

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

**LANDSCAPE AESTHETICS AND MULTI-USE
CONSULTANT HANDBOOK**

April 2003

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LANDSCAPE PLANNING AND DESIGN

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Preface:

This Handbook is a supplement to Chapter 20 of the Flood Control District's Consultant Guidelines. Chapter 20 provides a general outline of the work tasks and deliverables required for the integration of landscape aesthetics and recreation multi-uses into the planning and design of District flood control facilities. This Handbook is intended to provide additional guidance and direction to the consultant community regarding the work tasks and deliverables that are outlined in Chapter 20 of the Consultant Guidelines.

20.1.0 SCENERY RESOURCE ASSESSMENTS FOR PLANNING STUDIES

The work under this section may not be authorized with the Notice to Proceed, or may be authorized in writing either in whole or in part by the District.

20.1.1 GENERAL PROVISIONS

20.1.1.1 PURPOSE AND SCOPE

The purpose of the Scenery Resources Assessment is to assess the character, quality and visual sensitivity of lands contained within and adjacent to the project area; provide an analysis of opportunities and constraints for flood protection activities; identify a range of appropriate landscape themes and associated landscape features to apply to the plan alternatives; identify and develop plan alternatives that emphasize achievement of project landscape aesthetic goals; provide an analysis of the scenic impacts, benefits and costs associated with plan alternatives; assist in developing the preferred plan, including aesthetic planning and design guides, cost estimates for landscaping and aesthetic features, and guidance on needed right of way acquisition; and assist in development of the maintenance and implementation plan.

20.1.1.2 GOALS AND OBJECTIVES

The overall goal of the Scenery Resources Assessment is to maximize opportunities for preserving and enhancing the beauty of the urban, suburban, rural, pastoral and natural landscape settings of Maricopa county as an integral part of planning for flood protection within the study area. The achievement of this goal is viewed by the District as essential to gaining public support for, and promoting cost share opportunities to the fullest, for its overall mission, programs, plans and projects.

The expenditure of public funds by the Flood Control District for landscape aesthetic and multi-use treatments is subject to the authority and limitations of A.R.S.§48-3601 et seq., and the budgetary limitations specified by the District. Use of District funds for aesthetic and multi-use treatments is limited to features that are incidental to, or are part of, the flood control structure. The conceptual plans and designs presented in the Scenery Resource Assessment and the Planning Study may include project elements or items designed to serve exclusively purposes other than flood control. While the District may not be able to carry out all of the recommendations presented, these elements are included to illustrate potential open space opportunities associated with District flood protection features and measures and to attract partnerships with other stakeholders in the community who may be interested in sponsoring their implementation.

The DISTRICT shall provide direction to the CONSULTANT and the CONSULTANT LANDSCAPE ARCHITECT regarding the interpretation of the DISTRICT's legal and fiscal authority and limitations, as necessary.

20.1.1.3 STAFF QUALIFICATIONS, ROLES AND RESPONSIBILITIES

A. The Scenery Resource Assessment shall be directed and carried out by a licensed landscape architect, or a qualified scenery resources management knowledge expert approved in writing by the DISTRICT. The CONSULTANT LANDSCAPE ARCHITECT shall be knowledgeable and experienced in the application of the terminology, basic premises, concepts, criteria and methodologies of the Forest Service Visual Management and Scenery Management Systems in large scale area planning.

B. In accordance with District policy, landscape aesthetics shall be fully integrated at the beginning and throughout all phases of the planning and design of flood protection facilities in connection with the planning study.

C. The Consultant landscape architect shall exercise a leadership role in all matters identified or related to accomplishment of the purpose and scope of the Scenery Resource Assessment. The Consultant's landscape architect shall actively participate as a member of the project planning team in all planning phases, including all team meetings, workshops and public meetings.

20.1.1.4 APPROACH

The CONSULTANT LANDSCAPE ARCHITECT shall adapt and apply the terminology, concepts, methodologies and procedures outlined in the Forest Service Visual Management and Scenery Management Systems, as approved by the District. Please refer to the references listed in Section 1.1.8 of this Handbook.

20.1.1.5 TASK COORDINATION

A. The Consultant and the Consultant's landscape architect shall be responsible for fully coordinating all work tasks and completion of all deliverables to ensure they are complete and carried out in a timely and effective manner. This shall include delivery of data, maps, photos and reports prepared by other members of the CONSULTANT's team, including, but not limited to, cultural and historical assessments, vegetation inventories, geomorphic and geologic assessments, topographic mapping and orthophoto mapping, in a timely manner to ensure the Scenery Resources Assessment is completed on time, in an effective manner.

B. The CONSULTANT shall coordinate and fully integrate the Work Plan and Schedule for the Scenery Resource Assessment into the Work Plan and Schedule for the overall Project Planning Study.

20.1.1.6 PROJECT STATUS UPDATES

The CONSULTANT shall provide project status updates regarding accomplishment of the Scenery Resources Assessment to the DISTRICT as a part of all regularly scheduled progress reports identified for the Planning Study.

20.1.1.7 PROJECT AESTHETIC ADVISORY COMMITTEE (PAAC) MEETINGS

A. The DISTRICT will form and utilize a Project Aesthetics Advisory Committee (PAAC), in accordance with the District's landscaping and Aesthetics Policy, to provide reviews of both the Scenery and Recreation Multi-Use Assessments, and assist in the identification of appropriate aesthetic and multi-use concepts, features and designs to be incorporated into the plan alternatives and the preferred plan. The PAAC will review the project objectives and issues, data collection, inventory and analysis, the aesthetic and recreation multi-use features of the alternatives, the alternatives analysis, and the project implementation guidelines and costs pertaining to landscape aesthetics and recreation multi-use aspects of the project.

B. The DISTRICT will assemble the PAAC. The PAAC will be composed of: 1) the CONSULTANT's Project Manager, Landscape Architect and other appropriate staff; 2) the DISTRICT's Project Manager, Landscape Planner, Ecologist and Public Involvement Coordinator; 3) other landscape architects and aesthetics knowledge experts capable of providing peer reviews and creative input; 4) Local Community parks and recreation department representatives; 5) cooperative agency representatives; 6) local neighborhood representatives; and other individuals as appropriate.

C. The CONSULTANT and the Consultant's landscape architect shall participate in all activities of the PAAC through the end of the contract.

D. The Consultant shall provide a schedule for four (4) PAAC meetings, within 14 calendar days of the Notice to Proceed. The PAAC meetings shall be scheduled a minimum of 10 working days prior to each corresponding public meeting, to allow time for incorporating PAAC review comments and feedback prior to the public meetings. Unless otherwise indicated by the District, the purpose and desired outcomes of the four PAAC Meetings shall be as follows:

PAAC Meeting #1:

1. Describe the purpose and role of the PAAC
2. Provide an overview of the planning study, including the purpose, need and scope, flooding problems and range of possible solutions, planning process and schedule
3. Provide an overview of the Scenery Resource Assessment, coordination with other planning tasks, and schedule
4. Solicit feedback from committee members regarding aesthetic and recreation multi-use issues, concerns and opportunities

PAAC Meeting #2:

1. Present and receive feedback on the Scenery Resource and Recreation Multi-Use data collection and analysis, identified landscape themes, and preliminary planning concepts for the landscape aesthetics and multi-use opportunities emphasis plan alternative
2. Brainstorm additional possible landscape themes and concepts for the landscape aesthetics and multi-use opportunities emphasis plan alternative

PAAC Meeting #3:

1. Present and receive feedback on the aesthetic and multi-use features of the plan alternatives, alternatives analysis and cost estimates.

PAAC Meeting #4:

1. Present and receive feedback on the Preferred Alternative, including plan features, aesthetic and multi-use planning and design guides, cost estimate, right of way requirements and maintenance plan.

PAAC meeting #2 will be conducted as a workshop/Charette.

E. The CONSULTANT shall be responsible for preparing the agenda, sending out meeting notices, making presentations, and documenting and distributing notes of the PAAC meetings.

F. The CONSULTANT shall provide and review with the District's Landscape Planner, all materials, plans, graphic illustrations, and reports, to be presented at the PAAC and Public meetings in preliminary form, a minimum of 10 days prior to the scheduled date of each PAAC meeting. The Consultant shall make all changes and revisions requested by the District's Landscape Planner prior to their presentation at the PAAC meeting.

G. The DISTRICT shall have responsibility for obtaining agreement and consensus within the PAAC.

H. The CONSULTANT shall incorporate all recommendations of the PAAC approved by the District, into all public meeting materials prior to their presentation to the public or other entities.

20.1.1.8 REFERENCES

The CONSULTANT shall utilize the references listed below as a frame of reference and guide for designing and implementing the Scenery Resources Assessment. The DISTRICT will provide the following in digital form on CDROM to the CONSULTANT and the CONSULTANT's Landscape Architect at the project kick-off meeting:

- a) Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects, FCDMC, 1992
- b) Revised Cost Ceiling Tables for Landscaping and Project Aesthetic Features, FCDMC, 4/26/01
- c) Beauty and the Beast, A Feature Article for the AFMA Newsletter, Vol 17, Number 2, October 2000, Dennis Holcomb, FCDMC
- d) Issues and Concerns Pertaining to the Incorporation of Aesthetic Features in Flood Protection Facilities, FCDMC, 4/28/02
- e) A Framework for Assessing the Relative Ability of Alternative Flood Protection Methods to Complement and Achieve Compatibility with the Visual Character of Landscape Settings in Maricopa County
- f) Identification of General Landscape Setting Categories and Appropriate Landscape Treatment Themes & Prescriptions for District Flood Protection Facilities based upon MAG 2000 Land Use Categories, FCDMC, 4/29/02
- g) Aesthetic and Multi-Use Design Guidelines for Flood Control Basins and Channels, FCDMC, 4/23/02
- h) Landscape Character Types, Sub-Types and Units of Maricopa County, FCDMC, (if available)
- i) Landscape Character Types and Sub-Types in the National Forests of Arizona and New Mexico, USDA-FS, undated
- j) National Forest Landscape Management, Vol. 2, Ch. 1, The Visual Management System, Ag Handbook 462, USDA-FS, 1974
- k) National Forest Landscape Management, Vol. 1, Ag Hand book 434, USDA-FS, 1973.
- l) Landscape Aesthetics, A Handbook for Scenery Management, Ag Handbook 701, USDA-FS, 1995
- m) National Forest Landscape Management, Vol. 2, Ch. 4, Roads, Ag Handbook 483, 1977.
- n) National Forest Landscape Management, Vol. 2 Ch. 2, Utilities, Ag Handbook 478, USDA-FS, 1975
- o) Landscape Architecture Technical Information Series, Vol. 1, No. 3, Creating Land for Tomorrow, ASLA, 1978
- p) Forest landscape Description and Inventories – a basis for land planning and design, USDA Forest Research Paper PSW-49, USDA-FS, 1968.
- q) Desert Spaces, An Open Space Plan for the Maricopa Association of Governments, Design Workshop, Inc., Cornoyer)-Hedrick, Undated.
- r) Application Procedures for Designation of Parkways, Historic, and Scenic Roads in Arizona, ADOT, 1993

20.1.1.9 GIS INFORMATION

The District will provide the following information, if available, in GIS digital format to the CONSULTANT and the CONSULTANT'S Landscape Architect at the Kick-off meeting for use in carrying out the Scenic Resources Assessment:

- a) Aerial photography
- b) Aerial topographic
- c) Rights-of-Way

- d) Existing Soil data.
- e) Existing Vegetation biotic communities data in digital and hard format. (Arizona Actual Vegetation, National Biological Survey, Arizona GAP Analysis, 1993; and Arizona's Natural Vegetation, Arizona Game and Fish Department, 1974).
- f) Physiographic units of Maricopa County
- g) Geology of Maricopa County
- h) Landscape character types and subtypes of Maricopa County (USDA FS
- i) Landscape character types, subtypes and units, FCDMC
- j) Various MAG coverage's including the Desert Spaces Plan, bikeways, cultural and sports attractions, outdoor recreation opportunities, municipal, and supervisorial district boundaries
- k) Maricopa County Regional Trail System in digital and hard formats
- l) Existing Flood Control District Facilities

20.1.1.10 DATA DELIVERY STANDARDS

Reports
Maps
Photographs
Landscape Character Theme Sketches

20.1.2 PRE-WORK

The CONSULTANT's Landscape Architect shall complete all pre-work tasks and provide all deliverables identified in this Section to the satisfaction of the DISTRICT prior to commencing work on tasks identified in subsequent Sections of this scope.

20.1.2.1 REVIEW

A. The DISTRICT will provide the CONSULTANT with a list of DISTRICT project landscape aesthetic goals and objectives at the kickoff meeting, if available.

B. The CONSULTANT's Landscape Architect shall review: 1) the scope of work for the overall Planning Study and the Scenery Resources Assessment, 2) the DISTRICT's list of project landscape aesthetics goals and objective; 3) all background reports and maps delineating the study area boundary and identifying the flooding problems and possible solutions within the study area, including the ADMS Report, if available; and 4) the documents cited in the references in Section 10.1.1.8.

20.1.2.2 MEETING WITH THE DISTRICT LANDSCAPE PLANNER

The CONSULTANT's Landscape Architect shall meet with the DISTRICT's Landscape Planner to review the scope of work and receive any needed clarification regarding the Scenery Resources Assessment.

20.1.2.3 WORK PLAN AND SCHEDULE

A. Within fourteen (14) days of the notice to proceed, the CONSULTANT shall submit a work plan and schedule for carrying out all project tasks and providing all deliverables identified in the Scenery Resources Assessment to the DISTRICT for review and approval.

B. The CONSULTANT shall identify in the work plan the steps and procedures proposed to be undertaken to carry out the tasks and deliverables identified in the scope. The CONSULTANT shall provide a general narrative description of the methodology along with a diagram displaying the organization, sequence and relationship of the steps to be undertaken in the Assessment, including

coordination with other planning tasks identified in the scope of work for the Planning Study, including other assessments, public meetings, reviews and decision making points. The CONSULTANT shall revise the methodology proposed in the work plan as requested by the DISTRICT.

C. The CONSULTANT's Landscape Architect shall identify the content, organization, format and standards for all deliverables to be provided to the DISTRICT in the Work Plan.

D. The Consultant shall provide a schedule in the Work Plan for carrying out all of the tasks and providing all of the deliverables identified the Scenery Resources Assessment scope.

E. The CONSULTANT shall obtain approval of the Work Plan and Schedule from the DISTRICT prior to initiating further work on the Scenery Resources Assessment.

20.1.2.4 DELIVERABLES

- a) Scenery Resources Assessment Work Plan and Schedule in 8.5x11" black and white format including narrative summaries, charts and diagrams describing and modeling all items identified in Section 10.1.2.3. The illustrations, diagrams and charts may be foldouts.
- b) One work meeting
- c) One PAAC Meeting
- d) One project scoping meeting

20.1.3 DATA COLLECTION AND ANALYSIS

20.1.3.1 AFFECTED ENVIRONMENT AND SCOPE

Unless otherwise stipulated in writing by the DISTRICT, the affected environment and scope of the Scenery Resources Assessment shall include all lands contained within the study area boundary and all lands within 10 miles of the project area boundary that may be visually affected by flood protection activities that may occur within the study area.

20.1.3.2 LANDSCAPE AESTHETICS GOALS.

A. The CONSULTANT shall meet with the DISTRICT to review, update and document the DISTRICT's landscape aesthetic goals and objectives for the planning study.

B. The CONSULTANT shall meet with appropriate representatives of municipalities, other agencies and project stakeholders to obtain the landscape aesthetic goals and objectives for areas situated within the project area, all areas located adjacent to the project area, and any areas within ten (10) miles of the project area that may potentially be affected by the project.

C. The CONSULTANT shall document the project landscape aesthetics goals and objectives in the Scenery Resources Data Collection and Analysis Report.

20.1.3.2 BASIC PREMISES, TERMINOLOGY AND CRITERIA

A. The CONSULTANT shall identify and define the basic premises, terminology and criteria proposed to be used in the Scenery Resources Data Collection and Analysis.

B. The CONSULTANT may utilize and/or adapt the basic premises contained in USDA-FS Ag HB 462.

C. The CONSULTANT shall provide a glossary defining all terms utilized in the Scenery Resources Data Collection and Analysis Report, including terms used on all maps, charts and diagrams contained therein.

D. The CONSULTANT shall provide definitions for all rating criteria and map classes utilized in the Scenery Resources Assessment.

E. The CONSULTANT shall revise and update the basic premises, terminology and criteria, as necessary, during the data collection and analysis.

F. The CONSULTANT shall document all of the basic premises, terminology and criteria in the Scenery Resources Data Collection and Analysis Report.

20.1.3.3 BASE MAP PREPARATION

A. The CONSULTANT shall prepare a base map (scale: 1 inch = 400 feet) for display of the Scenery Resources Assessment, utilizing materials supplied by the DISTRICT. The basemap shall include orthophoto imagery in color or black and white, two (2) foot contours, the project boundary, a map title, the name of the planning study, legend, north arrow, scale, map source, date, the names and logos of the DISTRICT and the CONSULTANT, and any other information requested by the DISTRICT.

B. The CONSULTANT shall prepare the base map as a GIS layer.

C. The CONSULTANT shall review and obtain the approval of the DISTRICT for the base map prior to utilizing it in the Scenery Resources Assessment.

D. The CONSULTANT shall utilize the base map as a base for displaying all other maps identified in the scope for the Scenery Resources Assessment.

20.1.3.4 EXISTING LANDSCAPE CHARACTER ASSESSMENT

A. The CONSULTANT shall provide an assessment of existing landscape character, taking into consideration the visible natural and cultural features found within the study area. The physical attributes to be assessed include landforms, vegetation, rock formations, water features, and cultural (human built) elements. The CONSULTANT shall design and implement the assessment of existing landscape character to serve as a basis for: 1) identification and application of appropriate landscape themes to the alternatives and preferred plan; 2) Identification of compatible flood protection methods; 3) Assessment of the effects of the alternatives upon the existing visual character of the Study Area; and 4) Development of landscape aesthetics planning and design guides.

B. The CONSULTANT's assessment of existing landscape character shall include mapping, narrative descriptions, and photographic examples of the Landscape Character Types, Sub-Types, Units and Sub-Units currently found within the project area. The scope of the Existing Landscape Character Assessment shall extend a minimum of 1 mile beyond the boundary of the Planning Study.

C. The CONSULTANT shall obtain and review existing aerial photography and resource information pertaining to topography, existing geomorphology, water features, geologic resources, existing vegetation, and existing cultural features located within and adjacent to the project area that may serve as a basis for the preliminary identification and delineation of existing landscape character units and sub-units within the project area. The CONSULTANT shall review the information contained in the report titled Landscape Character Types, Sub-Types and Units of Maricopa County, if available, and the

report titled Landscape Character Types and Sub Types in the National Forests of Arizona and New Mexico, USDA-FS, undated.

D. The CONSULTANT shall delineate the Landscape Character Types and Sub-Types on the base map, as a separate GIS layer, utilizing GIS data pertaining to the Character Types and Sub-Types provided by the District. The CONSULTANT shall modify and adapt the GIS information provided by the DISTRICT, as necessary to accurately reflect the delineation of the Character Types and Sub-Types at the scale of the base map.

E. The CONSULTANT shall delineate the landscape character Units on the base map as a separate GIS layer, utilizing available GIS information provided by the DISTRICT. If this information is not available, the CONSULTANT shall identify and delineate landscape character Units as sub-divisions having common distinguishing visual characteristics within the Sub-Types, utilizing best available information pertaining to landforms, vegetation, water and cultural features.

F. The CONSULTANT shall delineate the landscape character Sub-Units on the base map as a separate GIS layer, utilizing and refining the information provided by the DISTRICT as a starting point. If this information is not available, the CONSULTANT shall identify and delineate landscape character Sub-Units as sub-divisions of the landscape Units, utilizing best available detailed information pertaining to landforms, vegetation, water and cultural features. The CONSULTANT may utilize the MAG 2000 Land Use Categories GIS data base for the purpose of identifying cultural landscape character Sub-Units.

G. The DISTRICT will provide the CONSULTANT with direction and examples of the level of mapping required for the landscape Units and Sub-Units.

H. The CONSULTANT shall meet with the DISTRICT'S Landscape Planner to review a preliminary Existing Landscape Character Map, consisting of a composite delineation of the Character Types, Sub-Types, Units and Sub-Units, and revise it, as requested, prior to proceeding further with the Scenery Resources Assessment.

I. The CONSULTANT shall conduct a field review to verify and refine the map of the Character Types, Sub-Types, Units and Sub-Units. The CONSULTANT shall provide photo documentation, including a minimum of 5 digital photographs, of each landscape Unit and Sub-Unit that are representative of its character, scenic quality and visual condition.

J. The CONSULTANT shall provide a brief narrative description of the visual characteristics of the physical attributes of the natural and cultural features within each landscape character Unit and Sub-Unit, including their dominant characteristics of line, form, color, texture, scale and arrangement.

K. The CONSULTANT shall document the Assessment of Existing Landscape Character in the Scenery Resources Data Collection and Analysis Report. This Assessment shall include a narrative and graphic overview of the regional setting and context of the character of the Study Area, including the Character Types and Sub-Types, narrative descriptions with sample photographs of each Landscape Unit and Sub-Unit, and the Existing Landscape Character Map. The CONSULTANT shall provide a brief overview of the methodology and define key terms and criteria as a part of the documentation.

L. The CONSULTANT shall assess the relative compatibility of the landscape character Units and Sub-Units with various flood protection methods including non-structural, soft structural, semi-soft structural, and hard structural. The CONSULTANT shall utilize and adapt the approach outlined in the DISTRICT document titled: A Framework for Assessing the Relative Ability of Alternative Flood Protection Methods to Complement and Achieve Compatibility with the Visual Character of Landscape

Settings in Maricopa County. The CONSULTANT shall prepare a Landscape Character Compatibility Classes map, as a separate GIS layer, illustrating the relative compatibility of the landscape character Units and Sub-Units for the various methods of flood protection. The CONSULTANT shall document the landscape compatibility assessment in the Scenery Resources Data Collection and Analysis report including the compatibility classes map and a narrative description of the purpose, methodology and compatibility classes, and the findings.

M. The CONSULTANT shall provide a minimum of ten (10) low elevation aerial oblique photographs representative of the range of existing landscape character conditions within the study area for use as exhibits at the public meetings. These photographs will serve as a baseline and frame of reference for developing exhibits a range of possible landscape character themes that may be appropriate to apply to the flood protection components proposed within the study area. All of the aerial oblique photographs shall be taken from a vertical height ranging from 50 to 75 feet above ground level. These photographs shall be a minimum of 24"x 36" mounted on foam core boards and shall be clearly focused, free of grain, properly exposed, well-composed and suitable for use as public exhibits and in the documents produced for this project. The CONSULTANT shall provide a minimum of twenty (20) 8 x10 inch photos taken from different locations for selection and approval by the DISTRICT of the ten (10) that will be used for the exhibits.

20.1.3.5 HISTORIC LANDSCAPE CHARACTER ASSESSMENT

A. The CONSULTANT shall prepare a Historical Landscape Character Assessment of the Study area that identifies the dominant visual characteristics of the study area reflected in the major periods of its Historic and Pre-Historic development. The CONSULTANT shall prepare the Historical Landscape Character Assessment in sufficient detail to serve as an effective basis for the identification of Landscape Themes and design guidelines that may be appropriate for application to the study area.

B. The scope of the Historic Landscape Character Assessment shall extend a minimum of one (1) mile beyond the boundary of the study area.

C. The CONSULTANT shall conduct a literature search, including preliminary information from the project Historical and Cultural Resources Assessment and provide copies of available photographs, sketches and narrative descriptions of the historic landscape character of the project area at the major cultural and historic stages of its development, including major architectural styles, if any, associated with particular periods.

D. The CONSULTANT shall provide a Historic Landscape Character map, as a separate GIS layer, depicting the location and extent of different historic and pre-historic landscape character settings found within the study area.

E. The CONSULTANT shall provide the DISTRICT with a brief narrative description and supporting photographs and/or sketches of each landscape character setting identified on the Historic Landscape Character map.

F. The CONSULTANT shall document the assessment of Historic Landscape Character in the Scenery Resources Assessment Data Collection and Analysis Report, including the Historic Landscape Character Map, narrative descriptions and supporting photos and sketches of the historic landscape settings, and narrative overviews of the purpose, methodology and terminology used in the assessment.

20.1.3.6 FUTURE DESIRED LANDSCAPE CHARACTER ASSESSMENT

A. The CONSULTANT shall provide an Assessment of Desired Future Landscape Character that identifies the kinds of landscape settings and "places" that are desired by the public and local communities in the study area. The CONSULTANT shall prepare the Future Desired Landscape Character Assessment in sufficient detail to serve as an effective basis for the identification of Landscape Themes and design guidelines that may be appropriate for application to the study area.

B. The scope of the Future Desired Landscape Character Assessment shall extend a minimum of a one (1) mile beyond the boundary of the study area.

C. The CONSULTANT shall conduct a search and review of existing County and Municipal general plans, open space, trails, parks, scenic area and recreation plans, zoning ordinances, design guidelines and other pertinent information to identify the types and location of landscape settings that are desired within the study area. The CONSULTANT shall also review and take into account the MAG Desert Spaces Plan.

D. The CONSULTANT shall prepare a Desired Future Landscape Character map depicting the location and extent of landscape settings that are desired as a future condition within the study area based upon the literature search.

E. The CONSULTANT shall provide a brief narrative description of the desired character for each future desired setting depicted on the Desired Future Landscape Character map.

F. The CONSULTANT shall summarize the findings for this item in the Data Collection Report.

G. The CONSULTANT shall document the Assessment of Desired Future Character in the Scenery Resources Assessment Data Collection and Analysis Report. The documentation shall include a narrative description of the purpose of the assessment, the methodology that was applied, definitions of terminology and criteria, and descriptions with photos and/or sketches illustrating the desired character for each setting delineated on the Desired Future Character map.

H. The CONSULTANT shall conduct public sensing at the second PAAC and Public meetings and, if appropriate, at presentations made to various municipalities and organizations, to further identify the community character that is desired by local citizens within and adjacent to the study area. The CONSULTANT shall prepare a questionnaire for use in the public sensing of desired future landscape character. The CONSULTANT shall provide the questionnaire for review and approval of the DISTRICT 10 days in advance of the first PAAC and Public meeting.

I. The CONSULTANT shall document the results of all public sensing and shall modify or refine the Future Desired Landscape Character Map to reflect any new information that was received.

J. The CONSULTANT shall document the Assessment of Future Desired Character in the Scenery Resources Data Collection and Analysis report. This documentation shall include the Future Desired Landscape Character map, a brief narrative description of the purpose of the assessment, the methodology, findings and descriptions of the landscape settings identified on the Future Desired Landscape Character map and any supporting photos and sketches.

20.1.3.7 LANDSCAPE THEMES DEVELOPMENT

A. The CONSULTANT shall utilize the information developed in the Existing, Historic and Future Desired Landscape Character Assessments to identify, describe and illustrate a minimum of ten

(10) landscape themes that would be appropriate to apply to flood protection projects that may be identified in the alternatives for the study area. A minimum of five (5) of the Landscape Themes will be developed from the Existing Landscape Character Assessment. A minimum of three (3) of the themes will be developed from the Future Desired Landscape Character Assessment. A minimum of two (2) will be developed from the Assessment of Historic Landscape Character.

B. The CONSULTANT shall meet with the District to identify and discuss the location of flooding problems within the study area and the possible locations and methods of flood protection that may be evaluated in the alternatives for the study area.

C. The CONSULTANT shall provide a minimum of 20 color aerial oblique photographs (8"x10"), taken from a height of 50-75 feet above the ground from different locations within the study area that may contain future flood protection facilities, to serve as a base and frame of reference for preparation of the Landscape Theme Sketches. The photographs shall be clearly focused, free of grain, properly exposed, well composed and suitable for enlargement to 24"x36" and use as public exhibits. The CONSULTANT shall prepare preliminary outline sketches with quick color enhancement as overlays on the color photographs. The CONSULTANT shall meet with the DISTRICT to review and select the photos that will serve as a basis for development of the selected Landscape Theme Sketches. The CONSULTANT shall revise the preliminary theme sketches as requested by the DISTRICT.

D. The CONSULTANT shall refine the selected Landscape Theme sketches following PAAC meeting #2 and prior to Public Meeting #2. The finalized photographs and Theme sketches shall be 24"x36" in size, color rendered and mounted on foam core board. The finalized theme sketches may be developed from enlargements of suitably detailed 8"x10" sketches.

E. The CONSULTANT LANDSCAPE ARCHITECT shall provide a descriptive label and narrative summary for each landscape theme, that identifies the desired physical characteristics of landform, vegetation, water and cultural features, their scale and arrangement, that would be applied to flood protection facilities. In developing the theme descriptions, The CONSULTANT LANDSCAPE ARCHITECT shall utilize the DISTRICT publication titled: Aesthetic and Multi-Use Design Guidelines for Flood Control Basins and Channels, FCDMC, 4/23/02, as a starting point and check list.

F. The CONSULTANT LANDSCAPE ARCHITECT shall utilize and adapt the framework outlined in the document titled: Identification of General Landscape Setting Categories and Appropriate Landscape Treatment Themes & Prescriptions for District Flood Protection Facilities based upon MAG 2000 Land Use Categories, FCDMC, 4/29/02, to identify the range of appropriate landscape themes that may be appropriate to apply to the landscape settings identified within the study area.

20.1.3.8 SCENIC QUALITY ASSESSMENT

A. The CONSULTANT shall provide an Assessment of Scenic Quality that includes an inventory and analysis of Landscape Variety and Existing Visual Conditions within and adjacent to the study area. The Scenic Quality Assessment shall be sufficiently detailed to identify features and areas that should be preserved for their outstanding scenic quality, and features and areas that may represent opportunities for landscape enhancement or improvement due to a lack of landscape variety or the presence of discordant features that appear to detract from the desired characteristics within the study area. In preparing the Scenic Quality Assessment, the CONSULTANT shall clearly and correctly distinguish between landscape variety that contributes positively to the character of the landscape Unit or Sub-Unit, and variety that negatively deviates and detracts from the character of the Unit or Sub-Unit.

B. The scope of Scenic Quality Assessment shall extend a minimum of one (1) mile beyond the boundary of the study area.

C. The CONSULTANT shall document the Assessment of Scenic Quality in the Scenery Resources Data Collection and Analysis report. This documentation shall include the Landscape Variety Class map and the Existing Conditions map, the narrative descriptions, photographs described in this Section, along with any graphic illustrations needed to clearly and effectively present the information.

1. LANDSCAPE VARIETY

The CONSULTANT shall conduct a literature search and review existing plans including the MAG Desert Spaces Plan, and other federal, state and local community plans, that identify areas of high scenic attraction and importance within the study area, including state and local scenic highways, scenic rivers, and national, state and local preserves, parks and special scenic areas

The CONSULTANT shall review and adapt the approach outlined for establishment of landscape variety classes in USDA-FS Ag Hb 462 cited in the references, to the study area.

The CONSULTANT shall prepare a Landscape Variety Classes map of the study area, as a separate GIS layer, that depicts areas of outstanding positive landscape variety (Class A), areas of common variety (Class B), and areas of minimal variety (Class C). In preparing the Variety Class map, the CONSULTANT shall review and apply the variety class rating criteria established for the Landscape Character Subtypes contained in the DISTRICT document titled: Landscape Character Types, Sub-types and Units of Maricopa County. If this document is not available, the CONSULTANT shall review and adapt the landscape variety class rating criteria for the Character Types of the study area that is contained in the USDA document titled: Landscape Character Types and Sub-Types in the National Forests of Arizona and New Mexico. The CONSULTANT shall apply the variety class ratings to the Landscape Character Sub-Units as a whole or, if necessary, delineate the variety classes as smaller areas within the Sub-Units.

The CONSULTANT shall identify and document the relative significance of all areas identified as Variety Class A within the study area, as to whether they have existing or potential national, state, regional and local significance. The CONSULTANT shall identify opportunities for enhancement through the introduction of positive variety for all identified Variety Class C areas through implementation of various flood protection methods, if any.

The CONSULTANT shall provide digital photos that are representative of the overall landscape variety within each Landscape Unit and Sub-Unit, and for all Variety Class A features identified therein.

The CONSULTANT shall prepare a brief narrative summarizing the purpose, methodology, variety classes, rating criteria, and the overall landscape variety of the study area as a whole. The narrative shall also include a brief description of landscape variety for each Landscape Unit and Sub-Unit and the identified opportunities for landscape enhancement through the implementation of various flood protection methods. The CONSULTANT shall include thumbnail cross section sketches as appropriate to illustrate the recommended retrofit treatments.

2. EXISTING VISUAL CONDITIONS

The CONSULTANT shall meet with the DISTRICT to review appropriate data and to gain guidance on the desired product for this task item.

The CONSULTANT shall prepare an Existing Visual Conditions map of the study area, as a separate GIS layer, that delineates areas of high, moderate and low scenic integrity, utilizing and adapting the approach outlined in chapter 2 of the document titled: Landscape Aesthetics, A Handbook for Scenery Management, Ag Handbook 701, USDA-FS, 1995. High scenic integrity shall include features and areas that appear to be visually intact and devoid of negative deviations that detract from the visual character of the Landscape Unit or Sub-Unit. Moderate scenic integrity shall include all features and areas that contain slightly to moderately evident negative deviations that detract from the visual character of the Landscape Unit or Sub-Unit. Low scenic integrity shall include all features and areas containing negative deviations that strongly detract from and visually dominate the visual character of the landscape Unit or Sub-Unit.

The CONSULTANT shall provide digital photographs representative of the visual integrity classes, in general, and the visual conditions found within each Landscape Unit and Sub-Unit.

The CONSULTANT shall identify and document opportunities for landscape character improvement through application of various flood protection methods, if any, for all features and areas within each Landscape Unit or Sub-Unit identified with moderate to low visual integrity.

The CONSULTANT shall assess the visual integrity of all existing DISTRICT flood protection facilities located within the study area and include this information on the Existing Visual Conditions map. The CONSULTANT shall identify and document opportunities and recommended retrofit treatment measures to bring the DISTRICT's existing facilities into conformance with its policy for landscaping and aesthetic treatment. The CONSULTANT shall include thumbnail cross section sketches as appropriate to illustrate the recommended retrofit treatments. The DISTRICT will provide the CONSULTANT with a map and a list of existing facilities within the study area that are owned and operated by the DISTRICT. The CONSULTANT shall review the DISTRICT's Existing Facilities Landscape Aesthetics and Multi-Use Opportunities Assessment for facilities located within the study area, if available, and adapt and refine this work to the study area as appropriate.

The CONSULTANT shall prepare a brief narrative describing the purpose, methodology, visual integrity classes, and summarizing the overall visual integrity of the study area as a whole. The narrative shall also include a brief description of visual integrity for each Landscape Unit and Sub-Unit and the identified opportunities and recommended treatments for landscape restoration or improvement through the implementation of various flood protection methods.

20.1.3.9 VISUAL SENSITIVITY ASSESSMENT

A. The CONSULTANT shall meet with the DISTRICT to review appropriate data and to gain guidance on the desired product for this task item.

B. The CONSULTANT shall prepare a Visual Sensitivity Levels map of the study area, as a separate GIS layer, that delineates areas of high, moderate and low Sensitivity Levels and that are further stratified into foreground, middleground and background viewing distance zones, utilizing and adapting the approach outlined in the document titled: National Forest Landscape Management, Vol. 2, Ch. 1, The Visual Management System, Ag Handbook 462, USDA-FS, 1974.

C. The CONSULTANT shall also identify primary and secondary focal points visible from and within the study area and include this information on the Visual Sensitivity Levels map.

D. The scope of the Visual Sensitivity Assessment shall extend a minimum of ten (10) miles beyond the boundary of the study area.

E. The CONSULTANT shall prepare a brief narrative summarizing the overall visual sensitivity of the study area as a whole, and the visual sensitivity and focal points identified within each Landscape Unit and Sub-Unit.

F. The CONSULTANT shall document the Assessment of Visual Sensitivity in the Scenery Resources Data Collection and Analysis report. This documentation shall include the Visual Sensitivity Levels map, and a brief summary description of the purpose, methodology, sensitivity level categories, rating criteria and the narrative descriptions of the overall visual sensitivity of the study area and the individual Landscape Units and Sub-Units.

20.1.3.10 SCENERY RESOURCES OPPORTUNITIES AND CONSTRAINTS ANALYSIS

A. The CONSULTANT shall meet with the DISTRICT to review appropriate data and to gain guidance on the desired product for this task item.

B. The CONSULTANT shall meet with the DISTRICT to identify the types and methods of flood protection that may be evaluated for the study area, including non-structural, soft structural, semi-soft structural, and hard structural with aesthetic treatments and hard structural without aesthetic treatment.

C. The CONSULTANT shall prepare a Landscape Character Compatibility Classes map, as a separate GIS layer, illustrating the relative compatibility of the landscape character Units and Sub-Units for the various identified methods of flood protection. The CONSULTANT shall utilize and adapt the approach outlined in the DISTRICT document titled: A Framework for Assessing the Relative Ability of Alternative Flood Protection Methods to Complement and Achieve Compatibility with the Visual Character of Landscape Settings in Maricopa County.

D. The CONSULTANT shall prepare a Scenic Quality Opportunities and Constraints map, as a separate GIS layer, that identifies the opportunities and constraints for various flood protection methods based upon the Landscape Variety Class and Existing Visual Conditions Analysis.

E. The CONSULTANT shall prepare a Visual Sensitivity Opportunities and Constraints map, as a separate GIS layer, that identifies the opportunities and constraint for the various identified flood protection methods based upon the information developed in the Visual Sensitivity Analysis.

F. The CONSULTANT shall prepare a Scenery Resources Opportunities and Constraints map, as a separate GIS layer, that is a composite of the Landscape Character Compatibility, Scenic Quality and Visual Sensitivity Opportunities and constraints maps.

G. The CONSULTANT shall document the Scenery Resources Opportunities and Constraints Analysis in the Scenery Resources Data Collection and Analysis report. The report shall include the Landscape Character Compatibility Classes map, and the Scenic Quality, Visual Sensitivity Levels and Scenic Resources Opportunities and Constraints maps. The report shall also include narrative summaries of the purpose, methodology, compatibility classes, criteria and findings of the Landscape Character Compatibility assessment.

20.1.3.11 DELIVERABLES

- a) Preliminary Scenery Resources Data Collection Report (3 Hard Copies)
- b) Final Scenery Resources Data Collection Report (10 hard copies, 1 digital copy on CDROM)
- c) Preliminary maps (1 hard copy) for the following: GIS maps and digital data files for:
Base map

- Existing Landscape Character
- Historic Landscape Character
- Future Desired Landscape Character
- Landscape Variety Classes
- Existing Visual Conditions
- Visual Sensitivity Levels
- Landscape Character Compatibility Classes
- Scenic Quality Opportunities and Constraints
- Visual Sensitivity Opportunities and Constraints
- Scenery Resources Opportunities and Constraints
- d) Final maps for all identified above (1 hard copy mounted on foam core board, and 2 copies in GIS format on CDROM Disk)
- e) Digital data file containing all photographs (2 copies on CDROM Disks)
- f) Twenty (20) aerial oblique color photographs (1hard copy, 8x10 each)
- g) Ten (10) final aerial oblique color photographs (1 hard copy, 24x36" mounted on foam core board)
- h) Twenty (20) preliminary Landscape Theme Sketches (1 hard copy, 8x10 each)
- i) Ten (10) final Landscape Character Theme Sketches 24"x36"
- j) One (1) PAAC meeting
- k) One (1) public meeting
- l) Three (3) work meetings

20.1.4 ALTERNATIVES FORMULATION AND ANALYSIS

20.1.4.1 SCENERY RESOURCES EMPHASIS ALTERNATIVE

A. The CONSULTANT LANDSCAPE ARCHITECT shall utilize the Scenery Resources Assessment and brainstormed ideas from PAAC meeting #2 to formulate a minimum of one (1) preliminary flood protection alternative that emphasizes protection and enhancement of scenery resources within the study area. The Landscape Architect Consultant shall meet with the DISTRCT and CONSULTANT planning team to refine the Scenery Resources Emphasis alternative. The CONSULTANT Landscape Architect shall illustrate and describe the alternative in sufficient detail to clearly identify the flood protection methods, facility types, and the landscape themes proposed to be applied thereto.

B. The CONSULTANT shall provide the CONSULTANT LANDSCAPE ARCHITECT with digital and hard copies of the base map that will be utilized to display the study area alternatives, if it is different from the base map that was used for the scenery resources data collection. The CONSULTANT LANDSCAPE ARCHITECT shall delineate the Scenery Resources Emphasis alternative as a separate GIS layer on the alternatives base map.

C. CONSULTANT LANDSCAPE ARCHITECT shall provide a narrative description of the flood protection features of the Scenery Resources Emphasis Alternative, including a description of the landscape themes and aesthetic concepts that would be applied to the flood protection components.

20.1.4.2 DEVELOPMENT OF OTHER ALTERNATIVES

A. The CONSULTANT LANDSCAPE ARCHITECT shall actively participate with the CONSULTANT's planning team in formulating and developing the other alternatives for the study area, including the selection and location of various types of flood protection methods, facilities and landscape themes that will be applied thereto.

B. The CONSULTANT LANDSCAPE ARCHITECT shall provide a brief narrative description of the landscape themes and overall aesthetic design concepts that would be applied to the flood protection components of each alternative, utilizing the landscape theme descriptions, prescriptions and guidelines developed in the Scenery Resources Data Collection and Analysis Report.

20.1.4.3 ALTERNATIVES LANDSCAPE THEME SKETCHES

The CONSULTANT LANDSCAPE ARCHITECT shall provide the DISTRICT with five (5) additional landscape character theme sketches (8x10 originals enlarged to 24"x36"), as directed by the DISTRICT, to adequately illustrate the landscape themes reflected in the alternatives.

20.1.4.4 IDENTIFICATION OF LAND ACQUISITION REQUIREMENTS

The CONSULTANT LANDSCAPE ARCHITECT shall assist the CONSULTANT in identifying the right of way and land acquisition requirements for each alternative using the DISTRICT document titled: Aesthetic and Multi-Use Design Guidelines for Flood Control Basins and Channels, FCDMC, 4/23/02, and the preliminary design guides developed for the landscape themes in the Scenery Resources Data Collection and Analysis.

20.1.4.5 COST ESTIMATES

The CONSULTANT LANDSCAPE ARCHITECT shall provide preliminary cost estimates for landscaping and aesthetic treatment for each alternative, utilizing the Revised Cost Ceiling Tables for Landscaping and Project Aesthetic Features, FCDMC, 4/26/01.

20.1.4.6 ALTERNATIVES EVALUATION

The CONSULTANT LANDSCAPE ARCHITECT shall provide an evaluation of the advantages and disadvantages of each alternative in terms of its effects on the character and scenic quality of the study area.

20.1.4.7 DELIVERABLES

- a. One (1) Scenery Resource Emphasis Alternative map (1 hard copy and 1 digital copy in GIS format on CDROM) with narrative description
- b) One (1) narrative description of Alternatives landscape themes, landscaping and aesthetic features and design guidelines, including related landscape theme sketches
- c) One (1) cost estimate for the alternatives landscaping and aesthetic treatments
- d) One (1) Alternatives landscape character and scenic quality effects Evaluation
- e) Five (5) Landscape Theme sketches (1 24"x36" hard copy each mounted on foam core board)

20.1.5 RECOMMENDED PLAN DEVELOPMENT

20.1.5.1 PLAN DEVELOPMENT

The CONSULTANT LANDSCAPE ARCHITECT shall participate with the CONSULTANT'S planning team in the development of the Recommended Plan, including selection of the types and locations of flood protection methods, facilities and landscape themes.

20.1.5.2 FINAL LANDSCAPE THEME SKETCHES AND DESCRIPTIONS

A. The CONSULTANT LANDSCAPE ARCHITECT shall refine and finalize the landscape theme sketches, as necessary, to illustrate the themes contained in the Recommended Plan.

B. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a complete and finalized description of the landscape themes associated with the flood protection components of the Recommended Plan.

20.1.5.3 RECOMMENDED PLAN LANDSCAPE AESTHETICS PLANNING AND DESIGN GUIDELINES

The CONSULTANT LANDSCAPE ARCHITECT shall provide final landscape aesthetics planning and design guidelines for each landscape theme contained in the Recommended Plan. In developing the landscape aesthetics planning and design guidelines, the CONSULTANT LANDSCAPE ARCHITECT shall review and refine, as necessary, the general guidelines contained in the DISTRICT's document titled: Aesthetic and Multi-Use Design Guidelines for Flood Control Basins and Channels, FCDMC, 4/23/02, for application to the themes in the Recommended Plan. The scope of the final landscape aesthetics planning and design guidelines shall be inclusive of the aforementioned general guidelines, and shall address the size, scale, shape, form and grading of all proposed flood protection facilities, define a plant pallet consistent with the landscape themes in the final plan, and provide any other direction necessary for implementing the themes in the plan. The CONSULTANT LANDSCAPE ARCHITECT shall provide thumb nail sketches, as needed, to illustrate the planning and design guidelines.

20.1.5.4 RECOMMENDED PLAN LAND ACQUISITION REQUIREMENTS

The CONSULTANT LANDSCAPE ARCHITECT shall assist the CONSULTANT in finalizing the land acquisition requirements for implementing the landscape themes of the project components of the Recommended Plan

20.1.5.5 RECOMMENDED PLAN COST ESTIMATE

The CONSULTANT LANDSCAPE ARCHITECT shall provide a final cost estimate for landscaping and aesthetic treatment for the project components of the Recommended Plan, utilizing the Revised Cost Ceiling Tables for Landscaping and Project Aesthetic Features, FCDMC, 4/26/01.

20.1.5.6 DELIVERABLES

- a) Final Landscape Theme Sketches (1 hard copy each, 24"x36", mounted on foam core board)
- b) Final narrative descriptions with landscape theme sketches
- c) Recommended Plan Landscape Aesthetic Planning and Design Guidelines

d) Recommended Plan Land Acquisition Requirements and Cost Estimate

20.1.6 IMPLEMENTATION AND MAINTENANCE PLAN

CONSULTANT LANDSCAPE ARCHITECT shall participate in the development of the Implementation and Maintenance Plan, including development of a vegetation management plan for the project components identified in the Recommended Plan.

20.2.0 RECREATION MULTIPLE-USE ASSESSMENTS FOR PLANNING STUDIES

The work under this section may not be authorized with the Notice to Proceed, or may be authorized in writing either in whole or in part by the District.

20.2.1 GENERAL PROVISIONS

20.2.1.1 PURPOSE AND SCOPE

The CONSULTANT shall prepare a Recreation Multi-Use Assessment for the Study area that takes into account the surrounding regional context. The purpose of the Assessment is to: Identify and evaluate existing and future planned recreation and open space resources within the study area and within the regional context of the study area; Evaluate the potential and value of incorporating recreation multi-use features into existing DISTRICT facilities; Evaluate the significance of opportunities for existing and future planned DISTRICT facilities to meet the recreation, trails and open space needs of local communities; Identify partnering opportunities; Serve as a basis for formulating a plan alternative that emphasizes incorporation of multi-use opportunities; Serve as a basis for incorporating recreation opportunities into alternatives and the Recommended Plan; Serve as a basis for analyzing the effects of the alternatives on recreation multi-use benefits; and Serve as a basis for development of planning and design implementation guidelines for recreation multi-uses in the Recommended Plan.

20.2.1.2 GOALS AND OBJECTIVES

The overall goal of the Recreation Multi-Use Assessment is to maximize opportunities for adding year round value and benefit of the DISTRICT's flood protection facilities by incorporating recreation multi-use opportunities as an integral part of the planning for flood protection within the study area. The primary goal is to meet local community needs for recreation, trails, open space and alternative forms of transportation. The achievement of this goal is viewed by the District as essential to gaining public support and promoting cost share opportunities to the fullest, for its overall mission, programs, plans and projects.

The expenditure of public funds by the Flood Control District for landscape aesthetic and multi-use treatments is subject to the authority and limitations of A.R.S. §48-3601 et seq., and the budgetary limitations specified by the DISTRICT. Use of DISTRICT funds for aesthetic and multi-use treatments is limited to features that are incidental to, or are part of, the flood control structure. The conceptual plans and designs presented in the Scenery Resource Assessment and the Planning Study may include project elements or items designed to serve exclusively purposes other than flood control. While the District may not be able to carry out all of the recommendations presented, these elements are included to illustrate potential open space opportunities associated with DISTRICT flood protection features and measures and to attract partnerships with other stakeholders in the community who may be interested in sponsoring their implementation.

20.2.1.3 STAFF QUALIFICATIONS

The Recreation Multi-Use Assessment shall be directed and carried out by a licensed landscape architect. The CONSULTANT LANDSCAPE ARCHITECT shall be knowledgeable and experienced in large scale public works recreation planning and design.

20.2.1.4 TASK COORDINATION

The CONSULTANT LANDSCAPE ARCHITECT shall be responsible for fully coordinating all work tasks and completion of all deliverables to ensure they are complete and carried out in a timely and effective manner. This shall include delivery of data, maps, photos and reports prepared by other members of the CONSULTANT's team, including, but not limited to, cultural and historical assessments, vegetation inventories, geomorphic and geologic assessments, topographic mapping and orthophoto mapping, in a timely manner, to ensure the Scenery Resources Assessment is completed on time, in an effective manner.

The CONSULTANT shall coordinate and fully integrate the Work Plan and Schedule for the Recreation Multi-Use Assessment into the Work Plan and Schedule for the overall Project Planning Study.

20.2.1.5 PROJECT STATUS UPDATES

The CONSULTANT shall provide project status updates regarding accomplishment of the Recreation Multi-Use Assessment to the DISTRICT as a part of all regularly scheduled progress reports identified for the Planning Study.

20.2.1.6 PROJECT AESTHETIC ADVISORY COMMITTEE (PAAC) MEETINGS

The DISTRICT will form and utilize a Project Aesthetics Advisory Committee (PAAC), in accordance with the DISTRICT's landscaping and Aesthetics Policy, to provide reviews of both the Scenery and Recreation Multi-Use Assessments and assist in the identification of appropriate aesthetic and multi-use concepts, features and designs to be incorporated into the plan alternatives and the preferred plan. The PAAC will review the project objectives and issues, data collection, inventory and analysis, the aesthetic and recreation multi-use features of the alternatives, the alternatives analysis, and the project implementation guidelines and costs pertaining to landscape aesthetics and recreation multi-use aspects of the project.

The DISTRICT will assemble the PAAC. The PAAC will be composed of: 1) the CONSULTANT's Project Manager, Landscape Architect and other appropriate staff; 2) the DISTRICT's Project Manager, Landscape Planner, Ecologist and Public Involvement Coordinator; 3) other landscape architects and aesthetics knowledge experts capable of providing peer reviews and creative input; 4) local community parks and recreation department representatives; 5) cooperative agency representatives; 6) local neighborhood representatives; and other individuals as appropriate.

The CONSULTANT and the CONSULTANT LANDSCAPE ARCHITECT shall facilitate and participate in all activities of the PAAC through the end of the contract.

The CONSULTANT LANDSCAPE ARCHITECT shall provide a schedule for four (4) PAAC meetings, within 14 calendar days of the Notice to Proceed. The PAAC meetings shall be scheduled a minimum of 10 working days prior to each corresponding public meeting, to allow time for incorporating PAAC review comments and feedback prior to the public meetings. Unless otherwise indicated by the DISTRICT, the purpose and desired outcomes of the four PAAC Meetings shall be as follows:

a. PAAC Meeting #1:

1. Describe the purpose and role of the PAAC
2. Provide an overview of the planning study, including the purpose, need and scope, flooding problems and range of possible solutions, planning process and schedule

3. Provide an overview of the Recreation Multi-Use Assessment, coordination with other planning tasks, and schedule
4. Solicit feedback from committee members regarding aesthetic and recreation multi-use issues, concerns and opportunities

b. PAAC Meeting #2:

1. Present and receive feedback on the Scenery Resource and Recreation Multi-Use data collection and analysis, identified landscape themes, and preliminary planning concepts for the landscape aesthetics and multi-use opportunities emphasis plan alternative
2. Brainstorm additional possible landscape themes and concepts for the landscape aesthetics and multi-use opportunities emphasis plan alternative

c. PAAC Meeting #3:

1. Present and receive feedback on the aesthetic and multi-use features of the plan alternatives, alternatives analysis and cost estimates.

d. PAAC Meeting #4:

1. Present and receive feedback on the Preferred Alternative, including plan features, aesthetic and multi-use planning and design guides, cost estimate, right of way requirements and maintenance plan.

PAAC meeting #2 will be conducted as a workshop/charette.

The CONSULTANT shall be responsible for preparing the agenda, sending out meeting notices, making presentations, and documenting and distributing notes of the PAAC meetings.

The CONSULTANT shall provide and review with the DISTRICT's Landscape Planner, all materials, plans, graphic illustrations, and reports, to be presented at the PAAC and public meetings in preliminary form, a minimum of 10 days prior to the scheduled date of each PAAC meeting. The CONSULTANT shall make all changes and revisions requested by the DISTRICT's Landscape Planner prior to their presentation at the PAAC meeting.

The DISTRICT shall have responsibility for obtaining agreement and consensus within the PAAC.

The CONSULTANT shall incorporate all recommendations of the PAAC approved by the DISTRICT, into all public meeting materials prior to their presentation to the public or other entities.

The CONSULTANT shall provide refreshments for each PAAC meeting.

20.2.1.7 REFERENCES

The CONSULTANT shall utilize the references listed below as a frame of reference and guide for designing and implementing the Recreation Multi-Use Assessment. The DISTRICT will provide the following in digital form on CDROM to the CONSULTANT and the CONSULTANT LANDSCAPE ARCHITECT at the project kick-off meeting:

- a) Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects, FCDMC, 1992
- b) Beauty and the Beast, A Feature Article for the AFMA Newsletter, Vol 17, Number 2, October 2000, Dennis Holcomb, FCDMC

- c) Aesthetic and Multi-Use Design Guidelines for Flood Control Basins and Channels, FCDMC, 4/23/02
- d) Desert Spaces, An Open Space Plan for the Maricopa Association of Governments, Design Workshop, Inc., Cornoyer)-Hedrick, Undated
- e) Existing Facilities Landscape Aesthetics and Multi-Use Opportunities Assessment, FCDMC (if available)

20.2.1.8 GIS INFORMATION

The DISTRICT will provide the following information, if available, in GIS digital format to the CONSULTANT and the CONSULTANT LANDSCAPE ARCHITECT at the Kick-off meeting for use in carrying out the Recreation Multi-Use Assessment:

- a) Aerial photography in color or black and white
- b) Aerial topographic
- c) Rights-of-Way
- j) Various MAG coverage's including the Desert Spaces Plan, bikeways, cultural and sports attractions, outdoor recreation opportunities, municipal, supervisorial district boundaries, and the 2000 existing land use designations
- k) Maricopa County Regional Trail System in digital and hard formats
- l) County Trails GIS data base, if available
- m) Existing Flood Control District Facilities

20.2.1.9 DATA DELIVERY STANDARDS (to be written)

Reports
Maps
Photographs
Sketches

20.2.2 PRE-WORK

The CONSULTANT LANDSCAPE ARCHITECT shall complete all pre-work tasks and provide all deliverables identified in this Section to the satisfaction of the DISTRICT prior to commencing work on tasks identified in subsequent Sections of this scope.

20.2.2.1 REVIEW

The CONSULTANT LANDSCAPE ARCHITECT shall review: 1) the scope of work for the overall Planning Study and the Recreation Multi-Use Assessment, 2) the DISTRICT's list of project recreation multi-use goals and objectives; 3) all background reports and maps delineating the study area boundary and identifying the flooding problems and possible solutions within the study area, including the ADMS Report, if available; and 4) the documents cited in the references in General Provisions Section.

20.2.2.2 MEETING WITH THE DISTRICT LANDSCAPE PLANNER

The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT's Landscape Planner to review the scope of work and receive any needed clarification regarding the Recreation Multi-Use Assessment.

20.2.2.3 WORK PLAN AND SCHEDULE

Within fourteen (14) days of the notice to proceed, the CONSULTANT shall submit a work plan and schedule for carrying out all project tasks and providing all deliverables identified in the Recreation Multi-Use Assessment to the DISTRICT for review and approval.

The CONSULTANT shall identify in the work plan the steps and procedures proposed to be undertaken to carry out the tasks and deliverables identified in the scope. The CONSULTANT shall provide a general narrative description of the methodology along with a diagram displaying the organization, sequence and relationship of the steps to be undertaken in the Assessment, including coordination with other planning tasks identified in the scope of work for the Planning Study, including other assessments, public meetings, reviews and decision making points. The CONSULTANT shall revise the methodology proposed in the work plan as requested by the DISTRICT.

The CONSULTANT LANDSCAPE ARCHITECT shall identify the content, organization, format and standards for all deliverables to be provided to the DISTRICT in the Work Plan.

The CONSULTANT LANDSCAPE ARCHITECT shall provide a schedule in the Work Plan for carrying out all of the tasks and providing all of the deliverables identified the Assessment scope.

The CONSULTANT LANDSCAPE ARCHITECT shall obtain approval of the Work Plan and Schedule from the DISTRICT prior to initiating further work on the Recreation Multi-Use Assessment.

20.2.2.4 DELIVERABLES

- a) Recreation Multi-Use Assessment Work Plan and Schedule in 8.5x11" black and white format including narrative summaries, charts and diagrams describing and modeling all items identified in Section 10.1.2.3. The illustrations, diagrams and charts may be foldouts.
- b) One work meeting
- c) One PAAC meeting
- d) One project scoping meeting

20.2.3 DATA COLLECTION AND ANALYSIS

20.2.3.1 RECREATION MULTI-USE DATA COLLECTION REPORT

The CONSULTANT LANDSCAPE ARCHITECT shall provide a Recreation Multi-Use Data Collection Report to the DISTRICT.

The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT to discuss and agree upon the content, format and delivery standards for the Recreation Multi-Use Assessment Data Collection Report prior to initiating the Data Collection and Analysis. At this meeting, the CONSULTANT LANDSCAPE ARCHITECT shall provide a proposed table of contents and story-board layout for the Recreation Multi-Use Assessment Data Collection Report.

20.2.3.2 BASE MAP PREPARATION

The CONSULTANT shall prepare a base map (scale: 1 inch = 400 feet) for display of the Recreation Multi-Use Assessment, utilizing materials supplied by the DISTRICT. The basemap shall include orthophoto imagery in color or black and white, two (2) foot contours, the project boundary, a

map title, the name of the planning study, legend, north arrow, scale, map source, date, the names and logos of the DISTRICT and the CONSULTANT, and any other information requested by the DISTRICT.

The CONSULTANT shall prepare the base map as a GIS layer.

The CONSULTANT shall review and obtain the approval of the DISTRICT for the base map prior to utilizing it in the Recreation Multi-Use Assessment.

The CONSULTANT shall utilize the base map as the base for displaying all other maps identified in the scope for the Recreation Multi-Use Assessment.

20.2.3.3 RECREATION MULTI-USE GOALS.

The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT to review, update and document the DISTRICT's recreation multi-use goals and objectives for the planning study.

The CONSULTANT shall meet with appropriate representatives of local communities, other agencies with responsibility for delivery of recreation and open space resources and services, and project stakeholders to identify the Recreation Multi-Use goals and objectives for the study area, and any areas within ten (15) miles of the study area that may potentially be affected by the project.

The CONSULTANT shall document the project Recreation Multi-Use goals and objectives in the Recreation Multi-Use Data Collection and Analysis Report.

20.2.3.4 INVENTORY OF RECREATION MULTI-USES

The CONSULTANT shall gather and review existing information pertaining to existing and future planned recreational and open space resources within the project area and its regional context. The purpose of the data collection task is to identify the types, extent, and location of existing and planned recreational features within the project area and its regional context. As a part of the inventory, the CONSULTANT shall identify and document existing and future planned land uses, including recreation sites, open spaces, preserves and natural areas, active play areas and sports fields, attractions, equestrian facilities, golf courses, cultural and historic interpretive sites, trails, transportation systems and nodes, and residential, commercial, educational and employment centers, located within and adjacent to the project area.

The CONSULTANT LANDSCAPE ARCHITECT shall use published material, other studies, field surveys, aerial photography and information provided by jurisdictions in the study area and the DISTRICT to identify existing, planned and potential recreational resources. The CONSULTANT shall conduct no more than six (6) meetings with jurisdictions and agencies to collect data. The CONSULTANT shall collect and review the MAG Desert spaces Plan, Maricopa Regional Trail Concept, Maricopa County Parks and Recreation Regional Parks plans as a part of this task.

The CONSULTANT LANDSCAPE ARCHITECT shall distinguish between existing and future planned recreational resources.

20.2.3.5 ANALYSIS OF THE REGIONAL RECREATION SETTING

The CONSULTANT LANDSCAPE ARCHITECT shall provide an analysis of the recreation resources regional setting of the study area. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a map and narrative that identifies and describes the existing and future planned recreation and other resources having potential regional significance that are located within 15 miles of the study area. The map and narrative shall include all National, State and County parks, and local parks having regional significance; National, State and local trails having regional significance, including the Maricopa County Regional Trail; Existing Flood Protection Facilities; and Other facilities and attractions having potential regional open spaces significance. The narrative and map shall clearly identify the type and significance of the identified recreation resources (National, State, Local) and identify and distinguish between existing and future planned resources.

. The CONSULTANT LANDSCAPE ARCHITECT shall provide one or more typical photographs of existing, planned and potential recreational features or sites identified within the regional context. Each typical photograph shall be dated and cross-referenced as to its location on the map exhibit.

The CONSULTANT LANDSCAPE ARCHITECT shall analyze and compare the types and locations of recreation resources identified in the regional context with the types and locations of existing flood protection facilities, flooding problem areas and potential flood protection facilities described in the ADMS for the study area, if available. The CONSULTANT LANDSCAPE ARCHITECT shall identify strategic locations within the regional context where existing or future planned flood protection facilities might enhance or contribute to the recreation and open space needs identified within the study area by providing open space connectivity or places for recreation activities. The CONSULTANT LANDSCAPE ARCHITECT shall identify and describe the types of flood protection methods and facilities that would best contribute to the enhancement of public recreation opportunities in the regional setting.

The CONSULTANT LANDSCAPE ARCHITECT shall document the Analysis of Recreation Resources of the Regional Setting in the Recreation Multi-Use Data Collection Report. The documentation shall include the Recreation Resources map, narratives and supporting photographs and graphic illustrations.

The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT to identify the format and data requirements for this deliverable.

20.2.3.6 ANALYSIS OF THE RECREATION RESOURCES WITHIN THE STUDY AREA

The CONSULTANT LANDSCAPE ARCHITECT shall provide an analysis of the recreation resources located within the study area. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a Recreation Resources map, as a separate GIS layer to the base map, that identifies the types and locations of all recreation resources within the study area, including parks, open spaces, golf courses and other recreation amenities, trails, bike paths, and transportation system nodes. The scope of this analysis shall extend one (1) mile beyond the boundary of the study area. The CONSULTANT LANDSCAPE ARCHITECT shall include all recreation resources and features identified in the analysis of the regional recreation setting that are situated within the limits of the local setting. The CONSULTANT shall differentiate between existing and future planned recreation and existing land uses.

The CONSULTANT LANDSCAPE ARCHITECT shall prepare a narrative summary with supporting photographs and sketches describing the types of recreation resources located within the study area. The CONSULTANT LANDSCAPE ARCHITECT shall utilize and adapt the USDA Forest Service

ROS system to the study area as a means of classifying and describing the types of recreation themes that are associated with the recreation resources of the study area.

The CONSULTANT LANDSCAPE ARCHITECT shall provide one or more typical photographs of existing, planned and potential recreational features or sites identified within the study area. Each typical photograph shall be dated and cross-referenced as to its location on the map exhibit.

The CONSULTANT LANDSCAPE ARCHITECT shall document the Analysis of Recreation Resources within the Study Area in the Recreation Multi-Use Data Collection Report.

20.2.3.7 ANALYSIS OF EXISTING FLOOD PROTECTION FACILITIES

The CONSULTANT shall assess and document the potential of existing DISTRICT facilities for incorporation of recreation multi-uses. This assessment will include identification of the current opportunities and value of retrofitting existing DISTRICT facilities for recreation multi-uses. The CONSULTANT LANDSCAPE ARCHITECT shall include the existing flood protection facilities on the Recreation Resources Map.

The CONSULTANT LANDSCAPE ARCHITECT shall document the analysis of existing flood protection facilities in the Recreation Multi-Use Data Collection Report

20.2.3.8 RECREATION MULTI-USE OPPORTUNITIES AND CONSTRAINTS ANALYSIS

The CONSULTANT LANDSCAPE ARCHITECT shall analyze and compare the types and locations of recreation resources identified within the study area with the types and locations of existing flood protection facilities, flooding problem areas and potential flood protection facilities described in the ADMS for the study area, if available. The CONSULTANT LANDSCAPE ARCHITECT shall identify strategic locations within the study area where existing or future planned flood protection facilities might enhance or contribute to the recreation and open space needs identified in the in the study area by providing open space connectivity or places for recreation activities.

The CONSULTANT LANDSCAPE ARCHITECT shall identify, and describe the types of flood protection methods and facilities that would best contribute to the enhancement of public recreation opportunities in the study area, and those that would be detrimental. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a Recreation Opportunities and Constraints map that illustrates the types of flood protection methods and facilities that will be complementary to the existing and future planned recreation facilities within the study area and the regional setting.

The CONSULTANT LANDSCAPE ARCHITECT shall document the Analysis of Recreation Multi-Use Opportunities and Constraints in the Recreation Multi-Use Data Collection Report.

20.2.3.9 PRELIMINARY RECREATION MULTI-USE CONCEPTS WORKSHOP

The CONSULTANT LANDSCAPE ARCHITECT shall utilize the recreation inventory and analysis to develop preliminary concept plans in graphical form to be used as seed ideas for development of the alternatives in the next phase. This effort will be a brainstorming session of the CONSULTANT and DISTRICT staff. The graphic product will be one or more concept drawings on tissue overlay paper on the base map developed in the brainstorming session. These concepts shall identify ways of linking and connecting existing and potential flood protection facilities in the study area with recreation opportunities in the local and regional context. These concepts shall also identify ways of locating,

organizing and designing flood protection facilities within the project area to capture recreation multi-use opportunities and achieve the recreation goals of local communities and agencies. The concepts shall identify the types of flood protection facilities and methods needed to achieve the recreation goals. The concept plan shall provide a broad spectrum of future recreation opportunities and experience levels and provide a cohesive system of open space, interpretive and recreational facilities linked by trails and paths throughout the study area. The CONSULTANT LANDSCAPE ARCHITECT shall include existing and future planned FCDMC projects and their potential as linked regional open space facilities. The CONSULTANT shall also include features identified in the MAG Desert Spaces Plan and the Regional Trail Concept proposed by the Maricopa County Trail Commission.

The CONSULTANT LANDSCAPE ARCHITECT shall document the results of the Recreation Multi-Use Concepts Workshop in the Recreation Multi-Use Data Collection Report.

20.2.3.10 IDENTIFICATION OF POSSIBLE PARTNERS AND FUNDING SOURCES

The CONSULTANT shall identify and document possible partners and funding sources for implementation of multi-use opportunities within the study area in the Recreation Multi-Use Data Collection Report.

20.2.3.11 PAAC MEETING #2 DOCUMENTATION

The CONSULTANT LANDSCAPE ARCHITECT shall document the recommendations and results from PAAC Meeting #2 in the Recreation Multi-Use Data Collection Report.

20.2.3.12 PRELIMINARY RECREATION MULTI-USE DATA COLLECTION REPORT

The CONSULTANT LANDSCAPE ARCHITECT shall provide the DISTRICT with a preliminary (draft) Recreation Multi-Use Data Collection report. The CONSULTANT LANDSCAPE ARCHITECT shall make all changes to the report requested by the DISTRICT.

20.2.3.13 FINAL RECREATION MULTI-USE DATA COLLECTION REPORT

The CONSULTANT LANDSCAPE ARCHITECT shall provide the DISTRICT with a Final Recreation Multi-Use Data Collection report.

20.2.3.14 DELIVERABLES

- a) Preliminary Recreation Multi-Use Data Collection Report
- b) Final Recreation Multi-Use Data Collection Report
- c) Base Map
- d) Regional Recreation Setting map
- e) Recreation Resources map
- f) Recreation Opportunities & Constraints map
- g) Preliminary Concept Plan(s)
- h) PAAC Meeting #2 Concept Plan(s)

20.2.4 ALTERNATIVES FORMULATION AND ANALYSIS

20.2.4.1 RECREATION MULTI-USE EMPHASIS ALTERNATIVE

The CONSULTANT LANDSCAPE ARCHITECT shall utilize the Recreation Resources Inventory and Assessment and brainstormed ideas from PAAC meeting #2 to formulate a minimum of one (1) preliminary flood protection alternative that emphasizes implementation of recreation multi-uses within the study area and the regional setting. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRCT and CONSULTANT planning team to refine the Scenery Resources Emphasis alternative. The CONSULTANT LANDSCAPE ARCHITECT shall illustrate and describe the alternative in sufficient detail to clearly identify the flood protection methods, facility types, and the landscape themes proposed to be applied thereto.

The CONSULTANT shall provide the CONSULTANT LANDSCAPE ARCHITECT with digital and hard copies of the base map that will be utilized to display the study area alternatives, if it is different from the base map that was used for the scenery resources data collection. The CONSULTANT LANDSCAPE ARCHITECT shall delineate the Recreation Multi-Use Emphasis alternative as a separate GIS layer on the alternatives base map.

CONSULTANT LANDSCAPE ARCHITECT shall provide a narrative description of the flood protection features of the Recreation Multi-Use Emphasis Alternative, including a description of the Recreation facilities and theme concepts that would be applied to the flood protection components.

20.2.4.2 DEVELOPMENT OF OTHER ALTERNATIVES

The CONSULTANT LANDSCAPE ARCHITECT shall actively participate with the CONSULTANT's planning team in formulating and developing the other alternatives for the study area, including the selection and location of various types of flood protection methods, facilities and the recreation facilities and concept themes that will be applied thereto.

The CONSULTANT LANDSCAPE ARCHITECT shall provide a brief narrative description of the recreation multi-use facilities and design concepts that would be applied to the flood protection components of each alternative, utilizing information developed in the Recreation Multi-Use Data Collection and Analysis Report.

20.2.4.3 ALTERNATIVES LANDSCAPE THEME SKETCHES

The CONSULTANT LANDSCAPE ARCHITECT shall incorporate the recreation concepts and themes into the Alternatives Landscape Theme Sketches specified in the Scenery Resources Assessment, to illustrate the landscape themes reflected in the alternatives.

20.2.4.4 IDENTIFICATION OF LAND ACQUISITION REQUIREMENTS

The CONSULTANT LANDSCAPE ARCHITECT shall assist the CONSULTANT in identifying the right of way and land acquisition requirements for each alternative to incorporate the recreation multi-use features identified in each alternative.

20.2.4.5 COST ESTIMATES

The CONSULTANT LANDSCAPE ARCHITECT shall provide preliminary cost estimates for the recreation multi-use features for each alternative.

20.2.4.6 ALTERNATIVES EVALUATION

The CONSULTANT LANDSCAPE ARCHITECT shall provide an evaluation of the advantages and disadvantages of each alternative in terms of their effects on providing year round recreation multi-use opportunities and meeting the recreation and open space goals of local communities and agencies.

20.2.4.7 DELIVERABLES

- a. One (1) Recreation Multi-Use Emphasis Alternative map (1 hard copy and 1 digital copy in GIS format on CDROM) with narrative description
- b) One (1) narrative description of the recreation multi-use features of each Alternative
- c) One (1) cost estimate for the alternatives landscaping and aesthetic treatments
- d) One (1) alternatives recreation multi-use effects evaluation narrative
- e) One PAAC meeting

20.2.5 RECOMMENDED PLAN DEVELOPMENT

20.2.5.1 PLAN DEVELOPMENT

The CONSULTANT LANDSCAPE ARCHITECT shall participate with the CONSULTANT'S planning team in the development of the Recommended Plan, including selection of the types and locations of flood protection methods, facilities and recreation multi-use features and themes.

20.2.5.2 FINAL LANDSCAPE THEME SKETCHES AND DESCRIPTIONS

The CONSULTANT LANDSCAPE ARCHITECT shall incorporate the recreation multi-use features and concepts for the Recommended Plan into the final the landscape theme sketches, specified as a deliverable in the Scenery Resources Assessment.

The CONSULTANT LANDSCAPE ARCHITECT shall prepare a complete and finalized description of the recreation multi-use facilities and themes associated with the flood protection components of the Recommended Plan.

20.2.5.3 RECOMMENDED PLAN MULTI-USE PLANNING AND DESIGN GUIDELINES

The CONSULTANT LANDSCAPE ARCHITECT shall provide detailed recreation multi-use planning and design guidelines for each flood protection component in the Recommended Plan to guide subsequent planning and design. In developing the planning and design guidelines, the CONSULTANT LANDSCAPE ARCHITECT shall review and refine, as necessary, the general guidelines contained in the DISTRICT's document titled: Aesthetic and Multi-Use Design Guidelines for Flood Control Basins and Channels, FCDMC, 4/23/02, for application to the themes in the Recommended Plan. The scope of the CONSULTANT LANDSCAPE ARCHITECT's landscape aesthetics planning and design guidelines shall be inclusive of the aforementioned general guidelines, and shall address the size, scale, shape, form and grading of all proposed flood protection facilities, define a plant pallet and provide any other direction necessary for implementing the themes in the plan. The CONSULTANT LANDSCAPE ARCHITECT shall provide thumb nail sketches, as needed, to illustrate the planning and design guidelines.

20.2.5.4 RECOMMENDED PLAN LAND ACQUISITION REQUIREMENTS

The CONSULTANT LANDSCAPE ARCHITECT shall assist the CONSULTANT in finalizing the land acquisition requirements for implementing the recreation multi-use features of the project components in the Recommended Plan.

20.2.5.5 RECOMMENDED PLAN COST ESTIMATE

The CONSULTANT LANDSCAPE ARCHITECT shall provide a final cost estimate for the recreation multi-use features of the project components in the Recommended Plan, utilizing the Revised Cost Ceiling Tables for Landscaping and Project Aesthetic Features, FCDMC, 4/26/01. The CONSULTANT LANDSCAPE ARCHITECT shall provide separate estimates and accounting for those features that will be cost shared by the DISTRICT, and those that will be provided by others.

20.2.5.6 DELIVERABLES

- a) Preliminary and Final narrative descriptions of the recreation multi-use features of the Recommended Plan
- b) Preliminary and Final Recommended Plan Recreation Multi-Use Planning and Design Guidelines
- c) Recommended Plan Land Acquisition Requirements
- d) Preliminary and Final Recommended Plan Cost Estimate for Recreation Multi-Use features

20.2.6 IMPLEMENTATION AND MAINTENANCE PLAN

CONSULTANT LANDSCAPE ARCHITECT shall participate in the development of the Implementation and Maintenance Plan, including development of a vegetation management plan for the project components identified in the Recommended Plan.

20.3.0 LANDSCAPE ARCHITECTURAL PROJECT PRE-DESIGN

The work under this section may not be authorized with the Notice to Proceed, or may be authorized in writing either in whole or in part by the DISTRICT.

20.3.1 GENERAL PROVISIONS

20.3.1.1 PURPOSE AND SCOPE

The purpose of this chapter is to provide all professional landscape architectural services for completion of final project site development plans, conceptual landscape designs for project component features, cost estimates and identification of right of way requirements necessary to fully integrate landscape aesthetics and recreation multi-use needs and opportunities into project pre-design. The work encompassed within this scope includes, but is not limited to: preparation of work plans and schedules; identification of project objectives and requirements; preparation of base map materials; review of existing documents; completing a site analysis, detailed scenery resource assessment and a recreation open space needs assessment; identification and development of landscape themes and project aesthetic and multi-use design guidelines; preparation of site development master plan and project feature conceptual aesthetic design alternatives, providing an analysis of the alternatives, and preparing a final site development master plan and project feature conceptual designs. The work also includes participation in project scoping meetings, team meetings, project aesthetics advisory committee meetings and public meetings and workshops.

20.3.1.2 GOALS AND OBJECTIVES:

The DISTRICT's aesthetics and open space goal is to enhance the year round value of its flood protection facilities by incorporating features that will help preserve natural Sonoran Desert landscapes, protect and enhance local community character, enhance the aesthetic value of its properties and provide public opportunities for recreation open space activities. The DISTRICT will provide the consultant with project specific goals and objectives at the kick-off meeting.

The expenditure of public funds by the Flood Control District for landscape aesthetic and multi-use treatments is subject to the authority and limitations of A.R.S. §48-3601 et seq., and the budgetary limitations specified by the DISTRICT. Use of DISTRICT funds for aesthetic and multi-use treatments is limited to features that are incidental to, or are part of, the flood control structure. The conceptual plans and designs presented in the Scenery Resource Assessment and the Planning Study may include project elements or items designed to serve exclusively purposes other than flood control. While the DISTRICT may not be able to carry out all of the recommendations presented, these elements are included to illustrate potential open space opportunities associated with DISTRICT flood protection features and measures and to attract partnerships with other stakeholders in the community who may be interested in sponsoring their implementation.

The DISTRICT will provide direction to the CONSULTANT and the CONSULTANT LANDSCAPE ARCHITECT regarding the interpretation of the DISTRICT's legal and fiscal authority and limitations, as necessary.

20.3.1.3 STAFF QUALIFICATIONS, ROLES AND RESPONSIBILITIES:

A. All work pertaining to preparation of landscape architectural site design, final design and construction documents shall be directed and carried out by a landscape architect licensed in the State of Arizona.

B. In accordance with DISTRICT policy, landscape aesthetics shall be fully integrated at the beginning and throughout all phases of project planning and final design. The CONSULTANT LANDSCAPE ARCHITECT shall exercise a lead role in all activities and provision of all deliverables related to the integration of landscape aesthetics and recreation multi-use opportunities into the project. The CONSULTANT LANDSCAPE ARCHITECT shall actively participate as a member of the project design team in all planning phases, including all team meetings, workshops and public meetings.

20.3.1.4 TASK COORDINATION AND PROJECT STATUS UPDATES

A. The CONSULTANT shall be responsible for fully coordinating all project work to ensure that all landscape architectural tasks and deliverables under this chapter are completed and carried out in a timely and effective manner. This shall include delivery of data, maps, drawings, photos and reports prepared by other members of the CONSULTANT's team.

B. The CONSULTANT LANDSCAPE ARCHITECT shall coordinate and fully integrate the tasks in the Landscape Architecture Project Work Plan into the Work Plans and Schedule for other consultants working concurrently on the Project that are identified by the DISTRICT.

C. The CONSULTANT LANDSCAPE ARCHITECT shall provide project status updates regarding accomplishment of the Landscape Architectural work to the DISTRICT as a part of all regularly scheduled progress reports identified for the project.

D. The CONSULTANT LANDSCAPE ARCHITECT shall regularly consult with the DISTRICT's Project Manager and Landscape Planner to ensure that work accomplishments and deliverables meet the DISTRICT's needs.

20.3.1.5 DELIVERABLES

A. GENERAL:

All deliverables provided under this Chapter Section, including drafts and finals of all reports, exhibits and illustrations shall be sealed by a professional landscape architect registered in the State of Arizona. All work requiring professional engineering design, shall be sealed by an appropriate professional engineer registered in the State of Arizona. All deliverables shall be appropriately titled, shall identify the DISTRICT and the CONSULTANT by name, and shall include the official logos of the DISTRICT and the CONSULTANT. All deliverables shall include the names of the project managers of the DISTRICT and the CONSULTANT. All deliverables shall include the date upon which they were completed and delivered to the DISTRICT.

B. NARRATIVE REPORTS:

The CONSULTANT LANDSCAPE ARCHITECT shall provide three (3) hard copies in 8.5"x11" format, and one (1) digital copy on CD ROM in Microsoft Word or Adobe Acrobat pdf format of all narrative reports specified as deliverables in the following sections. Large size maps and other graphic illustrations may be included as foldouts.

C. EXHIBITS:

The CONSULTANT LANDSCAPE ARCHITECT shall provide one (1) hard copy and one (1) digital copy in TIFF format on CDROM of all Exhibits specified as deliverables in the following sections.

D. MICROSOFT POWERPOINT PRESENTATION:

The CONSULTANT LANDSCAPE ARCHITECT shall provide one digital copy of all exhibits in Microsoft PowerPoint on CDROM. The PowerPoint Presentation shall also include all of the low elevation oblique aerial photos and other photographs needed to effectively make presentations of the project to local communities, partners, and other interested parties. The CONSULTANT LANDSCAPE ARCHITECT shall maintain and update the PowerPoint copy on an on-going basis to include the exhibits provided with each subsequent task. The CONSULTANT LANDSCAPE ARCHITECT shall submit updated versions of the Powerpoint to the DISTRICT as part of the deliverables for all task items that include Exhibits as deliverables.

D. PHOTOGRAPHS:

The CONSULTANT LANDSCAPE ARCHITECT shall provide a digital data base containing copies of all photographs in high quality JPEG format. Additional information to be included in the data base to identify the photos and their location will be provided to the CONSULTANT by the DISTRICT.

20.3.1.6 REFERENCES

The CONSULTANT LANDSCAPE ARCHITECT shall utilize the references listed below as a guide for carrying out the landscape architectural pre-design activities. The DISTRICT will provide the following in digital form on CDROM to the CONSULTANT LANDSCAPE ARCHITECT at the project kick-off meeting:

- A. Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects, FCDMC, 1992
- B. Revised Cost Ceiling Tables for Landscaping and Project Aesthetic Features, FCDMC, 4/26/01
- C. References cited in Chapter Sections 20.1 and 20.2

20.3.1.7 MEETINGS:

A. KICK-OFF AND SUBMITTAL REVIEW MEETINGS:

1. The CONSULTANT LANDSCAPE ARCHITECT shall attend and actively participate in the project kick-off meeting and all submittal review meetings.
2. The CONSULTANT LANDSCAPE ARCHITECT shall schedule submittal review meetings for the following:
 - a. Project Work Plan
 - b. Project Base Map
 - c. Existing Data Review and Summary
 - d. Site Analysis, Recreation Open Space Needs Assessment, Scenery Resource Assessment
 - e. Alternatives and Alternatives Analysis, Cost Estimate, ROW requirements
 - f. Final Plan

3. The CONSULTANT LANDSCAPE ARCHITECT shall schedule additional review meetings as requested by the DISTRICT.

4. The CONSULTANT LANDSCAPE ARCHITECT shall provide and review with the DISTRICT's Landscape Planner, all materials, plans, graphic illustrations, and reports, to be presented at the PAAC and Public meetings in preliminary form, a minimum of 10 days prior to the scheduled date of each PAAC and Public meeting. The CONSULTANT LANDSCAPE ARCHITECT shall make all changes and revisions requested by the DISTRICT's Landscape Planner prior to their presentation at PAAC or Public meetings.

B. PUBLIC MEETINGS:

The CONSULTANT LANDSCAPE ARCHITECT shall attend and actively participate in all public meetings and presentations to city councils identified in the project scope of work.

C. PROJECT AESTHETIC ADVISORY COMMITTEE (PAAC) MEETINGS

1. The DISTRICT will form and utilize a Project Aesthetics Advisory Committee (PAAC), in accordance with the District's Landscaping and Aesthetics Policy, to provide reviews of work submitted by the CONSULTANT LANDSCAPE ARCHITECT and assist in the identification of appropriate aesthetic and multi-use concepts, features and designs to be incorporated into the final plans and construction documents for the project. The PAAC will review the project aesthetic and recreation multi-use objectives, data collection, site analysis, needs assessment, existing conditions site plan, project landscape themes, aesthetic and multi-use design criteria, conceptual, preliminary and final site development plans, facility designs, grading and drainage plans, landscape planting and irrigation designs, cost estimates, special provisions and supplementary general conditions.

2. The DISTRICT will assemble the PAAC. The PAAC will be composed of: 1) the CONSULTANT's Project Manager, Landscape Architect and other appropriate staff; 2) the DISTRICT's Project Manager, Landscape Planner, Ecologist and Public Involvement Coordinator; 3) other landscape architects and aesthetics knowledge experts capable of providing peer reviews and creative input; 4) local community parks and recreation department representatives; 5) cooperative agency representatives; 6) local neighborhood representatives; and other individuals as appropriate.

3. The CONSULTANT LANDSCAPE ARCHITECT shall participate in all activities of the PAAC through the end of the contract.

4. The CONSULTANT LANDSCAPE ARCHITECT shall provide a schedule for three (3) PAAC meetings, within 14 calendar days of the Notice to Proceed. The PAAC meetings shall be scheduled a minimum of 10 working days prior to each corresponding public meeting, to allow time for incorporating PAAC review comments and feedback prior to the public meetings. Unless otherwise indicated by the District, the purpose and desired outcomes of the three PAAC Meetings shall be as follows:

a. PAAC Meeting #1:

1. Describe the purpose and role of the PAAC
2. Provide an overview of the project, including the purpose, need and scope, location and extent, project design process and schedule
3. Present a summary and solicit feedback regarding the Existing Data Review and Summary, Site Analysis, Detailed Scenery Resource Assessment, Recreation Open Space Needs Assessment, Landscape Aesthetic goals and objectives, Landscape Themes and their application, and updated aesthetics design guides
4. Brainstorm additional possible landscape themes and concepts for the landscape aesthetics and multi-use opportunities

b. PAAC Meeting #2:

Present and receive feedback on the Site Development MasterPlan Alternatives, alternative aesthetic design concepts for the project features, the alternatives analysis, cost estimate and estimates of right of way requirements

PAAC meetings #1&2 may be conducted as a design workshop.

c. PAAC Meeting #3:

Present and receive feedback on the Final Site Development Master Plan, and Feature Concept Designs, cost estimate and right of way requirements

5. The CONSULTANT LANDSCAPE ARCHITECT shall be responsible for preparing the agenda, sending out meeting notices, making presentations, and documenting and distributing notes of the PAAC meetings.

6. The DISTRICT will have responsibility for obtaining agreement and consensus within the PAAC.

7. The CONSULTANT LANDSCAPE ARCHITECT shall incorporate all recommendations of the PAAC approved by the District, into all public meeting materials prior to their presentation to the public or other entities.

8. The CONSULTANT LANDSCAPE ARCHITECT shall provide refreshments for each PAAC meeting.

20.3.2 PRE-WORK

The CONSULTANT LANDSCAPE ARCHITECT shall complete all pre-work tasks and provide all deliverables identified in this Section to the satisfaction of the DISTRICT prior to commencing work on tasks identified in subsequent Sections of this scope.

20.3.2.1 REVIEW

The CONSULTANT LANDSCAPE ARCHITECT shall review: 1) the scope of work for the project; 2) the DISTRICT's list of project specific goals and objective; 3) all background reports pertaining to the project, including all available planning studies; and 4) all references cited in this Chapter.

The DISTRICT will provide the CONSULTANT with a list of project specific goals and objectives for flood protection, landscape aesthetics, recreation multi-uses, and other resources, issues and concerns at the project kickoff meeting.

20.3.2.2 PRE-PLANNING MEETING WITH THE DISTRICT LANDSCAPE PLANNER

The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT's Project Manager and Landscape Planner to review the scope of work and receive any needed clarification regarding task accomplishment, delivery standards and scheduling requirements.

20.3.2.3 WORK PLAN AND SCHEDULE

A. Within 10 days of the Notice to Proceed, the CONSULTANT LANDSCAPE ARCHITECT shall submit a work plan and schedule for carrying out all project tasks and providing all deliverables identified in this Chapter to the DISTRICT for review and approval.

B. The CONSULTANT shall identify in the work plan the activities and procedures proposed to be undertaken to carry out the tasks and provide the deliverables identified in this Chapter. The CONSULTANT shall provide narrative descriptions and diagrams, as necessary, to illustrate the work methods, organization, sequence and relationship of the steps to be undertaken to complete the work identified in this Chapter, and coordination with other planning tasks identified elsewhere in the project scope of work. The Consultant shall provide a schedule in the Work Plan for carrying out and coordinating all of the tasks and providing all of the deliverables identified this Chapter.

C. The CONSULTANT shall meet with the DISTRICT to review the work plan. The CONSULTANT shall revise the work plan and schedule as requested by the DISTRICT. The CONSULTANT shall obtain approval of the Work Plan and Schedule from the DISTRICT prior to initiating further work on the project.

D. DELIVERABLES

1. Landscape Architecture Project Work Plan and Schedule, 8.5"x11" report, typed, black and white format, including narrative summaries, charts and diagrams.
2. One work meeting
3. One Project Kick-off Scoping meeting
4. One Project Work Plan review meeting

20.3.3 SITE DEVELOPMENT MASTER PLANNING AND FACILITY CONCEPT DESIGN

The CONSULTANT LANDSCAPE ARCHITECT shall carry out the tasks described in the following sections and provide a Project Site Development Master Plan and Facility Aesthetic and Multi-Use Concept Designs equivalent to a 15% design submittal.

20.3.3.1 BASE MAP

A. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a project Base Map that delineates the boundaries of the project area and includes the project context, utilizing the most current survey base information. Unless otherwise defined by the DISTRICT, the contextual environment shall extend a distance of one (1) mile beyond the boundary of the project area. The Base Map shall delineate the limits of all DISTRICT property lines.

B. The CONSULTANT LANDSCAPE ARCHITECT shall review the project base map with the DISTRICT project manager and landscape planner prior to proceeding with subsequent work tasks.

C. Deliverables:

Project and Context Base Map at 1"=200' with 2' contours on most current aerial photo base.

20.3.3.2 EXISTING DATA REVIEW AND SUMMARY

A. The CONSULTANT LANDSCAPE ARCHITECT shall review all existing planning studies including Area Drainage Master Plans, Water Course Master Plans, Landscape Aesthetics and Multi-Use Opportunities Assessments, and any Pre-Design studies that encompass all or part of the project area. The CONSULTANT LANDSCAPE ARCHITECT shall review all other existing community, agency, and private development plans that may be pertinent to the project. The CONSULTANT LANDSCAPE ARCHITECT shall review this information for completeness, current conditions, and identify additional needed information.

B. The CONSULTANT LANDSCAPE ARCHITECT shall provide a written summary identifying the flood protection functional requirements of the project, including the type, extent, depth and location of all known project components, including overbank areas, side slopes, bottom areas, low flow features, inlets, outlets, drop structures, energy dissipaters, weirs, and other project elements as a separate layer on the 200 scale project Base Map. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the project engineer to review and revise as necessary the summary and map layer identifying the flood protection project functional components and requirements. The CONSULTANT LANDSCAPE ARCHITECT shall generally identify and describe the aesthetic and recreation multi-use impact potential and degree of flexibility that exists with regard to modifying the location, type, size, depth, configuration, and other design aspects of the various components and features of the proposed flood protection facility.

C. The Consultant shall provide a written summary of existing information pertaining to scenery resources, including landscape character, scenic quality, visual sensitivity, landscape themes aesthetic improvement opportunities, scenic feature preservation constraints, and aesthetic design guides that pertain to the project area and its context. The CONSULTANT LANDSCAPE ARCHITECT shall provide a map as a layer to the project Base Map showing the location of the landscape themes and other scenery resource features, opportunities and constraints.

D. The CONSULTANT LANDSCAPE ARCHITECT shall provide a written summary describing the recreation multi-use opportunities, constraints and guidelines that apply to the project area and its context. The CONSULTANT LANDSCAPE ARCHITECT shall provide a map as a layer to the project Base Map that identifies the type, location and extent of any identified recreation multi-use features.

E. The CONSULTANT LANDSCAPE ARCHITECT shall provide a written summary identifying all other resource opportunities and constraints that may affect the planning and design of aesthetic and multi-use features within the project area, including: environmental, cultural and historical factors. The CONSULTANT LANDSCAPE ARCHITECT shall provide a map exhibit as a layer to the project base map that identifies the other resources opportunities and constraints.

F. The CONSULTANT LANDSCAPE ARCHITECT shall review the Summary of Existing Data with the DISTRICT project manager and landscape planner prior to proceeding with subsequent work tasks.

G. Deliverables:

Narrative Report Summarizing Existing Data

Existing Data Exhibits at a scale of 1"=200' of the following:

Flood Protection Facility Components and Requirements

Scenery Resources

Recreation Multi-use Opportunities and Constraints

Other Resource Opportunities and Constraints

20.3.3.3 SITE ANALYSIS

A. The CONSULTANT LANDSCAPE ARCHITECT shall visit the project site and context area, record observations of the physical environment, and photo-document these observations. The site analysis shall include, but is not limited to, documentation of existing and future land uses, zoning, vehicular circulation, traffic control, adjacent parking, trails systems and street crossings, public and private recreational facilities, above and below ground utilities, topography, existing vegetation, and drainage features. The CONSULTANT LANDSCAPE ARCHITECT shall perform a functional analysis that identifies and describes the physical and functional relationship of the project area to adjacent land use areas, including the need for physical connection with, or separation from, the proposed flood protection facility.

B. The CONSULTANT LANDSCAPE ARCHITECT shall photo document the observations identified and described in the site analysis. The photographs shall be in digital high quality JPEG format with a minimum print size of 8"x10" at a resolution of 144 pixels per inch produced in the camera without enlargement. The photographs shall be included in the Narrative Report Summarizing the the site analysis observations.

C. Deliverables:

Site Analysis Exhibit at a scale of 1"=200'

Narrative Report with Photos Summarizing the site analysis observations

20.3.3.4 RECREATION AND OPEN SPACE NEEDS ASSESSMENT:

A. The CONSULTANT LANDSCAPE ARCHITECT shall meet with appropriate representatives of local communities within and adjacent to the project area to conduct a Recreation and

Open Space Needs Assessment. The Needs Assessment shall identify the type, location and extent of recreation facilities and activity spaces that are desired by local communities located within the project area.

B. The CONSULTANT LANDSCAPE ARCHITECT shall expand, modify and refine the Recreation Multi-Use Opportunities and Constraints Narrative Summary and Exhibit developed in the Existing Data Review task based upon the information obtained in the Needs Assessment.

C. Deliverables:

Recreation and Open Space Needs Exhibit at a scale of 1"=200'

Narrative Report summarizing the Recreation and Open Space Needs Assessment

20.3.3.5 SCENERY RESOURCES ASSESSMENT

A. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a detailed assessment of scenery resources within the project area and its context. The detailed assessment of scenery resources shall build upon, expand and refine the Scenery Resources Narrative Summary and Exhibit developed in the preceding Existing Data Review and Summary task. If a pre-existing scenery resources assessment is not available for this purpose, the CONSULTANT LANDSCAPE ARCHITECT shall prepare an assessment following the guidelines in Chapter 20.1.

B. Utilizing the Site Analysis, the Needs Assessment, and the Existing Data Review and Summary Exhibits, the CONSULTANT LANDSCAPE ARCHITECT shall identify and document logical points of visual quality observations along the project corridor. These points shall include, as a minimum, all major arterial street crossings, mile points along the corridor, points of change in land use and perceived character, points of community cultural interest or impact, and all points, or potential points, of public entry into the project corridor.

C. The CONSULTANT LANDSCAPE ARCHITECT shall visit the project site and context area, and identify and record the existing scenic character, quality, focal points and important sight lines at each view point. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a viewpoint inventory exhibit and provide a description for each viewpoint. The narrative description and exhibit shall include identification and description of the scenic features within the project area that should be preserved, any visually discordant features that could be improved or screened through aesthetic treatments, and any opportunities for enhancement of public viewing opportunities from the project area. The CONSULTANT LANDSCAPE ARCHITECT shall identify sensitive focal point areas within the project area that are visible from travelways and use areas located adjacent to the project area, including areas that form the terminus of street and trail axes.

D. The CONSULTANT LANDSCAPE ARCHITECT shall photograph the project area and the area around each viewpoint. The photographs shall be in digital high quality JPEG format with a minimum print size of 8"x10" at a resolution of 144 pixels per inch produced in the camera without enlargement.

E. Deliverables:

Scenery Resources Exhibit at a scale of 1"=200'

Narrative Report Summarizing the Scenery Resources Assessment

20.3.3.6 LANDSCAPE AESTHETIC GOALS AND OBJECTIVES

A. The CONSULTANT LANDSCAPE ARCHITECT shall expand, refine and modify the the overall aesthetic concept, landscape themes and aesthetic design guides documented in the Existing Data Summary and Exhibit, as appropriate, based on new information developed in the detailed assessment of scenery resources.

B. The CONSULTANT LANDSCAPE ARCHITECT shall meet with representatives of local communities, project partners and the DISTRICT to review the updated landscape themes and project aesthetic design guides. The CONSULTANT LANDSCAPE ARCHITECT shall revise the landscape themes and project aesthetic design guides based on the review comments approved by the DISTRICT.

C. Deliverables:

Narrative Report summarizing the recommended and approved Project Landscape Aesthetic Goals and Objectives.

20.3.3.7 DATA COLLECTION REVIEW

A. The CONSULTANT LANDSCAPE ARCHITECT shall review the Site Analysis, Recreation Open Space Needs Assessment, the Detailed Scenery Resources Assessment and the Landscape Aesthetics Goals and Objectives with the DISTRICT project manager and landscape planner prior to proceeding with subsequent work tasks.

B. The CONSULTANT LANDSCAPE ARCHITECT shall make all changes and additions to the data collection requested by the DISTRICT.

20.3.3.8 LANDSCAPE AESTHETIC AND RECREATION OPEN SPACE ALTERNATIVES

A. Utilizing the Site Analysis, Recreation and Open Space Needs Assessment, Scenery Resources Assessment, and the Landscape Aesthetic Goals and Objectives, the CONSULTANT LANDSCAPE ARCHITECT shall prepare site development concept alternatives that encompass the entire project area, its segments and sub-segments. The site development concept alternatives shall be designed to achieve the functional flood protection requirements of the project, the landscape aesthetic and recreation open space goals and objectives, and other identified requirements. The site development concept alternatives shall include: a layout of the overall form and configuration of the project; a rough grading concept with 2 foot contour lines; the general location, layout and configuration of flood protection, aesthetic and recreation multi-use project features and structural components, including channel and basin low flow features, bottom area treatments, side slope treatments, overbank area treatments, O&M road layout, recreation facilities, public entry points and other nodal features; and a plant pallet and preliminary planting design concept that shows the general layout and arrangement of vegetative plant masses proposed to achieve visual unity, create spatial definition, view enframement, screening of discordant features, and accents at nodal and other special emphasis areas. The CONSULTANT LANDSCAPE ARCHITECT shall provide draft color rendered illustrations of the project concept alternatives at 200 scale.

B. The CONSULTANT LANDSCAPE ARCHITECT shall provide low elevation aerial oblique photographs (8"x10") of the project area and its context, taken from a vertical height of 50 feet above the ground. The photographs shall be suitable for enlargement to 24"x36" and use at public meeting presentations. Utilizing the low elevation aerial oblique photographs, the CONSULTANT LANDSCAPE ARCHITECT shall prepare preliminary draft color rendered perspective sketches that illustrate the overall

appearance and the aesthetic features of each site development concept alternative. The perspective sketches shall be a minimum of 8"x10"" in size and shall be board mounted.

C. The CONSULTANT LANDSCAPE ARCHITECT shall provide aesthetic design alternatives for the structural components of the project area including, but not limited to, low flow features, drop structures, energy dissipaters, inlets and outlets, culvert structures, vehicular bridge abutments, supports and spans, pedestrian bridges, fences and railings, hardscape treatments at entry points, other nodal facilities, overlooks, transitions areas and areas requiring hard lined erosion protection, wall treatments, paving patterns, public safety features, and other structural details of the project. The CONSULTANT LANDSCAPE ARCHITECT shall provide photographs, sketches, cross sections and other graphic materials to illustrate the aesthetic design alternatives for the structural components of the project.

D. Deliverables:

1. Narrative Report describing the Site Development Concept Alternatives
2. Site Development Concept Alternatives Exhibits, color rendered, at a scale of 1"=200' for each alternative
3. Color Aerial Oblique Photographs (8"x10")
4. Color Rendered Draft Perspective Sketches of the Site Development Concept Alternatives
5. Draft Graphic Illustrations and Photos of Aesthetic Treatment Alternatives for the Project Structural Components and other features.

20.3.3.9 ALTERNATIVES ANALYSIS AND REVIEW

A. The CONSULTANT LANDSCAPE ARCHITECT shall provide an analysis of the quantitative and qualitative differences between the Aesthetic and Recreation Open Space Alternatives. The analysis shall include responsiveness of the alternatives to meeting the flood protection requirements of the facility, achieving the landscape aesthetics goals and objectives, recreation needs identified in the needs assessment, and other project requirements including environmental, cultural and historical resource goals.

B. The CONSULTANT LANDSCAPE ARCHITECT shall provide a cost estimate for the landscaping and aesthetics features for each alternative, utilizing the most up to date Landscaping and Aesthetics Cost Ceiling Tables available from the DISTRICT. The cost estimate shall distinguish and separately list the costs that will be borne or shared by the District, costs that will be shared project partners, and costs that will be borne solely by partners or others.

C. The CONSULTANT LANDSCAPE ARCHITECT shall assess the adequacy of project rights of way to meet the project landscape aesthetics objectives. The CONSULTANT LANDSCAPE ARCHITECT shall make recommendations regarding acquisition of additional rights of way needed to meet the project landscape aesthetics objectives.

D. The CONSULTANT LANDSCAPE ARCHITECT shall review the Aesthetic and Recreation Open Space Alternatives and the Alternatives Analysis with representatives of local communities, cost-share partners and the DISTRICT. The CONSULTANT LANDSCAPE ARCHITECT shall identify and document all changes and additions recommended to the alternatives for the preferred alternative.

E. Deliverables:

Narrative Report documenting the Alternatives Analysis and Review

20.3.3.9 FINAL SITE DEVELOPMENT MASTER PLAN AND FEATURE CONCEPT DESIGNS

A. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a final site development master plan for the project area at 200 scale, based upon the analysis and review of the alternatives. The CONSULTANT LANDSCAPE ARCHITECT shall incorporate all recommendations from the alternatives review that are approved by the DISTRICT.

B. The CONSULTANT LANDSCAPE ARCHITECT shall modify the draft perspective sketches provided in the Alternatives task, based upon the review of the Alternatives, and provide the DISTRICT with final color rendered perspective sketches that illustrate the overall aesthetic treatment concepts contained in the Final Site Development Master Plan. The final perspective sketches shall be provided at a size of 24"x36" and shall be board mounted.

C. The CONSULTANT LANDSCAPE ARCHITECT shall provide final color rendered, board mounted, illustrations of the preferred aesthetic concept designs for the structural components and other features of the project area, based upon the review comments obtained from the Alternatives Analysis task.

D. The CONSULTANT LANDSCAPE ARCHITECT shall prepare an updated cost estimate for the Final Site Development Master Plan aesthetic features and components. The CONSULTANT LANDSCAPE ARCHITECT shall provide an updated identification of additional right of way required to provide the aesthetic and multi-use features contained in the Final Site Development Master Plan.

E. The CONSULTANT LANDSCAPE ARCHITECT shall provide a Final Site Development Master Plan Report that includes a narrative description of the Final Site Development Master Plan, and all of the deliverables specified in Chapter 20.3. Large size exhibits and illustrations may be reduced in size or included as foldouts in the report. The Design Narrative Report shall be organized logically and shall include a table of contents of the materials provided in the Pre-Design Study.

F. The CONSULTANT LANDSCAPE ARCHITECT shall review the final Site Development Master Plan and Preliminary Feature Concept Designs with the DISTRICT. The CONSULTANT LANDSCAPE ARCHITECT shall make all changes and additions requested by the DISTRICT.

E. Deliverables:

1. Final Cost Estimate
2. Final Estimate of Right of Way Requirements
3. Final Site Development Master Plan Exhibit, at a scale of 1"=200', color rendered.
4. Final Perspective Sketches for the Final Site Development Master Plan, (24"x36")
5. Final color rendered illustrations of the aesthetic treatments of the structural components and other project features.
6. Final Site Development Master Plan Report

20.4.0 LANDSCAPE ARCHITECTURAL FINAL DESIGN AND CONSTRUCTION DOCUMENTS

The work under this section may, or may not, be authorized with the Notice to Proceed.

20.4.1 GENERAL PROVISIONS

20.4.1.1 PURPOSE AND SCOPE

The purpose of this chapter is to provide all professional landscape architectural services for completion of final landscape architectural plans, designs and construction documents necessary to fully integrate landscape aesthetics and recreation multi-use needs and opportunities into the final design of the project. The work encompassed within this scope includes, but is not limited to: preparation of a work plan and schedule; provision of project coordination; participation in project and public meetings; identification of project objectives and requirements; preparation of base map materials; review of existing plans and documents; collection of data and conducting a site analysis; conducting needs assessments; identification and development of landscape themes and project aesthetic and multi-use design guidelines; preparation of a design narrative report; preparation of preliminary and final site plans, grading plans, planting plans, plans and facility designs for project structural components; development and completion of final construction documents, including construction plans, cross sections, profiles, detail drawings, quantity sheets, bid quantity and cost estimates, Construction Special Provisions and Supplementary General Conditions.

20.4.1.2 GOALS AND OBJECTIVES:

A. The DISTRICT's aesthetics and open space goal is to enhance the year round value of its flood protection facilities by incorporating features that will help preserve natural Sonoran Desert landscapes, protect and enhance local community character, enhance the aesthetic value of its properties and provide public opportunities for recreation open space activities. The DISTRICT will provide the consultant with project specific goals and objectives at the kick-off meeting.

B. The expenditure of public funds by the Flood Control District for landscape aesthetic and multi-use treatments is subject to the authority and limitations of A.R.S.§48-3601 et seq., and the budgetary limitations specified by the District. Use of DISTRICT funds for aesthetic and multi-use treatments is limited to features that are incidental to, or are part of, the flood control structure.

C. The DISTRICT will provide direction to the CONSULTANT and the CONSULTANT LANDSCAPE ARCHITECT regarding the interpretation of the DISTRICT's legal and fiscal authority and limitations, as necessary.

D. Unless otherwise specified, the CONSULTANT LANDSCAPE ARCHITECT shall utilize the latest approved Cost Ceiling Tables in the DISTRICT's Policy for Landscaping and Aesthetic Treatment as a framework for establishing the appropriate types of landscaping and aesthetic treatments and level of expenditure of DISTRICT funds.

20.4.1.3 STAFF QUALIFICATIONS, ROLES AND RESPONSIBILITIES:

A. All work pertaining to preparation of landscape architectural final design and construction documents shall be directed and carried out by a landscape architect licensed in the State of Arizona.

B. In accordance with DISTRICT policy, landscape aesthetics shall be fully integrated at the beginning and throughout all phases of project planning and final design. The CONSULTANT LANDSCAPE ARCHITECT shall exercise a lead role in all activities and provision of all deliverables related to the integration of landscape aesthetics and recreation multi-use opportunities into the project. The CONSULTANT LANDSCAPE ARCHITECT shall actively participate as a member of the project design team in all planning phases, including all team meetings, workshops and public meetings.

20.4.1.4 TASK COORDINATION AND PROJECT STATUS UPDATES

A. The CONSULTANT shall be responsible for fully coordinating all project work to ensure that all landscape architectural tasks and deliverables under this chapter are completed and carried out in a timely and effective manner.

B. The CONSULTANT LANDSCAPE ARCHITECT shall coordinate and fully integrate the tasks in the Landscape Architecture Project Work Plan into the Work Plans and Schedule for other consultants working concurrently on the Project that are identified by the DISTRICT. The CONSULTANT LANDSCAPE ARCHITECT shall perform all engineering design coordination necessary to meet project goals and objectives.

C. The CONSULTANT LANDSCAPE ARCHITECT shall provide project status updates regarding accomplishment of the Landscape Architectural work to the DISTRICT as a part of all regularly scheduled progress reports identified for the project.

D. The CONSULTANT LANDSCAPE ARCHITECT shall regularly consult with the DISTRICT's Project Manager and Landscape Planner to ensure that work accomplishments and deliverables meet the DISTRICT's needs.

20.4.1.5 DELIVERY STANDARDS

A. GENERAL

All deliverables provided under this Chapter Section, including drafts and finals of all reports, drawings and other submittals shall be sealed by a professional landscape architect registered in the State of Arizona. All work requiring professional engineering design shall be sealed by an appropriate professional engineer registered in the State of Arizona. All deliverables shall be appropriately titled, shall identify the DISTRICT and the CONSULTANT by name, shall include the official logos of the DISTRICT and the CONSULTANT, the names of the preparers, and shall include the date upon which they were completed and delivered to the DISTRICT.

B. NARRATIVE REPORTS

The CONSULTANT LANDSCAPE ARCHITECT shall provide three (3) hard copies in 8.5"x11" format, and one (1) digital copy on CD ROM in Microsoft Word or Adobe Acrobat pdf format of all narrative reports specified as deliverables in the following sections. Large size maps and other graphic illustrations may be included as foldouts.

C. FINAL PLANS AND CONSTRUCTION DRAWINGS

The CONSULTANT LANDSCAPE ARCHITECT shall deliver three (3) copies of all plans and drawings in Microstation Version 5.07 or newer.

Final Plans and Construction Drawings shall conform to the requirements identified in the DISTRICT's CADD standards "Data Delivery Specifications: Computer Aided Drafting and Design REV 1.0 January 2000", Flood Control District of Maricopa County, latest edition. In conjunction with meeting the DISTRICT's CADD standards, The CONSULTANT LANDSCAPE ARCHITECT shall provide a materials quantity tabulation sheet in the construction drawings for each sheet of the grading plans, planting plans, and irrigation plans.

D. FINAL BID QUANTITY CALCULATIONS AND COST ESTIMATE

The CONSULTANT LANDSCAPE ARCHITECT shall submit three (3) copies in final bound format. The CONSULTANT LANDSCAPE ARCHITECT shall submit an electronic version of the final cost estimate in the DISTRICT's format, which can be downloaded from the DISTRICT's internet web site in either Microsoft Excel 97, or older format. For example, see **Exhibit 13**.

An original copy of the final cost estimate shall be sealed by a landscape architect registered in the State of Arizona, and placed in a sealed envelope addressed to the Contracts Branch Manager. The envelope shall be identified by project name and contract number.

E. FINAL CONSTRUCTION SPECIAL PROVISIONS AND SUPPLEMENTARY GENERAL CONDITIONS

The CONSULTANT LANDSCAPE ARCHITECT shall submit one (1) sealed original hard copy in 8.5"x11" size ready for reproduction and one digital copy on CDROM in Microsoft Word format compatible with DISTRICT word version. The format and numbering system used for the Construction Special Provisions and Supplementary General Conditions shall be consistent with the MAG specifications.

20.4.1.6 DESIGN REFERENCES

The CONSULTANT LANDSCAPE ARCHITECT shall utilize the references listed below as a guide for carrying out the landscape architectural pre-design activities. The DISTRICT will provide the following in digital form on CDROM to the CONSULTANT LANDSCAPE ARCHITECT at the project kick-off meeting:

- A. Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects, FCDMC, 1992
- B. Revised Cost Ceiling Tables for Landscaping and Project Aesthetic Features, FCDMC, 4/26/01 or latest.
- C. Uniform Standard Specifications and Details for Public Works Construction, 1998 Arizona, and all revisions through 2002, Maricopa Association of Governments (MAG)
- D. References cited in Chapter 19

20.4.1.7 MEETINGS

A. PROJECT KICKOFF AND SUBMITTAL REVIEW MEETINGS

The CONSULTANT LANDSCAPE ARCHITECT shall schedule and attend a project kickoff and review meetings for the 30%, 60%, 90% and final submittals. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT Project Manager; Landscape Planner and members of the review team to review the overall status of the project and discuss the DISTRICT's review comments. The CONSULTANT shall be prepared to discuss the review comments. Any problems will be identified and corrective actions will be agreed upon at the submittal review meetings. Authorization to proceed to the next submittal may be given at the submittal review meetings. The 60% submittal review meeting shall be conducted as plans in hand field review.

B. PUBLIC MEETINGS:

The CONSULTANT LANDSCAPE ARCHITECT shall attend and actively participate in all public meetings and presentations to city councils identified in the project scope of work by the DISTRICT.

C. PROJECT AESTHETIC ADVISORY COMMITTEE (PAAC) MEETINGS

1. The DISTRICT will form and utilize a Project Aesthetics Advisory Committee (PAAC), in accordance with the District's Landscaping and Aesthetics Policy, to provide reviews of work submitted by the CONSULTANT LANDSCAPE ARCHITECT and assist in the identification of appropriate aesthetic and multi-use concepts, features and designs to be incorporated into the final plans and construction documents for the project. The PAAC will review the project aesthetic and recreation multi-use objectives, data collection, site analysis, needs assessment, existing conditions site plan, project landscape themes, aesthetic and multi-use design criteria, conceptual, preliminary and final site development plans, facility designs, grading and drainage plans, landscape planting and irrigation designs, cost estimates, special provisions and supplementary general conditions.

2. The DISTRICT will assemble the PAAC. The PAAC will be composed of: 1) the CONSULTANT's Project Manager, Landscape Architect and other appropriate staff; 2) the DISTRICT's Project Manager, Landscape Planner, Ecologist and Public Involvement Coordinator; 3) other landscape architects and aesthetics knowledge experts capable of providing peer reviews and creative input; 4) local community parks and recreation department representatives; 5) cooperative agency representatives; 6) local neighborhood representatives; and other individuals as appropriate.

3. The CONSULTANT LANDSCAPE ARCHITECT shall participate in all activities of the PAAC through the end of the contract.

4. The CONSULTANT LANDSCAPE ARCHITECT shall provide a schedule for three (3) PAAC meetings, within 14 calendar days of the Notice to Proceed. The PAAC meetings shall be scheduled a minimum of 10 working days prior to each corresponding public meeting, to allow time for incorporating PAAC review comments and feedback prior to the public meetings. Unless otherwise indicated by the DISTRICT, the purpose and desired outcomes of the three PAAC Meetings shall be as follows:

a. PAAC Meeting #1:

1. Describe the purpose and role of the PAAC
2. Provide an overview of the project, including the purpose, need and scope, location and extent, project design process and schedule
3. Present and solicit feedback regarding the 30% Submittal items.
4. Brainstorm additional possible refinements of the landscape themes and concepts for the landscape aesthetics and recreation multi-use plans and designs.

b. PAAC Meeting #2:

Present and receive feedback on the 60% Submittal items

c. PAAC Meeting #3:

Present and receive feedback on the 90% Submittal items.

5. The CONSULTANT LANDSCAPE ARCHITECT shall be responsible for preparing the agenda, sending out meeting notices, making presentations, and documenting and distributing notes of the PAAC meetings.

6. The DISTRICT will have responsibility for obtaining agreement and consensus within the PAAC.

7. The CONSULTANT LANDSCAPE ARCHITECT shall incorporate all recommendations of the PAAC approved by the DISTRICT, into all public-meeting materials prior to their presentation to the public or other entities.

8. The CONSULTANT LANDSCAPE ARCHITECT shall provide refreshments for each PAAC meeting.

20.4.2 PRE-WORK

The CONSULTANT LANDSCAPE ARCHITECT shall complete all pre-work tasks and provide all deliverables identified in this Section to the satisfaction of the DISTRICT prior to commencing work on tasks identified in subsequent Sections of this scope.

20.4.2.1 REVIEW

The CONSULTANT LANDSCAPE ARCHITECT shall review: 1) the scope of work for the project; 2) the DISTRICT's list of project specific goals and objective; 3) all background reports pertaining to the project, including all available planning and pre-design studies; and 4) all references cited in this Chapter.

The DISTRICT will provide the CONSULTANT with a list of project specific goals and objectives for flood protection landscape aesthetics, recreation multi-uses, and other resources, issues and concerns at the project kickoff meeting.

20.4.2.2 PRE-PLANNING MEETING WITH THE DISTRICT LANDSCAPE PLANNER

The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT's Project Manager and Landscape Planner to review the scope of work and receive any needed clarification regarding task accomplishment, delivery standards and scheduling requirements.

20.4.2.3 WORK PLAN AND SCHEDULE

A. Within 10 days of the Notice to Proceed, the CONSULTANT LANDSCAPE ARCHITECT shall submit a work plan and schedule for carrying out all project tasks and providing all deliverables identified in this Chapter to the DISTRICT for review and approval.

B. The CONSULTANT shall identify in the work plan the activities and procedures proposed to be undertaken to carry out the tasks and provide the deliverables identified in this Chapter. The CONSULTANT shall provide narrative descriptions and diagrams, as necessary, to illustrate the work

methods, organization, sequence and relationship of the steps to be undertaken to complete the work identified in this Chapter and coordination with other planning tasks identified elsewhere in the project scope of work. The Consultant shall provide a schedule in the Work Plan for carrying out and coordinating all of the tasks and providing all of the deliverables identified this Chapter.

C. The CONSULTANT shall meet with the DISTRICT to review the work plan. The CONSULTANT shall revise the work plan and schedule as requested by the DISTRICT. The CONSULTANT shall obtain approval of the Work Plan and Schedule from the DISTRICT prior to initiating further work on the project.

D. DELIVERABLES

1. Landscape Architecture Project Work Plan and Schedule, 8.5"x11" report, typed, black and white format, including narrative summaries, charts and diagrams.
2. One Work meeting
3. One Project Kick-off Scoping meeting
4. One Project Work Plan Review meeting

20.4.3 30% SUBMITTAL

20.4.3.1 BASE MAP

A. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a project Base Map that includes the boundaries of the project area, DISTRICT property lines, easements, survey monuments, two foot contour lines, existing vegetation, streets, utilities and other existing infrastructure.

B. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT Project Manager and Landscape Planner to review the project Base Map. Authorization to proceed with subsequent work tasks may be given by the DISTRICT upon acceptance of the Base Map.

C. CONSULTANT LANDSCAPE ARCHITECT shall include a copy of the Base Map in the Project Design Narrative Report.

D. Deliverables:

Project Base Map at a scale of 1"=40', with 2' contours

20.4.3.2 EXISTING DATA REVIEW AND SUMMARY

A. The CONSULTANT LANDSCAPE ARCHITECT shall review all existing planning studies including Area Drainage Master Plans, Water Course Master Plans, Landscape Aesthetics and Multi-Use Opportunities Assessments that encompass all or part of the project area.

B. The CONSULTANT LANDSCAPE ARCHITECT shall review all pre-design studies, including site development master plan exhibits and narrative reports, pertaining to the project area. The CONSULTANT LANDSCAPE ARCHITECT shall become thoroughly familiar with the project functional requirements, site analysis, scenery resources assessment, recreation needs assessment, aesthetic and recreation multi-use goals, objectives, landscape themes and design guides, other project requirements, the overall layout and configuration of project features, grading concepts, planting pallet and overall planting design concept, the aesthetic design concepts for project structural components, cost estimate and right of way requirements that are presented in the pre-design studies.

C. The CONSULTANT LANDSCAPE ARCHITECT shall review all other existing community, agency, and private development plans that may be pertinent to the project.

D. The CONSULTANT LANDSCAPE ARCHITECT shall review the existing data for completeness, current conditions, and identify additional needed information. CONSULTANT LANDSCAPE ARCHITECT shall include the documentation of the Existing Data Review and Summary in the Project Design Narrative Report.

E. Deliverables

Narrative report documenting clarification received concerning the Pre-design studies and identification of additional needed information.

20.4.3.3 PROJECT REQUIREMENTS UPDATE

A. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT Project Manager and Landscape Planner, the Project Design Engineer, representatives of municipalities and cost share partners, and others identified by the DISTRICT to review and update the project requirements identified in the Pre-Design Study(s) and other information sources from the Existing Data Review task including, but not limited to:

1. Flood Protection Project Functional Requirements
2. Recreation and Open Space Needs Assessment
3. Site Development Master Plan
 - a. Aesthetic & recreation goals, objectives, landscape themes & design guides
 - b. Overall layout and configuration of project features
 - c. Landscape grading concept
 - d. Planting palette and planting design concept
 - e. Aesthetic Design Concept illustrations for project features
 - f. Irrigation system requirements
 - g. Maintenance requirements
4. Cost Estimate, cost sharing and programmed project funding
5. Right of Way requirements and status of ROW acquisition

B. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a narrative report with draft illustrations, as necessary, documenting the review and update of the project requirements, including changes and additions to the items listed above. The CONSULTANT LANDSCAPE ARCHITECT shall include the documentation of the Project Requirements Update in the Project Design Narrative Report.

C. Deliverables:

Project Requirements Update Report

20.4.3.4 DETAILED SITE ANALYSIS AND ADDITIONAL DATA COLLECTION

A. The CONSULTANT LANDSCAPE ARCHITECT shall collect, develop and analyze the additional needed information identified in the Existing Data Review task. CONSULTANT LANDSCAPE ARCHITECT shall document this information in the Project Design Narrative Report.

B. Utilizing the information obtained in the Existing Data Review task, including the Pre-Design Site Analysis and Scenery Resources and Recreation Open Space Opportunities Assessments, the CONSULTANT LANDSCAPE ARCHITECT shall visit the project site and verify the accuracy of the existing data, record new observations of the physical environment, and photo-document these observations. The detailed site analysis shall include, but is not limited to, documentation of topography, drainage features, existing vegetation, aesthetic features, opportunities and constraints, public and private recreational facilities, opportunities and constraints, trail systems, existing and future land uses, zoning, pedestrian and vehicular circulation, traffic control, street crossings, adjacent parking, above and below ground utilities, water and electrical sources.

C. The CONSULTANT LANDSCAPE ARCHITECT shall perform a functional analysis that identifies and describes the physical and functional relationship of the project area to adjacent land use areas, including the need for physical connection with, or separation from, the proposed flood protection facility.

D. The CONSULTANT LANDSCAPE ARCHITECT shall photo document the observations identified and described in the site analysis. The photographs shall be in digital high quality JPEG format with a minimum print size of 8"x10" at a resolution of 144 pixels per inch produced in the camera without enlargement. The photographs shall be included in the Site Analysis Report to illustrate the new observations.

E. The CONSULTANT LANDSCAPE ARCHITECT shall prepare an Existing Conditions Site Plan Exhibit at 40 scale, as a layer to the project base map, that includes all applicable information from the pre-design study, and all new information obtained in the field visit.

F. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a narrative report, with photos, maps and other illustrations documenting the Detailed Site Analysis and Additional Data Collection. The CONSULTANT LANDSCAPE ARCHITECT shall incorporate this documentation into the Project Design Narrative Report.

F. Deliverables:

Existing Conditions Site Plan Exhibit at a scale of 1"=40'

Site Analysis Report with photos summarizing the site analysis observations

20.4.3.5 REVIEW

A. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT team, cost share partners and representatives of municipalities to review the deliverables in the Data Review and Summary, Project Requirements Update and Site Analysis work tasks.

B. CONSULTANT LANDSCAPE ARCHITECT shall document the results of the review, including the changes and additions requested by the DISTRICT. The CONSULTANT LANDSCAPE ARCHITECT shall include the documentation of the review in the Project Design Narrative Report.

C. The DISTRICT may authorize the CONSULTANT to proceed with subsequent work tasks upon acceptance of the deliverables.

D. Deliverables:

Data Review and Summary, Project Requirements Update, and Site Analysis Review Comments Report

20.4.3.6 PRELIMINARY DESIGN

A. Utilizing the information from the Existing Data Review and Summary, the Project Requirements Update, and the Detailed Site Analysis, the CONSULTANT LANDSCAPE ARCHITECT shall modify and refine the overall form and configuration of the project and its features, the grading design concept, planting design concept and the aesthetic design concepts for the structural components and other project features contained in the pre-design Site Development Master Plan, to best meet the project functional, aesthetic, recreation and other goals, objectives, landscape themes and design guides.

B. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a Preliminary Site Plan at 40 scale, using the project base map. The Preliminary Site Plan shall depict the approximate size, extent, configuration and arrangement of all project features, including flood protection facility overbank areas, side slopes, bottom areas, low flow features, grade control structures, inlets, outlets, energy dissipaters, walls, bridges, maintenance roads, walks and trails, public entry facilities, and other recreation and multi-use components. . The CONSULTANT LANDSCAPE ARCHITECT shall indicate rights of way requirements for the project.

C. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a Preliminary Grading Plan at 40 scale, using the Preliminary Site Plan as a base. This plan shall be developed as a contour grading plan showing existing and proposed new contours. The Preliminary Grading Plan shall include all areas of the project, including landscape berming of overbank areas, side slope warping and terracing, bottom area meandering and other landform treatments. The Preliminary Grading Plan shall be designed to meet the project flood capacity and drainage requirements specified by the DISTRICT. Unless otherwise specified by the DISTRICT, the Preliminary Grading Plan shall be represented with two-foot contour lines and shall include spot elevations, as necessary, to convey the design intent.

D. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a Preliminary Planting Plan utilizing the 40 scale Preliminary Site Plan & Grading Plan as a base. The Preliminary Planting Plan shall identify the location and boundaries of all landscape theme areas and provide the general layout and configuration of major groupings of plant materials, including tree, shrub, ground cover, and turf planting masses, and other hardscape treatment areas for each landscape theme area. The CONSULTANT LANDSCAPE ARCHITECT shall provide a list of plant species proposed for each landscape theme area and their functional application. The CONSULTANT LANDSCAPE ARCHITECT shall identify the plant materials that will be employed to establish continuity and visual unity within the corridor, and those that will be employed to establish the signature for each landscape theme area within the project. The Preliminary Planting Plan shall include and identify vegetation planting for screening unsightly on/off sight features, view enframing, spatial definition, view terminus treatment and nodal area accent planting, and treatments for recreation activity areas.

E. The CONSULTANT LANDSCAPE ARCHITECT shall prepare a Preliminary Irrigation Plan, utilizing the 40 scale Preliminary Planting Plan as a base. The Preliminary Irrigation Plan shall identify the location of water and electricity sources, main lines and other major components of the irrigation system. The CONSULTANT LANDSCAPE ARCHITECT shall include the design calculations for preliminary sizing of the major components of the irrigation system.

F. The CONSULTANT LANDSCAPE ARCHITECT shall provide Preliminary Project Feature Aesthetic Designs for project structural components, including paving patterns, wall treatments, fences, railings, inlets outlets, grade control structures, low flow and other project features. The CONSULTANT LANDSCAPE ARCHITECT shall modify, refine and update the Project Feature Aesthetic Concept Designs contained in the Site Development Master Plan and provide additional designs as necessary, based upon the Project Requirements Update task. The Preliminary Project Feature Aesthetic Designs shall be developed to a similar level of detail as those specified in the pre-design Site Development

Master Plan, and shall include draft color rendered planimetric and cross sectional sketches and/or photographs.

G. The CONSULTANT LANDSCAPE ARCHITECT shall provide a Preliminary Bid Quantities and Cost Estimate for the landscape and aesthetic features of the project. (See Exhibit 13 for example). The cost estimate shall segregate DISTRICT and cost share partner costs.

H. The CONSULTANT LANDSCAPE ARCHITECT shall analyze the adequacy of existing right of way and DISTRICT programmed right of way acquisition and identify any additional needed right of way to meet the project aesthetic and multi-use goals, objectives and design guidelines.

I. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT team, Project Engineer, cost share partners and representatives of municipalities affected by the project to review the Preliminary Design deliverables. The CONSULTANT LANDSCAPE ARCHITECT shall document the review comments in the Preliminary Design Report. The CONSULTANT LANDSCAPE ARCHITECT shall include all of the deliverables from the Preliminary Design task, including the review comments, in the Project Design Narrative Report.

J. Deliverables:

1. All submitted items shall be dated and marked "30% Submittal"
2. Four (4) copies of the Preliminary Site & Grading Plan at 1"=40 scale, delivered as a single strip map of the entire project area.
3. Four (4) copies of the Preliminary Planting Plan & Irrigation Plan at 1"=40 scale, delivered as a single strip map of the entire project area.
4. Four (4) copies of the Preliminary Project Feature Aesthetic Designs
5. Four (4) copies of the Preliminary Bid Quantities and Cost Estimate
6. Four (4) copies of the Preliminary Right of Way Analysis Report
7. Four (4) copies of the Project Design Narrative Report

20.4.4 60% SUBMITTAL

A. Upon review and approval of the 30% Submittal by the DISTRICT, the CONSULTANT LANDSCAPE ARCHITECT shall incorporate review comments, perform additional calculations, and modify and refine the 30% Submittal Plans to prepare the 60% Submittal. All submitted items shall be dated and marked "60% Submittal".

B. Plans shall be complete and accurately depict the location; extent and configuration of features, with the exception that details and schedules may be preliminary in nature. The plans will include general notes, title and legend.

C. The CONSULTANT LANDSCAPE ARCHITECT shall document all additional design calculations in a Design Calculations Report and document all correspondence and minutes of meetings and conversations with the DISTRICT, partners and affected entities. The CONSULTANT LANDSCAPE ARCHITECT shall include this documentation in the Project Design Narrative Report.

D. The CONSULTANT LANDSCAPE ARCHITECT shall perform all engineering design coordination necessary to meet project goals and objectives.

E. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT team, Project Engineer, cost share partners and representatives of municipalities affected by the project to

review the items provided in the 60% Submittal. The CONSULTANT LANDSCAPE ARCHITECT shall document the review comments in the 60% Design Review Report. The CONSULTANT LANDSCAPE ARCHITECT shall include the Design Calculations Report, Anticipated Construction Schedule, correspondence and minutes of meetings, and the 60% Review Comments in the Project Design Narrative Report.

F. Deliverables:

1. Four (4) copies of the Site Plan at 1"=40'
2. Four (4) copies of the Grading Plan at 1"=40'
3. Four (4) copies of the Planting Plan at 1"=40'
4. Four (4) copies of the Irrigation Plan at 1"=40'
5. Four (4) copies of the Construction Detail Design Drawings for all landscaping, aesthetic and recreation multi-use treatments including, planting, irrigation and other structural components
6. Four (4) copies of the Bid Quantities and Cost Estimate
7. Four (4) copies of the Construction Special Provisions (SPs') and Supplementary General Conditions
8. Four (4) copies of the Design Calculations Report for the irrigation system
9. Four (4) copies of the Anticipated Construction Schedule
10. One (1) copy of correspondence and minutes of conversations and meetings with the DISTRICT, partners and affected entities.
11. 60% Design Review Comments Report

20.4.5 90% SUBMITTAL

A. Upon review and approval of the 60% Submittal by the DISTRICT, the CONSULTANT LANDSCAPE ARCHITECT shall incorporate review comments, perform final modifications and refinements to the landscaping, aesthetics and recreation multi-use features to prepare the 90% Submittal. All submitted items shall be dated and marked "60% Submittal".

B. Plans and other submitted items shall be complete and appear ready to bid.

C. The CONSULTANT LANDSCAPE ARCHITECT shall document all additional design calculations in a Design Calculations Report and document all correspondence and minutes of meetings and conversations with the DISTRICT, partners and affected entities. The CONSULTANT LANDSCAPE ARCHITECT shall include this documentation in the Project Design Narrative Report.

D. The CONSULTANT LANDSCAPE ARCHITECT shall perform all engineering design coordination necessary to meet project goals and objectives.

E. The CONSULTANT LANDSCAPE ARCHITECT shall meet with the DISTRICT team, Project Engineer, cost share partners and representatives of municipalities affected by the project to review the items provided in the 90% Submittal. The CONSULTANT LANDSCAPE ARCHITECT shall document the review comments in the 90% Design Review Report. The CONSULTANT LANDSCAPE ARCHITECT shall include the Design Calculations Report, Anticipated Construction Schedule, correspondence and minutes of meetings, and the 60% Review Comments in the Project Design Narrative Report

E. Deliverables:

1. Four (4) copies of the Site Plan at 1"=40'

2. Four (4) copies of the Grading Plan at 1"=40'
3. Four (4) copies of the Planting Plan at 1"=40'
4. Four (4) copies of the Irrigation Plan at 1"=40'
5. Four (4) copies of the Construction Detail Design Drawings for all landscaping, aesthetic and recreation multi-use treatments including, planting, irrigation and other structural components
6. Four (4) copies of the Bid Quantities and Cost Estimate
7. Four (4) copies of the Construction Special Provisions (SP's) and Supplementary General Conditions (Sac's)
8. Four (4) copies of the Design Calculations Report for the irrigation system
9. Four (4) copies of the Anticipated Construction Schedule
10. One (1) copy of correspondence and minutes of conversations and meetings with the DISTRICT, partners and affected entities
11. 90% Design Review Comments Report

20.4.6 99% SUBMITTAL

A 99% Submittal may be required primarily due to the number of outstanding review comments remaining after the 90% Submittal, or because of lack of completeness of any one or more of the submittal documents. The DISTRICT Project Manager shall determine the need for a 99% submittal and for which document(s) the submittal is applicable. No additional contract time or fee will be provided for such a submittal and the contract end date for the final (100%) submittal shall be maintained.

20.4.7 100% SUBMITTAL

A. Upon review and approval of the 90% Submittal, or if required the 99% Submittal, the CONSULTANT LANDSCAPE ARCHITECT shall incorporate review comments and make required changes and corrections to the plans, detail drawings, Special Provisions, Supplementary General Conditions, design calculations, Bid Quantity Calculations and the Cost Estimate.

B. All submitted items should conform to the Delivery Standards specified in the General Provisions Section of this sub chapter 20.4.

C. The CONSULTANT LANDSCAPE ARCHITECT shall document all additional design calculations in a Final Design Calculations Report and document all correspondence and minutes of meetings and conversations with the DISTRICT, partners and affected entities. The CONSULTANT LANDSCAPE ARCHITECT shall include this documentation in the Final Project Design Narrative Report.

E. Deliverables:

1. Four (4) copies of the Final Site Plan at 1"=40'
2. Four (4) copies of the Final Grading Plan at 1"=40'
3. Four (4) copies of the Final Planting Plan at 1"=40'
4. Four (4) copies of the Final Irrigation Plan at 1"=40'
5. Four (4) copies of the Final Construction Detail Design Drawings for all landscaping, aesthetic and recreation multi-use treatments including, planting, irrigation and other structural components
6. Four (4) copies of the Final Bid Quantities Calculations and Cost Estimate

7. Four (4) copies of the Final Construction Special Provisions (SP's) and Supplementary General Conditions (Sac's)
8. Four (4) copies of the Final Design Calculations Report for the irrigation system
9. Four (4) copies of the Final Anticipated Construction Schedule
10. One (1) copy of correspondence and minutes of conversations and meetings with the District, partners and affected entities.
11. Four (4) copies of the completed Final Project Design Narrative Report

20. Scenery Resource Assessments for Planning Studies

20.1 Purpose and Scope

The CONSULTANT shall provide a scenery resource assessment and assist the DISTRICT in developing a regional flood protection plan that preserves and complements the character of the natural, rural, suburban and urban landscapes located within the study area. The scenery resource assessment is also intended to serve as a tool to assist DISTRICT staff, project partners, stakeholders and the public in determining the desired visual character for flood control facilities that may be developed within the study area.

The scenery resource assessment shall include an inventory of Landscape Character, Scenic Quality and Visual Sensitivity. The assessment shall also include: 1) an analysis of scenery resource opportunities and constraints for a variety of flood protection activities that may be considered within the study area; 2) an identification of landscape themes, aesthetic features and design guidelines that may be appropriate to enable planned flood control features to achieve context sensitivity with the visual environment of the study area; 3) an analysis of the scenic resource benefits, land requirements and costs associated with the plan alternatives that are developed for the study area; and 4) preparation of rendered 15% landscape contour grading designs, cross sections and thumb nail perspective sketches for each of the flood control structures in the Recommended Alternative.

Work Tasks: None

20.2 Scenery Resource Goals and Objectives

DISTRICT goals and objectives for scenery resources within the planning area are found in the *Policy for the Aesthetic Treatment and Landscaping of Flood Control Facilities*. They are briefly summarized as follows:

1. Incorporate considerations for landscape aesthetics at the beginning and throughout the planning process for the planning study.
2. Produce a flood protection plan that is context sensitive (e.g. preserves, complements or enhances the visual character of the natural, rural, suburban and urban landscapes within the study area).
3. Involve project partners, stakeholders and the public in determining the desired visual character and aesthetic appearance of planned flood control facilities within the planning area.

The CONSULTANT shall document the DISTRICT's scenery resource goals and objectives in the SRA Report. The CONSULTANT shall also document the scenery resource goals and objectives contained in the MAG Desert Spaces Plan (Maricopa County) and any that may be contained in local community General Plans and Elements

Work Tasks:

1. Document scenery resources goals and objectives of the DISTRICT and project stakeholders (Maximum of 1 page of narrative).

20.3 Study Area Geographic Scope

Unless otherwise stipulated in writing by the DISTRICT, the affected environment and geographic scope of the Scenery Resources Assessment shall include all lands contained within the boundary of the planning area together with a surrounding area of sufficient size, as agreed to by the DISTRICT, to adequately describe and illustrate the regional context of scenery resources within the planning area.

Work Tasks: None

20.4 Approach and Methodology

The CONSULTANT shall utilize the approach and methodology that is outlined in this scope to prepare the scenery resource assessment, unless otherwise approved by the DISTRICT. This approach is adapted from the USDA Forest Service Visual Management and Scenery Management Systems, as approved by the DISTRICT. The CONSULTANT shall document the approach in the Report by reference. The CONSULTANT shall provide a glossary of terms in the appendix of the SRA Report. The CONSULTANT may provide copies of the glossaries found in the publications that document the USDA Forest Service Visual Management and Scenery Management Systems for this purpose.

Work Tasks:

- 1. Document Approach and Methodology (maximum of 1 paragraph).**
- 2. Document the Glossary of Terms.**

20.5 Staff Qualifications, Roles and Responsibilities

The scenery resource assessment shall be directed and carried out by an Arizona Registered landscape architect who is knowledgeable in the application of the USDA Forest Service Visual and Scenery Management systems. The CONSULTANT's landscape architect shall actively participate as a member of the project planning team and provide leadership in the integration of landscape aesthetics in all phases of the planning study, including all team meetings, workshops and public meetings.

Work Tasks: None

20.6 Schedule

The CONSULTANT shall prepare a schedule for the Scenery Resources Assessment that is fully coordinated and integrated with the overall project schedule. The CONSULTANT shall review the schedule with the DISTRICT and revise it as requested.

Work Tasks:

- 1. Prepare a schedule.**
- 2. Review with DISTRICT and revise as requested.**

20.7 Project Aesthetics Advisory Committee (PAAC)

The CONSULTANT shall incorporate the recommendations of the PAAC, as approved by the DISTRICT, into the public meeting materials for the data collection, analysis, alternatives and final plan prior to their presentation to the public or other entities.

Work Tasks:

- 1. Incorporate the recommendations of the PAAC, as approved by the DISTRICT.**

20.8 Data Collection and Analysis

20.8.1 Base Map

The CONSULTANT shall utilize the base map that has been approved for the study by the DISTRICT, for display of the Scenery Resources Assessment. The base map shall include base imagery as approved by the DISTRICT. Base imagery may consist of aerial photography or hill shade. Additionally, the base map shall include the project boundary, a title block with the map title, legend, planning study name, north arrow, scale, map source, date, the names and logos of the DISTRICT and the CONSULTANT and any other information requested by the DISTRICT.

Work Tasks:

- 1. Review the proposed base imagery for scenery resources assessment maps and revise as requested by the DISTRICT.**

20.8.2 DISTRICT Supplied Scenery Resources Data

The DISTRICT will provide the CONSULTANT with a regional assessment of scenery resources in Maricopa County (Maricopa County SRA), including maps in GIS, landscape compatibility matrices and narrative materials for the following:

- Landscape Character Types and Subtypes
- Existing Landscape Character Units
- Existing Landscape Character Compatibility for Flood Protection Methods
- Future Planned Landscape Character Units
- Future Planned Landscape Character Compatibility for Flood Protection Methods
- Visual Sensitivity Levels for Travelways in Maricopa County
- Visual Sensitivity Levels Compatibility for Flood Protection Methods
- Predominant Landscape Variety Classes for Landscape Character Units
- Variety Class Compatibility for Flood Protection Methods

Work Tasks: None

20.8.3 Preliminary Scenery Resources Map Preparation

The CONSULTANT shall review the Maricopa County SRA and prepare a small location map illustrating the regional context of the study area to the scenic resources of Maricopa County. The CONSULTANT shall clip all of the GIS maps in the regional assessment to the boundary of the ADMP, provide hard copy prints of each and a brief narrative summary of the acreages make up and geographic distribution of the mapping units for each map.

Work Tasks

- 1. Upload into GIS and review the DISTRICT's SRA.**
- 2. Provide a small scale map showing the location of the study area within Maricopa County and its relationship to the Landscape Character Types, Subtypes and major travelways (federal and state) identified in the regional assessment of scenic resources.**
- 3. Clip the maps in the SRA to the boundary of the study area in GIS and provide preliminary maps and brief narrative description of the acreage and geographic distribution of the mapping units for the following in digital and hard copy:**
 - Existing Landscape Character Units**
 - Existing Landscape Character Compatibility Classes**
 - Future Planned Landscape Character Units**
 - Future Planned Landscape Character Compatibility Classes**

Visual Sensitivity Levels
Visual Sensitivity Levels Compatibility Classes
Variety Classes
Landscape Variety Compatibility Classes

- 4. Review the maps, tables and narrative materials with the DISTRICT at a monthly progress meeting as soon as the material is available and revise as requested.**

20.8.4 Update and Additional Preliminary Scenery Resources Mapping

The CONSULTANT shall update and provide additional preliminary scenery resources mapping as described in the following sub-sections:

20.8.4.1 Preliminary Existing Landscape Character Units and Subunits Map

The CONSULTANT shall review the landscape unit delineations in the Preliminary Existing Landscape Character Map and revise any that appear to be inaccurate. The CONSULTANT shall prepare a preliminary map that identifies areas wherein structural alternatives will not be explored and the remaining area in which structural alternatives may be applied for review and approval of the DISTRICT. . For those parts of the study area identified for possible application of structural flood protection methods, the CONSULTANT shall subdivide the landscape character units into subunits based upon differences in their physical and cultural landscape characteristics. The CONSULTANT shall utilize the MAG land uses GIS coverage, resource photography, topography and other existing resource information provided by the DISTRICT to delineate the subunits. The CONSULTANT shall delineate the subunits in sufficient detail to serve as a basis for: 1) identification and application of appropriate landscape themes to the alternatives and recommended plan; 2) Identification of compatible flood protection methods; 3) Assessment of the effects of the alternatives upon the existing visual character of the Study Area; and 4) Development of aesthetic treatment planning and design guides.

Work Tasks:

- 1. Revise and update any inaccuracies in landscape unit delineations found in the Preliminary Existing Landscape Character Units map.**
- 2. Prepare a preliminary map stratifying the landscape character units in the regional assessment into subunits, utilizing the MAG land use categories and resource photography provided in the regional assessment GIS data base.**

20.8.4.2 Preliminary Landscape Variety Class Map Update

The CONSULTANT shall assign a preliminary variety class rating to each of the subunits identified in the Preliminary Landscape Character Subunits Map, utilizing the preliminary variety class map prepared in 20.8.3, the variety class rating criteria, resource photography and other GIS information provided by the DISTRICT. Landscape Variety Classes provide a measure of the overall scenic quality of landscapes found within Maricopa County. There are three variety classes:

Variety Class A	Distinctive or Unusual Landscape Variety
Variety Class B	Average Variety within the Character Type
Variety Class C	Minimal Variety within the Character Type

The CONSULTANT shall assign the Variety Class A or A+ rating to all scenic features that have legal protected status and other features that have unusual or distinctive landscape variety that should be retained due to their scenic importance.

Work Tasks:

- 1. Assign preliminary variety class ratings to each landscape character subunit.**
- 2. Prepare an Updated Preliminary Variety Class Map (hard copy).**

20.8.4.3 Preliminary Scenic Integrity Class Map Preparation

The CONSULTANT shall assign a preliminary Scenic Integrity Class rating to each of the subunits shown on the Preliminary Existing Landscape Character Subunits map, utilizing scenic integrity rating criteria, resource photography and other GIS information provided by the DISTRICT. Scenic Integrity Classes provide a measure of the degree to which a landscape is perceived to be visually intact, whole or complete. They provide another indication of overall scenic quality and opportunities for landscape improvement. There are three Scenic Integrity Classes:

Class 1	High	Discordant features are not evident
Class 2	Moderate	Discordant Features are slightly evident
Class 3	Low	Discordant features are strongly evident

The CONSULTANT shall assign scenic integrity class ratings to each subunit based upon the presence or absence of discordant features within each subunit and not based upon a comparison of the subunits to one another.

Work Tasks:

- 1. Assign scenic integrity class ratings to each landscape character subunit.**
- 2. Prepare a Preliminary Scenic Integrity Class Map (hard copy).**

20.8.4.4 Visual Sensitivity Levels Map Verification and Update

The CONSULTANT shall review the Preliminary Visual Sensitivity Levels Map and update it with any additional visually sensitive travelways that are known to be located within the study area.

Work Tasks:

- 1. Verify and update the Visual Sensitivity Levels map.**

20.8.4.5 Future Planned Landscape Character Map Update

The CONSULTANT shall obtain and utilize the most recent available planned land use information from the local communities located within the study area to update the Preliminary Future Landscape Character Map, in GIS. The CONSULTANT shall also revise and update the Future Planned Landscape Character map, based upon feedback received from partners, stakeholders, PAAC and Public meetings.

Work Tasks:

- 1. Verify and update the Future Planned Landscape Character map as necessary.**

20.8.4.6 Preliminary Historic Landscape Character Map

The CONSULTANT shall prepare a Historic Landscape Character map of the planning area based upon a review of the History and Pre-History report(s) that have or will have been prepared for the planning area as a part of the study. The CONSULTANT's Historic Landscape Character map will delineate generalized areas of historic landscape character influence. Use of this map will be limited to the identification of possible landscape themes that might be applied to flood protection alternatives based upon historical and pre-historical land use.

Work Tasks:

- 1. Review Existing info pertaining to History and Pre-History within the study area and prepare a Preliminary Historic Landscape Character Map.**

20.8.4.7 Review

Prior to conducting field reconnaissance, the CONSULTANT shall review the preliminary scenic resource maps with the DISTRICT at a monthly progress meeting as soon as the maps are developed. The CONSULTANT shall revise the preliminary scenery resource maps as requested by the DISTRICT.

Work Tasks:

- 1. Review the Preliminary Scenic Resource maps with the DISTRICT and revise as requested.**

20.8.5 Field Reconnaissance and Photo Documentation

The CONSULTANT shall visit the study area to photo document and verify the accuracy of the preliminary existing landscape character unit and subunit delineations and revise them as necessary. The CONSULTANT shall review the proposed changes in draft with the DISTRICT (over the shoulder review at the CONSULTANT's office) and revise them as requested. During the field reconnaissance, the CONSULTANT shall photo document and verify the accuracy of the Landscape Variety and Scenic Integrity class ratings for each of the landscape character subunits and revise them as necessary. The CONSULTANT shall also visit any existing DISTRICT flood control facilities within the study area to verify and photo document their existing visual condition. The CONSULTANT shall provide a minimum of 1 photo for each landscape character unit and subunit within the study area and all areas identified with a Variety Class A rating and all areas identified assigned with a low scenic integrity class rating. The CONSULTANT shall also, as a minimum, photo document the major travelways (federal, state and scenic routes) within the study area.

Work Tasks

- 1. Conduct Field Reconnaissance.**
- 2. Photo document the scenery resources of the study area.**
- 3. Review proposed changes in the SRA mapping with the DISTRICT and revise as necessary.**

20.8.6 Final Scenery Resource Mapping

Following field reconnaissance and DISTRICT approval of the proposed changes to the preliminary mapping, the CONSULTANT shall prepare final scenery resources maps in GIS and deliver two (2) copies of the GIS files on DVDR discs. The CONSULTANT shall deliver to the DISTRICT one (1) set of board mounted hard copies suitable for public presentations for the following:

- Scenery Resources Regional Context Map
- Existing Landscape Character Units and Subunits
- Future Landscape Character Units (and Subunits if mapped)
- Historic Landscape Character
- Landscape Variety Classes
- Scenic Integrity Classes
- Visual Sensitivity Levels

Work Tasks

- 1. Prepare final mapping.**
- 2. Review with the DISTRICT.**
- 3. Provide digital and hard copies of all maps to the DISTRICT.**

20.8.7 Scenery Resource Opportunities and Constraints Analysis

The CONSULTANT shall update the landscape compatibility matrices for Existing and Future Planned Landscape Character that were provided by the DISTRICT in the SRA for Maricopa County to include compatibility ratings for any new mapping units that were identified in the final existing and future planned landscape character maps for the study area. The CONSULTANT shall obtain approval from the DISTRICT for the revised compatibility matrices prior to proceeding to the next step.

The CONSULTANT shall update the Existing and Future Planned landscape Character Compatibility maps provided by the DISTRICT in the SRA for Maricopa County, in GIS, using the updated compatibility matrices and the final Existing and Future Planned Landscape Character Maps of the study area. The CONSULTANT shall review the Existing and Future Planned Landscape Character Compatibility Maps with the DISTRICT and revise them as requested.

The CONSULTANT shall utilize the compatibility matrices for Variety Classes, Scenic Integrity and Visual Sensitivity Levels provided by the DISTRICT in the SRA for Maricopa County to provide updated landscape compatibility maps for Landscape Variety Classes, Scenic Integrity and Visual Sensitivity Levels, based upon the final approved mapping for these components of the SRA. The CONSULTANT shall review the compatibility maps with the DISTRICT and revise them as requested.

The CONSULTANT shall prepare two Scenic Resource Opportunities and Constraints (SROC) maps of the study area in GIS. The first map shall be a composite of the Existing Landscape Character, Variety Classes, Scenic Integrity and Sensitivity Levels compatibility maps. The second map shall be a composite of the Future Planned Landscape Character, Variety Classes, Scenic Integrity and Sensitivity Levels compatibility maps. The CONSULTANT shall include the delineations of features and areas on the SROC maps that are classified as having low Scenic Integrity. The CONSULTANT shall review the Scenery Resources Opportunities and Constraints map with the DISTRICT, revise it as requested.

The CONSULTANT shall prepare the final scenery resources compatibility maps and

opportunities and constraints maps in GIS and deliver two (2) copies of the GIS files on DVDR discs to the DISTRICT. The CONSULTANT shall also deliver to the DISTRICT one (1) set of board mounted hard copies suitable for public presentations for the following:

- Existing Landscape Character Units and Subunits Landscape Compatibility Map
- Future Landscape Character Units Landscape Compatibility Map
- Landscape Variety Classes Compatibility Map
- Scenic Integrity Classes Compatibility Map
- Visual Sensitivity Levels Compatibility Map
- Scenery Resources Opportunities and Constraints Maps (2)

Work Tasks

- 1. Update scenery resources compatibility matrices and provide digital and hard copies for review and approval by the DISTRICT.**
- 2. Update the preliminary scenery resource compatibility maps and provide digital and hard copies to the DISTRICT.**
- 3. Prepare digital and hard copies of the Opportunities and Constraints maps of the study area.**
- 4. Review with the DISTRICT and revise as requested.**

20.8.8 Landscape Themes Development

Landscape Themes are utilized in the SRA to identify appropriate landscape architectural design treatment concepts that may be applied to flood control facilities proposed within the ADMP. A range of landscape themes are identified as a first step and are used to obtain feedback from the PAAC, stakeholders and the public regarding the desired visual appearance for flood control facilities that are planned in various parts of the ADMP. The selected themes for the recommended alternative will ultimately serve as the basis for the development of more detailed aesthetic treatment design guidelines for the structural components in the Area Drainage Master Plan.

The CONSULTANT shall utilize the information from the Existing, Historic and Future Desired Landscape Character Assessments to identify, describe and illustrate a minimum of ten (10) landscape themes that would be appropriate to apply to flood protection projects that may be identified in the alternatives for the study area. A minimum of five (5) Landscape Themes will be developed from the Existing Landscape Character Assessment. A minimum of three (3) themes will be developed from the Future Desired Landscape Character Assessment. A minimum of two (2) will be developed from the Historic Landscape Character Assessment.

The CONSULTANT shall provide a minimum of 20 color photographs (8"x10"), of the study area from the field reconnaissance, for possible use as a base and frame of reference for preparation of the landscape theme perspective sketches. The photographs shall be clearly focused, free of grain, properly exposed, well composed and suitable for enlargement to 18"x24" and use as public exhibits. The CONSULTANT shall meet with the DISTRICT to review and select the photos that will serve as a basis for development of the theme sketches.

The CONSULTANT shall prepare preliminary outline sketches (8"x10") with quick color enhancement as overlays on the color photographs. The CONSULTANT shall revise the preliminary theme sketches as requested by the DISTRICT. The CONSULTANT shall then prepare final landscape theme sketches prior to PAAC and Public Meeting #1. The finalized photographs and theme sketches shall be enlarged to 18"x24"" in size, color rendered and mounted on foam core board. The finalized theme sketches may be developed from enlargements

of suitably detailed 8"x10" sketches. The DISTRICT will provide additional direction and examples of the final product that is expected to be delivered.

The CONSULTANT shall provide a descriptive label and brief one (1) paragraph narrative that describes the essential visual characteristics of each landscape theme.

Work Tasks:

1. **Identify a minimum of 10 landscape Themes and provide a brief one paragraph description of the visual characteristics for each theme for review and approval of the DISTRICT.**
2. **Provide 20 photos from the field reconnaissance for DISTRICT review and approval.**
3. **Prepare preliminary rough perspective sketches of the themes for DISTRICT review and approval.**
4. **Provide digital and hard copies of final rendered landscape theme sketches.**

20.8.9 Scenery Resource Assessment Report

The CONSULTANT shall document the scenery resources data collection and analysis in the SRA Report for the Study Area. The report shall include narrative summaries with photos for each of the SRA maps, the compatibility tables and maps, opportunities and constraints analysis, landscape theme sketches and descriptions, the regional context, the general approach and methodology, and the glossary of terms. The narrative descriptions shall include a brief description of the mapping units found within the study area and a summary of their extent and geographic distribution. The CONSULTANT shall incorporate the narrative materials or a summary of the narrative materials that were provided by the DISTRICT in the SRA for Maricopa County into the report. The report shall be limited to a maximum of 50 pages, unless otherwise agreed to by the DISTRICT.

The report shall be delivered in standard 8-1/2" x 11" format with map foldouts, unless otherwise approved by the DISTRICT. The CONSULTANT shall provide three (3) printed and one (1) digital copy of the Draft SRA Report for review by the DISTRICT.

The CONSULTANT shall revise the Draft SRA Report as requested and deliver five (5) printed hard copies of the final approved SRA Report for the study area and two (2) digital copies in Microsoft Word and Adobe PDF format on CDROM discs. The PDF files shall be formatted as one complete document. The CONSULTANT shall also provide separate digital copies of all graphic files in TIFF format. The final SRA Report for the study area shall be sealed by a Landscape Architect registered in the state of Arizona.

Work Tasks:

1. **Provide the Draft SRA Report,**
2. **Review with the DISTRICT and revise as requested.**
3. **Provide the final sealed SRA Report.**

20.9 Alternatives Formulation and Analysis

The work tasks described in this section are referenced to and are an additional part of the work tasks that are outlined in Sections 12.2.3, 12.3.3 and 12.4.3 of the *Flood Control District Consultant Guidelines*.

20.9.1 Preliminary Alternatives Formulation

The CONSULTANT shall utilize the scenery resource opportunities and constraints maps and the landscape design themes that were developed in the SRA for the study area to design all

preliminary alternatives to be context sensitive to the maximum extent possible. The CONSULTANT shall specify and graphically depict the proposed flood protection methods and landscape design themes on the plan sheets for the structural components of each alternative. The CONSULTANT shall also identify and show the rights of way and additional volume capacity needed to implement the proposed landscape design themes on all cross sections that are prepared for the structural components proposed in the alternatives. The CONSULTANT shall utilize the perspective sketches developed in the SRA data collection to further illustrate the landscape themes associated with the preliminary alternatives in planning team, stakeholder, PAAC and Public meetings.

The CONSULTANT shall design a minimum of one alternative that emphasizes context sensitivity with the visual environment and consistency with the DISTRICT's *Policy for the Aesthetic Treatment and Landscaping of Flood Control Facilities* to the maximum degree possible, while fully providing flood protection for the citizens of Maricopa County.

Work Tasks:

- 1. Utilize the SRA Opportunities and Constraints Map in the development of the Preliminary Alternatives to maximize context sensitivity with the visual environment.**
- 2. Identify the proposed flood protection methods and landscape design themes for the structural components in the alternatives.**
- 3. Identify the rights of way requirements associated with implementing the proposed landscape design themes for each alternative.**
- 4. Design one alternative that emphasizes context sensitivity with the visual environment.**

20.9.2 Preliminary Alternatives Analysis

The CONSULTANT shall provide a quantitative estimate of the costs associated with implementing the landscape design themes, including rights of way acquisition and construction of aesthetic features, in the overall cost estimate for each alternative.

The CONSULTANT shall utilize the SRA for the study area to provide an evaluation and comparison of the consistency of the alternatives with the DISTRICT's *Policy for the Aesthetic Treatment and Landscaping of Flood Control Facilities*, utilizing the following evaluation criteria:

1. Achievement of Context Sensitivity with Existing Landscape Character
2. Achievement of Context Sensitivity with Future Planned Landscape Character
3. Protection of valued landscape features (Variety Class A and Scenic Integrity Class 1 areas)
4. Protection of sensitive view areas (Foreground Sensitivity Level 1)
5. Scenic quality improvement (elimination of discordant landscape features)
6. Consistency with the Cost Ceiling Tables contained in the DISTRICT's *Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects*

The CONSULTANT also shall evaluate the consistency of the alternatives with any other known scenery resources objectives and policies of Maricopa County and local communities that are applicable to the study area.

Work Tasks:

1. **Provide a cost estimate for implementing aesthetic treatments for each alternative.**
2. **Evaluate and compare the positive and negative effects of the alternatives upon scenic resources.**

20.9.3 Proposed Alternatives Formulation

The CONSULTANT shall plan and design the Preliminary Alternatives that are selected for further study to improve their context sensitivity with the visual environment. The CONSULTANT shall specify and graphically show, on the plan map, the flood protection methods, and landscape design themes proposed for the structural components in each alternative. The CONSULTANT shall include the volume requirements and additional right of way requirements for implementing the landscape themes. The CONSULTANT shall provide typical cross sections illustrating the flood protection methods and landscape design themes proposed for the structural components in the alternatives. The CONSULTANT shall include on the cross sections the rights of way and volume capacity land requirements for implementing the landscape design themes, including freeform or meandering form, variable grading of bottom areas and side slopes, peripheral landscape buffer areas, vegetation planting, and other features. The CONSULTANT shall utilize the perspective sketches developed in the SRA data collection and analysis to further illustrate the landscape themes and aesthetic features associated with the preliminary alternatives in planning team, stakeholder, PAAC and Public meetings.

Work Tasks:

1. **Illustrate the flood protection methods, landscape themes and right of way requirements for the structural components on the plan map for each alternative.**
2. **Provide board mounted typical cross sections illustrating the flood protection methods, landscape design themes and rights of way requirements for the proposed structural components in the alternatives.**

20.9.4 Proposed Alternatives Analysis

The CONSULTANT shall provide a detailed quantitative estimate of the costs associated with implementing the landscape design themes, including rights of way acquisition and construction of aesthetic features, in the overall estimate of costs for each alternative.

The CONSULTANT shall provide an evaluation and comparison of the consistency of the alternatives with the DISTRICT's *Policy for the Aesthetic Treatment and Landscaping of Flood Control Facilities*, based upon the evaluation criteria specified for the Preliminary Alternatives. The CONSULTANT also shall evaluate the consistency of the alternatives with any other known aesthetic treatment policies of Maricopa County and local communities that are applicable to the planning area.

Work Tasks:

1. **Estimate cost of rights of ways acquisition and construction costs for Implementation of the landscape themes for each alternative.**

2. Evaluate the consistency of alternatives with DISTRICT's aesthetic treatment policy and applicable scenery resource goals of other agencies.
3. Review with DISTRICT and revise as requested.

20.9.5 Recommended Alternative

The CONSULTANT shall plan and design the flood control structural features contained in the Recommended Alternative to achieve context sensitivity with the visual environment to the maximum degree possible. The CONSULTANT shall specify and graphically show, on the plan view sheets, the flood protection methods and landscape design themes proposed for the structural components in the Recommended Alternative.

Utilizing the *Aesthetic & Multi-Use Design Guidelines for Flood Control Basins and Channels* and the structural guidelines in the DISTRICT's *Policy for the Aesthetic Treatment and Landscaping of Flood Control Facilities* as a guide, the CONSULTANT shall provide aesthetic treatment design guidelines for achievement of the landscape design themes for each structural component (channel, basin, flood retarding structure or flood wall) proposed in the Recommended Alternative. The design guidelines shall include the size, depth, Mannings N Value, form, bottom area and side slope grading design, landscape buffer area design, plant palette, materials usage and treatment of visible structural elements for each structural component in the Recommended Alternative. The DISTRICT will provide examples of the product that is expected for this task at the time of project scoping.

The CONSULTANT shall provide a 15% landscape grading plan for all basins and typical sections of all conveyance channels and flood walls that are proposed in the Recommended Plan. The sizing and grading of all proposed structural components will be in conjunction with the overall team and will be verified by the CONSULTANT's project engineer. The CONSULTANT shall review the 15% landscape grading plan with the DISTRICT and revise it as requested prior to proceeding to the next step.

The CONSULTANT shall provide a rendered landscape contour grading plan, cross section and thumb nail perspective sketch for all storage basins and a typical plan section, cross section and perspective sketch for all conveyance channel and flood wall structures proposed in the Recommended Plan. The rendered plan shall illustrate the overall form and grading design of the structure and the location and layout of the functional and aesthetic features identified in the design guidelines. A typical section may be used to illustrate the landscape design themes and aesthetic treatments for conveyance channels, flood retarding structures and flood walls that extend for several miles. The CONSULTANT shall also document the landscape theme, design guidelines, rendered conceptual contour grading design, cross section and thumb nail perspective sketch (maximum 2 pages each) in the Area Drainage Master Plan Report and board mounted on 24"x36 sheets.

The CONSULTANT shall utilize a Mannings N Value in sizing the width and depth of the flood control structures in the Recommended Alternative to fully accommodate and sustain the aesthetic features and treatments identified in the design guidelines.

The CONSULTANT shall identify and include the rights of way requirements for and costs associated with implementing the landscape themes and design guidelines in the overall estimate of costs for each of the structural components in the Recommended Alternative.

The CONSULTANT shall review the materials provided under this section with the DISTRICT and revise them as requested.

Work Tasks:

1. Provide landscape themes and design guidelines for each structural component.
2. Prepare a 15% landscape contour grading design and plan layout, cross section and thumb nail perspective sketch for each structural component in the Recommended alternative (2 pages 8.5"x11" each) for inclusion in the final ADMP Report.
3. Prepare board mounted 24"x36" sheets containing the landscape theme and design guidelines narrative, conceptual layout and grading plan, cross section and thumb nail sketch for each structural component in the Recommended Alternative.
4. Prepare cost estimate for aesthetic features associated with each structural component in the Recommended Alternative.
5. Review with the DISTRICT and revise as requested.

21. Recreation and Open Space Resource Assessments for Planning Studies

21.1 Purpose and Scope

The CONSULTANT shall provide a Recreation and Open Space Assessment for the study area and its regional context and assist the DISTRICT in preparing a regional flood protection plan that maximizes opportunities for use of DISTRICT flood control projects to meet public needs for open space, recreation use areas and trails.

The Recreation and Open Space Resource Assessment shall include an inventory of existing and future planned recreation use areas, trails and open space resources within the study area and within the regional context of the study area. The assessment shall also include: 1) an analysis of existing flood control structures within the study area, if any, to provide recreation and open space opportunities; 2) an analysis of recreation and open space opportunities and constraints for a variety of flood protection activities that may be considered within the study area; 3) an evaluation of the recreation and open space benefits that are associated with the plan alternatives that are developed for the study area, 4) identification of DISTRICT partnering opportunities; and 5) development of structural design guidelines for recreation use, trails and open space uses for flood control projects proposed within the study area.

The CONSULTANT shall deliver a Draft and Final Recreation and Open Space Resource Assessment Report (ROSRA Report) summarizing its findings with narrative descriptions, maps, illustrations, tables and photographs to the DISTRICT. The CONSULTANT shall also deliver draft and final recreation and open space resource mapping in GIS to the DISTRICT.

Work Tasks: None

21.2 Recreation and Open Space Goals and Objectives:

The DISTRICT's goals for planning the use of its facilities for recreation and open space purposes is to:

1. Increase the year round utility and public benefits of DISTRICT flood control facilities by planning these facilities in such a way as to enhance their value and potential to meet public recreation and open space needs in Maricopa County.
2. Increase opportunities for cost share partnerships with local communities and other stakeholders for the development of flood control facilities that will serve as amenities and provide year round recreation and open space multi-uses for local communities.

Additional goals for use of DISTRICT flood control facilities for public recreation and open space purposes are found in the Maricopa County General Plan Open Space Element, Maricopa Regional Trail Master Plan, the Maricopa Association of Governments Desert Spaces Plan and local community plans.

The CONSULTANT and the DISTRICT shall meet with appropriate representatives of local communities and other agencies with responsibility for delivery of recreation and open space resources and services and project stakeholders to identify the Recreation Multi-Use goals and objectives and future recreation needs and plans for the study area. The CONSULTANT shall document the recreation and open space goals and objectives, review them with the DISTRICT

and revise them as requested. The final approved recreation goals and objectives shall be included in the ROSRA Report.

Work Tasks:

1. **Review County and Local Community Planning Documents and Identify Goals and Objectives Applicable to the Study Area.**
2. **Meet with Local Communities and Stakeholders to Review and Identify Study Area Recreation and Open Spaces Goals and Objectives (1 meeting, 3 hours).**
3. **Document the Recreation and Open Spaces goals and objectives in the ROSRA Report.**

21.3 Study Area Geographic Scope

Unless otherwise stipulated in writing by the DISTRICT, the affected environment and geographic scope of the assessment of regional recreation and open spaces shall extend 10 miles beyond the boundary of the study area. The geographic scope of the detailed assessment of recreation and open space resources shall be limited to the boundary of the study area.

Work Tasks: None

21.4 Approach and Methodology

The CONSULTANT shall utilize the approach and methodology that is outlined in this scope to prepare the scenery resource assessment, unless otherwise approved by the DISTRICT.

Work Tasks: None

21.5 Staff Qualifications, Roles and Responsibilities

The Recreation and Open Spaces Resource Assessment shall be directed and carried out by a landscape architect who is registered in the state of Arizona. The CONSULTANT's landscape architect shall actively participate as a member of the project planning team in all planning phases of the study.

Work Tasks: None

21.6 Schedule

The CONSULTANT shall prepare a work schedule for the Recreation and Open Spaces Resource Assessment that is fully coordinated and integrated with the overall project schedule for review and approval of the DISTRICT.

Work Tasks:

1. **Prepare a work schedule.**
2. **Review with DISTRICT and revise as requested.**

21.7 Project Aesthetics Advisory Committee

Project Aesthetics Advisory Committee (PAAC)

The CONSULTANT shall incorporate the recommendations of the PAAC, as approved by the DISTRICT, into the public meeting materials for the data collection, analysis, alternatives and final plan prior to their presentation to the public or other entities.

Work Tasks:

1. **Incorporate the recommendations of the PAAC, as approved by the DISTRICT.**

21.8 Data Collection and Analysis

21.8.1 Base Map

The CONSULTANT shall utilize the base map that has been approved for the study by the DISTRICT, for display of the Recreation Resource Assessment. The base map shall include base imagery as approved by the DISTRICT. Base imagery may consist of aerial photography or hill shade. Additionally, the base map shall include the project boundary, a title block with the map title, legend, planning study name, north arrow, scale, map source, date, the names and logos of the DISTRICT and the CONSULTANT and any other information requested by the DISTRICT.

Work Tasks:

- 1. Review the proposed base imagery for the recreation resources assessment maps and revise as requested by the DISTRICT.**

21.8.2 DISTRICT Supplied Information

The DISTRICT will provide to the CONSULTANT a regional assessment of Recreation and Open Spaces Resources within Maricopa County (ROSRA), including maps in GIS, landscape compatibility matrices and narrative materials for the following:

Recreation and Open Space Resources within Maricopa County
Recreation and Open Space Resource Compatibility for Flood Protection
Methods
Maricopa Regional Trail System

Work Tasks: None

21.8.3 Preliminary Recreation and Open Space Resource Map Preparation

The CONSULTANT shall upload the DISTRICT's ROSRA into GIS and prepare a small scale Regional Recreation Resources Map that identifies the regionally significant recreation resources within the study area and related recreation resources of regional significance located within 10 miles of the study area boundary. Regionally significant recreation resources are defined herein include, as a minimum, federal wilderness areas and monuments, state parks and wildlife areas, county parks and the Maricopa Regional Trail System and city regional parks and preserves. The CONSULTANT shall review the Regional Recreation Resources Map with the DISTRICT, and revise it as requested.

The CONSULTANT shall clip the maps contained in the ROSRA, in GIS, to the boundary of the study area and produce the following maps for the study area:

- 1. Preliminary Recreation and Open Space Resource Map**
- 2. Preliminary Recreation and Open Space Resource Compatibility for Flood Protection Map**

The CONSULTANT shall provide hard copy prints of the preliminary recreation maps and an acreage breakdown for each category of recreation and open space within the study area. The CONSULTANT shall review the maps with the DISTRICT and revise them as requested.

Work Tasks

1. **Upload the ROSRA for Maricopa County into GIS**
2. **Provide a small scale Regional Recreation Resources Map.**
3. **Clip the maps in the ROSRA to the study area boundary and provide Preliminary Recreation Resources Maps for Existing Recreation Resources and Existing Recreation Resources Compatibility for Flood Protection Methods.**
4. **Review the maps and acreage tables with the DISTRICT at a monthly progress meeting as soon as the materials are available and revise as requested.**

21.8.4 Preliminary Recreation and Open Space Resources Map Update

The CONSULTANT shall obtain from local communities the latest information pertaining to existing and future planned recreation and open spaces resources, including parks, open spaces, golf courses, trails, bike paths and all other recreation resources located within the study area and update, in GIS, the Preliminary Recreation and Open Spaces Resources Map. The geographic scope of this effort shall be limited to the boundary of the study area. The CONSULTANT shall clearly distinguish between existing and future planned recreation resources in the mapping and analysis of recreation and open spaces resources. The CONSULTANT shall review the updated Recreation and Open Spaces Map of the study area with the DISTRICT and revise it as requested.

Work Tasks

1. **Obtain and review latest plans and information pertaining to existing and future planned or needed parks, recreation areas, trails and open spaces within the study area and its regional context.**
2. **Update the Regional Recreation and Open Spaces Resource Assessment for the study area, as needed.**
3. **Review with the DISTRICT and revise as requested.**

21.8.5 Existing Flood Control Facilities Evaluation

The CONSULTANT shall identify all existing DISTRICT flood control facilities within the study area on the Recreation and Open Space Resources Map. The DISTRICT will provide the CONSULTANT with existing reports containing assessments of the recreation use potential for existing DISTRICT flood control facilities within the study area, where available. The CONSULTANT shall review the existing reports provided by the DISTRICT and conduct a field assessment of existing DISTRICT flood control facilities within the study area and provide an evaluation of their potential and opportunities for public recreation use. The CONSULTANT shall assess the value of retrofitting existing DISTRICT facilities for recreation multi-uses.

Work Tasks:

1. **Include all existing flood control facilities on the Existing and Future Planned Recreation and Open Spaces Map.**

2. **Review existing information pertaining to opportunities for use of existing DISTRICT flood control facilities for recreation and open space purposes.**
3. **Conduct a field evaluation of all existing flood control facilities within the study area (maximum of 2 days).**
4. **Review mapping and evaluation with the DISTRICT and revise as necessary.**

21.8.6 Recreation Resource Constraints and Opportunities Analysis

The CONSULTANT shall update, in GIS, the Recreation and Open Space Compatibility for Flood Protection Methods Map that was provided by the DISTRICT in the ROSRA for Maricopa County, utilizing the Recreation Resource Compatibility Ratings matrices provided by the DISTRICT and the Updated Recreation and Open Space Resource Map of the study area.

The CONSULTANT shall analyze and compare the types and locations of recreation resources identified within the study area with the types and locations of existing flood protection facilities, flooding problem areas and potential flood protection facilities identified in the ADMS for the study area, if available. The CONSULTANT shall prepare a map that identifies strategic locations within the study area where existing or future planned flood protection structures (Storage Basins and Conveyance Channels) could enhance or contribute to the recreation and open space needs identified in the study area and its regional context by providing open space connectivity or places for recreation activities.

Work Tasks:

1. **Update in GIS the Level 1 Recreation and Open Spaces Compatibility Analysis.**
2. **Prepare flood protection structures opportunities map in GIS.**
3. **Review with the DISTRICT and revise as requested.**

21.8.7 Recreation Opportunity Spectrum Classification

The CONSULTANT shall utilize and adapt the USDA Forest Service ROS system to the recreation and open space resources identified within the study area and provide an Existing and Future Planned ROS Class maps, in GIS, of the study area. The CONSULTANT shall provide a brief narrative description with photo examples of each ROS class within the study area.

Work Tasks:

1. **Prepare ROS class maps for existing and future planned recreation resources.**
2. **Review with the DISTRICT and revise as requested.**

21.8.8 Recreation Workshop (Optional Item)

The CONSULTANT shall conduct a one-day recreation workshop involving the DISTRICT and CONSULTANT planning team along with stakeholders, partners, representatives of the public and others identified by the DISTRICT. The purpose of the workshop is to present an overview of the project, results of the Recreation and Open Space Resource Data Collection and to brainstorm conceptual ideas and plans for use of DISTRICT flood control activities to meet the recreation objectives identified within the study area.

21.10 Recreation and Open Spaces Resource Assessment Report

The CONSULTANT shall provide a Recreation and Open Space Resource Assessment Report (ROSRA Report) summarizing the assessment of the regional recreation setting and the recreation resources contained within the study area. The assessment shall include a summary of the recreation resource objectives, data collection and analysis, and the results of the Recreation Workshop (optional item), if authorized. The ROSRA Report shall include all maps and tables produced in the Data Collection and Analysis along with supporting photographs, illustrations and other materials.

Work Task:

- 1. Prepare Recreation and Open Spaces Resource Assessment Report (Maximum 50 pages).**

21.11 Preliminary Alternatives Formulation and Analysis

The CONSULTANT LANDSCAPE ARCHITECT shall identify the recreation themes (ROS Classes) and types of multi-use activities and facilities that would be integrated into the flood protection components of each alternative, utilizing information developed in the ROSRA Report. The CONSULTANT shall fully coordinate the proposed recreation themes with the landscape character design themes and other land use themes identified for the project components in each alternative.

The CONSULTANT shall: 1) evaluate and compare the extent to which the alternatives are compatible with existing and future planned recreation resources within the study area and its regional context; and 2) evaluate the extent to which the alternatives contribute to recreation goals and objectives that were identified for the study area.

Work Tasks:

- 1. Identify recreation themes (label) and uses associated with each of the project components in each alternative.**
- 2. Evaluate the compatibility and recreation benefits associated with the preliminary alternatives.**

21.12 Proposed Alternatives Formulation and Analysis

The CONSULTANT LANDSCAPE ARCHITECT shall provide a brief narrative description of the recreation themes (ROS Classes) and types of multi-use facilities that would be integrated into the flood protection components of each alternative, utilizing information developed in the ROSRA Report. The CONSULTANT shall fully coordinate the proposed recreation themes with the landscape character design themes and other land use themes identified for the project components in each alternative.

The CONSULTANT shall: 1) evaluate and compare the extent to which the alternatives are compatible with existing and future planned recreation resources within the study area and its regional context; 2) evaluate the extent to which the alternatives contribute to recreation goals and objectives that were identified for the study area; and 3) evaluate the differences in partnering opportunities with the DISTRICT associated with the plan alternatives.

Work Tasks:

- 1. Identify and describe the recreation themes (label) and uses associated with each of the project components in each alternative.**
- 2. Evaluate the compatibility and recreation benefits associated with the preliminary alternatives.**

21.13 Recommended Alternative

21.13.1 Recreation Themes and Structural Design Guidelines

The CONSULTANT shall refine the recreation theme and recreation uses associated with the project components of the recommended alternative based upon its further development and refinement. The CONSULTANT shall develop flood control structural guidelines necessary for implementing the recreation themes and uses identified for each project component in the recommended alternative. The CONSULTANT shall identify partnering opportunities associated with the project components of the recommended plan.

21.13.2 Fifteen Percent Design (Optional Item)

The CONSULTANT shall incorporate the recreation themes and design guidelines into the 15% layout plans, grading designs, cross sections and perspective sketches that are prepared for all project components in the ADMP.

Work Tasks:

- 1. Prepare final recreation themes, descriptions and structural design guidelines for each project component in the recommended alternative.**
- 2. Incorporate themes and guidelines into 15% plans, if authorized.**