

Project Manager & Key Staff Standards for Technical Proposals

Notes: This is a “pick list” for NJDOT Contract Managers, not all requirements apply for all projects. ADDITIONALLY, REQUIREMENTS NOT LISTED BELOW MAY BE INCLUDED IN A TECHNICAL PROPOSAL IF APPROPRIATE For use in ALL Divisions within NJDOT, Project Management uses # of projects, other Divisions use # of years.

(Updated 7/2/2020)

Project Manager	Project Specific Education, License and Other Requirements (TP Section 5)	Experience On Similar Projects (TP Section 6)	Similar Project Experience (TP Sections 6 & 7)
PROJECT MANAGER	<ul style="list-style-type: none"> • BACHELORS DEGREE • NJPE 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • EXPERIENCE IN NJDOT PROJECT DELIVERY PROCESS WITH THE MANAGEMENT OF AT LEAST ONE TRANSPORTATION PROJECT WITH SIMILAR SIZE AND COMPLEXITY FROM PRELIMINARY DESIGN/ENGINEERING PHASE THROUGH THE COMPLETION OF CONSTRUCTION WITHIN LAST 15 YEARS. DEPUTY PROJECT MANAGEMENT EXPERIENCE CAN (CANNOT) BE APPLIED FOR 1-3 PROJECTS. • EXPERIENCE WITH FHWA'S NEPA PROCESS. • EXPERIENCE IN MAINTAINING PROJECT'S BUDGET, SCHEDULE, SCOPE AND QUALITY MANAGEMENT AND SHOULD HAVE BEEN DIRECTLY RESPONSIBLE FOR BUDGET, SCHEDULE AND DELIVERY OF DESIGN DOCUMENTS/ STUDY REPORTS. • EXPERIENCE IN PROJECT'S PUBLIC OUTREACH. • EXPERIENCE IN PROJECT(S) OF SIMILAR SIZE AND COMPLEXITY SHOULD HAVE INCLUDED THE FOLLOWING (NJDOT CONTRACT MANAGER TO SELECT/ADD/DELETE APPROPRIATE PROJECT SPECIFIC CATEGORIES MARKED IN RED BELOW): -HIGHWAY DESIGN INCLUDING GEOMETRIC DESIGN AND/OR DRAINAGE DESIGN AND/OR TRAFFIC SIGNAL/SAFETY ENGINEERING AND/OR ITSAND/OR PAVEMENT DESIGN AND/OR MPT AND/OR ROW ENGINEERING AND/OR ACCESS DESIGN AND/OR UTILITY RELOCATION. -STRUCTURAL DESIGN INCLUDING BRIDGE REPLACEMENT AND/OR SUPERSTRUCTURE REPLACEMENT AND/OR DECK REPLACEMENT AND/OR BRIDGE REHABILITATION AND/OR GEOTECHNICAL AND FOUNDATION DESIGN AND/OR SUBSTRUCTURE DESIGN AND/OR RETAINING WALL DESIGN AND OR CULVERT DESIGN. • EXPERIENCE IN CONSTRUCTION ENGINEERING INCLUDING SHOP DRAWING REVIEWS, CONSTRUCTION SCHEDULE REVIEWS, AND PREPARATION OF CHANGE OF PLANS.
		4 TO 10 YEARS	
Key Staff/ Team Leaders	Project Specific Education, License and Other Requirements (TP Section 9)	Experience On Similar Projects (TP Section 10)	Similar Project Experience (TP Section 10)
ROADWAY DESIGN	<ul style="list-style-type: none"> • BSCE • NJPE 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • PERFORMED GEOMETRIC DESIGN OF HIGHWAYS AND STREETS • PREPARED DESIGN EXCEPTION REPORT • RESPONSIBLE FOR THE DEVELOPMENT OF CONSTRUCTION PLANS, ENGINEERING ESTIMATES, AND SPECIFICATIONS USING TRANSPORT AND PRIMAVERA SCHEDULE • PREPARED TRAFFIC CONTROL AND STAGING PLANS (MPT) • PREPARED TRAFFIC SIGNAGE AND STRIPING PLAN • EXPERIENCE IN NJDOT CAPITAL PROJECT DELIVERY PROCESS • EXPERIENCE IN NJDOT/ AASHTO ROADWAY DESIGN MANUAL • EXPERIENCE IN NJDOT STANDARDS SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION • EXPERIENCE IN NJ STATE HIGHWAY ACCESS MANAGEMENT CODE
		4 TO 8 YEARS	
BRIDGE DESIGN	<ul style="list-style-type: none"> • BSCE • NJPE 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • PREPARED BRIDGE DESIGN PLANS AND SPECIFICATIONS USING AASHTO/NJDOT DESIGN MANUALS • PERFORMED LOAD RESISTANCE FACTOR DESIGN (LRFD) METHODOLOGY FOR BRIDGE DESIGN. • PERFORMED SEISMIC ANALYSIS AND DESIGN • EXPERIENCE IN NJDOT CAPITAL PROJECT DELIVERY PROCESS • EXPERIENCE WITH NJDOT/AASHTO BRIDGE AND STRUCTURE DESIGN MANUALS
		4 TO 8 YEARS	

