

POND SITING REPORT

SR 714/ MONTEREY ROAD FEC RR ELEVATED OVER RAILROAD
Pond Siting Report

Martin County, Florida
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1.0 EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) District Four is conducting a Project Development and Environment (PD&E) study to evaluate the replacement of the existing at-grade crossing of State Road (SR) 714 at the Florida East Coast Railway (FEC) tracks. The proposed project entails constructing a grade-separated, elevated crossing structure spanning both the FEC right-of-way (ROW) and Southeast Dixie Highway. While multiple design alternatives are under evaluation, the primary project objectives are to improve regional mobility and enhance traffic safety by eliminating the conflict point at the active railroad crossing.

The project alignment and its contributing drainage areas span three distinct regional basins:

- South Fork Basin
- South Coastal Basin
- South Mid-Estuary Basin

Geographically, these basins are bounded by SE Ocean Boulevard to the north, SR 714 and SE Palm Beach Road to the west, and SE Federal Highway and the southern portion of the Witham Field Airport property to the south.

The purpose of this Pond Siting Report (PSR) is to document existing drainage infrastructure, establish baseline stormwater conditions, and evaluate stormwater management strategies to accommodate the proposed geometric improvements. Preliminary engineering analysis indicates that the project will not require additional right-of-way acquisition for stormwater management. Existing right of way contains sufficient surplus acreage to fulfill all water quality treatment and quantity attenuation requirements necessitated by the additional impervious surface area. Consequently, this report focuses on assessing the capacity and adequacy of existing stormwater facilities to confirm they can successfully integrate the proposed improvements.

2.0 PROJECT DESCRIPTION

During the PD&E phase, an extensive alternatives analysis was conducted to address systemic multimodal inefficiencies and improve regional connectivity between the urban sectors bisected by the FEC corridor. The existing infrastructure relies on an at-grade crossing at SE Monterey Road, which introduces significant operational delays and safety risks due to frequent rail traffic. Following a rigorous engineering screening process, three primary design alternatives were retained for detailed evaluation and public presentation:

- **Alternative 1:** Elevated SR 714 New Connection to SE Palm Beach Road (Revision 05)
- **Alternative 2:** Elevated SR 714 New Connection to SE Palm Beach Road (Revision 06)

- **Alternative 3 (Preferred Alternative):** Elevated Monterey Road Extension, Concept Plan Feasibility 10A

2.1 Evaluation of Alternatives

Alternative 1 (Revision 05)

Alternative 1 involves the implementation of a grade-separated structure designed to elevate SR 714 over both the FEC corridor and SE Dixie Highway. This configuration originates at the intersection of SR 714 and SE Federal Highway, extending northward to a proposed at-grade T-intersection north of the Martin County Airport (Witham Field). This intersection is engineered to channelize traffic volumes toward a four-way signalized intersection at SE 16th Street and SE Palm Beach Road, as well as a secondary at-grade T-intersection at the junction of SE Dixie Highway and SE Christie Way. Effectively, this concept establishes a collector loop from SR 714 to SE Federal Highway via a new alignment parallel to SE 15th Court, terminating at SE Palm Beach Road. However, the geometric footprint of Alternative 1 necessitates substantial ROW acquisition within an established residential neighborhood, directly impacting multiple parcels along SE 15th Court.

Alternative 2 (Revision 06)

Alternative 2 serves as a technical refinement of Alternative 1, specifically optimized to mitigate socio-economic impacts on the residential units located along SE 15th Court. This iteration eliminates the connection to SE 16th Street and realigns the SR 714 loop through an existing drainage easement north of SE 15th Court, eventually tying into SE Palm Beach Road. While this alignment reduces encroachment into residential zones, it still requires the acquisition of private property and the negotiation of new easements to accommodate the proposed roadway prism and associated clear zones.

Alternative 3 (Preferred Alternative - Concept Plan Feasibility 10A)

Alternative 3 prioritizes direct north-south connectivity between the urban areas south of the FEC corridor and the Martin County Airport environs through a dedicated overpass system. The horizontal alignment begins at the intersection of SE Monterey Road and the SE Monterey Road Extension, following the existing Grumman Boulevard corridor. Currently a dead-end facility, Grumman Boulevard will be extended via an elevated structure to SE Airport Road.

To achieve the vertical clearance required by the FEC corridor, the profiles of both the Grumman Boulevard Extension and SE Dixie Highway will be adjusted. A section of SE Dixie Highway and SE Airport Road will be raised to accommodate the grade-separated crossing. Mohawk Lane will be extended to the north to provide access to an existing shopping plaza that will lose its connection to SE Dixie Highway. The Preferred Alternative includes considerations for pedestrian and bicycle facilities. ROW acquisition will be required. This design preserves the existing functional link between SR 714 and SE Dixie Highway while utilizing vertical separation to eliminate the conflict points and idling delays inherent to at-grade rail crossings. Following a comprehensive evaluation of mobility enhancements, safety

benefits, and minimized socio-economic impacts, Alternative 3 has been selected as the Preferred Alternative.

2.2 Drainage Context and Right-of-Way Summary

The project alignment for the Preferred Alternative interacts with complex local drainage patterns. While situated within three broad regional basins (South Fork, South Coastal, and South Mid-Estuary), the specific project footprint spans five distinct localized sub-drainage basins.

From a stormwater management and pond siting perspective, the geometric footprint and profiles evaluated for Alternative 3 will not require the acquisition of additional right-of-way for stormwater facilities. Preliminary engineering assessments confirm that existing right of way contains sufficient surplus area to accommodate the water quality treatment and peak quantity attenuation required for the new impervious areas. Existing stormwater infrastructure will be evaluated to verify its structural and hydraulic capacity to manage the routed runoff from these five localized basins.

To satisfy regional South Florida Water Management District (SFWMD) water quality and attenuation requirements within the surplus right-of-way footprints, three (3) designated stormwater management facilities are proposed. The location, geographic orientation, and surrounding infrastructure boundaries for each facility—corresponding exactly to the placemarks established within the project's spatial alignment data—are described below:

- **Stormwater Pond 1-1 of drainage Basin 1:** Bounded by the Martin County Airport (Witham Field) perimeter to the east, this facility is situated east of the FEC Railway mainline tracks. It is located along the South Dixie Highway corridor, positioned directly south of SE Airport Road, and entirely within available public right of way. Because the site is fully contained within existing right of way, no right of way acquisition is required and no acquisition cost is incurred; for this reason, no other pond site alternative was evaluated.
- **Stormwater Swale 1 of drainage Basin 2:** This facility is situated on the western side of the project limits, positioned west of the FEC Railway mainline tracks. It is located within the roadway margins immediately adjacent to the intersection of SR 714 (SE Monterey Road) and SE Federal Highway (US 1), positioned southwest of the proposed raised intersection and entirely within existing public right of way. Because the site is fully contained within existing right of way, no right of way acquisition is required and no acquisition cost is incurred; for this reason, no other pond site alternative was evaluated.
- **Stormwater Pond 2-1 of drainage Basin 2:** Bounded near the northern airfield boundary, this facility is situated east of the FEC Railway mainline tracks. It is located along the northern right-of-way limits of SE Monterey Road, positioned directly north of SE Airport Road and across from the primary airport facility tracts, entirely within

existing public right of way. Because the site is fully contained within existing right of way, no right of way acquisition is required and no acquisition cost is incurred; for this reason, no other pond site alternative was evaluated.

- **Stormwater Pond 3-2A. Pond 3-2B, Exfiltration Trenches of drainage Basin 3:** The limits of this facility extend along SE Monterey Road Extension from its intersection with SE Federal Highway to its intersection with SE Monterey Road. Within these limits, the roadway is to be widened to a four-lane divided typical section with bicycle lanes provided in each direction. Accommodation of the proposed typical section requires that the existing segmented ditch along the south side of the corridor be filled. The drainage system will be a combination of dry detention ponds and hydraulically supplemented by a proposed exfiltration trenches located entirely within the existing SE Monterey Road right of way. Other alternative stormwater management locations were evaluated for this basin.

3.0 STORMWATER REQUIREMENTS

The proposed stormwater management system must satisfy state and regional criteria for water quality treatment, nutrient load reduction, and peak discharge attenuation. Regulatory oversight is governed by the Florida Department of Environmental Protection (FDEP) and the SFWMD under Chapter 62-330, Florida Administrative Code (F.A.C.), and the SFWMD Environmental Resource Permit (ERP) Applicant's Handbook Volume II.

3.1 Water Quality and Nutrient Criteria

The project is located within a watershed that discharges into the Saint Lucie River Estuary. The FDEP has designated this estuary as an impaired water body with established Total Maximum Daily Loads (TMDLs) for Total Phosphorus (TP) and Total Nitrogen (TN). Consequently, the project must comply with the enhanced statewide stormwater performance standards.

Performance-Based Nutrient Load Reduction

Rather than relying solely on traditional prescriptive volumetric rules, the post-development stormwater system must achieve a performance-based pollutant load reduction:

- **Net Improvement Standard:** Because the receiving water body is impaired, the post-development nutrient sheet flow and point source discharges must demonstrate a net improvement for the parameters of concern (TP and TN). Post-development average annual nutrient loading must be less than or equal to the pre-development baseline loading.
- **Baseline Volumetric Treatment:** As a components-based minimum, wet detention systems must retain or detain the greater of:
 - The first 1.0 inch of runoff from the entire contributing project area, or
 - The total runoff generated by 2.5 x the percentage of new impervious area.

Best Management Practices (BMP) and System Types

- **Wet Detention Systems:** Must be designed with a control elevation set at or below 1.0 foot from the seasonal high groundwater table (SHGWT). The system must maintain a slow bleed-down rate, discharging no more than 0.5 inches of the detention volume within a 24-hour period.
- **Dry Detention / Retention Systems:** Alternative BMPs (such as dry retention or exfiltration trenches) may be utilized within the existing right-of-way footprint. However, their selection and footprint requirements must be justified using a continuous simulation or performance-matrix routing tool (e.g., BMP trains) to prove equivalent or superior TP and TN mass removal efficiencies.
- **Hydrocarbon Source Control:** Because the final roadway configuration represents a high-traffic transportation facility exceeding 50% imperviousness, the system must feature structural skimmers, baffles, or equivalent sediment/debris mechanisms at all discharge structures to prevent the migration of oils, grease, and floating pollutants into the receiving waters.

3.2 Water Quantity and Attenuation Criteria

The SFWMD mandates that post-development peak discharge rates do not cause adverse upstream or downstream impacts on off-site properties. Allowable discharge limits are typically governed by historic discharge rates, limits established in prior SFWMD permits, or specific basin-allowable discharge allocations.

Tidal Discharge and Attenuation Rules

The project outfalls eventually reach tidally influenced portions of the Saint Lucie River system. While tidal outfalls are exempt from some restrictive land-locked basin allowable discharge limits, the SFWMD and FDOT District Four require a strict evaluation of the 25-year, 72-hour design storm event.

Post-development peak discharge rates and discharge volumes must not exceed pre-development levels for this design storm. Furthermore, structural design and hydraulic routing calculations must account for tailwater conditions, incorporating local sea-level rise (SLR) projections and high-tide stages to ensure the proposed roadway prism, bridge approach structures, and internal conveyance systems remain safe from localized flooding.

4.0 SITE INFORMATION AND DRAINAGE FEATURES

4.1 Existing Site Conditions

Topography and Ground Elevation Range

The topography within the project extent varies within a narrow vertical corridor typical of coastal flatwoods. Existing ground elevations along the SR 714 alignment and adjacent intersection interfaces range from approximately 10.0 feet to 16.0 feet NAVD 88. High-

elevation segments are concentrated near the urbanized limits and runway approach zones, with a maximum average ground elevation varying between 13.0 feet and 16.0 feet NAVD 88. The project corridor drops to its lowest elevations near the drainage canal crossings and the lower reaches of the SE Monterey Road extension.

The alignment straddles three distinct regional watersheds: the South Fork Basin, the South Coastal Basin, and the South Mid-Estuary Basin. The existing drainage infrastructure relies entirely on gravity storm sewer conveyance networks. Runoff from the roadway prism is collected via curb inlets and roadside swales, routing through standard gravity networks that discharge into roadside linear ditches or dry swales. These open conveyance elements are connected to established dry detention basins designed for primary storage and water quality filtration. Controlled overflow from these facilities discharges into municipal receiving canals, which ultimately outfall into the tidally influenced Saint Lucie River Estuary.

Land Use

The existing corridor and contributing drainage areas represent a heavily altered, suburbanized coastal environment. Land use within the spatial boundary includes a mix of low-to-medium density residential neighborhoods, active commercial zones along major arterials (SR 714 and SE Federal Highway), and institutional/transportation sectors associated with the Witham Field Airport property.

Floodplain

According to the applicable Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), the project area is mapped within Zone X, which represents areas outside the 100-year floodplain. As such, the site lies above the regulatory base flood elevation (BFE). Nevertheless, finished floor elevations for new or substantially improved structures must comply with the requirements of the National Flood Insurance Program (NFIP) and applicable local floodplain management ordinances.

A review of available records indicates that no historical flooding events have been documented at the project site or within the immediate surrounding area.

In addition to the Flood Insurance Rate Map (FIRM), storm surge vulnerability within the project area was evaluated using the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model developed by the National Oceanic and Atmospheric Administration (NOAA). The SLOSH analysis indicates that the existing northern drainage ditch located at the eastern limit of the project area may be subject to storm surge inundation under a Category 5 hurricane event.

The potential for surge-related backwater effects is localized to the eastern extent of the project corridor and is associated only with extreme catastrophic coastal scenarios. Nevertheless, these SLOSH model findings provide critical boundary conditions for the engineering of drainage outfalls and subsurface conveyances. Design considerations will

include the integration of backflow prevention measures or enhanced storage capacities to protect the integrity of the drainage network during extreme coastal surge events.

Soil Type and Hydrologic Soil Groups

Subsurface profiles within the project limits are categorized using the Soil Conservation Service (SCS) Soil Survey for Martin County. The prevailing soils consist primarily of poorly drained, fine marine sands typical of flatwood landforms.

- SCS Hydrologic Soil Group (HSG): The dominant soil series are classified under HSG A/D or B/D in their natural state due to a restrictive shallow water table. When artificially drained, these soils exhibit the characteristics of Group A or B.
- SHGWT and Design Indicators: In areas where the average ground surface elevation varies from 13.0 feet to 16.0 feet NAVD 88, the local depth to the water table extends up to 5.0 feet below grade. To ensure engineering accuracy and regulatory compliance during the design phase, the bottom elevation of adjacent existing dry ponds must be utilized as the direct baseline indicator to match and establish the local seasonal high-water table. This shallow water table requires precise calculation of pond bottom profiles to ensure compliance with dry retention or wet detention criteria

To characterize the runoff potential and infiltration properties within the project boundaries, the local soils and their corresponding Hydrologic Soil Groups (HSGs) are detailed in Table 1

Soil Type (SCS Map Unit Naming)	Map Group Number	Hydrologic Soil Group (HSG)
Lawnwood and Myakka fine sands	2	A/D
Waveland and Immokalee fine sands	4	B/D
Pomello sand, 0 to 5 percent slopes	9	A
Urban land, 0 to 2 percent slopes	23	N/A (Altered/Impervious)
Salerno sand	35	B/D
Jonathan sand, 0 to 5 percent slopes	41	A
Udorthents, 0 to 35 percent slopes	53	A
Hobe fine sand, 0 to 5 percent slopes	61	A

Table 1 Soil Types and Hydrologic Soil Groups within the Project Limits

Wetlands

Review of the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) indicates that while the immediate upland roadway clear zones are highly altered, the project will incur localized impacts on surface water conveyance features classified as "Riverine" systems. Specifically, construction activities will impact the following drainage features:

- South Dixie Highway Canal Corridor (from SE Airport Road to SE Monterey Road): Proposed geometric modifications and structural footprints will impact the riverine canal running parallel to this alignment. This canal is subject to routine maintenance, including bank mowing; however, the ditch bottom remains wet at various low-lying locations, indicating sustained interactions with the local water table.
- SE Monterey Road Extended Corridor (from SR 5 / SE Federal Highway to SE Monterey Road): The existing conveyance canal within this segment will be filled to accommodate the proposed roadway prism and clear zone requirements. This facility is highly maintained, mechanically stable, and remains dry for the majority of the year, functioning primarily as an ephemeral stormwater conveyance rather than a high-functioning natural wetland system.

Due to the heavily managed, altered, and disturbed nature of these roadside riverine systems, ecological impacts are considered minimal and primarily limited to water conveyance alterations rather than high-value habitat degradation. Appropriate structural stabilization, capacity compensation within the existing surplus right-of-way, and sedimentation controls will be deployed to mitigate any downstream impacts to the receiving waters of the Saint Lucie River Estuary.

Potential pond site involvement with jurisdictional wetlands was evaluated on desktop GIS routing and preliminary field screening and categorized using a standard four-tier ranking methodology. The definitions for the rating criteria are established as follows:

- **NO:** No jurisdictional wetlands are in the vicinity of the proposed pond site, or jurisdictional wetlands are adjacent to the pond site and will not be impacted by construction or hydrological drawdown.
- **LOW:** Only a small portion of the proposed pond footprint (less than 20%) includes or encroaches upon jurisdictional wetlands.
- **MEDIUM:** Encroachment is moderate, where 50% or less of the proposed pond site footprint is comprised of jurisdictional wetlands.
- **HIGH:** Encroachment is severe, where greater than 50% of the proposed pond site footprint is comprised of jurisdictional wetlands.

Based on desktop GIS routing and preliminary field screening, all three (3) proposed stormwater pond locations are situated entirely within highly disturbed upland areas. No direct or indirect wetland impacts are anticipated from the construction or operation of these facilities. Consequently, all evaluated pond sites receive a rating of "**NO**" for wetland involvement.

DISCLAIMER: The wetland involvement ratings and surface water evaluations presented in this report are based strictly on preliminary desktop GIS screening and initial site visits. These findings do not constitute a formal wetland delineation. A more detailed jurisdictional wetland analysis, formal vegetative research, and coordination with regulatory agencies—including the

South Florida Water Management District (SFWMD) and the U.S. Army Corps of Engineers (USACE)—may be required during the final design phase to verify precise jurisdictional lines and permitting thresholds.

Contamination

An environmental data screening was executed to identify recorded hazardous material, petroleum, or industrial waste sites within or immediately adjacent to the project extent boundary. Four (4) documented FDEP regulatory contamination facilities were identified within the localized study area.

To ensure engineering feasibility and prevent the lateral migration of contaminated groundwater plumes or the drawdown of localized contaminants, any future stormwater modifications or adjacent drainage routing within the surplus right-of-way must be cross-referenced with the specific facility parameters detailed in Table 2.

FDEP Facility ID (ERIC / Tracking No.)	Facility Name / Description	Contamination Type / Clean-up Core Parameter	Regulatory Status / Engineering Note
86880211	Former Coastal Express / Gas Station	Petroleum Hydrocarbons (BTEX, TRPH in Soil & Groundwater)	Active Remediation / Monitoring. Stormwater design must avoid structural drawdown or dewatering impacts.
86888761	Martin County Airport - Witham Field (Aviation Fuel Interface)	Aviation Fuel / Petroleum Volatile Organic Compounds (VOCs)	Active Regulatory Oversight. Drainage modifications nearby must preserve groundwater plume stability.
86889207	Commercial Retail / Historical Dry Cleaner Footprint	Chlorinated Solvents (Tetrachloroethene [PCE] / Trichloroethene [TCE])	Closed with Institutional/Engineering Controls or Active Assessment. Low- permeability liner required if localized exfiltration is proposed nearby.
86879836	County Maintenance / Industrial Support Facility	Waste Oils, Lubricants, and Heavy Metals	Clean-up Completed / Monitoring Inactive. Low risk of migration, but soil management protocols apply during shallow excavation.

Table 2 Documented FDEP Contamination Facilities within Project Interface

Importantly, a spatial proximity analysis confirms that the specific locations of the three (3) proposed stormwater ponds are not located within the immediate vicinity or hydraulic zone of influence of these contaminated facilities. Because the proposed stormwater strategies prioritize utilizing existing right-of-way surplus areas well separated from these parcels, the risk of intersecting contaminated soils or mobilizing regulated groundwater plumes is considered negligible.

During the final design phase, standard hydraulic modeling will be maintained to confirm that normal drawdown or retention operations do not induce lateral migration from these regional points of concern. If localized variations are encountered during final geotechnical boring phases, standard impermeable geomembrane liners will be specified as a conservative measure to completely isolate the stormwater facilities.

Potential pond site involvement with or proximity to contaminated parcels was systematically evaluated and categorized using a standard four-tier GIS-based hazard ranking methodology. The definitions for the evaluation criteria are established as follows:

- **NO:** Land uses that may have the potential to use petroleum or hazardous materials are not located within the vicinity of the proposed pond site.
- **LOW:** Land uses that may have the potential to use petroleum or hazardous materials are located within the vicinity of the proposed pond but show no active or historical discharges.
- **MEDIUM:** Land uses that actively use or store petroleum or hazardous materials are located in the immediate vicinity of the proposed pond site.
- **HIGH:** Land uses that actively use petroleum or hazardous materials are located in the immediate vicinity of the proposed pond site, or an active contamination plume/discharge is formally documented.

Importantly, a spatial proximity analysis confirms that the specific locations of the three (3) proposed stormwater ponds are completely cleared of any known or intersecting contamination sites. The geometric footprints of the proposed stormwater facilities are situated well outside the active hydraulic zones of influence or physical boundaries of the parcels detailed in Table 2. Because the proposed stormwater strategies prioritize utilizing existing right-of-way surplus areas that are isolated from these risk zones, the probability of intersecting contaminated media or mobilizing regulated groundwater plumes is considered negligible. Consequently, a rating of "**NO**" is applied to all three (3) proposed pond sites.

During the final design phase, standard hydraulic modeling will be maintained to confirm that normal drawdown or retention operations do not induce lateral migration from regional points of concern. If localized variations are encountered during final geotechnical boring phases, standard impermeable geomembrane liners will be specified as a conservative measure to completely isolate the stormwater facilities.

DISCLAIMER: The contamination hazard ratings presented in this section are based strictly on a preliminary GIS desktop screening of active state regulatory databases and initial project buffer analysis. These findings do not constitute a formal Level I or Level II Environmental Site Assessment (ESA). More detailed environmental research, hazardous material corridor assessments, or soil and groundwater testing may be required during the final design phase to conclusively verify subsurface conditions prior to any excavation or dewatering activities

Listed Species

A formal, comprehensive environmental field review for protected flora and fauna has not yet been executed for the project footprint. However, a preliminary office-topographic screening was performed for the three (3) potential localized pond utilization areas within the ROW. These locations are tentatively rated "NO" for critical habitat potential. Due to the severely disturbed nature of the existing ROW, routine mowing maintenance, and proximity to active urban transportation corridors, these sites provide minimal viable wildlife habitat or ecological value for listed species.

A formal, comprehensive environmental field review for protected flora and fauna has not yet been executed for the project footprint. To evaluate potential protected species involvement across the three (3) localized pond utilization areas within the existing ROW, a standard habitat suitability ranking methodology was applied based on the following criteria:

- **NO:** The proposed pond site provides minimal wildlife habitat due to its heavily disturbed nature, regular maintenance, or adjacent urban infrastructure.
- **MEDIUM:** The proposed pond site may contain preferred habitat parameters, nesting potential, or foraging opportunities for a specific listed species.
- **HIGH:** Listed species or direct indicators of their presence (e.g., active burrows, nests, or individuals) were explicitly observed within the proposed pond site footprint.

While the candidate pond sites are situated within heavily managed and altered transportation clear zones, regional desktop ecological layering indicates the potential presence of suitable soils or foraging territory for specific state and federally protected species. Consequently, a final tentative rating of "**MEDIUM**" is applied to the proposed pond sites. Because a final determination cannot be established solely through remote sensing data, further comprehensive on-site biological research and field surveys are required. Prior to final design approval and permitting, detailed ecological transects must be conducted within the selected pond footprints to confirm the presence or absence of protected species, delineate active habitats, and establish appropriate regulatory mitigation or relocation protocols if required.

Cultural Resource Assessment

A formal Cultural Resource Assessment Survey (CRAS) targeting the three proposed stormwater modification sites has not been performed to date. A spatial review of the project extent data indicates that the alignment avoids direct encroachment onto recorded archaeological sites or known historical structures. However, given the project's location within an established historic coastal county (Martin County), any future subsurface stormwater excavations or structural footprint expansions must be reconciled with the Florida Master Site File (FMSF) to verify that nearby historical structures or unrecorded urban resources are protected from vibration or structural drawdown impacts.

5.0 EVALUATION OF PONDS LOCATIONS

5.1 Basis of Evaluation

A comparative alternatives analysis was performed to evaluate the viability, engineering feasibility, and constraints associated with each proposed Stormwater Management Facility (SMF) location. Each site alternative was systematically audited against specific performance-based criteria, balancing geometric requirements against environmental, regulatory, and financial parameters. The matrix evaluation relies on the following primary core categories:

Constructability

This criterion assesses the physical and geometric suitability of each site to accommodate the necessary hydraulic infrastructure. Evaluation parameters include the efficiency of gravity routing to gravity storm sewer conveyance networks, the ability to maximize available storage depth while protecting the shallow water table, and the prevention of adverse backwater or localized flooding impacts on both on-site and off-site drainage systems. Sites must feature sufficient usable acreage to satisfy regulatory setbacks, clear zones, stable structural side slopes, and baseline pond bottom areas required to satisfy the performance-based water quality treatment and peak quantity attenuation volumes.

Maintainability

Long-term operational accessibility is critical to facility performance. Each alternative was evaluated to ensure adequate clearance and stable staging areas are available for heavy municipal equipment. Design footprints must accommodate stable maintenance berms and access ramps to facilitate routine mowing, mechanical weed control, sediment removal, vacuum clearing, and structural inspection of the outfall control structures, skimmers, and emergency overflow weirs.

Environmental Impacts

This category addresses potential degradation or modifications to jurisdictional wetlands, surface waters, and critical habitats for state or federally listed species. To streamline environmental permitting and minimize compensatory mitigation requirements through the SFWMD and USACE, the evaluation prioritizes sites located within severely disturbed uplands, specifically targeting areas with negligible ecological or wildlife habitat value.

Cultural Impacts

This parameter addresses risks associated with encroaching upon or damaging recorded prehistoric, historical, or archaeological resources, including historical architectural structures or known sub-surface deposits. Preference is given to configurations that ensure zero physical or vibrational impact to resources tracked by the FMSF.

Contamination Impacts

This criterion evaluates the proximity of each alternative to active or historical hazardous material, petroleum storage, or industrial waste facilities. The evaluation focuses on mapping structural footprints to eliminate the risk of encountering contaminated soils or drawing down groundwater tables in a manner that could induce lateral migration of documented, localized contaminant plumes.

Economic Risks and Right-of-Way Optimization

Financial evaluation encompasses total life-cycle costs, including structural construction estimates, earthwork, conflict utility relocations, and potential risk mitigation (such as specialized impermeable geomembrane liners). In alignment with the overarching project constraints, the selection process prioritizes utilizing existing FDOT right-of-way surplus acreage. Maximizing these public parcels completely eliminates the significant capital expenditures, administrative overhead, business/residential relocations, and schedule risks associated with private property or right-of-way acquisition.

5.2 Evaluation and Cost Estimate

The project corridor interacts with five localized drainage basins that roll up into three broad regional watersheds managed by the City of Stuart: the South Fork Basin, the South Coastal Basin, and the South Mid-Estuary Basin. To efficiently manage water quality treatment and peak quantity attenuation requirements without acquiring private property, the project is structured into distinct drainage design sections. Two of these localized basins will utilize traditional open-basin attenuation via three (3) proposed dry detention ponds, while a third highly constrained localized basin will be managed via an underground exfiltration trench system. One alternative will be evaluated at each proposed detention pond or Stormwater Management Facility (SMF) location.

5.2.1 Localized Basin 1 and SMF Pond 1-1 Evaluation

Basin 1 Drainage Context

Localized Basin 1 is situated within the overarching regional drainage framework. Geographically, the basin alignment originates at the intersection of SE Aviation Way and SE Dixie Highway (CR A1A) and terminates at the intersection of SE Airport Road and SE Dixie Highway.

The existing and proposed drainage infrastructure relies on a gravity storm sewer collection network (curb inlets and concrete piping) that routes runoff into an interconnected configuration of dry and wet roadside detention basins before final controlled outfall to the tidally influenced Saint Lucie River Estuary. The total drainage area contributing to this network encompasses 8.36 acres, which includes 0.06 acres of new, additional impervious surface area generated by the proposed grade-separated structure approach and roadway geometric modifications.

SMF Pond 1-1 Geometric Layout and Topography

To attenuate and treat the additional runoff from Basin 1, Stormwater Pond 1-1 is proposed within a surplus, triangular parcel of the existing right-of-way. This specific site footprint consists of an upland area historically utilized as the legacy roadway alignment for SE Dixie Highway. The site boundaries are defined as follows:

- **North:** Bounded by the active alignment of SE Dixie Highway.
- **East:** Bounded by the FEC Railway mainline right-of-way tracks.
- **South:** Bounded by the commercial parking and staging interfaces of the Stuart County Fairgrounds.

The existing terrain is clear, stabilized with turf grass, routinely mowed, and completely devoid of significant canopy or dense woody vegetation. Subsurface profiles are characterized by well-drained Waveland and Immokalee fine sands (SCS Map Group Number 4).

To satisfy regional drawdown and groundwater separation mandates, the proposed engineering controls establish the pond bottom elevation at +11.00 feet NAVD 88. This elevation is established conservatively, matching a vertical profile 1.0 foot higher than the existing dry detention pond situated immediately east of SE Dixie Highway, which serves as the local SHGWT indicator. The proposed top of berm elevation is set at +16.00 feet NAVD 88, matching surrounding natural ground ridges and ensuring adequate structural containment freeboard. Furthermore, the final geometric footprint of Pond 1-1 has been technically modified and constrained to fully preserve the active ingress/egress access geometry to the adjacent Stuart County Fairgrounds parking facilities.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Pond 1-1 site:

- **Wetlands:** Field observations confirmed that the proposed pond footprint is located entirely within a stabilized upland zone. No jurisdictional wetland vegetation, hydric soils, or surface water indicators are present. Consequently, SMF Pond 1-1 receives a final rating of **"NO" involvement** for wetland impacts.
- **Contamination:** No active or historical storage tanks, dumping, or signs of environmental distress were observed within or immediately adjacent to the parcel during the June 2026 field review. Spatial correlation with state regulatory databases confirms the site is clear of localized plumes. Accordingly, a rating of **"NO" involvement** for potential contamination risks is applied.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species (e.g., gopher tortoise burrows) were observed within the managed grassy right-of-way during field cross-sections. Due to its highly disturbed and routinely mowed state, a rating of **"NO" involvement** is anticipated; however, a formal, targeted

listed species survey is recommended prior to construction to finalize regulatory clearance.

- **Cultural Resources:** A formal Cultural Resource Assessment Survey (CRAS) has not been finalized for this specific sub-parcel. However, the field reconnaissance did not identify any surficial historical structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

Because SMF Pond 1-1 is entirely constrained within surplus public property already held by the Department, the right-of-way acquisition cost is \$0.00. There are zero expenditures required for land purchasing, easements, or residential/business relocations. Based on preliminary earthwork calculations, structural control structure and outfall configuration, bank stabilization requirements, the total estimated construction and excavation cost for SMF Pond 1-1 is \$246,190.00.

SMF Alternate Pond 1-2 Geometric Layout and Topography

As an alternative to SMF Pond 1-1, SMF Alternate Pond 1-2 is proposed at the northeast corner of the intersection of SE Dixie Highway (CR A1A) and SE Aviation Way. The proposed site encompasses 2.56 acres of property owned by Martin County. The site boundaries are defined as follows:

- **North:** Bounded by the Airport South Canal ditch.
- **South:** Bounded by SE Aviation Way.
- **East:** Bounded by SE Aviation Way Circle.
- **West:** Bounded by SE Dixie Highway (CR A1A).

The existing terrain is clear, stabilized with turf grass, routinely mowed, and completely devoid of significant canopy or dense woody vegetation. Subsurface profiles are characterized by Myakka fine sands (SCS Map Group Number 2).

To satisfy regional drawdown and groundwater separation mandates, the proposed engineering controls establish the pond bottom elevation at +11.00 feet NAVD 88, which is 1.0 foot higher than the existing dry detention pond situated east of SE Dixie Highway within the airport grounds. The average existing ground elevation across the site is +16.00 feet NAVD 88, and the proposed top of berm elevation is set at +16.00 feet NAVD 88. The final geometric footprint of SMF Alternate Pond 1-2 has been configured to fit entirely within the existing site boundaries.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Alternate Pond 1-2 site:

- **Wetlands:** Field observations confirmed that the proposed pond footprint is located entirely within a stabilized upland zone. No jurisdictional wetland vegetation, hydric soils, or surface water indicators are present. Consequently, SMF Alternate Pond 1-2 receives a final rating of **"NO" involvement** for wetland impacts.
- **Contamination:** No active or historical storage tanks, dumping, or signs of environmental distress were observed within or immediately adjacent to the parcel during the June 2026 field review. Spatial correlation with state regulatory databases confirms the site is clear of localized plumes. Accordingly, a rating of **"NO" involvement** for potential contamination risks is applied.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species (e.g., gopher tortoise burrows) were observed within the managed grassy right-of-way during field cross-sections. Due to its highly disturbed and routinely mowed state, a rating of **"NO" involvement** is anticipated; however, a formal, targeted listed species survey is recommended prior to construction to finalize regulatory clearance.
- **Cultural Resources:** A formal Cultural Resource Assessment Survey (CRAS) has not been finalized for this specific sub-parcel. However, the field reconnaissance did not identify any surficial historical structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

SMF Alternate Pond 1-2 is located on Martin County property that is outside Department right-of-way and would require full acquisition. Based on the Martin County Property Appraiser's database for parcel ID 37-38-41-006-171-00000-9, the estimated right-of-way acquisition cost is \$90,790.00. Based on preliminary earthwork calculations, control structure and outfall configuration, and bank stabilization requirements, the estimated construction cost for SMF Alternate Pond 1-2 is \$255,229.00, for a total estimated cost of \$346,019.00.

Although this site would satisfy the required water quality treatment and water quantity attenuation volumes, its location upstream of the Basin 1 watershed would require extending the project limits and modifying and reconstructing the existing gravity collection system, which currently flows north, to flow south. In addition, the new stormwater collection pipe would conflict with an existing culvert that links SE Federal Highway with SE Dixie Highway by crossing the FEC Railway tracks.

5.2.2 Localized Basin 2, SMF Pond 2-1 Evaluation

Basin 2 Drainage Context

Localized Basin 2 represents a major drainage segment within the overarching project corridor. Geographically, the basin alignment originates at the intersection of SE Airport Road and SE Dixie Highway (CR A1A) and terminates at the intersection of SE Monterey Road and SE Dixie Highway.

The existing drainage network relies on a gravity storm sewer collection system that routes runoff into an interconnected configuration of dry and wet roadside detention basins before final controlled outfall to the tidally influenced Saint Lucie River Estuary. The total drainage area contributing to this network encompasses 18.69 acres, which includes 0.75 acres of new, additional impervious surface area generated by the proposed grade-separated structure approach and roadway geometric modifications. To accommodate the necessary water quality treatment and peak quantity attenuation, Basin 2 will be drained by two (2) separate dry detention ponds, designated as Swale 1 and Pond 2-1.

SMF Swale 1 Geometric Layout and Topography

Stormwater Swale 1 is located at the western limits of Basin 2, positioned at the current dead end of SE Monterey Road adjacent to FEC Railway mainline tracks. As part of the Preferred Alternative, this dead-end street segment will be elevated to form the grade-separated overpass ramp bridging the FEC tracks from SE Federal Highway (US 1) toward the intersection of SE Dixie Highway and SE Airport Road. Historically, this portion of SE Monterey Road drained east toward SE Dixie Highway via an existing 36-inch pipe cross drain located below the FEC railroad tracks. The new geometric alignment of the overpass ramp will leave a structural surplus portion of public ROW that will be captured to collect and manage this historical runoff footprint.

The proposed facility will be configured within a triangular upland section of the existing right-of-way. The site features complex local conditions, containing an unpaved dirt road and an existing, fenced private wet pond that partially encroaches onto the public ROW. Subsurface profiles are characterized by well-drained Salerno sand (SCS Map Group Number 35).

To satisfy structural and regional water table separation mandates, the proposed engineering controls establish the pond bottom elevation at +8.00 feet NAVD 88, which sits 1.5 feet higher than the existing adjacent wet pond edge of water. The proposed top of berm elevation is set at +13.00 feet NAVD 88, matching surrounding natural ground elevations and ensuring adequate structural containment freeboard.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Swale 1 site:

- **Wetlands:** Field observations confirmed that due to the physical presence of the encroaching private wet pond system, the proposed pond footprint will have a "**LOW**" **involvement** rating for wetlands, as less than 20% of the site incorporates jurisdictional surface water area.
- **Contamination:** No active or historical storage tanks, dumping, or signs of environmental distress were observed within or immediately adjacent to the parcel during the June 2026 field review. Spatial correlation with state regulatory databases

confirms the site is clear of localized plumes. Accordingly, a rating of **"NO" involvement** for potential contamination risks is applied.

- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species were observed within the managed right-of-way during field cross-sections. Due to its highly disturbed state, a rating of **"NO" involvement** is anticipated; however, a formal, targeted listed species survey is recommended prior to construction to finalize regulatory clearance.
- **Cultural Resources:** A formal CRAS has not been finalized for this specific sub-parcel. However, the field reconnaissance did not identify any surficial historical structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

Based on the proposed right-of-way acquisition limits needed to construct the grade-separated overpass ramp, data from the Martin County Property Appraiser's database indicates that private parcel ID 15-38-41-000-000-00030-6 will be affected. A 10-foot-wide drainage easement will be required from this acquired area to facilitate the installation of a new gravity conveyance pipe draining the overpass ramp and efficiently routing runoff from this parcel, which currently overflows east via the legacy 36-inch cross drain.

The right-of-way acquisition and easement costs associated with this pond footprint are estimated at \$122,243.00. Based on preliminary earthwork calculations, structural control structure and outfall configuration, bank stabilization requirements, the total estimated construction and excavation cost for SMF Swale 1 is \$458,645.00, resulting in a combined total estimated cost of \$580,888.00.

SMF Alternate Pond 2-3 Geometric Layout and Topography

As an alternative to SMF Swale 1, SMF Alternate Pond 2-3 is proposed at the western limits of Basin 2, serving the same drainage footprint at the current dead end of SE Monterey Road adjacent to the FEC Railway mainline tracks. Rather than occupying the surplus public right-of-way south of the proposed connector ramp, SMF Alternate Pond 2-3 would be located north of the proposed connector, on private property that is already affected by the right-of-way acquisition required for the connecting ramp. The proposed site encompasses 3.59 acres of property owned by Tarmac Florida Inc.

As with SMF Swale 1, the proposed facility would continue to collect and manage the historical runoff footprint of SE Monterey Road, which drains east toward SE Dixie Highway via the existing 36-inch pipe cross drain located below the FEC railroad tracks. The site is presently occupied by an active commercial concrete mixing facility. Subsurface profiles are characterized by well-drained Salerno sand (SCS Map Group Number 35).

To satisfy structural and regional water table separation mandates, the proposed engineering controls establish the pond bottom elevation at +8.00 feet NAVD 88 and the proposed top of berm elevation at +13.00 feet NAVD 88, matching the criteria established for SMF Swale 1 and ensuring adequate structural containment freeboard.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Alternate Pond 2-3 site:

- **Wetlands:** Unlike SMF Swale 1, the proposed footprint contains no jurisdictional surface water and is devoid of any vegetation, the site being an active commercial concrete mixing facility. Consequently, SMF Alternate Pond 2-3 receives a final rating of **“NO” involvement** for wetland impacts.
- **Contamination:** Although no active FDEP-listed facility is mapped at this location, the nature of the existing commercial concrete mixing operation will require a contamination screening. Accordingly, a rating of **“LOW” involvement** for potential contamination risks is applied.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species were observed within the site during field cross-sections. Due to its highly disturbed state, a rating of **“NO” involvement** is anticipated; however, a formal, targeted listed species survey is recommended prior to construction to finalize regulatory clearance.
- **Cultural Resources:** A formal CRAS has not been finalized for this specific sub-parcel. However, the field reconnaissance did not identify any surficial historical structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

Based on the proposed right-of-way acquisition limits needed to construct the grade-separated overpass ramp, data from the Martin County Property Appraiser's database indicates that private parcel ID 10-38-41-000-000-00280-4 will be affected. No drainage easement would be required, as the facility would continue to overflow east via the legacy 36-inch cross drain.

The right-of-way acquisition cost associated with this pond footprint is estimated at \$981,900.00. Based on preliminary earthwork calculations, structural control structure and outfall configuration, bank stabilization requirements, the total estimated construction and excavation cost for SMF Alternate Pond 2-3 is \$362,420.00, resulting in a combined total estimated cost of \$1,344,320.00.

Although this site would amply satisfy the water quality and water quantity volumetric requirements, its current use as an active concrete mixing facility will require soil testing prior to acquisition. Business damages have not been evaluated and would increase the cost

beyond the estimate presented above. For these reasons, SMF Alternate Pond 2-3 is not the preferred option, and SMF Swale 1 remains the preferred choice despite its reduced capacity.

SMF Pond 2-1 Geometric Layout and Topography

Stormwater Pond 2-1 is located at the northern edge of Basin 2, situated within a triangular public parcel bounded by SE Monterey Road to the south, SE Palm Beach Road to the west, and vacant municipal lands belonging to the City of Stuart to the north. This northern boundary previously comprised a residential neighborhood that was subsequently acquired and cleared due to its position within the runway protection and clear zones for Martin County Airport (Witham Field) Runway 12–30.

Pond 2-1 consists of an existing dry detention facility that will be regraded, optimized, and expanded within the available triangular right-of-way footprint. Subsurface profiles are characterized by well-drained Waveland and Immokalee fine sands (SCS Map Group Number 4).

To maintain the hydraulic grade line and match local baseline parameters, the proposed engineering controls establish the pond bottom elevation at +8.00 feet NAVD 88, matching the existing pond bottom profile. The proposed top of berm elevation is set at +13.00 feet NAVD 88, ensuring structural consistency with the surrounding terrain.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Pond 2-1 site:

- **Wetlands:** Field observations confirmed that the proposed pond expansion footprint is located entirely within a stabilized, dry upland zone. No jurisdictional wetland vegetation, hydric soils, or natural surface water indicators are present. Consequently, SMF Pond 2-1 receives a final rating of **"NO" involvement** for wetland impacts.
- **Contamination:** No active or historical storage tanks, dumping, or signs of environmental distress were observed within or immediately adjacent to the parcel during the June 2026 field review. Spatial correlation with state regulatory databases confirms the site is clear of localized plumes. Accordingly, a rating of **"NO" involvement** for potential contamination risks is applied.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species were observed within the managed right-of-way during field cross-sections. Due to its routinely maintained state, a rating of **"NO" involvement** is anticipated; however, a formal, targeted listed species survey is recommended prior to construction to finalize regulatory clearance.
- **Cultural Resources:** A CRAS has not been finalized for this specific sub-parcel. However, the field reconnaissance did not identify any surficial historical structures,

architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

Because SMF Pond 2-1 is located entirely within public right-of-way and municipal clear zones already held by public entities, the right-of-way acquisition cost is \$0.00. There are zero expenditures required for land purchasing, private easements, or residential/business relocations. Based on preliminary earthwork calculations, structural control structure and outfall configuration, bank stabilization requirements, the total estimated construction and excavation cost for SMF Pond 2-1 is \$445,745.00.

SMF Alternate Pond 2-2 Geometric Layout and Topography

SMF Alternate Pond 2-2 is located across from Pond 2-1, within a triangular area bordered by SE Christie Way to the north, SE Dixie Highway to the west, and SE Palm Beach Road to the east. The site comprises 0.64 acres of private commercial property plus adjacent public right-of-way.

The proposed facility consists of a dry detention pond to be constructed within the available triangular footprint. Subsurface profiles are characterized by well-drained Waveland and Immokalee fine sands (SCS Map Group Number 4).

To maintain the hydraulic grade line and match local baseline parameters, the proposed engineering controls establish the pond bottom elevation at +8.00 feet NAVD 88, matching the existing Pond 2-1 bottom profile. The proposed top of berm elevation is set at +13.00 feet NAVD 88, ensuring structural consistency with the surrounding terrain.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Alternate Pond 2-2 site:

- **Wetlands:** Field observations confirmed that the proposed pond footprint is located entirely within private commercial property and adjacent public right-of-way. No jurisdictional wetland vegetation, hydric soils, or natural surface water indicators are present. Consequently, SMF Alternate Pond 2-2 receives a final rating of **“NO” involvement** for wetland impacts.
- **Contamination:** No active or historical storage tanks, dumping, or signs of environmental distress were observed within or immediately adjacent to the parcel during the June 2026 field review. Spatial correlation with state regulatory databases confirms the site is clear of localized plumes. Accordingly, a rating of **“NO” involvement** for potential contamination risks is applied.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species were observed within the site during field cross-sections. Due to its routinely maintained state, a rating of **“NO” involvement** is anticipated; however, a

formal, targeted listed species survey is recommended prior to construction to finalize regulatory clearance.

- **Cultural Resources:** A CRAS has not been finalized for this specific sub-parcel. However, the field reconnaissance did not identify any surficial historical structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

Based on the proposed right-of-way acquisition limits, data from the Martin County Property Appraiser's database indicates that private parcel ID 09-38-41-005-001-00170-2 will be affected.

The right-of-way acquisition cost associated with this pond footprint is estimated at \$768,390.00. Based on preliminary earthwork calculations, structural control structure and outfall configuration, bank stabilization requirements, the total estimated construction and excavation cost for SMF Alternate Pond 2-2 is \$176,161.00, resulting in a combined total estimated cost of \$944,551.00.

Although this site amply satisfies the water quality and water quantity volumetric requirements, the project limits would need to be extended further north to accommodate it. Overflow would be directed to the existing pond (Pond 2-1) with minor regrading.

5.2.3 Localized Basin 3, Exfiltration Trenches System Evaluation

Basin 3 Drainage Context

Localized Basin 3 lies west of the FEC Railway mainline and extends westward along SE Monterey Road Extension and SE Monterey Road to SE Veteran Avenue. Conveyance is provided primarily by a 60-inch diameter gravity pipe system that collects runoff from SE Monterey Road Extension and SE Federal Highway. This trunk line discharges to an open ditch at SE Veteran Avenue, which flows north to a detention pond that in turn overflows to the tidal waters of the Saint Lucie River Estuary. The total contributing drainage area (right-of-way) tributary to this network at the discharge point to the open ditch is 19.91 acres. The proposed work is limited to SE Monterey Road Extension, with a contributing drainage area of 3.78 acres.

The proposed drainage system consists of a continuous 36" diameter French drain constructed within the limits of the existing ditch and set at invert +7.50 feet NAVD 88 which is estimated per the existing ditch bottom. Preliminary sizing yields an estimated trench length of 1,520 feet, against a required length of 1,038 feet under SFWMD criteria. The system will be stage-controlled by a weir structure connected to the existing 60-inch diameter trunk line, which flows west to the SE Veteran Avenue outfall and the north-flowing ditch. The discontinued trunk line will be extended to maintain the conveyance overflow continuity for the upland public right of way and private properties systems currently draining toward this existing trunk line.

Preliminary volumetric sizing of this system was performed using regional hydraulic conductivity data developed from five percolation tests, obtained from existing permit records available through the SFWMD permit search portal (Permit 930330-3).

Environmental and Constraints Screening Results

An engineering field review conducted in June 2026, supplemented by a regional desktop GIS analysis, produced the following constraint determinations for the Basin 3 exfiltration trench system:

- **Wetlands:** Field observations confirmed that the proposed exfiltration trench footprint falls entirely within a maintained drainage ditch. No jurisdictional wetland vegetation, hydric soils, or natural surface water indicators were identified. The exfiltration trench is therefore assigned a final rating of **"NO" involvement** for wetland impacts. The existing ditch is further scheduled to be filled as part of the roadway widening.
- **Contamination:** An active FDEP-listed facility, the City of Stuart Fire Station (FDEP ID 86889207), is located near the western end of Basin 3. Accordingly, a rating of **"LOW" involvement** for potential contamination risks is applied.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state- or federally tracked species were observed within the maintained right-of-way during the field cross-sections. Given the routinely maintained condition of the corridor, a rating of **"NO" involvement** is anticipated; a formal, targeted listed species survey is nonetheless recommended prior to construction to finalize regulatory clearance.
- **Cultural Resources:** The CRAS has not been finalized. Field reconnaissance identified no surficial historic structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Cost Estimate Summary

The estimated construction cost for the proposed Basin 3 exfiltration trench system is \$1,122,420.00.

SMF Alternate Pond 3-1 Geometric Layout and Topography

As an alternative to the French drains, SMF Alternate Pond 3-1 is proposed to be located within a private property adjacent to the project and owned by the City of Stuart. SMF Alternate Pond 3-1 would be located south of SE Monterey Road roughly at the mid-point of Basin 3. The proposed alternate pond will first collect the runoff from SE Monterey Road and upstream tributary areas and finally will be discharged to the existing 60-inch diameter trunk line, which flows west to the SE Veteran Avenue outfall and the north-flowing ditch. The proposed site encompasses 2.34 acres of City owned property.

The existing terrain contains two warehouses, and a partially improved parking areas. The proposed facility consists of a dry detention pond to be constructed within the available

footprint. Subsurface profiles are characterized by well-drained Waveland and Immokalee fine sands (SCS Map Group Number 4)

To maintain the hydraulic grade line and match local baseline parameters, the proposed engineering controls establish the pond bottom elevation at +9.00 feet NAVD 88, matching the existing ditch bottom profile. The proposed top of berm elevation is set at +15.00 feet NAVD 88, ensuring structural consistency with the surrounding terrain.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Alternate Pond 3-1 site:

- **Wetlands:** Field observations confirmed that the proposed pond footprint is located entirely within private commercial property. No jurisdictional wetland vegetation, hydric soils, or natural surface water indicators are present. Consequently, SMF Alternate Pond 3 receives a final rating of **“NO” involvement** for wetland impacts.
- **Contamination:** No active or historical storage tanks, dumping, or signs of environmental distress were observed within or immediately adjacent to the parcel during the June 2026 field review. Spatial correlation with state regulatory databases confirms the site is clear of localized plumes. Accordingly, a rating of **“NO” involvement** for potential contamination risks is applied.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species were observed within the site during field cross-sections. Due to its routinely maintained state, a rating of **“NO” involvement** is anticipated; however, a formal, targeted listed species survey is recommended prior to construction to finalize regulatory clearance.
- **Cultural Resources:** A CRAS has not been finalized for this specific sub-parcel. However, the field reconnaissance did not identify any surficial historical structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

Based on the proposed right-of-way acquisition limits, data from the Martin County Property Appraiser's database indicates that City owned parcel ID 16-38-41-000-000-00015-0 will be affected.

The right-of-way acquisition cost associated with this pond footprint is estimated at \$1,367,000.00. Based on preliminary earthwork calculations, structural control structure and outfall configuration, bank stabilization requirements, the total estimated construction and excavation cost for SMF Alternate Pond 3-1 is \$1,171,235.00, resulting in a combined total estimated cost of \$2,538,235.00.

Although this site amply satisfies the water quality and water quantity volumetric requirements, the acquisition of this property will impact this real estate site currently on lease to a private company.

SMF Alternate Pond 3-2A, Pond 3-2B Geometric Layout and Topography

As an alternative to the French drains, SMF Alternate Pond 3-2A, Pond 3-2B are proposed to be located within 2 private properties adjacent to the project and owned by the City of Stuart. SMF Alternate Ponds 3-2A and 3-2B would be located south of SE Monterey Road roughly at the mid-point of Basin 3. The proposed alternate pond will first collect the runoff from SE Monterey Road and upstream tributary areas and finally will be discharged to the existing 60-inch diameter trunk line, which flows west to the SE Veteran Avenue outfall and the north-flowing ditch. The proposed sites encompass 1.006 acres of combined City owned properties. Alternate Pond 3-2A will be situated in a City owned property of 0.556 acre, while Alternate Pond 3-2B will be situated in the same city owned property where Alternate Pond 3-1 was proposed, but from a partial take of 0.45 acre. Subsurface profiles are characterized by well-drained Waveland and Immokalee fine sands (SCS Map Group Number 4)

To maintain the hydraulic grade line and match local baseline parameters, the proposed engineering controls establish the ponds bottom elevation at +9.00 feet NAVD 88, matching the existing ditch bottom profile. The proposed top of berms elevation for both ponds is set at +15.00 feet NAVD 88, ensuring structural consistency with the surrounding terrain. This alternative will require two combined or separated collection systems with upstream pipes located both east and west along SE Monterey Road and flowing toward SMF Alternate Pond 3-2A, and Pond 3-2B. The overflow from the ponds will be to the existing 60 inch trunk line which most likely will need to be realigned to avoid the placement of conflict flow-trough structures.

Environmental and Constraints Screening Results

An engineering field review executed in June 2026, supplemented by a regional desktop GIS analysis, yielded the following constraint determinations for the SMF Alternate Pond 3-2A, Pond 3-2B sites:

- **Wetlands:** Field observations confirmed that the proposed ponds footprint are located entirely within private commercial property. No jurisdictional wetland vegetation, hydric soils, or natural surface water indicators are present. Consequently, SMF Alternate Pond 3-2A, Pond 3-2B receive a final rating of **“NO” involvement** for wetland impacts.
- **Contamination:** An active FDEP-listed facility, the City of Stuart Fire Station (FDEP ID 86889207), is located near the western end of Basin 3. Accordingly, a rating of **“LOW” involvement** for potential contamination risks is applied to Alternate Pond 3-2A.
- **Listed Species:** No protected flora or fauna, active nesting cavities, or state/federally tracked species were observed within the sites during field cross-sections. Due to their routinely maintained state, a rating of **“NO” involvement** is anticipated; however, a

formal, targeted listed species survey is recommended prior to construction to finalize regulatory clearance.

- **Cultural Resources:** A CRAS has not been finalized for this specific sub-parcels. However, the field reconnaissance did not identify any surficial historical structures, architectural features, or visible archaeological indicators within the proposed excavation limits.

Right-of-Way and Cost Estimate Summary

Based on the proposed right-of-way acquisition limits, data from the Martin County Property Appraiser's database indicates that City owned parcels ID 16-38-41-000-000-00015-0 and 16-38-41-000-000-00014-0 will be affected.

The right-of-way acquisition cost associated with these ponds footprint is estimated at \$453,844.00. Based on preliminary earthwork calculations, structural control structures and outfalls configuration, bank stabilization requirements, the total estimated construction and excavation cost for SMF Alternate Pond 3-1 is \$1,124,105.00, resulting in a combined total estimated cost of \$1,577,949.00.

6.0 CONCLUSION AND RECOMMENDATION

Based on a comprehensive engineering evaluation, desktop GIS screening, and the June 2026 field review, the selection and configuration of the Stormwater Management Facilities (SMFs) for the State Road (SR) 714 grade-separated overpass project are finalized. The recommended stormwater strategy successfully achieves all regional and statewide performance criteria while strictly respecting local socio-economic and geometric constraints.

The preferred configuration implements three (3) distinct dry detention ponds distributed across two of the project's localized drainage basins, alongside an underground exfiltration trench system deployed within the remaining heavily constrained corridor footprint:

- SMF Pond 1-1 (Basin 1): Recommended for construction within the surplus right-of-way of the old SE Dixie Highway alignment. The design sets a pond bottom elevation of +11.00 feet NAVD 88 and a top of berm elevation of +16.00 feet NAVD 88. It carries an overall rating of "Good" due to zero right-of-way costs (\$0.00) and zero anticipated involvements with wetlands, contamination, or listed species. The pond's geometry is technically modified to preserve access to the adjacent Stuart County Fairgrounds parking facilities.
- SMF Swale 1 (Sub-Basin 2): Recommended for construction west of the FEC Railway tracks near the dead end of SE Monterey Road. It carries an overall rating of "Fair" due to a "LOW" wetland involvement rating (less than 20% encroachment on an existing private wet pond) and an estimated right-of-way acquisition/easement cost of

\$122,243.00 affecting private parcel ID 15-38-41-000-000-00030-6. The pond bottom is set at +8.00 feet NAVD 88 and the top of berm at +13.00 feet NAVD 88.

- SMF Pond 2-1 (Basin 2): Recommended for construction east of the FEC tracks along the northern limits of SE Monterey Road. This facility involves regrading and expanding an existing dry pond within a cleared public parcel previously acquired for airport runway protection. It carries an overall rating of "Good" due to zero right-of-way costs (\$0.00) and zero anticipated involvements with wetlands, contamination, or listed species. The pond bottom is set at +8.00 feet NAVD 88 and the top of berm at +13.00 feet NAVD 88.
- SMF Pond 3-2A, Pond 3-2B (Basin 3): Recommended for construction along SE Monterey Road. This facility involves the construction of two dry ponds and hydraulically supplemented by a reduced length of exfiltration trench system (100 feet) within the existing right of way, and in combination with the improvement of an existing gravity trunk line. It carries an overall rating of "Good" due to reduced maintenance cost, low impacts on existing utilities, and zero anticipated involvements with wetlands, contamination, or listed species. The invert of the French pipe will be set at +7.50 feet NAVD 88, and the ponds bottom will be set at +9.00 feet NAVD 88 and the top of berm at +15.00 feet NAVD 88.

SR 714/Monterey Road Elevated over FEC Railroad- Pond Siting Report

BASIN NO.	ALT. NO.	TREATMENT METHOD	RIGHT OF WAY COST	CONSTRUCTION COST	TOTAL COST	CULTURAL IMPACT POTENTIAL	LISTED SPECIES POTENTIAL	WETLAND IMPACTS POTENTIAL	CONTAMINATION RISK POTENTIAL	SITE RATING	RECOMMENDED
1	Pond 1-1	Pond	\$ -	\$ 246,190.00	\$ 246,190.00	None	No	No	No	Good	Yes
	Pond 1-2	Pond	\$ 90,790.00	\$ 255,229.00	\$ 346,019.00	None	No	No	No	Good	No
2	Swale 1	Pond	\$ 122,243.00	\$ 458,645.00	\$ 580,888.00	None	No	Low	No	Fair	Yes
	Pond 2-3	Pond	\$ 981,900.00	\$ 362,420.00	\$1,344,320.00	None	No	No	Low	Good	No
	Pond 2-1	Pond	\$ -	\$ 445,745.00	\$ 445,745.00	None	No	No	No	Good	Yes
	Pond 2-2	Pond	\$ 768,390.00	\$ 176,161.00	\$ 944,551.00	None	No	No	No	Poor	No
3	French Drain	French Drain	\$ -	\$ 1,122,420.00	\$1,122,420.00	None	No	No	Low	Good	No
	Pond 3-1	Pond	\$1,367,000.00	\$ 1,171,235.00	\$2,538,235.00	None	No	No	No	Good	No
	Ponds 3-2A, 3-2B	Pond	\$ 453,844.00	\$ 1,124,105.00	\$ 1,577,949.00	None	No	No	Low	Poor	Yes

Table 3 Pond Siting Evaluation Matrix

SR 714/Monterey Road Elevated over FEC Railroad- Pond Siting Report

Items	Weight of Factor	Factor	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Remarks
	1-10		1-10		1-10		1-10		1-10		1-10		1-10		1-10		1-10		1-10		1-10		
		Drainage Basin	Basin 1				Basin 2				Sub-Basin 2				Basin 3								
		Alternative Number	Pond 1-1		Pond 1-2		Pond 2-1		Pond 2-2		Pond 2-3		Swale 1		Pond 3-1		French Drains		Pond 3-2A		Pond 3-2B		
		Parcel Number			37-38-41-006-171-00000-9				09-38-41-005-001-00170-2		10-38-41-000-000-00280-4		15-38-41-000-000-00030-6		16-38-41-000-000-00015-0				16-38-41-000-000-00014-0		16-38-41-000-000-00015-0		
		Description of Alternative	Public Right-of-way		Martin County lot		Public Right-of-way		Private Property full take		Private Property full take		Private Property partial take		City of Stuart lot		Public Right-of-way		City of Stuart lot full take		City of Stuart lot partial take		
		Estimated Parcel Size (Acres)			2.560				0.639		3.594		0.075		2.340				0.556		0.450		
1	5	Zoning	10	50.00	5	25.00	10	50.00	2	10.00	2	10.00	8	40.00	2	10.00	10	50.00	2	10.00	2	10.00	
2	5	Land Use	10	50.00	10	50.00	10	50.00	5	25.00	5	25.00	5	25.00	5	25.00	10	50.00	5	25.00	5	25.00	
3	8	Right-of-Way Costs	10	80.00	2	16.00	10	80.00	2	16.00	2	16.00	6	48.00	5	40.00	10	80.00	5	40.00	5	40.00	
4	10	Drainage Considerations	10	100.00	10	100.00	10	100.00	8	80.00	10	100.00	8	80.00	8	80.00	8	80.00	8	80.00	8	80.00	
5	2	FEMA Flood Zone	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	
6	5	Contamination - Hazardous Materials	10	50.00	10	50.00	10	50.00	10	50.00	8	40.00	8	40.00	8	40.00	8	40.00	8	40.00	8	40.00	
7	5	Utilities/Railroad	10	50.00	10	50.00	10	50.00	10	50.00	8	40.00	8	40.00	10	50.00	10	50.00	10	50.00	10	50.00	
8	4	Threatened & Endangered Species (TES) and associated Mitigation	10	40.00	10	40.00	8	32.00	8	32.00	10	40.00	10	40.00	10	40.00	10	40.00	8	32.00	10	40.00	
9	5	Noise	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	
10	5	Wetlands/Protected Uplands and associated Mitigation Costs	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	10	50.00	
11	2	Cultural Resources and associated Costs	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	10	20.00	
12	2	Section 4(f)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
13	0	Public Wellfield	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
14	8	Construction	10	80.00	10	80.00	10	80.00	8	64.00	8	64.00	4	32.00	8	64.00	2	16.00	8	64.00	8	64.00	
15	9	Maintenance	10	90.00	10	90.00	10	90.00	10	90.00	5	45.00	2	18.00	10	90.00	2	18.00	10	90.00	10	90.00	
16	4	Aesthetics	10	40.00	10	40.00	10	40.00	10	40.00	8	32.00	10	40.00	8	32.00	10	40.00	8	32.00	8	32.00	
17	8	Public Opinion / Adjacent Residency Concerns	10	80.00	10	80.00	10	80.00	8	64.00	8	64.00	10	80.00	6	48.00	7	56.00	6	48.00	8	64.00	
		Comments, Advantages, Disadvantages, etc.																					
		Score	850.00		761.00		842.00		661.00		616.00		623.00		659.00		660.00		663.00				
		Ranking	1		2		1		2		2		1		3		2		1				

Table 4 FDOT D4 Pond Siting Evaluation Matrix Results

APPENDIX A: PROJECT EXHIBITS

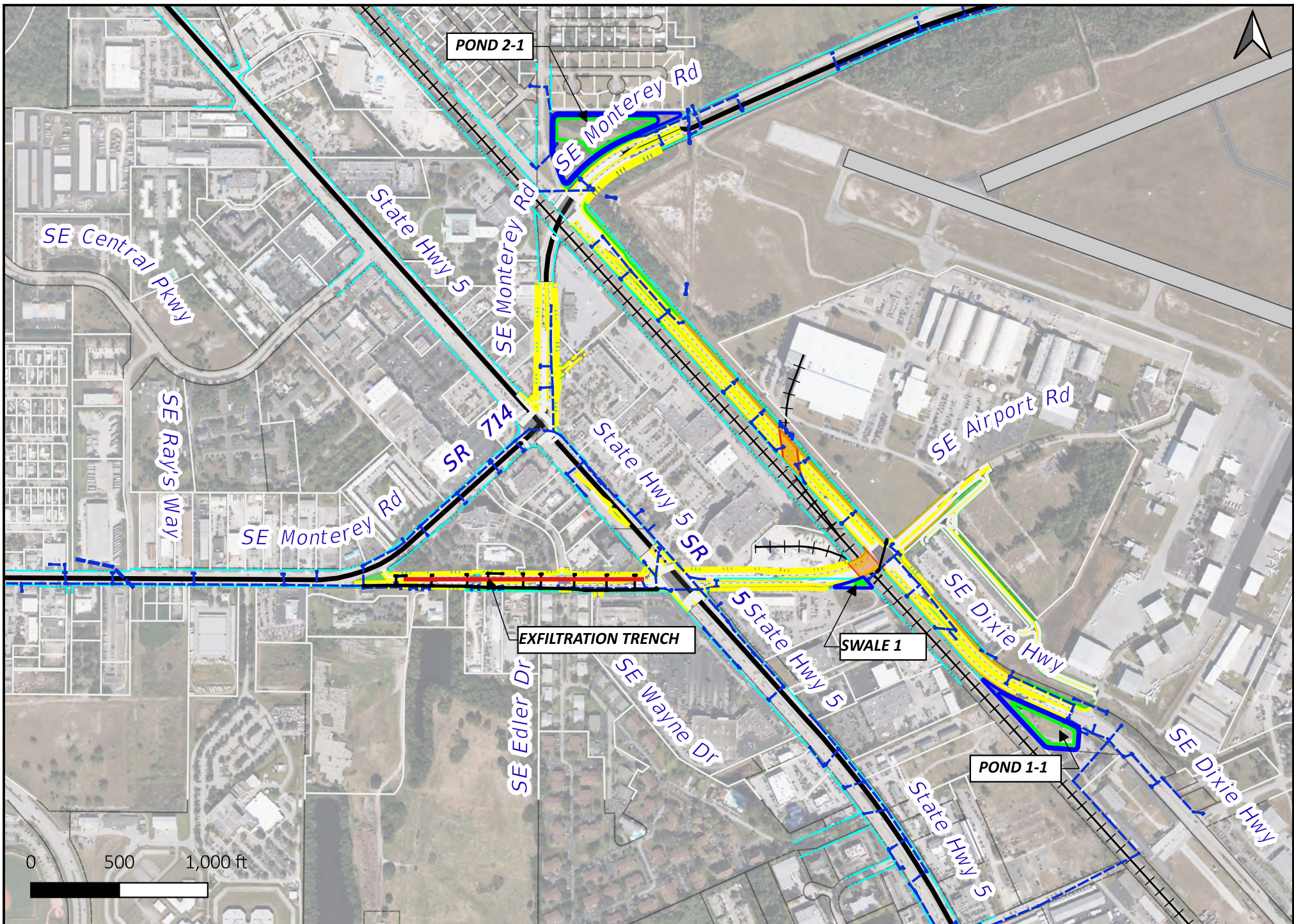


EXHIBIT 1 - LOCATION MAP

LEGEND

Florida Land Use

- Open Water (11)
- Developed, Open Space (21)
- Developed, Low Intensity (22)
- Developed, Medium Intensity (23)
- Developed High Intensity (24)

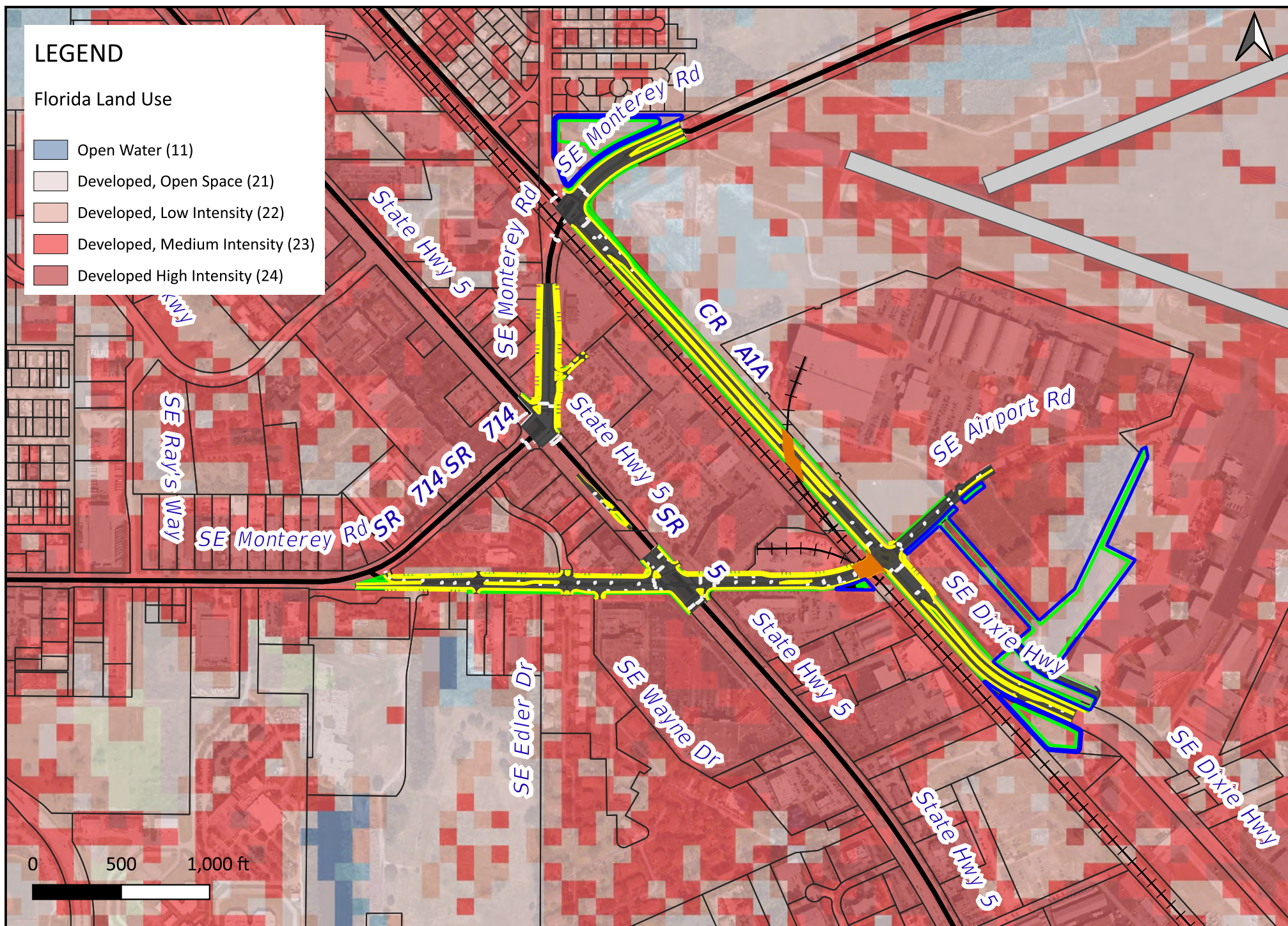


EXHIBIT 2 - LAND USE MAP

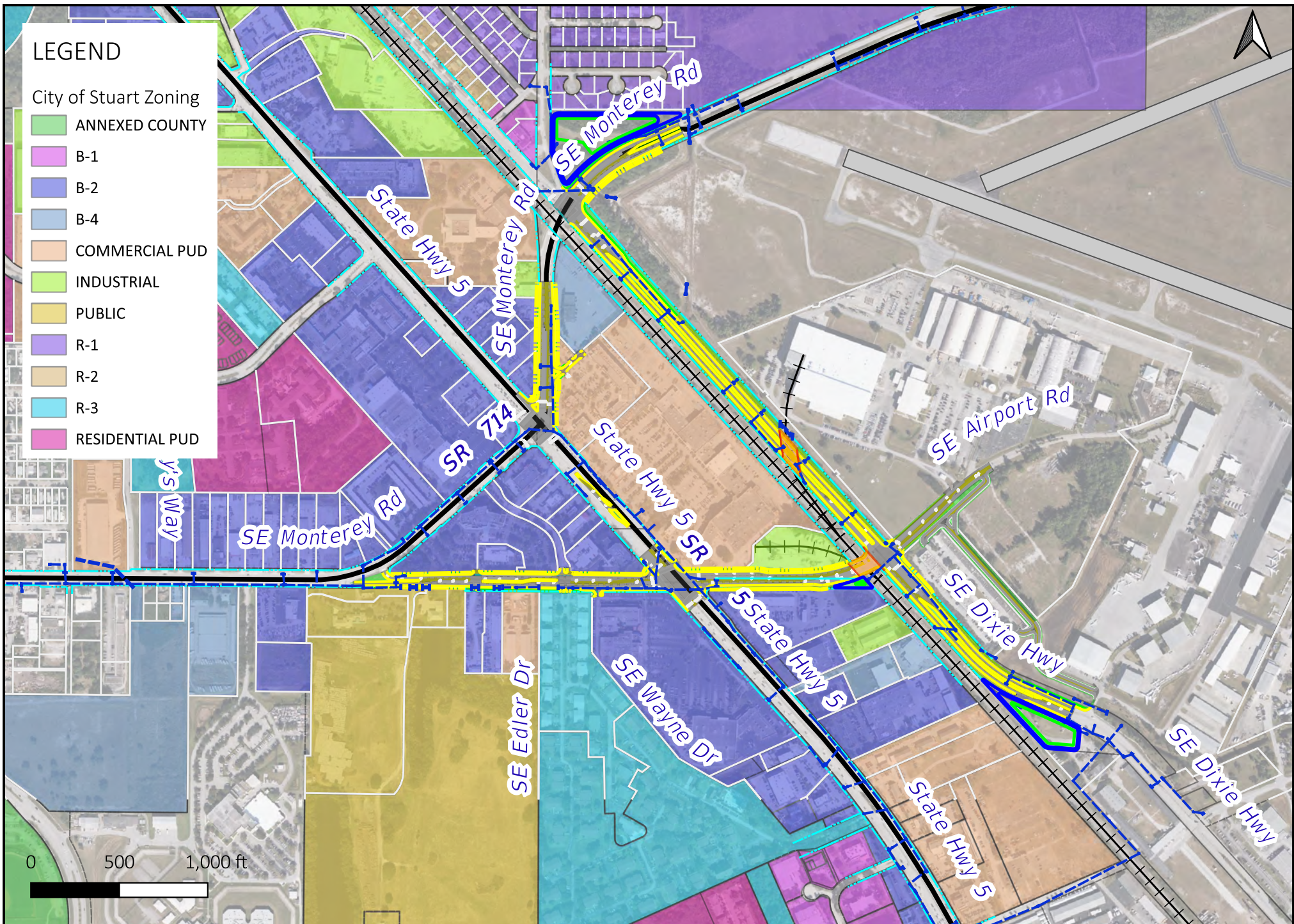


EXHIBIT 3 -ZONING MAP

LEGEND

Florida Soils

-  13 Placid and Basinger fine sands, depressional
-  2 Lawnwood and Myakka fine sands
-  23 Urban land, 0 to 2 percent slopes
-  35 Salerno sand
-  36 Arents, 0 to 2 percent slopes
-  4 Waveland and Immokalee fine sands
-  41 Jonathan sand, 0 to 5 percent slopes
-  5 Waveland and Lawnwood fine sands, depressional
-  53 Udorthents, 0 to 35 percent slopes
-  61 Hobe fine sand, 0 to 5 percent slopes
-  9 Pomello sand, 0 to 5 percent slopes

