



AVIATION AUTHORITY

* PERMIT APPLICATION *

Tampa International Airport Peter O. Knight Airport Plant City Airport Tampa Executive Airport
P.O. Box 22287, Tampa, FL 33622-2287

Scope/Nature of Request: Provide summary of request, activities involved and any other required or pertinent information to fully describe scope, submit drawings and specification if needed. Additional pages may be used if necessary. The application must also contain (1) an FAA Determination of No Hazard if the duration is greater than 72 hrs. (2) site survey with an FAA accuracy code of 1A, if requested (3) a Variance application, if applicable (4) site plan with a building layout, if requested (5) building elevation plan, if requested (6) any additional information requested by the Airport Zoning Director to determine whether or not the proposal will comply with the Airport Zoning Regulations.

Project Name \ Description:
Proposed roadway improvement of Turkey Creek Road, add turn lane, paved shoulders, parallel ditches and installation of potable water and sanitary sewer force main between Sydney Road and S.R. 574/MLK Blvd. (1.4 miles) Work within 100' County right-of-way just outside fence and Plant City Airport.

Applicant acknowledges receipt of the applicable procedures and/or provisions pertaining to the above request and agrees that in consideration of issuance of this permit to be bound by the terms and conditions of such documents and all other applicable laws, rules, regulations, procedures and laws.

Permanent (Height Zoning) *Check type of permit being requested*
Temporary (Crane/Equip.)

This application is required to be attached to the supplemental data form for Permit request (see on-line application process).

Name/Company/Organization: Hillsborough County Department of Public Works
James E. Hudock, Director of Public Works
Contact Person for Requested Activity: 601 E. Kennedy Boulevard Phone: 813-614-2187
Tampa, FL, 33602
Project Location: Turkey Creek Rd, Plant City, FL Email: HudockJ@hillsboroughcounty.org

Under penalty of perjury, I hereby certify that the above statements and supplemental data are true and correct and I have full power and authority to act on behalf of the above named firm, corporation or organization in the submission of this application.

Printed Name of Authorized Representative: Michael L. Thompson
Signature of Authorized Representative: *Michael L. Thompson* Date: 4/2/2020

STATE OF Florida, COUNTY OF Hillsborough
Sworn to (or affirmed) and subscribed before me this 2nd day of April, 2020 by MICHAEL L. THOMPSON

Personally Known OR Produced Identification _____ Type of Id Produced _____
(NOTARY SEAL)

Notary Signature: *Marisol Marquez-Bos*



All activities performed under this permit are at applicant's own expense and risk. The Authority will not be held liable for any damages, losses or injuries resulting from or connected with this activity. This permit does not relieve the applicant from obtaining any other permits, approvals, or determinations from other governmental agencies as may be required in accordance with law.

THIS SECTION TO BE COMPLETED BY AVIATION AUTHORITY REPRESENTATIVE

Airport Study No. _____	Variance Required: _____
FAA Study Number _____	Recommend Approval: _____
Associated FAA Study Numbers _____	Coordinate with Airport Operations _____
Reviewed By: _____	Coordinate with ATCT _____
_____ Zoning Director	_____ Date



AVIATION AUTHORITY

* PETITION FOR VARIANCE *

Tampa International Airport Peter O. Knight Airport Plant City Airport Tampa Executive Airport
P.O. Box 22287, Tampa, FL 33622-2287

Provide a summary of request, activities involved and any other required or pertinent information as it pertains to any of the following criteria which will be used to substantiate a variance to the height zoning regulations. Additional pages may be used if necessary.

- The regulated height would create an unnecessary hardship to the applicant.
- Special conditions and circumstances apply which are not applicable to other similarly situated property.
- The proposal will not create a substantial detriment to public good or impair the purposes of the intent of these regulations.
- The proposal will not create a substantial adverse effect on the utility of the airport covered under these regulations.

The current location, alignment and section design of Turkey Creek Road (the roadway) traverses the Plant City Airport's Approach Runway Protection Zone (Approach RPZ) for Runway 10 and the Departure Runway Protection Zone (Departure RPZ) for Runway 28. Turkey Creek Road is proposed to be widened or reconstructed within the limits of the RPZs.

(See attached pages providing responses to the four listed bulleted items above.)

Applicant acknowledges receipt of the applicable procedures and/or provisions pertaining to the above request and agrees that in consideration of issuance of this variance to be bound by the terms and conditions of such documents and all other applicable laws, rules, regulations, procedures and laws. The petitioner must forward to FDOT by certified mail, return receipt requested, a copy of the permit package and petition for comment. The review of this petition for variance and variance process will proceed only upon the receipt of FDOT's comments or waiver of that right. Include a copy of the certified mail receipt with the petition.

Date : April 8, 2020 Nearest Airport: Plant City Airport Overall Height (AMSL): 164' AMSL

Under penalty of perjury, I hereby certify that the above statements are true and correct and I have full power and authority to act on behalf of the Applicant's named firm, corporation or organization in the submission of this variance request.

Printed Name of Authorized Representative: Michael L. Thompson, Senior Airport Planner - Michael Baker International, Inc.

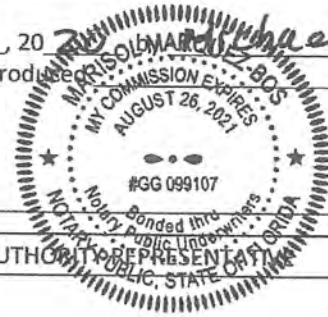
Signature of Authorized Representative: [Signature] Date: 4/8/2020

All activities performed under this variance are at applicants own expense and risk, the Authority will not be held liable for any Damages, losses or injuries resulting from or connected with this activity.

STATE OF Florida, COUNTY OF Hillsborough
Sworn to (or affirmed) and subscribed before me this 8th day of April, 2020
Personally Known OR Produced Identification _____ Type of Id Produced _____
Michael L. Thompson

(NOTARY SEAL)

Notary Signature [Signature]



THIS SECTION TO BE COMPLETED BY AVIATION AUTHORITY

Airport Study No. _____

FAA Study Number: _____

Associated Aeronautical Study Numbers: _____

FDOT Concurrence: _____

In accordance with Resolution No. 2017-37

Approved by Board of Adjustment Chairman _____

Date _____

Review Summary

Airport Study Number

Permit Number

Maximum Height - AMSL

Approval Date

Expires

Permit Type

Review

77.9 Review

77.17 Review

77.19 Review

TERPS

OEI (62.5:1)

Analysis Summary

Coordination with ATCT

Yes No

Coordination with Operations

Yes No

Emergency Use

Yes No

Hazard Marking and/or Lighting

Yes No

Objects affecting Navigable Airspace

Yes No

Exceeds Supportive Screening Criteria

Yes No

Conditions

Recommend Approval

Yes

No

Airport Study Number 2020-62

CONDITIONS

- E-File FAA form 7460-2 with the FAA and Airport if the project is abandoned or within 5 days after the construction reaches its greatest height.
- Notify the Airport at least 3 business days prior to starting construction at 813-870-7863 for local NOTAM to be issued.
- Installation equipment (Crane) exceeding 149' AMSL will require a separate permit by the Aviation Authority.
- You will be required to follow all conditions specified in the FAA Determination to remain in compliance.
- In order to remain in compliance with this permit the property owner will be responsible for maintaining any treatment ponds or drainage ditches to avoid attracting wildlife.

Petition for Variance

Provide a summary of request, activities involved and any other required or pertinent information as it pertains to any of the following criteria which will be used to substantiate a variance to the height zoning regulations. Additional pages may be used if necessary.

- **The regulated height would create an unnecessary hardship to the applicant.**

The current location, alignment and section design of Turkey Creek Road (the roadway) traverses the Plant City Airport's Approach Runway Protection Zone (Approach RPZ) for Runway 10 and the Departure Runway Protection Zone (Departure RPZ) for Runway 28. Turkey Creek Road is proposed to be widened or reconstructed within the limits of the RPZs.

Without the ability to widen Turkey Creek Road at this locations, the County and Plant City would not have the planned ability to:

- enhance freight-related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses,
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and/or
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The current and proposed future relative widened location, alignment, and applied upward vertical traverseway height of 15 feet of Turkey Creek Road penetrates the overlying 40:1 Departure Surface by +/- five feet. This penetration is therefore, considered by the FAA to exceed FAA Obstruction Standards.

- **Special conditions and circumstances apply which are not applicable to other similarly situated property.**

The regulated height of natural or man-made objects located along and departing aircraft when conducting instrument departure procedures is prescribed by Federal Aviation Administration (FAA) Order Number: 8260.3D - *United States Standard for Terminal Instrument Procedures (TERPS)* and FAA Advisory Circular Number: 150/5300-13A, Change 1, *Airport Design*. As prescribed for aircraft instrument departures from the departure (west) end of Runway 28, an imaginary airspace surface that is trapezoidal in shape rises upward and outward from the runway end at a rise-over-run slope of 40:1 for a distance of 10,200 feet along the extended runway centerline.

On behalf of Hillsborough County and Plant City, an electronic filing of FAA Form 7460-1, *Notice of Proposed Construction or Alteration* was filed on June 14, 2019 for the proposed symmetrical widening of Turkey Creek Road within the existing 100-foot wide County right-of-way immediately west of the approach end of Runway 10 at the Plant City Airport. Based upon that electronic filing, the FAA conducted Aeronautical Study No.: 2019-ASO-19390-OE under the provisions of 49 U.S.C., Section 44718 applicable to Title 14 of the Code of Federal Regulations, part 77. On January 22, 2020, the FAA's Southwest Regional Office Obstruction Evaluation Group issued its *Determination of No Hazard to Air Navigation* Finding revealing that ["...the structure does exceed obstruction standards but would not be a hazard to air navigation."] The Study further reported:

The proposal is for widening roadway from two to three lanes at height of 15 feet AGL, 164 feet AMSL.

The proposal is located approximately 0.38 NM west of the PCM ARP, Plant City, FL.

The proposal would exceed the Obstruction Standards of Title 14, Code of Federal Regulations (14 CFR), Part 77 as follows:

Section 77.17(a)(3) - a height that increases minimum instrument flight altitudes within a terminal area (TERPS criteria).

IMPACT ON FOLLOWING SIAP(s) @ PCM:

Obstacle penetrates RWY 28 40:1 Departure Surface by 5 feet. Qualifies as low, close-in penetration with climb gradient termination altitude 200 feet or less above DER, requiring TAKE-OFF MINIMUM AND (OBSTACLE) DEPARTURE PROCEDURES, NOTE: RWY 28, public roadway 329 feet from DER, 6 feet left of centerline.

As evidenced by the FAA's Determination of No Hazard to Air Navigation Finding, HCAA has no objection to the widening of Turkey Creek Road in proximity to Runway 10-28 at the Plant City Airport.

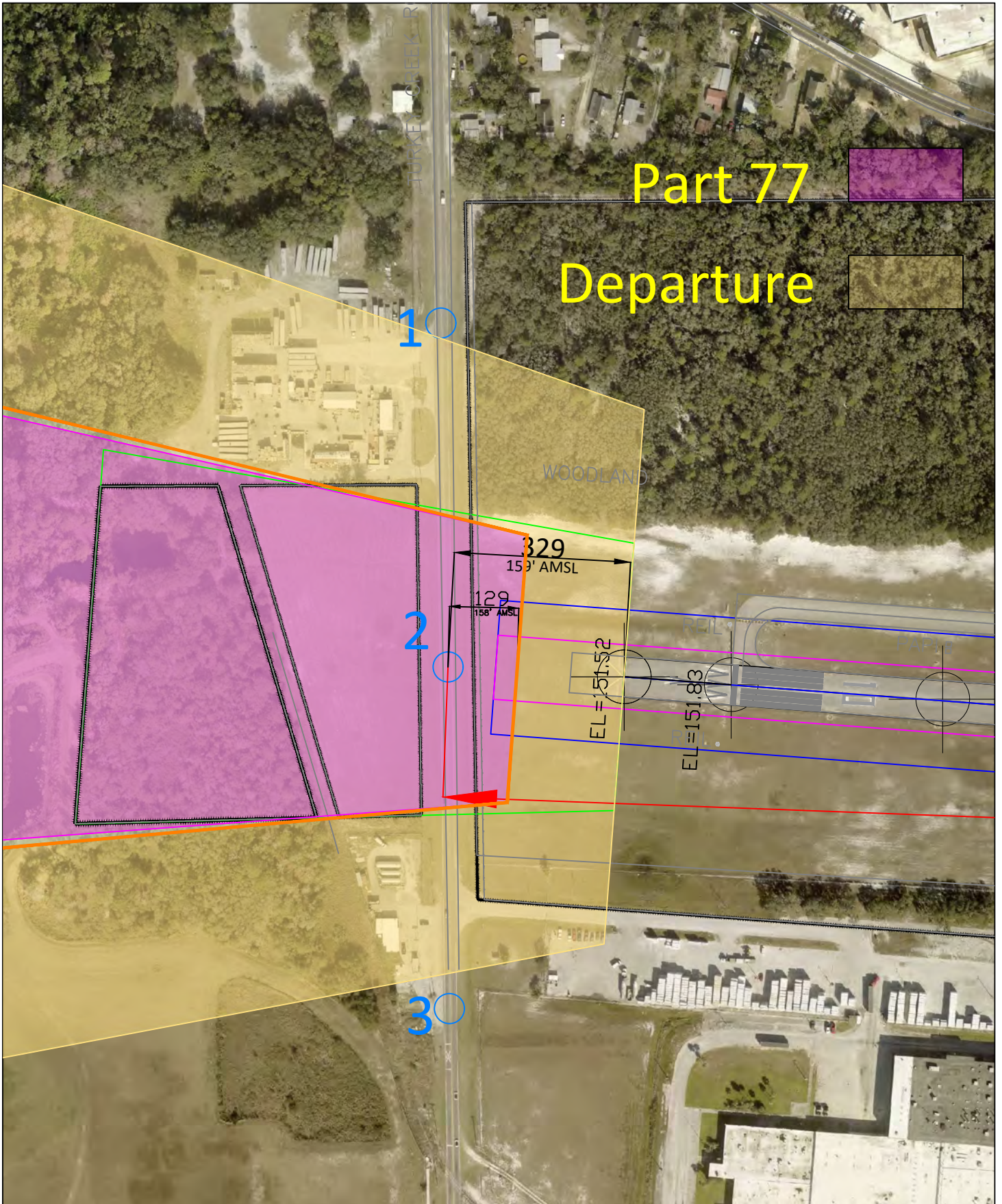
- **The proposal will not create a substantial detriment to public good or impair the purposes of the intent of these regulations.**

The existing and proposed future continued 5+/- foot penetration of the Runway 28 TERPS 40:1 Departure Surface will not create a substantial detriment to public good or impair the purposes of the intent of these regulations.

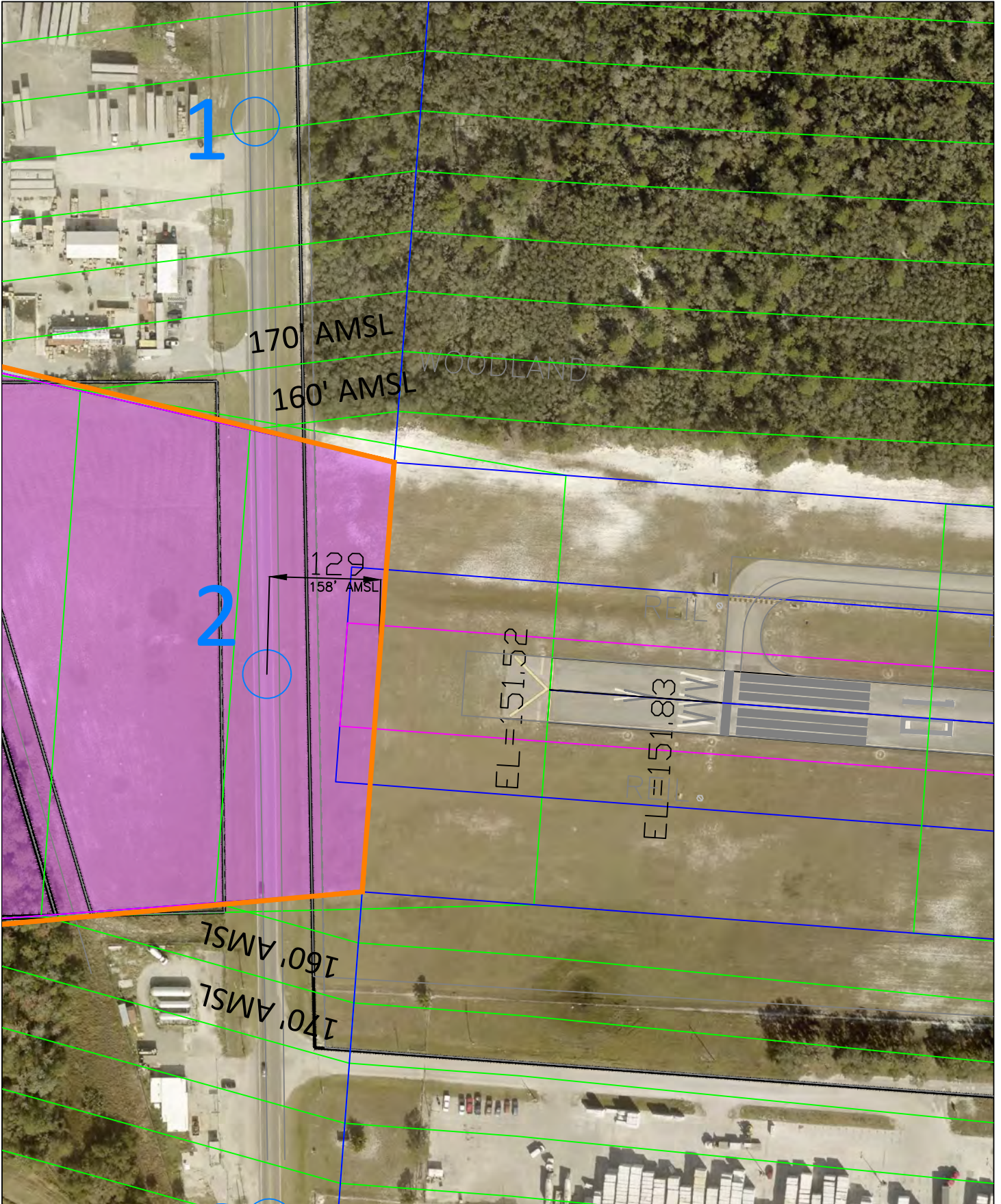
- **The proposal will not create a substantial adverse effect on the utility of the airport covered under these regulations.**

The existing and proposed future continued 5+/- foot penetration of the Runway 28 TERPS 40:1 Departure Surface will not adversely affect the safe and efficient operation of instrument aircraft departures from the departure end of Runway 28.

