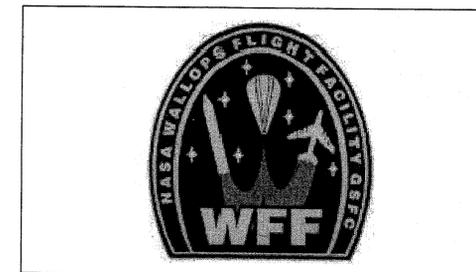


NATIONAL AERONAUTICS AND SPACE ADMINISTRATION Wallops Flight Facility Wallops Island, Virginia Electrical and Communications Upgrades, North Wallops Island



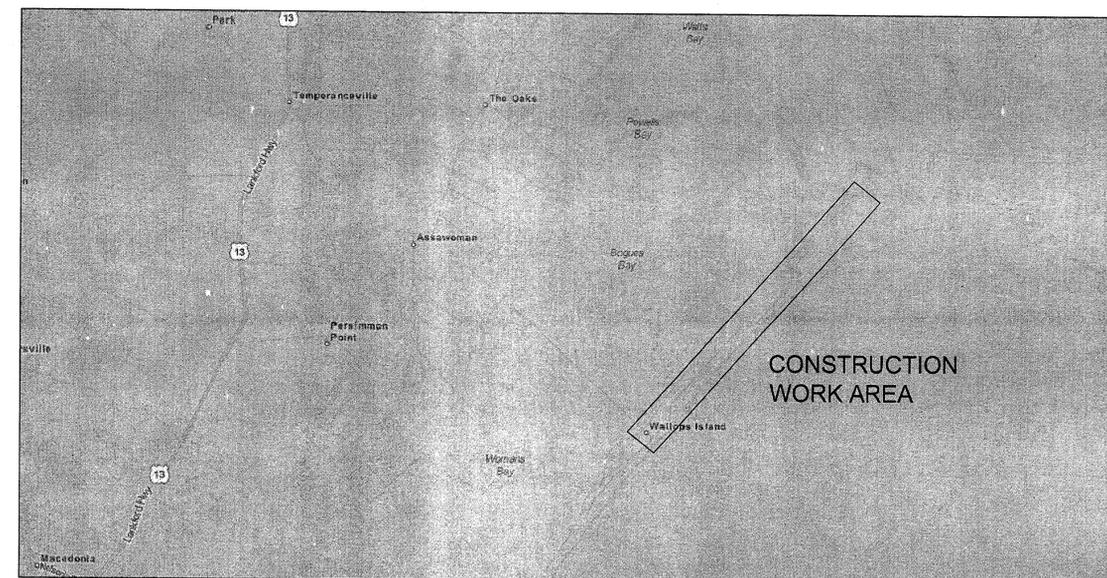
1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939



RELEASED FOR CONSTRUCTION

DRAWING NO.	DESCRIPTION
TS-1	TITLE SHEET
LS-1	LEGEND, SYMBOLS AND ABBREVIATIONS
GN-1	GENERAL NOTES, SAFETY AND CONTACTS
EOL	EXISTING ELECTRICAL DISTRIBUTION SYSTEM ONE-LINE DIAGRAM
POL	PROPOSED ELECTRICAL DISTRIBUTION SYSTEM ONE-LINE DIAGRAM
POL-1	PROPOSED ELECTRICAL DISTRIBUTION SYSTEM ONE-LINE DIAGRAM
POL-2	PROPOSED ELECTRICAL DISTRIBUTION SYSTEM ONE-LINE DIAGRAM
POL-3	PROPOSED ELECTRICAL DISTRIBUTION SYSTEM ONE-LINE DIAGRAM
POL-4	PROPOSED ELECTRICAL DISTRIBUTION SYSTEM ONE-LINE DIAGRAM
PCP-1	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-2	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-3	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-4	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-5	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-6	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-7	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-8	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-9	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-10	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-11	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-12	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-13	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-14	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-15	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-16	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-17	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PCP-18	UNDERGROUND ELECTRICAL SYSTEM CONDUIT PLAN
PE-1	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-2	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-3	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-4	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-5	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-6	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-7	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-8	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-9	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-10	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-11	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-12	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-13	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-14	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-15	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-16	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-17	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PE-18	UNDERGROUND ELECTRICAL SYSTEM PRIMARY AND SECONDARY CABLE PLAN
PED-1	EXISTING ELECTRICAL SYSTEM DEMOLITION PLAN
PED-2	EXISTING ELECTRICAL SYSTEM DEMOLITION PLAN
PED-3	EXISTING ELECTRICAL SYSTEM DEMOLITION PLAN

DRAWING NO.	DESCRIPTION
UD-1	UNDERGROUND ELECTRICAL SYSTEM CONSTRUCTION DETAILS
UD-2	UNDERGROUND ELECTRICAL SYSTEM CONSTRUCTION DETAILS
UD-3	UNDERGROUND ELECTRICAL SYSTEM CONSTRUCTION DETAILS
UD-4	UNDERGROUND ELECTRICAL SYSTEM CONSTRUCTION DETAILS
UD-5	UNDERGROUND ELECTRICAL SYSTEM CONSTRUCTION DETAILS
UD-6	UNDERGROUND ELECTRICAL SYSTEM CONSTRUCTION DETAILS
UD-7	EQUIPMENT SCHEDULE
CMP-1	CABLE PULLING MAP
CMP-2	CABLE PULLING MAP
CMP-3	CABLE PULLING MAP
CMP-4	CABLE PULLING MAP
CMP-5	CABLE PULLING MAP
CMP-6	CABLE PULLING MAP
CMP-7	CABLE PULLING MAP
CMP-8	CABLE PULLING MAP



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE: _____
SUBMITTED BY: *[Signature]*
DATE: 3/10/14
PROJECT MANAGER

NASA SAFETY
[Signature]
DATE: 2/21/14
FIRE PROTECTION
[Signature]
DATE: 2/21/14

CONSTRUCTION MANAGEMENT
[Signature]
DATE: 2/10/14
O & M
[Signature]
DATE: 2/10/14

ENGINEERING APPROVAL
ENGINEERING GROUP LEADER
[Signature]
DATE: 2/10/14
BRANCH APPROVAL
[Signature]
DATE: 2/10/14
BRANCH HEAD

GRAPHIC SCALE
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX
SCALE
SHEET 1 OF 63

TS-1

NORTH ISLAND ELECTRICAL UPGRADES
TITLE SHEET AND VICINITY MAP

PROJECT NUMBER: NASS-01080
DRAWING NO. 16858
DR. LBJ DATE: 12-31-2013
CK. PJR REVISED:



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

GENERAL NOTES

1. The work consists of the installation of new underground electrical distribution facilities and removal, rearrangement, or modification of existing underground electrical distribution facilities, all within the area of the Goddard Space Flight Facility Wallops Island in the northeast portion of Virginia.
2. Work on this project involves working over, under, near, around, and on 12.47kV/7.2 kV underground electric distribution facilities owned by NASA. The project work includes the installation of new precast concrete manholes, SF6 switchgear, junction enclosures, 3-phase transformers, directional boring of HDPE conduit, copper conductors, and all associated hardware and equipment. The work also includes the removal of existing SF6 switchgear, all as detailed in the project plans and drawings.
3. Work on the project will be performed using a segmented or phased installation in order to maintain electric service to existing facilities, maintain existing electric system operation and coordinate the work with other projects in the area.
4. Base facility plans used for the design base of this work were furnished by NASA-Wallops Island. Work to be performed under this contract was added by PowerServices, Inc. and shall be used solely for work on this project.
5. All existing overhead and underground facilities shown on the base plans are diagrammatic in nature and for informational purpose only. Actual locations shall be field verified and documented prior to excavation or execution of the work. Additionally, the contractor shall be responsible for the field verification of the accuracy of all as-built documents used in the process of the work. All relines and notes of offering construction or field conditions shall be reported and supplied to the PowerServices's project engineer for incorporation into the record drawings.
6. Contractor shall locate and mark all electrical circuits and underground utilities in the area of construction prior to any excavation. The contractor shall physically verify the location and elevation of the existing utilities indicated prior to the starting construction. Obtain digging/excavation permissions prior to the start of excavation by contacting the NASA project manager or representative.
7. Notify the NASA project manager or representative at least 7 days prior to starting excavation work. Contact the Government utility locate department system 48 hours prior to excavating.
8. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing facilities which are to remain. Repair or replace portions of any existing facility which has been altered during construction operations to match existing or adjoining work as approved by the NASA project manager. At the completion of construction, existing facilities shall be in a condition equal to or better than that which existed before new work started.
9. Permission to interrupt any base roads, parking lots and/or utility service shall be requested in writing a minimum of 15 days prior to the desired date of interruption.
10. All work around/involving roadways, to include roadway excavations and utility crossings, will be conducted in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and the NASA General Safety Program Requirements (NPR 8715.3C). Contractors shall provide and ensure appropriate road closure and detour signs are established as necessary for motor traffic management.
11. In order to minimize interruption to Wallops Island roadways, the contractor shall coordinate and schedule road crossing construction and closings per work phase to accomplish as many crossings as possible within the scheduled closing time frame.
12. Utility cutovers and interruptions should be scheduled after normal working hours or on Saturday, Sunday, and government holidays. Contractor shall conform to procedures required in notes 13 and 14.
13. Regular working hours can consist of up to an 8.5 hour period between 7 a.m. and 3:30 p.m., Monday through Friday, excluding Government holidays.
14. Work outside the regular working hours shall be arranged in advance with the NASA project manager.
15. The contractor will be working around existing buildings which are occupied. Do not enter the buildings without prior approval of the NASA project manager.
16. Operation of installation utilities: The contractor shall not operate nor disturb the setting of the control devices on the base utilities system, including water, sewer, electrical, and communication services. Base personnel will operate the control devices as required for normal conduct of the work.
17. Personnel and Vehicle Access and Cell Phone Usage.
 - a. The contractor shall be required to obtain contractor tradesman passes for all personnel to access the installation and government property. Provide a list of employees (prime and subcontractors) on company letterhead for clearance into the project work area. The list shall be provided to the NASA project manager a minimum of 5 work days prior to scheduled work to be performed. Additionally, the list shall be maintained and updated a minimum of 5 working days prior to the time new employees need access to the jobsite.
 - b. Cell phone usage on Wallops Island while driving is strictly prohibited and violators will be ticketed. The contractor shall make sure all employees and those of subcontractors are aware of this restriction.
18. The contractor shall make every effort to cause as little disturbance as possible and protect the natural environment and resources of the base during the course of the work.
19. All excess soil, excavation, waste and debris resulting from construction shall be removed from the site as soon as practical during the course of the work.

20. The contractor is responsible for the installation and maintenance of erosion control devices to control run off from the construction site for the duration of the contract. The contractor shall install approved erosion control devices as necessary to protect drainage course including temporary protection on side and back slopes as soon as rough grading is complete.
21. All excess soil, excavation, waste and debris shall be removed from the site as soon as practical during the course of the work. Soil and excavation materials should be removed from the Base and not stock piled unless they are to be reused.
22. The finish elevation of pad-mounted or ground sleeve mounted equipment should be a minimum of 4' above surrounding grade or adjacent roadways or as approved by the NASA project manager. Equipment is not to be installed within drainage control areas, areas subject to flooding or water holding areas.
23. Cable tags shall be provided for all underground circuitry, including medium and low voltage system cabling. Tags shall be provided at all accessible locations within the circuit. Identification markings shall include the circuit designation, phase, source (from) and feed (to) locations. For example, tags at the first handhole on an exterior lighting circuit would include, circuit designation (MDP-1), source (MDP ckt 1), feed (Lighting Pole 1). Tags at a transformer would include, source (Primary Riser Pole #xxxx) feed (Transformer #2). All cable identification tag information shall be identified and approved by the Public Works Engineer prior to installation.
24. Single-phase fault indicators shall be provided on all incoming and outgoing conductors located within the medium voltage equipment enclosures. This includes all pad mounted enclosures for medium voltage equipment, such as transformers, sectionalizing cabinets, medium voltage switches, etc.
25. All conduits installed will include pulling lines/cables for installation of conductors.
26. Contractor is responsible for keeping one clean set of drawings for as-built markups. These markups will be returned to the engineer for completion of a final set of as-built drawings to be presented to NASA Wallops Island as record drawings.
27. The contractor shall divert at least 50% of Construction and Demolition materials and debris through recycling. The contractor shall keep track of the weight (in pounds or tons) diverted and provide the data in a brief report upon completion of the project.
28. Contractor shall contact the Wallops Environmental Office for MEC Awareness Training. There is a low likelihood that the contractor will come into contact with munitions and explosive constituents. Contractor to schedule MEC Awareness Training through the COTR.
29. Contractor is responsible for providing a complete arc flash analysis for all switchgear installations for the project. Contractor shall supply and affix arc flash hazard labels in accordance with NFPA 70E.
30. Contractor shall provide means for de-watering of open pits for the installation of junction cabinets, switchgear, and transformers before installing stone base if necessary.
31. Wallops Island is currently providing various launch activities from the facilities in which work will be performed. It is the contractor's responsibility to schedule work so as not to interfere with launching activities in the area.

SAFETY NOTES

1. Refer to the approved safety plan for detailed safety information and requirements.
2. All contractors must comply with Federal, State, and Local regulations pertaining to the environment. Additionally all work must comply with the approved project safety plan, as well as OSHA requirements and standards.
3. The contractor is responsible for safety of on-site personnel. If safety department personnel observe an unsafe condition, work will be stopped without contract extension until the unsafe condition(s) is/are remedied. Accident report forms (OSHA Form 301 or 300) will be submitted for each reportable occupational injury, illness, or lost time accident. The contractor is responsible for notifying OSHA in the event of a serious employee illness or injury. Provide a copy of the accident report to the safety office.
4. All conductors and equipment shall be considered "Energized" unless checked, tagged, grounded, and checked again.
5. The contractor shall conduct daily "Tailgate" safety meetings covering the following items:
 - a. Proper wearing/use of personal protective equipment (PPE) and training to properly DON/DOFF all PPE.
 - b. Control access to the job site and cleanliness of the jobsite.
 - c. Electrical safety on the jobsite.
 - d. Recognition of potential hazards at the jobsite and establishing abatement procedures to minimize them.
 - e. As required during work performance, abide by all excavation and trenching regulations.
6. Materials with "Environmental Conditions" or hazardous substances will be the government's responsibility for proper handling and disposal. The term "Environmental Conditions" shall, without limitation, include the presence of or condition involving any pollutant, hazardous or solid waste, hazardous material or hazardous or condition involving any pollutant, hazardous or solid waste, hazardous material or hazardous or toxic substance regulated under any federal, state, or local law (including, without limitation, common law), regulation or ordinance or any substance (including, without limitation mold or other mycotoxins) which may create an unsafe condition or pose any threat to health or safety (collectively "Hazardous Substances").
7. The Contractor shall conduct the fueling and lubricating of equipment and motor vehicles in a manner that protects against spills and evaporation. All used oil generated on site will be managed in accordance with 40 CFR 279. The Contractor will determine if any used oil generated while on-site exhibits a characteristic of hazardous waste. In addition, used oil containing 1000 parts per million of solvents will be considered a hazardous waste and disposed of at Contractor's expense. Used oil mixed with a hazardous waste will also be considered a hazardous waste. All hazardous waste will be managed with the approved Environmental Protection Plan.
8. The Contractor shall take precautions to prevent releases/spills of oil and hazardous materials. In the event of any releases of oil and hazardous materials, chemicals, or gases; immediately (within 15 minutes) notify the Base or Activity Fire Department, and the NASA Project Manager. The Base Environmental Office shall make verbal and written notifications as required by the federal 40 CFR 355, State, local regulations and NASA Instructions. Spill response shall be in accordance with 40 CFR 300 and applicable State and local regulations. Contain and clean up these spills without cost to the Government. If Government assistance is requested or required, the Contractor shall reimburse the Government for such assistance.
9. In addition to the requirements of the approved safety plan for this project the Contractor shall comply with the following:
 - a. Confined space work shall conform to OSHA 29 CFR 1910.146 and GPR 1700.6A
 - b. Any potential for a hazard in a confined space requires a permit system to be used.
 - c. Entry Procedures. Prohibit entry into confined space by personnel for any purpose until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented.
 - d. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.
 - e. Workers shall have confined space safety training and be trained and knowledgeable in the proper use of confined space atmospheric monitoring equipment.
10. Contractor must maintain a copy of "Material Safety Data Sheet" (MSDS) for all chemical products or hazardous material that is required to perform the job. No lead, lead based, or Chromium products will be allowed on Wallops Island.

RELEASED FOR CONSTRUCTION GN-1

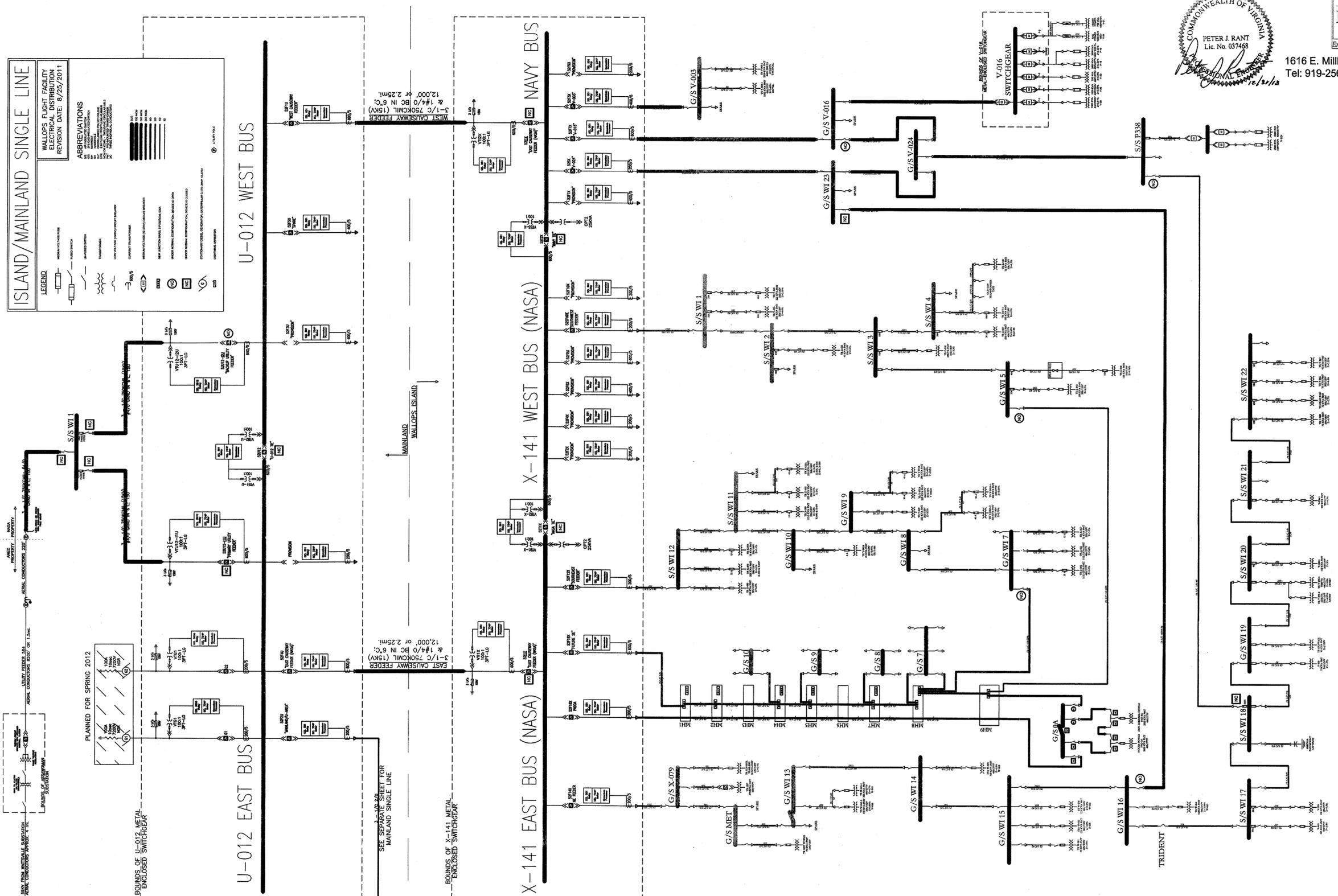
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADES GENERAL NOTES, SAFETY NOTES PROJECT NUMBER: NASS-01080 DR. LBJ DATE: 12-31-2013 CK. PJR REVISED: DRAWING NO. 16860
						DATE: _____	DATE: 2/21/14	DATE: 2/14/14	DATE: _____		
						SUBMITTED BY	FIRE PROTECTION	DATE: 2-10-14	BRANCH APPROVAL	AUTOCAD - RELEASE 2007	
						PROJECT MANAGER	DATE: 2/21/14	DATE: 2-10-14	BRANCH HEAD	FILE NAME: XXXXXX	
										SCALE	SHEET 3 OF 63

ISLAND/MAINLAND SINGLE LINE
Wallops Flight Facility
ELECTRICAL DISTRIBUTION
REVISION DATE: 8/25/2011

ABBREVIATIONS

LEGEND

PLANNED FOR SPRING 2012



COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
 PROFESSIONAL ENGINEER
 10/20/12

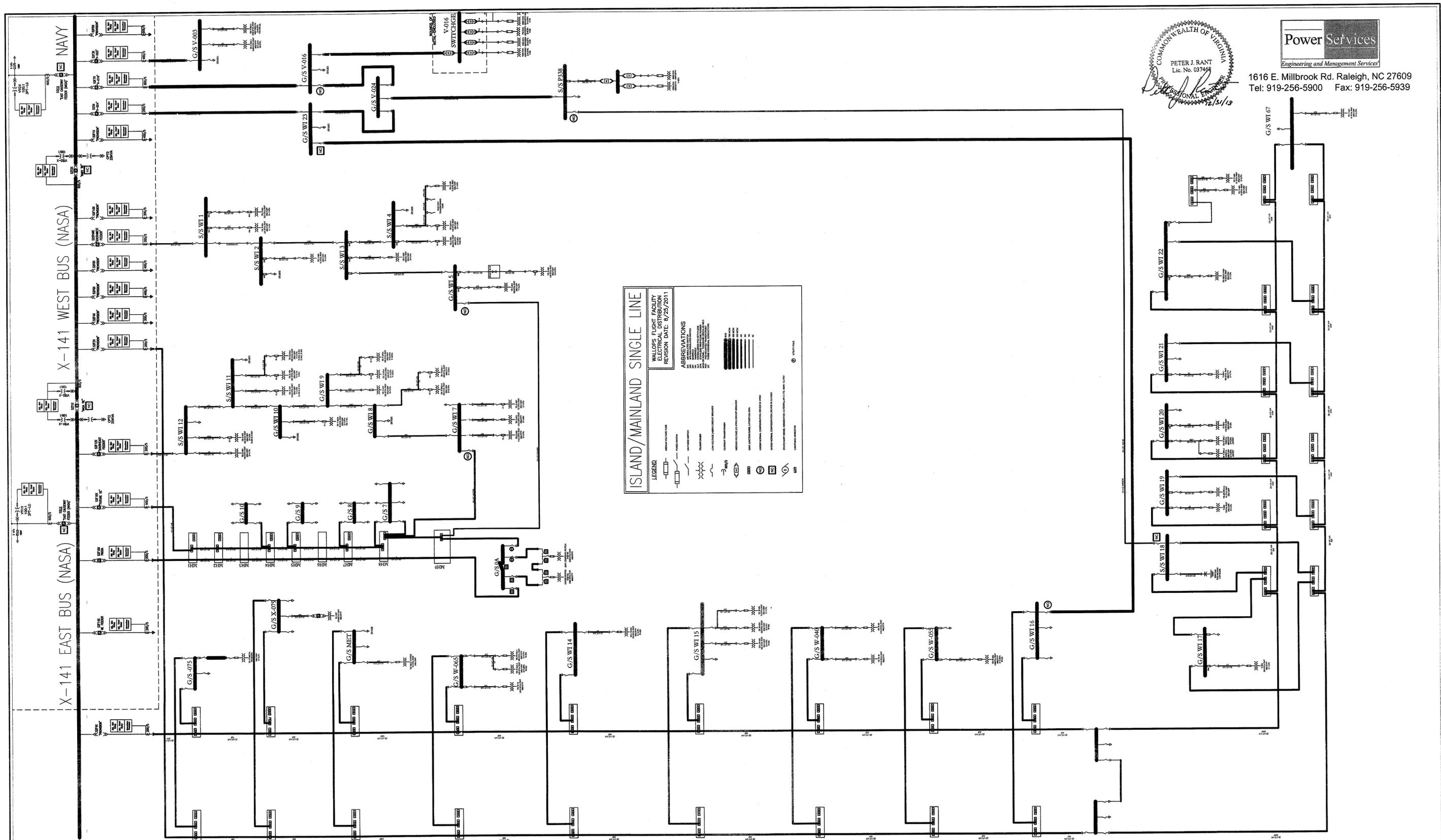
Power Services
 Engineering and Management Services

1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

RELEASED FOR CONSTRUCTION

EOL

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADES EXISTING ONE LINE DIAGRAM PROJECT NUMBER: NASS-01080 DR. LBJ DATE: 12-31-2013 CK. PJR REVISED:
						DATE: 3/10/09	DATE: 2/10/14	DATE: 2/10/14	DATE: 2/10/14	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	
							DATE: 2/12/14	DATE: 2/12/14	DATE: 2/12/14	SHEET 4 OF 63	



'ISLAND/MAINLAND SINGLE LINE

Wallops Flight Facility
Electrical Distribution
Revision Date: 8/25/2011

ABBREVIATIONS

- Legend:
 - : Equipment
 - : Transformer
 - ⊕: Grounding
 - ⊖: Grounding
 - ⊙: Grounding
 - ⊚: Grounding
 - ⊛: Grounding
 - ⊜: Grounding
 - ⊝: Grounding
 - ⊞: Grounding
 - ⊟: Grounding
 - ⊠: Grounding
 - ⊡: Grounding
 - ⊢: Grounding
 - ⊣: Grounding
 - ⊤: Grounding
 - ⊥: Grounding
 - ⊦: Grounding
 - ⊧: Grounding
 - ⊨: Grounding
 - ⊩: Grounding
 - ⊪: Grounding
 - ⊫: Grounding
 - ⊬: Grounding
 - ⊭: Grounding
 - ⊮: Grounding
 - ⊯: Grounding
 - ⊰: Grounding
 - ⊱: Grounding
 - ⊲: Grounding
 - ⊳: Grounding
 - ⊴: Grounding
 - ⊵: Grounding
 - ⊶: Grounding
 - ⊷: Grounding
 - ⊸: Grounding
 - ⊹: Grounding
 - ⊺: Grounding
 - ⊻: Grounding
 - ⊼: Grounding
 - ⊽: Grounding
 - ⊾: Grounding
 - ⊿: Grounding

Power Services
Engineering and Management Services

1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

PETER J. RANT
Lic. No. 037468
Professional Engineer
12/5/13

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE: 3/10/2014
SUBMITTED BY: [Signature]
PROJECT MANAGER

NASA SAFETY
DATE: 2/21/14
FIRE PROTECTION
DATE: 2/21/14

CONSTRUCTION MANAGEMENT
DATE: 2/14/14
O & M
DATE: 2-10-14

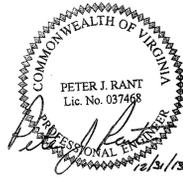
ENGINEERING APPROVAL
DATE: 2/21/14
ENGINEERING GROUP LEADER
DATE: 2/21/14
BRANCH APPROVAL
DATE: 2/21/14
BRANCH HEAD

GRAPHIC SCALE
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX

RELEASED FOR CONSTRUCTION POL

NORTH ISLAND ELECTRICAL UPGRADES
PROPOSED ONE LINE DIAGRAM

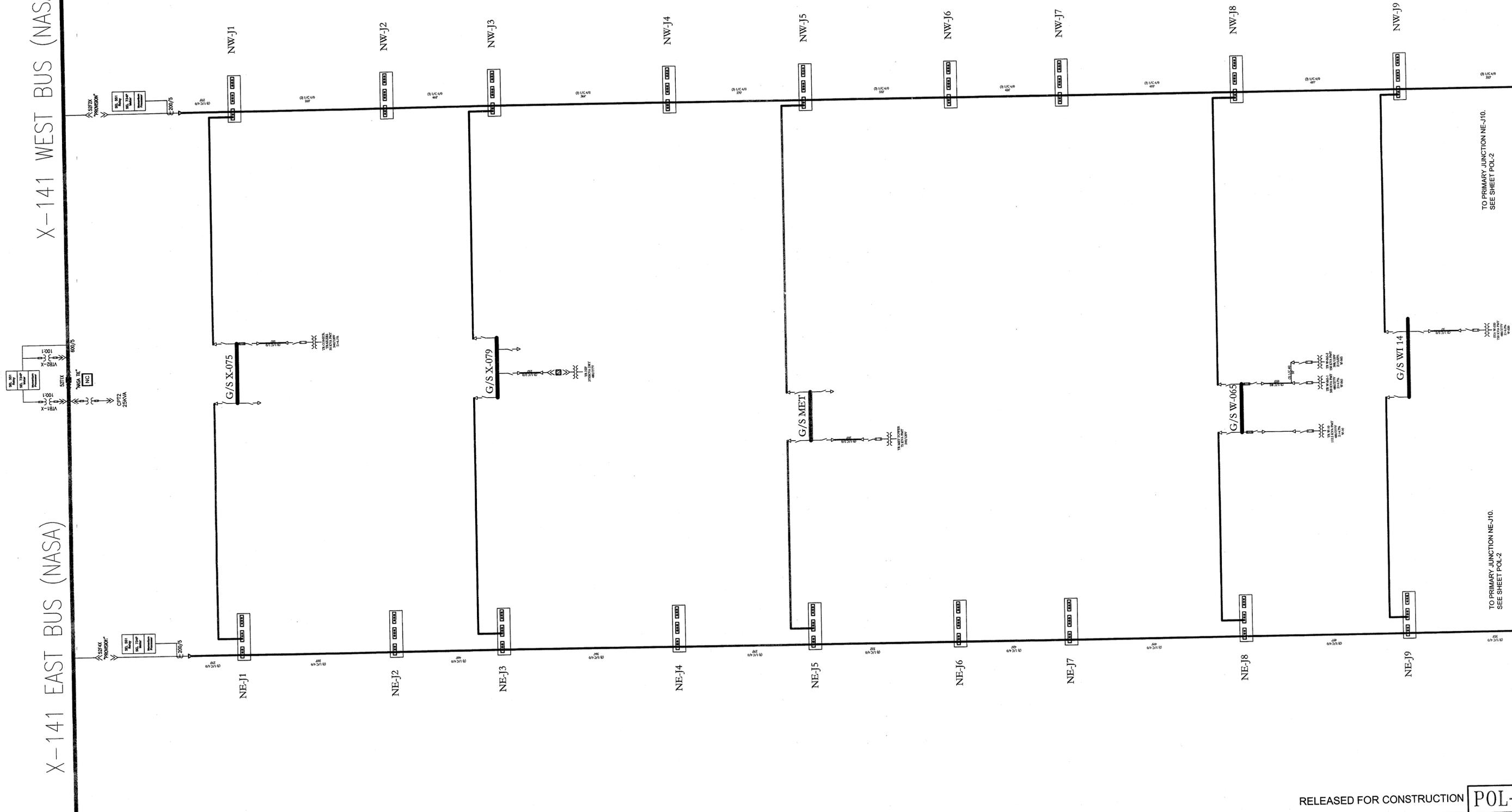
PROJECT NUMBER: NASS-01080
DRAWING NO. 16862
SCALE: DR. LBJ DATE: 12-31-2013
SHEET 5 OF 63 CK. PJR REVISED:



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

X-141 WEST BUS (NASA)

X-141 EAST BUS (NASA)



RELEASED FOR CONSTRUCTION POL-1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE : _____
SUBMITTED BY
DATE : 3/10/2013
PROJECT MANAGER

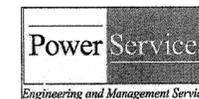
NASA SAFETY
DATE : 2/21/14
FIRE PROTECTION
DATE : 2/21/14

CONSTRUCTION MANAGEMENT
DATE : 2/19/14
DATE : ?-10-14

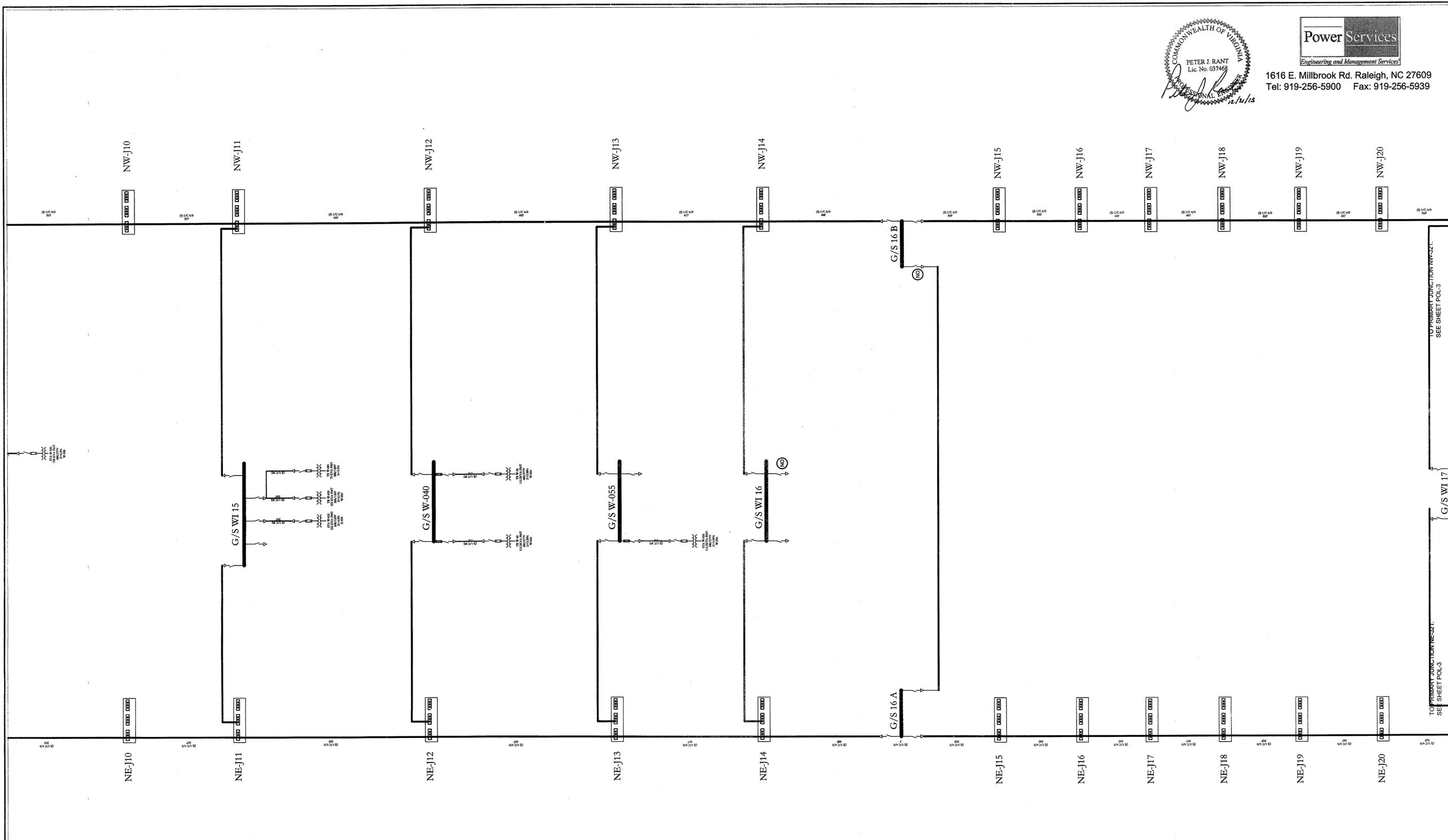
ENGINEERING APPROVAL
ENGINEERING GROUP LEADER DATE : _____
BRANCH APPROVAL
DATE : 2/14/14
BRANCH HEAD

GRAPHIC SCALE
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX
SCALE
SHEET 8 OF 63

NORTH ISLAND ELECTRICAL UPGRADES
PROPOSED ONE LINE DIAGRAM
PROJECT NUMBER: NAS5-01080
DRAWING NO. 16863
DR. LBJ DATE: 12-31-2013
CK. PJR REVISED:

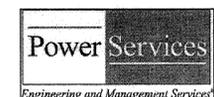


1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

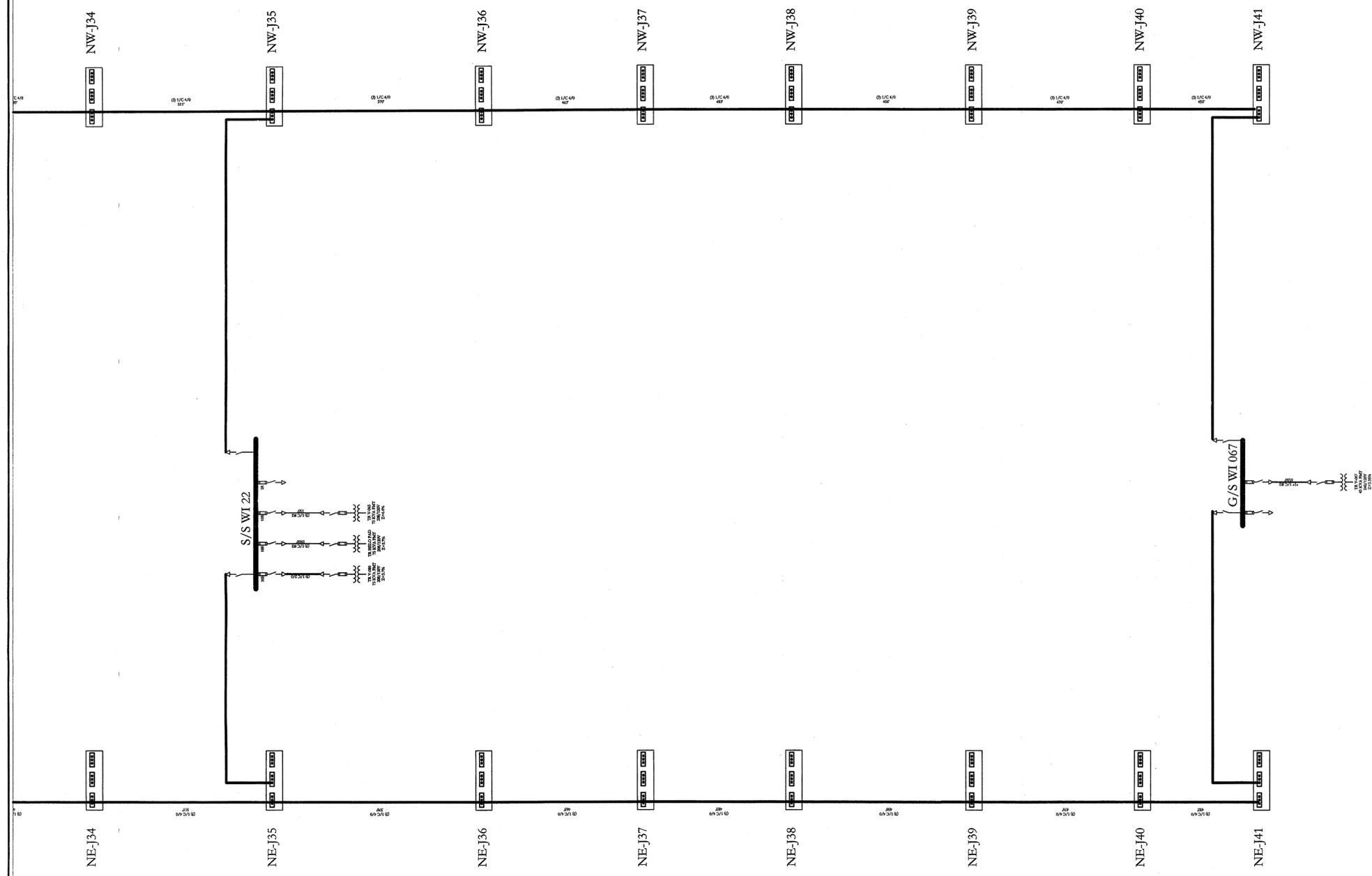


RELEASED FOR CONSTRUCTION POL-2

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADES	
						DATE: 3/10/2014	DATE: 2/21/14	DATE: 2/14/14	DATE: 2/14/14		PROPOSED ONE LINE DIAGRAM	
						PROJECT MANAGER	FIRE PROTECTION	O & M	ENGINEERING GROUP LEADER	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	SCALE	PROJECT NUMBER: NAS5-01080
							DATE: 2/21/14	DATE: 2-10-14	DATE: 2/14/14		SHEET 7 OF 63	DR. LBJ DATE: 12-31-2013
									BRANCH APPROVAL			DRAWING NO. 16864
									BRANCH HEAD			REVIS: CK. PJR



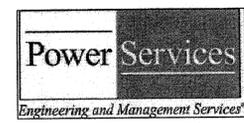
1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939



SEAL

RELEASED FOR CONSTRUCTION **POL-4**

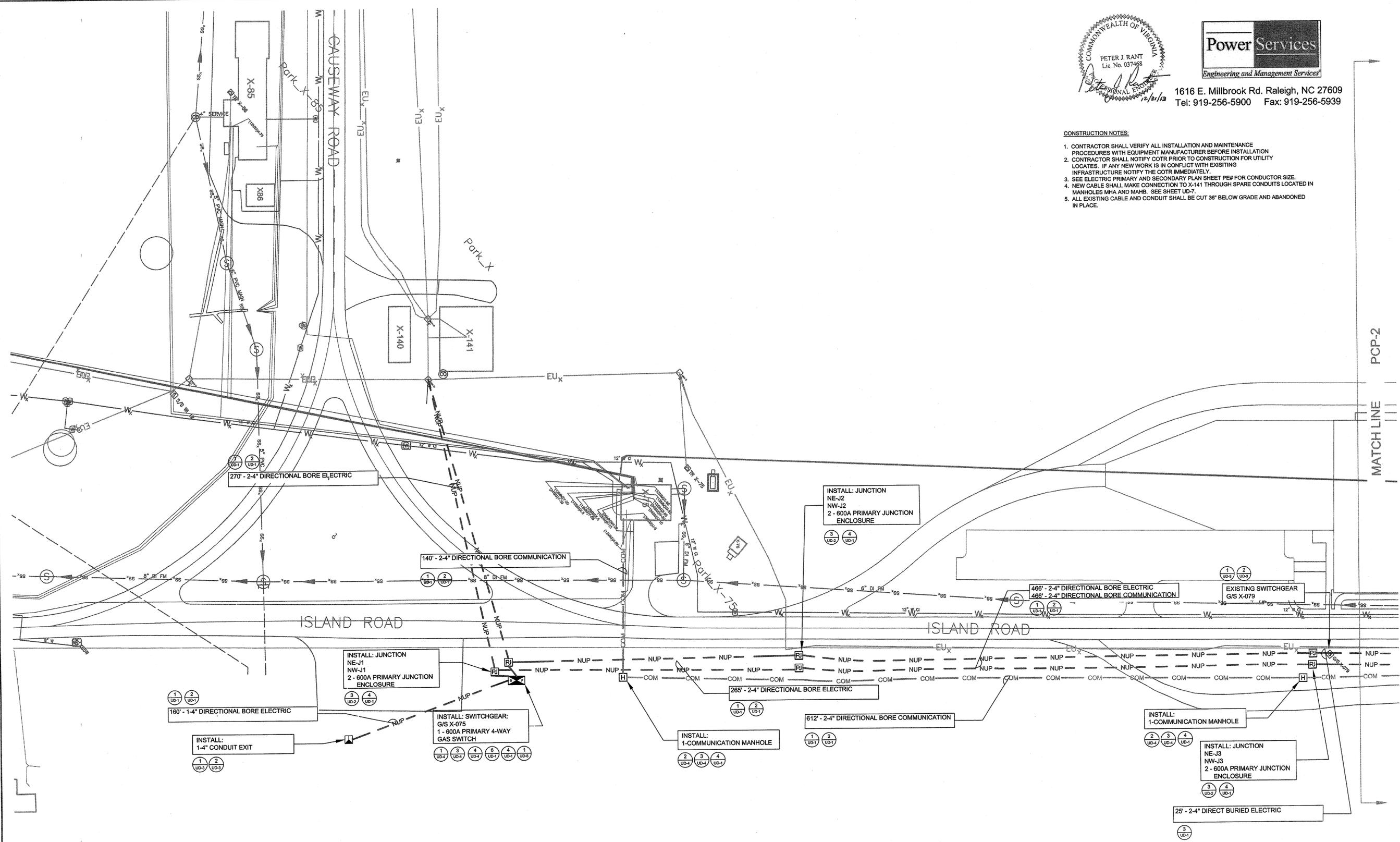
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADES	
						DATE: _____	<i>[Signature]</i> DATE: 2/24/14	<i>Nice Clayton</i> DATE: 2/14/14	DATE: _____		PROPOSED ONE LINE DIAGRAM	
						SUBMITTED BY: <i>[Signature]</i> DATE: 3/10/14 PROJECT MANAGER	FIRE PROTECTION <i>[Signature]</i> DATE: 2/21/14	O & M <i>[Signature]</i> DATE: 2-10-14	BRANCH APPROVAL <i>[Signature]</i> DATE: 2/21/14 BRANCH HEAD	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	SCALE SHEET 9 OF 63	PROJECT NUMBER: NAS5-01080 DR. LBJ DATE: 12-31-2013 CK. PJR REVISED:



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
4. NEW CABLE SHALL MAKE CONNECTION TO X-141 THROUGH SPARE CONDUITS LOCATED IN MANHOLES MAH AND MAHB. SEE SHEET UD-7.
5. ALL EXISTING CABLE AND CONDUIT SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.

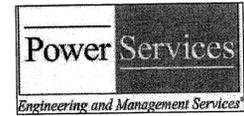
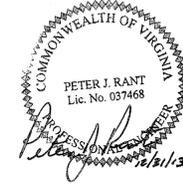


RELEASED FOR CONSTRUCTION PCP-1

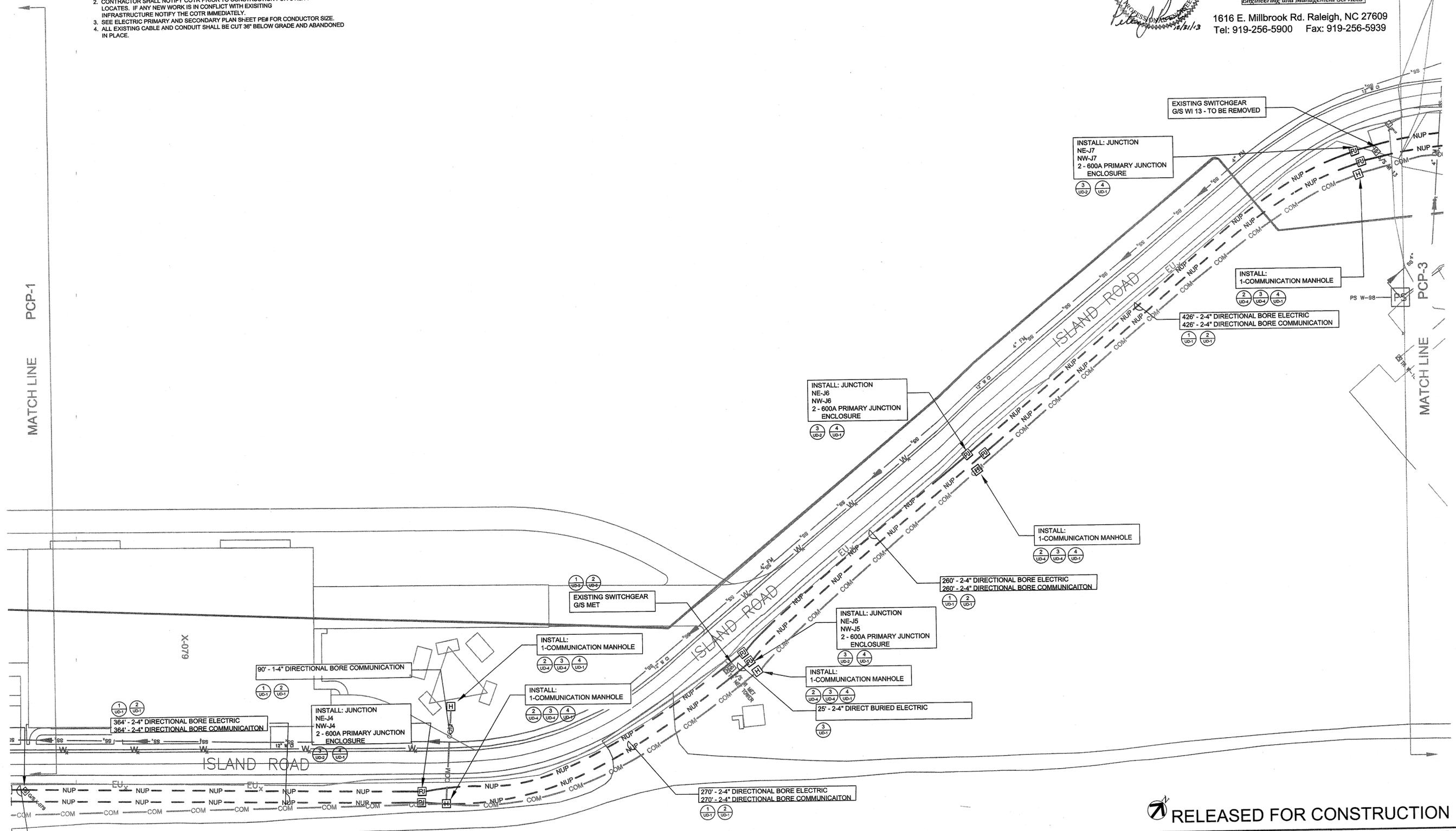
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
							DATE :	<i>[Signature]</i>	DATE : 2/14/14	<i>[Signature]</i>	0" 40' 80'	ELECTRICAL CONDUIT PLAN	
							DATE : 3/10/14	<i>[Signature]</i>	DATE : 2/10/14	<i>[Signature]</i>	AUTOCAD - RELEASE 2007	SCALE 1"=40'	PROJECT NUMBER: NASS-01080
						DATE : 2/10/14	<i>[Signature]</i>	DATE : 2/10/14	<i>[Signature]</i>	BRANCH APPROVAL	FILE NAME: XXXXXX	SHEET 10 OF 63	DR. LBJ
						DATE : 2/10/14	<i>[Signature]</i>	DATE : 2/10/14	<i>[Signature]</i>	BRANCH HEAD	DATE : 2/10/14	CK. PJR	DATE: 12-31-2013
						DATE : 2/10/14	<i>[Signature]</i>	DATE : 2/10/14	<i>[Signature]</i>			REVIS:	DRAWING NO. 16867

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
4. ALL EXISTING CABLE AND CONDUIT SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

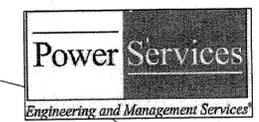
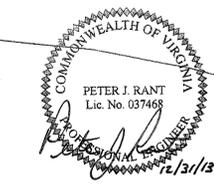


RELEASED FOR CONSTRUCTION

PCP-2

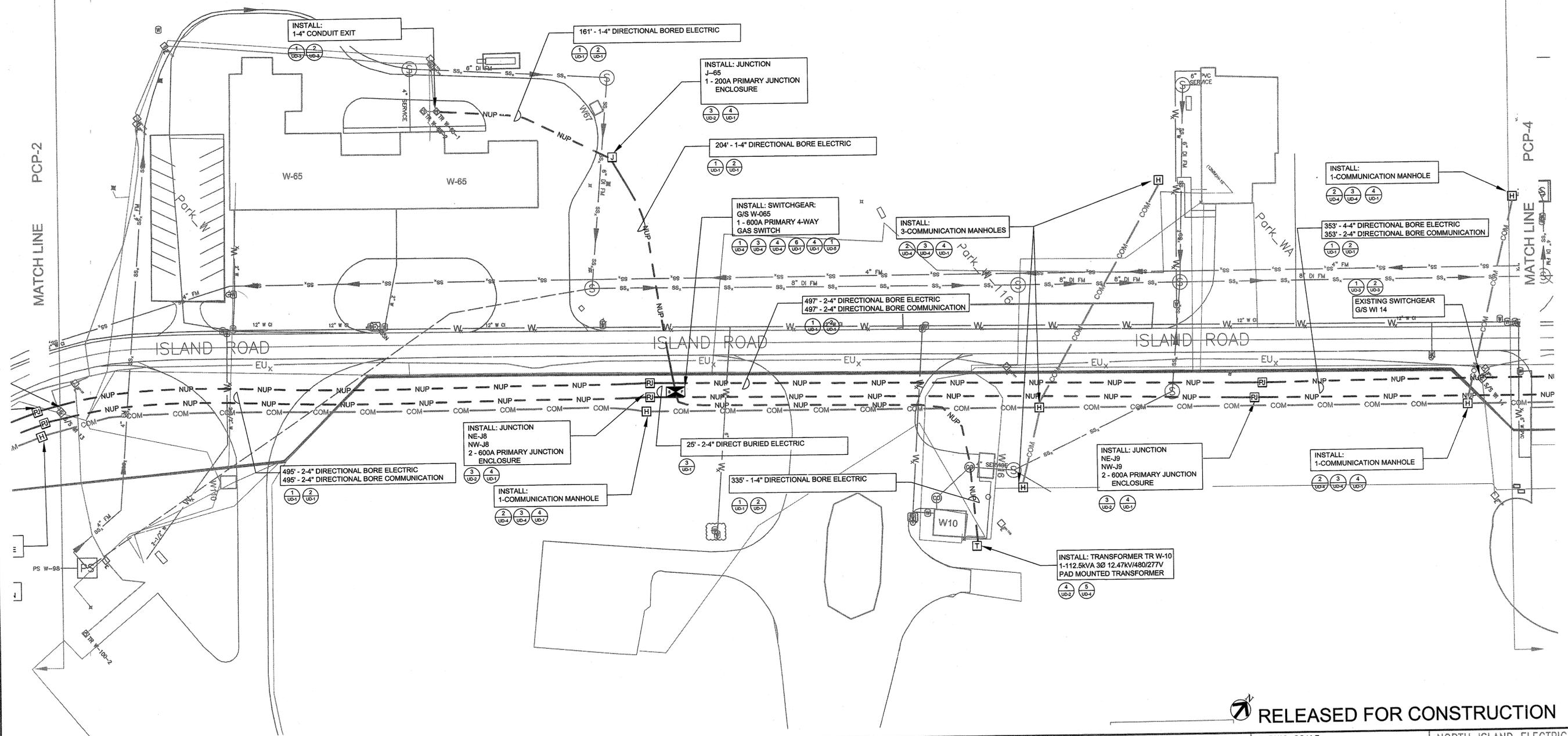
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE ELECTRICAL CONDUIT PLAN PROJECT NUMBER: NAS5-01080 DR. LBJ DATE: 12-31-2013 CK. PJR REVISIONS:	DRAWING NO. 16868
							DATE: 3/10/2014	DATE: 2/11/14	DATE: 2/11/14	SCALE 1"=40'		
							DATE: 3/10/2014	DATE: 2/11/14	DATE: 2/11/14	FILE NAME: XXXXXX		

LAUNCH AREA BY PASS ROAD



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

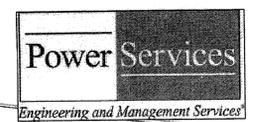
- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION.
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
 4. ALL EXISTING CABLE AND CONDUIT SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



RELEASED FOR CONSTRUCTION PCP-3

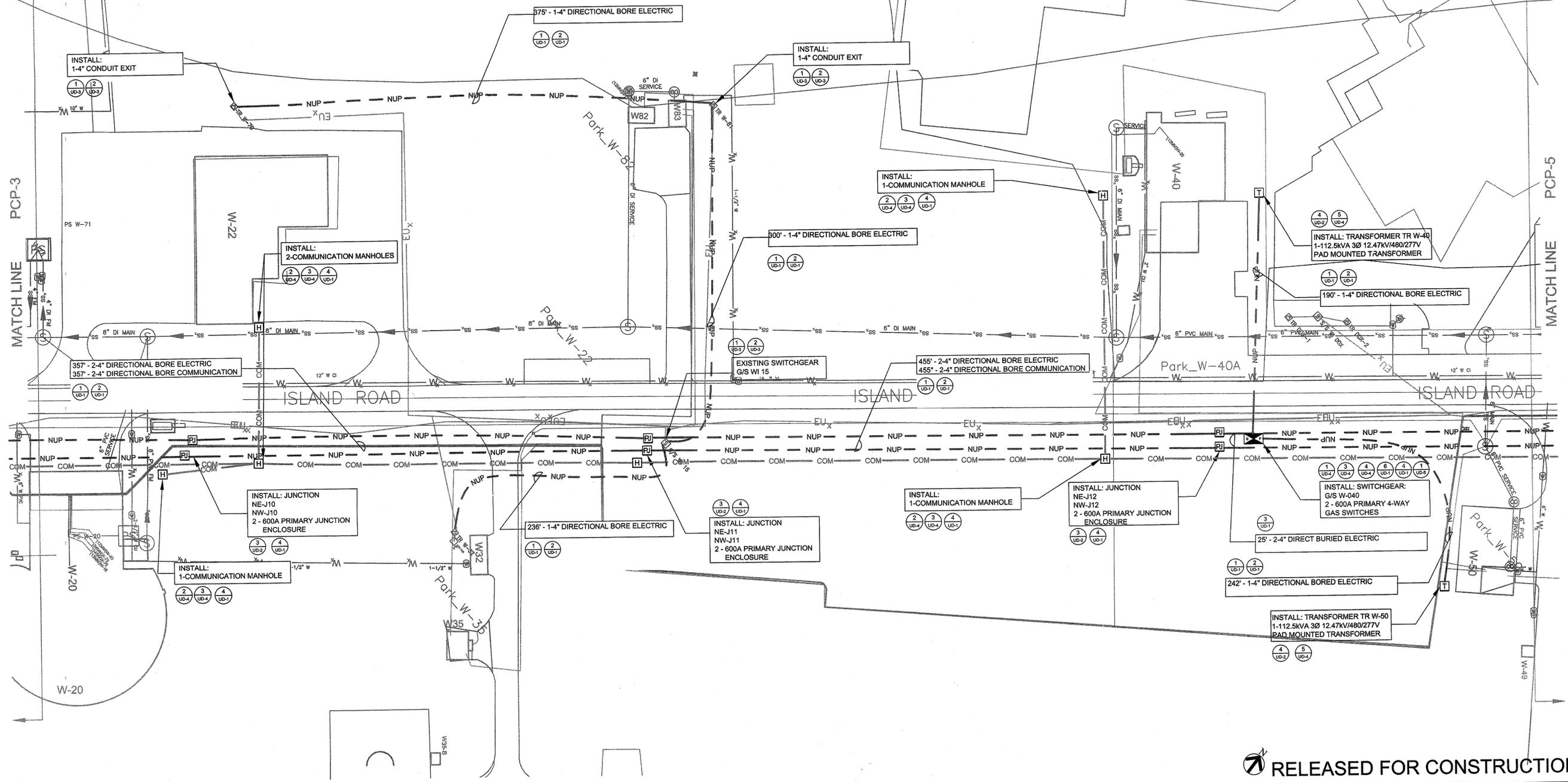
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
	SUBMITTED BY: <i>[Signature]</i> DATE: 3/10/14 PROJECT MANAGER: <i>[Signature]</i> DATE: 3/10/14 FIRE PROTECTION: <i>[Signature]</i> DATE: 2/21/14 O & M: <i>[Signature]</i> DATE: 2-10-14 ENGINEERING GROUP LEADER: <i>[Signature]</i> DATE: 2/14/14 BRANCH APPROVAL: <i>[Signature]</i> DATE: 2/12/14 BRANCH HEAD: <i>[Signature]</i> DATE: 2/12/14											
										SCALE 1"=40'	PROJECT NUMBER: NASS-01080	DRAWING NO. 16869
										AUTOCAD - RELEASE 2007	DR. LRSJ	DATE: 2-31-2013
										FILE NAME: XXXXXX	CK. PAR	REVISED:
										SHEET 12 OF 63		

COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
Peter J. Rant



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
 4. CONTRACTOR TO VERIFY SECONDARY ENTRANCES TO BUILDING W-040 AND W-050 FOR INSTALLATION OF TRANSFORMER TR W-040 AND TR W-050. LOCATION SHOWN THIS SHEET IS APPROXIMATE.
 5. COORDINATE ANY NECESSARY BUILDING ENTRIES WITH COTR PRIOR TO ENTERING BUILDING OR PERFORMING ANY CUTOVERS FOR SERVICE.
 6. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



RELEASED FOR CONSTRUCTION PCP-4

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 Wallops Flight Facility
 Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 DATE: 3/14/14
 SUBMITTED BY: *[Signature]*
 DATE: 3/14/14
 PROJECT MANAGER

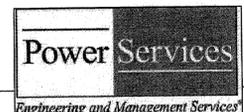
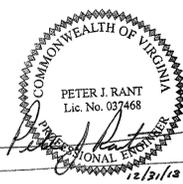
NASA SAFETY
 DATE: 2/21/14
 FIRE PROTECTION
 DATE: 2/21/14

CONSTRUCTION MANAGEMENT
 DATE: 2/19/14
 O & N
 DATE: 2-10-14

ENGINEERING APPROVAL
 DATE: 2/12/14
 BRANCH HEAD

GRAPHIC SCALE
 0 40 80
 AUTOCAD - RELEASE 2007
 FILE NAME: XXXXXXXX
 SCALE 1"=40'
 SHEET 13 OF 63

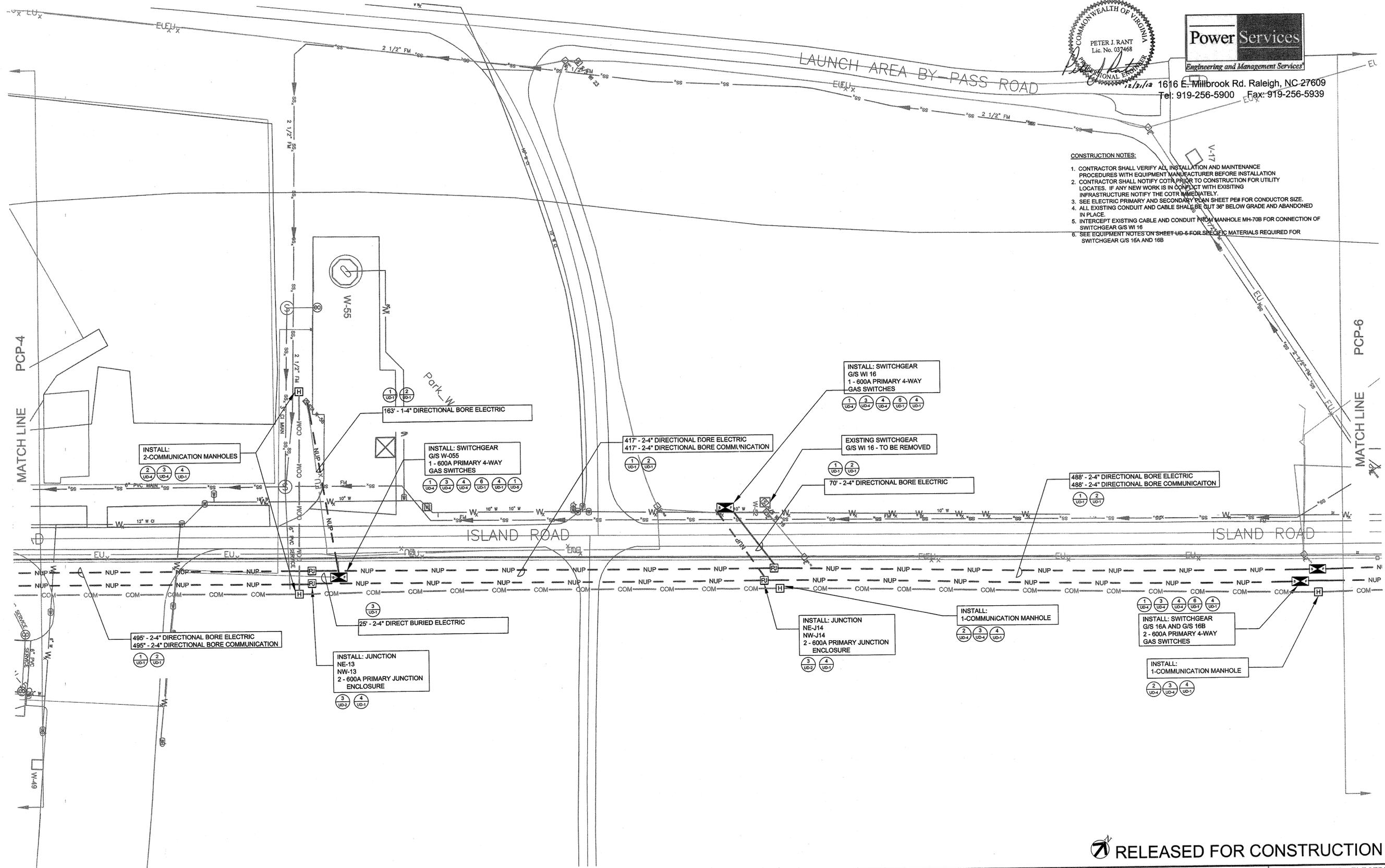
NORTH ISLAND ELECTRICAL UPGRADE
ELECTRICAL CONDUIT PLAN
 PROJECT NUMBER: NAS5-01080
 DRAWING NO. 16870
 DR. LBJ
 DATE: 12-31-2013
 CK. PJP
 REVISED:



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

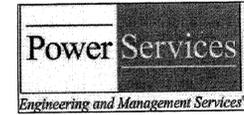
CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PAN SHEET PER FOR CONDUCTOR SIZE
4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 3' BELOW GRADE AND ABANDONED IN PLACE.
5. INTERCEPT EXISTING CABLE AND CONDUIT FROM MANHOLE MH-709 FOR CONNECTION OF SWITCHGEAR G/S W/ 16
6. SEE EQUIPMENT NOTES ON SHEET UD-5 FOR SPECIFIC MATERIALS REQUIRED FOR SWITCHGEAR G/S 16A AND 16B



RELEASED FOR CONSTRUCTION PCP-5

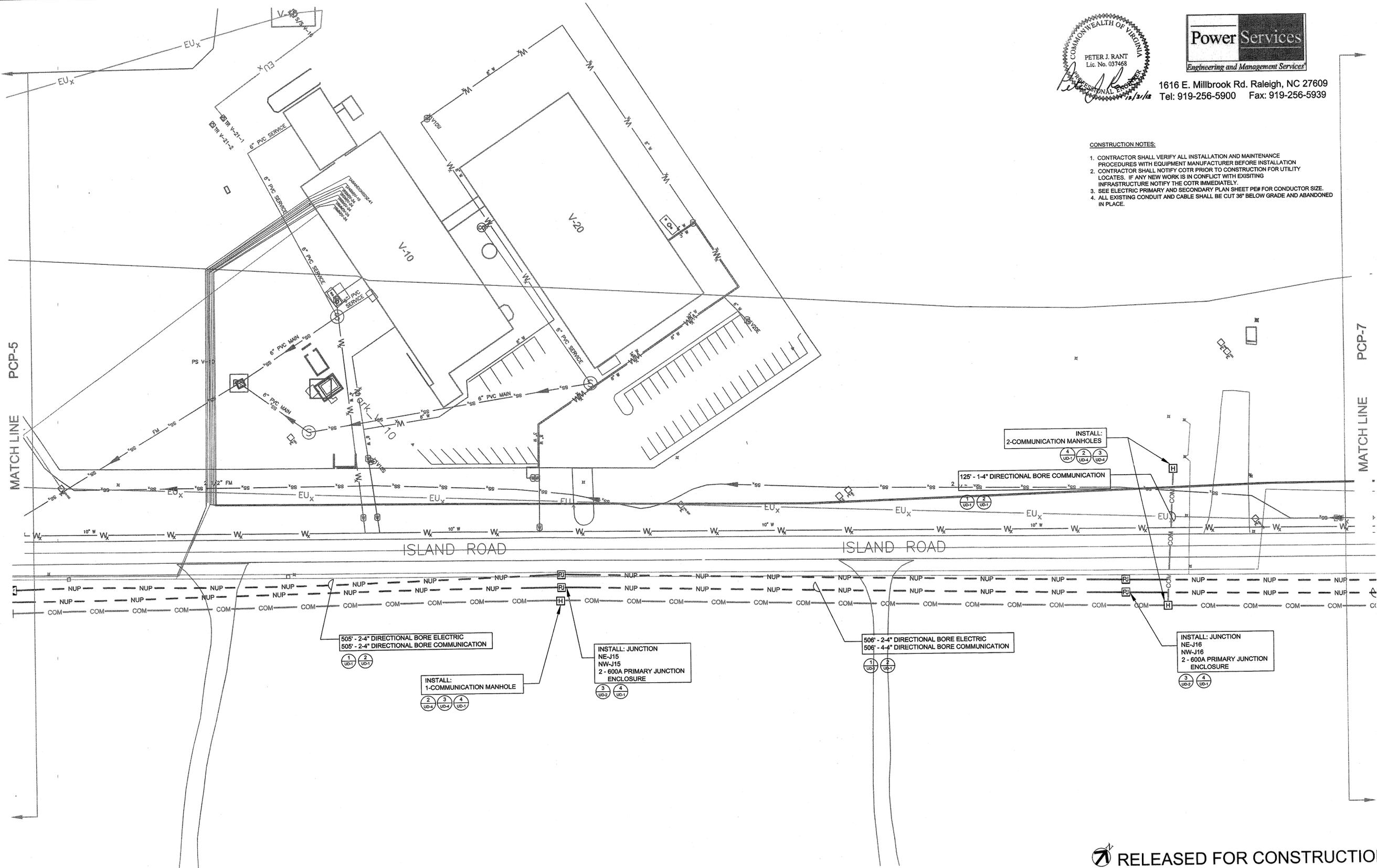
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
							DATE	DATE	DATE	DATE	0' 40' 80'	ELECTRICAL CONDUIT PLAN
						DATE	DATE	DATE	DATE	AUTOCAD - RELEASE 2007	PROJECT NUMBER: NASS-01080	DRAWING NO.
						DATE	DATE	DATE	DATE	FILE NAME: XXXXXX	SCALE 1"=40'	16871
						DATE	DATE	DATE	DATE	SHEET 14 OF 63	DR. LBJ	REVISOR
						DATE	DATE	DATE	DATE	CK. PJR	DATE: 12-31-2013	REVISED:



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.

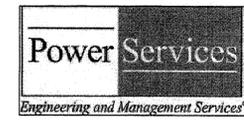


RELEASED FOR CONSTRUCTION PCP-6

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WALLOPS FLIGHT FACILITY
 WALLOPS ISLAND, VIRGINIA 23337

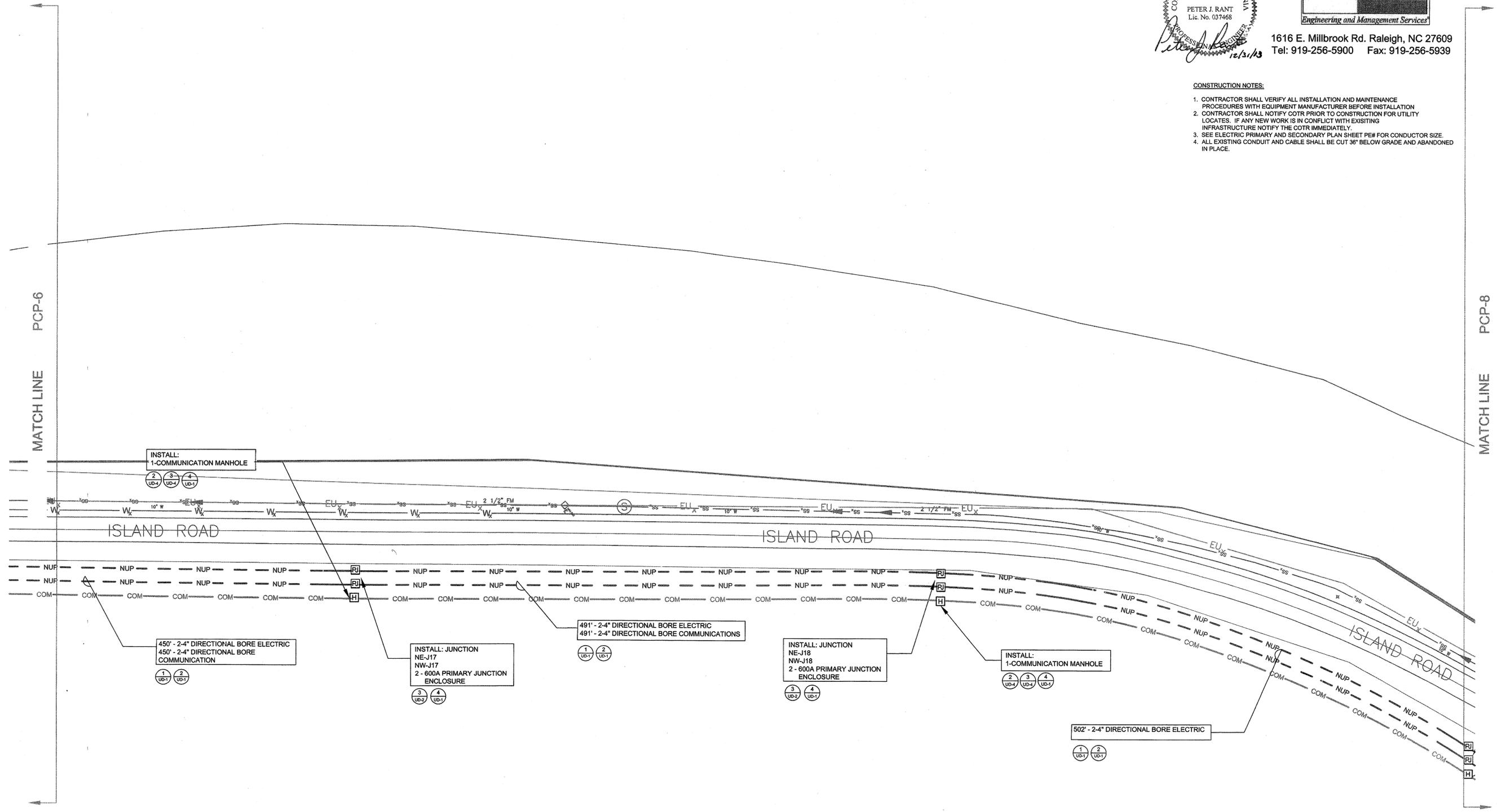


DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
					DATE: 3/10/14	DATE: 2/11/14	DATE: 2/12/14	DATE: 2/12/14	0" 40' 80'	ELECTRICAL CONDUIT PLAN		
SUBMITTED BY: [Signature]					DATE: 3/10/14	DATE: 2/11/14	DATE: 2-10-14	DATE: 2/12/14	AUTOCAD - RELEASE 2007	SCALE: 1"=40'	PROJECT NUMBER: NAS5-01080	DRAWING NO. 16872
PROJECT MANAGER					DATE: 3/10/14	DATE: 2/11/14	DATE: 2-10-14	DATE: 2/12/14	FILE NAME: XXXXXX	SHEET 15 OF 63	DR. LBJ DATE: 12-31-2013	REVISOR: [Signature]



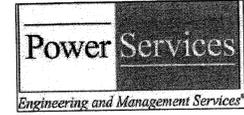
1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
 4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



RELEASED FOR CONSTRUCTION PCP-7

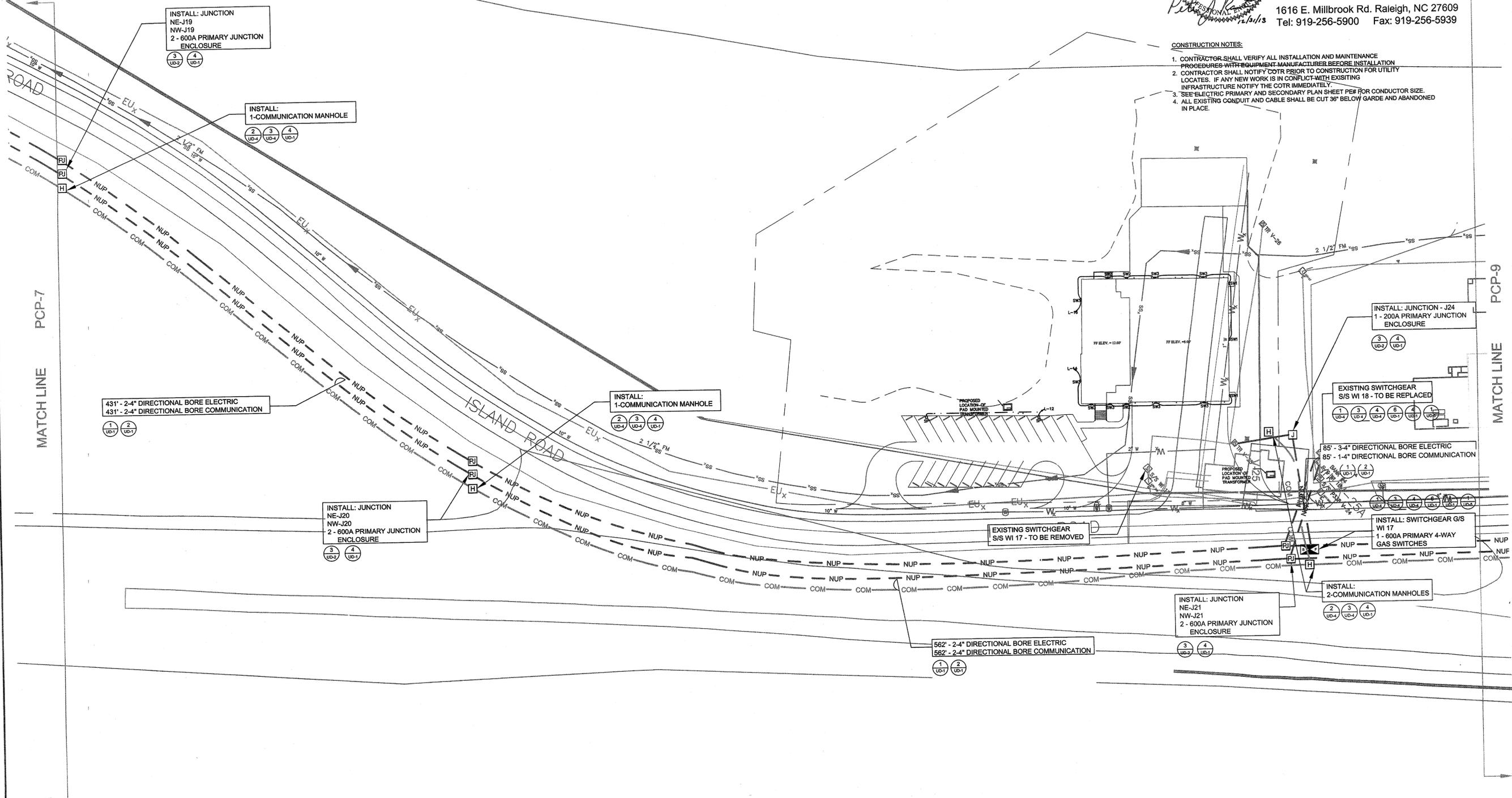
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
						DATE :	DATE : 2/21/14	DATE : 2/14/14	DATE :	0" 40" 80"	ELECTRICAL CONDUIT PLAN		
						DATE : 3/10/14	DATE : 2/21/14	DATE : 2-10-14	DATE : 2/10/14	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	SCALE 1"=40'	PROJECT NUMBER: NASS-01080	DRAWING NO. 16873
						SUBMITTED BY PROJECT MANAGER	FIRE PROTECTION DATE : 2/21/14	O & M DATE : 2-10-14	BRANCH APPROVAL DATE : 2/10/14	DR. LBJ CK. PJR	DATE: 12-31-2013	REVISIONS:	



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURERS BEFORE INSTALLATION.
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PEG FOR CONDUCTOR SIZE.
4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GARDE AND ABANDONED IN PLACE.



