MEMORANDUM

State of Alaska

Department of Transportation & Public Facilities
Design and Engineering Services

TO: Design Group 2

DATE: April 4, 2024

TELEPHONE NO: (907) 465-1796

FROM: James Brown
Design Group Chief
DOT&PF

SUBJECT: Pre-Environmental Design Review Guidance

The Pre-Environmental Review (PER) is a tool designed to better identify a project's physical and construction footprint prior to major environmental documentation efforts with the intention of reducing environmental rework post environmental document, and increasing the reliability of the delivery timeframe. Generally, enough information is known to start project development after a reconnaissance review and the draft PMP has been initiated. Any adjustments to the project scope of work should also be discussed with support groups and planning staff and changes made if necessary to its scope at this time. An average project requires 25% to 50% of its design completed to finalize an accurate environmental document. There are cases where this percentage is allowed to be higher (i.e. culvert replacement projects) to appropriately understand the environmental impacts of the project. FHWA guidance for boundaries of preliminary project development in advance of the environmental document can be found at FHWA Order 6640.1A.

Note: FAA projects do not require completion of the environmental document to progress the project plans and specifications through final design. However, the project's environmental document must be completed by April 30th of the preceding funding year in which the sponsor is requesting construction funding. (FAA Order 5050.4B, paragraph 302.b.1).

The PER typically will include a field walkthrough at the project site; the goal of the review is to finalize the scope of improvements to be constructed and thus gain a better understanding of environmental and ROW impacts and their scheduling.

The PER review for preventative maintenance projects should generally be completed within approximately 10 to 12 months of project assignment. Rehabilitation and more complex projects could require significantly more time to have their environmental impacts defined and thus result in a significantly longer duration necessary to conduct the review.

A draft version of the PMP, Public Involvement Plan (PIP), Design Criteria Checklist (attached), and Environmental Memo and Impacts Table is to be submitted with the project plans and cross sections to the review engineer. These items are submitted along with a preliminary list of special provisions placeholders for additional discussion and development.

COORDINATION ITEMS

Survey and ROW Mapping:

- Early topographic and property boundary line survey is essential in the early development of a project to determine existing encroachments into State ROW and also for Section 106 coordination. These efforts should start at project onset and be inclusive of the entire project length.

Environmental Analyst Involvement / Coordination:

Known Environmental Boundaries / Locations

To support timely project delivery and decrease the likelihood of late consultation delays, close coordination with environmental staff early in the project development is critical. A detail drawing separate from the main project plans should be produced referencing external SHP files and display each respective resource type's location and boundaries within the project limits. These resource boundary layers along with the project's construction limits, existing ROW limits, and proposed permanent acquisitions as well as temporary construction acquisitions are to be displayed on a sheet as per the template attached to this document in Appendix 'X'. The project team should revisit this drawing and its layers displayed over the current construction project limits between and at each review to verify no project design changes have been made that could impact the scheduled construction delivery of the project.

Prior to the PER, the following Agency resource information with respective SHP files is to be obtained by the internal or consultant design team assigned to the project. This information is to be used as defined above in the creation of a resource conflict monitoring sheet as defined above. See Appendix B for a list of mapping database and shapefile links.

