Restoring the Pre-Development Hydrologic Regime in the Picayune Strand Restoration Project Area

> Michael Duever Natural Ecosystems



Ecological Criteria for Picayune Restoration

 Full Range of Wetland Communities Exists Over a 24 in Topographic Gradient

HYDROPERIODS AND MAXIMUM WATER DEPTHS





Ecological Criteria for Picayune Restoration

Substrates are Very Porous with 2-5 ft Water Table Drawdowns Extending Miles from Canal

2000 Monthly Water Table Profiles - North Transect Wells

Hydrologic Restoration

Sheet flow is Key to Restoration

- Remove All Unnaturally Elevated Substrates
 - Roads
 - Logging Trams
 - Home Sites
 - Spoil Associated with Roads and Canals
- Eliminate Wet Season Surface Water Drainage
 - Plug Canals
- Eliminate Dry Season Groundwater Drainage
 - Fill Most of Length of Canals

Strategy To Restore Sheetflow

 Remove Vegetation from Roads, Logging Trams, and Canals to Expose Elevated Spoil

 Degrade Spoil and Place Excess Above-Natural-Grade Spoil Material in Canals

Minimal Area Has Been Impacted

Contract Documents

 Develop Specifications That Allow for Realistic Cost Estimates

Spoil Covered with 40 Years Growth of Vegetation
What is Spoil and What is Vegetation

Contract Documents

Originally Surveyed for Spoil Only 75 ft from Road Centerline

Subsequently Agreed to Approximately 250 ft Width of Clearing, But Clearing Should not Extend Beyond Where the Spoil Ended

Also, Clearing Was not Necessarily Based on the Road Centerline

Width of Clearing - To Outside Edge of Spoil Approximately 250 ft

First Contractor – Paid by the Linear Foot of Road Second Contractor – Paid by the Acre of Cleared Area

Width of Clearing - To Outside Edge of Spoil Approximately 250 ft

First Contractor – Paid by the Linear Foot of Road Second Contractor – Paid by the Acre of Cleared Area

Contract Documents

Specified the Roads would be Graded to Between <u>+3</u> and <u>+10</u> inches along a Straight Line Between Natural Grade on the Two Sides of Cleared Footprint

Landscape Features Requiring Modification of Contract Specifications A. Fire Dozer Line Spoil Berm Not Part of Project B. Wetland Slough Crossing the Road

+3",6" 10"

Slough

3 ft Deep

Merritt Canal

PURPOSE OF THE WORK

THE PICATUNE STRAND RESTORATION PROJECT (PSRP), FORMERLY THE SOUTHERN GOLDIN GATE ESTATES (SGG2) ECOSYSTEM RESTORATION PROJECT, WILL RESTORE APPROXMATLY 55,000 ACRES OF SENSITIVE ENVIRONMENTAL LAND LOCATED IN SOUTHWESTERN COLLIER COUNTY, FLORIDA TO IS PREDEVILOPHENT CONDITION.

THE GALGENE OF THE MIRRIT PAMEND STATION, LEVES, SPECIALS IEEM CONSTUTION, AND PURCEDS OF THE VERSITT CAME, PROJECT IE TO COLLECT THE WATER FROM THE NORTHEEN PORTION OF THE MERRIT CAMAL AREA, AND PURPT IO VERSITE IS SPECIALDE ERW WERST FOR RESTAULSH SHEET FLOW IN THE AREA SOUTH AND EAST OF THE MERRIT CAMAL

CERTAIN ROADS WITHIN THE PROJECT AREA HAVE SPECIFIC REWORK REQUIREMENTS, SUCH AS ASPHALT REMOVAL, DEGRADING AND REGRADING, ETC. SEE NOTES UNDER WORK DESCRIPTION SECTION FOR SPECIFIC DETAILS.