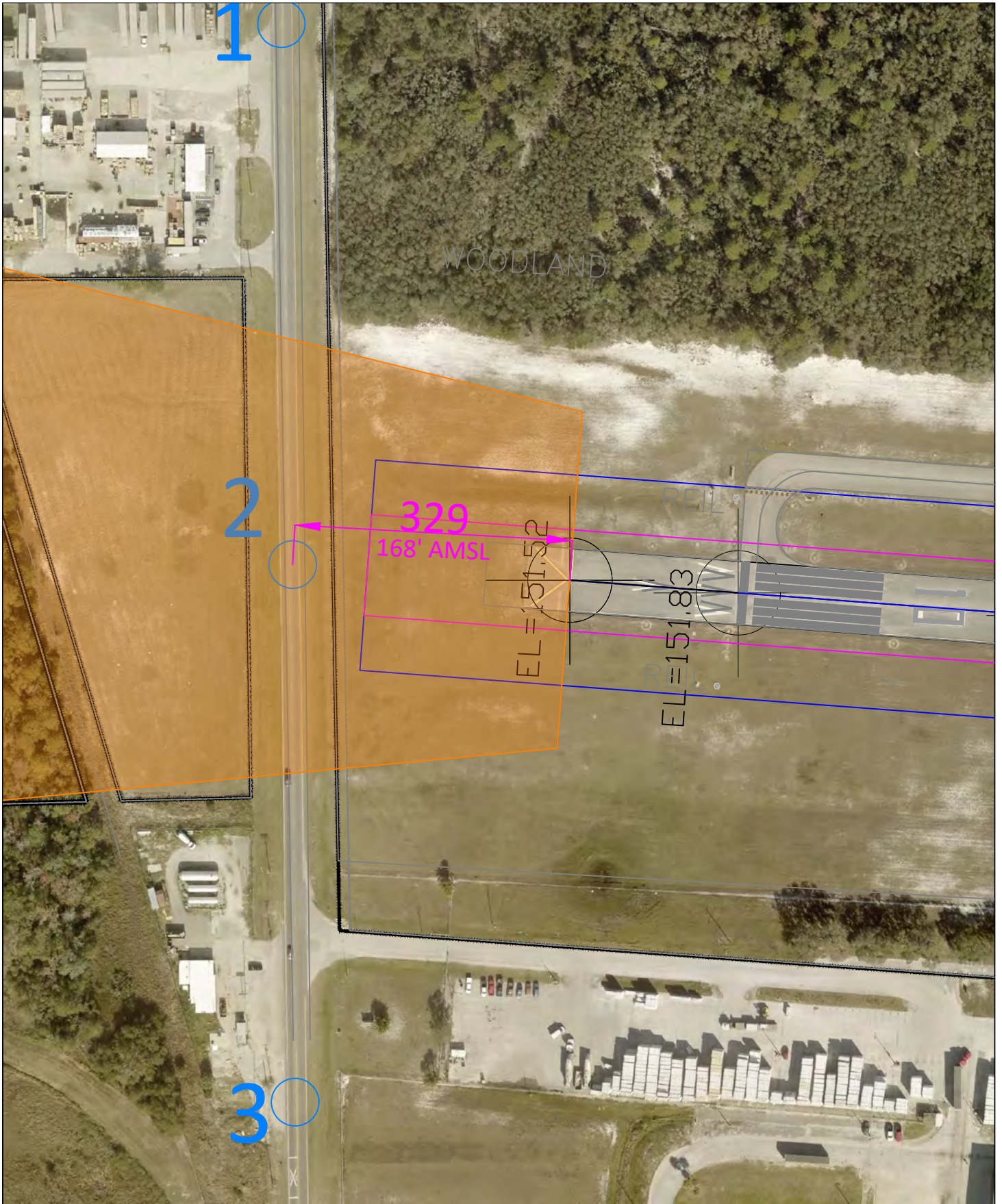
Impact



Part 77



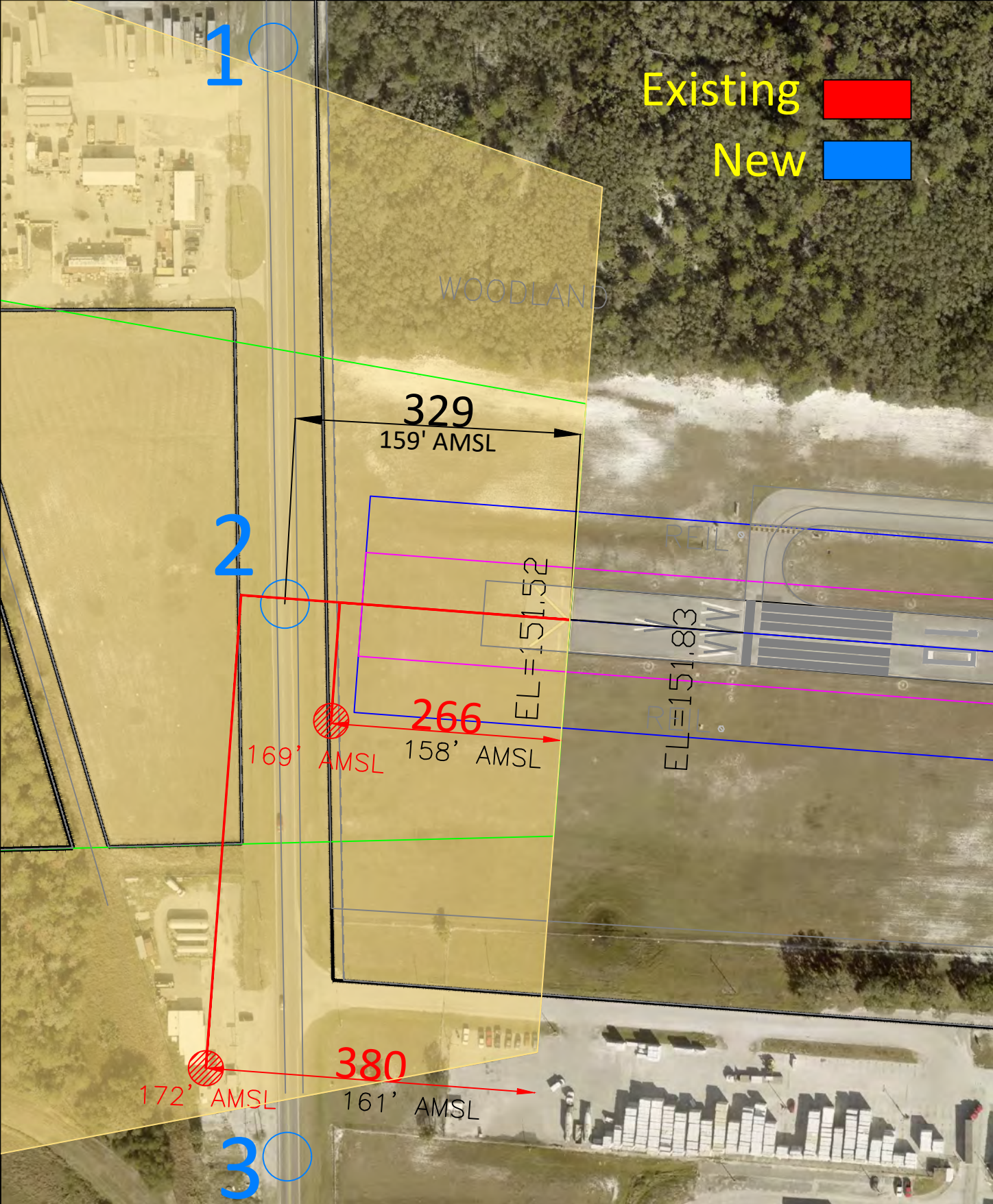
Obstruction Clearance Surface



Departure RW 28



Departure Impacts



TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

20114

PLANT CITY, FL

PLANT CITY (PCM)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 09127 (FAA)

TAKEOFF OBSTACLE NOTES: **Rwy 10**, trees beginning 264' from DER, 561' left of centerline, up to 100' AGL/229' MSL. Trees beginning 490' from DER, 13' right of centerline, up to 100' AGL/239' MSL. **Rwy 28**, trees beginning 50' from DER, 278' right of centerline, up to 100' AGL/254' MSL. Trees beginning 515' from DER, 15' left of centerline, up to 100' AGL/249' MSL. Train on railroad tracks, 380' from DER, 547' left of centerline, up to 23' AGL/172' MSL. Vehicles on roadway, 266' from DER, 137' left of centerline, up to 15' AGL/169' MSL.

POMPANO BEACH, FL

POMPANO BEACH AIRPARK (PMP)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 5 14261 (FAA)

TAKEOFF MINIMUMS: **Rwy 10**, 300-1¼ or std. w/ min. climb of 261' per NM to 300. **Rwy 15**, 400-1¼ or std. w/ min. climb of 441' per NM to 500.

TAKEOFF OBSTACLE NOTES: **Rwy 6**, trees beginning 101' from DER, 26' left and 232' right of centerline, up to 70' AGL/88' MSL. **Rwy 10**, pole 154' from DER, 131' left of centerline, 9' AGL/18' MSL. Trees, pole, and building beginning 427' from DER, 12' left and 343' right of centerline, up to 49' AGL/63' MSL. Poles and buildings beginning 1264' from DER, 166' left and 286' right of centerline, up to 64' AGL/72' MSL. Building 5670' from DER, 604' right of centerline, 186' AGL/190' MSL. Buildings 1 NM from DER, 887' left of centerline, up to 201' AGL/210' MSL. **Rwy 15**, building, trees, and poles beginning 502' from DER, 306' left and 434' right of centerline, 44' AGL/54' MSL. Trees beginning 1229' from DER, 152' left and 190' right of centerline, up to 71' AGL/162' MSL. Building 5994' from DER, 1491' left of centerline, 213' AGL/221' MSL. Building 1.1 NM from DER, 1259' left of centerline, 300' AGL/310' MSL. Building 1.7 NM from DER, 1385' right of centerline, 255' AGL/265' MSL. **Rwy 24**, trees beginning 190' from DER, 304' right of centerline, up to 30' AGL/49' MSL. Trees beginning 423' from DER, 3' left of centerline, up to 47' AGL/66' MSL. Tanks, building, tree, and pole beginning 630' from DER, 23' right of centerline, 60' AGL/80' MSL. Trees beginning 2179' from DER, 253' left of centerline, up to 91' AGL/110' MSL. **Rwy 28**, trees beginning 358' from DER, 255' left of centerline, up to 25' AGL/44' MSL. Poles, buildings, trees, and tank beginning 722' from DER, 33' left and 238' right of centerline, up to 45' AGL/64' MSL. **Rwy 33**, buildings beginning 29' from DER, 398' left of centerline, 18' AGL/34' MSL. Trees beginning 629' from DER, 518' left of centerline, up to 59' AGL/77' MSL. Trees beginning 202' from DER, 548' right of centerline, up to 38' AGL/56' MSL.

PONCE, PR

MERCEDITA (PSE)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 6 19227 (FAA)

TAKEOFF MINIMUMS: **Rwy 12**, std. w/min. climb of 300' per NM to 5300 or 5100-3 for VCOA. **Rwy 30**, 500-1½ w/min. climb of 350' per NM to 1300 or std. w/min. climb of 808' per NM to 500 or 5100-3 for VCOA.

DEPARTURE PROCEDURE: **Rwy 12**, climb heading 119° to 2500 then proceed on a heading between 304° CW to 248° from DER to avoid R-7105 and unmarked tethered balloon up to 15000 MSL. **Rwy 30**, climbing left turn on a heading between 120° CW to 200° from DER. Do not proceed northbound (headings 316° CW 119°) until leaving 5000; do not proceed westbound (headings 200° CW 315°) until leaving 12000 to avoid R-7105 and unmarked tethered balloon up to 15000 MSL.

VCOA: **All runways**: obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Mercedita airport at or above 5100 then climb heading 090° to SJU VORTAC R-239 to CLAYO INT/ SJU 35 DME.

TAKEOFF OBSTACLE NOTES: **Rwy 12**, trees beginning 126' from DER, 480' left of centerline, 5' AGL/31' MSL. Poles beginning 126' from DER, 435' right of centerline, up to 68' AGL/87' MSL. Trees beginning 306' from DER, 500' left of centerline, up to 33' AGL/64' MSL. Poles and trees beginning 323' from DER, 219' right of centerline, up to 59' AGL/88' MSL. Trees beginning 1003' from DER, 368' left of centerline, up to 33' AGL/71' MSL. Stack 5536' from DER, 1749' right of centerline, 184' AGL/210' MSL. **Rwy 30**, pole 143' from DER, 238' left of centerline, 43' AGL/76' MSL. Pole 144' from DER, 281' right of centerline, 44' AGL/87' MSL. Tree 3014' from DER, 1264' left of centerline, 133' MSL. Poles and trees beginning 3217' from DER, 705' right of centerline, up to 46' AGL/353' MSL. Trees, poles, and transmission line beginning 3282' from DER, 135' right of centerline, up to 41' AGL/355' MSL. Tree 3492' from DER, 327' left of centerline, 164' MSL. Tree 4406' from DER, 194' left of centerline, 55' AGL/172' MSL. Tree 4765' from DER, 109' left of centerline, 34' AGL/176' MSL. Pole 5243' from DER, 513' left of centerline, 106' AGL/197' MSL. Poles beginning 5256' from DER, 188' left of centerline, up to 73' AGL/216' MSL. Buildings beginning 1.2 NM from DER, 1986' left of centerline, up to 194' AGL/259' MSL.

PUNTA GORDA, FL

PUNTA GORDA (PGD)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 15288 (FAA)

TAKEOFF MINIMUMS: **Rwys 9, 27**, NA-airport authority request.

TAKEOFF OBSTACLE NOTES: **Rwy 4**, trees beginning 34' from DER, 291' right of centerline, up to 18' AGL/38' MSL. Tree 537' from DER, 633' right of centerline, 55' AGL/70' MSL. Tree 1034' from DER, 683' right of centerline, 69' AGL/84' MSL. **Rwy 15**, trees beginning 43' from DER, 305' left of centerline, up to 47' AGL/67' MSL. Tree 132' from DER, 449' right of centerline, 9' AGL/29' MSL. Trees beginning 1028' from DER, 190' left of centerline, up to 44' AGL/64' MSL. Tree 2444' from DER, 619' right of centerline, 84' AGL/104' MSL. **Rwy 22**, tree 138' from DER, 425' left of centerline, 15' AGL/29' MSL. **Rwy 33**, tree 638' from DER, 618' left of centerline, 38' AGL/53' MSL.

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

20114

SE-3

23 APR 2020 to 21 MAY 2020

23 APR 2020 to 21 MAY 2020



Archive Search Results Form 7460-1 for ASN 2019-ASO-19390-OE

Overview	
Study (ASN):	2019-ASO-19390-OE
Prior Study:	
Status:	Determined
Letters:	Determination
Supplemental Form 7460-2:	Please login to add a Supplemental Form 7460-2.
Received Date:	06/14/2019
Entered Date:	06/14/2019
Completion Date:	01/22/2020
Expiration Date:	07/22/2021
Map:	View Map
Sponsor Information	
Sponsor:	HDR ENGINEERING, Inc.
Attention Of:	Thomas A Quinn, P.E.
Address:	5426 Bay Center Drive
Address2:	Suite 400
City:	Tampa
State:	FL
Postal Code:	33609
Country:	US
Phone:	813-282-2342
Fax:	813-282-2430
Sponsor's Representative Information	
Representative:	Michael Baker International, Inc.
Attention Of:	Michael Thompson
Address:	7650 W. Courtney Campbell Causeway
Address2:	
City:	Tampa
State:	FL
Postal Code:	33607
Country:	US
Phone:	813-334-4103
Fax:	813-887-5300
Construction Info	
Notice Of:	CONSTR
Duration:	PERM (Months: 0 Days: 0)
Work Schedule:	12/01/2019 to 12/01/2021
Date Built:	
Structure Details	
Latitude (NAD 83):	28° 00' 02.17" N
Longitude (NAD 83):	82° 10' 13.57" W
Horizontal Datum:	NAD 83
Survey Accuracy:	4D
Marking/Lighting:	None
Other Description:	
Current Marking/Lighting:	None
Current Marking/Lighting Other Description:	
Name:	
City:	Plant City
State:	FL
Nearest County:	Hillsborough
Nearest Airport:	PCM
Distance to Structure:	2306.55 feet
On Airport:	No
Direction to Structure:	273.94°
Description of Location:	Proposed public roadway widening activities within existing 100-foot wide County right-of-way immediately west of the approach end of Runway 10 at the Plant City Airport. Two point locations are north and south roadway intersect of the overlying Runway 28 TERPS Departure Surface.
Description of Proposal:	Proposed widening of Turkey Creek Rd from 2 to 3 lanes with paved shoulders parallel ditches and installation of underground potable water and sanitary sewer force main.
Structure Summary	
Structure Type:	Public Roadway
Structure Name:	Turkey Creek Road Widening
FCC Number:	
Height and Elevation	
	Proposed DNE DET
Site Elevation:	149
Unadjusted Structure Height:	0
Height Adjustment:	15
Total Structure Height:	15 0 0
Total Height (AMSL):	164 0 149
Frequencies	
Low Freq	High Freq Unit ERP Unit



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2019-ASO-19390-OE

Issued Date: 01/22/2020

Thomas A Quinn, P.E.
HDR ENGINEERING, Inc.
5426 Bay Center Drive
Suite 400
Tampa, FL 33609

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Public Roadway Turkey Creek Road Widening
Location: Plant City, FL
Latitude: 28-00-02.17N NAD 83
Longitude: 82-10-13.57W
Heights: 149 feet site elevation (SE)
0 feet above ground level (AGL)
149 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does exceed obstruction standards but would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
 Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This aeronautical study included evaluation of a structure with an above ground level height that would at times be increased by the presence of mobile objects. For the purpose of this aeronautical study, the above ground level height was adjusted upward in accordance with 14 CFR 77.9(c) and the proposal was studied as a traverseway.

This determination expires on 07/22/2021 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6462, or mike.blaich@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-ASO-19390-OE.

Signature Control No: 408476476-428600391

(EBO)

Michael Blaich
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2019-ASO-19390-OE

PCM = Plant City Airport

AGL = Above Ground Level

AMSL = Above Mean Sea Level

NM = Nautical Miles

ARP = Airport Reference Point

RWY = Runway

IFR = Instrument Flight Rule

ASN = Aeronautical Study Number

NEH = No Effect Height

DER = Departure End of Runway

The proposal is for widening roadway from two to three lanes at height of 15 feet AGL, 164 feet AMSL.

The proposal is located approximately 0.38 NM west of the PCM ARP, Plant City, FL.

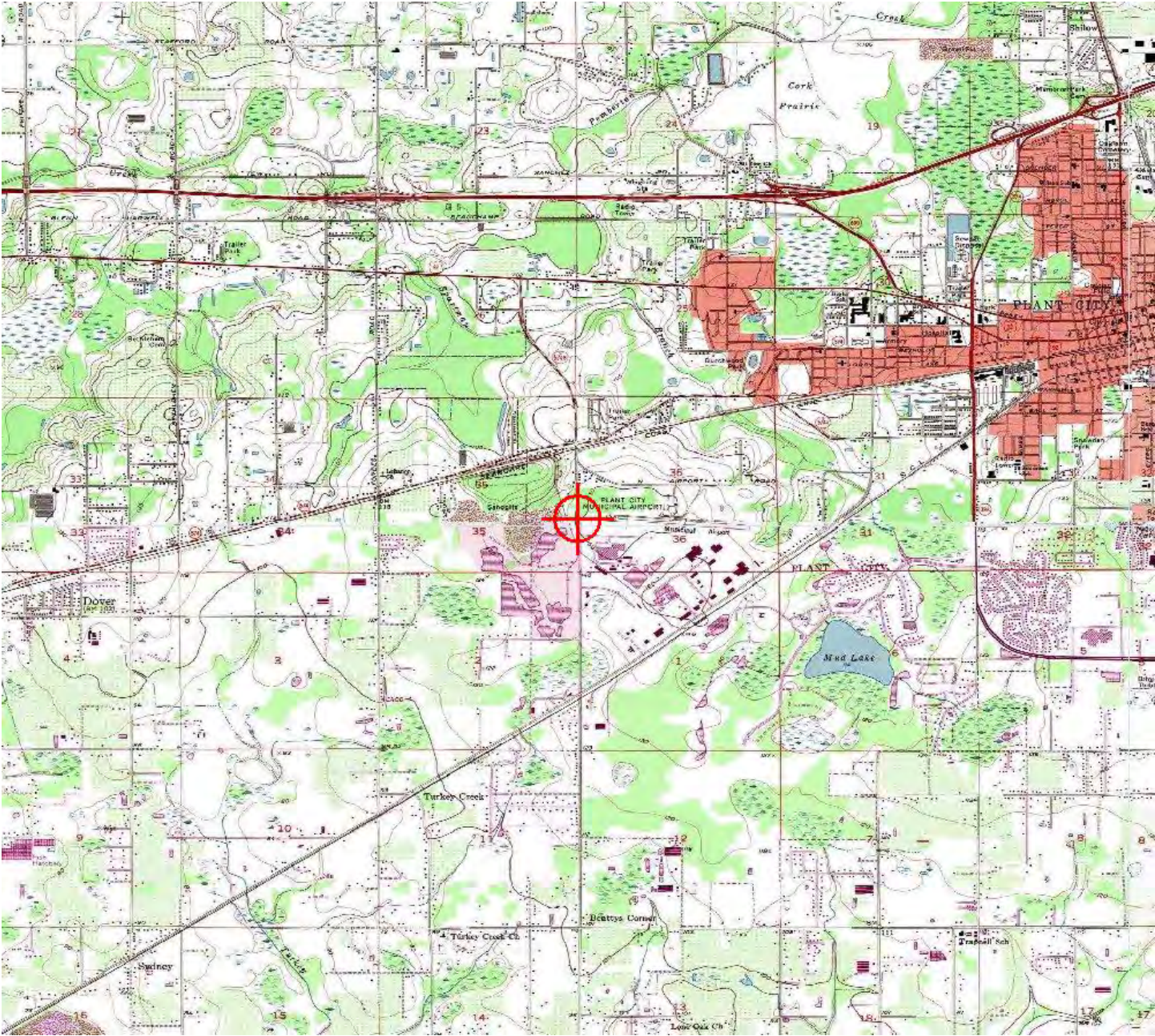
The proposal would exceed the Obstruction Standards of Title 14, Code of Federal Regulations (14 CFR), Part 77 as follows:

Section 77.17(a)(3) - a height that increases minimum instrument flight altitudes within a terminal area (TERPS criteria).

IMPACT ON FOLLOWING SIAP(s) @ PCM:

Obstacle penetrates RWY 28 40:1 Departure Surface by 5 feet. Qualifies as low, close-in penetration with climb gradient termination altitude 200 feet or less above DER, requiring TAKE-OFF MINIMUM AND (OBSTACLE) DEPARTURE PROCEDURES, NOTE: RWY 28, public roadway 329 feet from DER, 6 feet left of centerline.

TOPO Map for ASN 2019-ASO-19390-OE





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2019-ASO-19358-OE

Issued Date: 01/22/2020

Thomas A Quinn, P.E.
 HDR ENGINEERING, Inc.
 5426 Bay Center Drive
 Suite 400
 Tampa, FL 33609

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Public Roadway Turkey Creek Road
 Location: Plant City, FL
 Latitude: 28-00-08.52N NAD 83
 Longitude: 82-10-13.73W
 Heights: 149 feet site elevation (SE)
 0 feet above ground level (AGL)
 149 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This aeronautical study included evaluation of a structure with an above ground level height that would at times be increased by the presence of mobile objects. For the purpose of this aeronautical study, the above ground level height was adjusted upward in accordance with 14 CFR 77.9(c) and the proposal was studied as a traverseway.

This determination expires on 07/22/2021 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.

- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-ASO-19358-OE.