- **Waters of the US / Wetlands**: Review known waters of the US or wetlands located within the project limits. Impacts on these resources are to be designed to the point they are defined going into the PER. A graphic of these resources overlaid onto the project limits is expected at this time.
- **Bald Eagle Nests:** Location of known eagle nests within proximity to the project limits (Southeast: ½ mile for blasting or pile driving activities; rest of region: 660' for activities producing loud noise such as guardrail installation, paving, grinding, general excavation (work with environmental analyst to determine)). If the nest doesn't fit on the sheets due to the scale, include a note on the corresponding sheet indicating where the nest is in relation to the work. This information is important for identifying whether a bald eagle disturbance permit will be needed.
- **Anadromous Streams:** Location of anadromous streams within the project limits. This information is important for identifying whether there are impacts to essential fish habitat or whether a Title 16 Fish Habitat Permit will be required.
- **Endangered Species:** Location of any endangered species critical habitat that may reside within the project limits. This information is important for identifying if there may be impacts to endangered species and whether a consultation under the Endangered Species Act is required. A graphic of critical habitat, such as a sea lion haul out or rookery, is expected at this time if applicable.
- **Contaminated Sites:** Contaminated sites within the project limits. This information is important for identifying if that are contaminated sites within or adjacent to the project limits that require consultation with DEC and management plans.
- **Historic Boundaries**. Known historic residences within the project limits. I f resources are present, an overview graphic of historic resources located within the project area is expected to be completed. The environmental analyst and/or PQI will send a shapefile of the project area or preliminary APE and request the corresponding shapefile of interest from OHA (oha.ibs@alaska.gov; jeffrey.weinberger@alaska.gov). The intent of this graphic is to assist the design and environmental team in the development of the APE for the project and identify where a higher level of design, as well as survey needs, will be

necessary to determine the impacts of the project to them going into the PER.

- **4(f) Resources**: Contact the environmental analyst to review known 4(f) resources located within or adjacent to the project limits. Knowing where 4(f) resources are in relation to project activities is important for identifying whether there might be a use of a 4(f) resource or an exception to 4(f). Each of these requires Coordination with the Official(s) with Jurisdiction and a use would need specialized public notice efforts. Much of the linework for these layers can be obtained through GIS sources, some location linework will have to be developed by other manual methods such as wetland or cultural resource surveys. This list also includes any other areas that have been identified as potentially impacting the environmental document's completion.

Prior to the PER Review

Contact the environmental analyst assigned to the project a minimum of two weeks prior to the PER submittal to request the Environmental Memo and Impacts Table. Review the table for consistency with the project plans with the analyst and the construction manager. Address any issues prior to submitting the review for PER distribution.

PER DESIGN AND PRODUCTION GENERAL EXPECTATIONS

Design Sheet Information to be Included in the Pre-Environmental Review, All Project Types:

Plans for the Review are to Include:

1. Index and Title Sheet.

2. Typical Sections
   note: include cross sections for any culvert or bridge work

3. Alignment Data
   1) Design Horizontal curve data (PC, PI, PT, bearings)
   2) Design Vertical Alignment and its relationship to grade controlling features such as culverts, etc.
4. Plan Sheets depicting:
   - Existing topography
   - Existing ROW locations
   - Beginning and End of Project
   - Drainage Design including new ditch profiles
   - Construction limits and area of ground disturbance including acreage for Construction General Permit (CGP) determination
   - Preliminary Public Road Approach and drive locations
   - Guardrail Replacement Locations
   - ADA Grading with Point Tables
   - Drainage ditch relocation or construction areas
   - Known wetlands and Waters of the US locations
   - Anadromous streams directly adjacent to the project / within project limits
   - Contaminated Material sites
   - Proposed waste disposal sites

- Lighting (viewshed)
- Known eagle nest locations
- Bridge / Retaining Walls / Signal Poles etc locations
- Bubble curtain installation detail including installation depth (if proposed)

5. Proposed Cross Sections which include:
    - Templates of the proposed typical sections placed on the existing cross sections.
    - Profile grade elevations.
    - Mainline drainage structures, retaining walls, etc.
    - Existing ROW limits.
    - Temporary Traffic Control Sections (if applicable)

Additional Work to be completed Prior to and included in the PER:

Traffic Maintenance Details

- The conceptual traffic-maintenance strategy and phasing should be detailed and included with the PER submittal. Include plans for pedestrian and bicycle routing if impacted.
- Potential Impacts or Delays to Public or Private entities. Delays should be quantified as necessary with vehicle queuing analysis.

Hydraulics and Hydrology

- Copy of culvert inventory survey report and recommendations.
- Copies of preliminary hydraulic analysis for each culvert exceeding 4' diameter and all fish passage culverts.