GENERAL

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7. DISCREPANCIES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES, REGULATIONS, CRITERIA AND ORDINANCES HAVING JURISDICTION OVER THE PROJECT.
 - REQUIRED. 20. ALL EXISTING DRAINAGE STRUCTURES WITHIN THE LIMITS OF ALL WORK FOR THIS PROJECT SHALL CONFORM TO STANDARDS PUBLISHED BY RECOGNIZED PROFESSIONAL AND INDUSTRY ORGANIZATIONS. DEMOLITION AND/OR CONSTRUCTION ARE TO REMAIN, UNLESS OTHERWISE NOTED.

AND/OR CONSTRUCTION.

- 21. ANY PUBLIC LAND CORNER AND CONTROL MONUMENT WITHIN CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE PROR TO BODING AND FAMILIARZING HUMSELF WITH ALL EXISTING CONDITIONS AFFECTING THE WORK, INCLUMING BUT NOT LIMITED TO PRIVATE AND PUBLIC UTILITES, ON AND OFF SITE, ACCESS ROADS, AND OTHER SUPPORT FOLUTION. THE LIMITS OF DEMOLITION AND/OR CONSTRUCTION IS TO BE PROTECTED. THE CONTRACTOR SHALL VERIFY MONUMENT PROTECTED THE CONTINUE OF THE START OF DEMOLITION AND/OR CONSTRUCTION. IF ANY OF THESE MONUMENT TYPES ARE IN DANGER OF BEING DESTROYED AND HAVE NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE
- CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE CONTRACTING OFFICER PRIOR TO ANY CHANGES OR DEVIATION FROM CONTRACT DOCUMENTS. CONTRACTING OFFICER. THE COORDINATES SHOWN REFER TO THE FLORIDA STATE PLANE COORDINATE SYSTEM. TRANSVERSE MERCATOR PROJECTION, EAST ZONE, NORTH AMERICAN DATUM OF 1983, REVISION 1990. CONTRACTOR SHALL PREPARE AND MAINTAIN ALL CONSTRUCTION AREAS, AS WELL AS SURROUNDING AREAS, FREE OF DEBRIS OR HAZARDOUS MATERIALS AT ALL TIMES.
- 23. THE SECTION LINES SHOWN ARE APPROXIMATE, AND WERE TAKEN FROM THE S.F.W.M.D. GEOGRAPHIC INFORMATION SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ANY TENS DAMAGED DURING CONSTRUCTION OR CLEAN UP, CONSTRUCTION PRESONNEL SHALL BE CONTINED TO TH LIMITE OF THE CONSTRUCTION AREA. ALL OBMA REQUARITONS FOR CONSTRUCTION AREAS SHALL BE STRUCTLY FOLLOWED.
 - 24. GRADES SHOWN ARE FINISHED GRADES, UNLESS OTHERWISE
 - RESTORE ANY PORTIONS OF THE EXISTING ROADWAYS THAT ARE TO REMAIN, WHICH ARE DISTURBED BEYOND THE LIMITS OF DEMOLITION AND/OR CONSTRUCTION, TO THEIR PRIOR CONDITION. RESTORATION SHALL BE AT THE CONTRACTOR'S

16. ALL EXISTING INFORMATION HAS BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES. THE LOCATIONS OF THE CANALS, ROADWAYS, TRANS AND UTLITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO DEMOLITION

17 CONTRACTOR SHALL CLEAR ALL VEGETATION WITHIN THE LIMITS SHOWN ON THESE PLANS, ACCORDING TO REQUIREMENTS OF THE PROJECT SPECIFICATIONS. BURNING IS PERMITTED AS DETAILED IN THE SPECIFICATIONS.

FORTY EIGHT (48) HOURS PRIOR TO DIGGING, CALL SUNSHINE STATE ONE CALL OF FLORIDA, TELEPHONE NO. 1-800-432-4770 AND THE UTILITY OWNER AND REQUEST

UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN UTILITY COMPANIES LOCATE THEIR FACILITIES.