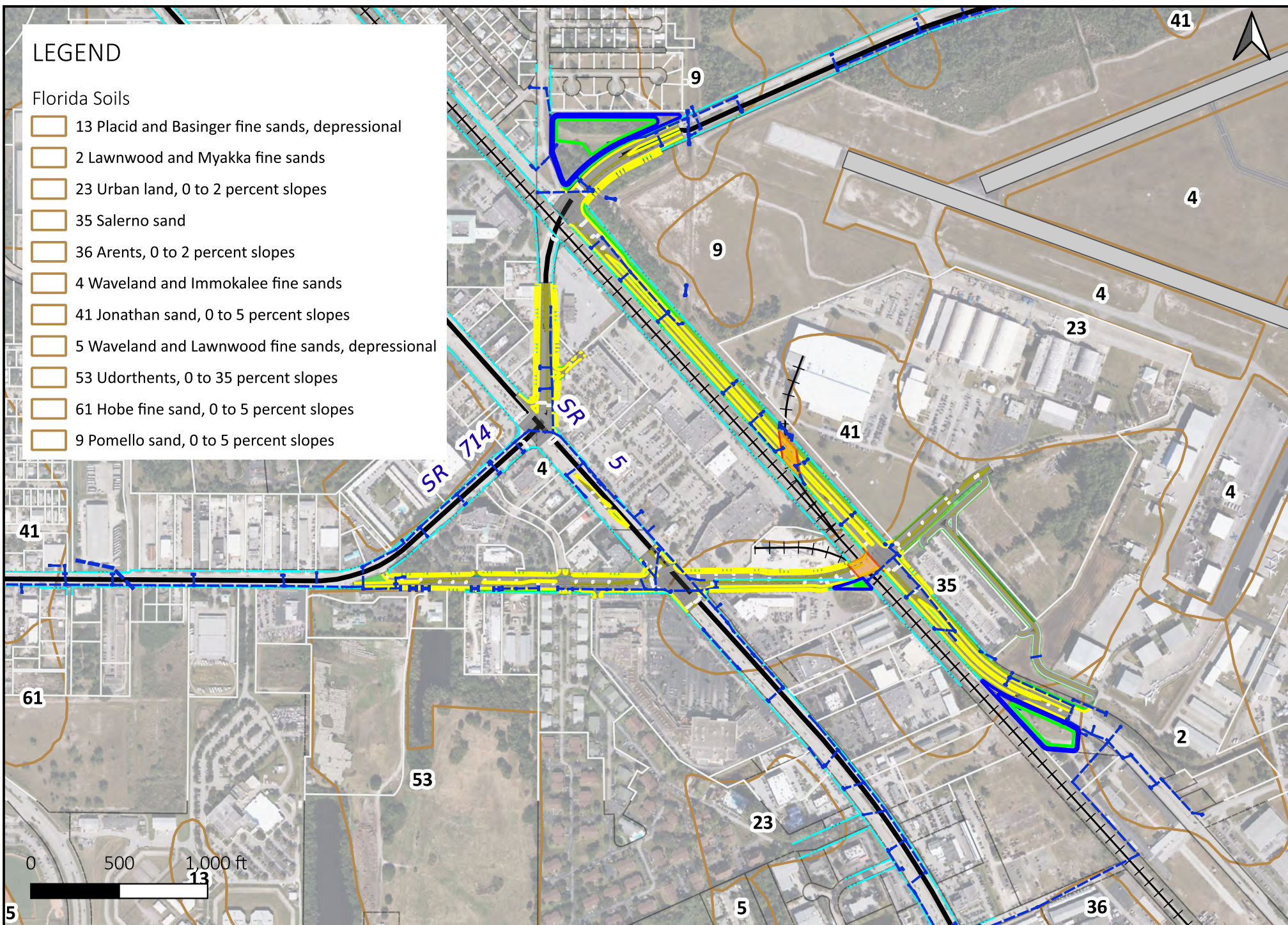


EXHIBIT 4 - SOILS MAP

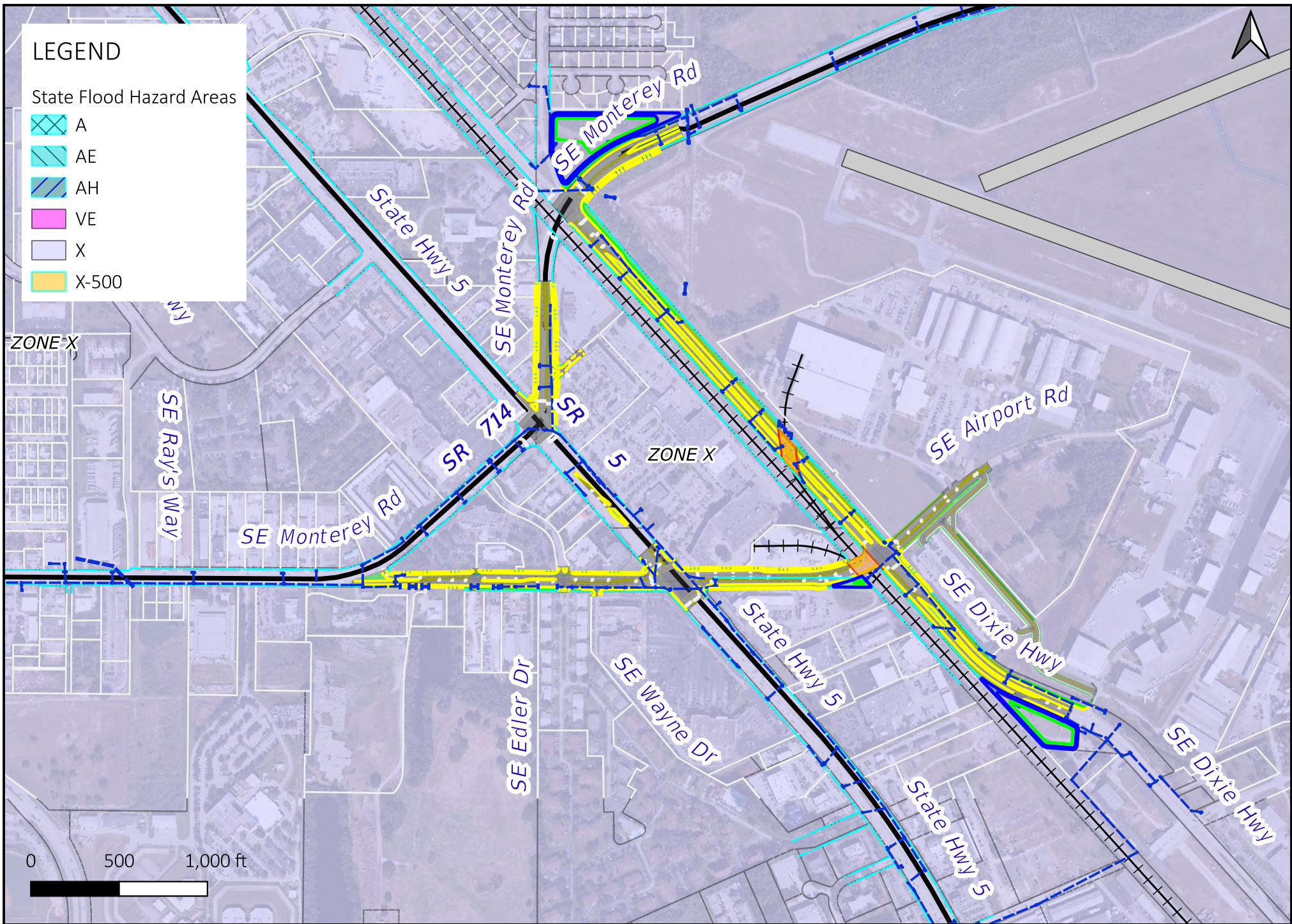


EXHIBIT 5 - FEMA BASE FLOOD ELEVATION MAP



EXHIBIT 6 - EXISTING WATERSHED MAP

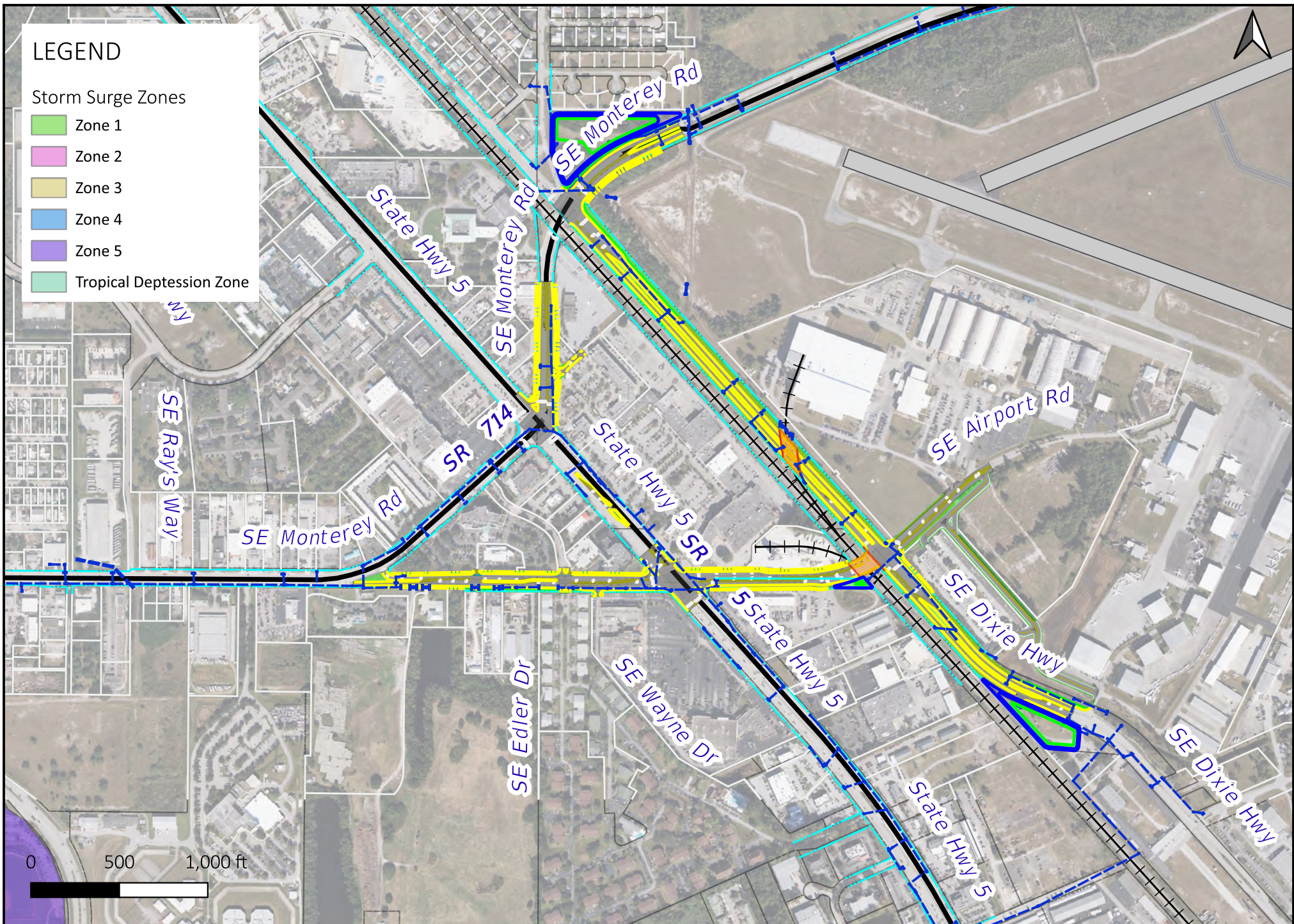


EXHIBIT 7 - STORM SURGE ZONES MAP

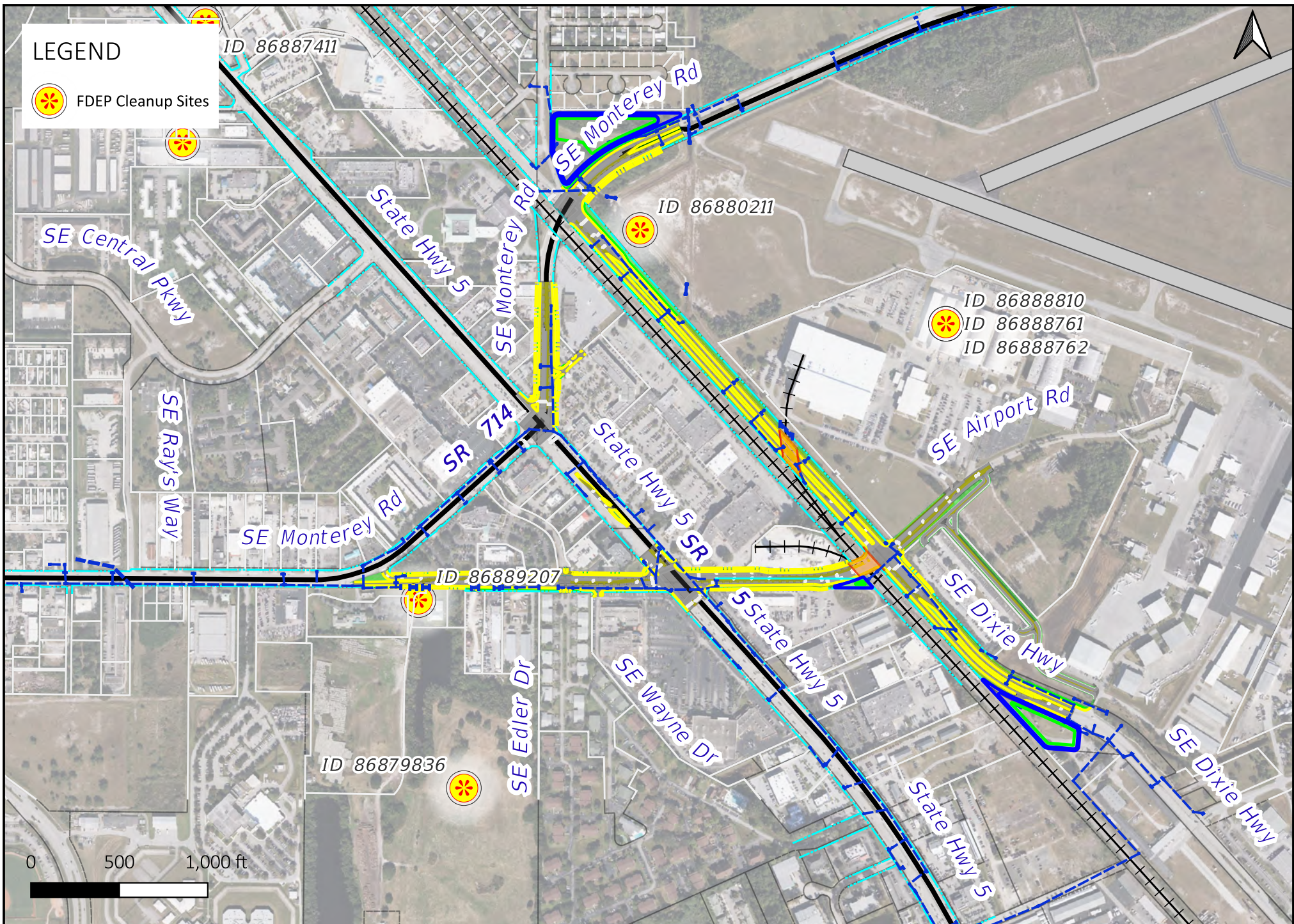


EXHIBIT 8 - CONTAMINATED SITES MAP

LEGEND

Florida Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

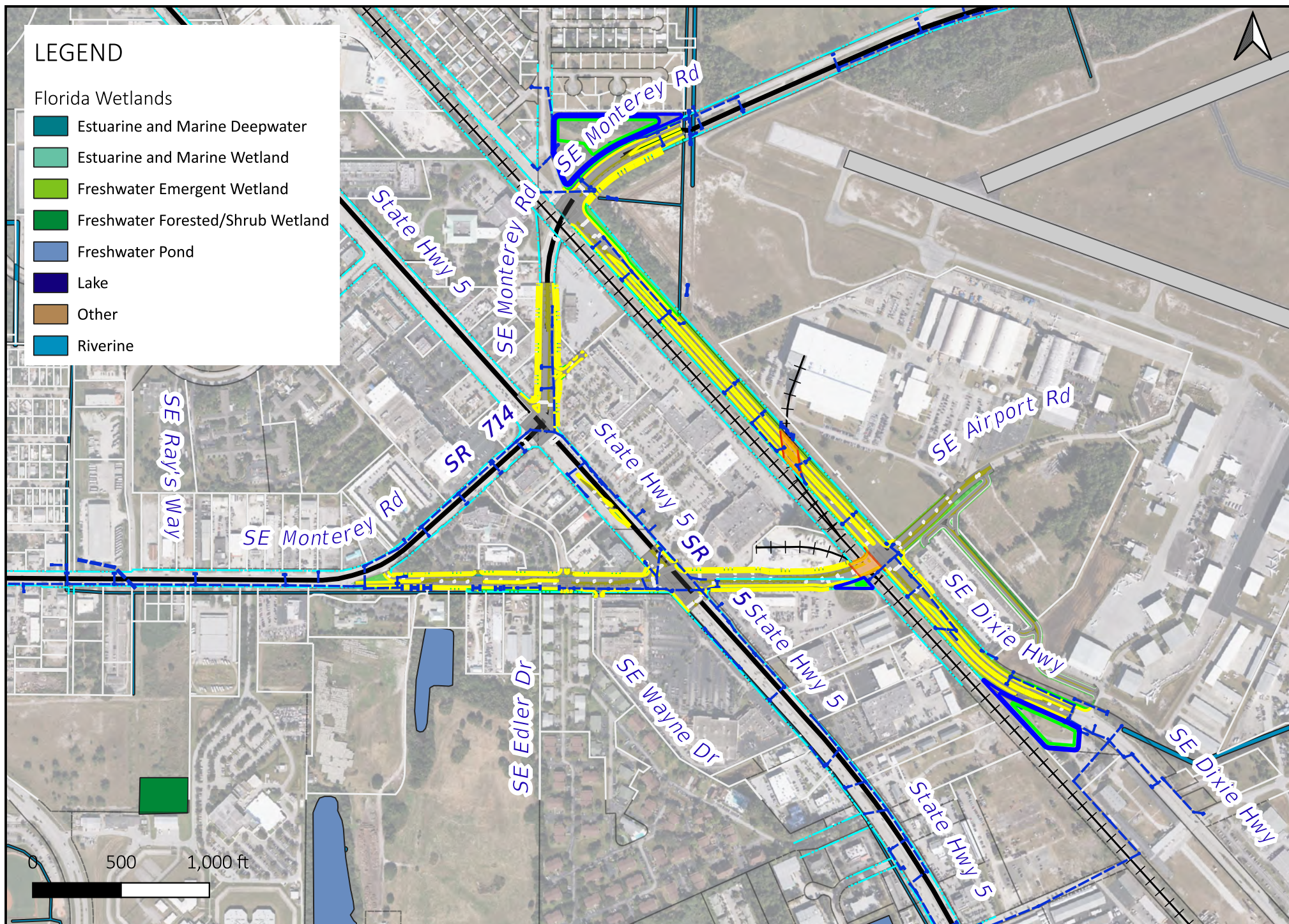


EXHIBIT 9 - WETLANDS MAP

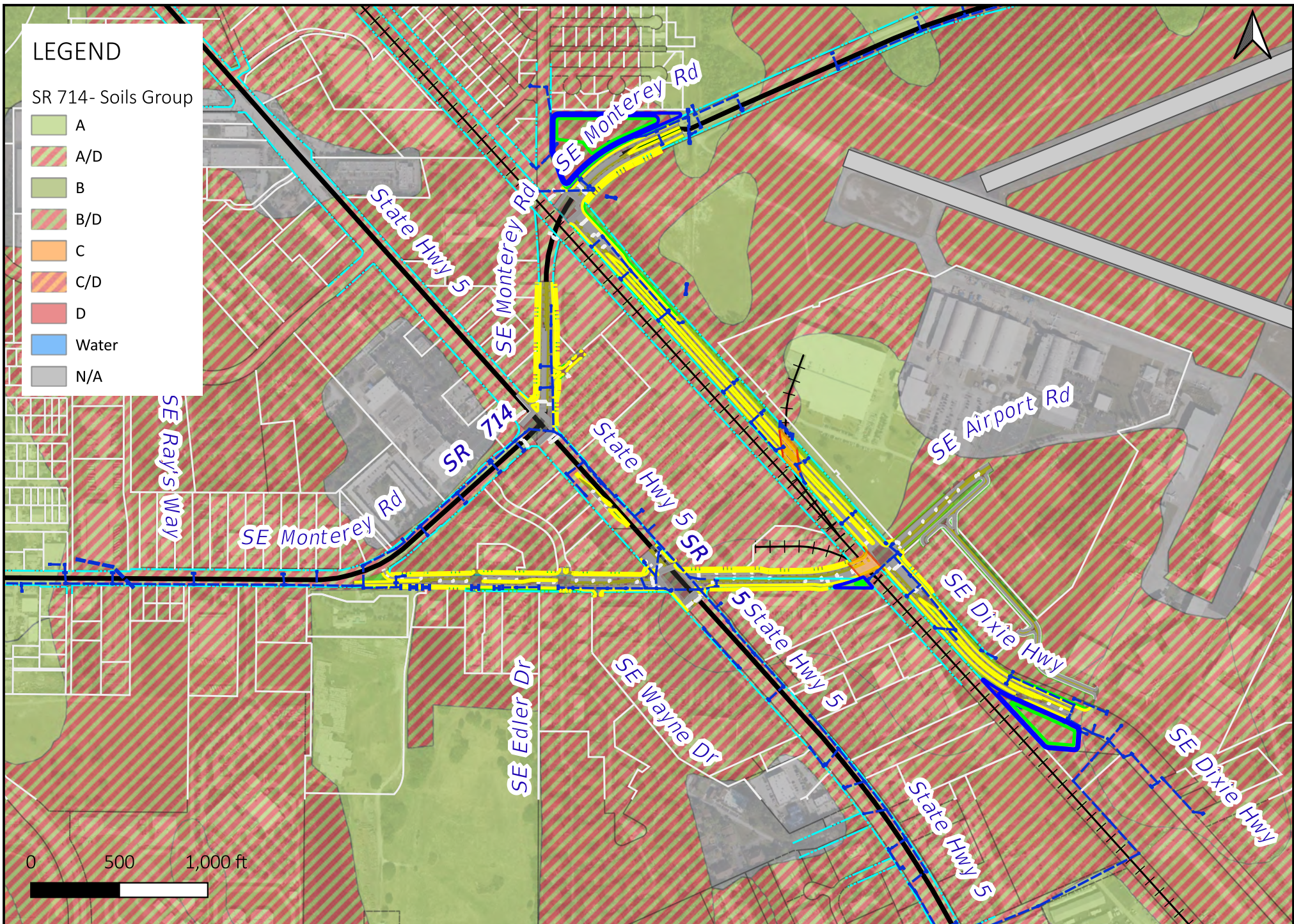


EXHIBIT 10 - EXISTING SOILS GROUP MAP

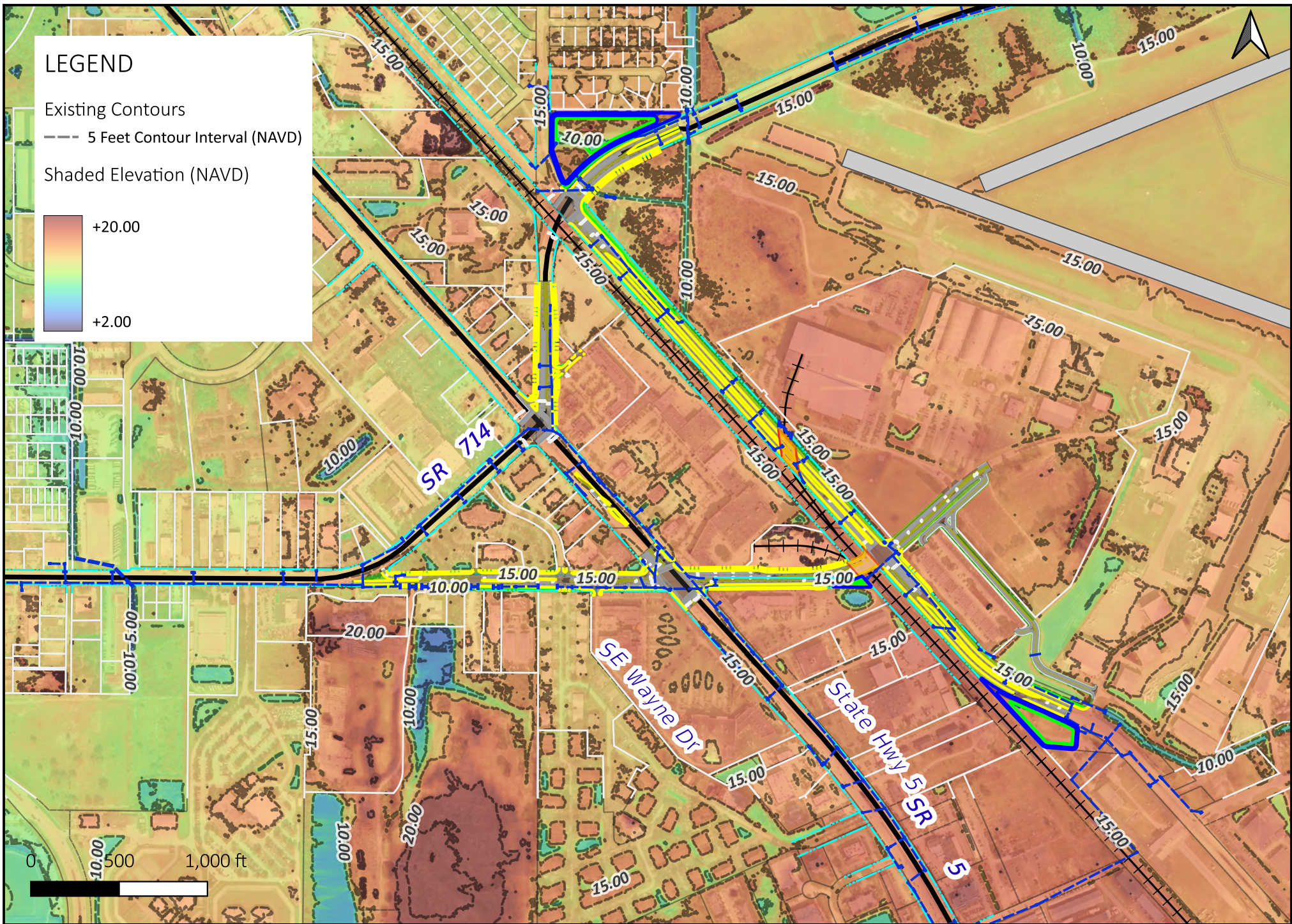


EXHIBIT 11 - EXISTING GROUND CONTOURS AND SHADED RELIEF MAP

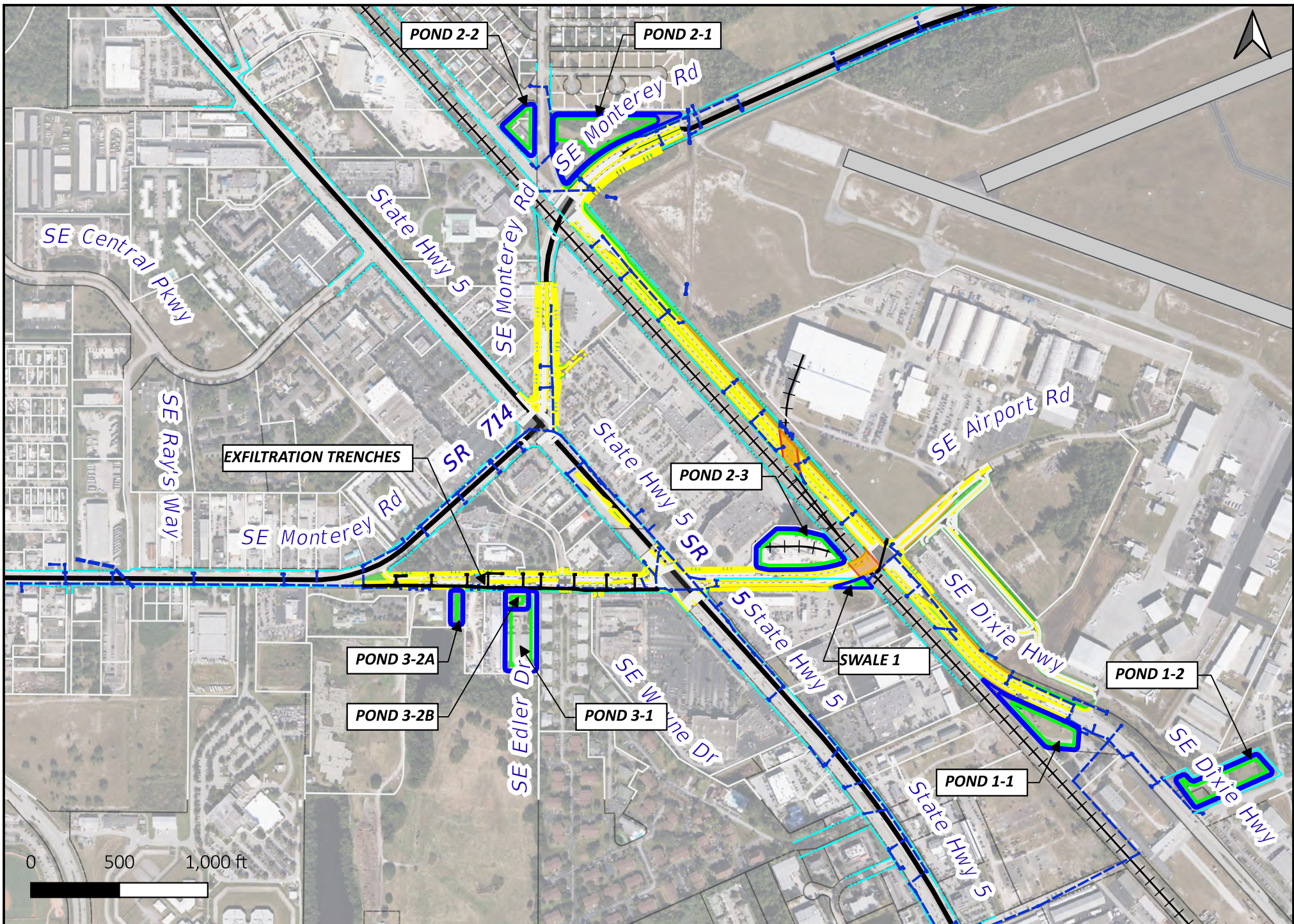
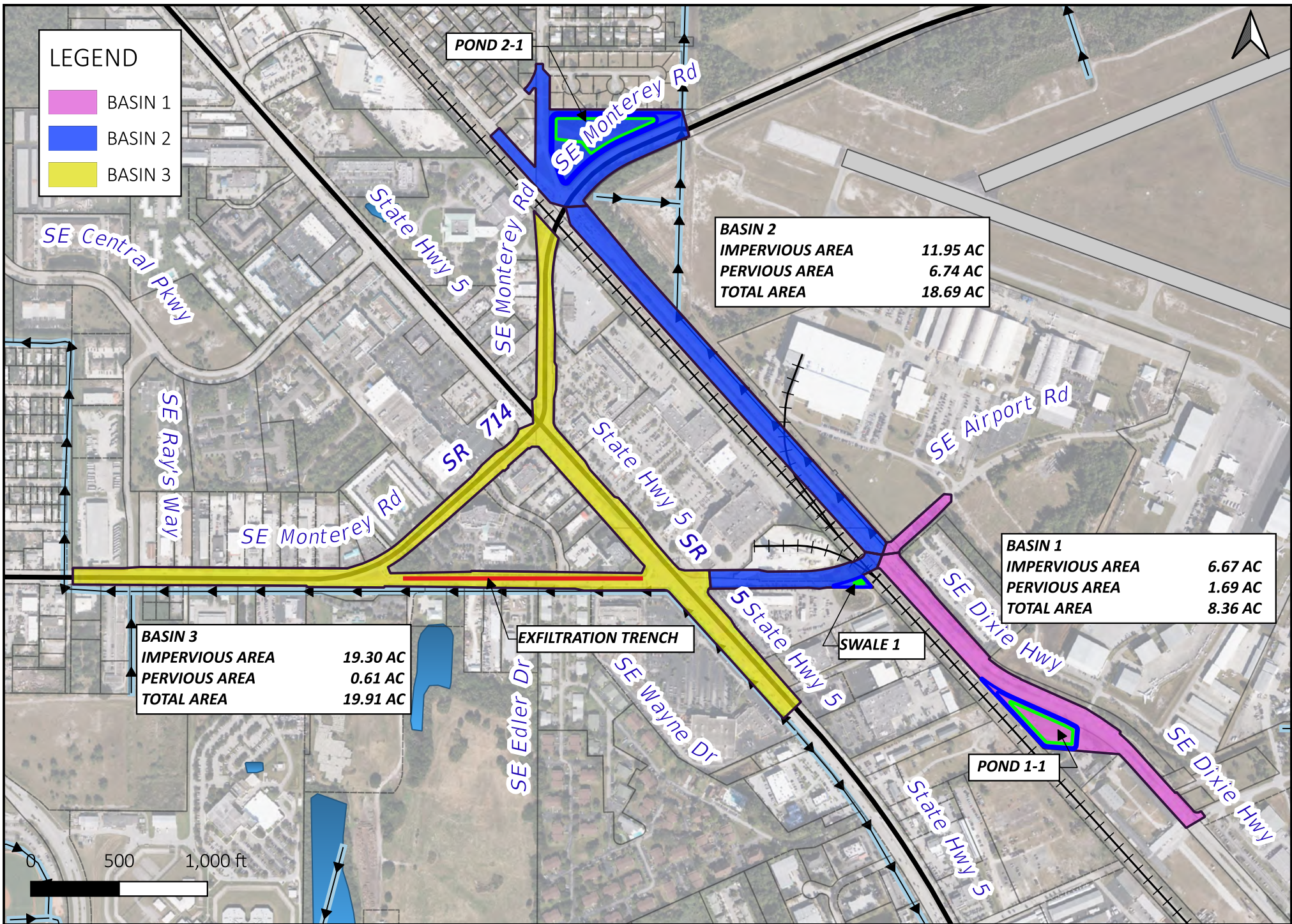


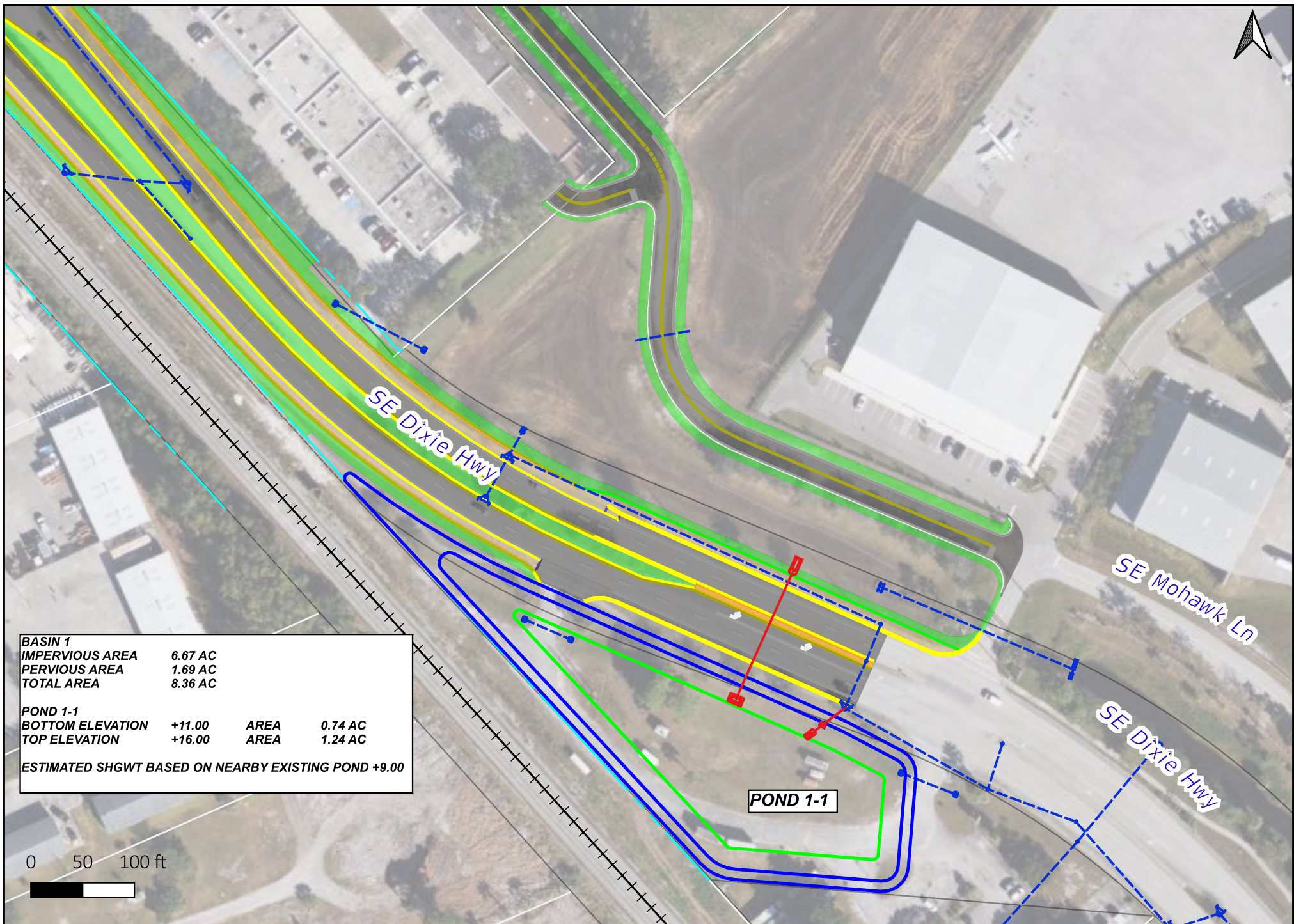
EXHIBIT 12 - ALTERNATE PONDS LOCATION

APPENDIX B: PONDS DRAINAGE BASINS

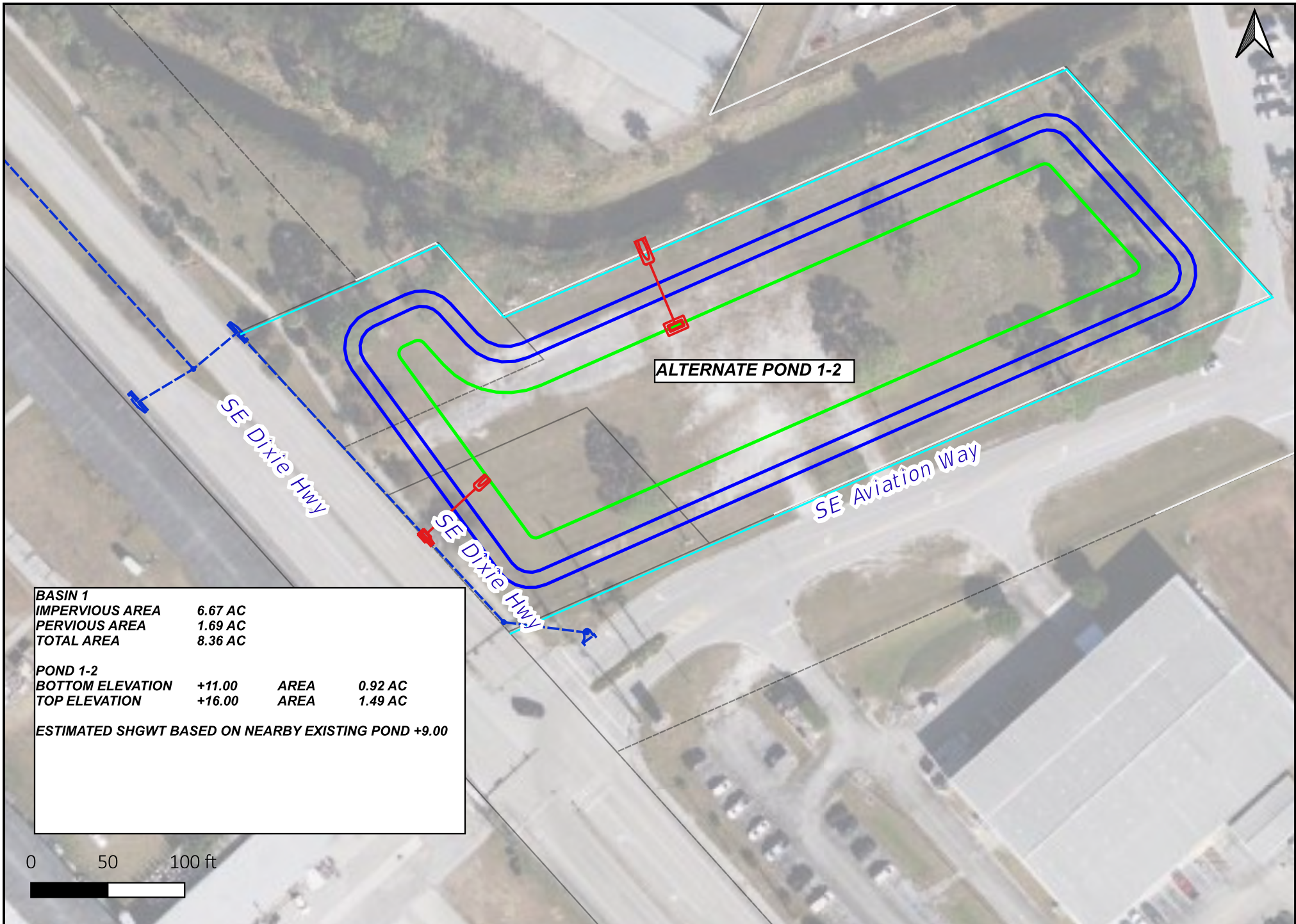


PROJECT DRAINAGE BASINS

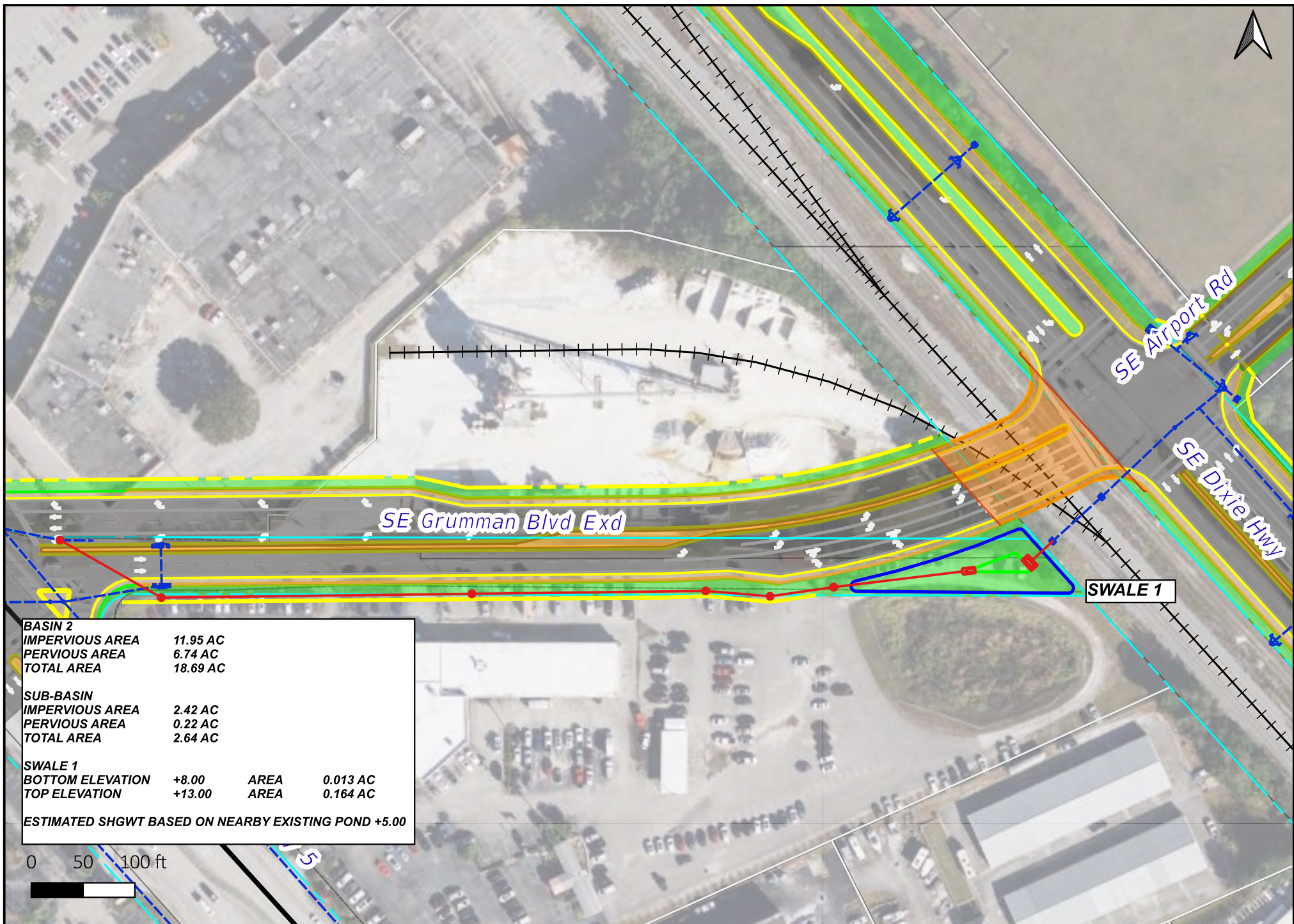
APPENDIX C: PROPOSED POND SITES



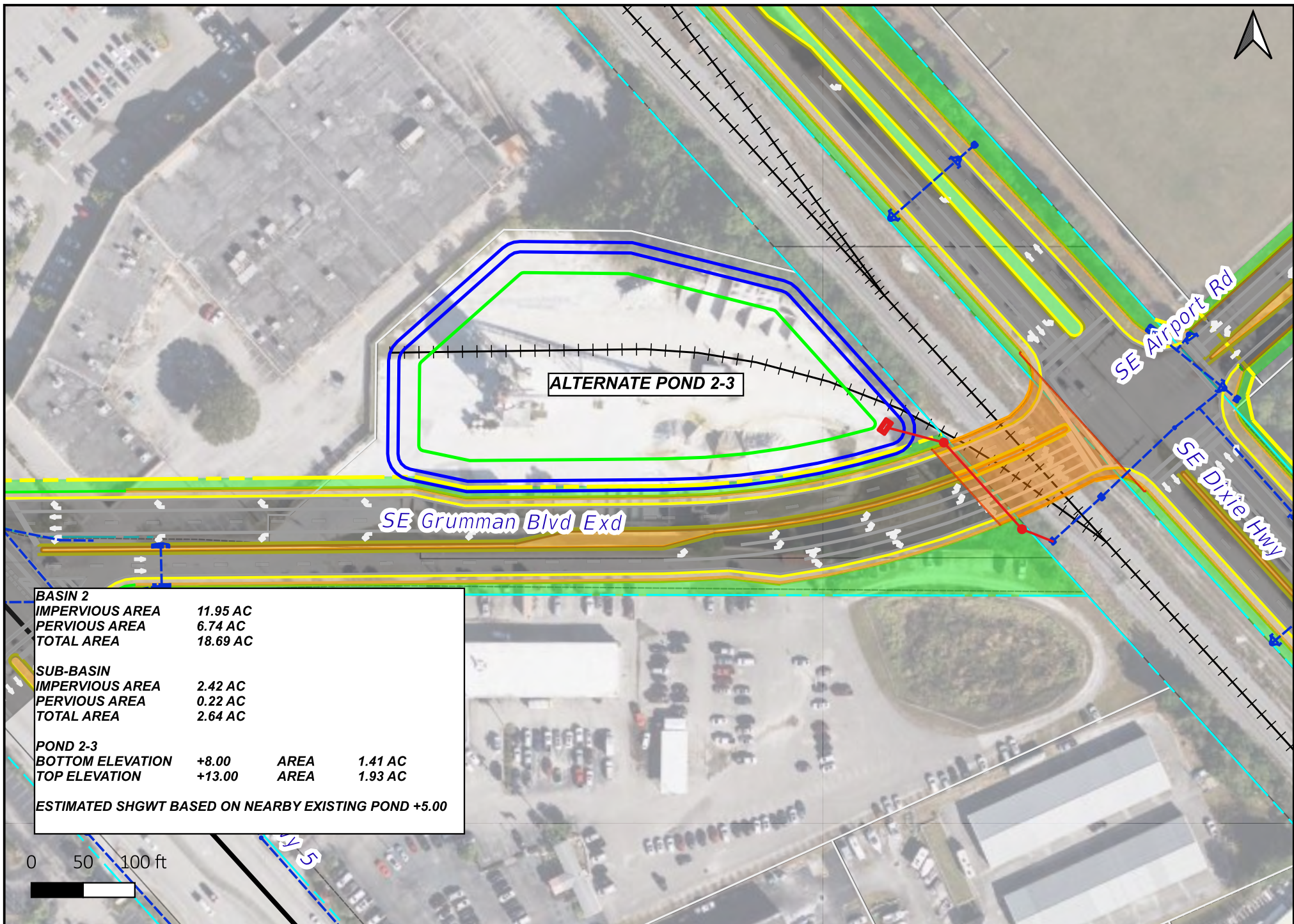
POND 1-1 OF BASIN 1



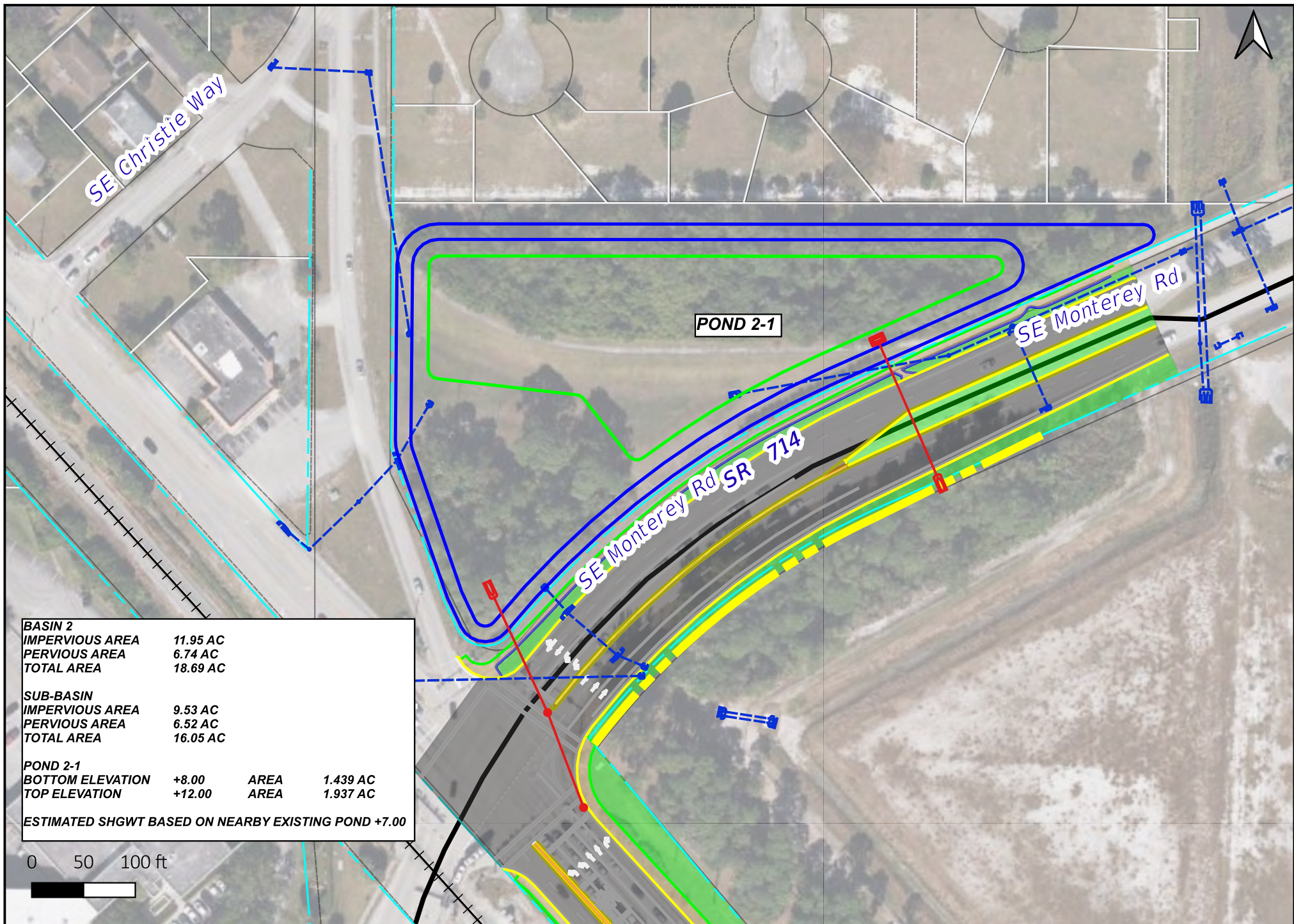
ALTERNATE POND 1-2 OF BASIN 1



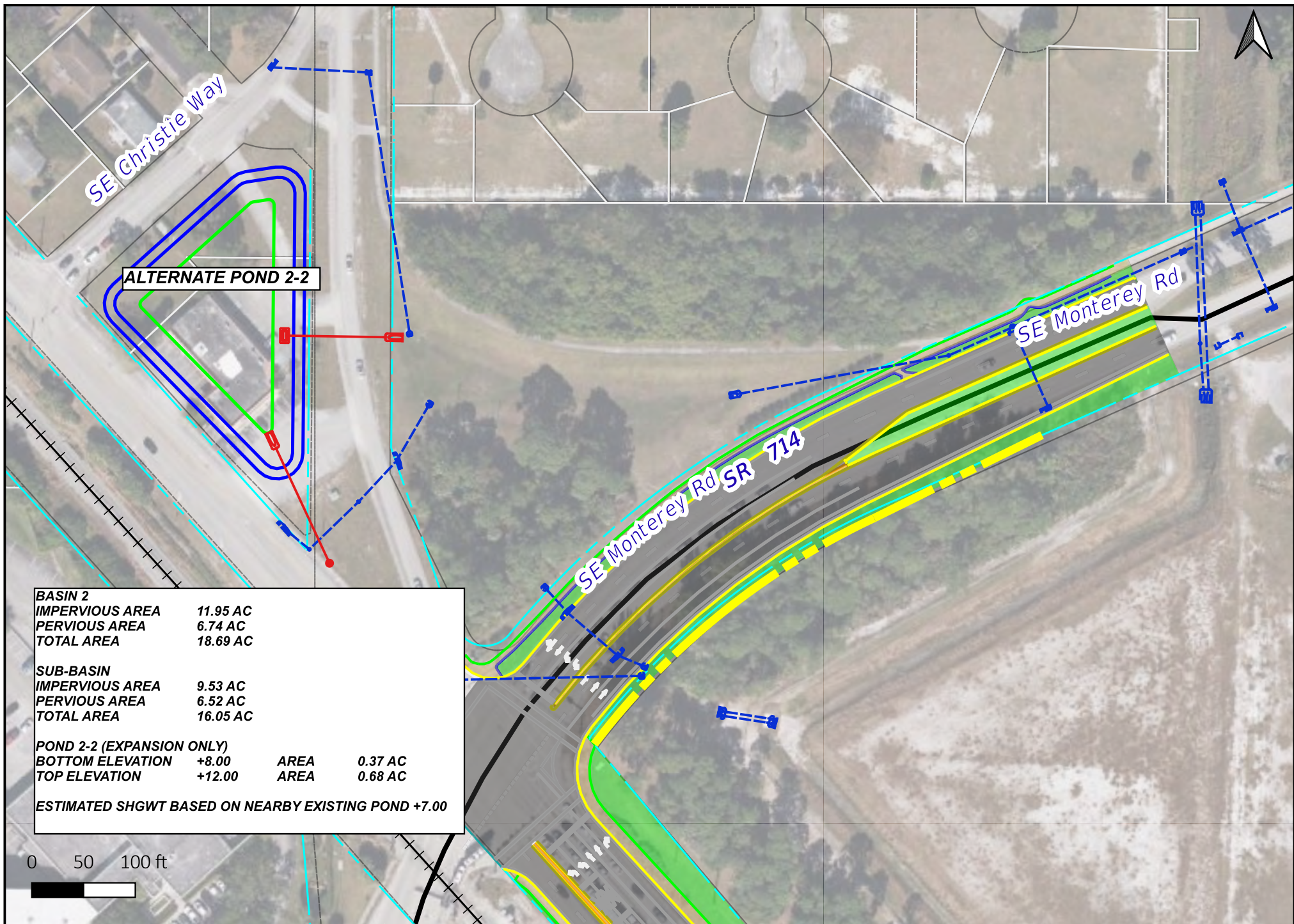
SWALE 1 OF BASIN 2



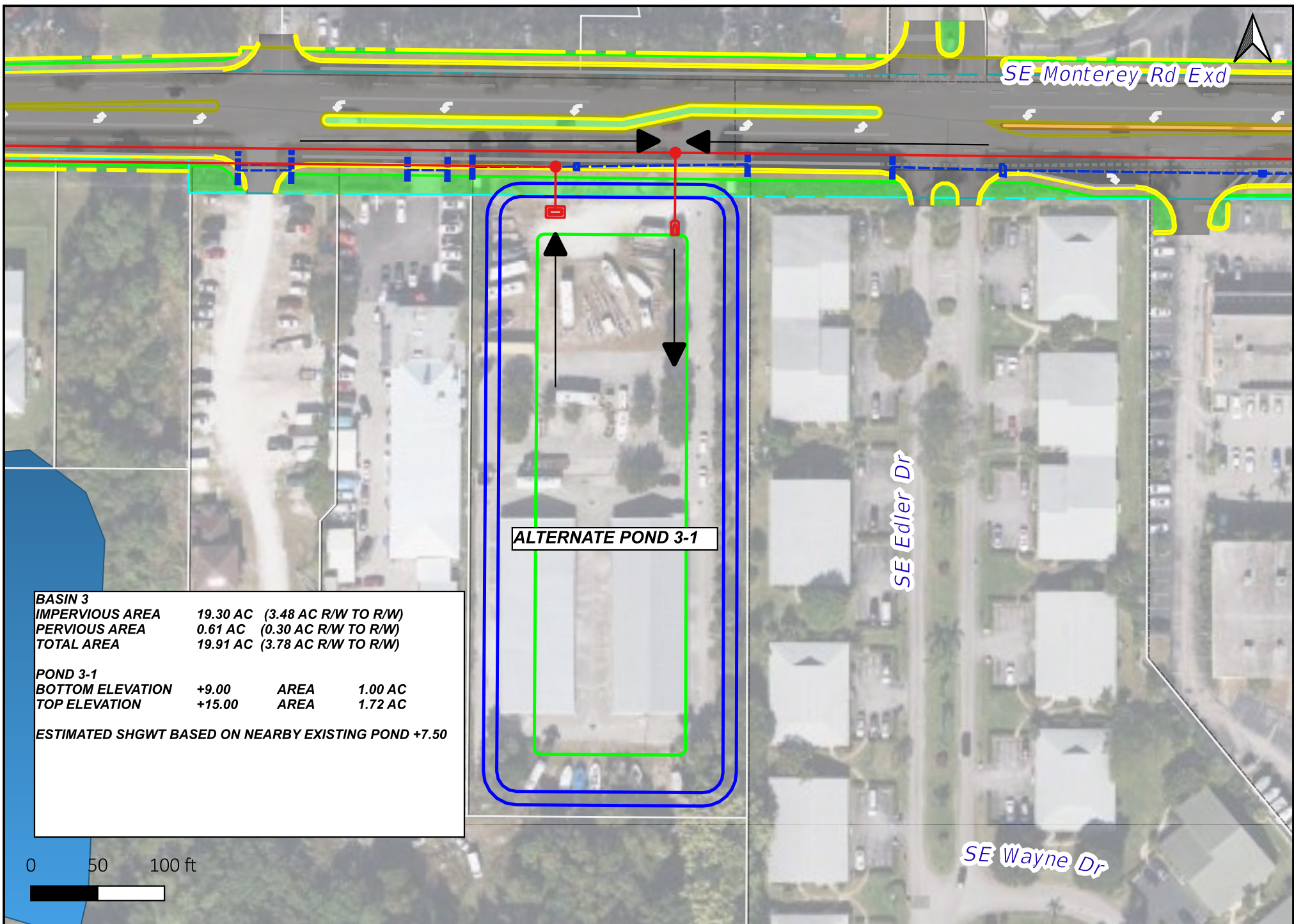
ALTERNATE POND 2-3 OF BASIN 2



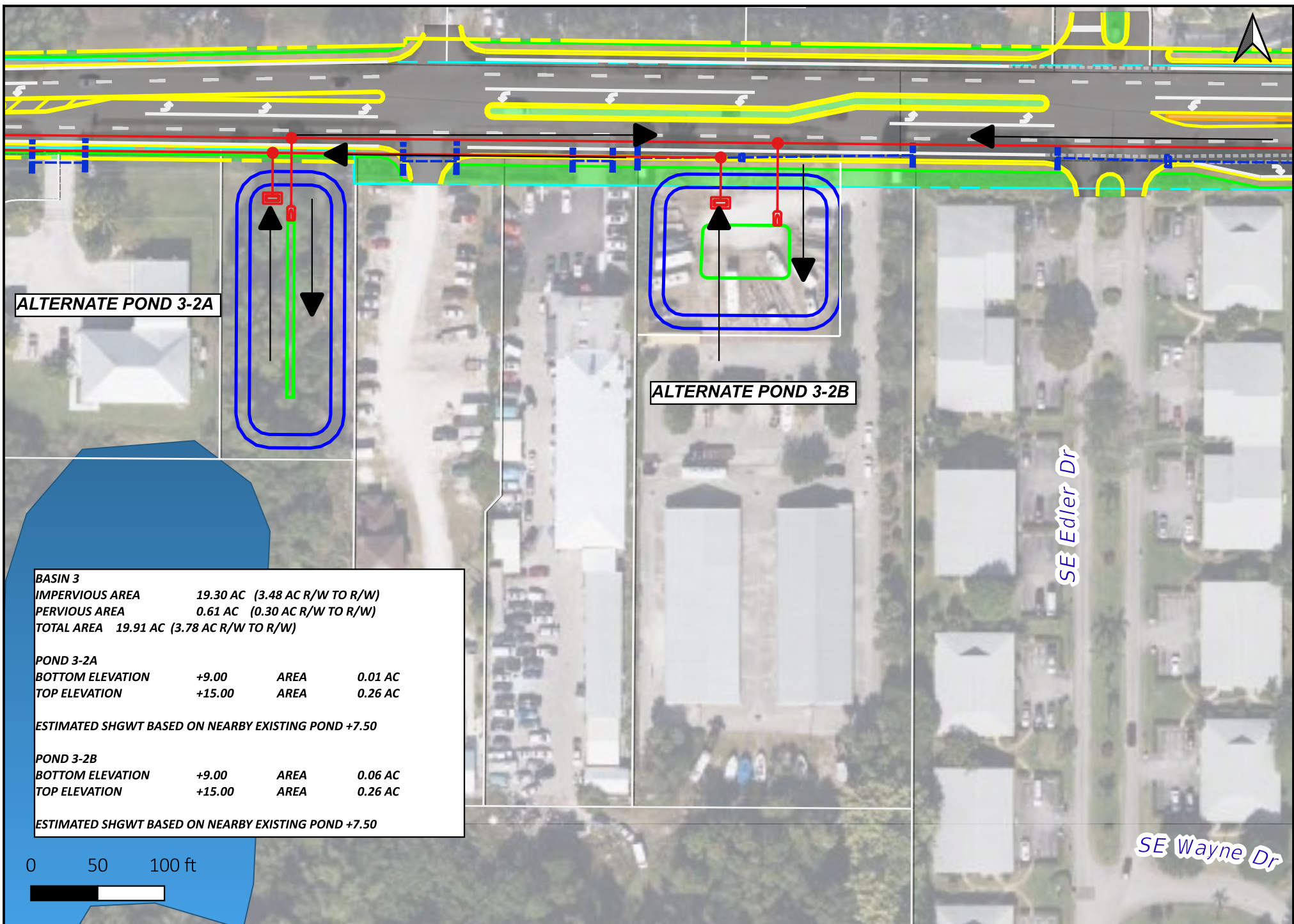
POND 2-1 OF BASIN 2



ALTERNATE POND 2-2 OF BASIN 2



ALTERNATE POND 3-1 OF BASIN 3



ALTERNATE PONDS 3-2A, 3-2B OF BASIN 3

APPENDIX D: WATER QUALITY AND QUANTITY POND REQUIREMENTS

POND SIZING CALCULATION

POND 1-1 OF BASIN 1

BASIN DATA

Impervious Area	6.67 Ac	CN	98.00	80%
Pervious Area	1.69 Ac	CN	93.00	20%
Total Area	8.36 Ac	CN Avg.	96.99	

WATER QUALITY BASED ON BASIN ADDITIONAL AREAS

Additional Right of Way				
Impervious Area	0.06 Ac	CN	98.00	100%
Pervious area	0.00 Ac	CN	93.00	0%
Total Additional	0.06 Ac	CN Avg.	98.00	

Water Quality Volume

1" Depth	1.00 inch
2.5" x % Impervious	2.50 inches
Required Depth	2.50 inches

Water Quality Volume Required Based on Additional Impervious

0.01 Ac-ft

WATER QUANTITY BASED ON BASIN AREAS

SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches
Cumulative Soil Storage "S"	0.31 inches
Rainfall Excess	11.14 inches

Rainfall Volume	7.76 Ac-ft
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Required Volume	7.76 Ac-ft
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Pond Data

Bottom Elevation	11.00	Area =	0.74 Ac
Top of Bank Elevation	16.00	Area =	1.24 Ac
Pond Depth	5.00 ft		
Pond Total Volume	4.89 Ac-ft		

Provided Retention

Pond Retention Volume	0.01 Ac-ft
Pond Retention Depth	0.01 ft

Provided Detention

Pond Detention Depth	3.00 ft		
Pond Provided Detention Volume	2.93 Ac-ft	<	7.76 Ac-ft

POND SIZING CALCULATION

POND 1-2 OF BASIN 1

BASIN DATA

Impervious Area	6.67 Ac	CN	98.00	80%
Pervious Area	1.69 Ac	CN	93.00	20%
Total Area	8.36 Ac	CN Avg.	96.99	

WATER QUALITY BASED ON BASIN ADDITIONAL AREAS

Additional Right of Way				
Impervious Area	0.06 Ac	CN	98.00	100%
Pervious area	0.00 Ac	CN	93.00	0%
Total Additional	0.06 Ac	CN Avg.	98.00	

Water Quality Volume

1" Depth	1.00 inch
2.5" x % Impervious	2.50 inches
Required Depth	2.50 inches

Water Quality Volume Required Based on Additional Impervious 0.01 Ac-ft

WATER QUANTITY BASED ON BASIN AREAS

SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches
Cumulative Soil Storage "S"	0.31 inches
Rainfall Excess	11.14 inches

Rainfall Volume 7.76 Ac-ft

Required Volume 7.76 Ac-ft

Pond Data

Bottom Elevation	11.00	Area =	0.92 Ac
Top of Bank Elevation	16.00	Area =	1.49 Ac
Pond Depth	5.00 ft		
Pond Total Volume	5.96 Ac-ft		

Provided Retention

Pond Retention Volume	0.01 Ac-ft
Pond Retention Depth	0.01 ft

Provided Detention

Pond Detention Depth	3.00 ft		
Pond Provided Detention Volume	3.58 Ac-ft	<	7.76 Ac-ft

POND SIZING CALCULATION

SWALE 1 OF SUB-BASIN 2 LOCATED BETWEEN SR-5 AND RAILROAD TRACK

BASIN DATA

Impervious Area	2.42 Ac	CN	98.00	92%
Pervious Area	0.22 Ac	CN	93.00	8%
Total Area	2.64 Ac	CN Avg.	97.58	

WATER QUALITY BASED ON BASIN ADDITIONAL AREAS

Additional Right of Way				
Impervious Area	0.75 Ac	CN	98.00	68%
Pervious area	0.36 Ac	CN	93.00	32%
Total Additional	1.11 Ac	CN Avg.	96.38	

Water Quality Volume

1" Depth	1.00 inch
2.5" x % Impervious	1.69 inches
Required Depth	1.69 inches

Water Quality Volume Required Based on Additional Impervious 0.11 Ac-ft

WATER QUANTITY BASED ON BASIN AREAS

SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches
Cumulative Soil Storage "S"	0.25 inches
Rainfall Excess	11.21 inches

Rainfall Volume 2.47 Ac-ft

Required Volume 2.47 Ac-ft

Pond Data

Bottom Elevation	8.00	Area =	0.013 Ac
Top of Bank Elevation	13.00	Area =	0.164 Ac
Pond Depth	5.00 ft		
Pond Total Volume	0.37 Ac-ft		

Provided Retention

Pond Retention Volume	0.11 Ac-ft
Pond Retention Depth	1.42 ft

Provided Detention

Pond Detention Depth	3.00 ft		
Pond Provided Detention Volume	0.22 Ac-ft	<	2.466 Ac-ft

POND SIZING CALCULATION				
POND 2-3 OF SUB-BASIN 2 LOCATED BETWEEN SR-5 AND RAILROAD TRACK				
BASIN DATA				
Impervious Area	2.42 Ac	CN	98.00	92%
Pervious Area	0.22 Ac	CN	93.00	8%
Total Area	2.64 Ac	CN Avg.	97.58	
WATER QUALITY BASED ON BASIN ADDITIONAL AREAS				
Additional Right of Way				
Impervious Area	0.75 Ac	CN	98.00	68%
Pervious area	0.36 Ac	CN	93.00	32%
Total Additional	1.11 Ac	CN Avg.	96.38	
Water Quality Volume				
1" Depth	1.00 inch			
2.5" x % Impervious	1.69 inches			
Required Depth	1.69 inches			
Water Quality Volume Required Based on Additional Impervious	0.11 Ac-ft			
WATER QUANTITY BASED ON BASIN AREAS				
SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches			
Cumulative Soil Storage "S"	0.25 inches			
Rainfall Excess	11.21 inches			
Rainfall Volume	2.47 Ac-ft			
Required Volume	2.47 Ac-ft			
Pond Data				
Bottom Elevation	8.00	Area =	1.408 Ac	
Top of Bank Elevation	13.00	Area =	1.929 Ac	
Pond Depth	5.00 ft			
Pond Total Volume	8.31 Ac-ft			
Provided Retention				
Pond Retention Volume	0.11 Ac-ft			
Pond Retention Depth	0.06 ft			
Provided Detention				
Pond Detention Depth	3.00 ft			
Pond Provided Detention Volume	4.99 Ac-ft	>	2.466 Ac-ft	

POND SIZING CALCULATION				
POND 2-1 OF BASIN 2				
BASIN DATA				
Impervious Area	9.53 Ac	CN	98.00	59%
Pervious Area	6.52 Ac	CN	93.00	41%
Total Area	16.05 Ac	CN Avg.	95.97	
WATER QUALITY BASED ON BASIN ADDITIONAL IMPERVIOUS AREAS				
Widening				
Impervious Area	1.16 Ac	CN	98.00	100%
Pervious area	0.00 Ac	CN	93.00	0%
Total Additional	1.16 Ac	CN Avg.	98.00	
Water Quality Volume				
1" Depth	1.00 inch			
2.5" x % Impervious	1.48 inches			
Required Depth	1.48 inches			
Water Quality Volume Required Based on Additional Impervious	0.14 Ac-ft			
WATER QUANTITY BASED ON BASIN IMPERVIOUS				
SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches			
Cumulative Soil Storage "S"	0.42 inches			
Rainfall Excess	11.01 inches			
Rainfall Volume	8.74 Ac-ft			
Required Volume	8.74 Ac-ft			
Pond Data (Expension only)				
Bottom Elevation	8.00	Area =	1.439 Ac	
Top of Bank Elevation	12.00	Area =	1.937 Ac	
Pond Depth	4.00 ft			
Pond Total Volume	6.73 Ac-ft			
Provided Retention				
Pond Retention Volume	0.14 Ac-ft			
Pond Retention Depth	0.09 ft			
Provided Detention				
Pond Detention Depth	3.00 ft			
Pond Provided Detention Volume	5.05 Ac-ft	<	8.744 Ac-ft	
Total Detention Volume Provided for Pond 2-1 + Swale 1	5.27 Ac-ft	<	11.210 Ac-ft	Required

POND SIZING CALCULATION

POND 2-2 OF BASIN 2

BASIN DATA

Impervious Area	9.53 Ac	CN	98.00	59%
Pervious Area	6.52 Ac	CN	93.00	41%
Total Area	16.05 Ac	CN Avg.	95.97	

WATER QUALITY BASED ON BASIN ADDITIONAL IMPERVIOUS AREAS

Widening				
Impervious Area	1.16 Ac	CN	98.00	100%
Pervious area	0.00 Ac	CN	93.00	0%
Total Additional	1.16 Ac	CN Avg.	98.00	

Water Quality Volume

1" Depth	1.00 inch
2.5" x % Impervious	1.48 inches
Required Depth	1.48 inches

Water Quality Volume Required Based on Additional Impervious

0.14 Ac-ft

WATER QUANTITY BASED ON BASIN IMPERVIOUS

SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches
Cumulative Soil Storage "S"	0.42 inches
Rainfall Excess	11.01 inches

Rainfall Volume 8.74 Ac-ft

Required Volume 8.74 Ac-ft

Pond Data (Expension only)

Bottom Elevation	8.00	Area =	0.371 Ac
Top of Bank Elevation	12.00	Area =	0.678 Ac
Pond Depth	4.00 ft		
Pond Total Volume	2.07 Ac-ft		

Provided Retention

Pond Retention Volume	0.14 Ac-ft
Pond Retention Depth	0.28 ft

Provided Detention

Pond Detention Depth	3.00 ft		
Pond Provided Detention Volume	1.55 Ac-ft	<	8.744 Ac-ft

POND SIZING CALCULATION

POND 3-1 OF BASIN 3

BASIN DATA

Impervious Area	3.48 Ac	CN	98.00	92%
Pervious Area	0.30 Ac	CN	93.00	8%
Total Area	3.78 Ac	CN Avg.	97.60	

WATER QUALITY BASED ON BASIN ADDITIONAL IMPERVIOUS AREAS

Widening				
Impervious Area	0.80 Ac	CN	98.00	100%
Pervious area	0.00 Ac	CN	93.00	0%
Total Additional	0.80 Ac	CN Avg.	98.00	

Water Quality Volume

1" Depth	1.00 inch
2.5" x % Impervious	2.30 inches
Required Depth	2.30 inches

Water Quality Volume Required Based on Additional Impervious

0.15 Ac-ft

WATER QUANTITY BASED ON BASIN AREAS

SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches
Cumulative Soil Storage "S"	0.25 inches
Rainfall Excess	11.21 inches

Rainfall Volume 3.25 Ac-ft

Required Volume 3.25 Ac-ft

Pond Data (Expansion only)

Bottom Elevation	9.00	Area =	1.000 Ac
Top of Bank Elevation	15.00	Area =	1.720 Ac
Pond Depth	6.00 ft		
Pond Total Volume	8.06 Ac-ft		

Provided Retention

Pond Retention Volume	0.15 Ac-ft
Pond Retention Depth	0.11 ft

Provided Detention

Pond Detention Depth	3.00 ft		
Pond Provided Detention Volume	4.03 Ac-ft	>	3.251 Ac-ft

POND SIZING CALCULATION

PONDS 3-2A, 3-2B OF BASIN 3

BASIN DATA

Impervious Area	3.48 Ac	CN	98.00	92%
Pervious Area	0.30 Ac	CN	93.00	8%
Total Area	3.78 Ac	CN Avg.	97.60	

WATER QUALITY BASED ON BASIN ADDITIONAL IMPERVIOUS AREAS

Widening				
Impervious Area	0.80 Ac	CN	98.00	100%
Pervious area	0.00 Ac	CN	93.00	0%
Total Additional	0.80 Ac	CN Avg.	98.00	

Water Quality Volume

1" Depth	1.00 inch
2.5" x % Impervious	2.30 inches
Required Depth	2.30 inches

Water Quality Volume Required Based on Additional Impervious

0.15 Ac-ft

WATER QUANTITY BASED ON BASIN AREAS

SFWMD 25 Year 72 Hours Rainfall Depth	11.50 inches
Cumulative Soil Storage "S"	0.25 inches
Rainfall Excess	11.21 inches

Rainfall Volume	3.25 Ac-ft
-----------------	------------

Required Volume	3.25 Ac-ft
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Pond Data (Expansion only)

Bottom Elevation	9.00	Area =	0.270 Ac
Top of Bank Elevation	15.00	Area =	0.520 Ac
Pond Depth	6.00 ft		
Pond Total Volume	2.33 Ac-ft		

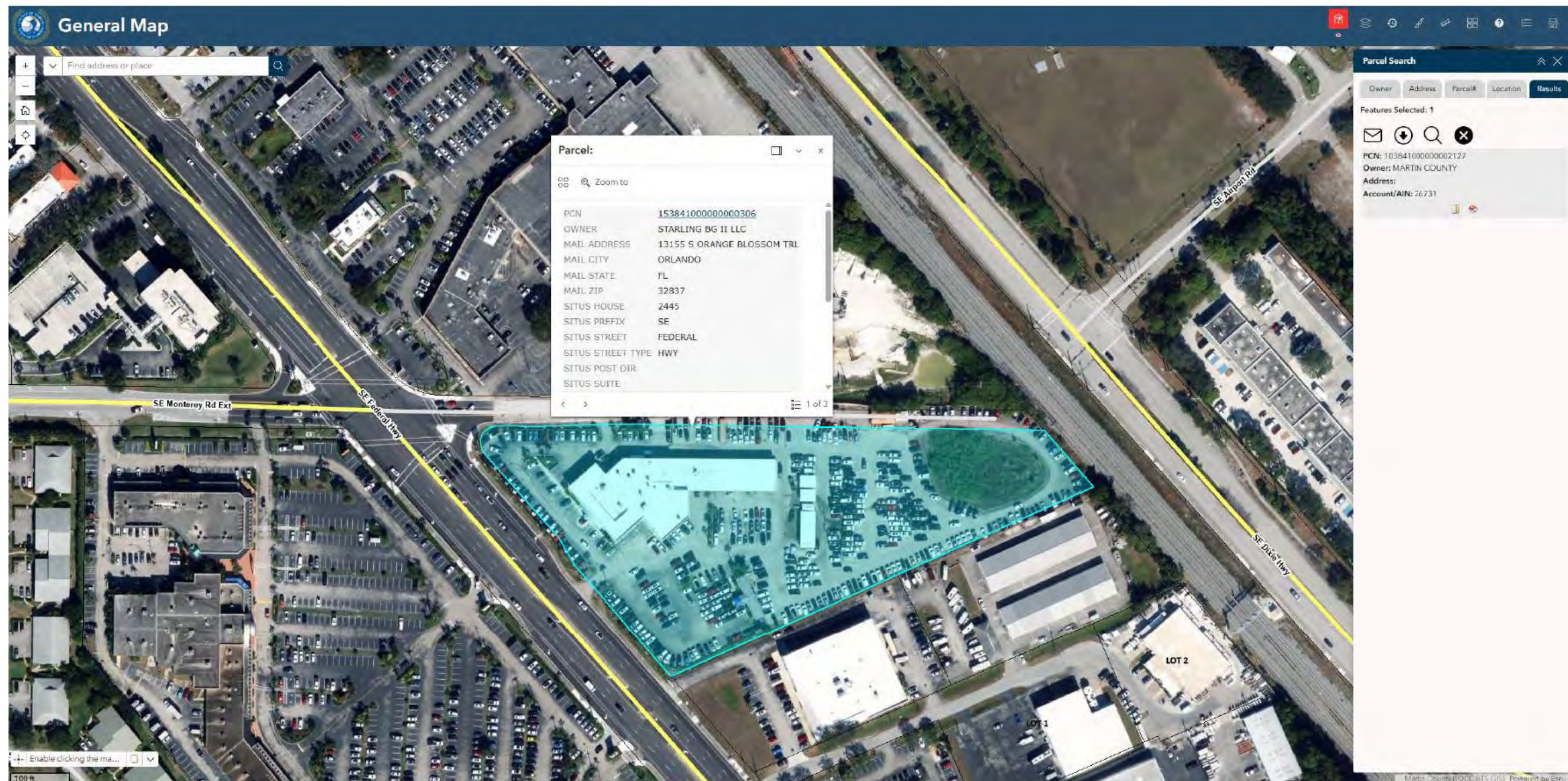
Provided Retention

Pond Retention Volume	0.15 Ac-ft
Pond Retention Depth	0.40 ft

Provided Detention

Pond Detention Depth	3.00 ft		
Pond Provided Detention Volume	1.16 Ac-ft	<	3.251 Ac-ft

APPENDIX E: PONDS CONSTRUCTION COST ESTIMATE



SWALE 1 (PARTIAL TAKE OF THE PROPERTY FOR A MAINTENANCE DRAINAGE EASEMENT – 10 FEET WIDE)

PIN 15-38-41-000-000-00030-6	AIN 27877	Situs Address 2445 SE FEDERAL HWY STUART FL	Website Updated 6/10/26
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General Information

CHANGE MAILING ADDRESS ▶		SIGN UP FOR PROPERTY FRAUD ALERT ▶	
Property Owners STARLING BG II LLC	Parcel ID 15-38-41-000-000-00030-6	Use Code/Property Class 2700 - 2700 Auto Sales/Repair	
Mailing Address 13155 S ORANGE BLOSSOM TRL ORLANDO FL 32837	Account Number 27877	Neighborhood M3E M3E-EAST STUART	
Tax District STUART	Property Address 2445 SE FEDERAL HWY STUART FL	Legal Acres 6.0444	
	Legal Description BEG N/L SEC 15 & E R/W US HWY 1, ELY 100... + Read more	Ag Use Size (Acre\Sq Ft) N/A	

Current Value

Year	Land Value	Improvement Value	Market Value	Value Not Taxed	Assessed Value	Total County Exemptions	County Taxable Value
2025	\$ 3,159,540	\$ 2,118,220	\$ 5,277,760	\$ 0	\$ 5,277,760	\$ 0	\$ 5,277,760
<i>Market values shown on the website reflect market conditions as of January 1st, the statutory assessment date. We are prohibited by law from relying on sales that occur after the January 1 assessment date. Therefore, market values shown on the website do not reflect today's market conditions, but rather the market conditions last year. In addition, the statutes require the county Property Appraiser to deduct for typical costs of sale (which include expenses such as commissions, title insurance, appraisals, inspection fees, etc.) when arriving at market value for tax purposes. That is why the market value for tax purposes is different from what a property would sell for today.</i>							

Current Sale

Sale Date 12/13/21	Grantor (Seller) FISCHER LAND DEVELOPMENT LLC	Doc Num 2931646
Sale Price \$ 7,100,000	Deed Type Special Warranty Deed	Book & Page 3279 0097



ALTERNATE POND 1-2

PIN 37-38-41-006-171-00000-9	AIN 33446	Situs Address 2675 SE DIXIE HWY STUART FL	Website Updated 8/12/26
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General Information

CHANGE MAILING ADDRESS ▶

SIGN UP FOR PROPERTY FRAUD ALERT ▶

Property Owners
MARTIN COUNTY
MARTIN COUNTY

Mailing Address
REAL PROPERTY DIVISION/PWD
2401 SE MONTEREY RD
STUART FL 34996

Tax District
DISTRICT TWO MSTU

Parcel ID
37-38-41-006-171-00000-9

Account Number
33446

Property Address
2675 SE DIXIE HWY STUART FL

Legal Description
A PARCEL OF LAND LYING IN A PORTION OF B... [+ Read more](#)

Use Code/Property Class
8600 - 8600 Cnty other than prev cvrd

Neighborhood
INST Institutional Lands

Legal Acres
2.56

Ag Use Size (Acre\Sq Ft)
N/A

Current Value

Year	Land Value	Improvement Value	Market Value	Value Not Taxed	Assessed Value	Total County Exemptions	County Taxable Value
2026	\$ 90,790	\$ 0	\$ 90,790	\$ 0	\$ 90,790	\$ 90,790	\$ 0

Market values shown on the website reflect market conditions as of January 1st, the statutory assessment date. We are prohibited by law from relying on sales that occur after the January 1 assessment date. Therefore, market values shown on the website do not reflect today's market conditions, but rather the market conditions last year. In addition, the statutes require the county Property Appraiser to deduct for typical costs of sale (which include expenses such as commissions, title insurance, appraisals, inspection fees, etc.) when arriving at market value for tax purposes. That is why the market value for tax purposes is different from what a property would sell for today.

Current Sale

Sale Date
1/1/01

Sale Price
\$ 0

Grantor (Seller)
SELLER - see file for name

Deed Type
N/A

Doc Num
N/A

Book & Page



PIN	AIN	Situs Address	Website Updated
10-38-41-000-000-00280-4	26735	1501 SE GRUMMAN BLVD STUART FL	8/12/26

General Information

CHANGE MAILING ADDRESS ▶

SIGN UP FOR PROPERTY FRAUD ALERT ▶

Property Owners
TARMAC FLORIDA INC

Mailing Address
5700 LAKE WRIGHT DR #300
NORFOLK VA 23502

Tax District
STUART

Parcel ID
10-38-41-000-000-00280-4

Account Number
26735

Property Address
1501 SE GRUMMAN BLVD STUART FL

Legal Description
PARCEL LYING IN SW 1/4 SEC 10 T38S R41E;... [+ Read more](#)

Use Code/Property Class
4700 - 4700 Minrl Process CementPhosp

Neighborhood
M3E M3E-EAST STUART

Legal Acres
3.5938

Ag Use Size (Acre\Sq Ft)
N/A

Current Value

Year	Land Value	Improvement Value	Market Value	Value Not Taxed	Assessed Value	Total County Exemptions	County Taxable Value
2026	\$ 887,400	\$ 94,500	\$ 981,900	\$ 138,419	\$ 843,481	\$ 0	\$ 843,481

Market values shown on the website reflect market conditions as of January 1st, the statutory assessment date. We are prohibited by law from relying on sales that occur after the January 1 assessment date. Therefore, market values shown on the website do not reflect today's market conditions, but rather the market conditions last year. In addition, the statutes require the county Property Appraiser to deduct for typical costs of sale (which include expenses such as commissions, title insurance, appraisals, inspection fees, etc.) when arriving at market value for tax purposes. That is why the market value for tax purposes is different from what a property would sell for today.

Current Sale

Sale Date
1/1/85

Sale Price
\$ 400,000

Grantor (Seller)
SELLER - see file for name

Deed Type
Special Warranty Deed

Doc Num
N/A

Book & Page
[0623 1750](#)



ALTERNATE POND 2-2

PIN	AIN	Situs Address	Website Updated
09-38-41-005-001-00170-2	26071	1880 SE PALM BEACH RD STUART FL	8/12/26

General Information

CHANGE MAILING ADDRESS ▶

SIGN UP FOR PROPERTY FRAUD ALERT ▶

Property Owners
AMIT SAGAR INC

Mailing Address
1880 SE PALM BEACH RD
STUART FL 34994

Tax District
STUART

Parcel ID
09-38-41-005-001-00170-2

Account Number
26071

Property Address
1880 SE PALM BEACH RD STUART FL

Legal Description
LAWLER HEIGHTS, LOT 17, LOT 18 (LESS BEG... [+ Read more](#)

Use Code/Property Class
1100 - 1100 STORES 1 STORY

Neighborhood
M3E M3E-EAST STUART

Legal Acres
0.6388

Ag Use Size (Acre\Sq Ft)
N/A

Current Value

Year	Land Value	Improvement Value	Market Value	Value Not Taxed	Assessed Value	Total County Exemptions	County Taxable Value
2026	\$ 333,330	\$ 435,060	\$ 768,390	\$ 24,833	\$ 743,557	\$ 0	\$ 743,557

Market values shown on the website reflect market conditions as of January 1st, the statutory assessment date. We are prohibited by law from relying on sales that occur after the January 1 assessment date. Therefore, market values shown on the website do not reflect today's market conditions, but rather the market conditions last year. In addition, the statutes require the county Property Appraiser to deduct for typical costs of sale (which include expenses such as commissions, title insurance, appraisals, inspection fees, etc.) when arriving at market value for tax purposes. That is why the market value for tax purposes is different from what a property would sell for today.

Current Sale

Sale Date
3/29/99

Grantor (Seller)
KAPADIA, ANIL

Doc Num
JMB

Sale Price
\$ 389,700

Deed Type
Special Warranty Deed

Book & Page
[1567 1956](#)

General Map

Find address or place

SE Monterey Rd

SE Monterey Rd Ext

SE Wayne Rd

SE Edler Dr

LOT 1

LOT 2

1 of 4

Parcel Search Results

Property Appraiser

Property Info

Zoom to

PCN

Owner

Situs Address

Account/AIN

163841000000000150

CITY OF STUART

1180 SE MONTEREY ROAD EXT

524183

Parcel Search

Owner

Address

Parcel#

Location

Results

Features Selected: 1

PCN: 163841000000000150

Owner: CITY OF STUART

Address: 1180 SE MONTEREY ROAD EXT

Account/AIN: 524183

ALTERNATE POND 3-1 AND POND 3-2B (PARTIAL TAKE)

PIN 16-38-41-000-000-00015-0	AIN 524183	Situs Address 1180 SE MONTEREY RD EXTENSION STUART FL	Website Updated 9/8/26
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General Information			
CHANGE MAILING ADDRESS ▶		SIGN UP FOR PROPERTY FRAUD ALERT ▶	
Property Owners CITY OF STUART	Parcel ID 16-38-41-000-000-00015-0	Use Code/Property Class 9000 - 9000 Leasehold Int Gov owned	
Mailing Address 121 SW FLAGLER AVE STUART FL 34994	Account Number 524183	Neighborhood 31400 Monterey Rd	
Tax District STUART	Property Address 1180 SE MONTEREY RD EXTENSION STUART FL	Legal Acres 2.34	
	Legal Description SEC 16-38-41, THE EAST 210 OF NORTH 518.... + Read more	Ag Use Size (Acre\Sq Ft) N/A	

Current Value							
Year 2026	Land Value \$ 326,180	Improvement Value \$ 1,040,820	Market Value \$ 1,367,000	Value Not Taxed \$ 425,475	Assessed Value \$ 941,525	Total County Exemptions \$ 0	County Taxable Value \$ 941,525
Market values shown on the website reflect market conditions as of January 1st, the statutory assessment date. We are prohibited by law from relying on sales that occur after the January 1 assessment date. Therefore, market values shown on the website do not reflect today's market conditions, but rather the market conditions last year. In addition, the statutes require the county Property Appraiser to deduct for typical costs of sale (which include expenses such as commissions, title insurance, appraisals, inspection fees, etc.) when arriving at market value for tax purposes. That is why the market value for tax purposes is different from what a property would sell for today.							

Current Sale		
Sale Date 2/28/05	Grantor (Seller) STUART, CITY OF	Doc Num 1817562
Sale Price \$ 0	Deed Type AFFIDAVIT	Book & Page 1985 2809



ALTERNATE POND 3-2A

PIN 16-38-41-000-000-00014-0	AIN 191253	Situs Address UNASSIGNED	Website Updated 9/16/26
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General Information

CHANGE MAILING ADDRESS ►

SIGN UP FOR PROPERTY FRAUD ALERT ►

Property Owners
CITY OF STUART

Parcel ID
16-38-41-000-000-00014-0

Use Code/Property Class
8900 - 8900 Muni other than prev cvrd

Mailing Address
121 SW FLAGLER AVE
STUART FL 34994

Account Number
191253

Neighborhood
31400 Monterey Rd

Tax District
STUART

Property Address
UNASSIGNED

Legal Acres
0.556

Legal Description
THAT PORTION OF GOV LOT 1 SEC 16 T38S R4... [+ Read more](#)

Ag Use Size (Acre\Sq Ft)
N/A

Current Value

Year	Land Value	Improvement Value	Market Value	Value Not Taxed	Assessed Value	Total County Exemptions	County Taxable Value
2026	\$ 190,960	\$ 0	\$ 190,960	\$ 3,410	\$ 187,550	\$ 187,550	\$ 0

Market values shown on the website reflect market conditions as of January 1st, the statutory assessment date. We are prohibited by law from relying on sales that occur after the January 1 assessment date. Therefore, market values shown on the website do not reflect today's market conditions, but rather the market conditions last year. In addition, the statutes require the county Property Appraiser to deduct for typical costs of sale (which include expenses such as commissions, title insurance, appraisals, inspection fees, etc.) when arriving at market value for tax purposes. That is why the market value for tax purposes is different from what a property would sell for today.