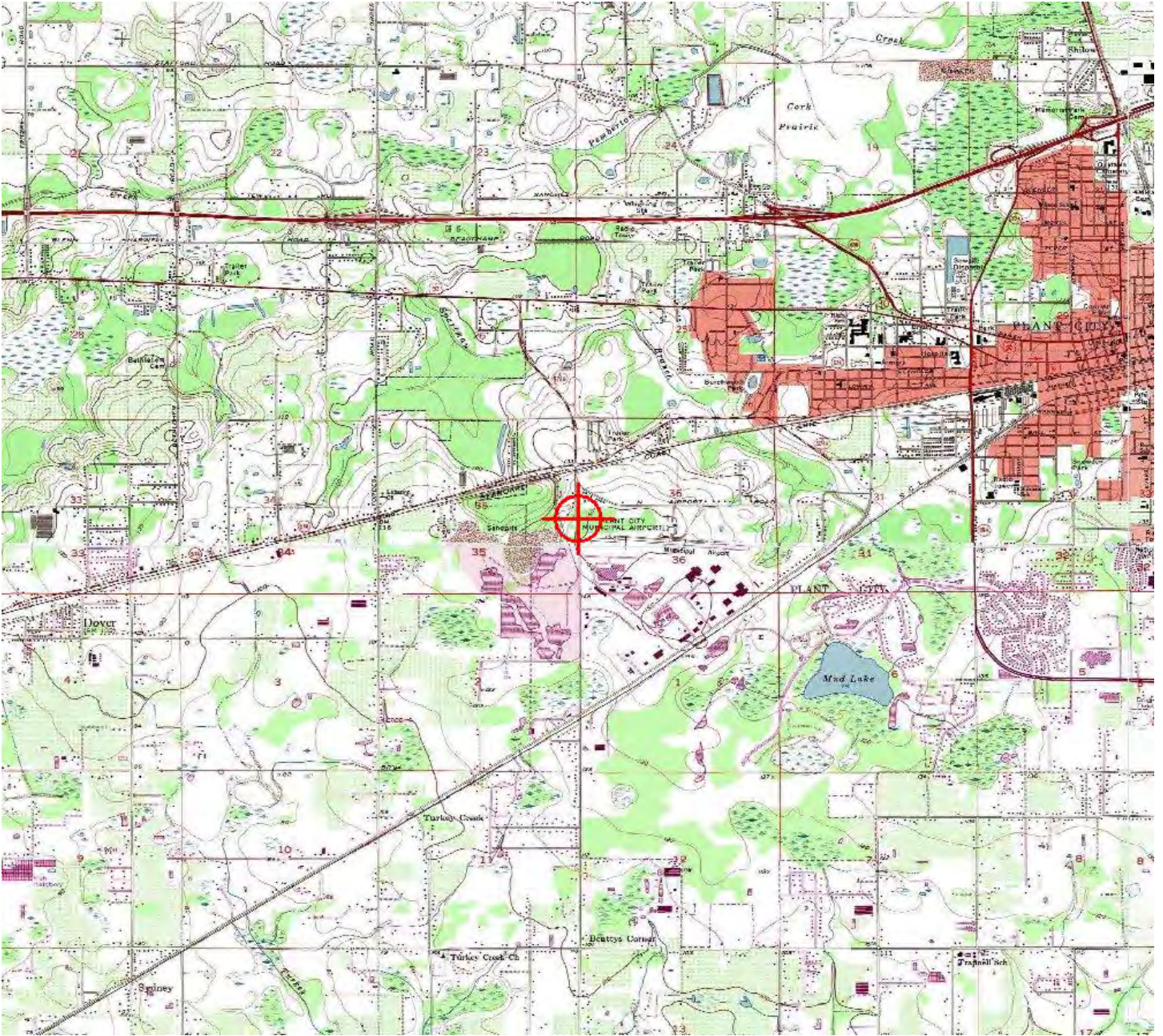
Signature Control No: 408469955-428579500

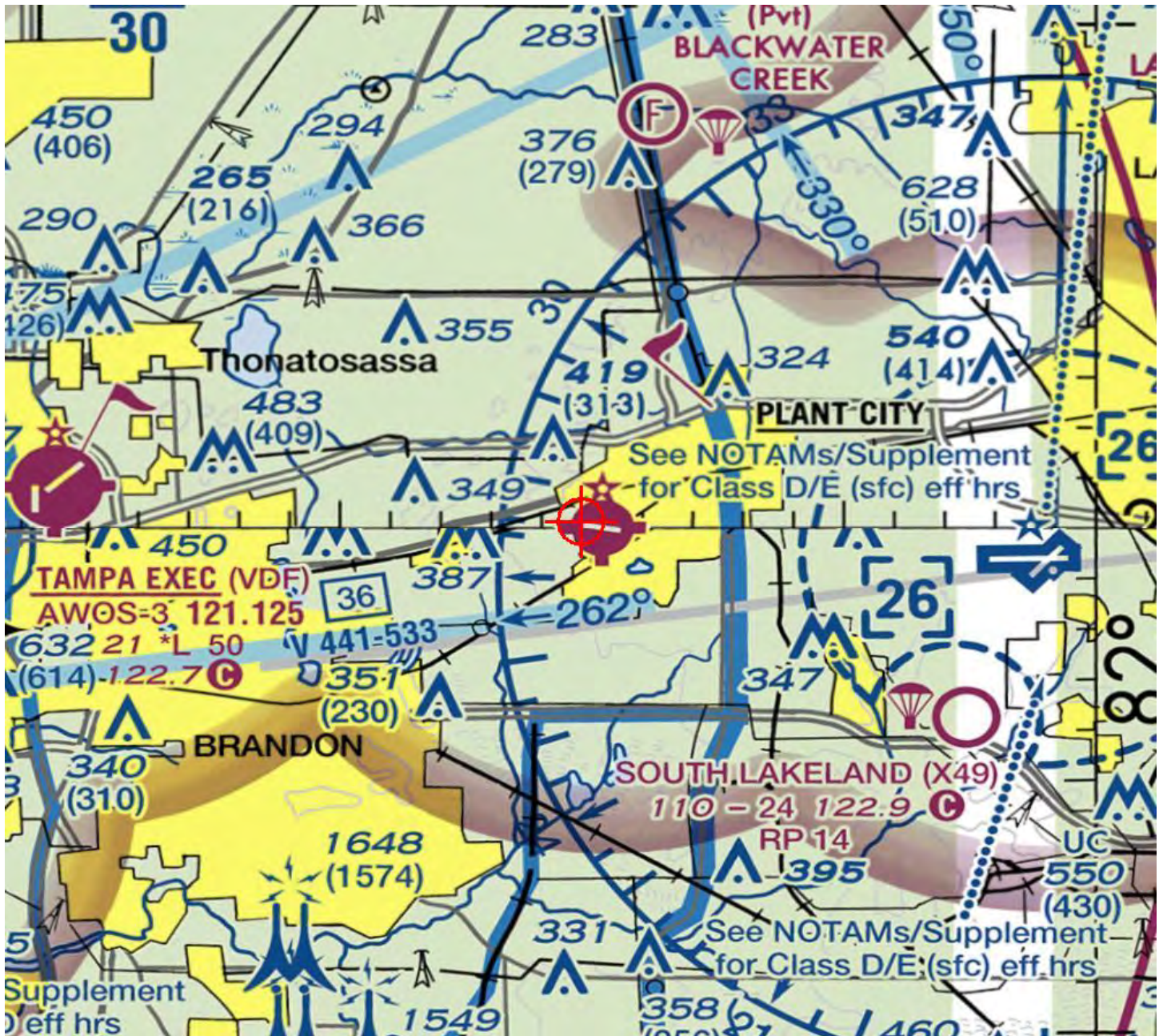
(DNE)

Vivian Vilaro
Specialist

Attachment(s)
Map(s)

TOPO Map for ASN 2019-ASO-19358-OE







Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2019-ASO-19359-OE

Issued Date: 01/22/2020

Thomas A Quinn, P.E.
 HDR ENGINEERING, Inc.
 5426 Bay Center Drive
 Suite 400
 Tampa, FL 33609

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Public Roadway Turkey Creek Road
 Location: Plant City, FL
 Latitude: 27-59-55.86N NAD 83
 Longitude: 82-10-13.53W
 Heights: 149 feet site elevation (SE)
 0 feet above ground level (AGL)
 149 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This aeronautical study included evaluation of a structure with an above ground level height that would at times be increased by the presence of mobile objects. For the purpose of this aeronautical study, the above ground level height was adjusted upward in accordance with 14 CFR 77.9(c) and the proposal was studied as a traverseway.

This determination expires on 07/22/2021 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.

- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-ASO-19359-OE.

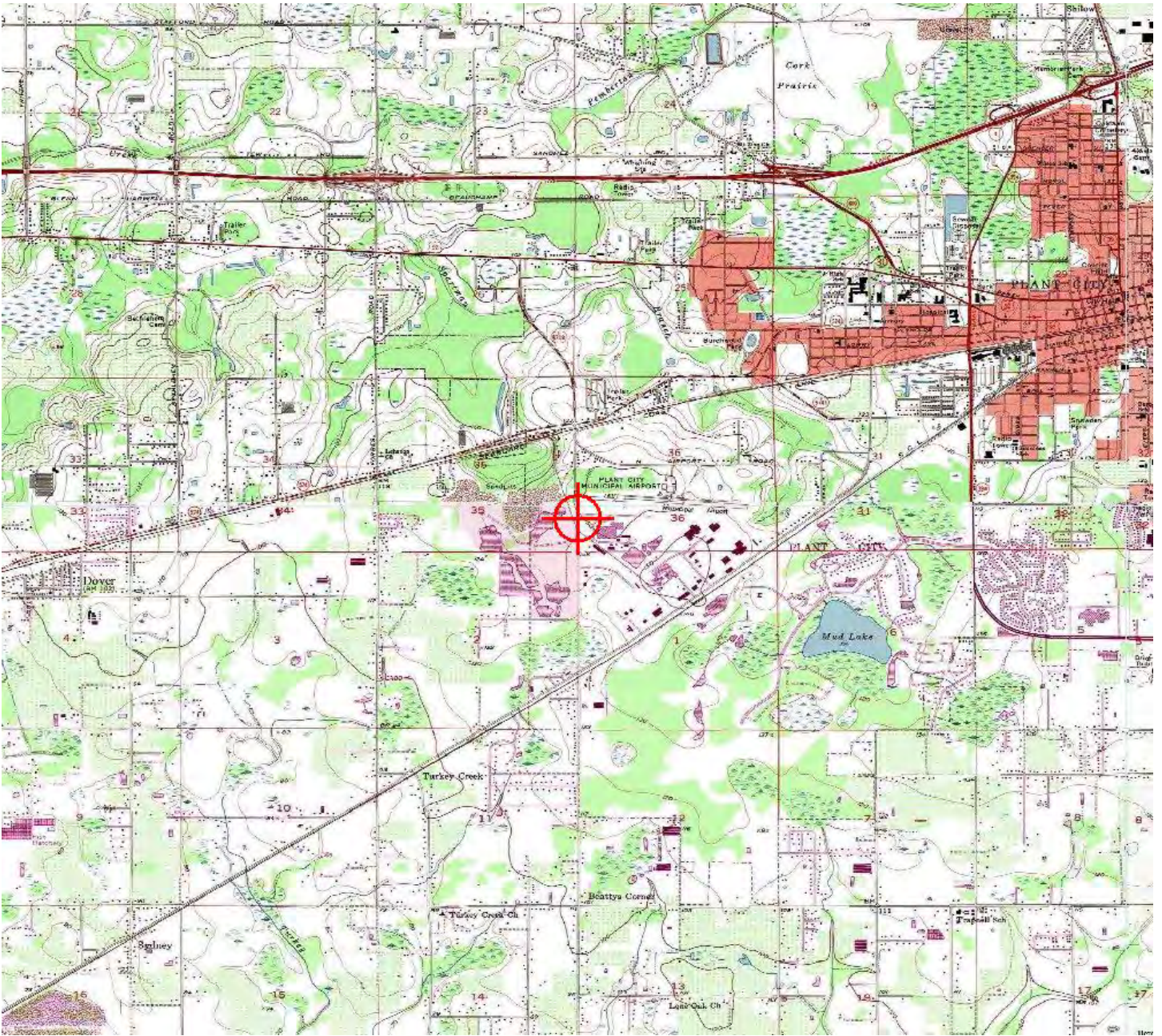
Signature Control No: 408469956-428579501

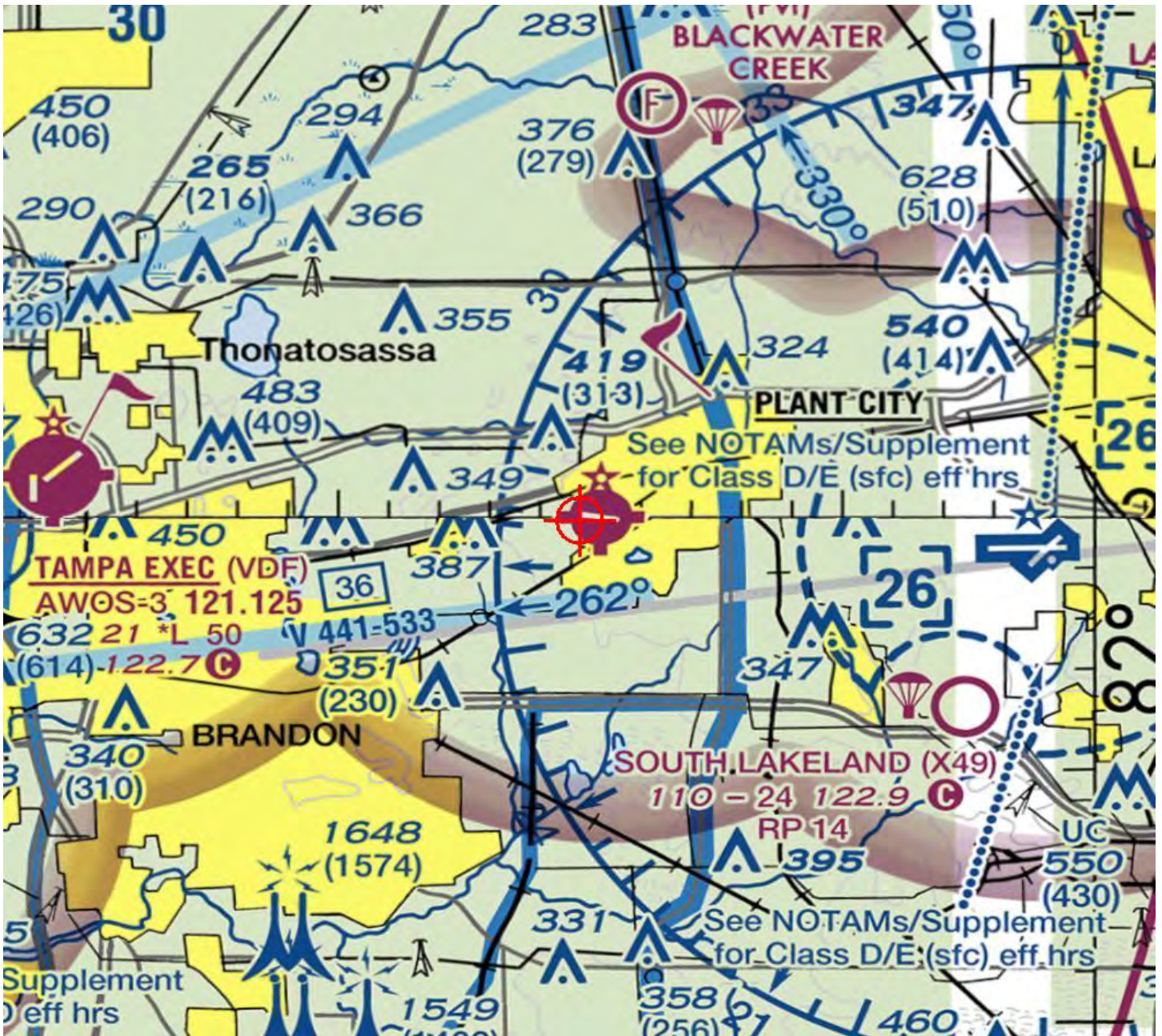
(DNE)

Vivian Vilaro
Specialist

Attachment(s)
Map(s)

TOPO Map for ASN 2019-ASO-19359-OE







U.S. Department
of Transportation
**Federal Aviation
Administration**

ORLANDO AIRPORTS DISTRICT OFFICE
8427 Southpark Circle., Suite 524
Orlando, Florida 32819-9058
Phone: (407) 487-7234 Fax: (407) 487-7135

March 30, 2020

Mr. Tony Mantegna
Lane Use & Height Zoning Manager
Tampa International Airport
PO Box 22287
Tampa, Florida 33622

Dear Mr. Mantegna:

RE: Plant City Airport – RWY 10/28 RPZ Analysis

This letter responds to your RPZ analysis package submitted to this office for review and coordination.

APP-400 and AAS-100 have reviewed the analysis and concur that the Airport has completed a sufficient level of analysis per the Interim Guidance. The triggering event for this analysis is the proposed widening of Turkey Creek Road, which currently traverses the Runway 10 Approach RPZ and Runway 28 Departure RPZ. The proposed road project adds a center turn lane, which will reduce driver delays, increase the turning radius, and improve the overall system operations and safety.

The Airport Sponsor, Hillsborough County Aviation Authority (HCAA), considered 12 RPZ alternatives. These alternatives include relocating the runway, relocating the Runway 10 threshold, displacing the Runway 10 threshold, lowering Turkey Creek Road, realigning Turkey Creek Road, and non-symmetrical widening of the roadway. Eight of the alternatives developed would allow for the City's planned widening of Turkey Creek Road while maintaining its current right-of-way alignment as it traverses through the existing Runway 10 Approach and Runway 28 Departure RPZ.

Alternative 2 was selected because it; eliminated the need for extensive land acquisition to relocate the runway either to the east or to the west, eliminated adverse environmental impacts from land disturbance outside of the existing right-of-way, and will not reduce the airport's capability to adequately serve the general aviation needs of the County.

If you have any questions, please contact me at (407)-487-7234.

Sincerely,

“ORIGINAL SIGNED BY”

Jenny Iglesias-Hamann, ACE
Community Planner



Peter O. Knight Airport
Plant City Airport
Tampa Executive Airport

July 3, 2019

Hillsborough County
Aviation Authority
P.O. Box 22287
Tampa, Florida 33622
phone/ 813-870-8700
fax/ 813-875-6670
TampaAirport.com

Jenny Iglesias-Hamann
Program Manager/Community Planner
Federal Aviation Administration
Orlando Airports District Office
8427 South Park Circle, Suite 524
Orlando, Florida 32819

Reference: **Widening of Turkey Creek Road
Plant City Public Works Department
Runway Protection Zone Alternatives Assessment
Plant City Airport**

Dear Ms. Iglesias-Hamann:

In accordance with the FAA memorandum issued in regards to "Interim Guidance on Land Use within a Runway Protection Zone", the Aviation Authority required the City of Plant City to do an Alternative Analysis for their project referenced above.

The current alignment of Turkey Creek Road traverses the Plant City Airport's Approach Runway Protection Zone (Approach RPZ) for Runway 10 and the Departure Runway Protection Zone (Departure RPZ) for Runway 28. The roadway is proposed to be widened to accommodate a turn lane. The widening of this road is very important to the overall future transportation needs within this area and the growth of Plant City Airport.

Based on the Alternatives submitted the Aviation Authority would support the Cities preferred Alternative #2 as long as it has no additional effect on utility of the airport. I have included supplemental information to assist you in your review.

Sincerely,

Anthony S. Mantegna
Height Zoning & Land Use Manager

Cc: Jeff Siddle
Brett Fay
Michael Thompson
Jennifer Ganley

Supplemental Information

Date: July 1, 2019

From: Tony Mantegna

Subject: Widening of Turkey Creek Road Alternatives Analysis

Impact to Plant City Airport:

City preferred Alternative #2 as discussed in the report is a viable alternative that is not believed to impact the current or future utility of the Airport. The Airport has made it very clear that we are not going to support any option that would reduce our utility. In order for the Airport to continue to grow from being a Utility Airport accommodating airport design group of B1 (small) to B2 and increasing the airports classification to “Other than utility” it is important that the airport cannot reduce runway length as identified in Alternatives #6, #10, and #12. Our current landing distance available for Runway 10 is 3,750 feet.

**Table 4-6
Aircraft Runway Length Requirements**

Aircraft	Code	Runway Length Requirement
King Air 90; A90-E90	B-II	3,700 feet
Super King Air 200	B-II	4,180 feet
Caravan 1-208 Super	B-II	4,180 feet
Citation CJ2	B-II	3,700 feet
Citation Excel/560XL	B-II	3,700 feet
Conquest/Conquest 2	B-II	3,700 feet
Commander 500	B-II	3,700 feet
Citation Jet C 525	B-I	3,700 feet

Source: AC 150/5324-4B, Runway Length Requirements for Airport Design.

Note: Runway length requirements based on mean daily temperature of the hottest month at the airport, 91.2 °F, and Plant City Airport elevation, 152.7 feet.

In the absence of information about specific aircraft runway length requirement ranges, Advisory Circular 150/5325-4B, Figure 2-1 and Figure 2-2 were utilized to determine specific runway length requirements.

**Table 3-6
Based Aircraft Forecast Percentiles**

Year	Single Engine	Multi Engine	Turboprop	Jet Engine	Helicopter	Total
2013	85%	13%	1%	1%	0%	100%
2018	84%	12%	2%	2%	0%	100%
2023	83%	11%	3%	2%	1%	100%
2028	79%	10%	6%	4%	1%	100%
2033	76%	10%	8%	5%	1%	100%

Source: URS, 2014.

Note: Derived forecast based on 2013 based aircraft information provided by Plant City Airport and forward-looking changes in fleet mix, based on planned future facility development.

**Table 3-13
Aircraft Operations Forecast Percentiles**

Year	Single Engine	Multi Engine	Turboprop	Jet Engine	Helicopter	Total
2013	93.84%	5.00%	0.11%	0.05%	1.00%	100%
2018	93.71%	4.99%	0.17%	0.08%	1.04%	100%
2023	93.50%	4.98%	0.28%	0.11%	1.12%	100%
2028	93.22%	4.97%	0.46%	0.16%	1.19%	100%
2033	92.82%	4.95%	0.73%	0.24%	1.26%	100%

Source: URS, 2014.