UTILITY COMPANES - NO KNOWN OPERATING UTILITY SERVICES WITHIN WORK AREA. SOME POLES AND TELEPHONE LINE EXST ALONG SOFT AVE. BUT ARE NOT KNOWN TO BE OPERATIONAL CONTINACION SHALL CONTACT LOCAL AREA UTILITES TO DETERMINE STATUS AND ARRANCE FOR TEWORARY SERVICE AS

- 26. ALL GROUNDWATER MONITORING WELLS THAT NEED TO BE DISTURBED SHALL BE REPLACED OR ABANDONED IN ACCORDANCE WITH DISTRICT AND FDEP REQUIREMENTS AT THE CONTRACTOR'S EXPENSE. COORDINATE WITH THE CONTRACTING
- 27. MMEDIATL VINTEY THE CONTRACTING DECEMPTON NOT AREADY DENTITIES OF THE CONTRACTING THE ACCESS IS TO BE CREATED BY THE CONTRACTING OFFICER ACCESS IS TO BE CREATED BY THE CONTRACTING OFFICER ACCESS IS TO BE CREATED BY THE CONTRACTING OFFICER ACCESS TO BE CREATED BY THE CONTRACTING OFFICER ACCESS TO BE CREATED AT A ACCESS AND A DEVELOPMENT TO THE CONTRACTING ACCESS AND A DEVELOPMENT REVENUE AND A DEVELOPMENT ON OF NO CONTRAMINION AND AS DIRECTOR IF THE CONTRACTING OFFICER.
- CONTRACTOR SHALL USE STAKED SILT FENCE, AS NECESSARY TO PROTECT EXISTING DITCHES, CANALS AND ADJACENT PROPERES, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE CONTRACTING OFFICER. SEE SPECIFICATION 31 32 11 FOR REQUIREMENTS.
- 29. THE WEIRS ALONG THE SPREADER BERM SHALL BE LINED WITH CONCRETE ARMORING OR ARTICULATING CONCRETE BLOCK OR APPROVED EQUAL LINNIG. THE WORRS SHALL BE LINED ALONG THEIR TOTAL LENGTH, ON BOTH SIDES, AND FROM THE BOTTOM OF THE BERM OVER THE WEIR AND CONTINUING ON THE. OUTSIDE OF THE BERM AS SHOWN ON THE CONSTRUCTION DRAWINGS. CONTRACTOR IS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR THE INSTALLATION OF THE PRODUCT.
- KEEP EXISTING AND NEW DRAINAGE STRUCTURES CLEAN OF PAVEMENT MATERIAL, AGGREGATE, DEBRIS, ETC. DURING DEMOLITION AND/OR CONSTRUCTION AT NO ADDITIONAL COST.

- 33. THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION.
- 34. ALL CONTOUR ELEVATIONS WERE OBTAINED BY LIDAR SURVEY AND IS ACCURATE WITHIN APPROXIMATELY 6 INCHES IN LOW VEOETATION AREAS AND PLUS OR MINUS 2 FEET IN VEANUT VEOETATED AREAS. THE TE-BACK LEVEES AND SPREADER BERMS ARE BASED ON FIRST ORDER SURVEY.

DESCRIPTION OF WORK:

- THE CONTRACTOR SHALL CONSTRUCT THE PUMPING STATION, TE-BACK LEVEES, SPREADER BERM, WERS, CANAL PLUES AND ROAD REWORK AS DESCRIBED IN THE SPECIFICATIONS AND AS SHOWN ON THE CONSTRUCTION DRAWINGS. SPECIFICALLY, CONTRACTOR IS TO;
- 1.1 CONSTRUCT BORROW CANAL

CONSTRUCT BORROW CANAL STARTING AT THE EAST SIDE OF THE OF PUMP STATION, ALONG THE NORTH SUDE OF 55TH AVE. SE. THIS BORROW CANAL WILL BE DISCONTINUES WITH THE BERLINING AND ENDING COORDINATES SPECIFIED IN THE CONSTRUCTION DRAWINGS.

AN ADDITIONAL BORROW CANAL WILL BE EXCAVATED SOUTH OF THE THE-BACK LEVEE AT A DISTANCE SPECIFIED IN THE CONSTRUCTION DRAWINGS. THIS BORROW CANAL WILL BE CONTINUOUS AND WILL BEGIN AND END AT COORDINATES SPECIFIED IN THE DRAWINGS.

