.00	24.00	Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00	Exit Loss Coef:	1.00
Invert(ft):	7.290	7.220	Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>110	From Node: 87	Length(ft):	300.00
Group:	BASE	To Node: 110	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	30.00	30.00	Entrance Loss Coef:	0.00
Rise(in):	30.00	30.00	Exit Loss Coef:	1.00
Invert(ft):	0.960	1.050	Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>112	From Node: 87	Length(ft):	798.00
Group:	BASE	To Node: 112	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	30.00	30.00	Entrance Loss Coef:	0.00
Rise(in):	30.00	30.00	Exit Loss Coef:	1.00
Invert(ft):	0.960	0.640	Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	89>87	From Node: 89	Length(ft):	85.00
Group:	BASE	To Node: 87	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	30.00	30.00	Entrance Loss Coef:	0.00
Rise(in):	30.00	30.00	Exit Loss Coef:	1.00
Invert(ft):	1.240	0.960	Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name:	92>94	From Node:	92
Group:	BASE	To Node:	94

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	4.790	4.590
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Length(ft):	35.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	94>89	From Node:	94
Group:	BASE	To Node:	89

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	30.00	30.00
Rise(in):	30.00	30.00
Invert(ft):	4.590	1.240
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Length(ft):	171.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

==== Hydrology Simulations ====

Name: 25 Year
Filename: Q:\07130\AdICPR\25 Year.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 9.50

Time(hrs)	Print Inc(min)
36.000	15.00

Name: 5 YR
Filename: Q:\15108\ICPR\5 YR.R32

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 6.20

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          15.00

-------------------------------------------------------------------------------------------------------
         Name: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 5.00

Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.00

=======================================================================================
==== Routing Simulations ==============================================================
=======================================================================================

         Name: 25 Year             Hydrology Sim: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
        Start Time(hrs): 0.000                    End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------------
         Name: 5 YR                Hydrology Sim: 5 YR
     Filename: Q:\15108\ICPR\5 YR.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
        Start Time(hrs): 0.000                    End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: Mean Annual Hydrology Sim: Mean Annual
Filename: Q:\07130\AdICPR\Mean Annual.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 0.000
Start Time(hrs): 0.000 End Time(hrs): 36.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
36.000	15.000

Group	Run
BASE	Yes

Simulation	Basin	Group	Time Max hrs	Flow Max cfs	Volume in	Volume ft3
25 Year	Basin 1	BASE	12.50	65.017	7.81	757734.49
25 Year	Basin 2	BASE	12.06	12.485	7.81	73181.07
25 Year	Basin 3	BASE	12.28	34.755	7.81	313796.30
25 Year	Basin 4	BASE	12.32	20.369	7.81	200538.83
25 Year	Basin 5	BASE	12.20	95.239	7.81	793595.58
5 YR	Basin 1	BASE	12.50	39.056	4.62	448002.52
5 YR	Basin 2	BASE	12.06	7.549	4.62	43267.51
5 YR	Basin 3	BASE	12.28	20.928	4.62	185519.47
5 YR	Basin 4	BASE	12.32	12.243	4.62	118566.40
5 YR	Basin 5	BASE	12.20	57.309	4.62	469202.46
Mean Annual	Basin 1	BASE	12.50	29.601	3.48	338021.40
Mean Annual	Basin 2	BASE	12.06	5.743	3.49	32645.66
Mean Annual	Basin 3	BASE	12.28	15.883	3.48	139971.25
Mean Annual	Basin 4	BASE	12.32	9.281	3.49	89459.24
Mean Annual	Basin 5	BASE	12.20	43.469	3.49	354015.65

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Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
108	BASE	25 Year	13.19	7.198	6.510	0.0050	74757	12.00	11.892	11.54	2.263
109	BASE	25 Year	15.01	6.690	6.690	-0.0050	137	11.54	2.263	11.61	2.220
110	BASE	25 Year	14.32	6.523	6.050	0.0092	41198	25.26	8.255	15.30	8.398
111	BASE	25 Year	13.94	6.552	6.440	0.0063	48676	15.30	8.398	15.29	8.415
112	BASE	25 Year	13.31	6.787	6.140	-0.0129	281506	15.29	18.232	14.94	20.562
117	BASE	25 Year	12.62	7.527	6.710	0.0411	88863	12.25	77.135	12.62	52.723
65	BASE	25 Year	18.71	9.253	7.620	0.0024	236675	12.25	34.659	31.47	2.700
82	BASE	25 Year	15.99	19.512	17.370	-0.0411	310436	12.50	65.001	13.60	11.103
83	BASE	25 Year	16.86	10.116	10.930	0.0083	125	13.60	11.103	13.81	11.203
85	BASE	25 Year	16.95	9.592	10.930	-0.0070	128	16.77	11.227	13.81	11.072
86	BASE	25 Year	16.77	9.860	10.930	-0.0162	117	13.81	11.203	16.77	11.227
87	BASE	25 Year	15.14	6.546	5.410	0.0046	123518	20.70	15.357	25.26	16.452
89	BASE	25 Year	17.64	6.729	4.610	-0.0084	230281	13.47	13.191	26.82	15.443
92	BASE	25 Year	17.41	7.594	9.930	0.0039	128	13.81	11.072	13.60	11.060
94	BASE	25 Year	17.50	7.332	9.930	-0.0048	146	13.50	13.215	13.47	13.191
98-E	BASE	25 Year	0.00	4.000	4.000	0.0000	207	12.62	52.723	0.00	0.000
108	BASE	5 YR	12.92	6.959	6.510	-0.0044	48766	12.00	7.148	11.69	2.517
109	BASE	5 YR	13.07	6.249	6.690	0.0047	137	11.69	2.517	11.72	2.458
110	BASE	5 YR	12.93	6.113	6.050	-0.0097	5490	19.04	7.321	19.20	7.515
111	BASE	5 YR	12.74	6.197	6.440	-0.0086	139	19.20	7.515	19.04	7.362
112	BASE	5 YR	12.60	6.371	6.140	-0.0171	100342	14.75	15.860	14.75	15.886
117	BASE	5 YR	12.25	6.634	6.710	0.0411	176	12.25	45.635	12.25	45.559
65	BASE	5 YR	15.86	8.775	7.620	-0.0045	167440	12.25	20.841	23.93	2.549
82	BASE	5 YR	15.08	18.771	17.370	-0.0315	202995	12.50	39.047	14.76	10.930
83	BASE	5 YR	15.68	9.565	10.930	0.0071	125	14.76	10.930	17.08	10.987
85	BASE	5 YR	15.81	9.009	10.930	-0.0055	143	16.24	11.033	14.90	10.926
86	BASE	5 YR	15.60	9.312	10.930	-0.0141	121	17.08	10.987	16.24	11.033
87	BASE	5 YR	13.06	6.027	5.410	0.0046	67133	19.50	14.173	19.04	14.537
89	BASE	5 YR	16.24	6.238	4.610	-0.0076	177014	14.76	12.984	20.89	13.919
92	BASE	5 YR	16.10	7.050	9.930	-0.0036	128	14.90	10.926	15.24	10.925
94	BASE	5 YR	16.13	6.794	9.930	-0.0047	242	14.69	12.988	14.76	12.984
98-E	BASE	5 YR	0.00	4.000	4.000	0.0000	207	12.25	45.559	0.00	0.000
108	BASE	Mean Annual	12.74	6.841	6.510	-0.0049	35942	12.00	5.418	11.79	2.564
109	BASE	Mean Annual	13.22	6.032	6.690	-0.0049	137	11.79	2.564	11.82	2.498
110	BASE	Mean Annual	12.35	5.788	6.050	0.0092	141	17.90	6.949	18.12	7.096
111	BASE	Mean Annual	12.27	5.888	6.440	0.0063	139	18.12	7.096	17.04	6.993
112	BASE	Mean Annual	12.26	6.062	6.140	0.0129	205	14.50	14.972	14.54	14.993
117	BASE	Mean Annual	12.26	6.081	6.710	0.0411	176	12.25	40.553	12.26	40.495
65	BASE	Mean Annual	15.07	8.575	7.620	-0.0045	138485	12.25	15.806	20.41	2.477
82	BASE	Mean Annual	14.49	18.430	17.370	-0.0305	153678	12.50	29.601	14.38	10.810
83	BASE	Mean Annual	12.54	9.486	10.930	-0.0061	125	14.38	10.810	14.39	10.810
85	BASE	Mean Annual	15.09	8.742	10.930	0.0046	153	14.41	10.809	14.51	10.807
86	BASE	Mean Annual	12.54	9.248	10.930	-0.0140	131	14.39	10.810	14.41	10.809
87	BASE	Mean Annual	13.49	5.792	5.410	-0.0047	41560	18.36	13.637	17.90	13.811
89	BASE	Mean Annual	15.66	6.012	4.610	0.0059	152460	14.53	12.871	18.31	13.402

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
92	BASE	Mean Annual	15.37	6.824	9.930	-0.0031	129	14.51	10.807	14.57	10.806
94	BASE	Mean Annual	15.45	6.574	9.930	0.0039	271	14.28	12.875	14.53	12.871
98-E	BASE	Mean Annual	0.00	4.000	4.000	0.0000	207	12.26	40.495	0.00	0.000

Woodridge Dr. Flooding Analysis - High Tide Condition
ZC 15108
Stormwater Calculations
12.23.15 HK/RD

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
108	BASE	25 Year	11.54	2.26	0.132	13.19	7.198	15.01	6.690
109>87	BASE	25 Year	11.61	2.22	0.369	15.01	6.690	15.14	6.546
110>111	BASE	25 Year	15.30	8.40	-5.130	14.32	6.523	13.94	6.552
111>112	BASE	25 Year	15.29	8.42	1.786	13.94	6.552	13.31	6.787
112>117	BASE	25 Year	14.94	20.56	1.669	13.31	6.787	12.62	7.527
117>98-E	BASE	25 Year	12.62	52.72	-35.763	12.62	7.527	0.00	4.000
65>94	BASE	25 Year	31.47	2.70	0.005	18.71	9.253	17.50	7.332
82>83	BASE	25 Year	13.60	11.10	0.056	15.99	19.512	16.86	10.116
83>86	BASE	25 Year	13.81	11.20	6.769	16.86	10.116	16.77	9.860
85>92	BASE	25 Year	13.81	11.07	0.028	16.95	9.592	17.41	7.594
86>85	BASE	25 Year	16.77	11.23	0.157	16.77	9.860	16.95	9.592
87>110	BASE	25 Year	25.26	8.26	1.603	15.14	6.546	14.32	6.523
87>112	BASE	25 Year	25.26	8.20	0.382	15.14	6.546	13.31	6.787
89>87	BASE	25 Year	26.82	15.44	1.578	17.64	6.729	15.14	6.546
92>94	BASE	25 Year	13.60	11.06	1.845	17.41	7.594	17.50	7.332
94>89	BASE	25 Year	13.47	13.19	-0.209	17.50	7.332	17.64	6.729
108	BASE	5 YR	11.69	2.52	0.133	12.92	6.959	13.07	6.249
109>87	BASE	5 YR	11.72	2.46	0.514	13.07	6.249	13.06	6.027
110>111	BASE	5 YR	19.20	7.51	-5.130	12.93	6.113	12.74	6.197
111>112	BASE	5 YR	19.04	7.36	1.764	12.74	6.197	12.60	6.371
112>117	BASE	5 YR	14.75	15.89	-1.406	12.60	6.371	12.25	6.634
117>98-E	BASE	5 YR	12.25	45.56	-35.763	12.25	6.634	0.00	4.000
65>94	BASE	5 YR	23.93	2.55	0.011	15.86	8.775	16.13	6.794
82>83	BASE	5 YR	14.76	10.93	0.044	15.08	18.771	15.68	9.565
83>86	BASE	5 YR	17.08	10.99	6.676	15.68	9.565	15.60	9.312
85>92	BASE	5 YR	14.90	10.93	0.026	15.81	9.009	16.10	7.050
86>85	BASE	5 YR	16.24	11.03	0.111	15.60	9.312	15.81	9.009
87>110	BASE	5 YR	19.04	7.32	1.580	13.06	6.027	12.93	6.113
87>112	BASE	5 YR	19.04	7.22	0.303	13.06	6.027	12.60	6.371
89>87	BASE	5 YR	20.89	13.92	1.619	16.24	6.238	13.06	6.027
92>94	BASE	5 YR	15.24	10.93	0.610	16.10	7.050	16.13	6.794
94>89	BASE	5 YR	14.76	12.98	0.120	16.13	6.794	16.24	6.238
108	BASE	Mean Annual	11.79	2.56	0.216	12.74	6.841	13.22	6.032
109>87	BASE	Mean Annual	11.82	2.50	0.517	13.22	6.032	13.49	5.792
110>111	BASE	Mean Annual	18.12	7.10	-5.130	12.35	5.788	12.27	5.888
111>112	BASE	Mean Annual	17.04	6.99	1.764	12.27	5.888	12.26	6.062
112>117	BASE	Mean Annual	14.54	14.99	-2.121	12.26	6.062	12.26	6.081
117>98-E	BASE	Mean Annual	12.26	40.50	-35.763	12.26	6.081	0.00	4.000
65>94	BASE	Mean Annual	20.41	2.48	0.011	15.07	8.575	15.45	6.574
82>83	BASE	Mean Annual	14.38	10.81	0.041	14.49	18.430	12.54	9.486
83>86	BASE	Mean Annual	14.39	10.81	-5.485	12.54	9.486	12.54	9.248
85>92	BASE	Mean Annual	14.51	10.81	-0.024	15.09	8.742	15.37	6.824
86>85	BASE	Mean Annual	14.41	10.81	-0.095	12.54	9.248	15.09	8.742
87>110	BASE	Mean Annual	17.90	6.95	1.583	13.49	5.792	12.35	5.788
87>112	BASE	Mean Annual	18.02	6.87	0.303	13.49	5.792	12.26	6.062

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Links Min/Max Report

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
89>87	BASE	Mean Annual	18.31	13.40	1.588	15.66	6.012	13.49	5.792
92>94	BASE	Mean Annual	14.57	10.81	-0.421	15.37	6.824	15.45	6.574
94>89	BASE	Mean Annual	14.53	12.87	0.101	15.45	6.574	15.66	6.012

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ZEVCOHEN & ASSOCIATES INC
Civil Engineering • Environmental • Planning
Landscape Architecture

WOODRIDGE DR.

Project Name FLOODING ANALYSIS File No. 15108

Date 12/15/2015 By H.K. Sheet ___ of ___

Description HGL ANALSIS

(ELEVATION)

1.0 - 2.0 - 3.0 - 4.0 - 5.0 - 6.0 - 7.0 - 8.0 - 9.0 - 0.=

0'

TC=10.93', HGL= 9.49' (95)
TC=10.93', HGL= 9.25' (96)
TC=10.93', HGL= 8.74' (95)

TC=9.93', HGL=6.82' (91)
TC=9.93', HGL=6.57' (94)

TC=4.61', HGL=6.01' (89)
TC=5.41', HGL=5.79' (87)

TC=6.05', HGL=5.79' (110)

TC=6.44', HGL=5.89' (111)

TC=6.14', HGL=6.06' (112)

TC=6.71, HGL=6.08' (114)

TAIL WATER=4.0'

OUTFALL (98)

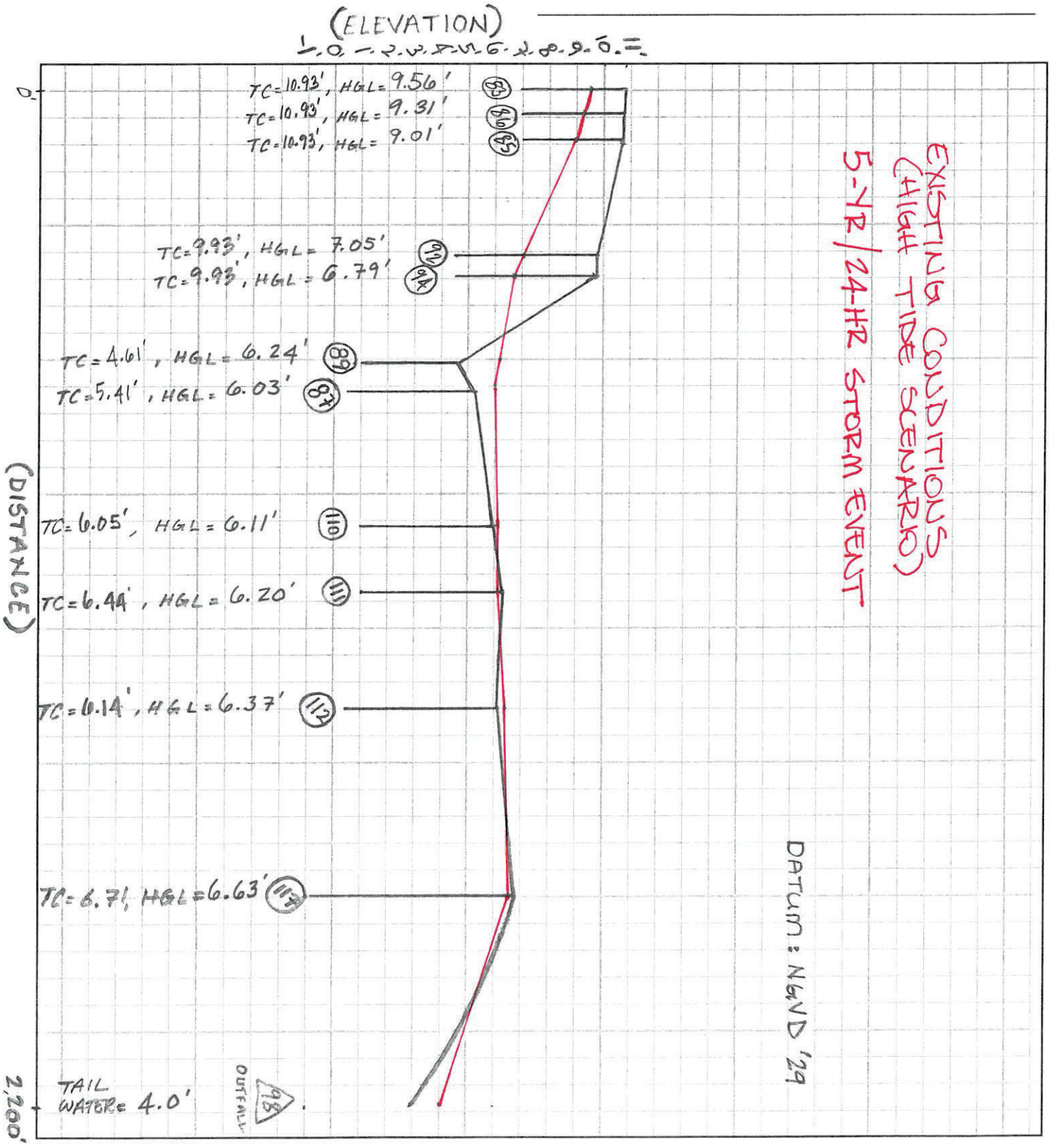
(DISTANCE)

2,200'

EXISTING CONDITIONS (HIGH TIDE SCENARIO)

MEAN ANNUAL STORM EVENT

DATUM: NGVD '29

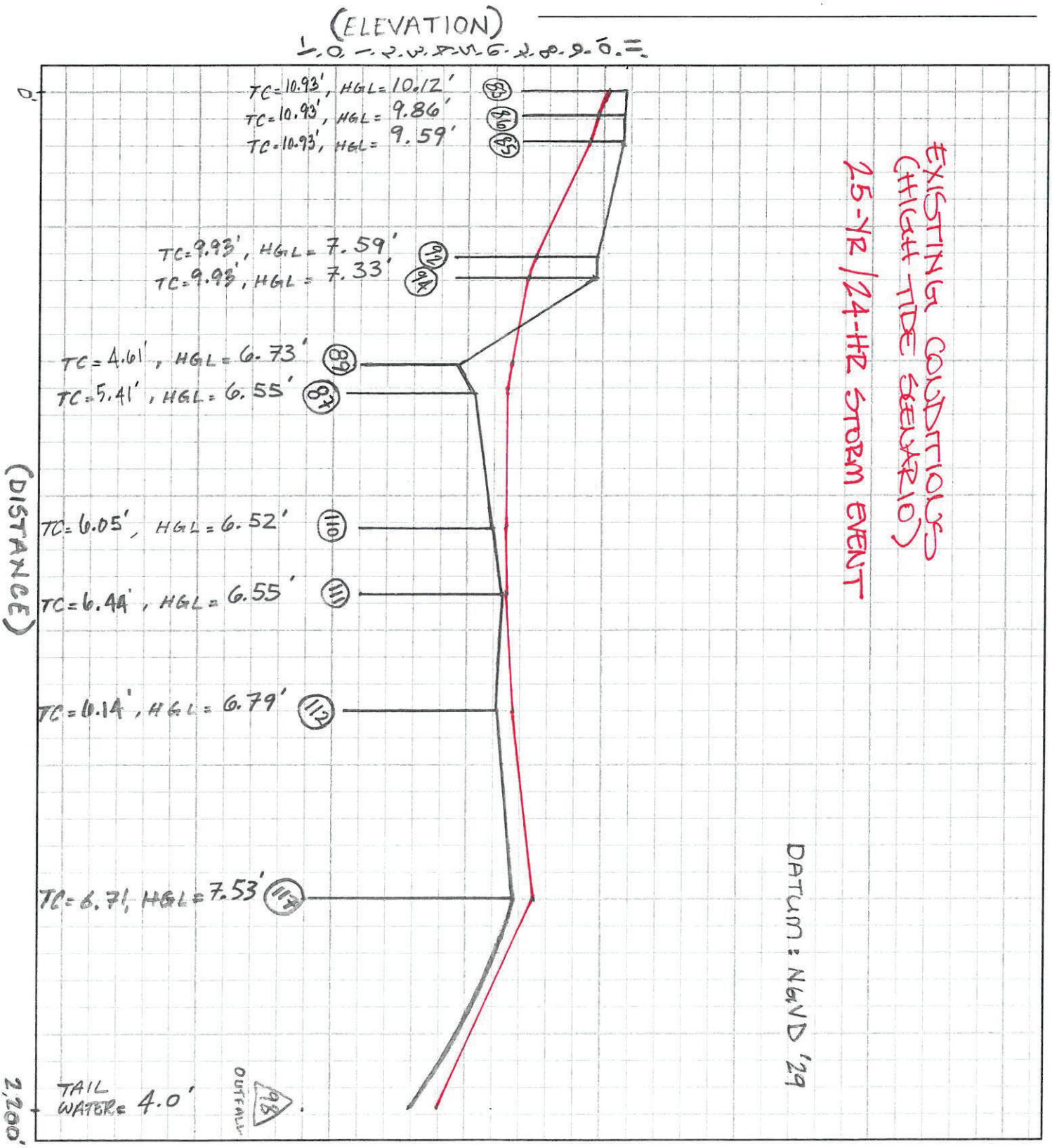

(ELEVATION)
1.0 - 2.0 - 3.0 - 4.0 - 5.0 - 6.0 - 7.0 - 8.0 - 9.0 - 10.0
0'
TC=10.93', HGL=9.56'
TC=10.93', HGL=9.31'
TC=10.93', HGL=9.01'
TC=9.93', HGL=7.05'
TC=9.93', HGL=6.79'
TC=4.61', HGL=6.24'
TC=5.41', HGL=6.03'
TC=6.05', HGL=6.11'
TC=6.44', HGL=6.20'
TC=6.14', HGL=6.37'
TC=6.71, HGL=6.63'
TAIL WATER=4.0'
OUTFALL
(DISTANCE)
2,200'
EXISTING CONDITIONS (HIGH TIDE SCENARIO)
5-YR/24-HR STORM EVENT
DATUM: NGVD '29

WOODRIDGE DR.

Project Name FLOODING ANALYSIS File No. 15108

Date 12/15/2015 By H.K. Sheet ___ of ___

Description HGL ANALSIS



V. STORMWATER ROUTING PROGRAM
IMPROVED CONDITIONS

MEAN ANNUAL RAIN EVENT
5 YEAR 24 HOUR RAIN EVENT
25 YEAR 24 HOUR RAIN EVENT

ZEV COHEN
& ASSOCIATES, INC.

300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
Engineers • Planners • Landscape Architecture

LOW TIDE CONDITION

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==========
==== Basins ====
==========

Name: Basin 1 | Node: 82 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	47.90
Area(ac):	26.720	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 2 | Node: 108 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	12.50
Area(ac):	2.580	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 3 | Node: 65 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	30.70
Area(ac):	11.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 4 | Node: 112 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	36.00
Area(ac):	7.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 5 | Node: 117 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	26.40
Area(ac):	27.980	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

==========

==== Nodes ==========

Name: 108 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.510
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.51	0.0002
6.55	0.1000

Name: 109 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.690
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.69	0.0002
6.70	0.1000

Name: 110 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.050
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.05	0.0002
6.10	0.1000

Name: 111 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.440
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.00	0.0002
6.44	0.0002
6.45	0.1000

Name: 112 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.140
Type: Stage/Area

Stage(ft)	Area(ac)

0.00	0.0002
2.00	0.0002
4.00	0.0002
6.14	0.0002
6.15	0.1000

Name: 117 Base Flow(cfs): 0.00 Init Stage(ft): -1.000
Group: BASE Warn Stage(ft): 6.710
Type: Stage/Area

Stage(ft)	Area(ac)
-1.00	0.0002
1.00	0.0002
4.00	0.0002
6.00	0.0002
6.71	0.0002
6.75	0.1000

Name: 65 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 7.620
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
7.62	0.0002
7.65	0.1000

Name: 82 Base Flow(cfs): 0.00 Init Stage(ft): 9.000
Group: BASE Warn Stage(ft): 17.370
Type: Stage/Area

Stage(ft)	Area(ac)
9.00	0.0002
11.00	0.0002
13.00	0.0002
15.00	0.0002
17.37	0.0002
17.40	0.1000

Name: 83 Base Flow(cfs): 0.00 Init Stage(ft): 7.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 85 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 86 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 87 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 5.410
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
5.41	0.0002
5.45	0.1000

Name: 89 Base Flow(cfs): 0.00 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 4.610
Type: Stage/Area

Stage(ft)	Area(ac)
1.00	0.0002
3.00	0.0002
4.61	0.0002
4.65	0.1000

Name: 92 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 94 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 98-E Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 0.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	0.00
12.00	0.00
18.00	0.00
24.00	0.00

==== Pipes ====

Name: 108>109 From Node: 108 Length(ft): 272.00
Group: BASE To Node: 109 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	3.560	3.040
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 109>87 From Node: 109 Length(ft): 400.00
Group: BASE To Node: 87 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	3.040	0.960
Manning's N:	0.022000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	110>111	From Node:	110	Length(ft): 150.00
Group:	BASE	To Node:	111	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.050	1.090		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	111>112	From Node:	111	Length(ft): 260.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.090	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	112>117	From Node:	112	Length(ft): 407.00
Group:	BASE	To Node:	117	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.640	0.110		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	117>98-E	From Node:	117	Length(ft): 500.00
Group:	BASE	To Node:	98-E	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	36.00	36.00		Entrance Loss Coef: 0.00
Rise(in):	36.00	36.00		Exit Loss Coef: 1.00
Invert(ft):	-0.800	-1.000		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	65>94	From Node:	65	Length(ft): 670.00
Group:	BASE	To Node:	94	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	15.00	15.00		Entrance Loss Coef: 0.00
Rise(in):	15.00	15.00		Exit Loss Coef: 1.00
Invert(ft):	5.560	4.590		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	82>83	From Node:	82	Length(ft): 278.00
Group:	BASE	To Node:	83	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	18.00	18.00		Entrance Loss Coef: 0.00
Rise(in):	18.00	18.00		Exit Loss Coef: 1.00
Invert(ft):	9.140	7.360		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	83>86	From Node: 83	Length(ft):	35.00
Group:	BASE	To Node: 86	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	24.00	24.00	Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00	Exit Loss Coef:	1.00
Invert(ft):	7.360	7.290	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	85>92	From Node: 85	Length(ft):	266.00
Group:	BASE	To Node: 92	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	24.00	24.00	Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00	Exit Loss Coef:	1.00
Invert(ft):	5.910	4.790	Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	86>85	From Node: 86	Length(ft):	35.00
Group:	BASE	To Node: 85	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	24.00	24.00	Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00	Exit Loss Coef:	1.00
Invert(ft):	7.290	7.220	Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>110	From Node:	87	Length(ft): 300.00
Group:	BASE	To Node:	110	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	1.050		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>98-E	From Node:	87	Length(ft): 600.00
Group:	BASE	To Node:	98-E	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	36.00	36.00		Entrance Loss Coef: 0.00
Rise(in):	36.00	36.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	0.000		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	89>87	From Node:	89	Length(ft): 85.00
Group:	BASE	To Node:	87	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.240	0.960		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name:	92>94	From Node: 92	Length(ft): 35.00
Group:	BASE	To Node: 94	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	24.00	24.00	Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00	Exit Loss Coef: 1.00
Invert(ft):	4.790	4.590	Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	94>89	From Node: 94	Length(ft): 171.00
Group:	BASE	To Node: 89	Count: 1
			Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular	Flow: Both
Span(in):	30.00	30.00	Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00	Exit Loss Coef: 1.00
Invert(ft):	4.590	1.240	Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

==========
==== Hydrology Simulations ====
==========

Name: 25 Year
Filename: Q:\07130\AdICPR\25 Year.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 9.50

Time(hrs)	Print Inc(min)
36.000	15.00

Name: 5 YR
Filename: Q:\15108\ICPR\5 YR.R32

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 6.20

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          15.00

-------------------------------------------------------------------------------------------------
         Name: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 5.00

Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.00

=================================================================================================
==== Routing Simulations ========================================================================
=================================================================================================

         Name: 25 Year             Hydrology Sim: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
   Time Step Optimizer: 0.000
      Start Time(hrs): 0.000                      End Time(hrs): 36.00
    Min Calc Time(sec): 0.5000                Max Calc Time(sec): 60.0000
      Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------
         Name: 5 YR                Hydrology Sim: 5 YR
     Filename: Q:\15108\ICPR\5 YR.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
   Time Step Optimizer: 0.000
      Start Time(hrs): 0.000                      End Time(hrs): 36.00
    Min Calc Time(sec): 0.5000                Max Calc Time(sec): 60.0000
      Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: Mean Annual Hydrology Sim: Mean Annual
Filename: Q:\07130\AdICPR\Mean Annual.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 0.000
Start Time(hrs): 0.000 End Time(hrs): 36.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
36.000	15.000

Group	Run
BASE	Yes

Woodridge Flooding Analysis - Low Tide Conditions - Improved Conditions
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Simulation	Basin	Group	Time Max hrs	Flow Max cfs	Volume in	Volume ft3
25 Year	Basin 1	BASE	12.50	65.017	7.81	757734.49
25 Year	Basin 2	BASE	12.06	12.485	7.81	73181.07
25 Year	Basin 3	BASE	12.28	34.755	7.81	313796.30
25 Year	Basin 4	BASE	12.32	20.369	7.81	200538.83
25 Year	Basin 5	BASE	12.20	95.239	7.81	793595.58
5 YR	Basin 1	BASE	12.50	39.056	4.62	448002.52
5 YR	Basin 2	BASE	12.06	7.549	4.62	43267.51
5 YR	Basin 3	BASE	12.28	20.928	4.62	185519.47
5 YR	Basin 4	BASE	12.32	12.243	4.62	118566.40
5 YR	Basin 5	BASE	12.20	57.309	4.62	469202.46
Mean Annual	Basin 1	BASE	12.50	29.601	3.48	338021.40
Mean Annual	Basin 2	BASE	12.06	5.743	3.49	32645.66
Mean Annual	Basin 3	BASE	12.28	15.883	3.48	139971.25
Mean Annual	Basin 4	BASE	12.32	9.281	3.49	89459.24
Mean Annual	Basin 5	BASE	12.20	43.469	3.49	354015.65

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Woodridge Flooding Analysis - Low Tide Conditions - Improved Conditions
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Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
108	BASE	25 Year	12.89	7.106	6.510	-0.0089	64781	12.00	11.891	14.07	3.878
109	BASE	25 Year	13.12	5.000	6.690	-0.0028	137	14.07	3.878	13.86	4.071
110	BASE	25 Year	12.92	5.292	6.050	-0.0131	141	15.24	4.067	15.25	4.082
111	BASE	25 Year	12.89	5.826	6.440	-0.0219	139	15.25	4.082	15.24	4.107
112	BASE	25 Year	12.88	6.676	6.140	-0.0800	232996	13.84	8.621	13.79	21.668
117	BASE	25 Year	12.50	7.214	6.710	-0.0164	54974	12.25	79.272	12.50	64.504
65	BASE	25 Year	17.21	9.224	7.620	0.0050	232459	12.25	34.672	28.35	2.715
82	BASE	25 Year	15.93	19.505	17.370	-0.0410	309332	12.50	64.990	15.95	11.383
83	BASE	25 Year	12.32	9.523	10.930	0.0047	127	15.95	11.383	17.47	11.502
85	BASE	25 Year	15.78	8.707	10.930	0.0050	177	15.95	11.431	15.78	11.382
86	BASE	25 Year	12.32	9.267	10.930	0.0050	133	17.47	11.502	15.95	11.431
87	BASE	25 Year	13.21	4.338	5.410	0.0050	408	13.85	24.243	13.84	26.747
89	BASE	25 Year	13.50	4.717	4.610	-0.0100	11895	15.96	13.836	13.85	20.400
92	BASE	25 Year	15.95	6.698	9.930	0.0050	216	15.78	11.382	15.95	11.382
94	BASE	25 Year	16.11	6.387	9.930	-0.0028	351	16.16	13.836	15.96	13.836
98-E	BASE	25 Year	0.00	0.000	0.000	0.0000	705	12.52	93.460	0.00	0.000
108	BASE	5 YR	12.61	6.851	6.510	-0.0086	37055	12.00	7.149	13.23	3.697
109	BASE	5 YR	12.33	4.759	6.690	-0.0040	137	13.23	3.697	12.67	3.822
110	BASE	5 YR	12.29	4.926	6.050	0.0050	141	15.04	3.120	14.77	3.125
111	BASE	5 YR	12.28	5.386	6.440	0.0050	139	14.77	3.125	14.69	3.138
112	BASE	5 YR	12.27	6.129	6.140	-0.0048	155	13.97	7.105	13.96	7.474
117	BASE	5 YR	12.27	6.127	6.710	-0.0046	314	12.26	57.759	12.27	56.288
65	BASE	5 YR	15.47	8.764	7.620	0.0050	165795	12.25	20.849	21.44	2.572
82	BASE	5 YR	15.07	18.771	17.370	-0.0312	203002	12.50	39.056	15.28	10.973
83	BASE	5 YR	12.68	9.522	10.930	0.0049	127	15.28	10.973	15.09	11.129
85	BASE	5 YR	15.09	8.520	10.930	0.0050	187	15.28	10.998	15.09	10.974
86	BASE	5 YR	19.42	9.267	10.930	0.0050	133	15.09	11.129	15.28	10.998
87	BASE	5 YR	12.31	4.111	5.410	0.0050	409	13.26	16.870	13.34	18.132
89	BASE	5 YR	12.32	4.438	4.610	0.0030	327	14.98	13.243	15.20	13.243
92	BASE	5 YR	15.02	6.638	9.930	0.0050	242	15.09	10.974	15.04	10.972
94	BASE	5 YR	15.27	6.338	9.930	0.0035	356	15.28	13.243	14.98	13.243
98-E	BASE	5 YR	0.00	0.000	0.000	0.0000	705	12.28	83.632	0.00	0.000
108	BASE	Mean Annual	12.45	6.720	6.510	-0.0076	22799	12.00	5.417	12.05	3.633
109	BASE	Mean Annual	12.34	4.392	6.690	-0.0024	259	12.05	3.633	12.88	3.659
110	BASE	Mean Annual	12.28	4.010	6.050	0.0050	141	14.56	3.025	14.52	3.028
111	BASE	Mean Annual	12.27	4.247	6.440	0.0050	139	14.52	3.028	14.25	3.042
112	BASE	Mean Annual	12.27	4.627	6.140	-0.0050	155	13.65	6.670	13.63	7.004
117	BASE	Mean Annual	12.27	4.628	6.710	0.0050	336	12.25	44.851	12.27	43.351
65	BASE	Mean Annual	14.96	8.570	7.620	0.0050	137695	12.25	15.806	18.77	2.501
82	BASE	Mean Annual	14.51	18.433	17.370	-0.0304	154059	12.50	29.600	14.56	10.764
83	BASE	Mean Annual	13.09	9.521	10.930	0.0044	127	14.56	10.764	16.30	10.894
85	BASE	Mean Annual	14.53	8.434	10.930	0.0050	190	14.72	10.780	14.52	10.762
86	BASE	Mean Annual	16.49	9.267	10.930	0.0050	133	16.30	10.894	14.72	10.780
87	BASE	Mean Annual	12.31	3.594	5.410	0.0050	860	12.94	16.462	12.97	16.902
89	BASE	Mean Annual	12.31	3.913	4.610	0.0036	327	14.53	12.951	14.66	12.951

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
92	BASE	Mean Annual	14.54	6.609	9.930	0.0050	252	14.52	10.762	14.56	10.762
94	BASE	Mean Annual	14.53	6.314	9.930	-0.0035	358	14.65	12.951	14.53	12.951
98-E	BASE	Mean Annual	0.00	0.000	0.000	0.0000	705	12.28	67.393	0.00	0.000

Woodridge Flooding Analysis - Low Tide Conditions - Improved Conditions
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Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
108>109	BASE	25 Year	14.07	3.88	-0.013	12.89	7.106	13.12	5.000
109>87	BASE	25 Year	13.86	4.07	-0.444	13.12	5.000	13.21	4.338
110>111	BASE	25 Year	15.25	4.08	-1.002	12.92	5.292	12.89	5.826
111>112	BASE	25 Year	15.24	4.11	1.348	12.89	5.826	12.88	6.676
112>117	BASE	25 Year	13.79	21.67	2.722	12.88	6.676	12.50	7.214
117>98-E	BASE	25 Year	12.50	64.50	-1.815	12.50	7.214	12.43	1.578
65>94	BASE	25 Year	28.35	2.71	0.011	17.21	9.224	16.11	6.387
82>83	BASE	25 Year	15.95	11.38	0.065	15.93	19.505	12.32	9.523
83>86	BASE	25 Year	17.47	11.50	-0.179	12.32	9.523	12.32	9.267
85>92	BASE	25 Year	15.78	11.38	-0.024	15.78	8.707	15.95	6.698
86>85	BASE	25 Year	15.95	11.43	-0.049	12.32	9.267	15.78	8.707
87>110	BASE	25 Year	15.24	4.07	0.897	13.21	4.338	12.92	5.292
87>98-E	BASE	25 Year	13.21	29.36	-0.051	13.21	4.338	12.96	1.755
89>87	BASE	25 Year	13.85	20.40	-0.102	13.50	4.717	13.21	4.338
92>94	BASE	25 Year	15.95	11.38	0.497	15.95	6.698	16.11	6.387
94>89	BASE	25 Year	15.96	13.84	-0.027	16.11	6.387	15.96	2.352
108>109	BASE	5 YR	13.23	3.70	0.007	12.61	6.851	12.33	4.759
109>87	BASE	5 YR	12.67	3.82	0.425	12.33	4.759	12.31	4.111
110>111	BASE	5 YR	14.77	3.12	1.814	12.29	4.926	12.28	5.386
111>112	BASE	5 YR	14.69	3.14	-1.205	12.28	5.386	12.27	6.129
112>117	BASE	5 YR	13.96	7.47	1.625	12.27	6.129	12.27	6.127
117>98-E	BASE	5 YR	12.27	56.29	-1.815	12.27	6.127	12.26	1.432
65>94	BASE	5 YR	21.44	2.57	0.011	15.47	8.764	15.27	6.338
82>83	BASE	5 YR	15.28	10.97	0.047	15.07	18.771	12.68	9.522
83>86	BASE	5 YR	15.09	11.13	0.193	12.68	9.522	19.42	9.267
85>92	BASE	5 YR	15.09	10.97	-0.023	15.09	8.520	15.02	6.638
86>85	BASE	5 YR	15.28	11.00	-0.044	19.42	9.267	15.09	8.520
87>110	BASE	5 YR	15.04	3.12	-0.964	12.31	4.111	12.29	4.926
87>98-E	BASE	5 YR	12.31	27.51	-0.040	12.31	4.111	12.29	1.696
89>87	BASE	5 YR	15.20	13.24	-0.027	12.32	4.438	12.31	4.111
92>94	BASE	5 YR	15.04	10.97	0.667	15.02	6.638	15.27	6.338
94>89	BASE	5 YR	14.98	13.24	0.031	15.27	6.338	14.98	2.325
108>109	BASE	Mean Annual	12.05	3.63	-0.009	12.45	6.720	12.34	4.392
109>87	BASE	Mean Annual	12.88	3.66	-0.010	12.34	4.392	12.31	3.594
110>111	BASE	Mean Annual	14.52	3.03	-1.631	12.28	4.010	12.27	4.247
111>112	BASE	Mean Annual	14.25	3.04	0.730	12.27	4.247	12.27	4.627
112>117	BASE	Mean Annual	13.63	7.00	-1.663	12.27	4.627	12.27	4.628
117>98-E	BASE	Mean Annual	12.27	43.35	-1.815	12.27	4.628	12.26	1.145
65>94	BASE	Mean Annual	18.77	2.50	0.011	14.96	8.570	14.53	6.314
82>83	BASE	Mean Annual	14.56	10.76	0.042	14.51	18.433	13.09	9.521
83>86	BASE	Mean Annual	16.30	10.89	0.194	13.09	9.521	16.49	9.267
85>92	BASE	Mean Annual	14.52	10.76	-0.023	14.53	8.434	14.54	6.609
86>85	BASE	Mean Annual	14.72	10.78	-0.044	16.49	9.267	14.53	8.434
87>110	BASE	Mean Annual	14.56	3.03	0.579	12.31	3.594	12.28	4.010
87>98-E	BASE	Mean Annual	12.31	24.17	0.030	12.31	3.594	12.31	1.585

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
89>87	BASE	Mean Annual	14.66	12.95	-0.027	12.31	3.913	12.31	3.594
92>94	BASE	Mean Annual	14.56	10.76	0.667	14.54	6.609	14.53	6.314
94>89	BASE	Mean Annual	14.53	12.95	-0.031	14.53	6.314	14.53	2.311

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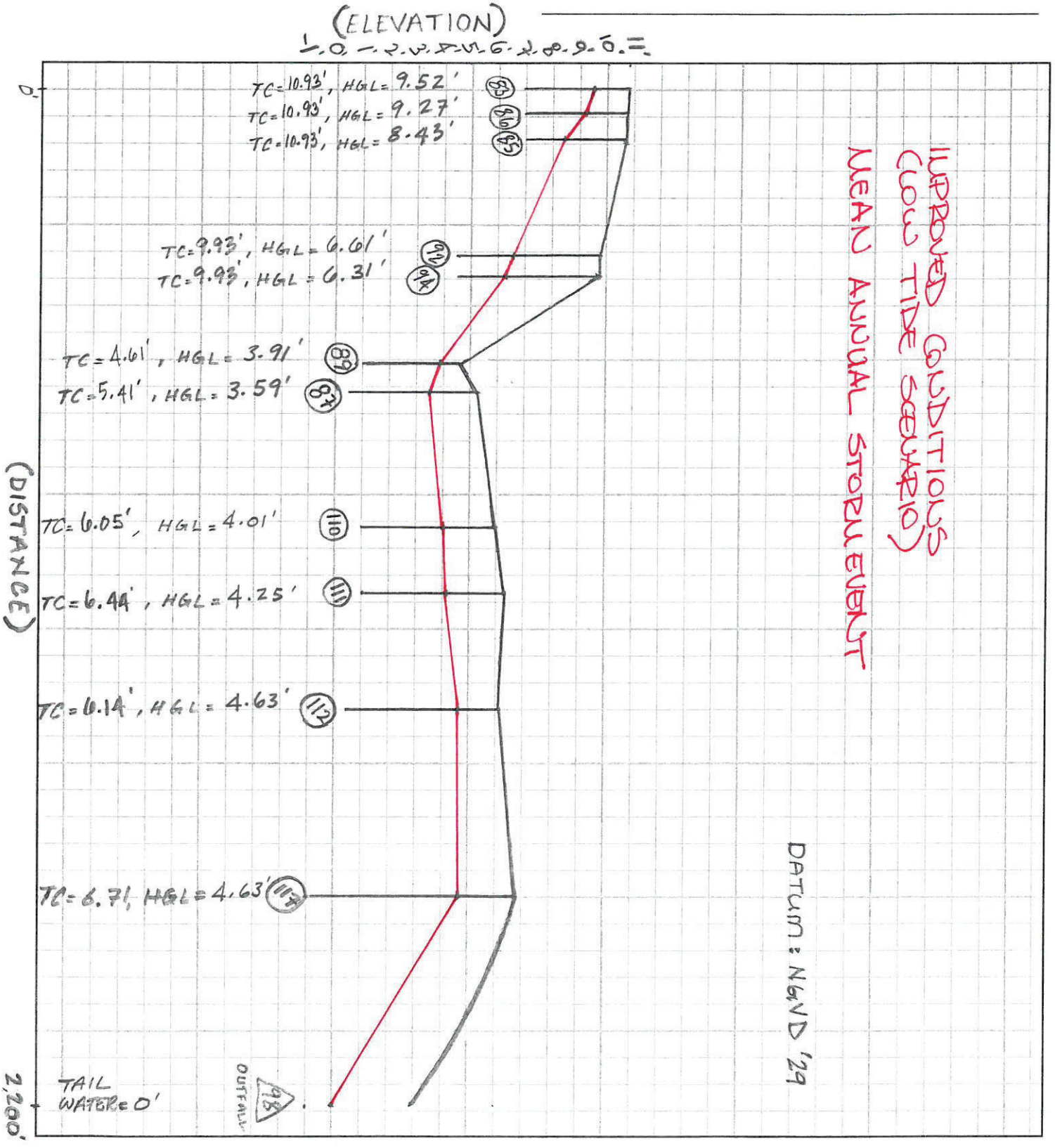
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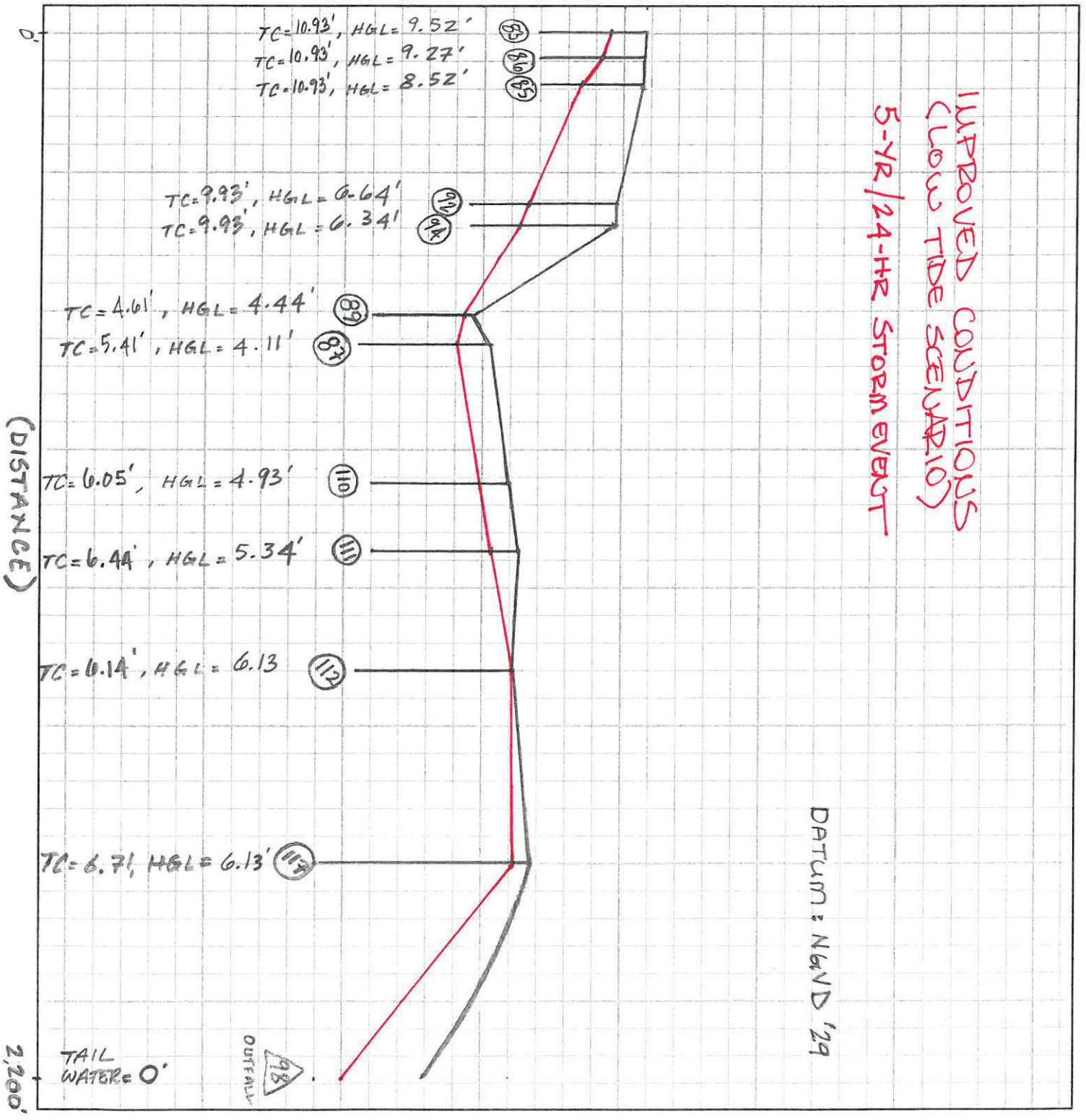
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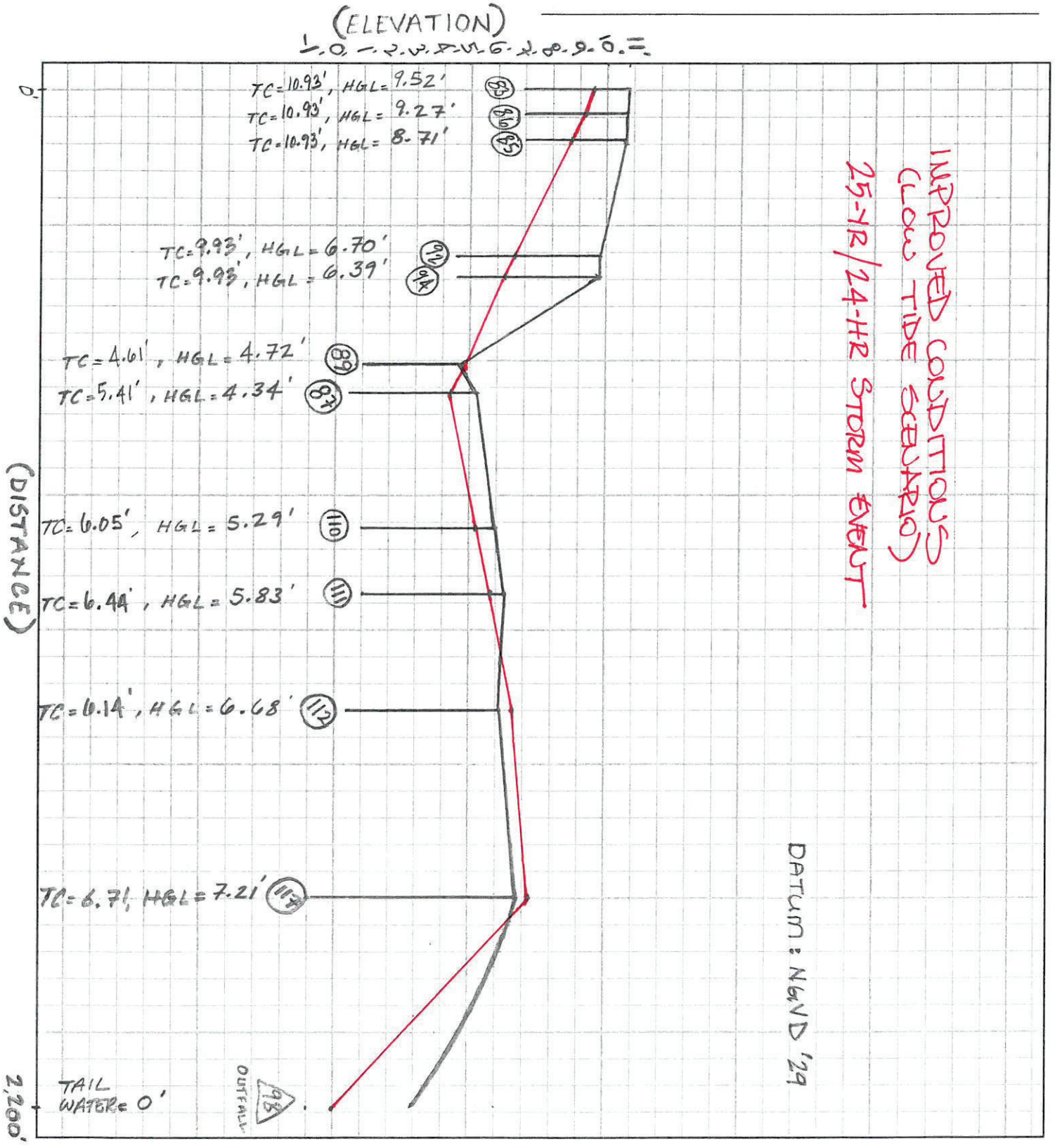
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& ASSOCIATES, INC.

300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
Engineers • Planners • Landscape Architecture

==========
==== Basins ====
==========

Name: Basin 1 | Node: 82 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	47.90
Area(ac):	26.720	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 2 | Node: 108 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	12.50
Area(ac):	2.580	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 3 | Node: 65 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	30.70
Area(ac):	11.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 4 | Node: 112 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	36.00
Area(ac):	7.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 5 | Node: 117 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	26.40
Area(ac):	27.980	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

==========

==== Nodes ==
==

Name: 108 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.510
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.51	0.0002
6.55	0.1000

Name: 109 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.690
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.69	0.0002
6.70	0.1000

Name: 110 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.050
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.05	0.0002
6.10	0.1000

Name: 111 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.440
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.00	0.0002
6.44	0.0002
6.45	0.1000

Name: 112 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.140
Type: Stage/Area

Stage(ft)	Area(ac)

0.00	0.0002
2.00	0.0002
4.00	0.0002
6.14	0.0002
6.15	0.1000

Name: 117 Base Flow(cfs): 0.00 Init Stage(ft): -1.000
Group: BASE Warn Stage(ft): 6.710
Type: Stage/Area

Stage(ft)	Area(ac)
-1.00	0.0002
1.00	0.0002
4.00	0.0002
6.00	0.0002
6.71	0.0002
6.75	0.1000

Name: 65 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 7.620
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
7.62	0.0002
7.65	0.1000

Name: 82 Base Flow(cfs): 0.00 Init Stage(ft): 9.000
Group: BASE Warn Stage(ft): 17.370
Type: Stage/Area

Stage(ft)	Area(ac)
9.00	0.0002
11.00	0.0002
13.00	0.0002
15.00	0.0002
17.37	0.0002
17.40	0.1000

Name: 83 Base Flow(cfs): 0.00 Init Stage(ft): 7.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 85 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 86 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 87 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 5.410
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
5.41	0.0002
5.45	0.1000

Name: 89 Base Flow(cfs): 0.00 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 4.610
Type: Stage/Area

Stage(ft)	Area(ac)
1.00	0.0002
3.00	0.0002
4.61	0.0002
4.65	0.1000

Name: 92 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 94 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 98-E Base Flow(cfs): 0.00 Init Stage(ft): 2.000
Group: BASE Warn Stage(ft): 2.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	2.00
12.00	2.00
18.00	2.00
24.00	2.00

Pipes

Name: 108 From Node: 108 Length(ft): 272.00
Group: BASE To Node: 109 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	3.560	3.040
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 109>87 From Node: 109 Length(ft): 400.00
Group: BASE To Node: 87 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	3.040	0.960
Manning's N:	0.022000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	110>111	From Node:	110	Length(ft): 150.00
Group:	BASE	To Node:	111	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.050	1.090		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	111>112	From Node:	111	Length(ft): 260.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.090	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	112>117	From Node:	112	Length(ft): 407.00
Group:	BASE	To Node:	117	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.640	0.110		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 117>98-E | From Node: 117 | Length(ft): 500.00
Group: BASE | To Node: 98-E | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	36.00	36.00
Rise(in):	36.00	36.00
Invert(ft):	-0.800	-1.000
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 65>94 | From Node: 65 | Length(ft): 670.00
Group: BASE | To Node: 94 | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	5.560	4.590
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 82>83 | From Node: 82 | Length(ft): 278.00
Group: BASE | To Node: 83 | Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	9.140	7.360
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	83>86	From Node:	83	Length(ft): 35.00
Group:	BASE	To Node:	86	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	7.360	7.290		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	85>92	From Node:	85	Length(ft): 266.00
Group:	BASE	To Node:	92	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	5.910	4.790		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	86>85	From Node:	86	Length(ft): 35.00
Group:	BASE	To Node:	85	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	7.290	7.220		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>110	From Node:	87	Length(ft): 300.00
Group:	BASE	To Node:	110	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	1.050		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>112	From Node:	87	Length(ft): 798.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>98-E	From Node:	87	Length(ft): 600.00
Group:	BASE	To Node:	98-E	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	36.00	36.00		Entrance Loss Coef: 0.00
Rise(in):	36.00	36.00		Exit Loss Coef: 1.00
Invert(ft):	0.960	0.000		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name:	89>87	From Node:	89	Length(ft): 85.00
Group:	BASE	To Node:	87	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.240	0.960		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	92>94	From Node:	92	Length(ft): 35.00
Group:	BASE	To Node:	94	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	24.00	24.00		Entrance Loss Coef: 0.00
Rise(in):	24.00	24.00		Exit Loss Coef: 1.00
Invert(ft):	4.790	4.590		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	94>89	From Node:	94	Length(ft): 171.00
Group:	BASE	To Node:	89	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	4.590	1.240		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
================================================================================
==== Hydrology Simulations =====================================================
================================================================================

         Name: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 9.50

Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.00

--------------------------------------------------------------------------------
         Name: 5 YR
     Filename: Q:\15108\ICPR\5 YR.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 6.20

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          15.00

--------------------------------------------------------------------------------
         Name: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 5.00

Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.00

================================================================================
==== Routing Simulations =======================================================
================================================================================

         Name: 25 Year             Hydrology Sim: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
   Time Step Optimizer: 0.000
      Start Time(hrs): 0.000                      End Time(hrs): 36.00
    Min Calc Time(sec): 0.5000                Max Calc Time(sec): 60.0000
       Boundary Stages:                           Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes
```

```
---------------------------------------------------------------------------------------------------------
         Name: 5 YR                 Hydrology Sim: 5 YR
     Filename: Q:\15108\ICPR\5 YR.I32

      Execute: Yes          Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
        Start Time(hrs): 0.000                    End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes

---------------------------------------------------------------------------------------------------------
         Name: Mean Annual          Hydrology Sim: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.I32

      Execute: Yes          Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
        Start Time(hrs): 0.000                    End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                          Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes
```

Simulation	Basin	Group	Time Max hrs	Flow Max cfs	Volume in	Volume ft3
25 Year	Basin 1	BASE	12.50	65.017	7.81	757734.49
25 Year	Basin 2	BASE	12.06	12.485	7.81	73181.07
25 Year	Basin 3	BASE	12.28	34.755	7.81	313796.30
25 Year	Basin 4	BASE	12.32	20.369	7.81	200538.83
25 Year	Basin 5	BASE	12.20	95.239	7.81	793595.58
5 YR	Basin 1	BASE	12.50	39.056	4.62	448002.52
5 YR	Basin 2	BASE	12.06	7.549	4.62	43267.51
5 YR	Basin 3	BASE	12.28	20.928	4.62	185519.47
5 YR	Basin 4	BASE	12.32	12.243	4.62	118566.40
5 YR	Basin 5	BASE	12.20	57.309	4.62	469202.46
Mean Annual	Basin 1	BASE	12.50	29.601	3.48	338021.40
Mean Annual	Basin 2	BASE	12.06	5.743	3.49	32645.66
Mean Annual	Basin 3	BASE	12.28	15.883	3.48	139971.25
Mean Annual	Basin 4	BASE	12.32	9.281	3.49	89459.24
Mean Annual	Basin 5	BASE	12.20	43.469	3.49	354015.65

Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

Woodridge Dr. Flooding - Mid Tide Condition - Improved Conditions
ZC 15108
Stormwater Calculations
12.23.15 HK/RD

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
108	BASE	25 Year	12.94	7.122	6.510	-0.0090	66510	12.00	11.892	13.99	3.901
109	BASE	25 Year	13.08	5.408	6.690	0.0030	137	13.99	3.901	13.77	4.008
110	BASE	25 Year	12.86	5.544	6.050	-0.0113	141	15.35	1.931	15.35	1.955
111	BASE	25 Year	12.85	5.928	6.440	-0.0168	139	15.35	1.955	15.36	1.980
112	BASE	25 Year	12.85	6.538	6.140	-0.0582	173010	13.80	8.159	13.31	15.852
117	BASE	25 Year	12.49	7.197	6.710	-0.0360	53000	12.25	78.396	12.49	63.999
65	BASE	25 Year	17.22	9.224	7.620	0.0049	232461	12.25	34.661	28.34	2.715
82	BASE	25 Year	15.94	19.504	17.370	-0.0409	309283	12.50	65.007	15.79	11.389
83	BASE	25 Year	12.31	9.512	10.930	-0.0046	127	15.79	11.389	16.25	11.562
85	BASE	25 Year	16.25	8.711	10.930	0.0050	177	15.79	11.439	16.25	11.389
86	BASE	25 Year	12.31	9.267	10.930	0.0050	133	16.25	11.562	15.79	11.439
87	BASE	25 Year	13.09	4.868	5.410	-0.0042	448	13.74	27.491	13.65	27.424
89	BASE	25 Year	13.33	5.145	4.610	-0.0134	58383	16.06	13.842	13.70	23.639
92	BASE	25 Year	16.06	6.698	9.930	0.0050	216	16.25	11.389	16.01	11.388
94	BASE	25 Year	16.08	6.388	9.930	-0.0026	351	16.01	13.841	16.06	13.842
98-E	BASE	25 Year	0.00	2.000	2.000	0.0000	1030	12.55	98.376	0.00	0.000
108	BASE	5 YR	12.62	6.856	6.510	-0.0085	37642	12.00	7.149	13.12	3.730
109	BASE	5 YR	12.31	4.938	6.690	0.0029	137	13.12	3.730	12.68	3.784
110	BASE	5 YR	12.28	4.749	6.050	0.0050	141	18.28	1.750	18.26	1.752
111	BASE	5 YR	12.27	4.974	6.440	0.0050	139	18.26	1.752	18.00	1.754
112	BASE	5 YR	12.27	5.335	6.140	-0.0047	205	13.55	6.345	14.25	6.165
117	BASE	5 YR	12.26	5.399	6.710	0.0127	176	12.25	51.854	12.26	51.760
65	BASE	5 YR	15.48	8.764	7.620	0.0049	165801	12.25	20.848	21.43	2.572
82	BASE	5 YR	15.07	18.770	17.370	-0.0313	202952	12.50	39.049	15.08	10.981
83	BASE	5 YR	12.67	9.511	10.930	0.0047	127	15.08	10.981	15.90	11.112
85	BASE	5 YR	15.10	8.522	10.930	0.0050	187	15.08	11.011	15.10	10.979
86	BASE	5 YR	19.36	9.270	10.930	0.0050	133	15.90	11.112	15.08	11.011
87	BASE	5 YR	12.29	4.347	5.410	0.0033	448	13.25	16.853	13.42	18.365
89	BASE	5 YR	12.34	4.657	4.610	0.0038	5359	15.06	13.250	15.19	13.248
92	BASE	5 YR	15.08	6.639	9.930	0.0043	241	15.10	10.979	15.08	10.979
94	BASE	5 YR	15.18	6.339	9.930	-0.0024	356	15.08	13.250	15.06	13.250
98-E	BASE	5 YR	0.00	2.000	2.000	0.0000	1030	12.27	83.280	0.00	0.000
108	BASE	Mean Annual	12.45	6.719	6.510	-0.0073	22691	12.00	5.417	12.77	3.645
109	BASE	Mean Annual	12.32	4.397	6.690	-0.0024	258	12.77	3.645	12.77	3.695
110	BASE	Mean Annual	12.28	3.788	6.050	0.0050	141	17.08	1.716	17.02	1.718
111	BASE	Mean Annual	12.28	3.892	6.440	0.0050	139	17.02	1.718	17.01	1.720
112	BASE	Mean Annual	12.27	4.061	6.140	-0.0050	205	14.20	5.665	14.00	5.804
117	BASE	Mean Annual	12.26	4.078	6.710	0.0127	176	12.25	40.498	12.26	40.472
65	BASE	Mean Annual	14.96	8.570	7.620	0.0050	137701	12.25	15.804	18.76	2.501
82	BASE	Mean Annual	14.50	18.433	17.370	-0.0304	154003	12.50	29.601	14.51	10.771
83	BASE	Mean Annual	16.50	9.511	10.930	0.0048	127	14.51	10.771	16.18	10.842
85	BASE	Mean Annual	14.52	8.437	10.930	0.0050	190	14.23	10.795	14.52	10.769
86	BASE	Mean Annual	16.65	9.267	10.930	0.0050	133	16.18	10.842	14.23	10.795
87	BASE	Mean Annual	12.30	3.604	5.410	0.0024	892	12.77	16.460	12.75	17.054
89	BASE	Mean Annual	12.30	3.924	4.610	0.0035	327	14.64	12.958	14.70	12.956

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
92	BASE	Mean Annual	14.64	6.610	9.930	0.0041	252	14.52	10.769	14.51	10.769
94	BASE	Mean Annual	14.69	6.315	9.930	-0.0024	358	14.64	12.958	14.64	12.958
98-E	BASE	Mean Annual	0.00	2.000	2.000	0.0000	1030	12.28	67.291	0.00	0.000

Woodridge Dr. Flooding - Mid Tide Condition - Improved Conditions
ZC 15108
Stormwater Calculations
12.23.15 HK/RD

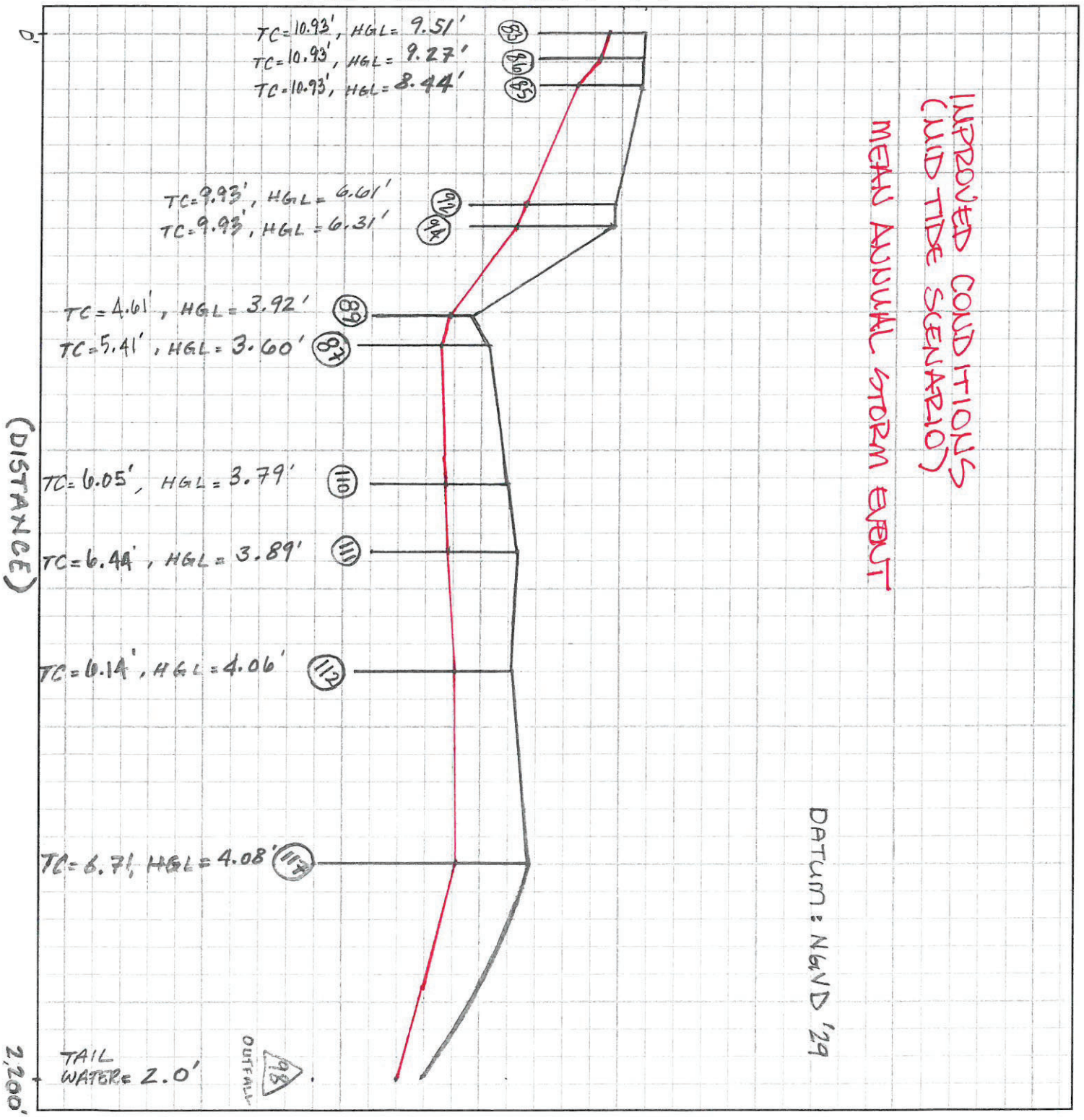
Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
108	BASE	25 Year	13.99	3.90	-0.013	12.94	7.122	13.08	5.408
109>87	BASE	25 Year	13.77	4.01	0.445	13.08	5.408	13.09	4.868
110>111	BASE	25 Year	15.35	1.95	-2.171	12.86	5.544	12.85	5.928
111>112	BASE	25 Year	15.36	1.98	1.341	12.85	5.928	12.85	6.538
112>117	BASE	25 Year	13.31	15.85	2.963	12.85	6.538	12.49	7.197
117>98-E	BASE	25 Year	12.49	64.00	-17.774	12.49	7.197	0.00	2.000
65>94	BASE	25 Year	28.34	2.72	0.011	17.22	9.224	16.08	6.388
82>83	BASE	25 Year	15.79	11.39	0.054	15.94	19.504	12.31	9.512
83>86	BASE	25 Year	16.25	11.56	-0.193	12.31	9.512	12.31	9.267
85>92	BASE	25 Year	16.25	11.39	-0.025	16.25	8.711	16.06	6.698
86>85	BASE	25 Year	15.79	11.44	0.049	12.31	9.267	16.25	8.711
87>110	BASE	25 Year	15.35	1.93	-1.098	13.09	4.868	12.86	5.544
87>112	BASE	25 Year	25.53	2.36	0.216	13.09	4.868	12.85	6.538
87>98-E	BASE	25 Year	13.09	34.91	-3.567	13.09	4.868	0.00	2.000
89>87	BASE	25 Year	13.70	23.64	-0.139	13.33	5.145	13.09	4.868
92>94	BASE	25 Year	16.01	11.39	0.412	16.06	6.698	16.08	6.388
94>89	BASE	25 Year	16.06	13.84	-0.026	16.08	6.388	16.06	2.352
108	BASE	5 YR	13.12	3.73	-0.008	12.62	6.856	12.31	4.938
109>87	BASE	5 YR	12.68	3.78	0.419	12.31	4.938	12.29	4.347
110>111	BASE	5 YR	18.26	1.75	-1.949	12.28	4.749	12.27	4.974
111>112	BASE	5 YR	18.00	1.75	-1.350	12.27	4.974	12.27	5.335
112>117	BASE	5 YR	14.25	6.16	1.852	12.27	5.335	12.26	5.399
117>98-E	BASE	5 YR	12.26	51.76	-17.774	12.26	5.399	0.00	2.000
65>94	BASE	5 YR	21.43	2.57	0.011	15.48	8.764	15.18	6.339
82>83	BASE	5 YR	15.08	10.98	0.040	15.07	18.770	12.67	9.511
83>86	BASE	5 YR	15.90	11.11	0.196	12.67	9.511	19.36	9.270
85>92	BASE	5 YR	15.10	10.98	-0.023	15.10	8.522	15.08	6.639
86>85	BASE	5 YR	15.08	11.01	0.043	19.36	9.270	15.10	8.522
87>110	BASE	5 YR	18.28	1.75	-1.099	12.29	4.347	12.28	4.749
87>112	BASE	5 YR	19.02	2.19	-0.224	12.29	4.347	12.27	5.335
87>98-E	BASE	5 YR	12.29	31.58	-3.567	12.29	4.347	0.00	2.000
89>87	BASE	5 YR	15.19	13.25	0.111	12.34	4.657	12.29	4.347
92>94	BASE	5 YR	15.08	10.98	-0.332	15.08	6.639	15.18	6.339
94>89	BASE	5 YR	15.06	13.25	-0.026	15.18	6.339	15.06	2.325
108	BASE	Mean Annual	12.77	3.64	0.011	12.45	6.719	12.32	4.397
109>87	BASE	Mean Annual	12.77	3.69	-0.011	12.32	4.397	12.30	3.604
110>111	BASE	Mean Annual	17.02	1.72	-1.416	12.28	3.788	12.28	3.892
111>112	BASE	Mean Annual	17.01	1.72	1.151	12.28	3.892	12.27	4.061
112>117	BASE	Mean Annual	14.00	5.80	1.500	12.27	4.061	12.26	4.078
117>98-E	BASE	Mean Annual	12.26	40.47	-17.774	12.26	4.078	0.00	2.000
65>94	BASE	Mean Annual	18.76	2.50	0.011	14.96	8.570	14.69	6.315
82>83	BASE	Mean Annual	14.51	10.77	0.041	14.50	18.433	16.50	9.511
83>86	BASE	Mean Annual	16.18	10.84	0.205	16.50	9.511	16.65	9.267
85>92	BASE	Mean Annual	14.52	10.77	-0.024	14.52	8.437	14.64	6.610
86>85	BASE	Mean Annual	14.23	10.80	-0.044	16.65	9.267	14.52	8.437

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
87>110	BASE	Mean Annual	17.08	1.72	0.887	12.30	3.604	12.28	3.788
87>112	BASE	Mean Annual	17.26	2.15	0.241	12.30	3.604	12.27	4.061
87>98-E	BASE	Mean Annual	12.30	26.92	-3.567	12.30	3.604	0.00	2.000
89>87	BASE	Mean Annual	14.70	12.96	0.111	12.30	3.924	12.30	3.604
92>94	BASE	Mean Annual	14.51	10.77	0.219	14.64	6.610	14.69	6.315
94>89	BASE	Mean Annual	14.64	12.96	-0.025	14.69	6.315	14.64	2.312

Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

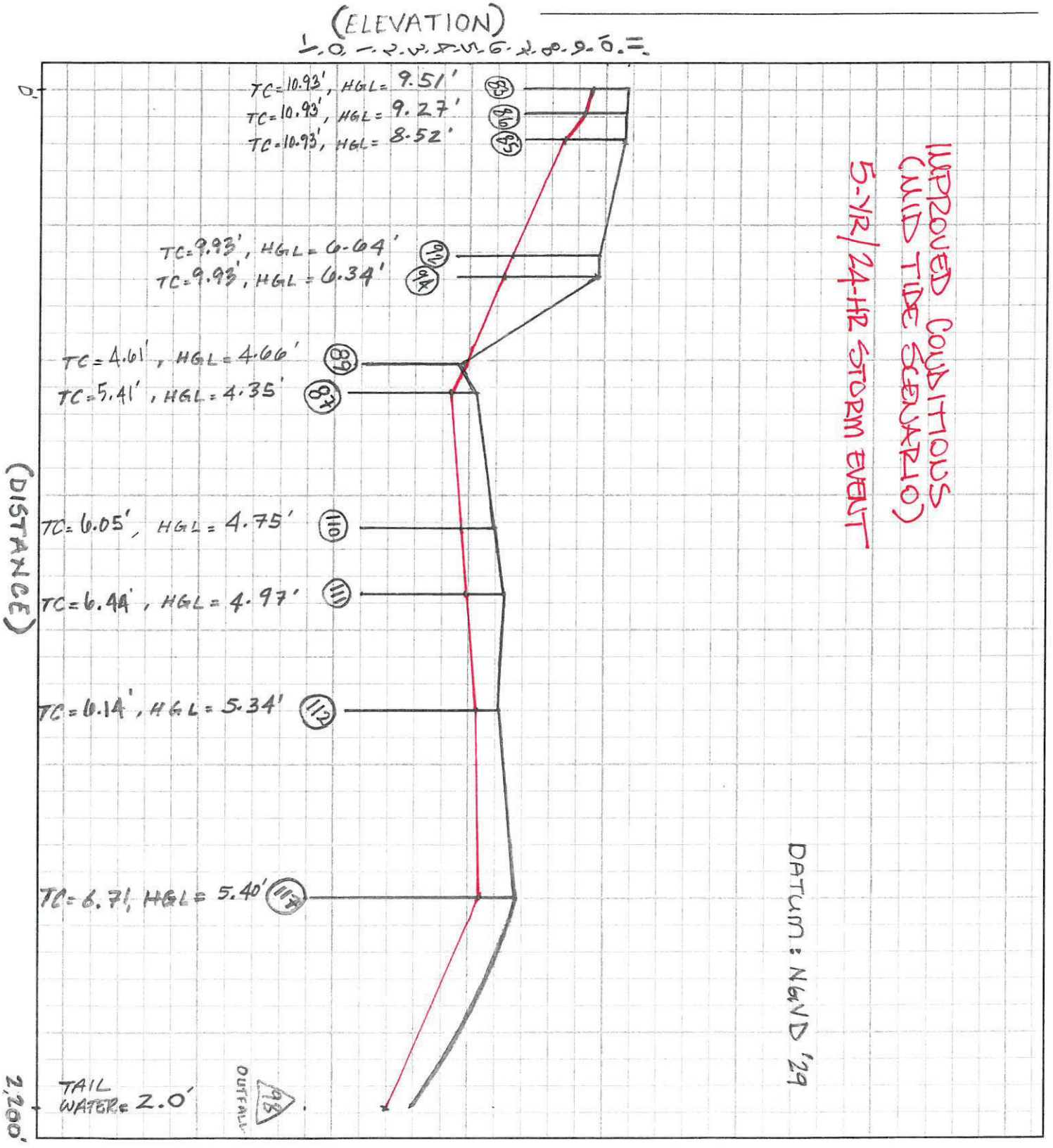
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Landscape Architecture

WOODRIDGE DR.
Project Name FLOODING ANALYSIS File No. 15108
Date 12/15/2015 By H.K. Sheet ___ of ___
Description HGL ANALSIS



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Landscape Architecture

WOODRIDGE DR.

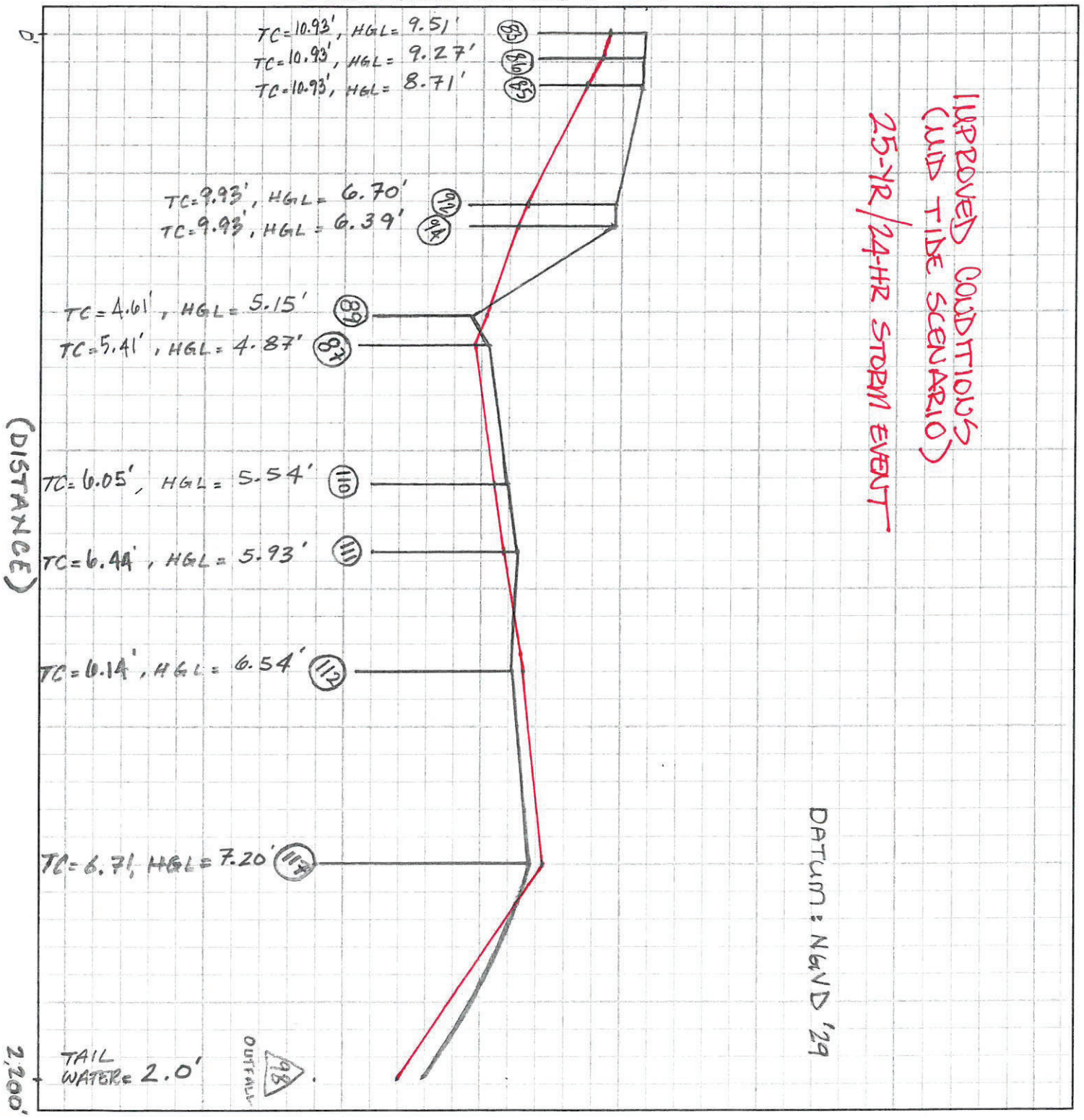
Project Name FLOODING ANALYSIS File No. 15108

Date 12/15/2015 By H.K. Sheet ___ of ___

Description HGL ANALSIS

(ELEVATION)

1.0-2.W.A.M.6.2.8.9.0.=



HIGH TIDE CONDITION

ZEV COHEN
& ASSOCIATES, INC.

300 Interchange Blvd • Ormond Beach, FL 32174
386.677.2482 • Fax 386.677.2505
Engineers • Planners • Landscape Architecture

==========
==== Basins ====
==========

Name: Basin 1 | Node: 82 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	47.90
Area(ac):	26.720	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 2 | Node: 108 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	12.50
Area(ac):	2.580	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 3 | Node: 65 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	30.70
Area(ac):	11.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 4 | Node: 112 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	36.00
Area(ac):	7.070	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

Name: Basin 5 | Node: 117 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph:	Uh256	Peaking Factor:	256.0
Rainfall File:	Flmod	Storm Duration(hrs):	24.00
Rainfall Amount(in):	0.000	Time of Conc(min):	26.40
Area(ac):	27.980	Time Shift(hrs):	0.00
Curve Number:	86.20	Max Allowable Q(cfs):	999999.000
DCIA(%):	0.00		

==========

==== Nodes ==========

Name: 108 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.510
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.51	0.0002
6.55	0.1000

Name: 109 Base Flow(cfs): 0.00 Init Stage(ft): 3.000
Group: BASE Warn Stage(ft): 6.690
Type: Stage/Area

Stage(ft)	Area(ac)
3.00	0.0002
5.00	0.0002
6.69	0.0002
6.70	0.1000

Name: 110 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.050
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.05	0.0002
6.10	0.1000

Name: 111 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.440
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
6.00	0.0002
6.44	0.0002
6.45	0.1000

Name: 112 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 6.140
Type: Stage/Area

Stage(ft)	Area(ac)

0.00	0.0002
2.00	0.0002
4.00	0.0002
6.14	0.0002
6.15	0.1000

Name: 117 Base Flow(cfs): 0.00 Init Stage(ft): -1.000
Group: BASE Warn Stage(ft): 6.710
Type: Stage/Area

Stage(ft)	Area(ac)
-1.00	0.0002
1.00	0.0002
4.00	0.0002
6.00	0.0002
6.71	0.0002
6.75	0.1000

Name: 65 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 7.620
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
7.62	0.0002
7.65	0.1000

Name: 82 Base Flow(cfs): 0.00 Init Stage(ft): 9.000
Group: BASE Warn Stage(ft): 17.370
Type: Stage/Area

Stage(ft)	Area(ac)
9.00	0.0002
11.00	0.0002
13.00	0.0002
15.00	0.0002
17.37	0.0002
17.40	0.1000

Name: 83 Base Flow(cfs): 0.00 Init Stage(ft): 7.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 85 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 86 Base Flow(cfs): 0.00 Init Stage(ft): 5.000
Group: BASE Warn Stage(ft): 10.930
Type: Stage/Area

Stage(ft)	Area(ac)
5.00	0.0002
7.00	0.0002
9.00	0.0002
10.93	0.0002
10.95	0.1000

Name: 87 Base Flow(cfs): 0.00 Init Stage(ft): 0.000
Group: BASE Warn Stage(ft): 5.410
Type: Stage/Area

Stage(ft)	Area(ac)
0.00	0.0002
2.00	0.0002
4.00	0.0002
5.41	0.0002
5.45	0.1000

Name: 89 Base Flow(cfs): 0.00 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 4.610
Type: Stage/Area

Stage(ft)	Area(ac)
1.00	0.0002
3.00	0.0002
4.61	0.0002
4.65	0.1000

Name: 92 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 94 Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 9.930
Type: Stage/Area

Stage(ft)	Area(ac)
4.00	0.0002
6.00	0.0002
8.00	0.0002
9.93	0.0002
9.95	0.1000

Name: 98-E Base Flow(cfs): 0.00 Init Stage(ft): 4.000
Group: BASE Warn Stage(ft): 4.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	4.00
12.00	4.00
18.00	4.00
24.00	4.00

Pipes

Name: 108 From Node: 108 Length(ft): 272.00
Group: BASE To Node: 109 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	3.560	3.040
Manning's N:	0.022000	0.022000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 109>87 From Node: 109 Length(ft): 400.00
Group: BASE To Node: 87 Count: 1
Friction Equation: Automatic
Solution Algorithm: Most Restrictive
Flow: Both
Entrance Loss Coef: 0.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	3.040	0.960
Manning's N:	0.022000	0.013000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	110>111	From Node:	110	Length(ft): 150.00
Group:	BASE	To Node:	111	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.050	1.090		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	111>112	From Node:	111	Length(ft): 260.00
Group:	BASE	To Node:	112	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	1.090	0.640		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	112>117	From Node:	112	Length(ft): 407.00
Group:	BASE	To Node:	117	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	30.00	30.00		Entrance Loss Coef: 0.00
Rise(in):	30.00	30.00		Exit Loss Coef: 1.00
Invert(ft):	0.640	0.110		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	117>98-E	From Node:	117	Length(ft): 500.00
Group:	BASE	To Node:	98-E	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	36.00	36.00		Entrance Loss Coef: 0.00
Rise(in):	36.00	36.00		Exit Loss Coef: 1.00
Invert(ft):	-0.800	-1.000		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	65>94	From Node:	65	Length(ft): 670.00
Group:	BASE	To Node:	94	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	15.00	15.00		Entrance Loss Coef: 0.00
Rise(in):	15.00	15.00		Exit Loss Coef: 1.00
Invert(ft):	5.560	4.590		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	82>83	From Node:	82	Length(ft): 278.00
Group:	BASE	To Node:	83	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Most Restrictive
Geometry:	Circular	Circular		Flow: Both
Span(in):	18.00	18.00		Entrance Loss Coef: 0.00
Rise(in):	18.00	18.00		Exit Loss Coef: 1.00
Invert(ft):	9.140	7.360		Bend Loss Coef: 0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	83>86	From Node:	83	Length(ft):	35.00
Group:	BASE	To Node:	86	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular		Flow:	Both
Span(in):	24.00	24.00		Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00		Exit Loss Coef:	1.00
Invert(ft):	7.360	4.590		Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	85>92	From Node:	85	Length(ft):	266.00
Group:	BASE	To Node:	92	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular		Flow:	Both
Span(in):	24.00	24.00		Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00		Exit Loss Coef:	1.00
Invert(ft):	5.910	4.490		Bend Loss Coef:	0.00
Manning's N:	0.022000	0.022000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	86>85	From Node:	86	Length(ft):	35.00
Group:	BASE	To Node:	85	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular		Flow:	Both
Span(in):	24.00	24.00		Entrance Loss Coef:	0.00
Rise(in):	24.00	24.00		Exit Loss Coef:	1.00
Invert(ft):	7.290	7.220		Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>110		From Node:	87	
Group:	BASE		To Node:	110	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	30.00	30.00			
Rise(in):	30.00	30.00			
Invert(ft):	0.960	1.050			
Manning's N:	0.022000	0.022000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	300.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>112		From Node:	87	
Group:	BASE		To Node:	112	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	30.00	30.00			
Rise(in):	30.00	30.00			
Invert(ft):	0.960	0.640			
Manning's N:	0.022000	0.022000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	798.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	87>98-E		From Node:	87	
Group:	BASE		To Node:	98-E	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	36.00	36.00			
Rise(in):	36.00	36.00			
Invert(ft):	0.960	0.000			
Manning's N:	0.012000	0.012000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	600.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name:	89>87		From Node:	89	
Group:	BASE		To Node:	87	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	30.00	30.00			
Rise(in):	30.00	30.00			
Invert(ft):	1.240	0.960			
Manning's N:	0.022000	0.022000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	85.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	92>94		From Node:	92	
Group:	BASE		To Node:	94	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	24.00	24.00			
Rise(in):	24.00	24.00			
Invert(ft):	4.790	4.590			
Manning's N:	0.012000	0.012000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	35.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	94>89		From Node:	94	
Group:	BASE		To Node:	89	
	UPSTREAM	DOWNSTREAM			
Geometry:	Circular	Circular			
Span(in):	30.00	30.00			
Rise(in):	30.00	30.00			
Invert(ft):	4.590	1.240			
Manning's N:	0.022000	0.022000			
Top Clip(in):	0.000	0.000			
Bot Clip(in):	0.000	0.000			

Length(ft):	171.00
Count:	1
Friction Equation:	Automatic
Solution Algorithm:	Most Restrictive
Flow:	Both
Entrance Loss Coef:	0.00
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
================================================================================
==== Hydrology Simulations =====================================================
================================================================================

         Name: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 9.50

Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.00

--------------------------------------------------------------------------------

         Name: 5 YR
     Filename: Q:\15108\ICPR\5 YR.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 6.20

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          15.00

--------------------------------------------------------------------------------

         Name: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 5.00

Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.00

================================================================================
==== Routing Simulations =======================================================
================================================================================

         Name: 25 Year             Hydrology Sim: 25 Year
     Filename: Q:\07130\AdICPR\25 Year.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
       Start Time(hrs): 0.000                     End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                           Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes
```

```
---------------------------------------------------------------------------------------------------
         Name: 5 YR                Hydrology Sim: 5 YR
     Filename: Q:\15108\ICPR\5 YR.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
       Start Time(hrs): 0.000                     End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes

---------------------------------------------------------------------------------------------------
         Name: Mean Annual         Hydrology Sim: Mean Annual
     Filename: Q:\07130\AdICPR\Mean Annual.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 0.000
       Start Time(hrs): 0.000                     End Time(hrs): 36.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
36.000          15.000

Group           Run
--------------- -----
BASE            Yes
```

Simulation	Basin	Group	Time Max hrs	Flow Max cfs	Volume in	Volume ft3
25 Year	Basin 1	BASE	12.50	65.017	7.81	757734.49
25 Year	Basin 2	BASE	12.06	12.485	7.81	73181.07
25 Year	Basin 3	BASE	12.28	34.755	7.81	313796.30
25 Year	Basin 4	BASE	12.32	20.369	7.81	200538.83
25 Year	Basin 5	BASE	12.20	95.239	7.81	793595.58
5 YR	Basin 1	BASE	12.50	39.056	4.62	448002.52
5 YR	Basin 2	BASE	12.06	7.549	4.62	43267.51
5 YR	Basin 3	BASE	12.28	20.928	4.62	185519.47
5 YR	Basin 4	BASE	12.32	12.243	4.62	118566.40
5 YR	Basin 5	BASE	12.20	57.309	4.62	469202.46
Mean Annual	Basin 1	BASE	12.50	29.601	3.48	338021.40
Mean Annual	Basin 2	BASE	12.06	5.743	3.49	32645.66
Mean Annual	Basin 3	BASE	12.28	15.883	3.48	139971.25
Mean Annual	Basin 4	BASE	12.32	9.281	3.49	89459.24
Mean Annual	Basin 5	BASE	12.20	43.469	3.49	354015.65

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Woodridge Dr. Flooding Analysis - High Tide Condition - Improved Conditions
ZC 15108
Stormwater Calculations
12.23.15 HK/RD

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
108	BASE	25 Year	12.98	7.150	6.510	-0.0093	69548	12.00	11.886	15.01	3.050
109	BASE	25 Year	13.60	5.776	6.690	-0.0027	137	15.01	3.050	14.07	3.293
110	BASE	25 Year	13.29	5.884	6.050	0.0204	141	0.12	9.796	16.16	2.829
111	BASE	25 Year	13.28	6.190	6.440	-0.0226	139	16.16	2.829	24.68	2.267
112	BASE	25 Year	13.25	6.678	6.140	-0.0557	233823	14.79	7.136	14.01	15.715
117	BASE	25 Year	12.61	7.513	6.710	0.0411	87321	12.25	76.602	12.61	52.617
65	BASE	25 Year	17.21	9.224	7.620	0.0019	232467	12.25	34.673	28.32	2.716
82	BASE	25 Year	15.94	19.504	17.370	-0.0409	309273	12.50	64.993	15.93	11.376
83	BASE	25 Year	15.97	9.522	10.930	0.0081	125	15.93	11.376	15.95	11.376
85	BASE	25 Year	15.97	8.827	10.930	-0.0048	150	15.95	11.376	15.95	11.376
86	BASE	25 Year	12.10	9.248	10.930	-0.0160	131	15.95	11.376	15.95	11.376
87	BASE	25 Year	13.67	5.351	5.410	0.0109	247	14.52	23.122	14.45	23.237
89	BASE	25 Year	14.06	5.583	4.610	0.0059	106012	15.85	13.830	14.52	20.080
92	BASE	25 Year	15.96	6.697	9.930	-0.0030	143	15.95	11.376	15.95	11.376
94	BASE	25 Year	16.16	6.387	9.930	-0.0025	351	16.08	13.830	15.85	13.830
98-E	BASE	25 Year	0.00	4.000	4.000	0.0000	465	12.74	81.541	0.00	0.000
108	BASE	5 YR	12.73	6.909	6.510	-0.0088	43396	12.00	7.148	13.79	2.897
109	BASE	5 YR	12.67	5.535	6.690	0.0023	137	13.79	2.897	13.76	2.911
110	BASE	5 YR	12.57	5.564	6.050	0.0204	141	0.12	9.796	20.51	2.557
111	BASE	5 YR	12.52	5.829	6.440	0.0194	139	20.51	2.557	19.74	2.004
112	BASE	5 YR	12.46	6.258	6.140	-0.0116	51368	14.14	5.856	14.16	5.803
117	BASE	5 YR	12.25	6.589	6.710	0.0411	176	12.25	45.253	12.25	45.175
65	BASE	5 YR	15.48	8.764	7.620	-0.0045	165821	12.25	20.844	21.40	2.573
82	BASE	5 YR	15.06	18.769	17.370	-0.0312	202779	12.50	39.047	15.06	10.999
83	BASE	5 YR	12.36	9.487	10.930	0.0071	125	15.06	10.999	15.06	10.999
85	BASE	5 YR	15.09	8.633	10.930	0.0046	154	15.06	10.999	15.10	10.999
86	BASE	5 YR	12.35	9.248	10.930	-0.0140	131	15.06	10.999	15.06	10.999
87	BASE	5 YR	12.66	5.102	5.410	0.0109	247	14.01	19.711	14.01	19.925
89	BASE	5 YR	12.95	5.240	4.610	0.0059	68739	15.05	13.270	14.26	17.308
92	BASE	5 YR	15.09	6.641	9.930	-0.0030	146	15.10	10.999	15.08	10.999
94	BASE	5 YR	15.07	6.341	9.930	-0.0024	356	15.14	13.269	15.05	13.270
98-E	BASE	5 YR	0.00	4.000	4.000	0.0000	465	12.25	71.201	0.00	0.000
108	BASE	Mean Annual	12.59	6.789	6.510	-0.0083	30327	12.00	5.417	11.83	2.919
109	BASE	Mean Annual	12.44	5.325	6.690	0.0023	137	11.83	2.919	13.22	2.854
110	BASE	Mean Annual	12.27	5.180	6.050	0.0204	141	0.12	9.796	18.46	2.561
111	BASE	Mean Annual	12.27	5.362	6.440	0.0194	139	18.46	2.561	18.16	1.997
112	BASE	Mean Annual	12.26	5.652	6.140	0.0067	205	13.88	5.229	14.25	4.651
117	BASE	Mean Annual	12.26	5.750	6.710	0.0411	176	12.25	37.201	12.26	37.141
65	BASE	Mean Annual	14.96	8.570	7.620	-0.0045	137721	12.25	15.803	18.73	2.502
82	BASE	Mean Annual	14.50	18.431	17.370	-0.0303	153771	12.50	29.601	14.50	10.803
83	BASE	Mean Annual	12.54	9.486	10.930	-0.0060	125	14.50	10.803	14.49	10.803
85	BASE	Mean Annual	14.51	8.535	10.930	0.0046	155	14.49	10.803	14.52	10.803
86	BASE	Mean Annual	12.54	9.248	10.930	-0.0140	131	14.49	10.803	14.49	10.803
87	BASE	Mean Annual	12.40	4.866	5.410	0.0109	247	13.43	18.087	13.43	18.072
89	BASE	Mean Annual	12.84	5.074	4.610	0.0059	50628	14.68	12.992	13.61	15.998

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Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
92	BASE	Mean Annual	14.68	6.614	9.930	-0.0030	147	14.52	10.803	14.49	10.803
94	BASE	Mean Annual	14.68	6.318	9.930	-0.0024	358	14.69	12.991	14.68	12.992
98-E	BASE	Mean Annual	0.00	4.000	4.000	0.0000	465	12.26	61.260	0.00	0.000

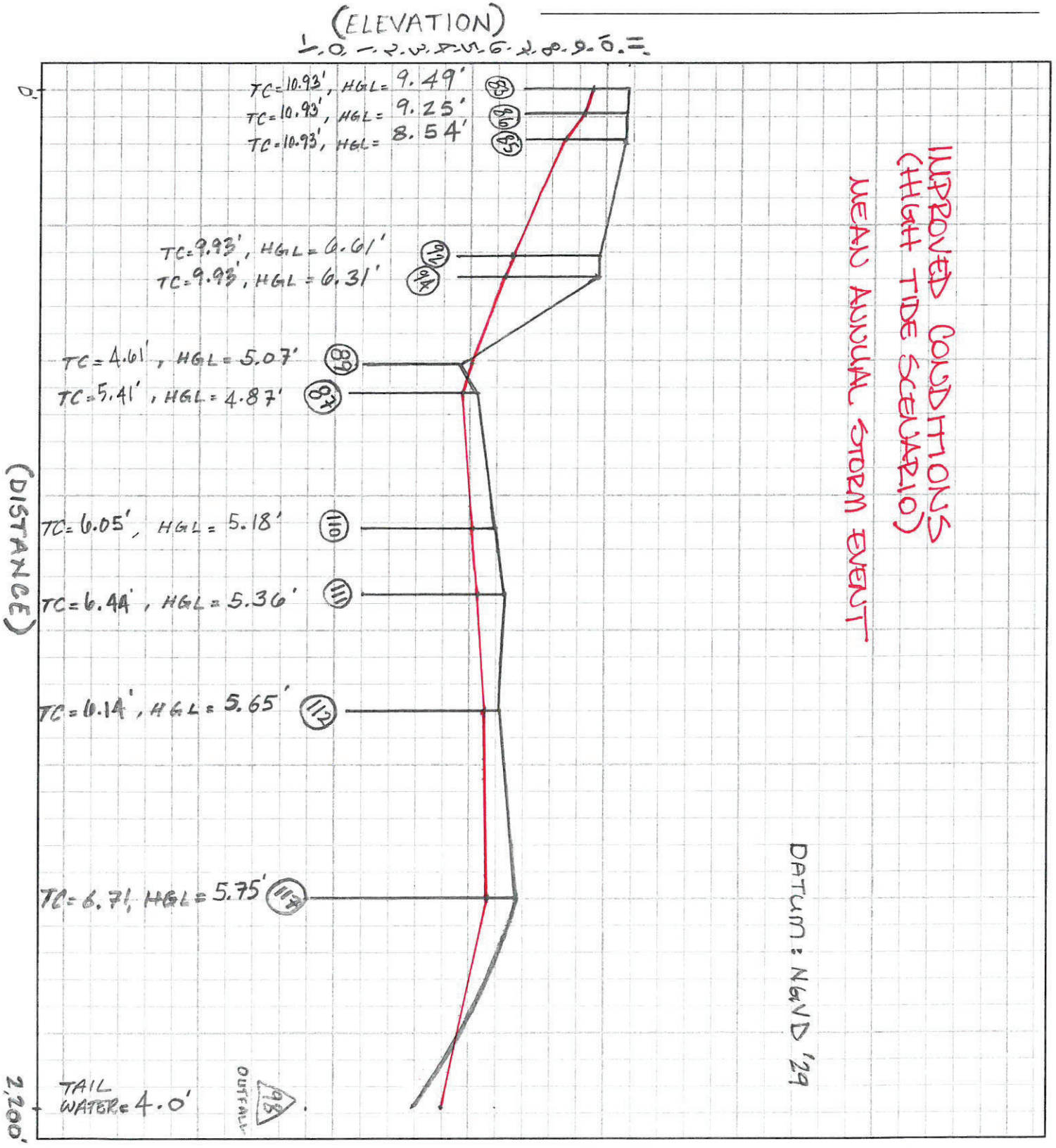
Woodridge Dr. Flooding Analysis - High Tide Condition - Improved Conditions
ZC 15108
Stormwater Calculations
12.23.15 HK/RD

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
108	BASE	25 Year	15.01	3.05	0.035	12.98	7.150	13.60	5.776
109>87	BASE	25 Year	14.07	3.29	-0.208	13.60	5.776	13.67	5.351
110>111	BASE	25 Year	16.16	2.83	2.355	13.29	5.884	13.28	6.190
111>112	BASE	25 Year	24.68	2.27	1.747	13.28	6.190	13.25	6.678
112>117	BASE	25 Year	14.01	15.71	4.314	13.25	6.678	12.61	7.513
117>98-E	BASE	25 Year	12.61	52.62	-35.763	12.61	7.513	0.00	4.000
65>94	BASE	25 Year	28.32	2.72	0.011	17.21	9.224	16.16	6.387
82>83	BASE	25 Year	15.93	11.38	0.076	15.94	19.504	15.97	9.522
83>86	BASE	25 Year	15.95	11.38	6.716	15.97	9.522	12.10	9.248
85>92	BASE	25 Year	15.95	11.38	-0.030	15.97	8.827	15.96	6.697
86>85	BASE	25 Year	15.95	11.38	-0.109	12.10	9.248	15.97	8.827
87>110	BASE	25 Year	0.12	9.80	1.540	13.67	5.351	13.29	5.884
87>112	BASE	25 Year	0.07	3.08	-0.334	13.67	5.351	13.25	6.678
87>98-E	BASE	25 Year	13.67	30.41	-18.859	13.67	5.351	0.00	4.000
89>87	BASE	25 Year	14.52	20.08	0.436	14.06	5.583	13.67	5.351
92>94	BASE	25 Year	15.95	11.38	0.047	15.96	6.697	16.16	6.387
94>89	BASE	25 Year	15.85	13.83	-0.027	16.16	6.387	4.37	4.003
108	BASE	5 YR	13.79	2.90	-0.013	12.73	6.909	12.67	5.535
109>87	BASE	5 YR	13.76	2.91	0.239	12.67	5.535	12.66	5.102
110>111	BASE	5 YR	20.51	2.56	-2.660	12.57	5.564	12.52	5.829
111>112	BASE	5 YR	19.74	2.00	1.723	12.52	5.829	12.46	6.258
112>117	BASE	5 YR	14.16	5.80	2.227	12.46	6.258	12.25	6.589
117>98-E	BASE	5 YR	12.25	45.18	-35.763	12.25	6.589	0.00	4.000
65>94	BASE	5 YR	21.40	2.57	0.012	15.48	8.764	15.07	6.341
82>83	BASE	5 YR	15.06	11.00	0.042	15.06	18.769	12.36	9.487
83>86	BASE	5 YR	15.06	11.00	-5.862	12.36	9.487	12.35	9.248
85>92	BASE	5 YR	15.10	11.00	0.032	15.09	8.633	15.09	6.641
86>85	BASE	5 YR	15.06	11.00	-0.095	12.35	9.248	15.09	8.633
87>110	BASE	5 YR	0.12	9.80	1.556	12.66	5.102	12.57	5.564
87>112	BASE	5 YR	0.07	3.08	-0.334	12.66	5.102	12.46	6.258
87>98-E	BASE	5 YR	12.66	27.47	-18.859	12.66	5.102	0.00	4.000
89>87	BASE	5 YR	14.26	17.31	0.436	12.95	5.240	12.66	5.102
92>94	BASE	5 YR	15.08	11.00	0.040	15.09	6.641	15.07	6.341
94>89	BASE	5 YR	15.05	13.27	-0.026	15.07	6.341	5.97	4.003
108	BASE	Mean Annual	11.83	2.92	-0.009	12.59	6.789	12.44	5.325
109>87	BASE	Mean Annual	13.22	2.85	-0.255	12.44	5.325	12.40	4.866
110>111	BASE	Mean Annual	18.46	2.56	2.446	12.27	5.180	12.27	5.362
111>112	BASE	Mean Annual	18.16	2.00	1.725	12.27	5.362	12.26	5.652
112>117	BASE	Mean Annual	14.25	4.65	2.195	12.26	5.652	12.26	5.750
117>98-E	BASE	Mean Annual	12.26	37.14	-35.763	12.26	5.750	0.00	4.000
65>94	BASE	Mean Annual	18.73	2.50	0.011	14.96	8.570	14.68	6.318
82>83	BASE	Mean Annual	14.50	10.80	0.041	14.50	18.431	12.54	9.486
83>86	BASE	Mean Annual	14.49	10.80	-5.864	12.54	9.486	12.54	9.248
85>92	BASE	Mean Annual	14.52	10.80	0.029	14.51	8.535	14.68	6.614
86>85	BASE	Mean Annual	14.49	10.80	-0.095	12.54	9.248	14.51	8.535

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
87>110	BASE	Mean Annual	0.12	9.80	1.522	12.40	4.866	12.27	5.180
87>112	BASE	Mean Annual	0.07	3.08	-0.334	12.40	4.866	12.26	5.652
87>98-E	BASE	Mean Annual	12.40	24.35	-18.859	12.40	4.866	0.00	4.000
89>87	BASE	Mean Annual	13.61	16.00	0.436	12.84	5.074	12.40	4.866
92>94	BASE	Mean Annual	14.49	10.80	0.046	14.68	6.614	14.68	6.318
94>89	BASE	Mean Annual	14.68	12.99	-0.027	14.68	6.318	6.94	4.003

ZEVCOHEN & ASSOCIATES INC
Civil Engineering • Environmental • Planning
Landscape Architecture

WOODRIDGE DR.
Project Name FLOODING ANALYSIS File No. 15108
Date 12/15/2015 By H.K. Sheet ___ of ___
Description HGL ANALSIS



WOODRIDGE DR.

