

**CCTV CAMERA INSTALLATION TURNPIKE WIDE
FINANCIAL PROJECT NUMBER: 435604-1-52-01
CONTRACT NUMBER: E8P84**

SUMMARY REPORT SESSION II

CEI

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Project Description and Limits:

CCTV Camera Installation Turnpike Wide – The major portion of the work is between Mile Post 31 and Mile Post 145, where new CCTV Cameras were installed and associated electrical service and fiber optic cable to tie into the existing Turnpike system. CCTV Cameras replaced were from MP 0.1 to MP 259.6.

Contract Details:

Original Contract Amount: \$ 1,564,634.30	Original Contract Time: 215 Days
Final Contract Amount: \$ 1,570,657.85	Final Contract Time: 250 Days
Percent Cost: 5.6%	Percent Time: 6.5% Time
Start Date: September 17, 2016	Completion Date: May 24, 2017

Work Orders:

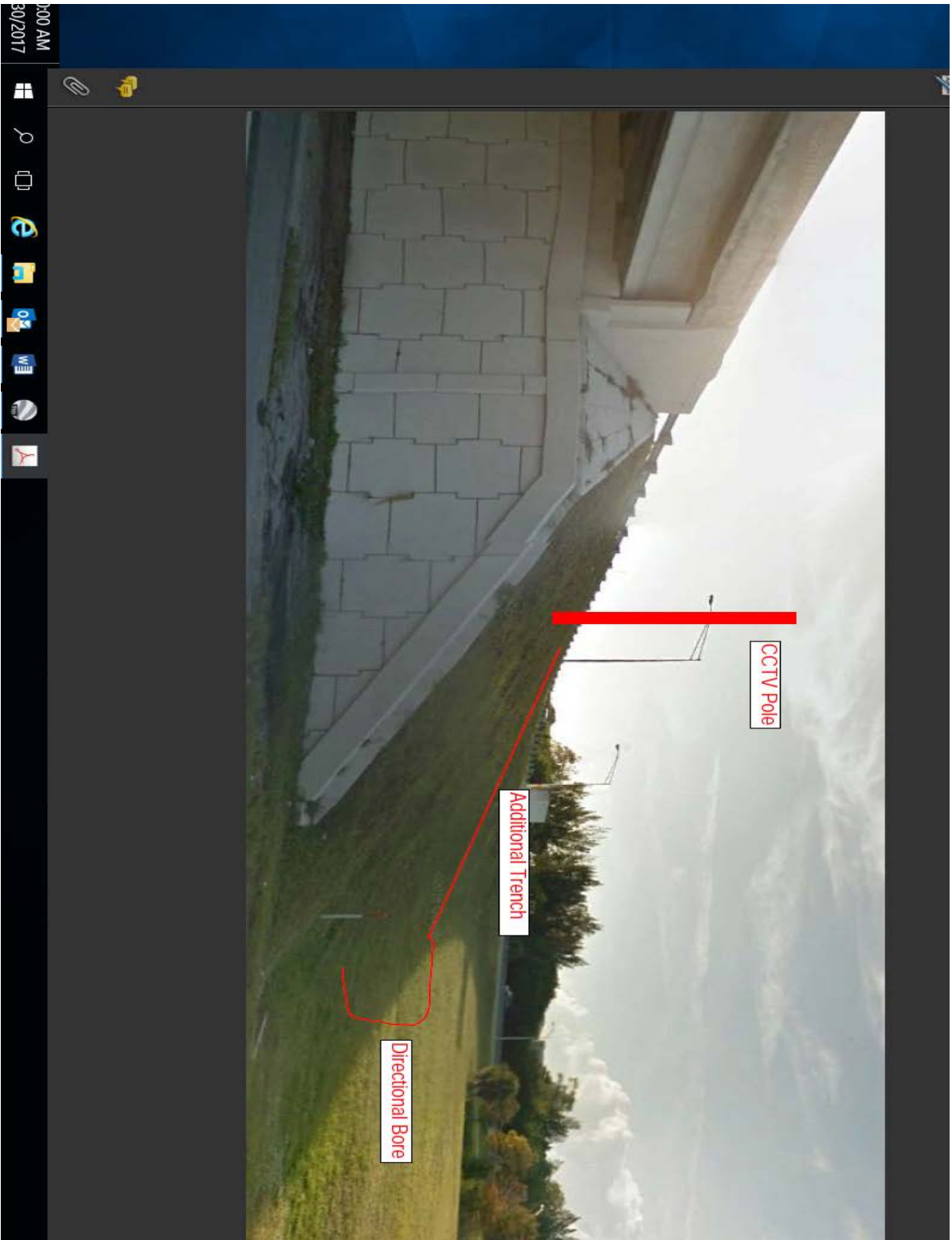
Summary of Work Orders

Work Order No. 1	\$6,064.48	Existing pull boxes were buried where needed to tie into: Ft. Pierce Service Plaza - Labor to located electrical and fiber pull boxes, place extend conduit lines and replace service wire to bring to the top of the pull boxes. SW Martin Interchange - Labor to locate existing pull boxes to tie into. These boxes were under asphalt
Code 012 - Deterioration of, or damage to, project after design (not weather related)		
Work Order No. 2	\$23,635.26	NW 74th Street Interchange: When Contractor was splicing fiber, the fiber at the CCTV pole was connected and then went to pull box to splice into backbone, it was determined the tie in point really wasn't the backbone. It was an AT&T Vault. All work performed, which had to be removed and and additional work, which would have been done if the plans were correct were added in here and shown as premium costs.
Code 112 - Phasing or plan components not constructible as shown in plans		
Work Order No. 3	\$2,848.01	Contractor hit a conduit at 04X Site not indicated on the plans causing an outage. When the associated pull box was found, the pull box was broken. A new pull box was placed at location of where the conduit was hit, new conduit placed and new electrical
Code 012 - Deterioration of, or damage to, project after design (not weather related)		

Lessons Learned:

1. Lessons Learned

Lesson Learned No. 1
Add Cross-Sections to Plans where work is being accomplished on fill areas and other crossings; such as canals. This will provide a means to be able to identify what work and quantities should be included in the Plans.
Issue and Resolution-