THE WEST REACH BORROW CANAL (WEST OF THE PUMP STATION WILL BE DISCONTINUUS. THIS BORROW CANAL WILL BE ON THE WEST SDE OF MERRITT BLVD AND WILL BEON AND END AT LOCATIONS SPECIFIED IN THE CONSTRUCTION DRAWINGS. IT WILL FOLLOW SOUTH ALONG MERRITT THE CONSTRUCTION DRAWINGS, IT WILL FOLLOW SOUTH ALONG MERRITT BOULEVARD AND WILL TURN WEST AT 66TH AVE SE.

1.2 CONSTRUCT TIE-BACK LEVEE

CONSTRUCT TE-BACK LEVEE ON EAST SIDE OF THE PUMP STATION, ALONG SOUTH SIDE OF S5TH AVE. SE, FROM PUMP STATION AT STA. 154-86.86, EAST AND NORTH SISTA COORCO. A SECONDARY RONG SHALL PARALLE. THE NORTH SIDE OF THE LEVEL FOLLOWING THE ROUTE OF SE 55TH AVE., AS SHOWN ON THE CONSTRUCTION DWOS.

CONSTRUCT THE-BACK LEVEE ON WEST SIDE OF THE PUMP STATION, ALONG THE EAST SIDE OF MERRIT BUOLEVARD, FROM PUMP STAT. 1284-58.22 WEST AND SOUTH TO STA. 2364-5927. A SECONDARY ROAD SHALL PARALLE. THE WEST SIDE OF THE LEVEE FOLLOWING THE ROUTE OF MERRIT BUOLEVARD AND 6511 AVE SE.

CONSTRUCTION OF THE LEVEES SHALL FOLLOW SPECIFICATION SECTION 31 23 00.00 20.

1.3 CONSTRUCT SPREADER BERM AND WEIRS

CONSTRUCT A SPREADER BERM STARTING FROM STA. 95+00 WHERE IT MEETS THE TE-BACK LEVEE WEST TO STA. 130+00 WHERE IT ALAIN MEETS THE TE-BACK LEVE, FOLOWING THE ALLOWENT SHOWN ON THE CONSTRUCTION DRAWNOS, A BURKOW CANAL MILL BE EXCAVATED STARTING AT N 653679.37 E 49600.53 NO ENNING AT N 653673.09 E 494281.56.

1.4 CONNECT BERSON AVENUE TO THE TE-BACK LEVEE.

REVERS SUD ATE E (BRESN ARNUE) D PRAMAR ROAD CALEGORY FROM CORDINATE A STOTOLO E 495000 AND 45 POINT ON THE CONSTRUCTION DRAWING TO ITS INTERSECTION WITH FRANCES STREET. THE CONSTRUCTION SHALL SCAREY TA OF AN OF AN ADVENT AND RE-COMPACT O A STABLE SUB-ORACE, THEN ADD 8 INCIES OF COMPACTD LIMISTORE BASE OVER THE STABLE SCAREY TO A DIRECT AND ADVENTION OF ADVENTION OF A DIRECT AND ADVENTION OF ADVENTION OF

REALIGN AND REWORK FRANCES STREET FROM ITS INTERSECTION WITH 52ND AVE. SE, BERSON AVENUE, TO THE PUMP STATION TO PRIMARY ROAD CATEGORY, AS SHOWN ON THE CONSTRUCTION DRAWINGS.

1.5 CONNECT TIE-BACK LEVEE TO PUMP STATION ROAD.

CONNECT EAST SIDE TE-BACK LEVEE AND ROAD TO PUMP STATION LEVEE AND ROAD AT STA. 115+68.36, AND WEST SIDE TIE-BACK LEVEE AND ROAD TO PUMP STATION LEVEE AND ROAD AT STA. 128+58.26, XD ETAILED IN THE CONSTRUCTION DRAWINGS.