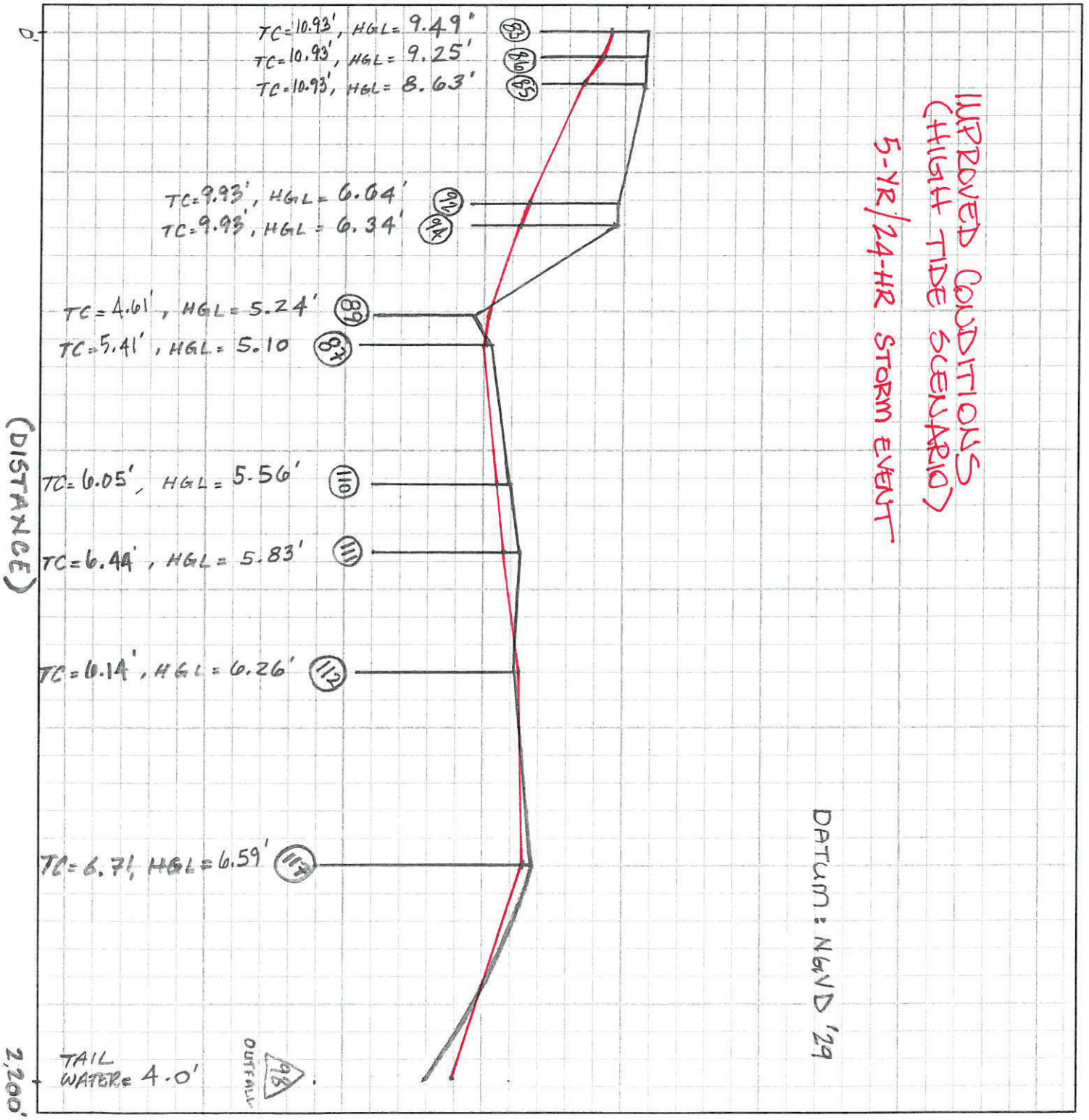
Project Name FLOODING ANALYSIS File No. 15108

Date 12/15/2015 By H.K. Sheet ____ of ____

Description HGL ANALSIS

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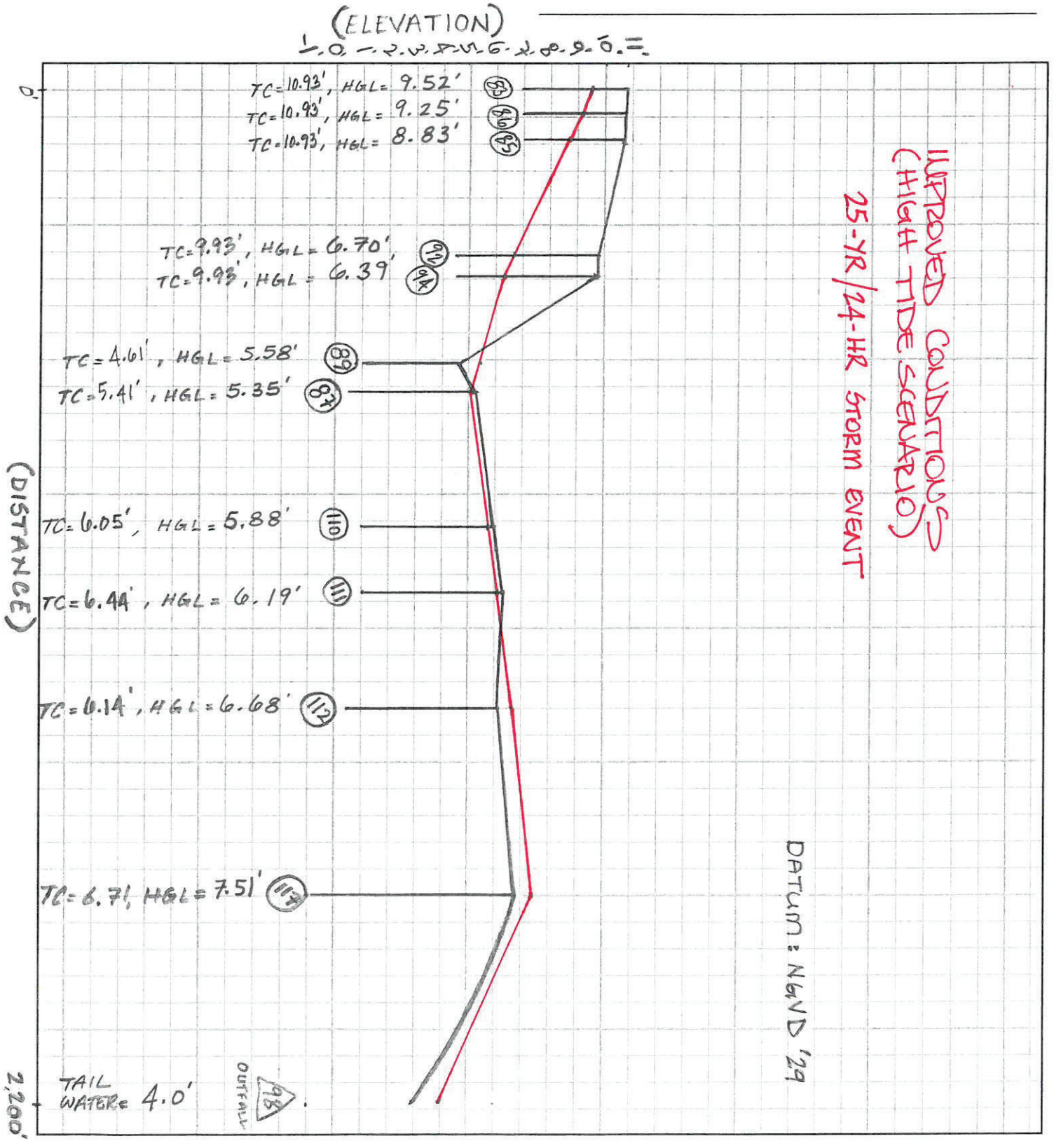


WOODRIDGE DR.

Project Name FLOODING ANALYSIS File No. 15108

Date 12/15/2015 By H.K. Sheet ____ of ____

Description HGL ANALSIS



APPENDIX A

MISCELLANEOUS TABLES AND CHARTS

ZEV COHEN
& ASSOCIATES, INC.
55 Seton Trail • Ormond Beach, Fl. 32176
386.677.2482 • Fax 386.677.2505
Engineers • Planners • Environmental

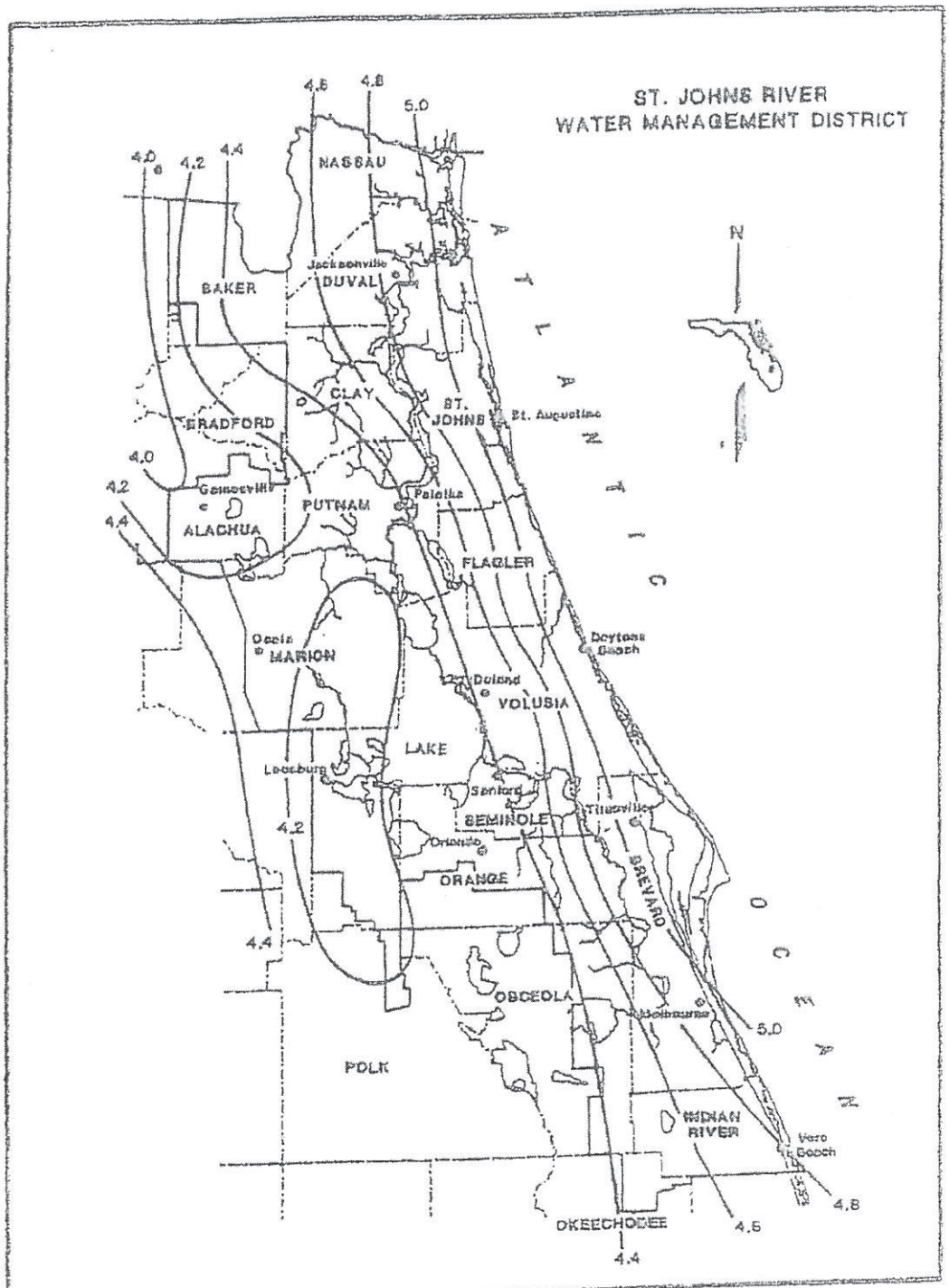


Figure 6. Mean annual 24-hour maximum rainfall for northeast Florida in inches
Source: Rao 1988a

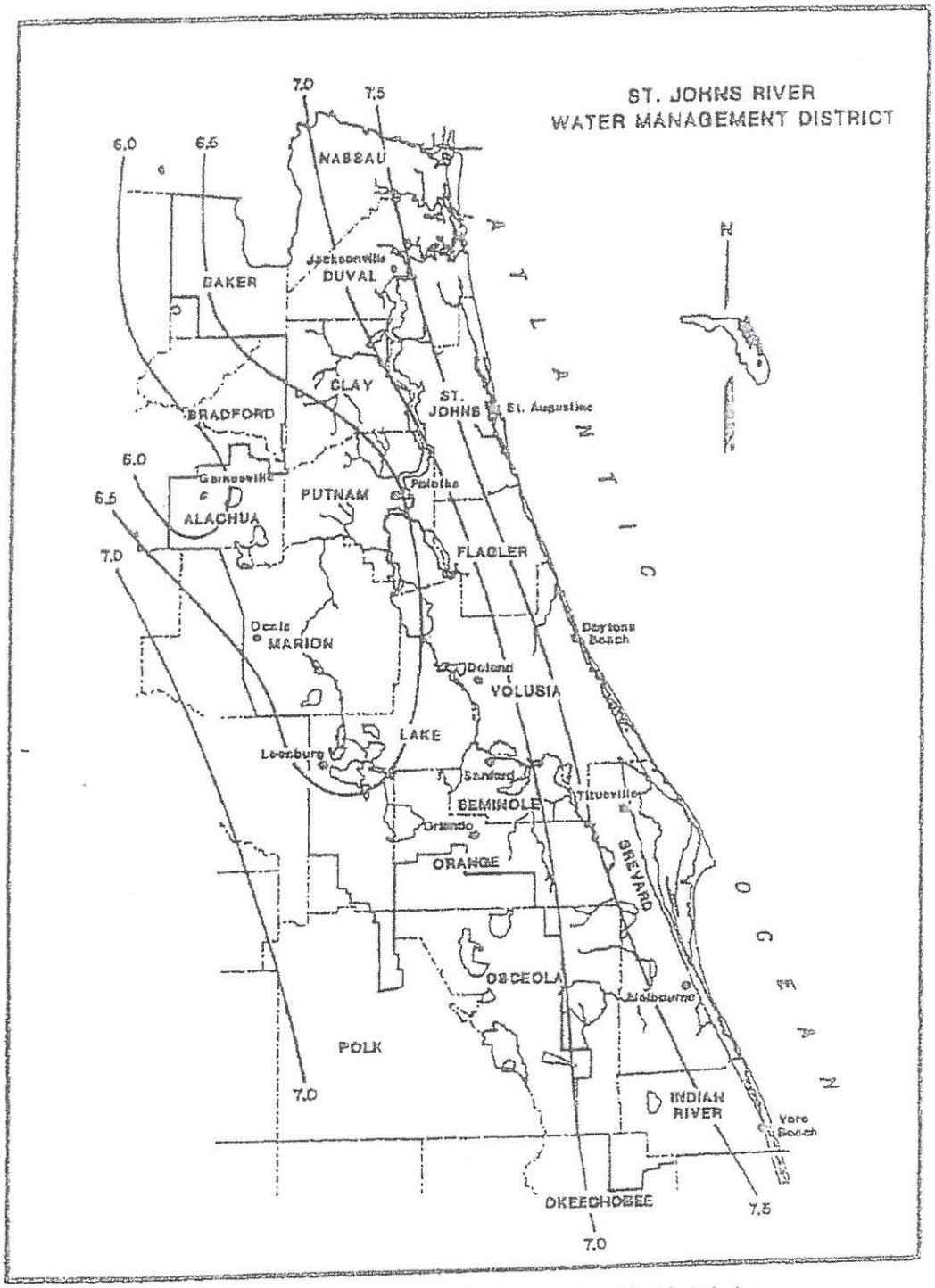


Figure 3. 10-year 24-hour maximum rainfall for northeast Florida in inches
Source: Rao 1988a

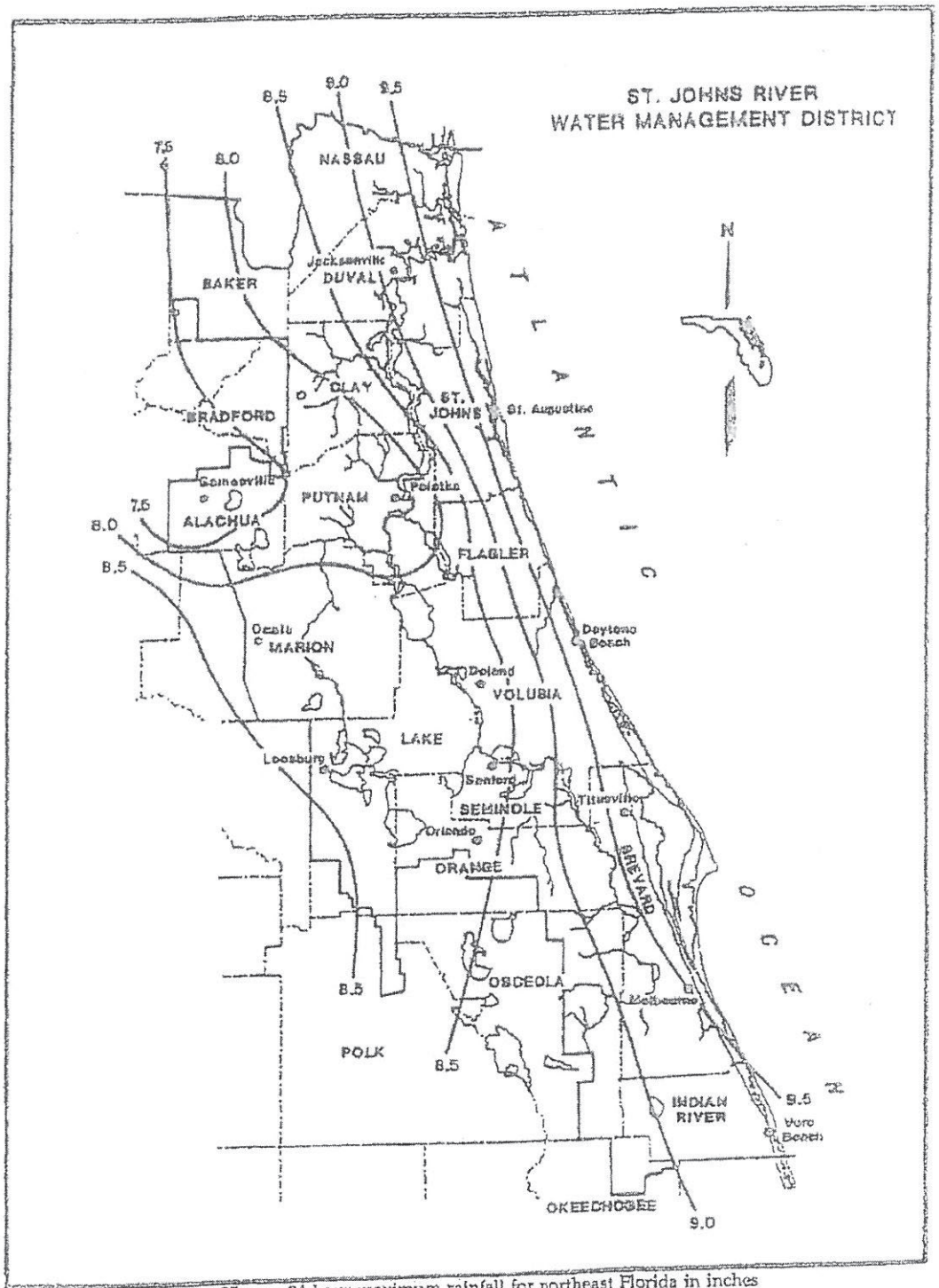


Figure 4. 25-year 24-hour maximum rainfall for northeast Florida in inches
Source: Rao 1988a

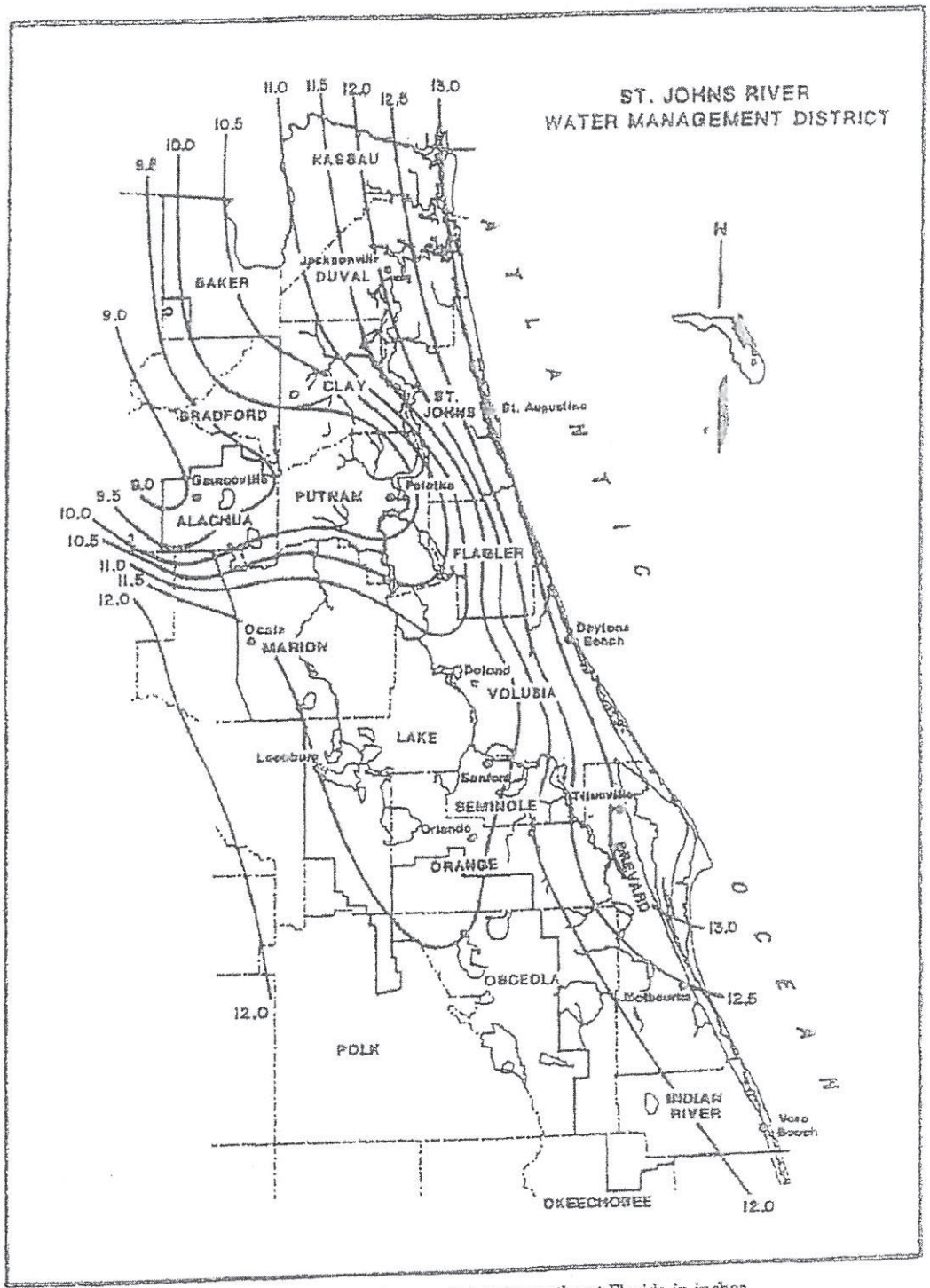


Figure 5. 100-year 24-hour maximum rainfall for northeast Florida in inches
Source: Rao 1988a

Table 2-2a Runoff curve numbers for urban areas [1]

Cover description: Cover type and hydrologic condition	Average percent impervious area [2]	Curve numbers for hydrologic soil group: A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1] Average runoff condition, and $I_a = 0.2S$.

[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Table 2-2c Runoff curve numbers for other agricultural lands [1]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. [2]	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. [3]	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 [4]	48	65	73
Woods—grass combination (orchard or tree farm). [5]	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. [6]	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 [4]	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

1 Average runoff condition, and $I_a = 0.2S$.

2 *Poor:* <50% ground cover or heavily grazed with no mulch.
Fair: 50 to 75% ground cover and not heavily grazed.
Good: > 75% ground cover and lightly or only occasionally grazed

3 *Poor:* <50% ground cover.
Fair: 50 to 75% ground cover.
Good: >75% ground cover.

4 Actual curve number is less than 30; use CN = 30 for runoff computations.

5 CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

6 *Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Table 2-2b Runoff curve numbers for cultivated agricultural lands [1]

Cover description			Curve numbers for hydrologic soil group			
Cover type	Treatment [2]	Hydrologic condition [3]	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
	C&T+ CR	Poor	65	73	79	81
		Good	61	70	77	80
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T+ CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

[1] Average runoff condition, and $I_a = 0.2S$

[2] Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

[3] Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good ≥ 20%), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

Table 2-2d Runoff curve numbers for arid and semiarid rangelands [1]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition [2]	A [3]	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

1 Average runoff condition, and $I_a = 0.2S$. For range in humid regions, use table 2-2c.

2 Poor: <30% ground cover (litter, grass, and brush overstory).
Fair: 30 to 70% ground cover
Good: > 70% ground cover.

3 Curve numbers for group A have been developed only for desert shrub.

SHEET FLOW T_t

for n = 0.24
P = 5.0

LENGTH (ft)	SLOPE (%) 0.5	1.0	1.5	2.0
100	0.33	0.25	0.21	0.19
150	0.45	0.34	0.30	0.26
200	0.59	0.44	0.37	0.33
250	0.69	0.52	0.44	0.40

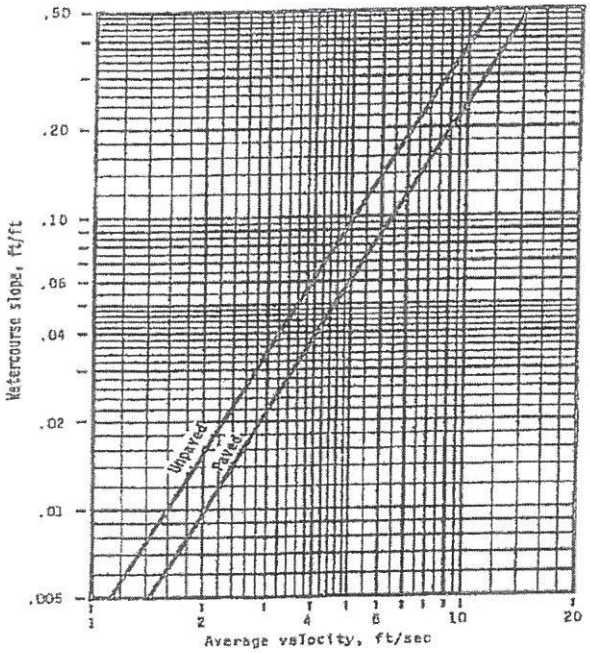


Figure 2-6 Average Velocities - Shallow Concentrated Flow

$$UNPAVED \quad V = 16.1345\,(S)^{0.5}$$

$$PAVED \quad V = 20.3282\,(S)^{0.5}$$

Table 3-2
ROUGHNESS COEFFICIENTS (MANNING'S n) FOR SHEET FLOW

SURFACE DESCRIPTION	n
Smooth surfaces (concrete, asphalt, gravel or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover < 20%	0.06
Residue cover > 20%	0.17
Grass:	
Short grass prairie	0.15
Dense grasses	0.24
Bermudagrass	0.41
Range (natural)	0.13
Woods[2]:	
Light underbrush	0.40
Dense underbrush	0.80

Source: SCS (1986)

[1]Includes species such as weeping lovegrass, bluegrass, buffalograss and native grass mixtures.

[2]When selecting n, consider cover to a height of about 0.1 ft. This is only part of the plant cover that w obstruct sheet flow.

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	6.B.
Section	CONSENT AGENDA	**Category**	Consent - Resolution
Subject	FAA Infrastructure Investment and Jobs Act (IIJA) - Ormond Beach Municipal Airport Airfield Remarking and Rejuvenation		
Recommended Action	Staff recommends approval of the execution of the grant agreement with the FAA to fund the remarking and rejuvenation of the runway and taxilanes.		
Strategic Goal	Economic Development - Actively promote the value of the Municipal Airport and pursue improvements that maximize its use and economic/business contributions to the City.		
Department Staff Contact	Economic Development Brian Rademacher, Economic Development Director		

Summary

This is a resolution to authorize the execution of a grant from the Federal Aviation Administration (FAA) to provide funding for the airport remarking and rejuvenation project. **This is an aviation safety project.**

Airfield pavement markings are a fundamental component of the airport's safety system, providing pilots with the visual guidance needed to safely identify runways, taxiways, holding positions, and other movement areas during takeoff, landing, and taxiing. Maintaining markings that are clear, properly located, and consistent with FAA standards helps reduce the risk of pilot confusion, runway incursions, and other airfield safety hazards.

During the most recent Florida Department of Transportation (FDOT) annual airport safety and licensing inspection, FDOT inspectors identified inconsistencies between the airport's existing airfield pavement markings and current FAA airfield marking standards. As a result, **FDOT advised the City that certain markings must be repainted, added, modified, or removed to bring the airfield into compliance with FAA safety standards.**

For these reasons, this project is considered a priority, and staff recommends proceeding with the work necessary to correct the deficiencies identified during the FDOT safety inspection **and maintain compliance with applicable FAA airfield safety standards.**

The FAA Infrastructure Investment and Jobs Act (IIJA) grant funding included in this resolution also provides funding for the resurfacing of Taxiway A and Taxi lane C.

Financial Impact

The total cost for Construction/Engineering/Inspection (CEI) Services and Construction is $751,312. The City Commission approved FAA Airport Improvement Planning (AIP funds and FDOT Public Transportation Grant Agreements funding this project on June 9, 2026, with Resolutions 2026-75 and 2026-76 respectively. This FAA grant completes FAA's portion of funds for this project.

Citizen Impact

The Airfield Marking and Pavement Rejuvenation Project pertains specifically to current and planned airport operations. The improved markings and pavement conditions will serve as an operational safety enhancement for the flying public.

Attachments

1. 26-101 FAA (IIJA) Grant - Airport Remarking (P26-0107G)
2. OMN-SOG-3-12-0059-034-2026-Grant Agreement
3. Exhibit_A

RESOLUTION NO. 2026-101

A RESOLUTION AUTHORIZING THE EXECUTION OF A GRANT AGREEMENT BETWEEN THE CITY AND THE FEDERAL AVIATION ADMINISTRATION REGARDING FUNDING FOR THE AIRPORT AIRFIELD REJUVENATION AND REMARKING PROJECT AT THE ORMOND BEACH MUNICIPAL AIRPORT; AUTHORIZING THE EXECUTION OF ALL DOCUMENTS NECESSARY AND INCIDENTAL THERETO FOR THE CITY TO ACCEPT THE GRANT AWARD; AND SETTING FORTH AN EFFECTIVE DATE.

WHEREAS, the City Commission desires to enter into a Grant Agreement with the Federal Aviation Administration ("FAA") for the Airport Airfield Rejuvenation and Remarking Project at the Ormond Beach Municipal Airport (the “Project”), and

WHEREAS, the total cost of the Project is $751,312.00, and

WHEREAS, the City Commission authorized the execution of two Grant Agreements with the Florida Department of Transportation (“FDOT”) through Resolution 2026-76 to provide grant funds in the amount of $411,103.00 towards this Project, and

WHEREAS, the City Commission authorized the execution of a Grant Agreement with the Federal Aviation Administration ("FAA") through Resolution 2026-75 to provide grant funding from the Airport Improvement Program (“AIP”) in the amount of $125,510.00, representing fifty percent (50%) of the FAA eligible portion of this Project, and

WHEREAS, the Federal Aviation Administration ("FAA") has issued a Grant Agreement to provide grant funding from the Infrastructure Investment and Jobs Act (“IIJA”) in

the amount of $111,922.00 (a copy of which is attached hereto and incorporated herein by reference), representing forty-five percent (45%) of the FAA eligible portion of this Project, and

WHEREAS, the City Manager has certified that $102,777.00 to fund the City's contribution for this Project is appropriated in the Airport Fund (108) and has not been appropriated for any other purpose, now therefore,

BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF ORMOND BEACH, FLORIDA, THAT:

SECTION ONE. The Mayor and the City Manager are hereby authorized and directed to execute a Grant Agreement between the City and the Federal Aviation Administration regarding funding for the Airport Airfield Rejuvenation and Remarking Project at the Ormond Beach Municipal Airport, and to pay the cost thereof using grant funds from the Federal Aviation Administration and the Florida Department of Transportation, and the Airport Fund.

SECTION TWO. This Resolution shall take effect immediately upon its adoption.

APPROVED AND AUTHENTICATED, this 25th day of August, 2026.

_____
JASON LESLIE
Mayor

ATTEST:

_____
SUSAN CARROLL DAUDERIS
City Clerk

U.S. Department of Transportation Federal Aviation Administration

Orlando Airports District Office:
8427 South Park Circle, Suite 524
Orlando, FL 32819

Mr. Brian Rademacher
Economic Development Director
City of Ormond Beach
22 South Beach Street
Ormond Beach, FL 32174

Dear Mr. Rademacher:

The Grant Offer for Infrastructure Investment and Jobs Act (IIJA) Project No. 3-12-0059-034-2026 at Ormond Beach Municipal Airport is attached for execution. This letter outlines the steps you must take to properly enter into this agreement and provides other useful information. Please read the conditions, special conditions, and assurances that comprise the Grant Offer carefully.

You may not make any modification to the text, terms or conditions of the Grant Offer.

Steps You Must Take to Enter Into Agreement.

To properly enter into this agreement, you must do the following:

1. The governing body must give authority to execute the grant to the individual(s) signing the grant, i.e., the person signing the document must be the sponsor's authorized representative(s) (hereinafter "authorized representative").
2. The authorized representative must execute the grant by adding their electronic signature to the appropriate certificate at the end of the agreement.
3. Once the authorized representative has electronically signed the grant, the sponsor's attorney(s) will automatically receive an email notification.
4. On the **same day or after** the authorized representative has signed the grant, the sponsor's attorney(s) will add their electronic signature to the appropriate certificate at the end of the agreement.
5. If there are co-sponsors, the authorized representative(s) and sponsor's attorney(s) must follow the above procedures to fully execute the grant and finalize the process. Signatures must be obtained and finalized no later than **August 27, 2026**.
6. The fully executed grant will then be automatically sent to all parties as an email attachment.

Payment. Subject to the requirements in 2 CFR § 200.305 (federal payment), each payment request for reimbursement under this grant must be made electronically via the Delphi eInvoicing System. Please see the attached Grant Agreement for more information regarding the use of this system.

Project Timing. The terms and conditions of this agreement require you to complete the project without undue delay and no later than the Period of Performance end date four (4) years from the grant execution date). We will be monitoring your progress to ensure proper stewardship of these federal funds. We expect you to submit payment requests for reimbursement of allowable incurred project expenses consistent with project progress. Your grant may be placed in "inactive" status if you do not make draws on a regular basis, which will affect your ability to receive future Grant Offers. Costs incurred after the Period of Performance ends are generally not allowable and will be rejected unless authorized by the FAA in advance.

Reporting. Until the grant is completed and closed, you are responsible for submitting formal reports as follows:

- For all grants, you must submit by December 31st of each year this grant is open:
  1. A signed/dated SF-270 (Request for Advance or Reimbursement for non-construction projects) or SF-271 or equivalent (Outlay Report and Request for Reimbursement for Construction Programs), and
  2. An SF-425 (Federal Financial Report).
- For non-construction projects, you must submit FAA Form 5100-140, Performance Report within 30 days of the end of the federal fiscal year.
- For construction projects, you must submit FAA Form 5370-1, Construction Progress and Inspection Report, within 30 days of the end of each federal fiscal quarter.

Audit Requirements. As a condition of receiving federal assistance under this award, you must comply with audit requirements as established under 2 CFR Part 200. Subpart F requires non-federal entities that expend $1,000,000 or more in federal awards to conduct a single or program specific audit for that year. Note that this includes federal expenditures made under other federal-assistance programs. Please take appropriate and necessary action to ensure your organization will comply with applicable audit requirements and standards.

Closeout. Once the project(s) is completed and all costs are determined, we ask that you work with your FAA contact indicated below to close the project without delay and submit the necessary final closeout documentation as required by your Region/Airports District Office.

FAA Contact Information. chastity Clark, (407) 487-7226, chastity.clark@faa.gov is the assigned program manager for this grant and is readily available to assist you and your designated representative with the requirements stated herein.

We sincerely value your cooperation in these efforts and look forward to working with you to complete this important project.

Sincerely,

Juan C. Brown
Manager

U.S. Department
of Transportation
Federal Aviation
Administration

FEDERAL AVIATION ADMINISTRATION

FY 2026

AIRPORT INFRASTRUCTURE GRANT (AIG) GRANT AGREEMENT

Part I - Offer

Federal Award Offer Date

Airport/Planning Area: Ormond Beach Municipal Airport

Airport Grant Number: 3-12-0059-034-2026

Unique Entity Identifier: P7N5EWNDK217

TO: City of Ormond Beach

(herein called the "Sponsor") (For Co-Sponsors, list all Co-Sponsor names. The word "Sponsor" in this Grant Agreement also applies to a Co-Sponsor.)

FROM: **The United States of America** (acting through the Federal Aviation Administration, herein called the "FAA")

WHEREAS, the sponsor has submitted to the FAA a Project Application dated April 2, 2026, for a grant of federal funds for a project at or associated with the Ormond Beach Municipal Airport, which is included as part of this Grant Agreement; and

WHEREAS, the FAA has approved a project for the Ormond Beach Municipal Airport (herein called the "Project") consisting of the following:

Resurface Taxiway A (4,765 feet) - Construction; Resurface Taxilane C (882 feet) - Construction

which is more fully described in the Project Application.

NOW THEREFORE, Pursuant to and for the purpose of carrying out Title 49, United States Code (USC), Chapters 471 and 475; 49 USC §§ 40101 et seq. and 48103; Consolidated Appropriations Act, 2024 (Public Law Number (P.L.) 118-42); Consolidated Appropriations Act, 2025 (P.L. 119-4); Consolidated Appropriations Act, 2026 (P.L. 119-75); FAA Reauthorization Act of 2024 (P.L. 118-63); Infrastructure Investment and Jobs Act of 2021 (IIJA) (P.L. 117-58) (as applicable); and the representations contained in the Project Application; and in consideration of: (a) the sponsor's adoption and ratification of the most recently published Grant Assurances; (b) the sponsor's acceptance of this offer; and (c) the benefits to accrue to the United States and the public from the accomplishment of the project, and compliance with the Grant Assurance and conditions as herein provided;

THE FEDERAL AVIATION ADMINISTRATION, FOR AND ON BEHALF OF THE UNITED STATES, HEREBY OFFERS AND AGREES to pay (95) % of the allowable costs incurred accomplishing the Project as the United States' share of the Project.

Assistance Listings Number(s): 20.117.

This Offer is made on and SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

CONDITIONS

1. **Maximum Obligation.** The maximum obligation of the United States payable under this Offer is $111,922.

   The following amounts represent a breakdown of the maximum obligation for the purpose of establishing allowable amounts for any future grant amendment, which may increase the foregoing maximum obligation of the United States under the provisions of 49 USC § 47108(b):
   $0 for planning
   $111,922 for airport development or noise program implementation; and,
   $0 for land acquisition.

2. **Grant Performance.** This agreement is subject to the following federal award requirements:

   a. Period of Performance:

      i. Start Date: The date the recipient formally accepts this agreement and the date signed by the last signatory to the agreement.

      ii. End Date: Four (4) years to the calendar day from the date of acceptance.

      iii. Extension of the Period of Performance (PoP): The recipient may request a one-time extension of up to one year after the PoP end date by submitting a request to the FAA. The request must include, at a minimum, supporting justification for the request and the amount of additional time requested. The request must be submitted at least 10 calendar days before the PoP end date. This one-time extension may not be exercised for the sole purpose of using unobligated balances.

      The PoP end date, or any extension as approved by FAA, shall not affect, relieve, or reduce recipient obligations and assurances that extend beyond the closeout of this agreement.

   b. Budget Period:

      i. For a single year grant offer, the budget period follows the same start and end date as the PoP provided in paragraph 2(a), and any extension of the PoP end date.

ii. For a multi-year grant offer, per the authority provided in 49 USC § 47108 and § 47114, the budget period is from the initial PoP start date through the end of the final fiscal year identified on a multi-year grant offer (See Multi-Year Grant Special Condition, if applicable).

c. Appropriation Period of Availability and Expenditure:

i. The FAA must obligate appropriated funds within the period of availability identified in the appropriation.

ii. In accordance with 31 USC § 1552, by September 30th of the fifth fiscal year after the period of availability, FAA must liquidate and close expired appropriations, and any remaining balance (whether obligated or unobligated) must be canceled and thereafter shall not be available for obligation or expenditure for any purpose.

iii. IIJA and Supplemental AIP funding are subject to this condition.

d. Close Out:

Recipients shall begin the closeout process upon physical completion of the project(s) identified in this agreement. Closeout shall proceed expeditiously and without delay, even if the PoP end date has not been reached. In accordance with 2 Code of Federal Regulations (CFR) 200, unless the FAA authorizes a written extension, the recipient must submit all grant closeout documentation and liquidate (pay-off) all obligations incurred under this award no later than 120 calendar days after the PoP end date. If the recipient does not submit all required closeout documentation within this period, the FAA will proceed to close out the grant within one year of the PoP end date with the information available at the end of 120 days.

e. Termination:

The FAA may terminate this agreement and all of its obligations under this agreement if any of the following occur:

i. The recipient fails to comply with the terms and conditions of this agreement;

ii. The recipient fails to obtain or provide any recipient grant contribution as required by the agreement;

iii. There is a material failure to comply with the Project Schedule even if it is beyond the reasonable control of the recipient;

iv. Any project changes that the FAA determines are inconsistent with the FAA's basis for selecting the project to receive a grant;

v. Continued grant payment inactivity, generally defined as no drawdowns over a 12-month period;

vi. The recipient requests that the FAA terminate the agreement under this section; or

vii. The FAA determines that termination of this agreement is in the public interest.

In terminating this agreement under this section, the FAA may elect to consider only the interests of the FAA.

3. Ineligible or Unallowable Costs. In accordance with 49 USC § 47110, the sponsor is prohibited from including any costs in the grant funded portions of the project that the FAA has determined to be ineligible or unallowable, including costs incurred to carry out airport development implementing

policies and initiatives repealed by Executive Order 14148, provided such costs are not otherwise permitted by statute.

4. **Indirect Costs - Sponsor.** The sponsor may charge indirect costs under this award by applying the indirect cost rate identified in the project application, as accepted by the FAA, to allowable costs for sponsor direct salaries and wages.

5. **Determining the Final Federal Share of Costs.** The United States' share of allowable project costs will be made in accordance with 49 USC § 47109, the regulations, policies, and procedures of the Secretary of Transportation ("Secretary"), and any superseding legislation. Final determination of the United States' share will be based upon the final audit of the total amount of allowable project costs, and settlement will be made for any upward or downward adjustments to the federal share of costs.

6. **Completing the Project Without Delay and in Conformance with Requirements.** The sponsor must carry out and complete the project without undue delay, and in accordance with this agreement, 49 USC Chapters 471 and 475, IIJA (P.L. 117-58) (as appropriate), and the regulations, policies, and procedures of the Secretary. Per 2 CFR § 200.308, the sponsor agrees to report and request prior FAA approval for any disengagement from performing the project that exceeds three months, or a 25 percent reduction in time devoted to the project. The report must include a reason for the project stoppage. The sponsor also agrees to comply with the grant assurances, which are part of this agreement.

7. **Amendments or Withdrawals before Grant Acceptance.** The FAA reserves the right to amend or withdraw this offer at any time prior to its acceptance by the sponsor.

8. **Offer Expiration Date.** This offer will expire and the United States will not be obligated to pay any part of the costs of the project(s) unless this offer has been accepted by the sponsor on or before August 27, 2026, or such subsequent date as may be prescribed in writing by the FAA.

9. **Improper Use of Federal Funds and Mandatory Disclosure.**

   a. The sponsor must take all steps, including litigation, if necessary, to recover federal funds spent fraudulently, wastefully, or in violation of federal antitrust statutes, or misused in any other manner for any project upon which federal funds have been expended. For the purposes of this grant agreement, the term "federal funds" means funds however used or dispersed by the sponsor, that were originally paid pursuant to this or any other federal grant agreement. The sponsor must obtain the approval of the Secretary as to any determination of the amount of the federal share of such funds. The sponsor must return the recovered federal share, including funds recovered by settlement, order, or judgment, to the Secretary. Upon request, the sponsor must furnish to the Secretary all documents and records pertaining to the determination of the amount of the federal share, or to any settlement, litigation, negotiation, or other efforts taken to recover such funds. All settlements or other final positions of the sponsor, in court or otherwise, involving the recovery of such federal share require advance approval by the Secretary.

   b. The sponsor, a recipient, and a subrecipient under this federal grant must promptly comply with the mandatory disclosure requirements as established under 2 CFR § 200.113, including reporting requirements related to recipient integrity and performance in accordance with Appendix XII to 2 CFR Part 200.

10. **United States Not Liable for Damage or Injury.** The United States is not responsible or liable for damage to property or injury to persons which may arise from, or be incident to, compliance with this agreement.

11. **System for Award Management (SAM) Registration and Unique Entity Identifier (UEI).**

    a. Requirement for System for Award Management (SAM): Unless the sponsor is exempted from this requirement under 2 CFR § 25.110, the sponsor must maintain the currency of its information in the SAM until the sponsor submits the final financial report required under this grant, or receives the final payment, whichever is later. This requires that the sponsor review and update the information at least annually after the initial registration and more frequently if required by changes in information or another award term. Additional information about registration procedures may be found at the SAM website (currently at http://www.sam.gov).

    b. Unique entity identifier (UEI) means a 12-character alpha-numeric value used to identify a specific commercial, nonprofit, or governmental entity. A UEI may be obtained from SAM.gov at https://sam.gov/content/entity-registration.

12. **Electronic Grant Payment(s).** Unless otherwise directed by the FAA, the sponsor must make each payment request under this agreement electronically via the Delphi eInvoicing System for Department of Transportation (DOT) Financial Assistance Awardees.

13. **Informal Letter Amendment of Projects.** If, during the life of the project, the FAA determines that the maximum grant obligation of the United States exceeds the expected needs of the sponsor by $25,000 or five percent, whichever is greater, the FAA can issue a letter amendment to the sponsor unilaterally reducing the maximum obligation.

    The FAA can also issue a letter to the sponsor increasing the maximum obligation if there is an overrun in the total actual eligible and allowable project costs to cover the amount of the overrun, provided it will not exceed the statutory limitations for grant amendments. The FAA's authority to increase the maximum obligation does not apply to the "planning" component of Condition No. 1, Maximum Obligation.

    The FAA can also issue an informal letter amendment that modifies the grant description to correct administrative errors or to delete work items if the FAA finds it advantageous, and in the best interests of the United States.

    An informal letter amendment has the same force and effect as a formal grant amendment.

14. **Environmental Standards.** The sponsor is required to comply with all applicable environmental standards, as further defined in the Grant Assurances, for all projects in this grant. If the sponsor fails to comply with this requirement, the FAA may suspend, cancel, or terminate this Grant Agreement.

15. **Financial Reporting and Payment Requirements.** The sponsor will comply with all federal financial reporting requirements and payment requirements, including submittal of timely and accurate reports.

16. **Buy American.** Unless otherwise approved in advance by the FAA, in accordance with 49 USC § 50101, the sponsor will not acquire or permit any contractor or subcontractor to acquire any steel or manufactured goods produced outside the United States to be used for any project for which funds are provided under this grant. The sponsor will include a provision implementing Buy American in every contract and subcontract awarded under this grant.

17. **Build America, Buy America.** The sponsor must comply with the requirements under the Build America, Buy America Act (P.L. 117-58).

18. **Maximum Obligation Increase.** In accordance with 49 USC § 47108(b)(2), as amended, the maximum obligation of the United States, as stated in Condition No. 1, Maximum Obligation, of this grant:

    a. May not be increased for a planning project;

    b. May be increased by not more than 15 percent for development projects, if funds are available;

    c. May be increased by not more than the greater of the following for a land project, if funds are available:

        i. 15 percent; or

        ii. 25 percent of the total increase in allowable project costs attributable to acquiring an interest in the land.

    If the sponsor requests an increase, any eligible increase in funding will be subject to the United States Government share as provided in 49 USC § 47109, or IIJA (P.L. 17-58), or other superseding legislation if applicable, for the fiscal year appropriation with which the increase is funded. The FAA is not responsible for the same federal share provided herein for any amount increased over the initial grant amount. The FAA may adjust the federal share as applicable through an informal letter of amendment.

19. **Audits for Sponsors.**

    PUBLIC SPONSORS. The sponsor must provide for a Single Audit or program-specific audit in accordance with 2 CFR Part 200. The sponsor must submit the audit reporting package to the Federal Audit Clearinghouse on the Federal Audit Clearinghouse's Internet Data Entry System at http://harvester.census.gov/facweb/. Upon request of the FAA, the sponsor shall provide one copy of the completed audit to the FAA. Sponsors that expend less than $1,000,000 in federal awards and are exempt from federal audit requirements must make records available for review or audit by the appropriate federal agency officials, state, and Government Accountability Office. The FAA and other appropriate federal agencies may request additional information to meet all federal audit requirements.

20. **Suspension or Debarment.** When entering into a "covered transaction" as defined by 2 CFR § 180.200, the sponsor must:

    a. Verify the non-federal entity is eligible to participate in this federal program by:

        i. Checking the System for Award Management (SAM.gov) exclusions to determine if the non-federal entity is excluded or disqualified; or

        ii. Collecting a certification statement from the non-federal entity attesting they are not excluded or disqualified from participating; or

        iii. Adding a clause or condition to covered transactions attesting the individual or firm are not excluded or disqualified from participating.

    b. Require prime contractors to comply with 2 CFR § 180.330 when entering into lower-tier transactions with their contractors and sub-contractors.

c. Immediately disclose in writing to the FAA whenever (1) the sponsor learns they have entered into a covered transaction with an ineligible entity or (2) the public sponsor suspends or debars a contractor, person, or entity.

21. Ban on Texting While Driving.

a. In accordance with Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving, October 1, 2009, and DOT Order 3902.10, Text Messaging While Driving, December 30, 2009, the sponsor is encouraged to:

i. Adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while driving when performing any work for, or on behalf of, the Federal Government, including work relating to a grant or subgrant.

ii. Conduct workplace safety initiatives in a manner commensurate with the size of the business, such as:

a) Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and
b) Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

f. The sponsor must insert the substance of this clause on banning texting while driving in all subgrants, contracts, and subcontracts funded with this grant.

22. Trafficking in Persons.

a. *Posting of contact information.*

i. The sponsor must post the contact information of the national human trafficking hotline (including options to reach out to the hotline such as through phone, text, or TTY) in all public airport restrooms.

b. *Provisions applicable to a sponsor that is a private entity.*

i. Under this grant, the sponsor, its employees, subrecipients under this grant, and subrecipient's employees must not engage in:

a) Severe forms of trafficking in persons;

b) The procurement of a commercial sex act during the period of time that the grant or cooperative agreement is in effect;

c) The use of forced labor in the performance of this grant; or any subaward; or

d) Acts that directly support or advance trafficking in persons, including the following acts:

1. Destroying, concealing, removing, confiscating, or otherwise denying an employee access to that employee's identity or immigration documents;

2. Failing to provide return transportation of pay for return transportation costs to an employee from a country outside the United States to the country from which the employee was recruited upon the end of employment if requested by the employee, unless:

a. Exempted from the requirement to provide or pay for such return transportation by the federal department or agency providing or entering into the grant; or

b. The employee is a victim of human trafficking seeking victim services or legal redress in the country of employment or witness in a human trafficking enforcement action;

3. Soliciting a person for the purpose of employment, or offering employment, by means of materially false or fraudulent pretenses, representations, or promises regarding that employment;

4. Charging recruited employees a placement or recruitment fee; or

5. Providing or arranging housing that fails to meet the host country's housing and safety standards.

ii. The FAA may unilaterally terminate this grant or take any remedial actions authorized by 22 USC § 7104b(c), without penalty, if any private entity under this grant:

a) is determined to have violated a prohibition in paragraph 2.a. (PoP) of this grant; or

b) has an employee that is determined to have violated a prohibition in paragraph 2.a. (PoP) of this grant through conduct that is either:

1. Associated with the performance under this grant; or
2. Imputed to the recipient or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR Part 180, "OMB Guidelines to Agencies on Government-wide Debarment and Suspension (Nonprocurement)," as implemented by the FAA at 2 CFR Part 1200.

c. *Provisions applicable to a sponsor other than a private entity.*

i. The FAA may unilaterally terminate this award or take any remedial actions authorized by 22 USC § 7104b(c), without penalty, if subrecipient is a private entity under this grant:

a) is determined to have violated a prohibition in paragraph 2.a. (PoP) of this grant or

b) has an employee that is determined to have violated a prohibition in paragraph 2.a. (PoP) of this grant through conduct that is either:

1. Associated with the performance under this grant; or
2. Imputed to the sponsor or subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR Part 180, "OMB Guidelines to Agencies on Government-wide Debarment and Suspension (Nonprocurement)," as implemented by the FAA at 2 CFR Part 1200.

d. *Provisions applicable to any sponsor or subrecipient.*

i. The sponsor or subrecipient must inform the FAA and the DOT Inspector General immediately of any information you receive from any source alleging a violation of a prohibition in paragraph 2.a. (PoP) of this grant.

ii. The FAA's right to unilaterally terminate this grant as described in paragraphs 2.b. (Budget Period) or 3.a. (Close Out and Termination) of this grant, implements the requirements of 22 USC Chapter 78, and is in addition to all other remedies for noncompliance that are available to the FAA under this grant.

iii. The sponsor must include the requirements of paragraph 2.a. (PoP) of this grant award term in any subaward it makes to a private entity.

iv. If applicable, the sponsor must also comply with the compliance plan and certification requirements in 2 CFR § 175.105(b).

e. *Definitions. For purposes of this grant award, term:*

i. "Employee" means either:

a) An individual employed by the sponsor or a subrecipient who is engaged in the performance of the project or program under this grant; or

b) Another person engaged in the performance of the project or program under this grant and not compensated by the sponsor or a subrecipient including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing requirements.

ii. "Private Entity" means:

a) Any entity, including for-profit organizations, nonprofit organizations, institutions of higher education, and hospitals. The term does not include foreign public entities, Indian Tribes, local governments, or states as defined in 2 CFR § 200.1.

b) The terms "severe forms of trafficking in persons," "commercial sex act," "sex trafficking," "abuse or threatened abuse of law or legal process," "coercion," "debt bondage," and "involuntary servitude" have the meanings given at section 103 of the Victims of Trafficking and Violence Protection Act of 2000, as amended (22 USC § 7102).

23. Grant Funded Work Included in a PFC Application. Within 120 days of acceptance of this Grant Agreement, the sponsor must submit to the FAA an amendment to any approved Passenger Facility Charge (PFC) application that contains an approved PFC project also covered under this Grant Agreement as described in the project application. The sponsor may not make any expenditure under this Grant Agreement until project work addressed under this Grant Agreement is removed from an approved PFC application by amendment.

24. Exhibit "A" Property Map. The Exhibit "A" Property Map dated January, 2016, is incorporated herein by reference, or is submitted with the project application and made part of this Grant Agreement.

25. Employee Protection from Reprisal. In accordance with 2 CFR § 200.217 and 41 USC § 4701, an employee of a grantee, subgrantee contractor, recipient, or subrecipient must not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing to a person or body described in 41 USC § 4712(a)(2) information that the employee reasonably believes is evidence of gross mismanagement of a federal contract or grant, a gross waste of federal funds, an abuse of authority relating to a federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a federal contract (including the competition for or negotiation of a contract) or grant. The grantee, subgrantee, contractor, recipient, or subrecipient must inform their employees in writing of employee whistleblower rights and protections under 41 USC § 4712. See statutory requirements for whistleblower protections at 10 USC § 4701, 41 USC § 4712, 41 USC § 4304, and 10 USC § 4310.

26. **Prohibited Telecommunications and Video Surveillance Services and Equipment.** The sponsor agrees to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [P.L. 115-232 § 889] and 2 CFR § 200.216.

27. **Critical Infrastructure Security and Resilience.** The sponsor acknowledges that it has considered and addressed physical and cybersecurity and resilience in its project planning, design, and oversight, as determined by the DOT and the Department of Homeland Security (DHS). For airports that do not have specific DOT or DHS cybersecurity requirements, the FAA encourages the voluntary adoption of the cybersecurity requirements from the Transportation Security Administration and Federal Security Director identified for security risk Category X airports.

28. **Title VI of the Civil Rights Act.** As a condition of a grant award, the sponsor shall demonstrate that it complies with the provisions of Title VI of the Civil Rights Act of 1964 (42 USC §§ 2000d et seq.) and implementing regulations (49 CFR Part 21), the Airport and Airway Improvement Act of 1982 (49 USC § 47123), the Age Discrimination Act of 1975 (42 USC § 6101 et seq.), Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 et seq.), the Americans with Disabilities Act of 1990 (42 USC § 12101, et seq.), U.S. Department of Transportation and Federal Aviation Administration (FAA) Assurances, and other relevant civil rights statutes, regulations, or authorities, including any amendments or updates thereto. This may include, as applicable, providing a current Title VI Program Plan to the FAA for approval, in the format and according to the timeline required by the FAA, and other information about the communities that will be benefited and impacted by the project. The sponsor shall affirmatively ensure that when carrying out any project supported by this grant that it complies with all federal nondiscrimination and civil rights laws based on race, color, national origin, sex, creed, age, disability, and genetic information, in consideration for federal financial assistance. The Department's and FAA's Office of Civil Rights may provide resources and technical assistance to recipients to ensure full and sustainable compliance with federal civil rights requirements. Failure to comply with civil rights requirements will be considered a violation of the agreement or contract and be subject to any enforcement action as authorized by law.

29. **Applicable Federal Anti-Discrimination Laws.** The sponsor agrees:

    a. That its compliance in all respects with all applicable federal anti-discrimination laws is material to the government's payment decisions for purposes of 31 USC § 3729(b)(4) and

    b. To certify that it does not operate any programs promoting Diversity, Equity, and Inclusion (DEI) that violate any applicable federal anti-discrimination laws.

30. **National Airspace System Requirements.**

    a. The sponsor shall cooperate with FAA activities installing, maintaining, replacing, improving, or operating equipment and facilities in or supporting the National Airspace System, including waiving permitting requirements and other restrictions affecting those activities to the maximum extent possible, and assisting the FAA in securing waivers of permitting or other restrictions from other authorities. The sponsor shall not take actions that frustrate or prevent the FAA from installing, maintaining, replacing, improving, or operating equipment and facilities in or supporting the National Airspace System.

    b. If FAA determines that the sponsor has violated subsection a., the FAA may impose a remedy, including:

        i. Additional conditions on the award;

ii. Consistent with 49 USC Chapter 471, any remedy permitted under 2 CFR §§ 200.339–200.340, including withholding of payments; disallowance of previously reimbursed costs, requiring refunds from the recipient to the DOT; suspension or termination of the award; or suspension and debarment under 2 CFR part 180; or

iii. Any other remedy legally available.

c. In imposing a remedy under this condition, the FAA may elect to consider the interests of only the FAA.

d. The sponsor acknowledges that amounts that the FAA requires the sponsor to refund to the FAA due to a remedy under this condition constitute a debt to the Federal Government that the FAA may collect under 2 CFR 200.346 and the Federal Claims Collection Standards (31 CFR Parts 900–904).

31. **Signage Costs for Construction Projects.** The sponsor agrees that it will require the prime contractor of a federally-assisted airport improvement project to post signs consistent with a DOT/FAA-prescribed format, as may be requested by the DOT/FAA, and further agrees to remove any signs posted in response to requests received prior to February 1, 2025.

SPECIAL CONDITIONS

32. **Pavement Maintenance Management Program.** The sponsor agrees that it will implement an effective airport pavement maintenance management program as required by Airport Sponsor Grant Assurance 11, Pavement Preventive Maintenance-Management, which is codified at 49 USC § 47105(e). The sponsor agrees that it will use the program for the useful life of any pavement constructed, reconstructed, rehabilitated, or repaired with federal financial assistance at the airport. The sponsor further agrees that the program will:

    a. Follow the current version of FAA Advisory Circular 150/5380-6, "Guidelines and Procedures for Maintenance of Airport Pavements," for specific guidelines and procedures for maintaining airport pavements, establishing an effective maintenance program, specific types of distress and its probable cause, inspection guidelines, and recommended methods of repair;

    b. Detail the procedures to be followed to assure that proper pavement maintenance, both preventive and repair, is performed;

    c. Include a Pavement Inventory, Inspection Schedule, Record Keeping, Information Retrieval, and Reference, meeting the following requirements:

        1. Pavement Inventory. The following must be depicted in an appropriate form and level of detail:

            i. Location of all runways, taxiways, and aprons;

            ii. Dimensions;

            iii. Type of pavement; and,

            iv. Year of construction or most recent major reconstruction, rehabilitation, or repair.

        2. Inspection Schedule.

            i. Detailed Inspection. A detailed inspection must be performed at least once a year. If a history of recorded pavement deterioration is available, i.e., Pavement Condition Index (PCI) survey as set forth in the current version of Advisory Circular 150/5380-6, the frequency of inspections may be extended to three years.

            ii. Drive-By Inspection. A drive-by inspection must be performed a minimum of once per month to detect unexpected changes in the pavement condition. For drive-by inspections, the date of inspection and any maintenance performed must be recorded.

        3. Record Keeping. Complete information on the findings of all detailed inspections and on the maintenance performed must be recorded and kept on file for a minimum of five years. The type of distress, location, and remedial action, scheduled or performed, must be documented. The minimum information is:

            i. Inspection date;

            ii. Location;

            iii. Distress types; and

            iv. Maintenance scheduled or performed.

4. Information Retrieval System. The sponsor must be able to retrieve the information and records produced by the pavement survey to provide a report to the FAA as may be required.

33. **Maintenance Project Life.** The sponsor agrees that pavement maintenance is limited to those aircraft pavements that are in sound condition that they do not warrant extensive work, such as reconstruction or overlays in the immediate or near future. The sponsor further agrees that AIP, Airport Infrastructure Grant (AIG), or supplemental appropriation funding for the pavements maintained under this project will not be requested for more substantial type rehabilitation (more substantial than periodic maintenance) for a 5-year period following the completion of this project unless the FAA determines that the rehabilitation or reconstruction is required for safety reasons.

34. **Construction Safety Phasing Plan**. In accordance with FAA Advisory Circular 150/5370-2G, Operational Safety on Airports During Construction, and any applicable amendment or update to the Advisory Circular, the sponsor understands and agrees that construction will not commence until FAA has approved the Construction Safety Phasing Plan and Points of Interest airspace case for the project(s) described in this grant, and the project application.

The sponsor's acceptance of this offer and ratification and adoption of the Project Application incorporated herein shall be evidenced by execution of this instrument by the sponsor, as hereinafter provided, and this offer and acceptance shall comprise a Grant Agreement, constituting the contractual obligations and rights of the United States and the sponsor with respect to the accomplishment of the project and compliance with the Grant Assurances, terms, and conditions as provided herein. Such Grant Agreement shall become effective upon the sponsor's acceptance of this offer.

Please read the following information: By signing this document, you are agreeing that you have reviewed the following consumer disclosure information and consent to transact business using electronic communications, to receive notices and disclosures electronically, and to utilize electronic signatures in lieu of using paper documents. You are not required to receive notices and disclosures or sign documents electronically. If you prefer not to do so, you may request to receive paper copies and withdraw your consent at any time.

I declare under penalty of perjury that the foregoing is true and correct.[1]

UNITED STATES OF AMERICA
FEDERAL AVIATION ADMINISTRATION

_____
(Signature)

_____
(Typed Name)

_____
(Title of FAA Official)

[1] Knowingly and willfully providing false information to the Federal government is a violation of 18 U.S.C. § 1001 (False Statements) and could subject you to fines, imprisonment, or both.

Part II - Acceptance

The sponsor does hereby ratify and adopt all assurances, statements, representations, warranties, covenants, and agreements contained in the Project Application and incorporated materials referred to in the foregoing offer, and does hereby accept this offer and by such acceptance agrees to comply with all of the Grant Assurances, terms, and conditions in this offer and in the Project Application.

Please read the following information: By signing this document, you are agreeing that you have reviewed the following consumer disclosure information and consent to transact business using electronic communications, to receive notices and disclosures electronically, and to utilize electronic signatures in lieu of using paper documents. You are not required to receive notices and disclosures or sign documents electronically. If you prefer not to do so, you may request to receive paper copies and withdraw your consent at any time.

I declare under penalty of perjury that the foregoing is true and correct.[2]

Dated _____

City of Ormond Beach
(Name of Sponsor)

_____
(Signature of Sponsor's Authorized Official)

By: _____
(Typed Name of Sponsor's Authorized Official)

Title: _____
(Title of Sponsor's Authorized Official)

[2] Knowingly and willfully providing false information to the Federal Government is a violation of 18 USC § 1001 (False Statements) and could subject you to fines, imprisonment, or both.

CERTIFICATE OF SPONSOR'S ATTORNEY

I, , acting as Attorney for the Sponsor do hereby certify:

That in my opinion the Sponsor is empowered to enter into the foregoing Grant Agreement under the laws of the State of Florida. Further, I have examined the foregoing Grant Agreement and the actions taken by said Sponsor and Sponsor's official representative, who has been duly authorized to execute this Grant Agreement, which is in all respects due and proper and in accordance with the laws of the said State; and Title 49, United States Code (USC), Chapters 471 and 475; 49 USC §§ 40101 et seq., and 48103; Consolidated Appropriations Act, 2024 (P.L. 118-42); Consolidated Appropriations Act, 2025 (P.L. 119-4); Consolidated Appropriations Act, 2026 (P.L. 119-75); FAA Reauthorization Act of 2024 (P.L. 118-63); and the representations contained in the Project Application. In addition, for grants involving projects to be carried out on property not owned by the Sponsor, there are no legal impediments that will prevent full performance by the Sponsor. Further, it is my opinion that the said Grant Agreement constitutes a legal and binding obligation of the Sponsor in accordance with the terms thereof.

Please read the following information: By signing this document, you are agreeing that you have reviewed the following consumer disclosure information and consent to transact business using electronic communications, to receive notices and disclosures electronically, and to utilize electronic signatures in lieu of using paper documents. You are not required to receive notices and disclosures or sign documents electronically. If you prefer not to do so, you may request to receive paper copies and withdraw your consent at any time.

I declare under penalty of perjury that the foregoing is true and correct.[3]

Dated at _____

By: _____
(Signature of Sponsor's Attorney)

[3] Knowingly and willfully providing false information to the Federal Government is a violation of 18 USC § 1001 (False Statements) and could subject you to fines, imprisonment, or both.

ASSURANCES
AIRPORT SPONSORS

A. General.

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.
2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, USC, subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.
3. Upon acceptance of this Grant Offer by the sponsor, these assurances are incorporated in and become part of this Grant Agreement.

B. Duration and Applicability.

1. **Airport Development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.**

   The terms, conditions and assurances of this Grant Agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a Grant Offer of federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. **Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.**

   The preceding paragraph (1) also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of federal aid for the project.

3. **Airport Planning Undertaken by a Sponsor.**

   Unless otherwise specified in this Grant Agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 23, 25, 30, 32, 33, 34, 37, and 40 in Section C apply to planning projects. The terms, conditions, and assurances of this Grant Agreement shall remain in full force and effect during the life of the project; there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport.

C. Sponsor Certification.

The sponsor hereby assures and certifies, with respect to this grant that:

1. General Federal Requirements

It will comply with all applicable federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance, and use of federal funds for this grant. Performance under this agreement shall be governed by and in compliance with the following requirements, as applicable, to the type of organization of the Sponsor and any applicable sub-recipients. The applicable provisions to this agreement include, but are not limited to, the following:

FEDERAL LEGISLATION

a. 49 USC subtitle VII, as amended.
b. Davis-Bacon Act, as amended — 40 USC §§ 3141-3144, 3146, and 3147, et seq.[1]
c. Federal Fair Labor Standards Act – 29 USC § 201, et seq.
d. Hatch Act – 5 USC § 1501, et seq.[2]
e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 USC § 4601, et seq.[1, 2]
f. National Historic Preservation Act of 1966 – Section 106 – 54 USC § 306108.[1]
g. Archeological and Historic Preservation Act of 1974 – 54 USC § 312501, et seq.[1]
h. Native Americans Grave Repatriation Act – 25 USC § 3001, et seq.
i. Clean Air Act, P.L. 90-148, as amended – 42 USC § 7401, et seq.
j. Coastal Zone Management Act, P.L. 92-583, as amended – 16 USC § 1451, et seq.
k. Flood Disaster Protection Act of 1973 – Section 102(a) - 42 USC § 4012a.[1]
l. 49 USC § 303, (formerly known as Section 4(f)).
m. Rehabilitation Act of 1973 – 29 USC § 794.
n. Title VI of the Civil Rights Act of 1964 (42 USC § 2000d et seq.) (prohibits discrimination on the basis of race, color, national origin).
o. Americans with Disabilities Act of 1990, as amended, (42 USC § 12101 et seq.) (prohibits discrimination on the basis of disability).
p. Age Discrimination Act of 1975 – 42 USC § 6101, et seq.
q. American Indian Religious Freedom Act, P.L. 95-341, as amended.
r. Architectural Barriers Act of 1968, as amended – 42 USC § 4151, et seq.[1]
s. Powerplant and Industrial Fuel Use Act of 1978 – Section 403 – 42 USC § 8373.[1]
t. Contract Work Hours and Safety Standards Act – 40 USC § 3701, et seq.[1]
u. Copeland Anti-kickback Act – 18 USC § 874.[1]

v. National Environmental Policy Act of 1969 – 42 USC § 4321, et seq.[1]

w. Wild and Scenic Rivers Act, P.L. 90-542, as amended – 16 USC § 1271, et seq.

x. Single Audit Act of 1984 – 31 USC § 7501, et seq.[2]

y. Drug-Free Workplace Act of 1988 – 41 USC §§ 8101 through 8105.

z. The Federal Funding Accountability and Transparency Act of 2006, as amended (P.L. 109-282, as amended by section 6202 of P.L. 110-252).

aa. Civil Rights Restoration Act of 1987, P.L. 100-259.

bb. Infrastructure Investment and Jobs Act, P.L. 117-58, Title VIII.

cc. Build America, Buy America Act, P.L. 117-58, Title IX.

dd. Endangered Species Act – 16 USC 1531, et seq.

ee. Title IX of the Education Amendments of 1972, as amended – 20 USC 1681–1683 and 1685–1687.

ff. Drug Abuse Office and Treatment Act of 1972, as amended – 21 USC 1101, et seq.

gg. Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, P.L. 91-616, as amended – 42 USC § 4541, et seq.

hh. Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, P.L. 91-616, as amended – 42 USC § 4541, et seq.

ii. Appropriated Funds to Influence Certain Federal Contracting and Financial Transactions – 31 USC § 1352.

EXECUTIVE ORDERS

a. Executive Order 11990 – Protection of Wetlands

b. Executive Order 11988 – Floodplain Management

c. Executive Order 12372 – Intergovernmental Review of Federal Programs

d. Executive Order 12699 – Seismic Safety of Federal and Federally Assisted New Building Construction[1]

e. Executive Order 14005 – Ensuring the Future is Made in all of America by All of America's Workers

f. Executive Order 14149 – Restoring Freedom of Speech and Ending Federal Censorship

g. Executive Order 14151 – Ending Radical and Wasteful Government DEI Programs and Preferencing

h. Executive Order 14154 – Unleashing American Energy

i. Executive Order 14168 – Defending Women from Gender Ideology Extremism and Restoring Biological Truth to the Federal Government

j. Executive Order 14173 – Ending Illegal Discrimination and Restoring Merit-Based Opportunity

FEDERAL REGULATIONS

a. 2 CFR Part 180 – OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement).

b. 2 CFR Part 200 and 1201 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. [3, 4, 5]

c. 2 CFR Part 1200 – Nonprocurement Suspension and Debarment.

d. 14 CFR Part 13 – Investigative and Enforcement Procedures.

e. 14 CFR Part 16 – Rules of Practice for Federally-Assisted Airport Enforcement Proceedings.

f. 14 CFR Part 150 – Airport Noise Compatibility Planning.

g. 28 CFR Part 35 – Nondiscrimination on the Basis of Disability in State and Local Government Services.

h. 28 CFR § 50.3 – U.S. Department of Justice Guidelines for the Enforcement of Title VI of the Civil Rights Act of 1964.

i. 29 CFR Part 1 – Procedures for Predetermination of Wage Rates.[1]

j. 29 CFR Part 3 – Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States.[1]

k. 29 CFR Part 5 – Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction (Also Labor Standards Provisions Applicable to Nonconstruction Contracts Subject to the Contract Work Hours and Safety Standards Act).[1]

l. 41 CFR Part 60 – Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and Federally-assisted contracting requirements).[1]

m. 49 CFR Part 20 – New Restrictions on Lobbying.

n. 49 CFR Part 21 – Nondiscrimination in Federally-Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964.

o. 49 CFR Part 23 – Participation by Disadvantage Business Enterprise in Airport Concessions.

p. 49 CFR Part 24 – Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs.[1, 2]

q. 49 CFR Part 26 – Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs.

r. 49 CFR Part 27 – Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance.[1]

s. 49 CFR Part 28 – Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the Department of Transportation.

t. 49 CFR Part 30 – Denial of Public Works Contracts to Suppliers of Goods and Services of Countries That Deny Procurement Market Access to U.S. Contractors.

u. 49 CFR Part 32 – Governmentwide Requirements for Drug-Free Workplace (Financial Assistance).

v. 49 CFR Part 37 – Transportation Services for Individuals with Disabilities (ADA).

w. 49 CFR Part 38 – Americans with Disabilities Act (ADA) Accessibility Specifications for Transportation Vehicles.

x. 49 CFR Part 41 – Seismic Safety.

FOOTNOTES TO ASSURANCE (C)(1)

[1] These laws do not apply to airport planning sponsors.
[2] These laws do not apply to private sponsors.
[3] 2 CFR Part 200 contains requirements for state and local governments receiving federal assistance. Any requirement levied upon state and local governments by this regulation shall apply where applicable to private sponsors receiving federal assistance under Title 49, United States Code.
[4] Cost principles established in 2 CFR Part 200 subpart E must be used as guidelines for determining the eligibility of specific types of expenses.
[5] Audit requirements established in 2 CFR Part 200 subpart F are the guidelines for audits.

SPECIFIC ASSURANCES

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in this Grant Agreement.

2. Responsibility and Authority of the Sponsor.

a. Public Agency Sponsor:

It has legal authority to apply for this grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

b. Private Sponsor:

It has legal authority to apply for this grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this Grant Agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. Sponsor Fund Availability.

It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under this Grant Agreement which it will own or control.

4. Good Title.

a. It, a public agency or the Federal Government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.

b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. Preserving Rights and Powers.

a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in this Grant Agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

b. Subject to 49 USC § 47107(a)(16) and (x), it will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which federal funds have been expended, for the duration of the terms, conditions, and assurances in this Grant Agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of this Grant Agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this Grant Agreement.

c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.

d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.

e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.

f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to ensure that the airport will be operated and maintained in accordance with Title 49, United States Code, the regulations and the terms, conditions and assurances in this Grant Agreement and shall ensure that such arrangement also requires compliance therewith.

g. Sponsors of commercial service airports will not permit or enter into any arrangement that results in permission for the owner or tenant of a property used as a residence, or zoned for residential use, to taxi an aircraft between that property and any location on airport. Sponsors

of general aviation airports entering into any arrangement that results in permission for the owner of residential real property adjacent to or near the airport must comply with the requirements of Sec. 136 of Public Law 112-95 and the sponsor assurances.

6. **Consistency with Local Plans.**

   The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the state in which the project is located to plan for the development of the area surrounding the airport.

7. **Consideration of Local Interest.**

   It has given fair consideration to the interest of communities in or near where the project may be located.

8. **Consultation with Users.**

   In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. **Public Hearings.**

   In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. **Metropolitan Planning Organization.**

    In projects involving the location of an airport, an airport runway, or a major runway extension at a medium or large hub airport, the sponsor has made available to and has provided upon request to the metropolitan planning organization in the area in which the airport is located, if any, a copy of the proposed amendment to the airport layout plan to depict the project and a copy of any airport master plan in which the project is described or depicted.

11. **Pavement Preventive Maintenance-Management.**

    With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. **Terminal Development Prerequisites.**

    For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under 49 USC § 44706, and all the security equipment required by rule or regulation, and has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. Accounting System, Audit, and Record Keeping Requirements.

a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of this grant, the total cost of the project in connection with which this grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to this grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which this grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. Minimum Wage Rates.

It shall include, in all contracts in excess of $2,000 for work on any projects funded under this Grant Agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor under 40 USC §§ 3141-3144, 3146, and 3147, Public Building, Property, and Works), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. Veteran's Preference.

It shall include in all contracts for work on any project funded under this Grant Agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in 49 USC § 47112. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. Conformity to Plans and Specifications.

It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this Grant Agreement, and, upon approval of the Secretary, shall be incorporated into this Grant Agreement. Any modification to the approved plans, specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into this Grant Agreement.

17. Construction Inspection and Approval.

It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in

accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. Planning Projects.

In carrying out planning projects:

a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.

b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.

c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.

d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a federal airport grant.

19. Operation and Maintenance.

a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state, and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary. In furtherance of this assurance, the sponsor will have in effect arrangements for:

1. Operating the airport's aeronautical facilities whenever required;
2. Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and
3. Promptly notifying pilots of any condition affecting aeronautical use of the airport. Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood, or other climatic conditions

interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which federal funds have been expended.

20. Hazard Removal and Mitigation.

It will take appropriate action to ensure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. Compatible Land Use.

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which federal funds have been expended.

22. Economic Nondiscrimination.

a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.

b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to:

1. Furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and

2. Charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.

e. Each air carrier using such airport (whether as a tenant, non-tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers

which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non-tenants and signatory carriers and non-signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.

f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees (including, but not limited to maintenance, repair, and fueling) that it may choose to perform.

g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.

h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. Exclusive Rights.

It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and

b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport. It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. Fee and Rental Structure.

It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the federal share of an airport development, airport planning or noise compatibility project for

which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. Airport Revenues.

a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. The following exceptions apply to this paragraph:

   1. If covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

   2. If the Secretary approves the sale of a privately owned airport to a public sponsor and provides funding for any portion of the public sponsor's acquisition of land, this limitation on the use of all revenues generated by the sale shall not apply to certain proceeds from the sale. This is conditioned on repayment to the Secretary by the private owner of an amount equal to the remaining unamortized portion (amortized over a 20-year period) of any airport improvement grant made to the private owner for any purpose other than land acquisition on or after October 1, 1996, plus an amount equal to the federal share of the current fair market value of any land acquired with an airport improvement grant made to that airport on or after October 1, 1996.

   3. Certain revenue derived from or generated by mineral extraction, production, lease, or other means at a general aviation airport (as defined at 49 USC § 47102), if the FAA determines the airport sponsor meets the requirements set forth in Section 813 of Public Law 112-95.

b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.

c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of 49 USC § 47107.

26. Reports and Inspections.

It will:

a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the

public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;

b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;

c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of this Grant Agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:

   1. all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and

   2. all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. Use by Government Aircraft.

It will make available all of the facilities of the airport developed with federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that:

a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or

b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

28. Land for Federal Facilities.

It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein as the Secretary considers necessary or desirable for construction, operation, and maintenance at federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. Airport Layout Plan.

a. The airport owner or operator will maintain a current airport layout plan of the airport showing:

1. boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto;

2. the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities;

3. the location of all existing and proposed non-aviation areas and of all existing improvements thereon; and

4. all proposed and existing access points used to taxi aircraft across the airport's property boundary.

b. Subject to subsection 49 USC § 47107(x), the Secretary will review and approve or disapprove the plan and any revision or modification of the plan before the plan, revision, or modification takes effect.

c. The owner or operator will not make or allow any alteration in the airport or any of its facilities unless the alteration—

1. is outside the scope of the Secretary's review and approval authority as set forth in subsection (x); or

2. complies with the portions of the plan approved by the Secretary.

d. When the airport owner or operator makes a change or alteration in the airport or the facilities which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary:

1. eliminate such adverse effect in a manner approved by the Secretary; or

2. bear all costs of relocating such property or its replacement to a site acceptable to the Secretary and of restoring the property or its replacement to the level of safety, utility, efficiency, and cost of operation that existed before the alteration was made, except in the case of a relocation or replacement of an existing airport facility due to a change in the Secretary's design standards beyond the control of the airport sponsor.

30. Civil Rights.

It will promptly take any measures necessary to ensure that no person in the United States shall, on the grounds of race, color, and national origin (including limited English proficiency) in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (42 USC §§ 2000d to 2000d-4); creed and sex per 49 USC § 47123 and related requirements; age per the Age Discrimination Act of 1975 and related requirements; or disability per the Americans with Disabilities Act of 1990 and related requirements, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any program and activity conducted with, or benefiting from, funds received from this grant.

a. Using the definitions of activity, facility, and program as found and defined in 49 CFR §§ 21.23(b) and 21.23(e), the sponsor will facilitate all programs, operate all facilities, or conduct all programs in compliance with all non-discrimination requirements imposed by or pursuant to these assurances.

b. Applicability

1. Programs and Activities. If the sponsor has received a grant (or other federal assistance) for any of the sponsor's program or activities, these requirements extend to all of the sponsor's programs and activities.

2. Facilities. Where it receives a grant or other federal financial assistance to construct, expand, renovate, remodel, alter, or acquire a facility, or part of a facility, the assurance extends to the entire facility and facilities operated in connection therewith.

3. Real Property. Where the sponsor receives a grant or other federal financial assistance in the form of, or for the acquisition of real property or an interest in real property, the assurance will extend to rights to space on, over, or under such property.

c. Duration.

The sponsor agrees that it is obligated to this assurance for the period during which federal financial assistance is extended to the program, except where the federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the assurance obligates the sponsor, or any transferee for the longer of the following periods:

1. So long as the airport is used as an airport, or for another purpose involving the provision of similar services or benefits; or

2. So long as the sponsor retains ownership or possession of the property.

d. Required Solicitation Language. It will include the following notification in all solicitations for bids, Requests For Proposals for work, or material under this Grant Agreement and in all proposals for agreements, including airport concessions, regardless of funding source:

"The City of Ormond Beach, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, all businesses will be afforded full and fair opportunity to submit bids in response to this invitation and no businesses will be discriminated against on the grounds of race, color, national origin (including limited English proficiency), creed, sex , age, or disability in consideration for an award."

e. Required Contract Provisions.

1. It will insert the non-discrimination contract clauses requiring compliance with the acts and regulations relative to non-discrimination in federally-assisted programs of the Department of Transportation (DOT), and incorporating the acts and regulations into the contracts by reference in every contract or agreement subject to the non-discrimination in federally-assisted programs of the DOT acts and regulations.

2. It will include a list of the pertinent non-discrimination authorities in every contract that is subject to the non-discrimination acts and regulations.

3. It will insert non-discrimination contract clauses as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.
4. It will insert non-discrimination contract clauses prohibiting discrimination on the basis of race, color, national origin (including limited English proficiency), creed, sex, age, or disability as a covenant running with the land, in any future deeds, leases, license, permits, or similar instruments entered into by the sponsor with other parties:
    a. For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
    b. For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

f. It will provide for such methods of administration for the program as are found by the Secretary to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of federal financial assistance under such program will comply with all requirements imposed or pursuant to the acts, the regulations, and this assurance.

g. It agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the acts, the regulations, and this assurance.

31. Disposal of Land.

a. For land purchased under a grant for airport noise compatibility purposes, including land serving as a noise buffer, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will be, at the discretion of the Secretary, (1) reinvested in another project at the airport, or (2) transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order:
    1. Reinvestment in an approved noise compatibility project;
    2. Reinvestment in an approved project that is eligible for grant funding under 49 USC § 47117(e);
    3. Reinvestment in an approved airport development project that is eligible for grant funding under 49 USC §§ 47114, 47115, or 47117;
    4. Transfer to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport; or
    5. Payment to the Secretary for deposit in the Airport and Airway Trust Fund.

    If land acquired under a grant for noise compatibility purposes is leased at fair market value and consistent with noise buffering purposes, the lease will not be considered a disposal of the land. Revenues derived from such a lease may be used for an approved airport development project that would otherwise be eligible for grant funding or any permitted use of airport revenue.

b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United

States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, upon application to the Secretary, be reinvested or transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order:

1. Reinvestment in an approved noise compatibility project;
2. Reinvestment in an approved project that is eligible for grant funding under 49 USC § 47117(e);
3. Reinvestment in an approved airport development project that is eligible for grant funding under 49 USC §§ 47114, 47115, or 47117;
4. Transfer to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport; or
5. Payment to the Secretary for deposit in the Airport and Airway Trust Fund.

c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.

d. Disposition of such land under (a), (b), or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. Engineering and Design Services.

If any phase of such project has received federal funds under Chapter 471 subchapter 1 of Title 49 USC, it will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services in the same manner as a contract for architectural and engineering services is negotiated under Chapter 11 of Title 40 U S.C., or an equivalent qualifications-based requirement prescribed for or by the sponsor of the airport.

33. Foreign Market Restrictions.

It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. Policies, Standards, and Specifications.

It will carry out any project funded under an Airport Improvement Program Grant in accordance with policies, standards, and specifications approved by the Secretary including, but not limited to, current FAA Advisory Circulars (https://www.faa.gov/airports/aip/aip_pfc_checklist) for AIP projects as of April 02, 2026.

35. Relocation and Real Property Acquisition.

a. It will be guided in acquiring real property, to the greatest extent practicable under state law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B.

b. It will provide a relocation assistance program offering the services described in Subpart C of 49 CFR Part 24 and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24.

c. It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. Access By Intercity Buses.

The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport; however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. Disadvantaged Business Enterprises (DBE)/Airport Concessions Disadvantage Business Enterprise (ACDBE) Program.

The sponsor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract covered by 49 CFR Part 26, or in the award and performance of any concession activity contract covered by 49 CFR Part 23. In addition, the sponsor shall not discriminate on the basis of race, color, national origin or sex in the administration of its Disadvantaged Business Enterprise (DBE) and Airport Concessions Disadvantaged Business Enterprise (ACDBE) programs or the requirements of 49 CFR Parts 23 and 26. The sponsor shall take all necessary and reasonable steps under 49 CFR Parts 23 and 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts, and/or concession contracts. The sponsor's DBE and ACDBE programs, as required by 49 CFR Parts 26 and 23, and as approved by DOT, are incorporated by reference in this agreement. Implementation of these programs is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the sponsor of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 USC § 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 USC §§ 3801-3809, 3812).

38. Hangar Construction.

If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. Competitive Access.

a. If the airport owner or operator of a medium or large hub airport (as defined in 49 USC § 47102) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that:

1. Describes the requests;

2. Provides an explanation as to why the requests could not be accommodated; and
3. Provides a time frame within which, if any, the airport will be able to accommodate the requests.

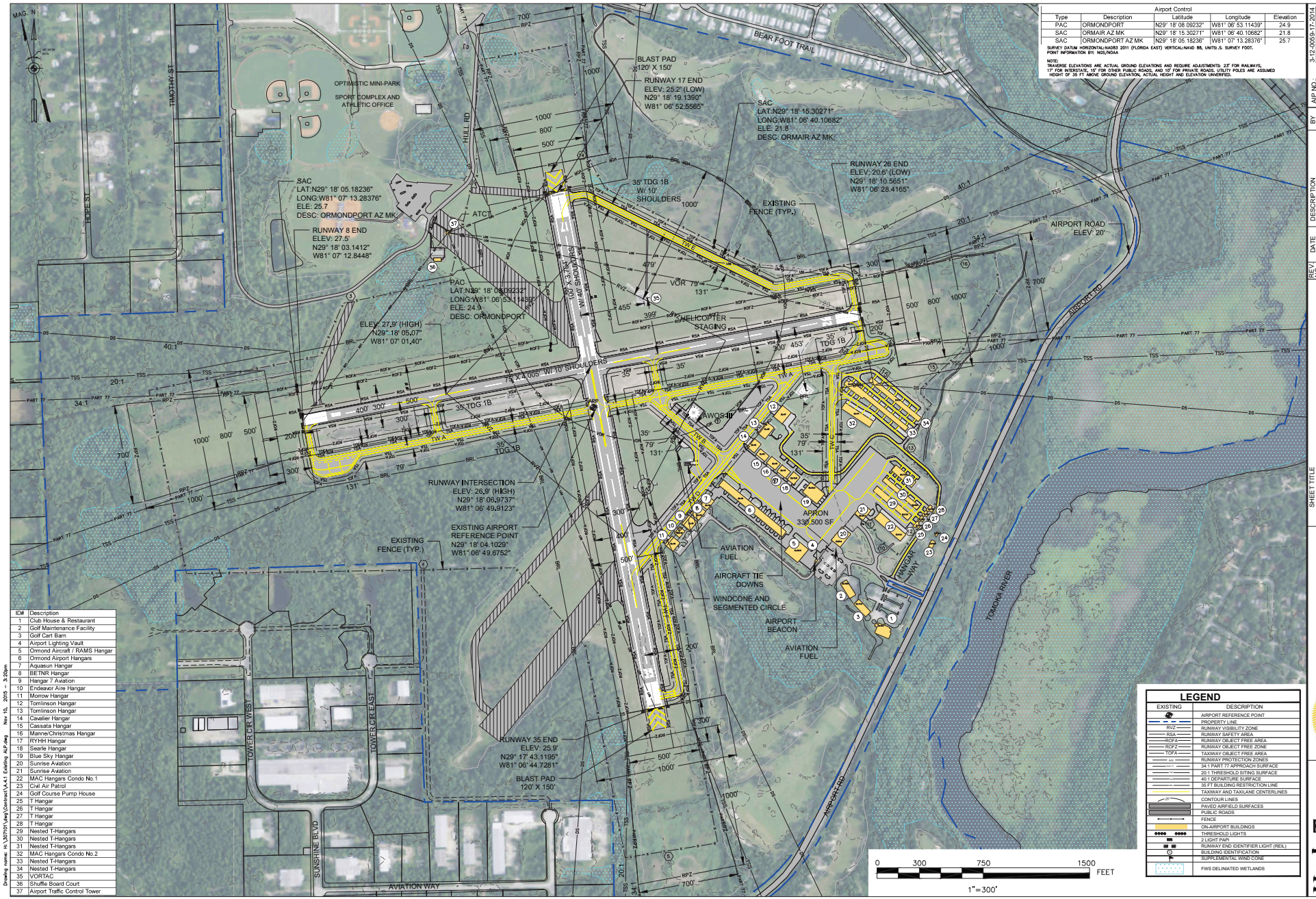
b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date.

40. Access to Leaded Aviation Gasoline

a. If 100-octane low lead aviation gasoline (100LL) was made available at an airport, at any time during calendar year 2022, an airport owner or operator may not restrict or prohibit the sale of, or self-fueling with, 100-octane low lead aviation gasoline.

b. This requirement remains until the earlier of December 31, 2030, or the date on which the airport or any retail fuel seller at the airport makes available an unleaded aviation gasoline that has been authorized for use by the FAA as a replacement for 100-octane low lead aviation gasoline for use in nearly all piston-engine aircraft and engine models; and meets either an industry consensus standard or other standard that facilitates the safe use, production, and distribution of such unleaded aviation gasoline, as determined appropriate by the FAA.

c. An airport owner or operator understands and agrees, that any violation of this grant assurance is subject to civil penalties as provided for in 49 USC § 46301(a)(8).



Airport Control				
Type	Description	Latitude	Longitude	Elevation
PAC	ORMONDPORT	N29° 18' 08.09232"	W81° 06' 53.11439"	24.9
SAC	ORMAIR AZ MK	N29° 18' 15.30271"	W81° 06' 40.10682"	21.8
SAC	ORMONDPORT AZ MK	N29° 18' 05.18236"	W81° 07' 13.28376"	25.7

SURVEY DATUM HORIZONTAL:NAD83 2011 (FLORIDA EAST) VERTICAL:NAVD 88, UNITS:U.S. SURVEY FOOT.
POINT INFORMATION BY: NGS/NOAA

NOTE:
TRAVERSE ELEVATIONS ARE ACTUAL GROUND ELEVATIONS AND REQUIRE ADJUSTMENTS: 23' FOR RAILWAYS, 17' FOR INTERSTATE, 15' FOR OTHER PUBLIC ROADS, AND 10' FOR PRIVATE ROADS. UTILITY POLES ARE ASSUMED HEIGHT OF 35 FT ABOVE GROUND ELEVATION, ACTUAL HEIGHT AND ELEVATION UNVERIFIED.