**Table 3-14
Aircraft Operations Forecast By Fleet Mix**

Year	Single Engine	Multi Engine	Turboprop	Jet Engine	Helicopter	Total
2013	46,342	2,469	54	27	494	49,386
2018	51,002	2,717	94	42	567	54,423
2023	54,200	2,888	164	66	651	57,969
2028	58,493	3,116	287	104	748	62,747
2033	63,191	3,367	500	162	858	68,078
AAGR 2013-2018	1.93%	1.93%	11.77%	9.37%	2.80%	1.96%
AAGR 2019-2023	1.14%	1.14%	11.77%	9.37%	2.80%	1.19%
AAGR 2024-2028	1.52%	1.52%	11.77%	9.37%	2.80%	1.58%
AAGR 2029-2033	1.56%	1.56%	11.77%	9.37%	2.80%	1.65%
AAGR 2013-2033	1.56%	1.56%	11.77%	9.37%	2.80%	1.62%

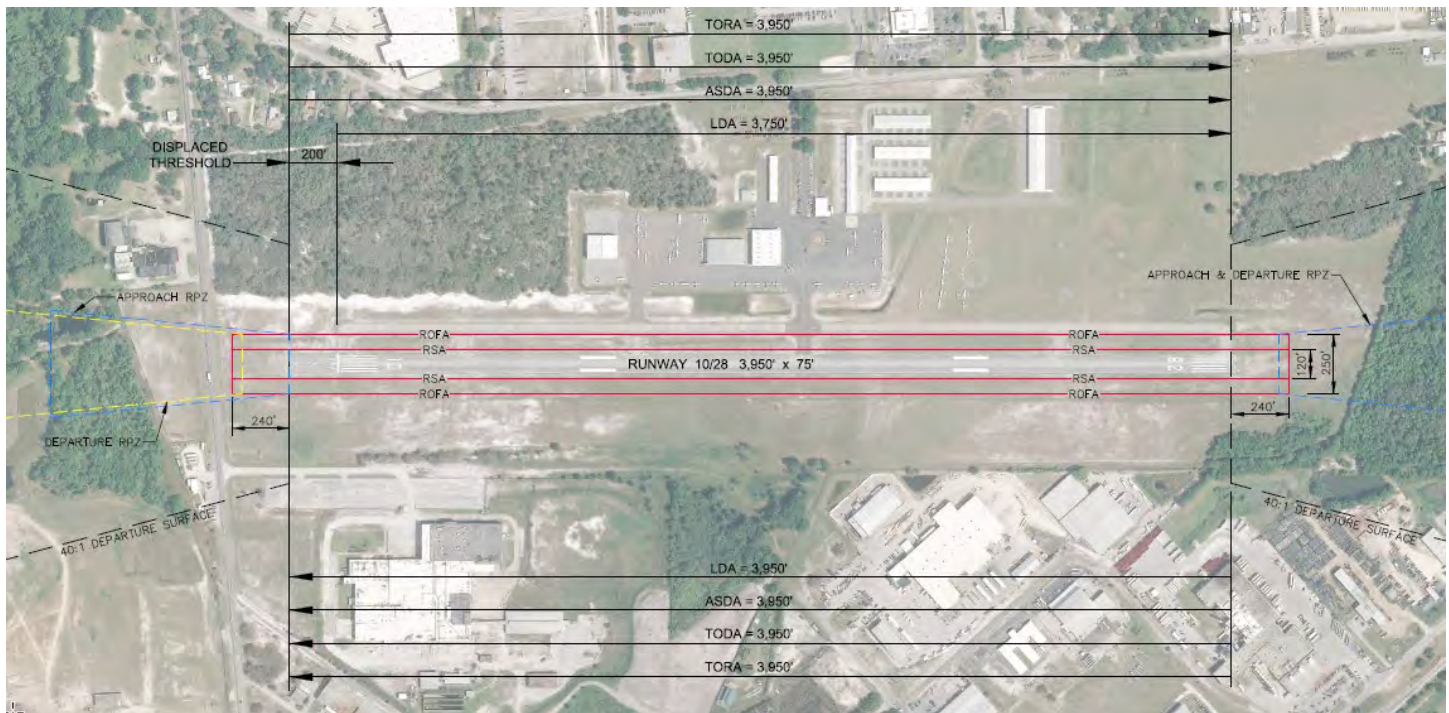
Source: URS, 2014.

Any further displacement to Runway 10-28 would have a number of negative impacts and produce operational hazards as identified in Alternatives #5, #7, #9, and #11. These alternatives would drastically reduce the utility of the airport and marketability that we are trying to be achieved through guidance provided by our Master Plan.

**Table 4-11
Existing Declared Distances - PCM**

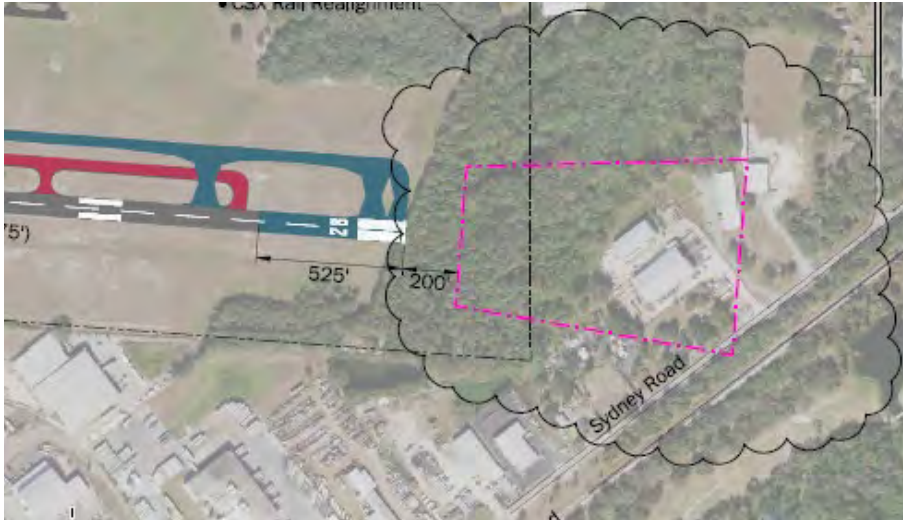
Runway	TORA (ft)	TODA (ft)	ASDA (ft)	LDA (ft)
10	3,950	3,950	3,950	3,750
28	3,576	3,576	3,950	3,950

Source: HCAA, August 2015.
Note: declared distances are not published



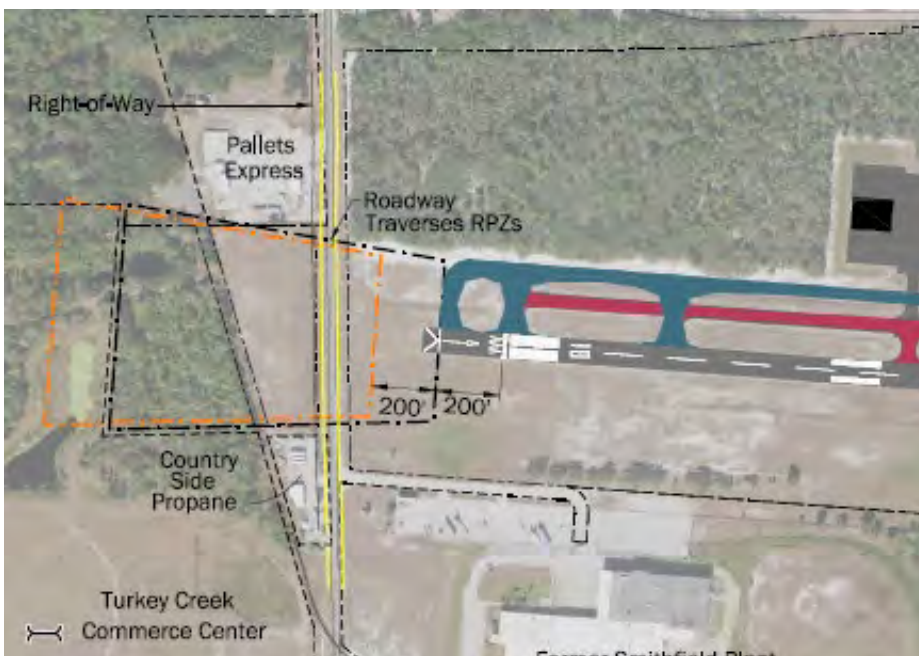
Runway Extension

Extending Runway 28 to the east to maintain runway length would produce operational hazards in Runway 28 RPZ. As identified in Alternatives #5, #7, and #11, Runway 28 RPZ would shift to the east which would introduce new structures and roadway impacts within the RPZ.



Plant City Airport Alternative

The only viable alternatives that could be evaluated without impact to the Runway system would be Alternatives #2 & #3. The cost impact associated with Alternative #3 does not provide any benefit or additional operational improvements over Alternative #2.



Instrument Operations

At such time that HCAA changes the Runway ARC from B-I Small to B-II, the inner width of each respective RPZ will increase from 250 feet to 500 feet, while the outer width will increase from 450 to 700 feet. The overall length of each respective RPZ will remain unchanged at 1,000 feet. When analyzing the total impact of the increase to the RPZ there would be little to no change associated with this project over existing conditions.

Runway 10-28 design standard is based on Approach Category A & B with not lower than a mile approach visibility which is not anticipated to change. The Following Tables show the forecasted instrument operations for Plant City Airport.

**Table 3-16
Aircraft Instrument Forecast Percentiles**

Year	Single Engine	Multi Engine	Turboprop	Jet Engine	Helicopter	Total
2013	68%	22%	6%	2%	2%	100%
2018	70%	20%	6%	2%	2%	100%
2023	71%	18%	7%	2%	2%	100%
2028	72%	16%	7%	3%	2%	100%
2033	72%	15%	8%	3%	2%	100%

Source: URS, 2014.

**Table 3-17
Aircraft Instrument Operations By Fleet Mix**

Year	Single Engine	Multi Engine	Turboprop	Jet Engine	Helicopter	Total
2013	487	158	43	14	14	716
2018	542	155	46	16	16	775
2023	597	151	59	17	17	841
2028	655	146	64	27	18	910
2033	710	148	79	30	20	987
AAGR 2013-2018	2.17%	0.33%	1.58%	1.58%	1.58%	1.58%
AAGR 2019-2023	1.94%	0.47%	4.83%	1.65%	1.65%	1.65%
AAGR 2024-2028	1.88%	0.77%	1.60%	10.18%	1.60%	1.60%
AAGR 2029-2033	1.64%	0.34%	4.40%	1.64%	1.64%	1.64%

Source: URS, 2014

**Table 3-16
Aircraft Instrument Forecast Percentiles**

Year	Single Engine	Multi Engine	Turboprop	Jet Engine	Helicopter	Total
2013	68%	22%	6%	2%	2%	100%
2018	70%	20%	6%	2%	2%	100%
2023	71%	18%	7%	2%	2%	100%
2028	72%	16%	7%	3%	2%	100%
2033	72%	15%	8%	3%	2%	100%

Source: URS, 2014.

**Table 3-17
Aircraft Instrument Operations By Fleet Mix**

Year	Single Engine	Multi Engine	Turboprop	Jet Engine	Helicopter	Total
2013	487	158	43	14	14	716
2018	542	155	46	16	16	775
2023	597	151	59	17	17	841
2028	655	146	64	27	18	910
2033	710	148	79	30	20	987
AAGR 2013-2018	2.17%	0.33%	1.58%	1.58%	1.58%	1.58%
AAGR 2019-2023	1.94%	0.47%	4.83%	1.65%	1.65%	1.65%
AAGR 2024-2028	1.88%	0.77%	1.60%	10.18%	1.60%	1.60%
AAGR 2029-2033	1.64%	0.34%	4.40%	1.64%	1.64%	1.64%

Source: URS, 2014

Conclusion

The above should provide enough supporting information on why Alternative #2 may be the best option. The proposed project is not on airport property nor is it land that we control. The current roadway is being expanded within the current roadway ROW. The Airport does not object to this project as long as it has no impact on the utility of the airport.

June 23, 2019

Mr. Tony Mantegna,
Height Zoning and Land Use Manager
Hillsborough County Aviation Authority
4160 George J. Bean Parkway
Tampa International Airport
2400 Administration Building, 2nd Floor Red Side
Tampa, FL 33607

SUBJECT: Letter of Transmittal - Plant City Airport Runway Protection Zone Alternatives Study

Mr. Mantegna:

The current location, alignment and section design of Turkey Creek Road in Plant City, Florida traverses the Plant City Airport's Approach Runway Protection Zone (Approach RPZ) for Runway 10 and the Departure Runway Protection Zone (Departure RPZ) for Runway 28. Turkey Creek Road is proposed to be widened or reconstructed within the limits of the RPZs. The preparation of a Runway Protection Zone Alternative Study for the Plant City Airport is needed to satisfy the FAA review and approval actions and to obtain local approval and permitting from the HCAA.

This *Plant City Airport Runway Protection Zone Alternatives Study* was jointly conducted by HDR Engineering, Inc. and Michael Baker International, Inc. in association with the Hillsborough County Public Works Department and the Plant City Public Works Department.

We hereby transmit an attached PDF copy of the above referenced Study to the Hillsborough County Aviation Authority for its submittal transmittal of same to the Federal Aviation Administration's Orlando Airport District Office for review and consideration.

If there are any questions, or if additional information is required, please feel free to contact me at (813) 466-6010.

Sincerely,
Michael Baker International, Inc.



Michael L. Thompson
Sr. Planner, Project Manager
cc: Philip Jufko, MBI
Tom Quinn, HDR

Technical Report

Plant City Airport Runway Protection Zone Alternatives Study

Prepared for:
Hillsborough County Aviation Authority
4100 George J. Bean Parkway, Tampa, FL 33607

In Association with:
Hillsborough County Public Works department
601 E. Kennedy Boulevard
Tampa, Florida 33601
and
Plant City Public Works Department
302 W. Reynolds Street,
Plant City, FL 33563

Prepared by:
Michael Baker International, Inc.
4211 W Boy Scout Blvd. Suite 500 | Tampa, FL 33607
and
HDR Engineering, Inc
4830 W. Kennedy Blvd., Suite 400
Tampa, FL 33609
June 13, 2019

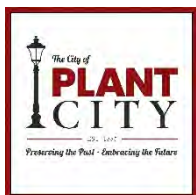


Table of Contents

1.0 Introduction and Findings.....	1
1.1 Runway Protection Zone Alternatives Considered	1
1.2 Study Findings	2
2.0 Proposed Roadway System Improvements and Demonstration of Need	4
3.0 Turkey Creek Road Conditions and Proximity to Plant City Airport	5
4.0 Description of Plant City Airport	6
4.1 Current Aeronautical Role and Operational Capabilities	6
4.2 Planned Future Enhancement of Airfield and Operational Capabilities	6
4.3 Local Meteorological Conditions	6
5.0 Runway Protection Zones and Protection of Navigable Airspace.....	7
5.1 Runway Protection Zones.....	7
5.2 HCAA Protection of Land Uses Within Runway Protection Zones.....	7
5.3 HCAA Protection and Preservation of Navigable Airspace.....	8
6.0 Runway Protection Zone Alternatives Analysis.....	9
6.1 FAA’s Need for RPZ Alternative Analysis	9
6.2 HCAA’s Need for RPZ Alternatives that Preserve and Protect Navigable Airspace	9
6.3 Formulation of RPZ Alternatives	10
Alternative 1: No Action.....	11
Alternative 2: Preferred Alternative / Proposed Action.....	13
RPZ Alternative 3: Limited Widening West Side of Turkey Creek Road to Mitigate Impacts to RPZ and Airport.....	16
RPZ Alternative 4: Partial Westward Realignment of Turkey Creek to Achieve Full Avoidance of RPZ.....	19
RPZ Alternative 5: Relocate Runway to Clear Departure Surface and Mitigate Impacts to Airport.....	22
RPZ Alternative 6: Relocate West End of Runway 10-28 Eastward to Achieve Full Avoidance of RPZ.....	25
RPZ Alternative 7: Relocate Runway 10-28 Eastward to Achieve Full Avoidance of RPZ.....	28
RPZ Alternative 8: Lowering Turkey Creek Road to Achieve Mitigation of Existing Airspace Penetration Issues.....	31
RPZ Alternative 9: Further Displace Runway 10 Threshold to Clear Approach Surfaces and Mitigate Impacts to Airport	34
RPZ Alternative 10: Eastward Relocation of Runway 10-28 West End to Clear Approach Surfaces and Mitigate Impacts to Airport.....	37

RPZ Alternative 11: Eastward Relocation of Runway 10-28 to Clear Approach Surfaces and Mitigate Impacts to Airport	40
RPZ Alternative 12: Relocate West End of Runway to Clear Departure Surface and Mitigate Impacts to Airport	43
7.0 Technical References	45

Figures

Figure 1: RPZ Alternative 1 - No Action	12
Figure 2: RPZ Alternative 2 - Preferred Alternative.....	15
Figure 3: RPZ Alternative 3 - Limited West Side Widening of Turkey Creek Road	18
Figure 4: RPZ Alternative 4 - Partial Westward Realignment of Turkey Creek Road.....	21
Figure 5 RPZ Alternative 5 - Relocate Runway to Clear Departure Surface.....	24
Figure 6: RPZ Alternative 6 - Relocate West End of Runway 10-28 Eastward.....	27
Figure 7: RPZ Alternative 7 - Relocate Runway 10-28 Eastward.....	30
Figure 8: RPZ Alternative 8 - Lowering Turkey Creek Road	33
Figure 9: RPZ Alternative 9 - Further Displace Runway 10 Threshold to Clear Approach Surfaces.....	36
Figure 10: RPZ Alternative 10 - Eastward Relocation of Runway 10-28 West End to Clear Approach Surfaces.....	39
Figure 11: RPZ Alternative 11 - Eastward Relocation of Runway 10-28 to Clear Approach Surfaces ..	42
Figure 12: RPZ Alternative 12- Relocate West End of Runway to Clear Departure Surface.....	44

1.0 Introduction and Study Findings

This *Plant City Airport Runway Protection Zone Alternatives Study* was jointly conducted by HDR Engineering, Inc. and Michael Baker International, Inc. for submittal to the Hillsborough County Aviation Authority and the Federal Aviation Administration's (FAA) Orlando Airport District Office. The Study also includes the preparation of necessary Hillsborough County Aviation Authority (HCAA) and FAA permit applications / FAA Form 7460-1, *Notice of Proposed Construction or Alteration*; necessary engineering and plan revisions to the Turkey Creek Road Widening plans; and incidental engineering services.

The current location, alignment and section design of Turkey Creek Road (the roadway) traverses the Plant City Airport's Approach Runway Protection Zone (Approach RPZ) for Runway 10 and the Departure Runway Protection Zone (Departure RPZ) for Runway 28. Turkey Creek Road is proposed to be widened or reconstructed within the limits of the RPZs. The preparation of a Runway Protection Zone Alternative Study for the Plant City Airport is needed to satisfy the FAA review and approval actions and to obtain local approval and permitting from the HCAA.

1.1 Runway Protection Zone Alternatives Considered

To address and adhere to the FAA guidance regarding the identification and assessment of existing and proposed land use changes within the Runway 10 Approach RPZ and Runway 28 Departure RPZ created by the proposed widening of Turkey Creek Road, a total of twelve RPZ Alternatives were identified as candidates by the City and Michael Baker International for consideration and assessment as part of this Study. Each of the twelve RPZ Alternatives are based upon the HCAA's planned future airfield improvements and the related change in the airport's *B-II* ARC and *Other Than Utility* Classification.

Five RPZ Alternatives were offered by the City/County and an additional seven RPZ Alternatives were developed by Michael Baker International through discussions with HCAA representatives.

City/County RPZ Alternatives

- Do Nothing Alternative - A single "Do Nothing" Alternative (Alternative 1) was offered by the City to illustrate the relative adverse impact that would be imposed to the City's Surface Transportation Program as it related to the proposed improvement to Turkey Creek Road.
- Maintaining Current Right of Way Alignment Alternatives - Three RPZ Alternatives (Alternatives 2, 3 and 8) were offered by the City that would each allow for the City's planned widening of Turkey Creek Road while maintaining its current right-of way alignment as it traverses through the existing Runway 10 Approach Runway RPZ and Runway 28 Departure RPZ. Each of these RPZ Alternatives, however, would not serve to eliminate the roadway's traversing of each respective RPZ, nor would they serve to minimize the impact of the land use in the RPZ (i.e., routing a new roadway through the controlled activity area, or move the roadway farther away from the runway end.)

- Full Avoidance of RPZ Alternative – A single RPZ Alternative (Alternative 4) was offered by the City included the partial westward realignment of Turkey Creek Road to the extent necessary (approximately 1,200 feet) to fully avoid the Runway 28 Departure RPZ.

Michael Baker International RPZ Alternatives

- Current Right of Way Alignment Alternatives - Five RPZ Alternatives (5, 9, 10, 11, and 12) were developed by Michael Baker International that would each allow for the City’s planned widening of Turkey Creek Road while maintaining its current right-of way alignment as it traverses through the existing Runway 10 Approach Runway RPZ and Runway 28 Departure RPZ. These Alternatives, however, would not serve to eliminate the roadway’s traversing of each respective RPZ, nor would they serve to minimize the impact of the land use in the RPZ. These five RPZ Alternatives would also not serve to ameliorate existing non-standard minimum vertical clearance conditions between the proposed widened Turkey Creek Road eastern-most (northbound) travel lane and planned future protections of overlying navigable airspace serving approached to and departures from the west end of the runway.
- Full Avoidance of RPZ Alternatives - Two RPZ Alternatives (6 and 7) were developed by Michael Baker International that would fully avoid the traversing of the Runway 10 Approach RPZ and the Runway 28 Departure RPZ. These RPZ Alternatives included the partial eastward relocation of the west end of the runway and the wholesale eastward relocation of the entire runway.

1.2 Study Findings

Of the twelve Runway Protection Zones Alternatives developed and considered as part of this *Plant City Airport Runway Protection Zone Alternatives Study*, the City/County’s *Alternative 2: Preferred Alternative / Proposed Action* that served to fully address needed improvements of Turkey Creek Road to enhance external access between the Plant City Airport Industrial Park and Interstate 4 was considered by the City/County to represent a prudent and viable project development alternative as was selected to be offered to the FAA for consideration and assessment.

Primary considerations for the rejection of all but the *Preferred Alternative / Proposed Action* Alternative included, but were not limited to the following potential adverse planning elements or impacts:

- Increased project costs,
- Increased time to redevelop and complete an alternative project that would fully satisfy the City/County’s transportation improvement needs,
- Very high potential for public controversy,
- Extensive land acquisition related to:
 - realignment of Turkey Creek Road west of the airport,
 - realignment of Sydney Road and CSX Railroad located east of the airport

- local in-kind relocation of light industrial, commercial and residential dwellings,
 - extensive relocation and/or likely bifurcation of a residential community,
- Full or partial taking of private commercial and residential land and related land uses for public use via eminent domain,
- High potential to reduce the airport's capability to adequately serve the general aviation needs of eastern Hillsborough County and that of the CFASPP West Central Metro Area,
- Adverse environmental impacts to non-disturbed lands, and
- High level of environmental due diligence, permitting, mitigation and associated NEPA involvement and Determinations.

