Orlando Utilities Commission

Stanton Energy Center

SITE CERTIFICATION AMENDMENT REQUEST

February 2, 2007

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Site-Certification Order Number PA81-14

Rail Car Siding Facility
Stanton Energy Center

Submitted to:
Florida Department of Environmental Protection

Submitted by:
Orlando Utilities Commission

February 2, 2007

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AMENDMENT REQUEST NO. 8
Rail Car Siding Facility
Proposed Amendment

This amendment request is for the construction and operation of a Rail Car Siding Facility (Facility) to be located entirely within the existing right-of-way property of the Orlando Utilities Commission (OUC) Stanton Rail Line together with Turn-Around Wye Trackage (Wye) located on leased property owned by the Orlando International Airport Authority (OIAA). The Stanton Rail Line extends between a point of interconnection with the CSX Transportation (CSXT) mainline rail corridor at Taft, Florida (south side of Orlando metro area) and the Stanton Energy Center (Stanton) site property. The Stanton Rail Line is wholly-owned by OUC and is employed in unit train deliveries of coal to the coal yard of Stanton and for movement of other rail shipments involved in the operation and maintenance of the generation facilities.

Purpose/Reason for Amendment
The purpose of the Facility would be to allow the passage of inbound and outbound unit trains operating over the 18-mile single line trackage between Taft and the Coal Car Unloading Building at the Stanton site. A second purpose would be to facilitate standing (parked) inspections of loaded railcars for maintenance and repairs to be performed (following unloading of coal lading) at the Railcar Maintenance Facilities proposed as Amendment Request No. 9 for development at the Stanton site. A third (future) purpose would be to facilitate the yard interchange of unit trains between CSXT road crews and operations and any rail operations performed by OUC (or contract operators) between the Facility and the Stanton site. The Turn-Around Wye Trackage would allow the CSXT motive power units to be turned around to allow "cab-forward" orientation of the locomotives when returning empty unit trains to the CSXT mainline.

Technical Description of Amendment
The Railcar Yard Facility and the Turn-Around Wye Trackage will be located between OUC Mileposts 5.6 and 7.8 on the existing rail line between Boggy Creek Road/South Airport Road (on the west) and Narcoossee Road (on the east). The location for the Facility is a straight segment of rail trackage occupying right-of-way property bounded on the southeast side by a right-of-way easement corridor for 230 kV and lower voltage transmission lines and the right-of-way of the Central Florida Greenway (Florida 417), a multiple lane limited access highway. The eastern segment of the Facility would be crossed by an overpass (grade separation) which has been recently completed to extend South Lake Nona Avenue to an interchange with Florida 417. The location of the Wye is on an upland pasture area lying to the north side of a curving segment of the rail line. This land is presently undeveloped and provides a buffer area under the runway approach/takeoff patterns of the Orlando International Airport.

The construction and operation of the Facility would take place entirely within the existing right-of-way property boundaries of the Stanton Rail Line except for an off-site

drainage ditch paralleling the subgrade fill limits on the northwest side. This drainage ditch would be located on easements obtained from the adjacent property owners (Lake Nona and OIAA) to carry rainfall runoff to existing natural drainage features.

Fill materials for the construction of the Facility and Wye would be provided by a borrow pit to be located on the OIAA property. This borrow pit would be employed as the source of fill materials to raise the grade for subgrade structures underlying the new-build sidings. Following completion of fill-borrow activities the borrow pit would serve as a collection point for rainfall runoff drainage from the Facility and Wye. It would be graded, contoured and re-vegetated to provide a similar appearance to the existing pits in the region remaining from the construction of the Central Florida Greenway, the South Lake Nona Avenue extension, and other local roadways.

The narrow land corridor lying between the southeast limits of the Stanton Rail Line right-of-way and the right-of-way for the Central Florida Greenway/Florida 417 is traversed by an existing OUC 230 kV transmission line and two lower voltage distribution transmission lines. The corridor also includes an unimproved (rock surfaced) roadway for access to the transmission and rail facilities.

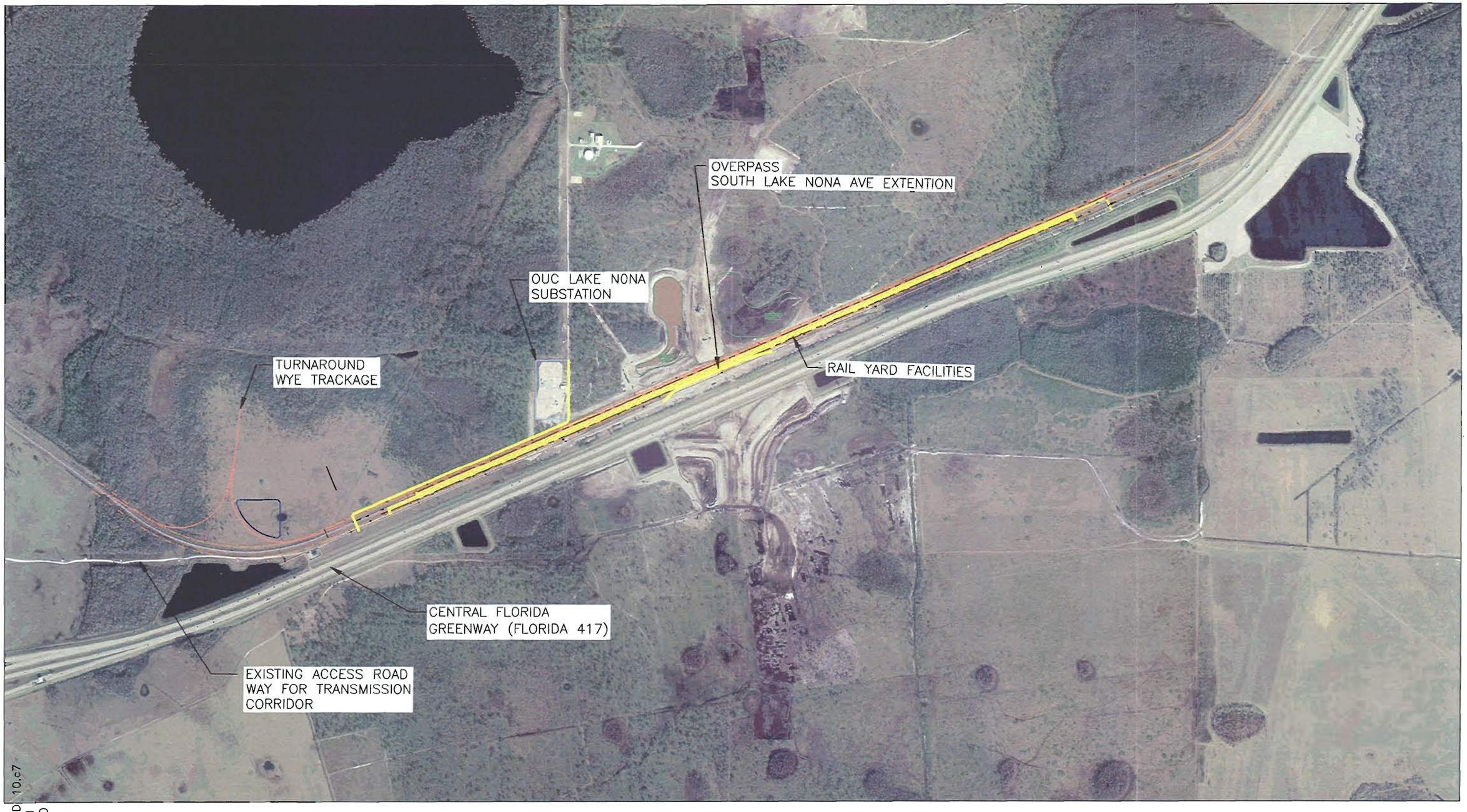
The location of the Facility and adjacent Wye is shown on Figure 8-1.

A new unimproved (rock surfaced) roadway would be constructed on an easement from OIAA along the north side of the existing right-of-way of the Stanton Rail Line. This roadway would provide secondary (emergency backup) vehicular access to the OUC Lake Nona Substation in the event that the primary access road (unnamed) is unavailable.

The new sidings of the Facility would comprise three separate tracks:

1. One rail siding paralleling the existing mainline track at a distance of 22-feet (between track centerlines) together with ten-foot wide access roadways located on each side of the siding. This Loaded Trainset Inspection Track siding would be approximately 8,800 feet in length to allow parking of a unit train to 8,400 feet in length.[1] The access roads would be located on each side of the siding and extend for about 8,400 feet length to allow access to the full extent of the standing train.
2. Two rail sidings paralleling the existing mainline track at distances of 22 feet (first siding) and an additional 16 feet (second siding) as measured between track centers. These Empty Trainset Tracks (for return-to-mine train movements) would be approximately 8,600 feet in length (for the shorter of the two sidings) to allow parking of an empty trainset of railcars and motive power units to a total train length of 8,400 feet. This pair of sidings would be flanked by a single access road located between the existing mainline track and the first siding. This road would be nominally 10-feet in width and approximately 8,500 feet in length. The unimproved (rock surfaced) road would facilitate personnel access to the standing railcars for make-up (re-connection) of air brake and door train-line hoses and the

[1] Siding to accommodate a unit train of up to 150 rail cars together with up to five high-horsepower locomotive units. Siding length measured between the point of switch locations at each end of the track.



1000' 500' 0 1000' 2000'

1"=1000'

N

143799-FIGURE 9-1 ACAD 10.c7
HAR48329 1=1
OUTLINE 12/29/06 02:14:20

BLACK & VEATCH CORPORATION

LOCATION OF RAIL YARD FACILITIES BETWEEN BOGGEY CREEK ROAD AND NARCOOSSEE ROAD

FIGURE 8-1

standing train inspection of air and hand brake components prior to departure for return to mines.

The construction of the sidings and associated access roadways would entail the filling of the existing rail line right-of-way areas to raise track elevations. A typical cross-sectional elevation through the proposed site fill is shown on Figure 8-2.

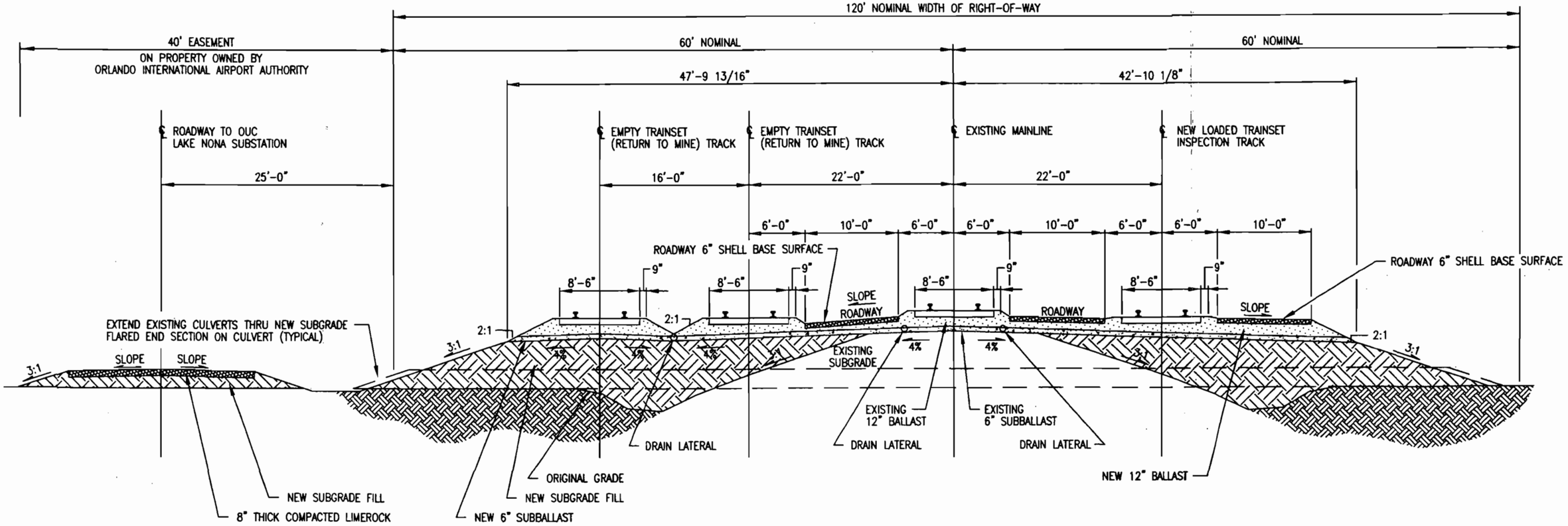
The new Wye would entail the construction of Wye trackage and associated turnouts to allow up to five high-horsepower locomotive units to be turned following uncoupling from a loaded unit train delivered to the interchange location and prior to the recoupling to an empty trainset of rail cars. Subgrade construction would be minimal in extent to raise the trackage above localized rainfall flooding.

Environmental Consequences of Amendment

The preliminary design of these facilities indicates approximately 1.55 acres of unnamed, freshwater forested shrub wetland will be impacted from the placement of fill material in the existing ROW. No other environmental consequences are anticipated from the approval and implementation of this amendment.

Effect of Amendment No. 8 on Certification/Conditions of Certification

OUC believes that approval and implementation of this request will require either an amendment or modification of the existing Stanton Certification (PA81-14) and/or Conditions of Certification.



TYPICAL CROSS-SECTION LOOKING NORTHEAST
TROUGH FOUR TRACK YARD

5' 0 5' 10'
SCALE: 3/32" = 1'-0"

BLACK & VEATCH

OUC Rail Yard at Location Between Narcoossee and Boggy Creek Roads
Typical Cross-Section Through Multiple Tracks
Figure 8-2

FORM #: 62-343.900(1)
FORM TITLE: JOINT ENVIRONMENTAL RESOURCE PERMIT APPLICATION
DATE: March 26, 2004

Amendment Request No. 8
Rail Car Siding Facility-OUC

JOINT APPLICATION FOR

ENVIRONMENTAL RESOURCE PERMIT/

AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS/

FEDERAL DREDGE AND FILL PERMIT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION/
WATER MANAGEMENT DISTRICTS/
U.S. ARMY CORPS OF ENGINEERS

SECTION A

FOR AGENCY USE ONLY	
ACOE Application #	DEP/WMD Application #
Date Application Received	Date Application Received
Proposed Project Lat.	Fee Received $
Proposed Project Long.	Fee Receipt #

PART 1:

Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?
☒ yes ☐ no

Is this application being filed by or on behalf of a government entity or drainage district? ☐yes ☒no

PART 2:

A. Type of Environmental Resource Permit Requested (check at least one). See Attachment 2 for thresholds and descriptions.

- ☐ Noticed General - include information requested in Section B.
- ☐ Standard General (Single Family Dwelling) - include information requested in Sections C and D.
- ☒ Standard General (all other Standard General projects) - include information requested in Sections C and E.
- ☐ Individual (Single Family Dwelling) - include information requested in Sections C and D.
- ☐ Individual (all other Individual projects) - include information requested in Sections C and E.
- ☐ Conceptual - include information requested in Sections C and E.
- ☐ Mitigation Bank Permit (construction) - include information requested in Sections C and F. (If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)
- ☐ Mitigation Bank (conceptual) - include information requested in Sections C and F.

B. Type of activity for which you are applying (check at least one)

- ☐ Construction or operation of a new system, other than a solid waste facility, including dredging or filling in, on or over wetlands and other surface waters.
- ☐ Construction, expansion or modification of a solid waste facility.
- ☐ Alteration or operation of an existing system which was not previously permitted by a WMD or DEP.
- ☒ Modification of a system previously permitted by a WMD or DEP.

  Provide previous permit numbers: ***Site Certification Order Number PA81-14***

  - ☐ Alteration of a system
  - ☐ Abandonment of a system
  - ☐ Removal of a system
  - ☐ Extension of permit duration
  - ☐ Construction of additional phases of a system

C. Are you requesting authorization to use Sovereign Submerged Lands?
☐yes ☒no
(See Section G and Attachment 5 for more information before answering this question.)

D. For activities in, on,or over wetlands or other surface waters, check type of federal dredge and fill permit requested:
☒Individual ☐Programmatic General ☐General
☐Nationwide ☐Not Applicable

E. Are you claiming to qualify for an exemption? ☐yes ☒no
If yes, provide rule number if known. _____

FORM #: 62-343.900 (1)
FORM TITLE: JOINT ENVIRONMENTAL RESOURCE PERMIT APPLICATION
DATE: March 26, 2004

PART 3: **A. OWNER(S) OF LAND**	**B. ENTITY TO RECEIVE PERMIT (IF OTHER THAN OWNER)**
Name ***Frederick F. Haddad, Jr.***	Name
Title and Company ***Vice President, Power Resources, Orlando Utilities Commission***	Title and Company
Address ***P. O. Box 3193***	Address
City, State, Zip ***Orlando, Florida 32801***	City, State, Zip
Telephone and Fax ***Telephone: (407) 658-6444 Fax: (407) 275-4120***	Telephone and Fax
E-mail Address: (optional)	E-mail Address: (optional)
C. AGENT AUTHORIZED TO SECURE PERMIT	**D. CONSULTANT (IF DIFFERENT FROM AGENT)**
Name ***Mike Soltys***	Name
Title and Company ***Site Certification Coordinator, Black & Veatch Corporation***	Title and Company
Address ***11401 Lamar Avenue***	Address
City, State, Zip ***Overland Park, Kansas 66211***	City, State, Zip
Telephone and Fax ***Telephone (913) 458-7563; Fax (913) 458-2934***	Telephone and Fax
E-mail Address: (optional)	E-mail Address: (optional)

PART 4: (Please provide metric equivalent for federally funded projects):

A. Name of Project, including phase if applicable: ***Rail Car Sidings Facilities***

B. Is this application for part of a multi-phase project? ☐ Yes ☒ No

C. Total applicant-owned area contiguous to the project? **38.65** ac.; _____ ha.

D. Total area served by the system: **_38.65_____** ac.; _____ ha.

E. Impervious area for which a permit is sought: **11.4** ac.; _____ ha.

F. Volume of water that the system is capable of impounding: **36.5 ac. ft. – applicable to the stormwater retention pond that would be constructed under this amendment.** ; _____ m^3

G. What is the total area of work in, on, or over wetlands or other surface waters?
___1.55_____ ac.; _____ ha.; _____ sq. ft.; _____ sq. m.

H. Total volume of material to be dredged: **_____0_____** yd^3; _____ m^3

I. Number of new boat slips proposed: **__0__** wet slips; **__0_** dry slips

PART 5:

Project location (use additional sheets if needed):
County(ies) ***Orange (location listed below indicates the location of impact area)***

Section(s) **27**	Township ***24 S***	Range ***30 E***
Section(s)	Township	Range
Section(s)	Township	Range

Land Grant name, if applicable:

Tax Parcel Identification Number: ***Multiple parcel numbers apply and can be provided upon request.***

Street Address, Road, or other location: ***The project is located between Boggy Creek Road/South Access Road (on the west) and Narcoossee Road on the east.***

City, Zip Code, if applicable: ***Orlando***

PART 6: Describe in general terms the proposed project, system, or activity.

The purpose of the Facility is to install track within an existing ROW to allow the passage of inbound and outbound unit trains operating over the 18-mile OUC owned single line trackage between Taft and the Coal Car Unloading Building at the SEC site. A second purpose would be to facilitate standing (parked) inspections of loaded railcars for maintenance and repairs to be performed (following unloading of coal lading) at the Railcar Maintenance Facilities proposed for development at the SEC site. A third (future) purpose would be to facilitate the yard interchange of unit trains between CSXT road crews and operations and any rail operations performed by OUC (or contract operators) between the Facility and the SEC site. The Turn-Around Wye Trackage would allow the CSXT motive power units to be turned around to allow "cab-forward" orientation of the locomotives when returning empty unit trains to the CSXT mainline. Wetlands impacts are required to install the Facilities. A stormwater management system is also proposed.

PART 7:

A. If there have been any pre-application meetings, including on-site meetings, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives.

Project pre-application/introduction meetiong held at FDEP-Siting Office in Tallahassee on August 24, 2006. Attendees were Buck Oven-FDEP, Mike Halpin-FDEP, Al Liners-FDEP, Louis Brown-OUC, Myron Rollins-Black & Veatch, and Mike Soltys-Black & Veatch.

B. Please identify by number any MSSW/Wetland Resource/ERP/ACOE Permits pending, issued or denied for projects at the location, and any related enforcement actions. NONE

Agency	Date	No.\Type of Application	Action Taken
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

C. Note: The following information is required for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit or an authorization to use state owned submerged lands. Please provide the names, addresses and zip codes of property owners whose property directly adjoins the project (excluding application) and/or (for proprietary authorizations) is located within a 500 ft. radius of the applicant's land. Please attach a plan view showing the owner's names and adjoining property lines. Attach additional sheets if necessary.

1.
Lake Nona Land Company
9801 Lake Nona Road
Orlando, FL 32827

2.
Divosta Homes LP
4500 PGA Blvd, Ste 400
Palm Beach Gardens, FL 33418

3.
Boggy Creek Improvement District
3434 Colwell Avenue, Ste. 200
Tampa, FL 33614

4.
City of Orlando/GOAA
c/o Commercial Properties
1 Airport Blvd.
Orlando, FL 32827

5.
City of Orlando/GOAA
c/o Allen Smith
8315 Narcoossee Road
Orlando, FL 32827

6.

7.

8.

PART 8:

A. By signing this application form, I am applying, or I am applying on behalf of the applicant, for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relive me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of the applicant, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

J. Michael Soltys
Typed/Printed Name of Applicant (If no Agent is used) or Agent (If one is so authorized below)

Signature of Applicant/Agent Date

(Corporate Title if applicable)

AN AGENT MAY SIGN ABOVE ONLY IF THE APPLICANT COMPLETES THE FOLLOWING:

B. I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Jan Aspuru		
Typed/Printed Name of Applicant	Signature of Applicant	Date

Vice President, Power Resources
(Corporate Title if applicable)

Please note: The applicant's original signature (not a copy) is required above.

PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:

C. I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Water Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor permitted work if a permit is granted.

Jan Aspuru		
Typed/Printed Name of Applicant	Signature of Applicant	Date

Vice President, Power Resources
(Corporate Title if applicable)

SECTION C

Environmental Resource Permit Notice of Receipt of Application

Note: this form does not need to be submitted for noticed general permits.
This information is required in addition to that required in other sections of the application. Please submit five copies of this notice of receipt of application and all attachments with the other required information. Please submit all information on 8 1/2" x 11" paper.

Project Name ***Rail Car Siding Facilities, Stanton Energy Center***
County ***Orange***
Owner ***Orlando Utilities Commission***
Applicant: ***Orlando Utilities Commission***
Applicant's Address: ***P. O. Box 3193, Orlando, FL 32802***

1. Indicate the project boundaries on a USGS quadrangle map. Attach a location map showing the boundary of the proposed activity. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.

A project location map is included as Figure 1.

2. Provide the names of all wetlands, or other surface waters that would be dredged, filled, impounded, diverted, drained, or would receive discharge (either directly or indirectly), or would otherwise be impacted by the proposed activity, and specify if they are in an Outstanding Florida Water or Aquatic Preserve:

This project is located on land leased from the Orlando International Airport and within an active utility right-of-way. Approximately 1.55 acres of unnamed, freshwater forested/shrub wetland would be filled as a result of this project. These wetlands are not located in an Outstanding Florida Water or Aquatic Preserve. Figure 2 is the National Wetland Inventory map of the project area.

3. Attach a depiction (plan and section views), which clearly shows the works or other facilities proposed to be constructed. Use multiple sheets, if necessary. Use a scale sufficient to show the location and type of works.

Drawing numbers 143799-SS-001 through 143799-SS-0012 as well as drawings presented in Appendix A of the Onsite Drainage System document that is included as Attachment 1 of this permit application.

4. Briefly describe the proposed project (such as "construct dock with boat shelter", "replace two existing culverts", "construct surface water management system to serve 150 acre residential development"):

Construction of a rail car siding facility to allow the passage of inbound and outbound unit trains.

5. Specify the acreage of wetlands or other surface waters, if any, that are proposed to be filled, excavated, or otherwise disturbed or impacted by the proposed activity:

filled 1.55 ac.; _____ excavated ac.;

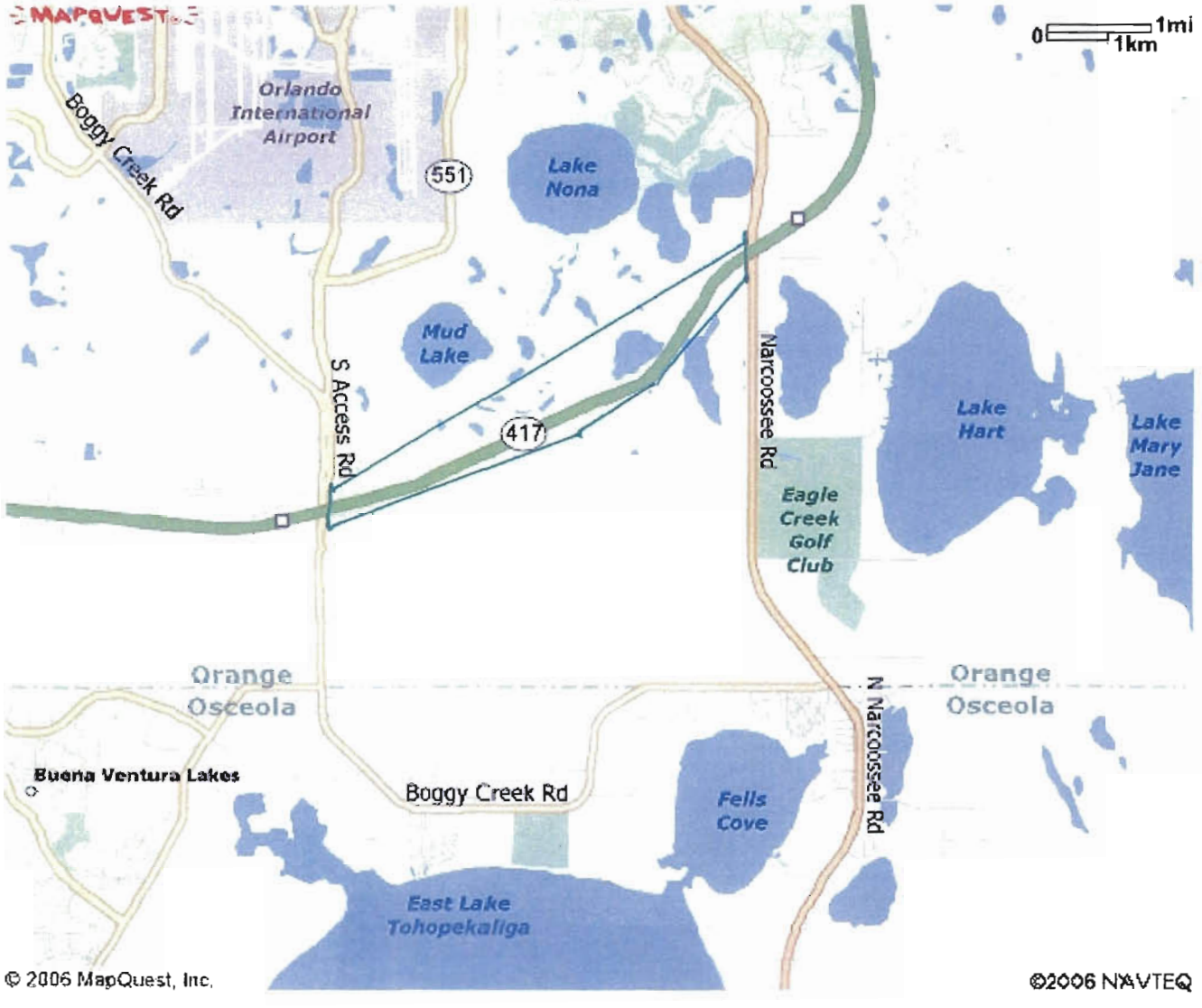
other impacts 0 ac.

6. Provide a brief statement describing any proposed mitigation for impacts to wetlands and other surface waters (attach additional sheets if necessary): ***The OUC proposes the purchase of mitigation bank credits to offset the impacts to 1.55 acres of unnamed, freshwater forested/shrub wetland.***

FOR AGENCY USE ONLY

Application Name:
Application Number:
Office where the application can be inspected:

Note to Notice recipient: The information in this notice has been submitted by the applicant, and has not been verified by the agency. It may be incorrect, incomplete or may be subject to change.



Rail Car Siding Facilities
Project Area

Figure 1

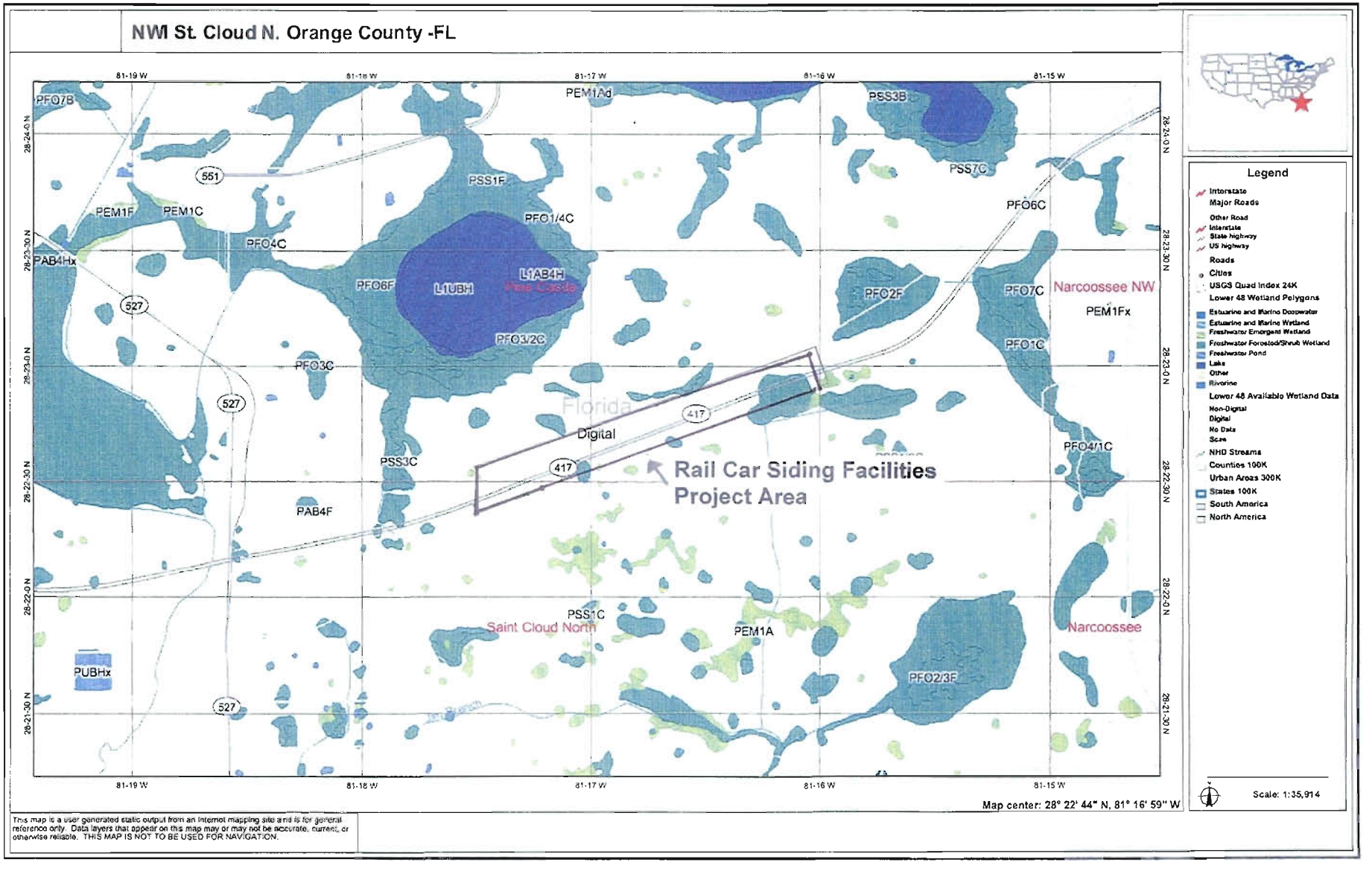

NWI St. Cloud N. Orange County -FL
81-19 W
81-18 W
81-17 W
81-16 W
81-15 W
28-24-0 N
28-23-30 N
28-23-0 N
28-22-30 N
28-22-0 N
28-21-30 N
PFO7B
PEM1Ad
PSS3B
PSS7C
PSS1F
PEM1F
PEM1C
PFO1/4C
PFO6C
PFO4C
PAB4Hx
L1AB4H
Pine Castle
PFO6F
L1UBH
PFO2F
PFO7C
Narcoossee NW
PEM1Fx
PFO3/2C
PFO1C
PFO3C
Florida
Digital
PFO4/1C
PSS3C
Rail Car Siding Facilities
Project Area
PAB4F
PSS1C
Saint Cloud North
PEM1A
Narcoossee
PFO2/3F
PUBHx
551
527
417
Legend
Interstate
Major Roads
Other Road
Interstate
State highway
US highway
Roads
Cities
USGS Quad Index 24K
Lower 48 Wetland Polygons
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
Lower 48 Available Wetland Data
Non-Digital
Digital
No Data
Scale
NHD Streams
Counties 100K
Urban Areas 300K
States 100K
South America
North America
Scale: 1:35,914
Map center: 28° 22' 44" N, 81° 16' 59" W
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Figure 2

SECTION E

INFORMATION REQUESTED FOR STANDARD GENERAL, INDIVIDUAL AND CONCEPTUAL ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS NOT RELATED TO A SINGLE FAMILY DWELLING UNIT

Please provide the information requested below if the proposed project requires either a standard general, individual, or conceptual approval environmental resource permit and is not related to an individual, single family dwelling unit, duplex or quadruplex. The information listed below represents the level of information that is usually required to evaluate an application. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. Please submit all information that is required by the Department on either 8 1/2 in. X 11 in. paper or 11 in. X 17 in. paper. Larger drawings may be submitted to supplement but not replace these smaller drawings.

I. Site Information

A. Provide a map(s) of the project area and vicinity delineating USDA/SCS soil types.

FIGURE 3 is a map of the project area and vicinity delineating USDA/SCS soil types.

B. Provide recent aerials, legible for photo interpretation with a scale of 1" = 400 ft, or more detailed, with project boundaries delineated on the aerial.

Aerials of the project area are provided herein.

C. Identify the seasonal high water or mean high tide elevation and normal pool or mean low tide elevation for each on site wetland or surface water, including receiving waters into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.

All impacted wetlands are located within the OUC ROW.

D. Identify the wet season high water tables at the locations representative of the entire project site. Include dates, datum, and methods used to determine these elevations.

The wet season high water tables are estimated at 1-2 feet below ground surface. These wetlands usually do not have standing water. **II. Environmental Considerations**

A. Provide results of any wildlife surveys that have been conducted on the site, and provide any comments pertaining to the project from the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service.

This project area is an existing, active utility and transportation right-of-way; thus, no wildlife surveys have been conducted or are proposed.

B. Provide a description of how water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed.

Water quantity and hydroperiod will be maintained in undisturbed areas by maintaining the existing drainage pattern. Water quality will be maintained during construction with Best Management Practices. Silt fences and other measures will prevent sediment and construction debris from reaching wetlands adjacent to the proposed construction area. All waste materials will be removed and properly disposed at reasonable intervals. Materials such as fuels and similar products will be stored appropriately to avoid spills and incidental releases to the environment. Fugitive dust emissions will be controlled with water sprays. Stormwater discharges during operation will be equal to pre-development runoff rates. Construction activities and personnel traffic will be confined to the railroad maintenance facilities expansion area to maintain the integrity of adjacent habitat.

C. Provide a narrative description of any proposed mitigation plans, including purpose, maintenance, monitoring, and construction sequence and techniques, and estimated costs.

The OUC proposes the purchase of mitigation bank credits to offset the impacts to 1.55 acres of unnamed, freshwater forested/shrub wetland.

D. Describe how boundaries of wetlands or other surface waters were determined. If there has ever been a jurisdictional declaratory statement, a formal wetland determination, a formal determination, a validated informal determination, or a revalidated jurisdictional determination, provide the identifying number.

A wetland delineation will be completed In accordance with the Uniform Mitigation Assessment Method post-certification.

E. Impact Summary Tables:

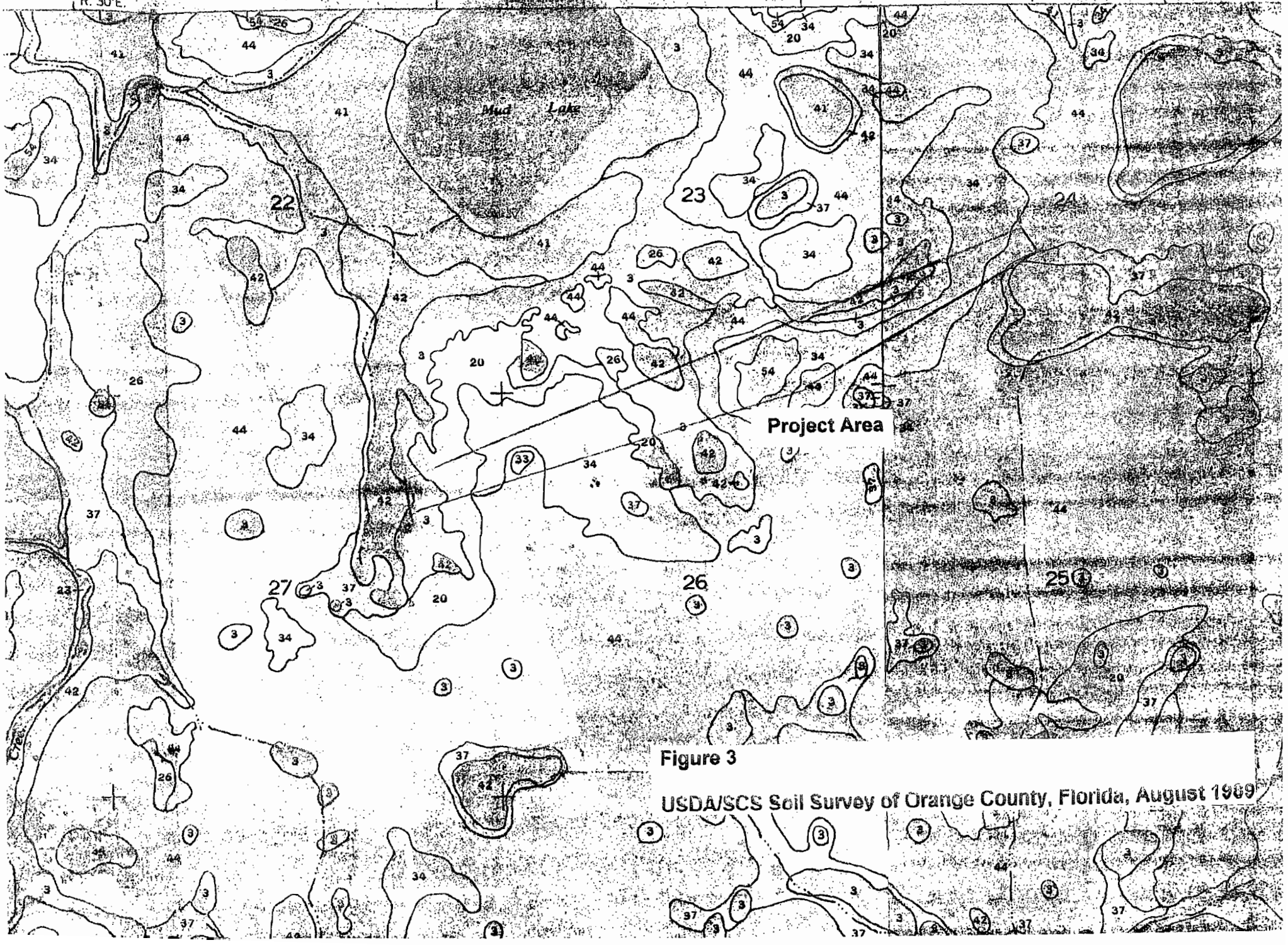


Figure 3

USDA/SCS Soil Survey of Orange County, Florida, August 1969

1. For all projects, complete Tables 1, 2 and 3 as applicable.

Table1 is complete and presented herein. Tables 2 and 3 are not applicable.

2. For docking facilities or other structures constructed over wetlands or other surface waters, provide the information requested in Table 4.

Not Applicable

3. For shoreline stabilization projects, provide the information requested in Table 5.

Not Applicable

III. Plans

Provide clear, detailed plans for the system including specifications, plan (overhead) views, cross sections (with the locations of the cross sections shown on the corresponding plan view), and profile (longitudinal) views of the proposed project. The plans must be signed and sealed by a an appropriate registered professional as required by law. Plans must include a scale and a north arrow. These plans should show the following:

A. Project area boundary and total land area, including distances and orientation from roads or other land marks;

Information will be provided post-certification.

B. Existing land use and land cover (acreage and percentages), and on-site natural communities, including wetlands and other surface waters, aquatic communities, and uplands. Use the Florida Land Use Cover & Classification System (FLUCCS)(Level 3) for projects proposed in the South Florida Water Management District, the St. Johns River Water Management District, and the Suwannee River Water Management District and use the National Wetlands Inventory (NWI) for projects proposed in the Southwest Florida Water Management District. Also identify each community with a unique identification number which must be consistent in all exhibits.

The current land use and land cover is as a utility (transmission line and railroad) ROW.

C. The existing topography extending at least 100 feet off the project area, and including adjacent wetlands and other surface waters. All topography shall include the location and a description of known benchmarks, referenced to NGVD. For systems waterward of the mean high water (MHW) or seasonal high water lines, show water depths, referenced to mean low water (MLW) in tidal areas or seasonal low water in non-tidal areas, and list the range between MHW and MLW. For docking facilities, indicate the distance to, location of, and depths of the nearest navigational channel and access routes to the channel.

This information will be provided post-certification.

D. If the project is in the known flood plain of a stream or other water course, identify the following: 1) the flood plain boundary and approximate flooding elevations; and 2) the 100-year flood elevation and floodplain boundary of any lake, stream or other watercourse located on or adjacent to the site;

This information will be provided post-certification.

E. The boundaries of wetlands and other surface waters within the project area. Distinguish those wetlands and other surface waters that have been delineated by any binding jurisdictional determination;

Wetland boundaries will be provided post-certification.

F. Proposed land use, land cover and natural communities (acreage and percentages), including wetlands and other surface waters, undisturbed uplands, aquatic communities, impervious surfaces, and water management areas. Use the same classification system and community identification number used in III (B) above.

The proposed use is as a utility ROW.

G. Proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands;

Approximately 1.55 acres of unnamed, freshwater forested/shrub wetland will be filled for construction of the Rail Car Siding Facility. Detailed information will be provided post-certification.

H. Proposed buffer zones;

The railcar maintenance facilities are proposed entirely within the right-of-way property boundaries of the Stanton Rail Line except for an off-site drainage ditch paralleling the subgrade fill limits on the northwest side. Thus, no buffer zone is required.

I. Pre- and post-development drainage patterns and basin boundaries showing the direction of flows, including any off-site runoff being routed through or around the system; and connections between wetlands and other surface waters;

This information will be provided post-certification.

J. Location of all water management areas with details of size, side slopes, and designed water depths;

This information will be provided post-certification.

K. Location and details of all water control structures, control elevations, any seasonal water level regulation schedules; and the location and description of benchmarks (minimum of one benchmark per structure);

Stormwater runoff will be routed to a combination of two existing ponds and one new pond to be constructed as part of this project (Drawings 143799-SS-0003 and 143799-SS0004). Details will be provided post-certification.

L. Location, dimensions and elevations of all proposed structures, including docks, seawalls, utility lines, roads, and buildings;

Information will be provided post-certification.

M. Location, size, and design capacity of the internal water management facilities;

Information will be provided post-certification.

N. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes, and rights-of-way and easements for the existing drainage system, if any;

Easements will be necessary for the drainage ditch to carry rainfall runoff to existing natural drainage features. The easements will be obtained from the adjacent property owners.

O. Receiving waters or surface water management systems into which runoff from the developed site will be discharged;

Runoff will drain to two existing stormwater ponds and one new stormwater runoff pond that will be constructed as part of this project. Details will be provided post-certification.

P. Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions;

Erosion and sediment control measures will be installed as necessary during construction to retard erosion and control sediment deposition. Detailed information will be provided post-certification. Construction techniques discussion will be provided post-certification.

Q. Location, grading, design water levels, and planting details of all mitigation areas;

OUC proposes to purchase mitigation bank credits to offset impacts to 1.55 acres of wetland.

R. Site grading details, including perimeter site grading;

Information will be provided post-certification.

S. Disposal site for any excavated material, including temporary and permanent disposal sites;

Topsoil will be excavated but retained on site and used for finished grading. Additional information will be provided post-certification.

T. Dewatering plan details;

Information will be provided post-certification.

U. For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities, and fish cleaning stations;

Not applicable

V. Location and description of any nearby existing offsite features which might be affected by the proposed construction or development such as stormwater management ponds, buildings or other structures, wetlands or other surface waters.

Offsite features will not be impacted by the proposed construction.

W. For phased projects, provide a master development plan.

Not applicable

IV. Construction Schedule and Techniques

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should specifically include the following:

A. Method for installing any pilings or seawall slabs;

Not applicable

B. Schedule of implementation of temporary or permanent erosion and turbidity control measures;

Refer to Part III, Item P of the ERP.

C. For projects that involve dredging or excavation in wetlands or other surface waters, describe the method of excavation, and the type of material to be excavated;

Refer to Part III, Item P of the ERP.

D. For projects that involve fill in wetlands or other surface waters, describe the source and type of fill material to be used. For shoreline stabilization projects that involve the installation of riprap, state how these materials are to be placed, (i.e., individually or with heavy equipment) and whether the rocks will be underlain with filter cloth;

Information will be provided post-certification.

E. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place (Note: a consumptive use or water use permit may by required);

Information will be provided post-certification.

F. Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;

Trucks or railcars will be used for transporting equipment and materials to and from the work site.

G. Demolition plan for any existing structures to be removed; and

Not Applicable

H. Identify the schedule and party responsible for completing monitoring, record drawings, and as-built certifications for the project when completed.

Orlando Utilities Commission will be responsible for identifying the schedule prior to construction and for identifying responsibility for completing monitoring, record drawings, and as-built certifications for the project when completed.

V. Drainage Information

A. Provide pre-development and post-development drainage calculations, signed and sealed by an appropriate registered professional, as follows:

This information will be provided post-certification.

1. Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basin;

This information will be provided post-certification.

2. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table draw down;

Not applicable.

3. Receiving water elevations (normal, wet season, design storm);

There will be no discharge to a receiving water.

4. Design storms used including rainfall depth, duration, frequency, and distribution;

The design storm used for this project is the 25 year 72-hour, which is 10.75 inches of precipitation. Details will be provided post-certification.

5. Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);

This information will be provided post-certification.

6. Stage-storage computations for any area such as a reservoir, close basin, detention area, or channel, used in storage routing;

This information will be provided post-certification.

7. Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;

This information will be provided post-certification.

8. Flood routings through on-site conveyance and storage areas;

This information will be provided post-certification.

9. Water surface profiles in the primary drainage system for each required design storm event(s);

This information will be provided post-certification.

10. Runoff peak rates and volumes discharged from the system for each required design storm event(s);

This information will be provided post-certification.

11. Tail water history and justification (time and elevation); and

Not Applicable

12. Pump specifications and operating curves for range of possible operating conditions (if used in system).

Not Applicable

B. Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions;

Not Applicable.

C. Provide the acreage, and percentages of the total project, of the following:

1. Impervious surfaces, excluding wetlands;
11.4 acres = 26%
2. Pervious surfaces (green areas, not including wetlands);
27.25 acres = 61%.
3. Lakes, canals, retention areas, other open water areas; and
Stormwater retention pond –4.23 acres = 10%
4. Wetlands.
1.55 acres = 4%

D. Provide an engineering analysis of floodplain storage and conveyance (if applicable), including:
Not Applicable.

1. Hydraulic calculations for all proposed traversing works;

2. Backwater water surface profiles showing upstream impact of traversing works;

3. Location and volume of encroachment within regulated floodplain(s); and

4. Plan for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.

E. Provide an analysis of the water quality treatment system including:

1. A description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis; and
All stormwater will be directed to three stormwater runoff ponds. Two of the three stormwater runoff ponds currently exist and one new stormwater runoff pond will be constructed.
2. Construction plans and calculations that address stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria.
This information will be provided post-certification

F. Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, two diskette copies, if available, and justification for model selection.
Not applicable.

VI. Operation and Maintenance and Legal Documentation

A. Describe the overall maintenance and operation schedule for the proposed system.
This information will be provided post-certification.

B. Identify the entity that will be responsible for operating and maintaining the system in perpetuity if different than the permittee, a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance. If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system. If a property owner's association is the proposed operation and maintenance entity, provide copies of the articles of incorporation for the association and copies of the declaration, restrictive covenants, deed restrictions, or other operational documents that assign responsibility for the operation and maintenance of the system. Provide information ensuring the continued adequate access to the system for maintenance purposes. Before transfer of the system to the operating entity will be approved, the permittee must document that the transferee will be bound by all terms and conditions of the permit.
The Orlando Utilities Commission will be responsible for operation and maintenance of the stormwater runoff facilities.

C. Provide copies of all proposed conservation easements, storm water management system easements, property owner's association documents, and plats for the property containing the proposed system.
The Orlando Utilities Commission owns all project area except for the location of the drainage ditch. Easements will be obtained from the adjacent property owners.

D. Provide indication of how water and waste water service will be supplied. Letters of commitment from off-site suppliers must be included.
Not applicable.

E. Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled by the applicant.

This information will be provided post-certification.

VII. Water Use

A. Will the surface water system be used for water supply, including landscape irrigation, or recreation.

Not applicable.

B. If a Consumptive Use or Water Use permit has been issued for the project, state the permit number.

Not applicable.

C. If no Consumptive Use or Water Use permit has been issued for the project, indicate if such a permit will be required and when the application for a permit will be submitted.

No consumptive use or water use permit will be required for this project

D. Indicate how any existing wells located within the project site will be utilized or abandoned.

Not applicable.

TABLE 1
Project Impact Summary

{PRIVATE }WL & SW ID	WL & SW TYPE	WL & SW SIZE (ac.) ON SITE	WL & SW ACRES NOT IMPACTED	PERMANENT IMPACTS TO WL & SW		TEMPORARY IMPACTS TO WL & SW		MITIGATION ID
				IMPACT SIZE (acres)	IMPACT CODE	IMPACT SIZE (acres)	IMPACT CODE	
WL		**1.55**	**0**	**1.55**	**C&F**	**0**	**NA**	**To Be Determined**

WL = Wetland; **SW** = Surface water; **ID** = Identification number, letter, etc.
Wetland Type: Use an established wetland classification system and, in the comments section below, indicate which classification system is being used.
Impact Code (Type): D = dredge; F = fill; H = change hydrology; S = shading; C = clearing; O = other. Indicate the final impact if more than one impact type is proposed in a given area. For example, show F only for an area that will first be demucked and then backfilled.

Note: Multiple entries per cell are not allowed, except in the "Mitigation ID" column. Any given acreage of wetland should be listed in one row only, such that the total of all rows equals the project total for a given category (column). For example, if Wetland No. 1 includes multiple wetland types and multiple impact codes are proposed in each type, then each proposed impact in each wetland type should be shown on a separate row, while the size of each wetland type found in Wetland No. 1 should be listed in only one row.

Comments: _____

TABLE 2
ON-SITE MITIGATION SUMMARY

{PRIVATE }MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVE		UPLAND PRESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
				NOT APPLICABLE								
PROJECT TOTALS:												

CODES (multiple entries per cell not allowed): Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

COMMENTS:

TABLE 3
OFF-SITE MITIGATION SUMMARY

{PRIVATE }MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVE		UPLAND PRESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
				NOT APPLICABLE								
PROJECT TOTALS:												

CODES (multiple entries per cell not allowed):

Target Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

TABLE 4
DOCKING FACILITY SUMMARY

{PRIVATE }Type of Structure*	Type of Work**	Number of Identical Docks	Length (feet)	Width (feet)	Height (feet)	Total square feet over water	Number of slips
		NOT APPLICABLE					

	TOTALS:	Existing	Proposed
*Dock, Pier, Finger Pier, or other structure (please specify what type)	Number of Slips		
**New, Replaced, Existing (unaltered), Removed, or Altered/Modified	Square Feet over the water		

Use of Structure:

Will the docking facility provide:

Live-aboard Slips? If yes, Number:
Fueling Facilities: If yes, Number
Sewage Pump-out Facilities? If yes, Number:
Other Supplies or Services Required for Boating (excluding refreshments, bait and tackle)
☐ Yes ☐ No

Type of Materials for Decking and Pilings (i.e., CCA, pressure treated wood, plastic, or concrete)

Pilings
Decking
Proposed Dock-Plank Spacing (if applicable)

Proposed Size (length and draft), Type, and Number of Boats Expected to Use or Proposed to be Mooring at the facility)

Table 5: SHORELINE STABILIZATION
IF YOU ARE CONSTRUCTING A SHORELINE STABILIZATION PROJECT, PLEASE PROVIDE THE FOLLOWING:

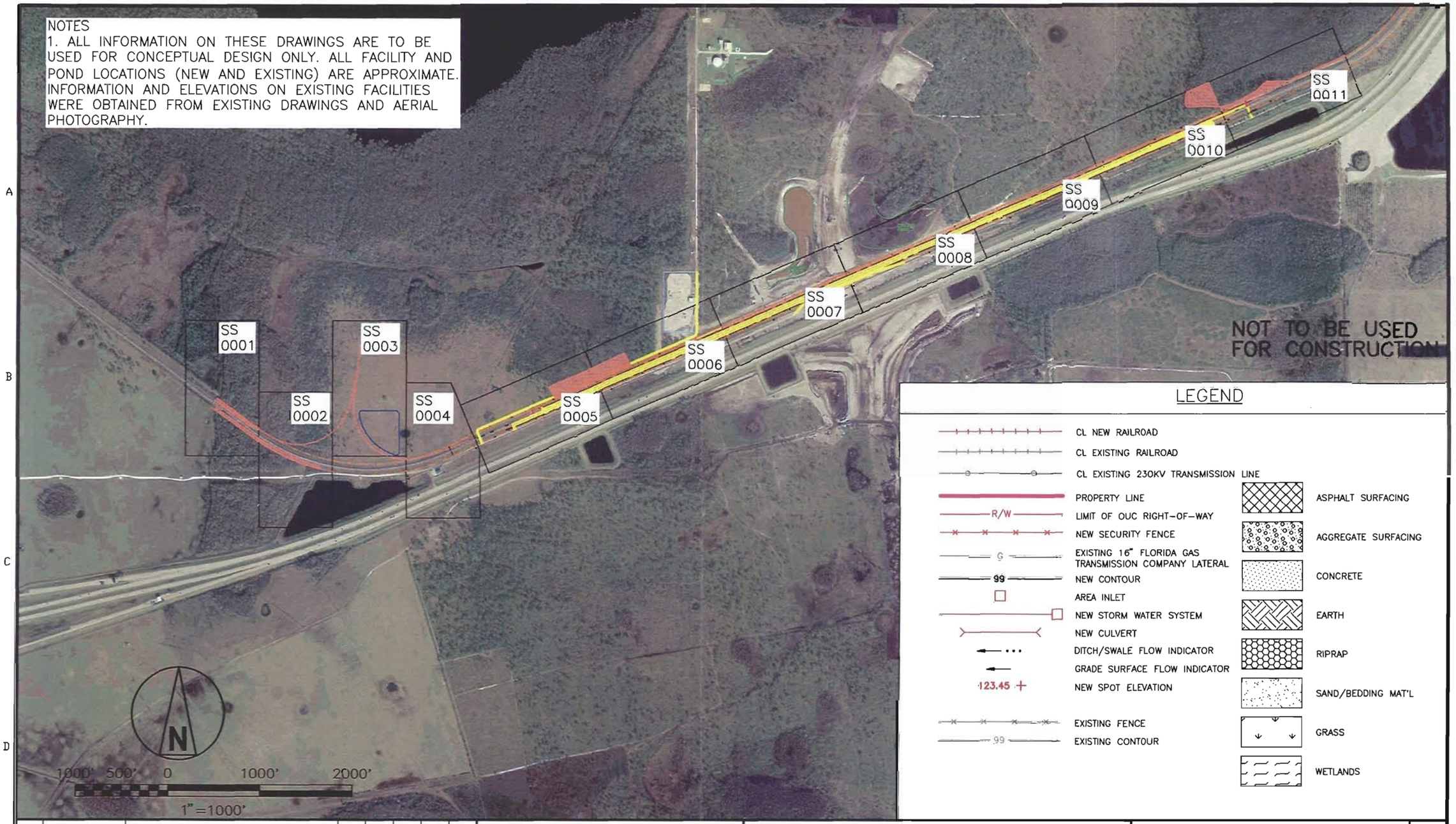
{PRIVATE }Type of Stabilization Being Done	Length (in feet) of New	Length (in feet) of Replaced	Length (in feet) of Repaired	Length (in feet) of Removed	Slope: H: V:	Width of the Toe (in feet)
Vertical Seawall		***NOT APPLICABLE***				
Seawall plus Rip-Rap						
Rip-Rap						
Rip-Rap plus Vegetation						
Other Type of Stabilization Being Done:						

Size of the Rip Rap: _____

Type of Rip Rap:_____

COMMENTS:

NOTES
1. ALL INFORMATION ON THESE DRAWINGS ARE TO BE USED FOR CONCEPTUAL DESIGN ONLY. ALL FACILITY AND POND LOCATIONS (NEW AND EXISTING) ARE APPROXIMATE. INFORMATION AND ELEVATIONS ON EXISTING FACILITIES WERE OBTAINED FROM EXISTING DRAWINGS AND AERIAL PHOTOGRAPHY.