MATCH LINE PCP-7

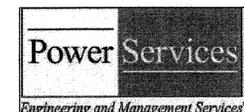
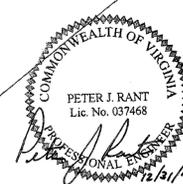
MATCH LINE PCP-9

RELEASED FOR CONSTRUCTION PCP-8

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337

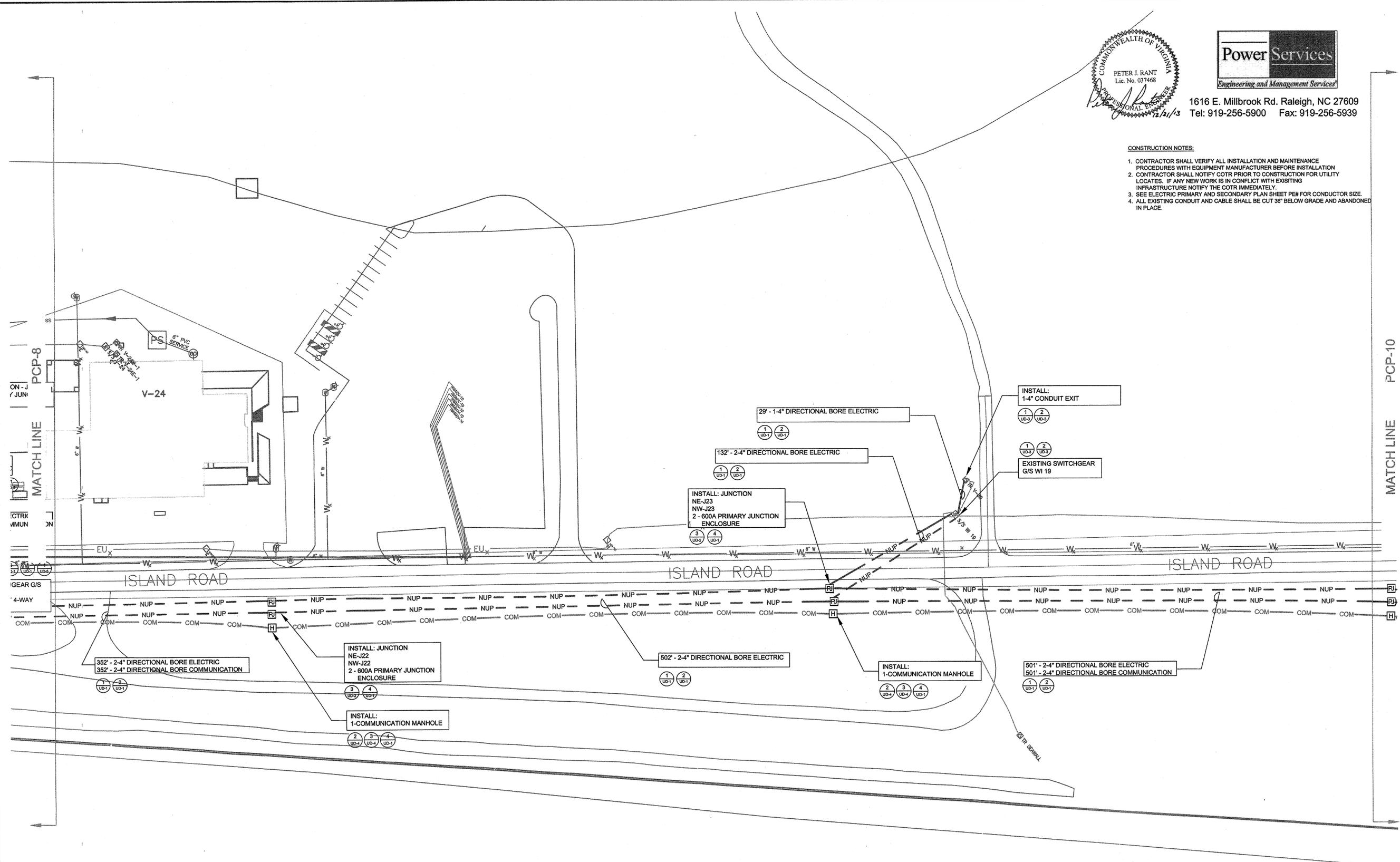


DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE			
									0" 40" 80"	ELECTRICAL CONDUIT PLAN			
					DATE: 2/10/14	DATE: 2/10/14	DATE: 2/10/14	DATE: 2/10/14	1"=40'	PROJECT NUMBER: NASS-01080	DR. LBJ	DATE: 12-31-2013	DRAWING NO. 16874
					DATE: 2/10/14	DATE: 2/10/14	DATE: 2-10-14	DATE: 2/10/14	AUTOCAD - RELEASE 2007	FILE NAME: KXXXXX	SCALE	PROJECT NUMBER: NASS-01080	DRAWING NO. 16874
					DATE: 2/10/14	DATE: 2/10/14	DATE: 2-10-14	DATE: 2/10/14	SHEET 17 OF 53	CK. PJR	REVISIONS		



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

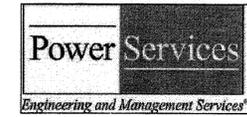
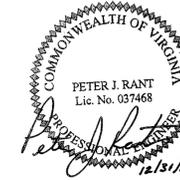
- CONSTRUCTION NOTES:**
- CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 - CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 - SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE#1 FOR CONDUCTOR SIZE.
 - ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



RELEASED FOR CONSTRUCTION

PCP-9

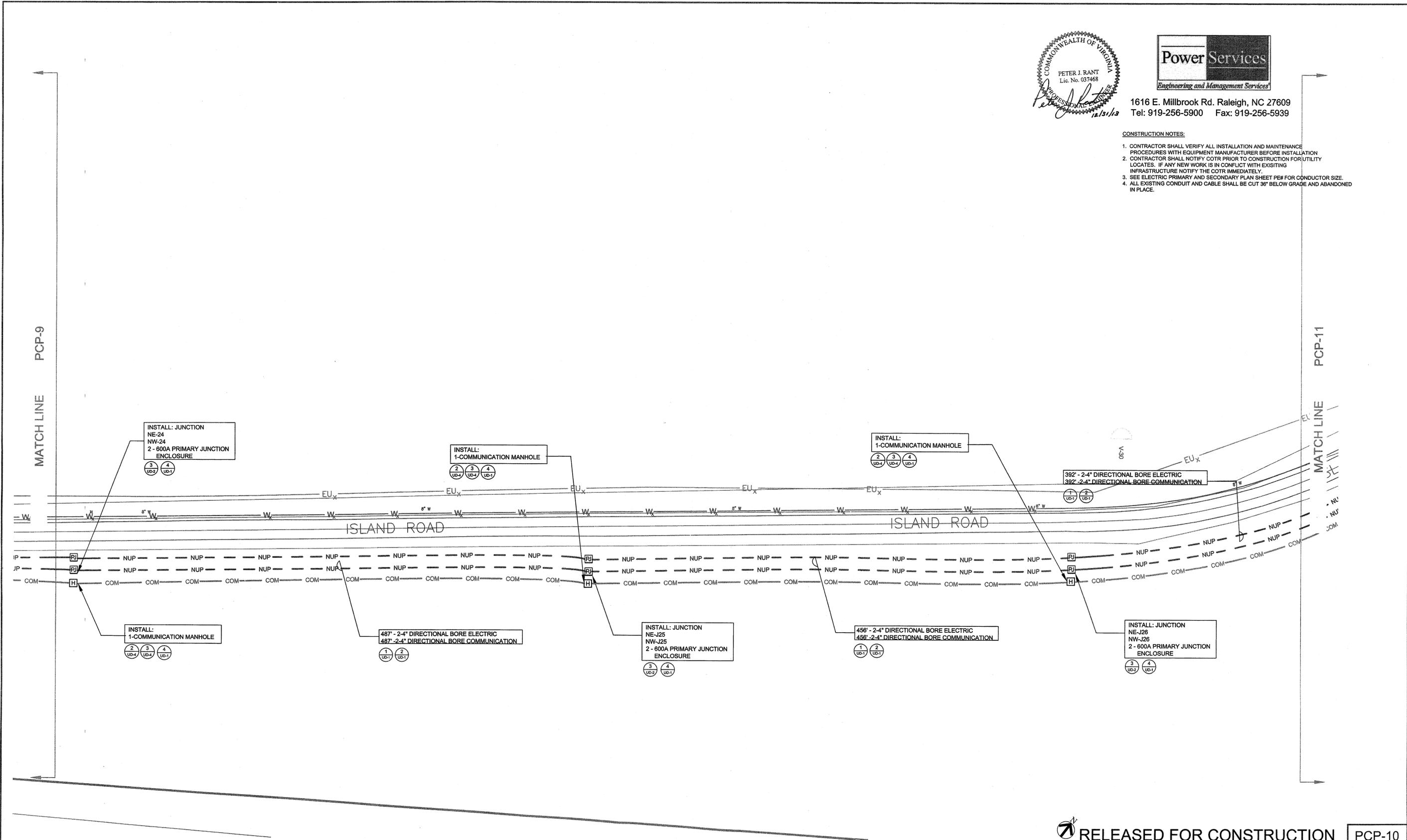
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
						DATE: _____	DATE: 2/21/14	DATE: 2/14/14	DATE: _____	0" 40" 80"	ELECTRICAL CONDUIT PLAN	
						DATE: 3/17/2014	DATE: 2/21/14	DATE: 2-10-14	DATE: 2/12/14	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	SCALE 1"=40'	PROJECT NUMBER: NAS5-01080
						PROJECT MANAGER	FIRE PROTECTION	DATE: _____	BRANCH APPROVAL	SHEET 18 OF 63	DR. LBJ	DATE: 12-31-2013
							DATE: _____	DATE: _____	BRANCH HEAD		CK. PJR	REVISED:



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

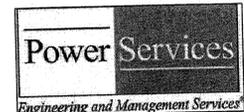
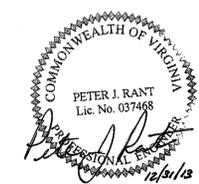
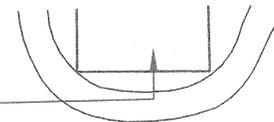
CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



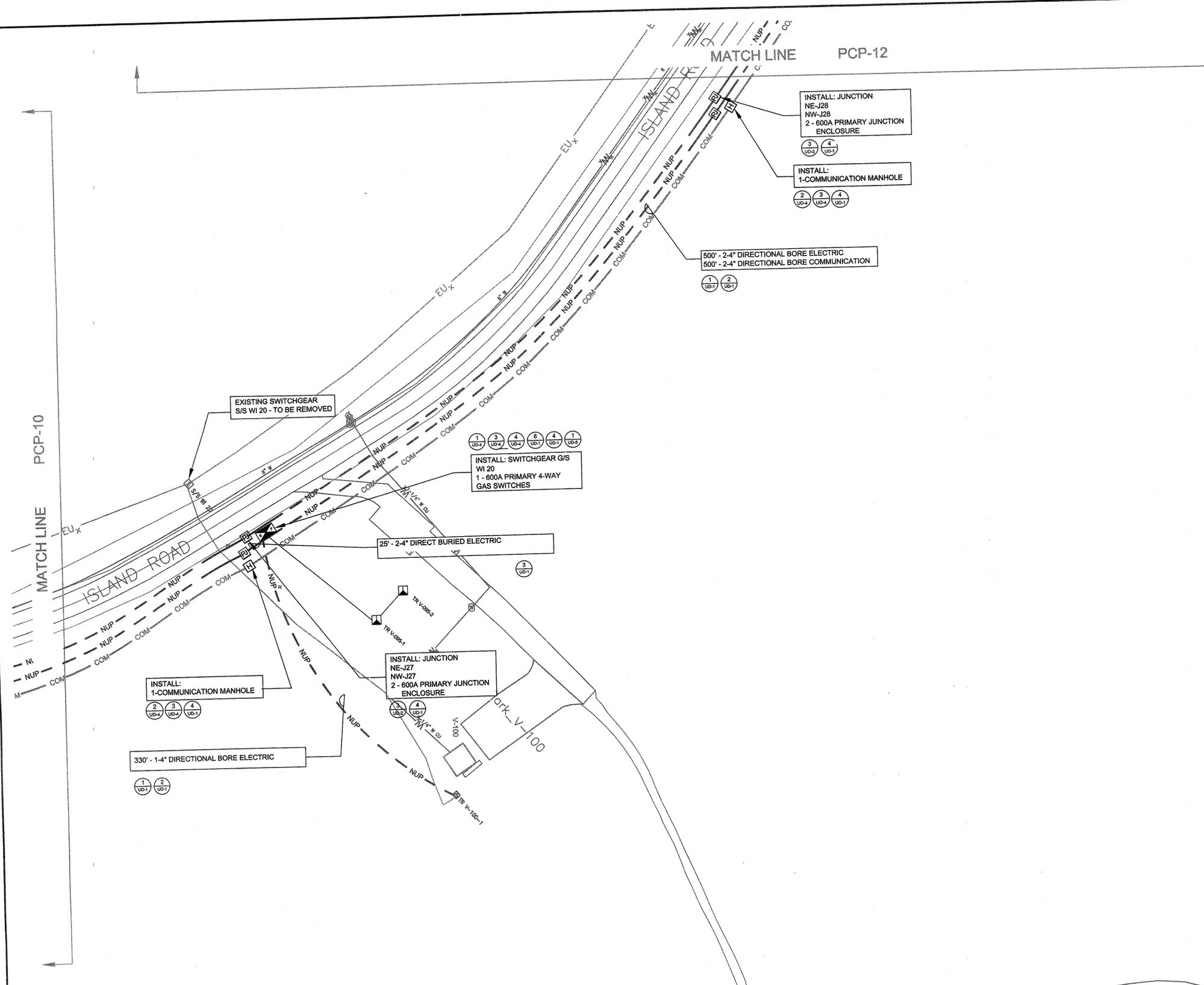
RELEASED FOR CONSTRUCTION PCP-10

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE ELECTRICAL CONDUIT PLAN PROJECT NUMBER: MASS-01080 DR. LBJ DATE: 12-31-2013 CK. PJR REVISED:
						DATE: 3/10/14	DATE: 2/21/14	DATE: 2/14/14	DATE: 2/12/14	0" 40' 80' SCALE: 1"=40' AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX SHEET 18 OF 53	



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION.
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY INFRASTRUCTURE NOT IN CONFLICT WITH EXISTING.
 3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
 4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.
 5. INTERCEPT EXISTING CABLE AND CONDUIT FEEDING TR-V-095-1 AND TR-V-095-2.



RELEASED FOR CONSTRUCTION PCP-11

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER

NASA SAFETY
 DATE: 8/21/14
 PROJECT ENGINEER: *Wade Clayton*

CONSTRUCTION MANAGEMENT
 DATE: 2/19/14
 PROJECT MANAGER: *R. F. Webster*

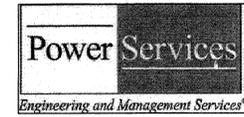
ENGINEERING APPROVAL
 ENGINEERING GROUP LEADER: *Wade Clayton*
 BRANCH APPROVAL: *D. Donald Webb*
 BRANCH HEAD: *D. Donald Webb*

GRAPHIC SCALE
 0' 40' 80'
 AUTOCAD - RELEASE 2007
 FILE NAME: XXXXXX

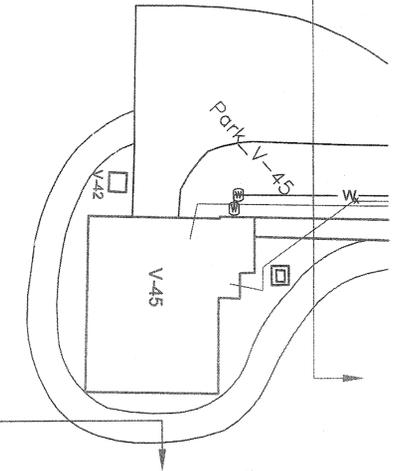
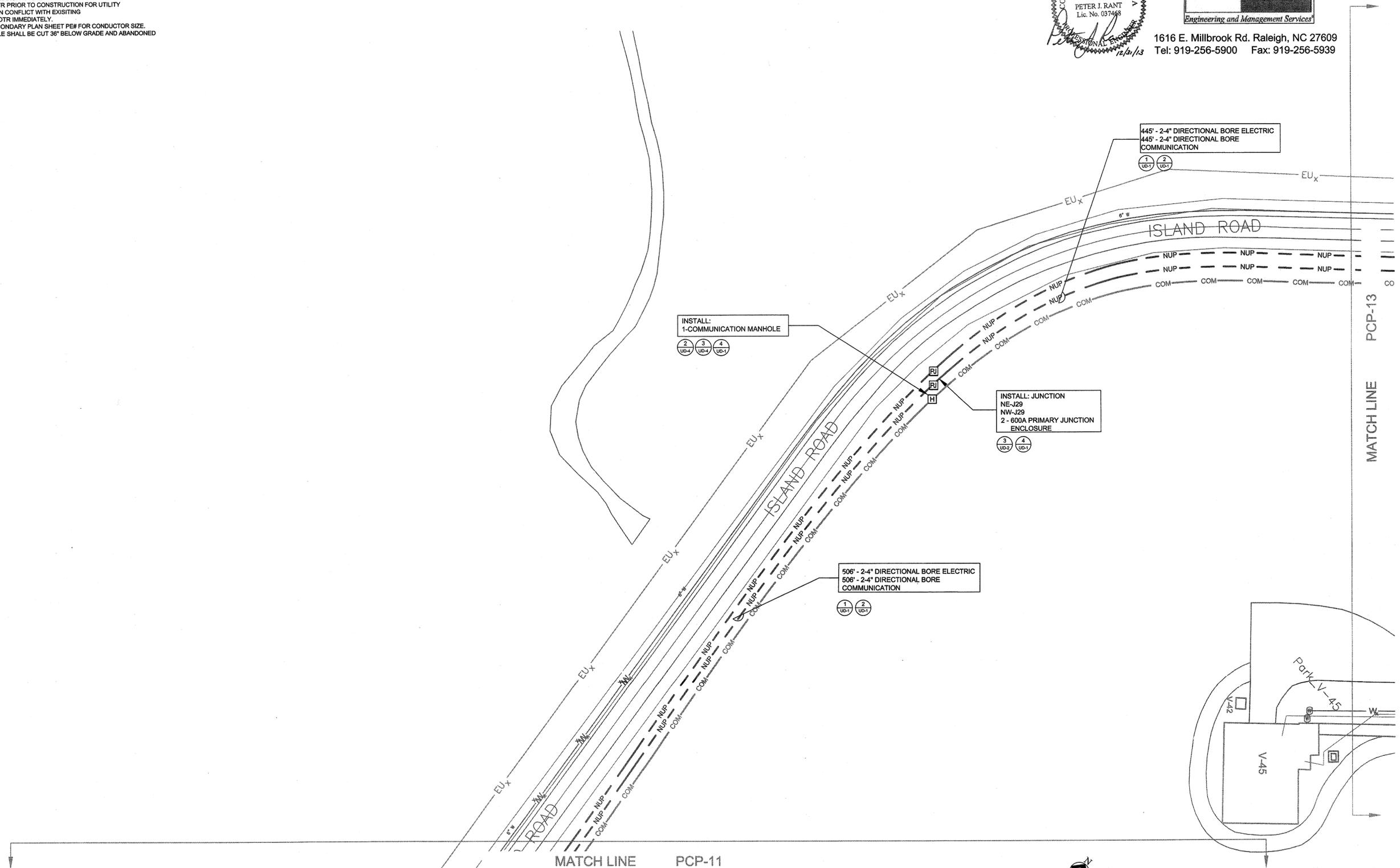
NORTH ISLAND ELECTRICAL UPGRADE
ELECTRICAL CONDUIT PLAN
 PROJECT NUMBER: NAS5-01080
 DRAWING NO. 16877

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.

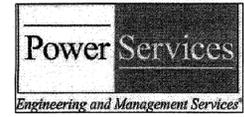
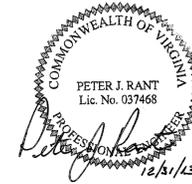


1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939



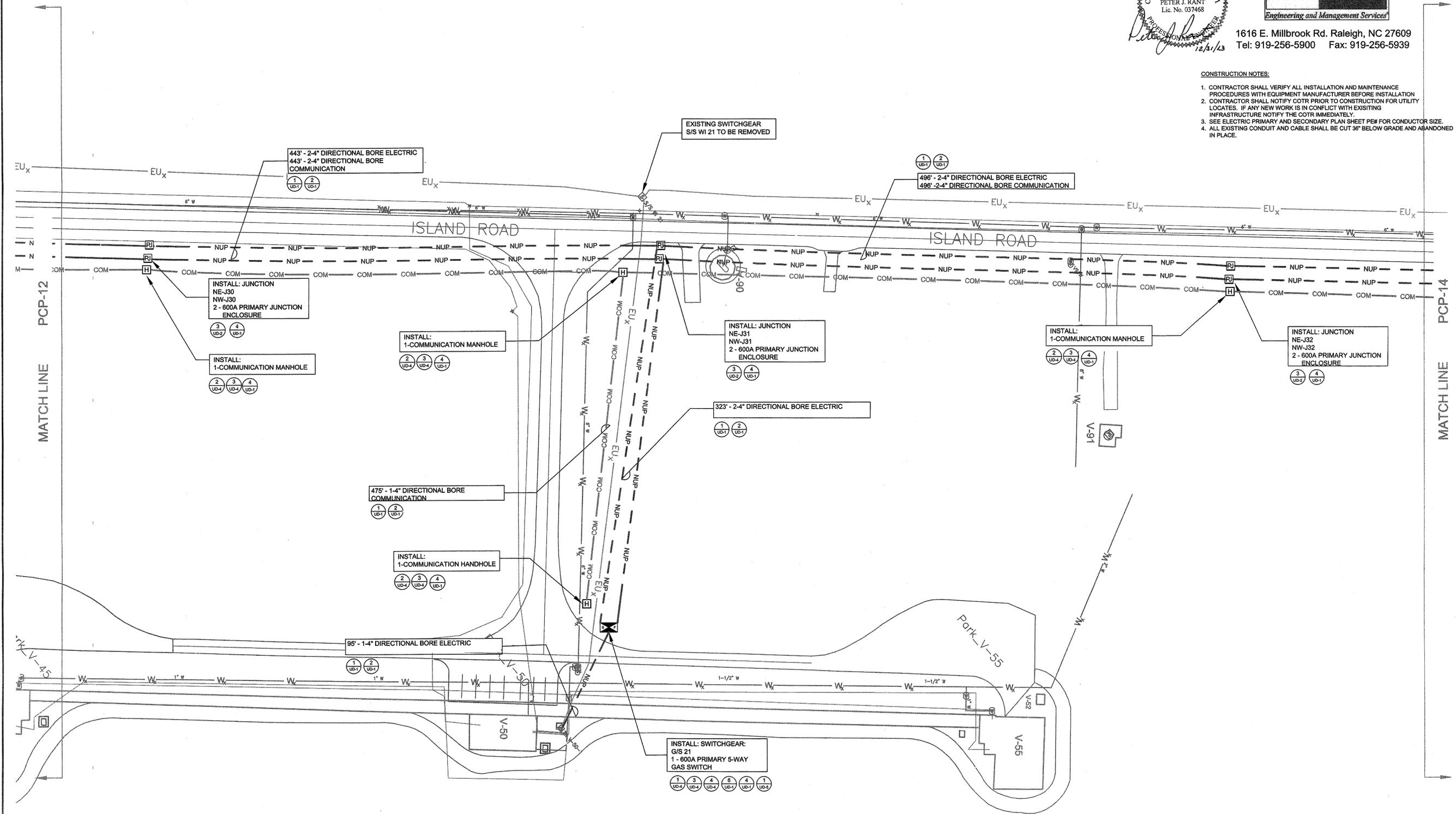
RELEASED FOR CONSTRUCTION PCP-12

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
										0" 40" 80"	ELECTRICAL CONDUIT PLAN	
						DATE: 2/19/14	DATE: 2/19/14	DATE: 2/19/14	DATE: 2/19/14	AUTOCAD - RELEASE 2007	SCALE 1"=40'	PROJECT NUMBER: NAS5-01080
						DATE: 3/10/14	DATE: 2/21/14	DATE: 2-10-14	DATE: 2/12/14	FILE NAME: XXXXXXX	SHEET 21 OF 63	DR. LBJ DATE: 12-31-2013
						PROJECT MANAGER	FIRE PROTECTION	O & M	BRANCH APPROVAL			CK. PJP REVISID:
							DATE: 2/21/14	DATE: 2-10-14	DATE: 2/12/14			DRAWING NO. 16878



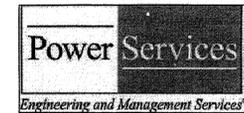
1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
- CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 - CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 - SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
 - ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



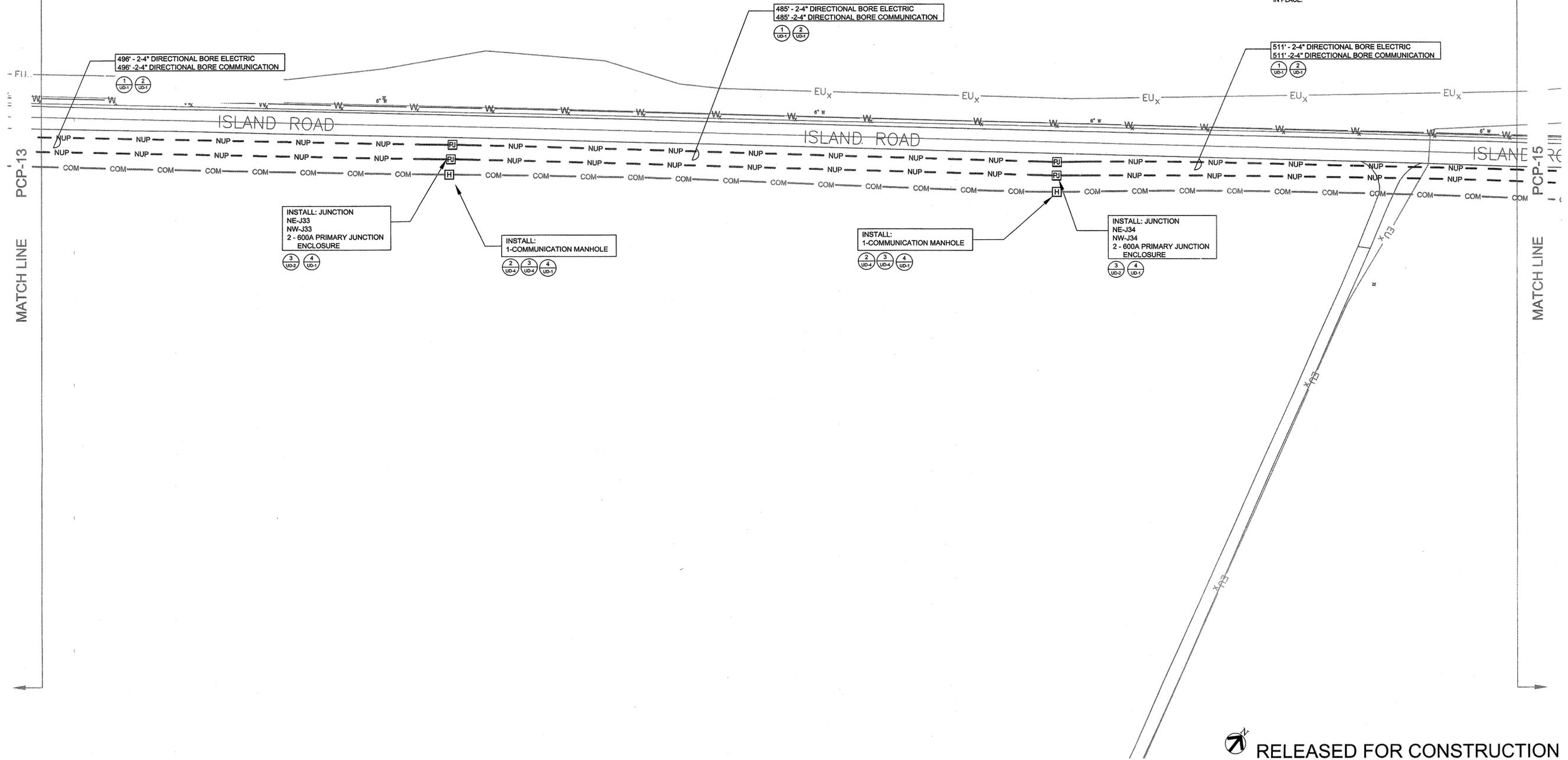
RELEASED FOR CONSTRUCTION PCP-13

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE ELECTRICAL CONDUIT PLAN PROJECT NUMBER: NASS-01080 DR. LBJ DATE: 12-31-2013 CK. PJR REVISED:
						SUBMITTED BY: <i>Meth</i> DATE: 3/19/14 PROJECT MANAGER	DATE: 2/21/14 FIRE PROTECTION: <i>A. J. V. / J. S.</i> DATE: 2/21/14	DATE: 2/14/14 O & M: <i>J. B. / B.</i> DATE: 2-10-14	DATE: _____ ENGINEERING GROUP LEADER BRANCH APPROVAL: <i>B. J. / J. B.</i> DATE: 2/12/14 BRANCH HEAD	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX SCALE: 1"=40' SHEET 22 OF 83	



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

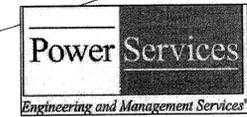
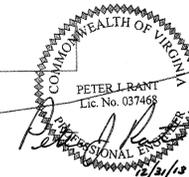
- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY
 3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE
 4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE



RELEASED FOR CONSTRUCTION PCP-14

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE ELECTRICAL CONDUIT PLAN PROJECT NUMBER: NAS5-01080 DR. LBJ DATE: 12-31-2013 CK. PJR REVISED:	DRAWING NO. 16880
						SUBMITTED BY: <i>[Signature]</i> DATE: 2/19/14 PROJECT MANAGER	DATE: 2/21/14 FIRE PROTECTION: <i>[Signature]</i>	DATE: 2/14/14 O & M: <i>[Signature]</i> DATE: 2-10-14	DATE: 2/12/14 BRANCH APPROVAL: <i>[Signature]</i> BRANCH HEAD	SCALE: 1"=40' AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX SHEET 23 OF 63		

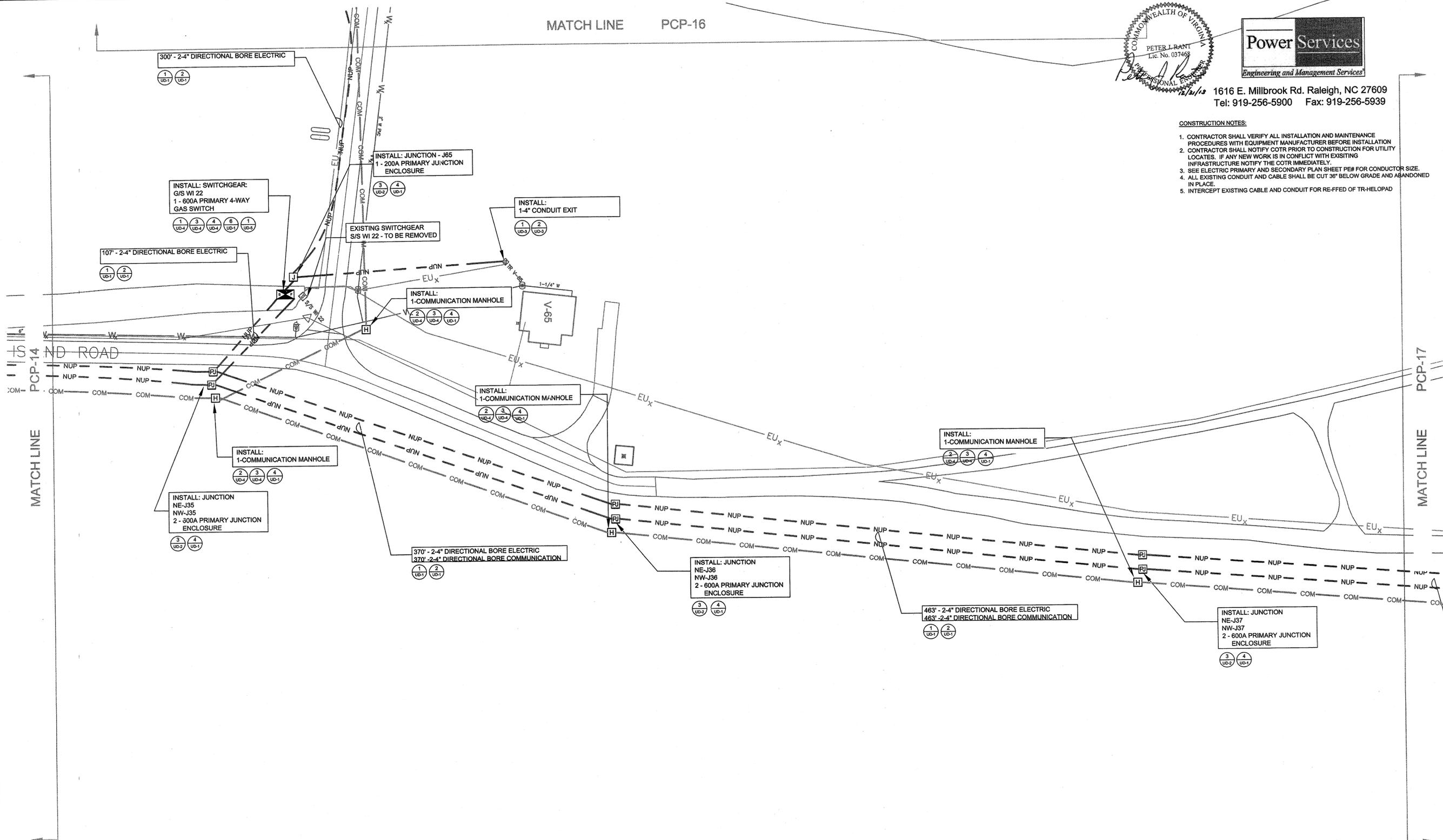
MATCH LINE PCP-16



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PER FOR CONDUCTOR SIZE.
4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.
5. INTERCEPT EXISTING CABLE AND CONDUIT FOR RE-FEED OF TR-HELOPAD



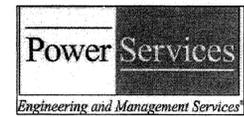
RELEASED FOR CONSTRUCTION

PCP-15

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337

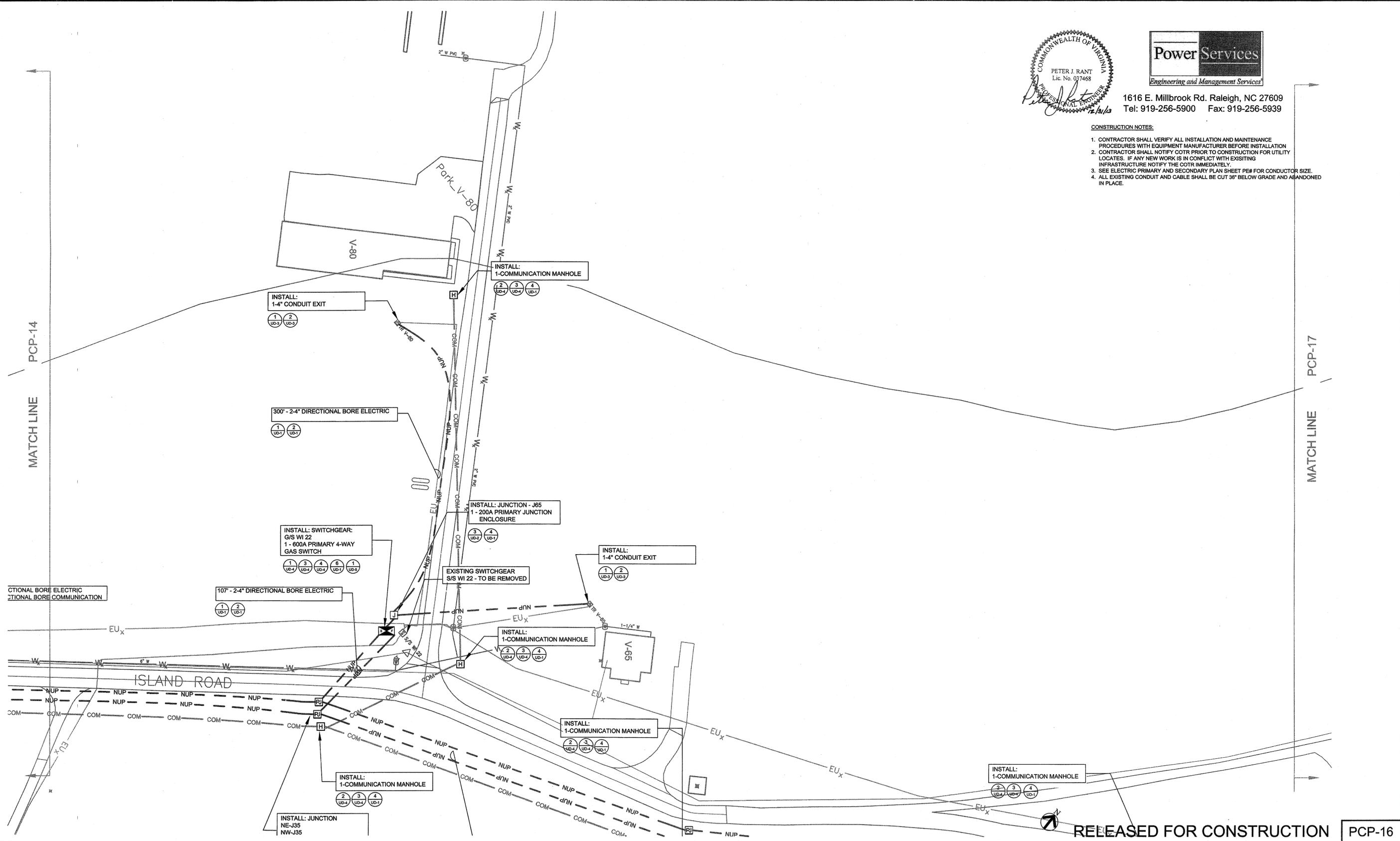


DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
						<i>[Signature]</i> DATE: 2/21/14	<i>[Signature]</i> DATE: 2/10/14		0' 40' 80'	ELECTRICAL CONDUIT PLAN		
					SUBMITTED BY: <i>[Signature]</i> DATE: 2/10/14	FIRE PROTECTION: <i>[Signature]</i> DATE: 2/10/14	O & M: <i>[Signature]</i> DATE: 2-10-14	ENGINEERING GROUP LEADER: <i>[Signature]</i> DATE: 2/10/14	AUTOCAD - RELEASE 2007	SCALE: 1"=40'	PROJECT NUMBER: NASS-01080	DRAWING NO. 16881
					PROJECT MANAGER			BRANCH APPROVAL: <i>[Signature]</i> DATE: 2/10/14	FILE NAME: XXXXXX	SHEET 24 OF 63	DR. LBJ DATE: 12-31-2013	CK. PJR REVISED:



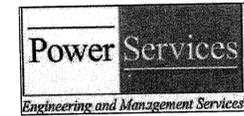
1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE
 4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 3" BELOW GRADE AND ABANDONED IN PLACE.