2.0 Proposed Roadway System Improvements and Project Need

Plant City is in Hillsborough County, Florida approximately midway between the unincorporated community of Brandon and the City of Lakeland along Interstate 4. The City's Surface Transportation Program includes the improvement of Turkey Creek Road to enhance external access between the Plant City Airport Industrial Park and Interstate 4. The Project includes the realignment of Airport Road, and section design improvements to Sydney Road and Turkey Creek Road. Collectively, the City's Project includes the realignment and associated improvements to existing right-of-ways and the associated overhead and/or underground (buried) utility systems of the three different roads. The project is jointly funded by the City and County since it includes improvements to City's (Airport Road and Sydney Road) and County's (Turkey Creek Road) facilities.

The entirety of the City's proposed Surface Transportation Program is fully described in the *Project Concept Report for the Airport Road Realignment, Sydney Road and Turkey Creek Road Improvements Hillsborough County, Florida* as prepared for the Plant City Public Works Division by HDR Engineering, Inc., Tampa, Florida dated April 2016 (Updated November 2018). The Project includes the widening of 1.4 miles of Turkey Creek Road from 2-lanes to 3-lanes beginning immediately south of the CSX Railroad right-of-way (i.e. south of SR 574 / Martin Luther King Boulevard) southward to Sydney Road, addition of westbound-to-northbound right turn lane along Sydney Road merging onto Turkey Creek Road, realignment of 800 feet of Airport Road and installation of mast arm traffic signals at the Turkey Creek / Airport Road intersection. Due to the constrained right-of-way width (70 feet to 85 feet) along the north end of Turkey Creek Road, an urban (curb and gutter) section is proposed. A rural section with flush shoulders and parallel ditches is proposed along Sydney Road, realigned Airport Road and the remaining 1.2 miles of Turkey Creek Road (100' right-of-way width).

According to the City's Project description, "industrial traffic within this segment of Turkey Creek Road has resulted in increased delays as the flow of trucks enter and exit the various industrial sites. The addition of a center turn lane will reduce driver delays while increasing turning radii and improving overall system operation. The signal [Airport Road] will enhance traffic safety". The Design Speed of each existing road is 45 miles per hour (mph) (urban) and 50 mph (rural) along Turkey Creek Road, 45 mph (rural) along Sydney Road and 40 mph (rural) along Airport Road. The proposed improvements will provide a continuous two-way left-turn lane along Turkey Creek Road which will allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The proposed typical Turkey Creek Road section north of Plant City Airport includes a 3-lane undivided urban section with two 12-foot wide travel lanes, a 12-foot wide center two-way left-turn lane, 4-foot wide bicycle lanes, curb and gutter, curb inlets and an underground storm sewer system. The proposed typical section, for the remainder of the project, includes a 3-lane undivided rural widening section with two 12-foot wide travel lanes, a 12-foot wide center two-way left-turn lane, 10-foot wide shoulders (5-foot paved), side slopes and parallel ditches. Stormwater ponds are located north and south of the double 54-inch cross drain near Sydney Road and in the northeast corner of the Turkey Creek Road / realigned Airport Road intersection.

The \$6.4 million project is jointly-funded by Hillsborough County and the City of Plant City. Construction is planned to begin in late 2019.

3.0 Turkey Creek Road Conditions and Proximity to Plant City Airport

Turkey Creek Road (the roadway) is listed as a “Collector” by the City and County and has a posted speed limit of 45 mph. The right-of-way width along Turkey Creek Road varies from 70 feet (south of Airport Road) to 85 feet (north of Airport Road to CSX RR) and is 60 feet wide along Airport Road. The remainder of the roadway (including the portion adjacent to the Plant City Airport) has right-of-way width of 100 feet. The roadway has a 2-lane rural section with a 3-lane urban section approaching Martin Luther King Boulevard on the north end and has a northbound right-turn lane approaching Airport Road. Airport Road has a 2-lane rural section throughout its length and a skewed intersection with Turkey Creek Road. Sydney Road has a 2-lane rural section throughout its length. Pavement condition along the roadway is “good” with minor rutting and cracking, drop-offs, and unpaved shoulders. Airport Road has more cracking and is in “fair” condition.

The roadway is identified as an “enhanced 2-lane facility” on the Hillsborough County Metropolitan Planning Office’s (MPO) *2035 Long Range Transportation Plan*. The proposed improvements are expected to enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses. Widening this facility is a high priority for Plant City and Hillsborough County, which added the Project to its list as CIP 69625000 in 2010. The roadway is part of a *Freight Mobility Corridor* that connects the Plant City Airport Industrial Park to Interstate 4. The MPO’s *2035 Freight Mobility Technical Memorandum* indicates that congestion is a major problem within the corridor, which is heavily used by large trucks. Approximately 460 heavy trucks use the roadway each day. The Turkey Creek intersections with Sydney Road (#30) and Airport Road (#31), were noted as a freight “hot-spots”.

Drainage includes parallel ditches with side drains; the area surrounding the Turkey Creek / Airport intersection drains toward the north (Pemberton Creek basin) and outfalls into the railroad ditch. Overall the Project has two drainage basins (divide by CSX spur line crossing) draining to the north (Pemberton Creek basin) and to the south (Alafia River basin), respectively. A double 54-inch cross drain is located about 950 feet north of Sydney Road.

The roadway has overhead electric, CATV, buried telephone and sanitary sewer along the west side; and potable water and natural gas along the east side. Near the Plant City Airport runway (north of Lykes Road) all overhead utilities are buried.

4.0 Description of Plant City Airport

4.1 Current Aeronautical Role and Operational Capabilities

The Plant City Airport is one of three general aviation airports owned and operated by the HCAA and serves the general aviation needs of eastern Hillsborough County. The airport has a single paved and lighted runway (Runway 10-28) that is 3,950 feet in length and 75 feet in width. Due to its proximity to the Lakeland Linder Regional Airport (LAL), the airport accommodates recurring increased levels of flight operations and parking by visiting aircraft owners that are directly associated with and influenced by the Experimental Aircraft Association's Sun 'n Fun Fly-In and Expo that occurs each Spring at the Lakeland Linder International Airport at Lakeland, Florida.

The airport is currently classified as being a "Utility Airport" having an Airport Reference Code (ARC) capable of accommodating aircraft having an Airplane Approach Category speed of "B" and an Airport Design Group of I (Small).

4.2 Planned Future Enhancement of Airfield and Operational Capabilities

As part of its 20-year Plant City Airport Master Plan, the HCAA intends to make certain airfield improvements to enhance the airport's capability to accommodate increased sustained operations by larger cabin-class general aviation aircraft. Accordingly, a future B-II ARC is planned that would also serve to increase the airport's classification to "Other than utility"

To safely and efficiently accommodate these increased operations by larger cabin-class general aviation aircraft, HCAA plans to increase the airport's airfield runway-to-taxiway centerline-separation from 150 feet to 240 feet at such time that sustained operational levels by larger aircraft dictate the timing for such improvements.

4.3 Local Meteorological Conditions

The airport experiences recurring seasonal local temperatures during the month of July that have a direct and adverse affect upon aircraft operational performance capabilities and associated runway takeoff and landing length requirements. Any planned future decrease available runway length to support arrival or departure operations by larger cabin-class general aviation aircraft will directly and adversely affect the overall capability and aeronautical utility of the airport.

5.0 Runway Protection Zones and Protection of Navigable Airspace

5.1 Runway Protection Zones

The Runway Protection Zone (RPZ) is trapezoidal in shape and centered about the extended runway centerline at ground level to enhance the safety and protection of people and property on the ground. An Approach RPZ begins 200 feet prior to the approach end of the runway, or 200 feet prior to its displaced threshold. The Departure RPZ begins 200 feet beyond the departure end of the runway.

Each RPZ is divided into two separate sub areas, the *Central Portion* and *Controlled Activity Area*. The Central Portion of the RPZ that extends from the beginning to the end of the RPZ, centered on the runway centerline. Its width is equal to the width of the Runway Object Free Area (ROFA). The Controlled Activity Area that is the remaining area of the RPZ on either side of the central portion of the RPZ.

The size, location and geographical dimensions of Runway Protection Zones are specific to each runway end and type of operation (e.g., arrival or departure), the runway's designated Airplane Design Group (I through VI) and published runway approach visibility minimums as defined in FAA Advisory Circular 150/5300-13, *Airport Design*. Based on the current Runway ARC from B-I (Small), the dimensional size of existing Approach RPZ and Departure RPZ are identical having an inner width of 250 feet, an outer width of 450 feet, and a length of 1,000 feet. The Departure Runway Protection Zones for Runways 10 and 28 and the Approach RPZ for Runway 28 begin 200 feet beyond the usable end of each runway, the Approach Runway Protection Zone for Runway 10 begins 200 feet prior to the Runway 10's 200-foot Displaced Threshold.

At such time that HCAA changes the Runway ARC from B-I Small to B-II, the inner width of each respective RPZ will increase from 250 feet to 500 feet, while the outer width will increase from 450 to 700 feet. The overall length of each respective RPZ will remain unchanged at 1,000 feet.

5.2 HCAA Protection of Land Uses Within Runway Protection Zones

Per Florida Statute 333, *Airport Zoning*, Section 333.03, *Requirement to adopt airport zoning regulations*, the Hillsborough County Aviation Authority (HCAA) has established, administered and enforced the *Airport Zoning Regulations* for Tampa International Airport, Tampa Executive Airport, Peter O. Knight Airport, and Plant City Airport dated June 1, 2017 as adopted per Resolution Number: 2017-37. Sections 4.01, *Land Use Compatibility Review* and 4.02, *Airport Compatibility Zoning* of these regulations serve to protect people and property on the ground and preserve the safe and efficient use of the airport utilizing established two-dimensional trapezoidal-shaped land areas called Approach Runway Protection Zones and/or Departure Runway Protection Zones.

5.3 HCAA Protection and Preservation of Navigable Airspace

The Plant City Airport is served by both space-based (i.e., *Wide Area Augmentation System*, or WAAS) and traditional ground-based (i.e., traditional legacy) navigational aids that provide pilots the capability to navigate to the approach end of the runway during periods of low cloud base and/or reduced horizontal visibility conditions.

Runway 10 and Runway 28 are each served by WAAS-enabled non-precision RNAV (GPS) Instrument Approach Procedures (IAPs) offering Localizer Performance with Vertical Guidance (LPV) capabilities that provide above ground level cloud base ceiling height minimums of 302 and 261 feet, respectively, and a common horizontal visibility minimum of 1 statute mile.

While the planned future use of LPV IAPs for each runway end will remain unchanged, the planned change in Runway ARC from B-I Small to B-II will increase the size and flatten the slope of the trapezoidal-shaped three-dimensional CFR part 77 Approach Surfaces.

6.0 Runway Protection Zone Alternatives Analysis

6.1 FAA's Need for RPZ Alternative Analysis

On September 27, 2012, the FAA's Office of Airports (ARP) published a Memorandum titled: *Interim Guidance on Land Uses Within a Runway Protection Zone* to clarify their policy on land uses within Runway Protection Zones (RPZ). The Memorandum provides interim policy guidance on compatible land uses within RPZs to address recurrent questions about what constitutes a compatible land use and how to evaluate proposed land uses that would reside in an RPZ. While FAA Advisory Circular (AC) 150/5300-13 A, Change 1, Airport Design notes that "it is desirable to clear all objects from the RPZ," the FAA acknowledges that "some uses are permitted" with conditions and other "land uses are prohibited."

- This interim policy only addresses the introduction of new or modified land uses to an RPZ and proposed changes to the RPZ size or location. The FAA Regional Office (RO) and Airports District Office (ADO) staff must consult with the FAA's National Airport Planning and Environmental Division, APP-400 in the FAA's Washington, D.C. Headquarters when any of the land uses described in the in Table I, (Land Uses Requiring Coordination with APP-400) of that memorandum would enter the limits of the RPZ as the result of:
 - An airfield project (e.g., runway extension, runway shift),
 - A change in the critical design aircraft that increases the RPZ dimensions,
 - A new or revised instrument approach procedure that increases the RPZ dimensions, and
 - A local development proposal in the RPZ (either new or reconfigured).

A bulleted item of that Table, Transportation Facilities, includes the reference to "Public Roads and Highways".

Prior to contacting APP-400, the FAA's RO and ADO staff must work with the Airport Sponsor (HCAA) to identify and document the full range of alternatives that could:

- Avoid introducing the land use issue within the RPZ,
- Minimize the impact of the land use in the RPZ (i.e., routing a new roadway through the controlled activity area, move farther away from the runway end, etc., and
- Mitigate risk to people and property on the ground (i.e., tunneling, depressing and/or protecting a roadway through the RPZ, implement operational measures to mitigate any risks, etc.).

6.2 HCAA's Need for RPZ Alternatives that Preserve and Protect Navigable Airspace

In addition to the FAA's guidance on land uses within RPZs, the HCAA identified the need to address and assess potential adverse operational impacts to the airport that might be imposed by the Turkey Creek Road travel lane improvements, particularly with respect to the widening the roadway to the east.

Because of the HCAA's need to provide a minimum 15-foot vertical clearance between the closest (northbound) travel lane of Turkey Creek Road and overlying protection of navigable airspace, the

Runway 10 Threshold location is displaced 200 feet to the east. Accordingly, the Runway 10 Approach RPZ is not coincidental to the location of the Runway 28 Departure RPZ that begins 200 feet beyond the west usable end of the runway. Consequently, when considering and/or assessing RPZ Alternatives that would serve to fully avoid or preclude the traversing of either RPZ located beyond the west end of the runway, the western-most RPZ (i.e., Runway 28 Departure RPZ) should be primarily considered.

With the HCAA's goal to preserve and protect navigable airspace while also retaining its future to enhance the aeronautical role and capability of the airport, the Study also included and assessed RPZ Alternatives developed by Michael Baker International that were based upon various potential changes to the Runway 10-28 operating environment.

6.3 Formulation of RPZ Alternatives

The following sections describe the twelve RPZ Alternatives, respective associated attributes, and their direct effects upon either fully eliminating non-compatible land uses within the RPZs, or their respective ability to ameliorate existing non-standard vertical clearances between the roadway and overlying protected navigable airspace surfaces.

The development and consideration of each RPZ Alternative considered included:

- A description and graphical depiction of each RPZ Alternative,
- The HCAA's planned future development of airport facilities and the related (two-dimensional) dimensional size and shape of each Approach RPZ and Departure RPZ that fully satisfy FAA's B-II *Other Than Utility* Classification design criteria,
- Practicability assessment based on the feasibility of the Alternative in terms of roadway improvement and airport development costs, non-Turkey Creek Road relocation and constructability costs, potential for taking of private commercial and residential land and related land uses for public use via eminent domain, environmental issues and concerns, and other factors,
- Identification of the potential RPZ Alternatives developed by Michael Baker International that would meet the Project's purpose and need while preserving the safe and efficient use of the airport.

Alternative 1: No Action

This RPZ Alternative assumes that the City/County does not undertake improvements to Turkey Creek Road or its right-of-way and that no associated physical changes would occur immediately west of and adjacent to the Plant City Airport as the roadway traverses the extended Runway 10-28 centerline.

This RPZ Alternative is shown in **Figure 1: Alternative 1 - No Action (Null Alternative)**.

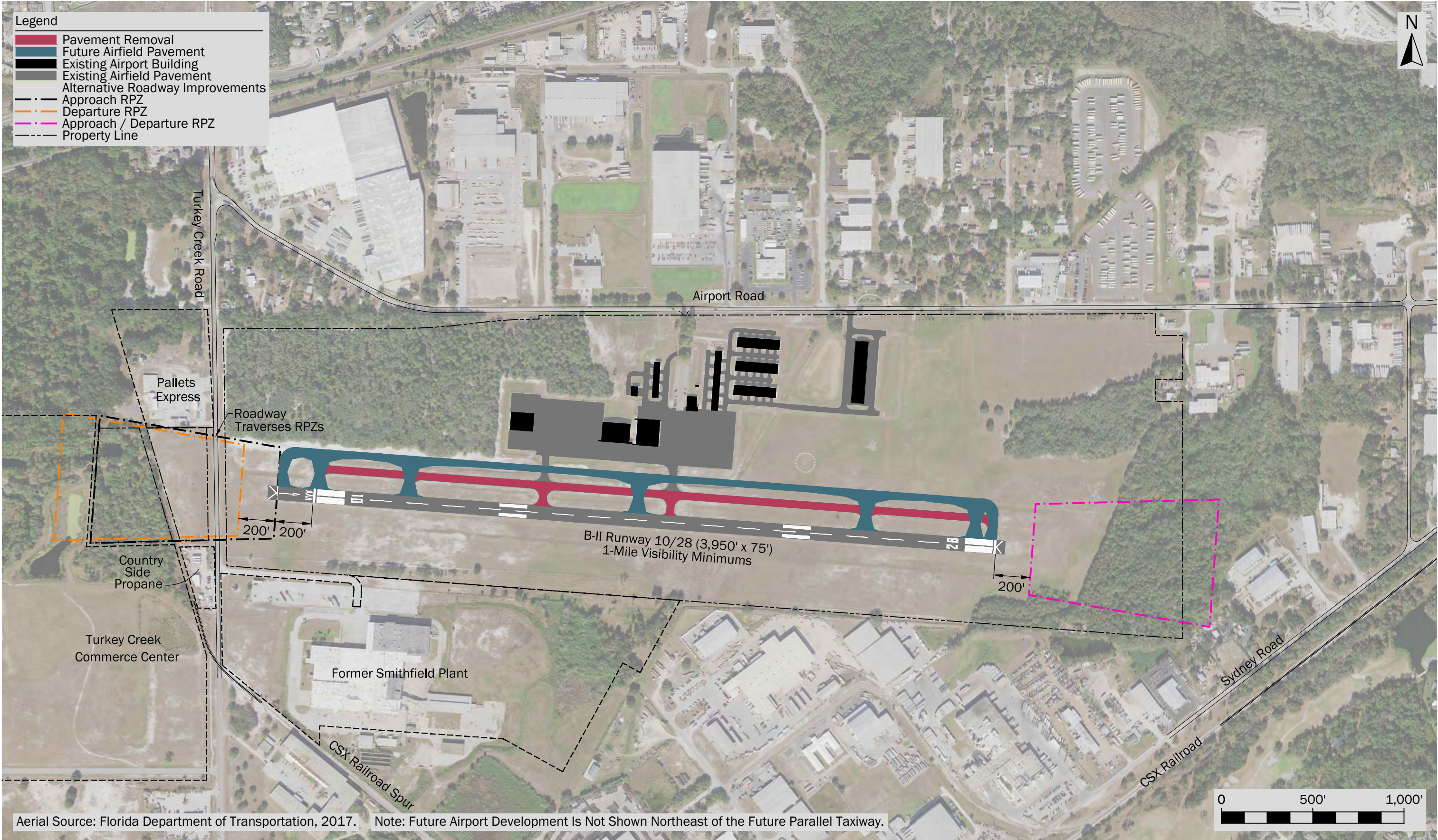
This RPZ Alternative would not satisfy the City/County's need to:

- enhance freight-related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses,
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and/or
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

This RPZ Alternative would:

- not change or adversely affect the safe and efficient operation the Plant City Airport, and
- not eliminate adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the current alignment of the Turkey Creek Road right-of-way.

The RPZ Alternative was rejected by the City/County and was considered a non-viable and impracticable solution since it does not satisfy the City's Surface Transportation Program or the Hillsborough County MPO's 2035 Long Range Transportation Plan to enhance external access between the City's Plant City Airport Industrial Park and Interstate 4.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\01_Alternative 1 - The No Action Alternative.dwg June 13, 2019 - 10:26

Figure 1
 Alternative - 1 No Action
 (Null Alternative)

Alternative 2: Preferred Alternative / Proposed Action

This RPZ Alternative involves the City/County's symmetrical-widening of Turkey Creek Road seven feet on each side along and completely within the lateral limits of its existing 100-foot-wide County-owned right-of-way. This roadway widening Alternative would increase the section from two to three lanes, (i.e., widening the pavement from 22 feet to 36 feet) within an undivided rural typical section having paved shoulders and parallel ditches on each side.

The widened roadway would continue to traverse the Runway 10 Approach RPZ and Runway 28 Departure RPZ. Because the location of the current 200-foot east displacement of the Runway 10 threshold would remain unchanged, the widened roadway would remain below and clear of the existing overlying [B-I Small] CFR Part 77 20:1 Approach Surface, its future overlying [B-II other than utility] CFR Part 77 34:1 Approach Surface, its existing/future 20:1 Type 4 OCS. The existing/future Runway 28 TERPS 40:1 Departure Surface would, however, continue to have non-standard vertical clearance above the roadway.

This RPZ Alternative is shown in **Figure 2: RPZ Alternative 2 - Preferred Alternative (City's Proposed Action)**.

This RPZ Alternative would:

- provide continued and unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way,
- provide a new continuous two-way left-turn lane that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic,
- not eliminate or fully avoid adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ currently imposed by the current alignment of the Turkey Creek Road right-of-way, and
- This alternative assumes the Runway 28 TERPS 40:1 Departure Surface will have "Close-in Obstructions" and not change or adversely affect the safe and efficient operation of the Plant City Airport.