Waters of the US - Fill / Fish Passage Design Detail Sections

- Fish Passage plan and profile depicting the volume of excavation and fill below OHW.
- Locations of impacts to other bodies of water known as Waters of the US and excavation and fill quantities (cubic yards) to be placed below OHW or HTL/MHW/MLLW levels.
- Estimated area of wetland involvement (acres). This also includes temporary fill.
- Include the HTL/MHW/MLLW or OHW elevations on typical sections if there is any work in, over, or under navigable waters of the United States.

Material Recommendations:

A simple summary of the general field findings and recommendations including:

- Preliminary Pavement Recommendations.
- Preliminary Slope Repair Recommendations.
- Fish Passage Locations and Culverts > 48" requiring repair.
- Areas involving repair or construction of retaining walls.

Material Sources:

Discuss with Materials staff the need for any off-site material and document recommendations and locations in the PER documents. Engage Construction, Environmental, and Right of Way staff if off-site materials are required. Additional resources for material sourcing include:

- Construction and materials staff can assess the contractor's need to develop material sites, or haul material from outside the project limits.
- Coordinate with Environmental staff and the Storm Water Specialist and inform them of off-site materials to assess impacts outside of the project limits.
- Sections 430 and 450 of the HPCM

Utility Coordination:
- Contact should be made with existing utility companies for work to be coordinated with the project and areas where work is anticipated to impact utilities. A formal walkthrough at PER should include local utility representatives.
- Provide a summary of anticipated utility work and where this work will be conducted on the project plans as well as any details needed for environmental coordination.
- Provide the utility conflict report.
- If known, a description of any utility "work by others" to be included in the Environmental Document's project description section.

  Note: The design team needs to only show the construction limits of the work done by others in the project plans outside of our existing ROW. Any additional property acquisition needs will be coordinated by the utility company, and said company is responsible for conducting their own environmental review. Ie – the Department does not show these acquisitions on project plans or the APE limits.

Bridge Coordination:
- Contact should be made with the Bridge section if there are bridges on the project. Include fill quantities below OHW or HTL and MHW. Include the HTL/MHW/MLLW or OHW elevations on typical sections if there is any work in, over, or under navigable waters of the United States.
- Depending on the project scope review documents may include: work items from the latest inspection reports; Bridge 3R analysis;

If the project involves replacement or major repairs of a bridge see the New/Replacement Bridge section below.

Estimate
- At this stage of development, an estimate conveying major work items along with contingency of 25% is acceptable.
- Provide quantity calculations for major work items.

Construction Limits
Definition: A shrink-wrapped, closed polyline encompassing the edge of all permanent construction work. Where two items are near the edge of construction, the outermost one will prevail. Examples of entities to encompass include but are not limited to:

- Cut and fill limits
- Excavation limits
- Clearing limits
- Outer edge of grading
- Revegetation areas

- Paving limits
- Joints, and locations where the project ties back into existing
- Concrete pads and back of sidewalk (including width for formwork)
- Utility installation or improvements and replacements (include trench limits)
- Sign posts bases, fences, and similar improvements
- Around culverts following the outer edge of pipe (include trench limits)
- Other physical elements permanently incorporated into the project.

It is typical for the construction limits to surround the complete perimeter of the permanent work of a project, also including the beginning and end of the project.

Items typically not included in the construction limit linework are temporary stabilization, dewatering, sediment control BMPs, and anything not permanently incorporated into the project. However, these items still must fall within the existing ROW or an easement acquired for the project.

Section 106 / APE / Right of Way Impacts and Construction Access/Easements

For projects that qualify for a Section 106 streamlined review, the Programmatic Allowance will be completed after the PER and scoping letters are sent. If the project requires a full Section 106 consultation, initiation letters will be sent after completion of the PER, scoping letters distributed, and any public meetings, design changes, and the Pre-ROW meeting.

Upon completion of the PER and finalizing design changes due to comments or action items resulting from the review, the design manager shall provide plans to Construction staff who will mark-up anticipated access areas needed to arrive at individual work areas outside the existing ROW needed for construction operations to be included within the Area of Potential Effect (APE).