LEGEND

- CL NEW RAILROAD
- CL EXISTING RAILROAD
- CL EXISTING 230KV TRANSMISSION LINE
- PROPERTY LINE
- R/W — LIMIT OF OUC RIGHT-OF-WAY
- NEW SECURITY FENCE
- G — EXISTING 16" FLORIDA GAS TRANSMISSION COMPANY LATERAL
- 99 — NEW CONTOUR
- AREA INLET
- NEW STORM WATER SYSTEM
- NEW CULVERT
- DITCH/SWALE FLOW INDICATOR
- GRADE SURFACE FLOW INDICATOR
- 123.45 + NEW SPOT ELEVATION
- EXISTING FENCE
- 99 — EXISTING CONTOUR

- ASPHALT SURFACING
- AGGREGATE SURFACING
- CONCRETE
- EARTH
- RIPRAP
- SAND/BEDDING MAT'L
- GRASS
- WETLANDS

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
CHECKED | DATE

RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0000 | DRAWING NUMBER | REV A

CODE
AREA

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DATE TIME
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MATCH LINE E 404105.82 – FOR CONTINUATION SEE DWG 0002

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0001 | DRAWING NUMBER | REV A

CODE

AREA

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MATCH LINE E 404982.46 – FOR CONTINUATION SEE DWG 0003

FOR CONTINUATION SEE DWG 0001

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ENGINEER | DRAWN

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0002 | DRAWING NUMBER | REV A

CODE

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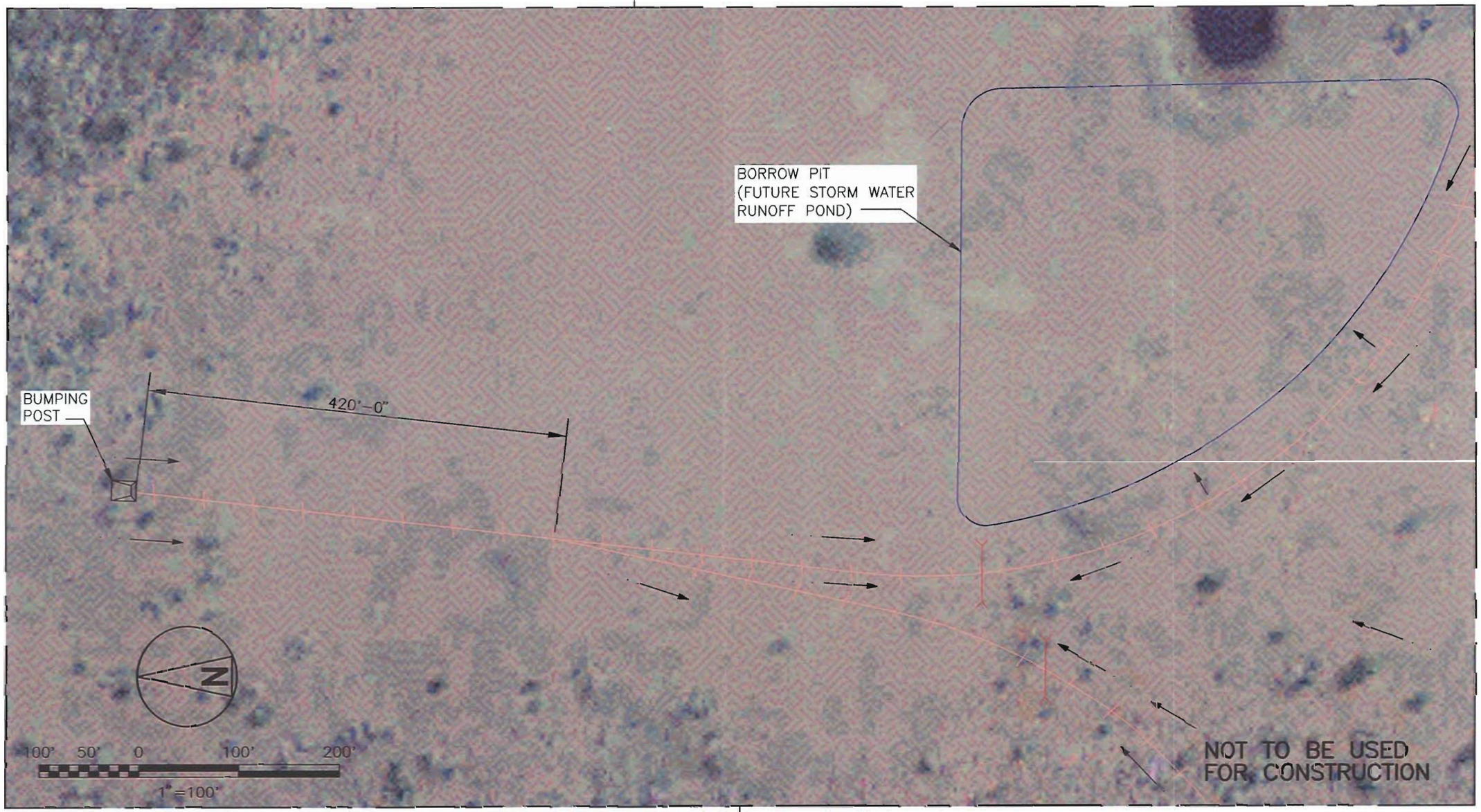
FOR CONTINUATION SEE DWG 0004



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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0003
DRAWING NUMBER
REV A
CODE
AREA

FOR CONTINUATION SEE DWG 0005

EXISTING STORM WATER RUNOFF PATTERN WILL NOT BE DISTURBED ON THIS SIDE

R/W

N

100' 50' 0 100' 200'

1" =100'

NOT TO BE USED FOR CONSTRUCTION

FOR CONTINUATION SEE DWG 0003

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AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0004 | DRAWING NUMBER | REV A

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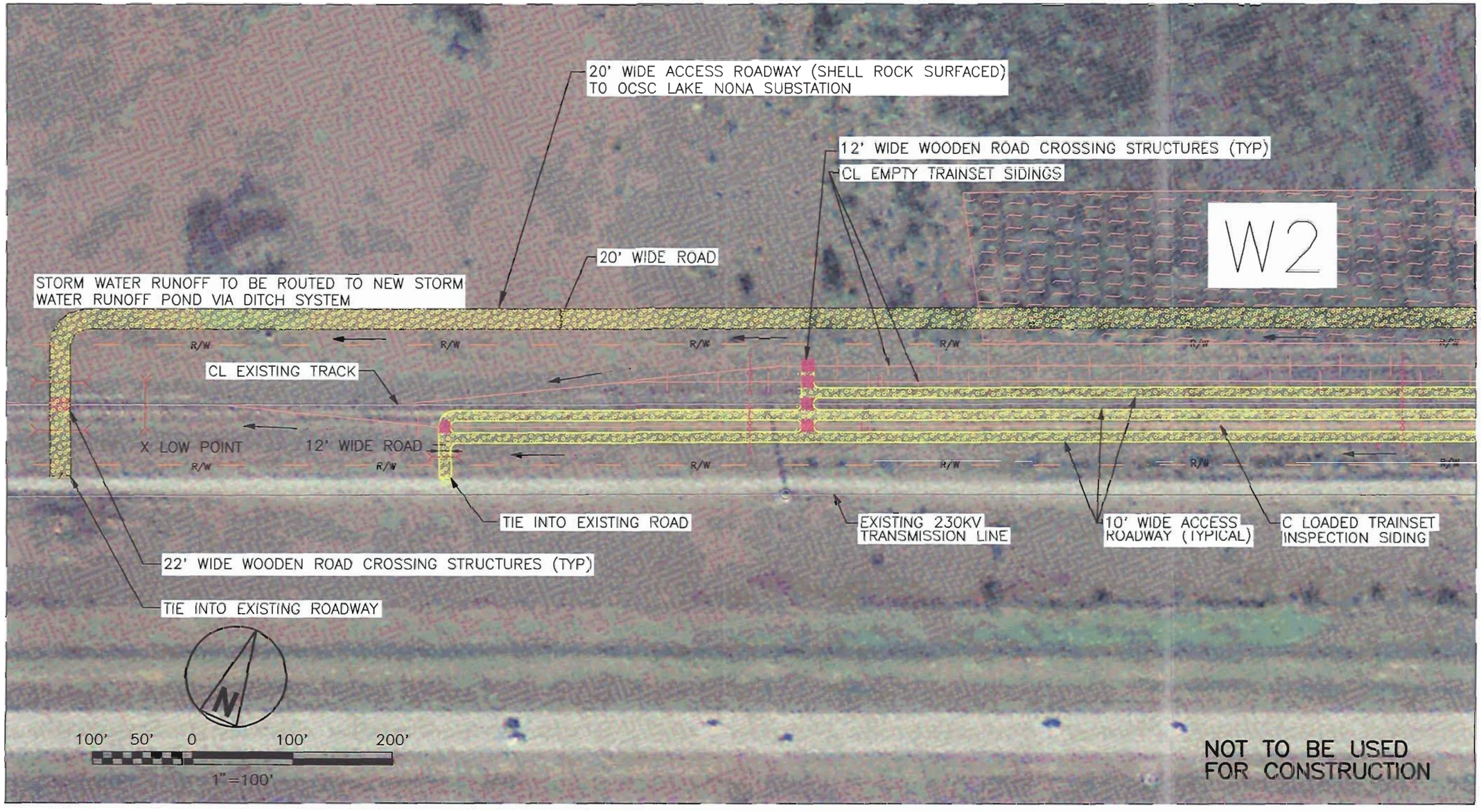

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0005 | DRAWING NUMBER | REV A

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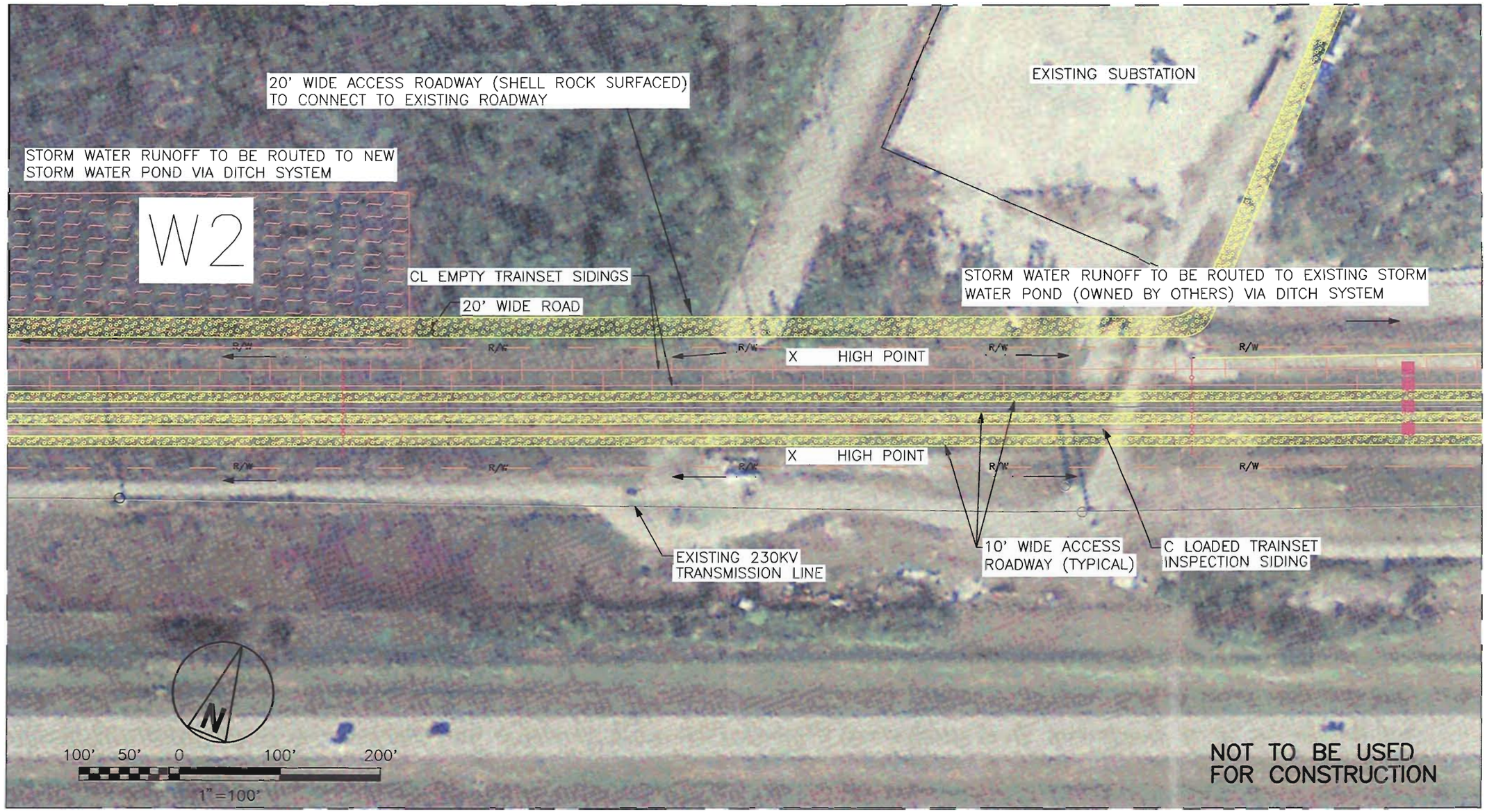

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0006

DRAWING NUMBER

REV A

CODE

AREA

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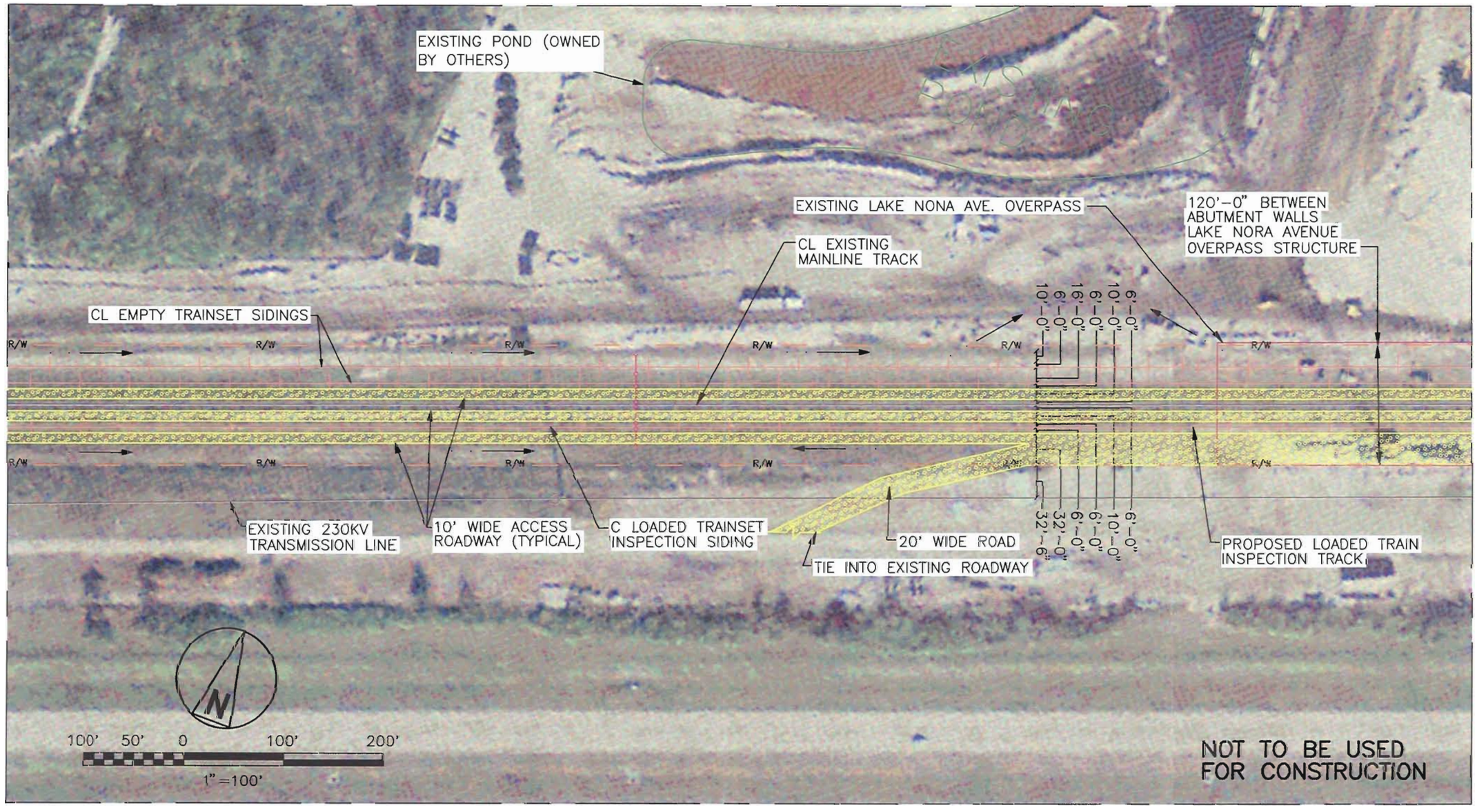

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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0007 | DRAWING NUMBER | REV A

CODE

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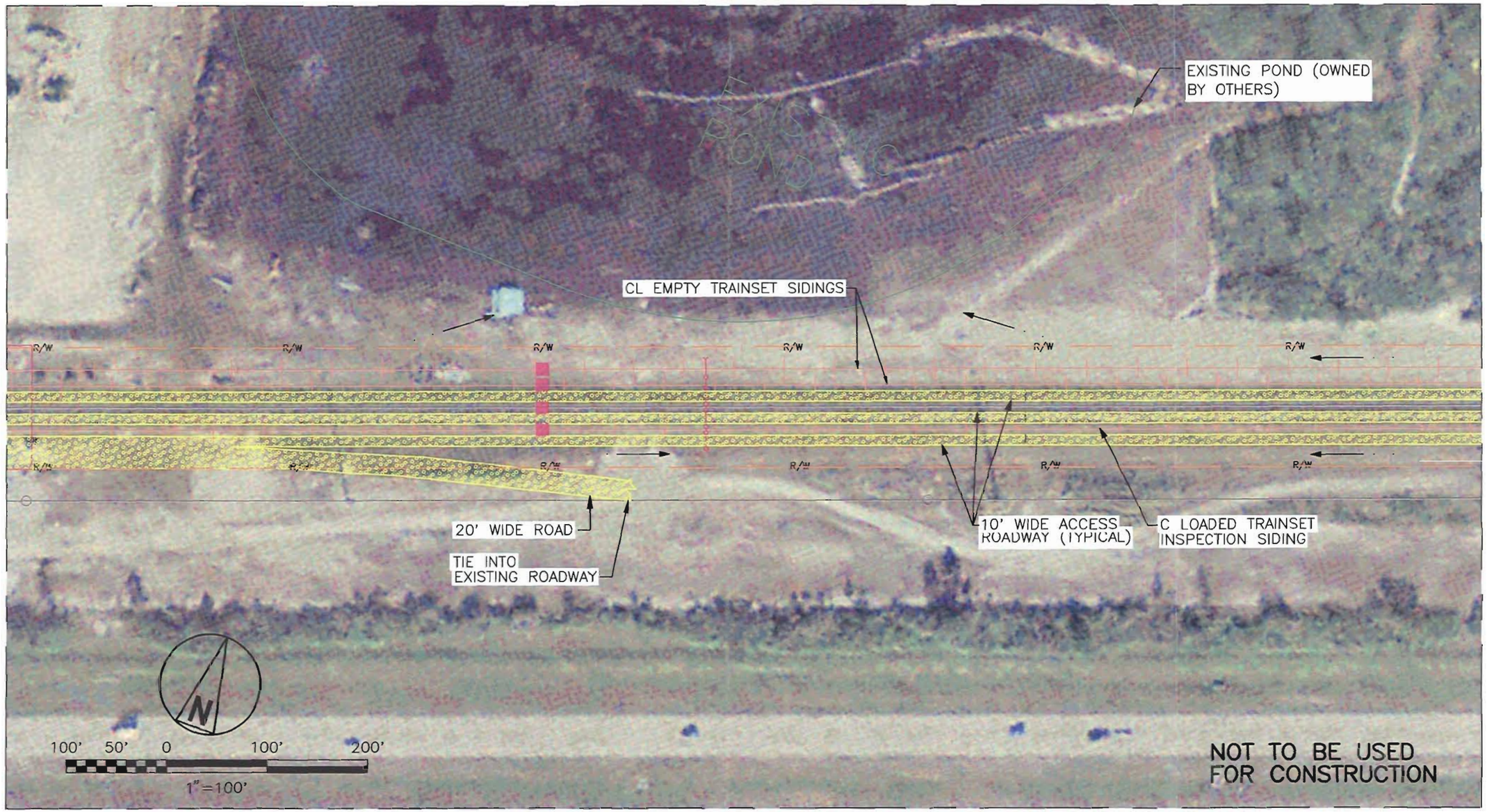

FOR CONTINUATION SEE DWG 0007

FOR CONTINUATION SEE DWG 0009

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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0008

DRAWING NUMBER

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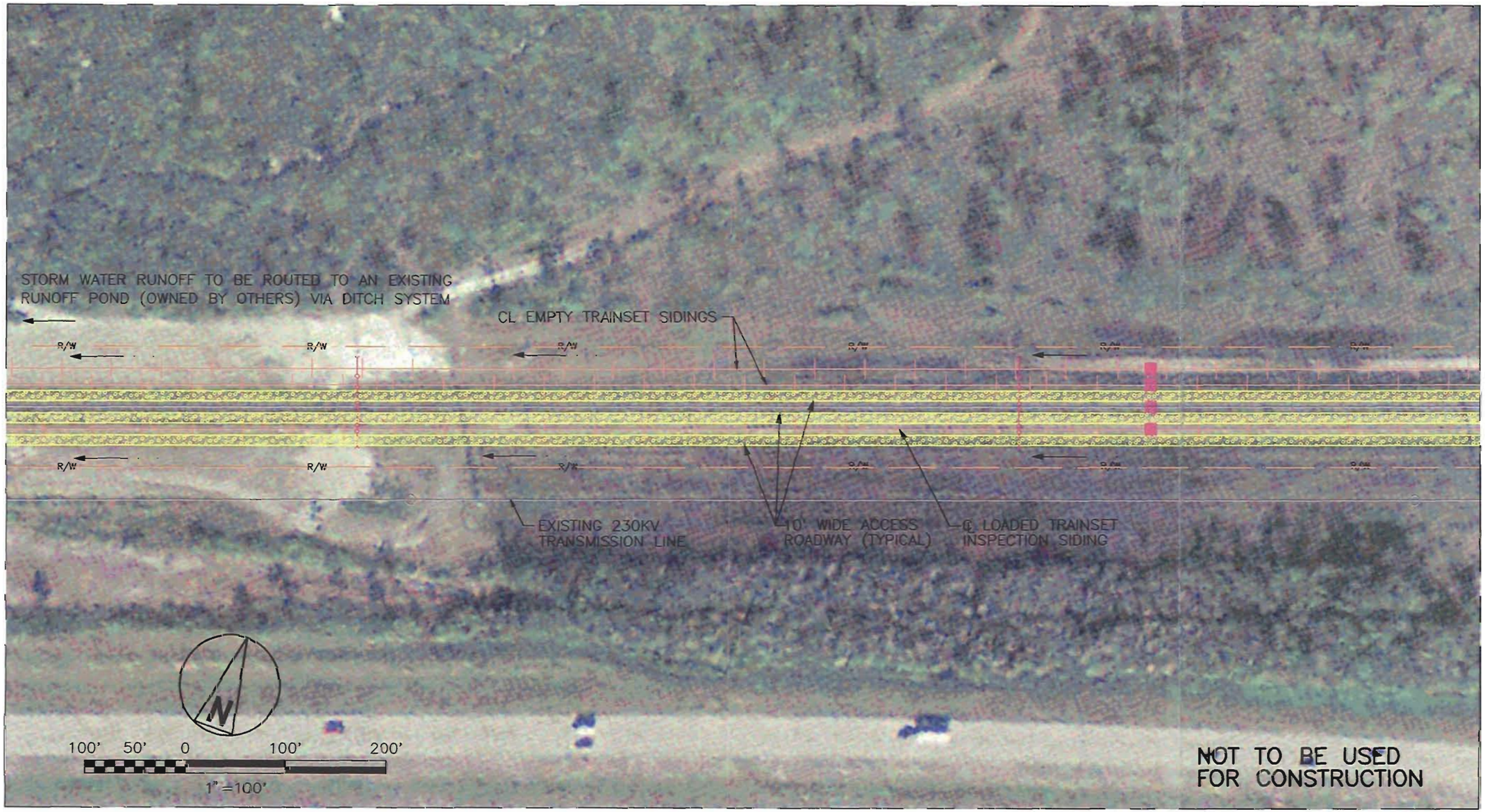

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FOR CONTINUATION SEE DWG 0010

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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0009 | DRAWING NUMBER | REV A

CODE

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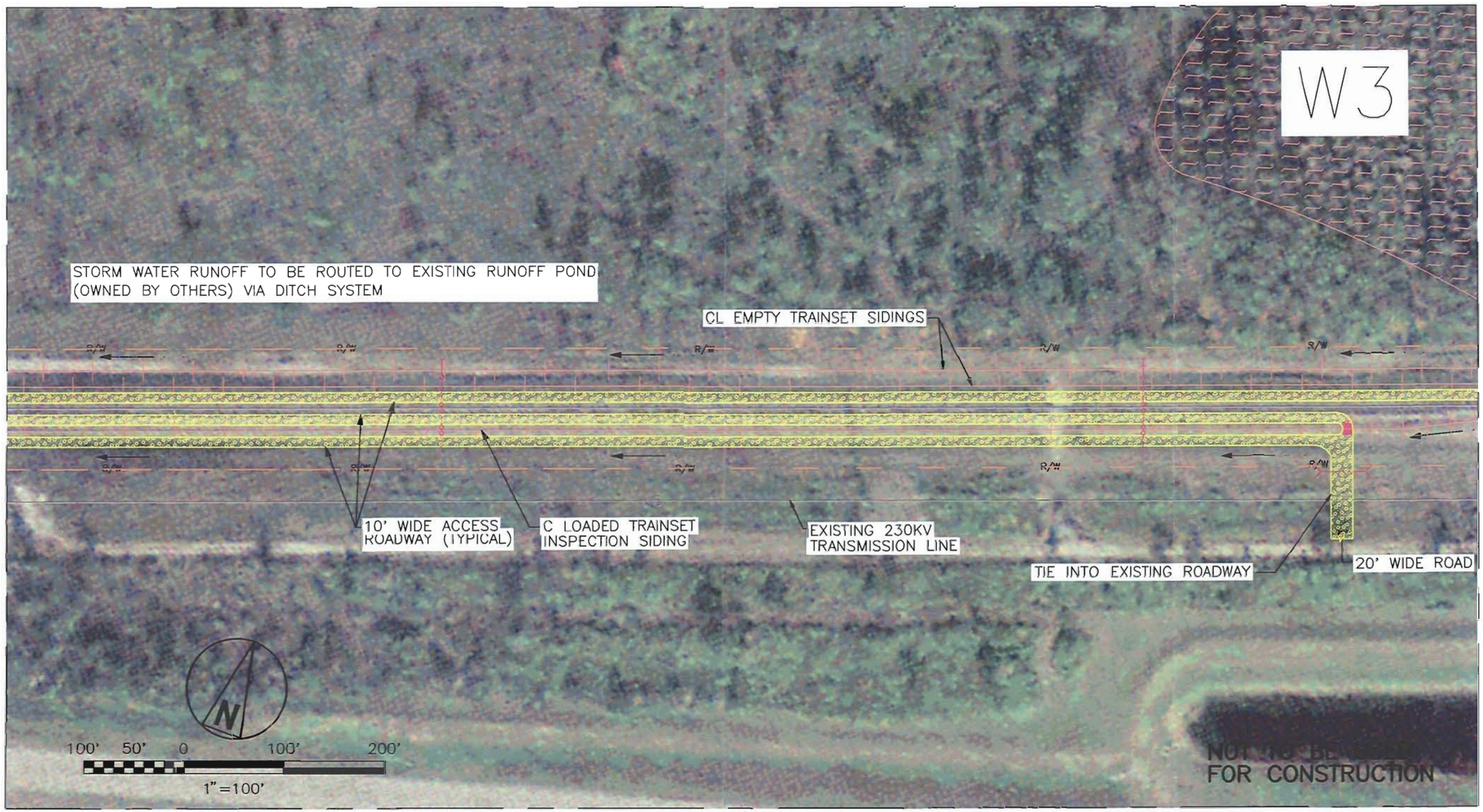

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0010

DRAWING NUMBER

REV A

CODE

AREA

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0011 | DRAWING NUMBER | REV A

CODE | AREA

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Orlando Utilities Commission
Stanton Energy Center

Rail Car Siding Facility

Onsite Drainage System

B&V Project No. 143799

Revision A

January 5, 2007

BLACK & VEATCH
building a world of difference™

ENERGY WATER INFORMATION GOVERNMENT

Contents

1.0 Introduction

The Orlando Utilities Commission (OUC) has submitted Amendment Request No. 8 to Site Certification Order No. PA81-14. The amendment request is for the construction and operation of a Railcar Siding Facility (Facility) to be located entirely within the existing right-of-way property of the OUC Stanton Rail Line together with Turn-Around Wye Trackage (Wye) located on leased property owned by the Orlando International Airport Authority (OIAA). The Stanton Rail Line extends between a point of interconnection with the CSX Transportation (CSXT) mainline rail corridor at Taft, Florida (south side of Orlando metro area) and the Stanton Energy Center (Stanton) site property. The Stanton Rail Line is wholly-owned by OUC and is employed in unit train deliveries of coal to the coal yard of Stanton and for movement of other rail shipments involved in the operation and maintenance of the generation facilities.

2.0 Onsite Drainage System

2.1 Uncontaminated Areas

The onsite drainage facilities will be designed in accordance with the requirements of the South Florida Water Management District (SFWMD) and the Florida Department of Environmental Protection (FDEP). Drawings 143799-SS-0000 through 143799-SS-0011, located in Appendix A of this report, show preliminary grading and drainage for the various Facility areas. It should be noted that all existing ponds and rails were taken from existing drawings and aerial photography. All locations and sizes are subject to a complete survey. Open channels and drainage structures (culverts, piping systems, etc.) will be designed to collect runoff from a 25-year, 72-hour storm event. Site runoff facilities (ditches, detention basin, etc.) will provide storage to satisfy criteria for maintenance of water quality and quantity, and to provide storage to attenuate peak discharge rates.

Runoff from areas of the site not disturbed by construction activities will be maintained in the existing state to the greatest extent possible. When it is necessary to direct this flow around developed portions of the site, diversion ditches will be constructed. These diversion ditches will collect runoff flow from the undisturbed areas and direct the flow to natural drainage patterns. Runoff from areas of the site disturbed by construction activities will be collected in a ditch system and directed to onsite runoff basins as described in Section 2.2. Drainage systems will be designed for gravity flow wherever site conditions allow. Generally, the drainage in the areas of new facilities will be directed away from the structures and routed to the onsite storage basins.

2.2 Drainage Areas

Storm water runoff associated with the Facility will be routed to a combination of three ponds. Two of the ponds are existing and are located on the east and west side of the Lake Nona Avenue Overpass. Confirmation of pond sizing and any necessary modifications will be determined during detailed design and final design will be submitted post certification. The third pond accepting storm water runoff will be the new storm water runoff pond illustrated on Drawings 143799-SS-0003 and 143799-SS-0004.

2.3 Design Criteria

The management and storage of surface waters (MSSW) system will be designed to maintain the existing drainage patterns wherever possible. The

MSSW system for the developed areas will be designed to ensure that the post development peak discharge will not exceed the predevelopment peak discharge at the project site boundary.

As specified in the SFWMD the design storm is the 25-year, 72-hour rainfall event.

Rainfall frequencies obtained from the NOAA's National Weather Service Precipitation Frequency Data Maps are as follows:

- 10-year, 24-hour = 7.33 inches.
- 10-year, 72-hour = 9.00 inches.
- 25-year, 24-hour = 8.50 inches.
- 25-year, 72-hour = 10.75 inches.

2.4 Runoff Analysis

The area associated with the Facility consists of approximately 27.25 acres of pervious area and 11.4 acres of aggregate area. These areas will drain into the three storm water runoff ponds described in Section 2.2. The 25-year, 72-hour rainfall event was used to size the new pond. As stated previously pond sizing and modifications will be determined during final design.

2.5 Erosion and Sediment Control Measures

Erosion and sediment control measures will be installed as necessary during the construction of the Facility. Before construction begins, silt fence or other appropriate control measures will be installed around the perimeter of construction areas. Diversion ditches will be equipped with straw bale dikes to aid in minimizing the amount of sediments flowing into the onsite ponds. Construction access ways and parking areas will be surfaced with aggregate to provide a stabilized sub grade. Erosion control measures will also include minimizing fugitive dust through periodic spraying of water.

2.6 Staging of Earthmoving Activities

Initial construction will remove all significant vegetation (trees, brush, etc.). If possible, some trees will be retained. Additional grading will be required in adjacent property easements in order to ensure proper drainage. The storm water runoff pond and associated drainage ways will be constructed concurrently with the initial clearing activities. Topsoil will be removed and stock piled for finish grading and site restoration after construction is completed. Once the topsoil has been removed, site preparation will be directly related to construction

of the Railcar Yard Facility. Once the earthmoving and construction are completed, the stockpiled topsoil will be used for finished grading. Seeding and mulching activities will begin within 30 days.

2.7 Construction Monitoring and Maintenance

In general, all erosion and sedimentation control measures will be checked weekly and after each significant rainfall event. Items including the following will be checked:

- Silt fences and straw bale dikes will be inspected after each significant rainfall and during prolonged periods of rainfall. Required repairs will be made immediately.
- Sediment deposits at barriers will be removed when the deposit depth reaches approximately one half the height of the barrier.

An EPA delegated National Pollutant Discharge Elimination System (NPDES) Generic Permit for construction storm water discharges, and accompanying Storm Water Pollution Prevention Plan (SWPPP), will be obtained.

2.8 Permanent Control Measures

Permanent erosion and sedimentation control measures within the project boundaries will include the runoff collection system (ditches, culverts, catch basins), and surfaced traffic and work areas, nonworking areas with established vegetation. These measurements will minimize erosion and potential sedimentation to water sources outside the project boundary.

3.0 References

1. South Florida Water Management District, "Environmental Resource Permit Information Manual", 2000.

2. Department of Environmental Regulation State of Florida "Florida Development Manual, A Guide to Sound Land and Water Management".

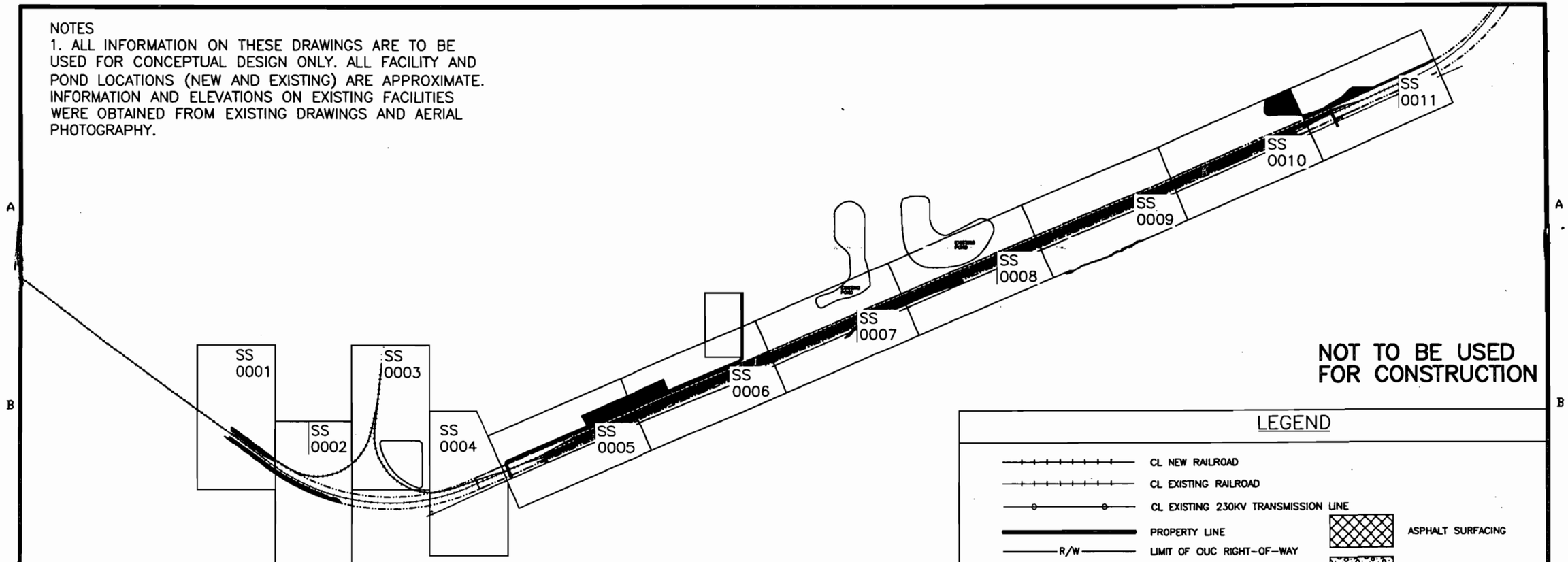
3. B&V, OUC Amendment Request No. 8

4. B&V, Site Certification Application, "Kissimmee Utility Authority Cane Island Units 1-3" Volume 2.

Appendix A

Drawings

NOTES
1. ALL INFORMATION ON THESE DRAWINGS ARE TO BE USED FOR CONCEPTUAL DESIGN ONLY. ALL FACILITY AND POND LOCATIONS (NEW AND EXISTING) ARE APPROXIMATE. INFORMATION AND ELEVATIONS ON EXISTING FACILITIES WERE OBTAINED FROM EXISTING DRAWINGS AND AERIAL PHOTOGRAPHY.



NOT TO BE USED FOR CONSTRUCTION

LEGEND

- CL NEW RAILROAD
- CL EXISTING RAILROAD
- CL EXISTING 230KV TRANSMISSION LINE
- PROPERTY LINE
- R/W — LIMIT OF OUC RIGHT-OF-WAY
- NEW SECURITY FENCE
- G — EXISTING 16" FLORIDA GAS TRANSMISSION COMPANY LATERAL
- 99 — NEW CONTOUR
- AREA INLET
- NEW STORM WATER SYSTEM
- NEW CULVERT
- DITCH/SWALE FLOW INDICATOR
- GRADE SURFACE FLOW INDICATOR
- 123.45 + NEW SPOT ELEVATION
- EXISTING FENCE
- 99 — EXISTING CONTOUR

- ASPHALT SURFACING
- AGGREGATE SURFACING
- CONCRETE
- EARTH
- RIPRAP
- SAND/BEDDING MAT'L
- GRASS
- WETLANDS

N

1000' 500' 0 1000' 2000'

1"=1000'

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DATE TIME 1=1

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0000 | DRAWING NUMBER | REV A

CODE
AREA

MATCH LINE E 404105.82 – FOR CONTINUATION SEE DWG 0002

W1

W1

R/W

R/W

R/W

R/W

R/W

EXISTING STORM WATER RUNOFF PATTERN WILL NOT BE DISTURBED ON THIS SIDE

N

100' 50' 0 100' 200'

1"=100'

NOT TO BE USED FOR CONSTRUCTION

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0001

DRAWING NUMBER

REV A

CODE

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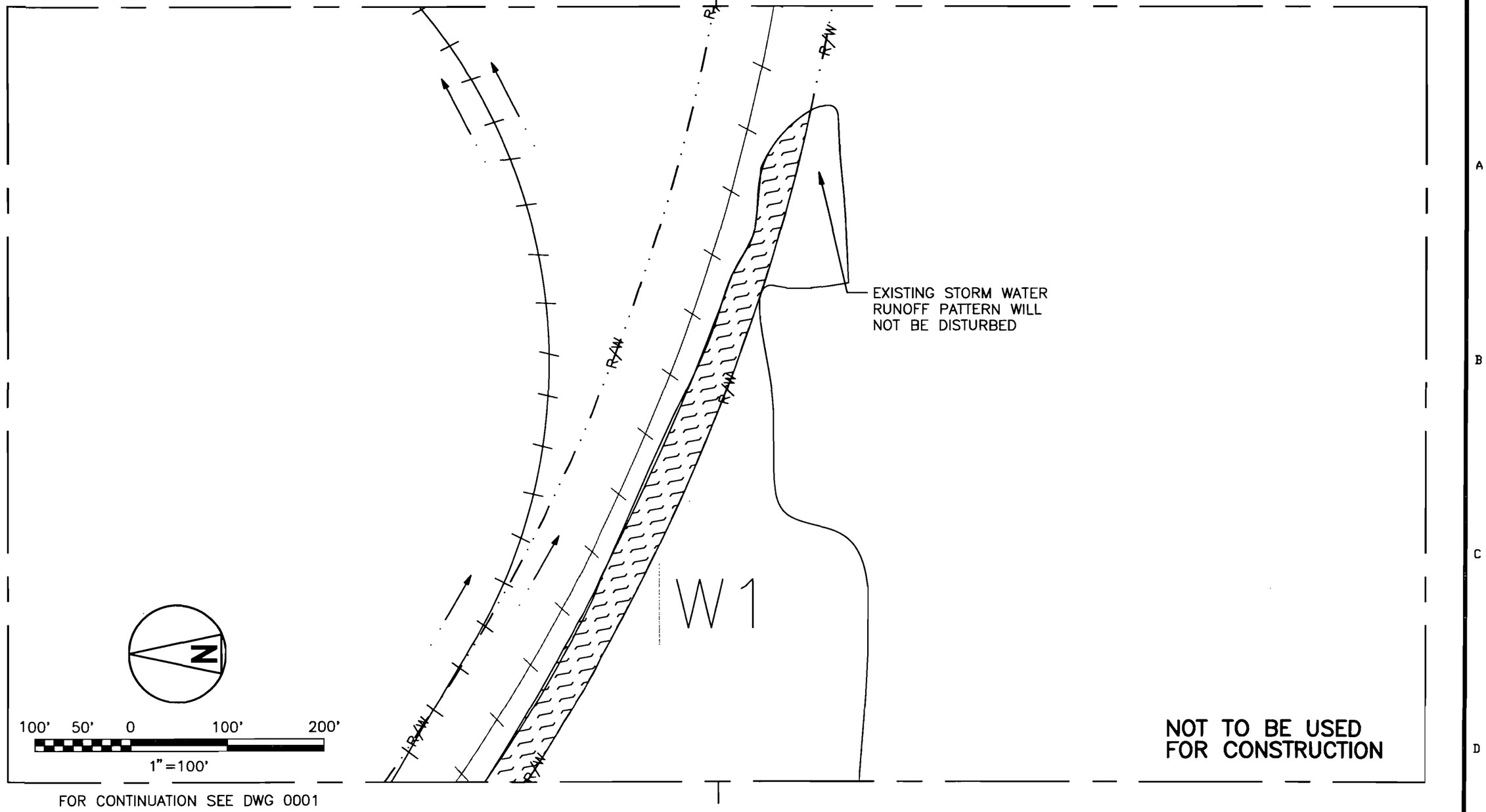

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FOR CONSTRUCTION

FOR CONTINUATION SEE DWG 0001

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799–SS–0002 | DRAWING NUMBER | REV A

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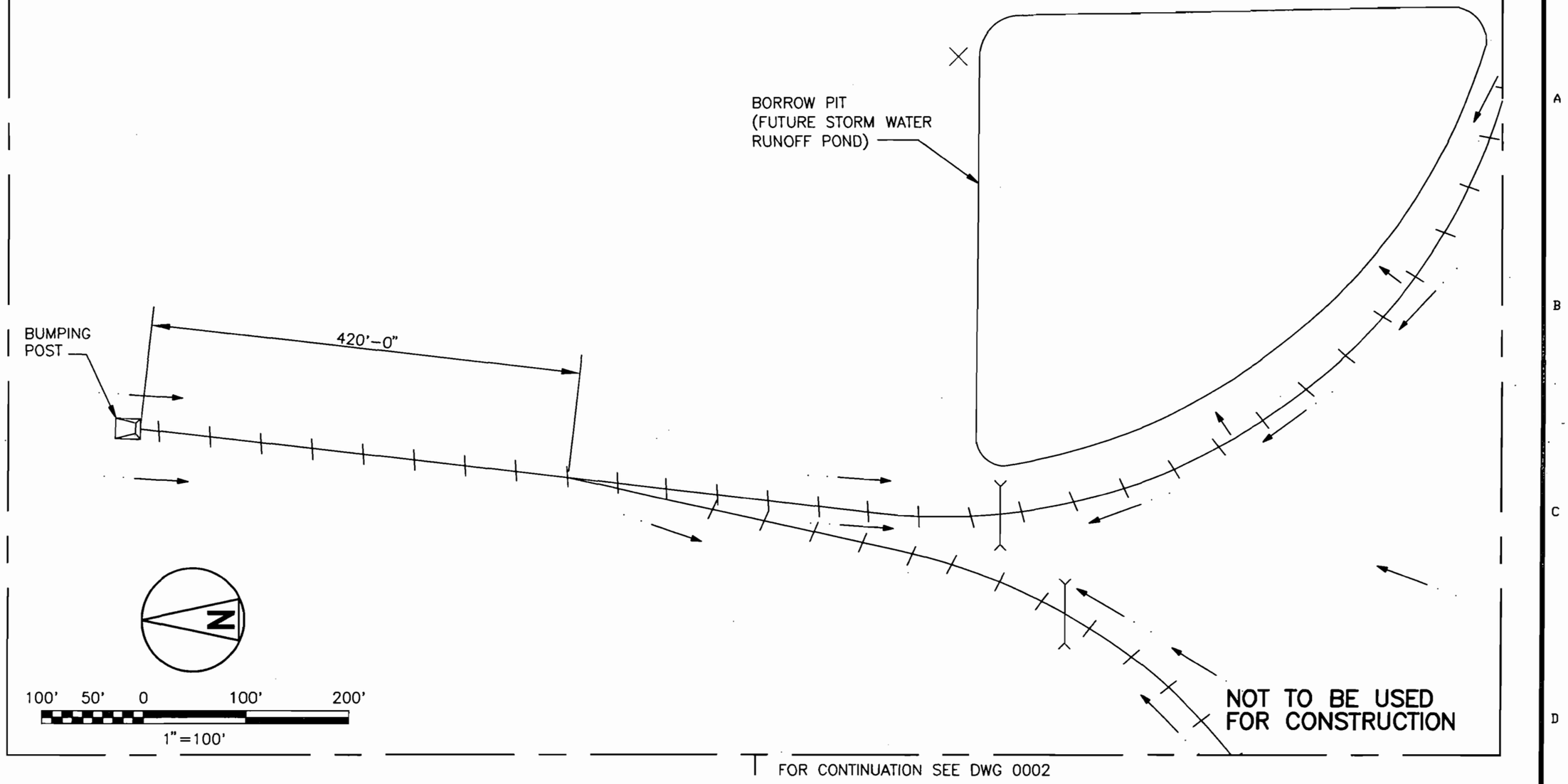

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0003 | DRAWING NUMBER | REV A

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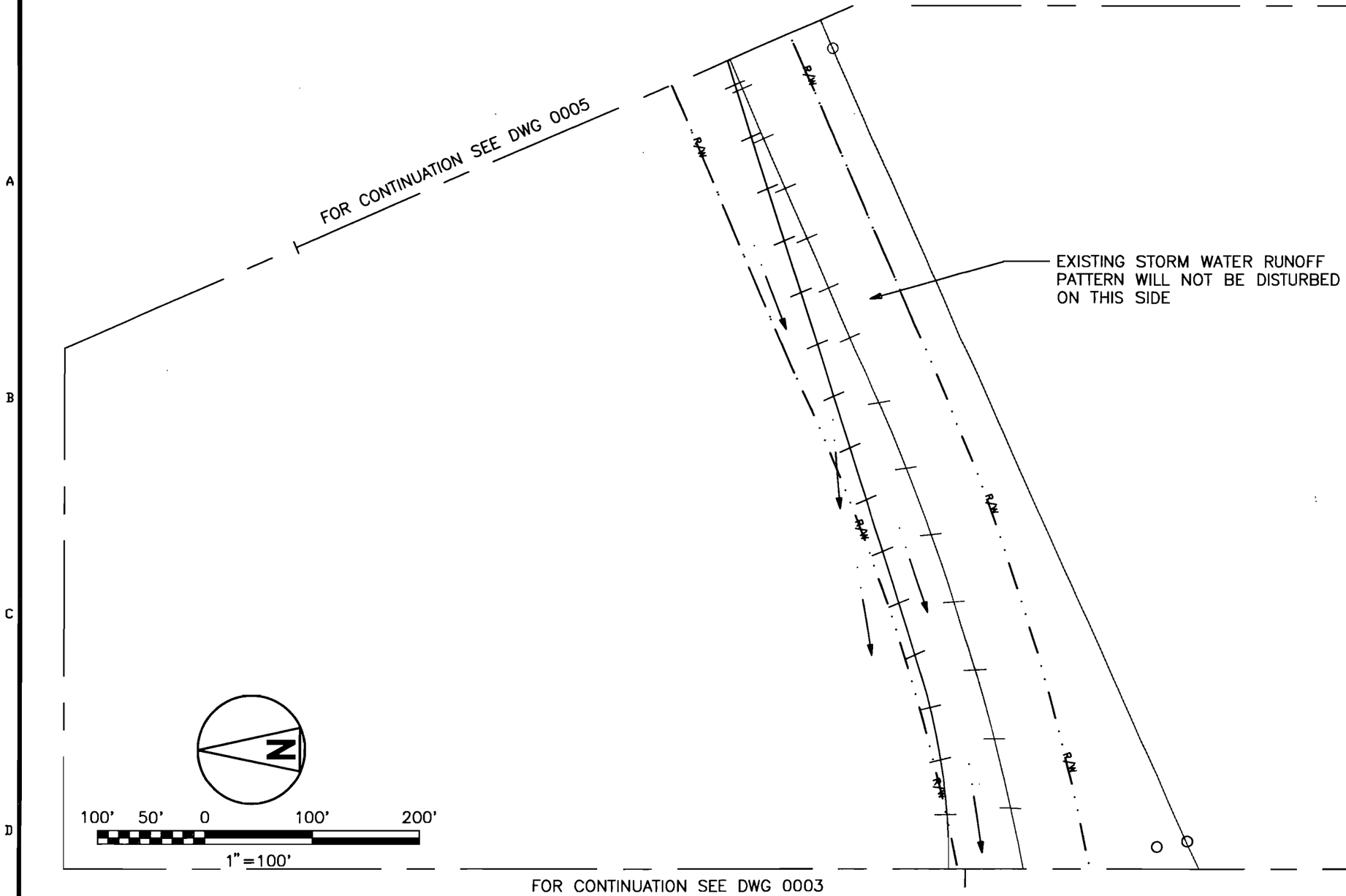

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FOR CONSTRUCTION

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AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0004 | DRAWING NUMBER | REV A

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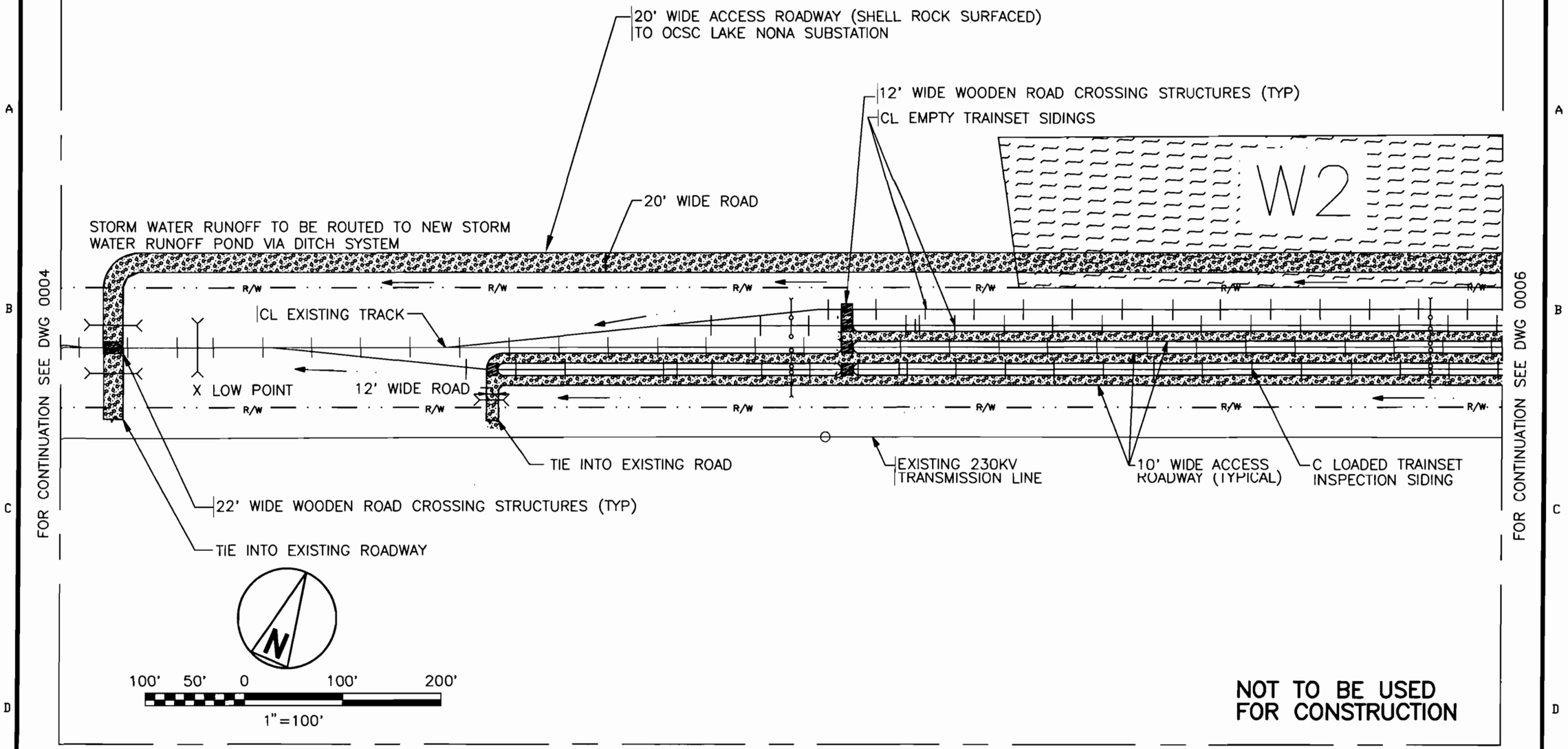