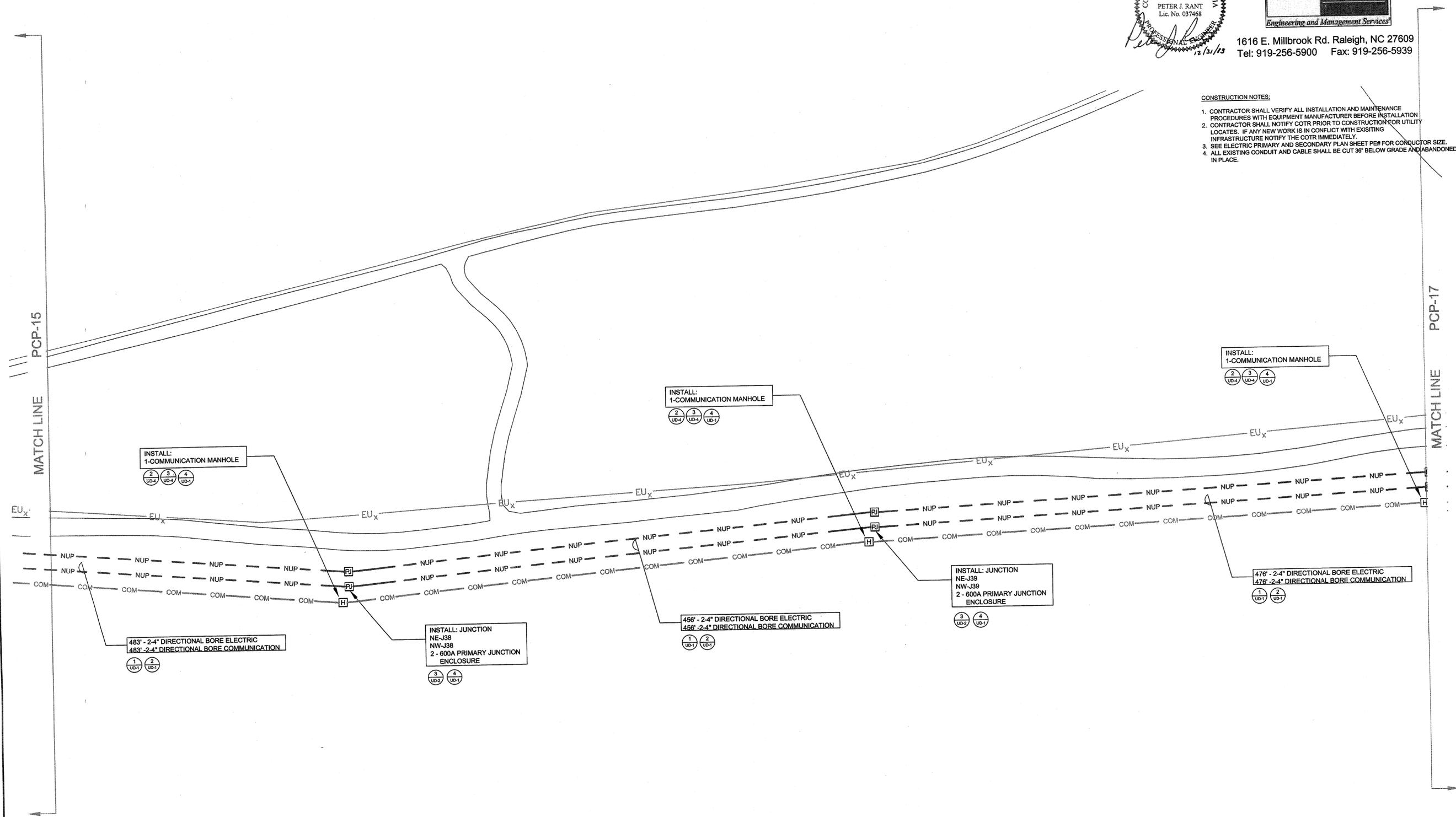
RELEASED FOR CONSTRUCTION PCP-16

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE ELECTRICAL CONDUIT PLAN PROJECT NUMBER: NASS-01080 DR. LIBJ DATE: 12-31-2013 CK. PJC REVISIONS:	DRAWING NO. 16882
						SUBMITTED BY: <i>[Signature]</i> PROJECT MANAGER DATE: 3/10/2014	DATE: 7/21/14 FIRE PROTECTION <i>[Signature]</i> DATE: 2/21/14	DATE: 7/14/14 O & M <i>[Signature]</i> DATE: 7-10-14	DATE: 2/12/12 BRANCH APPROVAL <i>[Signature]</i> BRANCH HEAD	1"=40' AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX SCALE SHEET 25 OF 63		



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
- CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION.
 - CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 - SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
 - ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.

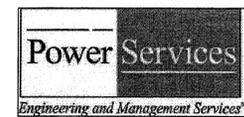
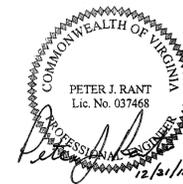


RELEASED FOR CONSTRUCTION PCP-17

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337



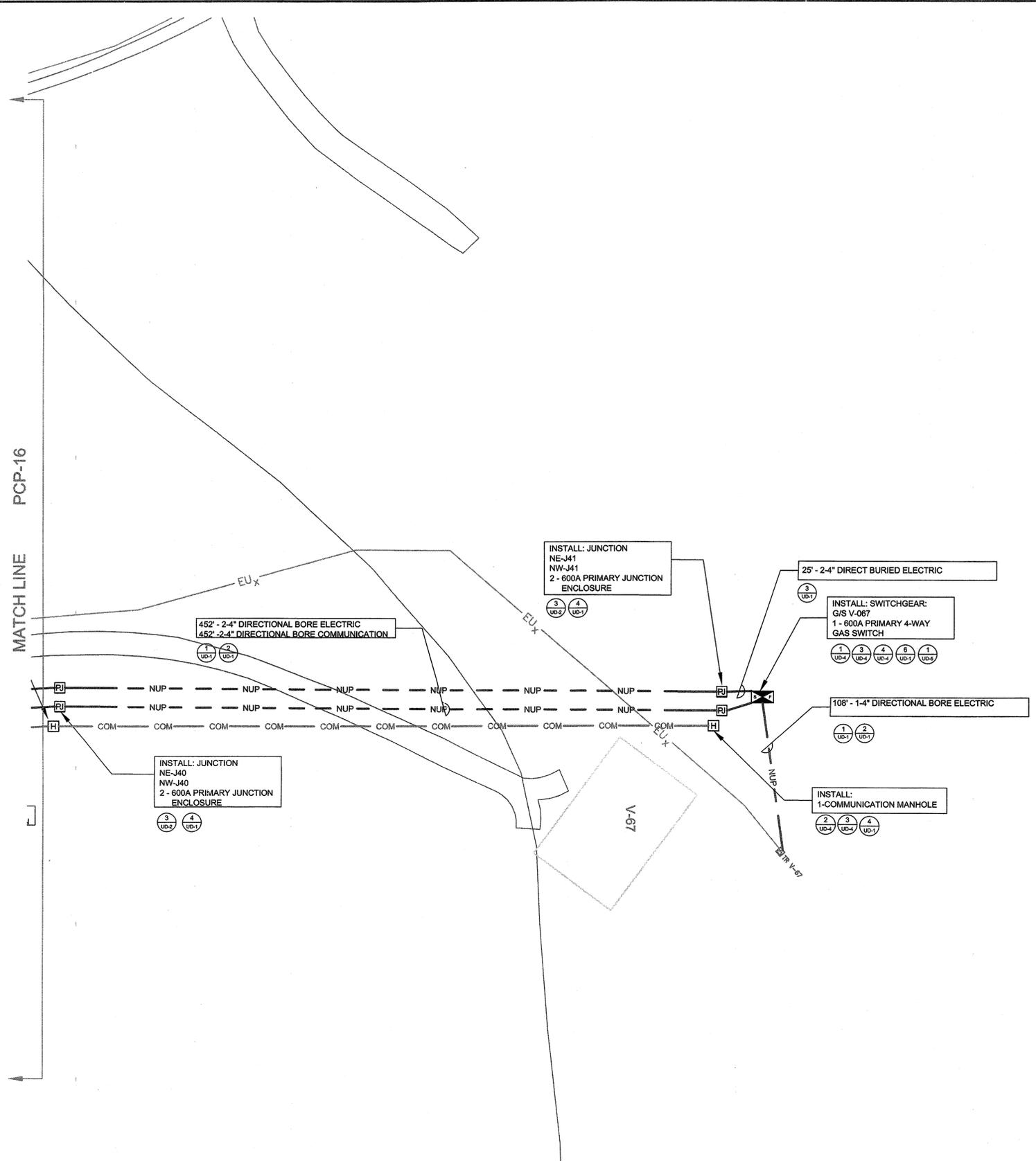
DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
						DATE: 2/21/14	DATE: 2/12/14	DATE:	0" 40" 80"	ELECTRICAL CONDUIT PLAN	
					DATE: 3/19/14	DATE: 2/21/14	DATE: 2-10-14	DATE: 2/12/14	SCALE 1"=40'	PROJECT NUMBER: NASS-01080	DRAWING NO. 16883
									AUTOCAD - RELEASE 2007	DR. LBJ	DATE: 12-31-2013
									FILE NAME: XXXXXX	CK. PJR	REVISED:
									SHEET 28 OF 63		



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC PRIMARY AND SECONDARY PLAN SHEET PE# FOR CONDUCTOR SIZE.
4. ALL EXISTING CONDUIT AND CABLE SHALL BE CUT 36" BELOW GRADE AND ABANDONED IN PLACE.



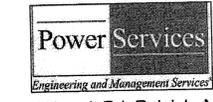
RELEASED FOR CONSTRUCTION PCP-18

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WALLOPS FLIGHT FACILITY
 WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
						<i>[Signature]</i> DATE: 2/21/14	<i>[Signature]</i> DATE: 2/18/14		0' 40' 80'	ELECTRICAL CONDUIT PLAN	
					SUBMITTED BY: <i>[Signature]</i> DATE: 3/19/2014	FIRE PROTECTION: <i>[Signature]</i> DATE: 2/21/14	<i>[Signature]</i> DATE: 2-10-14	ENGINEERING GROUP LEADER: <i>[Signature]</i> DATE: 2/12/14	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	SCALE: 1"=40'	PROJECT NUMBER: NASS-01080
					PROJECT MANAGER			BRANCH APPROVAL: <i>[Signature]</i> DATE: 2/12/14	SHEET 27 OF 63	DR. LBJ DATE: 12-31-2013	DRAWING NO. 16884
								BRANCH HEAD		CK. PJR	REVISED:

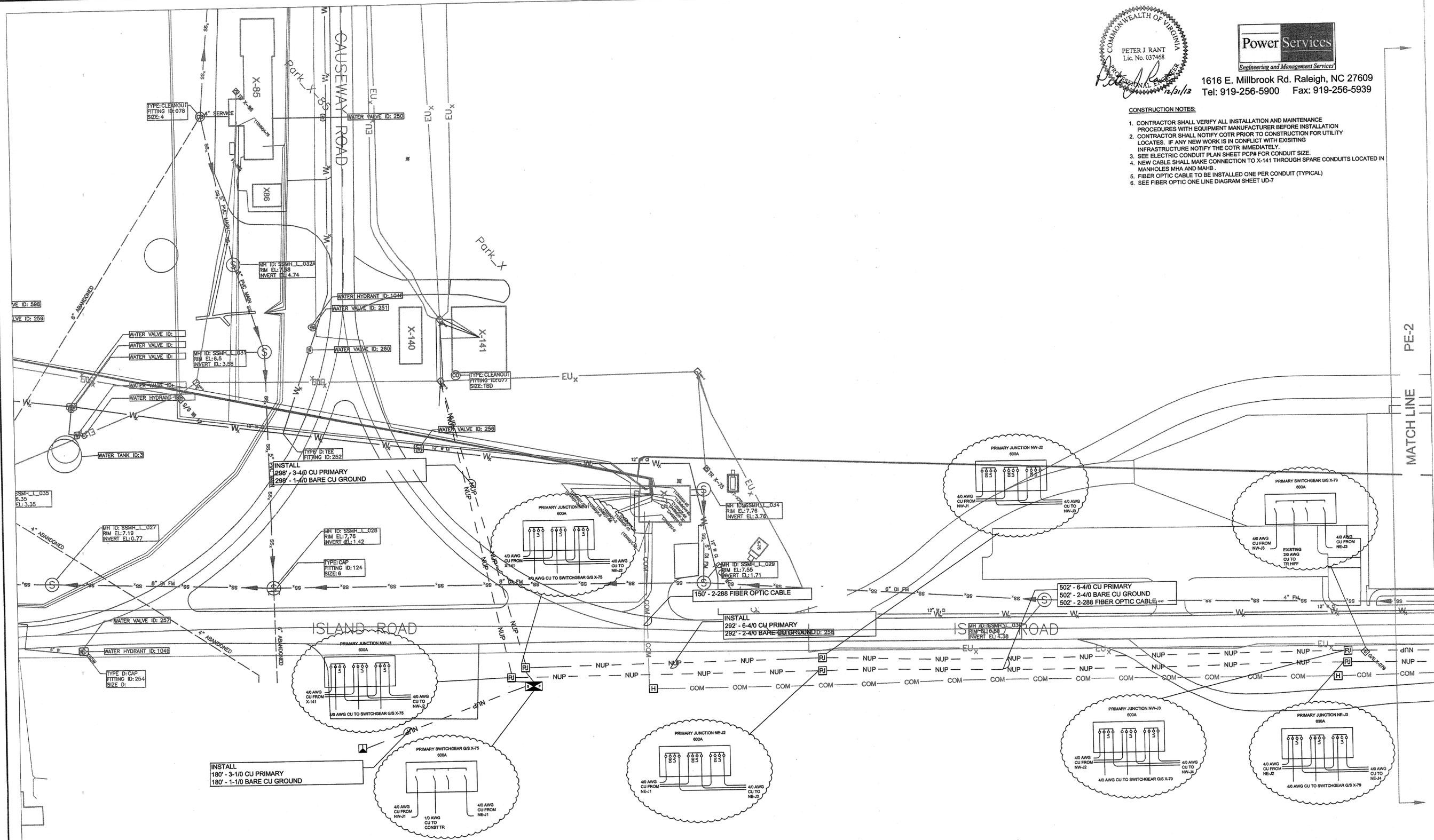
COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
 12/3/13



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

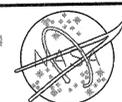
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC CONDUIT PLAN SHEET PCPW FOR CONDUIT SIZE.
4. NEW CABLE SHALL MAKE CONNECTION TO X-141 THROUGH SPARE CONDUITS LOCATED IN MANHOLES MHA AND MAH.
5. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
6. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

PE-1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 Wallops Flight Facility
 Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 SUBMITTED BY: *[Signature]*
 DATE: 3/19/14
 PROJECT MANAGER

NASA SAFETY
 DATE: 2/11/14
 FIRE PROTECTION
 DATE: 2/11/14

CONSTRUCTION MANAGEMENT
 DATE: 2/14/14
 DATE: 2-10-14

ENGINEERING APPROVAL
 ENGINEERING GROUP LEADER
 DATE: 2/12/14
 BRANCH HEAD

GRAPHIC SCALE
 0' 40' 80'
 AUTOCAD - RELEASE 2007
 FILE NAME: XXXXXX

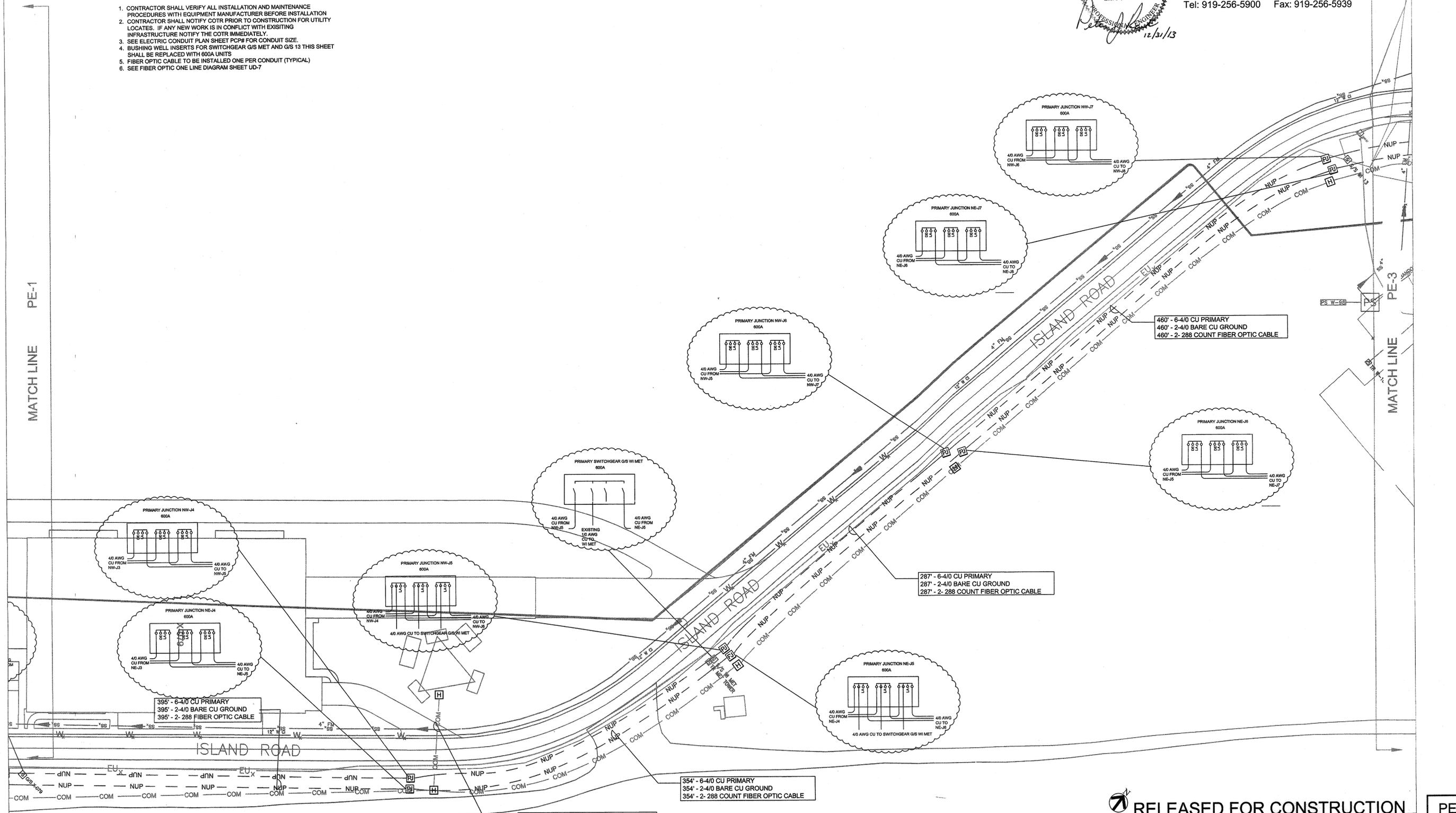
NORTH ISLAND ELECTRICAL UPGRADE
 PRIMARY AND SECONDARY CABLE PLAN
 PROJECT NUMBER: NASS-01086
 DATE: 12-31-2013
 DRAWING NO: 16885

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
4. BUSHING WELL INSERTS FOR SWITCHGEAR GIS MET AND GIS 13 THIS SHEET SHALL BE REPLACED WITH 600A UNITS
5. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
6. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939



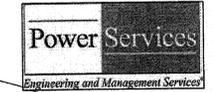
RELEASED FOR CONSTRUCTION

PE-2

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE PRIMARY AND SECONDARY CABLE PLAN PROJECT NUMBER: NASS-01080 DR. T.B.J. DATE: 12-31-2013 CK. P.J.S. REVISED:	DRAWING NO. 16886
						SUBMITTED BY: <i>[Signature]</i> DATE: 3/10/14 PROJECT MANAGER:	DATE: 2/21/14 FIRE PROTECTION: <i>[Signature]</i> DATE: 2/21/14	DATE: 2/14/14 DATE: 2-10-14	DATE: _____ ENGINEERING GROUP LEADER: <i>[Signature]</i> DATE: 2/12/14 BRANCH APPROVAL: <i>[Signature]</i> DATE: 2/12/14 BRANCH HEAD:	0" 40' 80' SCALE: 1"=40' AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX SHEET 29 OF 33		

LAUNCH AREA BY PASS ROAD

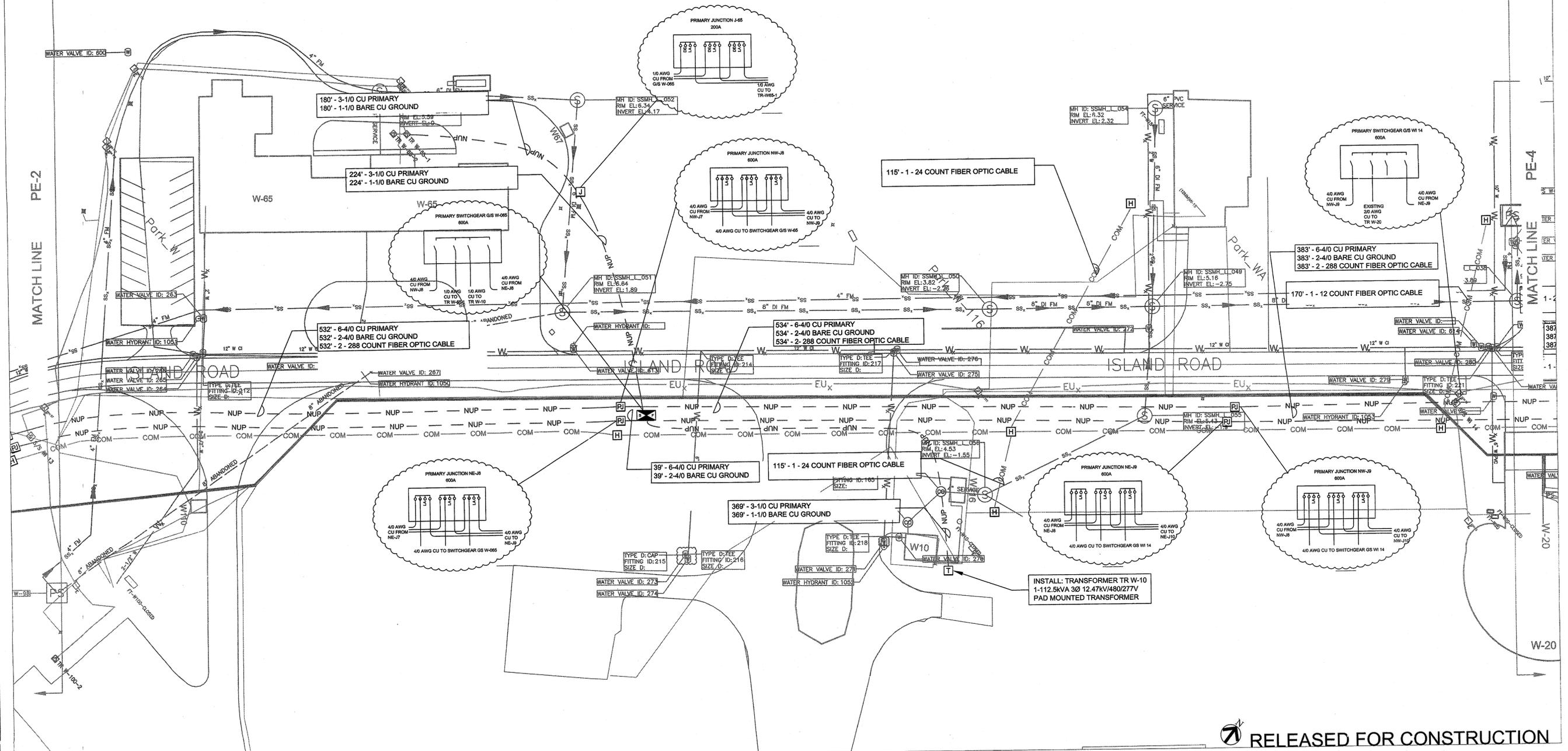
COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
 PROFESSIONAL ENGINEER
 12/21/13



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC CONDUIT PLAN SHEET PCPW FOR CONDUIT SIZE
4. BUSHING WELL INSERTS FOR SWITCHGEAR G/S 14 THIS SHEET SHALL BE REPLACED WITH 600A UNITS
5. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
6. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

PE-3

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WALLOPS FLIGHT FACILITY
 WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 DATE: 3/10/2014
 SUBMITTED BY: [Signature]
 PROJECT MANAGER

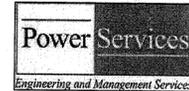
NASA SAFETY
 DATE: 3/10/14
 FIRE PROTECTION
 DATE: 2/21/14

CONSTRUCTION MANAGEMENT
 DATE: 2/14/14
 DATE: 7-10-14

ENGINEERING APPROVAL
 DATE: 2/21/14
 BRANCH APPROVAL
 DATE: 2/21/14

GRAPHIC SCALE
 0' 40' 80'
 SCALE 1"=40'
 SHEET 30 OF 63

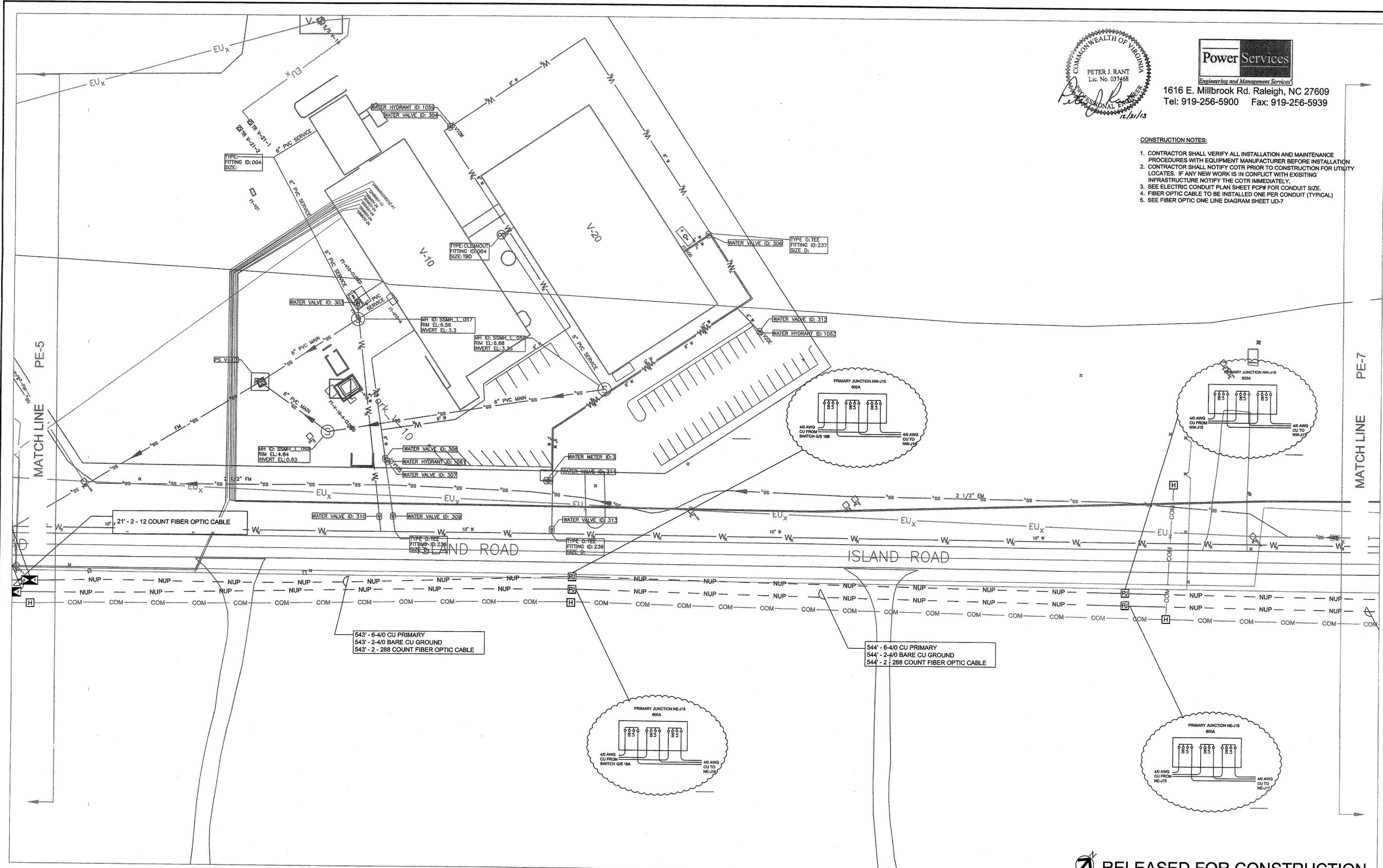
NORTH ISLAND ELECTRICAL UPGRADE
 PRIMARY AND SECONDARY CABLE PLAN
 PROJECT NUMBER: NASS-01080
 DR. LBJ DATE: 12-31-2013
 CK. FJR REVISIONS:
 DRAWING NO. 16887



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

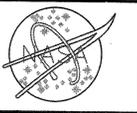
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

PE-6

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 Wallops Flight Facility
 Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 DATE: 3/10/14
 SUBMITTED BY: [Signature]
 PROJECT MANAGER

NASA SAFETY
 DATE: 2/21/14
 FIRE PROTECTION
 DATE: 2/21/14

CONSTRUCTION MANAGEMENT
 DATE: 2/12/14
 DATE: 2-10-14

ENGINEERING APPROVAL
 DATE: 2/12/14
 BRANCH APPROVAL
 DATE: 2/12/14

GRAPHIC SCALE
 0' 40' 80'

SCALE
 1"=40'

AUTOCAD - RELEASE 2007
 FILE NAME: XXXXXX

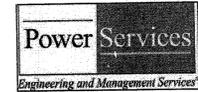
SHEET 33 OF 63

**NORTH ISLAND ELECTRICAL UPGRADE
 PRIMARY AND SECONDARY CABLE PLAN**

PROJECT NUMBER: NASS-01090
 DR. LBJ DATE: 12-31-2013
 CK. PJR REVISION:

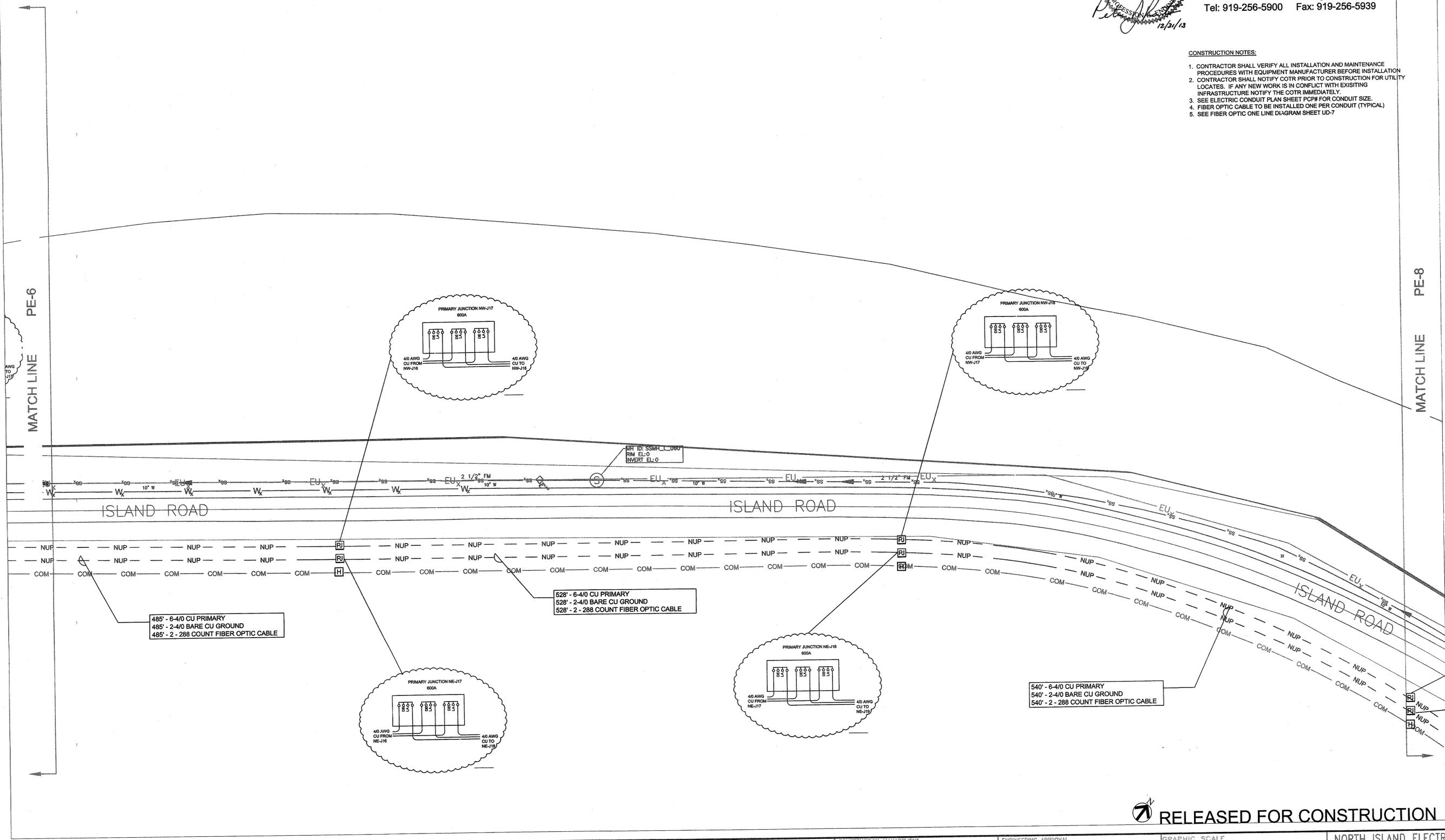
DRAWING NO.
16890

COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
 12/21/13



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

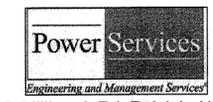
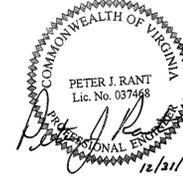
- CONSTRUCTION NOTES:
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
 4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
 5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