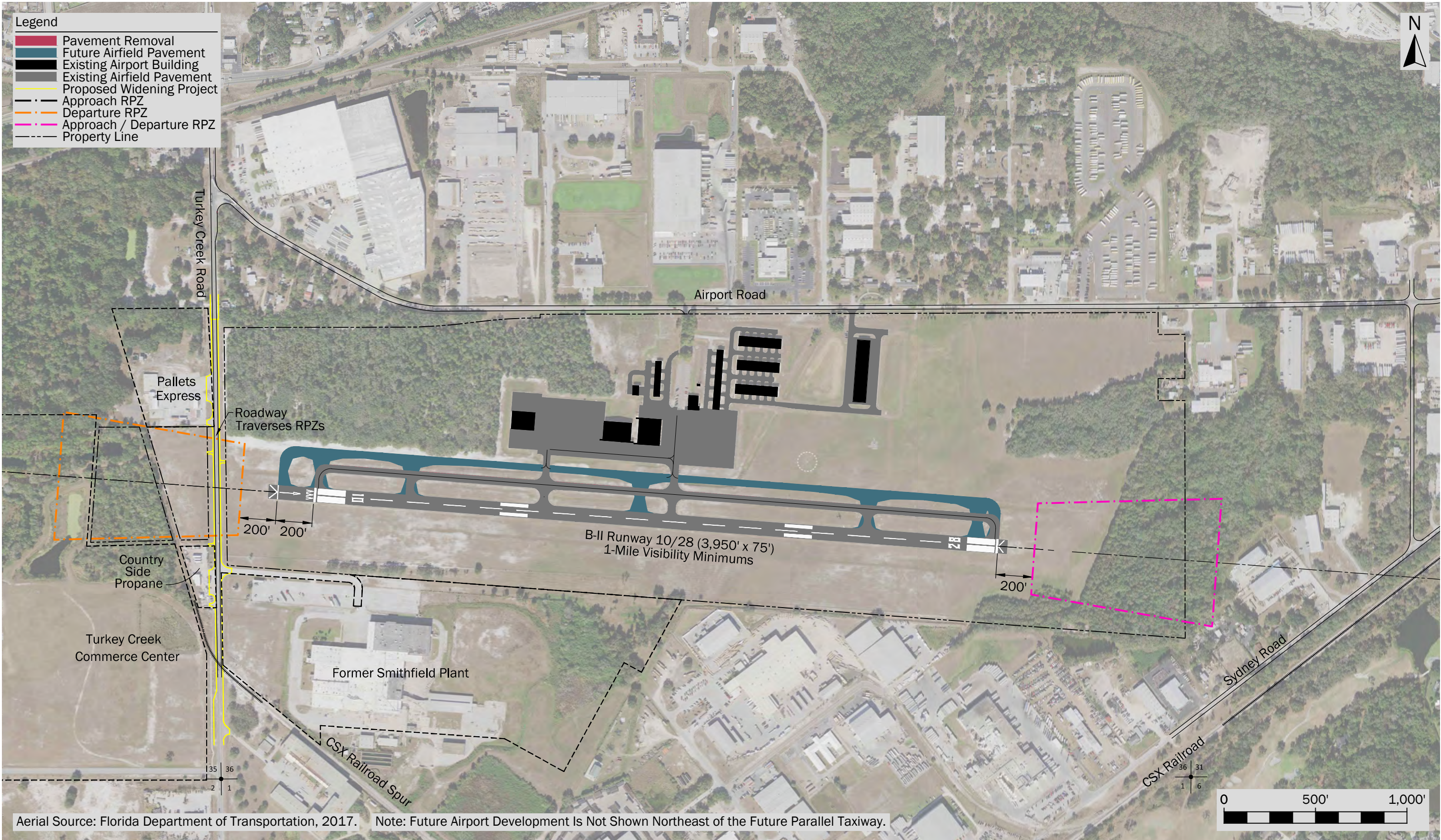
This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses,
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites located along Turkey Creek Road,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

This RPZ Alternative was considered by the City/County to represent a viable and practicable solution to fully satisfying the City's Surface Transportation Program and the Hillsborough County MPO's 2035 Long

Range Transportation Plan to enhance external access between the City's Plant City Airport Industrial Park and Interstate 4 based on:

- 1200-foot segment length and developed project construction costs (approximately \$530,000)
- use of existing roadway pavement and existing right-of-way,
- limited required NEPA review, determination, mitigation and related permitting,
- ability to maintain the current above-ground and underground utilities, and
- ability to maintain the current stormwater management system without re-design efforts.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\02_Alternative 2 - The Preferred Action_Alternative.dwg June 13 2019-10:27

Figure 2
 Alternative - 2 Preferred Alternative
 (City's Proposed Action)

RPZ Alternative 3: Limited Widening West Side of Turkey Creek Road to Mitigate Impacts to RPZ and Airport

This RPZ Alternative was developed through discussions with HCAA representatives and involves the potential 14-foot widening of the roadway travel lane within the extents of the future Runway 28 Departure RPZ, but only along the west side of the current 22-foot wide full-strength paved roadway. This alternative further assumes that the planned future non-standard vertical clearances below the CFR part 77 RNAV LPV 34:1 Approach Surfaces and Runway 28 TERPS 40:1 Departure Surfaces will remain unchanged (or slightly improved) as depicted on the current FAA Conditionally-approved Airport Layout Drawing (ALD). This Alternative would serve to partially reduce or ameliorate current operational, safety-related impacts to the safe and efficient operation of the Plant City Airport currently imposed by the current alignment of Turkey Creek Road.

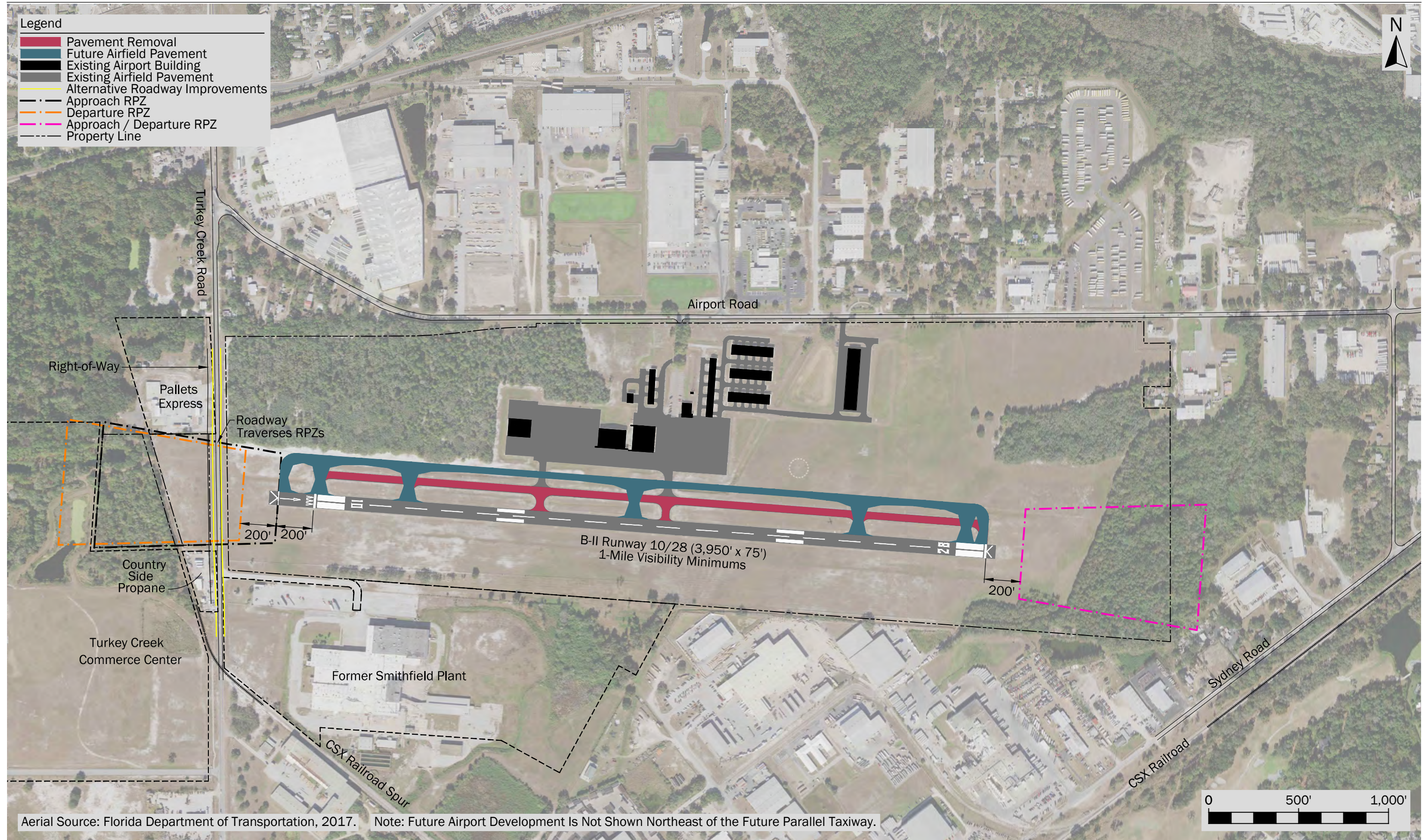
This RPZ Alternative is shown in **Figure 3: RPZ Alternative 3 - Limited West Side Widening of Turkey Creek Road (Preserve and Protect Airport Operations)**.

This RPZ Alternative would:

- include the non-symmetrical widening of the roadway with the additional of fourteen feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide County-owned right-of-way,
- provide continued unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- provide a new continuous two-way left-turn lane that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic,
- utilize 270-foot long transitions on either end of a 14-foot westwardly-shifted widening of the roadway alignment within and slightly beyond the dimensional limits of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ while maintaining the existing Turkey Creek Road profile (existing STA 79+50 to existing STA 91+50)
- provide a newly-acquired 10-foot wide additional right-of-way (obtained from HCAA and other property owners) along the west side of the existing right-of-way to provide the capability to construct a non-symmetrical widening of the roadway with the additional of fourteen feet of travel lane pavement along a portion of existing travel lane pavement increasing from two to three lanes. The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side, and
- not eliminate or fully avoid adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ currently imposed by the current alignment of the Turkey Creek Road right-of-way.

Although highly favored by the HCAA, the RPZ Alternative was rejected by the City/County and was considered a non-viable and impracticable solution based on project construction costs (approximately \$560,000) directly associated with:

- time to redesign and implement the modified project,
- length of additional roadway shift and right-of-way needed to be acquired (3 properties),
- right-of-way acquisition from HCAA,
- required NEPA review, determination, mitigation and related permitting,
- relocation of current above-ground and underground utilities, and
- relocation of current stormwater management with additional re-design efforts.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\03_Alternative 3 - Minimize Impacts of Land Use within RPZ Alternatives.dwg June 13 2019-10:30

Figure 3
Alternative 3 - Limited West Side Widening of Turkey Creek Road
(Preserve and Protect Airport Operations)

RPZ Alternative 4: Partial Westward Realignment of Turkey Creek to Achieve Full Avoidance of RPZ

This RPZ Alternative involves the potential realignment and westward relocation of a portion of Turkey Creek Road to a lateral offset distance necessary to eliminate and fully avoid imposed adverse impacts to protected land uses within the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the traversing roadway.

This RPZ Alternative is shown in **Figure 4: RPZ Alternative 4 - Partial Westward Realignment of Turkey Creek (Full Avoidance of RPZ)**.

This RPZ Alternative would:

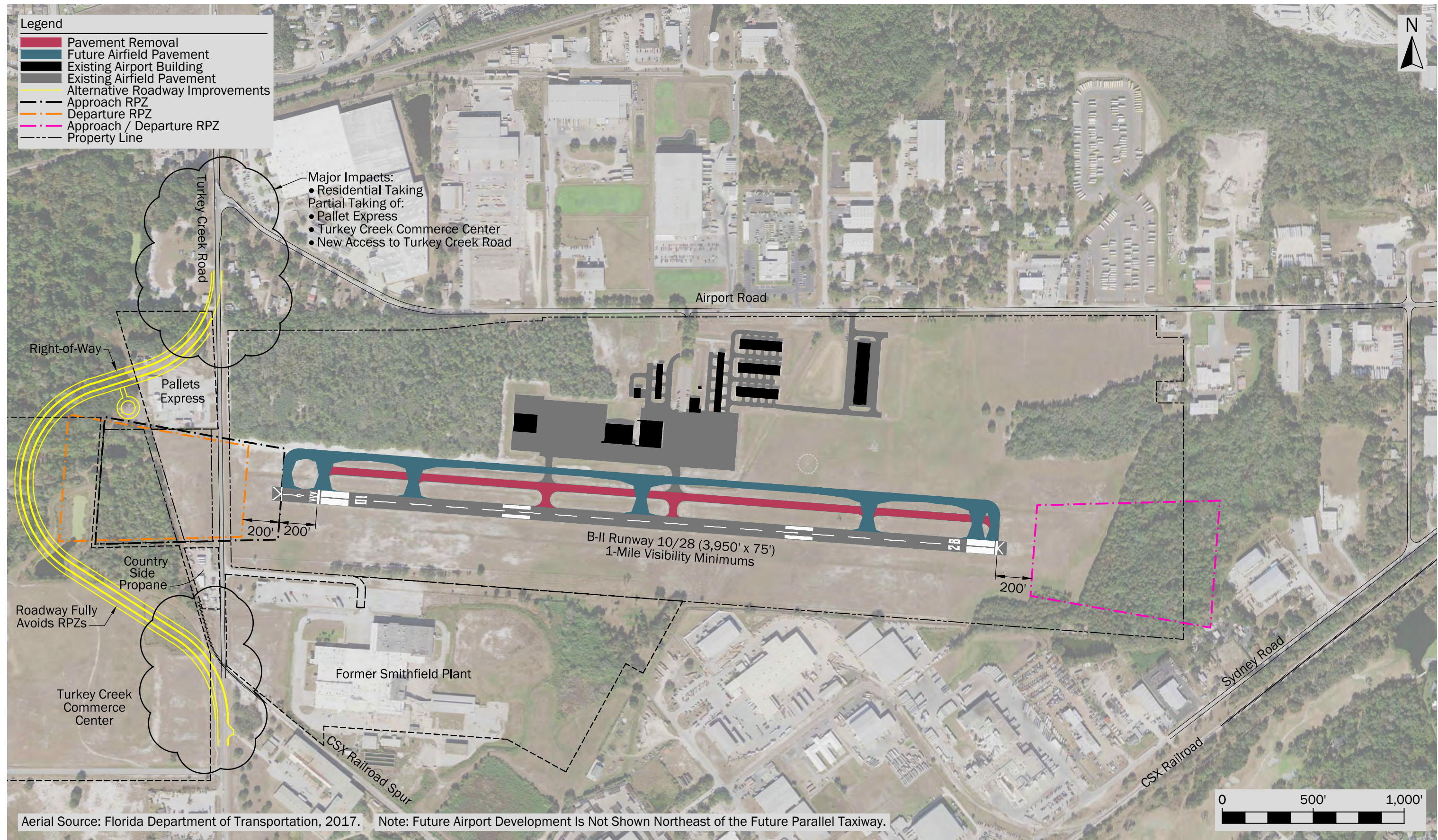
- require the westward realignment of the roadway approximately 1,200 feet to the west with tie-ins to the road's existing alignment south of CSX Spur rail road crossing (existing STA 73+00) and north of the Airport (existing STA 97+50),
- include three separate horizontal curves each having radius of 550 feet to accommodate a 35 mile per hour (MPH) Design Speed,
- add approximately 3,509 feet of newly-established 100-foot-wide right-of way to provide a three-lane undivided rural typical section having paved shoulders and parallel ditches on each side,
- likely create adverse taking impacts related to the Palettes Express facility and the Turkey Creek Commerce Center, and require relocation of a single-family dwelling each located along and access by Turkey Creek Road.
- require new points of access via newly-established cul-de-sac (or similar) roadways to existing enterprise businesses (i.e., former Smithfield Plant, Countryside Propane, Palettes Express) each currently located along and accessed via Turkey Creek Road, and
- eliminate and fully avoid adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the current alignment of the Turkey Creek Road right-of-way.

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The RPZ Alternative was rejected by the City/County and was considered a non-viable and impracticable solution based on increased project construction and right-of-way costs (approximately \$3,330,000) directly associated with:

- significant time to redesign, acquire additional project funding (highly unlikely), and implement project,
- length of additional realigned roadway and significant additional right-of-way,
- required NEPA review, determination, mitigation and related permitting,
- impacts to wetlands (approximately 0.67 acres), and
- relocation of above-ground and underground utilities,
- stormwater management (new pond sites),
- land use taking issues, and
- impacts to commercial and residential land uses.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\04_Alternative 4 - Relocation of Turkey Creek to the West\Alternative.dwg June 13 2019-10:51

Figure 4
Alternative - 4 Partial Westward Realignment of Turkey Creek Road
(Full Avoidance of RPZ)

RPZ Alternative 5: Relocate Runway to Clear Departure Surface and Mitigate Impacts to Airport

This RPZ Alternative involves the HCAA's required relocation of the entire runway 453 feet to the east to provide the required minimum 15-foot vertical clearance below the Runway 28 TERPS 40:1 Departure Surface. This Alternative would serve to preserve and maintain airport safety, efficiency and utility while maintaining the proposed Turkey Creek Road improvements.

This RPZ Alternative is shown in **Figure 5 RPZ Alternative 5 - Relocate Runway 10-28 Eastward to Clear Departure Surface (Preserve and Protect Airport Operations)**

This RPZ Alternative would:

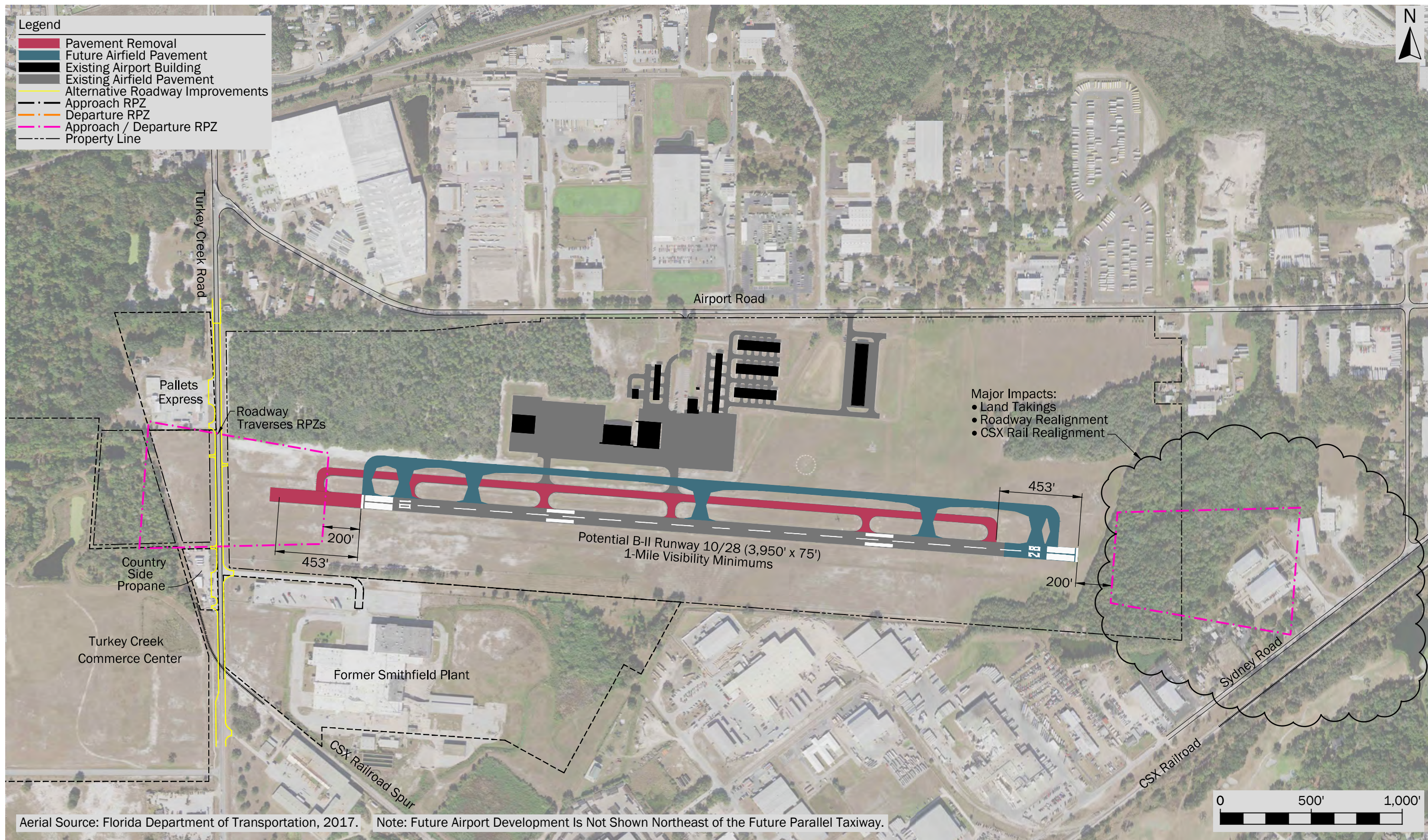
- include the symmetrical widening of the roadway with the additional of seven feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide County-owned right-of-way,
- provide continued unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- eliminate and fully avoid adverse impacts to, or the traversing of the future Runway 28 Departure RPZ by Turkey Creek Road.
- require the 453-foot eastward relocation of Runway 10-28,
- have very high potential for public controversy,
- require land acquisition related to:
 - local in-kind relocation of light industrial, commercial and residential dwellings,
- extensive taking of private commercial and residential land and related land uses for public use via eminent domain,
- impose adverse environmental impacts to non-disturbed lands, and
- require environmental due diligence, permitting, mitigation and associated NEPA involvement, studies and determinations.

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The RPZ Alternative was rejected by the HCAA and was considered a non-viable and impracticable solution based on:

- require land acquisition,
- redesign of airport and supporting infrastructures,
- required reconstruction of airport,
- required additional time to implement
- stormwater management,
- realignment and relocation of above-ground and underground utilities,
- acquisition of residential commercial land
- acquisition of and relocation of public transportation right-of ways
- in-kind relocation of people, property and business, and
- significant environmental impacts.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\05_Alternative 5 - Shift Runway 340 Feet to the East\Alternative.dwg June 14, 2019 - 08:56

Figure 5
Alternative 5 - Relocate Runway 10-28 Eastward 453' to Clear Departure Surface
(Preserve and Protect Airport Operations)

RPZ Alternative 6: Relocate West End of Runway 10-28 Eastward to Achieve Full Avoidance of RPZ

This RPZ Alternative involves the HCAA's required relocation of the west end of Runway 10-28 approximately 920 feet to the east to eliminate and fully avoid adverse impacts to Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the current alignment of the Turkey Creek Road right-of-way.