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AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0005

DRAWING NUMBER

REV A

CODE

AREA

20' WIDE ACCESS ROADWAY (SHELL ROCK SURFACED)
TO CONNECT TO EXISTING ROADWAY

EXISTING SUBSTATION

STORM WATER RUNOFF TO BE ROUTED TO NEW
STORM WATER POND VIA DITCH SYSTEM

W2

CL EMPTY TRAINSET SIDINGS

20' WIDE ROAD

STORM WATER RUNOFF TO BE ROUTED TO EXISTING STORM
WATER POND (OWNED BY OTHERS) VIA DITCH SYSTEM

R/W

X HIGH POINT

X HIGH POINT

FOR CONTINUATION SEE DWG 0005

FOR CONTINUATION SEE DWG 0007

EXISTING 230KV
TRANSMISSION LINE

10' WIDE ACCESS
ROADWAY (TYPICAL)

C LOADED TRAINSET
INSPECTION SIDING

N

100' 50' 0 100' 200'

1"=100'

NOT TO BE USED
FOR CONSTRUCTION

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0006

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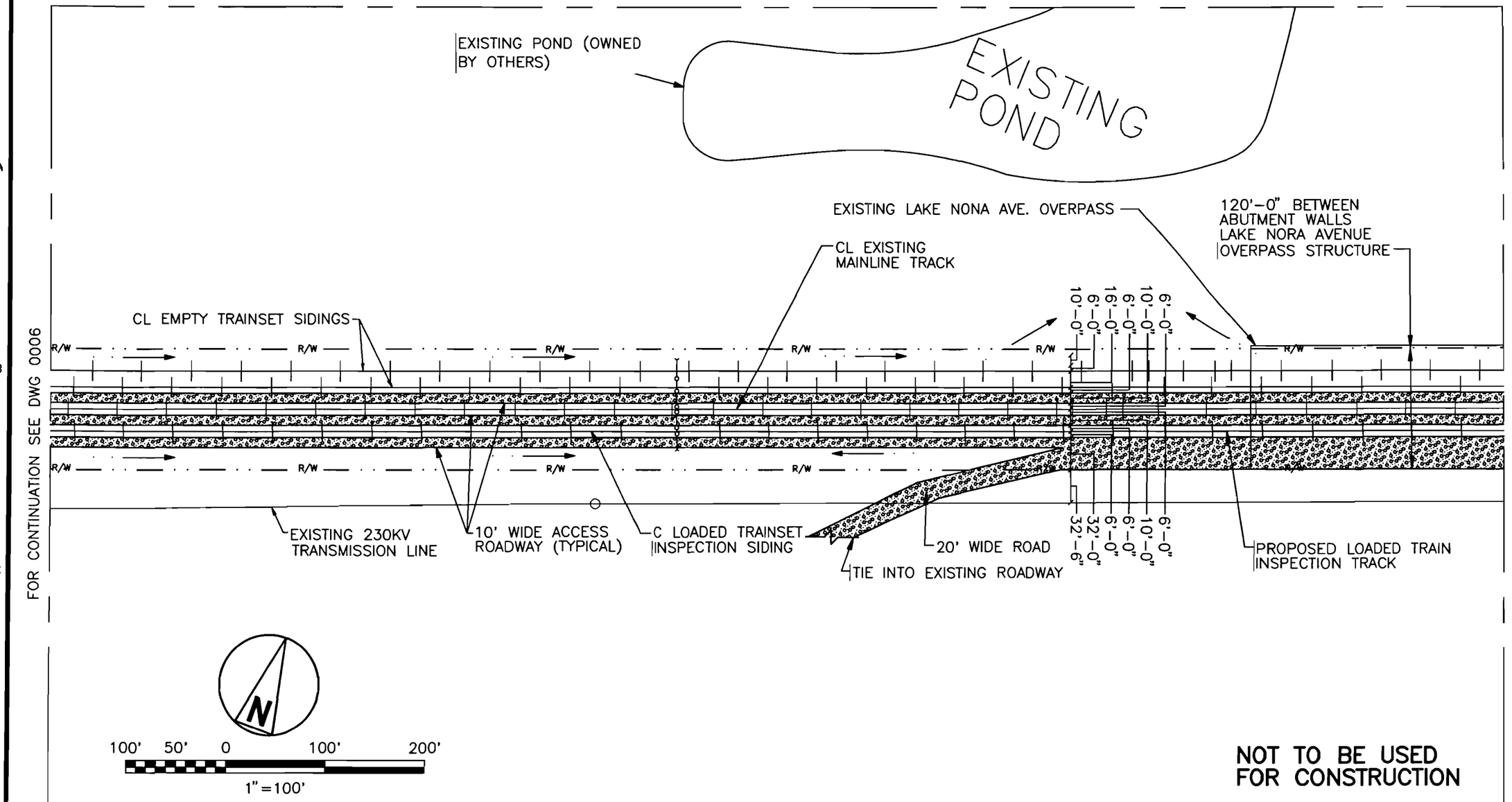

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ENGINEER | DRAWN

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0007 | DRAWING NUMBER | REV A

CODE | AREA

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EXISTING POND

EXISTING POND (OWNED BY OTHERS)

CL EMPTY TRAINSET SIDINGS

R/W

20' WIDE ROAD

TIE INTO EXISTING ROADWAY

10' WIDE ACCESS ROADWAY (TYPICAL)

C LOADED TRAINSET INSPECTION SIDING

FOR CONTINUATION SEE DWG 0007

FOR CONTINUATION SEE DWG 0009

N

100' 50' 0 100' 200'

1"=100'

NOT TO BE USED FOR CONSTRUCTION

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0008

DRAWING NUMBER

REV A

CODE

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STORM WATER RUNOFF TO BE ROUTED TO AN EXISTING RUNOFF POND (OWNED BY OTHERS) VIA DITCH SYSTEM

CL EMPTY TRAINSET SIDINGS

R/W

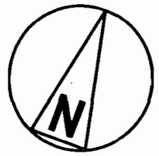
EXISTING 230KV TRANSMISSION LINE

10' WIDE ACCESS ROADWAY (TYPICAL)

℄ LOADED TRAINSET INSPECTION SIDING

FOR CONTINUATION SEE DWG 0008

FOR CONTINUATION SEE DWG 0010



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1"=100'

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AMENDMENT 8

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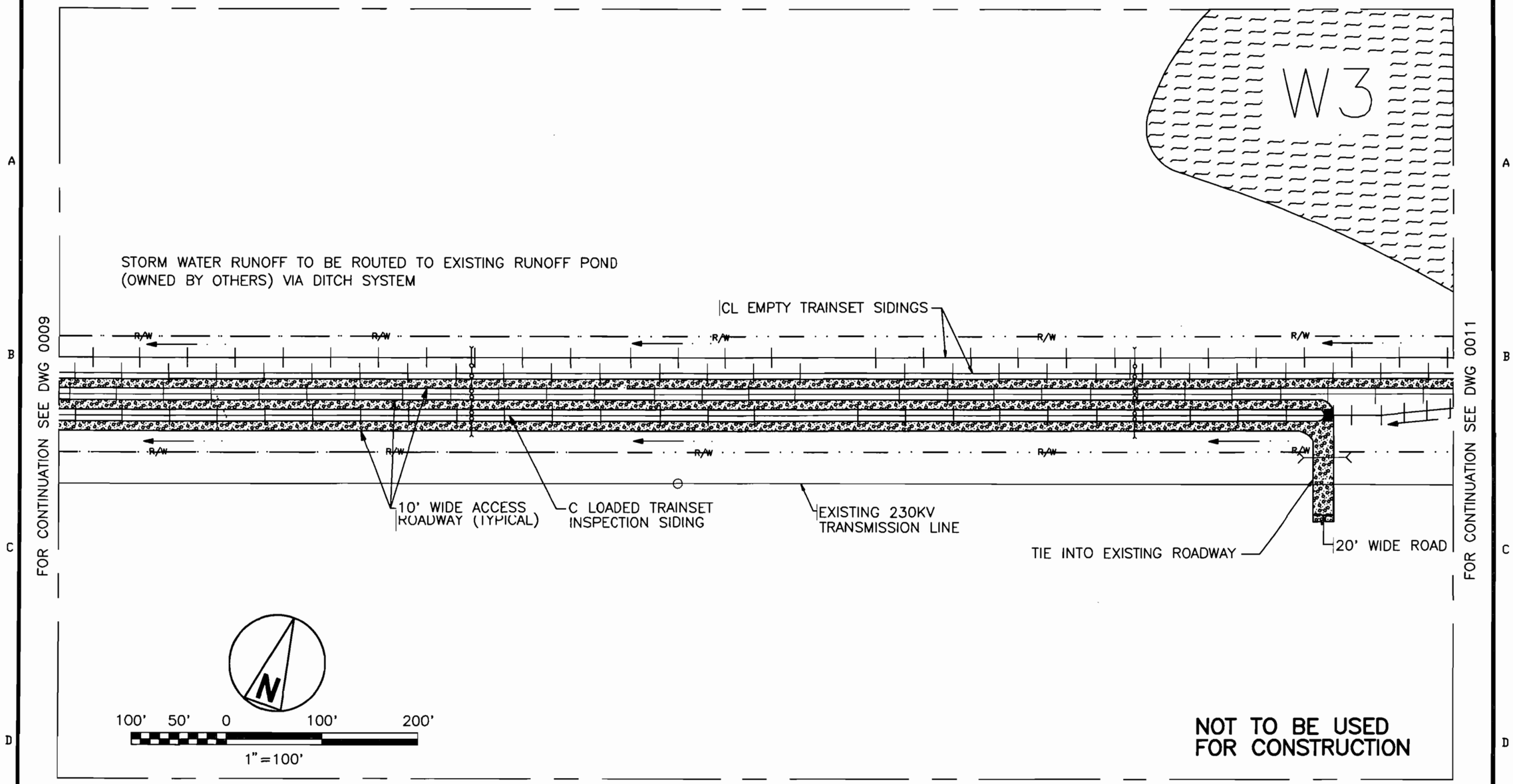

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0010 | DRAWING NUMBER | REV A

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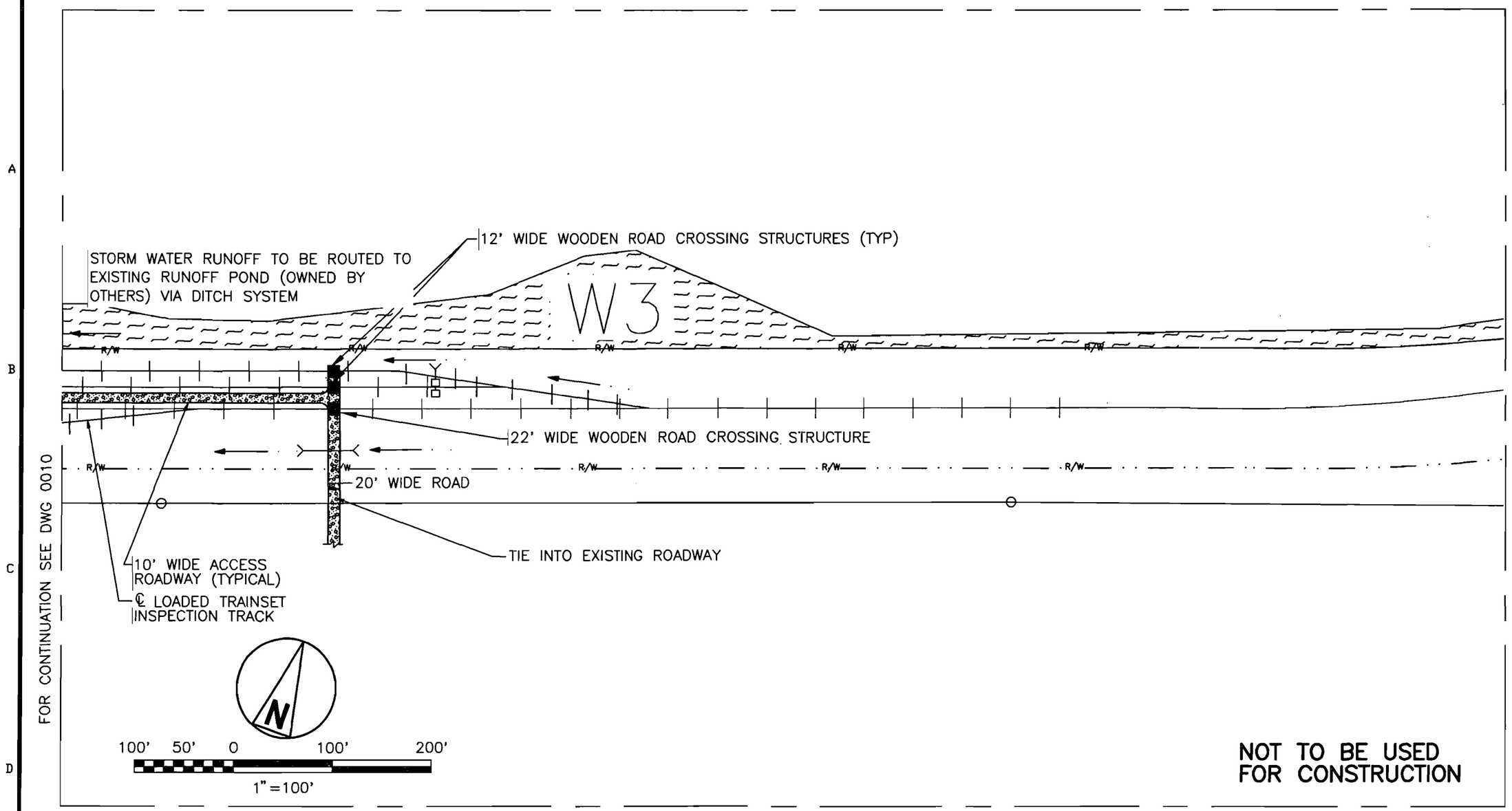

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RAIL CAR SIDING FACILITY
AMENDMENT 8

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0011
DRAWING NUMBER
REV A
CODE
AREA

Amendment Request No. 9 to
Site-Certification Order Number PA81-14

Rail Car Maintenance Facility
Stanton Energy Facility

Submitted to:
Florida Department of Environmental Protection

Submitted by:
Orlando Utilities Commission

February 2, 2007

AMENDMENT REQUEST NO. 9
Rail Car Maintenance Facilities

Proposed Amendment
This amendment request is for the construction and equipage of onsite facilities for the maintenance of unit train railroad cars at OUC's Stanton Energy Center (Stanton) site.

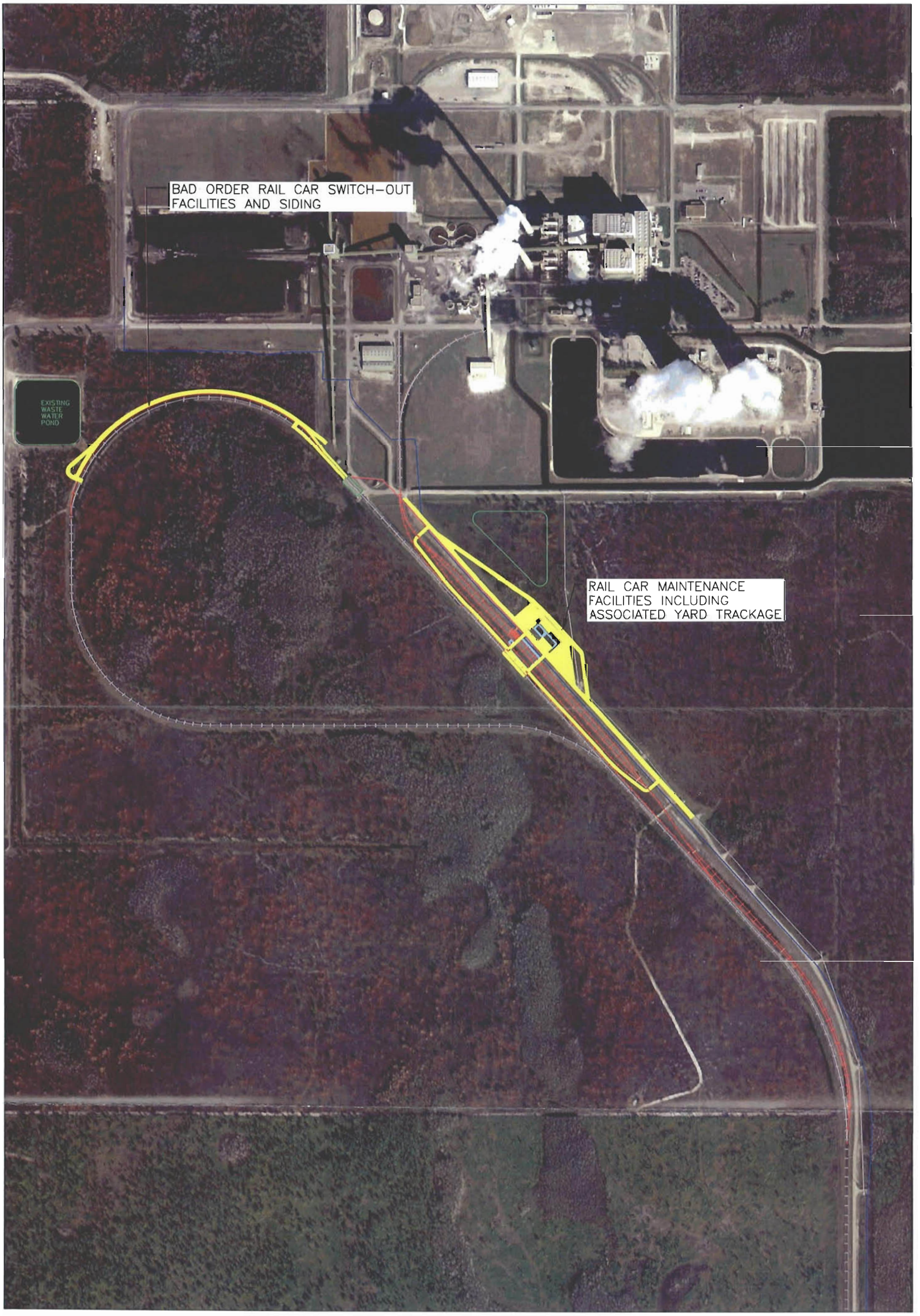
Purpose/Reason for Amendment
The purpose of the facilities (hereinafter the Rail Car Maintenance Facilities) would be to perform all maintenance and repair actions required to keep the present and future fleet of rail cars in optimal operational condition. These rail cars are deployed in unit train haulage of coal fuels for Stanton Units 1 and 2 and future coal fueled generation units to be developed at Stanton. The facilities will allow the centralization at one location of maintenance actions which have heretofore been performed at a number of shop locations along/adjacent to the CSXT haul routing from Central Appalachia (East Kentucky and West Virginia) to Stanton. The facilities will provide OUC with better oversight of maintenance actions, closer control of car movement logistics, significant decreases in out-of-service times (awaiting repairs), and enhanced flexibilities in deploying the rail car fleet in the future sourcing of coals from resource areas which have not historically been utilized for fuel supplies.

Technical Description of Amendment
The Rail Car Maintenance Facilities would entail the disturbance of the existing Stanton site at two locations.

1. The construction of the basic maintenance facilities, associated rail sidings and ancillary (personnel and warehousing) facilities. These new facilities would be located adjacent to and immediately northeast of the existing rail loop trackage serving the Coal Car Unloading Building of the Stanton coal yard.
2. A rail siding located adjacent to the existing rail loop trackage. This new rail siding would commence at a location approximately 100 feet to the northwest of the Coal Car Unloading Building and continue on the north side of the existing track, paralleling the curvature of the existing rail line for about 2,000 feet before rejoining the existing loop trackage.

The locations of these two areas of new construction are depicted on Figure 9-1. The total acreage of disturbance and final facilities is 29.29 acres.

The Rail Car Maintenance Facilities would be located largely within the vacant ground area lying between the existing rail loop trackage and the existing south (secondary) Stanton plant entrance road (from the Bee Line Expressway/Florida 528 at the ICP Boulevard exit). This long and narrow shaped land area was disturbed during the sitework development of Unit 1 and is presently grassland devoid of trees or significant shrubs. The area is crossed for much of its longitudinal length by a 16-inch diameter natural gas pipeline providing fuel supply for the Stanton A combustion turbine unit. The arrangement of the new facilities would avoid this pipeline.



143799-FIGURE 9-1
HAR48329 ACAD
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12/29/06 02:14:20

600' 300' 0 600' 1200'

1" = 600'

N

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LOCATION OF RAIL CAR MAINTENANCE FACILITIES AT THE STANTON ENERGY CENTER

FIGURE 9-1

The north end of the existing south plant entrance road would be re-aligned to the northeast from its point of intersection with the south loop road encircling the Stanton central area. The relocation would allow the development of ancillary facilities (an office and personnel building and enclosed warehousing) together with associated roadways and vehicular parking. These facilities and road/parking areas would be located directly to the northeast of the principal facilities work locations.

A small land area lying to the southwest of the existing trackage of the coal loop would be disturbed by fill construction. This area footprint, measuring roughly 240 feet (parallel to the existing track subgrade fill) by 25 feet, would be raised to match the top of the existing subgrade and topped with a crushed lime rock subbase and surface to provide an access roadway for the inspection of loaded railcars approaching the unloading facilities. In similar manner, an access roadway would be developed on the northeast side of the existing trackage to allow inspection access to both sides of the unit train rail cars.

The Rail Car Maintenance Facilities would consist of four building structures:

1. The Rail Car Maintenance Building comprising a single story structure measuring approximately 182'-6" in length by 112'-6" in width with a poured concrete foundation and floor system. The building would have an overall height of approximately 28 feet with a metal roof and siding extending more than 16'-0" above ground floor level (building would be open on all four sides below this level to provide full perimeter access for vehicles and personnel). Three rail tracks embedded in the concrete floor and extending the length of the building would be provided for the movement of rail cars to and from work stations.
2. A one-story Personnel and Office Building measuring approximately 72' by 32' in plan area. This building would be space conditioned (HVAC) and would house offices, restroom/locker room facilities, meeting/break room and storage spaces for the support of the facilities operations.
3. A single-story Warehouse for climate controlled storage of spare parts utilized in maintenance and repairs of the rail cars. The building would be fully enclosed and employ a rigid-frame structure with overall plan measurement of approximately 102' x 32'.
4. A Noise Suppression Building (approximately 26' by 20' in plan and one story in height) housing two reciprocating type air compressor units and a steam/hot water boiler installation

Site development would include four long rail sidings with associated track switches and leads to facilitate the switching, storage and movement of rail cars to and from the work locations within the Rail Car Maintenance Building. One track would be furnished with a concrete catch basin for containment of wastewaters generated by car cleaning and removal of road grime (using steam/hot water) from exterior surfaces of a single rail car.

The site development would also include underground linear facilities (service water supply pipeline, wastewater and sanitary drain lines) extending from/to the existing

underground yard piping termination points at the northeast corner of the Coal Car Unloading Building. Potable water would be supplied from the existing service water supply and treatment systems of the Stanton plant. Process and sanitary wastewaters would be routed to and processed by the existing Stanton treatment facilities. An appropriately designed underground oil/water separator unit will be provided for treatment of any oily wastewaters and grits/sludges generated from the floor drain systems of the Rail Car Maintenance Building and rail car wash down basin before forwarding of wastewaters for further treatment and disposal as outlined above.

The site development would also include asphalt paved roads, parking and ground storage spaces adjacent to the Rail Car Maintenance Building, the Personnel and Office Building and the Warehouse Building. The relocated south plant entrance road would also be asphalt paved to match the design features of the existing roadway. Secondary roads associated with vehicular access to the rail sidings and the rail car inspection areas would be surfaced with compacted crushed rock surfacing.

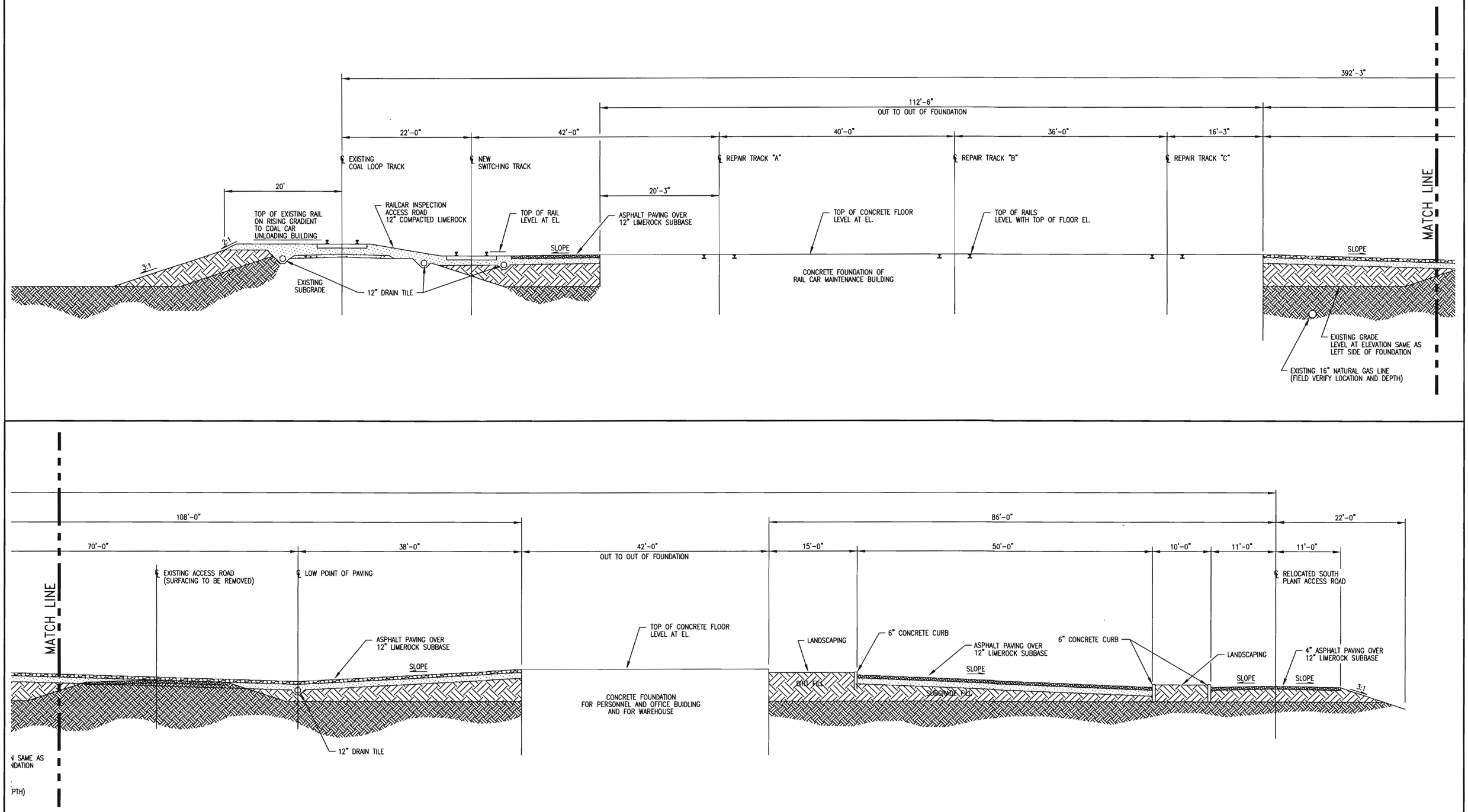
Roof drainage from the various buildings would be directed back to the existing makeup water supply storage pond by means of the underground wastewater drainage linkage described above. Rainfall drainage from the remaining exterior areas, including rail sidings, roads and parking areas as well as associated undisturbed ground areas of the site would be directed to a new stormwater detention basin as described in the attached Onsite Drainage System design report.

The construction of the multiple rail sidings, the Rail Car Maintenance Facilities and associated access roads and parking areas would entail the placement of fill materials to raise the site areas and track elevations. This filling is depicted on a typical cross-sectional elevation shown on Figure 9-2.

The siding to be constructed at the north side of the rail loop would be utilized for the switch-out and transient storage of "bad-ordered" rail cars (i.e., rail cars removed from the empty unit trains for maintenance actions). This siding would parallel the existing loop trackage (at a distance of approximately 24-feet track centers), with switches at each end. The siding would be approximately 2,200 feet in length (as measured between point-of-switch locations at each end) and constructed on fill materials to elevate track gradients as appropriate for control of rail car speeds during switching operations.

The siding would be paralleled by a two-lane road with a turn-around loop at its west end. This road would be unimproved (rock surfaced) to match the existing roadways and vehicular drive spaces at the north side of Coal Car Unloading Building.

The construction of the siding and associated access road would entail the placement of fill materials to raise track and roadway elevations. This filling is depicted on a typical cross-sectional elevation shown on Figure 9-3.

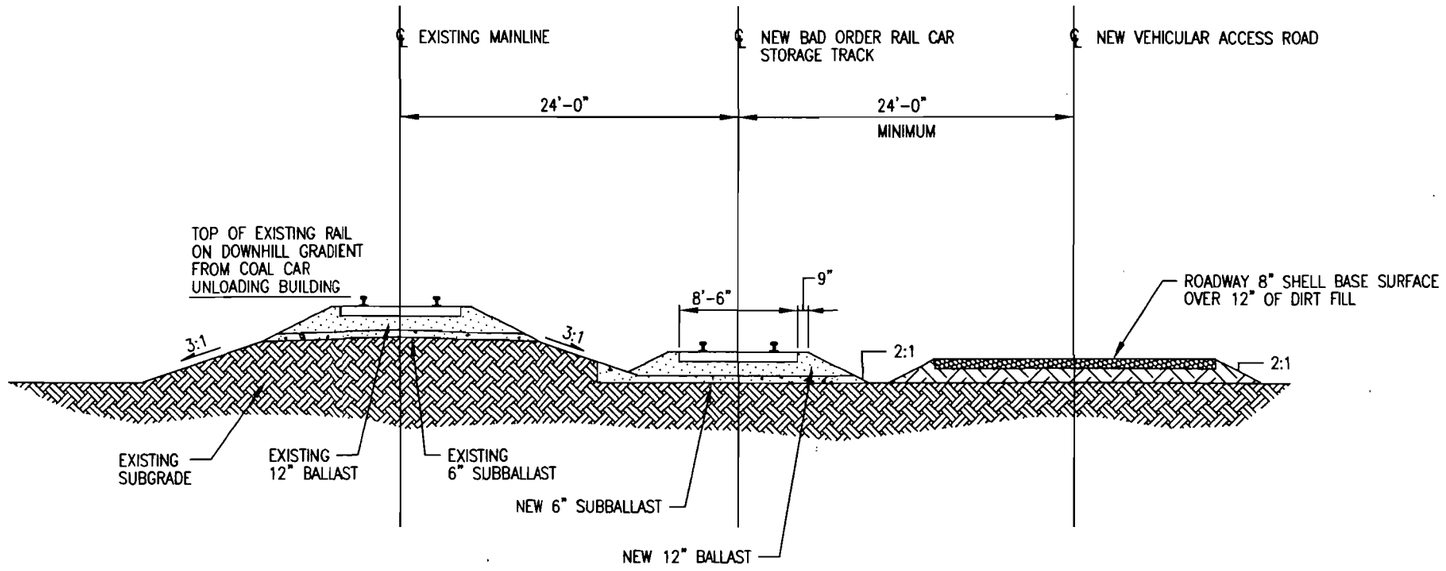


TYPICAL CROSS-SECTION LOOKING NORTHWEST
TROUGH RAIL CAR MAINTENANCE FACILITY AND FOUR TRACK YARD

5' 0 5' 10'
SCALE: 3/32" = 1'-0"

BLACK & VEATCH

OUC Rail Car Maintenance Facility and Yard Areas at Stanton Energy Center
Typical Cross-Section Through Building and Multiple Tracks
Figure 9-2



TYPICAL CROSS-SECTION LOOKING WEST
THROUGH EXISTING MAINLINE AND NEW BAD ORDER SIDING TRACK

5' 0 5' 10'
SCALE: 3/32" = 1'-0"

BLACK & VEATCH

OUC Rail Yard at Maintenance Facility
Bad Order Rail Car
Switch-Out Facilities and Siding
Typical Cross-Section Looking West
Through Existing Mainline and New Siding Tracks
Figure 9-3

Environmental Consequences of Amendment

OUC anticipates no adverse environmental impacts resulting from the approval and implementation of this amendment. Construction of the rail sidings west of the associated buildings will impact a small (approximately 1 acre), isolated, pond cypress wetland area. Approximately 0.98 acres of wetland will be filled for track placement and access road construction. An ERP application is attached, providing additional detail. The new stormwater retention basin will be constructed in an upland area. All other proposed facilities will be located in upland areas.

Effect of Amendment No. 9 on Certification/Conditions of Certification

OUC believes that approval and implementation of this request will require either an amendment or modification of the existing Stanton Certification (PA81-14) and/or Conditions of Certification.

FORM #: 62-343.900(1)
FORM TITLE: JOINT ENVIRONMENTAL RESOURCE PERMIT APPLICATION
DATE: March 26, 2004

Amendment Request No. 9
Rail Car Maintenance Facility-OUC

JOINT APPLICATION FOR

ENVIRONMENTAL RESOURCE PERMIT/

AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS/

FEDERAL DREDGE AND FILL PERMIT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION/
WATER MANAGEMENT DISTRICTS/
U.S. ARMY CORPS OF ENGINEERS

SECTION A

FOR AGENCY USE ONLY	
ACOE Application #	DEP/WMD Application #
Date Application Received	Date Application Received
Proposed Project Lat.	Fee Received $
Proposed Project Long.	Fee Receipt #

PART 1:

Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?
☒ yes ☐ no

Is this application being filed by or on behalf of a government entity or drainage district? ☐yes ☒no

PART 2:

A. Type of Environmental Resource Permit Requested (check at least one). See Attachment 2 for thresholds and descriptions.

- ☐ Noticed General - include information requested in Section B.
- ☐ Standard General (Single Family Dwelling) - include information requested in Sections C and D.
- ☒ Standard General (all other Standard General projects) - include information requested in Sections C and E.
- ☐ Individual (Single Family Dwelling) - include information requested in Sections C and D.
- ☐ Individual (all other Individual projects) - include information requested in Sections C and E.
- ☐ Conceptual - include information requested in Sections C and E.
- ☐ Mitigation Bank Permit (construction) - include information requested in Sections C and F. (If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)
- ☐ Mitigation Bank (conceptual) - include information requested in Sections C and F.

B. Type of activity for which you are applying (check at least one)

- ☒ Construction or operation of a new system, other than a solid waste facility, including dredging or filling in, on or over wetlands and other surface waters.
- ☐ Construction, expansion or modification of a solid waste facility.
- ☐ Alteration or operation of an existing system which was not previously permitted by a WMD or DEP.
- ☐ Modification of a system previously permitted by a WMD or DEP.

  Provide previous permit numbers: ***Site Certification Order Number PA81-14***

  - ☐ Alteration of a system
  - ☐ Abandonment of a system
  - ☐ Removal of a system
  - ☐ Extension of permit duration
  - ☐ Construction of additional phases of a system

C. Are you requesting authorization to use Sovereign Submerged Lands?
☐yes ☒no
(See Section G and Attachment 5 for more information before answering this question.)

D. For activities in, on,or over wetlands or other surface waters, check type of federal dredge and fill permit requested:
☒Individual ☐Programmatic General ☐General
☐Nationwide ☐Not Applicable

E. Are you claiming to qualify for an exemption? ☐yes ☒no
If yes, provide rule number if known. ____

FORM #: 62-343.900 (1)
FORM TITLE: JOINT ENVIRONMENTAL RESOURCE PERMIT APPLICATION
DATE: March 26, 2004

PART 3: **A. OWNER(S) OF LAND**	**B. ENTITY TO RECEIVE PERMIT (IF OTHER THAN OWNER)**
Name ***Frederick F. Haddad, Jr.***	Name
Title and Company ***Vice President, Power Resources, Orlando Utilities Commission***	Title and Company
Address ***P. O. Box 3193***	Address
City, State, Zip ***Orlando, Florida 32801***	City, State, Zip
Telephone and Fax ***Telephone: (407) 658-6444 Fax: (407) 275-4120***	Telephone and Fax
E-mail Address: (optional)	E-mail Address: (optional)
C. AGENT AUTHORIZED TO SECURE PERMIT	**D. CONSULTANT (IF DIFFERENT FROM AGENT)**
Name ***Mike Soltys***	Name
Title and Company ***Site Certification Coordinator, Black & Veatch Corporation***	Title and Company
Address ***11401 Lamar Avenue***	Address
City, State, Zip ***Overland Park, Kansas 66211***	City, State, Zip
Telephone and Fax ***Telephone (913) 458-7563; Fax (913) 458-2934***	Telephone and Fax
E-mail Address: (optional)	E-mail Address: (optional)

PART 4: (Please provide metric equivalent for federally funded projects):

A. Name of Project, including phase if applicable: ***Railcar Maintenance Facilities, Stanton Energy Center***

B. Is this application for part of a multi-phase project? ☐ Yes ☒ No

C. Total applicant-owned area contiguous to the project? ***3,445*** ac.; _____ ha.

D. Total area served by the system: **29.190** ac.; _____ ha.

E. Impervious area for which a permit is sought: **18.87** ac.; _____ ha.

F. Volume of water that the system is capable of impounding: **14.7** ac. ft.; _____ m^3

G. What is the total area of work in, on, or over wetlands or other surface waters?
0.98 ac.; _____ ha.; _____ sq. ft.; _____ sq. m.

H. Total volume of material to be dredged: **0** yd^3; _____ m^3

I. Number of new boat slips proposed: **0** wet slips; **0** dry slips

PART 5:

Project location (use additional sheets if needed):
County(ies) ***Orange (location listed below indicates the location of impact area)***

Section(s) ***13***	Township ***23 S***	Range ***31 E***
Section(s)	Township	Range
Section(s)	Township	Range

Land Grant name, if applicable:

Tax Parcel Identification Number: ***Multiple parcel numbers apply and can be provided upon request.***

Street AddressRoador other location: ***Stanton Energy Center, 5100 Alafaya Trail***

City, Zip Code, if applicable: ***Orlando, 32802***

PART 6: Describe in general terms the proposed project, system, or activity.

Orlando Utilities Commission (OUC) is planning to develop a new rail car maintenance facility located at the existing Stanton Energy Center. Site development would include four long rail sidings with associated track switches and leads to facilitate the switching, storage and movement of railcars to and from the work locations within the Railcar Maintenance Building. The site development would also include underground linear facilities (service water supply pipeline, wastewater and sanitary drain lines) extending from/to the existing underground yard piping termination points at the northeast corner of the existing Coal Car Unloading Building. The site development would include asphalt paved roads, parking and ground storage spaces adjacent to the Railcar Maintenance Building, the Personnel and Office Building and the Warehouse Building. A new stormwater detention basin is proposed northeast of the new facilities to collect, treat, and release (onsite) uncontaminated stormwater.

PART 7:

A. If there have been any pre-application meetings, including on-site meetings, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives.

Project pre-application/introduction meeting held at FDEP-Siting Office in Tallahassee on August 24, 2006. Attendees were Buck Oven – FDEP, Mike Halpin – FDEP, Al Liners – FDEP, Louis Brown – OUC, Myron Rollins – Black & Veatch, and Mike Soltys – Black & Veatch.

B. Please identify by number any MSSW/Wetland Resource/ERP/ACOE Permits pending, issued or denied for projects at the location, and any related enforcement actions.

Agency	Date	No.\Type of Application	Action Taken
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

C. Note: The following information is required for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit or an authorization to use state owned submerged lands. Please provide the names, addresses and zip codes of property owners whose property directly adjoins the project (excluding application) and/or (for proprietary authorizations) is located within a 500 ft. radius of the applicant's land. Please attach a plan view showing the owner's names and adjoining property lines. Attach additional sheets if necessary.

1. 2.

Please see attached Table A-1 of this ERP.

3. 4.

5. 6.

7. 8.

Table A-1 Surrounding Property Owners Stanton Energy Center			
Parcel ID	**Owner**	**Acres**	**Owner Address**
12-23-31-0000-00-002	Redditt, John Cecil	120	4414 Calm Water Ct. Orlando, FL 32817
12-23-31-0000-00-005	Redditt, Adeline Ann	120	710 N. Dean Rd. Orlando, FL 32825
12-23-31-0000-00-001	Morgran Co., Inc.	854.9	15 McMurrich St. Suite 1104 Toronto, Canada M5R3
11-23-31-0000-00-001	Orange Co. BCC	640	P.O. Box 1393 Orlando, FL 32802
14-23-31-0000-00-008	Orange Co. BCC	320	P.O. Box 1393 Orlando, FL 32802
23-23-31-0000-00-005	Orange Co. BCC	160	P.O. Box 1393 Orlando, FL 32802
21-23-31-0000-00-002	Orange Co. BCC	2728.87	P.O. Box 1393 Orlando, FL 32802
25-23-31-0000-00-001	Orlando Business Park, LLC	629.7	1525 S. Andrews Ave. Suite 216 Ft. Lauderdale, FL 33316
30-23-32-0000-00-001	TIITF/DOC	609.08	3900 Commonwealth Blvd. Tallahassee, FL 32399
29-23-32-0000-00-002	Smith, W. Roger	509.5	601 Lake Harbor Cir. Orlando, FL 32809
20-23-32-0000-00-001	St. Johns River Water Management District	2,160	P.O. Box 1429 Palatka, FL 32178
07-23-32-0000-00-004	Avalon Associates of Delaware LP	914	13013 Founders Sq. Drive Orlando, FL 32828

Source: Orange County Property Appraiser (http://pamap1.ocpafl.org)

PART 8:

A. By signing this application form, I am applying, or I am applying on behalf of the applicant, for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relive me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of the applicant, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Frederick F. Haddad, Jr.
Typed/Printed Name of Applicant (If no Agent is used) or Agent (If one is so authorized below)

Signature of Applicant/Agent Date

Vice President, Power Resources
(Corporate Title if applicable)

AN AGENT MAY SIGN ABOVE ONLY IF THE APPLICANT COMPLETES THE FOLLOWING:

B. I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Typed/Printed Name of Applicant	Signature of Applicant	Date

(Corporate Title if applicable)

Please note: The applicant's original signature (not a copy) is required above.

PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:

C. I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Water Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor permitted work if a permit is granted.

Frederick F. Haddad, Jr.		
Typed/Printed Name of Applicant	Signature of Applicant	Date

Vice President, Power Resources
(Corporate Title if applicable)

SECTION C

Environmental Resource Permit Notice of Receipt of Application

Note: this form does not need to be submitted for noticed general permits.
This information is required in addition to that required in other sections of the application. Please submit five copies of this notice of receipt of application and all attachments with the other required information. Please submit all information on 8 1/2" x 11" paper.

Project Name ***Railcar Maintenance Facilities, Stanton Energy Center***
County ***Orange***
Owner ***Orlando Utilities Commission***
Applicant: ***Orlando Utilities Commission***
Applicant's Address: ***P. O. Box 3193, Orlando, FL 32802***

1. Indicate the project boundaries on a USGS quadrangle map. Attach a location map showing the boundary of the proposed activity. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.

A project location map is included as Figure 1.

2. Provide the names of all wetlands, or other surface waters that would be dredged, filled, impounded, diverted, drained, or would receive discharge (either directly or indirectly), or would otherwise be impacted by the proposed activity, and specify if they are in an Outstanding Florida Water or Aquatic Preserve:

This project is located entirely within the property boundary of the Stanton Energy Center. Approximately 0.98 acres of Pond Cypress wetland would be impacted as a result of this project. This wetland is not an Outstanding Florida Water or Aquatic Preserve. Figure 2 is the National Wetland Inventory map of the Stanton Energy Center.

3. Attach a depiction (plan and section views), which clearly shows the works or other facilities proposed to be constructed. Use multiple sheets, if necessary. Use a scale sufficient to show the location and type of works.

Please see drawing numbers 143799-SS-0050 through 143799-SS-0058 included at the end of this application.

4. Briefly describe the proposed project (such as "construct dock with boat shelter", "replace two existing culverts", "construct surface water management system to serve 150 acre residential development"):

Construction of unit train railroad car maintenance facilities at the Stanton Energy Center site.

5. Specify the acreage of wetlands or other surface waters, if any, that are proposed to be filled, excavated, or otherwise disturbed or impacted by the proposed activity:

filled **0.98** ac.; 0 excavated ac.;

other impacts 0 ac.

6. Provide a brief statement describing any proposed mitigation for impacts to wetlands and other surface waters (attach additional sheets if necessary): ***The OUC proposed to purchase mitigation bank credits to offset impacts to 0.98 acres of Pond Cypress wetland.***

FOR AGENCY USE ONLY

Application Name:
Application Number:
Office where the application can be inspected:

Note to Notice recipient: The information in this notice has been submitted by the applicant, and has not been verified by the agency. It may be incorrect, incomplete or may be subject to change.

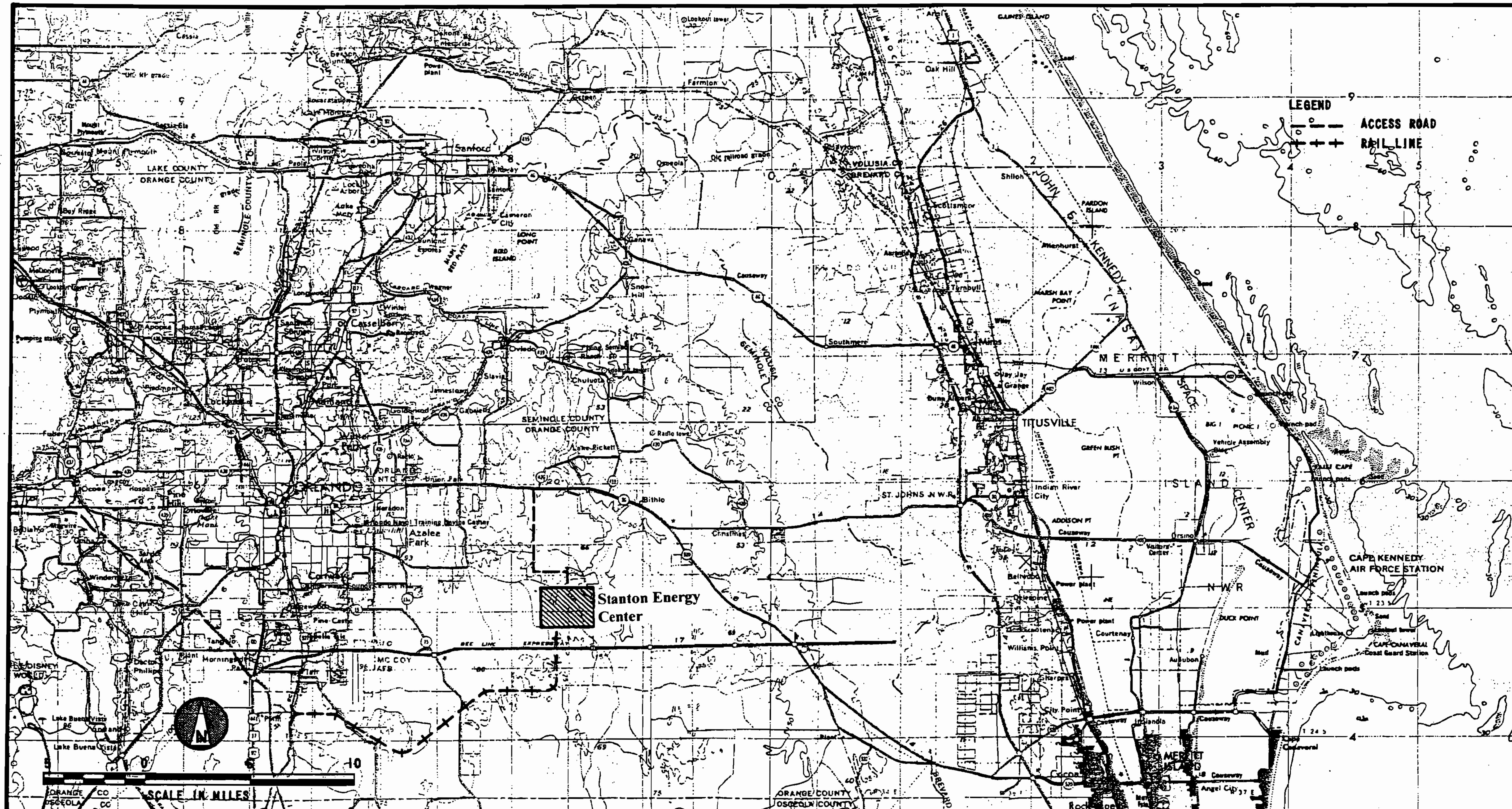


FIGURE 1

REGIONAL AREA MAP

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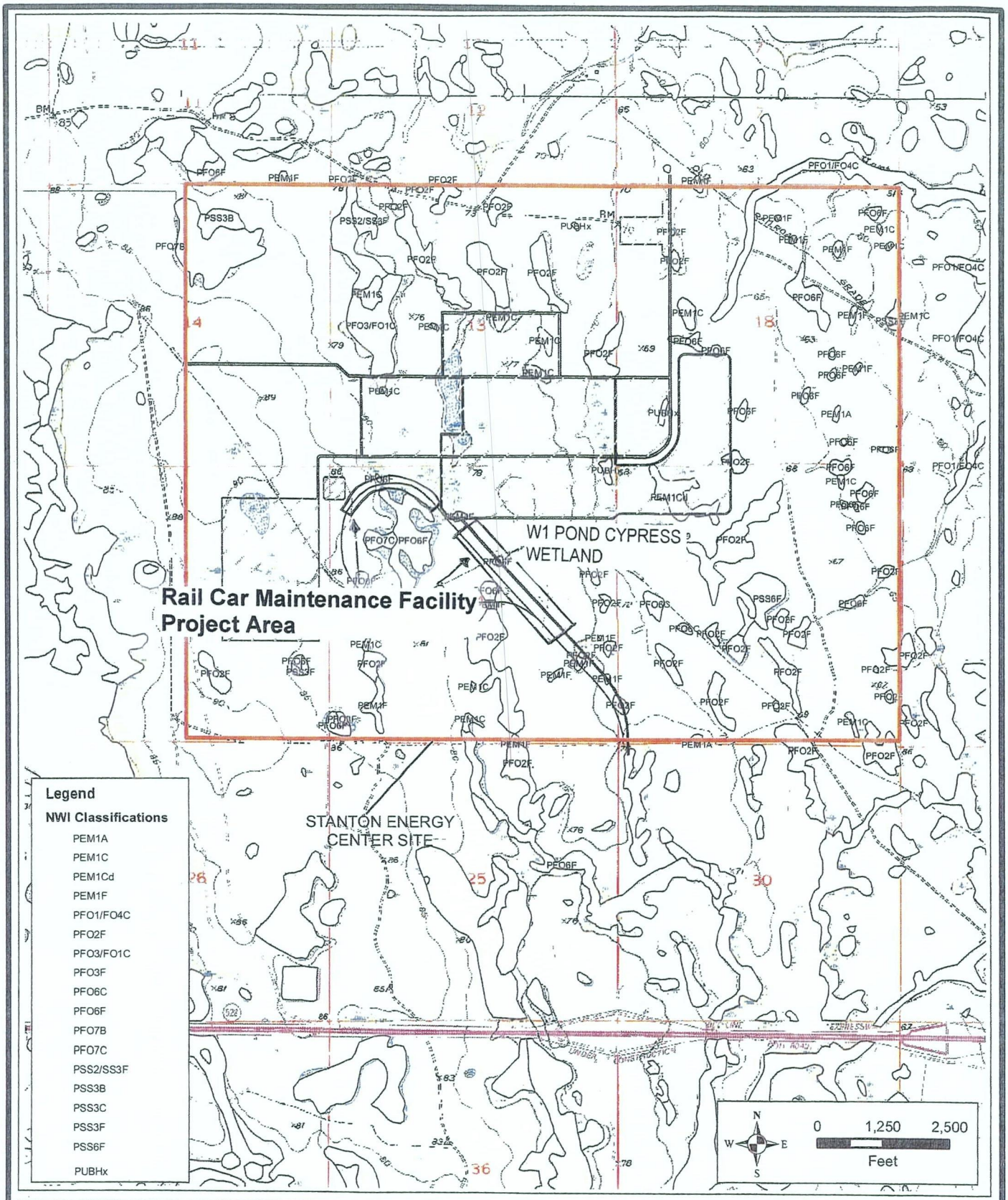


FIGURE 2.

NWI MAP FOR STANTON ENERGY CENTER SITE

Sources: USGS Quads: Oviedo SW and Norcoossee Nw, Fl, 1980; Orange County NWI data, 2005; ECT (Environmental Consulting & Technology, Inc.)

Source:

ECT

Environmental Consulting & Technology, Inc.

SECTION E

INFORMATION REQUESTED FOR STANDARD GENERAL, INDIVIDUAL AND CONCEPTUAL ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS NOT RELATED TO A SINGLE FAMILY DWELLING UNIT

Please provide the information requested below if the proposed project requires either a standard general, individual, or conceptual approval environmental resource permit and is not related to an individual, single family dwelling unit, duplex or quadruplex. The information listed below represents the level of information that is usually required to evaluate an application. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. Please submit all information that is required by the Department on either 8 1/2 in. X 11 in. paper or 11 in. X 17 in. paper. Larger drawings may be submitted to supplement but not replace these smaller drawings.

I. Site Information

A. Provide a map(s) of the project area and vicinity delineating USDA/SCS soil types.

FIGURE 3 is a map of the project area and vicinity delineating USDA/SCS soil types.

B. Provide recent aerials, legible for photo interpretation with a scale of 1" = 400 ft, or more detailed, with project boundaries delineated on the aerial.

Aerials of the project area are provided herein.

C. Identify the seasonal high water or mean high tide elevation and normal pool or mean low tide elevation for each on site wetland or surface water, including receiving waters into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.

Appendix B of this ERP application provides data from monitoring wells on the SEC site. Additional reports (listed below) can be provided upon request.