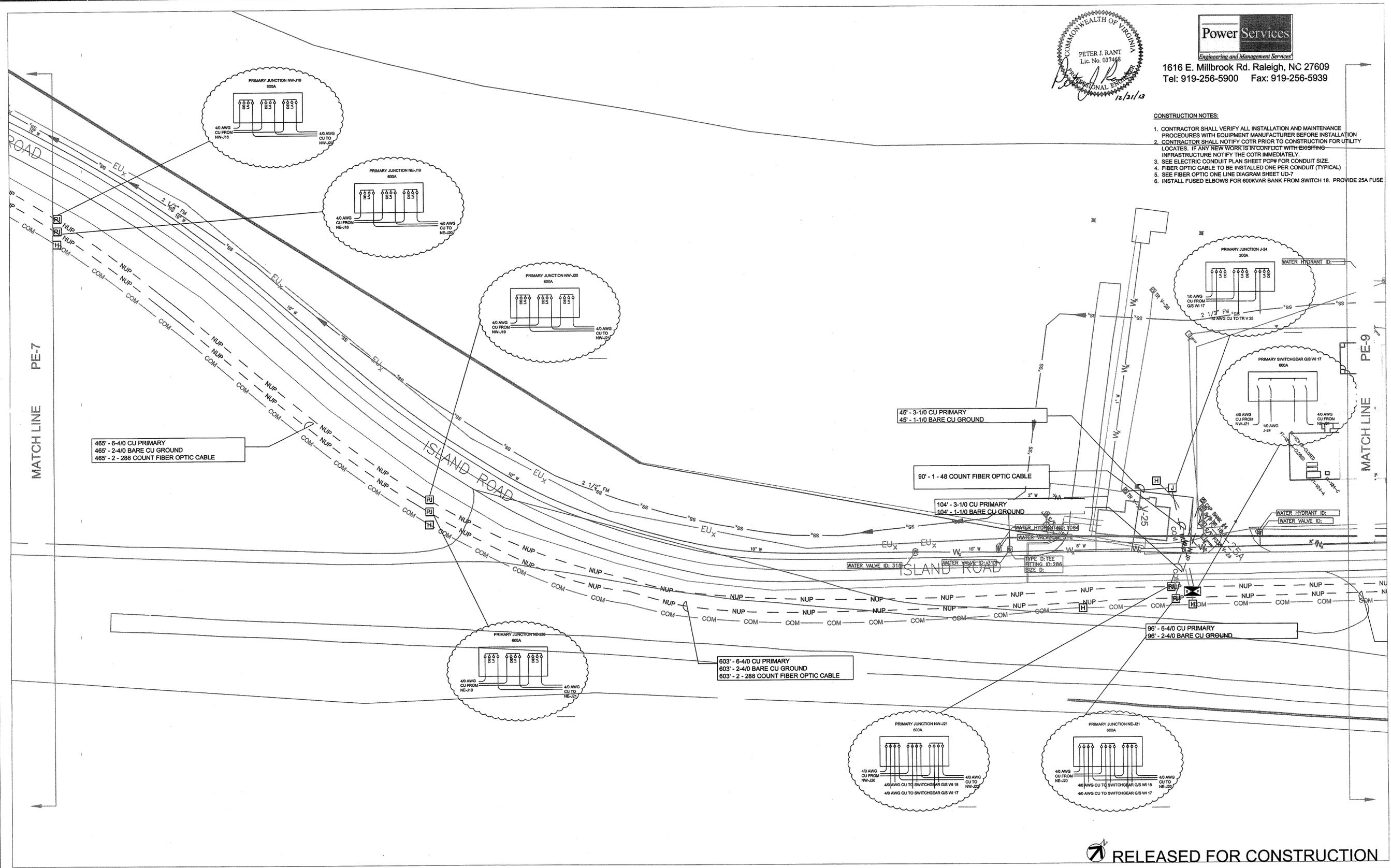
PE-7

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
						DATE: 3/10/2013	DATE: 2/1/14	DATE: 2/19/14	DATE: 2/12/14	0 40' 80'	PRIMARY AND SECONDARY CABLE PLAN	
						DATE: 3/10/2013	DATE: 2/1/14	DATE: 2-10-14	DATE: 2/12/14	SCALE 1"=40'	PROJECT NUMBER: NAS5-01080	DRAWING NO. 16891
						DATE: 3/10/2013	DATE: 2/1/14	DATE: 2-10-14	DATE: 2/12/14	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	DR. LBJ DATE: 12-31-2013	REVISIONS



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
 4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
 5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7
 6. INSTALL FUSED ELBOWS FOR 600KVAR BANK FROM SWITCH 18. PROVIDE 25A FUSE



RELEASED FOR CONSTRUCTION

PE-8

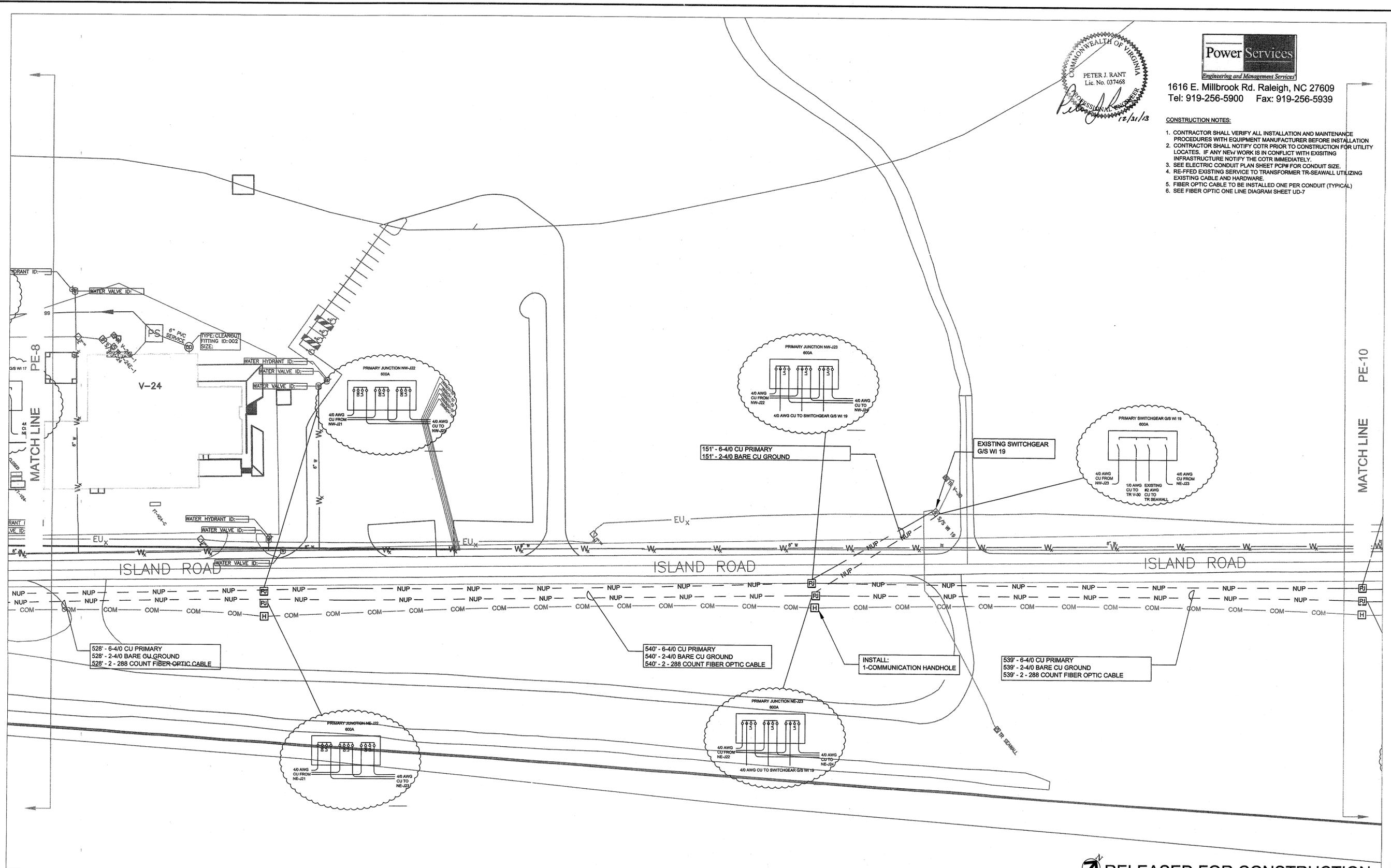
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE PRIMARY AND SECONDARY CABLE PLAN PROJECT NUMBER: NASS-0109D DR: LBJ DATE: 12-31-2013 SHEET 35 OF 63 CK: PJR REVISED:	
	SUBMITTED BY: <i>[Signature]</i> DATE: 2/10/14						FIRE PROTECTION	DATE: 2/10/14	ENGINEERING GROUP LEADER	DATE: 2/10/14		AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX
	PROJECT MANAGER						DATE: 2/10/14	DATE: 2/10/14	BRANCH APPROVAL	DATE: 2/10/14		DRAWING NO. 16892

COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
 PROFESSIONAL ENGINEER
 12/31/13



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PC# FOR CONDUIT SIZE.
 4. RE-FFED EXISTING SERVICE TO TRANSFORMER TR-SEAWALL UTILIZING EXISTING CABLE AND HARDWARE.
 5. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
 6. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

PE-9

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WOLLOPS FLIGHT FACILITY
 WOLLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 DATE: 2/10/14
 SUBMITTED BY: *[Signature]*
 DATE: 2/10/14
 PROJECT MANAGER

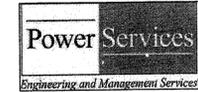
NASA SAFETY
 DATE: 2/21/14
 FIRE PROTECTION
 DATE: 2/21/14

CONSTRUCTION MANAGEMENT
 DATE: 2/14/14
 DATE: 2-10-14

ENGINEERING APPROVAL
 ENGINEERING GROUP LEADER
 DATE: 2/12/14
 BRANCH APPROVAL
 DATE: 2/12/14

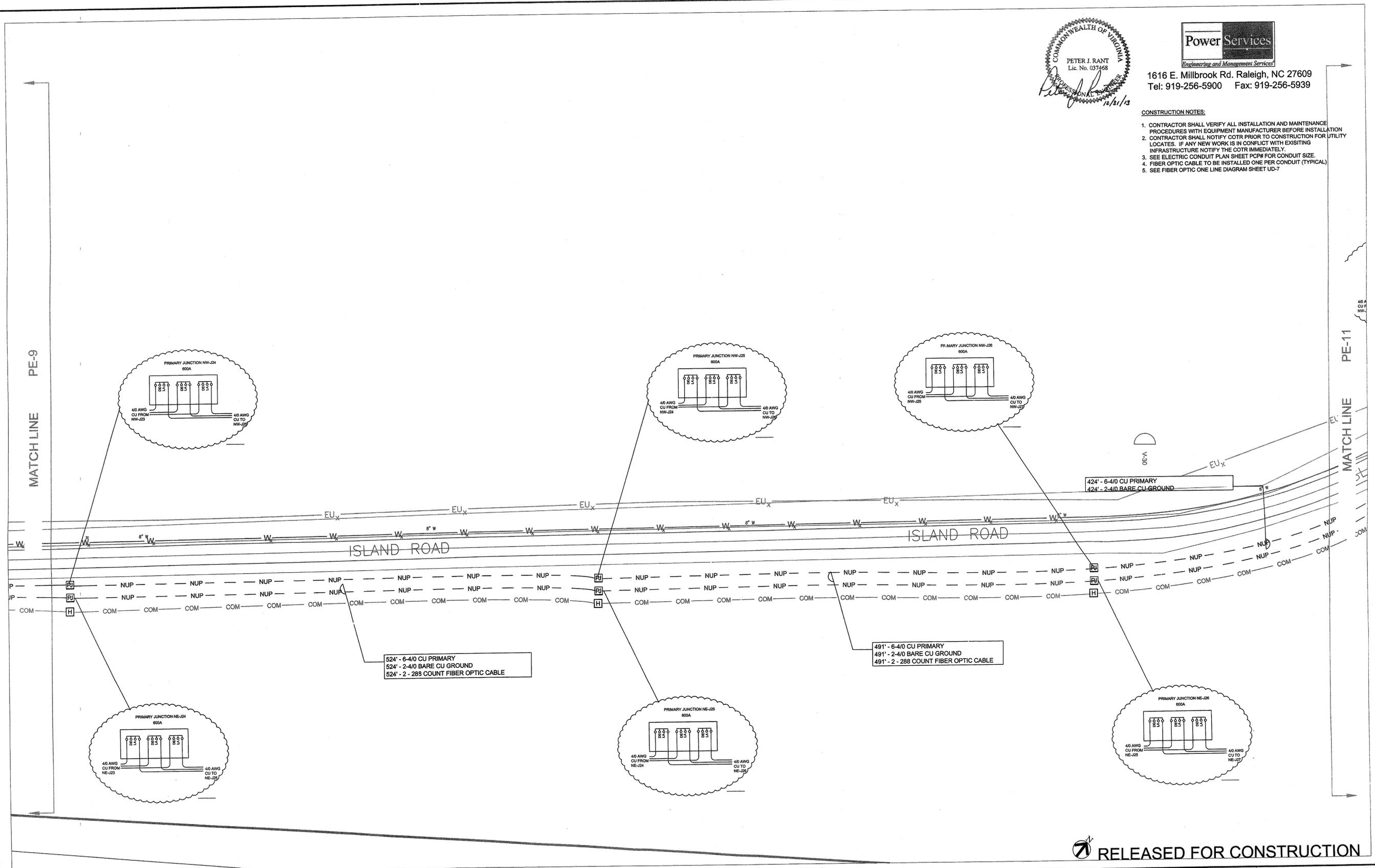
GRAPHIC SCALE
 0' 40' 80'
 AUTOCAD - RELEASE 2007
 FILE NAME: XXXXXX
 SCALE: 1"=40'
 SHEET 36 OF 53

NORTH ISLAND ELECTRICAL UPGRADE
 PRIMARY AND SECONDARY CABLE PLAN
 PROJECT NUMBER: NASS-01090
 DATE: 12-31-2013
 DRAWING NO. 16893



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

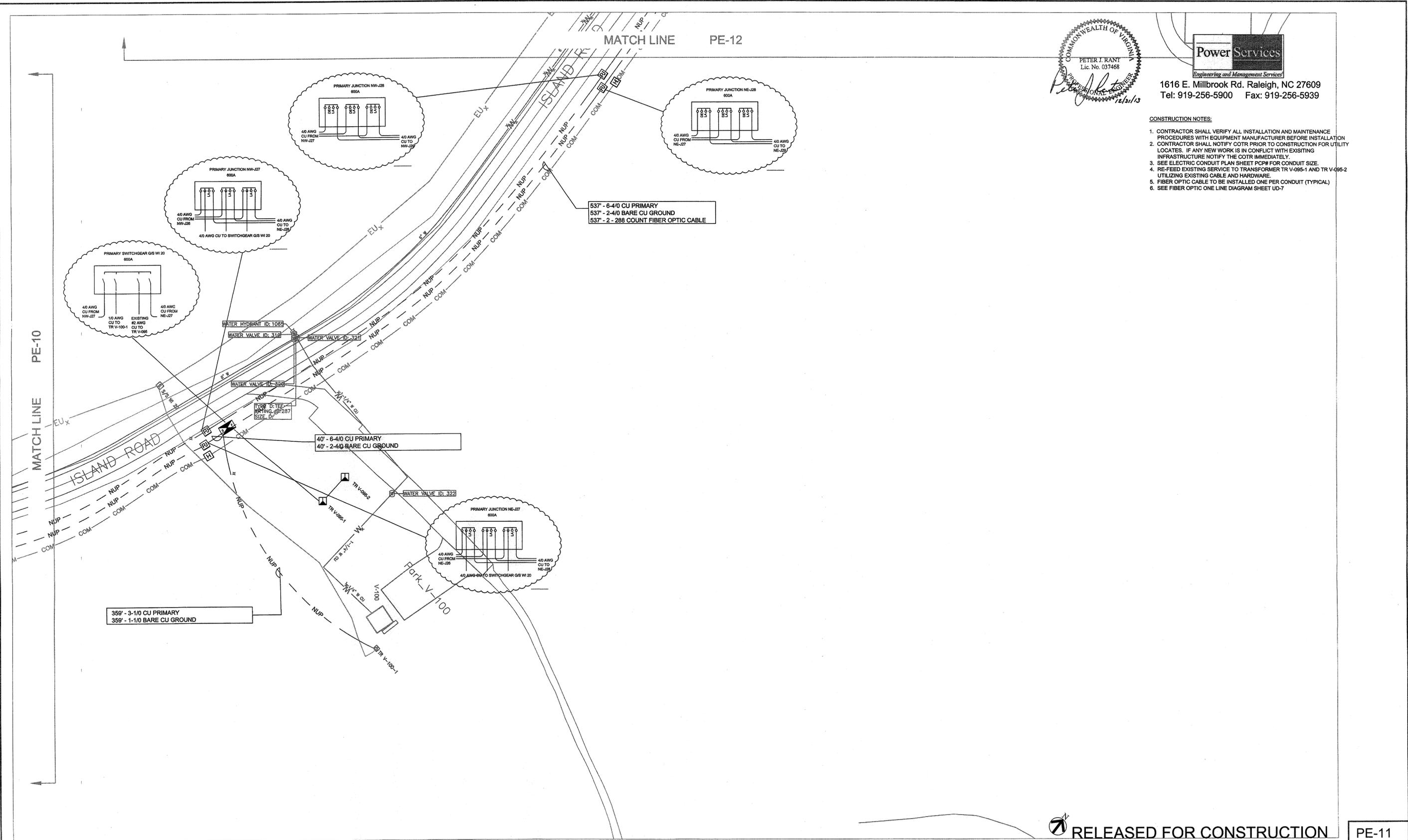
- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCPH FOR CONDUIT SIZE
 4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
 5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



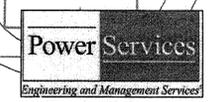
RELEASED FOR CONSTRUCTION

PE-10

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
										0' 40' 80'	PRIMARY AND SECONDARY CABLE PLAN		
											SCALE 1"=40'	PROJECT NUMBER: NAS5-01080	DRAWING NO. 16894
						SUBMITTED BY	FIRE PROTECTION	DATE	BRANCH APPROVAL	AUTOCAD - RELEASE 2007	SCALE	PROJECT NUMBER: NAS5-01080	DRAWING NO. 16894
						DATE	DATE	DATE	DATE	FILE NAME: XXXXXX	SHEET 37 OF 63	DR. LBJ DATE: 12-31-2013	REVISIONS
						PROJECT MANAGER	DATE	DATE	DATE			CK. PJR	REVISIONS



COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
Peter J. Rant
 12/31/13

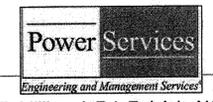
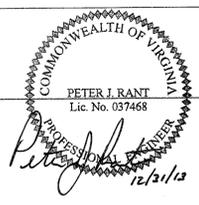


1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION.
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
 4. RE-FEED EXISTING SERVICE TO TRANSFORMER TR V-095-1 AND TR V-095-2 UTILIZING EXISTING CABLE AND HARDWARE.
 5. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL).
 6. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WOLLOPS FLIGHT FACILITY WOLLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE PRIMARY AND SECONDARY CABLE PLAN PROJECT NUMBER: NASS-0108D DRAWING NO. 16895
						SUBMITTED BY: <i>[Signature]</i> DATE: 3/10/2014 PROJECT MANAGER	DATE: 2/21/14 FIRE PROTECTION: <i>[Signature]</i> DATE: 2/21/14	DATE: 2/14/14 O & M: <i>[Signature]</i> DATE: 2-10-14	DATE: 2/12/14 BRANCH APPROVAL: <i>[Signature]</i> DATE: 2/12/14 BRANCH HEAD	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX SCALE: 1"=40' SHEET 38 OF 63	

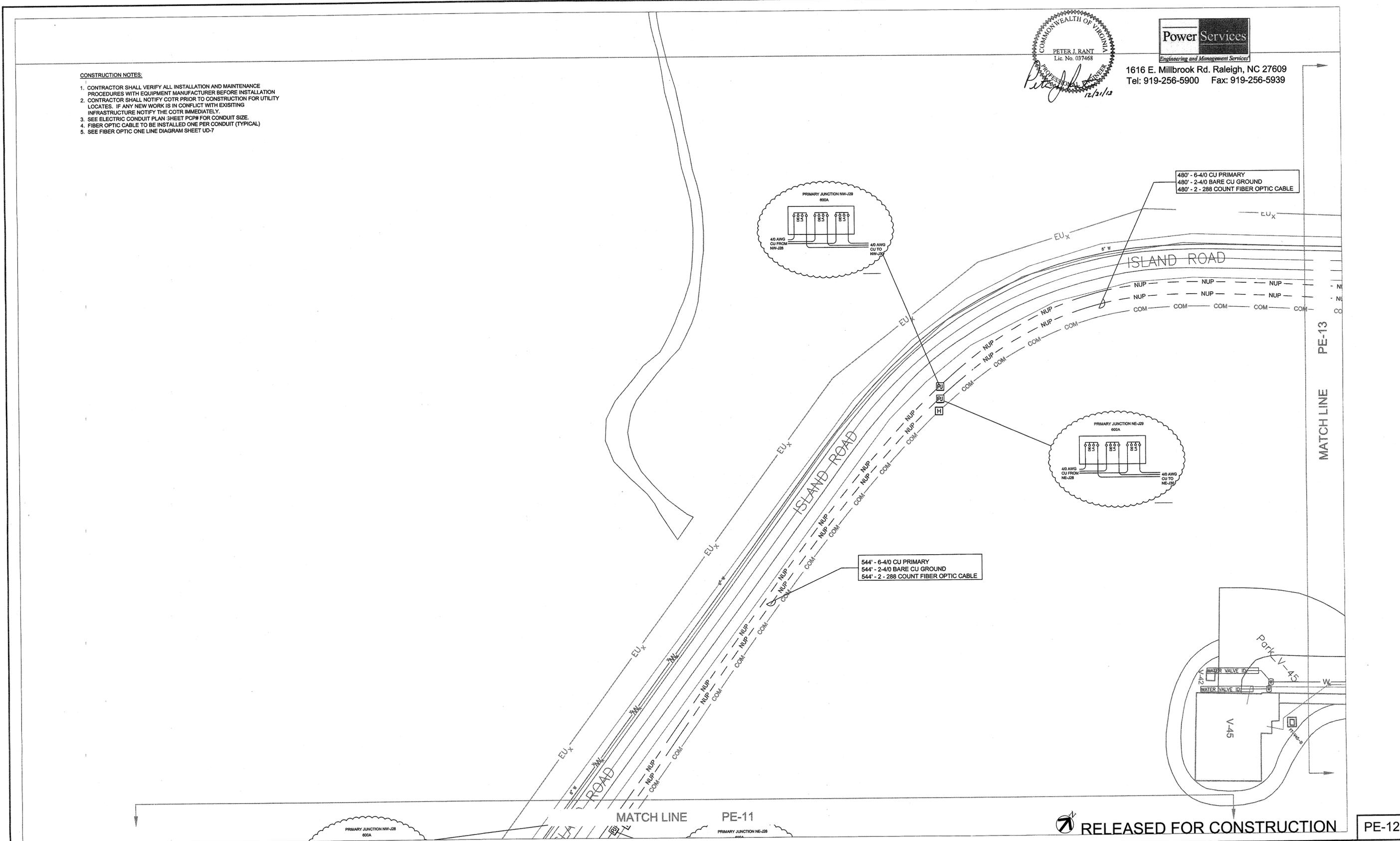
PE-11



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

PE-12

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WALLOPS FLIGHT FACILITY
 WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 DATE: _____
 SUBMITTED BY: *[Signature]* DATE: 3/19/2014
 PROJECT MANAGER

NASA SAFETY
 DATE: 2/21/14
 FIRE PROTECTION
 DATE: 2/21/14

CONSTRUCTION MANAGEMENT
[Signature] DATE: 2/14/14
 O & M
[Signature] DATE: 2-10-14

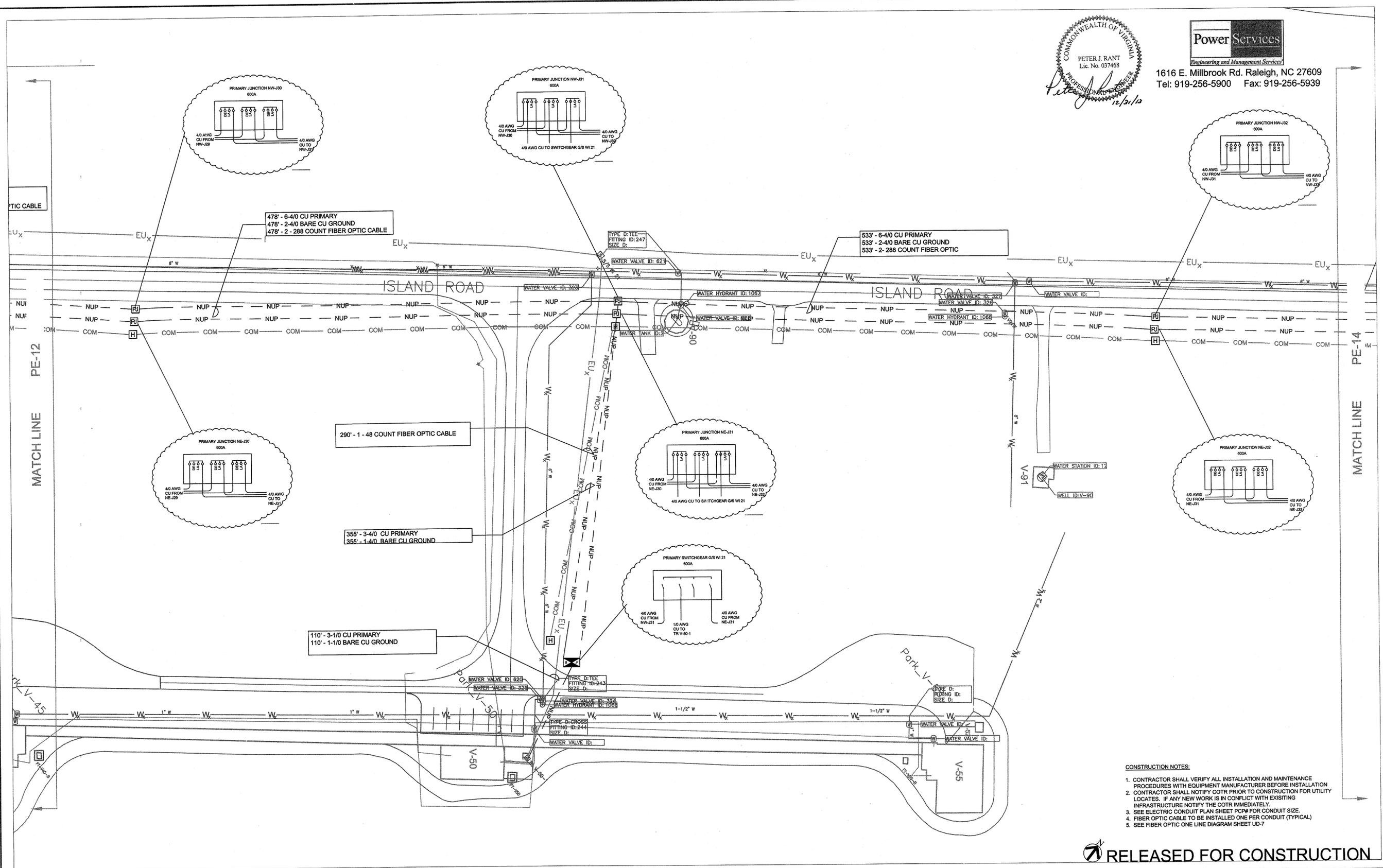
ENGINEERING APPROVAL
 ENGINEERING GROUP LEADER DATE: _____
 BRANCH APPROVAL
[Signature] DATE: 2/12/14
 BRANCH HEAD

GRAPHIC SCALE
 0 40' 80'
 SCALE 1"=40'
 AUTOCAD - RELEASE 2007
 FILE NAME: XXXXXX
 SHEET 39 OF 83

NORTH ISLAND ELECTRICAL UPGRADE
 PRIMARY AND SECONDARY CABLE PLAN
 PROJECT NUMBER: NASS-01080
 DATE: 12-31-2013
 DRAWING NO. 16896



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939



- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION.
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
 4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL).
 5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7.

RELEASED FOR CONSTRUCTION

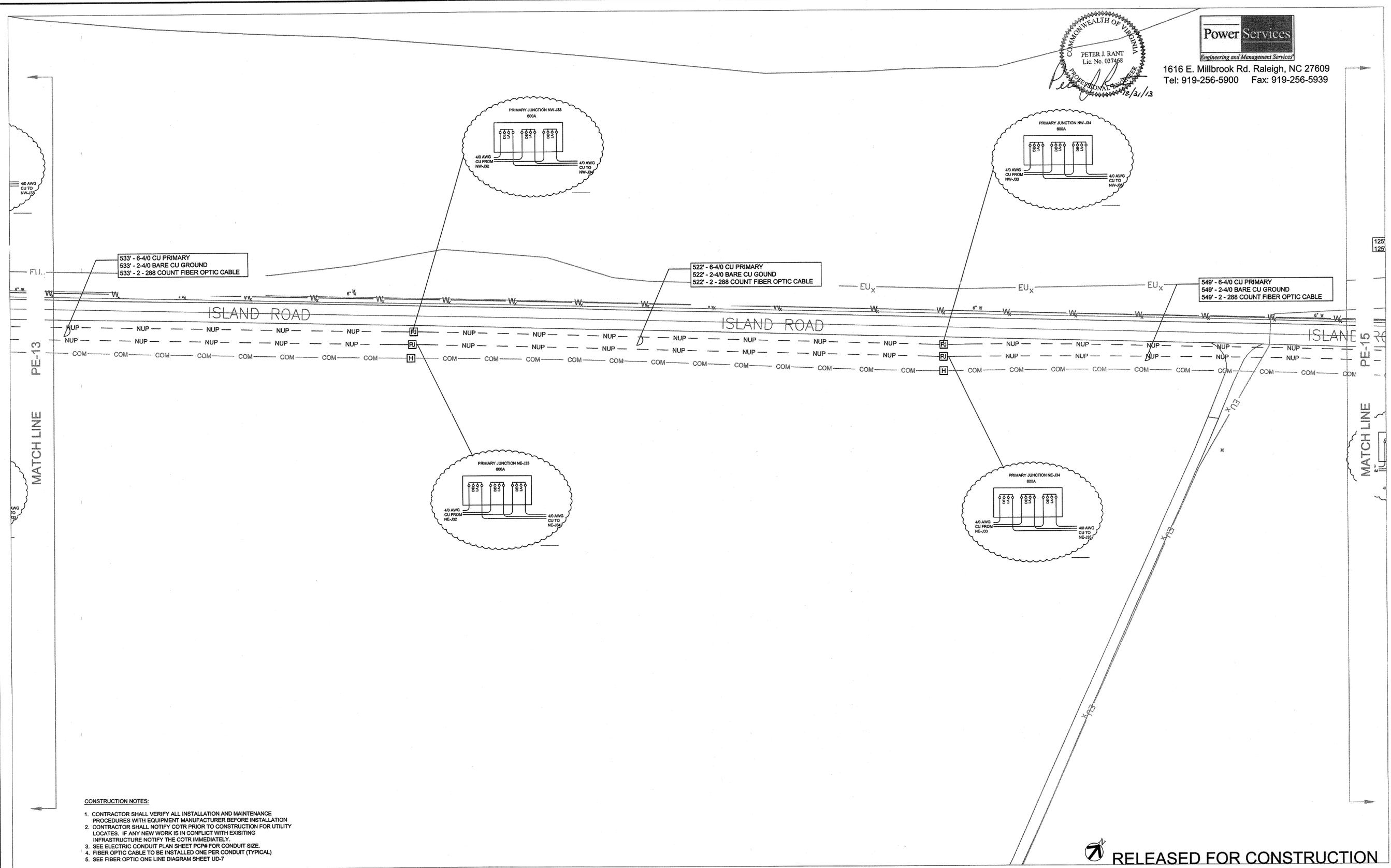
PE-13

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE PRIMARY AND SECONDARY CABLE PLAN	
										0' 40' 80'	PROJECT NUMBER: NA55-01080 DRAWING NO.: 16897	
										AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	SCALE 1"=40' SHEET 40 OF 63	DR. LBJ CK. FJR
												DATE: 12-31-2013 REVISED:

COMMONWEALTH OF VIRGINIA
 PETER J. RANT
 Lic. No. 037468
 PROFESSIONAL ELECTRICAL ENGINEER
 12/31/13



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939



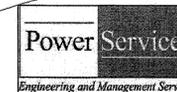
- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCPW FOR CONDUIT SIZE.
 4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
 5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7

RELEASED FOR CONSTRUCTION

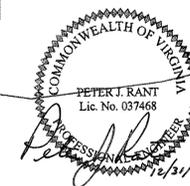
PE-14

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER DATE: _____	NASA SAFETY DATE: 2/21/14	CONSTRUCTION MANAGEMENT DATE: 2/14/14	ENGINEERING APPROVAL DATE: _____	GRAPHIC SCALE 	NORTH ISLAND ELECTRICAL UPGRADE PRIMARY AND SECONDARY CABLE PLAN
	SUBMITTED BY DATE: 2/10/14	PROJECT MANAGER DATE: 2/10/14	FIRE PROTECTION DATE: 2/21/14	O & M DATE: 2-10-14	BRANCH APPROVAL DATE: 2/21/14	BRANCH HEAD DATE: 2/21/14	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXX	SCALE 1"=40' SHEET 41 OF 83	PROJECT NUMBER: NASS-01080 DR. LBJ DATE: 12-31-2013 CK: PJR REVISION:	DRAWING NO. 16898	

MATCH LINE PE-16

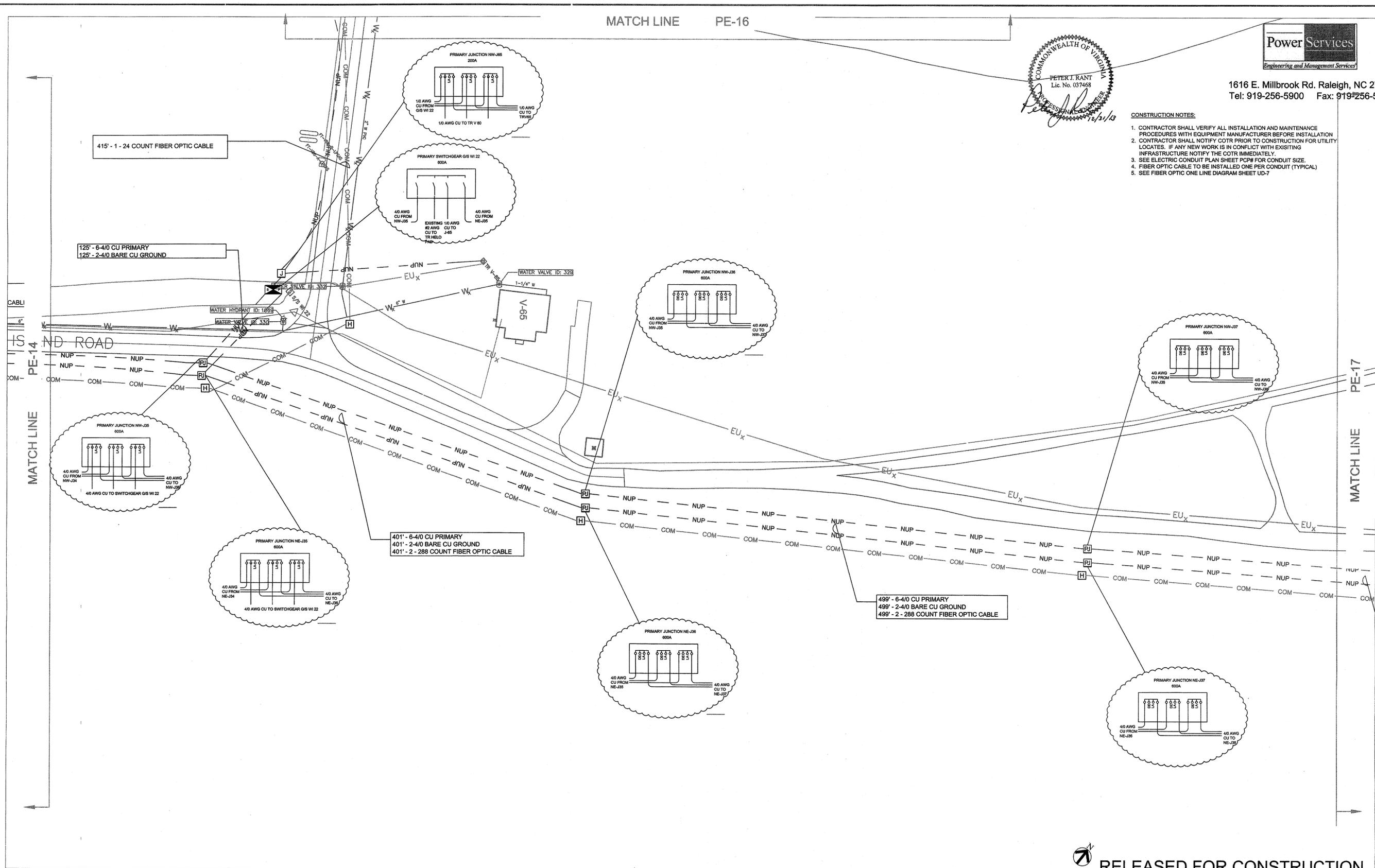


1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939



CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

PE-15

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE: _____
SUBMITTED: _____ DATE: 3/10/14
PROJECT MANAGER