This RPZ Alternative is shown in **Figure 6: RPZ Alternative 6 - Relocate West End of Runway 10-28 Eastward (Full Avoidance of RPZ)**

This RPZ Alternative would:

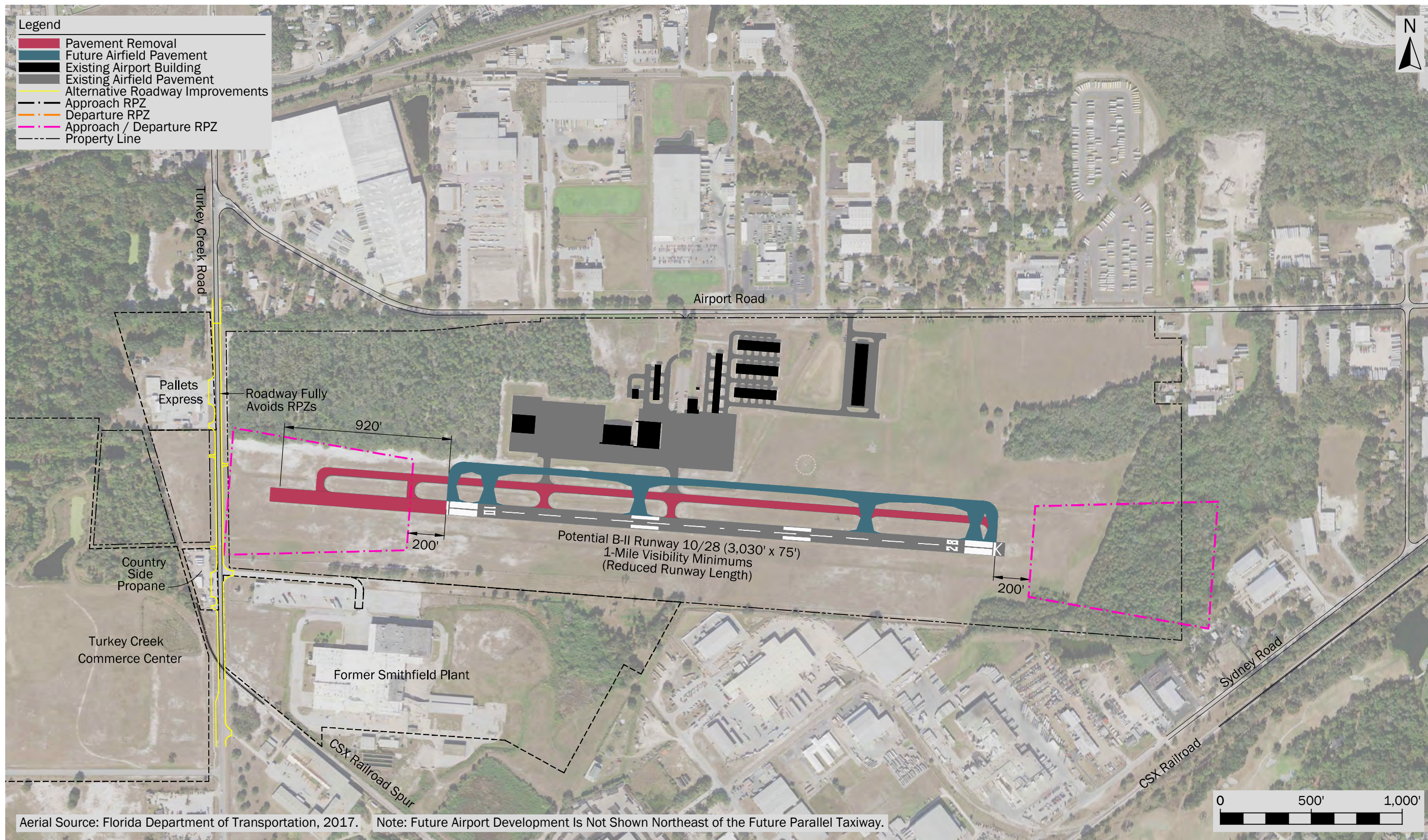
- include the symmetrical widening of the roadway with the additional of seven feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening the pavement from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide County-owned right-of-way,
- provide continued and unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- require the 920-foot eastward relocation of the west end of Runway 10-28,
- eliminate the need for displacement of the Runway 10 threshold,
- eliminate and fully avoid adverse impacts to Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the current alignment of the Turkey Creek Road right-of-way.
- reduce the available runway take-off and landing lengths to 3,030 feet in each direction,
- impose aircraft operational restrictions, and/or totally preclude Hottest Day arrivals and departure operations by larger cabin-class turbine jet general aviation aircraft.
- Potentially induce the relocation of locally-based general aviation aircraft adversely affected by reduced available runway take-off and landing lengths, and
- reduce the aeronautical capability and role of the Plant City Airport as one of HCAA's system of general aviation airport within the FDOT's CFASPP West Central Metro Area.

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The RPZ Alternative was rejected by the HCAA and was considered a non-viable and impracticable solution based on the associated imposed costs related to the need for airfield re-design and

construction costs. Further the HCAA considered this Alternative as having high potential to reduce its capability to adequately serve the general aviation needs of eastern Hillsborough County and that of the CFASPP West Central Metro Area.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\06_Alternative 6 - Relocate Runway 10 End 920 Feet to the East\Alternatives.dwg June 13 2019-10:53

RPZ Alternative 7: Relocate Runway 10-28 Eastward to Achieve Full Avoidance of RPZ

This RPZ Alternative involves the HCAA's potential relocation of the entirety of Runway 10-28 approximately 920 feet to the east to eliminate and fully avoid adverse impacts to Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the by the current right-of-way alignment of Turkey Creek Road.

This RPZ Alternative is shown in **Figure 7: RPZ Alternative 7 - Relocate Runway 10-28 Eastward (Full Avoidance of RPZ)**.

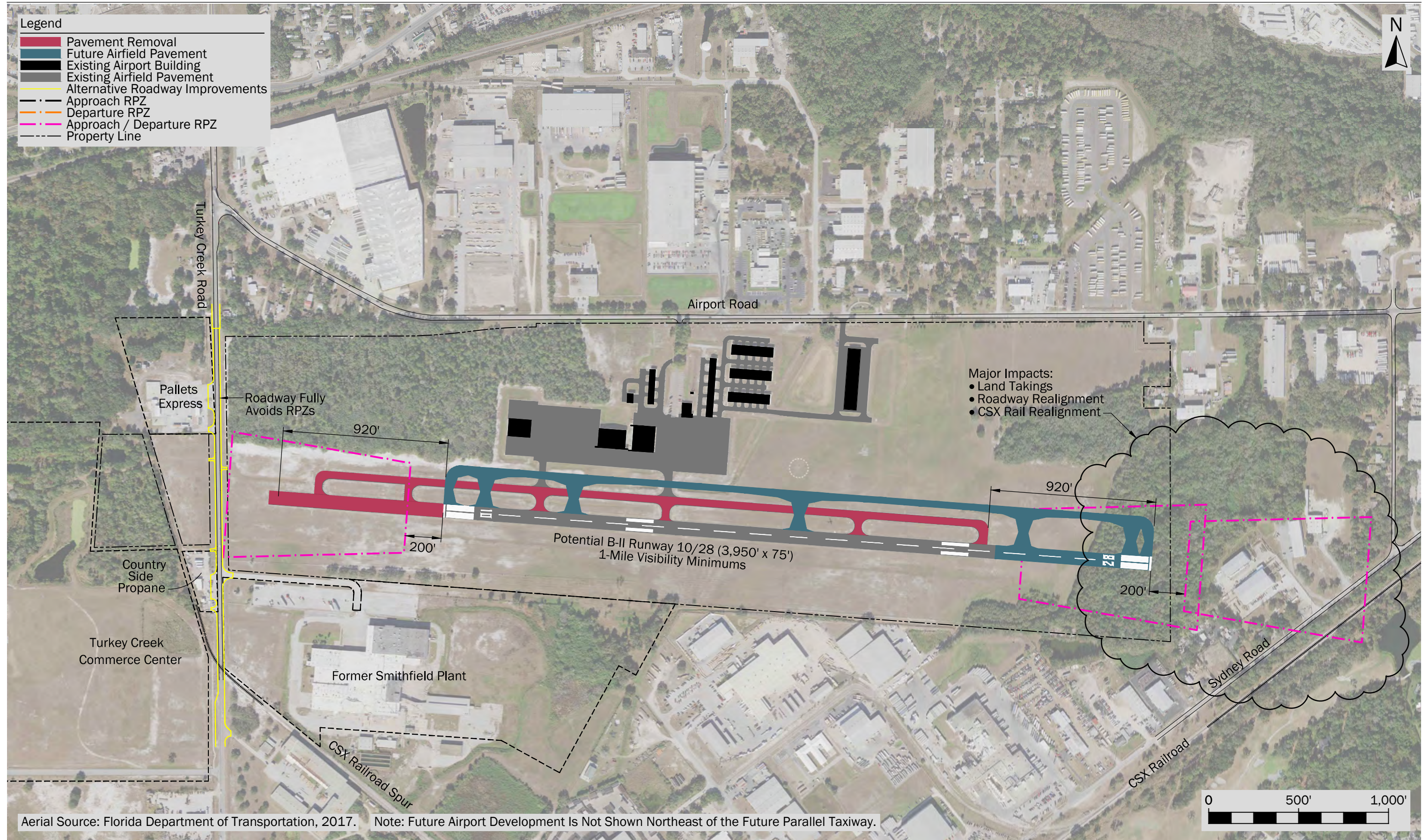
This RPZ Alternative would:

- include the symmetrical widening of the roadway with the additional of seven feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening the pavement from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide City-owned right-of-way,
- provide continued and unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- require the 920-foot eastward relocation of the entire runway 10-28,
- eliminate the need for displacement of the Runway 10 threshold,
- eliminate and fully avoid adverse impacts to Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the current alignment of the Turkey Creek Road right-of-way.
- have very high potential for public controversy,
- require extensive land acquisition related to:
 - realignment of Sydney Road and CSX Rail that would traverse relocated RPZs,
 - local in-kind relocation of light industrial, commercial and residential dwellings,
 - extensive relocation and/or likely bifurcation of a residential community,
- extensive taking of private commercial and residential land and related land uses for public use via eminent domain,
- impose adverse environmental impacts to non-disturbed lands, and
- require high level of environmental due diligence, permitting, mitigation and associated The National Environmental Policy Act (NEPA) involvement, studies and determinations.

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The RPZ Alternative was rejected by the HCAA and was considered a non-viable and impracticable solution based on the associated imposed costs related to airport design and construction as well as similar extensive high costs related to land acquisition, relocation of Sydney Road (owned by Plant City), the CSX Railroad, residential land uses and associated adverse environmental impacts,



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\07_Alternative 7 - Shift Runway 920 Feet to the East\Alternatives.dwg June 13 2019-10:39

Figure 7
Alternative - 7 Relocate Runway 10-28 920' Eastward
(Full Avoidance of RPZ)

RPZ Alternative 8: Lowering Turkey Creek Road to Achieve Mitigation of Existing Airspace Penetration Issues

This RPZ Alternative was developed through discussions with HCAA representatives and involves the reconstruction for approximately 1,710 feet of Turkey Creek Road, reconstructing access roads for adjacent properties, development of retaining walls all to allow the lowering (approximately 1,200 feet) of the roadway 4 feet below existing grade along its current alignment within the existing right-of-way. The widened and depressed Turkey Creek Road would continue to traverse the Runway 10 Approach RPZ and Runway 28 Departure RPZ,

This RPZ Alternative is shown in **Figure 8: RPZ Alternative 8 - Lowering Turkey Creek Road (Mitigation of Existing Airspace Penetration Issues)**.

This RPZ Alternative would:

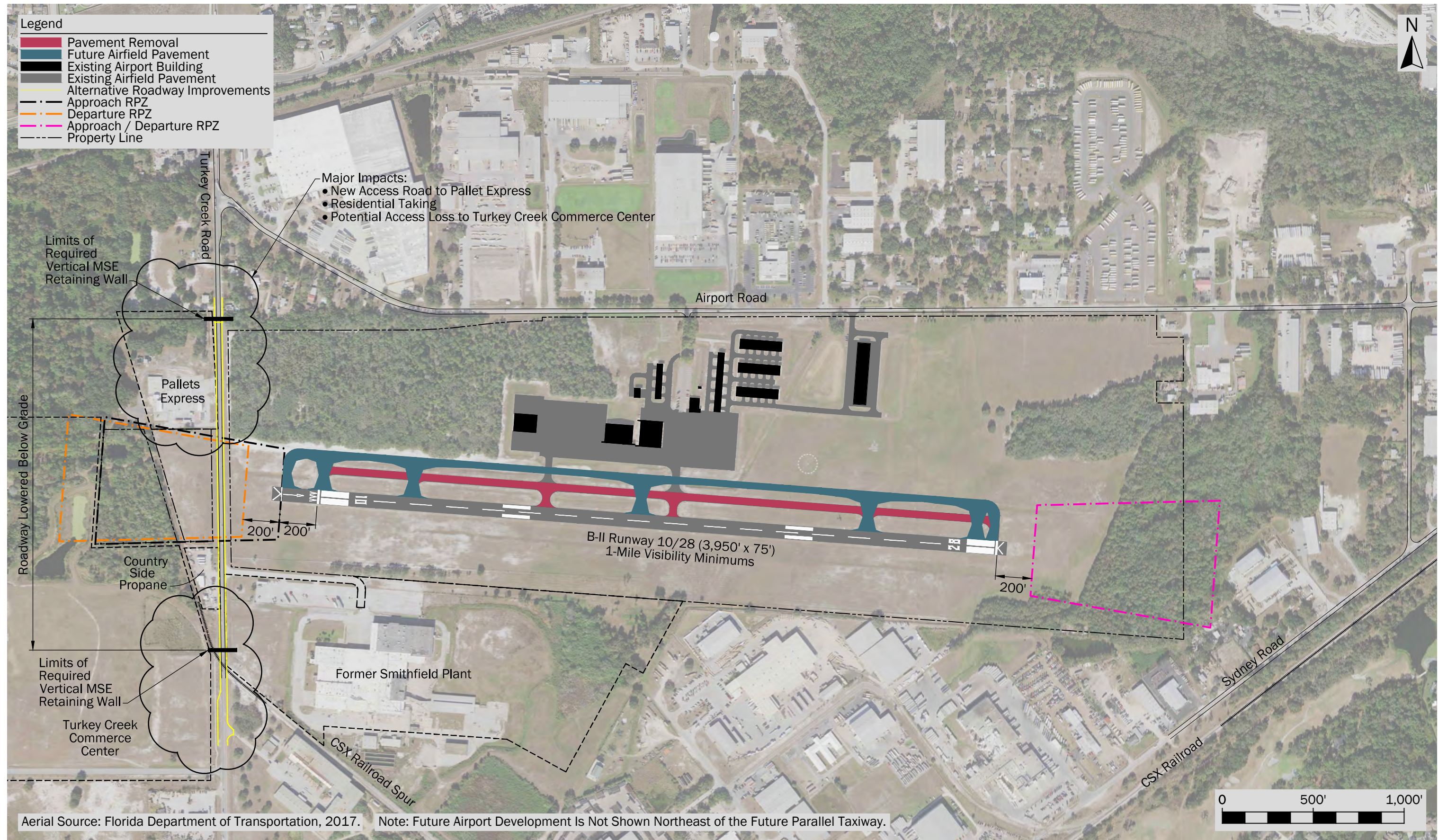
- maintain existing Turkey Creek Road horizontal alignment (existing STA 77+00 to existing STA 94+00), while lowering a portion of Turkey Creek Road profile (approximately 4 feet) within the limits of the TERPS 40:1 Departure Surface,
- require an underground drainage system connecting to proposed SMF 2-1 while staying above the pond design high water and seasonal high groundwater table,
- include a proposed typical section having three 12-foot travel lanes, 10-foot paved shoulders,
- vertical barrier and retaining walls on either side,
- include four vertical curves (crest-sag-sag-crest) meeting 35 mph Design Speed
- provide the required minimum vertical clearance below the existing overlying [B-I Small] CFR Part 77 20:1 Approach Surface, its future overlying [B-II other than utility] CFR Part 77 34:1 Approach Surface, its existing/future 20:1 Type 4 OCS.
- maintain the 200-foot displacement of the Runway 10 threshold, and
- satisfy HCAA's goal to eliminate or ameliorate current non-standard penetrations of overlying navigable airspace and Obstacle Clearance Surfaces (OCS) for aircraft arrivals to the east and aircraft departures to the west,

This RPZ Alternative would only partially satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

Although highly favored by the HCAA, the RPZ Alternative was rejected by the City/County and was considered a non-viable and impracticable solution based on increased project construction and right-of-way costs (approximately \$3,290,000) directly associated with:

- significant time to redesign, acquire additional funding (highly unlikely) and implement project,
- relocation of above-ground and underground utilities,
- impact access to adjacent properties (Smithfield Plant, Countryside Propane, Palettes Express) requiring new frontage roads or driveway / side street connections.
- potentially require complete property acquisition of Countryside Propane parcel
- incur business-related damages at Countryside Propane would likely result in complete property acquisition, and
- require extensive additional costs related, but not limited to: civil engineering and stormwater management, design, construction and related land and land use takings.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\08_Alternative 8 - Lower or Tunnel Turkey Creek Road Alternatives.dwg June 13 2019 - 10:40

Figure 8
 Alternative - 8 Lowering Turkey Creek Road
 (Full Avoidance of RPZ)

RPZ Alternative 9: Further Displace Runway 10 Threshold to Clear Approach Surfaces and Mitigate Impacts to Airport

This RPZ Alternative involves the HCAA's potential further displacement of the Runway 10 threshold approximately 375 feet to the east to provide 15-foot vertical clearance below the future Runway 10 TERPS 34:1 "W" and the future CFR Part 77 RNAV LPV 34:1 Approach Surfaces. This alternative assumes the Runway 28 TERPS 40:1 Departure Surface will continue to have "Close-in Obstructions", but not change or adversely affect the safe and efficient operation of the Plant City Airport.

This RPZ Alternative is shown in **Figure 9: RPZ Alternative 9 - Further Displace Runway 10 Threshold to Clear Approach Surfaces (Preserve and Protect Airport Operations)**

This RPZ Alternative would:

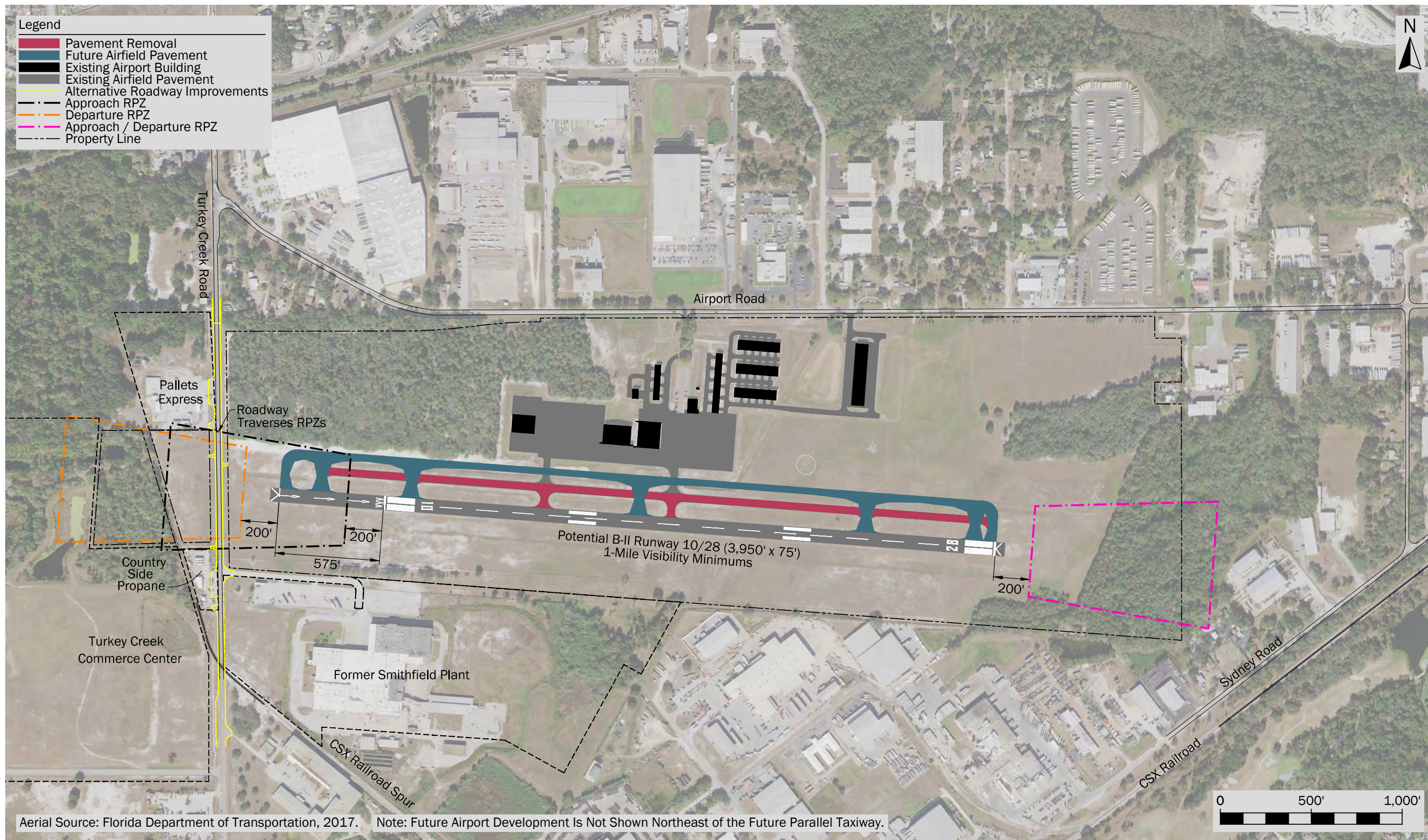
- serve to preserve and maintain airport safety, efficiency and utility while maintaining the proposed Turkey Creek Road improvements.
- include the symmetrical widening of the roadway with the additional of seven feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide County-owned right-of-way,
- provide continued unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- increased the displacement of Runway 10 threshold to 575 feet,
- further reduce the Available Landing Distance for Runway 10 by 375 feet,
- require reconstruction of the runway/taxiway system,
- require the remarking and re-lighting of the runway, and
- not serve to eliminate adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the current alignment of the Turkey Creek Road right-of-way.