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1.7 REWORK AND REGRADE ROADS.

- CRITAIN ROADS, AS IDDIVIDED IN THESE DOCUMENTS, RAE TO REMARK OR BE RESPRIZED AS MARKEN SECONDARY OR TOTAINER ROADS THESE STOCKS TAKES STOCK DOCIMANON REQUIREMENTS. THE CONTRACTOR SHALL FILL THE ADJACENT SWALES AND ROAD DITCHES TO UNDSTURBED GROUND (+/- 37) USINS SUITABLE MEREMA, RECOVERD FROM THE ADJACENT DESTING ROAD AND BERNES, MY SURPLUS USING SUITABLE MATERIAR RECOVERED FROM THE ADJACENT DISTINIO RODA DIO BERNS. ANY SUPPLIS USED TO TORM PLUES. ANY EXCESS MATERIAL RECM ROAD DECRADATION OF EXISTING SPOIL PLES SUBLIS TO FORM PLUES. ANY EXCESS MATERIAL RECM ROAD DECRADATION OF EXISTING SPOIL PLES SHALL BE HONCILLIDI NIO CARAL. ALL VECENTION ASCOLARID MINI CLEAR AND GOLGIBRON CAUTIVES SHALL BE HONCILLIDI NIO CARAL. ALL VECENTION ASID ANY REMAINING LARCE MOODY DEBIS PLACED IN OPEN SECTIONES OF HE CANAL. HIAT ARE NOT TO BE FLUED MINI SPOIL MATERIAL.
- 1.8 DEVOLUEN THE MERRITT CANAL CONTROL WERS. CONTRACTOR IS TO DEVOLUEN AND REMOVE THE WERRITT CANAL CONTROL LUCKY LAKE WER LOCATED AT THE DNO THE DOSTING 300 AVIS 8, AT COORDINATES N20033.87 (28/2926.18, AND THE MERRITT NO. 1 WERL LOCATED APROX. 100T, NORTH OF STEWART BLVD. AT COORDINATES N200319.80 E8/2924.55. SEE NOTES AND DEVILS OF UNCERTIONED DRAWING.

1.9 INSTALL COMMUNICATION DUCT BANKS.

INSTALL TWO (2) COMMUNICATION DUCT BARKS EACH WITH 4-2" IN. DIA CONDUITS AND ASSOCIATED PULL BOXES AND WANHOLES ALONG EACH SHOULDER OF BERSON BOULEVARD (52 AVE 55 STARTING AT STA 0+00 AND TERMINATING AT STA 34-81.41, AS DETALLED IN THE CONSTRUCTION DRAWNOS.

THESE DUCT BANKS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE DOT STANDARDS, AND ARMY CORPS OF ENGINEERS DESIGN AND CONSTRUCTION OF LEVEES, ENGINEERING DESIGN MANUAL, EM-1110-2-1913, APRIL 2000.

1.10 ACCESS RAMPS

CONSTRUCT ACCESS RAMPS FROM THE WEST SIDE OF THE WEST TIE-BACK LEVEE TO ACCESS THE LEVEE AT THE FOLLOWING LOCATIONS: 58TH AVE SE; 66TH AVE SE; AS INDICATED IN THE CONSTRUCTION DRAWINGS. 1.11 ACCESS GATES

INSTALL ACCESS GATES ON THE ROADS, AT THE FOLLOWING LOCATIONS, STA 33+00; 1+52.44; 116+52.10, AND 220+33.15 AS SHOWN ON THE CONSTRUCTION DRAWINGS.

- CONTRACTOR IS TO CLEAR LINES OF SIGHT ALONG THE ALIGNMENT OF THE VARIOUS LEVEES, SPREADER BERM, CANAL, PLUG LOCATIONS, ROADS, ETC. TO PERFORM A SURVEY BEFORE START OF CONSTRUCTION TO ESTABLISH THE ELEVATION OF THE UNDISTURBED CROUND IN THE AREAS WHERE CONSTRUCTION IS TO TAKE PLACE.
- AFTER COMPLETON OF WORK, THE CONTRACTOR SHALL PERFORM A SURVEY OF THE FINISHED FACILITIES, LEVERS, SPREADER BERM, CANAL PLUGS MOR DAOS TO ESTABLISH THER FINISHED, ACTUAL ELEVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 31 23 00.00 20 OF THE TECHNICAL SPECIFICATIONS, AND AS INCID IN THE DRANNOS.