Current Sale

Sale Date
7/30/04

Grantor (Seller)
STUART, CITY OF

Doc Num
1770353

Sale Price
\$ 0

Deed Type
AFFIDAVIT

Book & Page
[1925 2262](#)

SR 714 / MONTEREY ROAD FEC RR ELEVATED OVER RAILROAD
RIGHT OF WAY AND CONSTRUCTION COST ESTIMATES

	PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
POND 1-1 FOR BASIN 1							
	0120 1	REGULAR EXCAVATION	CY	12150	\$15.00	\$182,250.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	120	\$352.00	\$42,240.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	1	\$6,200.00	\$6,200.00	
	0430982133	MITERED END SECTION, OPTIONAL ROUND, 30" CD	EA	1	\$4,000.00	\$4,000.00	
		SUB-TOTAL					\$246,190.00
		ESTIMATED RIGHT OF WAY COST					\$0.00
		TOTAL					\$246,190.00
POND 1-2 FOR BASIN 1							
	0120 1	REGULAR EXCAVATION	CY	14583	\$15.00	\$218,745.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	42	\$352.00	\$14,784.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	1	\$6,200.00	\$6,200.00	
	0430982133	MITERED END SECTION, OPTIONAL ROUND, 30" CD	EA	1	\$4,000.00	\$4,000.00	
		SUB-TOTAL					\$255,229.00
		ESTIMATED RIGHT OF WAY COST					\$90,790.00
		TOTAL					\$346,019.00

SR 714 / MONTEREY ROAD FEC RR ELEVATED OVER RAILROAD
RIGHT OF WAY AND CONSTRUCTION COST ESTIMATES

	PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
SWALE 1 FOR SUB-BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	603	\$15.00	\$9,045.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	1120	\$280.00	\$313,600.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	7	\$16,500.00	\$115,500.00	
	0430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	2	\$4,500.00	\$9,000.00	
		SUB-TOTAL					\$458,645.00
		ESTIMATED RIGHT OF WAY COST					\$122,243.00
		TOTAL					\$580,888.00
POND 2-3 FOR SUB-BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	13408	\$15.00	\$201,120.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	385	\$280.00	\$107,800.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	2	\$16,500.00	\$33,000.00	
	0430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	2	\$4,500.00	\$9,000.00	
		SUB-TOTAL					\$362,420.00
		ESTIMATED RIGHT OF WAY COST					\$981,900.00
		TOTAL					\$1,344,320.00

SR 714 / MONTEREY ROAD FEC RR ELEVATED OVER RAILROAD
RIGHT OF WAY AND CONSTRUCTION COST ESTIMATES

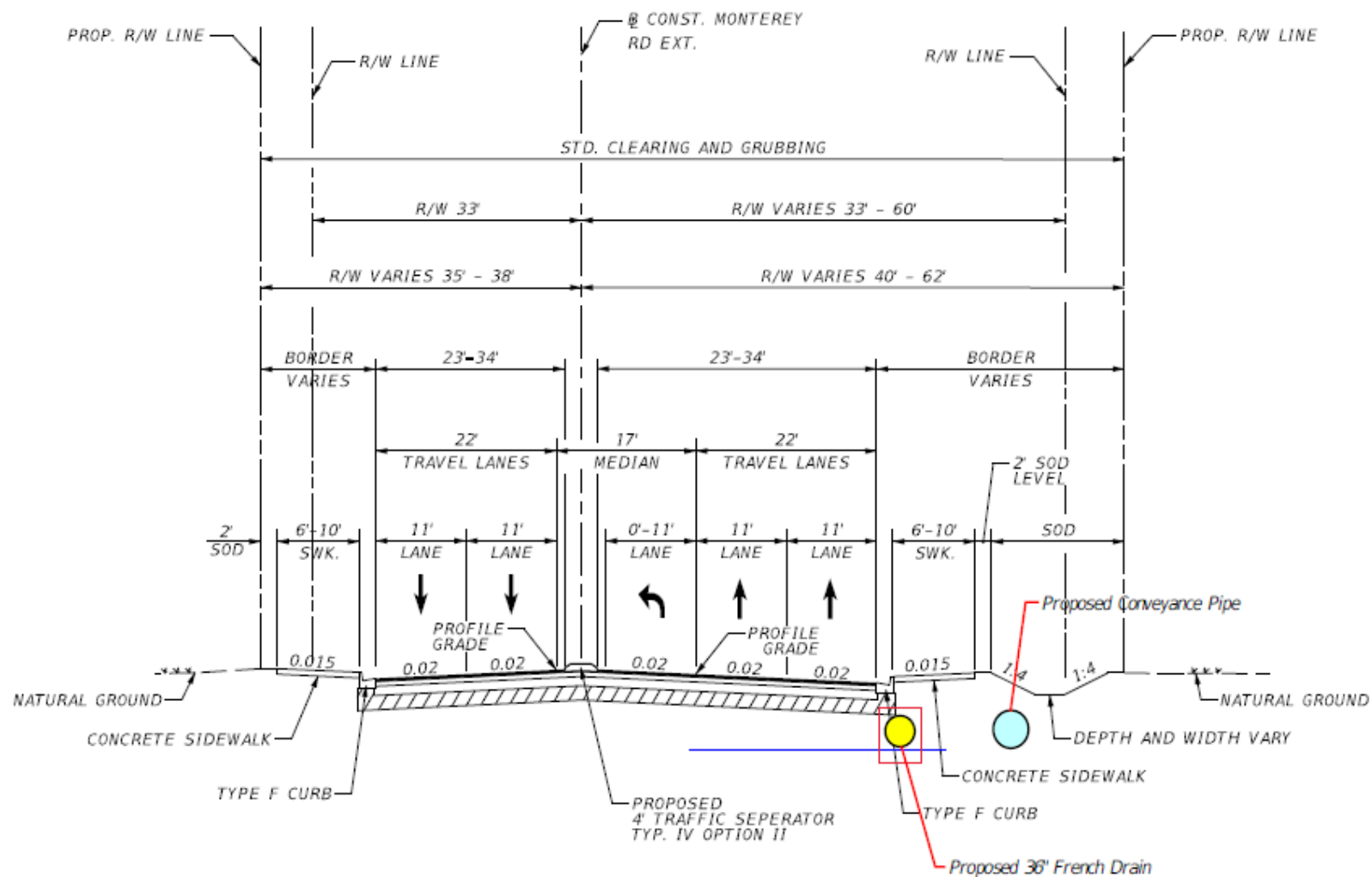
	PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
POND 2-1 FOR BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	17475	\$15.00	\$262,125.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	360	\$352.00	\$126,720.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	2	\$16,500.00	\$33,000.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	2	\$6,200.00	\$12,400.00	
		SUB-TOTAL					\$445,745.00
		ESTIMATED RIGHT OF WAY COST					\$0.00
		TOTAL					\$445,745.00
POND 2-2 FOR BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	5651	\$15.00	\$84,765.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	98	\$352.00	\$34,496.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	2	\$16,500.00	\$33,000.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	2	\$6,200.00	\$12,400.00	
		SUB-TOTAL					\$176,161.00
		ESTIMATED RIGHT OF WAY COST					\$768,390.00
		TOTAL					\$944,551.00

SR 714 / MONTEREY ROAD FEC RR ELEVATED OVER RAILROAD
RIGHT OF WAY AND CONSTRUCTION COST ESTIMATES

	PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
EXFILTRATION TRENCHES FOR BASIN 3							
	0443-70-6	FRENCH DRAIN, 36"	LF	1650	\$400.00	\$660,000.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	13	\$16,500.00	\$214,500.00	
	0425 1351	INLETS, CURB, TYPE P-5, <10'	EA	16	\$8,820.00	\$141,120.00	
	0425 1361	INLETS, CURB, TYPE P-6, <10'	EA	8	\$13,350.00	\$106,800.00	
		SUB-TOTAL					\$1,122,420.00
		ESTIMATED RIGHT OF WAY COST					\$0.00
		TOTAL					\$1,122,420.00
POND 3-1 FOR BASIN 3							
	0120 1	REGULAR EXCAVATION	CY	15181	\$15.00	\$227,715.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	2260	\$352.00	\$795,520.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	8	\$16,500.00	\$132,000.00	
	430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	1	\$4,500.00	\$4,500.00	
		SUB-TOTAL					\$1,171,235.00
		ESTIMATED RIGHT OF WAY COST					\$1,367,000.00
		TOTAL					\$2,538,235.00
PONDS 3-2A, 3-2B FOR BASIN 3							
	0120 1	REGULAR EXCAVATION	CY	3759	\$15.00	\$56,385.00	
	0443-70-6	FRENCH DRAIN, 36"	LF	100	\$400.00	\$40,000.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	2	\$11,500.00	\$23,000.00	
	430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	2360	\$352.00	\$830,720.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	10	\$16,500.00	\$165,000.00	
	430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	2	\$4,500.00	\$9,000.00	
		SUB-TOTAL					\$1,124,105.00
		ESTIMATED RIGHT OF WAY COST					\$453,844.00
		TOTAL					\$1,577,949.00

SR 714 / MONTEREY ROAD FEC RR ELEVATED OVER RAILROAD RIGHT OF WAY AND CONSTRUCTION COST ESTIMATES							
	PAY ITEM	PAY ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	TOTAL COST
POND 1-1 FOR BASIN 1							
	0120 1	REGULAR EXCAVATION	CY	12150	\$15.00	\$182,250.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	120	\$352.00	\$42,240.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	1	\$6,200.00	\$6,200.00	
	0430982133	MITERED END SECTION, OPTIONAL ROUND, 30" CD	EA	1	\$4,000.00	\$4,000.00	
		SUB-TOTAL					\$246,190.00
		ESTIMATED RIGHT OF WAY COST					\$0.00
		TOTAL					\$246,190.00
POND 1-2 FOR BASIN 1							
	0120 1	REGULAR EXCAVATION	CY	14583	\$15.00	\$218,745.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	42	\$352.00	\$14,784.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	1	\$6,200.00	\$6,200.00	
	0430982133	MITERED END SECTION, OPTIONAL ROUND, 30" CD	EA	1	\$4,000.00	\$4,000.00	
		SUB-TOTAL					\$255,229.00
		ESTIMATED RIGHT OF WAY COST					\$90,790.00
		TOTAL					\$346,019.00
SWALE 1 FOR SUB-BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	603	\$15.00	\$9,045.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	1120	\$280.00	\$313,600.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	7	\$16,500.00	\$115,500.00	
	0430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	2	\$4,500.00	\$9,000.00	
		SUB-TOTAL					\$458,645.00
		ESTIMATED RIGHT OF WAY COST					\$122,243.00
		TOTAL					\$580,888.00
POND 2-3 FOR SUB-BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	13408	\$15.00	\$201,120.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	385	\$280.00	\$107,800.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	2	\$16,500.00	\$33,000.00	
	0430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	2	\$4,500.00	\$9,000.00	
		SUB-TOTAL					\$362,420.00
		ESTIMATED RIGHT OF WAY COST					\$981,900.00
		TOTAL					\$1,344,320.00
POND 2-1 FOR BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	17475	\$15.00	\$262,125.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	360	\$352.00	\$126,720.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	2	\$16,500.00	\$33,000.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	2	\$6,200.00	\$12,400.00	
		SUB-TOTAL					\$445,745.00
		ESTIMATED RIGHT OF WAY COST					\$0.00
		TOTAL					\$445,745.00
POND 2-2 FOR BASIN 2							
	0120 1	REGULAR EXCAVATION	CY	5651	\$15.00	\$84,765.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	0430175148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	98	\$352.00	\$34,496.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	2	\$16,500.00	\$33,000.00	
	0430982141	MITERED END SECTION, OPTIONAL ROUND, 48" CD	EA	2	\$6,200.00	\$12,400.00	
		SUB-TOTAL					\$176,161.00
		ESTIMATED RIGHT OF WAY COST					\$768,390.00
		TOTAL					\$944,551.00
EXFILTRATION TRENCHES FOR BASIN 3							
	0443-70-6	FRENCH DRAIN, 36"	LF	1650	\$400.00	\$660,000.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	13	\$16,500.00	\$214,500.00	
	0425 1351	INLETS, CURB, TYPE P-5, <10'	EA	16	\$8,820.00	\$141,120.00	
	0425 1361	INLETS, CURB, TYPE P-6, <10'	EA	8	\$13,350.00	\$106,800.00	
		SUB-TOTAL					\$1,122,420.00
		ESTIMATED RIGHT OF WAY COST					\$0.00
		TOTAL					\$1,122,420.00
POND 3-1 FOR BASIN 3							
	0120 1	REGULAR EXCAVATION	CY	15181	\$15.00	\$227,715.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	1	\$11,500.00	\$11,500.00	
	430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	2260	\$352.00	\$795,520.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	8	\$16,500.00	\$132,000.00	
	430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	1	\$4,500.00	\$4,500.00	
		SUB-TOTAL					\$1,171,235.00
		ESTIMATED RIGHT OF WAY COST					\$1,367,000.00
		TOTAL					\$2,538,235.00
POND 3-2A, 3-2B FOR BASIN 3							
	0120 1	REGULAR EXCAVATION	CY	3759	\$15.00	\$56,385.00	
	0443-70-6	FRENCH DRAIN, 36"	LF	100	\$400.00	\$40,000.00	
	0425 1584	INLETS, DT BOT, TYPE H, J BOTTOM >10'	EA	2	\$11,500.00	\$23,000.00	
	430175136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	2360	\$352.00	\$830,720.00	
	0425 2 72	MANHOLES, J-7, >10'	EA	10	\$16,500.00	\$165,000.00	
	430982138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	2	\$4,500.00	\$9,000.00	
		SUB-TOTAL					\$1,124,105.00
		ESTIMATED RIGHT OF WAY COST					\$453,844.00
		TOTAL					\$1,577,949.00

APPENDIX F: MONTEREY ROAD FRENCH DRAINS REQUIREMENTS



SE MONTEREY ROAD EXT.
 (WEST OF US 1)
 MP 0.000 TO MP 0.349

LEGEND

- Existing Pipe
- Proposed Pipe
- French Drain (36" Pipe)
- Trench

SE Monterey Rd

BASIN 3

IMPERVIOUS AREA 19.30 AC

PERVIOUS AREA 0.61 AC

TOTAL AREA 19.91 AC

TOTAL FRENCH DRAIN LENGTH = 1,650 FEET

0 50 100 ft

LEGEND

- Existing Pipe
- Proposed Pipe
- French Drain (36" Pipe)
- Trench

BASIN 3

IMPERVIOUS AREA 19.30 AC

PERVIOUS AREA 0.61 AC

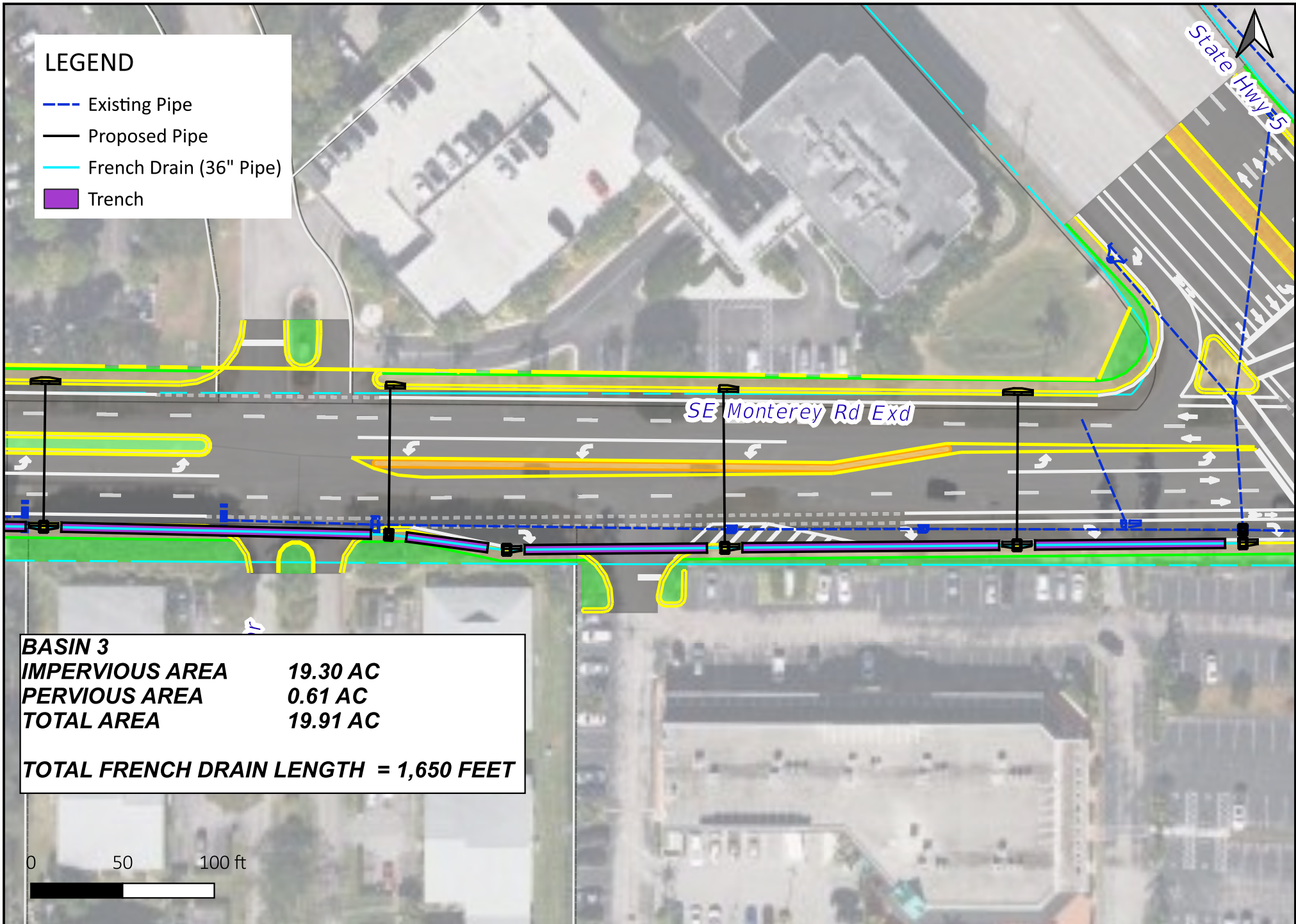
TOTAL AREA 19.91 AC

TOTAL FRENCH DRAIN LENGTH = 1,650 FEET

0 50 100 ft

LEGEND

- Existing Pipe
- Proposed Pipe
- French Drain (36" Pipe)
- Trench



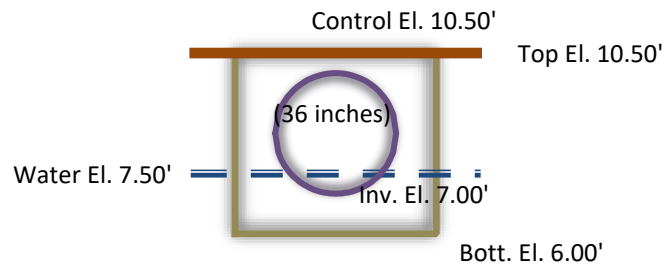
FDOT DISTRICT FOUR

PROJECT TITLE	SR 714 PDE Study	DATE	9/17/2026
PROJECT NUMBER	FPID 441636-2-22-01		
PROJECT MANAGER	Robert Lopes		
BASIN NUMBER	3 (Monterey Road)		
EXFILTRATION TRENCH FROM	Begin Station	TO	End Station

EXFILTRATION TRENCH SKETCH

Pipe Length = 1650.00 feet

Trench Length = 1520.00 feet



K10 El. .00

FDOT DISTRICT FOUR

PROJECT TITLE	SR 714 PDE Study	DATE	9/17/2026
PROJECT NUMBER	FPID 441636-2-22-01		
PROJECT MANAGER	Robert Lopes		
BASIN NUMBER	3 (Monterey Road)		
EXFILTRATION TRENCH FROM	Begin Station	TO	End Station

DRAINAGE AREAS

Impervious Area	3.480	acres	(CN = 98.00)	
Pervious Area	0.300	acres	(CN = 93.00)	
Total Drainage Area	3.780	acres	(CNavg. = 97.60)	
1.0" Water Quality Volume x Total Area	13721.40	cu.-feet		
2.5" Water Quality Volume x Impervious Area	31581.00	cu.-feet		
Required Water Quality Volume	31581.00	cu.-feet		0.73 Ac-Ft

PROPOSED EXFILTRATION TRENCH

Pipe Diameter	36.00	inches		
Pipe Inv. Elevation	7.00	feet		
Pipe Length	1650.00	feet		
October Water Level	7.50	feet		
Trench Bottom Elevation	6.00	feet		
Trench Bottom Width	5.00	feet		
Trench Top Elevation	10.50	feet		
Trench Top Width	5.00	feet		
Trench Length	1520.00	feet		
Control Elevation	10.50	feet	(Ex. Minimum inlet elevation)	
Hydraulic Conductivity K10	1.62E-04	cfs/sf-ft of head.	K10 El.	0.00 feet

Additional Storage	0.0000	(ac.-ft.)	0.00 cu.-feet
Total Storage + Exf Capacity	32958.20	>	31581.00 cu.-feet Required Water Quality

REQUIRED EXFILTRATION TRENCH LENGTH FOR WATER QUALITY

Unit Trench Volume	11.1854	cu.-feet/foot	
Unit Exfiltration Rate	0.0053	cfs/foot	
Required Trench Length	1037.79	feet	Add. Storage Exceeds Water Quality Vol.
Provided Trench Length	1520.00	feet	

FDOT DISTRICT FOUR

PROJECT TITLE	SR 714 PDE Study	DATE	9/17/2026
PROJECT NUMBER	FPID 441636-2-22-01		
PROJECT MANAGER	Robert Lopes		
BASIN NUMBER	3 (Monterey Road)		
EXFILTRATION TRENCH FROM	Begin Station	TO	End Station

DRAINAGE AREAS

Impervious Area	3.480	acres	(CN = 98.00)
Pervious Area	0.300	acres	(CN = 93.00)
Total Drainage Area	3.780	acres	(CNavg. = 97.60)
Design Storm Rainfall Depth	11.50	inches	
Design Storm Rainfall Excess	11.25	inches	
Rainfall Excess Drainage Basin Volume	154426.56	cu.-feet	3.55 Ac-Ft

PROPOSED EXFILTRATION TRENCH

Pipe Diameter	36.00	inches	
Pipe Inv. Elevation	7.00	feet	
Pipe Length	1650.00	feet	
October Water Level	7.50	feet	
Trench Bottom Elevation	6.00	feet	
Trench Bottom Width	5.00	feet	
Trench Top Elevation	10.50	feet	
Trench Top Width	5.00	feet	
Trench Length	1520.00	feet	
Control Elevation	10.50	feet	(Ex. Minimum inlet elevation)
Hydraulic Conductivity K10	1.62E-04	cfs/sf-ft of head.	K10 El. 0.00 feet

Additional Storage	0.0000	(ac.-ft.)
--------------------	--------	-----------

REQUIRED EXFILTRATION TRENCH LENGTH FOR WATER QUANTITY

Unit Trench Volume	11.1854	cu.-feet/foot	
Unit Exfiltration Rate	0.0053	cfs/foot	
System Capacity	46255.16	cu.-feet	1.06 Ac-Ft
Required Trench Length	5074.64	feet	For no overflow (self contained)
Provided Trench Length	1520.00	feet	

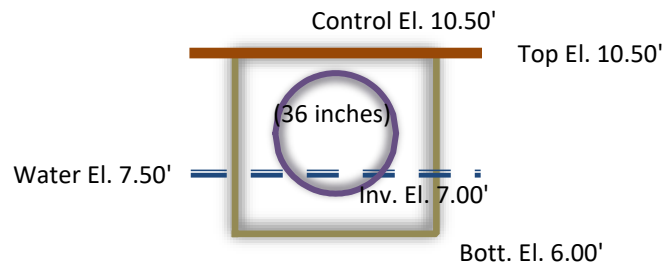
FDOT DISTRICT FOUR

PROJECT TITLE	SR 714 PDE Study	DATE	9/17/2026
PROJECT NUMBER	FPID 441636-2-22-01		
PROJECT MANAGER	Robert Lopes		
BASIN NUMBER	3 (Monterey Road) + Alternate pond		
EXFILTRATION TRENCH FROM	Begin Station	TO	End Station

EXFILTRATION TRENCH SKETCH

Pipe Length = 125.00 feet

Trench Length = 100.00 feet



K10 El. .00

FDOT DISTRICT FOUR

PROJECT TITLE	SR 714 PDE Study	DATE	9/17/2026
PROJECT NUMBER	FPID 441636-2-22-01		
PROJECT MANAGER	Robert Lopes		
BASIN NUMBER	3 (Monterey Road) + Alternate ponds		
EXFILTRATION TRENCH FROM	Begin Station	TO	End Station

DRAINAGE AREAS

Impervious Area	3.480	acres	(CN = 98.00)
Pervious Area	0.300	acres	(CN = 93.00)
Total Drainage Area	3.780	acres	(CNavg. = 97.60)
1.0" Water Quality Volume x Total Area	13721.40	cu.-feet	
2.5" Water Quality Volume x Impervious Area	31581.00	cu.-feet	
Required Water Quality Volume	31581.00	cu.-feet	0.73 Ac-Ft

PROPOSED EXFILTRATION TRENCH

Pipe Diameter	36.00	inches	
Pipe Inv. Elevation	7.00	feet	
Pipe Length	125.00	feet	
October Water Level	7.50	feet	
Trench Bottom Elevation	6.00	feet	
Trench Bottom Width	5.00	feet	
Trench Top Elevation	10.50	feet	
Trench Top Width	5.00	feet	
Trench Length	100.00	feet	
Control Elevation	10.50	feet	(Ex. Minimum inlet elevation)
Hydraulic Conductivity K10	1.62E-04	cfs/sf-ft of head.	K10 El. 0.00 feet

Additional Storage	1.1600	(ac.-ft.)	50529.60 cu.-feet
Total Storage + Exf Capacity	52801.43	>	31581.00 cu.-feet Required Water Quality

REQUIRED EXFILTRATION TRENCH LENGTH FOR WATER QUALITY

Unit Trench Volume	12.2207	cu.-feet/foot
Unit Exfiltration Rate	0.0053	cfs/foot
Required Trench Length		feet
Provided Trench Length	100.00	feet

FDOT DISTRICT FOUR

PROJECT TITLE	SR 714 PDE Study	DATE	9/17/2026
PROJECT NUMBER	FPID 441636-2-22-01		
PROJECT MANAGER	Robert Lopes		
BASIN NUMBER	3 (Monterey Road) + Alternate ponds		
EXFILTRATION TRENCH FROM	Begin Station	TO	End Station

DRAINAGE AREAS

Impervious Area	3.480	acres	(CN = 98.00)
Pervious Area	0.300	acres	(CN = 93.00)
Total Drainage Area	3.780	acres	(CNavg. = 97.60)
Design Storm Rainfall Depth	11.50	inches	
Design Storm Rainfall Excess	11.25	inches	
Rainfall Excess Drainage Basin Volume	154426.56	cu.-feet	3.55 Ac-Ft

PROPOSED EXFILTRATION TRENCH

Pipe Diameter	36.00	inches	
Pipe Inv. Elevation	7.00	feet	
Pipe Length	125.00	feet	
October Water Level	7.50	feet	
Trench Bottom Elevation	6.00	feet	
Trench Bottom Width	5.00	feet	
Trench Top Elevation	10.50	feet	
Trench Top Width	5.00	feet	
Trench Length	100.00	feet	
Control Elevation	10.50	feet	(Ex. Minimum inlet elevation)
Hydraulic Conductivity K10	1.62E-04	cfs/sf-ft of head.	K10 El. 0.00 feet

Additional Storage 1.1600 (ac.-ft.) in ponds 3-2A, 3-2B

REQUIRED EXFILTRATION TRENCH LENGTH FOR WATER QUANTITY

Unit Trench Volume	12.2207	cu.-feet/foot	
Unit Exfiltration Rate	0.0053	cfs/foot	
System Capacity	53676.23	cu.-feet	1.23 Ac-Ft
Required Trench Length	3301.85	feet	For no overflow (self contained)
Provided Trench Length	100.00	feet	

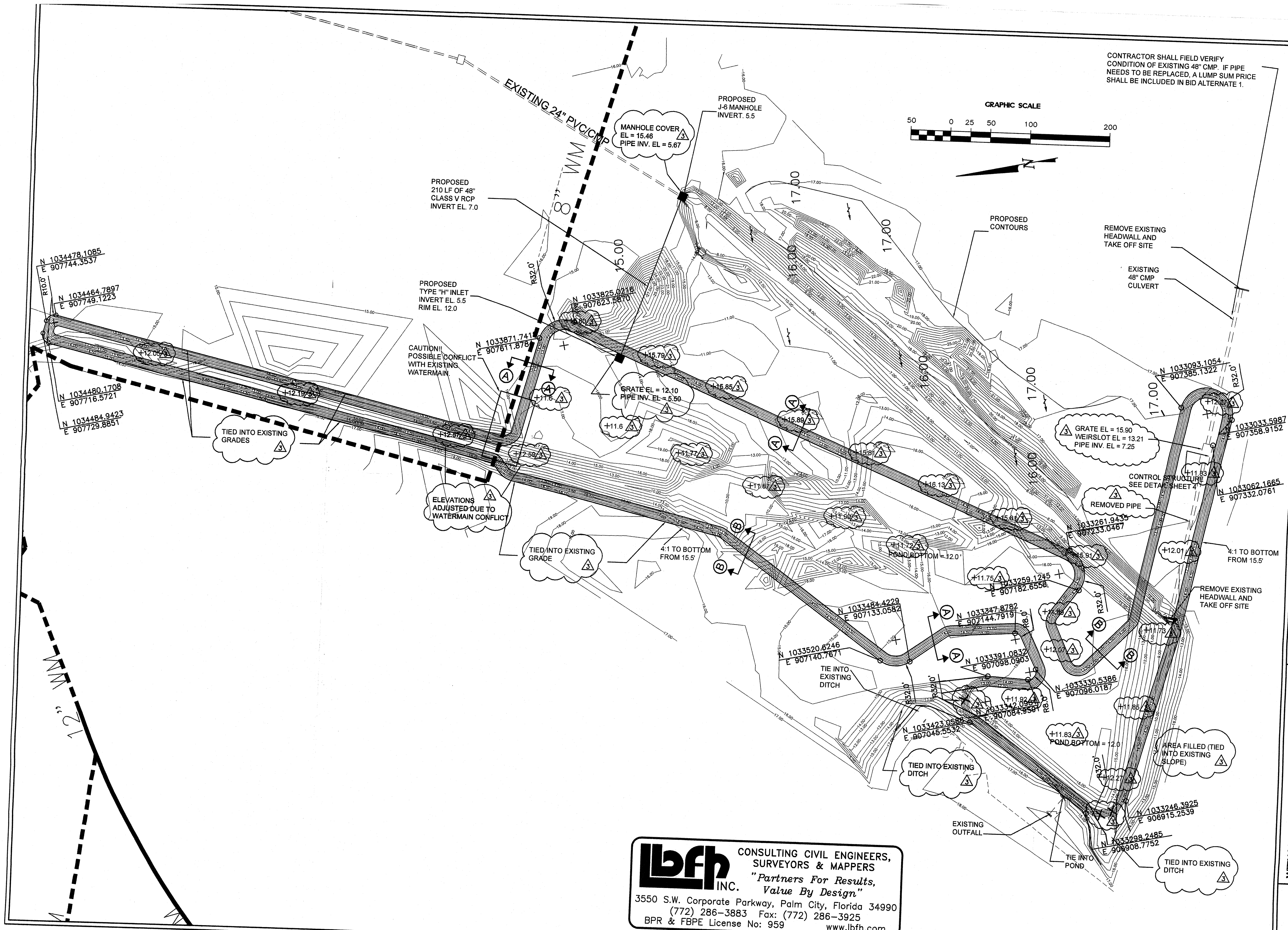
APPENDIX G: EXISTING PERMITS

ERP Permit

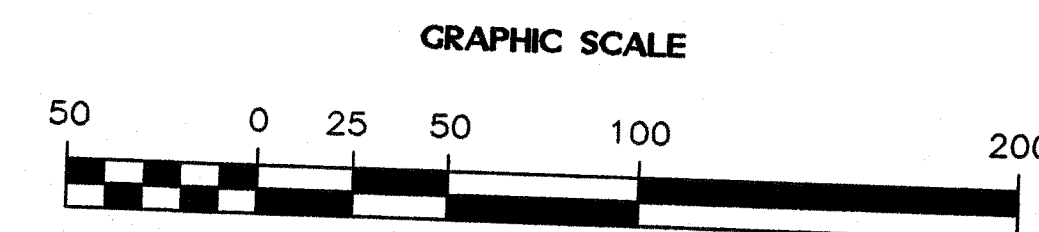
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- 43-01107-P
- 43-00653-S
- 43-0419-W
- 43-00773-S

As-Built

- FDOT FPID 89010-3552
- FDOT FM 444405-2-58-01
- Martin County Public Works Project No. 89.112207
- Martin County Public Works Project “Monterey Road to Kingswood Terrace”
- Martin County Public Works Project No. 06-233 A-1-A from Indian Street to Monterey Road



CONTRACTOR SHALL FIELD VERIFY
CONDITION OF EXISTING 48\"/>

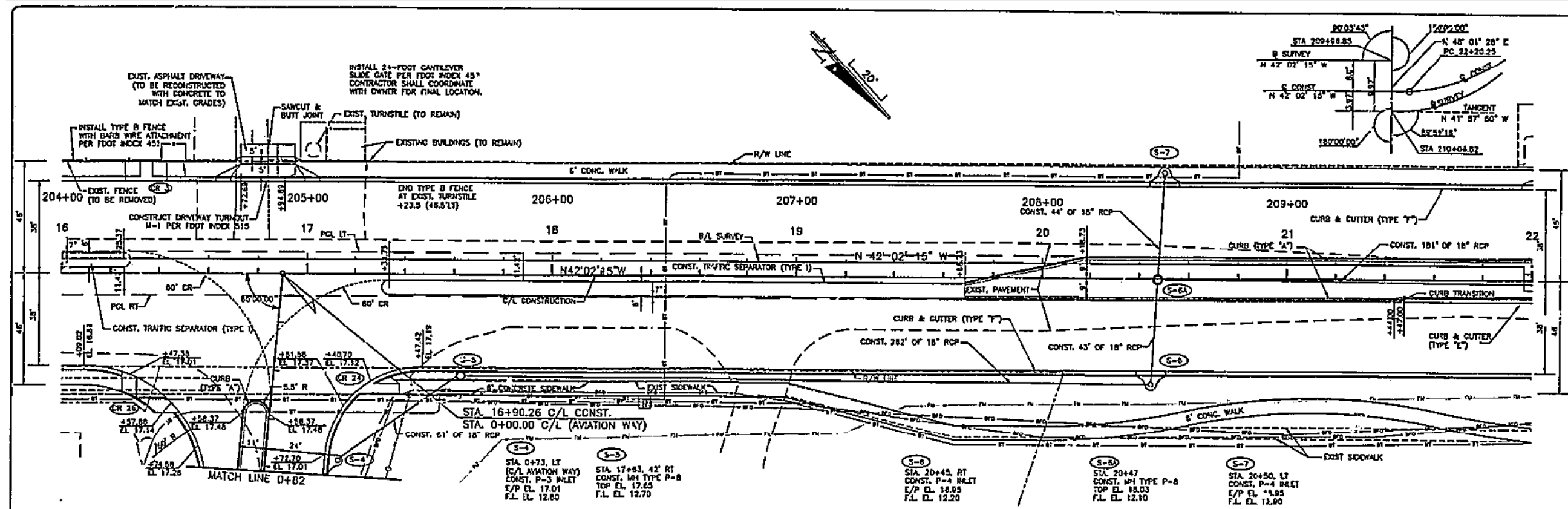
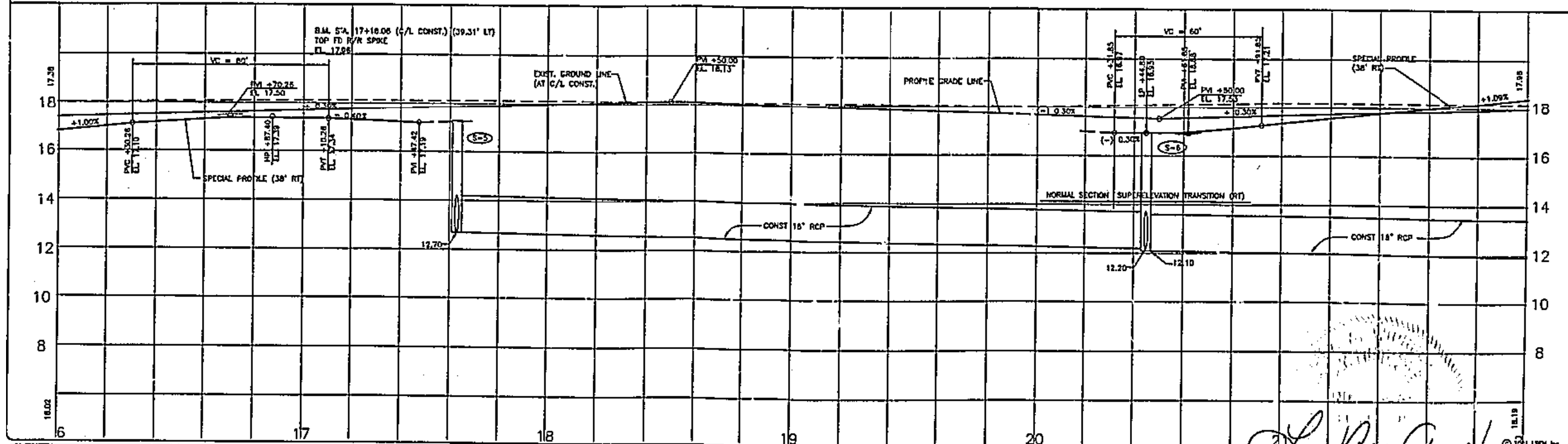


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(772) 286-3883 Fax: (772) 286-3925
BPR & FBPE License No: 959 www.lbh.com

PROJECT NO. 852824		CADD FILE 52824006	
Hoyle, Tanner & Associates, Inc. HTA 3452 LAKE LYNDY DRIVE, SUITE 151, ORLANDO, FL 32817 tel: (407) 380-1919 fax: (407) 380-1830 email: hta@hnta-fl.com web: www.hoyletanner.com		DES. BY LAW	DR. BY LBH
SCALE: GRAPHIC	DATE: DEC 2003	CHKD. BY DWN	DATE: DEC 2003
WITHAM FIELD/MARTIN COUNTY AIRPORT MARTIN COUNTY, FLORIDA DRAINAGE LAYOUT PLAN		DRAWING 6	
RECEIVED FEB 23 2009		SHEET 6 OF 8	

SCANNED/POSTED
@PERMITTING



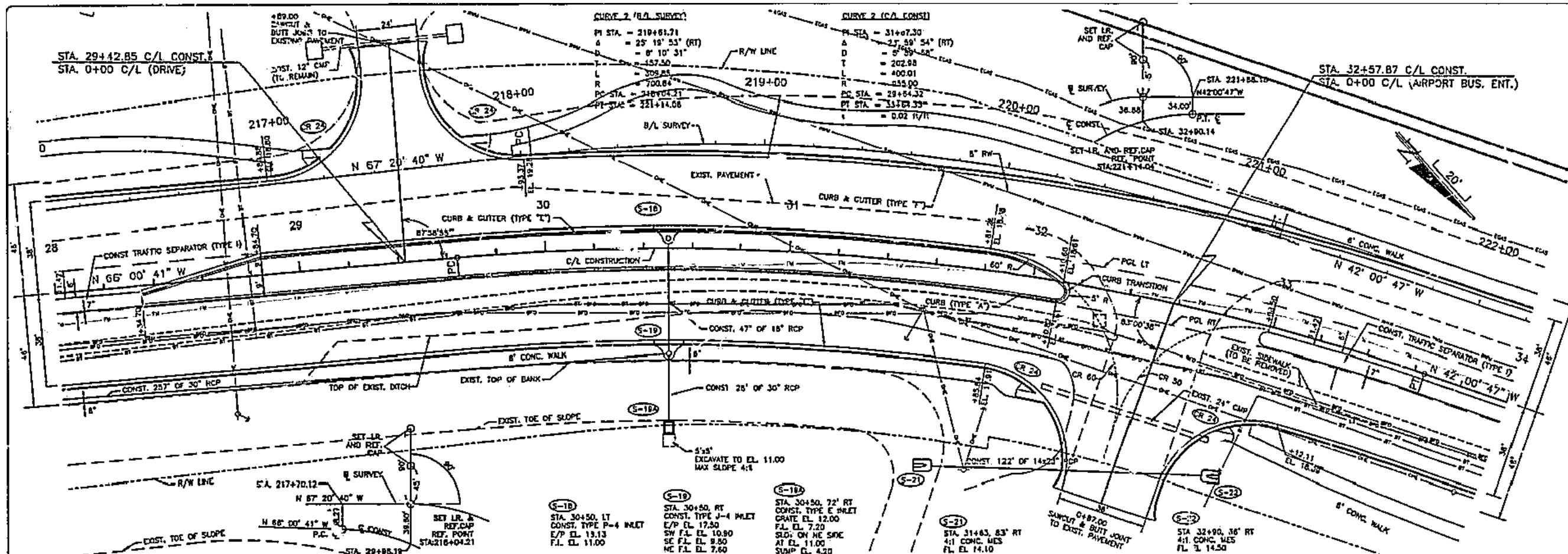
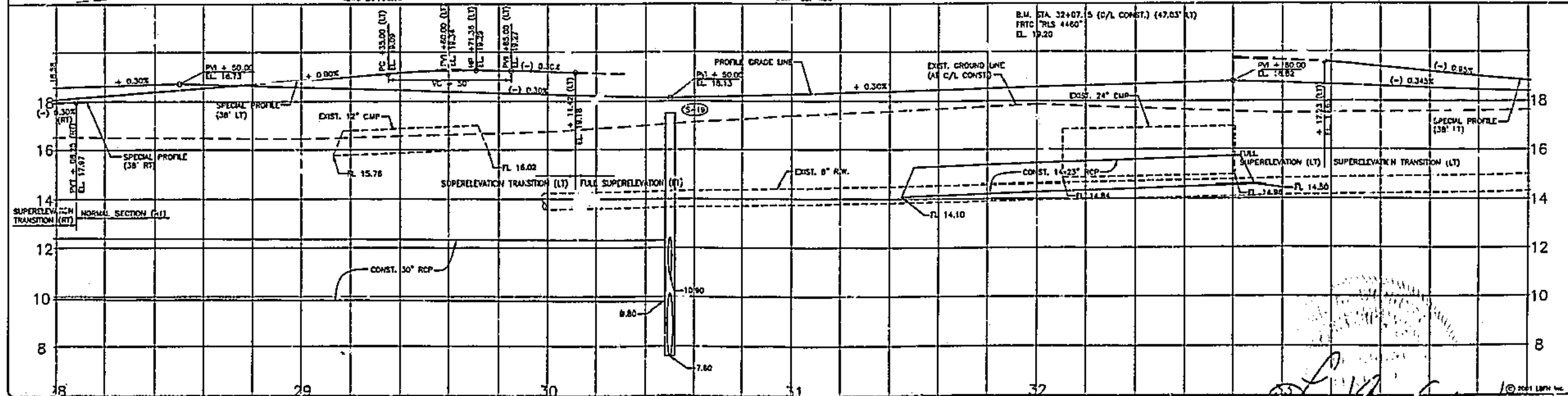
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CR A1A (DIXIE HIGHWAY)
 (FROM MONTEREY ROAD TO INDIAN STREET)
ROADWAY PLAN AND PROFILE

Lisa A. Wichser
Lisa A. Wichser, P.E.
 No. 45431
 MAY 30 2003
 LBN PROJECT No. 01-0080
 SHEET 7
 PLR00022.DWG



DATE	BY	REVISIONS

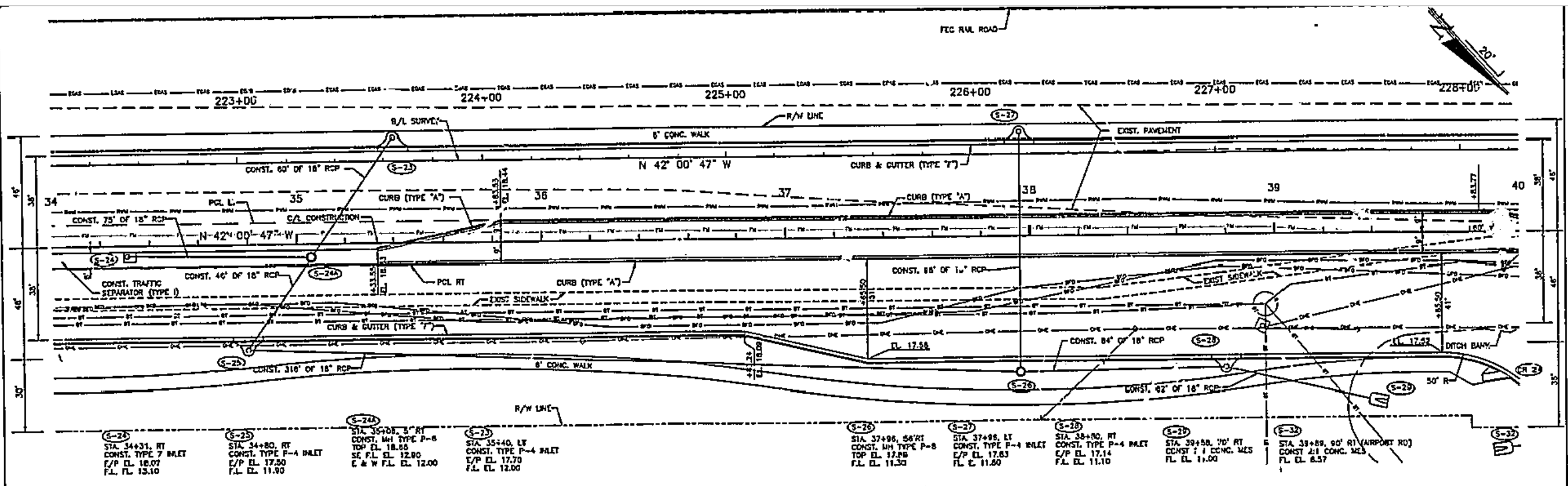
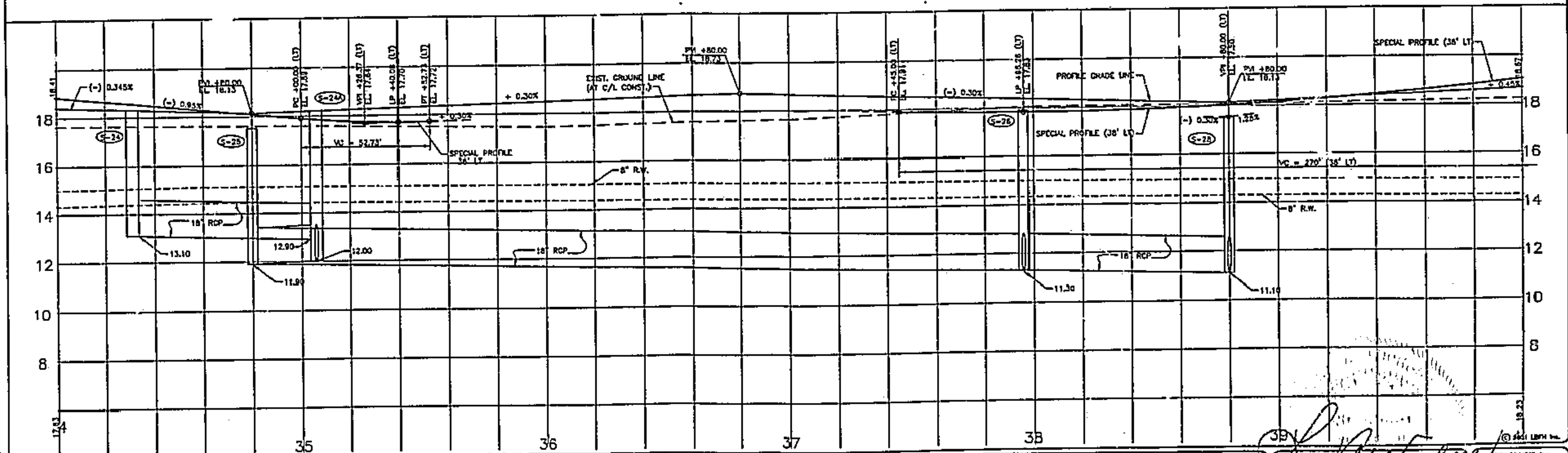
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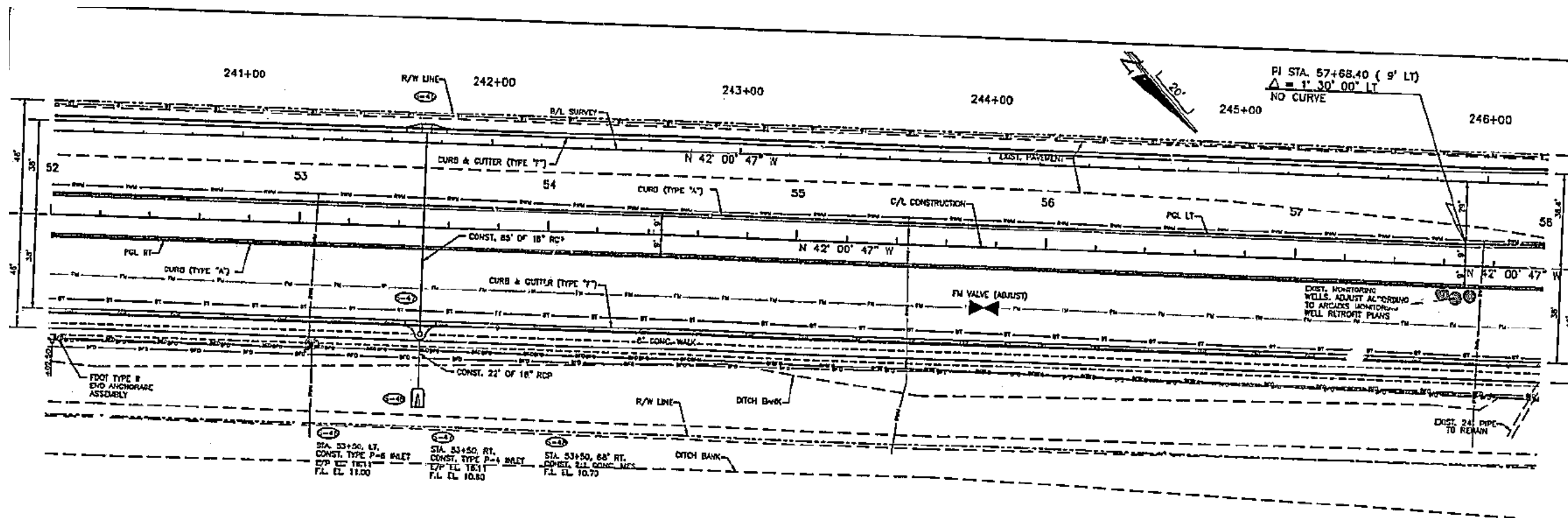
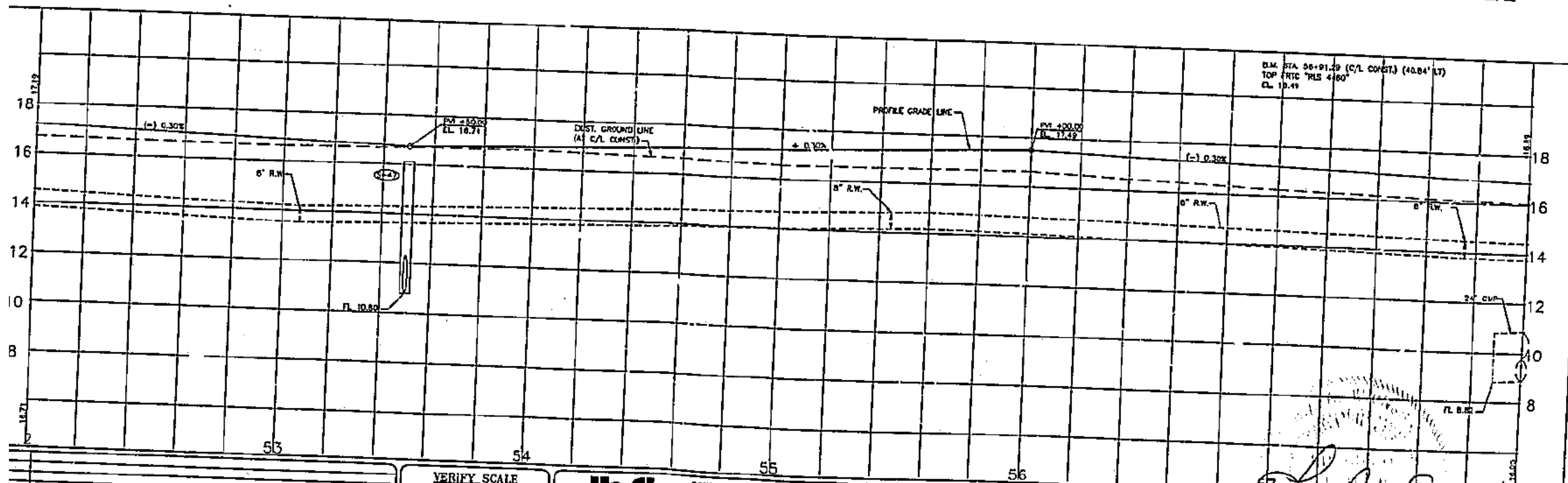
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CR A1A (DIXIE HIGHWAY)
(FROM MONTEREY ROAD TO INDIAN STREET)
ROADWAY PLAN AND PROFILE

Lisa A. Wichser
Lisa A. Wichser, P.E.
No. 48481

PROJECT No.
01-0089
SHEET
9
HARRISON ENG





NO.	REVISIONS
1	ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

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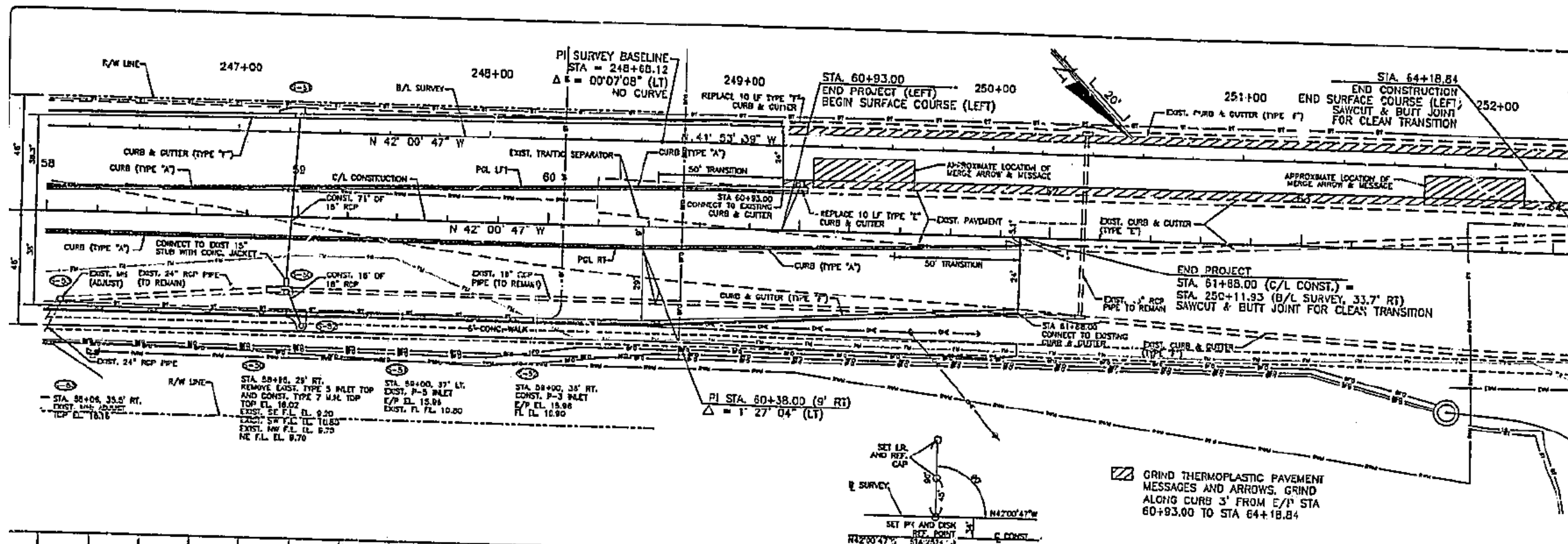
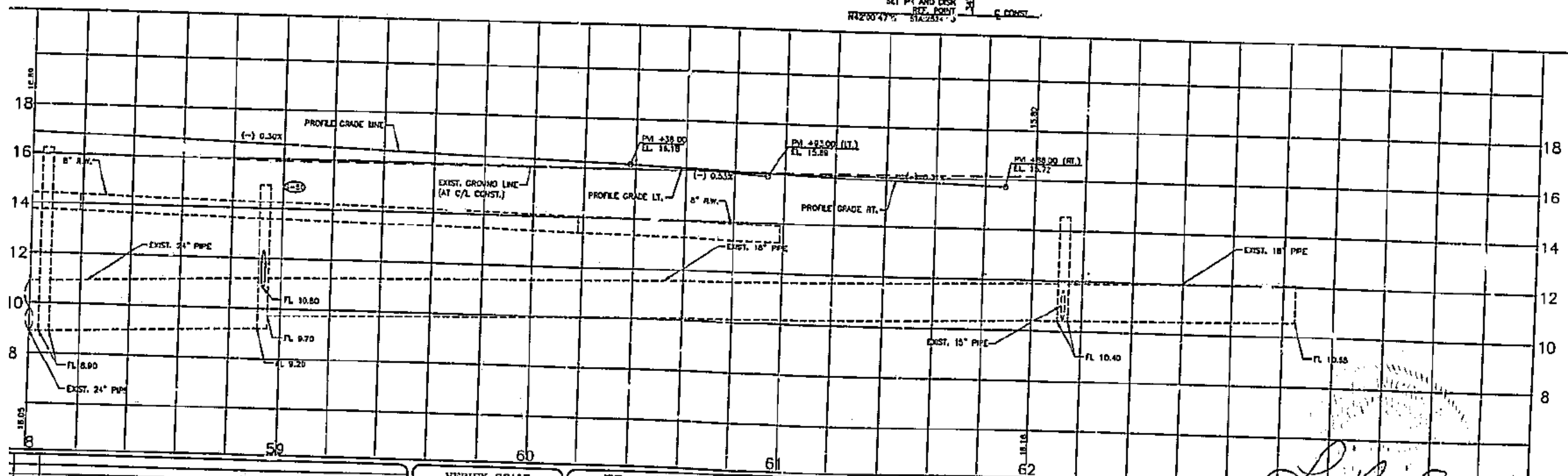
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CR A1A (DIXIE HIGHWAY)
 (FROM MONTEREY ROAD TO INDIAN STREET)
ROADWAY PLAN AND PROFILE

[Signature]
Lisa A. Wichser, P.E.
 No. 45431

MAY 30 2003

PROJECT NO. **01-0069**
SHEET
13
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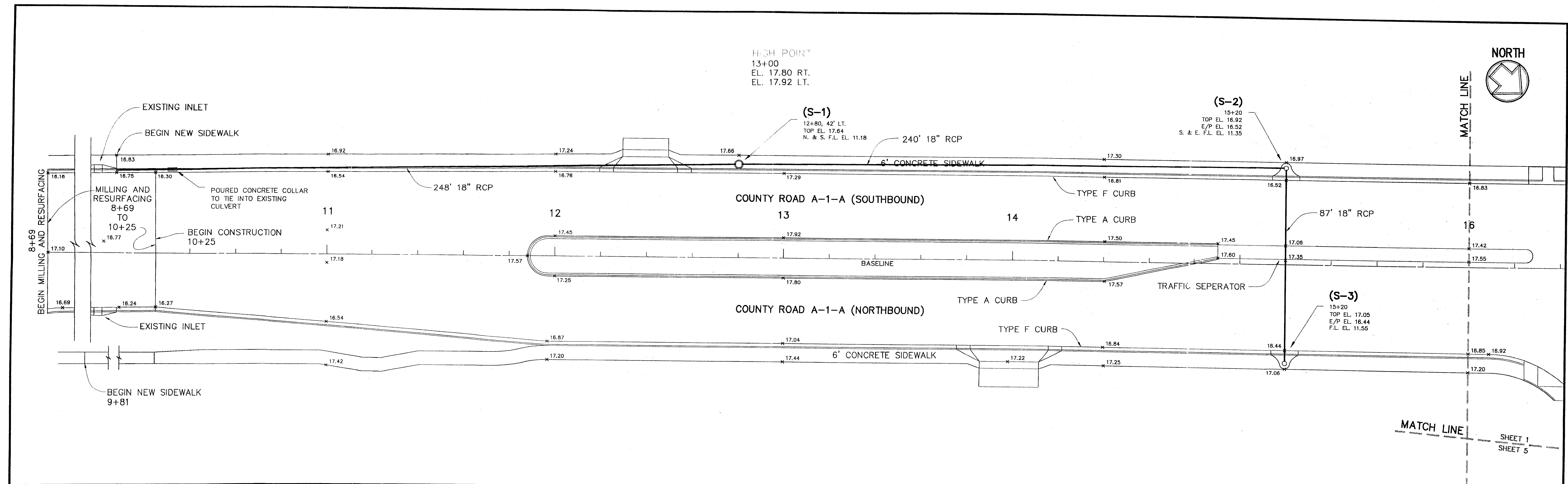
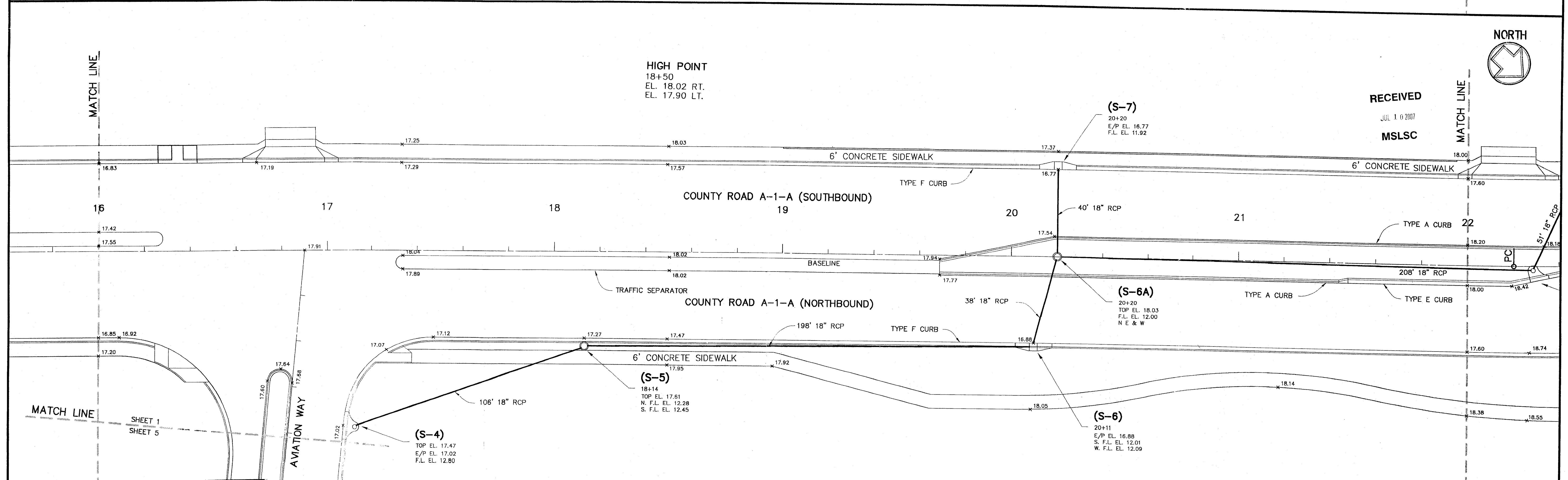
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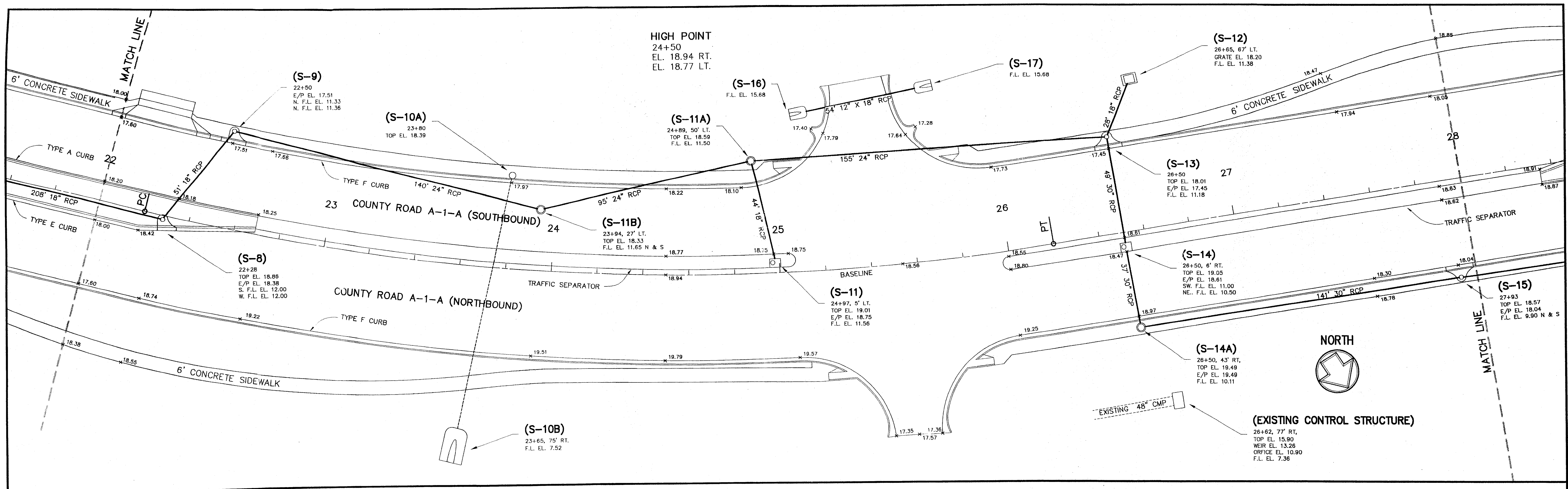
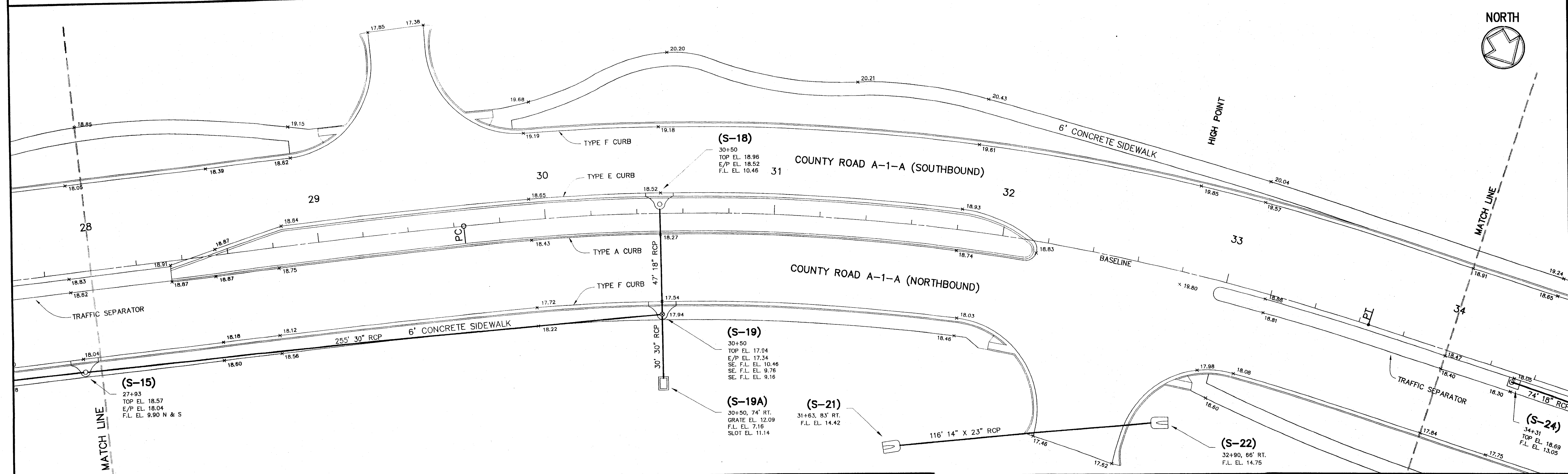
CR A1A (DIXIE HIGHWAY)
 (FROM MONTEREY ROAD TO INDIAN STREET)
ROADWAY PLAN AND PROFILE

Lisa A. Wichser
Lisa A. Wichser, P.E.
 No. 45431
 MAY 30 2003

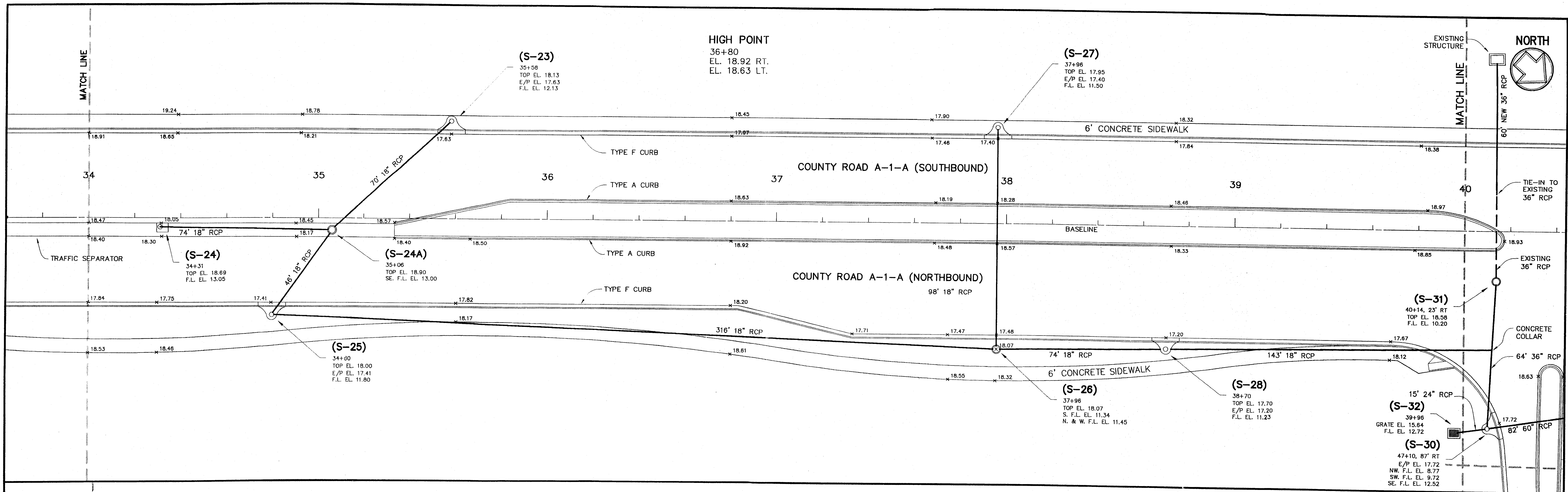
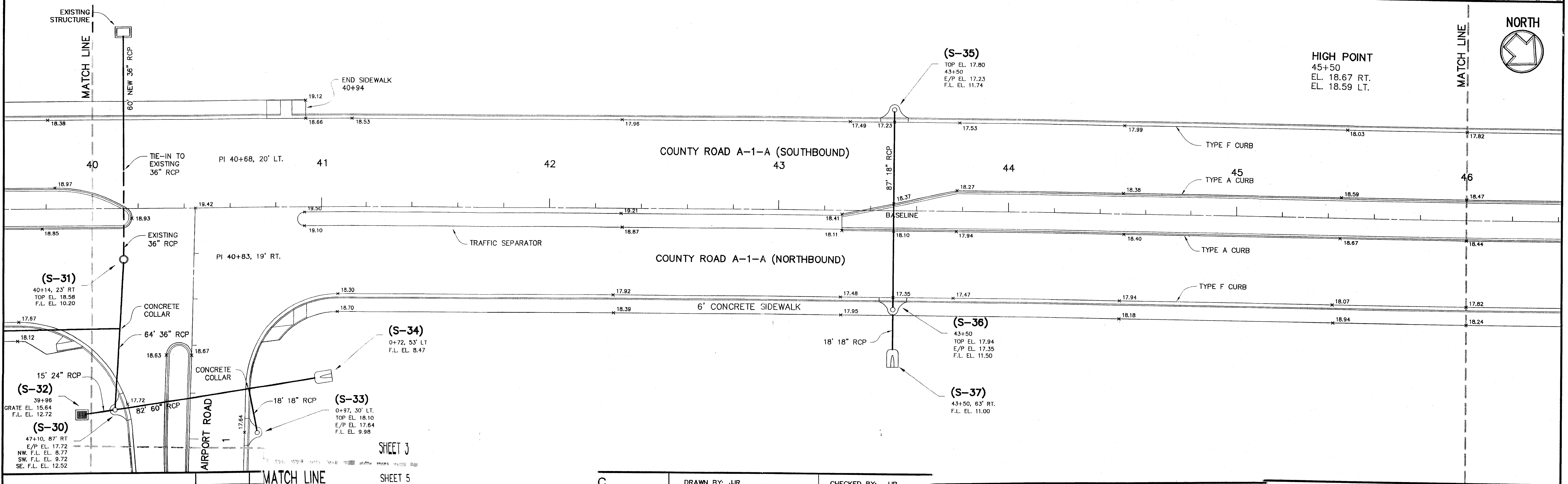
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01-0089
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A.B. SURVEY SUPPLIES ENTERPRISES, INC. Professional Surveyors and Mappers CERTIFICATE OF AUTHORIZATION NUMBER LB 6301 2603 INDUSTRIAL AVENUE 2, FT. PIERCE, FLORIDA 34946 PHONE (772) 464-9500 FAX (772) 878-7716 <small>Copyright 2006 A.B. Survey Supplies Enterprises, Inc.</small>			DRAWN BY: JJR SCALE: 1" = 20' DATE: 10-03-06	CHECKED BY: JJR PROJECT: 06-233 DWG: 06-232	THE SURVEY DEPICTED HEREON IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED (EMBOSSED) SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. THIS SURVEY WAS PREPARED UNDER THE RESPONSIBLE CHARGE OF THE UNDERSIGNED SURVEYOR AND MAPPER. CHRISTOPHER D. GOLDING, PROFESSIONAL SURVEYOR AND MAPPER STATE OF FLORIDA REGISTRATION NUMBER 8090	RECORD DRAWING COUNTY ROAD A-1-A PAVING AND DRAINAGE FROM INDIAN STREET TO MONTEREY ROAD LBFH PROJECT NUMBER 01-0069 MARTIN COUNTY, FLORIDA	PROJECT NUMBER 06-233 SHEET NUMBER 1 of 5
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				A.B. SURVEY SUPPLIES ENTERPRISES, INC. Professional Surveyors and Mappers CERTIFICATE OF AUTHORIZATION NUMBER LB 8301 2803 INDUSTRIAL AVENUE 2, FT. PIERCE, FLORIDA 34946 PHONE (772) 464-9500 FAX (772) 878-7716 Copyright 2006 A.B. Survey Supplies Enterprises, Inc.		DRAWN BY: JJR SCALE: 1" = 20' DATE: 10-03-06		CHECKED BY: JJR PROJECT: 06-233 DWG: 06-232		THE SURVEY DEPICTED HEREON IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED (EMBOSSED) SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. THIS SURVEY WAS PREPARED UNDER THE RESPONSIBLE CHARGE OF THE UNDERSIGNED SURVEYOR AND MAPPER.  CHRISTOPHER D. GOLDING, PROFESSIONAL SURVEYOR AND MAPPER STATE OF FLORIDA REGISTRATION NUMBER 5290		RECORD DRAWING COUNTY ROAD A-1-A PAVING AND DRAINAGE FROM INDIAN STREET TO MONTEREY ROAD LBFH PROJECT NUMBER 01-0069 MARTIN COUNTY, FLORIDA		PROJECT NUMBER 06-233 SHEET NUMBER 2 OF 5	
PIPE LENGTHS AND MISC.		11-14-06		JJR											
REVISION		DATE		BY											



A.B. SURVEY SUPPLIES ENTERPRISES, INC.
Professional Surveyors and Mappers 878-7716
CERTIFICATE OF AUTHORIZATION NUMBER LB 8301
FLORIDA 34846 PHONE (772) 484-9500 FAX (772) 484-9501

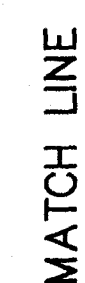
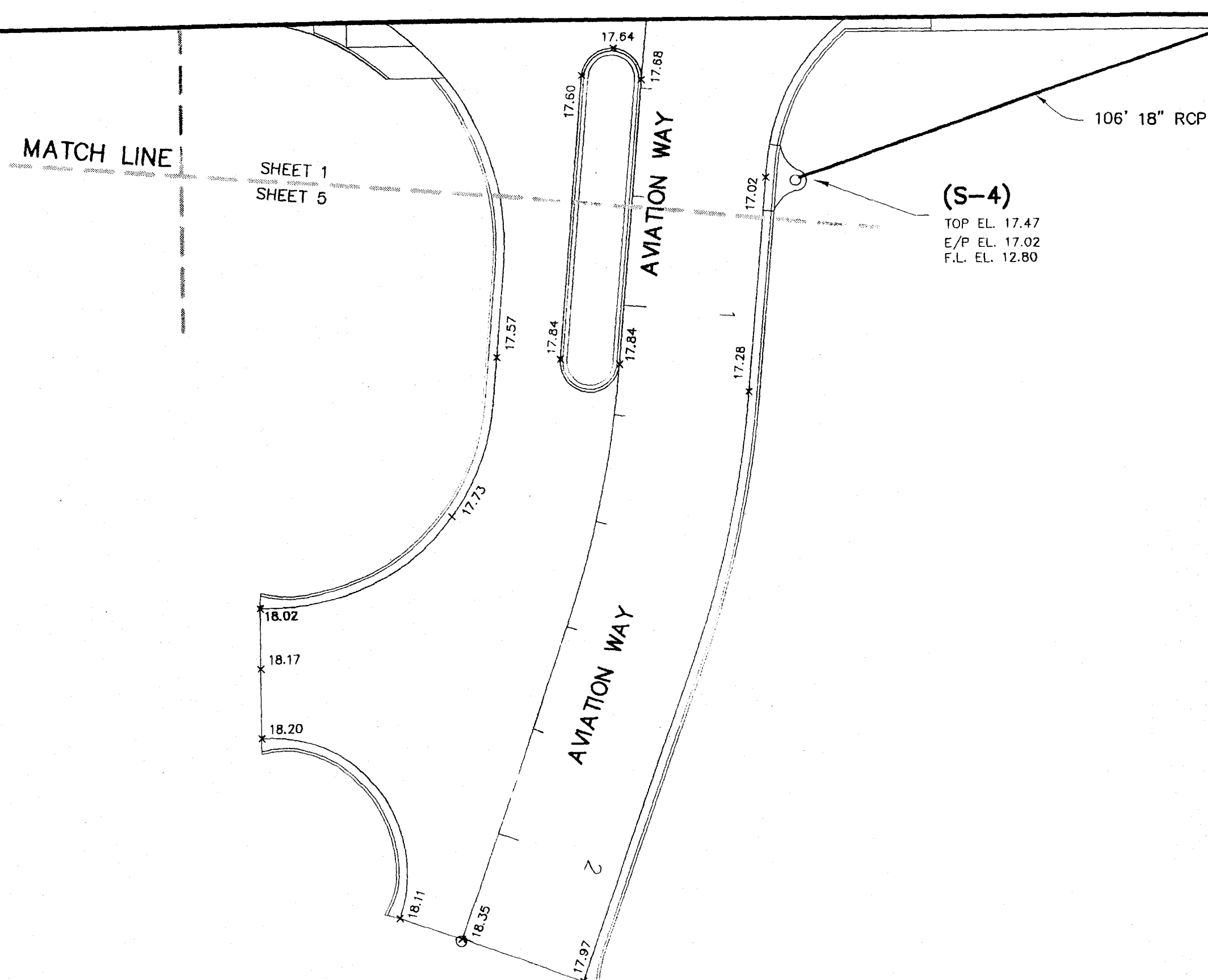
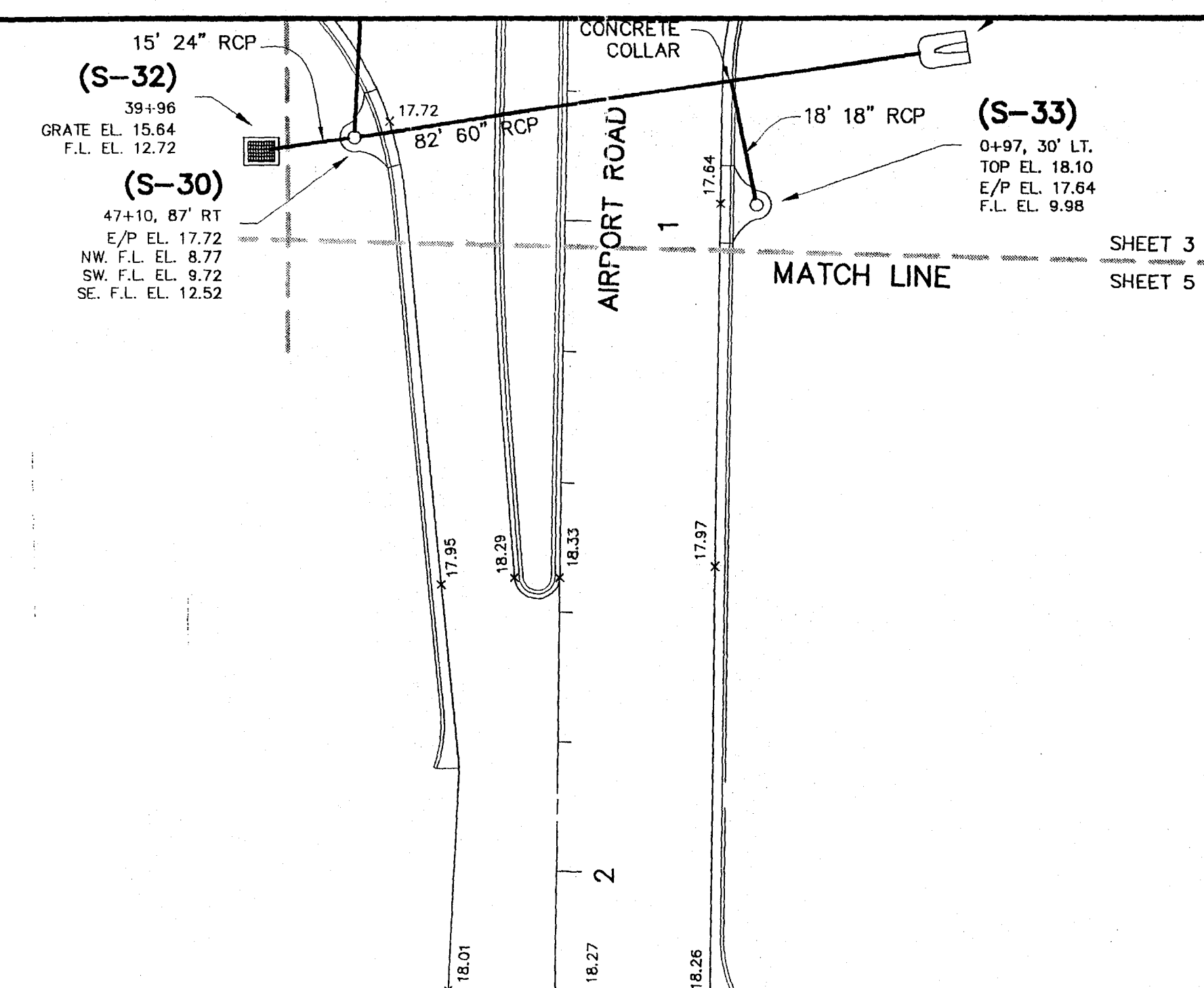
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Christopher D. Golding 11-14-06
CHRISTOPHER D. GOLDING, PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA REGISTRATION NUMBER 9096

RECORD DRAWING
COUNTY ROAD A-1-A PAVING AND DRAINAGE
FROM INDIAN STREET TO MONTEREY ROAD
L&H PROJECT NUMBER 01-0069
MARTIN COUNTY, FLORIDA

PROJECT NUMBER
06-233
SHEET NUMBER
3 of 5



			A.B. SURVEY SUPPLIES ENTERPRISES, INC.			DRAWN BY: JUR		CHECKED BY: JUR		<div>THE SURVEY DEPICTED HEREON IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED (EMBOSSED) SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. THIS SURVEY WAS PREPARED UNDER THE RESPONSIBLE CHARGE OF THE UNDERSIGNED SURVEYOR AND MAPPER.</div> <div></div> <div>CHRISTOPHER D. GOLDING, PROFESSIONAL SURVEYOR AND MAPPER STATE OF FLORIDA REGISTRATION NUMBER 6090</div>		<div>RECORD DRAWING</div> <div>COUNTY ROAD A-1-A PAVING AND DRAINAGE FROM INDIAN STREET TO MONTEREY ROAD LBPH PROJECT NUMBER 01-0069 MARTIN COUNTY, FLORIDA</div>		PROJECT NUMBER 06-233	
			SCALE: 1" = 20'			PROJECT: 06-233			SHEET NUMBER						
			DATE: 10-03-06			DWG: 06-232			5 OF 5						
PIPE LENGTHS AND MISC.			11-14-06 JUR			2603 INDUSTRIAL AVENUE 2, FT. PIERCE, FLORIDA 34948 PHONE (772) 464-9500 FAX (772) 878-7718									
REVISION			DATE BY			Copyright 2006 A.B. Survey Supplies Enterprises, Inc.									

The seal of Martin County, Florida, is a circular emblem. It features a central illustration of a fish, likely a snook, leaping out of the water. To the left of the fish is a rising sun. The entire scene is enclosed within a circular border. The words "STATE OF FLORIDA" are inscribed along the left and bottom arcs of the border, while "COUNTY OF MARTIN" is inscribed along the top and right arcs. The seal is surrounded by a decorative wreath of palm fronds.

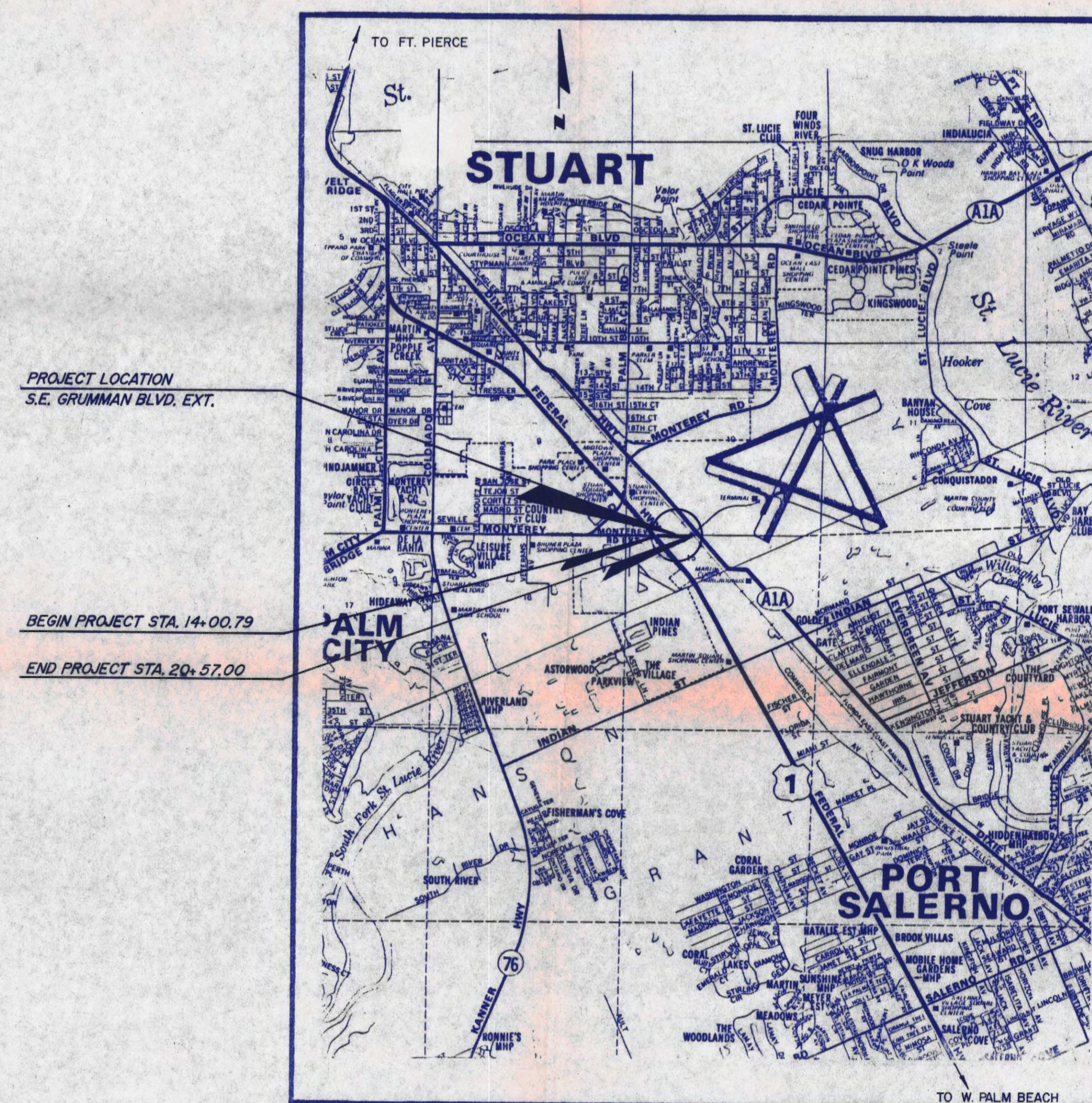
**PLANS FOR PROPOSED
S.E. GRUMMAN BOULEVARD EXTENSION
MARTIN COUNTY PROJECT
NO. 89.112207**

WPB

A hand-drawn map of Florida with the following cities labeled: PENSACOLA, TALLAHASSEE, JACKSONVILLE, DAYTONA BEACH, ORLANDO, TAMPA, MELBOURNE, STUART, JUPITER-TEQUESTA, WEST PALM BEACH, FT. LAUDERDALE, and MIAMI. A large arrow points from the text "PROJECT LOCATION" to the Tampa area.

[illegible]

CHAIRMAN
VICE CHAIRMAN
COMMISSIONER
COMMISSIONER
COMMISSIONER



**FIELD ENGINEERING
COPY**

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART
FLORIDA

GOVERNING SPECIFICATIONS ARE THE STATE OF FLORIDA DEPT.
OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION,
AND SUPPLEMENTS THEREOF FOR ROAD AND BRIDGE CONSTRUCTION

43-00653-5

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNING AND MARKING PLANS
LIGHTING PLANS
LANDSCAPING PLANS

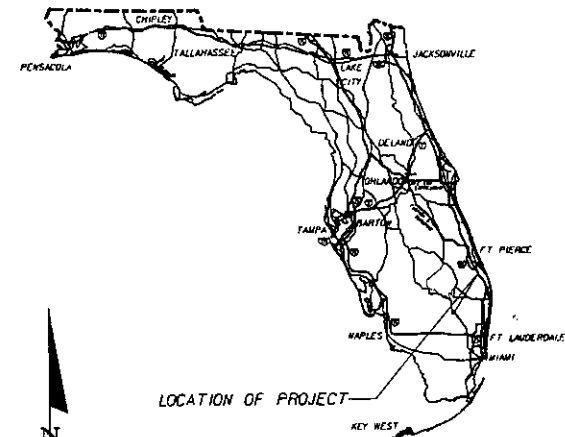
A DETAILED INDEX APPEARS ON THE
KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
	KEY SHEET
	GENERAL NOTES
	TYPICAL SECTION
	ROADWAY PLAN-PROFILE
	DRAINAGE DETAILS
	CROSS SECTIONS
	SIGNING & PAVEMENT MARKINGS
	POND PLAN AND DETAIL SHEET
	EROSION CONTROL

MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS CONTRACT PLANS

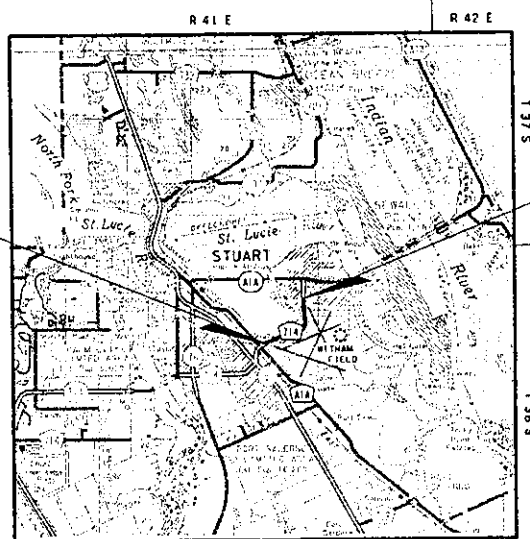
MARTIN COUNTY
MONTEREY ROAD (SR 714)
CR A1A (DIXIE HWY) TO KINGSWOOD TERRACE



LOCATION OF PROJECT

BEGIN PROJECT
@ CONST.
STA. 44+82.60

END PROJECT
@ CONST.
STA. 111+43.36



ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:

JEFF MULLIS, P.E.
KIMLEY-HORN AND ASSOCIATES, INC.
601 21ST STREET, SUITE 400
VERO BEACH, FL 32900
(772) 562-7981

PLANS PREPARED BY:



Kimley-Horn and Associates, Inc.
Vero Beach, Florida

CONTRACT NUMBER: C-8018
VENDOR NUMBER: 56-0885615
E.B. NUMBER: 696

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
"DESIGN STANDARDS" DATED JANUARY 2002,
AND "STANDARDS SPECIFICATIONS FOR ROAD
AND BRIDGE CONSTRUCTION" DATED 2000, AS
AMENDED BY CONTRACT DOCUMENTS.

REVISIONS

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	6656.59	1.26
BRIDGES	NA	NA
NET LENGTH OF PROJECT	6656.59	1.26
EXCEPTIONS	NA	NA
GROSS LENGTH OF PROJECT	6656.59	1.26

MARTIN COUNTY PROJECT MANAGER: ASHLEY COUCH, P.E.