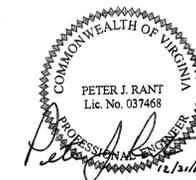
NASA SAFETY
DATE: 3/21/14
FIRE PROTECTION
DATE: 2/21/14

CONSTRUCTION MANAGEMENT
DATE: 2/14/14
DATE: 2-10-14

ENGINEERING APPROVAL
DATE: _____
ENGINEERING GROUP LEADER
DATE: 2/12/14
BRANCH HEAD

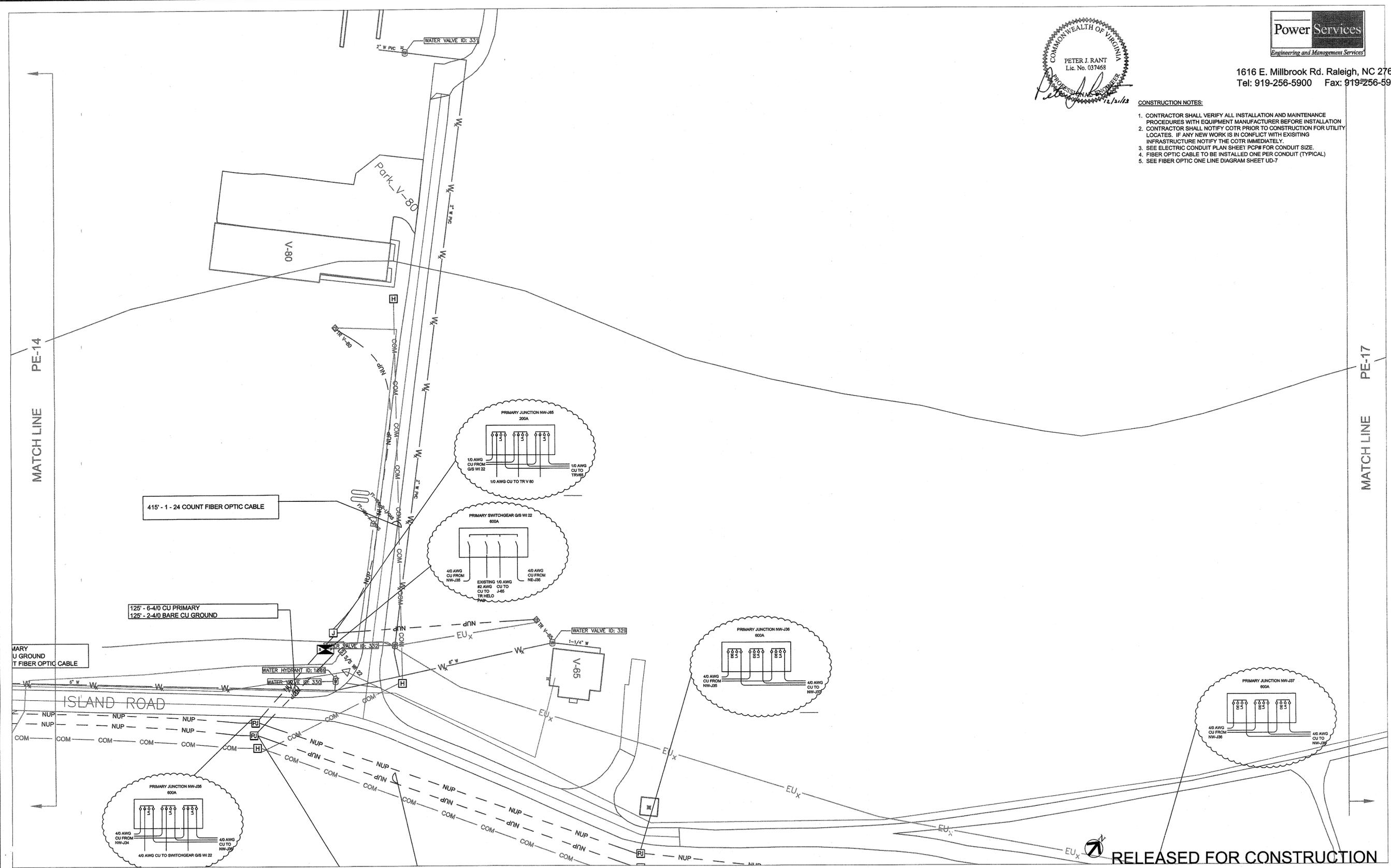
GRAPHIC SCALE
0' 40' 80'
SCALE 1"=40'
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX
SHEET 42 OF 83

NORTH ISLAND ELECTRICAL UPGRADE
PRIMARY AND SECONDARY CABLE PLAN
PROJECT NUMBER: NASS-01080
DR. LBJ DATE: 12-31-2013
CK. PJR REVISION:
DRAWING NO. 16899



CONSTRUCTION NOTES:

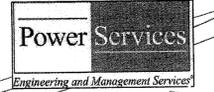
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION.
2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL).
5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7.



RELEASED FOR CONSTRUCTION

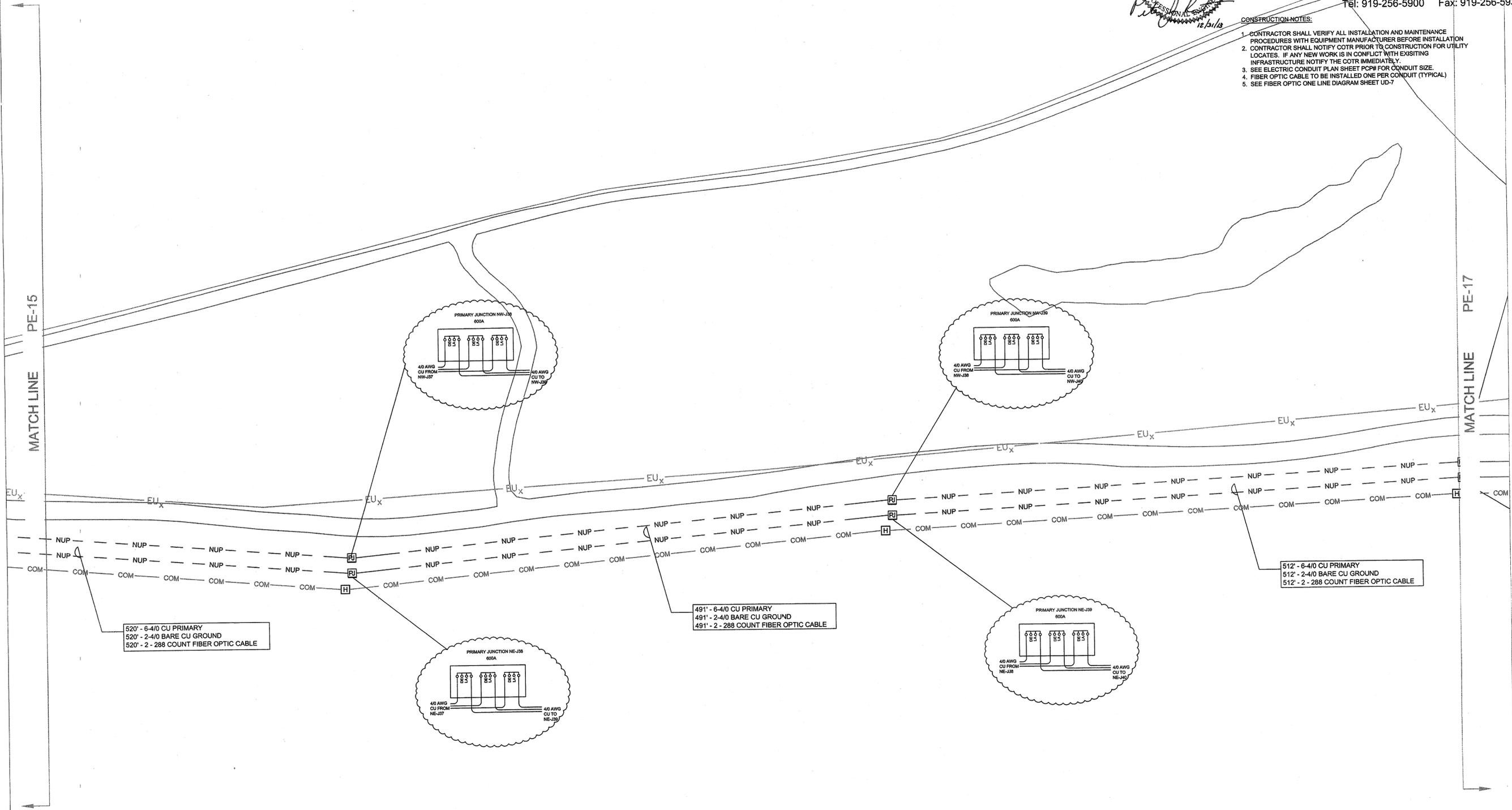
PE-16

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
										0' 40' 80'	PRIMARY AND SECONDARY CABLE PLAN		
											SCALE 1"=40'	PROJECT NUMBER: NASS-01080	DRAWING NO. 16900
						SUBMITTED BY	FIRE PROTECTION	O & W	BRANCH APPROVAL	AUTOCAD - RELEASE 2007	DR. LBJ	DATE: 12-31-2013	
						DATE: 3/10/2014	DATE: 2/21/14	DATE: 2-10-14	DATE: 2/2/14	FILE NAME: XXXXXX	CK. PJR	REVISED:	



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
 4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
 5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



520' - 6-4/0 CU PRIMARY
520' - 2-4/0 BARE CU GROUND
520' - 2 - 288 COUNT FIBER OPTIC CABLE

491' - 6-4/0 CU PRIMARY
491' - 2-4/0 BARE CU GROUND
491' - 2 - 288 COUNT FIBER OPTIC CABLE

512' - 6-4/0 CU PRIMARY
512' - 2-4/0 BARE CU GROUND
512' - 2 - 288 COUNT FIBER OPTIC CABLE

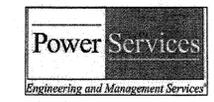
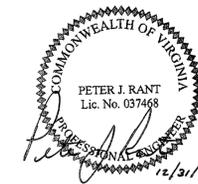
RELEASED FOR CONSTRUCTION

PE-17

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337

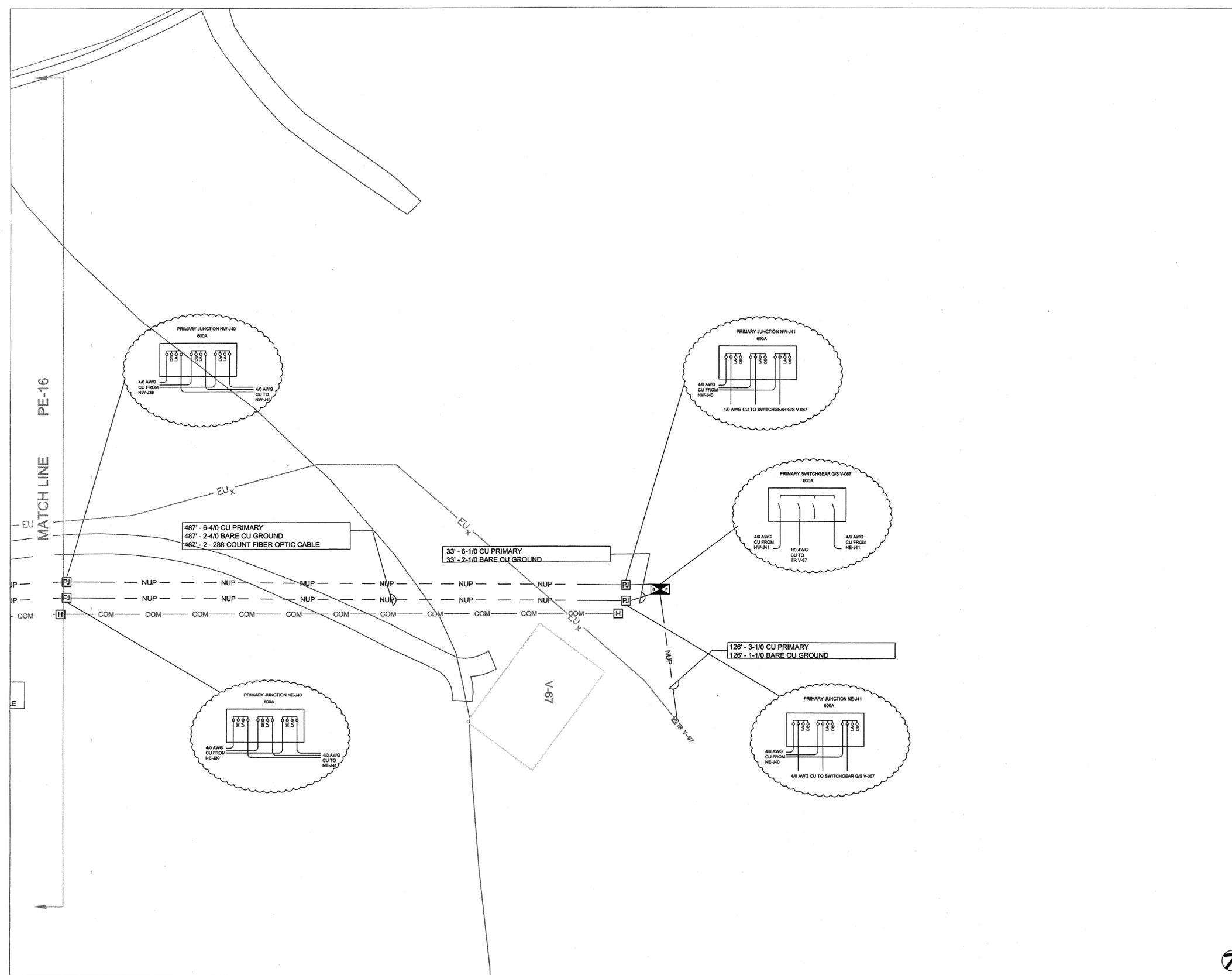


DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
									0 40' 80'	PRIMARY AND SECONDARY CABLE PLAN	
					DATE: 3/10/14	DATE: 2/10/14	DATE: 2/14/14	DATE: 2/12/14	AUTOCAD - RELEASE 2007	SCALE 1"=40'	PROJECT NUMBER: NAS5-01080
					DATE: 3/10/14	DATE: 2/10/14	DATE: 2-10-14	DATE: 2/12/14	FILE NAME: XXXXXX	DR: LBJ	DATE: 12-31-2013
					PROJECT MANAGER	FIRE PROTECTION	D & M	BRANCH HEAD	SHEET 44 OF 63	CK: PJR	REVISIONS:
						DATE: 2/10/14	DATE: 2-10-14	DATE: 2/12/14			DRAWING NO: 16901



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY ALL INSTALLATION AND MAINTENANCE PROCEDURES WITH EQUIPMENT MANUFACTURER BEFORE INSTALLATION
 2. CONTRACTOR SHALL NOTIFY COTR PRIOR TO CONSTRUCTION FOR UTILITY LOCATES. IF ANY NEW WORK IS IN CONFLICT WITH EXISTING INFRASTRUCTURE NOTIFY THE COTR IMMEDIATELY.
 3. SEE ELECTRIC CONDUIT PLAN SHEET PCP# FOR CONDUIT SIZE.
 4. FIBER OPTIC CABLE TO BE INSTALLED ONE PER CONDUIT (TYPICAL)
 5. SEE FIBER OPTIC ONE LINE DIAGRAM SHEET UD-7



RELEASED FOR CONSTRUCTION

PE-18

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE: _____
SUBMITTED BY: *[Signature]*
DATE: 3/10/14
PROJECT MANAGER

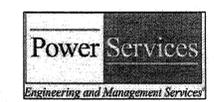
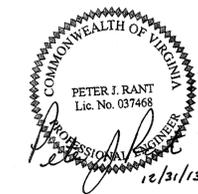
NASA SAFETY
[Signature] DATE: 2/21/14
FIRE PROTECTION
[Signature] DATE: 2/21/14

CONSTRUCTION MANAGEMENT
[Signature] DATE: 2/12/14
O & M
[Signature] DATE: 2-10-14

ENGINEERING APPROVAL
ENGINEERING GROUP LEADER
BRANCH APPROVAL
BRANCH HEAD

GRAPHIC SCALE
0' 40' 80'
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX
SCALE
1"=40'
SHEET 45 OF 63

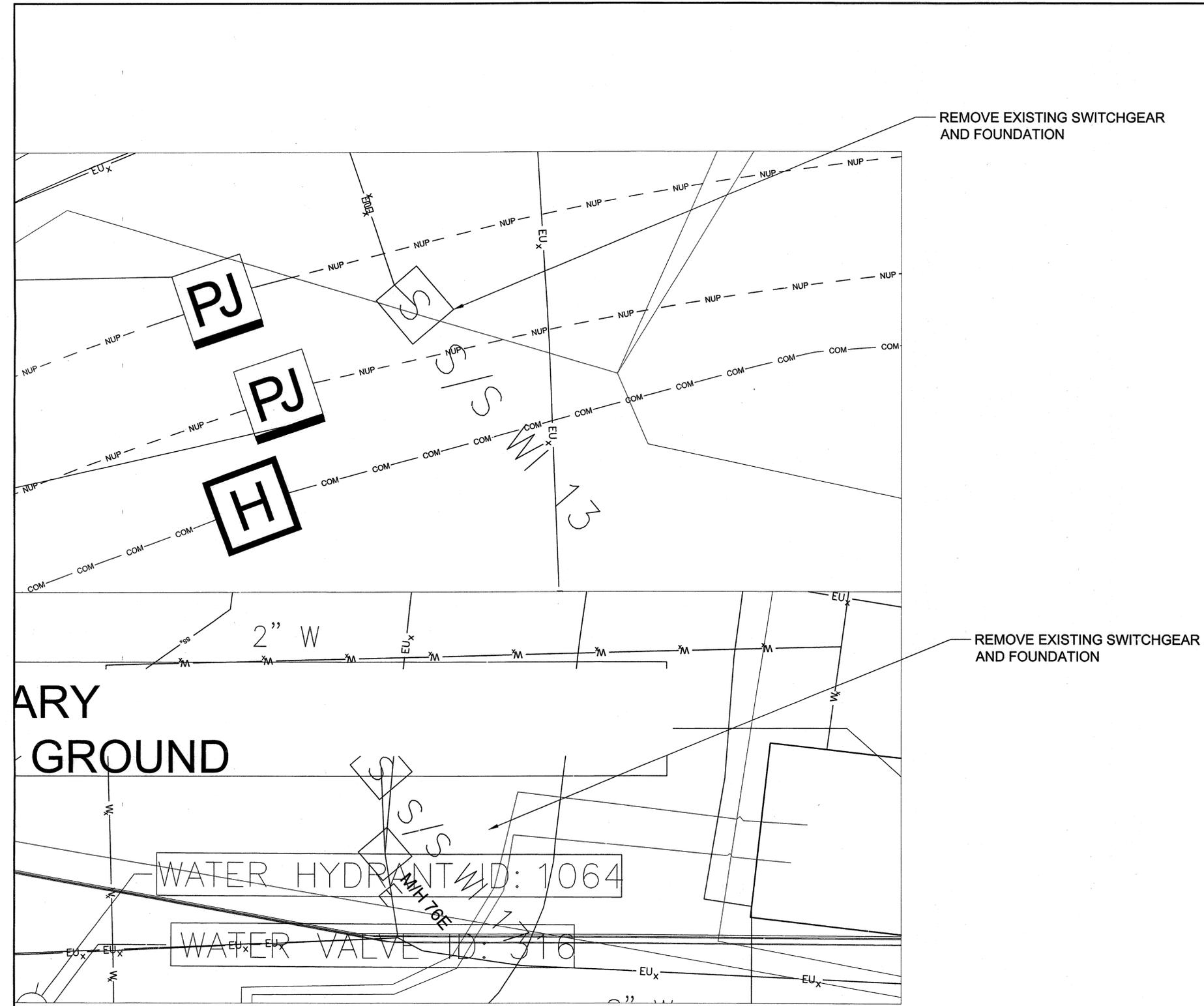
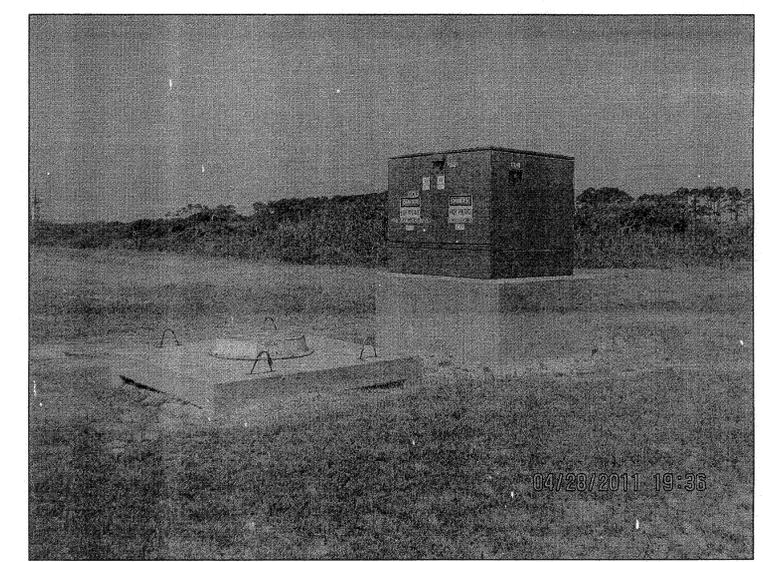
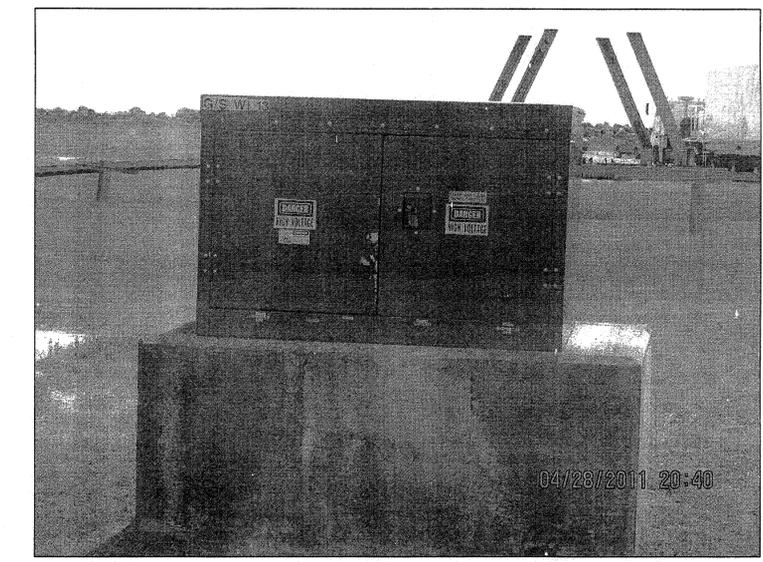
NORTH ISLAND ELECTRICAL UPGRADE
PRIMARY AND SECONDARY CABLE PLAN
PROJECT NUMBER: NASS-01080
DR. LBJ DATE: 12-31-2013
CK. FJR REVISED:
DRAWING NO. 16902



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE EXISTING SWITCHGEAR TO BE RETURNED TO THE GOVERNMENT
2. CONTRACTOR SHALL REMOVE EXISTING CONCRETE STRUCTURE AND REMOVE DEBRIS FROM THE PREMISES.
3. CONTRACTOR SHALL BACKFILL AND GRADE SITE TO MATCH EXISTING SURROUNDINGS
4. CUT ALL CABLE AND CONDUIT TO 36" BELOW GRADE AND ABANDON IN PLACE.



REMOVE EXISTING SWITCHGEAR AND FOUNDATION

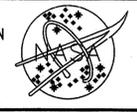
REMOVE EXISTING SWITCHGEAR AND FOUNDATION



RELEASED FOR CONSTRUCTION

PED-1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE: 2/20/14
SUBMITTED BY: [Signature]
DATE: 3/10/14
PROJECT MANAGER

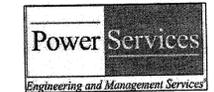
NASA SAFETY
DATE: 2/20/14
FIRE PROTECTION
DATE: 2/20/14

CONSTRUCTION MANAGEMENT
DATE: 2/19/14
O & M
DATE: 2-10-14

ENGINEERING APPROVAL
DATE:
ENGINEERING GROUP LEADER
DATE:
BRANCH APPROVAL
DATE: 4/2/14
BRANCH HEAD

GRAPHIC SCALE
0' 40' 80'
SCALE
1"=40'
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX
SHEET 46 OF 63

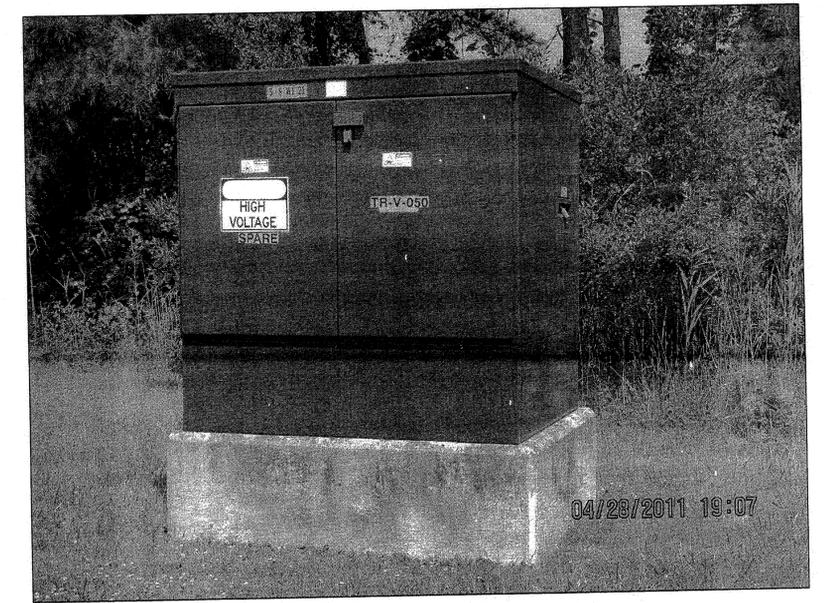
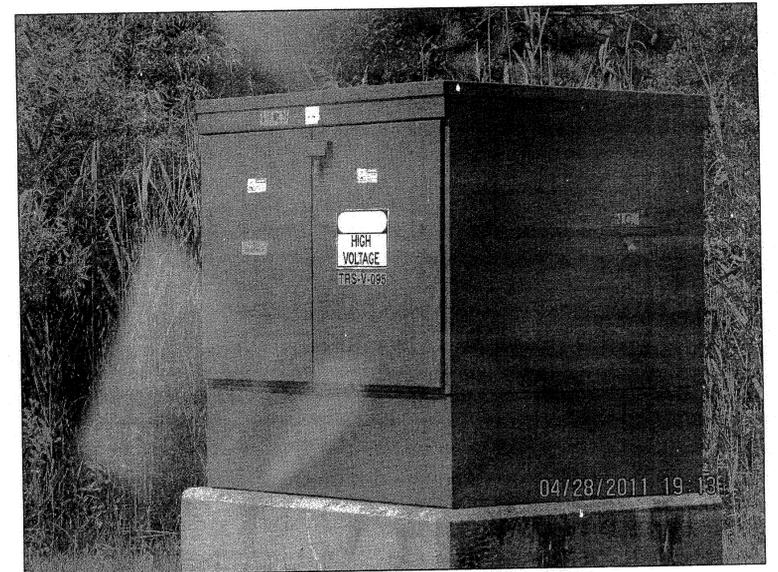
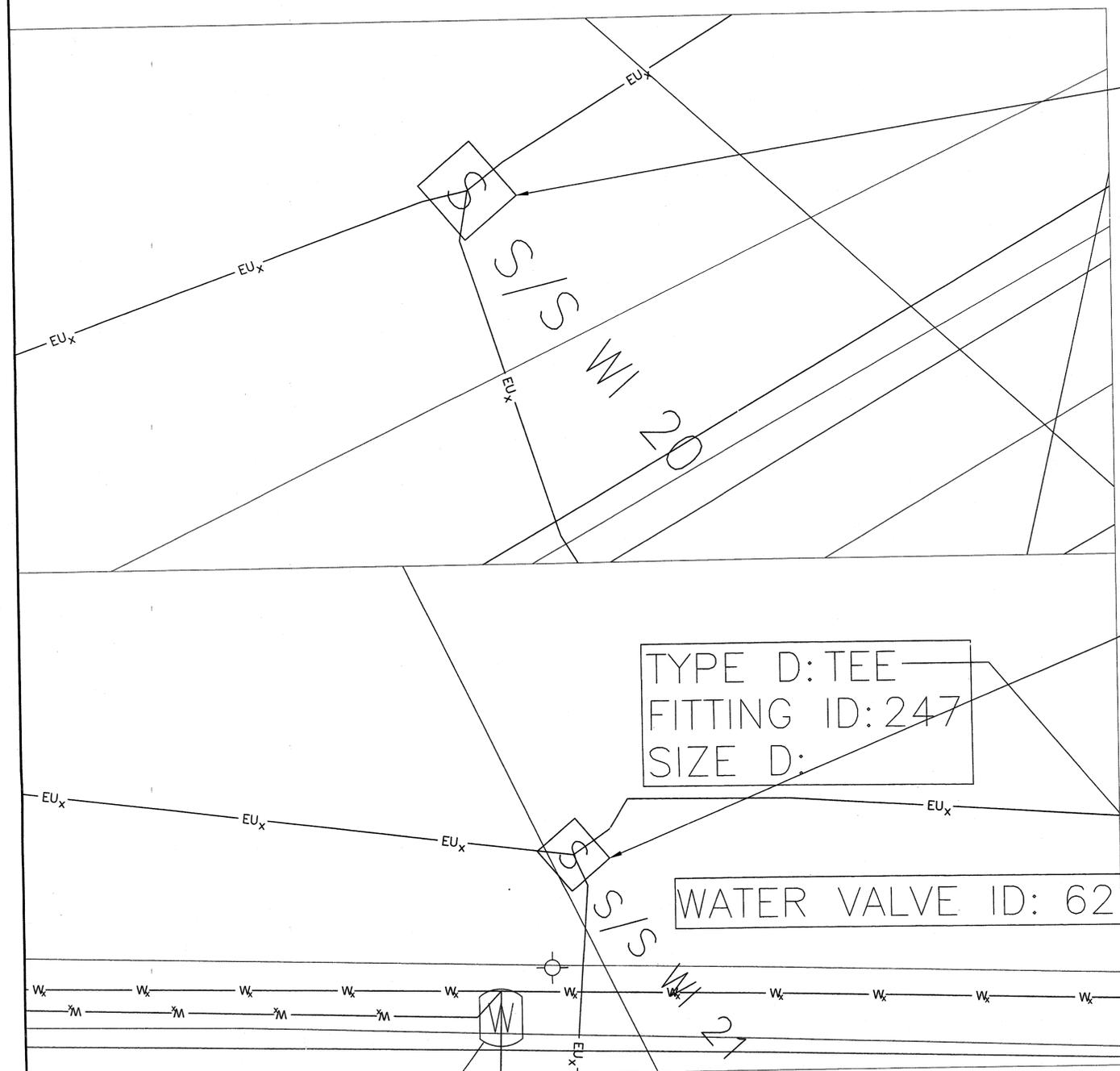
NORTH ISLAND ELECTRICAL UPGRADE
PRIMARY AND SECONDARY CABLE PLAN
PROJECT NUMBER: NASS-01080
DR. LBJ DATE: 12-31-2013
CK. FJR REVISED:
DRAWING NO. 16903



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE EXISTING SWITCHGEAR TO BE RETURNED TO THE GOVERNMENT
2. CONTRACTOR SHALL REMOVE EXISTING CONCRETE STRUCTURE AND REMOVE DEBRIS FROM THE PREMISES.
3. CONTRACTOR SHALL BACKFILL AND GRADE SITE TO MATCH EXISTING SURROUNDINGS
4. CUT ALL CABLE AND CONDUIT TO 36" BELOW GRADE AND ABANDON IN PLACE.



RELEASED FOR CONSTRUCTION PED-2

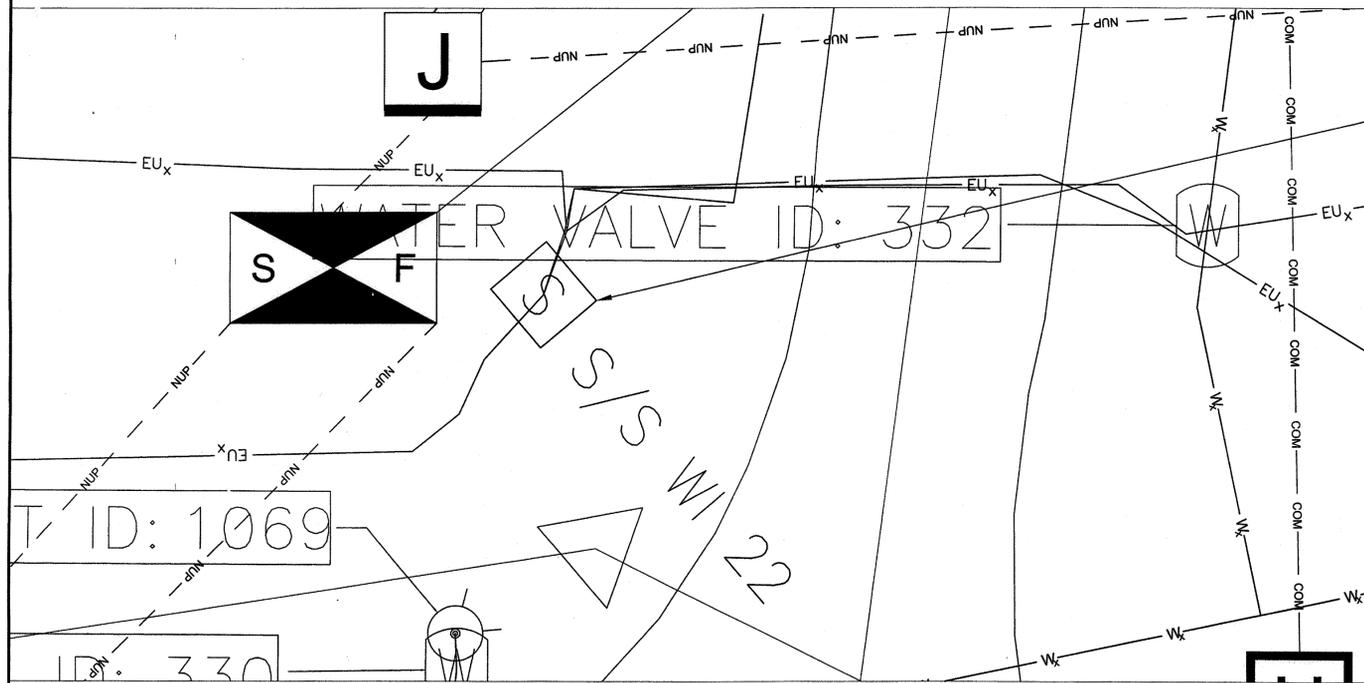
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
										0" 40" 80"	PRIMARY AND SECONDARY CABLE PLAN		
						DATE: 3/10/14	DATE: 2/10/14	DATE: 2/10/14	DATE: 2/10/14	AUTOCAD - RELEASE 2007	SCALE 1"=40'	PROJECT NUMBER: NASS-01080	DRAWING NO. 16904
						DATE: 3/10/14	DATE: 2/10/14	DATE: 2-10-14	DATE: 2/10/14	FILE NAME: XXXXXX	SHEET 47 OF 63	DR. LBJ	DATE: 12-31-2013
						PROJECT MANAGER	FIRE PROTECTION	DATE: 2-10-14	BRANCH HEAD			CK. PJR	REVISED:



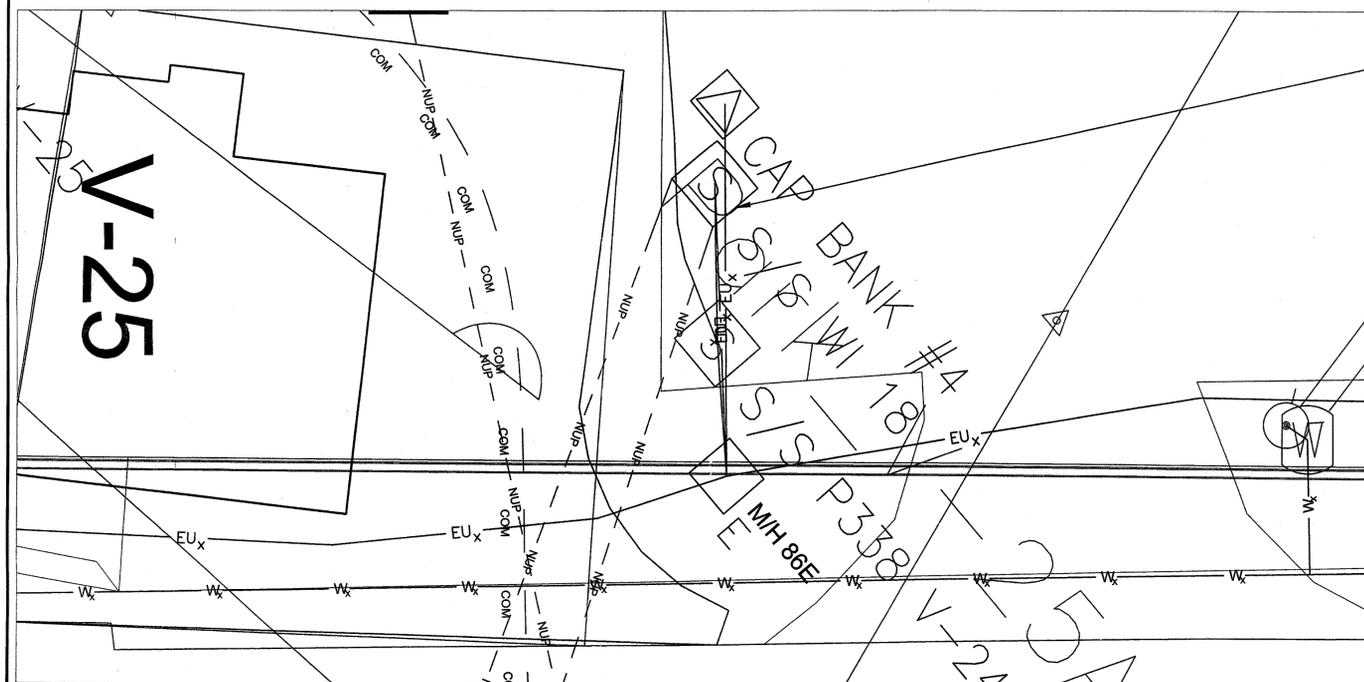
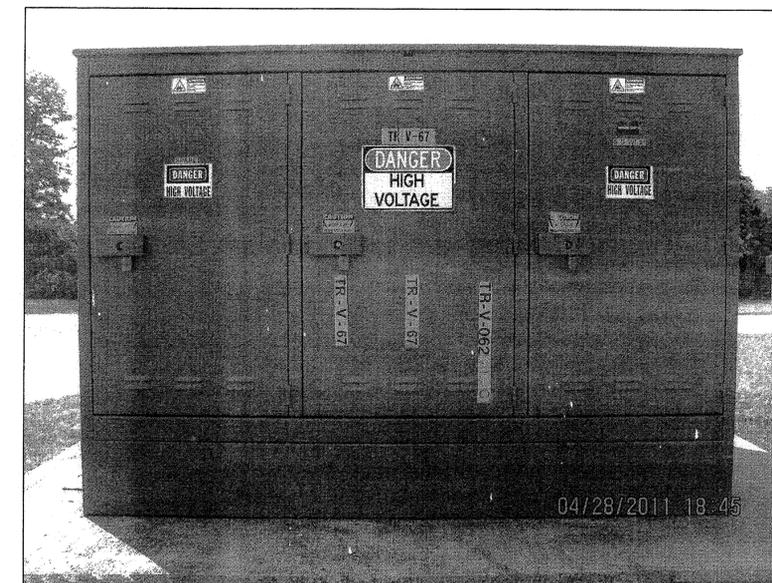
1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE EXISTING SWITCHGEAR TO BE RETURNED TO THE GOVERNMENT
2. CONTRACTOR SHALL REMOVE EXISTING CONCRETE STRUCTURE AND REMOVE DEBRIS FROM THE PREMISES.
3. CONTRACTOR SHALL BACKFILL AND GRADE SITE TO MATCH EXISTING SURROUNDINGS
4. CUT ALL CABLE AND CONDUIT TO 36" BELOW GRADE AND ABANDON IN PLACE.