3. THE RESULTS OF THE SURVEYS SHALL BE PRESENTED IN TABULAR FORMAT AND AUTOCAD FORMAT DRAWINGS.

- SLITABLE EXCAVATION MATERIAL THAT IS REMOVED SHALL BE REUSED AS FILL MATERIAL FOR THE CANAL PLUGS, SWALES, LEVEES, ETC.
- ANY EXCESS MATERIAL SHALL BE TEMPORARILY STOCKPILED FOR FUTURE USE ON SITE AS PLUG MATERIAL AT A LOCATION SPECIFIED BY THE CONTRACTING OFFICER.
- 6. STACING AREAS: SOTH AVENUE SE WEST OF WERRIT IDULEVARD IS THE DESCINATIO STACING AREA FOR THE WERRIT CAMLE PURP STATION WORK AND IS TO REMAIN AS SUCH UNIT, COMPLETING OF THE WORK. AT THAT THE 56 TH AVENUE SE SHALL BE REMORKED TO THEIR FINAL CONFIGURATION ACCORDING TO SPECIFICATION AND CONSTITUTION DIRAMON GRUIPEVATIS.
- 7. THE FOLLOWING BRIDGES ARE TO BE REMOVED: 68TH AVE SE, STEWART BLVD AND 116TH AVE SE. 8.
- THE FOLLOWING ROADS ARE TO HAVE ANY EXISTING ASPHALT AND GROUND REMOVED AS FOLLOWS: BERSON AVENUE WILL HAVE ASPHALT REMOVED FROM COORDINATE N:657702.73 E:491550.94 TO FRANCES ST.

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ASPHAIT THAT IS STRENDED FROM THE EXERUID RADIO SHALL BE CAROLING AND STROUP DEE TOR USE BY THE TORONA DIMENSION OF FORETRY: THE CRORING ADVISOR SHALL BE STOCK PED IN NURDERN BALLEND THE HARDY FIT WITHIN THE AREA DESIGNATED ON RADIO 22. THE WORKDOW SHALL NOT BE HORIZEN THAT ABOVE UNDERTRIED GRAUND LELYANDIA, AND SHALL BE INCLUED AT THE ANUTAL ANGLE OF FORE TOR THE MATERIAL. THE CONTRACTOR SHALL REMOVE ANY VEGETATION WITHIN THE STOCK PLE AREA BEFORE LAYING DOWN THE STOCPILE. THE 10. THE FOLLOWING ROADS ARE TO BE REWORKED OR DEGRADED AS FOLLOWS: 56TH AVENUE SE, 58TH AVENUE SE, 60TH AVENUE SE, 62ND AVENUE SE, 64TH AVENUE SE, 66TH AVENUE SE, AND 68TH AVENUE SE. THE ASPHALT WILL BE REMOVED FROM THESE ROADS 50 FEET FROM TOP OF BANK OF BORROW CANAL ALONG

Asphar, Will BE, RUMOND HOM HISS, ROADS SO FILT HOM HOF OF BANK OF BORHOF CANAL KERTET BOLLVAND, ARRINT BOLLVAND FROM BESON AKE TO 155 CAUTH OF 66 A/K WILL BE BERSHED TO TETHIARY CONTINUES. THE FOLLOWING ROADS AKE TO 155 CAUTH OF 66 A/K WILL BE BERSHED TO TETHIARY CONTINUES. THE FOLLOWING ROADS AKE TO 185 CERADID XON BORFLIED INTO CAMAL, SP RUID MATRIAL: SDFIL AVE SE, SBFL AVE SE, 601H AVE SE, GEND AVE SE, 64TH AVE SE, AND 66TH AVE SE.