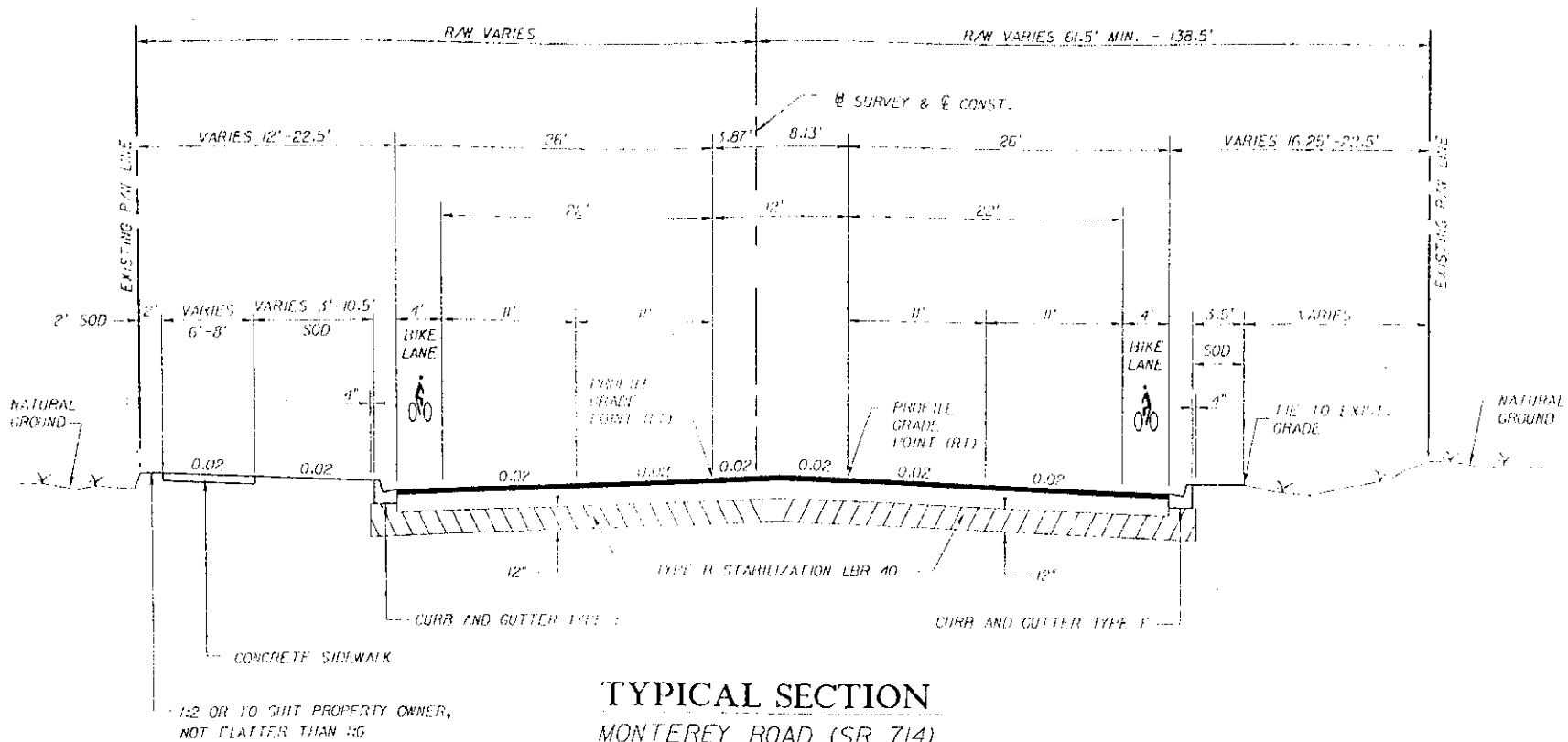
KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

ROADWAY PLANS
ENGINEER OF RECORD: JEFF MULLIS

P.E. NO. 48040

FISCAL YEAR	SHEET NO.
	1

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TRAFFIC DATA

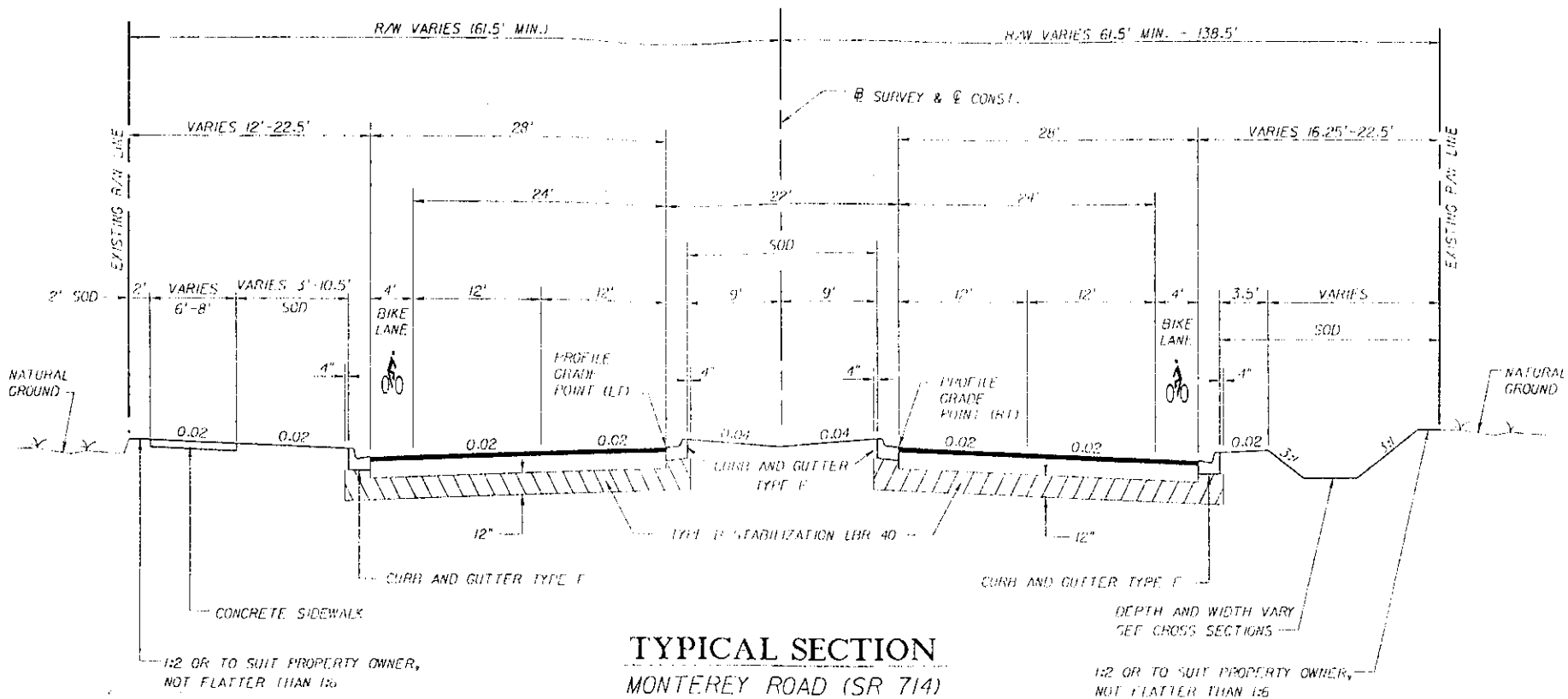
CURRENT YEAR = 2002 AADT = 18,700
 ESTIMATED OPENING YEAR = 2004 AADT = 19,300
 ESTIMATED DESIGN YEAR = 2026 AADT = 26,000
 9.2% D = 57.9% T = 2.3%
 SN T = 1.1%
 SN SPEED = 45 MPH

NEW CONSTRUCTION

OPTIONAL BASE GROUP 6
 TYPE SP STRUCTURAL COURSE (150 LBS./SY)
 AND FRICTION COURSE FC-6 (160 LBS./SY)

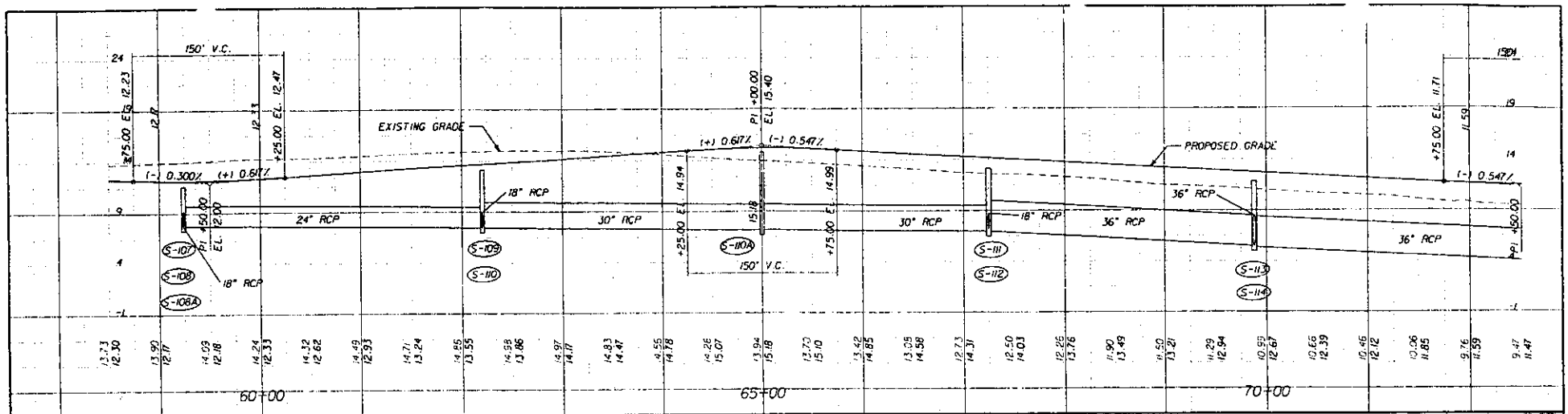
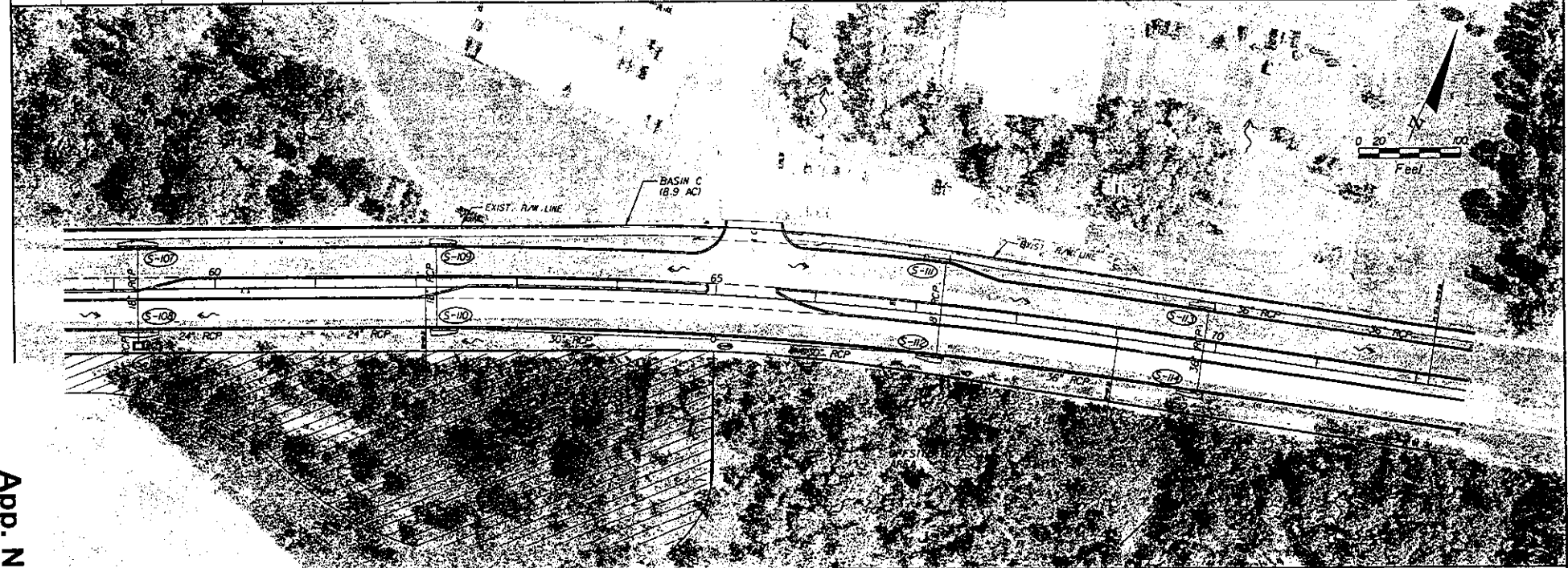
JAN 06 2004

REVISIONS				 Kinley Horn and Associates, Inc. 10000 Highway 1, Suite 100 San Diego, CA 92121 (619) 584-1100	MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS MONTEREY ROAD (SR 714)	TYPICAL SECTION	4
NO.	DESCRIPTION	DATE	BY				



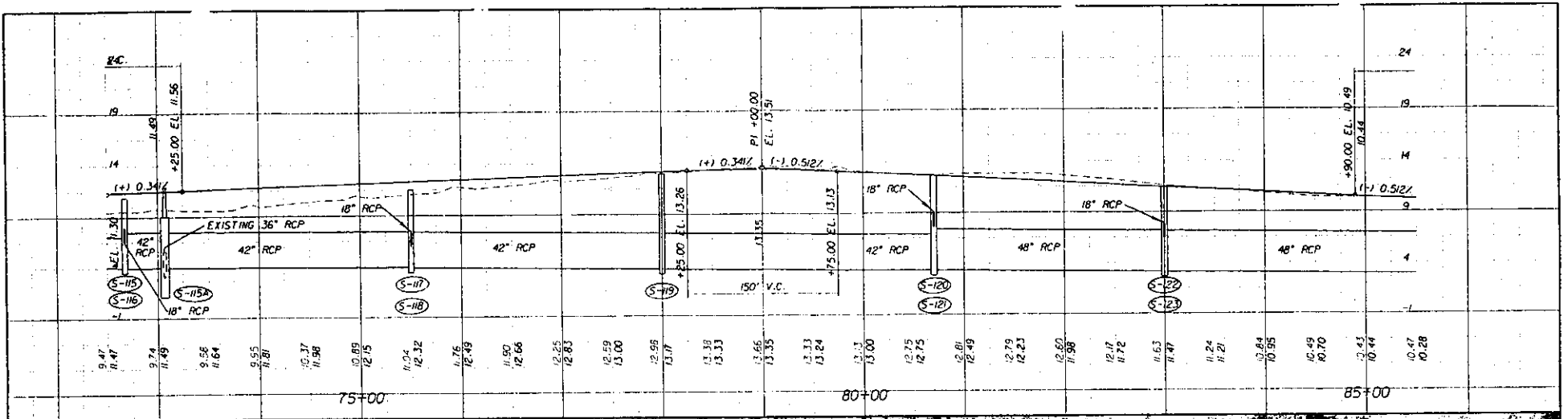
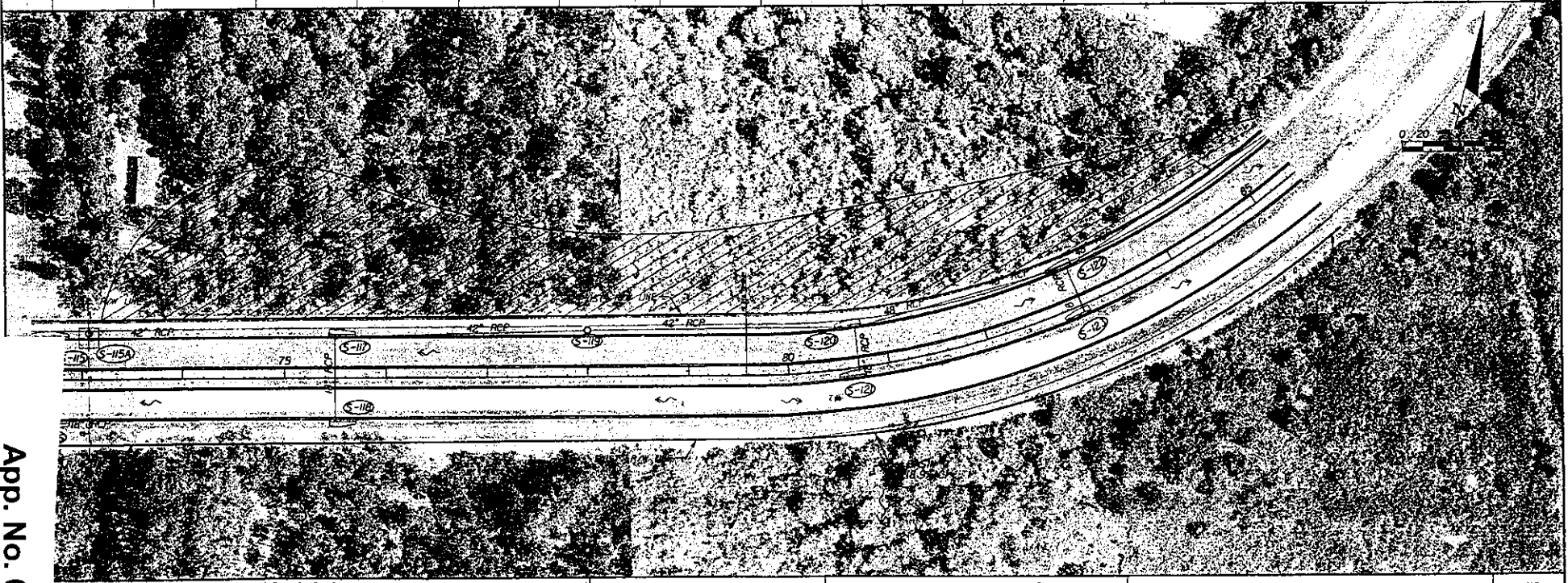
JAN 06 2004

REVISIONS				 Kimley-Horn and Associates, Inc. 1000 SHAW BLVD., SUITE 100 FORT WORTH, TX 76104 (817) 335-1000	MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS MONTEREY ROAD (SR 714)	TYPICAL SECTION	3
NO.	DESCRIPTION	DATE	BY				



REVISIONS				DESCRIPTION	MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS	DRAINAGE MAP	SHEET NO.
BY	DATE	BY	DATE				
					MONTEREY ROAD (SR 710)		


 K&H
 KIMLEY-HORN AND ASSOCIATES, INC.
 600 NEW STREET, SUITE 400
 WILSON, N.C. 27157-1120
 (704) 362-7700
 FAX (704) 362-7701



REVISIONS			
BY	DESCRIPTION	DATE	BY

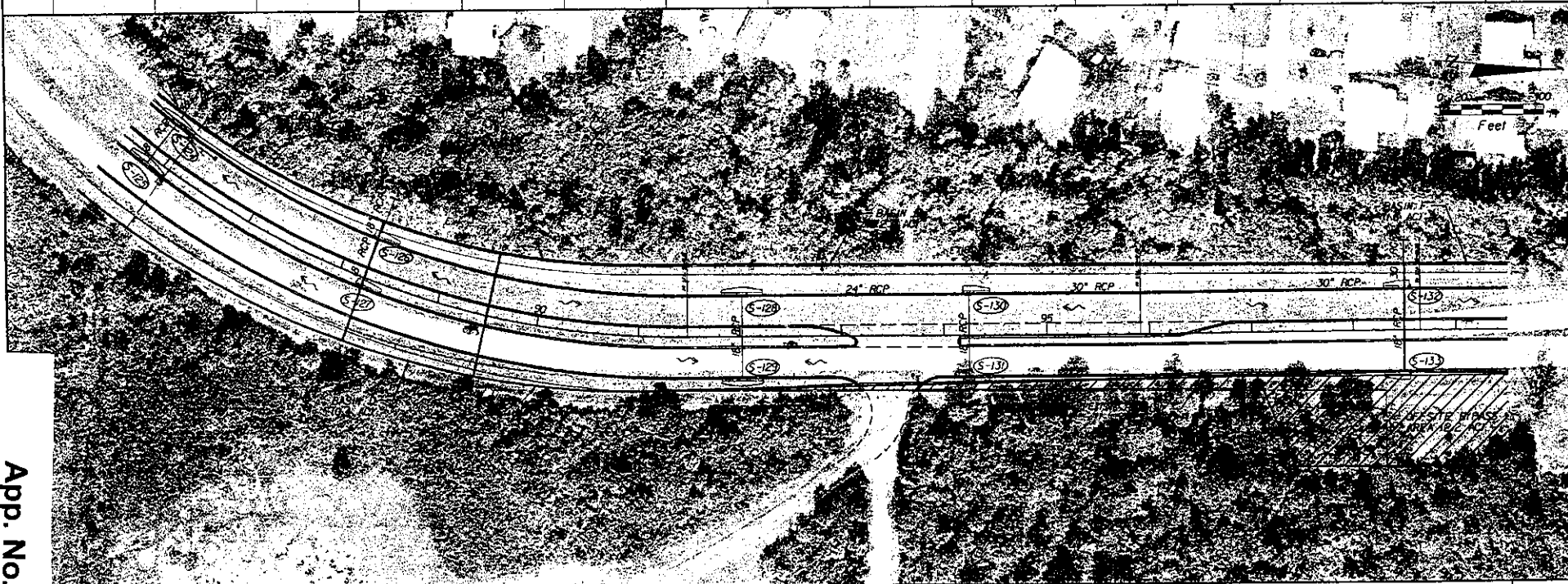

 Kimbly-Horn and Associates, Inc.
 1400 WEST STREET, SUITE 400
 WEST BEACH, FL 33500
 (727) 421-1100
 FAX (727) 421-1101

MARTIN COUNTY
 BOARD OF COUNTY COMMISSIONERS
 MONTEREY ROAD (SR 710)

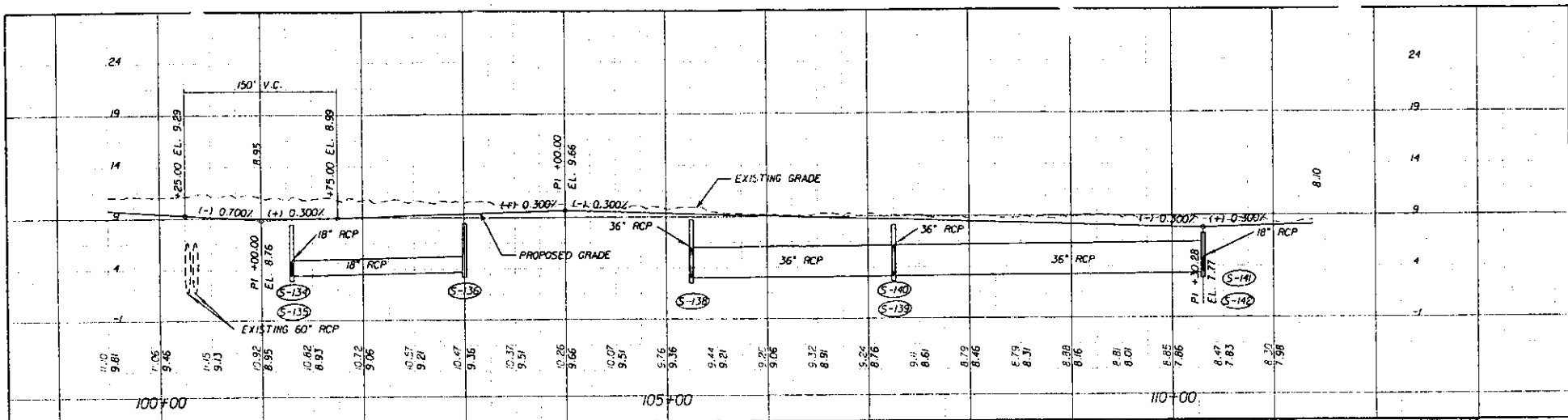
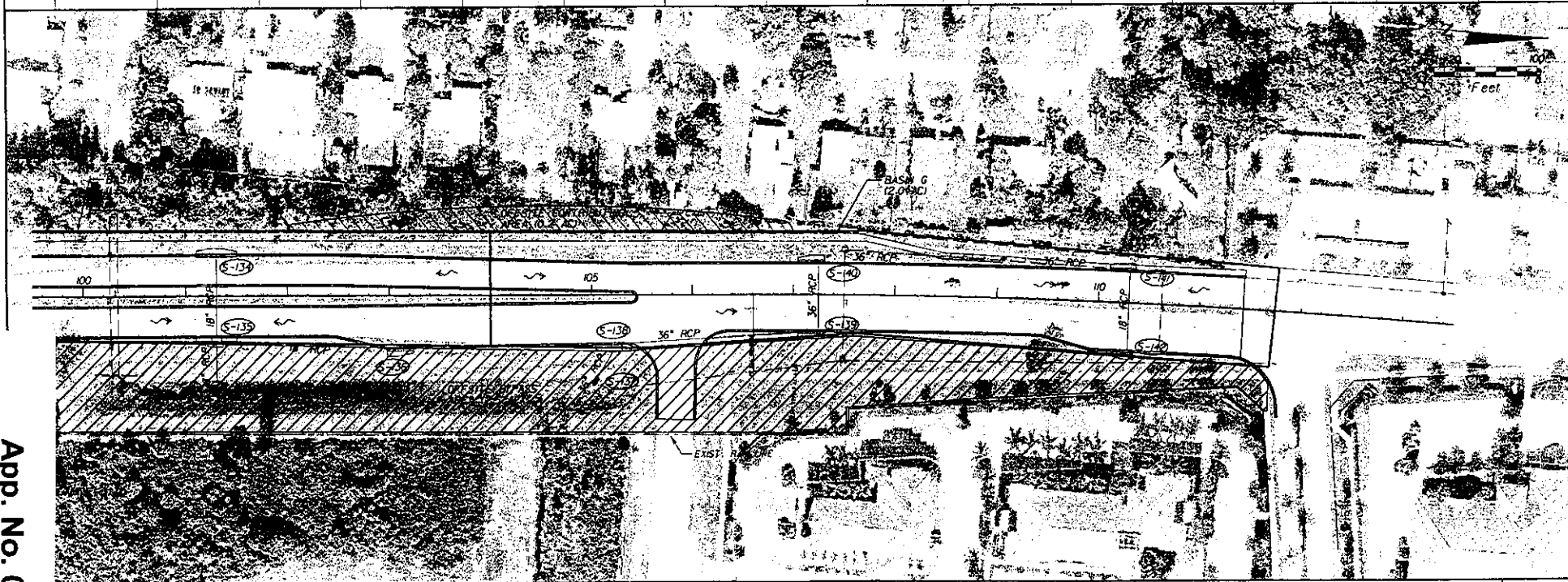
DRAINAGE MAP

SHEET NO.

01/01/2004 05:43:45 PM g:\112\0000\CA00\VIEW\CHW\PROJ.dgn



SHEET
NO.



REVISIONS				
NO.	DESCRIPTION	DATE	BY	DESCRIPTION


 Kimley-Horn and Associates, Inc.
 6020 STREET, SUITE 400
 WILSON, CALIFORNIA 95750
 (916) 362-1700
 E. J. Kimley, P.E.

MARTIN COUNTY
 BOARD OF COUNTY COMMISSIONERS
 MONTEREY ROAD (SR 710)

DRAINAGE MAP

SHEET NO.

COMPONENTS OF CONTRACT PLANS SET

- ROADWAY PLANS
- SIGNING AND PAVEMENT MARKING PLANS
- SIGNALIZATION PLANS
- LIGHTING PLANS

A DETAILED INDEX APPEARS ON THE
KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
4 - 6	TYPICAL SECTIONS
7	PROJECT LAYOUT
8	GENERAL NOTES
9 - 16	ROADWAY PLAN-PROFILE
17	SUMMARY OF DRAINAGE
18 - 19	DRAINAGE STRUCTURES
20	DRAINAGE DETAILS
21 - 51	CROSS SECTIONS
52 - 54	STORMWATER POLLUTION PREVENTION PLAN
55 - 62	EROSION CONTROL
63	TEMPORARY TRAFFIC CONTROL GENERAL NOTES
64 - 66	TEMPORARY TRAFFIC CONTROL TYPICAL SECTIONS
67	TREE DISPOSITION PLAN

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2023-24 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs)

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

INDEX OF ROADWAY PLANS

Florida Department of Transportation, January 2024 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

THIS DOCUMENT MAY BE REPRODUCED UPON REQUEST IN AN ALTERNATIVE FORMAT BY CONTACTING THE COUNTY ADA COORDINATOR (722) 320-3131, THE COUNTY ADMINISTRATION OFFICE (722) 288-5400, FLORIDA RELAY 711, OR BY COMPLETING OUR ACCESSIBILITY FEEDBACK FORM AT WWW.MARTIN.FL.US/ACCESSIBILITY-FEEDBACK.

MARTIN COUNTY

CONTRACT PLANS

FM# 444405-2-58-01
(FEDERAL FUNDS)
MARTIN COUNTY (89030)
SR-714 SE MONTEREY ROAD AND CR-A1A MULTIMODAL PATHWAY

DOUG SMITH
DISTRICT 1

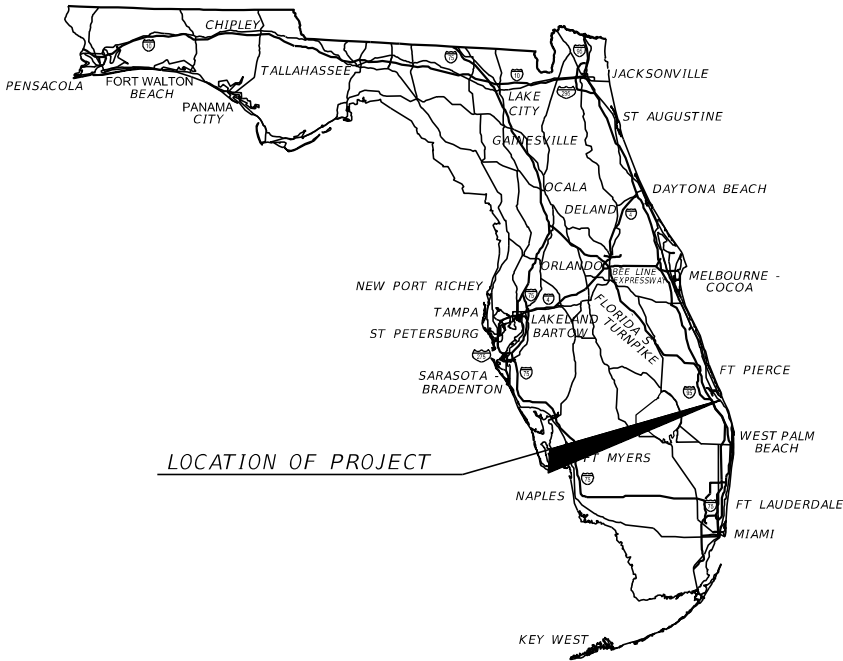
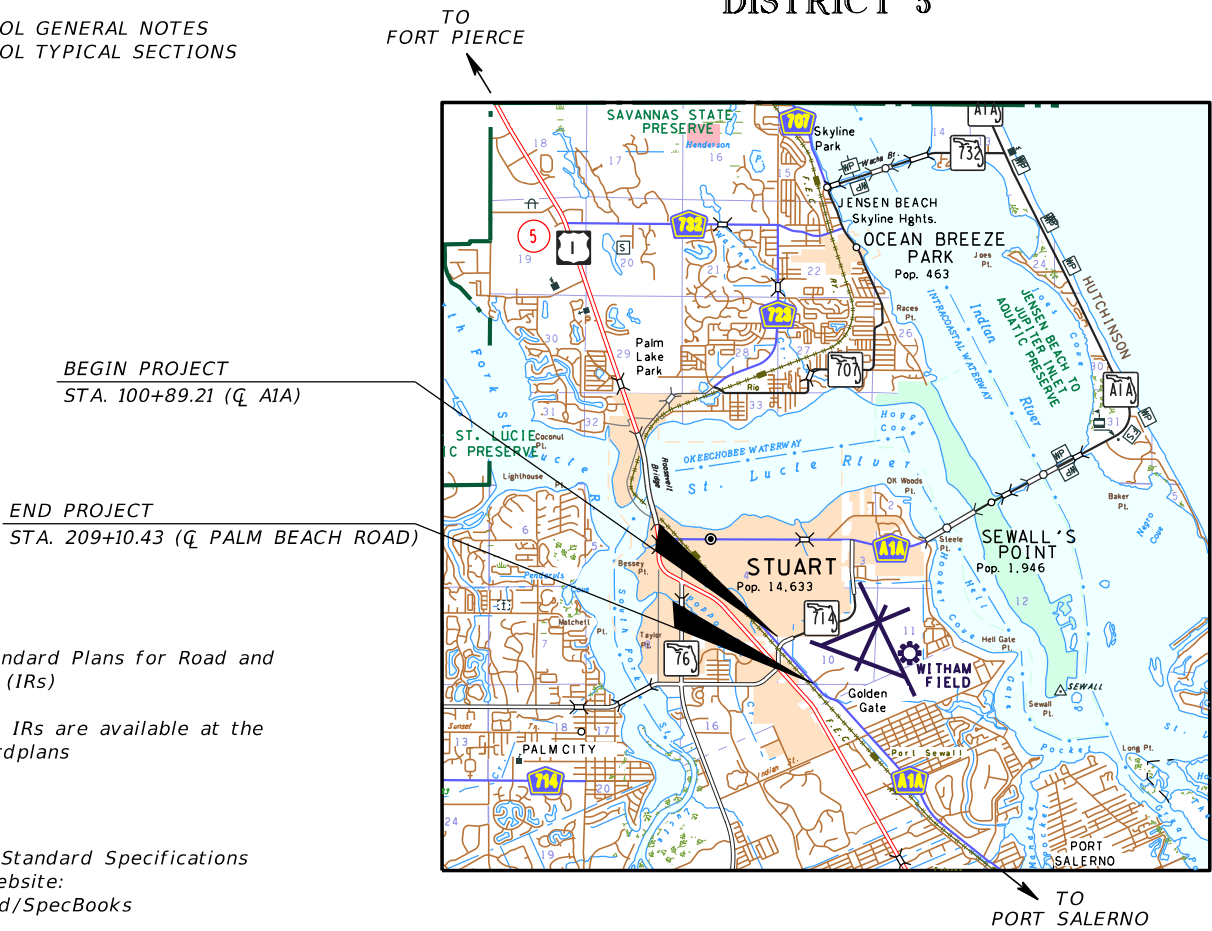
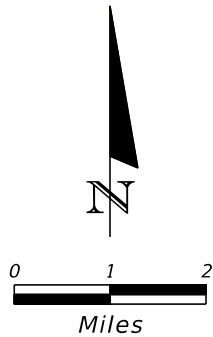
HAROLD JENKINS
DISTRICT 3



STACEY HETHERINGTON
DISTRICT 2

SARAH HEARD
DISTRICT 4

EDWARD CIAMPI
DISTRICT 5

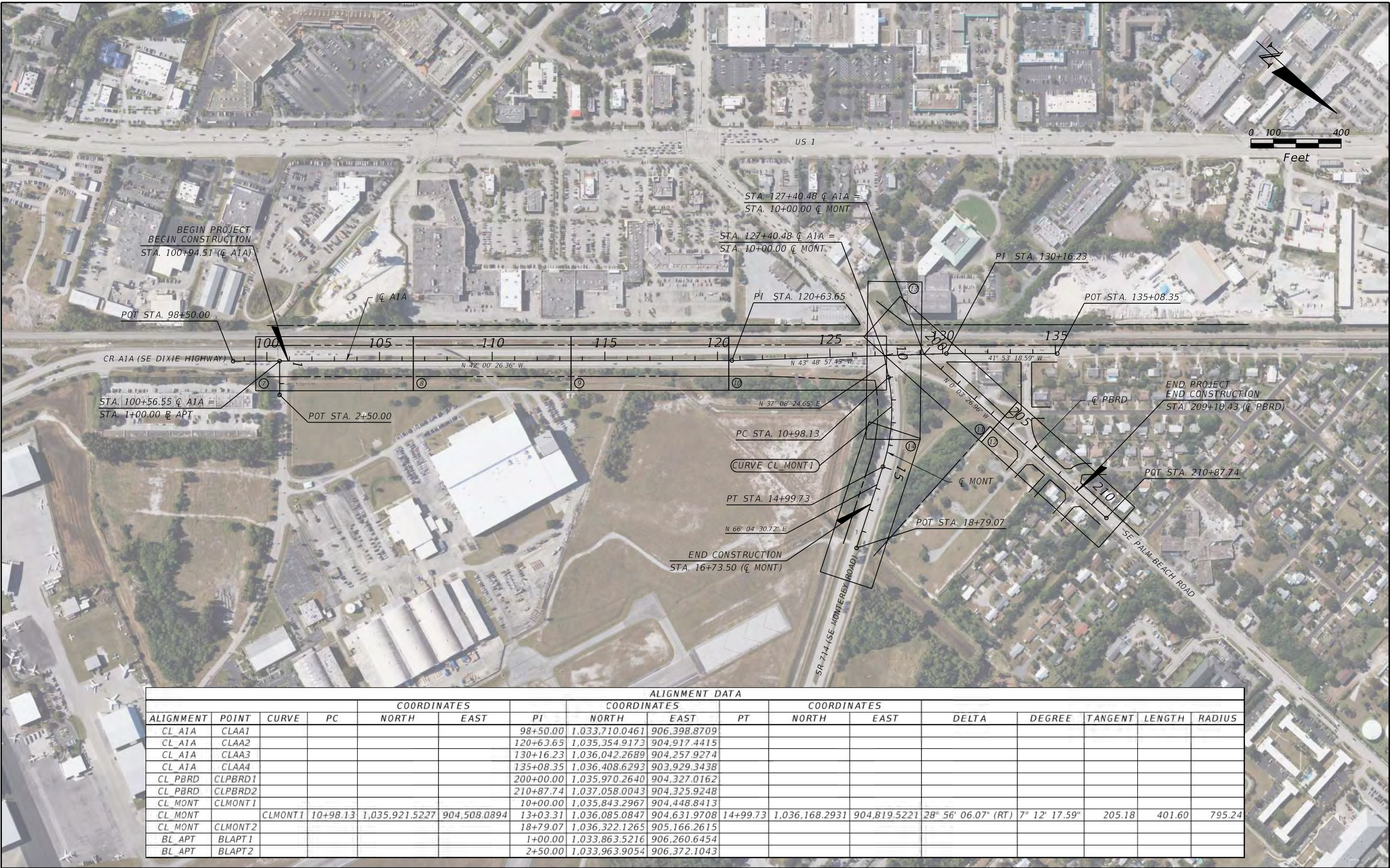


ROADWAY PLANS
ENGINEER OF RECORD:
DAVID C. GERBER, P.E.
P.E. NO.: 82446
WGI, Inc.
2035 VISTA PARKWAY
WEST PALM BEACH, FL 33411
CONTRACT NO.: C-9793
VENDOR NO.: 65-0271367
CERTIFICATE OF AUTHORIZATION NO.: 6091

MARTIN COUNTY
PROJECT MANAGER:
CHARLY PEREZ

LENGTH OF PROJECT		
	LIN. FT.	MILES
ROADWAY	4,184.27	0.792
BRIDGES	-	-
NET LENGTH OF PROJ.	4,184.27	0.792
EXCEPTIONS	-	-
GROSS LENGTH OF PROJ.	4,184.27	0.792

FISCAL YEAR	SHEET NO.
24	1



ALIGNMENT DATA																
			COORDINATES				COORDINATES		PT	COORDINATES		DELTA	DEGREE	TANGENT	LENGTH	RADIUS
ALIGNMENT	POINT	CURVE	PC	NORTH	EAST	PI	NORTH	EAST		NORTH	EAST					
CL A1A	CLAA1					98+50.00	1,033,710.0461	906,398.8709								
CL A1A	CLAA2					120+63.65	1,035,354.9173	904,917.4415								
CL A1A	CLAA3					130+16.23	1,036,042.2689	904,257.9274								
CL A1A	CLAA4					135+08.35	1,036,408.6293	903,929.3438								
CL PBRD	CLPBRD1					200+00.00	1,035,970.2640	904,327.0162								
CL PBRD	CLPBRD2					210+87.74	1,037,058.0043	904,325.9248								
CL MONT	CLMONT1					10+00.00	1,035,843.2967	904,448.8413								
CL MONT		CLMONT1	10+98.13	1,035,921.5227	904,508.0894	13+03.31	1,036,085.0847	904,631.9708	14+99.73	1,036,168.2931	904,819.5221	28° 56' 06.07" (RT)	7° 12' 17.59"	205.18	401.60	795.24
CL MONT		CLMONT2				18+79.07	1,036,322.1265	905,166.2615								
BL APT	BLAPT1					1+00.00	1,033,863.5216	906,260.6454								
BL APT	BLAPT2					2+50.00	1,033,963.9054	906,372.1043								

DATE

DESCRIPTION

DATE

DESCRIPTION

REVISIONS



2035 Vista Parkway
West Palm Beach, FL 33411
Phone No. 561-687-2220
Fax No. 561-687-1110
Cert No. 6091 - LB No. 7055

EOR: David C. Gerber, P.E.
P.E. License Number: 82446



MARTIN COUNTY

ROAD NO.

CR A1A

PROJECT NO.

444405-2-58-01

PROJECT LAYOUT

SHEET NO.
7

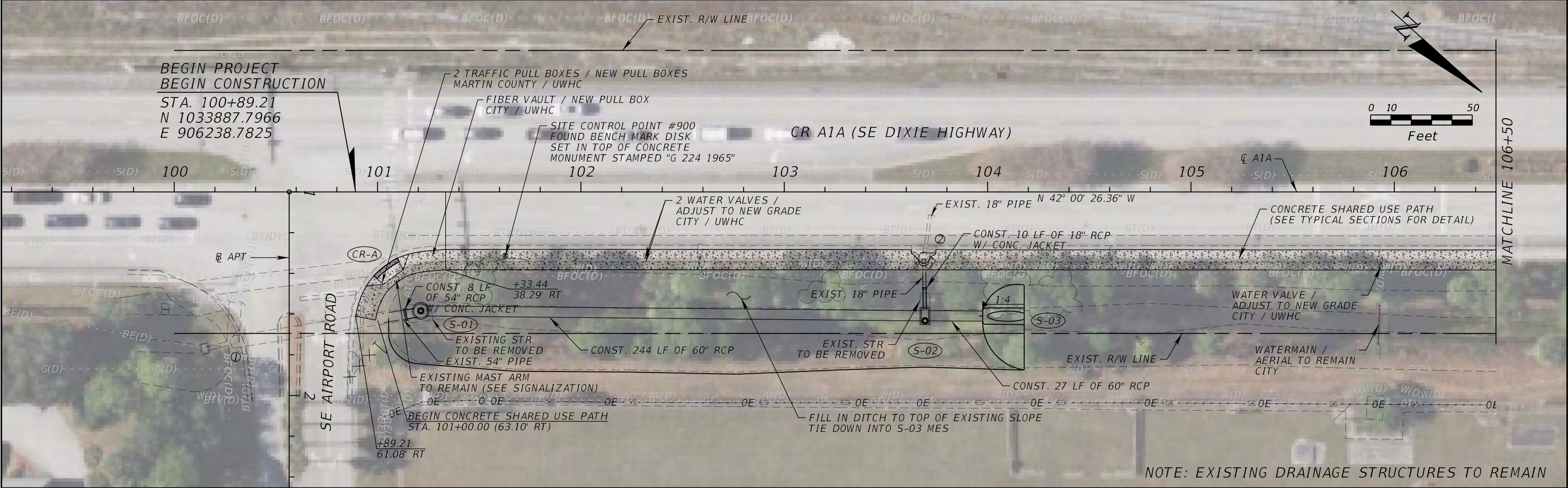
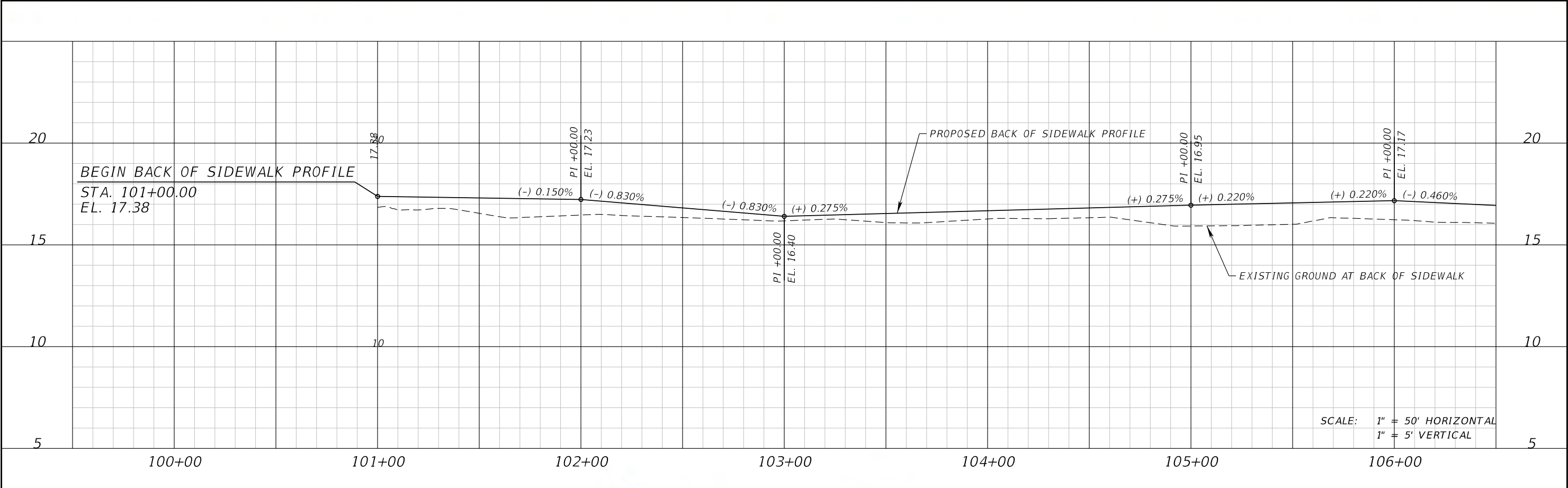
David Gerber

7/16/2024

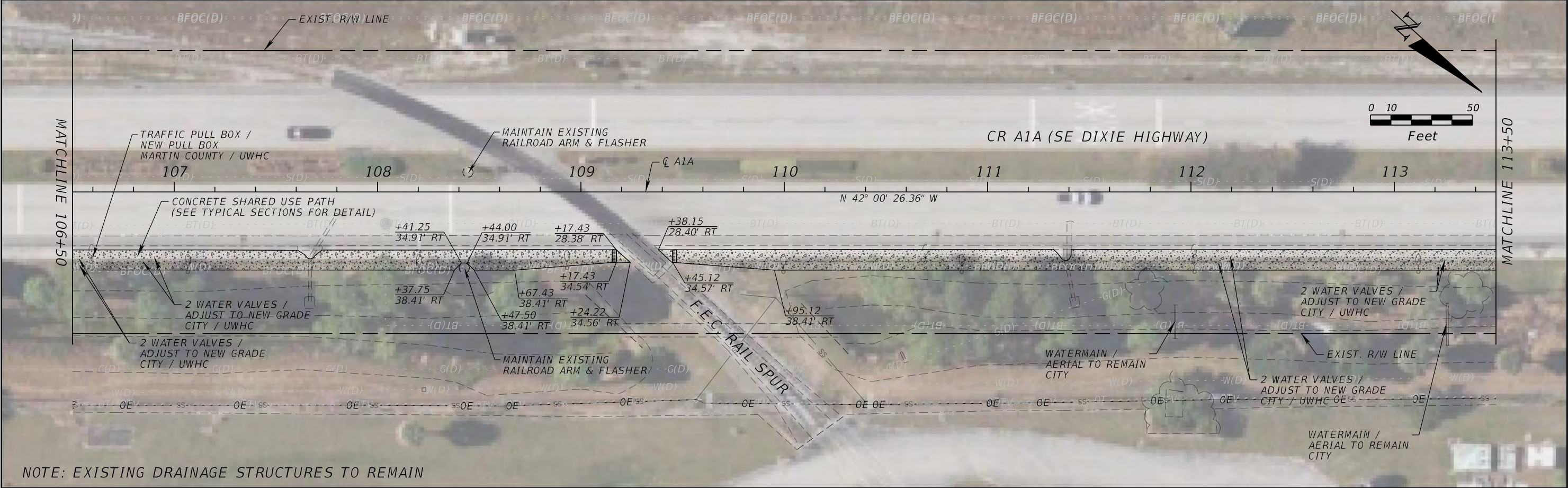
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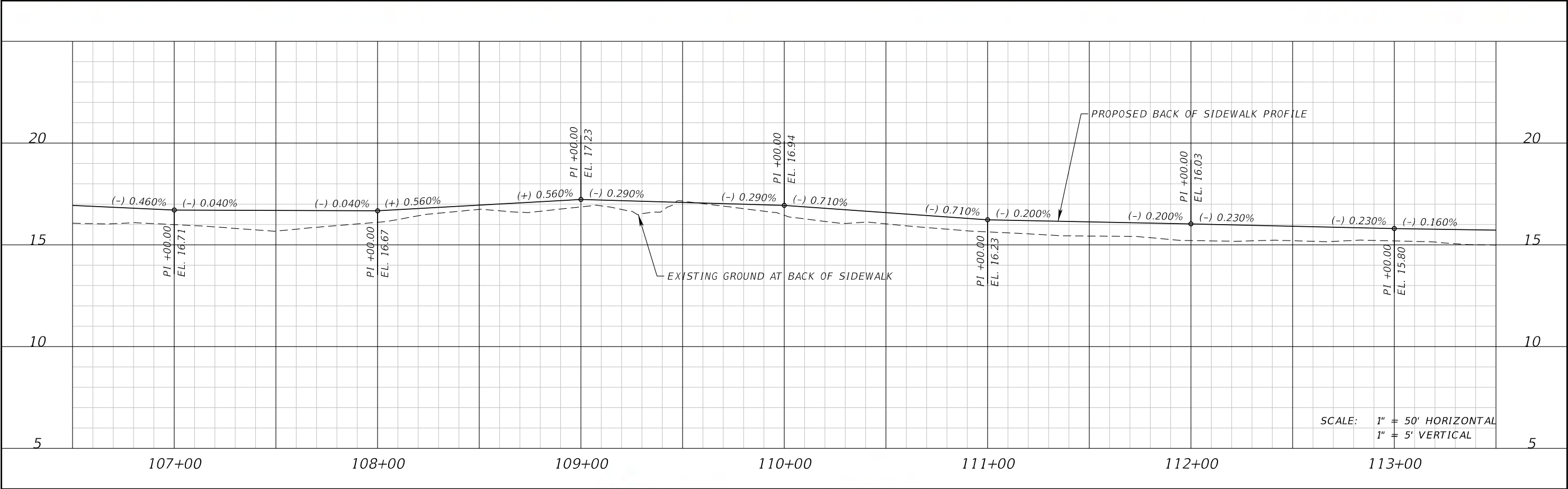
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



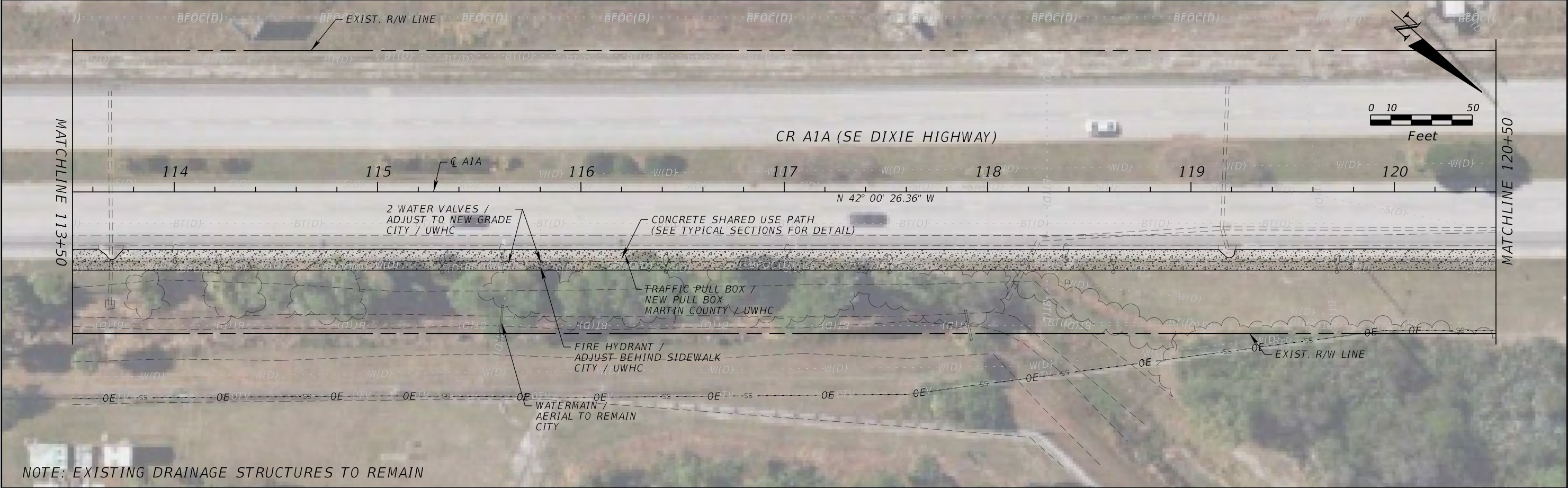
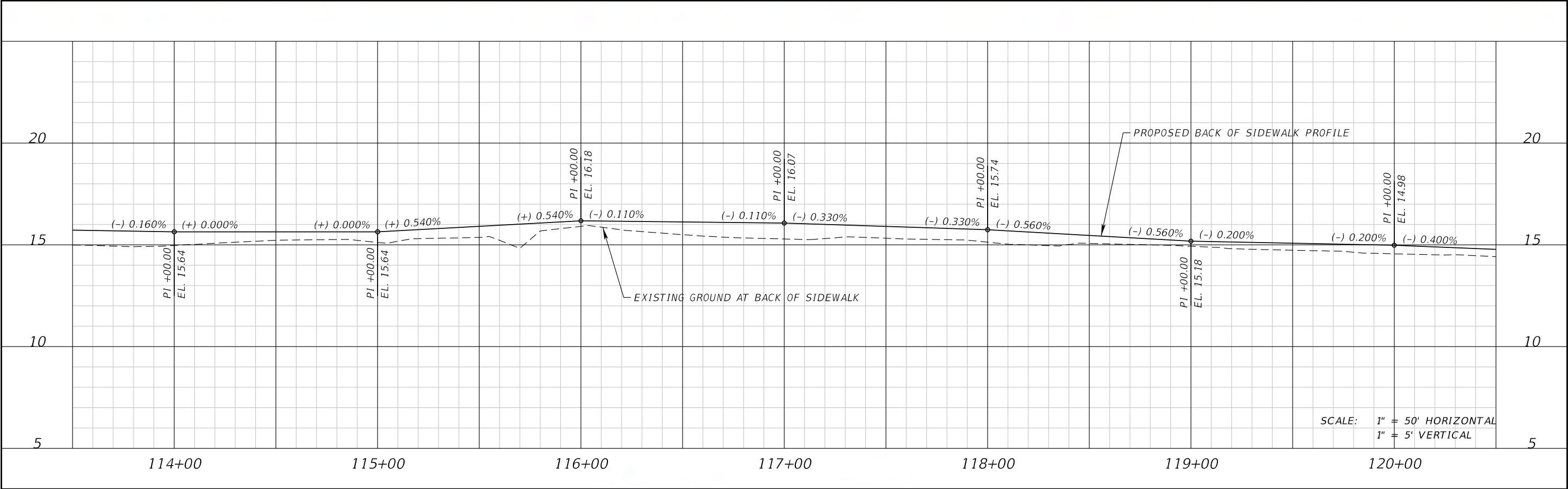
REVISIONS				 <div>2035 Vista Parkway West Palm Beach, FL 33411 Phone No. 561-687-2220 Fax No. 561-687-1110 Cert No. 6091 - LB No. 7055</div>		MARTIN COUNTY		ROADWAY PLAN-PROFILE (1)	SHEET NO. 9
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		
						CR A1A	444405-2-58-01		



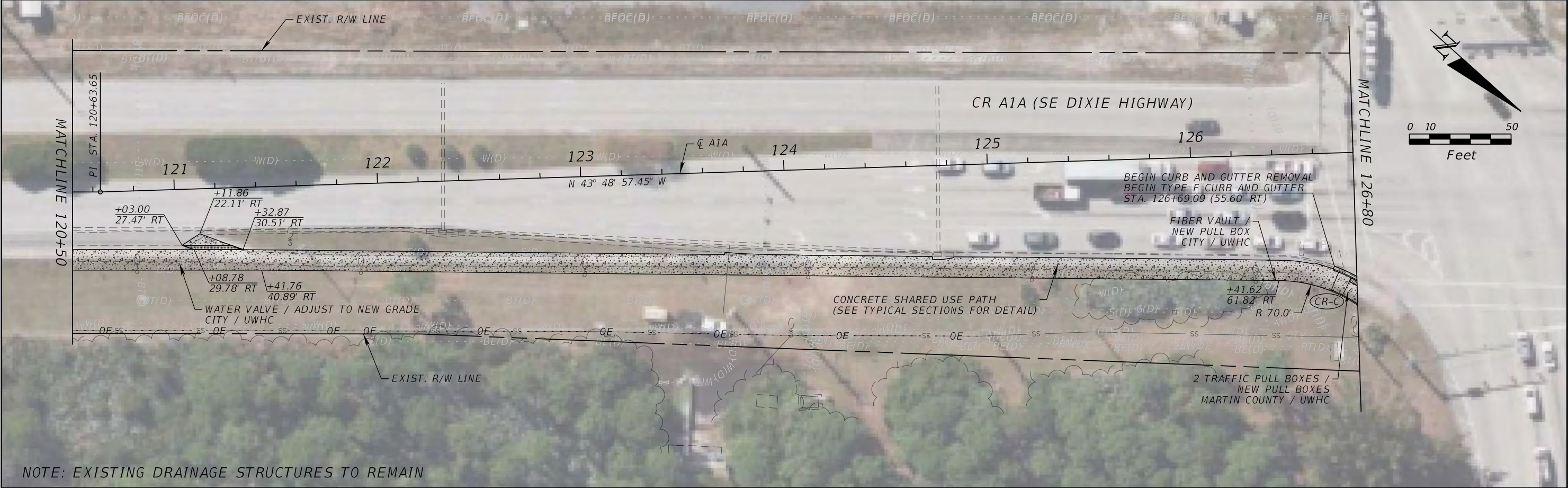
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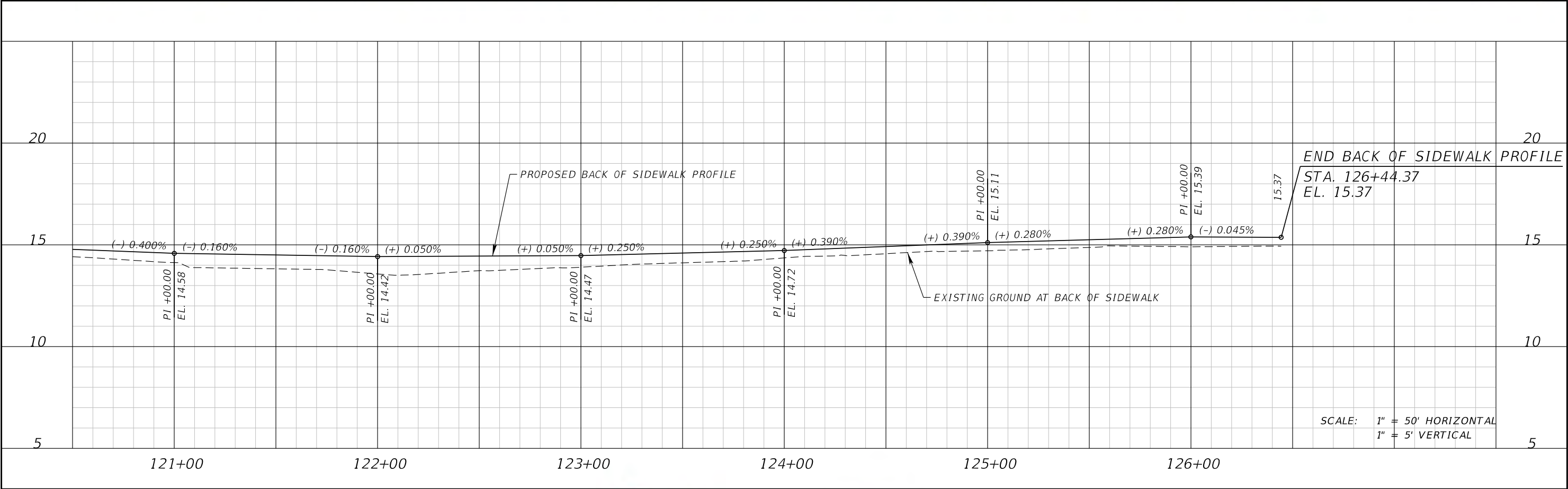
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DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		
						CR A1A	444405-2-58-01		



REVISIONS				 <div>2035 Vista Parkway West Palm Beach, FL 33411 Phone No. 561-687-2220 Fax No. 561-687-1110 Cert No. 6091 - LB No. 7055</div>		MARTIN COUNTY		ROADWAY PLAN-PROFILE (3)	SHEET NO. 11
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		
						CR A1A	444405-2-58-01		



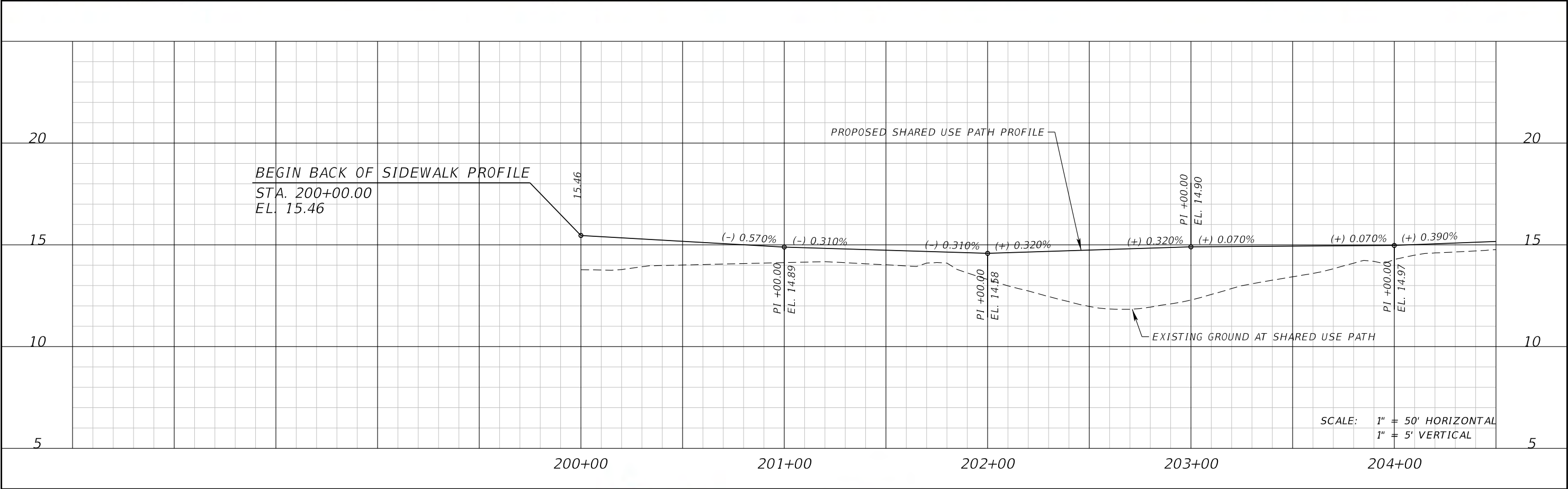
NOTE: EXISTING DRAINAGE STRUCTURES TO REMAIN



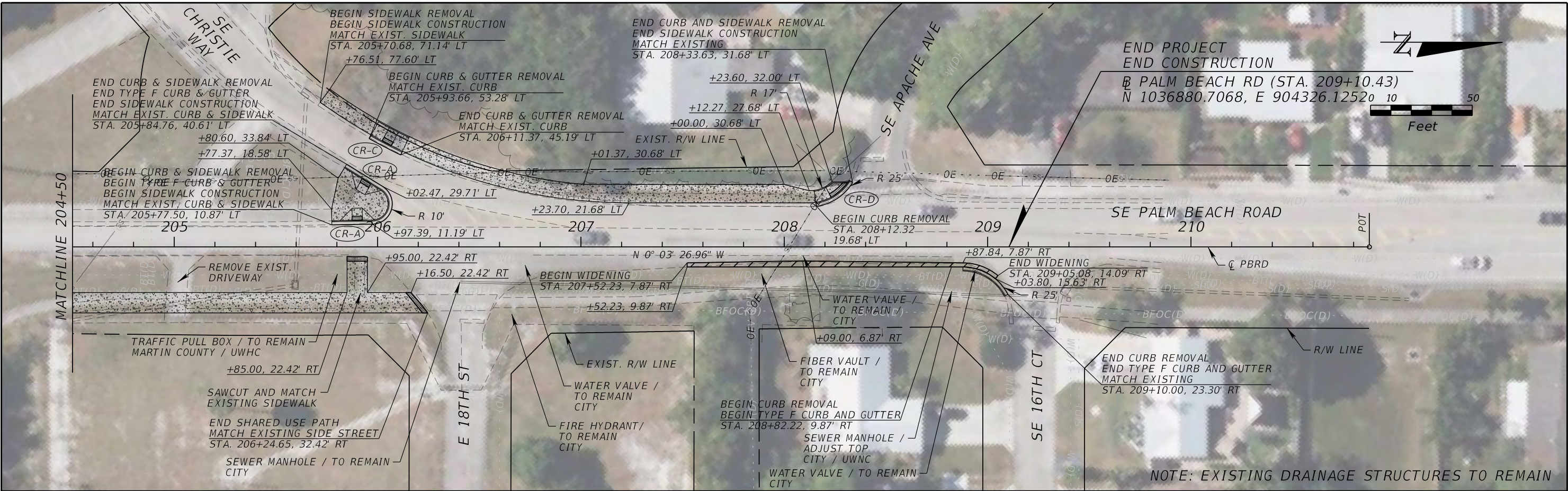
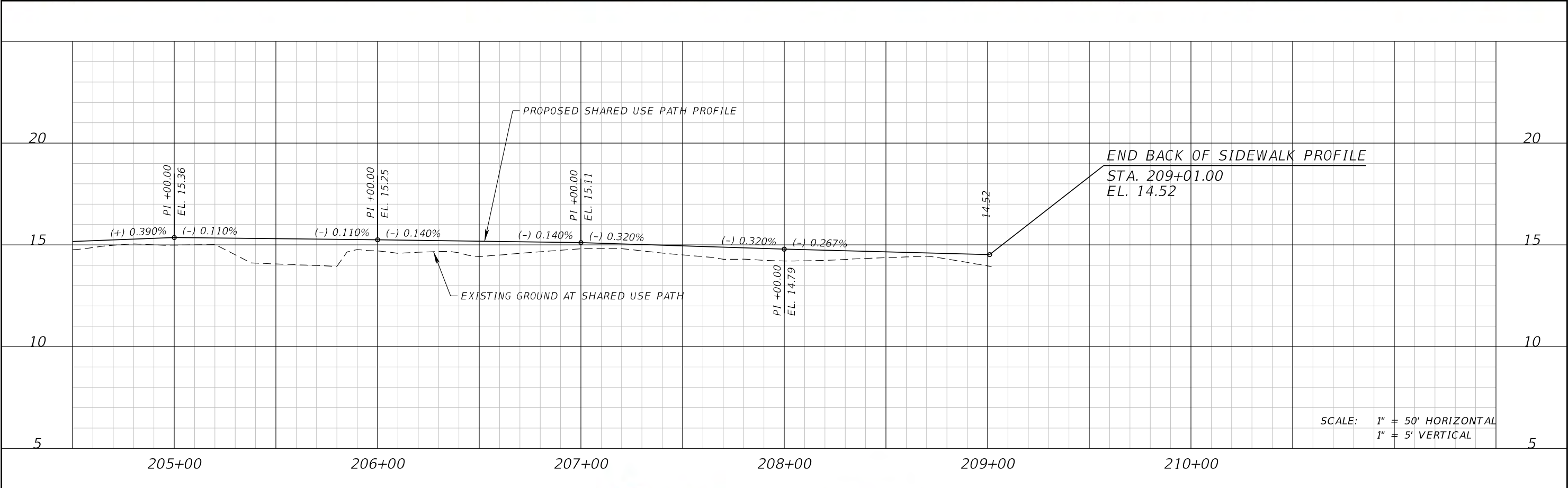
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DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		
						CR A1A	444405-2-58-01		



NOTE: EXISTING DRAINAGE STRUCTURES TO REMAIN

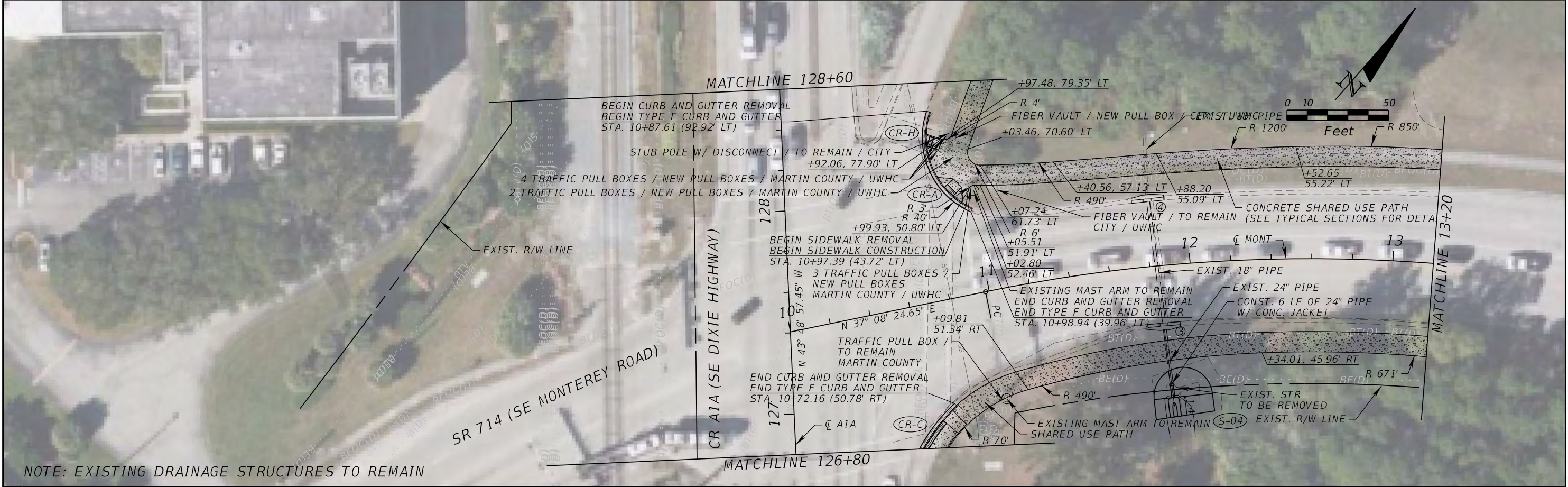


REVISIONS				 <div>2035 Vista Parkway West Palm Beach, FL 33411 Phone No. 561-687-2220 Fax No. 561-687-1110 Cert No. 6091 - LB No. 7055</div>		MARTIN COUNTY		ROADWAY PLAN-PROFILE (5)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		13
						CR A1A	444405-2-58-01		

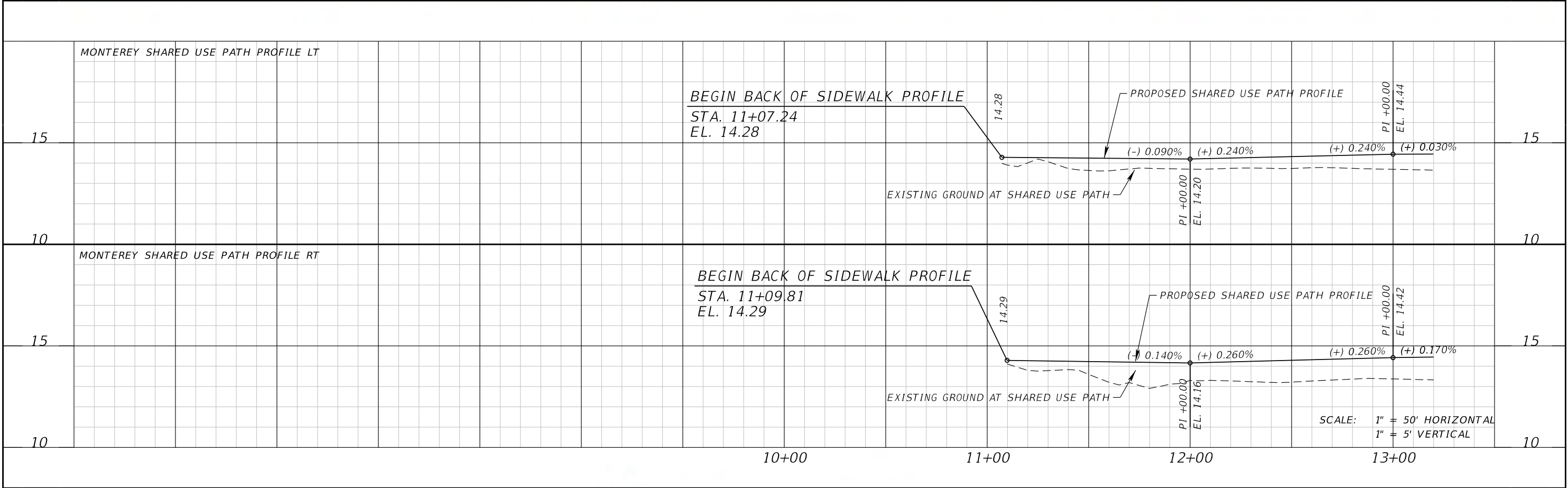


REVISIONS				 <div>2035 Vista Parkway West Palm Beach, FL 33411 Phone No. 561-687-2220 Fax No. 561-687-1110 Cert No. 6091 - LB No. 7055</div>		MARTIN COUNTY		ROADWAY PLAN-PROFILE (6)	SHEET NO. 14
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		
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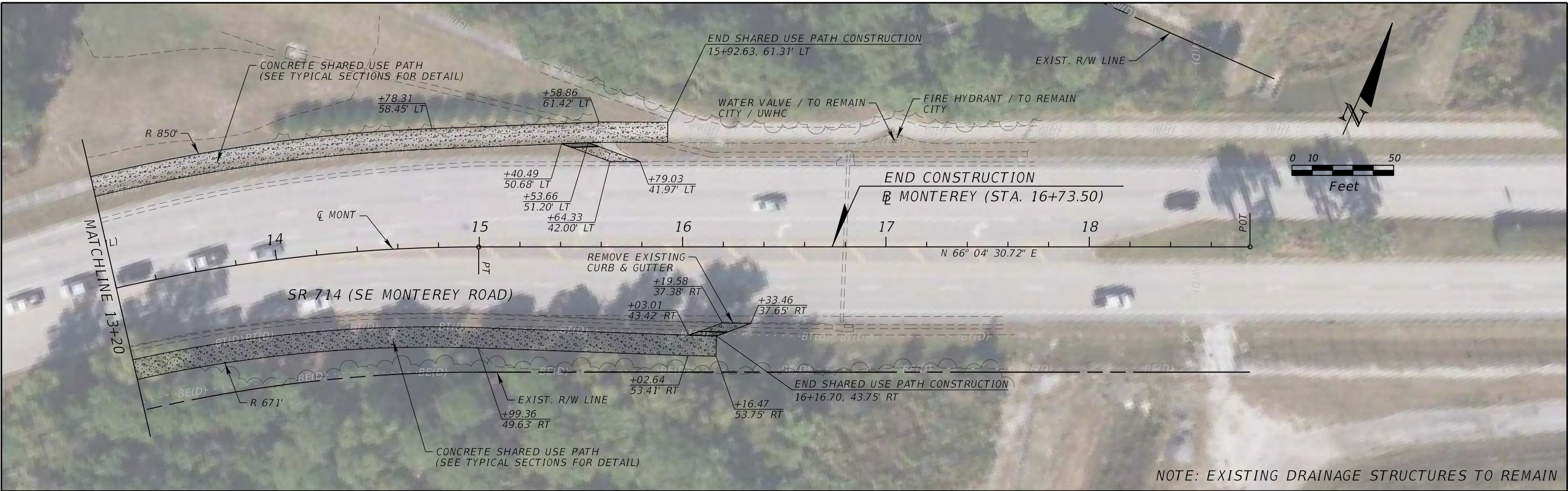
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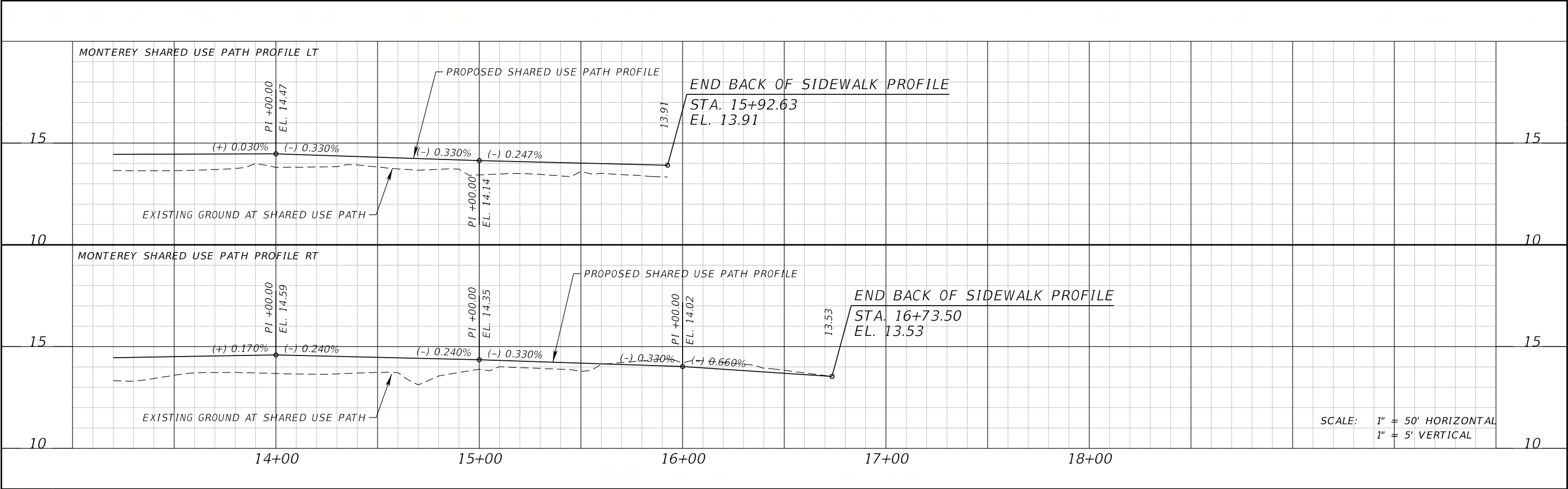
NOTE: EXISTING DRAINAGE STRUCTURES TO REMAIN



REVISIONS				 <div>2035 Vista Parkway West Palm Beach, FL 33411 Phone No. 561-687-2220 Fax No. 561-687-1110 Cert No. 6091 - LB No. 7055</div>		MARTIN COUNTY		ROADWAY PLAN-PROFILE (7)	SHEET NO. 15
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		
						CR A1A	444405-2-58-01		



NOTE: EXISTING DRAINAGE STRUCTURES TO REMAIN



SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

REVISIONS				 <div>2035 Vista Parkway West Palm Beach, FL 33411 Phone No. 561-687-2220 Fax No. 561-687-1110 Cert No. 6091 - LB No. 7055</div>		MARTIN COUNTY		ROADWAY PLAN-PROFILE (8)	SHEET NO. 16
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	PROJECT NO.		
				EOR: David C. Gerber, P.E. P.E. License Number: 82446		CR A1A	444405-2-58-01		

ROADWAY PLANS
SUMMARY OF PAY ITEMS (9 SHEETS)
BOX CULVERT DATA SHEETS (4 SHEETS)
SIGNING AND PAVEMENT MARKING PLANS
SIGNALIZATION PLANS
LANDSCAPE PLANS

FINAL AS - BUILT PLANS OF PROPOSED STATE HIGHWAY

STATE PROJECT NO. 89010-3552
MARTIN COUNTY
STATE ROAD NO. 5 (U.S. 1)

SHEET NO.	SHEET DESCRIPTION
-----------	-------------------

1	KEY SHEET
2-4	DRAINAGE MAPS
5	SUMMARY OF EXISTING DRAINAGE STRUCTURES
6-8	TYPICAL SECTIONS
9	SUMMARY OF QUANTITIES
10	GENERAL NOTES & PAY ITEM FOOTNOTES
11-17	SUMMARY OF DRAINAGE STRUCTURES
18-47	PLAN/PROFILE (U.S. 1)
48	PLAN/PROFILE (S.E. MONROE ST. - WEST)
49	PLAN/PROFILE (S.E. FISCHER ST. - EAST)
50	PLAN/PROFILE (S.E. GRUMMAN BLVD.)
51-52	INTERSECTION DETAILS
53-58	LUCKHARDT ST. OUTFALL/DETENTION BASIN No. 1
59-62	HARPER ST. OUTFALL/DETENTION BASIN No. 2
63-72	INTERSECTION PROFILES
73-106	DRAINAGE STRUCTURES
107-108	ROADWAY SOIL SURVEY
109-153	CROSS SECTIONS
154	FISCHER ST. (E) & MONROE ST. (W) CROSS SECTIONS
155	S.E. LUCKHARDT ST. (E&W) CROSS SECTIONS
156	S.E. GRUMMAN BLVD. EXT. CROSS SECTIONS
157	DETENTION BASIN No. 1 CROSS SECTIONS
158	DETENTION BASIN No. 2 CROSS SECTIONS
159-164	TRAFFIC CONTROL PLAN
165-209	UTILITY ADJUSTMENTS
210-211	SPECIAL DETAILS
212	SPECIAL BOX CULVERT DETAILS

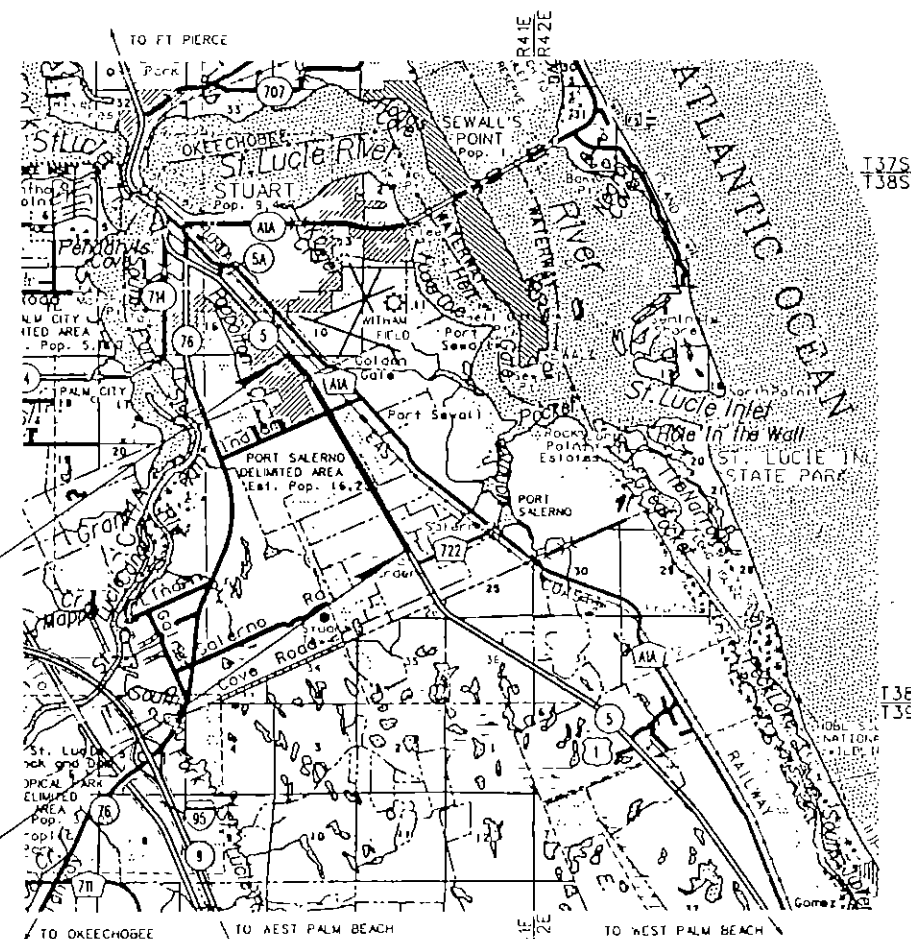
Roadway Sheets 21-22 (Revised 11-96)
Signing/Marking Sheets S-9 & S-10 (Revised 11-98)
Roadway Sheets 6-7 (Revised 12-96)
Roadway Sheets 6-7 (Revised 3-97)

- #13291 - Final Measurement (Milling, Sidewalks Fencing Railing, Casings, Separators & Block Pavers)
- #001886 - Removal of Existing Pavements
- #13290 - Signalization
- #13216 - Signalization, Fence, Guardrail & Handrail
- #13280 - Concrete Sidewalk
- #001906 - Martin County Utility Work
- #001917 - City of Stuart Utility Work
- #1004659 - Survey - Bench Marks, Alignment & Cross-Sections
- #13258 - Survey - Cross-Sections

Vol #1 - - Roadway
Vol #2 - - Conc (Pavement, End walls, Box Culverts), Drainage & Landscaping

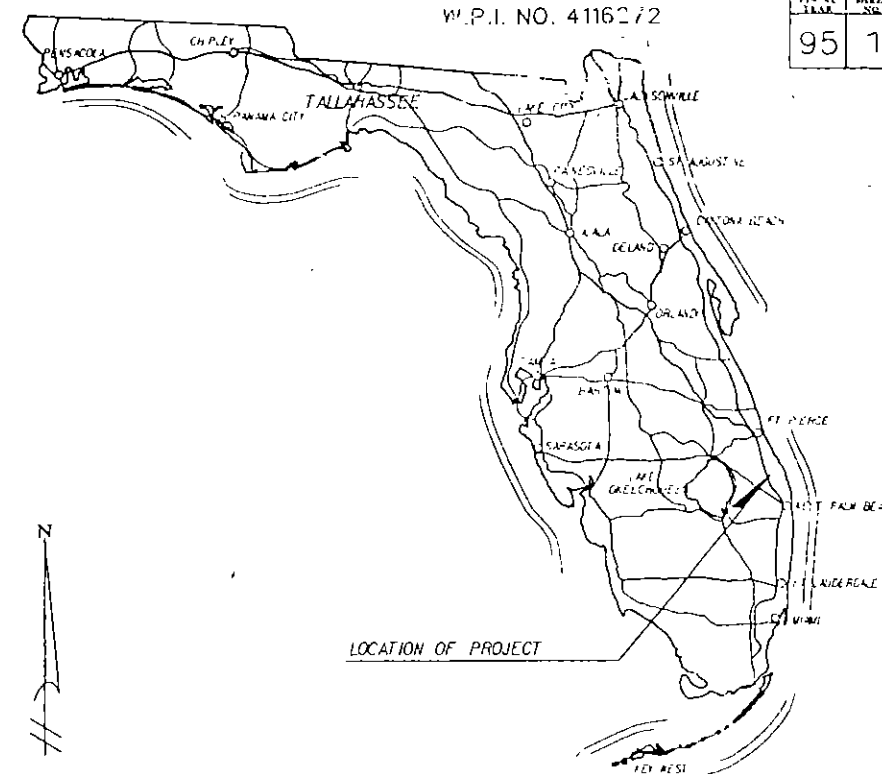
END PROJECT
STA 1029+42.43

BEGIN PROJECT
STA. 850+66.00
(MP. 14.609)



LENGTH OF PROJECT		
	LINEAR FT.	MILES
ROADWAY	17,876.43	3.355
BRIDGES	0	0
NET LENGTH OF PROJECT	17,876.43	3.355
EXCEPTIONS	0	0
GROSS LENGTH OF PROJECT	17,876.43	3.355

PROJECT MANAGER : JOE NAJJARIAN ,P.E.



LOCATION OF PROJECT

ROADWAY PLANS:
ENGINEER OF RECORD
JOHN ADAIR, P.E.

PLANS PREPARED BY:

ADAIR & BRADY, INC.
1958 SOUTH CONGRESS AVENUE
WEST PALM BEACH, FLORIDA 33406
(407) 964-1221

NOTE: THESE PROJECTS TO BE LET TO CONTRACT WITH STATE PROJECT NO. 89010-6552 AND STATE PROJECT NO. 99010-6557 (UTILITY PLANS).