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GEOTECHNICAL ENGINEERING	<ul style="list-style-type: none"> • BSCE • NJPE 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • PERFORMED FOUNDATION, RETAINING WALL, SHEET PILE, NOISE WALL, SIGN STRUCTURE DESIGN • PERFORMED SETTLEMENT, STABILITY ANALYSIS • PERFORMED WAVE EQUATION, DRIVABILITY, PILE DYNAMIC ANALYSIS • PREPARED FOUNDATION REPORTS • EXPERIENCE WITH NJDOT /AASHTO BRIDGE AND STRUCTURE DESIGN MANUAL
		3 TO 5 YEARS	
PAVEMENT DESIGN	<ul style="list-style-type: none"> • BSCE • NJPE 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • CONCRETE PAVEMENT REHAB TECHNIQUES • SOIL MECHANICS – RESILIENT MODULUS AND SUBSURFACE DRAINAGE • SUPERPAVE LEVEL I • LIFE CYCLE COST ANALYSIS • BACK CALCULATION OF FWD DEFLECTION DATA. • EXPERIENCE WITH SHRP LTPP DISTRESS IDENTIFICATION MANUAL • EXPERIENCE WITH AASHTO GUIDE FOR DESIGN OF PAVEMENT STRUCTURES, 1993 OR LATER
		2 TO 8 YEARS	
HYDRAULICS AND HYDROLOGY	<ul style="list-style-type: none"> • BSCE • TRAINING OR EXPERIENCE IN DRAINAGE DESIGN SOFTWARE (I.E. HEC-RAS, PONDPACK, HYDROCAD, STORMCAD, WATERSHED MODELING SYSTEM (WMS)) • TRAINING IN SCOUR ANALYSIS 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • DESIGN OF RETENTION AND DETENTION BASIN FOR WATER QUALITY • PERFORMED HIGHWAY STORM WATER DRAINAGE SPREAD CALCULATIONS AND DEVELOPED STORM WATER MANAGEMENT PLAN. • PERFORMED SCOUR ANALYSIS AND FLOOD ROUTING CALCULATIONS • PERFORMED HIGHWAY DRAINAGE DESIGN USING HEC-RAS, PONDPACK, HYDROCAD, STORMCAD, OR WATERSHED MODELING SYSTEM (WMS) • EXPERIENCE IN NJDEP FLOOD HAZARD CONTROL ACT AND STORM WATER MANAGEMENT REGULATIONS.
		4 TO 6 YEARS	
UTILITY ENGINEERING	<ul style="list-style-type: none"> • BS IN ENGINEERING 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • PREPARATION OF UTILITY RELOCATION SCHEMES AND DESIGN-CONSTRUCTION PLANS • PREPARATION OF UTILITY AGREEMENT PLANS • PREPARATION OF SPECIFICATIONS (SPECIAL PROVISIONS) • EXPERIENCE WITH NJDOT CAPITAL PROJECT DELIVERY PROCESS. • EXPERIENCE WITH STATE UTILITY & RAILROAD ACCOMMODATION POLICY • EXPERIENCE WITH TITLE 16 NJDOT CHAPTER 25 UTILITY ACCOMMODATION POLICY • ACCOMMODATION POLICY DESIGN EXPERIENCE • EXPERIENCE WITH CFR TITLE 23 PART 645 • EXPERIENCE WITH CFR TITLE 23 PART 646 • EXPERIENCE WITH NJDOT ROADWAY DESIGN MANUAL • EXPERIENCE WITH NJDOT BRIDGE AND STRUCTURAL DESIGN MANUAL • EXPERIENCE WITH UTILITY DESIGN OF WATER AND MUNICIPAL SEWER
		3 TO 5 YEARS	
SURVEYING AND ROW ENGINEERING	<ul style="list-style-type: none"> • NJ PLS 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • TOPOGRAPHIC SURVEY, BASE LINE SURVEY, PROFILE AND CROSS SECTIONS FOR HIGHWAYS • PREPARED ROW MAPS (ETM, GPPM,IPM) WITH PARCEL DESCRIPTIONS. • EXPERIENCE WITH NJ MAP FILING LAW FOR ROW MAPPING • EXPERIENCE WITH NJDOT SURVEYING MANUAL & STANDARD ARTICLE 44 • EXPERIENCE WITH NJDOT SURVEYING MANUAL AND STANDARD ARTICLE 51
		5 TO 7 YEARS	
TRAFFIC ENGINEERING	<ul style="list-style-type: none"> • BSCE or BSEE • TRAINING IN TRAFFIC SAFETY IN CONSTRUCTION ZONE,HIGHWAY CAPACITY MANUAL • TRAINING IN HIGHWAY CAPACITY ANALYSIS SOFTWARE HCM, AND SYNCHRO. 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> • PERFORMED HIGHWAY CAPACITY /LOS ANALYSIS, USING HIGHWAY CAPACITY SOFTWARE, HCS • PERFORMED SPEED/DELAY STUDIES AND QUEUING ANALYSIS • PREPARED TRAFFIC SIGNAL DESIGN PLANS • PREPARED DESIGN TEMPORARY TRAFFIC SIGNAL • EXPERIENCE IN MUTCD, STANDARD ROADWAY CONSTRUCTION AND TRAFFIC CONTROL DETAILS.
		3 TO 7 YEARS	