EXISTING ASPHALT SHALL BE REMOVED AND STOCKPILED AT THE LOCATION SHOWN ON SHEET R301.02 (MERRITT ROAD REMOVAL).

- CONTRACTOR WILL HAVE THE OPTION TO BRING IN CRUSHED LIMESTONE TO THE SITE OR CHANGE THE SI OF THE BORRING CANAL, AND GBTAIN THE CRUSHED LIMESTONE, FROM THE BORRING CANAL. APPROXIMAT FDDT STANARDS FOR LIMEROX BASE, FDDT STANARDS SPECIFY THAT AT LEAST 976 (94 YBCH) TO THE MATERIAL SHALL PASS A 3 ½ INCH SEVE AND THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN 11.
- 12. CONTRACTOR IS TO MAINTAIN ACCESS TO PUBLIC ROADS DURING CONSTRUCTION

13. INSTALL STILLING INTO WELLS AT 1-75 AND LUCKY LAKE.

TYPICAL DETAILS

TYPICAL DETAILS APPLY TO ALL APPROPRIATE LOCATIONS UNLESS OTHERWISE NOTED ON THE DRAMMOS. TYPICAL DETAILS MAY BE MODIFED TO SUIT FIELD CONDITIONS WITH THE REVEW AND APPROVAL OF THE CONTRACTING OFFICER. RESTOR Nova Consulting, In MEANS AND METHODS 0456 NW Stat Tengoe, Might, Nakto Fordio Certification No. 726 THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF THE CONTINUED AND/OR CONSTRUCTION, DEFAULTS FOR THIS HED PRODUCT IN-PLACE AND DO NOT IN ANY WAY SUGGEST OR OTHERWISE PRESCRIBE A MEANS AND/OR METHOD OF DEMOLTION, INSTALLATION OR CONSTRUCTION. PARSONS NE STRAN

The consultant, contractor or other parties associated with this project shall comply with Fiorica Statutes 115 07 (6) (e). These phans are the property of the United States Army Corp of Engineers and much be secured and maintained in a confidential manner. Berlie by any unauthorized individual or outside/third party mot performing over sceeenary for this project is prehibited. 5 or 314

B. THE CONTRACTOR SHALL HAVE ALL ITEMS OR DETAILS CLARIFIED WITH THE CONTRACTING OFFICER PRIOR TO SUBMITTING A BID, OTHERWISE THE CONTRACTING OFFICER'S INTERPRETATION WILL BE FINAL.

C. OKIMATOR SAML VIENT MO BE RESPONDED FOR ALL DIRENSIONS AND STEE CONFINIONS ENLATE: DIRENKE, ANY DISDEPANDIS'S IN DIRENSIONS OR SPECIAL MODIFICATIONS REQUIRED DURI OF RELO CONFIDENT FOR CARRENATION WITNOL TO THE CONTACTING SYNCHE FOR CARRENATION RESPONDED TO ANY CHARGES TO THE WORK MADE IN THE RESPONDED TO ANY CHARGES TO THE WORK MADE IN THE CONTINUOUS OFFICE SYNCH, MESS WITH THE CONTRACTOR THE CONTINUOUS OFFICE SYNCH, MESS WITH THE CONTRACTOR STREED WITHOUT PROOF NOTIFICATION OF ROM THE CONTINUOUS OFFICE SYNCH, MESS WITH THE CONTRACTOR.

A. THESE DRAWINGS SHALL BE UTILIZED IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS, REGARDING DISCREPANCIES OR

PROJECT SPECFICATIONS. REGARDING DISCREPARCES OR CONFLICTS IN THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENTS WILL APPLY, UNLESS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER.