A. Directional Boring has limitations, entry angles are usually between 8 and 16 degrees from horizontal and exit angles between 5 and 10 degrees. The directional bore at Coconut Creek Blvd. had an MSE wall which extended fairly deep into the ground. At Okeechobee Blvd., the distance between the canal and the edge of roadway was very short which in discussions in how to make it work, the issue of not having a permit came up and resulted in finding another solution all together. At the high ramp areas, the directional bore was made under the ramp and then couplers were placed and conduit was extended and was placed in a trench which made a large loop at the base and then proceeded up the hill to the CCTV camera.
B. The pull boxes are set next to the CCTV Poles at the top of the high fill. Consideration for those performing maintenance needs to be taken into consideration. If you build out the slope to flatten, then at some point the slope below becomes steeper unless slope is pushed out from top to bottom. Note: Consideration needs to also account for the amount of right-of-way available. The pull boxes were placed on a slant to minimize the amount of fill to be placed and lessen the amount the slope needed to be steepend.
C. With trenching up the slopes, then additional sod needs to be placed versus using seed and mulch as was shown in the Plans. Sod was placed on all slopes and erosion prone areas.



Lesson Learned No. 3

Each location of pull boxes, splice vaults, cabinets, new landscaping, other land use and right-of-way needs to be determined during the design phase, to be able to ascertain whether they meet what the as-builts show, in lieu of relying too much on the as-builts.

Issue and Resolution-

A. A number of pull boxes and splice vaults were shown to be on the Plans, but were very difficult to find or were not found. Pull boxes which were located were buried by a couple feet of dirt at Ft. Pierce and at SW Martin were found under dirt and asphalt. A substantial amount of effort was used to locate boxes and Contractor was paid for uncovering those which were found. For those not found, field reviews were performed and a new routing of conduit was determined and field adjustments made and paid by overrunning quantities. (Example: At Port St. Lucie, in lieu of being able to utilize existing system to the south, utilized trenching and direction boring to the splice vault north of the interchange.)

B. Land use was different at PGA Blvd. Interchange then show on the plans and trenching could not be performed. Direction boring was utilized. Also, at several locations, new landscaping had just been placed; therefore, rerouting the conduit through the treed area took place.