Contractor: Community Asphalt Corporation
Consultants: (Design) Adair & Brady Inc
 (Construction) Keith & Schnars
E.D.O.T.: District Engineer - Manuel Then, P.E
 Resident Engineer - James C. Lynch, P.E
Project Engineer: R.A. Kirkorian, Keith & Schnars, P.A.
Date Work Started: August 17, 1995
Date Work Accepted: March 23, 1998

<u>REVISIONS</u>		
<u>DATE</u>	<u>BY</u>	<u>DESCRIPTION</u>

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA

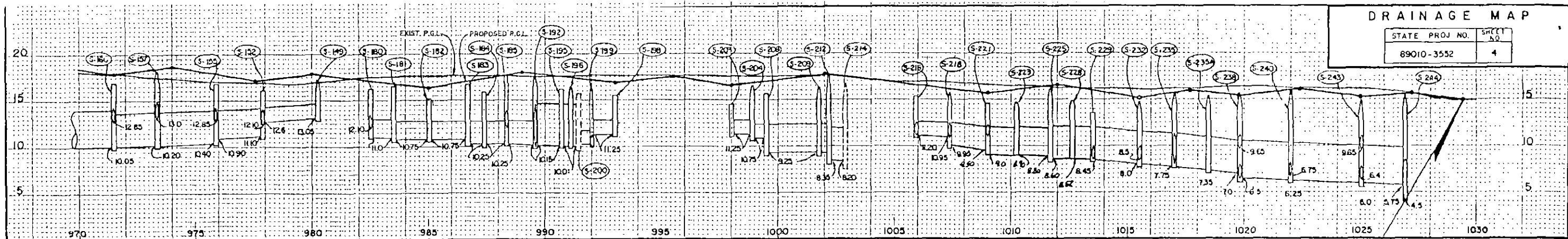
GOVERNING SPECIFICATIONS: STATE OF FLORIDA,
DEPARTMENT OF TRANSPORTATION, STANDARD
SPECIFICATIONS, DATED 1991 AND SUPPLEMENTS
THEREO IF NOTED IN THE SPECIAL PROVISIONS
FOR THIS PROJECT

RODNEY PLAYS JOHN ADAMS

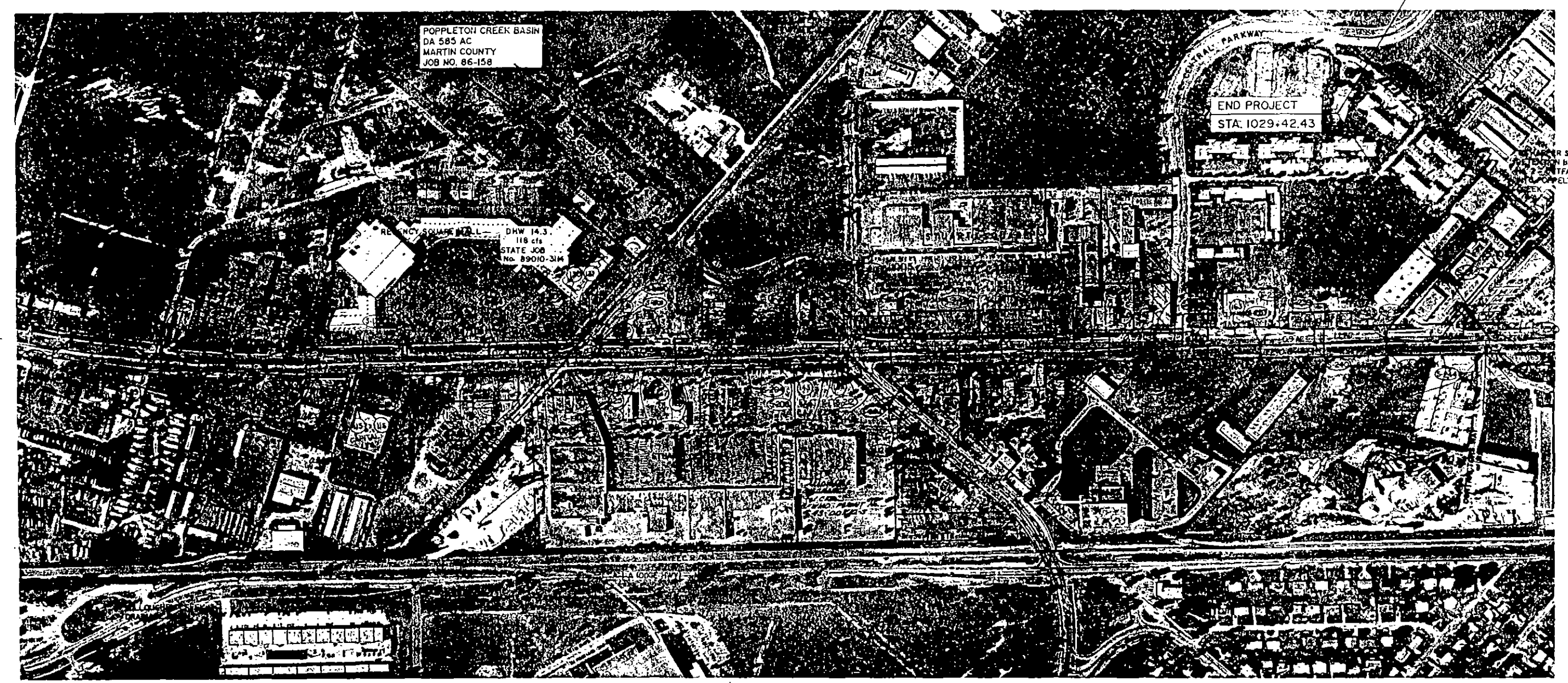
DATE. 12/93

PL No. 4151

Between April, 1946 and



DRAINAGE MAP		
STATE PROJ. NO.	SHEET NO.	
89010-3552	4	



REVISIONS				DESIGNER				DRAWN				APPROVED BY			
DATE	BY	DESCRIPTION		NAME	DATE	NAME	DATE	NAME	DATE	NAME	DATE	NAME	DATE	NAME	DATE
				MW	4-88	KB	4-88								
				JA	4-88	MW	4-88								

DRAINAGE MAP

SUMMARY OF EXISTING DRAINAGE STRUCTURES

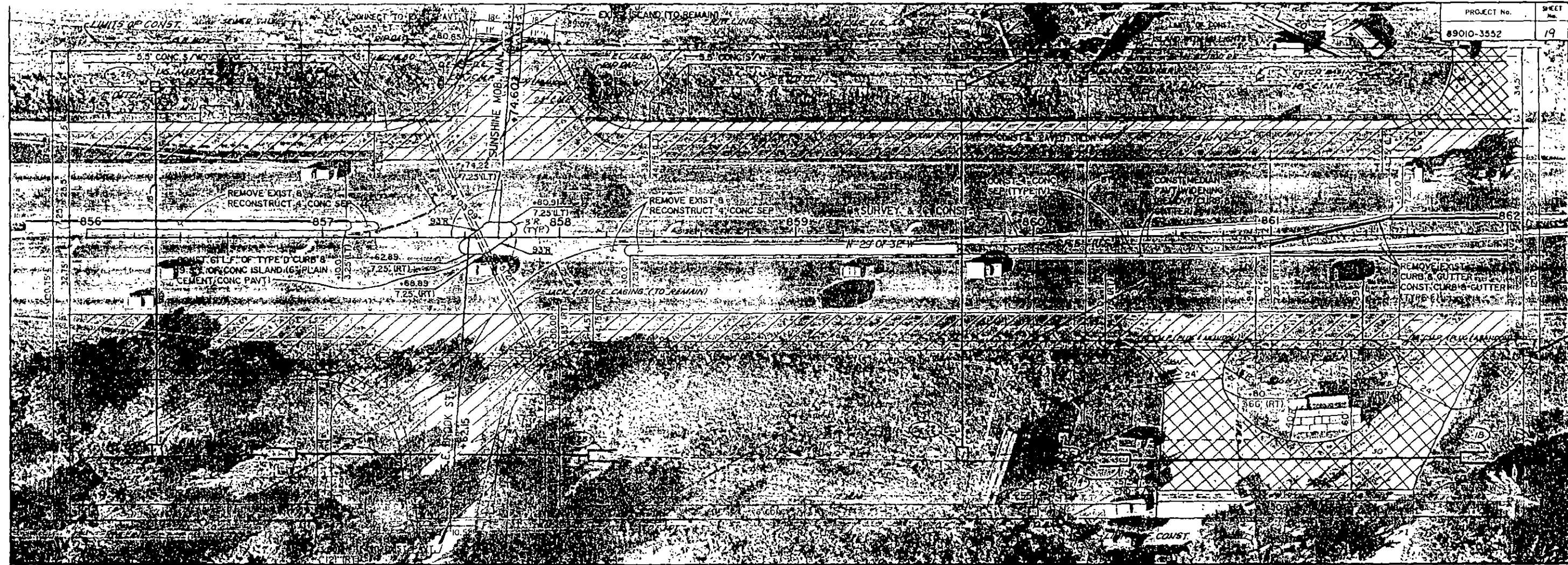
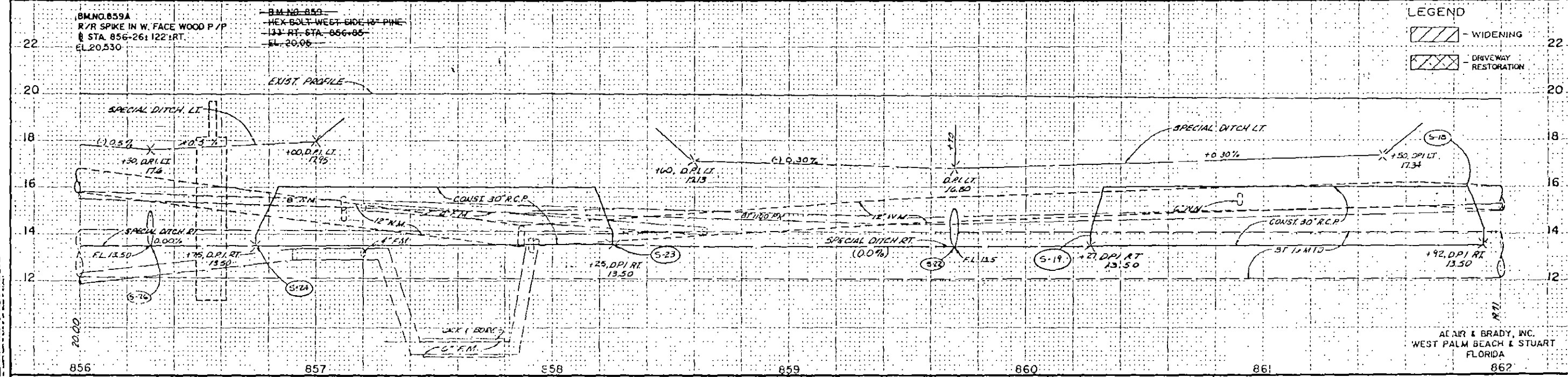
STATE PROJ. NO. 89010-3552
SHEET NO. 5

1 18" CMP MES N. FL 15.28	27 24" CMP S. FL 15.28 N. FL 15.28	53 2 - 24" CMP H.W. S. FL 15.08 H.W. N. FL 14.82	76 24" RCP MES S. FL 15.20 MES N. FL 15.71	100 CURB INLET W/MANHOLE RM EL 17.71 24" RCP W. INV 14.11 MES W. FL 13.55	122 MANHOLE RM EL 18.28 24" RCP SPILL OVER WALL EL 18.38 W. INV E. INV 15.88	140 CURB INLET 48" RCP E. INV 7.92 80" RCP W. INV 7.92 30" RCP N. INV 7.92	159 24" CMP MES S. FL 11.86 MES N. FL 12.08
2 18" CMP MES S. FL MES N. FL	28 8"x4" BOX CULVERT E. FL 12.92 W. FL 12.98	54 24" CMP S. FL 16.92 N. FL 17.08	77 CURB INLET 18" RCP N. INV 14.00	101 MANHOLE RM EL 18.81 MES S. FL 12.81 W. & S. INV 13.33 N. INV 13.31 MES N. FL 12.75	123 MANHOLE RM EL 17.58 30" RCP E. INV 9.40 S. INV 9.30 N. INV 9.33	141 CURB INLET 80" RCP E. & W. INV 7.88 24" RCP N. INV 7.88	160 36" CMP S. FL 11.85 N. FL 12.08
3 24" CMP S. FL 14.25 N. FL 14.16	29 2 - 30" CMP MES S. FL 13.78 MES N. FL 13.40	55 24" CMP S. FL 17.03 N. FL 16.90	78 CURB INLET 18" RCP S. & E. INV 13.57	102 CURB INLET W/MANHOLE RM EL 17.71 MES S. FL 12.81 W. & S. INV 13.33 N. INV 13.31 MES N. FL 12.75	124 CATCH BASIN GRATE EL 17.80 24" RCP S. & N. INV 9.40	142 MANHOLE 48"x24" ECMP S. & N. INV 13.15 H.W. N. FL 11.15	161 36" CMP MES S. FL 11.34 MES N. FL 11.59
4 CATCH BASIN GRATE EL 18.41 24" CMP S. FL 13.42 N. & S. INV 13.90 N. FL 13.50	30 18" CMP MES S. FL 15.09 MES N. FL 14.95	56 CATCH BASIN GRATE EL 19.88 36" CMP S. FL 15.88 S. INV 16.38 N. INV 16.48	79 36" CMP MES S. FL 14.70 MES N. FL 14.92	103 CATCH BASIN GRATE EL 17.09 24" CMP N. & S. INV 14.89	125 CATCH BASIN GRATE EL 16.37 36" RCP S. INV 10.50 36" RCP N. INV 9.10	143 CATCH BASIN GRATE EL 16.89 36" RCP S. INV 9.28	162 CATCH BASIN GRATE EL 14.98 18" CMP S. FL 12.40 N. & S. INV 13.40
5 18" CMP MES S. FL MES N. FL	31 2 - 36" CMP H.W. S. FL 12.39 H.W. N. FL 12.00	57 CATCH BASIN GRATE EL 19.90 36" CMP S. INV 16.70 N. INV 16.70	80 24" CMP S. FL 16.98 N. FL 17.08	104 24" CMP S. FL 12.93 N. FL 12.58	126 MANHOLE GRATE EL 16.41 36" RCP S. & N. INV 9.71	144 MANHOLE RM EL 16.82 36" RCP S. INV 9.87 E. INV 9.83	163 CATCH BASIN GRATE EL 14.59 18" CMP N. & S. INV 13.09 N. FL 13.68
6 36" CMP E. FL 14.21	32 H.W. S. FL 12.10 H.W. N. FL 12.00	58 CATCH BASIN GRATE EL 19.94 36" CMP S. INV 16.74 N. INV 16.84	81 36" CMP MES S. FL 14.49 MES N. FL 14.11	105 CATCH BASIN GRATE EL 17.24 24" CMP S. INV 15.14 N. INV 15.12	127 CATCH BASIN GRATE EL 15.20 36" CMP S. INV 11.90 E. & N. INV 11.80	145 MANHOLE RM EL 15.42 36" RCP W. INV 10.03 E. INV 9.95	164 CATCH BASIN GRATE EL 13.51 15" PIPE W. INV 10.31
7 8"x4" BOX CULVERT E. FL 12.78 W. FL 12.68	33 2 - 36" CMP H.W. S. FL 12.50 H.W. N. FL 12.98	59 CATCH BASIN GRATE EL 20.02 36" CMP S. INV 16.42 N. INV 16.52	82 M.H. CONTROL STRUCTURE RM EL 17.01 W. FL 15.18 (4.5" PVC) 24" RCP E. INV 15.18 E. FL 14.54	106 CATCH BASIN GRATE EL 17.28 24" CMP S. & N. INV 13.28	128 CATCH BASIN GRATE EL 14.69 36" RCP S. INV 10.89 N. INV 11.29	146 GUTTER INLET GRATE EL 14.31 36" RCP W. INV 10.73 30" RCP E. INV 10.78 12"x18" ERCP N. INV 10.71	165 CURB INLET 18" PIPE E. INV 9.28 24" PIPE N. INV
8 24" CMP S. FL 13.88 MES N. FL 14.16	34 2 - 24" CMP H.W. S. FL 13.32 H.W. N. FL 14.07	60 CATCH BASIN GRATE EL 19.94 36" CMP S. INV 16.77 N. INV 16.17	83 36" CMP MES S. FL 13.95 MES N. FL 14.29	107 CATCH BASIN GRATE EL 16.71 24" CMP S. & N. INV 14.51 N. FL 13.81	129 CATCH BASIN GRATE EL 14.50 36" RCP S. INV 12.30	147 GUTTER INLET GRATE EL 14.70 12"x18" ERCP S. INV 11.30	
9 24" CMP S. FL 14.32 N. FL 14.11	35 2 - 24" CMP MES S. FL 14.5 MES N. FL 13.88	61 CATCH BASIN GRATE EL 18.19 36" CMP S. INV 16.39 N. INV 16.39 N. FL 14.94	84 24" CMP S. FL 16.58 N. FL 16.84	108 CURB INLET W/MANHOLE RM EL 17.14 24" RCP W. INV 13.44 MES W. FL 12.90	130 MANHOLE RM EL 16.27 24" CMP S. INV 10.77 MES S. FL 11.53 48"x60" ECMP W. INV 10.77	148 36" CMP MES S. FL 11.75 MES N. FL 10.70	
10 24" CMP S. FL 15.90 N. FL 16.16	36 2 - 30" CMP S. FL 13.30 N. FL 13.39	62 36" CMP H.W. S. FL 13.82 H.W. N. FL 13.82	85 2 - 24" CMP MES S. FL 15.50 MES N. FL 14.53	109 24" CMP S. FL 12.75 N. FL 12.37	131 CATCH BASIN GRATE EL 15.68 36" RCP N. INV 10.88 48"x60" ECMP E. INV 10.48 W. INV 10.08	149 42" CMP MES S. FL 10.15 MES N. FL 10.83	
11 24" CMP S. FL 13.78 N. FL 13.82	37 2 - 36" CMP H.W. S. FL 12.94 H.W. N. FL 13.08	63 24" RCP MES S. FL 15.8 MES N. FL 15.9	86 24" CMP MES S. FL 16.18 MES N. FL 15.98	110 24" CMP S. FL 12.50 N. FL 12.30	132 CATCH BASIN GRATE EL 15.44 48"x60" ECMP W. & E. INV 10.14	150 CATCH BASIN GRATE EL 14.08 36" RCP MES S. FL 10.70 N. & S. INV 12.58 MES N. FL 11.14	
12 18" CMP MES S. FL 18.04 MES N. FL 18.16	38 2 - 36" CMP H.W. S. FL 13.48 H.W. N. FL 13.22	64 36" CMP S. FL 15.22 N. FL 15.60	87 36" CMP MES S. FL 13.93 MES N. FL 14.12	111 2 - 24" CMP MES 13.90 MES 12.70	133 CATCH BASIN GRATE EL 15.13 48"x60" ECMP E. INV 10.10 2 - 36" CMP W. INV 10.13 H.W. W. FL 10.10	151 36" CMP MES S. FL 12.15 MES N. FL 12.34	
13 18" CMP MES S. FL 18.25 MES N. FL 18.28	39 2 - 30" CMP S. FL 13.42 N. FL 13.48	65 24" CMP MES S. FL MES N. FL	88 MANHOLE RM EL 18.92 24" CMP W. FL 14.64 W. INV 13.80 30" CMP MES S. FL 14.08 S. INV 13.95 N. INV 14.15 MES N. FL 13.84	112 CATCH BASIN GRATE EL 16.88 24" RCP W. INV 13.14	134 CATCH BASIN GRATE EL 16.04 36" RCP S. INV 11.74 N. INV 11.84	152 36" CMP MES S. FL 12.20 MES N. FL 12.74	
14 CATCH BASIN GRATE EL 17.15 24" CMP S. FL 13.91 24" CMP S. INV 10.86 18" CMP N. INV 10.86	40 15" CMP E. FL 15.78 W. FL 15.73	66 2 - 36" RCP MES S. FL 14.08 MES N. FL 14.03	89 24" CMP MES S. FL 15.58 MES N. FL 15.51	113 CATCH BASIN GRATE EL 16.54 24" CMP MES S. FL 13.84 H. & S. INV 14.04 E. INV 14.54 MES N. FL 13.72	135 CATCH BASIN GRATE EL 15.68 36" RCP S. & N. INV 10.40	153 36" CMP MES S. FL 11.72 MES N. FL 11.08	
15 CATCH BASIN GRATE EL 17.58 18" CMP S. & N. INV 18.85	41 12" CMP E. FL 14.83 W. FL 15.42	67 2 - 18" RCP MES S. FL 14.57 MES N. FL 14.53	90 24" CMP MES S. FL 14.60 MES N. FL 13.54	114 CATCH BASIN GRATE EL 16.92 24" CMP W. INV 14.82 N. INV 11.52	136 CATCH BASIN GRATE EL 15.93 36" RCP S. & N. INV 10.70 MES N. FL 10.48	154 36" CMP MES S. FL 11.11 MES N. FL 10.41	
16 CATCH BASIN GRATE EL 17.85 18" CMP S. & N. INV 13.73 N. FL 14.02	42 2 - 24" CMP S. FL 14.51 H.W. N. FL 14.38	68 2 - 36" RCP MES S. FL 14.08 MES N. FL 14.03	91 24" CMP MES S. FL 15.59	115 12" PVC E. FL 15.22 W. FL 15.34	137 48" CMP S. FL 10.91 N. FL 10.81	155 CATCH BASIN GRATE EL 14.24 36" RCP H.W. S. FL 10.88 S. INV 10.48 N. INV 11.24	
17 18" CMP MES S. FL 18.38 MES N. FL 18.31	43 2 - 24" CMP H.W. S. FL 14.78 H.W. N. FL 14.71	69 CATCH BASIN GRATE EL 19.04 24" CMP S. FL 16.09 S. & N. INV 16.24 N. FL 16.08	92 24" CMP H.W. S. FL 13.12 H.W. N. FL 13.74	116 CATCH BASIN 24" CMP S. FL 13.91 S. & N. INV 13.88 N. FL 12.02	138 MANHOLE RM EL 16.50 48" RCP E. INV W. INV 8.21 48"x24" ECMP N. INV 12.18	156 JUNCTION BOX 36" CMP S. & N. INV W. INV MES N. FL 10.51	
18 24" CMP E. & W. FL 16.00	44 2 - 24" CMP S. FL 13.72 N. FL 13.80	70 2 - 18" CMP MES S. FL 14.84 MES N. FL 14.87	93 24" CMP H.W. S. FL 15.08 N. FL 15.35	117 2 - 24" CMP MES S. FL 12.21 MES N. FL 11.99	139 CURB INLET 48" RCP E. & W. INV 8.12 18" RCP N. INV 8.12	157 42" RCP H.W. E. FL 11.73 H.W. W. FL 11.73	
19 18" CMP S. FL 14.33 N. FL 13.75	45 MANHOLE RM EL 18.12 E. INV 13.72 MES E. FL 13.81	71 CATCH BASIN GRATE EL 18.49 2 - 36" RCP MES S. FL 14.40 S. INV 15.19 15" CMP W. INV 16.79 36" CMP N. INV 15.19 MES N. FL 13.78	94 CATCH BASIN GRATE EL 17.94 18" CMP W. INV 14.90 MES W. FL 14.04	118 24" CMP S. FL 15.14 N. FL 14.91		158 18" RCP S. FL 12.10 N. FL 11.86	
20 24" CMP S. FL 14.16 N. FL 14.03	46 2 - 24" CMP S. FL 13.71 N. FL 14.31	72 18" CMP MES S. FL 16.57 MES N. FL 16.59	95 24" CMP H.W. S. FL 13.59 N. FL 13.11	119 2 - 24" CMP MES S. FL 11.55 MES N. FL 11.39			
21 CATCH BASIN GRATE EL 18.82 18" CMP MES S. FL 15.72 S. INV 15.80 N. INV 16.18 MES N. FL 16.38	47 2 - 24" CMP S. FL 13.71 N. FL 14.08	73 36" CMP MES S. FL 14.05 MES N. FL 14.16	96 24" CMP S. FL 15.14 N. FL 14.91	120 36" CMP S. FL 12.84 N. FL 9.30			
22 24" CMP S. FL 14.22 N. FL 13.90	48 24" CMP S. FL 13.94 N. FL 13.59	74 24" CMP MES S. FL 15.91 MES N. FL 16.08	97 MANHOLE RM EL 18.34 W. W. 15.40 H.W. W. FL 13.15	121 CATCH BASIN GRATE EL 18.18 24" CMP MES S. FL 15.08 N. & S. INV 15.88 E. INV 15.78			
23 18" CMP S. FL 14.00 N. FL 14.72	49 2 - 24" CMP S. FL 14.90 N. FL 15.08	75 36" CMP MES S. FL 13.17 MES N. FL 13.55	98 18" RCP S. FL 16.02 N. FL 16.30				
24 18" CMP MES S. FL 15.70 MES N. FL 15.58	50 30" CMP S. FL 16.61 N. FL 16.84		99 CATCH BASIN GRATE EL 18.18 24" CMP MES S. FL 15.08 N. & S. INV 15.88 E. INV 15.78				
25 30" RCP S. FL N. FL	51 24" CMP MES S. FL 13.72 MES N. FL 14.00						
26 30" RCP S. FL N. FL	52 2 - 24" CMP S. FL 14.50 N. FL 14.05						

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DESIGNED	NAME	DATE	DRAWN	NAME	DATE	FLORIDA DEPARTMENT OF TRANSPORTATION	APPROVED BY	DATE	DATE
												JOHN ADAR	JOHN ADAR	10/89	JOHN ADAR	JOHN ADAR	10/89	APPROVED BY: JOHN ADAR	JOHN ADAR	10/89	DATE: 6/93

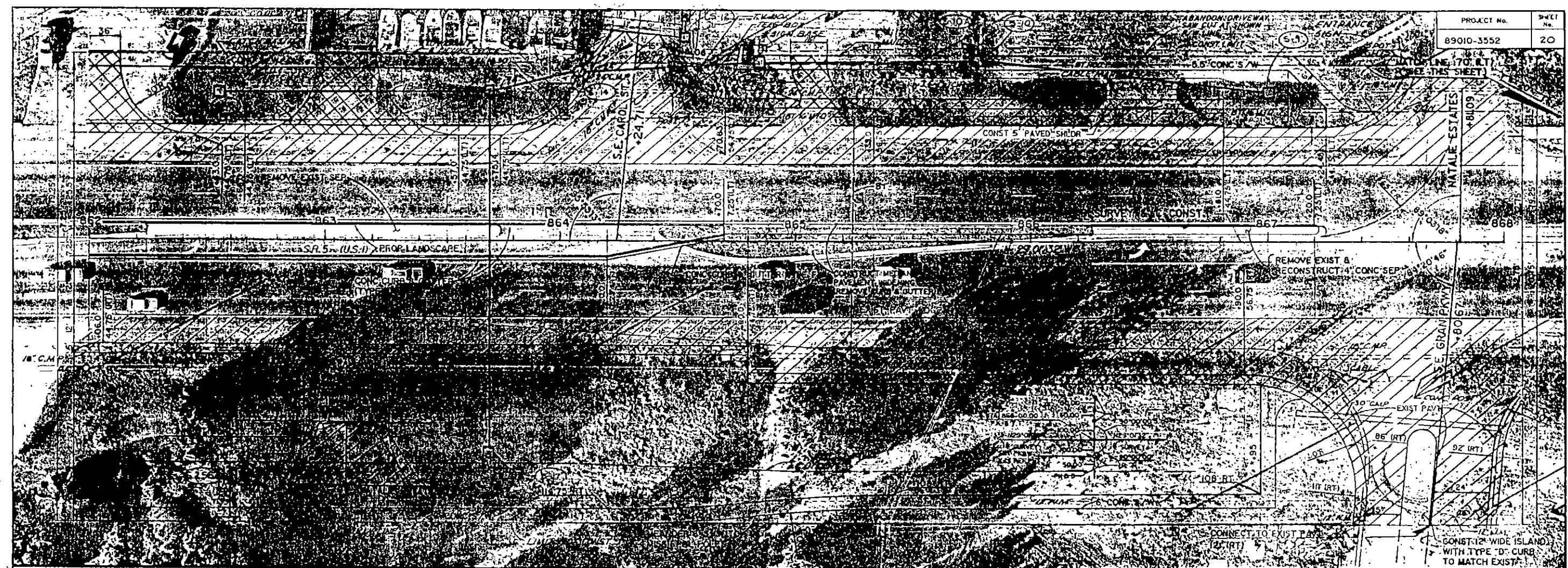
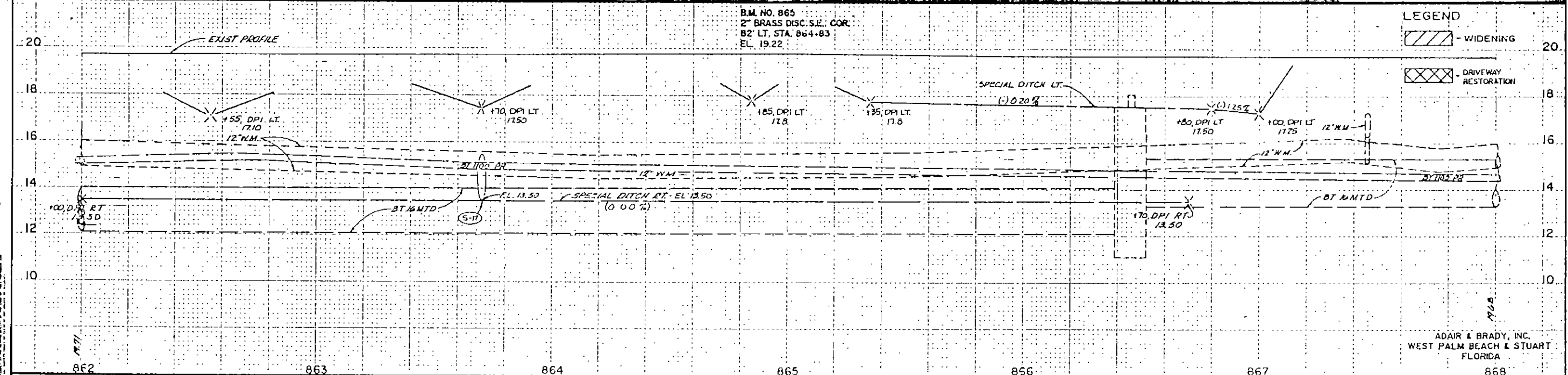
SUMMARY OF EXISTING DRAINAGE STRUCTURES

ADAR & BRADY, INC.
ENGINEERING ARCHITECTS
LAND SURVEYORS



DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED BY	MW	DATE	4-88	DRAWN BY	SV	DATE	4-88
CHECKED BY	JA	DATE	4-88	CHECKED BY	MW	DATE	4-88
SUPERSEDED BY JOHN ADAIR, P.E.				APPROVED BY JOHN ADAIR, P.E. DATE 3/91			



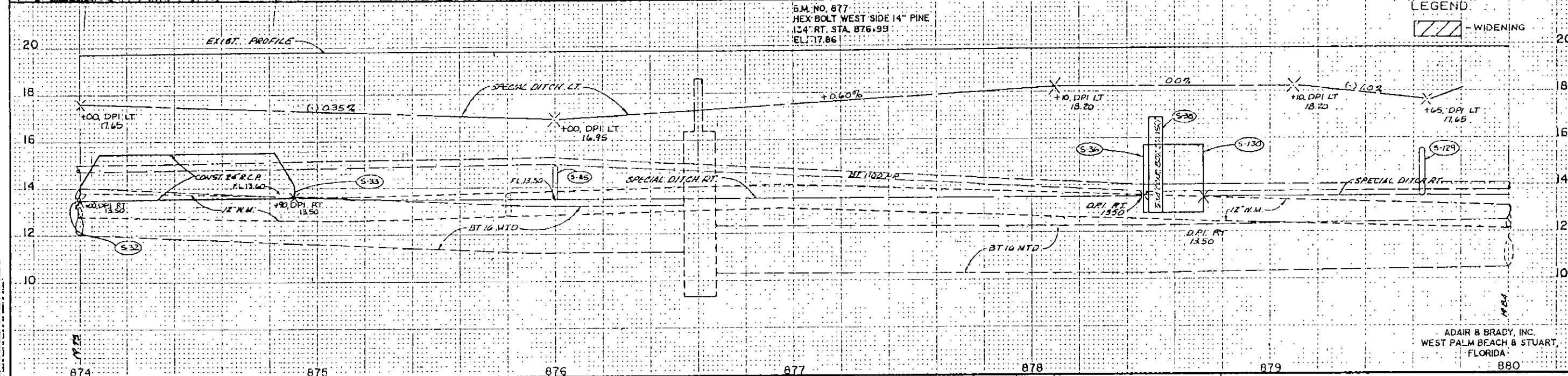
ADAIR & BRADY, INC.
WEST PALM BEACH & STUART
FLORIDA

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
CHCKD BY	MW	4-88	CHCKD BY	KB	4-88
	JA	4-88		MW	4-88

SUPERVISOR		DATE	
JOHN ADAIR, P.E.		3/91	

PLAN / PROFILE

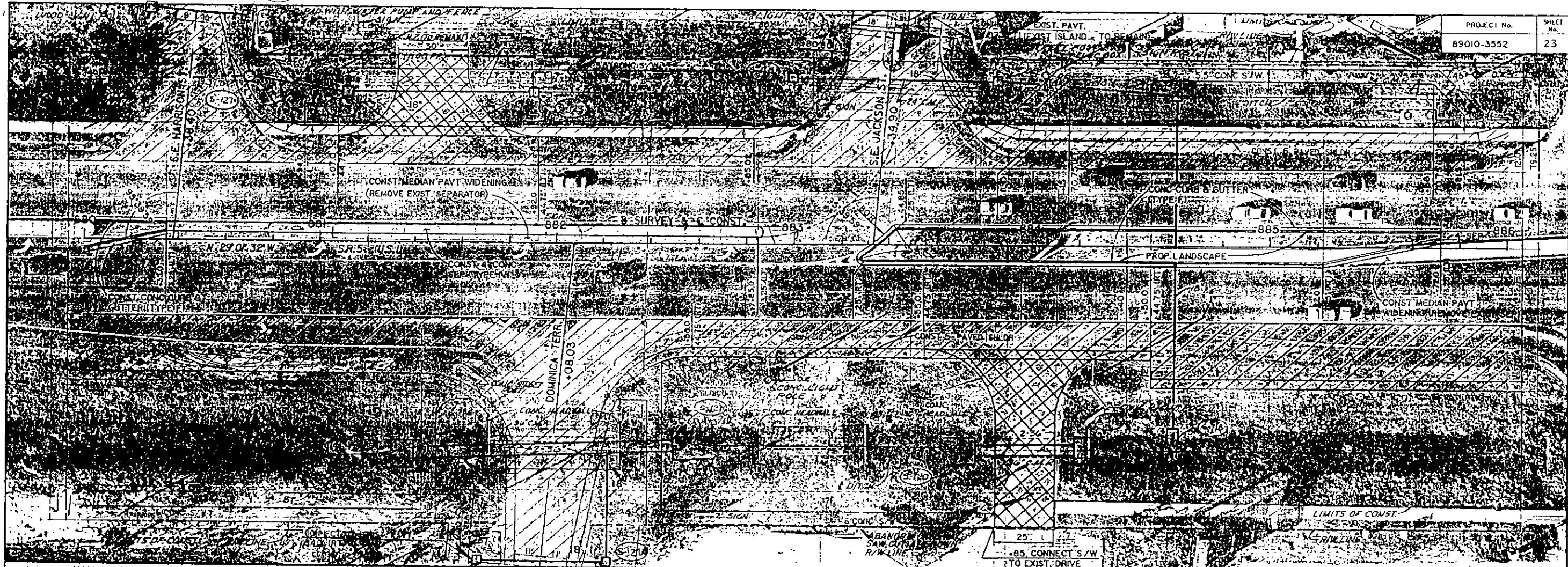
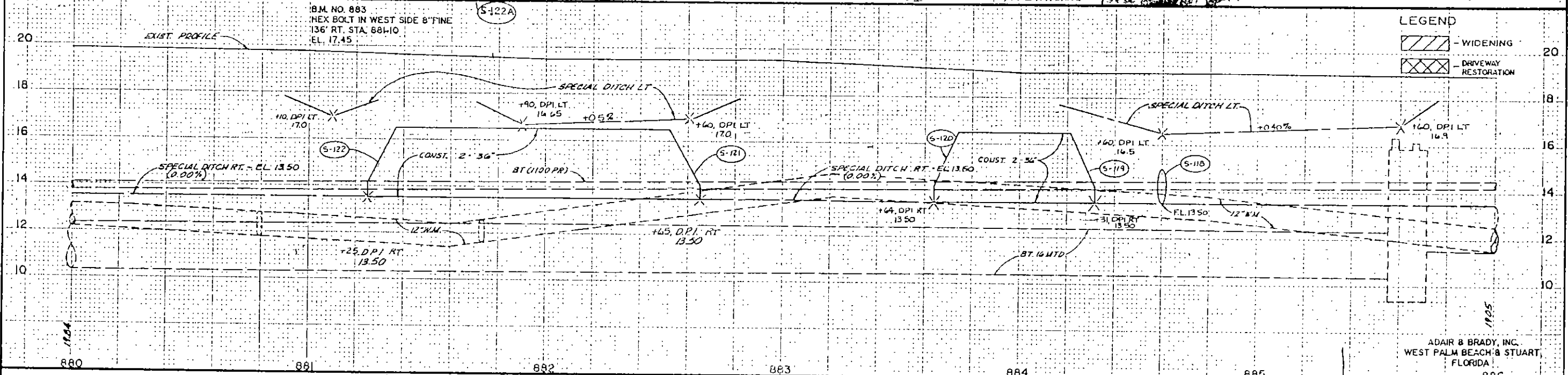


DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

NAME	DATE	NAME	DATE
DESIGNED BY: MW	4-88	DRAWN BY: KB	4-88
CHECKED BY: JA	4-88	CHECKED BY: MW	4-88
SUPERSEDED BY: JOHN ADAIR, P.E.		APPROVED BY: JOHN ADAIR, P.E. DATE 3/91	

PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA

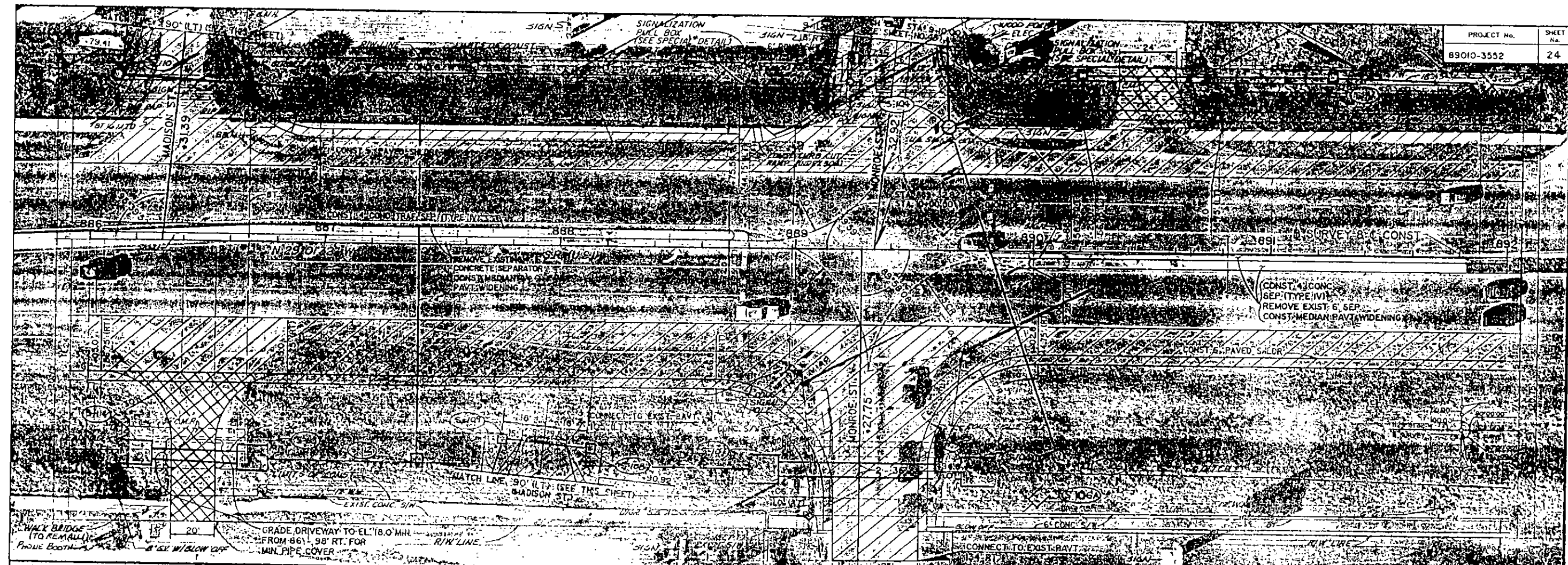
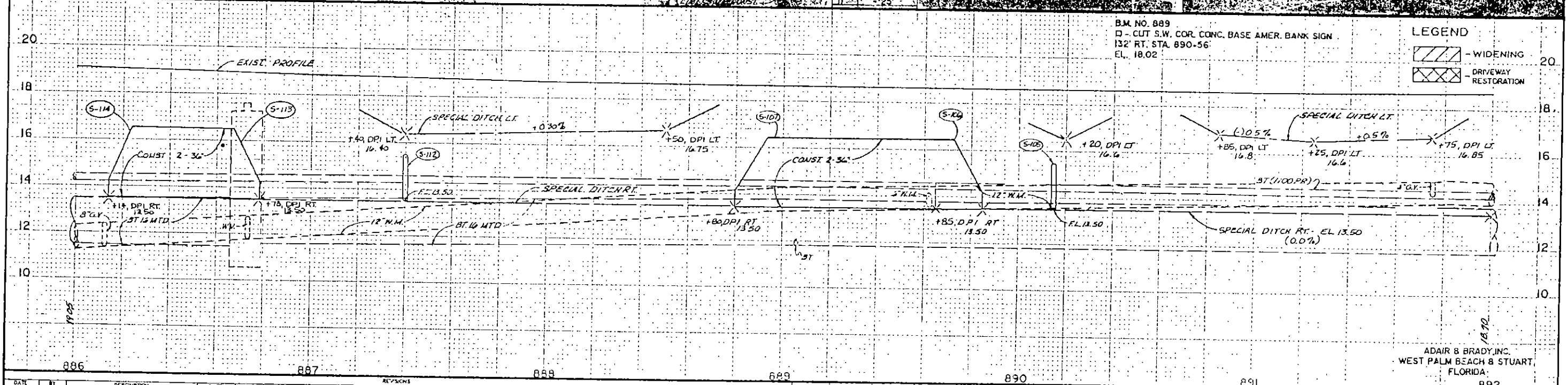


REVISIONS												SHEET				000		000					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	NAME	DATE	NAME	DATE	FLORIDA DEPARTMENT OF TRANSPORTATION		PLAN / PROFILE					
												DESIGNED BY	MW	4-88	DRAWN BY	SV	4-88			APPROVED BY			
												CHECKED BY	JA	4-88	CHECKED BY	MW	4-88						
												SUPERVISED BY JOHN ADAIR, P.E.								JOHN ADAIR, P.E. DATE 3/91			
BOONORTH AERIAL SURVEYS, INC. Aerial Photography Services												FLIGHT DATE: FEB. 14, 1988											

PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA

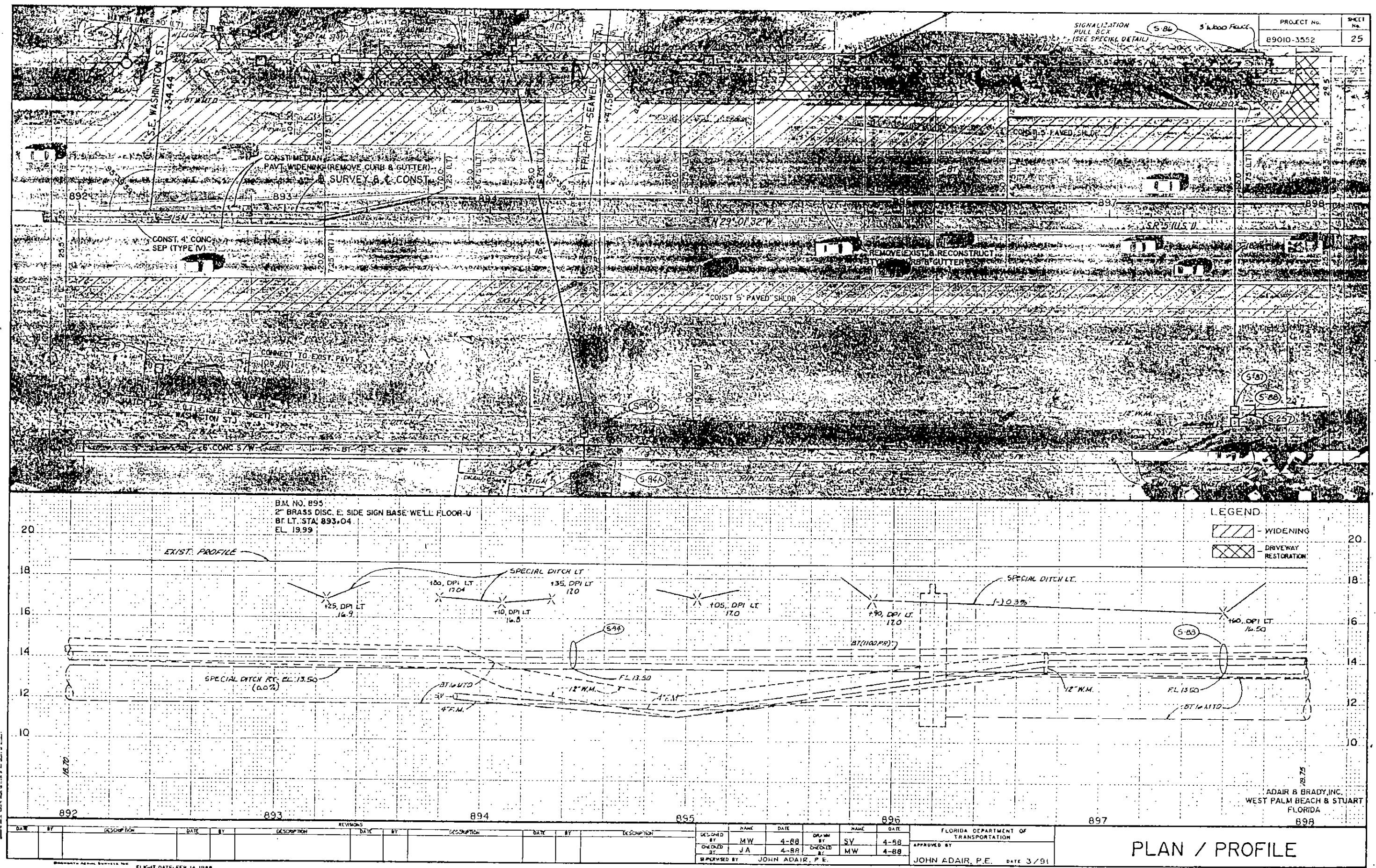
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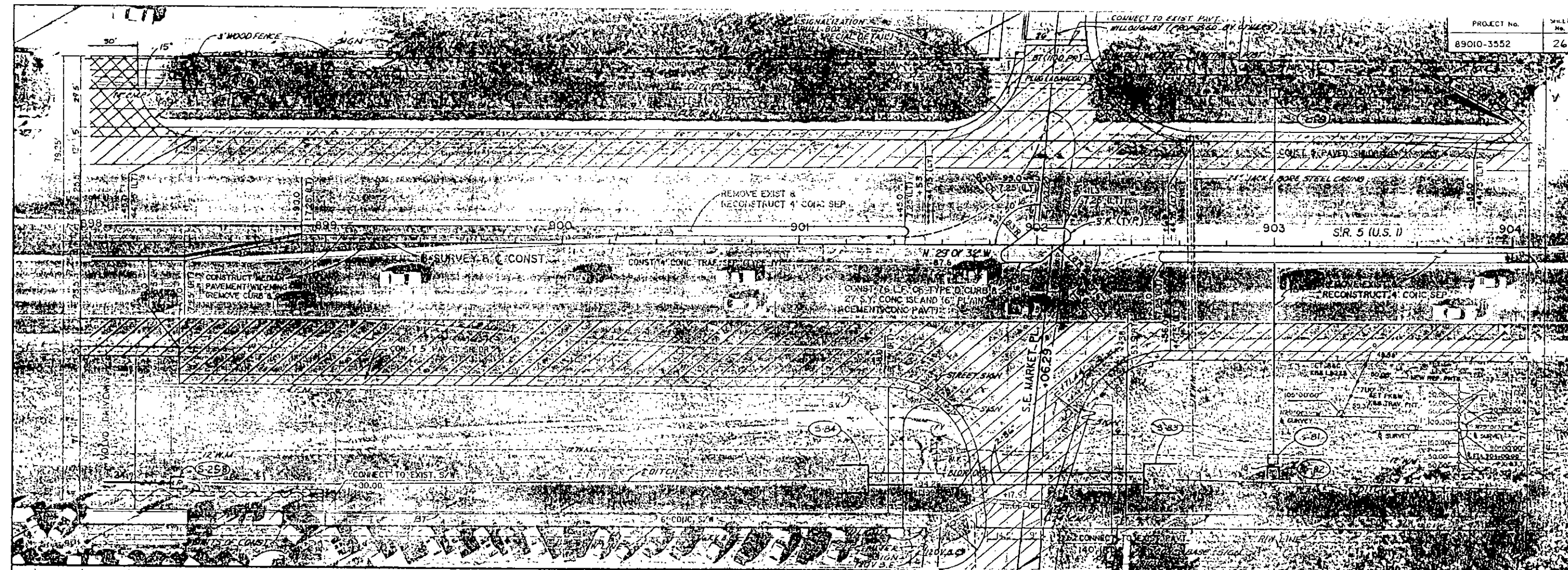
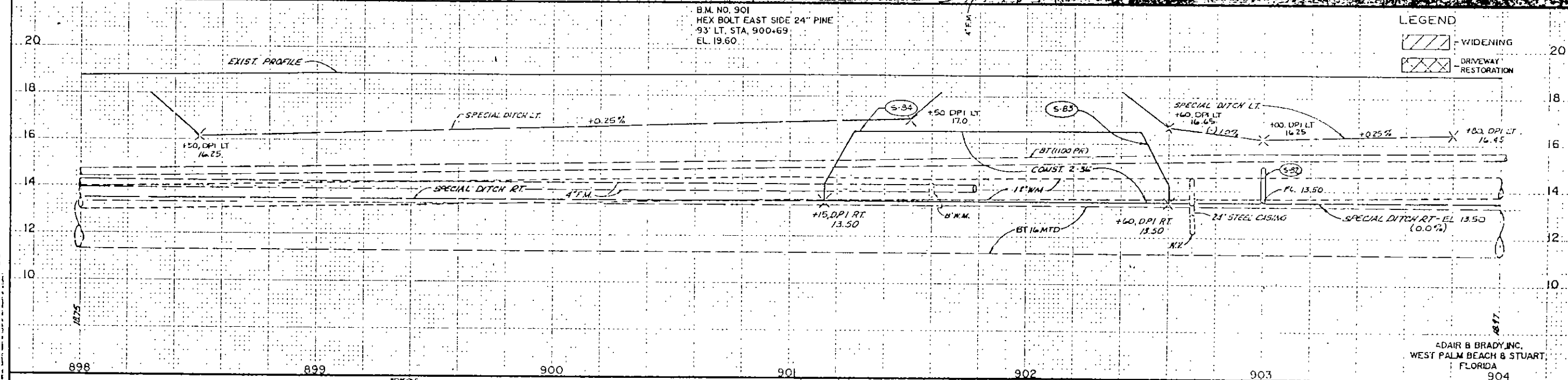


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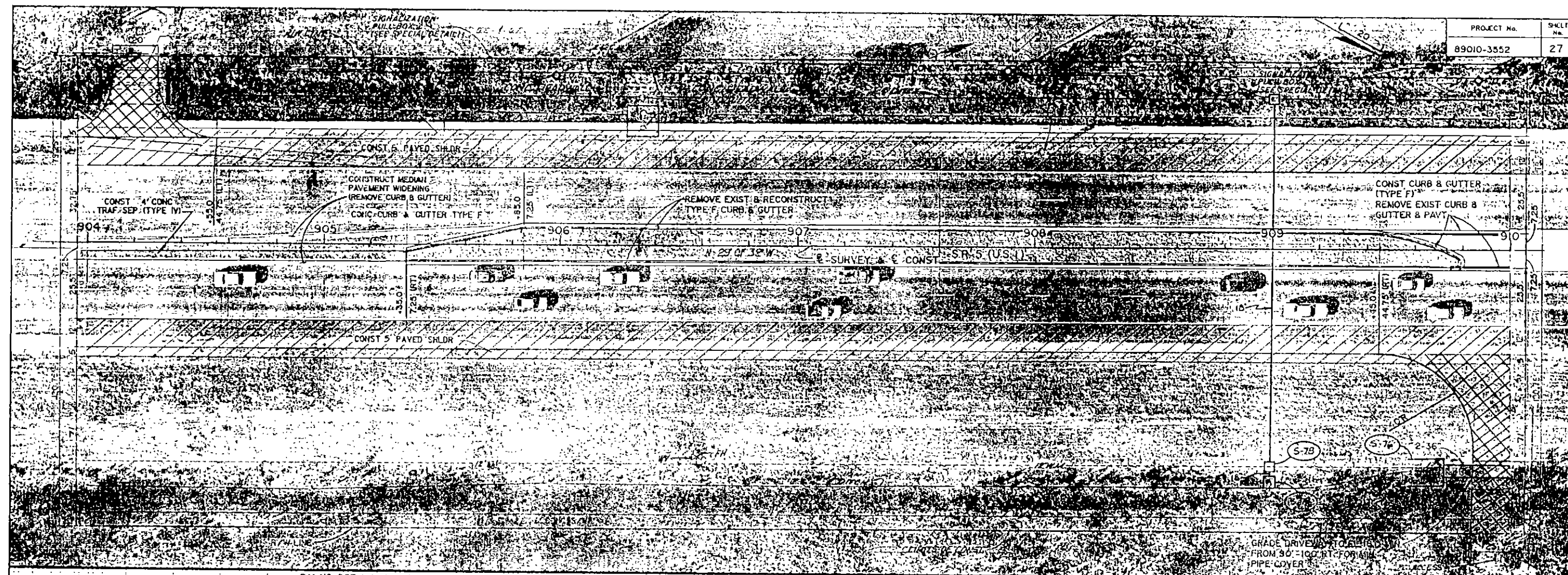
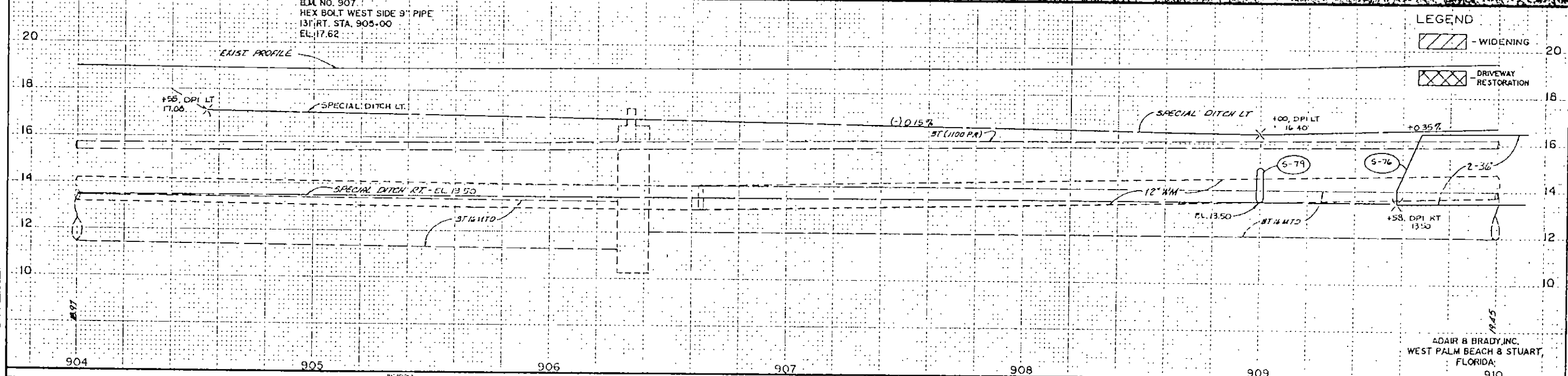
PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA



[illegible]

PLAN / PROFILE



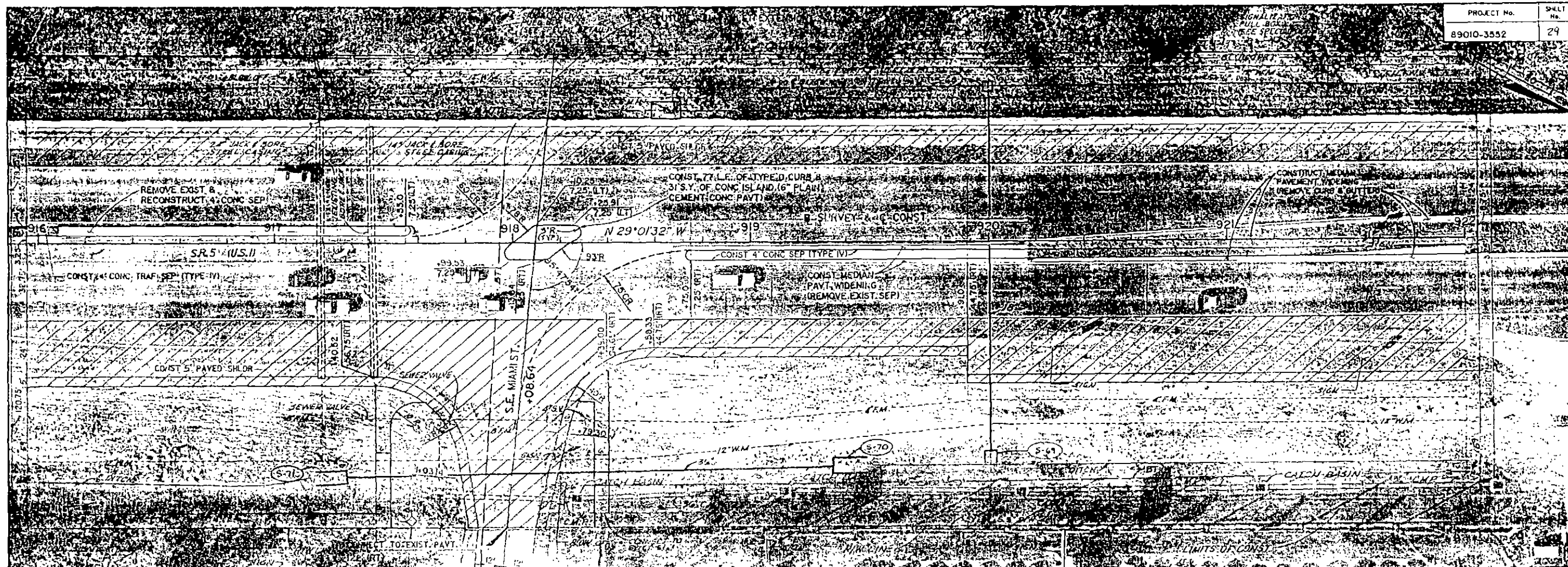
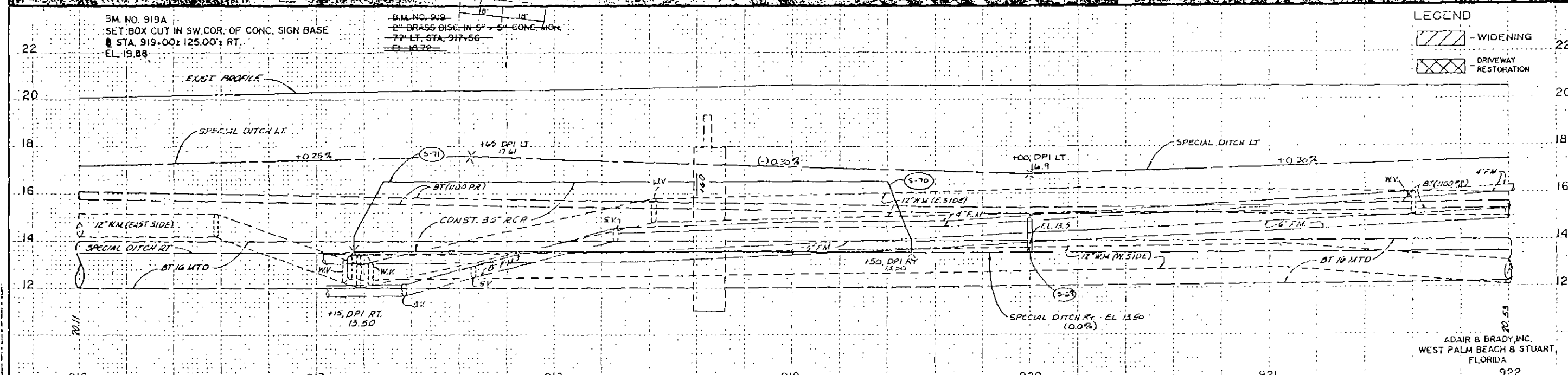
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CHECKED BY	RFH	DATE	4-88	CHECKED BY	MW	DATE	4-88
SUPERVISED BY: JOHN ADAIR, P.E.				APPROVED BY: JOHN ADAIR, P.E. DATE 3/91			

PLAN / PROFILE

BRADY & BRADY, INC. FLIGHT DATE: FEB. 14, 1988

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA

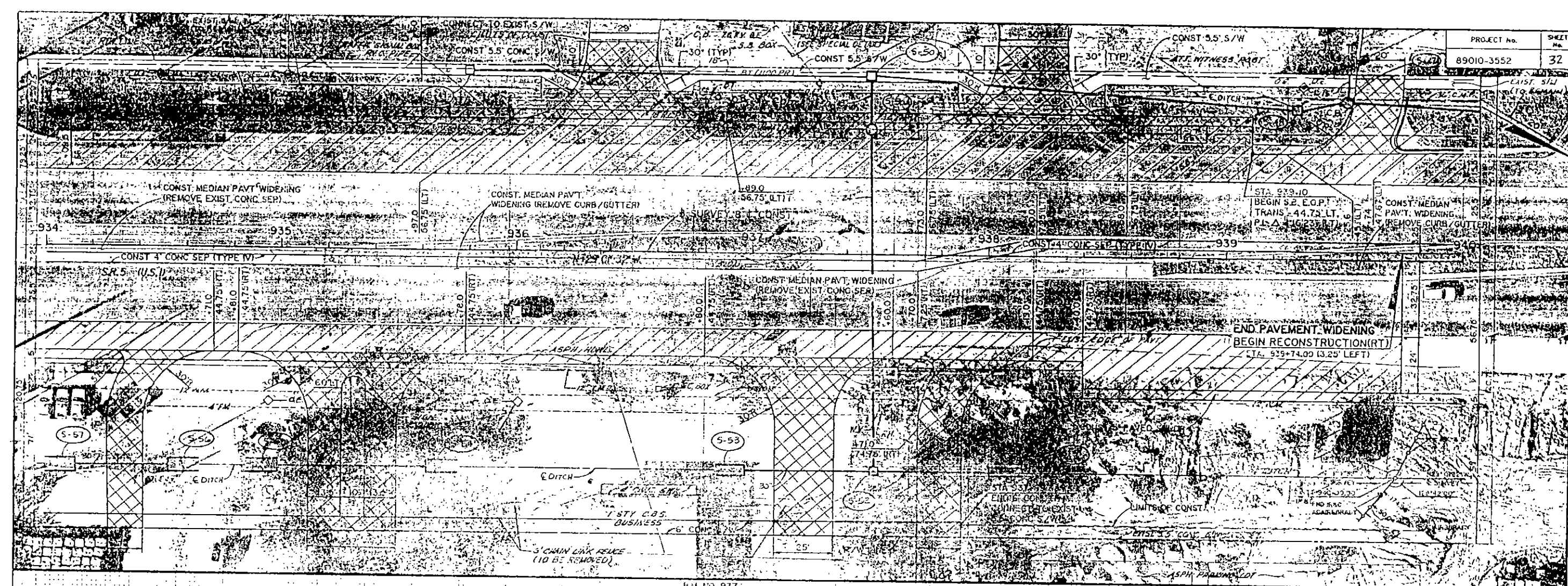


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MW	MW	4-88	FH	FH	4-88	JOHN ADAIR, P.E.	JOHN ADAIR, P.E.	DATE 3/91
RFH	RFH	4-88	MW	MW	4-88			

PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA

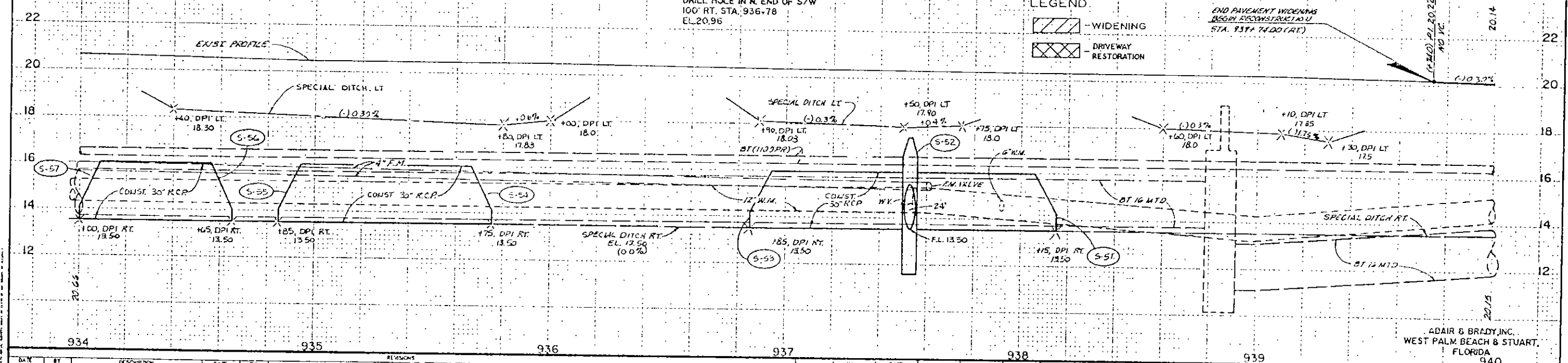


B.M. NO. 937
DRILL HOLE IN N. END OF S/W
100' RT. STA. 936+78
EL. 20.96

LEGEND

 - WIDENING
 - DRIVEWAY RESTORATION

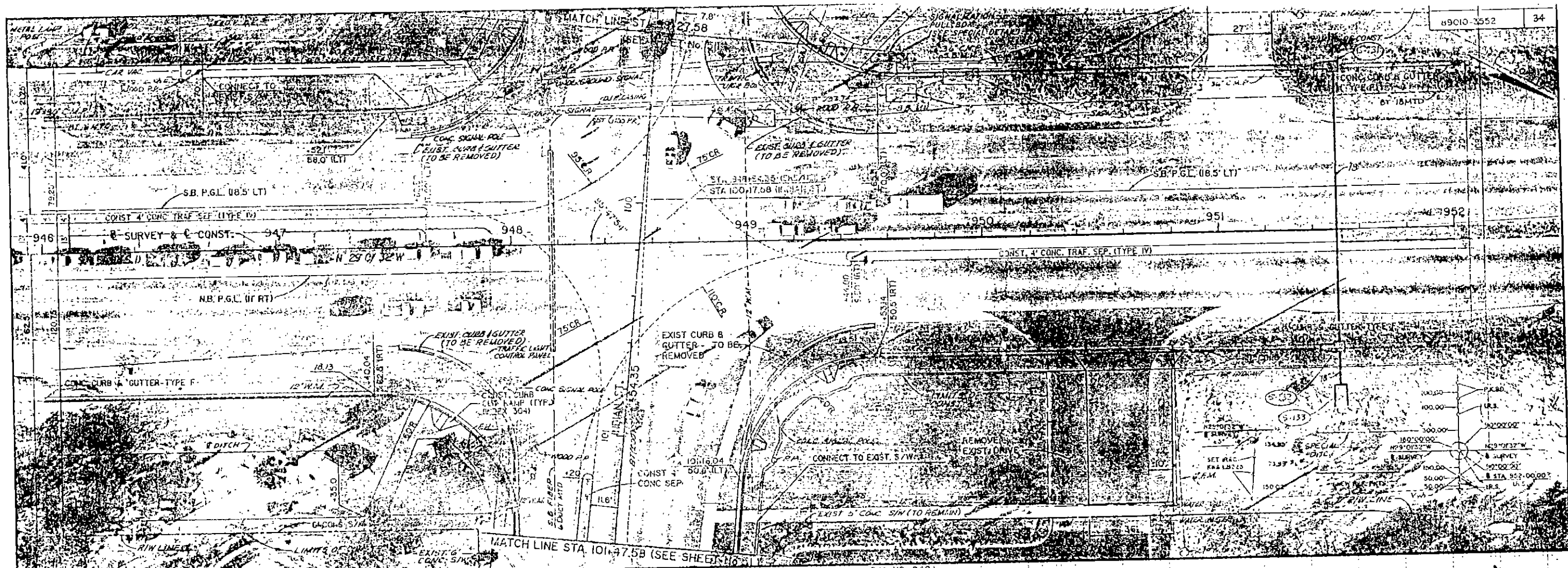
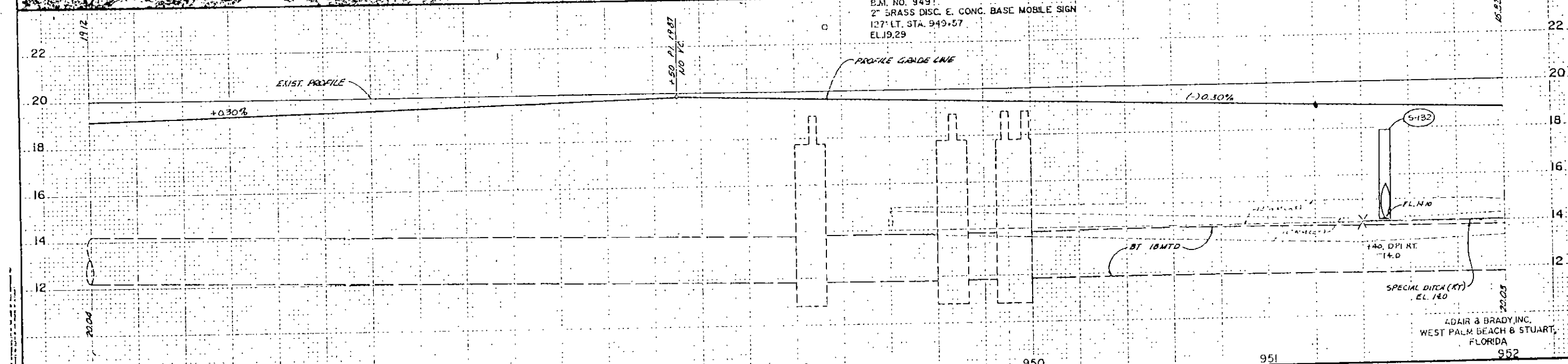
END PAVEMENT WIDENING
BEGIN RECONSTRUCTION
STA. 938+74.00 (RT)



ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA
940

REVISIONS						938						937						938					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE	FLORIDA DEPARTMENT OF TRANSPORTATION					
												CHECKED BY	MW	4-88	CHECKED BY	FH	4-88	APPROVED BY					
												DESIGNED BY	RFH	4-88	DESIGNED BY	MW	4-88	JOHN ADAIR, P.E. DATE 3/9					
BIOGRAPHIC AERIAL SURVEYS THE FLIGHT DATED FEB. 14, 1983												5. PLANNED BY JOHN ADAIR, P.E.											

PLAN / PROFILE

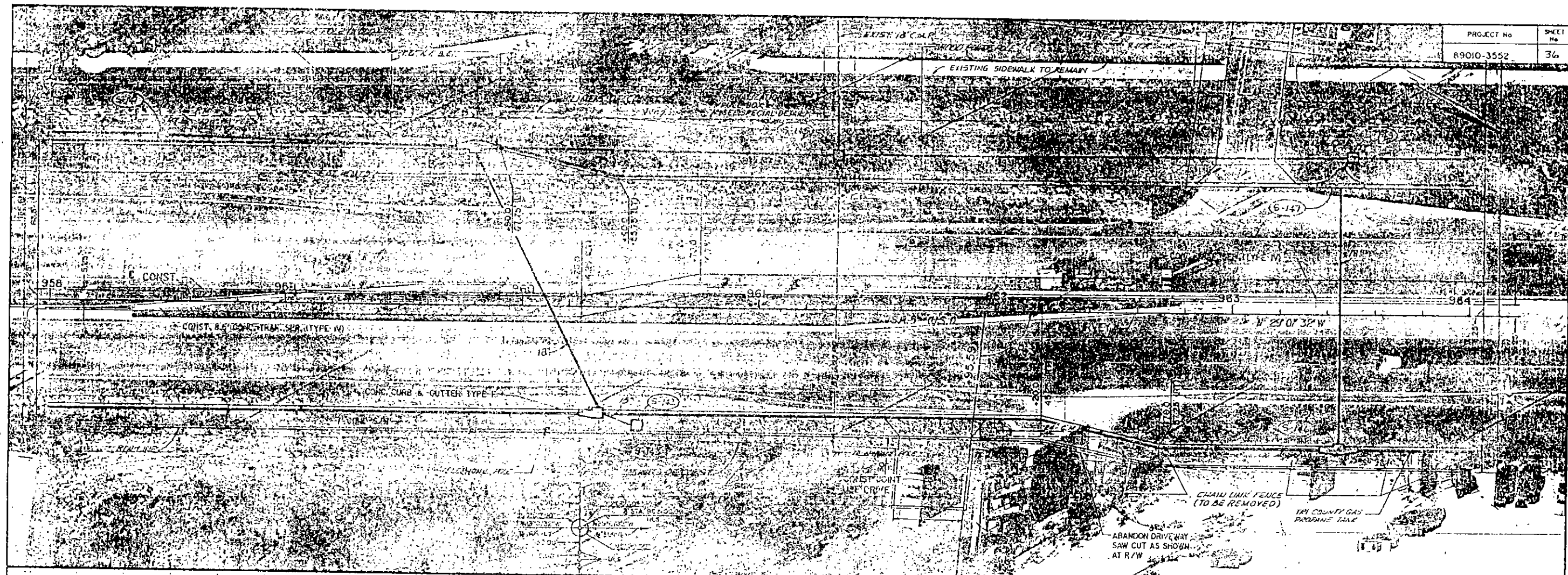
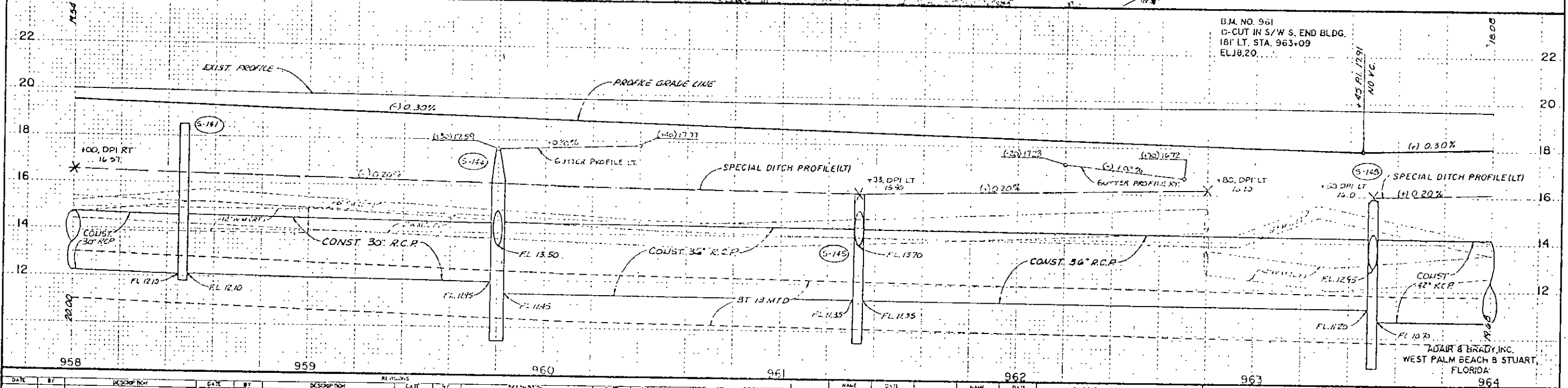


REVISIONS				DESIGNED BY				DRAWN BY				CHECKED BY				APPROVED BY			
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DESIGNED BY	M/W	DATE	4-88	DRAWN BY	FH	DATE	4-88
CHECKED BY	RFH	DATE	4-88	APPROVED BY	MW	DATE	4-88
SUPERSEDED BY JOHN ADAIR, P.E.							

FLORIDA DEPARTMENT OF TRANSPORTATION			
APPROVED BY JOHN ADAIR, P.E. DATE 3/91			

PLAN / PROFILE



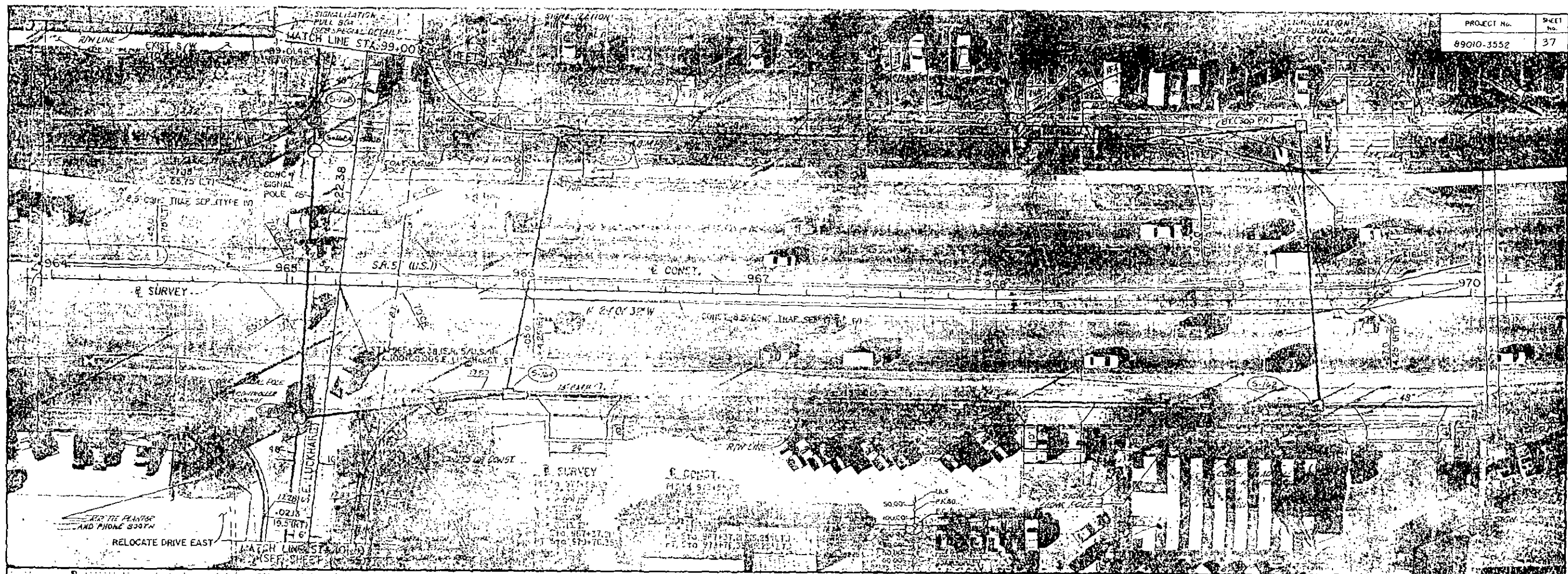
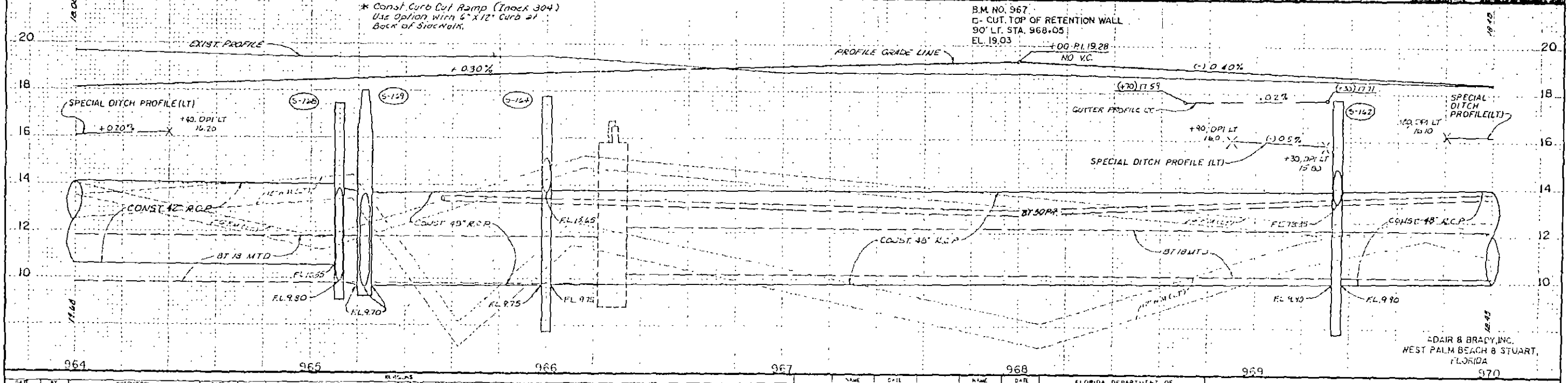
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MW	RFH	4-88	FH	MW	4-88

FLORIDA DEPARTMENT OF TRANSPORTATION	APPROVED BY	DATE
JOHN ADAIR, P.E.	JOHN ADAIR, P.E.	3/91

PLAN / PROFILE

BRANDT ALMA SURVEYING INC. FLIGHT DATE: FEB. 14, 1988

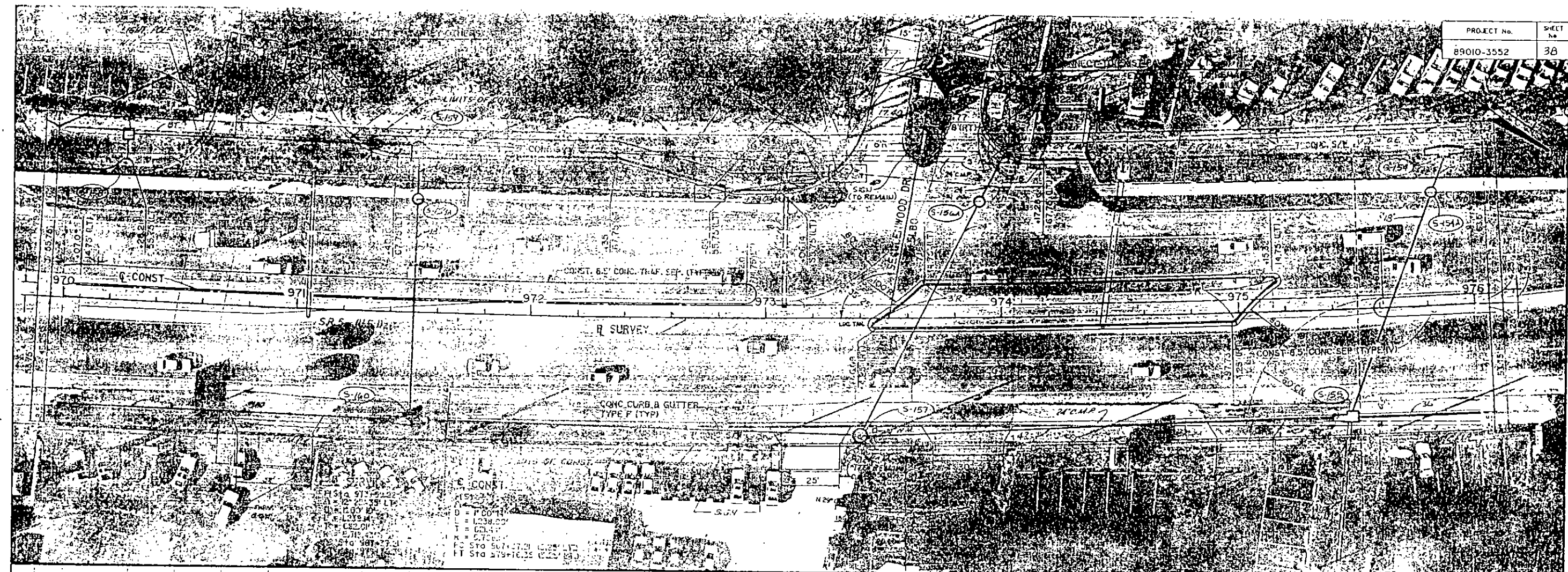
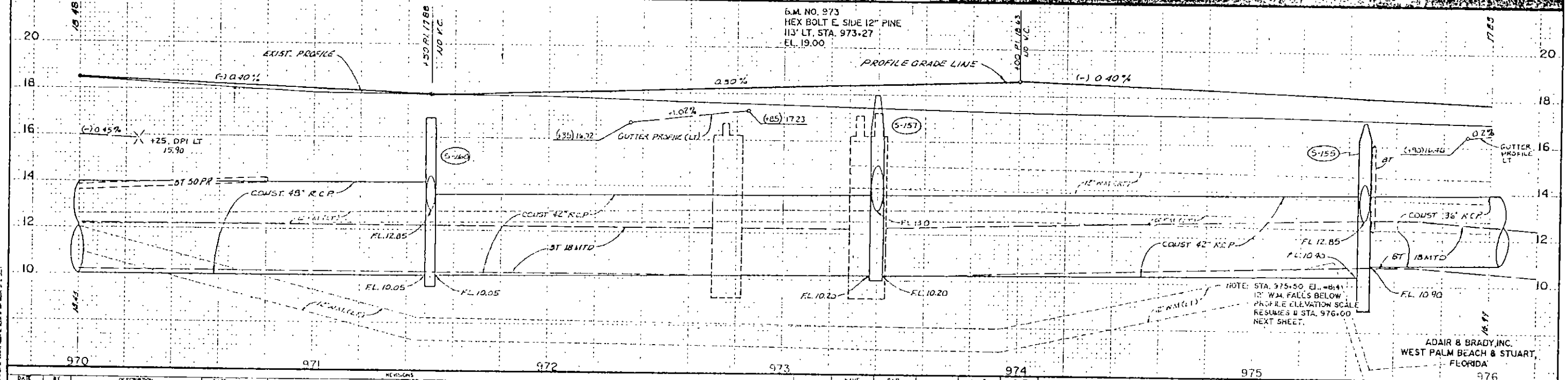


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FLORIDA DEPARTMENT OF TRANSPORTATION	APPROVED BY	DATE
	JOHN ADAIR, P.E.	