1. ***Soil Investigation, Orlando Utilities Commission – Stanton Energy Center, Black & Veatch Project No. 8927, includes Phase 1 Soil Investigation.***
2. ***laboratory Testing, Orlando Utilities Commission – Curtis H. Stanton Plant, Orlando, Florida, by Ardaman & Associates, Inc., September 10, 1980.***
3. ***Laboratory Testing, Orlando Utilities Commission – Curtis H. Stanton Plant, Orlando, Florida, August 6, 1981, by Ardaman & Associates, Inc.***

Laboratory and Field materials Test Results, Orlando Utilities Commission – Stanton Energy Center Unit 2, Orlando, Florida, black & Veatch Project No. 16805, by Universal Engineering Sciencies, Inc., May 28, 1992 (Borings B-104 through B-119

D. Identify the wet season high water tables at the locations representative of the entire project site. Include dates, datum, and methods used to determine these elevations.

Refer to response for Part I, Item C above.

II. Environmental Considerations

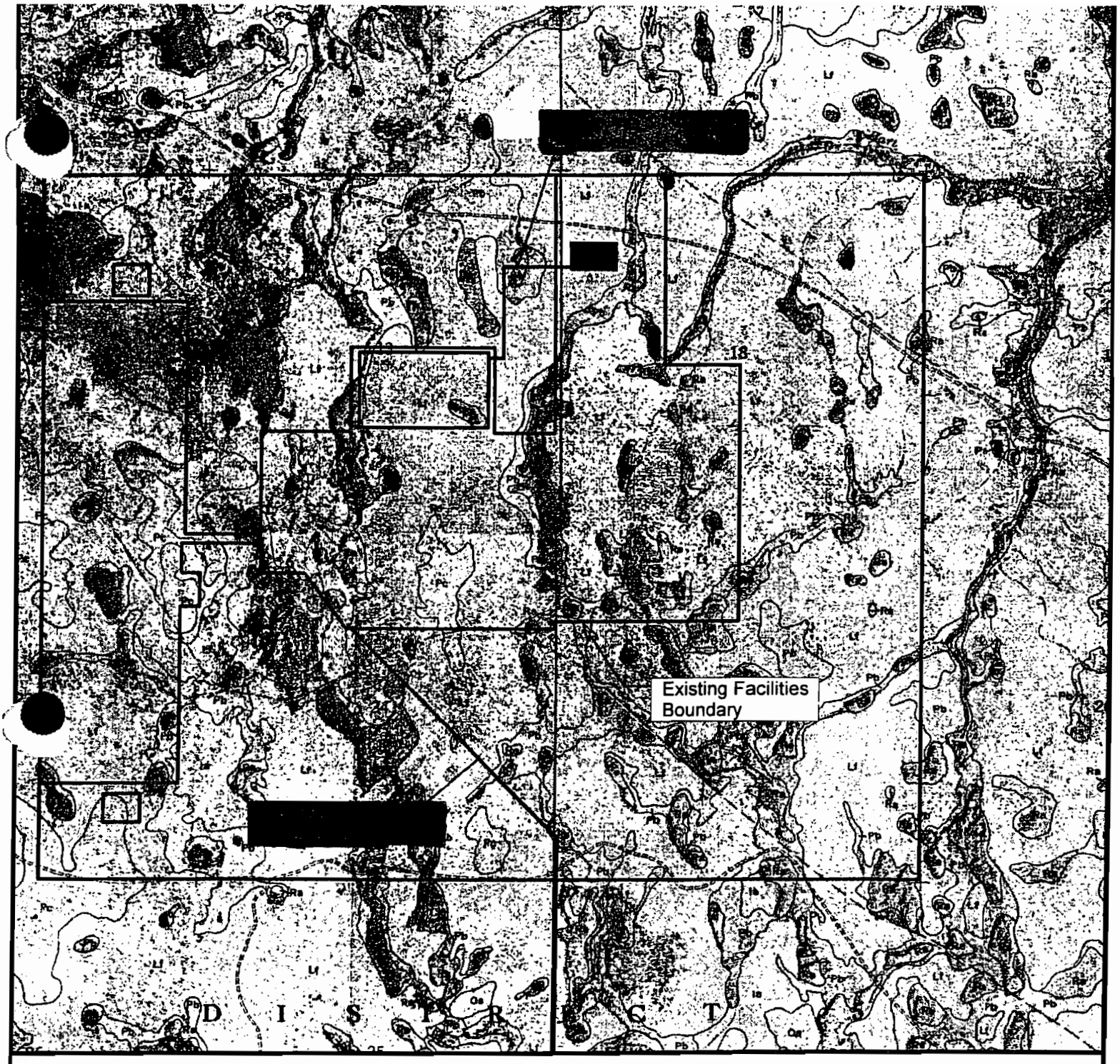
A. Provide results of any wildlife surveys that have been conducted on the site, and provide any comments pertaining to the project from the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service.

Results of wildlife surveys for the project site are included as Appendix A of this ERP.

B. Provide a description of how water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed.

Water quantity and hydroperiod will be maintained in undisturbed areas by maintaining the existing drainage pattern. Water quality will be maintained during construction with Best Management Practices. Silt fences will prevent sediment and construction debris from reaching wetlands adjacent to the proposed construction-n area. All waste materials will be removed and properly disposed at reasonable intervals. Materials such as fuels and similar products will be stored appropriately to avoid spills and incidental releases to the environment. Fugitive dust emissions will be controlled with water sprays. Stormwater discharges during operation will be equal to pre-development runoff rates. Construction activities and personnel traffic will be confined to the railroad maintenance facilities expansion area to maintain the integrity of adjacent habitat.

C. Provide a narrative description of any proposed mitigation plans, including purpose, maintenance, monitoring, and construction sequence and techniques, and estimated costs.



Ia - Immokalee fine sand
Lf - Leon fine sand
Pa - Pamlico muck
Pb - Plummer fine sand
Pc - Pomello fine sand
Ra - Rutlege fine sand
Rc - Rutlege mucky fine sand
Sa - St. Johns fine sand

N

Miles

0.5 1.0

Stanton Energy Center
Soil Survey
Figure 3

Source: USDA Soil Conservation Service; Soil Survey, Orange County Florida.

The OUC proposes the purchase of mitigation bank credits to offset the impacts to 0.98 acres of Pond Cypress wetland.

D. Describe how boundaries of wetlands or other surface waters were determined. If there has ever been a jurisdictional declaratory statement, a formal wetland determination, a formal determination, a validated informal determination, or a revalidated jurisdictional determination, provide the identifying number.

A wetland delineation will be completed in accordance with the Unified Mitigation Assessment Methods post-certification.

E. Impact Summary Tables:

1. For all projects, complete Tables 1, 2 and 3 as applicable.

Table1 is complete and presented herein. Tables 2 and 3 are not applicable.

2. For docking facilities or other structures constructed over wetlands or other surface waters, provide the information requested in Table 4.

Not Applicable

3. For shoreline stabilization projects, provide the information requested in Table 5.

Not Applicable

III. Plans

Provide clear, detailed plans for the system including specifications, plan (overhead) views, cross sections (with the locations of the cross sections shown on the corresponding plan view), and profile (longitudinal) views of the proposed project. The plans must be signed and sealed by a an appropriate registered professional as required by law. Plans must include a scale and a north arrow. These plans should show the following:

A. Project area boundary and total land area, including distances and orientation from roads or other land marks;

Figure 1 illustrates the project area.

B. Existing land use and land cover (acreage and percentages), and on-site natural communities, including wetlands and other surface waters, aquatic communities, and uplands. Use the Florida Land Use Cover & Classification System (FLUCCS)(Level 3) for projects proposed in the South Florida Water Management District, the St. Johns River Water Management District, and the Suwannee River Water Management District and use the National Wetlands Inventory (NWI) for projects proposed in the Southwest Florida Water Management District. Also identify each community with a unique identification number which must be consistent in all exhibits.

Figure 4 illustrates the existing land use and land cover for the Stanton Energy Center, including the project location.

C. The existing topography extending at least 100 feet off the project area, and including adjacent wetlands and other surface waters. All topography shall include the location and a description of known benchmarks, referenced to NGVD. For systems waterward of the mean high water (MHW) or seasonal high water lines, show water depths, referenced to mean low water (MLW) in tidal areas or seasonal low water in non-tidal areas, and list the range between MHW and MLW. For docking facilities, indicate the distance to, location of, and depths of the nearest navigational channel and access routes to the channel.

Figure 5 illustrates the site topography.

D. If the project is in the known flood plain of a stream or other water course, identify the following: 1) the flood plain boundary and approximate flooding elevations; and 2) the 100-year flood elevation and floodplain boundary of any lake, stream or other watercourse located on or adjacent to the site;

Figure 6 illustrates the flood zone designations.

E. The boundaries of wetlands and other surface waters within the project area. Distinguish those wetlands and other surface waters that have been delineated by any binding jurisdictional determination;

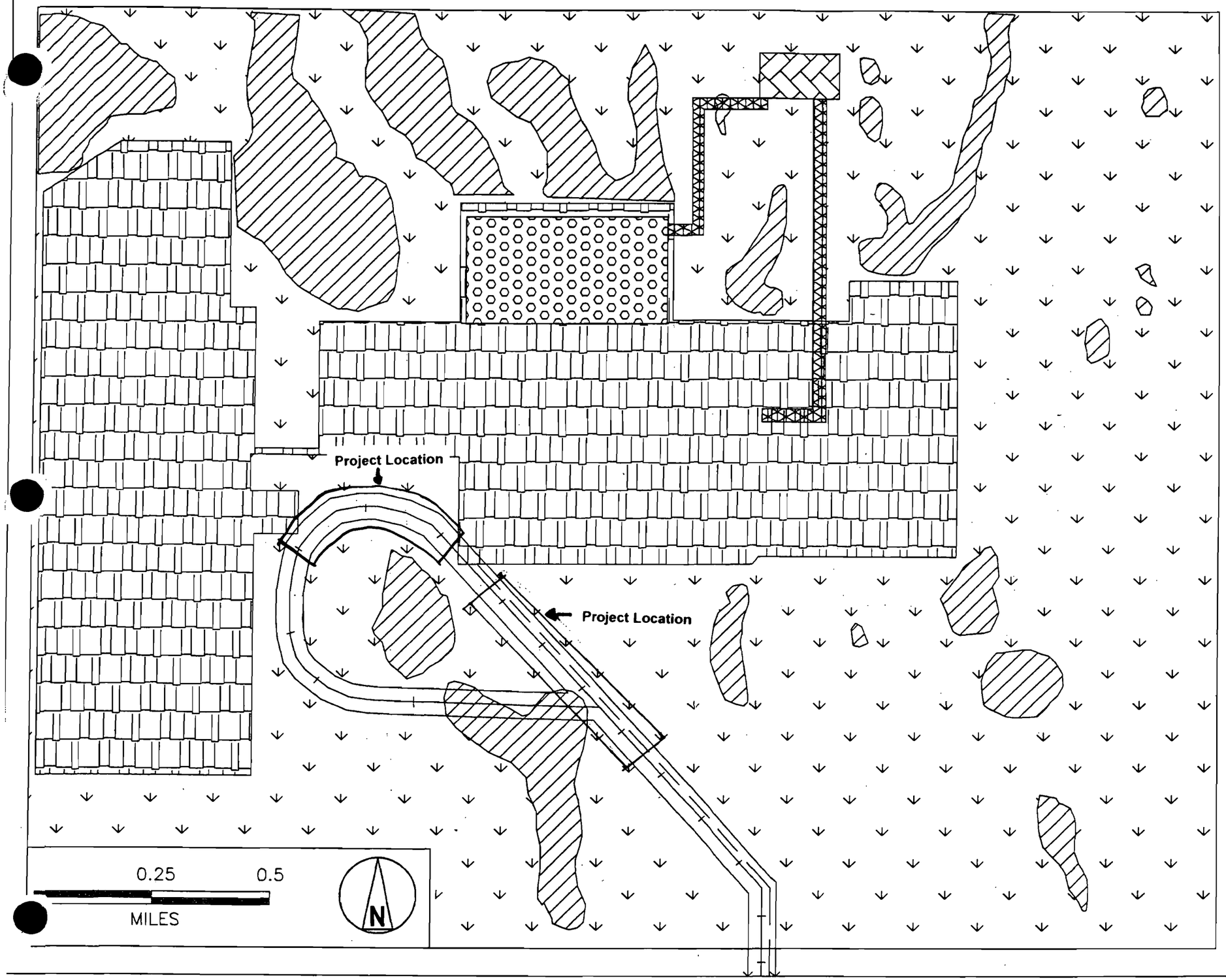
Figure 7 illustrates surface waters near the Stanton site.

F. Proposed land use, land cover and natural communities (acreage and percentages), including wetlands and other surface waters, undisturbed uplands, aquatic communities, impervious surfaces, and water management areas. Use the same classification system and community identification number used in III (B) above.

Figure 8 illustrates the proposed land use.

G. Proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands;

Approximately 0.98 acres of Pond Cypress wetland will be permanently filled for construction of the Railcar Maintenance Facility. Preliminary design identifies a culvert that will be constructed through the new roadway and will bisect this wetland to allow the flow of any surface water.



LEGEND

LAND COVER	ACRES	PERCENTAGE
411	1,771	51.3
621	342.1	9.9
812/817	~200	~6.0
831 8312	1,040.00 60.00	30.2 1.7
8315	10.4	0.3
832	21.5	0.6

LAND COVER	SYMBOL
411	
621	
812/817	
831	
8312	
8315	
832	

LAND COVER	DESCRIPTION
411	PINE FLATWOODS
621	CYPRESS WETLAND
812/817	RAILROADS/GAS LINE
831	ELECTRIC POWER FACILITIES (EPF)
8312	EPF, GAS TURBINES
8315	SUBSTATIONS
832	ELECTRIC POWER TRANSMISSION LINES

EXISTING LAND USE COVER
STANTON ENERGY CENTER
FIGURE 4

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Feb 13, 2006 - 10:09am by mtorrella

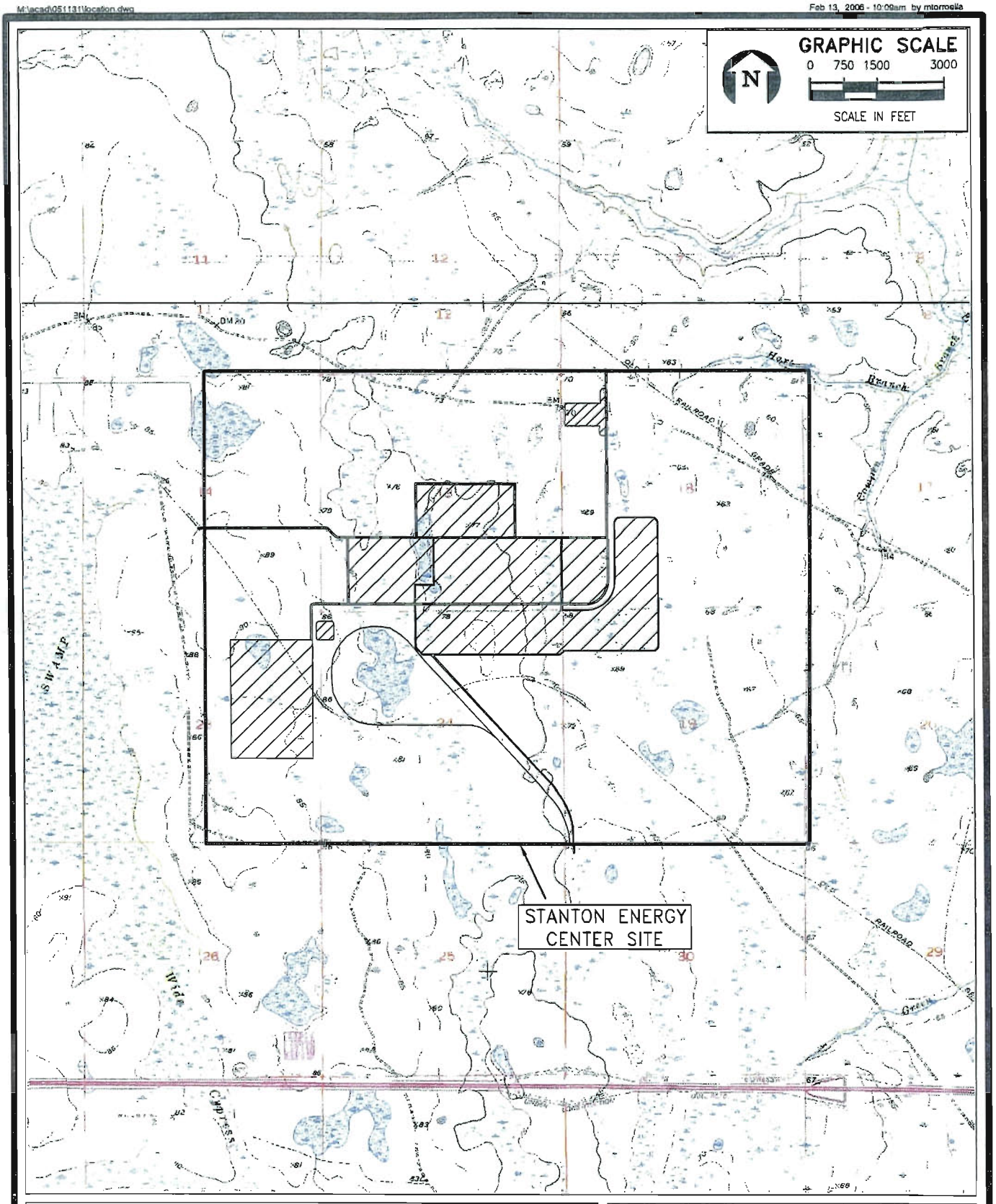

FIGURE 5

STANTON SITE TOPOGRAPHY

Sources: USGS Quads: Oviedo SW and Narcoossee NW, FL, 1980; ECT, 2005.

ECT

Environmental Consulting & Technology, Inc.

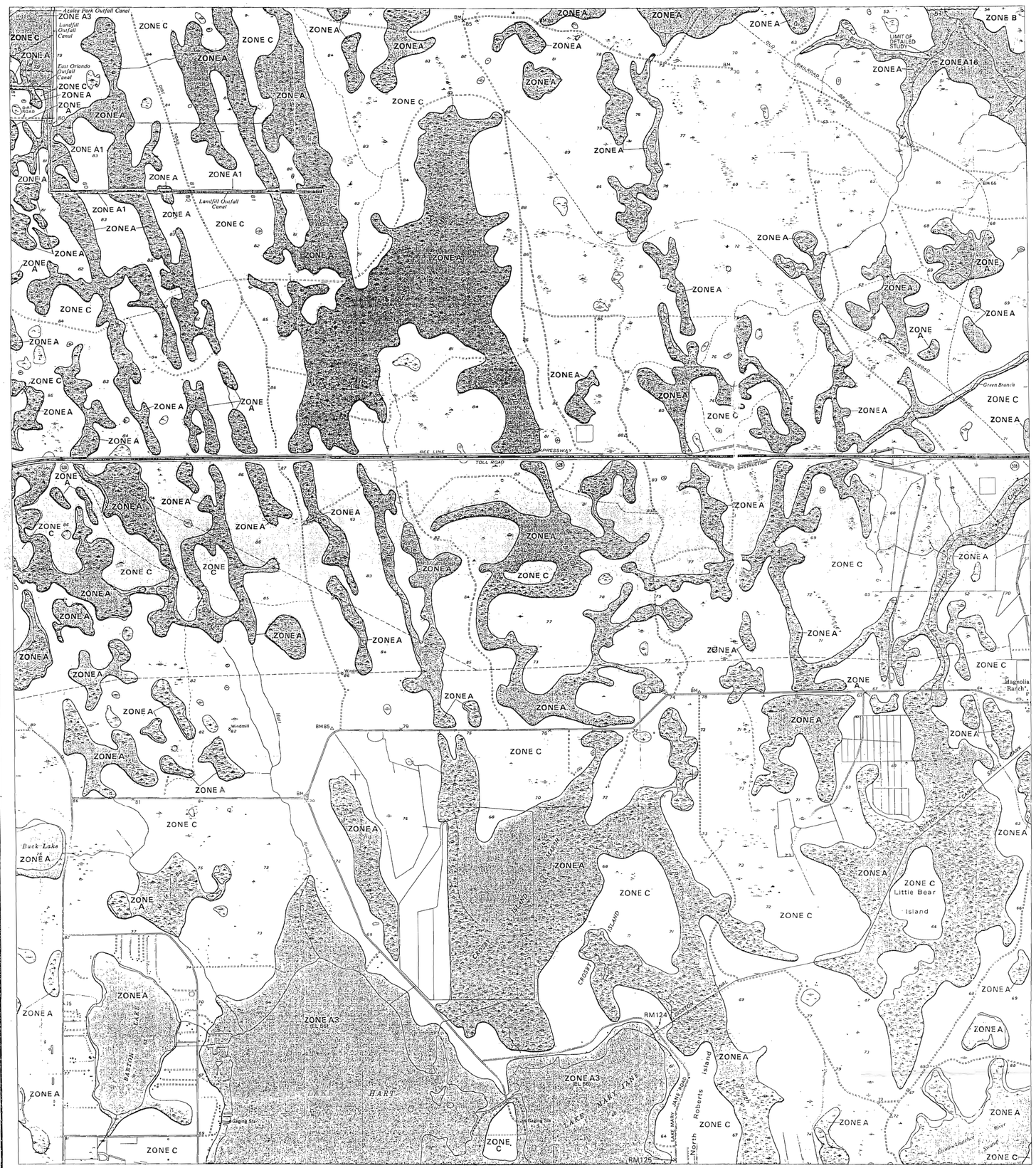

Figure 6

KEY TO MAP

500-Year Flood Boundary	ZONE B
100-Year Flood Boundary	ZONE A / ZONE AO
Zone Designations*	
100-Year Flood Boundary	ZONE B
500-Year Flood Boundary	
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7×
Zone D Boundary	
River Mile	•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Map Index.

INITIAL IDENTIFICATION:
JANUARY 30, 1976

FLOOD HAZARD BOUNDARY MAP REVISIONS:
APRIL 15, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
DECEMBER 1, 1981

FLOOD INSURANCE RATE MAP REVISIONS:
Map revised August 5, 1986
to change special flood hazard areas, base flood elevations and zone designations, add streets and street names, streams and stream names and to reflect new FEMA title block.

For Elevation Reference Mark Descriptions see Panel 120179 0150 C

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
2000 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

ORANGE COUNTY, FLORIDA
(UNINCORPORATED AREAS)

PANEL 425 OF 625

COMMUNITY-PANEL NUMBER
120179 0425 C

MAP REVISED:
AUGUST 5, 1986

Federal Emergency Management Agency

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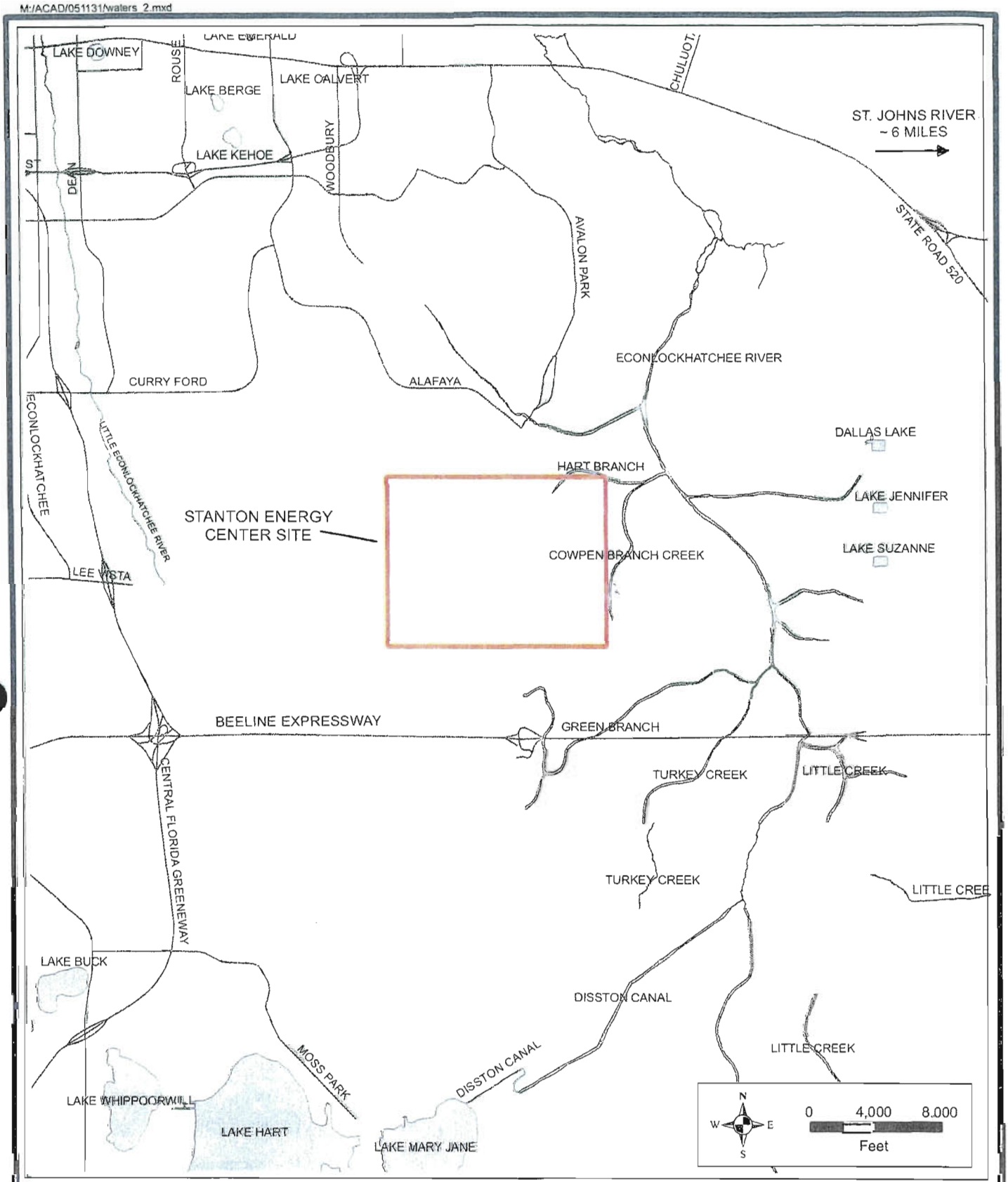


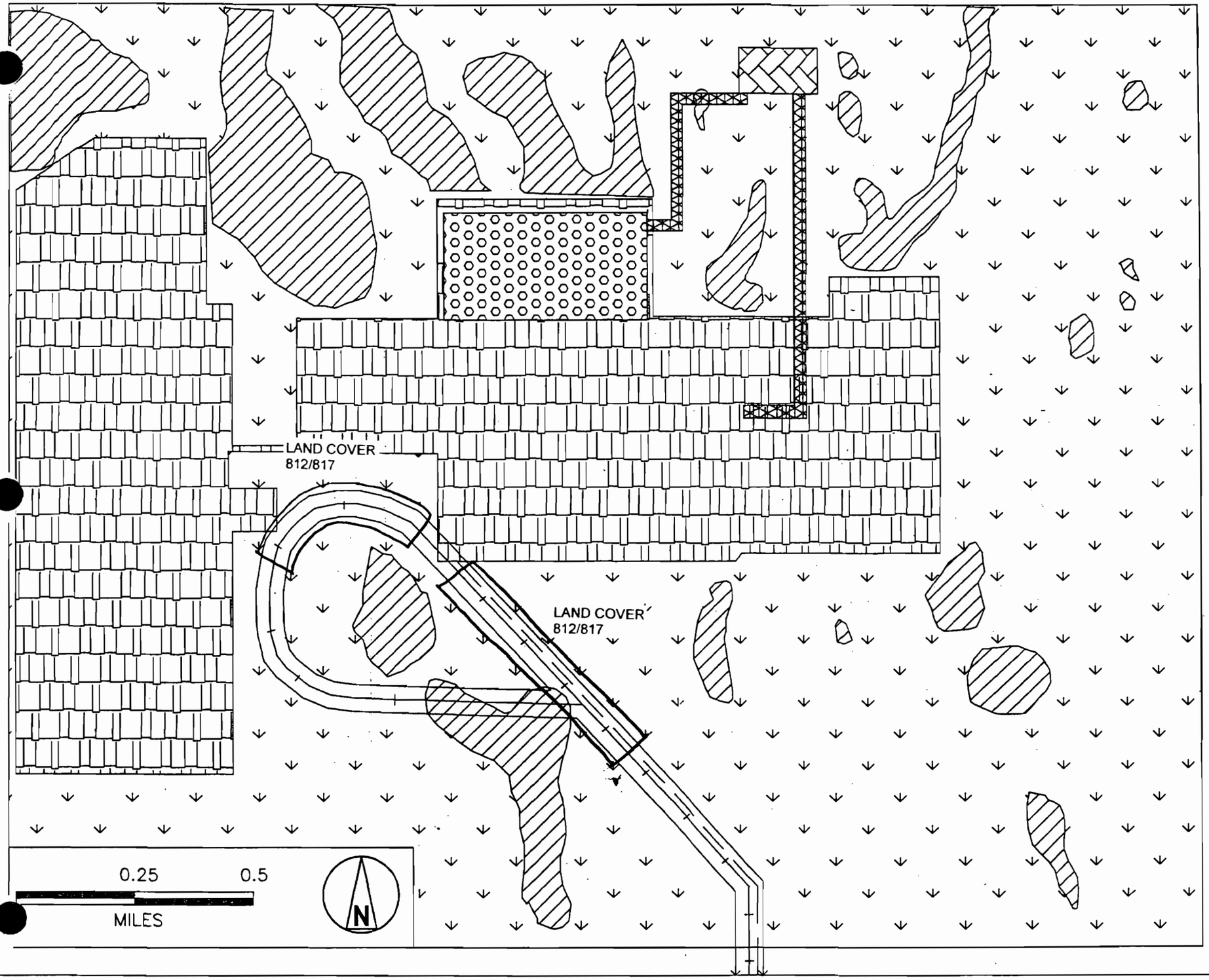
FIGURE 7

SURFACE WATERS NEAR THE STANTON SITE

Sources: Orange County, FL, 2005; ECT, 2005.

ECT

Environmental Consulting & Technology, Inc.



LEGEND

LAND COVER	ACRES	PERCENTAGE
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8315	SUBSTATIONS
832	ELECTRIC POWER TRANSMISSION LINES

EXISTING LAND USE COVER
STANTON ENERGY CENTER
FIGURE 8

H. Proposed buffer zones;

The railcar maintenance facilities are proposed entirely with Orlando Utilities Commission's property; therefore, no buffer zone is proposed.

I. Pre- and post-development drainage patterns and basin boundaries showing the direction of flows, including any off-site runoff being routed through or around the system; and connections between wetlands and other surface waters;

This information will be provided post-certification.

J. Location of all water management areas with details of size, side slopes, and designed water depths;

Refer to the Rail Car Maintenance Facilities Onsite Drainage System document in Appendix C.

K. Location and details of all water control structures, control elevations, any seasonal water level regulation schedules; and the location and description of benchmarks (minimum of one benchmark per structure);

All areas not draining the waste oil/water separator will be drained to a new stormwater retention pond (~3.67 acres) located east of the existing south entrance road and west of the existing transmission lines (Drawings 143799-SS-0054 and 143799-0055).

L. Location, dimensions and elevations of all proposed structures, including docks, seawalls, utility lines, roads, and buildings;

The Railcar Maintenance Facilities would consist of four building structures:

1. ***The Railcar Maintenance Building comprising a single story structure measuring approximately 182'-6" in length by 112'-6" in width with a poured concrete foundation and floor system. The building would have an overall height of approximately 28 feet with a metal roof and siding extending more than 16'-0" above ground floor level (building would be open on all four sides below this level to provide full perimeter access for vehicles and personnel). Three rail tracks embedded in the concrete floor and extending the length of the building would be provided for the movement of railcars to and from work stations.***
2. ***A one-story Personnel and Office Building measuring approximately 72' by 32' in plan area. This building would be space conditioned (HVAC) and would house offices, restroom/locker room facilities, meeting/break room and storage spaces for the support of the facilities operations.***
3. ***A single-story Warehouse for climate controlled storage of spare parts utilized in maintenance and repairs of the railcars. The building would be fully enclosed and employ a rigid-frame structure with overall plan measurement of approximately 102' x 32'.***
4. ***A Noise Suppression Building (approximately 26' by 20' in plan and one story in height) housing two reciprocating type air compressor units and a steam/hot water boiler installation***

M. Location, size, and design capacity of the internal water management facilities;

A new stormwater retention pond will be constructed east of the existing south entrance road and west of the existing transmission lines (Drawings 143799-SS-0054 and 143799-0055).

N. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes, and rights-of-way and easements for the existing drainage system, if any;

No new rights-of-way or easement will be required for construction because all of the facilities are on the Stanton site. O. Receiving waters or surface water management systems into which runoff from the developed site will be discharged;

Runoff will drain to a new stormwater retention pond, which will be approximately 3.67 acres in size.

P. Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions;

Erosion and sediment control measures will be installed as necessary during construction to retard erosion and control sediment deposition. Detailed information will be provided post-certification. Construction techniques discussion will be provided post-certification.

Q. Location, grading, design water levels, and planting details of all mitigation areas;

Information will be provided post-certification during detailed design.

R. Site grading details, including perimeter site grading;

Information will be provided post-certification during detailed design.

S. Disposal site for any excavated material, including temporary and permanent disposal sites;

Topsoil will be excavated but retained on site and used for finished grading. Additional information will be provided post-certification.

T. Dewatering plan details;

Information will be provided post-certification.

U. For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities, and fish cleaning stations;

Not applicable

V. Location and description of any nearby existing offsite features which might be affected by the proposed construction or development such as stormwater management ponds, buildings or other structures, wetlands or other surface waters.

Offsite features will not be impacted by the proposed construction. Proposed construction is located in the central portion of the 3,445 acre Stanton site.

W. For phased projects, provide a master development plan.

Not applicable

IV. Construction Schedule and Techniques

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should specifically include the following:

A. Method for installing any pilings or seawall slabs;

Not applicable

B. Schedule of implementation of temporary or permanent erosion and turbidity control measures;

Refer to Part III, Item P of the ERP.

C. For projects that involve dredging or excavation in wetlands or other surface waters, describe the method of excavation, and the type of material to be excavated;

Refer to Part III, Item P of the ERP.

D. For projects that involve fill in wetlands or other surface waters, describe the source and type of fill material to be used. For shoreline stabilization projects that involve the installation of riprap, state how these materials are to be placed, (i.e., individually or with heavy equipment) and whether the rocks will be underlain with filter cloth;

Information will be provided post-certification.

E. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place (Note: a consumptive use or water use permit may by required);

Information will be provided post-certification.

F. Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;

Trucks or railcars will be used for transporting equipment and materials to and from the work site.

G. Demolition plan for any existing structures to be removed; and

Not Applicable

H. Identify the schedule and party responsible for completing monitoring, record drawings, and as-built certifications for the project when completed.

Orlando Utilities Commission will be responsible for identifying the schedule prior to construction and for identifying responsibility for completing monitoring, record drawings, and as-built certifications for the project when completed.

V. Drainage Information

A. Provide pre-development and post-development drainage calculations, signed and sealed by an appropriate registered professional, as follows:

This information will be provided post-certification.

1. Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basin;

This information will be provided post-certification.

2. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table draw down;

Appendix B of this ERP application provides data from monitoring wells on the SEC site. Additional reports (listed below) can be provided upon request.

4. ***Soil Investigation, Orlando Utilities Commission – Stanton Energy Center, Black & Veatch Project No. 8927, includes Phase 1 Soil Investigation.***
5. ***laboratory Testing, Orlando Utilities Commission – Curtis H. Stanton Plant, Orlando, Florida, by Ardaman & Associates, Inc., September 10, 1980.***
6. ***Laboratory Testing, Orlando Utilities Commission – Curtis H. Stanton Plant, Orlando, Florida, August 6, 1981, by Ardaman & Associates, Inc.***

3. Receiving water elevations (normal, wet season, design storm);

There will be no discharge to a receiving water.

4. Design storms used including rainfall depth, duration, frequency, and distribution;

The design storm used for this project is the 25 year 72-hour, which is 10.75 inches of precipitation.

5. Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);

This information will be provided post-certification.

6. Stage-storage computations for any area such as a reservoir, close basin, detention area, or channel, used in storage routing;

This information will be provided post-certification.

7. Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;

This information will be provided post-certification.

8. Flood routings through on-site conveyance and storage areas;

This information will be provided post-certification.

9. Water surface profiles in the primary drainage system for each required design storm event(s);

This information will be provided post-certification.

10. Runoff peak rates and volumes discharged from the system for each required design storm event(s);

This information will be provided post-certification.

11. Tail water history and justification (time and elevation); and

Not Applicable

12. Pump specifications and operating curves for range of possible operating conditions (if used in system).

Not Applicable

B. Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions;

Appendix B of this ERP application provides data from monitoring wells on the SEC site. Additional reports (listed below) can be provided upon request.

7. ***Soil Investigation, Orlando Utilities Commission – Stanton Energy Center, Black & Veatch Project No. 8927, includes Phase 1 Soil Investigation.***
8. ***laboratory Testing, Orlando Utilities Commission – Curtis H. Stanton Plant, Orlando, Florida, by Ardaman & Associates, Inc., September 10, 1980.***
9. ***Laboratory Testing, Orlando Utilities Commission – Curtis H. Stanton Plant, Orlando, Florida, August 6, 1981, by Ardaman & Associates, Inc.***
10. ***Laboratory and Field materials Test Results, Orlando Utilities Commission – Stanton Energy Center Unit 2, Orlando, Florida, black & Veatch Project No. 16805, by Universal Engineering Sciencies, Inc., May 28, 1992 (Borings B-104 through B-119).***

C. Provide the acreage, and percentages of the total project, of the following:

1. Impervious surfaces, excluding wetlands;
   18.87 acres = 54%
2. Pervious surfaces (green areas, not including wetlands);
   6.65 acres =19%.
3. Lakes, canals, retention areas, other open water areas; and
   Stormwater retention pond - 3.67 acres = 11%.
4. Wetlands.
   5.63 acres = 16%

D. Provide an engineering analysis of floodplain storage and conveyance (if applicable), including:

Not Applicable.

1. Hydraulic calculations for all proposed traversing works;

2. Backwater water surface profiles showing upstream impact of traversing works;

3. Location and volume of encroachment within regulated floodplain(s); and

4. Plan for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.

E. Provide an analysis of the water quality treatment system including:

1. A description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis; and

Stormwater from the impervious area will be directed to the waste oil/water separator. Uncontaminated stormwater will be directed to the new stormwater runoff pond.

2. Construction plans and calculations that address stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria.

This information will be provided post-certification

F. Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, two diskette copies, if available, and justification for model selection.

Not applicable.

VI. Operation and Maintenance and Legal Documentation

A. Describe the overall maintenance and operation schedule for the proposed system.

This information will be provided post-certification.

B. Identify the entity that will be responsible for operating and maintaining the system in perpetuity if different than the permittee, a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance. If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system. If a property owner's association is the proposed operation and maintenance entity, provide copies of the articles of incorporation for the association and copies of the declaration, restrictive covenants, deed restrictions, or other operational documents that assign responsibility for the operation and maintenance of the system. Provide information ensuring the continued adequate access to the system for maintenance purposes. Before transfer of the system to the operating entity will be approved, the permittee must document that the transferee will be bound by all terms and conditions of the permit.

The Orlando Utilities Commission will be responsible for operation and maintenance of the stormwater runoff facilities.

C. Provide copies of all proposed conservation easements, storm water management system easements, property owner's association documents, and plats for the property containing the proposed system.

The Orlando Utilities Commission owns all project areas, therefore, no easements apply.

D. Provide indication of how water and waste water service will be supplied. Letters of commitment from off-site suppliers must be included.

Water and wastewater service will be provided by the existing Stanton facilities.

E. Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled by the applicant.

The OUC owns all of the 3,445 acres where the project site is located.

VII. Water Use

A. Will the surface water system be used for water supply, including landscape irrigation, or recreation.

Not applicable.

B. If a Consumptive Use or Water Use permit has been issued for the project, state the permit number.

Not applicable.

C. If no Consumptive Use or Water Use permit has been issued for the project, indicate if such a permit will be required and when the application for a permit will be submitted.

No consumptive use or water use permit will be required for this project

D. Indicate how any existing wells located within the project site will be utilized or abandoned.

Not applicable.

TABLE 1
Project Impact Summary

{PRIVATE }WL & SW ID	WL & SW TYPE	WL & SW SIZE (ac.) ON SITE	WL & SW ACRES NOT IMPACTED	PERMANENT IMPACTS TO WL & SW		TEMPORARY IMPACTS TO WL & SW		MITIGATION ID
				IMPACT SIZE (acres)	IMPACT CODE	IMPACT SIZE (acres)	IMPACT CODE	
W1	***PFO 6F***	***5.63 ac***	***4.65 ac***	***0.98 ac***	***C&F***	***0***	***-***	***To Be Determined***

WL = Wetland; **SW** = Surface water; **ID** = Identification number, letter, etc.
Wetland Type: Use an established wetland classification system and, in the comments section below, indicate which classification system is being used.
Impact Code (Type): D = dredge; F = fill; H = change hydrology; S = shading; C = clearing; O = other. Indicate the final impact if more than one impact type is proposed in a given area. For example, show F only for an area that will first be demucked and then backfilled.

Note: Multiple entries per cell are not allowed, except in the "Mitigation ID" column. Any given acreage of wetland should be listed in one row only, such that the total of all rows equals the project total for a given category (column). For example, if Wetland No. 1 includes multiple wetland types and multiple impact codes are proposed in each type, then each proposed impact in each wetland type should be shown on a separate row, while the size of each wetland type found in Wetland No. 1 should be listed in only one row.

Comments: _____

TABLE 2
ON-SITE MITIGATION SUMMARY

{PRIVATE }MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVE		UPLAND PRESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
				Not Applicable								
PROJECT TOTALS:												

CODES (multiple entries per cell not allowed): Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

COMMENTS:

TABLE 3
OFF-SITE MITIGATION SUMMARY

{PRIVATE }MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVE		UPLAND PRESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
				Not Applicable								
PROJECT TOTALS:												

CODES (multiple entries per cell not allowed):

Target Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

TABLE 4
DOCKING FACILITY SUMMARY

{PRIVATE }Type of Structure*	Type of Work**	Number of Identical Docks	Length (feet)	Width (feet)	Height (feet)	Total square feet over water	Number of slips
		NOT APPLICABLE					

	TOTALS:	Existing	Proposed
*Dock, Pier, Finger Pier, or other structure (please specify what type)	Number of Slips		
**New, Replaced, Existing (unaltered), Removed, or Altered/Modified	Square Feet over the water		

Use of Structure:

Will the docking facility provide:

Live-aboard Slips? If yes, Number:
Fueling Facilities: If yes, Number
Sewage Pump-out Facilities? If yes, Number:
Other Supplies or Services Required for Boating (excluding refreshments, bait and tackle)
☐ Yes ☐ No

Type of Materials for Decking and Pilings (i.e., CCA, pressure treated wood, plastic, or concrete)

Pilings
Decking
Proposed Dock-Plank Spacing (if applicable)

Proposed Size (length and draft), Type, and Number of Boats Expected to Use or Proposed to be Mooring at the facility)

Table 5: SHORELINE STABILIZATION
IF YOU ARE CONSTRUCTING A SHORELINE STABILIZATION PROJECT, PLEASE PROVIDE THE FOLLOWING:

{PRIVATE }Type of Stabilization Being Done	Length (in feet) of New	Length (in feet) of Replaced	Length (in feet) of Repaired	Length (in feet) of Removed	Slope: H: V:	Width of the Toe (in feet)
Vertical Seawall		***NOT APPLICABLE***				
Seawall plus Rip-Rap						
Rip-Rap						
Rip-Rap plus Vegetation						
Other Type of Stabilization Being Done:						

Size of the Rip Rap: _____

Type of Rip Rap:_____

COMMENTS:

NOTES
1. ALL INFORMATION ON THESE DRAWINGS ARE TO BE USED FOR CONCEPTUAL DESIGN ONLY. ALL FACILITY AND POND LOCATIONS (NEW AND EXISTING) ARE APPROXIMATE. INFORMATION AND ELEVATIONS ON EXISTING FACILITIES WERE OBTAINED FROM EXISTING DRAWINGS AND AERIAL PHOTOGRAPHY.

SS 0054
SS 0055
SS 0056
SS 0057
SS 0058
SS 0053
SS 0052
SS 0051

LEGEND

- CL NEW RAILROAD
- CL EXISTING RAILROAD
- CL EXISTING 230KV TRANSMISSION LINE
- PROPERTY LINE
- R/W — LIMIT OF OUC RIGHT-OF-WAY
- NEW SECURITY FENCE
- G — EXISTING 16" FLORIDA GAS TRANSMISSION COMPANY LATERAL
- 99 — NEW CONTOUR
- AREA INLET
- NEW STORM WATER SYSTEM
- NEW CULVERT
- DITCH/SWALE FLOW INDICATOR
- GRADE SURFACE FLOW INDICATOR
- 123.45 + NEW SPOT ELEVATION
- EXISTING FENCE
- 99 — EXISTING CONTOUR

- ASPHALT SURFACING
- AGGREGATE SURFACING
- CONCRETE
- EARTH
- RIPRAP
- SAND/BEDDING MAT'L
- GRASS
- WETLANDS

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

USERNAME A1ASL012 B1
DATE TIME ACAD 10.c7 1=1

BLACK & VEATCH CORPORATION

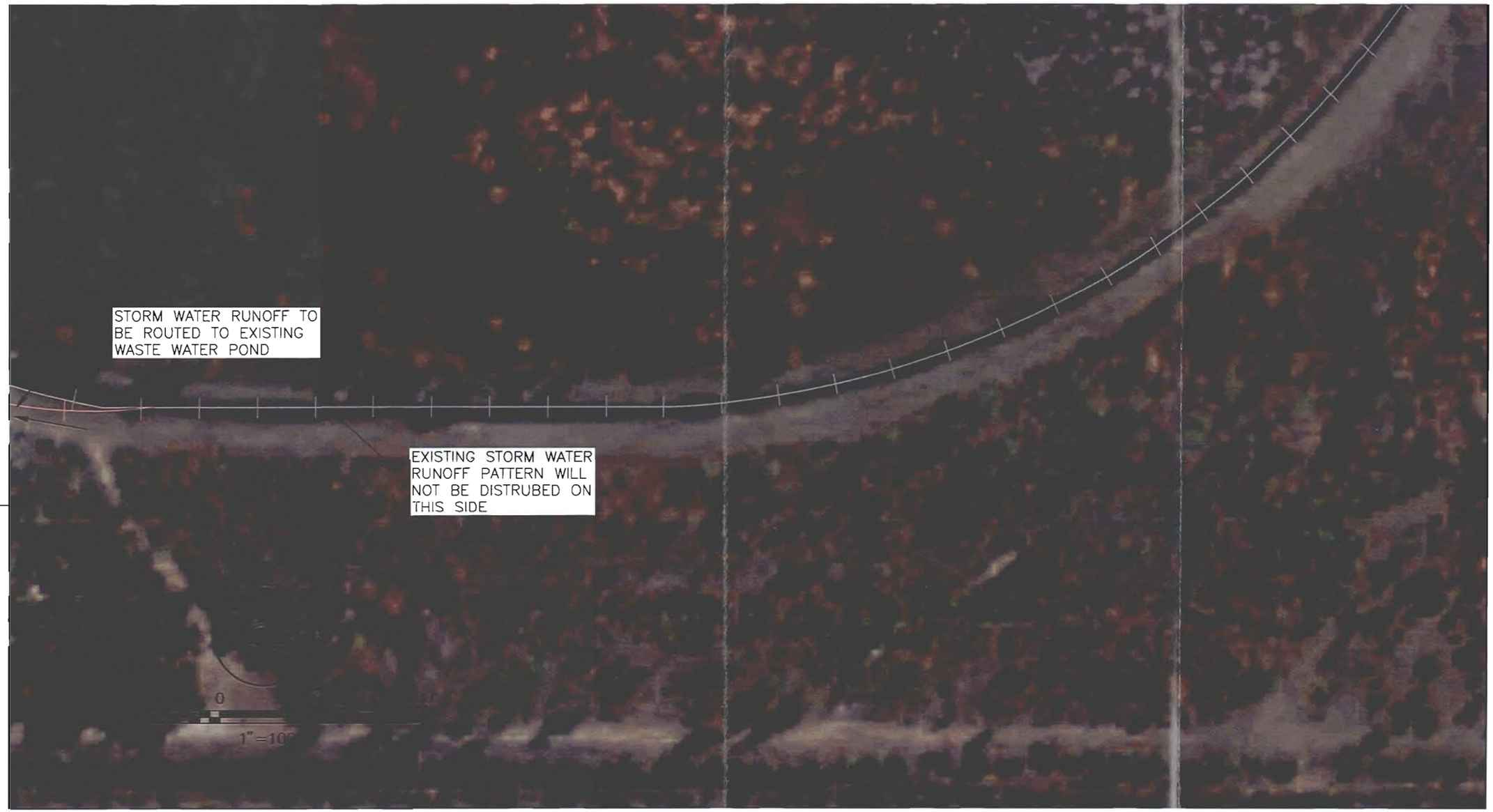
ENGINEER | DRAWN
CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0050
DRAWING NUMBER
REV A

CODE
AREA



FOR CONTINUATION SEE DWG 0052

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
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USERNAME A1ASL012 B1
DATE TIME ACAD 10.c7 1=1

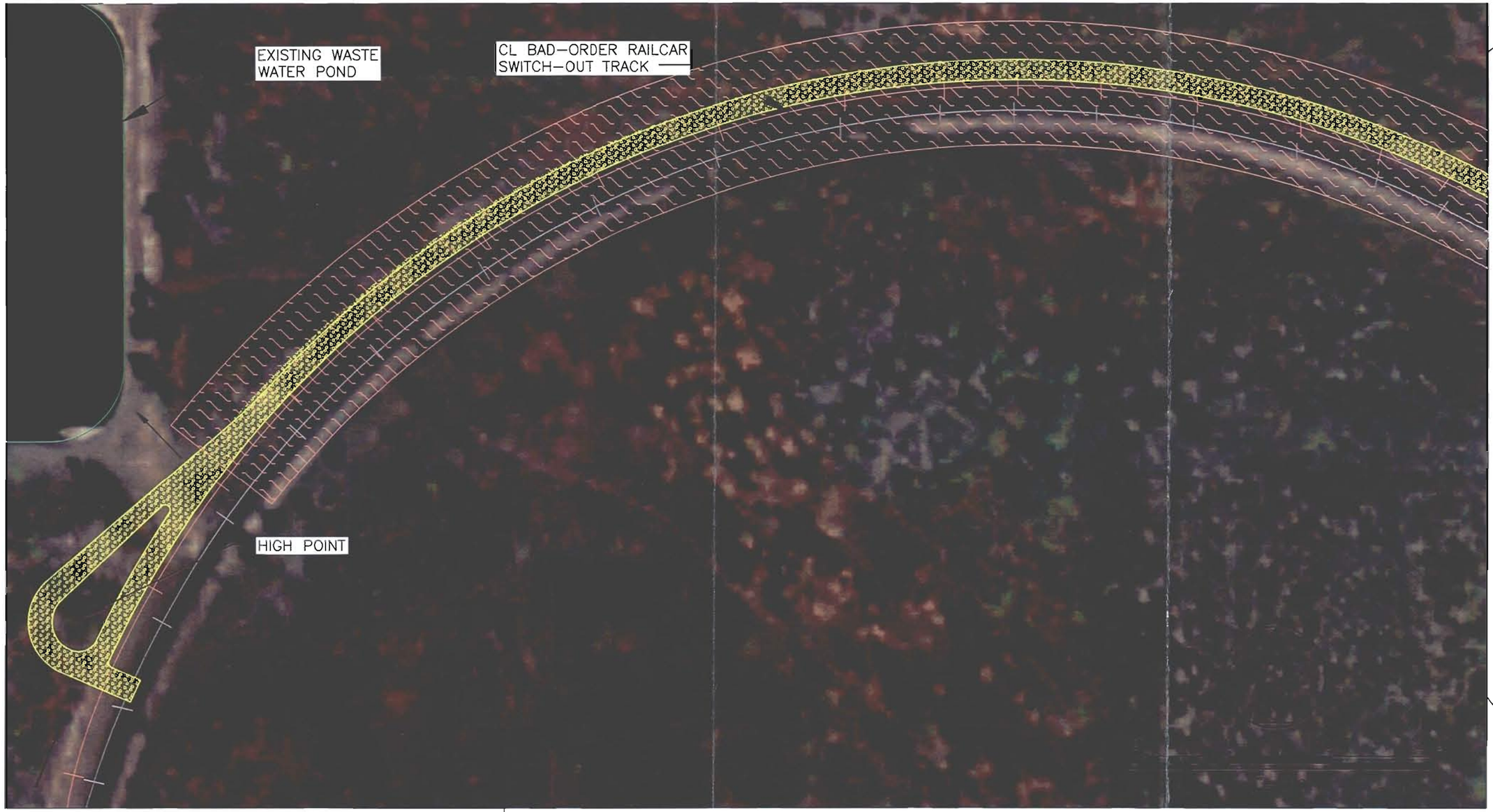
BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0051
DRAWING NUMBER
REV A
CODE
AREA



NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

USERNAME A1ASLO12 B1 1=1 ACAD 10.c7
DATE TIME

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
CHECKED | DATE

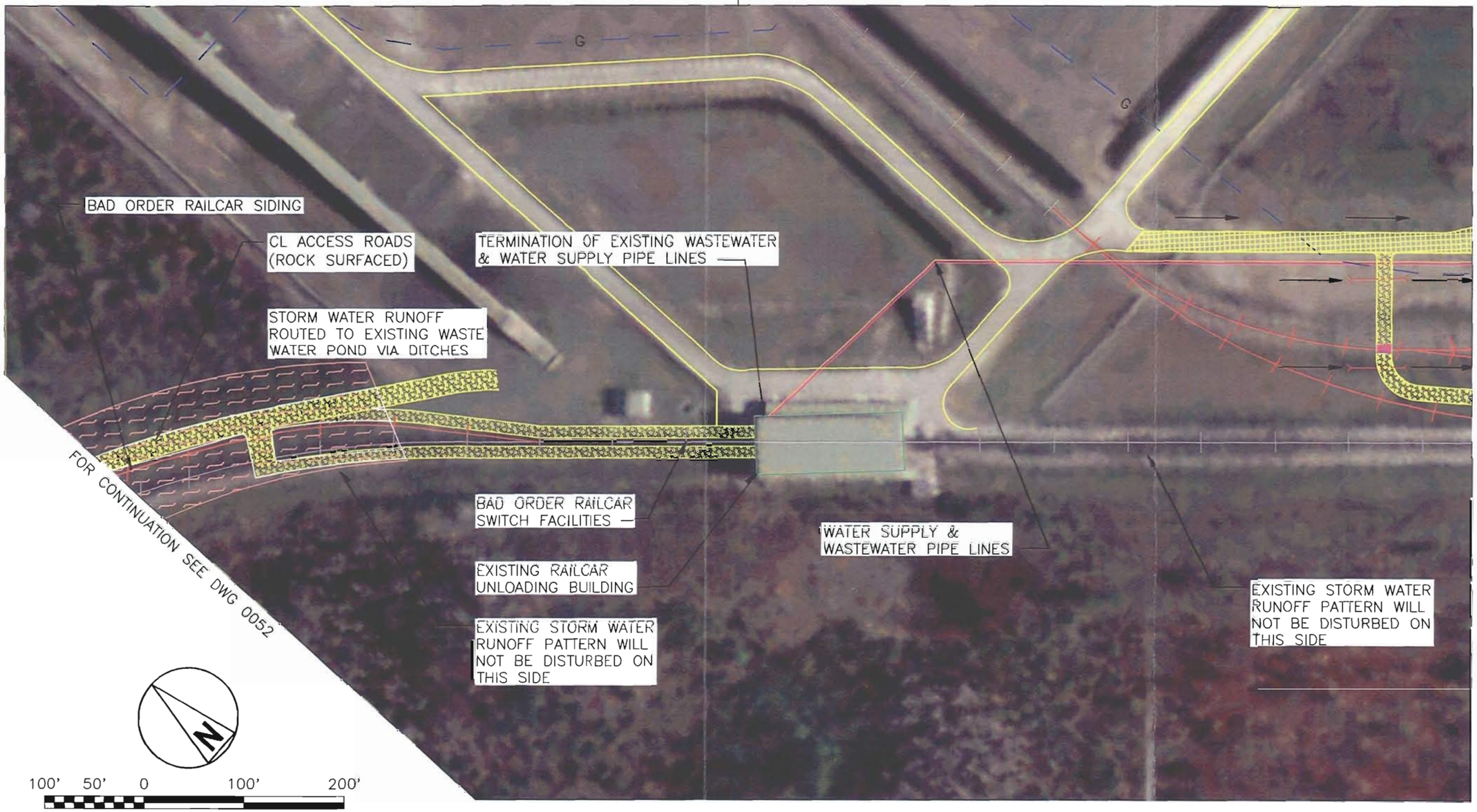
RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0052
DRAWING NUMBER
REV A
CODE
AREA