Where multiple methods of construction are options, the Construction manager will evaluate and provide a recommendation and assumption of the anticipated work procedure and tailor the work area necessary using this method. The design project manager shall then conduct a meeting, commonly referred to as the 'Preliminary Plans to ROW' meeting, in which these plans and mark-ups are reviewed by Construction, Environmental, and Right of Way staff. The goal of this meeting is to begin finalization of:

- Right of Way Parcel Design requirements needed for the project which account for both construction access and construction limits
- The Area of Potential Effect (APE) linework as recommended by an environmental PQI.

Additional Construction Coordination Items

Upon completion of the PER and once any resulting design comments have been addressed, the design project manager will schedule a meeting with the project construction staff to determine the size and location of construction staging, potential field office location, stockpile locations, contractor access routes, traffic control plan concerns, potential SWPPP concerns, and needed work zones to complete the work. Locations for temporary access roads and bridges must also be identified at this time. This information will develop the project's construction access limit line that will expand upon the project's

construction limits where additional space is needed to complete the work. This meeting should be held as soon as possible after the PER.

Public Involvement
Public involvement for the NEPA process, including the public notice and agency scoping efforts, will normally occur after the PER. Early stakeholder engagement may be needed for an overview of projects with larger community impacts prior to the PER for public feedback that may impact the early design direction. The intent of the early public involvement after completion of the PER and its review is to present a first look of designed plans that meet the project's needs to the public and stakeholders to provide feedback on.

Prior to the PER, the project's environmental analyst, design manger, and construction manager should review and update the Public Involvement Plan (PIP). This update will include identifying stakeholders and defining the appropriate level of public involvement outreach to various groups and agencies. Public involvement activity during design and once the project moves into construction should be discussed. Coordination with local municipalities is encouraged for local feedback to populate a list of organizations that may be impacted during the project's construction. Development of project-specific modifications to section 643 of the specifications should commence after engaging stakeholders to provide a frame work to accommodate parking and business interruptions.

Project scoping letters are to be distributed after completion of the PER and subsequent design changes and delivered prior to formal open houses.

The project manager will engage with the local government after the PER to begin early coordination for local concurrence.

Environmental Analyst PER Guidance

The Pre-Environmental Design Review will typically be conducted before the public notice and agency scoping have been completed. This is so ambiguities in project scope can be addressed prior to issuing public notice or beginning collaboration with outside agencies. For very simple projects or projects that have had proper field recon, an exception to this order of operations may be acceptable. The environmental analyst should consult the project manager for which direction to proceed. The intent of providing an Environmental Memo and Impacts Table at this stage is to ensure that impacts from the project are identified.

The Environmental Impacts Memo will include the project description, any anticipated environmental concerns, and schedule impacts so constructability or timing issues can be identified early on. The Impacts Table is similar to the info included with a standard Class of Action. Complete the table with the most up-to-date project information and have the Project Manager review it in advance of the PER submittal.

Bridge Design Staff PER Guidance

Include the following if a Biological Assessment, Informal Consultation, or IHA Application is anticipated *(These are understood to be an engineering assumption based on best practices and knowledge of available equipment and information at the time the document was provided. These values may not be representative of the final quantities, equipment, or methods employed by the selected contractor)*

Bridge section will require all the information to reach 80% certainty on permanent structures.

This includes: Bathymetry, geotechnical information, ROW and Utility locations, roadway typical section, vertical and horizontal geometry

Pile Driving Time Components Table:

PER ESTIMATED PILE INFORMATION TABLE											
Pile Diameters & Material	Structural Feature	Number of Piles	Number of Rock Sockets	Number of Tension Anchors	Rock Socket Installation, Duration per Pile (minutes/range)	Tension Anchor Installation, Duration per Pile (minutes/range)	Vibratory Duration per Pile (min)	Impact Strikes per Pile	Total Number of Hours	Number of Piles per Day	Days of Installation
Pile Installation											
Pile Removal											
Temporary Structures											
Totals	N/A				N/A	N/A	N/A	N/A	N/A	N/A	

** The above Pile table is needed for both permanent and temporary structures and should be filled in by the Environmental Analyst with input from Design and Construction.*

Additional Information Needed:

Dredging and Fill:

- Dredge Type
- Material removal volume
- Material disposal location (for offshore disposal)
- Type of material placed
- If material will be placed below or above high tide line
- Volume of material to be placed below the high tide line
- Linear measurement of shoreline to be armored

In-Water and Over-Water Structures:

- Estimate of size of structures
- Assumed method of construction

Additional Included Bridge Repair or Activity

Include other repairs as needed and defined for the bridge structure such as replacement of existing bolts, placement of platforms under gangways, or other activity such as blasting.