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic,

The RPZ Alternative was rejected by the HCAA and was considered a non-viable and impracticable solution based on the associated imposed costs related to airport design and construction as well as similar extensive high costs associated with the imposed runway construction, lighting and marking.

Further the HCAA considered this Alternative as having high potential to reduce its capability to adequately serve the general aviation needs of eastern Hillsborough County and that of the CFASPP West Central Metro Area.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\09_Alternative 9 - Further Displace Runway 10 Threshold 270 Feet to the East\Alternatives.dwg June 13 2019-10:41

Figure 9
 Alternative 9 - Further Displace Runway 10 Threshold 375' to Clear Approach Surfaces
 (Preserve and Protect Airport Operations)

RPZ Alternative 10: Eastward Relocation of Runway 10-28 West End to Clear Approach Surfaces and Mitigate Impacts to Airport

This RPZ Alternative involves the HCAA's potential relocation of the west end of Runway 10-28 approximately 575 feet to the east to provide 15-foot vertical clearance below the future Runway 10 TERPS 34:1 "W" and the future CFR Part 77 RNAV LPV 34:1 Approach Surfaces (Assumes the Runway 28 TERPS 40:1 Departure Surface will have "Close-in Obstructions", but would not change or adversely affect the safe and efficient operation of the Plant City Airport.

This RPZ Alternative is shown in **Figure 10: RPZ Alternative 10 - Eastward Relocation of Runway 10-28 West End to Clear Approach Surfaces (Preserve and Protect Airport Operations)**

This RPZ Alternative would:

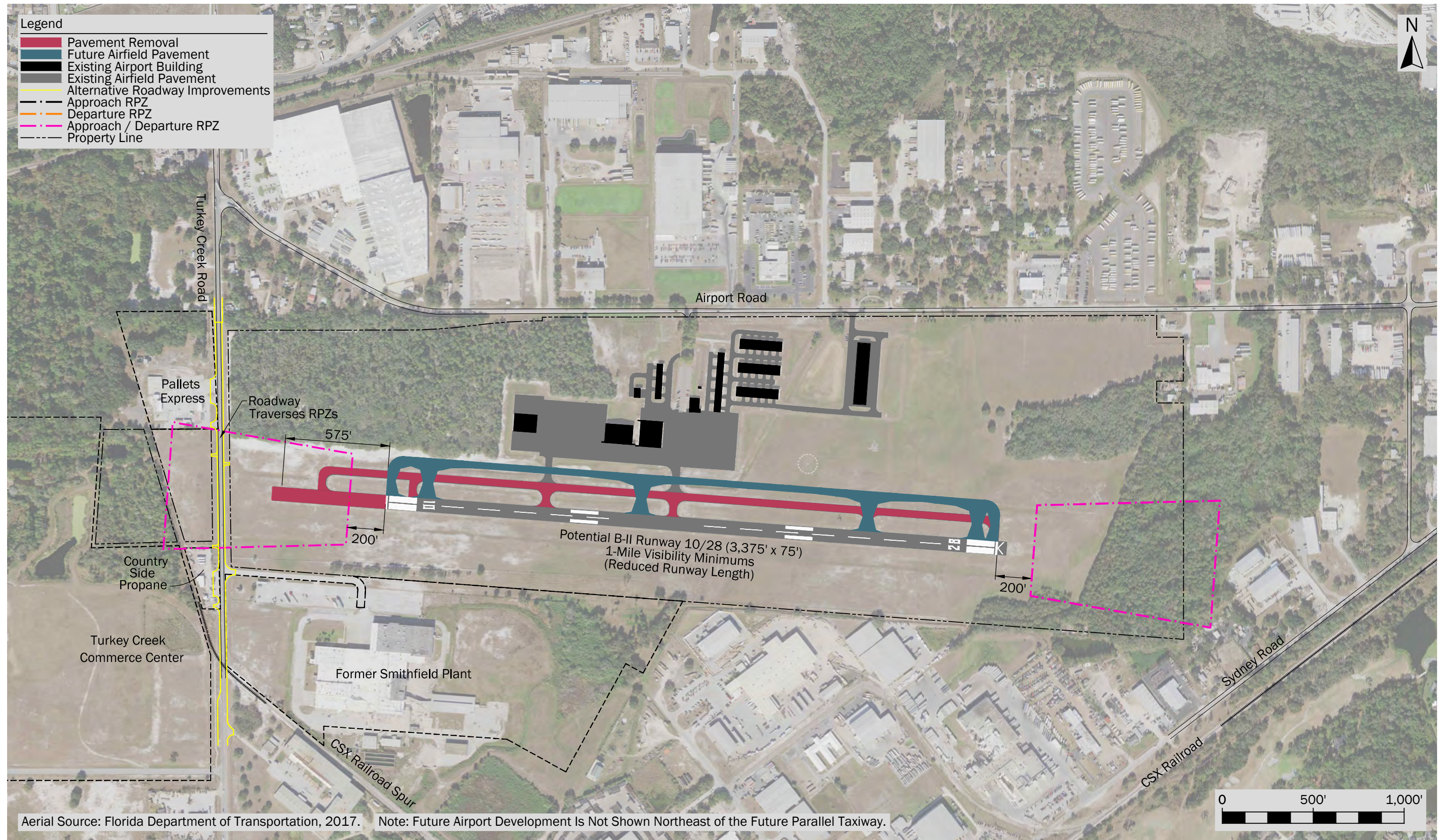
- serve to preserve and maintain airport safety, efficiency and utility while maintaining the proposed Turkey Creek Road improvements.
- include the symmetrical widening of the roadway with the additional of seven feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide County-owned right-of-way,
- provide continued unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- require the 575-foot relocation of the west end of Runway 10-28.
- further reduce the Available Landing Distance for Runway 10 by 375 feet,
- require reconstruction of the runway/taxiway system,
- require the remarking and re-lighting of the runway, and
- not serve to eliminate adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the by the current right-of-way alignment of Turkey Creek Road, and

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii
- as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The RPZ Alternative was rejected by the HCAA and was considered a non-viable and impracticable solution based on the associated extensive high costs associated with the imposed runway construction, lighting and marking. Further the HCAA considered this Alternative as having high potential

to reduce its capability to adequately serve the general aviation needs of eastern Hillsborough County and that of the CFASPP West Central Metro Area.



Aerial Source: Florida Department of Transportation, 2017. Note: Future Airport Development Is Not Shown Northeast of the Future Parallel Taxiway.

Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\10_Alternative 10 - Relocate Runway 10 End 270 Feet to the East Alternative.dwg June 13 2019-1043

Figure 10
 Alternative 10 - Eastward Relocation of Runway 10-28 West End 575' to Clear Approach Surfaces
 (Preserve and Protect Airport Operations)

RPZ Alternative 11: Eastward Relocation of Runway 10-28 to Clear Approach Surfaces and Mitigate Impacts to Airport

This RPZ Alternative involves the HCAA's potential relocation (i.e., shift) the entire 3,950-foot long Runway 10-28 approximately 575 feet to the east to provide 15-foot vertical clearance below the future Runway 10 TERPS 34:1 "W" and the future CFR Part 77 RNAV LPV 34:1 Approach Surfaces (Assumes the Runway 28 TERPS 40:1 Departure Surface will have "Close-in Obstructions", but not change or adversely affect the safe and efficient operation of the Plant City Airport.

This RPZ Alternative is shown in **Figure 11: RPZ Alternative 11 - Eastward Relocation of Runway 10-28 Eastward to Clear Approach Surfaces (Preserve and Protect Airport Operations)**

This RPZ Alternative would:

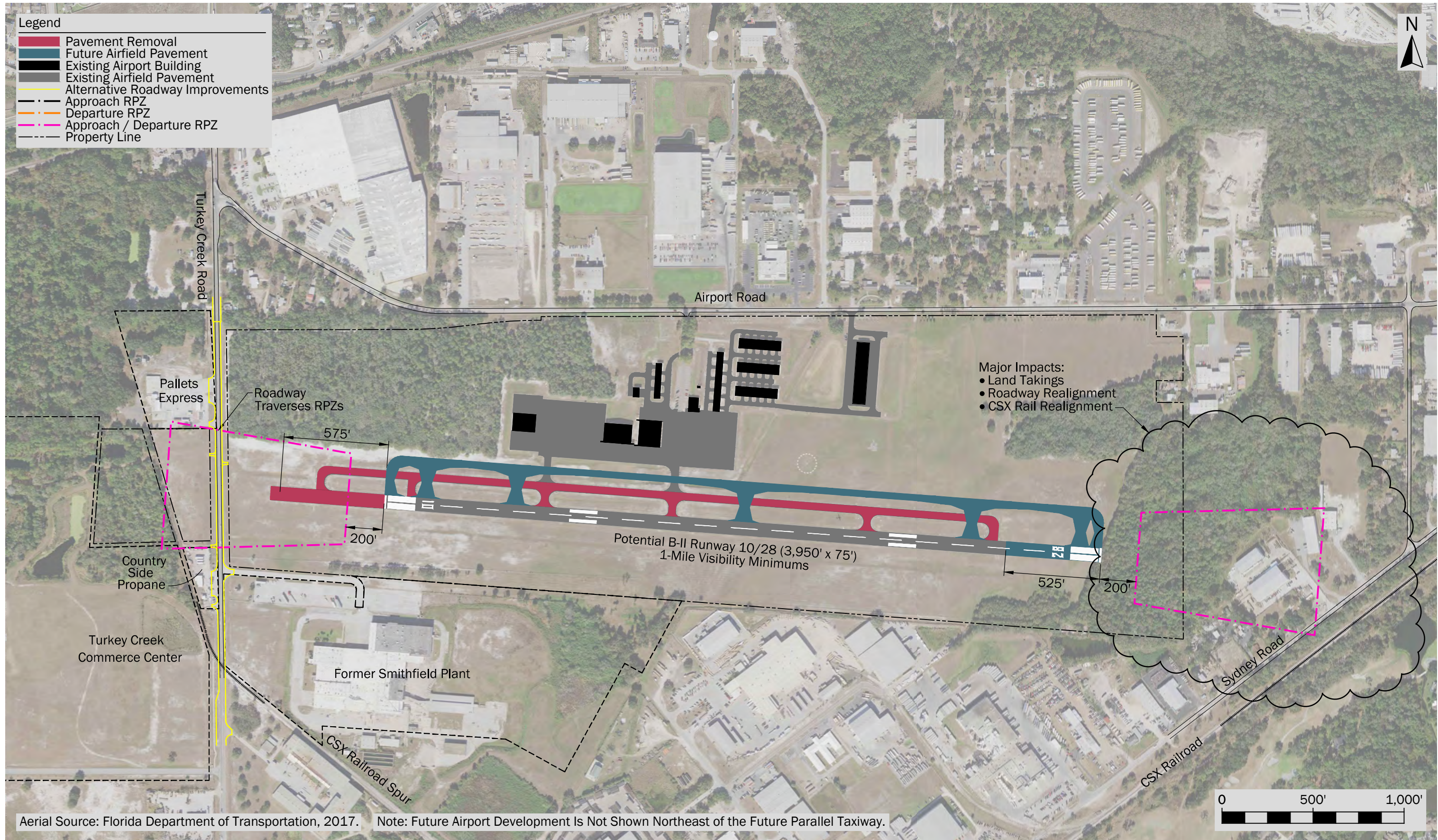
- serve to preserve and maintain airport safety, efficiency and utility while maintaining the proposed Turkey Creek Road improvements.
- include the symmetrical widening of the roadway with the additional of seven feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide County-owned right-of-way,
- provide continued unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- eliminate the need for displacement of the Runway 10 threshold,
- require the 575-foot eastward relocation of the entire runway 10-28,
- not serve to eliminate adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the current alignment of the Turkey Creek Road right-of-way.
- have very high potential for public controversy,
- require land acquisition related to:
 - local in-kind relocation of light industrial, commercial and residential dwellings,
- extensive taking of private commercial and residential land and related land uses for public use via eminent domain,
- impose adverse environmental impacts to non-disturbed lands, and
- require environmental due diligence, permitting, mitigation and associated NEPA involvement, studies and determinations.

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,

- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The RPZ Alternative was rejected by the HCAA and was considered a non-viable and impracticable solution based on the associated imposed costs related to airport design and construction as well as similar extensive high costs related to land acquisition, relocation of Sydney Road (owned by Plant City), the CSX Railroad, residential land uses and associated adverse environmental impacts.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\11_Alternative 11 - Shift Runway 270 to the East\Alternative.dwg June 14 2019-08:58

Figure 11
Alternative 11 - Relocation of Runway 10-28 Eastward 525' to Clear Approach Surfaces
(Preserve and Protect Airport Operations)

RPZ Alternative 12: Relocate West End of Runway to Clear Departure Surface and Mitigate Impacts to Airport

This RPZ Alternative involves the HCAA's potential relocation of the west end of the runway 453 feet to the east to provide the required minimum 15-foot vertical clearance below the Runway 28 TERPS 40:1 Departure Surface. This Alternative would serve to preserve and maintain airport safety, efficiency and utility while maintaining the proposed Turkey Creek Road improvements.

This RPZ Alternative is shown in **Figure 12: RPZ Alternative 12- Relocate West End of Runway to Clear Departure Surface (Preserve and Protect Airport Operations)**

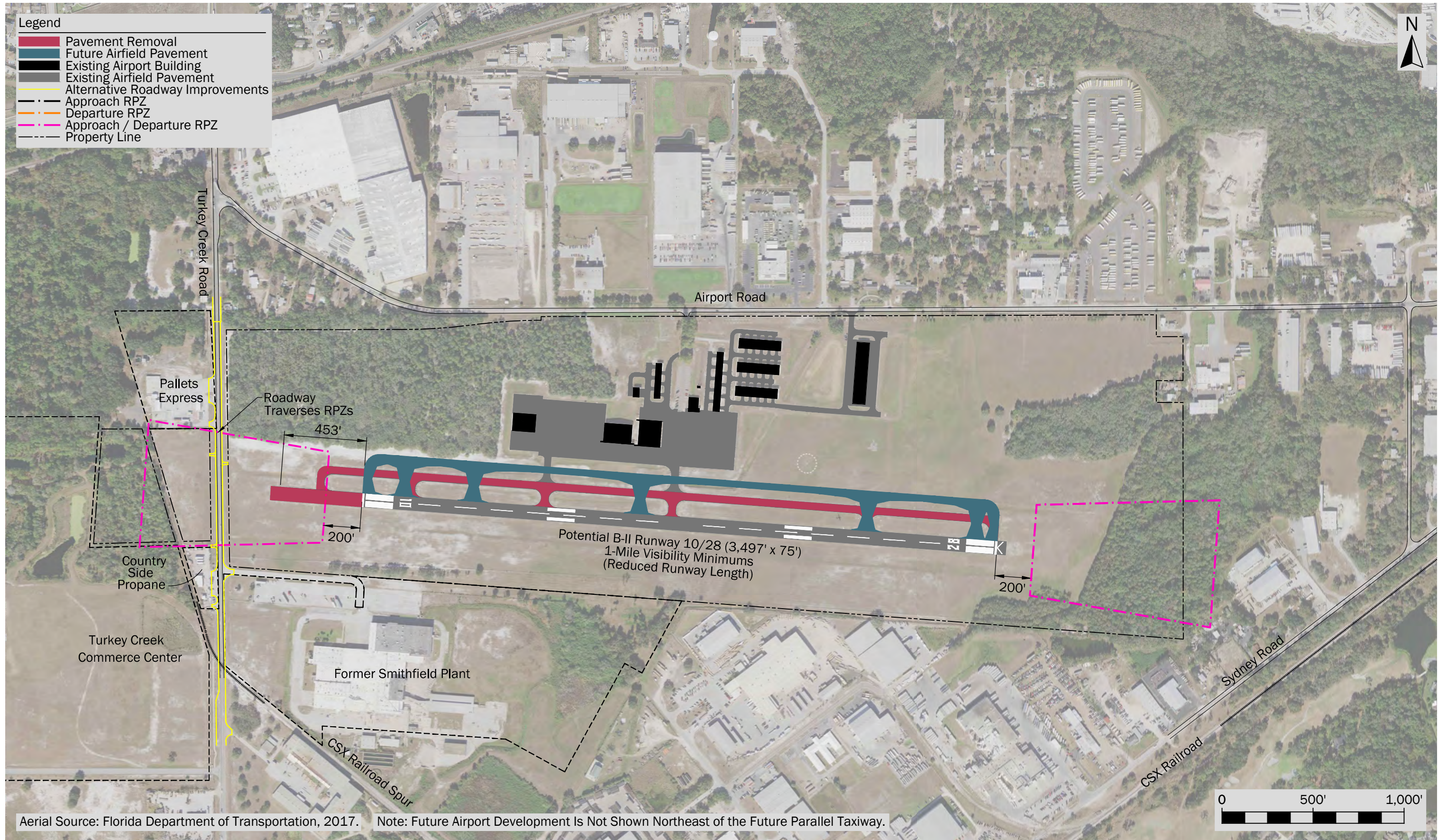
This RPZ Alternative would:

- include the symmetrical widening of the roadway with the additional of seven feet of travel lane pavement along each side of the existing travel lane pavement increasing from two to three lanes, (i.e., widening from 22 feet to 36 feet). The proposed three-lanes will be within an undivided rural typical section having paved shoulders and parallel ditches on each side all within the existing 100-foot-wide County-owned right-of-way,
- provide continued unrestricted access to adjacent properties and land uses (i.e., Turkey Creek Commerce Center, former Smithfield Plant, Countryside Propane, Palettes Express and a single-family dwelling) that are each located along the existing Turkey Creek Road right-of-way.
- eliminate the need for displacement of the Runway 10 threshold,
- require the 453-foot eastward relocation of the west end of Runway 10-28, and
- not eliminate adverse impacts to, or the traversing of the future Runway 10 Arrival RPZ and Runway 28 Departure RPZ imposed by the by the current right-of way alignment of Turkey Creek Road.

This RPZ Alternative would fully satisfy the City/County's need to:

- enhance freight related truck access from I-4 to/from the Plant City Airport and surrounding business, warehouse and industrial land uses.
- reduce or eliminate industrial traffic delays by increasing turning radii as the flow of trucks enter and exit the various industrial sites,
- improve overall system operation and enhance traffic safety, and
- provide a new continuous two-way left-turn center turn that would allow trucks to access industrial areas, warehouses and commercial properties without affecting through traffic.

The RPZ Alternative was rejected by the HCAA and was considered a non-viable and impracticable solution based on the associated imposed costs related to airport design and construction as well as similar extensive high costs associated with the imposed runway construction, lighting and marking. Further the HCAA considered this Alternative as having high potential to reduce its capability to adequately serve the general aviation needs of eastern Hillsborough County and that of the CFASPP West Central Metro Area.



Y:\Planning\PCW - Plant City Airport\RPZ Alternatives Study\12_Alternative 12 - Relocate Runway 10 340 Feet to the East\Alternatives June 13 2019-10:45

Figure 12
 Alternative 12 - Relocate West End of Runway 453' to Clear Departure Surface
 (Preserve and Protect Airport Operations)

7.0 Technical References

A variety of technical references are commonly used as part of this unique type of Alternatives Study. The following list denotes the likely type of published Federal Aviation Administration (FAA) reference materials:

- FAA Advisory Circular (AC) 150/5300-13A (Change 1), Airport Design,
- FAA Order 5200.8, Runway Safety Area Program,
- FAA Engineering Brief No. 99, Changes to Tables 3-2 and 3-4 of Advisory Circular 150/5300-13A, Airport Design,
- FAA Order 5300.1G, Modifications to Agency Airport Design, Construction, and Equipment Standards,
- FAA Joint Order JO 7400.2L, Procedures for Handling Airspace Matters (Change 1),
- FAA Memorandum: Interim Guidance on Land Uses Within a Runway Protection Zone, September 27, 2012,
- FAA AC 150/5325-4B, Runway Length Requirements for Airport Design,
- FAA AC 150/5340-1L, Standards for Airport Markings,
- FAA AC 150/5340-30H, Design and Installation Details for Airport Visual Aids,
- Title 14 CFR part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace,
- FAA Order 8260.3C, United States Standard for Terminal Instrument Procedures (TERPS),
- FAA Order 8260.19H, Flight Procedures and Airspace,
- FAA Order 1100.1B, FAA Organization - Policies and Standards (Change 1-2),
- FAA Order 1100.154A, Delegations of Authority,
- FAA Order 1100.53F, Delegation of Authority – Airports Division – Regional Components,
- FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions,
- FAA Order 5100.38D, Airport Improvement Program Handbook,
- FAA Order 5200.11, FAA Airports (ARP) Safety Management System.
- Florida Department of Transportation (FDOT), Plans Preparation Manual (January 2018),
- FDOT, Design Standards (FY 2018/2019),
- American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Streets and Highways (2004),
- FDOT, Flexible Pavement Design Manual (March 2015),
- Hillsborough County, Florida, Transportation Technical Manual (October 2015),
- Traffic Engineering Report, Turkey Creek Road at Airport Road (June 2009),
- American Consulting Engineers, Concept Plan for Airport Road Realignment (February 4, 2010), HNTB,
- Hillsborough County, Florida MPO, 2035 Long Range Transportation Plan – Cost Affordable Plan,
- Hillsborough County, Florida MPO, Freight Mobility Technical Memorandum (April 2009), and
- URS Corporation, Tampa Bay Regional Goods Movement Study (2009).