1 2 3 4 5 6 7

FOR CONTINUATION SEE DWG 0054



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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
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RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0053
DRAWING NUMBER
REV A
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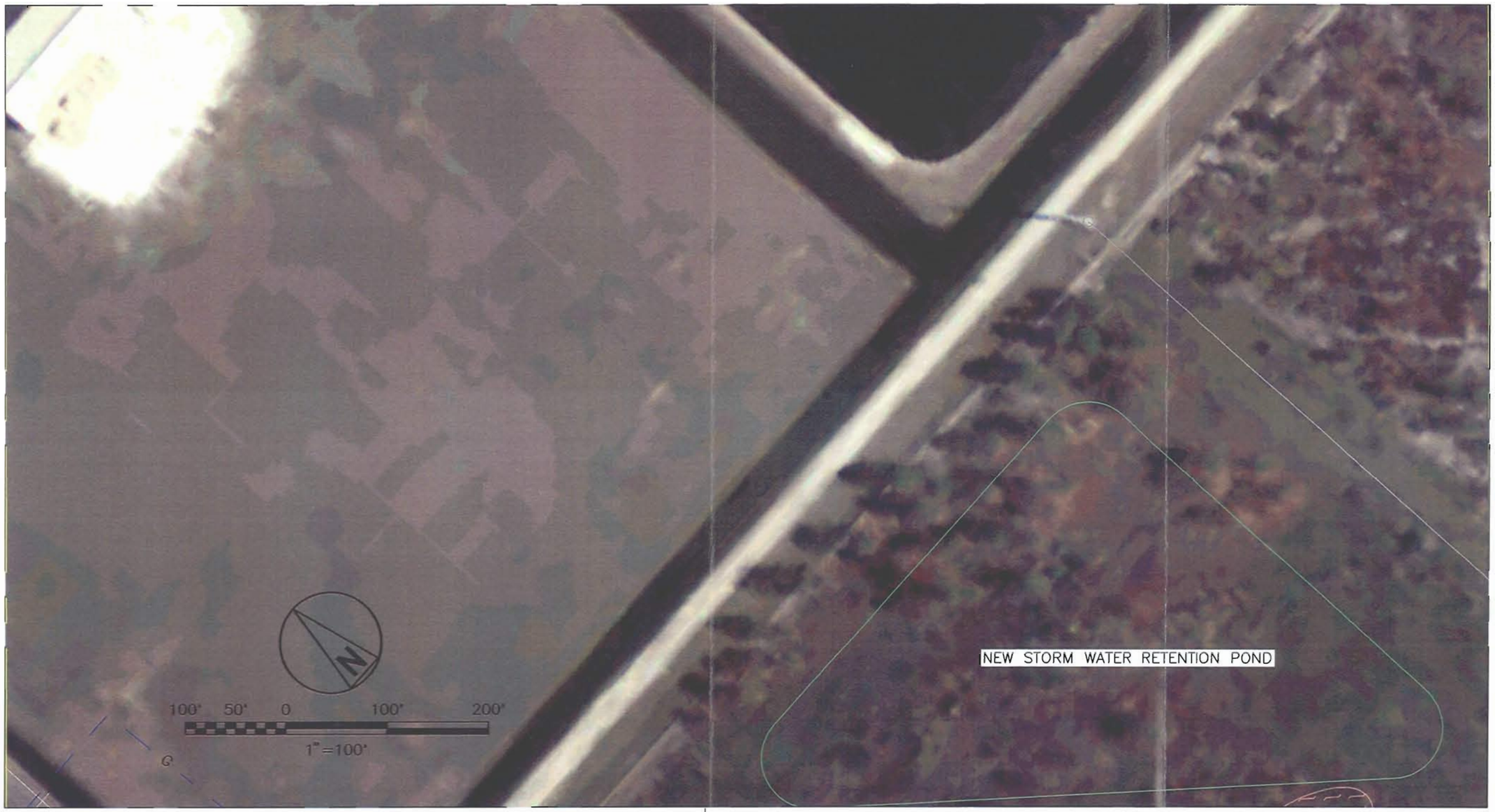
AREA



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DATE TIME
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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
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RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0054
DRAWING NUMBER
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A B C D

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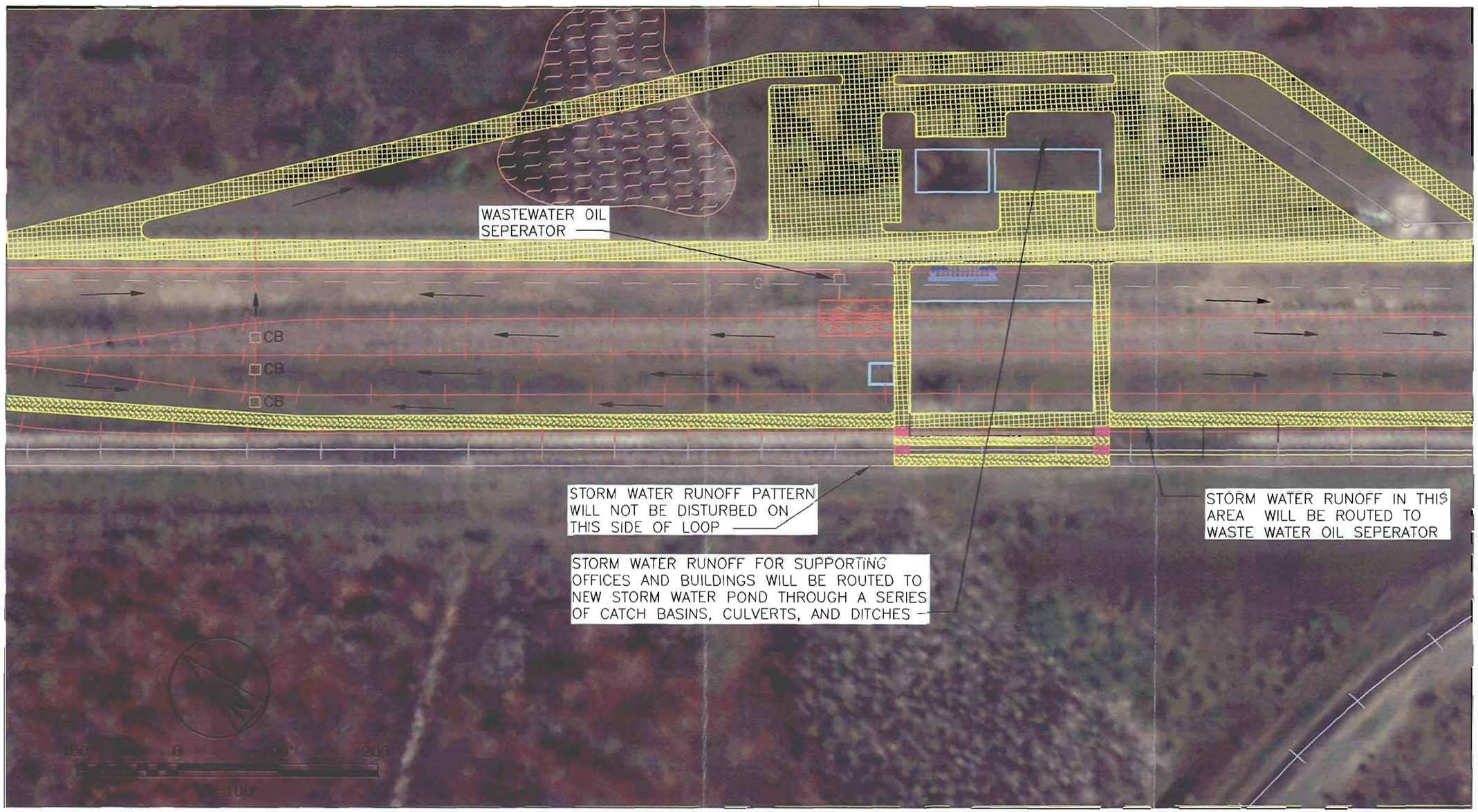
FOR CONTINUATION SEE DWG 0053

FOR CONTINUATION SEE DWG 0056



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BLACK & VEATCH CORPORATION

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RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0055

DRAWING NUMBER

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CODE

AREA

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DATE TIME
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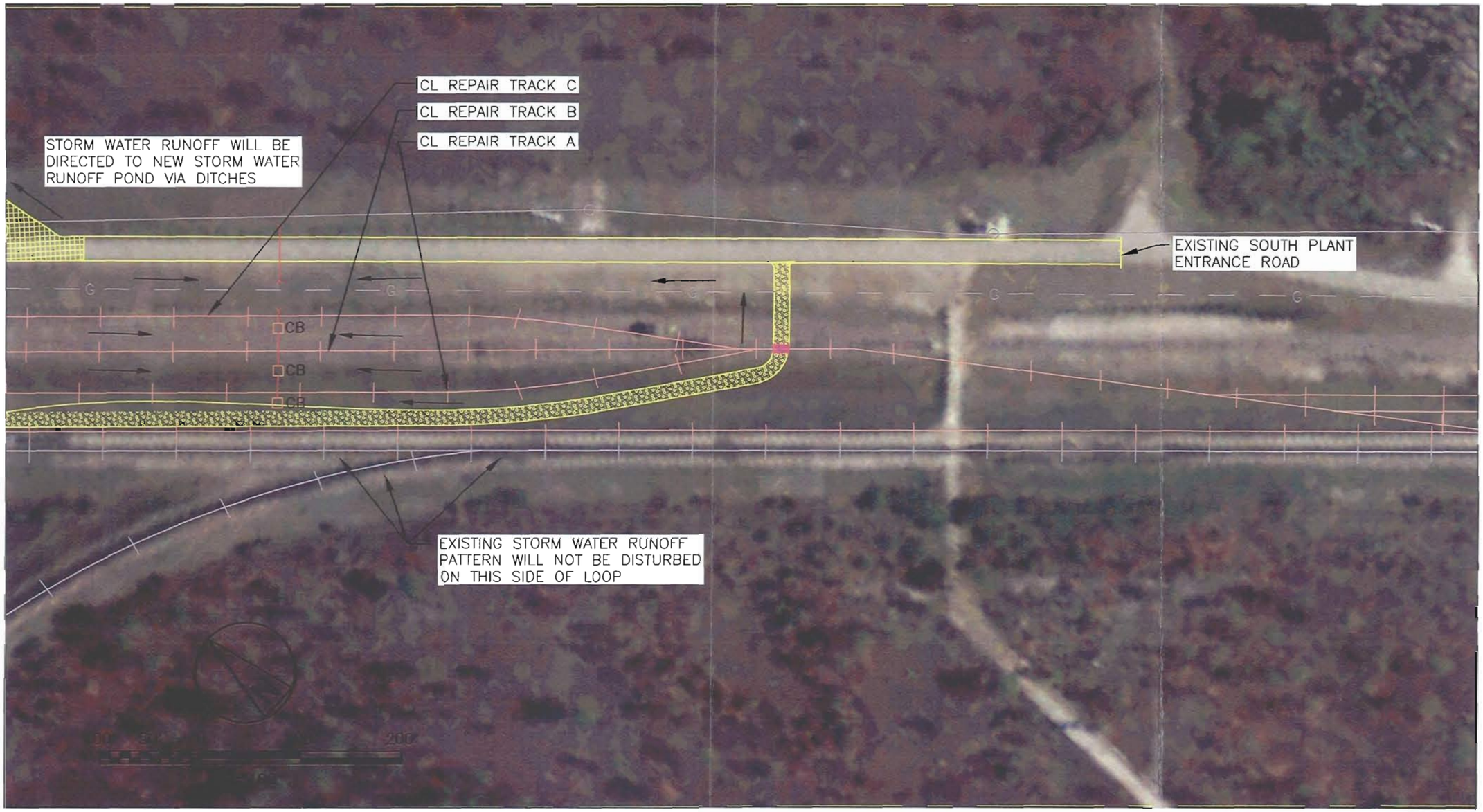

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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
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RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0056
DRAWING NUMBER
REV A
CODE
AREA

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A B C D

FOR CONTINUATION SEE DWG 0056

FOR CONTINUATION SEE DWG 0058

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DATE TIME
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NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

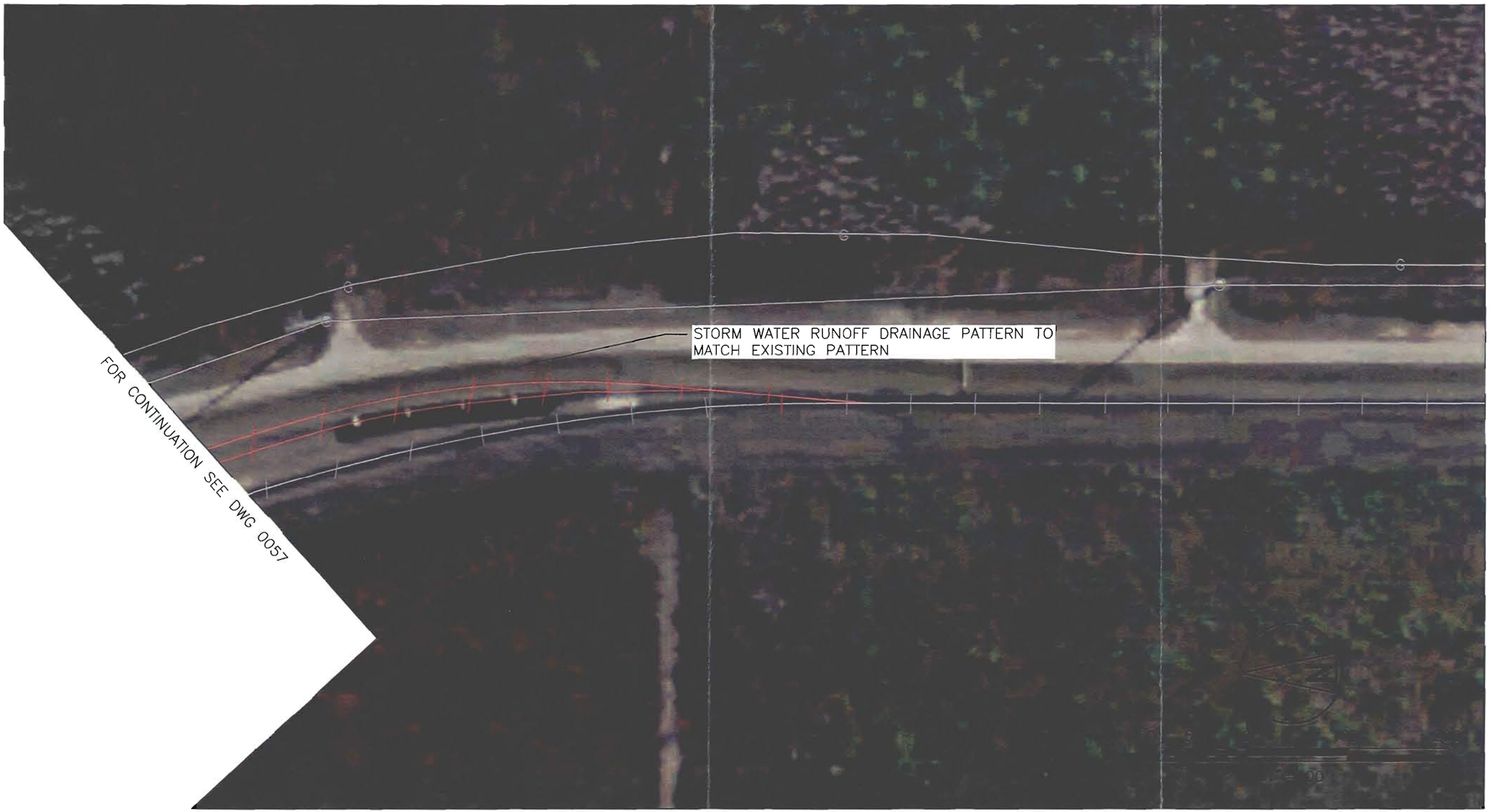
PROJECT 143799-SS-0057

DRAWING NUMBER

REV A

CODE

AREA



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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0058 | DRAWING NUMBER | REV A

CODE | AREA

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Appendix A

Wildlife Report

For

Stanton Energy Center
Combined Cycle Project

Wildlife and Protected Species Observed at Stanton Energy Center

This report identifies endangered, threatened, and other sensitive species that have the potential to occur within 5 miles of SEC which might reasonably be expected to be affected by the construction and operation of Curtis H. Stanton Energy Center Combined Cycle Unit A (Stanton A). Sensitive species include animals listed as endangered or threatened by the USFWS; species listed by the FFWCC in FAC 39-27 as endangered, threatened, or of special concern; species listed as game, fur bearers, or freshwater game fish in FAC 39-1; and, species which are indicators of, endemic to, or are unique to specific plant communities and habitat types.

Endangered and threatened animal species were identified from both state listings and federal listings. Table A-1 shows those animal species that have been observed and that may potentially occur in the area and their current (2000) status. Field surveys for endangered, threatened, other sensitive species, and common species were conducted in 1981. No critical habitat for federally listed species occurs on SEC property. Protected species, which are known to occur on SEC property are discussed below.

Red-cockaded woodpeckers are characterized as inhabiting mature, open pine forests. During the 1981 study, 19 unreported colonies were located on or in the immediate vicinity of SEC property. During surveys, a total of 45 active cavity trees and 35 red-cockaded woodpeckers were observed. Twenty of these active cavity trees occur on SEC property and represent six colonies (refer to Figure A-1). During recent surveys (1999-2000), six colonies and twenty active cavity trees were observed on SEC property. Monitoring required by the Conditions of Certification for Units 1 and 2 will also be performed for Stanton A. The woodpecker habitat is currently managed with periodic prescribed burns. For a more complete discussion of these and other parameters concerning the red-cockaded woodpecker, copies of the *Joint Agency Mitigation Monitoring Plan* for the SEC and the *Progress Report on Red-Cockaded Woodpeckers for the Curtis H. Stanton Energy Center, 1999* can be provided upon request.

Kirtland's warbler may occur as a rare spring or fall transient throughout the southeastern United States. This warbler apparently breeds only in a restricted area of jack pine forest in southern Michigan (Mayfield, 1960). Winter habitat is confined to pinewoods, broadleafed scrub, and Australian pine. This species may occur occasionally in the area during spring and fall migration.

Originally, the Florida black bear ranged throughout Florida. Current populations are mainly centered in Apalachicola, Osceola, and Ocala National Forests, with remnant populations occurring in various parts of the state. According to Hamilton (1943) in

Mammals of the Eastern United States, secluded swamps and forests are areas of preferred habitation for bears. Major areas of occupied habitat within the region are located to the east along the St. John's River and to the north along the Wekiva River. No Florida black bears or bear tracks were observed in the SEC area. The habitat in this area does not appear suitable.

The Florida scrub jay is characteristic of oak scrub communities and is confined mainly to such habitats. Surveys for this bird, conducted in scrub oak communities within SEC boundaries, resulted in an estimate of 4 to 8 family units. Scrub jays were observed in areas adjacent to the Project site.

The eastern indigo snake occurs in peninsular Florida, in a few widely scattered areas of the Georgia Coastal Plain, and in parts of the Florida Panhandle. This snake occupies a wide variety of habitat types. In xeric habitats, the shelter provided by gopher tortoise burrows apparently is a critical factor for the survival of this snake. No indigo snakes were observed on SEC property, although one was sighted within the existing transmission corridor.

The range of the Sherman's fox squirrel is limited to peninsular Florida and, perhaps, southeastern Georgia. Longleaf pine/turkey oak forests seem to be the most frequently used habitat, but sand, scrub, bayheads, pine flatwoods, and borders of cypress swamps are also used. Although optimum habitat is not found onsite, fox squirrels do inhabit some pine flatwoods and various flatwood-wetland ecotones. Too few fox squirrels were sighted to estimate population levels, but two were sighted along the transmission line and four were observed on SEC property; two in pine flatwoods and two in cypress domes.

The gopher tortoise is locally distributed in the Coastal Plain from South Carolina and Florida to eastern Louisiana. In Florida, it may be encountered widely in northern sections with relict, scattered populations occurring in suitable habitats in the south. Preferred habitat consists of old field areas, longleaf pine sandhill, live oak hammock, and beach scrub, usually with abundant herbaceous cover of several types. A few burrows may occur in maintained pastures, mixed swamp, and hydric hammock, but generally these habitats are not utilized. Some important burrow symbionts, which may occur in these same habitats, include the pine snake, indigo snake, Florida mouse, and Florida gopher frog. Other commensals include a large number of invertebrates, eastern diamondback rattlesnake, and various mammals.

Populations of gopher tortoise on SEC property are centered mainly on the higher elevation in the western and south-central portion of the property. In these areas, an average of seven active burrows was recorded per mile of survey.

In the south, bald eagles typically nest estuaries, along large rivers, and around lakes. In Florida, nest sites are usually located in large pines, but also include cypress and mangrove. Bald eagles have been observed east of Project property and along the existing electrical transmission corridors. An eagle's nest was discovered in 2000 on the east side of the makeup pond.

Table A-1 Animals Observed Onsite	
Scientific Name	Common Name
Didelphis virginiana	Virginia opossum
Cryptotis parva	Least shrew
Scalopus aquaticus	Eastern mole
Pipistrellus subflavus	Eastern pipistrelle
Eptesicus fuscus	Big brown bat
Lasiurus borealis	Red bat
Lasiurus seminolus	Seminole bat
Lasiurus intermedius	Northern yellow bat
Nycticeius humeralis	Evening bat
Plecotus rafinesquii	Rafinesque's big-eared bat
Tadarida brasiliensis	Brazillian free-tailed bat
Dasypus novemcinctus	Nine-banded armadillo
Sylvilagus floridanus	Eastern cottontail
Sylvilagus palustris	Marsh rabbit
Oryzamys palustris	Rice rat
Reithrodontomys humulis	Harvest mouse
Peromyscus polionotus	Old-field mouse
Peromyscus gossypinus	Cotton mouse
Peromyscus nuttalli	Golden mouse
Sigmodon hispidus	Cotton rat
Neotoma floridana	Eastern woodrat
Sciurus carolinensis	Gray squirrel
Sciurus niger	Fox squirrel
Glaucomys volans	Southern flying squirrel
Vulpes vulpes	Red fox
Urocyon cinereoargenteusnus	Gray fox
Procyon lotor	Raccoon
Spilogale putorius	Eastern spotted skunk
Mephitis mephitis	Striped skunk
Lynx rufus	Bobcat
Sus scrofa	Wild hog
Odocoileus virginianus	White-tailed deer
Notophthalamus viridescens	Peninsula newt

Table A-1 Animals Observed Onsite	
Scientific Name	Common Name
Scaphiopus holbrooki	Eastern spadefoot toad
Rana areolata	Gopher frog
Rana grylio	Pig frog
Rana utricularia	Southern leopard frog
Gastrophryne carolinensis	Eastern narrow-mouth toad
Bufo querecius	Oak toad
Bufo terrestris	Southern toad
Acris gryllus dorsalis	Florida cricket frog
Hyla cinerea cinerea	Green treefrog
Hyla femoralis	Pine woods treefrog
Hyla gratiosa	Barking treefrog
Hyla squirella	Squirrel treefrog
Pseudacris nigrita	Chorus frog
Limnaoedus ocularis	Little grass frog
Terrapene carolina bauri	Florida box turtle
Gopherus polyphemus	Gopher tortoise
Anolis sagrei	Brown anole
Anolis carolinensis	Green anole
Sceloporus undulatus	Fence lizard
Sceloporus woodi	Florida scrub lizard
Leiolopisma laterale	Ground skink
Eumeces inexpectatus	Southeastern five-lined skink
Cnemidophorus sexlineatus	Six-lined racerunner
Ophisaurus ventralis	Eastern glass lizard
Ophisaurus longicauda	Slender glass lizard
Nerodia sipedon	Banded water snake
Virginia stripula	Rough earth snake
Storeria occipitomaculata	Red-bellied snake
Storeria dekayi	Brown snake
Heterodon platyrhinos	Eastern hognose snake
Heterodon simus	Southern hognose snake
Diadophis punctatus	Ringneck snake
Farancia abacura	Mud snake
Coluber constrictor	Black racer

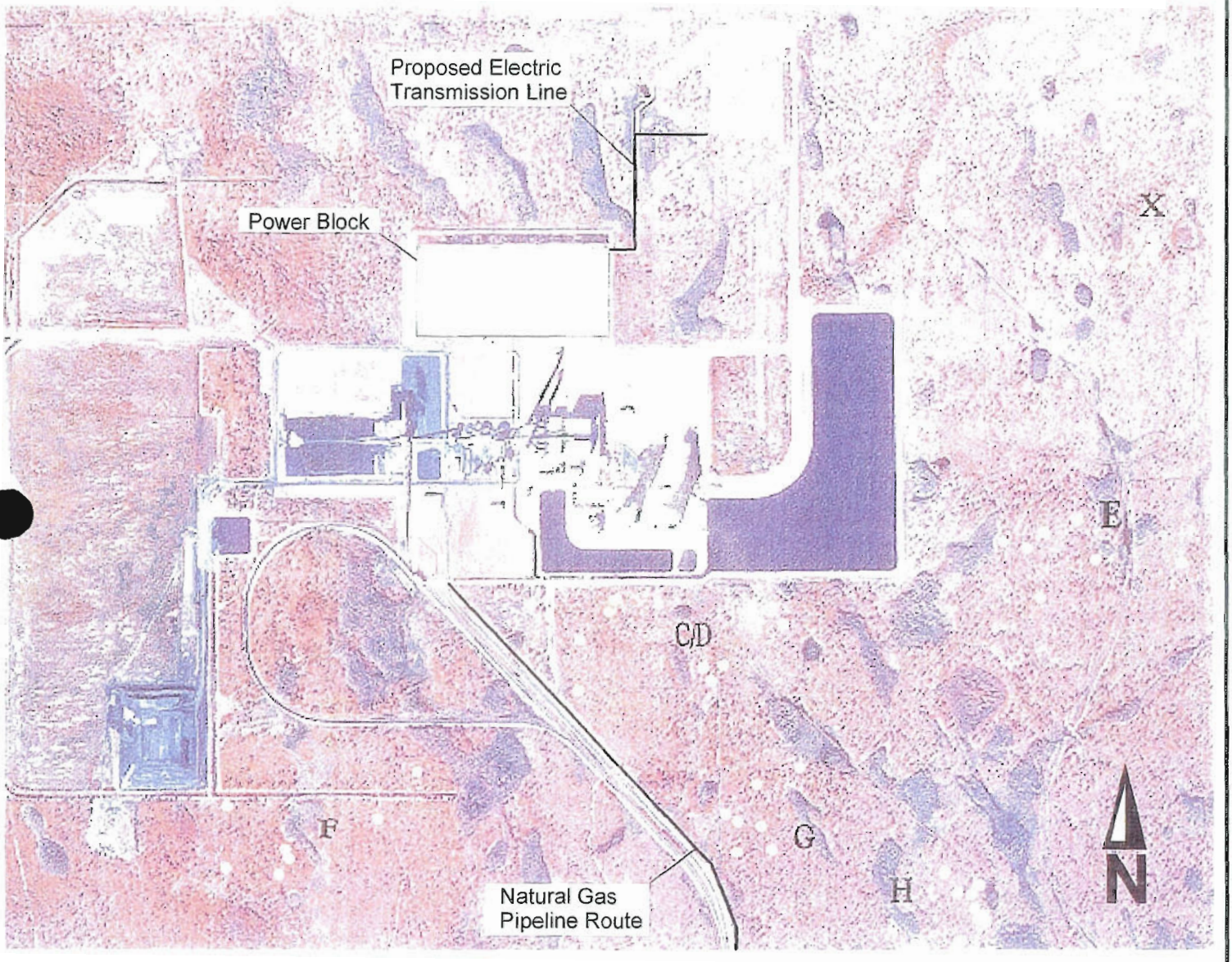
Table A-1 Animals Observed Onsite	
Scientific Name	Common Name
Pituophis melanoleucus	Pine snake
Masticophis flagellum	Eastern coachwhip
Opheodrys aestivus	Rough green snake
Elaphe obsoleta	Rat snake
Drymarchon corais couperi	Indigo snake
Lampropeltis elapsoides	Scarlet kingsnake
Lampropeltis getulus getulus	Eastern kingsnake
Cemophora coccinea	Scarlet snake
Tantilla relicta relicta	Peninsula crowned snake
Micrurus fulvius	Eastern coral snake
Agkistrodon piscivorus conanti	Florida cottonmouth
Sistrurus miliarius barbouri	Dusky pigmy rattlesnake
Crotalus adamanteus	Eastern diamondback rattlesnake
Bubulcus ibis	Cattle egret
Cathartes aura	Turkey vulture
Coragyps atratus	Black vulture
Accipiter striatus	Sharp-shinned hawk
Buteo jamaicensis	Red-tailed hawk
Buteo lineatus	Red-shouldered hawk
Circus cyaneus	Marsh hawk
Pandion haliaetus	Osprey
Falco sparverius	American kestrel
Colinus virginianus	Bobwhite
Charadrius vociferus	Killdeer
Zenaida macroura	Mourning dove
Columbina passerina	Ground dove
Caprimulgus carolinensis	Chuck-will's widow
Chordeiles minor	Common nighthawk
Colaptes auratus	Common flicker
Dryocopus pileatus	Pileated woodpecker
Centurus carolinus	Red-bellied woodpecker
Melanerpes erythrocephalus	Red-headed woodpecker
Sphyrapicus varius	Yellow-bellied sapsucker
Picoides villous	Hairy woodpecker

Table A-1
Animals Observed Onsite

Scientific Name	Common Name
Picoides pubescens	Downy woodpecker
Picoides borealis	Red-cockaded woodpecker
Tyrannus tyrannus	Eastern kingbird
Myiarchus crinitus	Great crested flycatcher
Sayornis phoebe	Eastern phoebe
Iridoprocne bicolor	Tree swallow
Cyanocitta cristata	Blue jay
Corvus brachyrhynchos	Common crow
Corvus ossifragus	Fish crow
Parus carolinensis	Carolina chickadee
Parus bicolor	Tufted titmouse
Sitta pusilla	Brown-headed nuthatch
Regulus calendula	Ruby-crowned kinglet
Troglodytes aedon	House wren
Thryothorus ludovicianus	Carolina wren
Mimus polyglottos	Mockingbird
Dumetella carolinensis	Gray catbird
Turdus migratorius	American robin
Sialia sialis	Eastern bluebird
Polioptila caerulea	Blue-gray gnatcatcher
Lanius ludovicianus	Loggerhead shrike
Vireo griseus	White-eyed vireo
Dendroica coronata	Yellow-rumped warbler
Dendroica pinus	Pine warbler
Dendroica discolor	Prairie warbler
Dendroica palmarum	Palm warbler
Geothlypis trichas	Common yellowthroat
Sturnella magna	Eastern meadowlark
Agelaius pheoniceus	Red-winged blackbird
Quiscalus major	Boat-tailed grackle
Quiscalus quiscula	Common grackle
Piranga rubra	Summer tanager
Cardinalis cardinalis	Cardinal

Table A-1 Animals Observed Onsite	
Scientific Name	Common Name
Haliaeetus leucocephus	Bald eagle
Carduelis tristis	American goldfinch
Pipilo erythrophthalmus	Rufous-sided towhee
Passerculus sandvicensis	Savannah sparrow
Aimophila aestivalis	Bachman's sparrow
Aphelocoma coerulescens	Florida scrub jay
Toxostoma rufum	Brown thrasher
Accipiter cooperii	Cooper's hawk
Meleagris gallopavo	Turkey
Philohela minor	American woodcock
Coccyzus americanus	Yellow-billed cuckoo
Otus asio	Screech owl
Bubo virginianus	Great horned owl
Strix varia	Barred owl
Caprimulgus vociferus	Whip-poor-will
Archilochus colubris	Ruby-throated hummingbird
Catharus guttatus	Hermit thrush
Catharus fuscescens	Veery
Vireo flavifrons	Yellow-throat vireo
Vireo solitarius	Solitary vireo
Vireo olivaceus	Red-eyed vireo
Minotilta varia	Black and white warbler
Protonotaria citrea	Prothonotary warbler
Parula americana	Northern parula
Dendroica dominica	Yellow-throated warbler
Setophaga ruticilla	American redstart
Pilipo erythrophthalmus	Rufous-sided towhee
Melospiza georgiana	Swamp sparrow

Location of Red-Cockaded Woodpecker Clusters and Cavity Trees (Yellow Spots), Curtis H. Stanton Energy Center, Orlando, Florida, 2000.



Source: Progress Report on Red-Cockaded Woodpeckers for the Curtis H. Stanton Energy Center, 1999; DeLotelle & Guthrie, Inc.

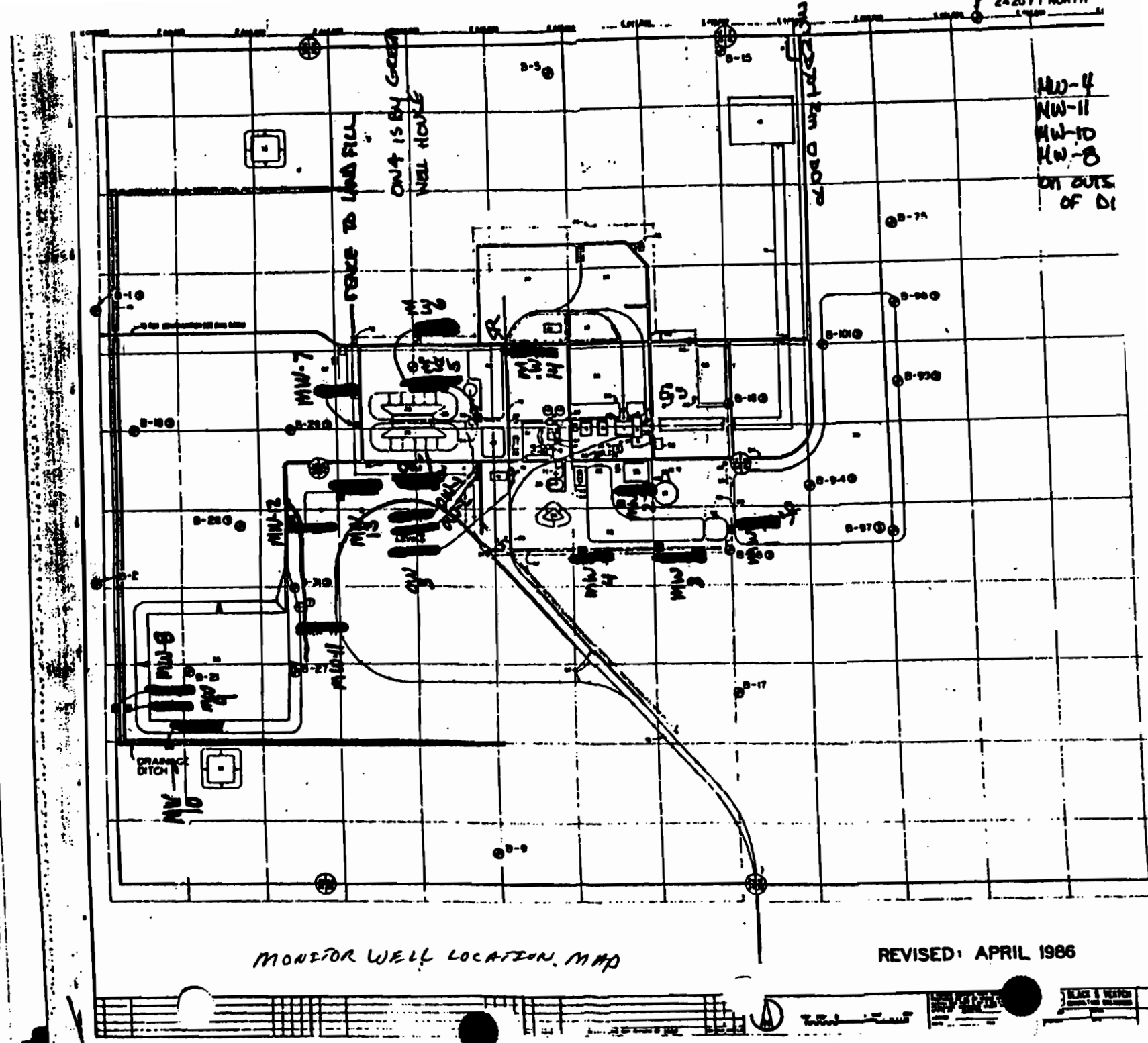
Figure A-1

Appendix B

Monitoring Well Data

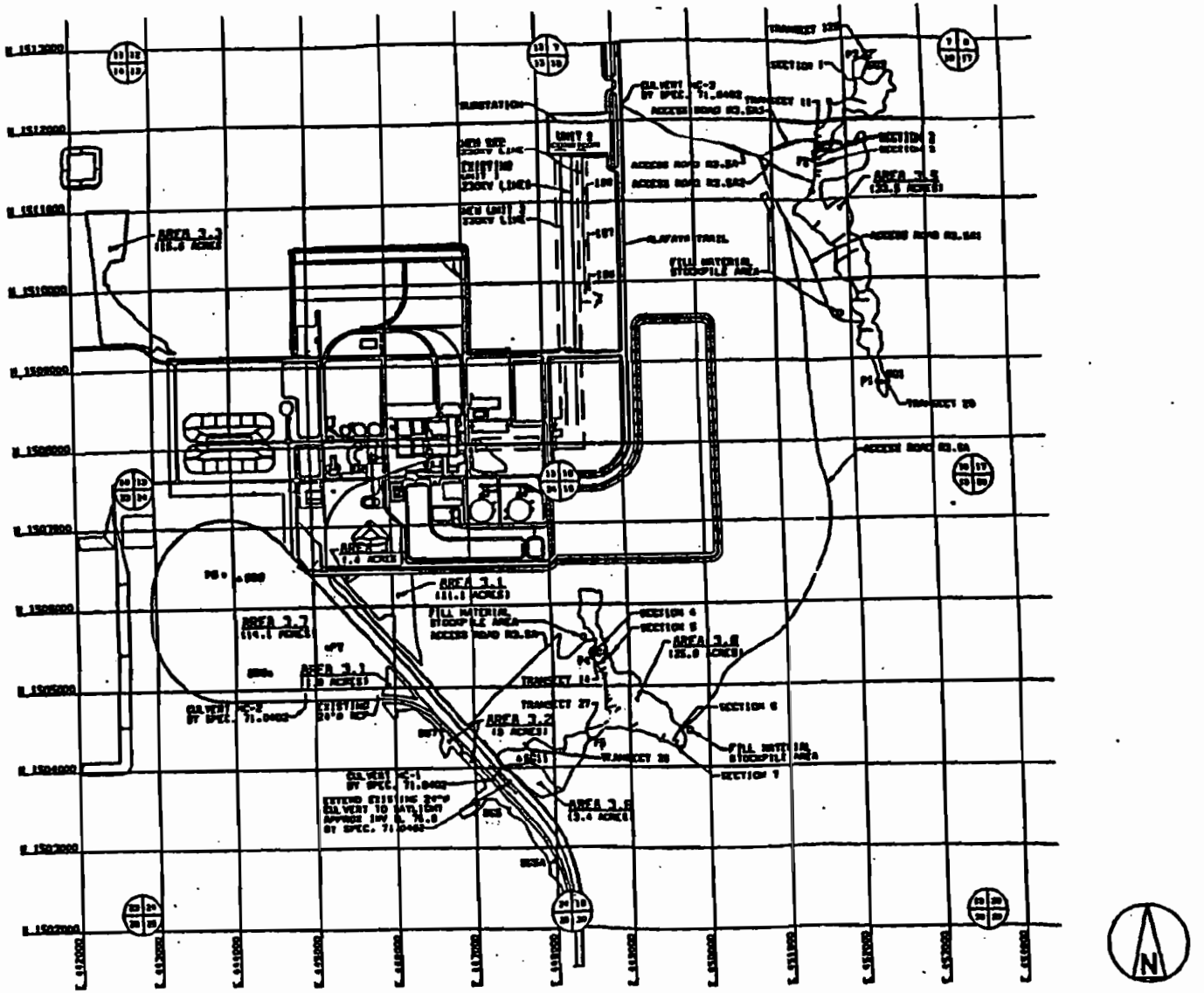
For

Stanton Energy Center



MONITOR WELL LOCATION MAP

REVISED: APRIL 1986



PBSJ POST BUCKLEY SCHUH & JERNIGAN INC

MITIGATION SITE OVERALL PLAN

FIGURE 1

STAFF GAUGES & PIEZOMETER MAP

MW - 1					
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	66.5	53	73	77
Nitrate	10	0.3	0.05	<0.050	<0.050
Total Phosphorus		0.32	0.68	0.34	0.35
Sulfate	250	<1.0	0.5		<0.50
Sulfite		<2.0	<1.0	<2.0	<2.0
Total Dissolved Solids	500	508	490	450	550
Aluminum	0.2	1.3	<0.050	0.37	0.24
Arsenic	0.05	<0.0050	<0.010	0.011	<0.010
Barium	2	0.28	0.33	0.24	0.29
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.010	<0.0050	<0.0050
Calcium		140	140	110	140
Chromium	0.1	<0.010	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	27	33	23	25
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		7.6	8.5	6.7	7.6
Manganese	0.05	0.03	0.036	0.026	0.029
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050
Potassium		1.8	1.8	1.3	1.4
Selenium	0.05	<0.0050	<0.020	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	18	18	15	19
Vanadium	0.049	<0.010	<0.010		<0.010
Zinc	5	<0.050	<0.010	<0.010	<0.010
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050
Conductivity		7500 umhos/cm	750 umhos/cm	390 umhos/cm	800 umhos/cm
Field pH		6.15 Units	6.07 Units	6.1	6.2 pH Units
Field Temp		21.5 ^C	23.1^C	26.0 Deg C	22.1 Deg C
Color		100 pcu	40 pcu	75 pcu	80 pcu
Turbidity		179 NTU	64 NTU	44 NTU	41 NTU
Water Level		10.42 ft	10.53 ft	9.67 ft	8.63 ft
Gross Alpha		5.3+/-1.7 pCi/l	4.4+/-1.4 pCi/l	7.7+/-1.5 pCi/l	5.6+/-1.6 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 1					
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	93	92	72	66
Nitrate	10	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		0.81	0.3	0.32	0.3
Sulfate	250	<0.50	<0.50	<0.50	<0.50
Sulfite		<2.0	<2.0	<2.0	<1
Total Dissolved Solids	500	680	600	580	660
Aluminum	0.2	0.57	0.098	0.59	0.47
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.38	0.31	0.31	0.31
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		160	150	150	130
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	36	28	28	26
Lead	0.015	<0.0050	<0.0050	0.0052	<0.0050
Magnesium		8.6	8.2	8.2	7.9
Manganese	0.05	0.033	0.042	0.029	0.025
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	0.0071	<0.0050	<0.0050	0.025
Potassium		2.2	1.9	2.3	1.5
Selenium	0.05	<0.010	<0.010	0.017	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	20	21	23	20
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.010	<0.010	<0.010	<0.010
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		917 umhos/cm	848 umhos/cm	874 umhos/cm	919 umhos/cm
Field pH		6.2 pH Units	6.0 pH Units	6.3 pH Units	5.9 pH Units
Field Temp		23.3 Deg C	26.2 Deg C	26.5 Deg. C	25.8 Deg. C
Color		300 pcu	250 pcu	250 pcu	120 pcu
Turbidity		120 NTU	30 NTU	15.9 NTU	8.14 NTU
Water Level		8.780 ft	10.5 ft	9.2 ft	9.89 ft
Gross Alpha		5.1+/-1.8 pCi/l	3.3+/_1.8 pCi/l	3.2 +/-1.6 pCi/l	3.8 +/-1.4 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 1						
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	91	106	102	95.2	
Nitrate	10	<0.050	BDL	BDL	BDL	
Total Phosphorus		0.26	0.35	0.11	0.39	
Sulfate	250	<0.50	BDL	0.39	BDL	
Sulfite		64	1.28	0.64	1.92	
Total Dissolved Solids	500	590	621	535	589	
Aluminum	0.2	3.4	1.61	1.43	0.055	
Arsenic	0.05	<0.010	BDL	0.001	0.002	
Barium	2	0.33	0.336	0.329	0.316	
Beryllium	0.004	<0.0040	BDL	BDL	<0.001	
Cadmium	0.005	<0.0050	0.001	BDL	<0.001	
Calcium		130	167	143	137.1	
Chromium	0.1	0.0098	0.003	BDL	<0.002	
Copper	1	<0.010	0.02	0.02	<0.01	
Iron	0.3	34	1.1	26.5	24.5	
Lead	0.015	<0.0050	0.004	BDL	0.001	
Magnesium		9	7.86	8.1	8.07	
Manganese	0.05	0.048	0.05	0.03	0.04	
Molybdenum	0.035	<0 050	0.005	BDL	0.005	
Nickel	0.1	0.018	0.024	0.006	0.006	
Potassium		2	1.99	2.33	2.09	
Selenium	0.05	<0.010	BDL	BDL	BDL	
Silver	0.1	<0.010	0.001	0.001	<0.001	
Sodium	160	26	27	21	25	
Vanadium	0.049	<0.010				
Zinc	5	0.28	0.01	BDL	0.02	
Mercury	0.002	0.0005	BDL	BDL	BDL	
Conductivity		871 umhos/cm	946 Us	918 Us	870 us	
Field pH		5.7 pH Units	5.68 pH units	5.05 pH units	4.94 pH/units	
Field Temp		26.6 Deg. C	25.6 C	26.1 C	19.4 C	
Color		280 pcu	>30 CU	>30 CU	>30 CU	
Turbidity		39.4 NTU	48 NTU	26.0 NTU	.79NTU	
Water Level		10.3 ft	9.41 ft	8.17 ft	8.51 ft.	
Gross Alpha		5.0 +/-1.5 pCi/	2.8 +/-2.8 pCi/	10.8+/-1.7 pCi	34.8+/-5.1pCi/L	
GREEN - laboratory error						
RED - maximum contaminant level						
BDL - Below Detection Limit						

MW - 1							
2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4		
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l		
Chloride	250	98	99.8	91.3			
Nitrate	10	BDL	BDL	<0.10			
Total Phosphorus		0.61	0.47	0.32			
Sulfate	250	0.117	BDL	0.14			
Sulfite		3.2	4.8	4			
Total Dissolved Solids	500	529	542	663			
Aluminum	0.2	1	0.43	0.6			
Arsenic	0.05	0.006	0.003	0.006			
Barium	2	0.438	0.317	0.55			
Beryllium	0.004	<0.001	<0.001	<0.001			
Cadmium	0.005	<0.001	<0.001	<0.001			
Calcium		141.8	151	136.6			
Chromium	0.1	<0.002	0.002	BDL			
Copper	1	0.01	0.01	BDL			
Iron	0.3	37.3	27	26			
Lead	0.015	0.006	0.009	0.002			
Magnesium		8.36	8.75	9.74			
Manganese	0.05	0.03	0.05	0.06			
Molybdenum	0.035	<0.005	<.005	0.004			
Nickel	0.1	0.01	0.008	0.007			
Potassium		2.31	3.01	2.56			
Selenium	0.05	BDL	<0.001	0.007			
Silver	0.1	<0.001	<0.001	<0.001			
Sodium	160	29	27.5	24.9			
Vanadium	0.049		<.005				
Zinc	5	0.01	0.12	0.07			
Mercury	0.002	BDL	<0.0005	BDL			
Conductivity		922 US	924.3 us	942 us			
Field pH		5.8 pH units	6.07 pH units	5.90 pH Units			
Field Temp			25.47 C	26.19 C			
Color		>30 CU	>30 CU	>30 CU			
Turbidity		30 NTU	50 NTU	46 NTU			
Water Level		9.1 ft.	10.67 ft.	8.81 ft.			
Gross Alpha		6.3-/+2pCi/l	4.4+/-2.8 pCi/L	4.5+/-2.8 pCi/L			
GREEN - laboratory error							
RED - maximum contaminant level							
	value preceding the "U" indicates the limit of detection for that compound,						
	based on the dilution(and moisture content if soil/sediment).						