Additional Environmental/Bridge Coordination Items:

- Estimate of noise levels at source and distance to the relevant threshold for species in the area (for pile driving and dredging)
- Barge Transit Route(s)
- Vessel sound source levels
- Potential marine mammal monitoring locations discussion of potential additions
- Civil twilight hours for 4MP

PER Aviation Additional Expectations

Plans for the Review are to Include:

1. Index and Title Sheet.

2. Typical Cross Sections
   note: include cross sections for any culvert or bridge work

3. Project Layout Plan

4. Site Plan

5. Plan Sheets depicting:

- Design Horizontal Alignment (e.g., horizontal curve data, PC, PI, PT, bearings)
- Design Vertical Alignment and its relationship to grade controlling features (culverts, etc)
- Construction limits and area of ground disturbance including acreage
- Material Sites

Design Criteria Checklist

- Include a completed Aviation Criteria Design Checklist. This form is to be submitted with the PER package (and updated if necessary) and all subsequent reviews.

Design Documents

- Critical Aircraft Determination Approval

PER Marine Design Production Expectations

Plans for the Review are to Include:

1. Index and Title Sheet.

2. Site Plan Pile Data Table
3. Plan Sheets depicting (if applicable):

    1. Survey
    2. Uplands
    3. Approach Superstructure
    4. Transfer Bridge
    5. Float
    6. Float Restraints
    7. Gangways & Catwalks
    8. Dolphins
    9. Hydraulic
    10. Electrical

Design Documents

- Geotechnical Information: **Include the following if a Biological Assessment, Informal Consultation, or IHA Application is anticipated** *(These are understood to be an engineering assumption based on best practices and knowledge of available equipment and information at the time the document was provided. These values may not be representative of the final quantities, equipment, or methods employed by the selected contractor)*

- Bridge section will require all the information to reach 80% certainty on permanent structures.

- This includes: Bathymetry, geotechnical information, ROW and Utility locations, roadway typical section, vertical and horizontal geometry

Pile Driving

- Existing support structure removal method
- Pile table for permanent and temporary structures including both public and contractor *(see example table below for required information)*
- Installation equipment (model, max energy, frequency, and hammer force)
- Substrate and bathymetry at the project site
- Daily and overall pile driving duration

PER ESTIMATED PILE INFORMATION TABLE											
Pile Diameters & Material	**Structural Feature**	**Number of Piles**	**Number of Rock Sockets**	**Number of Tension Anchors**	**Rock Socket Installation, Duration per Pile (minutes/range)**	**Tension Anchor Installation, Duration per Pile (minutes/range)**	**Vibratory Duration per Pile (min)**	**Impact Strikes per Pile**	**Total Number of Hours**	**Number of Piles per Day**	**Days of Installation**
Pile Installation											
Pile Removal											
Temporary Structures											
Totals	N/A				N/A	N/A	N/A	N/A	N/A	N/A	

* *The above Pile table is needed for both permanent and temporary structures and should be filled in by the Environmental Analyst with input from Design and Construction.*

Dredging and Fill

- Dredge Type
- Material removal volume
- Material disposal location (for offshore disposal)
- Type of material placed
- If material will be placed below or above high tide line
- Volume of material to be placed below the high tide line
- Linear measurement of shoreline to be armored

In-Water and Over-Water Structures

- Estimate of size of structures
- Assumed method of construction

Other Repairs

- Include other repairs to the facility that are required

Blasting *(if blasting is needed for abutments or dredging coordinate requirements with Department environmental analyst)*

Marine Construction PER Guidance

Include the following if a Biological Assessment, Informal Consultation, or IHA Application is anticipated *(These are understood to be an engineering assumption based on best practices and knowledge of available equipment and information at the time the document was provided. These values may not be representative of the final quantities, equipment, or methods employed by the selected contractor)*

Project Vessels

- Approximate size and type of vessels used (deep draft, cargo, barge, etc.)
- Estimate number of vessel trips to perform construction
- Time of Operation
- Estimate amount of time the vessel will be underway.