REMOVE EXISTING SWITCHGEAR AND FOUNDATION



REMOVE EXISTING SWITCHGEAR AND FOUNDATION



RELEASED FOR CONSTRUCTION

PED-3

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
Wallops Flight Facility
Wallops Island, Virginia 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE: _____
SUBMITTED BY: *[Signature]* DATE: 3/10/14
PROJECT MANAGER

NASA SAFETY
[Signature] DATE: 2/21/14
FIRE PROTECTION
[Signature] DATE: 2/21/14

CONSTRUCTION MANAGEMENT
[Signature] DATE: 2/14/14
O & M
[Signature] DATE: 2-10-14

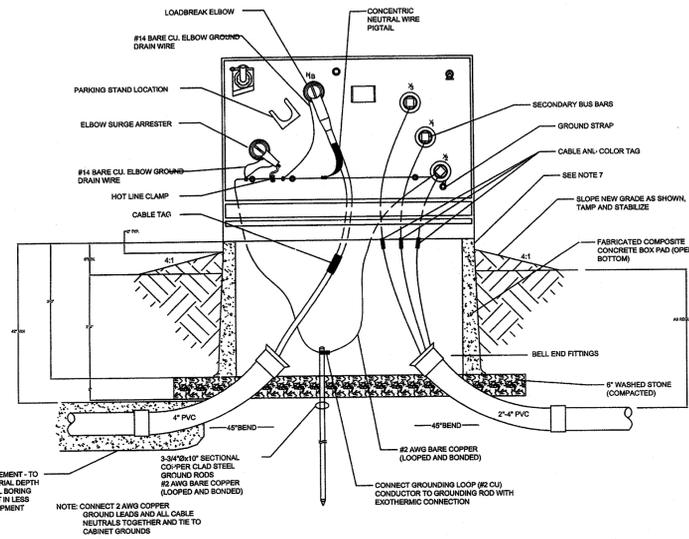
ENGINEERING APPROVAL
ENGINEERING GROUP LEADER
BRANCH APPROVAL
[Signature] DATE: 2/12/14
BRANCH HEAD

GRAPHIC SCALE
0' 40' 80'
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX

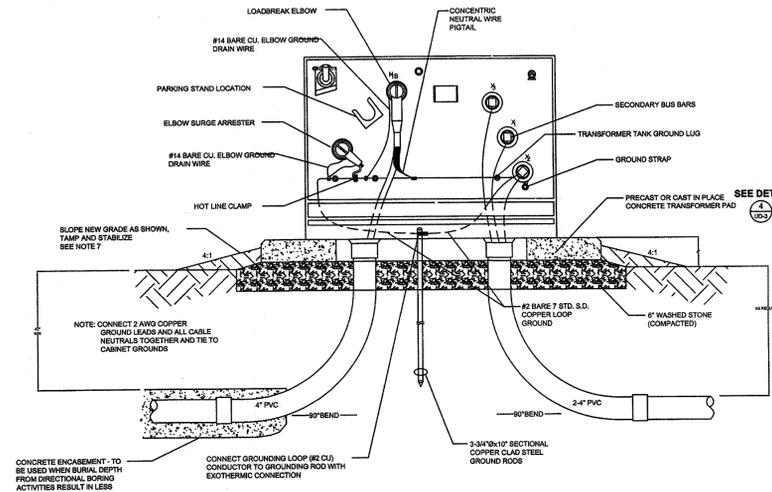
NORTH ISLAND ELECTRICAL UPGRADE
PRIMARY AND SECONDARY CABLE PLAN
PROJECT NUMBER: NASS-01080
DR. LBJ DATE: 12-31-2013
SHEET 48 OF 83
CK. PJR REVISIONS:
DRAWING NO. 16905



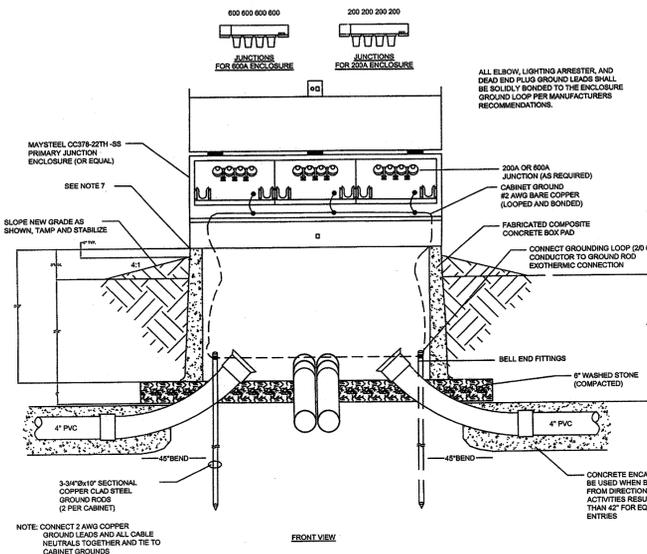
1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939



1 TYPICAL RADIAL FEED SINGLE PHASE TRANSFORMER INSTALLATION WITH PREFABRICATED COMPOSITE CONCRETE BOX PAD
 UD-2 N.T.S. (SEE NOTE 4)

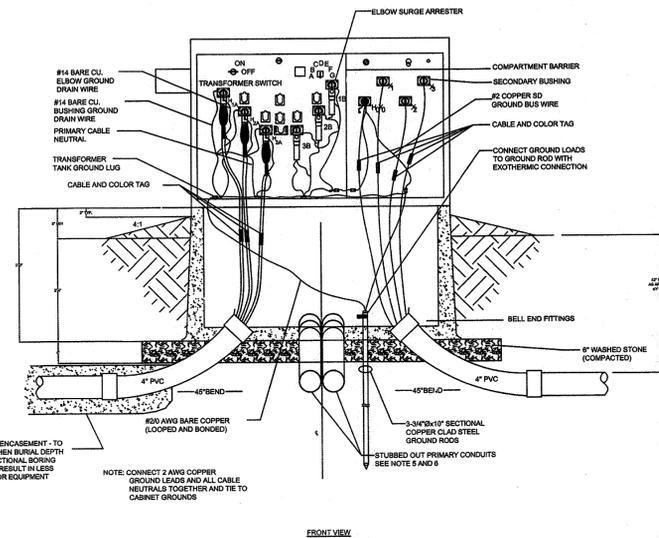


2 TYPICAL RADIAL FEED SINGLE PHASE TRANSFORMER INSTALLATION WITH PRECAST OR POURED IN PLACE TRANSFORMER PAD
 UD-2 N.T.S. (SEE NOTE 4)



3 PRIMARY JUNCTION CABINET DETAIL
 UD-2 PRIMARY CABLES & ELBOWS NOT SHOWN FOR CLARITY
 N.T.S. (SEE NOTES 2 AND 3)

800A JUNCTION CABINETS SHALL BE SUPPLIED WITH (3) 4-POINT JUNCTIONS - EACH WITH 4-800A POSITIONS
 200A JUNCTION CABINETS SHALL BE SUPPLIED WITH (2) 4-POINT JUNCTIONS - ALL 200A POSITIONS



4 THREE PHASE PAD MOUNT TRANSFORMER INSTALLATION RADIAL FEED INSTALLATION SHOWN
 UD-2 N.T.S. (SEE NOTE 4)

NOTES:
 1) SEE CONDUIT PLAN SHEETS PCP-# (INDICATES CONSTRUCTION PHASE AND SHEET NUMBER) FOR EQUIPMENT TYPE AND LOCATION.
 2) 800 AMP JUNCTION CABINETS ARE SHOWN AS PJ ON CONDUIT PLANS.
 3) 200 AMP JUNCTION CABINETS ARE SHOWN AS J ON CONDUIT PLANS.
 4) TRANSFORMERS ARE SHOWN AS T ON THE CONDUIT PLANS - SIZE AND VOLTAGE NOTED.
 5) THE BOTTOM OF NEW PAD MOUNTED EQUIPMENT OR THE TOP OF EQUIPMENT PADS SHALL BE 8" MINIMUM ABOVE EXISTING GRADE, NEAREST ROADWAY, OR AS APPROVED BY THE COTR OFFICER TO DETER WATER INFILTRATION AND FLOODING.

RELEASED FOR CONSTRUCTION

UD-2

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WALLOPS FLIGHT FACILITY
 WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER	DATE: 2/11/14
SUBMITTED BY: <i>[Signature]</i>	DATE: 2/10/14
PROJECT MANAGER	DATE: 2/11/14

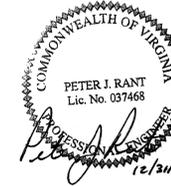
NASA SAFETY	DATE: 2/11/14
FIRE PROTECTION	DATE: 2/11/14

CONSTRUCTION MANAGEMENT	DATE: 2/14/14
DATE: 2-10-14	DATE: 2/14/14

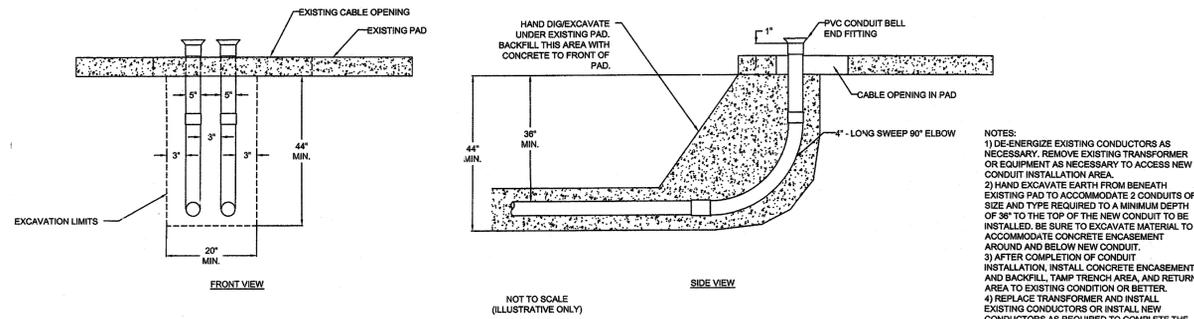
ENGINEERING APPROVAL	DATE: 2/11/14
ENGINEERING GROUP LEADER	DATE: 2/11/14
BRANCH APPROVAL	DATE: 2/11/14
BRANCH HEAD	DATE: 2/11/14

GRAPHIC SCALE	SCALE
AUTOCAD - RELEASE 2007	FILE NAME: XXXXXX
SHEET 60 OF 63	

NORTH ISLAND ELECTRICAL UPGRADES UNDERGROUND DETAILS	
PROJECT NUMBER: NASS-01080	DRAWING NO. 16907
DR. LBJ DATE: 12/31/2013	REVISIONS:
CK. FJR	

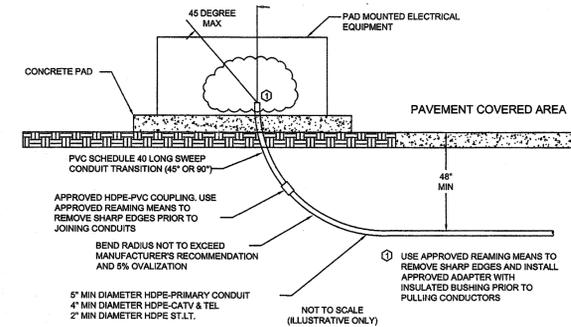


1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939



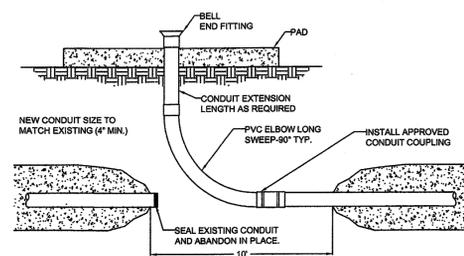
1 UD-3 TIE NEW PRIMARY DUCTBANK TO EXISTING TRANSFORMER OR EQUIPMENT PAD

NOTES:
1) DE-ENERGIZE EXISTING CONDUCTORS AS NECESSARY. REMOVE EXISTING TRANSFORMER OR EQUIPMENT AS NECESSARY TO ACCESS NEW CONDUIT INSTALLATION AREA.
2) HAND EXCAVATE EARTH FROM BENEATH EXISTING PAD TO ACCOMMODATE 2 CONDUITS OF SIZE AND TYPE REQUIRED TO A MINIMUM DEPTH OF 36" TO THE TOP OF THE NEW CONDUIT TO BE INSTALLED. BE SURE TO EXCAVATE MATERIAL TO ACCOMMODATE CONCRETE ENCASEMENT AROUND AND BELOW NEW CONDUIT.
3) AFTER COMPLETION OF CONDUIT INSTALLATION, INSTALL CONCRETE ENCASEMENT AND BACKFILL, TAMP TRENCH AREA, AND RETURN AREA TO EXISTING CONDITION OR BETTER.
4) REPLACE TRANSFORMER AND INSTALL EXISTING CONDUCTORS OR INSTALL NEW CONDUCTORS AS REQUIRED TO COMPLETE THE WORK INSTALLATION.



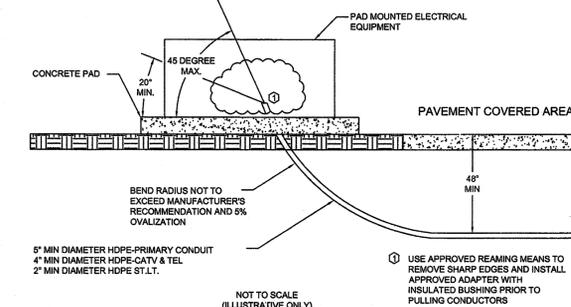
3 UD-3 PAVEMENT COVERED AREA TO ELECTRICAL EQUIPMENT TRANSITION - RIGID CONDUIT (45° - 90°)

NOTES:
1) USE APPROVED REAMING MEANS TO REMOVE SHARP EDGES AND INSTALL APPROVED ADAPTER WITH INSULATED BUSHING PRIOR TO PULLING CONDUCTORS.
2) BEND RADIUS NOT TO EXCEED MANUFACTURERS RECOMMENDATION AND 5% OVALIZATION.
3) 5" MIN DIAMETER HDPE-PRIMARY CONDUIT
4" MIN DIAMETER HDPE-CATV & TEL
2" MIN DIAMETER HDPE ST.LT.



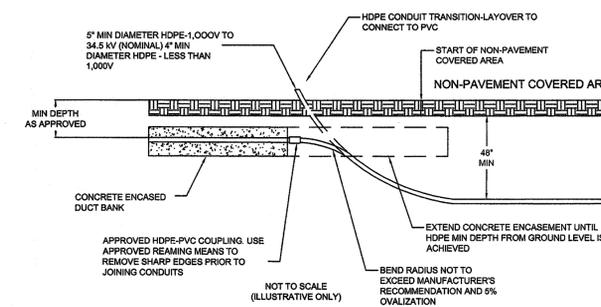
2 UD-3 INTERCEPT OF EXISTING CONCRETE ENCASED DUCTBANK

NOTES:
1) DE-ENERGIZE, GROUND AND REMOVE EXISTING CONDUCTORS FROM CONDUIT RUN TO BE INTERCEPTED.
2) EXCAVATE AND EXPOSE EXISTING CONCRETE ENCASED DUCTBANK.
3) CAREFULLY REMOVE 1' (OR LENGTH AS REQUIRED) OF CONCRETE ENCASEMENT AROUND DUCT.
4) CUT OUT A SECTION OF EXISTING CONDUIT LONG ENOUGH FOR THE INSTALLATION OF NEW ELBOWS AND CONDUIT TO BE EXTENDED TO NEW EQUIPMENT OR LOCATIONS.
5) INSTALL NEW CONDUIT AS NECESSARY FOR NEW LOCATION, ATTACHING NEW CONDUIT TO EXISTING CONDUIT WITH APPROVED CONNECTORS. NEW CONDUIT SHOULD MATCH EXISTING CONDUIT IN SIZE.
6) INSTALL CONCRETE BACKFILL FOR ENCASEMENT AROUND NEW CONDUIT SECTION.
7) OLD CONDUIT IS TO BE ABANDONED. SEAL CONDUIT ENDS AND BACKFILL AND TAMP EXCAVATION. RETURN TO PRE-EXISTING CONDITION.
8) CLEAN OUT EXISTING AND NEW CONDUIT AND INSTALL FULL LINES.



4 UD-3 PAVEMENT COVERED AREA TO ELECTRICAL EQUIPMENT TRANSITION - HDPE CONDUIT (20° - 45°)

NOTES:
1) USE APPROVED REAMING MEANS TO REMOVE SHARP EDGES AND INSTALL APPROVED ADAPTER WITH INSULATED BUSHING PRIOR TO PULLING CONDUCTORS.
2) BEND RADIUS NOT TO EXCEED MANUFACTURERS RECOMMENDATION AND 5% OVALIZATION.
3) 5" MIN DIAMETER HDPE-PRIMARY CONDUIT
4" MIN DIAMETER HDPE-CATV & TEL
2" MIN DIAMETER HDPE ST.LT.



5 UD-3 HDPE-TO-PVC NON-PAVEMENT COVERED AREA CONCRETE ENCASED DUCTBANK TRANSITION

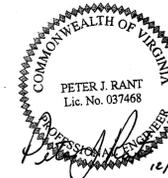
DIRECTIONAL BORING NOTES:
1) APPROVED MARKERS SHALL BE INSTALLED AT EACH END OF DIRECTIONAL BORES WHERE A TRANSITION IS MADE TO THE CONCRETE ENCASED DUCT BANK INSTALLATION.
2) ALL DIRECTIONAL BORE LOCATIONS SHALL BE APPROVED BY THE ROICC OFFICE AND DOCUMENTED ON THE "AS-BUILT" PLANS FOR THE PROJECT.
3) THESE NOTES SHALL APPLY TO ALL DIRECTIONAL BORING DETAILS IN THIS PLAN SET.

RELEASED FOR CONSTRUCTION UD-3

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADES UNDERGROUND DETAILS				
					DATE: 3/20/14	DATE: 2/21/14	DATE: 2/14/14	DATE: 2/21/14		PROJECT NUMBER: NASS-01080	DR. LBJ	DATE: 12/31/2013	DRAWING NO. 16908	
					DATE: 3/10/2014	DATE: 2/21/14	DATE: 2-10-14	DATE: 2/21/14		SCALE	PROJECT NUMBER: NASS-01080	DR. LBJ	DATE: 12/31/2013	DRAWING NO. 16908
										AUTOCAD - RELEASE 2007	CK. FJR	REVISED:		
										FILE NAME: XXXXXX				
										SHEET 51 OF 63				



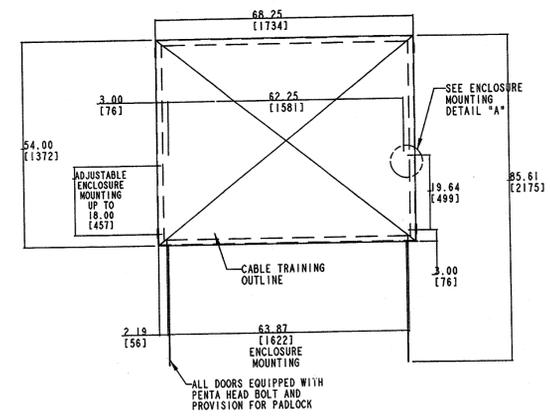
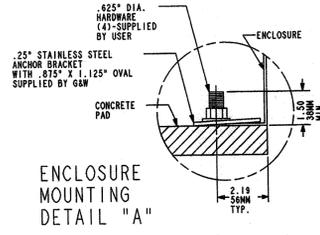
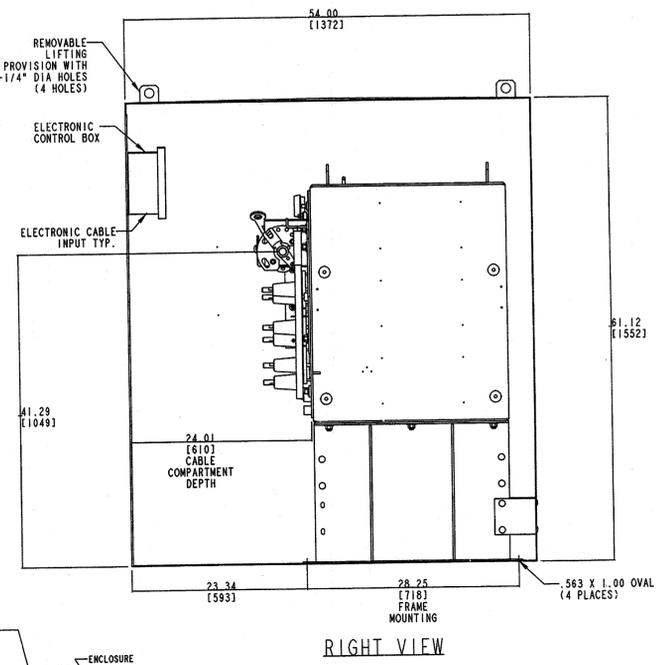
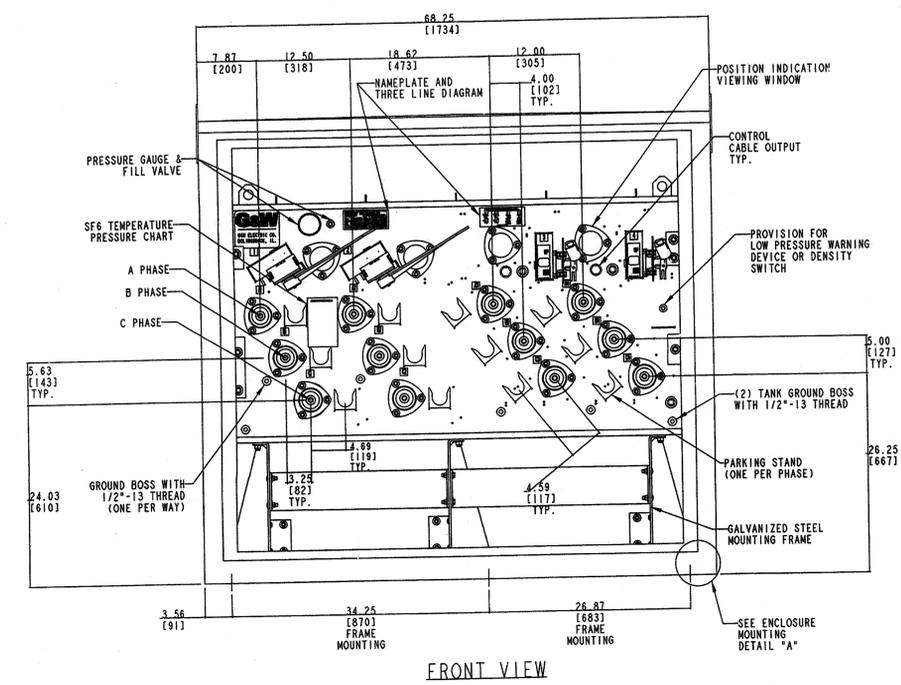
1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

TYPICAL SWITCHGEAR EQUIPMENT NOTES

1. 15.5KV, 110KV BIL
2. 630A CONTINUOUS LOAD BREAK RATING
3. 12.5KA SYMMETRICAL FAULT RATING
4. 304 STAINLESS STEEL TANK
5. 304 STAINLESS STEEL ENCLOSURE
6. MUNSELL GREEN 7GY3.29/1.5

**SWITCHGEAR G/S WI 16A AND 16B
ADDITIONAL EQUIPMENT NOTES**

1. 630A VOLTAGE SENSING BUSINGS ON WAYS 1 AND 2
2. ONE INTERNAL PT USED TO SUPPLY POWER TO THE CONTROLS
3. SEL 451-5
4. SEL 2725 ETHERNET SWITCH
5. NEMA 6P ENCLOSURE WITH WINDOW
6. VSAC BOARD
7. 24V DC BATTERY BACKUP IN SEPARATE NEMA 6P JUNCTION BOX
8. 400W POWER SUPPLY
9. TWO MOTOR CONTROL BOARDS
10. TWO MOTOR OPERATORS



NOTES:

1. ALL SWITCHED WAYS EQUIPPED WITH INTERNAL SPRING OPERATORS AND EXTERNAL PROVISIONS FOR PADLOCKING IN ALL POSITIONS.
2. 1/4" MILD STEEL TANK, WELDED CONSTRUCTION. PAINTED ASA TO LIGHT GRAY. GALVANIZED STEEL ENCLOSURE FINISHED PADMOUNT GREEN MUNSELL 701-3.29/1.5.
3. SWITCH ELECTRICAL RATINGS MAY BE REDUCED BY THE CHOICE OF ENTRANCES.
4. ENCLOSURE IS DESIGNED PER APPLICABLE SECTIONS OF ANSI/IEEE C37.72 AND ANSI C57.12.28. DRAWING IS TYPICAL AND SHOWS OVERALL DIMENSIONS ONLY. CONSTRUCTION DETAILS MAY VARY FROM THOSE DEPICTED.

OPTIONS:

-- SWITCH IS EQUIPPED WITH 30-600 AMP ELECTRONICS ON WAYS 3, 4.

ENTRANCES	
WAY 1	15.5KV 630A 110KV BIL APPARATUS BUSHING **
WAY 2	15.5KV 630A 110KV BIL APPARATUS BUSHING **
WAY 3	15.5KV 630A 110KV BIL APPARATUS BUSHING **
WAY 4	15.5KV 630A 110KV BIL APPARATUS BUSHING **
WAY 5	NOT APPLICABLE
WAY 6	NOT APPLICABLE
WAY 7	NOT APPLICABLE

** ELBOWS AND INSERTS ARE PROVIDED BY OTHERS AND MAY HAVE REDUCED ELECTRICAL RATINGS.

SWITCH ELECTRICAL INFORMATION
SEE NOTES FOR LIMITATIONS

	SWITCHED WAYS	PROTECTED WAYS
MAXIMUM DESIGN VOLTAGE	15.5 KV	15.5 KV
IMPULSE LEVEL (50IL)	110 KV	110 KV
AC 1 MIN WITHSTAND	34 KV	34 KV
DC 15 MIN WITHSTAND	53 KV	53 KV
CONTINUOUS CURRENT	630 AMP	630 AMP
INTERRUPTING CURRENT	630 AMP	12.5 KA SYM
MOMENTARY CURRENT RMS ASYM	40 KA	
MAKING CURRENT RMS ASYM	40 KA	
1 SEC. RATING RMS SYM	25 KA	

THREE LINE DIAGRAM
ORIENTATION AS SEEN FROM OPERATOR SIDE
WEIGHT WITH GAS APPROX. 2100 LBS / 955 KG
GAS REQUIRED APPROX. 13 LBS / 6 KG

1 PRIMARY GAS SWITCH DETAIL
UD-5 PRIMARY CABLES & ELBOWS NOT SHOWN FOR CLARITY

RELEASED FOR CONSTRUCTION

UD-5

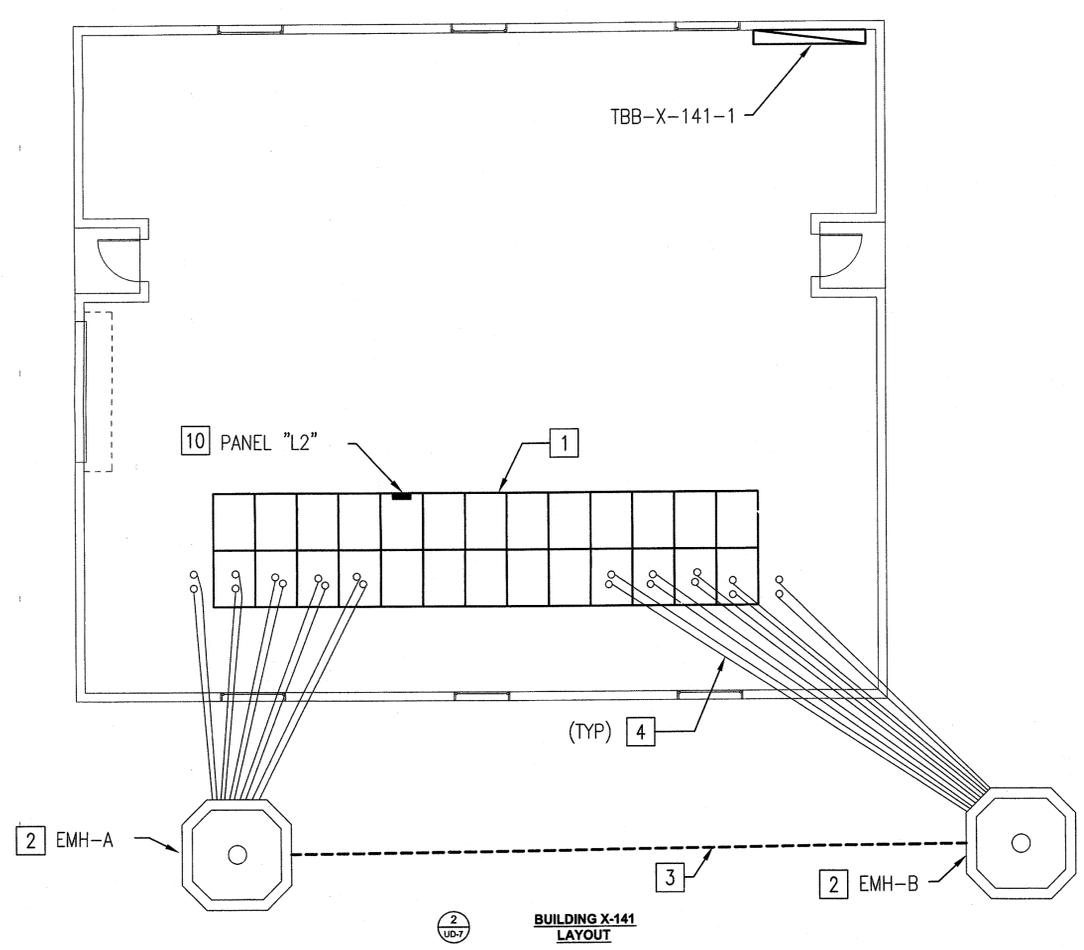
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADES		
											UNDERGROUND DETAILS		
												PROJECT NUMBER: NASS-01080	DRAWING NO. 16910
						SUBMITTED BY	FIRE PROTECTION	O & M	ENGINEERING GROUP LEADER	AUTOCAD - RELEASE 2007	SCALE	PROJECT NUMBER: NASS-01080	DRAWING NO. 16910
						PROJECT MANAGER			BRANCH APPROVAL	FILE NAME: XXXXXX	SHEET 83 OF 83	DR. LBJ	DATE: 12/31/2013
									BRANCH HEAD			CK. PJR	REVISED:



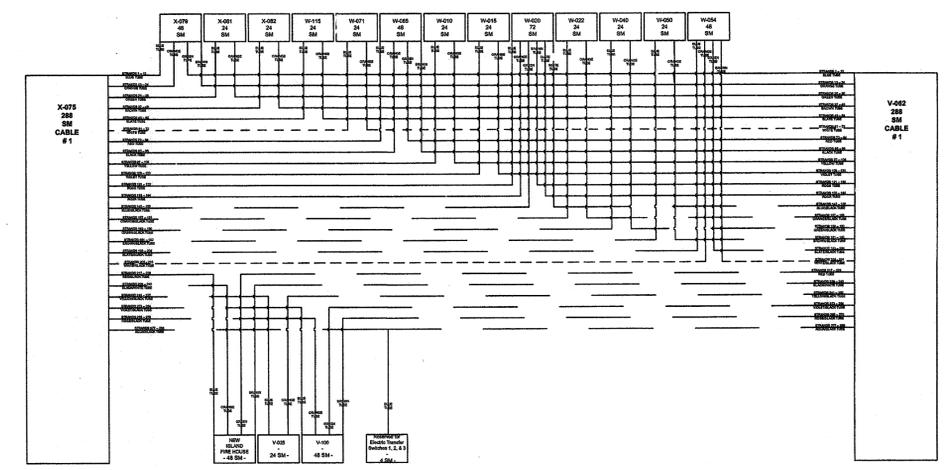
FDR F-8 RELAY ONLY	FDR F-4 SOUTH LOOP (EAST) BYPASS	MAIN X-141-11-NASA	TE CONTROL	FDR F-18 RELAY ONLY	FDR F-16 RELAY ONLY	FDR F-6 SOUTH LOOP (WEST) X-85	TE CONTROL	MAIN X-141-12-NHWY	FDR F-1 RELAY ONLY	FDR F-5 NORTH LOOP V-24
FDR F-12 RELAY ONLY	FDR F-10 BRIDGE XFMR	TE T1 (NWSA)	TE CONTROL	FDR F-14 RELAY ONLY	FDR F-2 NORTH LOOP W-111	TE T2 (NHWY)	TE CONTROL	FDR F-3 DOX	FDR F-7 V-16	FDR F-9 RELAY ONLY
1	2	3	4	5	6	7	8	9	10	11

- NOTES:
1. DRAWINGS THIS SHEET PROVIDED BY NASA WALLOPS ISLAND DRAWING NUMBERS 15728 AND 15730.
 2. FEEDER F-12 TO BE NORTHEAST FEEDER.
 3. FEEDER F-14 TO BE NORTHWEST FEEDER.
 4. CONTRACTOR TO VERIFY WITH NASA WALLOPS ISLAND CONSTRUCTION MANAGER BEFORE CONNECTION OF CIRCUIT EXITS TO SWITCHGEAR
 5. FIBER OPTIC LAYOUT SHOWN BELOW PROVIDED BY WALLOPS ISLAND STAFF.