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ENVIRONMENTAL SCIENCE	<ul style="list-style-type: none"> BACHELORS OR MASTERS DEGREE IN ENVIRONMENTAL SCIENCE, ECOLOGY, GEOLOGY, ENGINEERING, BIOLOGY, CHEMICAL OR NATURAL RESOURCES 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> MANAGED ENVIRONMENTAL TECHNICAL STUDIES FOR AIR, NOISE, ECOLOGY, HAZARDOUS WASTE, SOCIOECONOMIC, EJ, HISTORIC ARCHITECTURAL, AND ARCHEOLOGY. MANAGED PREPARATION OF NEPA DOCUMENTS AND ENVIRONMENTAL PERMITS MANAGED PREPARATION OF SECTION 4(F) DOCUMENTS EXPERIENCE WITH STATE & FEDERAL ENVIRONMENTAL REGULATIONS EXPERIENCE WITH NJDOT CAPITAL PROJECT DELIVERY PROCESS EXPERIENCE WITH PROCEDURES INVOLVING SHPO AND DEP PERMITS EXPERIENCE WITH SECRETARY OF INTERIOR STANDARDS FOR REHABILITATION
		5 TO 7 YEARS	
ENVIRONMENTAL - CULTURAL RESOURCES	<ul style="list-style-type: none"> QUALIFIED IN 36 CFR PART 61 (WHICH NOTES BACHELORS OR MASTERS DEGREE IN ARCHEOLOGY, ANTHROPOLOGY, ARCHITECTURAL HISTORY, ART HISTORY, HISTORIC PRESERVATION OR CLOSELY RELATED FIELD) 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> CULTURAL RESOURCES (INCLUDING ARCHEOLOGY AND HISTORIC ARCHITECTURAL SURVEYS AND MITIGATION EFFORTS)
		5 TO 7 YEARS	
ELECTRICAL ENGINEERING	<ul style="list-style-type: none"> BSEE 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> TRAFFIC SIGNAL DESIGN HIGHWAY LIGHTING DESIGN EXPERIENCE IN CADD - "DGN" FORMAT EXPERIENCE WITH LIGHTING DESIGN SOFTWARE – VISUAL
		2 TO 4 YEARS	
ITS	<ul style="list-style-type: none"> BSCE or BSEE (ELECTRICAL OR ELECTRONICS) 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> DESIGN AND TESTING OF A COMPLETED AND OPERATIONAL ITS SYSTEM, INCLUDING DMS, CCTV, CTSS, AND TRAFFIC DETECTORS DATA AND VIDEO COMMUNICATIONS NETWORKS AND SYSTEMS INTEGRATION, INCLUDING FIBER AND WIRELESS SYSTEMS DESIGN OF TRAFFIC MANAGEMENT CENTER EXPERIENCE WITH DESIGN, DEPLOYMENT & OPERATION OF ITS TECHNOLOGIES EXPERIENCE WITH NTCIP STANDARDS EXPERIENCE WITH ITS ARCHITECTURES & SYSTEMS ENGINEERING PROCESS
		2 TO 5 YEARS	
COMMUNITY INVOLVEMENT	<ul style="list-style-type: none"> ORGANIZED COMMUNITY OUTREACH EVENTS 	UP TO 6 PROJECTS	<ul style="list-style-type: none"> RESPONSIBLE FOR PUBLIC INFORMATION CENTERS COMMUNITY OUTREACH MAINTAINING MAILING LISTS AND RECORDS OF COMMUNITY OUTREACH PROGRAM CONTEXT SENSITIVE DESIGN (CSD)
		3 TO 5 YEARS	