Dredging and Fill

- Estimate of how fill material will be placed (e.g. small rocks by hand, via excavator from a barge)
- Anticipated material source location

ESCP

- Identify if silt curtains
- Assumed method of installation
- Length of time BMP's would be in place

Construction Methods

- Identify where cofferdams would be used
- Estimate for the area enclosed by coffer dams
- Estimate for the length of time the coffer dam would be in place
- Location where bubble curtain may be used

Attachments: Road Design Criteria Checklist
Aviation Design Criteria Checklist
Environmental Impacts Table

ROAD DESIGN CRITERIA CHECKLIST

Project Name Page of

State Project No. Fed. Project No.

Functional Classification: Terrain:

Present Year (&ADT): Design Year (&ADT):

DHV (%): Directional Split (%): Percent Trucks:

Pavement Design Year: Pavement Design ESAL:

Design Turning Vehicle: Design Accommodated Vehicle:

Project Type: Choose an item.

FEDERAL 10 CONTROLLING DESIGN CRITERIA		SOURCE	STANDARD	AS DESIGNED	EXCEPTION[1]
1. Design Speed[1]			mph	mph	Choose an item.
2a. Travel Lane Width			ft	ft	Choose an item.
2b. Auxiliary Lane Width			ft	ft	Choose an item.
3a. Outside Shoulder Width			ft	ft	Choose an item.
3b. Inside Shoulder Width			ft	ft	Choose an item.
3c. Auxiliary Lane Shoulder Width			ft	ft	Choose an item.
4. Horizontal Curvature Radius			ft	ft	Choose an item.
5. Superelevation Rate*, e(max)			%	%	Choose an item.
6. Stopping Sight Distance (SSD)*			ft	ft	Choose an item.
7. Grade	Min.		%	%	Choose an item.
	Max.		%	%	Choose an item.
8. Cross Slope			%	%	Choose an item.
9. Vertical Clearance*			ft	ft	Choose an item.
10. Design Loading Structural Capacity[1]					Choose an item.

** Attach calculations.*

1. On low speed roadways (<50 mph) on the NHS only Design Speed and Design Loading Structural Capacity require a Design Exception; all other criteria become a Design Waiver. For projects off the NHS, all criteria become a Design Waiver.

OTHER DESIGN CRITERIA		SOURCE	STANDARD	AS DESIGNED	WAIVER
Superelevation Transition*, Δ			%	%	Choose an item
Bridge Clear-Roadway Width			ft	ft	Choose an item.
Vertical Curvature, Min.	K(crest)				Choose an item.
	K(sag)				Choose an item.
Lateral Offset to Obstruction			ft	ft	Choose an item.
Surfacing Material					Choose an item.
Clear Zone Slope					Choose an item.
Clear Zone Width			ft	ft	Choose an item.
Bicycle Lane Width			ft	ft	Choose an item.
Sidewalk Width			ft	ft	Choose an item.
Intersection Sight Distance, Left Turn*			ft	ft	Choose an item.
Right Turn*			ft	ft	Choose an item.
Crossing*			ft	ft	Choose an item.
Passing Sight Distance			ft	ft	Choose an item.
Degree of Access Control					Choose an item.
Median Treatment					Choose an item.
Median Width			ft	ft	Choose an item.
Illumination					Choose an item.
Curb Type					Choose an item.

* *Attach calculations.*

Notes:

Proposed by: _____ Date: _____
Designer Signature (Consultant or Staff)

Approved by: _____ Date: _____
Design Manager

AVIATION DESIGN CRITERIA CHECKLIST

Project Name Page of

State Project No. Fed. Project No.