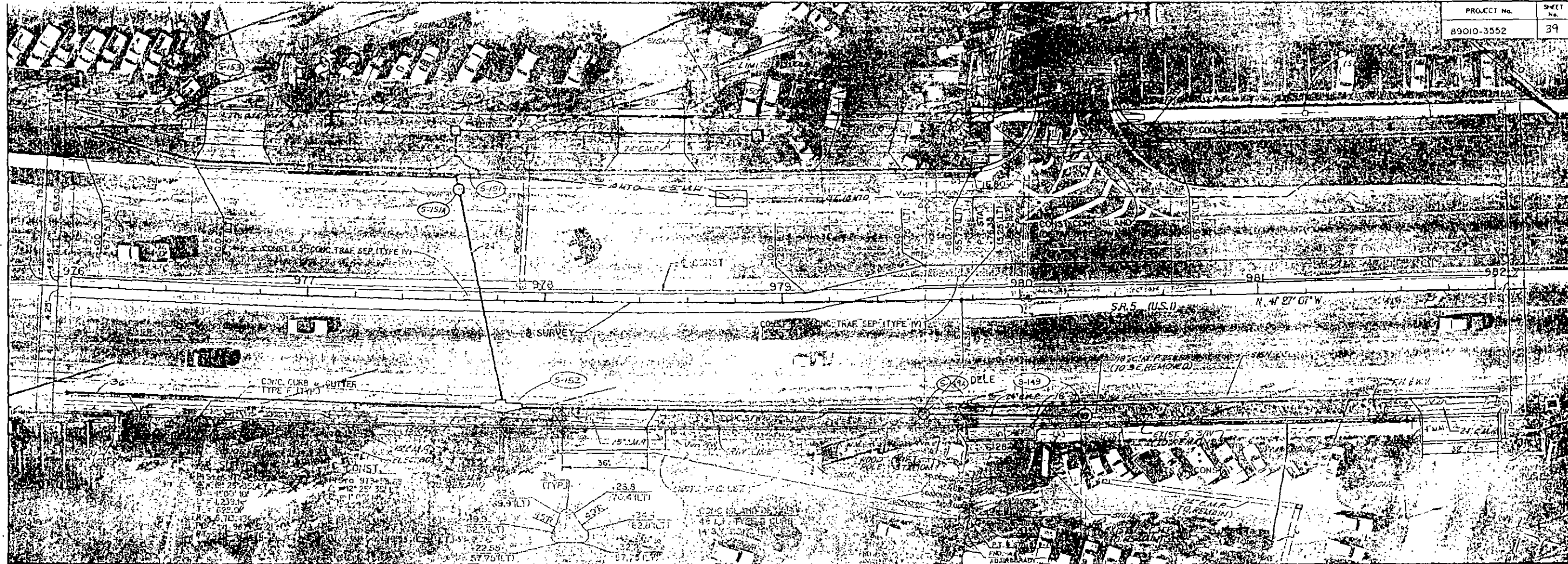
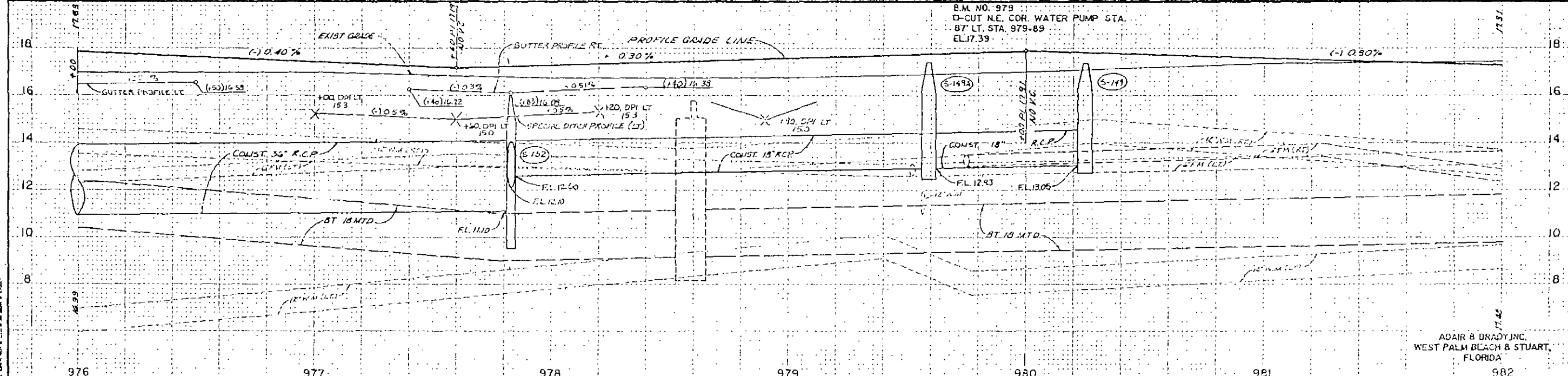
PLAN / PROFILE



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PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA

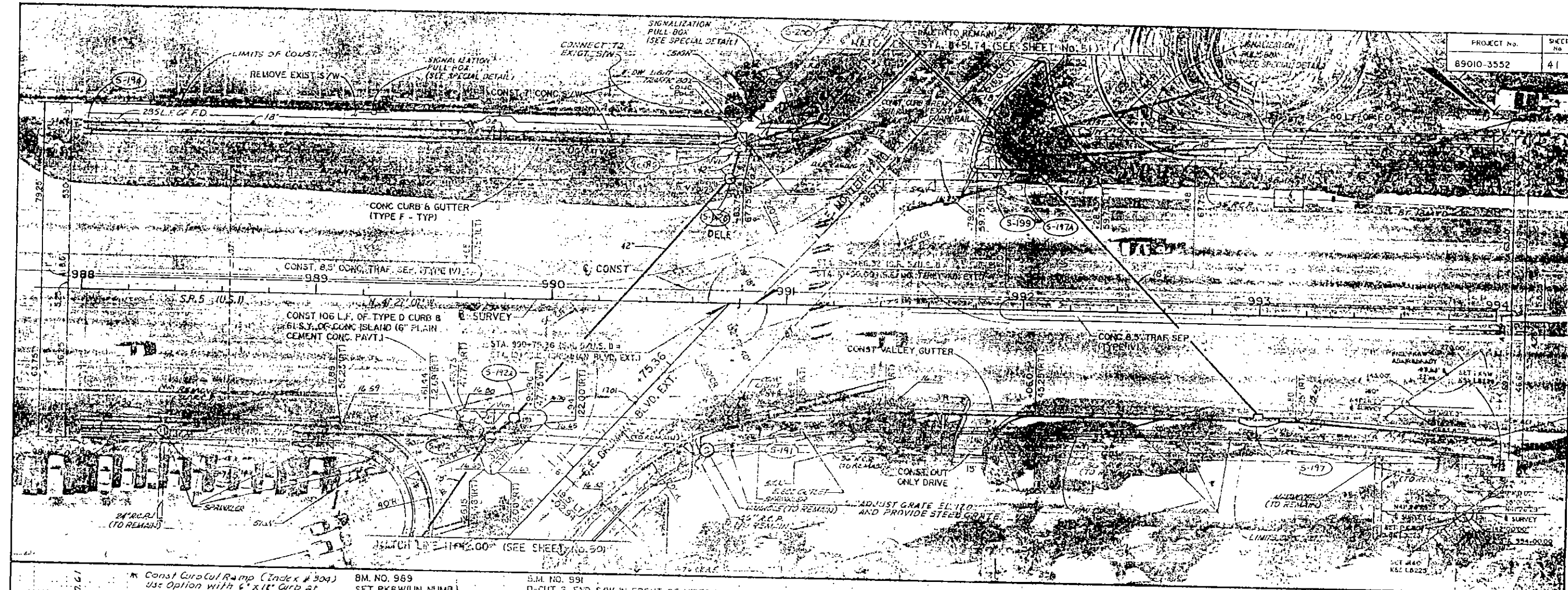
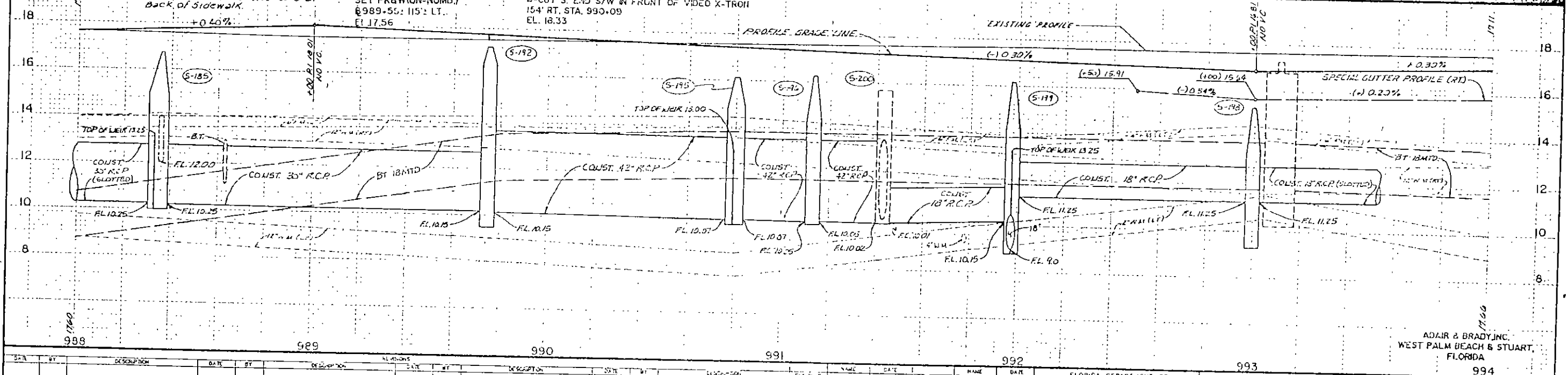


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CHECKED BY	RFH	4-88	CHECKED BY	MW	4-88
APPROVED BY: JOHN ADAIR, P.E.					

PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA



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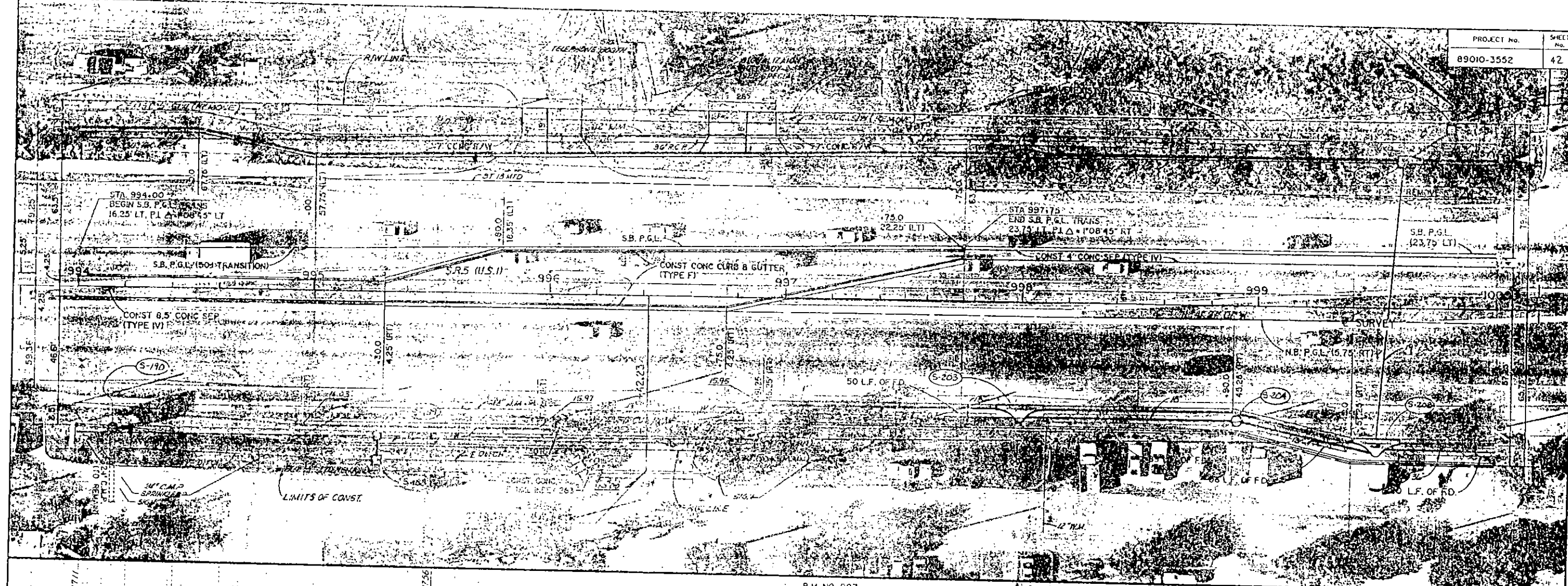
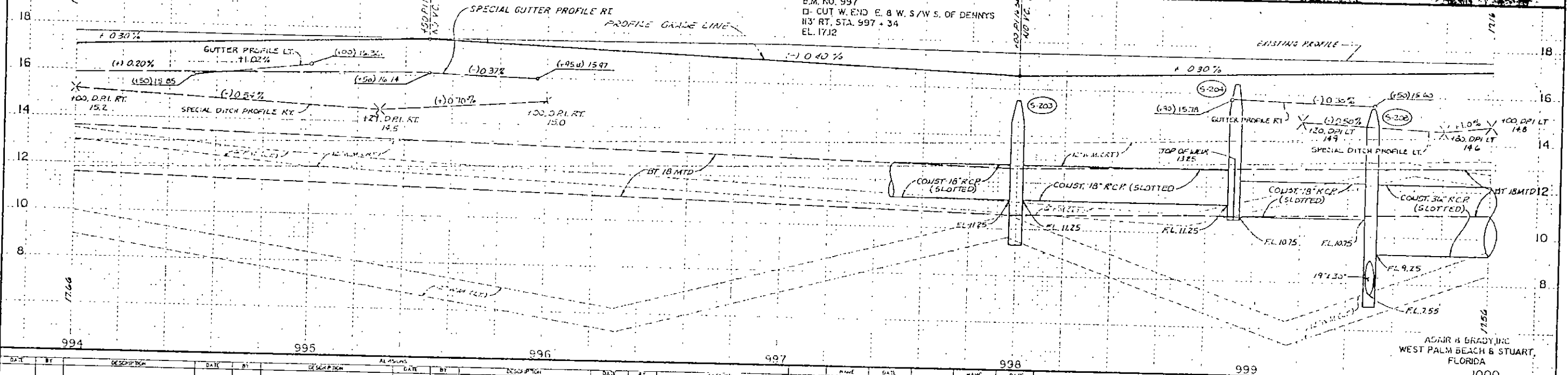
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RFH	4-82		MW	4-88	

SUPERVISOR		DATE	
JOHN ADAIR, P.E.			

APPROVED BY		DATE	
JOHN ADAIR, P.E.			

PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART,
FLORIDA



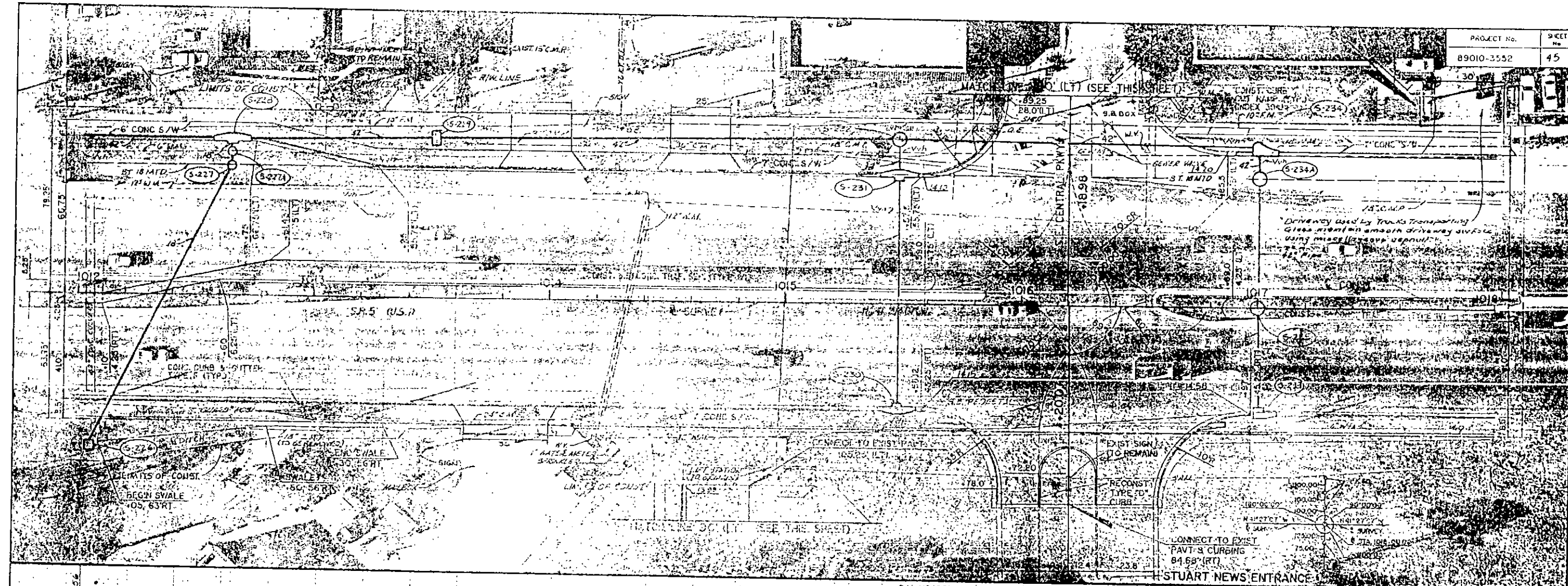
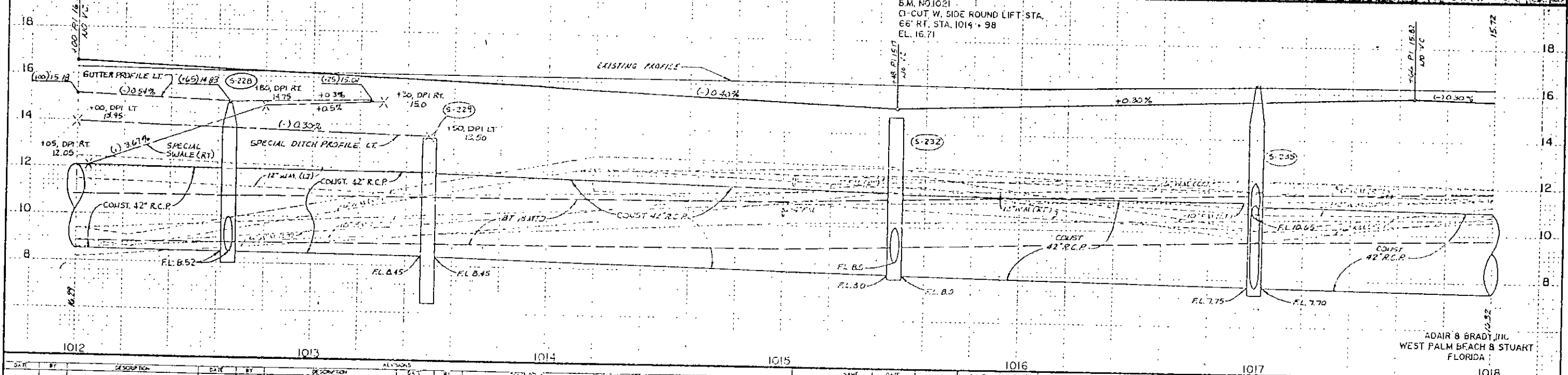
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FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY: JOHN ADAIR, P.E. DATE: _____

PLAN / PROFILE

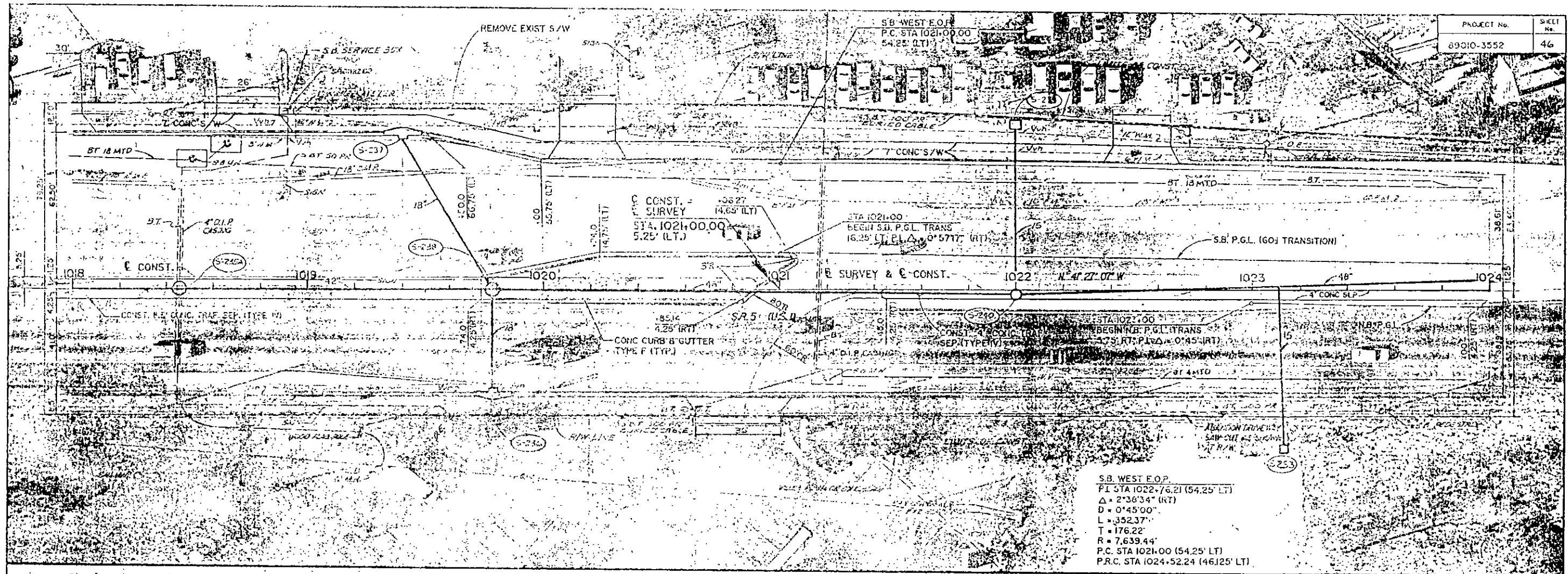
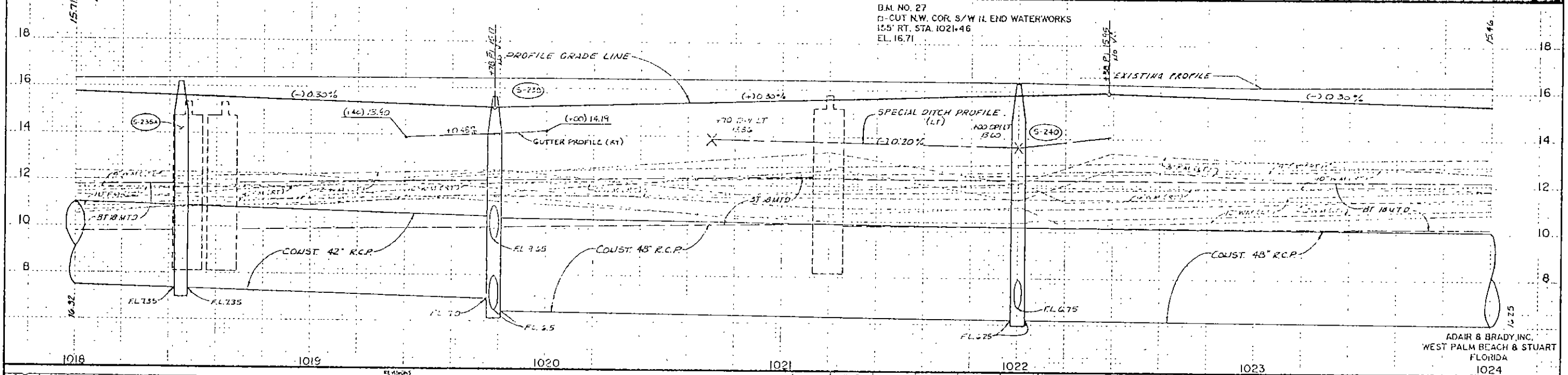


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FLORIDA DEPARTMENT OF TRANSPORTATION	
APPROVED BY	JOHN ADAIR, P.E. DATE 3/91

PLAN / PROFILE

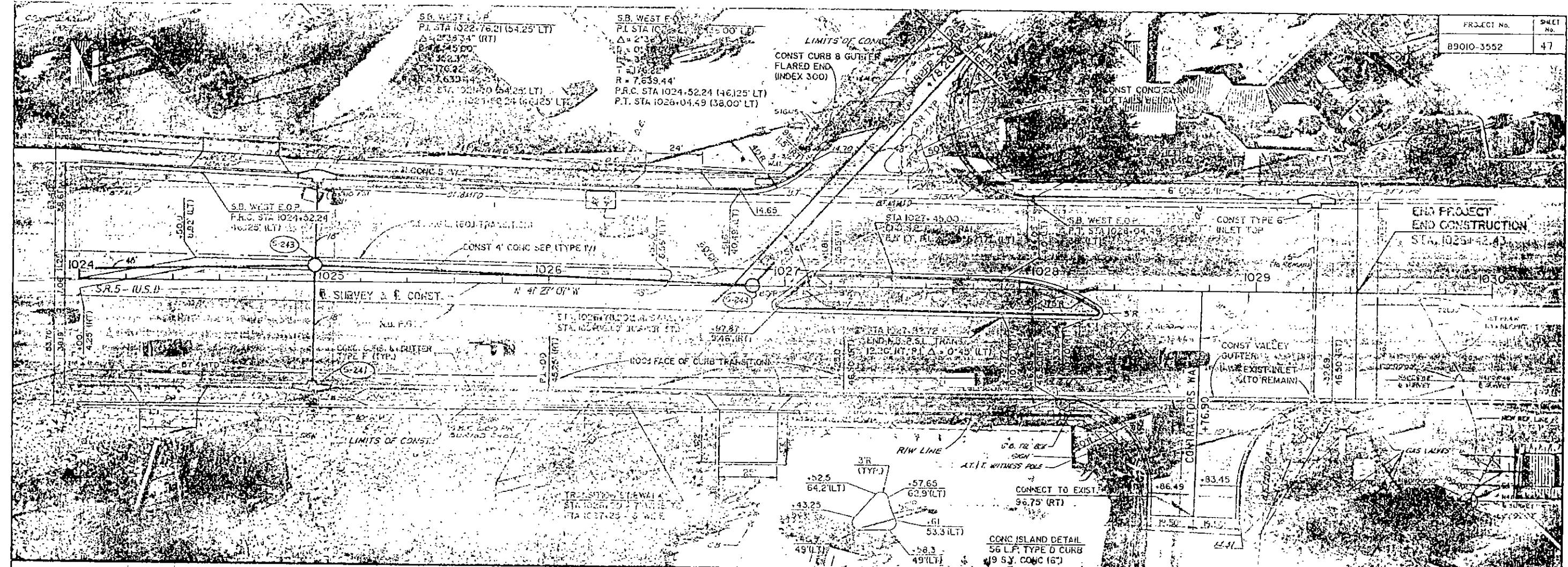
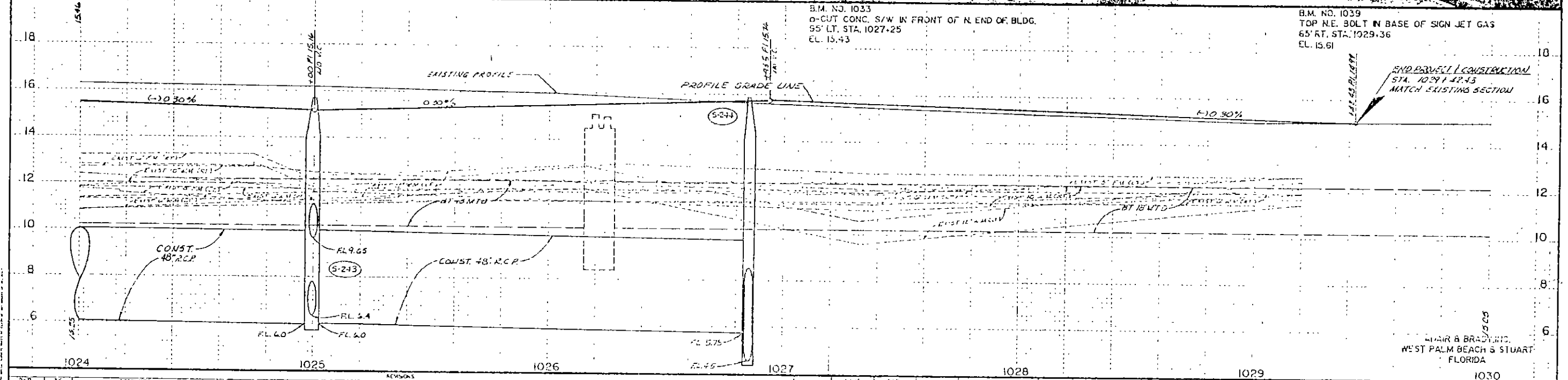


DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED BY	NAME	DATE	CHECKED BY	NAME	DATE	APPROVED BY	NAME	DATE
MW	4-88	FW	4-88	JOHN ADAIR, P.E.	DATE 3/91			
RFH	4-88	MW	4-88					

PLAN / PROFILE

ADAIR & BRADY, INC.
WEST PALM BEACH & STUART
FLORIDA

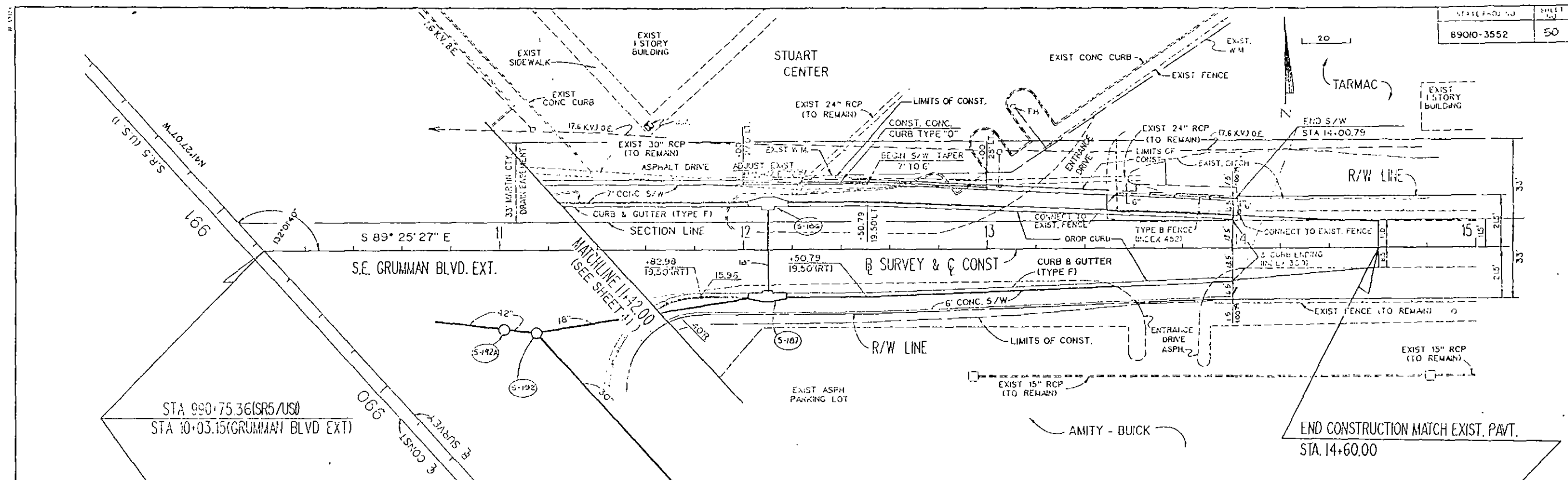
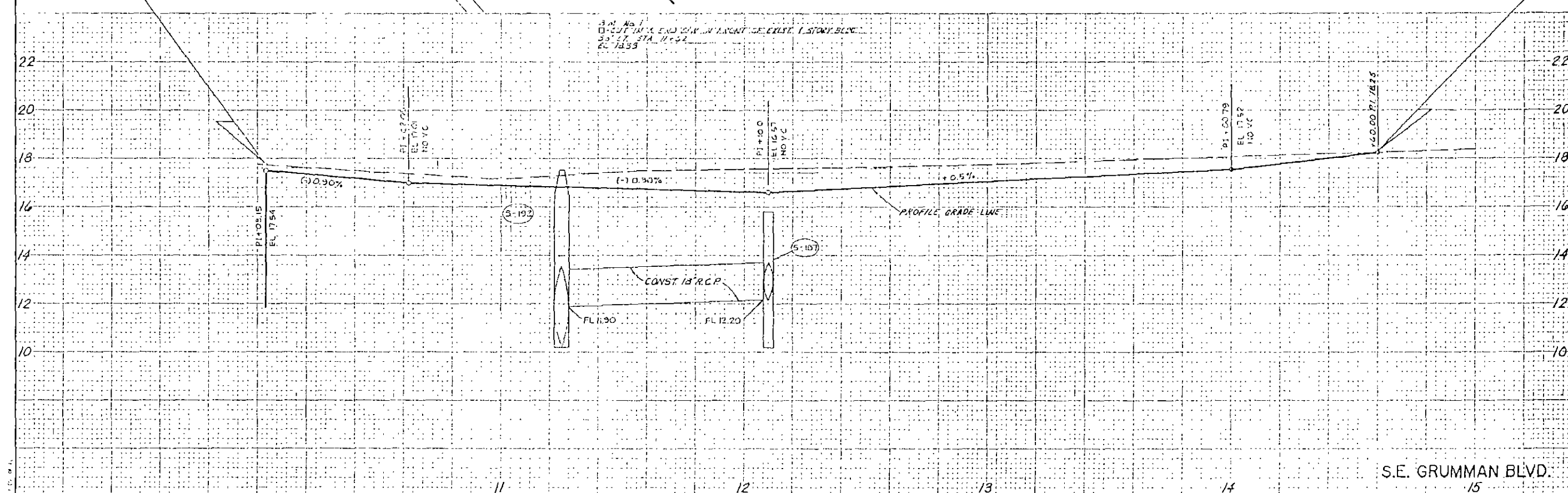


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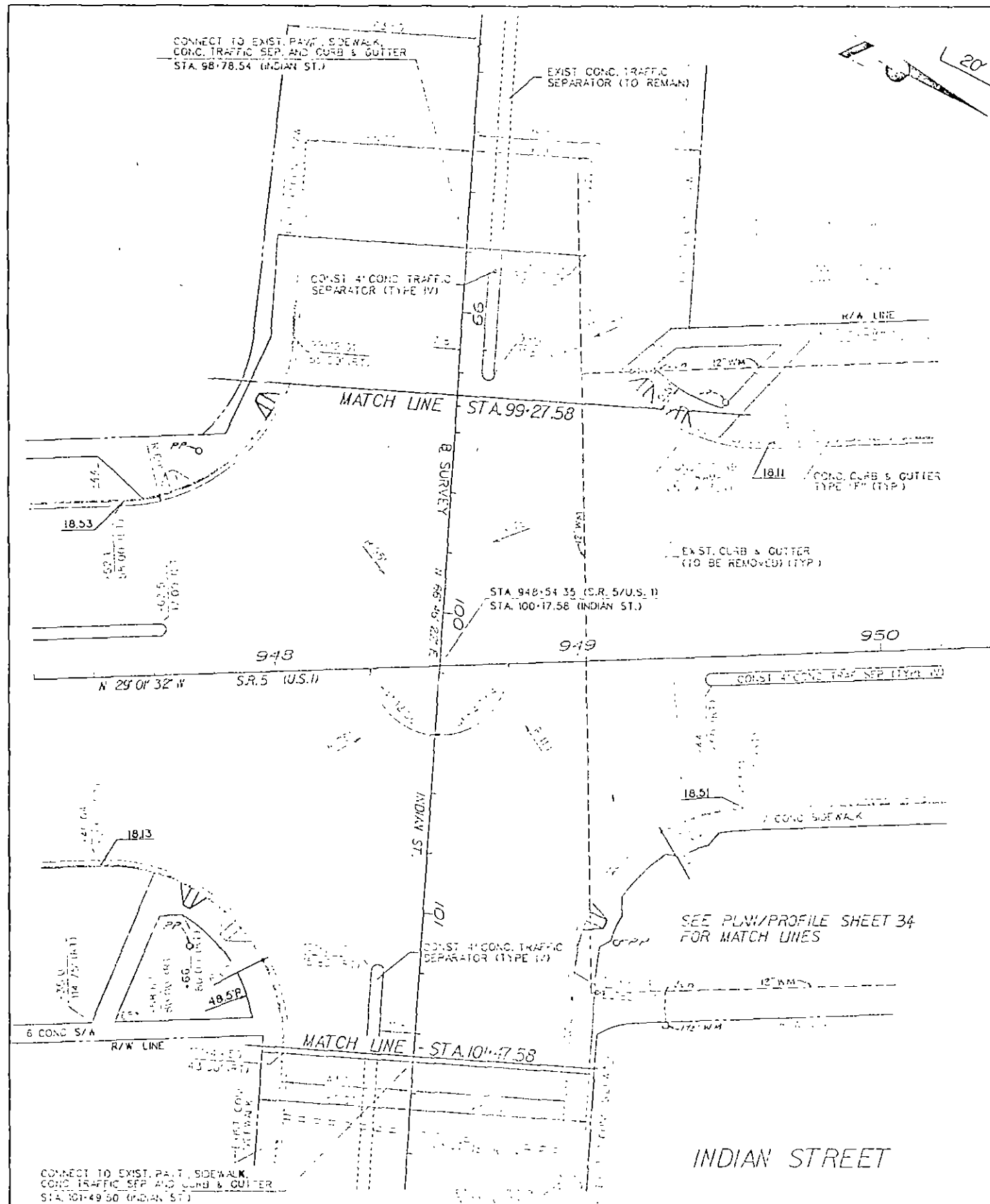
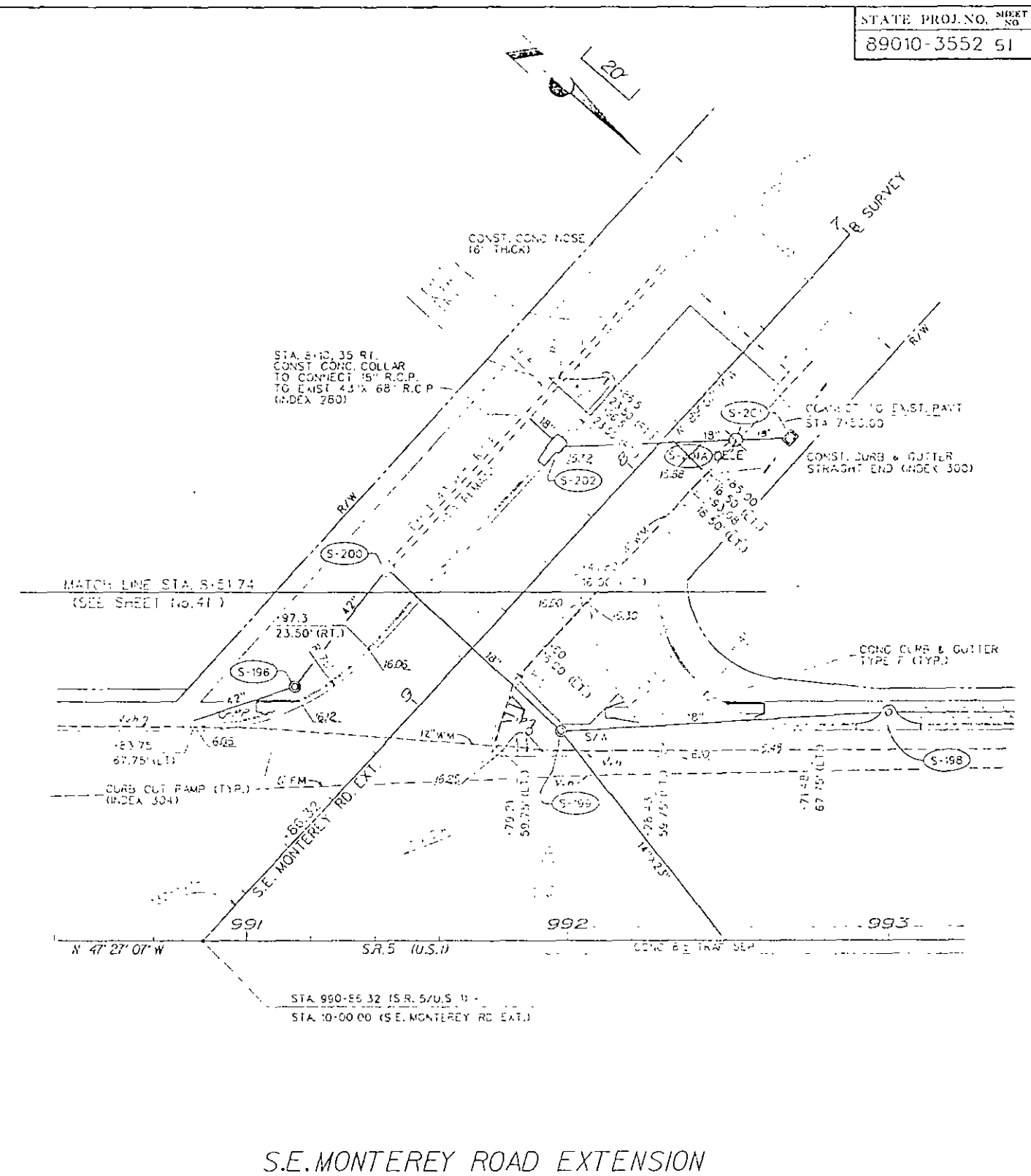
FLORIDA DEPARTMENT OF TRANSPORTATION	
APPROVED BY	DATE
JOHN ADAIR, P.E.	3/91

PLAN / PROFILE



DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION
 JOHN ADAIR, P.E. 3/91
 PLAN / PROFILE



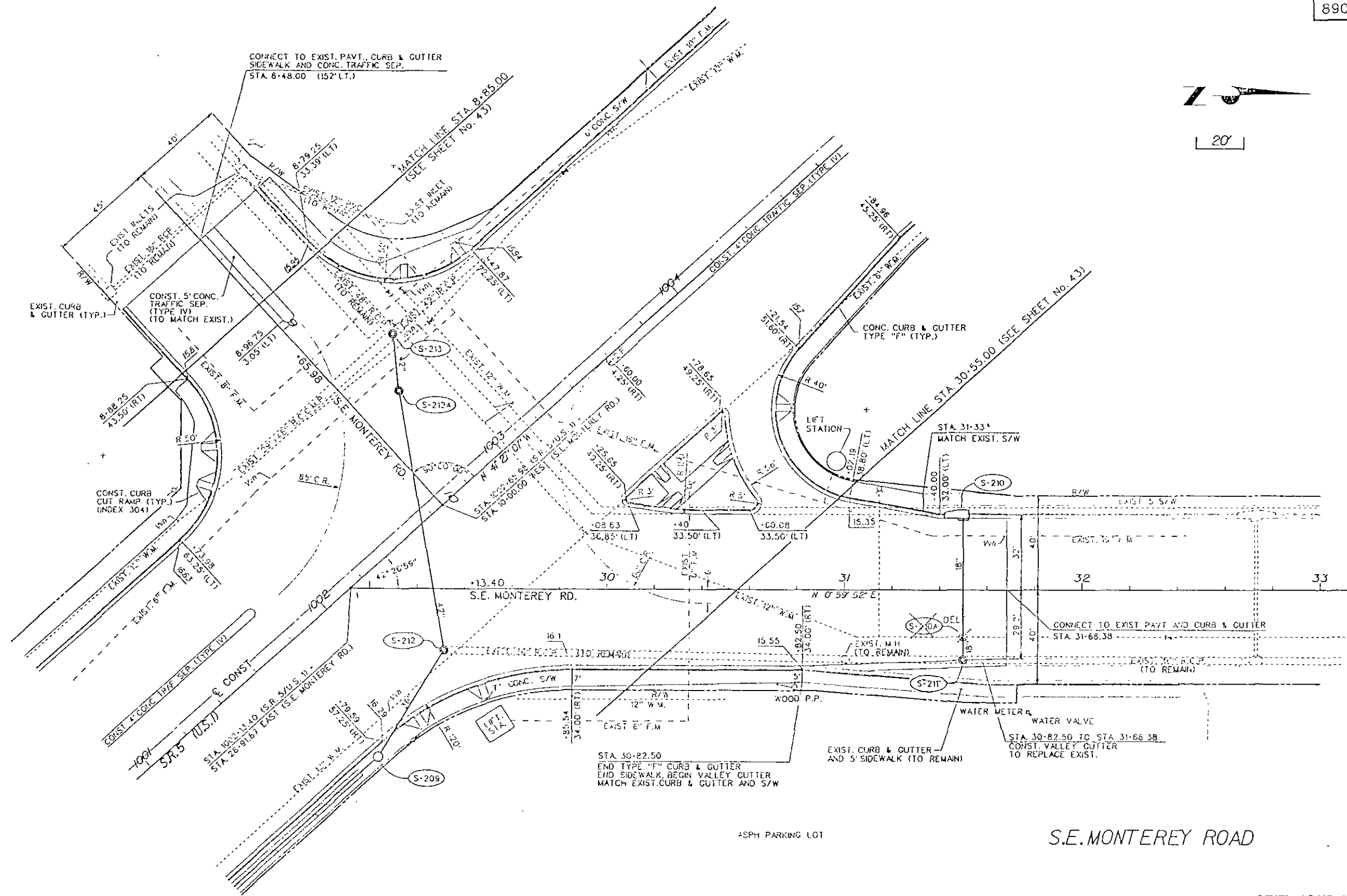
ADAIR & BRADY, INC.
 1000 ...

REVISIONS								REVISIONS				REVISIONS				REVISIONS			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		
DESIGNED	FOR	6/93	DRAWN	FOR	6/93	CHECKED	BY	6/93	BY	6/93	SUPVISED BY	JOHN ADAR	PE	6/93					

FLORIDA DEPARTMENT OF
TRANSPORTATION

APPROVED BY: JOHN ADAR
PE 6/93

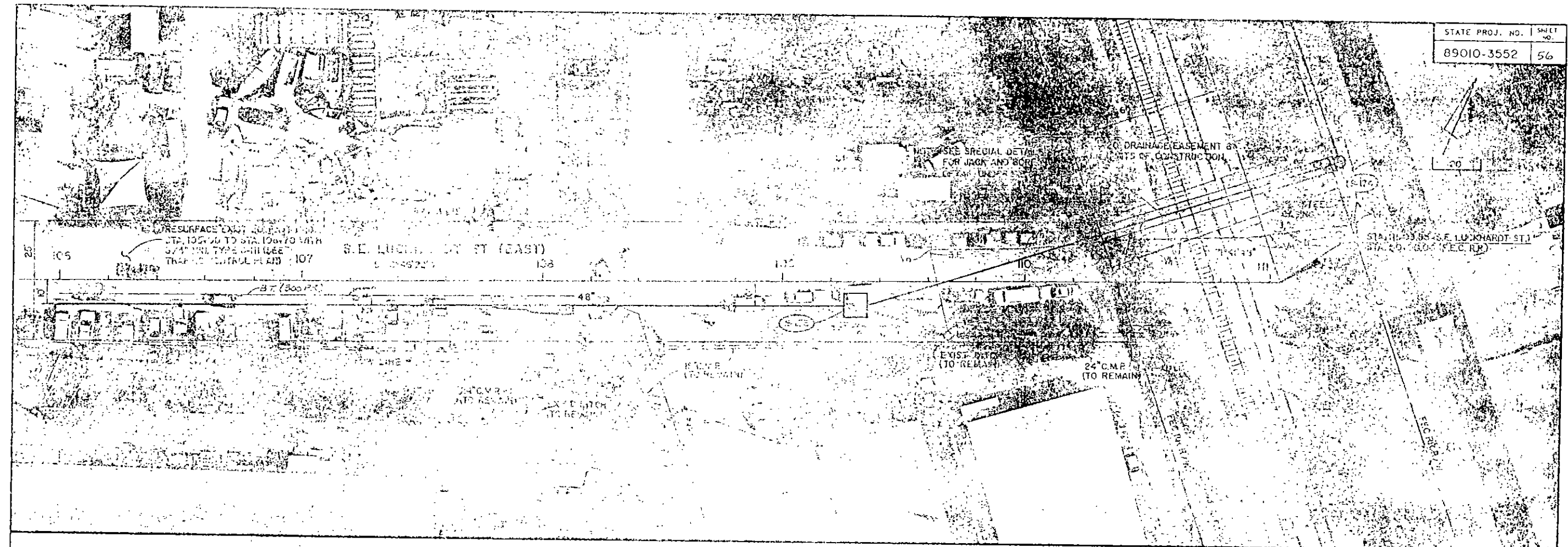
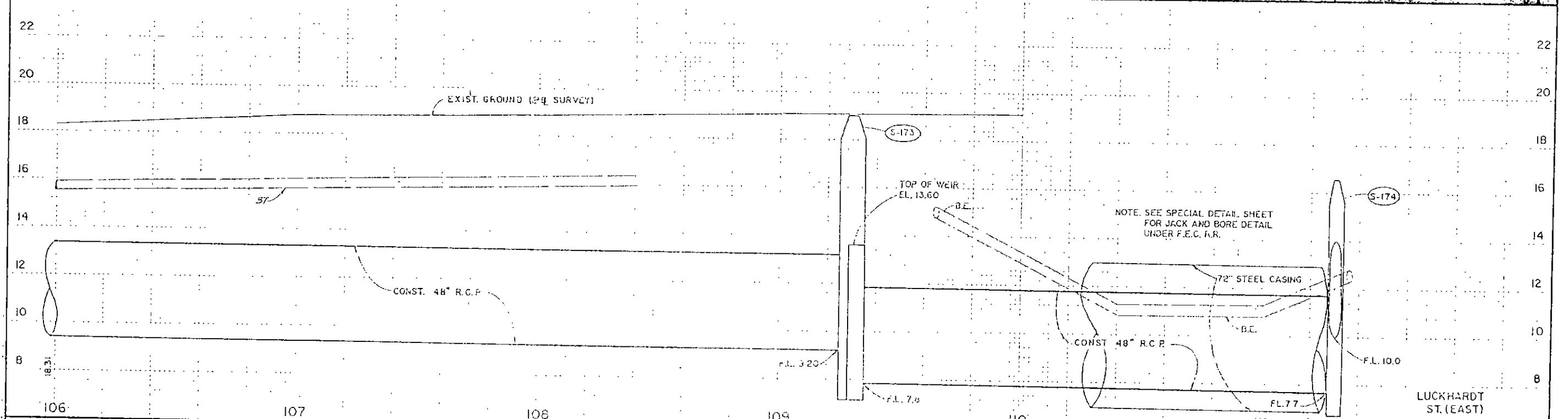
INTERSECTION DETAILS



REVISIONS												NAME		DATE		NAME		DATE		FLORIDA DEPARTMENT OF TRANSPORTATION APPROVED BY : JOHN ADAR, P.E. #4151 DATE : 6/93	INTERSECTION DETAILS
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DESIGNED BY :	JWC	6/90	CHECKED BY :	JWC	6/90							
									CHARLES	MW <td>6/90<td>CHARLES</td><td>MW<td>6/90</td></td></td>	6/90 <td>CHARLES</td> <td>MW<td>6/90</td></td>	CHARLES	MW <td>6/90</td>	6/90							
									SUPERVISED BY : JOHN ADAR, P.E.												

INTERSECTION DETAILS

ADAIR & BRADY, INC.
CONSULTING ENGINEERS
1001 N. MONTEREY BLVD., SUITE 100
MONTEREY, CA 94034



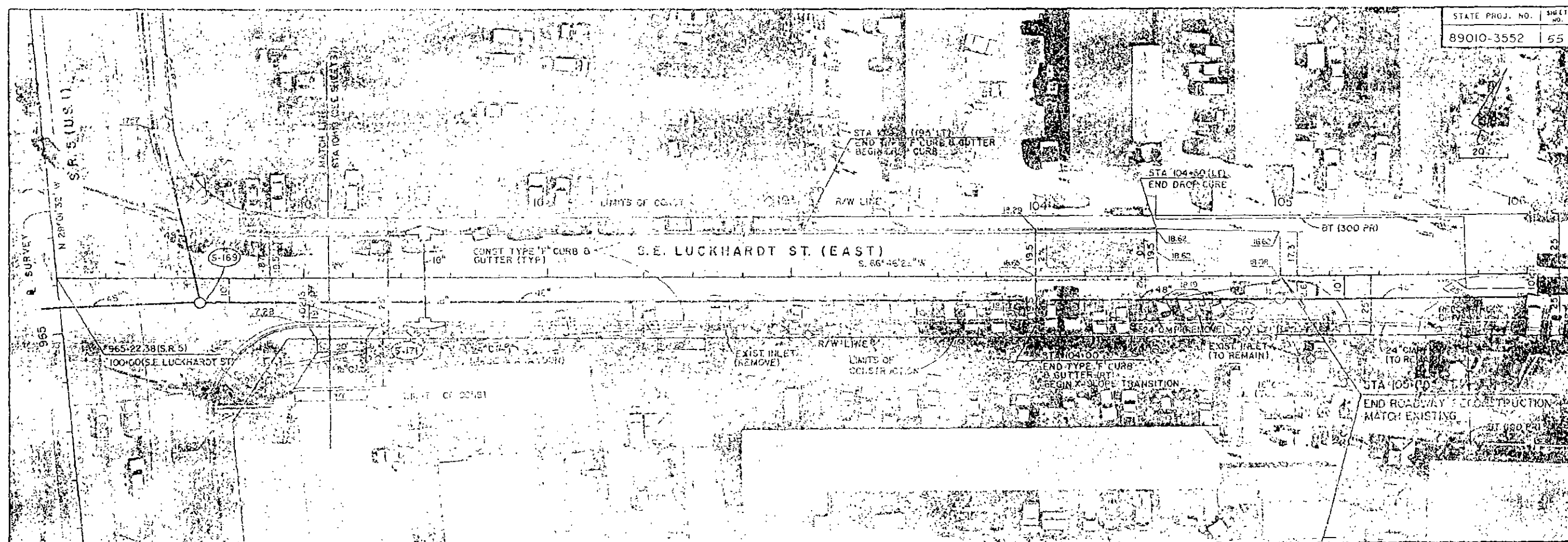
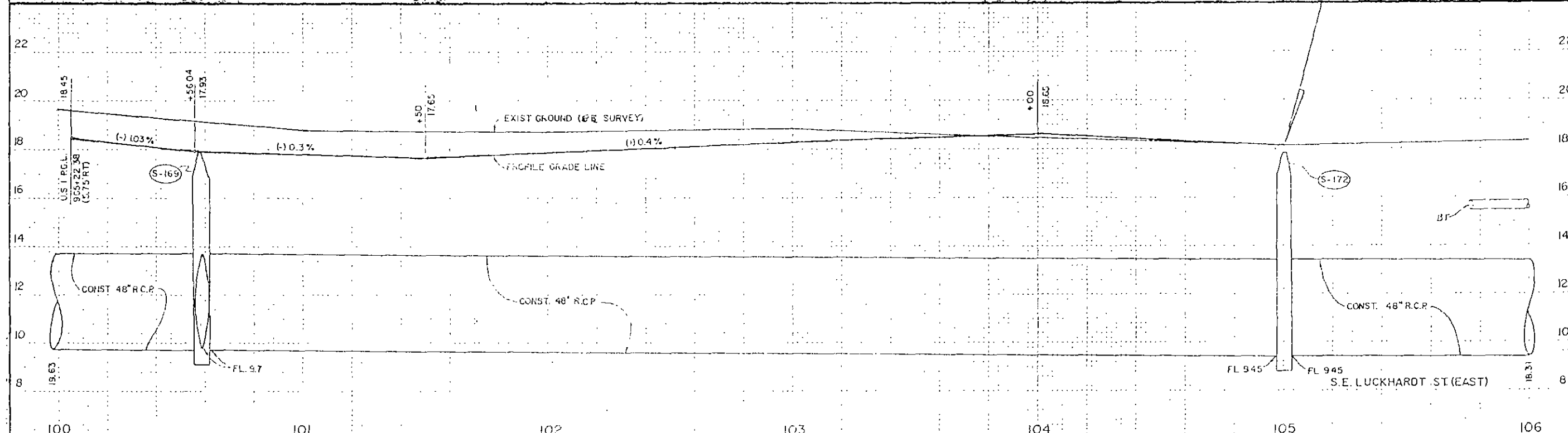
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FLIGHT DATE: 7-93

BY JOHN ADAIR, P.E.

FLORIDA DEPARTMENT OF TRANSPORTATION
JOHN ADAIR
P.E. #4151

LUCKHARDT ST. OUTFALL /
DETENTION BASIN No. 1



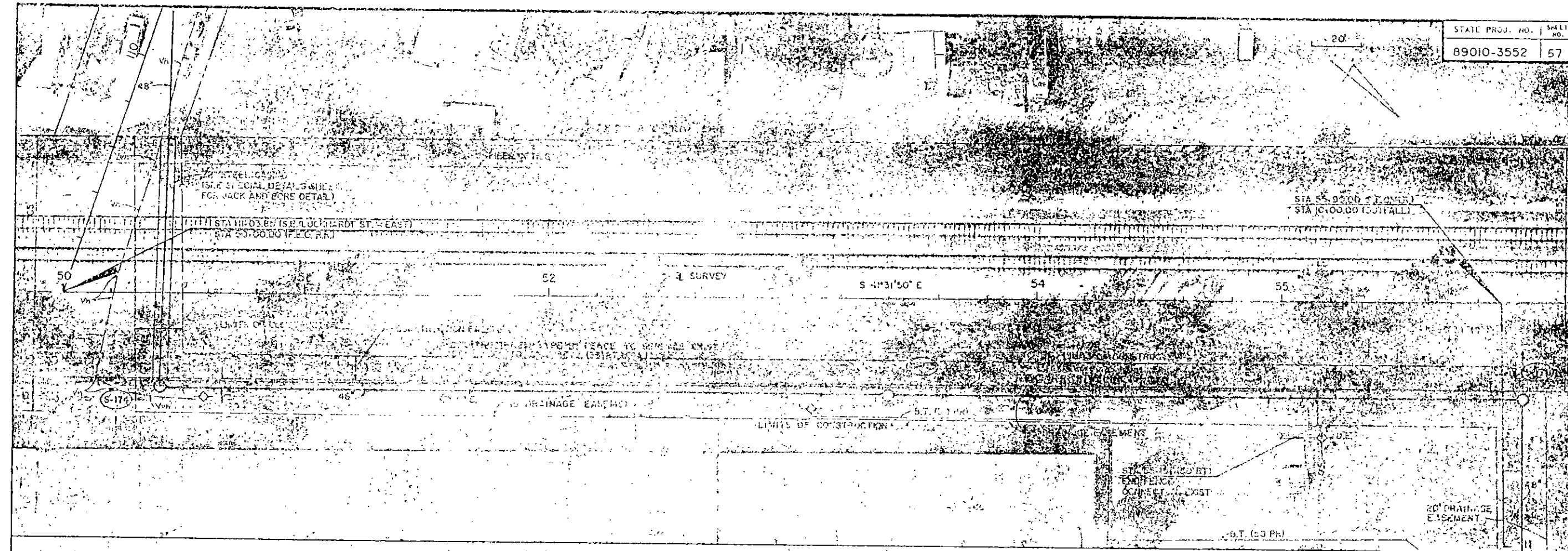
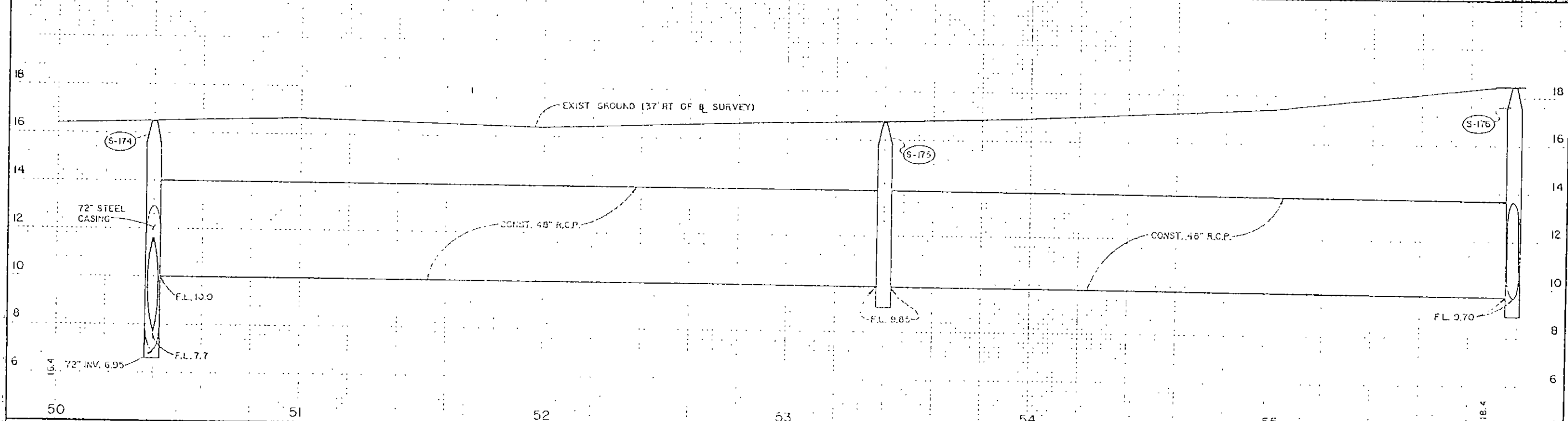
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FLIGHT DATE: 7-93

FLORIDA DEPARTMENT OF TRANSPORTATION

FLORIDA DEPARTMENT OF TRANSPORTATION
JOHN ADAIR
P.E. #4151

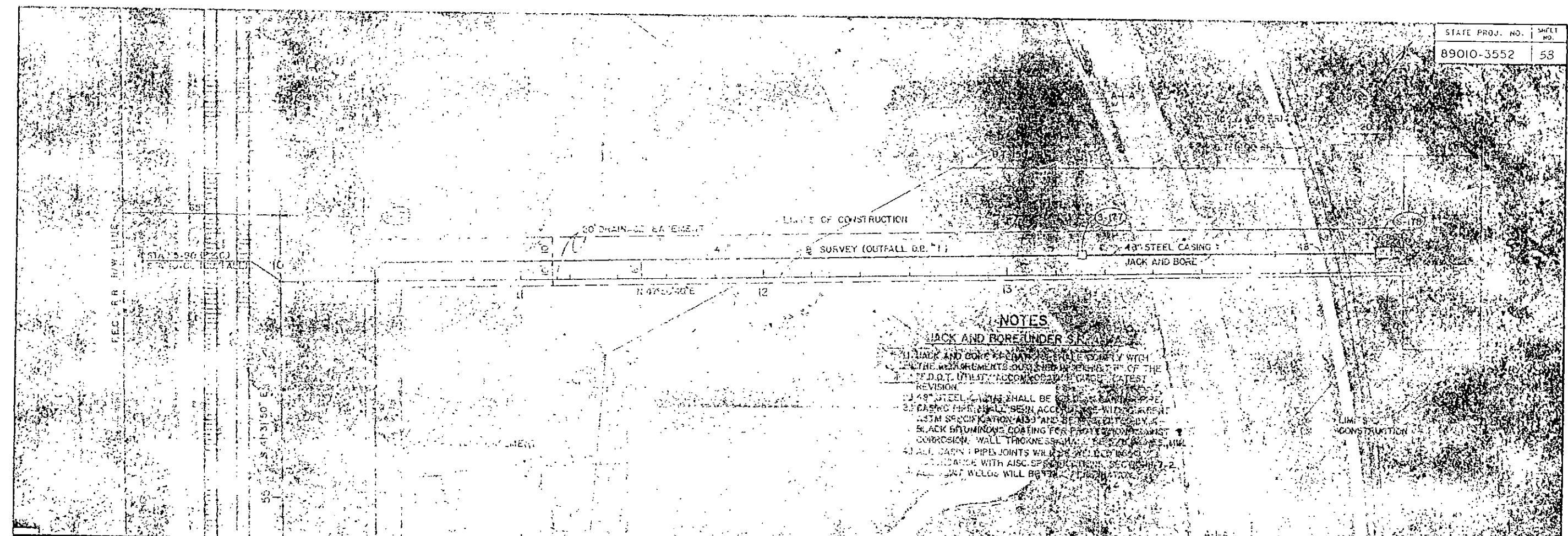
LUCKHARDT ST. OUTFALL /
DETENTION BASIN No. 1



DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
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JOHN ADAIR, P.E. P.E. #4151											

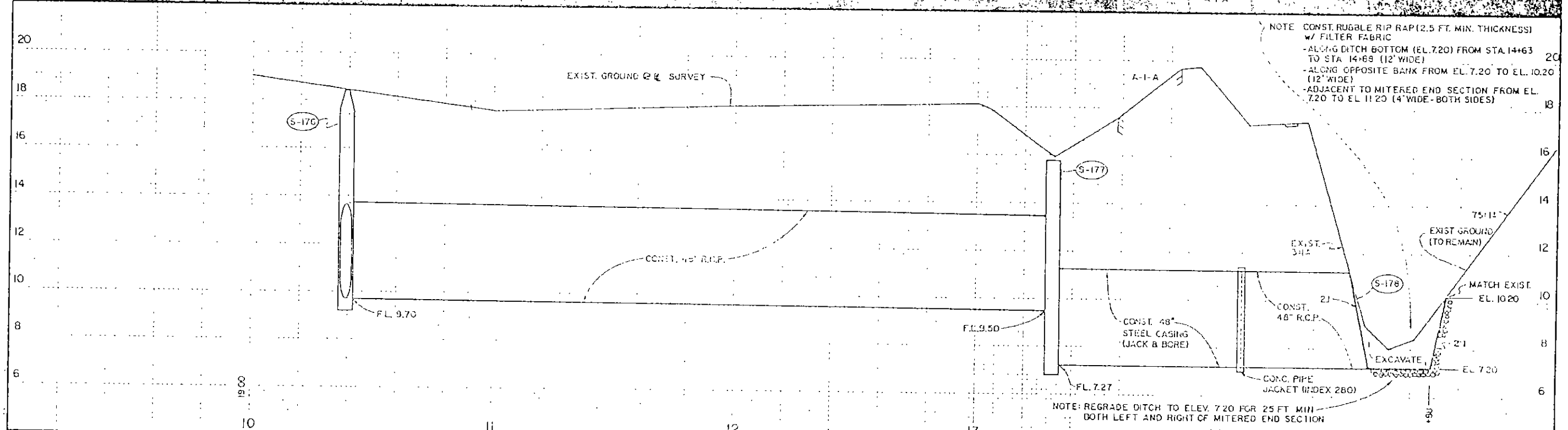
FLIGHT DATE: 7-93

LUCKHARDT ST. OUTFALL /
DETENTION BASIN No. 1



NOTES
JACK AND BORE UNDER STRUCTURE
 1. JACK AND BORE SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, LATEST EDITION.
 2. 48" STEEL CASING SHALL BE USED FOR JACKING.
 3. CASING PIPE SHALL BE IN ACCORDANCE WITH CURRENT ASTM SPECIFICATIONS AND BE PROTECTED BY A BLACK BITUMINOUS COATING FOR PROTECTION AGAINST CORROSION. WALL THICKNESS SHALL BE 7/16" MIN. ALL JOINTS SHALL BE WELDED IN ACCORDANCE WITH AISC SPECIFICATION, SECTION 7.2. ALL JOINT WELDS WILL BE FULL PENETRATION.

NOTE: CONST. RUBBLE RIP RAP (2.5 FT. MIN. THICKNESS) W/ FILTER FABRIC
 -ALONG DITCH BOTTOM (EL. 7.20) FROM STA. 14+63 TO STA. 14+69 (12' WIDE)
 -ALONG OPPOSITE BANK FROM EL. 7.20 TO EL. 10.20 (12' WIDE)
 -ADJACENT TO MITERED END SECTION FROM EL. 7.20 TO EL. 11.20 (4' WIDE - BOTH SIDES)



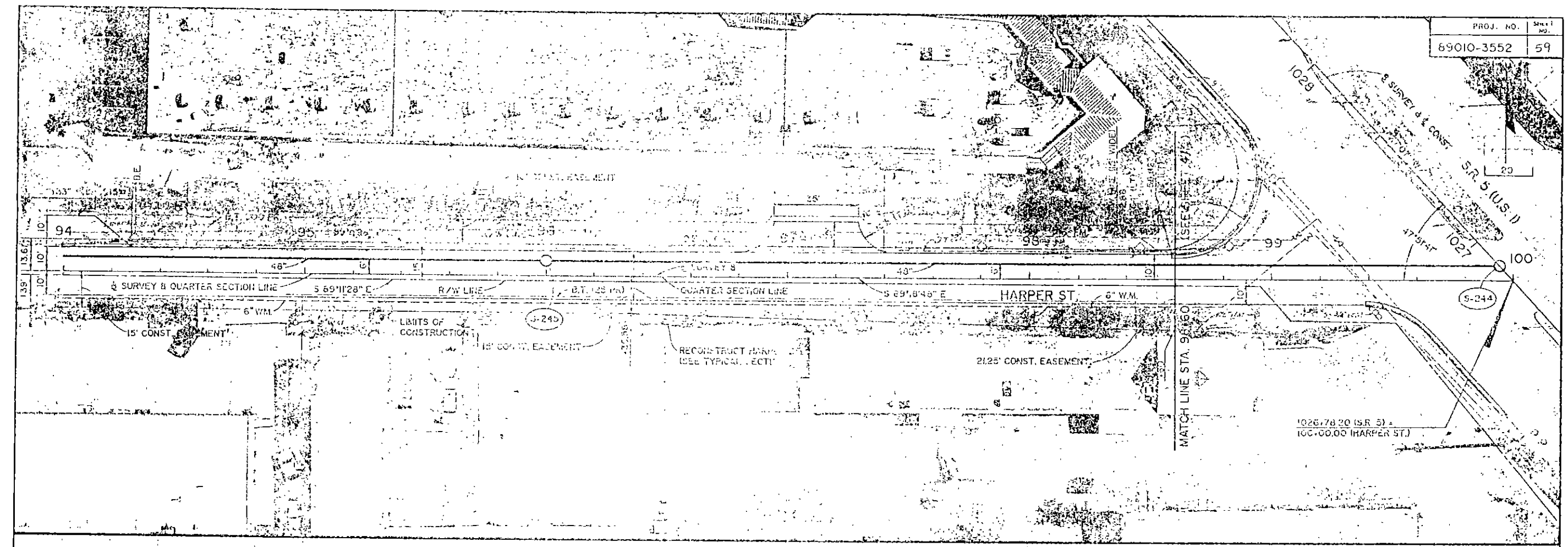
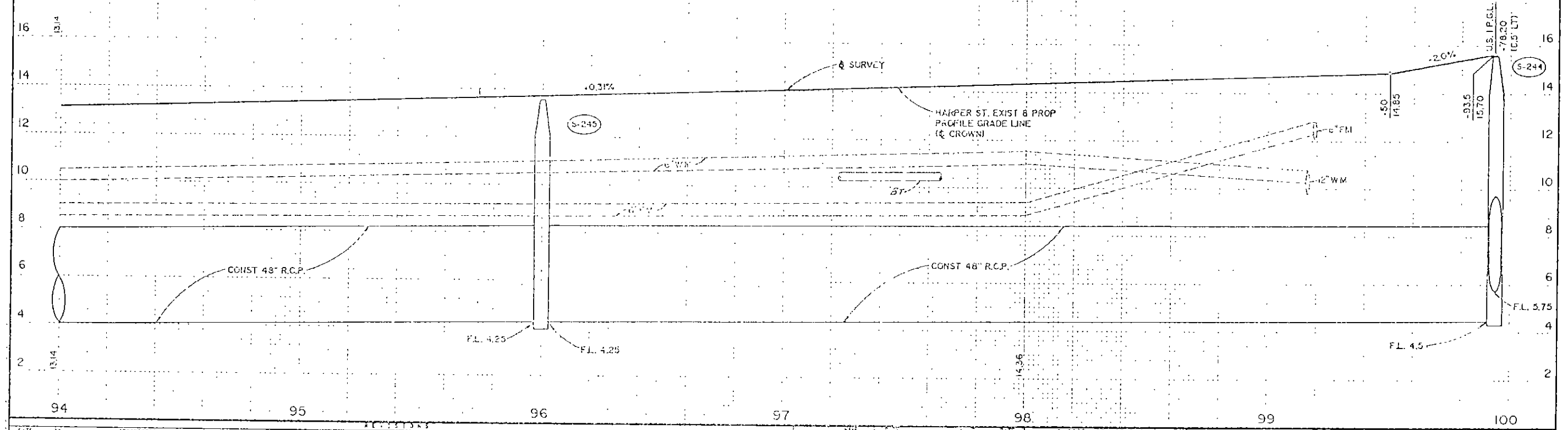
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FLIGHT DATE: 7-93

MANUFACTURED BY: [illegible]

FLORIDA DEPARTMENT OF TRANSPORTATION
 JOHN ADAIR
 P.E. #4151 9-93

LUCKHARDT ST. OUTFALL /
 DETENTION BASIN No. 1



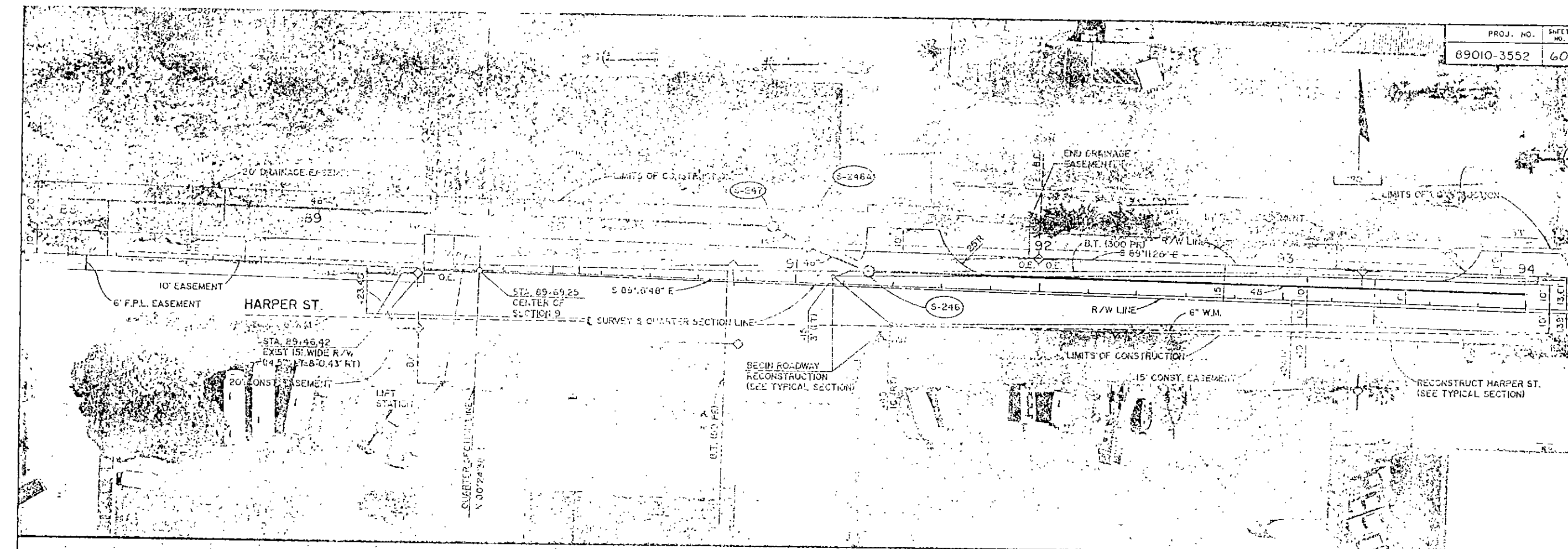
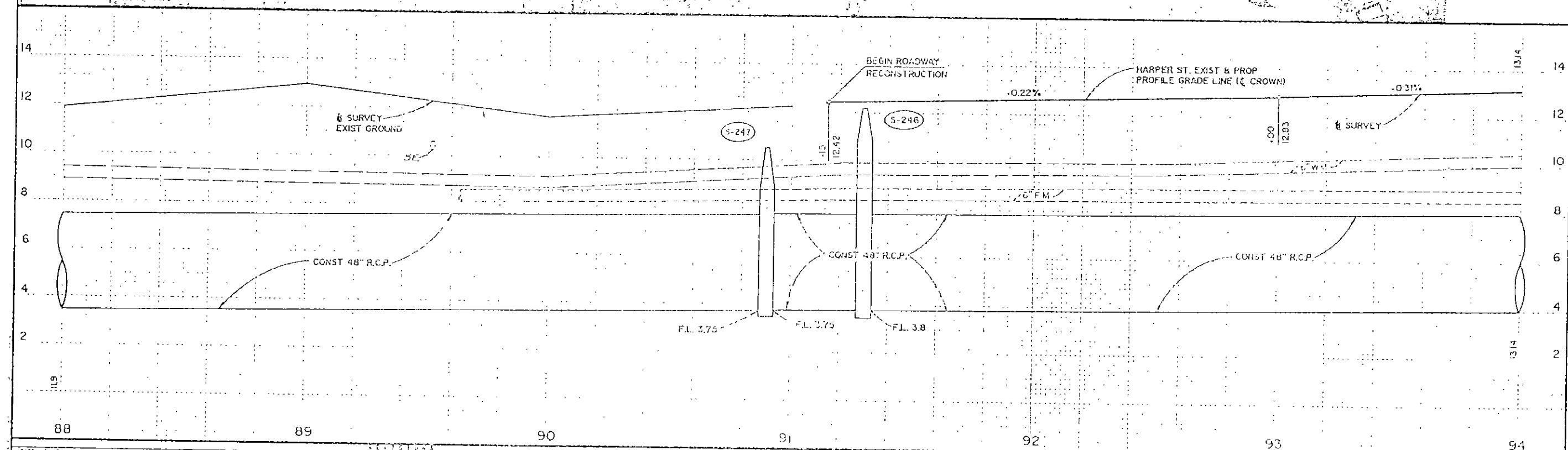
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6-93	SBC	CONSTRUCTION	6-93	SBC	CONSTRUCTION	6-93	SBC	CONSTRUCTION	6-93	SBC	CONSTRUCTION	6-93	SBC	CONSTRUCTION	6-93	SBC	CONSTRUCTION

FLIGHT DATE: 5-93

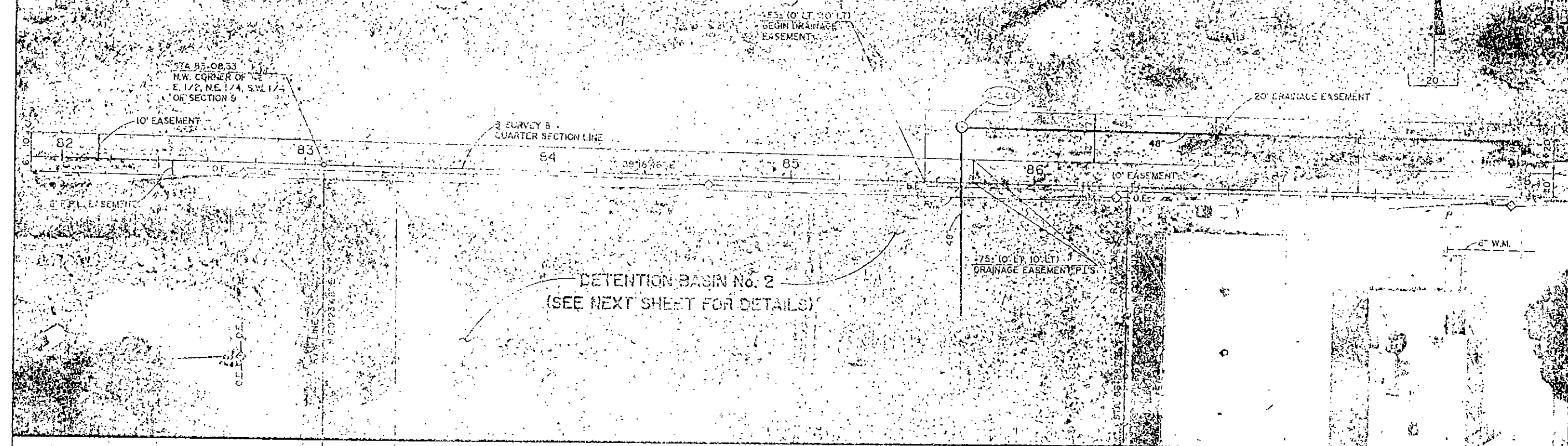
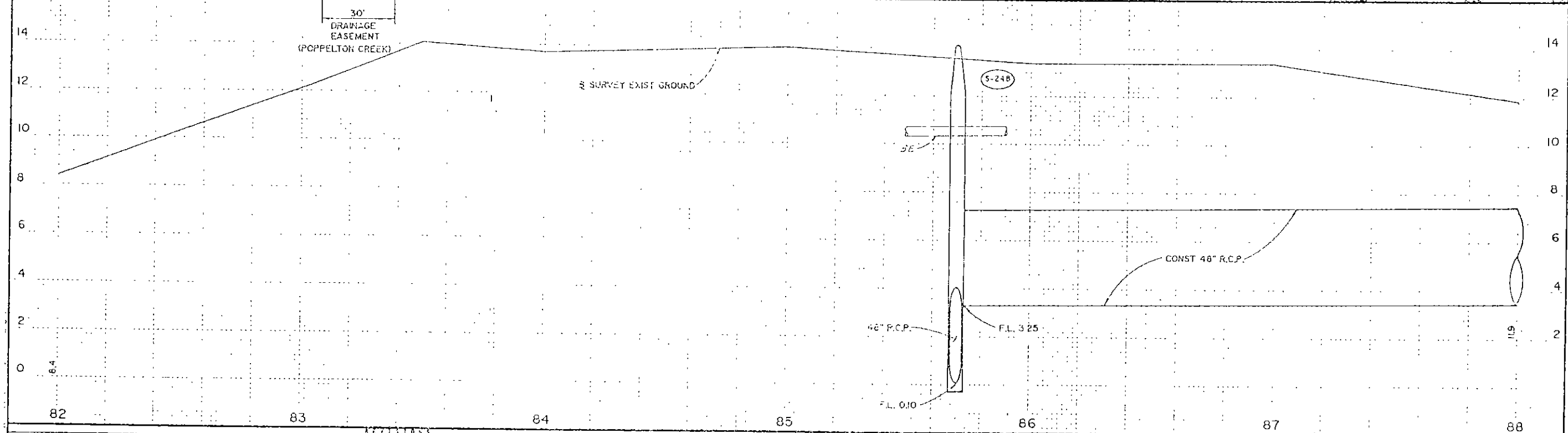
WATERPORT ENGINEERING, INC.
Professional Seal of Engineer

FLORIDA DEPARTMENT OF
TRANSPORTATION
JOHN ADAIR
P.E. #4151

HARPER ST. OUTFALL /
DETENTION BASIN No. 2



92																		93																		94																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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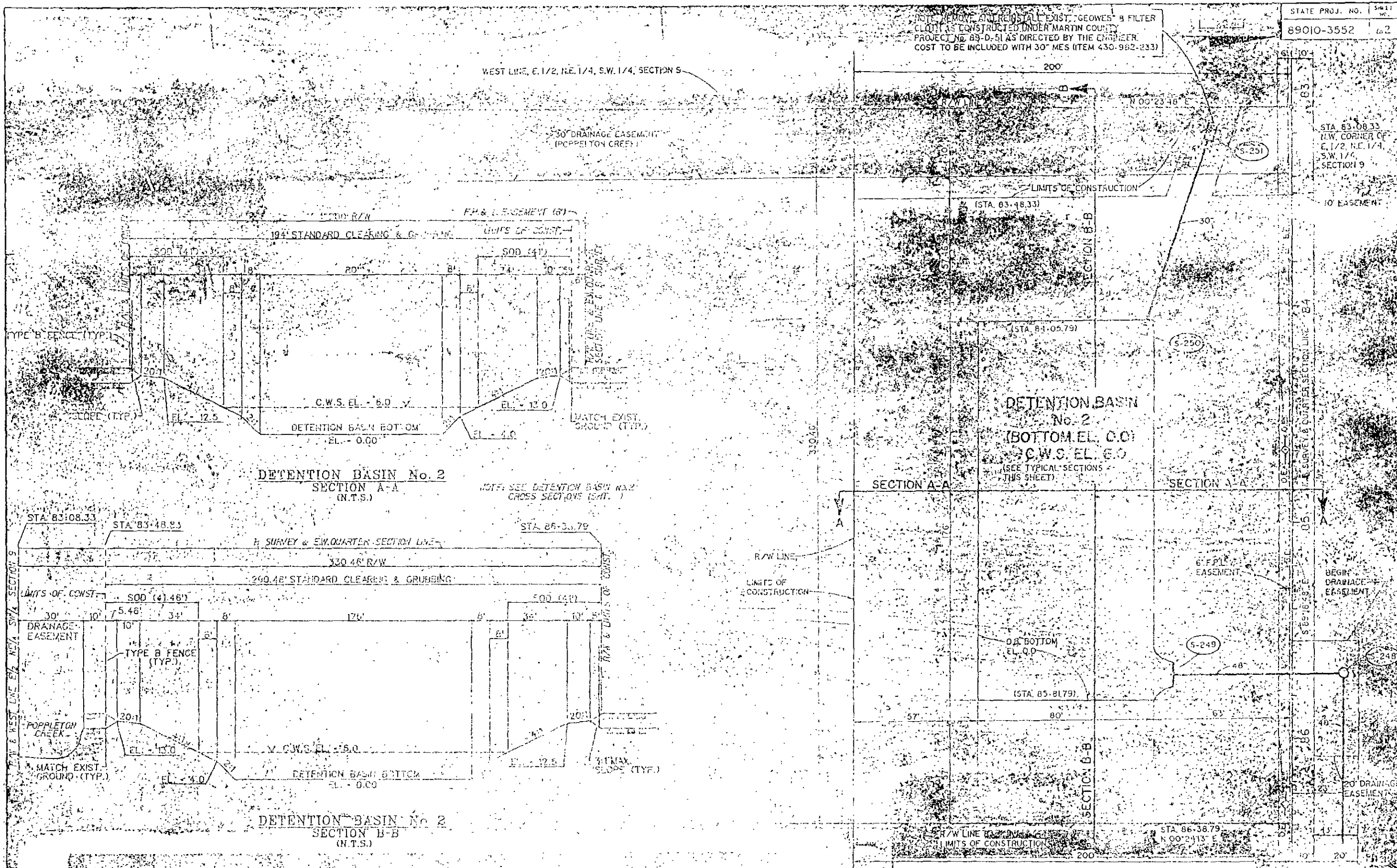
FLIGHT DATE: 5-93

DESIGNED BY	DATE	CHECKED BY	DATE
DDO	6-93	DSP	7-93
SBC	6-93	FJH	7-93

FLORIDA DEPARTMENT OF TRANSPORTATION
JOHN ADAIR
P.E. #4151

HARPER ST. OUTFALL /
DETENTION BASIN No. 2

NOTE: REMOVE AND REINSTALL EXIST. GEOWEBS B FILTER CLOTH AS CONSTRUCTED UNDER MARTIN COUNTY PROJECT NO. 89-D-51 AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED WITH 30" MES (ITEM 430-982-233)



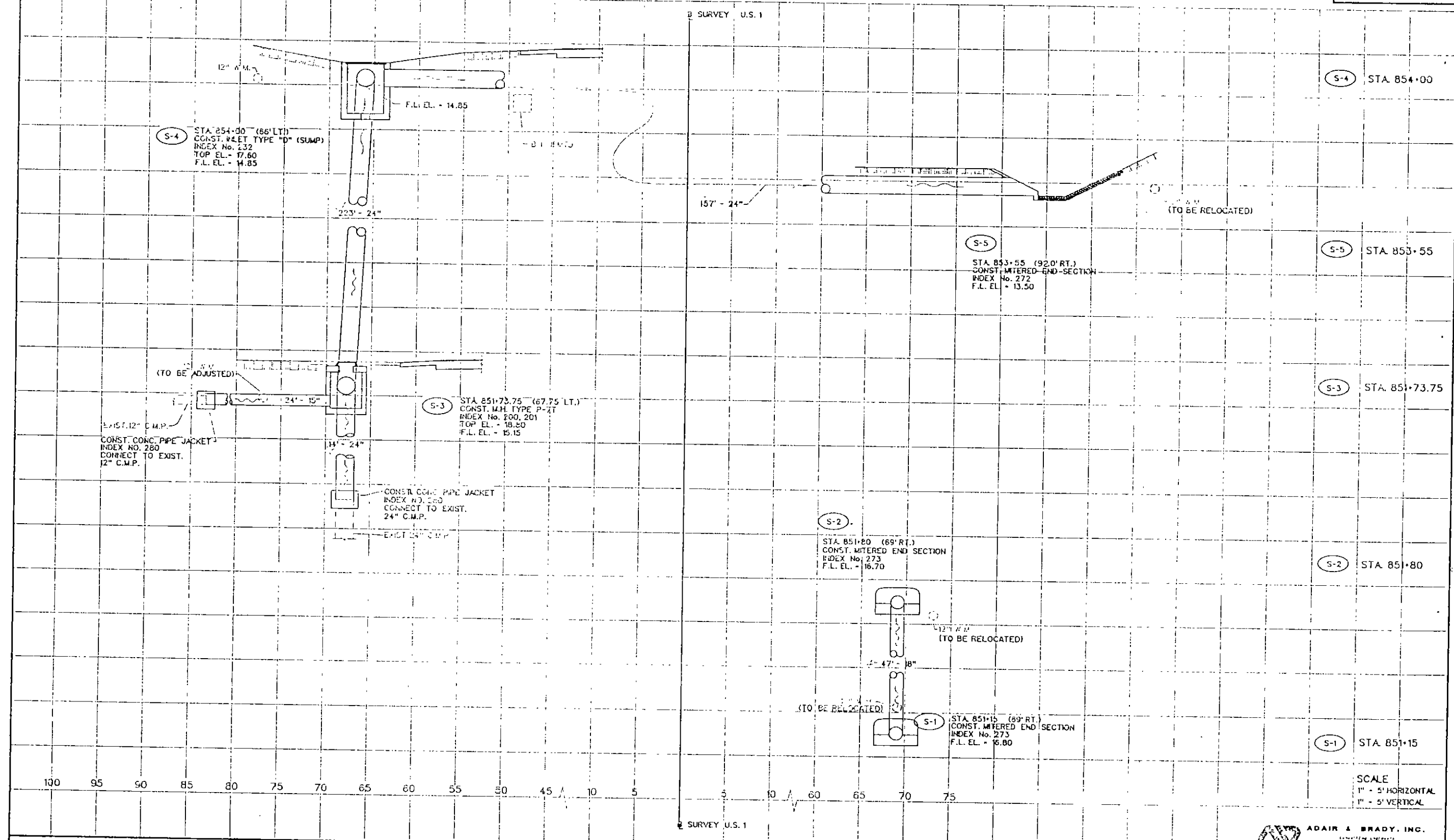
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FLIGHT DATE: 5-93

MANUFACTURED BY: [illegible]

FLORIDA DEPARTMENT OF TRANSPORTATION
JOHN ADAIR
P.E. #4151

HARPER ST. OUTFALL /
DETENTION BASIN No. 2



SCALE
1" = 5' HORIZONTAL
1" = 5' VERTICAL

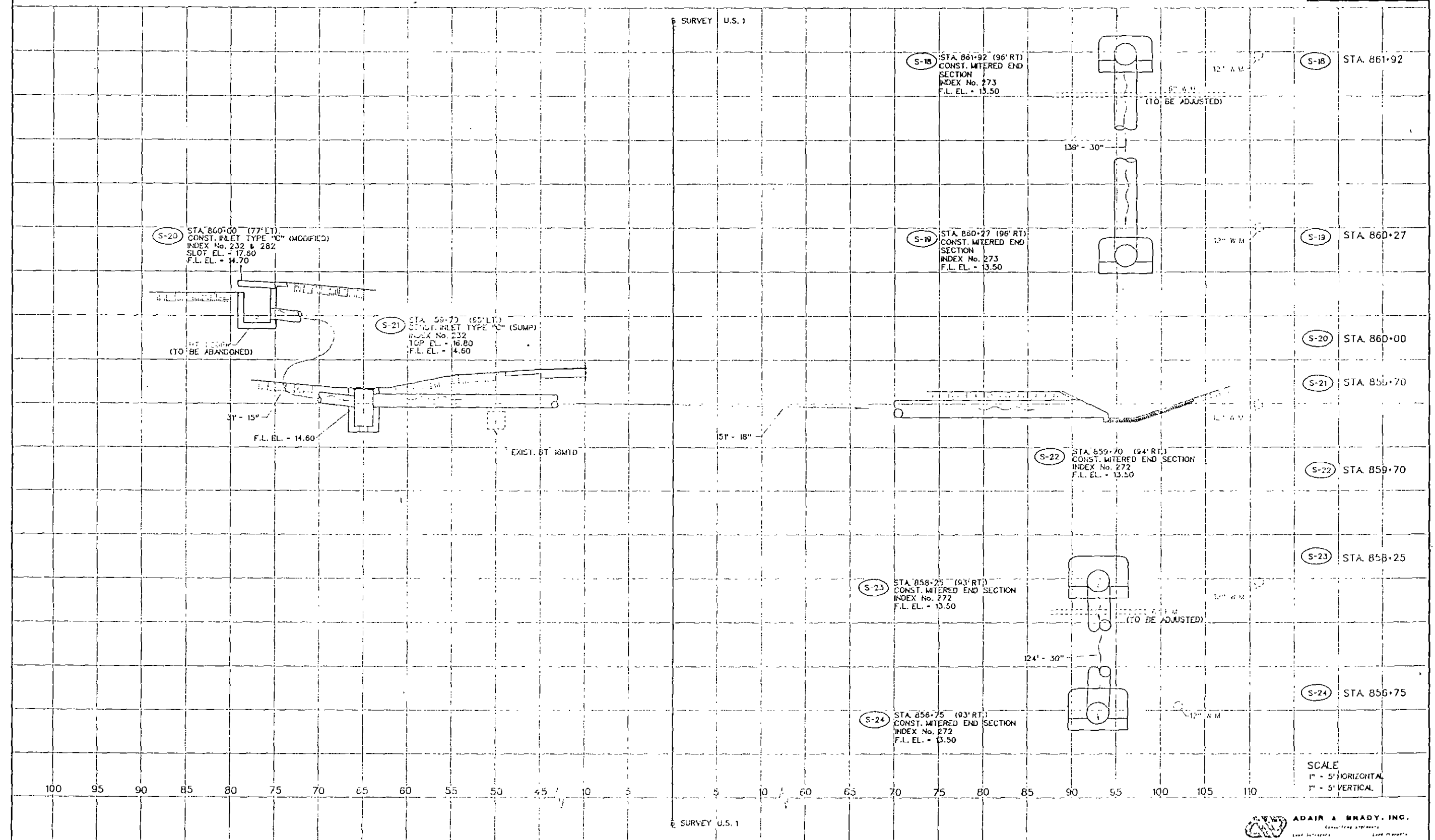
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DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
JC	10/89	MW	10/89	JOHN ADAIR, P.E.	6/93

FLORIDA DEPARTMENT OF TRANSPORTATION	APPROVED BY	DATE
	JOHN ADAIR, P.E. #4151	6/93

DRAINAGE STRUCTURES

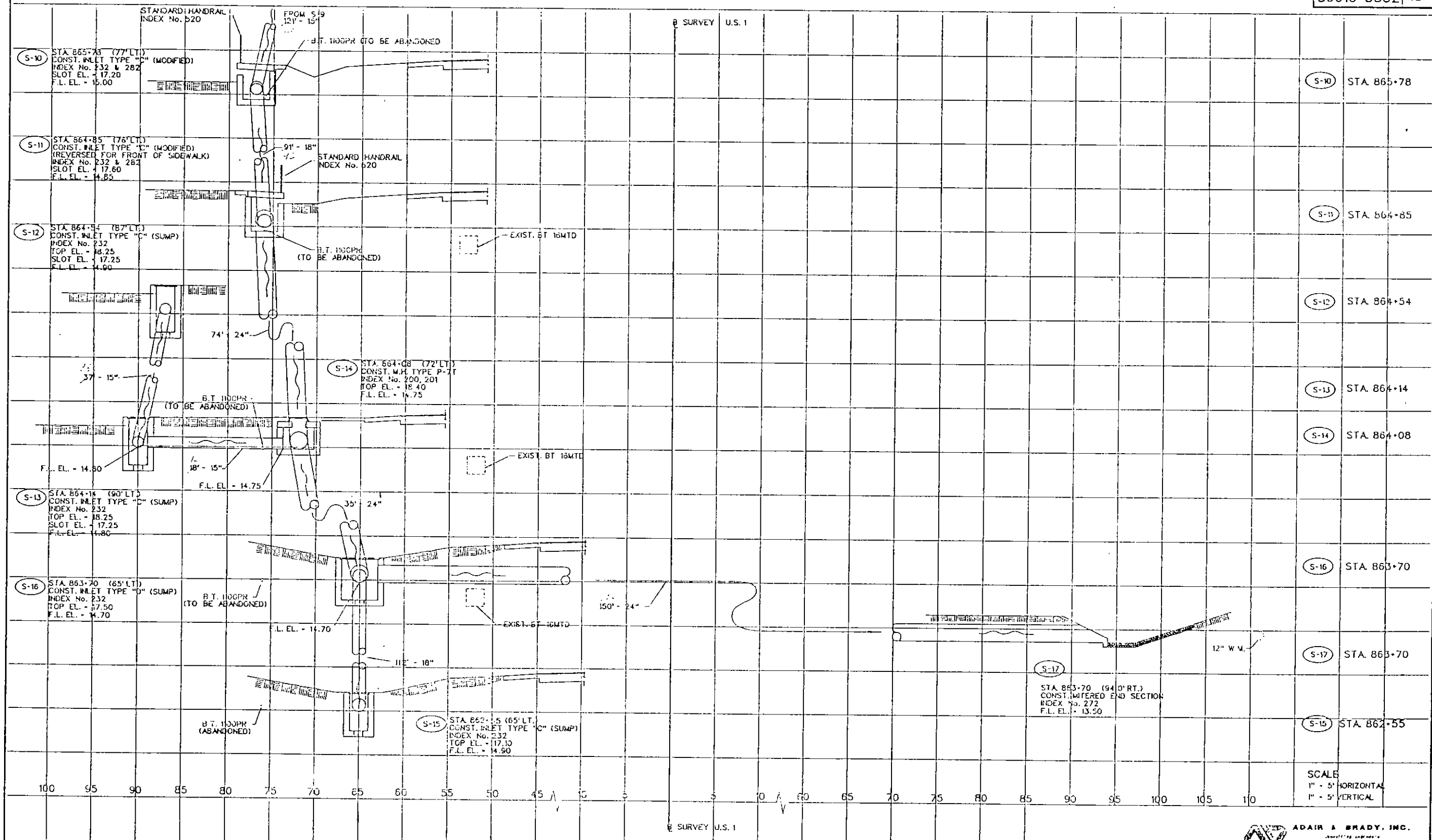




REVISIONS				APPROVALS			
DATE	BY	DESCRIPTION	DATE	NAME	DATE	NAME	DATE
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				CHECKED BY MW	10/89	INCHARGE BY MW	10/89
				SUPERVISED BY JOHN ADAIR, P.E.			
				FLORIDA DEPARTMENT OF TRANSPORTATION			
				APPROVED BY JOHN ADAIR, P.E. #4151 DATE: 6/93			

DRAINAGE STRUCTURES

ADAIR & BRADY, INC.
Consulting Engineers
1000 N. W. 10th Ave., Suite 100
Fort Lauderdale, FL 33304

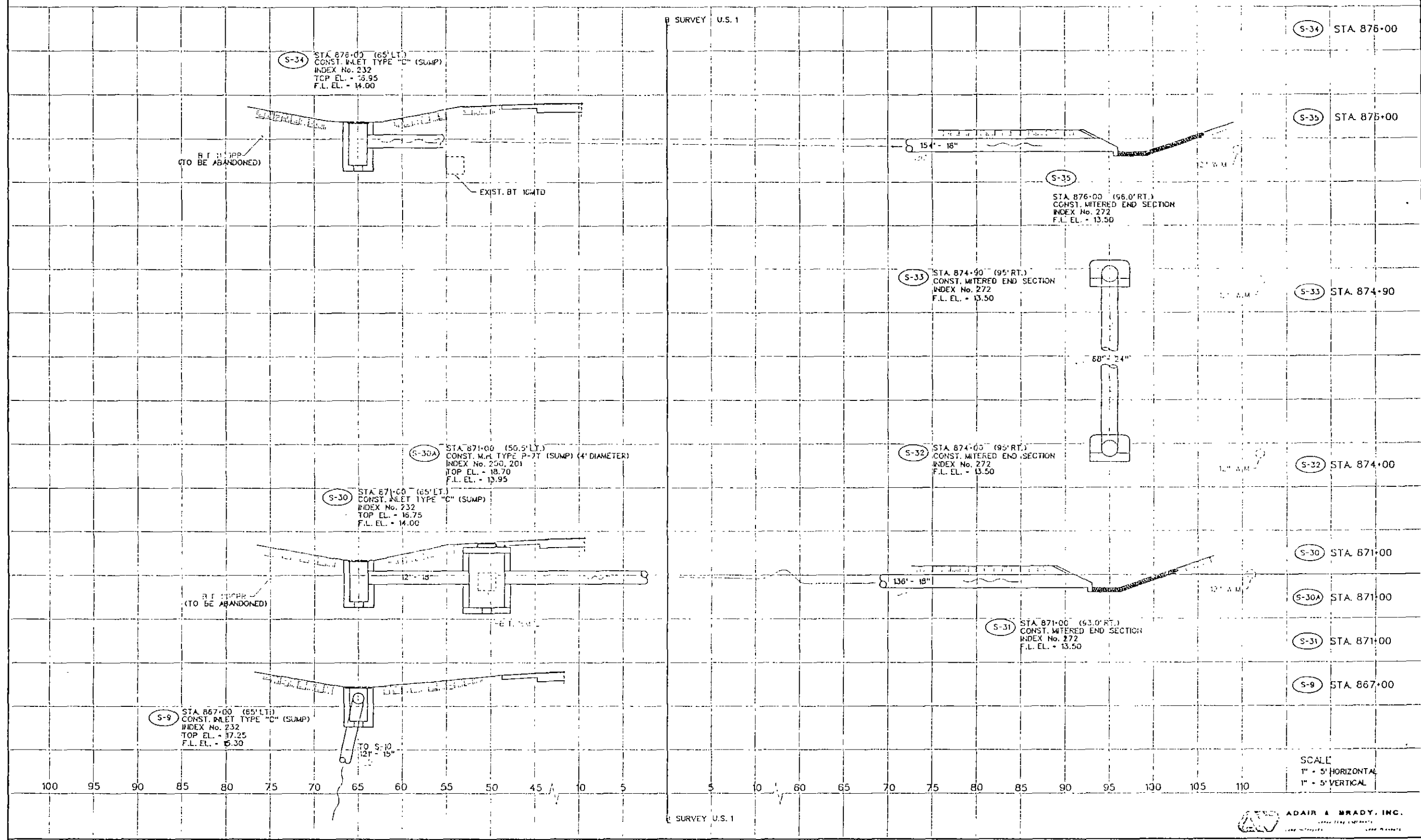


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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY

NAME	DATE	NAME	DATE
JC	10/89	KB	10/89
MW	10/89	MW	10/89
SUPERVISED BY: JOHN ADAR, P.E.			