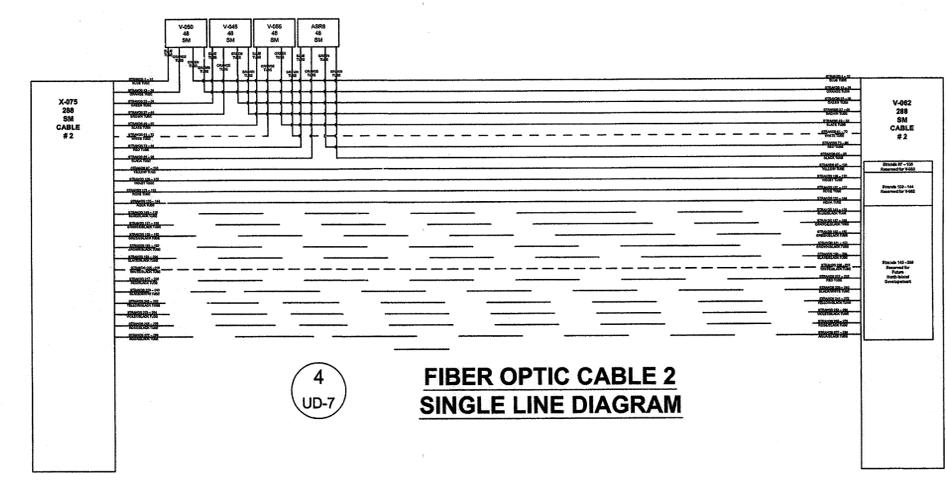
1 UD-7 BUILDING X-141
EXISTING SWITCHGEAR LINEUP



2 UD-7 BUILDING X-141
LAYOUT



3 UD-7 FIBER OPTIC CABLE 1
SINGLE LINE DIAGRAM



4 UD-7 FIBER OPTIC CABLE 2
SINGLE LINE DIAGRAM

RELEASED FOR CONSTRUCTION UD-6

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
DATE :
SUBMITTED BY
DATE : 3/10/14
PROJECT MANAGER

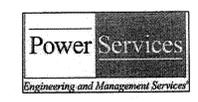
NASA SAFETY
DATE : 2/2/14
FIRE PROTECTION
DATE : 2/2/14

CONSTRUCTION MANAGEMENT
DATE : 2/12/14
O & M
DATE : 2-10-14

ENGINEERING APPROVAL
DATE :
ENGINEERING GROUP LEADER
DATE : 2/2/14
BRANCH APPROVAL
DATE : 2/2/14
BRANCH HEAD

GRAPHIC SCALE
AUTOCAD - RELEASE 2007
FILE NAME: XXXXXX
SCALE
SHEET 54 OF 63

NORTH ISLAND ELECTRICAL UPGRADES
UNDERGROUND DETAILS
PROJECT NUMBER: NASS-01080
DR. LBJ DATE: 12/31/2013
CK. FJR REVISIONS:
DRAWING NO. 16911



1616 E. Millbrook Rd. Raleigh, NC 27609
Tel: 919-256-5900 Fax: 919-256-5939

Sheet No.	Switchgear No.	Enclosure Type	Voltage Class	Manufacturer	Model No.	Ampacity	Short Circuit	BIL	Fuse Size	Furnished
PCP-1	G/S X-075	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Contractor
	G/S X-079									EXISTING - TO BE REUSED
	G/S MET									EXISTING - TO BE REUSED
PCP-3	G/S WI 13	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Contractor
	G/S X-065									EXISTING - TO BE REUSED
	G/S WI 14									EXISTING - TO BE REUSED
PCP-4	G/S W-040	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Contractor
	G/S W-055	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Contractor
PCP-5	G/S WI 16	Stainless Steel	15KV	G&W	SPRAM44-376-40PI	630	12.5KA	110		Government
	G/S WI 16A	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Contractor
	G/S WI 16B	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Contractor
PCP-8	G/S WI 17	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Contractor
	G/S WI 18									TO BE REMOVED
	G/S WI 18	Stainless Steel	15KV	G&W	SPRAM44-376-40PI	630	12.5KA	110		Government
PCP-11	G/S WI 20	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Government
	G/S WI 21									TO BE REMOVED
	G/S WI 21	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Government
PCP-15	G/S WI 22	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Government
	G/S V-067	Stainless Steel	15KV	G&W	RPF142-376-12-9F	630	12.5KA	110		Government

Sheet No.	Transformer No.	Enclosure Type	High Side Voltage	Low Side Voltage	Manufacturer	Type	Size	BIL	Alternate Manufacturer	Furnished
PCP-3	TR W-010	Stainless Steel	12.47/7.2Y kv	480/277Δ	Cooper	3 PHASE	112.5 KVA	95	ABB, ERMCO	Contractor
PCP-4	TR W-040	Stainless Steel	12.47/7.2Y kv	480/277Δ	Cooper	3 PHASE	112.5 KVA	95	ABB, ERMCO	Contractor

Sheet No.	Junction No.	Enclosure Type	Voltage Class	Manufacturer	Model No.	Ampacity	No. Of Positions	No. of Lightning Arresters (8.4 MCOV)	No. of Deadend Plugs	Furnished
PCP-1	NE-J1; NW-J1	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-1	NE-J2; NW-J2	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-1	NE-J3; NW-J3	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-2	NE-J4; NW-J4	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-2	NE-J5; NW-J5	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-2	NE-J6; NW-J6	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-2	NE-J7; NW-J7	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-3	NE-J8; NW-J8	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-3	NE-J9; NW-J9	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-3	J-065	Stainless Steel	15KV	Maysteel	C378-22TH	200	4-WAY	3	3	Contractor
PCP-4	NE-J10; NW-J10	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-4	NE-J11; NW-J11	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-4	NE-J12; NW-J12	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-5	NE-J13; NW-J13	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-5	NE-J14; NW-J14	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-6	NE-J15; NW-J15	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-6	NE-J16; NW-J16	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-7	NE-J17; NW-J17	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-7	NE-J18; NW-J18	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-8	NE-J19; NW-J19	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-8	NE-J20; NW-J20	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-8	NE-J21; NW-J21	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-8	J-18	Stainless Steel	15KV	Maysteel	C378-22TH	200	4-WAY	3	3	Contractor
PCP-9	NE-J22; NW-J22	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-9	NE-J23; NW-J23	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-10	NE-J24; NW-J24	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-10	NE-J25; NW-J25	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-10	NE-J26; NW-J26	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-11	NE-J27; NW-J27	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-11	NE-J28; NW-J28	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-12	NE-J29; NW-J29	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-13	NE-J30; NW-J30	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-13	NE-J31; NW-J31	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-13	NE-J32; NW-J32	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-14	NE-J33; NW-J33	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-14	NE-J34; NW-J34	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-15	NE-J35; NW-J35	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3		Contractor
PCP-15	NE-J36; NW-J36	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-15	NE-J37; NW-J37	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-15	J-22	Stainless Steel	15KV	Maysteel	C378-22TH	200	4-WAY	3	3	Contractor
PCP-16	NE-J38; NW-J38	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-16	NE-J39; NW-J39	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-17	NE-J40; NW-J40	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor
PCP-17	NE-J41; NW-J41	Stainless Steel	15KV	Maysteel	C378-22TH	600	4-WAY	3	3	Contractor

ELECTRICAL EQUIPMENT SCHEDULE

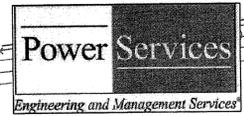
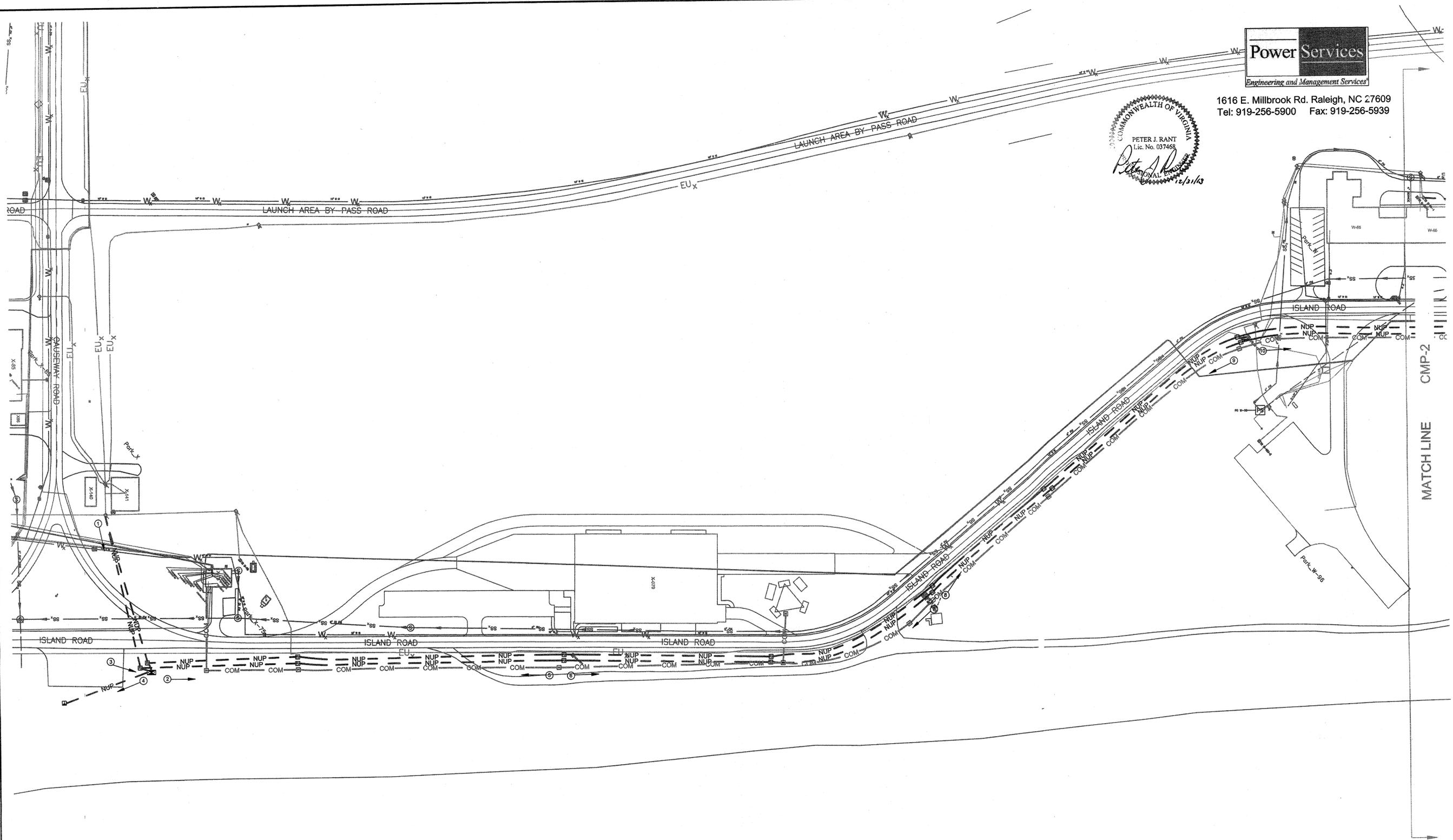
Floorplan	Building #	Building Name	LAN Closet Room #	Start Count	End Count	T-Off Cable Size
X	288 SM #1	X-079	HIFF	114	1	24
	288 SM #1	X-081	Met Tower	100	25	36
	288 SM #1	X-082	Met Tower (Pax River)	100	37	48
X	288 SM #1	W-115	Camera Platform	100	49	60
	288 SM #1	W-071	Sewage Pump Station	100	61	72
X	288 SM #1	W-065	Rocket Buildup	102	73	96
X	288 SM #1	W-010	Launch Term Bldg	100	97	108
	288 SM #1	W-015	Assembly Shop	104	109	120
X	288 SM #1	W-20	Blockhouse # 3	102	121	156
X	288 SM #1	W-22	Range Support Building	100	157	168
X	288 SM #1	W-40	Assembly Shop	102	169	180
X	288 SM #1	W-50	Launch Term Bldg	100	181	192
X	288 SM #1	W-54	Mid Island Comm Bldg.	101	193	216
	288 SM #1		New Island Fire House		217	240
	288 SM #1	V-25	Contractor Support Bldg.	107	241	252
	288 SM #1	V-100	Camera Station # 15	100	253	276
	288 SM #1	Various	Electric Transfer Switch 1, 2 & 3		277	288
	288 SM #2	V-50	Range Support Building	106	1	24
	288 SM #2	V-45	Range Support Building	103	25	48
	288 SM #2	V-55	Range Support Building	101	49	72
	288 SM #2	ASR8	ASR8 Radar Hut	100?	73	96
	288 SM #2	V-080	Rocket Motor Storage	?	97	108
	288 SM #2	Z-62	North Island Terminal	n/a	109	144
	288 SM #2	Future	North Island Development		145	288
						288

COMMUNICATIONS - FIBER OPTIC SPLICE SCHEDULE

RELEASED FOR CONSTRUCTION

UD-7

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADES EQUIPMENT SCHEDULE
						DATE: 3/10/14	DATE: 2/2/14	DATE: 2/14/14	DATE: 2/12/14		
						PROJECT MANAGER	FIRE PROTECTION	0 & M	BRANCH APPROVAL	AUTOCAD - RELEASE 2007	PROJECT NUMBER: NASS-01080 DRAWING NO. 16912

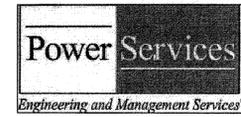


1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

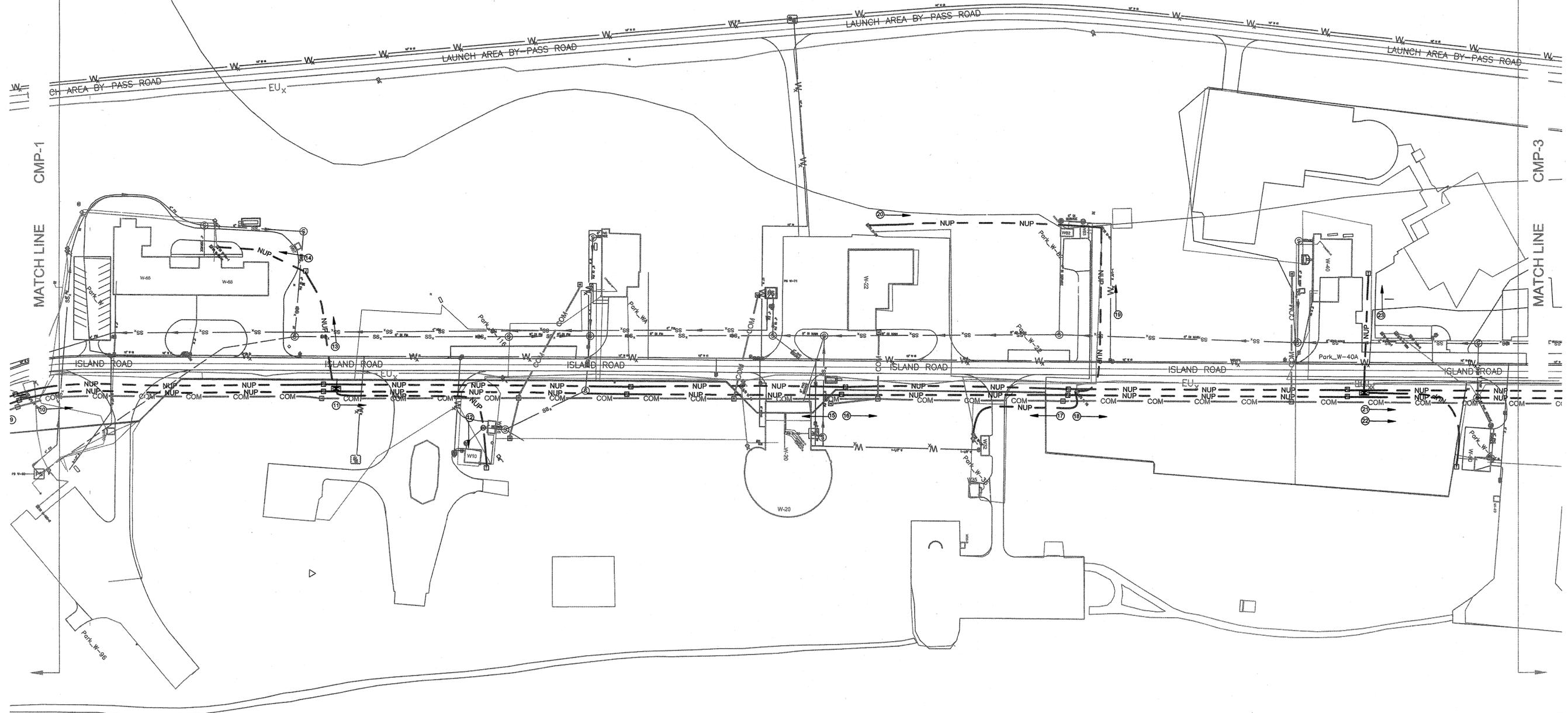


RELEASED FOR CONSTRUCTION CMP-1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER DATE:	NASA SAFETY DATE: 2/21/14	CONSTRUCTION MANAGEMENT DATE: 2/12/14	ENGINEERING APPROVAL ENGINEERING GROUP LEADER DATE:	GRAPHIC SCALE 	NORTH ISLAND ELECTRICAL UPGRADE CABLE PULLING MAP	
						SUBMITTED BY DATE: 2/10/14	FIRE PROTECTION DATE: 2/21/14	O & M DATE: 2-10-14	BRANCH APPROVAL DATE: 2/12/14	AUTOCAD - RELEASE 2007 FILE NAME: XXXXXXX	SCALE SHEET 56 OF 63	PROJECT NUMBER: NASS-0180 DR. LBJ DATE: 12-31-2013 CK. PJR REVISED:

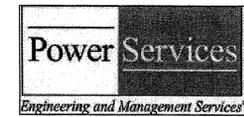


1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

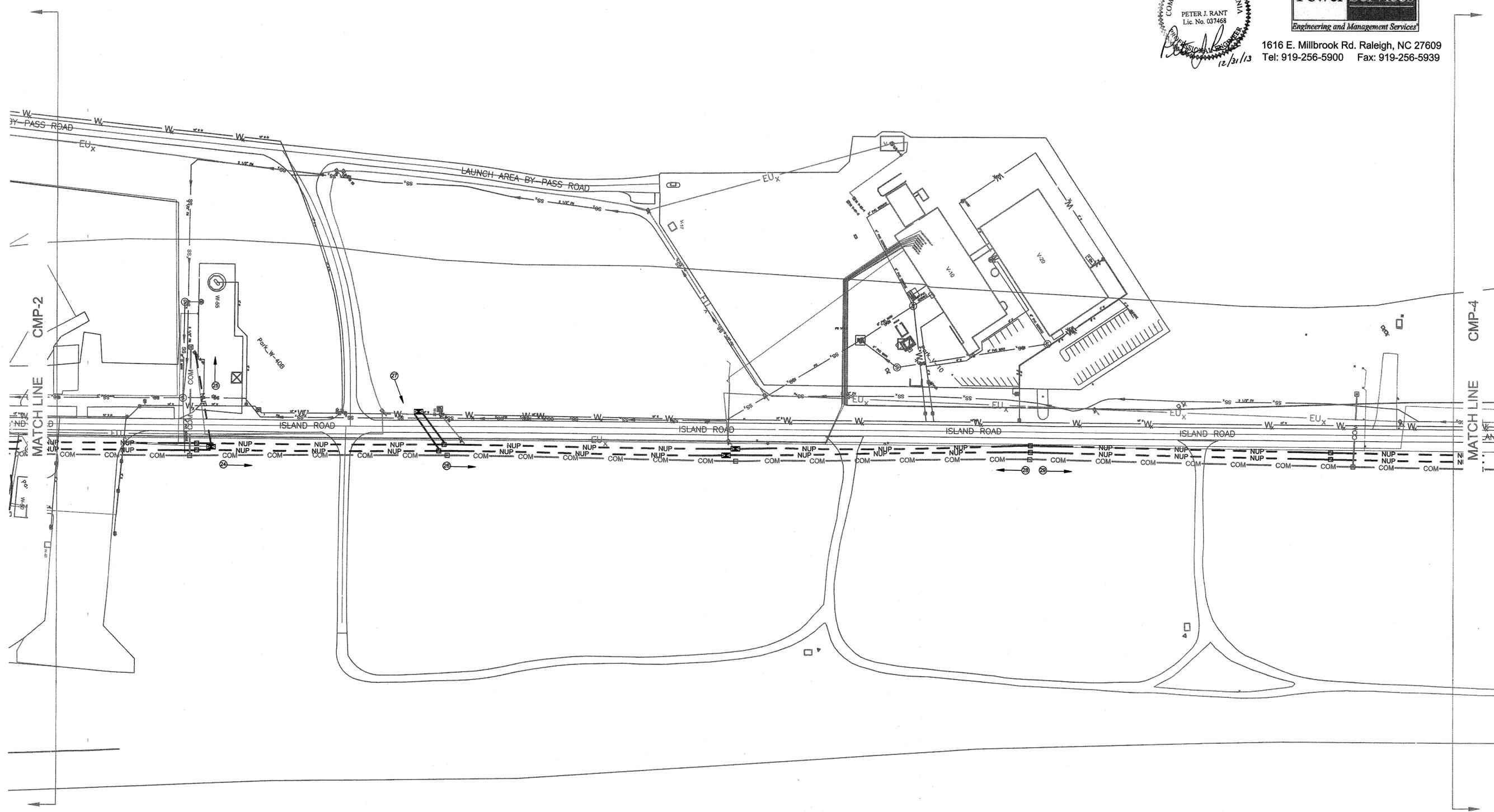


RELEASED FOR CONSTRUCTION CMP-2

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
										0" 40" 80"	CABLE PULLING MAP	
										AUTOCAD - RELEASE 2007	PROJECT NUMBER: NASS-0180	DRAWING NO.
										FILE NAME: XXXXXX	DR. LBJ DATE: 12-31-2013	16914
										SHEET 57 OF 63	CK. PJR	REVISED:



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939



RELEASED FOR CONSTRUCTION CMP-3

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WALLOPS FLIGHT FACILITY
 WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 DATE :
 SUBMITTED BY
 DATE : 2/10/14
 PROJECT MANAGER

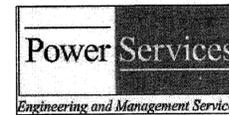
NASA SAFETY
 DATE : 2/21/14
 FIRE PROTECTION
 DATE : 2/21/14

CONSTRUCTION MANAGEMENT
 DATE : 2/12/14
 O & M
 DATE : 2-10-14

ENGINEERING APPROVAL
 ENGINEERING GROUP LEADER
 DATE :
 BRANCH APPROVAL
 DATE : 2/12/14
 BRANCH HEAD

GRAPHIC SCALE
 0' 40' 80'
 AUTOCAD - RELEASE 2007
 FILE NAME: XXXXXX
 SCALE
 SHEET 58 OF 63

NORTH ISLAND ELECTRICAL UPGRADE
 CABLE PULLING MAP
 PROJECT NUMBER: NASS-0180
 DRAWING NO. 16915
 DR. LBJ DATE: 12-31-2013
 CK. PJR REVISED:

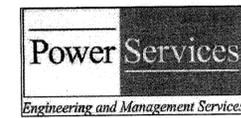
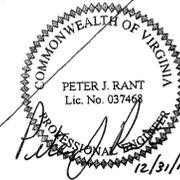


1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

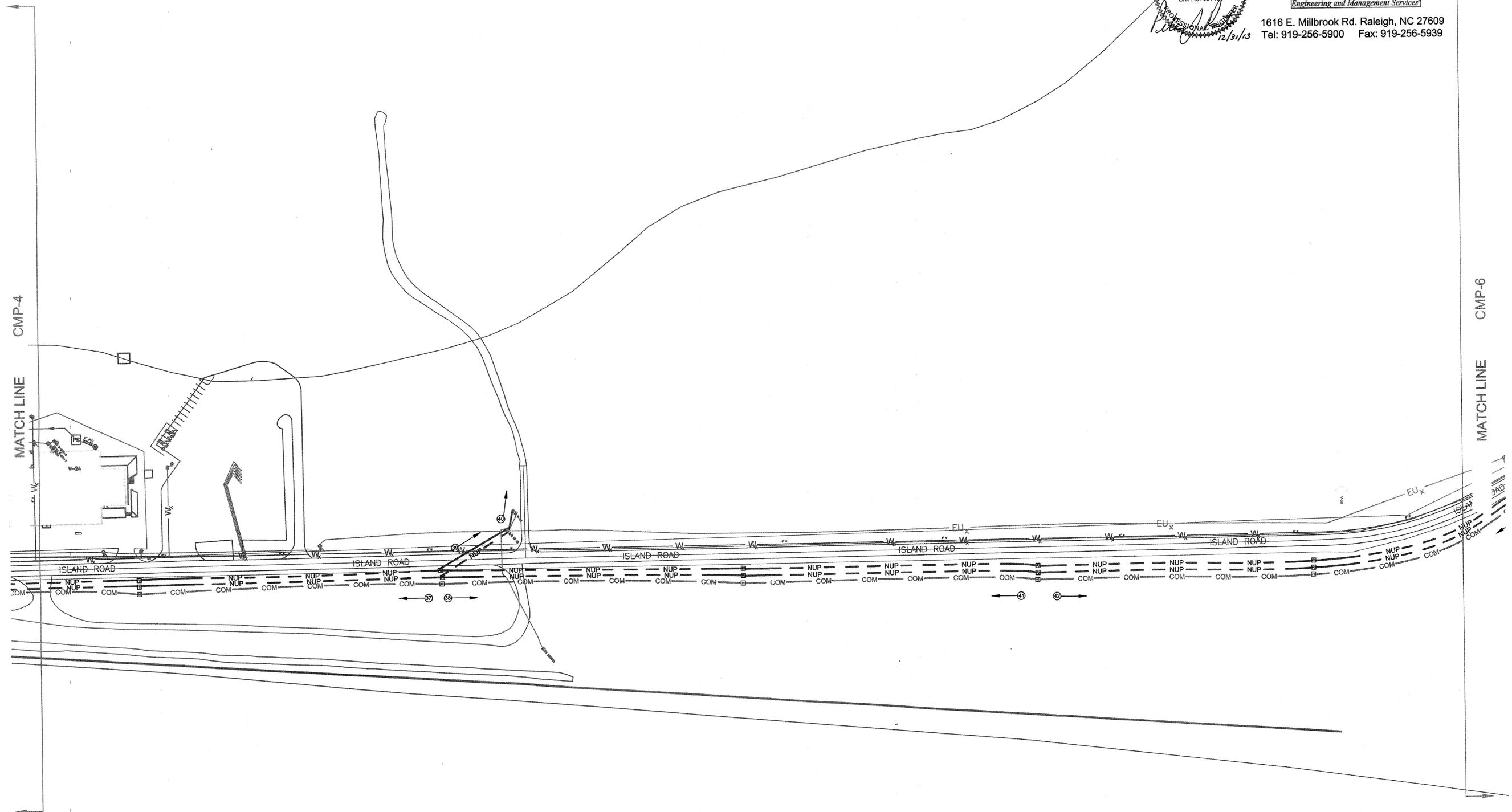


RELEASED FOR CONSTRUCTION CMP-4

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
						DATE: _____	DATE: 7/24/14	DATE: 2/14/14	DATE: _____	0" 40" 80"	CABLE PULLING MAP	
						SUBMITTED BY: <i>[Signature]</i> DATE: 3/10/14	FIRE PROTECTION: <i>[Signature]</i> DATE: 2/21/14	O & M: <i>[Signature]</i> DATE: 2-10-14	ENGINEERING GROUP LEADER: <i>[Signature]</i> DATE: 2/12/14	AUTOCAD - RELEASE 2007	SCALE	PROJECT NUMBER: NASS-0180
						PROJECT MANAGER			BRANCH APPROVAL: <i>[Signature]</i> DATE: 2/12/14	FILE NAME: XXXXXXXX	SHEET 59 OF 63	DR. LBJ DATE: 12-31-2013
									BRANCH HEAD			DRAWING NO. 16916



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939



RELEASED FOR CONSTRUCTION CMP-5

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
 GODDARD SPACE FLIGHT CENTER
 WALLOPS FLIGHT FACILITY
 WALLOPS ISLAND, VIRGINIA 23337



DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER
 DATE :
 SUBMITTED BY
 PROJECT MANAGER
 DATE : 3/10/2014

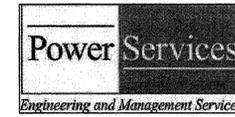
NASA SAFETY
 DATE : 2/2/14
 FIRE PROTECTION
 DATE : 2/2/14

CONSTRUCTION MANAGEMENT
 DATE : 2/14/14
 DATE : 2-10-14

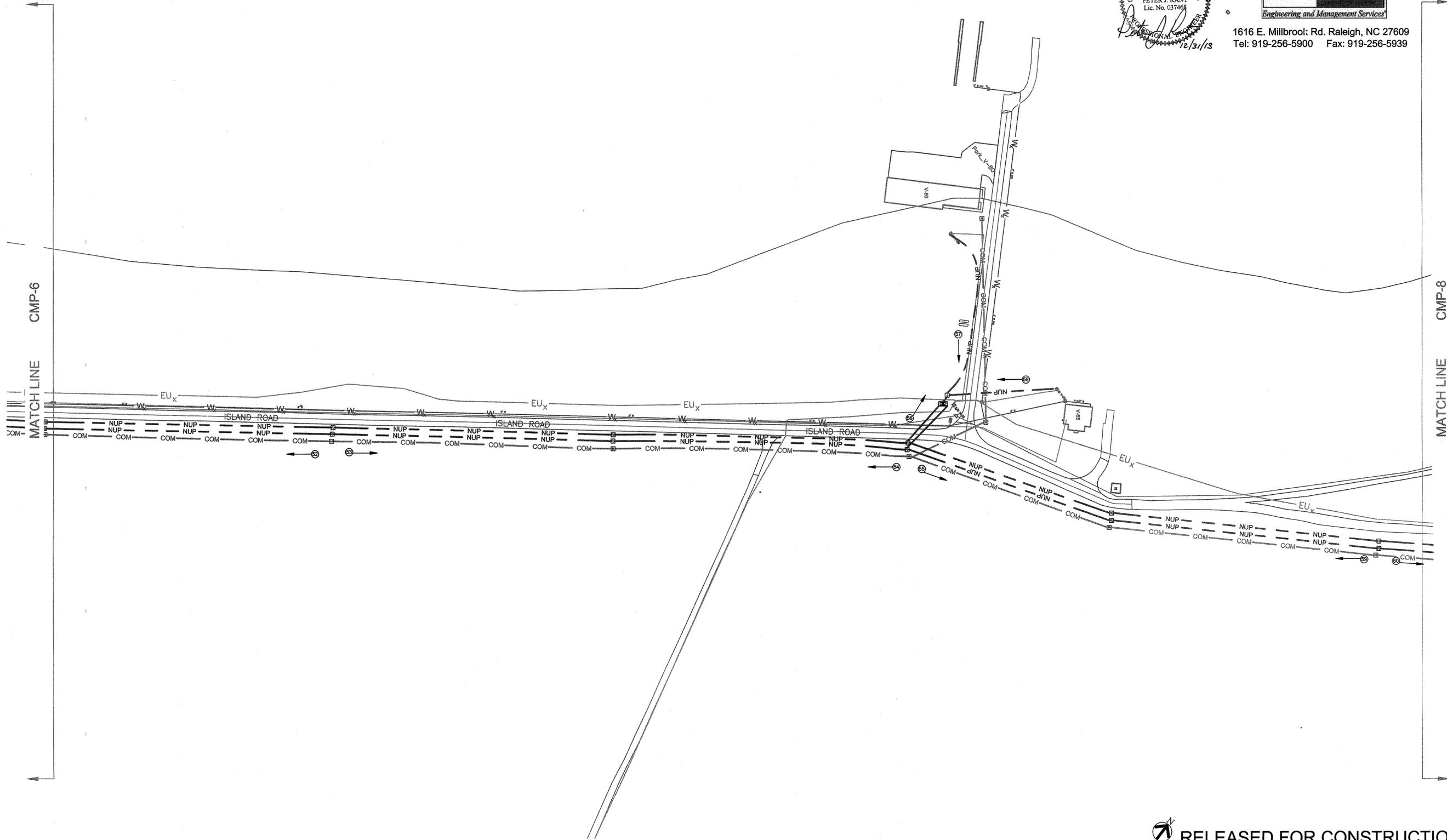
ENGINEERING APPROVAL
 ENGINEERING GROUP LEADER
 DATE : 2/14/14
 BRANCH APPROVAL
 BRANCH HEAD
 DATE : 2/14/14

GRAPHIC SCALE
 0' 40' 80'
 AUTOCAD - RELEASE 2007
 FILE NAME: XXXXX
 SCALE
 SHEET 60 OF 63

NORTH ISLAND ELECTRICAL UPGRADE
CABLE PULLING MAP
 PROJECT NUMBER: NAS5-0180
 DR. LBJ DATE: 12-31-2013
 CK. PJR REVISIONS:
 DRAWING NO. 16917

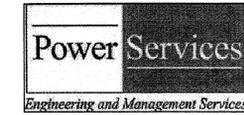
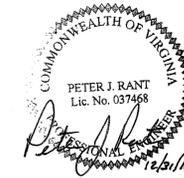


1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939

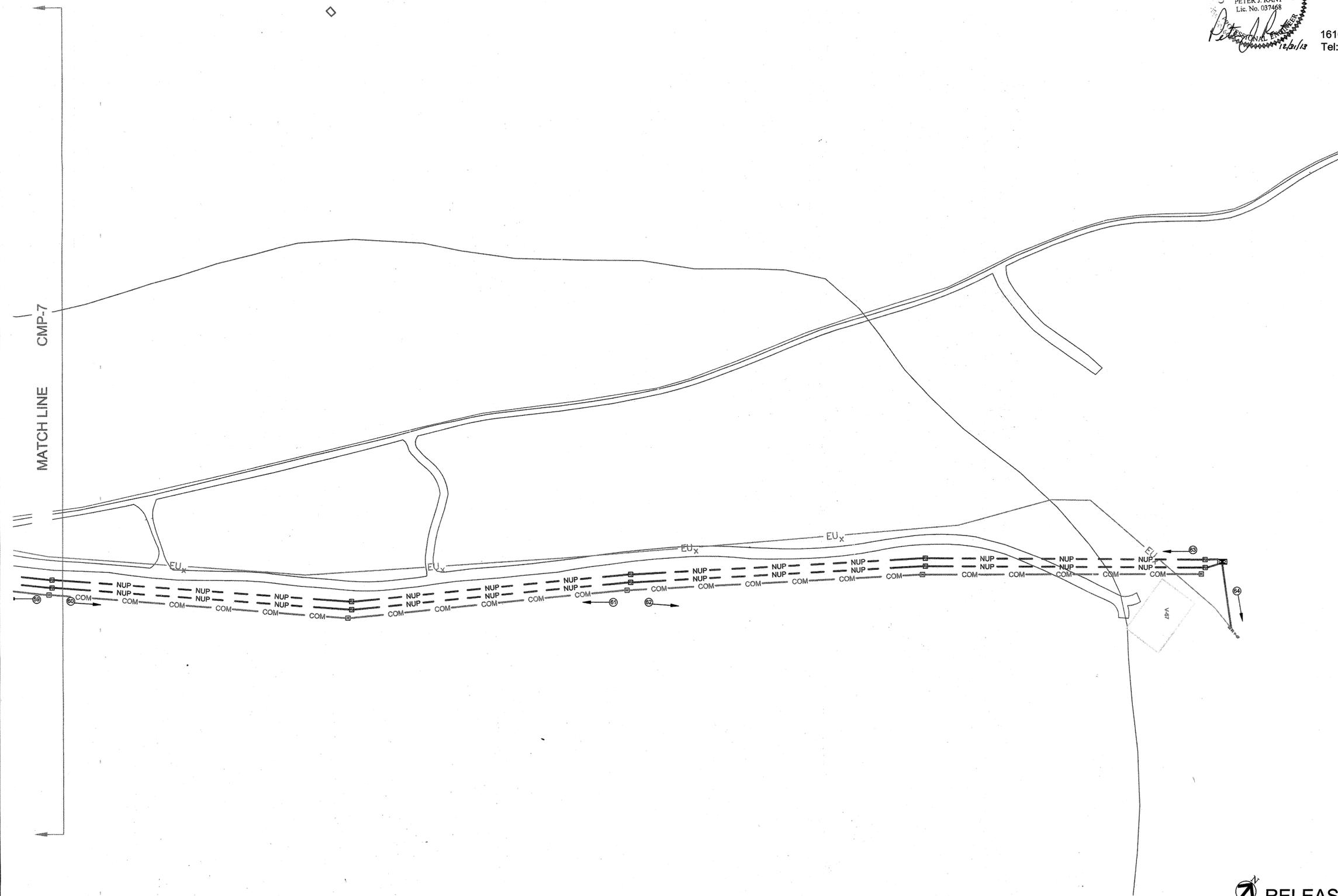


RELEASED FOR CONSTRUCTION CMP-7

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE	
						DATE: _____	DATE: 2/21/14	DATE: 2/4/14	DATE: _____	0" 40" 80"	CABLE PULLING MAP	
						DATE: 3/14/2014	DATE: 2/21/14	DATE: 2-10-14	DATE: 2/12/14	AUTOCAD - RELEASE 2007	SCALE	PROJECT NUMBER: NASS-0180
						DATE: _____	DATE: _____	DATE: _____	DATE: _____	FILE NAME: XXXXXX	SHEET 82 OF 83	DR. LBJ
						DATE: _____	DATE: _____	DATE: _____	DATE: _____			DATE: 12-31-2013
						DATE: _____	DATE: _____	DATE: _____	DATE: _____			CK. PJR
						DATE: _____	DATE: _____	DATE: _____	DATE: _____			REVISD:
						DATE: _____	DATE: _____	DATE: _____	DATE: _____			DRAWING NO.
						DATE: _____	DATE: _____	DATE: _____	DATE: _____			16919



1616 E. Millbrook Rd. Raleigh, NC 27609
 Tel: 919-256-5900 Fax: 919-256-5939



RELEASED FOR CONSTRUCTION CMP-8

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE	LET.	REVISIONS	CK.	AP.	PROJECT ENGINEER	NASA SAFETY	CONSTRUCTION MANAGEMENT	ENGINEERING APPROVAL	GRAPHIC SCALE	NORTH ISLAND ELECTRICAL UPGRADE		
										0' 40' 80'	CABLE PULLING MAP		
						SUBMITTED BY	FIRE PROTECTION	O & M	ENGINEERING GROUP LEADER	AUTOCAD - RELEASE 2007	SCALE	PROJECT NUMBER: NAS5-0180	
						DATE: 1/10/14	R. E. Velest DATE: 2/21/14	J. Dale DATE: 2-10-14	DATE: 2/14/14	FILE NAME: XXXXXXX	SHEET 83 OF 83	DR. LBJ DATE: 12-31-2013	DRAWING NO. 16920
						PROJECT MANAGER			BRANCH APPROVAL			CK. PJR	REVISED: