SPACEFLORIDA

CAPE CANAVERAL SPACEPORT

DEVELOPMENT MANUAL

Version 2.0

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Cape Canaveral Spaceport Development Manual

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The Cape Canaveral Spaceport Development Manual is Space Florida's living document prepared and updated as needed . Its purpose is to assist users in understanding processes, procedures, standards, and design criteria applicable to projects on sites under Space Florida's control located upon federal property within the boundary of the Cape Canaveral Spaceport (CCS).

The CCS is defined within Space Florida's authorizing statute as a geographical area that includes the entirety of NASA's John F. Kennedy Space Center (KSC) and the U.S. Space Force's Cape Canaveral Space Force Station (CCSFS). While both installations remain federal land, Space Florida is granted development rights, and the right to permit others to develop sites and projects, under the terms of various property agreements with NASA and the USSF which define the land available for Space Florida's use and define processes Space Florida uses to guide, review, and approve proposed development.

Space Florida intends to streamline design and construction of commercial and other non-governmental projects on sites under its control within the CCS. Space Florida operates as an Independent Special District, with statutory authorities similar to those of a municipality with regard to land planning and adoption of design and construction standards, reviews, and approvals applicable to CCS sites and projects under its control. There is no other county or municipal development code jurisdiction or approval process.

Except for defined Florida Building Codes and Life Safety Codes as governed by Space Florida's federal property use agreements, the standards herein establish general criteria to direct future building placement and design as well as site design. Rather than prescribe specific design solutions, as each new project presents its own unique circumstances, development and design standards allow projects to exhibit a desired degree of consistency in form and character required by Space Florida and land owners, while simultaneously allowing flexibility to meet customer needs.

If you have any questions/comments, contact Space Florida at 321-730-5301, or at the Corporate Office located at 505 Odyssey Way, Suite 300, Exploration Park, Florida 32953.

Jason Palmer
Building Official, Space Florida
jpalmer@spaceflorida.gov

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Cape Canaveral Spaceport
Development Manual

VOLUME 1

CAPE CANAVERAL SPACEPORT

(CCS)

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SECTION 1 – OVERVIEW

1.1 Purpose

The Cape Canaveral Spaceport (CCS) consists of facilities and property within Kennedy Space Center (KSC) as primarily governed by the National Aeronautics & Space Administration (NASA) and Cape Canaveral Space Force Station (CCSFS) as primarily governed by the United States Space Force (USSF). Property agreements between Space Florida (SF) and each Federal Authority (FA; NASA or USSF dependent upon location) transfer responsibility for certain facilities and land to SF and prescribe design/construction standards and approval processes. This Cape Canaveral Spaceport Development Manual (Manual) provides standards for CCS infrastructure and facility projects to:

- ✧ Establish general criteria to inform project placement & design;
- ✧ Outline specific development & design mandates of property-specific agreements;
- ✧ Provide coherent development framework for project consistency with CCS plan & vision; and
- ✧ Provide designers & facility managers with standards rather than specific design solutions.

Each project presents unique requirements and challenges; therefore, this Manual fosters a degree of consistency in form and character while simultaneously allowing flexibility and innovation.

1.2 Space Florida Organization

Florida Statutes (FS) Chapter 331, Part II established SF as a State of Florida Independent Special District to foster growth and development of a sustainable, world-leading space industry in Florida. SF uniquely serves as the single point-of-contact for all space-related functions of the State to strengthen Florida as the global leader in aerospace research, investment, exploration, and commerce. SF updates the Cape Canaveral Spaceport Master Plan (see spaceflorida.gov) to define goals and strategies to manage CCS growth in support of both commercial space activities and U.S. Government space missions. SF's various agreements provide SF the right to use, develop, and specify responsibilities to manage design and construction of defined land, facilities, and campuses. Tables 1 and 2 outline key SF Personnel and SF-owned/leased assets as of publication date.

Table 1: Space Florida Key Personnel

Name	*Title*
Steve Szabo, PE	Vice President, Spaceport Planning & Development
Pete Eggert	Vice President, Environmental Health and Safety
Jimmy Moffitt	Sr. Director, Launch & Flight Operations
Pat McCarthy	Director, Spaceport Operations
Michael St. Germain	Director, Facilities
Jason Palmer	Building Official
Brianna Soat, AICP	Spaceport Planning & Development Manager

Table 2: Space Florida's CCS Facilities/Assets

Facility	*Facility Description*	*Location*
Area 57 East	Vehicle Integration	CCSFS
Area 57 West	Vehicle Integration	CCSFS
Commercial Crew and Cargo Processing Facility (C3PF – formerly OPF3)	Vehicle Processing	KSC
Processing Control Center (PCC)	Launch Team Training, Launch Processing System Maintenance	KSC
LLF Air Traffic Control Tower (ATCT)	Air Traffic Control	KSC

LLF Convoy Vehicle Enclosure (CVE)	Hangar, Storage	KSC
LLF Landing Aids Control Building (LACB)	LLF Control Center, Office, LLF Terminal	KSC
LLF Media Operations Building	Office, Operations, Observations	KSC
LLF News Building	Storage, Office	KSC
LLF Reusable Launch Vehicle (RLV) Hangar	Vehicle Processing, Office, Operations & Maintenance Facility	KSC
LLF Runway 15-33, Apron, Taxiway A & Towway (concrete pavement)	Horizontal Launch & Landing Facility	KSC
LLF Fuel Farm	Jet Fuel Farm/Tanks	KSC
Space Launch Complex 20	Vertical Launch	CCSFS
Space Launch Complex 46	Vertical Launch	CCSFS
SpaceX Launch Control Center (LCC)*	Office, Launch Controls	CCSFS
South Campus Office (Administration Building 90326)*	Office	CCSFS
Exploration Park Space Life Sciences Laboratory (SLSL)*	Research & Development, Office, Space Florida Headquarters	KSC
Exploration Park Phase 1*	Office, Vehicle Integration, Manufacturing	KSC
Exploration Park Phase 2*	Office, Vehicle Integration, Manufacturing	KSC
Exploration Park Phase 3* (South Campus)	Office, Vehicle Integration, Manufacturing	KSC

** Facilities located outside KSC & CCSFS secured boundary limits and publicly accessible*

1.3 Authority

- ✧ Under FS 331.319(2), SF's Board of Directors requires SF Building Permit issuance prior to any construction, alteration, repair (except emergency repairs), conversion, replacement, removal, demolition, installation, or use/occupancy change of any landscape, building, structure, public utility (electrical, gas, mechanical, plumbing) pole, line, pipe, facility, or similar system, or any other construction work on SF property.
- ✧ Forms & processes available online (request access at spaceflorida.gov/request-for-access).
- ✧ SF Building Department manages code compliance through 3 entities:
  - o SF Building Official: permitting & Certificate of Occupancy or Completion
  - o SF's FBC Licensed Agent: third party plan review & inspection for vertical construction
  - o AHJ: life safety & fire protection plan review & inspection (required for Certificate of Occupancy/Completion); request Variance to utilize tenant-hired third-party
- ✧ SF/AHJ may appoint professional consultants, authorized agents, and representatives at its discretion to perform duties on its behalf, such as inspection of a parcel or improvement.
- ✧ The U.S. Government under NASA or USSF jurisdiction owns all CCS land and therefore maintains certain access rights to facilities and maintain a limited role in project coordination and approval; however, SF remains the approval authority, primary coordinator, and point-of-contact for all CCS development projects implemented under its authorities and responsibilities.

1.4 Scope

This Manual establishes design and construction requirements and guidance for infrastructure, buildings, launch complexes, and other facilities owned, operated, funded, leased, maintained, or otherwise legally conveyed to SF (easement, agreement, etc.) within the CCS boundary. Adherence to criteria herein results in conformance with SF goals, objectives, and various property agreements with partner agencies; however, SF encourages developers, designers, contractors, and Tenants to recommend alternative solutions where deviations from the Manual provide benefit.

1.4.1 Variance

To meet the unique needs of clients and their projects, SF offers Tenants opportunity request a Variance to the referenced standards and/or other design criteria within this Manual. To do so:

- ✧ Submit request & substantiating documentation to SF Project/Facilities Manager in writing.
- ✧ For Variance from requirements of NASA, USSF, Florida Department of Transportation (FDOT), St. Johns River Water Management District (SJRWMD), Florida Department of Environmental Protection (FDEP), Federal Aviation Administration (FAA), and other applicable regulatory agencies, provide documented concurrence from enforcing agency.
- ✧ SF responds within 10 business days; larger requests requiring third party review may take longer.

1.4.2 Manual Amendments

SF routinely updates this Manual. Any individual may submit, in writing, a proposed change or addition with sufficient technical analyses justifying the change. SF responds within 10 business days; however, larger requests requiring third-party review may take longer.

SECTION 2 – CCS-WIDE STANDARDS

2.1 General Codes

- ✧ Design per industry standards for construction.
- ✧ Comply with all applicable local, state, and federal laws and regulations, including:
  - o Chapter 373, Florida Statutes;
  - o Latest edition of Florida Building Code;
  - o Any State-adopted design/construction standards in effect at design commencement;
  - o Americans with Disabilities Act (ADA); and
  - o Applicable industry standards from the organizations in Table 3.
- ✧ If a provision conflicts with any zoning, building, or other applicable regulations, the most restrictive provision applies.
- ✧ Provide Site Civil QC Testing & Inspection 3rd Party qualifications via SFPDMS

Table 3: Standard Acronyms

Acronym	*Standard Description*	*Acronym*	*Standard Description*
AASHTO	American Association of State Highway & Transportation Officials	FAR	Federal Acquisition Regulations
ACI	American Concrete Institute International	FBC	Florida Building Code
ADA	Americans With Disabilities Act	FDEP	Florida Department of Environmental Protection
AIA	American Institute of Architects	FDOT	Florida Department of Transportation
AISC	American Institute of Steel Construction	FHWA	Federal Highway Administration
AISI	American Iron & Steel Institute	IEC	International Electrotechnical Commission
ANSI	American National Standards Institute	IES	Illuminating Engineering Society of North America
ASDA	Americans With Disabilities Act Accessibility Standards	KNPR	Kennedy NASA Procedural Requirements
ASME	American Society of Mechanical Engineers	NEC	National Electrical Code
ASSE/ SAFE	American Society of Safety Engineers	NEMA	National Electrical Manufacturers Association
ASTM	American Society of Testing & Materials	NEPA	National Environmental Policy Act
AWS	American Welding Society	NETA	International Electrical Testing Association
AWWA	American Water Works Association	NFPA	National Fire Protection Association
CFR	Code of Federal Regulation	SJRWMD	St. Johns River Water Management District
DOD	Department of Defense	UL	Underwriters Laboratories
EPA	Environmental Protection Agency	USACE	United States Army Corps of Engineers
FAA	Federal Aviation Administration	USDA	United States Department of Agriculture
FAC	Florida Administrative Code	USSF	United States Space Force

2.2 Badging

- Submit badge request form for SF sign-off & submittal to FA Badging Office
- CCSFS acknowledges all KSC badges except Foreign Visitor Badges

2.2.1 Visitor Badge

- Valid 1 to 29 days
- 2 forms of Government-issued ID
- Temporary badge form request
- May only be obtained once
- Countdown begins immediately and tolls daily regardless of use

2.2.2 Center-Specific Local Badge

- Valid 30 to 179 days (6 months)
- 2 forms of Government-issued ID
- Fingerprint
- IdMAX request with security background check
- Typically for construction workers, vendors, or consultants

2.2.3 PIV or Long-Term Center-Specific Local Badge

- Valid longer than 179 days through contract duration
- PIV Badge recognized for all NASA Centers while Long-Term Center-Specific Badge only provides access to KSC/CCSFS
- NACI Required (Investigation)
- 2 forms of Government-issued ID
- Fingerprints
- IdMAX request with security background check
- E-QIP account set up with the following information:
  - Full name
  - Social Security Number
  - Date of birth
  - Place of birth
  - Email address of applicant
- System automatically generates 20-162 – no need to submit
- PIV Badge holders may train for and provide foreign visitor escort

2.2.4 Foreign Visitor Badge

- For non-US Citizens cleared through NASA Security Specialist/International Visitor Coordinator
- Foreign visitor IdMax request
- Scanned colored copy of Passport and/or Visa
- Signed Certification of Conditions and Responsibilities for Escort of Foreign Nationals on Kennedy Space Center by PIV Badge holder foreign escort
- Allow 2 weeks for Friendly Countries
- Allow 30 days for Designated Countries
- Effective duration contingent upon NASA discrepancy

2.3 Right of Entry & Property Responsibility

- ✧ Engineering investigations & construction activities require right of entry, license, and/or enhanced use lease; typically, SF enters into such agreements with FA and subleases to Tenant
- ✧ Tenant provides boundary survey at own expense to define parcel boundary/easements
- ✧ Upon site vacation, Tenant submits an exit Environmental Baseline Survey (EBS)

2.4 Planned Traffic/Roadway Impacts

- ✧ Contact FA for Maintenance of Traffic plans, lane closure, or other traffic roadway impact >2 weeks prior to need within each impacted jurisdiction:
  - o USSF Cape Support (321-853-5211 or ccisr@us.af.mil) & Security Office (321-853-2121)
  - o NASA Protective Service
- ✧ No outside police, non-FA unarmed security, or off-duty USFWS agents may serve lane closures
- ✧ FA invoices SF for support Services

2.5 Utility Locates

Prior to any digging or dirt movement, locate & properly stake all utility services located on or adjacent to any parcel including, without limitation, any underground telephone, natural gas, high pressure gases, water, sewer, communications, or electric lines or connections.

SECTION 3 – CCS-WIDE DESIGN

3.1 Signage

- ✧ Limited to Tenant company name/logo, wayfinding, & code-required signage
- ✧ Submit drawings & specifications for SF & FA approval of any proposed signage (including temporary construction or marketing signage)
- ✧ Note each sign's proposed location, size/geometry, material, color, internal/external illumination
- ✧ Building/street number required on front of all buildings

3.2 Transportation

3.2.1 Parking & Loading

Justify proposed amount & space dimensions; include total counts of:

- ✧ # parking spaces per building square foot
- ✧ ADA handicap spaces required & proposed
- ✧ Bicycle spaces required & proposed
- ✧ Loading zones
- ✧ Request Variance for shared parking with other parcels

3.2.2 Right-of-Way

Request Variance for any improvement within right-of-way

3.2.3 Driveway

- ✧ 1 driveway per parcel
- ✧ ≥150' from street centerline intersections

3.2.4 Road Extension

Gutter spread calculation requirements:

- ✧ 10-year, 24-hour tail water condition
- ✧ 4 inches/hour rainfall intensity
- ✧ Maintain 1 minimum 12'-wide travel lane in worst conditions
- ✧ Hydraulic grade line 6" below inlet invert

3.3 Utilities

Underground all utility services located on or adjacent to the parcel, including without limitation, any telephone, gas, water, sewer, cable TV, electric lines, & connections.

3.3.1 Fire Hydrants

- ✧ Use International Organization for Standardization (ISO) method per NFPA
- ✧ Coordinate connectivity & hydrant flowrate with AHJ
- ✧ Color private system hydrant bodies red per NFPA 291
- ✧ Color cap based on flowrate
  - o 1,500+ gallons per minute (GPM): blue
  - o 1,000-1,499 GPM: green
  - o 500-999 GPM: orange
  - o <500 GPM: red

3.3.2 Lift Stations

- ✧ Comply with requirements of FDEP (for KSC) / USSF (for CCSFS)
- ✧ Include estimated sewer flows, peak factor used, velocities, head loss, pump selection information, pump curve, run time in both minimum & maximum cycles, wet well capacity & size, pumps on levels, pumps off levels, lag times, & buoyancy calculations

3.3.3 Hydraulic Analysis & Water Demand

- ✧ Design water main per requirements of FDEP (for KSC) / USSF (for CCSFS)
- ✧ Request hydrant flow tests at pre-application conference
- ✧ Hydraulic analysis for systems requiring main extension to potable water system (private or public)
- ✧ Water demand requirement calculations
- ✧ Include methodology for meter size & service lateral size determinations

3.4 Environmental Planning

3.4.1 NEPA

- ✧ Prepare documentation including required Environmental Assessment (EA) or Environmental Impact Statement (EIS) for development/operation
- ✧ Coordinate with SF Environmental Health & Safety Program Manager; if required, obtain land/utility owner signature (NASA Environmental Assurance Branch or USSF Environmental Department)
- ✧ Obtain required categorical exclusion, environmental permits, licenses, registrations, & approvals
- ✧ Prepare permit applications & pay fees directly to regulatory agency; submit copies to SF
- ✧ Submit copies of all permits, licenses, registrations, & approvals to SF within 5 business days after receipt from the regulatory agency
- ✧ Ensure permit condition compliance for all operations, activities, equipment, & facilities

3.4.2 Stormwater/Drainage Management

- ✧ Provide compliant stormwater control facilities with necessary means to assure complete drainage, water quality treatment, & attenuation within & immediately adjacent to parcel per SJRWMD regulation of drainage systems, stormwater treatment ponds, large uses of water, etc.
- ✧ Design roof drainage compatible to building envelope and site drainage plan; direct water away from major pedestrian traffic areas
- ✧ Construction adding >1,000 ft^2 of impervious surface requires stormwater management report signed & sealed by State of Florida licensed Professional Engineer (PE)

3.4.3 Erosion & Sediment Control

- ✧ Design SWPPPs in accordance with FDEP Generic Permit for Stormwater Discharge From Large & Small Construction Activities
- ✧ Submit monthly NPDES inspection report

SECTION 4 – CCS-WIDE APPLICATION PHASE

4.1 Pre-Application Conference

Schedule pre-application conference between SF, Tenant, project designer(s), any other pertinent project team members. At meeting:

- ✧ SF provides process checklists and an overview of the Space Florida Program Document Management System (SFPDMS), through which Tenant delivers all submittals
- ✧ Address any exceptions or additions to the process based on the specific project
- ✧ Submit Tenant Questionnaire for SF/FA concurrence to proceed with design

4.2 Deliverables

- ✧ Unless otherwise specified, submit all items for SF review & concurrence prior to FA submittal
- ✧ Submit online through Space Florida Program Document Management System (SFPDMS; request access at spaceflorida.gov/request-for-access) in Portable Document Format (PDF) format
- ✧ Tenant/Contractor shall ensure Applicant's access to computer software necessary for upload
- ✧ Licensed architect/engineer prepares all drawings etc. and bears the seal of the design professional responsible for preparation of the plans & specifications within AIA standards
- ✧ Acknowledge FBC & Fire and Life Safety requirements per editions most recent to Commencement Date, regardless whether applicable local/state authority asserts jurisdiction
- ✧ Submit certificates of compliance in accordance with Florida Statutes Section 553.791(11)
- ✧ Application formally considered submitted upon both of the following actions.
  - o Pay Building Plan Review Fee to SF FBC Agent
  - o Upload ***all*** items required herein (see Appendix) & any additional SF/FA requests

4.2.1 Permit Fees

- ✧ SF Building Official determines fee amounts based on scope of work presented in application
- ✧ Request for design review prior to Issue for Construction (IFC) drawings incurs additional fee
- ✧ SF contracts with Joe Payne, Inc. (JPI) for building plan review & inspection based on Total Cost of Construction (TCC); pay JPI directly via wire transfer or credit card

Table 4: Permit Fees

Scope		*Fee*
Building and/or Site Civil Permit		
	< $500,000 TCC	Greater of 3.5% TCC or $1,500
	$500,000-999,999 TCC	2.5% TCC
	$1 million - $2 million TCC	1.5% TCC
	> $2 million TCC	0.8% TCC for first $20 million
		0.6% TCC over $20 million
Annual Permit		Greater of 0.8% TCC or $400
Each reinspection after 2 failures		$750

TCC = total cost of construction

4.2.2 Fire & Life Safety

- ✧ Prior to 30% design completion, Tenant (not Contractor) hires AHJ-approved, licensed, third-party Qualified Fire Protection Engineer (QFPE) for fire & life safety plan review & inspection
- ✧ Obtain licensed & qualified Fire Stopping & Fireproofing company separate from QFPE
- ✧ Provide design documents upon Fire Protection Design Analysis & Issue For Construction

4.2.3 Wetlands Dredge & Fill

- ✧ United States Army Corps of Engineers (USACE) regulates & enforces the Clean Water Act (CWA), Section 404, and permits certain wetland dredging/filling
- ✧ FDEP reviews individual 404 permit applications under a public interest review and environmental criteria set forth in the CWA Section 404(b)(1) Guidelines
- ✧ Notify SF & FA prior to contacting FDEP for permit determinations & requirements

4.2.4 Water & Wastewater Permitting

- ✧ Assure proposed wastewater & water systems (including water for fire protection) meet all requirements within the applicable permit
- ✧ Submit water & wastewater permit applications to SF for FA & FDEP review & issuance
- ✧ For CCSFS, submit application to USSF Civil Engineering Group who directs FDEP submittal

4.2.5 Wastewater Treatment

- ✧ USSF owns & operates wastewater treatment plant and reviews wastewater permit applications
- ✧ Self-contain industrial wastewater (non-nutritive water such as chiller blowdown, condensate, or similar process wastewater); USSF prohibits such discharge into wastewater system

4.2.6 Stormwater Discharge for Construction Activities

Construction sites disturbing 1+ acre of land require coverage under Generic Permit for Stormwater Discharge from Large and Small Construction Activities

- ✧ Submit Notice of Intent (NOI) - FDEP form 62- 621.300(4)(b) & application fee to FDEP
- ✧ FDEP reviews/issues per FDEP National Pollutant Discharge Elimination System (NPDES) Phase II Construction Permit requirements
- ✧ Submit copies of NOI & SWPPP prior to construction

4.2.7 Air Permitting

Comply with FA's FDEP-issued facility-wide Federal Clean Air Act (FCAA) Title V Air Operation Permit for regulated air emissions and contact SF prior to:

- ✧ Operation, reactivation, or modification of an existing emission source/activity;
- ✧ Construction of any new air emission source; or
- ✧ Initiation of activity producing air emissions.

4.2.8 Airspace Analysis

Submit FAA 7460 Obstruction Notice of Actual Construction or Alteration / Airport Airspace Analysis (OE/AAA) or USSF Space Launch Delta 45 Airfield Waiver w/ Description & Risk Assessment if project:

- ✧ May result in airspace obstruction;
- ✧ May affect LLF, Skid Strip, or helicopter landing sites; or
- ✧ Utilizes cranes / other certain construction equipment

4.2.9 Mobile Food Vendors

Any cooking equipment used in fixed, mobile, or temporary concessions, such as trucks, buses, trailers, pavilions, tents, or any form of roofed enclosure, shall comply with Brevard County Fire Officials policy, permitting, and inspection (see Appendix).

4.3 Insurance & Bond Requirements

Unless otherwise specified, SF determines insurance limits by specific project/usage. Limits escalate every fifth year using appropriate indices to generally ensure pace with inflation. Per agreement conditions, additional insured shall include Tenant lists, SF, FDOT, NASA, USSF, & related entities.

General Contractor Insurance: every developer/contractor performing work within CCS shall maintain current insurance certificates. SF verifies minimum coverage required per project:

- ✧ Commercial general liability insurance, including contractual liability, broad form property damage liability, fire legal liability, products and completed operations, and medical payments;
- ✧ Business auto liability insurance;
- ✧ Workers' compensation insurance;
- ✧ Builders Risk Insurance; and,
- ✧ Employer's liability insurance.

Tenant/Operator Insurance:

- ✧ Insurance coverage shall meet statutory minimums as applicable.
- ✧ Based on Tenant or operator planned activities, SF determines insurance requirements based on risks to U.S. Government property & SF improvements.
- ✧ Current certificate shall cover loss/damage of U.S. Government property due to Tenant activity.
- ✧ Maintain insurance protection against loss or damage of improvements (including those of SF, Tenant, or operator) due to any Tenant/Operator activity.
- ✧ Prior to activities at CCS, provide proof of adequate insurance for damage to U.S. Government property & SF improvements.
- ✧ If applicable, provide separate insurance coverage for launch activity per FAA launch operator license, e.g., Probable Maximum Loss (PML) insurance.

Performance & Payment Bonds: prior to construction, in a form acceptable to SF, provide 2 bonds per contract – a performance bond and payment bond – each with good & sufficient surety acceptable to SF. For KSC projects, name SF & NASA as bond co-payees. SF completes Notice of Commencement filed by Contractor at Brevard Clerk of Courts

4.4 Review

- ✧ SF responds via SFPDMS within 10 business days (longer for projects requiring third-party, NASA, USSF, or other authority review)
- ✧ SF review does not relieve Applicant from responsibility of performing design QA/QC
- ✧ Tenant may request waiver to hire an independent third-party State of Florida licensed FBC Agent in place of the SF FBC Agent with sufficient reasoning documentation:
  - o Agent shall comply with alternative plans review & inspection process in FS Chapter 553, Building Construction Standards
  - o Tenant/Contractor still required to submit all documentation for review per Manual process
  - o Include certificates of compliance in accordance with Florida Statutes Section 553.791(11)
  - o Audit may require Tenant to pay reduced permit fee before Certificate of Occupancy (CO) or Certificate of Completion (CoC) issuance
- ✧ Upon approval, pay Permit Issuance Fee to FBC Agent

SECTION 5 – CCS-WIDE CONSTRUCTION

5.1 Pre-Construction Coordination

Contact SF Building Department to schedule pre-construction conference between the Tenant, Tenant's Prime Contractor, and Contractor's major Subcontractors. At conference:

- ✧ Submit emergency phone list, any further required submittals, applicable Notices of Commencement or environmental permits, and construction schedule
- ✧ SF briefs Contractor on rules, regulations, & procedures
- ✧ SF designates Operation and Maintenance Manager / Contractor point-of-contact for all utility coordination, roadway closures, and necessary outages for water, sewer, power, communications, irrigation systems, & any necessary FA-provided coordination
- ✧ Post issued permit & place approved construction documents at project site prior to construction

5.2 Removal Work

- ✧ Contractor shall not disturb existing infrastructure beyond that indicated or necessary per contract
- ✧ Temporary shoring & bracing for support of building components to prevent settlement or other movement as required to protect the work & existing facilities
- ✧ Coordinate with SF any offsite material hauling or contaminated soils removal (typically, FA denies earthwork removal off federal property)

5.3 Inspection

Upon obtaining permit card, request inspections via SFPDMS. Call inspector to confirm appointment. SF inspection does not relieve Applicant from responsibility of performing construction QA/QC.

5.3.1 Inspection Parties

- ✧ FBC Agent & Fire Protection Consultant records inspection results via SFPDMS
- ✧ Provide Site Civil QC Testing & Inspection 3rd Party qualifications & inspection reports via SFPDMS
- ✧ Tenant submits all inspection reports & any comment disposition to SFPDMS
- ✧ SF performs independent inspections as necessary
- ✧ Tenant/Contractor hires independent engineering firm licensed by the State of Florida and approved by SF for building threshold inspection services (Threshold Inspector)

5.3.2 Inspection Points

- ✧ Pass inspection before covering or concealing any electrical, plumbing, utility, mechanical, fire sprinkler, fire alarm, emergency lighting, smoke control systems or structural systems
- ✧ Work may not progress beyond any point for which an inspection is required until Contractor receives approved inspection report
- ✧ See example Inspection Checklist (see Appendix)
- ✧ CCSFS requires USSF presence at specific life safety inspections (i.e. hydrostatic test for fire suppression system, fire alarm test, life safety inspection)

5.3.3 Punch Lists

- ✧ Depending on project complexity, SF may issue construction phase-dependent punch lists documented in electronic format editable by others
- ✧ SF issues a final substantial completion punch list
- ✧ SF conducts pre-final inspection & prepares final punch list required for final completion

SECTION 6 – CLOSEOUT

6.1 As Built / Record Documents

- ✧ Collect and appropriately label As-Built / Record Documents (as-constructed) including drawings and specifications reflecting final installation after all modifications and actual construction, marked with changes made by addendum, change order, or product substitution:
  - o As-built survey by a Florida-registered Professional Land Surveyor
  - o Underground utilities: location of all alignments & material type
  - o Structures, buildings, roads, parking areas, other project elements
  - o Heating & air conditioning equipment, ductwork, air devices, piping, other devices necessary for Heating, Ventilation, & Air Conditioning (HVAC) system operation
  - o Plumbing equipment, pumps, piping, other devices necessary for plumbing system operation
  - o Electrical equipment, devices, wiring sequences, wiring methods, component system connections as installed; include color codes, panel identification, any other information necessary to identify & locate equipment
  - o All initiating devices such as flow switches/pressure switches for fire protection systems
  - o Initiating devices, wiring sequence, wiring method, connections of the components of the protective signaling system as installed; include color codes & terminal identifications
  - o Communications equipment, devices, wiring sequences, wiring methods, connections of component systems as installed; include color codes
  - o Security equipment, wiring sequences, wiring methods, connections of component systems as installed; include color codes
  - o Any abandoned piping, underground utilities, or structures
  - o Any identified, but undisturbed, asbestos remaining encapsulated
- ✧ Submit through SFPDMS all AutoCAD files, ArcGIS Shapefiles, & PDF files uncompressed (SF may also require hard copies); if files exceed upload limits, write the files to a USB drive/other SF-approved storage device

6.2 O&M Manuals & Warranties

Submit Operations & Maintenance (O&M) manuals for all facilities, systems, and equipment including Lighting Operations Manual (LOM) per USFWS, copies of approved construction submittals & change orders, acceptance test records & construction approvals, manufacturer & contractor warranties, any other contract-required documents.

6.3 Certificate of Occupancy or Completion

Prior to occupying, utilizing, or operating new improvements:

- ✧ Complete punch list including all submittals & passed inspections
- ✧ Submit FBC Agent letter of recommendation for CO or CoC
- ✧ Submit QFPE letter of compliance stating the facility complies with applicable codes & standards
- ✧ Request AHJ final inspection of fire protection & life safety requirements
- ✧ Submit AHJ CO letter
- ✧ Schedule final inspection with SF for CO or CoC
  - o CO: construction alters occupancy
  - o CoC: construction does not alter occupancy
  - o Tenant may request Temporary Certificate of Occupancy (TCO) for beneficial occupancy

APPENDICES

- ✧ ABBREVIATIONS
- ✧ MOBILE FOOD VENDORS
- ✧ BUILDING CHECKLIST
- ✧ INSPECTION CHECKLIST

Abbreviations

Acronym	Description
45 MSG	45th Mission Support Group
45 SFS	45th Security Forces Squadron
AAA	Airport Airspace Analysis
ADA	Americans with Disabilities Act
ACM	Asbestos Containing Material
AF	Air Force
AFSPCMAN	Air Force Space Command Manual
AHJ	Authority Having Jurisdiction
AIA	American Institute of Architects
ASME	American Society of Mechanical Engineers
AST	Aboveground Storage Tank
ATCT	Air Traffic Control Tower
BA	Biological Assessment
BO	Biological Opinion
BOSS	Base Operations & Spaceport Services
BOT	Build-Operate-Transfer
C3PF	Commercial Crew & Cargo Processing Facility
CA	Construction Administrator
CCSFS	Cape Canaveral Space Force Station
CCNA	Consultants' Competitive Negotiations Act
CCR	Covenants Conditions & Restrictions
CCS	Cape Canaveral Spaceport
CCTV	Closed Circuit TV
CES/CEIE	Civil Engineering Squadron / Installation Management & Environmental Element
CFR	Code of Federal Regulations
CLOIS	Consolidated Launch Operations & Infrastructure Support
CM	Construction Manager
CMP	Construction Management Plan
CNS	Canaveral National Seashore
CO	Certificate of Occupancy
CoC	Certificate of Completion
CPP	Commissioning Policy & Procedures
CPTED	Crime Prevention Through Environmental Design
CSA	Commercial Space Activities
CSI	Construction Specifications Institute
CSOSA	Commercial Space Operations Support Agreement
CVE	Convoy Vehicle Enclosure
CWA	Clean Water Act
DB	Design-Build
DD	Design Development
DBB	Design-Bid-Build
DBOM	Design-Build-Operate-Maintain
DDESB	Department Of Defense Explosives Safety Board
DoD	Department of Defense
DOPAA	Description of Proposed Action & Alternatives
EA	Environmental Assessment
EAB	Environmental Assurance Branch
EBS	Environmental Baseline Survey
EHS	Environmental Health & Safety
EIFS	Exterior Insulation & Finish Systems
EIS	Environmental Impact Statement
EMB	Environmental Management Branch
EPA	Environmental Protection Agency
EPR	Excavation Permit Request
ESA	Endangered Species Act
ESP	Explosive Site Plan
EUL	Enhanced Use Lease
The Park	Exploration Park
FS	Florida Statutes
FA	Federal Authority
FAA	Federal Aviation Administration
FAA AST	Federal Aviation Administration Office of Commercial Space Transportation
FAC	Florida Administrative Code
FAR	Federal Acquisition Regulation
FBC	Florida Building Code
FCAA	Federal Clean Air Act
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FGBC	Florida Green Building Coalition
FHWA	Federal Highway Administration
FNPS	Florida Native Plant Society
FOD	Foreign Object Debris
FS	Florida Statute
GBIGG	Green Building Initiative's Green Globes
GPM	Gallons Per Minute
GPS	Global Positioning System
HSPD	Homeland Security Presidential Directive
HVAC	Heating, Ventilation, Air Conditioning
ICD	Interface Control Document
IGCC	International Green Construction Code
IOMS	Infrastructure Operations & Maintenance Services
IPD	Integrated Project Delivery
ISC	Institutional Services Contract
ISO	International Organization for Standardization
JON	Job Order Number
KCA	Kennedy Center Agreement

Acronym	*Description*
KNPR	Kennedy NASA Procedural Requirements
KSC	Kennedy Space Center
LACB	Landing Aids Control Building
LC	Launch Complex
LCC	Launch Control Center
LEED	Leadership In Energy & Environmental Design
LLF	Launch & Landing Facility
LMP	Light Management Plan
LOM	Lighting Operations Manual
LPS	Low-Pressure Sodium
LSOL	Launch Site Operator's License
MAS	Mobile Access Structure
MINWR	Merritt Island National Wildlife Refuge
MOT	Maintenance of Traffic
MOU	Memorandum of Understanding
NA	Noise Analysis
NAS	National Airspace System
NASA	National Aeronautics & Space Administration
NAVAIDS	Navigational Aids
NBS	National Bureau of Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Administration
NGVD	National Geodetic Vertical Datum (1929 or 1983 as applicable)
NHPA	National Historic Preservation Act
NOTU	Naval Ordinance Test Unit
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPR	NASA Procedural Requirements
NRHP	National Registry of Historic Places
OAR	Owner's Authorized Representative
OE	Obstruction Evaluation
O&M	Operations & Maintenance
OSHA	Occupational Safety & Health Administration
P3	Public Private Partnership
PA	Programmatic Agreement
PCC	Processing Control Center
PDF	Portable Document Format
PE	Professional Engineer
PF	Processing Facility
PIR	Pollution Incident Report
PM	Project Manager
PML	Probable Maximum Loss
POC	Point of Contact
PSO	Protective Services Office
QA/QC	Quality Assurance/Quality Control
QD	Quantity-Distance
QFPE	Qualified Fire Protection Engineer
R&D	Research & Development
REC	Record of Environmental Consideration
RFSPR	Range Flight Safety Program Requirements
RLV	Re-usable Launch Vehicle
RSAA	Reimbursable Space Act Agreement
RSOL	Reentry Site Operator License
S&MA	Safety & Mission Assurance
SF	Space Florida
SFPDMS	Space Florida Program Document Management System
SHPO	State Historic Preservation Officer
SIR	Shell Isolation Rating
SJRWMD	St. Johns River Water Management District
SLC	Space Launch Complex
SLD 45	Space Launch Delta 45*
SLF	Shuttle Landing Facility
SLSL	Space Life Sciences Laboratory
SME	Subject Matter Expert
SOQ	Statement of Qualifications
SOW	Statement of Work
SPCC	Spill Prevention, Control, & Countermeasure
SWPPP	Stormwater Pollution Prevention Plan
TCO	Temporary Certificate of Occupancy
TOR	Task Order Request
TP	Tenant Projects
UAS	Unmanned Aerial Systems
UDS	Universal Documentation System
US	United States
USACE	US Army Corps of Engineers
USDC	US Department of Commerce
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGBC	US Green Building Council
USSF	US Space Force
UST	Underground Storage Tank
WON	Work Order Number
WORB	Work Order Review Board

BREVARD COUNTY FIRE OFFICIALS

SUPERSEDES: N/A **EFFECTIVE DATE: 09/01/2022**

SUBJECT: PROCEDURES FOR MOBILE FOOD VENDOR INSPECTIONS

POLICY

To establish a policy and checklist which shall be used when conducting fire inspections of Mobile Food Vendors within the local jurisdictions of Brevard County, Florida. A standard countywide Mobile Food Vendor policy will assist our customers by creating consistency with inspections and encourage similar type processes across jurisdictional boundaries within Brevard County.

The following jurisdictions have agreed to abide by this guideline with initials indicated below:

Brevard County	City of Cape Canaveral	Cape Canaveral Space Force Station	City of Cocoa	City of Cocoa Beach	Town of Grant-Valkaria	Town of Indialantic
City of Indian Harbor Beach	Kennedy Space Center NASA	Town of Malabar	City of Melbourne	Town of Melbourne Beach	Town of Melbourne Village	City of Palm Bay
Town of Palm Shores	Patrick Air Force Base USAF	City of Rockledge	City of Satellite Beach	City of Titusville	City of West Melbourne	Space Florida

POLICY EXPIRATION

This Mobile Food Vendor policy, along with attachments, shall be reviewed, updated, and reinstated by the Brevard County Fire Marshals committee every three years to ensure it coincides with code cycle changes.

AUTHORITY

According to F.S. Ch. 633, as adopted by the State Fire Marshal, the current edition of the Florida Fire Prevention Code (FFPC) as the governing law relative to the regulation and prevention of fire hazards in the county. The local jurisdiction shall be vested with the authority to establish reasonable policies and procedures regarding the enforcement of the code and shall determine the appropriate permits and/or inspections that shall be required within Brevard County.

DEFINITIONS

Mobile or Temporary Cooking Operations (Food Truck) - Any cooking apparatus or equipment operated on a one-time basis, interim basis, or for less than 90 days in the same location, other than at a fixed location, building, or structure that has been inspected and permitted under another section of this *Code*, regulation, or statute (FFPC current edition NFPA 1: 3.3.187)

Mobile or temporary cooking can include self-propelled trucks and vehicles; trailered units; push carts; equipment located under cover of awnings, canopies, or pop-up tents; or other structures for which a building permit has not been issued.

Cooking equipment used in fixed, mobile, or temporary concessions, such as trucks, buses, trailers, pavilions, tents, or any form of roofed enclosure, shall comply with this standard. [FFPC current edition (NFPA 96: 4.1.9)]

PROCEDURE

Mobile Food Vendor Fire Safety Inspections shall be scheduled per the jurisdiction. Brevard County jurisdictions will utilize the adopted checklist (see appendix A), to provide consistency throughout the jurisdictions in Brevard County, Florida. Fire Inspections shall be conducted at least every six (6) months, consistent with the required hood suppression system inspection as located within the associated Mobile Food Vendor. Inspection WILL NOT proceed without valid Mobile Food Dispensing Vehicle License from State of Florida Department of Business and Professional Regulation (FDBPR) Division of Hotels and Restaurants. This license decal shall be permanently attached to the vehicle.

Mobile food service vehicles equipped with an LP-Gas system, but without a current approved LP-Gas certification, shall not be permitted to be operated for mobile food service. [FFPC current edition (NFPA 1: 50.7.2.3.4.3)]

Once the Mobile Food Vendor inspection has been approved, the Mobile Food Vendor approval decal shall be placed on the exterior of the truck, trailer, or other vehicle near the State of Florida certification. Brevard County will supply jurisdictions with the Mobile Food Vendor approval decal. (See attachment B)

If a Mobile Food Vendor is operating at an event within these jurisdictions and not due for inspection, it will be up to the AHJ's discretion as to performing an inspection for any possible gas leaks utilizing a gas leak detection device.

FEES

Special Events are charged per the local municipality, county, or special district's fee schedule, therefore, if Mobile Food Vendors are part of an event, they shall not incur additional inspection fees. If a Mobile Food Vendor requires an inspection other than at a Special Event, they may be charged per municipality, county, or special district fee schedule pursuant to Florida State Statute 633.216. "The governing body of a county, municipality, or special district that has fire safety enforcement responsibilities may provide a schedule of fees to pay only the costs of inspections conducted pursuant to this subsection and related administrative expenses."

ATTACHMENTS

CITY OF MELBOURNE FIRE DEPARTMENT
MOBILE FOOD VENDOR INSPECTION PROGRAM
MOBILE FOOD VENDOR FIRE SAFETY INSPECTION CHECKLIST

Business Name:	Business E-Mail:
Business Address:	Date of Inspection:
Business Phone:	Vehicle or Trailer ID Number:

MOBILE AND TEMPORARY COOKING OPERATIONS SHALL COMPLY WITH THE APPLICABLE SECTION FOR THE TYPE OF COOKING PERFORMED.
FFPC current edition NFPA 1: 50.7, NFPA 10: 7, NFPA 96, NFPA 58

Corrective action must be noted and executed for each "NO" answer before business can continue.

1	Florida DBPR Div. of Hotels and Restaurants Mobile Food Dispensing Vehicle License posted and valid? G1			
ACCESS		**YES**	**NO**	**N/A**
2	**Separation:** Mobile or temporary cooking operations shall be separated from buildings or structures, combustible materials, vehicles, and other cooking operations by a minimum of *25 ft.* [1:50.7.1.5]* ***G3***			
3	**Clearance (Fire Equipment):** Fire hydrants, extinguishers, sprinklers & stand pipe connections are accessible and clear of all equipment & vehicles (e.g. no parking in front of hydrants, FDC, etc.) *[1:50.7.1.7, 1:13.1.4, 1:13.1.5]* ***G5***			
4	**Clearance (Fire Lanes):** Fire lane access must be maintained (***20 feet wide***) – *[1:50.7.1.7, 1:18.2.4]* ***G4***			
5	**Clearance:** Minimum 25 feet* from buildings, vehicles, combustible materials, other mobile cooking *[1:50.7.1.5]* ***G3***			
6	**Communications:** An approved method of communication to emergency personnel shall be accessible to all employees. *[1:50.7.1.8]*			
7	**Solid fuel (wood, charcoal, etc.):** stored minimum 3 ft. from cooking appliances, ignition sources, combustible/flammable liquids; Closed metal container for ash *[96:14.9]* **G4, SA-SF**			
8	**General Safety:** Wheel chocks shall be used to prevent mobile and temporary cooking units from moving *[1:50.7.1.3]*			
FIRE PROTECTION		**YES**	**NO**	**N/A**
9	**Extinguishers:** ***Class K*** fire extinguishers shall be provided for cooking appliance hazards that involve combustible cooking media ***(Maintained/Tagged every year)***. *[1:50.7.1.4.1,* ***96****:10.9.2,* ***10****:6.6.1,* ***10****:7.1]* ***G7b***			
10	**Extinguishers:** A minimum of one ***2A:10BC*** portable fire extinguisher shall be provided when a generator or other fuel fire appliance is used ***(Maintained/Tagged Annually)***. *[1:50.7.1.4.2,* ***10****:7.1,* ***10****:7.3.4].* 2A extinguisher or hose line required if using wood or charcoal. **G7a, G7b**			
11	**Hood Suppression:** Cooking equipment that produces grease-laden vapors and that might be a source of ignition of grease in the hood, grease removal device, or duct shall be protected by fire-extinguishing equipment. *[1:50.7.2.1,* ***96****:10.1.2]* ***G6***			
12	**Maintenance:** Maintenance of the fire-extinguishing system and listed exhaust hood shall be inspected by a properly trained, qualified, and certified person acceptable by the AHJ every ***(6) months***. *[96:11.2.1]*			
13	**Cleaning**: Exhaust system shall be cleaned by a properly trained, qualified, and certified person acceptable to the AHJ ***(Tag with date)***. *[96: 11.6]* ***OD***			
LP, GENERATOR, & ELECTRICAL		**YES**	**NO**	**N/A**
14	**Clearance (3 ft. Perimeter):** Fuel shall not be stored closer than ***3ft*** to any cooking appliance. *[96:14.9.2.2]*			
15	**Generator (5 ft. Perimeter):** Portable generators shall be positioned so that the exhaust is at least *5ft* in any direction away from openings, air intakes, means of egress, or from any building, structure, or vehicle. *[1:11.7.2.2,* ***1****:50.7.1.10.2]* ***F4***			
16	**Cables, Cords & Connectors:** Electrical appliances, fixtures, equipment, or wiring (other than low-voltage) installed within or on vehicles shall be in good working order and comply with NFPA 70. *[1:50.7.1.10.3]* ***F5***			
17	**LP Cylinders:** Main shut-off valve readily accessible *[58:6.26.4.1]* ***P1*** Cylinders shall be secured in an upright position to prevent tipping over. *[1:50.7.2.2.1]* ***P2*** Minimum 5 ft from exterior source of ignition *[58:6.4.4.3]* ***P4-P8***			
18	**Connector Hose:** A flexible connector shall be installed between the regulator outlet and the fixed piping system to protect against expansion, contraction, jarring, and vibration strains. [**1**:50.7.2.4.5.1.2] [**58**:6.26.5.1(B)] **P7**			
19	**Leak Detection:** Gas systems shall be inspected prior to each use by a trained worker. Leak detection testing documentation shall be made available to the AHJ. *[1:50.7.2.3.1 –* ***1****:50.7.2.3.3; 58:6.26.5]* ***G8d, P3-P6***			
20	**CO Detector:** An approved carbon monoxide detector shall be installed where mobile cooking operations are performed in an enclosed area. *[1:50.7.1.11.2]* ***P8***			
21	**Gas Meter:** Per the AHJ's discretion, a certified Fire Inspector may use a gas meter detection device to confirm that there are no leaks.			
22	**Certification:** LP-Gas Systems on mobile food service vehicles shall be certified for compliance with NFPA 58 by a licensed company. Approved license types are *CF, RF, Class I LP Gas Dealer, and Category V LP Gas Installer. [1:50.7.2.3.4]*			
23	**Re-Certification:** The certification shall be good for ***one year unless*** an appliance is replaced or added and if a piping connection is modified in any way. *[1:50.7.2.3.4 –* ***1****:50.7.2.3.4.2].* Shall not be permitted to operate lacking LP-Gas certification *[1:50.7.2.3.4.3]*			
TRAINING		**YES**	**NO**	**N/A**
24	**Training:** Prior to performing mobile or temporary cooking operations, workers shall be trained in emergency response procedures: use of extinguishers and hood suppression system, fuel shut-off, refueling, leak detection, and fuel properties. *[1:50.7.1.9.1]*			
25	**Refresher Training**: Refresher training shall be provided every *year*. *[1:50.7.1.9.2]*			
#	**CORRECTIVE ACTION TO BE TAKEN:** **- Use the other side of this form, if additional space is needed. --**			

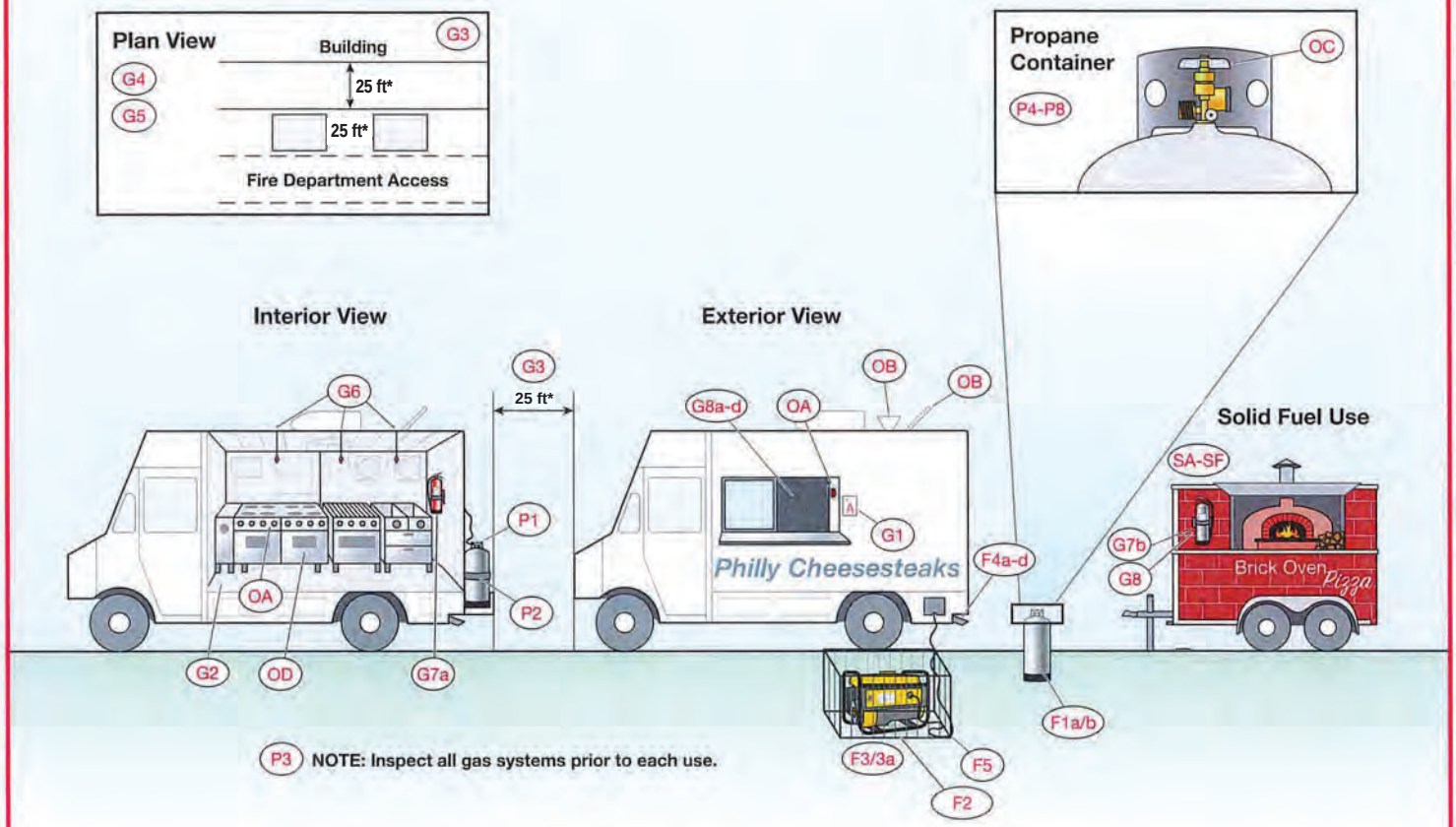
Inspector name: **Approved: Y / N** **Correction and re-inspection required:** Y / N **Approved date:**

Owner/Operator Signature:

* NASA/KSC 25 ft. separation criteria (NASA Standard 8719.11b) overrides Brevard County 10 ft. separation

FACT SHEET

FOOD TRUCK SAFETY



NFPA code references are provided at the end of each item. The red keys correspond to the NFPA food truck safety diagram. For more detailed information, see NFPA 1 and Chapter 17 in NFPA 96.

General Safety Checklist

- ❑ Obtain license or permits from the local authorities. [**1**:1.12.8(a)] **G1**
- ❑ Ensure there is no public seating within the mobile food truck. [**1**:50.8.3.2] **G2**
- ❑ Check that there is a clearance of at least **25 ft*** away from buildings, structures, vehicles, and any combustible materials. [**96**:17.2] **G3**
- ❑ Verify fire department vehicular access is provided for fire lanes and access roads. [**1**:18.2.4] **G4**
- ❑ Ensure clearance is provided for the fire department to access fire hydrants and access fire department connections. [**1**:13.1.4; **1**:13.1.5] **G5**
- ❑ Check that appliances using combustible media are protected by an approved fire extinguishing system. [**96**:10.1.2] **G6**
- ❑ Verify portable fire extinguishers have been selected and installed in kitchen cooking areas in accordance with NFPA 10. [**96**:10.9] **G7a**
- ❑ Where cooking appliances that use solid fuel, such as charcoal or wood, produce grease-laden vapors, make sure the appliances are protected by listed fire-extinguishing equipment. [**96**:15.7.1] **G7b**
- ❑ Ensure that workers are trained in the following: [**96**:17.10]: **G8**
  - ❑ Proper use of portable fire extinguishers and extinguishing systems [**96**:17.10.1(1)] **G8a**
  - ❑ Proper method of shutting off fuel sources [**96**:17.10.1(2)] **G8b**
  - ❑ Proper procedure for notifying the local fire department [**96**:17.10.1(1)] **G8c**
  - ❑ Proper procedure for how to perform simple leak test on gas connections [**96**:17.10.1(5)] **G8d**

* NASA/KSC 25 ft. separation criteria (NASA Standard 8719.11b) overrides Brevard County 10 ft. separation

FACT SHEET

FOOD TRUCK SAFETY *CONTINUED*

Fuel & Power Sources Checklist

- ❑ Verify that fuel tanks are filled to the capacity needed for uninterrupted operation during normal operating hours. [**1**:10.14.11.1 for carnivals only] **F1a**
- ❑ Ensure that refueling is conducted only during non-operating hours. [**96:**17.8.3] **F1b**
- ❑ Check that any engine-driven source of power is separated from the public by barriers, such as physical guards, fencing, or enclosures. [**96:**17.5.2.2] **F2**
- ❑ Ensure that any engine-driven source of power is shut down prior to refueling from a portable container. [**1**:10.15.4] **F3**
- ❑ Check that surfaces of engine-driven source of power are cool to the touch prior to refueling from a portable container. **F3a**
- ❑ Make sure that exhaust from engine-driven source of power complies with the following: **F4**
  - ❑ At least 12 ft in all directions from openings and air intakes [**96:**17.5.2.3(1)] **F4a**
  - ❑ At least 12 ft from every means of egress [**96:**B.13] **F4b**
  - ❑ Directed away from all buildings [**96:**17.5.2.3(2)] **F4c**
  - ❑ Directed away from all other cooking vehicles and operations [**96:**17.5.2.3(3)] **F4d**
- ❑ Ensure that all electrical appliances, fixtures, equipment, and wiring complies with the NFPA 70®.[**96:**17.8.1] **F5**

Propane System Integrity Checklist

- ❑ Check that the main shutoff valve on all gas containers is readily accessible. [**58:**6.26.4.1(3)] **P1**
- ❑ Ensure that portable gas containers are in the upright position and secured to prevent tipping over. [**58:**6.26.3.4] **P2**
- ❑ Inspect gas systems prior to each use. [**96:**17.7.2.3] **P3**
- ❑ Perform leak testing on all new gas connections of the gas system. [**58:**6.16; **58:**6.17] **P4**
- ❑ Perform leak testing on all gas connections affected by replacement of an exchangeable container. [**58:**6.16; **58:**6.17] **P5**
- ❑ Document leak testing and make documentation available for review by the authorized official. [**58:**6.26.5.1(M)] **P6**
- ❑ Ensure that on gas system piping, a flexible connector is installed between the regulator outlet and the fixed piping system. [**58:**6.26.5.1(B)] **P7**
- ❑ Where a gas detection system is installed, ensure that it is tested monthly. [**96:**17.7.2.2] **P8**

Operational Safety Checklist

- ❑ Do not leave cooking equipment unattended while it is still hot. (This is the leading cause of home structure fires and home fire injuries.) **OA**
- ❑ Operate cooking equipment only when all windows, service hatches, and ventilation sources are fully opened. [**96:**12.1.1] **OB**
- ❑ Close gas supply piping valves and gas container valves when equipment is not in use. [**58:**6.26.8.3] **OC**
- ❑ Keep cooking equipment, including the cooking ventilation system, clean by regularly removing grease. [**96:**12.4] **OD**

Solid Fuel Safety Checklist (Where Wood, Charcoal, Or Other Solid Fuel Is Used)

- ❑ Fuel is not stored above any heat-producing appliance or vent. [**96:**15.9.2.2] **SA**
- ❑ Fuel is not stored closer than 3 ft to any cooking appliance. [**96:**15.9.2.2] **SB**
- ❑ Fuel is not stored near any combustible flammable liquids, ignition sources, chemicals, and food supplies and packaged goods. [**96:**15.9.2.7] **SC**
- ❑ Fuel is not stored in the path of the ash removal or near removed ashes. [**96:**15.9.2.4] **SD**
- ❑ Ash, cinders, and other fire debris should be removed from the firebox at regular intervals and at least once a day. [**96:**15.9.3.6.1] **SE**
- ❑ Removed ashes, cinders, and other removed fire debris should be placed in a closed, metal container. [**96:**15.9.3.8.1] **SF**

Learn More

- Get free digital access to NFPA codes and standards at: nfpa.org/docinfo
- Read the latest news and updates at: nfpa.org/foodtrucksafety
- Review the following and other NFPA resources at: nfpa.org
  - NFPA 1, *Fire Code*, 2021 Edition
  - *NFPA 1 Fire Code Handbook*, 2021 Edition
  - NFPA 10, *Standard for Portable Fire Extinguishers*, 2018 Edition
  - NFPA 58, *Liquefied Petroleum Gas Code*, 2020 Edition
  - *LP-Gas Code Handbook*, 2020 Edition
  - NFPA 70®, *National Electrical Code®*, 2020 Edition
  - *National Electrical Code® Handbook*, 2020 Edition
  - NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*, 2021 Edition
  - NFPA 96: *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations Handbook*, 2017 Edition

SPACEFLORIDA BUILDING PROCESS CHECKLIST

Project: _____ **Date:** _____

PRECONSTRUCTION

PHASE 1: CONCEPT

- ❑ Tenant Questionnaire
- ❑ Lease Agreement
- ❑ Tenant/Development Concurrence on Federal Property
- ❑ SF Environmental Health & Safety Qualification
- ❑ Contractual/Frontends Submittals
- ❑ Site Survey of existing features
- ❑ Conceptual Rendering/Plan
- ❑ Explosive Siting Request
- ❑ CCSFS: USSF Commercial Space Operations Support Agreement
- ❑ KSC:
  - ❑ Sustainability Verification Preliminary Checklist
  - ❑ NASA Form 1509
  - ❑ NASA Form 1510
- ❑ Check one:
  - ❑ AF Form 332: Base Civil Engineering Work Request
  - ❑ KSC Siting Request for Site Plan Approval
- ❑ Check one:
  - ❑ AF Form 813: Environmental Impact Analysis Checklist
  - ❑ KSC 21-608 11/18: Environmental Checklist
- ❑ Schedule Pre-Application Conference

PHASE 2: DESIGN

Cover Sheet

- ❑ Date
- ❑ Project Number
- ❑ Structure ID Number (FA provides for new structures)
- ❑ Tenant contact information name, address, email address, phone number
- ❑ Design firm/consultant name, address, email address, phone number, license number
- ❑ Edition of codes utilized for design
- ❑ Scope of Work with proposed parcel use, activities, operations
- ❑ Building Code Use & Occupancy Classification
- ❑ Building Code Construction Type
- ❑ Design Occupant Load & Exiting Analysis
- ❑ Any provision of automatic sprinkler system
- ❑ U-factors of building envelope systems & signed/sealed Architect of Record's statement of Energy Code compliance
- ❑ Tabulation of building components/systems & signed/sealed Engineer of Record's statement of Energy Code compliance
- ❑ KSC: Building Rating System Sustainability Checklist & Supporting Documentation
- ❑ Project Rendering

Civil Site Drawings

Label distance dimensions:

- ❑ Signage
- ❑ Screening or fencing including hedges (elevations, materials labeled)
- ❑ Waste/recycling facilities
- ❑ Parking w/ total count & space dimensions
- ❑ Loading w/ total count, space dimensions, turning radii
- ❑ Utility Infrastructure
- ❑ Water Storage
- ❑ Stormwater Facilities
- ❑ FDOT Specs
- ❑ Civil QC 3rd Party Qualifications
- ❑ Landscape & Irrigation Plan
- ❑ Lighting Plan
- ❑ Environmental Protection Plan
- ❑ Explosives Site Plan

Attachments

- ❑ Parcel Description
- ❑ Tenant-Developed Permit Package
- ❑ Environmental Permit Application
- ❑ NEPA EA or EIS
- ❑ Check one:
  - ❑ AF Form 813: Request for Environmental Impact Analysis
  - ❑ KSC Record of Environmental Consideration (REC) w/ LOM, FONSI, etc.
- ❑ Wastewater Discharge Permit Application
- ❑ Air Emissions Permit Application
- ❑ Potable Water Permit Application
- ❑ Stormwater Discharge Permit Application
- ❑ CCSFS: Light Management Plan
- ❑ LLF:
  - ❑ Air Traffic Control Tower Line-of-Sight Study
  - ❑ FAR Part 77 Documentation
- ❑ Any waste containerizing operations
- ❑ AHJ approval of QFPE & Fire Stopping/Fireproofing company
- ❑ Delegated Designs/Deferred Submittals list
- ❑ Completed Responses to any Requests for Additional Information
- ❑ Application Review Fee

Architectural Plans

Label dimensions:

- ❑ Signage (elevations, materials labeled)
- ❑ Floor plans (uses labeled)
- ❑ Roof plan w/ ridge elevations, rooftop equipment, equipment screening elevations
- ❑ Cross-sections
- ❑ Elevations (materials labeled)
- ❑ Structural Plan
- ❑ Fire Protection Plan (Suppression, Fire Alarm System, Life Safety)
- ❑ Plumbing Plan
- ❑ Mechanical Plan
- ❑ Electrical Plan

SPACEFLORIDA BUILDING PROCESS CHECKLIST

Project: _____ **Date:** _____

PRECONSTRUCTION

PHASE 3: APPLICATION

Final Plans

Final Drawings Signed/Sealed:

- ❍ Civil Plans
- ❍ Grading/drainage Plan w/ natural & proposed grade contours
  - ❍ Exterior features (walks, courtyards, screening, etc.)
  - ❍ FDOT Specs
- ❍ Landscape & Irrigation Plan
- ❍ Architectural Plans
- ❍ Structural Plan
- ❍ Fire Protection Plan (Suppression, Fire Alarm System, Life Safety)
- ❍ Hydraulic analysis & QFPE Design Analysis
- ❍ Plumbing Plan
- ❍ Mechanical Plan
- ❍ Electrical Plan
- ❍ Lighting Plan
- ❍ Environmental Protection Plan
- ❍ Spill Prevention, Control, & Countermeasures Plan if storing oil

Construction Mgmt.

- ❍ Introduction
- ❍ Contractor Key Personnel & AHJ Emergency Contact Information
- ❍ Construction Utilization Layout w/ temporary offices, trailers, utilities, tanks, storage, signage, equipment, laydown, MOT, erosion control facilities, etc.
- ❍ Traffic Control Plan
- ❍ Health & Safety Plan w/ Hurricane Preparedness Plan
- ❍ Quality Control Plan – Inspections & QA/QC Testing
- ❍ Construction Schedule and Phasing Plan if applicable
- ❍ Schedule of Values
- ❍ Submittal Register
- ❍ Deferred Submittals Anticipated
- ❍ Hydrant Flow Verification for adequate water supply
- ❍ Threshold Plan & Pile requirements

Advance Permits

- ❍ Check 1 or 2:
  - ❍ AF Form 103 Dig Permit w/ AF Form 332
  - ❍ USAF 45th Airfield Construction Waiver
  - ❍ KSC Form 26-312: Utility Locate/Excavation Permit Request
  - ❍ KSC Form 50-1: Excavation Category Waiver
- ❍ SJWMD Environmental Resource Permit (ERP) for Stormwater Management
- ❍ FDEP:
  - ❍ Air Emissions Permit
  - ❍ Stormwater Permit / Stormwater Pollution Prevention Plan for wetlands dredge/fill
  - ❍ Potable Water / Wastewater Construction Permit
  - ❍ NPDES Stormwater Discharge for Construction Permit
  - ❍ USACE Dredge & Fill Permit
- ❍ USSF Wastewater Discharge Permit
- ❍ KSC:
  - ❍ Form 2-271: Hot Work Permit
  - ❍ NASA domestic wastewater discharge approval
  - ❍ FHWA Oversize/Overweight Load Permit
- ❍ Burn Permit
- ❍ Check one:
  - ❍ USSF 45 MSG Detachment 1 approval per OI 10-101
  - ❍ NASA Oversized Vehicles KSC Permit
- ❍ Check one if applicable:
  - ❍ FAA 7460 OE/AAA
  - ❍ USSF SLD 45 Airfield Waiver w/ Description & Risk Assessment

Attachments

- ❍ Check one:
  - ❍ AF Form 1354 Transfer & Acceptance of DoD Real Property
  - ❍ NASA Form 1046 Transfer / Notification of Acceptance of Accountability of Real Property
- ❍ Performance & Payment Bonds
- ❍ Certification of Insurance
- ❍ KSC:
  - ❍ Form 50-202 Task Order Request for Utility Outage
  - ❍ Building Rating System Sustainability Checklist & Supporting Documentation
  - ❍ Approved NASA Form 1509
- ❍ CCSFS:
  - ❍ C-CS-FRM-01 CLOIS Support Request
  - ❍ Department of Navy/NOTU
- ❍ FBC Agent / AHJ Letter of Recommendation for Permit Issuance (fire system documentation & shop drawings signed/sealed, hydraulic calculations, data; Tenant obtains QFPE approval)
- ❍ Notice of Commencement to applicable agencies:
  - ❍ FDEP Water
  - ❍ FDEP Wastewater
  - ❍ SJRWMD
  - ❍ USACE
  - ❍ Brevard County
- ❍ FDEP NPDES NOI
- ❍ Completed Responses to any Requests for Additional Information
- ❍ Written SF Variance Approvals
- ❍ Approved Planning Review of Development Standards
- ❍ SF Notice to Proceed
- ❍ Permit Issuance Fee
- ❍ Schedule Pre-Construction Conference

SPACEFLORIDA BUILDING PROCESS CHECKLIST

Project: _____ **Date:** _____

ACTIVE PERMIT

PHASE 4: CONSTRUCTION

- ❍ SF Stamped Plan Set kept at job site
- ❍ Maintain at job site copies of all required environmental permits, licenses, registrations, regulatory approvals, waste manifests, laboratory analyses, reports, plans, compliance records, NASA ECs, regulatory notifications
- ❍ Schedule inspections & call to confirm each
- ❍ Monthly NPDES Inspection Reports
- ❍ Threshold Inspector Reports
- ❍ Civil QC 3rd Party Inspection Reports
- ❍ FBC Agent Inspection Reports
- ❍ QFPE Inspection Reports (Suppression, Fire Alarm System, Life Safety)
- ❍ QFPE Elevator State Inspection Reports
- ❍ Environmental Protection Plan Implementation
- ❍ OSHA Compliance Inspection Reports
- ❍ Equipment Inspection Reports
- ❍ Quality Hold Point Inspection Reports per Design Documents
- ❍ Petroleum Tank Storage Installation Registration & Inspection Reports
- ❍ Mobile Food Vendor Inspection Reports
- ❍ Posted Street Address
- ❍ Posted Building Number
- ❍ Posted Occupancy Placards
- ❍ Cast-in-Place Concrete Formwork & Reinforcement Placement
- ❍ Contract Specifications: Earthwork/Excavation of Unsuitable Material/Concrete/Structural Components & Disposal Locations/Methodology
- ❍ Material Testing & Reporting Documents
- ❍ HVAC/Controls Drawings
- ❍ Utility Outages/Connection [for KSC: BOSS Form MSO-F-0004 (6/19)]
- ❍ Substantial Completion for Each Phase
- ❍ AHJ/Life Safety Systems Certificate Issuance Inspection Report
- ❍ SF Final Inspection for CO, CoC, TCO
- ❍ Reinspection Fee as required

PHASE 5: CLOSEOUT

- ❍ As-Builts Signed/Sealed:
  - ❍ AutoCAD Files
  - ❍ GIS Shapefiles
  - ❍ PDF Documents
- ❍ Facility Operations & Maintenance Manual
- ❍ Lighting Operation Manual
- ❍ Fire Department Access Procedure (gate access, lockbox, etc.)
- ❍ Life Safety Plan
- ❍ Certificate of Materials
- ❍ Spare Parts/Attic Stock
- ❍ Warranties transferred to SF
- ❍ Service Agreements
- ❍ Testing Reports/Manufacturer's Start-Up Reports
- ❍ Commissioning Documentation
- ❍ Release of Liens
- ❍ Punch List Completion
- ❍ Applicable Contractual Deliverables
- ❍ KSC: Sustainability Rating Verification
- ❍ Permitting Agency Closeout
- ❍ FBC Agent Letter of Recommendation for CO (or CoC if applicable)
- ❍ QFPE Letter of Compliance
- ❍ AHJ/Life Safety CO Letter
- ❍ Completed Responses to any Requests for Additional Information
- ❍ SF Final CO

SPACE FLORIDA

Facility CO Inspection Checklist

Status Date:

1st Floor	Inspection/Request Type	Approval Date	Approved By
NASA Fire Dept.	Above Ceiling		
NASA Fire Dept.	Final Life Safety		
NASA Fire Dept.	Final Sprinklers		
NASA Fire Dept.	Final Fire Alarm		
SF Building Dept	Above Ceiling		
SF Building Dept	Final Electrical		
SF Building Dept	Final Mechanical		
SF Building Dept	Final Plumbing		
SF Building Dept	Final Building		
SF Building Dept	Final Energy		
SF Building Dept	Final Accessibility		
Mezzanine Floor	**Inspection/Request Type**	**Approval Date**	**Approved By**
NASA Fire Dept.	Above Ceiling		
NASA Fire Dept.	Final Life Safety		
NASA Fire Dept.	Final Sprinklers		
NASA Fire Dept.	Final Fire Alarm		
SF Building Dept	Above Ceiling		
SF Building Dept	Final Electrical		
SF Building Dept	Final Mechanical		
SF Building Dept	Final Plumbing		
SF Building Dept	Final Building		
SF Building Dept	Final Energy		
SF Building Dept	Final Accessibility		
SF Building Dept	Final Gas		
2nd Floor	**Inspection/Request Type**	**Approval Date**	**Approved By**
NASA Fire Dept.	Above Ceiling		
NASA Fire Dept.	Final Life Safety		
NASA Fire Dept.	Final Sprinklers		
NASA Fire Dept.	Final Fire Alarm		
SF Building Dept	Above Ceiling		
SF Building Dept	Final Electrical		
SF Building Dept	Final Mechanical		
SF Building Dept	Final Plumbing		
SF Building Dept	Final Building		
SF Building Dept	Final Energy		
SF Building Dept	Final Accessibility		

SPACE FLORIDA

Facility CO Inspection Checklist

Building Overall	Inspection/Request Type	Approval Date	Approved By
Space Florida	Street address posted		
Space Florida	Site Civil ✓ Asphalt ✓ drainage ✓ Striping ✓ Signage ✓ Concrete ✓ ADA ✓ Lighting ✓ Landscaping		
SF Building Dept	System Commissioning C408(Energy Code)		
SF Building Dept	Occupancy placards posted		
SF Building Dept	Threshold Inspector Letter		
NASA Fire Dept.	Fire System Flush Test		
NASA Fire Dept.	Fire System Hydro Test		
NASA Fire Dept.	Fire Pump Final		
NASA Fire Dept.	Fire Site Final		
State of Florida/NASA	Environmental		
State of Florida	Elevator Approval		
Space Florida	KSC Building number posted		

SPACEFLORIDA

Cape Canaveral Spaceport Development Manual

VOLUME 2

KENNEDY SPACE CENTER

(KSC)

SPACEFLORIDA

Cape Canaveral Spaceport Development Manual

VOLUME 2
KENNEDY SPACE CENTER (KSC)

CHAPTER 1
GENERAL KSC REQUIREMENTS

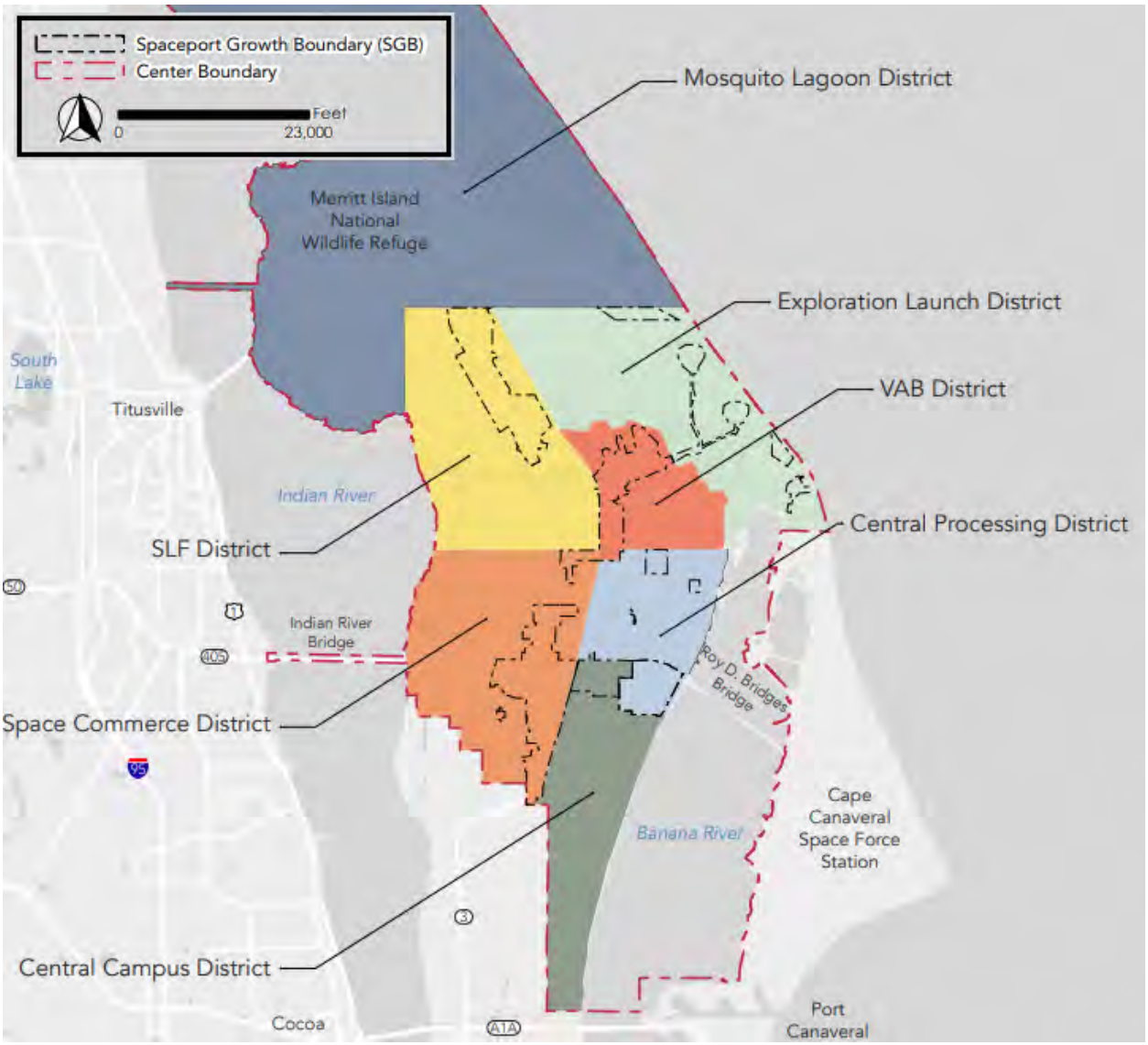
TABLE OF CONTENTS

SECTION 1 – KSC OVERVIEW

This Chapter highlights common requirements of the multiple agencies associated with the processes and design/construction standards for development of CCS infrastructure and facilities on land under the responsibility of SF within the boundaries of Kennedy Space Center (KSC). Within this Volume, "CCS" refers only to that portion within KSC as outlined in Figure 2-1. For additional site-specific requirements:

- ✧ Volume 2, Chapter 2 – Launch & Landing Facility (LLF)
- ✧ Volume 2, Chapter 3 – Space Commerce District (SCD) including Exploration Park

Figure 1: KSC Planning Districts Map



1.1 Coordination

SF is point-of-contact between Tenant and NASA including NASA support contractors. While NASA holds responsibility for certain reviews described herein, SF remains the governing authority.

Kennedy NASA Procedural Requirements (KNPR) and NASA Procedural Requirements (NPR) apply to development and operation of facilities at the CCS; Tenant is responsible for compliance with applicable NASA procedural requirements in Table 3.

- https://procurement.ksc.nasa.gov/PPD/Documents
- https://tdglobal.ksc.nasa.gov/search/general.html
- https://nodis3.gsfc.nasa.gov

Table 1: NASA Procedural Requirements

Section	Description	LLF	EP	PF	LC
KNPR 8715.3-3	KSC Safety Procedural Requirements	X	X	X	X
KNPR 8715.5	Range Flight Safety Program Requirements	X			X
KNPR 1860.1	KSC Radiation Protection Program	X	X	X	X
KNPR 1860.2	KSC Nonionizing Radiation Protection Program	X	X	X	X
NASA Form 1509	Facility Project - Brief Project Document	X	X	X	X
NASA Form 1510	Facility Project Cost Estimate	X	X	X	X
NASA STD 8719.11	Safety Standard for Fire Protection	X	X	X	X
KSC STD E-0012	Facility Grounding & Lightning Protection	X		X	X
KNPR 9715.2	Comprehensive Emergency Management Plan	X	X	X	X
KSC Form 21-608	NASA Environmental Checklist	X	X	X	X
KCA 4185	Programmatic Agreement for Management of Historic Properties	X	X		X
KSC Form 21-555	NASA Pollution Incident Report	X		X	X
NASA Form 1046	Transfer and/or Notification of Acceptance of Accountability of Real Property	X	X	X	X
KNPR 8830.1	Facility Asset Management Procedural Requirements	X	X	X	X

LLF: Launch & Land Facility; EP: Exploration Park; PF: Processing and Other Facilities; LC: Launch Complexes

1.2 Agency Regulations

Regulations within Table 2 apply to projects as designated with "X".

Table 2: Agency Regulations

Regulation	Reference	Description	LLF	EP	PF	LC
Florida Statute	255.253	Sustainable Building Rating	X	X	X	X
Protection of Historic Properties	36 CFR Part 800	Protection of Historical Properties	X			X
Florida Statute	373	Water Resources	X	X	X	X
29 U.S. Code	Chapter 15	Occupational Safety & Health	X	X	X	X
Hazardous Materials	40 CFR Part 302	Designation, Reportable Quantities, & Notification	X		X	X
	40 CFR Part 355	Emergency Planning & Notification	X		X	X
	49 CFR Parts 171-180	Hazardous Materials Regulations	X		X	X
	Title 40 Part 112	Oil Pollution Prevention	X		X	X
10 U.S Code	Section 2692	Storage, Treatment, & Disposal of Non-Defense Toxic & Hazardous Materials		X		
Florida Administrative	FAC Chapter 62-150	Hazardous Substance Release Notification	X		X	X

Code	FAC Chapter 62-770	Petroleum Contamination Site Cleanup Criteria	X		X	X
Petroleum Storage Tanks	FAC Chapter 62-761	Underground Storage Tank (UST) Systems	X	X	X	X
	FAC Chapter 62-762	Aboveground Storage Tank (AST) Systems	X	X	X	X
Davis Bacon Act*	40 U.S.C. 3141-3148	Local prevailing wages on public works projects for laborers & mechanics	X	X	X	X
FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance (Florida Greenbook) for Streets and Highways		Streets & Roadways	X	X	X	X

LLF: Launch & Land Facility; EP: Exploration Park; PF: Processing and Other Facilities; LC: Launch Complexes
**Use Davis Bacon Act wage rates only when applicable*

1.3 Deconfliction

NASA manages Spaceport Integrated Master Schedule (SIMS) to coordinate maintenance tasks and track resources, major hazards, and other relevant information throughout KSC. Accordingly, alert SF in advance of any of the following activities.

- ✧ Launch, landing, and/or recovery operations
- ✧ Major operations testing (e.g., wet dress rehearsal, launch abort testing, static fire operations)
- ✧ Planned cryogenic fuels usage (does not include LOX), hypergolic materials, or ammonia fluids requiring >50' safety clearance
- ✧ Planned ordnance, explosives, solid propellant, other hazardous operations requiring >50' safety clearance
- ✧ Nuclear materials operations
- ✧ Unmanned aircraft systems operations over areas outside Premises
- ✧ Operations utilizing Class 3B & 4 lasers, unless hazards are confined to a specific location within a facility or facility boundary
- ✧ Specific routing of flight hardware or significant science arriving on, transiting through, or departing KSC with air quality concerns or restrictions, or which require permitting, including any load movement exceeding KSC road/bridge width or weight restrictions
- ✧ Instances of documented increased facility air quality restrictions
- ✧ Operations requiring large-volume-usage of the NASA nitrogen & helium pipelines as described by:
  - o Low pressure gaseous nitrogen (GN2) - any use
  - o High pressure GN2 – any required additional flows of 1,000 standard cubic feet per minute for >1 hour or any required pressures >4,200 pounds per square inch gage (psig)
  - o Gaseous Helium (GHe) – any required taking of >50,000 standard cubic feet (scf) or any required pressure >4,500 psig
- ✧ Roadblocks or road closures on KSC
- ✧ Operations requiring use FAA-defined restricted airspace designations (R2932, R2933, R2934)
- ✧ Construction activities or large construction equipment/material moves that could reasonably be anticipated to impact spaceport users' operations
- ✧ Significant spaceport user-identified milestones associated with operations (e.g., facility readiness to support operations, certificates of occupancy, or major ground system acceptance/activation)
- ✧ Operations requiring radio frequency (RF) silence or RF restrictions
- ✧ Public affairs/media events that could reasonably be anticipated to impact spaceport user operations
- ✧ Other operations or events that could potentially adversely impact spaceport users (e.g., large quantity FireX flows >10 gallons/minute or flushing operations using potable water, any water tower fills, large electrical loading/power usage, non-standard or off-nominal infrastructure usage/modification)

NASA manages Multi-user Spaceport Conflict Resolution Board (MSCRB) Process to resolve critical resource conflicts and overlapping hazardous operation clearances.

1. First-come, first-served prioritization for Eastern Range Scheduling Office, resource provider, or hazardous operations requests
2. NASA works to resolve conflicts between resource providers, requesting users, & relevant stakeholders in accordance with resource provider capabilities & rules and requestor's agreements
3. SI-I1 Customer Advocates assist in facilitating acceptable solution when necessary; if unable, issue elevates to the appropriate senior manager for the conflicting entities (e.g., Program Manager or Launch Director)

KSC Duty Office (321-861-5464) manages real-time coordination during operations which impact or could reasonably be anticipated to impact KSC operations outside premises.

1.4 Security

- ✧ NASA provides security, fire, and emergency response service and routine patrol in accordance with service levels specified in the Reimbursable Space Act Agreement (RSAA), based on developed square footage, building type, and occupancy type
- ✧ NASA coordinates law enforcement activities with the Brevard County Sheriff's Office (BCSO)
- ✧ Tenants responsible for security for entry to, or activities within, individual Tenant facilities
- ✧ All vehicles, construction equipment, & personnel entering KSC are subject to NASA inspection
- ✧ All occupants shall comply with the most current version of (KNPR) 8715.3-3, KSC Safety Procedural Requirements for Partners Operating in Exclusive-Use Facilities

1.5 Flow Charts

KSC Site Development Preliminary Process (Figure 1), KSC Site Design Development Process (Figure 2), KSC Construction Phase Process (Figure 3), and KSC Construction Inspection Process (Figure 4) convey the general processes for approval.

Figure 2: KSC Site Preliminary Process

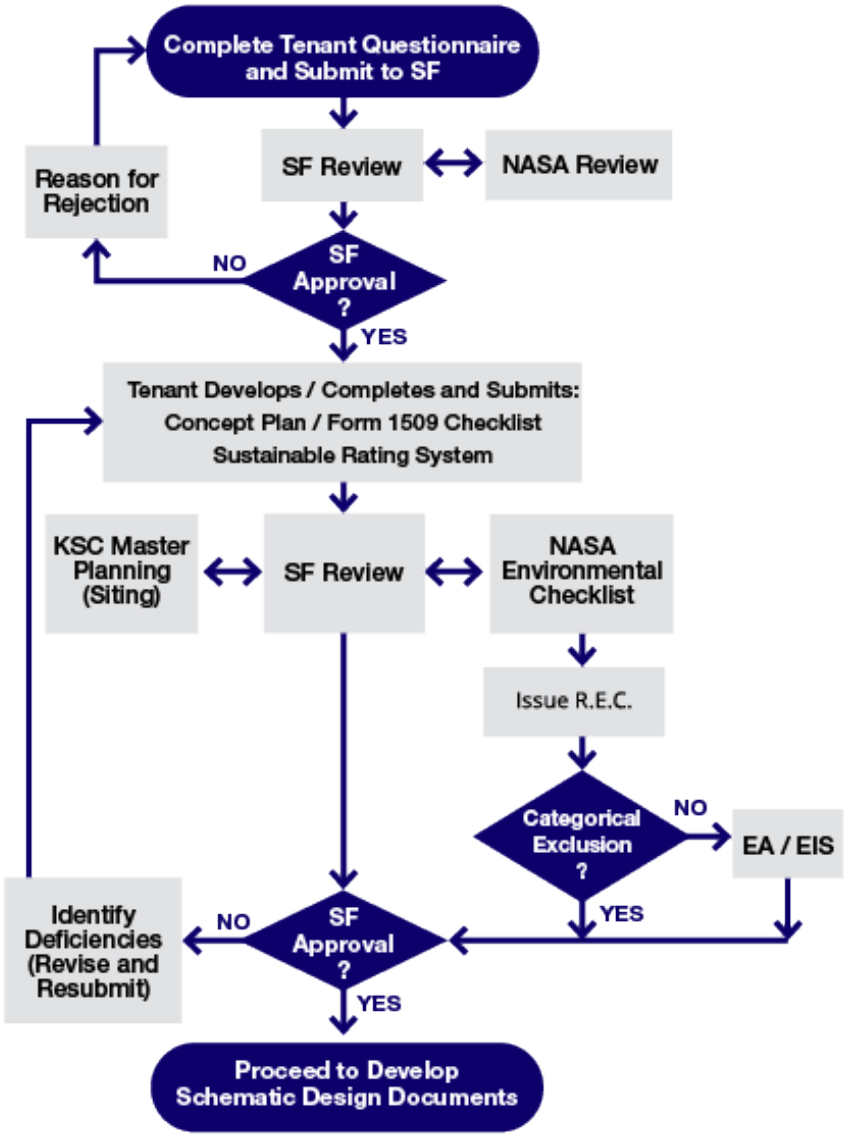


Figure 3: KSC Site Design Process

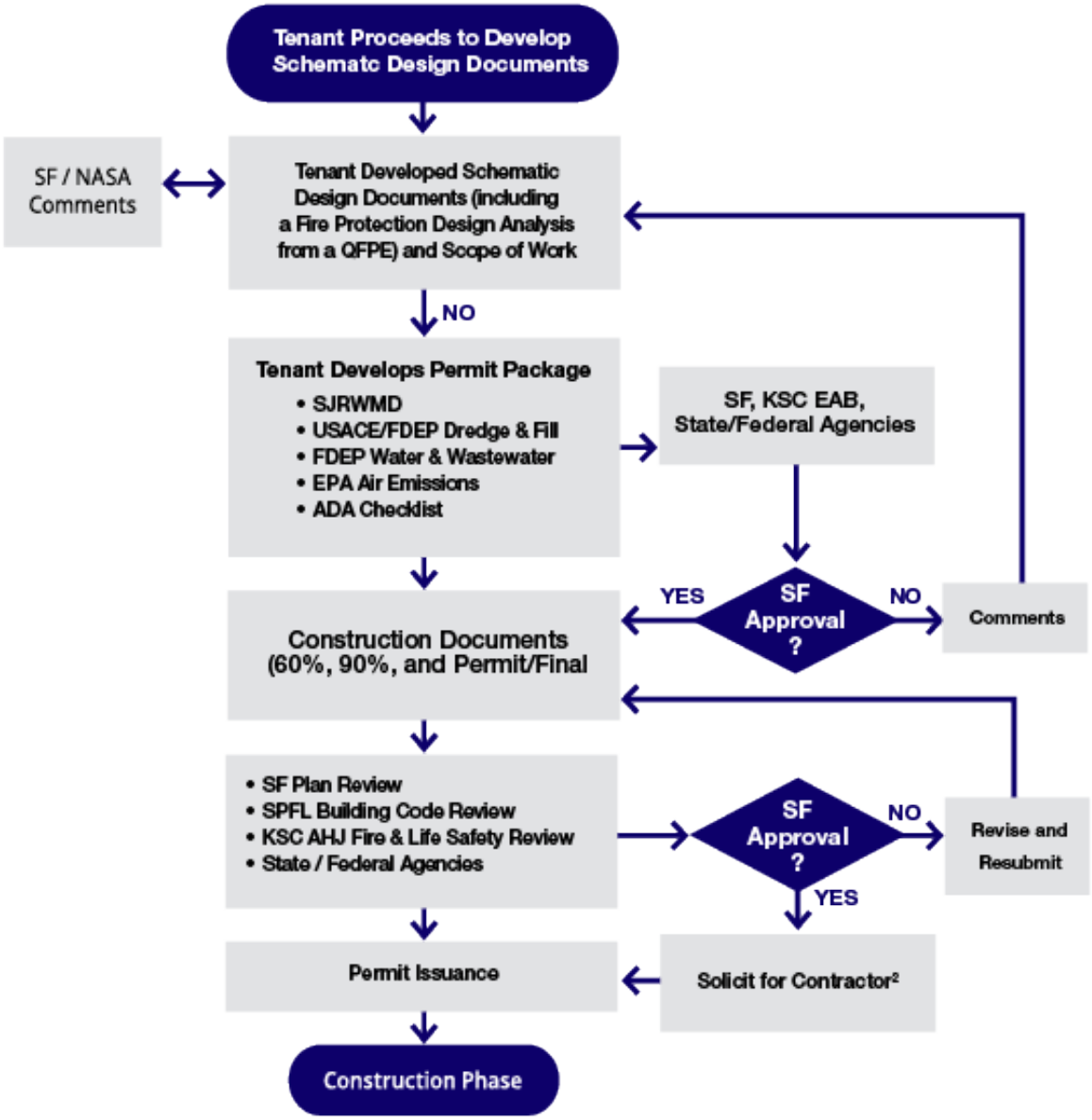


Figure 4: KSC Construction Process

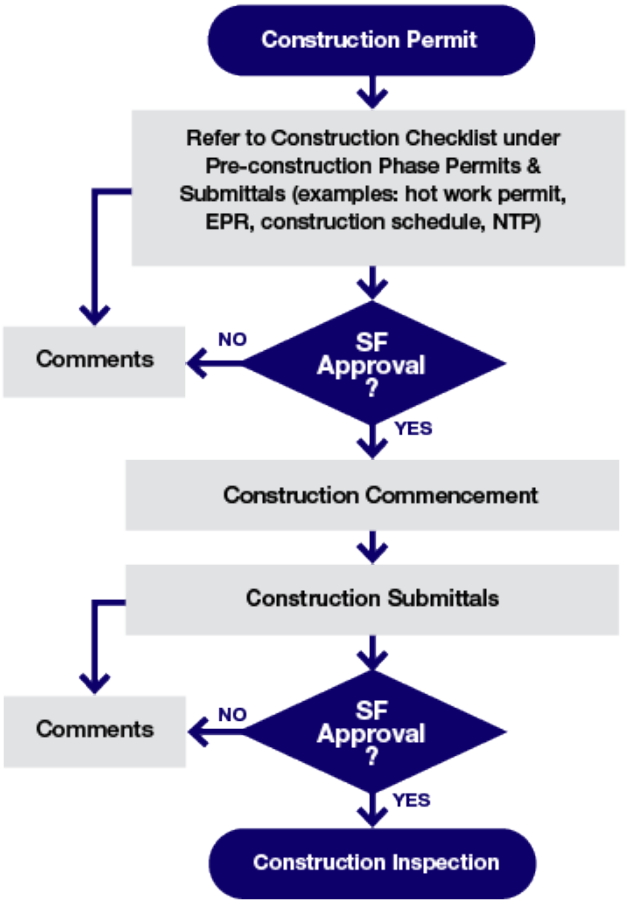
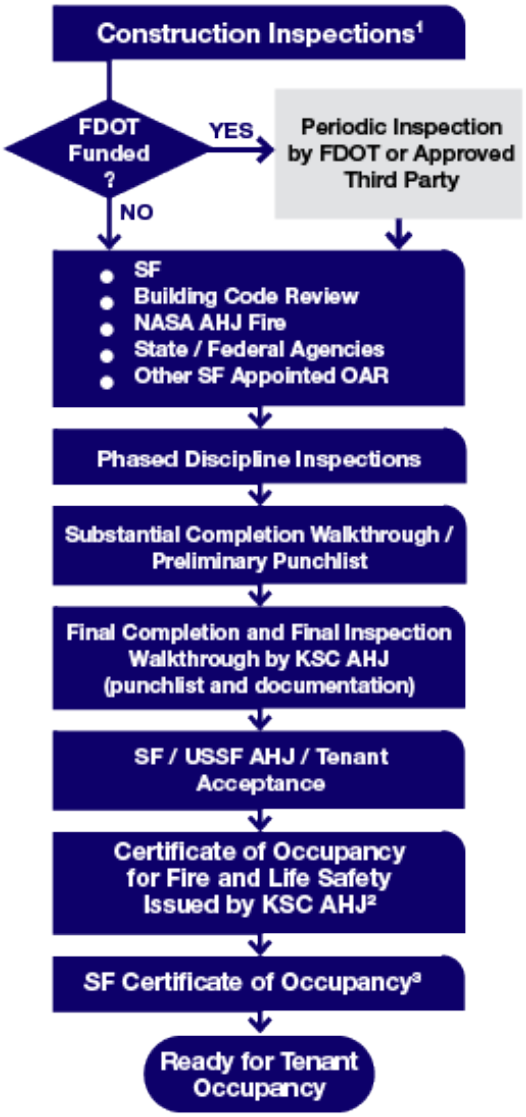


Figure 5: KSC Inspection Process



SECTION 2 – KSC USE

- ✧ Land use shall conform with SF & KSC master plans
- ✧ SF and NASA reserve the right to approve or restrict land use to accommodate changes in market conditions or regulations
  - o LLF: see Volume 2, Chapter 2, Section 2
  - o SCD: see Volume 2, Chapter 3, Section 2
  - o Other locations: see applicable lease
- ✧ Submit explosive siting analysis in accordance with KSC NASA Standard NASA-STD-8719.12A
- ✧ Request Variance for long-term use of trailers

SECTION 3 – KSC DESIGN

3.1 Goals

- ✧ Promote a cohesive physical environment.
- ✧ Encourage the creativity of building and site designers.
- ✧ Design for visual interest and promote interaction with thoughtfulness and care.
- ✧ Allow flexibility to achieve the ultimate goals and concepts described herein.
- ✧ Encourage a variety of design expressions.
- ✧ Develop a strong contextual tie to the environment.
- ✧ Maintain a coherent identity and distinct sense of place.

3.2 Transportation

3.2.1 Parking & Loading

- ✧ Minimum required setbacks:
  - o 15’ from parcel lines
  - o 25’ from right-of-way
  - o 150’ from street centerline intersections
- ✧ Prohibited locations:
  - o Along driveways or streets within parcel
  - o On landscaping, dirt, or gravel
- ✧ Visually screen long-term truck parking with fencing/landscaping
- ✧ Stripe & pave all spaces (request Variance for pervious surface with maintenance plan)

3.2.2 Landscaped Islands

- ✧ Install landscaped island equal to the area of ≥1 parking space at both ends of every row of parking
- ✧ Install additional parking space-sized landscape islands so that no parking space is more than 20 parking spaces from a landscaped island

3.2.3 Loading Location

- ✧ Within side or rear yard
- ✧ Screen from front yard view
- ✧ Fully accommodate loading vehicle turnaround movement within parcel
- ✧ Request Variance for shared or cross dock loading area on adjacent parcels

3.2.4 Electric Vehicle Charging

KSC follows NFPA 70 of the NEC to assure safety near Electrical Vehicle Service Equipment (EVSE).

- ✧ KSC AHJ approves location & operation of all Electric Vehicle charging stations
  - o Locate outdoors ≥25' from buildings & combustibles
  - o AHJ may require further separation from other hazards
- ✧ Install disconnecting means:
  - o In readily accessible location for EVSE & Wireless Power Transfer Equipment rated >60 amperes or >150 volts to ground
  - o If installed remote from the equipment, install plaque upon equipment denoting location of disconnecting means
  - o Maintain as lockable in open position
- ✧ Emergency disconnect:
  - o Compliant with 2023 NEC Article 625.43
  - o Readily accessible to first responders
  - o 20-100' from charging station & within sight of each other
  - o At 42-48" height
  - o AHJ-approved signage

Violation:

- ✧ Heads of primary organizations are responsible for submitting possible violations & associated points of contact to KSC AHJ in a timely manner
- ✧ AHJ may investigate possible violations
- ✧ KSC Chief of the Office of Protective Services notifies personnel in violation

3.3 Site

3.3.1 Development Standards

- ✧ Maximum parcel coverage:
  - o 50% building
  - o 85% impervious
- ✧ Minimum building setbacks:
  - o 25' to parcel lines
  - o 50' to right-of-way
  - o 1,500' to runway centerline
- ✧ Minimum irrigated landscape buffer:
  - o 15' to parcel lines
  - o 25' to street curb
  - o 15% of parcel

3.3.2 Landscaping

- ✧ Install turf, shrubs, & plants in all non-paved parcel areas
- ✧ Maintain trees, hedges, & shrubs out of motorist sightlines
- ✧ 1:3 maximum landscaping grade
- ✧ Select plants/shrubs based on soil conditions, low water requirements / summer drought tolerance, ease of maintenance, & native vegetation compatibility
- ✧ Xeriscape encouraged
- ✧ Maximize native plant species; reference Florida Native Plant Society (FNPS)
- ✧ Reference KSC Native Species List Guide (see Appendix) for prohibited invasive species & KSC native species list (FNPS takes precedence)
- ✧ Design in compatibility with MINWR's natural conditions
- ✧ No landscaping that attracts wildlife (i.e., fruit trees)
- ✧ Tenant responsible for irrigation

3.4 Architecture

Consider demonstration projects that engage new technologies in partnership with other CCS entities.

3.4.1 Building Envelope

Recognizing unique operations of CCS Tenants, SF recommends but may not require the following.

- ✧ Avoid single, large, box-like building masses when operations allow for changes in building mass
- ✧ Accent building entries by material differentiation, enhancements, & accessible design
- ✧ Utilize durable exterior building materials (brick, cast in place concrete, pre-cast concrete, stone, concrete block, natural metals, anodized aluminum, clear glass, natural stone); no reflective glass or Exterior Insulation and Finish Systems (EIFS)
- ✧ Select building material & architecture compatible with CCS master plan & coastal Florida context
- ✧ Use only shades of gray, silver, or light colors; request Variance for bold or bright colors
- ✧ Do not paint brick
- ✧ Apply glare-controlled material on all exterior structures
- ✧ Exterior fixtures such as solar panels require FAA approval where applicable
- ✧ Request Variance for any external antenna, dish, tower, or similar structure

3.4.2 Protection

- ✧ Provide weather protection over building entryways
- ✧ Provide sun protection over window openings
- ✧ Implement acoustic noise reduction measures where applicable
- ✧ Design discrete security infrastructure; no razor-wire or similar
- ✧ Include Foreign Object Debris prevention measures near flight lines or runway access
- ✧ Incorporate FBC environmental design factors (wind damage prevention, mold prevention, insect protection)
- ✧ Non-combustible construction recommended
- ✧ Shade areas close to buildings

3.4.3 Screening

- ✧ Acceptable screening materials: earth mounding, landscaping, walls, fencing, (request Variance for any other material)
- ✧ Rooftop mechanical equipment: position or screen from ground level view
- ✧ Ground-level mechanical & electrical equipment (tanks, transformers, generators, etc.): screen or enclose within a structure integrated into the building, preventing direct sightline from right-of-way
- ✧ Waste & outdoor storage (materials, products, equipment, trash, recycling):
  - o Screen on all sides
  - o Provide overhead cover
  - o Locate within rear or side setback, not facing street
- ✧ Screen fencing with landscape buffer, otherwise request Variance

3.4.4 Signage

- ✧ Design:
  - o ≤4 colors including black & white; request Variance for more
  - o No hand-painted, animated, flashing, or moving signs (including illusions)
  - o No vacuum-formed plastic lettering
  - o No interference with traveler safety
  - o No use of NASA or SF name or logo
  - o Remove all temporary construction/marketing signage by CO

- ✧ Wall signs:
  - o Mounted flat on wall surface
  - o ≤1' depth from surface
  - o Wholly below roof line
  - o ≤30% façade coverage
- ✧ Freestanding signs:
  - o ≤6' height
  - o ≥10' from entrance drive
  - o ≥30' from right-of-way & parcel lines
  - o Site freestanding signs:
    - 1/parcel (request Variance for more)
    - Located at primary parcel entrance
  - o Building freestanding or facia signs:
    - 1 per building façade
    - Located at primary building entrance

3.4.5 Exterior Lighting

- ✧ Fixtures:
  - o Only allowed for internal lighting of signs, security, exterior lighting of overall building surfaces, and safety illuminations of adjacent streets, parking areas, loading areas, service areas, access drives, walkways, and building entrances
  - o Amber lights with low frequency required for all KSC properties
  - o All parking lots, loading areas, service areas, pedestrian walkways, and security lights, whether wall-mounted or freestanding, must use concealed source fixtures, where lenses do not project below the opaque section of the fixture
- ✧ Prohibited:
  - o Excessive glare or reflection cast beyond subject parcel
  - o Flashing, animated, or intermittent lighting visible from any building exterior
- ✧ Describe light use & operation methodologies aimed at reducing adverse impact of artificial lighting
- ✧ See NASA's KSC Exterior Lighting Requirements in Appendix

3.4.6 Noise

- ✧ Reduce indoor-to-outdoor sound transfer to applicable levels per Shell Isolation Rating (SIR) method (see U.S. Department of Commerce, National Bureau of Standards (NBS) "Design Guide for Reducing Transportation Noise In and Around Buildings" of Building Science Series No. 84)
- ✧ Utilize suitable building material combination and execute construction details in accordance with established architectural & acoustical principles
- ✧ Consider all possible paths into facility (walls, roofs, windows, doors, ventilation openings, etc.)

3.5 Sustainability Rating

SF commits to conserving energy and natural resources through sustainable design practices intended to conserve energy, water, and other renewable & non-renewable resources.

- ✧ Incorporate State of Florida Sustainability Standards into design & construction
- ✧ Qualify under rating system per FS Section 255.253
  - o Options:
    - United States Green Building Council (USGBC) Leadership in Energy & Environmental Design (LEED) Silver certification
    - Green Building Initiative's Green Globes (GBIGG) 2 Globes certification
    - Florida Green Building Coalition (FGBC) Silver certification
    - Request Variance to utilize another green building rating system
    - Apply latest released version in effect at design commencement
  - o Certification:
    - Not mandatory, but strongly encouraged

- If not seeking certification, a qualified, credentialed, SF-approved third party may verify qualification during planning, design, construction, and operational phases to score & certify project under selected rating scorecard/checklist

  - Credit for Exploration Park infrastructure & site features may count toward score as appropriate
  - SF/NASA may waive requirements should Tenant demonstrate infeasibility due to the nature of the construction or planned operations
  - Prior to certificate of occupancy, Tenant/SF provides proof of rating system agency registration and scoring documentation demonstrating qualification of agreed upon rating level

- International Green Construction Code (IGCC) is not a standard but serves as a jurisdictional and municipal building code for new construction and major renovations
- Consider location within MINWR & Canaveral National Seashore through habitat restoration and native materials

SECTION 4 – KSC APPLICATION REVIEW

4.1 Pre-Application Conference

Determine need for NASA Form 1046 for any property transfer to SF or NASA (typically defined in property agreement)

4.2 NASA Form 1509

- ✧ EARLY IN THE DESIGN PROCESS, submit NASA Form 1509 Facility Project - Brief Project Document (see Appendix) for any new improvement valued $100,000+ along with:
  - o Drawings
  - o Certification pursuit of selected rating system, level, and track
  - o Cost estimate and, if applicable, Form 1510 Facility Project Cost Estimate
  - o Lease agreement may require additional information
  - o NASA may require independent 3rd party verification/compliance of design documents
- ✧ SUBMIT EARLY as some projects require NASA Headquarters approval
- ✧ Support project presentation to NASA Configuration Control Board accordingly

4.3 KSC Environmental Checklist

- ✧ Identifies applicable environmental regulations for proposed work, structure, or facility
- ✧ Submit KSC Form 21-608 11/18 - KSC Environmental Checklist (see Appendix) for projects with potential environmental impact including engineering investigations (geotechnical borings, archaeological surveys, etc.)
- ✧ SF signs & submits to NASA to determine categorical exclusions and issue Record of Environmental Consideration (REC) conditioned upon development requirements

4.4 Siting Approval

- ✧ Submit preliminary dimensioned site layout with short project description
- ✧ SF submits Siting Request package for NASA approval (~1 month multidepartmental review)
- ✧ NASA issues KSC Building Number for each approved facility
- ✧ Should Tenant need GIS/other records for existing conditions etc. to complete plans, SF's NASA Liaison manages request through NASA Engineering Document Center

4.5 Stormwater Management Permitting

- ✧ Surface Water & Stormwater Management System is under St. Johns River Water Management District (SJRWMD) jurisdiction
- ✧ Provide necessary means to assure complete drainage within & immediately adjacent to leased parcel for adequate storm water control facilities in accordance with SJRWMD requirements
- ✧ Notify SF prior to SJRWMD Palm Bay Office coordination for permit determination or requirements
- ✧ NASA signs all permitting applications prior to submittal to SJRWMD

SECTION 5 – KSC CONSTRUCTION

5.1 Open Burning

1. Request SF approval
2. Prepare site for burn: maintain proper setup of setbacks, piles, equipment
3. Florida State Division of Forestry issues burn control numbers:
   - Contact Cocoa Work Center (321-690-6465) to schedule onsite inspection
   - Cocoa Office sends onsite inspection paperwork to the Orlando District Field Unit (407-888-8767), who issues valid burn control number to the requester prior to KSC Fire Inspector issuing a Hot Work/Burn permit
   - Orlando District Field Unit issues customer number to contractor performing the burning
   - Call the Orlando District Field Office every day before burn for a Burn Authorization Number
4. Notify Fire Management Officer of US Fish & Wildlife (321-861-6695)
5. 3+ business days before burn, contact Duty Office (321-861-5050) for 30-day Hot Work/Burn Permit (See example KSC Form 2-271, Appendix), noting under Special Instructions Section:
   - The Kennedy Space Center Dispatch and the nearest Fire Station will be notified of the burn.
   - A 75-foot clearance shall be maintained from the burn area and all brush land.
   - Burning will only be performed from daylight to dusk.
   - A qualified Heavy Equipment Operator with bulldozer or front-end loader with rake will be on site to monitor each burn area.
   - No burning will be started or continue should winds reach 18 knots steady state.
   - The burning material will be fully extinguished prior to the monitor leaving the site.
   - Burning must be more than 1,000 feet away from an occupied building.
6. 48+ hours before burn, schedule KSC Fire inspection (321-861-5050)

5.2 Excavation Permit

- ≥5 days prior to any excavation, coring, boring, or digging operations associated with construction or design investigations (geotechnical borings, soft digs, etc.), request Dig Permit via SFPDMS using electronic KSC Excavation Permit Request (EPR) form (available at https://extapps.ksc.nasa.gov/EPR/Home/Dashboard)
- Upon concurrence, SF submits Dig Permit request to ksc-boss-digpermit@mail.nasa.gov
- SF may assist in digging coordination with ISC Duty Office Support (321-861-5050) and Sunshine 811 each day prior to any digging or excavation
- Commence work only upon approved Siting Request and Dig Permit number assignment
- Upon Dig Permit approval, Contractor may submit Excavation Category Waiver, KSC Form 50-1 (refer to Appendix) request for a No-Dig Waiver to dig during critical days/no dig days

5.3 Trailer Site

Tie down office trailers, storage trailers, storage boxes, etc. in accordance with Florida Department of Highway Safety & Motor Vehicles, Division of Motor Vehicles, Chapter 15C-1, & NASA-STD-8719.11B:

- ≥25’ between structures
- For >180 days occupancy:
  - >5,000 ft^2 structure area: fire protection required
  - >2,500 ft^2 structure area: fire alarm required
- For <180 days occupancy, spot smoke alarms are acceptable
- NASA must approve any chain link security fencing

5.4 Utility Outage

- ✧ Submit NASA Request for Utility Outage or Task Order Request to temporarily disconnect/shut-down utility or fire hydrant to complete facility modification or add a system to KSC's utility network
- ✧ Electrical outages: submit Request for Utility Outage Form (see Appendix)
- ✧ Water/other: submit KSC Form 50-202 NS 09/14 (see Appendix)
- ✧ SF assigns JON Number for each request

5.5 Oversize/Overweight Load Permits

- ✧ Requires NASA Oversized Vehicles KSC Permit (call 321-861-5050) in addition to FHWA permitting
- ✧ See FHWA 23 CFR Part 658.17 for maximum allowable weights for special permit exemption
- ✧ NASA does not evaluate loads or issue permits for State Road 405 Bridge (FDOT asset, not part of KSC roadway system)
- ✧ Provide advanced notification of any oversize/overweight loads entering KSC property

KSC APPENDICES

KSC FORMS

- NASA Form 1509: Facility Project - Brief Project Document (this is a static NASA Form 1509; for a fillable form (includes all 4 pages), see spaceflorida.gov/spaceport-system-territory)
- NASA Form 1510: Facility Project Cost Estimate
- KSC 21-608 11/18: KSC Environmental Checklist
- NASA Form 1046: Transfer and/or Notification of Acceptance of Accountability of Real Property
- KSC Form 50-1: Excavation Category Waiver
- BOSS Form MSO-F-0004 (6/19): Example of Request for Utility Outage
- KSC Form 50-202: Task Order Request
- KSC Form 2-271: Hot Work Permit
- *KSC Form 21-555: NASA KSC Pollution Incident Report (coming soon)*
- *Airspace Study Application (coming soon)*

KSC EXTERIOR LIGHTING REQUIREMENTS

KSC NATIVE SPECIES LIST GUIDE

National Aeronautics and Space Administration

Facility Project Approval Document

Purpose of this Revision	Revision	Date
	Basic	

I. Basic Facility Project Information

Project Title	Project Delivery	Sponsoring Mission Directorate	Cent. Proj. Code

Project Type [Reset Type & Category]	Category	Justification [Definitions]	Project Execution Site [Reset Site]	Component Facility

Changes From Previous Version of NF1509 *(Provide Details)*

Status of NEPA Review?

Status of NHPA Review?

Scope / Description

Basis of Need / Mission Impact

National Aeronautics and Space Administration

Facility Project Approval Document

Purpose of this Revision	Revision	Date
	Basic	

II. Approved Facility Project Cost Estimate (AFPCE)

Construction Funding Increments *(Identify)*	Amount	Fund Source	Work Breakdown Structure (WBS) Number
AFPCE Total:		*(Value used to determine if the project is Local or CoF Minor/Discrete)*	

III. Costs for Studies, PERS, Performance Specifications, and Designs

Study, PER, Performance Specification, or Design *(Identify)*	Amount	Fund Source	Work Breakdown Structure (WBS) Number
Study, PER, Performance Specification, and Design Costs Total:			

IV. Other Related Costs *(Not included in the AFPCE but required to make the facility functional)*

Identify Other Related Costs	Amount	Fund Source	Work Breakdown Structure (WBS) Number
Other Related Costs Total:			

V. Total Project Cost *(AFPCE Total) + (Study/PER/Design Cost Total) + (Other Related Costs Total)*

VI. Schedule Dates

Activity	Planned Start	Duration (Days)	Planned Complete	Actual Complete	Activity	Planned Start	Duration (Days)	Planned Complete	Actual Complete
Study					**Construction**				
PER					**Activation**				
Perf. Spec D-B					**M&O Turnover**				
Design					**Beneficial Occ.**				

VII. PDRI

PDRI Score _____ of possible _____ at _____ % design	PDRI URL

VIII. Project Approval

Submitted by Title	Submitted by Signature	Date
Mission Concurrence Title	Mission Concurrence Signature	Date
HQ Facility Concurrence Title	HQ Facility Concurrence Signature	Date
HQ Approved by Title	HQ Approval Signature	Date

National Aeronautics and Space Administration

Facility Project Cost Estimate

Purpose of this Revision	Revision	Date
	Basic	

Project Title	Project Execution Site	Component Facility

Basis of Cost Estimate

IX. Buildup of Engineering Estimate - EE *(Estimate from an A/E with no escalation, does not include contingency, SIES, or other)*

1. Description	2. Unit of Measure	3. Quantity	4. Unit Cost	Total Cost 5. Engineering Estimate (EE)
(Value will be auto-populated in Part II, Cell 1a below)			**6. Engineering Estimate (EE) Total:**	

X. Summary of Approved Facility Project Cost Estimate (AFPCE)

Description	a. Amount	b. Percent
1. Engineering Estimate (EE) Total		
2. Escalation Amount to Mid-point of Construction *(Enter percentage of cell 1a to the right in cell 2b)*		
3. Estimated Construction Contract Award Amount *(Subtotal of cells 1a and 2a)*		
4. Contingencies *(Enter percentage of cell 3a to the right in cell 4b)*		
5. Supervision, Inspection, and Engineering Services (SIES) *(Enter percentage of the sum of cells 3a and 4a to the right in cell 5b)*		
6. Other Burden Costs *(Enter percentage of cell 3a to the right in cell 6b)*		
7. Approximate AFPCE Total:		
(Rounded value of Cell 7 that matches AFPCE on Facility Project Approval Document) **8. Final AFPCE Total:**		

XI. Construction Contract Structure *(Explain the details of the construction Base Bid and Options)*

National Aeronautics and Space Administration	**Facility Project Cost Estimate**	Purpose of this Revision	Revision	Date
			Basic	

XI. Construction Contract Structure *(Explain the details of the construction Base Bid and Options)*

Bid Package	Bid Package Estimate	Bid Package Contents
Base Bid		
Option 1		
Option 2		
Option 3		
Option 4		
Option 5		

XII. Study, PER, Performance Specification, and Design Costs and Status

Description	Status			d. Method of Accomplishment	e. Cost
	a. Needed	b. In-Work	c. Complete		
1. Study	☐	☐	☐	☒ In-House ☐ A/E	$0.00
2. Preliminary Engineering Report (PER)	☒	☐	☐	☒ In-House ☐ A/E	$0.00
3. Performance Specification (Design-Build Projects)	☐	☒	☐	☒ In-House ☐ A/E	$0.00
4. Design	☐	☐	☐	☐ In-House ☐ A/E	
5. Total Study, PER, Performance Specification and Design Cost ▶					

NASA: NASA_1510

U.S. Federal Form: NASA: NASA_1510

FORM NUMBER:	NASA_1510
FORM TITLE:	U.S. Federal Form: NASA: NASA_1510
U.S. GOVERNMENT AGENCY:	NASA
POINTS OF CONTACT:	Agency Forms Management Officer
USERS:	NASA
FILE FORMATS:	PDF
OPTIMIZED?	T
PRINTABLE?	T
FILLABLE?	T
SAVABLE?	T
OBTAINING FROM:	(1) USA-Federal-Forms.com, (2) Fillable.com
ISSUANCES:	
ADOPTED?	
PRESCRIBED?	
PREVIOUS EDITIONS ACCEPTED?	
FORM CONTROLLED?	
SPONSOR:	
SUBSPONSOR:	
FUNCTION CODE:	
MANDATORY PRINT SPECIFICATIONS:	
PRIVACY ACT IMPLICATIONS?	
RCS:	
IRCN:	
OMB:	

National Aeronautics and Space Administration

Facility Project Cost Estimate

INSTALLATION/PROGRAM OFFICE	DAT E
PROJECT TITLE	SUBMISSION/REVISION
	PROJECT CODE
BASIS OF COST ESTIMATE	PROJECT ID

I. SUMMARY OF COST ESTIMATE

DESCRIPTION	AMOUNT a.	PERCENT b.
1. ENGINEERING ESTIMATE		
2. COST ADJUSTMENT *(Enter percentage of item 1a to right in column 2b)*		
3. SUBTOTAL *(1+2)*		
4. CONTINGENCIES *(Enter percentage of item 3 to right in column 4b)*		
5. SUPERVISION, INSPECTION AND ENGINEERING SERVICES *(Enter percentage of items 3a and 4a to right in column 5b)*		
6. OTHER BURDEN COSTS		
7. TOTAL BUDGET ESTIMATE *(3+4+5+6)*		
SAY		

8. IDENTIFICATION OF COST ADJUSTMENT *(Item 2, above)* AND OTHER BURDEN COSTS *(Item 6, above)*

II. PLANNING AND DESIGN

DESCRIPTION	STATUS				
	NEEDED a.	IN-WORK b.	COMPLETE c.	IN-HOUSE/AE d.	COST e.
1. PRELIMINARY ENGINEERING REPORT					
2. SPECIAL STUDIES *(Specify)*					
3. FINAL DESIGN					
4. SUPERVISION AND ADMINISTRATION OF DESIGN SERVICES					
5. TOTAL PLANNING AND DESIGN COST					

III. RELATED COST DATA *(Not included in this Approved Facility Cost Estimate, but required to make the facility initially operable.)*

1. RELATED COSTS INVOLVED	2. PER *(Amount)*	3. DESIGN *(Amount)*
☐ a. YES *(Identify in items 2 through 10)* ☐ b. NONE		

	ITEM	AMOUNT	ITEM	AMOUNT
OTHER RELATED EQUIPMENT BREAKOUT	4. TO BE PURCHASED		8. ACTIVATION	
	5. TRANSFER TO EXCESS		9. OTHER REAL ESTATE	
	6. EXISTING		10. OTHER *(Specify)*	
	7. FUTURE FUNDING			

INSTALLATION/PROGRAM OFFICE	PROJECT ID	PROJECT CODE	DATE

IV. FACILITY PROJECT COST ESTIMATE

DESCRIPTION	UNIT OF MEASURE (1)	QUANTITY (2)	UNIT COST		TOTAL COST	
			ENGNG (3)	BUDGET (4)	ENGNG (5)	BUDGET (6)
SOURCE OF COST DATA				TOTALS:		

V. RELATED ITEMS/ACTIONS *(Explain as appropriate. Use extra sheets, as necessary, for this block and above.)*

KSC Environmental Checklist

1. PROJECT TITLE:	2. PROJECT NO.:
3. PROJECT LOCATION: ☐ KSC ☐ CCAFS ☐ PAFB ☐ OTHER _____	4. FACILITY NAME/NO.:
5. REQUESTOR/PROJECT LEAD: _____ ORG/MAIL CODE: _____	6. PHONE NO.:
7. PREPARER OF CHECKLIST: _____ ORG/MAIL CODE: _____	8. PHONE NO.:

9. PROJECT DESCRIPTION: *(Provide site plans, maps, etc. as separate attachment(s))*

10. a-r. Check the appropriate box (Yes, No, Undetermined) to identify if any component of the proposed project (including, but not limited to: construction, installation, demolition, removal, activation or operation) will involve any of the items listed. Use the attached instructions. Provide more specific information for each item marked Yes or Undetermined in the third column.

☐ Yes ☐ No ☐ Undetermined	a. Construction/Modification/Demolition: Constructing, altering, expanding, modifying (other than routine maintenance), or demolishing any building, pavement or structure.	
☐ Yes ☐ No ☐ Undetermined	b. Land Impacts: Land disturbance, soil addition or removal, digging, grading, trenching, alteration or removal of vegetation, equipment/material staging area required, stockpiling and any activity in or near surface water (including ditches and low-lying areas).	
☐ Yes ☐ No ☐ Undetermined	c. Hazardous Material and Hazardous, Controlled or Universal Waste: Use, storage, generation and/or disposal of any hazardous or toxic material, petroleum products or paint coatings.	
☐ Yes ☐ No ☐ Undetermined	d. Asbestos Containing Material (ACM): Disturbance of construction material that may contain asbestos (i.e., roofs, walls, ceilings, floor tile, piping insulation, caulk, etc.).	
☐ Yes ☐ No ☐ Undetermined	e. PCBs: Disturbance or replacement of electrical distribution systems, communication systems, lightning protection, transformers, non-liquid PCB materials or any other items believed to contain PCBs, including paint coatings.	
☐ Yes ☐ No ☐ Undetermined	f. Painting: Initial application or repainting of a facility (interior or exterior), structure or utility.	
☐ Yes ☐ No ☐ Undetermined	g. Paint, Sealant, Caulking Removal: Includes surface preparation such as sandblasting, scraping, water blasting or chemical stripping of existing paint coatings. Specify method.	
☐ Yes ☐ No ☐ Undetermined	h. Dewatering: Use of conventional wellpoints, hydraulic pumps, or other means to transfer groundwater (including water in utility manholes) for project activities including utility trenching, foundation work, roadbed construction, stormwater treatment pond, and borrow excavation.	
☐ Yes ☐ No ☐ Undetermined	i. Stormwater: Construction of new building, pavement, impervious, or semi-impervious surface and/or modification of an existing stormwater system. Give approximate square feet of impervious surface being added.	Sq Ft
☐ Yes ☐ No ☐ Undetermined	j. Drinking/FIREX Water: Installation or modification of potable water system. Include diameter of new water piping if known.	inches
☐ Yes ☐ No ☐ Undetermined	k. Domestic/Industrial Wastewater: Installation or modification of domestic sewer system, including septic tank systems, generation of process wastewater or modification to a system that handles or transports wastewater, including condensate lines, washdown effluent, outfalls, holding ponds and non-point source discharges associated with industrial applications/processes.	
☐ Yes ☐ No ☐ Undetermined	l. Air Emissions: Installation or alteration of a stack, scrubber, exhaust fan, vent, generator, fume hood, cooling tower, boiler, halon fire suppression system, HVAC system, refrigeration system; or discharge from painting or sandblasting. Describe emission source.	
☐ Yes ☐ No ☐ Undetermined	m. Open Burning: Burning of any land clearing debris.	

☐ Yes ☐ No ☐ Undetermined	n. Tanks: Construction, modification, or repair of aboveground or underground storage tanks (including piping and/or containment). Give commodity stored and capacity.	gallons
☐ Yes ☐ No ☐ Undetermined	o. Transformers/Generators: Installation, replacement or repair of transformers, generators, or any other oil-filled equipment. Give capacity.	gallons
☐ Yes ☐ No ☐ Undetermined	p. Exterior Lighting: Installation, refurbishment or modification of exterior lighting.	
☐ Yes ☐ No ☐ Undetermined	q. Radiation: Generation of ionizing or non-ionizing radiation or use of any radiation source.	
☐ Yes ☐ No ☐ Undetermined	r. Other: Please describe any other aspect of the proposed action that could potentially affect the environment. Use separate sheet if necessary.	

Environmental Checklist Preparation Instructions

1. **Project Title**: Title of proposed action as it appears on the work order or programming document.

2. **Project Number**: Insert SON, WON, PCN, DBEH, SXHT, MAXIMO or other authorized work identification number, as appropriate.

3. **Project Location**: Check box for applicable installation where work will be conducted. For off-site work, identify location.

4. **Facility Name/Number**: Use the proper name for the facility where work is being conducted and the assigned facility number. If proposed action is not directly associated with a facility, use the closest facility for reference.

5. **Requestor/Project Lead**: List name of individual who has requested the proposed action. If this individual cannot be identified, or no single individual is responsible for submitting the work requirement, then list the person who is most familiar with the proposed action, such as the design engineer or project lead, and their mail code.

6. **Phone Number**: Telephone number of individual identified in #5.

7. **Preparer of Checklist**: List name of individual who completed the checklist and their mail code.

8. **Phone Number**: Telephone number of individual identified in #7.

9. **Project Description**: Provide a brief, complete description of the proposed project. Include size of project and site, proposed uses, and any known plans for the future. Attach additional information including site plans, maps, statement of work, etc.

   Attaching additional information within Adobe PDF software:
   1. Click the "Attach File(s)" button
   2. The attach dialog appears. Select the file you want, then click "open." The file appears in the Attachments window. Or
   3. Click the paper clip icon on the left side, then drag and drop the files into the Attachments window.

   Note: If you hold down the Ctrl or Shift keys you can select multiple files at one time.

   Instructions can also be found in the Help within the Adobe PDF software.

   10 a.-r. The items listed in this section could be included in, or result from, the work that is being proposed. To the best of your knowledge, indicate by checking the applicable box if any of these items could be affected by the proposed work. check the "UNDETERMINED" box if you are not certain. If further information is required to complete item 10 a.-r., please reference the additional instruction sheet.

Environmental Checklist Additional Information and Instructions Section 10a.-r.

The following additional information/instructions should be applied to Environmental Checklist Sections 10a.-r.

a. **Construction**: Some proposed construction activities may not have their scope defined well enough to allow easy identification of potential environmental concerns, and certain facilities and certain types of construction activities have restrictions or constraints that may not be easily identifiable. An example may be disposal of wastes from a construction or demolition project as opposed to waste generated from normal operations and maintenance (O&M) type projects. Types of waste accepted at the KSC Class III Schwartz Road Landfill are listed on the EPB (Environmental Program Branch) web page at KNPR 8500.1 Chapter14 Landfill. The proposed project must reflect the proper disposal method in the design specifications to ensure compliance with existing permits.

b. **Land Impacts**: Areas of major environmental concern associated with this item include the loss of vegetation and disturbance of land that may provide habitat for various types of wildlife. Disturbance of the ground could impact burrowing animals, such as the gopher tortoise. Other issues include the disposal of vegetation from land clearing, underground utilities, archaeological sites, wetlands, etc. If your project includes any type of vegetation removal, land clearing, tree trimming (other than routine landscape maintenance), digging, grading or activity in or near wetlands/surface waters, check yes for this item.

c. **Hazardous Material and Hazardous, Controlled, or Universal Waste**: A number of items have the potential to adversely effect human health or the natural environment. Consequently, use of these items in the construction and/or operation of the proposed project will require special storage, handling and disposal. Hazardous materials usually constitute items that possess any one or more of the following characteristics: corrosive, flammable, toxic and/or reactive. Should hazardous materials be included in your proposed project, the EPB may be able to identify an acceptable non-hazardous alternative through the Pollution Prevention (P2) program. Wastes generated from use of hazardous materials will generally be classified as hazardous wastes, which require special handling and disposal.

d. **Asbestos Containing Material (ACM)**: Due to the age of many of the buildings and structures on KSC and CCAFS, it is likely that if your project affects an existing facility, ACM may be encountered. If the project involves new construction or is remote from existing structures and/or utilities then it is unlikely that any ACM would be disturbed by your action(s). Many of the existing facilities have already been sampled and the ACM has been identified. Contact the KSC Industrial Hygiene Office at 867-2400 to determine if the project will impact a known ACM source or access KNPR 8500.1 Chapter 6, Section 6.5. If the potential for the presence of ACM exists, sampling must be requested so a determination can be made for all possible sources.

e. **PCBs**: Polychlorinated Biphenyls (PCB) are chemicals that are primarily found in some types of fluids used in electrical equipment, i.e., electrical transformers, switches, ballasts, etc. Non-liquid PCBs may also be present in older paint coatings, caulking and other materials. Consequently, all projects or jobs that will come in contact with any fluid filled electrical equipment, or non-liquid materials suspected of containing PCBs should include sampling and analysis for PCBs. A current analysis (within six months) must accompany each fluid-containing piece of electrical equipment requiring disposal.

f. **Painting**: Painting, depending on the method and contents of the paint, can generate hazardous or controlled wastes. Use of paint thinner and chemical stripper typically results in generation of waste requiring special handling and disposal. If known, please indicate if these painting related materials are to be used. If your project includes any painting check yes for this item and include specific information regarding paint contents, other hazardous materials to be used and painting methodology, as applicable.

g. **Paint, Sealant, Caulking Removal**: Removal of existing paint coatings, sealants and caulking can generate hazardous or controlled wastes. In some cases, old paint coatings containing lead and/or other metals as well as non-liquid PCBs will require specific abatement procedures and special disposal of wastes generated. If your project includes any paint, sealant, or caulking removal activities check yes for this item and include specific information regarding paint contents, other hazardous materials to be used, and paint or sealant removal methodology.

h. **Dewatering**: If the proposed project will require the pumping of water to support construction activities, a permit may be required. There are a number of variances and quantity thresholds based upon the amount of water being transferred and the area where the water will be discharged. Therefore, if your project requires dewatering, check yes and the EPB will determine permit applicability.

i. **Stormwater**: Stormwater is an environmental concern primarily due to potential impacts of rainwater runoff from an impervious surface into the surrounding area. An impervious surface prevents stormwater from percolating into the ground. Consequently, the St. Johns River Water Management District (SJRWMD) requires a permit to be obtained and a stormwater management system to be constructed when a large impervious surface is created. The threshold for obtaining a permit varies from 4000 square feet for surfaces specifically supporting vehicular traffic, such as roads, parking lots, stabilized areas, etc., to 9000 square feet for buildings inclusive of all other impervious surfaces. The permit threshold can also be "tripped" by adding to or modifying an existing impervious surface, so do not assume the project will not require permitting if new impervious area is below the above thresholds. If you check "yes", please identify the number of square feet involved.

j. **Drinking/FIREX Water**: Check yes if the proposed project involves work that would affect a potable water line. Environmental concerns with work that affects water lines are: 1.The disturbance of a water line typically lowers water quality and therefore, requires disinfection and sampling prior to use; 2. Some connections and/or additions to the existing water system require a permit. Supply as much design information as possible relating to potable water system changes (e.g., new vs. extension, pipe diameter, etc.). Permit determinations and applications will be handled by the EPB.

k. **Domestic Wastewater/Industrial Wastewater**: Environmental concerns include potential impacts to the operation of the Wastewater Treatment Plant and Florida Department of Environmental Protection (FDEP) permit conditions. New connections and septic tank installations may require permitting, inspection, and/or certification. Therefore, check yes if the proposed project will involve installation of new wastewater sources or in any way affect the existing sanitary sewer system. Industrial wastewater is any water-based waste stream, discharge, wash water, deluge outfall, etc., that would result from conducting an industrial-type operation. The source of this wastewater typically requires permitting and therefore, must be identified to the environmental office as soon as possible. In addition, early environmental coordination could result in the identification of a process alternative that may preclude or minimize the waste stream.

l. **Air Emissions**: If the project (either during construction or operation) would discharge any substance into the air, other than vehicular or normal construction equipment exhaust, check yes and describe the source of the emission. Some emission sources may require State and/or Federal permitting for both construction and operation.

m. **Open Burning**: If any land clearing debris will be burned during construction, check yes. The Florida Department of Forestry requires notification in accordance with FAC 51-2 Open Burning. Coordination with the KSC Fire Marshall is also required.

n. **Tanks**: Any vessel that stores liquids, other than drinking water, must be evaluated for potential environmental effects. Some tanks require registration with the State based upon the quantity and type of material being stored. All tanks must be identified in the tank management program and various containment and piping requirements may apply. If you suspect the involvement of any new or existing tanks, including associated piping or containment, check yes and the EPB tank program managers will identify any regulatory requirements.

o. **Transformers/Generators**: If any oil-filled equipment is to be modified, replaced or installed, check yes. There are specific handling, removal and waste disposal guidelines to follow as well as Spill Prevention, Control and Countermeasurers (SPCC) requirements to be met.

p. **Exterior Lighting**: Exterior lights at or near Atlantic Coast beaches in Florida have been proven to disrupt sea turtle nesting. Consequently, NASA has developed exterior lighting policies to minimize adverse impacts to threatened and endangered sea turtles that nest on KSC beaches. Should the project include exterior lights, either new or replacement of existing, check yes and the EPB will review the design of your project to ensure compliance with the applicable policies. Typically, exterior lights that are not directly related to a color rendition or explosion proof requirement will be the lowest wattage, low pressure sodium fixtures that meet the needs of your request. Exterior lighting requirements are located on the EPB web page at: KNPR 8500.1 Chapter 24, Section 24.1.5 D.

q. **Radiation**: Various types of mission related equipment has the potential to emit radiation that could effect human health and the well being of other living organisms. Typically, the project/job requestor is aware of the dangers associated with the equipment being constructed, installed, modified or maintained. However, in some cases, work may be requested that would take place within a zone of influence for an existing piece of equipment, thereby requiring shut-down or some other operational constraint. Therefore, if you know the project will involve a radiation source, or is in the vicinity of a potential source of radiation (radar, microwave transmitter, etc.) check yes.

r. **Other**: If aspects of the proposed project do not fit into any of the above categories, but may have an effect on the natural environment, explain in the space provided. This space should also be used to explain or identify specific aspects of the above items, as necessary. If there is not enough space to adequately explain the item you are describing, please attach an additional sheet and reference a continuation sheet in case they should become separated.

National Aeronautics and Space Administration

Transfer and/or Notification of Acceptance of Accountability of Real Property

1. FROM *(Installation/Activity):*	2. DATE	3. JOB NO.	*(Installation Use Only)*
	4. CONTRACT NO.	5. PROJECT NO.	

6. TO *(Installation/Activity):*

7. TYPE OF TRANSACTION

a. FACILITIES DATA
(1) ☐ NEW CONSTR. (2) ☐ EXISTING FACIL.
(3) ☐ CAPITAL IMP. (4) ☐ OTHER *(Specify)*

b. OCCUPANCY AND COMPLETION DATA
(1) ☐ BENEF. OCCUP. (2) ☐ PHYSICAL COM.
(3) ☐ FINANCIAL COM. (4) ☐ OTHER *(Specify)*

c. TRANSFER
(1) ☐ BETWEEN INSTAL.
(2) ☐ OTHER GOVT. AGENCY

ITEM NO. 8.	FACILITY CLASS. CODE 9.	FACILITY DESCRIPTION 10.	NO. OF UNITS 11.	TYPE 12.	UNIT. OF MEAS. 13.	TOTAL QUANTITY 14.	COST 15.	DRAWING NUMBER(S) 16.	REMARKS 17.
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
						TOTAL COST	$0.00		

CERTIFICATION *(The facilities listed hereon are in accordance with maps, drawings, and specifications and change orders approved by the authorized representative of the owning agency except for the deficiencies listed below)*			
18. AUTHORIZED BY *(Signature)*	19. TITLE		20. DATE
21. ACCEPTED BY *(Signature)*	22. TITLE	23. DATE	24. PROPERTY TRANSACTION NO.
25. CONSTRUCTION DEFICIENCIES			
26. EXPLANATORY NOTES See attached spreadsheet. Refer to EUL section 3.2 (item 5. of Rev. C) and Exhibit E for non-monetary consideration. Blue Origin OLS Early & Final Site Development Record Drawings 8/10/2018			

National Aeronautics and Space Administration

Transfer and/or Notification of Acceptance of Accountability of Real Property

INSTRUCTIONS

The page number and the total number of pages comprising each transaction shall be shown in the space provided at the top right-hand part of the form.

ITEM 1. - Self-explanatory.

ITEM 2. - DATE . Enter date of preparation.

ITEM 3. - JOB NO . Enter NASA job number, if applicable.

ITEM 4. - CONTRACT NO . Enter NASA contract number, if applicable.

ITEM 5. - PROJECT NO . Enter the number assigned to identify the project with appropriate construction or capital improvement.

ITEM 6. - Self-explanatory.

ITEM 7. - TYPE OF TRANSACTION . Enter an "x" in the appropriate box in block 7a to indicate whether the transfer and/or notification of acceptance of accountability covers new construction, existing facilities or capital improvements to existing facilities. If the "other" category is used, explain in item 26, "Explanatory Notes." In addition, insert an "x" in the appropriate box of block 7b to indicate whether acceptance is being made at time of beneficial occupancy, physical completion or financial completion *(with respect to new construction and capital improvements).* If the "other" category is used, explain in item 26, "Explanatory Notes."

ITEM 8. - ITEM NO . Each single entry will be identified as an item number, and this item number will be shown in this column.

ITEM 9. - FACILITY CLASSIFICATION CODE . Enter the applicable classification code as cited in the Manual.

ITEM 10. - FACILITY DESCRIPTION . Enter the descriptive nomenclature of the facility.

ITEM 11. - NO. OF UNITS . Enter the number of units in terms of buildings or other structures.

ITEM 12 - TYPE . Enter the type of construction; i.e., "P" for permanent, "S" for semi-permanent or "T" for temporary.

ITEM 13 - UNIT OF MEASURE . Enter as appropriate "SF" for square feet, or "Acres," etc.

ITEM 14. - TOTAL QUANTITY . Enter the total quantity applicable *(i.e., acres, square feet, etc.)* for the line item.

ITEM 15. - COST . - Indicate by item number and description the appropriate cost.

ITEMS 16 & 17 , - Self-explanatory.

ITEMS 18, 19, & 20 . Enter the signature and title of the person preparing the transaction and the date.

ITEMS 21, 22, 23, & 24 . Enter the signature and title of the person authorized to accept accountability of the real property, including date and transaction number.

ITEMS 25 & 26 . Self-explanatory.

Excavation Category Waiver

Send completed form to the Excavation Permit Administrator
KSC-ISC-DigPermit@mail.nasa.gov
Phone: 321-867-2180

Excavation Category Waivers are requested when normal work must be completed during a time not allowed by the category code assigned to the Excavation Permit. Excavation Category Waivers are only issued to a requester holding an already approved permit. Excavation Category Waivers are NOT emergency locate requests.

Excavation Permit Number	Vehicle / Payload / Operation
Planned Work Dates	Category Codes Impacted
Location (include map)	
Justification	
Requester Name	Requester Telephone Number

For Use by the Excavation Permit Administrator. Do not write below this line.

Waiver Number	

KSC Approval - Required for waivers in category codes 1 - 6. *

Signature of the NASA Test Director (NTD) is required for all waivers in every category code on the Kennedy Space Center	Date
Notes / Restrictions or Additional Information	

REQUEST FOR UTILITY OUTAGE

NOTE: Please allow 10 days for Outages to be processed.

1. OUTAGE TYPE	2. REPORTED DATE	3. BOSS LV or HV SUPPORT NEEDED?		
4. REQUESTER'S NAME AND ORGANIZATION		5. EMAIL ADDRESS		
6. OUTAGE SUMMARY DESCRIPTION				
7. OUTAGE WORK ORDER NUMBER **(REQUIRED)**		8. JON IF NO WORK ORDER NUMBER		
9. LOCATION & DESCRIPTION OF WORK REQUEST				
10. FACILITIES/AREA AFFECTED		11. REASON FOR OUTAGE		
12. POSSIBLE RESULT OF OUTAGE DENIAL		13. DURATION (HOURS)	14. OUTAGE TIME REQUESTED (DATE & TIME)	
15. ALTERNATE DATE & TIME REQUEST	16. SIGNATURE OF REQUESTER		17. OFFICE & CELL NUMBER	
18. ADDITIONAL REMARKS				

Task Order Request

Submit form to: KSC-TASK-ORDER-REQUESTS@mail.nasa.gov

Services/Support Authorization From:	Services/Support Provided to: (Partner Name)	
☐ Commercial Space Launch Act (CSLA) Subagreement ☐ Enhanced Use Lease (EUL) / Use Permit ☐ Space Act Agreement (SAA) ☐ Other	NASA/Kennedy Agreement Number:	
Mission: (If applicable)	Need Date	Control Number (to be completed by NASA)

TECHNICAL POINT OF CONTACT

Name	Phone Number	Email Address
Authorized Requester *(Print Name)*		Date of Request

Description of Desired Services/Support:

Task Order Request

Services/Support Authorization From:	Services/Support Provided to: (Partner Name)
☐ Commercial Space Launch Act (CSLA) Subagreement ☐ Enhanced Use Lease (EUL) / Use Permit ☐ Space Act Agreement (SAA) ☐ Other	NASA/Kennedy Agreement Number:

Mission: (If applicable)	Need Date	Control Number (to be completed by NASA)

TO BE COMPLETED BY NASA

Services/Support Offered:

Proposed Schedule

Estimated Cost		Funds Available? ☐ Yes ☐ No
NASA Project Engineer *(Print Name)*	NASA Project Engineer *(Email Address)*	Phone Number
NASA Approver *(Print Name)*	NASA Approver *(Signature)*	Date
Partner Concurrence *(Print Name)*	Partner Concurrence *(Signature)*	Date

Hot Work Permit

Permit Shall Not Exceed 30 Days

Company Name	Date Permit Issued	Date Permit Expires
Facility Number / Area	WAD/Work Order Number	

Supervisor's Name (see note 1) / Operator's Name (See note 2) Phone Number

☐Welding ☐Grinding ☐Torch Cutting ☐CAD
☐Soldering/Brazing ☐Other _____

Supervisor / Operator's Signature: I acknowledge that I have read, understand and will comply with the requirements of this form.	Permit Authorizing Individual Name and Phone Number

In event of FIRE OR EMERGENCY call 911 or cellphone 321-867-7911

Item	
1.	Operator affirms they are properly trained to perform hot work and equipment is in safe operating condition.
2.	Operator shall maintain good housekeeping practices throughout operation.
3.	Fire Extinguishers shall comply with NFPA 10 and located within 20 feet of hot work site. Type: ☐ABC ☐Water ☐CO^2 ☐Clean Agent ☐Other _____
4.	Flammable liquids and gases (not required by the hot work operation) shall be relocated a minimum of 50 feet from hot work. If impractical to relocate, ensure they are safely protected or do not perform hot work.
5.	Combustible materials shall be relocated a minimum distance of 35 feet from hot work. If impractical to relocate, ensure they are safely protected or do not perform hot work.
6.	Operator shall ensure all hazardous dust, lint, and oily deposits are removed, or do not perform hot work.
7.	Operator shall inspect all enclosures, chases, ducts, walls, floor openings and adjacent areas have been safely protected.
8.	Operator shall ensure all equipment, containers, pipes, hoses have liquids drained, pressure released, vapors purged, and electrical equipment de-energized, etc.
9.	Operator shall provide the appropriate safety barriers and warning signs as required, but shall not obstruct exits.
10.	Operator shall ensure detection systems (including HVAC) are safed, covered, or protected before hot work begins. Systems shall be restored to service daily. (unless otherwise permitted)
11.	Operator shall ensure fire suppression systems remain operational (unless otherwise permitted).
12.	Hot work not permitted in explosive or oxygen enriched atmospheres. Perform air sampling as required.
13.	Fire watch personnel shall be present throughout the hot work operation and 1 hour after completion.
Land Clearing Operations	
1.	Daily - Contact "Florida Forest Service Office, Orlando District" to request burn authorization.
2.	Daily - Notify the KSC Protectives Services Control Center of location and intent to burn. 321-867-7627
3.	Only "Air Curtain Burners/Incinerators" are permitted with trench or box burning on KSC.
4.	Set back minimums: 25 feet from forests, 50 feet from paved public roads, and 150 feet from occupied structures.
5.	Burning permitted from daylight to dusk. Extinguish if winds exceed 18 kts. steady state, or before leaving site.
6.	Minimum water extinguishing requirements shall be approved by the AHJ and specified in "Additional Comments" section.

For permit renewal call the Spaceport Integration Center at 861-5050.

Additional Comments

(Note #1): When a supervisor signs this permit, they shall brief all hot work operators under their supervision of these requirements.

(Note #2): If Operator cannot complete work, the new operator(s), by signing below, acknowledges that they have read, understand and will comply with the requirements of this permit.

Alternate Operator Signature	Date	Alternate Operator Signature	Date

KSC EXTERIOR LIGHTING REQUIREMENT

SECTION 1.0 REQUIREMENT AND REGULATIONS

Kennedy Space Center (KSC) is required to protect marine turtle nesting habitat by the National Environmental Policy Act (NEPA) and the U.S. Fish and Wildlife Service (FWS) through the Endangered Species Act (ESA). The NEPA of 1969, as amended (42 U.S.C. 4321-4370d), and according to the procedures of implementation of NEPA for NASA [Title 14, Code of Federal Regulations, part 1216 subparts 1216.1 and 1216.3], requires federal agencies to assess how programs and associated actions may affect the environment. As part of this assessment, KSC has coordinated with the FWS on the effects of exterior lighting on protected species. The FWS has issued an interim biological opinion (BO) based on their review of historical and anticipated future light management activities by KSC, and the associated effects on the loggerhead (*Caretta caretta*), green (*Chelonia mydas),* leatherback (*Dermochelys coriacea*), hawksbill (*Eretmochelys imbricata*), and Kemp's ridley (*Lepidochelys kempii*) sea turtles in accordance with Section 7 of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq*).

SECTION 2.0 PURPOSE

The purpose of this Requirement is: 1) to insure that KSC is compliant with the special conditions of the BO (Attachments 1 and 2) to provide clear guidance to project and/or facility managers who are required to comply with the KSC exterior lighting requirements.

Light Management Plans (LMPs) will be developed in accordance with this light management policy at KSC for all new facilities that are in close proximity to the beach, have lighting directly visible from the beach, and/or may cause significant sky glow. LMPs will be submitted to the Environmental Management Branch (EMB) for review and approval.

SECTION 3.0 IMPLEMENTATION

3.1 All projects that will be installing exterior lighting or lighting that is visible from outside the building must submit an environmental checklist to EMB (KSC Form 21-608V2 NS) (KDP-P-1727). The checklist is submitted by the project manager, facility manager, or the equivalent (PM) to EMB.

3.2 Within seven days of submittal of the checklist, the PM will receive either a request for further information or a record of environmental consideration (REC) from EMB.

3.2.1 If the REC determines that there will be no adverse affect on the sea turtles no further action will be required. However, if the REC determines that there may be an adverse affect on sea turtles (i.e. a violation of the BO) a LMP will be required.

3.3 The PM will be responsible for the development of a LMP that meets the criteria set forth in Section 5.0 of this Requirement. EMB will have a subject matter expert (SME) available to assist the PM with the plan.

3.4 The PM will submit the proposed lighting plan to EMB for review and comment.

3.4.1 If the LMP meets the guidelines, then a memorandum of acceptance will be generated by EMB and sent to the PM.

3.4.2 If the LMP does not meet the guidelines, EMB will provide comments for plan revision by the PM.

3.5 In some cases, safety for employees and/or the program assets may supersede the FWS BO requirements; and a variance from the LMP requirements must be requested (see Section 6.0 of this policy).

3.5.1 LMPs that include variances from the guidelines established herein will be reviewed by both the EMB and the FWS. This review cycle will continue until the EMB has satisfied its reporting requirements to the FWS.

3.5.2 Notification of approval will be sent to the PM by EMB.

3.6 The final approved plan will be cataloged in the EMB Light Plan Compliance electronic data file and the PM should retain a copy for future reference.

3.7 Any modifications to the project site/structure(s) that result in exterior lighting changes must go through the process again as outlined above.

SECTION 4.0 COMPLIANCE COORDINATION

4.1 Once every two years, the appropriate personnel, including but not limited to, engineers, facility managers, and any other representatives that design and/or enforce lighting at KSC, will attend a sea turtle lighting workshop conducted by EMB or its agent.

4.2 These same personnel will allow EMB and/or agents of EMB to post educational data and notices related to sea turtle nesting season at their facilities as indicated in the BO.

4.3 Affected facilities will be inspected annually by EMB, their agents, or FWS. EMB is required to conduct periodic compliance inspections and report all findings to FWS on an annual basis.

4.4 Currently, hatchling or adult sea turtle disorientation rates cannot exceed 3%, as described in the BO. If that occurs, the FWS will require reinitiating consultation and a review of the reasonable and prudent measures KSC has taken. Any changes that result from the consultation will be incorporated into this Requirement and will affect all existing and future projects.

SECTION 5.0 GENERAL EXTERIOR LIGHTING DESIGN GUIDELINES

5.1 The LMP must, at a minimum, identify on a plan drawing all exterior lighting fixtures and other lights that may be visible at night. The plan must include details of each type of fixture to be used, such as lamp type, wattage, installation height, and proposed operation schedule.

5.2 Facilities that are in close proximity to the beach, have lighting directly visible from the beach, and/or may cause significant sky glow will prohibit use of exterior lights between 9 p.m. and dawn from May 1 through October 31. If night activities that are essential to safety/security, support launch-related activities at active launch complexes, or night operations training require exterior lighting at night the PM may apply for a variance from these lighting restrictions as described in Section 6.0.

5.3 Lights with wavelengths from 585 - 590 nm and lowest wattage possible should be used for all exterior lighting applications. Lights with wavelengths between 320 and 560 nm, such as metal halide and mercury vapor lights, should not be used in any exterior lighting applications. Low-pressure sodium (LPS) lights are preferred if LPS can meet operational requirements. In cases where there are specific requirements calling for the discernment of colors, the PM may apply for a variance from the LMP as described in Section 6.0 below.

5.4 Energy conservation standards will be incorporated into all lighting designs.

5.5 All exterior light fixtures should be positioned so that:

5.5.1 The point source of light or any reflective surface of the light fixture is not directly visible from the beach.

5.5.2 Areas seaward of the frontal dune are not illuminated. Frontal dune is defined as the first natural or manmade mound of sand that is located landward of the beach and has sufficient vegetation, height, continuity, and configuration to offer protective value.

5.5.3 Light is directed downward and away from the beach at beachfront facilities and downward and in the direction of the task being performed at non-beachfront facilities.

5.5.4 All lights should be shielded and/or recessed.

5.5.5 Photocells should only be used to support security or other mission-specific requirements that occur on a regular schedule each night (e.g., parking lots will not routinely utilizephotocells unless mission operations occur 24 hours a day, 7 days a week). Automatic tiers can be used instead of, or in addition to, photocells to control lighting during actual hours of operation. Timers can also be used in locations where personnel are not readily available to manually extinguish lights. Where random security

monitoring is required, motion detector switches that keep lights off except when approached can be used. Such switches should turn lights on for the minimum duration possible.

5.6 Task lighting should be used for temporary operational activities rather than permanent light fixtures. Task lighting must conform to the same restrictions as permanent lighting. Switches should be used rather than timers or photocells.

5.7 Exceptions to the guidelines will be evaluated on a case-by-case basis through the variance process described in Section 6.0 below.

SECTION 6.0: VARIANCE PROCESS

6.1 Exceptions to the guidelines in Section 5.0 above will be evaluated by EMB and FWS.

6.2 The PM will submit a narrative documenting the necessity for using a light source that does not meet the requirements of the KSC Exterior Lighting Guidelines. The documentation of the variance request will include, but not be limited to, the regulation, Requirement, protocol requirement for the light source, and description of the specific circumstances surrounding the need.

6.3 The PM, with the assistance of EMB, will be responsible for mitigating any negative effects that may result from light use approved through the variance process. Corrective actions for negative effects will be determined by the EMB throughout consultation with the FWS.

6.4 EMB will concur/non-concur with variance request via email notification to PM.

LIGHT FIXTURES SCHEDULE

GENERAL / BUILDING LIGHTING

MARK	DESCRIPTION	LOCATION	COMMENTS	PICTURE
EMO-1	**TYPE:** EMERGENCY ONLY **MANUFACTURER**: EMERGI-LITE BY ABB **CATALOG No:** 12PR40NC2LG **WATTS**: 8 **VOLTS:** 120-277 **MOUNTING:** WALL-MOUNT **COLOR**: WHITE	GENERAL BUILDINGS, OFFICES		
EXO-1	**TYPE:** EXIT ONLY **MANUFACTURER**: EMERGI-LITE BY ABB **CATALOG No:** WPREMACR **WATTS**: 2.5 **VOLTS:** 120-277 **MOUNTING:** WALL-MOUNT **COLOR**: WHITE, RED LETTERS	GENERAL BUILDINGS, OFFICES		
EMC-1	**TYPE:** EMERGENCY AND EXIT COMBO **MANUFACTURER**: EMERGI-LITE BY ABB **CATALOG No:** WPR1240H-R2LG **WATTS**: 10 **VOLTS:** 120-277 **MOUNTING:** CEILING OR WALL-MOUNT **COLOR**: WHITE, RED LETTERS	GENERAL BUILDINGS, OFFICES		
FLB-1	**TYPE:** FLOODLIGHT - BULLET **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESFB1 **WATTS**: 21-32 **VOLTS:** 120-277 **MOUNTING**: GROUND MOUNTED **COLOR**: BLACK	LANDSCAPING, SIGN + WALL ILLUMINATION	EXTERIOR, WET LOCATIONS	
FLS-1	**TYPE:** FLOODLIGHT - SQUARE **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EES-AD25Q **WATTS**: 50 **VOLTS:** 120-277 **MOUNTING**: KNUCKLE-MULTIPLE **COLOR**: BLACK	FLAG POLE	5000 K, AREA FLOOD, DECORATIVE WALL SCONCE, POLE LIGHTING, FLAG POLE LIGHTING, SIGN LIGHTING.	
FLSL-1	**TYPE:** FLOODLIGHT - SLIM LINE **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESKH45-LED-PS-UNV-250W-5000K **WATTS**: 250 **VOLTS:** 120-277 **MOUNTING**: WALL + MULTIPLE OTHER OPTIONS **COLOR**: BLACK	OUTDOOR GUARD SHACK (Note - exempt from Amber color requirement per security / high-color rendition reasons)	5000 K, LISTED FOR WET LOCATIONS	
FLHO-1	**TYPE:** FLOODLIGHT - HIGH-OUTPUT **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESFD2X200WUNVV600NM **WATTS**: 500 **VOLTS:** 120-277 **MOUNTING**: POLE, WALL **COLOR**: BRONZE	OUTDOOR HIGH-OUTPUT FLOOD	AMBER, 600 NM.	
HAZ2-1	**TYPE:** HAZARDOUS LOCATION, 2 FT LINEAR **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EES-HLV2AQ **WATTS**: 58-77 **VOLTS:** 120-277 **MOUNTING**: WALL, CEILING **COLOR**: METALLIC-ALUMINUM	CLASS 1 DIVISION 2 HAZARDOUS LOCATIONS	5000 K	
HBII-1	**TYPE:** HIGH-BAY - INDOOR INDUSTRIAL **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESHB200W27V50KWLDM **WATTS**: 200 **VOLTS:** 120-277 **MOUNTING:** PENDANT MOUNTED **COLOR**: BLACK	WAREHOUSE, INDUSTRIAL BLDGS	5000 K	
HBIO-1	**TYPE:** HIGH-BAY - INDOOR OFFICE **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** HE-ENV-180W-LED-LHB-PS-UNV-5000K **WATTS**: 180 **VOLTS:** 120-277 **MOUNTING:** SURFACE, PENDANT MOUNTED **COLOR**: WHITE	OFFICES	5000 K	

LBP-1	**TYPE:** LOW-BAY PENDANT **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESLPLIN **WATTS**: 20-35 **VOLTS:** 120-277 **MOUNTING:** PENDANT-MOUNT **COLOR**: WHITE	BUILDINGS, INTERIOR	5000 K	
ORC-1	**TYPE:** OUTDOOR ROUND CANOPY **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESVNGL40-LED-PS-UNV-45W-5000K **WATTS**: 45 **VOLTS:** 120-277 **MOUNTING:** SURFACE MOUNTED **COLOR**: BLACK	OUTDOOR CANOPY, PARKING GARAGES	5000 K	
OSC-1	**TYPE:** OUTDOOR SQUARE CANOPY **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESVN43-LED-PS-UNV-60W-5000K **WATTS**: 60 **VOLTS:** 120-277 **MOUNTING:** SURFACE MOUNTED **COLOR**: BLACK	OUTDOOR CANOPY, PARKING GARAGES	5000 K	
SL2-1	**TYPE:** SHOP LIGHT - 2' **MANUFACTURER**: ALEDDRA **CATALOG No:** ASL-SELTF6-12W-850 **WATTS:** 12 **VOLTS**: 110-277 **MOUNTING**: SUSPENDED MOUNT **COLOR**: WHITE	BUILDINGS, INTERIOR, WORKSHOPS, GARAGES, STORAGE AREAS, BASEMENTS	5000 K	
SL4-1	**TYPE:** SHOP LIGHT - 4' **MANUFACTURER**: ALEDDRA **CATALOG No:** ASL-SELTF12-23W-850 **WATTS:** 23 **VOLTS**: 110-277 **MOUNTING**: SUSPENDED MOUNT **COLOR**: WHITE	BUILDINGS, INTERIOR, WORKSHOPS, GARAGES, STORAGE AREAS, BASEMENTS	5000 K	
TR22-1	**TYPE:** 2' X 2' TROFFER **MANUFACTURER**: ALEDDRA **CATALOG No:** AL-PL40D2250H **WATTS:** 30 **VOLTS**: 100-277 **MOUNTING**: T-BAR LAY-IN OR SUSPENDED MOUNT **COLOR**: WHITE	BUILDINGS, INTERIOR, CONDITIONED AND UNCONDITIONED (DAMP) SPACES	5000 K, NEW CONSTRUCTION AND RETROFIT APPLICATIONS	
TR22ROR-1	**TYPE:** 2' X 2' TROFFER - REDUCED OUTPUT RETROFIT KIT **MANUFACTURER**: ALEDDRA **CATALOG No:** AT-R4-15W-XDZ-50K **WATTS:** 15 **VOLTS**: 110-277 **MOUNTING**: INSTALLS INTO EXIST TROFFER HOUSING **COLOR**: WHITE	BUILDINGS, INTERIOR, CONDITIONED SPACE	5000 K, ONLY FOR RETROFIT APPLICATION	
TR24-1	**TYPE:** 2' X 4' TROFFER **MANUFACTURER**: ALEDDRA **CATALOG No:** AL-PL54D2450H **WATTS:** 48 **VOLTS**: 100-277 **MOUNTING**: T-BAR LAY-IN OR SUSPENDED MOUNT **COLOR**: WHITE	BUILDINGS, INTERIOR, CONDITIONED AND UNCONDITIONED (DAMP) SPACES	5000 K, NEW CONSTRUCTION AND RETROFIT APPLICATIONS	
TR24ROR-1	**TYPE:** 2' X 4' TROFFER - REDUCED OUTPUT RETROFIT KIT **MANUFACTURER**: ALEDDRA **CATALOG No:** AT-R7-25W-XDZ-50K **WATTS:** 25 **VOLTS**: 110-277 **MOUNTING**: INSTALLS INTO EXIST TROFFER HOUSING **COLOR**: WHITE	BUILDINGS, INTERIOR, CONDITIONED SPACE	5000 K, ONLY FOR RETROFIT APPLICATION	
VT14-1	**TYPE:** VAPOR TIGHT 1X4 (NARROW-BODY) **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESCT2-VT4-LED-PS-UNV-75W-5000K **WATTS**: 75 **VOLTS:** 120-277 **MOUNTING**: SURFACE MOUNTED **COLOR**: WHITE	SHOWER AREAS, MECHANICAL ROOMS, HIGH-HUMIDITY AREAS, NON-CONDITIONED SPACES	5000 K	
VT14LO-1	**TYPE:** VAPOR TIGHT 1X4 (NARROW-BODY) LOW OUTPUT **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** **WATTS**: **VOLTS:** 120-277 **MOUNTING**: SURFACE MOUNTED **COLOR**: WHITE	SHOWER AREAS, MECHANICAL ROOMS, HIGH-HUMIDITY AREAS, NON-CONDITIONED SPACES	5000 K	

VT24-1	**TYPE:** VAPOR TIGHT 2X4 (WIDE-BODY) **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESCT4-VT4-LED-PS-UNV-149W-5000K **WATTS**: 149 **VOLTS:** 120-277 **MOUNTING**: SURFACE MOUNTED **COLOR**: WHITE	SHOWER AREAS, MECHANICAL ROOMS, HIGH-HUMIDITY AREAS, NON-CONDITIONED SPACES	5000 K	
WPA-1	**TYPE:** WALL PACK - ANGLED **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EES-AMBER600NM-40W-LEDLWPCO-PS-UNV-UNV-U-4 **WATTS**: 40 **VOLTS:** 120-277 **MOUNTING:** WALL-MOUNT **COLOR**: BRONZE	EXTERIOR	AMBER, 600 NM	
WPM-1	**TYPE:** WALL PACK - MINI **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESWP12QF1X23U5K **WATTS**: 23 **VOLTS:** 120-277 **MOUNTING:** WALL-MOUNT **COLOR**: BRONZE	EXTERIOR	5000K	
WPR-1	**TYPE:** WALL PACK - ROUND **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EESWPC36QC1X25U5KC **WATTS**: 25 **VOLTS:** 120-277 **MOUNTING:** WALL MOUNTED **COLOR**: BRONZE	BATHROOM/BARBER SHOP LIGHTING, PARKING AREAS, PERIMETER LIGHTING, ENTRANCE & WALKWAYS	5000 K	
WSCU-1	**TYPE:** WALL SCONCE CURVED **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EES-WS **WATTS**: 10 **VOLTS:** 120-277 **MOUNTING:** WALL-MOUNT **COLOR**: AVAIL IN SATIN NICKEL OR BRONZE	ARCHITECTURAL INTERIOR	COOL WHITE, 5000 K UPON REQUEST	
WSDC-1	**TYPE:** WALL SCONCE DOUBLE CONE **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EES-HGWS **WATTS**: 10 **VOLTS:** 120-277 **MOUNTING:** WALL-MOUNT **COLOR**: AVAIL IN SATIN NICKEL OR BRONZE	ARCHITECTURAL INTERIOR	COOL WHITE, 5000 K UPON REQUEST	

GENERAL / BUILDING LIGHTING - LED RETROFIT LAMPS				
MARK	**DESCRIPTION**	**LOCATION**	**COMMENTS**	**PICTURE**
E26LED-1	**TYPE:** E26 LED SCREW-IN **MANUFACTURER**: ALEDDRA **CATALOG No:** AAL-7.7WA19-E26-40K **WATTS:** 8 **VOLTS**: 120 **MOUNTING**: E26 SCREW-IN BASE **COLOR**: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	4000 K (5000 K AVAILABLE AS 'MADE TO ORDER')	
T5LED4-1	**TYPE:** T5 LED RETROFIT LAMP - 4FT **MANUFACTURER**: ALEDDRA **CATALOG No:** LLT-4-T5-22-50K **WATTS:** 28 **VOLTS**: 120-277 **MOUNTING**: N/A (RETROFIT FOR EXIST T5 4' LAMP) **COLOR**: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K	
T8LEDSS2-1	**TYPE:** T8 LED RETROFIT LAMP W/SAFETY SWITCH - 2FT **MANUFACTURER**: ALEDDRA **CATALOG No:** LLT-2-T8-10W-DBA-D-50K **WATTS:** 10 **VOLTS**: 110-277 **MOUNTING**: N/A (RETROFIT FOR EXIST T8 2' LAMP) **COLOR**: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, DIFFUSED LENS	
T8LEDSS4-1	**TYPE:** T8 LED RETROFIT LAMP W/SAFETY SWITCH - 4FT **MANUFACTURER**: ALEDDRA **CATALOG No:** LLT-4-G-T8-12W-DBA-50K **WATTS:** 12 **VOLTS**: 110-277 **MOUNTING**: N/A (RETROFIT FOR EXIST T8 4' LAMP) **COLOR**: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K	

T8LEDBB2-1	**TYPE:** T8 LED RETROFIT LAMP W/BATTERY BACKUP- 2FT **MANUFACTURER**: ALEDDRA **CATALOG No:** YSH-T806-Y01-09(G13)5000K **WATTS:** 9 **VOLTS**: 100-277 **MOUNTING**: N/A (RETROFIT FOR EXIST T8 2' LAMP) **COLOR**: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, required to operate on an always-on circuit in order to keep the battery charged at all time	
T8LEDBB4-1	**TYPE:** T8 LED RETROFIT LAMP W/BATTERY BACKUP- 4FT **MANUFACTURER**: ALEDDRA **CATALOG No:** YSH-T812-Y01-18(G13)5000K **WATTS:** 18 **VOLTS**: 100-277 **MOUNTING**: N/A (RETROFIT FOR EXIST T8 4' LAMP) **COLOR**: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, required to operate on an always-on circuit in order to keep the battery charged at all time	
ULED2-1	**TYPE:** U-BEND LED TUBE, 2 FT **MANUFACTURER**: ALEDDRA **CATALOG No:** LLT-2U-T8-15W-BA-D-50K **WATTS:** 15 **VOLTS**: 120-277 **MOUNTING**: N/A (RETROFIT FOR EXIST 2' U-BEND LAMP) **COLOR**: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, DIFFUSED LENS	

WALKWAY LIGHTING				
MARK	**DESCRIPTION**	**LOCATION**	**COMMENTS**	**PICTURE**
WT-1	**TYPE:** WALKWAY LIGHT (TURTLE PROTECTION AREAS) **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** HE-ENV-90W-LED-LFLAMBER-600NM-PS-UNV-ST **WATTS**: 90 **VOLTS:** 120-277 **MOUNTING**: POLE MOUNTED **COLOR**: BRONZE	WALKWAY LIGHTING	600 NM AMBER	

PARKING LOT LIGHTING				
MARK	**DESCRIPTION**	**LOCATION**	**COMMENTS**	**PICTURE**
PT-1	**TYPE:** ROADWAY LIGHT (TURTLE PROTECTION AREAS) **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** HE-ENV-180W-LED-LFL-AMBER-600NMPS-UNV-ST **WATTS**: 180 **VOLTS:** 120-277 **MOUNTING**: POLE MOUNTED **COLOR**: BRONZE	PARKING LOT LIGHTING	600 NM AMBER	

ROADWAY LIGHTING				
MARK	**DESCRIPTION**	**LOCATION**	**COMMENTS**	**PICTURE**
RT-1	**TYPE:** ROADWAY LIGHT (TURTLE PROTECTION AREAS) **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No: HE-ENV-180W-LED-LFL-AMBER-600NMPS-UNV-ST** **WATTS**: **250** **VOLTS:** 120-277 **MOUNTING**: POLE MOUNTED **COLOR**: BRONZE	ROADWAY LIGHTING	600 NM AMBER	

POLES				
MARK	**DESCRIPTION**	**LOCATION**	**COMMENTS**	**PICTURE**
SQM-1	**TYPE:** POLE - SQUARE METALLIC **MANUFACTURER**: ENVIROLUX ENERGY SYSTEMS **CATALOG No:** EES-SSP SERIES **WATTS**: N/A **VOLTS:** N/A **MOUNTING**: SURFACE MOUNT (TO ANCHOR BOLTS) **COLOR**: BLACK	WALKWAY, PARKING LOT		

Native Trees, Plants, Wildflowers, Groundcover & Shrubs found on KSC & Available for Landscaping			
SCIENTIFIC NAME	**COMMON NAME**	**FOLIAGE COLOR**	**ADDITIONAL NOTES**
Acer rubrum	Red Maple		Moist sites, wide-ranging species use local material
Acrostichum danaeifolium	Giant leather fern		
Amorpha fruticosa	False indigobush		Moist sites, open to partial shade
Ananas comosus	Pineapple	Green	
Adropogon ternarius	Splitbeard bluestem		Dry, open sites
Andropogon virginicus var.	Chalky bluestem		Dry, open sites
Antirrhinum majus	Snap Dragons	Multi	
Ardisia escallanoides	Marlberry		Mesic sites, shade tolerant
Asclepias tuberosa	Butterfly Milkweed **(*NOT tropical milkweed)**	Orange	
Baptisia alba			
Begonia semperflorens	Begonias	Multi	
Bejaria racemosa	Tarflower		Open, well to somewhat poorly drained sites
Berlandiera subacaulis	Greeneyes	Yellow	
Bidens mitis			
Bursera simaruba	Gumbo limbo		
Bromeliaceae varieties	Florida Bromeliads	Multi	
Callicarpa americana	American Beautyberry		Full sun to partial shade, fruit attracts birds
Carphephorus corymbosus	Coastal Plain chaffhead		Summer to fall flowering, perennial
Carphephorus odoratissimus	Vanilla-plant		Summer to fall flowering, perennial
Castillja indvivsa	Indian Paintbrush		
Celtis laevigata	Sugarberry		Moist sites, deciduous
Chamaecrista fasciculate	Partridge Pea		
Chrysanthemum x morifolium	Garden Mums	Multi	
Coccoloba uvifera	Seagrape		Tolerates salt spray
Codiaeum variegatum	Croton	Multi	
Coleus x hybridus	Coleus	Multi	
Conoclinium coelestinum			
Conradina grandiflora	Scrub Mint	Pink	
Coreopsis basilis	Goldenmane Tickseed		
Coreopsis lanceolata	Lanceleaf Tickseed		
Coreopsis leavenworthii	Coreopsis	Multi	Moist sites, annual but may reseed
Cosmos bipinnatas	Garden Cosmos		
Cosmos sulphureus	Cosmos		
Crinum Americanum	Crinum Lilly		
Dianthus barbatus	Dianthus	Multi	
Echeveria/Sedum/ Sempervivum	Succulents **(*NOT Kalanchoe)**	Multi	
Echinacea purpurea	Purple coneflower	Purple	
Echinacea purpurea	Purple coneflower		
Eragrostis elliottii	Elliott's lovegrass		Open, dry to moist sites
Eragrostis spectabilis			
Erythrina herbacea	Coralbean		Full sun to partial shade, tubular flowers attract butterflies
Flaveria linearis	Narrowleaf yellowtop		
Forestiera segregata	Florida privet		Full sun to partial shade
Gaillardia aristata			
Gaillardia pulchella	Blanket Flower/Indian Blanket	Multi	

Geobalanus oblongifolius/Licania michauxii	Gopher apple		Geobalanus oblongifolius (=Licania michauxii)
Gerbera jamesonii	Gerbera Daisy	Multi	
Hamelia patens	Firebush	Red/Orange	
Helianthus angustifolius			
Helianthus debilis var. debilis	Dune sunflower/Dune daisy	Yellow	Open, dry sites, annual but may reseed
Helianthus radula	Rayless Sunflower	Yellow	
Heliotropium angustifolium	Scorpion-tail		Perennial
Hemerocallis spp.	Daylily	Multi	
Hippeastrum spp.	Amaryllis lily	Multi	
Ilex cassine	Dahoon holly		
Ilex glabra	Gallberry		
Ilex opaca	American holly		
Ilex vomitoria	Yaupon Holly		Can be used as a hedge
Illicium parviflorum	Yellow (Ocala) anise		
Ipomopsis rubra	Standing Cypress		
Jacquemontia pentanthos	Skyblue Clustervine	Blue	
Juniperas virginiana	Red Cedar		
Larkspur delphinium	Chinese Larkspur		
Liatris spicata/tenuifolia	Blazing Star	Purple	Fall flowering, perennial
Linum rubrum	Scarlet Flax		
Lonicera sempervirens	Coral Honeysuckle	Red	
Lupines texenis	Texas Bluebonnet		
Lupinus perennis	Blue Lupine		
Lupinus villosus			
Lyonia ferruginea	Rusty lyonia		Open, dry sites
Lyonia lucida	Shiny lyonia		Open, moist to somewhat poorly drained sites
Magnolia grandiflora	Southern magnolia		Well to somewhat poorly drained sites, evergreen
Magnolia virginia	Sweetbay magnolia		
Mimosa strigillosa	Powderpuff/Sunshine mimosa		
Monarda citriodora	Lemon Beebalm		
Monarda punctata	Beebalm		Open dry to moist sites
Morella cerifera a.k.a. Myrica cerifera	Southern Wax Myrtle		
Muhlenbergia capillaris	Muhly Grass	Purple/Pink	Open, moist to somewhat poorly drained sites
Myrcianthes fragrans	Simpson's stopper/Nakedwood		Sun to shade, fruits attracts birds
Myrica cerifera	Wax myrtle/Southern bayberry		Sun to partial shade, moist to somewhat poorly drained sites
Myrsine cubana	Myrsine		
Oenothera speciosa	Pink Pimrose		
Pelargonium x hortorum	Geraniums	Multi	
Penstemon multiflorus			
Pentas lanceolata	Pentas	Multi	
Phlox drummondii			
Phlox nivalis			
Phyla nodiflora	Frogfruit		Open, moist sites
Piloblephis rigida	Pennyroyal		Perennial subshrub
Pinus elliottii var. densa	South Florida Slash Pine		Well to somewhat poorly drained sites

Pityopsis graminifolia	Silver-leaved aster		Dry, open sites, summer to fall flowering
Portulaca spp.	Portulaca/Moss Rose	Multi	
Psychotria nervosa	Wild Coffee		Sun to partial shade, moist sites
Psychotria tenuifolia	Soft-leaved wild coffee		Moist sites, fruit attracts birds
Quercus chapmanii	Chapman oak		Small tree, well drained sites, deciduous
Quercus geminata	Sand live oak		Small to medium tree, dry sites, evergreen
Quercus laurifolia	Laurel oak		Large tree, well to somewhat poorly drained sites, mostly deciduous
Quercus myrtifolia	Myrtle oak		
Quercus virginiana	Live oak		Large tree, well to somewhat poorly drained sites, evergreen
Ratibida columnifera	Prairie Coneflower		
Rivina humilis	Rouge Plant	Red	
Rudbeckia hirta	Black-eyed Susan		
Rudbeckia mohrii			
Rudbeckia mollis	Sandhill black-eyed susan		
Ruellia caroliniensis	Wild Petunia **(*NOT Mexican Petunia)**	Purple	
Sabal palmetto	Cabbage palm		Range of sites, flowers attract many pollinators
Salvia coccinea	Scarlet Sage/Scarlet Salvia	Red	Annual, but may persist and reseed
Salvia lyrata	Lyre-Leaved Sage	Purple	
Sambucus canadensis	Elderberry		Moist sites, fruit attracts birds
Scutellaria sp.	Skullcap	Purple	
Senecio cineraria	Dusty Miller	White	
Serenoa repens	Saw Palmetto		Dry to somewhat poorly drained sites, attracts many pollinators
Silphium astericus	Starry Rosinweed	Yellow	
Sisyrinchium angustifolium	Blue-eyed grass		Open to partial shade, moist sites
Solidago fistulosa			
Solidago odora var. chapmanii	Chapman’s goldenrod		Dry sites, open to partial shade
Solidago sempervirens	Seaside Goldenrod	Yellow	Moist sites, open to partial shade
Solidago stricta			
Sophora tomentosa			
Spartina bakeri	Sand cordgrass		
Spartina patens	Smooth cordgrass		
Stokesia levis	Aster, Stokes'	Multi	
Tagetes spp.	Marigolds	Multi	
Tradescantia ohiensis	Spiderwort		Open to partial shade
Tripsacum dactyloides	Fakahatchee grass		Large clump grass, moist to poorly drained sites
Trichostema dichotomum	Bluecurls		Dry to moist sites, annual but may persist and reseed
Trifolium incarnatum	Crimson Clover		
Tripsacum dactyloides	Fakahatchee Grass	Green	
Vaccinium darrowi	Blueberry		Small shrub, moist to somewhat dry sites, spreads by rhizomes
Vaccinium myrsinites	Shiny blueberry		Small shrub, dry to somewhat poorly drained sites
Vaccinium stamineum	Deerberry		

Verbena maritima	Verbena, Beach	Purple	
Verbena tenuisecta	Moss verbena		
Vernonia gigantea	Giant ironweed		Moist sites, summer to fall flowering perennial
Veronia angustifolia	Ironweed, Tall	Purple	
Viburnum obovatum	Walter's Viburnum		Moist to somewhat dry sites
Viola soroia	Florida violet		
Viola x wittrockiana	Pansies	Multi	
Yucca filamentosa	Adams needle		
Zamia floridana	Coontie		
Zamia interifolia	Coontie		Grows slowly
Zephyranthes spp.	Rain lily	Multi	
Zinnia elegans	Zinnias	Multi	
	Roses **(containers only)**		

Note: The above list is inclusive of KSC native and permitted wildflowers, plants, shrubs, small trees, trees, and grasses/groundcover. List also includes FDOT approved roadway wildflowers

The Following Plants are NOT Permitted on KSC	
SCIENTIFIC NAME	**COMMON NAME**
Asclepias curassavica	Tropical Milkweed/Mexican Butterfly Weed
Asparagus aethiopicus	Asparagus Fern
Catharanthus roseus	Vinca/Periwinkle
Cuphea hyssopifolia	Mexican Heather/False Heather
Evolvulus glomeratus	Blue Daze/Shaggy Dwarf Morning Glory
Evolvulus Hybrid	Blue My Mind/Dwarf Morning Glory
Kalanchoe daigremontiana/Kalanchoe delagoensis	Mother of Thousands/Mother of Millions
Lantana camara	Lantana
Lobularia maritima	Sweet Alyssum
Ruellia simplex	Mexican Petunia
Sansevieria (ALL)	Snake Plant/Mother in Law's Tongue
Tradescantia spathacea	Oyster Plant/Moses-in-the-cradle

Note: The above list are some of the most common invasive plants in the area. They are commonly sold at garden centers but are not approved for use at KSC.

SPACEFLORIDA

Cape Canaveral Spaceport Development Manual

VOLUME 2
KENNEDY SPACE CENTER (KSC)

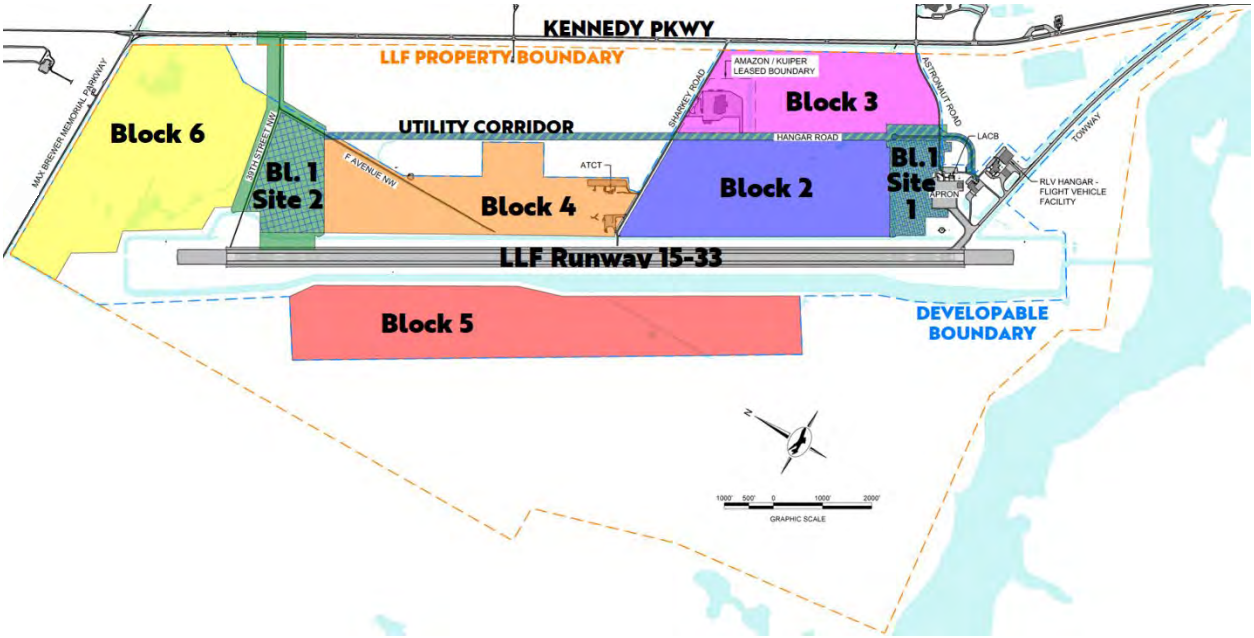
CHAPTER 2
LAUNCH & LANDING FACILITY (LLF)

TABLE OF CONTENTS

SECTION 1 – LLF OVERVIEW

The 4,432-acre CCS Launch & Landing Facility (LLF), a registered Private Florida Airport under airport code TTS, includes a 3-mile runway and associated support facilities used during NASA's Space Shuttle Program plus 2,077 available acres. Space Florida (SF) leases the LLF from NASA under KCA-4412, *The Property Agreement between the National Aeronautics and Space Administration John F Kennedy Space Center and Space Florida for the Transfer of Operations and Management of the Shuttle Landing Facility* (the Agreement) available for interested Tenant review. Development within this area is subject to the Development Manual's general criteria and specifically this chapter as SF implements the Development Concept Plan. Facilities designed, developed, funded, or constructed only by SF shall be referred to as SF Projects with all others deemed Tenant Projects (TP).

Figure 1: LLF Property Area



SECTION 2 – LLF USE

Land use shall conform with SF and KSC master plans. SF and NASA reserve the right to approve or restrict land use beyond the uses listed herein to accommodate changes in market conditions or regulations.

- ✧ Processing, flight, refurbishment of commercial/government suborbital & orbital launch system requiring horizontal takeoff/recovery
- ✧ Spaceflight vehicle or payload hardware delivery cargo aircraft operation
- ✧ Cargo operation supporting Commercial Space Activities (CSA) / other CCS activities
- ✧ Chartered air service including passenger aircraft associated directly with CSA
- ✧ Aviation flight test or development
- ✧ Advance air/space traffic management system development/testing (of Unmanned Aerial Systems (UAS) integration systems/technologies, commercial transportation into National Air Space, etc.)
- ✧ Straight line aerodynamic or engine technology vehicle testing
- ✧ Processing, integration, recovery, storage of space mission payload requiring use of permitted flight system
- ✧ Advanced aerospace vehicle flight testing & operation (UAS, spaceflight training, development-related experimental aircraft, etc.)
- ✧ Spaceflight or aerospace research mission support aviation operation
- ✧ Mission management, program support aircraft operation
- ✧ High energy system research, development, testing
- ✧ Explosive siting, hazardous material, fuel, propellant storage accompanied by an Explosives Site Plan (ESP) with appropriate Quantity-Distance (QD) calculations subject to NASA Standards & FAA AST approval; propellant storage shall not adversely impact any other LLF Tenant or operation

SF & NASA may generally allow the following uses as accessory to a permitted use.

- ✧ Manufacturing
- ✧ Assembly
- ✧ Space launch vehicle preparation area
- ✧ Storage/warehousing including fuel, commodities, components, flight/ground support equipment
- ✧ Office, operations, logistics, support facilities
- ✧ Visitor amenities (tourism, flight viewing, educational exhibits, etc.)

SF & NASA generally prohibit the following uses at the LLF.

- ✧ General aviation businesses
- ✧ Scheduled passenger air service
- ✧ Industrial manufacturing unrelated to space transportation, aerospace flight systems, or space mission payloads

SECTION 3 – LLF DESIGN

3.1 Airfield

Airfield infrastructure improvements for runway, aprons, and taxiways shall conform with the latest edition of the applicable FAA Advisory Circulars identified in Table 1. As necessary, utilize additional FAA Advisory Circulars/standards associated with airfield planning, operations, maintenance, and infrastructure development available at faa.gov/regulations_policies/advisory_circulars.

Table 1: FAA Design Guidelines

*Advisory Circular**	*Title*
150/5300-13B	Airport Design
150/5370-10H	Standards for Specifying Construction of Airports
150/5320-6G	Airport Pavement Design & Evaluation
150/5340-1M	Standards for Airport Markings
150/5340-18G	Standards for Airport Sign Systems
FAA 150/5340-30J	Design & Installation Details for Airport Visual Aids
150/5370-2G	Operational Safety on Airports During Construction
150/5345-46E	Specification for Runway & Taxiway Light Fixtures Document Information

** Utilize latest edition at time of design.*

3.2 Development Standards

- ✧ Building height: Provide Air Traffic Control Tower (ATCT) Line-of-Sight Study & FAR Part 77 documentation for airfield safety surfaces
- ✧ Minimum building setbacks:
  - o Runway centerline: 1,500'
  - o Taxiway centerline: Aircraft Design Group VI Object Free Area as defined in FAA Advisory Circular 150/5300-13 Airport Design (Latest Edition)
  - o Lease/property line: 25'

3.3 Glare

- ✧ Review FAA glare requirements prior to final design
- ✧ No highly reflective materials (i.e. glass veneered curtain walls) as major building element
- ✧ Utilize non-reflective bronze glass as opposed to highly reflective silver or gold glass
- ✧ Coat/clad high sheen materials (aluminum, stainless steel panels, etc.) with light-absorbing finish
- ✧ SF accepts light-colored roof aggregate

3.4 NASA Standard for Grounding

NASA Procedural Requirement KSC-STD-E-0012 Latest Edition applies for Facility Grounding & Lightning Protection if:

- ✧ Facility presents an explosive hazard to NASA facilities or personnel
- ✧ Project could impact NASA mission related operations

3.5 Utilities

- ✧ Coordinate utility demarcations with SF
- ✧ May negotiate additional demarcations within Tenant agreement

3.5.1 Power & Communications

- ✧ The LLF is in transition from NASA power to FPL power. Depending on development schedule, developers may need to contact both agencies to coordinate service.
- ✧ SF now provides & maintains communication infrastructure, including private access portals.

3.5.2 Water

KSC supplies LLF water separately as potable water and industrial water (non-potable) mains.

- ✧ Potable mains: generally smaller than industrial mains to minimize water age in the mains
- ✧ Industrial water mains for non-potable use (fire suppression, make-up water, other industrial uses)

3.5.3 Sanitary Sewer Discharge

- ✧ NASA operates & maintains domestic wastewater system & treatment
- ✧ SF operates & maintains new extensions
- ✧ Tenant responsible for own wastewater collection to a designated demarcation point from which NASA assumes responsibility
- ✧ Prior to non-domestic wastewater discharge, either:
  - o Obtain written discharge approval from SF and both NASA & CCAFS domestic wastewater collection/transmission system operators (cost to obtain approval reimbursable to NASA); or
  - o Tenant containerizes & ships wastewater to off-site treatment or disposal facility.

3.5.4 Wastewater

- ✧ NASA owned & operated
- ✧ No gravity collection mains exist; Tenant needs on-site lift station and force main lateral manifolding into the LLF's central force main system
- ✧ SF intends to install a master lift station at the LLF, into which the central force mains will discharge before repumping to KSC's regional pump station LS-4A

3.5.5 Waste Management & Disposal

- ✧ Properly containerize, store, label, manifest, ship, & dispose of all waste in regulatory compliance at Tenant expense
- ✧ Hazardous waste: Manifest, ship, and dispose of under U. S. Environmental Protection Agency (USEPA) hazardous waste generator identification number

3.6 Environmental Planning

- ✧ Tenant is solely responsible for environmental compliance with all Federal, State of Florida, and local environmental laws, statutes, regulations, & ordinances.
- ✧ Maintain copies of all required environmental permits, licenses, registrations, regulatory approvals, waste manifests, laboratory analyses, reports, plans, compliance records, NASA ECs, and regulatory notifications onsite and available for SF review upon request.
- ✧ Tenant reimburses SF/NASA of enforcement fines/penalties resulting from environmental violations due to Tenant activity.

3.6.1 Definitions

- Hazardous Material: any substance that is (a) defined under any Environmental Law (as defined below) as a hazardous substance, hazardous waste, hazardous material, pollutant, or contaminant; (b) a petroleum hydrocarbon, including crude oil or any fraction or mixture thereof; (c) hazardous, toxic, corrosive, flammable, explosive, infectious, radioactive, carcinogenic, or a reproductive toxicant; or (d) otherwise regulated pursuant to any Environmental Law
- Environmental Law: all Federal, State, and local laws, statutes, ordinances, regulations, rules, judicial and administrative orders and decrees, permits, licenses, approvals, authorizations, and similar requirements of all Federal, State, and local governmental agencies (including NASA) or other governmental authorities pertaining to the protection of human health and safety or the environment, now existing or later adopted
- Agreement Activities: the activities that are part of the ordinary course of SF's business in accordance with the Permitted Uses
- Materials: the materials handled, used, or stored in the ordinary course of conducting Agreement Activities
- Permit Applications: permit application forms and supporting documentation, Notice of Intent forms and supporting documentation, registration forms, license forms, or other regulatory approval requests

3.6.2 Environmental Baseline Survey (EBS)

The LLF's EBS dated February 28, 2014 represents environmental conditions and matters affecting the LLF as of June 22, 2015 (request a copy from Environmental Manager).

- Immediately report to SF any potential soil or water contamination not identified in the EBS.
- Upon vacating a facility or lease area, submit an updated EBS for that facility or lease area to set forth environmental conditions and matters affecting LLF at time of vacation. SF manages NASA approval and acknowledgement and may require sampling of soil and/or surface and ground water to verify conditions.
- Tenant is liable and required to remedy any environmental conditions and matters affecting the LLF found to be a result of the Tenant's activities.

3.6.3 Water Tank Storage

Development size dictates possible onsite water storage requirements. Request review upon sublease/development concurrence or KSC site plan submission.

3.6.4 Registered Petroleum Storage Tank System

- Comply with applicable petroleum storage tank system regulations (FAC Chapters 62-761, 65-762)
- For new petroleum storage tank systems, register system with FDEP & arrange required installation inspections with Brevard County Natural Resource Management Office prior to tank service
- If control/operation of an existing registered petroleum storage tank system is transferred as part of the facilities involved in a lease agreement, transfer registration from SF to Tenant; Tenant thereafter responsible for compliance
- Provide copy of all storage tank registration forms

3.6.5 Spill Prevention, Control, & Countermeasures (SPCC)

- Comply with applicable oil pollution prevention regulations under Title 40 Chapter 1 Subchapter D Part 112 of the CFR.
- If required, develop, maintain, and implement a SPCC plan for Tenant oil storage activities.
- Coordinate with LLF in updating the facility-wide SPCC plan.

3.7 Historical & Cultural Resources

- The LLF is eligible for listing on the National Registry of Historic Places (NRHP). Prior to modifications, repairs, improvements, alterations, coordinate with SF/NASA using the NASA Environmental Checklist process to determine if a proposal will adversely affect:
  - Historic properties under the National Historic Preservation Act (NHPA) regulations (36 CFR Part 800, Protection of Historic Properties); or
  - Programmatic Agreement (PA) for Management of Historic Properties at KSC (KCA-4185).
- SF/NASA reviews and may identify adverse effect on historic property and consult with State Historic Preservation Office (SHPO) in accordance with the PA (may take 3-6 months depending on project complexity).
- Tenant shall not remove, disturb, or cause or permit removal or disturbance of, any historical, archaeological, architectural, or other cultural artifacts, relics, vestiges, remains, or objects of antiquity. Upon discovery of such items, Tenant shall cease activity, immediately notify SF, and protect the site and material from further disturbance until SF/NASA provides clearance to proceed. Tenant bares any cost resulting from such delay.

SECTION 4 – LLF OPERATIONS

4.1 FAA Licensing

- ✧ Federal Aviation Administration Office of Commercial Space Transportation (FAA AST) granted SF a Launch Site Operator License (LSOL) in November 2018 and Reentry Site Operator License (RSOL) in February 2021 to operate the LLF in support of commercial space transportation activities. All projects shall comply with the requirements of the LSOL and RSOL.
- ✧ All users proposing launch/reentry to test equipment, design, or operating techniques engaging in spaceflight shall obtain FAA AST licensing, commercial launch operator license or experimental permit, upon determining the activity will not jeopardize public health and safety, property, U.S. national security or foreign policy interests, or international obligations.
- ✧ Each launch operator shall obtain a commercial launch operator's license from the FAA AST in accordance with CFR Title 14 Chapter III Parts 415/417, 431, and 435.
- ✧ Streamlined Launch & Reentry License Requirements shall comply with CFR Title 14 Chapter III Part 430.
- ✧ Provide SF copies of all licensing prior to operation.
- ✧ Access standards and licensing guidance on the FAA website at faa.gov/space/licenses.

4.2 Flight Safety Compliance

SF follows a tailored version of NPR 8715.5, Range Flight Safety Program Requirements (RFSPR). SF and NASA S&MA review and jointly document applicable requirements and responsibilities for LLF operations based on the following terms.

- ✧ Tenant conducts FAA Licensed Commercial Launch Operations in accordance with KCA-4394 Memorandum of Understanding (MOU) between 45th Space Wing and NASA on Enabling Range Flight Safety Services for FAA Licensed Launch Operations from KSC.
- ✧ SF provides risk analysis performance for all LLF flight activities (excluding conventional piloted aircraft) and NASA facility impact probabilities to NASA for Class C and D activities.
- ✧ Prior to Class C and D flight activity, NASA provides SF with verification of acceptable risk to NASA personnel and property.

4.3 NASA Compliance Oversight

- ✧ As landowner, NASA ensures Tenant compliance with environmental laws and regulations.
- ✧ NASA SF shall participate in periodic environmental audits of LLF operations to exchange information, review current and future LLF activities, confirm compliance with environmental regulations and permits, review environmental spills and remediation progress, discuss regulatory agency inspections and findings, coordinate on air permitting; etc.
- ✧ Tenant shall allow NASA spot inspections of Tenant facilities, systems, compliance records, or wastes if NASA personnel suspect potential environmental non-compliance, unpermitted spill, or release to the environment.
- ✧ Attend all spot inspections and respond with corrective action for identified violations, findings, and deficiencies by the inspection letter's due date (at Tenant expense).

4.4 Other Agency Inspections

Report to SF:

- ✧ Findings of other regulatory agency inspections or audits (EPA, FDEP, Brevard County Natural Resources, etc.)
- ✧ Notices of violation (cured as soon as practicable)

4.5 Environmental Land Management

- ✧ Merritt Island National Wildlife Refuge (MINWR) provides nuisance wildlife response within the LLF.
- ✧ U. S. Fish & Wildlife Service (USFWS) performs habitat management per long-standing interagency agreement (KCA 1649 Rev. B) and:
  - o Conducts prescriptive burns to effectively maintain and enhance wildlife habitat and reduce wildfires occurrence and severity;
  - o Maintains primary responsibility for wildfire suppression; and
  - o Treats & removes non-native invasive plants & animals on refuge lands.
- ✧ Coordinate prescribed burn approval with NASA under established procedures and notify SF and LLF Tenants.
- ✧ Annually provide NASA & SF a list of LLF fire management units scheduled for prescribed burning.

4.6 Spills

4.6.1 Reporting & Notification

- ✧ Hazardous spills, releases, or emissions exceeding Reportable Quantities as defined by federal and State of Florida regulations (40 CFR Part 302, 40 CFR Part 355, 49 CFR Parts 171-180, Florida Administrative Code (FAC) Chapter 62-150, and FAC Chapter 62-770): immediately report to:
  - o SF;
  - o NASA emergency responders (321-867-7911);
  - o Off-site agencies/authorities (National Response Center, Florida State Watch Office, and Florida Department of Environmental Protection) per Federal and State of Florida regulations; and,
  - o NASA EAB (321-867-9005).
- ✧ Pervious surface spill/release:
  - o Includes:
    - Impervious surface spill not adequately cleaned up within a reasonable timeframe (not to exceed 6 hours) or prior to a storm event
    - Pavement with unsealed cracks or expansion joints if hazardous materials can migrate to environmental media below (grass, soil, groundwater, surface water, sediment, gravel, etc.)
  - o Regardless of quantity, report to SF and NASA EAB (321-867-9005)
- ✧ Any spill or release: Tenant completes & submits NASA Pollution Incident Report (KSC Form 21-555) to SF and the NASA EAB within 3 calendar days after incident/discovery

4.6.2 Cleanup

- ✧ Take measures to prevent hazardous materials release at, about, or beneath LLF facilities. Tenant liability under this section survives lease termination with respect to acts or omissions occurring before such termination.
- ✧ Clean pervious surface spills to environmental media under State of Florida residential standards unless otherwise approved in writing by SF & NASA EAB.
- ✧ Tenant may request NASA spill team support via emergency operator through NASA reimbursement or a support agreement directly with the NASA spill team company.
- ✧ Ship & disposal of all cleanup waste & contaminated environmental media.
- ✧ Upon cleanup completion, prepare written report including description of corrective actions taken, a map showing spill location, general dimensions of the affected area using Global Positioning System (GPS) coordinates, photos of the spill before and after cleanup, and confirmatory sampling results providing evidence of adequate cleanup).
- ✧ For cleanup actions completed during a calendar quarter, deliver cleanup reports no later than the end of the following calendar quarter.

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VOLUME 2
KENNEDY SPACE CENTER (KSC)

CHAPTER 3
EXPLORATION PARK

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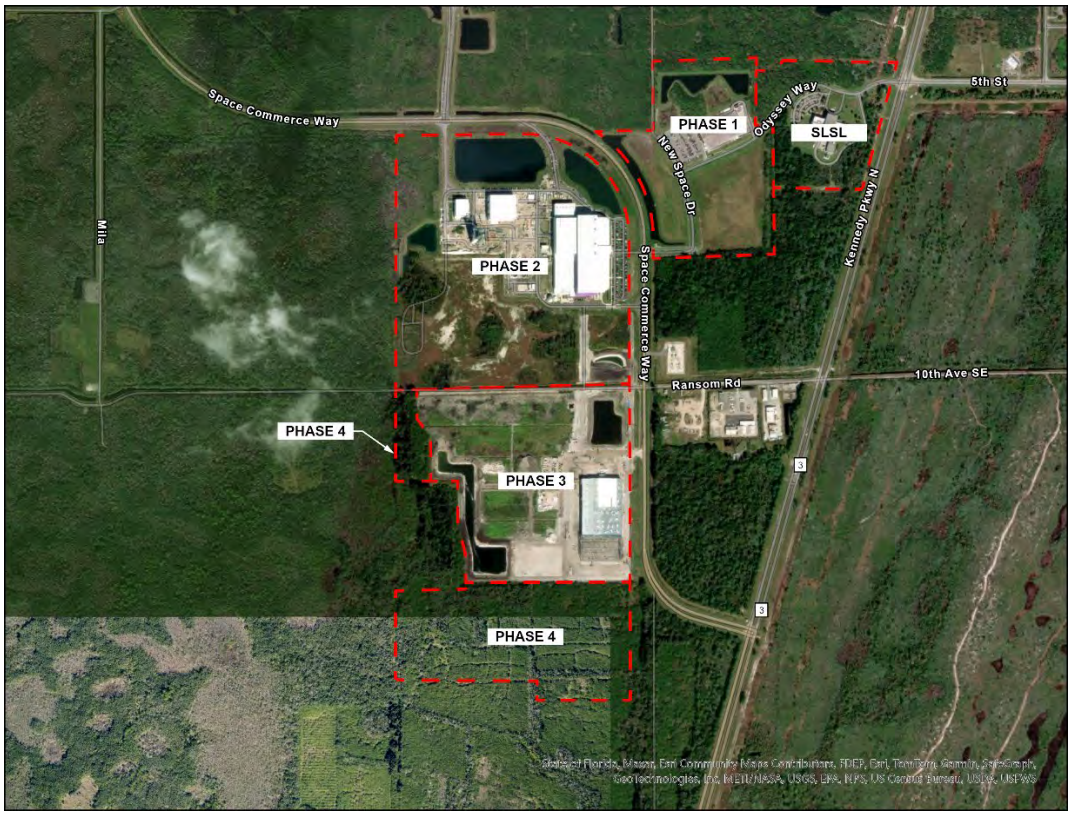
SECTION 1 – PARK OVERVIEW

Exploration Park ("the Park") as outlined in Figure 1 is a leading-edge research and innovation business park within the Space Commerce District (SCD) at Kennedy Space Center (KSC). The Agreement's ~400 acres currently includes the Space Life Sciences Laboratory (SLSL), Blue Origin's Rocket Park manufacturing complex, and Airbus U.S. Space & Defense's satellite assembly site. The Park maintains an evident sense of place, character, and functionality representing the priorities and aspirations of SF, National Aeronautics and Space Administration (NASA), KSC, and its Tenants.

Space Florida (SF) leases the Park from NASA under KCA-4222, *NASA John F. Kennedy Space Center Enhanced Use Lease,* herein referred to as the Agreement and available for interested Tenant review. Any development within this area is subject to the general criteria of the overall Development Manual and specifically within this chapter.

Figure 1: Exploration Park Property Area



Exploration Park as outlined in Figure 1 is one part of the larger SCD (see Figure 2 within Section 2) currently occupied through Enhanced Use Leases (EULs) between NASA, Space Florida (SF), and private entities including Airbus, Blue Origin, The Aerospace Corporation, International Space Station National Laboratory, and multiple universities, medical research companies, and others. SF pioneered the Area Development Plan (ADP) and accompanying Programmatic Environmental Assessment (PEA) for the entire SCD area with NASA support and a Finding of No Significant Impact (FONSI) in 2025. SF prepares to enter new EULs on the remaining parcels, potentially expanding the boundaries of Exploration Park within the SCD.

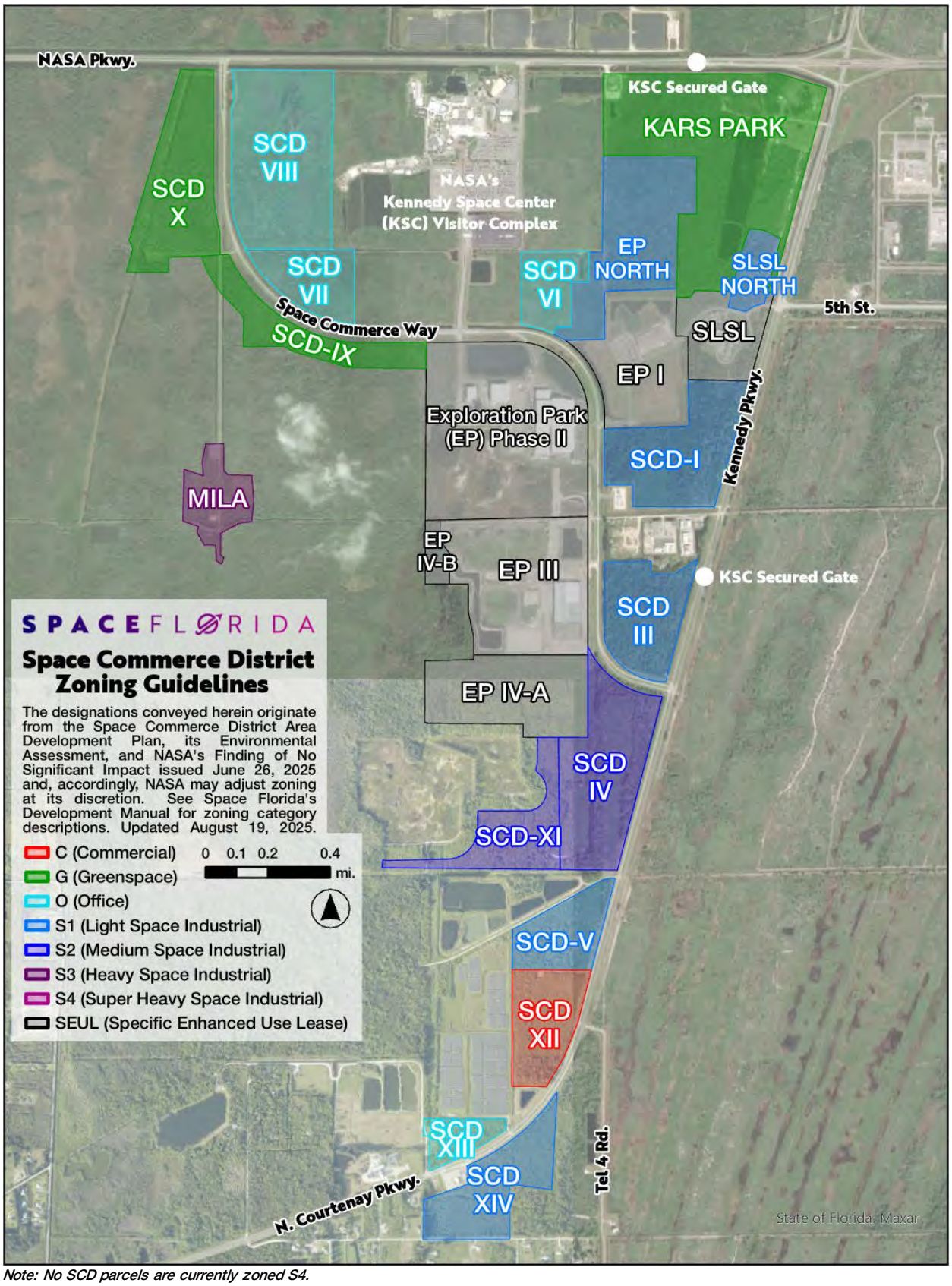
SECTION 2 – PARK USE

Land use shall conform with SF and KSC master plans. SF and NASA reserve the right to approve or restrict land use beyond the uses listed herein to accommodate changes in market conditions or regulations.

Table 1: Uses Allowed (A) by Zoning District

Grouping Use	G Green Space	C Commercial	O Office	S1 Light Space Industrial	S2 Medium Space Industrial	S3 Heavy Space Industrial	S4 Super Heavy Space Industrial
Preserved open space	A	A	A	A	A	A	A
Community							
Press facility		A	A	A	A		
Museum		A	A	A	A		
Fitness/recreation		A	A	A	A		
Medical		A	A	A	A		
Childcare		A	A	A	A		
Lodging/food amenities		A	A	A	A		
Gas station		A	A	A	A		
Administrative							
Fire station			A	A	A	A	
Office			A	A	A	A	
Academic facility			A	A	A	A	
Laboratory			A	A	A	A	
Small warehousing			A	A	A	A	
Light industrial							
Warehousing				A	A	A	
Photovoltaic array				A	A	A	
Vehicle maintenance				A	A	A	A
Heavy industrial							
Liquid fuels					A	A	A
Testing range					A	A	A
Utilities/production plant					A	A	A
Hazardous activities							
Explosives storage							A
Hazardous payload processing							A
Launch							
Launch & landing facilities							A
Launch-critical commodity production or storage							A

Figure 2: SCD Zoning Guidelines Map



Note: No SCD parcels are currently zoned S4.

2.1 Specific Enhanced Use Leases

Developments under EUL prior to SCD ADP PEA FONSI:

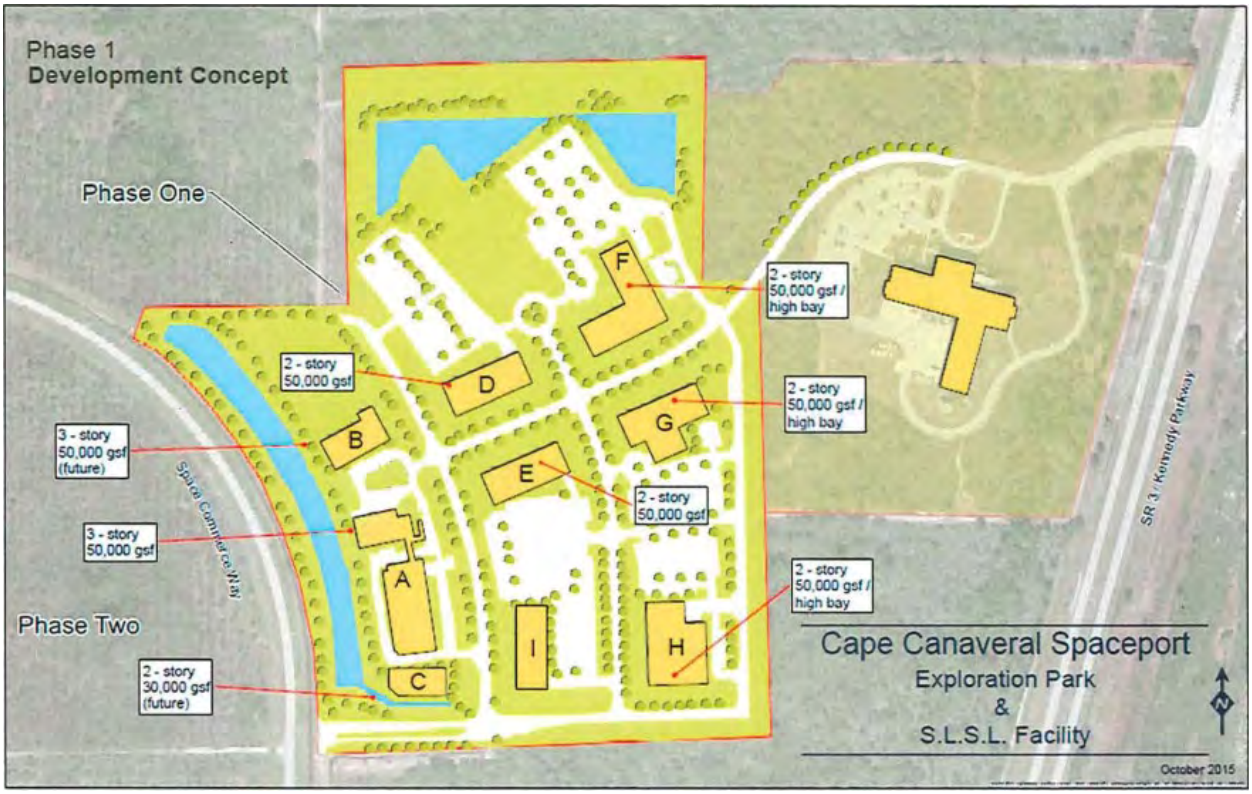
2.1.1 Space Life Sciences Lab (SLSL)

Laboratory facility with capability to host International Space Station (ISS) experiment processing and biological and life sciences research, including but not limited to, biotechnology, microgravity, space agriculture, biomedicine. Not permitted: alcohol sales; funds solicitation.

2.1.2 Exploration Park Phases 1 & 2 (EP & EP2)

- ✧ Generally permitted:
  - o Uses demonstrating requirement or benefit to close proximity to CCS facilities or personnel
  - o Uses related to NASA mission, space commerce, and space commercialization
  - o Research & technology development with known or potential application to activities in space or improvement of life on earth (energy-related, life sciences, environmental activities, etc.)
  - o Academics/education with current or potential partnership with NASA/USSF
  - o Support services reasonably required by Park Tenants or resident government and contractor organizations of KSC/CCSFS (technical support, business services, and incidental limited retail support services)
- ✧ Generally prohibited: hazardous activities, heavy industrial manufacturing, warehousing as standalone use, hotels or other major tourist facilities, or political, social, or religious-affiliated organizations.

Figure 2: Exploration Park Phase 1 Conceptual Site Development Master Plan per KCA-4222 Rev. C



2.1.3 Exploration Park Phase 3 (EP3)

- ✧ Generally permitted:
  - o Space flight hardware and launch vehicle design, manufacturing, assembly, processing, and testing necessary or desirable to develop and operate a commercial service for delivery of humans, cargo, and payloads to space
  - o Flight crew and space flight participant training and flight simulation activities
  - o Public engagement and educational outreach related to Blue Origin's launch and space flight operations
  - o Mission control and other associated engineering, technical, and administrative support activities associated with the provision of a commercial service for delivery of humans, cargo, and payloads to space
  - o Supporting accessory uses
- ✧ Generally prohibited: hazardous activities

2.1.4 Exploration Park Phase 4 (EP4)

- ✧ Assembly, integration, processing
- ✧ Laboratories, material support, and interface testing to achieve final assembly, test, and closeout to prepare and test payloads, space systems, and systems components for flight or integration;
- ✧ Development & testing of launch vehicle or spacecraft equipment at the component or system level
- ✧ Post-flight servicing and refurbishment activities
- ✧ Spaceport operations
- ✧ Associated and compatible manufacturing, logistics, technical support functions

SECTION 3 – PARK DESIGN

3.1 Key Design Principles

Connectivity, community, and cohesiveness represent three principles governing the organization and character of open spaces and buildings for Exploration Park, evoking a distinctive setting, consistency, and sense of place across Park' development.

3.1.1 Connectivity

SF encourages both physical and visual connections to facilitate movement throughout the Park and foster a sense of unity. A network of roadway and pedestrian circulation systems physically links buildings and open spaces. While the predominant roadway system provides a sense of order and organization to the Park, the freedom of pedestrian movement reserves priority. Achieve connectivity by establishing an axis of sightlines that visually links focal points throughout the Park. Tenant, as part of a development project, shall extend sidewalks and/or walking trails beyond parcel limits to offer occupants more connections.

3.2.2 Community

The guidelines support a hierarchy of communal spaces that encourage interaction among the Park's users. These spaces shall organize around specific program clusters, re-orienting individuals in laboratories and offices to larger communities within respective areas. Visually and physically connect communal spaces to larger, more collective space and provide a favorable image of the Park's mission to the community.

3.2.3 Cohesiveness

Cohesiveness promotes visual consistency among the Park's architecture and landscape over the course of development. Collectively, adjacent buildings represent a common strategy of massing, orientation, and general organization. SF encourages architects to incorporate a complementary palette of materials and colors. The Park's landscape maintains cohesiveness through the consistent use of native plant material, paving materials, signage, and lighting. Cohesiveness among the Park's buildings and open space enhances the Park's legibility and identity and promotes user collaboration.

3.2 Site

3.2.1 Open Space

Inviting outdoor spaces contribute to the interaction of all users of the Park and a healthy work environment. Well-articulated open spaces defined by adjacent buildings, landscape elements, or pedestrian paths serve as places of respite and engagement with industry colleagues. Plan open spaces and building courtyards with intention, enhancing connectivity between and among buildings, not left as negative space. Design fostering a secure, comfortable, and welcoming atmosphere for open space activity contributes to the Park's overall sense of community. Durability and ease of maintenance ensures long-term success of the Park.

The Park lies within the Merritt Island National Wildlife Refuge (MINWR) where natural habitat protection and restoration is a vital part of open space strategy. Protect and enhance existing wetlands through integrated stormwater management and treatment plans that capture runoff from development. Install native landscape materials along drainage courses, expanding existing habitat.

Required for Phase 1 Parcel only:

- ✧ Categorize outdoor areas by intended use and level of activity, such as direct pedestrian transit, casual pedestrian passage, personal solitude, quiet reflection, informal social engagement by both small and large groups, and structured activities (scheduled discussion, recreation, social gatherings).
- ✧ Develop outdoor rooms (courts, arcades, cloisters, plazas) in locations that invite convenient access and use.
- ✧ Scale outdoor spaces proportionally to intended or presumed use (i.e. smaller spaces for intimate gatherings, large spaces for collective social uses).
- ✧ While preserving the continuity of experience and expression in the design of all open space, individualize each area's intended use to grant unique identities. Landscape features such as fountains, water elements, sculptures, framed vistas, and specialized planting areas may serve as focal signatures.
- ✧ Where developers anticipate large-scaled activities and social uses, create broadly open, flat lawns or plazas with shaded edges and seating for passive activity.
- ✧ Identify areas of highest employment density and pedestrian traffic (particularly those adjacent to major building entries) and consider locations for outdoor cafés and meeting areas. Based on anticipated intensity of use, provide adequately scaled seating, lighting, power and data resources, and shade structures.
- ✧ Provide comfortable outdoor seating. Although scale, configuration, and design should vary in response to each open space's intended use, the style, color, and materials of seating should draw from a common design vocabulary.
- ✧ Provide appropriate outdoor accessories including trash receptacles, information kiosks, and directional signage.

Required for all phases:

- ✧ Orient open spaces to take advantage of solar warming using landscape elements or physical structures (trellises, overhangs, canopies, shelters, street trees, etc.). Anticipate the effect of adverse weather events (i.e., provide screening or shelter from wind and/or rain).
- ✧ Screen outdoor spaces from adjacent distractions using arcades, colonnades, gateways, plantings, walls, or fences while still preserving an inviting, welcoming character.
- ✧ If the specific building design includes an arrival forecourt, provide outdoor features to accommodate both passive and active uses. Consider site walls to define edges and bollards to define vehicular limits. Achieve a pedestrian-scale arrival to reduce the perceived scale of buildings; for example, include an overhead plane of trees and seating areas.

3.2.2 Signage

Signs should signal the Park's entry, convey information, and assist with wayfinding, promoting Park connectivity and collegiality. Maintain cohesiveness through consistent signage design, legibility, durability, and minimal required maintenance. Use branding designations, font, color, materials, profile, and scale (see Appendix).

3.2.3 Pedestrian Accommodation

Required for Phase 1 parcel only:

- ✧ To the extent that pedestrian pathways offer opportunities for incidental social interaction, provide accommodations to foster collaboration using shaded respites and break points.
- ✧ At major pedestrian intersections, strategically position breakout areas designed to offer seating and collaborative opportunities.
- ✧ Install security 'blue light' call boxes intermittently along walkways.

3.2.4 Safety & Security

Address Crime Prevention through Environmental Design (CPTED) principles of informal surveillance, lighting, defensible space, appropriate landscaping, and logical wayfinding. Maximize visibility and foster positive interactions among Park users, except required utility screening.

3.2.5 Vehicular Accommodation Guidelines

Roads and driveways link campus destinations subordinate to pedestrian movement to promote connectivity. Guidelines (not required):

- ✧ Based on anticipated volume and specific need for access including daily commuting, alternative non-pedestrian transit, visitor arrival & departure, service & delivery, and emergency access, develop a modal hierarchy to inform roadway design. Discourage intra-campus vehicular transit and limit the intersection of roadways with major pedestrian paths, favoring pedestrians and bicycles over service and private vehicles in multimodal areas.
- ✧ Design street-safe multimodal movement. Where feasible, segregate commuter and visitor traffic from service and delivery traffic.
- ✧ Promote alternative travel modes with information kiosks, ride share programs, bus shelters, shuttle stops, wayfinding, maps, etc.
- ✧ Place bicycle parking areas along multimodal streets and near activity centers, building entryways, and major open spaces.
- ✧ Establish drop-off zones near major activity centers and building entries for convenient use. Provide shelter and seating for waiting areas, attractive landscaping, and adequate lighting.

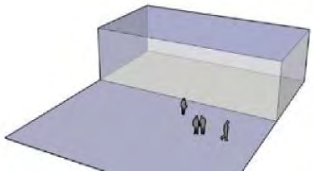


Figure 3: Inappropriate building entry articulation

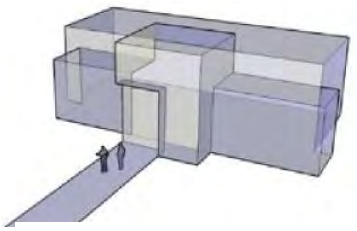


Figure 4: Appropriate building entry articulation

3.2.6 Building Aesthetics

Guidelines for Phase 1 Parcel only (not required):

- ✧ Design buildings of timeless manner, unassuming of a specific style of architecture. New buildings shall reflect a 'family resemblance' to existing buildings relative to size, scale, massing of similar forms, and building materials.
- ✧ Balance program requirements with desire to maintain overall sense of place, so that buildings generally respond to nearby existing heights. Buildings organized around defined open-spaces or corridors shall maintain consistency in height to ensure legibility of building edge.
- ✧ Optimized daylighting and limit overall building length to avoid excessive consumption of land and barrier effect.
- ✧ Locate building entries obviously and clearly from the perspective of pedestrian and vehicular corridors.
- ✧ Avoid long/massive uninterrupted walls with no relationship to human scale and articulate using changes in material, color, texture, or plane.

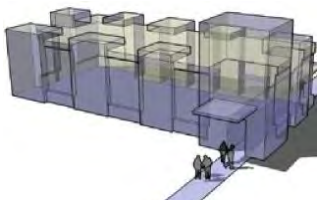


Figure 5: Over-articulated building entry

PARK APPENDICES

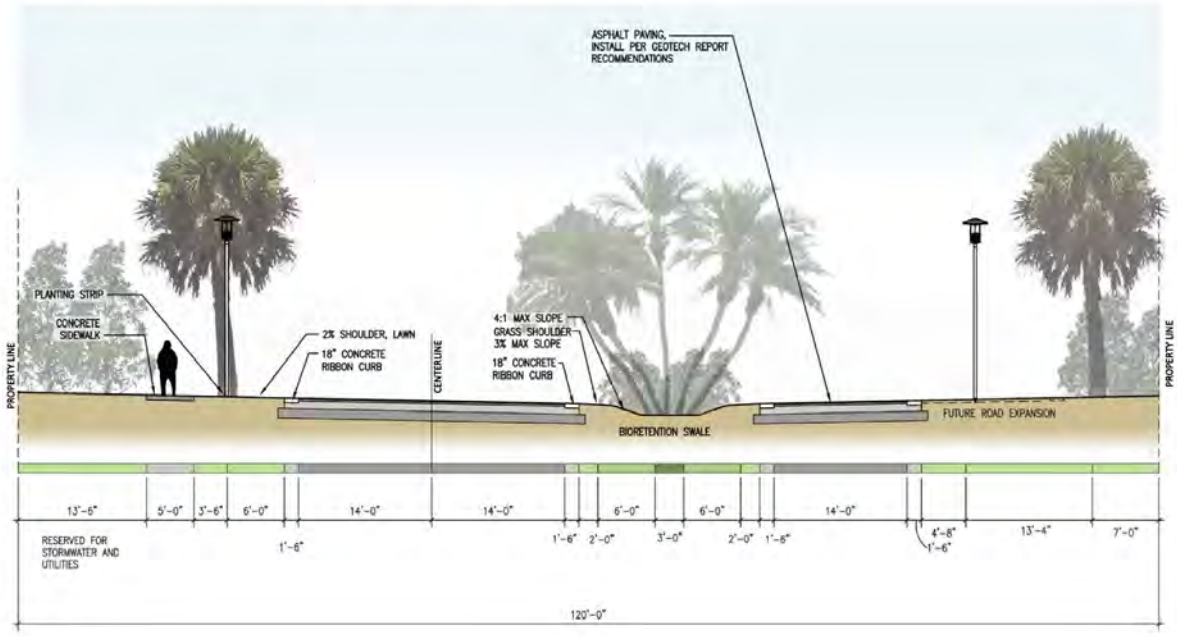
- ROAD CROSS-SECTIONS
- WAYFINDING SIGNS

ROAD CROSS SECTIONS

PRIMARY ROAD

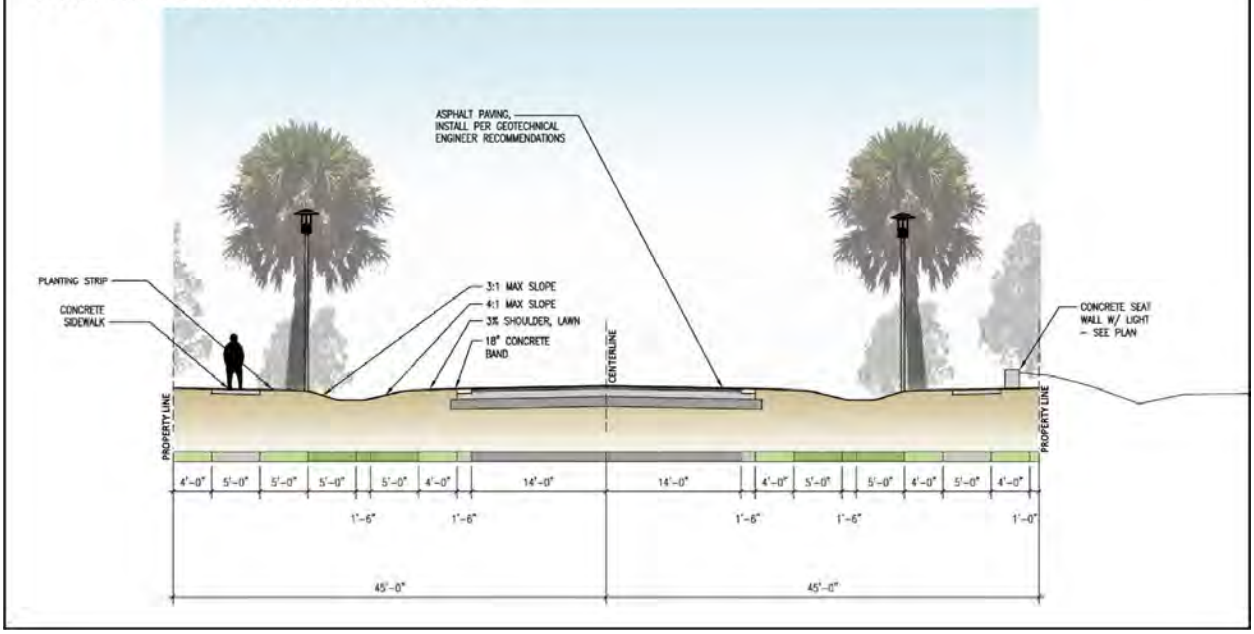
DIVIDED ROAD - MEDIAN IN CENTER

CROSS SECTION SHOWN INCLUDES RIGHT TURN LANE ONTO SPACE COMMERCE WAY

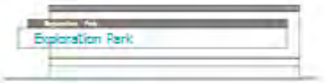


SECONDARY ROAD

2-WAY TRAFFIC WITH SWALES ON EACH SIDE



WAYFINDING SIGNS



CAMPUS DISTRICT GATEWAYS

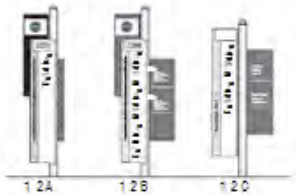
GATEWAYS

3A 3B 4 4A

VISITOR INFORMATIONAL & DIRECTIONAL

7A 7B 7C

VISITOR ORIENTATION KIOSKS



12A 12B 12C

RETAIL IDENTIFICATION

6 11

STREET NAME AND BUS STOP IDENTIFICATION

10 5B 5C 5D

PARKING LOT IDENTIFICATION

8A 8B 8C 8D 8E

9A 9B 9C

BUILDING IDENTIFICATION

19 20 21 22

SUB DISTRICT/NEIGHBORHOOD

13 13A 14A 14B 14C 15A 15B

ACCESSIBLE SIGNAGE SYSTEM

16A 16B 18

EMERGENCY BLUE LIGHT

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CAPE CANAVERAL SPACE FORCE STATION

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CHAPTER 1
GENERAL CCSFS REQUIREMENTS

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SECTION 1 – CCSFS OVERVIEW

This Chapter highlights common requirements of the multiple agencies associated with the processes and design/construction standards for development of CCS infrastructure and facilities on land under the responsibility of SF within the boundaries of Cape Canaveral Space Force Station (CCSFS) of Space Launch Delta 45. Within this Volume, "CCS" refers only to that portion within CCSFS.

For additional site-specific requirements, see Chapter 2 of this Volume. Construction projects often encompass "Areas" or "Complexes" and will cover several facilities within the assigned area under one project. SF maintains responsibilities at SLC-46, SLC-20, Area 57 processing area, and offices near Gate 1 including office, industrial, processing, operations, storage, and launch facilities.

1.1 Coordination

SF is point-of-contact between Tenant and USSF including contractors such as USSF's current Operations & Maintenance contractor, the Consolidated Launch Operations & Infrastructure Support (CLOIS) Contract. While NASA holds responsibility for certain reviews described herein, SF remains the governing authority. Regulations within Table 1.1 apply to projects as designated with "X".

Table 1: USSF Procedural Requirements

Regulation	*Reference*	*Description*	*Processing Facility/Related, Launch Complex*
Air Force Space Command Manual	91-710	Volumes 1 through 7	X
Florida Statute	255.253	Sustainable Building Rating	X
Protection of Historic Properties	36 CFR Part 800	Protection of Historical Properties	X
Florida Statute	373	Water Resources	X
29 U.S. Code	Chapter 15	Occupational Safety & Health	X
Hazardous Materials	40 CFR Part 302	Designation of Hazardous Substances	X
	40 CFR Part 355	Emergency Planning & Notification	X
	49 CFR Parts 171-180	Hazardous Materials Regulations	X
	Title 40 Part 112	Oil Pollution Prevention	X
10 U.S Code	Section 2692	Storage, Treatment, & Disposal of Non-Defense Toxic & Hazardous Materials	
Florida Administrative Code	FAC Chapter 62-150	Hazardous Substance Release Notification	X
	FAC Chapter 62-770	Petroleum Contamination Site Cleanup Criteria	X
Petroleum Storage Tanks	FAC Chapter 62-761	Underground Storage Tank (UST) Systems	X
	FAC Chapter 62-762	Aboveground Storage Tank (AST) Systems	X
Davis Bacon Act*	40 U.S.C. 3141-3148	Local prevailing wages on public works projects for laborers & mechanics	X

**Use Davis Bacon Act wage rates only when applicable.*

1.2 Mass Notification System

For safety, USSF requests that the building public address system include a Mass Notification System to quickly alert people to potential threats or emergency situations.

1.3 Security

- ✧ USSF provides security and emergency response services
- ✧ USSF coordinates law enforcement activities with Brevard County Sheriff's Office (BCSO)
- ✧ Tenants responsible for security for entry to, or activities within, individual Tenant facilities
- ✧ Direct safety concerns to CCSFS Security (321-853-2121) & Cape Support (321-853-5211)
- ✧ Vehicles, construction equipment, & personnel entering CCSFS are subject to USSF inspection
- ✧ Vehicles including trailers may not enter CCSFS without valid registration & proof of insurance
- ✧ All occupants shall comply with USSF safety & mishap requirements

1.4 Flow Charts

Figure 1: CCSFS Site Conceptual Development Process, Figure 2: CCSFS Site Design Development Process, Figure 3: CCSFS Construction Phase Process, and Figure 4: CCSFS Construction Inspection Process convey the general processes for approval.

Figure 1: CCSFS Site Conceptual Development Process

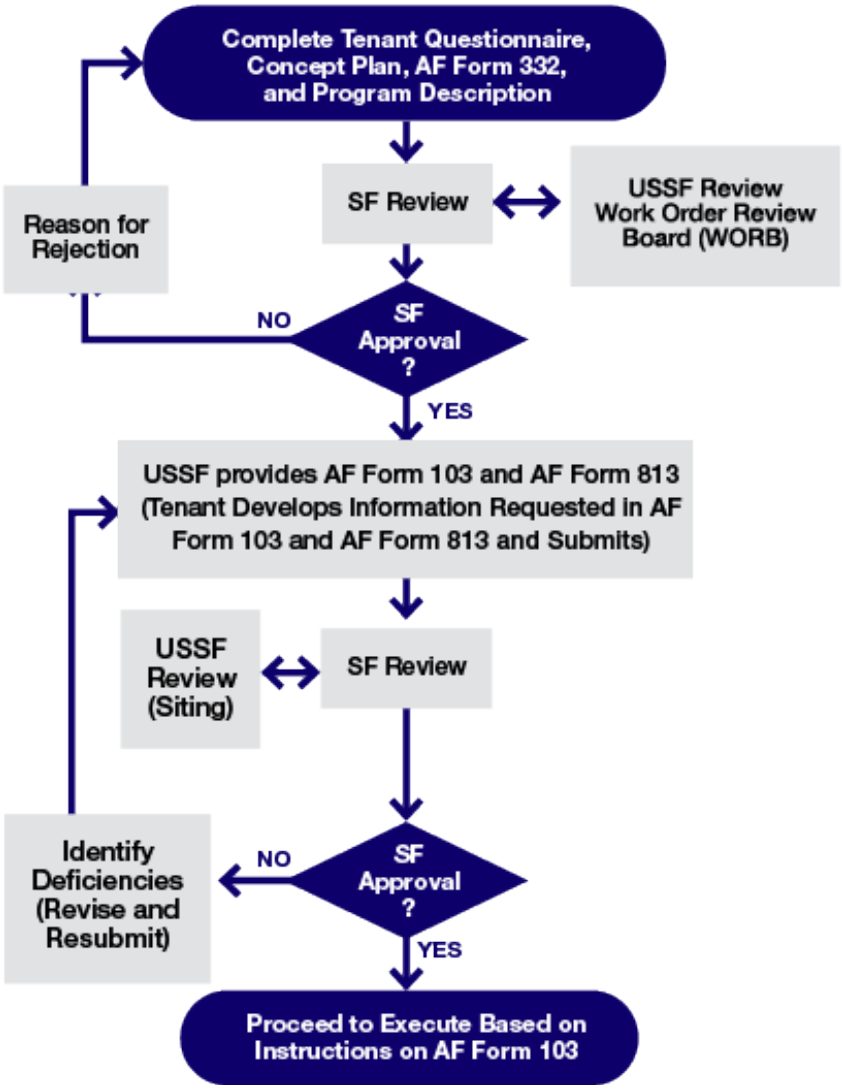


Figure 2: CCSFS Site Design Development Process

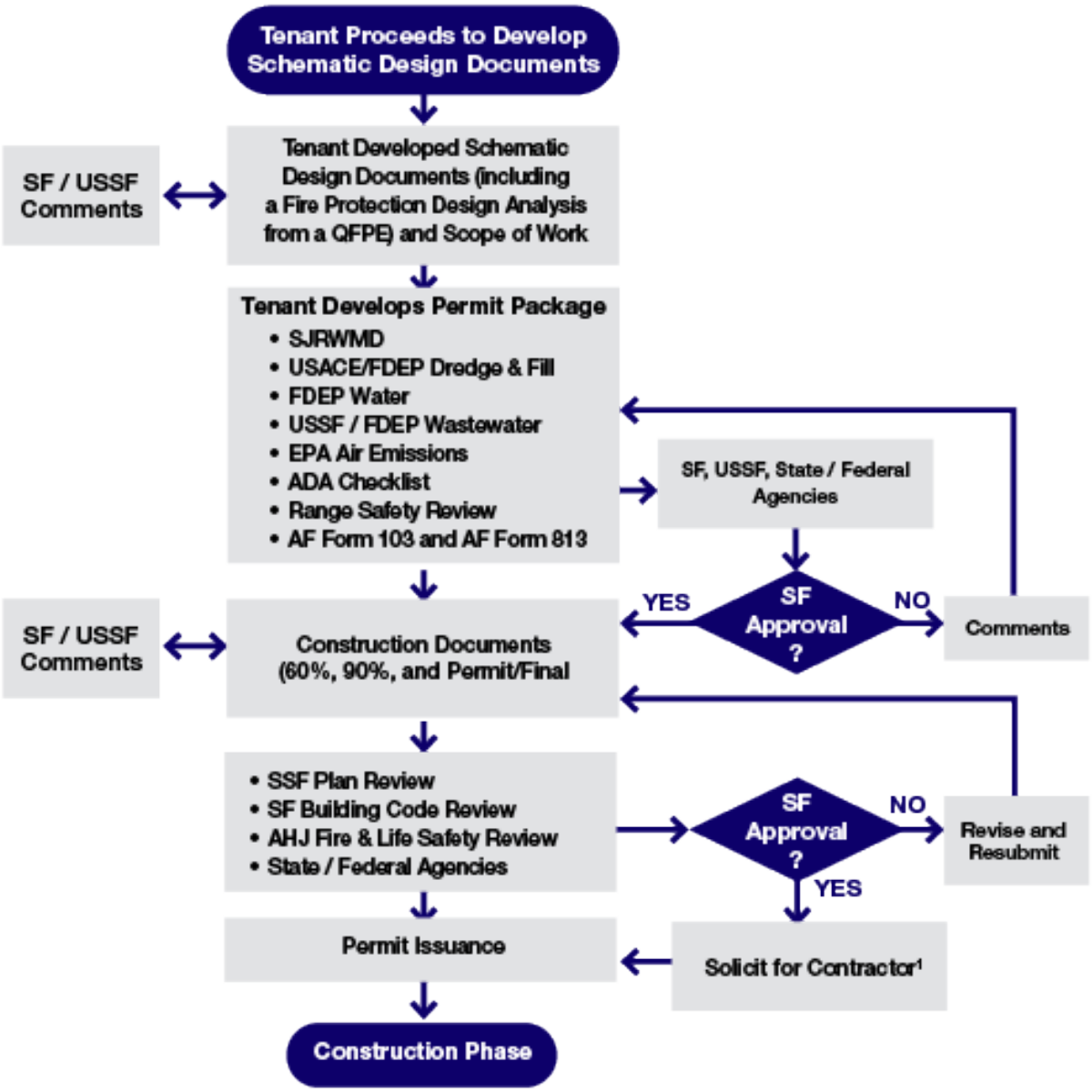


Figure 3: CCSFS Construction Phase Process

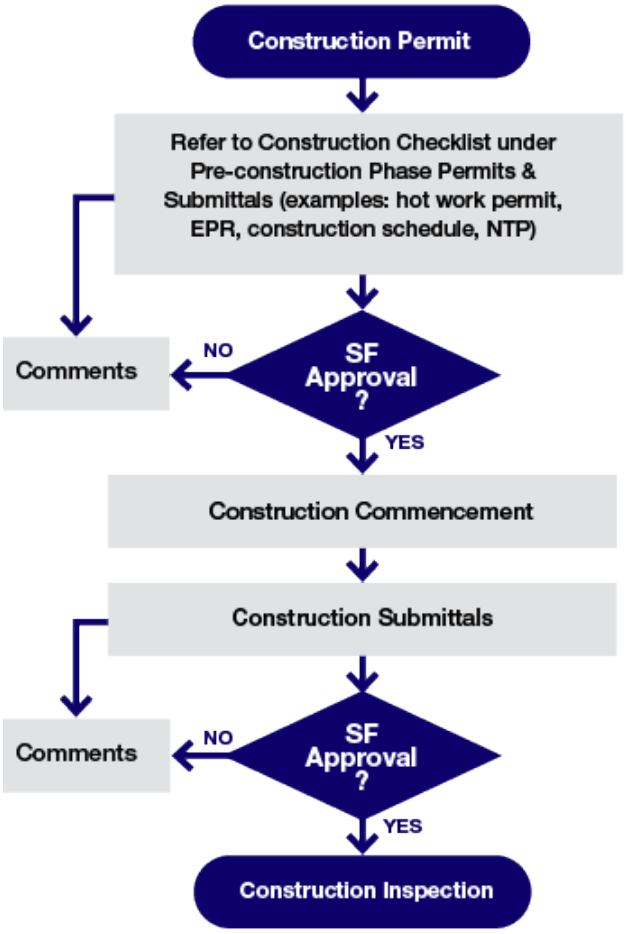
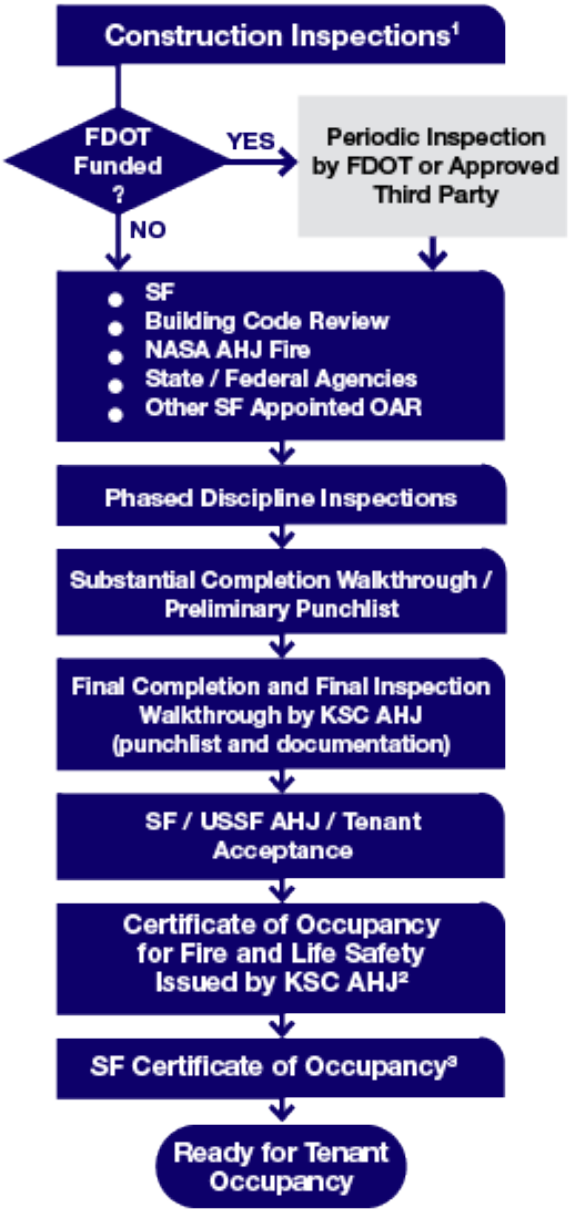


Figure 4: CCSFS Construction Inspection Process



SECTION 2 – CCSFS USE

Consider existing uses at & near project site including outside factors (explosive distance radii, line of sight requirements, FAA requirements, environmental issues as AF Form 332 may identify).

2.1 Hazardous Material, Fuel, & Propellant Storage

Request SF & USSF approval for storage of any hazardous materials, fuel, or propellants in accordance with all Federal & State regulations and applicable codes.

2.2 Explosive Siting & Range Safety

Coordinate with USSF 45th Space Wing Range Safety and gain DoD Explosives Safety Board (DDESB) approval in accordance with Air Force Manual 91-201 and CFR 14 Chapter III Part 420 for:

- ✧ Permanent or temporary construction or relocatable facilities (modular, pre-engineered), trailers, regardless of cost, size, or scope, new facilities/structures or additions to, equipment enclosures, antennae, fences, pads, roads, driveways, parking areas, memorial, flagpoles, utilities services
- ✧ Any proposal that will affect existing or future land use on SLD45 Installations
- ✧ Any structure (building, trailer, shed), permanent or temporary, proposed within an explosive safety zone or within the scope of range, airfield clearance, security criteria, etc.
- ✧ All laydown, staging, or storage areas for materials/equipment
- ✧ Relocation of any facility regardless of size or age

SECTION 3 – CCSFS DESIGN

SF seeks to foster an environment that promotes safety and sound engineering practices with innovation and new technologies. As a baseline, all designs shall comply with Department of Defense (DoD) United Facilities Criteria and lease agreements applicable at time of development.

3.1 Transportation

Streets, parking lots, & roadways require compliance with FDOT Manual of Minimum Uniform Standards for Design, Construction, & Maintenance for Streets & Highways (see dot.state.fl.us).

3.2 Light Management

Address effects on CCSFS's threatened/endangered species through a Light Management Plan (LMP):

- ✧ Submit to USSF 45th SW CES/CEIE & copy the USSF liaison officer for USFWS review (2-3 months)
- ✧ Facility operational requirements, fixture types, fixture locations
- ✧ Applies to internally illuminated signage
- ✧ After placement, demonstrate onsite; FA may require re-aiming or shielding for final approval

Typical LMP

1. Introduction
   - 1.1 Purpose
   - 1.2 Objective
2. Site Description
3. Operational Guidelines
   - 3.1 Pad & Site Lighting
     - 3.1.1 Pole Lighting
     - 3.1.2 Temporary Guard Shack
     - 3.1.3 MAS Structure Lighting
4. Compliance Verification
5. Light Fixture Information
6. Figures

3.3 Open Burning

- ✧ Coordinate all open burning with USSF during design
- ✧ Comply with permit requirements prior to work (hot fire, welding, grinding, controlled burn, etc.)

SECTION 4 – CCSFS APPLICATION REVIEW

4.1 Pre-Application Conference

- ✧ Submit a Program Introduction document (under format of the Universal Documentation System - UDS) describing overall program at a high level for acceptance onto the Eastern Range via USSF issuance of a UDS Statement of Capability.
- ✧ Make financial arrangements with USSF through establishment of a Job Order Number (JON) account accompanied by funding to cover potential USSF direct costs to support the program.
- ✧ Negotiate and secure a USSF Commercial Space Operations Support Agreement (CSOSA) detailing the types of support and services to be acquired from USSF.

4.2 Required USSF Forms

4.2.1 AF Form 332 – Base Civil Engineer Work Request

During preliminary design phase, submit AF Form 332 (see Appendix), which alerts the USSF/CCSFS community of any activity that disturbs traffic flow or penetrates the ground.

- ✧ Identify facility, project, financing, & needed USSF support
- ✧ For CLOIS financing or work support, submit Form C-CS-FRM-01 (see Appendix) with the AF Form 332, otherwise indicate “For Coordination Only”.
- ✧ Request SF approval to submit to USSF & SF in parallel.
- ✧ Work Order Review Board (WORB) consists of representatives from affected departments and organizations, reviews the AF Form 332, and provides disposition.
  - o For more complex projects, SF may request Tenant representation
  - o Disposition consists of comments from each affected department and identifies any additional documentation needed for permit
  - o Resubmit AF Form 332 upon addressing all comments
- ✧ WORB issues approved AF Form 332 and requires AF Form 103 submittal to outline work requirements and serve as the authority to request locator services and other CCSFS support.
- ✧ For emergency treatment, USSF liaison can help with special submittal and review process including submittal of AF Forms 332 and 103 together.

4.2.2 AF Form 103 – Dig Permit

- ✧ Submit AF Form 103 – Base Civil Engineering Work Clearance Request (dig permit) response to permit application (2-4 week process including environmental site review and utility locates)
- ✧ Identify Work Order Number (WON) & include signed AF Form 332
- ✧ Contact environmental, utilities, communication, & gas investigative/locator services for approval
- ✧ Sitework may begin only upon WORB chairperson approval (potentially with conditions) & notification to Cape Support office (321-853-5211) prior to performing any work each morning
- ✧ WORB approves digging only for non-Critical Days without an approved dig permit waiver request
- ✧ Actively inquire and keep up-to-date with Critical Days through Cape Support office
- ✧ For digging on Critical Days (defined days requiring uninterrupted operations critical to a launch schedule, tentatively set in advance but may change as operations for launch advance)
  - o Submit Dig Waiver Request via email with approved AF Forms 332 & 103, reason for project, work schedule/duration, reason for waiver, detailed project description, plans, requesting company and point-of-contact, company performing the work, equipment used, & location
  - o Requires Cape Support clearance

4.2.3 AF Form 813 – Request for Environmental Impact Analysis

- ✧ Form/checklist (see Appendix) required to better define project's potential environment impact
- ✧ Clarify & narrow scope of potential environmental issues for USSF Environmental group evaluation
- ✧ USSF uses form to define any further environmental study requirements

4.2.4 AF Form 1354 – Transfer & Acceptance of DoD Real Property

- ✧ Officially notifies USSF of property improvements to handle warrantees, maintenance, and update property records to identify any increase in property values
- ✧ Provide estimated property improvement costs for any new facility, permanent significant improvements to an existing facility, or infrastructure improvements; significant improvements include upgrading building systems (HVAC, fire alarm, security systems) or facility improvements (new roof, mechanical door, fencing) (see Appendix)
- ✧ Include descriptions & photos to better define the improvement
- ✧ May include USSF liaison & Real Property representative site visit
- ✧ 45th Space Wing may also require USSF executive branch approval
- ✧ Support preparation of Form 1354 for SF review & submittal

4.3 Stormwater Management Permitting

- ✧ Surface Water & Stormwater Management System is under St. Johns River Water Management District (SJRWMD) jurisdiction
- ✧ Provide necessary means to assure complete drainage within & immediately adjacent to leased parcel for adequate storm water control facilities in accordance with SJRWMD requirements
- ✧ Route application through USSF Environmental Group:
  1. Provide to 45 CES/CEIE the ERP application, drawings, & supportive documents
  2. Start application process on SJRWMD ePermit website (permitting.sjrwmd.com)
  3. Add SLD 45 as application team member using the email 45ces.cei.workflow@us.af.mil
  4. Uploads all supporting documentation but DO NOT submit application
  5. CEIE logs in, obtains authoritative signature, & uploads signed copy to ePermit
  6. CEIE requests contractor to submit application to ePermit
- ✧ Notify SF prior to any work adjacent to navigable or tidal waters; SF may request call to United States Army Corps of Engineers (USACE) Cocoa Section (321-504-3771) to define jurisdictional

SECTION 5 – CCSFS CONSTRUCTION

5.1 Trailer Site

- ✧ Tie down office trailers, storage trailers, storage boxes, etc. in accordance with Florida Department of Highway Safety and Motor Vehicles, Division of Motor Vehicles, Chapter 15C-1
- ✧ USSF must approve any security fencing

5.2 Utility Outage

Request temporary utility disconnection/shut-down as necessary to complete facility modification or add a system to USSF utility network.

5.3 Oversize/Overweight Load Permits

- ✧ Provide USSF & SF advance notification prior to entering property per direction of 45th Mission Support Group (45 MSG) Operations Instruction (OI 10-101)
- ✧ In addition to necessary FHWA permitting, contact Cape Support office (321-853-5211) for USSF 45 MSG Detachment 1 approval per OI 10-101 prior to entering property
- ✧ Contractor escort vehicle or 45th Security Forces Squadron (45 SFS) vehicles required for certain oversize transports and commodities as delineated in OI 10-101
- ✧ Oversize/Overweight loads shall not enter before USSF Cape Support office approval
- ✧ For maximum allowable weights not needing special permits see FHWA-issued 23 CFR Part 658.17

CCSFS APPENDICES

- ✧ AF Form 332: Base Civil Engineer Work Request
- ✧ C-CS-FRM-01: CLOIS Support Request
- ✧ AF Form 103: Base Civil Engineering Work Clearance Request (Dig Permit)
- ✧ AF Form 813: Request for Environmental Impact Analysis
- ✧ AF Form 1354: Transfer and Acceptance of Department of Defense Real Property

BASE CIVIL ENGINEER WORK REQUEST

Form Approved
OMB No. 0704-0188

SECTION I - TO BE COMPLETED BY REQUESTER

1. FROM	2. OFICE SYMBOL	3. DATE OF REQUEST	4. WORK REQUEST NO. *(For BCE Use)*

5. NAME AND PHONE NO. OF REQUESTER	6. REQUIRED COMPLETION DATE	7. BUILDING, FACILITY, OR STREET ADDRESS WHERE WORK IS TO BE ACCOMPLISHED

8. DESCRIPTION OF WORK TO BE ACCOMPLISHED

9. BRIEF JUSTIFICATION FOR WORK TO BE ACCOMPLISHED *(Not required for maintenance and repair)*

10. DONATED RESOURCES

☐ FUNDS	☐ LABOR	☐ MATERIAL	☐ CONTRACT BY REQUESTER	☐ NONE

5. NAME OF REQUESTER	12. GRADE OF REQUESTER	13. SIGNATURE OF REQUESTER

14. COORDINATION

SECTION II – FOR BASE CIVIL ENGINEER USE

15. WORK ORDER *(Place an "X" in the appropriate box.)*

☐ IN-SERVICE	☐ SELF-HELP	☐ CONTRACT	☐ SABER

16. DIRECT SCHEDULED WORK *(Place an "X" in the appropriate box.)*

☐ EMERGENCY	☐ URGENT	☐ ROUTINE	☐ SELF-HELP	☐ M/C

17. SELF-HELP *(Place an "X" in the appropriate box.)*

☐ BRIEFING REQUIRED	☐ ADEQUATE COORDINATION	☐ INSPECTION REQUIRED

SECTION III – COMPLETE ONLY IF WORK IS TO BE ACCOMPLISHED BY WORK ORDER

18. WORK CLASS	19. PRIORITY	20. ESTIMATED HOURS	21. ESTIMATED FUNDED COST	22. ESTIMATED TOTAL COST

☐ 23. THERE IS NO NEED FOR AN ENVIRONMENTAL ASSESSMENT (AFR 19-2)	☐ 24. A WRITTEN ASSESSMENT IS BEING/HAS BEEN PROCESSED	☐ 25. APPROVED	☐ 26. DISAPPROVED

27. REMARKS

SECTION IV – APPROVING AUTHORITY

28. NAME AND GRADE *(Please Type or Print)*	29. SIGNATURE	30. DATE

CLOIS SUPPORT REQUEST

PHONE: 853-5211 / FAX: 853-4123 / EMAIL: ccisr@us.af.mil

Customer shall complete all applicable areas shaded blue and submit via email to ccisr@us.af.mil for processing by the Cape Support Office.

CSO CARD NO.	WORK ORDER NO.	ORD SUPPORT NO.	CUSTOMER NO.	TASK ORDER NO.	JON	REPORTED BY	DATE	TIME

AUTHORIZED REQUESTOR:	TELEPHONE NO.	CELL NO.	FAX NO.	ORGANIZATION	EMAIL ADDRESS

BUILDING NAME / FACILITY NUMBER	START DATE	START TIME	PROJECT/MISSION

DATE / TIME	NAME / ORGANIZATION

REQUIREMENT(S) OF REQUEST

NOTE: For munitions issue, include the following at a minimum: Nomenclature, NSN, Quantity, CAT Code, Issue Type
For non-munitions issue, include the following at a minimum: Part Number, Lot Number, Serial Number or the Kit Number.

Contract number: (Will be provided when complete).

Request CLIOS services to perform:

LOCATION of Support:

Specifics if any:

POC

POINTS OF CONTACT	NAME OF INDIVIDUAL IF NOT THE REQUESTER, AUTHORIZED BY LETTER TO RECEIVE ORDNANCE:	OPERATIONAL SAFETY PROCEDURE NO.
		N/A

BASE CIVIL ENGINEERING WORK CLEARANCE REQUEST

(See Instructions on Reverse)

DATE PREPARED

1 Clearance is requested to proceed with work at _____

on Work Order No. _____, Contract No _____, involving excavation or utility disturbance per attached sketch. This area ☐ has ☐ has not been staked or clearly marked.

2. TYPE OF FACILITY/WORK INVOLVED-

☐	A. PAVEMENTS	☐	D. FIRE DETECTION & PROTECTION SYSTEMS				☐	G. AIRCRAFT OR VEHICULAR TRAFFIC FLOW
☐	B. DRAINAGE SYSTEMS	☐	E. UTILITY	☐ OVERHEAD	☐	UNDERGROUND	☐	H. SECURITY
☐	C. RAILROAD TRACKS	☐	F. COMM	☐ OVERHEAD	☐	UNDERGROUND	☐	I. OTHER Umbilical Tower Foundation

3. DATE CLEARANCE REQUIRED	4. DATE OF CLEARANCE

5. SIGNATURE OF REQUESTING OFFICIAL	6. TELEPHONE NO.	7. ORGANIZATION

	ORGANIZATION	REMARKS *(Use Reverse for additional comments)*	REVIEWER'S NAME AND INITIALS
8. BASE CIVIL ENGINEERING	A. ELECTRICAL DISTRIBUTION		
	B. STEAM DISTRIBUTION		
	C. WATER DISTRIBUTION		
	D. POL DISTRIBUTION		
	E. SEWER DISTRIBUTION		
	F. ENVIRONMENTAL		
	G. PAVEMENTS/GROUNDS		
	H. FIRE PROTECTION		
	I. ZONE IRP		
	J. MASTER PLANING		
9. SECURITY POLICE			
10. SAFETY			
11. COMMUNICATIONS			
12. BASE OPERATIONS			
13. CABLE TV			
14. COMMERCIAL UTILITY COMPANY ☐ TELEPHONE ☐ GAS ☐ ELECTRIC			

15. OTHER (Specify) _____

16. REQUESTED CLEARANCE ☐ APPROVED ☐ DISAPPROVED

17. TYPED NAME AND SIGNATURE OF APPROVING OFFICER *(Chief of Operations Flight or Chief of Engineering Flight)*	17. DATE SIGNED

AF FORM 103, AUG 94 *(EF-V1)* *(PerFORM PRO)* PREVIOUS EDITIONS ARE OBSOLETE.

INSTRUCTIONS

The BCE work clearance request is used for any work (contract or in-house) that may disrupt aircraft or vehicular traffic flow, base utility services, protection provided by fire and intrusion alarm system, or routine activities of the installation. This form is used to coordinate the required work with key base activities and keep customer inconvenience to a minimum. It is also used to identify potentially hazardous work conditions in an attempt to prevent accidents. The work clearance request is processed just prior to the start of work. If delays are encountered and the conditions at the job site change (or may have changed) this work clearance must be reprocessed.

18. REMARKS. *(This section must describe specific precautionary measure to be taken before and during work accomplishment. Specific comments concerning the approved method of excavation, hand or powered equipment, should be included.)*

WORK ORDER NUMBER:_____

HAND DIG ONLY: YES NO LOCATOR'S INITIALS:_____

Sean O'Brien

OPERATIONAL RESTRICTIONS:

COMM. LOCATES:_____

Customer must coordinate with CSR Phone 853-5044

COMM. LOCATOR'S OPERATIONAL RESTRICTIONS:

Notify IOMS Locator for remarking of utilities if required.
SEAN O'BRIEN
IOMS LOCATOR SERVICES
321-476-4357 (OFFICE)
321-749-4828 (CELL)
321-853-5211 (CAPE SUPPORT)

CRITICAL DAY NOTICE Contractor SHALL contact Cape Support, 321-853-5211, each day prior to commencing any digging or excavation work. Work Order/Dig Permit number will be required for permission to proceed.

Maintain original or legible of this form AF103 at the excavation site. Contractors not maintaining an original or legible copy risk work stoppage until the original or a copy can be located.

* If at anytime locate marks are not READILY VISIBLE and digging is occurring SUSPENSION OF EXCAVATION may result at the installation commanders directions.

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS:

INSTRUCTIONS: *Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I - PROPONENT INFORMATION

1. TO *(Environmental Planning Function)*	2. FROM *(Proponent organization and functional address symbol)*	2a. TELEPHONE NO.

3. TITLE OF PROPOSED ACTION

4. PURPOSE AND NEED FOR ACTION *(Identify decision to be made and need date)*

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*

6. PROPONENT APPROVAL *(Name and Grade)*	6a. SIGNATURE	6b. DATE

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY *(Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U= unknown effect).*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☐	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☐	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☐	☐	☐
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)*	☐	☐	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☐	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, threatened or endangered species, etc.)*	☐	☐	☐	☐
13. CULTURAL RESOURCES *(Native American burial sites, archaeological, historical, etc.)*	☐	☐	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☐	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☐	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☐	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☐ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR
☐ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION *(Name and Grade)*	19a. SIGNATURE	19b. DATE

TRANSFER AND ACCEPTANCE OF DoD REAL PROPERTY

Form Approved
OMB No. 0704-0188

PAGE OF PAGES

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.

1. FROM *(Organization Name)*	2. DATE PREPARED *(YYYYMMDD)*	3. PROJECT/JOB NUMBER	4. SERIAL NUMBER
5. TO *(Organization - Installation Code and Name)*	6. RPSUID/SITENAME/ INSTCODE/INSTNAME	7. CONTRACT NUMBER(S)	7a. PLACED-IN-SERVICE DATE *(YYYYMMDD)*

8. TRANSACTION DETAILS

a. METHOD *(X all that apply)*
- [ ] ACQUISITION BY CONSTRUCTION
- [ ] TRANSFER BETWEEN SERVICES
- [ ] CAPITAL IMPROVEMENT
- [ ] INVENTORY ADJUSTMENT

b. WHEN/EVENT *(X one)*
- [X] TOTAL ASSET PLACED-IN-SERVICE
- [ ] PARTIAL ASSET PLACED-IN-SERVICE

c. TYPE *(X one)*
- [ ] DRAFT
- [X] FINAL
- [ ] INTERIM

9. ITEM NO.	10a. FACILITY NO.	10b. RPUID	11. CATEGORY CODE	12. CATCODE DESCRIPTION	13. TYPE CODE	AREA 14. PRIMARY UM	AREA 15. PRIMARY UM QUANTITY	OTHER 16. SECONDARY UM	OTHER 17. SECONDARY UM QUANTITY	18. COST	19. FUND SOURCE	20. FUND ORG	21. INTEREST CODE	22. ITEM REMARKS
														,

23. STATEMENT OF COMPLETION. The facilities listed hereon are in accordance with maps, drawings, and specifications and change orders approved by the authorized representative of the using agency except for the deficiencies listed on the reverse side.

a. TRANSFERRED BY *(Typed Name and Signature)*	b. DATE SIGNED *(YYYYMMDD)*
c. TITLE *(Area Engr./Base Engr./DPW/Construction Agent)*	

24.a. ACCEPTED BY *(Typed Name and Signature)*	b. DATE SIGNED *(YYYYMMDD)*
c. TITLE *(DPW/RPAO)*	25. PROPERTY VOUCHER NUMBER

26. CONSTRUCTION DEFICIENCIES *(Attach blank sheet for continuations)*	27. PROJECT REMARKS *(Attach blank sheet for continuations)*

INSTRUCTIONS

GENERAL. This form has been designed and issued for use in connection with the transfer of military real property between the military departments and to or from other government agencies. It supersedes ENG Forms 290 and 290B (formerly used by the Army and Air Force) and NAVDOCKS Form 2317 (formerly used by the Navy).

Existing instructions issued by the military departments relative to the preparation of DD Form 1354 are applicable to this revised form to the extent that the various items and columns on the superseded forms have been retained. The military departments may promulgate additional instructions, as appropriate.

For detailed instructions on how to fill out this form, please refer to Unified Facilities Criteria (UFC) 1-300-08, dated 16 April 2009 or later.

SPECIFIC DATA ITEMS.

1. From. Name of the transferring agency.

2. Date Prepared. Date of actual preparation. Enter all dates in YYYYMMDD format (Example: March 31, 2010 = 20100331).

3. Project/Job Number. Project number on a DD Form 1391 or Individual Job Order Number.

4. Serial Number. Sequential serial number assigned by the preparing organization (e.g., 2010-0001).

5. To. Name and address of the receiving installation, activity, and Service of the Real Property Accountable Officer (RPAO).

6. RPSUID/SITENAME/INSTCODE/INSTNAME. Real Property Site Unique Identifier and Site Name or Installation Code and Installation Name where the constructed facility is located.

7. Contract Number(s). Contract number(s) for this project.

7a. Placed-In-Service Date. RPA Placed In Service Date. This is the date the asset is actually placed-in-service.

8. Transaction Details.
a. Method of Transaction. Mark (X) as many boxes as apply.
b. When/Event. When or event causing preparation of DD Form 1354. X only one box.
c. Type. Draft, interim, or final DD Form 1354. X only one box.

9. Item Number. Use a separate item number for each facility, no item number for additional usages.

10a. Facility Number. Assigned in accordance with the Installation/Base Master Numbering Plan.

10b. RPUID. Real Property Unique Identifier - Identified in Real Property Inventory.

11. Category Code. The category code describes the facility usage.

12. Catcode Description. The category code name which describes the facility usage.

13. Type Code. Construction Type Code - Type of construction: P for Permanent; S for Semi-permanent; T for Temporary.

14. Primary Unit Of Measure. Area unit of measure; use the unit of measure associated with the category code selected in 11.

15. Primary Unit of Measure Quantity. The total area for the measure identified in Item 14. Use negative numbers for demolition.

16. Secondary Unit of Measure. Unit of Measure 2 is the capacity or other measurement unit (e.g., LF, MB, EA, etc.).

17. Secondary Unit of Measure Quantity. The total capacity/other for the measure identified in Item 16.

18. Cost. Cost for each facility; for capital improvements to existing facilities, show amount of increase only. If there is no increase for the capital improvement, enter N/A.

19. Fund Source. Enter the Fund Source Code for this item.

20. Funding Organization. Enter the code for the organization responsible for acquiring this facility.

21. Interest Code. RPA Interest Type Code. Enter the code that reflects government interest or ownership in the facility.

22. Item Remarks. Remarks pertaining only to the item number identified in Item 9; show cost sharing.

23. Statement of Completion. Typed name, signature, title, and date of signature by the responsible transferring individual or agent.

24. Accepted By. Typed name, signature, title, and date of signature by the RPAO or accepting official.

25. Property Voucher Number. Next sequential number assigned by the RPAO in voucher register.

26. Construction Deficiencies. List construction deficiencies in project during contractor turnover inspection.

27. Project Remarks. Project level remarks and continuation of blocks.

Reset

SPACEFLORIDA

Cape Canaveral Spaceport
Development Manual

VOLUME 3
CAPE CANAVERAL SPACE FORCE STATION (CCSFS)

CHAPTER 2
LOCATIONAL REQUIREMENTS

TABLE OF CONTENTS

SECTION 1 – AREA 57

1.1 Introduction

Area 57 is a secured, isolated area consisting of 3 main buildings used for processing and storage of flight hardware.

1.1.1 Main Processing Facility Building 45607

SF managed the following improvements for upcoming building occupancy and operation.

- ✧ HVAC, fire alarm, communications, electrical, grounding, & security systems upgrades
- ✧ Foundation construction for specific overhead crane and rail-set installation to accommodate rocket motor testing
- ✧ Adjacent flight hardware storage upgrade

1.1.2 Storage Buildings 50801 & 50803

Both facilities maintain overhead cranes and a static discharge flooring system. Except for intermittent use for motor transporter parking, inert item storage, and hurricane protection storage, the structures remain vacant since 2016 while SF manages improvements to accommodate occupancy and use akin to original intent.

1.2 Design

Coming soon.

SECTION 2 – SPACE LAUNCH COMPLEX 20

2.1 Introduction

Space Launch Complex (SLC) 20 is an inactive small satellite launch site which SF is redeveloping into a multi-pad, multi-user complex for new orbital launch capacity through:

- ✧ Infrastructure/facility upgrades to meet Florida's commercial space transportation industry needs
- ✧ Existing launch vehicle horizontal processing facility & launch control center refurbishment
- ✧ Construction & activation of 1+ small satellite launch vehicle launch pad(s)
- ✧ New propellant servicing facilities, electrical improvements, & communications capabilities

The Cape Canaveral Spaceport Master Plan provides environmental documentation for 2 launch pads:

- ✧ Description of Proposed Action and Alternatives (DOPAA)
- ✧ Environmental Assessment (EA)
- ✧ Environmental Baseline Survey (EBS)
- ✧ Biological Assessment (BA)
- ✧ Explosive Site Plan (ESP)
- ✧ Noise Analysis (NA)
- ✧ Cultural Resources Assessment.

2.2 Design

Coming soon.

SECTION 3 – SPACE LAUNCH COMPLEX 46

3.1 Introduction

SF leases SLC-46 from USSF and shares this easternmost CCSFS property with the U.S. Navy, who operates south of the pad area and its supporting facilities. Recent uses:

- ✧ USSF Operationally Responsive Space 5 Mission Minotaur launch (August 2017)
- ✧ NASA Ascent Abort 2 Mission to demonstrate Orion's third stage abort system using a Minotaur booster (July 2019)
- ✧ 2 Astra liquid propellant launches (2022)
- ✧ 2 joint exercise launches between U.S. Navy & U.S. Army (2024-2025)

SF manages facility upgrades to accommodate increased launch cadence:

- ✧ Updated communications facility for the checkout of the launch vehicle
- ✧ Mobile Access Structure (MAS) with moveable access platforms
- ✧ Lightning Protection System (LPS)
- ✧ Launch mount with flame trench
- ✧ Power, communications, and other utilities to support a solid booster

The SLC-46 Interface Control Document (ICD; request copy from SF) comprehensively describes:

- ✧ Amenities & capabilities available to support launch
- ✧ Available systems including operation manuals & procedures
- ✧ Capacities & dimensioning to match physical characteristics of proposed program vehicles

3.2 Design

Coming soon.

SPACEFLORIDA

Cape Canaveral Spaceport Development Manual

VOLUME 4

SPACE FLORIDA PROJECTS

TABLE OF CONTENTS

GENERAL REQUIREMENTS

This Volume applies to design and construction of by Space Florida (SF)-funded projects in addition to the other Volumes of this Development Manual.

1.1 Project Types

All SF Projects shall be in accordance with SF requirements & subject to Consultant's Competitive Negotiations Act (CCNA) (Florida Statute (FS) 287.055).

- SF Projects: facilities funded, designed, developed, or constructed by SF
- Tenant Projects (TP): all other construction projects

SF determines contract/delivery method determined on a case-by-case basis which may include:

- Design-Bid-Build (DBB)
  - B101 Standard Form of Agreement Between Owner & Architect
  - A201 General Conditions of the Contract for Construction
  - Division 00 Specifications (Specs): Procurements & Contracting Requirements
  - Division 01 Specs: General Requirements
  - Division 02 thru 49: Technical Requirements
  - A101 Standard Form of Agreement Between Owner & Contractor where Basis of Payment is a Stipulated Sum
- DBB with Construction Management (DBB with CM)
  - B133 Standard Form of Agreement Between Owner & Architect, Construction Manager as Advisor
  - C132 Standard Form of Agreement Between Owner & Construction Manager as Advisor
  - A232 General Conditions of the Contract for Construction, Construction Manager as Advisor
  - Division 00 Specs: Procurements and Contracting Requirements
  - Division 01 Specs: General Requirements
  - Division 02 thru 49: Technical Requirements
  - A132 Standard Form of Agreement Between Owner & Contractor, Construction Manager as Advisor
- Design-Build (DB)
  - Scope of Work & Owner's Criteria
  - Division 1 Specs: General Requirements
  - A141 Standard Form of Agreement Between Owner & Design-Builder
- Design-Build-Operate-Maintain (DBOM)
- Build-Operate-Transfer (BOT)
- Integrated Project Delivery (IPD)
- Public-Private Partnership (P3)

1.2 Commissioning Policy & Procedures

- SF Commissioning Policy & Procedures (CPP) requires commissioning of:
  - SF construction project (development, maintenance, renovation) budget >$500,000
  - SF building construction project (new construction, modifications) budget >$50,000
- SF Building Official issues permit only upon Commissioning Authority approval of Commissioning Plan
- SF Building Official issues certificate of occupancy/use only upon successful completion of all pre-occupancy commissioning activities identified in Commissioning Plan

1.3 Consultant Selection

SF Projects shall be in accordance with State of Florida procurement requirements & Florida Statute 287.055, Consultants Competitive Negotiations Act. SF advertises professional services solicitation and reviews Statements of Qualifications (SOQ) to "shortlist" candidates who may present to selection committee, which recommends final selection.

1.4 Consultant Contract

First-rated consultant enters contract negotiations with SF representatives. If unsuccessful, SF may terminate negotiations and negotiate instead with next highest rated firm. Once negotiated, SF approves final contract and issues a notice to proceed with design.

1.5 Project Initiation

At Pre-Design Conference, Project Manager (PM), Contract Administrator (CA), other SF representatives, & pertinent design team members discuss design program, project budget, & schedule and designate project-long SF point-of-contact.

1.6 Project Review

SF staff aims to complete review within 2 weeks; interface with other projects, outside agency approvals, or other circumstances may force additional time. See Appendix for design milestones.

1.7 Review Comments

Design consultant shall respond to all review comments within subsequent submittal.

- ✧ Comments noted directly on drawings do not require written response
- ✧ SF may ask consultant to return previously reviewed plans temporarily to verify response

1.8 Consultant Participation

1.8.1 During Bid Phase

Contractor selection process, in general:

- ✧ General advertisements solicit construction bids
- ✧ Pre-Bid Conference to discuss scope of work & answer bidder questions; design consultant conducts or participates to provide answers & assist in preparing resulting contract addenda
- ✧ SF opens & reads aloud bids at advertised time
- ✧ SF may ask consultant to assist in bid analysis to determine responsive low bidder
- ✧ SF issues notice to proceed with construction after approving final construction contract

1.8.2 During Construction Process

SF holds Pre-Construction Conference to review contract requirements, operational & site restrictions, notification procedures, and required inspections. Contract may require consultant review of shop drawings, submittals, change orders, or other documents and involvement in periodic or regular construction progress meetings. SF representatives, consultant, contractor and/or Construction Manager, and major sub-contractors conduct partnering sessions on some projects.

1.8.3 Upon Construction Completion

Per contract, consultant generally participates in final project "walk-through" with SF & contractor, reviews contractor's certified as-built drawings, submits specs, and prepares final record drawings.

1.9 Software Requirements & Project Design Delivery

Final deliverables consist of construction Contract Documents detailing work required for architectural, civil, structural, mechanical, plumbing, electrical, fire protection & detection, communication, security, & utility service systems including transportation interfaces, site work, & necessary bidding information.

1.10 Specification Format

- ✧ Specs in accordance with latest Construction Specification Institute (CSI) division standards
- ✧ For all airfield construction projects, prepare contract documents per latest edition of FAA Advisory Circular 150/5370-10 Standards for Specifying Construction of Airports.
- ✧ Prepare Division 0, including Notice to Bidders, Instructions to Bidders, Proposal Forms, Bid Schedule Forms, Bond Forms, General & Special Provisions per SF Building Official guidance.

1.11 Design Calculations

Most design projects require various engineering calculations and/or design criteria/material cut sheets providing basis for information on construction plans & specs. Design consultant assembles values & calculations in "Basis of Design Manual" for each project, varying by design discipline.

1.12 Project Solicitation

Solicit proposals in accordance with Florida Bidding Statutes; SF coordinates contract arrangements.

1.13 Sale & Issuance of Contract Documents to Contractors

Beginning on Tuesday after the first Sunday advertisement, bid packages come available to bidders from a local reproduction company; design consultant confirms process with SF.

1.14 Pre-Bid Conference

SF conducts Pre-Bid Conference for bidders. Under guidance of SF CA, design consultant briefs bidders on overall project scope, answers bidder questions, and arrange for & conducts site tour.

1.15 Addenda

Design consultant provides answers to Pre-Bid Conference questions to SF, who issues Addenda.

1.16 Bid Opening

SF conducts bid opening at location designated in bid documents and analyzes bids to issue for approval a contract award to lowest responsible bidder.

1.17 Pre-Construction

Upon project approval, applicant, design agents, & the contractor meet with SF in Pre-Construction Conference to establish principal aspects of coordination: project schedule, coordination, inspections, and any other items of a timely nature to the project.

1.18 Site Clean-up

Specify in CDs that contractor shall:

- ✧ Maintain orderly, accommodative construction area environment
- ✧ Remove rubble, debris, & surplus material occasioned from immediate site prior to work conclusion
- ✧ Similarly render & restore all off-site areas disturbed during construction

SPACE FLORIDA-FUNDED DESIGN SUBMITTAL MATRIX

Submittals described herein are minimum requirements. SF may require intermediate review upon scope change or prior finding of deficiencies.

CATEGORY	DESIGN PHASE			COORDINATION
	Schematic (early review)	Design Development (mid review)	Construction (final review)	Please make every effort to coordinate design between disciplines.
GENERAL	❍ Boundary/topographic survey; tie points to existing Survey Coordinate System; may require ground survey verification of existing utility alignments & flow lines ❍ Existing buildings, facilities, contours, roadways, utilities, signs in immediate area of project site or relevant to proposed work ❍ Roadways, access drives, parking areas, site utilities, building locations ❍ Submit per designer's contract for SF approval before next phase	❍ Information in previous submittals ❍ Annotated comments from previous submittals ❍ Landscaping, exterior signing, exterior lighting, fencing, other site elements ❍ Preliminary horizontal & vertical alignments for roadways, drainage systems, applicable exterior utilities tied into coordinate system ❍ Preliminary paving & parking w/ horizontal & vertical ties to survey, representative cross-sections ❍ Preliminary Cost Estimates & Construction Schedule ❍ Perspective rendering ❍ Design data & analysis ❍ Soil tests data & analysis ❍ Outline Specs ❍ Submit per designer's contract for SF approval before next phase	❍ Information in previous submittals ❍ Annotated comments from previous submittals ❍ Complete drawings w/ plan, profile, detail, section, schedule, calculation, miscellaneous sheets ❍ Specs complete in final typed form ❍ Final construction schedule ❍ Final cost estimate ❍ Stormwater pollution prevention plan ❍ Submit number of Contract Bid Documents as design consultant's contract requires ❍ Documents ready to be signed & sealed pending SF approval; then provide to contractors for bidding	❍ Coordinate electrical lighting poles, manholes, handholds, underground conduit with existing & new utility installations ❍ Check plans & specs for conflicts ❍ List governing codes on cover sheet
AIRFIELD PROJECTS	❍ Existing facilities, runways, taxiways, taxi lanes, aprons, ground support equipment areas, emergency roads, buildings/ structures, contours, underground utilities, signs in immediate area of project site or relevant to scope ❍ Existing Navigational Aids (NAVAIDS), duct banks, guidance signs, lighting fixtures, electrical ducts, vaults, handholds, circuit ❍ Limits & dimensions: object free areas, safety areas, exclusion zones, NAVAIDS, critical areas, FAR part 77 airspace surfaces that affect project site ❍ Proposed paving, drainage, electrical buildings, NAVAIDS, security fences, signs, structures	❍ Horizontal & vertical layouts for airfield paving, emergency roads, drainage features ❍ Airfield electrical circuits, NAVAIDS, underground utilities ❍ Typical sections for each type of paving, incl. surface drainage ❍ Site access points & haul routes ❍ Typical details for paving, jointing, sealing, drainage, electrical, utilities, etc.	❍ Paving & facilities ❍ Grading & surface contours ❍ Final profiles & flow lines for all drainage systems ❍ Sections & details	N/A

SPACE FLORIDA-FUNDED DESIGN SUBMITTAL MATRIX

	SCHEMATIC	DESIGN DEVELOPMENT	CONSTRUCTION	
BUILDING	❍ Site plan w/ building footprint, vehicle access/parking, landscaping ❍ Floor plans ❍ Roof plans ❍ Building elevations ❍ Schedule of materials ❍ Building Design Data - building program & any special studies affecting project design ❍ Tower Line-of-Sight Studies (if required) ❍ Service entrances, trash locations ❍ Design live loads	❍ Floor plans ❍ Framing plans ❍ Ceiling plan ❍ Roof plans ❍ Sections ❍ Elevations ❍ Details of typical conditions	<u>ARCHITECTURAL</u>: ❍ Index, symbols, abbreviations, key plan notes ❍ Demolition, site plan, temp work ❍ Site plan w/ building footprint, vehicle access/parking, landscaping ❍ Building elevations ❍ Building Program Design Data ❍ Design live loads ❍ Material schedule, door schedule, key drawing ❍ Sections, exterior elevations ❍ Detailed floor plans ❍ Interior elevations ❍ Reflected ceiling plans ❍ Vertical circulation, stairs, elevators, escalators ❍ Exterior details ❍ Interior details	<u>STRUCTURAL</u>: ❍ Index, symbols, abbreviations, key plan, notes, loading criteria ❍ Demolition site work ❍ Foundation plans, details, design criteria ❍ Framing plans & details ❍ Elevations ❍ Details ❍ Schedules ❍ Special design

	SCHEMATIC	DESIGN DEVELOPMENT	CONSTRUCTION	COORDINATION
FIRE PROTECTION	❍ Fire vehicle access ❍ Describe fire protection systems incl. source of exterior fire protection services (water mains etc.) ❍ Schematic fire protection drawings identifying sprinkled areas & those protected by other automatic suppression systems ❍ Draw at 1/8” = 1’-0” scale	❍ Fire protection plans indicating underground water mains w/ sizes ❍ Fire hydrant locations ❍ Proposed water supply connections to sprinkler systems ❍ Control valve locations ❍ Fire alarm panel locations ❍ Smoke control/removal systems ❍ Underground valve meter pit ❍ Standpipe locations ❍ Outline specs covering fire protection items, equipment, materials w/ manufacturers & model numbers; incl. smoke/heat detectors, pressure, flow, tamper switches	❍ Number all fire risers ❍ Fire protection pressure systems flow diagrams ❍ Details incl. fire hose cabinets, fire hydrants, fire pumps, fire department connections, backflow prevention, water header, connections, cathodic protection, riser insulation, etc. ❍ Schedule all major equipment on drawings; fire sprinkler drawings w/ all piping sizes & locations; minimum scale ⅛“ = 1’	❍ Coordinate piping, electrical switchgear, building construction, beams, etc. to assure clearances & accessibility for maintenance ❍ Route sprinkler piping w/ minimum turns to avoid building construction, etc. ❍ Maintain fire protection/detection in all areas such as wedges in terminals & utility closets when project is subdivided into phases

SPACE FLORIDA-FUNDED DESIGN SUBMITTAL MATRIX

	SCHEMATIC	DESIGN DEVELOPMENT	CONSTRUCTION	COORDINATION
HVAC	❍ Mechanical rooms ❍ Chases required for air conditioning systems ❍ Air handling & refrigeration equipment ❍ Describe systems incl. schematic diagram of air flow through the various system components (upon SF agreement of general scheme outlined in narrative at Pre-Design Conference)	❍ Mechanical rooms, equipment, required connecting ductwork to-scale ❍ Route major piping systems when space is a consideration ❍ Ductwork for remainder of project in one-line form to indicate breakdown of proposed zones ❍ Report design criteria & system loads ❍ Outline specs covering all HVAC equipment & materials	❍ Air conditioning systems incl. ductwork in two-lines w/ fittings to-scale ❍ Sections through mechanical rooms to adequately describe the construction requirements ❍ Schedule of all major items of equipment drawn on the plan sheets to indicate performance characteristics ❍ All piping systems complete w/ necessary sections to clarify routing ❍ Applicable details, incl. those included in the Design Criteria modified to suit project ❍ Flow diagrams for each piping system except drains ❍ HVAC load calculations clearly indicating zoning requirements, etc. ❍ Test & Balance Reports shall coincide w/ designed system's scope of work	❍ Deconflict electrical lighting fixtures, air diffusers, ceiling grilles, sprinkler heads, ceiling type speakers, ceiling mounted devices ❍ Check ductwork for clearance between ceiling construction, underside of beams, recessed lighting fixtures, other interferences where space is limited ❍ Coordinate large mechanical system piping, electrical switchgear, building structure to assure clearances & accessibility for maintenance ❍ Coordinate requirements for louvers, equipment supports, devices serving mechanical systems but furnished under general construction ❍ Coordinate special types of or Board furnished equipment for correct rough-in requirements ❍ Check plans & specs for conflicts ❍ Coordinate plans for size & location of all chases
PLUMBING	❍ Brochure defining plumbing fixtures ❍ Describe proposed plumbing systems incl. source of exterior services ❍ Janitorial closets	❍ Plumbing fixtures incl. those for disabled persons to-scale ❍ Roof drains & route of storm drains to storm sewer ❍ Sump pump & sewage ejector locations ❍ One typical riser diagram for each type of system ❍ Design criteria & system loads ❍ Outline specs covering plumbing equipment & materials	❍ Number all plumbing fixtures ❍ Riser diagrams in isometric form for all plumbing risers in the building ❍ Flow diagrams for all pressure systems incl. hot & cold water, gas, oxygen, air vacuum, etc. ❍ Details such as lavatory connection, pump connection, hot water generator, water softener, sewer manholes, backflow prevention, water header, etc. ❍ Schedule major equipment on drawings ❍ Describe plumbing fixture specs; may also schedule	❍ Coordinate piping, electrical switchgear, building construction, beams, etc. to assure clearances & accessibility for maintenance ❍ Check piping for clearance between ceiling construction, underside of beams, recessed lighting fixtures, other interferences where space is limited ❍ Deconflict piping, ductwork, electrical conduits, etc., ensuring proper installation of each system ❍ Coordinate special types of equipment for correct rough-in ❍ Coordinate plans for size & location of all chases

SPACE FLORIDA-FUNDED DESIGN SUBMITTAL MATRIX

	SCHEMATIC	DESIGN DEVELOPMENT	CONSTRUCTION	COORDINATION
ELECTRICAL	❍ Electrical rooms ❍ Describe systems incl. schematic diagram of the distribution system (upon SF agreement of general scheme outlined in narrative at Pre-Design Conference) ❍ Preliminary lighting w/ general types of illumination (fluorescent, high-intensity discharge lamp, etc.) ❍ Lighting levels tabulation ❍ Sample lighting calculation for a typical room/area (exterior lighting projects)	❍ Electrical rooms & equipment to-scale ❍ Routing of feeder & service conduit systems when space is a consideration ❍ One-line diagram of distribution system indicating approximate equipment & service size ❍ Lighting layout incl. exterior systems w/ tabulated loads ❍ Brochure w/ cut sheets on lighting fixtures & poles; 5 sets of electrical systems plans for review & approval before proceeding to final working drawings (Contract Bid Documents) ❍ Outline specs covering all electrical equipment & materials	❍ All electrical systems to-scale incl. light fixtures, distribution equipment, all system components ❍ Schedule of light fixtures, switchboards, motor control centers ❍ Schedule of panel boards incl. connected loads & demand loads ❍ One-line diagram of electrical distribution system incl. equipment, feeder, service ratings, available symmetrical three-phase fault current at each device ❍ Applicable standard details from guidelines modified to suit project ❍ One-line diagrams for each system	❍ Deconflict electrical lighting fixtures, air diffusers, ceiling grilles, sprinkler heads, ceiling type speakers, etc. ❍ Coordinate large electrical system conduit, pull boxes, piping, electrical switchgear, building construction, beams, etc. to assure clearances & accessibility ❍ Check plans & specs for conflicts ❍ Coordinate plans for size & location of all chases
COMMUNICATIONS	❍ Comm. rooms ❍ Describe systems incl. schematic diagram (upon SF agreement of general scheme outlined in narrative at Pre-Design Conference)	❍ Comm. rooms w/ equipment to-scale ❍ One-line diagram of comm. system indicating intercom, speakers, equipment, terminal boards, cabinets ❍ Outline specs covering comm. equipment & materials	❍ Comm. system equipment, cabinets, boards to-scale, telephone outlets, intercom stations, repeater stations, etc. ❍ One-line diagram of comm. systems ❍ Applicable standard details modified to suit project	❍ Deconflict ceiling type speakers, light fixtures, air diffusers, ceiling grilles, sprinkler heads, etc. ❍ Coordinate large comm. system conduit, pull boxes, building construction, beams, etc., to assure clearances & accessibility
SECURITY	❍ Site security ❍ CCTV/monitor & equipment rooms ❍ Describe security system incl. schematic diagram (upon SF agreement of general scheme outlined in narrative at Pre-Design Conference)	❍ CCTV/monitor, equipment rooms, equipment to-scale; provide adequate working clearance for monitors & operator console ❍ One-line diagram of security system w/ control panels, sensors, cameras, monitors, telephone interface, any system operation critical devices ❍ Outline specs covering security equipment & materials	❍ Security system control & monitoring equipment, sensor locations, types to-scale ❍ Applicable standard details modified to suit project ❍ Security devices ❍ Security signage ❍ Individual zone location & designation, w/ alarm device locations incl. security alarm, data panel, annunciators, devices necessary for system operation	❍ Coordinate security system components, types, & locations through SF to properly interface w/ existing system ❍ Coordinate design to allow for uninterrupted operation of existing security systems; maintain security throughout construction ❍ Coordinate large security system conduit, pull boxes, building construction, beams, etc. to assure clearances & accessibility