FLORIDA DEPARTMENT OF TRANSPORTATION	
APPROVED BY: JOHN ADAR, P.E. #4151 DATE: 6/93	

DRAINAGE STRUCTURES

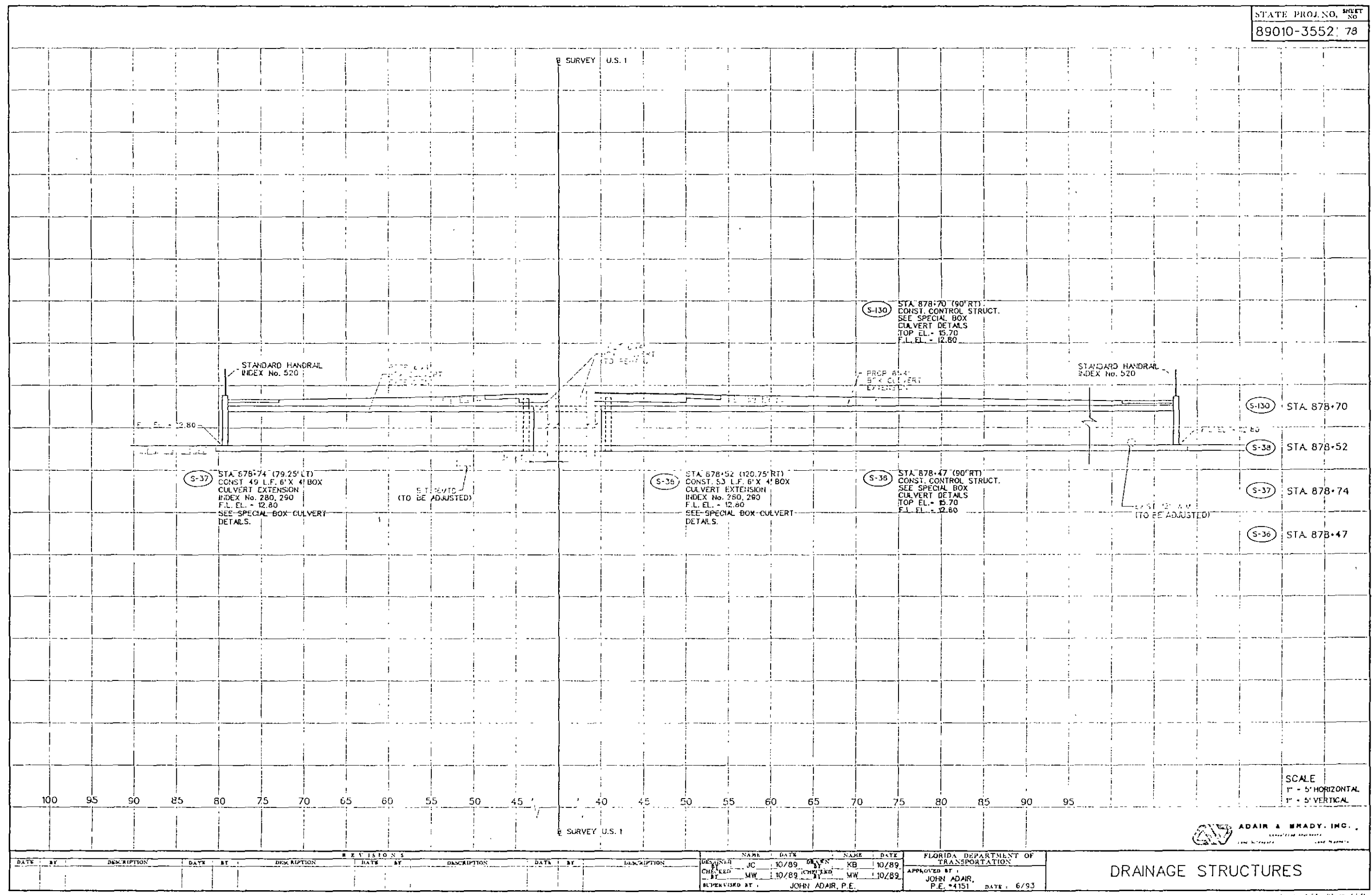


REVISIONS				APPROVED BY: JOHN ADAR, P.E.				DATE: 6/93			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ADAIR & BRADY, INC.
CIVIL ENGINEERS
1000 N. W. 10th Ave., Suite 100
Fort Lauderdale, FL 33304
(305) 555-1111

DRAINAGE STRUCTURES

10/21/93/5/20/93/1/2/93



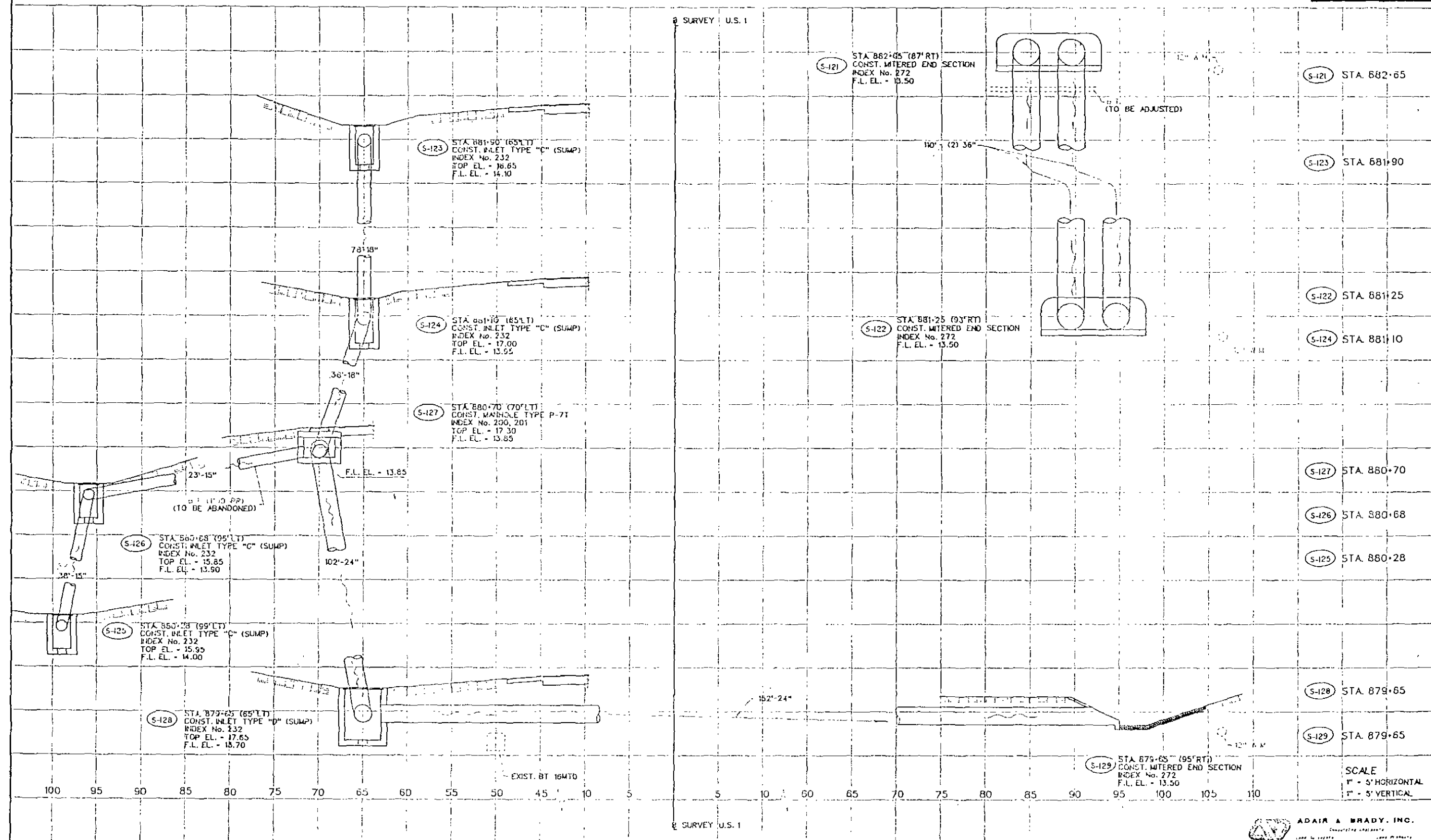
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NAME	DATE	NAME	DATE
DESIGNED BY JC	10/89	DRAWN BY KB	10/89
CHECKED BY MW	10/89	CHECKED BY MW	10/89
SUPERVISED BY			

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY: JOHN ADAIR, P.E. #4151 DATE: 6/93

DRAINAGE STRUCTURES

AD&M ADAIR & BRADY, INC. CONSULTING ENGINEERS



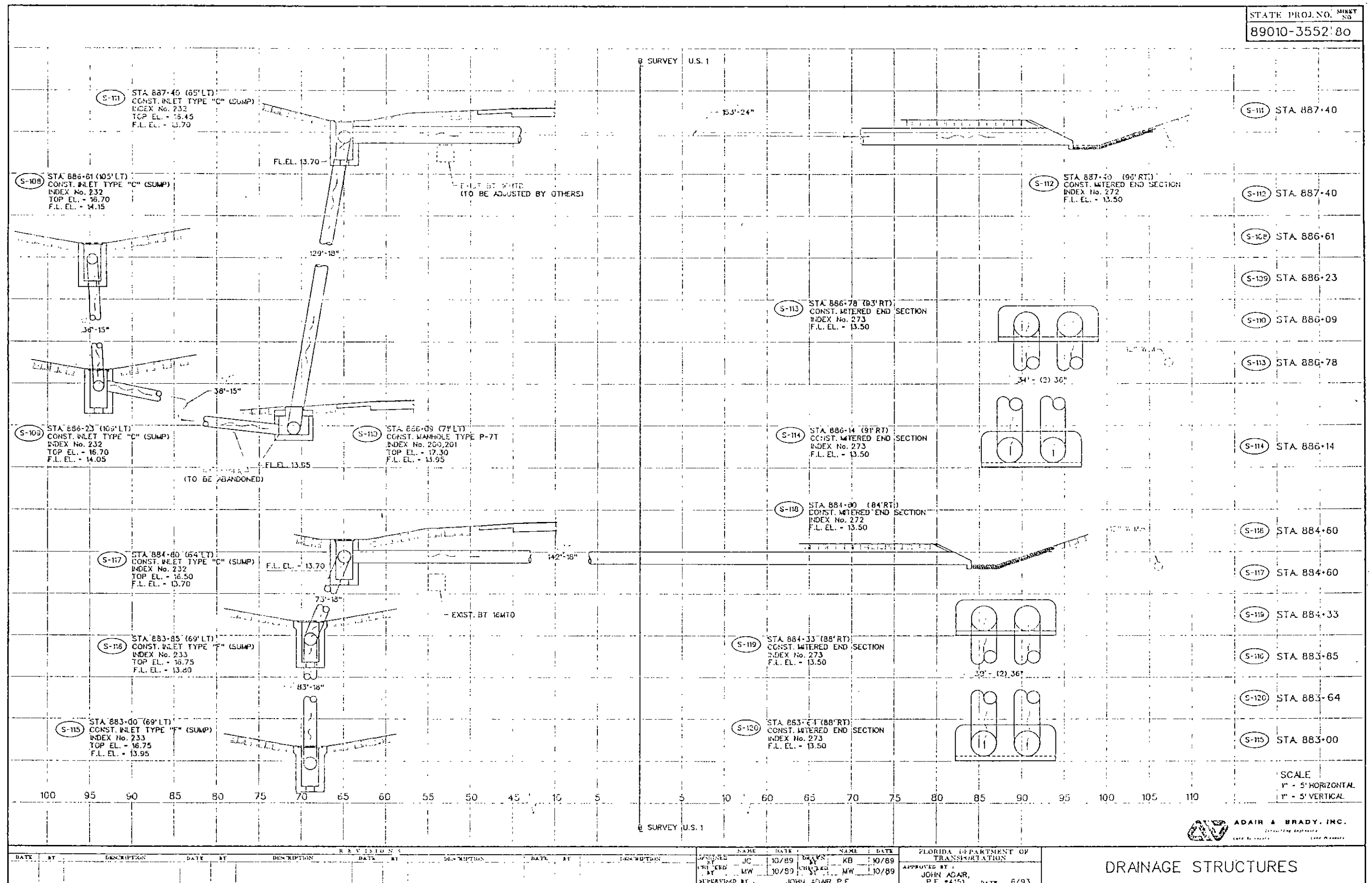
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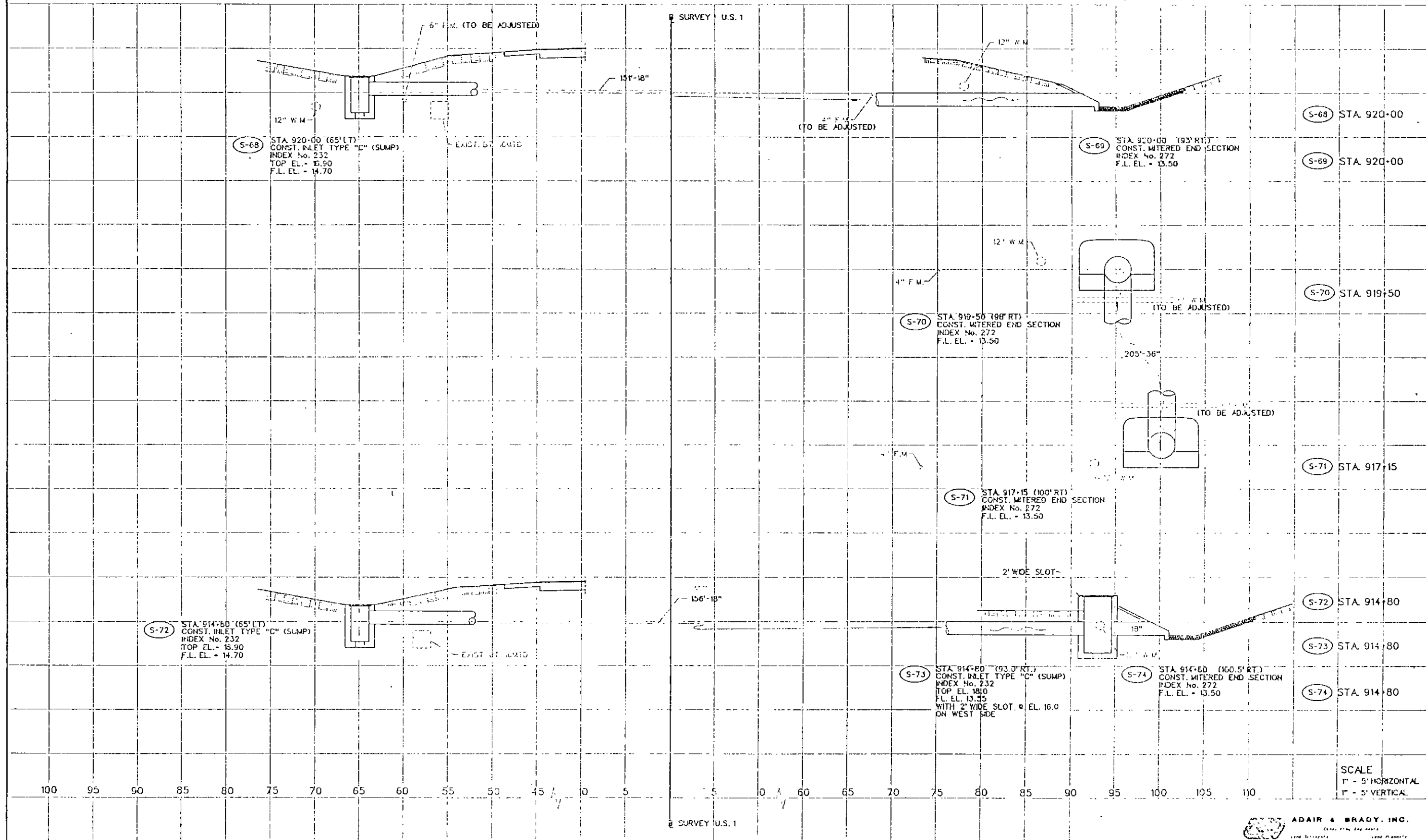
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CHECKED BY	MW	DATE	10/89	CHECKED BY	MW	DATE	10/89
SUPERVISOR BY	JOHN ADAR, P.E.	DATE	6/93				

FLORIDA DEPARTMENT OF TRANSPORTATION	APPROVED BY	JOHN ADAR, P.E. #4151	DATE	6/93
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ADAIR & BRADY, INC. CONSULTING ENGINEERS

DRAINAGE STRUCTURES





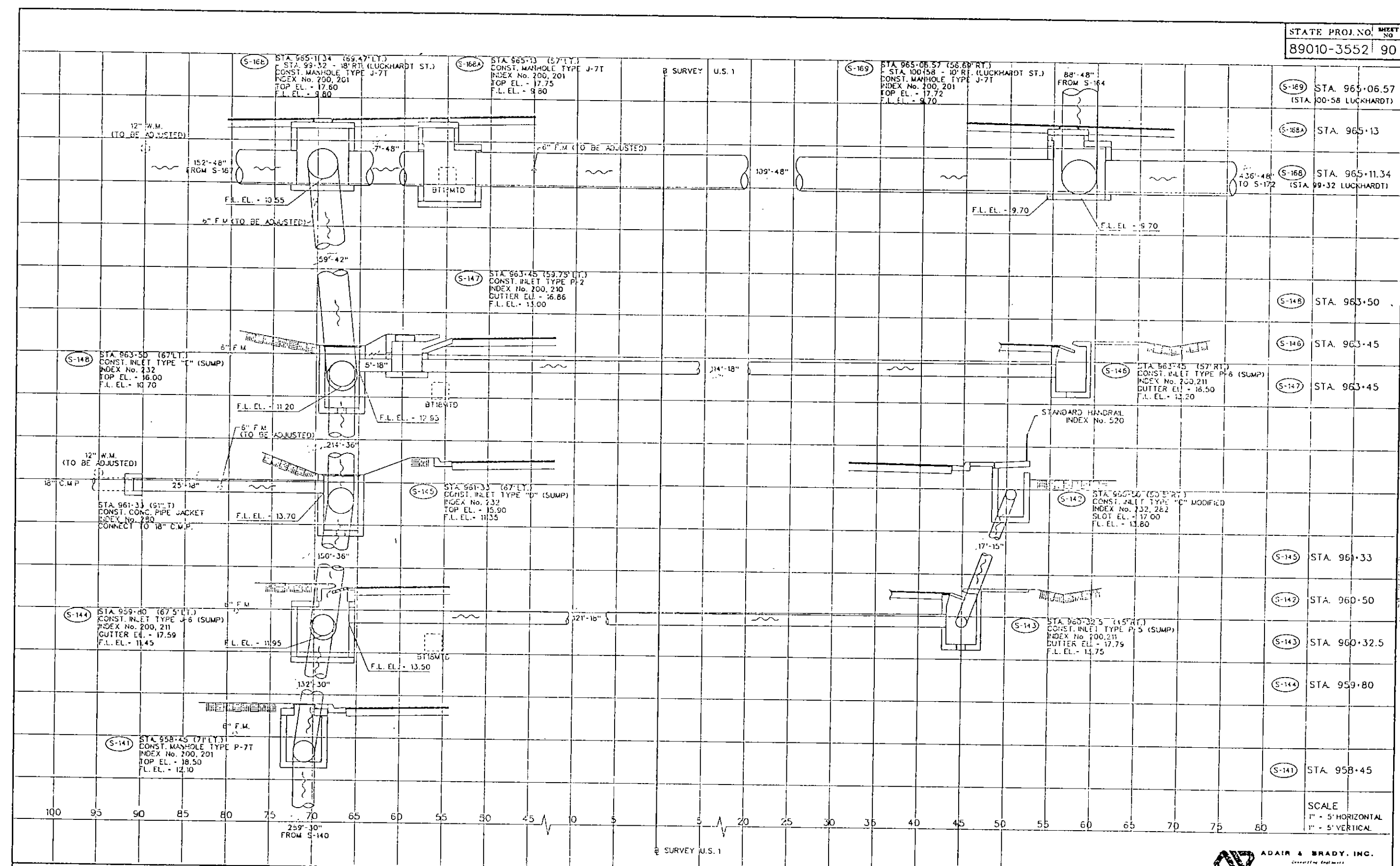
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1" = 5' VERTICAL

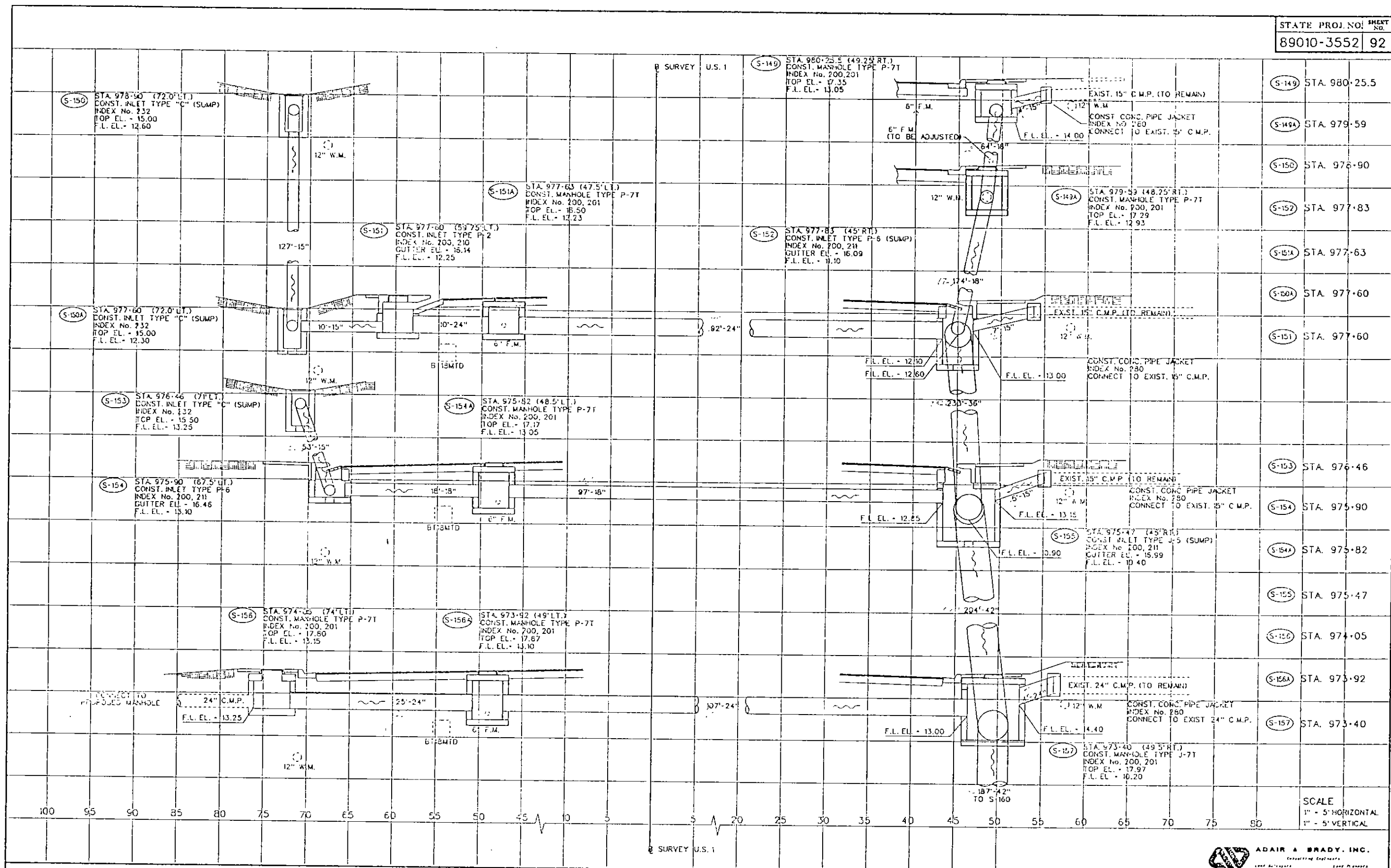
ADAIR & BRADY, INC.
Civil, Mechanical, Electrical, and Structural Engineers
1000 S.W. 10th Avenue, Suite 100, Fort Lauderdale, FL 33304

REVISIONS				APPROVALS				DATE	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	

DESIGNED BY	JC	DATE	10/89	DRAWN BY	KB	DATE	10/89
CHECKED BY	MW	DATE	10/89	CHECKED BY	MW	DATE	10/89
SUPERVISED BY	JOHN ADAIR, P.E.			APPROVED BY	JOHN ADAIR, P.E.	DATE	6/93

DRAINAGE STRUCTURES





REVISIONS				DESIGNER				FLORIDA DEPARTMENT OF TRANSPORTATION			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DATE	NAME	DATE	NAME
								10/89	JC	10/89	KB
								10/89	MW	10/89	MW

APPROVED BY: JOHN ADAIR, P.E. #4151 DATE: 6/93

FLORIDA DEPARTMENT OF TRANSPORTATION

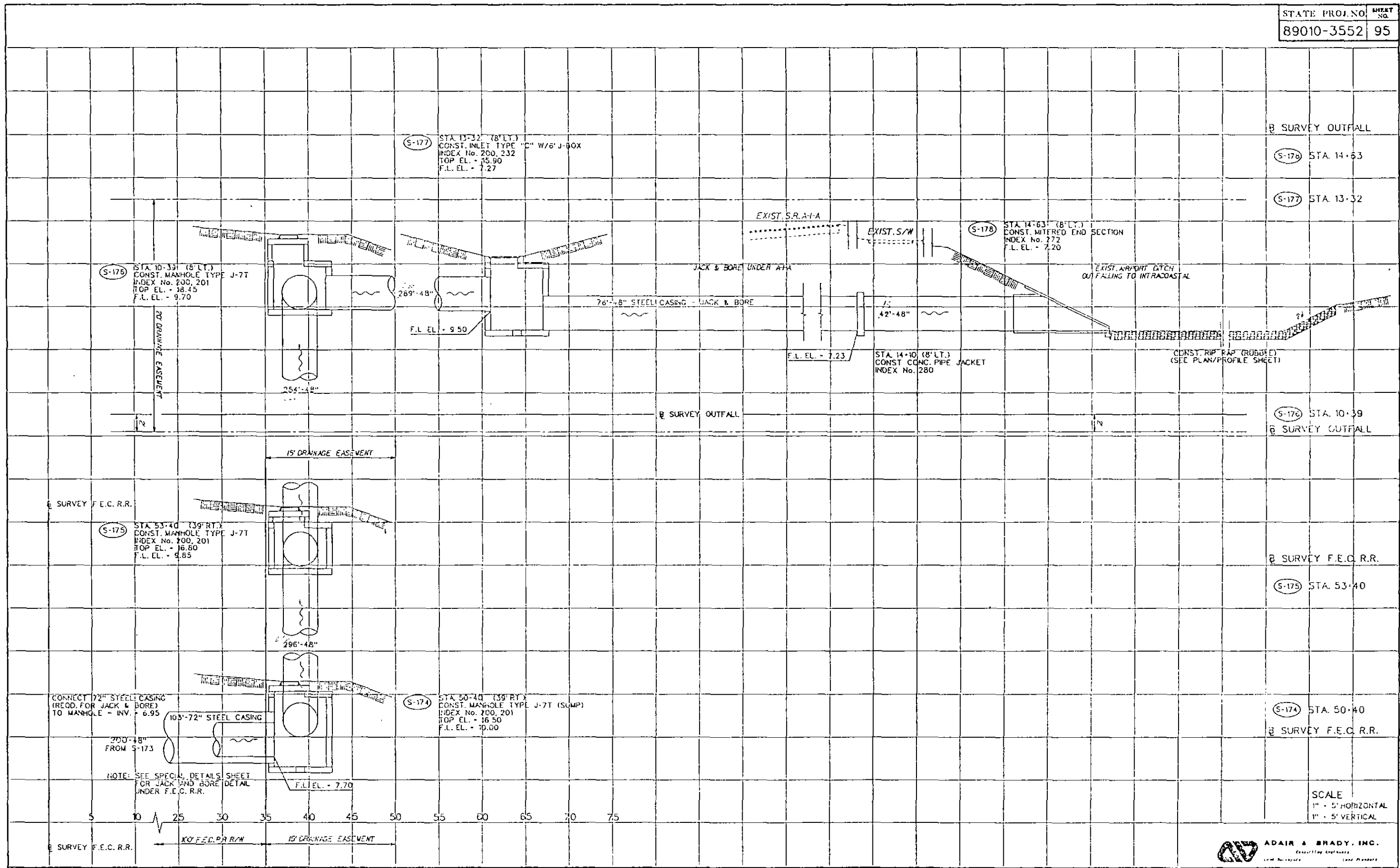
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CHECKED BY: KB 10/89

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SUPERVISOR BY: JOHN ADAIR, P.E.

DRAINAGE STRUCTURES

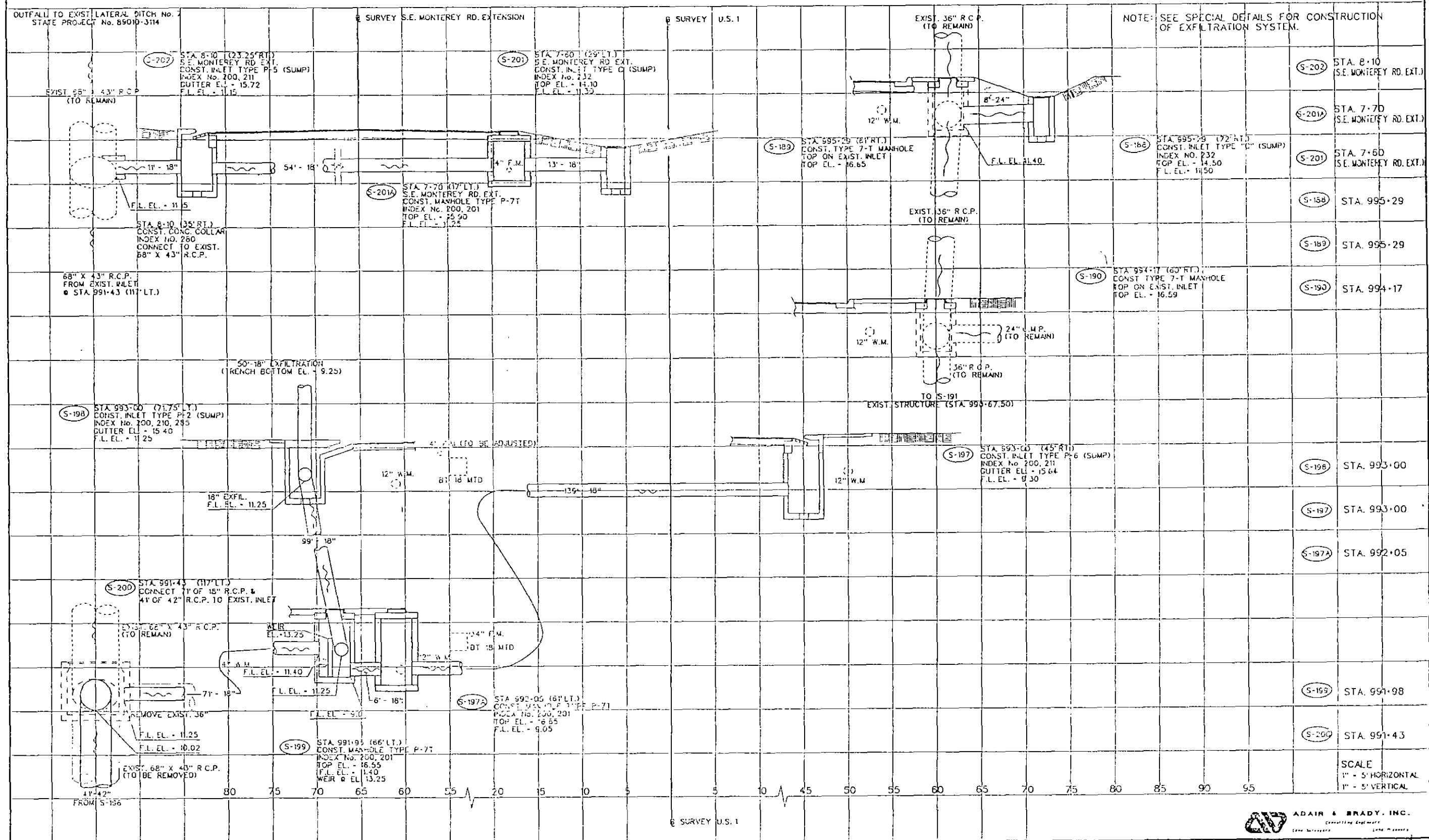


SCALE
1" = 5' HORIZONTAL
1" = 5' VERTICAL

ADAIR & BRADY, INC.
Consulting Engineers
1000 N. ...
Tallahassee, FL 32301

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	NAME	DATE	NAME	DATE	FLORIDA DEPARTMENT OF TRANSPORTATION
												DESIGNED BY	10/89	DRAWN BY	10/89	APPROVED BY
												CHECKED BY	10/89	CHECKED BY	10/89	JOHN ADAIR, P.E.
												SUPERVISOR BY				DATE: 6/93

DRAINAGE STRUCTURES



DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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 CHECKED BY: MW 10/89
 SUPERVISED BY: JOHN ADAR, P.E.

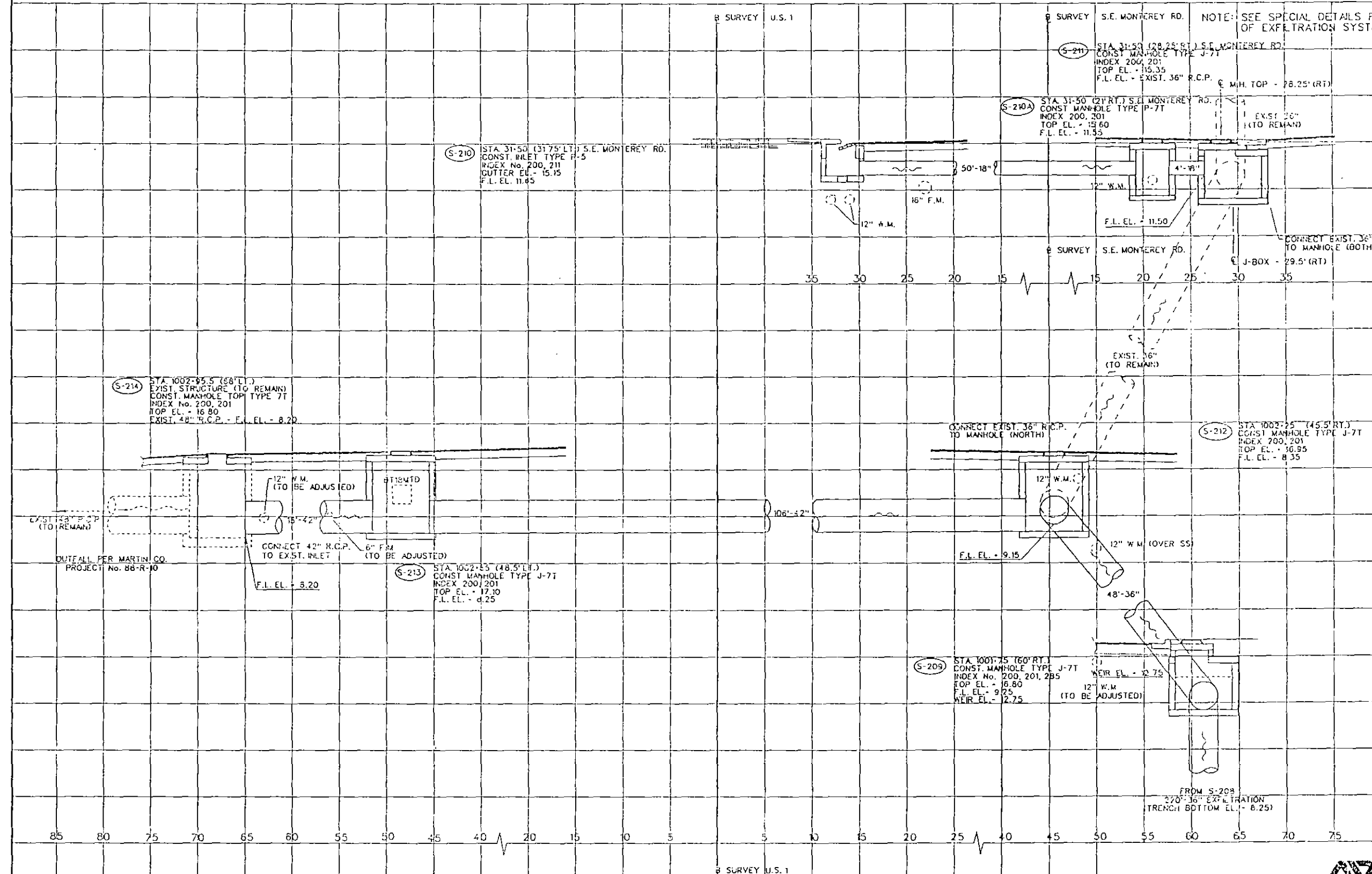
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 NAME: MW 10/89

FLORIDA DEPARTMENT OF TRANSPORTATION
 APPROVED AT: JOHN ADAR, P.E. #4151 DATE: 6/93

ADAR & BRADY, INC.
 Consulting Engineers
 1000 N. W. 10th Ave., Suite 1000, Fort Lauderdale, FL 33304

DRAINAGE STRUCTURES

10/17/89/10/17/89/10/17/89



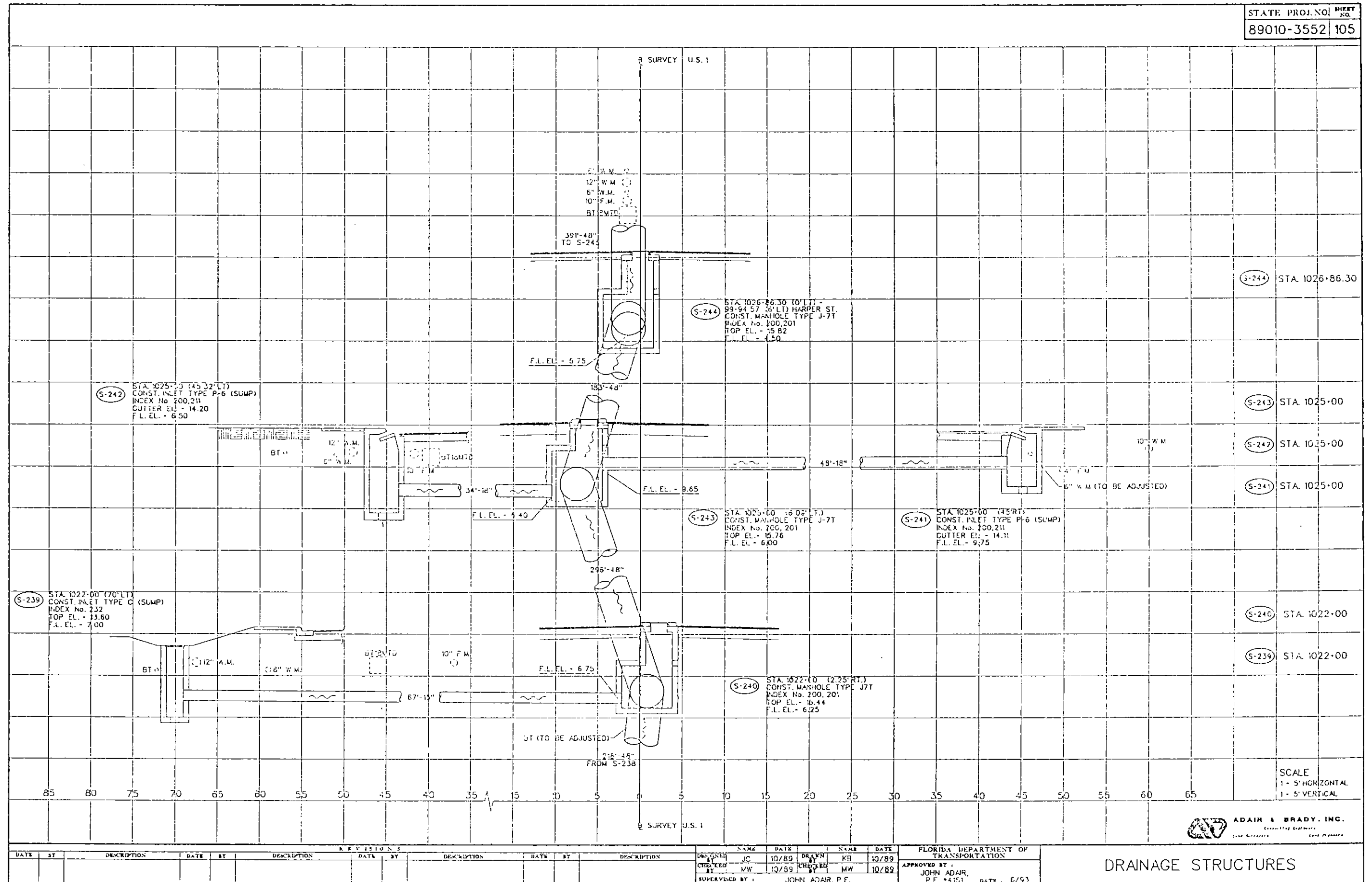
REVISIONS				DESIGN				CHECKED				APPROVED			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE

DESIGNED BY	JC	DATE	10/89	DRAWN BY	KB	DATE	10/89
CHECKED BY	MW	DATE	10/89	CHECKED BY	MW	DATE	10/89
SUPERINTENDENT BY	JOHN ADAR, P.E.	DATE	6/93				

FLORIDA DEPARTMENT OF TRANSPORTATION	APPROVED BY	JOHN ADAR, P.E.	DATE	6/93
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DRAINAGE STRUCTURES





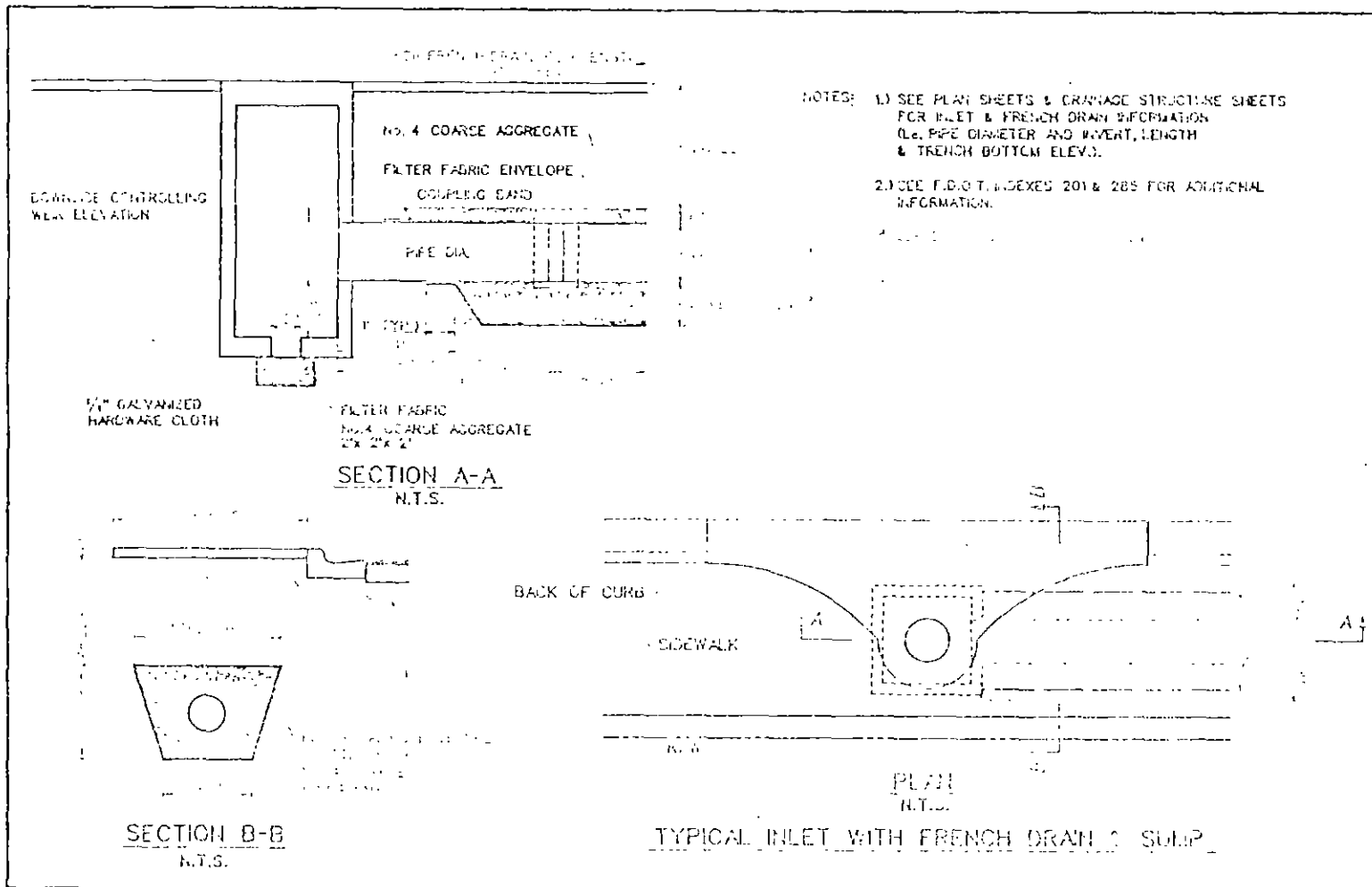
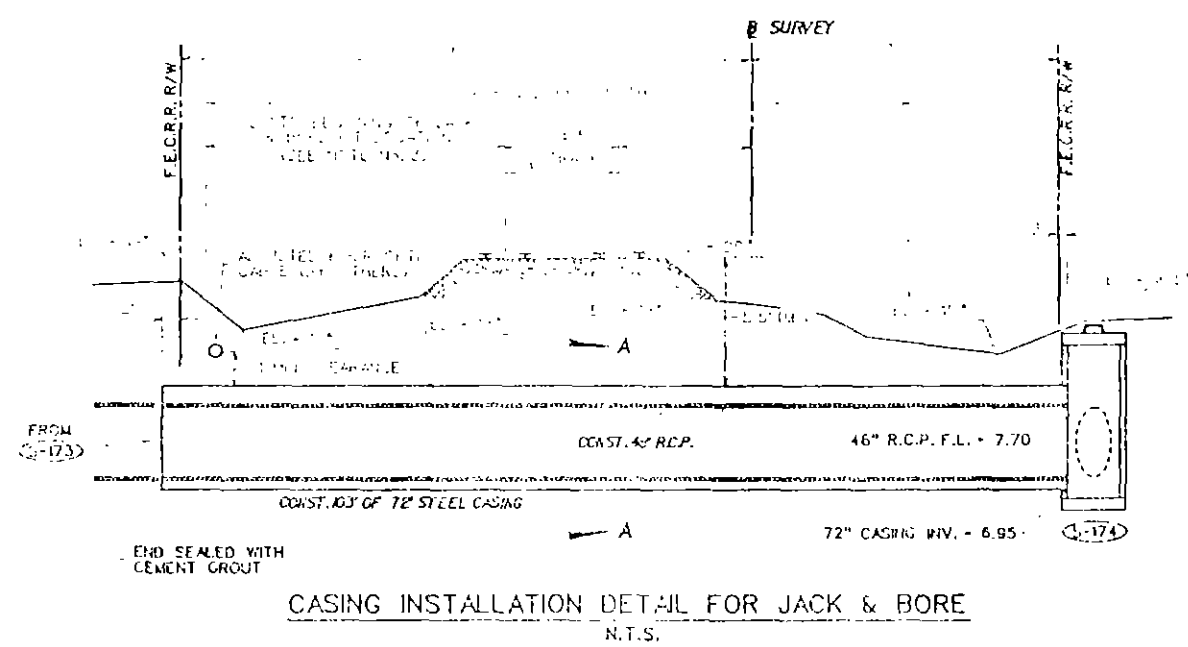
REVISIONS												NAME		DATE		NAME		DATE		FLORIDA DEPARTMENT OF TRANSPORTATION	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DESIGNED BY	DATE	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE		
												JC	10/89	KB	10/89			JOHN ADAR	6/93		
												MW	10/89	MW	10/89			P.E. 04/511			

ADAR & BRADY, INC.

Consulting Engineers

1000 N. W. 10th Ave., Suite 100, Ft. Lauderdale, FL 33304

DRAINAGE STRUCTURES

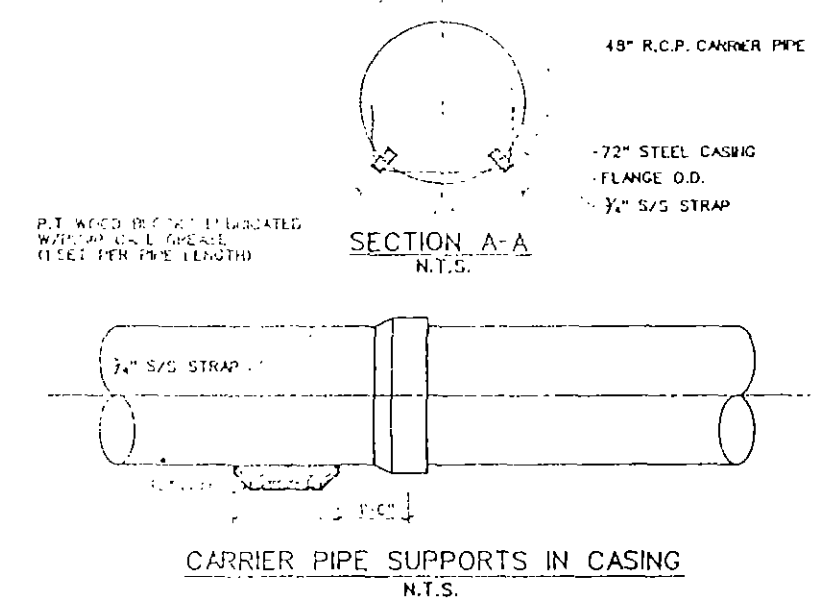


JACK & BORE (F.E.C. R.R.) GENERAL NOTES

- FOR FURTHER INFORMATION SEE F.D.O.T. INDEX NO. 285 OR CONTACT F.E.C. ENGINEERING DEPT. 1-800-342-1131.
- SEE DRAINAGE STRUCTURES FOR INVERTS AND LOCATIONS OF 5-173 & 5-174.
- CONTRACTOR WILL PROVIDE 30' TO THE BEGINNING OF THE JACKING PIT. THE PIT WILL BE PROTECTED WITH ADEQUATE SHEETING, BULKHEADS, AND LIGHTS TO PROTECT THE RAILWAY'S INVERTS. BARRICADES AND LIGHTS WILL BE PLACED AROUND THE PIT FOR PROTECTION.
- CASING PIPE SHALL BE IN ACCORDANCE WITH THE CURRENT ASTM SPECIFICATION A139 AND BE PROTECTED BY A BLACK BITUMINOUS COATING FOR PROTECTION AGAINST CORROSION. WALL THICKNESS SHALL BE AS FOLLOWS:

DIAMETER (INCHES)	THICKNESS (INCHES)
6 - 10	1/4
16 - 20	5/16
22 - 24	3/8
26 - 28	7/16
30 - 34	1/2
36 - 38	9/16
40 - 48	5/8
50 - 56	11/16
60 - 66	3/4
72 - 76	13/16
84 - 90	7/8
96 - 102	15/16
108 - 114	1
120	1-1/8

- ALL CASING PIPE JOINTS WILL BE WELDED IN ACCORDANCE WITH AISC SPECIFICATION NO. 3. ALL JOINT WELDS WILL BE FULL PENETRATION.
- AT NO TIME WILL CONSTRUCTION INTERFERE WITH THE NORMAL AND SAFE OPERATION OF THE RAILWAY. NO CONSTRUCTION EQUIPMENT WILL ENTER THE RAILWAY AREA. ALL CONSTRUCTION SHALL BE AT LEAST 10' FROM THE RAILWAY TRACKS.
- ALL CASING PIPE INSTALLATIONS WHERE THE DIAMETER IS GREATER THAN 48" WILL REQUIRE A PRECONSTRUCTION SURVEY AT THE PROJECT SITE.
- ENGINEERING AND ARCHITECTURAL WORK SHALL BE MADE WITH THE OFFICE OF THE ENGINEER OF DESIGN AND BUILDING AT LEAST ONE WEEK PRIOR TO CONSTRUCTION. A RAILWAY INSPECTION MUST BE COMPLETED DURING THE ENTIRE CONSTRUCTION OF THE CASING PIPE. THE INSPECTOR SHALL HAVE COMPLETE AUTHORITY OVER THE PROJECT ON THE RAILWAY'S RIGHT-OF-WAY.
- CARRIER PIPELINE SPECIFICATIONS ARE AS FOLLOWS:
 - MATERIALS: MODIFIED BELL AND SPIGOT OR TONGUE AND GROOVE IN ACCORDANCE WITH CURRENT ASTM SPECIFICATION C76 CLASS 15. RAILWAY STRENGTH PIPE OR CURRENT SPECIFICATION FOR PRESTRESSED CONCRETE PIPE.
 - JOINTS: JOINTS FOR PRESTRESSED PIPE IN ACCORDANCE WITH CURRENT LOCK JOINT PIPE COMPANY SPECIFICATION OR GPO OR EQUIVALENT. JOINTS FOR BELL AND SPIGOT AND TONGUE AND GROOVE PIPE TO BE IN ACCORDANCE WITH CURRENT STANDARD PRACTICE. JOINTS MAY BE MADE USING CURRENT LISTED US RUBBER GASKET.



PROPOSED PARKING IMPROVEMENTS
to the
MONTEREY MEDICAL CENTER
STUART, FLORIDA

JULY 10, 2022
August 10, 2022
October 10, 2022
December 7, 2022
January 20, 2023

DRAWING INDEX

TITLE	SHEET NUMBER
COVER SHEET	SHEET 0
EXISTING CONDITIONS & DEMOLITION PLAN	SHEET 1
PROPOSED SITE PLAN	SHEET 2
DRAINAGE IMPROVEMENT PLAN	SHEET 3
SEDIMENT & EROSION CONTROL PLAN	SHEET 4
MITIGATION AREA #1 - DETAIL	SHEET 5
MITIGATION AREA #2 - DETAIL	SHEET 6
STANDARD DETAILS	SHEET 7
INFILTRATION SYSTEM DETAILS	SHEET 8
NOTES	SHEET 9
EXISTING LAND USE PLAN	SHEET 10
PROPOSED LAND USE PLAN	SHEET 11



AREA MAP

nlb

PROPERTY DATA

PROPERTY IDENTIFICATION: LOTS 6, 7 & 8 PLAT
OF MONTEREY TRIANGLE BOOK 17, PAGE 14

ZONING DISTRICT: I (INDUSTRIAL)

AREA: 6.298 ACRES

OWNER/APPLICANT: DOC 1050 SE MONTEREY ROAD MOB, LLC

SURVEYING: BETSY LINDSAY, INC. SURVEYING AND MAPPING
DATED APRIL 22, 2021

DATUM: NAVD 88 (CONVERSION: NGVD 29 = NAVD 88 +1.38')



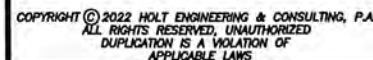
HOLT ENGINEERING & CONSULTING, PA
5540 NW UNIVERSITY BLVD. SUITE 105
PORT ST LUCIE, FL 34986
(772) 204-9550
DAN@HOLTENGINEERING.NET

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE
WITH THE FOLLOWING:

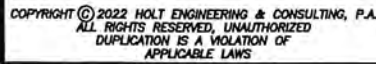
FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY
AND TRAFFIC DESIGN STANDARDS
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
REQUIREMENTS
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
REQUIREMENTS
CITY OF STUART LAND DEVELOPMENT REGULATIONS

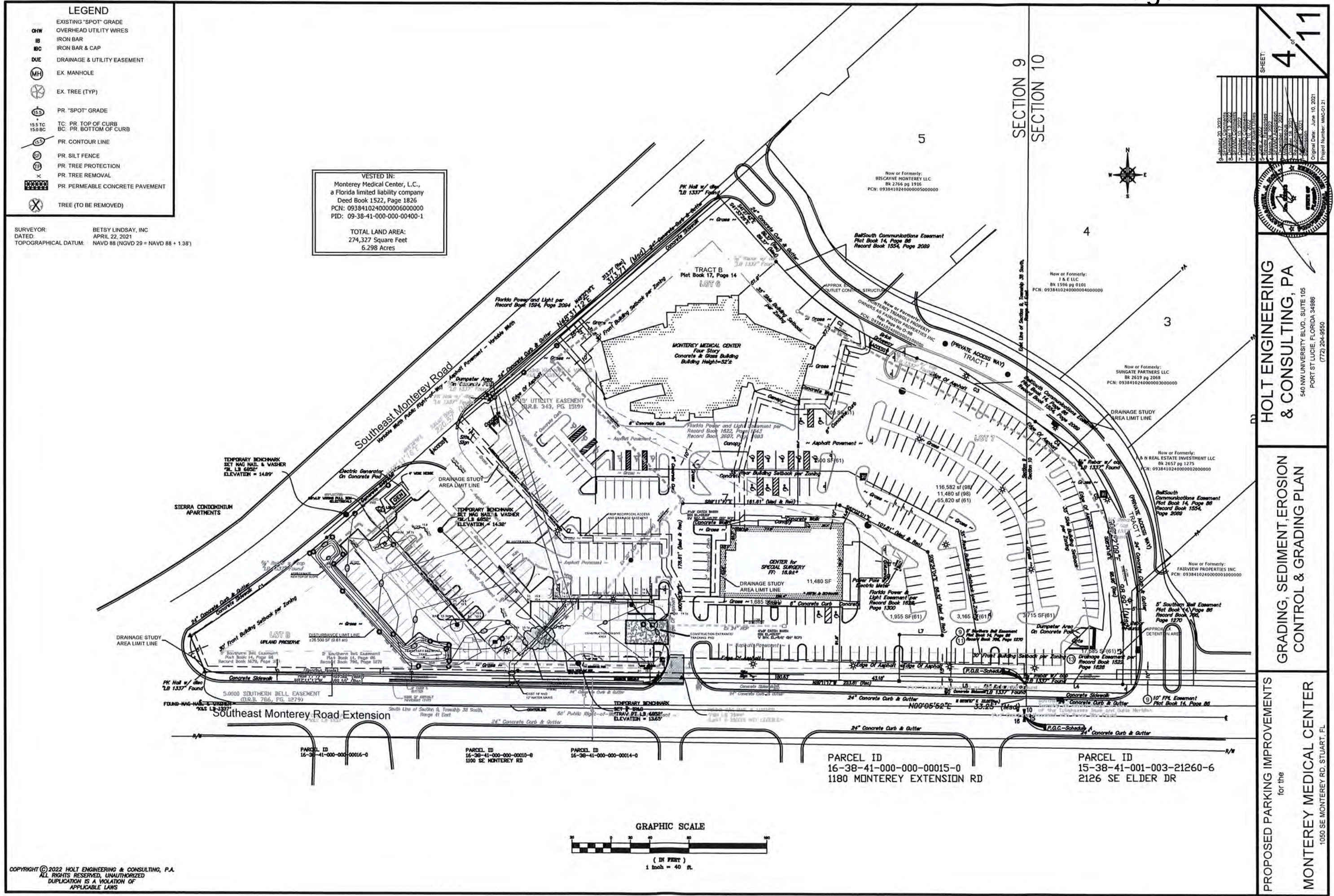
NOTE THAT THESE PLANS MAY HAVE BEEN REDUCED IN
SIZE DURING REPRODUCTION OR FOR FILING PURPOSES.
THEREFORE, IT IS ADVISED THAT SCALING OF THESE
PLANS BE BASED UPON THE GRAPHIC SCALE PROVIDED
ON EACH SHEET.

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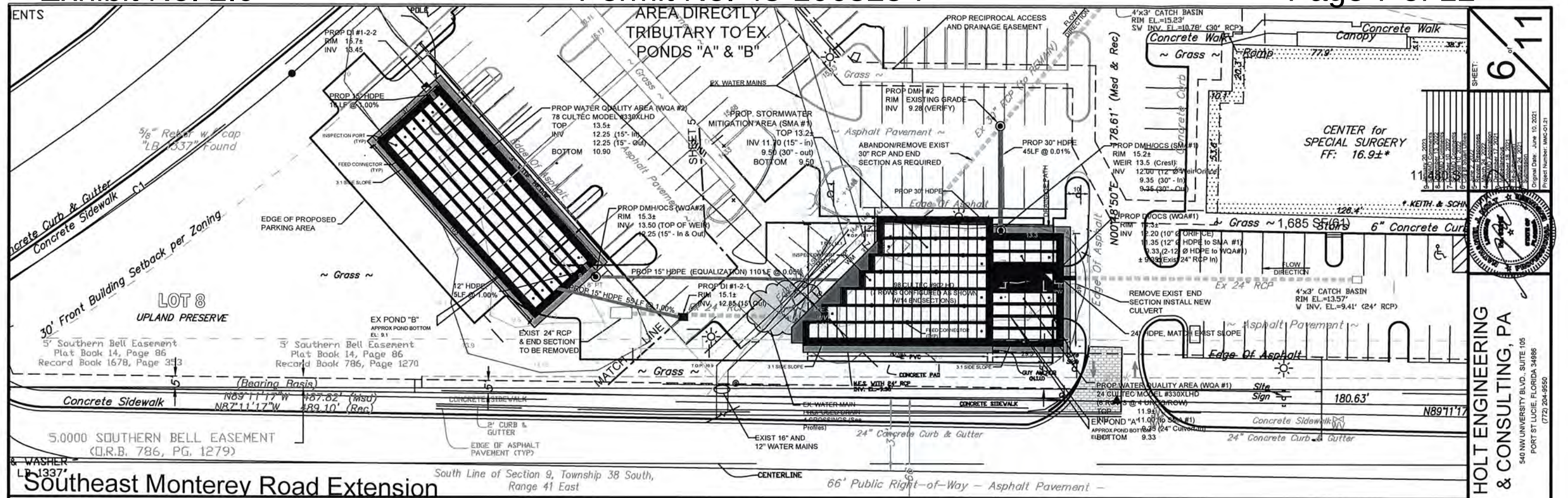
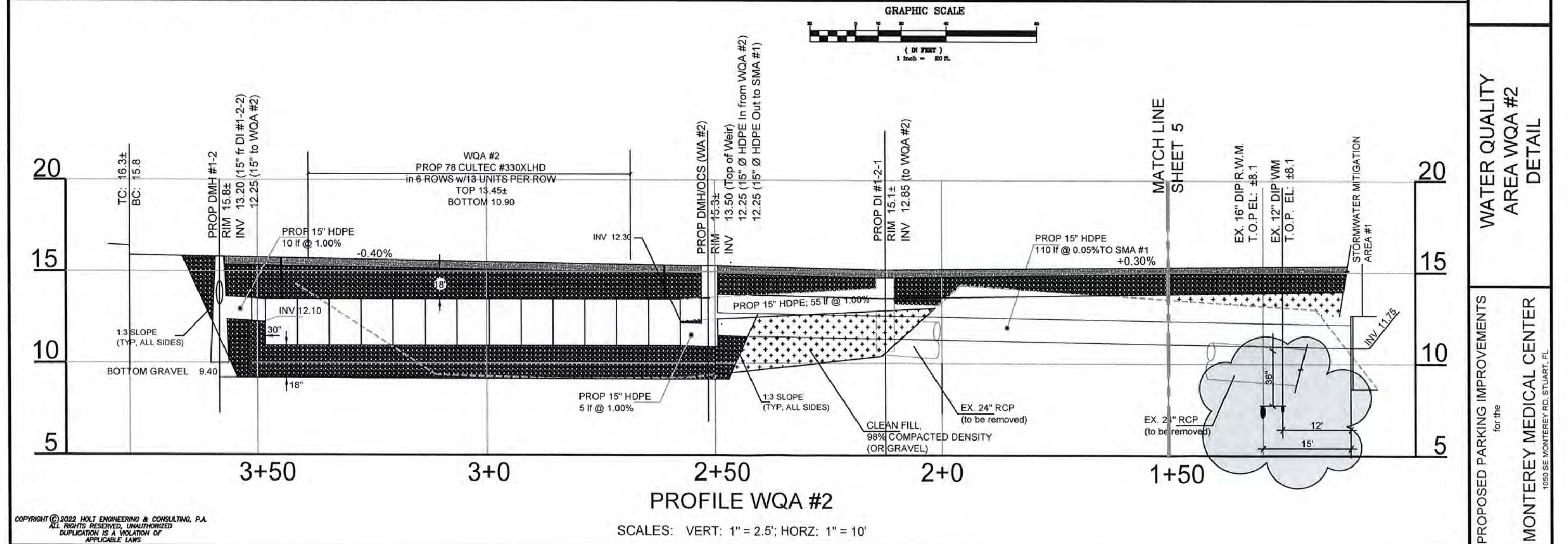
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540 NW UNIVERSITY BLVD., SUITE 105
PORT ST LUCIE, FLORIDA 34986
(772) 264-9550

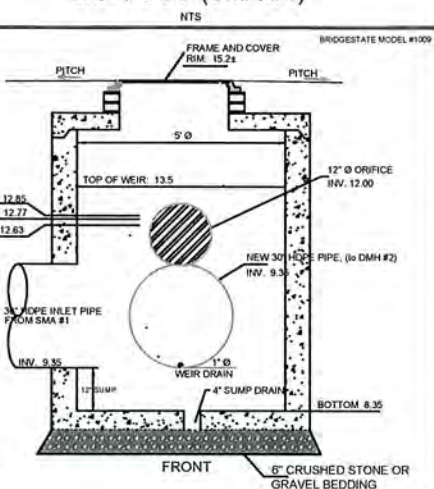
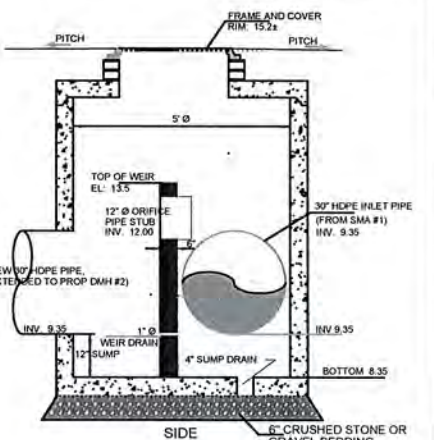
WATER QUALITY AREA WQA #2 DETAIL

PROPOSED PARKING IMPROVEMENTS for the MONTEREY MEDICAL CENTER
1050 SE MONTEREY RD, STUART, FL

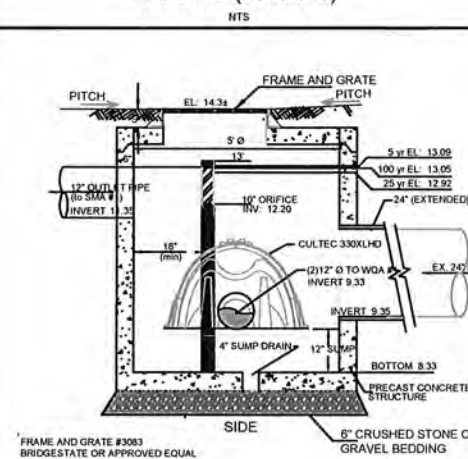
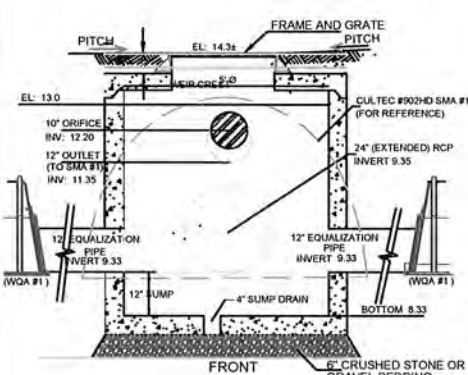
OUTLET CONTROL DETAILS

NTS

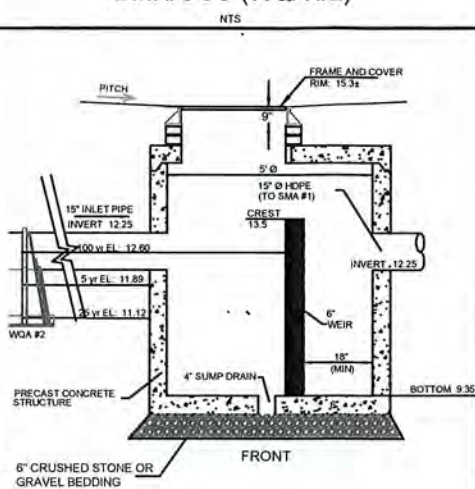
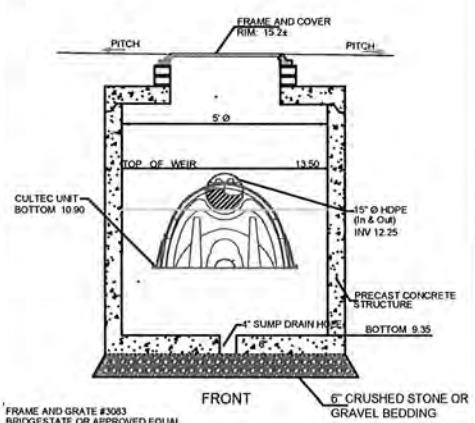
DMH/OCS (SMA #1)



DI/OCS (WQA #1)

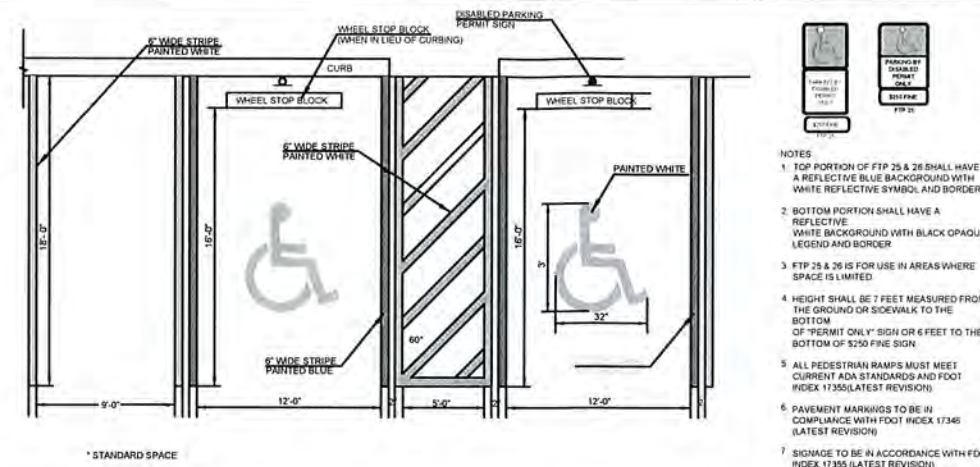


DMH/OCS (WQA #2)



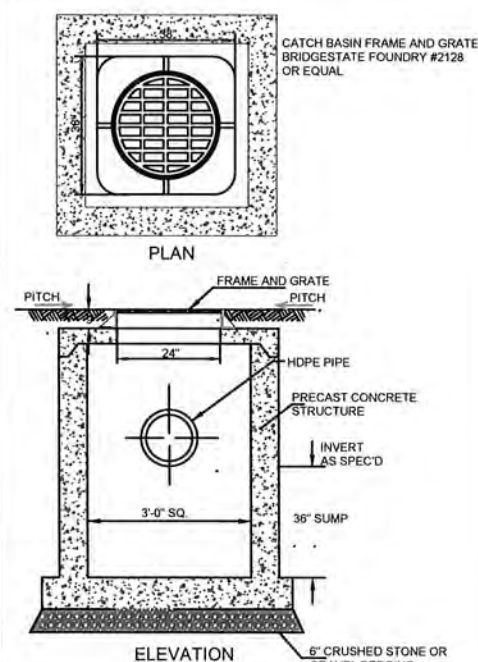
PARKING SPACE DETAILS

NTS

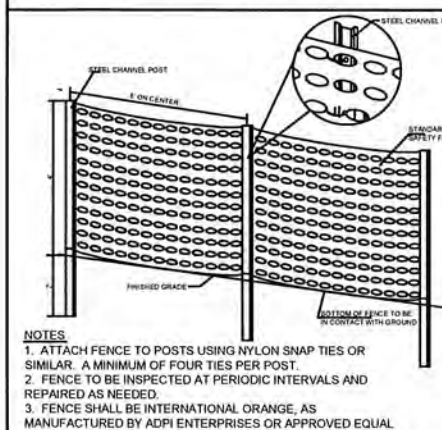


DRAIN INLET DETAIL

NTS

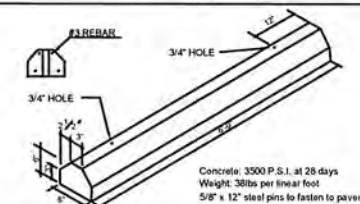


CONSTRUCTION FENCE DETAIL



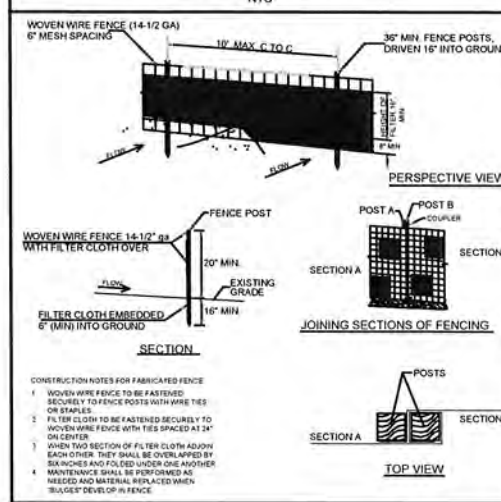
WHEEL STOP BLOCK

NTS



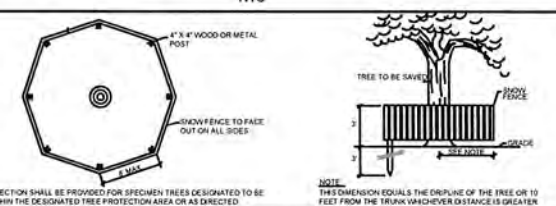
SILT FENCE

NTS



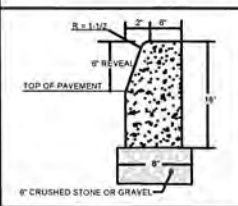
TREE PROTECTION DETAIL

NTS



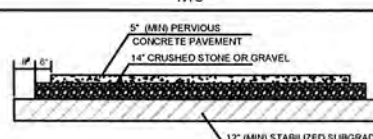
CONCRETE CURB DETAIL

NTS



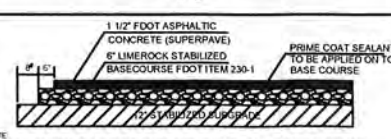
PERMEABLE CONCRETE PAVEMENT DETAIL

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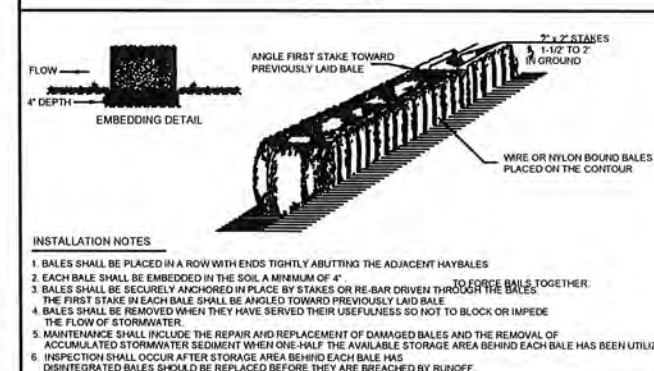
TYPICAL PAVEMENT DETAIL

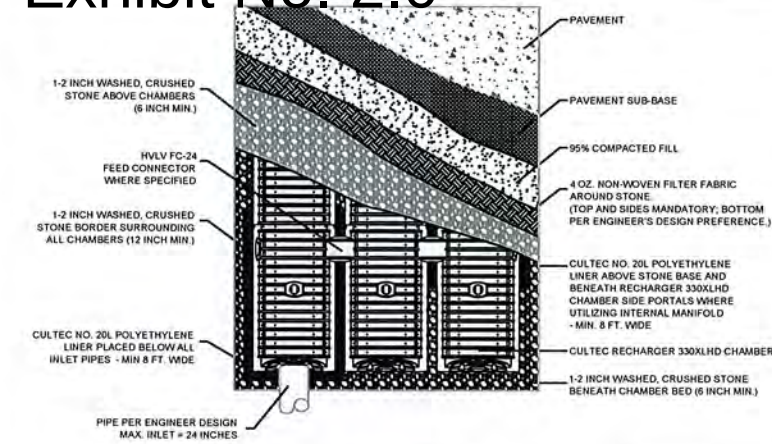
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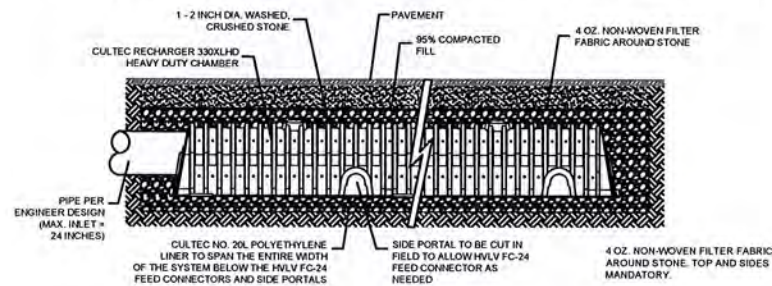
STRAWBALE SEDIMENT BARRIERS

NTS

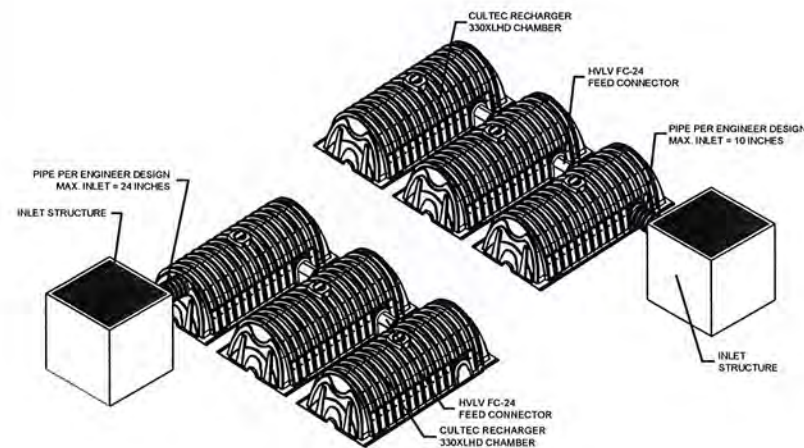




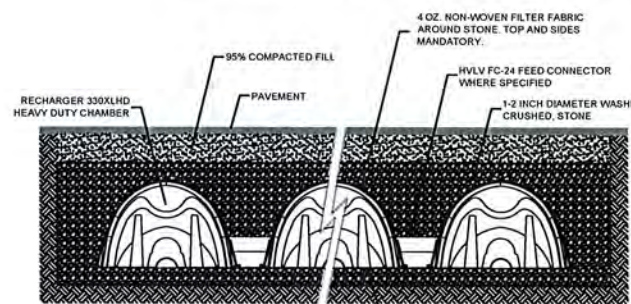
CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW



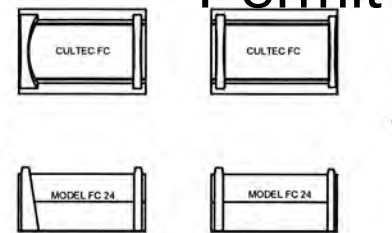
CULTEC INTERNAL MANIFOLD DETAIL



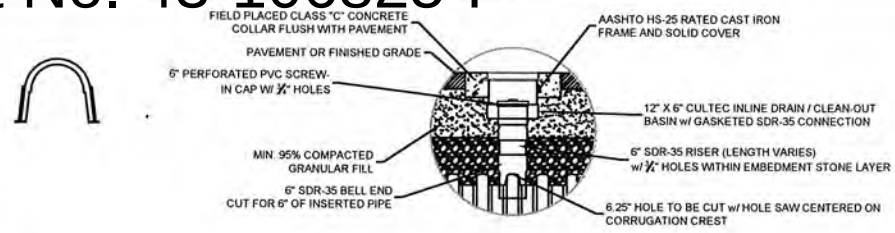
CULTEC TYPICAL INLET CONNECTION



CULTEC RECHARGER HVLV FC 24 FEED CONNECTOR THREE VIEW



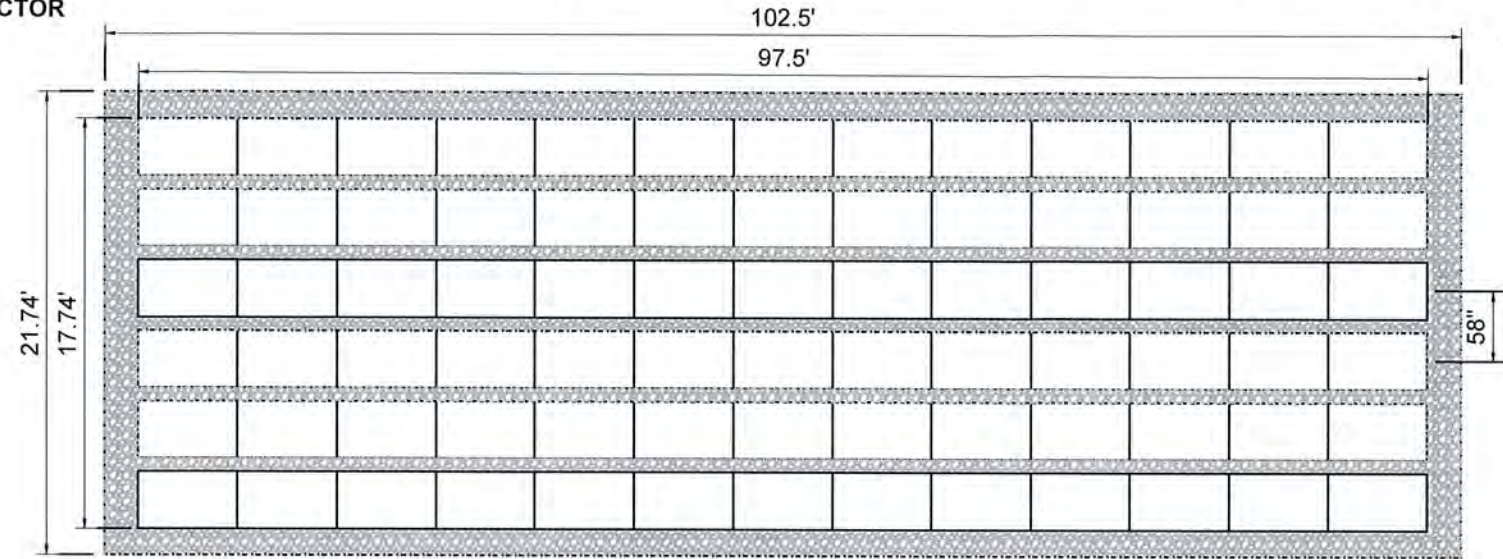
CULTEC RECHARGER HVLV FC 24 FEED CONNECTOR



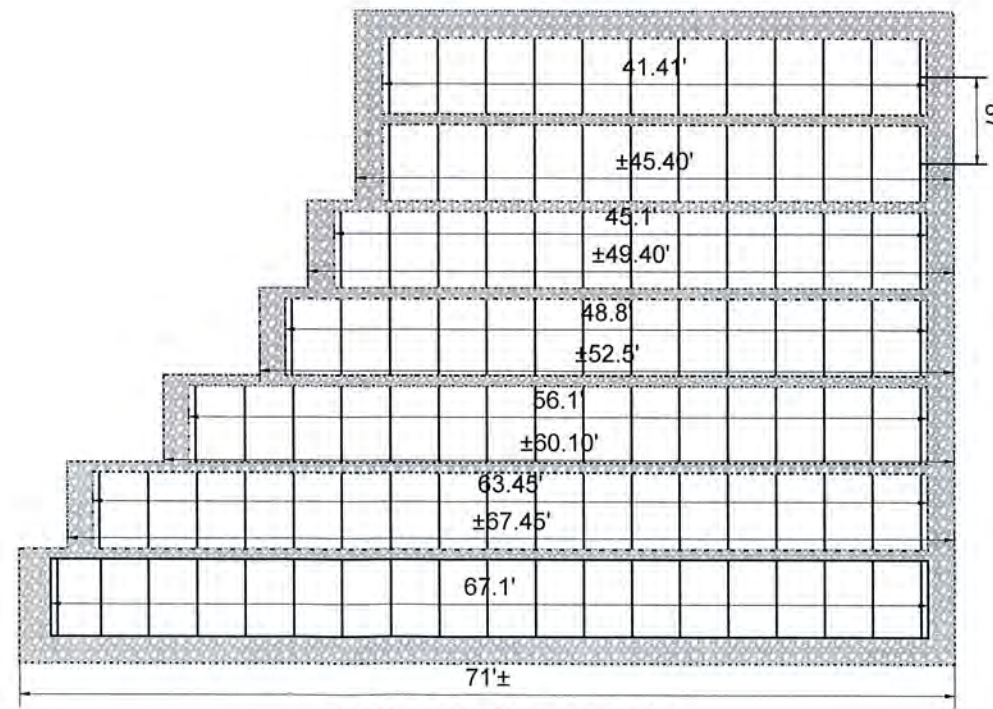
CULTEC INSPECTION PORT



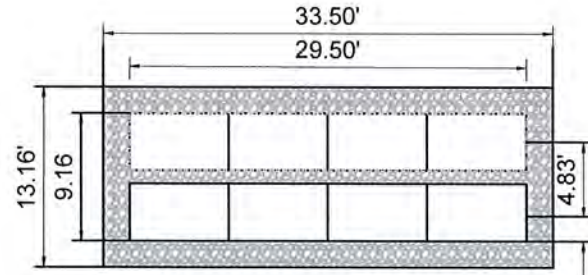
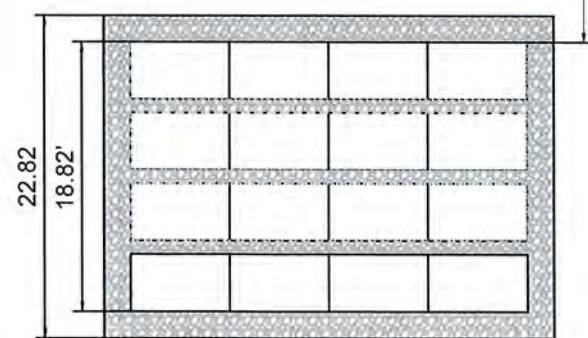
CULTEC RECHARGER 902HD (HEAVY DUTY)



CULTEC #330XLHD WQA #1-2 nts



CULTEC #R-902-HD SMA #1 nts



CULTEC #330XLHD WQA #1-1 nts

HOLT ENGINEERING & CONSULTING, PA
540 NW UNIVERSITY BLVD., SUITE 105
PORT ST LUCIE, FLORIDA 34986
(772) 204-9550

INFILTRATION SYSTEM DETAILS

PROPOSED PARKING IMPROVEMENTS for the
MONTEREY MEDICAL CENTER
1050 SE MONTEREY RD, STUART, FL

8/11
SHEET: 8/11
DATE: 10/10/2023
PROJECT: MONTEREY MEDICAL CENTER
DRAWN BY: J. HOLT
CHECKED BY: J. HOLT
APPROVED BY: J. HOLT
ORIGINAL DATE: JUNE 10, 2021
PROJECT NUMBER: MAC-0131



GENERAL NOTES

1. DRAWING DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING ANY WORK.
2. NO FIELD CHANGES OR DEVIATIONS FROM THESE PLANS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER/ENGINEER.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION.
4. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS (CALL BEFORE YOU DIG).
5. THE LOCATION AND SIZE OF EXISTING UTILITIES SHOWN ON THE PLANS SHOULD BE CONSIDERED APPROXIMATE AND ARE BASED UPON THE BEST AVAILABLE INFORMATION. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITIES BY ELECTRONIC METHOD AND BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.
6. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ANY UNDERGROUND CONDUIT AND/OR PIPING REQUIRED FOR ELECTRIC POWER, TELEPHONE, CABLE TELEVISION, IRRIGATION, ETC. PRIOR TO BEGINNING SUBGRADE WORK. THE CONTRACTOR SHALL COORDINATE THE RELOCATION OF ALL EXISTING UTILITIES WITH THE APPLICABLE UTILITY COMPANIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION, INCLUDING PROVIDING DIRECT SUPPORT AND/OR SHORING EXCAVATED AREAS AS NECESSARY. THE CONTRACTOR SHALL NOTIFY AFFECTED UTILITY COMPANIES PRIOR TO ATTEMPTING ANY FACILITY SUPPORT. IF A UTILITY COMPANY REQUESTS THAT ONLY THEIR CREWS MAY SUPPORT ITS FACILITIES, THEN THE CONTRACTOR SHALL PROVIDE FOR THE REQUIRED COORDINATION AND PAYMENT.
9. THE CONTRACTOR SHALL VERIFY WATER MAIN CONFLICT LOCATIONS, INCLUDING PIPE SIZE, MATERIAL AND DEPTH PRIOR TO BEGINNING CONSTRUCTION.
10. THE CONTRACTOR SHALL PROTECT EXISTING WATER MAINS AND MAINTAIN EXISTING WATER SERVICES WITHOUT INTERRUPTION AT ALL TIMES DURING CONSTRUCTION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING WATER SERVICES AS NECESSARY. SERVICE INTERRUPTIONS SHALL BE NO GREATER THAN TWO (2) HOURS.
12. ALL EXISTING WATER VALVES, FIRE HYDRANTS, WATER METERS, AND APPURTENANCES AFFECTED BY CONSTRUCTION SHALL BE ADJUSTED AS NECESSARY.
13. ALL UTILITY SYSTEM CONSTRUCTION SHALL BE INSTALLED, INSPECTED AND TESTED IN ACCORDANCE WITH THE UTILITY COMPANY DESIGN AND CONSTRUCTION STANDARDS. IN CASE OF DISCREPANCIES BETWEEN THE CONSTRUCTION PLANS AND THE UTILITY COMPANY SPECIFICATIONS, THE MORE RESTRICTIVE SHALL APPLY.
14. THE CONTRACTOR SHALL ALLOW THE UTILITIES COMPANIES TO INSPECT ALL APPLICABLE UTILITY WORK DURING CONSTRUCTION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CLEARING AND GRUBBING.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF ALL RUBBLE, DEBRIS AND ANY OTHER UNSUITABLE OR UNDESIRABLE MATERIAL.
17. THE "TRENCH SAFETY ACT" SHALL BE INCORPORATED INTO THIS CONTRACT AS ENACTED BY THE LEGISLATURE OF THE STATE OF FLORIDA.
18. ELEVATION DATUM IS THE NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1929.
19. ANY NGVD MONUMENT WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY:

GEODETIC INFORMATION CENTER
6001 EXECUTIVE BOULEVARD
ROCKVILLE, MARYLAND 20850
20. SHOP DRAWINGS FOR ALL CONSTRUCTION ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DELIVERY TO THE SITE.
21. EXCAVATION, BACKFILL, COMPACTION, TESTING, ROADWAY REPAIR/REPLACEMENT AND MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, UNLESS NOTED OTHERWISE.
22. CONSTRUCTION DEWATERING (WELL POINTS, SUMPS, ETC.) MAY REQUIRE A SOUTH FLORIDA WATER MANAGEMENT DISTRICT WATER USE/DEWATERING PERMIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING WATER USE/DEWATERING PERMITS AS NECESSARY.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GAINING COMPLETE FAMILIARITY WITH THE PROJECT SITE INCLUDING ACCESS LIMITATIONS, SUBSURFACE SOIL CONDITIONS AND GROUNDWATER LEVELS.
24. THE CONTRACTOR SHALL PROVIDE A QUALIFIED SUPERINTENDENT TO BE PRESENT AT THE PROJECT PRE-CONSTRUCTION MEETING AND IS TO REMAIN ON THE JOB SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED.
25. THE CONTRACTOR SHALL HAVE THE FOLLOWING AVAILABLE AT THE JOB SITE AT ALL TIMES: ONE COPY OF THE UTILITY COMPANY DESIGN AND CONSTRUCTION STANDARDS, ONE COPY OF THE CONTRACTOR DOCUMENTS, INCLUDING PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS AND ONE COPY OF EACH REQUIRED CONSTRUCTION PERMIT.
26. THE CONTRACTOR SHALL RESTORE ALL DRAINAGE SWALES/DITCHES AND REPAIR OR REPLACE ALL DRAINAGE STRUCTURES (INLETS, CULVERTS, HEADWALLS, ETC.) AFFECTED BY CONSTRUCTION ACTIVITIES. CONDITIONS (INCLUDING LOCATION, GRADE, SOD TYPE, ETC.) REPAIRED OR REPLACED DRAINAGE STRUCTURES SHALL MEET OR EXCEED ORIGINAL CONDITIONS (INCLUDING LOCATION, ELEVATION, SIZE, MATERIAL, ETC.) PRE AND POST CONSTRUCTION "AS-BUILT" INFORMATION SHALL BE PROVIDED FOR ALL DISTURBED OR DAMAGED FACILITIES.
27. THE CONTRACTOR SHALL RESTORE/REPLACE ALL EXISTING PAVEMENT, DRIVEWAYS, SIDEWALKS, WALKWAYS, SOD, LANDSCAPING, CONDUIT, CABLE, IRRIGATION SYSTEMS, ETC. AFFECTED BY CONSTRUCTION ACTIVITIES.
28. SOD SHALL BE REPLACED FOR THE FULL WIDTH DISTURBED AND SHALL MATCH THE EXISTING UNLESS OTHERWISE SPECIFIED.
29. CONCRETE AND ASPHALT AREAS SHALL BE RESTORED/REPLACED FROM SAW CUT TO EDGE OF NEW PAVEMENTS.
- TO BE RESPONSIBLE FOR CONTACTING PMTACONS FLAND PAVING ALL NECESSARY FEES FOR HOLDING POWER POLES AND/OR LINES AFFECTED BY CONSTRUCTION ACTIVITIES.

GENERAL SITE PREPARATION

CLEARING, GRUBBING & DEMOLITION

THE PAVEMENT, CURB AND VEGETATION WITHIN THE CONTRACT LIMITS SHALL BE REMOVED TO FACILITATE THE PROPOSED PARKING AND DRAINAGE IMPROVEMENTS WHICH IS GENERALLY DELINEATED ON THESE PLANS. ALL DEMOLISHED MATERIALS SHALL BE REMOVED FROM THE SITE. NO ON-SITE BURIAL OF ANY SUCH MATERIALS IS PERMITTED.

EXCAVATION AND BACKFILLINGPIPE

1. THE PIPE TRENCH SHALL BE EXCAVATED TO THE PRESCRIBED DEPTH (INVERT PLUS BEDDING) AS DEPICTED ON THE PLANS.
2. PRIOR TO INSTALLATION, THE TRENCH SUBGRADE SHALL BE COMPACTED. REMOVE ANY DELETERIOUS MATERIALS OR VEGETATION. REPLACE VOID WITH GRAVEL.
3. INSTALL PIPE AT REQUIRED SLOPE AND ALIGNMENT.
4. IF DEEMED SUITABLE, EXCAVATED MATERIAL MAY BE USED TO BACKFILL OVER THE PIPE. IN GENERAL, THE FILL SHALL BE PLACED IN 12 INCH LIFTS FREE OF ORGANIC MATERIALS WITH A MINIMUM DRY MOISTURE CONTENT OF 95%.

INFILTRATION SYSTEM

THE INFILTRATION SYSTEM IS TO BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATIONS. SEE DETAILS.

1. EXCAVATE TO THE SPECIFIED ELEVATIONS AND ALIGNMENT AS INDICATED ON THE PLANS PLUS AN ADDITIONAL 6 INCHES (MINIMUM FOR BEDDING).
2. AFTER PLACING REQUIRED GRAVEL BEDDING, INSTALL NON-WOVEN GEOTEXTILE. THE IS TO WRAP ENCLOSE THE ENTIRE SYSTEM ON ALL SIDES (INCLUDING ENDS AND TOP). GRAVEL SHALL BE 1/2" CLEAN WASHED FREE TO DEBRIS AND FINES. SEE DETAILS.
3. INSTALL INLET AND OUTLET PIPES ARE REQUIRED INVERT ELEVATION WHILE PROVIDING GRAVEL BEDDING. SIMILARLY, INSTALL HALF FEED CONNECTORS AS INDICATED ON THE PLANS AND CONTINUE TO INSTALL GRAVEL UNTIL ENTIRE UNIT IS SURROUNDED BY GRAVEL AND EXTEND GEOTEXTILE TO COMPLETE THE WRAPPING.

4. CARE MUST BE TAKEN IN PLACING THE GRAVEL SUCH THAT THE UNITS ARE NOT DAMAGED DUE TO THE MOVEMENT AND WEIGHT OF THE EQUIPMENT.

5. GRAVEL IS TO EXTEND TO THE PROPOSED SUBGRADE ELEVATION.

6. EXTEND THE WRAP ACROSS THE TOP OF THE SYSTEM.

SEDIMENT AND EROSION CONTROLS

THE EROSION CONTROLS ILLUSTRATED ON THESE PLANS ARE CONSIDERED TO BE THE MINIMUM REQUIRED TO LIMIT EROSION AND SILT LOADING RUN-OFF FROM THE PROPERTY TO OFFSITE DRAINAGE SYSTEMS AND/OR WATERWAYS. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SEDIMENT - EROSION CONTROL PLANS AND DETAILS CONTAINED WITHIN THESE SHEETS.

1. IN GENERAL, SILT FENCE SHALL BE INSTALLED DOWN GRADIENT AND ALONG THE EDGE OF THE DISTURBANCE/CONSTRUCTION LIMIT LINES.

2. AN ANTI-TRACKING PAD/CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED AS INDICATED ON THE PLANS AT WHICH ALL CONSTRUCTION EQUIPMENT AND DELIVERIES WILL ACCESS THE WORK. ALL DRAIN INLETS WITHIN THE WORK AREA SHALL BE THE CONTRACTOR SHALL SCHEDULE A MEETING WITH THE ENGINEER AT THE SITE TO REVIEW THE PLANS AND SITE CONDITIONS AT WHICH TIME ANY ADJUSTMENTS TO THE CONTROLS WILL BE AGREED UPON.

- ALL EXISTING DRAINAGE SWALES SHALL REMAIN SODDED DURING CONSTRUCTION.
- SCARIFICATION SHALL BE PERFORMED ONLY TO THE EXTENT ABSOLUTELY NECESSARY.
- HAY BALES AND SALTATION FENCES (PER FOOT INDEX 102) SHALL BE USED DURING CONSTRUCTION TO PROTECT OFF-SITE AREAS FROM DISCHARGES.
- HAY BALES AND SALTATION FENCES (PER FOOT INDEX 103) SHALL BE USED DURING CONSTRUCTION TO PROTECT DRAINAGE SWALES AND RETENTION AREAS FROM ANY DEWATERING AND/OR PUMPING OF WATER.
- ALL DISTURBED AREAS SHALL BE SODDED AS SOON AS PRACTICAL TO LIMIT EROSION.
- DRAINAGE SWALES AND RETENTION AREAS SHALL BE STABILIZED AND SODDED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.

DRAINAGE, GRADING AND PAVING

GENERAL. SITE GRADING ELEVATIONS SHOWN ON THE PLANS ARE FINISHED GRADES AND INTENDED TO PROVIDE/MAINTAIN OR CREATE POSITIVE FLOWS OF STORMWATER TO THE DRAINAGE SYSTEM.

1. ALL AREAS SHALL BE SODDED AS SOON AS PRACTICAL AFTER FINAL GRADING TO MINIMIZE EROSION.
2. THE CONTRACTOR SHALL CONSTRUCT THE STORMWATER MANAGEMENT SYSTEM IN A MANNER SO AS TO MINIMIZE ANY ADVERSE IMPACTS TO THE FISH AND WILDLIFE. THE CONTRACTOR SHALL EMPLOY COUNTERMEASURES AS NECESSARY DURING CONSTRUCTION TO PROTECT THE WATER QUALITY ON AND OFF-SITE.
3. THE CONTRACTOR SHALL IMMEDIATELY CORRECT ANY EROSION, SHOULDER OR WATER QUALITY CONDITIONS CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES.

4. REINFORCED CONCRETE PIPE (IF SPECIFIED) SHALL BE ASTM C-78, CLASS III IN ACCORDANCE WITH SECTION 951 OF THE FOOT STANDARD SPECIFICATIONS.

5. CORRUGATED METAL PIPE (IF SPECIFIED) SHALL BE IN ACCORDANCE WITH SECTION 943 OF THE FOOT STANDARD SPECIFICATIONS AND SHALL BE TREATED WITH BITUMINOUS COATING.

6. HIGH DENSITY POLYETHYLENE PIPE (HDPE) SHALL BE 11-12 AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEM (ADS) OR APPROVED EQUAL.

7. FILTER FABRIC SHALL BE IN ACCORDANCE WITH SECTION 585 OF THE FOOT STANDARD SPECIFICATIONS AND AS MANUFACTURED BY MIRAFI OR APPROVED EQUAL.

8. SUBGRADE SHALL BE STABILIZED IN ACCORDANCE WITH SECTION 169 OF THE FOOT STANDARD SPECIFICATIONS.

9. BASE ROCK SHALL BE LIMESTONE IN ACCORDANCE WITH SECTION 206 OF THE FOOT STANDARD SPECIFICATIONS AND SHALL BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-180.

10. BASE COURSE SHALL RECEIVE A PRIME COAT IN ACCORDANCE WITH SECTION 300 OF THE FOOT STANDARD SPECIFICATIONS.

11. TYPE S-I AND S-II ASPHALTIC CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 331 OF THE FOOT STANDARD SPECIFICATIONS.

12. TYPE II ASPHALTIC CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 332 OF THE FOOT STANDARD SPECIFICATIONS.

13. TYPE III ASPHALTIC CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 333 OF THE FOOT STANDARD SPECIFICATIONS.

14. EXISTING ASPHALTIC CONCRETE SHALL BE SAW CUT TO PROVIDE A STRAIGHT LINE WHERE NEW PAVEMENT MEETS THE EXISTING PAVEMENT PRIOR TO REMOVING ANY CURB OR GUTTER. THE EXISTING ADJACENT ASPHALT SHALL ALSO BE SAW CUT TO PROVIDE CLEAN STRAIGHT LINES.

15. CERTIFIED TEST REPORTS SHALL BE PROVIDED TO THE OWNER/ENGINEER FOR REVIEW AND ACCEPTANCE. REPORTS SHALL BE SUBMITTED DOCUMENTING AT A MINIMUM, THE TEST RESULTS OF THE FOLLOWING ITEMS: BACKFILL, GRADATION, COMPACTION, SUBGRADE, BEARING AND COMPACTION, BASE COURSE, COMPACTION, ASPHALT COMPOSITION, GRADATION AND CONCRETE BREAK STRENGTH.

16. THE INFILTRATION SYSTEM SHALL BE AS MANUFACTURED BY CULTEC, INC.

17. THE INFILTRATION SYSTEM SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE APPROVED PLANS IN IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

INSPECTION PROGRAM FOR INFILTRATION SYSTEM

ACTIVITY	SCHEDULE
INSPECT INLET, PRETREATMENT STRUCTURE, OUTLET CONTROL STRUCTURE ETC., TO ENSURE STRUCTURAL INTEGRITY.	
INSPECT SURFACE AND SUBSURFACE SYSTEMS.	SEASONALLY/QUARTERLY DURING THE FIRST YEAR, BIANNUALLY THEREAFTER
INSPECT PAVEMENTS FOR STRUCTURAL INTEGRITY	
INSPECT NON-PAVED AREAS FOR EROSION OR IMPROPER VEGETATIVE COVER	
INSPECT INLET, PRETREATMENT STRUCTURE AND OUTLET CONTROL STRUCTURE FOR ACCUMULATION OF SILTS AND DEBRIS	SEMI ANNUALLY FOR THE FIRST YEAR, ANNUALLY THEREAFTER
INSPECT HEADER PIPE FOR ACCUMULATION OF SILTS AND DEBRIS	
INSPECT YARD DRAINS, CATCH BASINS AND INLETS FOR BLOCKAGE OR ACCUMULATION OF DEBRIS	
INSPECT OBSERVATION WELLS AND OUTLET CONTROL STRUCTURES FOR PROPER DRAWDOWN BETWEEN STORM EVENTS	MONTHLY AND AFTER SIGNIFICANT RAINFALL/STORM EVENTS

MAINTENANCE PROGRAM FOR INFILTRATION SYSTEM

ACTIVITY	FREQUENCY	EQUIPMENT
CLEAN SPILLS IN PAVEMENT AREA WHICH ARE TRIBUTARY TO THE INFILTRATION SYSTEM	10 SQUARE FEET OR LARGER	STAIN SPECIFIC CLEANER
SWEEP ALL PAVEMENTS AND WALKS CLEAN OF SANDS, SILTS AND DEBRIS	MONTHLY (SOONER IF NECESSARY DUE TO STORM EVENTS)	HAND OR MECHANIZED BROOMS
REPAIR DETERIORATED PAVED SURFACES WITH EXPOSED SUBBASE	10 SQUARE FEET OR LARGER	PACKAGE PAVEMENT OR HOT MIX BASED UPON AREA
MAINTAIN AND REPLANT VEGETATIVE COVER. REPLACE MULCH	SEASONALLY	RAKES, SAWS, ETC
CLEAR DEBRIS FROM NON PAVED AREAS	SEASONALLY	USE REAR FACING JET HOSE
CLEAN DRAINAGE PIPES	WHEN 25% OF THE PIPE VOLUME HAS BECOME FILLED WITH DEBRIS	
INSPECT HEADER PIPES FOR ACCUMULATION OF DEBRIS, SAND, ETC	WHEN 25% OF THE PIPE VOLUME HAS BECOME FILLED WITH DEBRIS	USE REAR FACING JET HOSE TO WASH DEBRIS FROM PIPES AND INTO INLET (OR OUTLET) STRUCTURE. REMOVE DEBRIS USING VAC TRUCK, HAND TOOLS (SHOVEL BUCKETS, ETC)
REMOVE SEDIMENT AND DEBRIS FROM PRE-TREATMENT SUMP	WHEN SEDIMENT ACCUMULATION REACHES ONE HALF THE SUMP CAPACITY	HAND TOOLS (SHOVELS, BUCKETS, ETC)
CLEAR PIPES AND CHAMBERS OF SILT AND DEBRIS. REMOVE SEDIMENT AND DEBRIS FROM SUMPS IN PRETREATMENT AND OUTLET CONTROL STRUCTURES.	SEMI ANNUALLY IN THE FIRST YEAR, YEARLY THEREAFTER	VACUUM TRUCK OR SIMILAR

MAINTENANCE PROGRAM FOR PERMEABLE PAVEMENT

GENERAL
MAINTAINING THE SURFACE OF PERMEABLE CONCRETE PAVEMENT IS AN IMPORTANT ASPECT OF THE CONTINUED FUNCTIONING OF THE STORMWATER MITIGATION SYSTEM. THE ACCUMULATION OF SANDS AND SILTS AS WELL AS OIL BASED PRODUCTS CAN NEGATIVELY AFFECT THE ABILITY OF THE CONCRETE TO ALLOW STORMWATER TO FILTER INTO THE SUBSURFACE SOILS AND THE INFILTRATION SYSTEM.
AFTER INITIAL INSTALLATION, THE SURFACE OF THE PAVEMENT SHOULD BE VISUALLY INSPECTED FOR AN ACCUMULATION THE REFERENCED SANDS, SILTS AND OIL BASED DEBRIS. AFTER THE FIRST TWO YEARS THE TIMING OF THE OF SUCH INSPECTIONS CAN BE ADJUSTED ACCORDINGLY.
IT IS STRONGLY ADVISED NOT TO USE A PRESSURE WASHING PROCEDURE AS THERE IS A TENDENCY TO FORCE THE FINES INTO THE VOIDS WITHIN THE CONCRETE THEREBY REDUCING ITS EFFECTIVENESS.
PROCEDURE
THE RECOMMENDED METHOD OF CLEANING THE SURFACE IS DEPENDANT UPON THE AMOUNT OF SANDS AND SILTS THAT HAS ACCUMULATED ON THE SURFACE.
OPTION 1: FOR A LIGHT OR SPORADIC ACCUMULATION OF MATERIAL BROOMS OR BLOWERS MAY BE APPROPRIATE.
OPTION 2: FOR LARGE AREAS AND/OR HEAVY ACCUMULATION OF MATERIAL POWER SWEEPERS OR POWER BROOMS WOULD BE RECOMMENDED.
REMOVAL OF OTHER DEBRIS SHOULD BE BASED UPON THE MATERIAL.
REGARDLESS OF THE METHODS USED, ALL DEBRIS IS TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.

SHEET:	9	11
1. GENERAL NOTES		
2. SITE GRADING		
3. DRAINAGE		
4. PAVING		
5. INFILTRATION		
6. EROSION CONTROL		
7. SEDIMENT CONTROL		
8. CONSTRUCTION		
9. UTILITIES		
10. LANDSCAPING		
11. SOD		
12. CONCRETE		
13. ASPHALT		
14. FINISH		
15. TOTAL		
Original Date: June 10, 2021		
Project Number: MMC-01-21		



HOLT ENGINEERING
& CONSULTING, PA

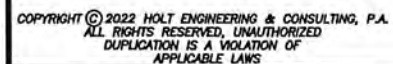
540 NW UNIVERSITY BLVD., SUITE 105
PORT ST LUCIE, FLORIDA 34986
(772) 204-9550

NOTES

PROPOSED PARKING IMPROVEMENTS
for the

IONTEREY MEDICAL CENTER

1050 SE MONTEREY RD, STUART, FL

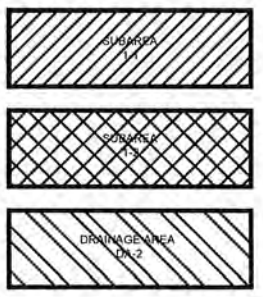
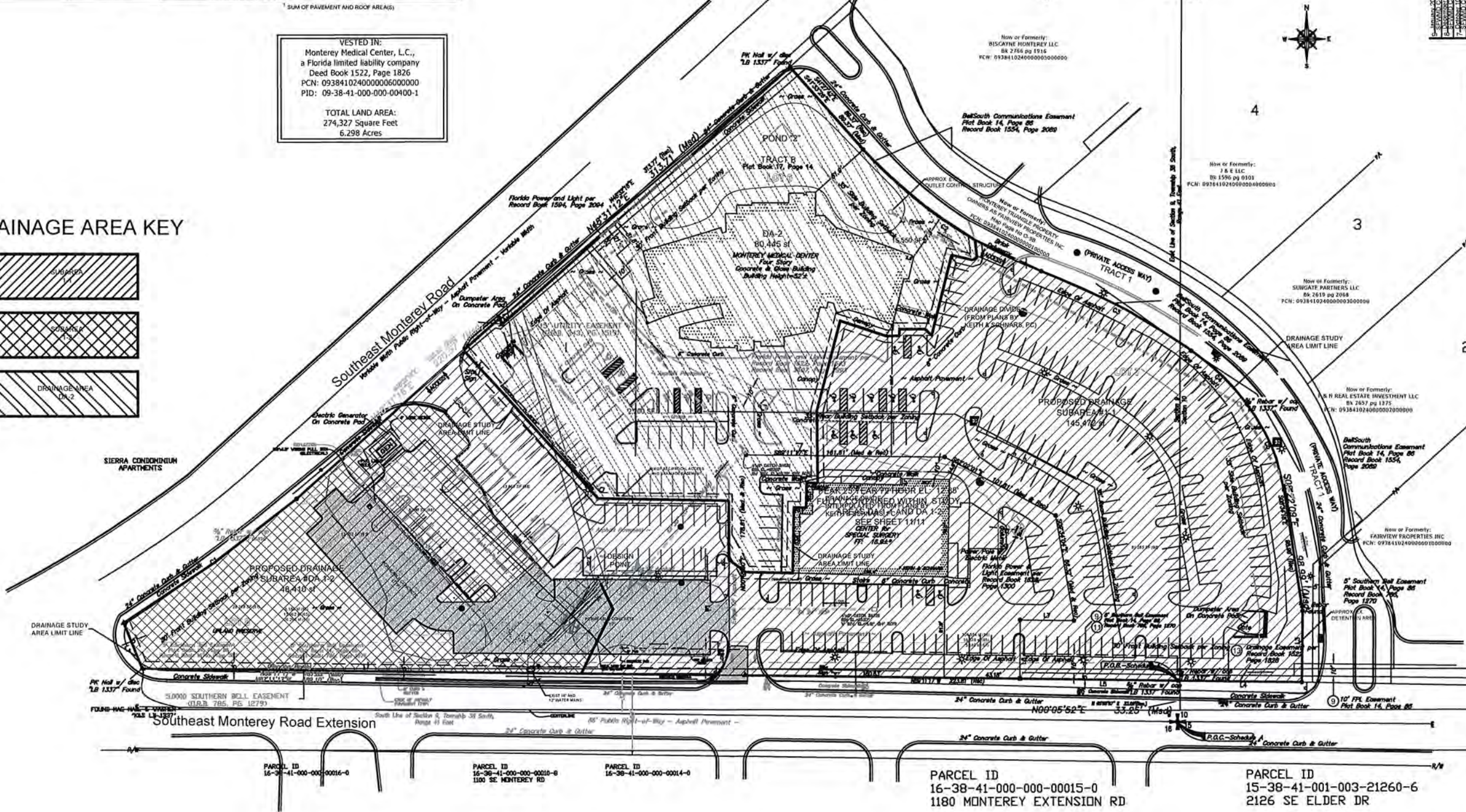
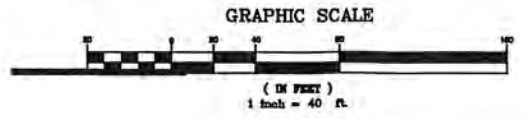


LAND USE TABLE			
USE	DRAINAGE SHED	EXISTING CONDITIONS	PROPOSED CONDITIONS
INSTITUTIONAL - MEDICAL HOSPITAL & SPECIAL SURGERY ON-GRADE PARKING	DA #1	BUILDING 11,860 sf IMPERVIOUS 116,862 sf LANDSCAPE 65,820 sf	DA #1-1 145,472 sf IMPERVIOUS 104,534 sf PERM CONC. 5,540 sf LANDSCAPE 35,398 sf
			DA #1-2 48,410 sf IMPERVIOUS 8,160 sf PERM CONC. 13,962 sf LANDSCAPE 26,288 sf
	DA #2	BUILDING 20,105 sf IMPERVIOUS 31,830 sf LANDSCAPE 28,710 sf	80,445 sf NO CHANGES
	TOTALS	274,327 sf BUILDING 31,545 sf IMPERVIOUS 148,212 sf LANDSCAPE 94,530 sf	274,327 sf

VESTED IN:
Monterey Medical Center, L.C.,
a Florida limited liability company
Deed Book 1522, Page 1826
PCN: 0938410240000006000000
PID: 09-38-41-000-000-00400-1

TOTAL LAND AREA:
274,327 Square Feet
6.298 Acres

DRAINAGE AREA KEY



C:\Data\HEC- Projects_Cad\MONTEREY\MONTEREY_SFWM.DWG, 1/21/2023 1:53:19 PM

11 of 11

11 of 11

Original Date: June 10, 2021
Project Number: MKC-0121

HOLT ENGINEERING & CONSULTING, P.A.

540 NW UNIVERSITY BLVD., SUITE 105
PORT ST LUCIE, FLORIDA 34986
(772) 204-9550

GROUND COVERAGE ANALYSIS (PROPOSED CONDITIONS)

PROPOSED PARKING IMPROVEMENTS for the
MONTEREY MEDICAL CENTER
1050 SE MONTEREY RD, STUART, FL

	PROPOSED PLANTER
	PROPOSED LIGHT
	PROPOSED DUMPSTER
	PROPOSED SURFACE FLOW
	PROPOSED PARKING SPACES
	PROPOSED SLOPE TO EXISTING GROUND
	PROPOSED ELEVATIONS (TOP AND BOTTOM OF CURB)
	EDGE OF PAVEMENT
EX	EXISTING
W/D=6"	WATERMAIN OVER DRAINAGE 6" MIN

1) ALL OFFSITE DISTURBED AREAS, LANDSCAPE AREAS, AND OPEN SPACE TO BE SODDED WITH BAHIA GRASS OR AS SPECIFIED BY LANDSCAPE ARCHITECT.

3). CONTRACTOR TO MAINTAIN ONE TEMPORARY CONSTRUCTION ENTRANCE ROAD FROM MONTEREY ROAD EXTENSION PER CITY OF STUART AND NPDES REQUIREMENTS UNTIL A PERMANENT ENTRANCE IS ESTABLISHED PER CONSTRUCTION PLANS. THE CONTRACTOR MUST CONTINUE TO PREVENT OFFSITE SEDIMENTATION FROM THE USE OF THE PERMANENT ENTRANCE ROAD PER MARTIN COUNTY AND NPDES REQUIREMENTS. CONTRACTOR TO PROVIDE TEMPORARY DRAINAGE CONVEYANCE AS NECESSARY PER CITY OF STUART AND SOUTH FLORIDA WATER MANAGEMENT DISTRICT REQUIREMENTS.

4) CONTRACTOR TO INSTALL AND MAINTAIN SILT FENCE ALONG ENTIRE PROPERTY BOUNDARY PER DETAIL UNTIL THE PERIMETER HAS BEEN CONSTRUCTED ACCORDING TO PLANS. SILT FENCE LOCATION CAN BE RELOCATED AS NECESSARY TO PERFORM WORK AS LONG AS THE RELOCATION CONTINUES TO PREVENT OFFSITE EROSION.

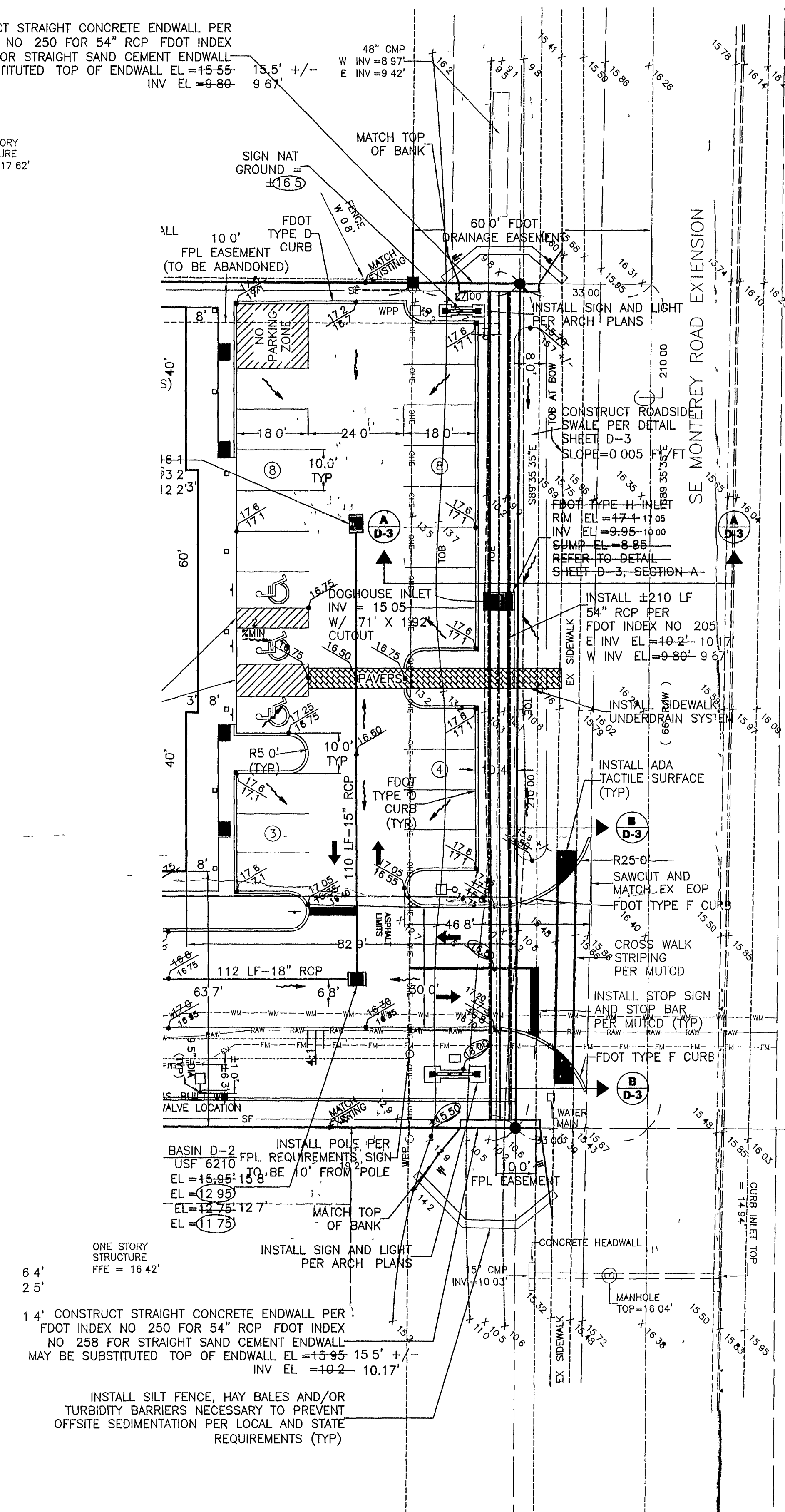
5) CONTRACTOR TO PREVENT OFFSITE SEDIMENTATION DURING THE INSTALLATION OF ROADWAY CULVERT AND ENDWALLS BY THE USE OF TURBIDITY BARRIERS, SILT FENCE, HAY BALES OR OTHER MEANS AND METHODS AS NECESSARY.

6) ALL SIDEWALKS TO MEET ADA CONSTRUCTION GUIDELINES.

7) CONTRACTOR TO PROVIDE MAINTENANCE OF TRAFFIC AND EROSION PLAN TO ENGINEER AND CITY OF STUART FOR APPROVAL PRIOR TO CULVERT INSTALLATION

CONSTRUCT STRAIGHT CONCRETE ENDWALL PER
FDOT INDEX NO 250 FOR 54" RCP FDOT INDEX
NO 258 FOR STRAIGHT SAND CEMENT ENDWALL-
MAY BE SUBSTITUTED TOP OF ENDWALL EL.=15.55
INV EL.=9.80

ONE STORY
STRUCTURE
FFE = 17 62



I HEREBY CERTIFY THAT THE AS-BUILT INFORMATION PROVIDED COMPLIES WITH REQUIREMENTS OF CHAPTER 61G17-6, FAC

STEPHEN J BROWN
619 EAST 5th STREET
STUART, FL 34994 (772) 288 7176

STEPHEN J. BROWN, PSM #4049

DEWATERING

ALL CONSTRUCTION DEWATERING (WELL POINTS, PUMPS ETC) SHALL REMAIN UNDER THE SFWMD NO-NOTICE CRITERIA, INCLUDING LESS THAN 8 MG/L, LESS THAN 100 MG TOTAL, LESS THAN 90 DAYS, AND NO RESOURCE OR OFFSITE IMPACTS. THIS PERMIT SHALL BE OBTAINED BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE.

CALL 48 HOURS BEFORE
YOU DIG IN FLORIDA
1-800-432-4770

IT'S THE LAW!
SUNSHINE STATE ONE CALL
OF FLORIDA, INC

CERTIFICATION ENGINEER
Adam Heltemes
PE No 59353
HSA Golden
100 East Pine Street
Suite 605
Orlando, FL 32801
Phone 407-649-5475
Fax 407-649-6582
FBPE No 9915
Project No 07-467 001

No	Revision/Issue	Date

Sign and Seal

Adam Heltemes
FBPE No 59353

Design Firm Name

Treasure Coast Engineering & Development, Inc

E-mail
tcoedevlopment@yahoo.com

FBPE No 26590

Project Name and Address

PENN PLAZA

GRADING, PAVING AND DRAINAGE

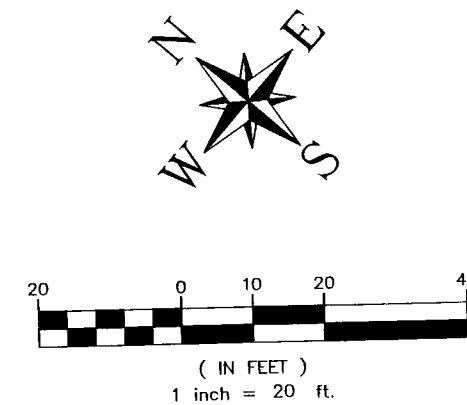
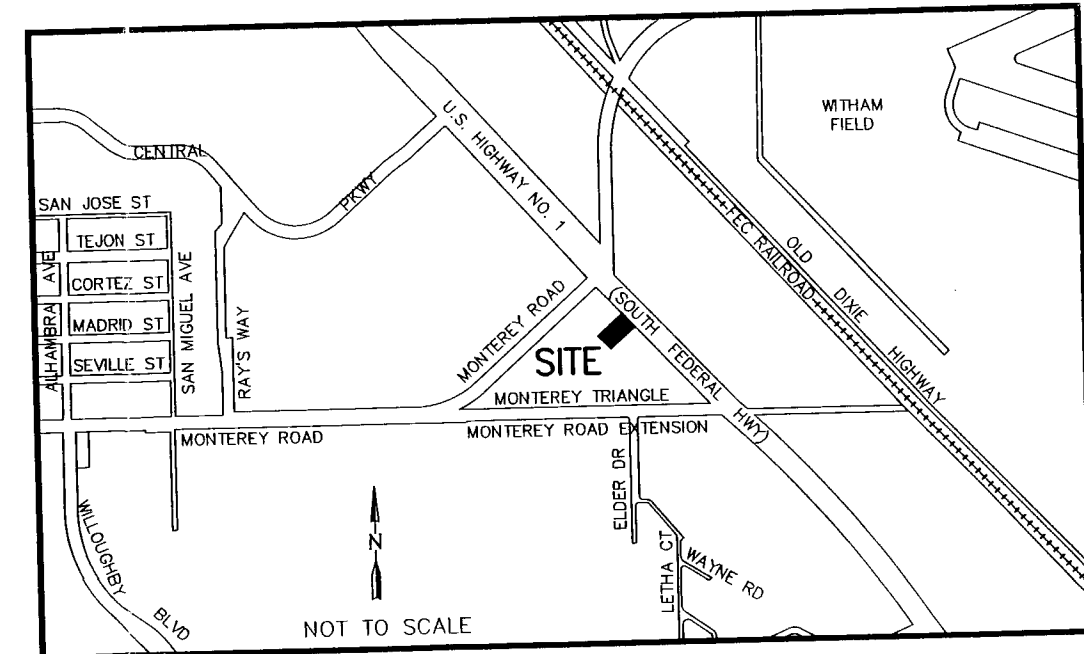
Monterey Road Extension
City of Stuart

Project No 06-05	Sheet
Date September 2006	P-1
Scale As Noted	

SJB FILE #5023-01

Exist. Use: Shopping Center
Zoning: C.P.U.D.
Land Use: Commercial

U.S. HIGHWAY NO. 1
(SOUTH FEDERAL HIGHWAY)
(STATE ROAD NO. 5)
(200' RIGHT-OF-WAY)



Location Map

GENERAL NOTES

- EXTERIOR LIGHTING DESIGN (SEE ELECTRICAL SITE PLAN) SHALL BE DESIGNED AND PERMITTED IN ACCORDANCE WITH CITY OF STUART CODE. THE FINAL LIGHTING PLAN SHALL BE REVIEWED BY THE CITY'S POLICE DEPT. TO INSURE THAT THE LIGHTING WILL NOT IMPACT OR PRODUCE GLARE ON THE NEARBY NEIGHBORHOOD OR INTERFERE WITH THE AESTHETICS OF THE SURROUNDING AREA OR WITH PUBLIC SAFETY.
- PROPOSED SIGNAGE (BY OTHERS) SHALL BE GROUND OR WALL TYPE, PERMITTED IN ACCORDANCE WITH CITY OF STUART CODE.
- CONTRACTOR SHALL POST "NO TRESPASSING" SIGNAGE IN ACCORDANCE WITH FL 810.09.
- CONTRACTOR SHALL PROTECT EXISTING TREES & VEGETATION IN ACORDANCE WITH SECTION 5.05.04, "PROTECTION DURING DEVELOPMENT", OF THE CITY CODE.
- LOCATIONS OF THE MONUMENT SIGN, DIRECTIONAL SIGN, MENU BOARD, ETC. SHOWN ARE APPROXIMATE. SIGNS TO BE PERMITTED & INSTALLED BY OTHERS.

FL. STATUE 810.09
"THIS AREA IS A DESIGNATED
CONSTRUCTION SITE
AND ANYONE WHO
TRESPASSES ON THIS
PROPERTY COMMITS A FELONY."

NO TRESPASSING
SIGNAGE DETAIL

LEGAL DESCRIPTION

ALL OF LOT 3, PLAT OF MONTEREY TRIANGLE, AS RECORDED IN
PLAT BOOK 14, PAGE 86, PUBLIC RECORDS, MARTIN COUNTY, FLORIDA.

SITE DATA

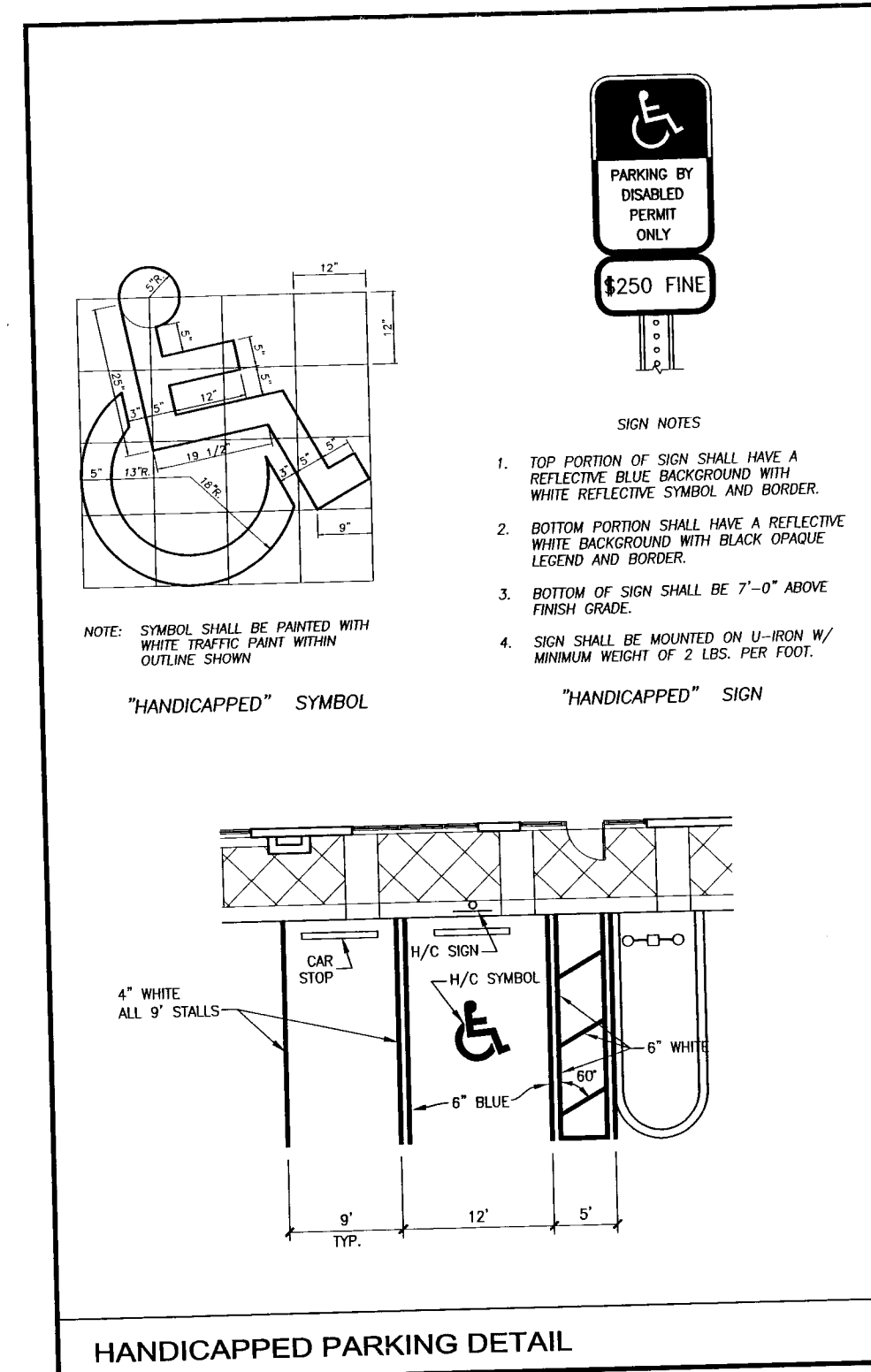
PROJECT NAME: STARBUCKS COFFEE
LOCATION: 2294 SE FEDERAL HIGHWAY
STUART, FLORIDA

EXISTING USE: VACANT
PROPOSED USE: COFFEE SHOP
ZONING: B2
LAND USE: COMMERCIAL
ALLOWABLE BUILDING HT. 45'
PROPOSED BUILDING HT. 18'

TOTAL AREA:	24,132 s.f.
BUILDING AREA:	1,520 s.f.
ASPHALT PAVEMENT/CURBS:	10,568 s.f.
PERVIOUS CONC. PAVEMENT:	2,694 s.f. @ 50% = 1,347 s.f.
CONCRETE WALKS/SLABS:	2,251 s.f.
OPEN AREA:	8,465 s.f.
TOTAL IMPERVIOUS AREA:	15,686 s.f. 65.0 %
ALLOWABLE IMPERVIOUS AREA:	15,686 s.f. 65.0 %
TOTAL PERVIOUS AREA:	8,446 s.f. 35.0 %

PARKING (PER SEC. 6.03.06 STUART LAND DEVELOPMENT CODE)

RESTAURANT - CONVENIENCE	6 Spaces
1 SPACE / EMPLOYEE ON LARGEST SHIFT - 6	13 Spaces
plus 1 SPACE/100s.f. OF SERVICE AREA 1315sf/100	19 Spaces
plus QUEING SPACES	19 Spaces
TOTAL REQUIRED	19 Spaces
TOTAL PROVIDED (Incl. 1 H/c)	19 Spaces



Exist. Use: Restaurant
Zoning: B2
Land Use: Commercial

LOT 4

BONO'S RESTAURANT
1 STORY C.B.S.
CONCRETE CARPORT
FINISH FLOOR ELEVATION = 16.85
OWNER: J & E. LLC

ASPHALT DRIVE AND PARKING AREA

HEIGHT BAR
(SEE ARCH. DWG'S.)

DIRECTIONAL
DRIVE THRU SIGN
(SEE ARCH. DWG'S.)

TYPE D CURB
24' WHITE

TYPE D CURB
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SITE PLAN

Exist. Use: Medical Complex
Zoning: B2
Land Use: Commercial

SITE PLAN • SITE DATA •
LOCATION MAP

SITE DEVELOPMENT PLANS
STARBUCKS
2294 SE FEDERAL HIGHWAY, STUART, FLORIDA

PROJECT NO. 1
SHEET 1
OF ONE

MSLSC

LOT 2

STARBUCKS
F.F.E. 17.50

LOT 3

TABLE OF DRAINAGE

MARK	STRUCTURE	RIM	IN
S-1	TYPE C	16.00	13.30
S-2	TYPE C	15.20	-
S-3	TYPE C	15.90	-
S-4	MITERED END	-	-
S-5	MITERED END	-	-
S-6	MITERED END	-	-
S-7	TYPE C	15.00	12.00

NOTE: All drainage pipe joints, including round concrete pipe, shall have a filter fabric jacket in accordance with the FDOT Roadway and Traffic Design Standards.

(200' RIGHT-OF-WAY)

12x2 WET TAP
COORDINATE WITH CITY OF STUART UTILITIES DEPT.

REMOVE/REPLACE SIDEWALK

EXIST. 12" W.M.

BELL SOUTH BOX

ELECTRIC BOX

WOOD UTILITY POLE

WATER METERS

BACKFLOW PREVENTERS

24" ACCESS EASEMENT
O.R.B. 1521, PG. 2422

1" POTABLE METER

1" IRRI. METER

100.00'

N41°27'42"W

OVERHEAD UTILITY LINE

2 TYPE F CURB

EDGE PAVEMENT

CONCRETE SIDEWALK

IN CURB CATCH BASIN
TOP=15.97
FLOWLINE=15.20

24" ACCESS EASEMENT
O.R.B. 1521, PG. 2422

CONCRETE SIDEWALK

1" RP2 w/LANDSCAPE
SCREEN PER CITY OF
STUART REQUIREMENTS

15" RP2 w/LANDSCAPE
SCREEN PER CITY OF
STUART REQUIREMENTS

SCORED CONC.
SEE ARCH. DWG'S

SEE MECH.
DWG'S FOR
CONTINUATION
STARBUCKS

F.F.E. 17.50

SEE MECH.
DWG'S FOR
CONTINUATION

LOT 3

VERIFY PLUMBING
STUB-OUT INVERT
PRIOR TO CONST.

6" CONC. WALK

14" DRY
RETENTION

15" DRY
RETENTION

16" DRY
RETENTION

17" DRY
RETENTION

18" DRY
RETENTION

19" DRY
RETENTION

20" DRY
RETENTION

21" DRY
RETENTION

22" DRY
RETENTION

23" DRY
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36" DRY
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37" DRY
RETENTION

38" DRY
RETENTION

39" DRY
RETENTION

40" DRY
RETENTION

41" DRY
RETENTION

42" DRY
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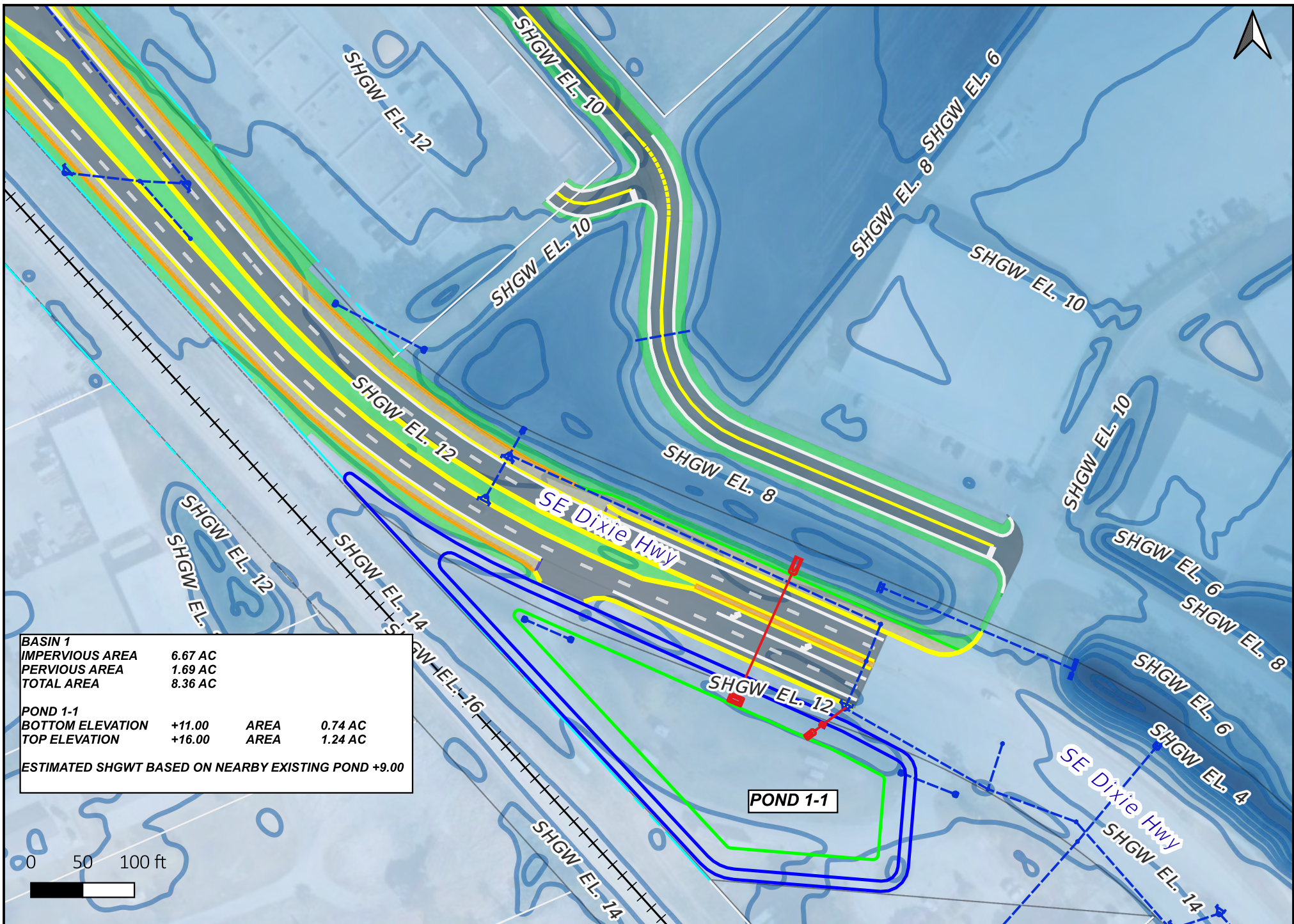
NOTE: NOTIFY CITY OF STUART PUBLIC WORKS DEPT. PRIOR
TO ANY CONSTRUCTION OF WATER OR SEWER SERVICE.

SITE DEVELOPMENT PLANS STARBUCKS 2294 SE FEDERAL HIGHWAY, STUART, FLORIDA		PAVING, GRADING & DRAINAGE PLAN UTILITY SERVICES PLAN		C. CALVERT MONTGOMERY & ASSOCIATES, INC. Engineers-Surveyors (LB & C.A. 0000160) P.O. BOX 92-959 S. FEDERAL HWY.....STUART, FLORIDA 34995 TEL. (772) 287-3636 FAX (772) 220-0580	
PROJECT NO.		1		6/04	
SHEET		1		DATE	
2		NO. REVISION		DATE	
		DESIGNED BY:		DATE: 06.14.04	
		CHECKED BY:		SCALE: 1"=20'	

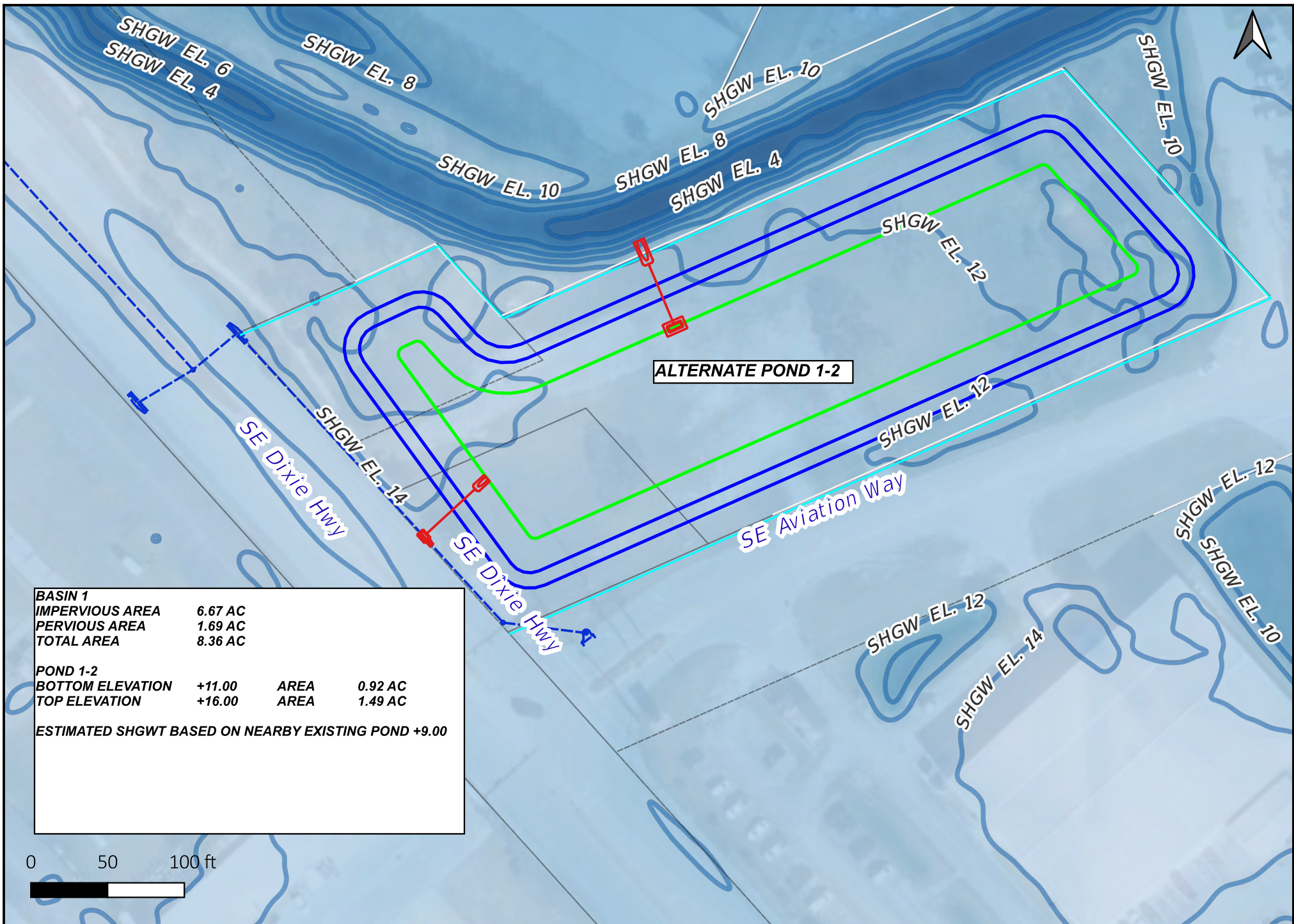
APPENDIX H: CULTURAL RESOURCE ASSESSMENT SURVEY

APPENDIX I: ENVIRONMENTAL CONSIDERATIONS

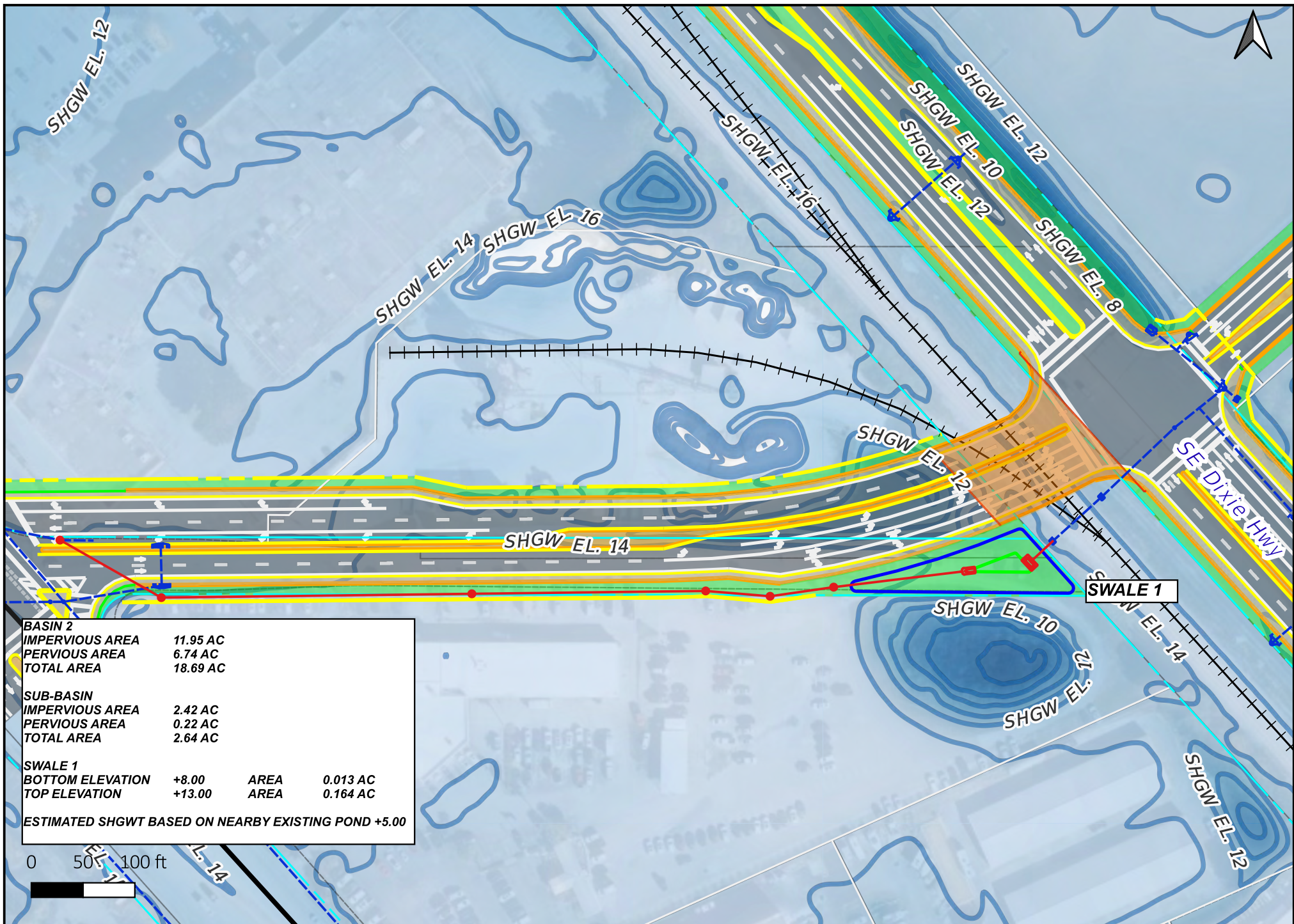
APPENDIX J: ESTIMATED SEASONAL GROUNDWATER ELEVATION



ESTIMATED SHGWT EL. IN THE VICINITY OF POND 1-1 (REF. "ESTIMATED DEPTH TO WATER TABLE - FDEP")

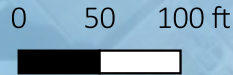


ESTIMATED SHGWT EL. IN THE VICINITY OF ALTERNATE POND 1-2 (REF: "ESTIMATED DEPTH TO WATER TABLE - FDEP")

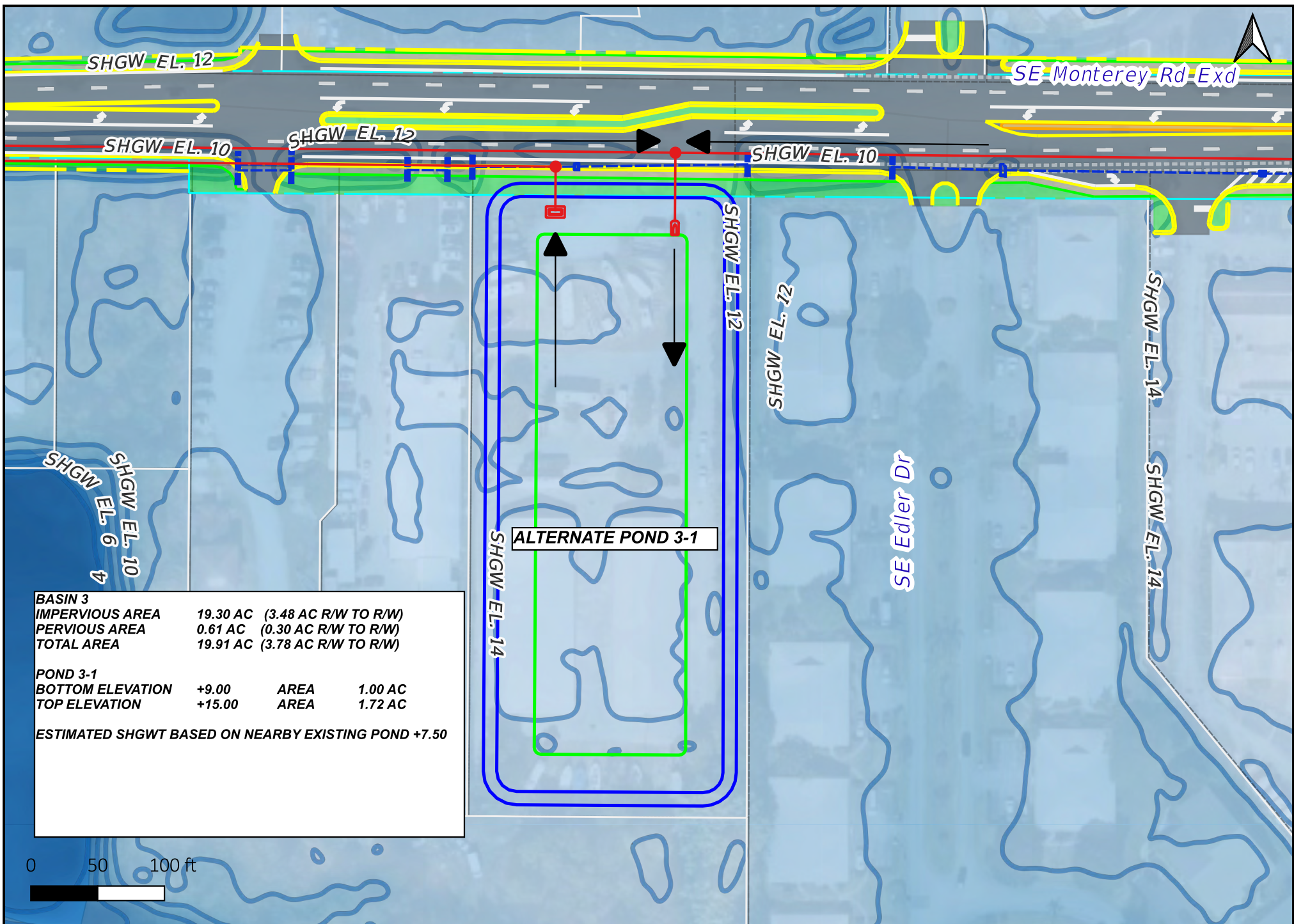


ESTIMATED SHGWT EL. IN THE VICINITY OF SWALE 1 (REF. "ESTIMATED DEPTH TO WATER TABLE - FDEP")

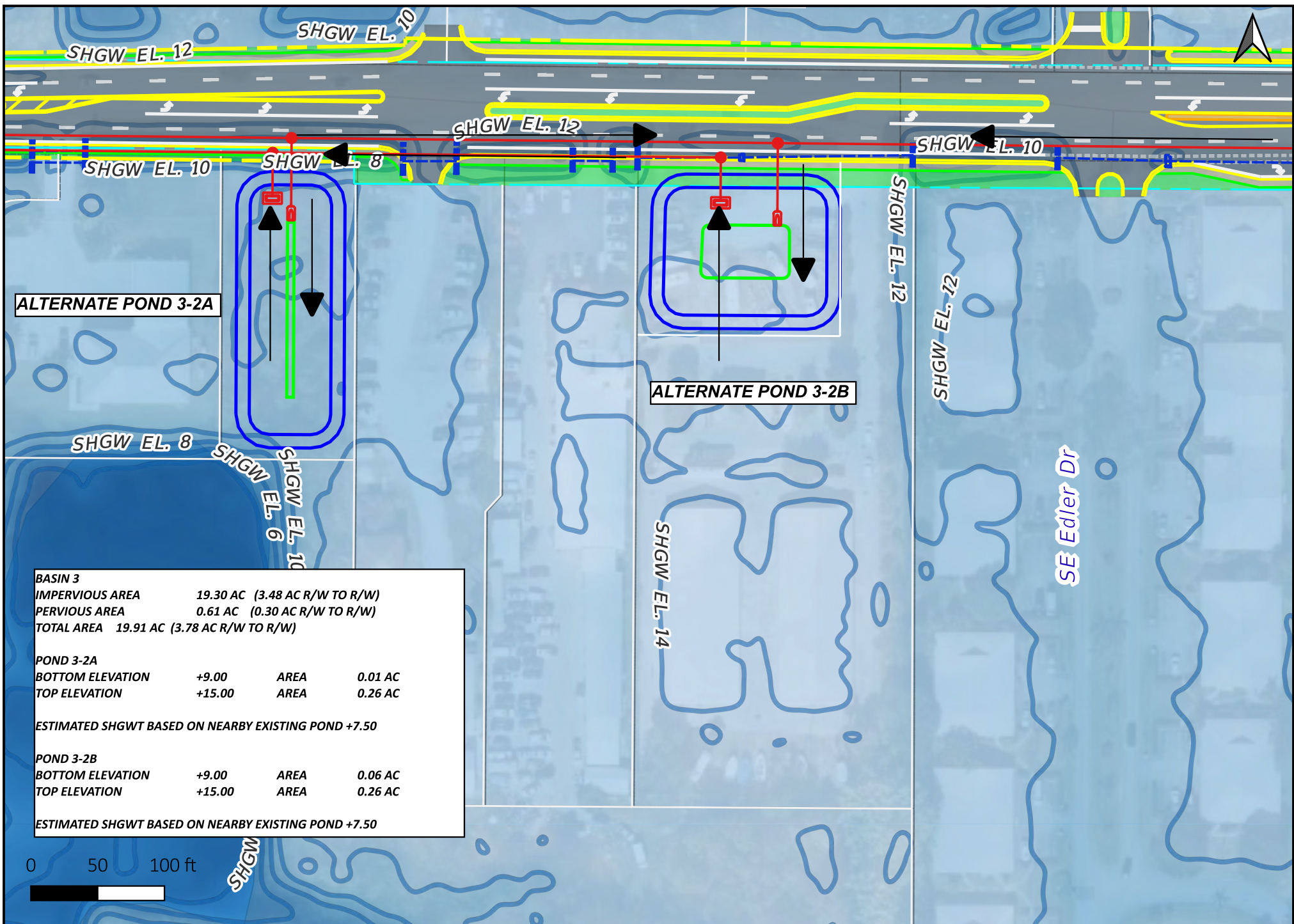




ESTIMATED SHGWT EL. IN THE VICINITY OF POND 2-1 (REF. "ESTIMATED DEPTH TO WATER TABLE - FDEP")



ESTIMATED SHGWT EL. IN THE VICINITY OF ALTERNATE POND 3-1 (REF: "ESTIMATED DEPTH TO WATER TABLE - FDEP")



ESTIMATED SHGW EL. IN THE VICINITY OF ALTERNATE PONDS 3-2A, 3-2B (REF: "ESTIMATED DEPTH TO WATER TABLE - FDEP")

APPENDIX K: SITE VISIT PHOTOGRAPH

Pond 1-1





































Pond 2-3





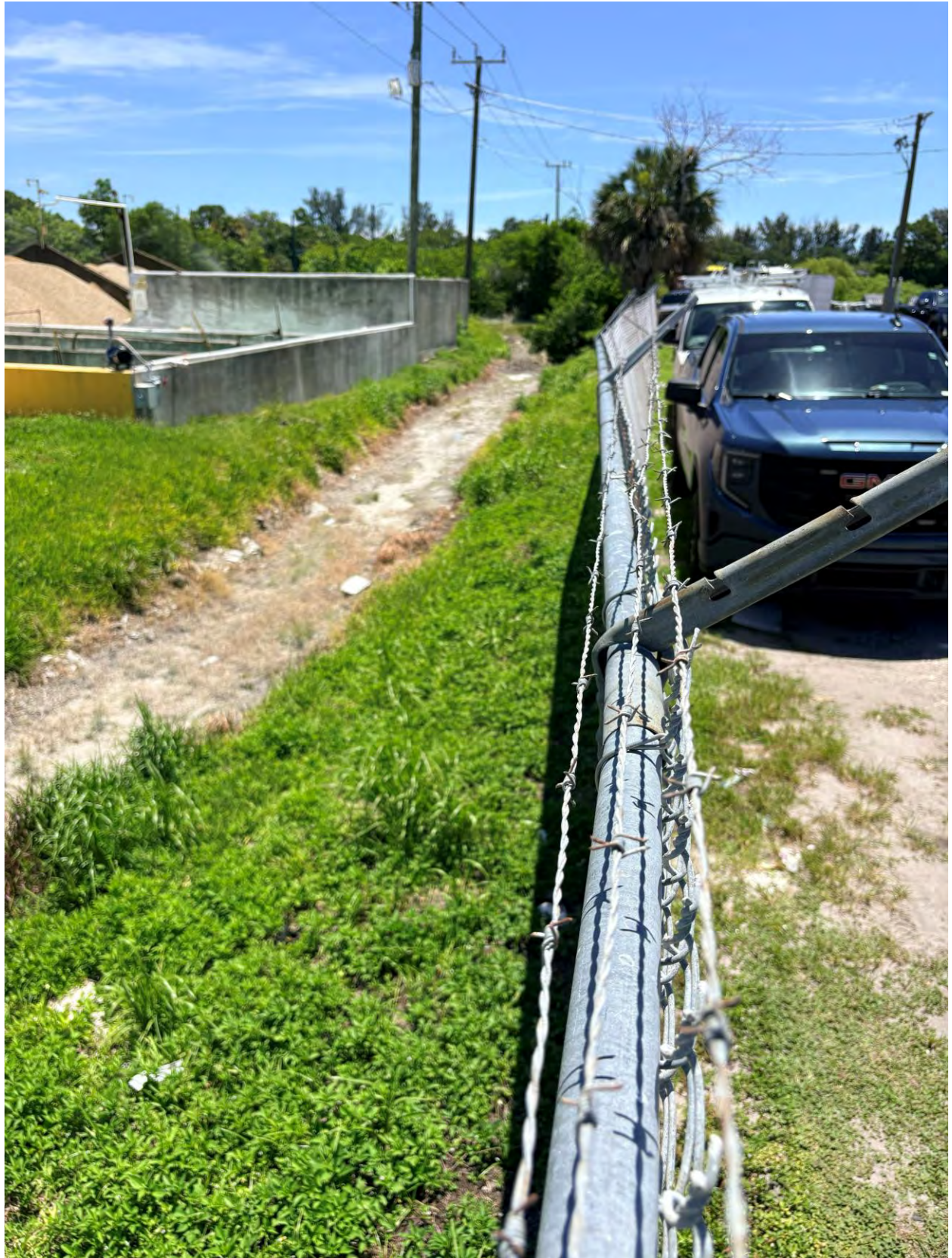












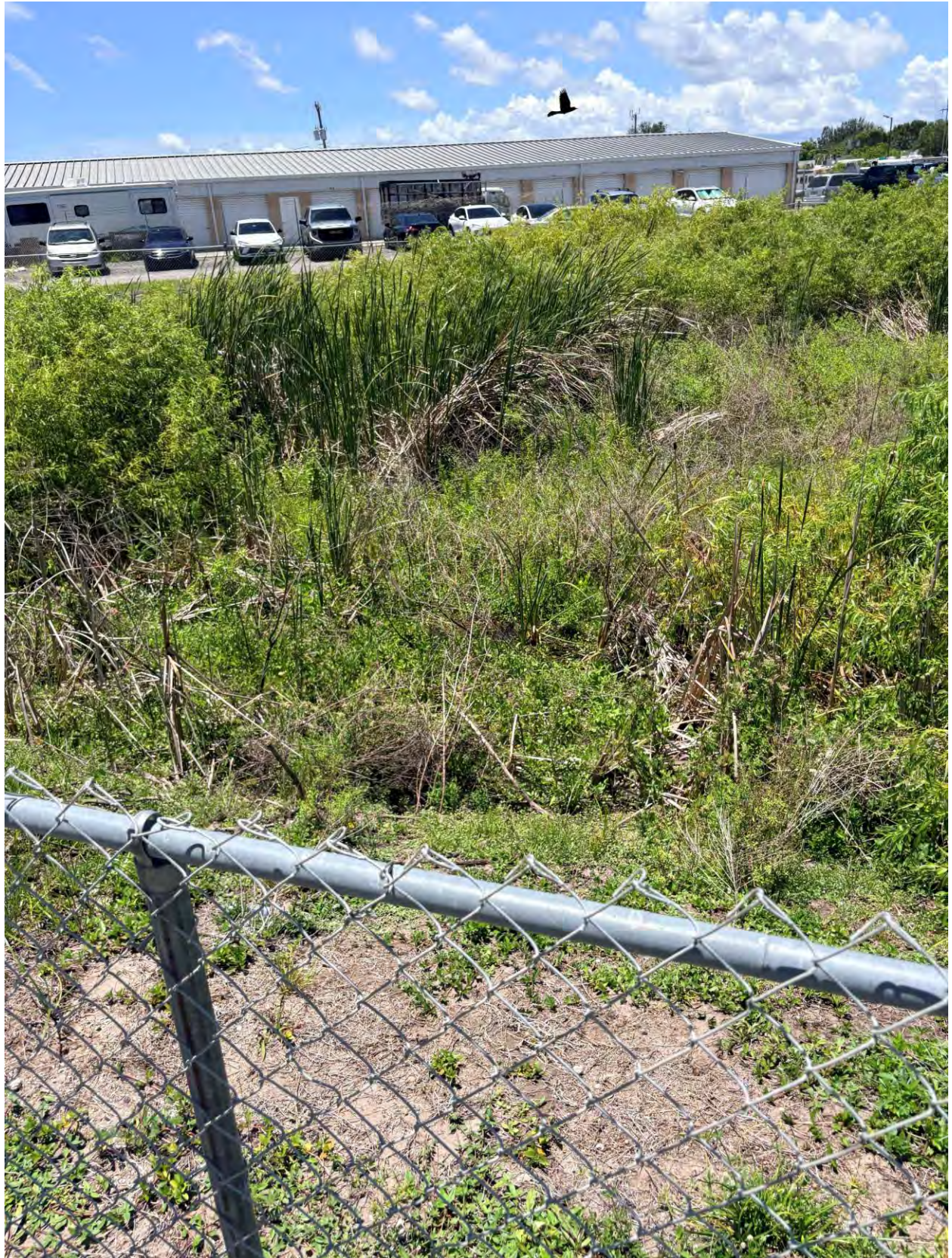


























Pond 2-1