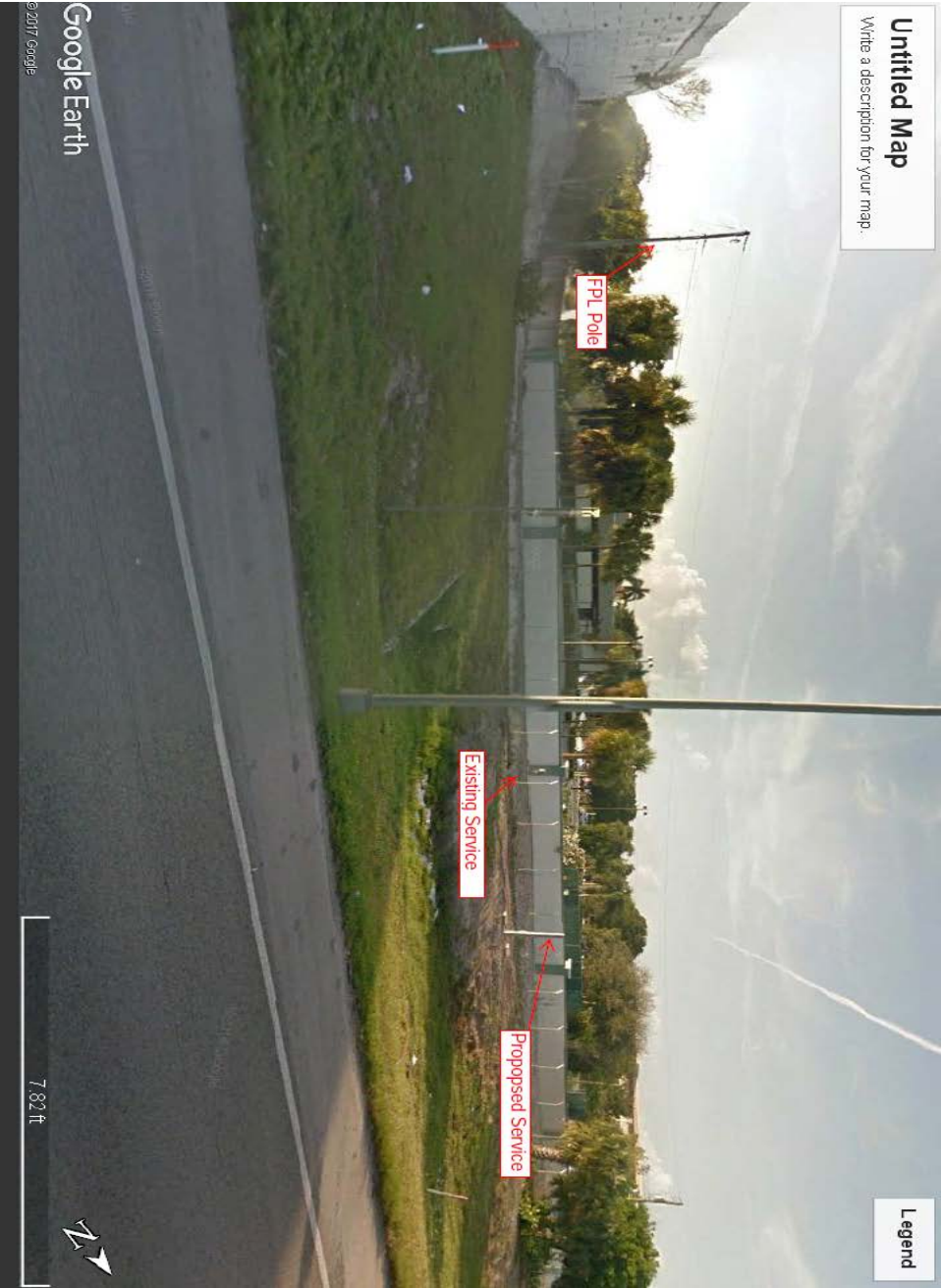
C. The right-of-way was not indicated on the plans, but when determine, the right-of-way was too close to building features at the Okeechobee Toll Plaza and there was a row of trees; therefore, trenching could not be accomplished.

Direction boring was utilized in lieu of trenching at the back of the building Okeechobee Blvd. and went deep under the building, since the right-of-way did not provide enough room to keep the directional bore equipment within the right-of-way machine. This work was accomplished by field direction and overrunning quantities.

D. When tying into the Patch Panels - Field Terminations, all fibers are terminated to better assure the fiber is not damaged, although most of the fibers terminated are not used. Since the patch panel is full, another patch panel is called for in the Plans and then the fibers are all terminated. In lieu of spending the money to terminate all fibers, determine which ones are not being utilized and not add another patch panel. It is our understanding that the fiber cable is going to be 24 vs. 48, then possibly determine from the new cable and the existing cable which 24 should be terminated at the patch panel and not add new panels.

E. At Coconut Creek Interchange, the electrical pull box utilized to bring in power from the FPL source ended up being connected to the existing CCTV and was within the Turnpike Electrical System. Placing a meter would not do anything; therefore, the Contractor utilized a connector in the meter box to assure the power was maintained. FPL will monitor the use of the new camera and bill out on a monthly basis based on load versus from the meter. FPL requested that the EOR and others go through their training to better assure the design is handled correctly, since they want any new service on the Turnpike system to be metered as per their current policy.

F. The Contractor had terminated the fiber at both CCTV camera locations and then went to terminate into the splice vault shown on the Plans. It was at this time, the Contractor determined that this was not the FTE Fiber backbone. It was determined that the vault was AT&T's. Plan Revision No. 1 was provided, all work which was performed and the removal and any other additional cost is in Work Order No. 2 as premium costs.



Untitled Map
Write a description for your map.

Legend



Lesson Learned No. 2

All canal crossings, whether over or under, should be reviewed for permitting conditions from the Drainage District.

Issue and Resolution-

From prior experience, Lake Worth Drainage District does require permits for crossing their canal. There were no permits obtained for the direction bore under the LWDD canal. Also, in this case, the direction bore could not be performed due to the steepness of the angle needed for placement.

An alternative to cross the road through existing spare ITS conduits was performed. The spare ITS conduit was removed from the fiber pull boxes and placed into separate electrical pull boxes.