MW - 2					
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/l	mg/l	mg/l	mg/l	mg/l
Chloride	250	24.7	25	14	18
Nitrate	10	0.03	0.062	<0.050	<0.050
Total Phosphorus		0.81	1.2	0.38	0.21
Sulfate	250	39	37		38
Sulfite		<2.0	<1.0	<2.0	<2.0
Total Dissolved Solids	500	320	320	320	290
Aluminum	0.2	2.1	1.2	2.1	0.74
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010
Barium	2	0.17	0.25	0.21	0.26
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		83	94	61	82
Chromium	0.1	<0.010	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	3	2.7	2.6	2.7
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		2.9	4.5	4.6	5.1
Manganese	0.05	0.01	0.011	0.012	0.014
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050
Potassium		3.1	3.1	2.5	2.7
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	18	17	13	14
Vanadium	0.049	0.018	0.019		<0.010
Zinc	5	<0.050	<0.010	<0.010	<0.10
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050
Conductivity		430 umhos/cm	490 umhos/cm	240 umhos/cm	490 umhos/cm
Field pH		6.36 Units	6.06 Units	5.9	6.3 pH Units
Field Temp		20.8 ^ C	23.6 ^ C	25.1 Deg C	23.6 Deg C
Color		50 pcu	30 pcu	25 pcu	10 pcu
Turbidity		46 NTU	91 NTU	0.24 NTU	12 NTU
Water Level		6.38 ft	5.52 ft	4.49 ft	2.93 ft
Gross Alpha		3.9+/-1.0 pCi/l	7.3+/-1.1 pCi/l	8.3+/-1.3 pCi/l	4.2+/-2.9 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 2

1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 1 DUP	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	28	26	13	10	16
Nitrate	10	<0.050	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		0.88	0.56	0.29	0.28	0.42
Sulfate	250	46	45	8.6	9.2	29
Sulfite		<2.0	<2.0	<2.0	<2.0	2.6
Total Dissolved Solids	500	350	360	330	360	350
Aluminum	0.2	1.1	1.2	0.27	0.8	3.9
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Barium	2	0.31	0.31	0.13	0.12	0.16
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		88	88	120	130	87
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010	<0.010
Iron	0.3	3.3	3.6	0.87	0.75	1.7
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		4.7	4.7	2.2	1.9	3.3
Manganese	0.05	0.015	0.015	<0.010	0.011	0.011
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		3.2	3.1	2.2	2.5	2.9
Selenium	0.05	<0.010	<0.010	<0.010	0.011	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	14	14	9.4	11	14
Vanadium	0.049	0.014	0.015	<0.010	<0.010	<0.010
Zinc	5	<0.010	0.017	<0.010	<0.010	0.011
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		489 umhos/cm	489 umhos/cm	536 umhos/cm	602 umhos/cm	504 umhos/cm
Field pH		6.2 pH Units	6.2 pH Units	6.2 pH Units	6.8 pH Units	6.3 pH Units
Field Temp		23.6 Deg C	23.6 Deg C	24.9 Deg C	25.7 Deg. C	25.2 Deg. C
Color		200 pcu	200 pcu	15 pcu	50 pcu	80 pcu
Turbidity		67 NTU	72 NTU	8.7 NTU	9.03 NTU	25.1 NTU
Water Level		3.760 ft	3.760 ft	5.84 ft	4.58 ft	6.18 ft
Gross Alpha		5.9+/-2.2 pCi/l	6.5+/-2.0 pCi/l	<1.4+/-0.9 pCi	3.1 +/-1.2 pCi/	2.7 +/-1.0 pCi/l
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 2					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	8	20.2	11.4	22.1
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		0.32	0.22	0.05	0.63
Sulfate	250	9.7	41.7	11.7	43.4
Sulfite		1	2.56	1.28	1.92
Total Dissolved Solids	500	340	324	371	265
Aluminum	0.2	<0.050	0.533	0.085	5.1
Arsenic	0.05	<0.010	BDL	BDL	<0.001
Barium	2	0.13	0.239	0.195	0.319
Beryllium	0.004	<0.0040	BDL	BDL	0.002
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		100	92	114	39.5
Chromium	0.1	<0.0050	0.003	0.003	0.002
Copper	1	<0.010	BDL	BDL	0.01
Iron	0.3	0.98	7.25	1.14	2.8
Lead	0.015	<0.0050	0.002	BDL	0.001
Magnesium		2.2	6.11	3	5.57
Manganese	0.05	<0.010	0.02	BDL	0.04
Molybdenum	0.035	<0.050	0.004	BDL	0.002
Nickel	0.1	<0.0050	0.012	BDL	0.006
Potassium		2.4	3.48	2.66	3.71
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	11	18	11.1	20
Vanadium	0.049	<0.010			
Zinc	5	0.011	0.01	BDL	0.02
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		589 umhos/cm	489 uS	611 Us	581 us
Field pH		6.6 pH Units	6.09 pH Units	6.21pH units	6.01 pH/units
Field Temp		25.7 Deg. C	26.2 C	23.9 C	18.6 C
Color		15 pcu	>30 CU	>30 CU	>30 CU
Turbidity		129 NTU	18 NTU	26 NTU	19.02 NTU
Water Level		6.84 ft	5.41 ft	4.39 ft	4.21 ft.
Gross Alpha		2.4 +/-1.0 pCi/	3.6+/-2.8 pCi/l	6.6+/-2.3 pCi/l	7+/-2.4 pCi/L
GREEN - laboratory error					
RED - maximum contaminant level					
BDL - Below Detection Limit					

MW - 2					
2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	23.5	30.6	14.2	
Nitrate	10	0.045	BDL	<0.10	
Total Phosphorus		0.5	0.58	0.59	
Sulfate	250	41.7	52	12.9	
Sulfite		3.2	5	3	
Total Dissolved Solids	500	273	266	364	
Aluminum	0.2	3.42	1.4	1.32	
Arsenic	0.05	0.003	<0.001	0.001	
Barium	2	0.36	0.269	0.5	
Beryllium	0.004	0.001	0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	
Calcium		58.2	50.8	106	
Chromium	0.1	0.003	0.002	BDL	
Copper	1	<0.01	<0.01	BDL	
Iron	0.3	13.4	4	2.82	
Lead	0.015	0.005	0.002	0.002	
Magnesium		7	6.25	2.82	
Manganese	0.05	<0.02	0.03	0.02	
Molybdenum	0.035	<0.005	<0.005	0.003	
Nickel	0.1	0.002	<0.005	BDL	
Potassium		3.83		2.61	
Selenium	0.05	BDL	<0.001	0.005	
Silver	0.1	<0.001	<0.001	<0.001	
Sodium	160	21	22.4	11.5	
Vanadium	0.049		0.013		
Zinc	5	<0.01	0.09	0.04	
Mercury	0.002	BDL	<0.0005	BDL	
Conductivity		469 us	472.4 us	601 us	
Field pH		5.79 pH units	5.88 pH units	6.46 pH units	
Field Temp			26.02 C	26.59 C	
Color		>30 CU	>30 CU	>30 CU	
Turbidity		14 NTU	20 NTU	17 NTU	
Water Level		5.4 FT	6.08 ft.	5.08 ft.	
Gross Alpha		4.4+/-2.2 pCi/l	.5+/-2.8 pCi/L	1.60+/-2.8pCi/L	
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 3							
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 3 DUP	QTR 4	QTR 4 DUP
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	8.4	9.2	4.2	4.2	6.1	5.8
Nitrate	10	<0.02	0.05	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		0.07	0.034	0.059	0.06	0.035	0.029
Sulfate	250	<1.0	0.5			<0.50	<0.50
Sulfite		<2.0	<1.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	500	160	190	160	170	92	150
Aluminum	0.2	0.18	0.11	0.13	0.12	0.11	0.1
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010
Barium	2	0.055	0.056	0.046	0.046	0.051	0.051
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0050	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		50	56	44	43	37	37
Chromium	0.1	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010
Iron	0.3	0.48	0.05	0.36	0.36	0.42	0.41
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		1.3	1.6	1.3	1.3	1.4	1.4
Manganese	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		1.3	1.4	1	1	0.98	1
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	5.3	5.8	4.4	4.5	5.1	5.2
Vanadium	0.049	<0.010	<0.010			<0.010	<0.010
Zinc	5	<0.050	<0.010	<0.10	<0.010	<0.010	0.011
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		244 umhos/cm	270 umhos/cm	220 umhos/cm	220 umhos/cm	210 umhos/cm	220 umhos/cm
Field pH		6.34 units	6.17 Units	6.4	6.4	6.1 pH Units	6.1 pH Units
Field Temp		21.1 ^ C	22.4 ^ C	25.0 Deg. C	25.0 ^ C	23.8 Deg. C	23.9 Deg. C
Color		20 pcu	20 pcu	15 pcu	10 pcu	<5.0 pcu	5.0 pcu
Turbidity		7.10 NTU	7.1 NTU	0.82 NTU	0.70 NTU	0.44 NTU	0.53 NTU
Water Level		7.25 ft	6.67 ft	6.51 ft	6.51 ft	4.75 ft	4.75 ft
Gross Alpha		<1.7+/-1.2 pCi	1.7+/-0.8 pCi/l	<1+/-0.7 pCi/l	3.2 +/-0.8 pCi/	<2+/- 1.5 pCi/l	<1.9+/-1.4 pCi/
GREEN - laboratory error							
RED - maximum contaminant level							

MW - 3						
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	13	6.7	1.6	6.1	
Nitrate	10	<0.050	<0.050	<0.050	<0.050	
Total Phosphorus		0.21	<0.010	0.077	0.06	
Sulfate	250	<0.50	<0.50	<0.50	<0.50	
Sulfite		<2.0	<2.0	<2.0	1.3	
Total Dissolved Solids	500	160	160	120	120	
Aluminum	0.2	0.36	0.15	0.29	0.48	
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010	
Barium	2	0.057	0.052	0.055	0.056	
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	
Calcium		41	46	41	29	
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	
Copper	1	<0.010	<0.010	<0.010	<0.010	
Iron	0.3	0.9	0.38	0.39	0.43	
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium		1.5	1.5	1.7	1.6	
Manganese	0.05	<0.010	<0.010	<0.010	<0.010	
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050	
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050	
Potassium		1.2	1.2	1.4	1.1	
Selenium	0.05	<0.010	<0.010	<0.010	<0.010	
Silver	0.1	<0.010	<0.010	<0.010	<0.010	
Sodium	160	4.6	5.2	5.3	4.9	
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010	
Zinc	5	<0.010	<0.010	<0.010	0.024	
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050	
Conductivity		267 umhos/cm	233 umhos/cm	238 umhos/cm	183 umhos/cm	
Field pH		6.1 pH Units	5.1 pH Units	6.2 pH Units	5.3 pH Units	
Field Temp		22.9 Deg C	24.3 Deg C	26.1 Deg. C	25.4 Deg. C	
Color		45 pcu	<5.0 pcu	50 pcu	20 pcu	
Turbidity		13 NTU	4.0 NTU	1.74 NTU	3.63 NTU	
Water Level		5.530 ft	7.17 ft	5.82 ft	6.53 ft	
Gross Alpha		<2.3+/-1.6 pCi	3.2+/-1.7 pCi/l	2.3 +/-0.8 pCi/	1.7 +/-0.7 pCi/l	
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 3					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	5.6	7.44	6.93	6.87
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		0.011	0.22	0.22	BDL
Sulfate	250	0.53	1.25	0.4	1.63
Sulfite		2.6	3.2	1.3	1.92
Total Dissolved Solids	500	62	64	126	110
Aluminum	0.2	0.27	0.571	0.45	0.378
Arsenic	0.05	<0.010	0.001	0.001	<0.001
Barium	2	0.057	0.246	0.068	0.111
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		13	98.7	28.6	21.5
Chromium	0.1	<0.0050	0.001	BDL	<0.002
Copper	1	<0.010	BDL	BDL	<0.01
Iron	0.3	0.63	6	0.49	0.38
Lead	0.015	<0.0050	0.002	BDL	0.001
Magnesium		1.5	6.14	2.04	1.95
Manganese	0.05	<0.010	0.02	BDL	BDL
Molybdenum	0.035	<0.050	0.005	BDL	0.003
Nickel	0.1	<0.0050	0.003	BDL	BDL
Potassium		0.81	3.61	1.26	1.38
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	4.8	5.8	5	5.4
Vanadium	0.049	<0.010			
Zinc	5	<0.010	BDL	BDL	0.01
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		159 umhos/cm	115 Us	190 Us	190 us
Field pH		5.3 pH Units	5.21 pH units	6.06pH units	5.96 pH units
Field Temp		24.6 Deg. C	25.2 C	24.5 C	19.1 C
Color		10 pcu	10 CU	>30 CU	18 CU
Turbidity		1.85 NTU	1.5 NTU	3.1 NTU	.39 NTU
Water Level		6.25 ft	5.96 ft	5.14 ft	4.92 ft
Gross Alpha		2.6 +/-1.0 pCi/	0.3+/-0.6 pCi/l	7.0+/-1.7 pCi/l	1.3+/-.9 pCi/L
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 3

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 3 DUP	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/l	mg/ l
Chloride	250	13.8	14	15.5	15.6	
Nitrate	10	0.015	BDL	<0.10	<0.10	
Total Phosphorus		<0.05	0.05	0.007	0.05	
Sulfate	250	2.7	1.97	2.3	2.21	
Sulfite		2.6	3.6	2.8	2.8	
Total Dissolved Solids	500	90	77	90	92	
Aluminum	0.2	0.21	0.16	0.17	0.15	
Arsenic	0.05	<0.001	<0.001	0.004	0.001	
Barium	2	0.72	0.057	0.32	0.26	
Beryllium	0.004	<0.001	<0.001	<0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	<0.001	
Calcium		16.6	15.8	13.8	14.8	
Chromium	0.1	<0.002	0.002	BDL	0.005	
Copper	1	<0.01	<0.01	BDL	BDL	
Iron	0.3	0.63	0.66	0.46	0.52	
Lead	0.015	0.002	<0.001	0.001	0.001	
Magnesium		2.19	2	1.8	1.89	
Manganese	0.05	<0.02	0.03	BDL	0.02	
Molybdenum	0.035	<0.005	<0.005	0.006	0.003	
Nickel	0.1	<0.001	<0.005	BDL	BDL	
Potassium		1.11	1.11	1.26	1.37	
Selenium	0.05	BDL	0.09	0.057	0.008	
Silver	0.1	<0.001	<0.001	<0.001	<0.001	
Sodium	160	7.9	7.6	7.19	7.29	
Vanadium	0.049		<0.005			
Zinc	5	<0.01	8	0.04	0.04	
Mercury	0.002	BDL	<0.0005	BDL	BDL	
Conductivity		145 us	147.6 us	135 us	135 us	
Field pH		5.41 pH units	5.51 pH units	5.29 pH Units	5.29 pH units	
Field Temp			26.37 c	25.58 C	25.58 C	
Color		18 CU	8 CU	7 CU	8 CU	
Turbidity		2.1 NTU	1.6 NTU	1.9 NTU	2.3 NTU	
Water Level		5.34 FT	6.85 ft	5.25 ft.	5.25 ft.	
Gross Alpha		1.3+/-pCi/l	.8+/-2.8 pCi/L	<2.10+/-2.8pCi/l	1.6+/-2.8 pCi/L	
GREEN - laboratory error						
RED - maximum contaminant level						

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

MW - 4				
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS				
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	15.3	17	8.8	11
Nitrate	10	<0.02	0.084	<0.050	<0.050
Total Phosphorus		<0.01	0.017	0.011	0.018
Sulfate	250	<1.0	1.6		<0.50
Sulfite		<2.0	2.4	<2.0	<2.0
Total Dissolved Solids	500	48	66	50	58
Aluminum	0.2	0.61	0.31	0.48	0.3
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010
Barium	2	0.037	0.039	0.033	0.035
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		1.8	2.2	1.7	1.7
Chromium	0.1	<0.010	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.81	0.71	0.52	0.54
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		<1.0	1.1	0.89	0.86
Manganese	0.05	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050
Potassium		<1.0	0.99	0.82	0.8
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	6.5	7.3	5.9	6.5
Vanadium	0.049	<0.010	<0.010		<0.010
Zinc	5	<0.050	<0.010	<0.010	0.015
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050
Conductivity		60 umhos/cm	125 umhos/cm	60.0 umhos/cm	70.0 umhos/cm
Field pH		4.96 Units	4.67 Units	4.7	5.5 pH Units
Field Temp		20.3 ^ C	2.8 ^ C	24.5 Deg C	21.4 Deg. C
Color		10 pcu	10 pcu	<5.0 pcu	<5.0 pcu
Turbidity		7.20 NTU	10 NTU	2.1 NTU	1.2 NTU
Water Level		7.17 ft	7.01 ft	6.47 ft	4.23 ft
Gross Alpha		0.7+/-0.6 pCi/l	<1.4+/-0.9 pCi	1.1+/-0.6 pCi/l	1.6+/-0.8 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 4						
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	QTR 4 DUP
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	10	11	9.5	9.7	9.8
Nitrate	10	<0.050	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		<0.010	0.3	0.054	0.057	<0.05
Sulfate	250	0.68	2.3	0.61	<0.50	<0.50
Sulfite		<2.0	<2.0	<2.0	7	7.7
Total Dissolved Solids	500	57	48	25	54	49
Aluminum	0.2	0.4	0.32	0.31	0.3	0.29
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Barium	2	0.032	0.033	0.036	0.033	0.034
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		1.2	1.4	1.9	1.7	1.8
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.5	0.48	0.51	0.46	0.47
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		0.87	0.93	0.92	0.8	0.83
Manganese	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		0.75	0.91	1.1	0.84	0.82
Selenium	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	5.7	6.6	6.2	5.5	5.6
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.010	<0.010	<0.010	<0.010	0.013
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		66.0 umhos/cm	61.0 umhos/cm	62.0 umhos/cm	60.0 umhos/cm	60.0 umhos/cm
Field pH		5.3 pH Units	4.7 pH Units	5.0 pH Units	5.3 pH Units	5.2 pH Units
Field Temp		22.8 Deg C	23.2 Deg C	24.7 Deg. C	25.4 Deg. C	25.4 Deg. C
Color		15 pcu	<5.0 pcu	20 pcu	10 pcu	5.0 pcu
Turbidity		6.2 NTU	0.70 NTU	0.720 NTU	2.12 NTU	2.14 NTU
Water Level		5.010 ft	7.08 ft	5.81 ft	6.71 ft	6.71 ft
Gross Alpha		0.7+/-0.4 pCi/l	0.8+/-0.6 pCi/l	1.7 +/-0.7 pCi/	1.2 +/-0.4 pCi/	1.2 +/-0.4 pCi/l
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 4					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/l	mg/l	mg/l	mg/l	mg/l
Chloride	250	8.8	10.5	9.8	9.01
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		<0.010	0.06	BDL	BDL
Sulfate	250	1.6	0.93	0.7	239
Sulfite		2.6	4.5	2.5	1.92
Total Dissolved Solids	500	34	33	55	54
Aluminum	0.2	0.27	0.044	0.27	0.321
Arsenic	0.05	<0.010	0.002	BDL	<0.001
Barium	2	0.033	0.049	0.033	0.035
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		1.6	15.7	1.22	0.59
Chromium	0.1	<0.0050	BDL	BDL	<0.002
Copper	1	<0.010	BDL	BDL	<0.01
Iron	0.3	0.5	0.42	0.5	0.52
Lead	0.015	<0.0050	0.001	BDL	BDL
Magnesium		0.85	1.51	0.95	1.37
Manganese	0.05	<0.010	BDL	BDL	0.02
Molybdenum	0.035	<0.050	0.007	BDL	BDL
Nickel	0.1	<0.0050	0.002	0.001	0.002
Potassium		0.69	0.99	1.07	1.02
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	5.5	6.9	5.16	5.8
Vanadium	0.049	<0.010			
Zinc	5	0.011	BDL	BDL	0.02
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		66.0umhos/cm	62 Us	60 Us	61 us
Field pH		5.5 pH Units	4.80 pH units	4.77pH units	4.71 pH units
Field Temp		25.1 Deg. C	25.3 C	23.7 C	19.1 C
Color		10 pcu	12 CU	12 CU	6 CU
Turbidity		1.62 NTU	1.0 NTU	1.0 NTU	.62 NTU
Water Level		6.63 ft	6.13 ft	4.89 ft	4.81 ft
Gross Alpha		1.4 +/-0.5 pCi/l	1.1+/-0.9 pCi/l	2.3+/-1.0 pCi/l	.6+/-.6 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					
BDL - Below Detection Limit					

MW - 4							
2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4		
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l		
Chloride	250	9.33	9.88	9.23			
Nitrate	10	BDL	BDL	<0.10			
Total Phosphorus		<0.05	<0.05	0.07			
Sulfate	250	2.86	2.36	2.22			
Sulfite		2.8	3.2	3.6			
Total Dissolved Solids	500	36	28	38			
Aluminum	0.2	0.46	0.21	0.15			
Arsenic	0.05	<0.001	0.001	0.001			
Barium	2	0.056	0.031	0.15			
Beryllium	0.004	<0.001	<0.001	<0.001			
Cadmium	0.005	<0.001	<0.001	<0.001			
Calcium		1.81	0.92	1.38			
Chromium	0.1	<0.002	<0.002	BDL			
Copper	1	<0.01	<0.02	BDL			
Iron	0.3	1.18	0.73	0.49			
Lead	0.015	0.002	0.002	0.001			
Magnesium		1.24	1				
Manganese	0.05	0.02	0.03	0.78			
Molybdenum	0.035	<0.005	0.005	BDL			
Nickel	0.1	0.002	0.005	BDL			
Potassium		1.14	0.98	1.03			
Selenium	0.05	BDL	<0.001	0.001			
Silver	0.1	<0.001	<0.001	<0.001			
Sodium	160	6.6	6.5	6.49			
Vanadium	0.049		<0.005				
Zinc	5	0.01	0.09	0.02			
Mercury	0.002	BDL	<0.0005	BDL			
Conductivity		54 us	52.6 us	53 us			
Field pH		4.4 pH units	4.64pH units	4.54 pH units			
Field Temp			30.43 C	25 C			
Color		6 CU	6 CU	8 CU			
Turbidity		1.5	1.5 NTU	1 NTU			
Water Level		5.55 ft	6.85 ft	5.45 ft.			
Gross Alpha		.6+/-.7 pCi/l	1.1+/-2.8 pCi/L	2.3+/-2.8pCi/L			
GREEN - laboratory error							
RED - maximum contaminant level							
		value preceding the "U" indicates the limit of detection for that compound,					
		based on the dilution(and moisture content if soil/sediment).					

MW - 5					
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	32.7	13	42	41
Nitrate	10	0.06	0.05	<0.050	<0.050
Total Phosphorus		0.01	0.012	0.011	0.024
Sulfate	250	74	75		90
Sulfite		<2.0	4.8	<2.0	<2.0
Total Dissolved Solids	500	212	250	230	200
Aluminum	0.2	1.2	1.3	1.1	1.1
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010
Barium	2	0.06	0.07	0.069	0.072
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		16	20	20	21
Chromium	0.1	<0.010	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	2.3	2.5	2.3	2.3
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		3.9	4.5	3.9	4.3
Manganese	0.05	<0.010	0.01	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050
Potassium		8.7	9.1	8.7	8.9
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	22	25	22	21
Vanadium	0.049	<0.010	<0.010		<0.010
Zinc	5	<0.050	0.026	<0.010	<0.010
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050
Conductivity		272 umhos/cm	335 umhos/cm	245 umhos/cm	340 umhos/cm
Field pH		4.65 Units	4.25 Units	4.3	5.1 pH Units
Field Temp		19.8 ^ C	23.4 ^ C	24.8 Deg. C	22.4 Deg. C
Color		30 pcu	30 pcu	35 pcu	20 pcu
Turbidity		10.8 NTU	3.2 NTU	2.0 NTU	1.8 NTU
Water Level		8.40 ft	7.58 ft	6.49 ft	5.74 ft
Gross Alpha		10.3+/-2.2 pCi/l	8.6+/-1.1 pCi/l	8.9+/-0.9 pCi/l	8.7+/-2.1 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 5							
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 2 DUP	QTR 3	QTR 3 DUP	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	51	51	44	13	34	38
Nitrate	10	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		0.01	<0.010	<0.010	0.054	<0.050	<0.05
Sulfate	250	98	120	120	38	100	100
Sulfite		<2.0	41	51	4	4	7.7
Total Dissolved Solids	500	200	230	240	300	290	280
Aluminum	0.2	1.3	1.3	1.3	1.3	1.3	1.4
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Barium	2	0.074	0.08	0.08	0.083	0.082	0.086
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		22	28	28	27	27	27
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Iron	0.3	2.3	2.5	2.5	1.8	1.8	1.6
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		4.4	4.7	4.7	5.3	5.3	5.3
Manganese	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		10	9.7	10	12	11	10
Selenium	0.05	<0.010	<0.010	<0.010	0.011	0.01	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	19	22	22	17	17	15
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		330 umhos/cm	369 umhos/cm	364 umhos/cm	349 umhos/cm	347 umhos/cm	360 umhos/cm
Field pH		5.0 pH Units	4.5 pH Units	4.5 pH Units	5.0 pH Units	4.9 pH Units	5.3 pH Units
Field Temp		22.3 Deg C	24.7 Deg C	24.7 Deg C	25.4 Deg. C	25.5 Deg. C	25.6 Deg. C
Color		70 pcu	30 pcu	35 pcu	200 pcu	200 pcu	70 pcu
Turbidity		11 NTU	0.71 NTU	0.50 NTU	0.270 NTU	0.290 NTU	2.30 NTU
Water Level		6.230 ft	7.57 ft		6.54 ft	6.54 ft	7.92 ft
Gross Alpha		6.8+/-2.0 pCi/l	10.3+/-1.7 pCi	10.7+/-1.6 pCi	10.1 +/-1.3 pC	9.8 +/-1.3 pCi/	5.0 +/-0.8 pCi/
GREEN - laboratory error							
RED - maximum contaminant level							

MW - 5						
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/l	mg/l	mg/l	mg/l	mg/l	
Chloride	250	25	33.2	34.6	34.3	
Nitrate	10	<0.050	BDL	BDL	BDL	
Total Phosphorus		<0.010	BDL	BDL	BDL	
Sulfate	250	86	96.5	124.5	120	
Sulfite		5.8	2.6	5.8	7.78	
Total Dissolved Solids	500	200	232	251	275	
Aluminum	0.2	1.5	0.222	1.32	1.87	
Arsenic	0.05	<0.010	0.002	BDL	<0.001	
Barium	2	0.078	0.03	0.092	0.837	
Beryllium	0.004	<0.0040	BDL	BDL	<0.001	
Cadmium	0.005	<0.0050	BDL	BDL	<0.001	
Calcium		27	1.36	30.1	29.4	
Chromium	0.1	<0.0050	0.001	BDL	<0.002	
Copper	1	<0.010	BDL	BDL	<0.01	
Iron	0.3	1.6	0.52	1.82	1.63	
Lead	0.015	<0.0050	0.001	BDL	BDL	
Magnesium		5.8	0.89	5.97	7.49	
Manganese	0.05	<0.010	BDL	BDL	BDL	
Molybdenum	0.035	<0.050	0.004	BDL	0.002	
Nickel	0.1	<0.0050	0.001	BDL	0.003	
Potassium		10	0.96	12.2	11.7	
Selenium	0.05	<0.010	BDL	BDL	BDL	
Silver	0.1	<0.010	BDL	BDL	<0.001	
Sodium	160	16	18	14	15	
Vanadium	0.049	<0.010				
Zinc	5	<0.010	BDL	BDL	BDL	
Mercury	0.002	<0.00050	BDL	BDL	BDL	
Conductivity		370 umhos/cm	364 Us	376 Us	394 us	
Field pH		4.5 pH Units	4.53 pH units	4.79pH units	4.82 pH units	
Field Temp		25.3 Deg. C	25.7 C	23.6 C	19.1 C	
Color		60 pcu	>30 CU	>30 CU	>30 CU	
Turbidity		0.790 NTU	3.0 NTU	2.0 NTU	1.24 NTU	
Water Level		8.59 ft	7.89 ft	6.34 ft	6.88 ft	
Gross Alpha		7.4 +/-1.3 pCi/	8.3+/-2.2 pCi/l	6.4+/-1.8 pCi/l	10.1+/-2.2 pCi/l	
GREEN - laboratory error						
RED - maximum contaminant level						
BDL - Below Detection Limits						

MW - 5

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 1 DUP	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/l	mg/ l	mg/ l	mg/ l
Chloride	250	37.8	35.3	13	31.2	
Nitrate	10	BDL	BDL	BDL	<0.10	
Total Phosphorus		0.06	<0.05	0.05	0.07	
Sulfate	250	121	151	140	145	
Sulfite		6	6	5	7	
Total Dissolved Solids	500	272	278	279	300	
Aluminum	0.2	1.6	2.4	1.4	1.9	
Arsenic	0.05	<0.001	<0.001	<0.001	0.001	
Barium	2	1.6	0.17	0.091	0.34	
Beryllium	0.004	<0.001	<0.001	<0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	<0.001	
Calcium		34.4	36.6	31.8	30.9	
Chromium	0.1	0.002	0.003	<0.002	BDL	
Copper	1	<0.01	<0.01	<0.01	BDL	
Iron	0.3	2.2	4.01	2.06	2.72	
Lead	0.015	0.001	0.002	0.001	0.002	
Magnesium		6.59	7.06	6.56	6.5	
Manganese	0.05	<0.02	<0.02	<0.02	BDL	
Molybdenum	0.035	<0.005	<0.005	<.005	BDL	
Nickel	0.1	0.001	0.001	<.005	0.001	
Potassium		11.2	12.1	8.31	13.8	
Selenium	0.05	BDL	BDL	<0.001	0.003	
Silver	0.1	<0.001	<0.001	<0.001	<0.001	
Sodium	160	20.1	20.4	21.4	21.5	
Vanadium	0.049			<0.005		
Zinc	5	0.02	0.02	0.09	0.04	
Mercury	0.002	BDL	BDL	<0.0005	BDL	
Conductivity		421 US	423 US	456.3 us	489 us	
Field pH		4.25 pH units	4.25 pH units	4.39 pH units	4.17 pH units	
Field Temp				26.41 C	25.94 C	
Color		>30 CU	>30 CU	40 CU	>30 CU	
Turbidity		7 NTU	2.5 NTU	15 NTU	17 NTU	
Water Level		7.63 FT	7.63 FT	8.94 ft	7.34 ft.	
Gross Alpha		8.2+/-2 pCi/l	12+/-2.4 pCi/l	9.6+/-2.8 pCi/L	1.40+/-2.8pCi/L	

GREEN - laboratory error

RED - maximum contaminant level

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

MW - 6						
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 1 DUP	QTR 2	QTR 3	QTR 4
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Chloride	250	15.4	14.9	13	9.4	11
Nitrate	10	<0.02	<0.02	<0.050	<0.050	<0.050
Total Phosphorus		0.08	0.07	0.038	<0.010	0.018
Sulfate	250	<1.0	<1.0	<0.50		<0.50
Sulfite		<2.0	<2.0	<1.0	<2.0	<2.0
Total Dissolved Solids	500	48	48	50	42	34
Aluminum	0.2	2	2	0.49	1	0.49
Arsenic	0.05	<0.0050	<0.0050	<0.010	<0.010	<0.010
Barium	2	0.023	0.023	0.02	0.016	0.018
Beryllium	0.004	<0.0040	<0.0040	0.004	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		1.7	1.6	2.2	1.4	1.6
Chromium	0.1	<0.010	<0.010	<0.010	<0.0050	<0.0050
Copper	1	<0.010	<0.010	0.015	<0.010	<0.010
Iron	0.3	0.6	0.49	0.36	0.35	0.32
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		<1.0	<1.0	0.64	0.58	0.6
Manganese	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.010	<0.0050	<0.0050	<0.0050
Potassium		<1.0	<1.0	0.79	0.51	0.5
Selenium	0.05	<0.0050	<0.0050	<0.10	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	6.2	6.2	7.5	5.6	6.1
Vanadium	0.049	<0.010	<0.010	<0.010		<0.010
Zinc	5	<0.050	<0.050	<0.035	<0.010	<0.010
Mercury	0.002	<0.00010	<0.00010	<0.0010	<0.00050	<0.00050
Conductivity		53 umhos /cm	54 umhos/cm	58 umhos/cm	60.0 umhos/cm	65.0 umhos/cm
Field pH		4.96 Units	4.94 Units	4.22 Units	4.8	5.3 pH Units
Field Temp		21.1 ^ C	22.4 ^ C	26.8 ^ C	25.5 Deg. C	22.2 Deg. C
Color		150 pcu	40 pcu	20 pcu	10 pcu	10 pcu
Turbidity		27.0 NTU	11.8 NTU	12NTU	6.5 NTU	11 NTU
Water Level		8.33 ft	8.33 ft	7.83 ft	6.69 ft	6.09 ft
Gross Alpha		0.9+/-0.6 pCi/l	0.9+/-0.6 pCi/l	1.3+/-0.6 pCi/l	<0.6+/-0.4 pCi	1.4+/-0.7 pCi/l
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 6					
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	18	13	11	11
Nitrate	10	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		0.013	<0.010	<0.050	<0.05
Sulfate	250	<0.50	<0.50	0.63	<0.50
Sulfite		4.5 I	<2.0	<2.0	1.3
Total Dissolved Solids	500	70	48	54	62
Aluminum	0.2	0.61	0.98	0.71	1.4
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.022	0.019	0.019	0.019
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		1.7	1.4	1.6	1.9
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	1	0.39	0.37	0.39
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		0.69	0.67	0.71	0.66
Manganese	0.05	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		0.59	0.55	0.86	0.55
Selenium	0.05	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	6	6.6	6.1	6.3
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	0.026	<0.010	<0.010	0.015
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		64.0 umhos/cm	59.0 umhos/cm	60.0 umhos/cm	60.0 umhos/cm
Field pH		4.9 pH Units	4.4 pH Units	4.7 pH Units	4.7 pH Units
Field Temp		22.4 Deg C	26.5 Deg C	25.8 Deg. C	25.5 Deg. C
Color		75 pcu	<5.0 pcu	40 pcu	20 pcu
Turbidity		25 NTU	7.4 NTU	5.60 NTU	7.21 NTU
Water Level		6.210 ft	7.87 ft	6.14 ft	7.52 ft
Gross Alpha		0.8+/-0.5 pCi/l	1.2+/-0.6 pCi/l	1.2 +/-0.7 pCi/	1.2 +/-0.4 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 6					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	10	12.5	12.3	11.9
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		0.029	BDL	BDL	BDL
Sulfate	250	<0.50	0.41	0.36	0.377
Sulfite		1.3	1.28		2.56
Total Dissolved Solids	500	26	50	69	60
Aluminum	0.2	0.74	1.17	10.4	0.88
Arsenic	0.05	<0.010	BDL	BDL	<0.001
Barium	2	0.019	0.016	0.032	0.023
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		1.7	31.4	1.1	0.59
Chromium	0.1	<0.0050	0.001	BDL	<0.002
Copper	1	<0.010	BDL	BDL	<0.01
Iron	0.3	0.36	0.35	0.53	0.28
Lead	0.015	<0.0050	0.002	BDL	BDL
Magnesium		0.67	0.65	0.71	1.3
Manganese	0.05	<0.010	BDL	BDL	BDL
Molybdenum	0.035	<0.050	0.003	BDL	BDL
Nickel	0.1	<0.0050	0.002	0.002	0.001
Potassium		<0.50	0.65	0.84	0.64
Selenium	0.05	<0.010	BDL	0.002	BDL
Silver	0.1	<0.010	0.001	BDL	<0.001
Sodium	160	5.5	7	6.1	6.2
Vanadium	0.049	<0.010			
Zinc	5	<0.010	BDL	BDL	0.01
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		60.0umhos/cm	62 Us	62 Us	65 us
Field pH		4.5pH Units	4.13pH units	4.59 pH Units	4.62 pH units
Field Temp		26.3 Deg. C	25.5 C	25.1 C	4.69 C
Color		10 pcu	18 CU	15 CU	>30 CU
Turbidity		8.41 NTU	6.4 NTU	25.0 NTU	5.24 NTU
Water Level		8.58 ft	8.45 ft	6.06 ft	7.03 ft
Gross Alpha		1.0 +/-0.5pCi/l	1.0+/-0.8pCi/l	3.6+/-1.3pCi/l	2.1+/-1 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					
BDL - Below Detection Limit					

MW - 6							
2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4		
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l		
Chloride	250	13	12.7	12.9			
Nitrate	10	0.026	BDL	<0.10			
Total Phosphorus		<0.05	<0.05	0.05			
Sulfate	250	0.624	0.124	0.66			
Sulfite		2	>2	<2.0			
Total Dissolved Solids	500	43	24	39			
Aluminum	0.2	0.44	0.35	0.4			
Arsenic	0.05	<0.001	<0.001	0.001			
Barium	2	0.027	0.02	0.2			
Beryllium	0.004	<0.001	<0.001	<0.001			
Cadmium	0.005	<0.001	<0.001	<0.001			
Calcium		1.17	1.46	2.06			
Chromium	0.1	<0.002	<0.002	BDL			
Copper	1	0.01	0.01	BDL			
Iron	0.3	0.43	0.33	0.39			
Lead	0.015	0.002	0.001	0.014			
Magnesium		0.88	0.87	0.77			
Manganese	0.05	<0.02	<0.02	BDL			
Molybdenum	0.035	<0.005	<0.005	BDL			
Nickel	0.1	<0.001	<.005	0.001			
Potassium		0.65	0.7	0.93			
Selenium	0.05	BDL	<0.001	0.001			
Silver	0.1	<0.001	<0.001	<0.001			
Sodium	160	7.3	6.5	7.6			
Vanadium	0.049		<.005				
Zinc	5	0.02	0.09	0.03			
Mercury	0.002	BDL	<0.0005	BDL			
Conductivity		67 us	63.2 us	65.5 us			
Field pH		4.54 pH units	4.59 pH unit	4.49 pH units			
Field Temp			25.21 C	26.94 C			
Color		12 CU	12 CU	4 CU			
Turbidity		4 NTU	1.30 NTU	1.3 NTU			
Water Level		8.13 ft	9.58 ft	7.36 ft.			
Gross Alpha		.5+/-.6 pCi/l	1.4+/-2.8 pCi/L	0.90+/-2.8 pCi/L			
		3					
GREEN - laboratory error							
RED - maximum contaminant level							
		value preceding the "U" indicates the limit of detection for that compound,					
		based on the dilution(and moisture content if soil/sediment).					

MW - 7					
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/l	mg/l	mg/l	mg/l	mg/l
Chloride	250	10.7	12	5.9	7.9
Nitrate	10	<0.02	<0.050	<0.050	<0.050
Total Phosphorus		0.26	0.084	0.086	0.068
Sulfate	250	1.2	1.3		1.3
Sulfite		<2.0	<1.0	<2.0	<2.0
Total Dissolved Solids	500	60	62	48	62
Aluminum	0.2	2.5	1.7	1.5	1.1
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010
Barium	2	0.046	0.042	0.025	0.027
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		3	2.6	3.6	2.6
Chromium	0.1	<0.010	<0.010	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.48	0.47	0.29	0.26
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		<1.0	0.75	0.54	0.71
Manganese	0.05	<0.010	0.01	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050
Potassium		<1.0	0.8	0.72	0.7
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	4.3	5.6	3.5	4.3
Vanadium	0.049	<0.010	<0.010		<0.010
Zinc	5	<0.050	0.021	<0.010	<0.010
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050
Conductivity		45 umhos/cm	55 umhos/cm	60.0 umhos/cm	60.0 umhos/cm
Field pH		5.15 Units	4.52 Units	4.9	5.0 pH Units
Field Temp		19.3 ^ C	24.5 ^ C	25.1 Deg C	21.4 Deg. C
Color		100 pcu	45 pcu	20 pcu	45 pcu
Turbidity		42.0 NTU	54 NTU	8.2 NTU	16 NTU
Water Level		3.84 ft	3.19 ft	2.01 ft	0.510 ft
Gross Alpha		2.1+/-0.8 pCi/l	2.3+/-0.7 pCi/l	0.9+/-0.6 pCi/l	1.8+/-0.7 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 7					
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	7.2	8.8	7.1	8.6
Nitrate	10	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		0.14	0.076	0.091	0.22
Sulfate	250	0.96	1.3	1.5	<0.50
Sulfite		<2.0	<2.0	<2.0	2.6
Total Dissolved Solids	500	65	48	41	59
Aluminum	0.2	0.42	2.3	0.89	2.2
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.036	0.035	0.019	0.033
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		6.2	3.9	3	2.5
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.28	0.33	0.37	0.34
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		0.55	0.65	0.71	0.69
Manganese	0.05	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		0.89	0.79	1	<0.50
Selenium	0.05	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	3.6	4.3	6.1	3.9
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.010	<0.010	<0.010	<0.010
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		60.0 umhos/cm	52.0 umhos/cm	50.0 umhos/cm	52.0 umhos/cm
Field pH		5.1 pH Units	4.8 pH Units	5.0 pH Units	4.8 pH Units
Field Temp		24.2 Deg C	24.6 Deg C	25.3 Deg. C	24.6 Deg. C
Color		20 pcu	10 pcu	60 pcu	40 pcu
Turbidity		7.8 NTU	18 NTU	11.2 NTU	15.1 NTU
Water Level		1.250 ft	3.39 ft	6.14 ft	3.24 ft
Gross Alpha		<0.8+/-0.6 pCi	1.4+/-0.7 pCi/l	1.4 +/-0.8 pCi/	1.7 +/-0.4 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 7					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	7.6	10.5	8	8.26
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		0.056	0.11	BDL	0.09
Sulfate	250	1.1	2.21	1.1	1.38
Sulfite		2.6	2.6	2.6	3.84
Total Dissolved Solids	500	30	38	59	54
Aluminum	0.2	1.3	2.93	2.2	0.426
Arsenic	0.05	<0.010	0.001	BDL	<0.001
Barium	2	0.033	0.032	0.037	0.043
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		2.3	2	4	3.47
Chromium	0.1	<0.0050	0.001	BDL	<0.002
Copper	1	<0.010	BDL	BDL	<0.01
Iron	0.3	0.33	0.4	0.3	0.2
Lead	0.015	<0.0050	0.003	BDL	BDL
Magnesium		0.73	0.89	0.54	1.27
Manganese	0.05	<0.010	BDL	BDL	BDL
Molybdenum	0.035	<0.050	0.003	BDL	BDL
Nickel	0.1	<0.0050	0.002	0.002	BDL
Potassium		0.58	0.81	1	0.99
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	4	5.7	4.2	4.5
Vanadium	0.049	<0.010			
Zinc	5	<0.010	0.01	BDL	0.02
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		52.0umhos/cm	57 Us	54 Us	51 us
Field pH		4.7pH Units	4.21pH units	4.92 ph Units	4.91 pH units
Field Temp		24.9 Deg. C	24.8 C	22.9 C	21 C
Color		15 pcu	20 CU	18 CU	10 CU
Turbidity		10.6 NTU	19 NTU	19 NTU	.11NTU
Water Level		4.31 ft	4.29 ft	1.33 ft	2.19 ft
Gross Alpha		2.3 +/-0.6 pCi/	1.8 +/-1.0 pCi/	2.1+/-1.0 pCi/l	.9+/-.7 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					
BDL - Below Detection Limit					

MW - 7

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	8.75	8.38	8.9	
Nitrate	10	0.019	BDL	<0.10	
Total Phosphorus		0.21	0.16	0.13	
Sulfate	250	1.47	1.87	1.79	
Sulfite		2	2.6	0.32	
Total Dissolved Solids	500	44	32	40	
Aluminum	0.2	0.35	0.67	0.6	
Arsenic	0.05	<0.001	<0.001	BDL	
Barium	2	0.045	0.03	0.42	
Beryllium	0.004	<0.001	<0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	
Calcium		3.07	2.51	2.07	
Chromium	0.1	<0.002	<0.002	BDL	
Copper	1	<0.01	<0.01	BDL	
Iron	0.3	0.38	0.33	0.41	
Lead	0.015	0.002	0.001	0.004	
Magnesium		0.88	0.78		
Manganese	0.05	<0.02	<0.02	0.72	
Molybdenum	0.035	<0.005	<.005	BDL	
Nickel	0.1	0.001	<.005	BDL	
Potassium		0.85	0.96	1.15	
Selenium	0.05	BDL	<0.001	0.001	
Silver	0.1	<0.001	<0.001	<0.001	
Sodium	160	4.5	4.1	4.95	
Vanadium	0.049		<.005		
Zinc	5	0.01	0.09	0.12	
Mercury	0.002	BDL	<0.0005	BDL	
Conductivity		59 us	58.3 us	51 us	
Field pH		4.95 pH units	4.93 pH units	4.46 pH units	
Field Temp			24.19 C		
Color		18 CU	18 CU	22 CU	
Turbidity		6.1 NTU	6.4 NTU	6.7 NTU	
Water Level		3.95 FT	5.38 ft		
Gross Alpha		1.6+/-.9 pCi/l	1.5+/-2.5 pCi/L	1.80+/-2.8 pCi/L	
GREEN - laboratory error					
RED - maximum contaminant level					

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

MW - 8						
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	10.8	4.4	12	9.1	
Nitrate	10	<0.02	<0.050	<0.050	<0.050	
Total Phosphorus		<0.01	<0.010	0.015	0.018	
Sulfate	250	<1.0	<1.0	<0.50	<0.50	
Sulfite		<2.0	<0.50	<2.0	<2.0	
Total Dissolved Solids	500	40	48	16	40	
Aluminum	0.2	0.43	0.57	0.3	0.26	
Arsenic	0.05	<0.0050	<0.10	<0.010	<0.010	
Barium	2	0.012	<0.10	0.014	0.012	
Beryllium	0.004	<0.0040	<0.10	<0.0040	<0.0040	
Cadmium	0.005	<0.0050	<0.10	<0.0050	<0.0050	
Calcium		<1.0	1.2	0.58	0.35	
Chromium	0.1	<0.010	<0.10	<0.0050	<0.0050	
Copper	1	<0.010	<0.10	<0.010	<0.010	
Iron	0.3	0.6	0.56	0.5	0.39	
Lead	0.015	<0.0050	<0.10	<0.0050	<0.0050	
Magnesium		<1.0	0.84	0.76	0.71	
Manganese	0.05	<0.010	<0.10	<0.010	<0.010	
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050	
Nickel	0.1	<0.010	<0.10	<0.0050	<0.0050	
Potassium		<1.0	<0.50	<0.50	<0.50	
Selenium	0.05	<0.0050	<0.10	<0.010	<0.010	
Silver	0.1	<0.010	<0.10	<0.010	<0.010	
Sodium	160	5.5	8.3	5	5.3	
Vanadium	0.049	<0.010	<0.10	<0.010	<0.010	
Zinc	5	<0.050	<0.10	<0.010	<0.010	
Mercury	0.002	<0.00010		<0.00050	<0.00050	
Conductivity		42 umhos/cm	45 umhos/cm	50.0 umhos/cm	55.5 umhos/cm	
Field pH		4.72 Units	4.36 Units	4.7	5.2 pH Units	
Field Temp		22.3 ^ C	25.4 ^ C	24.3 Deg. C	22.1 Deg. C	
Color		20 pcu	30 pcu	<5.0 pcu	15 pcu	
Turbidity		3.30 NTU	3.8 NTU	0.14 NTU	0.26 NTU	
Water Level		7.37 ft	7.63 ft	7.02 ft	6.24 ft	
Gross Alpha		1.4+/-0.6 pCi/l	1.6+/-0.6 pCi/l	1.3+/-0.8 pCi/l	1.7+/-0.7 pCi/l	
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 8

1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	10	9.5	7.4	10
Nitrate	10	<0.050	<0.050	0.07	<0.050
Total Phosphorus		0.045	<0.010	0.076	<0.050
Sulfate	250	0.76	1.2	0.85	0.54
Sulfite		<2.0	<2.0	<2.0	1.9
Total Dissolved Solids	500	51	37	32	52
Aluminum	0.2	0.66	0.3	0.34	0.34
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.014	0.012	0.011	0.012
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		0.42	40	0.41	0.42
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.44	0.37	0.36	0.44
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		0.76	0.69	0.71	0.88
Manganese	0.05	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		<0.50	<0.20	<0.50	<0.50
Selenium	0.05	0.022	<0.010	0.016	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	5.6	5.6	5.6	6.4
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	0.01	<0.010	<0.010	<0.010
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		51.0 umhos/cm	47.0 umhos/cm	45.0 umhos/cm	53.0 umhos/cm
Field pH		4.8pH Units	4.6 pH Units	4.9 pH Units	5.6 pH Units
Field Temp		23.0 Deg. C	24.5 Deg. C	24.9 Deg. C	29.4 Deg. C
Color		40 pcu	40 pcu	25 pcu	5.0 pcu
Turbidity		4.9 NTU	0.96 NTU	0.950 NTU	1.44 NTU
Water Level		6.900 ft	6.71 ft	5.56 ft	6.49 ft
Gross Alpha		1.7+/-0.7 pCi/l	2.0+/-0.9 pCi/l	1.7 +/-0.8 pCi/l	1.9 +/-0.9 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 8					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	17	16.7	9.4	12.4
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		<0.010	0.07	BDL	BDL
Sulfate	250	1.1	1.05	2.28	2.71
Sulfite		1.3	1.92	1.28	1.92
Total Dissolved Solids	500	64	43	53	63
Aluminum	0.2	0.46	0.354	0.28	0.387
Arsenic	0.05	<0.010	0.002	BDL	<0.001
Barium	2	0.022	0.014	BDL	0.022
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		0.57	1.04	0.83	2.83
Chromium	0.1	<0.0050	0.001	BDL	<0.002
Copper	1	<0.010	0.01	BDL	<0.01
Iron	0.3	0.78	0.92	0.39	0.52
Lead	0.015	<0.0050	0.001	BDL	BDL
Magnesium		1.7	1.42	0.94	1.92
Manganese	0.05	<0.010	BDL	BDL	0.03
Molybdenum	0.035	<0.050	0.003	BDL	BDL
Nickel	0.1	<0.0050	BDL	0.002	BDL
Potassium		<0.50	0.39	0.47	0.36
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	7.3	7.9	5.2	6.3
Vanadium	0.049	<0.010			
Zinc	5	0.011	0.01	BDL	0.01
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		81.0umhos/cm	76 Us	59 Us	60 us
Field pH		5.0 pH Units	5.09 pH units	5.70 pH units	5.44 pH units
Field Temp		25.1 Deg. C	24.7 C	24.4 CS	21.5 C
Color		10 pcu	20 PCU	20 PCU	12 CU
Turbidity		0.570 NTU	2.0 NTU	.75 NTU	.61 NTU
Water Level		7.56 ft	7.38 ft	6.44 ft	6.45 ft
Gross Alpha		2.5 +/-0.7 pCi/	0.3 +/-0.7 pCi/	2.7+/-1 pCi/L	1.2+/-.8 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 8							
2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4		
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l		
Chloride	250	11.1	16.1	15.4			
Nitrate	10	0.009	BDL	<0.10			
Total Phosphorus		0.07	<0.05	0.05			
Sulfate	250	1.61	1.42	4.3			
Sulfite		2	3.6	4.8			
Total Dissolved Solids	500	34	26	39			
Aluminum	0.2	0.29	0.42	0.44			
Arsenic	0.05	<0.001	<0.001	0.001			
Barium	2	0.024	0.017	0.29			
Beryllium	0.004	<0.001	<0.001	<0.001			
Cadmium	0.005	<0.001	<0.001	<0.001			
Calcium		0.85	0.42	0.92			
Chromium	0.1	<0.002	<0.002	BDL			
Copper	1	<0.01	<0.01	BDL			
Iron	0.3	0.86	0.66	0.62			
Lead	0.015	0.002	0.001	BDL			
Magnesium		1.01	1.49	1.03			
Manganese	0.05	<0.02	<0.02	BDL			
Molybdenum	0.035	<0.005	<0.005	BDL			
Nickel	0.1	<0.001	<0.005	BDL			
Potassium		0.31	0.54	0.83			
Selenium	0.05	BDL	<0.001	0.001			
Silver	0.1	<0.001	<0.001	<0.001			
Sodium	160	6.1	6.8	7.15			
Vanadium	0.049		<0.005				
Zinc	5	0.02	0.09	0.03			
Mercury	0.002	BDL	<0.0005	BDL			
Conductivity		66 US	70.7 us	68 us			
Field pH		4.51 pH units	4.5 pH units	4.32 pH units			
Field Temp			25.24 C	25.9 C			
Color		14 CU	12 CU	8 CU			
Turbidity		2 NTU	.76 NTU	.7 NTU			
Water Level		6.98 FT	8.19 ft	11.95 ft.			
Gross Alpha		2.1+/-1 pCi/l	1.1+/-pCi/L	2.60+/-2.8 pCi/L			
GREEN - laboratory error							
RED - maximum contaminant level							
	value preceding the "U" indicates the limit of detection for that compound,						
	based on the dilution(and moisture content if soil/sediment).						

MW - 9					
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	10.3	3	9	7.7
Nitrate	10	<0.02	<0.050	<0.050	<0.050
Total Phosphorus		0.08	0.02	0.014	<0.010
Sulfate	250	3.2	<1.0	2.5	3
Sulfite		<2.0	3.2	<2.0	<2.0
Total Dissolved Solids	500	42	42	42	44
Aluminum	0.2	0.38	0.57	0.34	0.32
Arsenic	0.05	<0.0050	<0.10	<0.010	<0.010
Barium	2	0.012	<0.10	0.011	0.012
Beryllium	0.004	<0.0040	<0.10	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.10	<0.0050	<0.0050
Calcium		<1.0	1.3	0.42	0.44
Chromium	0.1	<0.010	<0.10	<0.0050	<0.0050
Copper	1	<0.010	<0.10	<0.010	<0.010
Iron	0.3	0.71	0.56	0.47	0.44
Lead	0.015	<0.0050	0.1	<0.0050	<0.0050
Magnesium		<1.0	1.1	1.1	1.1
Manganese	0.05	<0.010	<0.10	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.10	<0.0050	<0.0050
Potassium		<1.0	<0.50	<0.50	<0.50
Selenium	0.05	<0.0050	<0.10	<0.010	<0.010
Silver	0.1	<0.010		<0.010	<0.010
Sodium	160	4.9	7.3	4.2	4.6
Vanadium	0.049	<0.010	<0.10	<0.010	<0.010
Zinc	5	<0.050	<0.10	<0.010	<0.010
Mercury	0.002	<0.00010		<0.00050	<0.00050
Conductivity		48 umhos/cm	45 umhos/cm	50.0 umhos/cm	60.0 umhos/cm
Field pH		4.67 Units	4.56 Units	4.9	6.0 pH Units
Field Temp		22.7 ^ C	25.5 ^ C	26.0 Deg. C	22.7 Deg. C
Color		20 pcu	25 pcu	5.0 pcu	15 pcu
Turbidity		1.99 NTU	1.9 NTU	0.27 NTU	0.88 NTU
Water Level		6.06 ft	8.32 ft	7.77 ft	6.89 ft
Gross Alpha		1.0+/-0.6 pCi/l	1.0+/-0.6 pCi/l	0.7+/-0.6 pCi/l	1.8+/-0.7 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 9					
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	8.8	9.5	7.7	8.6
Nitrate	10	<0.050	<0.050	0.07	<0.050
Total Phosphorus		0.056	<0.010	0.078	<0.050
Sulfate	250	2.5	1.2	2.5	2.1
Sulfite		<2.0	<2.0	<2.0	1.3
Total Dissolved Solids	500	19	37	41	49
Aluminum	0.2	0.96	0.3	0.4	0.72
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.013	0.012	0.012	0.01
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		0.45	0.4	0.54	0.51
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.57	0.37	0.5	0.49
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		1.2	0.69	1.1	1.1
Manganese	0.05	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		0.54	<0.20	<0.50	<0.50
Selenium	0.05	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	5.1	5.6	6.6	4.8
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.010	<0.010	<0.010	0.038
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		49.0 umhos/cm	47.0 umhos/cm	54.0 umhos/cm	61.0 umhos/cm
Field pH		5.2 pH Units	4.6 pH Units	5.6 pH Units	4.6 pH Units
Field Temp		23.3 Deg C	24.5 Deg C	25.4 Deg. C	26.0 Deg. C
Color		20 pcu	40 pcu	25 pcu	20 pcu
Turbidity		6.3 NTU	0.96 NTU	0.410NTU	3.64 NTU
Water Level		6.970 ft	6.71 ft	6.39 ft	7.34 ft
Gross Alpha		1.2+/-0.6 pCi/l	<1.0+/-0.7 pCi/l	1.5 +/-0.8 pCi/l	1.6 +/-0.8 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 9					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	7.3	8.27	5.6	8.79
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		<0.010	0.1	BDL	BDL
Sulfate	250	2.6	3.12	3.81	3.11
Sulfite		1.3	2.6	1.3	1.28
Total Dissolved Solids	500	28	34	51	52
Aluminum	0.2	0.31	0.373	0.488	0.431
Arsenic	0.05	<0.010	0.002	BDL	<0.001
Barium	2	0.022	0.009	0.007	0.011
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		0.44	1.74	0.08	3.31
Chromium	0.1	<0.0050	0.003	BDL	<0.002
Copper	1	<0.010	BDL	BDL	<0.01
Iron	0.3	0.45	0.44	0.38	0.36
Lead	0.015	<0.0050	0.001	BDL	BDL
Magnesium		<0.050	0.95	0.84	1.8
Manganese	0.05	<0.010	BDL	BDL	BDL
Molybdenum	0.035	<0.050	0.008	BDL	BDL
Nickel	0.1	<0.0050	0.003	BDL	BDL
Potassium		<0.50	0.38	0.4	0.38
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	4.6	5.4	3.9	4.8
Vanadium	0.049	<0.010			
Zinc	5	<0.010	0.01	BDL	0.02
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		53.0umhos/cm	56 Us	40 Us	38 us
Field pH		5.3 pH Units	5.60 pH units	4.98 pH units	5.02 pH units
Field Temp		25.1 Deg. C	25.2 C	24.7	21.4 C
Color		15 pcu	18 CU	>30 CU	18 CU
Turbidity		1.01 NTU	1.5 NTU	2.5 NTU	2.98 NTU
Water Level		8.24 ft	7.98 ft	7.95ft	30.28 ft
Gross Alpha		1.1 +/-0.5 pCi/	1.7 +/-0.9 pCi/	1.8+/-.9 pCi/L	1.3+/-.8 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 9

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 1 DUP	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/l	mg/ l	mg/ l	mg/ l
Chloride	250	8.12	7.78	8.74	13	
Nitrate	10	0.017	0.01	BDL	<0.10	
Total Phosphorus		0.07	<0.05	<0.05	0.05	
Sulfate	250	2.41	2.32	2.27	7.43	
Sulfite		2.4	2.4	2.3	5	
Total Dissolved Solids	500	36	34	17	35	
Aluminum	0.2	0.28	0.28	0.29	0.6	
Arsenic	0.05	<0.001	<0.001	<0.001	0.001	
Barium	2	0.015	0.014	0.011	0.49	
Beryllium	0.004	<0.001	<0.001	<0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	<0.001	
Calcium		0.48	0.48	0.3	0.84	
Chromium	0.1	<0.002	<0.002	<0.002	BDL	
Copper	1	<0.01	<0.01	<0.01	BDL	
Iron	0.3	0.5	0.49	0.41	0.83	
Lead	0.015	0.001	0.001	0.001	0.002	
Magnesium		0.88	1.03	1.09	1.89	
Manganese	0.05	<0.02	<0.02	<0.02	BDL	
Molybdenum	0.035	<0.005	<0.005	<0.005	BDL	
Nickel	0.1	<0.001	<0.001	<0.005	BDL	
Potassium		0.38	0.32	0.62	0.82	
Selenium	0.05	BDL	BDL	<0.001	0.001	
Silver	0.1	<0.001	<0.001	<0.001	<0.001	
Sodium	160	5.3	5.4	5.2	6.72	
Vanadium	0.049			<0.005		
Zinc	5	0.03	0.01	0.1	0.1	
Mercury	0.002	BDL	BDL	<0.0005	BDL	
Conductivity		45 US	48 US	50.54 us	81.7 us	
Field pH		4.58 pH units	4.37 pH units	4.6 pH units	4.21 pH units	
Field Temp				24.17 C	25.95 C	
Color		18 CU	14 CU	16 cu	6 CU	
Turbidity		1.5 NTU	.7 NTU	.98 NTU	0.4	
Water Level		7.9 FT	7.9 FT	9.07 ft	10.9 ft.	
Gross Alpha		3.2+/-1.1 pCi/l	1.9+/-.9 pCi/l	1.5+/-2.8 pCi/L	2.1+/-pCi/L	

GREEN - laboratory error

RED - maximum contaminant level

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

MW - 10						
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	8.8	2.5	8.1	6.2	
Nitrate	10	<0.02	<0.050	<0.050	<0.050	
Total Phosphorus		<0.01	0.02	0.016	0.015	
Sulfate	250	2.7	<1.0	1.9	2	
Sulfite		<2.0	2.8	<2.0	<2.0	
Total Dissolved Solids	500	38	42	34	56	
Aluminum	0.2	0.29	0.35	0.25	0.21	
Arsenic	0.05	<0.0050	<0.10	<0.010	<0.010	
Barium	2	0.011	<0.10	<0.010	<0.010	
Beryllium	0.004	<0.0040	<0.10	<0.0040	<0.0040	
Cadmium	0.005	<0.0050	<0.10	<0.0050	<0.0050	
Calcium		<1.0	1.1	0.25	0.22	
Chromium	0.1	<0.010	<0.10	<0.0050	<0.0050	
Copper	1	<0.010	<0.10	<0.010	<0.010	
Iron	0.3	0.96	0.61	0.46	0.41	
Lead	0.015	<0.0050	<0.10	<0.0050	<0.0050	
Magnesium		<1.0	0.74	0.61	0.56	
Manganese	0.05	<0.010	<0.10	<0.010	<0.010	
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050	
Nickel	0.1	<0.010	<0.10	<0.0050	<0.0050	
Potassium		<1.0	<0.50	<0.50	<0.50	
Selenium	0.05	<0.0050	<0.10	<0.010	<0.010	
Silver	0.1	<0.010	<0.10	<0.010	<0.010	
Sodium	160	5.5	7.7	4.5	4.7	
Vanadium	0.049	<0.010	<0.10	<0.010	<0.010	
Zinc	5	<0.050	<0.10	<0.010	<0.010	
Mercury	0.002	<0.00010		0.0005	<0.00050	
Conductivity		40 umhos/cm	45 umhos/cm	45.0 umhos/cm	40.0 umhos/cm	
Field pH		4.71 Units	4.37 Units	4.8	5.2 pH Units	
Field Temp		21.3 ^ C	25.1 ^ C	24.5 Deg. C	20.9 Deg. C	
Color		30 pcu	25 pcu	<5.0 pcu	10 pcu	
Turbidity		2.90 NTU	1.7 NTU	0.13 NTU	<0.10 NTU	
Water Level		5.99 ft	6.38 ft	5.65 ft	4.34 ft	
Gross Alpha		1.8 +/-0.7 pCi/	1.4 +/-0.6 pCi/	<0.8 +/-0.6 pC	1.7 +/-0.7 pCi/l	
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 10						
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	6.5	7.6	6.1	6.2	
Nitrate	10	<0.050	<0.050	0.03	<0.050	
Total Phosphorus		0.016	0.1	0.061	0.072	
Sulfate	250	2.3	2.7	2.7	2.1	
Sulfite		<2.0	<2.0	<2.0	1.3	
Total Dissolved Solids	500	35	32	29	45	
Aluminum	0.2	0.35	0.25	0.25	2.7	
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010	
Barium	2	0.01	0.011	0.011	0.01	
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	
Cadmium	0.005	<0.0050	<0.0050	0.005	<0.0050	
Calcium		0.25	0.25	0.27	0.34	
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	
Copper	1	<0.010	<0.010	<0.010	<0.010	
Iron	0.3	0.47	0.47	0.46	0.45	
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium		0.64	0.71	0.7	0.68	
Manganese	0.05	<0.010	<0.010	<0.010	<0.010	
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050	
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050	
Potassium		<0.50	<0.20	<0.50	<0.50	
Selenium	0.05	<0.010	<0.010	<0.010	<0.010	
Silver	0.1	<0.010	<0.010	<0.010	<0.010	
Sodium	160	4.9	5.6	5.1	5.8	
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010	
Zinc	5	<0.010	<0.010	<0.010	0.034	
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050	
Conductivity		43.0 umhos/cm	48.0 umhos/cm	42.0 umhos/cm	43.0 umhos/cm	
Field pH		4.6 pH Units	4.5 pH Units	4.8 pH Units	4.8 pH Units	
Field Temp		23.1 Deg C	23.6 Deg C	25.0 Deg. C	24.2 Deg. C	
Color		15 pcu	35 pcu	10 pcu	10 pcu	
Turbidity		1.4 NTU	0.64 NTU	0.220 NTU	1.32 NTU	
Water Level		4.940 ft	5.67 ft	4.96 ft	6.00 ft	
Gross Alpha		0.7+/-0.5 pCi/l	<1.1+/-0.8 pCi	1.3 +/-0.7 pCi/l	0.7 +/-0.6 pCi/l	
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 10					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/l	mg/l	mg/l	mg/l	mg/l
Chloride	250	5.3	6.37	6.08	5.77
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		0.028	0.07	BDL	0.06
Sulfate	250	2.8	2.75	2.19	2.29
Sulfite		<0.64	1.28	0.64	0.64
Total Dissolved Solids	500	<20	23	40	37
Aluminum	0.2	0.4	0.232	0.23	0.273
Arsenic	0.05	<0.010	0.002	BDL	<0.001
Barium	2	<0.010	0.008	0.007	0.01
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		0.23	0.5	0.21	0.275
Chromium	0.1	<0.0050	0.002	BDL	<0.002
Copper	1	<0.010	0.01	BDL	<0.01
Iron	0.3	0.42	0.42	0.39	0.45
Lead	0.015	<0.0050	0.001	BDL	BDL
Magnesium		0.66	0.62	0.65	0.99
Manganese	0.05	<0.010	BDL	BDL	BDL
Molybdenum	0.035	<0.050	0.007	BDL	0.003
Nickel	0.1	<0.0050	0.001	0.002	BDL
Potassium		<0.50	0.3	0.37	0.22
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	4.3	5	4.4	4.6
Vanadium	0.049	<0.010			
Zinc	5	<0.010	BDL	BDL	0.02
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		44.0umhos/cm	43 Us	42 Us	40 us
Field pH		4.8 pH Units	4.89 pH units	4.80 pH units	4.76 pH units
Field Temp		24.1 Deg. C	24.3 C	22.4 C	21.7 C
Color		10 pcu	20 CU	4 CU	16 CU
Turbidity		1.33 NTU	0.85 NTU	.30 NTU	.40 Ntu
Water Level		6.42 ft	6.67 ft	5.82 ft	5.68 ft
Gross Alpha		0.9+/-0.4 pCi/l	1.9 +/-1.0 pCi/	2.2+/-1pCi/L	1.5+/-.8 pCi/l
GREEN - laboratory error					
RED - *maximum contaminant level*					

MW - 10

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	6.37	5.68	6.52	
Nitrate	10	BDL	BDL	<0.10	
Total Phosphorus		<0.05	<0.05	0.05	
Sulfate	250	2.44	2.91	2.72	
Sulfite		<2.01	<2	2	
Total Dissolved Solids	500	26	19	25	
Aluminum	0.2	0.27	0.21	0.17	
Arsenic	0.05	<0.001	<0.001	BDL	
Barium	2	0.011	0.009	0.4	
Beryllium	0.004	<0.001	<0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	
Calcium		0.44	0.18	0.6	
Chromium	0.1	<0.002	<0.002	BDL	
Copper	1	<0.01	<0.01	BDL	
Iron	0.3	0.58	0.4	0.39	
Lead	0.015	0.001	0.001	0.001	
Magnesium		0.65	0.87		
Manganese	0.05	<0.02	<0.02	0.59	
Molybdenum	0.035	<0.005	<.005	BDL	
Nickel	0.1	<0.001	<0.005	0.001	
Potassium		0.23	0.49	0.4	
Selenium	0.05	BDL	<0.001	0.001	
Silver	0.1	<0.001	<0.001	<0.001	
Sodium	160	4.8	4.2	4.58	
Vanadium	0.049		<.005		
Zinc	5	0.01	0.1	0.03	
Mercury	0.002	BDL	<0.0005	BDL	
Conductivity		42 us	41.7 US	42 us	
Field pH		4.51 pH units	4.62 pH units	4.13 pH units	
Field Temp			24.58	24.51 C	
Color		12 CU	10 CU	6 CU	
Turbidity		1.5 NTU	.5 NTU	0.49	
Water Level		6.4 FT	7.7 ft	6.7 ft.	
Gross Alpha		1.9+/-.9 pCi/l	1.6+/- pCi/L	2.4+/-2.8 pCi/L	

GREEN - laboratory error

RED - maximum contaminant level

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

MW - 11

1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 1 DUP	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	96.6	92.5	86	36	67
Nitrate	10	0.04	0.03	<0.050	<0.050	<0.050
Total Phosphorus		0.39	0.26	0.39	0.15	0.12
Sulfate	250	1.2	<1.0	<1.0	1.6	1.7
Sulfite		<2.0	<2.0	1.2	<2.0	<2.0
Total Dissolved Solids	500	248	232	250	170	250
Aluminum	0.2	4	4.3	1.1	0.4	0.39
Arsenic	0.05	<0.0050	<0.0050	<0.10	<0.010	<0.010
Barium	2	0.15	0.16	0.2	0.056	0.13
Beryllium	0.004	<0.0040	<0.0040	<0.10	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.10	<0.0050	<0.0050
Calcium		28	29	26	41	35
Chromium	0.1	<0.010	<0.010	<0.10	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.10	<0.010	<0.010
Iron	0.3	3.5	2.9	2.6	0.69	1
Lead	0.015	<0.0050	<0.0050	<0.10	<0.0050	<0.0050
Magnesium		2.6	2.6	2.5	1.2	1.8
Manganese	0.05	<0.010	<0.010	<0.10	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.010	<0.10	<0.0050	<0.0050
Potassium		3.6	3.7	<0.50	1.1	3
Selenium	0.05	<0.0050	<0.0050	<0.10	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.10	<0.010	<0.010
Sodium	160	31	32	32	11	23
Vanadium	0.049	<0.010	<0.010	<0.10	<0.010	<0.010
Zinc	5	<0.050	<0.050	<0.10	<0.010	<0.010
Mercury	0.002	<0.00010	<0.00010		<0.00050	<0.00050
Conductivity		330 umhos/cm	340 umhos/cm	310 umhos/cm	170 umhos/cm	390 umhos/cm
Field pH		5.53 Units	5.59 Units	5.12 Units	5.9	6.1 pH Units
Field Temp		21.6 ^ C	23.0 ^ C	25.1 ^ C	26.1 Deg. C	21.5 Deg. C
Color		50 pcu	50 pcu	150 pcu	30 pcu	30 pcu
Turbidity		37 NTU	27 NTU	46 NTU	5.8 NTU	2.7 NTU
Water Level		5.77 ft	5.77 ft	5.64 ft	4.96 ft	4.02 ft
Gross Alpha		1.2 +/-0.6 pCi/l	1.1 +/-0.6 pCi/l	3.9 +/-1.2 pCi/l	<1.3 +/-0.8 pCi/l	<1.5 +/-1.0 pCi/l
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 11

1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	43	200	140	280
Nitrate	10	0.085	<0.050	0.04	<0.050
Total Phosphorus		0.32	0.056	<0.050	0.07
Sulfate	250	2.3	4.8	2.5	3.3
Sulfite		<2.0	<2.0	<2.0	1.9
Total Dissolved Solids	500	220	530	510	800
Aluminum	0.2	0.94	0.95	1	2.7
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.075	0.39	0.37	0.72
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		46	63	53	69
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.73	2.2	2	3.3
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		1.3	3.9	3	4.6
Manganese	0.05	<0.010	0.013	<0.010	0.015
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		2	10	8.3	17
Selenium	0.05	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	12	50	40	66
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	0.018	0.022	<0.010	0.022
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		321 umhos/cm	681 umhos/cm	506 umhos/cm	934 umhos/cm
Field pH		6.1 pH Units	5.5 pH Units	5.1 pH Units	4.8 pH Units
Field Temp		24.1 Deg C	23.9 Deg C	33.8 Deg. C	25.2 Deg. C
Color		75 pcu	55 pcu	30 pcu	20 pcu
Turbidity		39 NTU	7.5 NTU	1.69 NTU	4.82 NTU
Water Level		4.610 ft	5.30 ft	4.24 ft	5.49 ft
Gross Alpha		<1.7+/-1.2 pCi	2.3+/-1.4 pCi/l	2.2 +/-0.7 pCi/l	<2.7+/-1.7 pCi/l

GREEN - laboratory error

RED - maximum contaminant level

MW - 11					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	360	485	17.2	264
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		0.059	0.15	BDL	BDL
Sulfate	250	4.8	21.9	BDL	3.98
Sulfite		1.9	3.2	1.9	2.56
Total Dissolved Solids	500	780	1084	628	580
Aluminum	0.2	4.5	6.29	1.46	1.02
Arsenic	0.05	<0.010	0.002	BDL	<0.001
Barium	2	0.97	1.84	0.53	0.493
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		82	159	76.2	108.3
Chromium	0.1	<0.0050	0.003	BDL	<0.002
Copper	1	<0.010	0.01	BDL	<0.01
Iron	0.3	4.2	5.2	2.5	2.8
Lead	0.015	<0.0050	0.001	BDL	BDL
Magnesium		5.8	7.38	4.55	6.81
Manganese	0.05	0.02	0.02	BDL	0.02
Molybdenum	0.035	<0.050	0.004	BDL	0.002
Nickel	0.1	<0.0050	0.014	0.003	0.001
Potassium		25	41.4	15.2	11.2
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	80	120	55	54
Vanadium	0.049	<0.010			
Zinc	5	<0.010	0.01	BDL	0.02
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		1250umhos/cm	1762 Us	910 Us	900 us
Field pH		4.5 pH Units	4.31 pH units	5.22 pH units	5.14 pHunits
Field Temp		24.9 Deg. C	24.1 C	23.5 C	21 C
Color		5.0 pcu	20 CU	12 CU	14 CU
Turbidity		0.980NTU	5.4 NTU	5.5 NTU	.11 NTU
Water Level		6.11 ft	5.69 ft	4.73 ft	4.78 ft
Gross Alpha		11+/-2.6pCi/l	15.6+/-2.3 pCi/	7.2+/-1.5 pCi/L	5.9+/-1.7 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 11

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 3 DUP	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/l	mg/ l
Chloride	250	492	571	542	542	
Nitrate	10	BDL	BDL	<0.10	<0.10	
Total Phosphorus		0.11	0.08	0.08	0.1	
Sulfate	250	26.1	85.3	204	204	
Sulfite		2.6	2.4	3.7	3.7	
Total Dissolved Solids	500	1086	1007	1210	2085	
Aluminum	0.2	7.78	6.2	6.6	6.78	
Arsenic	0.05	<0.001	<0.001	0.001	0.002	
Barium	2	1.43	0.999	0.66	0.76	
Beryllium	0.004	0.001	<0.001	<0.001	<0.001	
Cadmium	0.005	0.001	<0.001	<0.001	0.001	
Calcium		148.1	162	193.8	205.2	
Chromium	0.1	<0.002	<0.002	BDL	BDL	
Copper	1	<0.01	<0.01	0.01	0.01	
Iron	0.3	5.96	4.9	5.56	4.5	
Lead	0.015	0.002	0.001	0.001	0.002	
Magnesium		7.47	9.56	7.7	7.77	
Manganese	0.05	0.02	<0.02	0.03	0.03	
Molybdenum	0.035	<0.005	<0.005	0.004	0.019	
Nickel	0.1	0.005	<0.005	0.006	0.004	
Potassium		42	37.1	43	42	
Selenium	0.05	BDL	<0.001	0.025	0.008	
Silver	0.1	<0.001	<0.001	<0.001	<0.001	
Sodium	160	108	116	115	120	
Vanadium	0.049		<0.005			
Zinc	5	0.03	0.11	0.04	0.04	
Mercury	0.002	BDL	<0.0005	BDL	BDL	
Conductivity		1838 us	1911 us	2085 us	2085 us	
Field pH		4.49 pH units	4.31 pH units	4.16 pH units	4.16 pH units	
Field Temp			23.85	25.82 C	25.82 C	
Color		8 CU	18 CU	12 CU	10 CU	
Turbidity		3 NTU	1.65 NTU	1.1 NTU	1.1 NTU	
Water Level		5.69 FT	7.46 ft	5.2 ft.	5.2 ft.	
Gross Alpha		31.1+/-4.3 pCi/	13.2+/-2.8 pCi/L	6+/-2.8pCi/L	8.6+/-2.8pCi/L	
GREEN - laboratory error						
RED - maximum contaminant level						

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

MW - 12

1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 3 DUP	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	67.8	38	39	39	45
Nitrate	10	0.05	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		<0.01	<0.010	0.012	0.011	0.021
Sulfate	250	210	75	22	22	44
Sulfite		<2.0	<1.0	<2.0	<2.0	<2.0
Total Dissolved Solids	500	414	180	100	86	150
Aluminum	0.2	8.1	2.1	1	1	1.2
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010	<0.010
Barium	2	0.026	0.012	0.016	0.016	0.025
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		61	17	9.2	9.3	18
Chromium	0.1	<0.010	<0.010	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010	<0.010
Iron	0.3	2.8	1.4	0.69	0.7	0.66
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		2.4	1.2	2.3	2.3	2.1
Manganese	0.05	0.011	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		18	5.7	2.9	3	5.3
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	24	14	14	15	16
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.050	0.047	<0.010	<0.010	<0.010
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050	<0.00050
Conductivity		550 umhos/cm	238 umhos/cm	150 umhos/cm	160 umhos/cm	245 umhos/cm
Field pH		4.08 Units	4.07 Units	4.5	4.3	4.7 pH Units
Field Temp		22.8 ^ C	25.4 ^ C	25.0 Deg. C	25.8 Deg. C	21.5 Deg. C
Color		20 pcu	35 pcu	10 pcu	10 pcu	30 pcu
Turbidity		2.6 NTU	1.9 NTU	0.13 NTU	0.17 NTU	0.12 NTU
Water Level		10.14 ft	9.64 ft	9.23 ft	9.23 ft	7.73 ft
Gross Alpha		8.8 +/-0.8 pCi/	3.7 +/-0.8 pCi/	2.6 +/-0.6 pCi/	1.9 +/-0.5 pCi/	5.3 +/-1.1 pCi/l
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 12

1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	280	180	66	190
Nitrate	10	0.1	<0.050	<0.050	<0.050
Total Phosphorus		0.011	<0.010	<0.050	<0.050
Sulfate	250	800	480	140	540
Sulfite		4.5 I	<2.0	<2.0	5.8
Total Dissolved Solids	500	1300	690	340	1100
Aluminum	0.2	1.8	13	4.2	16
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.095	0.037	0.054	0.069
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		240	120	4	180
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	4.8	3.4	1.6	4.3
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		6.7	4.4	3.3	6.7
Manganese	0.05	0.029	0.018	<0.010	0.026
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		64	31	13	49
Selenium	0.05	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	91	44	28	75
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.010	<0.010	<0.010	0.043
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		1810 umhos/cm	1030 umhos/cm	462umhos/cm	1480 umhos/cm
Field pH		3.9 pH Units	4.6 pH Units	4.1 pH Units	4.2 pH Units
Field Temp		25.1 Deg C	26.9 Deg C	25.3 Deg. C	25.4 Deg. C
Color		25 pcu	10 pcu	50 pcu	20 pcu
Turbidity		0.25 NTU	0.24 NTU	0.160 NTU	1.67 NTU
Water Level		8.600 ft	9.81 ft	8.41 ft	9.73 ft
Gross Alpha		17.1+/-5.4 pCi/	13.3+/-1.7 pCi/	4.2 +/-1.0 pCi/	18.7 +/-4.1 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 12					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	67	107	262	207
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		0.028	0.06	BDL	BDL
Sulfate	250	310	11.7	809	147
Sulfite		2.6	2.56	3.2	3.84
Total Dissolved Solids	500	340	224	1458	1492
Aluminum	0.2	7.3	1.57	13.6	18.9
Arsenic	0.05	<0.010	0.001	BDL	<0.001
Barium	2	0.037	0.41	0.22	0.0781
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		48	10.3	224	253.9
Chromium	0.1	<0.0050	0.002	BDL	<0.002
Copper	1	<0.010	BDL	BDL	0.01
Iron	0.3	1.9	1.62	4	4.6
Lead	0.015	<0.0050	BDL	BDL	0.004
Magnesium		3.3	5.13	8.36	13.1
Manganese	0.05	0.011	0.02	0.02	0.04
Molybdenum	0.035	<0.050	0.004	BDL	0.002
Nickel	0.1	<0.0050	0.004	0.004	0.003
Potassium		15	3.46	48.5	61.7
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	BDL	<0.001
Sodium	160	31	48	110	88
Vanadium	0.049	<0.010			
Zinc	5	<0.010	BDL	BDL	0.02
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		593umhos/cm	417 Us	2304 Us	1750 us
Field pH		4.9 pH Units	4.27 pH units	4.15 pH units	4.06 pH units
Field Temp		25.6 Deg. C	25.2 C	23.3 C	21.1C
Color		5.0 pcu	20 CU	14 CU	16 CU
Turbidity		2.12 NTU	0.50 NTU	4.1 NTU	.41 NTU
Water Level		10.7 ft	10.24 ft	8.61 ft	8.77 ft
Gross Alpha		6.6+/-1.6pCi/l	1.1 +/-1.1 pCi/	34.4+/-3.1 pCi	25.9+/-4.3 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 12

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/l	mg/l	mg/l	mg/l	mg/l
Chloride	250	248	249	134	
Nitrate	10	BDL	BDL	<0.10	
Total Phosphorus		<0.05	0.05	0.05	
Sulfate	250	609	811	103	
Sulfite		2.6	2.5	4	
Total Dissolved Solids	500	1339	1424	383	
Aluminum	0.2	21.7	25	5.34	
Arsenic	0.05	<0.001	<0.001	0.001	
Barium	2	0.15	0.076	0.28	
Beryllium	0.004	0.001	<0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	
Calcium		219.6	271	34.2	
Chromium	0.1	0.002	<0.002	BDL	
Copper	1	0.01	0.01	0.01	
Iron	0.3	6.27	6.8	2.22	
Lead	0.015	0.003	0.001	0.001	
Magnesium		10.4	19.4	7.37	
Manganese	0.05	0.04	0.04	0.02	
Molybdenum	0.035	<0.005	<0.005	0.002	
Nickel	0.1	0.004	<0.005	0.002	
Potassium		54.9	47.9	12.8	
Selenium	0.05	BDL	<0.001	0.003	
Silver	0.1	<0.001	<0.001	<0.001	
Sodium	160	94.6	88.2	60	
Vanadium	0.049		0.01		
Zinc	5	0.03	0.11	0.1	
Mercury	0.002	BDL	<0.0005	BDL	
Conductivity		1999 US	2030 US	718.7 us	
Field pH		3.88 pH units	3.97 pH units	4.09 pH units	
Field Temp			24.4	27.04 C	
Color		18 CU	20 CU	8 CU	
Turbidity		6 NTU	2.05 NTU	4 NTU	
Water Level		10.15 FT	11.75 ft	9.42 ft	
Gross Alpha		23.6+/-3.8 pCi/	15.2+/-2.8 pCi/L	4.2+/-2.8 pCi/L	

GREEN - laboratory error

RED - maximum contaminant level

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

MW - 13							
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	QTR 4 DUP	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	32.1	26	20	29	29	
Nitrate	10	<0.02	<0.050	<0.050	<0.050	<0.050	
Total Phosphorus		0.07	0.016	0.015	0.015	0.016	
Sulfate	250	41	23		25	25	
Sulfite		<2.0	<1.0	<2.0	<2.0	<2.0	
Total Dissolved Solids	500	136	110	72	96	100	
Aluminum	0.2	2.5	1.7	0.91	1.5	1.4	
Arsenic	0.05	<0.0050	0.029	<0.010	<0.010	<0.010	
Barium	2	0.044	<0.010	0.029	0.039	0.038	
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0040	<0.0040	
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Calcium		8.1	5.3	3.1	5.1	5.1	
Chromium	0.1	<0.010	<0.010	<0.0050	<0.0050	<0.0050	
Copper	1	<0.010	<0.010	<0.010	<0.010	<0.010	
Iron	0.3	1.4	0.85	0.74	0.96	0.96	
Lead	0.015	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	
Magnesium		3.7	2.2	2.1	3.2	3.2	
Manganese	0.05	0.02	<0.010	<0.010	<0.010	<0.010	
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050	<0.050	
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	
Potassium		1.9	1.4	0.86	1.2	1.2	
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010	<0.010	
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010	
Sodium	160	10	9.4	9	11	11	
Vanadium	0.049	<0.010	<0.010		<0.010	<0.010	
Zinc	5	<0.050	0.11	<0.010	<0.010	<0.010	
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050	<0.00050	
Conductivity		200 umhos/cm	155 umhos/cm	120 umhos/cm	160 umhos/cm	165 umhos/cm	
Field pH		4.26 Units	3.98 Units	4.1	4.4 pH Units	4.4 pH Units	
Field Temp		24.1 ^ C	27.0 ^ C	26.4 Deg. C	21.9 Deg. C	21.9 Deg. C	
Color		20 pcu	40 pcu	15 pcu	25 pcu	25 pcu	
Turbidity		2.2 NTU	2.5 NTU	0.23 NTU	<0.10 NTU	<0.10 NTU	
Water Level		8.13 ft	7.82 ft	7.07 ft	5.24 ft	5.24 ft	
Gross Alpha		14.5 +/-0.8 pC	11.4 +/-1.8 pC	5.7 +/-1.6 pCi/	10 +/-2.0 pCi/l	9.6 +/-2.0 pCi/l	
GREEN - laboratory error							
RED - maximum contaminant level							

MW - 13						
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	QTR 4 DUP
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	38	43	41	40	41
Nitrate	10	0.16	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		<0.010	<0.010	0.068	<0.050	<0.050
Sulfate	250	28	41	13	16	15
Sulfite		<2.0	<2.0	<2.0	2.6	
Total Dissolved Solids	500	120	120	120	170	130
Aluminum	0.2	1.6	2.2	1.2	1.3	1.3
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Barium	2	0.049	0.053	0.06	0.054	0.054
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		5.7	7.9	3.7	4.5	4.5
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010	<0.010
Iron	0.3	1.3	1.4	0.99	1	1.1
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		4.5	4.2	3.3	3.4	3.4
Manganese	0.05	<0.010	0.01	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		1.5	1.7	1.2	1.3	1.2
Selenium	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	13	15	17	15	15
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	5	0.01	0.011	<0.010	0.025	<0.010
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		200 umhos/cm	216 umhos/cm	187 umhos/cm	212 umhos/cm	
Field pH		4.0 pH Units	4.0 pH Units	5.2 pH Units	4.2 pH Units	
Field Temp		25.6 Deg C	25.2 Deg C	25.5 Deg. C	26.1 Deg. C	
Color		20 pcu	15 pcu	50 pcu	10 pcu	20 pcu
Turbidity		0.21 NTU	0.30 NTU	0.360 NTU	2.62 NTU	
Water Level		6.350 ft	7.95 ft	6.45 ft	7.82 ft	
Gross Alpha		6.9+/-1.1 pCi/l	11.0+/-2.1 pCi/	8.1 +/-1.5 p Ci/	7.9 +/-1.8 pCi/	8.7 +/-1.9 pCi/l
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 13						
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	28	29.1	36.1	43.8	
Nitrate	10	<0.050	BDL	BDL	BDL	
Total Phosphorus		0.01	0.06	BDL	BDL	
Sulfate	250	38	34	23.9	27.3	
Sulfite		1.9	2.56	1.92	1.92	
Total Dissolved Solids	500	64	102	125	143	
Aluminum	0.2	1.9	1.86	1.36	1.91	
Arsenic	0.05	<0.010	0.001	BDL	<0.001	
Barium	2	0.046	0.42	0.064	0.073	
Beryllium	0.004	<0.0040	BDL	BDL	<0.001	
Cadmium	0.005	<0.0050	BDL	BDL	<0.001	
Calcium		7.1	9.42	6.87	5.87	
Chromium	0.1	<0.0050	0.002	BDL	<0.002	
Copper	1	<0.010	BDL	BDL	<0.01	
Iron	0.3	1.2	1.01	1.08	1.16	
Lead	0.015	<0.0050	BDL	BDL	0.001	
Magnesium		3.4	2.96	3.53	5.69	
Manganese	0.05	<0.010	BDL	BDL	BDL	
Molybdenum	0.035	<0.050	0.004	BDL	BDL	
Nickel	0.1	<0.0050	0.002	0.001	0.001	
Potassium		1.1	1.38	1.71	1.36	
Selenium	0.05	<0.010	BDL	BDL	BDL	
Silver	0.1	<0.010	BDL	BDL	<0.001	
Sodium	160	13	14	15	22	
Vanadium	0.049	<0.010				
Zinc	5	<0.010	BDL	BDL	0.02	
Mercury	0.002	<0.00050	BDL	BDL	BDL	
Conductivity		210umhos/cm	199 Us	219 Us	210 us	
Field pH		4.2 pH Units	5.84 pH units	4.17 pH units	4.07 pH units	
Field Temp		25.7 Deg. C	25.6 C	25.1 C	21 C	
Color		15 pcu	18 CU	20 CU	14 CU	
Turbidity		2.84 NTU	0.45 NTU	.40 NTU	.34 NTU	
Water Level		8.71 ft	8.72 ft	6.59 ft	6.94 ft	
Gross Alpha		11.8+/-0.9pCi/	5.6 +/-1.7 pCi/	5.1+/-1.4 pCi/L	11.9+/-2.1 pCi/l	
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 13							
2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4		
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l		
Chloride	250	46.2	37.8	39.3			
Nitrate	10	BDL	BDL	<0.10			
Total Phosphorus		0.09	<0.05	0.07			
Sulfate	250	83	133	55.3			
Sulfite		2.3	3.2	3.3			
Total Dissolved Solids	500	199	214	146			
Aluminum	0.2	6.14	5.8	3.35			
Arsenic	0.05	<0.001	<0.001	0.001			
Barium	2	0.097	0.089	0.24			
Beryllium	0.004	<0.001	<0.001	<0.001			
Cadmium	0.005	<0.001	<0.001	<0.001			
Calcium		17.5	19.6	12.9			
Chromium	0.1	<0.002	<0.001	BDL			
Copper	1	<0.01	<0.01	0.01			
Iron	0.3	4.73	1.69	1.22			
Lead	0.015	0.002	0.001	0.001			
Magnesium		6.62	6.04	4.03			
Manganese	0.05	<0.02	<0.02	BDL			
Molybdenum	0.035	<0.005	<.005	0.003			
Nickel	0.1	0.002	<.005	0.001			
Potassium		3.07	3.21	2.19			
Selenium	0.05	BDL	<0.001	0.003			
Silver	0.1	<0.001	<0.001	<0.001			
Sodium	160	20.1	18.3	16.4			
Vanadium	0.049		<0.005				
Zinc	5	<0.01	0.09	0.02			
Mercury	0.002	BDL	<0.0005	BDL			
Conductivity		380 US	404.6 US	284.6 us			
Field pH		3.79 pH units	3.91 pH units	3.89 pH units			
Field Temp			24.13	27.03 C			
Color		>30 CU	30 CU	16 CU			
Turbidity		7 NTU	.55 NTU	.65 NTU			
Water Level		8.3 FT	9.8 ft	7.8 ft.			
Gross Alpha		29.1+/-2.9 pCi/	14.5+/-2.8 pCi/L	8.4+/-2.8pCi/L			
GREEN - laboratory error							
RED - maximum contaminant level							
		value preceding the "U" indicates the limit of detection for that compound,					
		based on the dilution(and moisture content if soil/sediment).					

MW - 14					
1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	19.1	13	14	12
Nitrate	10	<0.02	0.05	<0.050	<0.050
Total Phosphorus		<0.01	0.028	0.06	0.015
Sulfate	250	2.4	3.6		8.2
Sulfite		<2.0	1	<2.0	<2.0
Total Dissolved Solids	500	380	380	440	550
Aluminum	0.2	0.38	<0.050	1.9	0.26
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010
Barium	2	0.085	0.092	0.089	0.088
Beryllium	0.004	<0.0040	<0.0040	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		110	120	110	110
Chromium	0.1	<0.010	<0.0050	0.017	<0.0050
Copper	1	0.014	<0.010	<0.010	<0.010
Iron	0.3	1.7	1.7	4.4	1.1
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		3.1	3.6	3.2	3.4
Manganese	0.05	0.017	0.016	0.013	0.014
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	0.013	<0.0050
Potassium		9.1	9.7	8.5	8.7
Selenium	0.05	<0.0050	<0.020	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	5.5	7.9	7.1	5.8
Vanadium	0.049	<0.010	<0.010		<0.010
Zinc	5	<0.050	0.038	<0.010	<0.010
Mercury	0.002	<0.00010	<0.0010	<0.00050	<0.00050
Conductivity		500 umhos/cm	520 umhos/cm	350 umhos/cm	600 umhos/cm
Field pH		6.69 Units	6.34 Units	6.6	6.7 pH Units
Field Temp		20.4 ^ C	23.8 ^ C	26.7 Deg. C	23.0 Deg. C
Color		150 pcu	170 pcu	550 pcu	80 pcu
Turbidity		12.3 NTU	16 NTU	170 NTU	30 NTU
Water Level		5.50 ft	4.47 ft	3.54 ft	2.71 ft
Gross Alpha		4.6 +/-1.3 pCi/l	3.7 +/-1.1 pCi/l	5.2 +/-1.7 pCi/l	<3.5 +/-2.9 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 14						
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS						
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4	
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	
Chloride	250	16	19	11	16	
Nitrate	10	<0.050	<0.050	<0.050	<0.050	
Total Phosphorus		0.014	<0.010	<0.050	<0.050	
Sulfate	250	18	19	6.9	24	
Sulfite		<2.0	61	<2.0	5.1	
Total Dissolved Solids	500	450	390	410	480	
Aluminum	0.2	0.17	0.23	0.53	0.36	
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010	
Barium	2	0.091	0.085	0.06	0.11	
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040	
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	
Calcium		130	140	120	130	
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050	
Copper	1	<0.010	<0.010	<0.010	<0.010	
Iron	0.3	0.55	0.26	0.55	0.73	
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	
Magnesium		3.7	3.8	5.1	4.5	
Manganese	0.05	0.013	0.013	0.19	7.8	
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050	
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050	
Potassium		8.6	8.6	8.5	8.2	
Selenium	0.05	<0.010	<0.010	<0.010	<0.010	
Silver	0.1	<0.010	<0.010	<0.010	<0.010	
Sodium	160	5.3	5.5	8.6	7.8	
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010	
Zinc	5	<0.010	<0.010	<0.010	0.012	
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050	
Conductivity		586 umhos/cm	631 umhos/cm	597 umhos/cm	715 umhos/cm	
Field pH		6.5 pH Units	6.2 pH Units	4.9 pH Units	4.9 pH Units	
Field Temp		23.0 Deg C	26.4 Deg C	28.4 Deg. C	26.9 Deg. C	
Color		180 pcu	70 pcu	180 pcu	100 pcu	
Turbidity		30 NTU	19 NTU	11.5 NTU	4.09 NTU	
Water Level		3.180 ft	4.63 ft	3.34 ft	4.71 ft	
Gross Alpha		2.7+/-1.7 pCi/l	3.4+/-1.3 pCi/l	<1.5+/-0.9pCi/	<2.0+/-1.2pCi/l	
GREEN - laboratory error						
RED - maximum contaminant level						

MW - 14					
1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	13	23.3	22.7	28.7
Nitrate	10	<0.050	BDL	BDL	BDL
Total Phosphorus		<0.010	0.06	BDL	BDL
Sulfate	250	6.6	31.8	39.3	1.5
Sulfite		7	8.32	7.04	8.96
Total Dissolved Solids	500	410	509	491	435
Aluminum	0.2	<0.050	0.156	0.18	0.333
Arsenic	0.05	<0.010	0.001	BDL	<0.001
Barium	2	0.1	0.138	0.16	0.17
Beryllium	0.004	<0.0040	BDL	BDL	<0.001
Cadmium	0.005	<0.0050	BDL	BDL	<0.001
Calcium		120	155	117	98.7
Chromium	0.1	<0.0050	0.008	BDL	0.002
Copper	1	<0.010	0.01	BDL	<0.01
Iron	0.3	0.41	1.46	0.27	0.2
Lead	0.015	<0.0050	0.005	BDL	0.003
Magnesium		4	4.89	5.42	5.79
Manganese	0.05	0.018	0.02	BDL	0.04
Molybdenum	0.035	<0.050	0.005	BDL	0.002
Nickel	0.1	<0.0050	0.01	BDL	0.005
Potassium		8.6	8.92	1.03	13.8
Selenium	0.05	<0.010	BDL	BDL	BDL
Silver	0.1	<0.010	BDL	<0.001	<0.001
Sodium	160	8.4	14	8.4	14
Vanadium	0.049	<0.010			
Zinc	5	0.014	0.01	BDL	0.06
Mercury	0.002	<0.00050	BDL	BDL	BDL
Conductivity		681umhos/cm	735 Us	714 Us	725 us
Field pH		6.2 pH Units	5.63 pH units	6.17 pH units	6.19 pH units
Field Temp		24.5 Deg. C	25.9 C	26.4 C	19 C
Color		120 pcu	>30 CU	>30 CU	>30 CU
Turbidity		0.940NTU	10 NTU	6.8 NTU	3.12 NTU
Water Level		5.58 ft	8.47 ft	3.44 ft	3.98 ft
Gross Alpha		3.4+/-1.3 pCi/l	3.7 +/-2.5 pCi/	6.5+/-1.5pCi/L	10.6+/-2.5 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

MW - 14

2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	28.8	28.5	25.3	
Nitrate	10	0.029	BDL	<0.10	
Total Phosphorus		0.09	0.05	0.1	
Sulfate	250	46.5	50.8	45.1	
Sulfite		4.8	2.8	6	
Total Dissolved Solids	500	485	489	481	
Aluminum	0.2	1.6	0.33	3.24	
Arsenic	0.05	0.001	<0.001	0.001	
Barium	2	0.17	0.154	0.57	
Beryllium	0.004	<0.001	<0.001	<0.001	
Cadmium	0.005	<0.001	<0.001	<0.001	
Calcium		245.4	136	117.7	
Chromium	0.1	0.005	0.005	0.003	
Copper	1	0.02	0.01	0.01	
Iron	0.3	15.3	0.72	4.32	
Lead	0.015	0.002	0.002	0.001	
Magnesium		5.14	8.22	5.05	
Manganese	0.05	0.04	0.04	0.03	
Molybdenum	0.035	0.007	<.005	0.008	
Nickel	0.1	0.002	<.005	0.001	
Potassium		11.5	12.3	11.3	
Selenium	0.05	BDL	<0.001	0.005	
Silver	0.1	<0.001	<0.001	<0.001	
Sodium	160	12.3	13.7	12.8	
Vanadium	0.049		>.005		
Zinc	5	0.03	0.13	0.04	
Mercury	0.002	BDL	<0.0005	BDL	
Conductivity		758 US	732.2 US	734 us	
Field pH		6.21 pH units	6.15 pH units	5.89 pH units	
Field Temp			26.4	26.94 C	
Color		>30	13 CU	>30 CU	
Turbidity		20 NTU	6.5 NTU	12	
Water Level		5.05 FT	6.2 ft	4.8 ft.	
Gross Alpha		8.1+/-2.9 pCi/l	3.2+/-2.8 pCi/l	5+/-pCi/L	

GREEN - laboratory error

RED - maximum contaminant level

value preceding the "U" indicates the limit of detection for that compound, based on the dilution(and moisture content if soil/sediment).

0W - 4

1997 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 2	QTR 2 DUP	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	18.2	14	17	9.6	12
Nitrate	10	<0.02	0.1	0.18	<0.050	<0.050
Total Phosphorus		0.57	0.096	0.16	0.14	0.12
Sulfate	250	2.8	2.9	2.8		0.76
Sulfite		<2.0	3.2	3.2	<2.0	4.5 I
Total Dissolved Solids	500	100	82	88	78	82
Aluminum	0.2	4.6	0.16	0.21	5.8	1.7
Arsenic	0.05	<0.0050	<0.010	<0.010	<0.010	<0.010
Barium	2	0.09	0.071	0.066	0.06	0.059
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0050	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		6.6	7.6	6.6	5.8	6.3
Chromium	0.1	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010	<0.010
Iron	0.3	1	0.77	0.73	0.95	0.71
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		<1.0	0.86	0.78	0.66	0.81
Manganese	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	0.035	<0.010	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		1.5	1.4	1.5	1.1	1.2
Selenium	0.05	<0.0050	<0.010	<0.010	<0.010	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	160	6.2	9.3	6.9	5.4	6.4
Vanadium	0.049	<0.010	<0.010	<0.010		<0.010
Zinc	5	<0.050	0.027	<0.010	<0.010	<0.010
Mercury	0.002	<0.00010	<0.0010	<0.0010	<0.00050	<0.00050
Conductivity		74 umhos/cm	105 umhos/cm	80 umhos/cm	80.0 umhos/cm	90.0 umhos/cm
Field pH		5.24 Units	4.83 Units	4.83 Units	4.8	5.1 pH Units
Field Temp		20.7 ^ C	24.2 ^ C	24.3 ^ C	25.8 ^ C	21.8 ^ C
Color		150 pcu	40 pcu	30 pcu	130 pcu	40 pcu
Turbidity		70.0 NTU	55 NTU	29 NTU	48 NTU	29 NTU
Water Level		6.28 ft	5.50 ft	5.50 ft	4.92 ft	8.37 ft
Gross Alpha		6.0 +/-1.2 pCi/	5.1 +/-1.3 pCi/	4.3 +/-1.2 pCi	3.9 +/-1.2 pCi/	4.1 +/-1.2 pCi/l

GREEN - laboratory error

RED - maximum contaminant level

OW - 4					
1998 QUARTERLY GROUNDWATER ANALYTICAL RESULTS					
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l
Chloride	250	39	12	10	10
Nitrate	10	<0.050	<0.050	<0.050	<0.050
Total Phosphorus		<0.010	0.13	0.18	0.15
Sulfate	250	14	8.3	16	9.4
Sulfite		5.5	51	5.0 I	9.6
Total Dissolved Solids	500	110	80	120	96
Aluminum	0.2	0.24	3.2	0.78	4
Arsenic	0.05	<0.010	<0.010	<0.010	<0.010
Barium	2	0.014	0.075	0.086	0.082
Beryllium	0.004	<0.0040	<0.0040	<0.0040	<0.0040
Cadmium	0.005	<0.0050	<0.0050	<0.0050	<0.0050
Calcium		0.11	8.9	9.7	8.4
Chromium	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Copper	1	<0.010	<0.010	<0.010	<0.010
Iron	0.3	0.2	0.99	1	1.1
Lead	0.015	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium		1.2	0.92	1.1	0.99
Manganese	0.05	<0.010	<0.010	0.011	<0.010
Molybdenum	0.035	<0.050	<0.050	<0.050	<0.050
Nickel	0.1	<0.0050	<0.0050	<0.0050	<0.0050
Potassium		2.8	1.4	1.8	1.1
Selenium	0.05	<0.010	<0.010	0.017	<0.010
Silver	0.1	<0.010	<0.010	<0.010	<0.010
Sodium	160	12	7.6	8.3	7.1
Vanadium	0.049	<0.010	<0.010	<0.010	<0.010
Zinc	5	<0.010	<0.010	<0.010	<0.010
Mercury	0.002	<0.00050	<0.00050	<0.00050	<0.00050
Conductivity		110 umhos/cm	104umhos/cm	116 umhos/cm	108 umhos/cm
Field pH		5.0 pH Units	4.7 pH Units	4.9 pH Units	5.1 pH Units
Field Temp		24.6 Deg C	27.2 Deg C	24.8 Deg. C	24.6 Deg. C
Color		150 pcu	10 pcu	60 pcu	50 pcu
Turbidity		0.32 NTU	35 NTU	19.5 NTU	26.4 NTU
Water Level		4.600 ft	5.71 ft	4.46 ft	5.98 ft
Gross Alpha		4.0+/-1.2 pCi/l	3.5+/-1.2 pCi/l	4.3 +/-1.4 pCi/l	4.5 +/-0.7 pCi/l
GREEN - laboratory error					
RED - maximum contaminant level					

OW - 4

1999 QUARTERLY GROUNDWATER ANALYTICAL RESULTS

PARAMETER	FDEP	QTR 1	QTR 1 DUP	QTR 2	QTR 3	QTR 4	QTR. 4 DUP.
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Chloride	250	9.8	10	12.1	11.3	10.5	10.4
Nitrate	10	<0.050	<0.050	BDL	BDL	BDL	BDL
Total Phosphorus		0.066	0.053	0.14	0.05	BDL	BDL
Sulfate	250	3.9	4	6.89	16.4	23.7	24.7
Sulfite		7.7	7.7	10.2	7.04	6.4	6.4
Total Dissolved Solids	500	64	58	107	109	103	105
Aluminum	0.2	2.6	3.3	0.59	0.35	0.18	0.191
Arsenic	0.05	<0.010	<0.010	0.002	BDL	<0.001	<0.001
Barium	2	0.074	0.072	0.081	0.08	0.104	0.082
Beryllium	0.004	<0.010	<0.0040	BDL	BDL	<0.001	<0.001
Cadmium	0.005	<0.0050	<0.0050	BDL	BDL	<0.001	<0.001
Calcium		6.9	6.8	7.6	10.1	11.2	9.55
Chromium	0.1	<0.0050	<0.0050	0.006	BDL	0.002	0.002
Copper	1	<0.010	<0.010	0.01	BDL	<0.01	0.01
Iron	0.3	0.95	0.97	1.11	0.9	1.2	0.94
Lead	0.015	<0.0050	<0.0050	0.004	BDL	BDL	BDL
Magnesium		0.88	0.86	0.77	1.13	2.39	2.08
Manganese	0.05	<0.010	<0.010	BDL	BDL	0.02	0.02
Molybdenum	0.035	<0.050	<0.050	0.003	BDL	BDL	BDL
Nickel	0.1	<0.0050	<0.0050	0.004	BDL	BDL	BDL
Potassium		1.2	1.4	1.47	1.89	2.08	1.66
Selenium	0.05	<0.010	<0.010	BDL	BDL	BDL	BDL
Silver	0.1	<0.010	<0.010	BDL	BDL	<0.001	<0.001
Sodium	160	6.7	6.6	7.5	7.6	8.8	8.6
Vanadium	0.049	<0.010	<0.010				
Zinc	5	<0.010	<0.010	0.01	BDL	BDL	0.02
Mercury	0.002	<0.00050	<0.00050	BDL	BDL	BDL	BDL
Conductivity		94.0umhos/cm	94.0umhos/cm	98 Us	120 Us	115 us	115 us
Field pH		4.9 pH Units	4.9 pH Units	5.40 pH units	4.83 pH units	4.91 pH units	4.91 pH units
Field Temp		25.7 Deg. C	25.7 Deg. C	26.0 C	22.9 C	19 C	19 C
Color		50 pcu	25 pcu	>30 CU	>30 CU	12 CU	12 CU
Turbidity		225 NTU	22.5 NTU	65 NTU	5 NTU	.54 NTU	.54 NTU
Water Level		6.57 ft	6.57 ft	6.38 ft	4.45 ft	5.06 ft	5.06 ft
Gross Alpha		4.7+/-0.9 pCi/l	5.5+/-0.5 pCi/l	3.7 +/-1.4 pCi/	1.1+/-.9 pCi/L	2.9+/-1.1 pCi/l	3.1+/-1.2 pCi/l
GREEN - laboratory error							
RED - maximum contaminant level							

OW - 4							
2000 QUARTERLY GROUNDWATER ANALYTICAL RESULTS							
PARAMETER	FDEP	QTR 1	QTR 2	QTR 3	QTR 4		
	mg/ l	mg/ l	mg/ l	mg/ l	mg/ l		
Chloride	250	11.2	10.3	10.5			
Nitrate	10	BDL	BDL	<0.10			
Total Phosphorus		0.07	0.09	0.1			
Sulfate	250	32.6	42.7	45.8			
Sulfite		8	8	12			
Total Dissolved Solids	500	100	87	108			
Aluminum	0.2	0.98	0.11	0.028			
Arsenic	0.05	<0.001	<0.001	0.001			
Barium	2	0.11	0.104	0.45			
Beryllium	0.004	<0.001	<0.001	<0.001			
Cadmium	0.005	<0.001	<0.001	<0.001			
Calcium		11.8	0.92	13.7			
Chromium	0.1	<0.002	<0.002	BDL			
Copper	1	<0.01	0.01	0.01			
Iron	0.3	1.29	1.82	1.41			
Lead	0.015	0.001	0.001	0.002			
Magnesium		1.37	1.93	1.54			
Manganese	0.05	<0.02	<0.02	0.02			
Molybdenum	0.035	<0.005	<0.005	0.004			
Nickel	0.1	<0.001	<0.005	BDL			
Potassium		1.95	1.92	2.2			
Selenium	0.05	BDL	<0.001	0.001			
Silver	0.1	<0.001	<0.001	<0.001			
Sodium	160	10.3	9.7	10.2			
Vanadium	0.049		<.005				
Zinc	5	0.01	0.11	0.03			
Mercury	0.002	BDL	<0.0005	BDL			
Conductivity		152 US	158.5 US	163 us			
Field pH		4.9 pH units	4.87 pH units	4.71 pH units			
Field Temp			26.41	25.15 C			
Color		4 CU	12 CU	8 CU			
Turbidity		2.5 NTU	4.25 NTU	5 NTU			
Water Level		4.98 FT	7.74 ft	5.53 ft.			
Gross Alpha		2.8+/-1.1 pCi/l	1+/-2.8 pCi/L	2.70+/-2.8pCi/L			
GREEN - laboratory error							
RED - maximum contaminant level							
		value preceding the "U" indicates the limit of detection for that compound,					
		based on the dilution(and moisture content if soil/sediment).					

WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

This form must be completed by all persons applying for a permit for a wastewater facility or activity under Chapter 62-620, F.A.C..
See Form 1 to determine which other application forms you will need.

DEP Form 62-620.910(1)
(Effective October 23, 2000)

WASTEWATER FACILITY OR ACTIVITY PERMIT
APPLICATION FORM 1
GENERAL INFORMATION

I IDENTIFICATION NUMBER:

Facility ID _____

II CHARACTERISTICS:

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?		X	
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?		X	
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?		X	
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?		X	
H. Is this facility a non-discharging/closed loop recycle system?		X	

III NAME OF FACILITY: (40 characters and spaces)

SEC Rail Car Maintenance Facility

DEP Form 62-620.910(1)
(Effective October 23, 2000)

Facility ID _____

IV FACILITY CONTACT: (A. 30 characters and spaces)

A. Name and Title (Last, first, & title)	B. Phone (area code & no.)

V FACILITY MAILING ADDRESS: (A. 30 characters and spaces; B. 25 characters and spaces)

A. Street or P.O. Box: 3193		
B. City or Town: Orlando	State: FL	Zip Code: 32801

VI FACILITY LOCATION: (A. 30 characters and spaces; B. 24 characters and spaces; C. 3 spaces (if known); D. 25 characters and spaces; E. 2 spaces; F. 9 spaces)

A. Street, Route or Other Specific Identifier:		
B. County Name: Orange	C. County Code (if known): N/A	
D. City or Town: Orlando	E. State: FL	F. Zip Code: 32801

VII SIC CODES: (4-digit, in order of priority)

1. Code #: 4911	(Specify) Electric Serv	2. Code #: N/A	(Specify) N/A
3. Code #: N/A	(Specify) N./A	4. Code #: N/A	(Specify) N/A

VIII OPERATOR INFORMATION: (A. 40 characters and spaces; B. 1 character; C. 1 character (if other, specify); D. 12 characters; E. 30 characters and spaces; F. 25 characters and spaces; G. 2 characters; H. 9 characters)

A. Name: Orlando Utilities Commission		B. Is the name in VIII A. the owner? ☒Yes ☐No	
C. Status of Operator: F = Federal; S = State; P = Private; O = Other; M = Public (other than F or S)	(code) M	(specify)	D. Phone No.: 407-658-6444
E. Street or P. O. Box: 3193			
F. City or Town: Orlando		G. State: FL	H. Zip Code: 32801

IX INDIAN LAND: Is the facility located on Indian lands? ☐ Yes ☒ No

Facility ID _____

X EXISTING ENVIRONMENTAL PERMITS:

A. NPDES Permit No.	B. UIC Permit No.	C. Other (specify)	D. Other (specify)
Not Applicable	Not Applicable	Not Applicable	Not Applicable

XI MAP: Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII NATURE OF BUSINESS (provide a brief description)

Perform maintenance and repair of rail cars.

XIII CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Frederick F. Haddad, Jr.
A. Name (type or print)

B. Signature

Vice President, Power Resource
Official Title (type or print)

C. Date Signed

Appendix C
Onsite Drainage System

Orlando Utilities Commission
Stanton Energy Center

Railcar Maintenance Facilities

Onsite Drainage System

B&V Project No. 143799

Revision A

January 4, 2007

BLACK & VEATCH
building a world of difference™

ENERGY WATER INFORMATION GOVERNMENT

Contents

1.0 Introduction

The purpose of the facilities (hereinafter the Railcar Maintenance Facilities) would be to perform all maintenance and repair actions required to keep the present and future fleet of railcars in optimal operational condition. These railcars are deployed in unit train haulage of coal fuels for Stanton Units 1 and 2 and future coal fueled generation units to be developed at Stanton. The facilities will allow the centralization at one location of maintenance actions which have heretofore been performed at a number of shop locations along/adjacent to the CSXT haul routing from Central Appalachia (East Kentucky and West Virginia) to Stanton. The facilities will provide OUC with better oversight of maintenance actions, closer control of car movement logistics, significant decreases in out-of-service times (awaiting repairs), and enhanced flexibilities in deploying the railcar fleet in the future sourcing of coals from resource areas which have not historically been utilized for fuel supplies.

2.0 Onsite Drainage System

2.1 Uncontaminated Areas

The existing rail loop drainage is crowned at the centerline of rail and drains to an existing storm water pond located northwest of the loop.

The onsite drainage facilities will be designed in accordance with the requirements of the South Florida Water Management District (SFWMD) and the Florida Department of Environmental Protection (FDEP). Drawings 143799-SS-0050 through 143799-SS-0058, located in Appendix A of this report, show preliminary grading and drainage for the various facility areas. It should be noted that all existing ponds and rails were taken from existing drawings and aerial photography. All locations and sizes are subject to a complete survey. Open channels and drainage structures (culverts, piping systems, etc.) will be designed to collect runoff from a 25-year, 72-hour storm event. Site runoff facilities (ditches, detention basin, etc.) will provide storage to satisfy criteria for maintenance of water quality and quantity, and to provide storage to attenuate peak discharge rates.

Runoff from areas of the site not disturbed by construction activities will be maintained in the existing state to the greatest extent possible. When it is necessary to direct this flow around developed portions of the site, diversion ditches will be constructed. These diversion ditches will collect runoff flow from the undisturbed areas and direct the flow to natural drainage patterns. Runoff from areas of the site disturbed by construction activities will be collected in a ditch system and directed to onsite runoff basins as described in Section 2.2. Drainage systems will be designed for gravity flow wherever site conditions allow. Generally, the drainage in the areas of new facilities will be directed away from the structures and routed to the onsite storage basins. Storm water runoff and all waste water within the perimeter shown on Drawing 143799-SS-0055 around the Rail car Maintenance Facility will be routed through a waste/oil water separator before be pumped to the existing waste water facilities located within the plant.

2.2 Drainage Areas

Most of the construction will occur around the construction of the Rail CarMaintenance Facility and supporting structures. All areas not draining to the waste/oil water separator will be drained to a new storm water runoff pond (approximately 3.5 acres) located east of the existing south entrance road and west of the existing transmission lines (Drawings 143799-SS-0054 and 143799-SS-0055).

Stormwater runoff associated with the bad-order rail car switch-out track and supporting roads will be routed to the existing pond located north-west of the existing rail loop. Further investigation will be needed to determine if any updates to the pond will be needed to handle additional runoff.

2.3 Design Criteria

The management and storage of surface waters (MSSW) system will be designed to maintain the existing drainage patterns wherever possible. The MSSW system for the developed areas will be designed to ensure that the post development peak discharge will not exceed the predevelopment peak discharge at the project site boundary.

As specified in the SFWMD the design storm is the 25-year, 72-hour rainfall event.

Rainfall frequencies obtained from the NOAA's National Weather Service Precipitation Frequency Data Maps are as follows:

- 10-year, 24-hour = 7.33 inches.
- 10-year, 72-hour = 9.00 inches.
- 25-year, 24-hour = 8.50 inches.
- 25-year, 72-hour = 10.75 inches.

2.4 Runoff Analysis

The area associated with the Rail Car Maintenance Facilities consists of approximately 6.48 acres (excluding stormwater retention pond) of pervious area, 12.67 acres of aggregate area, and 3.17 acres of impervious area. These areas will drain into the new storm water retention pond, which is approximately 3.67 acres. The 25-year, 72-hour rainfall event was used to size the pond.

The area associated with the bad order Rail Car switch-out track consists of approximately 0.17 acres of pervious area and 3.03 acres of aggregate area. These areas will drain to the existing onsite waste water pond. As stated previously further investigation is needed to determine if the existing waste water pond can handle the additional runoff.

2.5 Erosion and Sediment Control Measures

Erosion and sediment control measures will be installed as necessary during the construction of the Rail Car Maintenance Facility and supporting structures.

Before construction begins, silt fence or other appropriate control measures will be installed around the perimeter of construction areas. Diversion ditches will be equipped with straw bale dikes to aid in minimizing the amount of sediments

flowing into the onsite ponds. Construction access ways and parking areas will be surfaced with aggregate to provide a stabilized sub grade. Erosion control measures will also include minimizing fugitive dust through periodic spraying of water.

2.6 Staging of Earthmoving Activities

Initial construction will remove all significant vegetation (trees, brush, etc.). If possible, some trees will be retained. The storm water runoff pond and associated drainage ways will be constructed concurrently with the initial clearing activities. Topsoil will be removed and stock piled for finish grading and site restoration after construction is completed. Once the topsoil has been removed, site preparation will be directly related to construction of the Rail Car Maintenance Facility and supporting structures. Once the earthmoving and construction are completed, the stockpiled topsoil will be used for finished grading. Seeding and mulching activities will begin within 30 days.

2.7 Construction Monitoring and Maintenance

In general, all erosion and sedimentation control measures will be checked weekly and after each significant rainfall event. Items including the following will be checked:

- Silt fences and straw bale dikes will be inspected after each significant rainfall and during prolonged periods of rainfall. Required repairs will be made immediately.
- Sediment deposits at barriers will be removed when the deposit depth reaches approximately one half the height of the barrier.

An EPA issued National Pollutant Discharge Elimination System (NPDES) General Permit for construction storm water discharges, and accompanying Storm Water Pollution Prevention Plan (SWPPP), will be required.

2.8 Permanent Control Measures

Permanent erosion and sedimentation control measures within the project boundaries will include the runoff collection system (ditches, culverts, catch basins), and surfaced traffic and work areas, nonworking areas with established vegetation. These measurements will minimize erosion and potential sedimentation to water sources outside the project boundary.

3.0 References

1. South Florida Water Management District, "Environmental Resource Permit Information Manual", 2000.

2. Department of Environmental Regulation State of Florida "Florida Development Manual, A Guide to Sound Land and Water Management".

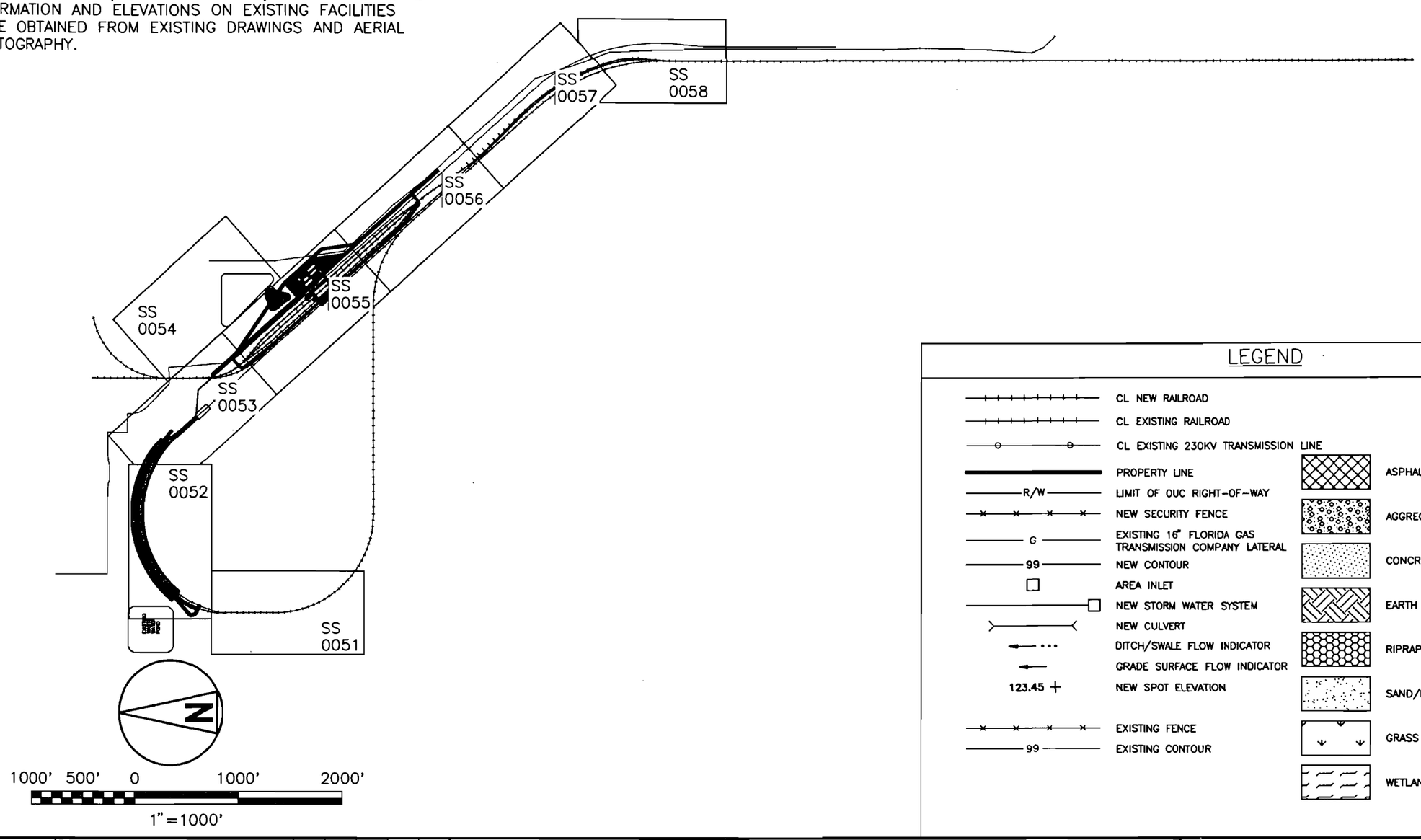
3. B&V, OUC Amendment Request No. 9

4. B&V, Site Certification Application, "Kissimmee Utility Authority Cane Island Units 1-3" Volume 2.

Appendix A

Drawings

NOTES
1. ALL INFORMATION ON THESE DRAWINGS ARE TO BE USED FOR CONCEPTUAL DESIGN ONLY. ALL FACILITY AND POND LOCATIONS (NEW AND EXISTING) ARE APPROXIMATE. INFORMATION AND ELEVATIONS ON EXISTING FACILITIES WERE OBTAINED FROM EXISTING DRAWINGS AND AERIAL PHOTOGRAPHY.



LEGEND

- CL NEW RAILROAD
- CL EXISTING RAILROAD
- CL EXISTING 230KV TRANSMISSION LINE
- PROPERTY LINE
- R/W — LIMIT OF OUC RIGHT-OF-WAY
- NEW SECURITY FENCE
- G — EXISTING 16" FLORIDA GAS TRANSMISSION COMPANY LATERAL
- 99 — NEW CONTOUR
- AREA INLET
- NEW STORM WATER SYSTEM
- NEW CULVERT
- DITCH/SWALE FLOW INDICATOR
- GRADE SURFACE FLOW INDICATOR
- 123.45 + NEW SPOT ELEVATION
- EXISTING FENCE
- 99 — EXISTING CONTOUR

- ASPHALT SURFACING
- AGGREGATE SURFACING
- CONCRETE
- EARTH
- RIPRAP
- SAND/BEDDING MAT'L
- GRASS
- WETLANDS

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0050 | DRAWING NUMBER | REV A

CODE | AREA

USERNAME A1ASL012
DATE TIME
B1 1=1
ACAD 10.c7

1 2 3 4 5 6 7

A B C D

FOR CONTINUATION SEE DWG 0052

STORM WATER RUNOFF TO BE ROUTED TO EXISTING WASTE WATER POND

EXISTING STORM WATER RUNOFF PATTERN WILL NOT BE DISTRUBED ON THIS SIDE

N

100' 50' 0 100' 200'

1"=100'

USERNAME A1ASL012
DATE TIME
B1 ACAD 10.c7
1=1

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

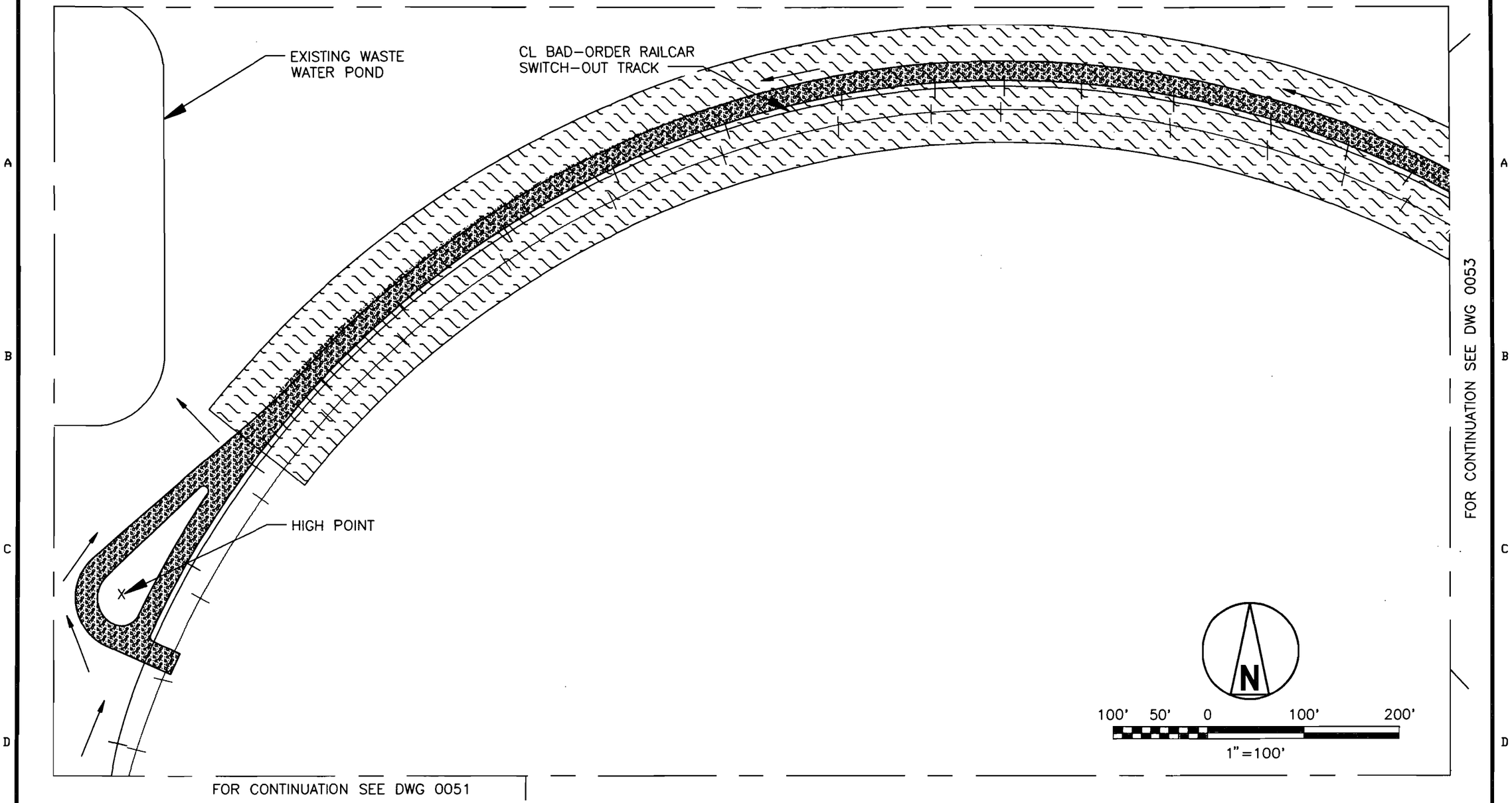
PROJECT 143799-SS-0051

DRAWING NUMBER

REV A

CODE

AREA



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DATE TIME 1=1

BLACK & VEATCH CORPORATION

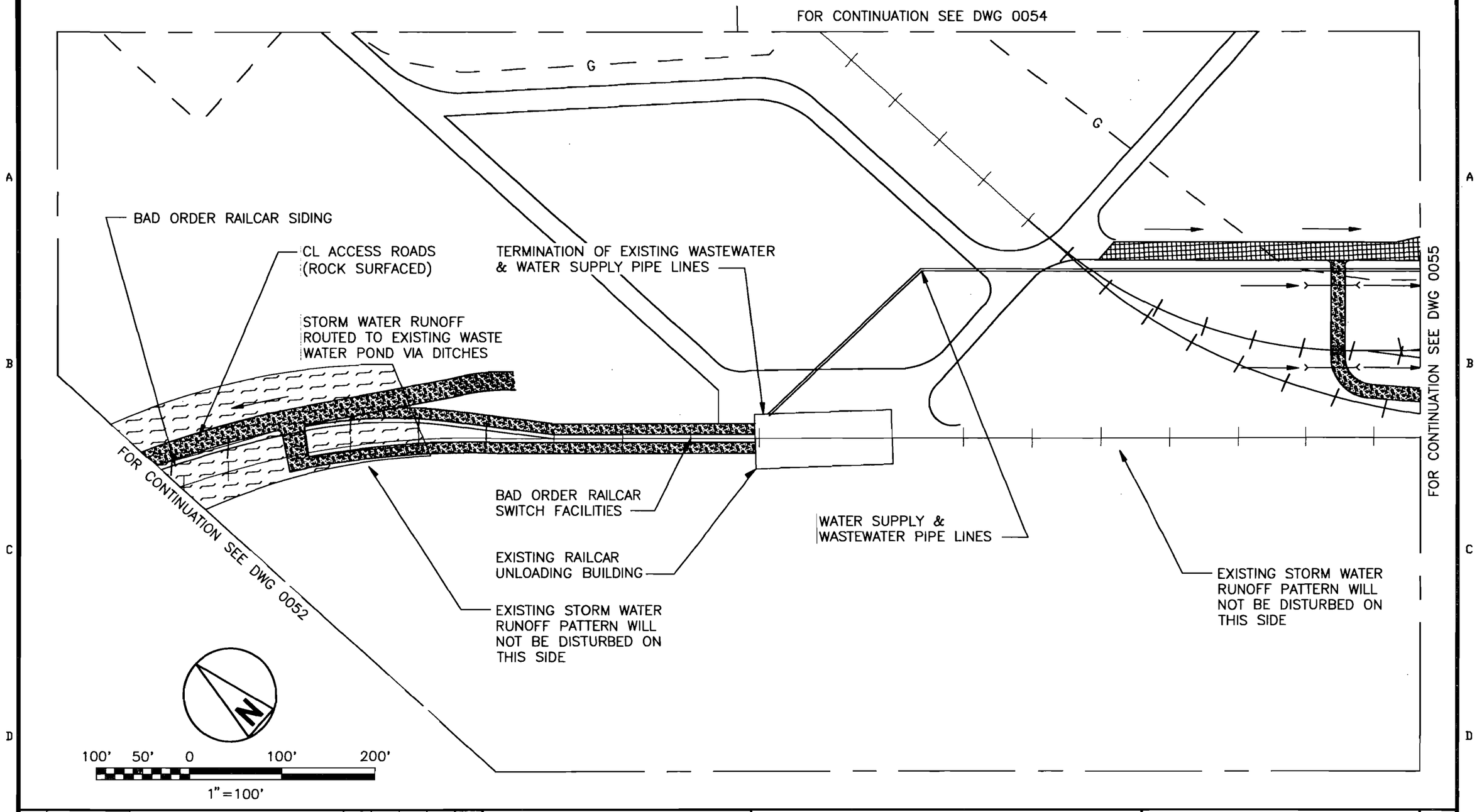
ENGINEER | DRAWN
CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0052 | DRAWING NUMBER | REV A

CODE
AREA



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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0053 | DRAWING NUMBER | REV A

CODE | AREA

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DATE TIME
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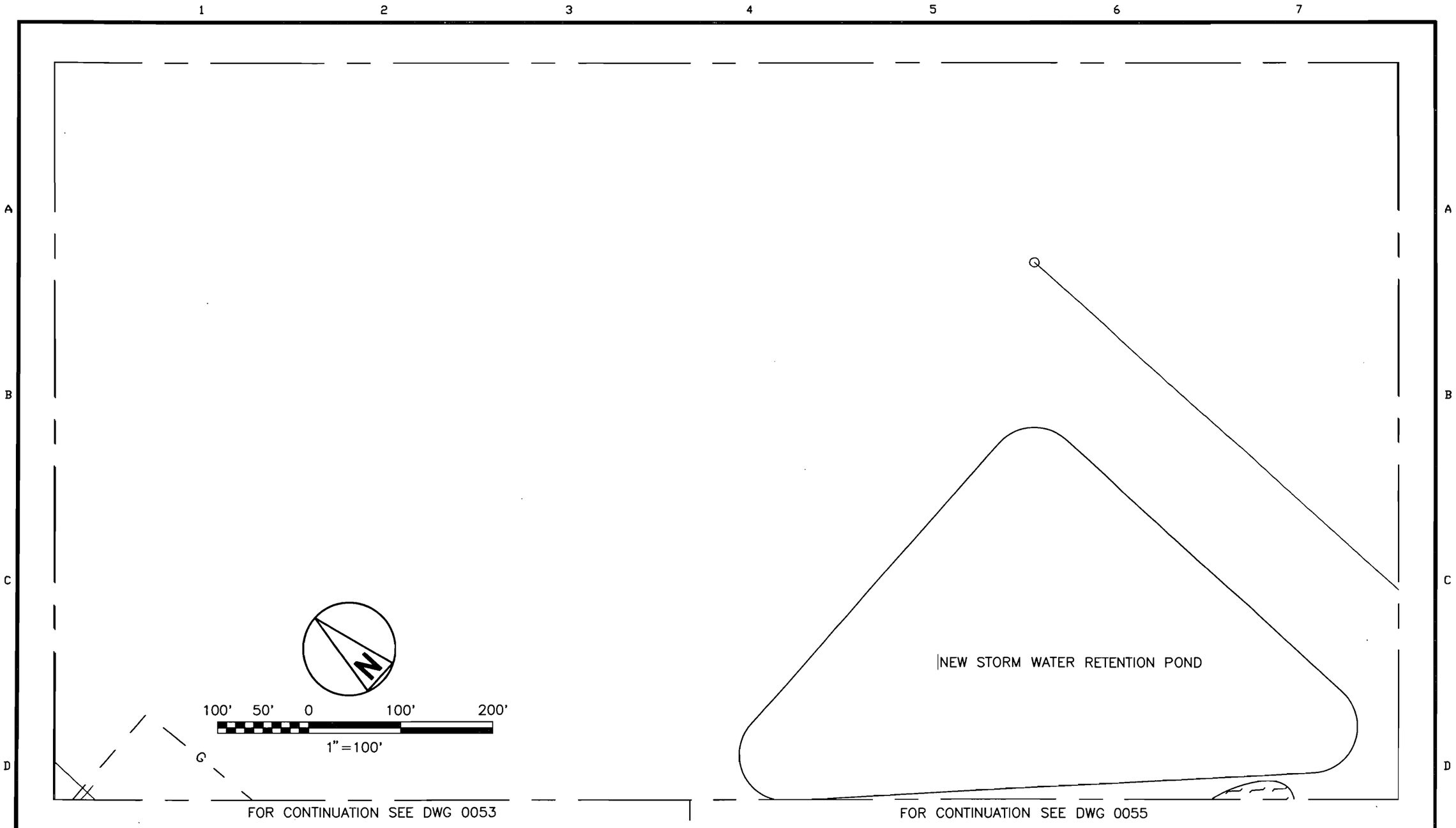

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DATE TIME B1 1=1 ACAD 10.c7

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0054
DRAWING NUMBER
REV A
CODE
AREA

FOR CONTINUATION SEE DWG 0054

FOR CONTINUATION SEE DWG 0053

FOR CONTINUATION SEE DWG 0056

WASTEWATER OIL SEPERATOR

CB

CB

CB

STORM WATER RUNOFF PATTERN WILL NOT BE DISTURBED ON THIS SIDE OF LOOP

STORM WATER RUNOFF FOR SUPPORTING OFFICES AND BUILDINGS WILL BE ROUTED TO NEW STORM WATER POND THROUGH A SERIES OF CATCH BASINS, CULVERTS, AND DITCHES

STORM WATER RUNOFF IN THIS AREA WILL BE ROUTED TO WASTE WATER OIL SEPERATOR

N

100' 50' 0 100' 200'

1"=100'

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0055

DRAWING NUMBER

REV A

CODE

AREA

USERNAME A1ASLO12
DATE TIME
B1 1=1
ACAD 10.c7

1 2 3 4 5 6 7

A B C D

CL REPAIR TRACK C
CL REPAIR TRACK B
CL REPAIR TRACK A

STORM WATER RUNOFF WILL BE DIRECTED TO NEW STORM WATER RUNOFF POND VIA DITCHES

FOR CONTINUATION SEE DWG 0055

FOR CONTINUATION SEE DWG 0057

EXISTING SOUTH PLANT ENTRANCE ROAD

G G G G G

CB
CB
CB

EXISTING STORM WATER RUNOFF PATTERN WILL NOT BE DISTURBED ON THIS SIDE OF LOOP

N

100' 50' 0 100' 200'

1"=100'

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11/20/06
A1ASL012
HAR48329

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0056

DRAWING NUMBER

REV A

CODE

AREA

1 2 3 4 5 6 7

A B C D

FOR CONTINUATION SEE DWG 0056

FOR CONTINUATION SEE DWG 0058

CL REPAIRED RAILCARS SIDINGS

G G G G

STORM WATER RUNOFF DRAINAGE PATTERN
TO MATCH EXISTING PATTERN

N

100' 50' 0 100' 200'

1"=100'

USERNAME A1ASL012 DATE TIME B1 1=1 ACAD 10.c7

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
A	01/02/07	ISSUED FOR CLIENT REVIEW	JH	ALM		MRR	

BLACK & VEATCH CORPORATION

ENGINEER | DRAWN

CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT DRAWING NUMBER
143799-SS-0057

REV
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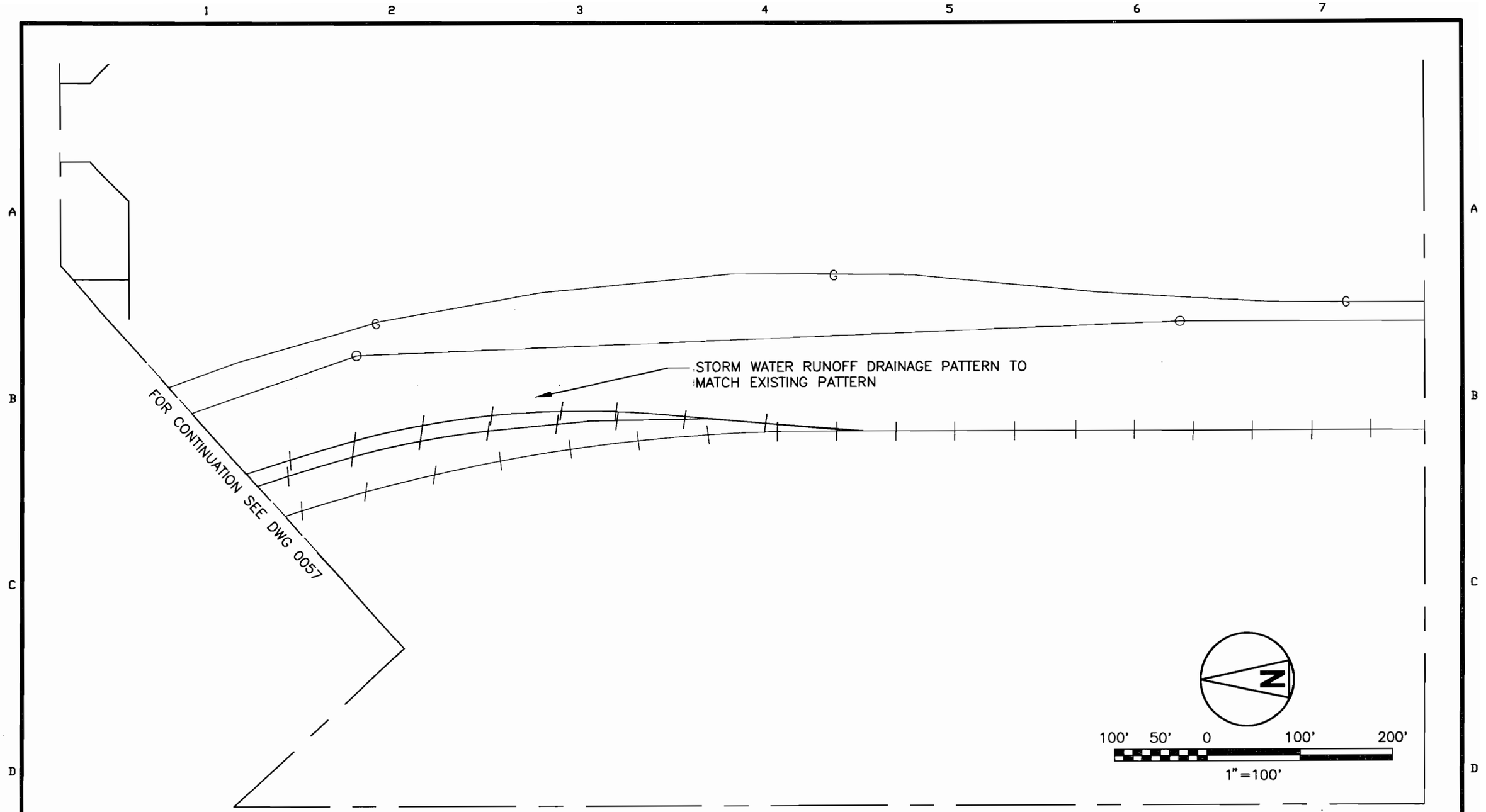

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BLACK & VEATCH CORPORATION

ENGINEER | DRAWN
CHECKED | DATE

RAILCAR MAINTENANCE FACILITIES
AMENDMENT 9

OUC STANTON ENERGY CENTER
PRELIMINARY STORM WATER DRAINAGE DESIGN

PROJECT 143799-SS-0058
DRAWING NUMBER
REV A

CODE
AREA

AMENDMENT REQUEST No. 10
Improvements to Ash Load-out Silos 1 & 2
New Rail Load-in with Silos 3 & 4

Proposed Amendment
The proposed amendment is for the installation of equipment needed to allow ash blending at the Stanton Energy Center (Stanton). These improvements to the current ash handling arrangement may best be described as three phased construction activities that will ultimately allow maximum flexibility to mix ashes from onsite and offsite to produce an increased amount of marketable pozzolan grade ash for use in concrete. (See attached Process Flow Diagram PF-100.)

Purpose/Reason for Amendment
These improvements are proposed to allow the blending of Units 1 & 2 ashes with imported ashes to produce larger quantities of high quality, marketable, pozzolan grade fly ash (a non-cementitious additive to concrete that partially replaces cement and improves concrete durability and workability), and reduce quantities of fly ash going to the onsite landfill.

Technical Description of Amendment
OUC's Stanton Energy Center (Stanton) currently has two fly ash (ash) loadout silos. Silo No. 1 and Silo No.2 receive ash pneumatically from Unit 2 and Unit 1, respectively. Each silo is equipped with an individual loadout spout that allows the ash to drop from the silo to a truck for delivery to the landfill or for beneficial use, depending on the ash quality. Each silo is also equipped with an individual baghouse.

The three phases of the proposed construction are:

1. Installation of common piping between existing Silos No. 1 and No. 2 that will allow mixing of ashes from those silos during load-out to trucks. A truck scale will also be installed under these silos during this phase of construction (see Silos No. 1 and No. 2 and truck scale in System 1 on the attached drawing PF-100).

2. Installation of a rail unloading system that will allow rail cars to import ash to the Stanton facilities (see System 2 on the attached drawing PF-100). This operation will consist of a bucket elevator that will unload incoming railed ash to a new 2,000-ton Silo No. 4 (equipped with an individual baghouse), which will store ash prior to conveying to one of two silos in the truck load-out area (Silo No. 1 or new Silo No. 3 of System 1 on the attached drawing PF-100).

3. Installation of a new 250-ton Silo No. 3 equipped with a baghouse. Silo No. 3 will be located adjacent to Silo No. 1. This silo will accept imported ash from the rail unloading system. Silo No. 3 will also accept imported ash from pneumatic trucks via a single truck port hook-up. Ash from Silo No. 3 can be loaded out to trucks directly through the same common load-out spout used for Silo Nos. 1 and 2.

The major pieces of new equipment required to accomplish these improvements are:

- 450-tons-per-hour (TPH) bucket elevator;
- Five air slides;
- 2,000-ton Silo No. 4 with baghouse at rail unloading;
- 250-ton Silo No. 3 with baghouse at truck load-out;
- Pneumatic transfer equipment with pressure pod; and
- Various blowers, compressors, and piping.

Existing Silo Nos. 1 and 2 will continue to receive ash generated by the Plant, each receiving approximately 100,000 tons per year. These two silos will combine their individual load-out spouts into a single common spout. The common spout will be an extendable double walled, hatch fitted spout that blows vented air from the trucks back to Silo No. 1. Appropriate conveyance piping, air slides, vent piping, valving, etc. will be installed to accomplish combining the load-out spouts. In addition, a truck scale will be installed under the common spout.

Railcar imported ash (see System 2 on the attached drawing PF-100) will be received at the railcar unloading facility located on the Stanton site approximately 500 feet south-southwest from the truck scale. Ash will unload by gravity from covered hopper bottom dump railcars to an air slide (see attached drawing PF-100). The air slide / railcar connection is fitted with an airtight boot. The air slide operates up to a maximum 450 TPH. Ash will be moved by the air slide to a load-in bucket elevator (450 TPH) and raised to a second air slide. The air slide will load the pozzolan (ash) into a 2,000-ton silo (new Silo No. 4).

The pozzolan is removed from Silo No. 4 by gravity load-out to a pressure pod, which will pneumatically convey the ash to either the new 250-ton Silo No.3 or existing Silo No. 1, depending on valve settings, at a rate of 50 TPH. This transfer is anticipated to operate for 8 to10 hours per day and transfer about 100,000 tons per year. Silo No. 3 essentially serves as a surge silo for imported ashes that will normally be used in mixing with Units 1 & 2 ashes to augment quality. Silo No. 3 can also accept ash pneumatically from trucks equipped with blowers; this transfer rate will be approximately 25 tons per hour. Silo No. 3 will load-out through the same common spout as Silo Nos. 1 and 2, directly above the truck scale. As much as 30,000 tons of ash per year may be imported by truck.

Mixing of ash is accomplished by loading ash from Silo Nos. 1, 2, and 3 at separate intervals; the mixing actually occurs in the truck, not in the pipe. Intervals of a silo's unloading are dictated by desired ash mixing ratios and are tracked by tonnages monitored on the truck scale. The instantaneous load-out rate is expected to be 250 TPH, but will be very discontinuous because of the mixing method described.

Environmental Consequences of Amendment

Silo No. 1 emissions will increase slightly because of the additional emissions from load-out to trucks from Silo Nos. 2 and 3, due to all three silos sharing a common load-out spout. This is a relatively small emissions increase and may be considered insignificant. The existing baghouse on Silo No. 2 will have emissions reduced by the amount of emissions caused by load-out to trucks since such emissions will now be vented to Silo No. 1. Silo No. 3 emissions will be the result of pneumatic load-in of 130,000 tons per year (average). Silo No. 4 emissions will be the result of pneumatic load-in of 100,000 tons per year (average).

Currently, Units 1 & 2 produce a coal fly ash that is either marginally marketable or non-marketable for use as an ASTM-approved pozzolan in concrete. Unit 1 usually meets pozzolan specs required by the concrete industry; Unit 2 rarely meets such specifications. Each Unit produces about 100,000 tons per year. Non-marketable ash must be landfilled. This landfilling is viewed as a negative value activity for this material and has a net negative impact on the environment.

Importation and mixing of a high quality pozzolan ash with the onsite ashes will allow for the production of a blended ash product, resulting in more and higher quality marketable pozzolan ash for use in concrete. The resulting blended marketable ash will have a net beneficial environmental effect. The beneficial environmental effects result from:

- Avoided greenhouse gas generation by offset cement production;
- Conserved landfill space;
- Avoided mining and transportation activity (resources preservation) resulting from offset cement production;
- Improved concrete products from use of quality pozzolan (primarily improved durability);
- Avoided particulate and hazardous air pollutant emissions from offset cement production.

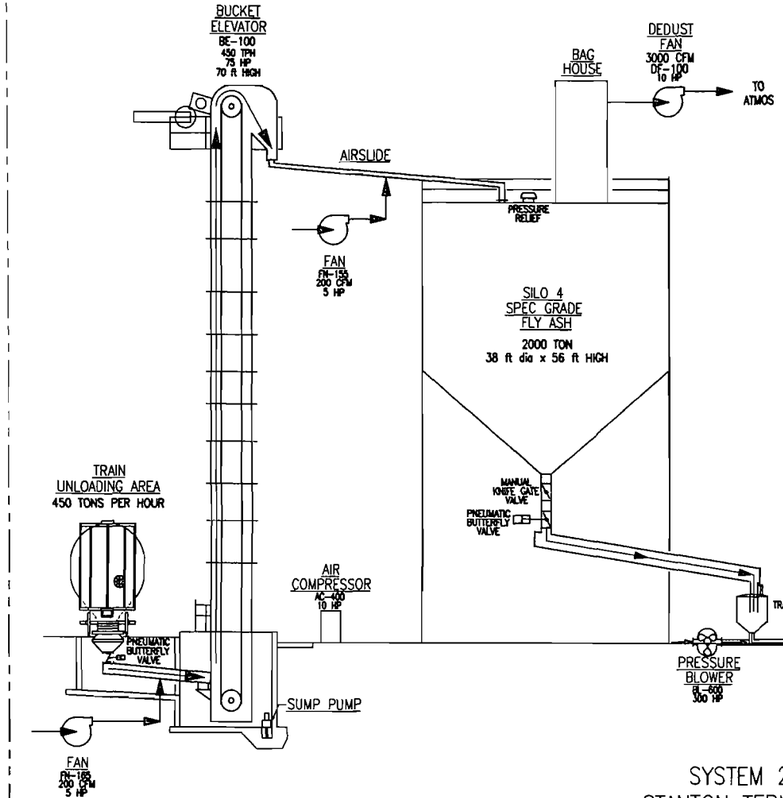
OUC anticipates a net benefit to the environment resulting from the approval and implementation of this amendment request. Additional emissions resulting from transfers of imported ash are more than offset by the benefits previously described

Effect of Amendment No. 10 on Certification/Conditions of Certification

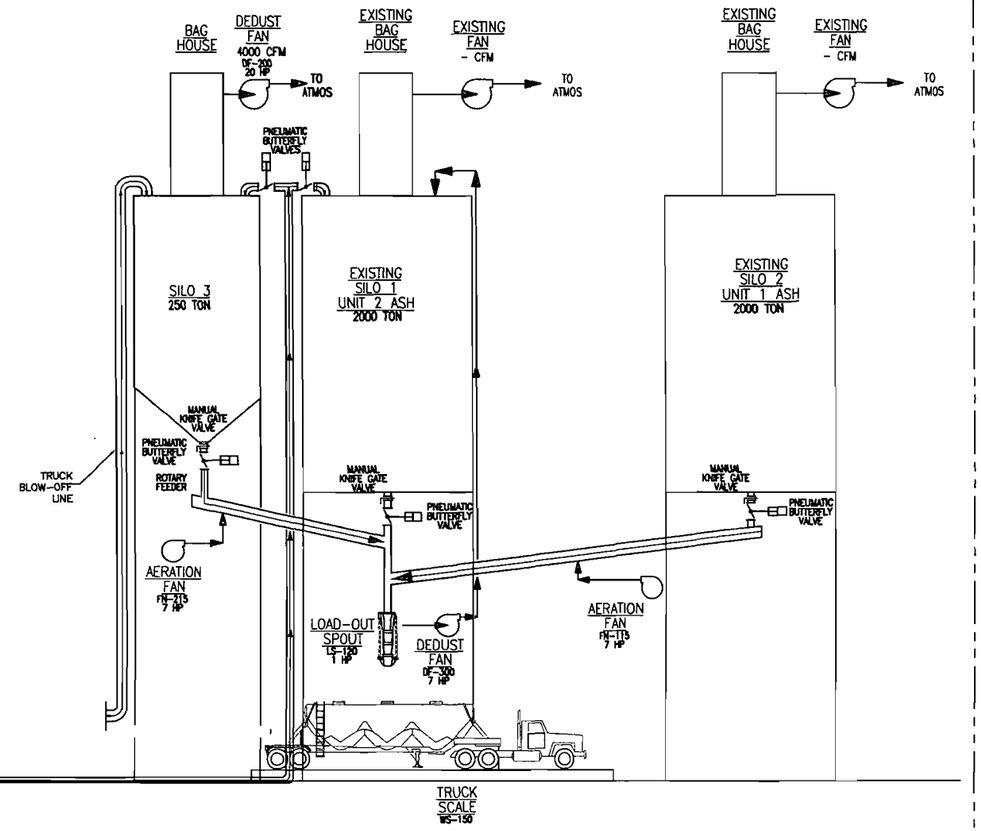
OUC believes that approval and implementation of the proposed ash blending facilities improvements will have no effect on the existing Conditions of Certification. However, OUC acknowledges that a modification of the Stanton PSD permit will be required.

APPENDIX TO AMENDMENT REQUEST NO. 10

Process Flow Diagram No. PF-100



SYSTEM 2
STANTON TERMINAL



SYSTEM 1
STANTON BLENDING

AREA 10

DATE	NO.	REVISION DESCRIPTION	APPD.
10-5-06	B	REVISED HORSEPOWERS	BRH

HEADWATERS RESOURCES

HEADWATERS RESOURCES, INC.
10653 S. RIVER FRONT PARKWAY
SOUTH JORDAN, UT 84095
(801) 984-9400
FAX (801) 984-9410
www.headwaters.com

SCALE: NTS
DATE: 10-3-06
DESIGN BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

STANTON ENERGY CENTER
FLY ASH TRANSFER CONE SILO
PROCESS FLOW DIAGRAM
ORLANDO, FLORIDA

DRAWING NO. PF-100
PROJECT NO.
REVISION NO. B
SHEET NO. 1 OF 1

AMENDMENT REQUEST NO. 11
Coal Blending Additions with Powder River Basin and Petroleum Coke Fuels.

Proposed Amendment
This amendment request is for installing additional coal conveying equipment at Stanton Energy Center (Stanton) to allow blending of fuels for Units 1 and 2 and to allow blending of petroleum coke (Petcoke) and Powder River Basin (PRB) sub-bituminous coal with bituminous coals. These additions will be coordinated with coal yard modifications associated with the Stanton Unit B addition.

Purpose/Reason for Amendment
The function of the coal storage, stockout and reclaim additions is to allow blending of fuels for Stanton Units 1 and 2 including PRB and Petcoke. Coal blending is desired to allow Stanton to comply with regulatory requirements regarding air emissions and produce cost effective energy. The modifications and use of PRB and Petcoke will provide flexibility to meet future emission reduction plans and will increase flexibility in fuel selection.

Technical Description of Amendment
The Coal Blending Additions include the following major components:

- A new Stacker/Reclaimer (S/R) 304 and Conveyor 306 located north of and parallel to the existing S/R.
- Transfer Point 302A including hopper east of existing Transfer Building 49.
- Conveyor 301 from Transfer Point 305 to new Transfer Point 302A.
- Conveyor 400A from Transfer Point 305 to Stanton Unit B Coal Crusher Building 404.
- Expansion of the coal storage area north of the existing S/R 13 and west of the Stanton B coal yard system.

A General Arrangement drawing (S1001AB) and preliminary Flow Diagram (S2000AB) of the proposed Coal Blending Additions are attached as part of this Amendment Request.

To increase flexibility of Unit 1 & 2 fuel selection and comply with future air emissions requirements, OUC commissioned a study to evaluate alternate fuel and air quality control strategies for Stanton Units 1 & 2. This study was performed by Black & Veatch. The goals for this study were to identify cost effective fuels and air quality control modifications to comply with air emissions requirements including CAIR and CAMR. Based on this study, OUC seeks the flexibility to burn a wider range of fuels and addition of the modifications described below.

New Conveyor 300B will transmit coal from the Coal Receiving System to Transfer Point 305 then to Conveyor 306 and to new S/R 304. S/R 304 then will convey the coal to active coal storage areas on either side of Conveyor 306 at rates up to 3500 tons per hour. In this way two or more coals can be stocked out and stored for future reclaiming and blending with coal reclaimed by existing S/R 13.

Coal blending will be accomplished by reclaiming different coals with existing S/R 13 and new S/R 304 and discharging the two coals onto Conveyors 6A and/or 6B that convey coal to Units 1 and 2 coal silos.

The coal storage area will be expanded to the north and west within the area originally intended for coal storage when Stanton Unit 1 was certified. This area drains to the existing Coal Runoff Pond and will be lined similar to the existing coal storage area.

In addition to new S/R 304, new Conveyor 301 and Transfer Point 302A will be added to convey coal from S/R 304 and Conveyor 306 to Conveyors 6A and 6B at rates between 225 and 1800 tons per hour. A new surge hopper with belt feeder will be located in Transfer Point 302A to permit more accurate control of coal flow onto Conveyors 6A and 6B than can be provided by S/R 304 in reclaim mode.

The discharge chutework of existing Conveyor 3 will also be modified to provide surge capacity and add a belt feeder to more accurately control coal flow to Conveyors 6A and 6B from existing S/R 13.

Blending is accomplished on Conveyors 6A and 6B by varying the coal discharge rate from Conveyor 3 and the Surge Hopper at Transfer Point 302A.

New Conveyor 400A will also be added to convey Powder River Basin coal reclaimed by S/R 304 from Transfer Point 305 to Stanton Unit B Coal Crusher Building 404 for burning in Stanton Unit B. This will provide greater reliability of PRB fuel supply to Stanton Unit B by providing a second coal flow path to Stanton Unit B.

S/R 304 will include wet suppression equipment to limit fugitive dust. A baghouse type dust collector will be provided at Transfer Point 302A.

Control of the Coal Blending Additions will be through the modified Coal Handling Control System located in Transfer Building 49.

Due to varying heat contents, the annual coal consumption for Stanton Units 1 and 2 will be slightly affected depending on which blends are used. The use of Petcoke will reduce the total tons of coal required while PRB will increase the total tons. For instance, if 25 per cent PRB is blended with bituminous coal typically used at Stanton Units 1 and 2, the quantity of coal used would increase about 8 percent. If 25 percent Petcoke is blended with bituminous coal, the quantity of coal used would decrease about 4 percent. A blend of 25 percent Petcoke with 75 percent PRB would increase annual coal tonnage by about 22 percent.

Environmental Consequences of Amendment

OUC anticipates no adverse environmental impacts resulting from the approval and implementation of Coal Blending and the Coal Blending Additions.

With the addition of the Coal Blending Additions, the total tonnage of coal burned in Stanton Units 1 and 2 may at times increase, but with no adverse effect on compliance with air permit emission limits. Blends using PRB coal will use slightly more tons of coal due to the lower heating value per ton of PRB compared to the bituminous fuel typically used at Stanton Units 1 and 2. Blends using Petcoke will use slightly fewer tons of coal due to the higher heating value per ton of Petcoke compared to the bituminous fuel typically used at Stanton Units 1 and 2. Addition of the new equipment, transfer points and conveyors should not result in significantly different potential for creating fugitive dust, since dust controls will be installed and coal flow at the new facilities will be offset by corresponding reduced flow at the existing facilities.

There is some potential for added coal handling when blending. Currently, some fuel is conveyed directly to the Stanton Units 1 and 2 coal silos from the Coal Receiving System without being stocked out and reclaimed from the coal storage area. With coal blending, all coal will be stocked out and then reclaimed to create a blended fuel. As a result, some added stockout and reclaiming will result when blended coal is fired in Stanton Units 1 and 2.

The anticipated benefit of installing and operating the Coal Blending Additions and firing the blended coal is the ability to cost effectively comply with regulatory requirements regarding air emissions, especially regarding SO_2, through increased fuel flexibility.

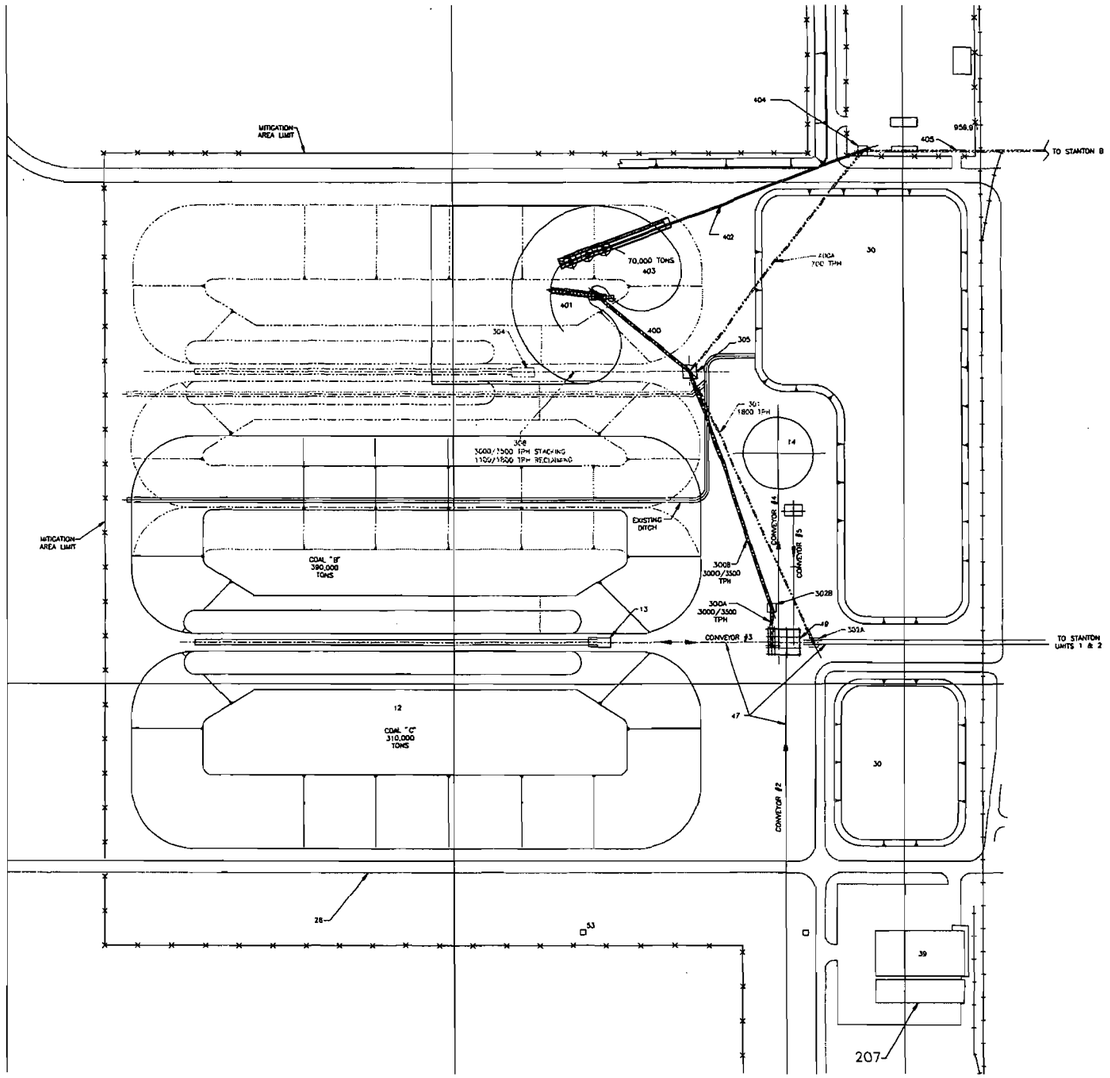
Effect of Amendment No. 11 on Certification/Conditions of Certification

OUC believes that approval and implementation of the Coal Blending Additions, and blending of PRB and Petcoke fuels with the current coal, will have no effect on the existing Conditions of Certification. However, OUC acknowledges that a modification of the Stanton PSD permit will be required.

APPENDIX TO AMENDMENT REQUEST NO. 11

General Arrangement Drawing No. 142726-DS-S1001AB

Flow Diagram No. 142726-DS-S2000AB



BUILDING AND FACILITIES LEGEND	
NO	EXISTING FACILITIES
12	COAL STORAGE AREA
13	STACKER RECLAIMER
14	EMERGENCY STOCKOUT AND RECLAIM
25	COMBUSTION WASTE HAUL ROAD
30	COAL STORAGE AREA RUNOFF POND
38	PERMANENT WAREHOUSE
47	YARD COAL CONVEYOR
48	COAL TRANSFER STRUCTURE
53	WELL WATER PUMP HOUSE
207	PERMANENT WAREHOUSE ADDITION
NO	PROPOSED FACILITIES – STANTON B
300	COAL STOCKOUT CONVEYOR
302	TRANSFER BUILDING
305	TRANSFER BUILDING
400	RECEIVING CONVEYOR
401	RADIAL STACKER
402	RECLAIM CONVEYOR
403	FIRE COAL STOCKPILE
404	CRUSHER BUILDING (BY OTHERS)
405	SILO FILL CONVEYOR (BY OTHERS)
NO	PROPOSED BLENDING FACILITIES
301	COAL RECLAIM CONVEYOR
302	TRANSFER BUILDING
304	BUCKET WHEEL STACKER/RECLAIMER (SHARED WITH STANTON B)
306	STACKER/RECLAIMER CONVEYOR (SHARED WITH STANTON B)
400A	RECLAIM CONVEYOR

NOT TO BE USED FOR CONSTRUCTION

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRAWN	CHECKED	APP'D
A	10/19/2006		KWS/MD		

100' 50' 0 100' 200'
SCALE: 1" = 100'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FL
SIGNED
DATE
REG NO.

BLACK & VEATCH CORPORATION

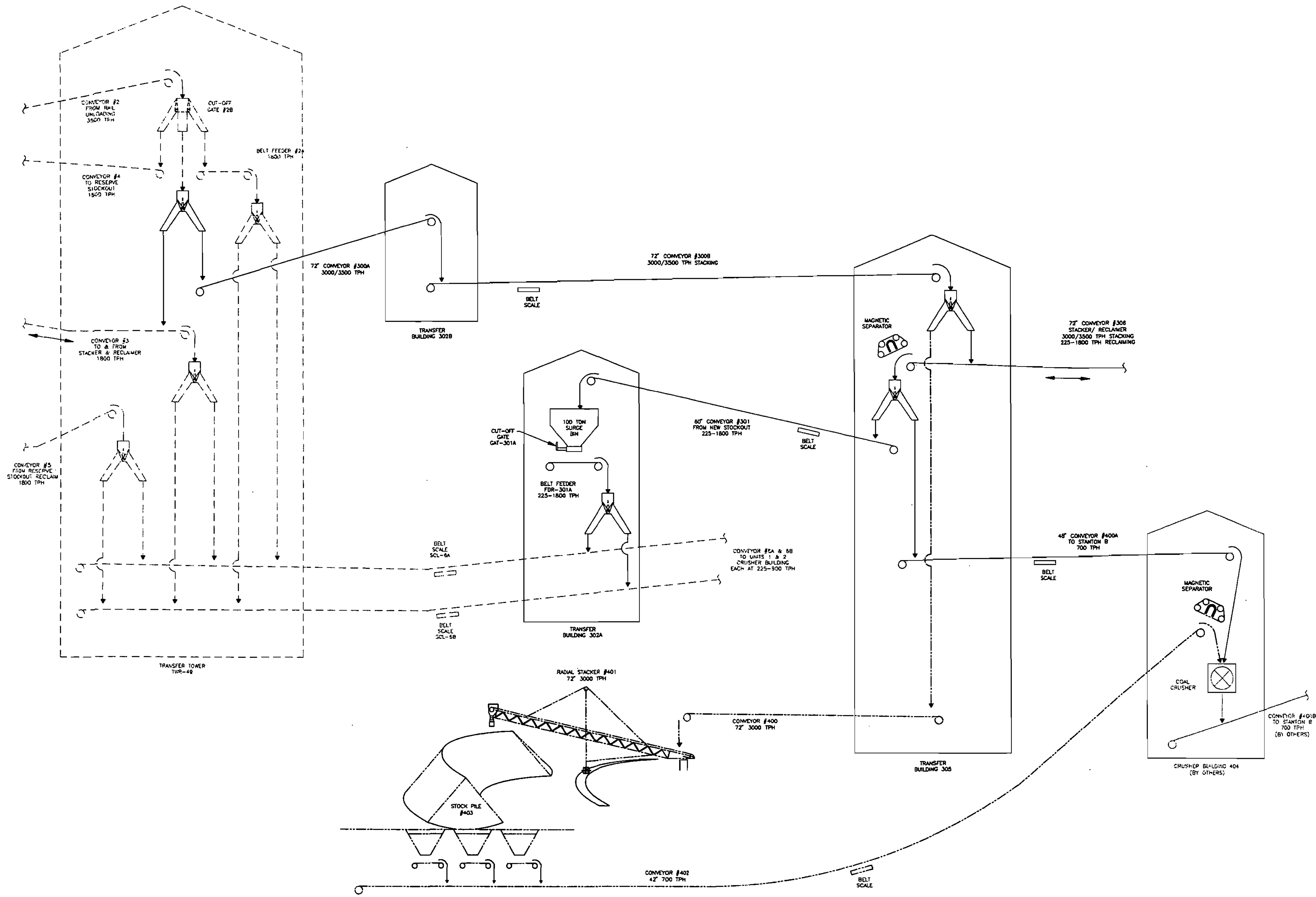
ENGINEER	JMD	DRAWN	KWS
CHECKED		DATE	

ORLANDO UTILITIES COMMISSION
STANTON ENERGY CENTER

PROPOSED ADDITIONS
COAL STACKOUT AND RECLAIM AREA

PROJECT 142726-DS-S1001AB
DRAWING NUMBER
REV A
CODE
AREA

SCHEDULE
DATE: 10/19/06 08:23:24



OPEN
10/10/06

NOT TO BE USED
FOR CONSTRUCTION

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDC	APP
B	10/19/2006	ADDED BLENDING	KMS	JWD			
A	10/10/2006	INITIAL ISSUE	KMS	JWD			

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF
SIGNED ______
DATE ______ REG NO. ______

BLACK & VEATCH CORPORATION
ENGINEER JWD DRAWN KMS
CHECKED DATE

ORLANDO UTILITIES COMMISSION
STANTON ENERGY CENTER

MODIFIED SOUTHERN LAYOUT
FLOW DIAGRAM

PROJECT / DRAWING NUMBER: 142726-DS-S2000AB
REV: B
CODE
AREA

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