- EXEGAL CONTRACTOR SHALL BE RESPONDED FOR ALL SUBCONTRACTORS WORKS, ON THE CAS BET AND FOR ALL CORENATION OF WORK AMONG THEM. HE SUBCONTRACTORS SHALL FULLY COORDINATE THER WORK WITH THE OTHER TRADES. THE SUBCONTRACTORS SHALL BE RESPONSED FOR THE FINAL CATHERING OF ALL EQUIPMENT INT TURNISHED BY THEM BUT REQUIRING THE SAME FOR FINAL COMPLETION
- ALL MATERIALS SHALL BE FURNISHED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL THE NECESSARY PERMITS AND INSPECTIONS REQUIRED FOR THE PROJECT.
- ALL DIMENSIONS SHALL BE CONSIDERED NOMINAL UNLESS NOTED OTHERWISE, WRITTEN DIMENSIONS SHALL GOVERN, DO NOT SCALE DRAWINGS.
- 12. CONTRACTOR IS TO STARE EQUIPMENT AND OTHER RESOURCES NECESSARY TO PERFORM HE WORK WITHIN THE CONSTRUCTION LIMITS AT LOCATIONS CONSISTENT WITH HIS WORK PLAN. AND AS APPROVED BY THE CONTRACTION OFFICER. THESE STADUM AREAS ANNOT INTERTER, WITH DEDICATED STOCKTUL/STADUM AREAS ASSOCIATED WITH ADJACENT AND CONCUMPENT WORK.
- 13. CONTRACTOR IS TO STOCKPILE DEBRIS WITHIN THE CONSTRUCTIO APPROVED BY THE CONTRACTING OFFICER. THESE STOCKPILE AREAS CANNOT INTERFERE WITH DEDICATED STOCKPILE/STAGING AREAS ASSOCIATED WITH ADJACENT AND CONCURRENT WORK.
- 14. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DSPOSAL ACCORDING TO APPLICABLE STANDARDS AND PROJECT SPICIFICATIONS ALL NO VECETIATURE OBSER, TRASH AND GARDAGE, THOM THE PROJECT DITE, CONTRACTOR SHALL CAROPY AND AND ADDRESS AND ADDRESS AND IN SIGN AND AND ADDRESS TO SITE FER PROJECT SPECIFICATIONS AND IN SIGN ANY AST IN OTI-CROSS CONTAMINATE MATTERNI, OR CONTAMINATE UNCLASSIBIL MATERIAL ADDRESSING STORE SHALL BE CORRECTOR AND REMOVE THE CONTRACTOR OFFICIAL CONTRACTOR SHALL CAROPHENES ALL AREAS FROM TO TINAL ACCEPTANCE BY THE CONTRACTING OFFICIER.
- COLLIER COUNTY AERIAL PHOTOGRAPHY (2005) WAS USED FOR OVERLAY.
- 31. TURBERTY CONTROL AND MANTORNE SHALL BE PROVIDED BY THE CONTROLING IN CONSISTENCE IN THE RE-DISTRUCTION OF STATE OF LIDERAL DEPARTMENT OF ENVIRONMENTAL PROTECTION CREMERC PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES OR AS DIRECTED BY THE CONTRACTING OFFICER. REFER TO SHEET G300.03 FOR PROJECT CONTROL BENCHMARKS.

(GS) SECTIONAL COVERAGE OF COLLIER COUNTY, WHICH WERE DIGITIZED FROM THE UNITED STATES GEOLOGICAL SURVEY QUADRANGLE MAPS.

1.6 PLUG CANALS

INSTALL CANAL PLUGS ON MERRITT CANAL AT THE FOLLOWING LOCATIONS:

FILL FOR CANAL PLUGS SHALL BE OBTAINED FROM BERM AND ROAD DEGRADING. SEE CONSTRUCTION DRAWINGS FOR PLUG DETAILS AND ACTUAL GRID LOCATIONS.

CONTRACTOR SHALL DEGRADE ALL SPOIL PILES ALONG CANAL. THIS MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CANAL PLUGS.

Knowledgeable Staff

- Know Natural Characteristics and Processes Being Restored
- Understand Project Goals and Design
- Regular and Consistent Involvement in Construction Activities
- Can Handle Working in Remote Areas and Sometimes Very Uncomfortable Conditions