ID#	Description
1	Club House & Restaurant
2	Golf Maintenance Facility
3	Golf Cart Barn
4	Airport Lighting Vault
5	Ormond Aircraft / RAMS Hangar
6	Ormond Airport Hangars
7	Aquasun Hangar
8	BETNR Hangar
9	Hangar 7 Aviation
10	Endeavor Aire Hangar
11	Morrow Hangar
12	Tomlinson Hangar
13	Tomlinson Hangar
14	Cavalier Hangar
15	Cassata Hangar
16	Manne/Christmas Hangar
17	RYHH Hangar
18	Searle Hangar
19	Blue Sky Hangar
20	Sunrise Aviation
21	Sunrise Aviation
22	MAC Hangars Condo No.1
23	Civil Air Patrol
24	Golf Course Pump House
25	T Hangar
26	T Hangar
27	T Hangar
28	T Hangar
29	Nested T-Hangars
30	Nested T-Hangars
31	Nested T-Hangars
32	MAC Hangars Condo No.2
33	Nested T-Hangars
34	Nested T-Hangars
35	VORTAC
36	Shuffle Board Court
37	Airport Traffic Control Tower

LEGEND

EXISTING	DESCRIPTION
	AIRPORT REFERENCE POINT
	PROPERTY LINE
RVZ	RUNWAY VISIBILITY ZONE
RSA	RUNWAY SAFETY AREA
ROFA	RUNWAY OBJECT FREE AREA
ROFZ	RUNWAY OBJECT FREE ZONE
TOFA	TAXIWAY OBJECT FREE AREA
	RUNWAY PROTECTION ZONES
	34:1 PART 77 APPROACH SURFACE
	20:1 THRESHOLD SITING SURFACE
	40:1 DEPARTURE SURFACE
	35 FT BUILDING RESTRICTION LINE
	TAXIWAY AND TAXILANE CENTERLINES
	CONTOUR LINES
	PAVED AIRFIELD SURFACES
	PUBLIC ROADS
	FENCE
	ON-AIRPORT BUILDINGS
	THRESHOLD LIGHTS
	2 LIGHT PAPI
	RUNWAY END IDENTIFIER LIGHT (REIL)
	BUILDING IDENTIFICATION
	SUPPLEMENTAL WIND CONE
	FWS DELINIATED WETLANDS

REV NO	DATE	DESCRIPTION	BY

DO NOT SCALE DRAWING

AIP NO.: 3-12-0055-17-2014
PROJ. NO.: 307101
DRAWN: JLC
DESIGN: MFM
CHECKED: MFM
DATE: OCTOBER 2015

SHEET 3 OF 14

SHEET TITLE

EXISTING AIRPORT LAYOUT PLAN

CITY OF ORMOND BEACH
ORMOND BEACH MUNICIPAL AIRPORT
ORMOND BEACH, FLORIDA

Hoyle, Tanner & Associates, Inc.
95 E. Mitchell Hammock Road,
Suite 200 Oviedo, FL 32765
Office PH: 407-380-1919
FaX: 407-380-1830
www.hoyletanner.com

Drawing name: H:\307101\dwg\Contract\A4.1 Existing ALP.dwg Nov 10, 2015 - 3:20pm

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	6.C.
Section	CONSENT AGENDA	**Category**	Consent - Disposition Item
Subject	City Manager's Monthly Report - August 2026		
Recommended Action	This report is for informational purposes. Additional information provided upon request.		
Strategic Goal	Governance - Other		
Department Staff Contact	City Manager Joyce Shanahan, City Manager		

Summary

The following reports provide information regarding the City's finances and capital improvement projects, building permits and development activity, and economic development activities and trends. (Reporting dates may vary since tracking and reporting periods may vary based on the subject.)

Financial Impact

None

Citizen Impact

None

Attachments

1. Financial Status Report - June 2026
2. Capital Improvements Projects, Status Report - July 2026
3. Economic Development Report - July 2026
4. Development Activity Report - July 2026
5. Building Permit Activity - July 2026
6. Residential Development Report - July 2026

Monthly Financial Status Report
June 2026

This report provides the City Commission with an update of the financial status of the City's operating funds. The purpose of this report is to identify any significant variances from the adopted budget and to identify any adverse trends and their implications for the current and future years' budgets.

The first table following this introduction provides a summary of the revenues and expenditures to date by fund. Additional details by fund type is provided in subsequent tables.

Revenues at or above 75% benchmark is favorable, while expenses at or below the 75% benchmark is also favorable.

The airport fund has revenue and expense impacts from FAA grants.
The Impact Fee funds experienced an increase in revenue due to new subdivision (Ridge Haven).

Budget Summary

Fund	Final Budget	YTD Actual Revenues	YTD %	YTD Actual Expenses	YTD %
001 - General Fund	52,356,211	40,953,740	78%	36,826,681	70%
104 - Community Redevelopment	1,999,836	1,812,660	91%	681,214	34%
106 - Ormond Crossing	399,640	355,597	89%	29,419	7%
107 - Stormwater	5,613,386	2,514,098	45%	2,677,530	48%
108 - Airport	1,318,198	333,789	25%	730,707	55%
109 - Local Law Enforcement Trust Fund	-	26,190	0%	1,930	0%
113 - Pension Contribution Pass Through	1,300,000	-	0%	-	0%
115 - Recreation Facility Fee	46,970	32,663	70%	36,866	78%
205 - Financing Debt Service	675,000	506,250	75%	417,682	62%
220 - Debt Service GOB 2010	358,068	354,700	99%	355,842	99%
301 - General Capital Improvement	3,051,339	1,105,427	36%	1,273,753	42%
302 - General Equipment & Vehicle	840,000	509,664	61%	441,444	53%
305 - Public Safety Vehicle & Equip	1,028,051	1,026,464	100%	1,927,461	187%
308 - Transportation	3,306,010	1,288,579	39%	1,437,151	43%
310 - Recreation Impact Fee	1,100,000	550,470	50%	150,611	14%
316 - Local Roads Impact Fee	275,000	178,040	65%	-	0%
317 - Facilities Renewal & Replacement	1,665,797	1,323,388	79%	950,643	57%
318 - Stormwater Impact Fee	15,000	7,165	48%	-	0%
319- Police Impact Fees	-	53,394	0%	-	0%
320- Fire Impact Fees	-	64,852	0%	-	0%
322 - Leisure Services Capital Fund	1,700,000	603,167	35%	105,746	6%
401 - Water/Wastewater Operating Fund	28,748,938	18,330,334	64%	20,321,847	71%
408 - Water/Wastewater E&V Fund	830,000	580,058	70%	639,341	77%
409 - Water/Wastewater Capital	6,830,768	3,642,829	53%	2,597,765	38%
414 - Water/Wastewater Consolidated Deb	3,824,000	2,868,003	75%	1,026,936	27%
433 - Reuse Impact Fee Fund	-	18,741	0%	-	0%
434 - Water Impact Fee	751,000	627,743	84%	1,606,571	214%
435 - Wastewater Impact Fee	850,000	1,168,613	137%	81,940	10%
446 - 2024 W&S Bond Projects	-	109,979	0%	2,180,971	0%
447 - 2026 W&S Bond Projects Fund	5,680,000	-	0%	362	0%
460 - Solid Waste	14,960,267	10,979,555	73%	11,415,199	76%
502 - Workers Compensation	747,500	609,262	82%	585,570	78%
504 - General Liability	2,142,400	2,273,466	106%	1,528,291	71%
Total	**$ 142,413,379**	**$ 94,808,072**	**67%**	**$ 90,029,472**	**63%**

General Fund Revenues

Ad valorem Taxes – Annual revenue is estimated at $21 million and is based on the taxable value ($5.49 billion) and the operating millage (4.096). Year to date we have received $20.7 million.

Utility Taxes – The City levies a utility tax of 10% on electric and gas sales. To date $2.85 million has been received of the $3.7 million budgeted.

Communication Taxes – $1.9 million are budgeted for Communication Service Taxes in this fiscal year. Of that, $1.1 million has been received as of June.

Business Tax – Business tax collections amounted to $44,637. The majority of business taxes are collected in the last quarter of the fiscal year.

Licenses, Permits and Franchise Fees – This revenue source includes building permits, plan review and franchise fees. Franchise fee agreements require electric and natural gas providers to remit 6% of gross sales to the City. Payments often occur several months after they are collected by providers. Collections through June 2026 have amounted to $4.2 million.

Intergovernmental – This revenue source includes municipal revenue sharing and sales tax. Through June, the City received a total of $3.8 million in this category.

Charges for Services – This category includes Leisure Services user charges and additional revenue from contracts for right of way mowing, traffic signal maintenance, and street lighting. The City received $854,000 in this category through June.

Fines and Forfeitures – Traffic, code enforcement, and court fines make up this revenue category. Revenues were $60,301 as of June.

Miscellaneous Revenue – Interest and internal service charges for Fleet and Engineering are included in this revenue category. Revenues collected were $1.55 million.

Transfers In – Transfers have been recorded in the amount of $5 million through June.

General Fund Revenues - June 2026

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Property Tax	$ 20,883,814	$ 20,671,659	$ 212,155	99.0%	$ 17,923,997	$ 2,747,662	15.33%
Utility Taxes	5,215,000	3,703,990	1,511,011	71.0%	3,471,603	232,387	6.69%
Communication Tax	1,900,000	1,097,009	802,991	57.7%	1,122,603	(25,593)	-2.28%
Business Tax	283,500	44,637	238,863	15.7%	95,537	(50,900)	-53.28%
Licenses, Permits & Fees	5,487,862	4,207,271	1,280,591	76.7%	3,269,870	937,401	28.67%
Intergovernmental	5,162,000	3,765,549	1,396,451	72.9%	3,222,293	543,256	16.86%
Charges for Services	883,138	854,077	29,061	96.7%	831,261	22,815	2.74%
Fines & Forfeitures	73,000	60,301	12,699	82.6%	90,583	(30,282)	-33.43%
Miscellaneous Revenues	4,465,407	1,550,494	2,914,913	34.7%	2,168,252	(617,758)	-28.49%
Transfers In	6,665,011	4,998,753	1,666,258	75.0%	5,139,711	(140,958)	-2.74%
Use of Fund Balance	1,337,479	-	1,337,479	0.0%	-	-	0.00%
	$ 52,356,211	$ 40,953,740	$ 11,402,471	78.2%	$ 37,335,710	$ 3,618,030	9.7%

General Fund Expenditures

Personnel Services - This category includes wages and benefits paid by the City. Personnel services account for $33.76 million of the General Fund gross budget. Expenditures through June were $23.97 million.

Operating Expenditures - This category includes $16 million for maintenance contracts, utilities, tools, fuel, insurance, supplies and contracts for service with community agencies. Through June, $11.1 million has been spent.

Grants and Aids - This category includes contributions made to not-for-profit organizations which were budgeted at $127,928. $68,615 has been expended to date.

Transfers Out – The budget for transfers from the General Fund to other funds is $2.23 million with $1.67 million made through June.

General Fund Expenditures - June 2026

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
City Commission	$ 474,127	$ 253,901	$ 220,226	53.6%	$ 299,917	$ (46,016)	-15.34%
City Administration	1,310,599	936,181	374,418	71.4%	854,111	82,071	9.61%
Support Services	539,600	333,391	206,209	61.8%	330,247	3,145	0.95%
City Attorney	1,458,131	1,382,983	75,148	94.8%	987,590	395,392	40.04%
Legislation & Policy	3,782,457	2,906,457	876,000	76.8%	2,471,865	434,592	17.58%
Finance	1,135,901	799,225	336,676	70.4%	753,606	45,619	6.05%
Information Technology	2,606,989	1,834,126	772,863	70.4%	2,111,251	(277,125)	-13.13%
Human Resources	731,880	513,581	218,299	70.2%	450,835	62,747	13.92%
Planning	922,966	753,095	169,871	81.6%	569,102	183,993	32.33%
Building Inspections	1,700,721	1,255,649	445,072	73.8%	1,023,770	231,879	22.65%
Police Administration	1,288,336	837,576	450,760	65.0%	942,807	(105,231)	-11.16%
Police Operations	8,809,844	6,454,721	2,355,123	73.3%	5,956,281	498,439	8.37%
Community Outreach	698,042	499,590	198,452	71.6%	409,085	90,505	22.12%
Criminal Investigations	1,855,567	1,300,205	555,362	70.1%	1,201,104	99,102	8.25%
Community Services	635,960	359,491	276,469	56.5%	354,032	5,459	1.54%
Records	216,238	148,525	67,713	68.7%	142,284	6,241	4.39%
Neighborhood Impr.	811,859	459,381	352,478	56.6%	374,638	84,743	22.62%
Police	14,315,846	10,059,490	4,256,356	70.3%	9,380,232	679,258	7.24%
Fire	8,099,114	6,012,456	2,086,658	74.2%	5,779,342	233,115	4.03%
Streets	2,883,795	1,690,774	1,193,021	58.6%	1,847,088	(156,314)	-8.46%
Engineering	1,457,708	881,109	576,599	60.4%	942,848	(61,739)	-6.55%
Fleet	2,296,000	1,493,236	802,764	65.0%	1,458,071	35,165	2.41%
Public Works	6,637,503	4,065,119	2,572,384	61.2%	4,248,006	(182,888)	-4.31%
Economic Development	448,226	293,620	154,606	65.5%	305,151	(11,531)	-3.78%
Building Maintenance	1,086,670	770,431	316,239	70.9%	759,733	10,698	1.41%
Administration	940,733	611,519	329,214	65.0%	652,630	(41,111)	-6.30%
Nova Recreation	480,510	362,486	118,024	75.4%	369,784	(7,298)	-1.97%
S. Ormond Neigh. Center	441,128	286,604	154,524	65.0%	278,374	8,230	2.96%
Athletic Fields Mnt.	1,856,450	1,269,220	587,230	68.4%	1,192,758	76,462	6.41%
Parks	3,010,718	2,090,400	920,318	69.4%	1,989,209	101,190	5.09%
Environmental Learning	307,215	235,115	72,100	76.5%	169,000	66,115	39.12%
The Casements	445,125	342,652	102,473	77.0%	321,792	20,860	6.48%
Performing Arts Center	465,043	348,346	116,697	74.9%	312,239	36,107	11.56%
Senior Center	97,933	70,268	27,665	71.8%	107,564	(37,296)	-34.67%
Community Events	319,076	203,847	115,229	63.9%	204,711	(864)	-0.42%
Leisure Services	9,450,601	6,590,887	2,859,714	69.7%	6,357,794	233,094	3.67%
Grants & Aid*	91,528	68,615	22,913	75.0%	68,615	-	0.00%
Transfers	2,232,479	1,674,360	558,119	75.0%	1,559,853	114,507	7.34%
Contingency	200,000	-	200,000	0.0%	-	-	0.00%
	$ 52,356,211	$ 36,826,681	$ 15,529,530	70.3%	$ 35,079,422	$ 1,747,259	4.98%

Downtown Redevelopment Trust

Revenues – Budgeted revenues are comprised of City, County, Hospital, and special district property taxes levied on property within the Downtown Redevelopment boundaries and amount to $2 million, including $834,000 in transfers into this fund. $1.8 million has been received as of June.

Expenditures – A total of $681,000 has been expended for capital projects and service contracts (Ormond Main Street and property improvement grants).

Downtown Redevelopment Fund Revenues - June 2026

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Grant	$ -	$ -	$ -	0.0%	$ -	$ -	0.0%
Local Units	1,135,798	1,128,609	7,189	99.4%	1,232,025	(103,416)	-8.4%
Miscellaneous	30,000	58,524	(28,524)	195.1%	80,787	(22,262)	-27.6%
Transfers In	834,038	625,527	208,511	75.0%	525,294	100,233	19.1%
Use of Fund Balance	-	-	-	0.0%	-	-	0.0%
	$ 1,999,836	$ 1,812,660	$ 187,176	90.6%	$ 1,838,106	$ (25,446)	-1.38%

Downtown Redevelopment Fund Expenditures

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Planning	$ 71,050	$ 50,175	$ 20,875	70.6%	$ 78,375	$ (28,200)	-36.0%
Public Works	68,500	371,183	(302,683)	541.9%	380,394	(9,211)	-2.4%
Engineering	39,388	-	39,388	0.0%		-	0.0%
Grants	200,000	-	200,000	0.0%	-	-	0.0%
Leisure Services	774,928	259,855	515,073	33.5%	1,848,537	(1,588,682)	-85.9%
Contingency	845,970	-	845,970	0.0%	-	-	0.0%
	$ 1,999,836	$ 681,214	$ 1,318,622	34.1%	$ 2,307,307	$ (1,626,093)	-70.48%

Stormwater Fund

Revenues – The primary revenue source is stormwater user fees. User fees were budgeted at $3.3 million with $2.5 million received through June 2026.

Expenditures – The total budget for stormwater expenses is $5.6 million with $2.68 million spent to date.

Stormwater Fund Revenues - June 2026

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Grants	$ -	$ -	$ -	0.0%	$ -	$ -	0.00%
Stormwater Fees	3,301,750	2,370,309	931,441	71.8%	1,827,909	542,400	29.67%
Miscellaneous	125,000	97,171	27,829	77.7%	106,156	(8,984)	-8.46%
Intergovernmental	769,020	46,618	-	0.0%	68,359	(21,741)	-31.80%
Use of Fund Balance	1,417,616	-	1,417,616	0.0%	-	-	0.00%
	$ 5,613,386	$ 2,514,098	$ 2,376,886	44.8%	$ 2,002,424	$ 511,674	25.55%

Stormwater Fund Expenditures

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Maintenance	5,102,243	2,431,911	2,670,332	47.7%	3,771,895	(1,339,984)	-35.53%
Engineering Support	$ 183,654	-	$ 183,654	0.0%	-	$ -	0.00%
Transfers Out	327,489	245,619	81,870	75.0%	210,357	35,262	16.76%
Contingency	-	-	-	0.0%	-	-	0.00%
	$ 5,613,386	$ 2,677,530	$ 2,935,856	47.7%	$ 3,982,252	$ (1,304,722)	-32.76%

Water and Wastewater Fund

Revenues – The primary revenue sources are water and sewer user fees. User fees were budgeted at $27 million with $17.8 million collected year to date. The revenue also includes $530,000 budgeted for transfers.

Expenditures – Operating expenses for utility billing and water/wastewater public works services is budgeted in the amount of $26.8 million, with $20.3 million expended to date.

Water/Wastewater Fund Revenues - June 2026

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Water/Sewer Charges	$ 27,325,000	$ 17,833,247	$ 9,491,753	65.3%	$ 16,733,306	$ 1,099,940	6.57%
Miscellaneous	51,000	99,261	(48,261)	194.6%	23,527	75,734	321.90%
Transfers In	530,427	397,827	132,600	75.0%	338,247	59,580	17.61%
Intergovernmental	-	-	-	0.0%	-	-	0.00%
Use of Fund Balance	842,511	-	842,511	0.0%	-	-	
	$ 28,748,938	$ 18,330,334	$ 10,418,604	63.8%	$ 17,095,080	$ 1,235,254	7.23%

Water/Wastewater Fund Expenditures

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Utility Billing	$ 1,831,300	$ 1,362,711	$ 468,589	74.4%	$ 1,247,449	$ 115,263	9.24%
Water Production	5,402,295	3,594,388	1,807,907	66.5%	3,517,711	76,677	2.18%
Water Distribution	1,875,744	1,274,950	600,794	68.0%	1,333,876	(58,926)	-4.42%
Wastewater Treatment	4,786,102	3,003,227	1,782,875	62.7%	2,857,222	146,005	5.11%
Wastewater Collection	1,787,071	1,261,726	525,345	70.6%	1,178,666	83,060	7.05%
W&S Engineering	-	25,023	(25,023)		23,579	1,444	0.00%
Transfers Out	13,066,426	9,799,821	3,266,605	75.0%	8,725,815	1,074,006	12.31%
Contingency	-	-	-	0.0%	-	-	0.00%
	$ 28,748,938	$ 20,321,847	$ 8,427,091	70.7%	$ 18,884,318	$ 1,437,529	7.61%

Solid Waste Fund

Revenues – The primary revenue source is solid waste franchise and user fees. To date, $10.98 million has been received.

Expenditures – Personnel, operating, capital expenses and transfers budgeted for 2026 are $14.96 million. $11.4 million has been expended as of June.

Solid Waste Fund Revenues - June 2026

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Franchise Fees	$ 2,626,000	$ 1,926,183	$ 699,817	73.4%	$ 1,263,493	$ 662,690	52.45%
User Fees	12,295,000	9,027,788	$ 3,267,212	73.4%	8,493,598	534,190	6.29%
Miscellaneous	1,000	25,584	$ (24,584)	2558.4%	23,468	2,116	9.02%
Intergovernmental	-	-	$ -	0.0%	-		0.00%
Use of Fund Balance	38,267	-	$ 38,267	0.0%	-	-	0.00%
	$ 14,960,267	$ 10,979,555	$ 3,980,712	73.4%	$ 9,780,560	$ 1,198,996	12.26%

Solid Waste Fund Expenditures

	Final Budget	YTD FY 2025-26	Remaining Budget	% of Budget	YTD FY 2024-25	$ FY Variance	% FY Variance
Collection & Disposal	$ 11,414,726	$ 8,773,503	$ 2,641,223	76.9%	$ 8,575,282	$ 198,222	2.31%
Recycling	1,606,800	1,187,638	419,162	73.9%	925,416	262,222	28.34%
Engineering	-		-	0.0%	-	-	0.00%
Transfers Out	1,938,741	1,454,058	484,683	75.0%	1,290,654	163,404	12.66%
Contingency	-	-	-	0.0%	-	-	0.00%
	$ 14,960,267	$ 11,415,199	$ 3,545,068	76.3%	$ 10,791,352	$ 623,847	5.78%

FY 2025-26 Budget Amendments

Fund	Description	Revenue Amount	Expenditure Amount	Commission Action
General Fund				
Revenues				
	Use of Fund Balance	645,667		
	Internal Service Charges-Engineering	2,500		
	Use of fund balance-Building Inspections	395,865		
		1,044,032		
Expenditures				
	Transfer to Fund 317 Facilities R&R		3,312	Casements Roof & Downspout
	Fire Fire Hydrant $160k BID		160,000	RESO#2025-155
	Tomoka Oaks Legal Expenses		200,000	
	Transfer to 317		53,155	317743 soccer netting hurricane milton
	Building Inspectors' Supllies		9,500	CC Meeting 12/16/25
	Building Inspectors' Personnel		196,000	CC Meeting 12/16/25
	Fleming Avenue Resident's Property Restoration		5,000	
	Transfer to Fund 301-General Capital		121,000	OBSC Generators Reso 2026-30 CC Meeting 3/3/26
	Transfer to Fund 301-General Capital		99,900	Protective Glass for Building Inspection Counter
	Transfer to Fund 301-General Capital		75,000	Freeze Damage Landscaping
	Transfer to Fund 302-General Vehicles		79,165	Two additional inspector vehicles CC Meeting 12/16/25
	Transfer to Fund 317-Facilities R&R		30,000	Fire Station 93 Mold Remediation additional repairs
	Transfer to Fund 317-Facilities R&R		12,000	Building Inspectors' Office Carpet CC Meeting 12/16/25
			1,044,032	
CRA				
Revenues				
	Use of Fund Balance	744,000		
		744,000		
Expenditures				
	Cassen Park		159,000	Reso 2026-70 6/9/26 & Work Authorization
	Underground Utilities		470,000	Carryforward from FY 2024-25
	Median Upgrades		115,000	Carryforward from FY 2024-25
			744,000	
Ormond Crossings				
Revenues				
Expenditures				
Stormwater				
Revenues				
	Use of Fund Balance	1,467,000		
	Transform 386 Funding	(455,520)		
		1,011,480		
Expenditures				
	OBSC Drainage		40,000	Carryforward from FY 2024-25
	Fleming Stormwater		170,000	Carryforward from FY 2024-25
	OBSC Stormwater		1,092,000	Carryforward from FY 2024-25
	Stormwater Projects Transform 386		(455,520)	
	Fleming Avenue Pump Station Engineering		165,000	Reso 2026-36 3/24/26
			1,011,480	
Airport				
Revenues				
	FDOT	109,200		
	Use of Fund Balance	483,300		
		592,500		
Expenditures				
	Airport Security Gates		136,500	Reso 2025-58 2/18/25
	Air Traffic Control Tower		64,000	Work Authorization
	Riverbend Golf Course Property Tax		392,000	
			592,500	
Economic Development Fund				
Revenues				
Expenditures				

FY 2025-26 Budget Amendments

Fund	Description	Revenue Amount	Expenditure Amount	Commission Action
Pension Pass Thru				
Revenues				
Expenditures				
Recreation Facilitiy Fee Fund				
Revenues				
	Prior Year Surplus	10,400		
		10,400		
Expenditures				
	FF102 linelazer ball field		10,400	
			10,400	
Debt Service Fund				
Revenues				
	Transfer from Fund 211-Capital Improvement Fund	15,000		
		15,000		
Expenditures				
	Contingency		15,000	
			15,000	
2002 General Obligation Bonds				
Revenues				
	Use of Fund Balance	145,000		
		145,000		
Expenditures				211
	Transfer to Fund 220-2010 General Obligation Bond		145,000	To close out fund & transfer for current bond repayment
			145,000	
2003 General Obligation Bonds				
Revenues				
	Use of Fund Balance	10,000		
		10,000		
Expenditures				
	Transfer to Fund 220-2010 General Obligation Bond		10,000	To close out fund & transfer for current bond repayment
			10,000	
2011 Capital Improvement Notes				
Revenues				
	Use of Fund Balance	15,000		
		15,000		
Expenditures				
	Transfer to Fund 205-Debt Service Fund		15,000	To close out fund & transfer for current bond repayment
			15,000	
2010 General Obligation Bonds				
Revenues				
	Transfer from Fund 209-2002 General Obligation Bond	145,000		
	Transfer from Fund 210-2003 General Obligation Bond	10,000		
		155,000		
Expenditures				
	Contingency		155,000	To close out fund & transfer for current bond repayment
			155,000	
Grant Fund				
Revenues				
	Use of Fund Balance	80,000		
		80,000		
Expenditures				
	Transfer to Fund 301-General Capital Improvements		80,000	To close out fund
			80,000	

FY 2025-26 Budget Amendments

Fund	Description	Revenue Amount	Expenditure Amount	Commission Action
General Capital Improvements				
Revenues				
	FEMA	1,751,945		
	State of Florida	285,588		
	CDBG	250,040		
	Transfer from Fund 001-General Fund	295,900		121000
	Transfer from Fund 116-Grant Fund	80,000		80000
	Use of Fund Balance	1,301,450		
		3,964,923		
Expenditures				
	Fleet Fuel Canopy		650,000	Carryforward from FY 2024-25
	Central Park Trails		250,040	Carryforward from FY 2024-25
	ARBFP Seawall & ADA Ramp		2,294,700	Reso 2026-03 1/20/26
	ARBFP Construction Administration		38,420	Carryforward from FY 2024-25
	OBSC Generators (2)		121,000	Reso 2026-30 CC Meeting 3/3/26
	Protective Glass Building Inspection Counter		99,900	
	301280 CDBG Military BLVD		83,863	RESO 2025-197 12/16/2025 approved
	Fire Station 93 Wind Wall & Pad		60,000	Reso. 2026-62 5/5/26
	Freeze Damage Landscaping		75,000	Direction provided @ workshop
	Fire Station Alterting		87,000	Carryforward from FY 2024-25
	Telephone System		171,000	Carryforward from FY 2024-25
	City Hall Access Control		34,000	Reso 2026-33 3/24/26
			3,964,923	
General Capital Vehicle/Equipment				
Revenues				
	Transfer from General Fund (Building Inspection)	132,165		
		132,165		
Expenditures				
	Leisure Service Vehicles ordered in FY 2024-25		53,000	Delivered & paid in FY 2025-26
	Two additional Building Inspectors' Vehicles		79,165	CC Meeting 12/16/25 plus $700 for spray liner
			132,165	
Public Safety				
Revenues				
	Transfer from Fund 504-General Liability	576,000		
	Use of Fund Balance	573,000		
		1,149,000		
Expenditures				
	Purchase of 7 Patrol Vehicles		500,000	Reso 2025-159 10/8/25
	Patrol Lighting		59,000	Carryforward from FY 2024-25
	Fire Station 92 & 93 Generator structure design		224,000	Carryforward from FY 2024-25
	Brush Truck order in FY 2024-25		290,000	Received & paid in FY 2025-26
	Police Vehicle Damage		76,000	
			1,149,000	
Transportation				
Revenues				
Expenditures				
Recreation Impact Fees				
Revenues				
	Racing & Recreation District Grant	(300,000)		
	Fund Balance	577,710		
		277,710		
Expenditures				
	Parks and Rec Master Plant 310020		122,710	reso#2025-188 12/2/2025
	OBSC Field 11 & 12 LED Lighting		155,000	
			277,710	

FY 2025-26 Budget Amendments

Fund	Description	Revenue Amount	Expenditure Amount	Commission Action
Facilities R&R				
Revenues				
	Fund Balance	216,442		
	FEMA	57,375		
	State of Florida	9,563		
	Transfer in from 001 fund	86,467		
	Transfer from General Fund (Building Inspection)	12,000		
		381,847		
Expenditures				
	Sanchez Park Fishing Pier Replacement		170,000	Reso 2025-150 10/8/2025 CC Meeting
	Sanchez Park Fishing Pier Replacement		50,631	Budget Adjustment
	Fire Station 93 Mold Remediation		70,192	Carryforward from FY 2024-25 plus add'l repair expenses
	FEMA SOCCER NETTING MILTON		53,155	
	Riveria Fishing Pier Replacement		(50,631)	Budget Adjustment
	Casements Roof & Downspout		26,500	Hurricane Damage
	Rockefeller Gardens Shade Structure		50,000	Hurricane Damage
	Building Inspectors' Carpet		12,000	CC Meeting 12/16/25
			381,847	
Leisure Services Capital Revenue				
Revenues				
Expenditures				
WWW Operating				
Revenues				
Expenditures				
WWW Vehicles & Equipment				
Revenues				
	Use of Fund Balance	272,333		
	Transfer from General Liability Fund	38,000		
		310,333		
Expenditures				
	Transfer to WWW Capital Fund		122,000	
	Lift Station Operating Expenses		(122,000)	
	Water Plant Truck $949		38,000	
	Dumpt Trucks (2) ordered in FY 2024-25		271,000	Received & paid in FY 2025-26
	Additional Cost for Vacuum Trailer		1,333	Reso 2025-192 CC Meeting 12/2/2025
			310,333	
WWW Capital Impr.				
Revenues				
	Use of Fund Balance	2,537,680		
	Transfer from WWW Operating Fund	122,000		
		2,659,680		
Expenditures				
	Finance Security Enhancements & Renovations		51,000	
	Lead Service Assessment		15,000	Additional Appropriation
	Lift Station 4P		122,000	Carryforward from FY 2024-25
	Sanitary Sewer		220,000	Carryforward from FY 2024-25
	WRF Filter Modifications		121,000	Carryforward from FY 2024-25
	Lift Station Bypass		200,000	Carryforward from FY 2024-25
	WTP Generator		15,075	Carryforward from FY 2024-25
	S. Nova Raw Water Main Emergency Repair		74,000	Emergency
	Lift Station Backup Pumps		143,380	Carryforward from FY 2024-25
	Watermain Replacement		184,000	Carryforward from FY 2024-25
	A1A Utility Repair		123,000	Carryforward from FY 2024-25
	Williamson Blvd. Pipe Relocation		357,000	Carryforward from FY 2024-25
	Fire Hydrant & Valve Expansion		37,225	Carryforward from FY 2024-25
	Western Service Area Storage Tank & Pump Station		496,000	Reso 2026-40 3/24/26
	Western Service Area WWTP Basin & Lift Station		501,000	Reso 2026-41 3/24/26
			2,659,680	

FY 2025-26 Budget Amendments

Fund	Description	Revenue Amount	Expenditure Amount	Commission Action
Reclaimed Water Impact Fee Fund				
Revenues				
Expenditures				
Water Impact Fee Fund				
Revenues				
Expenditures				
Wastewater Impact Fee Fund				
Revenues				
	Use of Fund Balance	724,000		
		724,000		
Expenditures				
	Riverside Drive Forcemain		724,000	Reso 2026-22 2/19/26
			724,000	
2024 Water & Wastewater Bonds				
Revenues				
	Use of Fund Balance from Bond Proceeds	1,422,000		
		1,422,000		
Expenditures				
	Water Treatment Plant Aerator Rehab		1,422,000	Reso 2026-21 2/19/26
			1,422,000	
General Liability				
Revenues				
	Use of Fund Balance	576,000		
	Reimbursement from Insurance	38,000		
		614,000		
Expenditures				
	Transfer to Fund 305-Public Safety Vehicle Fund		576,000	
	Transfer to Fund 408-WWW Vehicle Fund		38,000	
			614,000	
		15,458,070	**15,458,070**	
		157,871,449	**157,871,449**	

CIP Status Report as of July 30, 2026

Project Name	Grant Funded	Phase	Timeline		Budget		
			Percent Complete	Date Complete	Budget Amount	Contract Amount	Percent Spent
Fund 104 - TIF							
Downtown East Granada Utility Undergrounding		Design/Bidding	100%		$ 20,000	$ 27,500	100%
Economy Electric		Construction	95%		$ 100,000	$ 991,928	81%
(Construction)		Total			$ 120,000	$ 1,019,428	
Downtown Granada Sidewalk		Design/Bidding	100%			In-House	
		Construction	0%		$ 1,400,000		
(Design)		Total			$ 1,400,000	$ -	
Downtown Upgrades & Improvements 25/26FY		Design/Bidding	100%			In-House	
Economy Electric		Construction	0%		$ 60,000	$ 51,273	0%
(Construction)		Total			$ 60,000	$ 51,273	
Fortunato Park Fishing Pier		Design/Bidding	71%		$ 86,000	$ 86,000	71%
Dredging & Marine Consultants	FIND	Construction	0%				
(Design)		Total			$ 86,000	$ 86,000	
Fund 107 - Stormwater							
Fleming Avenue Pump Station & Force Main		Design/Bidding	100%				
	HMGP Pending	Construction	0%				
		Total			$ -	$ -	
Hidden Hills Drainage Improvements		Design/Bidding	100%			In-House	
All State Civil		Construction	0%		$ 140,308	$ 140,308	0%
(Construction)		Total			$ 140,308	$ 140,308	
OBSC SW Pond Expansion		Design/Bidding	100%		$ 64,500	$ 62,880	100%
GPS Civil		Construction	65%		$ 1,044,422	$ 1,044,422	65%
(Construction)		Total			$ 1,108,922	$ 1,107,302	
Fund 108 - Airport							
Crosswind Business Park		Design/Bidding	65%		$ 211,570	$ 211,570	65%
Zev Cohen	FDOT	Construction	0%				
(Design)		Total			$ 211,570	$ 211,570	
Fund 301 - General Fund							
Police Station / EOC		Design/Bidding	50%		$ 557,710	$ 557,710	50%
JL2 Architecture		Construction					
(Design)		Total			$ 557,710	$ 557,710	
Security Access Control		Design/Bidding	100%			In-House	
Empire		Construction	50%		$ 333,281	$ 333,281	0%
(Construction)		Total			$ 333,281	$ 333,281	
Solar Parking Lot Lights		Design/Bidding	90%			In-House	
		Construction					
(Design)		Total			$ -	$ -	
Fund 305 - Public Safety							
Fire Station 92 & 93 Generators		Design/Bidding	100%		$ 22,207	$ 22,207	100%
Greg Reynolds Construction	HMGP	Construction	35%		$ 230,668	$ 230,668	77%
(Construction)		Total			$ 252,875	$ 252,875	
Fund 308 - Transportation							
Main Trail Bridge R&R		Design/Bidding	97%		$ 70,430	$ 70,430	97%
Kimley-Horn		Construction	0%		$ 429,570		
(Design)		Total			$ 500,000	$ 70,430	
Road Resurfacing 25/26FY		Design/Bidding	100%			In-House	
Sparks Concrete		Construction	0%		$ 639,041	$ 639,041	0%
(Construction)		Total			$ 639,041	$ 639,041	
Sidewalk Repair & Replacement 25/26FY		Design/Bidding	90%			In-House	
		Construction	0%		$ 125,000		
(Design)		Total			$ 125,000	$ -	

CIP Status Report as of July 30, 2026

Project Name	Grant Funded	Phase	Timeline		Budget		
			Percent Complete	Date Complete	Budget Amount	Contract Amount	Percent Spent
Fund 310 - Recreation Impact Fee Fund							
OBSC Fields 11 & 12 LED Lighting		Design/Bidding	100%			In-House	
AM Weigel		Construction	23%		$ 653,265	$ 653,265	23%
(Construction)		Total			$ 653,265	$ 653,265	
Fund 317 - Facility R & R Fund							
ARBP Shade Structure Replacement		Design/Bidding	100%			In-House	
		Construction	0%		$ 300,000		
(Design)		Total			$ -	$ -	
Riviera Park Fishing Pier		Design/Bidding	71%		$ 86,000	$ 86,000	71%
Dredging & Marine Consultants		Construction	0%		$ 364,000		
(Design)		Total			$ 450,000	$ 86,000	
Fund 322 - Leisure Services Capital Fund							
OBSC Field 4		Design/Bidding	58%		$ 189,700	$ 189,700	58%
GAI Consultants, Inc.		Construction	0%				
(Design)		Total			$ 189,700	$ 189,700	
OBSC Softball Field Reconstruction		Design/Bidding	100%		$ 14,500	$ 14,500	100%
Castle Bay		Construction	0%		$ 800,000		
(Design)		Total			$ 814,500	$ 14,500	
Fund 409 - Water/Wastewater System Improvements							
2" Watermain Replacement - Mainland Phase 5		Design/Bidding	50%			In-House	
		Construction			$ -		
(Design)		Total			$ -	$ -	
SR40 WM Loop with FM Addition		Design/Bidding	100%		$ 75,000	$ 104,275	100%
JD Weber	FDEP	Construction	95%		$ 6,205,000	$ 4,525,370	84%
(Construction)		Total			$ 6,280,000	$ 4,629,645	
A1A Utility Relocation Phase 1		Design/Bidding	100%			In-House	
All State Civil		Construction	80%		$ -	$ 530,000	80%
(Construction)		Total			$ -	$ 530,000	
A1A Utility Relocation Phase 2		Design/Bidding	100%			In-House	
ThadCon		Construction	63%		$ -	$ 497,285	63%
(Construction)		Total			$ -	$ 497,285	
Lead Service Line Program 25/26FY		Design/Bidding	100%			In-House	
Next Wave Plumbing		Construction	0%		$ 200,000	$ 161,400	0%
(Construction)		Total			$ 200,000	$ 161,400	
Lift Station Rehabilitation 4P		Design/Bidding	100%		$ 165,000	$ 164,612	100%
Danus Utilities		Construction	0%		$ 1,415,679	$ 1,415,679	0%
(Construction)		Total			$ 1,580,679	$ 1,580,291	
Manhole Rehabilitation 25/26FY		Design/Bidding	100%			In-House	
Hazen		Construction	93%		$ 549,187	$ 549,187	93%
(Construction)		Total			$ 549,187	$ 549,187	
Public Works Generator		Design/Bidding	100%			In-House	
Accurate Power		Construction	30%		$ 242,428	$ 242,428	22%
(Construction)		Total			$ 242,428	$ 242,428	
Public Works Renovation		Design/Bidding	10%		$ 100,000	$ 30,000	0%
Hall & Ogle		Construction			$ 750,000		
(Design)		Total			$ 850,000	$ 30,000	
Stormwater Piping 25/26		Design/Bidding	100%			In-House	
Insituform		Construction	35%		$ 1,343,500	$ 1,343,500	0%
(Construction)		Total			$ 1,343,500	$ 1,343,500	

CIP Status Report as of July 30, 2026

Project Name	Grant Funded	Phase	Timeline		Budget		
			Percent Complete	Date Complete	Budget Amount	Contract Amount	Percent Spent
Fund 434 & 435 - Water/Wastewater Impact Fee Funds							
Halifax River Utility Crossing		Design/Bidding	86%		$ 480,000	$ 438,614	86%
McKim & Creed		Construction	0%		$ 5,680,000		
(Design)		Total			$ 6,160,000	$ 438,614	
Hudson Wellfield Expansion		Design/Bidding	100%		$ 300,000	$ 292,964	100%
Hazen		Construction	77%		$ 1,300,000	$ 4,317,575	77%
(Construction)		Total			$ 1,600,000	$ 4,610,539	
Septic to Sewer - Oak, Magnolia & Bonita	FDEP	Design/Bidding	17%		$ 160,000	$ 148,079	17%
		Construction	0%		$ 1,440,000		
(Design)		Total			$ 1,600,000	$ 148,079	
WRF Ultraviolet Disinfection Conversion	FDEP (const only)	Design/Bidding	100%		$ 270,000	$ 272,800	100%
SGS Contracting		Construction	74%		$ 2,430,000	$ 6,904,700	74%
(Construction)		Total			$ 2,700,000	$ 7,177,500	
Hurricanes IAN & NICOLE - FEMA							
ARBP Seawall & ADA Ramp Reconstruction	FEMA	Design/Bidding	100%			$ 93,965	100%
Construct Co		Construction	27%		$ 2,381,012	$ 2,381,012	27%
(Construction)		Total			$ 2,381,012	$ 2,474,977	
Hurricane MILTON - FEMA							
Osceola Elementary Pavilion Replacement	FEMA	Design/Bidding	95%			In-House	
		Construction	Project on Hold		$ -		
		Total			$ -	$ -	
Rockefeller Stage Canopy Repairs	FEMA	Design/Bidding	100%			In-House	
AM Weigel		Construction	100%		$ 49,645	$ 49,645	100%
(Construction)		Total			$ 49,645	$ 49,645	
Misc Non-CIP Projects							
Cassen Park Milling & Fire Standpipe		Design/Bidding	100%			In-House	
Coleman Goodemote		Construction	67%		$ 113,621	$ 113,621	60%
(Construction)		Total			$ 113,621	$ 113,621	
Finance Security Upgrades		Design/Bidding	100%			In-House	100%
Coleman Goodemote		Construction	85%		$ 46,764	$ 46,764	35%
(Construction)		Total			$ 46,764	$ 46,764	
Riverside Drive Forcemain Replacement		Design/Bidding	100%		$ -	$ -	100%
JD Weber		Construction	7%		$ 1,598,166	$ 1,598,166	7%
(Construction)		Total			$ 1,598,166	$ 1,598,166	
Western Storage Tank & Pump Station		Design/Bidding	8%		$ 495,237	$ 495,237	8%
Mead & Hunt		Construction	0%		$ 1,440,000		
(Design)		Total			$ 1,935,237	$ 495,237	
Western WWTP Equalization Basin & Master Lift Station		Design/Bidding	11%		$ 500,083	$ 500,083	11%
Mead & Hunt		Construction	0%		$ 1,440,000		
(Design)		Total			$ 1,940,083	$ 500,083	
WTP Aerator Rehabilitation		Design/Bidding	100%		$ -	$ -	100%
SGS Contracting		Construction	8%		$ 1,422,000	$ 1,422,000	0%
(Construction)		Total			$ 1,422,000	$ 1,422,000	

Economic Development Monthly Report

July 2026

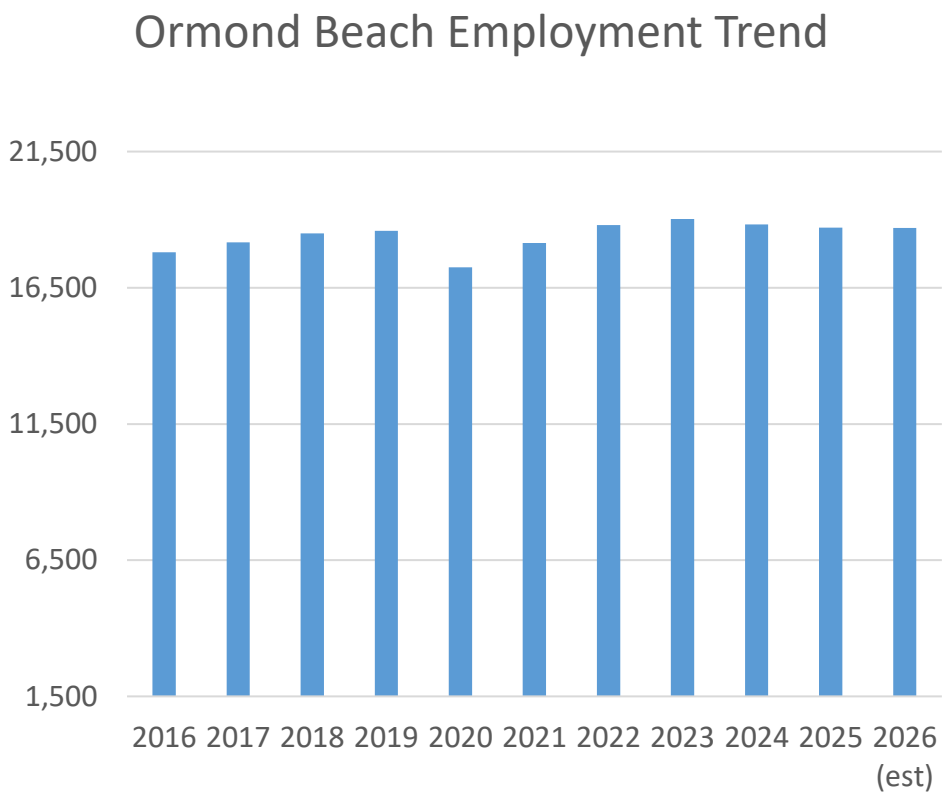
Ormond Beach
June Employment

18,691

This is down 0.5% year over year

Ormond Beach
Unemployment Rate

4.9%



Notes and Updates:

- **Employment conditions remained stable through June.** Following a strong February rebound of +214 jobs, employment gains continued through May before moderating slightly in June (−49 jobs). Despite the monthly decline, the year-over-year employment gap remains substantially improved from January (−245 jobs) to June (−61 jobs), reflecting continued progress in local workforce conditions. Overall, recent data continues to point toward stabilization and gradual improvement, reinforcing the strength of the local job base.
- **Employer demand remains active,** with job postings increasing by +17 in June, bringing the three-month average to 946.9, the highest level recorded this year. Job demand momentum remains positive, indicating continued strength in employer hiring activity. Hiring demand continues to be concentrated in Health Care, Administrative and Support Services, Retail Trade, Hospitality, and Professional and Scientific Services, reflecting sustained demand across key sectors of the local economy.
- **Commercial development activity continued to build into July,** with the rolling total of non-residential permits increasing to 438, the highest level observed year-to-date. Investment momentum remains positive, reflecting sustained private capital deployment and continued project advancement. The continued increase in permit activity suggests businesses and property owners remain confident in moving forward with investment decisions throughout the community.
- **The local economy remains stable and advancing**, with employment holding steady, employer hiring demand strengthening, business formation activity moderating but still healthy, and private investment

COMMERCIAL PROJECTS	
1	1755 N. U.S. Highway 1 Warehouse
2	A & M Frozen
3	Advent Health OSED
4	Beau's Seafood Market - Utilities
5	Breakway Trails, Tract A
6	Campana Office (repermit)
7	Circle K, North US Highway 1
8	Circle K, North US Highway 1, Special Exception
9	Circle K, South Nova Road
10	Dutch Bros Coffee
11	First United Methodist
12	Florida Urology
13	Hull Rd Contractor Storage
14	Murphy USA, Site Plan
15	Murphy USA, Annexation
16	Murphy USA, Special Exception
17	Ormond Beach Holdings LLC
18	Ormond Beach Self Storage
19	Ormond Crossings East Industrial Phase 1
20	OC Pine Tree Flyover
21	Pathways Elementary
22	PO OB - Neighborhood Commercial
23	Prince of Peace, Alternate Access
24	Terra Marine Park
25	The Sarah House
26	Superior Handling Equipment
27	Tomlinson Aviation
28	Tomoka Christian Church
29	Tomoka Commerce Park, Zoning Amendment
30	Tomoka Commerce Park, Lot 1 Amendment
31	Tomoka Commerce Park Preliminary Plat Amendment
32	Tomoka Commerce Park - PBD
33	Tomoka Commerce Park - Preliminary Plat
34	Tomoka Commerce Park, Lot 1
35	Tomoka Commerce Park, Lot 2
36	Tomoka Commerce Park, Lot 3
37	Tomoka Commerce Park, Lot 4
38	Wal-Mart Expansion
39	WRF B Disinfection Conversion

ORMOND BEACH - UTILITY PROVIDER ONLY	
40	Aquarius
41	Baileys By The Sea
42	Baileys By The Sea 2
43	Brookside at Ormond Station
44	Garden Side, Phase II
45	Kingston Shores Water Utilities
46	North Peninsula WWTP
47	Seascape
48	Sunrise Condominium
49	Verona Oceanside Building 1 - Utilities

RESIDENTIAL PROJECTS	
50	121 East
51	Archer's Mill - Phase 3
52	Archer's Mill - Phase 4
53	Archer's Mill - Phase 5
54	Bradford Lakes Amenities
55	Cliffhaven Court, Annexation
56	Cliffhaven, Lot Split
57	Cliffhaven, Site Plan
58	Fountain View - Phase 1D
59	Fountain View - Phase 1E
60	Fountain View - Phase 1F
61	Ormond Crossings - Forcemain Ext
62	Ormond Crossings - Phase 1
63	Ormond Crossings, Phase 1A Final Plat
64	Ormond Crossings Phase 1B
65	Ormond Crossings - Reclaim Water
66	Ormond Crossings Tymber Creek Flyover (Utilities)
67	OC Watermain Extension
68	Ormond Enclave
69	Plantation Oaks - 2C
70	Plantation Oaks - 2D
71	Reflections Village SE
72	Rivell Subdivision
73	Tattersall at Tymber Creek
74	Tides Edge Preliminary Plat
75	Tomoka Reserve, Phase 1 Preliminary Plat
76	Yoon Way Townhomes, Comprehensive Plan Amendment
77	Yoon Way Townhomes

CITY OF ORMOND BEACH COMMERCIAL AND RESIDENTIAL DEVELOPMENT REPORT

Legend

- Residential Sites
- Commercial Sites
- Utility Provider Only

Atlantic Ocean

Halifax River

0 0.5 1 2 Miles

Prepared By: The City of Ormond Beach GIS Department - July 30, 2026

City of Ormond Beach Commercial Development Report, as of August 1, 2026

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Change in project status **Projects reviewed last month**

#	Project	Description	Application Date	1st Review	2nd Review	3rd Review	4th Review	Neigh-borhood meeting	Advisory Board	City Commis-sion	Final Approval	DO Expiration	Building Permit	Building Permit Value	Eng. Permit	Eng. Permit Constr. Value	Under Construc tion	E or Arc = Project Engineer or Architect O = Owner A = Applicant
1	**1755 N U.S. HWY 1 WAREHOUSE** 1755 N U.S. HWY 1 SPRC-2026-000098	New construction of a 5,000 square foot office/warehouse on 2.64 acres.	07.02.26	07.27.26				Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Ultra Design Consulting, Inc. O = BSDG Holdings, LLC
2	**A & M FROZEN** 1899 North US Highway 1 SPRC-2024-000031	Site building expansion of 50,400 square feet and associated site improvements.	04.18.24	05.17.24	01.28.25			Not applicable	Not applicable	Not applicable	02.25.25	02.25.27	Not applied	Not applied	Not applied	Not applied		E = Zev Cohen & Associates O = 1899 US HWAY 1, LLC
3	**ADVENT HEALTH OSED** 1561 North US Highway 1 SPRC-2025-000069	New emergency department - 13,451 square foot building on 2.47 acres.	05.16.25	5.30.25	08.31.25	10.23.25 02.12.26	05.12.26	Not applicable	11.13.25 (Approved)	12.16.25 01.20.26 (Approved)	06.25.26	06.25.28	Not applied	Not applied	Not applied	Not applied		E = Kimley-Horn Engineering O =Advent Health System/ Sunbelt INC.
4	**BEAU'S SEAFOOD MARKET** 801 N. U.S. HWY 1 SPRC-2026-000101	Connection of water service to serve the building and removal of well water services.	7.14.26					Not applicable	Not applicable	Not applicable	07.27.26	07.27.28	Not applicable	Not applicable	Not applied	Not applied		E = Upham, Inc. O = Capital Partners Insurance
5	**BREAKAWAY TRAILS, TRACT A** 8 Breakaway Trail PZ-2025-000179	Development of Regional Impact amendment for RV and boat storage and storage buildings.	06.11.25	07.18.25	01.05.26	04.16.26		Required	Required	Required			Not applied	Not applied	Not applied	Not applied		E = Zev Cohen & Associates O = Four Deland Plaza LLC
6	**CAMPANA (REPERMIT)** 783 N. U.S. HWY 1 SPRC-2026-000094	Repermit of project that has started. Office building on 1.03 acre lot.	06.09.26	07.10.26				Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Alann Engineering APP - Steven Campana
7	**CIRCLE K - NORTH US 1** 1505 N. US Highway 1 SPRC-2026-000090	New construction. Development of a 3,956 square foot convenience store with 12 pumps on 1.60 acres.	04.08.26	05.01.26	07.09.26			Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Kimley-Horn Engineering APP = Circle K O = RCM Properties, LLC
8	**CIRCLE K - NORTH US 1** 1505 N. US Highway 1 PZ-2026-000266	Special Exception for Outdoor Activity for outdoor sales area.	06.16.26	07.09.26				Not applicable	Required	Required			Not applicable	Not applicable	Not applicable	Not applicable		E = Kimley-Horn Engineering APP = Circle K O = RCM Properties, LLC
9	**CIRCLE K - NOVA & HAND** 699 South Nova Road SPRC-2024-000051	Demolish existing bank building and construct 5,200 SF building on 1.88 acres for convenience store with fueling canopy.	12.04.24	12.30.24	03.04.25	05.08.25 09.16.25 10.20.25 10.29.25	REV 1 03.03.26	02.10.25	Not applicable	Appeal 08.05.25	11.03.25 Revision 07.15.26	Under Construc-tion	Issued 03.17.26	$2,009,000	Issued 03.25.26	$1,275,000	55%	E = Kimley-Horn O = Sun State Petrol I, LLC
10	**DUTCH BROS COFFEE** 764 West Granada Boulevard SPRC-2025-000078	New construction of a 1,071 square feet building on1.07 acres	09.22.25	10.16.25	11.05.25	12.10.25	12.11.25 (Approved)	Not applicable	Not applicable	Not applicable	12.11.25	Under Construc-tion	Issued 04.21.26	$650,000	Issued 04.27.26	$440,171	20%	E = Newkirk Engineering, Inc. O = Ormond Central Investors, LLC ARC = Pursuit Development LLC

City of Ormond Beach Commercial Development Report, as of August 1, 2026

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Change in project status | **Projects reviewed last month**

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11	**FIRST UNITED METHODIST** 336 S. Halifax Drive SPRC-2025-000055	Demolition of the existing gathering building and construction of a new building with associated site improvements.	01.17.25	02.06.25	07.23.25	09.16.25		04.09.25	10.09.25 (Approved)	11.18.25 (Approved)	12.08.25	12.08.27	Approved	$7,000,000	Not applied	Not applied		E = Zev Cohen & Associates O = First United Methodist Church
12	**FLORIDA UROLOGY** 300 Clyde Morris Blvd. PZ-2026-000283	Special exception to allow for use of a Mobile Prostate-Specific Membrane Antigen (PSMA) PET/CT trailer within the property	7.14.26	7.24.26				Not applicable	08.13.26	09.23.26			Not applicable	Not applicable	Not applicable	Not applicable		APP = Cobb Cole
13	**HULL RD CONTRACTOR STORAGE** 835 Hull Rd SPRC-2025-000075	New construction of Outdoor Storage Construction Yard	09.10.25	09.26.25	10.27.25			Not applicable	11.13.25 (Approved)	12.16.25 (Approved)	01.12.26	Under Construc-tion	Not applicable	Not applicable	Issued 01.14.26	$12,000	40%	E = Newkirk Engineering, Inc. O = Vic Abuzov
14	**MURPHY USA** 1510 North US Highway 1 SPRC-2026-000095	Proposed Murphy USA gas station and convenience store - 2,824 square feet on 2.65 acres.	06.25.26	07.17.26				NA	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Greenberg Farrow O - 1510 N US HWY 1 O = Monica Investment Group Inc
15	**MURPHY USA ANNEXATION** 1510 North US Highway 1 PZ-2026-000270	Annexation of 1510 North US Highway 1 from Volusia County to Ormond Beach.	06.25.26	07.14.26				NA	Not applicable	Required			Not Applicable	Not Applicable	Not Applicable	Not Applicable		E = Greenberg Farrow O - 1510 N US HWY 1 O = Monica Investment Group Inc
16	**MURPY USA, SE** 1510 North US Highway 1 PZ-2026-000271	Special Exception for outdoor product display, including propane gas cage and ice machine.	06.25.26	07.17.26				NA	Required	Required			Not Applicable	Not Applicable	Not Applicable	Not Applicable		E = Greenberg Farrow O - 1510 N US HWY 1 O = Monica Investment Group Inc
17	**ORMOND BEACH HOLDINGS LLC** 251 South Atlantic Avenue PZ #22-018(b)	Proposed five story, 95,700 square foot hotel with 137 rooms.	03.09.22	04.04.22	06.13.22	08.24.22	09.07.22 01.31.23	09.14.22	12.05.22 Approved 5-0	01.10.23 & 01.24.23 (Approved)	05.24.24	Under Construc-tion	Issued 02.29.24	$34,000,000	Issued 04.12.24	$1,400,000	99%	E = Parker Mynchenberg & Associates, Inc. APP/O = Ormond Beach Holdings, LLC
18	**ORMOND BEACH SELF STORAGE** 490 N. U.S. Highway 1 PZ #2023-021	Proposed 166,423 of storage square footage on 24.28 acres.	01.27.23	02.20.23	06.07.23			Not applicable	Not applicable	Not applicable	10.28.23	Under Construc-tion	Issued 04.04.25	All buildings $21,365,794	Issued 12.10.25	$1,390,816	25%	E = Mark Dowst & Associates, Inc. O = TSO Ormond Beach, LP ARC = Smith Boland Architects, LLC
19	**OC EAST INDUSTRIAL, PHASE 1** Broadway Ave & Commerce Crossing SPRC-2026-000102	Preliminary plat, including Commerce Crossings Boulevard, master stormwater ponds,	07.14.26	In Review				Not applicable	Not applicable	Not applicable			Not Applicable	Not Applicable	Not Applicable	Not Applicable		E = Pape Dawson Consulting Engineers, LLC O = Ormond Crossings West, LLC
20	**OC PINE TREE FLYOVER** 100 Ormond Crossings Boulevard SPRC-2024-000047	Railroad flyover (at Pine Tree Dr Intersection) to the Ormond Crossings development.	11.20.24	12.22.24	09.03.25	05.18.26	In Review	Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Pape Dawson Consulting Engineers, LLC O = Ormond Crossings West, LLC

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21	**PATHWAYS ELEMENTARY** 2100 Airport Road SPRC-2025-000085	Courtesy review of Pathways Elementary classroom additions and pickup/drop-off modifications.	12.08.25	12.24.25				Not applicable	Not applicable	Not applicable	05.15.26	Under Construc-tion	Courtesy Review	Courtesy Review	Issued 06.22.26 Turn lane only	$65,000	10%	E = Parker Mynchenberg & Associates, Inc. O = Volusia County Schools
22	**PLANTATION OAKS NEIGHBORHOOD COMMERCIAL** 1730 Plantation Oaks Boulevard SPRC-2024-000023	Construction of a two-story, 25,520 square foot building.	03.13.24	04.12.24	06.19.24			06.10.24	07.11.24 Approved	09.04.24 Approved	11.05.24	Under Construc-tion	Not applied	Not applied	Issued 02.27.25	$478,584	50%	E = Parker Mynchenberg & Associates, Inc. O = PLANTATION OAKS OF ORMOND BEACH LLC
23	**PRINCE OF PEACE** 1225 Hand Avenue SPRC-2026-000103	Concrete access drive as an alternative access to the site due to the Hand Ave. median.	07.20.26	In Review				Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Alann Engineering Group O = Diocese of Orlando
24	**TERRA MARINE PARK** 6 Tower Circle Unit A SPRC-2025-000077	Construction of a 1-story 12,300 SF warehouse building, which includes 1,200 SF office on a 2.17-acre parcel.	09.17.25	10.16.25	12.24.25	02.27.26		Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Parker Mynchenberg & Associates, Inc. A= Safstor Real Estate Co LLC
25	**THE SARAH HOUSE** 1001 Old Tomoka Road SPRC-2026-000088	Building expansion of approximately 424 square feet.	02.02.26	02.17.26				05.11.26	BOAA 05.06.26 (Approved)	Not applicable	06.18.26	06.18.28	Not applied	Not applied	Not applied	Not applied		E = Newkirk Engineering, Inc. O = 1001 Old Tomoka LLC
26	**SUPERIOR HANDLING** 1010 Broadway Avenue SPRC-2026-000104	Construction of a 34.000 square foot manufacturing facility with associated site improvements.	07.21.26	In Review				Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Pape Dawson Consulting Engineers, LLC Bonzai FL LLC O = Ormond Crossings West, LLC
27	**TOMLINSON AVIATION** 92 & 96 Hanger Way SPRC-2024-000041	Construct two (2) building additions (13,200 SF) to existing buildings.	09.18.24					Not applicable	Not applicable	Not applicable	10.16.24 Revision 05.18.26	Under Construc-tion	92 Hangar - Issued 07.16.25, 96 Hangar - Issued 08.01.25	92 Hangar - $308,634, 96 Hangar - $608,240	Issued 07.21.25	$308,633	90%	E = Parker Mynchenberg & Associates, Inc. O = Tomlinson Aviation
28	**TOMOKA CHRISTIAN CHURCH** 1450 Hand Avenue SPRC-2024-000005	Proposed construction of a new ±20,000 square feet building.	12.07.23	12.21.23	02.29.24	04.08.24	05.22.24	02.22.24	03.14.24 (Approved)	04.16.24 (Approved)	08.18.24	Under Construc-tion	Issued 08.19.25	$5,000,000	Issued 10.15.24	$400,926	85%	E = Zev Cohen & Associates O = Tomoka Christian Church
29	**TOMOKA COMMERCE PARK ZONING AMENDMENT** 890 North US Highway 1 PZ-2026-000259	Zoning amendment for a 12.58 to allow a Tractor Supply store and business warehouse & industrial uses.	05.13.26	06.04.26				07.22.26	08.13.26	09.23.26 & 10.07.26			Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC App = HSC Ormond Beach, LLC

City of Ormond Beach Commercial Development Report, as of August 1, 2026

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Change in project status | **Projects reviewed last month**

30	**TOMOKA COMMERCE PARK LOT 1 AMENDMENT** 890 North US Highway 1 SPRC-2026-000091	Construction of a 21,901 square foot Tractor Supply Company with associated site improvements.	05.13.26	06.04.26				Part of PBD Amendment	Part of PBD Amendment	Part of PBD Amendment			Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC App = HSC Ormond Beach, LLC
31	**TOMOKA COMMERCE PARK PRELIMINARY PLAT AMENDMENT** 890 North US Highway 1 SPRC-2026-000092	Subdivision of 12.48 acres into 2 lots with associated site improvements.	05.13.26	06.04.26				Not applicable	Not applicable	Not applicable			Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC App = HSC Ormond Beach, LLC
32	**TOMOKA COMMERCE PARK** 890 North US Highway 1 PZ-2025-000165	Zoning Amendment to PBD - 12.48 acre to allow commercial & industrial uses.	05.09.25	06.01.25	09.16.25	02.06.26		11.12.25	12.11.25 (Approved)	01.20.26 02.03.26 (Approved)	Ordinance 26-01	02.03.29	Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC
33	**TOMOKA COMMERCE PARK** 890 North US Highway 1 SPRC-2025-000063	Preliminary Plat - One lot into four commercial lots.	05.09.25	06.01.25	09.23.25	02.06.26	06.03.26	11.12.25	Not applicable	Not applicable	07.20.26	07.20.28	Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC
34	**TOMOKA COMMERCE PARK, LOT 1** 890 North US Highway 1 SPRC-2025-000064	Commercial use in a 9,990 square foot building on 1.52 acres.	05.09.25	06.01.25	09.17.25	02.06.26	05.31.26	11.12.25	Part of PBD	Part of PBD	07.20.26	07.20.28	Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC
35	**TOMOKA COMMERCE PARK, LOT 2** 890 North US Highway 1 SPRC-2025-000065	Commercial use in a 9,990 square foot building on 1.52 acres.	05.09.25	06.01.25	09.17.25	02.06.26	06.03.26	11.12.25	Part of PBD	Part of PBD	07.20.26	07.20.28	Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC
36	**TOMOKA COMMERCE PARK, LOT 3** 890 North US Highway 1 SPRC-2025-000066	Commercial/Industrial uses within 36,630 square foot building on 2.46 acres.	05.09.25	06.01.25	09.19.25	02.06.26	05.31.26	11.12.25	Part of PBD	Part of PBD	07.20.26	07.20.28	Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC
37	**TOMOKA COMMERCE PARK, LOT 4** 890 North US Highway 1 SPRC-2025-000067	Commercial/Industrial uses within 27,200 square foot building on 2.47 acres.	05.09.25	06.01.25	09.19.25	02.06.26	05.31.26	11.12.25	Part of PBD	Part of PBD	07.20.26	07.20.28	Not applied	Not applied	Not applied	Not applied		E = Park Mynchenberg & Associates O = 890 N US HWY 1, LLC
38	**WAL-MART EXPANSION** 1521 West Granada Boulevard SPRC-2024-000053	Expansion of 4,752 square feet to support online pickup area.	12.10.24	01.08.25	06.25.25	08.27.25		02.20.25	07.10.25	08.19.25 09.03.25	10.02.25	Under Construc-tion	Issued 03.25.26	$3,000,000	Issued 03.18.26	237,510	35%	E = CPH O = Wal-Mart Stores, Inc.
39	**WRF B DISINFECTION CONVERSION** 550 N. Orchard Street SPRC-2025-000079	UV Disinfection Conversion for City's Water Reclamation Facility.	10.02.25					Not applicable	Not applicable	Not applicable	10.20.25	10.20.27	Resubmit Required	$2,455,000	Part of building permit	Part of building permit	70%	O = City of Ormond Beach E = Mead & Hunt

City of Ormond Beach As Utility Provider Only Development Report, as of August 1, 2026

Change in project status — Projects reviewed last month

#	Project	Description	Application Date	1st Review	2nd Review	3rd Review	4th Review	Final Approval	DO Expiration	LDC Extension	Eng. Permit	Eng. Permit Constr. Value	Under Construction	E or Arc = Project Engineer or Architect O = Owner A = Applicant
40	**AQUARIUS OCEANFRONT** 1575 Ocean Shore Boulevard SPRC-2026-000099	Phased force main connection for Aquarius Oceanfront.	07.07.26	07.27.26						None	Not applied	Not applied		E = Spruce Creek Civil Engineering, Inc. O = Aquarius Oceanfront
41	**BAILEYS BY THE SEA** 2360 Ocean Shore Boulevard SPRC-2024-000003	Utility connection, Ormond By the Sea, 5 multi-family buildings units with 32 total units.	11.02.23					11.26.23	Under Construction	None	Issued 07.19.24	$536,995 (Utilities only)	90%	O = Trisha Bailey E = Kimley-Horn & Associates APP = Jeannimarie, LLC
42	**BAILEYS BY THE SEA 2** 2020 Ocean Shore Boulevard SPRC-2024-000026	Utility connection, Ormond By the Sea, 2 multi-family buildings units with 8 total units.	03.27.24	04.19.24				07.26.24	Under Construction	None	Issued 12.16.24	$207,442 (Utilities Only)	90%	O = Trisha Bailey E = Kimley-Horn & Associates APP = Jeannimarie, LLC
43	**BROOKSIDE AT ORMOND STATION** Flagler County SPRC-2024-000004	Flagler County utility connection, 162 lots on 53.16 acres.	11.21.23	12.11.23				05.17.24	05.17.26	05.17.27	Not applied	Not applied		E = Alann Engineering Group O = U.S. Capital Alliance, LLC
44	**GARDEN SIDE, PHASE II** Flagler County SPRC-2024-000021	Flagler County utility connection,89 lots on 40.15 acres.	03.05.24	04.04.24	08.23.24			11.15.24	11.15.26	None	Not applied	Not applied		E = Alann Engineering Group O = U.S. Capital Alliance, LLC
45	**KINGSTON SHORES WATER** 5500 OCEAN SHORE BLVD SPRC-2026-000087	Replace existing water mains and fire hydrant	01.23.26	02.09.26						None	Not applied	Not applied		E = Parker Mynchenberg & Associates, Inc. O = Kingstone Shores
46	**NORTH PENINSULA WWTP** 16 Seabridge Drive SPRC-2024-000027	Converting the existing WWTP to City owned and maintained master lift station and associated 6-in FM from Seabridge development to connection on A1A.	04.02.24	04.24.24	07.15.24			09.10.24	09.10.26	None	Not applied	Not applied		E = Kimley-Horn and Associates APP = Central States Water Resources, Inc.
47	**SEASCAPE** SPRC-2025-000062 2290 Ocean Shore Boulevard	Proposed private lift station and approximately 500 LF of 2" force main to connect to public force main.	03.17.25	04.03.25				10.03.25	Under Construction	None	Issued 10.20.25	$260,000	90%	E = Kimley-Horn and Associates, Inc. O = Seascape Condo
48	**SUNRISE CONDOMINIUM** SPRC-2025-000081 2294 Ocean Shore Boulevard	Remove existing wastewater treatment plant and install new private lift station and forcemain connection to the City system	10.06.25	10.28.25	11.12.25	12.23.25		01.23.26	01.23.28	None	Issued 03.10.26	$276,000	20%	E = Saltus Engineering, Inc. O = Sunrise Condominium
49	**VERONA OCEANSIDE - BUILDING #1** 25 Marden Drive SPRC-2026-000100	Connecting existing fire line to the potable water main.	07.09.26	07.24.26						None	Not applied	Not applied		E = Parker Mynchenberg & Associates, Inc. O = MHK of Volusia County, Inc

City of Ormond Beach Residential Development Report, as of August 1, 2026

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Change in project status | **Projects reviewed last month**

#	Project	Description	Application Date	1st Review	2nd Review	3rd Review	4th Review	Neigh-borhood meeting	Advisory Board	City Commis-sion	Final Approval	DO Expiration	Eng. Permit	Eng. Permit Constr. Value	Under Construc tion	E or Arc = Project Engineer or Architect O = Owner A = Applicant
50	**121 EAST** 121 East Granada Boulevard PZ-22-00000098	Development of 24 multi-family units.	08.12.22	09.01.22	05.17.23	08.23.23		03.14.23	06.08.23 (Approved)	07.18.23 & 08.01.23 (Approved)	Ordinance 2023-39	08.01.27	Early Review	$15,000,000		E = Zev Cohen & Associates O = Dime Rock Properties, LLC ARC = William Chapin
51	**ARCHER'S MILL, PHASE 3** 3016 Bonspiel Drive PZ-23-00000052	Preliminary Plat. 59 lots on 22.42 acres, Plantation Oaks PRD (Phase 3).	05.01.23	05.24.23	08.08.23	09.15.23		Not Required	06.08.23 (Approved)	07.18.23 (Approved)	10.17.23	10.17.26 (Extension)	Not applied	Not applied		E = Parker Mynchenberg & Associates, Inc. O = Forestar USA Real Estate Group Inc.
52	**ARCHER'S MILL, PHASE 4** 3015 Arch Avenue PZ-23-00000059	Preliminary Plat. 111 lots on 51.56 acres, Plantation Oaks PRD (Phase 3)	05.19.23	06.29.23	09.19.23			Not Required	08.10.23 (Approved)	09.20.23 (Approved)	10.30.23	10.30.26 (Extension)	Not applied	Not applied		E = Parker Mynchenberg & Associates, Inc. O = Forestar USA Real Estate Group Inc.
53	**ARCHER'S MILL PHASE 5** 3343 Bonspiel Drive PZ# 2023-060	Preliminary Plat. 114 lots on 92.71 acres, Plantation Oaks PRD (Phase 3)	05.19.23	06.29.23	09.18.23			Not Required	08.10.23 (Approved)	09.20.23 (Approved)	10.17.23	10.17.25	Issued 11.27.23	$1,225,490.57	99%	E = Parker Mynchenberg & Associates, Inc. O = Forestar USA Real Estate Group Inc.
54	**BRADFORD LAKES AMENITIES** 140 Bradford Lakes Way SPRC-2025-000072	Revision of the Amenities Building of 1,653 square feet with pool	7.11.25	07.29.25	08.31.25			Not Required	Not Required	Not Required	09.15.24	See Above	See Above	See Above	90%	E = Parker Mynchenberg & Associates, Inc. O =Meritage Homes of Florida, Inc.
55	**CLIFFHAVEN COURT ANNEXATION** Cliffhaven Court PZ-2026-000278	Annexation of three parcels totaling 1.43 acres	07.02.26	07.16.26				Not Required	Not Required	09.09.26 & 09.23.26		Not Applicable	Not Applicable	Not Applicable		APP = Sham Mahabir E = Zahn Engineering, Inc.
56	**CLIFFHAVEN COURT LOT SPLIT** Cliffhaven Court SPRC-2026-000096	Subdivision of three lots into four lot.	07.02.26	07.17.26				Not Required	Not Required	Not Required		Not Applicable	Not Applicable	Not Applicable		APP = Sham Mahabir E = Zahn Engineering, Inc.
57	**CLIFFHAVEN COURT SITE PLAN** Cliffhaven Court SPRC-2026-000097	Site plan improvements for four lots.	07.02.26	07.17.26				Not Required	Not Required	Not Required						APP = Sham Mahabir E = Zahn Engineering, Inc.
58	**FOUNTAIN VIEW PHASE 1D** 1789 Houmas Street SPRC-2024-000016	Preliminary Plat. 103 lots on 62.14 acres, Plantation Oaks PRD (Phase 1).	02.08.23	06.19.25	06.19.25	08.01.25		Not Required	04.11.24 (Approved)	05.21.24 (Approved)	08.01.25	Under Construc-tion	Issued 12.17.25	$3,526,515	65%	E = Parker Mynchenberg & Associates, Inc. O = Plantation Oaks of Ormond Beach, LLC
59	**FOUNTAIN VIEW PHASE 1E** 1587 Nottoway Circle SPRC-2024-000017	Preliminary Plat. 110 lots on 36.20 acres, Plantation Oaks PRD (Phase 1).	02.08.23	03.18.24	06.19.25	08.01.25		Not Required	04.11.24 (Approved)	05.21.24 (Approved)	08.05.25	08.05.27	Issued 07.30.26	$2,582,058.00	0%	E = Parker Mynchenberg & Associates, Inc. O = Plantation Oaks of Ormond Beach, LLC

City of Ormond Beach Residential Development Report, as of August 1, 2026

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Change in project status **Projects reviewed last month**

#	Project	Description	Application Date	1st Review	2nd Review	3rd Review	4th Review	Neigh-borhood meeting	Advisory Board	City Commis-sion	Final Approval	DO Expiration	Eng. Permit	Eng. Permit Constr. Value	Under Construc tion	E or Arc = Project Engineer or Architect O = Owner A = Applicant
60	**FOUNTAIN VIEW PHASE 1F** 1130 Evelyton Lane SPRC-2024-000018	Preliminary Plat. 97 lots on 32.13 acres, Plantation Oaks PRD (Phase 1).	02.08.23	03.21.24	06.19.25	08.01.25		Not Required	04.11.24 (Approved)	06.04.24 (Approved)	08.01.25	08.01.27	Issued 07.30.26	$2,245,862.00	0%	E = Parker Mynchenberg & Associates, Inc. O = Plantation Oaks of Ormond Beach, LLC
61	**ORMOND CROSSINGS, FORCEMAIN EXT** 1030 North Tymber Creek Road SPRC-2025-000068	Construction of 16" proposed reclaim water main.	5.13.25	06.20.25	10.20.25	01.13.26	03.26.26	Not Required	Not Required	Not Required	04.08.26	04.08.28	Issued 06.06.26	$4,064,186.00	20%	E = Pape-Dawson O = Ormond Crossings West, LLC
62	**ORMOND CROSSINGS, PHASE 1** 1030 North Tymber Creek Road SPRC-2024-000050	Preliminary Plat. 444 lots on 252.16 acres.	12.03.24	01.02.25	03.27.25	07.17.25 10.16.25	Revision	Not Required	Not Required	Not Required	12.24.25	Under Construc-tion	Issued 03.24.26	$18,690,768	50%	E = Pape-Dawson O = Ormond Crossings West, LLC
63	**ORMOND CROSSINGS, PHASE 1A** Parcels 312600000101, 313500000011, and 313601780011 PZ-2026-000261	Final Plat for Ormond Crossings, Phase 1A, consisting of 155 lots.	05.18.26	06.10.26	In Review			Not Required	Not Required	Not Required			Not Applied	Not Applied		APP = Allen & Company, LLC O = Ormond Crossings West, LLC
64	**ORMOND CROSSINGS, PHASE 1B** Parcel 313601780010 PZ-2026-000288	Final Plat for Ormond Crossings, Phase 1B, consisting of 283 lots.	07.28.26	In Review				Not Required	Not Required	Not Required			Not Applied	Not Applied		APP = Allen & Company, LLC O = Ormond Crossings West, LLC
65	**ORMOND CROSSINGS, RECLAIM WATER** 1030 North Tymber Creek Road SPRC-2025-000071	Construction of 12" proposed forcemain.	05.13.25	06.22.25	11.13.25	1.07.26	03.26.26	Not Required	Not Required	Not Required	04.08.26	04.08.28	Issued 06.08.26	$4,275,642.00	20%	E = Pape-Dawson O = Ormond Crossings West, LLC
66	**OC TYMBER CREEK FLYOVER** 1700 N US 1 Highway SPRC-2024-000044	Railroad flyover (at new Tymber Creek Road) to the Ormond Crossings development. **Utilities only**.	11.21.24	12.22.24	04.07.25			Not applicable	Not applicable	Not applicable	09.23.25 & 11.25.25	Under Construc-tion	Issued 10.06.25	Utilities, Phase 1 $1,190,862	20%	E = Pape-Dawson O = Ormond Crossings West, LLC
67	**OC WATERMAIN EXTENSION** 1030 North Tymber Creek Road SPRC-2024-000049	Ormond Crossings. Construction of approximately 18,000 LF of 16" PVC water main along North Tymber Creek Road.	12.03.24	12.30.24	03.21.25			Not Required	Not Required	Not Required	Revision 01.07.26	06.01.27	Issued 03.19.26	$2,614,727.00	75%	E = Pape-Dawson O = Ormond Crossings West, LLC
68	**ORMOND ENCLAVE (FKA COURTYARDS)** 135 North Yonge Street PZ# 2021-079	Construct 64 unit multi family apartment complex.	06.17.21	07.09.21	10.19.22	05.08.23	06.17.23	08.15.21; 01.17.23	06.08.23 (Approved)	07.18.23 (Approved) & 08.01.23 (Approved)	Ordinance 2023-37		Not applied	Not applied		E = Parker Mynchenberg & Associates, Inc. O = CST Holdings, LLC ARC = BPF Design

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Change in project status | **Projects reviewed last month**

#	Project	Description	Application Date	1st Review	2nd Review	3rd Review	4th Review	Neigh-borhood meeting	Advisory Board	City Commis-sion	Final Approval	DO Expiration	Eng. Permit	Eng. Permit Constr. Value	Under Construc tion	E or Arc = Project Engineer or Architect O = Owner A = Applicant
69	**PLANTATION OAKS, 2C** 2124 Esplanada Drive PZ# 2020-025	Development of 121 lots on 63.12 acres. Manufactured home phase. Plantation Oaks PRD (Phase 2).	12.14.17	2.07.18	07.17.18			Volusia County approval	Volusia County approval	Volusia County approval	09.20.18	Under Construc-tion	Issued 09.17.21	$3,044,572	95%	E = Parker Mynchenberg & Associates, Inc. O = Plantation Oaks of Ormond Beach, LLC
70	**PLANTATION OAKS, 2D** 2258 Chretien Drive PZ# 2020-026	Development of 84 units on 27.32 acres. Manufactured home phase. Plantation Oaks PRD (Phase 2).	12.14.17	02.12.18	08.24.18			Volusia County approval	Volusia County approval	Volusia County approval	09.20.18	Under Construc-tion	Issued 09.17.21	$1,784,746	95%	E = Parker Mynchenberg & Associates, Inc. O = Plantation Oaks of Ormond Beach, LLC
71	**REFLECTIONS VILLAGE** PZ-2026-000257 50 South Old Kings Road	Special Exception to allow the HOA to determine decorative wall replacement from a masonry wall to column and tubular metal fencing.	04.23.26	To Planning Board				Not Required	08.13.26	To be determined			Not applied	Not applied		APP = Reflections Village HOA
72	**RIVELL SUBDIVISION** 100 Rivell Trail SPRC-2024-000014	Preliminary Plat - subdivision converting one 5.16-acre lot into 4 lots of record.	02.05.24	03.07.24	11.27.24	08.04.25	09.23.25	Not Required	Not Required	Not Required	10.26.25	10.26.27	Not applied	Not applied		E = Newkirk Engineering, Inc O = Marie Lilienstern
73	**TATTERSALL AT TYMBER CREEK** Tymber Creek Road and Airport Road PZ# 2023-041	Preliminary Plat 75 lots of a 129 lot subdivision and associated site improvements.	03.14.23	05.01.23	11.14.23	1.29.24 03.06.24	05.22.24	01.18.24	02.08.24 (Approved)	05.07.24 (Approved)	06.12.24	06.12.26	Issued 04.14.25	$6,237,383.00	98%	E = Zev Cohen & Associates, Inc. APP = Paylin Tymber 1 and 2, LLC
74	**TIDES EDGE** 300 South Atlantic Avenue PZ# 2022-018	Preliminary Plat, 15 single-family lots.	05.31.22	06.13.22	09.07.22	11.20.22		09.14.22	12,05.22	01.10.23 & 01.24.23	03.27.23	Under Construc-tion	Approved	$718,460	98%	E = Parker Mynchenberg & Associates, Inc. O = Ormond Beach Holdings, LLC
75	**TOMOKA RESERVE** 20 Tomoka Oaks Boulevard SPRC-2026-000093	Phase 1 of Tomoka Reserve to include 24 lots. The subdivision was approved by Ordinance 2023-44.	06.05.26	07.01.26				Not Required	Not Required	Not Required			Not applied	Not applied		E = Zev Cohen & Associates, Inc O = Triumph Oaks of Ormond Beach I, LLC
76	**YOON WAY TOWNHOMES** 1190 West Granada Boulevard PZ-2025-000207	Comprehensive Plan amendment from "Open Space/Conservation" to "Medium Density Residential" for 2.81 acres	09.22.25	10.16.25				Not Required	Required	Required			Not applied	Not applied		A = Cobb Cole O = Engineer Realty, LLC
77	**YOON WAY TOWNHOMES** 1190 West Granada Boulevard PZ-2025-000206	Zoning Map amendment to Planned Residential Development for 12 townhome units	09.22.25	10.16.25				04.15.26	Required	Required			Not applied	Not applied		A = Cobb Cole O = Engineer Realty, LLC

City Commission items, City Commission Chambers of City Hall					
File Number	**Item**	**Description**	**Planning Board**	**City Commission, 1st or only**	**City Commission, 2nd reading**
PZ-26-243	Zoning Map Amendment, 651 South Ridgewood Avenue	This is an administrative request to amend the City's Official Zoning Map for a ±0.39-acre parcel of land from the existing zoning classification of Volusia County R-5, Urban Single-Family Residential to the City's R-3, Single-Family Medium Density zoning district at 651 South Ridgewood Avenue as a result of an annexation that was approved through Ordinance 2024-14.	04.09.26	**08.04.26**	**08.25.26**
PZ-26-255	Comprehensive Plan Amendments, Capital Improvement Element Schedules	This is an administrative request to update the Capital Improvements Schedule of the Capital Improvements Element of the City of Ormond Beach Comprehensive Plan to be consistent with the adopted Capital Improvement Plan in accordance with state law.	05.14.26	**08.04.26**	**08.25.26**
NA	Street Renaming, Yoon Way	This request seeks to change the street name from Yoon Way to Corner Square Way, located approximately 1,450 linear feet from the intersection of West Granada Boulevard and Clyde Morris Boulevard. Street name changes are governed by Section 17-8 of the Code of Ordinances and require notice to affected property owners.	NA	**08.04.26**	**08.25.26**
NA	Data Center Timeline	Discussion item. At the first reading of the data center moratorium on July 28, 2026, there was a desire to establish a timeframe for the Comprehensive Plan and Land Development Code amendments regarding data centers. A draft data center regulation timeline has been prepared for discussion.	NA	**08.04.26**	NA
Note: City Commission items are based upon the best information available as of the publishing of this report and are subject to change. City Commission agendas are available at: https://ormondbeach.iqm2.com/citizens/default.aspx?. For additional information, please contact the Planning Department via e-mail at comdev@ormondbeach.org or by telephone at (386) 610-0520.					

Board of Adjustment and Appeals - August 5, 2026, City Commission Chambers of City Hall at 6:00 P.M.		
PZ-2026-282	716 South Beach Street	This is a request submitted by Adelson Ramos and Melba Ramirez, property owners of 716 S. Beach Street. The property is located in the R-2 (Single-Family Low Density) zoning district. The applicant is proposing to construct a second-story addition to the existing non-conforming single-family residence. As part of the improvements, the applicant is requesting four variances as follows: Variance A: North Side Yard. Section 2-13.B.9.c. of the Land Development Code (LDC) requires a minimum 8'-side yard setback. The applicant is requesting a side yard setback on the north side of the property of 4.8', requiring a variance of 3.2', to construct a second-story addition and expand the single-car garage. Variance B: South Side Yard. Section 2-13.B.9.c. of the Land Development Code (LDC) requires a minimum 12'-side yard setback. The applicant is requesting a side yard setback on the south side of 6.8', requiring a variance of 5.2', to construct a second-story addition. Variance C: Combined Side Yards. Section 2-13.B.9.c. of the Land Development Code (LDC) requires a combined side yard setback of 20'. Based on the existing non-conforming side yard setbacks, the applicant is requesting a combined side yard setback total of 11.6', requiring a variance of 8.4' to the required 20'-combined yard setback to construct a second-story addition. Variance D: Front Yard Second-Story-Covered Balcony. The Rio Vista Section A subdivision plat calls out a 75'-building setback line abutting South Beach Street (formerly Dixie Highway). The single-family residence has an existing non-conforming front yard setback on the south side of the property of 73.2'. The applicant is requesting a front yard setback on the south side of the structure of 70.2', requiring a variance of 4.8' to the required 75'-front yard setback, for a second-story hard-roof-covered balcony on the front of the home.
Note: Board and Adjustment and Appeals information is based upon the best information available as of the publishing of this report and are subject to change. Board and Adjustment and Appeals agendas are available at: https://www.ormondbeach.org/218/Board-of-Adjustments-Appeals. For additional information, please contact the Planning Department via e-mail at comdev@ormondbeach.org or by telephone at (386) (386) 610-0520.		

Planning Board - August 13, 2026, City Commission Chambers of City Hall at 6:00 P.M.		
PZ-206-257	Reflections Village, Special Exception Wall Waiver	This is an application submitted by Joseph Jaynes, Reflections Village Homeowners' Association (HOA) President/Agent, for a Special Exception to amend Ormond Beach Resolution 95-43 that approved the Reflections Village subdivision under certain conditions. The application seeks to allow the HOA the ability to determine decorative wall replacement from a masonry wall to a column and tubular metal fencing within the Reflections Village subdivision. The subject property is located at the intersection of Old Kings Road and West Granada Boulevard. This item was continued at the June 11, 2026 Planning Board meeting.
PZ-206-259	Tomoka Commerce Park, Planned Business Development Amendment, 890 North U.S. Highway 1	This is an application submitted by 890 North U.S. Highway 1, LLC, property owner, for an amendment to the Tomoka Commerce Park development order to authorize development of 12.48 acres for a two (2) lot commercial subdivision with a mixture of commercial, outdoor activity, warehouse, and light industrial uses within the Tomoka Commerce Park. The amended master development plan proposes 56,108 square feet of office, warehouse, and industrial space. The commercial use includes a 21,901 square-foot Tractor Supply Company building, with a fenced product area of approximately 19,898 square feet, outdoor display areas of approximately 5,356 square feet, and associated site improvements. The property is located at 890 North U.S. Highway 1 and is zoned as Planned Business Development.
PZ-2026-283	Florida Urology Special Exception, Outdoor Activity for an Imaging Trailer, 300 Clyde Morris Boulevard, Unit C	This is an application submitted by Cobb Cole, on behalf of the property owner, Florida Urology Founders Real Estate LLC, for a Special Exception for Outdoor Activity to allow for the use of a mobile imaging trailer in the rear of the property. The property is located at 300 Clyde Morris Boulevard, Unit C, and has a zoning designation of B-10, Suburban Boulevard. The outdoor activity use is allowed as a Special Exception within the B-10, Suburban Boulevard zoning district.
PZ-2026-285	Land Development Code Amendments, Establishment of Land Development Code Permits	This is an application for an administrative amendment to the Land Development Code as follows: (1) Chapter 1, General Administration, Article II, Administration and Enforcement, Section 1-14, Development orders, building permits, certificate of occupancy and certificate of use permits and (2) Chapter 2, District and General Regulations, Article III, General Regulations, Section 2-50, Accessory Uses to establish Land Development Code permits.
The Planning Board agenda is available at: https://www.ormondbeach.org/224/Planning-Board. For additional information, please contact the Planning Department via e-mail at comdev@ormondbeach.org or by telephone at (386) (386) 610-0520.		

PERMIT ISSUANCE SUMMARY (07/01/2026 TO 07/31/2026)
FOR CITY OF ORMOND BEACH

Permit Type	Permit Work Class*	Permits Issued	Square Feet	Valuation	Fees Paid
Building Non-Residential	Demolition, Partial or Interior	1	10,000	$100,000.00	$803.29
	Detached Accessory Structure	1	52	$52,230.00	$688.75
	Electrical	8	0	$165,200.00	$4,336.00
	Exterior	24	0	$1,620,676.52	$12,705.36
	Interior Build Out	3	15,071	$908,500.00	$7,148.76
	Low Voltage Alarm Labels	1	1,000	$1,500.00	$35.00
	Mechanical	17	2,300	$126,316.34	$1,805.25
	Reroof	5	25,984	$97,850.00	$984.40
	Signage	11	197	$30,400.00	$1,358.91
	Wall, Structural	1	0	$165,000.00	$1,123.71
	BUILDING NON-RESIDENTIAL TOTAL:	**72**	**54,604**	**$3,267,672.86**	**$30,989.43**
Building Residential	Demolition, Complete	1	0	$2,300.00	$301.09
	Detached Accessory Structure	5	1,916	$480,500.00	$3,596.24
	Dock/Seawall	1	0	$68,750.00	$587.70
	Electrical	14	2,400	$96,499.75	$1,746.72
	Exterior	78	4,747	$887,207.23	$12,958.21
	Gas	4	0	$6,880.00	$391.75
	Generator	2	0	$23,445.00	$477.20
	Interior Renovation	6	2,111	$249,852.14	$2,820.62
	Manufactured/Mobile Home	1	1,890	$16,000.00	$9,315.93
	Mechanical	112	8,236	$1,128,657.48	$8,611.60
	New Construction, Addition	17	7,672	$1,217,371.40	$9,493.49
	New, Single Family Residential	23	68,327	$10,888,699.04	$322,706.43
	Outside the City Utility Permit	7	10,794	$0.00	$44,940.00
	Plumbing	24	44,388	$177,673.89	$4,743.31
	Pool/Spa	5	735	$248,325.00	$2,563.73
	Reroof	50	65,858	$1,019,753.98	$8,320.48
	Screen Enclosure	3	646	$11,484.00	$322.25
	Solar	3	0	$74,974.00	$895.78
	Wall, Structural	1	0	$5,000.00	$60.00
	BUILDING RESIDENTIAL TOTAL:	**357**	**219,720**	**$16,603,372.91**	**$434,852.53**
Engineering Non-Residential	Seawall Revetment	1	0	$18,509.60	$221.21
	Tree Maintenance and/or Removal	1	0	$0.00	$80.00
	ENGINEERING NON-RESIDENTIAL TOTAL:	**2**	**0**	**$18,509.60**	**$301.21**
Engineering Residential	Grade & Fill	2	0	$50.00	$132.00
	Tree Maintenance and/or Removal	41	0	$7,000.00	$570.00
	Underbrushing	1	0	$0.00	$0.00
	ENGINEERING RESIDENTIAL TOTAL:	**44**	**0**	**$7,050.00**	**$702.00**
Fire Non-Residential	Fire Alarm (Simplified)	1	100	$387.00	$113.75
	Fire Sprinkler (Simplified)	1	3,500	$3,963.00	$192.50
	FIRE NON-RESIDENTIAL TOTAL:	**2**	**3,600**	**$4,350.00**	**$306.25**
LDC Non-Residential	LDC	3	1,945	$65,647.00	$225.00
	Paint Permit	2	6,700	$21,900.00	$40.00
	Special Event Permit	1	0	$1.00	$0.00
	SPRC Site Improvements	1	0	$888,670.89	$9,886.71
	LDC NON-RESIDENTIAL TOTAL:	**7**	**8,645**	**$976,218.89**	**$10,151.71**

** Double-click the Permit Work Class Name while in the browser to see Permit details for that Work Class.*

PERMIT ISSUANCE SUMMARY (07/01/2026 TO 07/31/2026)

Permit Type	Permit Work Class*	Permits Issued	Square Feet	Valuation	Fees Paid
LDC Residential	Garage Sale	20	0	$20.00	$90.00
	LDC	46	0	$241,901.15	$3,380.00
	Residential Subdivision SPRC Site Im	2	0	$4,827,919.56	$120,697.98
	Sheds less than 150 square feet in siz	1	0	$1,000.00	$45.00
	LDC RESIDENTIAL TOTAL:	**69**	**0**	**$5,070,840.71**	**$124,212.98**
	GRAND TOTAL:	**553**	**286,569**	**$25,948,014.97**	**$601,516.11**

** Double-click the Permit Work Class Name while in the browser to see Permit details for that Work Class.*

Ormond Beach Residential, as of August 1, 2026

Subdivision Name	Type	Status	Lots	CO Issued	Issued	Fees Due	In Review	Remaining Lots
121 East	MF	Site Plan Review	20					20
Archer's Mill Phase 1	SF	Infrastructure Complete	94	91	0	0	0	3
Archer's Mill Phase 2	SF	Infrastructure Complete	68	67	1	0	0	0
Archer's Mill Phase 3	SF	No Construction to Date	78	0	0	0	0	78
Archer's Mill Phase 4	SF	No Construction to Date	111	0	0	0	0	111
Archer's Mill Phase 5	SF	Infrastructure Construction	114	0	0	0	0	114
Archer's Mill Phase 6	SF	Infrastructure Complete	78	12	20	45	0	1
Bradford Lakes	SF	Infrastructure Construction	80	0	6	0	0	74
Bradford Park	TH	Infrastructure Complete	180	20	18	0	0	142
Enclave (Tymber Creek)	SF	Infrastructure Complete	12	0	1	0	0	11
Fountain View, Phase 1A	SF	Infrastructure Complete	119	100	6	0	0	13
Fountain View, Phase 1B	SF	Infrastructure Complete	137	99	5	33	0	0
Fountain View, Phase 1C	SF	Infrastructure Complete	141	0	0	1	35	105
Fountain View, Phase 1D	SF	Infrastructure Construction	103	0	0	0	0	103
Fountain View, Phase 1E	SF	No Construction to Date	110	0	0	0	0	110
Fountain View, Phase 1F	SF	No Construction to Date	97	0	0	0	0	97
Ormond Crossings, Phase 1	SF	Infrastructure Construction	444					444
Ormond Crossings, Approved	SF/MF	Development Order, Zoning	2506					2506
Plantation Oaks, Phase 2A	MH	Infrastructure Complete	94	84	2	0	0	8
Plantation Oaks, Phase 2B	MH	Infrastructure Complete	125	39	1	0	0	85
Plantation Oaks, Phase 2C	MH	Infrastructure Construction	121	0	0	0	0	121
Plantation Oaks, Phase 2D	MH	Infrastructure Construction	84	0	0	0	0	84
Ridgehaven	SF	Infrastructure Complete	286	65	51	0	4	166
Rivell Trail	SF	Site Plan Review	3					3
Tattersall at Tymber Creek	SF	Infrastructure Construction	75	0	2	0	3	70
Tides Edge	SF	Infrastructure Construction	15					15
Tomoka Reserve	SF	Development Order, Zoning	254					254
		TOTALS:	**5,549**	**577**	**113**	**79**	**42**	**4,738**
		PERCENTAGE:	**NA**	**10%**	**2%**	**1%**	**1%**	**85%**

Notes: MF - Multi-family, SF - Single-family, TH - Townhomes, MH - Manufactured Homes (55+), CO - Certificate of Occupancy

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	7.A.
Section	PUBLIC HEARINGS	**Category**	Public Hearing - Ordinances
Subject	Eighteen-Month Moratorium on Data Centers (SECOND READING)		
Recommended Action	It is recommended that the City Commission approve the attached ordinance imposing a moratorium on all data centers for an eighteen-month period during which city staff will study and prepare necessary and appropriate amendments to the city's Comprehensive Plan and Land Development Code to ban large-scale data centers or other types of large-load utility users, and to provide regulations for small facilities that may meet the definition of a data center for which regulations may be appropriate.		
Strategic Goal	Governance - Other		
Department Staff Contact	City Attorney Randy Hayes, City Attorney		

Summary

This is a request for approval of an ordinance that will impose an eighteen-month moratorium on all data center types, including large-scale data centers and other large load utility users, and smaller facilities that may meet the technical definition of a data center (i.e., including the receipt, processing, consideration, and approval of any application, order, permit, etc.)

Technology regarding data centers is rapidly changing. The operation of data centers creates increasing demands for the use of scarce resources including land, water, electricity, etc. These circumstances have made it difficult for local government jurisdictions throughout the state of Florida to address the impacts that are created by data centers.

Senate Bill 484 (SB 484) was enacted by the 2026 Florida legislature in Chapter 2026-65, Laws of Florida, which became effective as law on July 1, 2026. It expressly authorizes local governments to regulate data centers, including the impacts from data centers. The regulations may include a ban on all or various types of data centers. The regulations involve the use of land which must therefore be made by amending the city's Comprehensive Land Use Plan and Land Development Code through the public hearing process. Like other local government jurisdictions, neither the city's Comprehensive Plan nor the Land Development Code address data centers,

regardless of size. If an application for a data center (regardless of type or size) was submitted today, the application would require review and consideration as a special exception through the public hearing process. A moratorium is necessary to make appropriate changes to the city's Comprehensive Plan and Land Development Regulations through the public process.

A data center is defined as "a facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be: (a) A free-standing structure; or (b) A facility within a larger structure which uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment." Section 373.203(3), Fla. Stat. Data centers generally fall into categories based on power capacity and facility size.

For instance, a large-scale data center is defined as a single location with a data center on site that has an anticipated monthly peak load of 50 megawatts or more calculated as the highest average load over a 15-minute interval. It does not include a load aggregated across multiple locations owned by the same customer. However, it does include all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load provided by law.

And large-load utility users are defined as customers with an anticipated monthly peak load of 50 megawatts or more, calculated as the highest average load over a 15-minute interval at a single location. It does not include a load aggregated across multiple locations owned by the same customer; however, it does include all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load provided in this paragraph.

By comparison, micro and small-sized data centers typically store and process a single organization's data and are operated by that organization. Examples include banks that operate micro and small-sized data centers. These uses are typically ancillary to the primary commercial or office use on the site.

According to datacentermap.com, there are no existing data centers within the city of Ormond Beach. However, the surrounding coastal area contains one existing data center and one currently under construction. Lumen Daytona Beach 1 in Daytona Beach encompasses 10,000 square feet of total space, and the DC Blox project currently under construction in Palm Coast received a building permit for a 33,760 square foot building.

It should be noted that Senate Bill 180 imposed what is commonly referred to as a blanket freeze on a local government's authority to propose or adopt more restrictive or burdensome amendments to its land development code or comprehensive plan or generally related to procedures for review, approval, or issuance of development through October 1, 2027. This provision is in effect for the Florida counties listed in the Federal Disaster Declaration for Hurricanes Debby (DR-4806), Helene (DR-4828), or Milton (DR-4834). Volusia County is a listed county for Hurricanes Debby and Milton. However, SB 484 specifically allows local governments to regulate data centers through changes to comprehensive plans and land development regulations. Further evaluation will be conducted during the moratorium period to determine whether there are any properties in the affected storm areas that may require an exception under SB 180. The moratorium will extend to October 2027 to cover the date that SB 180 will expire.

Financial Impact

None

Citizen Impact

Data centers are an emerging technology that could affect key infrastructure such as water and electricity and have potential negative impacts on Ormond Beach residents. The 2026 Florida legislature recognized the emerging technology and authorized local governments to regulate data centers. A moratorium is designed to create regulations for the emerging technology through a public process. Citizens will have opportunities during the public hearing process to provide input on data center regulations.

Attachments

1. 2026-11 - Data Center 18 Mo. Moritorium
2. Data Center Moratorium Ordinance - Business Impact Estimate

ORDINANCE NO. 2026-11

AN ORDINANCE OF THE CITY OF ORMOND BEACH, FLORIDA, IMPOSING A TEMPORARY MORATORIUM FOR EIGHTEEN MONTHS ON THE RECEIPT, CONSIDERATION OF APPLICATIONS OR ISSUANCE OF ANY BUILDING PERMITS, SITE PLAN APPROVALS, DEVELOPMENT ORDERS, DEVELOPMENT AGREEMENTS, SPECIAL EXCEPTION USES, CONDITIONAL USES, REZONINGS, AND COMPREHENSIVE PLAN AMENDMENTS, AND ANY OTHER OFFICIAL ACTION THE CITY OF ORMOND BEACH ACTING BY AND THROUGH ITS ELECTED AND APPOINTED OFFICIALS AND THEIR DESIGNEES RELATED TO DATA CENTERS, LARGE SCALE DATA CENTERS AND OTHER LARGE LOAD UTILITY USERS; PROVIDING LEGISLATIVE FINDINGS; PROVIDING THE DURATION; PROVIDING SEVERABILITY; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City Commission has the authority pursuant to Chapter 166, Florida Statutes, and Article VIII of the Florida Constitution to protect the public health, safety and general welfare of its residents and to enact ordinances for valid governmental purposes consistent with general or special law; and

WHEREAS, Chapter Law 2026-65, creating Section 163.326, Florida Statutes, specifically provides for the authority of the City Commission to regulate facilities with substantial electrical, water, or other utility demands, such as data centers, large-scale data centers, as defined in Sections 373.203(3) and (4), Florida Statutes, and other large load customers, as defined in Section 366.043(2)(d), Florida Statutes, through comprehensive plans and land development regulations; and

WHEREAS, Section 373.262. Florida Statutes, provides it is the intent of the Florida Legislature that the development of large-scale data centers in this state be managed under a

permitting framework that ensures this state's water resources are used in the public interest, in a manner that is not harmful to the water resources of this state, and consistent with local government zoning regulations and comprehensive plans; and

WHEREAS, the City of Ormond Beach is a coastal community that is nestled adjacent to the Atlantic Ocean and relies upon groundwater resources from the Florida Aquifer system, which is historically been subject to significant conservation efforts due to risks of saltwater intrusion into local ground wells requiring effective resource management to protect the natural water resources and quality of life for residents and visitors; and

WHEREAS, the findings of the Florida Legislature provide large scale and hyperscale data centers can consume 20 to 100 MW of electricity, equivalent of 15,000 to 75,000 U.S. homes, with the water consumption equivalent to 2,600 homes, significantly impacting environmental resources; and

WHEREAS, such facilities potentially could have significant impacts on municipal water supplies, waste-water treatment facilities, and demand for local electric utilities; and

WHEREAS, local governments are authorized to enact moratoriums if the ordinance is intended to preserve the status quo and is rationally related to the government's attempt to enact changes to development regulations. (*WCI Communities Inc., v. City of Coral Springs*, 885 So. 2d 912 (Fla. 4th DCA 2004)); and

WHEREAS, Florida courts have held that a permissible basis for land use restrictions include concerns about the effects from the proposed development on traffic, congestion, surrounding property values, demand for public services, and on other aspects of the general

welfare (*WCI Communities Inc., v. City of Coral Springs*, 885 So. 2d 912 (Fla. 4th DCA 2004)); and

WHEREAS, local governments are entitled to enact moratoriums as land-use tools to promote effective planning and preserve the status quo while formulating a more permanent development strategy (*Tahoe-Sierra Pres. Council, Inc.,v. Tahoe Reg'l Planning Agency*, 535 U.S. 302,337;122 S. Ct. 1465, 1487 (2002)); and

WHEREAS, a temporary moratorium of eighteen (18) months on the submission and acceptance of applications for building permits, site plans, development orders, development agreements, special exception uses, conditional uses, rezonings, and comprehensive plan amendments related to data centers, large scale data centers, and large load utility users within the City of Ormond Beach is needed as the Office of Program Policy Analysis and Government Accountability (OPPAGA) has until July 1, 2027 to submit a study to the Governor, the President of the Senate, and the Speaker of House of Representatives, with included policy recommendations on facility siting and mitigation measures that should be considered to reduce any potential negative impacts. This report by OPPAGA will provide the City Commission the opportunity to determine the appropriateness of allowing such uses and the adoption of amendments to the City of Ormond Beach Comprehensive Plan*, Land Development Code*, and *Code of Ordinances*, as may be required, to regulate or prohibit such uses; and

WHEREAS, the Commission hereby desires to establish a temporary moratorium of eighteen (18) months on the submission and acceptance of applications for building permits, site plans, development orders, development agreements, special exception uses, conditional uses, rezonings, and comprehensive plan amendments related to data centers, large scale data centers,

and large load utility users within the City and such moratorium is reasonable and necessary to accomplish the goal of adopting reasonable regulations to ensure the protection of the community's natural resources and the public health, safety, and general welfare of residents.

BE IT ENACTED BY THE PEOPLE OF THE CITY OF ORMOND BEACH, FLORIDA, THAT:

SECTION ONE. PURPOSE AND LEGISLATIVE FINDINGS

The above recitals are hereby adopted as the legislative purpose of this Ordinance and as the City Commission's legislative findings.

SECTION TWO. TEMPORARY MORATORIUM IS HEREBY ORDERED AND IMPOSED ON THE SUBMISSION AND ACCEPTANCE OF APPLICATIONS FOR CONSIDERATION OR ISSUANCE OF ANY, BUILDING PERMITS, SITE PLAN APPROVALS, DEVELOPMENT ORDERS, DEVELOPMENT AGREEMENTS, SPECIAL EXCEPTION USES, CONDITIONAL USES, REZONINGS, AND COMPREHENSIVE PLAN AMENDMENTS RELATED TO DATA CENTERS, LARGE SCALE DATA CENTERS, AND LARGE LOAD UTILITY USERS WITHIN THE CITY OF ORMOND BEACH.

All activities relating to the acceptance, review and action upon applications of approvals for building permits, site plan approvals, development orders, development agreements, special exception uses, conditional uses, rezonings and comprehensive plan amendments related to data centers, large scale data centers, and large load utility users are temporarily suspended in order for the City of Ormond Beach, through its officials and staff, to have adequate time to research, study and determine the appropriate regulations for data centers,

large scale data centers and large load utility users. A moratorium is required to preserve the status quo in the community pending the consideration of remedial legislation.

During the time the temporary moratorium is in effect, the City will accept no applications or act on any pending applications for permits, approvals for such activities or facilities and no such new activities or facilities shall be permitted within the City. The City shall return any funds accepted for pending applications for approvals, permits, or business tax receipts.

SECTION THREE. GEOGRAPHIC AREA COVERED.

The temporary moratorium established in this Ordinance shall be effective in the corporate and municipal boundaries of the City of Ormond Beach as the same exists and as may be expanded by annexation.

SECTION FOUR. DURATION.

(a) The temporary moratorium set forth in this Ordinance shall take effect immediately upon the effective date of this Ordinance and shall terminate eighteen (18) months after said effective date. The City will accept no applications or act on pending applications which are subject to the moratorium until the moratorium has expired.

(b) The City Commission may extend the temporary moratorium established in this ordinance for additional periods not to exceed ninety (90) days per extension upon a finding by the City Commission set forth in the ordinance that the issues giving rise to the need for the temporary moratorium established herein continue to exist and that reasonable progress is being made in carrying out a specific and prompt plan of corrective legislative action, and that additional time is reasonably needed to adequately address the issues facing the City.

SECTION FIVE. SEVERABILITY.

If any Section or portion of a Section of this Ordinance is determined by a court having competent jurisdiction to be invalid, unlawful, or unconstitutional, such final judicial determination shall not invalidate or impair the validity, force, or effect of any other Section or part of this Ordinance**.**

SECTION SIX. REPEAL.

All Ordinances or parts of Ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION SEVEN. EFFECTIVE DATE.

This Ordinance shall take effect immediately upon its adoption.

PASSED UPON at the first reading of the City Commission, this 28th day of July 2026.

PASSED UPON at the second reading of the City Commission, this 25th day of August 2026.

_____
JASON LESLIE
Mayor

ATTEST:

_____
SUSAN DAUDERIS
City Clerk

Ordinance Adoption
Business Impact Estimate

Proposed ordinance's number and legal title: 2026-11

AN ORDINANCE OF THE CITY OF ORMOND BEACH, FLORIDA, IMPOSING A TEMPORARY MORATORIUM FOR EIGHTEEN MONTHS ON THE RECEIPT, CONSIDERATION OF APPLICATIONS OR ISSUANCE OF ANY BUILDING PERMITS, SITE PLAN APPROVALS, DEVELOPMENT ORDERS, DEVELOPMENT AGREEMENTS, SPECIAL EXCEPTION USES, CONDITIONAL USES, REZONINGS, AND COMPREHENSIVE PLAN AMENDMENTS, AND ANY OTHER OFFICIAL ACTION THE CITY OF ORMOND BEACH ACTING BY AND THROUGH ITS ELECTED AND APPOINTED OFFICIALS AND THEIR DESIGNEES RELATED TO DATA CENTERS, LARGE SCALE DATA CENTERS AND OTHER LARGE LOAD UTILITY USERS; PROVIDING LEGISLATIVE FINDINGS; PROVIDING THE DURATION; PROVIDING SEVERABILITY; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; AND PROVIDING FOR AN EFFECTIVE DATE.

This Business Impact Estimate is provided in accordance with section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is not required by state law for the proposed ordinance, but the City is, nevertheless, providing this Business Impact Estimate as a courtesy and to avoid any procedural issues that could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- ☐ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☐ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;
- ☐ The ordinance relates to procurement; or
- ☐ The proposed ordinance is enacted to implement the following:
  a. Part II of Chapter 163, Florida Statutes, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
  b. Sections 190.005 and 190.046, Florida Statutes, regarding community development districts;
  c. Section 553.73, Florida Statutes, relating to the Florida Building Code; or
  d. Section 633.202, Florida Statutes, relating to the Florida Fire Prevention Code.

In accordance with the provisions of controlling law, even notwithstanding the fact that an exemption noted above may apply, the City hereby publishes the following information:

1. A summary of the proposed ordinance, including a statement of the public purpose to be served by the proposed ordinance, such as serving the public health, safety, morals, and welfare of the City.

The purpose of this Ordinance is to impose an eighteen-month moratorium on all data center types, including large-scale data centers and other large load utility users, and smaller facilities that may meet the technical definition of a data center (i.e., including the receipt, processing, consideration, and approval of any application, order, permit, etc.). This Ordinance will permit staff to properly evaluate and address the impacts that are created by data centers.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, including the following, if any:

    a. An estimate of direct compliance costs that businesses may reasonably incur if the ordinance is enacted;

    N/A

    b. Identification of any new charge or fee on businesses subject to the proposed ordinance, or for which businesses will be financially responsible; and

    N/A

    c. An estimate of the City's regulatory costs, including an estimate of revenues from any new charges or fees that will be imposed on businesses to cover such costs.

    N/A

3. A good faith estimate of the number of businesses likely to be impacted by the ordinance.
   N/A

4. Any additional information the City determines may be useful.

   (This section may include: methodology or data used to prepare the Business Impact Estimate, e.g., City staff solicited comments from businesses as to the potential impact of the proposed ordinance by contacting the chamber of commerce, social media posting, direct mail/email, posting on the City's website, public workshop, etc.; efforts made to reduce the potential fiscal impact on businesses; and state the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals or businesses) and, therefore, the proposed ordinance does not affect only businesses.)

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	7.B.
Section	PUBLIC HEARINGS	**Category**	Public Hearing - Ordinances
Subject	Zoning Map Amendment, 651 South Ridgewood Avenue (SECOND READING)		
Recommended Action	The Planning Board recommended APPROVAL of the administrative request to amend the Official Zoning Map to change the zoning classification for ±0.39 acres from Volusia County R-5, Urban Single-Family Residential to Ormond Beach R-3, Single-Family Medium Density for the property located at 651 South Ridgewood Ave., as a result of annexation.		
Strategic Goal	Transportation & Community Development - Other		
Department Staff Contact	Planning & Building Steven Spraker, Planning Director		

Summary

This is an administrative request to amend the City's Official Zoning Map for a ±0.39-acre parcel of land from the existing zoning classification of Volusia County R-5, Urban Single-Family Residential to the City's R-3, Single-Family Medium Density zoning district at 651 South Ridgewood Avenue as a result of an annexation that was approved through Ordinance 2024-14.

The parcel is currently a developed single-family residential lot. The property owner requested a connection to the sanitary sewer system, which required annexation as part of the utility connection. A Comprehensive Plan land use map amendment was approved with Ordinance 2026-09 that assigned a city land use of "Low Density Residential" to the property. The proposed R-3 Single-Family Medium Density zoning district is consistent with the "Low Density Residential" land-use designation.

The Planning Board reviewed the zoning map amendment at the April 9, 2026, meeting and recommended approval with a 6-0 vote.

Financial Impact

None

Citizen Impact

None

Attachments

1. 26-12 651 S. Ridgewood Ave ZMA (P26-0078G)
2. Exhibit A_Sketch and Legal
3. Exhibit B_651 S Ridgewood Zoning Map
4. 651S. Ridgewood Ave., ZMA PB Staff Report Final
5. Planning Board minutes, 651 S. Ridgewood Avenue, ZMA
6. Ordinance - BIE, 651 S. Ridgewood Ave, ZMA

ORDINANCE NO. 2026-12

AN ORDINANCE AMENDING PARAGRAPH C, OFFICIAL ZONING MAP, OF SECTION 2-01, ESTABLISHED, OF ARTICLE I, ESTABLISHMENT OF ZONING DISTRICTS AND OFFICIAL ZONING MAP, OF CHAPTER 2, DISTRICT AND GENERAL REGULATIONS, OF THE CITY OF ORMOND BEACH *LAND DEVELOPMENT CODE*, BY AMENDING THE OFFICIAL ZONING MAP TO REZONE CERTAIN REAL PROPERTY TOTALING 0.39± ACRES LOCATED AT 651 SOUTH RIDGEWOOD AVENUE, VOLUSIA COUNTY PROPERTY APPRAISER PARCEL NUMBER 4242-20-32-0100 FROM VOLUSIA COUNTY R-5, URBAN SINGLE-FAMILY RESIDENTIAL TO ORMOND BEACH R-3, SINGLE-FAMILY MEDIUM DENSITY, AUTHORIZING REVISION OF OFFICIAL ZONING MAP; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

WHEREAS, the City of Ormond Beach has initiated this Ordinance which rezones that specific parcel of privately-owned real property hereinafter described, as hereinafter provided, and

WHEREAS, based on a utility connection, the property at 651 South Ridgewood Avenue was annexed on July 23, 2024, with Ordinance 2024-14, and

WHEREAS, the City Commission approved a small-scale Comprehensive Plan amendment on June 9, 2026, with Ordinance 2026-09, to amend the land use from Volusia County "Urban Medium Intensity" (UMI) to Ormond Beach "Low Density Residential" (LDR), and

WHEREAS, the property to be rezoned consists of 0.39± acres of real property located at 651 South Ridgewood Avenue (Volusia County parcel number: 4242-20-32-0100), said parcel being legally described and depicted in Exhibit "A" attached hereto and incorporated herein by reference, and

WHEREAS, the said parcel or real property involves less than ten (10) contiguous acres, and

WHEREAS, the Planning Board held a public hearing regarding this matter as required by Chapter 1, Article II, Section 1-15(d)(3), of the *Land Development Code*, and

WHEREAS, the City Commission held a public hearing regarding this matter as required by Section 166.041(3)(a), *Florida Statues*, and

WHEREAS, all applicable legal notice requirements have been complied with, and

WHEREAS, the City Commission finds the proposed rezoning to be consistent with the Future Land Use Element, and the Future Land Use Map, of the City's adopted *Comprehensive Plan*, now therefore,

BE IT ENACTED BY THE PEOPLE OF THE CITY OF ORMOND BEACH, FLORIDA, THAT:

SECTION ONE. The foregoing recitals are incorporated herein as the findings of the City Commission.

SECTION TWO. Paragraph C, Official Zoning Map, of Section 2-01, Established, of Article I, Establishment of Zoning Districts and Official Zoning Map, of Chapter 2, District and General Regulations, of the *Land Development Code* of the City of Ormond Beach, Florida is hereby amended by amending the Official Zoning Map, to change the zoning designation of one parcel of property located at 651 South Ridgewood Avenue (Volusia County parcel number: 4242-20-32-0100), as more particularly described and depicted in Exhibit "A" from Volusia County R-5, Urban Single-Family Residential to Ormond Beach R-3, Single-Family Medium Density.

SECTION THREE. The City Commission does hereby approve, authorize and direct the revision of the City's Official Zoning Map to show the classification for the area as hereby zoned as depicted in Exhibit "B" attached hereto and incorporated herein by reference.

SECTION FOUR. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION FIVE. This Ordinance shall take effect immediately upon its adoption.

PASSED UPON at the first reading of the City Commission, this 4th day of August, 2026.

PASSED UPON at the second and final reading of the City Commission, this 25th day of August, 2026.

_____
JASON LESLIE
Mayor

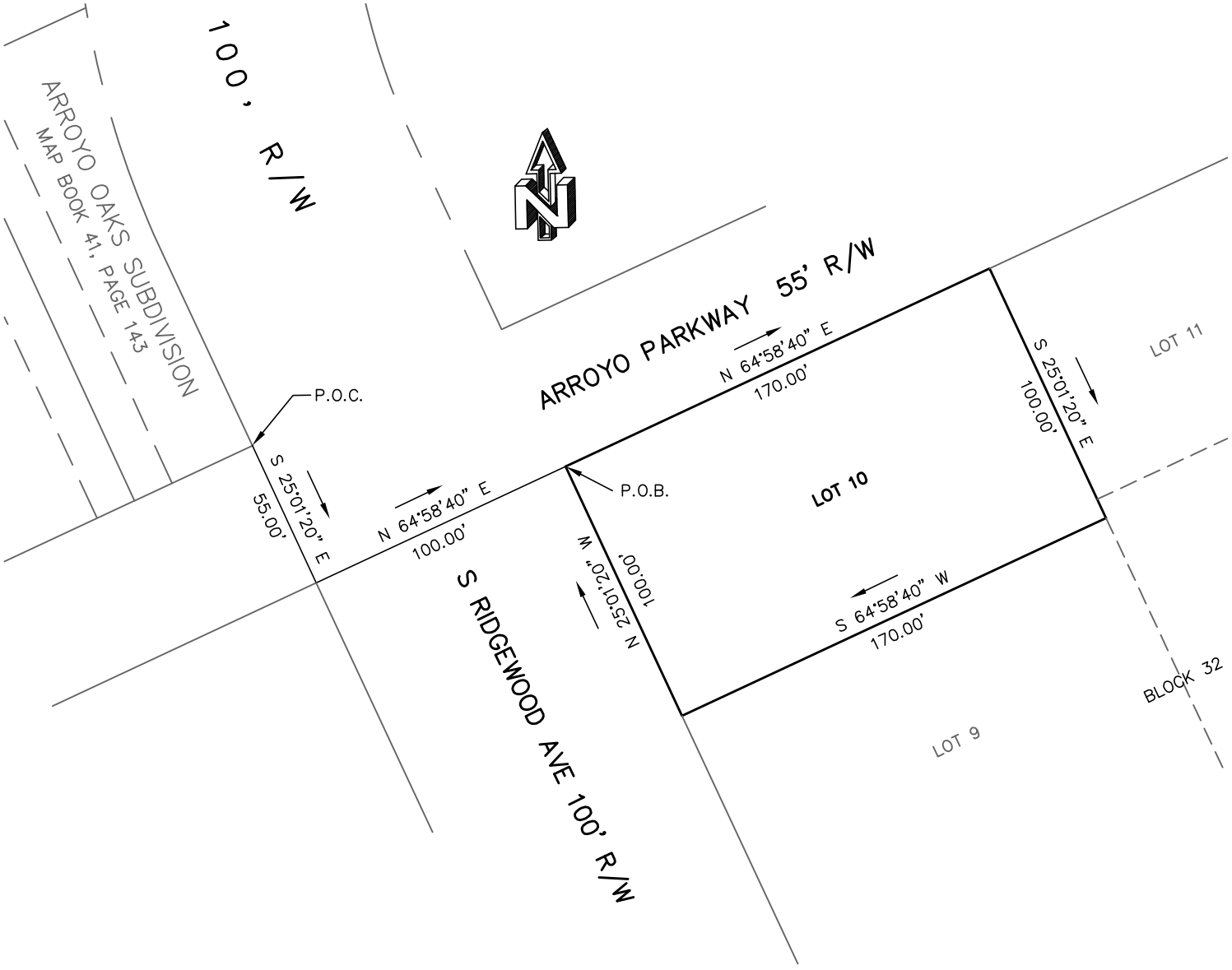
ATTEST:

_____
SUSAN CARROLL DAUDERIS
City Clerk

LOT 10, BLOCK 32, RIO VISTA SUB SECTION "A", AS RECORDED IN PLAT BOOK 6, PAGE 25, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

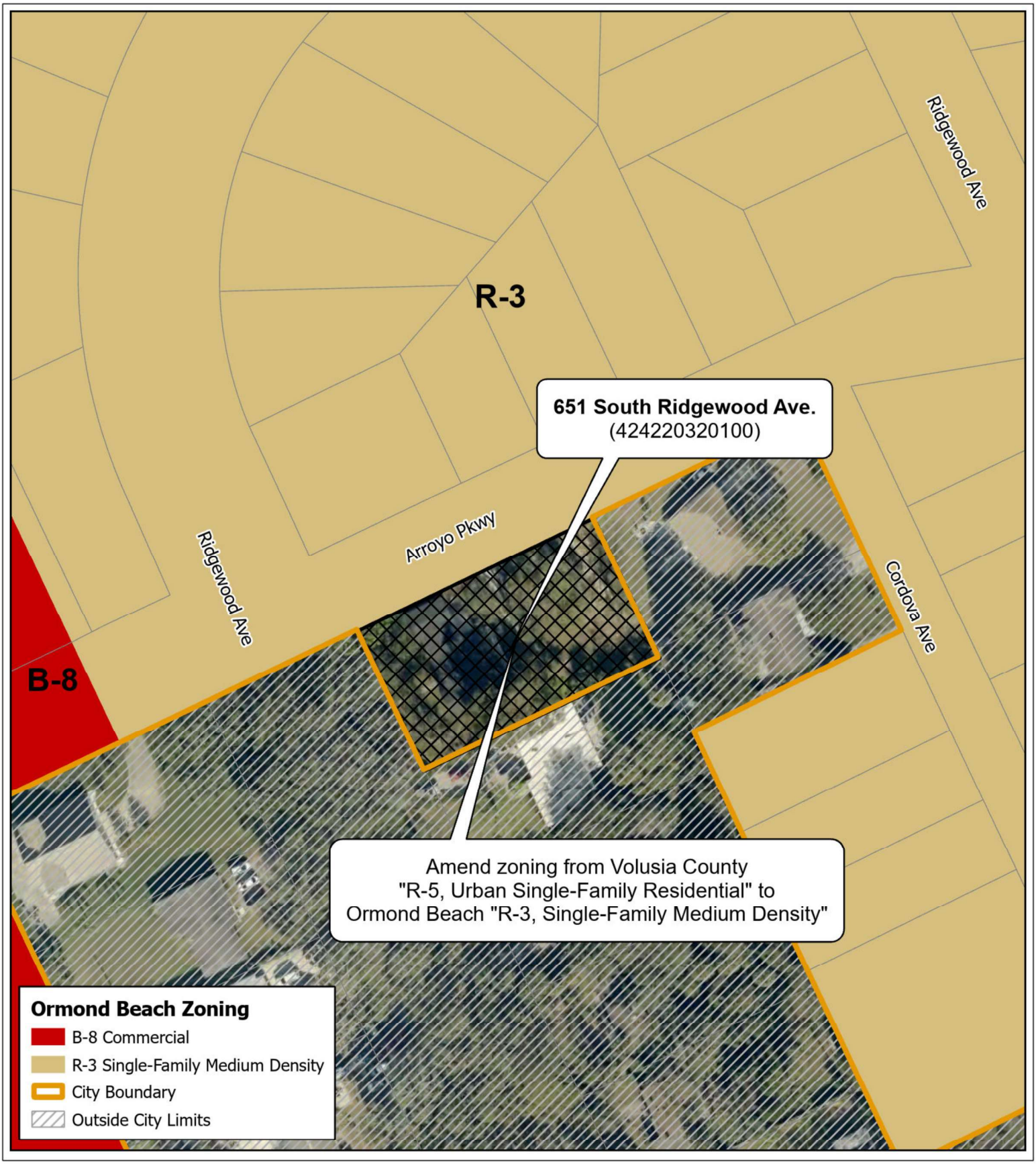
COMMENCING FROM A POINT OF INTERSECTION WITH THE EASTERLY LINE OF ARROYO OAKS SUBDIVISION AS RECORDED IN MAP BOOK 41, PAGE 143, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, AND THE NORTHERLY LINE OF ARROYO PARKWAY (A 55 FOOT RIGHT-OF-WAY AS SHOWN IN THE PLAT OF SAID RIO VISTA SECTION"A"), RUN THENCE S25°01'20"E A DISTANCE OF 55.00 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY LINE OF SAID ARROYO PARKWAY AND THE WESTERLY LINE OF SOUTH RIDGEWOOD AVENUE (A 100 FOOT RIGHT-OF-WAY AS SHOWN IN THE PLAT OF SAID RIO VISTA SECTION "A"); THENCE RUN N64°58'40"E A DISTANCE OF 100.00 FEET TO A POINT OF INTERSECTION WITH THE NORTHWEST CORNER OF SAID LOT 10, SAID POINT ALSO KNOWN AS THE <u>POINT OF BEGINNING</u> FOR THIS DESCRIPTION; THENCE CONTINUE N64°58'40"E ALONG SAID SOUTHERLY LINE OF ARROYO PARKWAY A DISTANCE OF 170.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY LINE OF SAID LOT 10; THENCE DEPARTING SAID SOUTHERLY LINE RUN S25°01'20"E ALONG SAID EASTERLY LINE A DISTANCE OF 100.00 FEET TO POINT OF INTERSECTION WITH THE SOUTHERLY LINE OF SAID LOT 10; THENCE DEPARTING SAID EASTERLY LINE RUN S64°58'40"W AND PARALLEL TO SAID SOUTHERLY LINE OF ARROYO PARKWAY A DISTANCE OF 170.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY LINE OF SAID SOUTH RIDGEWOOD AVENUE; THENCE DEPARTING SAID SOUTHERLY LINE RUN N25°01'20"W ALONG SAID EASTERLY LINE A DISTANCE OF 100.00 FEET TO THE <u>POINT OF BEGINNING</u>

SAID PARCEL CONTAINS 17,000 SQ.FT OR 0.39 ACRES MORE OR LESS



City of Ormond Beach **Engineering Division**	DATE: 3/14/24	PROJECT NO.:
	SCALE: N.T.S.	FILE 651 S RDGWD
	SHEET: 1 OF 1	DRAWN BY: CO

EXHIBIT "B"



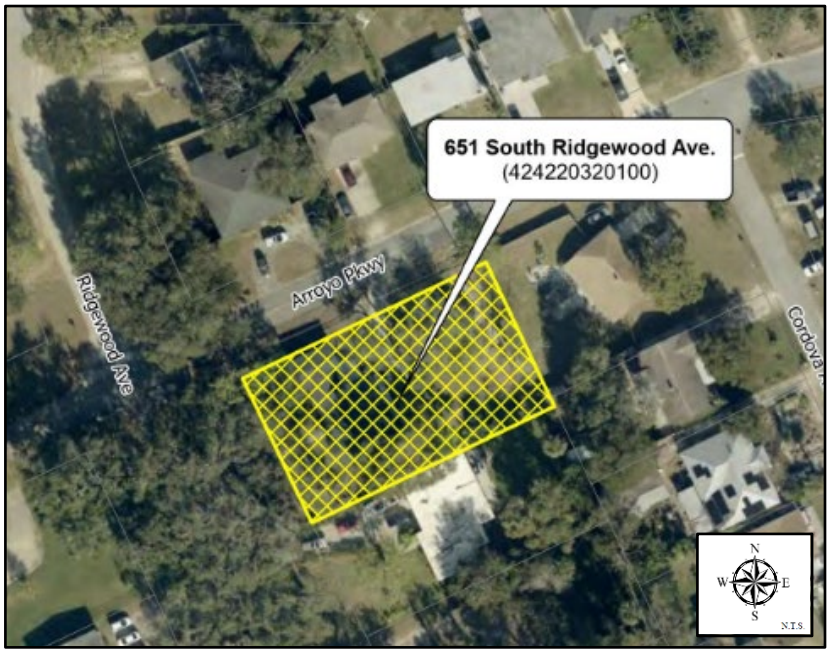
ZONING MAP
651 S RIDGEWOOD AVE
(424220320100)

Prepared By: The City of Ormond Beach
GIS Department - March 4, 2026

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PLANNING BOARD STAFF REPORT

651 South Ridgewood Avenue
Zoning Map Amendment
Project Number: PZ-2026-000243

PLANNING BOARD DATE:	April 9, 2026
TENTATIVE CITY COMMISSION DATE:	July 21, 2026 (first reading) August 4, 2026 (second reading)
APPLICANT:	Administrative
LOCATION:	651 South Ridgewood Avenue, Ormond Beach, Florida 32174
REQUEST:	Zoning Map Amendment for single-family home that annexed into City jurisdiction
STAFF CONTACT:	Sarah Motes, Senior Planner
MAP OF PROJECT AREA:	

SECTION 1, INTRODUCTION:

This is an administrative request to amend the City's Official Zoning Map for a ±0.39 acre parcel of land from the existing zoning classification of Volusia County R-5 (Urban Single-Family Residential) to the City of Ormond Beach R-3 (Single-Family Medium Density) zoning district at 651 South Ridgewood Avenue as the result of an annexation that was approved through Ordinance 2024-14.

SECTION 2, BACKGROUND:

The subject property located at 651 South Ridgewood Avenue has a Volusia County R-5 (Urban Single-Family Residential) zoning classification.

The parcel is currently a developed single-family residential lot. The property owner requested a connection to the sanitary sewer system which required annexation as part of the utility connection. The annexation was adopted on July 23, 2024, with Ordinance 2024-14. There are no changes to the proposed residence, but based on annexation, the City is required to assign a City of Ormond Beach land use and zoning designation to the property that is similar to other surrounding City of Ormond Beach land use and zoning designations.

The property is currently zoned Volusia County R-5 (Urban Single-Family Residential). The proposed zoning classification is City of Ormond Beach R-3 (Single-Family Medium Density) and will follow upon the completion of the administrative land use change. The proposed zoning map amendment schedule of the subject property is as follows:

EXHIBIT 1: Zoning map amendment schedule:

Action/Board	Date
Planning Board	April 9, 2026
City Commission 1st Reading	July 21, 2026
City Commission 2nd Reading	August 4, 2026

SECTION 3, ANALYSIS:

The existing Volusia County zoning classification for the subject property is Volusia County R-5 (Urban Single-Family Residential). The Volusia County Land Development Code states the purpose and intent for the R-5 (Urban Single-Family Residential) zoning classification as follows:

> "The purpose and intent of the R-5 Urban Single-Family Residential Classification, is to provide for medium-density residential development and preserve the character of existing small lot residential subdivisions."

The subject property is undergoing a land use amendment to assign a City of Ormond Beach Future Land Use designation of "Low Density Residential". The goal of the zoning classification is to provide the most compatible zoning with surrounding properties and the most consistent designation with the proposed Future Land Use. The adjacent land use designations and zoning classifications are as follows:

EXHIBIT 2: Land use and zoning designations:

Direction	Current Land Uses	Future Land Use Designation	Zoning Classifications
North	Single-Family Residential	Ormond Beach "Low Density Residential"	Ormond Beach Single-Family Medium Density (R-3)
South	Single-Family Residential	Volusia County "Urban Medium Intensity"	Volusia County Urban Single-Family Residential (R-5)
East	Single-Family Residential	Volusia County "Urban Medium Intensity"	Volusia County Urban Single-Family Residential (R-5)
West	Single-Family Residential	Volusia County "Urban Medium Intensity"	Volusia County Urban Single-Family Residential (R-5)

The subject property is an existing single-family residence that requested connection to the City of Ormond Beach sanitary sewer system which required annexation. There are no proposed changes to the residence or character of the neighborhood. Based on annexation, the City is required to assign a City of Ormond Beach land use and zoning designation to the property that is similar to other surrounding City of Ormond Beach land use and zoning designations as directed by the Comprehensive Plan. The subject property is undergoing a land use amendment to assign a City of Ormond Beach Future Land Use designation of "Low Density Residential". The proposed zoning designation of R-3, Single-Family Medium Residential is the most compatible zoning designation for the proposed land use designation and consistent with current Volusia County zoning classifications and other City of Ormond Beach zoning in the area. Below is a matrix that shows the proposed land use and zoning compatibility.

In choosing a consistent zoning district for the proposed land use of Low Density Residential, Table 2-2 located in Chapter 2, District and General Regulations; Article I – Establishment of Zoning Districts and Official Zoning Map; Section 2-02, Future land use map designations and zoning districts, of the City's Land Development Code is referenced below.

EXHIBIT 3: Excerpt of Table 2-2. Future Land Use Map Designations and Compatible Zoning Districts of the Land Development Code:

Comprehensive Plan Future Land Use Map Designation	Corresponding Compatible Zoning District
LDR, Low Density Residential	R-1, Residential Estate R-2, Single-Family Low Density R-2.5, Single-Family Low-Medium Density R-3, Single-Family Medium Density PRD, Planned Residential Development

Within Section 1-15(d)(3) of the Land Development Code, nonplanned development rezonings are included within the Land Development Code amendment category. Section 1-15(e) of the Land Development Code requires a review of the following criteria for the Planning Board.

The City Commission review requirements are within Section 1-18 of the Land Development Code. The following requirements would be applicable to this application:

- Section 1-18(a)(1) of the Land Development Code: Except as otherwise provided in this section, Land Development Code amendments shall be adopted in accordance with the procedures set forth in F.S. § 166.041(3)(a).
- Section 1-18(a)(3) of the Land Development Code: Land Development Code amendments which are initiated by the city, and which change the actual zoning map designation of a parcel or parcels of land involving less than ten (10) contiguous acres, shall be adopted in accordance with the procedures set forth in F.S. § 166.041(3)(c)(1). This statute requires specific notice to the applicant including 30-day mail notice prior to an ordinance adoption.
- Section 1-18(d)(1) of the Land Development Code: Rezonings of property to all zoning categories, except for planned development shall comply with the requirements established in F.S. § 166.041(3)(c).
- Section 1-18(e)(3) of the Land Development Code: All requests for rezoning shall be considered on the basis of consistency with the comprehensive plan. Where such requests are consistent with the comprehensive plan, but would not meet the standards for development orders in subsection (e)(2) of this section. The city commission may table such request and initiate an administrative study and amendment to the comprehensive plan in order to correct such deficiency.

Below is Planning staff's analysis of the criteria:

1. **The proposed development conforms to the standards and requirements of this Code and will not create undue crowding beyond the conditions normally permitted in the zoning district, or adversely affect the public health, safety, welfare, or quality of life.**

   A single-family residence exists on the subject property and the request is based on a need to assign a city zoning classification to the property as the result of annexation. The zoning map amendment will not adversely affect public health, safety, welfare or the quality of life. Any future site improvements shall be reviewed based upon the standards of the City of Ormond Beach Land Development Code.

2. **The proposed development is consistent with the Comprehensive Plan.**

   There is a separate future land use map amendment that proposes to assign a City of Ormond Beach, "Low Density Residential" designation to the property. The proposed R-3 (Single-Family Medium Density) zoning district is consistent with the "Low Density Residential" land use designation. For Section 1-18(e)(3) of the Land Development Code, staff concludes that the proposed City zoning classification of R-3 (Single-Family Medium Density) is the most consistent zoning classification with

the Volusia County zoning classification of R-5 (Urban Single-Family Residential) and with the surrounding properties currently zoned in the City of Ormond Beach limits.

3. **The proposed development will not adversely impact environmentally sensitive lands or natural resources, including but not limited to waterbodies, wetlands, xeric communities, wildlife habitats, endangered or threatened plants and animal species or species of special concern, wellfields, and individual wells.**

   There are no environmentally sensitive lands or natural resources that will be impacted by the zoning map amendment.

4. **The proposed use will not substantially or permanently depreciate the value of surrounding property; create a nuisance; or deprive adjoining properties of adequate light and air; create excessive noise, odor, glare, or visual impacts on the neighborhood and adjoining properties**.

   The single-family residence exists, and any future construction would be required to comply with the Land Development Code standards and would not impact surrounding properties.

5. **There are adequate public facilities to serve the development, including but not limited to roads, sidewalks, bike paths, potable water, wastewater treatment, drainage, fire and police safety, parks and recreation facilities, schools, and playgrounds.**

   The single-family residential structure exists, and the zoning action is the result of annexation into the city.

6. **Ingress and egress to the property and traffic patterns are designed to protect and promote motorized vehicle and pedestrian/bicycle safety and convenience, allow for desirable traffic flow and control, and provide adequate access in case of fire or catastrophe. This finding shall be based on a traffic report where available, prepared by a qualified traffic consultant, engineer or planner which details the anticipated or projected effect of the project on adjacent roads and the impact on public safety.**

   There will be no transportation impacts as a result of this amendment. The single-family residential structure exists, and the zoning action is the result of annexation into the city.

7. **The proposed development is functional in the use of space and aesthetically acceptable.**

   This amendment will have no impact on the use of space or the aesthetics of the neighborhood. The single-family residential structure exists, and the zoning action is the result of annexation into the city.

8. **The proposed development provides for the safety of occupants and visitors**.

   This amendment will have no impact on the safety of occupants or visitors. The single-family residential structure exists, and the zoning action is the result of annexation into the city.

9. **The proposed use of materials and architectural features will not adversely impact the neighborhood and aesthetics of the area.**

   This amendment will not adversely affect the neighborhood or the area's aesthetics. The single-family residential structure exists, and the zoning action is the result of annexation into the city.

10. **The testimony provided at public hearings**.

    There has not been a public hearing at this time. The comments from the Planning Board meeting will be incorporated into the City Commission packet.

SECTION 4, RECOMMENDATION:

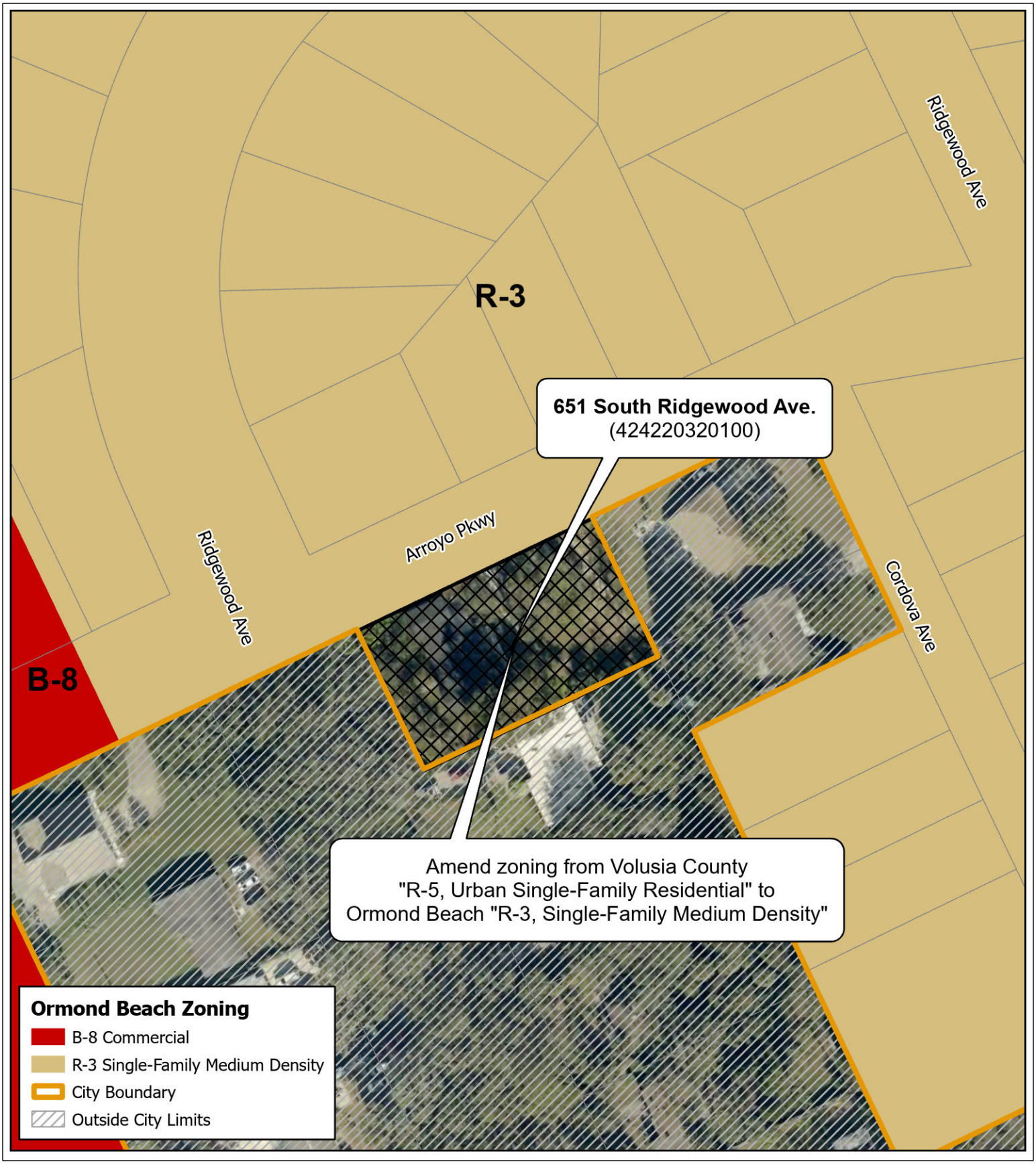
Staff recommend that the Planning Board recommend **APPROVAL** to the City Commission of the administrative request to amend the Official Zoning Map to change the zoning classification for ±0.39 acres from Volusia County R-5 (Urban Single-Family Residential) to Ormond Beach R-3 (Single-Family Medium Density) for the property located at 651 South Ridgewood Avenue as the result of annexation.

Attachments:

Attachment 1: Proposed Zoning Map
Attachment 2: Project maps and Sketch and Legal Description
Attachment 3: Section 2-15 of the Land Development Code, R-3 (Single-Family Medium Density) Zoning District

Attachment 1:

Proposed Zoning Map



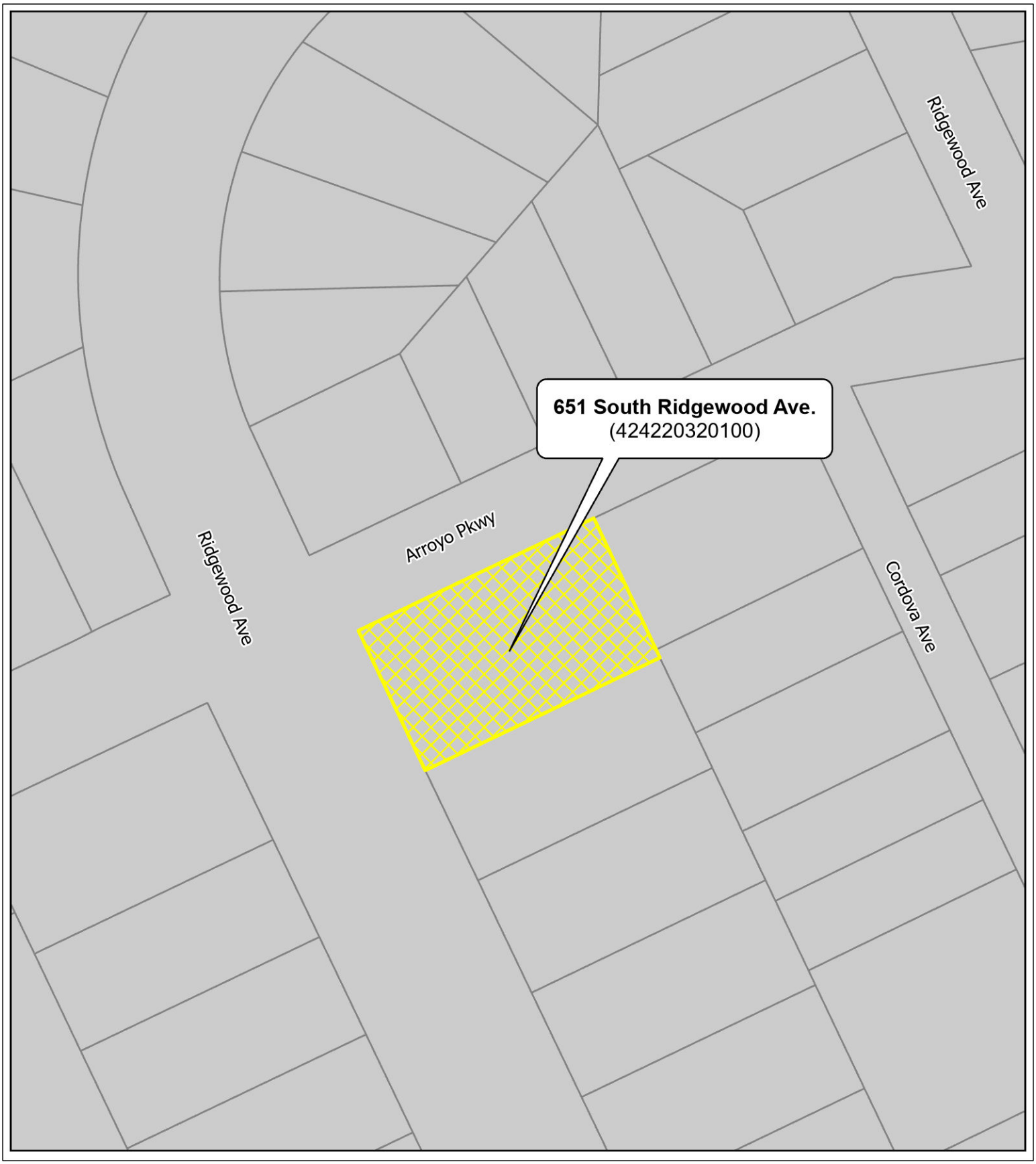
ZONING MAP
651 S RIDGEWOOD AVE
(424220320100)

Prepared By: The City of Ormond Beach
GIS Department - March 4, 2026

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Attachment 2:

Project maps
and
Sketch and Legal Description



LOCATION MAP
651 S RIDGEWOOD AVE
(424220320100)

Prepared By: The City of Ormond Beach
GIS Department - March 4, 2026

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AERIAL MAP
651 S RIDGEWOOD AVE
(424220320100)

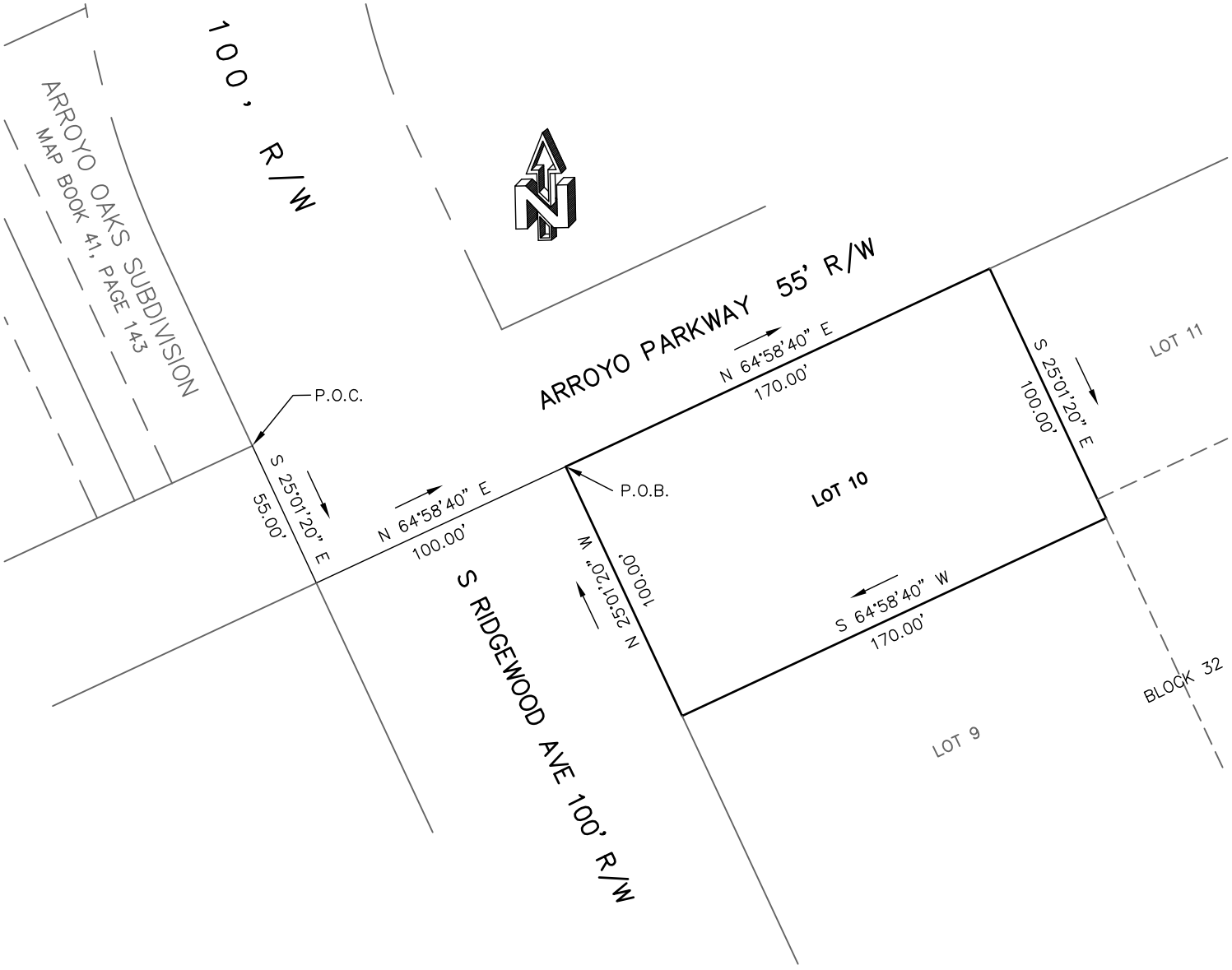
Prepared By: The City of Ormond Beach
GIS Department - March 4, 2026

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LOT 10, BLOCK 32, RIO VISTA SUB SECTION "A", AS RECORDED IN PLAT BOOK 6, PAGE 25, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING FROM A POINT OF INTERSECTION WITH THE EASTERLY LINE OF ARROYO OAKS SUBDIVISION AS RECORDED IN MAP BOOK 41, PAGE 143, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, AND THE NORTHERLY LINE OF ARROYO PARKWAY (A 55 FOOT RIGHT-OF-WAY AS SHOWN IN THE PLAT OF SAID RIO VISTA SECTION"A"), RUN THENCE S25°01'20"E A DISTANCE OF 55.00 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY LINE OF SAID ARROYO PARKWAY AND THE WESTERLY LINE OF SOUTH RIDGEWOOD AVENUE (A 100 FOOT RIGHT-OF-WAY AS SHOWN IN THE PLAT OF SAID RIO VISTA SECTION "A"); THENCE RUN N64°58'40"E A DISTANCE OF 100.00 FEET TO A POINT OF INTERSECTION WITH THE NORTHWEST CORNER OF SAID LOT 10, SAID POINT ALSO KNOWN AS THE <u>POINT OF BEGINNING</u> FOR THIS DESCRIPTION; THENCE CONTINUE N64°58'40"E ALONG SAID SOUTHERLY LINE OF ARROYO PARKWAY A DISTANCE OF 170.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY LINE OF SAID LOT 10; THENCE DEPARTING SAID SOUTHERLY LINE RUN S25°01'20"E ALONG SAID EASTERLY LINE A DISTANCE OF 100.00 FEET TO POINT OF INTERSECTION WITH THE SOUTHERLY LINE OF SAID LOT 10; THENCE DEPARTING SAID EASTERLY LINE RUN S64°58'40"W AND PARALLEL TO SAID SOUTHERLY LINE OF ARROYO PARKWAY A DISTANCE OF 170.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY LINE OF SAID SOUTH RIDGEWOOD AVENUE; THENCE DEPARTING SAID SOUTHERLY LINE RUN N25°01'20"W ALONG SAID EASTERLY LINE A DISTANCE OF 100.00 FEET TO THE <u>POINT OF BEGINNING</u>

SAID PARCEL CONTAINS 17,000 SQ.FT OR 0.39 ACRES MORE OR LESS



City of Ormond Beach Engineering Division	DATE: 3/14/24	PROJECT NO.:
	SCALE: N.T.S.	FILE 651 S RDGWD
	SHEET: 1 OF 1	DRAWN BY: CO

Attachment 3:

Section 2-15 of the Land Development Code, R-3 (Single-Family Medium Density) Zoning District

Sec. 2-15. R-3, Single-Family Medium Density Zoning District.

A. PURPOSE: The purpose of the Single-Family Medium Density (R-3) Zoning District is to stabilize and protect the residential characteristics of existing medium density, single-family neighborhoods and to promote and encourage a suitable environment for family life.

B. DIMENSIONAL STANDARDS

1. Density	2. Maximum Building Height	3. Maximum Building Coverage	4. Maximum Impervious Lot Coverage	5. Minimum Lot Size	6. Minimum Lot Width	7. Minimum Lot Depth	8. Minimum Perimeter	9. Setbacks				
								a. Front	b. Rear	c. Side	d. Street Side/Corner	e. Waterbody
5.05 units per acre	30'	35%	75%	8,625 SF	75'	115'	None	25'	20'	8' total 20'	20'	30'

C. PERMITTED USES	D. CONDITIONAL USES	E. SPECIAL EXCEPTION USES	F. OTHER STANDARDS
1. Community Residential Home 2. Dwelling, Singe-Family—Detached 3. School, Public	1. Adult Family Care Home 2. Assisted Living 3. Cemetery 4. Family Day Care Home 5. Foster Home 6. Group Home 7. Parks and Recreation Facilities, Private 8. Parks and Recreation Facilities, Public 9. Public Facilities 10. Public Utilities 11. Telecommunication Tower or Antenna, Camouflaged 12. Water Survival Instruction 13. Wind Energy System	1. Adult Day Care 2. Bed and Breakfast Inn 3. Child Care Facilities 4. Historic Preservation Mixed Use 5. House of Worship 6. Nursing Home 7. School, Private	All development must comply with setback requirements: 1. Wetlands (chapter 3, article II). 2. Special corridors and buffer requirements (chapter 3, article I). 3. See conditional and special exception regulations (chapter 2, article IV). 4. Use of dwelling units for transient lodging is prohibited in order to protect and maintain the residential character of the zoning district. 5. Single-family residential buildings shall have the following minimum floor area:

Type	1-Story	Split Level	2-Story
A	1,500 SF	1,800 SF	2,100 SF
B	1,350 SF	1,650 SF	2,000 SF
C	1,150 SF	1,400 SF	1,750 SF

The required minimum building square footage for residential structures with a "C" zoning suffix (as shown on the official zoning map), may be reduced by 15% where the chief building official finds that the proposed building is to be occupied by residents which qualify for assistance as low- to medium-income as defined by the United States Department of Housing and Urban Development.

G. PERMITTED ACCESSORY USES: Accessory uses customarily associated with, dependent on and incidental to their permitted principal uses, provided that such uses conform to the regulations set forth in chapter 2, article III.

H. SPECIAL STANDARDS:

Nonconformance: Single-family residential lots located within this district and having a minimum lot area of 7,500 square feet, a minimum width of 75', and are located in areas of the city where established street patterns and lot configurations are generally consistent with the 75'/7,500 square foot standard, shall be deemed to be conforming lots, subject to the setback and buffer requirements of Ordinance No. 78-35, as existed on December 31, 1991. Parcels within such districts may be divided into lots having minimum lot areas of 7,500 square feet and minimum widths of 75', provided the structure on each lot meets the setback and buffer requirements of Ordinance No. 78-35. However, where the recorded plat or covenants indicate front yards in excess of current city standards for principal buildings, said plat or covenants shall first be properly amended prior to the issuance of a building permit.

Approved Plats: Setbacks that are less restrictive than the standards listed above are acceptable, provided that they are either shown on the approved plat or a less restrictive standard was in place at the time of recording the original plat.

(Ord. No. 2013-11, § 2, 2-5-2013; Ord. No. 2013-13, § 8, 2-5-2013)

Planning Board minutes from April 9, 2026

ITEM:

PZ-2026-243

651 South Ridgewood Avenue

Zoning Map Amendment

Recommended for Approval (6-0)

by the Volusia County Health Department. If abandoning the septic, it would be required to coordinate with the Health Department, and not the responsibility of the city to assess.

Mr. Jorczak asked if it was a connection in the city, if the city would have any remediation issues with the disconnect. Ms. Motes explained that it would be a decision for the property owner. An example being if it was a property that was already in the City of Ormond Beach jurisdiction and is on a septic tank that was decommissioned because of connection to utilities, it would be up to their discretion, and cost estimates, in coordination of the Health Department if it were to be required or not and if it can be left there until it fails. Ms. Motes stated that she did not have all answers on it but could follow up with the Health Department to find out specifically how septic tanks get decommissioned.

Mr. Jorczak expressed his curiosity about abandoned septic systems with integrating what are County areas into the City, where there is ability to connect to water and sewer systems.

Chairman Thomas referenced how in years past in Ormond by the Sea, they were given the option to pay for the price of connection to sewer over a three-to-four-year period of time and asked what the price was. Mr. Spraker replied that to the best of his knowledge it never got that far with a true final cost estimate and noted how there was also an intent at the time to apply for state grants.

Ms. Bobak asked if there was a stipulation where when connecting to sewer, that they would be required to remove the tanks. Ms. Motes replied not to her knowledge.

Mr. Spraker refocused on the land use application and added if the Board was interested in how septic tanks are closed or removed, staff can get a report on the information.

Chairman Thomas opened the hearing up for any public comments and any additional comments or questions from the Board and entertained a motion.

Board Recommendation

Mr. Jorczak motioned to approve PZ-2026-000244: 651 S. Ridgewood Avenue, Small Scale Future Land Use Map Amendment. Mr. Gentry seconded it. Vote was called, and the motion was approved (6-0).

B. PZ-2026-000243: 651 S. Ridgewood Avenue, Amendment to the Official Map

Ms. Sarah Motes, Senior Planner, explained the administrative amendment request to amend the City's Official Zoning Map for a ±0.39 acre parcel of land from the existing zoning classification of Volusia County R-5 (Urban Single-Family Residential) to the City of Ormond Beach R-3 (Single-Family Medium Density) zoning district at 651 South Ridgewood Avenue as the result of an annexation that was approved through Ordinance 2024-14.

Ms. Motes continued that the parcel is currently an existing single-family residential lot. The property owner requested a connection to the sanitary sewer system, which required annexation as part of the utility connection. The annexation was adopted on

July 23, 2024. She added that there are no changes to the proposed residence and how based on annexation, the City is required through the administrative process to assign a similar City of Ormond Beach land use and zoning designation to the property that is similar to other surrounding City of Ormond Beach land use and zoning designations that abut it.

Ms. Motes concluded that staff recommend that the Planning Board recommend approval to the City Commission of the administrative request to amend the Official Zoning Map to change the zoning classification for ±0.39 acres from Volusia County R-5 (Urban Single-Family Residential) to the Ormond Beach R-3 Single-Family Medium Density zoning district for the property located at 651 South Ridgewood Avenue as the result of the previous annexation. City Commission hearing dates are July 21, 2026 and August 4, 2026.

Chairman Thomas brought it up to the Board for discussion and entertained a motion.

Board Recommendation

Mr. Jorczak motioned to approve PZ-2026-000243: 651 S. Ridgewood Avenue, Amendment to the Official Map. Mr. Railsback seconded it. Vote was called, and the motion was approved (6-0).

VIII. PUBLIC COMMENTS

Mr. Ted Rhodes, Ormond Beach Resident, expressed his thoughts on property rights, and how any justly governed jurisdiction must operate under a system of common beliefs and values that are generally accepted by officials and voters alike. Once such belief system, common to our American heritage, is that of property rights.

Mr. Rhodes continued: *"Over the years property rights have been invoked by members of the Planning Board. It is generally understood that a prospective buyer purchases a property as is with no implied guarantees that are not specified in the contract. The buyer is responsible to do their due diligence before closing on a property and the buyer must research flood zones, sink holes, traffic planning or HOA CCNRs or other considerations and likewise the buyer assumes possession of a property with all the regulatory and zoning encumbrances set upon the property at the time of closing. The owner has every right to improve the property within these constraints."*

"A property right does not however confer an obligation of a local government to change regulatory encumbrances, variances, or zoning restrictions on the property, and the regulatory body is not under any circumstances compelled to approve applications to alter these encumbrances. Local governments do so at their discretion depending on long term plans of the local government, but most importantly consideration to the wishes and desires of the local residents who come first and foremost. Many times, over the past years, this Planning Board seems to have forgotten the commonly accepted beliefs and values that are the foundation of our American ethos. This is not a matter of opinion and not a matter up for public debate. It is the cornerstone definition as codified in our United States Constitution."

Mr. Rhodes challenged each member of the Board to prove him otherwise and handed out the copy of the Constitution. He added that he cannot find it anywhere in there

Ordinance Adoption
Business Impact Estimate

Proposed ordinance's number and legal title:

ORDINANCE NO. 2026-12

AN ORDINANCE AMENDING PARAGRAPH C, OFFICIAL ZONING MAP, OF SECTION 2-01, ESTABLISHED, OF ARTICLE I, ESTABLISHMENT OF ZONING DISTRICTS AND OFFICIAL ZONING MAP, OF CHAPTER 2, DISTRICT AND GENERAL REGULATIONS, OF THE CITY OF ORMOND BEACH LAND DEVELOPMENT CODE, BY AMENDING THE OFFICIAL ZONING MAP TO REZONE CERTAIN REAL PROPERTY TOTALING 0.39+ ACRES LOCATED AT 651 SOUTH RIDGEWOOD AVENUE, VOLUSIA COUNTY PROPERTY APPRAISER PARCEL NUMBER 4242-20-32-0100 FROM VOLUSIA COUNTY R-5, URBAN SINGLE-FAMILY RESIDENTIAL TO ORMOND BEACH R-3, SINGLE-FAMILY MEDIUM DENSITY, AUTHORIZING REVISION OF OFFICIAL ZONING MAP; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

This Business Impact Estimate is provided in accordance with section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is not required by state law for the proposed ordinance, but the City is, nevertheless, providing this Business Impact Estimate as a courtesy and to avoid any procedural issues that could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- ☒ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☐ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;
- ☐ The ordinance relates to procurement; or
- ☒ The proposed ordinance is enacted to implement the following:
  a. Part II of Chapter 163, Florida Statutes, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
  b. Sections 190.005 and 190.046, Florida Statutes, regarding community development districts;
  c. Section 553.73, Florida Statutes, relating to the Florida Building Code; or
  d. Section 633.202, Florida Statutes, relating to the Florida Fire Prevention Code.

In accordance with the provisions of controlling law, even notwithstanding the fact that an exemption noted above may apply, the City hereby publishes the following information:

1. A summary of the proposed ordinance, including a statement of the public purpose to be served by the proposed ordinance, such as serving the public health, safety, morals, and welfare of the City.

   This is an administrative request to amend the city's Official Zoning Map for a ±0.39 acre parcel of land from the existing zoning classification of Volusia County R-5, Urban Single-Family Residential to the City of Ormond Beach R-3, Single-Family Medium Density zoning district at 651 South Ridgewood Avenue. The parcel is currently a developed single-family residential lot with no proposed changes. The property owner requested a connection to the sanitary sewer system, which required annexation as part of the utility connection. The annexation was adopted on July 23, 2024, with Ordinance 2024-14. The subject property has been annexed into the City of Ormond Beach, and the city's Comprehensive Plan requires the property to be given a similar land use and compatible zoning as existed in unincorporated Volusia County.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, including the following, if any:

   a. An estimate of direct compliance costs that businesses may reasonably incur if the ordinance is enacted;

      None. This zoning map amendment does not impact any existing businesses.

   b. Identification of any new charge or fee on businesses subject to the proposed ordinance, or for which businesses will be financially responsible; and

      None.

   c. An estimate of the city's regulatory costs, including an estimate of revenues from any new charges or fees that will be imposed on businesses to cover such costs.

      None.

3. A good faith estimates of the number of businesses likely to be impacted by the ordinance.

   None. This zoning map amendment does not impact any existing businesses.

4. Any additional information the City determines may be useful.

   (This section may include: methodology or data used to prepare the Business Impact Estimate, e.g., City staff solicited comments from businesses as to the potential impact of the proposed ordinance by contacting the chamber of commerce, social media posting, direct mail/email, posting on the City's website, public workshop, etc.; efforts made to reduce the potential fiscal impact on businesses; and state the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals or businesses) and, therefore, the proposed ordinance does not affect only businesses.)

   The item was advertised in accordance with the applicable public notice requirements. Information on the application is also on the city's website.

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	7.C.
Section	PUBLIC HEARINGS	**Category**	Public Hearing - Ordinances
Subject	Comprehensive Plan Amendments, Capital Improvement Element Schedules (SECOND READING)		
Recommended Action	The Planning Board recommended APPROVAL of the update to the Capital Improvements Schedule of the Capital Improvements Element of the City of Ormond Beach Comprehensive Plan to be consistent with the adopted Capital Improvement Plan.		
Strategic Goal	Transportation & Community Development - Other		
Department Staff Contact	Planning & Building Steven Spraker, Planning Director		

Summary

This is an administrative request to update the Capital Improvements Schedule of the Capital Improvements Element of the City of Ormond Beach Comprehensive Plan to be consistent with the adopted Capital Improvement Plan in accordance with state law. This update does not include any text changes to the goals, objectives, and policies of the Capital Improvements Element. Chapter 163.3177(3)(a) of the Florida Statutes states, “The CIE must be reviewed by the local government on an annual basis.

Modifications to update the 5-year capital improvement schedule may be accomplished by ordinance and may not be deemed to be amendments to the local comprehensive plan.” Each year, local governments must update their Capital Improvements Element, including the Five-Year Schedule of Capital Improvements, to demonstrate funding or planning for the public facility improvements needed to support their population.

The Planning Board reviewed the proposed Comprehensive Plan amendment at the May 14, 2026, meeting and recommended approval by a 7-0 vote.

Financial Impact

None

Citizen Impact

None

Attachments

1. 26-13 2025 CIE Schedule Update (P26-0079G)
2. Exhibit A, CIE Schedule Update
3. 05.14.2026, CIE Update, PB Staff Report
4. Draft Planning Board minutes, CIE Update
5. Ordinance - BIE, 2025-26 CIE

ORDINANCE NO. 2026-13

AN ORDINANCE ADOPTING CERTAIN UPDATED SCHEDULES TO THE CAPITAL IMPROVEMENTS ELEMENT OF THE CITY OF ORMOND BEACH COMPREHENSIVE PLAN; PROVIDING WHEN SUCH UPDATES SHALL TAKE EFFECT; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

WHEREAS, the City of Ormond Beach is committed to planning and managing the future growth of the City, and

WHEREAS, the City of Ormond Beach has the authority to update the schedules of its Capital Improvements Element in its *Comprehensive Plan* pursuant to Chapter 163.3177(3)(b), *Florida Statutes*, and

WHEREAS, the Planning Board, which is the "local planning agency" of the City of Ormond Beach, Florida, have conducted public hearings and issued notices required by Florida Law in the preparation and enactment of this Capital Improvements Element Schedule Updates Ordinance, and

WHEREAS, the City Commission concurs with the City's planning staff recommendations to update the schedules of the Capital Improvements Element in the *Comprehensive Plan* attached hereto as Exhibit "A", now therefore,

BE IT ENACTED BY THE PEOPLE OF THE CITY OF ORMOND BEACH, FLORIDA, THAT:

SECTION ONE. The Capital Improvements Element Schedules of the City of Ormond Beach *Comprehensive Plan* are hereby updated and, are therefore, hereby approved and

adopted to include the updates to the Schedules to the Capital Improvements Element as are set forth in Exhibit "A" attached hereto and incorporated herein by reference.

SECTION TWO. In order to make the City of Ormond Beach *Comprehensive Plan*, as hereby updated, available to the public, a certified copy of the enacting Ordinance, as well as certified copies of the City of Ormond Beach *Comprehensive Plan* and the updates to the Schedules thereto, shall be located in the Planning Department of the City of Ormond Beach. The Planning Director shall also make copies available to the public for a reasonable reproduction charge.

SECTION THREE. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION FOUR. This ordinance shall take effect immediately upon its adoption.

PASSED UPON at the first reading of the City Commission, this 4th day of August, 2026.

PASSED UPON at the second and final reading of the City Commission, this 25th day of August, 2026.

_____
JASON LESLIE
Mayor

ATTEST:

_____
SUSAN CARROLL DAUDERIS
City Clerk

EXHIBIT A

Proposed Updates to the Schedules of the Capital Improvements Element

(Shown in ~~strike-thru~~ and <u>underline</u> to reflect changes)

CAPITAL IMPROVEMENTS ELEMENT









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GOAL 1. LEVEL-OF-SERVICE STANDARDS

PUBLIC FACILITIES SHALL BE PROVIDED IN A TIMELY AND EFFICIENT MANNER AS NECESSARY TO CORRECT EXISTING DEFICIENCIES IN THE LEVEL-OF-SERVICE FOR POTABLE WATER, SANITARY SEWER, SOLID WASTE, TRAFFIC CIRCULATION, AND PARKS AND RECREATION AND TO MEET FUTURE DEMANDS GENERATED FROM NEW DEVELOPMENT THROUGH THE USE OF SOUND FISCAL PRACTICES.

OBJECTIVE 1.1. CAPITAL IMPROVEMENTS

Capital Improvements identified in other plan Elements shall be provided to correct existing deficiencies, accommodate future growth, and to replace deteriorated or obsolete facilities in an economically and energy efficient manner, as indicated in the schedule of improvements in this Element.

POLICY 1.1.1.

The City shall include capital improvement projects that are either: 1) required to meet adopted level-of-service standards; 2) implemented Goals, Objectives and Policies of the Comprehensive Plan; and 3) determined to be of relatively large scale in cost ($25,000.00 or greater) in the Schedule of Improvements of this Element.

POLICY 1.1.2.

As per Section 163.3177, F.S., all capital improvement projects proposed by the City shall be consistent with the Comprehensive Plan.

POLICY 1.1.3.

All capital improvements included in the Capital Improvements Element schedule of improvements shall be included in the City's annual capital budget.

POLICY 1.1.4.

Proposed capital improvement projects that compete for funding within the same funding source and as identified annually through the concurrency management system shall be evaluated and ranked in order of priority according to the following guidelines:

a. The extent to which the project is necessary to protect public health and safety.

b. Capital improvements needed to address existing deficiencies.

c. Maintenance of adopted levels-of-service.

d. The impact that the project would have on the local budget.

e. Reduction of future improvements costs.

f. Encouragement of infill development and/or preservation or achievement of full use of existing facilities.

g. Promotion of efficient development and prevention of urban sprawl.

h. Consistency with the Florida Department of Transportation and other State and regional plans.

POLICY 1.1.5.

The Capital Improvements Element shall be reviewed on an annual basis and modified as necessary in accordance with Section 163.3177, F.S. Corrections, updates and modifications concerning costs; revenue sources; acceptance of facilities, pursuant to dedications which are consistent with the plan; or the date of construction of any facility enumerated in the Capital Improvements Element may be accomplished by ordinance and shall not be deemed to be amendments to the Comprehensive Plan.

POLICY 1.1.6.

The comprehensive planning process shall be used to ensure that present and future public facility and service needs are planned and provided in a timely and efficient manner, while safeguarding the health safety and welfare of the public and natural environment.

POLICY 1.1.7.

The provision of the public services and facilities shall be planned and coordinated so that the provision of public services and facilities occurs in a manner which encourages growth to be orderly and, to the extent feasible, is compatible with existing and desired land uses.

POLICY 1.1.8.

Public facilities, services, and programs shall be designed to service the intensities of development projected in State, regional and local comprehensive and functional plans and other planning documents.

POLICY 1.1.9

Government buildings and facilities shall incorporate and recognize urban design principles. Life cycle costs should be considered in the design and construction of government facilities. The City shall implement an Energy Efficiency and Conservation Plan including a program to track the use of energy and water in facilities owned by the City and reducing energy consumption as it relates to budgetary constraints. The City shall require energy efficient retrofits of existing facilities, where feasible, and will ensure energy efficient objectives are met in the planning and construction of any new facilities. The City shall consider a Sustainability Index for use in assessing proposed capital projects.

OBJECTIVE 1.2. COASTAL HIGH HAZARD AREA

The City shall limit future public expenditures for capital improvements which promote growth within Coastal High Hazard Areas, except for public land acquisition, enhancement of natural resources, or other projects as identified in the Coastal Management Element.

POLICY 1.2.1.

The City shall expend funds in Coastal High Hazard Areas for the provision of improvements needed to correct existing deficiencies to maintain their existing capacity.

POLICY 1.2.2.

The City shall continue to provide recreational facilities as needed within Coastal High Hazard Areas.

POLICY 1.2.3.

The City shall not construct any new public facilities in the coastal high-hazard areas, except for:

a. Conservation, natural resource protection and preservation, conservation groundwater aquifer recharge, resource restoration facilities, public access facilities, stormwater management and passive recreation and recreation support facilities;

b. Facilities necessary to improve hurricane evacuation time and/or mitigate storm damage to existing development; and

c. Reconstruction of public facilities essential to maintaining the public health and safety shall only occur if such structures can meet the most current hurricane wind velocity standards contained in the adopted building code.

OBJECTIVE 1.3. CONCURRENCY MANAGEMENT SYSTEM

The City shall continue to implement and periodically review its concurrency management system. The concurrency management system shall ensure the management of the land development process in a way that public facility needs identified within plan Elements are provided as needed but not in excess of the City's financial capacity to operate such facilities.

POLICY 1.3.1.

The provision of public facilities and services is intended to serve as a growth management measure, as such provision shall be undertaken and expanded within existing or identified future designated facility service areas and discouraged elsewhere, except in cases of overriding public benefit or where needed to meet the needs of existing development.

POLICY 1.3.2.

The City shall use the following level-of-service standards to determine the impacts of new development and redevelopment upon public facility provision:

a. Fire Fighting: All development having a density equivalent to or greater than one (1) unit per acre shall be served by a public/private central water system capable of delivering the required fire flows having adequate fire-fighting capacity of a minimum of 500 gallons per minute (gpm) or greater as determined by the Chief Fire Official in conjunction with the City Engineer (or its equivalent where a sprinkler system is used) and minimum 20 pounds per square inch (psi) residual for a minimum two- (2-) hour duration depending upon the specific structure and/or use. Single-family home development at less than one (1) unit per acre or less, or other development of equivalent intensity (e.g., average daily water use of less than 300 gallons per day per acre), may be served by an individual well. All required fire flows will be in addition to the peak daily demand established.

b. Parks (acres per population): 13 acres per 1,000 population.

   A capital facilities recovery fee to develop lands dedicated by developers to meet the acreage level-of-service standards shall be pursued. The recovery fee may be either assessed to the developer of the subdivision or the builder of the home in the form of an impact fee.

   Subdivisions which provide private recreation lands and facilities shall be provided a credit against the land dedication and capital facilities recovery fee.

c. Roads: The following level-of-service standards are adopted for roadways Citywide:

	Level-of-Service Daily	Level-of-Service Peak Hour
City	C	D
County	D	E
State	C (SIS/FIHS)	D (TRIP)

d. Water:

Raw:	An average daily volume of 330 gallons per Equivalent Residential Unit (ERU).
Potable:	An average daily volume of 300 gallons per Equivalent Residential Unit.
Reclaimed:	An average daily volume of 300 gallons per day per Equivalent Residential Unit.

Other uses water standards:

Types of Establishments* (note – ERU is Equivalent Residential Unit)	
Apartments	0.7 ERU per unit
Bars and Cocktail Lounges	0.05 ERU per seat
Barbershop	0.25 ERU per seat
Beauty Shop	0.5 ERU per seat
Car Wash	8.5 ERU minimum
Dentist	0.7 ERU per wet chair
Factories (with Showers or Chemicals)	0.1 ERU per 100 sq. ft.
Factories (without Showers or Chemicals)	0.05 ERU per 100 sq. ft.
General Commercial / Office Buildings	0.05 ERU per 100 sq. ft.
Gas Stations (no car wash)	1.5 ERU per bathroom
Hospitals	0.7 ERU per bed
Hotels and Motels	0.4 ERU per room
Movie Theaters, Auditoriums, Churches	0.02 ERU per seat
Nursing Homes / A.L.F.	0.5 ERU per bed
Restaurants	0.15 ERU per seat
Single-Family Residence	1.00 ERU per unit
Schools	0.05 ERU per seat
Townhouse Residence	0.7 ERU per unit

*The Site Plan Review Committee will consider alternate flow rates for various establishments if the applicant/Engineer of Record can provide supporting documentation.

e. Sewer: An average daily volume of 270 gallons per Equivalent Residential Unit. Sanitary Sewer Treatment: All development having a density equivalent to or greater than one (1) ERU per acre shall be served by a public/private wastewater treatment system capable of handling the projected design flows with an appropriate peak factor, as determined by the applicant or design professional. The peak factor shall not be less than 2.5. For developments having a density of less than one (1) ERU per acre, the applicant may elect to install a septic system provided that the applicant obtains an appropriate permit from the Volusia County Health Department and the City's existing gravity collection system is not within 200 feet of the proposed development.

f. Solid Waste:

Average residential pick-ups per truck	1,400
Average commercial pick-ups/truck/route	160
Average residential pick-ups/man/day	800-600
Pounds/capita/day for residential, commercial and industrial waste	5.83
Pounds/capita/day for special wastes	3.85

g. Drainage: The difference in the volume of run-off for 25 years frequency, 24-hour duration storm event between pre-development and post-development conditions shall be retained on-site. The difference between the pre-development and post-development conditions for peak run-off rates for the 100-year frequency, 24-hour duration rainfall event shall be retained on-site. Individual development facility capacity shall be maintained so that there is no potential flooding increase above the base year elevation. There shall be no degradation of water quality of Class III waters. An equal or greater volume of storage capacity must be created for any volume of the regulatory flood that would be displaced by fill or structures. The velocity of the regulatory flood must not be adversely altered on any watercourse. Areas not filled are to generally be left in their natural state. However, such areas may be used to meet landscaping and/or retention requirements, provided that the design is consistent with the then-existing City standards and ordinance requirements. Fill limitations consistent with the Land Development Code and the performance standards for each wetland classification established by the Conservation Element shall be enforced for all developments lying within areas of special flood hazard, as defined by the 100-year floodplain boundaries of the Federal Emergency Management Agency Flood Insurance Rate Map.

POLICY 1.3.3.

The City shall maintain provisions in the Land Development Code that will ensure that, at the time a development order is issued, adequate facility capacity is or will be available when needed to serve the development.

POLICY 1.3.4.

The City shall evaluate proposed plan amendments and requests for new development based on the following guidelines:

a. Creates potential public hazard.

b. Accentuates any existing facility deficiencies.

c. Generates public facility demands that could be accommodated by scheduled capacity increases in the capital improvements schedule.

d. Conforms with the Future Land Use Map (Future Land Use Element) and service areas (Utilities Element).

e. Affects other agencies' facilities plans.

f. Conforms to the Conservation Element's policies for natural resource protection.

g. Conforms to the Coastal Management Element's policies for limiting specific and cumulative impacts of development or redevelopment upon wetlands, water quality and quantity, wildlife habitat, living marine resources, and beach and dune systems.

h. Minimizes impacts to surrounding jurisdictions.

OBJECTIVE 1.4. IMPACT AND CONNECTION FEES

Future development projects shall pay their fair share of the cost of providing facilities and services required to maintain adopted level-of-service standards as specified in the Land Development Code. Impact and connection fees, developer dedications and contributions shall be required in an amount equal to the cost of the infrastructure required to serve the development.

POLICY 1.4.1.

Recreation impact fees shall be continued and refined as needed to adequately maintain adopted level-of-service standards.

POLICY 1.4.2.

Water and sewer connection fees shall be periodically reviewed and adjusted in accordance with Florida Statutes to assure that revenues are equal to growth-related capital expenditures, and to adequately maintain adopted level-of-service standards.

POLICY 1.4.3. The City shall continue to require that developers build water, sewer and reclaimed water infrastructure, local streets and internal collectors and provide off-site improvements needed for their development including but not limited to acceleration/deceleration lanes, turning lanes and traffic signals.

OBJECTIVE 1.5. FISCAL RESOURCES

The City shall manage its fiscal resources to ensure the provision of needed capital improvements for previously issued development orders and for future development and redevelopment.

POLICY 1.5.1.

In providing capital improvements funded by general obligation bond issues, the City shall limit outstanding indebtedness to no greater than five (5%) percent of its property tax base.

POLICY 1.5.2.

The City shall continue to adopt an annual capital budget and a five- (5) year capital improvement program as part of its budgeting process.

POLICY 1.5.3.

The City shall continue its efforts to secure State or Federal grants or private funds whenever available for capital improvements financing, through actively seeking and applying for grants and, if required, providing matching funds for grants.

POLICY 1.5.4.

Prior to scheduling any referenda to finance capital projects, the City shall make every effort to identify alternative funding sources.

POLICY 1.5.5.

Prior to the issuance of Certificates of Occupancy, the City shall provide for all public facilities needed to serve developments for which development orders were previously issued.

POLICY 1.5.6.

If a Capital improvement is needed to maintain a level-of-service standard, then new development will be required to contribute its fair share toward the improvement.

OBJECTIVE 1.6. LOCAL AND REGIONAL FACILITIES & SERVICES

The City shall require that necessary local and regional facilities and services be available concurrent with the impacts of development through the adoption of a concurrency management system as implemented by the Land Development Code.

POLICY 1.6.1.

The City shall verify that all public facilities needed to serve new development have been provided prior to the approval of an application for final subdivision plan or final site plan.

POLICY 1.6.2.

The City shall continue to implement a concurrency management system to:

a. Determine whether necessary facilities identified within the City's Capital Improvements Element, including Traffic Circulation, Recreation and Open Space, and Utilities are being constructed in accordance with the schedules in the Comprehensive Plan.

b. Update annually existing level-of-service, committed capacity as defined in the Land Development Code, and facility needs prior to and in conjunction with the annual update of the Capital Improvements Element, except that a shorter time frame, daily, monthly, or semi-annually, will be used as appropriate where the level-of-service is near capacity.

The City plat approval process will require that necessary regional and local facilities and services be available concurrent with the impacts of development after the adoption of the concurrency management system through any of the following situations:

1. The necessary facilities are in place at the time a plat approval is issued, or a plat approval is issued subject to the condition that the necessary facilities will be in place when the impacts of the development occur.
2. The necessary facilities are under construction at the time a plat approval is issued.
3. The necessary facilities are the subject of a binding contract executed for the construction of those necessary facilities at the time a plat approval is issued. Capacity to meet Level-of-Service for sanitary sewer, potable water, drainage and solid waste shall be in place prior to awarding concurrency status for any development order.
4. The necessary road facilities as listed in the first three (3) years of the Florida Department of Transportation Five-Year Work Program have been included in the Volusia County or City of Ormond Beach annual budget at the time a plat approval is issued. A plan amendment is required to eliminate, defer or delay construction of any road or mass transit facility or service which is needed to maintain the adopted level-of-service standards and which is listed in the five- (5-) year schedule of capital improvements.

For those parcels that do not require platting, the above steps will be considered at the time of site plan and review. In such cases the words “site plan” will replace “plat approval” wherever it appears above.

POLICY 1.6.3

Capital Improvements necessary for water supply concurrency will be identified and included in the annual update to the Capital Improvements Schedule.

OBJECTIVE 1.7. INTERGOVERNMENTAL COORDINATION

Intergovernmental cooperation and coordination shall be established and maintained in order to plan for and provide the best methods for providing efficient, cost-effective, and environmentally sound public facilities and services.

POLICY 1.7.1.

Effective administrative and procedural mechanisms which promote the coordination, planning and provision of public facilities and services shall be used at every possible opportunity. Adherence to this policy cluster, at a minimum, shall include the following actions:

a. The City shall establish formal and informal methods of contact and communication with adjacent and/or affected units of local government concurrent with the initiation of planning for new public facilities or improvements to existing public facilities for the purpose of interjurisdictional coordination in the planning, construction and operation of such facilities, where appropriate.

b. Administrative and procedural mechanisms shall be used to more effectively coordinate, plan and provide public facilities and services.

OBJECTIVE 1.8. ORMOND CROSSINGS ACTIVITY CENTER

The Ormond Crossings Activity Center provides the City with the opportunity to master plan a mixed-use development, including the needed public facilities required to meet the minimum levels of service established in this Comprehensive Plan.

POLICY 1.8.1.

The City shall monitor the progress of the development to analyze and where necessary, amend the Capital Improvements Element (CIE) and other related elements to ensure that public infrastructure and facilities are in place to ensure that minimum levels-of-service are maintained at the lowest possible cost to the City. The following is a list of improvements that may be required, as identified in the Ormond Crossings Activity Center Development Agreement. This list is to be used for general planning purposes and provide guidelines to the City. This policy shall not be interpreted to mean that changes to the development plan for the identified improvement cannot occur in the future. Given the potential time needed for this project to reach buildout, changes are to be expected. This policy provides a process and background for future capital planning efforts of the City.

SCHEDULE OF IMPROVEMENTS

The tables on the following pages of the Capital Improvements Element will be used to effectively stage the timing, estimated cost, and revenue sources of the capital improvements projected for the future. All items listed are consistent with individual Comprehensive Plan Elements.

The Schedule of Improvements are based upon the annual Ormond Beach Capital Improvement Plan and the capital improvements of other organizations such as Volusia County School Board and the Transportation Planning Organization.

MONITORING / EVALUATION

The Capital Improvements Element requires a continuous program for monitoring and evaluation, and pursuant to Chapter 163, F.S., the Element must be reviewed every year to ensure that the fiscal resources are available to provide public facilities needed to support adopted Level-of-Service standards.
Programs that will be adopted to ensure that the Goals, Objectives and Policies established in the Capital Improvements Element include:

a. The Concurrency Management System.

b. Annual review of the Capital Improvements Element.

c. Annual review of the City's budget to determine if all capital improvement projects are consistent with all Comprehensive Plan Elements and that the proposed projects will further the Goals, Objectives and Policies of the Comprehensive Plan.

~~Table A~~
~~Parks and Recreation~~
~~Capital Improvements Schedule~~
~~Based upon adopted Capital Improvement Plan, September 4, 2024~~

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
	Leisure Services							
1	OBSC Softball Field Reconstruction	Property Taxes-LS	$800,000	$0	$0	$0	$0	$800,000
2	Nova Field #1 Relocation	Echo Grant	$100.000	$900,000	$500,000	$0	$0	$1,500,000
		Property Taxes-LS						
3	Central Park Trails Systems	Echo Grant	$0	$0	$0	$1,000,000	$0	$1,000,000
		Property Taxes-LS						
		Total	**$900,000**	**$900,000**	**$500,000**	**$1,000,000**	**$0**	**$3,300,000**

Leisure Services Funding Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Echo Grant	$400,000	$450,000	$0	$500,000	$0	$1,350,000
Property Taxes – LS	$500,000	$450,000	$500,000	$500,000	$0	$1,950,000
Total	**$900,000**	**$900,000**	**$500,000**	**$1,000,000**	**$0**	**$3,300,000**

Table B
Community Redevelopment
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
	Downtown							
1	Community Center	Property Taxes – CRA	$0	$500,000	$0	$0	$7,118,000	$7,618,000
2	Traffic Calming	Property Taxes – TIF	$0	$100,000	$0	$0	$0	$100,000
3	Stormwater Improvements	Property Taxes – TIF Stormwater Charges	$0	$0	$1,100,000	$0	$0	$1,100,000
4	Thompson Creek, Phase 1	TPO (Grant Pending) Property Taxes – TIF	$0	$0	$624,716	$2,220,273	$0	$2,844,989
		Total	**$0**	**$600,000**	**$1,724,716**	**$2,220,273**	**$7,118,000**	**$11,662,989**

Downtown Funding Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Property Taxes - CRA	$0	$100,000	$862,472	$222,028	$7,118,000	$8,302,500
Property Taxes – TIF	$0	$0	$0	$0	$0	$0
Stormwater charges	$0	$0	$300,000	$0	$0	$300,000
Grant	$0	$500,000	$0	$0	$0	$500,000
TPO (Grant Pending)	$0	$0	$562,244	$1,998,245	$0	$2,560,489
Total	**$0**	**$600,000**	**$1,724,716**	**$2,220,273**	**$7,118,000**	**$11,662,989**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Water Improvements								
1	Water Main Replacement	Water & Sewer Charges	$300,000	$0	$0	$0	$0	$300,000
2	Wellfield Repairs	Water & Sewer Charges, Bond Proceeds	$0	$0	$151,400	$1,778,750	$0	$1,930,150
3	West Ormond Utilities Potable Tank and Station	To be determined	$375,000	$5,025,000	$0	$0	$0	$5,400,000
4	West Ormond Utilities – New Rima Wells	To be determined	$0	$0	$300,000	$3,007,500	$0	$3,307,500
5	West Ormond Utilities, Water Treatment Plan Evaluation	To be determined	$0	$0	$300,000	$0	$0	$300,000
6	Water System Expansion	To be determined	$0	$0	$0	$4,500,000	$42,750,000	$47,250,000
7	West Ormond Utilities – New Raw Water Wellfield	To be determined	$0	$0	$0	$0	$17,250,000	$17,250,000
Wastewater Improvements								
8	Halifax River Utility Crossing	Bond Proceeds	$480,000	$5,680,000	$0	$0	$0	$6,160,000
9	Water Reclamation Facility Filter Modification	Bond Proceeds	$475,000	$5,100,000	$0	$0	$0	$5,575,000
10	North US 1 Utility Adjustments	Water & Sewer Charges, Bond Proceeds	$0	$0	$300,000	$3,100,000	$0	$3,400,000
11	Pep Tank Elimination, Phase 1	Water & Sewer Charges, Bond Proceeds	$0	$0	$400,000	$5,750,000	$0	$6,150,000

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
12	West Ormond Utilities Airport Road Force Main Extension	To be determined, Daytona Beach	$275,000	$3,059,5000	$0	$0	$0	$3,334,500
13	West Ormond Utilities Water Reclamation Facility	To be determined, Daytona Beach	$6,500,000	$37,250,000	$37,250,000	$0	$0	$81,000,000
14	West Ormond Water Reclamation Facility Site Improvements	To be determined	$1,700,000	$0	$0	$0	$0	$1,700,000
15	West Ormond Utilities SR 40 Parallel Force Main	To be determined	$0	$225,000	$2,880,000	$0	$0	$3,105,000
16	West Ormond Utilities Hand Avenue Force Main	To be determined	$0	$0	$0	$300,000	$4,020,000	$4,320,000
Water and Sewer Improvements								
17	Public Works Management Site Upgrades	Water & Sewer Charges	$0	$0	$0	$0	$270,000	$270,000
18	Public Works Generator	Water & Sewer Charges	$0	$0	$0	$0	$255,000	$255,000
19	Public Works Renovation	Water & Sewer Charges	$0	$0	$0	$0	$338,000	$338,000
20	Utility Master Plan Update	Wastewater Impact Fees, Water impact Fees	$0	$380,000	$0	$0	$0	$380,000
21	West Ormond Utilities Area A Water Main & Force Main	To be determined	$200,000	$2,550,000	$0	$0	$0	$2,750,000

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Reclaim Water								
22	Reuse Reservoir	Bond Proceeds, SJRWMD, State Appropriation	$6,680,000	$0	$0	$0	$0	$6,680,000
Total			**$17,210,000**	**$56,899,500**	**$43,726,400**	**$18,436,250**	**$64,883,000**	**$201,155,150**

Utilities Funding Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Bond Proceeds	$4,765,000	$10,780,000	$0	$10,628,750	$0	$26,173,750
Daytona Beach	$1,990,000	$10,353,000	$9,450,000	$0	$0	$21,793,000
SJRWMD	$1,670,000	$0	$0	$0	$0	$1,670,000
To be determined	$7,285,000	$35,386,500	$33,425,000	$7,807,500	$64,020,000	$147,924,000
State Appropriation	$1,200,000	$0	$0	$0	$0	$1,200,000
Wastewater Impact Fee	$0	$190,000	$0	$0	$0	$190,000
Water & Sewer Charges	$300,000	$0	$851,400	$0	$863,000	$2,014,400
Water Impact Fees	$0	$190,000	$0	$0	$0	$190,000
Total	**$17,210,000**	**$56,899,500**	**$43,726,400**	**$18,436,250**	**$64,883,000**	**$201,155,150**

Table D
Transportation
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
1	Neighborhood Traffic Calming	Property Taxes – Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
2	Pineland Trail Roadway Improvements	River to Sea TPO grant	$0	$0	$0	$7,152,353	$0	$7,152,353
		Transportation Reserves						
3	US 1 North Sidewalk	River to Sea TPO grant	$0	$0	$0	$2,413,781	$3,096,361	$5,519,142
		Transportation Reserves						
		Totals:	**$50,000**	**$50,000**	**$50,000**	**$9,616,134**	**$3,146,361**	**$12,921,495**

Transportation Funding Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Property Taxes - Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
River to Sea TPO Grant	$0	$0	$0	$6,505,965	$0	$4,770,315
Bonds	$0	$0	$0	$2,382,038	$3,774,492	$2,382,038
Total	**$50,000**	**$50,000**	**$50,000**	**$8,938,003**	**$3,824,492**	**$12,912,495**

~~Table E~~
~~School Improvements~~
~~Capital Improvements Schedule~~

~~Based upon Volusia County Schools, Annual Operating Budget~~
~~https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets~~

Volusia County Schools
2025-2029 Capital Five-Year Work Program Forecast (Detail)
Capital Projects Funds - Local Capital Improvement Funds - Consolidated

	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029
Sources - revenues					
Local sources:					
Ad valorem property taxes	$ 99,170,467	$ 94,018,320	$ 97,250,400	$ 102,439,152	$ 106,686,288
Investment income	80,000	70,000	60,000	50,000	40,000
Total local sources	99,250,467	94,088,320	97,310,400	102,489,152	106,726,288
Total sources	**99,250,467**	**94,088,320**	**97,310,400**	**102,489,152**	**106,726,288**
Uses - expenditures					
New Construction					
Central Warehouse	-	-	2,500,000	15,000,000	-
Enterprise Elm - K-8 Replacement School	3,000,000	-	-	-	-
Hinson Mid - Classroom Addition	-	-	-	750,000	10,000,000
Indian River Elm - Classroom Addition	-	-	-	-	400,000
Manatee Cove Elm - 11 Classroom Addition	550,000	-	500,000	-	-
Pathways Elm - 11 Classroom Addition	550,000	-	500,000	-	-
Pine Ridge HS - 14 Classroom Addition	700,000	-	500,000	-	-
Port Orange Elm - Renovations	-	-	750,000	8,500,000	10,000,000
Read Pattillo Elm - K-8 Replacement School	750,000	-	2,000,000	-	-
Southwestern Mid - Renovate Kitchen and Multipurpose	6,000,000	-	-	-	-
Spruce Creek Elm - Campuswide HVAC and Lighting	-	-	1,200,000	-	-
Volusia Pines Elm - Classroom Addition	-	-	-	-	600,000
Total New Construction	11,550,000	-	7,950,000	24,250,000	21,000,000

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~~Table E~~
~~School Improvements~~
~~Capital Improvements Schedule~~
~~Based upon Volusia County Schools, Annual Operating Budget~~
~~https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets~~

Projects at Existing Schools and Facilities					
Atlantic HS - Press Box and Restroom Buildings	1,383,000	-	-	-	-
Atlantic HS - Renovate Group Restrooms Campus Wide	2,160,000	-	-	-	-
Blue Lake Elm - Renovate Basketball Courts	318,324	-	-	-	-
Brewster Center - Replace Emergency Generator	601,200	-	-	-	-
Brewster Center - Repair Floor Joists	-	117,600	-	-	-
Campbell Mid - Replace Emergency Generator	-	597,600	-	-	-
Creekside Mid - Replace Stage Lighting and Sound System	-	-	900,000	-	-
DeLand Administrative Complex - Upgrade Data Center Ba	250,000	-	-	-	-
Deltona HS - Upgrade Stage Lighting	900,000	-	-	-	-
Deltona HS - Foundation Repairs Bldg. 2	3,000,000	-	-	-	-
DeLand Mid - School Envelope Improvement	-	3,900,000	-	-	-
Edgewater Public Elm - Renovate Media Center	360,000	-	-	-	-
Edgewater Public Elm - Upgrade Parking Lot and Bus Loop	-	-	400,000	-	-
Edgewater Public Elm - Replace Stage Lighting and Sound S	-	600,000	-	-	-
Forest Lake Elm - Parent Loop Extension	1,000,000	-	-	-	-
Freedom Elm - Replace DOAS Bldgs. 3 and 4	1,300,000	-	-	-	-
Freedom Elm - Replace Stage Lighting and Sound System	-	600,000	-	-	-
Freedom Elm - Replace DOAS Bldgs. 1 and 2	-	1,400,000	-	-	-
Heritage Mid - New Marquee	-	216,000	-	-	-
Hinson Mid - Upgrade HVAC and Lighting Bldg. 7	-	1,800,000	-	-	-
Mainland HS - Stormwater Upgrades	1,500,000	-	-	-	-
Mainland HS - Upgrade Site Lighting	-	-	900,000	-	-
Mainland HS - Renovate Cafeteria	-	2,640,000	-	-	-
New Smyrna Transportation - Vehicle Lift Foundation	111,840	-	-	-	-
New Smyrna Beach HS - Upgrade BAS Bldgs. 1-4	-	1,488,044	-	-	-
New Smyrna Beach Mid - Replace Millwork Campus Wide	-	-	1,500,000	-	-
Osceola Elm - Reroof Bldgs. 4 and 9	94,000	-	-	-	-
Osceola Elm - Renovation for Riverview Move	-	3,426,000	-	-	-
Osteen Elm - Replace Gutters and Downspouts	556,390	-	-	-	-
Parking Lot Lease - City of DeLand	28,665	28,665	28,665	28,665	28,665

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~~Table E~~
~~School Improvements~~
~~Capital Improvements Schedule~~
~~Based upon Volusia County Schools, Annual Operating Budget~~
~~https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets~~

Buses					
Bus and Safety	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Total Buses	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Charter School Disbursements					
Charter School Capital Outlay LCIF Disbursements	1,034,127	1,313,192	1,938,308	2,753,078	3,010,532
Total Charter School Disbursements	1,034,127	1,313,192	1,938,308	2,753,078	3,010,532
Roll Forward					
Prior Year Carryover Encumbrances	50,658,975	-	-	-	
Prior Year Carryover Appropriations	31,769,478	-	-	-	
Total roll forward	82,428,453	-	-	-	
Total uses	129,832,497	39,335,039	30,674,973	43,831,743	40,839,197
Excess (deficiency) of revenues over expenditures	(30,582,030)	54,753,281	66,635,427	58,657,409	65,887,091
Other financing uses					
Transfers - General Fund	(31,681,710)	(33,015,595)	(34,416,175)	(35,886,784)	(37,430,924)
Transfers - Debt Service Funds	(21,317,043)	(23,546,350)	(23,549,950)	(23,553,850)	(23,551,300)
Total other financing uses	(52,998,753)	(56,561,945)	(57,966,125)	(59,440,634)	(60,982,224)
Net change in fund balances	(83,580,783)	(1,808,664)	8,669,302	(783,225)	4,904,867
Fund balances					
Beginning Balance	91,404,931	7,824,148	6,015,483	14,684,785	13,901,559
	2024-2025	**2025-2026**	**2026-2027**	**2027-2028**	**2028-2029**
Ending Balance	**$ 7,824,148**	**$ 6,015,483**	**$ 14,684,785**	**$ 13,901,559**	**$ 18,806,427**

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~~Table F~~

~~River to Sea Transportation Planning Organization Transportation Improvement Plan~~

~~Capital Improvements Schedule~~

~~https://www.r2ctpo.org/planning-studies/transportation-improvement-program/~~

#	Project Description/Area	<2025	2025	2026	2027	2028	FY 28-29
1	419772-1 – I-95 N. Ormond Business Park Interchange	$559,027	$0	$0	$0	$0	$559,027
2	428947-1- SR 40 (Granada Blvd.) from Breakaway Trail to Williamson Blvd	$4,710,989	$400,000	$2,190,000	$2,107,386	884,708	$10,293,083
3	419772-2 - I-95 Interchange at SR5 (US1)	$50.650,966	$0	$0	$240,681,710	$0	$291,332,676
4	419772-3 – I-95 Interchange at SR 5 (US1)	$6,409,678	$200,000	$0	$0	$0	$6,609,678
5	453588-1 – I-95 Interchange at SR-40	$0	$3,529,500	$0	$0	$0	$3,529,500
6	448786-1 US-1 from Airport Road to Broadway Avenue	$498,702	$0	$0	$0	$4,516,483	$5,015,185
7	440950-1 – Thompson Creek Trail	$0	$0	$686, 302	$0	$0	$686,302
Totals		**$12,178,396**	**$4,129,500**	**$2,190,000**	**$242,789,096**	**$5,401,191**	**$318,025,451**

Table G
General Capital Improvement Fund
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
1	Police Station/EOC	Bonds, Legislative Funding	$2,900,000	$24,000,000	$24,000,000	$0	$0	$50,900,000
Total			**$2,900,000**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$50,900,000**

General Capital Improvement Fund Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Bonds	$1,450,000	$24,000,000	$24,000,000	$0	$0	$49,450,000
Legislative Funding	$1,450,000	$0	$0	$0	$0	$1,450,000
Total	**$2,900,000**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$50,900,000**

Table A
Parks and Recreation
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Expenditures							
1	OBSC Softball Field Reconstruction	Property Taxes – LS Echo Grant	$800,000	$0	$0	$0	$0	**$800,000**
2	Nova Field #1 Relocation	Property Taxes – LS Echo Grant	$900,000	$500,000	$0	$0	$0	**$1,400,000**
3	Central Park Trail Systems	Property Taxes – LS Echo Grant	$0	$0	$1,000,000	$0	$0	**$1,000,000**
4	LED Lighting on Fields 11 and 12	Racing & Rec. Grant Rec. Impact Fees	$500,000	$0	$0	$0	$0	**$500,000**
		Total	**$2,200,000**	**$500,000**	**$1,000,000**	**$0**	**$0**	**$3,700,000**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Property Taxes – LS	$850,000	$500,000	$500,000	$0	$0	**$1,850,000**
ECHO Grant	$850,000	$0	$500,000	$0	$0	**$1,350,000**
Racing and Recreation Grant	$300,000	$0	$0	$0	$0	**$300,000**
Recreation Impact Fees	$200,000	$0	$0	$0	$0	**$200,000**
Total	**$2,200,000**	**$500,000**	**$1,000,000**	**$0**	**$0**	**$3,700,000**

Table B
Community Redevelopment
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Expenditures							
1	Linear Park	Property Taxes – TIF	$36,000	$75,000	$500,000	$0	$0	**$611,000**
2	Thompson Creek, Phase 1	TPO (Grant Pending) Property Taxes – TIF	$0	$624,716	2,220,273	$0	$0	**$2,844,989**
3	Stormwater Improvements	Stormwater Charges Property Taxes – TIF	$0	$0	$0	$1,100,000	$0	**$1,100,000**
4	Granada Bridge Lighting	Property Taxes – TIF	$0	$0	$0	$0	$4,000,000	**$4,000,000**
		Total	**$36,000**	**$699,716**	**$2,720,273**	**$1,100,000**	**$4,000,000**	**$8,555,989**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Property Taxes – TIF	$36,000	$137,472	$722,028	$800,000	$4,000,000	**$5,695,500**
Stormwater charges	$0	$0	$0	$300,000	$0	**$300,000**
Grant	$0	$0	$0	$0	$0	**$0**
TPO (Grant Pending)	$0	$562,244	$1,998,245	$0	$0	**$2,560,489**
Total	**$36,000**	**$699,716**	**$2,720,273**	**$1,100,000**	**$4,000,000**	**$8,555,989**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Water Improvements							
1	Halifax River Utility Crossing	Bond Proceeds	$5,680,000	$0	$0	$0	$0	**$5,680,000**
2	Water Main Replacement	Bond Proceeds	$0	$6,500,000	$3,500,000	$3,500,000	$3,500,000	**$17,000,000**
3	WTP Replace Lime Softening Filters 5 & 6	Bond Proceeds	$0	$5,375,000	$0	$0	$0	**$5,375,000**
4	Wellfield Construction	Bond Proceeds Water & Sewer Charges	$0	$0	$175,000	$1,837,500	$0	**$2,012,500**
5	West Ormond Utilities Potable Tank and Station	To Be Determined	$5,730,000	$0	$0	$0	$0	**$5,730,000**
6	West Ormond Utilities WTP Evaluation	To Be Determined	$0	$0	$0	$300,000	$0	**$300,000**
7	West Ormond Utilities WTP	To Be Determined	$0	$0	$0	$4,500,000	$42,750,000	**$47,250,000**
8	West Ormond Utilities - Hudson Wellfield Retrofit	To Be Determined	$0	$0	$0	$0	$17,860,800	**$17,860,800**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Wastewater Improvements							
9	Water Reclamation Facility Filter Modification	Bond Proceeds	$6,100,000	$0	$0	$0	$0	**$6,100,000**
10	North US 1 Utility Adjustments	FDOT Reimbursement	$0	$173,511	$1,330,251	$0	$0	**$1,503,762**
11	PEP Tank Elimination	Water & Sewer Charges Bond Proceeds	$0	$800,000	$11,500,000	$250,000	$5,000,000	**$17,550,000**
12	WRF Clarifier Rehabilitation	Bond Proceeds	$0	$0	$1,800,000	$1,800,000	$0	**$3,600,000**
13	WRF Influent Pump Station Replacement	Bond Proceeds Water & Sewer Charges HMGP Grant	$0	$0	$0	$1,100,000	$7,150,000	**$8,250,000**
14	WTP South Generator Replacement	Water & Sewer Charges HMGP Grant	$0	$0	$0	$140,000	$1,465,000	**$1,605,000**
15	West Ormond Utilities Airport Rd FM Extension	To Be Determined Daytona Beach	$3,059,500	$0	$0	$0	$0	**$3,059,500**
16	West Ormond Utilities Hand Ave FM	To Be Determined	$0	$0	$300,000	$4,020,000	$0	**$4,320,000**
17	West Ormond Utilities Area SR40 Parallel FM	To Be Determined	$0	$0	$0	$225,000	$2,880,000	**$3,105,000**
18	West Ormond Utilities Area WRF	To Be Determined Daytona Beach	$6,500,000	$37,250,000	$37,250,000	$0	$0	**$81,000,000**
19	West Ormond Utilities Area WRF Site Improvements	To Be Determined	$1,700,000	$0	$0	$0	$0	**$1,700,000**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Water and Sewer Improvements							
20	Public Works Generator	Water & Sewer Charges	$350,000	$0	$0	$0	$0	**$350,000**
21	Public Works Renovation	Water & Sewer Charges	$850,000	$0	$0	$0	$0	**$850,000**
22	Utility Master Plan Update	Utility Collection Fees - Wastewater Utility Collection Fees - Water	$380,000	$0	$0	$0	$0	**$850,000**
23	West Ormond Utilities Area A WM FM	To Be Determined	$2,250,000	$0	$0	$0	$0	**$2,250,000**
		Total	**$3,830,000**	**$0**	**$0**	**$0**	**$0**	**$3,830,000**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Bond Proceeds	$11,780,000	$11,875,000	$16,975,000	$7,262,500	$10,287,500	**$58,180,000**
Water & Sewer Charges	$1,200,000	$800,000	$0	$435,000	$366,250	**$2,801,250**
FDOT Reimbursement	$0	$173,511	$1,330,251	$0	$0	**$1,503,762**
HMGP Grant	$0	$0	$0	$930,000	$6,461,250	**$7,391,250**
Utility Collection Fees - Wastewater	$190,000	$0	$0	$0	$0	**$190,000**
Utility Collection Fees - Water	$190,000	$0	$0	$0	$0	**$190,000**
To Be Determined	$16,446,500	$27,800,000	$28,100,000	$9,045,000	$63,490,800	**$144,882,300**
Daytona Beach	$2,793,000	$9,450,000	$9,450,000	$0	$0	**$21,693,000**
Total	**$32,599,500**	**$50,098,511**	**$55,855,251**	**$17,672,500**	**$80,605,800**	**$236,831,562**

Table D
Transportation
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Expenditures								
1	Multi-modal Trails Plan	Transportation Fund	$250,000	$0	$0	$0	$0	$250,000
2	Neighborhood Traffic Calming	Property Taxes - Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
3	Forest Hills Sidewalk Project	CDBG	$0	$1,372,350	$0	$0	$0	$1,372,350
4	Pineland Trail Roadway Improvements	Volusia Flagler TPO	$0	$0	7,152,353	$0	$0	$7,152,353
		Bond Proceeds						
5	US 1 North Sidewalk	Volusia Flagler TPO	$0	$0	$2,413,781	$3,096,361	-	$5,510,142
		Bond Proceeds						
		Total	**$300,000**	**$1,422,350**	**$9,616,134**	**$3,146,361**	**$50,000**	**$14,534,845**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Transportation Fund	$250,000	$0	$0	$0	$0	**$250,000**
Property Taxes - Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	**$250,000**
CDBG	$0	1372350	$0	$0	$0	**$1,372,350**
Volusia Flagler TPO	$0	$0	$6,505,965	$0	$0	**$6,505,965**
Bond Proceeds	$0	$0	$3,060,169	3096361	$0	**$6,156,530**
Total	**$300,000**	**$1,422,350**	**$9,616,134**	**$3,146,361**	**$50,000**	**$14,534,845**

Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets

VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Sources - revenues					
State sources:					
CO&DS distributed	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000
Interest on undistributed CO & DS	16,500	16,500	16,500	16,500	16,500
Total state sources	2,266,500	2,266,500	2,266,500	2,266,500	2,266,500
Local sources:					
Ad valorem property taxes	104,592,392	111,436,992	117,496,656	123,192,864	129,132,432
Local Sales tax	66,539,629	67,464,953	68,403,144	69,354,383	70,318,849
Investment income	1,370,000	1,160,000	950,000	740,000	530,000
Impact fees	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Total local sources	182,502,021	190,061,945	196,849,800	203,287,247	209,981,281
Total sources	**184,768,521**	**192,328,445**	**199,116,300**	**205,553,747**	**212,247,781**
Uses - expenditures					
New Construction					
Enterprise Elm - K-8 Replacement School	-	72,000,000	-	-	-
Facilities Warehouse Expansion	-	-	2,500,000	12,000,000	250,000
Hinson Mid - 14 Classroom Addition	-	-	1,200,000	13,900,000	-
Indian River Elm - 11 Classroom Addition	-	-	-	900,000	12,750,000
New Smyrna Beach Mid - 14 Classroom Addition	-	1,200,000	13,900,000	-	-
Pathways Elm - 11 Classroom Addition	12,000,000	750,000	-	-	-
Pine Ridge HS - 20 Classroom Addition	21,000,000	1,000,000	-	-	-
Read-Pattillo Elm - K-5 Replacement School	-	2,000,000	50,000,000	2,000,000	-
Silver Sands Mid - 14 Classroom Addition	-	1,200,000	13,900,000	-	-
Spruce Creek Elm - Upgrade HVAC and Lighting Campus W	-	-	-	16,168,664	-
Sugar Mill Elm - 11 Classroom Addition	900,000	12,750,000	-	-	-
Total New Construction	33,900,000	90,900,000	81,500,000	44,968,664	13,000,000

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Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
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	2025-26	2026-27	2027-28	2028-29	2029-30
Projects at Existing Schools and Facilities					
All High Schools - Athletic Facility Leases	180,000	180,000	180,000	180,000	180,000
Atlantic HS - Repair Stucco Second Floor Walkway	638,000	-	-	-	-
Atlantic HS - Upgrade HVAC, Ceiling and Lighting Bldg. 4	-	2,786,400	-	-	-
Atlantic HS - Technology Lab Conversion	-	-	1,500,000	-	-
Atlantic HS - Replace Windows	-	-	-	4,500,000	-
Brewster Center - Repair Floor Joists	117,600	-	-	-	-
Brewster Center - Upgrade Main Electrical Distribution	-	2,000,000	-	-	-
Campbell Mid - Replace Emergency Generator	597,600	-	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 5 and 9	1,817,016	-	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 1 and 2	-	1,129,086	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 8 and 10	-	-	518,906	-	-
Champion Elm - Upgrade CEP	1,171,734	-	-	-	-
Creekside Mid - Replace Stage Lighting and Sound System	-	900,000	-	-	-
Daytona Transportation - Replace Emergency Generator	480,000	-	-	-	-
DeBary Elm - Upgrade HVAC, Ceiling and Lighting Bldgs. 1,	-	-	4,277,362	-	-
DeBary Elm - Renovate Media Center	-	525,000	-	-	-
Deltona HS - Rebuild Chillers, Cooling Tower and Piping	2,836,453	-	-	-	-
DeLand Administrative Complex - Replace Data Center Floc	160,464	-	-	-	-
DeLand HS - Digital Marquee	165,000	-	-	-	-
Deltona HS - Reroof Bldg. 26	210,000	-	-	-	-
Deltona Lakes Elm - Upgrade Intrusion and Fire Alarm Mor	174,000	-	-	-	-
Deltona Maintenance - Replace Emergency Generator and	690,000	-	-	-	-
Deltona Transportation - Replace Fuel Island and Tanks	1,170,000	-	-	-	-

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Table E
School Improvements
Capital Improvements Schedule
Based upon Volusia County Schools, Annual Operating Budget

VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
DeLand Administrative Complex - Renovate Board Room	1,400,000	-	-	-	-
DeLand Mid - School Envelope Improvement	-	-	3,900,000	-	-
DeLand HS - Upgrade HVAC Bldg. 17	-	1,890,850	-	-	-
Deltona HS - Technology Lab Conversion	-	-	500,000	-	-
DeLand HS - Replace Two 350 Ton Chillers	-	-	2,048,370	-	-
DeLand Mid - Renovate Media Center	-	525,000	-	-	-
DeLand Transportation - Replace Fuel Tanks	-	906,000	-	-	-
Deltona HS - Replace Exterior Doors and Windows	-	-	-	-	5,500,000
Edgewater Public Elm - Replace Stage Lighting and Sound S	600,000	-	-	-	-
Edgewater Public Elm - Upgrade Parking Lot and Bus Loop	-	400,000	-	-	-
Forest Lake Elm - Increase Bus Loop Parking	433,000	-	-	-	-
Freedom Elm - Replace DOAS Bldgs. 1 and 2	1,400,000	-	-	-	-
Freedom Elm - Replace Stage Lighting and Sound System	600,000	-	-	-	-
Freedom Elm - Digital Marquee	-	-	216,000	-	-
Freedom Elm - Replace DOAS Bldg. 7	-	-	-	1,085,000	-
Friendship Elm - Replace Switchgear Bldg. 4	284,000	-	-	-	-
Friendship Elm - Upgrade HVAC Bldgs. 1 and 2	-	3,368,400	-	-	-
Heritage Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 1	-	4,076,081	-	-	-
Heritage Mid - Convert Computer Lab to Science Lab Bldg.	648,000	-	-	-	-
Heritage Mid - Digital Marquee	216,000	-	-	-	-
Heritage Mid - Upgrade HVAC, Ceiling and Lighting Bldg. 3	2,000,000	-	-	-	-
Herbert Street Center - Upgrade HVAC	-	-	1,969,859	-	-
Heritage Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 9	-	-	3,700,000	-	-
Hinson Mid - Upgrade HVAC and Lighting Bldg. 7	-	-	1,800,000	-	-
Hinson Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 3 a	-	3,943,360	-	-	-
Holly Hill School - Replace Boiler	247,800	-	-	-	-
Holly Hill School - Upgrade Intrusion and Fire Alarm Monitc	174,000	-	-	-	-
Horizon Elm - Replace Chiller Bldg. 11	345,000	-	-	-	-
Horizon Elm - Physical Education Pavillion with Two Basket	-	654.000	-	-	-

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Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Indian River Elm - Replace Switchgear Bldg. 4	360,000	-	-	-	-
Indian River Elm - Upgrade HVAC, Ceiling and Lighting Bldg	-	-	2,864,866	-	-
Mainland HS - Upgrade Stage Lighting	1,440,000	-	-	-	-
Mainland HS - Upgrade Site Lighting	-	900,000	-	-	-
Mainland HS - Renovate Cafeteria	-	2,640,000	-	-	-
New Smyrna Beach HS - Replace Gutters and Downspouts	838,800	-	-	-	-
New Smyrna Beach HS - Upgrade Intrusion and Fire Alarm	174,000	-	-	-	-
New Smyrna Beach HS - Upgrade BAS Bldgs. 1-4	-	1,668,415	-	-	-
New Smyrna Beach Mid - Replace Millwork Campus Wide	-	1,500,000	-	-	-
New Smyrna Transportation - Replace Fuel Tanks	-	-	906,000	-	-
Ormond Beach Mid - Upgrade Intrusion and Fire Alarm Mo	174,000	-	-	-	-
Osceola Elm - Renovation for Riverview Move	-	2,000,000	-	-	-
Osteen Elm - Modify Bus Loop Entrance	1,000,000	-	-	-	-
Osteen Elm - Upgrade CEP	-	1,236,822	-	-	-
Osteen Elm - Digital Marquee	-	-	-	220,000	-
Palm Terrace Elm - Replace Emergency Generator	672,000	-	-	-	-
Palm Terrace Elm - Upgrade CEP	2,391,683	-	-	-	-
Pathways Elm - Upgrade Stage Lighting and Sound System	500,000	-	-	-	-
Pathways Elm - Upgrade Parking Lot Lighting	-	258,000	-	-	-
Pine Ridge HS - Replace Intercom	834,000	-	-	-	-
Pine Ridge HS - Upgrade Kitchen and Dining HVAC, Ceilings	3,091,483	-	-	-	-
Pine Trail Elm - Parent Loop Extension	1,986,000	-	-	-	-
Pine Trail Elm - Upgrade Stage Sound	460,000	-	-	-	-
Pine Ridge HS - Renovate Ag Lab	-	-	750,000	-	-
Pine Ridge HS - Upgrade Auditorium Seating and Flooring	-	1,320,000	-	-	-

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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Pine Ridge HS - Upgrade Main Electrical Switchgear	-	-	-	-	2,200,000
Pine Ridge HS - Renovate Culinary Lab	-	-	-	1,700,000	-
Portables - Moves and Compliance	400,000	400,000	400,000	400,000	400,000
Port Orange Elm - Replace Fire Alarm	1,116,000	-	-	-	-
Pride Elm - Upgrade Chiller and Controls	-	1,800,000	-	-	-
R.J. Longstreet Elm - Remodel Media Center	432,000	-	-	-	-
R.J. Longstreet Elm - Upgrade Parking Lot and Canopy Ligh	200,000	-	-	-	-
River Springs Mid - Parent Loop Extension	2,500,000	-	-	-	-
River Springs Mid - Convert Three Classrooms to Science La	1,656,000	-	-	-	-
River Springs Mid - New Chiller Plant	-	3,500,000	-	-	-
Seabreeze HS - Upgrade HVAC Bldg. 3	2,611,806	-	-	-	-
Seabreeze HS - Reroof Bldg. 7	510,000	-	-	-	-
Seabreeze HS - Upgrade MDP and Secondary Feeders Cam	2,310,000	-	-	-	-
Seabreeze HS - Digital Marquee	-	216,000	-	-	-
Seabreeze HS - Upgrade Parking Lot Lighting	-	546,000	-	-	-
Seabreeze HS - Upgrade Stormwater and Additional Parkin	-	-	-	-	3,000,000
Seabreeze HS - Renovate Classrooms Bldgs. 8 and 9	-	-	-	-	1,500,000
Seabreeze HS - Replace Exterior Doors	-	-	-	950,000	-
Silver Sands Mid - Renovate Media Center	525,000	-	-	-	-
Silver Sands Mid - Replace Gymnasium Bleachers	400,000	-	-	-	-
Silver Sands Mid - Replace WSHP Bldg. 10	1,227,936	-	-	-	-
Silver Sands Mid - Upgrade Condenser Water Loop	4,200,000	-	-	-	-
South Daytona Elm - Renovate Media Center	525,000	-	-	-	-
South Daytona Elm - Reroof Bldgs. 6, 7 and 8	639,600	-	-	-	-
South Daytona Elm - Upgrade Kitchen Flooring, Lighting an	354,000	-	-	-	-
Southwestern Mid - Replace Gymnasium Bleachers	400,000	-	-	-	-
Southwestern Mid - Upgrade HVAC Bldgs. 1 and 2	-	-	4,688,615	-	-

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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Spirit Elm - Upgrade HVAC Bldg. 7	539,918	-	-	-	-
Spirit Elm - Upgrade HVAC Bldg. 6	-	-	-	1,668,455	-
Spirit Elm - Upgrade HVAC Bldgs. 1 and 2	-	2,780,780	-	-	-
Spirit Elm - Upgrade HVAC Bldgs. 3 and 5	-	-	2,799,215	-	-
Spruce Creek Elm - Replace 60 Ton Chiller	321,369	-	-	-	-
Spruce Creek HS - Upgrade Intrusion and Fire Alarm Monit	174,000	-	-	-	-
Spruce Creek HS - Upgrade Auditorium Seating and Floorin	-	1,290,000	-	-	-
Sugar Mill Elm - Parent Loop Extension	1,500,000	-	-	-	-
Sunrise Elm - Upgrade HVAC, Ceiling, Lighting Bldg. 2 and C	-	2,770,771	-	-	-
T. Dewitt Taylor Mid-HS - Upgrade CEP	2,028,756	-	-	-	-
Timbercrest Elm - Upgrade Boilers	600,000	-	-	-	-
Turie T. Small Elm - Expand Cafeteria	950,000	-	-	-	-
Various - Security	2,543,670	2,543,670	2,543,670	3,000,000	3,000,000
Various - Infrastructure for Technology	250,000	250,000	250,000	250,000	250,000
Various - Minor Projects	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Various Schools - High School Athletics	2,877,200	750,000	1,000,000	1,000,000	1,000,000
Various Schools - Playgrounds	300,000	300,000	300,000	300,000	300,000
Various - Elevator Upgrades	300,000	300,000	300,000	150,000	150,000
Volusia Pines Elm - Upgrade HVAC Bldgs. 3, 5 and 7	2,978,000	-	-	-	-
Volusia Pines Elm - Upgrade HVAC Bldgs. 4 and 8	-	1,100,000	-	-	-
Woodward Avenue Elm - Upgrade HVAC Bldg. 1 Pod 11	819,422	-	-	-	-
Total Projects at Existing Schools and Facilities	72,867,310	57,354,635	41,412,863	19,403,455	21,480,000
Facilities Management					
Contingency	10,725,000	9,000,000	9,000,000	9,000,000	9,000,000
Contingency - Operations	1,000,000	-	-	-	-
DeLand Warehouse - Lease	250,028	262,529	275,655	-	-

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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Facilities Management	3,250,000	3,250,000	3,250,000	3,250,000	3,250,000
Parking Lot Lease - City of DeLand	31,122	32,678	34,312	36,027	37,829
Various Schools - Leased Portables	350,000	100,000	100,000	100,000	100,000
Total Facilities Management	15,606,149	12,645,207	12,659,967	12,386,027	12,387,829
					-
Technology					
Centegix	456,330	456,330	456,330	-	-
Various Schools & Depts - District Wide Technology Equipn	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Various Secondary Schools - CTE Technology Equipment	650,000	650,000	650,000	650,000	650,000
Total Technology	11,106,330	11,106,330	11,106,330	10,650,000	10,650,000
System Wide Equipment and Vehicles					
Furn, Fix, Equip, Veh	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
White Fleet	910,000	910,000	910,000	910,000	910,000
Total System Wide Equipment and Vehicles	2,110,000	2,110,000	2,110,000	2,110,000	2,110,000
Buses					
Bus and Safety	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Total Buses	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Charter School Disbursements					
Charter School Capital Outlay LCIF Disbursements	1,553,967	2,213,278	3,077,283	3,401,684	3,735,186
Total Charter School Disbursements	1,553,967	2,213,278	3,077,283	3,401,684	3,735,186

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Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets

VOLUSIA COUNTY SCHOOLS

CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)

FOR FISCAL YEARS 2026 THROUGH 2030

ALL TEXT ON THIS PAGE IS NEW.

	2025-26	2026-27	2027-28	2028-29	2029-30
Roll Forward					
Prior Year Carryover Encumbrances	75,964,429	-	-	-	-
Prior Year Carryover Appropriations	93,411,228	-	-	-	-
Total roll forward	**169,375,657**	**-**	**-**	**-**	**-**
Total uses	**309,109,413**	**178,919,450**	**154,456,443**	**95,509,830**	**65,953,015**
Deficiency of revenues under expenditures	(124,340,892)	13,408,995	44,659,857	110,043,917	146,294,766
Other financing sources					
Transfers - General Fund	(38,402,151)	(40,270,906)	(42,248,314)	(44,114,831)	(46,294,923)
Transfers - Debt Service Funds	(40,730,758)	(42,640,707)	(46,743,952)	(52,049,459)	(52,061,320)
Proceeds of Lease-Purchase Agreements	-	82,000,000	63,000,000	-	-
Total other financing sources	**(79,132,909)**	**(911,613)**	**(25,992,265)**	**(96,164,290)**	**(98,356,242)**
Net change in fund balances	(203,473,802)	12,497,382	18,667,592	13,879,627	47,938,524
Fund balances					
Beginning Balance	284,175,588	80,701,786	93,199,168	111,866,759	125,746,386
Ending Balance	**$ 80,701,786**	**$ 93,199,168**	**$ 111,866,759**	**$ 125,746,386**	**$ 173,684,910**

Table E
School Improvements
Capital Improvements Schedule
Based upon Volusia County Schools, Annual Operating Budget
https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets

VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CAPTIAL OUTLAY AND DEBT SERVICE (CO&DS) PROGRAM - CONSOLIDATED
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Sources - revenues					
State sources:					
CO&DS distributed	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000
Interest on undistributed CO & DS	16,500	16,500	16,500	16,500	16,500
Total state sources	2,266,500	2,266,500	2,266,500	2,266,500	2,266,500
Total sources	**2,266,500**	**2,266,500**	**2,266,500**	**2,266,500**	**2,266,500**
Roll Forward					
Prior Year Carryover Encumbrances	5,868,387	-	-	-	-
Prior Year Carryover Appropriations	2,155,901	-	-	-	-
Total roll forward	**8,024,288**	**-**	**-**	**-**	**-**
Total uses	**8,024,288**	**-**	**-**	**-**	**-**
Deficiency of revenues under expenditures	(5,757,788)	2,266,500	2,266,500	2,266,500	2,266,500
Net change in fund balances	(5,757,788)	2,266,500	2,266,500	2,266,500	2,266,500
Fund balances					
Beginning Balance	16,419,085	10,661,297	12,927,797	15,194,297	17,460,797
Ending Balance	**$ 10,661,297**	**$ 12,927,797**	**$ 15,194,297**	**$ 17,460,797**	**$ 19,727,297**

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Table F
Volusia Flagler Transportation Planning Organization Transportation Improvement Plan Capital Improvements Schedule

https://www.r2ctpo.org/planning-studies/transportation-improvement-program/

#	Project Description/Area	<2026	2026	2027	2028	2029	2030	TOTAL
1	4197723 – I-95 Interchange at SR 5 (US1)	$11,952,33	$24,185,650	$254,032,478	$3,080,000	$2,208,820	$0	$295,459,275
2	428947-1- SR 40 (Granada Blvd.) from Breakaway Trail to Williamson Blvd	$5,561,730	$4,731,924	$2,700,000	$1,177,308	$580,000	$545,051	$15,296,013
3	4389791 - Sidewalk, US 1 from Wilmette Avenue to Airport Road	$0	$270,530	$0	$0	$0	$0	$270,530
4	440950-1 – Thompson Creek Trail, from Division Avenue to Wilmette Avenue	$0	$0	$686,302	$0	$0	$0	$686,302
5	4487862Sidewalk, US-1 from Airport Road to Broadway Avenue	$0	$0	$0	$4,327,333	$0	$0	$4,327,333
6	4506441, Resurfacing, SR5A (Nova Road) from Flomich Avenue to US 1	$2,327,681	$17,864,623	$0	$0	$0	$0	$20,192,304
Totals		**$7,901,363**	**$47,052,727**	**$257,418,780**	**$8,584,641**	**$2,788,820**	**$545,051**	**$336,231,757**

Table G
General Capital Improvement Fund
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Expenditures							
1	Police Station/EOC	Bond Proceeds	$0	$24,000,000	$24,000,000	$0	$0	**$48,000,000**
		Total	**$0**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$48,000,000**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Bond Proceeds	$0	$24,000,000	$24,000,000	$0	$0	**$48,000,000**
Total	**$0**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$48,000,000**

PLANNING BOARD
STAFF REPORT
Comprehensive Plan Amendments
Capital Improvements Schedule Annual Update
Project Number: PZ-2026-255

PLANNING BOARD DATE:	May 14, 2026
TENTATIVE CITY COMMISSION DATES:	July 21, 2026 and August 4, 2026
APPLICANT:	Administrative
REQUEST:	An administrative request to update the Capital Improvements Schedule of the Capital Improvements Element of the City of Ormond Beach Comprehensive Plan, consistent with the adopted Capital Improvement Plan, in accordance with State law. This update does not include any text changes to the goals, objectives, and policies of the Capital Improvements Element
STAFF RECOMMENDATION:	Approval
STAFF CONTACT:	Steven Spraker, AICP, Planning Director

SECTION 1, INTRODUCTION:

This is an administrative request to update the Capital Improvements Schedule of the Capital Improvements Element of the City of Ormond Beach Comprehensive Plan to be consistent with the adopted Capital Improvement Plan in accordance with State law. This update does not include any text changes to the goals, objectives, and policies of the Capital Improvements Element.

SECTION 2, BACKGROUND:

Chapter 163.3177(3)(b) of the Florida Statutes states, “The capital improvements element must be reviewed by the local government on an annual basis. Modifications to update the 5-year capital improvement schedule may be accomplished by ordinance and may not be deemed to be amendments to the local comprehensive plan.” Each year, local governments must update their Capital Improvements Element (CIE), including the Five-Year Schedule of Capital Improvements, to demonstrate funding or planning for the public facility improvements needed to support their population.

Policy 1.1.5. of the Capital Improvements Element states:

> The Capital Improvements Element shall be reviewed on an annual basis and modified as necessary in accordance with Section 163.3187, F.S. Corrections, updates and modifications concerning costs; revenue sources; acceptance of facilities, pursuant to dedications which are consistent with the plan; or the date of construction of any facility enumerated in the CIE may be accomplished by ordinance and shall not be deemed to be amendments to the Comprehensive Plan.

The list of capital projects are from the following documents:

1. Ormond Beach Capital Improvements Plan (CIP) adopted September 17, 2025;
2. Volusia County Schools Capital Project Details; and
3. Volusia-Flagler Transportation Planning Organization Transportation Improvement Program.

These project improvements assist in maintaining the city's adopted level-of-service (LOS) standards for public facilities. These facilities include water, sewer, stormwater, roads, parks, and schools. The City Commission approved the Ormond Beach Capital Improvements Plan on September 17, 2025. The proposed amendment updates the Schedule of Capital Improvements projects previously approved by the City Commission with the adopted Capital Improvement Plan. There was a delay in preparing the Capital Improvements Element tables while the Comprehensive Plan 2045 underwent final state approval.

The Capital Improvement Plan shows the current fiscal year (2025-26) with approved projects and outer fiscal years as proposed. The City Commission reviews and approves the Capital Improvement Plan annually. The Capital Improvements Schedule only includes capital projects. Capital projects, typically over $25,000, are designed for long-term use, such as a water line or road improvement. The Capital Improvement Plan includes vehicles, maintenance, repairs, and rehabilitation, but is not in the Capital Improvements Schedule. Some facilities, such as schools or roadways, are funded from sources outside the City and copied into the Capital Improvement Schedule.

Local governments are mandated to plan for the availability of public facilities and services to support development and the impacts of such development. The Capital Improvements Element and the Schedule aim to identify the capital improvements needed to implement the Comprehensive Plan and ensure adopted LOS Standards are achieved and maintained for concurrency-related facilities. The capital improvements schedule is not required to be submitted as a comprehensive plan amendment under the submittal procedures set forth in Section 163.3184, F.S. Other revisions related to the capital improvements schedule, such as map amendments or level-of-service revisions, may not be adopted in the same ordinance. The CIE annual update is limited solely to the schedule itself. The conditions governing the notice and hearing are the same as those required to adopt any local ordinance. The city is no longer required to submit the adoption ordinance and updated schedule to the Department of Economic Opportunity, but as a courtesy, will continue to do so.

SECTION 3, ANALYSIS:

The proposed amendment updates the Capital Improvements Schedule within the Capital Improvements Element consistent with the adopted five-year Capital Improvement Plan. Updates include:

Table A, Leisure Services – source: City Capital Improvement Plan

Table B, Community Redevelopment – source: City Capital Improvement Plan

Table C, Utilities – source: City Capital Improvement Plan

Table D, Transportation – source: City Capital Improvement Plan

Table E, School Improvements – source: Volusia County School operating budget (https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets)

Table F, River to Sea Transportation Planning Organization Transportation Improvement Plan
https://www.r2ctpo.org/planning-studies/transportation-improvement-program/

Table G, General Capital Improvement Fund – source: City Capital Improvement Plan

The proposed amendments to the CIE schedules are required to be in underline/strikethrough format and are attached for review as Attachment 1. The amendments include the Volusia County School District Five-Year Work Program and the Volusia-Flagler Transportation Planning Organization Transportation Work Program.

The fiscal year 2026-27 City Capital Improvement Program is underway with a City Commission workshop on May 19, 2026.

SECTION 4, RECOMMENDATION:

Updates to the Capital Improvements Schedule are required based on the city's Comprehensive Plan and Florida Statutes. It is recommended that the Planning Board **APPROVE** administrative amendments to the Comprehensive Plan for the adoption of the annual Capital Improvement Schedule update.

Attachment 1: 2025-26 Capital Improvement Element Annual Update

ATTACHMENT 1

Capital Improvements Element,
Capital Improvements Schedule

- Existing Schedule to be deleted
(~~in strikethrough~~)

- Proposed Schedule
(<u>in underline</u>)

CAPITAL IMPROVEMENTS ELEMENT









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GOAL 1.LEVEL-OF-SERVICE STANDARDS

PUBLIC FACILITIES SHALL BE PROVIDED IN A TIMELY AND EFFICIENT MANNER AS NECESSARY TO CORRECT EXISTING DEFICIENCIES IN THE LEVEL-OF-SERVICE FOR POTABLE WATER, SANITARY SEWER, SOLID WASTE, TRAFFIC CIRCULATION, AND PARKS AND RECREATION AND TO MEET FUTURE DEMANDS GENERATED FROM NEW DEVELOPMENT THROUGH THE USE OF SOUND FISCAL PRACTICES.

OBJECTIVE 1.1. CAPITAL IMPROVEMENTS

Capital Improvements identified in other plan Elements shall be provided to correct existing deficiencies, accommodate future growth, and to replace deteriorated or obsolete facilities in an economically and energy efficient manner, as indicated in the schedule of improvements in this Element.

POLICY 1.1.1.

The City shall include capital improvement projects that are either: 1) required to meet adopted level-of-service standards; 2) implemented Goals, Objectives and Policies of the Comprehensive Plan; and 3) determined to be of relatively large scale in cost ($25,000.00 or greater) in the Schedule of Improvements of this Element.

POLICY 1.1.2.

As per Section 163.3177, F.S., all capital improvement projects proposed by the City shall be consistent with the Comprehensive Plan.

POLICY 1.1.3.

All capital improvements included in the Capital Improvements Element schedule of improvements shall be included in the City's annual capital budget.

POLICY 1.1.4.

Proposed capital improvement projects that compete for funding within the same funding source and as identified annually through the concurrency management system shall be evaluated and ranked in order of priority according to the following guidelines:

a. The extent to which the project is necessary to protect public health and safety.

b. Capital improvements needed to address existing deficiencies.

c. Maintenance of adopted levels-of-service.

d. The impact that the project would have on the local budget.

e. Reduction of future improvements costs.

f. Encouragement of infill development and/or preservation or achievement of full use of existing facilities.

g. Promotion of efficient development and prevention of urban sprawl.

h. Consistency with the Florida Department of Transportation and other State and regional plans.

POLICY 1.1.5.

The Capital Improvements Element shall be reviewed on an annual basis and modified as necessary in accordance with Section 163.3177, F.S. Corrections, updates and modifications concerning costs; revenue sources; acceptance of facilities, pursuant to dedications which are consistent with the plan; or the date of construction of any facility enumerated in the Capital Improvements Element may be accomplished by ordinance and shall not be deemed to be amendments to the Comprehensive Plan.

POLICY 1.1.6.

The comprehensive planning process shall be used to ensure that present and future public facility and service needs are planned and provided in a timely and efficient manner, while safeguarding the health safety and welfare of the public and natural environment.

POLICY 1.1.7.

The provision of the public services and facilities shall be planned and coordinated so that the provision of public services and facilities occurs in a manner which encourages growth to be orderly and, to the extent feasible, is compatible with existing and desired land uses.

POLICY 1.1.8.

Public facilities, services, and programs shall be designed to service the intensities of development projected in State, regional and local comprehensive and functional plans and other planning documents.

POLICY 1.1.9

Government buildings and facilities shall incorporate and recognize urban design principles. Life cycle costs should be considered in the design and construction of government facilities. The City shall implement an Energy Efficiency and Conservation Plan including a program to track the use of energy and water in facilities owned by the City and reducing energy consumption as it relates to budgetary constraints. The City shall require energy efficient retrofits of existing facilities, where feasible, and will ensure energy efficient objectives are met in the planning and construction of any new facilities. The City shall consider a Sustainability Index for use in assessing proposed capital projects.

OBJECTIVE 1.2. COASTAL HIGH HAZARD AREA

The City shall limit future public expenditures for capital improvements which promote growth within Coastal High Hazard Areas, except for public land acquisition, enhancement of natural resources, or other projects as identified in the Coastal Management Element.

POLICY 1.2.1.

The City shall expend funds in Coastal High Hazard Areas for the provision of improvements needed to correct existing deficiencies to maintain their existing capacity.

POLICY 1.2.2.

The City shall continue to provide recreational facilities as needed within Coastal High Hazard Areas.

POLICY 1.2.3.

The City shall not construct any new public facilities in the coastal high-hazard areas, except for:

a. Conservation, natural resource protection and preservation, conservation groundwater aquifer recharge, resource restoration facilities, public access facilities, stormwater management and passive recreation and recreation support facilities;

b. Facilities necessary to improve hurricane evacuation time and/or mitigate storm damage to existing development; and

c. Reconstruction of public facilities essential to maintaining the public health and safety shall only occur if such structures can meet the most current hurricane wind velocity standards contained in the adopted building code.

OBJECTIVE 1.3. CONCURRENCY MANAGEMENT SYSTEM

The City shall continue to implement and periodically review its concurrency management system. The concurrency management system shall ensure the management of the land development process in a way that public facility needs identified within plan Elements are provided as needed but not in excess of the City's financial capacity to operate such facilities.

POLICY 1.3.1.

The provision of public facilities and services is intended to serve as a growth management measure, as such provision shall be undertaken and expanded within existing or identified future designated facility service areas and discouraged elsewhere, except in cases of overriding public benefit or where needed to meet the needs of existing development.

POLICY 1.3.2.

The City shall use the following level-of-service standards to determine the impacts of new development and redevelopment upon public facility provision:

a. Fire Fighting: All development having a density equivalent to or greater than one (1) unit per acre shall be served by a public/private central water system capable of delivering the required fire flows having adequate fire-fighting capacity of a minimum of 500 gallons per minute (gpm) or greater as determined by the Chief Fire Official in conjunction with the City Engineer (or its equivalent where a sprinkler system is used) and minimum 20 pounds per square inch (psi) residual for a minimum two- (2-) hour duration depending upon the specific structure and/or use. Single-family home development at less than one (1) unit per acre or less, or other development of equivalent intensity (e.g., average daily water use of less than 300 gallons per day per acre), may be served by an individual well. All required fire flows will be in addition to the peak daily demand established.

b. Parks (acres per population): 13 acres per 1,000 population.

   A capital facilities recovery fee to develop lands dedicated by developers to meet the acreage level-of-service standards shall be pursued. The recovery fee may be either assessed to the developer of the subdivision or the builder of the home in the form of an impact fee.

   Subdivisions which provide private recreation lands and facilities shall be provided a credit against the land dedication and capital facilities recovery fee.

c. Roads: The following level-of-service standards are adopted for roadways Citywide:

	Level-of-Service Daily	Level-of-Service Peak Hour
City	C	D
County	D	E
State	C (SIS/FIHS)	D (TRIP)

d. Water:

Raw:	An average daily volume of 330 gallons per Equivalent Residential Unit (ERU).
Potable:	An average daily volume of 300 gallons per Equivalent Residential Unit.
Reclaimed:	An average daily volume of 300 gallons per day per Equivalent Residential Unit.

Other uses water standards:

Types of Establishments* (note – ERU is Equivalent Residential Unit)	
Apartments	0.7 ERU per unit
Bars and Cocktail Lounges	0.05 ERU per seat
Barbershop	0.25 ERU per seat
Beauty Shop	0.5 ERU per seat
Car Wash	8.5 ERU minimum
Dentist	0.7 ERU per wet chair
Factories (with Showers or Chemicals)	0.1 ERU per 100 sq. ft.
Factories (without Showers or Chemicals)	0.05 ERU per 100 sq. ft.
General Commercial / Office Buildings	0.05 ERU per 100 sq. ft.
Gas Stations (no car wash)	1.5 ERU per bathroom
Hospitals	0.7 ERU per bed
Hotels and Motels	0.4 ERU per room
Movie Theaters, Auditoriums, Churches	0.02 ERU per seat
Nursing Homes / A.L.F.	0.5 ERU per bed
Restaurants	0.15 ERU per seat
Single-Family Residence	1.00 ERU per unit
Schools	0.05 ERU per seat
Townhouse Residence	0.7 ERU per unit

*The Site Plan Review Committee will consider alternate flow rates for various establishments if the applicant/Engineer of Record can provide supporting documentation.

e. Sewer: An average daily volume of 270 gallons per Equivalent Residential Unit. Sanitary Sewer Treatment: All development having a density equivalent to or greater than one (1) ERU per acre shall be served by a public/private wastewater treatment system capable of handling the projected design flows with an appropriate peak factor, as determined by the applicant or design professional. The peak factor shall not be less than 2.5. For developments having a density of less than one (1) ERU per acre, the applicant may elect to install a septic system provided that the applicant obtains an appropriate permit from the Volusia County Health Department and the City's existing gravity collection system is not within 200 feet of the proposed development.

f. Solid Waste:

Average residential pick-ups per truck	1,400
Average commercial pick-ups/truck/route	160
Average residential pick-ups/man/day	800-600
Pounds/capita/day for residential, commercial and industrial waste	5.83
Pounds/capita/day for special wastes	3.85

g. Drainage: The difference in the volume of run-off for 25 years frequency, 24-hour duration storm event between pre-development and post-development conditions shall be retained on-site. The difference between the pre-development and post-development conditions for peak run-off rates for the 100-year frequency, 24-hour duration rainfall event shall be retained on-site. Individual development facility capacity shall be maintained so that there is no potential flooding increase above the base year elevation. There shall be no degradation of water quality of Class III waters. An equal or greater volume of storage capacity must be created for any volume of the regulatory flood that would be displaced by fill or structures. The velocity of the regulatory flood must not be adversely altered on any watercourse. Areas not filled are to generally be left in their natural state. However, such areas may be used to meet landscaping and/or retention requirements, provided that the design is consistent with the then-existing City standards and ordinance requirements. Fill limitations consistent with the Land Development Code and the performance standards for each wetland classification established by the Conservation Element shall be enforced for all developments lying within areas of special flood hazard, as defined by the 100-year floodplain boundaries of the Federal Emergency Management Agency Flood Insurance Rate Map.

POLICY 1.3.3.

The City shall maintain provisions in the Land Development Code that will ensure that, at the time a development order is issued, adequate facility capacity is or will be available when needed to serve the development.

POLICY 1.3.4.

The City shall evaluate proposed plan amendments and requests for new development based on the following guidelines:

a. Creates potential public hazard.

b. Accentuates any existing facility deficiencies.

c. Generates public facility demands that could be accommodated by scheduled capacity increases in the capital improvements schedule.

d. Conforms with the Future Land Use Map (Future Land Use Element) and service areas (Utilities Element).

e. Affects other agencies' facilities plans.

f. Conforms to the Conservation Element's policies for natural resource protection.

g. Conforms to the Coastal Management Element's policies for limiting specific and cumulative impacts of development or redevelopment upon wetlands, water quality and quantity, wildlife habitat, living marine resources, and beach and dune systems.

h. Minimizes impacts to surrounding jurisdictions.

OBJECTIVE 1.4. IMPACT AND CONNECTION FEES

Future development projects shall pay their fair share of the cost of providing facilities and services required to maintain adopted level-of-service standards as specified in the Land Development Code. Impact and connection fees, developer dedications and contributions shall be required in an amount equal to the cost of the infrastructure required to serve the development.

POLICY 1.4.1.

Recreation impact fees shall be continued and refined as needed to adequately maintain adopted level-of-service standards.

POLICY 1.4.2.

Water and sewer connection fees shall be periodically reviewed and adjusted in accordance with Florida Statutes to assure that revenues are equal to growth-related capital expenditures, and to adequately maintain adopted level-of-service standards.

POLICY 1.4.3. The City shall continue to require that developers build water, sewer and reclaimed water infrastructure, local streets and internal collectors and provide off-site improvements needed for their development including but not limited to acceleration/deceleration lanes, turning lanes and traffic signals.

OBJECTIVE 1.5. FISCAL RESOURCES

The City shall manage its fiscal resources to ensure the provision of needed capital improvements for previously issued development orders and for future development and redevelopment.

POLICY 1.5.1.

In providing capital improvements funded by general obligation bond issues, the City shall limit outstanding indebtedness to no greater than five (5%) percent of its property tax base.

POLICY 1.5.2.

The City shall continue to adopt an annual capital budget and a five- (5) year capital improvement program as part of its budgeting process.

POLICY 1.5.3.

The City shall continue its efforts to secure State or Federal grants or private funds whenever available for capital improvements financing, through actively seeking and applying for grants and, if required, providing matching funds for grants.

POLICY 1.5.4.

Prior to scheduling any referenda to finance capital projects, the City shall make every effort to identify alternative funding sources.

POLICY 1.5.5.

Prior to the issuance of Certificates of Occupancy, the City shall provide for all public facilities needed to serve developments for which development orders were previously issued.

POLICY 1.5.6.

If a Capital improvement is needed to maintain a level-of-service standard, then new development will be required to contribute its fair share toward the improvement.

OBJECTIVE 1.6. LOCAL AND REGIONAL FACILITIES & SERVICES

The City shall require that necessary local and regional facilities and services be available concurrent with the impacts of development through the adoption of a concurrency management system as implemented by the Land Development Code.

POLICY 1.6.1.

The City shall verify that all public facilities needed to serve new development have been provided prior to the approval of an application for final subdivision plan or final site plan.

POLICY 1.6.2.

The City shall continue to implement a concurrency management system to:

a. Determine whether necessary facilities identified within the City's Capital Improvements Element, including Traffic Circulation, Recreation and Open Space, and Utilities are being constructed in accordance with the schedules in the Comprehensive Plan.

b. Update annually existing level-of-service, committed capacity as defined in the Land Development Code, and facility needs prior to and in conjunction with the annual update of the Capital Improvements Element, except that a shorter time frame, daily, monthly, or semi-annually, will be used as appropriate where the level-of-service is near capacity.

The City plat approval process will require that necessary regional and local facilities and services be available concurrent with the impacts of development after the adoption of the concurrency management system through any of the following situations:

1. The necessary facilities are in place at the time a plat approval is issued, or a plat approval is issued subject to the condition that the necessary facilities will be in place when the impacts of the development occur.
2. The necessary facilities are under construction at the time a plat approval is issued.
3. The necessary facilities are the subject of a binding contract executed for the construction of those necessary facilities at the time a plat approval is issued. Capacity to meet Level-of-Service for sanitary sewer, potable water, drainage and solid waste shall be in place prior to awarding concurrency status for any development order.
4. The necessary road facilities as listed in the first three (3) years of the Florida Department of Transportation Five-Year Work Program have been included in the Volusia County or City of Ormond Beach annual budget at the time a plat approval is issued. A plan amendment is required to eliminate, defer or delay construction of any road or mass transit facility or service which is needed to maintain the adopted level-of-service standards and which is listed in the five- (5-) year schedule of capital improvements.

For those parcels that do not require platting, the above steps will be considered at the time of site plan and review. In such cases the words “site plan” will replace “plat approval” wherever it appears above.

POLICY 1.6.3

Capital Improvements necessary for water supply concurrency will be identified and included in the annual update to the Capital Improvements Schedule.

OBJECTIVE 1.7. INTERGOVERNMENTAL COORDINATION

Intergovernmental cooperation and coordination shall be established and maintained in order to plan for and provide the best methods for providing efficient, cost-effective, and environmentally sound public facilities and services.

POLICY 1.7.1.

Effective administrative and procedural mechanisms which promote the coordination, planning and provision of public facilities and services shall be used at every possible opportunity. Adherence to this policy cluster, at a minimum, shall include the following actions:

a. The City shall establish formal and informal methods of contact and communication with adjacent and/or affected units of local government concurrent with the initiation of planning for new public facilities or improvements to existing public facilities for the purpose of interjurisdictional coordination in the planning, construction and operation of such facilities, where appropriate.

b. Administrative and procedural mechanisms shall be used to more effectively coordinate, plan and provide public facilities and services.

OBJECTIVE 1.8. ORMOND CROSSINGS ACTIVITY CENTER

The Ormond Crossings Activity Center provides the City with the opportunity to master plan a mixed-use development, including the needed public facilities required to meet the minimum levels of service established in this Comprehensive Plan.

POLICY 1.8.1.

The City shall monitor the progress of the development to analyze and where necessary, amend the Capital Improvements Element (CIE) and other related elements to ensure that public infrastructure and facilities are in place to ensure that minimum levels-of-service are maintained at the lowest possible cost to the City. The following is a list of improvements that may be required, as identified in the Ormond Crossings Activity Center Development Agreement. This list is to be used for general planning purposes and provide guidelines to the City. This policy shall not be interpreted to mean that changes to the development plan for the identified improvement cannot occur in the future. Given the potential time needed for this project to reach buildout, changes are to be expected. This policy provides a process and background for future capital planning efforts of the City.

SCHEDULE OF IMPROVEMENTS

The tables on the following pages of the Capital Improvements Element will be used to effectively stage the timing, estimated cost, and revenue sources of the capital improvements projected for the future. All items listed are consistent with individual Comprehensive Plan Elements.

The Schedule of Improvements are based upon the annual Ormond Beach Capital Improvement Plan and the capital improvements of other organizations such as Volusia County School Board and the Transportation Planning Organization.

MONITORING / EVALUATION

The Capital Improvements Element requires a continuous program for monitoring and evaluation, and pursuant to Chapter 163, F.S., the Element must be reviewed every year to ensure that the fiscal resources are available to provide public facilities needed to support adopted Level-of-Service standards.
Programs that will be adopted to ensure that the Goals, Objectives and Policies established in the Capital Improvements Element include:

a. The Concurrency Management System.

b. Annual review of the Capital Improvements Element.

c. Annual review of the City's budget to determine if all capital improvement projects are consistent with all Comprehensive Plan Elements and that the proposed projects will further the Goals, Objectives and Policies of the Comprehensive Plan.

Table A
Parks and Recreation
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
	Leisure Services							
1	OBSC Softball Field Reconstruction	Property Taxes-LS	$800,000	$0	$0	$0	$0	$800,000
2	Nova Field #1 Relocation	Echo Grant	$100.000	$900,000	$500,000	$0	$0	$1,500,000
		Property Taxes-LS						
3	Central Park Trails Systems	Echo Grant	$0	$0	$0	$1,000,000	$0	$1,000,000
		Property Taxes-LS						
		Total	**$900,000**	**$900,000**	**$500,000**	**$1,000,000**	**$0**	**$3,300,000**

Leisure Services Funding Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Echo Grant	$400,000	$450,000	$0	$500,000	$0	$1,350,000
Property Taxes – LS	$500,000	$450,000	$500,000	$500,000	$0	$1,950,000
Total	**$900,000**	**$900,000**	**$500,000**	**$1,000,000**	**$0**	**$3,300,000**

Table B
Community Redevelopment
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
	Downtown							
1	Community Center	Property Taxes – CRA	$0	$500,000	$0	$0	$7,118,000	$7,618,000
2	Traffic Calming	Property Taxes – TIF	$0	$100,000	$0	$0	$0	$100,000
3	Stormwater Improvements	Property Taxes – TIF Stormwater Charges	$0	$0	$1,100,000	$0	$0	$1,100,000
4	Thompson Creek, Phase 1	TPO (Grant Pending) Property Taxes – TIF	$0	$0	$624,716	$2,220,273	$0	$2,844,989
		Total	**$0**	**$600,000**	**$1,724,716**	**$2,220,273**	**$7,118,000**	**$11,662,989**

Downtown Funding Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Property Taxes - CRA	$0	$100,000	$862,472	$222,028	$7,118,000	$8,302,500
Property Taxes – TIF	$0	$0	$0	$0	$0	$0
Stormwater charges	$0	$0	$300,000	$0	$0	$300,000
Grant	$0	$500,000	$0	$0	$0	$500,000
TPO (Grant Pending)	$0	$0	$562,244	$1,998,245	$0	$2,560,489
Total	**$0**	**$600,000**	**$1,724,716**	**$2,220,273**	**$7,118,000**	**$11,662,989**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Water Improvements								
1	Water Main Replacement	Water & Sewer Charges	$300,000	$0	$0	$0	$0	$300,000
2	Wellfield Repairs	Water & Sewer Charges, Bond Proceeds	$0	$0	$151,400	$1,778,750	$0	$1,930,150
3	West Ormond Utilities Potable Tank and Station	To be determined	$375,000	$5,025,000	$0	$0	$0	$5,400,000
4	West Ormond Utilities – New Rima Wells	To be determined	$0	$0	$300,000	$3,007,500	$0	$3,307,500
5	West Ormond Utilities, Water Treatment Plan Evaluation	To be determined	$0	$0	$300,000	$0	$0	$300,000
6	Water System Expansion	To be determined	$0	$0	$0	$4,500,000	$42,750,000	$47,250,000
7	West Ormond Utilities – New Raw Water Wellfield	To be determined	$0	$0	$0	$0	$17,250,000	$17,250,000
Wastewater Improvements								
8	Halifax River Utility Crossing	Bond Proceeds	$480,000	$5,680,000	$0	$0	$0	$6,160,000
9	Water Reclamation Facility Filter Modification	Bond Proceeds	$475,000	$5,100,000	$0	$0	$0	$5,575,000
10	North US 1 Utility Adjustments	Water & Sewer Charges, Bond Proceeds	$0	$0	$300,000	$3,100,000	$0	$3,400,000
11	Pep Tank Elimination, Phase 1	Water & Sewer Charges, Bond Proceeds	$0	$0	$400,000	$5,750,000	$0	$6,150,000

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
12	West Ormond Utilities Airport Road Force Main Extension	To be determined, Daytona Beach	$275,000	$3,059,5000	$0	$0	$0	$3,334,500
13	West Ormond Utilities Water Reclamation Facility	To be determined, Daytona Beach	$6,500,000	$37,250,000	$37,250,000	$0	$0	$81,000,000
14	West Ormond Water Reclamation Facility Site Improvements	To be determined	$1,700,000	$0	$0	$0	$0	$1,700,000
15	West Ormond Utilities SR 40 Parallel Force Main	To be determined	$0	$225,000	$2,880,000	$0	$0	$3,105,000
16	West Ormond Utilities Hand Avenue Force Main	To be determined	$0	$0	$0	$300,000	$4,020,000	$4,320,000
Water and Sewer Improvements								
17	Public Works Management Site Upgrades	Water & Sewer Charges	$0	$0	$0	$0	$270,000	$270,000
18	Public Works Generator	Water & Sewer Charges	$0	$0	$0	$0	$255,000	$255,000
19	Public Works Renovation	Water & Sewer Charges	$0	$0	$0	$0	$338,000	$338,000
20	Utility Master Plan Update	Wastewater Impact Fees, Water impact Fees	$0	$380,000	$0	$0	$0	$380,000
21	West Ormond Utilities Area A Water Main & Force Main	To be determined	$200,000	$2,550,000	$0	$0	$0	$2,750,000

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Reclaim Water								
22	Reuse Reservoir	Bond Proceeds, SJRWMD, State Appropriation	$6,680,000	$0	$0	$0	$0	$6,680,000
Total			**$17,210,000**	**$56,899,500**	**$43,726,400**	**$18,436,250**	**$64,883,000**	**$201,155,150**

Utilities Funding Schedule							
Funding Source	**FY 24-25**	**FY 25-26**	**FY 26-27**	**FY 27-28**	**FY 28-29**	**TOTAL FY 24-25 to FY 28-29**
Bond Proceeds	$4,765,000	$10,780,000	$0	$10,628,750	$0	$26,173,750
Daytona Beach	$1,990,000	$10,353,000	$9,450,000	$0	$0	$21,793,000
SJRWMD	$1,670,000	$0	$0	$0	$0	$1,670,000
To be determined	$7,285,000	$35,386,500	$33,425,000	$7,807,500	$64,020,000	$147,924,000
State Appropriation	$1,200,000	$0	$0	$0	$0	$1,200,000
Wastewater Impact Fee	$0	$190,000	$0	$0	$0	$190,000
Water & Sewer Charges	$300,000	$0	$851,400	$0	$863,000	$2,014,400
Water Impact Fees	$0	$190,000	$0	$0	$0	$190,000
Total	**$17,210,000**	**$56,899,500**	**$43,726,400**	**$18,436,250**	**$64,883,000**	**$201,155,150**

Table D
Transportation
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 4, 2024

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
1	Neighborhood Traffic Calming	Property Taxes – Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
2	Pineland Trail Roadway Improvements	River to Sea TPO grant	$0	$0	$0	$7,152,353	$0	$7,152,353
		Transportation Reserves						
3	US 1 North Sidewalk	River to Sea TPO grant	$0	$0	$0	$2,413,781	$3,096,361	$5,519,142
		Transportation Reserves						
		Totals:	**$50,000**	**$50,000**	**$50,000**	**$9,616,134**	**$3,146,361**	**$12,921,495**

Transportation Funding Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Property Taxes - Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
River to Sea TPO Grant	$0	$0	$0	$6,505,965	$0	$4,770,315
Bonds	$0	$0	$0	$2,382,038	$3,774,492	$2,382,038
Total	**$50,000**	**$50,000**	**$50,000**	**$8,938,003**	**$3,824,492**	**$12,912,495**

~~Table E~~
~~School Improvements~~
~~Capital Improvements Schedule~~

~~Based upon Volusia County Schools, Annual Operating Budget~~
~~https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets~~

Volusia County Schools
2025-2029 Capital Five-Year Work Program Forecast (Detail)
Capital Projects Funds - Local Capital Improvement Funds - Consolidated

	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029
Sources - revenues					
Local sources:					
Ad valorem property taxes	$ 99,170,467	$ 94,018,320	$ 97,250,400	$ 102,439,152	$ 106,686,288
Investment income	80,000	70,000	60,000	50,000	40,000
Total local sources	99,250,467	94,088,320	97,310,400	102,489,152	106,726,288
Total sources	**99,250,467**	**94,088,320**	**97,310,400**	**102,489,152**	**106,726,288**
Uses - expenditures					
New Construction					
Central Warehouse	-	-	2,500,000	15,000,000	-
Enterprise Elm - K-8 Replacement School	3,000,000	-	-	-	-
Hinson Mid - Classroom Addition	-	-	-	750,000	10,000,000
Indian River Elm - Classroom Addition	-	-	-	-	400,000
Manatee Cove Elm - 11 Classroom Addition	550,000	-	500,000	-	-
Pathways Elm - 11 Classroom Addition	550,000	-	500,000	-	-
Pine Ridge HS - 14 Classroom Addition	700,000	-	500,000	-	-
Port Orange Elm - Renovations	-	-	750,000	8,500,000	10,000,000
Read Pattillo Elm - K-8 Replacement School	750,000	-	2,000,000	-	-
Southwestern Mid - Renovate Kitchen and Multipurpose	6,000,000	-	-	-	-
Spruce Creek Elm - Campuswide HVAC and Lighting	-	-	1,200,000	-	-
Volusia Pines Elm - Classroom Addition	-	-	-	-	600,000
Total New Construction	11,550,000	-	7,950,000	24,250,000	21,000,000

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~~Table E~~
~~School Improvements~~
~~Capital Improvements Schedule~~

~~Based upon Volusia County Schools, Annual Operating Budget~~
~~https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets~~

Projects at Existing Schools and Facilities					
Atlantic HS - Press Box and Restroom Buildings	1,383,000	-	-	-	-
Atlantic HS - Renovate Group Restrooms Campus Wide	2,160,000	-	-	-	-
Blue Lake Elm - Renovate Basketball Courts	318,324	-	-	-	-
Brewster Center - Replace Emergency Generator	601,200	-	-	-	-
Brewster Center - Repair Floor Joists	-	117,600	-	-	-
Campbell Mid - Replace Emergency Generator	-	597,600	-	-	-
Creekside Mid - Replace Stage Lighting and Sound System	-	-	900,000	-	-
DeLand Administrative Complex - Upgrade Data Center Ba	250,000	-	-	-	-
Deltona HS - Upgrade Stage Lighting	900,000	-	-	-	-
Deltona HS - Foundation Repairs Bldg. 2	3,000,000	-	-	-	-
DeLand Mid - School Envelope Improvement	-	3,900,000	-	-	-
Edgewater Public Elm - Renovate Media Center	360,000	-	-	-	-
Edgewater Public Elm - Upgrade Parking Lot and Bus Loop	-	-	400,000	-	-
Edgewater Public Elm - Replace Stage Lighting and Sound S	-	600,000	-	-	-
Forest Lake Elm - Parent Loop Extension	1,000,000	-	-	-	-
Freedom Elm - Replace DOAS Bldgs. 3 and 4	1,300,000	-	-	-	-
Freedom Elm - Replace Stage Lighting and Sound System	-	600,000	-	-	-
Freedom Elm - Replace DOAS Bldgs. 1 and 2	-	1,400,000	-	-	-
Heritage Mid - New Marquee	-	216,000	-	-	-
Hinson Mid - Upgrade HVAC and Lighting Bldg. 7	-	1,800,000	-	-	-
Mainland HS - Stormwater Upgrades	1,500,000	-	-	-	-
Mainland HS - Upgrade Site Lighting	-	-	900,000	-	-
Mainland HS - Renovate Cafeteria	-	2,640,000	-	-	-
New Smyrna Transportation - Vehicle Lift Foundation	111,840	-	-	-	-
New Smyrna Beach HS - Upgrade BAS Bldgs. 1-4	-	1,488,044	-	-	-
New Smyrna Beach Mid - Replace Millwork Campus Wide	-	-	1,500,000	-	-
Osceola Elm - Reroof Bldgs. 4 and 9	94,000	-	-	-	-
Osceola Elm - Renovation for Riverview Move	-	3,426,000	-	-	-
Osteen Elm - Replace Gutters and Downspouts	556,390	-	-	-	-
Parking Lot Lease - City of DeLand	28,665	28,665	28,665	28,665	28,665

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~~Table E~~
~~School Improvements~~
~~Capital Improvements Schedule~~
~~Based upon Volusia County Schools, Annual Operating Budget~~
~~https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets~~

Buses					
Bus and Safety	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Total Buses	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Charter School Disbursements					
Charter School Capital Outlay LCIF Disbursements	1,034,127	1,313,192	1,938,308	2,753,078	3,010,532
Total Charter School Disbursements	1,034,127	1,313,192	1,938,308	2,753,078	3,010,532
Roll Forward					
Prior Year Carryover Encumbrances	50,658,975	-	-		
Prior Year Carryover Appropriations	31,769,478	-	-		
Total roll forward	**82,428,453**	-	-	-	-
Total uses	**129,832,497**	**39,335,039**	**30,674,973**	**43,831,743**	**40,839,197**
Excess (deficiency) of revenues over expenditures	(30,582,030)	54,753,281	66,635,427	58,657,409	65,887,091
Other financing uses					
Transfers - General Fund	(31,681,710)	(33,015,595)	(34,416,175)	(35,886,784)	(37,430,924)
Transfers - Debt Service Funds	(21,317,043)	(23,546,350)	(23,549,950)	(23,553,850)	(23,551,300)
Total other financing uses	**(52,998,753)**	**(56,561,945)**	**(57,966,125)**	**(59,440,634)**	**(60,982,224)**
Net change in fund balances	(83,580,783)	(1,808,664)	8,669,302	(783,225)	4,904,867
Fund balances					
Beginning Balance	91,404,931	7,824,148	6,015,483	14,684,785	13,901,559
	2024-2025	**2025-2026**	**2026-2027**	**2027-2028**	**2028-2029**
Ending Balance	**$ 7,824,148**	**$ 6,015,483**	**$ 14,684,785**	**$ 13,901,559**	**$ 18,806,427**

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~~Table F~~

~~River to Sea Transportation Planning Organization Transportation Improvement Plan~~

~~Capital Improvements Schedule~~

~~https://www.r2ctpo.org/planning-studies/transportation-improvement-program/~~

#	Project Description/Area	<2025	2025	2026	2027	2028	FY 28-29
1	419772-1 – I-95 N. Ormond Business Park Interchange	$559,027	$0	$0	$0	$0	$559,027
2	428947-1- SR 40 (Granada Blvd.) from Breakaway Trail to Williamson Blvd	$4,710,989	$400,000	$2,190,000	$2,107,386	884,708	$10,293,083
3	419772-2 - I-95 Interchange at SR5 (US1)	$50.650,966	$0	$0	$240,681,710	$0	$291,332,676
4	419772-3 – I-95 Interchange at SR 5 (US1)	$6,409,678	$200,000	$0	$0	$0	$6,609,678
5	453588-1 – I-95 Interchange at SR-40	$0	$3,529,500	$0	$0	$0	$3,529,500
6	448786-1 US-1 from Airport Road to Broadway Avenue	$498,702	$0	$0	$0	$4,516,483	$5,015,185
7	440950-1 – Thompson Creek Trail	$0	$0	$686, 302	$0	$0	$686,302
Totals		**$12,178,396**	**$4,129,500**	**$2,190,000**	**$242,789,096**	**$5,401,191**	**$318,025,451**

~~Table G~~
~~General Capital Improvement Fund~~
~~Capital Improvements Schedule~~
~~Based upon adopted Capital Improvement Plan, September 4, 2024~~

#	Project Description/Area	Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
1	Police Station/EOC	Bonds, Legislative Funding	$2,900,000	$24,000,000	$24,000,000	$0	$0	$50,900,000
Total			**$2,900,000**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$50,900,000**

General Capital Improvement Fund Schedule

Funding Source	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	TOTAL FY 24-25 to FY 28-29
Bonds	$1,450,000	$24,000,000	$24,000,000	$0	$0	$49,450,000
Legislative Funding	$1,450,000	$0	$0	$0	$0	$1,450,000
Total	**$2,900,000**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$50,900,000**

Table A
Parks and Recreation
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Expenditures							
1	OBSC Softball Field Reconstruction	Property Taxes – LS Echo Grant	$800,000	$0	$0	$0	$0	**$800,000**
2	Nova Field #1 Relocation	Property Taxes – LS Echo Grant	$900,000	$500,000	$0	$0	$0	**$1,400,000**
3	Central Park Trail Systems	Property Taxes – LS Echo Grant	$0	$0	$1,000,000	$0	$0	**$1,000,000**
4	LED Lighting on Fields 11 and 12	Racing & Rec. Grant Rec. Impact Fees	$500,000	$0	$0	$0	$0	**$500,000**
		Total	**$2,200,000**	**$500,000**	**$1,000,000**	**$0**	**$0**	**$3,700,000**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Property Taxes – LS	$850,000	$500,000	$500,000	$0	$0	**$1,850,000**
ECHO Grant	$850,000	$0	$500,000	$0	$0	**$1,350,000**
Racing and Recreation Grant	$300,000	$0	$0	$0	$0	**$300,000**
Recreation Impact Fees	$200,000	$0	$0	$0	$0	**$200,000**
Total	**$2,200,000**	**$500,000**	**$1,000,000**	**$0**	**$0**	**$3,700,000**

Table B
Community Redevelopment
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Expenditures							
1	Linear Park	Property Taxes – TIF	$36,000	$75,000	$500,000	$0	$0	**$611,000**
2	Thompson Creek, Phase 1	TPO (Grant Pending) Property Taxes – TIF	$0	$624,716	2,220,273	$0	$0	**$2,844,989**
3	Stormwater Improvements	Stormwater Charges Property Taxes – TIF	$0	$0	$0	$1,100,000	$0	**$1,100,000**
4	Granada Bridge Lighting	Property Taxes – TIF	$0	$0	$0	$0	$4,000,000	**$4,000,000**
		Total	**$36,000**	**$699,716**	**$2,720,273**	**$1,100,000**	**$4,000,000**	**$8,555,989**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Property Taxes – TIF	$36,000	$137,472	$722,028	$800,000	$4,000,000	**$5,695,500**
Stormwater charges	$0	$0	$0	$300,000	$0	**$300,000**
Grant	$0	$0	$0	$0	$0	**$0**
TPO (Grant Pending)	$0	$562,244	$1,998,245	$0	$0	**$2,560,489**
Total	**$36,000**	**$699,716**	**$2,720,273**	**$1,100,000**	**$4,000,000**	**$8,555,989**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Water Improvements							
1	Halifax River Utility Crossing	Bond Proceeds	$5,680,000	$0	$0	$0	$0	**$5,680,000**
2	Water Main Replacement	Bond Proceeds	$0	$6,500,000	$3,500,000	$3,500,000	$3,500,000	**$17,000,000**
3	WTP Replace Lime Softening Filters 5 & 6	Bond Proceeds	$0	$5,375,000	$0	$0	$0	**$5,375,000**
4	Wellfield Construction	Bond Proceeds Water & Sewer Charges	$0	$0	$175,000	$1,837,500	$0	**$2,012,500**
5	West Ormond Utilities Potable Tank and Station	To Be Determined	$5,730,000	$0	$0	$0	$0	**$5,730,000**
6	West Ormond Utilities WTP Evaluation	To Be Determined	$0	$0	$0	$300,000	$0	**$300,000**
7	West Ormond Utilities WTP	To Be Determined	$0	$0	$0	$4,500,000	$42,750,000	**$47,250,000**
8	West Ormond Utilities - Hudson Wellfield Retrofit	To Be Determined	$0	$0	$0	$0	$17,860,800	**$17,860,800**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Wastewater Improvements							
9	Water Reclamation Facility Filter Modification	Bond Proceeds	$6,100,000	$0	$0	$0	$0	**$6,100,000**
10	North US 1 Utility Adjustments	FDOT Reimbursement	$0	$173,511	$1,330,251	$0	$0	**$1,503,762**
11	PEP Tank Elimination	Water & Sewer Charges Bond Proceeds	$0	$800,000	$11,500,000	$250,000	$5,000,000	**$17,550,000**
12	WRF Clarifier Rehabilitation	Bond Proceeds	$0	$0	$1,800,000	$1,800,000	$0	**$3,600,000**
13	WRF Influent Pump Station Replacement	Bond Proceeds Water & Sewer Charges HMGP Grant	$0	$0	$0	$1,100,000	$7,150,000	**$8,250,000**
14	WTP South Generator Replacement	Water & Sewer Charges HMGP Grant	$0	$0	$0	$140,000	$1,465,000	**$1,605,000**
15	West Ormond Utilities Airport Rd FM Extension	To Be Determined Daytona Beach	$3,059,500	$0	$0	$0	$0	**$3,059,500**
16	West Ormond Utilities Hand Ave FM	To Be Determined	$0	$0	$300,000	$4,020,000	$0	**$4,320,000**
17	West Ormond Utilities Area SR40 Parallel FM	To Be Determined	$0	$0	$0	$225,000	$2,880,000	**$3,105,000**
18	West Ormond Utilities Area WRF	To Be Determined Daytona Beach	$6,500,000	$37,250,000	$37,250,000	$0	$0	**$81,000,000**
19	West Ormond Utilities Area WRF Site Improvements	To Be Determined	$1,700,000	$0	$0	$0	$0	**$1,700,000**

Table C
Utilities
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Water and Sewer Improvements							
20	Public Works Generator	Water & Sewer Charges	$350,000	$0	$0	$0	$0	**$350,000**
21	Public Works Renovation	Water & Sewer Charges	$850,000	$0	$0	$0	$0	**$850,000**
22	Utility Master Plan Update	Utility Collection Fees - Wastewater Utility Collection Fees - Water	$380,000	$0	$0	$0	$0	**$850,000**
23	West Ormond Utilities Area A WM FM	To Be Determined	$2,250,000	$0	$0	$0	$0	**$2,250,000**
		Total	**$3,830,000**	**$0**	**$0**	**$0**	**$0**	**$3,830,000**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Bond Proceeds	$11,780,000	$11,875,000	$16,975,000	$7,262,500	$10,287,500	**$58,180,000**
Water & Sewer Charges	$1,200,000	$800,000	$0	$435,000	$366,250	**$2,801,250**
FDOT Reimbursement	$0	$173,511	$1,330,251	$0	$0	**$1,503,762**
HMGP Grant	$0	$0	$0	$930,000	$6,461,250	**$7,391,250**
Utility Collection Fees - Wastewater	$190,000	$0	$0	$0	$0	**$190,000**
Utility Collection Fees - Water	$190,000	$0	$0	$0	$0	**$190,000**
To Be Determined	$16,446,500	$27,800,000	$28,100,000	$9,045,000	$63,490,800	**$144,882,300**
Daytona Beach	$2,793,000	$9,450,000	$9,450,000	$0	$0	**$21,693,000**
Total	**$32,599,500**	**$50,098,511**	**$55,855,251**	**$17,672,500**	**$80,605,800**	**$236,831,562**

Table D
Transportation
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Expenditures								
1	Multi-modal Trails Plan	Transportation Fund	$250,000	$0	$0	$0	$0	$250,000
2	Neighborhood Traffic Calming	Property Taxes - Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
3	Forest Hills Sidewalk Project	CDBG	$0	$1,372,350	$0	$0	$0	$1,372,350
4	Pineland Trail Roadway Improvements	Volusia Flagler TPO	$0	$0	7,152,353	$0	$0	$7,152,353
		Bond Proceeds						
5	US 1 North Sidewalk	Volusia Flagler TPO	$0	$0	$2,413,781	$3,096,361	-	$5,510,142
		Bond Proceeds						
		Total	**$300,000**	**$1,422,350**	**$9,616,134**	**$3,146,361**	**$50,000**	**$14,534,845**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Transportation Fund	$250,000	$0	$0	$0	$0	**$250,000**
Property Taxes - Transportation	$50,000	$50,000	$50,000	$50,000	$50,000	**$250,000**
CDBG	$0	1372350	$0	$0	$0	**$1,372,350**
Volusia Flagler TPO	$0	$0	$6,505,965	$0	$0	**$6,505,965**
Bond Proceeds	$0	$0	$3,060,169	3096361	$0	**$6,156,530**
Total	**$300,000**	**$1,422,350**	**$9,616,134**	**$3,146,361**	**$50,000**	**$14,534,845**

Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets

VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Sources - revenues					
State sources:					
CO&DS distributed	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000
Interest on undistributed CO & DS	16,500	16,500	16,500	16,500	16,500
Total state sources	2,266,500	2,266,500	2,266,500	2,266,500	2,266,500
Local sources:					
Ad valorem property taxes	104,592,392	111,436,992	117,496,656	123,192,864	129,132,432
Local Sales tax	66,539,629	67,464,953	68,403,144	69,354,383	70,318,849
Investment income	1,370,000	1,160,000	950,000	740,000	530,000
Impact fees	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Total local sources	182,502,021	190,061,945	196,849,800	203,287,247	209,981,281
Total sources	**184,768,521**	**192,328,445**	**199,116,300**	**205,553,747**	**212,247,781**
Uses - expenditures					
New Construction					
Enterprise Elm - K-8 Replacement School	-	72,000,000	-	-	-
Facilities Warehouse Expansion	-	-	2,500,000	12,000,000	250,000
Hinson Mid - 14 Classroom Addition	-	-	1,200,000	13,900,000	-
Indian River Elm - 11 Classroom Addition	-	-	-	900,000	12,750,000
New Smyrna Beach Mid - 14 Classroom Addition	-	1,200,000	13,900,000	-	-
Pathways Elm - 11 Classroom Addition	12,000,000	750,000	-	-	-
Pine Ridge HS - 20 Classroom Addition	21,000,000	1,000,000	-	-	-
Read-Pattillo Elm - K-5 Replacement School	-	2,000,000	50,000,000	2,000,000	-
Silver Sands Mid - 14 Classroom Addition	-	1,200,000	13,900,000	-	-
Spruce Creek Elm - Upgrade HVAC and Lighting Campus W	-	-	-	16,168,664	-
Sugar Mill Elm - 11 Classroom Addition	900,000	12,750,000	-	-	-
Total New Construction	33,900,000	90,900,000	81,500,000	44,968,664	13,000,000

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Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
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	2025-26	2026-27	2027-28	2028-29	2029-30
Projects at Existing Schools and Facilities					
All High Schools - Athletic Facility Leases	180,000	180,000	180,000	180,000	180,000
Atlantic HS - Repair Stucco Second Floor Walkway	638,000	-	-	-	-
Atlantic HS - Upgrade HVAC, Ceiling and Lighting Bldg. 4	-	2,786,400	-	-	-
Atlantic HS - Technology Lab Conversion	-	-	1,500,000	-	-
Atlantic HS - Replace Windows	-	-	-	4,500,000	-
Brewster Center - Repair Floor Joists	117,600	-	-	-	-
Brewster Center - Upgrade Main Electrical Distribution	-	2,000,000	-	-	-
Campbell Mid - Replace Emergency Generator	597,600	-	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 5 and 9	1,817,016	-	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 1 and 2	-	1,129,086	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 8 and 10	-	-	518,906	-	-
Champion Elm - Upgrade CEP	1,171,734	-	-	-	-
Creekside Mid - Replace Stage Lighting and Sound System	-	900,000	-	-	-
Daytona Transportation - Replace Emergency Generator	480,000	-	-	-	-
DeBary Elm - Upgrade HVAC, Ceiling and Lighting Bldgs. 1,	-	-	4,277,362	-	-
DeBary Elm - Renovate Media Center	-	525,000	-	-	-
Deltona HS - Rebuild Chillers, Cooling Tower and Piping	2,836,453	-	-	-	-
DeLand Administrative Complex - Replace Data Center Floc	160,464	-	-	-	-
DeLand HS - Digital Marquee	165,000	-	-	-	-
Deltona HS - Reroof Bldg. 26	210,000	-	-	-	-
Deltona Lakes Elm - Upgrade Intrusion and Fire Alarm Mor	174,000	-	-	-	-
Deltona Maintenance - Replace Emergency Generator and	690,000	-	-	-	-
Deltona Transportation - Replace Fuel Island and Tanks	1,170,000	-	-	-	-

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Table E
School Improvements
Capital Improvements Schedule
Based upon Volusia County Schools, Annual Operating Budget

VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
DeLand Administrative Complex - Renovate Board Room	1,400,000	-	-	-	-
DeLand Mid - School Envelope Improvement	-	-	3,900,000	-	-
DeLand HS - Upgrade HVAC Bldg. 17	-	1,890,850	-	-	-
Deltona HS - Technology Lab Conversion	-	-	500,000	-	-
DeLand HS - Replace Two 350 Ton Chillers	-	-	2,048,370	-	-
DeLand Mid - Renovate Media Center	-	525,000	-	-	-
DeLand Transportation - Replace Fuel Tanks	-	906,000	-	-	-
Deltona HS - Replace Exterior Doors and Windows	-	-	-	-	5,500,000
Edgewater Public Elm - Replace Stage Lighting and Sound S	600,000	-	-	-	-
Edgewater Public Elm - Upgrade Parking Lot and Bus Loop	-	400,000	-	-	-
Forest Lake Elm - Increase Bus Loop Parking	433,000	-	-	-	-
Freedom Elm - Replace DOAS Bldgs. 1 and 2	1,400,000	-	-	-	-
Freedom Elm - Replace Stage Lighting and Sound System	600,000	-	-	-	-
Freedom Elm - Digital Marquee	-	-	216,000	-	-
Freedom Elm - Replace DOAS Bldg. 7	-	-	-	1,085,000	-
Friendship Elm - Replace Switchgear Bldg. 4	284,000	-	-	-	-
Friendship Elm - Upgrade HVAC Bldgs. 1 and 2	-	3,368,400	-	-	-
Heritage Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 1	-	4,076,081	-	-	-
Heritage Mid - Convert Computer Lab to Science Lab Bldg.	648,000	-	-	-	-
Heritage Mid - Digital Marquee	216,000	-	-	-	-
Heritage Mid - Upgrade HVAC, Ceiling and Lighting Bldg. 3	2,000,000	-	-	-	-
Herbert Street Center - Upgrade HVAC	-	-	1,969,859	-	-
Heritage Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 9	-	-	3,700,000	-	-
Hinson Mid - Upgrade HVAC and Lighting Bldg. 7	-	-	1,800,000	-	-
Hinson Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 3 a	-	3,943,360	-	-	-
Holly Hill School - Replace Boiler	247,800	-	-	-	-
Holly Hill School - Upgrade Intrusion and Fire Alarm Monitc	174,000	-	-	-	-
Horizon Elm - Replace Chiller Bldg. 11	345,000	-	-	-	-
Horizon Elm - Physical Education Pavillion with Two Basket	-	654,000	-	-	-

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School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Indian River Elm - Replace Switchgear Bldg. 4	360,000	-	-	-	-
Indian River Elm - Upgrade HVAC, Ceiling and Lighting Bldg	-	-	2,864,866	-	-
Mainland HS - Upgrade Stage Lighting	1,440,000	-	-	-	-
Mainland HS - Upgrade Site Lighting	-	900,000	-	-	-
Mainland HS - Renovate Cafeteria	-	2,640,000	-	-	-
New Smyrna Beach HS - Replace Gutters and Downspouts	838,800	-	-	-	-
New Smyrna Beach HS - Upgrade Intrusion and Fire Alarm	174,000	-	-	-	-
New Smyrna Beach HS - Upgrade BAS Bldgs. 1-4	-	1,668,415	-	-	-
New Smyrna Beach Mid - Replace Millwork Campus Wide	-	1,500,000	-	-	-
New Smyrna Transportation - Replace Fuel Tanks	-	-	906,000	-	-
Ormond Beach Mid - Upgrade Intrusion and Fire Alarm Mo	174,000	-	-	-	-
Osceola Elm - Renovation for Riverview Move	-	2,000,000	-	-	-
Osteen Elm - Modify Bus Loop Entrance	1,000,000	-	-	-	-
Osteen Elm - Upgrade CEP	-	1,236,822	-	-	-
Osteen Elm - Digital Marquee	-	-	-	220,000	-
Palm Terrace Elm - Replace Emergency Generator	672,000	-	-	-	-
Palm Terrace Elm - Upgrade CEP	2,391,683	-	-	-	-
Pathways Elm - Upgrade Stage Lighting and Sound System	500,000	-	-	-	-
Pathways Elm - Upgrade Parking Lot Lighting	-	258,000	-	-	-
Pine Ridge HS - Replace Intercom	834,000	-	-	-	-
Pine Ridge HS - Upgrade Kitchen and Dining HVAC, Ceilings	3,091,483	-	-	-	-
Pine Trail Elm - Parent Loop Extension	1,986,000	-	-	-	-
Pine Trail Elm - Upgrade Stage Sound	460,000	-	-	-	-
Pine Ridge HS - Renovate Ag Lab	-	-	750,000	-	-
Pine Ridge HS - Upgrade Auditorium Seating and Flooring	-	1,320,000	-	-	-

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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Pine Ridge HS - Upgrade Main Electrical Switchgear	-	-	-	-	2,200,000
Pine Ridge HS - Renovate Culinary Lab	-	-	-	1,700,000	-
Portables - Moves and Compliance	400,000	400,000	400,000	400,000	400,000
Port Orange Elm - Replace Fire Alarm	1,116,000	-	-	-	-
Pride Elm - Upgrade Chiller and Controls	-	1,800,000	-	-	-
R.J. Longstreet Elm - Remodel Media Center	432,000	-	-	-	-
R.J. Longstreet Elm - Upgrade Parking Lot and Canopy Ligh	200,000	-	-	-	-
River Springs Mid - Parent Loop Extension	2,500,000	-	-	-	-
River Springs Mid - Convert Three Classrooms to Science L	1,656,000	-	-	-	-
River Springs Mid - New Chiller Plant	-	3,500,000	-	-	-
Seabreeze HS - Upgrade HVAC Bldg. 3	2,611,806	-	-	-	-
Seabreeze HS - Reroof Bldg. 7	510,000	-	-	-	-
Seabreeze HS - Upgrade MDP and Secondary Feeders Cam	2,310,000	-	-	-	-
Seabreeze HS - Digital Marquee	-	216,000	-	-	-
Seabreeze HS - Upgrade Parking Lot Lighting	-	546,000	-	-	-
Seabreeze HS - Upgrade Stormwater and Additional Parkin	-	-	-	-	3,000,000
Seabreeze HS - Renovate Classrooms Bldgs. 8 and 9	-	-	-	-	1,500,000
Seabreeze HS - Replace Exterior Doors	-	-	-	950,000	-
Silver Sands Mid - Renovate Media Center	525,000	-	-	-	-
Silver Sands Mid - Replace Gymnasium Bleachers	400,000	-	-	-	-
Silver Sands Mid - Replace WSHP Bldg. 10	1,227,936	-	-	-	-
Silver Sands Mid - Upgrade Condenser Water Loop	4,200,000	-	-	-	-
South Daytona Elm - Renovate Media Center	525,000	-	-	-	-
South Daytona Elm - Reroof Bldgs. 6, 7 and 8	639,600	-	-	-	-
South Daytona Elm - Upgrade Kitchen Flooring, Lighting an	354,000	-	-	-	-
Southwestern Mid - Replace Gymnasium Bleachers	400,000	-	-	-	-
Southwestern Mid - Upgrade HVAC Bldgs. 1 and 2	-	-	4,688,615	-	-

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Table E
School Improvements
Capital Improvements Schedule

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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Spirit Elm - Upgrade HVAC Bldg. 7	539,918	-	-	-	-
Spirit Elm - Upgrade HVAC Bldg. 6	-	-	-	1,668,455	-
Spirit Elm - Upgrade HVAC Bldgs. 1 and 2	-	2,780,780	-	-	-
Spirit Elm - Upgrade HVAC Bldgs. 3 and 5	-	-	2,799,215	-	-
Spruce Creek Elm - Replace 60 Ton Chiller	321,369	-	-	-	-
Spruce Creek HS - Upgrade Intrusion and Fire Alarm Monit	174,000	-	-	-	-
Spruce Creek HS - Upgrade Auditorium Seating and Floorin	-	1,290,000	-	-	-
Sugar Mill Elm - Parent Loop Extension	1,500,000	-	-	-	-
Sunrise Elm - Upgrade HVAC, Ceiling, Lighting Bldg. 2 and C	-	2,770,771	-	-	-
T. Dewitt Taylor Mid-HS - Upgrade CEP	2,028,756	-	-	-	-
Timbercrest Elm - Upgrade Boilers	600,000	-	-	-	-
Turie T. Small Elm - Expand Cafeteria	950,000	-	-	-	-
Various - Security	2,543,670	2,543,670	2,543,670	3,000,000	3,000,000
Various - Infrastructure for Technology	250,000	250,000	250,000	250,000	250,000
Various - Minor Projects	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Various Schools - High School Athletics	2,877,200	750,000	1,000,000	1,000,000	1,000,000
Various Schools - Playgrounds	300,000	300,000	300,000	300,000	300,000
Various - Elevator Upgrades	300,000	300,000	300,000	150,000	150,000
Volusia Pines Elm - Upgrade HVAC Bldgs. 3, 5 and 7	2,978,000	-	-	-	-
Volusia Pines Elm - Upgrade HVAC Bldgs. 4 and 8	-	1,100,000	-	-	-
Woodward Avenue Elm - Upgrade HVAC Bldg. 1 Pod 11	819,422	-	-	-	-
Total Projects at Existing Schools and Facilities	72,867,310	57,354,635	41,412,863	19,403,455	21,480,000
Facilities Management					
Contingency	10,725,000	9,000,000	9,000,000	9,000,000	9,000,000
Contingency - Operations	1,000,000	-	-	-	-
DeLand Warehouse - Lease	250,028	262,529	275,655	-	-

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School Improvements
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VOLUSIA COUNTY SCHOOLS
CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)
FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Facilities Management	3,250,000	3,250,000	3,250,000	3,250,000	3,250,000
Parking Lot Lease - City of DeLand	31,122	32,678	34,312	36,027	37,829
Various Schools - Leased Portables	350,000	100,000	100,000	100,000	100,000
Total Facilities Management	15,606,149	12,645,207	12,659,967	12,386,027	12,387,829
					-
Technology					
Centegix	456,330	456,330	456,330	-	-
Various Schools & Depts - District Wide Technology Equipn	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Various Secondary Schools - CTE Technology Equipment	650,000	650,000	650,000	650,000	650,000
Total Technology	11,106,330	11,106,330	11,106,330	10,650,000	10,650,000
System Wide Equipment and Vehicles					
Furn, Fix, Equip, Veh	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
White Fleet	910,000	910,000	910,000	910,000	910,000
Total System Wide Equipment and Vehicles	2,110,000	2,110,000	2,110,000	2,110,000	2,110,000
Buses					
Bus and Safety	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Total Buses	2,590,000	2,590,000	2,590,000	2,590,000	2,590,000
Charter School Disbursements					
Charter School Capital Outlay LCIF Disbursements	1,553,967	2,213,278	3,077,283	3,401,684	3,735,186
Total Charter School Disbursements	1,553,967	2,213,278	3,077,283	3,401,684	3,735,186

ALL TEXT ON THIS PAGE IS NEW.

Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets

VOLUSIA COUNTY SCHOOLS

CAPITAL PROJECTS FUNDS - CONSOLIDATED FIVE-YEAR FORECAST (DETAIL)

FOR FISCAL YEARS 2026 THROUGH 2030

ALL TEXT ON THIS PAGE IS NEW.

	2025-26	2026-27	2027-28	2028-29	2029-30
Roll Forward					
Prior Year Carryover Encumbrances	75,964,429	-	-	-	-
Prior Year Carryover Appropriations	93,411,228	-	-	-	-
Total roll forward	**169,375,657**	**-**	**-**	**-**	**-**
Total uses	**309,109,413**	**178,919,450**	**154,456,443**	**95,509,830**	**65,953,015**
Deficiency of revenues under expenditures	(124,340,892)	13,408,995	44,659,857	110,043,917	146,294,766
Other financing sources					
Transfers - General Fund	(38,402,151)	(40,270,906)	(42,248,314)	(44,114,831)	(46,294,923)
Transfers - Debt Service Funds	(40,730,758)	(42,640,707)	(46,743,952)	(52,049,459)	(52,061,320)
Proceeds of Lease-Purchase Agreements	-	82,000,000	63,000,000	-	-
Total other financing sources	**(79,132,909)**	**(911,613)**	**(25,992,265)**	**(96,164,290)**	**(98,356,242)**
Net change in fund balances	(203,473,802)	12,497,382	18,667,592	13,879,627	47,938,524
Fund balances					
Beginning Balance	284,175,588	80,701,786	93,199,168	111,866,759	125,746,386
Ending Balance	**$ 80,701,786**	**$ 93,199,168**	**$ 111,866,759**	**$ 125,746,386**	**$ 173,684,910**

Table E
School Improvements
Capital Improvements Schedule

Based upon Volusia County Schools, Annual Operating Budget
https://www.vcsedu.org/directory/departments/financial-services/financial-transparency/annual-budgets

VOLUSIA COUNTY SCHOOLS

CAPITAL PROJECTS FUNDS - CAPTIAL OUTLAY AND DEBT SERVICE (CO&DS) PROGRAM - CONSOLIDATED

FOR FISCAL YEARS 2026 THROUGH 2030

	2025-26	2026-27	2027-28	2028-29	2029-30
Sources - revenues					
State sources:					
CO&DS distributed	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000	$ 2,250,000
Interest on undistributed CO & DS	16,500	16,500	16,500	16,500	16,500
Total state sources	2,266,500	2,266,500	2,266,500	2,266,500	2,266,500
Total sources	**2,266,500**	**2,266,500**	**2,266,500**	**2,266,500**	**2,266,500**
Roll Forward					
Prior Year Carryover Encumbrances	5,868,387	-	-	-	-
Prior Year Carryover Appropriations	2,155,901	-	-	-	-
Total roll forward	**8,024,288**	**-**	**-**	**-**	**-**
Total uses	**8,024,288**	-	-	-	-
Deficiency of revenues under expenditures	(5,757,788)	2,266,500	2,266,500	2,266,500	2,266,500
Net change in fund balances	(5,757,788)	2,266,500	2,266,500	2,266,500	2,266,500
Fund balances					
Beginning Balance	16,419,085	10,661,297	12,927,797	15,194,297	17,460,797
Ending Balance	**$ 10,661,297**	**$ 12,927,797**	**$ 15,194,297**	**$ 17,460,797**	**$ 19,727,297**

ALL TEXT ON THIS PAGE IS NEW.

Table F
Volusia Flagler Transportation Planning Organization Transportation Improvement Plan Capital Improvements Schedule

https://www.r2ctpo.org/planning-studies/transportation-improvement-program/

#	Project Description/Area	<2026	2026	2027	2028	2029	2030	TOTAL
1	4197723 – I-95 Interchange at SR 5 (US1)	$11,952.33	$24,185,650	$254,032,478	$3,080,000	$2,208,820	$0	$295,459,275
2	428947-1- SR 40 (Granada Blvd.) from Breakaway Trail to Williamson Blvd	$5,561,730	$4,731,924	$2,700,000	$1,177,308	$580,000	$545,051	$15,296,013
3	4389791 - Sidewalk, US 1 from Wilmette Avenue to Airport Road	$0	$270,530	$0	$0	$0	$0	$270,530
4	440950-1 – Thompson Creek Trail, from Division Avenue to Wilmette Avenue	$0	$0	$686,302	$0	$0	$0	$686,302
5	4487862Sidewalk, US-1 from Airport Road to Broadway Avenue	$0	$0	$0	$4,327,333	$0	$0	$4,327,333
6	4506441, Resurfacing, SR5A (Nova Road) from Flomich Avenue to US 1	$2,327,681	$17,864,623	$0	$0	$0	$0	$20,192,304
Totals		**$7,901,363**	**$47,052,727**	**$257,418,780**	**$8,584,641**	**$2,788,820**	**$545,051**	**$336,231,757**

Table G
General Capital Improvement Fund
Capital Improvements Schedule
Based upon adopted Capital Improvement Plan, September 17, 2025

#	Project Description/Area	Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
	Expenditures							
1	Police Station/EOC	Bond Proceeds	$0	$24,000,000	$24,000,000	$0	$0	**$48,000,000**
		Total	**$0**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$48,000,000**

Funding

Funding Source	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	TOTAL FY 25-26 to FY 29-30
Bond Proceeds	$0	$24,000,000	$24,000,000	$0	$0	**$48,000,000**
Total	**$0**	**$24,000,000**	**$24,000,000**	**$0**	**$0**	**$48,000,000**

Planning Board minutes from

May 14, 2026

ITEM:

PZ-2026-255

Comprehensive Plan Amendments
Capital Improvements Schedule Annual Update

Recommended for Approval (7-0)

V. APPROVAL OF MINUTES

April 09, 2026

Mr. Jorczak moved to approve the April 09, 2026 Minutes. Mr. Gentry seconded the motion. The minutes were unanimously approved. (7-0)

VI. PLANNING DIRECTOR'S REPORT

No Report.

VII. PUBLIC HEARINGS

A. PZ-2026-000255: Comprehensive Plan Amendments, Capital Improvements Schedule Annual Update

Mr. Steven Spraker, Planning Director, explained the administrative request for the annual update of the Capital Improvements Schedule for the Capital Improvements Element of the City of Ormond Beach Comprehensive Plan to be consistent with the adopted Capital Improvement Plan in accordance with State Law. The Capital Improvements Schedule draws from the Capital Improvement Plan, the Volusia County Schools operating budget, and the Volusia Flagler Transportation Planning Organization, for plans that have been adopted through the budget cycle and are included in the Comprehensive Plan to meet the Level of Service Standards. Mr. Spraker explained that this update does not include any text changes to the goals, objectives, and policies of the Capital Improvements Element. Mr. Spraker stated that it is an ordinance that is done and is not required to go to the Florida Department of Commerce or the Volusia County Growth Management Commission and is an update to the Capital Budgets. The items reviewed are from the last fiscal year, which is the one we are currently in. Mr. Spraker added that there is a workshop on May 19, 2026 on future upcoming capital budgets for the City. Mr. Spraker concluded that staff recommends approval of the Comprehensive Plan Amendments, Capital Improvements Schedule Annual Update.

Chairman Thomas brought it up to the Board for questions.

Board Questions

Ms. Shull inquired about the school budget numbers. Mr. Spraker responded that it comes from the Volusia County Schools Operating Budget. The interlocal agreement requires the cities to adopt it. Ms. Shull stated that their numbers do not to jive and suggested Mr. Spraker ask them about it.

Ms. Shull asked about an Ormond Crossings activity center (Objective 1.8, page 11) and if it is in the works for this year. Mr. Spraker replied that the amendment is only to the Capital Improvements Schedule with no amendment to the text, and existing language within the Comprehensive Plan. Ormond Crossings has an active development order. He continued that these amendments do not include any changes to the Goals, Objectives, and Policies. The schedule is only being updated within the Capital Improvement Element. Mr. Spraker concluded that the 'land use' for Ormond Crossings is "Activity Center", and the zoning is Planned Mixed-Use Development (PMUD).

Chairman Thomas asked if there is a facility to be built in Ormond Crossings for a clubhouse or activity center. Mr. Spraker replied that there are multiple aspects of Ormond Crossings, one in which is the waterline extension on N. Tymber Creek Road, a force main extension, and reuse. There is a recreational component to the project that the Parks and Recreation Department is partnering with the Ormond Crossings development team to make a West Ormond Community Center.

Chairman Thomas stated that they are going to have a 22-27-acre plot of land that is going to be whole. The remainder of the 46-47 acres will be neighborhood parks spread out throughout the project.

Mr. Spraker concurred that recreation is woven through the development and included that they will also have multi-use trails.

Chairman Thomas referenced about Fiscal Year 2028-2029 and 2029-2030 showing all $0 and asked if it because the Recreation Department or Recreation Board not recommending any projects for then. Mr. Spraker reiterated that it is only for capital projects that are 'new' and does not include rehabilitation or maintenance. He explained that the capital projects shown on Table A are all to be constructed within the next three years. What was adopted last year did not have anything for the last two fiscal years as a 'new' capital project. He continued that there may be maintenance and rehabilitation, and rebuilding boardwalks, redoing fields, but they are not capital projects. Mr. Spraker explained that they are capital projects that help improve the level of service and recreation.

Board discussion ensued on the topic.

Mr. Jorczak asked about Daytona Beach's recent approval given to the Avalon development, making the connection between LPGA and Route 40, as part of the first phase. He asked if the County ponied up money for extending Hand Avenue over Interstate 95 to the junction and if there is anything in the City of Ormond Beach capital budget that says that there are any expenses in connecting Hand Avenue to whatever the segment of road development is going to be. Mr. Jorczak asked Mr. Spraker if he is aware of anything involved with that part of their development that interfaces with what the City of Ormond Beach has to do on a transportation element-side. Mr. Spraker replied no, that there is nothing in the Transportation charts in the Capital Improvement Plan for roadway improvements associated with Avalon.

Mr. Galloway commented that he was with an engineer recently where they physically walked and satellite pinned areas from State Road 40 to LPGA along the Tomoka River. He stated that the Florida Department of Transportation (FDOT) is doing engineering work on mapping. Mr. Galloway asked if any of the projects could be fast-tracked. Mr. Spraker responded that the question is outside of the scope of today's presentation and would be a FDOT budget decision.

Mr. Galloway referenced long-range planning, and remarked that there could be some fast-tracking if there are matching funds coming from the state.

Mr. Galloway commented that they are already putting curbing in on Hand Avenue between U.S. Highway 1 and Clyde Morris Boulevard and widening the road, as well

as putting a new road in. Mr. Spraker clarified that it is Nova Road, Shangri-La to Clyde Morris Boulevard and not U.S. Highway 1.

Mr. Galloway stated that it will eventually go all the way out to Williamson Boulevard and commented that it is almost finished now. Mr. Spraker stated that they are both Volusia County roadways.

Mr. Galloway pointed out from a traffic standpoint that they lead to the City's roadways and to the interstate.

Mr. Railsback asked if the Hand Avenue improvements referenced by Mr. Galloway are associated with the church expansion. Mr. Spraker replied that no, that the roadway improvements were a capital improvement through Volusia County.

Chairman Thomas inquired about the connector between the west side of Interstate 95 and the east side at Hand Avenue and if it was a definite plan. Mr. Spraker responded yes, that they identify Hand Avenue as the parallel corridor, suggesting to refer back to that agreement, where there is a roadway agreement between Volusia County and Daytona Beach. Mr. Spraker further explained that as far as a final decision, he believes that the roadway agreement assigns cost and permit responsibilities to Volusia County and Daytona Beach.

Ms. Shull shared today's Ormond Observer article where it details that the first phase would extend Tymber Creek Road from where Margaritaville is up to Avalon Park Boulevard and Avalon Park Boulevard will continue to State Road 40 to Granada Boulevard. She added that they just purchased property behind Riverbend Church to incorporate into the rest of their 8,800 homes.

There was discussion on the long-range planning and the Hand Avenue extension, and the Airport Road extension in Ormond Beach across Interstate 95. It was mentioned that at LPGA the bridge needs repair work. The 10-year TPO plan was incorporated into the Board discussion on the LPGA interchange to be redone with a double flyover.

Mr. Galloway remarked that he wants to make sure that long-term planning matters can be moved around based on needs.

Chairman Thomas opened the hearing up for any public comments or questions and opened it back up to the Board, entertaining a motion.

Ms. Shull motioned to approve PZ-2026-000255: Comprehensive Plan Amendments, Capital Improvements Schedule Annual Update. Mr. Jorczak seconded it. Vote was called, and the motion was approved (7-0).

VIII. PUBLIC COMMENTS

None.

IX. OTHER BUSINESS

None.

X. MEMBER COMMENTS

Ordinance Adoption
Business Impact Estimate

Proposed ordinance's number and legal title:

2026-13

AN ORDINANCE ADOPTING CERTAIN UPDATED SCHEDULES TO THE CAPITAL IMPROVEMENTS ELEMENT OF THE CITY OF ORMOND BEACH COMPREHENSIVE PLAN; PROVIDING WHEN SUCH UPDATES SHALL TAKE EFFECT; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; AND SETTING FORTH AN EFFECTIVE DATE.

This Business Impact Estimate is provided in accordance with section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is not required by state law for the proposed ordinance, but the City is, nevertheless, providing this Business Impact Estimate as a courtesy and to avoid any procedural issues that could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

☐ The proposed ordinance is required for compliance with Federal or State law or regulation;
☐ The proposed ordinance relates to the issuance or refinancing of debt;
☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant or other financial assistance accepted by the municipal government;
☐ The proposed ordinance is an emergency ordinance;
☐ The ordinance relates to procurement; or
☒ The proposed ordinance is enacted to implement the following:
   a. Part II of Chapter 163, Florida Statutes, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
   b. Sections 190.005 and 190.046, Florida Statutes, regarding community development districts;
   c. Section 553.73, Florida Statutes, relating to the Florida Building Code; or
   d. Section 633.202, Florida Statutes, relating to the Florida Fire Prevention Code.

In accordance with the provisions of controlling law, even notwithstanding the fact that an exemption noted above may apply, the City hereby publishes the following information:

1. A summary of the proposed ordinance, including a statement of the public purpose to be served by the proposed ordinance, such as serving the public health, safety, morals, and welfare of the City.

This is an administrative request to update the Capital Improvements Schedule of the Capital Improvements Element of the City of Ormond Beach Comprehensive Plan to be consistent with the adopted Capital Improvement Plan in accordance with state law. This update does not include any text changes to the goals, objectives, and policies of the Capital Improvements Element.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, including the following, if any:

    a. An estimate of direct compliance costs that businesses may reasonably incur if the ordinance is enacted;

        None. This is an ordinance to update the Capital Improvement Schedule in the Comprehensive Plan based on adopted capital plans.

    b. Identification of any new charge or fee on businesses subject to the proposed ordinance, or for which businesses will be financially responsible; and

        None. This is an ordinance to update the Capital Improvement Schedule in the Comprehensive Plan based on adopted capital plans. No charges or fees are proposed.

    c. An estimate of the City's regulatory costs, including an estimate of revenues from any new charges or fees that will be imposed on businesses to cover such costs.

        None. This is an ordinance to update the Capital Improvement Schedule in the Comprehensive Plan based on adopted capital plans. There are no new fees proposed.

3. A good faith estimates of the number of businesses likely to be impacted by the ordinance.

    None. This is an ordinance to update the Capital Improvement Schedule in the Comprehensive Plan based on adopted capital plans.

4. Any additional information the City determines may be useful.

    (This section may include: methodology or data used to prepare the Business Impact Estimate, e.g., City staff solicited comments from businesses as to the potential impact of the proposed ordinance by contacting the chamber of commerce, social media posting, direct mail/email, posting on the City's website, public workshop, etc.; efforts made to reduce the potential fiscal impact on businesses; and state the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals or businesses) and, therefore, the proposed ordinance does not affect only businesses.)

    No business impacts proposed. The item was advertised by newspaper advertisements. Information on the application is also on the city's website.

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	7.D.
Section	PUBLIC HEARINGS	**Category**	Public Hearing - Ordinances
Subject	Street Renaming, Yoon Way (SECOND READING)		
Recommended Action	It is recommended that the City Commission APPROVE the attached Ordinance to rename the street from Yoon Way to Corner Square Way.		
Strategic Goal	Transportation & Community Development - Other		
Department Staff Contact	Planning & Building Steven Spraker, Planning Director		

Summary

This request seeks to change the street name from Yoon Way to Corner Square Way, located approximately 1,450 linear feet from the intersection of West Granada Boulevard and Clyde Morris Boulevard. Street name changes are governed by Section 17-8 of the Code of Ordinances and require notice to affected property owners.

On November 3, 1999, the Commission approved Resolution 1999-40, granting a Special Exception for a 13,289-square-foot building and related site improvements at 165 Sagebrush Trail for the Vanguard South 40 project. During the public hearing, residents raised concerns that the project's traffic could affect nearby residential areas. A possible connection to the Florida Department of Transportation's (FDOT) unimproved Haul Road was considered but was not required as a condition of approval. After approval, the developer worked with FDOT and the City to address those concerns by providing roadway access from Granada Boulevard.

On May 16, 2000, through Resolution 2000-79, the city accepted a quitclaim deed from FDOT for an undeveloped 0.19-acre right-of-way known as "Haul Road." As Vanguard South 40 moved forward, the developer constructed Haul Road to city street standards, and it became known as Yoon Way.

At the April 21, 2026, City Commission meeting, the Commission directed staff to consider alternative names for Yoon Way at the request of the owner of 1180 West Granada Boulevard.

Financial Impact

There are no direct financial impacts. The street name sign would need to be replaced.

Citizen Impact

Well-marked and identifiable streets are essential for citizens and visitors to the community to orient themselves and for emergency vehicles to respond.

Attachments

1. 26-14 Yoon Way Road Name Change (P26-0081G)
2. Exhibit A, Street Location
3. Ordinance - BIE, Yoon Way Street Renaming

ORDINANCE NO. 2026-14

AN ORDINANCE CHANGING THE STREET NAME OF "YOON WAY" TO "CORNER SQUARE WAY" SAID STREET BEING LOCATED ALONG WEST GRANADA BOULEVARD, APPROXIMATELY 1,450 LINEAR FEET WEST OF THE INTERSECTION OF WEST GRANADA BOULEVARD AND CLYDE MORRIS BOULEVARD; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; PROVIDING FOR TRANSMITTAL AND RECORDING IN THE PUBLIC RECORDS OF VOLUSIA COUNTY; AND SETTING FORTH AN EFFECTIVE DATE.

WHEREAS, the City Commission accepted the right-of-way that became Yoon Way from the Florida Department of Transportation on May 16, 2000, with Resolution 2000-79, and

WHEREAS, there are no existing residential single-family home structures located on the parcels where the proposed name change is sought, and

WHEREAS, at the April 21, 2026, City Commission meeting, the City Commission provided direction to consider alternative names for Yoon Way at the request of the owner of 1180 West Granada, and

WHEREAS, the proposed street name change has been reviewed and processed in accordance with Section 3-54 of the Land Development Code and Section 17-8 of the Code of Ordinances, and

WHEREAS, the property owners along "Yoon Way" have been notified of the proposed street name change, and

WHEREAS, the City Commission finds the street name change to be consistent with the provisions of the *Land Development Code* and *Code of Ordinances* of the City of Ormond Beach, and in the overall best interest of the public health, safety, and welfare, now therefore,

BE IT ENACTED BY THE PEOPLE OF THE CITY OF ORMOND BEACH, FLORIDA, THAT:

SECTION ONE. The name of "Yoon Way", said public street being located approximately 1,450 linear feet west of the intersection of West Granada Boulevard and Clyde Morris Boulevard, is hereby changed to "Corner Square Way", as more particularly described in Exhibit "A" hereto.

SECTION TWO. The City Commission hereby directs the City Clerk to record a copy of this Ordinance in the public records of Volusia County, Florida.

SECTION THREE. The City Commission hereby directs the City staff to transmit a certified copy of this Ordinance to the appropriate agencies.

SECTION FOUR. All Ordinances or parts of Ordinances in conflict herewith are hereby repealed to the extent of such conflict.

SECTION FIVE. This Ordinance shall take effect immediately upon its adoption.

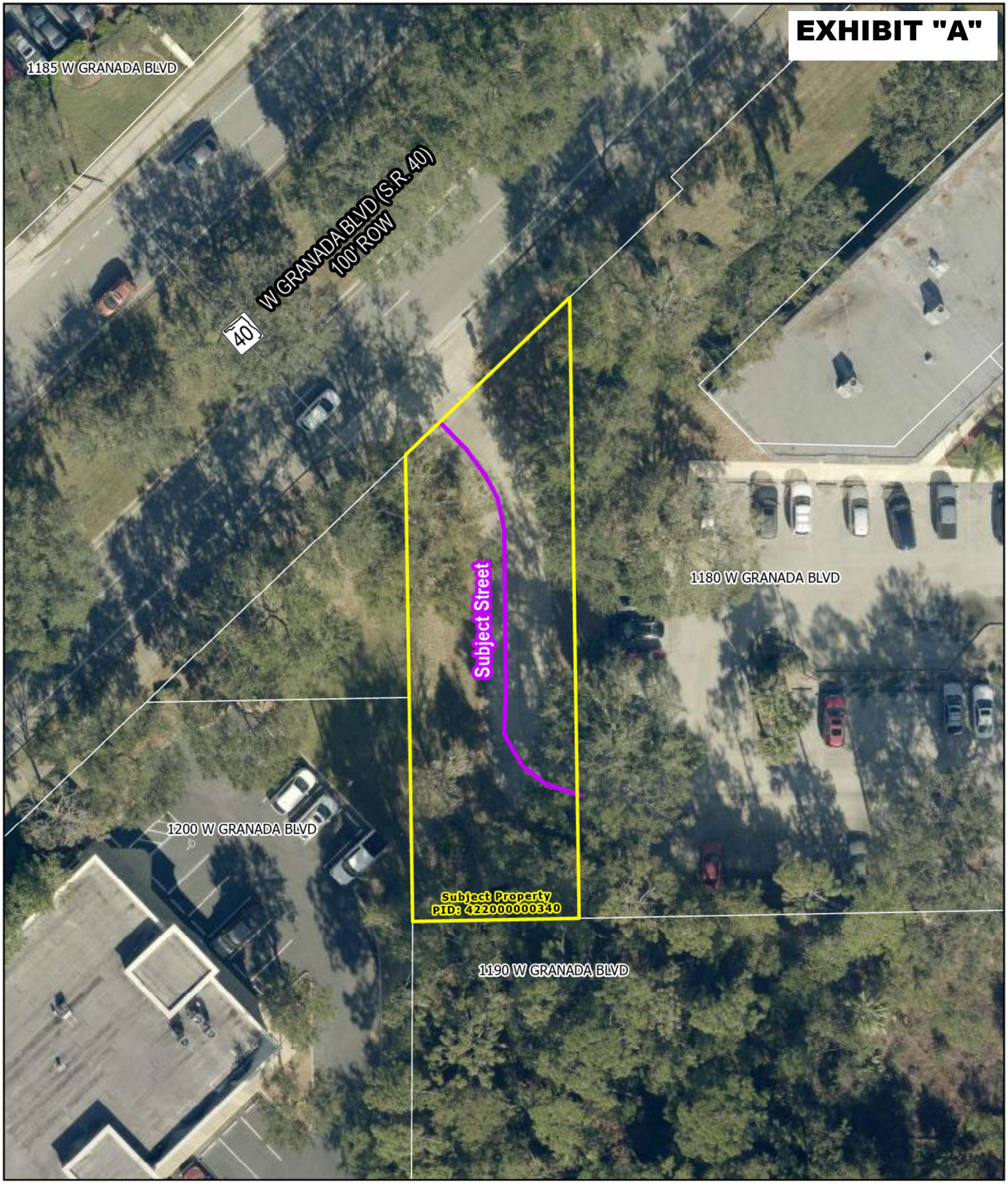
PASSED UPON at the first reading of the City Commission, this 4th day of August, 2026.

PASSED UPON at the second and final reading of the City Commission, this 25th day of August, 2026.

_____
JASON LESLIE
Mayor

ATTEST:

_____
SUSAN CARROLL DAUDERIS
City Clerk



STREET NAME CHANGE MAP
From: YOON WAY
To: CORNER SQUARE WAY

Prepared by The City of Ormond Beach GIS Department - 6/11/2026

Ordinance Adoption
Business Impact Estimate

Proposed ordinance's number and legal title:

2026-14

AN ORDINANCE CHANGING THE STREET NAME OF "YOON WAY" TO "CORNER SQUARE WAY" SAID STREET BEING LOCATED ALONG WEST GRANADA BOULEVARD, APPROXIMATELY 1,450 LINEAR FEET WEST OF THE INTERSECTION OF WEST GRANADA BOULEVARD AND CLYDE MORRIS BOULEVARD; REPEALING ALL INCONSISTENT ORDINANCES OR PARTS THEREOF; PROVIDING FOR TRANSMITTAL AND RECORDING IN THE PUBLIC RECORDS OF VOLUSIA COUNTY; AND SETTING FORTH AN EFFECTIVE DATE.

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☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant or other financial assistance accepted by the municipal government;
☐ The proposed ordinance is an emergency ordinance;
☐ The ordinance relates to procurement; or
☒ The proposed ordinance is enacted to implement the following:
  a. Part II of Chapter 163, Florida Statutes, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
  b. Sections 190.005 and 190.046, Florida Statutes, regarding community development districts;
  c. Section 553.73, Florida Statutes, relating to the Florida Building Code; or
  d. Section 633.202, Florida Statutes, relating to the Florida Fire Prevention Code.

In accordance with the provisions of controlling law, even notwithstanding the fact that an exemption noted above may apply, the City hereby publishes the following information:

1. A summary of the proposed ordinance, including a statement of the public purpose to be served by the proposed ordinance, such as serving the public health, safety, morals, and welfare of the City.

This request seeks to change the street name from Yoon Way to Corner Square Way, located approximately 1,450 linear feet from the intersection of West Granada Boulevard and Clyde Morris Boulevard.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, including the following, if any:

    a. An estimate of direct compliance costs that businesses may reasonably incur if the ordinance is enacted;

        None. This request seeks to change the street name from Yoon Way to Corner Square Way, located approximately 1,450 linear feet from the intersection of West Granada Boulevard and Clyde Morris Boulevard.

    b. Identification of any new charge or fee on businesses subject to the proposed ordinance, or for which businesses will be financially responsible; and

        None. This request seeks to change the street name from Yoon Way to Corner Square Way, located approximately 1,450 linear feet from the intersection of West Granada Boulevard and Clyde Morris Boulevard.

    c. An estimate of the City's regulatory costs, including an estimate of revenues from any new charges or fees that will be imposed on businesses to cover such costs.

        None. This request seeks to change the street name from Yoon Way to Corner Square Way, located approximately 1,450 linear feet from the intersection of West Granada Boulevard and Clyde Morris Boulevard.

3. A good faith estimates of the number of businesses likely to be impacted by the ordinance.

    None. This request seeks to change the street name from Yoon Way to Corner Square Way, located approximately 1,450 linear feet from the intersection of West Granada Boulevard and Clyde Morris Boulevard.

4. Any additional information the City determines may be useful.

    (This section may include: methodology or data used to prepare the Business Impact Estimate, e.g., City staff solicited comments from businesses as to the potential impact of the proposed ordinance by contacting the chamber of commerce, social media posting, direct mail/email, posting on the City's website, public workshop, etc.; efforts made to reduce the potential fiscal impact on businesses; and state the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals or businesses) and, therefore, the proposed ordinance does not affect only businesses.)

    No business impacts proposed. The item was advertised by newspaper advertisements. Information on the application is also on the city's website.

City of Ormond Beach

City Commission Agenda

Staff Report

Agenda Date	August 25, 2026	**Item No**	8.A.
Section	DISCUSSION AND DIRECTION ITEMS	**Category**	Discussion Item
Subject	Data Centers		
Recommended Action	The City Commission's policy direction will guide staff in finalizing Comprehensive Plan amendments for Planning Board review and subsequent public hearings.		
Strategic Goal	Transportation & Community Development - Other		
Department Staff Contact	Planning & Building Steven Spraker, Planning Director		

Summary

The purpose of this discussion item is to obtain policy direction regarding potential Comprehensive Plan amendments addressing data centers within the City of Ormond Beach. Senate Bill 484, effective July 1, 2026, recognizes that data centers may create unique planning, infrastructure, compatibility, environmental, and utility impacts and expressly preserves local government authority to address those impacts through comprehensive plans and land development regulations.

Data centers can vary by type, and the below exhibit shows typical project sizes:

Tier	Site Area	Building Area
Small	Under 10 acres	Under 50,000 square feet
Medium	10 to 50 acres	50,000 to 250,000 square feet
Large	51 to 200 acres	250,000 to 1,000,000 square feet
Hyperscale	200 acres and over	1,000,000 square feet and over

Key factors would be total building square footage, equipment yard area, generator yard, fuel storage area, and height of structures.

Common siting factors for data centers include proximity to high-voltage transmission infrastructure, available utility capacity, fiber-optic connectivity, water availability, large developable sites, hazard avoidance, predictable regulatory frameworks, and compatibility with surrounding land uses. Data centers are considered most compatible in industrial districts, technology parks, and other areas separated from residential neighborhoods due to operational characteristics such as large buildings, continuous operations, security fencing, lighting, cooling equipment, and backup generators.

Approximately 54 percent of the city is devoted to residential uses, and 78 percent of the city consists of residential, park, and open-space uses combined. Industrial land comprises only approximately 3.4 percent of the city's acreage, and industrial areas throughout the city are located adjacent to or in close proximity to residential neighborhoods. Additionally, the city has limited vacant land remaining. Based on these characteristics, staff conclude that data centers would present compatibility concerns and create extraordinary demands on infrastructure and utility systems.

Data centers are not currently listed as a permitted, conditional, or special exception use within the Land Development Code and therefore are not presently an allowed use. To provide additional policy guidance and clarity, staff have prepared Comprehensive Plan amendments that would:

- Establish a comprehensive definition of "data center" and related facilities.
- Define and recognize "on-premise server rooms" as accessory facilities supporting principal business use.
- Establish policies addressing developments that create extraordinary and disproportionate infrastructure demands.
- Prohibit data centers and associated facilities within the City of Ormond Beach.
- Prohibit acceptance of development applications, zoning changes, special exceptions, variances, or planned developments intended to establish data centers.
- Clarify that facilities cannot avoid regulation through alternative terminology such as AI campuses, cloud facilities, hyperscale facilities, or similar designations.
- Add conservation and utility policies aimed at preventing development that exceeds the growth assumptions and infrastructure capacities established by the Comprehensive Plan.

This discussion item seeks policy direction on data centers to prepare Comprehensive Plan amendments as follows:

Policy Direction #1: Data Center Prohibition. Staff seek confirmation that all types of data centers, including small, medium, large, and hyperscale facilities, should be prohibited.

Policy Direction #2: On-Premise Server Rooms. Staff seek confirmation that the information technology needs of commercial, institutional, and industrial principal uses should be distinguished from data centers. Such principal uses may include uses permitted by right, conditionally permitted uses, and Special Exception uses within their respective zoning districts.

The term "on-premise server rooms" is defined as computer rooms, server rooms, network closets, telecommunications rooms, and similar information technology facilities that are accessory to and support a permitted principal use.

Policy Direction #3: Provision of Utilities Outside of the City Limits. Ormond Beach is the utility provider for areas outside of its jurisdictional limits, including Flagler County and unincorporated Volusia County. Staff seek confirmation of Comprehensive Plan policies that would prohibit the provision of utility services to uses located outside the City limits and subject to the zoning jurisdiction of another governmental agency when specified thresholds or conditions indicating extraordinary utility demand are met.

Financial Impact

None

Citizen Impact

At previous City Commission meetings, residents have expressed concerns regarding the appropriateness of data center development within Ormond Beach. A common concern has been the impacts of water consumption, electrical infrastructure, and the proximity to residential uses.

Attachments

1. 08.25.2026, DRAFT Data Center Comprehensive Plan Amendments, CC Discussion Item,V2

CITY COMMISSION DISCUSSION ITEM STAFF REPORT

Comprehensive Plan Amendments
Data Centers

DISCUSSION ITEM DATE:	August 25, 2026
PLANNING BOARD DATE:	September 10, 2026
COMMISSION DATES:	October 20, 2026 (1st Reading) – transmittal hearing January 5, 2027 (2nd Reading) – adoption hearing (tentative)
APPLICANT:	Administrative
PROJECT NUMBER:	PZ-2026-000291
SUBJECT:	Comprehensive Plan Amendments Regarding Data Centers: • Plan Administration • Future Land Use Element • Conservation Element • Utilities Element
STAFF CONTACTS:	Steven Spraker, AICP, Planning Director Sarah Motes, Senior Planner Chuck Osteen, Information Technology Director

SECTION 1, INTRODUCTION:

This discussion item seeks policy direction regarding data centers for the purpose of preparing Comprehensive Plan amendments. Section 373.203 of Florida Statutes defines a data center as follows:

> Data center means a facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be:
>
> (a) A free-standing structure; or
>
> (b) A facility within a larger structure which uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment.

Direction from this discussion item will be incorporated into the proposed Comprehensive Plan amendments for consideration by the Planning Board in September.

SECTION 2, BACKGROUND:

Senate Bill 484 (Attachment 1) regarding data centers was signed into law on May 7, 2026, and became effective July 1, 2026. The law was created to manage the rapid growth of large, energy-intensive data centers and protect the public from their impacts. The purpose of the bill includes:

1. Prevent cost shifting of data centers to residents;
2. Preserve local government authority over land use planning and development regulations;
3. Protect water and environmental resources; and
4. Directs the Public Service Commission to create special tariffs and service requirements.

Key sections of Senate Bill 484 include:

- ***Section 1 (lines 71-81)*** – The Legislature finds that certain land uses, such as data centers and other large load customers may present unique planning, infrastructure, and compatibility considerations. **Legislature intends such considerations shall be addressed through local comprehensive planning and land development regulations**, including provisions related to infrastructure capacity, land use compatibility, environmental impacts, and efficient provision of public facilities and services.
- ***Section 1 (lines 82-87)*** – Local governments shall maintain the **authority to exercise the powers and responsibilities for comprehensive planning and land development regulations** granted by law with respect to large load customers. Large load customers may not be considered an electric substation.
- ***Section 3 (lines 130-222)*** – Requires the Florida Public Service Commission to establish a **minimum tariff and service requirements to ensure cost of services are not shifted to general body of ratepayers** no later than 10/01/2026.
- ***Section 3 (lines 217-219)*** – Public utility may not provide electric service to a large load customer if that customer is a foreign entity.
- ***Section 4 (lines 223-243)*** – Modifies F.S. 373.203 definitions to include definitions for “Data Center” and “Large-scale data center”:

  (3) “Data center” means a facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be:

  (a) A free-standing structure; or

  (b) A facility within a larger structure which uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment.

  (4) “Large-scale data center” means a single location, with a data center on site, that has an anticipated monthly peak load 50 megawatts or more, calculated as the highest average load over a 15-minute interval. The term does not include a load aggregated across multiple locations owned by the same customer. However, the

term includes all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load provided in this subsection.

- ***Section 5 (lines 244-299)*** – **Establishes large-scale data center permitting requirements**, including water management districts, including conditions of permit issuance, such as seeking to use re-use water when possible.
- ***Section 6 (lines 300-316)*** – Modifies F.S. 373.239 which regulates permit modifications and renewals to include large-scale data centers.
- ***Section 7 (lines 317-334)*** – Requires the Office of Program Policy Analysis and Government Accountability (OPPAGA) to complete a study of policy considerations related to construction and operation of large-scale data centers at a state/regional/local level on economic impacts, land and water use, natural resource use, energy use and associated costs, and public health and safety impacts. The study shall also include facility siting and mitigation efforts to reduce potential negative impacts. **OPPAGA must complete and submit the study to the Governor, the President of the Senate, and the Speaker of the House of Representatives by 07/01/2027.**
- ***Section 8 (lines 335-337)*** – establishes that the law will have an **effective date of 7/1/2026**.

Attachment 2 includes information on data centers as follows:

1. Senate Bill 484 Florida Senate Bill Analysis and Fiscal Impact Statement.
2. Urban Land Institute, Local Guidelines for Data Center Development.
3. 1000 Friends of Florida, Data Centers in Florida, Issues for state and local policymakers.
4. Congressional Research Service, Data Centers and Their Energy Consumption: Frequently Asked Questions.
5. American Water Works Association, Cooling the Cloud: Water Utilities in a Data-Driven World

The City Commission approved Ordinance 2026-11 to authorize a moratorium on data centers on first reading on July 28, 2026. The second reading is scheduled for August 25, 2026. At the first reading, there was a desire to review timelines for Comprehensive Plan amendment. The following timeline (Exhibit 1) was discussed at the August 4, 2026, City Commission meeting:

EXHIBIT 1: Comprehensive Plan Amendment Timeline:

Comprehensive Plan Amendment		
Date	**Group**	**Item**
8/25/2026	City Commission	Discussion Item - Policy Direction
9/10/2026	Planning Board	Public Hearing
10/20/2026	City Commission	1st Public Hearing - Transmittal
10/27/2026	City staff	City staff transmits to Volusia County Growth Management Commission (VGMC) and state agencies
11/27/2026 to 12/10/2026	NA	Receive comments or approval from Volusia County Growth Management Commission (VGMC) and state agencies
1/5/2027	City Commission	2nd Public Hearing - Adoption
1/12/2027	City Staff	City staff transmits to state agencies
2/13/2027	NA	Effective date of amendments

SECTION 3, ANALYSIS:

Existing Ormond Beach Regulations on Data Centers

Key zoning district uses terms as defined by Section 1-22 of the Land Development Code include:

> ***Permitted use*** means the specific purposes for which lands or buildings are maintained in accordance with the land use district regulations of this Land Development Code.
>
> ***Conditional use*** means the need for staff approval for a use permitted in a particular zoning district that may be compatible within part of a district but not throughout the district and is permitted only upon successful demonstration by an applicant that the use as proposed on a specific site will comply with all the conditional use criteria and standards for location, design and/or operation.
>
> ***Special Exception*** means a use permitted in a particular zoning district that generally may have an impact that transcends an area, neighborhood, or subdivision. Such use may be compatible within part of a district but not throughout the district and is permitted only after a public hearing and only upon demonstration by the applicant that the use as proposed on a specific site will comply with all the special use criteria and standards for location, design and/or operation.

Data centers are not listed as a permitted, conditional, or special exception use in any Ormond Beach zoning district. Additionally, the data center use is not similar to the defined zoning uses in the Land Development Code. Therefore, data centers are not an allowed use within the City's Land Development Code today. Section 2-01(b)(7) of the Land Development Code does provide for the ability of uses not defined in the Land Development Code to seek a special exception and be reviewed under certain criteria.

Types of Data Centers

Senate Bill 484 Florida Senate Bill Analysis and Fiscal Impact Statement provided a summary of the types of data centers which are provided below:

- **Micro data centers:** These are the smallest type of data center—generally used by single companies or for remote offices of larger operations. Generally, these centers will have up to 10 server racks (or fewer than 140 servers).
  - Power capacity: Less than 150 kilowatts (kW).
  - Size: Less than 5,000 square feet.
- **Small-sized data centers:** These types of data centers are typical for onsite or regional enterprise facilities. Generally, these types of centers will range from 500 to 2,000 servers.
  - Power capacity: 1 to 5 megawatts (MW).
  - Size: 5,000 to 20,000 square feet.
- **Medium-sized data centers:** Also used for onsite or regional enterprise facilities. At the upper end of this scale, one may also see colocation data centers. Generally, these data centers will range from 2,000 to 5,000 servers.
  - Power capacity: 5 to 20 megawatts (MW).
  - Size: 20,000 to 100,000 square feet.
- **Large-scale data centers**: These are large-scale facilities. However, they are not quite up to what would generally, currently, be considered hyperscale. These facilities can be used for colocation, cloud services, big data analytics, and artificial intelligence. Generally, these data centers will fall somewhere between a medium-sized data center and a hyperscale data center in regard to servers, power capacity, and size.
- **Hyperscale data centers**: These are massive-scale facilities, often involving a large campus of buildings. The International Data Corporation defines “hyperscale” as having at least 5,000 servers and at least 10,000 square feet of data center floor space. In practice, these facilities are multitudes larger than that. Hyperscale data centers are used for cloud services, big data analytics, artificial intelligence and machine learning, streaming services, and large social networks and are run by large cloud providers and big tech firms. While the minimum scale to qualify as a hyperscale can differ according to various sources—generally these facilities start at 40 to 100 megawatts (MW) in power capacity and reach up to a gigawatt or more.

Separate from data centers, many non-residential uses have computer rooms, network closets, server rooms, or information technology areas that are used to provide the computer network for the principal business. The computer infrastructure is designed to

support the internal operations of the business and does not lease computing space to outside parties or provide commercial colocation abilities.

Typical data center siting criteria

Below are factors that influence where data centers are located:

1. **Electrical Power Availability.** The availability of electrical power is a key requirement for data centers. Senate Bill 484 sought to protect utility customers from bearing the costs and risks associated with large electricity users. The legislation sought to have data centers pay the full costs of electrical service and the infrastructure needed to serve the use. Key electrical power considerations would be:
   a. The location of high-voltage transmission lines and substations.
   b. The capability of the utility provider to provide the data center electrical demand.
   c. The need for infrastructure improvements such as new substations, transmission upgrades, distribution improvements, and power plant capacity.
2. **High-Capacity Fiber and Telecommunications Infrastructure.** Data centers depend on resilient fiber routes. Site review should identify whether new conduit, boring, pole attachments, rights-of-way, beach or water crossings, or shore landing facilities are required.
3. **Water Availability.** Data centers may require large volumes of water to cool electronic equipment. Key considerations include the availability of potable and reclaimed water, water plant capacity, and wastewater treatment capacity. As technology improves, the demand for water resources may decrease.
4. **Large Land Parcels.** Data centers can vary by type, and the below exhibit shows typical project sizes:

   EXHIBIT 2: Typical Data Center Types with Site and Building Areas:

Tier	Site Area	Building Area
Small	Under 10 acres	Under 50,000 square feet
Medium	10 to 50 acres	50,000 to 250,000 square feet
Large	51 to 200 acres	250,000 to 1,000,000 square feet
Hyperscale	200 acres and over	1,000,000 square feet and over

   Key factors would be total building square footage, equipment yard area, generator yard, fuel storage area, and height of structures.
5. **Natural Hazard Risks.** Data centers have a need to stay secure and to always be active with no power outages. The environment in which they are constructed is a key factor. Locations with probability of flooding, sea level rise, hurricanes, earthquakes, or wildfires would likely not be desirable locations.
6. **Regulatory Environment.** As with any land use and zoning use, data centers typically seek land area where the use is an allowed use that is not subject to

discretionary review processes. Uncertainty in land use or zoning can lead to both time delays and costly plan submittals without a clear outcome. Other regulatory factors include environmental standards and utility regulations. Many states have enacted legislation on data centers, such as Florida's SB 484, based on the infrastructure and community impacts of data centers.

7. **Community Compatibility.** Data centers have industrial characteristics, including continuous operations, large buildings, security fencing, lighting, and backup generators. Data centers are most compatible with industrial districts, not surrounding residential uses, business parks, and technology centers.

Data center impacts

1. **High Energy Consumption**

   Data centers require large amounts of electricity to power servers and cool systems. Electrical usage is measured in megawatts (MW). A MW is a unit of power equal to 1,000,000 watts or 1,000 kilowatts (kW). This unit measures the rate at which electricity is used or produced at a specific point in time.

   EXHIBIT 3: Typical Data Center Electrical Usages:

Tier	Electrical Load in Megawatts (MW)
Small	Under 5 MW
Medium	5 MW to 49 MW
Large	50 MW to 99 MW
Hyperscale	100 MW and over

   The Senate Bill 484 Florida Senate Bill Analysis and Fiscal Impact Statement states:

   > A single large or hyperscale data center consuming 20 to 100 megawatts (MW) of electricity continuously can have the electricity demand equivalent to approximately 15,000 to 75,000 U.S. homes or more.

2. **Water Usage**

   The American Water Works Association, Cooling the Cloud: Water Utilities in a Data-Driven World publication discusses the water demand for data centers. Key points include:

   a. Data centers can require substantial volumes of water due to intensive cooling systems.
   b. Utilities may face challenges with treatment capacity, transmission mains, distribution systems, and peak demand management.
   c. Data centers are often built in locations where water infrastructure must be extended or upgraded, creating substantial capital costs and planning challenges.

EXHIBIT 4: Typical Data Center Water Usages:

Tier	Water Usage GPD (gallons per day)
Small	Under 50,000
Medium	50,000 to 250,000
Large	250,001 to 1,000,000
Hyperscale	Over 1,000,000

3. Community Impacts

Data centers are a land use that may exhibit characteristics ranging from heavy commercial to industrial development depending on facility size and resource consumption, including electricity and water demand. Data centers are most appropriate in areas that are surrounded with heavy commercial, industrial, or heavy industrial uses. In researching data centers, the following are key issues where data centers are impacting the character of communities:

a. Noise impacts. Cooling systems, such as chillers, cooling towers, large HVAC equipment, and air-handling units can produce a continuous humming sound that can travel long distances.

b. Building characteristics. Many data center buildings are large windowless buildings. The structures lack coordinated architectural design to integrate the building into the community.

c. Backup generators. Impacts include the noise and air quality impacts during operation. Additional concerns include the need for fuel storage on-site.

d. Security and Lighting. Data centers have fencing around the perimeter of the site and lighting to serve the facility.

Data center documents highlight the positive impacts of data centers located in appropriate locations with adequate infrastructure.

4. Economic Growth

The Urban Land Institute, Local Guidelines for Data Center Development highlights the tax revenue generated from data centers. The report states that data centers provide municipalities with substantial economic and fiscal benefits through various forms of tax revenue (if unabated) that far exceed ones associated with other property types.

5. Digital Infrastructure

Data centers support cloud computing, internet services, artificial intelligence, online banking, healthcare systems, and emergency communications.

Ormond Beach Characteristics

The Comprehensive Plan is the City's long-term vision and policy document that guides future growth and development. It establishes policies regarding where development may occur, including residential density and commercial intensity, identifies infrastructure needs to support growth, and provides direction for protecting environmental resources, recreational opportunities, and community character.

Comprehensive Plan – Goal 2 of the Future Land Use Element states:

> Future development and redevelopment activities should be directed in appropriate areas as depicted on the Future Land Use Map to meet the land use needs of the anticipated population, in a manner consistent with sound planning principles, the goals, objectives and policies contained herein, and the desired community character.
>
> The Future Land Use Element should allow limited commercial expansion, promote industrial use, and maintain residential densities in the core area while establishing lower densities in the perimeter areas, focusing redevelopment in the Downtown Community Redevelopment Area, US1, and SRA1A, and providing for a continued high level of open space. Future growth shall be timed and located to maximize existing public infrastructure.

There are approximately 23,113.58 acres within the jurisdiction of Ormond Beach. The exhibit below provides a breakdown of the general land uses within the City:

EXHIBIT 5: Ormond Beach Land Uses:

Land Use	Acres	Percentage of Overall Acres
Residential	12,501.19	54.09%
Open Space/Conservation & Recreation /Open Space	5,540.59	23.97%
Commercial	3,418.51	14.79%
Institutional	863.56	3.74%
Industrial	789.73	3.42%
Total:	23,113.58	100.00%

The Ormond Crossings “Activity Center” land use was divided into 1,847 acres for residential and 1,102 acres into commercial for the Town Center and Commerce Park areas.

Exhibit 5 shows 54% of the city is dedicated to residential land uses. Adding the park and open space areas to the residential areas, approximately 78% of the City is dedicated to residential, parks, and open space. Commercial areas comprise 14.79% of the land use area, institutional areas comprise 3.74%, and industrial uses comprise 3.42% of the land use area of the city.

Ormond Beach has two (2) key characteristics regarding land uses related to data centers. The first key land use characteristic is that commercial and industrial land uses are located in close proximity to residential uses. The development pattern of the City shows that the major roadways accommodate commercial and industrial uses, with residential uses located immediately behind them or in close proximity. This development pattern applies to SR A1A, US Highway 1, Nova Road, Clyde Morris Boulevard, and West Granada Boulevard. Some roadways have residential uses directly along them. The proximity of residential uses next to commercial and industrial uses is a key component of the Comprehensive Plan policies and Land Development Code regulations to ensure compatibility between uses.

A second key land use characteristic is that Ormond Beach has a low percentage of vacant land. The remaining vacant land is within the National Gardens Development of Regional Impact, including Plantation Oaks and the Ormond Crossings Planned Mixed-Use Development. Plantation Oaks is a residential development that was annexed from Volusia County in order to provide water and sewer services. Ormond Crossings was annexed in 2004 and is planned as a master development covering approximately 2,949.14 acres. Ormond Crossings contains areas designated for residential uses, a town center with retail and commercial uses, and a commerce park with commercial and industrial uses. The remaining vacant land outside Plantation Oaks and Ormond Crossings consists of scattered lots in the City that are generally small.

The data center use is not a defined use within the City's Comprehensive Plan or Land Development Code. Based upon the characteristics of the use, the most appropriate land use category would be Industrial. The Industrial land use category abuts residential land uses, or is located in close proximity to residential land uses, in several areas of the City, including South Yonge Street, North U.S. Highway 1, Hull Road, the airport property, and the Airport Business Park. Staff would conclude that data centers are not appropriate uses based on the limited amount of land area within the "Industrial" land use, the proximity to residential uses, and the characteristics of the data center uses.

SECTION 4, COMPREHENSIVE PLAN AMENDMENTS:

Below are proposed Comprehensive Plan amendments with underlined text shown as new language.

Plan Administration – Definitions

Data center - A building, structure, campus, facility, or group of facilities that houses computer servers, data storage systems, networking equipment, telecommunications equipment, artificial intelligence systems, high-performance computing systems, cloud computing infrastructure, colocation services, or similar digital processing equipment used to collect, process, store, transmit, manage, or distribute electronic data or computing services. A data center includes all associated supporting infrastructure, including cooling systems, backup generation, electrical equipment, substations, battery energy storage systems, fuel storage, telecommunications facilities, and related utility infrastructure. Activities conducted within the facility, including cloud computing, artificial intelligence, machine learning, high-performance computing, enterprise computing, colocation services, edge computing, cryptocurrency mining facilities, or similar technology functions, shall not exempt the facility from classification as a data center.

On-premise server rooms mean a dedicated physical space such as computer rooms, server rooms, network closets, telecommunications rooms, or information technology facilities that are accessory to a principal use. On-premise server rooms infrastructure is designed to support the internal operations of the principal use and does not include leased computing space to outside parties or provide commercial colocation services and are not to be operated as a data center, colocation facility, cloud computing facility, cryptocurrency mining facility, or artificial intelligence computing facility. Such areas shall not provide leased colocation services outside the principal use.

Future Land Use Element

Goal 3. Land Use Compatibility

THE LAND USE ELEMENT SHALL ENSURE THAT LAND USES ARE AVAILABLE IN A COMPATIBLE ARRANGEMENT MAXIMIZING EFFICIENT USE OF PUBLIC INFRASTRUCTURE WHILE MINIMIZING NEGATIVE IMPACTS UPON EACH OTHER. THE CITY SHALL ENSURE ADEQUATE MANAGEMENT OF FUTURE DEVELOPMENT THROUGH THE CONTINUED REVIEW OF EXISTING REGULATIONS AND, WHERE NECESSARY, THE GENERATION, ADOPTION AND IMPLEMENTATION OF EFFECTIVE, COMPREHENSIVE, AND EQUITABLE DEVELOPMENT STANDARDS IN ORDER TO FURTHER THE QUALITY OF NEW DEVELOPMENT.

Objective 3.7.

Incompatible Uses. Protect the capacity and reliability of public facilities, utilities, and infrastructure by preventing development that creates extraordinary service demands exceeding the growth assumptions, facility capacities, or adopted level-of-service standards established by the City.

Policy 3.7.1.

The City shall discourage and may deem incompatible proposed development that creates extraordinary and disproportionate demands on electric power systems, water supply facilities, wastewater facilities, or other public infrastructure that materially exceed the growth assumptions, service capacities, and infrastructure planning horizons established in the Comprehensive Plan and Capital Improvements Element.

Policy 3.7.2.

Data centers and associated facilities are prohibited uses within the City of Ormond Beach. The City shall not accept, process, or approve any application for a development order, development permit, site plan, or building permit for a data center.

Policy 3.7.3.

The City shall not accept or approve any applications submitted as a variance, Land Development Code amendment, special exception, or Planned Development for approval for the establishment, construction, or operation of a data center or associated facilities.

Policy 3.7.4.

The City recognizes that computing facilities may be described using many terms, including cloud campuses, AI facilities, research computing centers, digital infrastructure

campuses, colocation facilities, enterprise data centers, hyperscale facilities, edge computing facilities, or similar terminology. For regulatory purposes, the data center classification shall be based upon the facility's operational function, utility demand, supporting infrastructure, and computing equipment rather than the name assigned to the project.

Policy 3.7.5.

On-premise server rooms shall be permitted as accessory uses to principal uses.

Conservation Element

GOAL 7. USES OF NATURAL RESOURCES

THE CITY SHALL PROVIDE FOR THE PROTECTION AND SENSITIVE USE OF NATURAL RESOURCES THROUGH DEVELOPMENT REGULATIONS AND PUBLIC PROGRAMS.

OBJECTIVE 7.3. SUSTAINABILITY

Promote energy conservation techniques such as the use of alternative and renewable energy sources thereby increasing energy efficiency.

Policy 7.3.6.

The City shall protect environmental resources and maintain consistency with the Comprehensive Plan's long-range growth strategy by prohibiting development that creates extraordinary demands on electrical, water, and utility infrastructure systems that exceed the growth projections and service capacities planned by the Comprehensive Plan.

Utilities Element

GOAL 1.B. POTABLE WATER

THE CITY SHALL PROVIDE FOR MUNICIPAL POTABLE WATER SUPPLY FACILITIES WITH SUFFICIENT CAPACITY FOR RAW WATER SUPPLY, TREATMENT AND TRANSMISSION OF POTABLE WATER TO MEET CONSUMPTION DEMANDS THROUGHOUT THE DEFINED SERVICE AREAS DURING THE PLANNING PERIOD AND THAT MEET OR EXCEED THE CALCULATED LEVEL-OF-SERVICE STANDARDS ESTABLISHED FOR THE POTABLE WATER SYSTEM. SUCH FACILITIES SHALL MEET OR EXCEED STATE AND FEDERAL REQUIREMENTS FOR MUNICIPAL POTABLE WATER QUALITY, THE CITY SHALL ALSO APPROPRIATELY REGULATE THE USE OF INDIVIDUAL WELL AND POTABLE WATER PACKAGE TREATMENT SYSTEMS.

OBJECTIVE 1.5. GROWTH MANAGEMENT

All new development shall occur in an orderly and economical manner, to the maximum extent possible, and to the maximum existing public infrastructure possible.

Policy 1.5.5.

The City shall not approve development approvals that create extraordinary potable or reclaimed water demands greater than anticipated uses in the Capital Improvement Element.

Policy 1.5.6.

The City shall not provide water services to uses that require extraordinary infrastructure demand outside its municipal boundary and within the utility service area. Such uses will be viewed as being detrimental to the level of service, existing customers, and waterbodies (aquifer, wetlands, lakes, rivers, or springs). Characteristics of extraordinary uses would include one or more of the following:

1. Two (2) megawatts (MW) of electrical demand.
2. An average water demand exceeding 50,000 gallons per day.
3. A projected fire flow demand exceeding 4,000 gallons per minute for 30 minutes or longer to any point in the proposed usage area.
4. An average wastewater demand exceeding 50,000 gallons per day.

SECTION 5, POLICY DIRECTION:

This discussion item seeks policy direction regarding data centers for the purpose of preparing Comprehensive Plan amendments. Direction from this discussion item would be incorporated into the Comprehensive Plan amendments to be heard by the Planning Board in September.

Policy Direction #1: Data Center Prohibition. Staff is seeking to confirm that all types of data centers, including small, medium, large, and hyperscale, are desired to be prohibited. The basis of prohibition would be:

1. The data center use is not allowed today, and the amendments seek to confirm that the use is not allowed.
2. The City's land use pattern is predominantly residential, recreation/open space, and conservation, with no land areas that would provide adequate separation of the data center use and residential areas.
3. Data centers have extraordinary impacts on infrastructure, including the provision of water and electrical services.

Policy Direction #2: On-Premise Server Rooms. Staff is seeking to confirm whether there is a desire to separate the information technology needs of commercial, institutional, and industrial principal uses that are permitted, conditional, or special exception in their respective zoning districts. The term "on-premise server rooms" is defined as the accessory use of computer rooms, server rooms, network closets, telecommunications rooms, or information technology facilities that are accessory to the principal use.

Policy Direction #3: Provision of Utilities Outside of the City Limits. Ormond Beach is the utility provider for areas outside of its jurisdictional limits, including Flagler County and unincorporated Volusia County. Staff is seeking confirmation of Comprehensive Plan policies that would prohibit the provision of utility services to uses located outside the City limits and under the zoning jurisdiction of another governmental agency when specified thresholds or conditions indicating extraordinary utility demand are met.

Attachments:
Attachment 1: Senate Bill 484
Attachment 2: Data Center Information

ATTACHMENT 1

Senate Bill 484

An act relating to data centers; creating s. 163.326, F.S.; providing legislative findings; specifying that local governments maintain authority to exercise power and responsibility over comprehensive planning and land development regulations relating to large load customers; prohibiting a large load customer from being considered an electric substation; amending s. 288.075, F.S.; defining the term "data center"; providing an exception to a provision allowing an extension of certain confidentiality protections; creating s. 366.043, F.S.; providing legislative findings; defining terms; requiring public utilities to provide certain minimum tariff and service requirements for large load customers; requiring that such requirements ensure that large load customers bear their costs of service and that such costs are not shifted to the general body of ratepayers; requiring certain measures to minimize the risk of nonpayment of such costs; requiring that such minimum tariff and service requirements include certain provisions designed to prevent a public utility from providing electric service to a large load customer that is a foreign entity; prohibiting a customer from separating a certain electrical load into multiple smaller connections for a specified purpose; authorizing the Florida Public Service Commission to approve public utility tariffs that include certain utility industry-accepted ratemaking and other

CODING: Words ~~stricken~~ are deletions; words underlined are additions.

financial tools; prohibiting any tariff, contractual provision, service requirement, or other public utility policy from preventing or hindering the curtailment or interruption of electric service to a large load customer for certain purposes; prohibiting a public utility from knowingly providing electric service to a large load customer that is a foreign entity; requiring each public utility to file a tariff in compliance with the provisions of the bill by a specified date; amending s. 373.203, F.S.; defining terms; creating s. 373.262, F.S.; providing legislative intent; prohibiting the governing board of a water management district or the Department of Environmental Protection from issuing a permit for the consumptive use of water to a large-scale data center under certain circumstances; requiring that such permit be issued to a large-scale data center applicant if the applicant establishes that the proposed use of water satisfies certain requirements; requiring the governing board or the department to require the use of reclaimed water for a large-scale data center applicant's allocation when certain requirements are met; specifying requirements for certain permit applications; prohibiting the approval of permit applications without a hearing; amending s. 373.239, F.S.; requiring that consumptive use permit modifications proposed by a large-scale data center be treated in a specified manner; requiring the Office of Program Policy Analysis and Government Accountability

to contract for a study relating to the construction and operation of large-scale data centers; providing requirements for the study; requiring the study to be submitted to the Governor, the President of the Senate, and the Speaker of the House by a specified date; providing effective dates.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Effective upon becoming a law, section 163.326, Florida Statutes, is created to read:

163.326 Large load customer considerations.—

(1) The Legislature finds that certain land uses, including facilities with substantial electric or other utility demands, such as data centers and other large load customers as defined in s. 366.043(2), may present unique planning, infrastructure, and compatibility considerations. The Legislature intends that such considerations shall be addressed through local comprehensive planning and land development regulations adopted pursuant to this chapter, including provisions related to infrastructure capacity, land use compatibility, environmental impacts, and the efficient provision of public facilities and services.

(2) Local governments shall maintain the authority to exercise the powers and responsibilities for comprehensive planning and land development regulation granted by law with respect to large load customers. A large load customer may not be considered an electric substation for the purposes of s. 163.3208.

Section 2. Paragraphs (a), (b), and (c) of subsection (1) of section 288.075, Florida Statutes, are redesignated as paragraphs (b), (c), and (d), respectively, paragraph (a) of subsection (2) is amended, and a new paragraph (a) is added to subsection (1) of that section, to read:

288.075 Confidentiality of records.—

(1) DEFINITIONS.—As used in this section, the term:

(a) "Data center" has the same meaning as in s. 373.203.

(2) PLANS, INTENTIONS, AND INTERESTS.—

(a)1. If a private corporation, partnership, or person requests in writing before an economic incentive agreement is signed that an economic development agency maintain the confidentiality of information concerning plans, intentions, or interests of such private corporation, partnership, or person to locate, relocate, or expand any of its business activities in this state, the information is confidential and exempt from s. 119.07(1) and s. 24(a), Art. I of the State Constitution for 12 months after the date an economic development agency receives a request for confidentiality or until the information is otherwise disclosed, whichever occurs first.

2. An economic development agency may extend the period of confidentiality specified in subparagraph 1. for up to an additional 12 months upon written request from the private corporation, partnership, or person who originally requested confidentiality under this section and upon a finding by the economic development agency that such private corporation, partnership, or person is still actively considering locating, relocating, or expanding its business activities in this state. Such a request for an extension in the period of confidentiality

must be received prior to the expiration of any confidentiality originally provided under subparagraph 1. This subparagraph does not apply to information described in subparagraph 1. relating to data centers.

If a final project order for a signed economic development agreement is issued, then the information will remain confidential and exempt for 180 days after the final project order is issued, until a date specified in the final project order, or until the information is otherwise disclosed, whichever occurs first. However, such period of confidentiality may not extend beyond the period of confidentiality established in subparagraph 1. or subparagraph 2.

Section 3. Section 366.043, Florida Statutes, is created to read:

366.043 Large load tariffs for public electric utilities.—

(1) The Legislature finds that the provision of safe and reliable electric services, provided at fair, just, and reasonable rates, is essential to the welfare of the ratepayers of this state. The Legislature further finds that when one class of electric service customer requires uniquely large electrical loads at a single location, it imposes a disproportionate risk on the other ratepayers of this state and makes it necessary for the commission to develop and enforce rate structures and other policies for such customers which ensure such risk is mitigated as much as possible and prevent shifting the costs of serving large load customers to the general body of ratepayers.

(2) As used in this section, the term:

(a) "Controlled by" means having the power to direct or

cause the direction of the management or policies of a company, whether through ownership of securities, by contract, or otherwise. A person or an entity that directly or indirectly has the right to vote 25 percent or more of the voting interests of the company or that is entitled to 25 percent or more of its profits is presumed to control the entity.

(b) "Foreign country of concern" has the same meaning as in s. 692.201.

(c) "Foreign entity" means an entity that is:

1. Owned or controlled by the government of a foreign country of concern; or

2. A partnership, an association, a corporation, an organization, or other combination of persons organized under the laws of or having its principal place of business in a foreign country of concern, or a subsidiary of such entity.

(d) "Large load customer" means a customer with an anticipated monthly peak load of 50 megawatts or more, calculated as the highest average load over a 15-minute interval at a single location. The term does not include a load aggregated across multiple locations owned by the same customer. However, the term includes all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load provided in this paragraph.

(e) "Public utility" has the same meaning as in s. 366.02, except that the term does not include a gas utility.

(3) The following minimum tariff and service requirements for large load customers are required in public utility tariffs:

(a) The minimum tariff and service requirements must

reasonably ensure that each large load customer bears its own full cost of service and that such cost is not shifted to the general body of ratepayers. Such cost of service includes, but is not limited to, connection, incremental transmission, incremental generation, and other infrastructure costs; operations and maintenance expenses; and any other costs required to serve a large load customer. The risk of nonpayment of such costs may not be borne by the general body of ratepayers.

(b) The minimum tariff and service requirements must include provisions reasonably designed to prevent a public utility from providing electric service to a customer that would otherwise qualify as a large load customer if that customer is a foreign entity.

(4) A customer may not separate an electrical load at a single location into multiple smaller connections to avoid being classified as a large load customer.

(5) To effectuate the requirements of subsection (3), the commission may approve public utility tariffs that include utility industry-accepted ratemaking and other financial tools, including, but not limited to, the following:

(a) Contributions in aid of construction or other required customer infrastructure investments that may be returned, in whole or in part, to such customers over time.

(b) Demand charges, including minimum demand charges.

(c) Incremental generation charges.

(d) Financial guarantees.

(e) Minimum load factors.

(f) Take-or-pay provisions or similar provisions requiring

payment for contracted capacity, regardless of a large load customer's actual electricity use or demand.

(g) Minimum period of service contract requirements, including early termination fees or other fees for violation of such contracts.

(6) Any tariff, contractual provision, service requirement, or other public utility policy relating to large load customers may not prevent or otherwise hinder the curtailment or interruption of electric service to a large load customer where such curtailment or interruption is intended to ensure grid stability, reduce the likelihood or breadth of wider service outages, or ensure public safety during an emergency or other exceptional circumstance.

(7) A public utility may not knowingly provide electric service to a customer that would otherwise qualify as a large load customer if that customer is a foreign entity.

(8) No later than October 1, 2026, each public utility shall file, for commission approval, a tariff that complies with this section.

Section 4. Effective upon becoming a law, subsections (3) and (4) of section 373.203, Florida Statutes, are redesignated as subsections (5) and (6), respectively, and new subsections (3) and (4) are added to that section, to read:

373.203 Definitions.—

(3) "Data center" means a facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be:

(a) A free-standing structure; or

(b) A facility within a larger structure which uses

environmental control equipment to maintain the proper conditions for the operation of electronic equipment.

(4) "Large-scale data center" means a single location, with a data center on site, that has an anticipated monthly peak load of 50 megawatts or more, calculated as the highest average load over a 15-minute interval. The term does not include a load aggregated across multiple locations owned by the same customer. However, the term includes all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load provided in this subsection.

Section 5. Section 373.262, Florida Statutes, is created to read:

373.262 Large-scale data center permitting.—

(1) It is the intent of the Legislature that the development and operation of large-scale data centers in this state be managed under a permitting framework that ensures this state's water resources are used in the public interest, in a manner that is not harmful to the water resources of this state, and consistent with local government zoning regulations and comprehensive plans.

(2) Consistent with other provisions of this part, the governing board of a water management district or the department may not issue a permit to a large-scale data center applicant for an allocation of water if the proposed use of the water is harmful to the water resources of the area or is prohibited by the applicable local government zoning regulations and comprehensive plan. A permit shall be issued to a large-scale data center applicant for an allocation of water if the

applicant establishes that the proposed use of water:

(a) Is a reasonable-beneficial use as defined in s. 373.019;

(b) Will not interfere with any presently existing legal use of water; and

(c) Is consistent with the public interest.

(3) The governing board or the department shall require the use of reclaimed water in lieu of all or a portion of a proposed use of surface water or groundwater by a large-scale data center applicant when:

(a) A suitable reclaimed water supply source is available and permitted;

(b) Reclaimed water distribution or supply lines are available at the property boundary in sufficient capacity and quality to serve the applicant’s needs;

(c) The applicant is capable of accessing the reclaimed water source through distribution or supply lines;

(d) Use of reclaimed water is environmentally, economically, and technically feasible; and

(e) Use of reclaimed water would not conflict with the requirements contained in the applicant’s surface water discharge permit, if applicable.

(4)(a) In addition to the requirements of s. 373.229, all permit applications made under this part requesting an allocation of at least an average daily flow of 100,000 gallons of water per day by a large-scale data center must contain:

1. All sources and amounts of water and losses of water used for cooling, industrial and treatment processes, personal or sanitary needs of employees, and landscape irrigation; and

2. A water conservation plan that, at a minimum, incorporates recycling cooling water before discharge or disposal, implementation of a leak detection and repair program, use of water efficient fixtures, and implementation of an employee awareness and education program concerning water conservation.

(b) Notwithstanding s. 373.229(4), the governing board or the department may not approve a permit application made under this part by a large-scale data center without a hearing.

Section 6. Subsection (2) of section 373.239, Florida Statutes, is amended to read:

373.239 Modification and renewal of permit terms.—

(2) If the proposed modification involves water use of 100,000 gallons or more per day or is proposed by a large-scale data center as defined in s. 373.203, the application shall be treated under the provisions of s. 373.229 in the same manner as the initial permit application. Otherwise, the governing board or the department may at its discretion approve the proposed modification without a hearing, provided the permittee establishes that:

(a) A change in conditions has resulted in the water allowed under the permit becoming inadequate for the permittee's need, or

(b) The proposed modification would result in a more efficient utilization of water than is possible under the existing permit.

Section 7. The Office of Program Policy Analysis and Government Accountability (OPPAGA) shall contract for an independent, interdisciplinary study of policy considerations

related to the construction and operation of large-scale data centers, including, but not limited to, state, regional, or local economic development and tax revenue impacts; use of land, water, and other natural resources; energy use and related cost and rate impacts; and public health and safety related impacts. OPPAGA may contract with one or more nonpartisan academic or nonprofit research organizations with policy and scientific expertise in relevant fields of study. The study must identify any issues unique to the construction and operation of large-scale data centers in this state. The study must also include recommendations on facility siting and mitigation measures that should be considered to reduce any potential negative impacts. OPPAGA shall submit the study to the Governor, the President of the Senate, and the Speaker of the House of Representatives by July 1, 2027.

Section 8. Except as otherwise expressly provided in this act and except for this section, which shall take effect upon becoming a law, this act shall take effect July 1, 2026.

ATTACHMENT 2

Data Center Information

The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Rules

BILL:	CS/CS/SB 484
INTRODUCER:	Rules Committee; Community Affairs Committee; Senator Avila and others
SUBJECT:	Data Centers
DATE:	February 18, 2026 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Schrader	Imhof	RI	**Favorable**
2.	Hackett	Fleming	CA	**Fav/CS**
3.	Schrader	Kruse	RC	**Fav/CS**

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/CS/SB 484 revises Florida law regarding the regulation of large-scale data centers and certain other large electricity users. Specifically, the bill:

- Specifies that agencies may not enter into non-disclosure agreements, or other contracts restricting the agency from disclosing information about a potential data center development to members of the public.
- Maintains the authority of local governments to exercise the powers and responsibilities for comprehensive planning and land development regulation granted by law with respect to large load customers. The bill also establishes that large load customers may not be considered an electric substation for the purposes of s.163.3208, F.S.
- Provides definitions for the terms "controlled by," foreign country of concern," "foreign entity," "large load customer," "public utility," "data center," and "large-scale data center."
- Requires the Public Service Commission to develop minimum large load tariff requirements for public electric utilities. The tariff requirements must reasonably ensure that large load customers (such as large data centers) pay for their own cost of service, minimize the risk of nonpayment of such costs to the maximum extent practicable, and include provisions to prevent a public utility from providing electric service to a foreign entity large load customer.
- Prohibits public electric utilities from knowingly providing service to large load facilities owned or controlled by foreign countries of concern.
- Establishes a distinct large-scale data center consumptive use permit (CUP) permit requirements and application process. The bill also authorizes water management districts or

the Department of Environmental Protection to require large-scale data centers to use some portion of reclaimed water as part of a CUP approval.
- Specifies that CUP modifications involving a large-scale data center must be treated as new, initial applications.

The bill takes effect July 1, 2026.

II. Present Situation:

Florida Public Service Commission

The Florida Public Service Commission (PSC) is an arm of the legislative branch of government.[1] The role of the PSC is to ensure Florida's consumers receive utility services, including electric, natural gas, telephone, water, and wastewater, in a safe and reliable manner and at fair prices.[2] In order to do so, the PSC exercises authority over utilities in one or more of the following areas: rate base or economic regulation; competitive market oversight; and monitoring of safety, reliability, and service issues.[3]

Electric Utilities

The PSC monitors the safety and reliability of the electric power grid[4] and may order the addition or repair of infrastructure as necessary.[5] The PSC has broad jurisdiction over the rates and service of investor-owned electric and gas utilities[6] (defined as "public utilities" under ch. 366, F.S.).[7] However, the PSC does not fully regulate municipal electric utilities (utilities owned or operated on behalf of a municipality) or rural electric cooperatives. The PSC does have jurisdiction over these types of utilities with regard to rate structure, territorial boundaries, and bulk power supply operations and planning.[8] Municipally-owned utility rates and revenues are regulated by their respective local governments or local utility boards. Rates and revenues for a cooperative utility are regulated by its governing body elected by the cooperative's membership.

Public Electric Utilities in Florida

There are four investor-owned electric utility companies (electric IOUs) in Florida: Florida Power & Light Company (FPL), Duke Energy Florida (Duke), Tampa Electric Company (TECO), and Florida Public Utilities Corporation (FPUC).[9]

Electric IOU rates and revenues are regulated by the PSC, and the utilities must file periodic earnings reports. This allows the PSC to monitor earnings levels on an ongoing basis and adjust

[1] Section 350.001, F.S.
[2] *See* Florida Public Service Commission, *Florida Public Service Commission Homepage*, http://www.psc.state.fl.us (last visited Dec. 3, 2025).
[3] Florida Public Service Commission, *About the PSC*, https://www.psc.state.fl.us/about (last visited Feb. 2, 2026).
[4] Section 366.04(5) and (6), F.S.
[5] Section 366.05(1) and (8), F.S.
[6] Section 366.05, F.S.
[7] Section 366.02(8), F.S.
[8] Florida Public Service Commission, *About the PSC*, *supra* note 3.
[9] Florida Public Service Commission, *2025 Facts and Figures of the Florida Utility Industry*, pg. 4, Apr. 2025 (available at: https://www.floridapsc.com/pscfiles/website-files/PDF/Publications/Reports/General/FactsAndFigures/April%202025.pdf).

customer rates quickly if a company appears to be overearning.[10] If a utility believes it is earning below a reasonable level, it can petition the PSC for a change in rates.[11]

Section 366.041(2), F.S., requires public utilities to provide adequate service to customers. As compensation for fulfilling that obligation, s. 366.06, F.S., requires the PSC to allow the IOUs to recover honestly and prudently invested costs of providing service, including investments in infrastructure and operating expenses used to provide electric service.[12]

Water and Wastewater Utilities

Florida's Water and Wastewater System Regulatory Law, ch. 367, F.S., regulates water and wastewater systems in the state. Section 367.011, F.S., grants the PSC exclusive jurisdiction over each utility with respect to its authority, service, and rates. For the chapter, a "utility" is defined as "a water or wastewater utility and, except as provided in s. 367.022, [F.S.], includes every person, lessee, trustee, or receiver owning, operating, managing, or controlling a system, or proposing construction of a system, who is providing, or proposes to provide, water or wastewater service to the public for compensation." In 2024, the PSC had jurisdiction over 153 investor-owned water and/or wastewater utilities in 40 of Florida's 67 counties.[13]

Section 367.022, F.S., exempts certain types of water and wastewater operations from PSC jurisdiction and the provisions of ch. 367, F.S. (except as expressly provided in the chapter). Such exempt operations include: municipal water and wastewater systems, public lodging systems that only provide service to their guests, systems with a 100-person or less capacity, landlords that include service to their tenants without specific compensation for such service, and mobile home parks operating both as a mobile home park and a mobile home subdivision that provide "service within the park and subdivision to a combination of both tenants and lot owners, provided that the service to tenants is without specific compensation," and others.[14] The PSC also does not regulate utilities in counties that have exempted themselves from PSC regulation pursuant to s. 367.171, F.S. However, under s. 367.171(7), F.S., the PSC retains exclusive jurisdiction over all utility systems whose service crosses county boundaries, except for utility systems that are subject to interlocal utility agreements.

Municipal Water and Sewer Utilities in Florida

A municipality[15] may establish a utility by resolution or ordinance under s. 180.03, F.S. A municipality may establish a service area within its municipal boundary or within five miles of its corporate limits of the municipality.[16]

Under s. 180.19, F.S., a municipality may permit another municipality and the owners or association of owners of lands outside of its corporate limits or within another municipality's

[10] PSC, *2024 Annual Report*, p. 6, (available at: https://www.floridapsc.com/pscfiles/website-files/PDF/Publications/Reports/General/AnnualReports/2024.pdf) (last visited Feb. 2, 2026).
[11] *Id.*
[12] *Id*.
[13] Florida Public Service Commission, *2025 Facts and Figures of the Florida Utility Industry*, *supra* note 9, at 4.
[14] Section 367.022, F.S.
[15] Defined by s. 180.01, F.S., "as any city, town, or village duly incorporated under the laws of the state."
[16] Section 180.02, F.S., *see also* s. 180.06, F.S.

corporate limits to connect to its utilities upon such terms and conditions as may be agreed upon between the municipalities.

The PSC does not have jurisdiction over municipal water and sewer utilities, and as such, has no authority over the rates for such utilities. Municipally-owned water and sewer utility rates and revenues are regulated by their respective local governments, sometimes through a utility board or commission.

PSC Setting of Public Utility Rates and Other Charges

Section 366.041, F.S., establishes the considerations the PSC must apply in fixing just, reasonable, and compensatory rates:

> the [PSC] is authorized to give consideration, among other things, to the efficiency, sufficiency, and adequacy of the facilities provided and the services rendered; the cost of providing such service and the value of such service to the public; the ability of the utility to improve such service and facilities; and energy conservation and the efficient use of alternative energy resources; provided that no public utility shall be denied a reasonable rate of return upon its rate base

Section 366.06, F.S., establishes the PSC's authority to establish and implement procedures for the fixing of and changing public utility rates. Under this section, all applications made by public utilities for changes in rates must be in writing with the PSC under the PSC's established rules and regulations.[17] Section 366.06(2), F.S., requires the PSC to hold a public hearing whenever it finds, upon request made, or upon its own motion, one or more of the following:

- That the rates demanded, charged, or collected by any public utility for public utility service, or that the rules, regulations, or practices of any public utility affecting such rates, are unjust, unreasonable, unjustly discriminatory, or in violation of law;
- That such rates are insufficient to yield reasonable compensation for the services rendered;
- That such rates yield excessive compensation for services rendered; or
- That such service is inadequate or cannot be obtained.

During such a hearing, the PSC must determine just and reasonable rates to be thereafter charged for such service, and promulgate rules and regulations affecting equipment, facilities, and service to be thereafter installed, furnished, and used.[18]

The PSC establishes separate rates and charges for various components of a public utility's cost of providing service to its customers. These are established through various proceedings and processes which include:

- Base rate proceedings (also known as rate cases);
- Cost recovery clauses;
- Interim charges;
- Infrastructure surcharges;

[17] Section 366.06(1), F.S.
[18] *Id.*

- Tariffs.[19]

Tariffs

A public utility's tariffs are a series of documents, approved by the PSC, that provide the utility's rates, terms, and conditions for service. These tariffs also include standardized forms for the utility's service offerings and its standard contracts and agreements. Tariffs are generally revised, as necessary, after a PSC-approved change in a utility's rates or charges and are generally part of any proceeding revising rates or charges. Utilities may also request a tariff change if circumstances warrant doing so. However, the PSC does not establish a return on equity (ROE) or overall rates of return in reviewing stand-alone requests to approve a new, modified, or canceled tariff.[20]

Rate Cases

Rate cases are generally held less frequently than the PSC's other rate and charge proceedings for public utilities. For a public utility, these wide-ranging proceedings seek to address:
- A reasonable rate of return on investment;
- Operating and maintenance expenses; and
- Cost of administering the public utility.[21]

According to the PSC, in setting a reasonable rate of return, it is guided by the principles established in *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va.*, 262 U.S. 679 (1923) and *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).[22] In *Bluefield,* the United States Supreme Court found that:

> Rates which are not sufficient to yield a reasonable return on the value of the property used at the time it is being used to render the service are unjust, unreasonable and confiscatory, and their enforcement deprives the public utility company of its property in violation of the Fourteenth Amendment….A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding, risks and uncertainties.[23]

Further, the court in *Bluefield* found that such return should be "reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties." Further, this "rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for

[19] Florida Public Service Commission, *2026 Agency Legislative Bill Analysis for SB 126*, (Nov. 7, 2025) (on file with the Senate Committee on Regulated Industries).
[20] *Id.*.
[21] *Id.*
[22] *Id.*
[23] *Bluefield Waterworks & Imp. Co. v. Pub. Serv. Comm'n of W. Va.*, 262 U.S. 679, 690-92 (1923).

investment, the money market and business conditions generally."[24] Thus, for a rate of return to be non-confiscatory, it must be adjusted as broader-market circumstances change.

The Supreme Court in *Hope* found that:

> The fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests…. From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business…. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[25]

In *Hope*, the Supreme Court also reiterates its previous decision in *Fed. Power Comm'n v. Nat. Gas Pipeline Co. of Am.*, 315 U.S. 575, 586 (1942) that the "[United States] Constitution does not bind rate-making bodies to the service of any single formula or combination of formulas." Rather, it is "not theory but the impact of the rate order which counts."[26] The court cites with approval that the Federal Power Commission, in its rate-making function, uses "pragmatic adjustments" in fixing rates.[27]

In a base rate proceeding, the PSC establishes a public utility's rate of return or cost of capital. It sets this based on:
- Return on equity (ROE);
- Long-term and short-term debt;
- Customer deposits; and
- Deferred taxes.[28]

The PSC, in a rate proceeding, develops a substantial evidentiary record, which includes analysis of ROE using models generally used in the utility industry. The PSC also takes into account various risks to the public utility when setting ROE. When the PSC approves an ROE for a public utility, it does so within a 100-basis point rate of return (i.e. plus or minus 1 percent).[29]

The rate of return actually earned by the utility is dependent on both the utility's ability to manage costs and react to other factors that may impact its operations. These factors may include:
- Changes in revenues due to the impact of weather on sales;
- New, modified, or cancelled tariffed rates or charges;
- Costs of materials, supplies, and labor; and
- Interest rates affecting the cost of debt.[30]

[24] *Id* at 692.
[25] *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591, 603 (1944).
[26] *Id* at 602.
[27] *Id*.
[28] Florida Public Service Commission, *2026 Agency Legislative Bill Analysis for SB 126, supra* note 19.
[29] *Id.*
[30] *Id.*

Salaries and benefits paid to employees of the public utility, including its executives, are part of the PSC's review in a rate case proceeding and the PSC examines these figures in the aggregate. In determining whether such expenses are reasonable and prudent, the PSC will consider industry norms and the need to attract and retain qualified executive and non-executive utility personnel.[31]

Establishment of other Bases of Public Utility Customer Charges

Outside of rate cases, the PSC also has other processes for revising, or creating, utility rates and charges. These proceedings include cost recovery clause proceedings and interim charges.

Cost recovery clause proceedings allow public utilities to recover variable, volatile, or legislatively mandated costs.[32] For public electric utilities, the PSC holds annual hearings to allow the utilities to recover expenditures on:

- Fuel and purchased power costs;
- Capacity costs;
- Environmental compliance costs pursuant to s. 366.8255, F.S.;
- Storm protection plan costs pursuant to s. 366.96, F.S.; and
- Energy conservation program costs pursuant to s. 366.80 through 366.83, F.S.

Section 366.93, F.S., also authorizes similar cost recovery for nuclear costs. However, the PSC has not conducted a nuclear cost recovery proceeding since 2018 as no public utility has petitioned for recovery under this clause since that year.[33]

For public natural gas utilities, the PSC holds annual hearings to allow the utilities to recover expenditures on:

- Purchased natural gas costs;
- Energy conservation costs pursuant to s. 366.80 through 366.83, F.S.; and
- Natural gas infrastructure relocation costs pursuant to s. 366.99, F.S.[34]

Outside of cost recovery clause proceedings, the PSC also provides a process for establishing interim charges to quickly recover estimated storm-recovery related expenses. These interim charges are time-limited and are subject to a final true-up proceeding once final costs can be determined for a particular storm or series of storms.[35]

The PSC does not establish ROEs or overall rates of returns in recovery clause and interim charge proceedings, as these focused rate proceedings are limited in scope. Rather, ROE and overall rates of return are set during rate cases, as those proceedings are substantially broader in scope.[36]

[31] *Id*.
[32] *Id.*
[33] Florida Public Service Commission, *2025 Agency Legislative Bill Analysis for SB 354*, (Feb. 28, 2025) (on file with the Senate Committee on Regulated Industries).
[34] Florida Public Service Commission, *2026 Agency Legislative Bill Analysis for SB 126, supra* note 19.
[35] *Id.*
[36] Florida Public Service Commission, *2026 Agency Legislative Bill Analysis for SB 126, supra* note 19.

Data Centers

At its most basic, a data center is a physical facility that contains information technology (IT) infrastructure for storing, processing, and distributing data and the running of shared and distributed applications and services. Data centers can be anything from a dedicated space within a building, a dedicated building, or, for the largest-scale data centers, multi-building campuses.[37]

Generally, the major components of a data center are:

- IT equipment: This would be the core processing, storage, and transmission hardware for a data center—this would include servers, data storage systems, and network gear (such as routers and switches).
- Power infrastructure: This would be all the equipment to supply and maintain power to the facility, including power supplies (including redundant and uninterruptable power supplies to ensure continuous operation), and power distribution units.
- Cooling systems: This would include cooling infrastructure to maintain the data center at ideal temperatures and prevent IT equipment from overheating.
- Physical security: This would include systems that restrict access to the data center and fire suppression systems.[38]

Technically, data centers came about during earliest days of electronic digital computing when machines like the US military's Electrical Numerical Integrator and Computer (ENIAC), completed in 1945, required dedicated computer room space to house its massive machines. For many years, mainframe computers dominated computer rooms. However, in the 1990's when microcomputers came about and replaced mainframes in computer rooms, these microcomputers became known as servers and the computer rooms became known as what would eventually become the modern data center.[39]

The emergence of cloud computing in the early 2000s changed the data center landscape significantly in regard to the purpose and scale of data centers. Data centers went from serving solely one organization's needs (or even one organization's needs at a single location), to shared resources that can be sold and provided as needed to multiple individuals and organizations with the ability to scale up or down as needed—these shared spaces are generally known as colocation data centers.[40]

Tiers/Types of Data Centers

While there are no hard-set size classification scale or guidelines for data centers, they generally fall into one of the below categories:[41]

[37] Cisco, *What is a Data Center*, https://www.cisco.com/site/us/en/learn/topics/computing/what-is-a-data-center.html (last visited Feb. 2, 2026); and IBM, *What is a Data Center*, https://www.ibm.com/think/topics/data-centers (last visited Feb. 2, 2026).
[38] McKinsey & Company, *What is a Data Center*, https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-a-data-center (last visited Feb. 2, 2026).
[39] IBM *supra* note 37.
[40] *Id.*
[41] IBM, *What is a hyperscale data center*, https://www.ibm.com/think/topics/hyperscale-data-center (last visited Feb. 2, 2026); City Science, *Data Centres and Local Planning: Balancing Growth with Environmental Commitments*, Nov. 7, 2025

- Micro data center: These are the smallest type of data center—generally used by single companies or for remote offices of larger operations. Generally, these centers will have up to 10 server racks (or fewer than 140 servers).
  - Power capacity: Less than 150 kilowatts (kW).
  - Size: Less than 5,000 square feet.
- Small-sized data centers: These types of data centers are typical for onsite or regional enterprise facilities. Generally, these types of centers will range from 500-2,000 servers.
  - Power capacity: 1 to 5 megawatts (MW).
  - Size: 5,000 to 20,000 square feet.
- Medium-sized data centers: Also used for onsite or regional enterprise facilities. At the upper end of this scale, one may also see colocation data centers. Generally, these data centers will range from 2,000 to 5,000 servers.
  - Power capacity: 5 to 20 MW.
  - Size: 20,000 to 100,000 square feet.
- Large-scale data center: These are large-scale facilities. However, they are not quite up to what would generally, currently, be considered hyperscale. These facilities can be used for colocation, cloud services, big data analytics, and artificial intelligence. Generally, these data centers will fall somewhere between a medium-sized data center and a hyperscale data center in regard to servers, power capacity, and size.
- Hyperscale data center: These are massive-scale facilities, often involving a large campus of buildings. The International Data Corporation defines "hyperscale" as having at least 5,000 servers and at least 10,000 square feet of data center floor space. In practice, these facilities are multitudes larger than that.[42] Hyperscale data centers are used for cloud services, big data analytics, artificial intelligence and machine learning, streaming services, and large social networks and are run by large cloud providers and big tech firms.[43] While the minimum scale to qualify as a hyperscale can differ according to various sources—generally these facilities start at 40 to 100 MW in power capacity and reach up to a gigawatt or more.[44]

The size of data center facilities is anticipated to continue to grow and the share of the overall market for hyperscale facilities is also anticipated to grow. As of 2025, 41 percent of all data center capacity worldwide is within facilities with a power capacity of 100 MW or more. This figure is expected to grow to 60 percent by 2029.[45]

(available at: https://cityscience.com/news/data-centres-and-local-planning-balancing-growth-with-environmental-commitments/);

[42] IBM, *What is hyperscale?*, https://www.ibm.com/think/topics/hyperscale (last visited Feb. 2, 2026).

[43] BenchMark, *Hyperscale Data Centers and How to Power Them*, Jan. 15, 2025 (available at: https://info.burnsmcd.com/benchmark/article/hyperscale-data-centers-and-how-to-power-them).

[44] Ryan Abramson, Scout Cities, *Titans of Tech: Exploring America's Largest Hyperscale Data Centers*, Jul. 23, 2024 (available at: https://scoutcities.com/blog/the-titans-of-tech-exploring-the-worlds-largest-hyperscale-data-centers); Tawen Dawn-Hiscox, *What is a hyperscale data center*, DATA CENTER DYNAMICS, Sep. 13, 2022 (available at: https://www.datacenterdynamics.com/en/analysis/what-is-a-hyperscale-data-center/#:~:text=How%20big%20is%20a%20hyperscale,capacity%20above%20the%20100MW%20mark.); and Orrick, *Powering Data Centers*, Nov. 20, 2025 (available at https://www.orrick.com/en/Insights/2025/11/Powering-Data-Centers).

[45] Orrick *supra* note 44.

Data Center Growth

An analysis published by McKenzie and Company in 2025 found that the global demand for data center capacity will triple by 2030 and it anticipates a 20 to 25 percent annual growth of data center capacity within the United States during that time. That same analysis found that this growth will likely place substantial strains on United States energy and water supplies.[46]

Data Center Impact on Water Resources

Every piece of electronic IT equipment generates heat as it operates, and high-performance computing tasks, such as machine learning, cloud computing, and large-scale data processing, intensify this heat production because of their near-continuous heavy workloads. This heat must be offloaded in some manner, otherwise high temperatures can lead to hardware malfunctions, efficiency reductions, and permanent hardware damage.[47] Data centers, thus, require extensive cooling systems to help dissipate large amounts of heat.[48]

This cooling can be accomplished through a number of strategies and technologies:

- Centralized cooling systems: These systems either moved chilled air through centralized duct work (essentially large-scale central air conditioning) or by moving chilled water through a cooling loop that exchanges heat with the environment.
- De-centralized/room scale cooling systems: A common type of these cooling systems is called computer room air conditioners (or CRACs) and are popular with smaller data centers.

Methods that directly consume water are the most effective for cooling and this water can come from many sources including local water utilities, on-site wells, and on-site reservoirs or other co-located water resources. The International Energy Agency estimates that a 100 MW data center in the United States consumes approximately the same amount of water as 2,600 households in direct consumption and cooling.[49] This does not account for, however, the water needed to produce the electricity need to power such facilities—which can be substantial.

Date Center Impact on Electricity Resources

In larger economies like the United States, China, and the European Union, data centers, as of 2024, account for two to four percent of total electricity consumption.[50] Studies have estimated, for the United States, data centers' percentage of total consumption could rise to anywhere

[46] McKinsey & Company, *The data center balance: How US states can navigate the opportunities and challenges*, Aug. 8. 2025 (available at: https://www.mckinsey.com/industries/public-sector/our-insights/the-data-center-balance-how-us-states-can-navigate-the-opportunities-and-challenges).
[47] Terry Nguyen and Ben Green, *What Happens When Data Centers Come to Town*, UNIVERSITY OF MICHIGAN FORD SCHOOL OF SCIENCE, TECHNOLOGY, AND PUBLIC POLICY, Jul. 2025 (available at: https://stpp.fordschool.umich.edu/sites/stpp/files/2025-07/stpp-data-centers-2025.pdf).
[48] Martin C. Offutt and Ling Zhu, Cong. Rsch. Serv., R48646, *Data Centers and Their Energy Consumption: Frequently Asked Questions* (Introduction) (Aug. 26, 2025), (available at: https://www.congress.gov/crs-product/R48646#:~:text=In%20its%20simplest%20form%2C%20a,transmit%20large%20amounts%20of%20data.
[49] *Id*.
[50] International Energy Agency, *What the data centre and AI boom could mean for the energy sector*, Oct. 18, 2024 (available at https://www.iea.org/commentaries/what-the-data-centre-and-ai-boom-could-mean-for-the-energy-sector).

between 6.7 percent and 12 percent by 2030 (the United States, as of 2025, stands at approximately four percent).[51]

The total consumption of data centers, however, does not show the entire context of their electricity demand. Data centers, thus far in the United States, have tended to be spatially concentrated, with the data center sector surpassing 10 percent of electricity consumption in five states as of 2024.[52] A single large or hyperscale data center consuming 20 to 100 MW of electricity continuously can have the electricity demand equivalent of 15,000 to 75,000 United States homes or more (the equivalent of a single small city). A large 650 MW facility would be the equivalent of 500,000 homes.[53] For comparison, the U.S. Census Reporter estimates that Orange County, Florida, currently has 556,557 total households and Florida has a total of 8.967 million households.[54]

Thus the growth of data centers in an area can lead to considerable strain on local electric grids—especially with the considerable mismatch between the speed with which data centers can be constructed and the ability to get approval for and build new generation capacity and interconnect that generation into the electric transmission grid.[55] Data center-driven increases in demand may have also lead to an increase in electricity prices for consumers, at least in the short term (while the medium and long term impact on overall electric rates is still debated).[56]

In markets with the most data centers (such as the Pacific Northwest, Northern California, Phoenix, Dallas, Chicago, and Northern Virginia), surging demand is creating electric capacity challenges. Due to this, hyperscale operators are looking to secondary markets (with lower but fast-growing electricity demand—such as Kansas, Iowa, Indiana, Oklahoma, Nebraska, and much of the Southeastern United States) and emerging markets (where electricity is still, comparatively, abundant—such as Florida, Ohio, Pennsylvania, New York, and New Jersey).[57]

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[51] Gartner, *Gartner Says Electricity Demand for Data Centers to Grow 16% in 2025 and Double by 2030*, Nov. 17, 2025 (available at: https://www.gartner.com/en/newsroom/press-releases/2025-11-17-gartner-says-electricity-demand-for-data-centers-to-grow-16-percent-in-2025-and-double-by-2030), United States Department of Energy, Clean Energy Resources to Meet Data Center Electricity Demand, https://www.energy.gov/gdo/clean-energy-resources-meet-data-center-electricity-demand (last visited Feb. 2, 2026); and World Resources Institute, *Powering the US Data Center Boom: Why Forecasting Can Be So Tricky*, Sep. 17, 2025 (available at: https://www.wri.org/insights/us-data-centers-electricity-demand).

[52] International Energy Agency *supra* note 50.

[53] IAEI Magazine, *How Much Electricity Does a Data Center Use? Complete 2025 Analysis*, Jan. 1, 2026 (available at: https://iaeimagazine.org/electrical-fundamentals/how-much-electricity-does-a-data-center-use-complete-2025-analysis/#:~:text=Frequently%20Asked%20Questions,homes%20for%20an%20entire%20year).

[54] Census Reporter, Orange County, FL https://censusreporter.org/profiles/05000US12095-orange-county-fl/ https://censusreporter.org/profiles/05000US12095-orange-county-fl/ -:~:text=Here's%20some%20census%20data%20for%20Orange%20County%2C,households%20*%2015.5%25%20moved%20since%20previous%20year(last visited Feb. 2, 2026).

[55] McKinsey & Company, *The data center balance: How US states can navigate the opportunities and challenges*, Aug. 8, 2025 (available at: https://www.mckinsey.com/industries/public-sector/our-insights/the-data-center-balance-how-us-states-can-navigate-the-opportunities-and-challenges).

[56] *See* Ryan Wiser et al., *Factors influencing recent trends in retail electricity prices in the United States*, 38 ELECTRICITY J. 107516 (2025), https://doi.org/10.1016/j.tej.2025.107516; *but see* Eliza Martin and Ari Peskoe, *Extracting Profits from the Public: How Utility Ratepayers Are Paying for Big Tech's Power*, ENVIRONMENTAL & ENERGY LAW PROGRAM: HARVARD LAW SCHOOL, Mar. 2025 (available at: https://eelp.law.harvard.edu/wp-content/uploads/2025/03/Harvard-ELI-Extracting-Profits-from-the-Public.pdf).

[57] *Id.*

Consumptive Use Permits

Consumptive use is any use of water which reduces the supply from which it is withdrawn or diverted.[58] A consumptive use permit (CUP), also known as a water use permit (WUP), establishes the duration and type of water use as well as the maximum quantity of water that may be withdrawn.[59] The Florida Department of Environmental Protection (DEP) and Florida's five Water Management Districts (WMDs) are authorized to issue CUPs and impose reasonable conditions as necessary to assure such use is consistent with the DEP or the WMD's goals and is not harmful to the water resources of the area.[60] This authority is primarily delegated to the WMDs, which implement extensive CUP programs within their respective jurisdictions.[61] To obtain a CUP, an applicant must establish that the proposed use of water:

- Is a reasonable-beneficial use;[62]
- Will not interfere with any presently existing legal use of water; and
- Is consistent with the public interest.[63]

The DEP has also adopted additional rules implementing s. 373.219(3), F.S., which provides that the agency, for Outstanding Florida Springs, adopt CUP rules "which prevent groundwater withdrawals that are harmful to the water resources and adopt by rule a uniform definition of the term 'harmful to the water resources' to provide water management districts with minimum standards necessary to be consistent with the overall water policy of the state." Florida Admin. Code R. 62-41.401 defines "harmful to the water resources" as:

> A consumptive use that adversely impacts an Outstanding Florida Spring or its spring run in one or more of the following ways: (a) Causing harmful water quality impacts to the Outstanding Florida Spring or its spring run resulting from the withdrawal or diversion; (b) Causing harmful water quality impacts from dewatering discharge to the Outstanding Florida Spring or its spring run; (c) Causing harmful saline water intrusion or harmful upcoming to the Outstanding Florida Spring or its spring run; (d) Causing harmful hydrologic alterations to natural systems associated with an Outstanding Florida Spring or its spring run, including wetlands or other surface waters; and (e) Otherwise causing harmful hydrologic alterations to the water resources of the Outstanding Florida Spring or its spring run.

Each of the five WMDs publishes an applicant's handbook, incorporated by reference into their respective rules, identifying the procedures and information used by district staff for review of CUP applications.[64] Generally, there are two types of CUP permits: general permits that may be

[58] Fla. Admin. Code R. 62-40.210(4).
[59] Chapter 373, part II, F.S.
[60] Section 373.219, F.S. No permit is required for domestic consumption of water by individual users.
[61] Section 373.216, F.S.; Fla Admin. Code Chapters 40A-2, 40B-2, 40C-2, 40D-2, and 40E-2.
[62] Section 373.019(16), F.S. "Reasonable-beneficial use" is defined as "the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest"; Fla. Admin. Code R. 62-40.410. DEP rules contain a list of factors that must be considered when determining whether a water use is a reasonable-beneficial use.
[63] Section 373.223, F.S.; *see* s. 373.229, F.S. Permit applications must contain certain specified information.
[64] South Florida WMD, *Applicant's Handbook for Water Use Permit Applications* (2022)[hereinafter *SFWMD WUP Handbook*], *available at* https://www.sfwmd.gov/sites/default/files/documents/wu_applicants_handbook.pdf; Southwest Florida WMD, *Water Use Permit Applicant's Handbook Part B* (2022)[hereinafter *SWFWMD WUP Handbook*], *available at*

granted by rule based on regulatory thresholds for factors such as withdrawal volume or pipe diameter, and individual permits requiring applications when regulatory thresholds are exceeded.[65] The WMDs have different schedules for application processing fees, which can vary based on total requested withdrawal amounts or type of application.[66] The DEP and the WMDs are authorized to grant permits for a period of up to 20 years, if there is sufficient data to provide reasonable assurance that the conditions for permit issuance will be met for the duration of the permit.[67]

The WMDs are required to include appropriate monitoring efforts as part of their CUP programs.[68] CUPs must be monitored when they authorize groundwater withdrawals of 100,000 gallons or more per day from a well with an inside diameter of eight inches or more.[69] Such monitoring must be at intervals and must use methods determined by the applicable WMD.[70] The results of such monitoring must be reported to the applicable WMD at least annually.[71] The WMD's respective CUP applicant handbooks contain various monitoring standards, which may include thresholds for required monitoring, reporting requirements, and specific standards for metering.[72] Generally, pursuant to the handbooks, the permittee is responsible for required monitoring of withdrawal quantities.

Minimum Flows and Minimum Water Levels

Minimum Flows and Minimum Water Levels (MFLs) are adopted standards that identify the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area.[73] The DEP and the WMDs are required to establish MFLs based on priority lists for surface water courses, aquifers, and surface waters.[74] By establishing the limit at which further withdrawals would be significantly harmful, the MFLs provide a benchmark to help establish excess quantities of water that are available from priority water bodies. A key goal of

https://www.swfwmd.state.fl.us/sites/default/files/medias/documents/WUP%20Applicant%27s%20Handbook%20Part%20B%20-%20January%202022_0.pdf; St. John's River WMD, *Applicant's Handbook: Consumptive Uses of Water* (2025)[hereinafter *SJRWMD CUP Handbook*], *available at* https://aws.sjrwmd.com/SJRWMD/permitting/CUP-Applicant-Handbook.pdf; Northwest Florida WMD, *Water Use Permit Applicant's Handbook* (2015)[hereinafter *NWFWMD WUP Handbook*], *available at* https://www.nwfwater.com/content/download/8605/71075/Applicant_Handbook_201504.pdf; Suwannee River WMD, *Water Use Permit Applicant's Handbook* (2019)[hereinafter *SRWMD WUP Handbook*], *available at* https://www.flrules.org/gateway/readRefFile.asp?refId=11315&filename=REFERENCE%20MATERIAL_WUP%20Applicant%27s%20Handbook%20FINAL%2010-31-2019.pdf.

[65] *See* Michael T. Olexa et al., University of Florida, Institute of Food and Agricultural Sciences, *Handbook of Florida Water Regulation: Consumptive Use*, 2 (2021), *available at* https://edis.ifas.ufl.edu/pdffiles/FE/FE60400.pdf.

[66] *See* s. 373.109, F.S.

[67] Section 373.236, F.S.

[68] Section 373.216, F.S.

[69] Section 373.223(6), F.S. The water management districts are authorized to adopt or enforce certain rules in lieu of these requirements, in accordance with the statute.

[70] *Id.*

[71] *Id.*

[72] *SFWMD WUP Handbook*, at 100-105; *SWFWMD WUP Handbook*, at 75-77, 85-89; *SJRWMD CUP Handbook*, at 4-1–4-3; *NWFWMD WUP Handbook*, at 63-64; *SRWMD WUP Handbook*, at 43-44, 50.

[73] Section 373.042, F.S.

[74] Sections 373.042 and 373.0421, F.S.; Fla. Admin. Code R. 62-40.473.

establishing an MFL is to identify and establish the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area.[75]

III. Effect of Proposed Changes:

Section 1 of the bill creates s. 112.231, F.S., which provides that state, county, district, authority, or municipal officer, public employee, department, division, board, bureau, or commission, or other units of Florida government (defined collectively as an "agency") may not enter into nondisclosure agreements or other contract restricting the agency from disclosing information about a potential data center development to members of the public. Data center is defined as a "facility that primarily contains electronic equipment used to process, store, and transmit digital information which may be a free-standing structure or a facility within a larger structure which uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment." The section states that any such agreements, entered into on or after July 1, 2026, are void and unenforceable. The section also provides for a civil fine penalty of $1,000 for agencies that violate this provision. It applies to agreements entered on or after July 1, 2026.

Section 2 of the bill creates s. 163.326, F.S., provides that it is the finding of the Legislature that facilities with substantial electric or other utility demands (such as data centers and other large load electricity customers), present unique planning, infrastructure, and compatibility considerations. The section further provides that it is the intent of the Legislature that such considerations shall be addressed through local comprehensive planning and land development regulations adopted pursuant to ch. 163, F.S., including provisions related to infrastructure capacity, land use compatibility, environmental impacts, and the efficient provision of public facilities and services. Local governments, under the section, are to maintain the authority to exercise the powers and responsibilities for comprehensive planning and land development regulation granted by law with respect to large load electric customers.

The section also specifies that a large load customer may not be considered an electric substation for the purposes of s. 163.3208, F.S.[76]

Section 3 of the bill creates s. 366.043, F.S., which modifies Florida's public utility code to create a requirement that the Public Service Commission (PSC) develop minimum large load service and tariff requirements for public electric utilities. The tariff requirements must reasonably ensure that large load customers (such as large data centers) pay for their own cost of service and the PSC must establish a financial protection framework applicable to large load tariff customers by requiring that nonpayment risk be addressed up front, prior to service being provided by the public utility. Specifically, the section requires the PSC to establish requirements designed to minimize the risk of nonpayment to the maximum extent practicable through commercially reasonable performance and financial security arrangements. In addition, the PSC

[75] *see* DEP, *Minimum Flows and Minimum Water Levels and Reservations*, https://floridadep.gov/water-policy/water-policy/content/minimum-flows-and-minimum-water-levels-and-reservations (last visited Feb. 2, 2026).
[76] Section 163.3208, F.S., provides the local government regulation restrictions and required approval process for electric substations. Section 163.3208(2), F.S., defines "electric substation" as "an electric substation, including accessory administration or maintenance buildings and related accessory uses and structures, which takes electricity from the transmission grid and converts it to another voltage or lower voltage so it can be distributed to customers through one or more lines."

must require that such arrangements include financial guarantees sufficient to protect both the public utility and its ratepayers.

The tariff requirements must also include provisions reasonably designed to prevent a public utility from providing electric service to a customer that otherwise qualifies as both a large load customer and a foreign entity. The bill defines a "large load customer" as one that a customer with an anticipated monthly peak load of 50 megawatts or more, calculated as the highest average load over a 15-minute interval at a single location. In addition, the section:

- Specifies that large load customers cannot split up loads to avoid being subject to the large load tariff requirements established by the provisions of the bill. The peak load threshold does not include a load aggregated across multiple locations owned by the same customer. However, it does include all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the peak load threshold.
- Does not specify rate mechanisms or specific service policies, rather, it specifies the end goal and directs the PSC, by rule, to develop baseline requirements for serving large load customers using utility industry-accepted ratemaking and other financial tools, such as, but not limited to:
  - Contributions in aid of construction or other required customer infrastructure investments;
  - Demand charges;
  - Incremental generation charges;
  - Financial guarantees;
  - Minimum load factors;
  - Take-or-pay provisions or similar provisions requiring payment for contracted capacity; and
  - Minimum period of service contract requirements.
- Prohibits a public utility from knowingly providing a large load customer with a tariff, contractual provision, service requirement, or other policy that would prevent or otherwise hinder the curtailment or interruption of electric service to a large load customer where such curtailment or interruption is intended to ensure grid stability, reduce the likelihood or breadth of wider service outages, or ensure public safety during an emergency or other exceptional circumstance.
- Prohibits public utilities from providing electrical service to facilities that would otherwise qualify for a large load tariff if such facility is owned or controlled by a foreign country of concern. It defines control to include a person or entity that controls 25 percent of the voting interest of a company or is entitled to 25 percent or more of the profits of the company. Foreign country of concern has the same meaning as in s. 692.201, F.S., which defines the term as the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolás Maduro, or the Syrian Arab Republic, including any agency of or any other entity of significant control of such foreign country of concern.
- Provides that the PSC is to adopt rules to implement this section, that it must propose a rule for adoption by March 1, 2027, and that public utilities must file for approval of a tariff complying with the final rule within 60 days after its adoption.

The section also provides a legislative finding that the provision of safe and reliable electric services, provided at fair, just, and reasonable rates, is essential to the welfare of Florida

ratepayers. Further, it finds that when one class of electric service customer requires uniquely large electrical loads at a single location, it imposes a disproportionate risk on other Florida ratepayers and makes it necessary for the PSC to develop policies to mitigate this risk and avoid the shifting of costs to provide service to such customers to the general body of ratepayers.

Section 4 amends s. 373.203, F.S., to create a definition for data centers and large-scale data centers for ch. 373, F.S., which regulates Florida's water resources. Specifically, the section defines:

- "Data center" as a facility that primarily contains electronic equipment used to process, store, and transmit digital information—which may be a free-standing structure or a facility within a larger structure which uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment.
- "Large-scale data center" as a single location, with a data center on site, that has an anticipated monthly peak load of 50 megawatts or more, calculated as the highest average load over a 15-minute interval. This does not include a load aggregated across multiple locations owned by the same customer. However, it does include all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load threshold.

Section 5 amends s. 373.262, F.S., to create distinct large-scale data center consumptive use permit (CUP) permit requirements. Specifically, the section:

- Provides that, consistent with the other provisions of Florida's CUP law, a water management district (WMD) or the Department of Environmental Protection (DEP) may not grant a CUP to a large-scale data center for an allocation of water if the proposed use of the water is harmful to the water resources of the area or is prohibited by the applicable local government zoning regulations and comprehensive plan. A CUP may only be issued if the proposed use of water:
  - Is a reasonable-beneficial use as defined in s. 373.019, F.S.;
  - Will not interfere with any presently existing legal use of water; and
  - Is consistent with the public interest.
- Provides that the WMD or DEP may require the large-scale data center to use some portion of reclaimed water, in lieu of surface or groundwater, if:
  - A suitable reclaimed water supply source is available and permitted;
  - Reclaimed water distribution or supply lines are available at the property boundary in sufficient capacity and quality to serve the applicant's needs;
  - The applicant can access the reclaimed water source through distribution or supply lines;
  - Use of reclaimed water is environmentally, economically, and technically feasible; and
  - Use of reclaimed water would not conflict with the requirements contained in the applicant's surface water discharge permit, if applicable.
- In addition to the minimum CUP filing requirements under s. 373.229, F.S., all CUP applications requesting an allocation of at least an average daily flow of 100,000 gallons of water per day by a large-scale data center must contain:
  - All sources and amounts of water and losses of water used for cooling, industrial and treatment processes, personal or sanitary needs of employees, and landscape irrigation; and
  - A water conservation plan that, at a minimum, incorporates recycling cooling water before discharge or disposal, implementation of a leak detection and repair program, use

of water efficient fixtures, and implementation of an employee awareness and education program concerning water conservation.

- Prohibits large-scale data center CUP application approvals without a hearing.

Section 6 amends s. 373.239, F.S., to provide that if a CUP modification application is filed by a large-scale data center, it must be treated in the same manner as an initial CUP permit application.

Section 7 provides an effective date of the bill of July 1, 2026.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

The bill will most likely have an impact on the electricity rates, fees, and other costs paid by large load electric customers of public electric utilities. However, the degree of this impact is indeterminate given the multitude of factors present in determining an electric utility rate, particular customer circumstances, and that the impact is likely to be partly determined upon the particular rule provisions adopted by the Public Service Commission. In addition, large-scale data centers seeking consumptive use permits may see an increase in costs relating to the application process and additional permitting requirements authorized by the bill.

C. Government Sector Impact:

None.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill substantially amends the following sections of the Florida Statutes: 373.203 and 373.239.
This bill creates the following sections of the Florida Statutes: 112.231, 163.326, 366.043, and 373.262.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS/CS by Rules on February 17, 2026:
The committee substitute:

- Clarified that a large load customer may not be considered an electric substation for the purposes of s.163.3208, F.S.
- Established a financial protection framework applicable to large load tariff customers by requiring that nonpayment risk be addressed up front, prior to service being provided by the public utility.
- Directed the PSC to establish requirements designed to minimize the risk of nonpayment to the maximum extent practicable through commercially reasonable performance and financial security arrangements. It also requires such arrangements include financial guarantees sufficient to protect both the public utility and its ratepayers.
- Removed a requirement that public utilities would be solely responsible for losses if PSC-approved financial protections to serve large load tariff customers prove insufficient.

CS by Community Affairs on February 3, 2026:
The committee substitute provides that the tariffs the PSC create under the bill must include provisions to prevent a public utility from providing electric service to a foreign entity large load customer, and adds that public utility providers may not *knowingly* provide to a foreign entity. It also revises the timeline, giving the PSC until March 2027 to adopt a final rule, and public utilities 60 days from rule adoption to file conforming updated tariffs.

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.

Urban Land Institute

Local Guidelines for Data Center Development

By the ULI Americas Data Center Product Council

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Project Team

Lead author

Hannah Miet,
President, Hannah Miet Consulting LLC

Urban Land Institute

ULI Americas Data Center Product Council

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1 Introduction: data centers 101

This paper seeks to demystify data centers and their purpose while offering a balanced model zoning ordinance for data center development that authorities having jurisdiction (AHJs) can adapt straight from the page. It also aims to provide a roadmap to data center development for local officials, planners, and other municipal decision-makers.

Data centers are still a relatively new land use, and they are often misunderstood or miscategorized. To be ready when data centers are proposed in your jurisdiction or to attract them, first it is important to understand their purpose in our society and how they function, as well as to have strategies to mitigate common challenges.

Essential infrastructure

In the morning, most of us brush our teeth or take a shower. We may not know where the water comes from or where it goes. We may not know that it is treated at a plant and arrives at our homes, where wastewater departs, is received in a facility, and is released into surface water systems.

These days, we often check our email or social media first thing in the morning, even before we shower or brush our teeth. The internet—like water, sewer, and power systems—has become part of our essential everyday infrastructure.

Water and sewage systems are typically financed and delivered by local cities or counties. Power is funded and delivered by a mix of public and private entities. Data centers, however, which form the backbone of the internet, are financed, developed, and operated primarily by privately held businesses. Unlike what occurs with other critical infrastructure systems, the development of data centers requires navigating a complex landscape of private property laws, environmental impact assessments, and local zoning regulations. Local officials, in other words, play a key role in ensuring access to the internet economy.

Purpose and function

A **data center** is a building that houses the infrastructure that supports the world's computing functions. This building is filled with servers that process and store the data commonly referred to as "the cloud."

Processing and storage

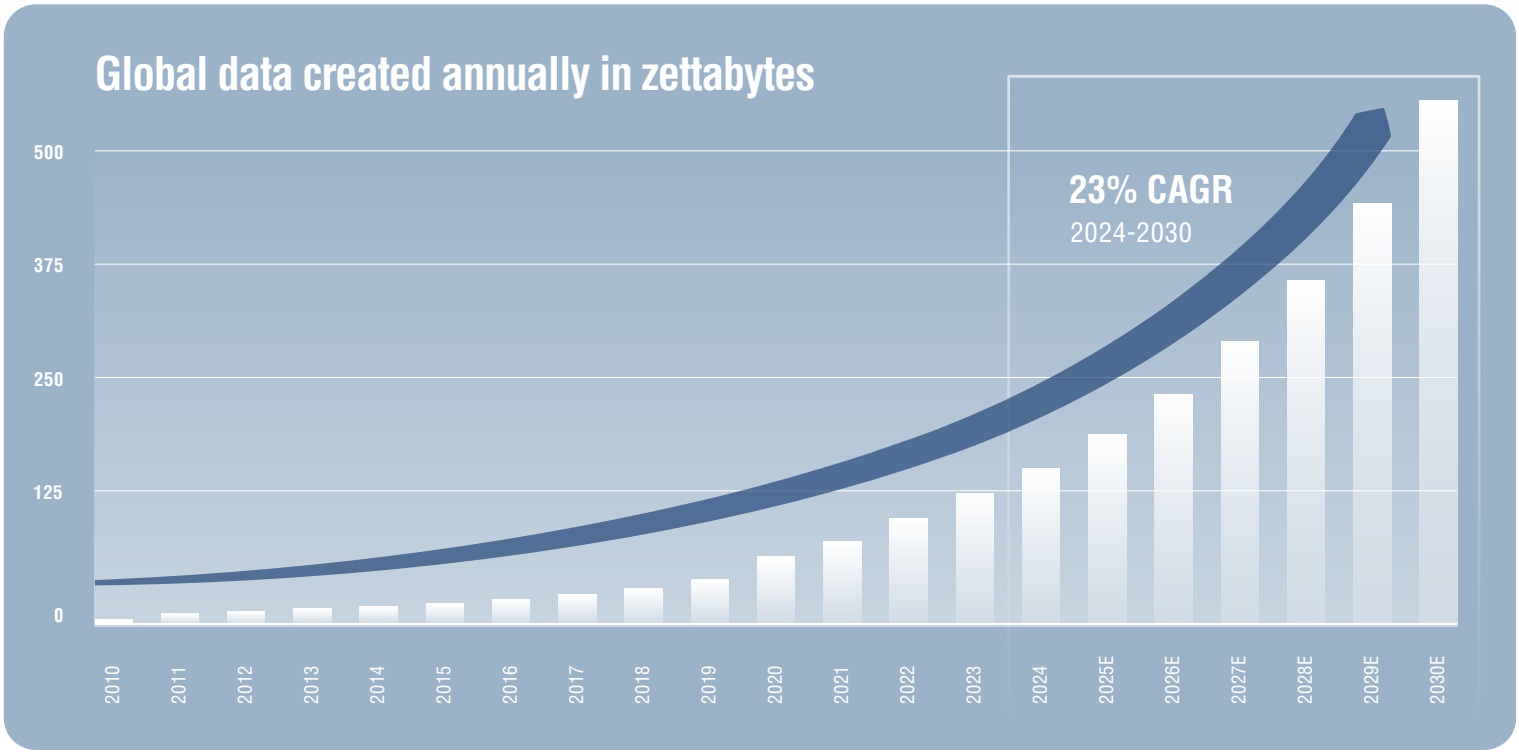
Whenever you swipe your credit card, join a Zoom meeting, or send an email, your virtual activity connects to a real place in the physical world: a data center.

What gets processed in a data center? A better question: what does not? Data centers house our national security systems, including military communications. They enable online commerce, financial services, health care, and other essential services. Each app on your phone—even offline apps that

sync—and every activity on the internet requires a data center.

When you use your smartphone, that tiny device does not process your requests. Instead, your phone asks questions that get answered in data centers—usually in a fraction of a second.[1]

Data centers' primary function is processing and accessing data, but they also store data, safeguarding sensitive information so it's inaccessible to hackers. When you save a file to the cloud, you are not storing it in the sky. A data center stores it, more efficiently and securely than a filing cabinet ever could.



Source: JLL Research, IDC

The demand for more data center capacity

Our economy and communities were able to continue functioning during the Covid-19 pandemic—when schools, workplaces, and social gatherings shifted to the internet—thanks in large part to the support provided by data centers. This change also moved us further into an economy that exists, largely, online.

The rise of remote work and advancements in artificial intelligence (AI) that require high-density computing increased the demand for processing and data storage, thus requiring more data center capacity. As a result, this property category has grown significantly.

If society and the economy continue the shift to the internet, we would seem to face a need for more data centers. Where these new data centers will be developed is a matter of great importance that requires several variables to come together. To discuss these variables, we first must discuss what a data center is.

Types of data centers

Corporate or **enterprise data centers**, which store and process a single organization's data, rose in prominence in the mid-1990s as the dot-com boom drove demand for fast internet connectivity and 24/7 operations. These data centers often store the data of financial institutions—think American Express or Wells Fargo—that typically own and operate such facilities themselves, rather than leasing them from a provider.

1 "One: You Use Data Centers," Where the Internet Lives, Google, podcast audio, https://podcasts.apple.com/us/podcast/one-you-use-data centers/id1541394865?i=1000501909698.

At **colocation data centers**, which include **retail data centers**, third-party operators lease data center space—a certain number of server cabinets, for example, or kilowatts (kW) to multiple companies.

Wholesale data centers are a type of colocation data center where a third-party developer rents large portions of the space and energy capacity to one company–often, all of it.

Telecom data centers, owned by telecommunications companies such as Verizon, are where traffic from cell towers "switches" to the internet. These facilities tend to be smaller than the other data center types and require less energy.

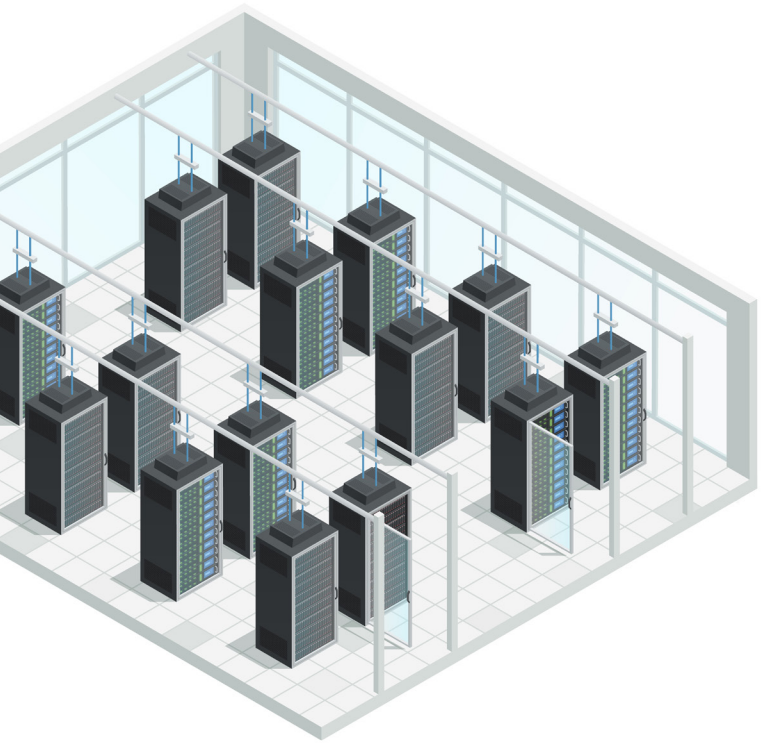
Hyperscale data centers are built for a single customer: one of the large tech companies that provide many of the services we use every day—Google (Google Cloud), Amazon (AWS), Microsoft, and Meta. These companies sometimes own their own centers, and sometimes they lease them from a third-party developer. These centers are built based on the data demands of the hyperscaler.

The name *hyperscaler* emphasizes the ability to scale resources up or down quickly and efficiently to meet demand. These companies have a massive number of users and generate vast amounts of data, which together demand substantial processing power and storage capacity, especially as user bases grow unpredictably.

Differences from industrial warehouses

Data centers differ from other forms of commercial real estate. They constitute a relatively new category and, until recently, they were concentrated in select geographic areas. As a result, the buildings housing our essential internet infrastructure are widely misunderstood.

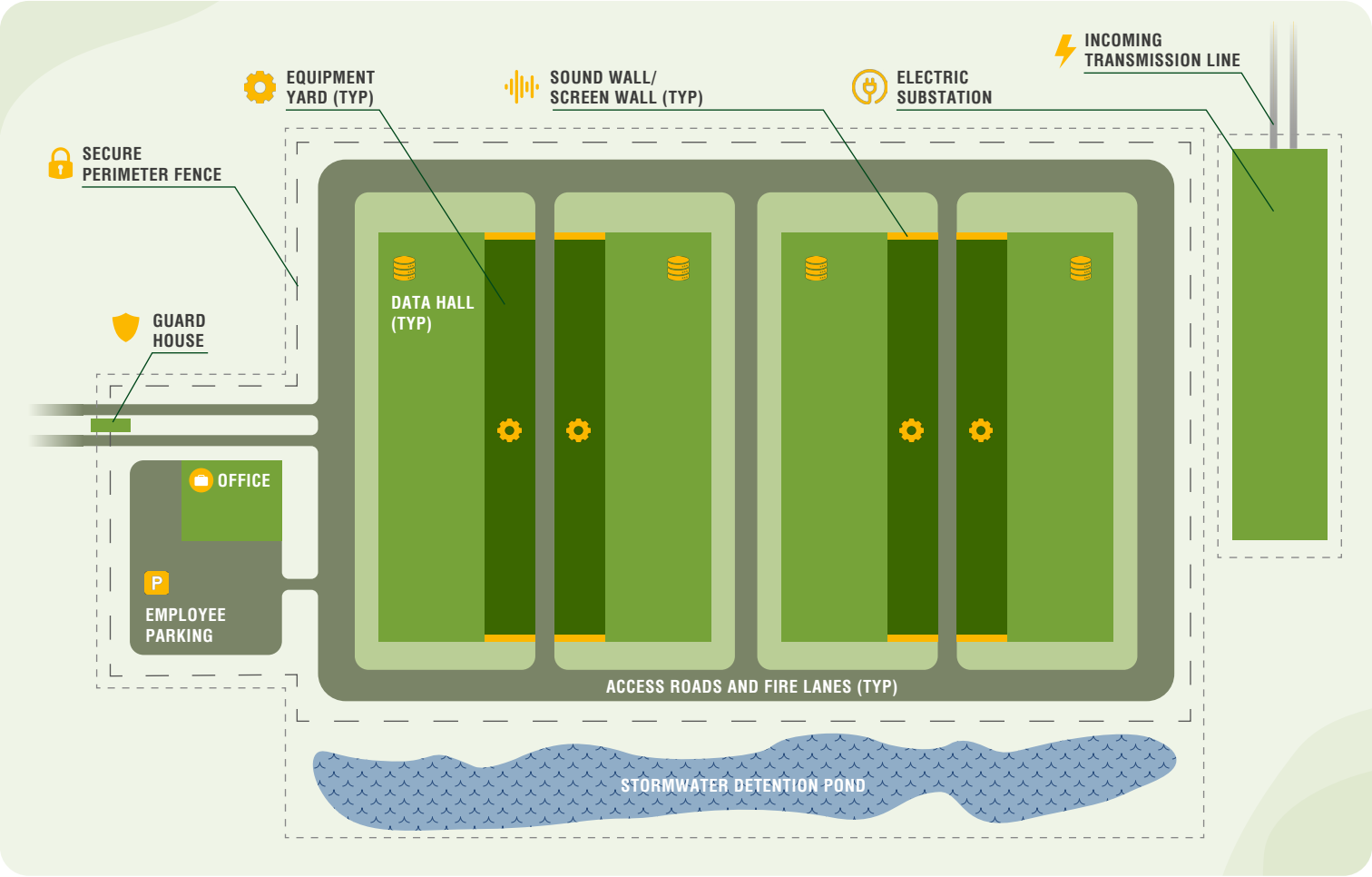
Typically, data centers are not explicitly mentioned in zoning codes. Instead, they fall under the umbrella of general industrial zoning uses. But because they store data, they are not typical warehouses. Their classification, as such, causes planning challenges, which we will detail further in a later section.



Here's how data centers differ from industrial warehouses or factories:

- Data centers are more compatible with other uses nearby because, unlike factories or warehouses, they are odorless and lack truck traffic.
- They are often taller than traditional single-story warehouses. Data centers can be single-story or multistory. Single-story data centers start at around 30 feet (9.1 meters) and multi-story data centers go up from there.
- They require fewer employees once construction is complete, so long-term impacts on traffic, schools, and public services are minimal.
- They need fewer parking spaces and plumbing fixture counts than are typically mandated by industrial codes.
- Data centers require more robust underground and above-ground infrastructure.
- Unlike warehouses and factories, data centers have external electrical and mechanical equipment.
- Some data centers need multiple layers of redundancy, which we'll discuss in a moment.
- Data centers require more security measures than industrial buildings, including 24/7/365 surveillance and controlled-access points.

Let's tour a hyperscale data center campus



Most of the data centers developed today are hyperscale data centers—typically within campuses. We tour one below.

Approaching the campus

As you approach a hyperscale data center campus, you are likely to encounter a fence or gate—often with a gatehouse—beyond which you may be able to see equipment yards and cooling equipment in the distance.

Security

Data center campuses have extensive security measures and strict protocols for employees and visitors. Infrared surveillance cameras and tall, anti-climb security fences that detect movement surround the property. A guard at the gatehouse checks guests' credentials outside. If you make it past this point—few people do—you will find another security checkpoint at the entrance to the data center building itself, where additional security personnel check badges.

Equipment yards

Before heading inside, let's first follow the winding campus driveway and stop at the mechanical and electrical equipment yards.

Electrical yards

In the electrical yards, you'll hear the low hum of static if you stand directly under the transmission lines. A nearby **utility substation transformer** receives this power and converts it down to the lower voltage needed for use inside. The medium-voltage power feeds into **switchgear** in the electrical yard—or another type of power distribution equipment that similarly dispenses electrical power throughout the data center.

Alongside the switchgear, you will see multiple generators that provide emergency power in case of an electrical utility outage. If they look like they aren't running, it's because they are usually turned off. Except during emergency outages, they are turned on only for monthly maintenance tests for a mere 30 minutes[2] and are quiet while running due to sound-attenuated enclosures.

2 GeneratorSource, "Data Center Generator Maintenance," GeneratorSource, January 2024, https://www.generatorsource.com/blog/January-2024/Data-Center-Generator-Maintenance.aspx.

Redundancy

Like hospitals, data centers require a high level of redundancy to ensure they never go down, and the generators are part of this preparedness. Redundancy is often also created through multiple power feeds. The servers have backup capacity, too. For instance, your inbox is stored on several servers so that if one fails, your emails remain accessible.

Mechanical yards

The mechanical yards operate similarly but typically focus on cooling rather than on power redundancy. On the ground, you'll find chillers that cool the data center. At some data centers, they are on the roof.

Heat is a byproduct of computer processing. The servers within data centers must remain cool to function correctly. There are multiple ways of to achieve this cooling, but for the purposes of this paper, we focus on three main categories: air-cooled chillers, water-cooled chillers, and evaporative cooling.

A highly efficient **air-cooled chiller system** is sealed in a closed loop and uses little to no water—less than the amount used in three single-family homes.

Both water-cooled and evaporative systems use more water and consume less electricity than air-cooled chiller systems. In an open-loop **water-cooled chiller system**, cooling towers evaporate water for cooling purposes. **Evaporative cooling** is primarily achieved by large air-handling units that move air across a wet medium to evaporate water, which removes heat and cools the air in the data hall.

Data center structure

Let's now make our way through the security checkpoint and into the data center building itself. Inside, we find the **data hall**, where the servers sit in rows of tall racks along a series of aisles fed by **electrical distribution equipment**. Data halls are the *pièce de résistance* of any data center. Such a structure is typically designed from the data hall outward, with all supporting infrastructure responding directly to its needs.

If you examine the racks from the floor upward, you see bundles of colorful fiber optic cables (inside of which are thin strands of glass) connecting servers to switches and routers. These cables enable high-speed data transfer. Without them, we would be unable to access the web or many of the apps we use daily. The cables are organized in lanes that converge at massive **switches**.

Inside the data center building, you also find electrical rooms that house other critical power supply infrastructure. Battery-powered **uninterruptible power supply (UPS) systems** sit in large cabinets against the wall. In the event of a utility outage, these systems feed power to **power distribution units (PDUs)** inside the data hall. UPS systems are the first-used backup power source and often prevent use of the generators outside.

The importance of clustering

The internet is a network of interconnected networks, and so are data centers. **Clustering** refers to the practice of linking the servers at multiple data centers with high-speed, low-latency connections so they work together as a unified system. This interconnected group is called a cluster, and each server in the cluster is called a **node**.

Importantly, clustering requires physical proximity: locating multiple data centers close to one another geographically so that optical signals in fiber cables don't lose strength. That's why a huge portion of global internet traffic passes through major hubs such as northern Virginia's "Data Center Alley."

Clustering also requires interconnection—linking these data centers through high-speed, low-latency connections.

Reduced latency

One primary reason for data center clustering is to reduce **latency**, the time it takes for information to travel from its source to its destination. When data centers are geographically distant from each other, latency increases, which leads to slower application performance for end users, including the dreaded "spinning wheel of death." When data centers are located near each other, data can travel shorter distances, and this information exchange runs faster. Due to quicker response times, the user experience improves.

Improved reliability

Clustering enhances redundancy. If one data center server goes offline, others in the cluster can take over, ensuring continuous service availability. Without clusters, one server failure could cause an outage with international implications. In the appendix, we explore this concept further through a case study.

Load balancing

Clustered data centers allow for more efficient **load balancing**, the process of distributing network traffic across multiple servers at interconnected data centers. This practice prevents any single server or center from becoming overwhelmed.

Shared infrastructure

Data centers require conduits for power and, in some cases, water. When data centers cluster, they benefit from shared power and cooling infrastructure while also reducing the need for long-distance fiber optic connections.

2 What happens when data centers come to your region: opportunities, challenges, and mitigations

Data centers can provide significant economic benefits and other opportunities. Data center projects also introduce unique planning challenges, however. To be prepared, and to seize opportunities when appropriate, AHJs must understand these challenges and how to mitigate them.

Opportunities

Support essential national infrastructure

Data centers contribute to national infrastructure and economic growth. Also, they enable the digital economy by underpinning businesses of all sizes in virtually every industry.

According to the United States Department of Energy[3], "At a national level, data centers are critical to supporting America's economic growth by powering businesses and enabling continued leadership in innovation, including for AI applications."

HERE'S HOW DATA CENTERS SUPPORT NATIONAL SECURITY AND ECONOMIC GROWTH:

They protect the privacy of all of the data within U.S. borders against cyber threats by powering security measures such as encryption, firewalls, and access controls.

They host critical infrastructure for our emergency services, providing the necessary computing power and data storage to support communication networks, emergency response coordination, and real-time data analysis during crises.

Our health care system depends on data centers. They enable a range of services, from telehealth visits to managing digital health records, and they even assist in providing data-analysis-informed diagnoses for patients.

Banks and the rest of our financial ecosystem rely on data centers for their daily operations.

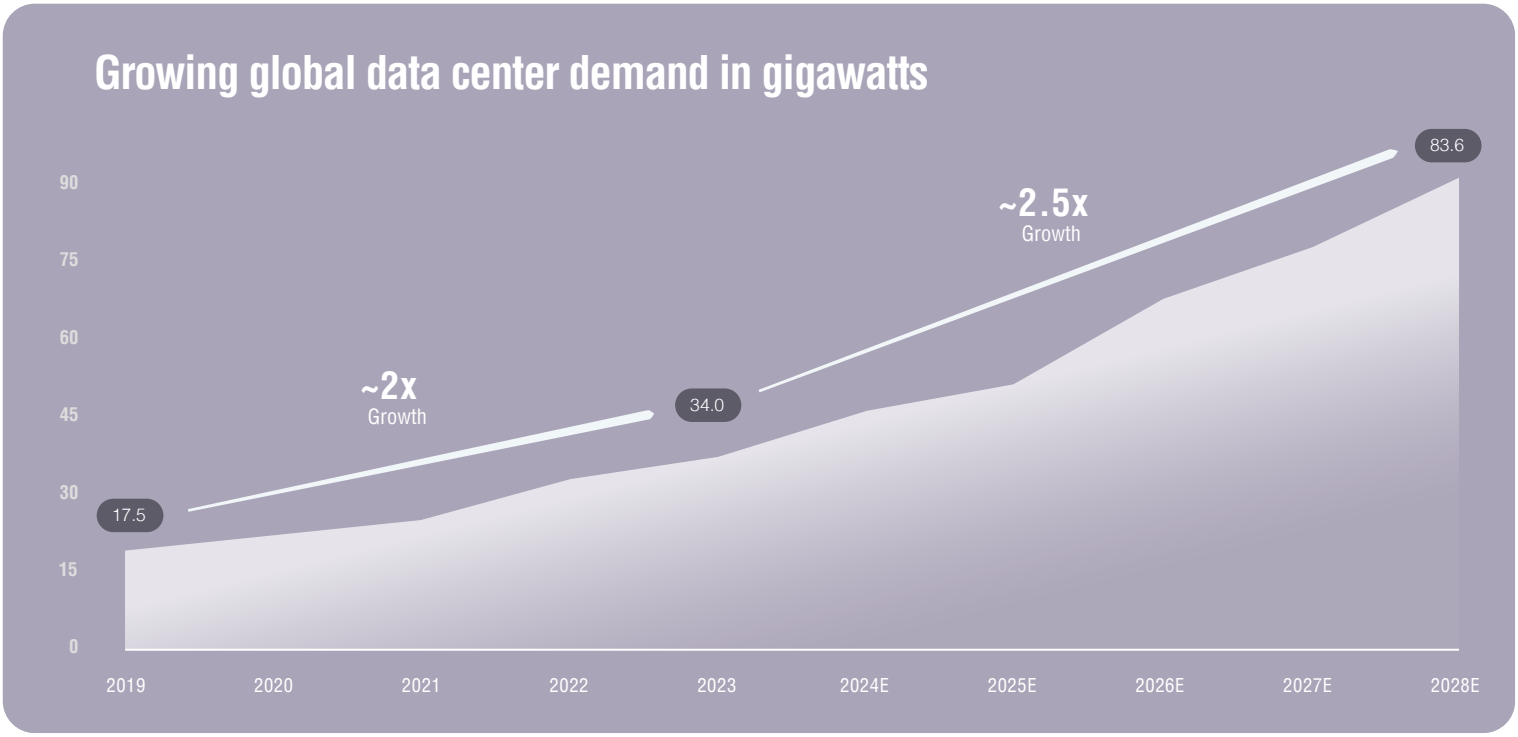
Data centers also support the development and deployment of emerging tech. Data centers are the backbone of AI infrastructure, which requires rapid data processing, storage, and analysis at scale.

On a macroscale, maintaining advanced data center infrastructure allows the U.S. to compete with such countries as China in the race for AI dominance, thus fostering economic growth and strengthening national security through technological leadership.

On a microscale, data centers also improve businesses' operational efficiency by democratizing access to supercomputer processing and secure cloud storage so that small businesses can compete more easily with larger corporations.

3 U.S. Department of Energy, "Clean Energy Resources to Meet Data Center Electricity Demand," https://www.energy.gov/policy/articles/clean-energy-resources-meet-data center-electricity-demand.

Increase much-needed processing and storage capacity



Source: CBRE, DC Bytes

Our needs for data center capacity have grown—and continue to grow at a fast clip as we create more data.

If we don't build data centers that support this increasing data density, it could hamper the economy, business operations, and our daily lives.

On a microlevel, a lack of data center capacity or redundancy makes files and apps load slowly. On a macrolevel, if we don't build enough data centers to meet our growing storage and processing needs, there will be outages with international consequences, like the October 2021 Meta outage. We include a case study on this incident and its profound impacts in the appendix.

Jobs

When data centers are in operation, they require fewer employees to operate than most other commercial properties, leaving minimal impacts on traffic in surrounding areas. A typical data center operates with fewer employees than other commercial or industrial facilities. Unlike industrial facilities, there is no fleet of trucks going in and out, which further minimizes traffic congestion.

More workers are present while the data center campus is under construction, though. Data center construction projects happen in phases, especially on larger campus developments, and these phases can extend over several years. This phased approach often leads to misunderstandings regarding the permanency of the increased traffic. Clear communication about the nature and duration of construction phases can help manage expectations and reduce misunderstandings.

This phasing approach has a plus side, however. Data centers create local construction jobs for tradespeople who otherwise travel from job to job—with less fossil fuel consumption thanks to reduced commuting. Jobs related to data center construction typically provide these workers, sometimes called journey-people, with more stability and longer timelines, offering a higher quality of life. This outcome, in turn, can prevent or alleviate labor shortages and reduce renovation and building expenses in the area, benefiting homeowners and businesses.

Although the operational workforce of data centers is relatively small, people employed in these roles are well-compensated, often earning six-figure salaries without the need for significant training or a college degree. During both the construction and operational phases, data center jobs boost to the local economy because workers spend at retail stores, nearby restaurants, hotels, and suppliers.

Data centers also indirectly create many jobs across the broader economy. According to PricewaterhouseCoopers International Limited[4] (PwC), each direct job in the U.S. data center industry

4 PwC, "Economic Impact Study of the US Data Center Industry," January 2021; "Data Centers and Ancillary Job Creation," TechIndustryReview, March 2022.

generates, on average, six ancillary jobs throughout the national economy. As a result, the total annual impact of the data center industry on national employment—combining direct, indirect, and induced effects from both construction and operations—grew from 2.9 million jobs in 2017 to 3.5 million jobs in 2021, representing a 20 percent increase.

Furthermore, the PwC study does not include jobs created by the cloud access and processing power that data centers enable. Data centers also facilitate zero-commute remote work across the country, further reducing fossil fuel consumption and contributing to a more sustainable economic model.

Tax revenue

Data centers provide municipalities with substantial economic and fiscal benefits through various forms of tax revenue (if unabated) that far exceed ones associated with other property types.

Hyperscale data centers are capital-intensive developments that can cost billions to construct—and are filled with high-value equipment and infrastructure. Taxes levied against them can be a windfall for AHJs.

A case in point: the data center tax base in Loudoun County, the central hub of North Virginia's Data Center Alley, increased from $15.996 billion in 2023 to $25.627 billion in 2024, constituting 58.5 percent of the municipality's total tax revenue.[5]

Data center owners pay two primary forms of property taxes. The first is real property tax, which applies to the land campuses are built on and the permanent structures that sit upon it, such as buildings. The second is personal property tax, which is levied on movable assets such as the servers and equipment inside data centers.

These revenues become significant boons to surrounding municipalities. In Loudoun, personal property tax revenue from computer equipment purchases for data centers surged by 170 percent in 2023, accounting for two and a half times the tax revenue.

The presence of data centers can also lower the overall tax burden for residents. In Loudoun, the general property tax rate is set at $0.87 per $100 of assessed value; it would be $1.33 (an additional 52 percent) but for the influx of data center developments, according to the county's executive director of economic development.[6] Revenue from data centers accounts for $0.47 of the tax rate, thereby alleviating the burden on other taxpayers.

Data center revenue can be channeled into net-zero programs and those related to health care, education, and other critical public services.

Data center revenue can be channeled into net zero programs and ones related to health care, education, and other critical public services. Revenue from data centers in Quincy, Washington, for example, has been used to fund local schools, public safety, and infrastructure improvements.[7]

By 2026, Loudoun County projects it will receive roughly $1.4 billion in tax revenue from the personal property tax it levies on computer equipment alone.[8] This amount constitutes nearly half of Loudoun County's entire fiscal 2021 budget of $3 billion.

Community incentive packages

Data center operators also provide significant benefits through incentive packages negotiated with municipalities that can include funding for schools or public infrastructure projects. In multiple cases, hyperscalers have funded renewable energy plants and created workforce development programs in areas where they operate.

As part of AWS' $10 billion data center campus investment in Mississippi, the company developed STEM-focused workforce training and career awareness programs for K-12 school systems and funded the state's first utility-scale wind farm.[9] You can learn more about the community benefits the hyperscaler provided in the appendix.

5 Emily Leayman, "Loudoun's Data Center Tax Base Jumps, Residential Increases Continue," Patch, February 8, 2024, https://patch.com/virginia/ashburn/loudouns-data-center-tax-base-jumps-residential-increases-continue.

6 Hanna Pampaloni, "Rizer: Land Value Increases Bring Benefits and Challenges," Loudoun Now, June 28, 2024, https://www.loudounnow.com/business/rizer-land-value-increases-bring-benefits-and-challenges/article_5b417aa8-3592-11ef-b587-f7ca7fd349c0.html.

7 Nick Parker, "Quincy Data Centers: The Data Center Conversation" (Presentation, Port of Quincy), https://wedaonline.org/wp-content/uploads/2020/10/Port-of-Quincy-Presentation.pdf.

8 "Loudoun Data Center Revenue Growth," Washington Business Journal, October 19, 2020, https://www.bizjournals.com/washington/news/2020/10/19/loudoun-data-center-revenue-growth.html.

9 Amazon Staff, "AWS plans to invest $10 billion in Mississippi, the largest capital investment in the state's history," About Amazon, January 25, 2024, https://www.aboutamazon.com/news/aws/aws-10-billion-investment-mississippi.

The region that includes Fredericksburg, Virginia—an emerging exurban hyperscale campus market located southeast of Loudoun County—is a case study in how AHJs can attract landslide economic and fiscal benefits while mitigating potential concerns well in advance.

In March 2024 Virginia's governor, Glenn Youngkin, alongside other state and local elected officials, announced that AWS was making a $35 billion dollar investment in data centers in Spotsylvania, Caroline, Stafford, and Louisa counties, creating approximately 2,000 new jobs. Also announced was AWS' contribution of $400,000 in community funds to those localities.

We explore how AHJs in the region did the work to prepare for and attract that investment in the appendix, which also covers similar measures in Elk Grove Village, Illinois, a unique suburban community northwest of downtown Chicago that modified its zoning code to attract data center development.

Challenges and mitigations

Sustainability

The sustainability of data centers is a significant concern for both AHJs, as well as for data center operators and developers, who ensure that their centers are designed and engineered to minimize emissions and other community impacts.

Grid impact

Let's address the misconception that data centers draw from the grid power that other customers, such as residential consumers and retail operators, could use. This concern is common among constituents when a data center is proposed in a municipality.

The grid is heavily regulated. Under existing federal regulations (and in Texas, the only state that regulates its own power grid), demand from a new customer cannot affect the reliability or availability of an existing customer.

Rather than taking power from the grid, new large-load customers such as data center operators face the challenge of finding readily available power that the utility can deliver—especially because many seek clean power sources.

According to the U.S. Department of Energy (DOE), as quoted in a recent article,[10] data centers can actually catalyze the grid's clean energy transition: "Near-term data center driven electricity demand growth is an opportunity to accelerate the build-out of clean energy solutions, improve demand flexibility, and modernize the grid while maintaining affordability."

Here's why: in many municipalities, energy providers are obligated to meet the power demands of various users. When a significant portion of demand comes from data center operators, many of which have strong commitments to using renewable energy, that activity accelerates the greening of the grid. These companies, driven by their climate goals, place considerable pressure on utility providers to adopt cleaner energy solutions.

> "Near-term data center driven electricity demand growth is an opportunity to accelerate the build-out of clean energy solutions, improve demand flexibility, and modernize the grid while maintaining affordability."
>
> *U.S. Department of Energy*

Unlike AHJs, which cannot create the demand to push forward such changes themselves, data center operators wield considerable influence by creating substantial demand for renewable energy.

This dynamic forces utilities to accelerate and help finance their transition to greener energy sources, thereby modernizing the grid to meet contemporary environmental standards. Public officials have a critical role to play in this scenario. By ensuring the existence of clear and easy-to-follow guidelines for data center development within their jurisdictions, AHJs can become integral to the solution, thus fostering a cleaner energy infrastructure.

Conversely, discouraging data center development could inadvertently push these operations into regions with less stringent grid standards and undermine broader sustainability efforts. Thus, the collaboration between data center operators and local governments is pivotal in driving the clean energy transition and ensuring grid modernization.

10 U.S. Department of Energy, "Clean Energy Resources."

Grid sustainability

Data center companies—third-party developers, operators, and hyperscalers among them—typically have far stricter carbon reduction commitments than do municipalities themselves.

- The top five hyperscalers have a combined renewable energy portfolio totaling more than 45 gigawatts (GW) worldwide, the equivalent of roughly 118,215 Tesla Model 3 motors[11] running on full power—and that figure doesn't include on-site generation.[12] Roughly 57 percent of global corporate wind and solar capacity tracked by S&P Global Commodity Insights is tied to these five companies alone.
- Amazon first committed to powering all of its operations, including AWS data centers, with 100 percent renewable energy by 2025. As of 2023, Amazon reported achieving this goal early, with 100 percent of its electricity consumption matched with renewable energy sources. The company also set a goal to reach net-zero emissions by 2040.[13]
- Microsoft committed to designing and operating data centers that are carbon negative, water positive, and zero waste before 2030, procuring 100 percent renewable energy on a global scale by 2025, and significantly expanding and decarbonizing local electricity grids.[14]
- Apple has committed to becoming carbon-neutral across its entire supply chain and product life cycle by 2030. This effort includes using nearly 10 GW of existing renewable energy and investing in new renewable generation.[15]
- Google, meanwhile, announced its goal in September 2020 to operate carbon-free, on clean local electricity, 24 hours a day, 7 days a week, 365 days a year by 2030. From 2010 to 2023, the company signed more than 115 agreements totaling in excess of 14 GW of clean energy generation capacity.[16]
- Meta committed to net zero emissions for its supply chain and to becoming water positive by 2030. The company plans to power all of its data centers with renewable energy by 2025.[17]

The methods through which hyperscalers and data center developers are working toward these goals include:

On-site generation: Some data centers have solar panels or other renewable energy sources installed directly on their premises. Wind and solar require a lot of land, however, and on-site land is usually scarce. As such, these projects typically provide only a small portion of data centers' total energy needs.

Power purchase agreements (PPAs): In a PPA, data center companies (the buyers) sign long-term contracts with renewable energy providers (the sellers) to purchase electricity from specific wind or solar farms. PPAs often support the development of new renewable energy, thus contributing to overall grid decarbonization and improving the grid mix for local residents and businesses.

Renewable energy certificates (RECs): Companies purchase RECs to offset their energy consumption, which supports the economics of clean energy development. RECs are not necessarily tied to the specific municipalities where data centers are located, though.

Investment in renewable projects: Hyperscalers often invest directly in the development of new renewable energy projects.

Diesel generators

The role of diesel generators at data centers is often misunderstood. As we discussed elsewhere, these generators are present only as a backup power source.

Also worth noting is that diesel generators are subject to a comprehensive regulatory framework. The Environmental Protection Agency (EPA) sets federal standards implemented and enforced at the state level for generators, and states may

11 U.S. Department of Energy, "How Much Power is 1 Gigawatt?" Office of Energy Efficiency & Renewable Energy, https://www.energy.gov/eere/articles/how-much-power-1-gigawatt.

12 S&P Global Market Intelligence, "Datacenter Companies Continue Renewable Buying Spree, Surpassing 40 GW in US," S&P Global, https://www.spglobal.com/market-intelligence/en/news-insights/research/datacenter-companies-continue-renewable-buying-spree-surpassing-40-gw-in-us.

13 Amazon, "Climate Solutions," Amazon Sustainability, https://sustainability.aboutamazon.com/climate-solutions.

14 Microsoft, "Microsoft's Datacenter Community Pledge: To Build and Operate Digital Infrastructure That Addresses Societal Challenges and Creates Benefits for Communities," Microsoft Blog, accessed September 15, 2024, https://blogs.microsoft.com/blog/2024/06/02/microsofts-datacenter-community-pledge-to-build-and-operate-digital-infrastructure-that-addresses-societal-challenges-and-creates-benefits-for-communities/.

15 Apple Inc., "Apple's Climate Roadmap," Apple Newsroom, https://www.apple.com/newsroom/2021/07/apples-climate-roadmap/.

16 Google, "Build a Carbon-Free Future for Everyone," Google Sustainability, accessed September 15, 2024, https://sustainability.google/projects/carbon-free-24x7/.

17 Meta, "The Next Stage of our Climate Commitment: Net-Zero Supply Chain Emissions by 2030," Facebook Newsroom, https://about.fb.com/news/2021/10/the-next-stage-of-our-climate-commitment-net-zero-supply-chain-emissions-by-2030/.

have additional requirements.[18] Once permitted, each diesel generator's operation is bound by strict regulations. Operators typically may run generators for only a limited number of hours per year for routine maintenance and inspection purposes.

Although it varies by facility, generators at data centers are typically used far less than these rules dictate. Generators' brief monthly operation to ensure proper functioning is comparable to running a pump system that's been inactive for an extended period—regular checks prevent potential issues that accompany prolonged inactivity, such as seized components or degraded lubricants.

Greener alternatives to diesel are in various stages of development, but none has been proved at scale yet.

Water sustainability

Cooling accounts for almost 40 percent of the total energy consumed by data centers, McKinsey and Company estimates.[19] Several factors determine the type of cooling that is most sustainable yet still suitable for the job.

Air cooling can be more efficient at lower load percentages and smaller equipment capacities. It can also be sustainable at any scale when the data center is located in an area with a high percentage of renewable sources in the energy grid, including ones generated on site.

When cooling processes require water, nonpotable water sources can be used so as not to reduce the local drinking water supply. Nonpotable water is treated—either at a local plant or, in some cases, on site–to remove contaminants, solids, and impurities. Then recycled water is then distributed in plum-colored pipes, which accounts for the nickname the **purple pipe system**. To pursue it, companies often consider access to recycled wastewater an important factor in the early stages of site selection.

Hyperscalers have even helped AHJs finance such projects, though that's not always viable, which makes proximity to existing treatment facilities a key consideration. In 2012, Google funded the construction of the Sweetwater Creek Sidestream Plant in Douglas County, Georgia, which we explore further in the appendix.

Electrical utility transmission and distribution

When developers vet a site for a data center, they consider whether there are adequate transmission lines. At the local level, there can be pushback against the building of new transmission lines, inside and outside a data center context. Local pushback against transmission lines increased by 57 percent from 2022 to 2023, according to Columbia Law School research.[20]

This challenge exists not just for data centers but also for the clean energy transition. One truism says that the transition can't happen without transmission. Here's why: as more sectors such as transportation go electric, overall power demand is likely to increase, requiring greater transmission capacity. Grids in the U.S. are not connected, which is a problem because such clean energy sources as solar and wind are often located far from urban centers, where electricity is most needed. Connecting grids across the country requires a plethora of new transmission lines.

"By the 2030s, we need to build so many new lines that they would reach to the moon if they were strung together," says Bill Gates, cofounder of Microsoft, in a video on his YouTube channel. "And by 2050, we'll need to more than double the size of the grid, while replacing most of the existing wires."

Most transmission lines, built between the 1950s and the 1970s, are now outdated.[21]

How did we get here? For a long time, electricity generation was centralized, and there was no need for a connected grid. Large coal-powered plants and nuclear power plants produced massive amounts of electricity in specific locations. This electricity was then distributed widely to homes, businesses, and industries throughout a large area. Power flowed primarily in one direction: from centralized plants to distributed end users.

As we transition to clean grid sources, however, we need a less centralized, more distributed system. Unlike fossil fuel plants, renewable energy sources are often geographically dispersed, variable in output, and located far from major consumption centers. They require a shift to an interconnected grid with diverse, distributed sources, one that's more resilient to outages and increasingly frequent extreme weather events caused by climate change. This shift requires more cross-regional transmission or inter-regional transmission. It requires . . . transmission lines.

18 U.S. Environmental Protection Agency, "Regulations for Emissions from Heavy Equipment with Compression-Ignition Engines," https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression.

19 Srini Bangalore et al., "Investing in the Rising Data Center Economy," McKinsey & Company, January 17, 2023, https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/investing-in-the-rising-data center-economy.

20 "Opposition to Renewable Energy Facilities in the United States," Sabin Center for Climate Change Law, Columbia Law School, May 2023, https://scholarship.law.columbia.edu/sabin_climate_change/200/.

21 Bill Gates, "The Surprising Key to a Clean Energy Future," Gates Notes, January 24, 2023, https://www.gatesnotes.com/Transmission.

Often, constituents don't understand that transmission lines are an essential part of our sustainable future, even without data center demand. Properly communicating this message to a community isn't easy, but it's essential. Siting data centers near transmission infrastructure is most efficient, as doing so allows for use of the existing infrastructure and the associated rights of way for new infrastructure, if needed.

Sound

Another common community concern is sound. Most mitigations related to it are already baked into the development process. Data center designers, architects, and engineers tend to design data center campuses to mitigate impacts from sound upon nearby neighbors, including strategic placement of generators away from other uses. Developers typically employ on-site acoustic monitors as part of regulatory entitlements to ensure sound levels remain within acceptable limits.

Let's discuss where sounds occur at data center campuses. Remember the low hum in the equipment yards? It comes from cooling equipment. Screens and sound attenuators make it barely audible.

Generators make mechanical sounds, albeit only when they are turned on for testing or emergencies. Sound impacts can also be easily mitigated by housing generators in sound-attenuated enclosures with proper exhaust systems.

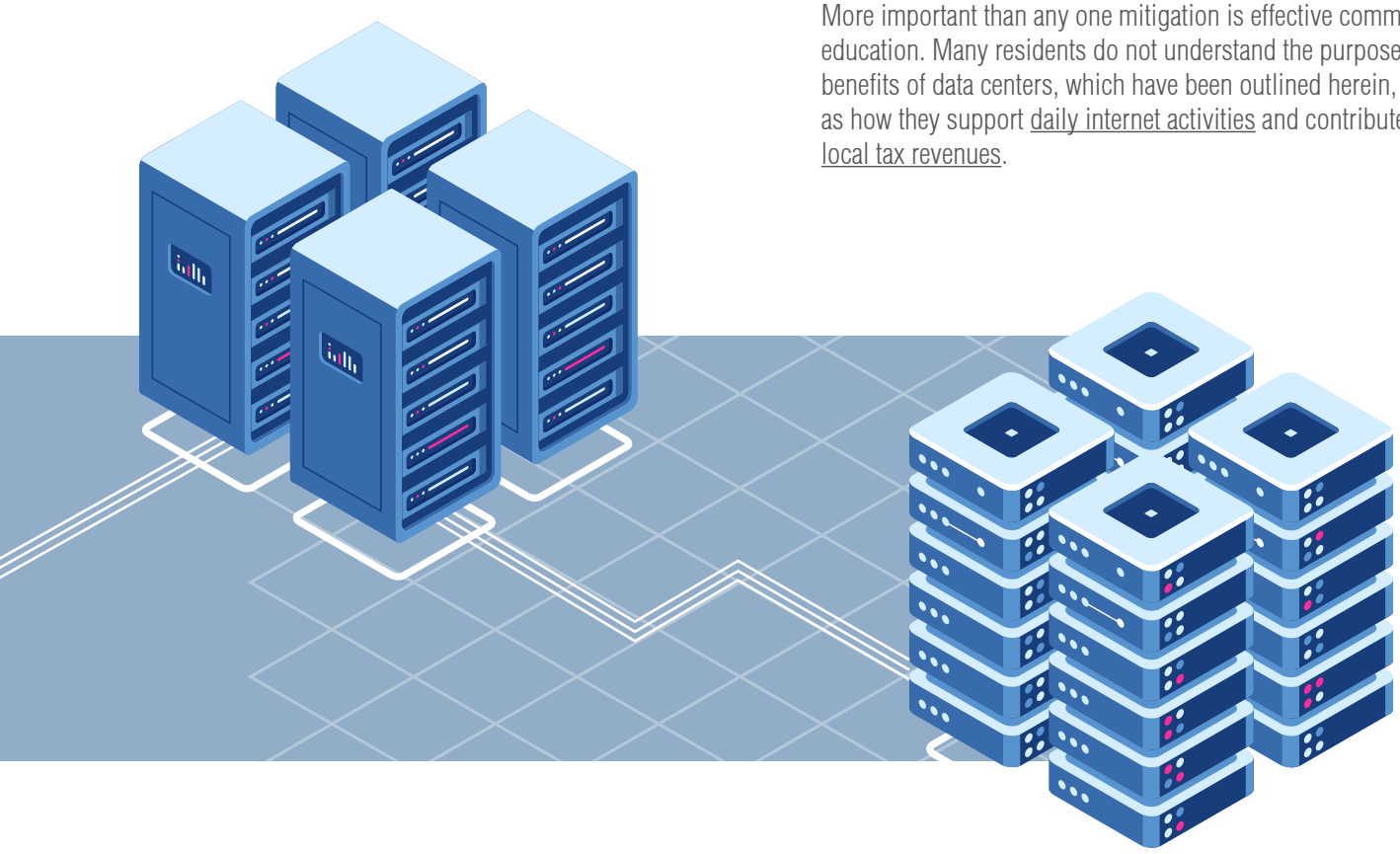
Aesthetics

Community members often raise concerns about whether data center campuses will look as if they fit into the community. This issue can be mitigated by:

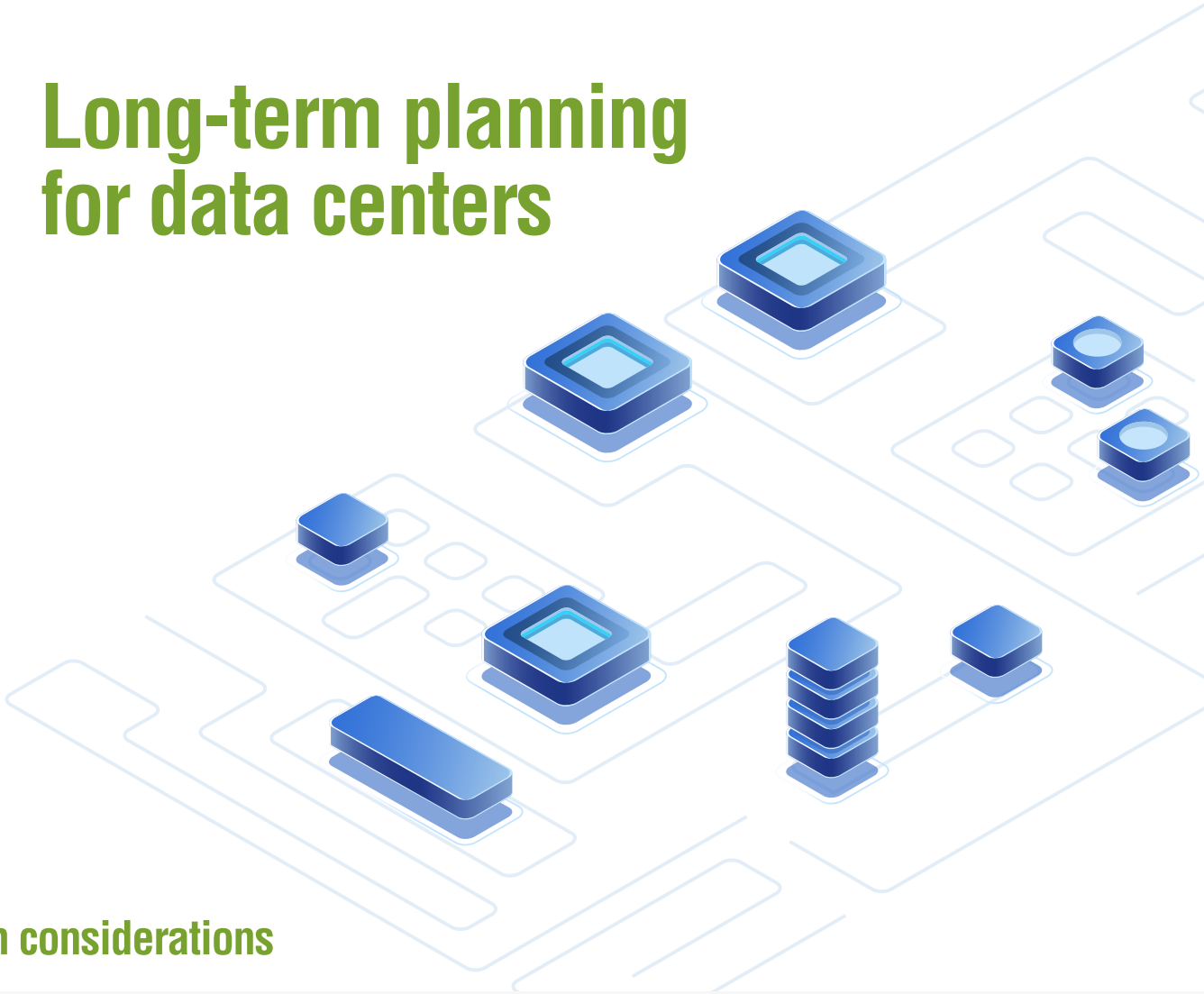
- Creating buffer zones near residential and retail areas
- Employing glass façades in key areas to make data centers more closely resemble office buildings than industrial complexes
- Applying other exterior design techniques that use materials and colors to blend buildings into their surroundings, if required and appropriate to the context

Although these mitigations are effective, it's important not to codify excessively specific or restrictive design standards into zoning codes, as doing so can discourage data center development. Exceedingly stringent height restrictions, for example, could hinder the functional design of these facilities. Balancing aesthetic considerations with operational needs of data centers is key.

More important than any one mitigation is effective community education. Many residents do not understand the purpose and benefits of data centers, which have been outlined herein, such as how they support daily internet activities and contribute to local tax revenues.



3 Long-term planning for data centers



Location considerations

Because of their unique operational and physical requirements, several crucial factors must be considered when deciding what sites suit data centers:

Power

Data centers are power-intensive. Reliable and robust access to power is non-negotiable, making proximity to high-capacity substations essential.

Roads

Whereas operational traffic is minimal, the initial construction phase generates more traffic. Thus, easy access to highways and major roads is vital for logistics and transportation.

Land

Hyperscale campuses require ample land area to accommodate both the facility and its accompanying infrastructure.

Discharge infrastructure

If there is runoff from water-based cooling, a site will need adequate infrastructure for wastewater discharge, such as a connection to a municipal sewer system, an on-site water treatment facility, or proper drainage.

Wet utilities

Some data centers require access to municipal water supply greater than what typical industrial developments need. The climate goals of most hyperscalers and developers are driving demand for recycled, rather than potable, water.

Frequent missteps

Common pitfalls in planning for data centers include:

Height restrictions:

Failing to allow sufficient building height can impede the efficient design of cooling systems, which rely heavily on vertical space for optimal airflow. The minimum height for a single-story data center could be as much as 30 feet (9.1 m). In denser jurisdictions with higher land basis, multistory data centers are common and typically require at least 66 feet (20.1 m) of height, in addition to considerations for rooftop equipment. Minimum heights are generally measured ground level to the roof line. Ancillary height structures, such as parapets, equipment platforms, screens, and stairwells can add another 15–20 feet (4.6–6.1 m) of height in some cases.

Zoning challenges:

The lack of a uniform land-use category for data centers presents challenges for localities in siting these facilities appropriately. Data centers typically fall between office and industrial/warehouse uses, which often makes the applicant request variances that appear to be special considerations rather than basic requirements. This outset can lead to high-stakes decision-making by exception that undermines the existing zoning codes.

Building code challenges:

Typical building code requirements around occupancy and plumbing fixtures may need to be modified for data center uses.

Parking and plumbing standards:

Regulations developed for office or warehouse uses often impose excessive parking and plumbing fixture counts on data centers, which necessitate variances and complicate the planning process.

Substation zoning:

Substations often fall under different categories than does the data center itself, creating further zoning inconsistencies and the need for additional, sometimes separate, approvals for one campus.

Construction confusion:

Data center campuses are often built over time, as we discussed above, which can cause planning confusion. The sightlines of a campus may change over time, so it's important to consider both the full campus and each individual building in the planning process.

Fire Department considerations:

Fire departments that are not yet experienced with data centers might not know that the on-site batteries and generators are for backup purposes only, so education is essential. Yet even though those backups aren't frequently used, data centers are built with robust fire detection and suppression systems. Modern batteries for UPS applications include multiple safety features, including battery management systems that monitor voltage, temperature, and current. Fuel tanks for backup generators are typically stored in separate, fire-rated enclosures, and secondary containment systems are used to prevent fuel spills and leaks.

Clear rules benefit all parties

Clear rules in zoning codes and land use plans, as well as in the entitlement and permitting processes, benefit all stakeholders involved in data center development, including the surrounding community.

Clarity simplifies the planning process, reduces the amount of planning that is done by exception, and lets communities gain maximum financial benefits from data center developments.

In the next few sections, we discuss planning options for AHJs seeking to be prepared to regulate thoughtful data center development, to attract it, or both. We also provide a model zoning ordinance that municipalities can adopt, designed to address common concerns while avoiding excessively restrictive measures that could hinder data center development.

4 Regulating data centers

Planning-related options

AHJs that want to bring data centers to their region can start by identifying strategic locations. Municipalities should perform comprehensive analyses to determine suitable areas, based on power availability, infrastructure, and environmental impact.

Ideally, more than one area should be designated for potential development—as with the process for industrial parks—to provide flexibility and attract varied investments.

Option 1: Create an overlay district

One option for guiding the development of data centers is to incorporate an overlay district. An overlay district is mapped to certain areas of the jurisdiction's zoning map without necessarily changing the underlying zoning district and what is allowed therein.

A historic overlay district is a common application of this tool. It typically provides for certain additional standards—an expansion of the uses that might be permitted in that district, a limitation of them, or some mix of the two.

A data center overlay district can allow for the development of data centers and prescribe that such development meet certain standards or requirements. An overlay district clearly indicates where and under what circumstances data centers are permitted and provides additional direction to any data center developer seeking to develop in that jurisdiction.

Option 2: Create a planned innovation, research, and technology (PIRT) district

PIRTs—and their regional equivalents, which include innovation zones, technology corridors, and research and technology parks—offer municipalities a flexible approach to land use that goes beyond traditional industrial or commercial zoning.

This designation allows for a mix of uses and can adapt to the specific requirements of data centers without necessitating a rezoning. Data centers in a PIRT district can integrate seamlessly with adjacent research facilities or tech hubs, fostering synergistic growth and innovation. Examples of successful PIRT districts include Palo Alto's Stanford Research Park.[22]

When data centers are sited clearly as being a by-right use, data center developers are more likely to consider the location for investment because they have the required certainty that the land they acquire won't struggle or be delayed in the approvals process. In the appendix, we explore how Elk Grove Village did so successfully.

Option 3: Note preferred data center locations in the comprehensive plan and invite owner- or hyperscaler-initiated rezoning applications

AHJs can identify preferred locations for data center development in their comprehensive plans and invite rezoning applications in those areas.

Municipalities and data center companies can agree on development conditions—sometimes called proffers, development agreements, or conditional zoning—which are voluntary commitments made by developers in return for allowed zoning. They outline specific conditions or promises agreed upon to mitigate the impact of proposed developments or to otherwise benefit the municipality's residents.

Development conditions may include infrastructure improvements, restrictions on use, environmental protections, community benefits, and other strictures. They are flexible enough to apply to various zoning categories, including PIRTs.

Option 4: Implement a specific data center zoning district defined by ordinance

Creating a data center-specific zoning district is a solution that's more detailed and restrictive than the previous three. We recommend it as a best practice in many jurisdictions because it establishes clear guidance on where data centers are permitted by right and eliminates the possibility that high-stakes decisions are made by exception. The ordinance should define data centers and outline general standards for building them, such as building size thresholds, height limits, and floor area ratio (FAR) requirements.

The zoning ordinance should include specific use standards for data centers, such as parking, setbacks, buffering, plumbing fixture counts, equipment screening requirements, and operational sound limits. The next chapter consists of a model ordinance that AHJs can adopt.

22 "About Stanford Research Park," Stanford Research Park, https://stanfordresearchpark.com/about/.

5 Model zoning ordinance guidelines

AHJs that want balanced and transparent zoning standards that mitigate unwanted impacts while encouraging the many potential benefits of data center development can take this zoning ordinance off the page and adapt it.

No two jurisdictions are the same. Each needs to layer in its own considerations.

Our intention, however, is to offer a strong foundation upon which AHJs can build zoning districts for data centers defined by ordinance. Note that the language provided below is to be included in the zoning ordinance and there may be other provisions that govern development, such as in the building code as it pertains to plumbing fixtures, that may need to be adjusted.

For example:

- Rural counties can consider additional guidelines and requirements when a data center is adjacent to certain agricultural uses or other sensitive uses.
- Urban municipalities can consider additional guidelines and requirements when a data center is adjacent to transit hubs or to prioritize pedestrian activity.

Zoning categories

Broadly, zoning districts in which data centers have specific considerations fall into four categories:

Residential: Because data centers are ultimately an industrial use, we believe that data centers are not appropriate in residential districts.

Industrial: Given the nature of data centers, they should be permitted in all industrial categories, from light industrial to heavier industrial. In such areas, data centers should be permitted as any other industrial use would be allowed, including following the same height, setback and landscaping requirements.

Rural/agricultural: In rural areas, data centers should be permitted to the extent that industrial uses would be permitted in such areas, provided that the same conditions are applied that would be applied to permissible industrial uses on such land. If another industrial use would require a certain setback, landscaping treatment or other mitigation on rural or agricultural land, our recommendation is that the same conditions be applied for a data center on such land.

Commercial: Data centers in commercial areas can be appropriate, provided they comply with certain use standards as set forth below. For the purpose of this section, commercial districts are defined as ones that permit a diversity of nonresidential uses, such as office and retail.

Use standards for commercial areas

Data centers shall be permitted by right in commercial districts if the following criteria are met:

1. To provide screening and reduce noise levels, all equipment for cooling, ventilation, or otherwise operating the facility—including generators or other power supply equipment—must be fully enclosed, except when determined by the [zoning administrator] not to be mechanically feasible. If the zoning administrator determines that full enclosure is not mechanically feasible, all equipment for cooling, ventilation, or power generation must be screened by a wall or similar barrier. In addition, any accessory electrical substation must be screened from adjacent nonindustrial properties or public streets by a wall or similar barrier. This standard does not apply to solar panels.
2. A data center building must include a main entrance feature that is differentiated from the remainder of the building façade by a change in building material, pattern, texture, color, or accent material. The entrance feature must also either project or recess from the adjoining building plane.
3. The primary façades of data centers must include either:
    a. A change in the primary facade surface for every approximately 150 horizontal feet of at least one of the following: building material, pattern, texture, color, or accent material; or

b. A minimum of thirty percent (30%) of the primary facade shall be comprised of windows, doors, or similar fenestration design features such as faux windows that are generally distributed horizontally and vertically across the façade.

c. These standards do not apply to accessory uses.

d. For the purposes of this requirement, a primary facade shall be deemed to be a facade that fronts on a public street.

4. Buildings may be constructed up to one hundred (100) feet (30.5 meters) in height or taller with special exception approval and subject to FAA limitations.

5. FAR shall not exceed [1.5 times the maximum FAR of the commercial district] without approval of a special exception. With approval of a special exception, the FAR may be increased to [2.5 times the maximum FAR of the commercial district].

Use standards for industrial areas adjacent to residential

Although data centers are appropriate in all industrial zoning categories, special attention may be afforded when industrial land is adjacent to residential. In such cases, the following language could be included in the locality's zoning ordinance:

1. Where industrial is adjacent to residential or any other sound-sensitive use, any data center building or ancillary equipment should (1) be located at least 200 feet (61 m) from the residential or noise-sensitive use or (2) meet the other standards set out for data centers in the commercial districts set out in section 1.

   a. A lesser distance that does not conform to the standards in paragraph 1, above, may be allowed with special exception approval.

Parking requirements for all data centers

As referenced elsewhere in this document, the parking requirements for data centers are far less than would be required for another industrial or commercial use of a similar size. Overbuilding parking for a given data center site or campus can be unnecessarily costly but more importantly creates excess impervious surface and avoidable environmental consequences. Accordingly, we recommend that the parking requirements for data centers be established either by:

1. Applying the parking requirements for office that exist in the ordinance, but only to the portion of the data center building that is actually utilized for office space; or

2. Requesting a staffing plan from the data center developer and allowing such data to inform the minimum number of needed parking spaces.



6 Appendix, contacts, and additional resources

Appendix: case studies

Google's Gmail and the need for redundancy

According to Google's podcast *Where the Internet Lives*,[23] Gmail launched in 2004 while offering a staggering 1 gigabyte of storage—more than 250 times the capacity of other email services at the time.

Gmail revolutionized user expectations and increased the need for data center capacity. It made every individual's account data exist on multiple interconnected servers at Google's hyperscale data centers, ensuring that users always have access to their personal information, even in the event of individual server failures, and allowing users to search and organize emails in a new way.

The Meta outage and the quest for data center capacity

The October 2021 Meta outage affected Facebook, Instagram, WhatsApp, Messenger, Oculus, and other services, making them inaccessible to billions of users for six to seven hours. This disruption, caused by an ill-timed and erroneous maintenance command, led to a cascade of failures that severed Meta's data centers from the internet. The primary cause was a lack of redundancy in the backbone network, which left no failover capacity for critical services.[24]

The economic impact was significant, with individuals and businesses that relied on these services facing major interruptions—amplified by the fact that many users sign in to other apps and services through their Facebook logins. As Mike Isaac and Sheera Frenkel wrote, in the New York Times, this mix of factors led "to unexpected domino effects such as people not being able to log into shopping websites or sign into their smart TVs, thermostats, and other Internet-connected devices."[25] Meta's stock value dropped by billions of dollars during and after the outage.[26]

Google's financing of a water treatment plant

In 2012, Google funded the Sweetwater Creek Sidestream Plant in Douglas County, Georgia. This move made its nearby data center the first in the state to use recycled water for cooling. Google partnered with the Douglasville-Douglas County Water and Sewer Authority on an initiative to conserve the Chattahoochee River's potable water supply, especially during droughts and summertime.

AWS' community incentives package in Mississippi

As part of AWS' $10 billion data center campus investment in Mississippi—the single largest capital investment in that state's history—the company funded Mississippi's first utility-scale wind farm, located in Tunica County, and developed STEM-focused workforce training and career awareness programs for K-12 school systems.

The hyperscaler committed to supporting local educational institutions—community colleges, technical schools, universities, and workforce development organizations—by developing training programs for high-demand career pathways in data center construction and operations, as well as the broadband expansion sector. AWS also provided a free cloud computing curriculum to local institutions and learners.

Fredericksburg, VA's windfall

Located southeast of Loudoun County, Fredericksburg, Virginia, is an emerging exurban hyperscale campus market. Alongside its regional partners, it represents a case study in attracting data center development—and landmark economic and fiscal benefits–while also mitigating potential concerns well in advance.

In March 2024, Virginia's governor, Glenn Youngkin, alongside other state and local elected officials, announced that AWS was making a $35 billion investment in data centers in Spotsylvania, Caroline, Stafford, and Louisa counties, thereby creating approximately 2,000 new jobs. It was also announced

23 Fischer Barry, "Two: Inside the Walls," Where the Internet Lives, December 9, 2020, podcast, 40:54, https://www.google.com/about/datacenters/podcast/.

24 Kerry Sheridan, "Facebook Outage: Social Media Giant Blames Network Problem for Global Disruption," BBC News, October 4, 2021, https://www.bbc.com/news/technology-58793174.

25 Mike Isaac and Sheera Frenkel, "Gone in Minutes, Out for Hours: Outage Shakes Facebook," New York Times, October 4, 2021, https://www.nytimes.com/2021/10/04/technology/facebook-down.html.

26 Greg Roumeliotis, "Facebook Services, Including Instagram and WhatsApp, Suffer Worldwide Outage," Reuters, October 5, 2021, https://www.reuters.com/technology/facebook-instagram-whatsapp-suffer-outage-2021-10-04/.

that AWS would be contributing $400,000 in community funds within those four localities, which, together with bordering Fredericksburg, constitute an economic region: the Fredericksburg Area Association of Realtors service area.

What Youngkin called the largest single economic development investment in the history of the state didn't happen by accident. The Fredericksburg Regional Alliance (FRA) at the University of Mary Washington and other regional groups had together been paving the way for data center development since 2016, when they also focused on ensuring the facilities would be built away from residential areas or well-buffered if close to them.

"The reality is [that] this region is one of the [fastest-growing] areas in the Commonwealth. With growth comes the need for infrastructure and services that the area can [afford only] by attracting new revenue sources or raising taxes on local businesses and residents," stated Curry Roberts, president of the FRA, in a local op-ed. "To get ahead of this [need], leaders in our region have worked for over a decade to attract data centers and the tremendous local tax revenue they bring."

According to Roberts, the regional coalition began its quest by evaluating 50 sites to determine whether—based on zoning, transmission lines, and water access—they were compatible with data center use. The coalition eventually narrowed it list down to 15 locations across five localities, with each site exceeding 100 acres. This groundwork set the stage for an ambitious economic development plan aimed at attracting major industry players such as AWS.

Roberts emphasized the importance of getting information in front of the public proactively, rather than waiting for opposition to arise. Stafford County, for example, held several community meetings to educate people about data centers before any specific projects were proposed.

Stafford and Spotsylvania counties set the stage for evaporative cooling by engineering recycled wastewater systems for that purpose in data centers. These systems are now used by data centers, which pay for the service, thus creating additional revenue for the localities.

When AWS approached regional leaders in 2018 about a data center project, the FRA was able to act quickly. It coordinated with localities to harmonize tax rates and depreciation schedules on a parcel that straddled several jurisdictions, ensuring a straightforward fiscal environment for AWS.

Although the project stalled during the pandemic, by 2023 AWS had acquired and entitled approximately 2,500 acres (1,012 ha), paving the way for the development of 18 million to 19 million square feet (1.7 million–1.8 million sq m) of data center space.

Tax benefits from the investment are immense. According to Roberts, for every dollar of service demanded by a data center, the operator is paying $13 in taxes.

Elk Grove Village's innovation district

Elk Grove Village, Illinois, a suburban community northwest of downtown Chicago, is located at a major fiber intersection. It intentionally attracted data center development through a combination of zoning code modifications, the promotion of strategic location advantages, and proactive communication with the development community.

Since its formation, the village has had unique zoning. The eastern half of the community, adjacent to O'Hare International Airport, is home to the largest contiguous industrial park in the United States and is zoned as such. The western half of the village is primarily residential and zoned to protect housing.

Matthew Roan, the village manager of Elk Grove Village, said the municipality updated its zoning code to spur redevelopment within its office park by creating a new "innovation and technology" zoning district that specifically permitted data centers as an approved use, thus inviting data center operators to fill unused space.

Additional modifications to the zoning code allow data centers to have greater building heights and front-yard fencing or screening that wouldn't normally be permitted for industrial uses. Other changes reduce parking requirements. All of these changes allow data center builders to get their projects off the ground more quickly, amid the certainty that the structures can be built and won't struggle in the approvals process—an uncertain phase that makes land acquisition too risky for some parties.

This proactive approach has attracted data center developers and hyperscalers, including Meta and Microsoft. Roan, who has served in various roles in village government since 2000, said it brought significant economic benefits to the region, including long-term development and permit fee revenues, financial assistance for local school districts and other taxing bodies, high-quality site aesthetics, and temporary construction jobs. The increased tax and fee revenue from data centers allowed the village to reinvest in infrastructure improvements and redevelopment projects, he said.

This strategic positioning of Elk Grove Village as a data center hub exemplifies how proactive municipal policies can drive growth and innovation—as well as stable economic returns. Once data centers make their large capital investments, Roan said, they tend to stay in the community long term, unlike more transient industrial users.

Contacts

Economic development contacts

Andrew Larsen,
Managing Director,
Henrico EDA

andrew@henrico.com

Brad Tietz,
Vice President,
Chicagoland Chamber of Commerce

btietz@chicagolandchamber.org

Curry Roberts,
President,
Fredericksburg Regional Alliance
at the University of Mary Washington

540.361.7373
croberts@fredregion.com

Jackie Russell,
Economic Development Specialist,
New Albany

jrussell@newalbanyohio.org

Matt Roan,
Village Manager,
Elk Grove Village

847.357.4004
mroan@elkgrove.org

Land use and law contacts

Colleen Gillis,
Esq.,
Curata Partners PLLC
(Chantilly, Virginia)

colleen@curatapartners.com
703.202.3130

Tamsen Plume,
Partner,
Holland & Knight LLP
(San Francisco, California)

tamsen.plume@hklaw.com
415.743.6941

7 Glossary

air-cooled chiller system: A cooling system sealed in a closed loop that typically consumes very little water—less than the amount used in three single-family homes.

clustering: The practice of data centers locating near one another, connecting their servers to work as a unified system, or both.

colocation data centers: Multi-tenant data centers where third-party operators (developers) lease data center space—a certain number of server cabinets, for example, or kilowatts (kW) to a host of other companies.

corporate data centers: Also called enterprise data centers, these facilities store and process a single organization's data. These data centers often store the data of financial institutions—think American Express or Wells Fargo—that typically own and operate such facilities themselves, rather than leasing them from a provider.

data center: A building or campus that houses the infrastructure that supports the world's computing functions.

data hall: The rooms in data centers where data is processed and stored.

evaporative cooling: A cooling system that uses large fans to move air across a wet medium to evaporate water, which removes the heat from the data center and cools the air.

hyperscale data centers: Large data center buildings or campuses that process and store the data of companies that often need to scale up or scale down their infrastructure quickly.

hyperscaler: A company that occupies and operates a large data center building or campus. These companies—which include AWS, Microsoft, Google and Meta, often need to "scale up" their infrastructure quickly.

latency: The time it takes for information to travel from its source to its destination.

load balancing: The process of distributing network traffic across multiple servers at interconnected data centers.

node: An individual server in a cluster of servers.

phasing: A process for data center campus construction that occurs in stages.

power distribution units (PDUs): Devices that distribute energy to servers, network devices, and other equipment within a rack.

power purchase agreements (PPAs): An agreement between a data center company (the buyer) and a renewable energy provider (the seller) to purchase electricity from specific wind or solar farms.

purple pipe system: A recycled water setup whereby water is treated to remove contaminants, solids, and impurities and then distributed via plum-colored pipes.

renewable energy certificate (REC): A tradable commodity wherein each REC equates to the generation of 1 MWh of power from a qualified renewable resource, usually wind or solar power generation facilities.

switch: A device used to connect network devices and route data through interconnected networks.

switchgear: Power distribution equipment that controls, protects, and distributes electrical power throughout the data center.

telecom data centers: Where traffic from cell towers "switches" to go out to the internet. Typically owned by such telecommunications companies as Verizon, these centers tend to be smaller facilities than the other data center types and require less than 10 kWs.

uninterruptible power supply (UPS) systems: Electrical equipment used in data centers to provide battery backup power in the event of a power outage.

utility substation transformer: A large electrical device in the electrical yards of a data center campus that steps down high-transmission voltages from the utility grid to lower, more manageable medium-voltage levels suitable for distribution throughout the data center.

water-cooled chiller system: An open-loop pipe system in which water removes heat from the refrigerant.

wholesale data center: A type of data center where a third-party developer rents a large portion of the space, the energy capacity, or both to one company–often, all of it.



Data Centers in Florida:
Issues for state and local policymakers

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- Driven by growing demand for cloud storage, AI, cryptocurrency
- Packed with servers, computers operating 24/7
- Require cooling systems
- Create water, electricity demand comparable to small cities
- Require generators for backup power
- After temporary surge for construction, few permanent jobs
- National hot spots in Virginia, Texas
- Currently 120 data centers in Florida, though most not hyperscale

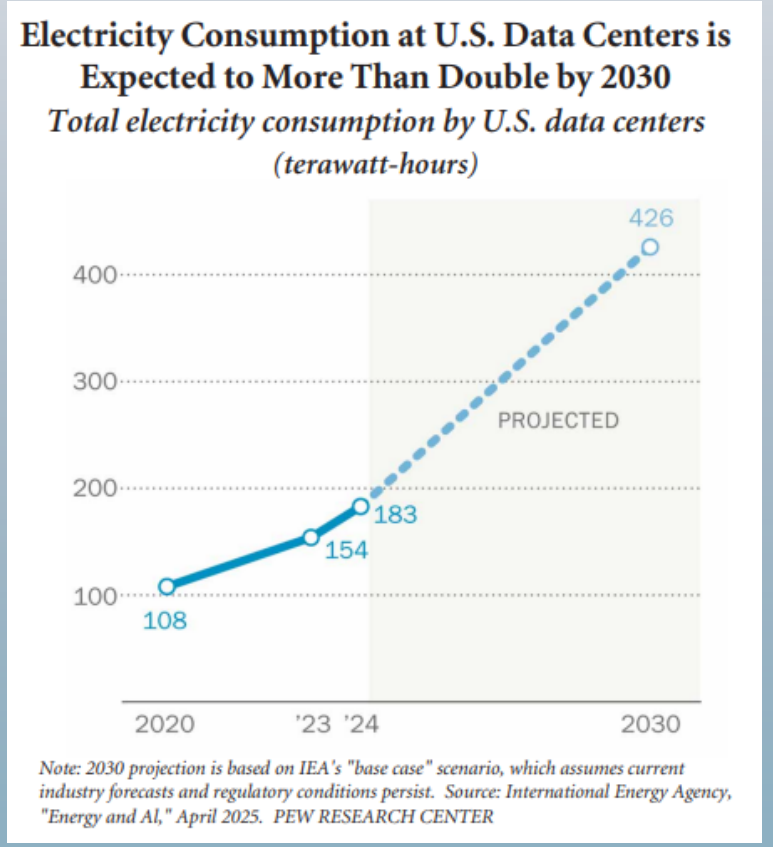
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Energy Demand

- Vast amounts of electricity needed to power servers, cooling systems
- Typical AI data center consumes as much electricity as 100,000 households
- Hyperscale data centers could approach electricity demand of 2 million households
- Normally requires adding generating sources, with transmission lines, substations

- Heavy, urgent demand may force extended life for old, inefficient fossil fuel power plants
- Data centers powered by solar arrays will increase land demand, displace farms, ranches
- Gas-fired power plants increase emissions, require pipelines, transmission corridors
- Nuclear plants – old restarted or new modular – raise environmental, security issues
- Who bears the cost of additional power?





Water Use

- Servers, other equipment produce substantial heat, require cooling, usually with water
- Hyper-scale centers reportedly use up to 5 million gallons/day, equivalent to city of 50,000 people
- Despite R & D toward more efficient cooling, most centers still lose water through evaporative cooling
- Texas centers used 49 billion gallons in 2025, and projected to use nearly 400 billion gallons by 2030
- Air cooling possible, but uses more power

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Land Use and Quality of Life

- Data centers are large windowless buildings, brightly lit with high-security fencing – an industrial land use
- Diesel generators providing backup power create noise, emissions
- Relatively few operating employees limit traffic impact
- Buildings and equipment increase local tax bases, minus any tax breaks offered

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Questions for planners: Compatibility, equity

- How close to schools, parks, nursing homes, hospitals?
- Near low-income communities?
- Noise impacts on current, future nearby development?
- Light impacts on neighboring communities, wildlife?
- What buffers, design requirements are needed to enhance compatibility?
- What height, intensity limits are needed?

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Questions for planners: Growth implications

- What neighboring commercial, tourism land uses would data centers make incompatible?
- How much developable or productive agricultural land might be lost for centers and their electrical infrastructure?
- What future developments would be attracted by electrical infrastructure?
- What impact would centers have on value of neighboring land for future development?

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Questions for planners: Water supply & wastewater

- How much water would be needed for cooling, and what share of local water supply?
- Would recycled water be available?
- Would the local wastewater treatment capacity be sufficient?



Questions for planners: Other environmental impacts

- How close would center be to Florida Wildlife Corridor, with what impact on its conservation and protection?
- Possible to avoid, minimize or mitigate impacts to wildlife habitat and other high-priority conservation land?
- What air, noise impacts from backup generators?
- How would risks of on-site fuel storage be managed?

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SB 484 Data Centers

- Sets oversight, permitting and utility cost requirements for hyperscale (50 megawatts or more) centers to ensure they
  - Bear their own infrastructure costs
  - Comply with local land-use regulations
  - Don’t shift electricity costs to other ratepayers
- Declares local governments retain planning and land development regulation authority over data centers
- Prohibits water permits harmful to area resources or otherwise barred under local zoning or comp plans
- Requires reclaimed water *when feasible,* along with conservation plan and hearing before permits issued
- Mandates independent study of impacts on economy, resources and public health, due by July 1, 2027
- Retreating from original bill, allows developers to enter into NDAs with state, local agencies, exempt for disclosure for up to a year



Senator Bryan Avila, R-Miami-Dade

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Data Centers and Their Energy Consumption: Frequently Asked Questions

Updated May 12, 2026

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Prepared for Members and
Committees of Congress

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Data Centers and Their Energy Consumption: Frequently Asked Questions

SUMMARY

R48646

May 12, 2026

Martin C. Offutt
Analyst in Energy Policy

Ling Zhu
Specialist in Science and Technology Policy

Ashley J. Lawson
Specialist in Energy Policy

Natalie R. Ortiz
Analyst in Government Organization and Management

In its simplest form, a data center is a physical facility that houses and runs large computer systems. U.S. data center annual energy use in 2023 (not accounting for cryptocurrency) was approximately 176 terawatt-hours (TWh), approximately 4.4% of U.S. annual electricity consumption that year, according to a report by Lawrence Berkeley National Laboratory. A data center typically contains multiple computer servers, data storage devices, and network equipment that can provide information technology (IT) infrastructure service for organizations to store, manage, process, and transmit large amounts of data. Some projections show that data center energy consumption could double or triple by 2028.

Roughly one-half or greater of the electric power demand of data centers stems directly from the operation of electronic IT equipment. Much of the rest is for cooling. The operation of the IT equipment raises the temperature of the ambient room air, necessitating a cooling strategy. Centralized cooling resources are of two types: (1) those moving chilled air through large ductwork; or (2) those moving chilled water in a piped *cooling loop* that exchanges heat with the environment. An alternative to these centralized systems is room-scale air conditioners. One type, called computer room air conditioners (CRACs), is common in smaller data centers. Exchanging the heat with the environment can happen faster with methods that directly consume water. The source of the water can be the local water utility and can also be on-site reservoirs or other colocated water resources. A study by the International Energy Agency estimates, for illustration, that a 100 megawatt U.S. data center may consume roughly 2 million liters (roughly 530,000 gallons) per day, averaged across the various cooling strategies, with 725,000 liters (roughly 190,000 gallons) per day consumed on site, or a little less than 40%.

Currently, there are no legally binding energy standards that apply explicitly to operation of data centers in the private sector. For use within the federal government, the U.S. Department of Energy has published guidance on how to optimize energy use in federal data centers. Another nonbinding program, ENERGY STAR, certifies data centers with a focus on the building and infrastructure. Since 2012 the Department of Energy has regulated the energy efficiency of CRACs, one type of cooling strategy.

The federal government has made some efforts to gather data using information collection methods suitable for later scale-up. In general, before a federal agency can begin collecting information on data centers, the agency must go through a months-long approval process under the Paperwork Reduction Act of 1995. A 2021 report by the U.S. Energy Information Administration on a pilot study of energy use in data centers surveyed 50 facilities and received 9 responses. Other options may include using data from private firms that maintain data sets that are able to provide direct or proxy information on data centers.

In 2023, a letter from five Senators and three Representatives urged the U.S. Environmental Protection Agency to use its authority under Section 114 of the Clean Air Act to implement a “mandatory disclosure regime” on cryptocurrency mining facilities. In the 119th Congress, S. 1475, the Clean Cloud Act of 2025, introduced in the Senate and referred to the Committee on Public Works, would amend the Clean Air Act (42 U.S.C. §§7401 et seq.) to provide the U.S. Environmental Protection Agency and the U.S. Energy Information Administration with authority to collect data and information on annual electricity consumption of data centers and cryptocurrency mining facilities.

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Introduction

According to estimates produced by Lawrence Berkeley National Laboratory (LBNL), U.S. data center annual energy use in 2023 (not accounting for cryptocurrency) was approximately 176 terawatt-hours (TWh), approximately 4.4% of U.S. annual electricity consumption that year.[1] Some projections show that data center energy consumption could double or triple by 2028.[2] Data centers provide information technology (IT) infrastructure services for processing large amounts of data, such as for the rapidly growing field of artificial intelligence (AI). Roughly one-half or greater of the electric power demand of data centers stems directly from the operation of IT equipment. Much of the rest is for cooling.

What is a data center?

In its simplest form, a data center is a physical facility that houses and runs large computer systems. A data center typically contains multiple computer servers, data storage devices, and network equipment that can provide IT infrastructure service for organizations to store, manage, process, and transmit large amounts of data. An increasing number of private and public entities have used data centers to support their expanding IT needs, particularly as data volumes continue to grow.

Types of data centers vary based on their ownership or intended purposes. For example, a large company may choose to build, own, and operate an on-premises data center (also known as an "enterprise data center") to house and manage its own IT infrastructure.[3] Other organizations, especially those lacking the space, staff, or IT resources, often choose to rent a space, equipment, or services within a colocation data center (also known as a "managed data center") owned and operated by a third-party company.[4] Some online service providers operate geographically distributed and interconnected data centers and allow multiple users to remotely access computing resources such as data processing chips, software, data storage, networks, and applications hosted by these data centers, which are called "cloud data centers."[5] Cloud computing service providers may also operate and maintain smaller data centers physically located closer to end users (called "edge data centers") to reduce network latency and data communication delay, speed up content distribution, optimize real-time, data-intensive workloads, and improve application performance and user experience.[6]

The increasing demand for data storage and processing capacities, especially for intensive computational tasks such as AI development and deployment, has led to construction and

[1] A. Shehabi et al., *2024 United States Data Center Energy Usage Report*, Lawrence Berkeley National Laboratory (LBNL), LBNL-2001637, December 2024, p. 5. While cryptocurrency is one type of service supported by data centers, not all studies of energy consumption of data centers touch on energy usage related to cryptocurrency. The report noted that its calculations assumed that data centers would operate consistently with how they were commissioned and designed but that results may differ.

[2] Shehabi et al., *2024 United States Data Center Energy Usage Report* (LBNL report), p. 6. Does not include energy use related to cryptocurrency.

[3] Equinix, "What Is a Data Center? What Are Different Types of Data Centers?," August 1, 2024, https://blog.equinix.com/blog/2022/10/13/what-is-a-data-center-what-are-different-types-of-data-centers/.

[4] Stephanie Susnjara and Ian Smalley, "What Is a Data Center?," IBM, September 4, 2024, https://www.ibm.com/think/topics/data-centers.

[5] Cisco, "What Is a Data Center?," https://www.cisco.com/c/en/us/solutions/data-center-virtualization/what-is-a-data-center.html#~infrastructure-evolution.

[6] Susnjara and Smalley, "What Is a Data Center?"

operation of "hyperscale data centers" notable for their size.[7] According to industry analysts, to be considered a hyperscale data center, a facility should contain at least 5,000 computer servers and a large scale of network equipment and occupy at least 10,000 square feet of physical space, with an electric power rating, sometimes referred to as *power draw*, exceeding 100 megawatts (MW; one megawatt is equal to 1 million watts).[8] Roughly 100 MW of electric power is sufficient to support the electricity needs of 80,000 U.S. households.[9]

What do data centers look like?

Data centers have architectural configurations ranging from closets, to larger rooms within a single enterprise, to dedicated standalone structures serving the needs of multiple customers or tenants, known as *colocation. Colocation centers* are touted for their flexibility in allowing customers to specify exactly the amount of hardware and software resources they require. The largest, or "hyperscale," facilities occupy whole buildings or groups of buildings. When reporting on the number of data centers, some analysts only count whole-building data centers, which would include the hyperscale and colocation centers. The majority of computer servers are found in these latter two types of centers—74% in 2023, according to LBNL.[10]

How have data centers been defined in federal law and guidance?

The term *data center* has been defined in federal laws and guidance in the context of energy consumption and federal use of data centers. For instance, Section 453(a)(1) of the Energy Independence and Security Act of 2007 (P.L. 110-140) defines a data center as "any facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be (A) a free-standing structure; or (B) a facility within a larger structure, that uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment."[11]

In its guidance memorandum for federal agencies to implement the Federal Data Center Enhancement Act of 2023 (Division D, Title LIII, of P.L. 118-31), the Office of Management and Budget (OMB) specified that an agency data center covered in the memorandum (1) is composed of certain types of permanent structures and operates in a fixed location; (2) houses IT equipment, including servers and other high-performance computing devices, or data storage devices; and (3)

[7] Phill Powell and Ian Smalley, "What Is a Hyperscale Data Center?," IBM, March 21, 2024, https://www.ibm.com/think/topics/hyperscale-data-center.

[8] Powell and Smalley, "What Is a Hyperscale Data Center?" See also VIAVI Solutions, "What Is a Hyperscale Data Center?," https://www.viavisolutions.com/en-us/resources/learning-center/what-hyperscale-data-center.

[9] This calculation assumes a continuous source of electric power generation equal to 100 megawatts (MW), operating year-round, and that the average U.S. household consumes 10,566 kilowatt-hours (kWh) of electricity per year. The latter figure is sourced from the U.S. Energy Information Administration (EIA), "EIA Releases Consumption and Expenditures Data from the Residential Energy Consumption Survey," press release, March 29, 2023, https://www.eia.gov/pressroom/releases/press530.php.

[10] Shehabi et al., *2024 United States Data Center Energy Usage Report* (LBNL report), p. 37.

[11] 42 U.S.C. §17112(a)(1).

hosts information and information systems accessed by other systems or by users on other devices.[12]

What are the energy requirements of data centers?

The Department of Energy (DOE) examined the nationwide energy consumption of data centers in response to direction by Congress in the Energy Act of 2020 (Section 1003 of Division Z, P.L. 116-260). The study, performed by LBNL, found that U.S. data center annual energy use in 2023 (not accounting for cryptocurrency) was approximately 176 terawatt-hours (TWh), approximately 4.4% of U.S. annual electricity consumption that year.[13] An analysis by the Electric Power Research Institute (EPRI) similarly estimated that data centers consumed 4% of U.S. electricity in 2023.[14] In a separate analysis, in 2024, EPRI estimated that AI consumed 10% to 20% of data center energy.[15]

Why are data centers energy-intensive?

Roughly one-half or greater of the electric power demand of data centers stems directly from the operation of electronic IT equipment.[16] Much of the rest is for cooling. The core hardware components of a data center include computer servers, which contain computing chips (e.g., central processing unit [CPU] and graphics processing unit [GPU]), memory chips, data storage drives, and network routers and switches.[17] Data from a major CPU chip manufacturer show that its data center-level CPU series in early 2025 had an average thermal design power (TDP) rating between 150 watts (W) and 350W.[18] An advanced data center-level GPU can have a maximum TDP rating between 350W and 700W.[19] The computing chips of CPU and GPU typically consume the most electrical power inside a server, as discussed further in "What contributes to the need for cooling in data centers?" According to an industry report published in November

[12] Office of Management and Budget (OMB), *Implementation Guidance for the Federal Data Center Enhancement Act*, M-25-03, January 14, 2025, p. 2, https://bidenwhitehouse.archives.gov/wp-content/uploads/2025/01/M-25-03_Implementation-Guidance-for-the-Federal-Data-Center-Enhancement-Act.pdf.

[13] Shehabi et al., *2024 United States Data Center Energy Usage Report* (LBNL report), p. 5.

[14] See Figure ES-1 of Electric Power Research Institute (EPRI), *Powering Data Centers: U.S. Energy System and Emissions Impacts of Growing Loads*, October 2024, p. 3, https://www.epri.com/research/products/000000003002031198.

[15] EPRI, *Powering Data Centers*, p. 7.

[16] Shehabi et al., *2024 United States Data Center Energy Usage Report* (LBNL report), p. 47.

[17] For more information on the use of CPUs and GPUs in data centers, see CRS In Focus IF12899, *Data Centers and Cloud Computing: Information Technology Infrastructure for Artificial Intelligence*, by Ling Zhu.

[18] Intel, "Intel Xeon 6 Processors," https://www.intel.com/content/www/us/en/products/details/processors/xeon.html. Intel defines *thermal design power* (TDP) as "the average power, in watts, the processor dissipates when operating at Base Frequency with all cores active, under an Intel-defined, high-complexity workload." Intel, "11th Gen Intel® Core™ Mobile Processor Technical Specifications," https://edc.intel.com/preview/content/www/us/en/products/performance/benchmarks/11th-gen-intel-core-mobile-processor-technical-specifications/.

[19] See, for example, Nvidia, "NVIDIA H100 Tensor Core GPU," https://www.nvidia.com/en-us/data-center/h100/. Nvidia defines the term TDP differently from Intel. The TDP of an Nvidia GPU is "the maximum power that a subsystem is allowed to draw for a 'real world' application, and also the maximum amount of heat generated by the component that the cooling system can dissipate under real-world conditions." Nvidia, *GeForce GPU Power Primer*, https://www.nvidia.com/content/dam/en-zz/Solutions/GeForce/technologies/frameview/Power_Primer.pdf.

2024, computing power and server systems account for roughly 40% of electricity consumption in a data center, while network and data storage equipment use about 10%.[20]

Each piece of the electronic IT equipment generates heat as it operates. Many chipsets incorporate a safety mechanism called "thermal throttling" that reduces the chip performance to prevent overheating and protect the hardware.[21] Data centers require cooling systems to help dissipate the heat and maintain optimal performance and overall system stability. The cooling systems could account for another 38% to 40% of electricity consumption in a data center.[22] (See **Figure 1**.)

While general-purpose workloads typically require only CPUs, GPUs are typically considered better than CPUs for handling computation-intensive processes such as AI training.[23] Under full workload conditions, a GPU performing AI training tasks may operate near its maximum capacity and draw power close to its maximum TDP over extended periods of time.

The development and deployment of state-of-the-art, large AI models may require multiple GPUs to work concurrently by distributing large volumes of data and computational tasks across the computing chips (known as "parallel computing").[24] A study released in December 2024 observed that, when training a large AI model using a computer system with eight advanced GPUs for eight hours, the GPUs were near full utilization most of the time (an average of 93%) and the median amount of electrical power consumed by the chips was 7.92 kilowatts (kW; one kilowatt is equal to 1,000 watts), with a total energy consumption of 62 kilowatt-hours (kWh).[25]

Cutting-edge chip technologies support high-speed GPU-to-GPU data communication among hundreds of GPUs across multiple servers, enabling the creation of a massive data processing cluster to support large-scale AI training but also further increasing these data centers' energy consumption. A report released in April 2025 estimated that training a specific large AI model required a total power draw of 25.3 MW and that the power required to train these models could double annually.[26] The report stated that "[t]he rising power consumption of AI models reflects the trend of training on increasingly larger datasets."[27] Another study released in May 2025 estimated that training another large AI model consumed 50 gigawatt-hours (GWh; one gigawatt-hour is equal to 1 million kilowatt-hours) of energy, "enough to power San Francisco for three days."[28]

Multiple industry reports indicate that data processing demands of AI and related remote computing services have spurred new construction and upgrades of data centers. The computing

[20] Karthik Ramachandran et al., "As Generative AI Asks for More Power, Data Centers Seek More Reliable, Cleaner Energy Solutions," Deloitte Center for Technology Media and Telecommunications, November 19, 2024, https://www2.deloitte.com/us/en/insights/industry/technology/technology-media-and-telecom-predictions/2025/genai-power-consumption-creates-need-for-more-sustainable-data-centers.html.

[21] Intel, "What Is Throttling and How Can It Be Resolved?," May 25, 2023, https://www.intel.com/content/www/us/en/support/articles/000088048/processors.html.

[22] Ramachandran et al., "As Generative AI Asks for More Power, Data Centers Seek More Reliable, Cleaner Energy Solution."

[23] Imran Latif et al., "Empirical Measurements of AI Training Power Demand on a GPU-Accelerated Node," arXiv, December 20, 2024, https://arxiv.org/abs/2412.08602.

[24] DigitalOcean, "Multi-GPU Computing: What It Is and How It Works," February 14, 2025, https://www.digitalocean.com/resources/articles/multi-gpu-computing.

[25] Latif et al., "Empirical Measurements of AI Training Power Demand on a GPU-Accelerated Node," p. 10.

[26] Nestor Maslej et al., *The Artificial Intelligence Index Report 2025*, Institute for Human-Centered Artificial Intelligence, Stanford University, April 2025, p. 72, https://hai.stanford.edu/ai-index/2025-ai-index-report.

[27] Maslej et al., *AI Index Report 2025*, p. 72.

[28] James O'Donnell and Casey Crownhart, "We Did the Math on AI's Energy Footprint. Here's The Story You Haven't Heard," *MIT Technology Review*, May 20, 2025.

resources hosted by these centers would, in turn, lead to increased power demand. For example, one report estimated that the computing capacity (measured by the amount of electrical power consumed by IT equipment) of data centers under construction in North America at the end of 2024 reached a record-high 6,350 MW, more than double the figure from a year earlier.[29] Another report indicated that new hyperscale data centers have been built with capacities from 100 MW to 1,000 MW each, "roughly equivalent to the load from 80,000 to 800,000 homes."[30]

What equipment uses energy in a data center?

Data centers in whole building structures contain energy-consuming IT equipment, cooling and air handling equipment, and backup power supplies.[31] The latter may include uninterruptible power supplies, backup diesel generators, and natural-gas-powered generators.[32] Backup strategies involving batteries consume electricity while improving the quality of the electricity by evening out the highs and lows of the electric voltage.

For a small data center within an office or research building, the mix of energy consumption could be roughly 50% attributable to IT physical machines and 50% attributable to cooling and power supply, according to a large industrial and energy equipment maker.[33] (See **Figure 1**.) In addition, data centers include appliances and equipment for human occupants, not depicted in the figure. Overall, the energy use within data centers is not well described nationally, as elaborated further in "Are there reports on the actual energy use of U.S. data centers?" An expression or metric sometimes used to describe the energy performance of data centers is *power usage effectiveness* (PUE), which is the ratio of all the power used by the data center to the power used by just the IT equipment.[34] For the example just discussed, the PUE would be two (2).

Discussion of IT equipment rapidly invokes terms descriptive of nonphysical entities such as clouds, virtual machines, architectures, nodes, and protocols not directly associated with a real-world energy-consuming process. Understanding the energy consumption necessitates discussing hardware (i.e., physical machines) to which energy consumption can be assigned, described below in "What contributes to the need for cooling in data centers?"

[29] CBRE, "North America Data Center Trends H2 2024: Surging Demand Drives Record New Data Center Development," February 26, 2025, https://www.cbre.com/insights/reports/north-america-data-center-trends-h2-2024.

[30] EPRI, *Powering Intelligence: Analyzing Artificial Intelligence and Data Center Energy Consumption*, May 28, 2024, p. 2.

[31] These non-IT components may be termed "infrastructure" for purpose of energy tracking. A. Shehabi et al., "Data Center Growth in the United States: Decoupling the Demand for Services from Electricity Use," *Environmental Research Letters*, vol. 13 (2018), p. 124030. Whole-building data centers are described elsewhere in the present report.

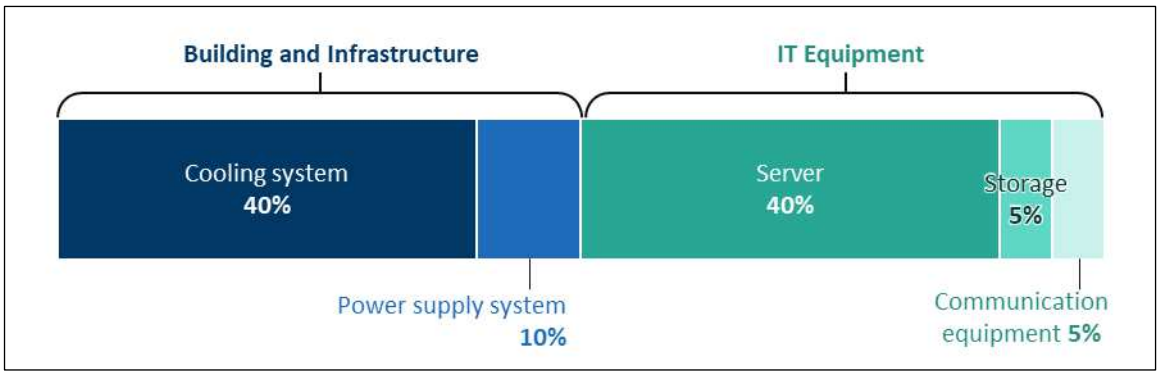
[32] Uninterruptible power supply (UPS) strategies range from full standby to active regeneration of the waveform of the power supply. CyberPower, "How Does an Uninterruptible Power Supply (UPS) Work?," September 10, 2015, https://www.cyberpowersystems.com/blog/how-does-a-ups-work/.

[33] ABB, *HVAC Motors: Motors in Data Centers*, https://new.abb.com/motors-generators/nema-low-voltage-ac-motors/hvac-motors.

[34] The Green Grid, *PUE: A Comprehensive Examination of the Metric*, White Paper #49, 2012; and N. Casale, "Data Centers: Where and How Should PUE Be Improved?," *ASHRAE Journal*, vol. 63, no. 6 (June 2021).

Figure 1. Notional Power Draws of IT Equipment and Infrastructure

Illustrative case with PUE = 2, consistent with data centers of <150 square feet floor space



Source: CRS, adapted from ABB, *HVAC Motors: Motors in Data Centers*, https://new.abb.com/motors-generators/nema-low-voltage-ac-motors/hvac-motors.

Notes: PUE = power usage effectiveness, the ratio of all power used by a data center to that used by the information technology (IT) equipment (i.e., by servers, data storage, and communication). The depicted PUE of 2 is typical of a small data center (i.e., one having less than 150 square feet of floor space), as reported in A. Shehabi et al., *2024 United States Data Center Energy Usage Report*, Lawrence Berkeley National Laboratory (LBNL), LBNL-2001637, December 2024, p. 47.

What contributes to the need for cooling in data centers?

From an electrical engineer's perspective, as computer chips of various types perform their function, the impedance of the electrical pathways generates heat, both on and between chips.[35] The majority of heat arises dynamically while the processers are performing useful functions. Heat-generating activities from computation take place related to, or in support of, CPU/GPU activity. Generally speaking, the energy consumption of a server scales according to the number of CPUs or GPUs.[36] On-chip (i.e., on the physical CPU/GPU) energy consumption includes dynamic losses associated with the basic concept of operation of a transistor, known as *switching*.[37] Further losses occur associated with computing chips when they access on-chip SRAM (static random access memory) and networking functions. Additional losses on-chip are due to control functions ("clock"), power, and leakage current.[38] Off-chip energy can be lost when electricity moves between the computing chip (CPU/GPU) and a separate memory chip. The time needed for very large transmission of data between separate chips, as in the last example, is known as the *memory wall* or *memory bottleneck*.

Unlike in a desktop computer, the activity rates of chips in a data center can be extremely high, and this activity rate increases the cooling needs as the hot equipment raises the temperature of

[35] Servers, named after today's client-server architecture, may include chips for computing, memory, and networking.

[36] Shehabi et al., *2024 United States Data Center Energy Usage Report* (LBNL report), p. 16.

[37] Integrated circuits, also known as chips, contain billions of transistors. Heat is the movement of energy between two bodies of different temperatures that are in thermal contact. Colloquially, heat may be referred to as a "loss" if the heat does not provide a useful (valorized) service.

[38] Leakage current is a static loss not associated with the chip's performance of computational functions. Not all the energy consumed by the IT equipment supports the useful computing functions of computer chips. Some energy heats the equipment without performing a function.

the ambient air. The more common cooling strategies treat and condition this ambient air by lowering its temperature and humidity.

Historically the amount of computing power per watt has improved significantly. The move to multi-core processing at the turn of the millennium lowered the heat produced for the same amount of computing power.[39] According to Nvidia, as reported in October 2024, the prior 10 years had seen a 4,000-fold improvement in its GPU's computational performance per watt of power.[40] More conservatively, the International Energy Agency estimates the change in AI GPU performance per watt to have improved 100-fold or greater between 2008 and 2023.[41]

How are data centers typically cooled?

The operation of the IT equipment raises the temperature of the ambient room air, necessitating a cooling strategy. Generally speaking, the cooling strategies for IT equipment differ from cooling needed for personal comfort, with computer servers tolerant of higher temperatures but requiring lower humidity.[42] Federal guidelines and research advise using large centralized cooling resources for data centers.[43] There are two types of centralized cooling resources: (1) those moving air through large ductwork to deliver chilled air and remove warm air; or (2) those moving water or other heat transfer fluid through a piped *cooling loop* that exchanges heat with the environment. The centralized cooling resources achieve higher efficiency at the larger scale. Those of the first type, which moves air, can improve their energy efficiency by utilizing variable speed fans.[44] Though less common, these methods can, if required, be used to heat the interior of the data center using air-ducted or looped strategies (i.e., strategies that use heat transfer fluids).

An alternative to these centralized systems is room-scale air conditioners. One type, called computer room air conditioners (CRACs), is common in smaller data centers.[45] With CRACs, the air is looped and filtered within the room but the heat is sent outside the building using refrigerant or other fluid.[46]

The above methods rely on a sequence in which computing equipment first heats the room air, after which the cooling system accepts heat from the room air, either moving a heated fluid outside, where the heat is returned to the environment, or removing the air itself and replacing it

[39] K. Bourzac, "Fixing AI's Energy Crisis," *Nature*, October 17, 2024.

[40] K. Bourzac, "Fixing AI's Energy Crisis."

[41] International Energy Agency (IEA), "Efficiency Improvement of AI Related Computer Chips, 2008-2023," October 17, 2024, https://www.iea.org/data-and-statistics/charts/efficiency-improvement-of-ai-related-computer-chips-2008-2023.

[42] See DOE's proposed rule on computer room air conditioners, 65 *Federal Register* 48830 (August 9, 2000).

[43] DOE Federal Energy Management Program (FEMP) and National Renewable Energy Laboratory (NREL), *Best Practices Guide for Energy-Efficient Data Center Design*, July 2024, p. 14, https://www.energy.gov/femp/articles/best-practices-guide-energy-efficient-data-center-design.

[44] DOE FEMP, *Best Practices*, p. 16.

[45] In DOE's definition, CRACs are "[u]sed in computer rooms, data processing rooms, or other information technology." DOE FEMP, *Best Practices*, p. 14; and DOE, *Technical Support Document: Energy Efficiency Program for Commercial and Industrial Equipment: Certain Categories of Commercial Air Conditioning and Heating Equipment*, August 2019, p. 2-1.

[46] Trane, *Engineers Newsletter: Understanding the Selection of Direct Expansion (DX)*, vol. 52, no. 1 (March 2023), https://www.trane.com/content/dam/Trane/Commercial/global/learning-center/engineers-newsletters/ADM-APN086-EN.pdf; R. Waldron, "CRAC Units: Computer Room AC Basics," Rasmussen Mechanical Services, January 25, 2023, https://www.rasmech.com/blog/crac-units-computer-room-ac-basics/?srsltid=AfmBOoq5_rVIu-Hm-LF7BTN2i2AZ_d7bskeXWdYt4hzkS8WTuX75qFpy; and R. Schmidt and M. Iyengar, "Thermodynamics of Information Technology Data Centers," *IBM Journal of Research and Development*, vol. 53, no. 3 (August 2009).

with cooled return air. Exchanging the heat with the environment can happen faster with methods that involve water.

What are some additional data center cooling strategies?

High-performance computing (HPC)[47] equipment has necessitated cooling methods that are thermodynamically closer to the chips and intercept the energy before it has substantially raised the room air temperature. These *direct liquid cooling* technologies can address the higher power of HPC.

Another option that may be used during shoulder season (i.e., spring and fall in temperate climates) or winter, known as *free cooling*, imports water chilled passively by environmental conditions. Compared with methods involving conventional *mechanical cooling* that use powered compressors, free cooling is relatively inexpensive. Optimizing the cooling of the data center will generally involve some combination of methods.

Facilities with substantial cooling needs sometimes employ thermal storage. The National Institutes of Health, for example, has a large chilled water storage facility at its Bethesda, MD, campus.[48] The thermal storage system operates by drawing down the chilled water reservoir during periods of intense cooling requirements and replenishing the reservoir during off-peak hours.

What are some potential concerns about water consumption by data centers?

A study by the International Energy Agency estimates, for illustration, that a 100 MW U.S. data center may consume roughly 2 million liters (roughly 530,000 gallons) per day, averaged across the various cooling strategies, with 725,000 liters (roughly 190,000 gallons) per day consumed on site, or a little less than 40%.[49]

Of the various cooling strategies to return heat to the environment, those that include cooling towers accelerate the rate of heat transfer by spraying water onto surfaces in the cooling tower. The water evaporates to provide cooling and must constantly be replenished. According to one vendor, water-cooled systems may use as little as one-half the electric power of air-cooled systems.[50] The source of the cooling water can be the local water utility. A city in Oregon reported

[47] The definition of high-performance computing is not rigorous but is associated with more complex tasks. See, for example, Nvidia, "What Is High-Performance Computing?," https://www.nvidia.com/en-us/glossary/high-performance-computing/.

[48] National Academies of Sciences, Engineering, and Medicine, *Managing the NIH Bethesda Campus Capital Assets for Success in a Highly Competitive Global Biomedical Research Environment* (National Academies Press, 2019), p. 42.

[49] IEA, *Energy and AI: World Energy Outlook Special Report*, April 2025, p. 242, https://iea.blob.core.windows.net/assets/34eac603-ecf1-464f-b813-2ecceb8f81c2/EnergyandAI.pdf. IEA assumes a load factor of 55% for the data center's electricity consumption. IEA further employs a water intensity factor of 0.55 liters/kWh. Noelle Walsh-Elwell, "How Microsoft Measures Datacenter Water and Energy Use to Improve Azure Cloud Sustainability," *Microsoft Azure Blog*, April 22, 2022, https://azure.microsoft.com/en-us/blog/how-microsoft-measures-datacenter-water-and-energy-use-to-improve-azure-cloud-sustainability/.

[50] ABB, *HVAC Motors: Motors in Data Centers*, https://ibtinc.com/wp-content/uploads/2024/05/Brochure-Motors-in-data-enters.pdf.

that nearly 30% of the city's water consumption was attributable to Google data centers, which had tripled water consumption over a five-year period.[51] The source of water can also be on-site reservoirs or other colocated water resources.[52] Data centers of smaller size within an office building might only incrementally increase direct water use.

There are two principal sources of water demand from cooling towers. One of the sources of demand is the sprayed-on cooling water just noted. Another operation, known as *blowdown*, uses water to flush out hard scale that can build up on surfaces in the cooling tower when sprayed-on water evaporates and leaves behind solid material.[53] By one estimate, most of the wastewater produced at a data center is from blowdown.[54]

Which, if any, federal regulations cover the energy consumption of data centers?

DOE has published guidance on how to optimize energy use in data centers used by the federal government.[55] Currently there are no legally binding energy standards that apply explicitly to operation of data centers in the private sector.[56] The ENERGY STAR program, a voluntary labeling program, certifies data centers with a focus on the energy efficiency of data centers' buildings and infrastructure.[57] ENERGY STAR uses a calculation method that effectively removes the consumption of the IT equipment, attributing energy use only to that of a *powered shell* (the building and its electricity).[58] ENERGY STAR gives a rating based on the performance of the powered shell of the building and rates this against that of similar buildings. The program

[51] M. Rogoway, "Google's Water Use Is Soaring in The Dalles, Records Show, with Two More Data Centers to Come," *Oregonian*, February 22, 2023. The city agreed to report "total of all water meter readings" for the operator of the data center. Data released by the city in 2025 shows total water disposition was 355 million gallons attributed to Google of the city's 1.232 billion gallons (i.e., 29% was attributed to Google). April Ehrlich, "The Dalles' Mayor Called OPB's Data Center Story Inaccurate. Here Are the Facts," Oregon Public Broadcasting (OPB), January 23, 2026.

[52] R. Miller, "Alligator Patrols Google's Data Center," *DataCenter Knowledge*, December 13, 2012, https://www.datacenterknowledge.com/hyperscalers/alligator-patrols-google-s-data-center.

[53] DOE FEMP, "Best Management Practice #10: Cooling Tower Management," https://www.energy.gov/femp/best-management-practice-10-cooling-tower-management.

[54] DOE FEMP, "Best Management Practice #10: Cooling Tower Management," https://www.energy.gov/femp/best-management-practice-10-cooling-tower-management.

[55] DOE FEMP, *Best Practices*.

[56] Building codes and standards vary by jurisdiction. Generally, the federal government has jurisdiction over building codes and standards for federal and military buildings; establishes national manufactured housing construction standards; and requires buildings to comply with the Americans with Disabilities Act of 1990 (ADA; P.L. 101-336) and the Fair Housing Act of 1968 (P.L. 90-284). For more information, see CRS Report R47665, *Building Codes, Standards, and Regulations: Frequently Asked Questions*, coordinated by Linda R. Rowan.

[57] For further information on ENERGY STAR, see CRS In Focus IF10753, *ENERGY STAR Program*, by Corrie E. Clark.

[58] ENERGY STAR, *Data Center Estimates in the United States and Canada*, August 2023, p. 1, https://www.energystar.gov/sites/default/files/tools/Data_Center_Estimates_August_2018_EN%20-%20508%20Blue.pdf. The whole-building certification by ENERGY STAR's computation tool, Portfolio Manager, takes account of electricity and natural gas used on site and calculates an energy use intensity (energy per floor area) that includes the energy needed to generate and deliver the electricity and to deliver the natural gas.

has certified nearly 300 data centers, with all but one having greater than 10,000 square feet total floor area.[59]

ENERGY STAR also certifies products found in data centers such as enterprise scale servers, uninterruptible power supplies, memory storage, and networking equipment.[60]

Since 2012, DOE has regulated the energy efficiency of CRACs.[61] The regulatory program is authorized by the Energy Policy and Conservation Act, as amended (EPCA; 42. U.S.C. §§6291 et seq.). The standards apply to units at the time they are shipped by manufacturers; the manufacturer is responsible for compliance.[62]

How do data centers affect electricity prices?

The price (rate) that customers pay for electricity is determined primarily by two factors: the cost of producing electricity (generation) and the cost of delivering electricity to customers through the grid (transmission and distribution).[63] Utility regulators at the state or local level approve rates that reflect a utility's cost for these components. Rates typically change every few years in response to shifts in utility costs over time. For example, if a utility invests in a new power plant or in upgrades to the grid, rates might need to change to reflect those capital investments. Utility sales also affect rates. When sales increase, a utility earns more revenue; conversely, when sales decrease, a utility earns less revenue. If a utility's revenue is less than its costs, rates might need to increase to compensate. Similarly, if a utility's revenue exceeds its costs, regulators might lower rates.

Data center electricity demand could potentially affect electricity rates if that demand led to a meaningful change in the local utility's costs or sales (or both). If a utility built new infrastructure to accommodate data center demand, the utility might raise rates to recover the cost. Alternatively, if a utility had sufficient existing infrastructure to accommodate data center demand, the increased sales might lead the utility to reduce rates.

Researchers at LBNL led an analysis providing insights on the extent to which data centers and other drivers have affected retail electricity prices.[64] Their analysis focused on the years 2019 through 2025. They found that the main driver behind increases in electricity prices during this period was utility investments in grid infrastructure, mostly in response to aging infrastructure and resilience needs. Other key drivers included natural gas prices, recovery from natural disasters (e.g., storms, wildfires), and state energy and environmental policies. In other words, this analysis did not identify data centers as major influencers of electricity prices in most areas of the country between 2019 and 2025.

[59] ENERGY STAR, *ENERGY STAR Certified Data Centers*, https://www.energystar.gov/buildings/certified-data-centers.

[60] ENERGY STAR, "Data Center Equipment," https://www.energystar.gov/products/data_center_equipment.

[61] The Energy Policy Act of 1992 (P.L. 102-486) amended the Energy Policy and Conservation Act (42 U.S.C. §6291 et seq.) and gave DOE authority to set energy conservation standards for "commercial package air conditioning and heating equipment." 42 U.S.C. §§6311(8)(A) and 6313(a)(6)(A).

[62] See CRS Report R47038, *The Department of Energy's Appliance and Equipment Standards Program*, by Martin C. Offutt.

[63] U.S. Energy Information Administration (EIA), "Electricity Explained: Factors Affecting Electricity Prices," https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php.

[64] Ryan Wiser et al., "Retail Electricity Price Trends and Drivers: Data Update—2026 Edition," LBNL and the Brattle Group, April 2026, https://emp.lbl.gov/sites/default/files/2026-03/Retail%20Price%20Trends_2026%20edition.pdf.

The LBNL analysis further investigated the relationship between electricity demand growth (including demand growth due to data centers) and prices. The analysis found that states with the largest data center demand growth generally saw electricity price decreases between 2019 and 2025, though some states with relatively large data center growth saw price increases or little change.[65] One explanation for this finding may be that increased demand in some states allowed utility costs to be spread over a larger sales volume, putting downward pressure on rates. Whether that relationship holds in those states moving forward remains to be seen.

How can policymakers address electricity affordability concerns?

Electricity consumers typically notice their monthly bill, not their electricity rate. Customers' electricity bills are determined primarily as the product of electricity rates and electricity consumption. Some policy options primarily impact rates while other options primarily impact consumption.

State and local utility regulators can use policies to attempt to isolate the rate impact of utility capital investment to data centers, thereby reducing any potential rate impacts for other customers.[66] This approach typically involves establishing new electricity customer classes for data centers or other large electricity consumers with similar demand profiles. The number of utilities with data center-specific policies is increasing as utility regulators around the country address affordability concerns associated with data center development.[67]

Another set of policy options primarily impacting rates relates to infrastructure development. As noted in the previous section, areas of the country with grid constraints due to insufficient infrastructure are more likely to experience rate increases from new data center demand. Electricity infrastructure is subject to a combination of federal, state, and local permitting processes. Numerous proposals have been introduced in the 119th Congress with the goal of speeding the pace of infrastructure development. For additional discussion, see CRS Report R48762, *Data Center Energy Infrastructure: Federal Permit Requirements*, by Paul W. Parfomak et al., and CRS Report R47627, *Electricity Transmission Permitting Reform: Issues and Legislative Proposals*, by Ashley J. Lawson. Additionally, federal tax policy has historically affected utility costs for new power plants, primarily by providing tax credits to developers of power plants with low greenhouse gas emissions. The 119th Congress modified this policy. For additional discussion, see CRS Insight IN12624, *IRA Tax Credit Repeal in the FY2025 Reconciliation Law: Part 1*, by Nicholas E. Buffie.

Policies aimed at increasing energy conservation and energy efficiency can reduce energy consumption, thereby lowering consumers' bills without necessarily affecting electricity rates. Federal policy has historically promoted energy efficiency improvements through grant programs and tax credits. States and utilities also frequently adopt policies promoting efficiency and conservation. For additional discussion of selected federal programs, see CRS Report R46418,

[65] Ryan Wiser et al., "Retail Electricity Price Trends and Drivers: Data Update—2026 Edition," p. 47.

[66] Such retail rate policies are outside federal jurisdiction, pursuant to the Federal Power Act (16 U.S.C. §§791 *et seq.*). For additional discussion, see CRS In Focus IF11411, *The Legal Framework of the Federal Power Act*, by Adam Vann.

[67] See, for example, Natalie Mims Frick and Long Lam, "Large Loads: Interconnection, Tariff Designs, and State Actions," LBNL and the Brattle Group, September 2025, https://www.brattle.com/wp-content/uploads/2025/09/Large-Loads-Interconnection-Tariff-Designs-and-State-Actions.pdf; and Smart Electric Power Alliance and NC Clean Energy Technology Center, "Database of Emerging Large-Load Tariffs (DELTa)," https://sepapower.org/large-load-tariffs-database/.

The Weatherization Assistance Program Formula, by Corrie E. Clark and Lynn J. Cunningham, and CRS Insight IN12625, *IRA Tax Credit Repeal in the FY2025 Reconciliation Law: Part 2*, by Nicholas E. Buffie.[68]

One consideration about these policies is the time period over which they can affect customers' bills. Energy efficiency and conservation tend to have immediate impacts—electricity consumption decreases as soon as an efficiency or conservation measure is in place. Policies focused on infrastructure, in contrast, could take several years to affect rates because of the time it takes to develop new electricity infrastructure.

Are there reports on the actual energy use of U.S. data centers?

Owing to recent interest in the energy use of data centers, the federal government has begun data collection to assess data centers' scope and scale and, ultimately, their impacts on energy demand and natural resources. Congress, through oversight and legislative activity, has shown interest in the results of data collection and in expanding the federal government's authority to collect the data.[69] As noted, the federal government has made some efforts to gather data using information collection methods suitable for later scale-up.[70] The Energy Information Administration (EIA) has conducted two data collection activities, but these were limited by sample size or were curtailed. A 2021 EIA pilot study of energy use in data centers surveyed 50 facilities and received 9 responses; other responses either were not received, were incomplete, or were not facilities matching the criteria for data centers. EIA noted significant obstacles to collecting the data.[71] EIA focused on facilities of greater than 50,000 square feet as most likely to be whole-building data centers.[72]

In 2024, EIA attempted to collect information focused on cryptocurrency mining data centers. EIA began its survey with emergency approval under a provision of the Paperwork Reduction Act of 1995 (PRA).[73] The collection was challenged in the U.S. District Court for the Western District of Texas by a trade association focused on blockchain and cryptocurrency technologies and a Bitcoin mining company. These plaintiffs made several allegations against the government, including that the PRA's emergency approval provision was improperly used by EIA, that OMB's conditions for approving the collection violated the PRA,[74] and that OMB violated the Administrative Procedure Act (5 U.S.C. §551 et seq.) by arbitrarily and capriciously approving an

[68] CRS Insight IN12625, *IRA Tax Credit Repeal in the FY2025 Reconciliation Law: Part 2*, by Nicholas E. Buffie.

[69] See, for example, S. 1475, Clean Cloud Act of 2025; H.R. 6984, Data Center Transparency Act; H.R. 7858, Data Center Community Impact Act; and Letter from Sens. Warren, Whitehouse, Markey, Merkley, and Durbin and Reps. Huffman, Tlaib, and Porter to Michael Regan, Administrator, U.S. Environmental Protection Agency, and Jennifer Granholm, Secretary, Department of Energy, February 6, 2023. In the 118th Congress, see S. 3732, Artificial Intelligence Environmental Impacts Act of 2024.

[70] For further discussion of federal policies on information collection, see CRS Report R48546, *The Office of Information and Regulatory Affairs (OIRA): Overview and Major Responsibilities*, coordinated by Meghan M. Stuessy and Taylor N. Riccard.

[71] EIA, *2018 CBECS Data Center Pilot*, p. 2.

[72] EIA, *2018 CBECS Data Center Pilot*, p. 3.

[73] 44 U.S.C. §3507(j).

[74] The role of OMB in approving an agency's information collection, including surveys, is discussed below in "What statutory and administrative procedures apply to information collection in general?"

information collection that did not follow the PRA's procedures.[75] The court issued a temporary restraining order, noting the allegations of harm made by plaintiffs, including the legal penalties for not responding to the EIA survey,[76] the costs of complying with the survey, and the disclosure of proprietary information requested by EIA through the survey.[77] Following the temporary restraining order, EIA, OMB, and plaintiffs reached and filed an agreement with the district court, resulting in an end to EIA's data collection and EIA agreeing to destroy any data collected up to that point.[78]

S. 1475, the Clean Cloud Act of 2025, introduced in the Senate and referred to the Committee on Environment and Public Works, would amend the Clean Air Act (42 U.S.C. §§7401 et seq.) to provide the U.S. Environmental Protection Agency (EPA) and EIA with authority to collect data and information on annual energy consumption of the data center or cryptocurrency mining facility, the provider of the electricity, any power purchase agreements, and related topics.

In 2023, a letter from five Senators and three Representatives urged EPA to use its authority under Section 114 of the Clean Air Act to implement a "mandatory disclosure regime" on cryptocurrency mining facilities.[79] The letter asserted that some such facilities would emit greater than the 25,000-ton threshold of carbon dioxide equivalent of greenhouse gases per year necessary to invoke Section 114, an authority that allows EPA to request information from emission source categories for regulatory development or enforcement and for other purposes.[80]

What statutory and administrative procedures apply to information collection in general?

When an executive branch agency collects information or data from the public, the agency typically must comply with the Paperwork Reduction Act of 1995.[81] The PRA governs the *collection of information*.[82] The purpose of the PRA is to balance the government's need for

[75] Verified Complaint for Declaratory and Injunctive Relief, Tex. Blockchain Council v. Dep't of Energy, No. 6:24-cv-99 (W.D. Tex., February 22, 2024), ECF No. 1.

[76] Plaintiffs cited 15 U.S.C. §797(a-b) in their complaint as the legal authority for the possible imposition of these penalties, and cited to 10 C.F.R. §207.7(c)(1) for the maximum civil penalty amount that could be imposed for a violation. At the time of the complaint, the maximum penalty was $12,937 per violation (see 89 *Federal Register* 1027). The amount is adjusted for inflation pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 (P.L. 101-410), as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (P.L. 114-74, Title VII, §701 (129 Stat. 599)).

[77] Order Granting Plaintiffs' Motion for Temporary Restraining Order, Tex. Blockchain Council v. Dep't of Energy, No. 6:24-cv-99 (W.D. Tex., February 23, 2024), ECF No. 13.

[78] Notice of Agreement, Tex. Blockchain Council v. Dep't of Energy, No. 6:24-cv-99 (W.D. Tex., March 1, 2024), ECF No. 24.

[79] Letter from Sens. Warren, Whitehouse, Markey, Merkley, and Durbin and Reps. Huffman, Tlaib, and Porter to Michael Regan, Administrator, U.S. Environmental Protection Agency, and Jennifer Granholm, Secretary, Department of Energy, February 6, 2023.

[80] 42 U.S.C. §7414.

[81] P.L. 104-13; codified at 44 U.S.C. §§3501-3521.

[82] A *collection of information* "means the obtaining, causing to be obtained, soliciting, or requiring the disclosure to third parties or the public, of facts or opinions by or for an agency, regardless of form or format, calling for either (i) answers to identical questions posed to, or identical reporting or recordkeeping requirements imposed on, ten or more persons, other than agencies, instrumentalities, or employees of the United States; or (ii) answers to questions posed to agencies, instrumentalities, or employees of the United States which are to be used for general statistical purpose" (44 U.S.C. §3502(3)). For a more complete overview of the Paperwork Reduction Act's (PRA's) information collection (continued...)

information with the burden imposed on the public to produce and supply that information.[83] Information collections include, but are not limited to, reporting or recordkeeping requirements, surveys, public disclosure requirements, and collections that use an electronic or paper form.[84]

Before an agency can collect information from the public, the PRA requires approval by OMB.[85] OMB's approval is required regardless of whether the agency's information collection is mandatory (e.g., required by law) or voluntary.[86] Information collections conducted in association with a rule are also subject to OMB's approval.[87]

The process for obtaining approval of an information collection—known in practice as the clearance process—includes two public notice-and-comment periods. The first period is 60 days,[88] during which time agencies are required to solicit the public's input on certain topics, including the *practical utility*, or usefulness, of the information to the agency,[89] and the accuracy of the agency's *burden* estimate, or the amount of time and resources that is expected to be expended by the public to generate, provide, or maintain the information for or to an agency.[90] A subsequent notice-and-comment period of at least 30 days occurs when the agency submits the information collection request to OMB for approval.[91]

After receiving the information collection request from the agency and after the 30-day public comment period has lapsed, OMB has up to another 30 days to make a decision on whether to approve the information collection.[92] Thus, under the PRA, an agency is expected to spend at least 90 days and up to 120 days going through the clearance process. In practice, the total amount of time spent by an agency is often much longer because internal agency processes extend the timeline beyond what is specified in statute.

OMB can approve an information collection for no more than three years.[93] When approval of an information collection expires, an agency that wants to continue collecting the information must go through the clearance process again and obtain OMB's approval.[94]

As mentioned above, EIA obtained approval from OMB to collect data on cryptocurrency mining data centers under the PRA's emergency authorization provision, which was challenged in U.S. district court.[95] This provision of the PRA permits an agency in certain specified circumstances to

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requirements, see CRS In Focus IF11837, *The Paperwork Reduction Act and Federal Collections of Information: A Brief Overview*, by Maeve P. Carey and Natalie R. Ortiz.

[83] 44 U.S.C. §3501.

[84] 5 C.F.R. §1320.3(c)(1).

[85] 44 U.S.C. §3507(a)(2).

[86] 5 C.F.R. §1320.3(c).

[87] 44 U.S.C. §3507(d). See also 5 C.F.R. §1320.11 and §1320.12.

[88] 44 U.S.C. §3506(c)(2)(A).

[89] 44 U.S.C. §3502(11).

[90] 44 U.S.C. §3502(2). For a more complete discussion of burden under the PRA, see CRS In Focus IF12673, *Burden and the Paperwork Reduction Act: An Overview*, by Natalie R. Ortiz.

[91] 44 U.S.C. §3507(b).

[92] 44 U.S.C. §3507(c)(2).

[93] 44 U.S.C. §3507(g).

[94] Memorandum from Cass R. Sunstein, Administrator, Office of Information and Regulatory Affairs, to the heads of executive departments and agencies, and independent regulatory agencies, "Information Collection under the Paperwork Reduction Act," April 7, 2010, pp. 5-6, https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/inforeg/PRAPrimer_04072010.pdf.

[95] See footnote 73 and accompanying text.

seek OMB's approval to conduct an information collection on a temporary basis (not to exceed 180 days) without complying with the processes usually required under the PRA.[96] In the district court case brought against EIA, the plaintiffs alleged that EIA's burden estimate was underestimated and that EIA failed to take steps to minimize burden by not consulting with the public as required by OMB in its regulations implementing the PRA.[97]

When collecting information about energy, what are specific considerations?

There may be additional considerations beyond the PRA when it comes to the collection of information on data centers' energy use. For example, the Energy Supply and Environmental Coordination Act of 1974 (ESECA; P.L. 93-319) includes an enforcement provision that imposes civil monetary penalties on business entities that do not report *energy information* sought under the information collection authorities of the Federal Energy Administrator.[98] The possibility of these civil monetary policies were part of the case brought against EIA when it attempted to survey cryptomining facilities in 2024, as discussed above.[99] The administrator's information collection authority contained in ESECA is "in addition to, independent of, not limited by, and not in limitation of, any other authority of the Federal Energy Administrator." Thus, while providing information is anticipated to impose some cost under the PRA because of its conceptualization of paperwork burden, additional costs are also possible for those that might be subject to reporting energy information under ESECA. Other laws establishing an agency's information collection authority might also have an enforcement mechanism, which might be viewed as increasing the stakes around collecting information in these circumstances.

In developing legislation addressing the collection of information about energy usage, Congress may also give further consideration to which entities would be providing information. For example, private firms maintain data sets that can provide direct or proxy information on data centers. Cushman & Wakefield, a real estate firm with a specialty in data centers, and Baxtel, a real estate and marketing firm that provides specialized services for data center owners, issue reports on the population of data centers and their electric power requirements in the United States. Obtaining data from these private firms may be one option.

Another option may be to obtain data from primary sources. While EIA previously attempted to collect data directly from cryptomining facilities, the Clean Cloud Act of 2025 would require the collection of information from three different sources: data centers, cryptomining facilities, and the electric utilities that serve data centers and cryptomining facilities. Academic research has found differences in the accuracy and reliability of data centers' energy consumption estimates because of differences in the methods used by the different sources of the estimates.[100] The

[96] 44 U.S.C. §3507(j). While statute permits an agency to avoid the clearance process for emergency processing and authorization, OMB's regulations implementing the PRA state that an agency shall "set forth in the Federal Register" the notice typically required unless waived or modified (5 C.F.R. §1320.13(d)). While statute permits OMB to provide emergency authorization of an information collection for a maximum of 180 days, OMB's regulations state that its approval is valid for a maximum of 90 days (5 C.F.R. §1320.13(f)).

[97] See the requirements for consult at 5 C.F.R. §1320.13(c).

[98] 15 U.S.C. §797 (P.L. 93-319, §12 (88 Stat. 264)). The functions of the Federal Energy Administrator were transferred to the U.S. Energy Information Administration when EIA was established in 1977. For additional information, see CRS Report R46524, *The U.S. Energy Information Administration*, coordinated by Ashley J. Lawson.

[99] See footnote 73 and accompanying text.

[100] David Mytton and Masaō Ashtine, "Sources of Data Center Energy Estimates: A Comprehensive Review," *Joule*, vol. 6, no. 9 (September 2022), pp. 2032-2056.

authors of the study find that these estimates are then used by others in subsequent research, and the authors argue that these data quality issues could undermine the research that subsequently uses these estimates.[101]

One possible policy implication that follows from the aforementioned study is that how information is collected could have consequences for the subsequent uses of that information, including the extent to which it can be used as an authoritative source to inform federal energy policy or regulation. In other words, how statute directs the collection of information on data centers' energy use, or how an agency designs its collection of information on such energy use, may influence the extent to which such collected data can then be used to reliably serve certain purposes. The data, for example, may be not be generalizable, may be incomplete (e.g., certain information is missing or underreported), inaccurate (e.g., certain information is underestimated or overestimated), or otherwise limited in its usefulness because of circumstances that occurred during data collection.

The use of data collected by federal agencies on energy use is not necessarily without consequence or significance. The Clean Cloud Act of 2025 would establish that the information collected under it shall be used for fee setting. Additionally, compliance with a certain provision of the Clean Cloud Act of 2025 is to be monitored by the EPA, in conjunction with EIA, using "the best available data," including the information collected under the bill.

The Clean Cloud Act of 2025 would also require certain data collected under it to be made publicly available. Some researchers argue that it is insufficient and possibly ineffective for policymakers to establish data policy regimes that are primarily concerned with information disclosure (e.g., making certain data from regulated entities publicly available in databases, repositories, or similar searchable publications and websites).[102] Instead, it is argued that policymakers should focus on the broader goals of a "data stewardship" regime. Data stewardship would aim to maximize data quality and usability—alongside information disclosure and making data publicly available—by ensuring the reliability, accuracy, and fairness of data collected, so that the data can serve regulatory needs and the various ends and goals of stakeholders and data users.[103]

Another potential consideration is that the Information Quality Act (IQA) required OMB to develop government-wide guidelines for information and data quality.[104] In implementing the IQA, OMB acknowledged that certain information developed or made publicly available by agencies should be held to a higher quality standard because it is more important and influential, and that increasing data quality has costs and benefits.[105]

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[101] See also the discussion about data gaps and analytical errors in research on the environmental impacts of information technology (IT) in Jonathan Koomey and Eric Masanet, "Does Not Compute: Avoiding Pitfalls Assessing the Internet's Energy and Carbon Impacts," *Joule*, vol. 5 no. 7 (July 2021), p. 1626. These authors argue, "A recurrent theme is that well-intentioned research often overestimates IT's electricity use and climate impacts, sometimes by orders of magnitude. These results then become 'factoids' that spread quickly as people share them and the media report them" (p. 1625).

[102] Nathan Cortez, "Regulation by Database," *University of Colorado Law Review*, vol. 89, no. 1 (2018), pp. 28-37. Hereinafter cited as "Cortez, "Regulation by Database."

[103] Cortez, "Regulation by Database," pp. 69-91.

[104] P.L. 106-554, Appendix C, §515 (114 Stat. 2763A-153).

[105] OMB, "Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication," 67 *Federal Register* 8452-8453, February 22, 2002, https://www.federalregister.gov/documents/2002/02/22/R2-59/guidelines-for-ensuring-and-maximizing-the-quality-objectivity-utility-and-integrity-of-information.

Author Information

Martin C. Offutt
Analyst in Energy Policy

Ashley J. Lawson
Specialist in Energy Policy

Ling Zhu
Specialist in Science and Technology Policy

Natalie R. Ortiz
Analyst in Government Organization and Management

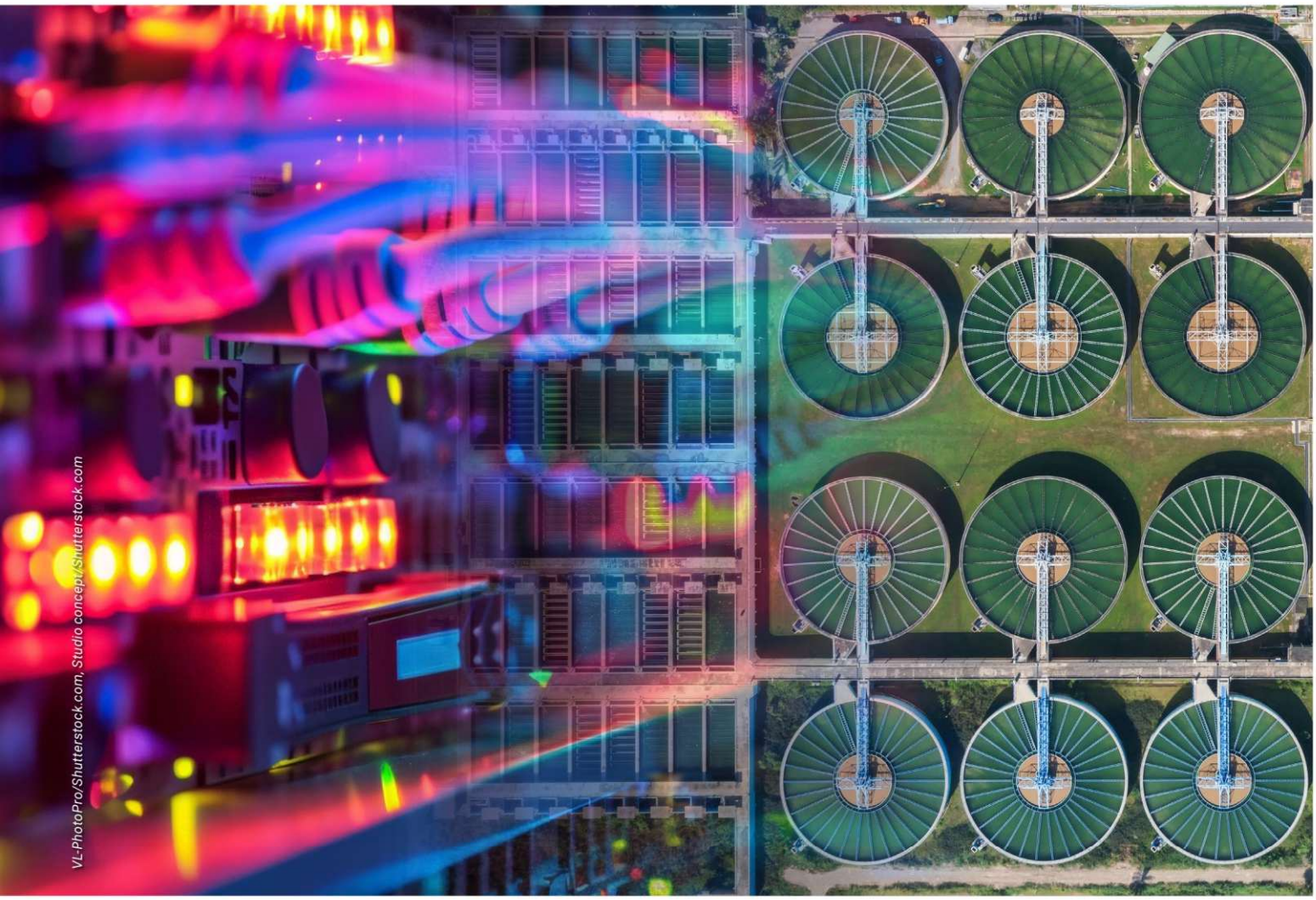
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Cooling the Cloud: Water Utilities in a Data-Driven World



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American Water Works Association

Cooling the Cloud: Water Utilities in a Data-Driven World

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Anthony DeRosa, Association of State Drinking Water Administrators

Pam Kenel, Loudoun Water

Rebecca Slabaugh, Arcadis

Bob Stea, MITRE

Michelle Stockness, Freshwater Society

T.J. Stroebl, Kurita

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Samantha Wolfe, Tetra Tech

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Aerial photo of a data center in Nevada. Image Credit: Audio und werbung/Shutterstock.com

1. Introduction

Artificial intelligence (AI) is a rapidly growing element of the nation's economy. The physical infrastructure needed for AI is primarily housed in data centers, which are also used to meet the needs of other digital services. Data centers power these services by providing the processing, storage, and networking needed to run them. Business Insider estimates that 1,240 data centers were built or approved for construction by 2024, with Northern Virginia (329) and Maricopa County, Arizona (48) boasting the highest concentrations.[1] These areas of historic data center growth may prove to be only the beginning as more capacity is needed moving forward.

Thoughtful preparation by water systems will be essential. Data centers are anticipated to consume considerable resources and, in some instances, strain infrastructure and water supplies. A United States International Trade Commission briefing estimated that between 2010 and 2025, the technology sector would see a 146-fold increase in digital data creation.[2] Data centers provide essential infrastructure for the processing, communication, and storage of data and benefit all sectors of the economy, but they also bring significant impacts that must be addressed.[3]

As an organization serving the water utility sector, AWWA provides this report to help water utilities better understand some of the challenges, opportunities, key decision points, and other considerations involving data centers. We hope this information will also benefit many other audiences.

The proliferation of data centers is inextricably linked to AI growth because of the additional computing power necessary to train and run AI models.[4] A number of U.S. federal programs and policies have actively supported the development and growth of AI, including various executive orders issued from 2019 through 2025, funding for AI innovation, and the White House's most recent *America's AI Action Plan*, among others.[5,6,7,8] The siting of data centers is economically attractive to state and local governments, given that data centers generate considerable revenue, primarily from business personal property and real estate property taxes. Additionally, unlike most other forms of development, data centers require relatively

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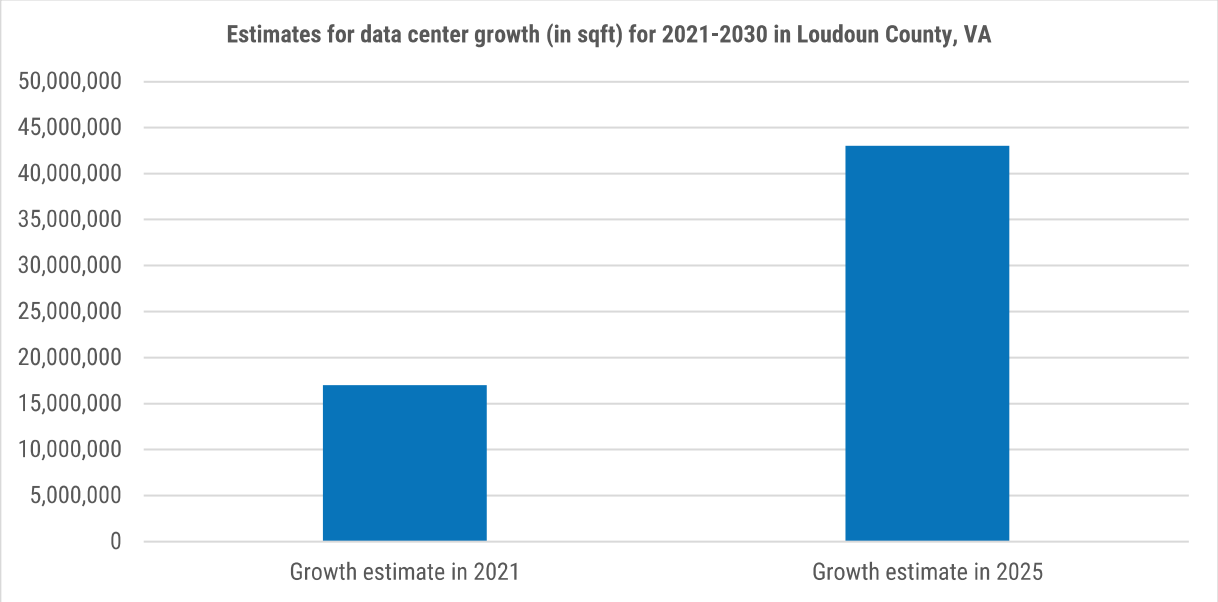
[1] Hannah Beckler, "See where data center construction is booming," *Business Insider*, July 17, 2025, https://www.businessinsider.com/big-tech-ai-data-center-spending-construction-map-2025-8 .
[2] Brian Daigle, *Data Centers Around the World: A Quick Look*, Executive Briefings on Trade (United States International Trade Commission), https://www.usitc.gov/publications/332/executive_briefings/ebot_data_centers_around_the_world.pdf.
[3] Arman Shehabi, Sarah J. Smith, Alex Hubbard, Alex Newkirk, Nuoa Lei, Md Abu Bakar Siddik, Billie Holecek, Jonathan Koomey, Eric Masanet, and Dale Sartor, *2024 United States Data Center Energy Usage Report* (Energy Analysis and Environmental Impacts Division, Lawrence Berkeley National Laboratory, 2024), https://eta-publications.lbl.gov/sites/default/files/2024-12/lbnl-2024-united-states-data-center-energy-usage-report_1.pdf.
[4] Goldman Sachs, "AI to drive 165% increase in data center power demand by 2030," February 4, 2025, https://www.goldmansachs.com/insights/articles/ai-to-drive-165-increase-in-data-center-power-demand-by-2030.
[5] U.S. Department of Homeland Security, Cybersecurity & Infrastructure Security Agency, *Recent U.S. Efforts on AI Policy* (Washington, DC., n.d.), https://www.cisa.gov/ai/recent-efforts.
[6] Exec. Order No. 13960, 85 Fed. Reg. 78939-78943 (December 3, 2020), https://www.federalregister.gov/documents/2020/12/08/2020-27065/promoting-the-use-of-trustworthy-artificial-intelligence-in-the-federal-government.
[7] Exec. Order No. 14179, 90 Fed. Reg. 8741-8742 (January 23, 2025), https://www.federalregister.gov/documents/2025/01/31/2025-02172/removing-barriers-to-american-leadership-in-artificial-intelligence.
[8] Executive Office of the President of the United States, *Winning the Race: America's AI Action Plan* (Washington, DC, 2025), https://www.whitehouse.gov/wp-content/uploads/2025/07/Americas-AI-Action-Plan.pdf.

few staff for operation and utilize relatively few public services (e.g., social services that would be needed for residential development or an extensive road network needed for a commercial district).[9] Recognizing it is currently the area with the greatest density of data centers in the country, Loudoun County estimated it would receive $895 million in tax revenue from data centers in 2025, equating to 95% of the county's operating budget of $940 million.[10]

To illustrate the scale of data center impacts, the call-out box below demonstrates impacts on a single utility's planning efforts.

Example of Rapid Data Center Growth: Loudoun Water, Virginia

The pace of change associated with data center development can be dramatic. In 2020, Loudoun County officials forecasted that following a period of rapid expansion, data center development in the county would diminish after 2021. They estimated roughly 17 million additional square feet of development between 2021-30. Actual increases were roughly 20 million square feet in just four of the nine years. Subsequently, the overall forecast for 2021-30 nearly tripled to 43 million in additional square feet anticipated. These forecasts are based on development applications received by the county and may still underestimate impacts.



In Loudoun County, this degree of change in a single sector is atypical with respect to utility planning. Because Loudoun Water is a separate entity from the county, a high degree of coordination between the utility and county government is critical. Loudoun Water is also involved with development industry groups to keep abreast of new potential projects in the county. In Loudoun Water's case, the degree of planning and preparedness needed to account for this rapid pace of development calls for dedicated staff -- a key consideration for water utilities in other communities.

[9] "Data Centers in Virginia," Joint Legislative Audit & Review Commission, accessed September 15, 2025, https://jlarc.virginia.gov/landing-2024-data-centers-in-virginia.asp.
[10] Nick Minok, "Data centers helped drive down Loudoun County taxes, but new restrictions are on the way," *WJLA*, April 2, 2025, https://wjla.com/news/local/loudoun-county-virginia-taxes-data-centers-new-restrictions-budget-supervisors-board-kershner-data-center-revenue-new-positions-estimated-millions-operating-money-politics.

However, data centers can require substantial volumes of water directly due to intensive cooling systems and indirectly through water consumed for electricity generation.[11] Some large data centers are reported to directly consume up to 5 million gallons of water per day.[12] Despite this substantial water use, a 2024 white paper from a global digital infrastructure company suggests that water availability is one of the least commonly cited concerns driving the decision of where to build data centers.[13] In that paper, only 3.4% of survey respondents indicated water availability as their top concern, as compared with 41.2% who cited an electricity-related concern. Despite this, there are at least two examples of planned data center projects that were cancelled in part due to water resource concerns.[14,15] Sustainability and resource use concerns are increasingly becoming drivers for the critical digital infrastructure industry, with data centers emerging as cross-sector leaders in setting water conservation and sustainability targets.[16]

Water consumption by data centers is anticipated to increase over the coming years because of AI's computation requirements.[17] Recent construction has mostly been hyperscale (i.e., data centers typically built for a single company deploying internet services and platforms at a large scale), which use more resources, including water. The *2024 United States Data Center Energy Usage Report* demonstrates this trend, with estimates reflecting that in 2014, 64% of direct water consumption came from internal data centers (i.e., data centers run by enterprises for their own internal use).[18] By 2023, hyperscale and colocation (i.e., data centers built to serve multiple companies) were expected to account for 84% of total direct water consumption, with internal data centers accounting for just 12%.[19] This trend will likely to continue into 2028, with direct water consumption by internal data centers estimated at just 2% and hyperscale data centers increasing their consumption up to nearly 50% (33 billion gallons) of the total.[20]

To meet the needs of the communities they serve, water utilities must understand and explain the unique impacts that data centers exert on the water sector. They must also be prepared to communicate legislative and regulatory activity related to siting of data centers. Because the siting of data centers is not evenly distributed geographically, impacts faced by water systems are likely to differ by regions (Figure 1).[21] This paper provides water utilities with background information and resources to help recognize the potential impacts of data center development in their service areas.

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[11] David Mytton, "Data centre water consumption," *npj Clean Water* 4, no. 1 (2021): 11. https://doi.org/10.1038/s41545-021-00101-w.
[12] Shannon Osaka, "A new front in the water wars: Your Internet Use," *The Washington Post*, April 25, 2023, https://www.washingtonpost.com/climate-environment/2023/04/25/data-centers-drought-water-use/.
[13] Vertiv (2024). Vertiv White Paper: Rethinking Modern Data Center Design and Construction Trends. Available at https://media.datacenterdynamics.com/media/documents/Vertiv-RethinkingModernDataCenterDesign.pdf.
[14] Victor Smith, "Huge Arizona data centre axed over water use fears," *Global Water Intelligence*, August 12, 2025, https://www.globalwaterintel.com/articles/huge-arizona-data-centre-axed-over-water-use-fears.
[15] Kate Grumke, "Public opposition sinks St. Charles data center plans," *St. Louis Public Radio*, August 18, 2025, https://www.stlpr.org/news-briefs/2025-08-18/developer-controversial-data-center-st-charles.
[16] Global Water Intelligence. *Scaling Water Reuse in Industry,* (Global Water Intelligence, 2025), https://www.globalwaterintel.com/documents/scaling-reuse-in-industry.
[17] Eric Olson, Anne Grau, and Taylor Tipton, "Data centers draining resources in water-stressed communities," *The University of Tulsa*, July 19, 2024, https://utulsa.edu/news/data-centers-draining-resources-in-water-stressed-communities/.
[18] Shehabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[19] Shebabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[20] Shehabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[21] Data Center Map, "USA Data Centers."

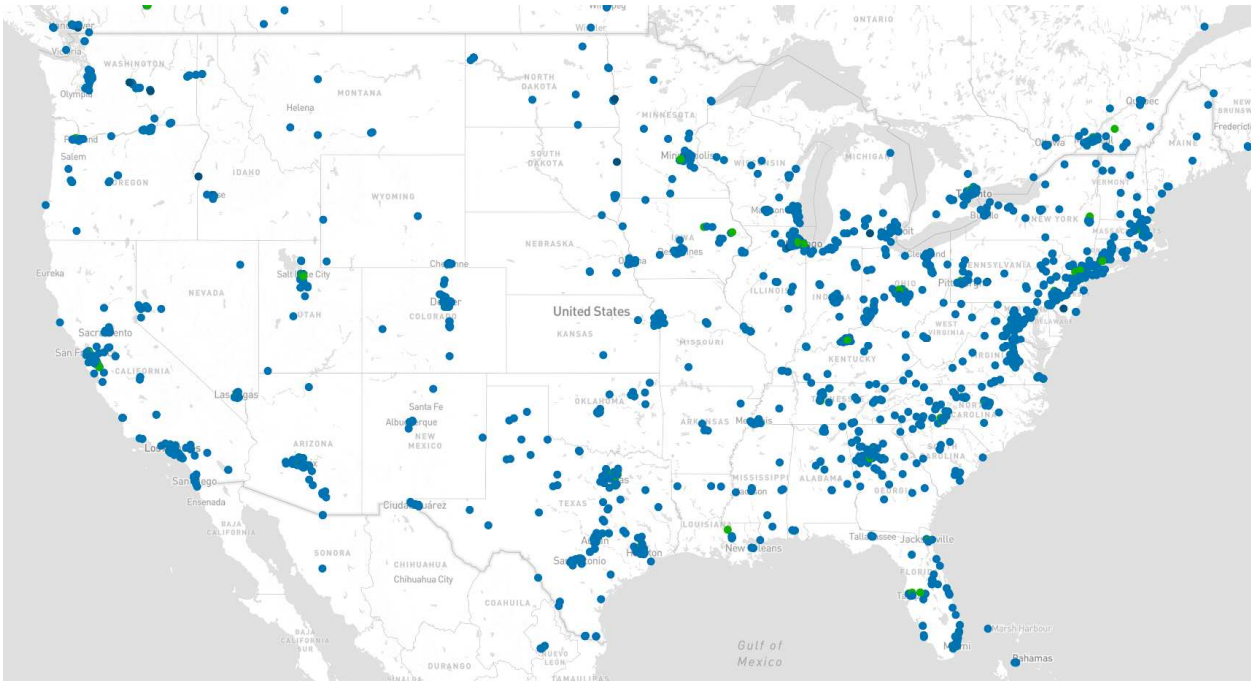


Figure 1. Distribution of Data Centers in the Continental United States[22]

2. What are data centers?

Data centers are physical facilities that house thousands of servers, digital storage equipment, and network infrastructure to support large-scale data processing and storage.[23,24] Servers hosted at data centers perform computations for data used by millions of websites and web services that make up the cloud. Despite minimal potable water needs, data center operations require substantial volumes of water overall for cooling and other operations.[25] By some accounts, up to 57% of water consumed by data centers for cooling has been sourced from potable water, with the rest coming from various other sources such groundwater, surface water, or various forms of reuse or reclaimed water[26].

Like a factory that uses raw materials to make a product, data centers use resources (primarily electricity and water) to run computing and cooling equipment with outputs of data processing, storage, and networking, illustrated in Figure 2. The resource use is local, while the output is used globally.

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[22] "USA Data Centers," Data Center Map, accessed October 10, 2025, https://www.datacentermap.com.
[23] Siddik, Md Abu Bakar, Arman Shehabi, and Landon Marston, "The environmental footprint of data centers in the United States," *Environmental Research Letters* 16, no. 6 (2021): 064017. https://doi.org/10.1088/1748-9326/abfba1.
[24] Stephanie Susnjara and Ian Smalley, "What is a data center?," *IBM Think*, September 4, 2024, https://www.ibm.com/think/topics/data-centers.
[25] Mytton, "Data centre water consumption," 11.
[26] Mytton, "Data centre water consumption," 11.

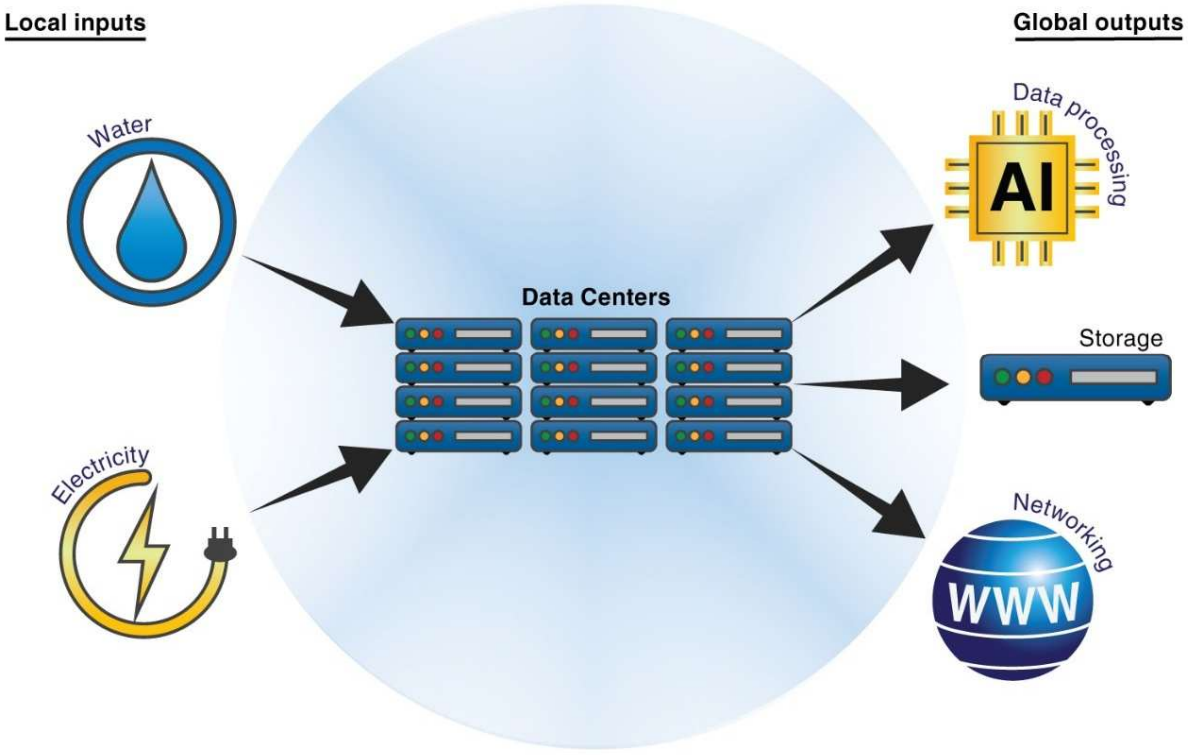


Figure 2. Diagram of Data Center Local Inputs and Global Outputs

The choice of cooling technologies employed throughout the data center, both to remove heat from the individual components and to move heat from the facility to the atmosphere, can greatly impact water and energy consumption. In recent years, liquid-cooling and free-cooling (i.e., using cool ambient temperature air or water to cool equipment) have proven to boast higher cooling effectiveness and energy efficiency. However, this increased energy efficiency may come at the cost of greater water consumption.[27,28]

Just as water utilities have adapted to other industries with significant water impacts, they are well-equipped to respond to the increased siting of data centers. That said, given the rapid pace of change associated with data center development, water utilities will need to adapt quickly to changing data center demands.

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[27] Qingxia Zhang, Zihao Meng, Xianwen Hong, Yuhao Zhan, Jia Liu, Jiabao Dong, Tian Bai, Junyu Niu, and M. Jamal Deen, "A survey on data center cooling systems: Technology, power consumption modeling and control strategy optimization," *Journal of Systems Architecture* 119 (2021): 102253. https://doi.org/10.1016/j.sysarc.2021.102253.
[28] Leila Khatib, Anh Pham, Khaled Ahmed, and Val S. Frenkel, "Data Centers and Water: Challenges and Solutions for Sustainable Cooling," *Journal-American Water Works Association* 117, no. 8 (2025): 48-53. https://doi.org/10.1002/awwa.2504.

3. What are the potential impacts data centers pose to water systems?

While the impacts posed by data centers are site-specific, the most prevalent, anticipated effects include:

- Increased water demand impacting sources or treatment capacity (Section 3.1).
- Stress on water infrastructure (Section 3.2).
- Opportunities to use alternate water supplies (Section 3.3).
- Increased costs (Section 3.4)

Cutting across these concerns is the potential for changes in data center design and operation, technology usage (such as the compression of more computing power into smaller footprints), choices in cooling strategies, and usage patterns. Taken together, these potential changes introduce substantial uncertainty to near- and long-term water and power demand forecasts. While this uncertainty makes it difficult to forecast potential impacts on a broad scale, site-specific analysis can reveal the information needed to make appropriate planning decisions.

3.1 Increased water demand and consumption

Water consumption by data centers currently makes up a small proportion of total water consumption in the United States. Data center water usage is still substantial, however, particularly for those facilities using evaporative cooling systems, and overall demand is only expected to grow. One estimate projects that annual direct water consumption attributed to cooling will have increased from 5.6 billion gallons in 2014 to 73 billion gallons by 2028.[29] But projections vary. For example, another study reported total direct water consumption in 2018 roughly 80% lower than other reports for the same year.[30] A third study examined water usage effectiveness (WUE) metrics, which utilize a ratio of the data center's water use to the electricity use of its information technology (IT) equipment, finding major variations based on which technologies were used.[31] The study demonstrates that the amount of water use for the same unit of digital output can vary by 10,000 times (1,000,000%) due to many factors, including server efficiency, server utilization, electrical grid water consumption considerations, cooling system type, data center infrastructure operating efficiency, and climatic conditions, among other factors.[32] With an enormous range of efficiency among data centers, decisions in the planning phases can have considerable impact on the ultimate resource needs. A data center industry standard metric has been introduced, which measures water use efficiency as liters of water per kilowatt hour of energy use.[33]

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[29] Shehabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[30] Siddik, Shehabi, and Marston, "The environmental footprint of data centers in the United States," 064017.
[31] Nuoa Lei, Jun Lu, Arman Shehabi, and Eric Masanet, "The water use of data center workloads: A review and assessment of key determinants," *Resources, Conservation and Recycling 219* (2025), 108310. https://doi.org/10.1016/j.resconrec.2025.108310.
[32] Lei, Lu, Shehabi, and Masanet, "The water use of data center workloads: A review and assessment of key determinants," 108310.
[33] The Green Grid. *Data Center Resource Effectiveness (DCRE) Metric*, White Paper 93 (The Green Grid, 2025), https://www.thegreengrid.org/resources/library-and-tools/wp93-data-center-resource-effectiveness-dcre-metric.

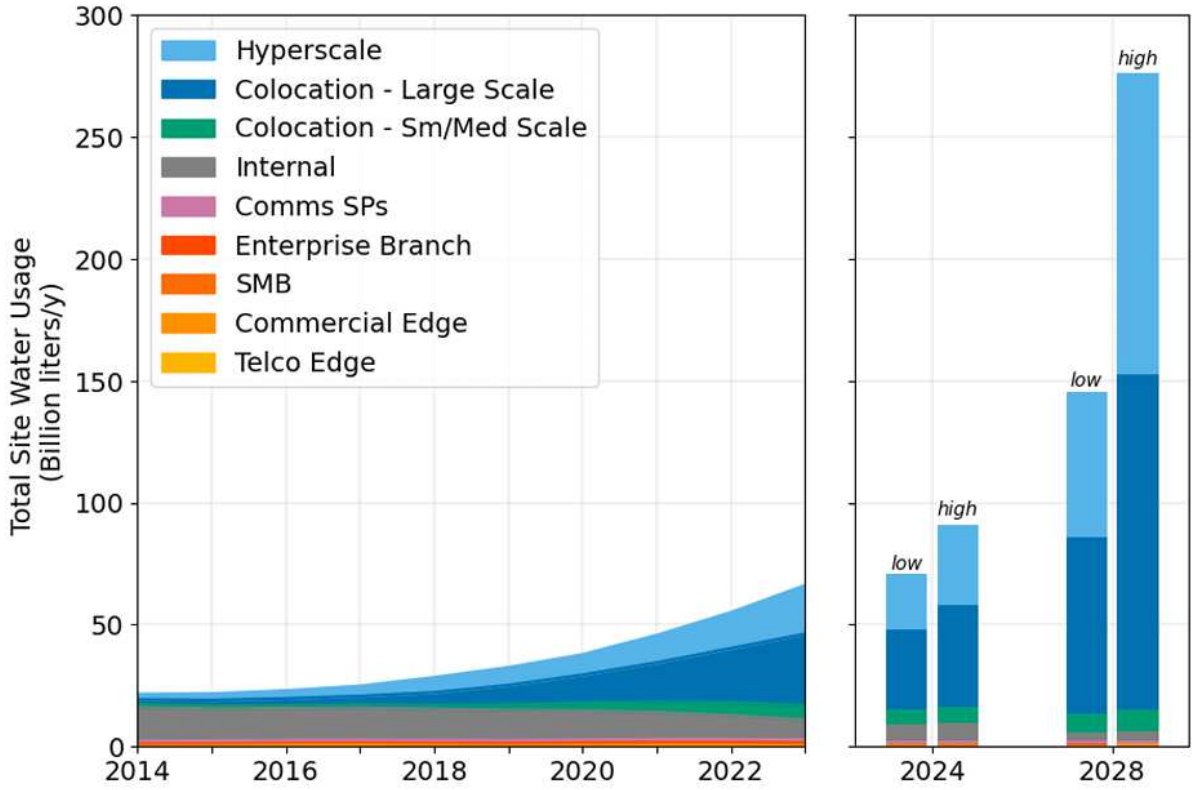


Figure 3. Historic and Anticipated Water Use by Data Center Type[34]

As Figure 3 demonstrates, substantial increases in water consumption are anticipated over time as the digital infrastructure industry continues to expand. Utilities with data centers proposed in their service territories will need to account for rapid growth in water consumption to avoid supply-related issues. For instance, an early 2025 media report suggests that Warrior River Water Authority in Bessemer, Alabama may face potential challenges supplying adequate volumes of water to a proposed hyperscale data center.[35] The utility, which is estimated to have a supply capacity around 6 million gallons per day, has stated that it would struggle to provide the requested water flow of 2 million gallons per day to the data center without "significant upgrades to the existing water system".[36]

Peak water demand from data centers can be significant and may follow different patterns of water consumption than other residential and commercial uses. This is because demand is typically tied to the level of electricity use. Clustering of data centers can exacerbate the challenge of planning for peak water demand, particularly in instances where there are concurrent demands from other sectors or limits in available supply (e.g., drought). Other environmental impacts — such as maintaining ecosystem health and baseflow to streams, impacts to nearby water bodies, and changes to groundwater levels — may also be important considerations.

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[34] Shehabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[35] Lee Hedgepeth, "Utility Says It Can't Meet Demand for Alabama Data Center Without 'Significant Upgrades'," Inside Climate News, July 12, 2025, https://insideclimatenews.org/news/12072025/bessemer-alabama-water-utility-data-center-upgrades/.
[36] Hedgepeth, "Utility Says It Can't Meet Demand for Alabama Data Center Without "Significant Upgrades'."

Water demand can impact potable water, reuse, and wastewater infrastructure depending on the existing design of the utility.[37] Examples include reaching treatment capacity or exceeding transmission capacity. Even if the utility has sufficient treatment capacity overall, the appropriate transmission and distribution infrastructure may not be in place for the needs of the data center(s) when they are first proposed for siting. These key considerations are illustrated in Figure 4.

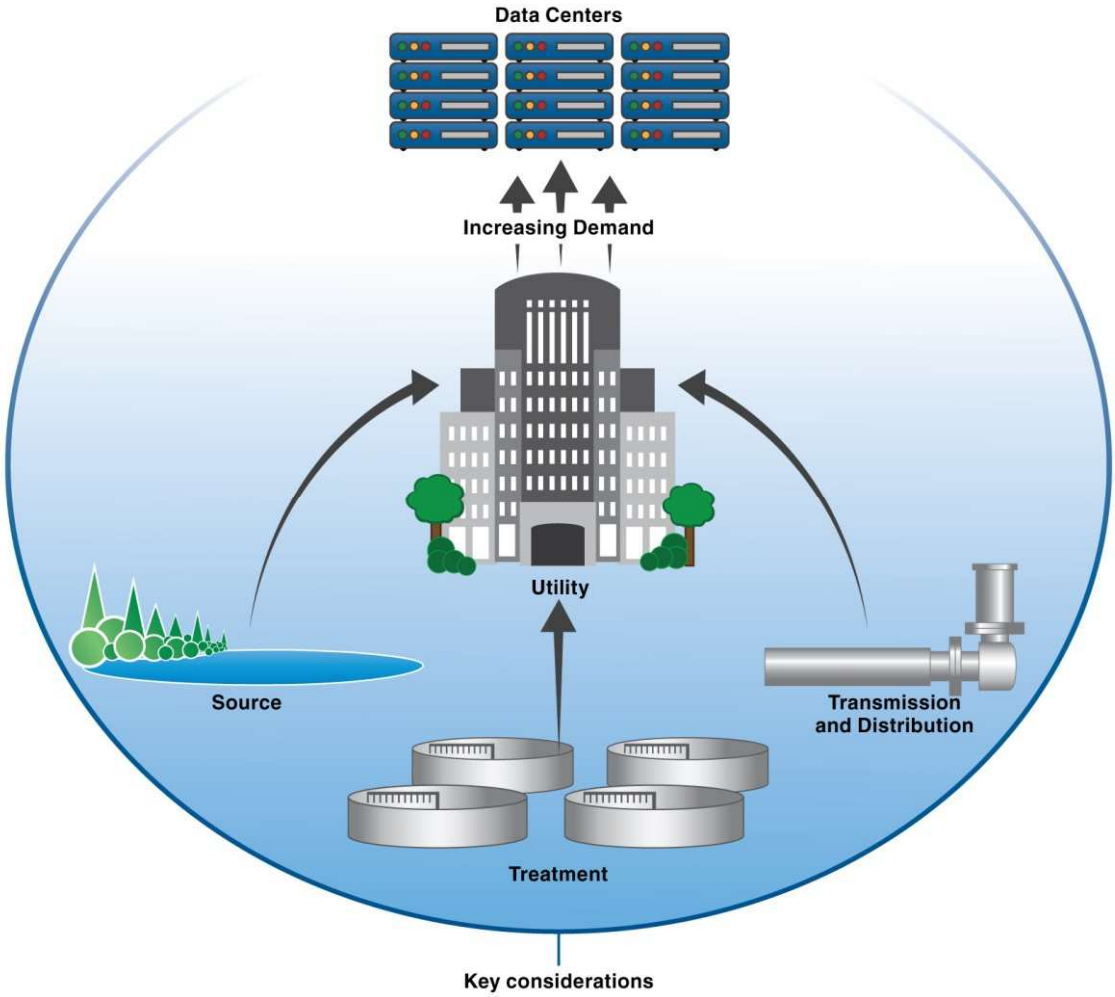


Figure 4. Key Water Utility Considerations for Data Center Demand

It is essential that data center developers and local water systems communicate early in the planning process, while also coordinating with regional water planning authorities as appropriate, to ensure sufficient capacity exists or can be created when it is needed. Ongoing coordination is also critical to addressing operational considerations.

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[37] Alex Setmajer, "How Data Centers Use Water, and How We're Working to Use Water Responsibly," *Equinix*, September 19, 2024, https://blog.equinix.com/blog/2024/09/19/how-data-centers-use-water-and-how-were-working-to-use-water-responsibly/.

With thoughtful preparation, data centers or campuses can be designed to integrate into local water infrastructure. Considerations include:

- Proximity to existing or planned recycled water production and distribution pipelines.
- Installation of on-site water storage to reduce peak demands on community infrastructure.
- Choice of cooling systems installed.
- Siting choices that use existing or planned capacity.

An example of a forward-thinking utility planning process addressing data centers is discussed in the call-out box below.

Planning for the Future: Aurora Water, Colorado

Aurora Water in Colorado has developed a *Large Water User Guide*, which specifically addresses high-demand developments such as data centers.[38] The guide establishes criteria for both volumetric water use and non-recoverable consumption, setting thresholds between 500 and 3,000 gallons per acre per day based on a project's recoverable water volume. These guidelines serve a dual purpose: not only do they help evaluate potential strain on the city's water infrastructure, but they also ensure that extremely high water use applications are discouraged in Aurora's arid climate, where long-term water availability is a critical concern. By aligning water demand with the city's sustainable supply and growth projections, the guide supports responsible development that protects current and future water customers. In 2025, these standards were formally codified in the Aurora City Code, reinforcing their role in the city's long-range planning framework.

3.2 Strains to infrastructure and resiliency

In instances where the total amount of water use from data centers does not cause strain on the source or treatment capacity, other infrastructure and resilience concerns could still exist. Data centers are often built in places where land can be acquired affordably, well outside the core of a water system's transmission system, which can create transmission and distribution challenges. The potential for rapid development compounds this issue. The time needed to build a data center can be shorter than the time needed to create water infrastructure to support it (e.g., planning, permitting, design, and construction). Similar challenges can arise when securing electrical generation and transmission infrastructure. Uncertainty regarding whether and when data center development will occur also presents challenges for securing financing for infrastructure upgrades.

Utilities will need to approach long-term planning thoughtfully to provide sufficient treatment, transmission, and distribution to handle increases in water demand, ensuring resilient, uninterrupted water supply to support current and future operations. At the same time, utilities should be sure not to overbuild new infrastructure in response to this demand, which can ultimately result in stranded assets, if, for example, data centers move to technologies that require significantly less water.

In their long-term planning processes, water utilities should recognize that rapid changes in technology could impact data centers and thus water demand. For instance, changes in hardware used at data

[38] Aurora Water, *Appendix F: Large Water Users Guide* (Aurora Water, 2025), https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_1881137/File/Business%20Services/Development%20Center/Water%20&%20Other%20Utilities/2025/2025%20Water%20Sewer%20Drainage%20Standards/Appendix%20F%20Large%20Water%20Users%20Guide.pdf.

centers may generate less heat, requiring less cooling and therefore less water and electricity consumption. Changes in cooling technologies could have a similar impact. Conversely, technology also may change to allow more equipment in the same space, which could increase cooling needs and thus water demand.

3.3 Water supply alternative opportunities

Data centers may use community potable water for cooling; they may also provide their own water through groundwater wells or a nearby surface water source, requiring them to comply with state and local regulations. In other situations, utilization of centralized water reuse has proven to be a useful alternative to potable water to meet data centers' water needs. For example, Loudoun Water employs a reuse loop using treated wastewater effluent to deliver to nearby data centers.[39] Despite this success, the growth in requests for Loudoun Water's reuse water is expected to exceed supply. While the use of reclaimed water can help reduce potable water demand, data center development may still outpace capacity, resulting in additional potable demand.

Successful reuse implementation requires appropriate infrastructure, supply, and management of quality concerns. However, alternative sources may be of limited benefit in arid regions of the country where reclaimed supplies are already needed to help sustain or offset potable uses.

While data centers require certain water quality parameters, these expectations are generally achievable by water utilities. For incoming water to data centers, water with low scaling corrosion — typical for cooling systems — is ideal. More specifically, the following water quality conditions are typically required:

- Low hardness (100 mg/L as $CaCO_3$ or less)
- Moderate alkalinity (50-100 mg/L as $CaCO_3$ or less)
- Slightly elevated pH to reduce corrosivity (7.5-9)
- Chlorides < 50 mg/L
- Phosphates for corrosion control and sequestration[40]

While these parameters are typical, water quality needs may vary depending on data center facility design. For instance, cooling assets with higher grade materials will accommodate greater chloride concentrations. Data centers may include their own pretreatment systems to maximize water use efficiency, guarantee consistent quality from a source prone to variation, or meet more stringent needs for advanced cooling methods. Those incorporating on-site reuse may also tolerate higher source water concentrations when blending with recycled water of greater purity.

Water discharged from data centers typically exhibits high conductivity, elevated total dissolved solids (TDS), and increased concentrations of salts such as sodium and chloride. As data centers increasingly adopt internal water reuse practices to reduce consumption, the concentration of TDS in the resulting

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[39] "Reclaimed Water Program," Loudoun Water, accessed September 15, 2025, https://www.loudounwater.org/commercial-customers/reclaimed-water-program.
[40] American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Technical Committee 9.9, Mission Critical Facilities, Data Centers, Technology Spaces and Electronic Equipment, *Water-Cooled Servers: Common Designs, Components, and Processes* (ASHRAE, 2019), https://www.ashrae.org/file%20library/technical%20resources/bookstore/whitepaper_tc099-watercooledservers.pdf.

effluent often rises, posing additional challenges for wastewater treatment processes.[41] However, salinity is not solely a wastewater treatment concern. Across the United States, rising salinity in both surface and groundwater supplies is emerging as a significant long-term issue, complicating drinking water treatment, reducing agricultural usability, and accelerating infrastructure corrosion. As such, any activity — including data center operations — that contributes additional salinity to water systems should be carefully evaluated for its cumulative and long-term impacts on regional water quality and treatment capacity. Elevated salinity and temperature of discharged water should also be taken into consideration from an ecosystem health perspective, as high salinity and thermal pollution may pose risks to receiving aquatic ecosystems.[42]

3.4 Increased costs

With increasing water consumption from data centers, residential customers and advocates may be concerned that their water bills will rise. Fortunately, rate-setting practices at water systems have adjusted to the unique characteristics of different industries in their service areas for a long time. In the flagship AWWA manual of practice *Principles of Water Rates, Fees and Charges* (known as "M1"), there are detailed explanations about creating different customer classes for water users with unique needs and allocating costs based upon their characteristics (chapters III.1-III.2).[43] Likewise, methods for calculating connection charges and system development charges (i.e., costs to account for the impacts to the system the connection has) are also presented (chapters VII.1-VII.2). Although data centers may present unique challenges in some respects, much of the knowledge regarding rate-setting practices already exists, although it will need to be applied in differently and more quickly than in cases of typical water system growth.

However, rates are only one part of the equation. For high-demand users like data centers, tap fees and system development charges must be structured to fully recover the true cost of service, both in terms of infrastructure capacity and water resource acquisition. These fees are intended to ensure equity among customer classes by requiring new developments to pay the share of the cost burden they introduce. Yet, in the pursuit of economic development, municipalities may be tempted to offer incentives — such as reduced or waived tap fees — to attract data center investment. While such incentives may appear to offer short-term economic gains, they risk shifting costs onto other users, disproportionately impacting lower-volume residential and commercial customers. In regions like Colorado, where water rights are scarce and expensive — sometimes accounting for up to 80% of a tap fee — this issue becomes even more critical. Allowing data centers to acquire their own water rights outside of utility-controlled planning frameworks may offer an appealing workaround on paper, but it can drive up the market cost of water for municipalities and districts, as private industry is often able to outbid public entities. In the long term, this can undermine coordinated water supply planning and increase the financial burden on existing ratepayers. Ensuring that data centers equitably participate in covering both capacity and resource costs is essential for preserving the financial and hydrological sustainability of water systems.

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[41] Rasheed Ahmad, "Engineers often need a lot of water to keep data centers cool," Civil Engineering, March 4, 2024, https://www.asce.org/publications-and-news/civil-engineering-source/civil-engineering-magazine/issues/magazine-issue/article/2024/03/engineers-often-need-a-lot-of-water-to-keep-data-centers-cool.

[42] Khatib, Pham, Ahmed, and Frenkel. "Data Centers and Water: Challenges and Solutions for Sustainable Cooling," 48-53.

[43] Woodcock, C, R. Giardina, T. Cristiano. 2017. M1, principles of water rates, fees, and charges, seventh edition. American Water Works Association. ISBN 9781625761910. https://store.awwa.org/M1-Principles-of-Water-Rates-Fees-and-Charges-Seventh-Edition.

4. What are the energy-related impacts?

In addition to their direct impacts to water utilities, data centers can also have indirect impacts to the water sector because of their substantial electricity demand. Challenges that can result include:

- Grid instability.
- Increased electricity costs borne by water utilities.
- Risks to resiliency and long-term planning.

Data center growth projections show continued increases in demand on electric transmission systems, with one source estimating that data centers account for roughly 4.5% of total electricity consumption in the United States.[44] The *2024 United States Data Center Energy Usage Report* developed a range of scenarios of future data center energy demand through 2028, which indicate energy consumption estimates for data centers ranging from 325 to 580 terawatt-hours (TWh) in 2028.[45] The report estimates that, based on the assumption of an average capacity utilization rate of 50%, the annual energy use range would translate to a total power demand between 74 and 132 GW, representing 6.7% to 12% of total U.S. electricity consumption forecasted for 2028.[46] Estimated national consumption of electricity from data centers is projected to rise from 4% in 2024 to 4.6-9.1% by 2030, per an Electric Power Research Institute (EPRI) paper.[47]

Because their operations require such considerable amounts of electricity, data centers in high concentrations can cause electrical grid instability. For example, a series of publicized incidents in Virginia occurred where routine fault-protection actions by the grid operator caused dozens of data centers to simultaneously switch to backup power despite the grid remaining online.[48] Though electric service was not interrupted, the rapid drop in electricity demand resulted in overvoltage and nearly triggered widespread outages in the area.[49] Electricity interruptions can have major impacts on water utilities, and if the disruptions were to be widespread, recovery might take longer than expected. Thus, water utilities should regularly evaluate how their operations would be impacted from grid interruptions and take action to reduce risks, regardless of the level of data center activity.[50] Actions could include dual-feeds or dedicated protected lines for electricity supply, on-site backup generation, and increased storage.

Data centers also have considerable indirect water use associated with power generation. Water consumption for electric generation can vary considerably based on several factors, including fuel type,

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[44] Neil Kolwey and Howard Geller, *Data centers: Power needs and clean energy challenges* (Southwest Energy Efficiency Project, 2025), https://www.swenergy.org/directory/data-centers-power-needs-and-clean-energy-challenges/.
[45] Shehabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[46] Shehabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[47] EPRI, *Powering Intelligence: Analyzing Artificial Intelligence and Data Center Energy Consumption*, Report 000000003002028905 (EPRI, 2024), https://www.epri.com/research/products/3002028905.
[48] Tim McLaughlin, "Big Tech's data center boom poses new risk to US grid operators," *Reuters,* March 19, 2025, https://www.reuters.com/technology/big-techs-data-center-boom-poses-new-risk-us-grid-operators-2025-03-19/.
[49] McLaughlin, "Big Tech's data center boom poses new risk to US grid operators."
[50] There are many resources available to assist utilities with this issue. One example is AWWA's "Emergency Power Source Planning for Water and Wastewater" at https://store.awwa.org/Emergency-Power-Source-Planning-for-Water-and-Wastewater.

technology, location, and plant efficiency. One source estimates the total indirect water footprint of data centers in the United States at nearly 211 billion gallons in 2023.[51] Another source estimates that in 2018, indirect water consumption attributed to electricity demand was roughly 101 billion gallons.[52] The same study indicates that about 75% of data centers' water footprint is indirect water consumption, which includes both electricity generation and electricity consumption of utilities servicing data centers.[53] Sourcing electricity from less water-intensive energy sources, including wind and solar, can help data centers reduce their indirect consumption.[54] The impacts felt locally from data center indirect water use can range from none to significant, depending on whether the indirect use does or does not impact the local sources.

Additionally, electric infrastructure costs can adversely impact the rates of both residential and commercial/industrial electrical customers, including water utilities themselves. This is especially relevant for electrical load peaking, as it may require considerable new infrastructure whose cost may be distributed across other types of customers. Some states have adopted more stringent requirements for data centers to source power supply in response to concerns that the additional load may result in rate increases for other customers.[55] For instance, in March 2025, the Utah Senate passed S.B. 132, which includes provisions intended to prevent incremental costs of large energy load requirements to be paid by the consumer, requiring instead that the large user address those costs.[56]

The energy-related challenges posed by the rapid growth of data centers cannot be overstated. Some of those challenges are beyond the scope of what water utilities will likely encounter, but it is nevertheless beneficial to remain aware of these issues as some will have direct and indirect impacts on water utilities and the management of water resources.

5. How are data centers regulated?

There is no overarching regulator of data centers in the United States. Rather, data center developers and operators must, like other industries, comply with an array of regulations covering different aspects of their design, construction, and operation. For siting, design, and construction, data centers must be responsive to state and local zoning, land-use planning, building codes, fire codes, noise limitations, and similar requirements, some of which apply to all industrial entities and some which may be unique to this sector.[57,58] The formality of such requirements is not standardized. In other parts of the world, there are

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[51] Shehabi, Smith, Hubbard, Newkirk, Lei, Siddik, Holecek, Koomey, Masanet, and Sartor, *2024 United States Data Center Energy Usage Report*.
[52] Siddik, Shehabi, and Marston, "The environmental footprint of data centers in the United States," 064017.
[53] Siddik, Shehabi, and Marston, "The environmental footprint of data centers in the United States," 064017.
[54] Khatib, Pham, Ahmed, and Frenkel. "Data Centers and Water: Challenges and Solutions for Sustainable Cooling," 48-53.
[55] Gibson Dunn, "When Data Center Developers Have Options, State Regulatory Treatment Is Key to Success," March 17, 2025, https://www.gibsondunn.com/when-data-center-developers-have-options-state-regulatory-treatment-is-key-to-success/.
[56] Gibson Dunn, "When Data Center Developers Have Options, State Regulatory Treatment Is Key to Success."
[57] Bill Kosik, John Peterson, Brian Rener, Mike Starr, Tarek G. Tousson, Saahil Tumber, and John Gregory Williams, "Data centers achieve a new level of high-tech: Codes and standards," *Consulting – Specifying Engineer,* April 27, 2020, https://www.csemag.com/data-centers-achieve-a-new-level-of-high-tech-codes-and-standards/.
[58] Christopher Tozzi, "Land Barriers: How Zoning Regulations Could Stall Data Center Industry Expansion," *Data Center Knowledge*, January 10, 2025, https://www.datacenterknowledge.com/regulations/land-barriers-how-zoning-regulations-could-stall-data-center-industry-expansion.

emerging national frameworks. The European Union, for example, intends to protect against water shortages by proposing minimum performance standards for data centers by the end of 2026.[59]

For the operation of the data center itself, there are an array of requirements for how the data center processes, stores, and transmits data, impacting information security and privacy protection. These are imposed by regulation, customer requirements, and/or industry standards.[60] Although compliance is not likely to meaningfully alter how data centers expend their resources, addressing these requirements is likely to be paramount to the data center operator. Additionally, data centers are increasingly becoming targets for cyberattacks. As such, taking measures to protect against such attacks is likely to become a driver for the industry.[61]

At least 17 U.S. states have proposed or adopted laws or regulations that apply to data centers; these policies primarily focus on such areas as utility regulation, energy efficiency, energy standards, zoning and permitting, and rate structures.[62] By contrast, fewer states have proposed or adopted laws or regulations with impacts to reporting and/or optimization of water consumption at data centers. Examples of state policies that have sought to regulate water usage at data centers include the following:

- The New York Senate introduced S.B. S6394A during its 2025-26 session, which would require data centers to disclose the amount of water projected to be used on an annual basis.[63]
- The New Jersey Senate introduced S.B. S4143 during its 2024-25 session, which would require data centers to optimize water usage to minimize impacts to drinking water and the environment.[64]
- Minnesota's H.F. 16 was signed into law in June 2025. It requires a pre-application evaluation for projects that propose to consume in excess of 100 million gallons per year and stipulates water use permit conditions.[65]

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[59] John Ainger, "EU will work on setting water use caps for thirsty data centers," *Bloomberg*, May 15, 2025, https://www.bloomberg.com/news/articles/2025-05-15/eu-will-work-on-setting-water-use-caps-for-thirsty-data-centers.
[60] Kostic, N. 17 December 2024. Data Center Compliance and Regulations Explained. PhoenixNAP. https://phoenixnap.com/blog/data-center-compliance.
[61] *Broadband Breakfast,* "Dateline Ashburn: How to Break the Internet," September 5, 2025, https://chat.broadbandbreakfast.com/c/news/dateline-ashburn-how-to-break-the-internet-d8343d04-5123-49ac-a1c3-d0c632f555c3.
[62] North Dakota Legislative Council, "State-by-State Data Center Regulation," accessed September 19, 2025, https://ndlegis.gov/sites/default/files/resource/research-document/state-by-state-data-center-regulation-january-2025.pdf.
[63] New York State Legislature, Senate, Senate Bill S6394A, 2025-2026 Legislative Session, introduced in Senate March 13, 2025, https://www.nysenate.gov/legislation/bills/2025/S6394/amendment/A.
[64] New Jersey Legislature, Senate, Bill S4143, Session 2024-2025, introduced in Senate March 17, 2025, https://www.njleg.state.nj.us/bill-search/2024/S4143/bill-text?f=S4500&n=4143_S1.
[65] Minnesota Legislature, House, HF 16, 94th Legislature, 2025 1st Special Session, introduced in House June 17, 2025, https://www.revisor.mn.gov/bills/text.php?number=HF16&version=latest&session=ls94&session_year=2025&session_number=1.

- The Connecticut General Assembly introduced S.B. 1292 and H.B. 5076 during its 2025 session, which would require data centers to report information on water usage and establish water efficiency performance standards.[66,67]
- The California Senate introduced A.B. 93 during its 2025-26 session, which would require data centers to provide an estimate of expected water use.[68]
- Virginia's Joint Legislative Audit and Review Commission issued recommendations that the General Assembly consider amending state code to authorize local governments to require data center developments to provide water use estimates and consider water use when making rezoning and special use permit decisions.[69]

Some states lack policies that explicitly regulate data centers but have water management laws or regulations that may apply to data centers. For instance, in Missouri, major water users (i.e., entities capable of producing 100,000 gallons per day, or about 70 gallons per minute, including all wells or surface intakes) are legally required to register and report water usage to the Missouri Department of Natural Resources.[70] Similarly, Iowa law stipulates that any user withdrawing more than 25,000 gallons of water per day from any groundwater or surface water source must obtain a water use permit.[71] Massachusetts also regulates large water users (i.e., entities withdrawing more than 100,000 gallons) under the Massachusetts Water Management Act.[72] These laws would likely result in registration and reporting for a data center only if the facility was obtaining water directly from a groundwater or surface water source, as opposed to indirectly through a water utility. In Arizona, several large municipalities have passed ordinances to regulate large water users. Notably, the town of Marana, Arizona has an ordinance that stipulates that the water department will not deliver potable water to data centers for their cooling, humidity control, or other similar operational uses; in these cases, the developer must identify an alternative water source.[73] Southern Nevada Water Authority instituted a ban on new installations of evaporative cooling in industrial and commercial settings in 2021, which includes data centers[74].

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[66] State of Connecticut General Assembly, Senate, *An Act Concerning Energy and Water Efficiency Requirements for Artificial Intelligence Data Centers*, Raised Bill No. 1292, January Session, 2025, introduced in Senate April 7, 2025, https://www.cga.ct.gov/2025/TOB/S/PDF/2025SB-01292-R00-SB.PDF.

[67] State of Connecticut General Assembly, House, *An Act Concerning Energy and Water Efficiency Requirements for Artificial Intelligence Data Centers*, Proposed Bill No. 5076, January Session, 2025, introduced in House January 10, 2025, https://www.cga.ct.gov/2025/TOB/H/PDF/2025HB-05076-R00-HB.PDF.

[68] California Legislature, Assembly, 2025 CA A 93, 2025-2026 Regular Session, introduced in Assembly January 7, 2025, https://custom.statenet.com/public/resources.cgi?mode=show_text&id=ID:bill:CA2025000A93&verid=CA2025000A93_20250709_0_A&.

[69] Joint Legislative Audit & Review Commission, "Data Centers in Virginia."

[70] "Major Water User Registration," Missouri Department of Natural Resources, accessed September 17, 2025, https://dnr.mo.gov/water/business-industry-other-entities/reporting/major-water-users/registration.

[71] "Water Allocation & Use," Iowa Department of Natural Resources, accessed September 17, 2025, https://www.iowadnr.gov/environmental-protection/water-quality/water-supply-engineering/water-allocation-use.

[72] *Massachusetts Water Management Act*, MA Gen L ch 21g § 1 (2022). https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21G.

[73] Arizona State University (ASU) Kyl Center for Water Policy at Morrison Institute, *How Arizona Municipal Water Providers are Regulating Large-Volume Water Users* (ASU, 2025), https://morrisoninstitute.asu.edu/sites/g/files/litvpz841/files/2025-09/Large-Volume%20Water%20User%20Ordinances%20090525_revised2.pdf.

[74] "Understand laws and ordinances" Southern Nevada Water Authority, accessed October 1, 2025. https://www.snwa.com/conservation/understand-laws-ordinances/index.html.

Many states, including 36 that offer some form of tax incentive, actively promote new data center development.[75] These laws differ in the type of tax exemption offered, period of time covered by the incentive, eligible entities, investment thresholds, and the types of expenditures or other items covered by the legislation. In addition to covering construction and IT equipment, tax exemptions in some states also cover electricity, cooling infrastructure, and data center end-users.[76]

6. What can utilities do if expecting data center development?

Utilities should prepare for data center development through rigorous assessment, early engagement, and careful follow-through. In all instances, understanding the local conditions is essential and may warrant different or additional considerations than those suggested here.

First, remember that as the local water utility, you know the capabilities and limitations of your system, although you may not immediately have the answer to every possible question. To address potential challenges and take advantage of the benefits of data centers in your service territory, advanced planning is critical.

The following considerations can help guide a planning process around potential development of data centers in your area:

1. *Consider coordinating in your region*: Coordinate with state and regional water planners and other utilities in your watershed to discuss regional water capacity limits and holistic impacts to your watershed. Ask your community economic development team to consult with your utility early in the process when evaluating data center siting options. There are a number of potential policies that can ensure that water resource concerns are heard early in the development process, and by being looped in early in the process, the developer will be much more likely to be able to make meaningful design changes (such as adding non-evaporative cooling systems) should a concern be identified.

2. *Consider your source:* Whether groundwater, surface water, nontraditional sources or any combination of waters, every source has capacity limits. Limitations may derive from regulatory requirements, pure availability, or some other reason. For states with complex water rights and/or withdrawal permit limits, even if the source can theoretically support additional capacity, there may be other limitations. Always account for other anticipated changes in demand. Consider future water use needs, accounting for potential growth and permit allocations.

3. *Consider your treatment capacity:* For either drinking water or reuse water, there will be limits on how much additional treatment can be added. In some systems, there may be considerable reserve treatment capacity or a built-in ability to increase it in the future, whereas other systems may already

[75] Jake Remington and Rod Carter, "An Overview of State Data Center-Related Tax Incentives," *Development*, Winter 2024/2025 Issue, https://www.naiop.org/research-and-publications/magazine/2024/Winter-2024-2025/development-ownership/an-overview-of-state-data-center-related-tax-incentives/.
[76] Farney, "Incentivizing the Digital Future: Inside America's Face to Attract Data Centers," *Data Center Frontier,* August 5, 2025, https://www.datacenterfrontier.com/site-selection/article/55307797/incentivizing-the-digital-future-inside-americas-race-to-attract-data-centers.

be approaching limits. Adding additional treatment capacity is usually a long-term process that involves considerable capital investment.

4. *Consider your transmission and distribution:* Even if the source and treatment infrastructure are adequate, data centers will likely seek land that is affordable. Transmission and distribution systems may not be in place or be sufficient to meet the needs at the chosen location. Proactively identify areas in your distribution system that can support demand from data center development and be prepared to explain limitations and challenges with less ideal locations.

5. *Consider impacts on other customers*: Changes to one area of the system can have positive and/or negative effects on other areas. Consider whether addressing a data center's needs may improve resilience or capacity for others, or whether doing so may indirectly limit future growth to other parts of the system or impose new costs to existing customers. What can be done to limit adverse impacts?

6. *Consider the financials:* Addressing these challenges will be complex and involve considerable resources. Unlike overall incremental system growth where costs are relatively evenly spread across the customer base, if upgrades are needed to accommodate a single customer or cluster of customers, the responsibility to pay may fall to that much smaller customer group.

7. *Consider alternatives:* If any aspect of a possible plan seems overly difficult, expensive, or time-consuming, are there different approaches by which to accomplish the same goal? Consider requiring alternative lower/zero water-use cooling systems, a variety of sources (including reuse), and different approaches that the customer might employ (internal reuse, for example, to lower total demand).

8. *Consider contingencies:* Even given the best laid plans, things can go wrong. Consider various contingencies such as drought, power outages, and other disruptions. Do these events potentially change the plan, or do you need to develop new procedures to address them? What should you do if key information, such as the data center's water and electricity use, is unknown until a later stage in the development process?

Ideally, these many questions are addressed ahead of any formal announcements or commitments to construct a data center. However, these considerations can also be examined after a decision has been made. In such cases, the timeline is likely to be compressed, but the process will be better informed in terms of where the data center will be built and the anticipated water consumption. The call-out box below presents potential ideas for facilitating information exchange between the utility and data center developers. Exchanging this information will allow for a more specific assessment of potential impacts to source, treatment, infrastructure, finances, and other aspects of utility operation, and builds trust through collaboration. The utility can then work with the data center developer to ensure that concerns are adequately addressed and that the developer and operator are able to pay for any necessary upgrades to address their needs. If the data center's needs exceed the utility's ability to meet them, necessary modifications can be discussed to ensure all parties have appropriate expectations and only feasible service commitments are made. Figure 5 illustrates these eight considerations.

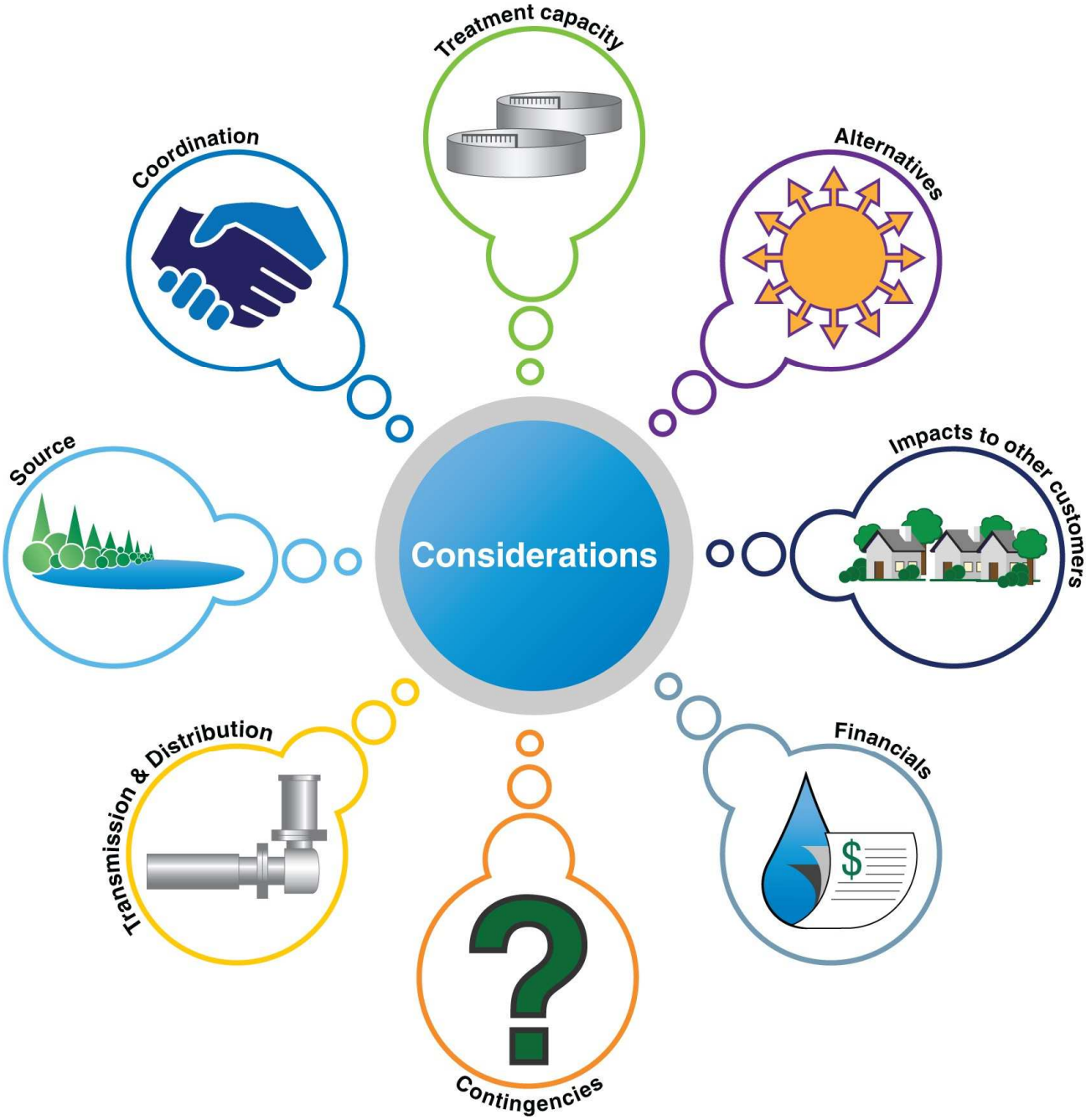


Figure 5. Water Utility Planning Considerations for Data Center Development

Ideas for Utility and Data Center Developer Information Exchange

Information the utility should be ready to provide: • Maps showing distance to available infrastructure from the proposed site(s) as well as pipe sizes, available pressures, and capacities. • System's total available capacity. • Relevant future upgrades already anticipated by the system regardless of the data center development. • Upgrades that may be required to the system because of the anticipated data center development.
Information the utility should request: • What is the cooling strategy for the data center? • What is the anticipated maximum day demand and average day flow? • What is the anticipated instantaneous demand? • What is the anticipated monthly use profile? • What is the estimated commissioning date? • What is the estimated ramp up/buildout schedule?

To effectively integrate data centers into areas with existing water systems, utilities may need to establish or update clear and predictable review processes for new, large service connections. These processes ideally would require potential new large water users to submit comprehensive information upfront, prior to approval to begin construction. This includes detailed projections of water demand — both average and peak usage — with expected variability over time (e.g., daily or seasonal maximum and minimum usage), anticipated discharge volumes, and water quality characteristics of any returned flow. Understanding these parameters early allows utilities to assess infrastructure impacts, resource availability, and treatment needs more accurately. Moreover, a standardized review framework ensures transparency, supports equitable decision-making, and enables utilities to plan for long-term system resilience as high-demand users like data centers emerge.

Public interest in data centers is growing, and you may receive customer and media inquiries. In responding to such requests, in all cases, honesty and transparency is the best policy. Truthfully reporting to your customers and residents what you know about potential data center development and its impacts to the water system and supplies is essential, as is faithfully acknowledging anything that is not known. Utilities may be privacy concerns: for example, if it is not possible to disclose how much water a data center uses, particularly in cases where nondisclosure agreements are in place, utilities should refer questions to the facility itself. Talk about efforts to work collaboratively with the sector to prevent and solve problems. If there are concerns, be consistent and be prepared to answer follow-up questions.

Through careful analysis, meaningful information exchange, and careful decision-making, utilities can minimize the adverse impacts to their operations from data centers and contribute towards long-term system sustainability.

Recognizing that many decisions are made during planning and construction, ongoing coordination with data center operators after the facilities are functioning is critical. Regular communication provides an

opportunity to identify any operational challenges and address them, just as would be the case for other customers.

7. Conclusion

AI technology is contributing to the rapid proliferation of data centers in communities across North America. Data centers use large volumes of water and may introduce challenges with respect to managing water resources and infrastructure. Recognizing and proactively addressing these challenges is critical for water utilities. Fortunately, water utilities have a great deal of experience working with a wide range of industrial customers. Although data centers present unique concerns, the water sector possesses the technical expertise and strategic foresight to meet the moment. Each proposed data center development will require weighing trade-offs to determine what is right for the community, electric and water utilities, the regional water supply, and data center developers and operators. Water utilities can engage with many partners to ensure data centers are assessed and integrated as appropriate into their communities. Water utilities can provide critical insights during the community planning process and should remain engaged after data centers are constructed and operational.



Server racks in a data center. Image credit: Sashkin/Shutterstock.com

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