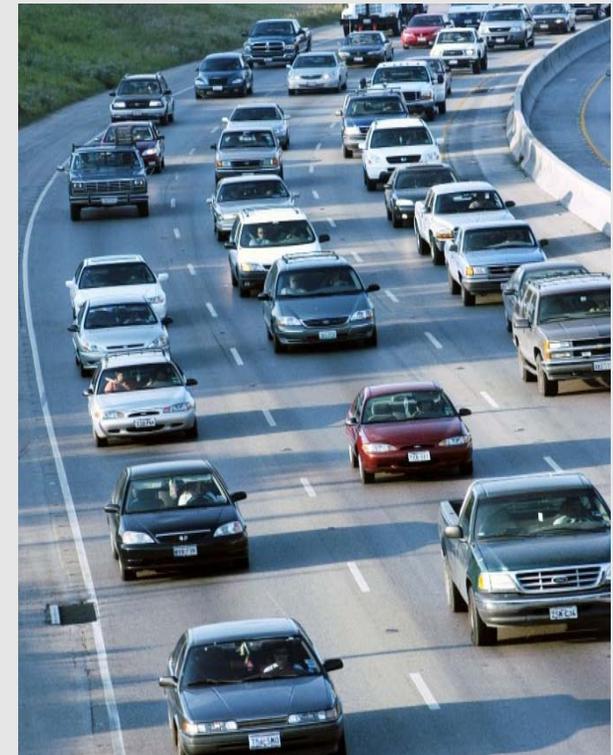




HOW WE PROCURE SERVICES

Upcoming Projects for Houston District
Sargon Youhannazad, P.E.



Become Precertified

- The program is defined under Title 43 TAC, Rule §9.33
- A vital part of the TxDOT professional services contracting program
- A requirement for individuals who want to be eligible to work on TxDOT professional services contracts
- **New “Where categories are merged, individuals that are already precertified will be “grandfathered” and remain precertified”**
- Insurance Requirements
- Consultant Errors and Omissions Correction and Collection - Policy and Procedures
- Guidance Regarding Post Employment Restrictions
- Prepare your Application (professional qualifications, experience, education)
- CCIS User Contact Information Sheet
- Request for External Access to TxDOT Information Systems (Form 1980)
- Information Security Compliance Agreement (Form 1828b)

Become Precertified

- Complete the web application in CCIS Online
- Maintain Precertification Status
 - ❖ Update Precertification
 - ❖ Maintain your active status: Annual renewal **between Jan. 1 and March 31 of each year**

Precertification Work Groups

There are 18 work groups with 111 work categories

- Group 1. Transportation Systems Planning (8)
- Group 2. Environmental
 - ❖ Environmental Studies (4)
 - ❖ United States Army Corps of Engineers Permits (4)
 - ❖ Protected Species Coordination (10)
- Group 3. Schematic Development (1)
- Group 4. Roadway Design (4)
- Group 5. Bridge Design (3)
- Group 6. Bridge Inspection (8)
- Group 7. Traffic Engineering and Operations Studies (4)
- Group 8. Traffic Operations Design (5)

Precertification Work Groups - continued

- Group 9. Bicycle and Pedestrian Facilities (1)
- Group 10. Hydraulic Design and Analysis (10)
- Group 11. Construction Management (8)
- Group 12. Material Testing - The firm must employ qualified, certified staff necessary to perform the work specified in this category (8)
- Group 14. Geotechnical Services (5)
- Group 15. Surveying and Mapping (9)
- Group 16. Architecture – Buildings and other structures (3)
- Group 17. Facilities Engineering (7)
- Group 18. Utility Engineering (5)
- Group 19. Miscellaneous (1)

Precertification Work Categories/Projected Contracts

Precertification Work Categories

<http://ftp.dot.state.tx.us/pub/txdot/ppd/precertification/work-categories-2018.pdf>

Architectural, Engineering and Surveying Consultants

<https://www.txdot.gov/business/consultants/architectural-engineering-surveying.html>

Projected Consultant Projects

http://ftp.dot.state.tx.us/pub/txdot-info/des/cco/professional_services/projected_contracts.pdf

- **Texas Board of Professional Engineers Rules prohibit selection of firms based on cost, rates and location. All selections are qualifications based.**

Precertification Updates

Work Category Updates

Existing	Proposed
16 work groups	18 work groups
78 work categories	111 work categories
30 standard NLCs	No standard NLCs

Notes:

- Some existing categories will be combined or merged.
- 21 existing categories will expire.
- 52 new categories are being added.

Precertification Work Categories Summary of Changes - 2018

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
Transportation Systems Planning				
1.6.1	Major Investment Studies	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
1.7.1	Traffic Demand Modeling	This is a new category.	All applicants must meet the new requirements.	
1.8.1	Public Involvement	This is a new category.	All applicants must meet the new requirements.	
Environmental Studies				
2.1.1	Traffic Noise Analysis	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.2.1	Air Quality Analysis	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.3.1	Wetland Delineation	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.3.2	Conditional/Functional Assessment	This is a new category	Everyone will need to apply for precertification in this new category	
2.4.2	Clean Water Act §404 (Title 33, United States Code §1344) Permits (including mitigation and monitoring).	Title and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.4.3	U. S. Coast Guard (General Bridge Act) and U.S. Army Corps of Engineers (Section 10) (Title 33, United States Code §403) Permits	Title and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.5.1	Geological Assessment for Edwards Aquifer Recharge Zone	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.6.1	Protected Species Determination(Habitat)	This category will expire.	Precertification will be archived and cease to be used in the future.	
2.6.2	Impact Evaluation Assessments	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.6.3	Biological Surveys	This category will expire.	Precertification will be archived and cease to be used in the future.	
2.6.4	Biological Evaluations/Assessments	This is a new category.	All applicants must meet the new requirements.	
2.7.1	Parks, Recreational Areas, and Refuges §4(f) (Title 23, United States Code of Federal Regulations §771.135) and/or §6(f) (Title 49, United States Code §303) Evaluations	Description and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
2.7.2	Historic Sites §4(f) (Title 23, United States Code of Federal Regulations §771.135) Evaluations	This is a new category.	All applicants must meet the new requirements.	
2.8.1	Surveys, Research and Documentation of Historic Buildings, Structures and Objects	This category will expire.	Precertification will be archived and cease to be used in the future.	
2.9.1	Historic Architecture	This category will expire.	Precertification will be archived and cease to be used in the future.	
2.10.1	Archeological Surveys, Documentation, Excavations, Testing Reports, and Data Recovery Plans	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
2.11.1	Historical and Archival Research	This category will expire.	Precertification will be archived and cease to be used in the future.	
2.12.1	Socio-Economic and Environmental Justice Analyses	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.13.1	Hazardous Materials Initial Site Assessment	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.14.1	Environmental Document Preparation	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	New applicants must meet the new requirements.
2.15.1	Historical Research of Extant Historic Buildings, Structures, Landscapes, and Objects	This is a new category.	All applicants must meet the new requirements.	
2.15.2	Historical Surveys and Documentation of Historic Buildings, Structures, Landscapes, and Objects	This is a new category.	All applicants must meet the new requirements.	
Schematic Development				
3.1.1	Route Studies & Schematic Design - Minor Roadways	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 3.2.1.	
3.2.1	Route Studies & Schematic Design	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
3.3.1	Route Studies & Schematic Design - Complex Highways	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 3.2.1.	
3.4.1	Minor Bridge Layouts	This category will expire.	Precertification will be archived and cease to be used in the future.	
3.5.1	Major Bridge Layouts	This category will expire.	Precertification will be archived and cease to be used in the future.	
3.6.1	Multi-Level Interchange and Exotic Bridge Layout	This category will expire.	Precertification will be archived and cease to be used in the future.	

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
Roadway Design				
4.1.1	Minor Roadway Design	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 4.2.1.	
4.2.1	Roadway Design	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
4.3.1	Complex Highway Design	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 4.2.1.	
4.4.1	Freeway Interchanges	Title and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
4.5.1	Constructability Review	This is a new category.	All applicants must meet the new requirements.	
4.6.1	3-D Design Visualization Services	This is a new category.	All applicants must meet the new requirements.	
Bridge Design				
5.1.1	Minor Bridge Design	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 5.2.1.	
5.2.1	Bridge Design	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
5.3.1	Multi-Level Interchange Design	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
5.4.1	Exotic Bridge Design	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 5.2.1.	
5.5.1	Bridge Class Culvert, Non- Bridge Class Culvert, and Inlet Design	This is a new category.	All applicants must meet the new requirements.	

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
Bridge Inspection				
6.1.1	Routine Bridge Inspection Team Leader	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
6.1.2	Routine Bridge Inspection Project Manager	This is a new category.	All applicants must meet the new requirements.	
6.2.1	Complex Bridge Inspection Team Leader	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
6.2.2	Complex Bridge Inspection Project Manager	This is a new category.	Everyone will need to apply for precertification in this new category	
6.3.1	Tunnel Inspection Team Leader	This is a new category.	Everyone will need to apply for precertification in this new category	
6.3.2	Tunnel Inspection Project Manager	This is a new category.	All applicants must meet the new requirements.	
6.4.1	Underwater Bridge Inspection Team Leader	This is a new category.	All applicants must meet the new requirements.	
6.5.1	Non-Destructive Testing	This is a new category.	All applicants must meet the new requirements.	
Traffic Engineering and Operations Studies				
7.2.1	Highway-Rail Grade Crossing Studies	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 8.6.1.	
7.3.1	Traffic Signal Timing	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
7.4.1	Traffic Control Systems Analysis, Design, and Implementation	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
7.5.1	Intelligent Transportation Systems	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
Traffic Operations Design				
8.5.1	Highway-Rail Grade Crossings	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 8.6.1.	
8.6.1	Rail-Highway Design	This is a new category.	Precertified individuals from old categories 7.2.1 and 8.5.1 will be grandfathered and listed in this category.	New applicants must meet the new requirements.
Bicycle and Pedestrian facilities				
9.1.1	Bicycle and Pedestrian Facility Development	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
Hydraulic Design and Analysis				
10.1.1	Hydrologic Studies	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
10.2.1	Roadway Hydraulic Design	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
10.3.1	Bridge Hydraulic Design	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
10.4.1	Storm Water Pump Station- Hydraulic Design	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
10.4.2	Pump Stations-Electrical	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
10.4.3	Pump Stations-Structures	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
10.5.1	Bridge Scour Evaluations and Analysis	Description and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
10.6.1	Coastal Hydraulic Design	This is a new category.	All applicants must meet the new requirements.	
10.7.1	Riverine Hydraulic Design	This is a new category.	All applicants must meet the new requirements.	
10.8.1	Federal Emergency Management Agency (FEMA) Regulations and Permits	This is a new category.	All applicants must meet the new requirements.	
Construction Management				
11.1.1	Roadway Construction Management and Inspection	Description and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
11.2.1	Bridge Construction Management and Inspection	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
11.3.1	Construction Superintendent	This is a new category.	All applicants must meet the new requirements.	
11.4.1	Environmental Inspections	This is a new category.	All applicants must meet the new requirements.	
11.5.1	Construction Scheduling Project Manager	This is a new category.	All applicants must meet the new requirements.	
11.6.1	Construction Schedule Support General	This is a new category.	All applicants must meet the new requirements.	
11.7.1	Construction Schedule Support Relating to Scheduling of Roadway Design	This is a new category.	All applicants must meet the new requirements.	
11.8.1	Construction Schedule Support Relating to Construction Management of Projects Including Bridges or Multilevel Interchanges	This is a new category.	All applicants must meet the new requirements.	

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
Materials Inspection and Testing				
12.1.1	Asphaltic Concrete Production	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
12.1.2	Portland Cement Concrete	Requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
12.1.3	Materials Engineering	This is a new category	All applicants must meet the new requirements.	
12.1.4	Asphaltic Concrete Placement	This is a new category.	All applicants must meet the new requirements.	
12.1.5	Portland Cement Concrete Placement	This is a new category.	All applicants must meet the new requirements.	
12.1.6	Embankment/Subgrade/ Backfill/Base Production	This is a new category.	All applicants must meet the new requirements.	
12.1.7	Embankment/Subgrade/ Backfill/Base Placement	This is a new category.	All applicants must meet the new requirements.	
12.2.1	Plant Inspection and Testing	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
12.3.1	Coatings Inspection and Material Testing Project Manager	This is a new category.	All applicants must meet the new requirements.	
12.3.2	Coatings Inspection and Material Testing Task Leader	This is a new category.	All applicants must meet the new requirements.	
Geotechnical Services				
14.1.1	Soil Exploration	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
14.2.1	Geotechnical Testing	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
14.3.1	Transportation Foundation Studies	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
14.4.1	Building Foundation Studies	Minor changes to requirements.	Precertified individuals will be grandfathered and remain precertified.	
14.5.1	Evaluation & Design of Geotechnical Related Structures	This is a new category.	All applicants must meet the new requirements.	

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
Surveying and Mapping				
15.1.1	Right of Way Surveys	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
15.1.2	Parcel Plats	This category will expire.	Precertification will be archived and cease to be used in the future.	
15.1.3	Legal Descriptions	This category will expire.	Precertification will be archived and cease to be used in the future.	
15.1.4	Right of Way Maps	This category will expire.	Precertification will be archived and cease to be used in the future.	
15.2.1	Design Survey	Title, description, and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
15.2.2	Construction Survey	This is a new category.	Precertified individuals from old category 15.2.1 will be grandfathered and listed in this category.	
15.3.1	Aerial Photogrammetry	Title, description, and requirements have changed.	All applicants must meet the new requirements.	
15.3.2	Terrestrial Photogrammetry	This is a new category.	All applicants must meet the new requirements.	
15.3.3	Terrestrial LiDAR	This is a new category.	All applicants must meet the new requirements.	
15.3.4	Mobile and Airborne LiDAR	This is a new category.	All applicants must meet the new requirements.	
15.3.5	Horizontal and Vertical Control	This is a new category, but it is similar to old category 15.4.1	Precertified individuals from old category 15.4.1 will be grandfathered and listed in this category.	
15.4.1	Horizontal and Vertical Control for Aerial Mapping	This category will expire.	Precertified individuals from this category will be grandfathered and listed in category 15.3.5.	
Architecture --Buildings and Other Structures				
16.1.1	Architecture	Description and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
16.2.1	Building and Facilities Architecture	This is a new category.	All applicants must meet the new requirements.	
16.3.1	Landscape Architecture	This is a new category.	All applicants must meet the new requirements.	
Facilities Engineering				
17.1.1	Structural Engineering	This is a new category.	All applicants must meet the new requirements.	
17.2.1	Mechanical Engineering	This is a new category.	All applicants must meet the new requirements.	
17.3.1	Plumbing Engineering	This is a new category.	All applicants must meet the new requirements.	

Category Number	Category Title	Changes for the Category	Changes for the people	Additional Notes
17.4.1	Electrical Engineering	This is a new category.	All applicants must meet the new requirements.	
17.5.1	Civil Engineering	This is a new category.	All applicants must meet the new requirements.	
17.6.1	Hazardous Building Materials Assessment (Asbestos)	This is a new category.	All applicants must meet the new requirements.	
17.6.2	Hazardous Building Materials Assessment (Lead)	This is a new category.	All applicants must meet the new requirements.	
Utility Engineering				
18.1.1	Value Engineering	This category will expire.	Precertified individuals will be grandfathered and listed as precertified in Category 19.1.1.	
18.2.1	Subsurface Utility Engineering	Description and requirements have changed.	Precertified individuals will be grandfathered and remain precertified.	
18.3.1	Utility Adjustment Coordination	This is a new category.	All applicants must meet the new requirements.	
18.4.1	Utility Engineering	This is a new category.	All applicants must meet the new requirements.	
18.5.1	Utility Construction Management and Verification	This is a new category.	All applicants must meet the new requirements.	
18.6.1	Utility Management & Coordination Oversight	This is a new category.	All applicants must meet the new requirements.	
MISC				
19.1.1	Value Engineering	Category number and Requirements have changed.	Precertified individuals from category 18.1.1 will be grandfathered and listed as precertified in Category 19.1.1.	

FAQ Precertification

- Employee Precertifications follow the individual not the firm
- If I leave a firm, how do I transfer my records?
 - ✓ Records can be transferred from one firm to another, but TxDOT does not allow joint ventures. In other words, TxDOT does not allow an individual to be simultaneously employed by two firms (or on two payrolls) when working under a contract. To transfer records, contact our CCIS Online Administrator by email or phone at (512) 416-2218.
- How many projects can I put in my application?
 - ✓ Ten projects per employee may be submitted. Keep in mind that it is only necessary to meet the minimum requirements for the categories. Space in TxDOT's database is limited to 60 characters per line and five lines for project work descriptions. If you go over the limits of our database, you will need to resubmit the information.
- Who can I contact for questions, comments, or suggestions for the CCIS Online System?
 - ✓ Contact CCIS Online Administrator by email or phone at (512) 416-2218.

Precertification - Project Team Composition

PTC Form - Part 2 of 3

- What should I do if the task leader precertification box turns **RED**?
- Verify the Task Leader is precertified. If so, contact the Procurement Engineer listed in the RFQ for further instructions.

Firm Seq.	Prime Firm Name	Proj. Mgr. Seq. No.	Proj. Mgr. Name	PM Precertified?	TxDOT USE Only: Precertification Date				
Work Category No.	Category Name	E & D Related Services	Percentage Advertised	Firm Seq. No.	Firm Name	Emp. Seq. No.	Task Leader**	Task Leader Date*	Firm Status Active? (Y/N)
11.1.1	Roadway Construction Management & Inspection	<input checked="" type="checkbox"/>	32.00%						
11.2.1	Major Bridge Construction Management & Inspection	<input checked="" type="checkbox"/>	25.00%						
12.1.1	Asphaltic Concrete	<input checked="" type="checkbox"/>	2.00%						
12.1.2	Portland Cement Concrete	<input checked="" type="checkbox"/>	3.00%						
12.2.1	Plant Inspection and Testing	<input checked="" type="checkbox"/>	2.00%						
14.1.1	Soil Exploration	<input checked="" type="checkbox"/>	1.00%						
14.2.1	Geotechnical Testing	<input checked="" type="checkbox"/>	1.00%						
15.2.1	Design & Construction Survey	<input checked="" type="checkbox"/>	1.00%						
18.2.1	Subsurface Utility Engineering	<input checked="" type="checkbox"/>	2.00%						

Engineering Contract Types

Bridge On/Off Replacement	Survey
Construction, Engineering, Inspection (CEI)	Traffic Engineering
Critical Path Method Scheduling (CPM)	Traffic Signal Timing
Engineering	Utility Engineering
General Engineering Consultant (GEC)	Materials Engineering
Geotechnical	Facilities Engineering
Hydraulic	Independent Engineer (IE)
Planning	Traffic & Revenue (T&R)
Plans, Specifications and Estimates (PS&E)	
Procurement Engineering (PcE)	
Schematic	
Schematic / Environmental	
Schematic/Environmental/PS&E	

Disciplines most commonly procured in Houston District

Typical Pre-Certified Work Categories

- On/Off System Bridge Replacement
- Plans, Specifications & Estimate
- Schematic/Environmental
- Construction Engineering Inspection
- Planning
- Hydraulics and Hydrology
- Traffic Engineering Studies
- Utility Engineering
- Surveying

On/Off System Bridge Replacement

- Environmental Studies (Traffic Noise Analysis, Air Quality Analysis)
- United States Army Corps of Engineers Permits (Nationwide, 404)
- Protected Species Coordination (Socio-Economic Analysis, Hazardous Material)
- Schematic Development (Route Studies & Schematic Design)
- Roadway Design (Roadway Design)
- Bridge Design (Bridge Design, Multi-Level Interchange Design)
- Traffic Operations Design (Signing, Pavement Marking & Channelization, Signalization)
- Hydraulic Design and Analysis (Hydrologic Studies, Basic Hydraulic Design)
- Geotechnical Services (Soil Exploration, Geotechnical Testing)
- Surveying and Mapping (Design and Construction Survey, ROW Maps)
- Utility Engineering (Subsurface Utility Engineering)

Plans, Specifications and Estimates (PS&E)

- Environmental Studies (Traffic Noise Analysis, Air Quality Analysis)
- United States Army Corps of Engineers Permits (Nationwide, 404)
- Protected Species Coordination (Socio-Economic Analysis, Hazardous Material)
- Schematic Development (Route Studies & Schematic Design)
- Roadway Design (Roadway Design, Freeway Interchanges)
- Bridge Design (Bridge Design)
- Traffic Engineering and Operations Studies (Traffic Engineering Studies)
- Traffic Operations Design (Signing, Pavement Marking & Channelization, Signalization)
- Hydraulic Design and Analysis (Hydrologic Studies, Basic Hydraulic Design)
- Geotechnical Services (Soil Exploration, Geotechnical Testing)
- Surveying and Mapping (Design and Construction Survey, ROW Maps)
- Utility Engineering (Subsurface Utility Engineering)

Schematic / Environmental

- Transportation Systems Planning (Feasibility Studies, **Public Involvement**)
- Environmental Studies (Traffic Noise Analysis, Air Quality Analysis)
- United States Army Corps of Engineers Permits (Nationwide, 404)
- Protected Species Coordination (Socio-Economic Analysis, Hazardous Material)
- Schematic Development (Route Studies & Schematic Design)
- Traffic Engineering and Operations Studies (Traffic Engineering Studies)
- Traffic Operations Design (Signing, Pavement Marking & Channelization, Signalization)
- Hydraulic Design and Analysis (Hydrologic Studies, Basic Hydraulic Design)
- Geotechnical Services (Soil Exploration, Geotechnical Testing)
- Surveying and Mapping (Aerial Mapping, Horizontal & Vertical Control for Aerial Mapping)

Construction Engineering Inspection (CEI)

- Transportation Systems Planning (**Public Involvement**)
- Construction Management (Roadway/Bridge Construction Management, **Scheduling, Construction Superintendent, Environmental Inspection**)
- Material Testing (Asphaltic Concrete, Portland Cement Concrete)
- Geotechnical Services (Soil Exploration, Geotechnical Testing)
- Surveying and Mapping (Design and Construction Survey)
- Utility Engineering (Subsurface Utility Engineering, **Utility Engineering, Utility Adjustment Management and Verification**)

Planning

- Transportation System Planning (Travel Demand Modeling, **Public Involvement**)
- Systems Planning
- Subarea/Corridor Planning
- Land Planning/Engineering
- Feasibility Studies
- Traffic Engineering Studies

Hydraulics and Hydrology

- 4.2.1 Roadway Design
- 10.1.1 Hydrologic Studies
- 10.2.1 Basic Hydraulic Design
- 10.3.1 Complex Hydraulic Design
- 10.4.1 Pump Stations - Hydraulics
- 10.4.2 Pump Stations - Electrical
- 10.4.3 Pump Stations - Structures
- 10.5.1 Bridge Scour Evaluations & Analysis
- 15.2.1 Design & Construction Survey

Traffic Engineering Studies

4.2.1 Roadway Design

7.1.1 Traffic Engineering Studies

7.2.1 Highway - Rail Grade Crossing Studies

7.3.1 Traffic Signal Timing

7.4.1 Traffic Control Systems Analysis, Design & Implementation

7.5.1 Intelligent Transportation System

8.1.1 Signing, Pavement Marking & Channelization

8.2.1 Illumination

8.3.1 Signalization

8.4.1 ITS Control Systems Analysis, Design & Implementation

8.5.1 Highway - Rail Grade Crossing

9.1.1 Bicycle & Pedestrian Facility Development

Utility Engineering

15.2.1 Design and Construction Survey

18.2.1 Subsurface Utility Engineering

18.3.1 Utility Adjustment Coordination

18.4.1 Utility Engineering

18.5.1 Utility Construction Management and Verification

Surveying

15.1.1 Survey

15.1.2 Parcel Plats

15.1.3 Legal Descriptions

15.1.4 Right of Way Maps

15.2.1 Design & Construction Survey

15.3.1 Aerial Mapping

15.4.1 Horizontal & Vertical Control for Aerial Mapping

15.5.1 State Land Surveying