Runway Design Group: Taxiway Design Group:

Airport Design Group: Design Year:

Runway Critical Aircraft: Taxiway Critical Aircraft:

Pavement Design Year:

Project Type: Choose an item.

RUNWAY DESIGN CRITERIA	SOURCE	STANDARD	EXISTING	AS DESIGNED	DESIGN CONSIDERATIONS
1. Runway Width		ft	ft	ft	
2. Runway Shoulder Width		ft	ft	ft	
3. Runway Length		ft	ft	ft	
4. Runway Safety Area Width		ft	ft	ft	
5. Runway Safety Area Length Beyond Threshold		ft	ft	ft	
6. Runway Object Free Area Width		ft	ft	ft	
7. Runway Object Free Area Length Beyond Threshold		ft	ft	ft	
8. Runway Object Free Zone Width		ft	ft	ft	
9. Runway Object Free Zone Length Beyond Threshold		ft	ft	ft	
10. S-1 Runway Slope		%	%	%	
11. S-2 Shoulder Slope		%	%	%	
12. S-3 RSA Slope		%	%	%	
13. S-4 OFA Slope		%	%	%	
14. S-5 Back Slope		ft/ft	ft/ft	ft/ft	
15. D-1 Back Slope		ft	ft	ft	

TAXIWAY / TAXILANE DESIGN CRITERIA	SOURCE	STANDARD	EXISTING	AS DESIGNED	DESIGN CONSIDERATIONS
1. Taxiway Width		ft	ft	ft	
2. Taxiway Edge Safety Margin		ft	ft	ft	
2. Taxiway Shoulder Width		ft	ft	ft	
3. Taxiway Safety Area Width		ft	ft	ft	
4. Taxiway Object Free Area Width		ft	ft	ft	
5. Taxilane Object Free Area Width		ft	ft	ft	
6. Taxiway Separation centerline to parallel taxiway centerline		ft	ft	ft	
7. Taxiway Separation centerline to fixed or movable object		ft	ft	ft	
8. Taxilane Separation centerline to parallel taxilane centerline		ft	ft	ft	
9. Taxilane Separation centerline to fixed or movable object		ft	ft	ft	
10. Taxiway Wingtip Clearance		ft	ft	ft	
11. Taxilane Wingtip Clearance		ft	ft	ft	
12. Taxiway/Taxilane Cross Slope		%	%	%	
13. Taxiway/Taxilane Shoulder Slope		%	%	%	
13. Taxiway/Taxilane TSA Side Slope		%	%	%	
14. Taxiway/Taxilane TOFA Slope		ft/ft	ft/ft	ft/ft	

***** *Attach needed taxiway/taxilane radii tables with highlighted values to be used on the project.*

Notes:

Proposed by: _____ Date: _____
Designer Signature (Consultant or Staff)

Approved by: _____ Date: _____
Design Manager

Environmental Impacts Table

- Project Description
- Date of Scoping & Notice
- Anticipated Environmental Concerns
- Schedule Impacts (time sensitive needs; ex: timeframes for consultation or a consultation can't be started until design is at a certain level)

Summary of possible impacts to resources and mitigation/permitting requirements		
CE Resource Category	**Possible Impact**	**Possible Mitigation/ Permitting needed**
ROW		
Social/neighborhood cohesion		
Travel patterns/accessibility		
Access control		
School boundaries etc.	.	
Elderly, handicapped etc.		
Alaska Native / Tribal Entities		
Economic		
Land Use/Trans Plans		
Historic Properties		
Wetlands		
Water Body		
Wild and Scenic River		
Fish		
Wildlife (eagles etc.)		
T&E		
Hazardous Waste		
Invasive Species		
Air Quality		
Floodplain		
Noise (type 1 project?)		
Water Quality		
Construction		
Section 4f/6f		
23 CFR 771.117(b)(2): Is there substantial controversy on environmental grounds?		
23 CFR 771.117(b)(3): Significant impacts on Section 4f or Section 106 protected properties?		
23 CFR 771.117(b)(4): Are there inconsistencies with Federal, state, or local laws, etc?		