

These Technical Provisions are comprised of the following documents:

1. Sections 1 through 18 of the Technical Provisions
2. the extract from Publication 408 (as amended by the exceptions schedule); and
3. the relevant Design Manuals.

With regards to the Technical Provisions documents, the order of precedence should be treated as follows:

- a) In the event of any conflict, ambiguity or inconsistency between any terms or provisions of these documents, the order of precedence, from highest to lowest, shall be as follows:
 - i. Sections 1 through 18 of the Technical Provisions;
 - ii. the extract from Publication 408 (as amended by the exceptions schedule);
and
 - iii. the relevant Design Manuals.
- b) In the event of any conflict, ambiguity or inconsistency of the provisions within any one of these documents, the more stringent standard will prevail.
- c) Additional or supplemental details or requirements in a lower priority document shall be given effect except to the extent they irreconcilably conflict with requirements, provisions and practices contained in the higher priority document.

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1 GENERAL

1.1 Project Description

The Project consists of the replacement of the [560] bridges listed in Attachment 10-1 which are located across the Commonwealth of Pennsylvania and as further described in these Technical Provisions. The Project is divided into Early Completion Bridges (ECB) and Remaining Eligible Bridges (REB). A general description of the proposed improvements to be included in the Contract is below:

- Early Completion Bridges (ECB) – The ECB are located in two clusters in Districts 3, 4, and 5 and in Districts 10, 11, and 12. There are 82 ECBs, as shown in Attachment 10-1.
- Remaining Eligible Bridges (REB) - Also as part of the Project remaining bridges will be spread across the entire Commonwealth as shown in Attachment 10-1.

If a specific Replacement Bridge becomes problematic for any reason, that bridge can be removed from the Project and replaced with another Replacement Bridge via a change order.

1.2 Project Scope

The Work generally includes the design, construction, and maintenance of the Replacement Bridges and associated roadway, sidewalks, drainage systems, structures, signing, lighting, traffic signals, and landscaping within the Construction Limits and Maintenance Limits as applicable, as further described in these Technical Provisions.

Development Entity shall manage, plan, execute, and control all aspects of the Work. Development Entity shall coordinate its activities with the Governmental Entities and other Persons that are directly or indirectly impacted by the Work. In addition, Development Entity shall document and report all Work in accordance with the Project Documents.

For the ECB the Department will have acquired all necessary ROW, including easements; will have cleared all utilities; and will have achieved all environmental clearances prior to Notice to Proceed 2 (NTP2). Development Entity may modify the Department's design of an ECB, but shall assume all costs associated with the modified design including costs associated with Environmental Commitments, additional Utility Relocations, design, construction and maintenance.

For the REB the Department will acquire ROW consistent with ROW plans prepared by Development Entity. Development Entity will be responsible for clearing utilities and achieving environmental clearances.

Development Entity shall perform or cause to be performed all Utility Relocations necessary to accommodate construction, operation, maintenance and handback. The Department will assist Development Entity in the Utility Relocation process, to the extent described in the Project Documents. Some Utility Relocations may be performed by the Utility Owner with its own forces and/or contractors and consultants. All others shall be performed by Development Entity with its own forces and/or Contractors and consultants, subject to any approval rights required by the Utility Owner for those working on its facilities. The allocation of responsibility for the Utility Relocation Work between Development Entity and the Utility Owners shall be specified in the Utility Relocation Agreements.

The Department reserves the right to perform or cause to be performed any work in the vicinity of the Project Site. The Development Entity shall cooperate and coordinate with the Department or its agent in the delivery of such work and shall exercise Reasonable Efforts to prevent interference with and hindrance of the progress of such work and shall join such work as may be necessary.

Development Entity shall not damage overhead and underground facilities and structures or property within or adjacent to the Project Site and shall use special care in the performance of the Work in order to avoid interference or damage to operating utilities or plants. Where there is any possibility of interference or damage, Development Entity shall make satisfactory arrangements, prior to Work being performed, with responsible corporate officers of the utilities or plant, covering the necessary precautions to be used during the performance of the Work.

Development Entity shall promptly make restitution for or satisfactorily repair or restore damaged public or private property and shall protect trees to be left standing. If these existing trees to be left standing are damaged, Development Entity shall satisfactorily repair or replace them, at no expense to the Department, or compensate the Department for the damage by an equitable monetary amount as determined by, or agreed with, the Department.

1.3 Project Requirements

Development Entity shall design and construct the Project in compliance with requirements in Publication 408 Change 7 and other Department design manuals, publications and strike-off letters with exceptions as noted in the Technical Provisions and Exception Exhibits 1 and 2.

Requirements for any portions of the Work are not limited to any individual section of these Technical Provisions and may be addressed within more than one section. Development Entity shall review and follow all requirements related to the Work as described in all sections of the Technical Provisions.

Certain AASHTO, ASTM, FHWA and Department standards, manuals and other documents are referenced as requirements in the Technical Provisions and are noted below. If any such standards, manuals or documents are referenced in the Technical Provisions including Attachments and Exhibits, then all Work associated with the commitments, statements, requirements and guidelines included in these documents shall be included in the Project. To the extent any portion of the Work is not expressly governed by these Technical Provisions including all Attachments and Exhibits, the Development Entity shall perform such Work in accordance with Good Industry Practice and the following, as applicable:

The following Standard Special Provisions are applicable to this project:

- a00901 Alternate Erosion And Sediment Pollution Control Plan
- a04001 Super Load Bridge Beams
- a07039 Changes to Specifications: Section 901
- C06131 Item 9613-2001 (9613-0001) Reclaimed Portland Cement Concrete (RPCC) Aggregate For Miscellaneous Drainage
- c10751 Item 9075-20_ _ (ITEM 9075-00_ _) - Containment
- c80201 Item 8621- ____ Mechanically Stabilized Retaining Wall Systems (As Designed)
- c80221 Item 8622-0003 Precast Modular Retaining Wall Systems (As Designed)
- a10451 Steel Materials For Temporary Bridges
- a11701 Mechanically Stabilized Retaining Wall Systems
- a12301 Permanent Anchored Walls
- c10431 Item 9043-2101 (Item 9043-0101) - Epoxy-Based Surface Treatment For Bridge Decks
- c10611 Item 9061-2101 (Item 9061-0101) Shop Metallizing And Painting Of New Structural
- b02011 Emerald Ash Borer Quarantine
- b11061 Section 1106 - Precast Concrete Bridge Beams
- 9850-2XXX (9850-0XXX) Reclaimed Portland Cement Concrete (RPCC) Aggregate For Rock Lining, Class R-____

1.4 Maintenance Work Requirements

Development Entity shall maintain certain Elements within the Project Limits in accordance with Section 17 of these Technical Provisions.

1.5 FHWA Coordination

Development Entity shall not coordinate directly with the FHWA. For processes involving the FHWA, Development Entity shall coordinate with the Department, and the Department will coordinate with the FHWA. Development Entity shall assist the Department as needed in carrying out this coordination.

2 PROJECT MANAGEMENT

The Development Entity shall administer and manage the execution of the Work described in these Technical Provisions and the PPA in accordance with the requirements in this Section 2 of these Technical Provisions and the Project Documents.

Subject to Department review and approval at its sole discretion, the Development Entity shall prepare, implement, manage, and, as required, update a Project Management Plan (PMP), which shall detail the Development Entity's organization, staffing, systems, strategies, approaches, procedures, and methods for the administration and management of the Work in accordance with the Project Documents, as further described in Section 2.3 of these Technical Provisions. There shall be only one PMP for the Development Entity and all Development Entity-Related Entities. This is separate and apart from the PMP required under SAFETEA-LU between the Department and FHWA. The PMP is a collection of several plans as further described in Table 2-1 below and in this Section 2 of these Technical Provisions. Each part of the PMP shall include details of internal and external auditing procedures. All commitments and requirements contained in the PMP shall be verifiable in accordance with ISO quality and audit standards. A listing of the component plans to be included in the PMP is summarized in Table 2-1.

The Department reserves the right to audit and monitor the activities described in the PMP to assess Development Entity performance and assess Noncompliance Points as set forth in Tables 7.1 and 7.2 of Schedule 7 of the PPA.

Table 2-1: Project Management Plan Components

Chapter Title	Technical Provision That Defines the Chapter Requirements
Administration	
Management and Staffing Plan	<u>Section 2</u>
Document and Data Management Plan	<u>Section 2</u>
Risk Management Plan	<u>Section 2</u>
Communications	
Department – Development Entity Communications Plan	<u>Section 2</u>
Cultural Resource Professional (CRP) -Development Entity Communications Plan	<u>Section 4</u>
Public Information and Communications Plan	<u>Section 3</u>
ROW and Environmental	
Utility Relocation Plan	<u>Section 6</u>
ROW Acquisition Plan	Section 7
Waste Management Plan <ul style="list-style-type: none"> • Spill Response Plan 	<u>Section 4</u>
Comprehensive Environmental Protection Plan	<u>Section 4</u>
Design, Construction, and Maintenance	
Quality Management Plan <ul style="list-style-type: none"> • Design Quality Management Plan (DQMP) • Construction Quality Management Plan (CQMP) (See Maintenance Management Plan (MMP) for quality requirements during Maintenance Work)	<u>Section 2</u>
Maintenance Management Plan (MMP) <ul style="list-style-type: none"> • Maintenance Manual • Renewal Work Plan • Maintenance Safety Plan • Transition and Coordination Plan 	<u>Section 17</u>

Affected Third Parties Plan	<u>Section 5</u>
Safety Plan	<u>Section 2</u>
Emergency Management and Disaster Recovery Plan	<u>Section 2</u>
Transportation Management Plan	<u>Section 16</u>
Context Sensitive Design and Aesthetics Master Plan	<u>Section 14</u>

2.1 General Requirements

2.1.1 Project Schedule

The Project Schedule shall define the timeframe for completion of the Project and achievement of milestones, and be used to monitor progress and denote changes that occur during design, construction and maintenance.

2.1.1.1 Project Baseline Schedule

The Preliminary Project Baseline Schedule (PBS-1) submitted with the Proposal shall detail the Work required to complete the Project as defined in Schedule 1 of the PPA. Development Entity shall use PBS-1 as a foundation to prepare a Project Baseline Schedule (PBS) and shall submit a draft of the PBS to the Department for review and approval.

PBS-2 and subsequent updates (PBS-3, PBS-3+) shall be resource and cost-loaded and shall detail all Work required to complete the Replacement Bridges on a bridge-by-bridge basis. Approval of PBS-2 shall be a condition of NTP2. The PBS shall be developed using Primavera 6 (P6). Development Entity shall submit PBS-2 to the Department at least thirty (30) Days prior to the anticipated NTP2. The Department will review PBS-2 within twenty-one (21) Days of submission. In the event that the Department does not approve PBS-2, Development Entity shall revise and resubmit it with changes clearly identified. The Department will review each resubmission of the PBS-2 within 14 Days of resubmission. Development Entity shall submit the PBS-2 on full-size (22" x 34") color PDF, along with an electronic version of the schedule in its native format for each submittal.

An updated PBS between PBS-1 and PBS-2 (PBS-1a) detailing any permitted activities which the Development Entity wishes to undertake prior to NTP2 (such as field investigations, surveys, preliminary Design Work) must be submitted to the Department prior to beginning such activities.

PBS-3 and all subsequent schedule revisions (PBS-3+) shall be submitted a minimum of 14 Days in advance to obtain approval prior to performance of any activity changes to the PBS.

Development Entity shall submit to the Department a revised PBS within 14 Days after each Change Order, Relief Event or Compensation Event is executed. All approved Change Orders, Relief Events or Compensation Events shall be incorporated into the originally planned execution of the Work. The Department shall confirm in writing the approval of each revised PBS. The approved PBS shall remain in force until a subsequent revised PBS is approved by the Department.

The PBS shall include a separate narrative report which describes, in general fashion, Development Entity's proposed methods of operation for designing and constructing each of the bridges required by the Project Documents. The schedule narrative shall describe the general sequence of design and construction, the proposed Critical Path of the Project, and all Milestone schedule deadlines.

The PBS shall include all major Work activities required under the Project Documents, in sufficient detail to monitor and evaluate design and construction progress, from commencement of the Work to Final Acceptance of the Work. The PBS shall also include activities for property acquisition, Utility Relocations, permit acquisitions and maintenance during construction and interfaces with other projects, localities, municipalities and other Governmental Entities. For each major activity, Development Entity shall indicate the duration (in Days) required to perform the activity and the anticipated beginning and completion date of each activity. In addition, the PBS shall indicate the sequence of performing each major activity and the logical dependencies and inter-relationships among the activities.

The PBS shall be organized consistent with the order of the bridge design and construction and called the Work Breakdown Structure (WBS), the minimum requirements of which are included as Attachment 2-1, WBS Requirements, and shall be cost and resource loaded in accordance with Table 2-2. Each schedule activity shall be mapped to one and only one of the WBS elements. Development Entity shall further develop and detail the WBS in accordance with its specific Schedule Activities and retaining the ability to summarize to at least the same level as shown in the base. Development Entity shall submit its developed WBS to the Department for approval as a condition of NTP2. Development Entity may add additional activities to the levels with the Department's approval.

The WBS, as detailed in Attachment 2-1, to be described in the PBS and write-up is as follows:

WBS Level 1 – Project Administration

WBS Level 2 – ROW

WBS Level 3 – Utilities

WBS Level 4 – Design

WBS Level 5 – Prefabrication

WBS Level 6 - Construction

Table 2-2: Schedule Level-of-Detail Requirements

Discipline	Detail	PBS-1	PBS-2	PBS-3+
Project Administration	WBS Level	All levels Per Bridge	All levels Per Bridge	All Levels Per Bridge
	Cost Loading	No	Yes	Yes
	Resource Loading	No	Yes	Yes
ROW	WBS Level	All levels Per Bridge	All levels Per Bridge	All Levels Per Bridge
	Cost Loading	No	Yes	Yes
	Resource Loading	No	Yes	Yes
Utilities	WBS Level	All levels Per Bridge	All levels Per Bridge	All Levels Per Bridge
	Cost Loading	No	Yes	Yes
	Resource Loading	No	Yes	Yes
Design	WBS Level	All levels Per Bridge	All levels Per Bridge	All Levels Per Bridge
	Cost Loading	No	Yes	Yes
	Resource Loading	No	Yes	Yes
Prefabrication	WBS Level	All levels Per Bridge	All levels Per Bridge	All Levels Per Bridge
	Cost Loading	No	Yes	Yes
	Resource Loading	No	Yes	Yes
Construction	WBS Level	All levels Per Bridge	All levels Per Bridge	All Levels Per Bridge
	Cost Loading	No	Yes	Yes
	Resource Loading	No	Yes	Yes

The PBS shall divide the Work into Schedule Activities of reasonable duration with appropriate logic ties to show Development Entity’s overall approach to the planning, scheduling, and execution of the Work. The duration and logical relationships of the Schedule Activities (or summaries at phase level) shall be based on the actual duration and relationships anticipated, with tasks linked.

Development Entity shall use standard and consistent Schedule Activity identification numbers, textual descriptions, and codes in all PBS submittals, in a manner acceptable to the Department. Each PBS submittal shall be clearly identified. Resubmissions of a PBS use the same revision number as the original submission individually identified by a sequential appended letter (A, B, C, etc.), as an identification of a revised version.

Development Entity shall allocate the total cost throughout the Schedule Activities in the PBS. Such allocation shall accurately reflect Development Entity’s cost for each Schedule Activity and shall not artificially inflate, imbalance, or front-load line items.

Each milestone shall be separately identified, conform to the scheduling requirements set forth in the Project Documents, and be assigned a “finish no later than” constraint date.

No unspecified milestones, constraints, float suppression techniques, or use of Schedule Activity durations, logic ties, and/or sequences deemed unreasonable by the Department, shall be used in the PBS. Each PBS submittal shall clearly and individually define the progression of the Work within the applicable time frame by using separate Schedule Activities. The Critical Path shall be highlighted in red on all schedules to distinguish critical Schedule Activities from other Schedule Activities and Float shown for all Schedule Activities.

Float shall not be considered as time for the exclusive use of or benefit of either the Department or Development Entity but shall be considered as a jointly owned, expiring resource available to the Project and shall not be used to the financial detriment of either party. Any method utilized to sequester Float calculations will be prohibited without prior approval of the Department. Any schedule, including the Project Baseline Schedule and all updates thereto, showing an early completion date shall show the time between the scheduled completion date and the applicable Milestone Schedule Deadline as “Project Float.”

The PBS shall be used by the Parties for planning the progress of the Work. Approved logic changes and approved changes to the Contract shall be incorporated into the PBS.

The materials, labor, or equipment quantity that the Schedule Activity value will be based upon shall be indicated as a resource and only those resources actually available to Development Entity shall be included. Labor-loading of activities may be based upon total number of workers, but, at a minimum upon total number of crews. Major construction equipment to be used by Development Entity and Contractors at all tiers in performing Work shall be assigned to applicable activities. The quantity shall represent the estimated effort in-place for the Schedule Activity value.

Development Entity shall develop the WBS with clearly identifiable phases represented in the PBS. The Schedule Activity for each Work element shall indicate the duration, timing, and logical relationship to other Work elements, including to Schedule Activities other than the parent Schedule Activity of the particular Work element. Schedule Activities shall not only be broken down to each bridge but each bridge shall be broken down minimally to Work elements (for example, bridges shall be broken down into permits, ROW, maintenance and protection of traffic for closure or detour, foundation, substructure, superstructure, and decks). All Work shall be broken down to similar manageable Work elements. For Mobilization Schedule Activities or Work elements, Development Entity shall provide a list of Work items that are included in each Schedule Activity or Work element.

The PBS shall include a listing of all submittals as called out in the Project Documents. Submittal activity durations shall include specific durations for the Department and/or FHWA review and/or approval of Development Entity’s submittals as called out elsewhere in the Contract and these Technical Provisions.

Each activity shall have a duration of reasonable and appropriate length. All activities shown in the schedule, with the exception of the first and last activities, shall have a minimum of one predecessor and a minimum of one successor activity.

The Project title and data date shall be displayed on all schedules, charts and diagrams. A legend shall be provided on all schedules, charts and diagrams which indicates the various symbols used and their meanings. Electronic versions shall likewise be uniquely identifiable by filename.

2.1.1.2 Project Status Schedule Updates

The Development Entity shall include Project Status Schedule Updates in the Monthly Progress Reports submitted to the Department no later than the tenth day of each month following the Commercial Closing Date. The Project Status Schedule Updates shall be submitted, if applicable, until Final Acceptance of the Work.

The Project Status Schedule Updates shall accurately reflect the current status of the Project including all activities completed as of the Commercial Close of the current PBS, recovery schedules, schedule revisions due to Relief Events, approved Change Orders, Development Entity's detailed schedule for completing the Work and all information and reporting required for the Project Schedule. At a minimum, the monthly Project Status Schedule Update(s) shall include the following current Work data:

- Detailed resource-loaded schedule of activities that clearly identify the Critical Path.
- Monthly Performance Report
- Actual start and finish dates of Work, physical percent complete, and Days remaining for Work in progress.

The date for use in calculating the Project Status Schedule Update shall be the first day of the following month. The Project Status Schedule Update shall accurately reflect updated progress as of the Commercial Close of the updated PBS, forecast finish for in-progress Schedule Activities and reforecast early dates and late dates for remaining Schedule Activities and shall indicate the overall physically complete percent of the D&C Work. If any actual dates are changed or corrected in any following month, a narrative must be included providing explanation of the change.

Time-scaled network diagrams shall be submitted, on at least a monthly basis, on 22" X 34" sheets in PDF, using a scale that yields readable plots. The network diagrams shall be organized consistent with the Project WBS. Project activities shall be linked by logic ties and shown on their early dates. The Critical Path shall be highlighted and Float, where applicable, shown for all Project activities.

The monthly Project Status Schedule Update(s) shall include additional, separate, filtered lists of Project activities and Work Elements included in the Project Schedule to create the following reports:

- a) Coordinating with and accomplishing Work associated with Utilities,
- b) ROW progress, requirements and submittals for the forthcoming period,
- c) Bar chart schedule sorted by bridge indicating the physical status of all activities as of date of the update,
- d) Graphical report, which compares Development Entity's progress to planned progress by bridge, and major item/WBS,
- e) Design document submittals for the forthcoming period,
- f) Tabular report listing all activities with ten (10) Days or less Float,
- g) Sixty-day (60) look ahead report on all the Department and Governmental Approvals required,
- h) Ninety-day (90) look ahead bar chart schedule sorted by WBS and activity early start dates,
- i) Critical items graphical report for each Critical Path sorted by activity early start date
- j) Time-scaled critical path network plot indicating the status of all activities as of the date of the update, and
- k) Coordination with the Department regarding potential impacts to other Department projects.

The reports shall be accompanied by a narrative progress report describing the status of the Project in detail including progress made that period; plans for the forthcoming period; all potential delays and problems; their estimated effect on the Project Schedule and overall completion, and whether on, ahead of or behind schedule.

The Department will review the monthly Project Status Schedule Update(s) for consistency with Development Entity's WBS and the current approved Project Schedule and for conformance with the Project Documents. Development Entity shall correct any deficiencies and resubmit its monthly Project Status Schedule Update(s). The Department will notify Development Entity of corrections required within ten (10) Business Days of receipt of the Project Status Schedule Update(s).

The Department will use these updates to manage its activities to be responsive to Development Entity's Project Schedule, to analyze Payment Request, and to measure Development Entity's performance with respect to its plan for accomplishing the Work.

Development Entity shall submit the Project Status Schedule Update on sheets no larger than 22" X 34" in color PDF along with an electronic version of the schedule in its native format and a full-size color paper copy. Software settings shall not be changed or modified, for any schedule submissions, without prior Department approval.

2.1.1.3 Monthly Performance Report

The Development Entity shall submit a Monthly Performance Report as described in Schedule 13 of the PPA.

2.1.1.4 Monthly Progress Report

Each month, beginning with the first full month after the Commercial Closing Date, Development Entity shall submit to the Department the Monthly Progress Report. Development Entity shall submit the Monthly Progress Report, including the corresponding Project Status Schedule Update as required by Section 2.1.1.2, no later than the 15th day of each month following the Commercial Closing Date. An electronic copy of the entire progress report shall be submitted to the Department.

The Monthly Progress Report shall contain a narrative which shall include, but not be limited to, the following items:

- a) Describe progress for each Replacement Bridge and the Project as a whole, including all phases of Work. Identify start date and completion dates on major areas of Work. Group the information based on the WBS.
- b) Include the monthly quality report, as required in Section 2.2.1, and summarize QA/QC findings of activities reviewed, findings and resolutions.
- c) List any change order that were identified or executed during the period from the submission of the previous month's progress report to the submission of the current progress report. Include their status.
- d) Identify any Relief Events or Compensation Events that were accepted during the period from the submission of the previous month's progress report to the submission of the current progress report.
- e) Identify Schedule Activities planned for the upcoming period.
- f) Identify problems and issues that arose during the period from the submission of the previous month's progress report to the submission of the current progress report and issues that remain to be resolved.
- g) Summarize resolution of problems/issues raised in previous progress reports or resolved during the period from the submission of the previous month's progress report to the submission of the current progress report.
- h) Identify Critical Path issues and proposed resolution.
- i) Provide a report on the Milestone Schedule Deadlines showing the schedule dates for the immediate prior month and current month. A narrative is required to explain why the dates have changed for variances greater than thirty (30) Days.

- j) Identify requested and/or required Department actions for the next month.
- k) Provide digital progress photographs that accurately depict Project progress as outlined in the progress report narrative.
- l) Project Status Schedule Updates as described above.

If requested by the Department, Development Entity shall make all corrections to the monthly progress report and resubmit.

2.1.1.5 As-Built Schedule

At Final Acceptance of each Replacement Bridge, Development Entity will submit the Project Status Schedule Update identified as the “As-Built Schedule”. The “As-Built Schedule” shall reflect the exact manner in which the Work up to Final Acceptance for each Replacement Bridge and described by the Project Documents was actually performed (including start and completion dates, Schedule Activities, actual durations, sequences and logic). The “As-Built Schedule” shall be signed and certified by Development Entity’s Project Manager and Development Entity’s scheduler as being a true record of when the Work was actually performed. The “As-Built Schedule” that the Department determines is both correct and complete is a requirement for Final Acceptance of the Replacement Bridges.

2.1.1.6 Time Impact Analysis

Development Entity shall submit to the Department a written Time Impact Analysis (TIA) in accordance with Section 10 and Section 12 of the PPA.

Each TIA submitted by Development Entity shall consist of the following steps or elements:

- a) Establish the status of the Project before the impact by using the most recent schedule update that has the closest data date prior to the event for TIA, or as adjusted by mutual agreement.
- b) Identify the impact event, estimate duration of the impact, determine appropriate logic, and insert the impact of the activity or fragments of activities into the schedule.
- c) Demonstrate any resulting affects from the impact through layouts generated from the scheduling software. Filter activities to show added or modified activities and activities impacted from changes. Note any other changes made to the schedule including modifications to the calendars or constraints.

Development Entity shall submit the following with each TIA Submittal:

- a) A narrative report which:
 - Identifies the schedule update(s) used for analysis.
 - Describes the procedures used to analyze schedule impacts, including: Additions, deletions, or modification to activities and or fragments of activities; modifications to the calendars or constraints; and modifications to relationships
 - Describes the impact or potential impact by comparing Work prior to the impact and Work affected or predicted to be affected after the impact.
 - Describes mitigation efforts taken to date.
 - Describes potential resolutions to mitigate or avoid impact.
- b) Schedule layouts in PDF. Filter activities to clearly show impacted activities and affects to the Critical Path. Multiple layouts may be required to adequately demonstrate the impact to the Critical Path. At a minimum, provide a layout demonstrating associated activities prior to the impact and a layout demonstrating associated activities after the impact is inserted and the schedule is progressed.
- c) One electronic copy, in Primavera P6 format, of the impacted PBS.
- d) Other information or documentation pertinent to the analysis.

Incorporation of TIA activities into the Project Schedule Update submittal requires Department approval.

2.1.1.7 Recovery Schedule

If, from a Project portfolio approach, the Work is delayed on any Critical Path item for a period which exceeds the greater of either thirty (30) Days in the aggregate or that number of Days in the aggregate equal to five percent of the Days remaining until Project Final Acceptance, the next Project Status Schedule Update shall include a recovery schedule demonstrating the proposed plan to regain lost Project Schedule progress and to achieve Project Final Acceptance by the specified date.

2.1.2 Submittal Requirements for D&C Work

The process for design submittals, including review, resubmittal as necessary, certification of compliance, design changes and minor modifications, is described below. The requirements for As-Built Drawings and documentation are also described. There are numerous submittals required of the Development Entity in addition to those discussed in this Section 2.1.2 which are described throughout the Project Documents and identified in Attachment 2-2. Under no circumstances is this list of Submittals to be construed as exhaustive and the Development Entity shall be solely responsible for meeting any and all Submittal requirements of the Technical Provisions and the Project Documents.

2.1.2.1 Design Submittal Review Process

Development Entity shall conduct a series of working meetings with its professional services staff, the internal quality control of Development Entity staff and the Department to establish workflow processes and procedures to be utilized during the design review process that are consistent with the Project Documents. Development Entity may, with the Department's approval, utilize a pro team approach to facilitate the design submittal and review process.

Development Entity and the Department shall collaborate and mutually agree upon

- a) the method for bundling of bridges for Work;
- b) a proposed Submittal schedule, and
- c) a list of required Submittals in addition to those identified in the Project Documents.

Reviews of the Submittals for D&C Work shall be evenly scheduled over the duration of the Design Work. Submittals shall be logically organized into manageable pieces and shall contain sufficient information and details to confirm Development Entity intent and to validate conditions.

The purpose of the design Submittal reviews is for the Department to review professional services products for general compliance with Project requirements, sound engineering practice, applicable Law, the Governmental Approvals and the Project Documents.

2.1.2.2 Design Submittals

Preliminary submittals, such as TS&L plans, shall be submitted to the Department as described in Section 10 and Section 12 of these Technical Provisions for approval. Other preliminary submittals may be subject to review and comment.

Development Entity shall not proceed with Final Design until National Environmental Policy Act (NEPA) clearance has been achieved. The Final Design Submittal shall be submitted to the Department for review and comment, and the Design Quality Control Manager (DQCM) shall provide a certification of compliance per Section 2.1.2.4 of these Technical Provisions. Construction packages for individual Work items, elements or phases shall be organized such that the final document package can be assembled in a manner mutually agreed upon by Development Entity and the Department.

The Final Design Submittal shall include a complete set of Design Documents incorporating all of the design submittal review comments received. All documentation, including copies of the Department's approval of Design Exceptions shall be provided with the Final Design Submittal.

Development Entity shall provide quantity estimates for Work covered by Final Design documents. The quantity estimates shall be in units consistent with the quality acceptance and quality review sampling and testing requirements in the CQMP.

2.1.2.3 Resubmittal Process

Resubmittals of any design submittal may be required if deemed necessary by the Department or any Governmental Entities with jurisdiction over the Project. Each resubmittal must address all comments received from a prior submittal in a manner satisfactory to the commenting party. Submittals shall be resubmitted as many times as necessary to address comments from the Department or any Governmental Entity with jurisdiction over the Project.

2.1.2.4 Certification of Compliance

When Development Entity has completed the Final Design Submittal for an item, Element, or phase of Work and wishes to initiate the Department's review and comment of such Design Documents, the DQCM shall certify that:

- a) the Design Documents meet all applicable requirements of the Project Documents, applicable Law and the Governmental Approvals;
- b) the design has been checked in accordance with Development Entity's approved DQMP;
- c) the item or Element is ready for construction; and
- d) the Development Entity has obtained all Governmental Approvals and Utility Owner approvals.

After all concerns and questions have been resolved to the satisfaction of the Department, Development Entity shall provide the Final Design package to the Department. Development Entity's Final Design package shall include, but not be limited to:

- a) Design drawings;
- b) Design calculations;
- c) Design reports;
- d) Specifications;
- e) Electronic files;
- f) Documentation required for all final ROW;
- g) Governmental Approvals;
- h) Utility Owner approvals;
- i) Railroad approvals; and
- j) Approved design exception packages.

The Department's concurrence with the DQCM's certification of compliance will not constitute approval of the design or subsequent construction, nor relieve Development Entity of its responsibility to meet the requirements hereof. Irrespective of whether the Department provides Development Entity with the authority to begin construction on items, elements, or phases of the Work prior to completion of the design for the entire Project, Development Entity shall bear the responsibility to assure that construction meets the requirements of the Project Documents, applicable Law and Governmental Approvals.

Construction of any item, Element or phase covered by the DQCM's certification of compliance of said item, Element, or phase shall only progress to the extent covered by the Design Documents included in that statement. Prior to progressing further with construction of a certified package, Development Entity shall complete the next item, Element or phase of design or complete the Final Design, and obtain the

Department's concurrence. Any items, elements or phases of design, subsequent to the certification of compliance from DQCM, shall be checked and certified by the DQCM in the same manner indicated above.

If the Department determines that the Final Design Documents do not meet the requirements of the Project Documents, applicable Law and/or the Governmental Approvals, the Department will notify Development Entity in writing of any specific deficiencies in the final design documents. Development Entity shall correct such deficiencies; modify the Final Design Documents; and, if necessary, modify construction upon receipt of the Department's comments.

If there is evidence that the DQMP procedures are not adequate, as evidenced by the Department's oversight reviews or problems during construction, the Department may, at its sole discretion, suspend ongoing Work represented by the deficient design and require correction of design and/or construction defects and modifications to the DQMP.

2.1.2.5 Design Changes

Development Entity or the Department may initiate design changes. Design changes may occur either on items, Elements, or phases undergoing construction or after the Department's approval of the design Submittals. Such Design changes of the Replacement Bridge may trigger review by an environmental specialist or NEPA reevaluation. In order to process such changes, Development Entity shall submit, when the problem or change occurs, a Request for Design Change (RFDC) for the Department's concurrence.

All design changes submitted under the RFDC procedure shall undergo the same DQMP checks as the original design.

The Professional Engineer responsible for the original design shall approve design changes during construction, or design changes to final design documents in writing. If the original Professional Engineer is no longer available, then after notification to the original Professional Engineer, an experienced Professional Engineer shall provide documentation of design changes. All plans, final submittals, specifications, calculations, and reports for design changes shall be sealed, signed and dated by this Professional Engineer. In all cases, the DQCM shall certify in writing that the design change has been:

- a) designed in accordance with the requirements of the Project Documents, applicable Law and the Governmental Approvals;
- b) checked in accordance with Development Entity's approved DQMP; and
- c) prepared consistently with other elements of the original design.

Development Entity shall request and schedule interim and final RFDC formal design review(s) by the Department for all design changes made during construction or to the Final Design. Development Entity shall distribute all changes made through the RFDC process to field personnel. All changes made through the RFDC process shall be documented in the As-Built Drawings as required in Section 2.1.2.8.

2.1.2.6 Minor Design Modifications

Minor design changes that do not affect the TS&L concurred with by the Department, do not change ROW needs reflected in the ROW plans, or utility impacts, and do not impact the operations and maintenance responsibilities of the Department, may go through an abbreviated informal design review process as authorized by the Department.

2.1.2.7 Released For Construction Documents

Development Entity shall submit to the Department all Released for Construction Documents in accordance with the submittal requirements of the DQMP. Development Entity's Released for Construction Documents shall comply with the requirements of the Project Documents, and shall be detailed, complete, constructible, and shall allow verification of the design criteria and compliance with Project Documents.

Not later than two (2) Business Days after Development Entity has completed design of any particular Released for Construction Document, Development Entity shall submit the signed and sealed document to the Department.

2.1.2.8 As-Built Drawings and Documentation

As a condition precedent to achieving Final Acceptance of a Replacement bridge, Development Entity shall submit to the Department a complete set of As-Built Drawings for that Replacement Bridge in hard copy and native electronic format for the portion of the Project actually opened to traffic (see also Section 9.3.4 of these Technical Provisions). The As-Built Drawings and documentation shall be an organized, complete record of Plans and supporting calculations and details that accurately represent what Development Entity constructed.

Development Entity shall ensure that the As-Built Drawings reflect the actual condition of the constructed Work for each Replacement Bridge. Development Entity shall submit to the Department the electronic files used to prepare the As-Built Drawings and documentation.

2.1.2.9 Submittal Format for D&C Work

Development Entity shall furnish all submittals by electronic copy in accordance with Section 2.1.2. Unless otherwise stated in the Project Documents, Development Entity shall provide to the Department a PDF electronic copy of each submittal along with the electronic files. The PDF submittal shall have the signature of an authorized representative of Development Entity.

Development Entity shall include with each Submittal a transmittal cover sheet in a form acceptable to the Department.

The minimum sheet size for the submittals shall be 8.5 inches by 11 inches, and the sheet size for plans shall be 22" x 34". Every page in a submittal shall be numbered in sequence.

2.1.3 Document and Data Management

Development Entity shall establish and maintain an Electronic Document Management System (EDMS) to store, catalog, maintain, control, access, search, and retrieve all Project-related documents and records in an electronic format. All Project-related documents in the EDMS shall be electronically searchable and legible. The Development Entity shall incorporate into the EDMS the Department data management system, which the Department may require, and shall train the Development Entity personnel to operate any such data management system. The Development Entity's EDMS shall be used by the Development Entity and all Development Entity-Related Entities. Development Entity shall provide the Department full, real time access to Development Entity's EDMS.

The Development Entity's EDMS shall:

- a) utilize the Department's EDMS plan sheet file naming convention as shown in Attachment 2-3;
- b) use data systems, standards and procedures compatible with those employed by the Department and implement any new operating practices required as a result of the Department's amendments to any such systems, standards and procedures;

- c) use the applicable Bridge Key (BRKEY) number, Multi-modal Project Management System (MPMS) number and structural number (S-Number) for each Replacement Bridge;
- d) provide for the secure access of data by the Department and transfer of data to the Department;
- e) provide for secure document and data storage, such that only authorized Development Entity personnel and authorized Department personnel have access and that documents and data are protected from loss, theft, damage, unauthorized access, or malicious use;
- f) employ appropriate standards and procedures, and train Development Entity personnel to operate any Department data management system which the Department may require in connection with the Project;
- g) provide for electronic storage and electronic transfer of data in native format as may be required by the Department along with the associated searchable portable document format (PDF) images for uploading by the Department; and
- h) provide the Department with procedures and software for accessing the Development Entity's EDMS and all Project-related documents

The EDMS shall encompass the Maintenance Management Information System (MMIS) per Section 17 of these Technical Provisions.

To allow for disaster recovery, Development Entity shall back-up all Project-related documents on a nightly basis and store all Project-related documents in two geographically separate and secure locations on a weekly basis and in a manner consistent with the Development Entity's Emergency Management and Disaster Recovery Plan (EMDRP) and the Project Documents.

Unless otherwise directed by the Department, or indicated in the Project Documents, retention of Project-related documents and records shall comply with the requirements of Publication 408, and regulatory requirements for record retention (49 CFR 18.42). All Project-related documents and records shall be provided to the Department at the end of the Term. Furthermore, the Development Entity shall retain such Project-related documents, records, and data until five (5) years after the end of Term. During such period, when requested by the Department, the Development Entity shall provide the Department copies of such records. As part of the PMP, the Development Entity shall establish, implement, populate, manage, maintain, and, as required, update a Document and Data Management Plan (DDMP) as per Section 2.3.2 of these Technical Provisions.

2.1.4 Personnel

The Development Entity's supervisory personnel, including Key Personnel, shall have the necessary education, training, and experience required for the execution of the Work. The Development Entity's supervisory personnel shall all be approved by the Department prior to any Work being undertaken for which they are responsible in accordance with the Project Documents.

2.1.4.1 Key Personnel

Key Personnel as identified in the PPA are listed below. The first eight Key Personnel were qualified as part of the Request for Qualifications (RFQ) process for this Project. The roles, responsibilities, and requirements for the remaining Key Personnel are included in the list below.

1. Project Executive (if different than the Project Manager): The Project Executive shall be available as necessary to engage with the Department throughout the Term.
2. Project Manager: The Project Manager shall be committed to the Project on a full-time basis until two (2) months after the D&C Work Completion Date. Thereafter until the end of the Term, the Project Manager's time commitment shall be sufficient to carry out his or her required duties.

3. Deputy Project Manager(s): The Deputy Project Manager(s) shall be available to the Project as deemed necessary by the Development Entity.
4. Project Finance Lead: The Project Finance Lead shall be available to the Project as necessary through Financial Close.
5. Construction Manager: The Construction Manager shall be committed to the Project on a full-time basis throughout the Construction Period.
6. Lead Engineer: The Lead Engineer shall be committed to the Project on a full-time basis throughout the Construction Period.
7. Maintenance Manager: The Maintenance Manager shall be committed to the Project on a full-time basis from Substantial Completion of the first Replacement Bridge throughout the Term. During Design Work, the Maintenance Manager's time commitment shall be sufficient to incorporate lifecycle costing into the designs of the Replacement Bridges.
8. Quality Manager: The Quality Manager shall be committed to the Project on a full-time basis during the Construction Period. Throughout the remainder of the Term, the Quality Manager's time commitment shall be sufficient to carry out his or her required duties. The Quality Manager shall have no responsibilities in the production of the Work and shall report directly to the Project Executive or other high-level management of the Development Entity independent of the day-to-day management of the Project.
9. Public Information Coordinator (PIC): The PIC shall lead the Development Entity's public involvement activities on a full-time, day-to-day basis during the Construction Period and as needed during the Maintenance Period. The Public Information Coordinator shall have a bachelor's degree and a minimum of four (4) years of relevant experience on projects of similar type, size, and scope.
10. DBE Coordinator: The DBE Coordinator shall lead the Development Entity's activities in ensuring that all DBE requirements described in the Project Documents are achieved. The DBE Coordinator shall have (i) a bachelor's degree and a minimum of four (4) years of relevant experience on projects of similar type and scope, and/ or (ii) such other significant relevant experience as the Department may approve in its sole discretion..
11. Construction Quality Control Manager (CQCM): The CQCM shall be responsible for management of the quality of the Construction Work as per the CQMP and shall be devoted to the Project on a full-time basis through the Construction Period. The CQCM shall also be responsible for the management of the quality of Maintenance Work, including Renewal Work, and shall have a time commitment during the remainder of the Term that is sufficient to carry out his or her required duties in accordance with the Maintenance Management Plan (MMP). The CQCM shall not be involved with scheduling, design, or production activities, and shall report directly to the Quality Manager. The CQCM shall see that the methods and procedures contained in approved CQMP and MMP are implemented and followed by Development Entity and Development Entity-Related Entities in the performance of the Work. The CQCM shall be a Professional Engineer with at least fifteen (15) years of experience who has had a similar role on at least two design-build projects of similar type, size, and scope.
12. Construction Quality Acceptance Manager (CQAM): The CQAM, who shall be employed by the Construction Quality Acceptance Firm (CQAF), shall be responsible for management of the quality acceptance aspect of the CQMP and MMP. This shall be a full-time role through the Construction Period. For the remainder of the Term, the role shall have a time commitment that is sufficient to carry out his or her required duties. The CQAM shall be a Professional Engineer with at least fifteen (15) years of experience who has had a similar role on at least two design-

build projects of similar type, size, and scope. The CQAM shall report jointly to Development Entity's management team and the Department. The CQAM shall not report to any Person or party directly responsible for design or production activities and shall not be involved with scheduling, design, or production activities. The CQAM shall review, approve, authorize, examine, and confirm any methods or procedures requiring the "Engineers' review, approval, authorization, examination, confirmation, etc." which are contained in Publication 408.

13. Financial Director: The Financial Director shall oversee all financial and accounting functions and personnel and day-to-day financial activities of the Project and shall report directly to the Project Executive. The Financial Director shall have at least four (4) years' experience managing project financing activities for projects of similar size and complexity.
14. Utility Manager (UM): The UM's primary work responsibility shall be the performance of all Developer's obligations with respect to Utility Relocations. This shall be a full-time role through the Construction Period. The UM shall have a bachelor's degree, and have at least four (4) years of relevant experience in coordinating and solving complex Utility Relocations on highway improvement projects. The UM should be authorized by the Development Entity to approve all financial and technical modifications associated with Utility Relocations, and modifications to the Utility Agreements.
15. Design Quality Control Manager (DQCM): The DQCM shall be responsible for management of the quality control program for the design, environmental, ROW, Utilities and survey. This shall be a full-time role during the Design Work. Thereafter until the end of the Term, the Design Quality Control Manager's time commitment shall be sufficient to carry out his or her required duties. The DQCM shall not be involved with direct scheduling or production activities; and shall report directly to the Quality Manager. The DQCM shall see that the methods and procedures contained in the approved DQMP are implemented and followed by Development Entity design staff in the performance of the Work. The DQCM shall be a Professional Engineer with at least fifteen (15) years of experience and who has had a similar role on at least two design-build projects of similar type, size, and scope.
16. Safety Manager: The Safety Manager shall be responsible for achieving the safety goals of the Project. This shall be a full-time role through the Construction Period and a part-time role as required for the remainder of the Term. He/she shall have at least ten (10) years of progressive safety experience, five (5) years of which must be safety management experience, on complex heavy civil projects for the position during the Construction period and similar experience on maintenance projects for the position during the Maintenance Period. Additional requirements include: designation, as a Construction Health and Safety Technician (CHST) or higher certification issued by the Board of Certified Safety Professionals (BCSP), completion of the OSHA 30-hour Safety and Health Course, training and current certification for CPR and First Aid;
17. Environmental Compliance Manager (ECM): The ECM shall be responsible for complying with the Development Entity's obligations regarding environmental compliance and permitting. This shall be a full-time role through the Construction Period and a part-time role as required for the remainder of the Term. The role will be full-time from NTP1 until Substantial Project Completion and part-time to the extent necessary thereafter for the remainder of the Term. He or she will have at least a bachelor's degree in engineering or an appropriate scientific discipline and a minimum of fifteen (15) years of relevant experience, with increasing responsibilities leading to at least one similar role on a project of comparable scope.
18. Quality Assurance Manager (QAM): The QAM shall report directly to the Quality Manager and be responsible for the Development Entity's quality assurance program, which through audits of the quality control program and its elements will verify that the processes described in the QMP

are followed and that the quality requirements of the Project Documents are met. This shall be a full-time role through the Construction Period and a part-time role as required for the remainder of the Term. The QAM shall be a Professional Engineer with at least fifteen (15) years of experience and who has had a similar role on at least two design-build projects of a similar type, size, and scope.

2.1.4.2 Other Supervisory and Professional Personnel

Personnel in Responsible Charge. Development Entity shall designate (by name) the personnel in responsible charge for each item, Element, or phase of the Work. The personnel in responsible charge shall possess the necessary experience, registrations, licenses, and certifications in the State of Pennsylvania as applicable and shall be personally responsible for directly supervising the Work.

Design Work Reviewers. Development Entity personnel performing the quality control check of the Design Work shall not be directly involved with the original development of the item, Element, or phase of the Design Work being checked.

Cultural Resources Professional(CRP). The Development Entity shall provide a minimum of two (2) individuals, one of whom must meet the Secretary of Interior Standards (SOIS), 36 CFR Part 61 for archaeology and one for architectural history respectively. These individuals are trained and delegated to serve as CRPs. Additional requirements are included in Section 4.6.3 of these Technical Provisions. These CRPs shall be available to the Project as necessary throughout the Term.

Hazardous Materials Manager (HMM). The HMM employed by the Development Entity shall be a qualified professional with 40-hour HAZWOPER certification and at least five (5) years of experience in similar projects and experienced in developing IWPs, SIRs, and remedial action plans or equivalent reports necessary and acceptable to PADEP in material discovery and remediation efforts of Hazardous Materials. Additional requirements are included in Section 4.6.2 of these Technical Provisions.

Natural Resource Biologist. The ECM shall designate a Natural Resource Biologist with BS in Biology or related field and NEPA related experience in the Mid-Atlantic Region to provide expertise in monitoring impacts on wildlife and the natural environment during the course of the Work.

Construction Quality Control Staff

Personnel performing QC shall ensure quality of workmanship and QC sampling/testing shall ensure that materials meet the required specifications prior to acceptance testing performed by the CQAF. Personnel responsible for performing quality control shall be knowledgeable and receive training to perform their quality control duties. Personnel performing quality control sampling/testing shall be knowledgeable in the testing methods and procedures. Construction Quality Control Staff are not required to be direct employees of Development Entity, but cannot be employees of the CQAF, and shall not be involved with scheduling or design activities. Construction quality control staff shall follow the direction of the CQCM.

Construction Quality Assurance Staff:

Personnel performing QA shall ensure that the quality control program is implemented consistent with the QMP in order that the materials utilized and workmanship meet the required specifications prior to acceptance testing performed by the CQAF. Personnel responsible for performing quality assurance shall be knowledgeable and receive training to perform their quality assurance duties. Personnel performing quality assurance sampling/testing shall be knowledgeable in the testing methods and procedures. Construction Quality Assurance staff are not required to be direct employees of Development Entity, but cannot be employees of the CQAF, and shall not be involved with scheduling, design, or production activities. Construction quality assurance staff shall report to the QAM.

Construction Quality Acceptance Staff

A quality acceptance inspection and material sampling/testing staff shall be employed by the CQAF and shall, under the direction of the CQAM, perform inspection and material sampling/testing of all Work performed and materials incorporated into the Project by any member of Development Entity's group.

The quality acceptance inspection and testing staff shall have been trained in the applicable inspection and material sampling and testing procedures. The quality acceptance staff shall be experienced in highway and bridge construction inspection and material testing. The training and experience of the quality acceptance staff shall be commensurate with the scope, complexity, and nature of the activity to be controlled and tested. Qualifications shall include appropriate Department certification for testing and inspection. Construction quality acceptance staff shall report to the CQAM and shall not be involved with scheduling, design, or production activities.

The quality acceptance staff shall perform audits of the quality control inspection and material sampling/testing operation.

The quality acceptance inspection staff shall check compliance of all material, equipment, construction, installations, and operations. Construction activities requiring continuous field quality acceptance inspection or sampling and testing, in the sole discretion of the Department, shall proceed only in the presence of the CQAF's quality acceptance (QA) personnel. The CQMP shall identify those activities.

2.2 Quality of the Work

2.2.1 General Requirements

Development Entity shall be responsible for the quality of the Work. As part of the PMP, the Development Entity shall develop and implement a comprehensive Quality Management Plan (QMP) to ensure compliance with the Project Documents and the quality of all aspects of the Project and the Work using a single quality management system, which covers all the activities of the Development Entity and the Development Entity-Related Entities. The Development Entity's quality management system shall include quality control procedures to be utilized to verify, check, and review the quality of all Work (including the quality and accuracy of Project Data) and quality assurance procedures to confirm that the quality control procedures are being followed.

Quality control and quality assurance activities must be performed during Design, Construction and Maintenance Work. Quality assurance personnel will report directly to the QAM.

Construction quality acceptance activities shall be directed and performed by personnel employed by the Construction Quality Acceptance Firm (CQAF) which shall be under contract to the Development Entity, after approval of its contract by the Department. The CQAF shall be an independent firm and shall not be an Affiliate of the Development Entity or any Development Entity-Related Entity. The Development Entity shall delegate to the CQAF unfettered rights and obligations for on-site inspection, sampling and testing of the Work for compliance with the requirements of the PMP and the Project Documents. The CQAF will submit all reports concurrently to the Development Entity and the Department.

Development Entity's quality management system shall include procedures for Development Entity to report and monitor the status of, and close out of, all Nonconforming Work and Noncompliance Events throughout the Term. The Development Entity's quality management system shall include procedures for investigations and surveys undertaken by Development Entity.

The Development Entity's quality management system shall be consistent with the requirements of ISO 9001, and shall include a Corrective and Preventative Action Process (CPAP). For avoidance of doubt, Development Entity may elect to obtain formal ISO 9001 certification, but is not required to do so. Development Entity's quality management system shall include processes to reflect environmental management that is compliant with ISO 14001 requirements.

There shall be only one quality management system for the Project covering Development Entity and Development Entity-Related Entities. Individual quality systems for different Development Entity-Related Entities shall not be permitted.

Development Entity's Quality Manager and quality assurance staff shall have no responsibilities in the production of the Work. Development Entity's and Development Entity-Related Entities' personnel assigned to perform inspection, testing or monitoring shall not be those personnel performing or directly supervising the Work being inspected tested or monitored. Quality control staff shall remain independent of the quality assurance staff.

The Quality Manager shall prepare a monthly quality report of the quality reviews, inspections, and tests performed; results of such reviews, inspections, and tests performed; and occurrences and resolution of Nonconforming Work discoveries. Development Entity shall submit the monthly quality reports to the Department for review as part of the Monthly Progress Report.

Development Entity's Quality Manager, Quality Assurance Manager, and Construction Quality Control Manager(s) shall have the authority to stop Work for quality-related issues.

Unless defined or modified elsewhere in the Project Documents, the quality terminology used in Section 2.2 and Section 2.3.10 of these Technical Provisions shall have the meaning defined in ISO 9001. Terms used in ISO 9001 shall have the meanings defined below:

- "Organization" as used in ISO 9001 shall mean the Development Entity and Development Entity-Related Entities.
- "Customers" as used in ISO 9001 shall mean the Patrons, the Department, FHWA and PADEP,
- "Product" as used in ISO 9001 shall mean the Work.

2.2.2 Quality of Design Work

As part of the Development Entity's quality management system, the Development Entity shall be responsible for the quality of the Design Work, assure compliance of Design Documents with the Project Documents, Governmental Approvals, and applicable Law and develop and implement, at a minimum:

- design quality control process to include policy, procedures and specific roles and responsibilities;
- methods by which all Final Design Documents will be independently reviewed, verified for constructability, completeness, clarity, accuracy, and back-checked;
- procedures and responsibilities for preparing and checking the plans, drawings, specifications, estimates, calculations, computer application input data, notes, and other submittal items;
- procedures and responsibilities for verifying that Design Documents comply with the Project Documents, Governmental Approvals, applicable Law, design standards, and design criteria;
- procedures for submitting Design Documents;
- procedures for resolving and tracking resolution of the Department comments;
- process for stopping Design Work or elevating an issue;
- the Development Entity-Related Entities' review requirements and the Development Entity's role in the review of the Development Entity-Related Entities' Work;
- quality control requirements of the Development Entity-Related Entities;

- quality assurance procedures for documenting compliance with quality procedures;
- distribution of plan revisions, to include field personnel;
- scope and frequency of design, calculations, computer input assumptions, and design details audits;
- incorporation of past audit findings;
- internal and external audit procedures and dissemination of audit results; and
- corrective and preventative action processes.

Such policy, procedures, methods, roles, and responsibilities shall be documented in the Design Quality Management Plan.

2.2.3 Quality of Construction Work

As part of its quality management system, the Development Entity shall be responsible for the quality of the Construction Work throughout the Term, including Renewal Work.

The Development Entity shall retain an independent CQAF to perform construction quality acceptance testing services for all of the Construction Work required under Section 2.2.3.2 of these Technical Provisions from the first NTP3 to the D&C Work Completion. Prior to executing the Contract between Development Entity and the CQAF, as a condition precedent to NTP2, Development Entity shall submit the Contract to the Department for approval. Any proposed changes to the Department-approved Contract must be submitted to the Department for approval prior to executing such changes.

The CQAF shall be an independent firm and shall not be an Affiliate of the Development Entity or any Development Entity-Related Entity. The CQAF must be pre-qualified under the Department's pre-qualification requirements. Before entering into a Contract with the CQAF, the Development Entity shall submit the draft Contract to the Department for review and comment and such proposed Contract shall, at a minimum, include the requirements set forth in Section 2.2.3.2 of the Technical Provisions.

2.2.3.1 Responsibilities of the Development Entity

Development Entity shall:

- execute the D&C Work in accordance with the Released For Construction Documents and all other provisions of the Project Documents;
- be responsible for the quality of the D&C Work ;
- be responsible for clearing utilities and achieving environmental clearances as further described in Section 4 of these Technical Provisions;
- retain a CQAF per Section 2.2.3 of these Technical Provisions;
- be responsible for all construction quality control, whether performed by the Development Entity or the Development Entity-Related Entities, including production of materials, placement of the material, workmanship, and a quality management system;
- inspect materials or equipment at the source of supply, manufacture, and/or fabrication;
- perform materials inspection and testing in accordance with Section 2.2.4 of these Technical Provisions;
- perform construction inspection, sampling and testing to validate the quality control testing in accordance with the PMP;
- maintain a record of all the Development Entity inspections, including but not limited to, date of inspection, sampling and testing undertaken, and the results of such sampling and testing;
- make all quality records immediately available to the Department for review. Development Entity shall provide the Department with a copy of any and/or all quality records when requested;

- submit to the Department the results of all internal audits within seven (7) Days of their completion. When Development Entity becomes aware of any Nonconforming Work, Development Entity shall promptly issue a report of the Nonconforming Work, which shall detail any corrective action plan prepared by Development Entity. Development Entity shall promptly issue a report upon the resolution of the Nonconforming Work, detailing the corrective actions implemented by Development Entity including disposition of failing material and/or Work;
- cooperate with the Department and the CQAF to ensure their ability to perform quality assurance and quality acceptance activities for work performed by Development Entity and Development Entity-Related Entities;
- delegate to the CQAF unfettered rights and obligations for on-site inspection, sampling and testing of the Work for compliance with the requirements of the PMP and the Project Documents;
- on a weekly basis, Development Entity shall provide the Department with a rolling three-week inspection notice. The inspection notification shall include the fabrication schedule and planned Construction Work for each Replacement Bridge, Project Element, or other phase of the Work, as applicable;
- maintain construction records and daily project site activities (PSAs) utilizing the Department's Construction Documentation Management System (CDS V3 ECMS) and, at a minimum, meet the documentation requirements contained in the following Department publications:
 - a) Publication 2 – Project Office Manual
 - b) Publication 8 – Construction Manual
 - c) Publication 19 – Field Test Manual
 - d) Publication 408 – Specifications;
- the responsible technician and his/her supervisor shall sign all sample testing worksheets and the worksheet data shall be entered in eCAMMS within two (2) Business Days after test completion and the test results calculated and saved and finalized and saved; sign up eCAMMS Users and Owning Lab(s) by contacting eCAMMS Support at RA-pdeCAMMSSupport@pa.gov or (717)425-5815; provide all required training, accommodation, facilities and equipment necessary for the CQAF to fulfill its obligations and duties under the Contract between the CQAF and the Development Entity;
- make allowance for the activities of the CQAF in schedules prepared by the Development Entity and in the execution of the Construction Work;
- provide the Department and the CQAF unrestricted access to any part of the Project or facilities where Work is being undertaken that will ultimately be incorporated into the Project, including such locations and facilities where materials or equipment are sourced, manufactured, and/or fabricated;
- provide all the Development Entity quality reports concurrently to the Department and the CQAF;
- ensure that the Development Entity-Related Entities and the CQAF comply with all parts of the PMP;
- beginning at NTP3 and until Final Acceptance, provide access on the Project Site to the plans, specifications, and the Project Documents in electronic or hardcopy format;
- suspend all Work when notified by the Department that the CQAF has failed to provide the services as required under the Project Documents or under the Contract between the CQAF and the Development Entity; and
- immediately suspend Work that is not in compliance with the Project Documents, Governmental Approvals, or applicable Law.

2.2.3.2 Responsibilities of the Construction Quality Acceptance Firm (CQAF)

The services of the CQAF shall be part of the Development Entity's quality management system. The CQAF shall:

- perform independent quality acceptance material testing and inspection;
- perform quality acceptance inspection;
- perform audits addressing compliance with QMP;
- certify that the Work meets Development Entity's acceptance criteria;
- provide an adequate number of quality acceptance staff to reflect the volume of quality acceptance activities necessary for the Work in progress;
- provide adequate staff to be responsive to changes in the construction schedule without impacting the Development Entity's activities or achievement of Milestones;
- provide reports concurrently to the Development Entity and the Department;
- maintain a daily log of all inspections performed for both Development Entity and Contractor operations in a format acceptable to the Department and transmitted to the Department daily. The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed. The responsible technician and supervisor shall sign the daily inspection reports. The results of the daily inspections shall be provided to the Department in an electronic format within twenty-four (24) hours after the work shift is completed; and
- utilize eCAMMS for recording all material test results. The responsible technician and his/her supervisor shall sign the daily test reports. The results of the daily tests shall be provided to the Department in an electronic format within two (2) Business Days after test completion.

2.2.3.3 Responsibilities of the Department

The Department will:

- carry out independent assurance inspections and testing of the Work at its sole discretion; and
- audit Development Entity documents, including design documents, test results, inspection reports and any other documentation at its sole discretion

Performance by the Department of such quality assurance, inspection, verification, sampling, and testing does not relieve the Development Entity of any of its responsibility under the Project Documents and in particular its responsibility for the quality of the Work. The Development Entity shall save and hold harmless the Department from the consequences of all defective Work as well as all Defects, errors and omissions in the plans, Design Documents, and Work prepared by or executed by the Development Entity.

2.2.4 Materials Inspection and Testing

2.2.4.1 Laboratory Requirements

Development Entity shall obtain certifications and perform testing in accordance with the requirements in Publication 408, and PTM and will also comply with the following: Quality acceptance tests shall be conducted by the CQAF's testing laboratory identified in the Construction Quality Management Plan (CQMP) that complies with the requirements of the AASHTO Accreditation Program (AAP) (including AASHTO Materials Reference Laboratory (AMRL) certification) and ASTM Cement and Concrete Reference Laboratory (CCRL) certification as applicable, or other appropriate accreditation acceptable to the Department for the pertinent test. A copy of AAP accreditation certificate(s) shall be transmitted to the Department upon their receipt by the testing laboratory.

Inspections, reviews, and testing shall only be performed by personnel with appropriate training and qualifications, in accordance with the Department Construction Inspection Qualification Chart included as Attachment 2-4 to these Technical Provisions, for each appropriate item of Work (items produced on and off the Project Site) using appropriate equipment that is accurately calibrated and maintained in good operating condition in accordance with Publication 408, PTM, POM, and other related documents.

Equipment in all laboratories shall be calibrated, standardized, or checked according to AASHTO R 18, the applicable test methods, and the equipment operating instructions. Equipment found to be out of calibration, standardization, check tolerances, or defective shall be promptly removed from service. Equipment shall be maintained, as necessary, in regular intervals according to the equipment operating instructions.

2.2.4.2 Supply Source and Material Quality

Quality of all materials shall conform to requirements contained in the Project Documents and to any requirements of affected Utility Owners. The CQAF shall provide plant inspection and aggregate sampling and testing at concrete, steel, precast and asphalt plants. Manufacturers' test reports may supplement, but not replace, the quality acceptance inspections, sampling, testing and certification provisions.

2.2.4.3 Sampling and Testing

The Development Entity and CQAF will adhere to the sampling and testing policies and procedures of Project Office Manual (POM) Section B06-05 covering project sampling in the field and the 2013 Material Acceptance Program (MAP). The MAP covers all sampling and acceptance policies including project field work, quality assurance, independent assurance, and structural materials.

Prefabrication will be compliant with the Project Documents; Publications 408, 135, and 145; and any other Department Publications and Manuals included by reference in the Project Documents.

Disputes over specific test results may be resolved in a reliable, unbiased manner by referee testing and evaluation performed by a referee laboratory. The referee laboratory shall be the Department's central laboratory or a testing laboratory qualified according to the Department's standards. The decision by the referee laboratory will be final.

2.3 Project Management Plan

2.3.1 Management and Staffing Plan

As part of the PMP, the Development Entity shall prepare, implement, manage, and, as required, update a Management and Staffing Plan in accordance with this Section 2.3.1 of these Technical Provisions and the personnel and staffing requirements in the Project Documents. The Development Entity shall include a Management and Staffing Plan, which identifies key individuals, as detailed in Section 2.1.4 of these Technical Provisions and as set forth in the Proposal, and sets out reporting lines, responsibilities, and authority. The plan shall also include details on how the various organizations within Development Entity and Development Entity-Related Entities will be interlinked and managed and shall demonstrate how the design, construction, maintenance, and handback responsibilities will be integrated. The plan shall also include details of management structures and management systems to be used for design management, construction management, and maintenance management. The plan shall also include details of the interface protocols and systems Development Entity and Development Entity-Related Entities shall utilize for interaction among each other, with the Department, third parties, and the public.

2.3.2 Document and Data Management Plan

As part of the PMP, the Development Entity shall establish, implement, populate, manage, maintain, and, as required, update a Document and Data Management Plan (DDMP). The DDMP shall set out the Development Entity's Electronic Document Management System (EDMS) for storing, maintaining, cataloging, searching, controlling, accessing, and promptly and conveniently retrieving all Project-related documents in an electronic format.

In the DDMP, the Development Entity shall describe:

- methods by which all Project-related documents, data, and records shall be uniquely coded, stored, accessed in real-time as may be necessary and/or retrieved. The retrieval system shall allow for prompt, convenient retrieval of any Project-related document in a user friendly format;
- the routing, filing, control, access, and retrieval methods for all documents;
- methods to facilitate fast and convenient sharing of data including procedures and software for accessing all Project-related documents; and
- methods for production, checking, storage and retrieval of all documents and data that shall support records required to be submitted by the Development Entity to the Department under the Project Documents or any other Project-related records that the Department requires.

2.3.3 Risk Management Plan

As part of the PMP, the Development Entity shall submit a Risk Management Plan that describes the approach to identification, management, mitigation, and allocation of Project-specific risks, includes a risk matrix and identifies the following at a minimum:

- a) significant risk categories during the design, construction, maintenance and bridge inspections of the Project;
- b) the potential consequences of the identified risks;
- c) the likelihood of risks;
- d) risk-mitigation strategies and specific measures to eliminate, prevent, or reduce the impact of risks; and
- e) specific procedures to respond in the event such risks occur and mitigate the consequences.

2.3.4 Department – Development Entity Communications Plan

As part of the PMP, the Development Entity shall submit to the Department a Department–Development Entity Communications Plan (Communications Plan) that is consistent with and expands upon the preliminary communications plan submitted with the Proposal. Development Entity shall maintain and update the Communications Plan throughout the Term.

The Communications Plan shall describe the procedures for communication of Project information between Development Entity’s organization and the Department.

The Communications Plan shall describe the submittal process as agreed to by Development Entity and the Department, as required by Section 2.1.2 of the Technical Provisions.

The Communications Plan shall describe how Development Entity’s organization will respond to unexpected requests for information, communicate changes or revisions to necessary Development Entity personnel, and notify affected stakeholders before and after changes are made to the Project Documents.

2.3.5 Cultural Resource Professional (CRP) – Development Entity Communications Plan

As part of the PMP, the Development Entity shall develop, implement, manage, and, as required, update a CRP-Development Entity Communication Plan in accordance with Section 4 of these Technical Provisions.

2.3.6 Public Information and Communications Plan

As part of the PMP, Developer shall develop, implement, manage, and, as required, update a Public Information and Communications Plan in accordance with Section 3 of these Technical Provisions.

2.3.7 ROW Acquisition Plan

As part of the PMP, Developer shall develop, implement, manage, and, as required, update a ROW Acquisition Plan in accordance with Section 7 of these Technical Provisions.

Development Entity will be responsible for development of ROW Plans for the Department's use in acquiring ROW as necessary.

2.3.8 Utility Relocation Plan

As part of the PMP, Developer shall develop, implement, manage, and, as required, update a Utility Relocation Plan in accordance with Section 6 of these Technical Provisions.

2.3.9 Waste Management Plan

As part of the PMP, the Development Entity shall develop, implement, manage, and, as required, update a Waste Management Plan in accordance with Section 4 of these Technical Provisions.

2.3.10 Comprehensive Environmental Protection Plan

As part of the PMP, the Development Entity shall develop, implement, manage, and, as required, update a Comprehensive Environmental Protection Plan in accordance with Section 4 of these Technical Provisions.

2.3.11 Quality Management Plan (QMP)

The QMP shall contain a complete description of the quality policies and objectives that Development Entity shall implement throughout its organization and in the execution of the Work. The policy shall demonstrate Development Entity senior management's commitment to implement and continually improve the quality management system for the Work.

The QMP shall be consistent with the preliminary QMP submitted with the Proposal and expand on the quality control procedures to verify, check, and review the quality of all Work and quality assurance procedures to confirm that the quality control procedures are being followed. The QMP is subject to the Department's approval at the Department's sole discretion; shall be compliant with all referenced laws, manuals and publications and shall be a part of the Project Management Plan.

The QMP shall contain detailed procedures for Development Entity's quality control and quality assurance activities for the Project in accordance with the Project Documents. Development Entity's quality process shall ensure that each Replacement Bridge shall achieve the required level of quality throughout the Term and incorporate planned and systematic verifications and audits. Development Entity shall conduct all quality control, quality assurance and performance verification in accordance with the QMP and the requirements of the Project Documents. The QMP shall be consistent with ISO 9001 and ISO 14001 standards for quality and environmental management systems.

Development Entity shall revise its QMP when:

- a) its own quality management organization detects a systemic or fundamental Nonconforming Work;
- b) its own quality management organization detects a systemic issue with the manner the Work is inspected or tested; or
- c) when the Department advises Development Entity of such a problem.

The QMP shall, at a minimum:

- d) clearly outline the roles, rights, and responsibilities of the Department, Development Entity, and the Construction Quality Acceptance Firm (CQAF), consistent with the requirements of Sections 2.2.3.1, 2.2.3.2 and 2.2.3.3 of these Technical Provisions;
- e) include procedures to report, the status of, and the closeout of, all Nonconforming Work and Noncompliance Events throughout the Term. The QMP shall also include procedures for investigations and surveys undertaken by Development Entity as part of the monitoring process; and
- f) encompass Replacement Bridges and all Work performed by Development Entity and Contractors and suppliers of all tiers.

2.3.11.1 Design Quality Management Plan (DQMP)

Development Entity shall prepare and submit to the Department for review and approval a Design Quality Management Plan (DQMP) that describes its policies, procedures, and staffing to manage the quality of Design Work in accordance with the requirements of this Section 2.3.10.1.

The DQMP shall describe and include at a minimum the following general requirements:

- a) The quality control and quality review procedures for professional services products shall be organized by discipline (such as structural, civil, utilities). These procedures shall specify measures to ensure that appropriate quality requirements are specified and included in the professional services product and to control deviations from such requirements.
- b) Specific quality control and quality review procedures, including all required forms and checklists, shall be specified for preparing, verifying and checking all professional services products to ensure that they are independently checked and back-checked in accordance with generally accepted engineering practices and the requirements of the Project Documents.
- c) The designer and checker shall be clearly identified on the face of all final design documents. The DQMP shall also include specific procedures for verifying the professional services product along with any computer programs being used for such purposes. Design Documents shall be sealed, signed and dated by the Professional Engineer in responsible charge for that item, element, or phase of the Work.
- d) Procedures shall be described for coordinating Design Work performed by different individuals or firms working in the same area, in adjacent areas, or on related tasks to ensure that conflicts, omissions or misalignments do not occur between drawings or between the drawings and the specifications. This shall also include the coordination of the review, approval, release, distribution and revision of documents involving such parties.
- e) Procedures shall: (i) ensure that Development Entity personnel are familiar with all the provisions of the Project Documents concerning their respective responsibilities; (ii) provide for the education, training and certification, as appropriate, of personnel performing activities affecting or assessing the quality of the Work to assure that such personnel achieve and maintain reasonable proficiency; and (iii) ensure that the Work is performed according to the DQMP, generally accepted engineering practices and the Project Documents.
- f) Procedures shall be established for meeting documentation requirements; the filing of design criteria, reports and notes, calculations, plans, specifications, schematics and supporting materials needed during the final design; and the specific responsibilities of personnel to satisfy these requirements. All Design Documents shall be maintained, organized and indexed by Development Entity and copies made available to the Department upon request.
- g) Procedures and schedules shall be established for the Design Quality Control Manager (DQCM) to perform audits of the quality control procedures of the firms involved in the design of the Project under the DQMP; the dissemination of audit results and the addressing of audit findings.

2.3.11.2 Construction Quality Management Plan (CQMP)

Development Entity's Construction Quality Management Plan (CQMP) shall contain detailed procedures for Development Entity's quality control and quality assurance activities for the Construction Work. The CQMP shall establish a clear distinction between quality control and quality acceptance activities and persons performing them. At a minimum, the CQMP shall specify:

- a) Methods and procedures that clearly define the distinction/authority/responsibility for the administration of Development Entity's CQMP.
- b) a methodology for performing daily field inspections of Construction Work and preparing a daily QC report to document the inspection performed.
- c) The review and approval of all Portland cement concrete and hot mix asphaltic concrete mix designs by a Construction Quality Acceptance Firm (CQAF) Professional Engineer.
- d) Methods and procedures to be utilized by Development Entity to obtain active participation of the work force in quality control operations to achieve a quality Project; reporting forms to be used by the responsible quality control personnel shall be included.
- e) A construction quality control organization and staffing plan. The period of time that the quality control staff member will be present on the site shall be shown, resumes of the Key Personnel shall be included, and the experience/knowledge/skill levels of the quality control support staff shall be provided in a matrix format to the Department.
- f) CQAF organizational and staffing plans. The period of time that the quality acceptance staff member will be present on the site shall be shown; resumes of key staff members shall be included; and the required minimum knowledge, technical skills, and experience level of the personnel related to the various inspection functions, such as grading, drainage, pile-driving and structures inspections, that will occur on the Construction Work shall be stated. The administrative/clerical support staff for maintenance and management of records/documents pertinent to quality acceptance for the CQMP activities shall be identified.
- g) Procedures for inspecting, checking, and documenting the Construction Work. Inspection, examinations and measurements shall be performed for each operation of the Construction Work to assure quality.
- h) Procedures to ensure that all activities affecting the quality of the Construction Work are accomplished using appropriate equipment for the task being performed.
- i) Procedures to ensure that the education, training, and certification of personnel performing CQMP activities are achieved and maintained and that all Construction Work is performed in accordance with the approved designs, plans, and specifications.
- j) Procedures to ensure that critical elements of the Construction Work are not started or continued without inspection and testing by the quality acceptance personnel on site. Inspection or hold points shall be identified and communicated to the CQAF, Construction Quality Control Manager (CQCM), and the Department. Procedures to proceed beyond inspection points shall be developed.
- k) Description of specific procedures to ensure that all Construction Work conforms to the requirements of the Project Documents, Governmental Approvals and applicable Law, and the Design documents, as well as that all materials, equipment, and elements of the Construction Work will perform satisfactorily for the purpose intended.
- l) Documents specify that all activities undertaken by or on behalf of Development Entity affecting the quality of the Work shall be prescribed and accomplished by documented instructions, procedures, and appropriate drawings. Such instructions, procedures and drawings shall include quantitative and qualitative criteria to be used to determine compliance.

- m) Measures to ensure that purchased materials comply with Publication 408 and Bulletins 14 and 15, equipment, and services conform to the Project Documents, and Governmental Approvals, applicable Laws, rules, and the Design Documents. These measures shall be consistent with Good Industry Practice and shall include provisions for source evaluation and selection, objective evidence of quality furnished by Contractors and Suppliers, inspection at the manufacture or vendor source, and examination of products upon delivery.
- n) Procedures for identification and control of materials, equipment, and Project Elements. These procedures shall be consistent with Good Industry Practice to ensure that identification of the Element is maintained by appropriate means, on the Element, whenever possible, and as part of the EDMS to ensure that the identification is part of the Project records traceable to the material, equipment, or Element, as necessary, throughout fabrication (onsite and offsite), erection, installation and use of the material, equipment, or Element.
- o) Procedures to ensure that materials, equipment or elements of the Construction Work that do not conform to requirements of the Project Documents, the Governmental Approvals, applicable Law or the Design Documents are not used or installed. These procedures shall include identification, documentation, segregation, disposition and notification to the Department and, if appropriate, Governmental Entities and other affected third parties, as well as procedures for the Department to review Nonconforming Work and procedures to prevent reoccurrence of Nonconforming Work
- p) Procedures for processing an RFI to resolve discrepancies and/or questions in the plans and specifications so that all changes are documented and approved by Development Entity's design engineers with concurrence by the Department.
- q) Procedures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the Construction Work.
- r) A program for inspection for each operation of all Work examinations, measurement and test of materials or elements of the Construction Work to assure quality.
- s) A program for coordination of all inspection and testing with the inspections and tests of Governmental Entities and Utility Owners.
- t) A program to ensure performance of all testing required to demonstrate that all materials, equipment and elements of the Construction Work will perform satisfactorily for the purpose intended and meet the standards specified in the Project Documents. It shall specify written test procedures which include provision for ensuring that all prerequisites for the given test have been met and that adequate test instrumentation is available and used. The CQMP shall require test results be documented and evaluated to ensure that test requirements have been satisfied. The CQMP shall also demonstrate how the CQAF will track its testing frequencies to ensure compliance with the Project Documents.
- u) Procedures for reviewing and approving acceptance test results, categorizing test results in a manner acceptable to the Department, transmitting acceptance test results to the Department using eCAMMS for use in fulfilling its statistical validation requirements, and working collaboratively with the Department to resolve statistical non-validation between CQAF and the Department test results.
- v) Detailed descriptions of the inspection and test plans, including the timing, quantities represented and frequency of testing, that Development Entity will use to meet quality control and quality assurance requirements of the Construction Work.
- w) Measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly maintained, controlled, calibrated, certified and adjusted at specified periods to maintain accuracy within industry standards.

- x) Procedures to control the handling, storage, shipping, cleaning and preservation of materials and equipment to prevent damage or deterioration.
- y) Procedures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, defective material and equipment, deviations and other Nonconforming Work are promptly identified and corrected. The procedures shall ensure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition and the corrective action taken shall be documented and reported to the Department in writing and to appropriate levels of Development Entity's management to ensure corrective action is promptly taken.
- z) A comprehensive system of planned and periodic audits of Development Entity's CQMP to determine adherence to and the effectiveness of the CQMP. CQAF personnel shall perform the audits in accordance with the written procedures or checklists. Audit results shall be documented, reviewed, and acted upon by Development Entity. Follow-up action, including re-audit of deficient areas following corrective action, shall be taken.
- aa) Measures to control the receipt and issuance of controlled documents, such as instructions, procedures, training manuals and drawings, including changes thereto, which prescribe activities affecting quality. These measures shall ensure that approved documents, including authorized changes thereto, are reviewed for adequacy and approved for release by authorized personnel of Development Entity and are distributed to and used at the location where the prescribed activity is performed. Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless the Department consents, in writing, to another responsible organization.
- bb) The requirements and methods for controlling documents. Development Entity's document control system shall be compatible with the Department's and in compliance with Section 2.1.3 of these Technical Provisions.
- cc) Procedures and personnel to be used to assure that specified instrumentation is installed and monitored in accordance with applicable specification.
- dd) The form and distribution of certificates of compliance.
- ee) Procedures for quality acceptance in the CQMP with respect to checking and verifying the accuracy and adequacy of construction stakes, lines, and grades established by Development Entity.
- ff) In order to inspect the Construction Work and to perform independent quality assurance inspection, verification, sampling, testing and audit for compliance with the Project Documents, Development Entity will provide to the Department unrestricted entry at all times to such parts of the Project and facilities that concern the manufacture, fabrication (onsite and offsite), production, or testing. Performance by the Department of such quality assurance, inspection, verification, sampling, testing and audit does not relieve Development Entity of any of its responsibility under the Project Documents and in particular its responsibility for the quality of the Construction Work.
- gg) Procedures for achieving substantial completion and final acceptance for each Replacement Bridge and the Project, including procedures to certify to the Department that all Construction Work meets all acceptance criteria.

2.3.11.3 Quality Management Organization

Development Entity shall regularly maintain the QMP to contain current versions of the following information:

- a) The organizational chart that identifies all quality management personnel, their roles, authorities and line reporting relationships.

- b) Description of the roles and responsibilities of all quality management personnel and those who have the authority to stop Work.
- c) Identification of testing agencies, including information on each agency's capability to provide the specific services required for the Work, certifications held, equipment and location of laboratories for products produced both on and off the Project Site.
- d) Resumes for all quality management personnel.

2.3.12 Maintenance Management Plan

As part of the PMP, the Development Entity shall develop, implement, manage, and, as required, update a Maintenance Management Plan, including the Maintenance Manual, Renewal Work Plan, Maintenance Safety Plan, and Transition and Coordination Plan, in accordance with Section 17 of these Technical Provisions.

2.3.13 Affected Third Parties Plan

When Work interfaces with third party facilities, Development Entity is responsible for coordinating in a timely fashion the Work with all third parties potentially affected by the Work.

As part of the PMP, the Development Entity shall develop, implement, manage, and, as required, update an Affected Third Parties Plan., which describes how Development Entity will mitigate the impact of the Work upon potentially impacted third parties, for the Department's review prior to initiating discussions with potentially impacted third parties.

When the Work interfaces with other construction projects within, connecting to, or impacted by project detours, Development Entity shall coordinate the Work with the other projects to ensure that the proposed design, construction, and schedules for the Project and other projects are not in conflict. A description of how Development Entity will coordinate with other construction projects shall be included in the Affected Third Parties Plan.

2.3.14 Safety Plan

Development Entity shall be responsible for the safety of its personnel and of the general public affected by the Work.

As part of the PMP, the Development Entity shall submit to the Department for review and approval a comprehensive safety plan ("Safety Plan") that complies with OSHA requirements and is consistent with and expands upon the preliminary safety plan submitted with the Proposal. The Safety Plan shall fully describe Development Entity's policies, plans, training programs, Project Site controls, and Incident response plans to ensure the health and safety of personnel involved in the Project and the general public affected by the Project during the Term. The Safety Plan shall in particular present how the Development Entity shall comply with the requirements in Sections 2.3.14.1 and 2.3.14.2 of these Technical Provisions.

Development Entity's Safety Plan shall address procedures for immediately notifying the Department of all Incidents arising out of or in connection with the performance of the Work, whether on or adjacent to the Project.

2.3.14.1 Occupational Safety and Health

The Development Entity shall comply at all times with applicable Federal, State, and local laws and regulations, provisions, and policies governing safety and health, including the Federal Construction Safety Act (Public Law 91-54), 29 CFR Chapter XVII, Part 1926, Occupational Safety and Health Regulations for Construction, and the Occupation Safety and Health Act (Public Law 91-596), 29 CFR

Chapter XVII, Part 1910 Occupational Safety and Health Standards for General Industry, and subsequent publications updating these regulations.

The Development Entity shall take any other needed action or proceed as directed, to protect the life, health, and general occupational welfare of personnel employed on the project, to provide confined space training on the proper use of the testing equipment and all safety procedures to ensure a safe operation to Development Entity personnel and Department personnel required to access the area for inspection purposes and to provide all safety and testing equipment required by 29 CFR 1910.146, to both Department personnel and Development Entity personnel to ensure the safety of all workers and inspectors during construction operations and inspection operations of any confined spaces. The Development entity shall also provide proof of training, such as a course sign-in sheet or certificate of training. Provide appropriate rescue services, personnel, and equipment as per 29 CFR 1910.146(k).

If, in the Department's opinion, persons on a Project Site are exposed to extraordinary conditions which could or do constitute a hazard, , the Development Entity shall modify such equipment, devices, and job procedures to ensure protection against the hazard or to reduce the risk.

The Development Entity shall give special emphasis to providing safeguards for any specially or unusually hazardous operations and health hazards. Include initial indoctrination and continuing instructions for all employees to enable them to perform work in a safe manner. Include in the instruction project safety practices, manner of reporting accidents, availability of medical facilities, and explanation of individual responsibility for accident-free operations.

The Development Entity shall require all persons to wear high-visibility safety apparel that is intended to provide conspicuity during both daytime and nighttime usage, and that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear" while in work zones exposed either to traffic or to construction equipment.

During Construction Work, Maintenance Work, and Renewal Work, a Project Site will be a hard hat area. The Development Entity shall require all persons within the project limits to wear protective headgear and high-visibility vests, including persons in cement concrete and bituminous concrete plants operated exclusively for the Project, even though the plant(s) may be remotely located.

2.3.14.2 Accessibility of Fire Hydrants

The Development Entity shall make necessary arrangements with the local authorities to provide fire protection at all times, keep the fire hydrants adjacent to the work readily accessible to fire apparatus and not place material or other obstructions within 15 feet of any hydrant.

2.3.15 Emergency Management and Disaster Recovery Plan

As part of the PMP, the Development Entity shall develop, implement, manage, and, as required, update an Emergency Management and Disaster Recovery Plan (EMDRP) that covers the procedures for Emergency, Incidents and Force Majeure Events that may disrupt the Work or damage the Project. The EMDRP shall describe Development Entity's plan for responding to Emergency Incidents and other situations that may disturb the Work or damage the Project including but not limited to:

- Severe weather incidents such as tornados, hail storms, snow storms and flooding.
- Power failures that may affect traffic signals and lighting.
- Vehicular accidents that may damage facilities or interfere with traffic flow.
- Hazardous Materials spills including flammable liquids.

The EMDRP shall set out Development Entity's systems and procedures for limiting disruption to the Work and the operation of the Project and protecting documents and data in case of disaster, and promptly resume Work and restore the Project post-disaster.

Development Entity's EMDRP shall:

- identify relevant systems and their level of criticality to the Work and the continuing operation of the Project;
- identify the relevant personnel;
- categorize the different types of data, systems, and operations according to their criticality;
- identify the levels of redundancy, security, verification and any other precautions required to protect and restore critical systems and data;
- identify potential disaster and major hazards to the Project and Development Entity's action plan and procedures in response to each to restore Project operation after such event;
- describe how Development Entity shall coordinate with the Department, local law enforcement agencies and emergency personnel, and affected third parties in response to Emergencies and Incidents; and
- describe how Development Entity will notify the public about the Emergencies and Incidents.

Developer shall provide the Department staff with training in the relevant disaster recovery procedures and systems utilized by Development Entity.

2.3.16 Traffic Management Plan

As part of the PMP, the Development Entity shall develop, implement, manage, and, as required, update a Traffic Management Plan in accordance with Section 16.2.1 of these Technical Provisions.

2.3.17 Context Sensitive Design and Aesthetics Master Plan

As part of the PMP, Developer shall develop, implement, manage, and, as required, update a Context Sensitive Design and Aesthetics Plan in accordance with Section 14 of these Technical Provisions.

2.4 Materials and Equipment

2.4.1 Material Source and Quality: General

- a) Preliminary Acceptance and Approval. Have the source(s) of material supply listed on Form CS-200 (Source of Supply – Materials) or Form CS-201 (Source of Supply – Traffic Items) and approved before delivery to Project Site.
 1. Preapproved Sources. For any preapproved source of material supply, submit the following to the Department: source; description; and specified use. Obtain copies of form CS-4171 Certificate of Compliance', where applicable. If after initial acceptance of a pre-approved material, the supplier is no longer able to provide the specified material, submit for approval another pre-approved source to the Department for review and approval.
 2. Other Sources. Non-bulletin material must be submitted to the Department for approval prior to use. Non-bulletin material includes:
 - a) any material, product, or material source not listed in Bulletin 14 or Bulletin 15;
 - b) any material, product, or material source listed in Bulletin 14 or Bulletin 15 being used in an application not intended or specified in the Bulletin, Publication 408, or a Special Provision;

- c) any bituminous material or product not produced at a source listed in Bulletin 41;
- d) any bituminous material or product not specified in Publication 408 or a Special Provision;
- e) any ready-mixed, cement concrete material or product not produced at a source listed in Bulletin 42; and
- f) any ready-mixed, cement concrete material or product not specified in Publication 408 or a Special Provision.

Construction-Aid Material is a necessary, temporary, or ancillary material that is not specified for use as part of a contract item or extra work item, but used by the Development Entity only to aid in the completion of the Work. The material is typically not a permanent part of the specified Work (example: wood and nails for temporary formwork). The material need not be listed on Form CS-200 and does not require any Department approval for delivery to or use on the Project. The Department reserves the right to determine whether a material is a construction-aid material. Note temporary traffic control items are not construction-aid materials and do need to be listed on Form CS-201 since these items must be from Bulletin 15 listed sources and are specified for use as part of contract items or extra work items.

Project-specific, Laboratory Testing Section (LTS) approved material is non-bulletin material proposed for use on a particular project as part of a contract item or extra work item, which requires approval by the LTS. Use of material is not meant to circumvent the use of available material sources listed in Bulletin 14, 15, 41, or 42. Have each material and material source listed on Form CS-200 or Form CS-201. The material is defined as any material, product, or material source that meets one or more of the following criteria:

- a) meets specified requirements in Publication 408 or Special Provision, for the material and material application;
- b) meets specified requirements in AASHTO or ASTM Standard for the material and material application;
- c) meets specified requirements in project Special Provision for the material and material application.

Submit material to the LTS for evaluation and testing a minimum of 90 days before planned delivery to the Project. Submit the following information to the LTS, with a copy to the Department: source, description, specified use, QC Plan, independent lab test data showing material meets all specified requirements as determined on a single lot of material, and material samples of the kind and quality specified. Do not deliver material to the project until written acceptance is received from the Department.

Project-specific Department approved material is non-Bulletin material proposed for use on a particular project as part of a contract item or extra work item, which does not require LTS approval because of the low risk to constructed Project performance, but does require approval by the Department. This category of material is not meant to circumvent the use of available material sources listed in the Bulletins, or the requirements of Project-Specific, LTS Approved Materials. These materials must meet specification requirements and will be clearly identified in the specification as only needing Department approval. Have each material and material source listed on Form CS-200 or Form CS-201. Submit for Department approval all required information for the material, as indicated in the specification. Examples of locally approved materials are project specific items, such as inlet filter bags, compost filter socks, and compost blanket and compost filter berms where the specification indicates that these materials are to be

locally approved. Bulletin 15 will reference specific Publication 408 Sections that apply to Locally Approved Materials. Bulletin 15 will not list actual materials or material sources for this category of materials as they will be accepted for use on a project-specific basis by the Department.

Do not deliver material from the unapproved source to the Project Site until written acceptance is received from the Department. The Department reserves the right to obtain samples of the material provided by the Development Entity for laboratory testing to verify compliance with specifications.

- b) Inspection. Inspect material delivered to the Project Site and stockpile the material passing inspection for use. Do not incorporate questionable material until material is tested and accepted by the Department in writing. Questionable material delivered to the Project Site shall be rejected when test results are not according to the specifications. Furnish assistance as required to obtain samples.

The Development Entity shall allow the CQAF and Department representatives unrestricted access to inspect material being used, or intended to be used, at any time before, during, or after material preparation, while being used during the progress of the Work, or after the Work has been completed. Furnish or arrange with producers or manufacturers to provide necessary material, labor, tools, and equipment for such inspection.

Inspections and tests, if made at any point other than the point of incorporation in the Work, will not guarantee acceptance of the material. Inspection and testing performed will not relieve the Development Entity's responsibility for quality control or Handback Requirements.

2.4.2 Material Source and Quality: Steel and Aluminum

The Development Entity shall comply with the provisions of the Pennsylvania Trade Practices Act, 71 P.S. Section 773.101, et seq., concerning the purchase of aluminum and steel products produced in a foreign country and shall also comply with the Buy America Provisions and Convict Produced Materials provisions according to 23 CFR 635.410 and 23 CFR 635.417.

The Development Entity shall comply with the provisions of the Steel Products Procurement Act, 73 P.S. Section 1881, et seq.

For Fabricated Structural Steel materials, and any other fabricated aluminum, precast or prestressed concrete products inspected during manufacturing, stamped, the Development Entity shall furnish Form CS-4171 to the Department. Certified mill test reports for any steel included will be reviewed by the Department and retained by the fabricator.

For all other steel products or products containing steel that will serve a permanent functional use in the Project, the Development Entity shall provide the CQAM the following when the product is delivered to the Project Site:

- i. For any "identifiable" steel products, certification that Section 4 of the Steel Products Procurement Act, 73 P.S. Section 1884, has been complied with. Identifiable steel products are steel products which contain permanent markings which indicate the material was both melted and manufactured in the United States.

- ii. For all other “unidentifiable” steel products, documentation such as invoices, bills of lading, and mill certification that positively identify that the steel was melted and manufactured in the United States.

The provisions of the Steel Products Procurement Act will not be waived unless the Secretary has determined, under authority granted in Section 4(b) of the act, that a certain steel product or products is not produced in the United States in sufficient quantities to meet contract requirements. Such a determination will be set forth in a proposal for the Department’s review and response. Include with the proposal a comprehensive list of sources, including names and contact information, for verification. This determination has no impact on the Buy America provisions under Federal law.

Steel products are defined as products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, otherwise similarly processed, or processed by a combination of two or more of these operations from steel made in the United States by the open hearth, basic oxygen, electric furnace, Bessemer, or any other steel-producing process. Included are cast iron products and machinery and equipment as listed in United States Department of Commerce Standard Industrial Classification 25, 35, and 37 and made of, fabricated from, or containing steel components. If a product, as delivered to the project, contains both foreign and United States steel, such product is considered to be a United States steel product only if at least 75% of the cost of the articles, materials, and supplies have been mined, produced, or manufactured, as the case may be, in the United States. Any person who willfully violates the Steel Products Procurement Act will be prohibited from submitting bids for any contract for a period of 5 years from the date of determination that a violation has occurred. If a subcontractor, manufacturer or supplier, violates the Steel Products Procurement Act, such Person will be prohibited from performing any work or supplying any materials to the Department for a period of five (5) years from the date of determination that a violation has occurred.

If steel products are used as a construction tool or appurtenance and will not serve a permanent functional use in the project, compliance with the Steel Products Procurement Act is not required.

When standard manufactured items are specified and these items are identified by unit mass (unit weight), section dimensions, or similar characteristics, their identification will be considered to be nominal masses (weights) or dimensions. Unless more stringently controlled by specified tolerances, industry established manufacturing tolerances will be accepted.

2.4.3 Use of Materials from within the Project Site

With written permission from the Department, material(s) found in the excavation areas and meeting the Department’s specifications may be used in Construction Work. However, replace any portion removed with suitable material(s) meeting the Department’s specifications, if required to complete the embankments. The replaced quantity will be 110% of the volume of stone or gravel removed and 100% of the volume of sand and other material removed.

2.4.4 Storage of Material

- a) General. Store material to assure preservation of specified quality and fitness for the Work. Stored material, even though accepted by the Department before storage, may again be inspected before use in the Work. Locate stored material in a way that facilitates prompt inspection and control.

Do not use private property for storage purposes without written permission from the owner or lessee. Make a copy of this permission available to the Department. After use, restore storage sites to the initial conditions or better that is acceptable to each property owner or lessee and the Department. Obtain a written release from each property owner or lessee, and make a copy of this release available to the Department

- b) Storage of Aggregates. Provide a separate stockpile for each aggregate size and type at cement concrete plants.

Do not use aggregates that become segregated or mixed with earth or foreign material.

If divided aggregate bins are used for storage or for proportioning, take measures to prevent mixing of aggregates.

Provide an area for storage of aggregates for use in Portland cement concrete and bituminous concrete. Store aggregates on one of the following constructed according to standard practice:

- Bituminous concrete base course, 4 inches minimum depth.
 - Class C concrete, or better, 4 inches minimum depth.
- c) Control of Aggregates. Have aggregates available for use in cement concrete at the proportioning plant in enough time before batching to allow inspection and testing. Handle the aggregates so they may be field tested and accepted, before storing them with previously accepted aggregates. Batch fine and coarse aggregates separately. Properly control uniformity of moisture and uniformity of gradation. Provide a system of water sprays, then use when required, to maintain coarse aggregate moisture control.

During cool and cold weather concrete production, maintain aggregates required for individual concrete placements, whether stored in proportioning bins or stockpiles, at a temperature of not less than 40F before and during batching operations, for a sufficient length of time to eliminate the presence of frost in or around the aggregate particles.

- d) Storage of Reinforcement. Satisfactorily store reinforcement above ground, in a clean and dry condition on a platform, in an orderly manner, plainly marked to facilitate inspection.

2.4.5 Handling and Transportation of Material

- a) General. Carefully handle material to preserve quality and fitness for the work and to prevent loss, segregation, or inconsistency in quantities after weighing or measuring for incorporation in the Work.
- b) Aggregates. In dry batching operations, measure aggregates or weigh before placing in the compartments of the vehicle, unless otherwise specified or permitted. Clean the vehicles and provide tight batch partitions at least 4 inches higher than the batched aggregate level being hauled, to prevent any spillage from one compartment to another.
- c) Bulk Cement. Bulk cement may be used, as specified in Section 701 of Publication 408.

If bulk cement is used, transport to the mixer in acceptable metal, rubber, or plastic, watertight containers or compartments.

- d) Bag Cement. If bag cement is used, dump the contents of the correct number of bags required for each batch into the mixer skip. If permitted, bag cement may be transported from storage to the mixer by placing the correct number of bags per batch on the batched aggregate in the aggregate compartments. When transported, the bag cement may be dumped on the aggregate after having been checked by the inspector, and if done not more than 100 feet from the mixer. Bag cement that is allowed to lie on the batched aggregates longer than 2 hours, or cement dumped on the batched aggregate longer than 1 hour, must be rejected.

2.4.6 Acceptance of Construction Loading and Material Stockpiling on Bridges

Do not stage equipment or stockpile materials on a bridge unless a written authorization has been given by Development Entity's Engineer of Record. Submissions are to be signed and sealed by the Engineer of Record. Provide the Department a construction analysis for staged construction or if construction is over live traffic.

Development Entity shall accept liability for damages resulting from the stockpiling of materials or from the operation and movement of construction equipment.

The requirements of this Section 2.4.6 are applicable from NTP3 to Substantial Completion. All the following conditions must be satisfied:

- All applicable structural members are erected.
- Spans proposed for construction loading and material stockpiling are completed from expansion joint to expansion joint or from abutment to abutment excluding barriers and deck joints.
- If staged construction for maintenance-of-traffic, spans of staged width proposed for construction loading and material stockpiling are completed from expansion joint to expansion joint or from abutment to abutment excluding barriers and deck joints, and the staged width has been designed for and will be opened to all legal loads without restriction.

For construction equipment on deck slabs, the written request must describe the loading magnitude, arrangement, movement, and position of the equipment on the structure, including the mechanism of load transfer (load path) to the bridge.

2.4.7 Loading Limits

For spans over 40 feet, carrying live traffic loads (staged construction) or over live traffic, limit the stockpiling of material and staging of equipment on a non-weight posted completed bridge the following:

1. Individual material stockpile (including but not limited to pallets of products, reinforcement bar bundles, aggregate piles) - Limited to one individual stockpile with a maximum weight of 250 pounds/square foot and a maximum size of 100 square feet.
2. Multiple material stockpiles - Maximum weight of 65 pounds/square foot with a maximum total stockpile area of 1000 square feet.
3. Combinations of material stock piles, vehicles, other materials, and equipment are limited to a maximum total weight of 100,000 pounds per span in any for work zone width less than 24 feet, and a maximum total weight of 200,000 pounds per span for work zones \geq 24 wide, provided loading limits in Sections 105.17(a)1 and 2 are not exceeded. The force effects produced by combinations of material stockpiles, vehicles and other materials and equipment are limited to the force effects produced by vehicles of legal configuration evaluated at operating rating levels as defined in Publication 238.

On a weight posted completed bridge, the above thresholds are to be reduced proportionately based on the ratio of the posted load limit(s) to the legal load limit(s).

If loads are proposed that will exceed the above loading limits or loads are proposed to be placed on an incomplete bridge, submit analytical calculations showing the flexural, shear, and axial stresses due to construction loadings do not exceed the operating stress levels as defined in Publication 238 for the main load carrying members of the structure or the deck slab.

2.4.8 Placement of a Crane

Submit a working drawing to the Department showing the location of crane, matting, and all other loads and denote their weights. Submit analytical calculations showing that flexural, shear, and axial stresses due to construction loadings do not exceed the operating stress levels as defined in Publication 238 for the main load carrying members of the structure or the deck slab. Provide matting to protect the deck slab from damage. Placement of cranes is not allowed on newly constructed bridge decks until the deck concrete has cured for a minimum of fourteen (14) Days and has attained a minimum compressive strength of 4,000 pounds per square inch.

2.5 Department Offices

2.5.1 Field Offices

Development Entity shall provide field office space for the exclusive use of the Department's field staff during Construction Work as specified in this Section 2.

Subject to the Department's prior written concurrence, Development Entity shall provide separate facilities for the Department's staff located within the same complex(s) as Development Entity's field office(s).

Development Entity shall provide the field staff facilities at least fourteen (14) Days prior to starting any Work activity involving staff that shall occupy the field staff facilities. Field staff facilities shall remain in operation until the completion of the D&C Work.

2.5.2 Office Space Requirements

Although actual space requirements shall depend upon Work schedule and geographic locations of the field offices, a typical field office should include the following:

- a) Offices - Enclosed offices for the Department's construction representative (150 square feet).
- b) Offices/Cubicles - Offices or cubicles for up to two (2) field engineer/inspection/administration staff (100 square feet each).
- c) All Offices shall include electrical and telecommunications, printer and internet access with mobile capabilities, and access to restroom facilities.

2.6 Deliverables

Development Entity shall submit the deliverables discussed throughout Section 2, including but not limited to:

- PBS & updates (Project Working Schedules)
- Project Status Schedule & updates
- Monthly Performance Report
- Project Management Plan, comprised of:
 - Management and Staffing Plan
 - Quality Management Plan
 - Design Quality Management Plan
 - Construction Quality Management Plan
 - Maintenance Management Plan
 - Comprehensive Environmental Protection Plan
 - Public Information and Communication Plan
 - Context Sensitive Design and Aesthetics Master Plan
 - Document and Data Management Plan
 - Safety Plan

- Department – Development Entity Communications Plan
- ROW Acquisition Plan and Utility Relocation Plan
- Risk Management Plan
- Affected Third Parties Plan
- Emergency Management and Disaster Recovery Plan
- Waste Management Plan
- CRP – Development Entity Communications Plan
- Maintenance Management Plan
 - Maintenance Manual
 - Renewal Work Plan
 - Maintenance Safety Plan
 - Transition and Coordination Plan
- Transportation Management Plan
- All construction related deliverables including, but not limited to, materials certifications, CQAF certifications and other documentation
- Finalized CDS V3/ECMS documentation.

Under no circumstances is this list of Submittals to be construed as exhaustive and the Development Entity shall be solely responsible for meeting any and all Submittal requirements of the Technical Provisions and the Project Documents.

3 PUBLIC INFORMATION AND COMMUNICATIONS

3.1 General Requirements

Development Entity shall coordinate all public information communication plans with ongoing Department public information activities to ensure that a consistent message is being distributed to the Customer Groups. Copies of all materials to be presented to the public or the media shall be provided to the Department for review and approval at least five (5) Business Days prior to dissemination. Public information and communications shall be in accordance with Publication 295 Public Involvement Handbook and the Publication 746 Environmental Justice Handbook.

For purposes of NEPA related public involvement, the Development Entity will carry out public involvement consistent with requirements of Department's FHWA-approved Project Level Public Involvement Handbook (Publication 295) and 23 CFR 771.111(h). To guide the Development Entity toward meeting 23 CFR 771.111(h) ii, the Department has established recommended actions for NEPA-related public involvement for every bridge in Attachment 10-1 of these Technical Provisions. A Department representative will attend public official or public meetings held for the individual bridges to ensure that the proceedings are properly administered consistent with the Departments Project Level Public Involvement Handbook.

3.2 Administrative Requirements

3.2.1 Public Information and Communications Plan

Development Entity shall submit to the Department for approval a comprehensive Public Information and Communications Plan (PICP) within thirty (30) Days of NTP 1, based upon the preliminary communications plan submitted with Development Entity's Proposal, which informs, educates, and engages the Customer Groups throughout every stage of the Project. Development Entity shall obtain Department approval as a condition precedent of NTP 2. The PICP shall identify specific outreach or engagement activities, the frequency of those activities, what modes of communication will be used and what process Development Entity will use in order to measure the effectiveness of the PICP. Submittal shall be in both hardcopy form and electronic format compatible with Department software.

In preparing this plan, Development Entity shall identify the Customer Groups and develop specific plans to respond to their concerns and needs in all respects regarding the Project. After incorporation of comments from the Department on the PICP, Development Entity shall implement the various activities and initiatives contained therein. Development Entity shall continually maintain the plan to ensure delivery of high-quality, well-executed communications throughout the Term of the Contract.

The PICP shall be flexible to capture the full magnitude of yet-to-be-determined impacts from Project activities such as design, construction, and maintenance, and the public's makeup in any region as well as their likely reaction to these and other impacts. Together with the Department's designated point of contact for the Public Information Office, Development Entity shall periodically review the PICP on a basis not less than annually to forecast, plan and coordinate updates in the plan and strategies needed to effectively accomplish the stated goals and objectives. The PICP shall also be resilient to successfully implement the outlined strategies, given the ever-changing desire for depth, breadth, and frequency of information by a variety of important Customer Groups such as the media, elected officials, and the general public.

The PICP shall include a general timeline listing public information activities for the Project over the entire Term. This timeline shall be used as an initial guide and shall be updated by Development Entity as the Project is implemented but no less than on a yearly basis.

The Department may audit Development Entity's performance of the activities set forth in the PICP. Development Entity shall make appropriate changes to the PICP as required to meet the findings of any audit or review and to suit the changing goals and needs of the Project. Development Entity shall cooperate with the Department to amend the PICP as required to suit circumstances as yet unknown, including public reaction to the impacts, real or perceived, from the Work and the depth, breadth and frequency of information necessitated by Customer Groups. Development Entity shall document the efforts and results of the PICP in measurable terms to clearly indicate compliance.

Development Entity shall provide sufficient qualified staffing to effectively implement the PICP.

In developing the PICP, Development Entity shall make appropriate provisions to achieve the following goals:

- a) Provides information to the Department in a timely and accurate manner.
- b) Gain and maintain support and/or informed consent from Customer Groups, building on existing community partnerships and communication networks.
- c) Provide Customer Groups with regular opportunities for input early and often throughout the development process.
- d) Demonstrate to Customer Groups that the Project will be developed pursuant to a well-executed program.
- e) Notify Customer Groups in advance of key environment, Project ROW acquisition, construction and maintenance activities and communicate the potential impacts of these activities.
- f) Provide public information which facilitates trip planning during construction.
- g) Address the Project-specific concerns of Customer Groups, including but not limited to interests in Emergency Services vehicle access, business owner and patron driveway access, delivery access, adjacent neighborhood access, changes to bicycle and pedestrian access and neighborhood traffic patterns, changes to mobility access associated with the Americans with Disabilities Act (ADA), construction noise and lighting, and ongoing noise issues.

To achieve these goals, Development Entity shall use, but not be limited to, the following implementation strategies:

Customer Groups

- a) Develop a forum to coordinate on-going dialogue among Customer Groups, the Department, and Development Entity.
- b) Prepare and distribute Project-related materials in a user-friendly format to inform Customer Groups through appropriate means such as: meetings, interviews, media kits, news releases, telephone correspondence, newsletters, brochures, e-mail, text messaging service, social media, mobile phone apps, hotlines, Highway Conditions Reports (HCRs), dynamic message boards, Web alerts, public opinion polls/surveys, videos, display booths, presentations, public access information kiosks, and special events.
- c) Organize and manage meetings and communications with key elected officials, the general public, representatives of civic organizations, businesses, and special interest groups affected by the Project for the purpose of building rapport and gaining feedback with Customer Groups. Meetings can be held on an ad hoc basis or, as appropriate, on a regular basis as established in consultation with the Department.
- d) Respond to invitations and seek opportunities to attend meetings, conferences and other events at which Project information can be exchanged with Customer Groups.

- e) Develop, disseminate and display timely, high-quality information concerning the Project, including Project plans showing slope grading, drainage, bridge structures, retaining walls, Project ROW acquisition, MOT/detours, environmental features and aesthetic characteristics.
- f) Conduct working meetings with stakeholders and government agencies to help prepare for potential emergency situations during construction phase.
- g) Compile database of all customer group contacts and make readily available to the Department in an easily accessible format.

Media

- a) Coordinate with the Department to place Project-related messages in the appropriate media, including social media.
- b) Develop and implement communications plans that anticipate and attempt to minimize traffic impacts of public, special and seasonal events adjacent to the corridor that may draw large crowds through the Replacement Bridge limits.
- c) Monitor local, state and national media coverage for accuracy and to gauge local opinion. Coordinate with the Department regarding response to inaccurate information as soon as possible in the same media.

Environmental

The PICP shall detail the communication hierarchy for information distribution related to compliance with the Comprehensive Environmental Protection Plan, as described in Section 4 (Environmental). The PICP shall include names and contact information, including emergency contact information, and the preferred methods of routine, and emergency communication distribution.

Development Entity shall assign audit and quality assurance responsibilities to a member of his quality assurance team. The Public Information Coordinator shall not perform those duties because of the potential conflict of interest.

3.2.2 Public Information Coordinator

Development Entity shall provide a Public Information Coordinator to lead Development Entity's responsibility for public involvement activities on a day-to-day basis from NTP2 until the Handback Date and to serve as the single point of contact throughout the Project Term. The Public Information Coordinator shall have a minimum of four (4) years of relevant experience on projects of similar type and scope, and the ability to competently perform the following:

- a) Serve as the primary point of contact between Development Entity and the Department and act as clearinghouse for the receipt of and response to written or verbal comments or complaints regarding the Project.
- b) Lead the production, implementation, audit, quality control/quality assurance and update of the PICP.
- c) Coordinate and supervise day-to-day activities of Development Entity's personnel in performing the activities described in the PICP.
- d) Facilitate communication among Development Entity, the Department, and Customer Groups.
- e) Interact with Customer Groups and represent the interests of the Project at associated meetings and other formal and informal events.
- f) Develop a "first-hand feel" for Customer Groups' concerns and reactions regarding the Project and public information program and incorporate that knowledge into improving the PICP.
- g) Liaise with the person assigned to coordinate the initial response to any Incident or Emergency and any Governmental Entity that may have jurisdiction in the Emergency.

- h) Liaise with the appropriate staff and customer groups as appropriate to outline the impacts and benefits of the Project in relation to parks and pedestrian/bicyclist access.
- i) Create and manage a Customer Group database. Allow the Department access to database as needed.

3.2.3 Public Information Office

Development Entity shall maintain a public information office from NTP2 until completion of the D&C Work. The hours of operation for this office shall be as outlined below. This office shall serve as the primary business location for the Public Information Coordinator during the D&C Work and shall be located in Harrisburg. The Public Information Office shall facilitate the exchange of information between Development Entity and the Department to the public and provide a centralized location for residents and other Customer Groups to obtain information on the Project, including Project maps and design plans, fact sheets, alternative routes, lane closures, construction updates, community impacts, and commute options.

The minimum hours of operation of the public information office shall be as follows.

Monday-Friday	8 a.m. – 5 p.m. and by appointment
Saturday	By appointment
Sunday	Closed

Development Entity shall provide reasonable access to the Project Sites to give the Department-approved Customer Groups the opportunity to tour the construction.

In addition to the services listed above, from NTP2 to completion of the D&C Work, Development Entity shall provide a 24-hour telephone number for Development Entity's Public Information Coordinator, who shall be available during normal business hours of the public information office, with a recorded message describing Emergency procedures after hours. Development Entity shall respond to voicemail messages left after hours within 24 hours of receiving the voicemail message.

3.2.4 Customer Groups

The Public Information Coordinator shall identify, actively engage, inform, and seek appropriate support from Customer Groups for the Project throughout every stage of the Project. Customer Groups shall include the following:

- a) The Department;
- b) Media;
- c) Local, State and Federal Governmental Entities, including regulatory and law enforcement agencies;
- d) General public residing or working within the general vicinity of the Project, or traveling within or across the limits of the Project;
- e) Business owners within or adjacent to the Project corridor;
- f) Utilities, railroads, transportation authorities and providers (such as local airports, transit; operators, toll authorities, and other highway concessionaires) affected by the Project;
- g) Neighborhood associations, community groups, and other organizations with special interest in the Project;
- h) Major traffic generators that could be affected by closures or construction (such as universities, major employers) and sponsors/coordinators of major regional special events; and
- i) Schools and emergency services

3.2.5 Public Officials and Public Meetings

Development Entity shall organize and manage public meetings as necessary with the Customer Groups during design and construction activities and will serve as the clearinghouse for invitations to attend meetings and other events. For NEPA related public official, plans display or public meetings, a Department representative will attend the meetings held for the individual bridges to ensure that the proceedings are properly administered consistent with the Department's Project Level Public Involvement Handbook.

The frequency of public meetings shall be addressed in Development Entity's PICP and will increase or decrease as needs arise to better inform and engage the Customer Groups. Development Entity shall propose a schedule of public meetings to the Department and then conduct the public meetings that, at a minimum, shall address Project design, construction and maintenance.

Development Entity shall conduct public involvement activities that meet the requirements of NEPA Section 4(f) and Section 106, DM Part 1 - Transportation Project Development Process, address the needs of affected groups and individuals and adhere to the principles set forth in Publication 295 Public Involvement Handbook and the Publication 746 Environmental Justice Handbook, which outline the procedures that are required by regulation. In addition, Development Entity shall consult with Metropolitan Planning Organizations (MPOs)/Rural Planning Organizations (RPOs)/the Department to identify any previous public outreach that may have occurred.

As necessary, both a public officials meeting and a public meeting shall be held a minimum of 30 Days prior to any full Replacement Bridge closure. The meeting with the public officials shall precede the public meeting. These meetings could cover the closure of a single Replacement Bridge or multiple Replacement Bridges within the same geographic region. Development Entity shall provide reasonable notice to announce general purpose and special purpose public meetings. Development Entity shall provide a minimum two-week's notice be given prior to any public meeting. Development Entity shall also provide notice to the Project area public officials, prior to the newspaper advertisement and mailings to the general public, to notify them of the upcoming meeting.

Development Entity shall provide notice of a general purpose public meeting through a block advertisement in a newspaper of general circulation within the study area of the proposed project. This notice shall include a request that persons with disabilities requiring assistance contact the Department so that appropriate arrangements can be made.

Development Entity shall provide notice of a special purpose public meeting through an announcement tailored to the particular type of meeting to be held. The announcement may be made through formal or informal means. Publication of an advertisement in a newspaper of general circulation is not specifically required, although this would certainly be one means of accomplishing the task.

Publication 295 provides guidance for conducting the public meeting. Development Entity shall provide the Department with a plan that satisfies this guidance and obtain the Department's approval of that plan.

During such meetings, Development Entity shall inform the participants of the Project's progress and discuss key issues as they emerge. Development Entity shall provide timely and useful information regarding subjects of interest to the Customer Groups, including:

- a) Design and construction issues affecting adjacent residential areas, frontage roads, local streets, and utilities, including such issues as Project ROW definition, Project ROW acquisition process, grading, drainage, access, lighting, aesthetics and noise and retaining walls;
- b) Street and roadway detour design and implementation;
- c) Scheduling and duration of Work, including hours of construction;

- d) Haul routes;
- e) Methods to minimize noise and dust;
- f) Environmental mitigation measures, including noise wall meetings; and
- g) Other environmental issues.

Development Entity shall notify the Department a minimum of seven (7) Days in advance of any meetings with the public officials and the public. The Department reserves the right to attend any such meetings. When requested by the Department, Development Entity shall participate in and provide support for any meetings with the Customer Groups called and conducted by the Department.

3.2.6 Meeting Summaries

For all meetings with the Customer Groups which Development Entity conducts or directly participates in, Development Entity shall prepare meeting summaries within five (5) Business Days after the conclusion of such meetings. At a minimum, Development Entity shall include the following items in the meeting summary:

- a) A complete list of attendees (including their affiliations, telephone numbers, and e-mail addresses);
- b) Documentation of the exhibits, presentations and/or handouts available at the meeting;
- c) Documentation of the issues discussed and any associated solutions; and
- d) Description of remaining open issues and action items (including the person(s) responsible for follow-up and target date for resolution).

Development Entity shall submit draft versions of all meeting summaries to the Department for review before distributing final versions to the meeting attendees and appropriate Customer Groups.

Meeting summaries shall be submitted as PDF and in electronic native files to the Department using readily accessible electronic means, such as e-mail, Project intranet site, or file sharing site, within the five (5) Business Days required.

3.2.7 Emergency Event Communications

For all Emergency events, such as major vehicle collisions, ice/snow conditions, and Hazardous Material spills, the Public Information Coordinator shall take timely and appropriate action to inform the Department, the appropriate Department District CRC's and appropriate Customer Groups of all pertinent details. The Public Information Coordinator shall provide these details to the Department so that the Department may notify the public through the use of appropriate tools to ensure effective communication. These tools include, but are not limited to: dynamic message signs (DMS), the Department's 511 system, various Department District Office Traffic Management Centers, email/Web/text alerts, telephone notification, facsimiles, and media releases/interviews, as appropriate. The Public Information Coordinator shall continue to provide updated information, as available and on a timely basis, until the Emergency no longer exists.

In the event of an unforeseen Emergency, timely notification shall mean as soon as practicable, but in no event longer than within one (1) hour of the occurrence. The definition of an unforeseen Emergency shall follow the Department's general guidelines requiring emergency notification when delays for motorists in traffic extend beyond two (2) hours. If advanced warning is available for an Emergency event such as ice/snow, timely notification shall mean as soon as practicable, but in no event longer than within one (1) hour of the time the information is available. In both situations, the Public Information Coordinator shall continue to provide updated information, as available and on a timely basis, until the Emergency no longer exists.

3.2.7.1 Lane Closures

Subject to the lane closure restrictions set forth in Section 16 (Maintenance and Protection of Traffic) Development Entity shall provide the Department and appropriate Customer Groups a minimum of 14 Days advance notice for lane closures and/or traffic switches planned to be in effect longer than twenty-four (24) hours, or all full highway closures in effect during any portion of the period from 6 a.m. to 8 p.m., regardless of duration, and a minimum of two (2) Days advance notice for lane closures other than full closures that are planned to be in effect less than twenty-four (24) hours, using all appropriate tools as needed.

For planned lane closures and Emergency event lane closures, as appropriate, Development Entity shall coordinate with the Department to ensure that no conflicts occur with other Department facilities. Development Entity shall provide advance notification of all lane closure notices to the Department. The Department will provide appropriate contacts and information upon request. Development Entity shall also monitor other projects in the vicinity of the Replacement Bridge for major closures that could affect travelers. Development Entity shall provide notification to the Department and coordinate with those projects to ensure appropriate levels of mobility.

3.2.8 Disseminating Public Information

Development Entity shall prepare and distribute materials in accordance with this Section 3 and as approved by the Department.

4 ENVIRONMENTAL

The Development Entity shall comply with all existing and future environmental requirements set forth in Applicable Law, technical guidance and policy, and all environmental approvals required for the Project. The Department will provide the Development Entity with copies of all environmental approvals required for the Early Completion Bridges (ECB) and the Development Entity is responsible for securing environmental approvals for the Remaining Eligible Bridges (REB) in accordance with Applicable Law. The Development Entity is also responsible for construction, monitoring, inspection, and maintenance of the structures and all required environmental mitigation measures during the Term. The Department's Categorical Exclusion Expert System (CEES) and Joint Permit Application Expert System 2 (JPA2) will be used for securing Governmental Approvals. The Development Entity shall contact the Department's ECMS Help Desk in order to secure access to the CEES and JPA2 systems.

4.1 Agency Coordination

The Project will necessitate coordination with the relevant Governmental Entities and other key stakeholders within and outside the Commonwealth that may include but not be limited to:

- The U.S. Federal Highway Administration (“FHWA”);
- U.S. Army Corps of Engineers (“USACOE”);
- U.S. Environmental Protection Agency (“USEPA”);
- U.S. Fish & Wildlife Service (“USFWS”);
- U.S. Forest Service; and
- PA Department of Conservation & Natural Resources (“DCNR”);
- PA Department of Environmental Protection (“PADEP”);
- PA Historical and Museum Commission (“PHMC”); The State Historic Preservation Office (SHPO) is part of PHMC;
 - FHWA and Advisory Council on Historic Preservation has delegated to the Department through a programmatic agreement (PA) certain responsibilities under Section 106 and 110(d) of the National Historic Preservation Act (NHPA), as amended, for minor transportation projects of the Federal Aid Highway Program which are classified as "categorical exclusions" under 23 CFR 771. This agreement establishes the basis for the Department internal review of individual minor projects and establishes the roles of involved parties throughout the process.
- PA Fish & Boat Commission (“PFBC”);
- PA Game Commission (“PGC”); and
- PA County Conservation Districts.

For processes where FHWA will be consulted, the Department will be involved with any consultations.

4.2 Environmental Guidance

In addition to Commonwealth and federal regulations, policy and manuals related to Environmental Approvals, the Development Entity shall utilize and comply with the following Department manuals and policies:

- Publication 10B DM 1B – Post-TIP NEPA Procedures
- Publication 24 Project Level Highway Traffic Noise Handbook
- Publication 216 Community Impact Assessment Brochure
- Publication 217 Community Impact Assessment Handbook
- Publication 295 Transportation Project Development Process – Project Level Public Involvement Handbook

- Publication 319 Needs Study Handbook
- Publication 321 Project Level Air Quality Handbook
- Publication 324 Agricultural Resources Handbook
- Publication 325 Wetland Resources Handbook
- Publication 349 Section 4(f) Handbook
- Publication 546 Threatened and Endangered Species Desk Reference
- Publication 591 Tribal Consultation Handbook
- Publication 592 Tribal Consultation Handbook Appendix
- Publication 640 Indirect & Cumulative Effects Desk Reference
- Publication 689 Cultural Resources Handbook
- Publication 745 6(f) Handbook
- Publication 746 Project Level Environmental Justice Guidance
- Publication 756 Invasive Species Best Management Practices
- Way finding sign guidance in Publication 13M, DM 2, Chapter 10, Drainage Design & Related Procedures, Section 10.5 Waterway Approval (strike-off letter Anticipated in 2014).
- Aids to Navigation (ATON) in accordance with strike-off letters 482-13-18

4.3 General Requirements and Process

The Department is developing the environmental approvals for the ECB as outlined in Section 4.3.1. The Development Entity is responsible for developing the environmental documents and securing environmental approvals for the REB as outlined in [Section 4.3.2](#). The Development Entity is responsible for providing property owners with a notice of intent to enter as outlined in [Section 7](#) if entry onto private property is necessary to complete any environmental analysis or mitigation measures. The Department's CEES and JPA2 will be used to develop and secure Governmental Approvals. If the Development Entity plans to bundle water obstruction permit packages for submission to Agencies, the following is recommended: Bridges must be bundled within the same county; bundle by similar PASPGP Review Category (Category I, II or III), and there should be an early coordination meeting with the PADEP to discuss the bundle.

4.3.1 Early Completion Bridges

- The Department is responsible for completing the engineering and environmental (E&E) scoping process in accordance with the Department Publication 10B (DM-1B), Chapter 3, Section 3.2 Engineering and Environmental Scoping Field View. This will include documenting the E&E Scoping Field View in the Department's Categorical Exclusion Expert System (CEES).
- The Department is responsible for securing National Environmental Policy Act (NEPA) approvals utilizing the Department's CEES.
- The Department is responsible for securing federal and Commonwealth environmental approvals for water quality, waterway obstruction and encroachment, and erosion and sediment control necessary for the Construction Work in respect of the ECB, including:
 - The National Pollution and Discharge Elimination System (NPDES) Permit, the Clean Water Act Section 404 permit and the Section 401 Water Quality Certification.
 - Any permit and authorization required by Pennsylvania Code Title 25 Environmental Protection, Chapter 102 Erosion and Sediment Control, Chapter 105 Dam Safety and Waterway Management, and Chapter 106 Floodplain Management.
- The Department will transfer to the Development Entity each Environmental Approval required to be secured by the Department for the ECBs, and the Development Entity shall be responsible for associated transfer fees. The PADEP 105/USACOE 404 Permits are developed using the

JPA2 Expert System. Once such permits have been transferred to the Development Entity, the Development Entity will be provided access to the JPA2 Expert System for the ECBs.

- Environmental Commitments are identified and tracked by the Department utilizing the Environmental Commitments and Mitigation Tracking System (ECMTS) found in Appendix T of Publication 10X, Appendices to DM1A, DM1B and DM1C. The Department will provide access to the environmental mitigation information in ECMTS. The Development Entity is responsible for implementing and completing any Environmental Commitments throughout the Term for the ECB and updating the ECMTS for any changes or additional requirements.
- For any changes including but not limited to, Department Change, Development Entity Change, and changes in environmental impacts, regulation or policy, endangered species listing, etc. that occur after the Commercial Closing Date, the Development Entity is responsible for the following:
 - The Development Entity is responsible for notifying the Department of changes that require a NEPA document re-evaluation and providing design support information that would be required information for re-evaluation. The Department will develop the NEPA re-evaluation in the CEES System. If the re-evaluation is due to a design change, the Development Entity will be responsible for any associated costs of the re-evaluation. The Department or FHWA will review/approve the NEPA re-evaluation and will provide a copy of the approval to Development Entity.
 - The Development Entity is responsible for coordinating with the relevant Governmental Entities and the Department for any modifications or changes to the Environmental Commitments. For NEPA related commitments, the Department will be the lead for coordination with other agencies and responsible for securing NEPA related approvals. For other Environmental Approvals (e.g. Chapter 102/105/106, Section 404), the Development Entity is responsible for securing any necessary consents or approvals required for such modifications or changes. The Development Entity is responsible for updating ECMTS to document any such modifications or changes to the Environmental Commitments.
 - The Development Entity is responsible for any and all modifications to any permit obtained by the Department required to complete the Construction Work and Maintenance Work in respect of the ECB. The Development Entity will use processes and procedures established by relevant Governmental Entities to request modifications and/or amendments to such permits. The Development Entity is not exempt from permit application and/or review fees required for amendment and/or modification requests. The Development Entity will provide the Department with copies of the amendment and/or modification requests, any supporting documents and the permit decision.
- The Development Entity is responsible for compliance with the terms and conditions of all environmental approvals and Environmental Commitments as well as any resulting compliance action and/or litigation.
- The Development Entity is responsible for all fines and penalties that may be assessed by a Governmental Entity with jurisdiction in connection with the Development Entity's failure to comply with Applicable Laws or Environmental Approvals, including but not limited to permit conditions, Environmental Commitments and monitoring commitments listed in the CEES.
- The Development Entity is responsible for providing support and coordination with the Department and any relevant Governmental Entities for any Third Party challenges to Environmental Approvals.
- The Development Entity shall, within one (1) Day of receiving a written Notice of Violation (NOV) or similar notification, contact the Department. The Development Entity is responsible for providing all correspondence and details of the resolution of these warnings and/or violations for the Department's records.

- In addition to any reporting obligation to the Department, the Development Entity will hold the Department harmless and be responsible for resolving any and all NOV's, compliance/enforcement actions and/or violations noted in inspection reports issued by any local, state or federal agencies. Included but not limited to the resolution of any NOV/enforcement action is: corrective action to resolve the action, required plan and permit modifications, payment of all fines and penalties, and coordination with the affected parties and agencies.
- When construction is completed, the Development Entity is responsible for completing the necessary forms and obtaining acknowledgement and/or approvals for all PADEP and USACOE permits including but not limited to:
 - Notice of Construction Completion
 - Notice of Termination
 - Permit Compliance Self-Certification Form. Note the completed form must be returned to the District Permit Coordinator.
- At the conclusion of the Term, the Development Entity will transfer each Environmental Approval from the Development Entity name back to the Department. The permit/approvals cannot be transferred to the Department until the Development Entity proves that they have documentation that applicable agencies acknowledged/approved the completion of construction and mitigation under the permit and all NOV/enforcement actions have been resolved. If transfer fees are required, the Department will be responsible for associated transfer fees and will either pay for these directly or the Development Entity will pay the transfer fees and the Department will reimburse the Development Entity for the actual cost.

4.3.2 Remaining Eligible Bridges

- The Department staff is responsible for completing the E&E scoping process in accordance with the Department Publication 10B (DM-1B), Chapter 3, Section 3.2 Engineering and Environmental Scoping Field View. This will include documenting the E&E Scoping Field View in the CEES. Development Entity can view a copy of the approved E&E Scoping Field View Forms in the CEES for information only.
- The Development Entity is responsible for obtaining any and all environmental approvals in compliance with all Applicable Law to include but not limited to the following:
 - National Environmental Policy Act (NEPA) and its associated implementing regulations (40 CFR §1500-1508), Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966;
 - Endangered Species Act (ESA);
 - 23 CFR 771- Environmental Impact and Related Procedures;
 - 23 CFR 774 – Parks, Recreation Area, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f)); and
 - Section 106 of the National Historic Preservation Act (NHPA) and its associated implementing regulations (36 CFR § 800), PA Act 120, and the State History Code (37 Pa. C.S. 101-906).
- The Development Entity is required to utilize the Department's CEES to document the environmental analysis and submit the documentation for the NEPA approvals. Consistent with the existing Stewardship and Oversight Agreement, the Department or FHWA is responsible for providing the NEPA approvals. Development Entity may only submit a maximum of twenty-five (25) requests per District/per month. The Department will complete the approval of the Categorical Exclusion Evaluation (CEE) evaluations within thirty (30) Days. For FHWA required evaluations, anticipate sixty (60) Days from submission to approval will be required. Note that the clock restarts if the documentation is not complete or is incorrect (i.e the clock goes back to zero (0) Days on the date that the DE is notified the documentation is incomplete or incorrect and does not start again until the DE submits a revised submission);

- For purposes of NEPA related public involvement, the Development Entity will carry out public involvement consistent with requirements of Department's FHWA-approved Project Level Public Involvement Handbook (Publication 295) and 23 CFR 771.111(h). To guide the Development Entity toward meeting 23 CFR 771.111(h) ii, the Department has established recommended actions for NEPA-related public involvement for every bridge in Attachment 10-1 of these Technical Provisions. A Department representative will attend public official or public meetings held for the individual bridges to ensure that the proceedings are properly administered consistent with the Department's Project Level Public Involvement Handbook. See Section 3 of these Technical Provisions for additional details related to public involvement;
- Development Entity is the permittee and is responsible for securing all environmental approvals for water quality, waterway obstruction and encroachment, and erosion and sediment control necessary for construction including:
 - The National Pollution and Discharge Elimination System (NPDES) Permit, the Clean Water Act Section 404 permit and the Section 401 Water Quality Certification.
 - Any permit and authorization required by Pennsylvania Code Title 25 Environmental Protection, Chapter 102 Erosion and Sediment Control, Chapter 105 Dam Safety and Waterway Management, and Chapter 106 Floodplain Management.
- The Development Entity will use processes and procedures established by the relevant Governmental Entities for securing Environmental Approvals. The Development Entity is not exempt from permit application and/or review fees required as part of the permit submission. The Development Entity shall provide the Department with copies of permit applications and permits received.
- Bridge projects involving Section 404 permit reviews not delegated to PaDEP may require paper submissions by the Development Entity of the permit application/registration to the U.S. Army Corps of Engineers.
- For any changes including but not limited to, a Department Change, Development Entity Change, change in environmental impacts, regulation or policy, endangered species listing, etc. that occur after the Commercial Closing Date, the Development Entity is responsible for the following:
 - Preparing any NEPA document re-evaluations. The Development Entity is required to utilize the Department's CEES to document the environmental analysis and submit the documentation for the NEPA approvals for the NEPA re-evaluations. The Department or FHWA is responsible for providing the NEPA re-evaluation approvals. The Department will complete the approval of the CEE re-evaluations within thirty (30) Days of submittal by the Development Entity; in the event such Submittals require FHWA re-evaluations, the Department shall have sixty (60) Days to approve such Submittal.
 - The Development Entity is responsible for coordinating with the relevant Governmental Entities and the Department for any modifications or changes to the Environmental Commitments. The Development Entity is responsible for securing any necessary consents or approvals required for such modifications or changes.
 - The Development Entity is responsible for any and all permit modifications required to complete the construction and maintenance of the Project. The Development Entity will provide the Department with copies of the permit modification requests, any supporting documents and the permit decision.
- Environmental Commitments will be identified and tracked by the Development Entity. The Development Entity shall utilize the format of the Environmental Commitments and Mitigation Tracking System (ECMTS) found in Appendix T of Publication 10X, Appendices to DM1A, DM1B and DM1C. The Development Entity is responsible for implementing and completing any Environmental Commitments through the design, construction and maintenance phases of the REBs.

- In accordance with the Department's existing Publication 10C (Design Manual 1C) in Section 1.3 of the Technical Provisions, the Development Entity will not conduct final design activities prior to receiving the Department's NEPA approval.
- The Development Entity is responsible for compliance with the terms and conditions of all environmental approvals and Environmental Commitments as well as any resulting compliance action and/or litigation.
- The Development Entity is responsible for all fines and penalties that may be assessed by a Governmental Entity with jurisdiction in connection with the Development Entity's failure to comply with Applicable Law or Environmental Approvals, including but not limited to permit conditions, Environmental Commitments and monitoring commitments listed in the CEES.
- The Development Entity is responsible for providing support and coordination with the Department and the relevant Governmental Entities for any third party challenges of Environmental Approvals.
- The Development Entity shall, within one (1) Day of receiving a written NOV or similar notification, contact the Department. The Development Entity shall be responsible for providing all correspondence and details of the resolution of these warnings and/or violations.
- In addition to any reporting obligation to the Department, the Development Entity will hold the Department harmless and be responsible for resolving any and all NOVs, compliance/enforcement actions, and/or violations noted in inspection reports issued by any local, state or federal agencies. Included but not limited to the resolution of any NOV/enforcement action is: corrective action to resolve the NOV/action, required plan and permit modifications, payment of all fines and penalties, and coordination with the affected parties and agencies.
- Upon completion of the Construction Work, the Development Entity is responsible for completing the necessary forms and obtaining acknowledgement and/or approvals for all PADEP and USACOE permits including but not limited to:
 - Notice of Construction Completion
 - Notice of Termination
 - Permit Compliance Self-Certification Form
- At the conclusion of the Term, the Development Entity will transfer any environmental approvals from the Development Entity name back to the Department. The permit/approvals cannot be transferred to the Department until the Development Entity proves that it has documentation that the relevant Governmental Entity acknowledged and approved the completion of construction and mitigation under the Environmental Approval and all NOV/enforcement actions have been resolved.

4.4 Environmental Approvals

The Development Entity is responsible for conducting environmental studies and re-evaluations caused by actions not identified in the Environmental Approvals, actions not covered specifically by existing resource agency coordination, or incorporation of additional properties into the Project. The Development Entity is responsible for all coordination of environmental studies with appropriate Governmental Entities. The Development Entity is responsible for providing the Department a spreadsheet with the status of each environmental approval and permit for each bridge on a quarterly basis for the purpose of managing the NEPA Clearance and Permitting Process. The spreadsheet shall contain the following information: County, SR, BMS Number, and local name of the Replacement Bridge, Environmental Approval status, cost expended for NEPA related activities, permits required, name of individual and firm completing and submitting the application, date(s) of submission, cycle times for administrative completeness, technical completeness and issuance of the approval or permit. The Department and FHWA, as applicable, will review a sample of CEE Submissions of the projects approved on a monthly basis for the first ninety (90) days, then at 3-month, 6-month, and 12-month intervals.

4.4.1 Department Review and Approval of Development Entity Submissions

The Department will review, comment on, and, as applicable, require revisions to documentation submitted for Environmental Commitments or Environmental Approvals related to the NEPA Process. The Department reserves the right to review, comment on, and require revisions to documentation submitted for state and federal permit applications. Documentation shall conform to current Department submission standards and the requirements of all applicable Governmental Entities and Applicable Law. If the Department reviews documentation, the Department shall return approved documentation to the Development Entity for submittal to the appropriate Governmental Entity in cases where the Development Entity performs coordination. The Department, acting reasonably, shall approve those submissions for which the Department signature or other approval is required. Documentation not meeting current submission standards or requirements of Governmental Entities is returned to the Development Entity, and shall be revised by Development Entity to meet standards or requirements. The Department will also compare the impacts identified by Development Entity in the NEPA documentation to the results of the scoping-phase field screening the Department did for the bridge. In reviewing and approving the NEPA documents, the Department and FHWA will take full responsibility for the scope and contents of the NEPA documents.

4.4.2 Water Obstruction and Encroachment and Floodplain Management Permits

Water obstructions are regulated under PA Code Title 25, Chapter 105 and Chapter 106 and USACE Clean Water Act Section 401/404. PA Code Title 25, Chapter 105 Water Obstruction and Encroachment permit is needed for any structure or activity that changes, expands or diminishes the course, current or cross section of a watercourse, floodway, body of water, or wetland. Under PA Code, Title 25, Chapter 106 Floodplain Management permit is needed when a highway obstruction in a floodplain is constructed, modified, removed, destroyed or abandoned. Chapter 106 permits, when required, are included as part of the Chapter 105 permit application. The fee required for a project authorized under this permit shall be consistent with 25 PA Code §105.13 and the Development Entity will not be exempt from such fees. A Submerged Lands License Agreement (SLLA) is required for any regulated water obstruction or encroachment to occupy submerged lands of this Commonwealth located in a navigable lake or river or stream declared a Public Highway. A SLLA is not required for Commonwealth owned structures, but other public or privately owned obstructions (e.g. utility lines attached to the bridge or under the streambed) will require SLLA and the associated fees to obtain the SLLA. Development Entity is responsible to ensure Utilities have acquired the SLLA prior to commencement of construction. The Utilities or others will bear all costs associated with acquiring the SLLA for their facilities.

The Development Entity will submit to the Department a copy of the approved CEE, a report of the wetlands and stream impacts, and the mitigation proposed for the Chapter 105/106 and Section 404 permits prior to submitting the permit application to the agencies so the Department can ensure the impacts and mitigation reported in the NEPA document are accounted for in the permit process. The PASPGP (Pennsylvania State Programmatic General Permit), as amended, authorizes the discharge of dredged, excavated or fill material or structures into waters of the United States and waters of the Commonwealth, including wetlands. Pennsylvania uses the PASPGP joint agency guidance between PADEP and USACOE to provide the USACOE 404 Clearance and PADEP 105/106 Clearance in one permit process for projects that meet the conditions of PASPGP.

4.4.3 Erosion and Sediment Pollution Control/Stormwater Management

The Development Entity shall be responsible for developing, implementing and monitoring an erosion and sediment control plan in compliance with Applicable Law and guidance in the Department's Drainage Manual, Publication 584, Chapter 12 and 13 and DM 2, Chapter 13.

If required by Applicable Law or any Environmental Approvals, the Development Entity shall prepare a post construction stormwater management (PCSM) plan. The Development Entity shall be responsible for the inspection, maintenance, remedial action and permit modifications of any PCSM facilities constructed or modified for the Project. The Development Entity shall perform inspections and maintenance in accordance with the current Department policy on PCSM facilities inspections. If the Department policy on PCSM facilities inspections is not available, the Development Entity shall perform inspections on PCSM facilities in accordance with the PCSM Plan and inspection results must be reported to Department and PADEP. The Development Entity shall report any maintenance, remedial action or permit modifications of any PCSM facilities constructed for the Project to the Department.

For PCSM facilities, the long-term inspection and maintenance schedule developed by the Development Entity shall comply with any applicable Department policies and shall be transferred to the Department at the conclusion of the Term.

4.4.4 Threatened and Endangered Species

The Development Entity shall comply with all aspects of the federal Endangered Species Act, including consultations. The Development Entity will conduct as necessary a Pennsylvania Natural Diversity Inventory (PNDI) screening. When it is determined that there are any threatened or endangered species/habitat or rare natural communities in the vicinity of any of the Replacement Bridges, the Development Entity will coordinate with the Governmental Entities with jurisdiction over potential impacts. In some instances surveys may be necessary to determine if the Work will impact a species or its habitat. The Development Entity shall coordinate with the Department to determine whether Work may proceed and what measures can be implemented to avoid or minimize the impacts of the Work to threatened and endangered species and rare natural communities. Candidate Species will be treated as listed species.

All consultations required for federally listed T&E Species for the Project will be conducted by the Department in order to facilitate FHWA consultation with the U.S. Fish and Wildlife Service (USFWS).

The Development Entity is responsible for completing the biological assessment (BA) and all associated research, documentation and surveys to prepare the BA for consultation with the USFWS.

The Development Entity is responsible for coordinating state listed species with the relevant Governmental Entities and providing the Department with copies of clearance and mitigation requirement documents.

4.4.5 Cultural Resources

The Development Entity will comply with Section 106 of the National Historic Preservation Act and the Pennsylvania State History Code through the use of existing Department tools, specifically the Statewide Section 106 Programmatic Agreement (Statewide PA), the State History Code Memorandum of Understanding (MOU), Publication 689, Project PATH and the Letter of Agreement (LOA) developed by the Department in coordination with the State Historic Preservation Office (SHPO) and FHWA stipulating the use of the Statewide PA for this Project.

4.4.5.1 Cultural Resources Professionals Delegation

The PA and its corresponding MOU are core to the compliance with federal and Commonwealth historic preservation laws and regulations. The PA and MOU streamline the Section 106 process, using trained and delegated cultural resources professionals (CRPs).

4.4.5.2 Project PATH

For the REB, Development Entity's CRPs are expected to use Project PATH and other tools as suggested in the CR Handbook to solicit for consulting parties where historic properties are anticipated, and to post

project findings of eligibility and effect. The Development Entity should expect that the Department and Preservation Pennsylvania will create a special category of project type to cover the Project, and should anticipate that each Project Site will be considered individually for purposes of Section 106 consultation.

4.4.5.3 Elevation and Dispute Resolution

For any disputes arising from the Stipulation XI of the Statewide PA, the appropriate Development Entity CRP will notify the Department's Cultural Resource Unit Head within 3 Working Days. The Department will attempt to mediate the dispute between the Development Entity CRP and the other party. If the dispute cannot be resolved to the satisfaction of all parties, the Department will elevate the dispute following the provisions of Stipulation XI of the Statewide PA.

For any disagreements related to cultural resources level of effort or findings within the Project where historic resources may be affected, i.e., between the Development Entity CRP and other staff where historic resources may be affected, the Development Entity CRP shall have the ability and responsibility to elevate the dispute to the Department. The Department's Cultural Resources Unit Head will attempt to mediate the disagreement. The Department shall be responsible for notifying both the FHWA and the PHMC as to the nature of the disagreement and its status. If the disagreement cannot be resolved, the Department's Cultural Resources Unit Head will elevate the issue to the Chief of the Environmental Policy and Development Section (EPDS). If the EPDS Section Chief cannot resolve the disagreement, the EPDS Chief will elevate the issue to the Department's manager of the PPA.

4.4.5.4 Resolving Adverse Effects

Consistent with Stipulation III.B.10 of the Statewide PA should a Replacement Bridge result in an anticipated adverse effect to historic resources, the CRP will provide the Department documentation following 36 CFR 800.11(3). The Department will provide this information to and coordinate with FHWA, the SHPO and any tribes or consulting parties to seek to avoid or minimize adverse effects. FHWA will notify the Advisory Council on Historic Preservation if conditions in Stipulation III.B.10.b apply. The CRPs will involve consulting parties to resolve the adverse effect, following the Statewide PA and Publication 689. As a result of consultation, the CRP will provide the list of conditions and stipulations to the Department to be included in a Replacement Bridge-specific memorandum of agreement (MOA) or Letter of Agreement (LOA). CRPs are responsible for outreach and coordination of the draft MOA/LOA with consulting parties and the public. The Department will draft the MOA/LOA and circulate the MOA/LOA for signature.

For archaeological investigations, the Development Entity will have the responsibility of either providing a deed of gift or evidence that a reasonable effort to obtain a deed of gift was not successful. The Development Entity will have the responsibility of providing all recovered artifacts and records in a condition consistent with PHMC guidelines to the State Museum for permanent curation, including any payment of fees for accessioning and curation. The Development Entity will be reimbursed at actual cost for all curation fees that may occur during this process.

4.4.5.5 Tribal Consultation

Stipulation II.C and III.B.3 of the Statewide PA, as well as several tribal-specific memorandums of understanding require the Department to consult with federally-recognized Tribes where there is the potential to affect historic properties of tribal interest (see also the Department's Publications 591 and 592). For all Replacement Bridges, this coordination shall be undertaken by the Department. The Development Entity is responsible for providing the Department with notification of any proposed archaeological studies at least forty-five (45) Days in advance of fieldwork, and provide a completed Initial Tribal Consultation Form and associated documents. The Development Entity will also cooperate and provide any related project materials for the purposes of consultation to the Department's Cultural Resources Unit Head, including any subsequent Tribal Consultation Forms.

4.4.5.6 Human Remains

Following the Stipulation VI of the Statewide PA, if human remains, graves, or grave-associated artifacts are encountered during an archaeological investigation or during performance of the Work, the Development Entity will immediately cease all Work in the area of the encounter and notify the Department in accordance with the policies and coordination procedures established in Publication 689, Chapter V-4. The Department and/or FHWA will implement the remaining provision of Stipulation VI.

4.4.5.7 Oversight

Quality control is maintained via the use of trained and delegated CRPs to manage the Section 106 process, and, the use of a transparent process through Project PATH. In addition to these steps, the Development Entity shall:

- Develop and implement an internal communication protocol for the purposes of ensuring cultural resources decisions made by the CRPs are transmitted to the design team, and that design decisions that might affect historic properties are transmitted to the CRP in a timely manner. The Development Entity shall submit the proposed CRP – Development Entity Communications Plan to the Department for review and approval in its sole discretion within 30 Days of NTP1.
- For any dispute raised under Stipulation XI of the Statewide PA, the Development Entity will cooperate with the FHWA, SHPO, and the Department to provide files, notes, memos, e-mails, etc., to assist in discovering the basis for the dispute, the best means to resolve the dispute, and any best practices that may be developed to prevent similar disputes from arising in the future.
- Cooperate in any monitoring programs developed by the Department, including but not limited to a review of a sample of Section 106 completed Replacement Bridges on a monthly basis for the first ninety (90) Days, then at 3-month, 6-month, and 12-month intervals to ensure that the Development Entity CRPs are completing the Section 106 studies, analysis, and documentation consistent with Publication 689 and the Statewide PA. The Development Entity will implement within thirty (30) Days recommendations made by the Department and SHPO regarding performance of the Section 106 process.
- For purposes of Stipulation X, ECB and REB sites collectively will be treated as a District and Development Entity CRPs are required to update the necessary information into Project PATH so that the Department can provide a list of Replacement Bridges and findings made by Development Entity CRPs in its annual reports required under the Statewide PA.
- For each mitigation commitment to avoid or resolve an adverse effect, develop and implement a work plan that will identify the committed action and any associated deliverable, who is responsible for completing the action, the deadline for completing the action, and any additional coordination for completing the action. Work plans must be submitted to and approved by the Department's Cultural Resources Unit Head prior to implementation. For each completed action, the Development Entity will notify the Department and provide any documentation of its completion. The Project PATH Mitigation tab will be used to monitor mitigation commitments. To the degree that the Environmental Commitments and Mitigation Tracking System (ECMTS) can be used to complete these requirements, the Development Entity shall use ECMTS.

4.4.5.8 4(f) Resources

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. 303) prohibits the use of historic properties or publically owned parks, recreation areas, or wildlife refuges (Section 4(f) resources) unless it is first determined that there is no feasible or prudent alternative to the use of the resource and the project includes all measures to minimize harm to the resource(s). If a Replacement Bridge involves a temporary occupancy or a take from a Section 4(f) resource, the Development Entity will be required to comply with Section 4(f), its regulations (23 C.F.R. Part 774), the Programmatic Section 4(f) Evaluations, 71 P.S. 512(a)(15) (the state equivalent), and Publication 349.

A Section 4(f) Evaluation would be required by completing a checklist if one of the approved Programmatic Section 4(f) Evaluations are applicable or an Individual Section 4(f) Evaluation would be required consistent with Publication 349. The Development Entity will coordinate with the Department regarding the applicability of Section 4(f) to the Project and the scope of documentation required. The Department and/or FHWA will review and approve the checklist and the Individual Section 4(f) Evaluations. For the non-applicability and temporary use and occupancy checklists, approval is only required from the Department. For all other checklists and Individual Section 4(f) Evaluations approval is needed from both the Department and FHWA. The Development Entity will prepare and submit the Section 4(f) documentation to the Department. The Department will coordinate with FHWA. Depending on the quality of the documentation, approval of checklists involving only the Department are normally completed in thirty (30) days, approvals of checklists involving the Department and FHWA are normally completed in sixty (60) days, and approvals of Individual Section 4(f) Evaluations are normally completed in one hundred and twenty (120) days.

4.4.5.9 Aesthetic Bridge Design in Historic Districts

The section pertains only to Replacement Bridges that are to be located in historic districts. Aesthetics for other Replacement Bridges are considered under Section 14-Aesthetics and Landscaping.

If a Replacement Bridge is determined to be located in a historic district, but is determined to not be contributing to the historic district and not have an adverse effect, the standards developed in Section 14-Aesthetics and Landscaping will apply but concurrence from the SHPO will not be required for the design of the Replacement Bridge.

Consistent with Stipulation V of the Statewide PA, there are two approaches for the consideration of Aesthetic Bridge Design for contributing bridges in Historic Districts, depending on whether consulting parties other than the Department and the SHPO are present. For the resolution of adverse effect(s), the SHPO will have the opportunity to review and comment on the draft Aesthetic Master Plan and any site specific plans that do not conform to the Master Plan. If the Replacement Bridge contributes to a historic district and there are no consulting parties other than FHWA, the SHPO, and the Department, the standards developed in Section 14-Aesthetics and Landscaping will apply. The plans for each Replacement Bridge contributing to an historic district will be developed in consultation with the Department, FHWA and SHPO and will be submitted to the SHPO for concurrence as a standard treatment (Section 106 PA, Appendix F, Part B). If the SHPO concurs, the Development Entity will execute the design. If the SHPO does not concur, the Development Entity' CRPs will consult with the SHPO, FHWA, and the Department to resolve the disagreement, following Stipulation XI of the Statewide PA. The same applies if the Replacement Bridge does not contribute to the historic district but the Replacement Bridge could result in an adverse effect to the Historic District.

If there are consulting parties for the Replacement Bridge in addition to the FHWA, the SHPO, and the Department, the Development Entity will present the bridge standard from the Aesthetic Master Plan as one option for the purposes of consultation. The Development Entity will follow the Statewide PA and Cultural Resource Handbook in completing the Section 106 process.

If a standard treatment is the sole measure to resolve adverse effects, no memorandum of agreement or letter of agreement is needed.

All treatments beyond what is required in Section 14 of these Technical Provisions to address adverse effects to historic districts shall be considered as an environmental mitigation action.

The Department, FHWA, and/or the SHPO may request on-site meetings during construction to review implementation of the agreed upon bridge designs and/or treatments. The Development Entity shall provide site access and timely notification of the installation of elements developed to avoid or minimize adverse effects during construction to accommodate the on-site meetings.

4.4.6 Invasive Species Control

The Development Entity shall comply with the best management practices (BMP's) identified in the current version of Publication 756, Invasive Species best management practices.

4.4.7 Environmental Justice

Environmental Justice (EJ) refers to the implementation of Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which directs procedures to be put in place to identify and address any disproportionately high and adverse human health or environmental effects on minority and low-income population groups.

It is anticipated that the majority of REB are exempt from a detailed EJ analysis by meeting the exemption criteria outlined in Publication 746 except where the stipulations and criteria in Section 2.1.1 are not met. Development Entity will determine if the project is exempt from an EJ analysis and if so, document this in the CEES. For those projects that are not exempt, Development Entity will conduct an EJ analysis as outlined in Publication 746.

For exempt projects, the deliverable is the accurate completion of the EJ information in the CEES. For non-exempt projects with no EJ population identified or with EJ populations identified but without disproportionately high and adverse effects, the deliverable is the accurate completion of the EJ information in the CEES. Development Entity will keep the technical file with documentation of the analysis for review by the Department or FHWA as requested.

For any project determined to have disproportionately high and adverse effects, Development Entity will complete the accurate documentation of EJ information in the CEES and develop a mitigation strategy. The mitigation strategy is submitted to the Department for approval. Development Entity is responsible for implementing mitigation measures outlined in the mitigation strategy.

4.4.8 Air Quality – Publication 321 - Project Level Air Quality Handbook – August 2012

Project level air quality analyses occur as part of the environmental clearance process and address requirements in the Clean Air Act (CAA) and PA Act 120. Projects that have potential air quality impacts must be considered for the incorporation of appropriate avoidance and/or relief strategies.

Development Entity will complete all air quality analysis as required by the Department *Publication 321, Project Level Air Quality Handbook*. It is anticipated that most online bridge replacements is determined to be exempt from air quality analysis per exemption criteria contained in *Publication 321*.

For projects that require a qualitative analysis, per *Publication 321*, Development Entity will complete the analysis and accurately document the results in the CE Expert System. For projects that require a quantitative analysis, Development Entity will complete the analysis and accurately document the results in the CE Expert System. Additionally, the quantitative analysis is submitted to the Department for approval. Any project requiring coordination with the Pennsylvania Air Quality Interagency Consultation Group (ICG) is submitted to the Department for approval and coordination with the ICG.

4.4.9 Project Level Highway Traffic Noise – Publication 24- Project Level Highway Traffic Noise Handbook, April 2011

The Department assesses the potential noise impacts of highway improvement projects and, where appropriate, considers noise impact mitigation measures for eligible projects. Development Entity is responsible for preparing all highway traffic noise analyses as required under 23 CFR 772 and the Department Publication 24, Project Level Highway Traffic Noise Handbook. It is anticipated that most online bridge replacements will be determined not to be Type I projects as per FHWA and the Department criteria and will require only a qualitative analysis. The qualitative noise analysis will be conducted by Development Entity.

Based on the results of the qualitative analysis, Development Entity will accurately complete the Highway Traffic Noise Section of the CE document in the CE Expert System. No FHWA or the Department review is needed for qualitative analysis projects. When Development Entity determines that the project is a Type I Project, per FHWA and the Department criteria, a quantitative analysis will be required. Development Entity will conduct the quantitative analysis in accordance with Publication 24. Development Entity will be required to submit all Type I projects with quantitative analysis to the Department for review and approval. If mitigation is required, public involvement will be necessary as part of the determination of the selected treatment option. Level 2 CEs or projects where mitigation is recommended will require additional approval from FHWA. If FHWA approval is required, assume a 30 day review process for FHWA.

4.4.10 Project Level Agricultural Resources Evaluation

The agricultural resources evaluation process was developed in conformance with and to assure compliance with the following federal and state laws and policies:

- 7 U.S.C. §4201, Farmland Protection Policy Act (FPPA) of 1981;
- 4 PA Code Chapter 7, §7.301 *et seq.*, Agricultural Land Preservation Policy (ALPP), Executive Order No. 2003-2, March 20, 2003;
- PA Act 1979-100, The Administrative Code of 1929; and
- PA Act 1981-43 Agricultural Area Security Law.

The Development Entity is responsible for all project level agricultural resource activities. These activities are conducted in accordance with *the Department Publication 324, Agricultural Resources Evaluation Handbook*. It is anticipated that most online bridge replacements will not result in significant impacts to agricultural resources and that only the project NEPA document is required to address the ALPP and FPPA. Additionally the Department review and the involvement of the Office of Chief Counsel is required only when PA Act 1979-100 or PA Act 1981-43, related to the condemnation of productive agricultural land and/or condemnation of lands enrolled in agricultural security districts, are applicable to a project.

In summary:

- If FPPA and/or ALPP only apply, then no further the Department review is required.
- If PA Act 1979-100 or PA Act 1981-43 are applicable to a project, then the Department and Office of Chief Counsel Review is required. The Office of General counsel will endeavor to review agricultural condemnation evaluations within fifteen (15) days of complete request for legal opinion consistent with Pub 324, Appendix 9 on whether ALCAB approval is needed.

4.4.11 Hazardous and Regulated Waste Management

The U.S. Environmental Protection Agency (EPA) has determined that bridges are defined as structures per 40 CFR part 61 Subpart M, NESHAP (National Emission Standard for Hazardous Air Pollutants), and therefore subject to inspection, notification, and removal requirements per federal, state and local laws

and regulations. Development Entity shall comply with applicable laws and coordinate with the Department regarding potential hazardous waste impacts. The Department will provide available information on the existing bridges and the Development Entity will be responsible for tests to identify lead base paint and asbestos-containing materials on existing bridges thirty (30) calendar days prior to start of bridge construction. Development Entity shall follow specific measures to protect the streams and other waters of the U.S., including wetlands, from materials generated during bridge blasting and deck repair or removal.

The Development Entity must submit Environmental Site Assessments (ESAs) to the Department for review. The Department will complete the review of the ESA submission within fourteen (14) Days. The costs of all field, laboratory and consulting work, including but not limited to Phase II or III Environmental Site Assessments (ESAs), related to Hazardous Materials, non-hazardous waste, contaminated soil and clean fill are considered part of the Construction Work.

4.4.11.1 Asbestos Containing Material (ACM)

The Development Entity shall identify, inspect, notify, amend notifications as necessary, pay notification fees and abate asbestos found on any structure in accordance with appropriate or relevant regulations or guidance.

4.4.11.2 Lead Based Paint

The Development Entity shall identify, inspect, notify, amend notifications as necessary, pay notification fees and abate lead based paint found on any structure that is to be utilized onsite during performance of the Work, in accordance with Applicable Law and Department guidance. If structural members are scrapped/recycled/sold, the Development entity shall follow Applicable Law and Department guidance for the handling processes.

4.4.12 Public Lands

The Development Entity shall coordinate with the Department and appropriate Governmental Entities on the potential to impact public lands to facilitate avoidance or mitigation. Public lands may include parks, trails, state or national forests, state game lands, state parks and other recreational type lands; that could potentially be classified as Section 4 (f) or where federal or state grants were used to purchase said lands such as Section 6(f), Project 70, Project 500, and other Commonwealth grant programs. Any mitigation requires purchase of real properties and property purchase shall be in accordance with Section 7 of these Technical Provisions.

In performing work within or adjacent to public use lands, namely national or state forests, state gamelands, wildlife or waterfowl refuges, recreation areas, parklands, and historic sites, comply with all applicable rules and regulations of the authority having jurisdiction. See Section 4.4.5.8 of these Technical Provisions for documentation requirements related to Section 4(f).

The Development Entity shall cooperate with the national or state forest officer or supervisor and authorized subordinates in observing sanitary laws and in exercising every reasonable precaution to prevent and suppress forest fires and vandalism.

The Development Entity shall do everything reasonable to prevent and suppress forest fires and notify a forest supervisor, as soon as possible, of the location and extent of any fire observed. Before starting indicated work affecting stream channels, verify that the Department has the approval of the PADEP and/or the DCNR.

4.4.13 Waste, Borrow and Staging Areas

The Development Entity will locate proposed areas for obtaining borrow material and/or areas for disposal of waste material, when required and ensure compliance with all applicable laws and regulations. Locate waste, borrow, or staging areas inside or outside of the right-of-way in upland areas not impacting waters of the United States, including jurisdictional wetlands, unless already authorized by the U.S. Army Corps of Engineers and PADEP; remove topsoil and stockpile it for replacement when removal of borrow material has been completed.

Waste and borrow areas that impact waters of the United States are prohibited unless already permitted, as agreed to with the U.S. Army Corps of Engineers. The Development Entity will obtain waterway and/or other required permits as applicable, prepare and submit an Erosion and Sediment Pollution Control Plan to the Conservation District for approval and negotiate with the owner(s) of property to be obtained by using the Department's standard —Borrow and/or Waste Agreement, available from the Department. This standard agreement may be modified to cover unusual or special conditions, provided such conditions are acceptable to the Department. Submit one copy of each executed agreement to the Department

The Development Entity will also submit one copy of applicable permits and of the approved Erosion and Sediment Control Plan to the Department before starting work; have the agreement provide for cleaning and leaving the premises and area in a well-drained and, if required, smoothly graded condition, blending into the existing topography; and scarify, lime, fertilize, seed, and mulch any disturbed areas with material, and formulae, at rates typical for the project. When directed, it will satisfactorily remove and dispose of surplus material and perform the clean fill determination for all borrow materials entering the construction right-of-way by completing and submitting the Environmental Due Diligence Form EDD-VI, and, if necessary, Form EDD-VII to the Department for acceptance.

4.4.14 Construction Impacts

Development Entity shall be responsible for evaluating potential construction noise, dust and traffic impacts and for developing and implementing necessary impact mitigation measures.

4.5 Comprehensive Environmental Protection Plan

As part of the Project Management Plan (PMP), the Development Entity shall develop and implement a Comprehensive Environmental Protection Plan (CEPP), applicable throughout the Term to establish the approach, requirements and procedures to be employed to protect the Environment. All component parts shall reflect in order of priority: impact avoidance, minimization and as last resort mitigation. The CEPP shall satisfy applicable FHWA, the Department and resource agency requirements, including those detailed as commitments in any environmental approvals and associated PPC Plans.

The dates by which component parts comprising the CEPP are to be submitted for the Department approval are set forth in the PPA. Amendments and updates to the CEPP as necessary to address changing conditions and environmental requirements shall be in accordance with the procedures for amendments to the PMP.

The Development Entity shall establish a schedule for periodic CEPP review to ensure it is up to date. The CEPP shall provide a means to track the reviews and results. At a minimum, the CEPP shall require documents in the following list to be on file at replacement bridge sites and available at any time for Department review:

- a) CEPP component parts;
- b) Weekly environmental monitoring reports;

- c) Investigative work plans, site investigation reports, and remedial action plans as necessary for hazardous material discovery/remediation;
- d) Wetlands Delineations and appropriate Section 404 Permit Application if changes to the design or temporary construction impacts are necessary;
- e) Mitigation or resource monitoring reports, as required by resource-specific mitigation plans
- f) Designs for wetland and floodplain mitigation;
- g) PADEP 105 Permit and Section 401 Water Quality Certification Approvals with date of approval and expiration date, if applicable;
- h) USACOE 404 Approval with date of approval; and
- i) Completed permit applications and permits as issued.

Standard Operating Procedures

Development Entity shall develop standard operating procedures for the following activities and include them in the CEPP:

- a) Controlling dust during construction;
- b) Mitigating vibration during construction; and
- c) Complying with jurisdictional waters and wetlands permits.

4.5.1 Environmental Commitment and Mitigation Tracking System

The Environmental Commitment and Mitigation Tracking System (ECMTS) shall be the overarching system by which Development Entity shall ensure environmental commitments are implemented. The Environmental Commitments will include those made during the Environmental Approval and permitting processes, and other environmental requirements to be carried forward and reflected, as appropriate, in the design and implemented throughout the Work. Development Entity shall utilize the ECMTS to track on-going issues, identify environmental compliances, nonconforming work and identify actions required/taken to correct any such Nonconformance.

4.5.2 Waste Management Plan

The Development Entity shall prepare a Waste Management Plan (WMP) for the safe handling, storage, treatment and/or disposal of Hazardous Materials, hazardous waste, non-hazardous waste, contaminated soil and clean fill whether encountered or brought onto the Project Site by a third party, or otherwise, during the Term to ensure a safe working environment for personnel and visitors. The Development Entity shall use the Department's Publication 281 for guidance on the development of the WMP. The Development Entity shall submit the final Waste Management Plan to the Department for approval within thirty (30) Days of NTP1; approval of the WMP by the Department shall be a condition of NTP2.

The Waste Management Plan shall include procedures compliant with all Applicable Laws and include, at a minimum:

- a) For all chemicals to be used on the Project, Development Entity shall keep and update Safety Data Sheets (SDS), per Occupational Safety and Health Administration (OSHA) requirements, for the Term.
- b) Designated individuals responsible for implementation of the plan,
- c) Procedures for identifying and documenting potential contaminated sites which might impact Project development,
- d) Procedures for mitigation of known contaminated sites anticipated to impact construction,
- e) Procedures for mitigation of unanticipated contaminated sites encountered during construction,
- f) Procedures for mitigation of contamination during the operation and maintenance of the Project,
- g) Procedures for developing a detailed Spill Response Plan for the Term,

- h) Process for training personnel for responding to and mitigating Incidents involving contamination or waste
- i) Provisions for appropriate storage and disposal of all waste encountered or disposed of on the Project for the Term; and
- j) Identification and contact information for designated responsible individuals.

The WMP shall include provisions for making all on-site workers aware of and able to recognize the potential Hazardous Materials to which they may be exposed, limiting Contractors and other Project Site workers' exposure to Hazardous Materials and providing all necessary personal protection equipment to protect workers from exposure. The WMP shall require Development Entity to provide any non-Development Entity personnel who visit the Project with the appropriate personal protection equipment.

The WMP shall require that all personnel of Development Entity-Related Entities handling Hazardous Materials be trained and certified at least to the minimum requirements established under the current guidelines of OSHA 1910.120.

Further, the WMP shall include procedures for ensuring that all applicable certifications, licenses, authorizations and Governmental Approvals for Development Entity-Related Entity personnel handling Hazardous Materials are current and valid through the duration of the Work.

4.5.2.1 Investigative Work Plans and Site Investigation Reports

If wastes or contamination are encountered within any of the Project ROW or additional properties used as the Development Entity's staging area, field office site, plant sites, borrow site, or stockpile location, the Development Entity shall prepare an investigative work plan (IWP) that addresses the methods, techniques, and analytical testing requirements to adequately characterize the extent of the contaminated media (soil and/or groundwater) potentially impacting the Project. The Development Entity shall locate and assess the likely source of contamination.

A Professional Engineer and other qualified professionals, as needed, shall prepare the IWP and other necessary reports in accordance with Applicable Laws and Department guidance.

Upon satisfactorily completing the investigative work, the Development Entity shall summarize the findings within a Site Investigation Report (SIR) and make recommendations regarding potential response actions necessary for Project development. Development Entity shall take Hazardous Materials contamination and all waste management considerations into account during all subsequent phases of Project development, including additional properties negotiation and acquisition, property management, design, and construction.

The SIR shall address the characterization of the impacted area; sampling efforts and findings; opportunities to avoid the contamination by adjusting the design; level of response action warranted if the contamination cannot be avoided; feasibility of initiating response actions prior to construction; pursuit of cost-reimbursement from responsible parties; and the need for completing response actions concurrent with construction and nature of any special specifications and provisions necessary for incorporation into the Project.

The Development Entity may initiate a preventative or corrective action after the Department review and approval of the Site Investigation Report from appropriate Federal or State agencies.

4.5.3 Communication Plan

The Development Entity shall develop a Communication Plan (CP) which describes in detail the communication hierarchy for information distribution related to environmental coordination. The CP will

include names and contact information, including emergency contact information, and the preferred methods of routine, and emergency communication distribution.

4.5.4 Construction Monitoring

The Construction Quality Management Plan (CQMP) in Section 2.2.9 shall identify times, locations, and other conditions where monitoring of construction activities are to be performed to maintain and cause compliance with environmental laws, Environmental Approvals, and the Project Documents. All environmental monitoring reports shall be made available for review by the Department at the Department's request. Should any Nonconforming Work or violation be observed that represents an imminent danger to human health or the environment, the CQMP shall include procedures to cause immediate notification to the Department.

In addition to the CQMP, prior to NTP2, the Development Entity shall inspect existing facilities, structures, and environmentally sensitive areas in the vicinity of the Project Site but not included as part of the Work. The inspection shall document the pre-construction condition of vegetation, streets, sidewalks, landscaping, residential and commercial property, creeks, storm drainage and infrastructure. The purpose of the inspection is to provide a point of reference from which the Department can determine if any facility, structure and environmentally sensitive area damaged during the Work is restored to its pre-construction condition. Development Entity shall document the inspection with a report that shall include photographs, sketches, maps, and narratives clearly depicting the pre-construction Project Site condition.

All photographs shall be archival quality and shall be accompanied by a caption describing the date; time of day; location and direction in which the photograph was taken. If the photograph shows existing damage, the damage must be clearly shown and noted in the caption. All sketches and maps must be no larger than 11"x17". All photographs must be 4"x6".

4.6 Environmental Personnel

The Development Entity shall designate an Environmental Team (ET), as detailed in this section, to prevent, minimize, and/or correct any violation of or noncompliance with Environmental Approvals. The ET shall include Environmental Compliance Manager, Environmental Training Staff, Cultural Resources Management Personnel, Natural Resource Biologist, Environmental Compliance Inspectors (ECIs), Water Quality Specialist, and Hazardous Materials Manager. All of the ET shall be deemed other principal personnel.

4.6.1 Environmental Compliance Manager

The Development Entity shall designate a full-time Environmental Compliance Manager (ECM) for the D&C Work. The ECM shall report and coordinate all issues directly with the Department and the Project Manager. In the event the ECM, in consultation with the Project Manager and the Department, is unable to reach satisfactory resolution of environmental issues, the ECM shall provide written notification to the Development Entity and the Department outlining the concerns, actions taken attempting to correct the concerns, and provide a recommendation as to the suggested course of action.

The ECM shall coordinate with the Department, Development Entity's team, and appropriate Governmental Entities. The ECM shall submit all necessary environmental documentation and monitoring reports to the appropriate Governmental Entities and when applicable, through the Department, to the extent necessary to maintain compliance with applicable Environmental Approvals.

4.6.2 Environmental Training Staff

Under the direction of the ECM, the environmental training staff shall develop, schedule and conduct environmental awareness and environmental compliance training for the Development Entity's personnel.

4.6.3 Hazardous Materials Manager

The ECM shall designate a Hazardous Materials Manager to provide expertise in the safe handling of Hazardous Materials required to perform the Work and those that may be discovered/impacted during the Term. The Hazardous Materials Manager shall conduct appropriate activities such as the following:

- Schedule and/or conduct training for the Development Entity's employees and Subcontractors.
- Verify all employee certifications prior to and required for any handling of Hazardous Materials.
- Maintain records of all incidents involving Hazardous Materials and notify the ECM, the Department and appropriate authorities in writing of any such incidents.

The Hazardous Materials Manager shall be a qualified professional with 40-hour HAZWOPER certification and at least five (5) years of experience in similar projects and experienced in developing IWP, SIRs, and remedial action plans or equivalent reports necessary and acceptable to PADEP in material discovery and remediation efforts of Hazardous Materials.

4.6.4 Cultural Resource Management Personnel

The Development Entity shall provide a minimum of two (2) individuals, one of which must meet the Secretary of Interior Standards (SOIS), 36 CFR Part 61 for archaeology and one for architectural history respectively. These individuals are trained and delegated to serve as Cultural Resources Professionals (Development Entity CRPs). In addition to meeting SOIS, each individual must have a minimum of two (2) years of demonstrated experience in the Section 106 process, of which one (1) year is in the Mid-Atlantic Region. Included in consideration of the SOI Standard, the archaeologist must have a minimum of 2 years of experience in the archaeology of the Mid-Atlantic Region, of which one (1) year shall be supervisory. The architectural historian must have a minimum of two (2) years of experience with the architectural history of the Mid-Atlantic Region.

The Development Entity shall provide to the Department the qualifications of all proposed Development Entity CRPs, to include both a resume and a completed Checklist (Attachment 1). The Development Entity is limited to four (4) Development Entity CRPs.

The Department's Cultural Resources Unit Head and the FHWA, in consultation with the PHMC's Bureau for Historic Preservation, will review the qualifications of all proposed Development Entity CRPs and determine whether the proposed individuals meet these requirements. FHWA and the Department's Cultural Resources Unit Head will provide written agreement that the proposed individuals meet the requirements after the proposed Development Entity CRPs successfully complete the training as outlined in the LOA.

Consistent with Stipulation II.F of the Statewide PA, Development Entity agrees to provide proposed individuals to the Department for required training, at the Development Entity's expense, as outlined in the Publication 689, Chapter 15. The Department will take the responsibility for ensuring the proposed Development Entity CRPs have an adequate opportunity to take the required training. Upon successful completion of the training, the Department and the FHWA will delegate the individuals as Development Entity CRPs in respect of the PPA. The Department reserves the right to reject any proposed Development Entity CRP for failure to successfully complete the required training.

The Development Entity shall not have the ability to relieve the Development Entity CRP of his or her duty without the written consent of the Department.

4.6.5 Natural Resource Biologist

The ECM shall designate a Natural Resource Biologist with a BS in Biology or related field and NEPA related experience in the Mid-Atlantic Region to provide expertise in monitoring impacts on wildlife and the natural environment during the course of the Work.

4.6.6 Environmental Compliance Inspectors (ECI)

The ECIs shall conduct on-site environmental monitoring, prepare documentation, and report to the ECM daily all violations, compliance, and noncompliance with Environmental Approvals.

The ECI shall report immediately to the ECM any violation or non-compliance and shall include with any such reports, the appropriate recommendations for corrective action, including, but not limited to, stoppage of Work. The ECIs shall have at least one year construction inspection experience and be familiar with environmental mitigation and associated permitting requirements.

4.6.7 Water Quality Specialist

The ECM shall designate a Water Quality Specialist to provide expertise in permitting delineation, stormwater pollution prevention, and the protection of jurisdictional waters during the course of the Work. The Water Quality specialist shall have education in wetland biology, water pollution biology, or other related environmental sciences and a minimum of two years of experience.

4.7 Property Access

To fulfill the obligations set out in the Department Obtained Governmental Approvals to maintain current access during and after completion of the Construction Work, the Development Entity shall make reasonable efforts to minimize the inconvenience to vehicles, bicycles and pedestrians during the Term. The Development Entity shall maintain access to adjacent properties during the Construction Period and ensure that visibility of businesses is maintained.

4.8 Dust Control

The Development Entity shall institute dust control measures to minimize air quality impacts. The measures shall be adjusted as necessary based on construction traffic, forecasted wind speeds, and persistent dry weather conditions.

4.9 Submittals

The deliverables are discussed throughout the section, but a summary of key deliverables are outlined below:

- List of environmental commitments or mitigation utilizing ECMTS documentation protocol
- Environmental commitment or mitigation modifications or changes for approval by the Department
- NOVs: Provide all correspondence and details of the resolution of warnings and/or violations to the Department
- Provide CEEs and documentation for Bridge and Roadway Programmatic Agreement and all NEPA re-evaluations and supporting documentation through CEES
- Provide the Department on a quarterly basis a spreadsheet detailing the status of all environmental approvals and permits
- Provide permit applications and permits received
- Provide transfer of the Chapter 105/106 permits to the Department at the conclusion of the term of the contract

- Development Entity shall report any maintenance, remedial action or permit modifications of any Post Construction Stormwater Management (PCSM) Facilities constructed for the Project Replacement Bridges to the Department. (Annual – June)
- Development Entity shall provide PCSM inspection reports if PCSM facilities are constructed or modified as part the Project
- State and Federal T&E coordination and mitigation documentation
- Initial and Project Tribal Consultation Forms, as warranted
- Internal communications protocol to ensure free flow of information between Development Entity CRPs and design team and project managers (CRP – Development Entity Communications Plan)
- For each bridge that has historic property mitigation commitments, a list of conditions and stipulations resulting from consultation over adverse effects to historic resources under Section 106. The list and stipulations will form the basis for an MOA to be drafted by the Department.
- Mitigation workplan for adverse effects to historic resources. The work plan will identify the committed action and any associated deliverable, who is responsible for completing the action, the deadline for completing the action, and any additional coordination for completing the action.
- For all completed archaeological investigations, deed of gift for artifacts (if one is obtained, and receipt for payment of curation fees to State Museum.

5 THIRD PARTY AGREEMENTS

Provisions related to third party agreements are included in the applicable sections of these Technical Provisions.

6 UTILITIES

6.1 Early Completion Bridges

6.1.1 The Department's Responsibilities

With respect to each Early Completion Bridge, the Department will be responsible for the following Utility Relocation coordination activities prior to the issuance of NTP2:

- coordinating the design of the Utility Relocations required for the construction of the Early Completion Bridges;
- issuing Utility Relocation Highway Occupancy Permits (URHOPs) and bridge occupancy licenses;
- preparing Utility Relocation agreements for reimbursement and cost sharing, and secure funding;
- preparing Utility Relocation clearances. The Department will prepare, at a minimum, conditional Utility Relocation clearances by June 2014 and will prepare final Utility Relocation clearances by December 2014;
- processing payments from Utilities for Utility Relocation Work;
- assisting in conflict resolution between the Utility and Development Entity (DE) with respect to any Utility Relocation activities; and
- billing Utilities for their share of the incorporated Work.

With respect to each Early Completion Bridge, the Department will ensure that all Utility Work (other than incorporated Work set forth in the relevant Utility Relocation clearance) is completed no later than the relevant date for completion of such Utility Work set forth in the relevant Utility Relocation clearance.

6.1.2 Development Entity's Responsibilities

With respect to each Early Completion Bridge, the Development Entity will be responsible for all Utility Relocation coordination activities following issuance of NTP2, except for Department obligations under Section 6.1.1 that remain outstanding after issuance of NTP2. The Development Entity's responsibilities include:

- notifying Utility Owners per the specific notification times listed in the Utility Relocation clearances;
- scheduling of the Utility Relocation Work proposed by the Utility Owner;
- completing construction specific operations for coordinated work; and
- performing construction of Utility incorporated Work.

6.2 Remaining Eligible Bridges

6.2.1 The Department Responsibilities

The Department will be responsible for the Utility Relocation coordination activities that occur after NTP2, which include:

- issuing URHOPs within twenty one (21) Days of the acceptable applications
- issuing and Bridge Occupancy Licenses (BOLs) within sixty (60) Days of the acceptable applications;
- approving cost sharing requests and real property interest packages within twenty one (21) Days of acceptable submittals by the Development Entity;
- preparing and executing Utility Relocation agreements within sixty (60) Days of the acceptable agreement package submittals by Development Entity;

- meeting with Development Entity and the Utility Owners to discuss and resolve matters relating to the Utility Relocation Work; and
- processing payments for Utility Relocation Work.

6.2.2 The Development Entity's Responsibilities

The requirements of Design Manual 5 (DM-5), will govern the Utility Relocations unless modified in this section. The Development Entity is responsible for the coordination of all Utility Relocations required for construction of the Project. The Development Entity's action plan for each project must be to design to avoid or minimize impacts to Utilities to the extent practicable. Betterments are not included within the Development Entity's Work. This Section applies to existing and proposed underground and overhead Utilities. The following are not considered Utilities: traffic signals, storm drains, street lighting, variable message signs, video and video detection systems and the Department-owned fiber optics.

The Development Entity must identify all Utilities located within the Construction Limits of the proposed Replacement Bridge and related roadway work. If Utility Relocations are necessary, the Development Entity shall coordinate Utility Relocations consistent with the requirements of DM-5.

The Development Entity will be responsible for but not limited to:

- Identifying and verifying all existing Utilities located within the project limits. Compliance with the "Responsibilities of the Project Owner" and "Responsibilities of the Designer" under PA One Call, 73 P.S. §176, et seq. Provide PA One Call responses to the Department;
- determining the Utilities' need for attachment to the proposed structure (DM-5 Appendix Figure A-505);
- completing the Subsurface Utility Engineering (SUE) Impact form (see DM-5, Chapter 6) for each structure;
- having the appropriate level of SUE performed to confirm and or accommodate Utility conflicts. (all information obtained from the use of SUE shall be provided to the Department and the applicable Utility Owner in format acceptable to each respective party (see DM-5, Figure A-507));
- providing all affected Utilities' Written Authorization to begin Preliminary Utility Engineering (DM-5 Appendix A, Figure A-522) in accordance with DM-5, Chapter 3.2.I;
- providing all affected Utility Owners and the Department a matrix of confirmed conflicts requiring the relocation of a Utility facility;
- providing all Utility Owners within the limits of the Project one (1) set of plans, as required by the Utility Owners, which meet or exceed the minimum plan requirements set forth in DM-5 Appendix A, Figure A-502;
- providing in writing to all Utility Owners within the limits of the project a detailed schedule of design milestones in accordance with the Lead Time Policy set forth in DM-5 Appendix A, Figure A-502. (Utility lead time commences only after acceptable plans and written Authorization to begin Preliminary Utility Engineering has been issued);
- providing mutually beneficial information to assist Utility Owners in securing permits (including environmental), licenses and authorizations for the relocation of their facilities;
- providing survey stake out services at the request of the Utility Owners to assist and facilitate the design and construction of the Utility Relocations;
- if a Utility Owner claims to be compensable, requesting and obtaining the applicable real property interest (RPI) documentation from the Utility Owner. Prior to submitting the RPI documents to the Department the Development Entity shall provide on the right-of-way plan, references to the portions of the Utility facilities which each the RPI document applies;

- forwarding request from a Utility Owner for substitute right-of-way (ROW) provided it complies with Section 412 of the State Highway Law and Chapter 7, ROW Procedures, Section 7.3 within ten (10) Days of the Development Entity's receipt;
- forwarding Cost Sharing requests and justification received from a Utility Owner to the Department for consideration within ten (10) calendar days of the Development Entity's receipt;
- obtaining the required documents for issuance of a Utility Relocation permit from the Utility Owner (see DM-5 Chapter 4.1.I - 4.1.J). Upon the Development Entity's receipt forward to the Department within fifteen (15) Days;
- receiving the agreement packages from the utilities and providing them to the Department (see DM-5, figure A-814 for the estimate/agreement checklist);
- once all written arrangements have been received by the Department and the necessary permits, agreements and authorizations are issued and executed, providing the Utility Owner written Notice to Proceed (NTP) with the physical relocation of the Utilities facilities;
- all expenses incurred by the Utility Owner that are a result of a project design change initiated by the DE, that occur after the Utility Owner's NTP has been issued;
- inspecting all Utility Relocation Work to ensure compliance with Utility Relocation Permit. If revisions are necessary, obtaining from the Utility Owner the revised permit application and plan which reflect the actual installation and provide to the Department within thirty (30) Days of the Work completion; and
- providing a primary contact person for Utility Relocations and coordination.

6.2.3 Utility Relocation Permits, Agreements and Utility ROW

The Development Entity shall support the Utility Owner in obtaining necessary permits, agreements and Utility ROW in connection with Utility Relocations.

Refer to the following chapters in DM-5 for further information:

- Chapter 3 for permit information;
- Chapter 8 for agreement information; and
- Chapter 7 for right-of-way information.

6.2.4 Utilities Attached to Replacement Bridges

If placement of a Utility on a Replacement Bridge is necessary, the Development Entity shall obtain and provide details of the proposed installation to the Department as soon as the need has been determined but no less than sixty (60) Days prior to scheduled construction.

Where Utilities are to be located on a structure or are a part of incorporated Utility Work, Development Entity shall coordinate to determine what Utilities will be included on the structure, the materials required for each Utility, and the party who will be furnishing and installing the material.

If the Department agrees that the attachment is permissible, the Development Entity shall coordinate with the Department to provide the required details and information so the Department can enter into a Bridge Occupancy License and reimbursement agreement with the Utility Owner (See DM5, Chapter 1, Section 1.3.B.6 Occupancy of Structures).

Utility attachments to Replacement Bridges will not be permitted unless the Department has issued a Bridge Occupancy License to the Utility Owner to permit the attachment.

6.2.5 Authorizations/Notices to Utilities

Authorizations and notices for Utility Relocations will be handled as listed below.

- Authorization to Start Preliminary Engineering – The Development Entity shall issue the Utilities’ authorization to start preliminary engineering in accordance with DM-5.
- Authorization to Proceed with Work – The Development Entity shall issue the Utility Owner’s authorization to start work in accordance with DM-5.
- Notice to Start Work - The Development Entity shall notify all affected Utility Owners at a minimum of fifteen (15) Days or as stipulated by the Utilities in the Utility Clearance before commencing any operations that affect a Utility.

For excavation operations, Development Entity shall mark in white the proposed excavation before contacting PA One Call. The Development Entity shall call PA One Call in accordance with 73 P.S. Section 176 et.seq. before starting excavation operations.

The Development Entity shall not start construction operations adjacent to Utility facilities until arrangements, satisfactory to the Utility Owners, have been made by the Development Entity.

- Notices Regarding Utility Performance
The Development Entity shall be responsible for verifying progress of the Utility work and for notifying the Department should the Development Entity have cause to believe that the Utility Owner will not meet the specified time frame(s) for any of the following:
 - a) Utility Relocation submissions;
 - b) construction;
 - c) review of Development Entity’s plans; or
 - d) construction inspection.

The Development Entity shall provide such written notice to the Department promptly after discovering that a Utility Owner will not meet the specified time frames.

6.2.6 Meetings and Documentation

The Development Entity shall be available to meet when requested by the Utility Owners to discuss and resolve matters relating to the Utility Work. If needed, or at its discretion, the Department will attend the meetings. If the Department is requested to attend, the Development Entity shall provide the Department with not less than fourteen (14) Days prior notice of such meetings.

The Development Entity shall produce minutes of all meetings with Utility Owners and/or the Department and shall distribute copies of the minutes to the Utility Owner, the Department and other attendees no later than seven (7) Days after each meeting date.

The Development Entity shall also provide the Department copies of all correspondence between DE and any Utility Owner and any other documentation no later than seven (7) Days after receipt or sending.

The documentation to the Department should be in Portable Document Format (PDF) file format.

6.2.7 Utility Infrastructure and Utility Relocations

- a) **Utility Infrastructure and Utility Relocations Interfering with Contract Operations.** Before submitting a bid for the project, examine the project site and any waste or borrow sites designated in the proposal to determine the location of all Utility Infrastructure and the need for any Utility Relocations. The Department is not responsible for waste and borrow areas not designated in the Project Documents. Accept the responsibility and risk relating to the conditions to be encountered

regarding Utility Infrastructure and Utility Relocations that are indicated in the Project Documents or that can be ascertained from a careful pre-bid.

Subject to the Department's obligations in respect of the same set forth in this Section 6.2, upon execution of the PPA, inform all public service companies, individuals, and others owning or controlling any facilities or structures within the Construction Limits, which may have to be relocated, adjusted, protected, or reconstructed, of the plan of Construction Work. Give due notice to the responsible party in sufficient time for that party to organize and perform such work in conjunction with or in advance of Construction Work.

Subject to the Department's obligations in respect of the same set forth in this Section 6.2, cooperate with the Utility Owners and the owners of all waste and borrow areas not on the project site. Make arrangements for Utility Relocations necessary to perform the work as indicated in the Project Documents. Arrange and perform Work in and around such Utilities in accordance with recognized and accepted engineering and construction practices and in a manner that assists the Utility Owners in their required Utility Relocations. Refer to the provisions of Act 287-1974, which specifies project responsibilities in regard to public health and safety during excavation and demolition operations in areas of underground Utilities.

- c) **Utility Relocations by Others.** Development Entity shall follow the “PA One Call requirements” as shown in 73 P.S. Section 176 et.seq. “Responsibilities of the Excavator”.

The Development Entity shall be responsible for any and all damage caused by the Development Entity’s subcontractors, employees or agents to the property, facilities, structures or persons of the Utility. Development Entity shall immediately notify the affected Utility Owners of any damaged to their facilities caused by Development Entity’s subcontractors, employees or agents.

Development Entity shall be responsible for all costs and/or schedule impacts associated with said damage. This does not include underground facilities that are incorrectly marked by the Utility. The PA One Call Law places the responsibility on the Utility Owner when said Utility Owner incorrectly marks underground facilities that are subsequently hit by excavation activities. The Utility Owner is also responsible if they do not respond to a One Call Request within the required amount of time.

Should Development Entity’s equipment come in contact with or damage a Utility in any way, even though there may be no apparent evidence of breakage or harm, Development Entity must promptly notify the proper authorities and cooperate with those authorities in determining damage and restoring interrupted services as may be needed. (Note: Damage to gas and or oil facilities must be reported immediately to authorities via 911, and the affected Utility Owner should also be contacted immediately.)

Promptly after Development Entity’s discovery of such damage or Development Entity’s receipt of notice of any such damage from the Utility Owner or from any other source:

- at the Utility Owner’s election, the Utility may make such repairs at Development Entity’s expense or
- the Development Entity shall repair the damage to the Utility Owner’s reasonable satisfaction.

6.2.8 Deliverables

Development Entity must:

- provide all necessary information required for the Utility Relocation permits packages for the Utility Work to the Department (see DM-5 Chapter 3);
- request and obtain real property interest (RPI) packages (RPI documents for Utilities with associated plans) from the Utility Owners for their affected Utilities and submit to the Department for review (see DM-5 Chapter 7);
- submit cost sharing requests and justifications to the Department for review and approval (see DM-5 Chapter 8);
- obtain and provide details of proposed Utility attachments to structures to the Department as soon as the need has been determined but no less than sixty (60) Days prior to scheduled construction (see DM-5 Chapter 1);
- provide Utility Relocation permit inspection reports and any revised Utility Relocation permits for the completed Utility Work to the Department; and
- provide all necessary documentation from the Utility Owner to the Department for the completion of Utility Relocation Agreements

7 RIGHT-OF-WAY

7.1 Early Completion Bridges

By March 31, 2015, the Department will have acquired all required ROW identified as necessary by developing a ROW plan from the TS&Ls prepared by the Department. This includes, but is not limited to all required temporary construction easements and all utility, flowage or other easements. Any additional ROW required as the result of design changes made by Development Entity must be coordinated with the Department at the earliest opportunity. The Department will acquire the necessary ROW, except as expressly provided in the PPA.

7.2 Remaining Eligible Bridges (REB)

Development Entity shall submit to the Department ROW plans consistent with Publication 14M; DM Part 3; Publication 16M; DM Part 5, Utility ROW Chapter; Publication 371 Section 2.03, Acquisition of Railroad Property, and the Pennsylvania Eminent Domain Code.

ROW activities related to the acquisition of land (i.e. performing appraisals, offers for ROW acquisition or payments made) may not occur until NEPA approval (i.e., the National Environmental Policy Act of 1969) has been obtained for the Project, and a final ROW plan submitted.

Development Entity's PE and PLS must sign the ROW plans and must include the completed ROW plan checklist provided in Attachment 7-1.

A simplified ROW plan as described in DM-3 may be prepared in lieu of a standard ROW plan, if applicable and agreed to by the Department. Required area descriptions or tabulations must be shown within the ROW claim information block described on the plan detail sheet. In addition to the items listed, property plots are required for every property that is impacted by the Development Entity's design unless waived by the Department. Parcel numbers are required for each property shown on the plan.

Development Entity will ensure qualified individuals research titles to all affected properties in accordance with in accordance with DM-3.

The title information and supporting documents shall be submitted to the Department. Title information includes, but is not limited to current deed(s), mortgage(s), deed(s) of easement (including utility easements), will(s), estate information, adverse(s), lot or subdivision plan(s), judgment(s), lien(s), tax assessment information, all tax and lien certification(s), tax map(s), current taxes including paid, unpaid, or delinquent status, bankruptcy verification, unity of use analysis and other related documents and available in a digital format, or paper copy if requested.

Note: The Department will not appropriate a greater amount of property than is reasonably required for the contemplated transportation purpose. See Pub 378, Chapter 3.03.Q.6. Excessive takings are unconstitutional and where they occur, preliminary objections to the declaration of taking will be sustained.

Development Entity will develop and submit final ROW plans and title information consistent with Development Entity's approved PBS-2 or PBS-3+ (whichever is current at the time of the submittal) (all such information together comprising the "Right-of-Way Pack" for the relevant Remaining Eligible Bridge) at least nine (9) months prior to the planned commencement of construction for each Replacement Bridge. The Department shall provide Access to the relevant REB Project Site Within the relevant ROW Acquisition Period.

In order to acquire parcels in less than nine (9) months, ROW claims must be minimized to avoid impacts to improvements, residences and businesses. Failure to consider potential impacts may result in unforeseen delays and an extension of the nine-month criteria. Therefore, Development Entity shall consider priority and anticipated acquisition complications with each site in its sequencing. Complex acquisitions take longer to acquire where:

- acquisitions from improved commercial properties are required;
- utility work requires acquisition of substitute ROW;
- personal property, including outdoor advertising devices are located within required ROW;
- required takes involve conservation easements;
- improvements exist within required ROW;
- acquisitions have a serious impact to the remaining property, such as access or parking;
- the acquisition affects a parcel that may meet the criteria of a larger parcel;
- parcel owners of the required ROW have filed for bankruptcy in US District Court;
- acquisition of railroad property is required;
- acquisitions from state or federal agencies are required;
- residential or business relocations are required;
- pre-condemnation approval is required from the Agricultural Lands Condemnation Approval Board (ALCAB), or the acquisition involves an agricultural conservation easement (ACE) created under Act 43. See agricultural note below:
 - gas wells, oil wells, or known mineral rights exist within required areas;
 - properties involving severance and or depreciation to remaining property/buildings
 - properties subject to leases;
 - properties with multiple ownership interests;
 - properties where owners live out-of-state;
 - unknown or unlocatable owners; and,
 - negative public perception arises.

Note regarding agricultural property: A project should not advance to the point of property acquisition in the absence of a detailed examination of the existence and extent of agricultural resources. See Pub 324. Parcels where condemnation approval is required from the Agricultural Lands Approval Board (ALCAB) must be identified. ALCAB approval requires up to six months of preparation for the hearing and the approval may not be granted, meaning that the Department has no power to acquire the necessary right-of-way through condemnation. In addition, agricultural conservation easement property (ACE) under Act 43 can only be converted by the filing of a declaration of taking, whether or not ALCAB approval is needed and requires a complex coordination with the Department of Agriculture. *Reference: the Office of Chief Counsel Real Property Division Directive No. 38 dated July 8, 1998.* A project that requires ALCAB approval in order to use the power of condemnation under Pub. 324, or any project that requires the conversion of Act 43 land must be brought to the attention of the Department immediately.

Development Entity may not submit more than forty (40) final ROW plans per month without prior approval by the Department. Each ROW plan will detail the parcels required for a Replacement Bridge.

Any deficiencies in the plans are Development Entity's responsibility. The Department will not begin acquisition activities until such deficiencies are corrected and the plan resubmitted. Any changes that result in a revision to valuation amounts will reset the timeframes for the Department to complete the acquisition in a timely manner.

In the event a petition for the appointment of a board of viewers, preliminary objections to a declaration of taking, a writ of possession or some other real property litigation is filed by a condemnee, Development Entity will be responsible for developing and submitting to the Department the board of

view plans for providing expert witnesses for the proceeding(s) (board of view hearing and trial), and other litigation support. Where testimony regarding a ROW plan is necessary, the Development Entity may be required to provide such at the request of the Office of Chief Counsel.

Development Entity will be responsible for identifying improvements and/or structures of any kind to be removed or demolished within the required area(s) of take and will properly identify such on the final ROW plan.

Upon the successful relocation of all displaced persons and the completion of the acquisition of required land and all personal property by the Department, the Development Entity will be responsible for the removal or demolition of improvements and/or structures of any kind identified on parcels to be acquired. Where demolition occurs, the Development Entity is responsible to coordinate and secure demolition services including, but not limited to the removal of hazardous materials, the proper discontinuance of all utilities, and maintenance of the property in a manner consistent with public safety.

No property may be entered upon for the purpose of performing Work in connection with the construction of any Replacement Bridge until all temporary and permanent ROW is acquired and a Final ROW Clearance Certification is issued by the Department.

Development Entity will have the appropriate Surveyor staff available upon request from the Department in the event a property owner desires the take area to be staked on the land(s) to be acquired.

Development Entity will provide names of the necessary points-of-contact of the Design staff available to answer questions, participate in site visits, and attend right-of-way project status meetings when requested by the Department.

7.3 Notice of Intent to Enter

Development Entity will be responsible for providing property owners with a notice of intent to enter if entry onto private property is necessary to complete the ROW Plan or for any other necessary investigations. The RW-983 will be mailed by certified mail, return receipt requested, to the property owner in sufficient time to be received by the property owner at least ten (10) Days in advance of the anticipated date of entry. Development Entity will coordinate obtaining the appropriate Department signature prior to mailing the form. A repeat notice will be sent to the property owner if an extended period of time has elapsed since entry was made on the initial notice. It will be incumbent on Development Entity to keep records of all mailings.

7.4 ROW Requirements Post Substantial Completion

The Development Entity will contact the Department where temporary access to private property is needed to maintain the Replacement Bridge. The Development Entity will be responsible for developing the right-of-way plan following the same guidelines as Section 7.2 above. The Department will be responsible for obtaining the appropriate temporary access.

7.5 Deliverables

Development Entity will be responsible for ensuring that complete and accurate final ROW plans and related title information are submitted to the Department to prevent acquisition delays. Original ROW plans are required with seals and signatures.

Development Entity shall maintain a database tracking all ROW plans in progress until all ROW is acquired for each Replacement Bridge and shall provide the Department access to the database.

8 GEOTECHNICAL

8.1 General Requirements

The Development Entity shall perform geotechnical investigations, analyses, design, oversight, construction, maintenance, monitoring and reporting in accordance with this Section 8 of these Technical Provisions and other relevant provisions of the Agreement.

Notwithstanding the information provided in the Geotechnical Summary Reports to the Development Entity by the Department, the Development Entity shall perform geotechnical investigations, testing, research (including of existing published sources, geotechnical/geological references and maps), and analysis necessary to effectively determine and understand the existing surface and subsurface conditions of each Project Site. Investigations, tests, research and analyses shall be carried out in accordance with the requirements of:

1. the Department's following publications: DM-4, Publication 242, Publication 293, Publication 222; and Publication 408
2. any FHWA requirements referred to in the aforementioned Department publications; and
3. the Exception Exhibit Documents.

8.2 Design Requirements

The Development Entity shall design each Replacement Bridge in accordance with the requirements of DM-4, Publication 222, Publication 242 and Publication 293.

1. To the extent that the Development Entity is required to perform geotechnical investigations or tests pursuant to Section 8.1 above in addition to the Geotechnical Summary Reports provided in the Disclosed Information, such investigations or tests shall also be carried out in accordance with the following requirements:
 - Subsurface Borings providing SPT and rock core drilling following the requirements of Publication 222. Borings shall be of sufficient depth below foundation bearing elevation to identify and assess materials that will be subjected to foundation loads. Minimum boring depths for shallow foundations are two times the footing width below the bearing elevation of the footing. Minimum boring depths for deep foundations are 12 pile diameters below the estimated pile tip elevation.
 - Sieve analysis with gradation curves (AASHTO T-88), Atterberg Limits (AASHTO T 89 and T 90), Hydrometer Analysis (AASHTO T 88), AASHTO and Unified Soil Classifications, adequate to represent soil layers imparting lateral loads and soil layers resisting foundation loads
 - Unconfined compressive strength tests of intact rock core samples representing rock layers subject to foundation loads to assure that materials have adequate strength to resist long term foundation loads determined according to ASTM D7012, "Standard Method of Test for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures", Method C.
2. If Development Entity determines that no investigation or testing is required pursuant to Section 8.1 in addition to the Geotechnical Summary Reports, the "design parameters and model assumptions" should clearly substantiate why no additional testing and investigation is required. The minimum number of borings required per Publication 293 do not apply.
3. If Development Entity chooses to use presumptive values for geotechnical design parameters, Development Entity shall follow the requirements of Tables 8.1(a) and 8.1(b) for maximum presumptive values for soil and rock, respectively. Development Entity shall use the following test methods for determining non-presumptive geotechnical design parameters:

- Long Term Soil Shear Strength Design Parameters for disturbed granular soils and disturbed or undisturbed cohesive soils – AASHTO T 236, “Standard Method of Test for Direct Shear Test of Soils under Consolidated Drained Conditions”, conducted on representative samples collected from the specific structure site at the appropriate depths and locations. For undisturbed cohesive soils AASHTO T 297, “Standard Method of Test for Consolidated, Undrained Triaxial Compression Test on Cohesive Soils”, may also be used to determine long term soil shear strength parameters.
- Consolidation Design Parameters of Soils – AASHTO T 216, “Standard Method of Test for One-Dimensional Consolidation Properties of Soils. Field testing using an Electric Cone Penetrometer with pore pressure measuring element (CPT w/piezo or piezo-cone) may substitute or supplement lab consolidation testing to determine consolidation design parameters of soils.
- Unconfined Compressive Strength of Intact Rock – ASTM D7012, “Standard Method of Test for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures”, Method C.

Strength Parameters	AASHTO Soil Classification	Maximum Presumptive Value (Visual Classification)		Predictive Value with Maximum Allowable Indicated (Laboratory Classification)		Comments
		ϕ (deg)	c (psf)	ϕ (deg)	c (psf)	
Long Term (Drained) Soil Shear Strength Parameters for Structure Design	A-1-a	34.0	0.0	Well graded materials with $C_u \geq 10$ and $1 \leq C_c \leq 3$: $\phi = [4 \times \ln(N_{60})] + 25$ with $\phi_{max} = 39$ degrees A-1-a and A-1-b lab classified materials not meeting the above requirements (materials with $C_u < 10$ and $1 > C_c > 3$) : $\phi = [4 \times \ln(N_{60})] + 22$ with $\phi_{max} = 36$ degrees	0.0	<ul style="list-style-type: none"> • N_{60} may not be corrected for overburden pressure • Only valid for N-values for samples with greater than or equal to 70 percent recover • Not valid for any N-values or portion of sample run where there is indication that blow counts have been inflated by material that resists entering the sample barrel and/or interfere with penetration of drive tip
	A-1-b	32.0	0.0		0.0	
	A-2-4	31.0	0.0	$\phi = (0.074 \times \% \text{ Sand}) - (0.258 \times \% \text{ Clay}) + 34$ w/maximum value of 34 degrees	0.0	
	A-2-5	29.0	0.0	30.0 max	0.0	
	A-2-6	28.0	0.0	28.0 max	0.0	
	A-2-7	26.0	0.0	26.0 max	0.0	

	A-4	27.0	0.0	$\phi = (0.106 \times \% \text{ Sand}) - (0.199 \times \% \text{ Clay}) + 30.5$ w/maximum value of 30 degrees	0.0	
	A-5	25.0	0.0	25.0 max	0.0	
	A-6	22.0	0.0	$\phi = (0.118 \times \% \text{ Fine Sand}) - (0.067 \times \% \text{ Silt}) + 27$ w/maximum value of 24 degrees	0.0	
	A-7-5, A-7-6	16.0	0.0	16.0 max	0.0	
Long Term (Drained) Soil Shear Strength Parameters for Slope Stability	A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-4 and A-5 Soils with $PI < 6.0$	Use corresponding "Long Term Soil Shear Strength Parameters for Structure Design" listed above for both ϕ and c				
	A-2-4, A-2-5, A-2-6 and A-2-7 with $> 20\%$ passing No. 200 sieve and $PI \geq 6.0$; A-4 and A-5 with $PI \geq 6.0$; A-6 and A-7-6	Use corresponding "Long Term Soil Shear Strength Parameters for Structure Design" listed above for ϕ $c = [125 \times \ln(PI)] - 150$ with maximum value of $c = 250$ psf				
Settlement Parameters	AASHTO Soil Classification	Maximum Value			Comments	
		Elastic Modulus, E (ksf)		Poisson's Ratio, ν		
Elastic Settlement	A-1-a, A-1-b, A-2-4, A-2-5, A-2-6 and A-2-7 (Granular Soils); Non-to Low Plastic A-4 and A-5 Fine Grained Soils w/ $PI < 6.0$	$10 \times (N_{60} + 10)$		0.3	N_{60} is average N-value for layer corrected for an assumed hammer efficiency of 60 percent	
Consolidation Settlement	A-4 and A-5 w/ $PI \geq 6.0$, A-6 and A-7 (Fine Grained Soils)	Laboratory consolidation testing must be performed, or field piezo-cone (CPT w/pore pressure element) testing must be conducted, to determine consolidation design parameters. Presumptive values are not permitted for consolidation settlement calculations.				

Table 8.1(b) – Presumptive Design Parameters for Rock					
Design Parameter	Rock Type	Unconfined Compressive Strength (psi)			Comments
		Apparent Rock Weathering (from Pub 222, Sec 3.6.4(g), Table 27)*			
		Fresh	Weathered	Highly Weathered	
		Apparent Rock Hardness (from Pub 222, Sec 3.6.4(f), Table 26)*			
		Very Hard	Medium Hard	Very Soft	
Unconfined Compressive Strength of Intact Rock	Claystone	300	200	100	Must also check for slake durability
	Shale	600	400	200	
	Siltstone	3000	1800	600	
	Sandstone	6000	3500	1000	
	Conglomerate / Breccia	6000	3500	1000	
	Limestone	7000	4000	1000	
	Dolomite	7000	4000	1000	
	Siltstone	3000	1700	400	
	Quartzite	12000	9000	6000	
	Argillite	3000	1700	400	
	Slate	3000	2000	1000	
	Phyllite	3600	2100	600	
	Slate	5000	3000	1000	
	Schist	3000	1800	600	
	Gneiss	7000	4500	2000	
Marble	6000	3500	1000		

	Diabase	12500	7500	4000	
	Granite	7000	4500	2000	
	* Hardness criteria are not a reliable indicator of relative intact rock strength (especially for soft rocks). Weathering will provide a better indicator of relative rock strength, however hardness may be useful in assessing the degree of weathering, and evaluating the appropriate strength for a given rock type within the presumptive ranges indicated.				
Ultimate Grout to Ground Bond Strength for Micropiles		See DM-4, Table C10.9.3.5.2-1			
Ultimate Values of Grout to Ground Bond Stress for Anchors in Rock		See FHWA, GEC 4, Sec 5.3.6, Table 7			

4. Development Entity shall calculate bearing resistance of rock for spread footings according to Table 8.1(c)

Table 8.1(c) – Calculation of Bearing Resistance of Rock for Spread Footings		
Calculation of Bearing Resistance	All rock types	$q_r = \phi \times N_q \times C_o$ where: q_r = bearing resistance of rock mass; use for both presumptive values and when lab testing of intact rock is available ϕ = resistance factor = 0.5 C_o = Unconfined compressive strength of intact rock; Use lab test values for C_o where valid, adequate and representative testing is available; For presumptive values, determine according to Table 8.1(b). N_q = bearing capacity factor = $(0.0011)(e^{(0.0817) RCR})$ where: RCR = weighted average percent (%) rock core recovery of rock mass within 1.5B below bearing elevation calculated as follows: $RCR = (0.67)(\%RCR \text{ for } 0 \text{ to } 0.75 \text{ B below bottom of footing}) + (0.33)(\%RCR \text{ for } 0.75 \text{ to } 1.5 \text{ B below bottom of footing})$ where: $\%RCR$ = average rock core recovery in percent for the zone

5. Development Entity shall develop and submit a Foundation Design Parameters and Model Assumptions Report (See Section 12) for approval prior to submitting individual Foundation for each Replacement Bridge based upon observed and anticipated construction sequencing, short, and long term site specific materials and conditions.
6. TS&L submissions shall reflect incorporation of accepted design parameters and model assumptions.

7. The following types of geotechnical conditions shall be considered unacceptable by the Department for contributing to the support of structure; in general, i.e. bearing on coal, bearing on slaking rock, spread footing on soil in karst geology, auger cast piles, timber piles, timber mats, etc. If these conditions are encountered at a Project Site, they are to be mitigated, as warranted, to ensure a long-lasting, durable foundation and structure.
8. Development Entity shall design and construct the Foundations Elements of the Project to meet or exceed the foundation types, testing requirements, pile dynamic analysis and other requirements listed in Attachment 8-1, as well as the requirements in the Technical Provisions and the Exception Exhibits.
9. Development Entity shall determine the D50 value for scour evaluation.
10. Development Entity shall assess the potential for corrosive soil and ground water.
11. Development Entity shall be required to use drillers and drill inspectors approved and certified by the Department.

8.2.1 Presentation of Subsurface Geotechnical Information

The subsurface investigation includes but is not limited to, soil borings (SPT) and rock coring, test pits, laboratory testing, and pavement coring. Development Entity may also employ air track drilling, field testing, instrumentation and/or geophysical methods of investigation as it deems appropriate and necessary to define subsurface conditions and develop design parameters. The Development Entity shall determine the specific locations, depths, frequency, and scope of all subsurface geotechnical investigations, testing, research, and analysis Development Entity considers necessary to provide a safe and reliable roadway, pavement, foundation, structure, embankment, excavation, slope and other facilities for the Project in accordance with the Department and FHWA geotechnical requirements. Applicable FHWA geotechnical requirements are referenced in Department publications including DM-4, Publication 242, Publication 293, and Publication 222. All subsurface information must be entered and presented using gINT software for subsurface data management and reporting. The Department's gINT library and data template will be provided to the Development Entity. The gINT software is not provided and must be obtained by the Development Entity.

Development Entity will employ field investigation measures that avoid groundwater contamination, and is responsible for all mitigation and/or restoration associated with geotechnical investigations.

Development Entity shall prepare and amend as necessary, its Foundation Report documenting the assumptions, conditions, and results of the geotechnical investigations and analyses, and rationale for amending the report, including the following:

- a) The geology of each Project Site, including soil and/or rock types, and drainage characteristics.
- b) Field investigations and laboratory test results used to characterize conditions. Documentation of field investigations includes descriptions of methods of investigation and testing, descriptions of all soil and rock strata including soil and rock recoveries, blow counts, N_{60} values, and RQD (rock quality designation) values, and the results of any field/in-situ testing conducted as part of the investigations. Laboratory and field testing includes works necessary for development of design parameters, testing necessary to establish construction control requirements and performance standards (e.g. Moisture-Density/Proctor testing), and testing conducted in monitoring of construction performance and compliance with construction specifications (e.g. Nuclear Gage testing). Documentation of laboratory testing includes all test results, recording of all measurements and observations conducted as part of the testing, and all calculations, charts and graphs made in analysis and determination of the

- test results. All testing shall be conducted in accordance with all required Department, AASHTO and ASTM testing standards.
- c) A discussion of conditions and results with reference to specific locations on each Project Site.
 - d) Design and construction parameters resulting from the geotechnical investigation, testing and analysis, including parameters for the design of pavements, pipes, foundations, structures, slopes, retaining walls, noise walls and embankments.
 - e) Slope stability analyses for embankment and excavation, including roadway section, and retaining wall slopes including both short-term (undrained) and long-term (drained) conditions, and discussion of design measures undertaken to ensure stability and safety of all slopes. The analysis shall consider the potential for long-term surficial slide failures common to high plasticity clays in Pennsylvania, and specific recommendations shall be provided to minimize their occurrence. No soil slopes shall be steeper than 2H:1V. Anything steeper must be in rock or a reinforced soil slope.
 - f) Plan view locations of field sampling (Boring Locations Plan), boring logs and other field data, laboratory test results, calculations, and analyses that support design decisions.

Each Foundation Report shall:

- a) Provide design and construction parameters derived from geotechnical investigations for the design of structure foundations, pipes, pavements, slopes, embankments and earth retaining structures.
- b) Assess the corrosion potential of the soil and rock materials and conditions that will be encountered, and the impacts to planned surface and subsurface facilities.

Each Foundation Report, upon completion and including any later supplements or amendments shall be submitted to the Department for review, comment, and acceptance.

8.2.2 Deliverables

Development Entity shall provide deliverables as per Section 12.

9 LAND SURVEYING

9.1 General Requirements

For the ECBs, the Department will provide land surveying and mapping necessary to support ROW acquisition. Development Entity shall be responsible for all other land surveying and mapping needed for the Project.

Development Entity shall review existing survey and mapping data, if any, and determine the requirements for updating or extending the existing survey and mapping data. If no existing survey or mapping data is available, Development Entity shall determine the requirements for obtaining survey and mapping data. Development Entity is responsible for the final precision, accuracy, and comprehensiveness of all survey and mapping.

In performing surveys for other adjoining projects, the Department may need to verify and check Development Entity's survey Work. Development Entity shall coordinate with contractor for the adjoining project regarding planned construction activities. Development Entity shall notify the Department prior to altering or disturbing any Department stakes and marks.

9.1.1 Laws and Procedures

Development Entity shall comply with the most recent and applicable Commonwealth and federal laws. Survey procedures and criteria shall be in accordance with Publication 122M (Surveying and Mapping Manual); Publication 408, Section 686 (Highway Specifications); and any applicable portions of Publication 10 (DM Part 1- Transportation Project Development Process). Traffic control shall be in accordance with Publication 213.

9.2 Design and Construction Requirements

9.2.1 Units

All survey Work shall be performed in the State Plane Coordinate System using U.S. Survey Feet system of measurement. Development Entity will calculate the combined surface adjustments factors for each Replacement Bridge.

9.2.2 Survey Control Requirements

Development Entity shall establish and maintain survey control in accordance with Publication 122M. When survey is provided by the Department, Development Entity shall base all additional horizontal and vertical control on control provided by the Department.

Development Entity shall establish and maintain additional survey control as needed throughout the duration of the Project. Development Entity shall tie any additional horizontal and vertical control for the Project to the Department-supplied control network. If Development Entity chooses to use GPS methods, Development Entity shall meet the accuracy of the appropriate level of survey as defined in the Department Publication 122M.

All survey control points shall be set and/or verified by a Professional Land Surveyor.

Project Specific Control Network (PSCN) shall consist of 24 inch (600mm) steel rebars in open ground, Mag Nails™ in bituminous pavements, drill holes in concrete or other methods. Exceptions to other methods of monumentation standard must be approved by the Department. Development Entity shall replace all existing survey monuments and control points disturbed or destroyed. Development Entity

shall make all survey computations and observations necessary to establish the exact position of all other control points based on the primary control provided.

Development Entity shall deliver to the Department a listing of all primary and secondary control coordinate values, original computations, survey notes, copies of field notebooks, and other records, including GPS observations and analysis made by Development Entity within ninety (90) Days of Final Acceptance of the Replacement Bridge, or upon request by the Department. Deliverables shall be in PDF and native electronic format using the software and version thereof being used by the Department at the time the deliverable is developed.

9.2.3 Conventional Method (Horizontal & Vertical)

Horizontal and vertical distances shall be measured and expressed to 0.01 foot (1 mm). Angular measurements shall be recorded and expressed to the nearest 1 second. All measurements shall meet the specific accuracy requirements as outlined in Publication 122M, Tables 1.3.1 and 1.3.2, Part A, Chapter 3 – Field Survey Classifications.

All survey work related to horizontal control networks will be categorized as shown in Publication 122M Table 1.3.1.

9.2.3.1 ROW Surveys

A ROW Plan shall be required when Additional ROW or easements are acquired. Development Entity's PLS shall reestablish the existing alignment and existing ROW and survey any new Project alignment.

9.2.3.2 Legal Property Surveys

Obvious physical evidence such as iron pins, stone piles, blazed trees, fence rows, etc. shall be included in the survey as a normal part of obtaining topography. This survey data shall then be used to establish property lines as part of the ROW plan preparation. If required to establish property lines due to a lack of description in the deed or due to a dispute with the owner during settlement, property lines shall be established with field survey procedures. Retracement surveys or random traverse techniques shall be used as appropriate. Property corners shall be located directly based on retracements and through office fittings of random traverse surveys.

9.2.4 Hydraulic Surveys

Hydraulic surveys shall meet the requirements of Publication 122M, Appendix D.

9.2.5 Survey Records and Reports

Development Entity shall produce a horizontal and vertical control report including coordinate listing, maps showing control, the Department monument description and location description of all primary and secondary survey control points installed, marked and referenced along with a listing of the existing control used to create the installed control points. Control from adjoining, incorporated, or crossed roadway projects, which are currently in design, will be located and a comparison of the horizontal and vertical values will be shown. Development Entity shall provide survey records and reports to the Department upon request.

Development Entity may use an electronic field book to collect and store raw data. Development Entity shall preserve original raw data and document any changes or corrections made to field data, such as station name, height of instrument, or target. Development Entity shall also preserve raw and corrected field data in hardcopy output forms in a similar manner to conventional field book preservation.

Field survey data and sketches that cannot be efficiently recorded in the electronic field book shall be recorded in a field notebook and stored with copies of the electronic data.

All field notes shall be recorded in a permanently bound book. (Loose leaf field notes will not be allowed.) All field survey books shall use a format and index consistent with the Department Form D-428.

9.3 Deliverables

9.3.1 Survey Records

Development Entity shall deliver to the Department for review and acceptance, a listing of all primary, secondary control coordinate values, original computations, survey notes and other records including GPS observations and analysis made by Development Entity within ninety (90) Days of Final Acceptance.

9.3.2 Final ROW Surveying and Mapping

The survey for condemnation of ROW shall be coincidental with the construction survey, as is outlined in Publication 122M. Before such survey is started, Development Entity will gain approval of the proposed required ROW width from the Department.

The documents produced by the Surveyor, or the Surveyor's subcontractors, are the property of the Department, and release of any such document must be approved by the Department. All topographic mapping created by Development Entity shall be provided to the Department in a format compatible with Microstation. The minimum requirement should include the following 1) Microstation Cadd file (.DGN) 2) Digital 3d terrain Model (.DTM) 3) Microstation Survey Fieldbook file (.FWD), and 4) Microstation Horizontal and Vertical Geometry files (.ALG) using the software and version thereof being used by the Department at the time the mapping is developed.

9.3.3 Survey Monuments and Benchmarks

Reference monumentation and benchmarking requirements for construction and ROW purposes will be in accordance with Publication 122M, Publication 408 and DM3 Publication 14M Figure 2.1.3.

9.3.4 As-Built Drawings and Documentation

Development Entity shall submit the following as part of the As-Built Drawings and as a condition of Final Acceptance:

- a) A listing of all primary and secondary control coordinate values, original computations and other records including Global Positioning System (GPS) observations and analysis made by Development Entity
- b) Copies of all survey control network measurements, computations, unadjusted and adjusted coordinate and evaluation values;
- c) Survey records and survey reports; and
- d) Digital 3D terrain model (.DTM) if developed for each Replacement Bridge.

Development Entity shall produce reports documenting the location of the as-built alignments, profiles, structure locations, Utilities, and survey control monuments. These reports shall include descriptive statements for the survey methods used to determine the as-built location of the feature being surveyed. Development Entity's as-built data shall include the coordinate types (x, y, and/or z) and feature codes in the same format in which the preliminary construction data was generated. Where data has been provided to Development Entity from the Department in an x, y, z only coordinate format, or z only coordinate format, Development Entity shall provide the Department with data in an x, y, z only coordinate format or z only coordinate format.

10 ROADWAYS AND PAVEMENTS

10.1 General Requirements

The objectives of the Project include the provision of safe, reliable, cost-effective, and aesthetically-pleasing corridors for the traveling public. The requirements contained in this section provide the framework for the design and construction of the roadway improvements to help attain the Project objectives.

The roadway design shall have the flexibility to accommodate changes that produce benefits or savings to the Department or Development Entity without impairing or reducing the essential functions and characteristics of the Project, such as safety, traffic operations, durability, desired appearance, maintainability, environmental protection, and drainage.

Development Entity shall keep the Replacement Bridges in their existing alignment unless a shift in alignment is required for staged construction, or to meet the geometric criteria provided in this Section 10. Development Entity shall ensure that impacts are minimized by the proposed Project. This includes, but is not limited to, environmental, ROW and Utility impacts.

Development Entity shall coordinate roadway design, construction, and maintenance with other Elements of the Project to achieve the objectives of the Project.

Where changes to the roadway geometrics result in revisions to the Project ROW for the ECB's, Development Entity is responsible for demonstrating the proposed change is an equally safe alternative as well as the initiation and progression of all environmental and public involvement processes in coordination with the Department. When additional ROW is necessitated by proposed changes, Development Entity shall prepare and submit ROW plans and title documentation which will be the basis for the Department's acquisition of the ROW.

10.2 Standards

The design and construction of the roadway and pavements shall be in accordance with the relevant requirements of the standards listed in Table 10-1, Standards for Roadways, and Table 10-2, Standards for Pavements.

Development Entity will comply with the current version of Publication 408 including applicable strike-off letters as of the date of Final RFP.

Unless otherwise required in the Project Documents, Development Entity shall use the references listed in Tables 10-1 and 10-2 and all applicable strike-off letters, as requirements for the design and construction of the roadway and pavements.

TABLE 10-1		
STANDARDS FOR ROADWAYS		
	Author or Agency	Title
	Development Entity	Contract for the Project*
	The Department	Publication. No. 13M – DM Part 2: Highway Design
	The	Publication. No. 10C – DM Part 1C, Transportation Engineering

	Department	Procedures
	The Department	Publication. No. 10X – DM Part 1X, Appendices to DMs 1, 1A, 1B, and 1C
	The Department	Publication No. 14 M – Design Manual Part 3, Plans Presentation
	The Department	Publication. No. 408 –Specifications
	The Department	Publication. No. 72M – Roadway Construction Standards
	The Department	Publication. No. 584 – PennDOT Drainage Manual
	AASHTO	A Policy on Geometric Design of Highways and Streets
	AASHTO	Roadside Design Guide
*Only where it exceeds requirements in the RFP or any other documents or standards.		

TABLE 10-2		
STANDARDS FOR PAVEMENTS		
	Author or Agency	Title
	Development Entity	Contract for the Project*
	Department	Publication. No. 242 - Pavement Policy Manual
	Department	Publication. No. 408 –Specifications
	Department	Publication. No. 72M – Roadway Construction Standards
	Department	Publication. No. 293 – Geotechnical Engineering Manual
	Department	Publication No. 34 – Aggregate Producers (Bulletin 14)
*Only where it exceeds requirements in the RFP or any other documents or standards.		

10.3 Roadway Design Requirements

Development Entity shall coordinate its roadway design with the design of other components of the Project, including aesthetics. The Project roadways shall be designed to integrate with streets and roadways that are adjacent or connecting to the Project.

Geometric design elements within the bridge structure and transition lengths of a Replacement Bridge shall be in accordance with design criteria and design standards, including superelevation. Design exceptions shall be in accordance with this section. New highway construction roadway geometric design criteria provided in Design Manual, Part 2 as it pertains to the thirteen (13) controlling criteria provided in Design Manual, Part 1X, Appendix P, Design Exceptions is applicable to the Replacement Bridges. The geometric design of each bridge shall not adversely affect the approaches.

Development Entity shall design transitions to and from the Replacement Bridge to existing facilities and roadways within the Construction Limits accounting for necessary width transitions, roadway geometric changes, including superelevation as well as support roadway safety and required guide rail and be in accordance with the requirements of this Section 10 of these Technical Provisions. Any Replacement Bridge that requires approach pavement in excess of 500 feet on each side of the Replacement Bridge measured from the end of the approach slab will be addressed through the change order process.

The Project roadways shall be designed to incorporate roadway appurtenances, including ROW fences, guide rail, barriers, and hazard protection as necessary to promote safety for the traveling public and adjacent neighboring properties. Existing roadways and roadway appurtenances that are damaged by Development Entity during the Construction Work shall be replaced to current standard.

The Development Entity shall take into consideration aesthetics and landscaping requirements included in [Section 14](#) when determining the final design.

10.3.1 Control of Access

Development Entity shall maintain all existing property accesses and shall not revise control of access without the Department review and the written agreement of the affected property owner.

10.3.2 Geometric Design Information

Development Entity shall design the Elements of the Project to meet the design features shown in the Geometric Design Information Table, see [Attachment 10-1](#) as well as design criteria contained in the design standards shown in [Tables 10-1 and 10-2](#). New and Reconstruction design criteria is applicable.

For REBs, locations that have been determined by the Department to qualify for 3R curb-to-curb bridge width, submit to the Department for approval the 3R Bridge Width Criteria Documentation Form in DM-2, Chapter 1, Appendix A. This form will be submitted by Development Entity for approval by the Department. If the Department determines that any of the conditions on the form are not met, and a wider curb-to-curb bridge width is required, this will be covered by a change order. For ECBs, this form will be completed by the Department when determined applicable.

10.3.3 Intersecting Streets

Development Entity shall coordinate, design and construct the improvements on intersecting streets and driveways in accordance with the Governmental Entity having jurisdiction of said roadway.

Where the limits of Work impacts intersecting streets, Development Entity shall replace the pavement at intersection corners to the extents of the existing intersection, and apply corner radii to match the existing intersection.

At reconstructed intersections, Development Entity shall design and construct the following improvements:

- Utilities shall be installed and / or adjusted as needed and in accordance with [Section 6 of these Technical Provisions](#) to accommodate the intersection reconstruction.
- Street crossings including curb ramps and crosswalks where pedestrian facilities are existing or are specified to be included in the Project requirements.

10.3.4 Intersecting Rail Lines

Development Entity shall coordinate, design, and construct any improvements involving at-grade railroad crossings in accordance with 23 CFR Part 646 and Publication 371.

10.3.5 Design Exceptions

The Development Entity's Design Documents shall be in accordance with the Project Documents unless a Design Exception from such requirements has been approved by the Department and as necessary by FHWA.

If Development Entity is seeking Design Exceptions, Development Entity shall prepare Design Exceptions in accordance with Publication 10X Appendix P for approval by the Department and as

necessary by FHWA and explain proposed mitigation measures. Design exceptions for Replacement Bridges on the National Highway System must be reviewed and approved by the FHWA. The Department will be responsible for formally requesting FHWA review and approval of all design exceptions on the National Highway System after receiving it from the Development Entity.

Development Entity shall coordinate all requests for Design Exceptions with the Department and shall not have any direct communications with FHWA regarding Design Exceptions.

Once approval of a Design Exception is obtained, the Development Entity shall be responsible for the final development of the Design Documents, which may include the approved Design Exception.

Design Exceptions previously approved by the Department and FHWA are summarized in Attachment 10-2 to the Technical Provisions. If the Development Entity's Design Documents require changes to previously-approved Design Exceptions, the Development Entity shall be solely responsible for obtaining the Department and FHWA approval of such modification to the previously-approved Design Exceptions.

Design Exceptions will only be considered if adequate justification and documentation are provided per Publication 10X Appendix P and it is not expected to result in a safety concern. A safety study, including an evaluation of the three year crash history within the Construction Limits will serve as the basis for determining safety concerns.

If any of the thirteen (13) controlling criteria listed in Publication 10X Appendix P cannot be met within the Construction Limits for a Replacement Bridge a Design Exception Request is required.

Design Exception Requests will not be considered for the Project for the controlling criteria listed under (1) and (5) of section P.1 of Publication 10X Appendix P and listed below.

- (1) Design Speed
- (5) Structural Capacity

Design Exception Requests will not be required for the following dimensions provided in Attachment 10-1 of these Technical Provisions corresponding to the controlling criteria listed under (2) to (4) of Section P.1 of Publication 10X Appendix P and listed below.

- (2) Lane Width
- (3) Shoulder Width
- (4) Bridge Width

A Design Exception may be requested by Development Entity for the controlling criteria listed under (6) to (13) of Section P.1 of Publication 10X Appendix P and listed below.

- (6) Horizontal Alignment
- (7) Vertical Alignment
- (8) Grade
- (9) Stopping Sight Distance (SSD) and Headlight Sight Distance (HLSD)
- (10) Cross Slope
- (11) Superelevation
- (12) Vertical Clearance
- (13) Horizontal Clearance (other than Clear Zone)

For illustration purposes only, the following are examples of potential situations that may be considered as part of a request for Design Exception:

- The proposed bridge results in Stopping Sight Distance, Headlight Sight Distance or Intersection Sight Distance not being met within the Construction Limits.

- The required radius of the horizontal curve (horizontal alignment) and associated superelevation on the proposed bridge cannot be met without adversely affecting the approaches.

10.3.6 Alternate Standards

If Development Entity desires to utilize an approved standard from another Department of Transportation, the Development Entity must submit the complete standard to the Department for formal review and approval. Although alternate standards are not Design Exceptions, Development Entity shall submit such requests utilizing the Design Exception Approval process in Publication 10X Appendix P. All alternate standards are subject to the Department approval and FHWA approval.

10.3.7 Construction Limits

Development Entity is to determine the Construction Limits needed to accommodate each bridge reconstruction, including approach Work and all temporary Work needed to accommodate the bridge reconstruction.

10.3.8 Guide Rail

Existing guide rail shall not be reused. Guide rail shall be designed to protect the bridge obstacle as well as obstacles below, such as a stream, and any obstacles within the clear zone. If existing guide rail extends beyond the length of need calculated for all obstacles within the clear zone, it shall be replaced to the length of need for all obstacles within the clear zone. If the existing guide rail extends beyond the end of the approach pavement for a particular location, such guide rail shall be replaced and shall be transitioned into the existing guide rail within the Construction Limits. Any Replacement Bridge that requires guide rail in excess of 100 feet beyond the end of the approach pavement on either side of a Replacement Bridge may be addressed through the change order process.

All bridge approach transitions for a Replacement Bridge are to conform to those approved for use as shown in Publication 72M, RC-50M. Provide adequate length for full transition to new or existing approach guide rail.

10.3.9 Bridge Approaches and Transitions

The approach distance shall account for any necessary roadway geometric changes including superelevation transitions and applicable transitions from the existing roadway as well as to support roadside safety and required guide rail. The existing roadway template (travel lanes plus shoulders) shall taper to the curb-to-curb bridge width within the applicable taper distance.

Where geometric Elements of existing approaches meet current design criteria, they are not to be reduced below current design criteria. Where geometric Elements of existing approaches do not meet current design criteria, Development Entity must submit to the Department, for the Department's acceptance, proof that alternative designs to meet criteria are not feasible and the design results in conditions which are not reduced below existing conditions.

10.3.10 Miscellaneous Roadway Design Requirements

All roadside safety devices used on the Project shall be in accordance with the Department standards.

10.4 Pavement Selection and Design

The Development Entity shall minimize the disturbance and replacement of roadway pavements to the greatest extent possible. Where pavement replacement is necessary, the new pavement type shall match the existing pavement surface type.

For all pavement sections for bridge approach Work where the total paving of both sides of the bridge

structure is greater than 1,000 feet, a DARWin pavement design analysis is required. For all shorter pavement sections not requiring a DARWin pavement design analysis, the proposed pavement may match the existing pavement structure where it meets minimum thickness requirements as described in Publication 242, Pavement Policy Manual, Tables 8.3 Minimum and Maximum Depths for Portland Cement Concrete (PCC) and Table 9.4 Minimum and Maximum Thickness of Surface, Base and Subbase Materials for Superpave Mixes. For shorter pavement sections where the existing pavement structure does not meet these minimum thickness requirements, the proposed pavement shall meet the minimum thickness requirements per Publication 242 without a DARWin pavement design. Where the existing pavement is a composite pavement that well-exceeds the minimum pavement thickness or contains elements not reasonable to replicate such as crack-and-seat, a DARWin pavement design analysis may be performed in order to achieve a structurally sufficient pavement in a cost-effective manner.

10.4.1 Pavement Design

The Department Publication 242, Pavement Policy Manual, including latest revisions shall be the basis for all pavement designs for the Project, and is supplemented with the requirements contained within this document as identified in the paragraphs in this section. Where there are conflicts between the requirements in these two documents, the requirements in this document shall take precedence.

Development Entity shall prepare separate pavement design reports and submit to the Department, as and when required per Publication 242. The reports shall include results of the field explorations and testing of pavement sections as well as recommended pavement rehabilitation methods and designs for new pavements.

For all widened sections, the interface between the new widened pavement and the existing pavement shall provide a uniform surface of the same material type across all adjacent lanes. In areas where an existing asphalt surface is in place and widening is required, a new surface course for existing and constructed pavement will be required.

10.4.2 Pavement Materials Requirements

Unless otherwise specified herein, pavement material requirements are defined in the most current version of Publication 408. Test procedures identified herein shall be the most current version identified in the Materials Test Procedures, AASHTO or ASTM standards or equivalent guidance as approved or provided by the Department.

10.4.3 Construction Verification

Smoothness and skid resistance of the pavement constructed shall conform to the requirements of Publication 408 and Publication 34 (Bulletin 14).

10.5 Reinstatement of Utility Cuts

As part of the Utility Relocation Work, after installation of drainage structures, storm sewers, or any other public or private utility facility by open cut beneath existing pavements carrying traffic during construction, the pavement structure and surface shall be restored and maintained to a normal satisfactory structure and riding surface equal to or better than the existing structure and riding surface. Coordinate so that planned relocations and installations are completed prior to final pavement surface construction.

10.6 ADA Curb Ramp and Sidewalk Agreements

The Department requires a Maintenance Agreement, assigning maintenance to the municipality, for sidewalks installed on bridges. A Pedestrian Study shall be performed if the governing municipality

proposes a sidewalk in the Public Involvement process, (see Pedestrian Determination Form, DM2, Chapter 6).

To meet the requirements of the ADA, projects affecting the use of pedestrian accessible routes in the public ROW shall incorporate pedestrian access improvements within the scope of the project. Specifically, altered pedestrian facilities must be improved to the maximum extent feasible within the scope and limits of the project to meet the current ADA standards and any locations missing a required pedestrian facility, as determined in the pedestrian study, must have a pedestrian facility installed during construction of the project. The procedures for achieving ADA compliance are identified in DM 2, Chapter 6. Development Entity shall assume the Department's role as identified in DM 2, Chapter 6 and the responsibilities as prescribed in new Reimbursement and/or Maintenance Agreements within the limits of the Project so that all ADA requirements are met, and so that the local government accepts ownership and maintenance responsibilities for pedestrian facilities upon substantial completion of the specific site.

10.7 Deliverables

Deliverables shall be provided to the Department in electronic format, including PDF and native files. Development Entity shall submit no more than 70 Design Field Views submissions per month without prior approval by the Department.

Allow fourteen (14) Days for review for initial submission and five (5) Days for a resubmission for deliverables requiring the Department review and approval. Allow thirty (30) Days for review for initial submission and fifteen (15) Days for resubmission of proposed revisions to standards. Instances where FHWA review and approval are necessary shall be performed concurrently with the Department.

RFC plans shall be signed and sealed by the Engineer of Record (EOR) for each design element.

Development Entity shall provide the following items for review and approval by the Department prior to progressing with final design:

- Type, Size and Location (TS&L) per Section 12 including line, grade and typical section
- Design Field View (DFV) submission to include all roadway alignments, profiles, and typical sections,
- 3R Bridge Width Criteria Documentation form, if required
- Design Exception requests, if required
- Pavement Design Report, if required

Development Entity shall provide the following item in conjunction with the design field view prior to progressing with final design:

- Safety Review Certification by Development Entity's quality management team in accordance with Development Entity's QMP

Development Entity shall provide to the Department the following items prior to NTP3:

- Released for Construction (RFC) Documents
- Design Exception approval letters

Development Entity shall provide to the Department the following items prior to Final Acceptance:

- As-Built Drawings, with adjustments made in the electronic computer program files to incorporate redlines of changes during construction.

11 HYDROLOGY & HYDRAULICS

11.1 General Requirements

The Project shall include all Work for the design and construction of drainage facilities for Replacement Bridge Locations including temporary and permanent erosion control measures. Drainage facilities may include pipes, culverts, bridges, natural channels and man-made channels that are within the Project Limits. Efficient performance of the drainage system is an integral part of the performance of the Project. Development Entity shall account for all sources of runoff that may reach the Project, whether originating within or outside the Project ROW, in the design of the structures. The requirements of Publication 13M, DM 2, will govern the Work unless modified in this [Section 11](#).

If existing drainage patterns are revised during the Project design, then Development Entity shall design and construct a solution that does not adversely impact property owners outside the ROW.

11.2 Administrative Requirements

11.2.1 Data Collection

To establish a drainage system that complies with the requirements and accommodates the historical hydrologic flows through the Project Site, Development Entity is responsible for collecting all necessary data to establish existing and proposed hydrologic and hydraulic conditions.

Development Entity shall collect available data identifying all water resource issues, including water quality requirements as imposed by state and federal government regulations; National Wetland Inventory and other wetland/protected waters inventories; FEMA maps of floodplains; and official documents concerning the Project. Development Entity shall also identify watershed boundaries, protected waters, ditches, pipes, areas classified as wetlands, and floodplains.

Development Entity shall conduct surveys for information not available from other sources. In order to develop the hydraulic models, surveys of the natural channel will be required for structures over waterways. Pennsylvania has LiDAR (Light Detection and Ranging) data available for the entire state that is available for use for the topography of the floodplains outside of the natural channel.

If documentation is not available for Elements of the existing drainage system within the Project Site and scheduled to remain in place, Development Entity shall investigate the existing drainage system to determine condition, size, material, location, and other pertinent information prior to commencement of construction activities. Documentation of the system will be included in the design files.

11.2.2 Coordination with Other Agencies

Development Entity shall coordinate all drainage issues with affected regulatory agencies that have jurisdiction over the Project and in accordance with the protocol established in [Section 4](#) of this document. Development Entity shall include the Department in formal correspondence with affected regulatory agencies. Development Entity shall document the resolutions of hydrologic and hydraulic issues and include resolutions in the design file. DM2, Chapter 10.7.D.2 specifies requirements when H&H Reports should be provided to FEMA or municipalities. For ECBs, the Department will be responsible for forwarding a copy of the H&H Report to the appropriate agencies. For REBs, the Development Entity shall be responsible for forwarding a copy of the H&H Report to the appropriate agencies.

11.3 Design Requirements

Development Entity shall design all Elements of the drainage facilities in accordance with the applicable design criteria which shall include Publication 13M, DM 2, Publication 584, PennDOT’s Drainage Manual and Publication 15M, DM4, Chapter 7 as applicable. Development Entity shall preserve existing drainage patterns wherever possible.

Elements of the existing drainage system within the Project Site scheduled to remain in place must meet hydraulic capacity requirements in accordance with Publication 13M, DM2. If any Elements of the existing system do not comply with the requirements of Publication 13M, DM2, those Elements shall be replaced by Development Entity, or Development Entity shall submit an alternative mitigation plan for the Department’s approval.

Development Entity shall base its final design on design computations and risk assessments related to the project drainage.

The Department encourages Development Entity to establish the appropriate hydraulic design performance criteria at each location where a structure is being replaced or widened over a waterway. However, if the appropriate criteria do not meet the criteria established in Section 11.3.1, Development Entity must submit to the Department, for the Department’s acceptance, proof that alternative designs to meet criteria are not feasible. A feasible design approach would consider reduced superstructure depth options, up to a 20% increase in hydraulic opening, and minimum approach roadway Work. In no case shall roadway overtopping conditions be made worse.

11.3.1 Design Frequencies

Inundation of the travelway indicates the level of traffic service provided by a highway facility. The travelway overtopping flood level identifies the upper limit of serviceability, and it provides one of the important definitions of the term “design flood”. Development Entity shall use the minimum magnitude of design frequencies listed in Table 11-1 below.

Table 11-1: Drainage Design Flood Frequencies

FUNCTIONAL CLASSIFICATION	MAXIMUM EXCEEDANCE PROBABILITY (%)	MINIMUM RETURN PERIOD (YEARS)
Interstate and Limited Access Highways	2	50
Principal Arterial System	2	50
Minor Arterial System	4	25
Rural Collector System, Major	4	25
Other Collector Systems	10	10
Local Road and Street Systems	10	10

All structures must also be evaluated for the regulatory environmental flood, as specified in 25 PA Code Chapters 105 and 106 and elsewhere, and the 100-year flood event. For bridges, the superflood (500-year flood) must also be evaluated for the scour analysis as discussed in Publication 15M, DM, Part 4, Structures, Section 7.

11.3.1.1 Hydrologic Analysis

Development Entity shall design for known changes in land use that may affect the magnitude of runoff and therefore the design capacity of structures. Flood Discharges will be calculated using an acceptable hydrologic method per Publication 13M, DM 2, Chapter 10. Development Entity shall ensure that the selected hydrologic method is appropriate for conditions in the watershed. For structures located within a FEMA Flood Insurance Study (FIS) with peak flow information, the 100-year peak flow from the

published FEMA FIS must be used to evaluate the 100-year backwater impacts. Other methods may be considered for the design flood if they are more applicable to current conditions and justification is documented in the H&H Report.

11.3.1.2 Hydraulic Analysis

Development Entity will evaluate the structures hydraulics using an acceptable hydraulic method per Publication 13M, DM 2, Chapter 10. Development Entity shall ensure that the selected hydraulic method is appropriate for conditions at the project site.

Development Entity shall provide a scour analysis in accordance with Publication 15M, DM4, Chapter 7 for bridges over water. At a minimum, Development Entity shall design abutment and pier foundations to account for contraction and pier scour and shall incorporate scour protection in accordance with DM4, Chapter 7. If necessary, Development Entity shall provide countermeasures for any instability and scour problems, including lateral stream migration in accordance with DM4 Chapter 7 or FHWA Hydraulic Engineering Circular No. 23 - Bridge and Scour and Stream Instability Countermeasures Experience Selection and Design Guidance.

11.3.1.2.1 Bridge/Culvert Waterway Design

Development Entity shall analyze the existing structure with the proposed flows to determine if the backwater meets allowable overtopping characteristics as outlined in Section 11.3. If this condition is not met, Development Entity shall evaluate replacement structures with sufficient capacity to pass the design-frequency flows without causing adverse impacts. If the design-frequency overtopping characteristics cannot be achieved, the Development Entity must submit to the Department, for the Department's acceptance, proof that alternative designs to meet criteria are not feasible. A feasible design approach would consider reduced superstructure depth options, up to a 20% increase in hydraulic opening, and minimize approach roadway work.

For Replacement Bridges located in the Floodways of FEMA Detailed Study Areas, the proposed waterway design shall ensure there is no increase in the 100-year water surface profile.

For Replacement Bridges located in FEMA Approximate Study Areas, FEMA Detailed Study Area with No Floodway, or areas not regulated by FEMA, the proposed waterway design may allow a minimal increase of up to 0.10 feet in the 100-year water surface profile if the low chord is not lowered and there are no adverse impacts to structures (buildings) in the floodplain. If there is an increase in the proposed 100-year water surface profile, Development Entity must submit to the Department, for the Department's acceptance, proof that the minor increase of 0.10 feet or less does not impact structures in the project area and the increases do not extend beyond the hydraulic model study limits.

The Freeboard, for the purposes of this Project, is defined as the difference between the minimum upstream low chord elevation and the 100-year water surface elevation (WSE) at the cross section immediately upstream of the Replacement Bridge and shall be in accordance with the following:

- If the existing bridge has less than one (1) foot of freeboard, then the proposed bridge shall not lower the low chord of the bridge unless an increase in span length offsets the loss in underclearance and the backwater is actually reduced. Development Entity must submit justification for reducing the freeboard for the Department's review and concurrence as part of the TS&L submission.
- If the existing bridge has greater than one (1) foot of freeboard, reducing the freeboard may be permitted if hydraulic or maintenance benefits can be documented. Development Entity must submit justification for reducing the freeboard for the Department's review and concurrence as part of the TS&L submission. The freeboard may only be reduced to a point where the low chord is not impacted by the 100-year WSE.

Bridge waterway design shall maintain the existing low flow channel through the structure, if possible.

11.3.1.2.2 Bridge Deck Drainage

Stormwater flowing toward the bridge shall be intercepted upstream from the approach slab. Scuppers shall be provided on the bridge in accordance with DM4 where hydraulic computations show that they are needed.

11.4 Hydrologic and Hydraulic Report

The documentation shall include the detailed calculations, electronic and printed copies of the computer software input and output files, a description about the hydrologic and hydraulic (H&H) analysis, and reasons for the design recommendations. The report shall be developed in accordance with DM 2, Chapter 10.

11.5 Construction Requirements

Development Entity shall design drainage to accommodate construction staging. The design shall include temporary erosion and sediment controls needed to satisfy the water obstruction permitting process and other regulatory requirements.

11.6 Deliverables

The following are required when hydraulic analyses are performed. Development Entity shall submit the H&H documentation in accordance with DM 2 Chapter 10 to the Department with the TS&L submission. Development Entity shall submit to the Department all H&H documentation including electronic files with the As-Built Drawings.

12 STRUCTURES

12.1 General Requirements

Structural elements of the Project shall be defined as bridges, culverts, drainage structures, signage supports, illumination assemblies, traffic signals, retaining walls, sound walls, and/or other structures as designated by the Department. The structural elements of the project and their components shall be designed and constructed in conformance with the requirements of the Project Documents, the *AASHTO LRFD Bridge Design Specifications* 4th Edition, 2010 as amended by Design Manual (DM) Part 4 (Publication 15M), Active strike-off letters, Bridge Design Standards BD-600M Series (Publication 218M), Bridge Construction Standards BC-700M Series (Publication 219M), Roadway Construction Standards (Publication 72M) and Highway Construction Specifications (Publication 408), except where directed otherwise by the Exception Exhibit 1. These requirements are mandated in order to provide the general public a safe and reliable transportation facility.

This Work includes the design and preparation of construction plans for a structure of the type indicated on the Department's Conceptual Type Size & Location (TS&L) plan for the ECB. If an alternate type structure is proposed on an ECB, the Development Entity will indicate on the Final TS&L plan submitted for review to the Department. This review is to confirm compliance with prior approved permits, environmental clearance documentation and any mitigation commitments and hydraulic performance.

This Work includes the design and preparation of construction plans for a structure of the type indicated on the Development Entity's 1 TS&L Plan for the REB at each structure site.

At minimum, structural concepts, details and solutions, soil parameters, hydraulics (including providing existing and proposed freeboard), environmental requirements, wetland impacts, safety, functional and geometric criteria, constructability, aesthetics requirements, and continuity for the Project shall be evaluated and documented in the TS&L submission.

See [Section 12.4](#) for a partial list of deliverables.

12.2 Design Requirements

Design shall be in accordance with [Sections 8, 10, 11, and 14](#) of these Technical Provisions and those stated in [Section 12.1](#) General Requirements.

See Exception Exhibit 1 for bridge types not allowed.

Development Entity should proportion bridge spans to avoid uplift at supports.

Development Entity shall design Replacement Bridge in accordance with the RBR Project Geometric Design Information Table. See [Section 10](#). Pedestrian facilities shall be provided on bridge structures where indicated in accordance with [Section 10](#).

Development Entity shall design foundations in stream environments for scour and incorporate appropriate and properly designed scour protection measures as required per [Section 11](#).

12.2.1 Bridge Design Loads and Load Ratings

Load ratings shall be in accordance with DM 4 except where directed otherwise by the Exception Exhibit 1 for Load and Resistance Factor Ratings. Prepare Load Factor Ratings and APRAS analysis files in accordance with applicable sections of Bridge Safety Inspection Manual (Publication 238).

12.2.2 Bridge Decks and Superstructures

The type of bridge shall not be restricted to those typically used by the Department. Other types and components may be used, subject to the Department's approval, if:

- a) they have been accepted for general use by the Federal Highway Administration (FHWA);
- b) Development Entity can demonstrate that the design of the bridge type and components will meet the requirements in the Project Documents, and in particular the functional and durability requirements of the Project; and
- c) the bridge type is not one of the restricted bridge types listed in the Exception Exhibit 1.

Next D Beam system may be used at a maximum of 30 Project Sites provided that:

- a) Longitudinal joints are cast with UHPC material;
- b) Latex overlay is provided at initial construction; and
- c) For spans over 39 feet, provide a midspan diaphragm constructed with Ultra High Performance Concrete.

Next F Beam – The skew limitation associated with Drawing 09-602-BQAD Rev 1 may be waived at the discretion of the Development Entity Engineer of Record.

If expansion joints are necessary, they should be placed off the bridge at the end of the approach slab(s). Bridge approach slabs shall be designed and constructed in accordance with the Department Publication 218M, except where directed otherwise by the Exception Exhibit 1.

For cast in place decks, provide an epoxy overlay to the new deck one calendar year after the bridge is open to traffic and another at twenty-three (23) years after the bridge is open to traffic. Additional overlays shall be applied when the ride quality or the integrity of the overlay begins to deteriorate but at no more than 12 year intervals.

For precast decks or modular deck units with closure pours, provide an epoxy overlay to the new deck one (1) week after the closure pours attain their required strength and another at twenty-three (23) years after the bridge is open to traffic. Additional overlays shall be applied when the ride quality or the integrity of the overlay begins to deteriorate but at no more than twelve (12) year intervals.

For precast decks closure pours shall be made using one of the following methods:

- ultra-high performance concrete with mild reinforcement; or
- conventional grout with post tensioning.

For precast decks, at the longitudinal closure pore, the beam/girder haunch shall be cast with an ultra-high performance concrete. The beam/girder haunch and shear pockets at other beams/girders shall be cast with either an ultra-high performance concrete or an epoxy grout.

Precast concrete barrier permanently attached and secured to the deck via dowel bars with grout and/or adhesive anchors is prohibited. Temporary conditions (under three (3) years) utilizing precast barriers with adhesive anchors are allowed. Barriers cast monolithically with a precast concrete deck component in a fabrication shop are permitted.

The slab overhang will be designed to meet the requirements of the Exception Exhibit.

Development Entity shall design pedestrian facilities to meet the criteria of the Section 18 and AASHTO *Roadside Design Guide* and shall protect pedestrian facilities from vehicular impact, as required by DM 4, with a Department-approved bridge railing unless written authorization from the Department granting an exception to meeting the criteria is received.

Development Entity shall make bridge superstructures, joints, and bearings accessible for long-term inspection and maintenance. Development Entity shall make open-framed superstructures accessible by use of ladders or an under-bridge inspection crane.

Replacement Bridges shall either be accessible from below or from the bridge deck using an under-bridge inspection crane. Development Entity shall make steel and concrete box girders and caps (substructure) with a minimum inside depth of six (6) feet to facilitate interior inspection. Development Entity shall include a minimum access opening of 3'-0" diameter into all cells and between cells of the girders to allow free flow of air during inspections. The outside access opening cover shall hinge to the inside of the box girder and caps (substructure). Development Entity shall install air-tight, sealed and locked entryways on all hatches and points of access. Keys to the locked entryways shall be provided to the Department.

12.2.3 Retaining Walls

Wall types and components will be allowed only if:

- a) They have been accepted for general use by the Department,
- b) The design of the wall type and components meets the functional requirements of the Project, and
- c) They meet the requirements of Design Manual Part 4

Modular walls employing interlocking blocks shall not be used where surcharge loads from vehicular traffic are present.

The design of wall structures shall take into account live load surcharges. Development Entity shall apply the appropriate live loading condition (vehicular, heavy rail, transit etc.) to which each wall will be subjected. These live load surcharges shall be based on the latest *AASHTO LRFD Bridge Design Specifications* 4th Edition 2010, DM 4 Section 11, American Railway Engineering and Maintenance of Way Association (AREMA) specifications, or the requirements of the specific railroad and/or transit owner/operator, as appropriate.

The retaining wall layout shall address slope maintenance above and below the wall.

Development Entity shall design and construct components of the Project to provide embankments without the use of retaining walls. Where earthen embankments are not feasible, Development Entity may use retaining walls.

Metal walls, including bin walls and sheet pile walls, recycled material walls and timber walls are not allowed.

If pipe culverts are to extend through the retaining walls, the pipe shall be installed so that no joints are located within or under the wall.

12.2.4 Noise/Sound Walls

If required, Noise/sound walls will be incorporated in the Project through a change order. Development Entity shall design and construct the noise/sound walls per DM 4 to achieve the decibel reduction requirement in the NEPA Approval(s).

Panel design and construction shall limit the risk of falling debris resulting from traffic impacting the sound wall.

Timber sound walls are not allowed.

12.2.5 Incorporation of New P/S Concrete (20/30) PA-I Beams Provided by the Department

The Department currently has in surplus 56 new (20/30) PA-I Beams that were not used on another project in District 12.

The Development Entity shall consider the use of these beams at those sites that will permit their use, first for those sites in District 12, if not possible then to be considered for use in other Districts.

Perform designs/investigations with consideration to Publication 408, Section 1050.4g and the intent therein.

Shop drawings and LRFD Prestressed Concrete Girder Design and Rating (PSLRFD) program input sheets are available in Attachment 12-2.

The number of beams and out-to-out beam lengths are as follows:

- 14 beams @ 39' – 5"
- 28 beams @ 45' – 3 ½"
- 14 beams @ 29' – 11"

(The beams are dapped to accommodate a 3.78% grade.)

The beams are currently being stored at the Washington County Maintenance Stockpile in Washington, PA.

Pickup and delivery of the beams to the required site is the responsibility of Development Entity.

Contact Washington County Maintenance Manager at 724-223-4480 3 days in advance to arrange for pick up.

12.2.6 Highway and Bridge Lighting

Development Entity shall install new lighting systems where warranted as per DM 2 Chapter 5 or reinstall existing lighting systems, providing the local government agrees in writing to assume or continue to assume the ownership and 100% of the annual energy and maintenance charges. When local governments do not agree to the payment of annual energy and maintenance charges, Development Entity shall notify the Department and obtain guidance on whether or not to proceed with the installation. Where Highway and Bridge Lighting Agreements exist within the limits of the Replacement Bridge, Development Entity shall coordinate with the relevant third parties.

12.3 Construction Requirements

Construction shall be in accordance with those specification documents stated in Section 12.1.

12.3.1 Concrete Finishes

Concrete surfaces that do not have aesthetic treatments shall have a uniform texture and appearance. Color treatment, where required as an aspect of the aesthetic treatment of the concrete, shall be uniform in appearance.

12.3.2 Steel Finishes

Except for weathering steel, structural steel shall be protected. Non-weathering steel beam lengths less than 70 ft. shall be galvanized. Weathering steel shall be protected as indicated by the documents listed in Section 12.1. If weathering steel is used, Development Entity shall protect components of the structure (superstructure and substructure) that are susceptible to corrosion and/or staining from weathering steel run-off.

12.3.3 Concrete Decks

For bridge structures with cast in place concrete decks, Attachment 12-1, the Review for Bridge Deck Cracking form, shall be completed and submitted upon completion of construction to the Department for incorporation into the Department's Deck Performance database.

Use of partial precast deck panels is prohibited.

12.3.4 Modular Deck Units

For modular girder and deck units comprised of steel girders with concrete deck component, the casting of the deck on the girders for this modular construction shall be performed at a Bulletin 15 approved precast facility. Closure pours shall be made using ultra high performance concrete with mild reinforcement

12.4 Drawings

The following drawings, when applicable, are required to perform the work. Refer to Section 12.5 for applicable deliverable drawings to be submitted to the Department:

12.4.1 Project Drawings

Project drawings are included in the RFC documents and show roadway lines, grades, and typical cross sections; location and design of structures; related construction features and details; and construction quantities.

12.4.2 Standard Drawings

Standard drawings are approved drawings, showing standard details, produced to be used repeatedly on Replacement Bridges. Refer to the Exception Exhibit for drawing requirements for deviation from the Department BD and BC standards.

12.4.3 Working Drawings

Prepare these drawings to supplement the RFC Documents. They include falsework drawings, field sketches, erection diagrams, erection stresses and loads, and other details, as necessary to construct the project. Submit the drawings to the Development Entity's Engineer of Record for review and approval, before beginning work on the item involved. All drawings for load-bearing falsework submissions are to be signed and sealed by a Professional Engineer, registered in the State. Have a Professional Engineer, registered in the State, certify that the falsework system has been assembled as shown on the Development Entity's Engineer of Record approved falsework drawings. Submit the certification to the Development Entity's Engineer of Record and Structure Control Engineer before placing loads on

falsework for systems supporting bridge components that carry live traffic and/or falsework systems supporting bridge components over live traffic.

12.4.4 Bridge Shop Drawings

Prepare these drawings in accordance with the requirements of design drawings, Department standards, DM 4, and the Technical Provisions of this contract unless otherwise specified. Prepare drawings electronically (CAD), using standard ANSI D size, 22 inch by 34 inch sheets with 1 1/2 inch margin on the left side and 1/2 inch margins on remaining three sides. All lines on the drawing are to be of sufficient density and width so as to have residual density when reduced by 50% or microfilmed. Make details clear and uncluttered. Show complete details, dimensions, materials, notes, camber diagrams, welding details and sequences, and any other information required to fabricate the item.

Provide a title block in the lower right-hand corner of each drawing that indicates the county, route, section number, title of drawing, drawing number, structure number (S-Number). The section number shall be designated as "RBR-" followed by the project specific BRKEY. Above the title block, indicate the MPMS number and Bridge Management System (BMS) number for the specific project. In the lower left corner, indicate the initials of the designer, initials of the drafter, initials of the checker, and date of the drawing. Include a revision block to the left of the title block and an empty block, approximately 4 inches by 3 inches above the title block to be used by the shop drawing reviewer for the shop drawing stamp.

The following requirements are to be followed when submitting electronic shop drawings:

Submit drawings in a portable document format (PDF) file for each drawing. Include structure number (S-Number) and drawing number in the file name. Submit PDF files to Development Entity Engineer of Record for review and approval.

12.5 Deliverables

Deliverables shall be provided to the Department in accordance with Section 2.2.8 including software input and output electronic native files. Refer to DM 4 and Exception Exhibit 1 for submission requirements.

RFC plans shall be signed and sealed by Development Entity Engineer of Record (EOR) for each design element.

Development Entity shall submit no more than a total of seventy (70) individual TS&L submissions and/or Foundation submissions for review and approval per month without prior approval by the Department.

Without prior approval by the Department, allow fourteen (14) Days for review for initial submission and five (5) Days for a resubmission for deliverables requiring the Department review and approval. Allow thirty (30) Days for review for initial submission and fifteen (15) Days for resubmission of proposed revisions to standards. Instances where FHWA review and approval are necessary shall be performed concurrently with the Department.

Development Entity shall provide the following items for review and approval by the Department prior to progressing with final design:

- Type, Size and Location (TS&L), including Inventory and Operating Load Ratings with and without future wearing surface. Follow the submission requirements of DM 4 Chapter 1 Administrative Considerations, Section 1.9.3.3.2 Streamlined TS&L

- Foundation design parameters and model assumptions report
- Foundation Report. Follow the submission requirements of Design Manual Part 4 Chapter 1 Administrative Considerations, Section 1.9.4.3.2 Streamlined Foundation
- Utility attachment details, if necessary, for attachment to the bridge
- Development Entity standard drawings as applicable (Reference [Section 12.4.2](#))

Development Entity shall provide the following items in conjunction with the items listed above prior to progressing with final design:

- Hydrology and Hydraulics Reports submitted with TS&L. Follow the submission requirements as outlined in [Section 11](#).
- Scour depth computations submitted with TS&L. Follow the submission requirements as outlined in [Section 11](#).
- Traffic Signal, Lighting, Sign Support Structural Verification. Follow the submission requirements as outlined in [Section 15](#).
- Additional boring logs with the Foundation Report (if taken)

Development Entity shall provide to the Department the following items prior to start of construction not on Project Site:

- Design calculations, including Inventory and Operating Load Ratings with and without future wearing surface
- Approximate Quantity Table, DM4 PP1.6.4.11
- Approved Shop Drawings (including but not limited to prestressed beams, precast beams, precast decks, steel beams and girders, and reinforcement bar schedules.)
- RFC Documents for Elements to be prefabricated

Development Entity shall provide to the Department the following items prior to NTP3:

- RFC Documents

Development Entity shall provide to the Department the following items during construction:

- Pile hammer approvals (required prior to performing related Work)
- Falsework Certification, as applicable (required prior to performing related Work)
- Jacking and/or demolition schemes (required prior to performing related Work)
- Pile Driving Records
- Fabrication QA/QC documents, including digital UT, MT, RT and PT NDT reports along with RT digital images of weld testing results and material mill certifications and test reports Electronic Quality Management System (EQMS) entries, non-destructive testing (NDT) documentation certifications.
- Development Entity Change Requests
- Concrete cylinder break test results
- Buy American documentation
- Photos taken during construction

Development Entity shall provide to the Department the following items prior to Substantial Completion:

- Bridge Load Rating computations, including electronic input files (BAR7, PS3, etc), and Automated Permit Routing Analysis System (APRAS) information
- NBIS bridge inspection report including I-forms
- Punch List

Development Entity shall provide to the Department the following items prior to Final Acceptance:

- As-Built Drawings
- Additional Geotechnical Investigation performed during construction along with testing results performed. Submitted with As-Built Drawings. The Department's gINT project file, updated to include any additional geotechnical information obtained by the Development Entity (from sampling, obtained through lab testing, or information resulting from the design or construction process) by the Development Entity to be provided to the Department.

Development Entity shall provide to the Department the following items at Handback:

- Annual maintenance records
- NBIS bridge inspections reports including I-forms (on a 24-month cycle)
- APRAS information as conditions warrant. Such conditions may include load, resistance, or functional changes.
- Load re-rating computations resulting from load changes, condition changes or policy changes, as well as damage and emergency inspection reports.

13 RAIL

13.1 General Requirements

This Section sets forth the criteria for Work impacting existing railroad ROW.

Development Entity's PMP shall set forth an approach, procedures, and methods for the rail road coordination and construction meeting the requirements set forth in the Project Documents.

13.2 Railroad Design Standards

The design for all railroad elements of the Project shall be based on the most recent American Railway Engineering and Maintenance of Way Association (AREMA) publications including but not limited to the Manual for Railway Engineering and Communications & Signal Manual of Recommended Practices and the requirements of the operating railroad. Development Entity's design shall minimize service interruptions to existing rail lines to the maximum extent possible with the use of non-revenue/non-operating service hours as the primary option. If the railroad elements of the Project are being constructed within an existing Quiet Zone, any new or changes to existing crossing protection(s) must be approved by the railroad company and other pertinent government entities, as well as comply with the Supplemental Safety measures as outlined in 49 CFR Parts 222 and 229 and must not negatively impact or degrade the existing Quiet Zone classification.

All work involving railroad companies and work on railroad ROW shall be in accordance with State and federal law and the practices, guidelines, procedures and methods of the Department. Additionally, the requirements of the owner of each facility crossed shall be compared to the requirements in the various Department manuals (cite sections and Publications), and the most restrictive criteria shall be utilized.

At highway-rail at-grade crossings, the roadway and drainage design parameters shall be maintained at the crossing except for the cross slope of the pavement which may be transitioned to match the grade across the rail line. The structural design of any Utilities, including drainage structures, installed by Development Entity and crossing a rail line, shall be in accordance with the railroad's design criteria and Pennsylvania Public Utility Commission (PUC) approval. Development Entity shall coordinate with the railroad prior to designing and constructing all temporary facilities necessary for construction. Required grade crossing gates, signals or other safety upgrades are the responsibility of Development Entity.

Development Entity's design shall minimize service interruptions to existing rail lines. Coordination with the impacted railroad and other appropriate Governmental Entities for anticipated service interruptions shall comply with the railroad notice requirements.

Where signalized intersections occur near an existing highway-rail at-grade crossing, Development Entity's design shall coordinate with the MPT plan to minimize stacking issues.

13.2.1 Design Criteria

Unless otherwise approved by the railroad, the minimum horizontal and vertical clearance as shown in Publication 371, Grade Crossing Manual, Chapter 4 shall be required over the entire railroad ROW within the Project Limits.

Development Entity shall coordinate, design, and construct any improvements involving at-grade railroad crossings in accordance with 23 CFR Part 646 and Department Publication 371.

13.3 Administrative Requirements

13.3.1 Project Work Affecting Railroad Operations

Development Entity shall coordinate the Work with all affected railroads. The design and installation of all railroad warning devices and traffic signals shall be coordinated with the appropriate Governmental Entities and railroads.

13.3.2 Railroad Agreements

Highway-railroad at-grade crossings involve joint railroad-Department/Local Government occupancy of ROW. Furthermore, these crossings are under the exclusive jurisdiction of the PUC, and therefore require a specialized process to examine and resolve a wide range of legal and operational issues.

Below is a list of agreement and easement types typically required on Highway-Rail projects:

- a) Preliminary Engineering Reimbursement Agreement – Preliminary engineering agreements are required in order to proceed with the development and review of plans. This agreement authorizes reimbursement to the railroad company for preliminary engineering and estimating performed by the railroad or their consultant(s).
- b) Construction Agreements – Construction Reimbursement agreements are required in order to proceed with construction. Typically these agreements provide for reimbursement to the railroad for such activities as protective services (flagging), administrative costs, and any construction activities required by the railroad (such as at-grade crossing safety upgrades).

Development Entity shall support the Department in all railroad and PUC coordination activities as outlined in Publication 371, Grade Crossing Manual. Development Entity shall be responsible for gathering the required information, preparing the PUC application, and providing other support to the Department as needed. Such activities may include, but not be limited to:

- a) Preparation and submission of a PUC application
- b) Attendance with Department personnel at PUC Field Conferences
- c) Preparation of all State-railroad agreements
- d) Making all required submissions to the PUC and all parties of record, such as final ROW plans and property descriptions, and final construction plans
- e) Obtaining PUC Orders/Secretarial Letters and approvals from the PUC
- f) Reviewing invoices received from the railroad
- g) Use of GCEDMS for all document storage and project tracking

For each Replacement Bridge on this list Development Entity shall coordinate and cooperate with the Department to supply all required railroad submittal documents. Development Entity shall comply with all requirements of the railroad agreements and the PUC order. Development Entity shall also provide a traffic control plan with the expected dates of construction, proposed detours, length and road closures if applicable. Also included with this traffic control submittal shall be an explanation of the time and duration of any expected railroad track closures.

Railroad reimbursement agreements must be prepared for all projects involving railroads. All executed agreements shall be submitted in their entirety as part of the Final Design Documents. These agreements will be between the Department and the railroad; therefore the Department will initially pay the railroad for any costs incurred during the Work. These costs will be reimbursed to the Department by the Development Entity.

13.3.3 Railroad Property Acquisitions

Department will acquire necessary property from the railroad. Development Entity shall provide information and support as needed to the Department in order to complete these tasks as outlined in Publications 371 and 378.

13.3.4 Railroad Right-of-Entry Permit

The acquisition of railroad property does not eliminate the need for a Right-of-Entry permit. The Department cannot legally agree to indemnification language included in these permits. In order to enter the railroad's ROW to perform the Work, Development Entity shall secure a railroad Right of Entry Permit and shall coordinate the arrangements of the necessary permits directly with the railroad.

13.3.5 Development Entity Right-of Entry-Agreement

Development Entity shall cooperate and coordinate with all railroads for access by the railroad and/or their agents to the rail ROW as necessary for rail maintenance and operations activities, inspection, repair and emergency responses.

13.4 Construction Requirements

Development Entity shall comply with all construction requirements and specifications set forth by the railroad.

Development Entity shall be responsible for scheduling the work to be completed by railroad as well as the work to be completed by its own forces. To the extent required to be reimbursed under any agreement with the railroad, Development Entity shall be responsible for any amounts due to the railroad.

Conform to regulations stipulated in the Pennsylvania Public Utility Commission's order when work is indicated to be performed within, or adjacent to, the right of way or trackage belonging to, or upon which a common carrier operates. Observe strict adherence to all requirements pertaining to the work, safety, and movement of trains; to public and personal liability insurance; and to any other related matters. If it is necessary to use crossings other than those indicated, make arrangements for the use of the crossings.

13.4.1 Flagging

Development Entity shall arrange for railroad flagging as required by the railroad company to ensure the safe passage of rail traffic throughout the Project Limits effecting railroad ROW.

Development Entity shall comply with all notice requirements of the railroad regarding commencement of work within the railroad ROW and commencement of any activities involving persons, equipment, equipment, tools, materials, or vehicles within 25 feet (or other railroad threshold) of any tracks.

13.4.2 Safety Certification

Development Entity shall comply with the railroad's requirements for contractor safety training prior to performing Work or other activities on the railroad's ROW and shall maintain current registration prior to working on railroad property.

13.4.3 Railway-Highway Provisions

Development Entity shall conform to regulations stipulated in the Pennsylvania Public Utility Commission's secretarial letter or order when work is indicated to be performed within, or adjacent to, the right of way or trackage belonging to, or upon which a common carrier operates. Observe strict adherence to all requirements pertaining to the work, safety, and movement of trains; to public and personal liability

insurance; and to any other related matters. If it is necessary to use crossings other than those indicated, make arrangements for the use of the crossings.

13.5 Bridge Inspection and Maintenance

Development Entity shall coordinate directly with the railroad when scheduling required bridge inspections and periodic maintenance work. Coordination includes, but is not limited to, preparing agreements, executing rights-of-entry, and acquiring railroad protective flagging. Should any major maintenance activities be required during the life of Development Entity's maintenance period, close coordination (and possible application) with the PUC may be required. Coordinate these activities with the Department as necessary.

13.6 Deliverables

- Information for PUC Application (see Publication 371, Ch. 4.C). This includes: location map, index map, typical sections, plan and profile sheets, and TS&L plans
 - 17 weeks estimated to receive PUC Secretarial Letter or Order.
 - Any objections to the project will cause it to go to a hearing, add 1 year.
- ROW plan (see Publication 371, Ch 2.B, 2.D) for PUC appropriation of ROW. This must be reviewed by the railroad before any PUC submission and must include metes and bounds descriptions, recitations, preliminary ROW plans
 - 18 weeks estimated to receive PUC Order appropriating ROW
- Final construction plans to PUC (see Publication 371, Ch. 4.04D)
 - 10 weeks estimated
- Attend PUC field conferences with Department personnel as required
 - One week per field conference (prep, travel, attendance).
 - Includes initial field conference, any subsequent PUC directed meetings, and the PUC Final Inspection.

14 CONTEXT SENSITIVE DESIGN AND AESTHETICS

14.1 General Requirements

This [Section 14](#) and [Section 4.4.5.9](#) define requirements with which Development Entity shall design and construct aesthetic treatments for the roadway, structures, drainage, and landscaping Elements of the Project. Aesthetic treatments shall be designed to be context-sensitive with the local setting and to harmonize with the local landscape and architecture. Development Entity shall coordinate with the Department to achieve this harmonization with the appropriate local coordination.

14.2 Administrative Requirements

For purposes of this [Section 14](#), the following list of items will be considered the aesthetics Elements of the Project and designated for context sensitive solutions and aesthetic treatment. Certain Elements as listed below will be considered applicable for usage as designated if their application falls within the Project Limits:

- a) Material, finish, dimensions, color, and texture of bridge Elements
- b) Materials, finish, dimensions, and color of barriers and railings
- c) Paved slope treatments
- d) Sidewalks, median or pedestrian specialty paving, including material, finish, and color
- e) Hardscape at interchanges and intersections
- f) Fencing
- g) Signage – overhead, attached, and ground-mounted
- h) Light fixture, ambient light colors, and general layout conditions
- i) Material finish, dimensions and color of light poles and mast arms, ambient lighting colors, and general layout conditions

14.2.1 Aesthetic Designation

All Replacement Bridges will require aesthetic treatment in conformance with a Context Sensitive Design and Aesthetics Master Plan (Master Plan). The context for decisions on the type and degree of treatment is elaborated in 14.2.3 below, and the assignments for type and degree of treatment is found in [Attachment 10-1](#), column heading CSS & Aesthetics Treatment Level.

14.2.2 Aesthetic Inventory

Development Entity will be required to inventory all of the Replacement Bridges for an actual assessment of any existing enhanced feature or existing landscaping elements that would be considered to be retained for the Replacement Bridge. This inventory will be the basis for inclusion of requirements as further highlighted in [Attachment 10-1](#).

14.2.3 Aesthetics Concepts

Context sensitive design incorporates aesthetic elements as integral to that design, not supplemental. The AASHTO Bridge Aesthetics Sourcebook: Practical Ideas for Short- and Medium Span Bridges (AASHTO 2010) should be referenced as guidance for understanding this Section. As referenced in the Aesthetics Sourcebook, of the 10 determinants of appearance, the first four - horizontal and vertical geometry, super structure type, pier placement and span arrangement, and, abutment placement and height - are going to be governed by the nature of this Project and have limited flexibility in treatment. The remaining six determinants - superstructure shape including parapets, overhangs, and railings; pier shape; abutment shape; color; texture, ornamentation, and details; and, lighting, signing, and landscaping - have significant impacts in appearance. The design Elements should be responsive to these. Most importantly, the design Elements should achieve a unified "look" for the Project statewide, so that each bridge is recognizable as belonging to this RBR Project. The most notable example of this unified look in

Pennsylvania is the original Pennsylvania Turnpike, especially with the consistent color, shape, style, and incising on the crossing bridges.

Travelling over the bridge deck, the driver of a vehicle, or a bicyclist, or pedestrian sees the travel way, bridge railings, and the view to either side. There is a second perspective from which bridges are viewed, and which impacts context. If a bridge crosses over another roadway, over a trail, water trail, or within a park, its sides and underneath become part of the setting. A bridge therefore always has two contexts - internal "travel" context and the external "viewed" context - for which design needs to be responsive. An example of the viewed context would be in the original Pennsylvania Turnpike from the perspective of travelling on the Turnpike but viewing the bridges that cross the Turnpike. The external treatments on those crossing bridges would have been responsive to the viewed context. "Base" context defines those categories represented by areas with higher design speeds and a lower pedestrian/bicyclist population density. For Base Context, Development Entity will design and implement a stamp visible for both the travel and viewed contexts.

Nominal treatments are reserved for travel contexts, viewed contexts, or both. For bridges in a travel context, the dominating factors in the look of the bridge are its superstructure barrier and its texture and in certain cases, color. This variant of Nominal is designated as Nominal-1. In particular, bridges for which the substructure is obscured from view such as from vegetation, a Nominal-1 assignment is warranted. For bridges where a viewed context is supported, the dominating factors for look are the barrier, color, and the substructure shape, color, and surface pattern and in certain cases, color. This variant of Nominal is designated as Nominal-2.

Bridges in town centers, main streets, and urban centers with low design speeds, and a higher density of non-motorized traffic warrant an "Enhanced" level of treatment. In addition to color, barrier design, substructure shape, color and surface pattern, an Enhanced level might contain railing, color and lighting treatments, where warranted by the context, i.e., lighting where lighting is being replaced or where justified for safety reasons. Development Entity will follow the guidance on General Lighting Policies provided in DM-1C (Publication 10C), Chapter 4(H). Given the setting of the bridge in a town center/Main-street context, there is no differentiation between Travel context enhanced and Viewed context enhanced levels of treatment.

As stated above, a viewed context may justify treatments, even if the travel context does not. In particular if the feature crossed is part of a recreational or scenic setting, a Nominal-2 level treatment of barriers and substructure elements may be warranted. Examples of these settings are bridges located over trails or water trails, or located in a rural historic district, park, or historical monument. For village or park settings, implementing both Nominal-1 and Nominal-2 may be appropriate. When both Nominal-1 and Nominal-2 are invoked for a village setting bridge, it may be considered equivalent to an Enhanced level of treatment. The difference between a Nominal-1/Nominal-2 and Enhanced is that the considerations of lighting and railing that might occur in an Enhanced treatment are usually not relevant to a village or park setting. With respect to historic districts, a Nominal-1 or Nominal-2 level of treatment may be warranted in a rural historic district, while an Enhanced level of treatment may be warranted in an urban, town, or village historic district. Each Replacement Bridge in Attachment 10-1 has been classified as belonging to a Base, Nominal-1, Nominal-2, or Enhanced level of treatment with regard to the viewed or travel context.

There are going to be settings where the travel context has a high design speed and the viewed context suggests a Nominal or Enhanced treatment level. To ensure safety in these situations, the barrier roadside face must meet all safety requirements but can have more dominant aesthetic treatments such as recessed panels on the exterior face suggesting an open barrier design.

14.2.4 Context Sensitive Design and Aesthetics Master Plan

Development Entity shall submit the Master Plan to the Department for review and comment. The Department will coordinate with FHWA and SHPO to review the Master Plan and will issue final approval after considering all comments. Approval of the Master Plan shall be a condition of NTP2. All finishes, textures, colors, features, hardscapes, softscapes, fencing, signs, gantries, and any other Element of the Replacement Bridges shall comply with the Master Plan.

The Master Plan shall sufficiently address how the following Elements will be incorporated into the Site-Specific Design Drawings for each Replacement Bridge.

- Color
- Abutments and Wingwalls
- Visible Structural Elements
- Barriers
- Railings
- Sidewalks
- Signing
- Lighting
- Landscaping and Plant Material
- Accent Features (Stamp)
- Walls and Fencing

Development Entity shall follow the guidelines and requirements for the development of the Master Plan, and for the Replacement Bridge design, including the following:

- a) Aesthetics shall not interfere with safety, constructability and maintenance requirements.
- b) The Replacement Bridge design shall minimize impact on the existing natural environment to the extent possible.
- c) The Replacement Bridge design shall be responsive to the context and in proportion to the visual and experiential impact the structure has on the bicyclist/pedestrian population using and viewing the bridge.
- d) Structures shall be detailed and responsive to the context in a conservative manner so as to achieve the greatest level of aesthetic fit within the context.
- e) Treatment of the Replacement Bridge shall be responsive to the viewed context if the feature being crossed is part of a scenic byway, historic district, historic landscape, park, trail, water trail, or a multi-use facility, containing one or more of the following: historical monuments, parking areas, bikeways, pedestrian paths, and other shared-use facilities on the highway right-of-way.
- f) Color, texture, and form shall be used appropriately for all structures.
- g) Existing trees and natural features shall be preserved to the greatest extent possible.
- h) Aesthetics Elements shall be fully integrated with the adjacent landscaping.
- i) Visual quality of any replaced or augmented landscaping shall be across the extent of the local region where the bridge is located.
- j) Native-area and/or naturalized plant materials shall be used.
- k) Aesthetic Elements shall be easy to maintain
- l) Where the bridge is contributing to a historic district, the aesthetic option will be presented to consulting parties as the first option for discussion and consultation on how to resolve potential adverse effects to the historic district.

As part of the Master Plan approval, Development Entity must prepare physicals samples for the various patterns and surface treatments for review and approval by the Department in such Plan.

14.2.5 Site-Specific Design Drawings

For Replacement Bridges classified as Nominal or Enhanced, Development Entity shall prepare Site-Specific Design Drawings for each Replacement Bridge and include those plans with the TS&L, final design and Released for Construction Documents. The Development Entity must submit to the Department for review and approval any Replacement Bridge Site-Specific Design Drawings that do not conform to the approved Master Plan prior to construction.

14.3 Design Requirements

Design shall be in accordance with approved Master Plan.

14.3.1 Structures

Aesthetic treatments for the Replacement Bridges shall be coordinated with Development Entity's structural design team to facilitate constructability and maintain safety requirements. Structural elements to be considered include: color, abutments, barriers, railings, sidewalks, and lighting. All structural elements shall be consistent in form and texture, with similar shapes and details used for the appropriate classification for that roadway bridge crossing, in accordance with the designated level of treatment from the Master Plan.

Minimize exposed conduits or drain pipes on bents, columns, bridge beams, retaining walls, or any other visible surface.

14.3.2 Color

As part of the Master Plan, Development Entity shall submit a plan that indicates where each color is to be applied. Use color in coordination with other elements to create a cohesive identity amongst bridges from this project and a "look" that is distinctive for Pennsylvania. Use color to add interest via contrasting colors to highlight some elements and/or to disguise/mass some elements.

This plan can be diagrammatic in nature, but shall list each element and its colors. In addition to integrated colors, painting, and staining, Development Entity may use colored lighting in selected areas to add color. There should be no more than two to three colors per bridge and no more than three to four color schemes applied across the Commonwealth.

14.3.3 Stamp

As part of the Master Plan, Development Entity shall submit a plan for a stamped emblem that identifies the Replacement Bridge as part of the Project. Analogous efforts are the keystone used for the Pennsylvania Railroad (PRR) railroad bridges and the Pennsylvania Turnpike Commission (PTC) keystone used for the Pennsylvania Turnpike bridges. The stamp design will be submitted for review and approval at the sole discretion of the Department as part of the Master Plan and will be applied to each Replacement Bridge in a way to be visible to both motorist and bicyclist/pedestrians using the bridge.

14.3.4 Abutments and Wing Walls

As part of the Master Plan, Development Entity shall provide at least one aesthetic pattern scheme for abutments and wingwalls that is integrated into the look of the Project. Simulated stone is not encouraged for this pattern scheme. A simulated stone look should be reserved for and may be warranted in locations where a historic district is present and the intent is to complement existing stone and patterns used in neighboring abutments. In Enhanced Contexts, an abutment/wingwall scheme may include tiles and/or reliefs on surfaces, and facades that show artistic and/or historical expressions.

Abutments and wingwalls are generally not visible from the interior perspective, so application of the aesthetic pattern scheme will be conditional on the presence of vehicle and bicyclist/pedestrian observers on the feature being crossed.

14.3.5 Barriers

As part of the Master Plan, Development Entity shall provide at least one context sensitive aesthetic pattern scheme for barriers. Barriers that rely on imitation stone for the pattern are explicitly discouraged for use. A simulated stone look should be reserved for and may be warranted in locations where a historic district is present and the intent is to complement existing stone and patterns used in neighboring abutments.

14.3.6 Railings

As part of the Master Plan, Development Entity shall provide at least one context sensitive aesthetic pattern scheme for railings where required.

14.3.7 Sidewalks

As part of the Master Plan, Development Entity shall provide at least one context sensitive aesthetic pattern scheme for sidewalks that will separate vehicular traffic from bicyclist/pedestrian traffic. Sidewalks utilizing the aesthetic pattern scheme will be used where they are associated with aesthetic barriers and/or railings, and where recommended to replace existing sidewalks or to connect sidewalks on either approach of the bridge.

14.3.8 Lighting

As part of the Master Plan, Development Entity shall provide at least one context sensitive aesthetic pattern scheme for lighting. Development Entity shall inventory any existing standard lighting and any existing aesthetically enhanced lighting for the Replacement Bridges. This provides a basis whereby lighting must be included in the replacement design.

Consideration of the use of the context sensitive lighting design scheme should be limited to Enhanced contexts and where there is existing lighting or where lighting is recommended.

Development Entity will design lighting to accommodate municipal lighting agreement requirements and any enhanced aesthetic criteria that may apply.

14.3.9 Walls and Fencing

As part of the Master Plan, Development Entity shall design any noise/sound walls to be similar in color, texture, and style to those of existing retaining walls, and shall develop an aesthetics treatment that is consistent with other physical features such as structures, landscaping, and other highway components in the area adjacent to the Replacement Bridge.

The roadside face of noise walls shall have a consistent appearance throughout their length. The side of the noise walls facing away from the roadway may vary based upon community input gathered by Development Entity as part of the NEPA process to incorporate and include any approved noise walls.

Development Entity shall design fencing, primarily pedestrian safety fencing, to blend in with the surrounding neighborhood through careful use of material, surface, pattern, finish, and color.

14.4 Construction Requirements

Apply the aesthetic treatments in accordance with approved Master Plan.

14.5 Aesthetic Costs and Aesthetic Enhancements

Development Entity, in coordination with the Department, shall provide adjacent Governmental Entities the opportunity to add to the aesthetic and landscaping features for a Replacement Bridge. The local aesthetic treatment shall be consistent with the requirements in this Section 14 for the Replacement Bridges and as further highlighted in Attachment 10-1. For example, local aesthetic treatment could be an upgrade in classification from the Nominal Context treatment to an Enhanced Context treatment. It could additionally be an added feature or treatment above and beyond either the Base, Nominal, or Enhanced Context as long as safety, design, compatibility, schedule and agreements can be reached.

Aesthetic and landscaping changes or additions requested by Governmental Entities will be allowed only when the Government Entity agrees to completely fund the additional cost for incorporation of all additional improvements into the proposed treatment.

14.6 Deliverables

Deliverables shall be provided to the Department in electronic format, including PDF and native files. Physical samples shall be provided as required. Deliverables include, but may not be limited to, the following:

- Master Plan;
- Aesthetics inventory;
- Site-specific design drawings; and
- Samples for the various patterns and surface treatments

Aesthetic treatments shall be designed to be context sensitive with the local setting and to harmonize with the local landscape and architecture.

14.6.1 Master Plan

As part of the Master Plan, Development Entity shall submit, and in some instances prepare physical samples for, the following items:

- various patterns and surface treatments for review and approval by the Department in such Plan;
- a plan that indicates where each color is to be applied;
- a proposed stamped emblem;
- a plan and physical sample for a stamped emblem;
- at least one aesthetic pattern scheme for abutments and wing walls that is integrated into the look of the Project; and
- at least one context sensitive aesthetic pattern scheme for barriers.

15 SIGNING, DELINEATION, PAVEMENT MARKING, SIGNALIZATION AND LIGHTING

15.1 General Requirements

This Section 15 includes requirements with which Development Entity shall design, construct, and maintain all signing, delineation, pavement markings, signalization, and lighting, for the Project.

15.2 Administrative Requirements

15.2.1 Meetings

Development Entity shall arrange and coordinate all meetings with local agencies or individuals that have responsibility for maintaining and operating traffic signals, roadway lighting, signs, etc. Development Entity shall provide the Department with notification of such meetings a minimum of seven (7) Days prior to the start of the meeting. The Department, in its discretion, may attend such meetings.

15.2.2 Existing Inventory

Prior to the commencement of construction activities, Development Entity shall document and record the location and condition of all signs, pavement markings, signals, lighting elements, etc. within the Project Limits.

15.3 Design Requirements

Development Entity shall relocate or replace all signing, delineation, pavement marking, and signalization in accordance with:

- Manual on Uniform Traffic Control Devices (MUTCD)
- Publication 212 Official Traffic Control Devices – the Department’s Supplement to the MUTCD
- Publication 111 Pavement Marking and Signing Standards TC-8600 and TC-8700 Series
- Publication 236, Handbook of Approved Signs
- Publication 46, Traffic Engineering Manual.
- Publication 13M, DM2
- Publication 10C, DM 1C
- Publication 35, Bulletin 15

Where intersections are impacted by the bridge construction, Development Entity shall design and install, relocate or adjust signing including general, street name signs, pedestrian signs, regulatory signs, warning signs, guide signs, etc.

15.3.1 Signing Design

Development Entity shall prepare and submit a signing and pavement marking pPlan for review and concurrence by the Department.

15.3.2 Signing and Delineation

With the Department’s concurrence, Development Entity shall remove all signing that is no longer required and return it to the nearest Department maintenance facility or as otherwise agreed upon location with the Department.

Development Entity shall replace any signs that are damaged or removed at any time with new posts

consistent with the type on that route and new sign panels in accordance with applicable standards. Signs shall be detailed in accordance with Department Publication 111, Traffic Control-Pavement Markings and Signing Standards TC-8600 and TC-8700 Series and Publication 236, Handbook of Approved Signs.

Development Entity shall procure all signs in accordance with Publication 35 and shall install all signs as shown on the Pavement Marking and Signing Plan. Signs include new and relocated signs. Development Entity's design shall include the locations of ground-mounted and overhead signs, graphic representation of all signs, proposed striping, delineation placement, guide sign and special sign details. Signs shall be located in a manner that avoids conflicts with other signs, vegetation, lighting, and structures.

Development Entity shall ensure that signs are clearly visible, provide clear direction and information for users, and comply with all applicable State requirements.

Development Entity's design of delineators and object markers shall comply with MUTCD requirements.

15.3.3 Project Signs – Outside the Project ROW

For signs located outside the Project ROW but within a public ROW, Development Entity shall install the signs in existing ROW controlled by other Governmental Entities. Development Entity shall coordinate with appropriate Governmental Entities for the design and installation of such signs. Development Entity shall be responsible for any permits required for the installation of these signs.

15.3.4 Third-Party Signs

In addition to the warning, regulatory, and guide signs within the Project ROW, the Department or Governmental Entities may request that Third-Party signs, be installed by a third party. Development Entity shall coordinate and cooperate with any third party performing such work. The Department may solicit input from Development Entity in reviewing applications for new Third-Party signs, but will retain sole authority for approving installation of these signs. All costs associated with fabricating and installing these signs shall be borne by the sign applicant. If approved by the Department, the Department may require Development Entity to fabricate and/or install these signs as a Department Change.

15.3.5 Pavement Marking

Development Entity shall ensure that the design and installation of all pavement markings comply with applicable MUTCD requirements and the Department's Publication 111, Traffic Control – Pavement Markings and Signing Standards TC-8600 and TC-8700 Series.

Pavement markings shall be provided by Development Entity as a condition of Substantial Completion of the Replacement Bridge. Additionally, Development Entity shall provide pavement markings during construction. If pavement markings are to be relocated during construction, temporary marking shall be provided. Conflicting pavement markings, either temporary or permanent, shall be removed. Permanent pavement marking shall be installed by Development Entity upon completion of the Replacement Bridge.

The pavement marking system shall be waterborne paint in accordance with Section 962 of Publication 408.

Any permanent intersection pavement markings; crosswalks, stop bars, turn arrows, etc., that are damaged or need relocating due to lane or geometric changes, shall be replaced with durable pavement markings per Applicable Standards.

15.3.6 Traffic Signals

Traffic signal designs and modifications to existing traffic signals shall be completed in accordance with

Department standards and specifications, the MUTCD and approved by the Department and the appropriate Governmental Entity.

15.3.6.1 Traffic Signal Requirements

Development Entity shall maintain or modify, as appropriate, any existing traffic signal impacted by the Project. Development Entity shall notify the Department and the appropriate Governmental Entities prior to impacting the traffic signal components. Development Entity shall maintain and/or restore the existing traffic signal, at the time of the improvement, to the current traffic signal permit. If the Development Entity provides any enhancements and/or modifications to the traffic signal then the Department and the appropriate Governmental Entities approval is required along with updating the traffic signal permit. All Traffic Signal equipment shall be in accordance with the current versions of the Department's Publication 35 (Bulletin 15) or as identified in Publication 408.

Development Entity shall upgrade all traffic signal loops embedded and/or cut into the bridge deck with a non-intrusive detection system when bridge improvements occur. Development Entity shall obtain approval from the Department and the appropriate Governmental Entities prior to installing the non-intrusive detection system. Development Entity shall coordinate with the appropriate Department District to update the traffic signal permit with the non-intrusive technology.

Development Entity shall evaluate and ensure the current structural adequacy of traffic signal structural supports and connected traffic signal appurtenance equipment on the existing bridge. Traffic signal structural support and connected traffic signal appurtenance equipment shall be installed to the Department's current design and construction standards. Development Entity shall ensure upgrades are in compliance with the existing traffic signal permit or obtain approval prior to making the modifications.

Development Entity shall ensure that all traffic signal conduit, junction boxes, signal cables, ground wires, electricity, communications or other signal components are connected and maintained on the bridge if Development Entity is responsible for ensuring electricity and communications are in compliance with the existing traffic signal permit or it shall obtain approval prior to making the modifications. Development Entity shall ensure that existing line of sight requirements are maintained for wireless or radio technologies.

Development Entity shall maintain pedestrian accommodations associated with a traffic signal in accordance with the provisions identified within this contract.

If the Department or Governmental Entity requests improvements to a traffic signal that will impact the existing structural integrity of a bridge than the Development Entity will need to either approve or deny the request.

The Department or Governmental Entity and/or its contractors acting on their behalf shall notify the Development Entity if any maintenance or improvements are made to traffic signal equipment on a bridge identified within this contract.

The Department, at its sole discretion, in coordination with Development Entity, reserves the right to upgrade and/or replace signal equipment within Project Limits at any time. Such upgrade and/or replacement will be considered a Department Directed Change.

15.3.7 Lighting

Lighting, per Department Publication 13M (DM-2), Chapter 5, Publication 72M, Roadway Construction Standards, the AASHTO Roadway Lighting Design Guide, and AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals shall be provided by

Development Entity at any locations that currently have lighting and the existing lighting is being removed or impacted due to construction at any Replacement Bridge.

Lighting shall be provided under all bridges consistent with Bureau of Maintenance and Operation – Maintenance Technical Leadership Division (BOMO – MTLTD) highway lighting.

Pedestrian level lighting shall be provided for sidewalks on bridges where it now exists.

Development Entity shall contact the Department and applicable third parties a minimum of thirty (30) Days in advance of proposal to relocate existing facilities in the area of lighting. If any lighting is damaged by construction activities, Development Entity shall replace in kind with new materials. Lighting poles shall be kept in the current location, relocation will not be allowed, unless Development Entity proposes an alternative design that does not affect performance or safety near the lighting and the relocation is approved by the Department and applicable third parties. Lighting must be completely operational or completely off. Lighting shall remain completely operational when bridges are open to all lanes of traffic.

Any changes in lighting design must meet the illumination criteria in Department Publication 13M (DM-2), Chapter 5 and the AASHTO Roadway Lighting Design Guide. Development Entity shall submit lighting calculations showing the proposed lighting plan meets the illumination criteria. All pull boxes located on the bridges shall be replaced.

If current lighting wiring is located under the Replacement Bridge, Development Entity shall replace wiring and add pull boxes and conduit to the Replacement Bridges. The new pull box shall be located in the toe of the barrier wall. If any conduit located on the Replacement Bridges is damaged by construction activities, it shall be replaced.

All non-breakaway light poles removed at any time due to the Work shall be replaced with Type S poles.

Development Entity may provide anchor base, Type A poles when:

- a) Pole is mounted on bridge barrier or wall.
- b) Pole is located behind guide rail.
- c) Pole is protected by natural roadside considerations.
- d) Pole is adjacent to pedestrian areas.

Any changes made to the lighting system must complete the required system test as outlined in Publication 408, Specifications Section 910.

Publication 408, Specifications will apply for permanent lighting.

All third party requests for lighting within the Replacement Bridge location shall be subject to Department approval. If approved by the Department and the third party, Development Entity shall provide the lighting as indicated in Section 5 Third Party Agreements.

Luminaire poles and breakaway bases shall be designed in accordance with AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

Development Entity shall place all understructure lighting in a configuration that minimizes the need for lane closures during maintenance.

Development Entity shall not place ITS cable, fiber-optic lines, signal conductors, or any other non-lighting related cables or conductors in the lighting conduit, ground boxes, or junction boxes.

Development Entity shall ensure that lighting structures that are replaced or relocated comply with FAA height restrictions near airport facilities. In the event that proposed or existing luminaires, mast arms, or poles infringe into an airport's or heliport's base surface, Development Entity shall coordinate with the FAA and the Department to permit or relocate such structures.

Development Entity shall coordinate with the Department and the appropriate Governmental Entities to define additional illumination design preferences of the local maintenance and operation agency.

15.3.7.1 Additional Requirements

Navigation lighting shall be kept operational with a permanent system. Publication 408, Specifications will apply for navigation lighting. If the navigation lighting system is indicated for replacement, the installation will be completed according to Publication 408, Specifications.

At a minimum, underground conduit shall not be less than 2" or Schedule 40 polyvinyl chloride (PVC).

The minimum conductor size shall be #8 AWG copper for primary circuits and #12 AWG for underpass lights on the load side of the fusible disconnect. Development Entity shall not use duct cable for illumination purposes.

Aviation lighting shall remain operational at all times.

Electrical part of the installation shall be designed and installed in conformance with the National Electrical Code (NEC).

15.3.8 Visual Quality

Development Entity shall make a reasonable attempt to provide luminaires that match the existing luminaires along the roadway.

Development Entity shall not use timber poles for permanent installation.

Development Entity shall re-sod or re-seed areas of construction disturbed by the installation of signs, traffic signal systems, or lighting systems after final installation.

15.4 Construction Requirements

15.4.1 Permanent Signing and Delineation

Development Entity shall use established industry and utility safety practices to erect and remove signs located near any overhead or underground utilities, and shall consult with the appropriate Utility Owner(s) prior to beginning such Work.

Development Entity shall relocate as needed or leave all applicable guide signs and/or exit direction signs in place at all times during construction and shall not obstruct the view of the signs to the motorist. Development Entity shall replace any other removed signs before the end of the work day.

15.4.2 Permanent Signalization

Development Entity shall coordinate with the Utility Owner(s) and ensure necessary power service is maintained for permanent signal systems.

Before modifying any permanent traffic signal, Development Entity shall provide the Department and applicable third party a complete traffic signal design for review.

15.4.3 Permanent Lighting

Development Entity shall coordinate with the Utility Owner(s) and ensure power service is maintained for permanent lighting systems. Where the Work impacts existing lighting, Development Entity shall maintain existing lighting, as temporary lighting during construction and restore or replace prior to Substantial Completion. At all times during the Term, safe lighting conditions shall be maintained along the Project roadway.

Development Entity shall contact Utility Owners regarding their specific required working clearance requirements.

15.4.4 Intelligent Transportation Systems

Prior to the commencement of construction activities, Development Entity shall document and record the location and condition of all ITS equipment within the project limits.

Development Entity shall relocate or replace in kind any ITS or other electrical equipment including cabinets, conduits, pull boxes, data collection equipment, fiber optic network, etc., that are altered or damaged because of the Work. Communications shall not be interrupted at any time unless approved by the Department. Development Entity shall keep any existing dynamic message signs, traffic sensors, or other types of intelligent transportation systems (ITS) equipment functional at all times during performance of the Work. Work shall conform to Publication 647, Civil and Structural Standards for Intelligent Transportation Systems ITS-1200M Series.

16 MAINTENANCE AND PROTECTION OF TRAFFIC

16.1 General Requirements

Development Entity shall design, construct and maintain the Project, in conformance with the requirements stated in this Section 16, to provide for the safe and efficient movement of people, goods, and services, through and around the Project, while minimizing negative impacts to Patrons, residents, and businesses. Development Entity shall coordinate with local Government Entities on the development of Transportation Management Plan (TMP) and the Traffic Control Plan (TCP).

For Replacement Bridges spanning other roadways, Development Entity shall obtain approval from the appropriate Governmental Entity for any Closure of the roadway beneath the Replacement Bridge for Construction Work or Maintenance Work as applicable. When work is required on such Replacement Bridge, Development Entity shall be responsible for the maintenance and protection of traffic on roadways under the Replacement Bridges per this Section 16 of these Technical Provisions. Development Entity shall maintain written documentation of all approvals.

It shall be the responsibility of Development Entity to coordinate with the affected property owner on each driveway closure. Development Entity shall not restrict access to property that will result in a de facto ROW taking. Development Entity shall maintain written documentation of all coordination.

During all phases, temporary or existing Intelligent Transportation System (ITS) equipment, street lights, and traffic signals shall remain in operation such that new and existing equipment operate as a coherent system. Development Entity will be responsible for coordinating signal timing adjustments with the local municipality and the Department.

16.2 Administrative Requirements

16.2.1 Transportation Management Plan

Development Entity shall prepare a TMP for the Department's review and approval and implement the TMP as a condition precedent for NTP2. The TMP shall include the following items for the Construction Work and for the Maintenance Work:

- a) Descriptions of the qualifications and duties of the traffic engineering manager, traffic control coordinator, and other personnel with traffic control responsibilities;
- b) Procedures for the development of TCP's;
- c) Procedures to maintain access for emergency services and other service providers;
- d) Procedures to minimize traffic impacts to school districts, hospitals, businesses, farmers and local residents;
- e) Procedures to comply with all local ordinances. This includes but is not limited to city, borough and township noise ordinances;
- f) Procedures to maintain and control pedestrian, bicycle and other non-vehicular traffic;
- g) Procedures to coordinate the TMP for Replacement Bridges with other Department, local Governmental Entities and private projects that are or will be under construction;
- h) Procedures to research, identify and include special events, including fairs, expositions, shows and other community events for inclusion in each TCP;
- i) Procedures to identify and incorporate the needs of transit operators, Utility Owners, Governmental Entities, emergency service providers, school districts, business owners, and other related Patrons, Customer Groups or entities affected by the Replacement Bridge and surrounding affected areas;

- j) Procedures for notifying applicable Governmental Entities of detours, road and lane closures and other traffic pattern modifications, and implementing and maintaining those modifications;
- k) Procedures for signing transitions during construction from one stage to the next and from temporary signing to permanent signing;
- l) Procedures for maintenance and replacement of traffic control devices, including pavement markings and traffic barriers, if used;
- m) Procedures to incorporate the accommodation of snow plowing and other Department maintenance procedures into the TCP's, including, but not limited to provisions for equipment turn-around and temporary lane widths that allow the passage of the Department's equipment;
- n) Procedures to verify twice daily that all construction is in accordance with the approved TCP;
- o) Procedures to regularly evaluate and recommend modifications to, if necessary, traffic signal timings, and the procedures for the development, the Department approval, implementation, testing, and maintenance of all affected signals ;
- p) Procedures to adjust the TCP if it results in unsafe conditions relative to railroad grade crossings;
- q) Procedures to coordinate with the appropriate Governmental Entities operating signals affected by the Replacement Bridge or detour routes to ensure temporary system compatibility, establish responsibilities for temporary signal installation, maintenance, operation and removal, and coordinate traffic signal timing with local signals;
- r) Procedures and processes for the safe ingress and egress of construction vehicles in the work zone;
- s) Provisions to provide continuous access to established truck routes and Hazardous Material (HazMat) routes, and to provide suitable detour routes, including obtaining any approvals required by the appropriate governmental entities for these uses;
- t) Procedures to modify plans as needed to adapt to current Replacement Bridge circumstances including a contingency plan to alleviate unreasonable construction-related back-ups that can be implemented immediately upon notification from the Department;
- u) Procedures to communicate TMP information to Development Entity's public information personnel and notify the public of maintenance of traffic issues in conjunction with the requirements of Section 3 (Public Information and Communications);
- v) Descriptions of contact methods, personnel available, and response times for any deficiencies or Emergency conditions requiring attention during off-hours; and
- w) Procedures for night work to incorporate Publication 213 requirements and to include a work zone light system design in accordance with NCHRP Report 498 – Illumination Guidelines for Nighttime Highway Work.
- x) In accordance with Section 212.5 of Title 67 of the Pennsylvania Code (67 Pa. Code §212.5), municipalities are responsible for the installation, maintenance and operation of traffic signals on both State and local highways. Moreover, when The Department issues a traffic signal permit (Department Form TE-964), the Department clearly indicates that it is the responsibility of the municipality to maintain the traffic signal in a safe condition at all times. Where Traffic Signal Maintenance Agreements exist within the Construction Limits, Development Entity shall coordinate with the relevant third parties.

Development Entity shall notify the traveling public by placing post mounted signs a minimum of fourteen (14) Days in advance of actual roadway closure or major traffic modifications. Where available and when possible, Development Entity shall coordinate and utilize Dynamic Message Signs on the regional ITS system.

Development Entity shall maintain access to all parcels within each Replacement Bridge limit or Development Entity shall provide alternative access.

Development Entity shall describe the TMP with reasonable, measurable tasks and milestones.

If at any time, the Department, in its sole discretion, determines that construction-related queues become unreasonable, modifications to alleviate the congestion shall be taken immediately. Contingency plans of how this will be determined and occur shall be included in the TMP.

16.3 Design Requirements

16.3.1 Traffic Control Plans (TCP's)

As a condition precedent to NTP3 for each individual Replacement Bridge, Development Entity shall develop a TCP in coordination with the Department and shall submit it to the Department for review and comment. The TCP for each Replacement Bridge shall show Development Entity's proposed construction staging and proposed traffic control devices consistent with the TMP and the construction schedule. Development Entity shall develop the detailed TCP's which provide for all construction stages and phasing, as well as all required switching procedures. The TCP's shall correspond with the construction schedule. Development Entity shall develop the TCP's in accordance with:

- a) Traffic Engineering Manual (Publication 46)
- b) Temporary Traffic Control Guidelines (Publication 213)
- c) The Manual on Uniform Traffic Control Devices (MUTCD)
- d) Official Traffic Control Devices – the Department's Supplement to the MUTCD (Publication 212)
- e) Traffic Control Pavement Markings & Signing Standards-TC 8600 & 8700 (Publication 111)
- f) DM Part 2: Highway Design (Publication 13M)
- g) DM Part 3, Chapter 4 (Publication 14M)
- h) Highway Specifications (Publication 408)
- i) The most current version of the Department's Road Users Liquidated Damages (RULD) Input Worksheet
- j) For Replacement Bridges spanning other roadways, Development Entity shall include details and narrate in the TCP regarding traffic control necessary on such roadways to construct for Construction Work or Maintenance Work (as relevant).

A Closure of the roadway beneath a Replacement Bridge spanning other roadways, for Construction Work or Maintenance Work applicable, shall be subject to the Department's approval.

Unless otherwise indicated in the Technical Provisions or specifically in Attachment 10-1, only short term lane closures in accordance with the requirements of Publication 213 will be permitted, and lane widths, shoulder widths and vertical clearance may not be reduced without the Department's prior approval.

The TCP shall not permit any Closure which occurs during a Calendar Event.

Development Entity shall coordinate with appropriate Governmental Entities on the development of the plan. Development Entity is responsible for obtaining all necessary permits, approvals and agreements from such local entities to implement the plans.

Each TCP shall be submitted to the Department for review and concurrence in accordance with the PMP. The TCP shall include details for all detours, traffic control devices, striping, and signage applicable to

each phase of construction. Information included in the TCP shall be of sufficient detail to allow verification of design criteria and safety requirements, including typical sections, alignment, striping layout, drop off conditions, and temporary drainage. The TCP shall clearly designate all temporary reductions in speed limits.

Development Entity shall maintain detour signing continuity on all active roadways within or intersecting the Replacement Bridge and along any detour route at all times.

Throughout the duration of the Replacement Bridge, Development Entity shall ensure all streets and intersections remain open to traffic, except as otherwise described in this section or approved by the Department, by constructing the Work in stages.

Development Entity shall prepare public information notices, in coordination with Section 3 (Public Information and Communications), in advance of the implementation of any lane closures or traffic switches. These notices shall be referred to as Traffic Advisories.

16.3.1.1 Design Parameters for Traffic Control Plans

Turning Radius. Turning movement on all local streets and driveways shall, at a minimum, provide similar characteristics as existing vehicles.

Speed Restrictions. Temporary reductions in posted speed limits during construction will be in accordance with the Department publications identified in this Section 16.3.1.

Number of Lanes. Unless the Department approves full closures with detours, or partial width construction with alternating traffic controlled by a temporary traffic signal or stop signs, the minimum number of lanes to be maintained during construction shall be in accordance with Attachment 10-1. Lane closures on other roadways may be considered subject to the Department approval in its sole discretion, so long as all traffic patterns and accesses are maintained.

Lane Widths. During construction, the minimum lane width during staged construction shall be as established in Attachment 10-1.

Shoulders. The minimum offset from the edge of travel way to the edge of pavement or traffic barrier shall be as established in Section 10, Roadways and Pavements.

16.3.1.2 Allowable Lane and Roadway Closures

Lane and roadway closures are subject to Department concurrence and will only be permitted when Development Entity can demonstrate that the closure will provide clear benefit to the progress of the Work, that Development Entity has considered the traffic control approach in the Scoping Field View information provided by the Department, that Development Entity has coordinated potential closures with the appropriate Customer Groups and that Development Entity will implement measures to mitigate impacts from the closures to the maximum extent reasonable. Closures must be coordinated with adjacent projects. Development Entity shall inform the appropriate Customer Groups of any lane closures in accordance with their PICP identified in Section 3.

Additional Constraints during construction:

The Replacement Bridge scheduling and phasing shall also take into account:

- a) Development Entity shall not have a period of Construction Work inactivity greater than fourteen (14) Days for any type of Closure unless approved by the Department in writing;

- b) Development Entity shall begin construction Work adjacent to an initial traffic shift or traffic detour within 24 hours of shifting or detouring traffic;
- c) Development Entity shall not implement a detour or lane closure one day in advance of or during a holiday or special event that will adversely affect traffic flows relative to those holidays or special events;

Development Entity shall follow the requirements of the Department policy letter titled Road Condition Reporting System (RCRS) Requirements. When Development Entity creates a road closure or lane restriction which meets the requirements identified for an “RCRS Reportable Event,” the responsible party (foreman, resident engineer, inspector, contractor, etc.) must report the event as defined for an “Unplanned Event.” Events must be reported in real time at the actual time the closure or lane restriction occurs and when it is removed in accordance with the procedures identified in the Development Entity’s PICP;

- d) Development Entity shall notify the Department a minimum of ten (10) Business Days (excluding holidays) prior to prohibiting oversize/overweight vehicles from traveling through restricted areas. The notification shall be on the Department form M-937R(8-09). Additionally, Development Entity must notify the Department five (5) Business Days before opening restricted area to oversize/overweight vehicles. The notification shall be on the Department form M-937RO(3-09); and
- e) Development Entity shall notify the appropriate Regional Traffic Management Center (RTMC) at least fifteen (15) minutes prior to beginning work within the roadway of any Numbered Traffic Route. Development Entity shall report the work location, beginning time of traffic restrictions, what traffic restrictions drivers will encounter, the expected time that traffic patterns will return to normal and what Publication 213 Pennsylvania Typical Application drawing (PATA) number is being utilized. Development Entity will notify the RTMC immediately upon ending traffic restrictions.

Driveway Closures. Development Entity shall maintain a minimum of one all-weather driveway per business at all times. For businesses with multiple driveways, closures may be permitted but are subject to approval and timeframe restrictions by the Department. Development Entity shall notify property owners ten (10) Days in advance of driveway restrictions affecting their properties.

16.3.1.3 Detour Usage

Development Entity shall use State routes for detour routes, wherever applicable. If State routes are unavailable, Development Entity may use local arterials, provided that Development Entity has conducted the necessary coordination with the Governmental Entity having jurisdiction. The Development Entity will prepare for the Department to provide that Government Entity with a courtesy letter indicating that the Department and Development Entity will use the local road as a detour. Development Entity shall not use local surface streets for detour routes without the prior written approval by the Governmental Entity. Development Entity shall properly maintain local routes on the detour to be safe and passable, and shall restore the roadway and associated roadway appurtenances to preconstruction conditions when the detour is no longer required. Development Entity shall prepare and submit an existing conditions report, including video documentation, prior to implementing the detour.

Designated detour routes and bypasses shall be capable of handling the traffic volume and characteristic of the existing route and shall contain no bridges with a weight limit more restrictive than the subject Replacement Bridge.

Development Entity shall be responsible for ensuring that bicycle and pedestrian access is maintained. Provisions for accommodating bicyclists and pedestrians should be included in the detour routing for all construction. The provisions should include signing and markings to convey the following information:

- Bikeway/walkway closed.
- Detour direction signing, including turns.
- Distance measurements if detour is longer than 0.5 miles for pedestrians and 2 miles for bicyclists. These measurements may be placed at either end of the detour route. The measurements should be given in blocks for pedestrians and miles for bicyclists.

16.4 Traffic Management Requirements During Construction Period

Development Entity shall provide the Department the names of the traffic control coordinator and support personnel, and the phone number(s) where they can be reached twenty-four (24) hours per day, seven (7) Days per week.

Development Entity shall be responsible, in respect to a Replacement Bridge, for maintaining the traffic flow through the Project Site (including without limitation on intersecting roadways), along detour routes during the period from NTP3 until Final Acceptance. If disruption of the traffic flow occurs and traffic queues greater than ten (10) minutes occur, then Development Entity shall review the construction operations that contributed directly to the disruption of the traffic flow and make adjustments to the operations to prevent the disruption from reoccurring. If at any time the Department determines Development Entity's traffic control operations do not meet the intent of the TMP or any specific TCP, Development Entity shall immediately revise or discontinue such operations to correct the deficient conditions.

Development Entity shall manage traffic during the construction period in accordance with TMP, TCP's concurred with by the Department and the following:

- a) Highway Specifications (Publication 408)
- b) The Manual on Uniform Traffic Control Devices (MUTCD)
- c) Official Traffic Control Devices – the Department's Supplement to the MUTCD (Publication 212)
- d) Temporary Traffic Control Guidelines (Publication 213)
- e) Traffic Engineering Manual (Publication 46)
- f) Traffic Control Pavement Markings & Signing Standards-TC 8600 & 8700 (Publication 111)

Failure to comply with the maintenance and protection of traffic requirements in this Section 16.4 of these Technical Provisions shall be a Noncompliance Event. If after the Department's notification of such Noncompliance Event and expiration of the corresponding Cure Period, the Development Entity remains in violation of such requirements, the Development Entity shall be deemed to have failed to comply with the Safety Standards.

16.4.1 Access

Existing bicycle and pedestrian access and mobility shall be maintained. Access to existing transit stop locations shall be maintained during construction or reasonable alternative locations shall be coordinated

with and concurrence gained from transit operators. All signing associated with alternate access shall be the responsibility of Development Entity.

16.4.2 Pavement Markings

Development Entity shall be required to remove existing pavement markings that conflict with temporary or permanent pavement markings in accordance with Publication 408. Remove conflicting pavement markings during any phase of construction and relocate as indicated in Development Entity's TCP. Do not remove traffic lines and markings without a paint truck present on the Replacement Bridge site if repainting is required.

16.4.3 Hauling Equipment and Materials

Development Entity shall keep traveled surfaces used in its hauling operations clear and free of dirt or other debris that would hinder the safe operation of roadway traffic.

Rubber-tired equipment shall be used for moving dirt or other materials along or across paved surfaces. Where Development Entity moves any equipment not licensed for operation on public highways on or across any pavement, Development Entity shall protect the pavement from all damage caused by such movement. Any damage caused by the operation of Development Entity shall be repaired at the expense of Development Entity.

All haul routes utilizing any street of an adjacent Governmental Entity shall be coordinated with the appropriate Governmental Entity.

Development Entity's placement of construction equipment, materials and vehicles shall comply with AASHTO policies and guidelines.

16.4.4 Final Clean-up

Development Entity shall clear and remove from the site all surplus and discarded materials and debris of every kind and leave the entire Replacement Bridge in a smooth and neat condition, prior to the final inspection.

16.4.5 Stockpiles

Barricades and warning signs are to be placed at stockpiles to warn motorists of a hazard. All material stockpiles shall not be located within the clear zone of any traveled lane, unless positive protection is provided.

16.5 Traffic Management Requirements During Maintenance Period

The temporary traffic control restrictions established for the Construction Period, under this Section 16, shall be utilized during the Maintenance Period when traffic control is expected to be in place for a continuous duration of twenty four (24) hours or longer, unless otherwise approved by the Department. All other traffic control while performing maintenance activities shall be in accordance with the following:

- a) Highway Specifications (Publication 408)
- b) The Manual on Uniform Traffic Control Devices (MUTCD)
- c) Official Traffic Control Devices – the Department's Supplement to the MUTCD (Publication 212)
- d) Temporary Traffic Control Guidelines (Publication 213)
- e) Traffic Engineering Manual (Publication 46)
- f) Traffic Control Pavement Markings & Signing Standards-TC 8600 & 8700 (Publication 111)

16.6 Opening Sections of Project to Traffic

The Department will have the authority to order, in writing, any substantially completed section of the project opened to traffic when seasonal, local, or other conditions relating to the project or public convenience justify such action; however, such opening will not be held to be an acceptance or a waiver of any provisions of the specifications or the contract.

Furnish, place, and maintain necessary traffic control devices, as directed, at the Department's expense. Conduct the remainder of construction operations so as to cause the least obstruction to traffic.

After opening a section of the project to traffic, any damage to satisfactorily completed work items within the section which occurs due to vehicles, other than construction vehicles and equipment engaged on the project, and not to defective materials and/or workmanship, and which occurs despite satisfactory precaution taken, will be replaced or repaired, as directed, as Extra Work.

16.7 Hauling Restrictions

- a) **General.** Accept responsibility for all hauling done on the project and on adjacent highways, in connection with the contract. Hauling restrictions on highways will be according to the applicable sections of the Pennsylvania Vehicle Code, Act of 1976, No. 81.

If truck delivery of long bridge members (in excess of 21 m (70 feet)) is contemplated, obtain, in writing, a determination if a Department's hauling permit can be issued for the routing from the proposed source(s) of supply to the project.

Without written permission, do not move and/or operate heavy-duty construction grading and hauling equipment over existing or new pavements, subbase, base and surface courses, and structures which will remain in service.

No special permits will be required for the transfer of oversize or overweight equipment or vehicles from one work area to another work area within the project limits. However, Development Entity shall correct any damage caused by the transfer of equipment or vehicles.

If, in special cases, further restrictions are necessary, such restrictions will be indicated and/or specified in the proposal.

b) Mass (Weight) Limits and Weighing.

1. Do not operate on public highways any vehicles which are in excess of the registered, gross, and/or axle mass (weight) limits established in Chapter 49 of the Vehicle Code, 75 PA C.S. Chapter 49, or as posted by the Department.
2. Submit to weighing by Department weigh teams when requested. If, as a result of such a weighing, it is determined that a vehicle owned or leased by the Contractor or any Contractor has been operated on public highways carrying a mass (weight) in excess of the above registered, gross or axle mass (weight) limits, the sum of \$50 for each 225 kg (500 pounds) or part thereof of such excess mass (weight) will be deducted as liquidated damages from money due or to become due. These liquidated damages are attributable to inherent damage to the highway which is not readily ascertainable and do not relieve the

Contractor of responsibility to pay ascertainable damage as may be required in other sections of these Specifications.

17 MAINTENANCE WORK

17.1 General Requirements

The Development Entity shall perform Maintenance Work on all natural and built assets within the Maintenance Limits and take all necessary actions to:

- ensure the safe, functional, and reliable operation of each Replacement Bridge;
- ensure and verify the quality of the Maintenance Work;
- minimize delay and inconvenience to Patrons and to users of Related Transportation Facilities in accordance with Section 16 of these Technical Provisions; and
- ensure the safety of the Patrons and the general public and minimize the risk of damage, disturbance, or destruction of Department property and Third-Party property.

The Development Entity shall perform Maintenance Work within the Maintenance Limits in accordance with the requirements of the Project Documents and in particular Section 8 and Section 11 of the PPA, this Section 17 of these Technical Provisions, and the Maintenance Management Plan from Substantial Completion until the relevant Handback Date. The Development Entity shall implement a preventative and proactive maintenance system to prevent the degradation of the Replacement Bridges and other Project assets, maintain the Replacement Bridges in a state of good repair, self-monitor and self-report performance, and meet the minimum Maintenance Performance Requirements in this Section 17 of these Technical Provisions. The Development Entity shall be responsible for Maintenance Work on curbs and sidewalks within the Maintenance Limits, unless such responsibility can be assigned to a municipality pursuant to Section 10.6 of the Technical Provisions.

Notwithstanding the above, the Development Entity shall maintain the Early Handback Elements from Substantial Completion until such dates as specified in Section 17.7 of these Technical Provisions. The Department will maintain the Early Handback Elements from the Early Handback Date as specified in Section 17.7 of these Technical Provisions until the End of the Term.

The Development Entity shall perform all Maintenance Work within the Maintenance Limits with the exception of the activities identified in Section 17.1.10 of these Technical Provisions as being the responsibility of the Department. Maintenance of traffic during Maintenance Work shall meet the requirements of Section 16 of these Technical Provisions.

Maintenance Work shall meet or exceed the Department standards and specifications, industry design standards, and manufacturer's specifications and shall ensure that all Elements and Replacement Bridges function as intended. All the relevant requirements in the Technical Provisions respecting D&C Work shall equally apply to Maintenance Work.

The Development Entity shall cooperate and coordinate with and enable the Department and third parties with statutory duties or functions in relation to the Project or Related Transportation Facilities to perform such duties and functions from NTP3 until the relevant Handback Date. The Development Entity shall coordinate the planning and execution of Renewal Work and other Planned Maintenance with the Department and affected third parties.

The Development Entity shall not encroach or otherwise use third party right of way for Maintenance Work without prior approval from the Department.

All Maintenance Work shall be conducted in accordance with Government Approvals and Maintenance Work shall not disturb or alter the habitat or threaten the life of any Endangered Species.

The Development Entity shall develop and implement a quality system for the Maintenance Work and be responsible for the quality of Maintenance Work in accordance with the requirements of Section 2 of these Technical Provisions. The Development Entity shall be responsible for providing all resources and qualified personnel necessary to meet the requirements of this Section 17 of these Technical Provisions and to perform the Work identified in the Maintenance Management Plan.

17.1.1 Maintenance Limits

As a Condition Precedent to each Replacement Bridge Final Acceptance, the Development Entity shall prepare and submit to the Department drawings accompanied by a narrative describing the proposed final Maintenance Limits in accordance with the Project Documents. The drawings and narrative shall identify the Early Handback Elements and the dates maintenance responsibility for such Elements is transferred back to the Department per Section 17.7 of these Technical Provisions. The final Maintenance Limits for each Replacement Bridge shall be subject to the Department's review and approval.

The drawings shall establish the final boundaries of the Maintenance Limits for each Replacement Bridge using the Pennsylvania Location Reference System (LRS) per Publication 336. The plans shall cross reference to an inventory describing each Element of the Project contained within the Maintenance Limits. The boundaries of the final Maintenance Limits for each Replacement Bridge and the inventory describing each Element of the Project contained within the Maintenance Limits shall be recorded into the Development Entity's Maintenance Management Information System as per Section 17.3 of these Technical Provisions.

When a Replacement Bridge crosses over a stream channel, the Maintenance Limits shall include such stream channel (including banks and walls) 50 feet upstream and 50 feet downstream, measured from the relevant outer edge of the Replacement Bridge.

17.1.2 Maintenance during Construction

Notwithstanding the requirements in Section 17.1.1 of these Technical Provisions, from NTP3 until Substantial Completion, the Development Entity shall maintain the Project Sites that are temporarily open to traffic, any temporary Work, and local roads used as detour routes in a safe, passable and functional condition with open travel lanes free of hazards, debris and encumbrances and generally in compliance with the requirements of Section 16 of these Technical Provisions, with the exception of winter maintenance activities as identified in Section 17.1.9 of these Technical Provisions.

The Development Entity shall perform vegetation control pursuant to Section 17.7 of these Technical Provisions, from NTP3 until Substantial Completion.

17.1.3 Self-Monitoring and Self-Reporting Requirements

The Development Entity shall be responsible for establishing a self-monitoring and self-reporting program (included as part of the Development Entity's quality system respecting the requirements of Section 2.2 of these Technical Provisions) as a tool to evaluate the condition of the Project assets and the overall effectiveness of the Development Entity's Maintenance Work and meet the obligations under the Project Documents. The details of this program shall be presented in the Maintenance Management Plan.

17.1.4 [Reserved]

17.1.5 Planned Maintenance and Permitted Closures

Any Closure (other than a Permitted Closure or as otherwise approved by the Department) shall not be permitted. Any Closure affecting all travel lanes of a Replacement Bridge for Planned Maintenance activities shall not be permitted.

As part of the Maintenance Management Plan or the Renewal Work Plan (as relevant), the Development Entity shall prepare a schedule of Planned Maintenance (including Routine Maintenance and Renewal Work) in accordance with the requirements set forth in this Section 17.1.5 and Section 17.4 of these Technical Provisions.

If any Maintenance Work requires a Closure, the Development Entity shall submit the schedule for such proposed Closure as part of the Maintenance Management Plan and as part of the Renewal Work Plan for Renewal Work. The schedule for such proposed Closures shall be subject to the Department's approval. The Development Entity shall also notify the Department on the first day of the month of any Closures scheduled for the current month and the following month.

During the Department's review of the schedule of Closures submitted as part of the Maintenance Management Plan or the Renewal Work Plan (as relevant), the Department shall notify the Development Entity if any proposed Closure occurs during a Calendar Event. In such case, the Development Entity shall reschedule the Planned Maintenance so the Closure does not occur on a Calendar Event.

The schedule of Planned Maintenance shall describe all of the Planned Maintenance for the given period and shall include at a minimum the expected dates, Replacement Bridges, times, durations of each Planned Maintenance activity, and impact on traffic including any proposed Closures. The schedule of Planned Maintenance shall include a contingency plan to expedite traffic flow or reopening of closed lanes in the event of a traffic queue greater than ten (10) minutes.

The schedule of Planned Maintenance, and any changes thereof, shall be developed in cooperation with the Department and other Government Entities or third parties impacted by such proposed Closures to minimize the impact on traffic and avoid the scheduling of proposed Closures during local events.

The Development Entity shall consider the impact on traffic for any scheduled Planned Maintenance so as to minimize traffic queuing. The Development Entity shall schedule Planned Maintenance requiring Closures expected to last more than six (6) hours (including Routine Maintenance and Renewal Work) only when a traffic analysis performed by the Development Entity indicates that a traffic queuing will be minimized.

When a traffic queuing greater than ten (10) minutes occurs during the execution of Planned Maintenance as a result of such Work, the Work shall be discontinued immediately and may resume when traffic queuing has ceased or shall be rescheduled at a later time.

When changes occur in the Development Entity's schedule of Planned Maintenance (including changes in the Renewal Work Schedule) for which a Closure is required, the Development Entity shall request and obtain the approval from the Department at least fourteen (14) days before undertaking the Work that requires such Closure. Such requirement does not apply to Permissible Unplanned Maintenance.

When acting in response to an Emergency or an Incident or to cure a Priority 0 Noncompliance that is not a Planned Maintenance, the Development Entity shall notify the Department immediately of any Closures.

17.1.6 Damage Assessment Following Emergency, Incident, and Severe Weather Event

During or after the occurrence of an Emergency, Incident, or a severe weather event, the Department will conduct cursory visual inspections of the affected Project Sites as part of its routine maintenance patrols and will notify the Development Entity of its observations and possible Noncompliance Events.

Upon obtaining knowledge of or receiving notification from the Department of an Emergency, Incident or notification following a severe weather event, the Development Entity shall promptly respond to the affected Project Sites and assess damages and repairs necessary in accordance with Table 17-1. The Development Entity shall provide the appropriate level of qualified staff for such Work.

The Development Entity shall provide to the Department a detailed damage assessment report in response to such events. This report shall include, but not be limited to, an individual analysis of the Project Site or Project Sites affected by the Emergency, Incident or severe weather event with the following information:

- date and time of the event;
- cause and description of damage including damages to the Project assets (and third party assets, if applicable);
- description of the Noncompliance Event (if any), including Noncompliance Event classification and corresponding procedure for Cure Periods;
- description of issue or failure and resulting system impacts;
- description of site conditions supported by photo documentation (digital only);
- list of damaged assets with damage assessment;
- traffic flow impact; and
- hazard exposure.

The Development Entity shall coordinate with the Department to establish time frames for such reports to be delivered to the Department depending on the severity of the Emergency or Incident or extreme weather event; **provided however** that the Development Entity shall immediately notify the Department if any field observations reveal deficiencies sufficiently critical to warrant immediate actions, traffic restriction or Closure.

17.1.7 Hazardous Materials

Upon the release of Hazardous Materials, time is of the essence. Should the Development Entity become aware of any Hazardous Material releases or fuel spills onto the Project Site, the Development Entity shall immediately notify the Department.

17.1.7.1 Third Party Release of Hazardous Materials

For all Hazardous Material releases or fuel spills onto the Project Site caused by third parties, the Department will contain and mitigate the contamination, clean-up the affected area(s), and remove, transport, and dispose (as applicable) of Hazardous Materials. The Development Entity shall, upon obtaining knowledge of or receiving notification from the Department, respond to the Project Site in a timely manner and assess the affected area(s) for any Maintenance Work needed in order to ensure compliance with the requirements set forth in this Table 17-1 of these Technical Provisions.

17.1.7.2 Development Entity Release of Hazardous Materials

For all Hazardous Material releases or fuel spills onto the Project Site caused by the Development Entity or a the Development Entity-Related Entity, the Development Entity shall respond and take remedial actions as per the provisions of the Maintenance Management Plan respecting Hazardous Materials and the minimum Performance Requirements set forth in Table 17-1.

The Development Entity shall be required to respond promptly to assess the affected area(s), contain and mitigate the contamination, and clean-up the affected area(s) (whether within and/or outside the Maintenance Limits). The Development Entity shall treat, handle, store, remediate, remove, transport, and dispose (as applicable) of Hazardous Materials in accordance with all Laws and Governmental Approvals.

The Development Entity shall provide a full written report describing the Hazardous Material release event, documenting the cause(s) of the event and the Development Entity's response and actions taken to remedy and mitigate the impacts of the Hazardous Material release. This report shall be provided to the Department within two (2) Business Days after the initial clean-up is completed and shall be included in the Maintenance Monthly Report.

The Development Entity shall further develop and implement a corrective and preventative action plan to prevent such event from reoccurring and modify the Maintenance Management Plan accordingly to incorporate lessons learned from the event. Such plans shall be submitted to the Department within seven (7) days for review and comment after the initial clean-up is completed.

The Development Entity shall provide qualified staff with the appropriate levels of training and certification and equipment necessary for such Work.

17.1.8 Vegetation Control and Use of Herbicides and Pesticides

With respect to vegetation management within the Maintenance Limits, the Development Entity shall be responsible for the following Maintenance Work:

- maintaining the Elements listed under item (g) of the Early Handback Elements per Schedule 1 of the PPA until the Early Handback Date as per Section 17.7 of these Technical Provisions;
- the vegetation management activities necessary to meet the requirements in Table 17-1 of these Technical Provisions, including vegetation management activities necessary to maintain the normal flow of streams and keep stream channel free of obstructions; and
- removing weeds and other undesirable vegetation growing directly on, under or directly adjacent to a Replacement Bridge, sidewalks and curbs.

The Department will be responsible for the following vegetation management activities within the Maintenance Limits during the Maintenance Period:

- tree trimming and tree removal to facilitate roadway passage and safety; and
- mowing, cutting and clearing brush.

In carrying out its responsibilities respecting vegetation control, the Development Entity shall minimize the use of pesticides and herbicides and shall use such substances in accordance with all Laws and Governmental Approvals, permits, and regulations and shall comply with all Department standards respecting the use of such substances.

The Development Entity acknowledges that the vegetation control activities performed by the Department may deposit chemicals, including pesticides and herbicides, on Project Elements within the Maintenance Limits. The Department will use pesticides and herbicides, in accordance with all Laws and Governmental Approvals, permits, regulations, and standards respecting the use of such substances.

17.1.9 Winter Maintenance

The Development Entity shall not be responsible for carrying out winter snow and ice removal activities on the Project to facilitate general traffic flow. Such activities, including application of treatment material on Replacement Bridges, travel lanes, shoulders, offsets, and sidewalks, will be provided by the Department, following the same procedures and standards applied on Comparable Facilities and the Department's Publication 23. The Development Entity acknowledges that winter snow and ice removal activities performed by the Department will deposit antiskid materials and chemicals on bridge decks, which can accumulate over the winter within the area of the water table near scuppers and around structural members (panel points of trusses, flange angles, bottom flanges of plate girders, etc.).

Notwithstanding the above, the Development Entity shall be responsible for carrying out winter snow and ice removal activities for any portion of the roadway that is closed as a result of the Development Entity's Construction Work so long as such Closure is in place during the Construction Period. In such cases, the Development Entity shall only be responsible for carrying out winter snow and ice removal activities within the Construction Limits and from the Construction Limits up to the locations of the traffic control devices, which indicate that the road is being closed, in order to provide access to commercial and residential driveways affected by such detour.

The Development Entity shall remove obstructions that can create standing water or hazardous ice buildup in the travel way associated with the aforementioned activities.

17.1.10 Department's Responsibilities within the Maintenance Limits

During the Maintenance Period, the Development Entity shall be responsible for Maintenance Work within the Maintenance Limits, with the exception of the Maintenance Work on those Elements listed under items (b) through (f) of the Early Handback Elements per Schedule 1 of the PPA, which shall be the responsibility of the Department, **provided however** that:

- (a) such Elements meet the requirements of Section 17.7 of these Technical Provisions; and
- (b) if the Development Entity performs Renewal Work that affects such Early Handback Elements, the Development Entity shall restore the above Elements, at a minimum, to their condition prior to such Renewal Work.

The Department will be responsible for the Maintenance Work on flexible pavement after the Early Handback Date, as per Section 17.7 of these Technical Provisions.

The Development Entity shall coordinate its Maintenance Work with the Department so as to ensure the proper, continuous functioning of the Early Handback Elements. The Development Entity will not be responsible for traffic operations and for the Routine Maintenance Work listed below during the Maintenance Period:

- response to Incidents and Emergencies, including consequential traffic control and cleanup activities ;
- response to severe weather events per Section 17.1.6 of these Technical Provisions;
- winter maintenance activities per Section 17.1.9 of the Technical Provisions;
- response to Hazardous Materials releases per Section 17.1.7.1 of these Technical Provisions;

- vegetation management activities identified in Section 17.1.8 of these Technical Provisions (with the exception of the activities identified as being the Development Entity's responsibility in Section 17.1.8 of these Technical Provisions);
- maintenance of ITS devices (other than structural supports per Table 17-1 of the Technical Provisions);
- litter pick-up; and
- removal of obstacles that constitute a safety hazard, including dead animal removal.

For Replacement Bridges spanning other roadways, the Department will be responsible for all Maintenance Work on the pavement of such roadways under the Replacement Bridges, except for:

- maintenance and protection of traffic on such roadways under a Replacement Bridge necessary to carry out Maintenance Work performed by Development Entity on the Replacement Bridge per Section 16.1 and Section 16.3.1 of these Technical Provisions; and
- Maintenance Work as may be necessary to remove obstructions or repair damages on such roadways under a Replacement Bridge caused by the Development Entity's Maintenance Work on the Replacement Bridge.

The Development Entity is not required to measure skid resistance within the Maintenance Limits. The Department will notify the Development Entity when low skid resistance is detected and the Development Entity shall consequently investigate and perform Maintenance Work to eliminate unsafe condition.

17.1.11 Department's Inspections, Planned Maintenance, and Closures

For any operation or maintenance activities, which are the Department's responsibility under the Project Documents within or outside the Maintenance Limits during the Maintenance Period, the Department shall be permitted access to the Project Site at all times without any restriction and shall have the right to shift or re-direct traffic as necessary. The Department will be responsible for the direct cost associated with such activities including changing the pavement marking to accommodate temporary traffic patterns and restore the pavement marking to the conditions existing prior to such activities. Department will notify the Development Entity of any maintenance activities that the Department plans to undertake within the Maintenance Limits including general nature, expected dates, locations, times, and durations of such activities. The Development Entity and the Department will coordinate to accommodate such planned maintenance activities.

The Department may perform inspections and condition assessment reviews at any time at its sole discretion. The Department may periodically perform independent assessments and independent quality assurance reviews by inspecting repairs and other Maintenance Work performed or being performed by the Development Entity. In addition, the Department may perform field reviews for quality and completeness assessments. All records of the Maintenance Work performed by the Development Entity shall be made available to the Department for review according to the requirements in Section 17.3 of these Technical Provisions.

The Department shall have the right to close any Replacement Bridge when it determines, in its sole discretion, that an Emergency has occurred or is about to occur.

17.2 Maintenance Performance Requirements

The Development Entity shall provide all necessary Work to achieve or exceed the Maintenance Performance Requirements in Table 17-1 of these Technical Provisions and the NBIS rating requirements

in Section 17.2.2 of these Technical Provisions for each Replacement Bridge and each Element or the requirements in the Design Documents, whichever is greater, within the Maintenance Limits during the Maintenance Period. The Development Entity shall be solely responsible for the quality of the Maintenance Work. With respect to references to the Department's publications in Table 17-1 of the Technical Provisions requiring specific types of repairs, the Development Entity shall follow the intent of such publications to achieve the specified outcome but shall have discretion as to the use of means and methods.

The Development Entity shall notify the Department of Noncompliance Events and Closures within 48 hours of such event. There is no Cure Period for delayed notification.

Subject to any applicable Cure Period, the Development Entity shall accrue Noncompliance Points for Noncompliance Events as per Section 11 of the PPA and Table 7.2 of Schedule 7 of the PPA.

In effecting repairs to flexible pavement approaches, remove and replace distressed layers full lane width to a depth necessary to correct observed distress not less than ten (10) feet longitudinally beyond the distressed area, in any case not to exceed the Maintenance Limits. In effecting repairs to flexible pavement approaches, should the distance between repair areas be less than twenty (20) feet, the Development Entity shall make one continuous repair. All repairs to flexible pavement must meet the surface tolerance as specified in Pub. 408 Section 501.3 (o).

In effecting repairs to rigid pavement approaches, the Development Entity shall follow the repair criteria delineated in publication 408 and the Roadway Construction standards (RC-26M), in any case not to exceed the Maintenance Limits. All repairs to rigid pavement must meet the surface tolerance as specified in Pub. 408 Section 501.3(o).

In effecting repairs to rigid pavement and bridge decks, the Development Entity shall follow the requirements of Publication 408 and the Department's applicable standard drawings.

In the event of persistent recurring nonperformance or Noncompliance Events, the Development Entity shall investigate and explain to the Department the causes for such recurrence and develop a corrective and preventative action plan to eliminate or minimize future occurrences of the Noncompliance Events. Such plans shall be submitted to the Department within fourteen (14) days for review and comment, or such other shorter time period as may be deemed appropriate by the Department for Priority 0 Noncompliance Events.

17.2.1 Noncompliance Priority Classification and Cure

The Development Entity shall identify and classify all Noncompliance Events according to the Noncompliance priority classification defined in this Section 17.2.1 of these Technical Provisions. The Development Entity shall classify each Noncompliance Event as either a Priority 0 Noncompliance or a Priority 1 Noncompliance. Events identified in Table 7.2 of the PPA and not otherwise identified in Table 17-1 of these Technical Provisions shall be classified as Priority 1 Noncompliance

The Development Entity shall immediately notify the Department of any Priority 0 Noncompliance when the Development Entity discovers such events. When the Development Entity is the first to discover a Priority 0 Noncompliance Event, the Development Entity shall, immediately upon discovery, respond to such Priority 0 Noncompliance Event by deploying traffic control devices to close a lane, close multiple lanes, or close a Replacement Bridge to mitigate the hazard and ensure the safety of the Patrons and the general public.

When the Department is the first to become aware of a Priority 0 Noncompliance Event, the Department will respond to such Priority 0 Noncompliance Event by deploying traffic control devices to close a lane, close multiple lanes, or close a Replacement Bridge to mitigate the hazard and ensure the safety of the Patrons and the general public and will notify the Development Entity. In such cases, within twenty four (24) hours of the Department's notification, the Development Entity shall take over the Project Site and deploy its own traffic control devices to close a lane, close multiple lanes, or close a Replacement Bridge to mitigate the hazard and ensure the safety of the Patrons and the general public.

In either case, the Development Entity shall then cure Priority 0 Noncompliance Events so that hazards to Patrons are eliminated through the use of temporary remedies within the Cure Periods identified in the column entitled "Priority 0 Hazard Mitigation" in Table 17-1 when permanent cures cannot practically be implemented within such periods and permanently cure Priority 0 Noncompliance Events within the Cure Periods identified in the column entitled "Priority 0 Permanent Cure" in Table 17-1.

The Development Entity shall permanently cure Priority 1 Noncompliance Events within the Cure Periods identified in the column entitled "Priority 1 Permanent Cure" in Table 17-1.

The Department reserves the right to extend the Cure Periods for Priority 0 Permanent Cure and Priority 1 Permanent Cure in Table 17-1 if, in its sole discretion, the Department deems that such cure cannot be completed in a timely manner due to events outside of the Development Entity's control.

The Department reserves the right, in its sole discretion, to require modification of the classification of any Noncompliance Event. When Noncompliance Events are identified by the Department, the Department will classify the Noncompliance Events according to the Noncompliance Event priority classification defined in this Section 17.2.1 of these Technical Provisions.

The Cure Periods stated in Table 7.2 of the PPA and Table 17-1 of these Technical Provisions under each of the above headings shall be deemed to start upon the date the Development Entity first obtained knowledge of, or first reasonably should have known of the Noncompliance Event. For this purpose, the Development Entity shall be deemed to first obtain knowledge of the Noncompliance Event no later than the date of delivery of an initial notice to the Development Entity. The Development Entity shall investigate reports and complaints on the condition of the Project received from all sources. The Development Entity shall record response times, maintenance records, all relevant inspections and actions taken in respect of Noncompliance Event in the MMIS, including temporary protective measures and repairs as per the requirements of Section 17.3 of these Technical Provisions.

If extended periods of cold temperatures or severe winter conditions make it impossible for the Development Entity to cure a Noncompliance Event within the applicable Cure Period, the Development Entity shall request an extension of the Cure Period and justify the weather conditions preventing such cure, and the Department will extend the Cure Period at its discretion. Such approval shall not be withheld unreasonably.

17.2.2 NBIS Bridge Rating Requirements

The Development Entity shall achieve NBIS Bridge Rating of at least seven (7) for 98% of all Replacement Bridges and NBIS Rating of at least (6) for the remaining 2% of Replacement Bridges. The Development Entity shall achieve NBIS Bridge Rating of at least seven (7) for each superstructure Element on each Replacement Bridge.

17.3 Maintenance Management Information System

As part of its Maintenance Management Plan, the Development Entity shall develop, populate, manage, and utilize a computer-based database to manage the Project and meet the obligations under the Project Documents, including without limitations the requirements under Section 17 of these Technical Provisions, during the Maintenance Period (the “Maintenance Management Information System” or “MMIS”). The MMIS shall provide for control of records and control of documents procedures in accordance with ISO 9001. There shall be only one, single MMIS for all Development-Entity Related Entities.

The MMIS shall, at a minimum, accurately:

- record and organize information in manner that is consistent, logical, user-friendly, and searchable by individual Replacement Bridge, Element, attribute, time, location, or nature of Work performed, or any other relevant field of information pertinent to the identification of the Project assets and their performance;
- incorporate a Geographical Information System (GIS), fully integrated with the MMIS;
- include the delineation of the final Maintenance Limits for each Replacement Bridge;
- inventory and provide clear description of each Replacement Bridge using the applicable Bridge Key (BRKEY) number, Multi-modal Project Management System (MPMS) number, and structural number (S-Number) for each Replacement Bridge;
- inventory and provide clear description of each Element of the Project contained within the Maintenance Limits with its proper location and with a unique Element identification (ID) consistent with Table 17-1;
- record, as part of the inventory, all relevant information respecting each Element, including material and fabrication certifications, vendor or Contractor, date of installation, date and type of Maintenance Work, maintenance personnel identifier, and date of replacement;
- record spare parts inventory;
- record information related to each Replacement Bridge consistent with the NBIS and include in particular the National Bridge Inspection (NBI) sheets;
- record and track occurrence, time, location (including identifying the respective Replacement Bridge and respective Element), and nature of all Noncompliance Events, degradation, damages to, and failures of Project Elements, response to site following identification of Noncompliance Events, and cure of such Noncompliance Events and associated time to cure;
- record and track accruals of all Noncompliance Points in accordance with Section 11, Schedule 8 and Schedule 13 of the PPA;
- keep all records, including time, location, and nature of the Development Entity’s Maintenance Work in respect to each Replacement Bridge and Project Element including inspections and inspection results (including NBIS inspections), Maintenance Work to address issues identified during inspections, preventative, Planned Maintenance and unplanned Maintenance Work, repairs (including repair codes), Renewal Work, replacements, and Closures;
- calculate and record statistical data on mean time between failure and mean time to repair; and
- record time, location, and nature of Emergencies, Incidents, and release of Hazardous Materials and consequential damages to the Project Elements and consequential actions taken by the Development Entity.

All locations shall be identified following the Pennsylvania Location Reference System (LRS) per Publication 336. The physical Element locations shall be accurate to within one foot in 100 feet.

When a physical Element is constructed, installed, maintained, inspected, modified, renewed, replaced, or removed, the MMIS shall be updated within two (2) Business Days of completion of such Work. The Development Entity shall record in the MMIS any Noncompliance Event no later than forty-eight (48) hours after obtaining knowledge of or receiving notification from the Department of such Noncompliance Event. All other ongoing MMIS recording requirements shall be fulfilled within two (2) Business Days of completion or occurrence of the relevant activity.

The Development Entity shall use the MMIS functionalities to provide clear reporting to the Department (including as part of the Maintenance Monthly Reports, Maintenance Annual Reports, Renewal Work Reports, and Handback Work Plan) demonstrating the Development Entity's compliance with the obligations under the Project Documents and in particular with Section 8 and Section 11 of the PPA and the Maintenance Performance Requirements.

The Development Entity shall provide the Department with real time, high-speed, remote unrestricted access to all the functionalities of the MMIS and all Project records contained in the MMIS and the ability to download any information contained in the MMIS, at all times from the first Replacement Bridge Substantial Completion Date until the end of the Term. Such Project records in the MMIS shall be made available to the Department in an electronic format compatible with the Department's maintenance management systems for uploading. The Development Entity shall provide the Department with access to the same data and have the ability to run the same reports and analyses on the MMIS data as the Development Entity.

For Replacement Bridge Elements, the Development Entity shall input inspection and performance data directly into the Department's Bridge Management System 2 (BMS2) in accordance with Coding Manual Publication 100A. The MMIS shall reflect the same information as contained in the BMS2 for all Replacement Bridges.

All records entered into the MMIS shall be maintained and preserved during the entire Term. The Development Entity shall handover all Project records contained in the MMIS in electronic format compatible with the Department's maintenance management system at the end of the Term.

The structure of the MMIS shall fully support the Development Entity's obligations under the PPA. The structure of the MMIS (including without limitation the data fields, information type, functionalities, and architecture) shall be subject to the Department's approval, which approval shall not be unreasonably withheld. The MMIS shall be fully functional and populated with information respecting each Replacement Bridge and meet all the requirements in this Section 17.3 of these Technical Provisions as a condition precedent to each Replacement Bridge Final Acceptance. The MMIS shall be updated with the latest available information and shall remain functional and accessible by the Department for the duration of the Term.

17.4 Maintenance Management Plan

The Development Entity shall prepare and submit to the Department for review and approval a Maintenance Management Plan that clearly identifies the approach, methods, staffing, schedule, inspections, reporting frequencies, systems and procedures necessary for the Development Entity to perform Maintenance Work and ensure that each Replacement Bridge and each Element continuously meet or exceed the requirements of the Project Documents including without limitations Section 8 and Section 11 of the PPA, this Section 17 of these Technical Provisions, and the Maintenance Performance Requirements during the Maintenance Period..

The Development Entity shall implement the Maintenance Management Plan and shall manage and perform Maintenance Work in accordance with the Maintenance Management Plan. There shall be only

one Maintenance Management Plan for the Development Entity and all the Development Entity-Related Entities performing Maintenance Work.

The Maintenance Management Plan shall include, at a minimum, the following components:

- Maintenance Management Information System as per Section 17.3 of these Technical Provisions;
- schedule of Planned Maintenance and preventative Routine Maintenance;
- Maintenance Manual;
- Renewal Work Plan, including Renewal Work Schedule;
- Maintenance Safety Plan, and
- Transition and Coordination Plan.

The Development Entity shall submit a comprehensive draft Maintenance Management Plan (including all component plans and systems) to the Department for review and approval within thirty (30) days after the issuance of NTP1 and submit a final Maintenance Management Plan (including all component plans and systems) to the Department for review and approval within ninety (90) days after the issuance of NTP1; **provided however** that information specific to individual Replacement Bridges shall only reflect the information reasonably known at the time of such Submittals.

The Department will provide comments and/or approval on the draft Maintenance Management Plan within thirty (30) days after receiving a complete and conforming draft Maintenance Management Plan in accordance with the requirements of this Section 17 of these Technical Provisions. Approval by the Department of the Maintenance Management Plan shall be a condition precedent to issuance of NTP2. The Development Entity shall submit updated sections and components of the Maintenance Management Plan in respect of a Replacement Bridge, reflecting As-Built Documents and final Maintenance Limits as a condition precedent to Final Acceptance of such Replacement Bridge.

Subsequently, the Development Entity shall update the Maintenance Management Plan within thirty (30) days prior to the beginning of each Calendar Year and as the Development Entity or the Department determine is necessary to comply with the requirements of the Project Documents and Good Industry Practice. Each update of the Maintenance Management Plan shall include changes to Project Documents as they relate to Maintenance Work and the Technical Provisions and shall be subject to the Department's approval.

The Maintenance Management Plan for all of the Development Entity's Maintenance Work shall rely on and fully utilize the MMIS and comply with the requirements of Section 17.3 of these Technical Provisions.

The Maintenance Management Plan and subsequent updates shall describe the Development Entity's approach to inspections, Routine Maintenance, Planned Maintenance, preventative Maintenance Work, Renewal Work, replacements, and other maintenance services performed by the Development Entity, and include, at a minimum, the following:

- plan drawings showing the Maintenance Limits for each Replacement Bridge;
- inventory and clear description of each Replacement Bridge and each Element of the Project contained within the Maintenance Limits with its proper location and with a unique Element identification (ID) consistent with Table 17-1;
- description of any Maintenance Work during the Construction Period for each Project Site (in a standalone, separate section of the Maintenance Management Plan), as may be applicable before Final Acceptance;
- acceptable criteria for Maintenance Work;
- schedule of Planned Maintenance and preventative Routine Maintenance (including bridge washing) and associated Closures along with an explanation of required frequencies of such

- Work and procedures for executing such Work, for each Element Category and for each Replacement Bridge;
- plans and procedures for maintenance and protection of traffic during Maintenance Work (for Planned Maintenance and unplanned Maintenance Work respectively) per Section 16 of these Technical Provisions, including without limitations site-specific Traffic Control Plans respecting the Replacement Bridges on which Planned Maintenance is scheduled following the requirements of Section 16.3.1 of these Technical Provisions;
 - description of the Development Entity's approach to minimize delay and inconvenience to Patrons and to users of Related Transportation Facilities in accordance with Section 16 of these Technical Provisions;
 - description of the Development Entity's approach to minimize the risk of harm to the general public and minimize the risk of damage, disturbance, or destruction of Department property and third-party property;
 - description of the Development Entity's approach to coordinate with the Department and third parties;
 - description of the Development Entity's quality system and approach to quality management, quality assurance, and quality control (including the Development Entity's quality assurance and quality control of its self-monitoring and self-reporting program), processes and procedures for achieving the requirements under this Section 17 of these Technical Provisions and the obligations of the Project Documents;
 - the Development Entity's approach and procedures for monitoring and inspecting the condition of the Project and self-monitoring and self-reporting processes and procedures for identifying, classifying (per Section 17.2.1 of these Technical Provisions), tracking, notifying the Department of and reporting Noncompliance Events, response time and cure, times and procedures to permanently cure Noncompliance Events;
 - procedures for tracking, calculating, and reporting Noncompliance Points accurately;
 - quality assurance and quality control procedures to ensure the quality of the Maintenance Work following the requirements of Section 2.2 of these Technical Provisions;
 - corrective and preventative actions to eliminate or minimize future occurrences of Noncompliance Events;
 - performance target metrics, measurement procedures and threshold values at which Maintenance Work is required, inspection procedures and frequencies and subsequent Maintenance Work to address deficiencies noted in such inspections, for each Element of the Project in accordance with Section 17 of these Technical Provisions and Good Industry Practice;
 - the Development Entity's self-monitoring processes and procedures for identifying and notifying the Department of Closures (including Permitted Closures);
 - procedures to assess damages, required Maintenance Work, and coordination with the Department and third parties, the Development Entity following Emergencies, Incidents, and extreme weather events;
 - description of Developer's approach for fully utilizing the MMIS per Section 17.3 of these Technical Provisions including procedures for managing records of inspection and Maintenance Work, including appropriate measures for control of records and control of documents;

- description of Developer's approach to obtaining all Governmental Approvals required for the Maintenance Work including any revision, modification, amendment, supplement, renewal or extension thereof and coordination with the Department and third parties;
- the Development Entity's plan and procedures for responding to Hazardous Material releases as per Section 17.1.7 of these Technical Provisions, including monitoring and evaluation and clean-up procedures of any Hazardous Materials;
- the Development Entity's approach to controlling vegetation;
- details of Contractors employed to undertake Maintenance Work;
- list of the Development Entity's and Maintenance Contractor's maintenance personnel, staff organization chart and staffing plan including geographical and functional responsibilities, positions, personnel ID numbers, qualifications, training and certification processes, work locations, work hours, and contact details;
- a list with addresses and phone numbers for all the facilities that will be used by the Development Entity, including any off-site storage or maintenance facilities;
- a list and inventory of vehicles, tools, spare parts and other major equipment furnished by the Development Entity to support the Maintenance Work;
- the Maintenance Work activities planned for next twelve (12) months, on a monthly basis; and
- guidelines and procedures for the efficient, coordinated, and consistent implementation of the Maintenance Manual, Safety Plan, Transition and Coordination Plan, Renewal Work Plan, and any other plan required for the performance of the Maintenance Work.

The Development Entity shall comply with the minimum requirements in the documents listed below under items (a) through (f) and incorporate these documents in the Maintenance Management Plan:

- a) Bridge Management System 2 (BMS2) Coding Manual Publication 100A;
- b) Bridge Safety Inspection Manual Publication 238;
- c) Specifications Publication 408, as modified by Exception Exhibit 1; and
- d) PA CoRe Element Coding Code Publication 590 ;
- e) Publication 213; and
- f) the relevant sections of the Project Documents.

Furthermore, in the development of the Maintenance Management Plan, the Development Entity shall review and demonstrate an understanding of the documents listed below under items (g) through (j), which are used by the Department for a series of maintenance activities:

- g) Project Office Manual (POM) Publication 2;
- h) Bureau of Maintenance and Operations - Maintenance Manual Publication 23;
- i) Automated Pavement Condition Survey Field Manual Publication 336; and
- j) Pavement Policy Manual Publication 242.

The Department does not warrant or guarantee in any way the outcomes achieved by the Development Entity in using any of these documents.

17.4.1 Maintenance Manual

The Development Entity shall develop and submit as part of the Maintenance Management Plan, a detailed Maintenance Manual based on its Maintenance Work. This Maintenance Manual shall include the complete set of information detailing the specific maintenance procedures for the execution of Maintenance Work, consistent with the Maintenance Management Plan. The Maintenance Manual shall be used by the Development Entity's maintenance staff in the performance of Maintenance Work and shall be updated in accordance with the requirements set forth in this Section 17 of these Technical Provisions. The Maintenance Manual for all the Development Entity's Maintenance Work shall rely on, and fully utilize the MMIS. The Development Entity shall update the Maintenance Manual annually within thirty (30) days prior to the beginning of each Calendar Year (as part of the annual update to the Maintenance Management Plan) and as the Development Entity or the Department determine is necessary to comply with the requirements of the Project Documents and Good Industry Practice. The Maintenance Manual shall be based on the specific Maintenance Work program of the Development Entity and include, at a minimum, the following:

- identify the locations of each Replacement Bridge and Elements subject to Maintenance Work per the MMIS;
- list of Planned Maintenance and preventative Routine Maintenance procedures and required frequencies for each Replacement Bridge and Element;
- diagnostic procedures for Elements, equipment and systems;
- procedures and forms used for inspections including scheduling, programming, reporting and inspections systems, including inspection procedures necessary to the establishment of the NBIS score;
- procedures for routine monitoring, detection and evaluation of Noncompliance Events including patrolling; procedures for responding, assessing and remediating events related to Hazardous Materials or fuel spills per Section 17.1.7 of these Technical Provisions;
- procedures for responding, assessing, and remediating Emergencies, Incidents and extreme weather events per Section 17.1.6 of these Technical Provisions, and in particular procedures for monitoring weather events and preparing to respond to such weather-related events;
- procedures for systematic coordination with the Department and relevant third parties;
- procedures for public information and communication of upcoming Maintenance Work per Section 3 of these Technical Provisions;
- procedures for maintenance and protection of traffic per Section 16 of these Technical Provisions;
- copies of all As-Built Drawings that detail the components of the Maintenance Work and Renewal Work to be provided by the Development Entity, including logic block diagrams, assembly and disassembly drawings clearly identifying the components;
manufacturers' instruction manuals and service manuals as appropriate, including systems, software and equipment manufacturer's maintenance manuals;
- copies of all forms, checklists, certificates, etc. to be used by the Development Entity's personnel in the execution of Maintenance Work; and
- user manuals including the user manual for the MMIS.

Standard service manuals for commercially available equipment and products shall be acceptable as part of the Maintenance Manual only if the equipment provided is standard off-the-shelf equipment without any custom features or functions. Custom equipment and systems shall have custom Maintenance

Manuals that include detailed information that addresses the custom features of the equipment provided and shall include drawings.

17.4.2 Renewal Work Plan

The Development Entity shall develop and submit, as part of the Maintenance Management Plan, a detailed Renewal Work Plan. The Development Entity shall update the Renewal Work Plan annually within thirty (30) days prior to the beginning of each Calendar Year (as part of the annual update to the Maintenance Management Plan) and as the Development Entity or the Department determine is necessary to comply with the requirements of the Project Documents and Good Industry Practice. Each update of the Renewal Work Plan shall include changes to Project Documents as they relate to Maintenance Work and the Technical Provisions.

The Renewal Work Plan shall provide an overview of the overarching approach to Renewal Work during the entire Maintenance Period, identify the planned Renewal Work cycles (including replacement cycles) for each Element, and describe the Development Entity's approach, assumptions, means and methods for the Renewal Work (including Useful Life and Residual Life assumptions) during the entire Maintenance Period.

The Renewal Work Plan shall identify and detail the program, approach, procedures, records, type and schedule of Renewal Work that the Development Entity shall perform during the next five (5) Calendar Years to ensure that each Replacement Bridge and each Element continuously meets or exceed the requirements of the Project Documents including without limitations Section 8 and Section 11 of the PPA, this Section 17 of these Technical Provisions, and the Maintenance Performance Requirements.

The Renewal Work Plan for all the Development Entity's Renewal Work shall rely on and fully utilize the MMIS and comply with the requirements of Section 17.3 of the Technical Provision.

The Renewal Work Plan shall identify the Renewal Work per Replacement Bridge and Element and shall include, at a minimum, the following:

- identify the Useful Life for all Elements of each Replacement Bridge and identify the planned Renewal Work cycles (including replacement) for each Element for the entire Maintenance Period
- description of the type of Renewal Work for both the Development Entity and the Department anticipated to be performed at the end of the Element's Residual Life;
- description of any Renewal Work anticipated to be performed or that has been performed before the end of the Element's Useful Life, including reasons why this Work is anticipated or has been performed at the proposed time;
- description of the nature of Renewal Work and Renewal Work Schedule to be conducted over the following five (5) Calendar Years per Section 17.4.2.1 of these Technical Provisions;
- plans and procedures for public information and communication of upcoming Renewal Work per Section 3 of these Technical Provisions;
- plans and procedures for maintenance and protection of traffic during Renewal Work per Section 16 of these Technical Provisions, including without limitations site-specific Traffic Control Plans respecting the Replacement Bridges on which Renewal Work is scheduled following the requirements of Section 16.3.1 of these Technical Provisions;
- plans and procedures for the coordination with the Department and affected third parties in the planning and execution of Renewal Work;
- quality system for all Renewal Work;

- results of most recently completed inspections (including any Department independent inspections or audits) and how such results are incorporated into the Renewal Work;
- details of alterations or replacements to any structural Elements of Replacement Bridges;
- description (including photographs) of the nature and dates of Renewal Work performed over the past Calendar Year, highlighting any unplanned activities;
- Renewal Work Schedule per Section 17.4.2.1 of these Technical Provisions; and
- when the five-year Renewal Work Plan extends into the Handback Period, all Work required to meet the Handback Requirements.

17.4.2.1 Renewal Work Schedule

The Development Entity shall submit to the Department for review and approval a Renewal Work Schedule as part of the Renewal Work Plan. The Renewal Work Schedule shall be planned and developed in cooperation with Department and other Government Entities or third parties impacted by such proposed Closures to minimize the impact on traffic and avoid the scheduling of proposed Closures during local events.

The Renewal Work schedule shall identify the Renewal Work for each Replacement Bridge and each Project Element and provide a detailed schedule of Renewal Work to be conducted over the following five (5) Calendar Years with a daily resolution for the next twenty-four (24) months, and monthly resolution for the thirty-six (36) months thereafter. The Renewal Work Schedule shall include explanation, anticipated start and end dates and duration of each planned Renewal Work, and anticipated start and end dates and duration of Closures along with a description of proposed Closures and mitigating measures to avoid any Unavailability Event or negative impact on traffic.

Annual updates to the Renewal Work Schedule shall show the revisions, if any, to the prior Renewal Work Schedule and include an explanation of the reasons for such revisions.

17.4.3 Maintenance Safety Plan

The Development Entity shall perform Maintenance Work in a manner that:

- ensures the safety of the Patrons, the general public, the Department's employees, and the Development Entity's and the Development Entity-Related Entities employees in accordance with all applicable Laws, Safety Standards, and the Maintenance Management Plan; and
- minimizes the risk of damage, disturbance, or destruction of Department property and third-party property.

As part of the Maintenance Management Plan, the Development Entity shall develop and implement a Maintenance Safety Plan that includes staff training, safety procedures, protocols, and specialized equipment to address hazardous conditions associated with the Development Entity's Maintenance Work.

The Maintenance Safety Plan shall comply with the requirements of Section 2 and Section 16 of these Technical Provisions.

The Maintenance Safety Plan shall address the Development Entity's approach to meeting all the safety objectives set forth in the Project Documents and in particular the requirements set forth below:

- provide safety equipment and procedures for the protection of employees, Patrons, and the general public in the execution of Maintenance Work;

- all equipment used shall be maintained in a safe and efficient manner in accordance with all Laws, Safety Standards, safety organizations, regulations and guidelines pertaining to providing the required services;
- follow all safety requirements outlined in the National Electric Safety Code (NESC), the Occupational Safety and Health Administration (OSHA), and any standards or practices for safe installation or maintenance of required equipment per the Project Documents; and
- notify the Department immediately after any injury incurred by person(s) working on the Project or involving members of the general public.

17.4.4 Transition and Coordination Plan

The Development Entity shall coordinate with the Department to achieve a smooth transition of Maintenance Work between the Department and the Development Entity at the commencement and end of the Maintenance Period, including the end of the Handback Period.

As part of the Maintenance Management Plan, the Development Entity shall develop and implement a Transition and Coordination Plan. The Transition and Coordination Plan shall detail how the Development Entity shall work with the Department to ensure a seamless transfer of Maintenance responsibilities. The Transition and Coordination Plan shall also detail how the Development Entity shall coordinate with the Department for all maintenance and operations work that is the responsibility of the Department.

The parts of the Transition and Coordination Plan dealing with transition at the end of the Handback period shall be submitted to the Department for review and approval ninety (90) days before the start of the Handback Period.

17.5 Inspections

The Development Entity shall be responsible for conducting inspections of all Replacement Bridges and all other Project Elements during the Maintenance Period within the Maintenance Limits as per Section 17.5 of these Technical Provisions. The Development Entity shall also fulfill the FHWA's NBIS inspection requirements in respect of a Replacement Bridge when such inspections were previously scheduled for the period from NTP3 until Substantial Completion.

17.5.1 Inspection Requirements

The Development Entity shall perform NBIS inspections to demonstrate compliance with the requirements in Section 17.2.2 of these Technical Provisions. Such inspections shall be in accordance with the following:

- Federal Highway Administration's National Bridge Inspection Standards (NBIS) of the Code of Federal Regulations, 23 Highways – Part 650;
- Department's Publication 238 – Bridge Safety Inspection Manual;
- Department's Publication 100A and the Federal Highway Administration's Bridge Inspector's Reference Manual;
- Department's Publication 242 – Pavement Policy Manual; and

The Development Entity shall record the results of the inspections as per Section 17.3 of these Technical Provisions and shall include the results of the inspections as part of the Maintenance Reports described in Section 17.6 of these Technical Provisions.

The Development Entity shall also inspect all other Elements within the Maintenance Limits to demonstrate compliance with the requirements in Table 17-1 at least once every two (2) years. Inspections shall be performed such that all Noncompliance Events are identified and cured within the Cure Periods shown in Table 17-1.

The Development Entity shall update the MMIS and notify the Department of any Noncompliance Events within forty-eight (48) hours following any inspection.

The Development Entity shall include any planned inspection (including type, date and location and including contact information of the team planned to perform the inspection) as part of the Maintenance Work activities planned for next twelve (12) months in the annual update of the Maintenance Management Plan and shall notify the Department on the first day of the month of any inspection scheduled for the current month and the following month.

Table 17-4: Inspections Requirements within the Maintenance Limits

Element	Inspection Requirements
All Replacement Bridge Elements and other structural Elements	Conduct inspections and load rating calculations at the required frequency. In addition, NBIS inspections shall comply with the requirements in the Department Publications 238 and 100A and FHWA regulations and at the frequency specified in the Department Publications 238 and 100A and FHWA regulations. Inspections shall identify any Noncompliance Events with the requirements of <u>Table 7.2 of the PPA</u> and <u>Table 17-1 of these Technical Provisions</u> .
All other Elements	Conduct inspections at least once every two years to identify any Noncompliance Events with the requirements of Table 17-1. Such inspections may be concurrent with the NBIS inspections.

The Development Entity shall create a new maintenance record in the MMIS for each Element inspected in accordance with Section 17.3 of these Technical Provisions. Such maintenance records with respect to inspections shall include employee identifier, details of the manner of inspection, stream conditions, weather conditions and any unusual features of the inspection, and Closures.

17.5.2 Inspection Personnel Requirements

The Development Entity shall provide trained and competent personnel to plan and implement the required inspections. The Development Entity shall ensure that personnel performing inspections of any Project Element are certified as inspectors and/or raters in accordance with the following qualification requirements:

- (1) For bridge safety inspection personnel:
 - Publication 238 Bridge Safety Inspection Manual;
 - NBIS regulations CFR 650.309;
 - personnel assigned to the inspection shall meet the requirements set forth in the NBIS for all work levels;
 - inspection personnel must hold a valid certification as "Bridge Safety Inspector" issued by the Department; and
 - for PA Commonly Recognized (CoRe) Element assessments, inspection personnel must have attended and successfully passed the Department's PA CoRe Assessment class.

- (2) For underwater inspections personnel:
- the Engineer in charge of inspection and preparation of the inspection report must possess the following minimum qualifications to be a Professional Engineer licensed in Pennsylvania and have a minimum of five years of experience in underwater inspection assignments in responsible capacity; and
 - the underwater bridge inspection diver(s) shall meet the NBIS qualification requirements and be a certified diver, with at least two years of experience in underwater bridge inspection.

For underwater inspections, a Professional Engineer shall be on site either in the boat or as underwater bridge inspection diver during the inspections. A team leader meeting the NBIS qualification requirements shall be on site. The team leader must also hold a valid certification as “Bridge Safety Inspector” issued by the Department. The Professional Engineer on site or the underwater bridge inspection diver can also be the team leader if they meet all the applicable requirements.

The Development Entity shall request the Department’s approval for all inspection team leaders, inspection supervisors, and the approving Professional Engineer a minimum of sixty (60) days before initiating the inspections. Any changes in such personnel must be approved by the Department.

17.5.3 Department Inspections and Auditing

The Department shall have the unfettered right to perform periodic inspection, inspection audits, and testing of the Development Entity’s Maintenance Work to verify the Maintenance Work meets the Maintenance Performance Requirements.

The Department reserves the right to participate in any inspection conducted by the Development Entity.

17.6 Reporting Requirements

17.6.1 Maintenance Monthly Report

From Substantial Completion, the Development Entity shall deliver a Maintenance Monthly Report to the Department for review and comment no later than the 15th day of each month covering the Maintenance Work performed the previous month. The format of the Maintenance Monthly Report shall be submitted to the Department by the Development Entity for approval as part of the Maintenance Management Plan. The Development Entity shall prepare the monthly reports in electronic format and each report shall contain at a minimum the following information:

- summary of the Planned Maintenance for the upcoming month;
- summary of the Maintenance Work performed and completed for the previous month and confirmation that the Development Entity performed all Maintenance Work in accordance with the Technical Provisions;
- summary of the Planned Maintenance previously scheduled for the month but that was not completed for the month, including the reasons for the incompleteness of the Planned Maintenance and a revised schedule for such Work;
- summary of the maintenance activities performed for the previous month beyond the Planned Maintenance for that month;
- detailed results of all Planned Maintenance and other Maintenance Work that was performed during the month;

- summary of inspection activities, assessments, testing activities and results, identified Noncompliance Events , and consequential Maintenance Work;
- report all instances of Noncompliance Events starting or ending during the month, describing at a minimum: the corresponding name and ID number per Table 7.2 of Schedule 7 of the PPA and Table 17-1 of these Technical Provisions, applicable Cure Period, the Noncompliance Start Date, Noncompliance Rectification Date, entity who identified the event first, whether the event was the result of an Incident or an Emergency, details regarding the cure of such Noncompliance Events including the steps taken and the time it took to cure, the status of the event as of the end of the month, confirmation of cure if applicable, Noncompliance Points accrued if any associated with each event, and the changes (if any) made to the Maintenance Management Plan based upon the events;
- summary of calculation of Noncompliance Points accrued by the Development Entity for the past month and cumulative number of Noncompliance Points assessed during the last rolling 12-month period and 48-month rolling period, , and detailed assessment of the Monthly Maintenance Noncompliance Deductions, per Section 11, Schedule 8 and Schedule 13 of the PPA;
- list and total number of all Closures including details describing the location and duration and explaining as applicable for each Closure whether it is an Unavailability Event or a Permitted Closure, and whether it is a lane Closure or a Replacement Bridge Closure, and detailed assessment of Monthly Maintenance Unavailability Deductions per Schedule 8 of the PPA;
- detailed assessment and calculation of the Monthly Maintenance Unavailability Deductions for the past month and cumulative amount of Monthly Maintenance Unavailability Deductions assessed during the last rolling 12-month period, per Schedule 8 of the PPA;
- the Development Entity’s Emergency, Incident, and extreme inclement weather damage assessment logs per Section 17.1.6 of these Technical Provisions, including a time based report of all actions and activities performed by the Development Entity;
- description of the completed or programmed upcoming Renewal Work and measures to complete such Work;
- materials certification CS-4171 for any materials incorporated into the Work; and
- certification that the Work performed meets Development Entity’s acceptance criteria.

17.6.2 Maintenance Annual Report

On an annual basis, the Development Entity shall create a consolidated Maintenance Annual Report. The Maintenance Annual Report shall summarize the Development Entity’s Maintenance Work performed for the year, and confirmation that the Development Entity performed its Maintenance Work in compliance with the Project Documents.

From Substantial Completion, the Development Entity shall deliver the Maintenance Annual Report to the Department no later than thirty (30) days after each Calendar Year for review and comment, starting on January 1st after one year after the first Substantial Completion Date. The Maintenance Annual Report shall be completed in accordance with the requirements set forth in this Section 17 of these Technical Provisions. The Development Entity’s Maintenance Annual Report shall contain the following information:

- summary of all Maintenance Monthly Reports from the preceding year;

- NBIS scores for all Replacement Bridges (with dates of inspection) and all Elements subject to NBIS inspections and statistical summary analysis of the NBIS scores for the Project along with explanations;
- summary of Noncompliance Events (per Table 7.2 of Schedule 7 of the PPA and Table 17-1 of these Technical Provisions) and Noncompliance Points accrued for the preceding year;
- statement of all adjustments to the Maintenance Monthly Reports from the preceding year (if any);
- summary of the information requested by the Department (corrected if necessary), by month during the preceding year (if any); and
- Renewal Work Report.

17.6.3 Renewal Work Report

As part of the Maintenance Annual Report, the Development Entity shall deliver the Renewal Work Report to the Department no later than the thirty (30) days after each Calendar Year for the Department review and comment. The Renewal Work Report shall, at minimum, include the following:

- summary of the preceding year's completed Renewal Work performed, including the location, the type of Work performed for each Element listed on the Renewal Work Schedule and any other component, including the dates of commencement and completion and the final cost (per type of Work);
- updates to As-Built Drawings, as necessary;
- any updated inventory data as a result of the Renewal Work;
- a list of any the Development Entity's Renewal Work which was included in the previous year's Renewal Work Schedule, but was not conducted and an explanation of why the Development Entity did not conduct this Renewal Work;
- materials certification CF-4171 for any materials incorporated into the Work; and
- certification that the Work performed meets Development Entity's acceptance criteria.

17.7 Handback Requirements for Early Handback Elements

The Development Entity shall transfer responsibility for maintenance of the Early Handback Elements to the Department at such times and as specified in this Section 17.7 of these Technical Provisions.

At Final Acceptance, those Elements listed under items (b) through (f) of the Early Handback Elements per Schedule 1 of the PPA shall meet the Maintenance Performance Requirements. Provided these conditions are met, the Department will assume maintenance responsibilities for those Elements at Final Acceptance.

Transfer of responsibility to the Department for Maintenance Work for those Elements listed under item (g) of the Early Handback Elements per Schedule 1 of the PPA (landscaping, seeding and plantings) shall occur after the Early Handback Date appropriate establishment period for landscaping, seeding and plantings (defined under (c) of the Early Handback Date per Schedule 1 of the PPA) that are part of the Construction Work. From NTP3 until the Early Handback Date (defined under (c) of the Early Handback Date per Schedule 1 of the PPA), the Development Entity shall be responsible for the Work necessary to establish sustainable landscape and planting and maintain healthy and vibrant landscape and planting within the Maintenance Limits and ensure that vegetation is managed to guarantee safe vehicular travel. Such Work shall include as may be necessary vegetation control, weeding, brush cutting, fertilization, herbicide vegetation management, mowing, watering, seeding/reseeding, pruning, plant replacement, mulching, tree trimming, and tree removal and replacement, as well as any vegetation control Work

necessary to ensure safe roadway passage and maintain all travel lanes free of debris and encumbrances. Provided these conditions are met, the Department will assume maintenance responsibilities for those Elements at the Early Handback Date (defined under (c) of the Early Handback Date per Schedule 1 of the PPA).

As of the Early Handback Date, those Elements listed under item (a) of the Early Handback Elements per Schedule 1 of the PPA (flexible pavement) shall meet the Maintenance Performance Requirements. At the Early Handback Date for flexible pavement (defined under (a) of the Early Handback Date per Schedule 1 of the PPA), the Development Entity shall provide materials certification CS-4171 for any materials incorporated into the Work on such Elements and certification that the Work performed on such Elements meets Development Entity's acceptance criteria. Provided these conditions are met, the Department will assume maintenance responsibilities for those Elements at the Early Handback Date (defined under (a) of the Early Handback Date per Schedule 1 of the PPA).

The Development Entity shall develop a Handback Work Plan respecting the Early Handback Elements listed under item (a) of the Early Handback Elements per Schedule 1 of the PPA to transfer responsibility for Maintenance Work to the Department of such Elements at the Early Handback Date. Such plan shall follow the same procedures and processes set forth in Section 17.8 of these Technical Provisions with the following exceptions:

- the Development Entity shall submit the Handback Work Plan respecting the Early Handback Elements for the approval of the Department nine (9) months before the Early Handback Date;
- the Development Entity shall obtain approval of the Handback Work Plan respecting the Early Handback Elements from the Department no later than three (3) months prior to the Early Handback Date;
- no final Useful Life determination is required for flexible pavement Elements and flexible pavement Elements shall only meet the requirements listed in Table 17-1 of these Technical Provisions at the Early Handback Date; and
- the Handback Work Plan respecting the Early Handback Elements shall not include a section on training and transition.

The Development Entity shall coordinate with the Department to establish a schedule for handback respecting the Early Handback Elements to ensure an orderly joint inspection process before transfer of maintenance responsibilities to the Department.

The Development Entity is responsible for any Maintenance Work necessary to ensure that the Early Handback Elements meet the Performance Requirements until such date when maintenance responsibilities are transferred to the Department.

If the Department undertakes renewal work (other than superficial treatment of the surface course) on the flexible pavement approaches to a Replacement Bridge within the Maintenance Limits before the Early Handback Date, the Development Entity may be relieved from its responsibility for Maintenance Work on such flexible pavement approaches.

17.8 Handback Requirements

Each Replacement Bridge and each Project Element shall meet the minimum Handback Requirements in this Section 17.8 of these Technical Provisions including without limitations the criteria set forth in Table 17-1 and Table 17-2 of these Technical Provisions and the NBIS rating requirements in Section 17.2.2 of these Technical Provisions as of the Handback Date.

At the Handback Date, the Development Entity shall provide materials certification CF-4171 for any materials incorporated into the Work on Elements handed back to the Department and certification that the Work performed on such Elements meets Development Entity's acceptance criteria.

17.8.1 Handback Work Plan

No later than twelve (12) months prior to the commencement of the Handback Period, the Development Entity shall develop and submit a Handback Work Plan to the Department for approval. The Development Entity shall implement the Handback Work Plan. The Handback Work Plan shall cover all Replacement Bridges and all Project Elements within the Maintenance Limits, without limitations.

Subsequently, the Development Entity shall update the Handback Work Plan thirty (30) days prior to the beginning of each Handback Year and as the Development Entity or the Department determine is necessary to comply with the requirements of the Project Documents and Good Industry Practice. Each update of the Handback Work Plan shall be subject to the Department's approval and shall include a progress report on the Maintenance Work, including Renewal Work, performed to meet the requirements of this Section 17.8 of the Technical Provisions.

The Handback Work Plan shall contain the details necessary to meet the Handback Requirements as set forth in Section 8.6, Section 8.7 and Schedule 5 of the PPA and for the calculation of the "Handback Amounts" as set forth in Schedule 5 of the PPA.

The Handback Work Plan shall rely on and fully utilize the MMIS and comply with the requirements of Section 17.3 of these Technical Provisions.

The Development Entity shall coordinate all aspects of the development of the Handback Work Plan with the Department, as further detailed in this Section 17.8 of these Technical Provisions.

The Handback Work Plan shall include, at a minimum, the following:

- procedures and schedule for the assessment by the Development Entity of the Project Elements condition and performance per Table 17-1 and Section 17.2.2 of these Technical Provisions and final Useful Life per Table 17-2 to determine what Maintenance Work, as set forth in Section 17.8.3 of these Technical Provisions;
- program and schedule of Maintenance Work, including Renewal Work, to ensure that the requirements of Table 17-1, Table 17-2 and Section 17.2.2 of these Technical Provisions are met as of the as of the Handback Date as set forth in Section 17.8.4 of these Technical Provisions;
- program and schedule of phased joint inspections of all Project Sites to verify that each Replacement Bridge and each Project Element meet the requirements of Table 17-1 and Table 17-2 and Section 17.2.2 of these Technical Provisions as of the Handback Date and plan for the coordination of such joint inspections with the Department as per Section 17.8.2 of these Technical Provisions;
- procedures and data necessary to support the requirements of Section 8.7 and Schedule 5 of the PPA (including without limitations the calculation of the Handback Reserve Amount per Schedule 5 of the PPA), and to demonstrate how the Handback Reserve Amount will be used to fund any Maintenance Work, including Renewal Work, required to meet the requirements of this Section 17.8 of these Technical Provisions;
- plan for the phased transition of maintenance responsibilities for each Project Site to the Department upon satisfaction of the acceptance criteria;
- training of Department staff on all maintenance manuals, systems, and procedures; and

- for the annual updates, the information required under Section 17.8.7 of these Technical Provisions.

17.8.2 Inspections during the Handback Period

All Project Elements and all Replacement Bridges shall be inspected to verify that the requirements of Table 17-1, Table 17-2 and Section 17.2.2 of these Technical Provisions are met as of the Handback Date. Such inspections shall be joint inspections of the Development Entity and the Department requiring concurrence of the Department on the results and interpretation of such inspections including resolutions to punch list items.

The Development Entity shall develop a schedule of inspections as part of the Handback Work Plan. The schedule for such proposed inspections shall be subject to the Department's approval. The Development Entity shall also notify the Department on the first day of the month during the Handback Period of any inspection scheduled for the current month and the following month.

The Development Entity shall deliver to the Department, within ten (10) days after it is created, the results and output data arising from any inspection, testing and any interpretation and conclusion thereof.

The same procedures and methodologies for inspection and determination of Renewal Work used throughout the Term shall be used during the Handback Period. The test and inspection procedures detailed in the Handback Work Plan shall indicate any particular reference standards, or other information used to support the testing, inspection, and asset evaluation process, including updates to the Department's standards that occur during the Term.

For the purpose of meeting the Handback Requirements under this Section 17.8 of these Technical Provisions, the NBIS rating requirements set forth in Section 17.2.2 of these Technical Provisions shall be based on NBIS inspections performed pursuant to Section 17.5 of these Technical Provisions less than six (6) months before the Handback Date. Such inspections shall be performed jointly with the Department.

17.8.3 Assessment of Condition, Performance, and Final Useful Life

The Handback Work Plan shall detail the Work, procedures, methods and tests that will be used as part of the condition and performance assessments, the acceptance criteria, the acceptance measures or limits that must be satisfied, and the conditions and data that will be used to verify that each Replacement Bridge and each Project Element meet the criteria set forth in Table 17-1, Table 17-2 and Section 17.2.2 of these Technical Provisions as of the Handback Date and used to calculate the final Useful Life for all Project Elements in the categories specified in Table 17-2.

The Handback Work Plan shall also include the scope, schedule, detailed tests and inspection procedures, processes and evaluations required, acceptance criteria, and acceptance measures that will be used to verify and demonstrate to the Department that all Project Elements function as specified; that they comply with the applicable codes, standards, and Government Approvals set forth in the Technical Provisions; and that they meet the performance requirements specified in Table 17-1 and Section 17.2.2 of these Technical Provisions and the final Useful Life requirements as specified in Table 17-2 of these Technical Provisions.

The Development Entity shall use the categories identified in Table 17-1 and Table 17-2 together with any additional categories required as a result of the Development Entity's Final Design configuration and assets in place at the time of the evaluation. As may be required, the Development Entity and the Department may mutually develop a more detailed table and proposal based upon the Development Entity's Design Documents configuration and Project Elements or Element Category in place at the time of the Handback Work Plan's preparation.

The Development Entity shall prepare the initial final Useful Life calculation methods for each Project Element in the categories specified in Table 17-2 and shall utilize applicable current industry standards, manufacturer's life expectancy, and equipment/asset histories in addition to criteria listed in the Table 17-1 and Table 17-2 to determine the condition, performance and the final Useful Life for each Project Element.

The determination as to whether a Replacement Bridge requires rehabilitation or replacement shall be in accordance with the Highway Bridge Replacement and Rehabilitation Program (23 CFR 650.409).

17.8.4 Renewal Work during the Handback Period

The Handback Work Plan shall detail the Development Entity's approach to Maintenance Work, including Renewal Work, during the Handback Period such that each Replacement Bridge and each Project Element meet the Maintenance Performance Requirements and final Useful Life requirements as specified in Table 17-1, Table 17-2 and Section 17.2.2 of these Technical Provisions, based upon the Development Entity's Design Documents configuration and assets in place at the time of the Handback Work Plan's preparation. Renewal Work identified as part of the Handback Work Plan shall be planned and scheduled according to the requirements in Section 17.4.2 of these Technical Provisions.

The Development Entity's Renewal Work proposals shall be developed:

- on the basis of the achievement of the Maintenance Performance Requirements during the term (as recorded in the MMIS) and additional assessment performed by the Development Entity in developing the Handback Work Plan and final Useful Life of the relevant Project Elements; and
- on the assumption that the Project Elements will be maintained in accordance with the Technical Provisions for the remainder of the Term.

The Handback Work Plan shall include any areas that are under remedial Work. The Development Entity shall retain all remediation responsibility (and liability) until such time that the Development Entity submits to the Department a full description of the remedial Work and the results of such Work, and receives from the Department acceptable documentation indicating that the Development Entity has complied with all directives and fulfilled and completed their remediation obligations as directed by the Governmental Entity with jurisdiction, whether it be a Federal, State, County or Local government.

The Development Entity shall coordinate with the Department the scheduling of any Renewal Work required under the Handback Work Plan.

17.8.5 Training and Transition

The Handback Work Plan shall include a Training and Transition Plan. The Training and Transition Plan shall detail how the Development Entity will work with the Department to ensure a seamless transfer of maintenance responsibilities and safe traffic operations back to the Department.

At least six (6) months prior to the Termination Date, the Development Entity shall provide a comprehensive training session for the Department's staff which shall cover in detail all maintenance functions of the Project, and an on-the-job transition project plan and schedule. The training session shall include a review of certain Project records as well as all maintenance manuals, and other plans and procedures. The complete curriculum for this training session shall be contained in the Training and Transition Plan component of the Handback Work Plan.

17.8.6 Execution of the Handback Work Plan

Upon receipt of approval of the Handback Work Plan by the Department and any update thereof, including the Renewal Work Schedule, the Development Entity shall execute the Maintenance Work, including the Renewal Work, in accordance with the Handback Work Plan and the Project Documents.

17.8.7 Annual Updates of the Handback Work Plan

After the preparation of the first Handback Work Plan and prior to the commencement of each Handback Year, the Development Entity, upon consultation with the Department, shall update the Handback Work Plan as needed to:

- include a progress report evaluating the progress and effectiveness of the Maintenance Work, including Renewal Work, performed in the prior Handback Year to meet the requirements of this Section 17.8 of these Technical Provisions as described in the Handback Work Plan submitted for the prior Handback Year;
- include the results of inspections performed during the prior Handback Year;
- update the schedule of Maintenance Work, including the Schedule of Renewal Work, as necessary to meet the requirements of this Section 17.8 of these Technical Provisions;
- provide actual costs for the Work performed in the previous Handback Year and estimated cost and schedule of implementation of the remaining Maintenance Work, including Renewal Work;
- provide updates to the calculation of Useful Life and updates on the condition and performance of the Replacement Bridges and Project Elements with respect to the criteria set forth in Table 17-1 and Section 17.2.2 of these Technical Provisions; and
- provide any additional data required to meet the requirements of Section 8.7 and Schedule 5 of the PPA.

17.9 Deliverables

The Development Entity shall submit at a minimum the following deliverables to the Department in accordance with this Section 17 of these Technical Provisions:

- before the Substantial Completion of each Replacement Bridge, a drawing and including a narrative describing the proposed final Maintenance Limits, in accordance with the Project Documents and Section 17.1.1 of these Technical Provisions;
- fully populated and operational MMIS, in accordance to Section 17.3 of these Technical Provisions, prior to each Replacement Bridge Substantial Completion.
- Maintenance Management Plan and all component plans, in accordance with Section 17.4 of these Technical Provisions, updated within thirty (30) days prior to the beginning of each Calendar Year;
- Maintenance Monthly Report, in accordance with Section 17.6.1 of the Technical Provisions, due no later than the 15th day of each month;
- Maintenance Annual Report, in accordance with Section 17.6.2 of these Technical Provisions, to the Department no later than the thirty (30) days after each Calendar Year;
- Handback Work Plan respecting the Early Handback Elements, in accordance with Section 17.7 of these Technical Provisions, due twelve (12) months before the Early Handback Date; and,

- Handback Renewal Work Plan, in accordance with Section 17.8.1 of these Technical Provisions, due on the 19th anniversary of the first Substantial Completion Date.

Under no circumstances is this list of Deliverables to be construed as exhaustive and the Development Entity shall be solely responsible for meeting any and all Deliverable requirements of the Technical Provisions and the Project Documents.

Table 17-1: Maintenance Performance Requirements

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
1. ROADWAY								
All roadway	Safety warning to the traveling public	1	For known roadway safety hazards for which (x) the Development Entity is the first to respond to the Project Site in accordance with <u>Section 17.2.1 of the Technical Provisions</u> or (y) the Department is the first to respond to the Project Site, but the Development Entity has subsequent obligation to relieve the Department of mitigation responsibility within twenty-four (24) hours of the Department's notification in accordance with <u>Section 17.2.1 of the Technical Provisions</u> , place and maintain precautionary delineation and appropriate warning signs for the duration of such conditions; ensure safety signs and warnings are clear and easily visible.	2	2 hours	N/A	N/A	N/A
Flexible pavement	Maintain flexible pavement at acceptable level of performance and safety for the traveling public	2	Maintain flexible pavement free high severity fatigue cracking, and high severity transverse and miscellaneous cracking. For assessing severity of cracking, follow Pub. 336, Pub 242, and Pub 23, and other Department Publications as applicable. Remove and replace distressed layers full lane width to a depth necessary to correct observed distress and length not less than 10 feet longitudinally beyond the distressed area, in any case not to exceed the Maintenance Limits.	3	24 hours	30 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
		3	Maintain flexible pavement free of low and medium severity transverse cracking and other miscellaneous cracking. For assessing severity of cracking, follow Pub. 336, Pub 242, and Pub 23, and other Department Publications as applicable. Seal cracks as specified in Pub. 336 and Pub 408.	3	N/A	30 days	30 days	7 days
		4	Maintain flexible pavement free of medium or greater severity raveling and/or weathering. For assessing severity of cracking, follow Pub. 336, Pub 242, and Pub 23, and other Department Publications as applicable. Remove and replace distressed layers full lane width to a depth necessary to correct observed distress but not to exceed warranted pavement and length not less than 10 feet longitudinally beyond the distressed area, in any case not to exceed the Maintenance Limits.	3	24 hours	30 days	30 days	7 days
		5	Maintain flexible pavement free of rutting greater than 3/8". For assessing severity of cracking, follow Pub. 336, Pub 242, and Pub 23, and other Department Publications as applicable. Remove and replace distressed layers full lane width to a depth necessary to correct observed distress but not less than 10 feet longitudinally beyond the distressed area, in any case not to exceed the Maintenance Limits.	4	24 hours	30 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
		6	Maintain flexible pavement free of potholes and slippage areas greater than 1.0 square feet in area or 1.0 inch deep and free of pavement structure failures. Remove and replace distressed layers full lane width to a depth necessary to correct observed distress not less than 10 feet longitudinally beyond the distressed area, in any case not to exceed the Maintenance Limits.	5	24 hours	7 days	7 days	7 days
		7	Maintain flexible pavement free of low or medium severity longitudinal joint and edge deterioration (shoulder and lane joints) For assessing low or medium severity longitudinal joint deterioration, follow Pub. 336, Pub 242, and Pub 23, and other Department Publications as applicable. Seal cracks as specified in Pub. 336 and Pub 408.	3	N/A	30 days	30 days	7 days
		8	Maintain flexible pavement free of high severity longitudinal joint and edge deterioration (shoulder and lane joints). For assessing medium and high severity edge deterioration (including shoulder joint) and left edge joint (including lane joints) follow Pub. 336, and other Department Publications as applicable. Remove and replace distressed layer one foot on either side of the deteriorated joint transversely and a minimum of 24 inches beyond distressed pavement in all longitudinal directions, in any case not to exceed the Maintenance Limits.	4	24 hours	30 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
		9	Maintain flexible pavement free of flushing. For assessing flushing conditions, follow Pub. 336 and other Department Publications as applicable. Remove and replace distressed layers full lane width to a depth necessary to correct observed distress not less than 10 feet longitudinally beyond the distressed area, in any case not to exceed the Maintenance Limits.	3	24 hours	30 days	30 days	7 days
		10	Maintain ride quality with no discontinuities greater than 1/4" for every 10ft straight edge. For assessing ride quality, follow Pub 242 and other Department Publications as applicable.	4	24 hours	30 days	30 days	7 days
		11	Maintain flexible pavement free of edge drop-off greater than 2" (compared to adjacent pavement, approach slab or bridge deck surface). For assessing edge drop-offs, follow Pub. 23 and other Department Publications as applicable.	3	24 hours	30 days	30 days	7 days
		12	Maintain safe skid resistance level. Respond to the Department notification when low skid resistance is detected, perform a site investigation and perform Maintenance Work to eliminate unsafe condition.	5	24 hours	30 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
Rigid / concrete pavement (including approach slabs)*	Maintain concrete/rigid pavement at acceptable level of performance and safety for the traveling public	13	Maintain rigid pavement free of base failures. For assessing base failures, follow to Pub. 23 and other Department Publications as applicable.	5	24 hours	30 days	30 days	7 days
		14	Maintain rigid pavement free of edge drop-off greater than 2" (compared to adjacent pavement, approach slab or bridge deck surface). For assessing edge drop-offs, follow Pub. 23 and other Department Publications as applicable.	3	24 hours	30 days	30 days	7 days
		15	Maintain safe skid resistance level. Respond to the Department notification when low skid resistance is detected, perform a site investigation and perform Maintenance Work to eliminate unsafe condition.	5	24 hours	30 days	30 days	7 days
		16	Maintain ride quality with no discontinuities greater than 1/4" for every 10ft straight edge. For assessing ride quality, follow Pub 242 and other Department Publications as applicable.	4	24 hours	30 days	30 days	7 days
		17	Maintain rigid pavement free of potholes and spalling greater than 1.0 square feet in area or 1.0 inch deep including any single area in the wheel path exceeding 3 inches in width measured longitudinally and 12 inches in length measured transversely. For assessing potholes and spalling, follow Pub. 336, Pub. 242, Pub. 23, Pub. 72M, RC-26, and other Department Publications as applicable.	5	24 hours	30 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
		18	Maintain concrete paving joints sealed and in proper alignment. No failing joint seals. No longitudinal joint separations. No elevation difference greater than 1/2" of two sides of joints. No joint width greater than 2". For assessing deficiencies in concrete joints, follow Pub. 242, Pub. 23, Pub. 72M, RC-26, and other Department Publications as applicable.	3	24 hours	30 days	30 days	7 days
		19	Maintain concrete pavement free of medium or greater severity cracking. For assessing cracking in concrete, follow Pub. 336, Pub. 242, Pub. 23, Pub. 72M, RC-26, and other Department Publications as applicable.	3	24 hours	30 days	30 days	7 days
Curb, Sidewalk, and pedestrian protection measures	Ensure state of good condition and the safety of the traveling public, and in particular pedestrians	20	Maintain sidewalks, curbs, and pedestrian protection measures free of damages. Maintain sidewalks and curbs free of misalignment greater than 1/2 inch, sidewalk edge vertical misalignments greater than 1/4 inch, cracks greater than 1/2 inch. Maintain sidewalks and curbs free of exposed steel, free of vegetation, and free of safety hazards.	2	24 hours	30 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
2. DRAINAGE, STORM WATER ELEMENTS, STREAM CHANNEL, AND VEGETATION								
Elements of the drainage system	Maintain Elements of the drainage system to preserve their functionality, reliability, and the safety for the traveling public	21	<p>Maintain full functionality and reliability of pipes, swales, inlets, headwalls, treatment, balancing systems, flow and spillage control devices, and other Elements of the drainage system as intended in the Design Documents. Maintain all ditches and swales such that they convey runoffs from the roadway.</p> <p>At a minimum, maintain all Elements of drainage system clean and clear of obstructions (at a minimum, 90% of the opening of drainage Elements should be clear of obstructions) and without obstruction to inlet or outlet flow.</p> <p>Maintain non-bridge-class culverts free of deterioration in sealant to movement joints, scour damage, corrosion, and loss of section.</p> <p>For assessment of drainage Elements, follow Pub. 23, Pub. 73, and other Department Publications as applicable.</p>	3	24 hours	30 days	30 days	7 days
Travel way		22	Maintain travel way free of standing water or hazardous ice buildup.	4	24 hours	24 hours	24 hours	12 hours
Discharge systems		23	Maintain full functionality and reliability of discharge systems in accordance with Government Approvals, including Soil Conservation District and PADEP issued permit. Ensure surface water discharge systems are properly performing and that discharge to groundwater and waterways complies with the Laws and Governmental Approvals.	2	24 hours	7 days	14 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
Endangered species		24	No Maintenance Work shall disturb or alter the habitat or threaten the life of any Endangered species.	3	24 hours	None	None	24 hours
Vegetation control	Maintain Replacement Bridges free of vegetation.	25	Maintain and control vegetation as per the requirements of <u>Section 17.1.8 of the Technical Provisions</u> and per Pub. 55.	1	24 hours	7 days	14 days	24 hours
Stream channel	Maintain stream channel clear of debris	26	Maintain stream channel and embankments clear of debris, deposits, and vegetation obstructing the normal flow of the stream.	2	24 hours	14 days	30 days	24 hours

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
3. REPLACEMENT BRIDGE ELEMENTS AND STRUCTURES								
Structures and Replacement Bridge structural Elements (with length greater than 8 feet)**	Maintain integrity and soundness of all structural Elements to ensure a safe condition for the traveling public	27	<p>Maintain structures and Replacement Bridge Elements safe and fully functional as intended in the Design Documents and free of deterioration and damages including scour damages, corrosion of rebar, steel corrosion, unsound concrete, failure or delamination of the overlay greater than 1 sq ft, excessive cracking, delaminated concrete, spalled concrete or potholes, loss of section, settlement or movement beyond tolerable movement design criteria or affecting performance of structure.</p> <p>For inspection and assessment follow National Bridge Inspection Standards (NBIS) of 23 CFR Part 650, FHWA's Bridge Inspector's Reference Manual, Pub 55, Pub. 238, Pub. 100A, and Department Publications as applicable.</p>	5	24 hours	7 days	30 days	24 hours
Replacement Bridge joints		28	<p>Maintain expansion joints so joints do not leak or maintain full functionality and reliability of expansion joints as intended and maintain free of dirt, debris, vegetation, loose nuts and bolts, and any other deficiencies.</p> <p>For inspection and assessment follow National Bridge Inspection Standards (NBIS) of 23 CFR Part 650, FHWA's Bridge Inspector's Reference Manual, Pub. 238, and Department Publications as applicable.</p>	4	24 hours	7 days	30 days	24 hours

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
Bridge Barrier and Railing		29	<p>Maintain functionality and reliability of barriers and railing on a Replacement Bridge as intended in the Design Documents and free of displacement and deterioration including corrosion of rebar, steel corrosion, unsound concrete, delaminated concrete, spalled concrete, paint system failure, rust, loose nuts and bolts, corrosion, cracks, loss of section, debris and vegetation on pedestals and anchorages, blockages of hollow section drain holes, and impact damage.</p> <p>For inspection and assessment follow National Bridge Inspection Standards (NBIS) of 23 CFR Part 650, FHWA's Bridge Inspector's Reference Manual, Pub. 238, and other Department Publications as applicable.</p>	3	24 hours	7 days	30 days	24 hours
Bridge Deck / Surface Course		30	<p>Maintain safe skid resistance level.</p> <p>Respond to the Department notification when low skid resistance is detected, perform a site investigation and perform Maintenance Work to eliminate unsafe condition.</p>	5	24 hours	30 days	30 days	7 days
Bridge Deck / Surface Course		31	<p>Maintain ride quality with no discontinuities greater than 1/4" for every 10ft straight edge (including discontinuities between deck and approach slabs).</p> <p>For assessing ride quality, follow Pub 242 and other Department Publications as applicable.</p>	4	24 hours	30 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
Bearings		32	Maintain bearing elements (including bearings, bearing shelves, sliding and roller surfaces) clean, free of debris and vegetation, fully functional and reliable as intended in the Design Documents. Comply with the manufacturers' instructions.	4	24 hours	30 days	90 days	24 hours
Structural Steel Elements	Maintain Replacement Bridge steel Elements free of rust	33	Maintain Replacement Bridge structural steel Elements free of paint system failure, rust, loose nuts and bolts, corrosion, cracks, and loss of section. For assessing maintenance requirements of steel elements, follow Pub 55 and other Department Publications as applicable.	5	24 hours	7 days	30 days	7 days
Replacement Bridge washing	Wash, clean and flush Replacement Bridges	34	Wash, clean and flush Replacement Bridge decks (and drains) at a minimum once per year and bearings and substructures a minimum of once every five years per Pub 55, in accordance with the schedule in the Maintenance Management Plan.	4	N/A	30 days	30 days	14 days
Sign, signal, and lighting support structures	Maintain at acceptable levels of safety and proper functioning conditions for the traveling public	35	Maintain structural safety and functionality of sign, signal and lighting support structures (which are not otherwise the responsibility of the Department per <u>Section 17.1.10 of the Technical Provisions</u>) and free of loose nuts and bolts, damages in surface protection systems, corrosion, cracks in steel, loss of section, impact damage, graffiti, vandalism, and debris/vegetation on pedestals and anchorages.	4	24 hours	14 days	30 days	24 hours

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
Load ratings	Maintain structural integrity of the bridge	36	Meet and maintain Bridge Load Ratings according to the NBIS and Department requirements. Maintain the designed load capacity in all structures. Ensure any damage to Replacement Bridges does not impact the design load ratings as indicated on the approved structure plans for that location. For inspection and assessment, follow Pub. 238.	5	24 hours	7 days	30 days	24 hours
Access points	Maintain at acceptable levels of safety and security	37	Keep all hatches and points of access fully operational as well as lockable entryways.	2	24 hours	7 days	30 days	24 hours
Replacement Bridge and Element appearance	Maintain Replacement Bridge and other Elements free of graffiti.	38	Maintain Replacement Bridge and other Elements within the Maintenance Limits free of graffiti and damages resulting from acts of vandalism. (Graffiti of an obscene nature are Priority 0 Noncompliance.)	1	N/A	7 days	60 days	30 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
4. GUIDERAILS, SAFETY BARRIERS, AND IMPACT ATTENUATORS								
Guiderails and safety devices	Ensure state of good condition and safety for road users	39	<p>Maintain structural safety, reliability and functionality of guiderails, guiderail end treatments, impact attenuators, safety barriers, concrete barriers, and other safety devices leading up to a Replacement Bridge. Ensure that safety devices are free damages and vehicular impact damage and are appropriately placed and correctly installed at the correct height and distance from roadway or obstacles and that foundations/anchors are sound.</p> <p>For inspection and assessments, follow Pub. 33, Pub 23, Pub. 13M, and other Department Publications as applicable.</p> <p>Installation and repairs shall be carried out in accordance with the requirements of NCHRP 350 standards.</p>	4	24 hours	48 hours	30 days	8 hours

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
5. TRAFFIC SIGNALS, SIGNS AND MARKINGS								
Traffic signals and signs	Ensure state of good condition and visibility for road users	40	Maintain signs and traffic signal Elements, including vehicle and pedestrian detectors, (which are not otherwise the responsibility of the Department per <u>Section 17.1.10 of the Technical Provisions</u>) visible, clear of obstructions and graffiti, clean and visible, with acceptable reflectivity levels, correctly aligned, fully functional and free from damage. Keep signal timing correct. Develop and keep in place contingency plans to rectify Priority 0 defects that are not immediately repairable and to ensure alternative traffic control during a failure period. For assessing signals, follow to Pub 191, and other Department Publications as applicable.	2	24 hours	48 hours	7 days	8 hours
Identification markings		41	Maintain identification markers and telephone number for reporting correctly located, clearly visible, clean and legible.	1	N/A	N/A	30 days	8 hours

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
6. FENCES, WALLS, AND SOUND ABATEMENT								
Fencing	Maintain fence in acceptable condition and level of safety for the traveling public	42	Maintain fences fully functional and free of damage. Repair or replace fences that no longer provide access control and/or a physical barrier. For assessing fence, follow RC-60M and RC-61M, and other Department Publications as applicable.	2	24 hours	30 days	30 days	7 days
Retaining walls, wing walls, and abutments	Maintain retaining walls and abutments at acceptable level of safety for the traveling public	43	Maintain structural safety and integrity of retaining walls and free of any damage and hazards, including blocked weep holes, undesirable vegetation, defects in joint sealants, defects in pedestrian protection, scour damage, corrosion of reinforcing bars, cracked masonry, cracked, loose or missing mortar, efflorescence, paint system failure, concrete spalling, impact damage, loss of backfill, and settlement or movement beyond tolerable movement design criteria or affecting performance. Maintain walls in the vertical and horizontal position accounting for tolerable movements per DM4 11.6.2. For inspection and assessment follow National Bridge Inspection Standards (NBIS) of 23 CFR Part 650, FHWA's Bridge Inspector's Reference Manual, Pub 55, Pub. 238, Pub. 100A, and other Department Publications as applicable.	5	24 hours	7 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
7. EARTHWORKS, EMBANKMENTS, AND CUTTINGS								
Slopes and embankments	Ensure slope stability	44	<p>No slope failure, undercut slopes or embankments, no slumped areas.</p> <p>Maintain slopes and embankments in general conformance to the original graded cross-sections in the Design Documents. Replace landscaping materials and reseeded as necessary for erosion control. Remove and dispose of all eroded materials and keep roadways, shoulders, and Replacement Bridges clear of eroded material. All structural or natural failures of embankments and cut slopes are to be repaired and maintained according to their original grades, landscaping materials (including reseeded and re-vegetation for erosion control purposes) is to be replaced, and eroded materials are to be removed and disposed of.</p> <p>For assessing slopes, follow RC-40M and Pub 23, and Department Publications as applicable.</p>	5	24 hours	7 days	30 days	7 days
8. ALL ELEMENTS / EXTREME INCLEMENT WEATHER RESPONSE								
Severe weather events response	Conduct visual inspection and damage assessment	45	<p>Conduct visual inspections and damage assessments following severe weather events per <u>Section 17.1.6 of the Technical Provisions</u>.</p>	1	N/A	N/A	N/A	N/A

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
9. ALL ELEMENTS / EMERGENCY AND INCIDENT RESPONSE								
Damage assessment	Ensure a diligent response upon notification and efficient completion of damage assessment and corresponding repairs.	46	Evaluate and complete assessment of all Elements, including structural evaluation and evaluation of safety conditions, and liaise with the Department regarding any potential hazards to the general public. Propose and implement temporary measures or permanent repairs of any damage arising from the Emergency, Incident or extreme weather events. Ensure the structural safety of structures affected by such events.	2	24 hours	2 days	7 days	8 hours
Temporary remedy and permanent repair		47	Coordinate with the Department and conduct repairs in accordance to <u>Section 17 of the Technical Provisions</u> .	2	24 hours	14 days	30 days	7 days

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
10. RESPONSE TO PATRONS ENQUIRIES								
Response to inquiries	Create and maintain a uniform system that responds to and documents Patron concerns	48	Keep a timely and effective response to Patron inquiries, complaints, and identification of Noncompliance per <u>Section 3 of the Technical Provisions</u> .	1	24 hours	N/A	3 days	24 hours
Patron contact line		49	Establish and advertise a reliable telephone line during business hours and 24 hour availability of messaging system per <u>Section 3 of the Technical Provisions</u> . Keep telephone line or message system free of faults.	1	N/A	N/A	48 hours	24 hours

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
11. LIGHTING								
Lighting	Continually monitor and maintain lighting elements to ensure safety and full functioning	50	Keep at least 95% of the total luminaries (which are not otherwise the responsibility of the Department per <u>Section 17.1.10 of the Technical Provisions</u>) fully functioning as intended in the Design Documents and providing acceptable levels and uniform lighting quality. Lanterns are clean and correctly positioned. Lighting units are free from impact damage, accidental damage and vandalism. Posts are upright and structurally sound.	2	N/A	7 days	14 days	24 hours

ELEMENT CATEGORY, DESCRIPTION, AND MINIMUM PERFORMANCE REQUIREMENT				POINTS	CURE PERIODS AND INTERVAL OF RECURRENCE			
Element Category or requirement category	General Requirement	Performance Requirement ID	Minimum Performance Requirement	Noncompliance Points	Priority 0 Hazard Mitigation	Priority 0 Permanent Cure	Priority 1 Permanent Cure	Interval of Recurrence for Permanent Cure
12. FUEL SPILLS / HAZARDOUS MATERIALS RELEASES								
Fuel Spills / Hazardous Materials Releases by third parties	Respond and assess affected areas	51	For third party Release of Hazardous Materials, respond to the Project Site in a timely manner and assess the affected area per <u>Sections 17.1.7.1 of Technical Provisions</u> .	2	24 hours	N/A	N/A	N/A
Fuel Spills / Hazardous Materials Releases by Development Entity	Ensure diligent clean-up process and avoidance of unsafe situations and damage to bridge elements and roadway approaches	52	Notify the Department per <u>Sections 17.1.7 of the Technical Provisions</u> and provide clean-up process following fuel spills or release of Hazardous Materials per <u>Sections 17.1.7.2 of Technical Provisions</u> . When evaluating clean-up activities, follow the Maintenance Management Plan, Pub. 23, and other Department Publications as applicable.	5	24 hours	24 hours	24 hours	12 hours

Notes:

- * Renewal Work for rigid pavement shall include removal and replacement of the entire approach pavement when there is a deviation beyond the threshold levels indicated in Table 17-1, which total a remedial action area greater than 20% of the surface area of any approach pavement. Also, a medium severity crack will be considered to be a deviation affecting 6 inches on either side of the crack for the entire length of the crack. All Renewal Work must meet the surface tolerance as specified in Pub. 408 Section 409.3 (I).
- ** As measured along the centerline of roadway from paving notch to paving notch or back-to-back of backwalls of abutments, if presents. Otherwise, the structure length is measured from end -to-end of the bridge deck, but in no case less than the bridge opening length and supporting structural Elements.

Table 17-2: Useful Life Requirements

Element Category	Required Final Useful Life (yrs)
Structures (Non-Bridge Elements)	
Reinforced Concrete	40
Precast and/or Pre-Stress Concrete	40
Pavement	
Concrete pavement	10
Drainage	
Underground Storm Sewer System (installed new, reconstructed, rehabilitated, restored, renewed, or replaced by the Development Entity, in connection with the Project).	25
Culverts	75
Ditches	10
Inlets	25
Corrugated Steel	25
Ancillary	
Earthwork Slopes	40
Guiderail	10
Concrete Barrier	40
Impact Attenuators	10
Lighting Columns	25
Overhead Signs	25
Traffic Signal Housings and Mountings	25
Fence	10
Manhole Covers, Gratings, Frames and Boxes	25
Sidewalks	10
Curbs and Gutters	10
Lanterns (Lamps/Luminaires)	5
Sign/Signal Gantries	25
Noise Walls	50
Retaining Walls	75

18 BICYCLE AND PEDESTRIAN FACILITIES

18.1 General Requirements

This section includes requirements with which Development Entity shall design and construct all bicycle and pedestrian facilities for the Project. Development Entity shall integrate bicycle and pedestrian travel into Project development. Development Entity shall coordinate the Elements of this Project with the existing and planned trails and other facilities for pedestrians and cyclists.

18.2 Standards

The design and construction of the bicycle and pedestrian facilities shall be in accordance with the relevant requirements of the standards listed in Table 18-1, Standards for Bicycle and Pedestrian Facilities.

If there is any conflict in standards, adhere to the highest standard; however, if Development Entity's Proposal has a higher standard than any of the listed standards, adhere to Development Entity's Proposal standard.

If there is any unresolved ambiguity in standards, obtain clarification from the Department before proceeding with design or construction.

Use the most current version of each listed standard as of the issue date of the Final RFP including Strike-Off Letters.

TABLE 18-1		
STANDARDS FOR BICYCLE AND PEDESTRIAN FACILITIES		
	Author or Agency	Title
	Development Entity	Contract for the Project*
	Department	Publication No. 13M – DM Part 2: Highway Design
	Department	Publication No. 10C – DM Part 1C, Transportation Engineering Procedures
	Department	Publication No. 10X – DM Part 1X, Appendices to DMs 1, 1A, 1B, and 1C
	Department	Publication No. 14M – DM Part 3, Plans Presentation
	Department	Publication No. 408 – Specifications
	Department	Publication No. 72M – Roadway Construction Standards
	AASHTO	Guide for the Development of Bicycle Facilities
*Only where it exceeds requirements in the RFP or any other documents or standards.		

18.3 Administrative Requirements

Development Entity shall maintain bicycle and pedestrian access during construction and throughout the Term in accordance with these Technical Provisions.

18.4 Design Requirements

18.4.1 General

The development and design of bicycle and pedestrian facilities shall reflect the criteria presented in Publication 13M, Design Manual Part2; the Association of State Highway and Transportation Officials' (AASHTO) Guide for the Development of Bicycle Facilities and the "Bicycle and Pedestrian Checklist" found in Publication 10X, DM, Part 1X, Appendices to DMs 1, 1A, 1B, and 1C, Appendix S.

18.4.2 Bicycle Facilities

Replacement Bridge Locations that require bicycle facilities are included in the Geometric Design Information Table in Attachment 10-1.

Development Entity's facilities shall be consistent with the region's bicycle and pedestrian plan and accommodate existing bicycle paths and crossings, and on-street bicycle facilities. Development Entity shall coordinate with Governmental Entities to ensure consistency with existing and proposed bicycle facilities.

Development Entity's bicycle facilities shall meet the Project requirements and shall incorporate the following elements relating to bicycle facilities into the design:

- a) Alignment, profile, cross-section, and materials
- b) Points of connection to existing and proposed bicycle facilities
- c) Signing, and pavement markings

18.4.3 Pedestrian Facilities

Development Entity shall design, construct, and maintain sidewalks where sidewalks are specified on the Geometric Design Information Table in Attachment 10-1. Development Entity shall install curb ramps that meet all ADA requirements at all existing and proposed intersections where curb exists or is required to be constructed. If the ADA curb ramp requirements cannot be met, Development Entity shall submit a "Technically Infeasible Form" to the Department for approval.

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Attachment 2-1

Work Breakdown Structure Requirements

The following Work Breakdown Structure (WBS) shall be the basis for organizing all Work under the Contract Documents and shall be used to structure the baseline schedule and other cost control systems, including the Payment Progress Process if applicable.

Table 1 represents the minimum levels of the WBS that all cost and schedule information shall rollup to once the Project Baseline Schedule is fully developed.

The WBS shall conform to level structure as follows:

Table 1: WBS Minimum Requirements
(Items noted with "*" not required for PBS-1)

- 1 Project**
- 1.1 Project Administration**
 - 1.1.1 Mobilization
 - 1.1.2 Submittals and Permitting
- 1.2 ROW**
 - 1.2.1 General Activities and Field Work
 - 1.2.2 ROW Submittals
 - 1.2.3 Appraisals and Acquisitions
- 1.3 Utilities**
 - 1.3.1 Utility Coordination
 - 1.3.2 Utility Submittals
 - 1.3.3 Utility Relocations
- 1.4 Design**
 - 1.4.1 General Activities and Field Work
 - 1.4.2 Environmental Documentation/Design
 - 1.4.3 Design Submittals
- 1.5 Prefabrication**
 - 1.5.1 Shop Drawings
 - 1.5.2 Administration
- 1.6 Construction**
 - 1.6.1 NTP3/Mobilization
 - 1.6.1.1 Closures and Lane Restrictions*
 - 1.6.2 Execution
 - 1.6.2.1 Submittals*
 - 1.6.2.2 Piles and Foundations*
 - 1.6.2.3 Substructure Elements*
 - 1.6.2.4 Superstructure Elements*
 - 1.6.2.5 Bridge Deck*
 - 1.6.2.6 Roadway*
 - 1.6.3 Substantial Completion
 - 1.6.3.1 Open to Traffic*
 - 1.6.4 2.6.4. Final Acceptance

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**Attachment 2-2
Submittals Summary Table**

The following table summarizes the Submittals that are required throughout the Project Term. Under no circumstances is this list of Submittals to be construed as exhaustive. Development Entity shall be solely responsible for meeting any and all Submittal requirements of the Technical Provisions and the Project Documents.

Submittals Summary Table

Item No.	Document Reference	Deliverable	Department Response Time	Discretionary Submittal	Non-Discretionary Submittal	R&C Submittal	Other Submittal	Notes
Deliverables Required for NTP1								
1	ITP	DBE Performance Plan	30 Days		x			
Deliverables Required for NTP2								
2	TP2	Updated Preliminary Project Baseline Schedule (PBS-1, PBS-1+) ¹	7 Days		x			Must include all Work being performed prior to NTP2, including submittals
3	TP2	Project Baseline Schedule (PBS-2)	21 Days		x			30 Days prior to NTP2
Project Management Plan (PMP) Deliverables Required for NTP2								
4	TP2	Management and Staffing Plan	21 days	x				Within 30 Days of NTP1
5	TP2	Document and Data Management Plan		x				
6	TP2	Risk Management Plan	21 days	x				Within 30 Days of NTP1
7	TP2	Department-Development Entity Communications Plan ¹	21 days	x				Within 30 Days of NTP1
8	TP2, TP4	CRP - Development Entity Communication Plan	21 days	x				Within 30 Days of NTP1
9	TP2, TP3	Public Information and Communications Plan (PICP) ¹	21 days	x				Within 30 Days of NTP1
10	TP2, TP6	Utility Relocation Plan ¹	21 days	x				Within 30 Days of NTP1
11	TP2, TP7	Right-of-Way Acquisition Plan ¹	21 days	x				Within 30 Days of NTP1
12	TP2, TP4	Waste Management Plan, including Spill Response Plan	21 days	x				Within 30 Days of NTP1
13	TP2, TP4	Comprehensive Environmental Protection Plan (CEPP)	21 days	x				Within 30 Days of NTP1
14	TP2, TP17	Quality Management Plan, including the following subsections: > Design Quality Management Plan ¹ > Construction Quality Management Plan (See Maintenance Management Plan for Quality Management during Maintenance Work)	21 Days	x				Within 30 Days of NTP1
15	TP2, TP17	Maintenance Management Plan, including the following subsections: > Maintenance Manual > Renewal Work Plan > Maintenance Safety Plan > Transition and Coordination Plan	21 days	x				
16	TP2	Affected Third Parties Plan ¹	21 days	x				Within 30 Days of NTP1
17	TP2	Safety Plan ¹	21 days	x				Within 30 Days of NTP1
18	TP2	Emergency Management Plan	21 days	x				Within 30 Days of NTP1
19	TP2, TP16	Transportation Management Plan ¹	21 days	x				
20	TP2, TP14	Context Sensitive Design and Aesthetics Master Plan, including physical samples	28 days	x				30 Days prior to NTP2
21	TP2	Development Entity - CQAF Contract	14 days		x			
Deliverables Required for NTP3								
Preliminary Deliverables Required for NTP3								
22	TP 10, TP12, TP14	Type, Size and Location (TS&L) Plans	14 Days ²		x			Maximum of 70 submittals per month
23	TP 10	Design Field View (DFV) Submittal	14 Days ²		x			
24	TP 10	Safety Review Certification	14 Days ²				x	
25	TP 10	3R Bridge Width Criteria Documentation Form, if required	14 Days ²		x			
26	TP 10	Design Exception Requests, if required	14 Days ²		x			If on Interstate System
27	TP 10	Pavement Design Report, if required	14 Days ²		x			
28	TP11, TP12	Hydrology and Hydraulics (H&H) Report	14 Days ²			x		Submitted with TS&L
29	TP12	Foundation Design Parameters and Model Assumptions	14 Days ²		x			
30	TP12	Foundation Report	14 Days ²		x			Maximum of 70 submittals per month
31	TP6, TP12	Utility Attachment Details, if required	14 Days ²		x			Submitted not less than 60 Days prior to construction
32	TP12	Development Entity Standard Drawings, if applicable	30 Days ^{1,3}	x				
33	TP12	Scour Depth Computations	14 Days			x		Submitted with TS&L
34	TP12	Traffic Signal, Lighting, Sign Support Structural Verification	14 Days			x		
35	TP12	Additional Boring Logs, if applicable	14 Days			x		Submitted with Foundation Report

Submittals Summary Table (Continued)

Item No.	Document Reference	Deliverable	Department Response Time	Discretionary Submittal	Non-Discretionary Submittal	R&C Submittal	Other Submittal	Notes
Other Deliverables Required for NTP3								
36	TP2	DQCM's Certification of Compliance					x	
37	TP4	Environmental Commitments and Mitigation Measures	14 Days		x			
38	TP4	CEEs and BRPA and all NEPA re-evaluations and supporting documentation	30 Days		x			Maximum of 25 submittals per month per District
39	TP4	Summary of Permit Status for All Sites	14 Days				x	Submitted quarterly
40	TP4	Permit Applications and Permits Received					x	
41	TP4	Section 4(f) Documentation	30 to 120 Days					
42	TP4	Initial and Project Tribal Consultation Forms					x	
43	TP4	Section 106 Mitigation Conditions and Stipulations					x	
44	TP4	Section 106 Mitigation Workplan					x	
45	TP4	Proposed Cultural Resource Personnel (CRPs)	14 Days		x			
46	TP4	State and Federal T&E coordination and mitigation documentation					x	
47	TP6	Information for Utility Relocation Permits	14 Days			x		
48	TP6	Real Property Interest (RPI) Packages for Affected Utilities	14 Days			x		
49	TP6	Cost Sharing Requests and Justifications (Utility Relocations)	14 Days			x		
50	TP6	All necessary documentation from the Utility for the completion of Utility Relocation Agreements	14 Days			x		
51	TP7	ROW Plans and Supporting Information (titles, easements, etc.)	9 Months			x		Maximum of 40 per month
52	TP7	Notices of Intent to Enter, if required	14 Days					10 Days prior to entry
53	TP7	ROW Database	14 Days			x		
54	TP9	Final ROW Surveying and Mapping					x	
55	TP 10, TP14	Released for Construction (RFC) Documents					x	
56	TP 10	Design Exception Approval Letters, if required					x	
57	TP 12	Design Calculations for Prefabricated Elements ⁴						
58	TP12	Shop Drawings ⁴					x	
59	TP12	RFC Documents for Prefabricated Elements ⁴					x	
60	TP12	RFC Documents					x	
61	TP12	Pile Hammer Approvals ⁵					x	
62	TP2, TP12	Jacking and/or Demolition Schemes ⁵	14 Days			x		for staged construction or over live traffic
63	TP2, TP12	Falsework and construction loadings on decks ⁵	14 Days			x		for staged construction or over live traffic
64	TP13	Information for PUC Application	14 Days			x		17 weeks estimated to receive PUC Secretarial Letter or Order. Objections add one year
65	TP13	ROW Plan for PUC Application					x	18 weeks estimated to receive PUC Order appropriating ROW
66	TP13	Final Construction Plans for PUC					x	10 weeks estimated
67		Attend PUC Field Conference with Department personnel, as					x	
68	TP15	Signing and Pavement Marking Plan	14 Days			x		
69	TP15	Any Modifications to Signals, Detectors, Structural Supports, Conduit	14 Days			x		
70	TP15	Third-Party Requests for Lighting	14 Days			x		
71	TP 16	Traffic Control Plans (TCP's)	14 Days			x		
72	TP18	ADA Technically Infeasible Form, as required	14 Days		x			
Deliverables Required for Substantial Completion of Replacement Bridge								
73	TP6	Utility Relocation Permit Inspection Reports					x	
74	TP6	Revised Utility Relocation Permits for Completed Utility Work					x	
75	TP12	Pile Driving Records					x	Submitted during construction.
76	TP12	Fabrication QA/QC Documents					x	Submitted during construction.
77	TP12	Development Entity Change Requests					x	Submitted during construction.
78	TP12	Concrete Cylinder Break Test Results					x	Submitted during construction.
79	TP12	Buy America Documentation					x	Submitted during construction.
80	TP12	Photos Taken During Construction					x	Submitted during construction.
81	TP12	Bridge Load Rating Computations					x	
82	TP12	NBIS Bridge Inspection Reports					x	
83	TP12	Punch List					x	
84	TP2	All construction related deliverables, including, but not limited to, materials certifications, CQAF certifications, and other					x	
85	TP17	Proposed Maintenance Limits Plan	14 Days		x			
86	TP17	Proposed Bridge Inspection Team Members	60 Days		x			
87	TP17	Renewal Work Plan	14 Days		x			
88	TP17	Renewal Maintenance Work Schedule (Annually)	90 Days			x		
89	TP17	Lane Closures for Renewal Maintenance Work	60 Days		x		x	
90	TP17	Location Referencing System	14 Days				x	
91	TP17	Maintenance Management Information System (MMIS)	14 Days		x			

Submittals Summary Table (Continued)

Item No.	Document Reference	Deliverable	Department Response Time	Discretionary Submittal	Non-Discretionary Submittal	R&C Submittal	Other Submittal	Notes
Deliverables Required for Final Acceptance of Replacement Bridge								
92	TP2	As-Built Schedule	14 Days				x	
93	TP9, TP12	As-Built Drawings	14 Days				x	
94	TP11	Hydrology and Hydraulics (H&H) Documentation with As-Built	14 Days				x	
95	TP12	Additional Geotechnical Investigation During Construction	14 Days				x	
96	TP12	Updated gINT file	14 Days				x	
97	TP2	Finalized CDS V3/ECMS documentation	14 Days				x	
Deliverables Required During Term								
98	Schedule 13 of the PPA	Monthly Performance Report	10 Days		x			Submitted no later than the tenth day of each month following the Commercial Closing Date
99	TP2	Progress Report	14 Days		x			Submitted no later than the tenth day of each month following the Commercial Closing Date
100	TP2	Project Baseline Schedule Updates (PBS-3, PBS-3+)	14 Days		x			
101	TP2	Time Impact Analysis	14 Days					Submitted within 15 Days of request
102	TP3	Copies of All Material to be Presented to Public or Media	5 Days		x			
103	TP3	Customer Group Meeting Summaries	5 Days			x		Submitted within 5 Business Days of conclusion of such meetings
104	TP4	Environmental Mitigation or Commitment Modifications					x	
105	TP4	Notices of Violation (NOVs)					x	
106	TP4	Quarterly spreadsheet detailing the status of all environmental approvals and permits					x	Quarterly
107	TP4	Report of Maintenance, Remedial Action or Modification of Post Construction Stormwater Management (PCSM) Facilities					x	
108		Maintenance Management Plan Updates						Submitted within 45 Days prior to the beginning of each Calendar Year
109	TP4	PCSM Inspection Reports					x	
110	TP4	Deed of Gift for Artifacts					x	
111	TP9	Survey Records					x	
112	TP9	Survey Monuments and Benchmarks					x	
113	TP15	Notices of Meetings					x	7 Days prior to meeting
114	TP17	Renewal Work Plan and Renewal Maintenance Work Schedule (Annually)	90 Days			x		
115	TP17	Lane Closures for Renewal Maintenance Work	60 Days		x			
Deliverables Required for Early Handback								
116	TP17	Handback Renewal Work Plan	6 Months		x			
Deliverables Required for Handback								
117	TP4	Transfer of Chapter 105/106 Permits to Department					x	
118	TP12	Annual Maintenance Records					x	
119	TP12	NBIS Bridge Inspection Reports on a 24-Month Cycle					x	
120	TP12	APRAS Information, as required					x	
121	TP12	Load Re-Rating Computations, as required					x	
122	TP17	Handback Work Plan (60 Months Prior to End of Term)	14 Days		x			
123	TP17	Handback Work Plan Update (Annually)	14 Days		x			
124	TP17	Fully Populated MMIS					x	

General Notes:

- A. Days means calendar days unless noted otherwise
- B. TP = Technical Provisions
- C. TP Sections including a Deliverables list are: 2, 4, 6, 7, 9, 10, 11, 12, 13, 16 and 17 (Section 8 deliverables are shown in Section 12).
- D. Development Entity shall not begin final design on a Replacement Bridge until NEPA clearance has been obtained for that Replacement Bridge.

Superscript Notes:

- 1. Required to begin field investigations, surveys, and Preliminary Design Work prior to NTP2.
- 2. Five (5) Days for resubmissions.
- 3. Fifteen (15) Days for resubmissions.
- 4. Required to begin construction not on the Project Site.
- 5. Required prior to performing related Work. Submittal may occur after NTP3.

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Attachment 2-3

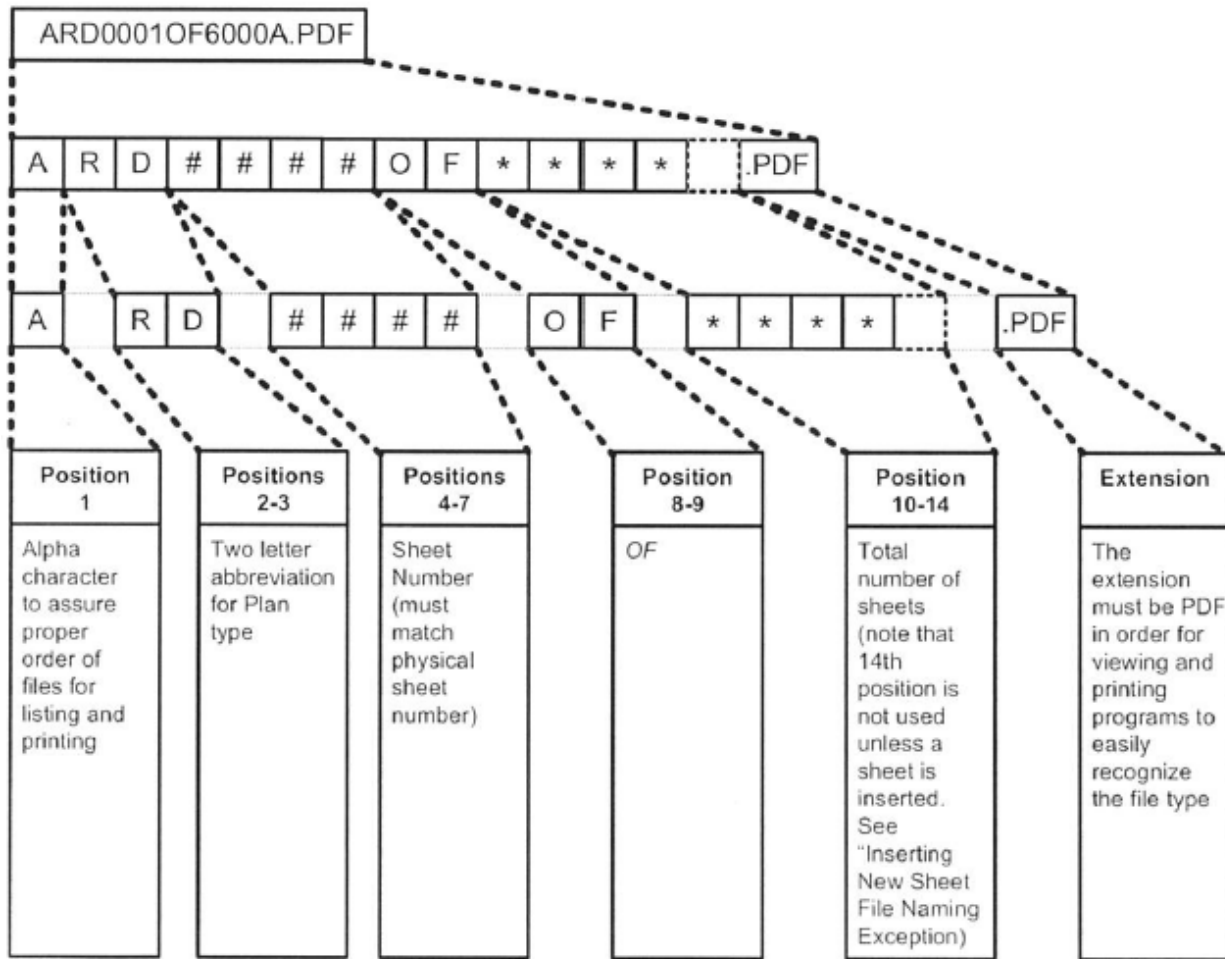
**The Department's EDMS Plan Sheet File Naming
Convention**

Introduction

The purpose of this document is to describe and illustrate the file naming convention for scanned or electronically generated plan sheets. The Central Office Plans Reproduction unit is currently using this standard for file. If any plans are being scanned within the Department, they must follow this naming format in order to provide a uniform method of exchanging the electronic plans.

The document is divided into three sections. The first part describes the standard format for naming non-structure plan sheet files. The second part describes the standard format for naming structure plan sheet files. The third part describes the exceptions for multiple sets of cross sections or existing structure plans, which can happen with combination projects.

Part 1 – File Naming Format for Non-Structure Plan Sheet Files



Plans file name breakdown

Position 1

This is an alpha character (A to R) that is assigned to each plan type in a project to allow for the proper order in listing and printing. The lettering always begins with “A”. “S” is reserved for Structures, “X” is reserved for Cross Sections, and “Z” is reserved for any existing structure plans that will be included.

Positions 2 – 3

This is a two-letter abbreviation that allows for the easy visual recognition of what the plan type is. The following cross-reference matrix can be used to determine the proper alpha character and abbreviation to use for the different plan types.

Document Type	Alpha	Abbrev.
Right of Way Plan		RW
Roadway Plan		RD
Utility Relocation Plan		UR
Landscaping Plan		LP
Safety Rest Area Plan		RA
Highway Lighting Plan		HL
Railroad Plan		RR
Erosion and Sediment Pollution Control Plan		EC
Wetland Mitigation Plan		WM
Environmental Mitigation Plan		EM
Contamination and Remediation Plan		CR
Pollution Control Plan		PC
Roadway Test Boring Plan		RT
Highway Advisory Radio Plan		HA
Weather Monitoring System Plan		WS

Document Type	Alpha	Abbrev.
Pavement Sensor Plan		PS
Traffic Control Plan		TC
Signing and Pavement Marking Plan		SM
Emergency Detour Plan		ED
Traffic Signal Plan		TS
Interconnect Plan		IP
Traffic Monitoring Plan		TM
Flashing Warning Device Plan		FW
Sign Structure Plan		SS
Soil Profile Plan		SP
Structure Plan	S	*
Cross Section	X	CS
Existing Structure Plan	Z	ES
Other Plan		OP

* See Exceptions > Structure Plan File Naming Exception

Positions 4 – 7

– This is a four-place position that contains the numeric sheet number (right justified with preceding zeros: 0001, 0002...0010, 0012, etc.).

Positions 8 – 9

This is simply the descriptive “OF” for 0001OF99, 0002OF99, etc.

Positions 10 – 14

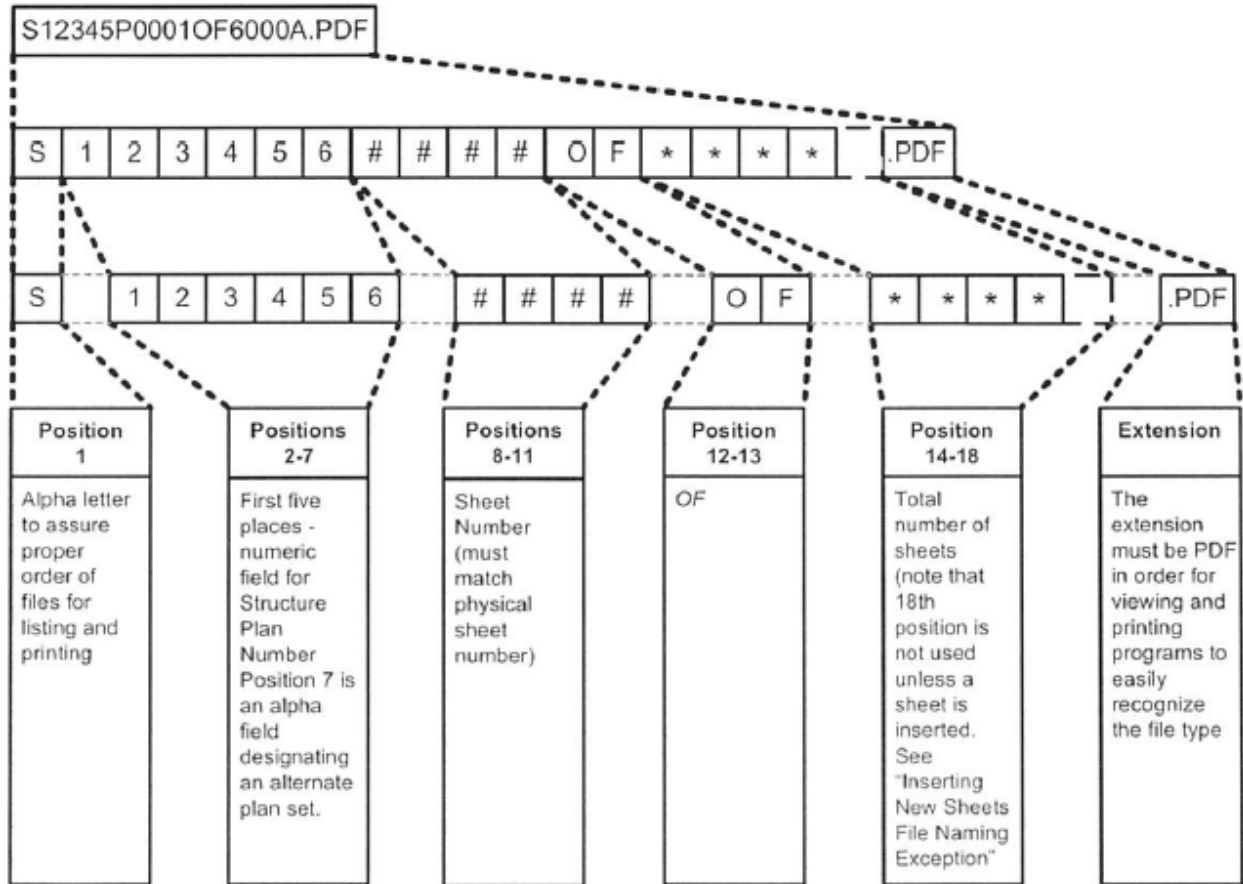
Positions 10 to 13 denote the total number of sheets (with no preceding zeros: 1, 2, 3...10, 11, 12...100, 101, 102, etc.). The fifth place (14) is used for identifying inserted sheets with an alpha character (50A, 75B, 100C, etc.).

Extension

The extension of every file must be “.pdf” in order for viewers and other applications to recognize the file type.

Part 2 – File Naming Format for Structure Plan Sheet Files

Structure plans have five numeric digits for identification instead of two, so the positions mentioned above shift to the right.



Structure Plans file name breakdown

Position 1

This is the alpha character (S) that is assigned to each structure plan.

Positions 2 – 7

This is the 5-character structure number plus an alpha character. An alpha character is used if the files represent an alternate plan (See DM Part 4 Section 1.6.2.5 for more information.).

Positions 8 – 11

– This is a four-place position that contains the numeric sheet number (right justified with preceding zeros: 0001, 0002...0010, 0012, etc.).

Positions 12 – 13

This is simply the descriptive “OF” for 0001OF99, 0002OF99, etc.

Positions 14 – 18

Positions 14 to 17 denote the total number of sheets (with no preceding zeros: 1, 2, 3...10, 11, 12...100, 101, 102, etc.). The fifth place (18) is used for identifying inserted sheets with an alpha character (50A, 75B, 100C, etc.).

Extension

The extension of every file must be “.pdf” in order for viewers and other applications to recognize the file type.

Note

When importing Structure Plans through PIMS, it is a best practice to enter the SRIDNumber (BMS #) and/or the BMSRefNumber (BRKey). These fields aid with the linking of structure plans within BMS.

Process Selected Folders

1 Folder(s) 3 File(s)

Group	#Sheets	Type
S-12345	3	Structure Plan ...

Group Info

File Group :

DocumentType :

Title :

SRIDNumber :

BMSRefNumber :

Directory :

Files : 3 File(s)

Part 3 – Exceptions

There are cases where new sheets must be inserted into a set of plans. The proper way to do this is to renumber the actual plan sheets and then rescan the set. If renumbering is not possible, then a sheet can be inserted by adding an alpha character to the file name (see sections titled Positions 10 – 14 or Positions 14 – 18). For example, if a Roadway plan set had 20 sheets (ARD0001OF20.pdf, ARD0002OF20.pdf, etc.) and a new sheet was inserted between sheets 1 and 2 it would be labeled as sheet 1A (ARD0001OF20A). Note that the letter in the file name comes after the total number of sheets and that the total number of sheets is not changed even though one additional sheet has been added.

Multiple Existing Structure Plans

There are cases when multiple Existing Structure plans may be attached to a project. This can cause potential confusion with the pre-assigned alpha character “Z”. For example, if you have 2 separate 3-page existing structure plans (ZES0001OF3.pdf, ZES0002OF3.pdf, and ZES0003OF3.pdf) it can be difficult to select the correct files to link to each PDC item in ECMS. There are 2 different ways to resolve the issue, depending on your preferences.

If you wish to maintain the alpha character “Z”, then each Existing Structure plan should be imported through PIMS separately, with descriptive text entered in the Title field, see the screenshots below:

Process Selected Folders

1 Folder(s) 3 File(s)

Group	#Sheets	Type
ZES	3	Existing Structure Plan ...

Group Info

File Group : ZES

DocumentType : Existing Structure Plan

Title : first existing set

SRIDNumber : **Auto Index**

BMSRefNumber : **Auto Index**

Directory : \\pdfpedms2k303.penndot.lcl\scan\SYST\corey test plans

Files : **3 File(s)**
ZES0001OF3.pdf, ZES0002OF3.pdf, ZES0003OF3.pdf

First

Existing Structure Plan being prepared for PIMS import

Process Selected Folders

1 Folder(s) 3 File(s)

Group	#Sheets	Type
ZES	3	Existing Structure Plan ...

Group Info

File Group :

DocumentType : Existing Structure Plan

Title :

SRIDNumber : **Auto Index**

BMSRefNumber : **Auto Index**

Directory :

Files : **3 File(s)**
 ZES0001OF3.pdf, ZES0002OF3.pdf, ZES0003OF3.pdf

Second Existing Structure Plan being prepared for PIMS import

Next, the files will be able to be differentiated in ECMS for linking purposes:

File Name	Title	Type	Project	BP ID	Added By User	Date Added
YES0001OF3.pdf	second existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:21.703
YES0002OF3.pdf	second existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:22.233
YES0003OF3.pdf	second existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:22.59
ZES0001OF3.pdf	first existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:22.973
ZES0002OF3.pdf	first existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:23.407
ZES0003OF3.pdf	first existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:23.803

The second option is to change the alpha character “Z” of any subsequent existing structure plan sets. For example, the first existing structure plan set could be called ZES0001OF3.pdf, ZES0002OF3.pdf, etc. The second existing structure plan set could be called YES0001OF3.pdf, YES0002OF3.pdf, etc. PIMS will still recognize the Document Type as Existing Structure Plan, even if the alpha character is not “Z”. Though not mandatory, it is still recommended that the Title field be populated with descriptive text during the PIMS import.

Process Selected Folders

1 Folder(s) 6 File(s)

Group	#Sheets	Type	
YES	3	Existing Structure Plan	Select
ZES	3	Existing Structure Plan	...

Group Info

File Group :

DocumentType :

Title :

SRIDNumber : [Auto Index](#)

BMSRefNumber : [Auto Index](#)

Directory :

Files : **3 File(s)**
 ZES0001OF3.pdf, ZES0002OF3.pdf, ZES0003OF3.pdf

If this method is used, it is recommended to start the alpha character at “Z” and work backwards alphabetically: “Z”, “Y”, “X”, “W”, etc.

The files will still be differentiated in ECMS for linking purposes:

EDMS ASSOCIATED DOCUMENTS							
Available Records							
Records 1 to 6 of 6		Page 1 of 1		Records Per Page: 500			
<input type="checkbox"/>	File Name ^	Title	Type	Project	BP ID	Added By User	Date Added
<input type="checkbox"/>	YES0001OF3.pdf	second existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:21.703
<input type="checkbox"/>	YES0002OF3.pdf	second existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:22.233
<input type="checkbox"/>	YES0003OF3.pdf	second existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:22.59
<input type="checkbox"/>	ZES0001OF3.pdf	first existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:22.973
<input type="checkbox"/>	ZES0002OF3.pdf	first existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:23.407
<input type="checkbox"/>	ZES0003OF3.pdf	first existing set	Existing Structure Plan	13		cnotarange	2014-04-01 07:30:23.803
Records 1 to 6 of 6		Page 1 of 1		Records Per Page: 500			

Multiple Cross Sections Plans

Multiple Cross Sections plans occur most commonly on combination projects. They can be handled the same way as the Existing Structure Plans, either one of the two methods outlined above will work.

If you wish to maintain the alpha character “X”, then import the Cross Sections through PIMS separately, with descriptive text in the “Title” field.

Process Selected Folders

1 Folder(s) 3 File(s)

Group	#Sheets	Type
XCS	3	Cross Section ...

Group Info

File Group :

DocumentType :

Title :

SRIDNumber :

BMSRefNumber :

Directory :

Files : **3 File(s)**

First Cross Sections Plan being prepared for PIMS import

Process Selected Folders

1 Folder(s) 3 File(s)

Group	#Sheets	Type
XCS	3	Cross Section ...

Group Info

File Group :

DocumentType :

Title :

SRIDNumber :

BMSRefNumber :

Directory :

Files : **3 File(s)**

Second Cross Sections Plan being prepared for PIMS import

Next, the files will be able to be differentiated in ECMS for linking purposes:

File Name	Title	Type	Project	BP ID	Added By User	Date Added
WCS0001OF3.PDF	second cross section	Cross Section	13		cnotarange	2014-04-01 07:30:19.457
WCS0002OF3.pdf	second cross section	Cross Section	13		cnotarange	2014-04-01 07:30:19.923
WCS0003OF3.pdf	second cross section	Cross Section	13		cnotarange	2014-04-01 07:30:20.283
XCS0001OF3.PDF	first cross section	Cross Section	13		cnotarange	2014-04-01 07:30:20.647
XCS0002OF3.pdf	first cross section	Cross Section	13		cnotarange	2014-04-01 07:30:20.997
XCS0003OF3.pdf	first cross section	Cross Section	13		cnotarange	2014-04-01 07:30:21.353

Similarly to the second option for existing structure plans, the alpha character “X” can be changed for any subsequent cross sections plan sets. For example, the first cross sections plan set could be called XCS0001OF3.pdf, XCS0002OF3.pdf, etc. The second cross sections plan set could be called WCS0001OF3.pdf, WCS0002OF3.pdf, etc. PIMS will still recognize the Document Type as Cross Section, even if the alpha character is not “X”. Though not mandatory, it is still recommended that the Title field be populated with descriptive text during the PIMS import.

Process Selected Folders

1 Folder(s) 6 File(s)

Group	#Sheets	Type	Action
WCS	3	Cross Section	Select
XCS	3	Cross Section	...

Group Info

File Group :

DocumentType :

Title :

SRIDNumber : Auto Index

BMSRefNumber : Auto Index

Directory :

Files : 3 File(s)

If this method is used, it is recommended to start the alpha character at “X” and work backwards alphabetically: “W”, “V”, “U”, “T”, etc.

The files will still be differentiated in ECMS for linking purposes:

EDMS ASSOCIATED DOCUMENTS							
Available Records							
Records 1 to 6 of 6		Page 1 of 1		Records Per Page: 500			
<input type="checkbox"/> File Name	Title	Type	Project	BP ID	Added By User	Date Added	
<input type="checkbox"/> WCS00010F3.PDF	second cross section	Cross Section	13		cnotarange	2014-04-01 07:30:19.457	
<input type="checkbox"/> WCS00020F3.pdf	second cross section	Cross Section	13		cnotarange	2014-04-01 07:30:19.923	
<input type="checkbox"/> WCS00030F3.pdf	second cross section	Cross Section	13		cnotarange	2014-04-01 07:30:20.283	
<input type="checkbox"/> XCS00010F3.PDF	first cross section	Cross Section	13		cnotarange	2014-04-01 07:30:20.647	
<input type="checkbox"/> XCS00020F3.pdf	first cross section	Cross Section	13		cnotarange	2014-04-01 07:30:20.997	
<input type="checkbox"/> XCS00030F3.pdf	first cross section	Cross Section	13		cnotarange	2014-04-01 07:30:21.353	
Records 1 to 6 of 6		Page 1 of 1		Records Per Page: 500			

**Pennsylvania Department of
Transportation**

Technical Provisions

Rapid Bridge Replacement Program

**Attachment 2-4
Construction Inspection Qualification Chart**

Construction Inspection Qualification Chart

	TCM-2	TCM-1	TCIS-2	TCIS-1
Minimum Experience and Training	One (1) Year Minimum PennDOT Experience as TCM-1; and must have all three (3) Certs: PennDOT Concrete Tech. and NECEPT Field Tech., and NICET Level IV Certification in Highway Construction	One (1) year minimum PennDOT experience as TCIS-2 and must have all three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level III Certification in Highway Construction	One (1) year minimum PennDOT experience as TCIS-1 and must have all three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level III Certification in Highway Construction	One (1) year minimum PennDOT experience as TCI-3 and must have all three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level II Certification in Highway Construction
OR	Three (3) year minimum PennDOT experience as TCM-1 and has two (2) of the following three (3) Certs: PennDOT Concrete Tech. or NECEPT Field Tech. or NICET Level IV Cert. in Highway Construction	One (1) year minimum PennDOT experience as TCIS-2 and NICET Level IV Certification in Highway Construction and either PennDOT Concrete Tech. or NECEPT Field Tech.	One (1) year minimum PennDOT experience as TCIS-1 and NICET Level IV Certification in Highway Construction and either PennDOT Concrete Tech. or NECEPT Field Tech.	One (1) year minimum PennDOT experience as TCI-3 and NICET Level III or IV Cert. Highway Construction and either PennDOT Concrete Tech. or NECEPT Field Tech.
OR	Ten (10) year minimum transportation, highway or bridge construction inspection supervision/management experience and must have all three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level IV Cert. in Highway Construction	Three (3) years minimum PennDOT experience as TCIS-1 and has two (2) of the following three (3) Certs: PennDOT Concrete Tech., or NECEPT Field Tech., or NICET Level III Cert. in Highway Construction.	Six (6) years minimum PennDOT experience as TCI and must have all Three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level III Cert. in Highway Construction.	Three (3) years minimum PennDOT experience as TCI-2 and has two (2) of the following Three (3) Certs: PennDOT Concrete Tech., or NECEPT Field Tech., or NICET Level II Cert. in Highway Construction.
OR		Is qualified and has performed at a higher classification for a minimum of one (1) year		
OR	Sixteen (16) years minimum transportation, highway or bridge construction inspection supervision/management experience acceptable to the Department	Eight (8) years Minimum transportation, highway or bridge construction inspection supervision/management experience and PennDOT Concrete Tech., and either NECEPT Field Tech., or NICET Level IV Cert. in Highway Construction.	Six (6) years minimum transportation, highway or bridge construction inspection experience and NICET Level IV Certification in Highway Construction and either PennDOT Concrete Tech. or NECEPT Field Tech.	Five (5) years minimum transportation, highway or bridge construction inspection experience and must have all Three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level III Cert. in Highway Construction.
OR		Twelve (12) years Minimum Transportation, highway or bridge construction inspection supervision/management experience acceptable to the Department		Five (5) years minimum transportation, highway or bridge construction inspection experience and NICET Level IV Certification in Highway Construction
P.E.	Active P.E. License may be substituted for four (4) years of experience and all NICET Levels	Active P.E. License may be substituted for four (4) years of experience and all NICET Levels	Active P.E. License may be substituted for all experience	Active P.E. License may be substituted for all experience
Bachelor's Degree in Civil Engineering	Bachelor's Degree of Science in Civil Engineering or closely related engineering field may be substituted for four (4) years of experience	Bachelor's Degree in Civil Engineering may be substituted for four (4) years of experience	Bachelor's Degree in Civil Engineering or closely related Engineering field may be substituted for four (4) years of experience	Bachelor's Degree in Civil Engineering or closely related Engineering field may be substituted for four (4) years of experience
Associate Degree in Engineering	Associate Degree in Civil Engineering or closely related engineering field may be substituted for two (2) years of experience	Associate Degree in Civil Engineering or closely related engineering field may be substituted for two (2) years of experience	Associate Degree in Civil Engineering or closely related Engineering field may be substituted for two (2) years of experience	Associate Degree in Civil Engineering or closely related Engineering field may be substituted for two (2) years of experience

Construction Inspection Qualification Chart (Continued)

	TCI-3	TCI-2	TCI-1	TA-2	TA-1
Minimum Experience and Training	One (1) year minimum PennDOT experience as TCI-2 and must have all three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level II Certification in Highway Construction	One (1) year minimum PennDOT experience as TCI-1 and one (1) of the following three (3) Certs: PennDOT Concrete Tech., or NECEPT Field Tech., or NICET Level II Certification in Highway Construction	One (1) year minimum PennDOT experience as a TA-2	One (1) year minimum PennDOT experience as a TA-1	High School Diploma, GED or post-secondary education and has abilities to read, write, and communicate in English and do basic math computations for length, area, and volume
OR	One (1) year minimum PennDOT experience as TCI-2 and NICET Level III or IV Certification in Highway Construction	Three (3) years minimum PennDOT transportation, highway or bridge construction inspection experience and one (1) of the following three (3) Certs: PennDOT Concrete Tech., or NECEPT Field Tech., or NICET Level II Certification in Highway Construction	Two (2) years Transportation, highway or bridge construction inspection experience	One (1) year transportation industry experience in highway/bridge or construction inspection and has a High School Diploma, GED or post-secondary education and has abilities to read, write, and communicate in English and do basic math computations for length, area, and volume	
OR	Four (4) years minimum transportation, highway or bridge construction inspection experience and must have all Three (3) Certs: PennDOT Concrete Tech., and NECEPT Field Tech., and NICET Level II Cert. in Highway Construction.	Five (5) years highway or bridge construction, or highway or bridge design experience	Four (4) years highway or bridge construction, non-highway or bridge inspection, or highway or bridge design experience	Two (2) years of non transportation related design, construction, inspection experience and has High School Diploma, GED or post-secondary education and has abilities to read, write, and communicate in English and do basic math computations for length, area, and volume	
OR	Is qualified and has performed at a higher classification for a minimum of one (1) year				
OR	Four (4) years minimum transportation, highway or bridge construction inspection experience and NICET Level III or IV Certification in Highway Construction		Possess a Transportation Technology Construction Inspection Certification received through an accredited Technology program approved by the Department	COATINGS INSPECTOR 3 Four (4) years minimum experience is structural steel coating application inspection, which includes one (1) year of coatings inspection experience on bridges, and be a NACE Certified Coating Inspector - Level 3 Peer Review certified, Each NACE Certified Coating Inspector - Level 3 Peer Review certified individual must also have lead abatement training (SSPC-C3) prior to the job assignment	COATINGS INSPECTOR 2 Three (3) years minimum experience is structural steel coating application inspection, which includes six (6) months of coatings inspection experience on bridges, and be a NACE Coating Inspector - Level 1 Certified or higher. Each NACE Coating Inspection Level 1 - certified or higher individual must also have lead abatement training (SSPC-C3) prior to the job assignment
OR				Note: SSPC Bridge Coating Inspection Program (BCI) Level 1 may be substituted for one (1) year of experience in structural steel coating application inspection	Note: SSPC Bridge Coating Inspection Program (BCI) Level 1 may be substituted for one (1) year of experience in structural steel coating application inspection
P.E.	Active P.E. License may be substituted for all experience	Active P.E. License may be substituted for all experience	N/A	COATINGS INSPECTOR 1	
Bachelor's Degree in Civil Engineering	Bachelor's Degree in Civil Engineering or closely related Engineering field may be substituted for four (4) years of experience	Bachelor's Degree in Civil Engineering or closely related Engineering field	N/A	High School Diploma or GED and six (6) months minimum experience in structural steel coating application inspecting and be knowledgeable in applicable OSHA guidelines governing proper respirator usage and lead exposure.	
Associate Degree in Engineering	Associate Degree in Civil Engineering or closely related Engineering field may be substituted for two (2) years of experience	Associate Degree in Civil Engineering or closely related Engineering field may be substituted for one (2) year of experience	Associate Degree in Civil Engineering or closely related Engineering field	Note: A Coatings Inspector 1 must work under the direction of a Coatings Inspector 2 or 3 assigned to that project	

RIGHT-OF-WAY PLAN REVIEW CHECKLIST

County: S.R.: Section: Date of Field Review:

Preliminary Right of Way Plan Final Right of Way Plan Other:

The signatures and seals below certify that the right-of-way plan is in compliance with Publication 14M, *Design Manual Part 3, Plans Presentation*, and that all aspects included on the following checklist have been verified.

Professional Engineer's Signature

Professional Land Surveyor's Signature

	Item	Yes/No	Approximate Location of Deficiency/Other Comments
	<i>Were the following existing above ground features verified on the plans?</i>		
1.	Navigable and Non-Navigable Waterways (e.g., streams, rivers, lakes, ponds, creeks, ditches, wetlands, etc.)		
2.	Driveways (Type of Material, Field) and drive pipes		
3.	Buildings (e.g., residential and commercial structures, Outbuildings, etc.); including steps, overhangs, porches, sunroom, decks, etc. within 100' of take area		
4.	Fences (private and limited access) and gates		
5.	Catch basins, manholes, inlets, or other drainage features		
6.	Retaining walls		
7.	Mailbox Structures		
8.	Sidewalks/Walkways (private and/or public)		
9.	Guardrail or Cable barrier		
10.	Trees, bushes, shrubs, landscaping, planter boxes, property improvements, etc.		
11.	Curbs and gutters		
12.	Non-highway signs (private) and billboards (ADC), including electrical connections		
13.	Encroachment (supports and overhangs)		
14.	Utility poles, lines, and guides (power, telephone, cable, etc.) Applicable easements MUST be noted on plans.		
15.	Water wells		
16.	Oil/natural gas wells.		
17.	Private poles (lighting, etc.)		
18.	Sprinkler Systems		
19.	Monuments (centerline and right of way)		
	<i>Were the following below ground features verified on the plans?</i>		
20.	Septic systems (leach fields, septic tanks, etc.)		
21.	Underground utilities (gas, water, power, cable, telephone, oil, etc.) Applicable easements MUST be noted on plans.		
22.	Underground storage tanks		
23.	Irrigation systems		
24.	Storm sewers and culverts		
25.	Structural foundation (retaining wall, bridge, building, etc.)		
26.	<i>Are all topographic items near construction limits identified as (To Remain)?</i>		
27.	<i>Does the type of take fit the construction work being performed?</i>		
28.	<i>Does there appear to be sufficient room for construction access, including maintenance of traffic?</i>		
29.	<i>Did the driveway grade change? If so, was this discussed with the District R/W Staff?</i>		

In addition to the items above being verified in the field, the following items must be verified for correctness on the plan sheets:

Title Sheet	Yes/No	Comments
Authorization language is correct considering type of takings		
WBS coding is correct		
FPN listed if WBS is PC 1		
Check limits of authorization and condemnation station against detail sheets and table of authorization lengths and/or right of way lengths		
Index Sheet		
Check property lines and owners and parcel numbers against detail sheets		
Owner's names as on deed, i.e. single, widow, needed		
General Notes and Typical Sections Sheets		
All easement notes current and match DM-3		
Information about source of existing legal RW widths appears correct		
Plan Sheets		
Ditches, cut and fill lines.		
Tabulation of Property Information		
Owner information correct as shown on deed(s) or directed by R/W. If multiple deeds, still list one area per parcel		
Legal RW, adverbs, exceptions correctly accounted for to arrive at effective area		
Residue area correctly calculated and listed by which side of road it's on, L or R		
Portion of existing slope, drainage, etc. easements within required RW broken out		
Verification of ownership less than 30 days old when plan sent in for authorization		
Claim numbers listed		
Tax map numbers listed if not shown elsewhere in plan		
Unity of Use reviewed for parcel set up as one deed may be split into more than one		

Attachment 8-1 Draft - revised 12_35 PM 2014-08-04

Bridge Identification Information				Allowable Foundation Types						Additional Testing Requirements			
District	Bridge Key	County	BRIDGE_ID	Spread on Soil	Spread on Rock	Drilled Shafts	Point or End-Bearing Piles Driven to Rock	Friction Piles	Micropiles	Coal Staus Report included in GSR	PDA Required for Test Piles	Additional Corrosion Testing Mandatory	Piles to Rock in Karst Geology - Compensation Available for Pile Length Overruns
D8-0	47	Adams	01003003000000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	71	Adams	01003402200745	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	75	Adams	01003402700000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	87	Adams	01009701000240	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	98	Adams	01011601100000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	128	Adams	01019402401689	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	135	Adams	01023401202343	Y	N	Y	Y	N	Y	N	N	N	N
D8-0	148	Adams	01023403100000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	160	Adams	01039400600526	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	185	Adams	01101400501701	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	198	Adams	01101601101587	Y	Y	Y	Y	Y	Y	N	Y	N	N
D8-0	229	Adams	01200600400591	Y	Y	Y	Y	N	Y	N	Y	Y	N
D8-0	319	Adams	01301301000061	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	362	Adams	01400500101339	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	364	Adams	01400601202897	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	381	Adams	01401100101013	Y	Y	Y	Y	N	Y	N	Y	N	N
D11-0	505	Allegheny	02000804101108	N	N	Y	Y	N	Y	Y	N	N	N
D11-0	659	Allegheny	02003001202263	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	664	Allegheny	02003001901870	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	709	Allegheny	02005100802710	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	954	Allegheny	02013600500000	Y	N	Y	Y	Y	Y	Y	Y	N	N
D11-0	961	Allegheny	02013601202172	N	Y	Y	Y	N	Y	Y	N	N	N
D11-0	1334	Allegheny	02091002400485	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1339	Allegheny	02091003000000	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1346	Allegheny	02097800300000	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1365	Allegheny	02100102101194	Y	N	Y	Y	N	Y	Y	Y	N	N
D11-0	1372	Allegheny	02100103502537	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1373	Allegheny	02100103601567	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1390	Allegheny	02100600402405	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1397	Allegheny	02101100101018	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1400	Allegheny	02101100102295	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1404	Allegheny	02101200602013	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1405	Allegheny	02101300202226	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1406	Allegheny	02101300300428	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1424	Allegheny	02101500702617	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1435	Allegheny	02101600801980	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1455	Allegheny	02102801801751	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1471	Allegheny	02103400501321	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1479	Allegheny	02200100800335	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1481	Allegheny	02200101300130	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D11-0	1496	Allegheny	02200800100053	Y	Y	Y	Y	N	Y	Y	N	N	N
D11-0	1498	Allegheny	02201000102238	Y	Y	Y	Y	N	Y	Y	Y	N	N

Attachment 8-1 Draft - revised 12_35 PM 2014-08-04

Bridge Identification Information				Allowable Foundation Types						Additional Testing Requirements			
District	Bridge Key	County	BRIDGE_ID	Spread on Soil	Spread on Rock	Drilled Shafts	Point or End-Bearing Piles Driven to Rock	Friction Piles	Micropiles	Coal Staus Report included in GSR	PDA Required for Test Piles	Additional Corrosion Testing Mandatory	Piles to Rock in Karst Geology - Compensation Available for Pile Length Overruns
D11-0	1519	Allegheny	02201701301248	Y	N	Y	Y	N	Y	Y	Y	N	N
D11-0	1520	Allegheny	02201701400112	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1523	Allegheny	02201800400721	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1527	Allegheny	02202200102622	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1559	Allegheny	02204500300840	Y	Y	Y	Y	N	Y	Y	N	N	N
D11-0	1562	Allegheny	02204600401678	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1567	Allegheny	02204600800256	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1568	Allegheny	02204600801088	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1600	Allegheny	02206500402452	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1620	Allegheny	02207500900000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1626	Allegheny	02207501900000	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1671	Allegheny	02211800203544	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1704	Allegheny	02300800420000	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1715	Allegheny	02301400302259	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1727	Allegheny	02301800260000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1733	Allegheny	02302100300941	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1776	Allegheny	02304801200000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1859	Allegheny	02309800500762	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1860	Allegheny	02309800601125	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1881	Allegheny	02310800100174	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1882	Allegheny	02310800301395	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1950	Allegheny	02401700500880	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1974	Allegheny	02403200902202	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1976	Allegheny	02403600701676	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1980	Allegheny	02403601303135	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	1982	Allegheny	02403601400961	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	2992	Armstrong	03006600600000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3097	Armstrong	03083901001927	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3160	Armstrong	03103900600000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3169	Armstrong	03200101402192	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3176	Armstrong	03200500500000	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3232	Armstrong	03204701200000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3245	Armstrong	03205700100245	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3278	Armstrong	03300900800000	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3282	Armstrong	03301300602401	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3293	Armstrong	03301702501033	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	3294	Armstrong	03301702801869	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	3599	Beaver	04016803300983	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	3602	Beaver	04016805001748	Y	N	Y	N	Y	Y	Y	Y	N	N
D11-0	3647	Beaver	04100500202450	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	3654	Beaver	04101400700193	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	3693	Beaver	04300500800933	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	3695	Beaver	04300900600000	N	Y	Y	N	N	Y	Y	N	N	N
D11-0	3717	Beaver	04302500701409	Y	N	Y	Y	N	Y	Y	Y	N	N
D11-0	3722	Beaver	04302700400000	Y	Y	Y	Y	N	Y	Y	Y	N	N

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D11-0	3723	Beaver	04302700460000	Y	N	Y	Y	Y	Y	Y	Y	N	N
D11-0	3747	Beaver	04401201000519	Y	N	Y	Y	Y	Y	Y	Y	N	N
D11-0	3749	Beaver	04401201100256	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	3750	Beaver	04401201500926	Y	N	Y	Y	Y	Y	Y	Y	N	N
D11-0	3755	Beaver	04401900500000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	3769	Beaver	04403400200000	N	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	3954	Bedford	05003001000907	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	3955	Bedford	05003001100000	Y	Y	Y	Y	N	Y	N	Y	N	Y
D9-0	4010	Bedford	05005600901305	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	4044	Bedford	05009602600000	Y	Y	Y	Y	N	Y	N	Y	Y	N
D9-0	4122	Bedford	05086901201328	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	4174	Bedford	05101100400000	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	4177	Bedford	05101200400000	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	4196	Bedford	05102000500880	N	Y	Y	N	N	Y	N	N	N	N
D9-0	4386	Bedford	05403101601407	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	4900	Berks	06062501301318	N	Y	Y	Y	N	Y	N	Y	N	N
D5-0	4946	Berks	06100400100619	N	Y	Y	Y	N	Y	N	Y	N	Y
D5-0	4953	Berks	06100601100107	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	4957	Berks	06100800300000	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	5147	Berks	06300900701675	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	5699	Blair	07101302400000	N	Y	Y	Y	N	Y	N	Y	N	Y
D9-0	5702	Blair	07101302500908	N	Y	Y	Y	N	Y	N	Y	N	Y
D9-0	5709	Blair	07101303601234	N	Y	Y	Y	N	Y	N	Y	N	Y
D9-0	5763	Blair	07300500100050	Y	Y	Y	Y	N	Y	N	Y	Y	Y
D9-0	5883	Blair	07403100301171	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	6074	Bradford	08001403400602	N	N	Y	Y	Y	Y	N	Y	N	N
D3-0	6104	Bradford	08018704000000	Y	N	Y	Y	N	Y	N	N	N	N
D3-0	6136	Bradford	08022001301099	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	6164	Bradford	08036700101794	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	6191	Bradford	08041403800000	Y	N	Y	Y	N	Y	N	N	N	N
D3-0	6193	Bradford	08046700100052	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	6203	Bradford	08046702700000	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	6216	Bradford	08051402000863	Y	N	Y	Y	N	Y	N	N	N	N
D3-0	6224	Bradford	08070601701340	Y	N	Y	N	Y	Y	N	Y	N	N
D3-0	6227	Bradford	08070602601160	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	6348	Bradford	08105900700582	Y	N	Y	Y	N	Y	N	Y	N	N
D3-0	6476	Bradford	08401302501496	Y	N	Y	Y	Y	Y	N	Y	N	N
D6-0	7262	Bucks	09203701900000	N	Y	Y	Y	N	Y	N	Y	N	N
D10-0	7834	Butler	10006800200616	Y	Y	Y	Y	N	Y	N	Y	N	N
D10-0	7925	Butler	10030800801195	Y	Y	Y	Y	N	Y	N	N	Y	N
D10-0	7935	Butler	10035603000333	Y	Y	Y	Y	N	Y	N	N	N	N
D10-0	8016	Butler	10102500100211	Y	Y	Y	Y	N	Y	N	N	N	N
D10-0	8025	Butler	10200700101196	Y	Y	Y	Y	N	Y	N	Y	N	N
D10-0	8061	Butler	10300400300433	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	8071	Butler	10301000600000	Y	Y	Y	Y	N	Y	Y	Y	N	N

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D10-0	8073	Butler	10301200500000	Y	Y	Y	Y	N	Y	N	Y	N	N
D10-0	8104	Butler	10302700500194	Y	Y	Y	Y	N	Y	N	Y	N	N
D10-0	8113	Butler	10400201302768	Y	Y	Y	Y	N	Y	Y	N	N	N
D10-0	8334	Butler	10800505000898	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	8424	Cambria	11016002000862	Y	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	8425	Cambria	11016002200000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	8580	Cambria	11102601101804	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D2-0	8831	Cameron	12012000400000	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	8994	Carbon	13020902602676	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	9104	Carbon	13401000501489	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	9265	Centre	14004507902031	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	9360	Centre	14014403400099	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	9431	Centre	14304001301062	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	9434	Centre	14304001500701	Y	Y	Y	Y	N	Y	N	N	N	N
D2-0	9451	Centre	14304003701668	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	9576	Centre	14100200501555	Y	Y	Y	Y	Y	Y	N	Y	N	N
D2-0	9577	Centre	14100200801726	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	9679	Centre	14201300100000	Y	Y	Y	Y	N	Y	N	Y	N	Y
D2-0	9778	Centre	14400200702338	Y	N	Y	Y	N	Y	N	N	N	N
D2-0	9790	Centre	14400600100000	Y	Y	Y	Y	N	Y	Y	Y	Y	N
D6-0	10497	Chester	15304401300000	Y	Y	Y	Y	N	Y	N	Y	N	N
D6-0	10599	Chester	15400800402407	Y	Y	Y	Y	N	Y	N	Y	N	N
D10-0	10975	Clarion	16032201801102	Y	Y	Y	Y	N	Y	N	Y	Y	N
D10-0	10996	Clarion	16086100620656	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	10997	Clarion	16086100421587	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	11042	Clarion	16200900100000	N	Y	Y	Y	N	Y	N	Y	N	N
D10-0	11049	Clarion	16200902200128	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	11088	Clarion	16401500301431	Y	Y	Y	Y	Y	Y	N	Y	Y	N
D2-0	11245	Clearfield	17005306400000	Y	Y	Y	Y	N	Y	Y	Y	Y	N
D2-0	11390	Clearfield	17021902800000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D2-0	11399	Clearfield	17021904201459	Y	Y	Y	Y	N	Y	Y	Y	N	N
D2-0	11403	Clearfield	17021904602606	Y	Y	Y	Y	N	Y	Y	Y	N	N
D2-0	11404	Clearfield	17021904700185	Y	Y	Y	Y	N	Y	Y	Y	N	N
D2-0	11454	Clearfield	17025502200000	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
D2-0	11461	Clearfield	17025503200000	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D2-0	11658	Clearfield	17100900401885	Y	Y	Y	Y	N	Y	Y	Y	N	N
D2-0	11698	Clearfield	17200703101047	Y	Y	Y	Y	N	Y	N	Y	Y	N
D2-0	11807	Clearfield	17300902501042	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D2-0	12163	Clinton	18015000701624	Y	N	Y	Y	Y	Y	N	Y	N	Y
D2-0	12239	Clinton	18047700300000	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	12486	Columbia	19004402401397	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	12555	Columbia	19025402500486	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	12592	Columbia	19048703700177	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	12738	Columbia	19403101120000	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	12745	Columbia	19403600120000	N	Y	Y	Y	N	Y	N	Y	N	N

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D1-0	12879	Crawford	20000604100000	Y	N	Y	Y	Y	Y	N	Y	Y	N
D1-0	12902	Crawford	20000608400273	Y	Y	Y	Y	N	Y	N	Y	Y	N
D1-0	13027	Crawford	20088601600750	Y	N	Y	Y	N	Y	N	Y	Y	N
D1-0	13084	Crawford	20028501000629	Y	N	Y	Y	N	Y	N	Y	Y	N
D1-0	13122	Crawford	20040801800428	Y	N	Y	Y	N	Y	N	Y	Y	N
D1-0	13128	Crawford	20040805201643	Y	N	Y	N	Y	Y	N	N	Y	N
D1-0	13367	Crawford	20401100200000	Y	N	Y	N	Y	Y	N	Y	Y	N
D8-0	13564	Cumberland	21001105202844	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	13616	Cumberland	21003400700827	N	N	Y	Y	N	Y	N	Y	N	Y
D8-0	13735	Cumberland	21023300900266	Y	N	Y	Y	N	Y	N	Y	N	N
D8-0	13741	Cumberland	21023303801454	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	13824	Cumberland	21099702601555	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	13896	Cumberland	21203100100000	N	Y	Y	Y	N	Y	N	Y	Y	N
D8-0	13946	Cumberland	21301900100000	N	N	Y	Y	N	Y	N	Y	N	N
D8-0	13948	Cumberland	21400100200000	Y	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	13961	Cumberland	21400800302148	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	14441	Dauphin	22101800101692	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	14481	Dauphin	22201200100356	N	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	14578	Dauphin	22400400202505	Y	Y	Y	Y	N	Y	N	Y	N	N
D6-0	15002	Delaware	23042000701072	N	Y	Y	Y	N	Y	N	Y	N	N
D2-0	15531	Elk	24012002801546	Y	N	Y	Y	Y	Y	N	Y	N	N
D2-0	15535	Elk	24021900201858	N	Y	Y	Y	N	Y	Y	Y	N	N
D2-0	15560	Elk	24021904900000	Y	N	Y	Y	Y	Y	N	Y	N	N
D1-0	16373	Erie	25401100800860	Y	N	Y	Y	N	Y	N	Y	Y	N
D12-0	16651	Fayette	26016603900000	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16673	Fayette	26038100801000	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16713	Fayette	26100100200639	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16720	Fayette	26100300320000	Y	N	Y	Y	N	Y	Y	N	N	N
D12-0	16725	Fayette	26100700300000	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	16736	Fayette	26101800100206	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16752	Fayette	26103100100053	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	16757	Fayette	26103100601336	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	16758	Fayette	26103100700299	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	16782	Fayette	26104300200093	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	16789	Fayette	26105000101121	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	16794	Fayette	26105002101302	Y	N	Y	Y	N	Y	Y	N	N	N
D12-0	16806	Fayette	26105103000845	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16827	Fayette	26105501401377	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16840	Fayette	26105801300142	Y	N	Y	Y	N	Y	Y	N	N	N
D12-0	16841	Fayette	26105801300864	Y	N	Y	Y	N	Y	Y	Y	Y	N
D12-0	16868	Fayette	26201500300000	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16910	Fayette	26301100900000	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16920	Fayette	26301301601348	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16922	Fayette	26301301700955	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	16923	Fayette	26301301701416	Y	Y	Y	Y	N	Y	Y	N	N	N

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D12-0	16928	Fayette	26301301900753	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	16930	Fayette	26301301901171	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	17052	Fayette	26404400201593	N	Y	Y	Y	N	Y	Y	Y	N	N
D1-0	17195	Forest	27006201302194	Y	N	Y	Y	Y	Y	N	Y	Y	N
D1-0	17207	Forest	27066600700000	Y	N	Y	Y	N	Y	N	Y	Y	N
D1-0	17208	Forest	27066600900000	Y	Y	Y	Y	N	Y	N	Y	Y	N
D1-0	17209	Forest	27066601100240	Y	Y	Y	Y	N	Y	N	Y	Y	N
D8-0	17407	Franklin	28023302000092	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	17408	Franklin	28027400200000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	17471	Franklin	28099706500000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	17592	Franklin	28400801900060	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	17593	Franklin	28400802301142	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17813	Fulton	29048400101102	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17826	Fulton	29052201401573	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17827	Fulton	29052201600330	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17828	Fulton	29052201601370	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17832	Fulton	29052202901545	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17850	Fulton	29065503900454	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17853	Fulton	29065504501203	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	17873	Fulton	29100100100266	N	Y	Y	Y	N	Y	N	Y	N	N
D12-0	18013	Greene	30001802400670	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	18044	Greene	30001805800146	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	18154	Greene	30018800300000	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	18164	Greene	30018801800000	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	18214	Greene	30101101500501	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	18222	Greene	30101400803315	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	18261	Greene	30200303301330	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	18279	Greene	30201103700000	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	18287	Greene	30201600701702	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	18315	Greene	30202600100590	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	18317	Greene	30202600501285	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	18351	Greene	30300600100674	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	18403	Greene	30301300900000	N	Y	Y	Y	N	Y	Y	N	N	N
D9-0	18576	Huntingdon	31002202300000	N	N	Y	Y	Y	Y	N	Y	Y	N
D9-0	18601	Huntingdon	31002604900654	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	18603	Huntingdon	31002605100972	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	18703	Huntingdon	31065505400533	Y	Y	Y	Y	Y/N	Y	N	Y	N	N
D9-0	18742	Huntingdon	31091301901896	Y	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	18773	Huntingdon	31100800400000	N	Y	Y	Y	N	Y	N	Y	N	N
D9-0	18784	Huntingdon	31101900100185	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	18785	Huntingdon	31101900600000	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	18881	Huntingdon	31400900200000	N	Y	Y	Y	N	Y	N	Y	N	N
D10-0	19087	Indiana	32028601500520	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	19183	Indiana	32055302000620	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	19200	Indiana	32095403700000	Y	Y	Y	Y	N	Y	Y	Y	N	N

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D10-0	19320	Indiana	32300701200000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	19392	Indiana	32401000100530	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D12-0	19550	Jefferson	33003601701535	Y	N	Y	Y	N	Y	Y	N	N	N
D10-0	19699	Jefferson	33200300700000	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	19708	Jefferson	33200802100200	Y	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	19737	Jefferson	33300302500000	N	Y	Y	Y	N	Y	Y	Y	N	N
D10-0	19807	Jefferson	33400100700000	Y	Y	Y	Y	N	Y	Y	Y	Y	N
D2-0	19992	Juniata	34003507200000	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	20021	Juniata	34007502501504	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	20106	Juniata	34100200200000	N	Y	Y	Y	N	Y	N	Y	N	N
D2-0	20118	Juniata	34100400300549	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	20137	Juniata	34200601501696	Y	Y	Y	Y	N	Y	N	Y	N	Y
D2-0	20147	Juniata	34200701400000	Y	Y	Y	Y	N	Y	N	Y	N	N
D4-0	20820	Lackawanna	35401900200731	Y	Y	Y	Y	Y	Y	N	Y	N	N
D8-0	20976	Lancaster	36002300301231	N	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	21043	Lancaster	36003004802322	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21196	Lancaster	36032201500954	N	Y	Y	Y	N	Y	N	Y	Y	Y
D8-0	21237	Lancaster	36034003700000	N	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	21238	Lancaster	36034003801674	N	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	21251	Lancaster	36037204240000	Y	Y	Y	Y	N	Y	N	Y	Y	N
D8-0	21277	Lancaster	36046202200000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21292	Lancaster	36062501302573	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21326	Lancaster	36077204500174	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21403	Lancaster	36101900500000	N	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	21409	Lancaster	36102100420000	N	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	21415	Lancaster	36102402100000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21417	Lancaster	36102500801639	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21439	Lancaster	36103400200000	Y	Y	Y	Y	N	Y	N	Y	Y	N
D8-0	21446	Lancaster	36103501500846	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21454	Lancaster	36103702100000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21459	Lancaster	36103900500000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21474	Lancaster	36104800500000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21482	Lancaster	36105300200000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21487	Lancaster	36105500202673	Y	Y	Y	Y	Y	Y	N	Y	N	N
D8-0	21514	Lancaster	36200200602329	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21518	Lancaster	36200500300000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21533	Lancaster	36201000560000	Y	Y	Y	Y	Y	Y	N	Y	N	N
D8-0	21536	Lancaster	36201200320000	Y	Y	Y	Y	Y	Y	N	Y	N	N
D8-0	21545	Lancaster	36201500400000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21558	Lancaster	36202000100000	N	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	21559	Lancaster	36202000200000	Y	N	Y	Y	Y	Y	N	Y	N	N
D8-0	21595	Lancaster	36204500700000	Y	Y	Y	Y	N	Y	N	Y	N	Y
D8-0	21601	Lancaster	36300400200000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21637	Lancaster	36301702401388	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	21662	Lancaster	36303201100000	N	Y	Y	Y	N	Y	N	Y	N	N

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D11-0	22262	Lawrence	37020800700000	Y	N	Y	N	Y	Y	N	Y	N	N
D11-0	22265	Lawrence	37020801000000	Y	N	Y	Y	Y	Y	N	Y	N	N
D11-0	22269	Lawrence	37020802201379	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	22277	Lawrence	37022400601429	N	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	22281	Lawrence	37022401100412	Y	N	Y	Y	Y	Y	N	Y	N	N
D11-0	22358	Lawrence	37095601200542	Y	Y	Y	Y	N	Y	Y	Y	N	N
D11-0	22359	Lawrence	37095601501187	Y	N	Y	N	Y	Y	Y	Y	N	N
D11-0	22362	Lawrence	37095601900000	Y	N	Y	Y	N	Y	Y	Y	N	N
D11-0	22369	Lawrence	37100501501309	Y	N	Y	N	Y	Y	Y	Y	N	N
D11-0	22374	Lawrence	37100900603315	Y	N	Y	Y	Y	Y	Y	Y	N	N
D11-0	22378	Lawrence	37101200700000	Y	N	Y	N	Y	Y	Y	Y	N	N
D11-0	22379	Lawrence	37101200900000	Y	N	Y	N	Y	Y	Y	Y	N	N
D11-0	22396	Lawrence	37200100802619	Y	N	Y	N	Y	Y	Y	Y	N	N
D11-0	22416	Lawrence	37201200103494	Y	N	Y	Y	N	Y	Y	N	N	N
D11-0	22433	Lawrence	37300100300259	Y	N	Y	Y	Y	Y	Y	Y	Y	N
D11-0	22439	Lawrence	37300300800000	Y	N	Y	Y	Y	Y	Y	Y	N	N
D11-0	22441	Lawrence	37300400600000	Y	N	Y	Y	Y	Y	Y	Y	N	N
D11-0	22455	Lawrence	37301500201288	Y	N	Y	N	Y	Y	N	Y	N	N
D8-0	22812	Lebanon	38402000800000	N	Y	Y	Y	N	Y	N	Y	N	Y
D5-0	23136	Lehigh	39622200303519	N	Y	Y	Y	N	Y	N	Y	N	Y
D5-0	23144	Lehigh	39022202103224	N	Y	Y	Y	N	Y	N	Y	N	Y
D5-0	23228	Lehigh	39100400202044	N	Y	Y	Y	N	Y	N	Y	N	Y
D5-0	23330	Lehigh	39204900302189	N	Y	Y	Y	N	Y	N	Y	N	Y
D4-0	23795	Luzerne	40011501200000	N	Y	Y	Y	N	Y	N	Y	Y	N
D4-0	24493	Luzerne	40800500201030	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	24511	Lycoming	41001500702198	N	N	Y	N	Y	Y	N	Y	N	N
D3-0	24566	Lycoming	41004403440880	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	24591	Lycoming	41008700600000	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	24603	Lycoming	41011801700622	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	24748	Lycoming	41041400100417	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	24751	Lycoming	41041400800000	Y	N	Y	Y	N	Y	N	N	N	N
D3-0	24850	Lycoming	41200200320000	Y	N	Y	Y	N	Y	N	N	N	N
D3-0	24881	Lycoming	41201501720000	Y	N	Y	Y	N	Y	N	Y	N	N
D3-0	24928	Lycoming	41205000120000	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	24938	Lycoming	41206101702204	Y	N	Y	Y	N	Y	N	Y	N	N
D2-0	25213	McKean	42000605100562	Y	N	Y	Y	Y	Y	N	Y	N	N
D2-0	25216	McKean	42000605800309	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25243	McKean	42004600600000	N	N	Y	Y	Y	Y	N	Y	N	N
D2-0	25281	McKean	42005904500000	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	25297	McKean	42015500200000	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25308	McKean	42015501900182	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25313	McKean	42015502701162	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25314	McKean	42015502900238	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25418	McKean	42034604101617	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25420	McKean	42034604201811	Y	N	Y	N	Y	Y	N	Y	N	N

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D2-0	25459	McKean	42064602900000	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25461	McKean	42077001300784	Y	N	Y	Y	Y	Y	N	Y	N	N
D2-0	25462	McKean	42077001400000	Y	N	Y	Y	Y	Y	N	Y	N	N
D2-0	25489	McKean	42101500100472	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25495	McKean	42200100100806	Y	N	Y	Y	Y	Y	N	Y	N	N
D2-0	25500	McKean	42200200320000	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	25535	McKean	42401100102339	Y	N	Y	N	Y	Y	N	Y	N	N
D1-0	25833	Mercer	43017304703518	Y	N	Y	Y	Y	Y	N	Y	Y	N
D1-0	25858	Mercer	43031801500622	Y	N	Y	Y	Y	Y	N	Y	Y	N
D1-0	26008	Mercer	43302001700000	Y	N	Y	N	Y	Y	N	Y	Y	N
D2-0	26468	Mifflin	44065502201820	N	Y	Y	Y	N	Y	N	Y	N	N
D2-0	26469	Mifflin	44065502300022	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	26472	Mifflin	44100200800896	N	Y	Y	Y	N	Y	N	Y	N	N
D2-0	26477	Mifflin	44100201200618	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	26595	Mifflin	44401300500000	Y	N	Y	Y	N	Y	N	Y	N	Y
D5-0	26785	Monroe	45020900401748	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26795	Monroe	45020903110000	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26811	Monroe	45031401101750	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26832	Monroe	45039000300932	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	26887	Monroe	45061105100000	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	26888	Monroe	45071500201751	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26901	Monroe	45090300200000	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26904	Monroe	45094000701313	Y	Y	Y	Y	N	Y	N	Y	Y	N
D5-0	26907	Monroe	45094001400882	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26914	Monroe	45094003900000	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26924	Monroe	45100400300941	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	26962	Monroe	45200900101729	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	27011	Monroe	45300900220000	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	27017	Monroe	45301100300000	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	27042	Monroe	45302301202040	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	27055	Monroe	45400300702976	Y	N	Y	Y	Y	Y	N	Y	N	N
D5-0	27059	Monroe	45400600200000	Y	N	Y	Y	Y	Y	N	Y	N	N
D6-0	27513	Montgomery	46066302700894	N	Y	Y	Y	N	Y	N	Y	N	N
D6-0	27605	Montgomery	46201300320000	N	N	Y	Y	N	Y	N	Y	N	Y
D6-0	27643	Montgomery	46202700500209	N	Y	Y	Y	N	Y	N	Y	N	N
D6-0	27757	Montgomery	46304400500389	N	Y	Y	Y	N	Y	N	Y	N	N
D6-0	27868	Montgomery	46404200341011	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	28361	Montour	47025400200000	Y	N	Y	Y	N	Y	N	Y	N	N
D3-0	28387	Montour	47100600100570	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	28389	Montour	47100600500000	N	Y	Y	Y	N	Y	N	Y	N	N
D5-0	28493	Northampton	48003300200000	N	Y	Y	Y	N	Y	N	Y	Y	Y
D5-0	28494	Northampton	48003300210000	N	Y	Y	Y	N	Y	N	Y	Y	Y
D5-0	28606	Northampton	48051202101582	N	Y	Y	Y	Y	Y	N	Y	N	N
D5-0	28660	Northampton	48100400601655	N	Y	Y	Y	N	Y	N	Y	N	Y
D5-0	28672	Northampton	48101500801677	Y	Y	Y	Y	Y	Y	N	Y	N	N

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D3-0	29174	Northumberland	49102700400616	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	29178	Northumberland	49200100200000	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	29303	Northumberland	49402000301775	Y	N	Y	Y	N	Y	N	Y	N	N
D3-0	29306	Northumberland	49402200101591	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	29311	Northumberland	49402600100165	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29426	Perry	50001100300893	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29451	Perry	50001701101051	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29468	Perry	50001707600000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29518	Perry	50007401900530	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29565	Perry	50085002201839	Y	N	Y	N	Y	Y	N	Y	N	N
D8-0	29566	Perry	50085002501777	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29605	Perry	50101502002360	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29651	Perry	50300600100014	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	29673	Perry	50301700100000	Y	Y	Y	N	N	Y	N	N	N	N
D8-0	29693	Perry	50400701001472	Y	N	Y	Y	N	Y	N	Y	N	N
D4-0	29947	Pike	51100700301853	N	Y	Y	Y	N	Y	N	Y	N	N
D4-0	29982	Pike	51200600100953	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	30090	Potter	52000602300000	Y	N	Y	Y	Y	Y	N	Y	N	N
D2-0	30144	Potter	52004402700000	Y	N	Y	Y	N	Y	N	Y	N	N
D2-0	30156	Potter	52004408101925	Y	N	Y	Y	N	Y	N	Y	N	N
D2-0	30162	Potter	52004409500000	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	30166	Potter	52004410100000	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	30190	Potter	52004904300530	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	30191	Potter	52004904400406	Y	N	Y	N	Y	Y	N	Y	N	N
D2-0	30233	Potter	52044900501401	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	30348	Potter	52200201302331	Y	Y	Y	Y	N	Y	N	Y	N	N
D2-0	30435	Potter	52402600220000	Y	N	Y	N	Y	Y	N	Y	N	N
D5-0	30678	Schuylkill	53033902000276	N	Y	Y	Y	N	Y	N	Y	N	N
D5-0	30679	Schuylkill	53033902400902	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	30680	Schuylkill	53033902401098	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	30730	Schuylkill	53092400702725	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D5-0	30832	Schuylkill	53401600100000	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	30856	Schuylkill	53403600300000	Y	Y	Y	Y	N	Y	N	Y	N	N
D5-0	30862	Schuylkill	53403900200000	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	31169	Snyder	54102300401962	N	N	Y	Y	N	Y	N	Y	N	Y
D9-0	31343	Somerset	55003104200000	Y	N	Y	Y	N	Y	Y	N	N	N
D9-0	31469	Somerset	55052300301840	N	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31470	Somerset	55052300701200	N	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31471	Somerset	55052300801065	Y	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31521	Somerset	55100400101850	N	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31528	Somerset	55100700300000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31532	Somerset	55100701800000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31588	Somerset	55200500300000	N	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31608	Somerset	55201301000000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D9-0	31630	Somerset	55201800600000	Y	N	Y	Y	Y	Y	Y	Y	N	N

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Bridge Identification Information				Allowable Foundation Types						Additional Testing Requirements			
District	Bridge Key	County	BRIDGE_ID	Spread on Soil	Spread on Rock	Drilled Shafts	Point or End-Bearing Piles Driven to Rock	Friction Piles	Micropiles	Coal Staus Report included in GSR	PDA Required for Test Piles	Additional Corrosion Testing Mandatory	Piles to Rock in Karst Geology - Compensation Available for Pile Length Overruns
D9-0	31651	Somerset	55202600300000	N	Y	Y	N	N	Y	Y	N	N	N
D9-0	31758	Somerset	55401900700000	N	Y	Y	Y	N	Y	Y	Y	N	N
D3-0	31948	Sullivan	56008701100148	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	31966	Sullivan	56008705202440	N	Y	Y	N	N	Y	N	N	N	N
D3-0	31981	Tioga	56015401501564	Y	Y	Y	Y	N	Y	N	Y	N	N
D4-0	32153	Susquehanna	57001104601461	Y	N	Y	N	Y	Y	N	Y	N	N
D4-0	32244	Susquehanna	57010601220638	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	32307	Susquehanna	57026703200000	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	32308	Susquehanna	57026703202704	Y	Y	Y	Y	N	Y	N	Y	N	N
D4-0	32327	Susquehanna	57037400502476	N	Y	Y	Y	N	Y	N	Y	N	N
D4-0	32365	Susquehanna	57070602700000	Y	N	Y	N	Y	Y	N	Y	N	N
D4-0	32378	Susquehanna	57085800500000	Y	N	Y	N	Y	Y	N	Y	N	N
D4-0	32401	Susquehanna	57100700500000	Y	N	Y	N	Y	Y	N	Y	N	N
D4-0	32437	Susquehanna	57101801302350	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	32478	Susquehanna	57200800203639	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	32507	Susquehanna	57202100501583	Y	N	Y	Y	Y	Y	N	Y	Y	N
D4-0	32647	Susquehanna	57400201300000	Y	N	Y	N	Y	Y	N	Y	N	N
D3-0	32822	Tioga	58004901400434	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	32843	Tioga	58024903220000	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	32931	Tioga	58054902602539	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	33080	Tioga	58300103901413	N	Y	Y	Y	N	Y	N	Y	N	N
D3-0	33083	Tioga	58300500400000	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	33180	Tioga	58401702800000	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	33209	Tioga	58403501300426	Y	N	Y	Y	N	Y	N	N	N	N
D3-0	33469	Union	59100101101961	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	33470	Union	59100101102058	Y	Y	Y	Y	N	Y	N	Y	N	N
D3-0	33478	Union	59100300200000	Y	N	Y	Y	Y	Y	N	Y	N	N
D3-0	33543	Union	59300202000501	Y	Y	Y	Y	N	Y	N	Y	N	Y
D1-0	33765	Venango	60042702200000	Y	N	Y	N	Y	Y	N	Y	Y	N
D1-0	33788	Venango	60201301000000	N	Y	Y	Y	N	Y	N	Y	Y	N
D1-0	33956	Warren	61000603502233	Y	N	Y	N	Y	Y	N	Y	Y	N
D1-0	33957	Warren	61000603900000	Y	N	Y	Y	Y	Y	N	Y	Y	N
D1-0	33982	Warren	61000608200000	Y	N	Y	N	Y	Y	N	Y	Y	N
D1-0	34001	Warren	61002705203359	Y	N	Y	Y	Y	Y	N	Y	Y	N
D1-0	34056	Warren	61012700902381	Y	N	Y	Y	Y	Y	N	Y	Y	N
D1-0	34077	Warren	61095701700981	Y	N	Y	N	Y	Y	N	Y	Y	N
D1-0	34169	Warren	61301000600428	Y	N	Y	N	Y	Y	N	Y	Y	N
D12-0	34335	Washington	62001900400000	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	34417	Washington	62005003300000	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	34609	Washington	62008804902545	Y	N	Y	Y	N	Y	Y	N	N	N
D12-0	34623	Washington	62008807600000	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	34650	Washington	62022100802172	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	34673	Washington	62023104300092	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	34692	Washington	62048100500000	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34702	Washington	62048102400990	N	Y	Y	Y	N	Y	Y	Y	N	N

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D12-0	34847	Washington	62104900520000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34879	Washington	62200700200048	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34901	Washington	62201102800165	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34907	Washington	62201500200805	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	34946	Washington	62202300800032	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	34949	Washington	62202301100756	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34977	Washington	62203400500000	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34980	Washington	62203600101601	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34985	Washington	62203600500000	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	34996	Washington	62203700403160	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	35090	Washington	62303700801515	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	35103	Washington	62400300701841	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	35171	Washington	62402300200000	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	35178	Washington	62402700100687	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	35201	Washington	62403900701840	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	35227	Washington	62406100401960	N	Y	Y	Y	N	Y	Y	N	N	N
D4-0	35471	Wayne	63019106701296	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	35508	Wayne	63029601800000	Y	Y	Y	Y	N	Y	N	Y	N	N
D4-0	35624	Wayne	63101801602046	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	35654	Wayne	63200700301844	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	35675	Wayne	63300601600000	Y	N	Y	Y	Y	Y	N	Y	N	N
D4-0	35765	Wayne	63401401300733	N	Y	Y	Y	N	Y	N	Y	N	N
D4-0	35802	Wayne	63403302600090	N	Y	Y	Y	N	Y	N	Y	N	N
D4-0	35810	Wayne	63403703303161	Y	N	Y	Y	Y	Y	N	Y	N	N
D12-0	35982	Westmoreland	64003103302148	N	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36002	Westmoreland	64005600501506	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36130	Westmoreland	64013602502924	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36168	Westmoreland	64025900700000	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36207	Westmoreland	64036601720000	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36228	Westmoreland	64038102400504	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36230	Westmoreland	64038103000000	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36248	Westmoreland	64071102601107	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36251	Westmoreland	64071103000565	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36331	Westmoreland	64098201701219	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36365	Westmoreland	64100400200165	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36387	Westmoreland	64101700400238	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36389	Westmoreland	64101700600042	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36431	Westmoreland	64103400500000	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36481	Westmoreland	64201201301481	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36482	Westmoreland	64201300201727	Y	Y	Y	Y	N	Y	Y	N	N	N
D12-0	36493	Westmoreland	64202100601976	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36684	Westmoreland	64400700200691	N	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	36750	Westmoreland	64405300120000	Y	Y	Y	Y	N	Y	Y	Y	N	N
D12-0	37037	Westmoreland	64801105100448	N	Y	Y	Y	N	Y	Y	N	N	N
D4-0	37163	Wyoming	65026700100659	Y	N	Y	Y	Y	Y	N	Y	N	N

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D4-0	37172	Wyoming	65029201500354	Y	Y	Y	Y	Y	Y	N	Y	N	N
D4-0	37192	Wyoming	65100100500000	N	Y	Y	Y	N	Y	N	Y	N	N
D4-0	37222	Wyoming	65200100500596	Y	N	Y	Y	Y	Y	N	Y	N	N
D8-0	37488	York	66012401400000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37491	York	66012402502532	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37590	York	66042504600314	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37607	York	66061601000255	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37608	York	66061601001014	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37641	York	66092100900000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37725	York	66202800800249	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37726	York	66202900902536	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37878	York	66304500800853	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37890	York	66305100200000	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37921	York	66307100100000	Y	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37946	York	66400102102301	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	37976	York	66401200602478	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	38007	York	66403300403136	N	Y	Y	Y	N	Y	N	Y	N	N
D8-0	38023	York	66405100300581	Y	Y	Y	Y	N	Y	N	Y	N	N
D9-0	41517	Somerset	55003003702626	N	Y	Y	N	N	Y	Y	N	N	N
D11-0	42177	Allegheny	02101300400000	N	Y	Y	N	N	Y	Y	Y	N	N
D9-0	45123	Somerset	55003003602574	Y	N	Y	Y	N	Y	Y	N	N	N

GEOMETRIC DESIGN INFORMATION: All Districts
8/5/2014

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	97120	12879	20000604100000	01	Crawford	VERNON TOWNSHIP	OVER TR CONNEAUT LK OUT	Rural Principal Arterial	Regional Arterial-Rural	7233	55	5	11	8	8	71	N	N	--	Y	Base	--
--	90155	12902	20000608400273	01	Crawford	CAMBRIDGE TOWNSHIP	OVER FRENCH CREEK TRIB #3	Rural Minor Arterial	Community Arterial-Rural	3719	55	2	12	4	4	32	N	N	Y	Y	Base	--
--	97121	13084	20028501000629	01	Crawford	NORTH SHENANGO TOWNSHIP	OVER BENNETT RUN	Rural Minor Arterial	Community Arterial-Rural	2108	55	2	12	8	8	40	N	N	--	Y	Base	--
--	97117	13122	20040801800428	01	Crawford	RICHMOND TOWNSHIP	OVER TEMPLE RUN	Rural Major Collector	Community Collector-Rural	1541	55	2	11	3	3	28	N	N	Y	Y	Base	--
--	97118	13128	20040805201643	01	Crawford	HYDETOWN BOROUGH	OVER THOMPSON CREEK	Rural Major Collector	Community Collector-Suburban Neighborhood	1815	35	2	11	4	4	30	5	5	Y	Y	Nominal 1	Functional typology nominal - contains sidewalks and current barrier is non-plain. Would have suggested Enhanced if substructure were more visible.
--	89176	13027	20088601600750	01	Crawford	WOODCOCK BOROUGH	OVER GRAVEL RUN	Rural Major Collector	Community Collector-Rural	2669	45	2	11	3	3	28	N	N	Y	Y	Base	--
--	97124	13367	20401100200000	01	Crawford	HAYFIELD TOWNSHIP	OVER WOLF RUN TRIB	Rural Major Collector	Neighborhood Collector-Rural	1170	45	2	11	2	2	26	N	N	Y	Y	Base	--
--	1140	16373	25401100800860	01	Erie	MILL CREEK TOWNSHIP	OVER WALNUT CREEK	Urban Collector	Neighborhood Collector- suburban neighborhood	4514	35	2	12	5	5	34	N	N	Y	Y	Base	--
--	74663	17195	27006201302194	01	Forest	TIONESTA BOROUGH	OVER TUBBS RUN	Rural Principal Arterial	Community Arterial-Rural	1783	45	2	12	8	8	40	N	N	--	Y	Nominal 1	On gateway edge of Tionesta historic district. Picnic areas adjacent. Identified in scoping document as in scenic viewshed and suggested staining. Is on northern gateway into Tionesta. Substructure not visible from road or side.
--	1370	17207	27066600700000	01	Forest	HICKORY TOWNSHIP	OVER BEAVER RUN	Rural Major Collector	Community Collector-Rural	641	45	2	10	2	2	24	N	N	Y	Y	Base	--
--	93595	17208	27066600900000	01	Forest	HICKORY TOWNSHIP	OVER BEAVER RUN	Rural Major Collector	Community Collector-Rural	641	45	2	10	2	2	24	N	N	Y	Y	Base	--
--	1398	17209	27066601100240	01	Forest	HICKORY TOWNSHIP	OVER BEAVER RUN	Rural Major Collector	Community Collector-Rural	266	45	2	10	2	2	24	N	N	Y	Y	Base	--
--	97328	25833	43017304703518	01	Mercer	NEW LEBANON BOROUGH	OVER MILL CREEK	Rural Major Collector	Community Collector-Rural	2398	55	2	12	7	7	38	N	N	Y	Y	Base	--
--	1686	25858	43031801500622	01	Mercer	LACKAWANNOCK TOWNSHIP	OVER LT NESHANNOCK CK BR	Rural Minor Collector	Neighborhood Collector - Rural Places	2132	45	2	12	4	4	32	N	N	Y	Y	Base	--
--	58092	26008	43302001700000	01	Mercer	JEFFERSON TOWNSHIP	OVER LACKAWANNOCK CREEK	Rural Local	Rural Local Road/Street	432	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	93160	33765	60042702200000	01	Venango	PLUM TOWNSHIP	OVER SUGAR CREEK TRIB	Rural Major Collector	Community Collector-Rural	399	45	2	11	3	3	28	N	N	--	Y	Base	--
--	2251	33788	60201301000000	01	Venango	CRANBERRY TOWNSHIP	OVER EAST SANDY CREEK	Rural Major Collector	Community Collector-Rural	2020	55	2	11	4	4	30	N	N	Y	Y	Base	--
--	97457	33956	61000603502233	01	Warren	BROKENSTRAW TOWNSHIP	OVER WINTROTH RUN	Rural Principal Arterial	Community Arterial-Rural	8632	45	2	12	8	8	40	N	N	--	Y	Base	--
--	2438	33957	61000603900000	01	Warren	BROKENSTRAW TOWNSHIP	OVER MEAD RUN	Rural Principal Arterial	Community Arterial - Suburban corridor	8632	45	2	12	8	8	40	N	N	--	Y	Base	--
--	2546	33982	61000608200000	01	Warren	SHEFFIELD TOWNSHIP	OVER FOUR MILE RUN	Rural Principal Arterial	Community Arterial-Rural	5921	35	2	12	8	8	40	N	N	--	Y	Nominal 1	On Scenic Byway Route 6. Substructure not visible from road and no adjacent population or recreation contexts.
--	2580	34001	61002705203359	01	Warren	BROKENSTRAW TOWNSHIP	OVER HAZELTINE HOLLOW RU	Rural Minor Arterial	Community Arterial-Rural	2126	35	2	11	4	4	30	N	N	Y	Y	Base	--
--	2548	34056	61012700902381	01	Warren	TRIUMPH TOWNSHIP	OVER GORDON RUN	Rural Major Collector	Community Collector-Rural	844	40	2	11	6	6	34	N	N	--	Y	Base	--
--	84954	34077	61095701700981	01	Warren	FREEHOLD TOWNSHIP	OVER LITTLE BROKENSTRAW	Rural Minor Arterial	Community Arterial-Rural	1398	40	2	11	3	3	28	N	N	Y	Y	Base	--
--	97452	34169	61301000600428	01	Warren	SPRING CREEK TOWNSHIP	OVER WHITNEY RUN	Rural Major Collector	Community Collector-Rural	519	45	2	11	2	2	26	N	N	Y	Y	Base	--
--	85095	8831	12012000400000	02	Cameron	TRUMAN	BIG RUN	Rural Minor Arterial	Community Arterial - Rural	2717	55	2	12	9	9	42	N	N	--	Y	Base	External context. At site of roadside park
--	88201	9265	14004507902031	02	Centre	WOODWARD	PINE CREEK	Rural Minor Collector	Community Collector - Rural	2058	45	2	12	7	7	38	N	N	--	Y	Nominal 2	External context. Bridge within large Penns Valley & Brush Valley Rural Historic District. Large Woodward camp is adjacent to this feature.

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level
													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
--	88155	9360	14014403400099	02	Centre	BELLEFONTE	YOCUM RUN	Urban Other Principal Arterial	Community Arterial - Rural	10003	45	2	12	10	10	44	N	N	--	Y	Base	--
--	85135	9576	14100200501555	02	Centre	YARNELL	LITTLE MARSH CREEK	Rural Minor Collector	Community Collector - Rural	265	35	2	10	2	2	24	N	N	Y	Y	Base	--
--	81359	9577	14100200801726	02	Centre	YARNELL	BRANCH LITTLE MARSH CR	Rural Minor Collector	Community Collector - Rural	265	35	2	10	2	2	30	N	N	Y	Y	Base	--
--	2893	9679	14201300100000	02	Centre	2 MI NE COBURN	PINE CREEK	Rural Local	Local Road/Street - Rural	144	35	2	11	3	3	28	N	N	--	Y	Nominal 2	External context. Bridge within large Penns Valley & Brush Valley Rural Historic District.
--	85125	9431	14304001301062	02	Centre	PORT MATILDA	LAUREL RUN	Rural Principal Arterial - Other	Community Arterial - Rural	3328	50	2	12	8	8	40	5	5	--	Y	Base	--
--	85128	9434	14304001500701	02	Centre	1 MI E PORT MATILDA	SUNNYSIDE HOLLOW RUN	Rural Principal Arterial - Other	Community Arterial - Rural	3328	50	2	12	8	8	40	N	N	--	Y	Base	--
--	88199	9451	14304003701668	02	Centre	UNIONVILLE BORO	DEWITT RUN	Rural Principal Arterial - Other	Community Arterial - Rural	2325	35	2	12	8	8	40	N	N	--	Y	Base	--
--	91413	9778	14400200702338	02	Centre	CLARENCE	LITTLE SANDY RUN	Rural Minor Collector	Community Collector - Rural	614	35	2	12	2	2	28	N	N	Y	Y	Base	--
--	3195	9790	14400600100000	02	Centre	CASANOVA	MOSHANNON CREEK	Rural Minor Collector	Community Collector - Rural	423	35	2	12	2	2	28	5	N	Y	Y	Base	--
--	69443	11245	17005306400000	02	Clearfield	MORRISDALE	EMIGH RUN	Rural Minor Arterial	Community Arterial - Rural	5419	45	2	12	10	10	44	N	N	--	N	Base	--
--	91508	11390	17021902800000	02	Clearfield	MCGEES MILLS	WHISKEY RUN	Rural Principal Arterial - Other	Regional Arterial - Rural	2885	45	2	12	10	10	44	N	N	--	N	Base	--
--	85076	11399	17021904201459	02	Clearfield	CURRY RUN	CURRY RUN	Rural Principal Arterial - Other	Regional Arterial - Rural	2519	55	2	12	8	8	40	N	N	--	N	Base	--
--	85079	11403	17021904602606	02	Clearfield	BELLS LANDING	POPLAR RUN	Rural Principal Arterial - Other	Regional Arterial - Rural	2895	55	2	12	8	8	40	N	N	--	N	Base	--
--	93323	11404	17021904700185	02	Clearfield	BELLS LANDING	BELL RUN	Rural Principal Arterial - Other	Regional Arterial - Rural	2895	40	2	12	8	8	40	N	N	--	N	Base	--
--	93372	11454	17025502200000	02	Clearfield	2 MI SW PENFIELD	BENNETT BRANCH	Rural Minor Arterial	Community Arterial - Rural	4412	55	2	12	8	8	40	N	N	--	N	Base	--
--	88626	11461	17025503200000	02	Clearfield	HOLLYWOOD	MINE CAVE IN	Rural Minor Arterial	Community Arterial - Rural	5045	45	2	12	8	8	40	N	N	--	N	Base	--
--	89978	11658	17100900401885	02	Clearfield	HAWK RUN	HAWK RUN	Rural Major Collector	Community Collector - Rural	319	45	2	12	2	2	28	N	N	Y	N	Base	--
--	3571	11698	17200703101047	02	Clearfield	WEST DECATUR	LAUREL RUN	Rural Local	Local Road/Street - Rural	1286	35	2	12	2	2	28	N	N	--	N	Base	--
--	85119	11807	17300902501042	02	Clearfield	2 MI SE TROUTVILLE	E BR MAHONING CREEK	Rural Minor Collector	Neighborhood Collector - Rural	324	45	2	12	2	2	28	N	N	Y	N	Base	--
--	91510	12163	18015000701624	02	Clinton	3 MILE EAST BEECH CREEK	MASDEN RUN	Rural Minor Arterial	Community Arterial - Rural	5500	55	2	12	8	8	40	N	N	--	N	Base	--
--	69040	12239	18047700300000	02	Clinton	SALONA	LONG RUN	Urban Collector	Neighborhood Collector - Town/Village/Neighborhood	1610	25	2	12	4	4	32	N	N	--	N	Base	--
--	85152	15531	24012002801546	02	Elk	CITY OF ST MARYS	BRANCH ELK CREEK	Urban Minor Arterial	Community Arterial - Town/Village/Neighborhood	7798	25	2	12	8	8	40	N	N	--	N	Base	--
--	69088	15535	24021900201858	02	Elk	BROCKPORT	MEAD RUN	Rural Principal Arterial - Other	Regional Arterial - Rural	5593	35	2	12	8	8	40	N	N	--	N	Base	--
--	88185	15560	24021904900000	02	Elk	JOHNSONBURG	POWERS RUN	Rural Principal Arterial - Other	Regional Arterial - Rural	4007	35	2	12	8	8	40	N	N	--	N	Base	--
--	88195	19992	34003507200000	02	Juniata	MCALISTERVILLE	TRIB LOST CREEK	Rural Minor Arterial	Community Arterial - Rural	4945	35	2	12	8	8	40	N	N	--	Y	Nominal 1	External context. Bridge is immediately adjacent to and visible from park and school. Southern gateway to town.
--	4194	20021	34007502501504	02	Juniata	EAST WATERFORD	HORSE VALLEY RUN CREEK	Rural Minor Arterial	Community Collector - Rural	803	35	2	11	6	6	34	5	N	--	Y	Base	--
--	4214	20106	34100200200000	02	Juniata	0.5 MI E CUBA MILLS	LOST CREEK	Rural Minor Collector	Community Collector - Rural	446	45	2	12	2	2	28	N	N	Y	Y	Base	--
--	4218	20118	34100400300549	02	Juniata	MCALISTERVILLE	LITTLE LOST CREEK	Rural Local	Local Road/Street - Rural	775	35	2	11	3	3	28	5	N	--	Y	Base	--
--	81508	20137	34200601501696	02	Juniata	VAN WERT	DOE RUN	Rural Minor Collector	Community Collector - Rural	1112	35	2	11	4	4	30	N	N	--	Y	Base	--
--	91518	20147	34200701400000	02	Juniata	OAKLAND MILLS	LOST CREEK	Rural Minor Collector	Community Collector - Rural	436	45	2	12	2	2	28	N	N	Y	Y	Base	--
--	78606	25213	42000605100562	02	McKean	HAZELHURST	MARVIN CREEK	Rural Principal Arterial - Other	Regional Arterial - Town/Village Neighborhood	2212	55	2	12	8	8	40	N	N	--	Y	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	78605	25216	42000605800309	02	McKean	MARVINDALE	WARNER BROOK	Rural Principal Arterial - Other	Regional Arterial - Rural	2266	55	2	12	8	8	40	N	N	--	Y	Base	--
--	4344	25243	42004600600000	02	McKean	3 MI SE BETULA	HAVENS BROOK	Rural Minor Arterial	Regional Arterial - Rural	1062	55	2	12	4	4	32	N	N	Y	Y	Base	--
--	88664	25281	42005904500000	02	McKean	1 MI W ORMSBY	TRIB KINZUA CREEK	Rural Minor Arterial	Community Arterial - Rural	1022	55	2	12	8	8	40	N	N	--	Y	Base	--
--	88183	25297	42015500200000	02	McKean	LIBERTY	PORTAGE CREEK	Rural Major Collector	Community Collector - Rural	1227	55	2	12	6	6	38	N	N	--	Y	Base	--
--	85215	25308	42015501900182	02	McKean	1 MI N PORT ALLEGHENY	TWO MILE CREEK	Rural Major Collector	Community Collector - Rural	2923	45	2	12	8	8	40	N	N	--	Y	Base	--
--	4341	25313	42015502701162	02	McKean	3 MI SE LARABEE	ROCK RUN	Rural Major Collector	Community Collector - Rural	2277	55	2	12	8	8	40	N	N	--	Y	Base	--
--	85259	25314	42015502900238	02	McKean	2 MI SE LARABEE	NEWELL CREEK	Rural Major Collector	Neighborhood Collector - Rural	2277	55	2	12	8	8	40	N	N	--	Y	Base	--
--	85234	25418	42034604101617	02	McKean	3 MI E BRADFORD	FOSTER BROOK	Urban Collector	Community Collector - Rural	3662	45	2	12	8	8	40	N	N	--	Y	Base	--
--	4336	25420	42034604201811	02	McKean	DERRICK CITY	FOSTER BROOK	Rural Major Collector	Community Collector - Rural	3662	35	2	12	8	8	40	N	N	--	Y	Base	--
--	85237	25459	42064602900000	02	McKean	1 MI N GILMORE	PENNBROOK RUN	Rural Major Collector	Community Collector - Rural	1470	45	2	12	4	4	32	N	N	--	Y	Base	--
--	4340	25461	42077001300784	02	McKean	CUSTER CITY	SHEPPARD RUN	Rural Major Collector	Community Collector - Rural	1563	55	2	12	4	4	32	N	N	--	Y	Base	--
--	88630	25462	42077001400000	02	McKean	CUSTER CITY	SHEPPARD RUN	Urban Collector	Community Collector - Rural	1563	55	2	12	4	4	32	N	N	--	Y	Base	--
--	68965	25489	42101500100472	02	McKean	WRIGHTS CORNERS	NORTH BRANCH COLE CREEK	Rural Local	Local Road/Street - Rural	321	40	2	12	4	4	32	N	N	--	Y	Base	--
--	4486	25495	42200100100806	02	McKean	6 MI SW CLERMONT	SEVEN MILE RUN	Rural Major Collector	Community Collector - Rural	278	45	2	11	2	2	26	N	N	Y	Y	Base	--
--	78611	25500	42200200320000	02	McKean	BETULA	WEST BRANCH POTATO CREEK	Rural Local	Local Road/Street - Rural	49	35	2	10	2	2	24	N	N	--	Y	Base	--
--	93322	25535	42401100102339	02	McKean	BRADFORD	BENNETT BROOK	Urban Collector	Community Collector - Suburban Neighborhood	417	35	2	10	2	2	24	N	N	Y	Y	Base	--
--	4642	26468	44065502201820	02	Mifflin	KISHACOQUILLAS	FROG HOLLOW RUN	Rural Minor Arterial	Community Arterial - Rural	5945	55	2	12	8	8	40	N	N	--	Y	Base	--
--	85297	26469	44065502300022	02	Mifflin	KISHACOQUILLAS	ALEXANDER RUN	Rural Minor Arterial	Community Arterial - Rural	5945	55	2	12	8	8	40	N	N	--	Y	Base	--
--	4676	26472	44100200800896	02	Mifflin	3 MI NE REEDSVILLE	HONEY CREEK	Rural Minor Collector	Neighborhood Collector - Rural	1160	40	2	11	4	4	30	N	N	--	Y	Base	--
--	4677	26477	44100201200618	02	Mifflin	LOCKE MILLS	HONEY CREEK	Rural Minor Collector	Neighborhood Collector - Rural	687	40	2	11	4	4	30	N	N	--	Y	Base	--
--	85275	26595	44401300500000	02	Mifflin	1 MI NW STRODES MILLS	STRODES RUN	Rural Principal Arterial - Other	Neighborhood Collector - Rural	836	35	2	12	2	2	28	N	N	Y	Y	Base	--
--	88640	30090	52000602300000	02	Potter	COUDERSPORT BORO	DINGMANS RUN	Rural Minor Arterial	Community Arterial - Rural	4597	45	2	12	10	10	44	5	N	--	Y	Base	--
--	69501	30144	52004402700000	02	Potter	CARTER CAMP	LITTLE KETTLE CREEK	Rural Minor Arterial	Community Arterial - Rural	394	55	2	11	4	4	30	N	N	Y	Y	Base	--
--	93375	30156	52004408101925	02	Potter	1 MI SE HEBRON CENTRE	SOUTH BRANCH OSWAYO CR	Rural Minor Arterial	Community Arterial - Rural	1477	55	2	12	5	5	34	N	N	Y	Y	Base	--
--	85309	30162	52004409500000	02	Potter	CLARA	CLARA CREEK	Rural Minor Arterial	Community Arterial - Rural	1477	55	2	11	6	6	34	N	N	Y	Y	Base	--
--	4805	30166	52004410100000	02	Potter	SHARON CENTER	SHARON CREEK	Rural Minor Arterial	Community Arterial - Rural	2064	55	2	12	8	8	40	N	N	--	Y	Base	--
--	4897	30190	52004904300530	02	Potter	MILLS	MARSH CREEK	Rural Minor Arterial	Community Arterial - Rural	1907	55	2	11	6	6	34	N	N	Y	Y	Base	--
--	4898	30191	52004904400406	02	Potter	MILLS	BRANCH COWANESQUE CR	Rural Minor Arterial	Community Arterial - Rural	1907	55	2	11	6	6	34	N	N	Y	Y	Base	--
--	4899	30233	52044900501401	02	Potter	2 MI N WALTON	BUCKSELLER RUN	Rural Minor Arterial	Community Arterial - Rural	572	55	2	11	6	6	34	N	N	Y	Y	Base	--
--	93373	30348	52200201302331	02	Potter	2 MI SW GERMANIA STATION	LYMAN RUN	Rural Major Collector	Community Collector - Rural	116	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	85402	30435	52402600220000	02	Potter	ROULETTE	FISHING CREEK	Rural Local	Local Road/Street - Rural	625	35	2	10	4	4	28	N	N	--	Y	Base	--
--	83457	6074	08001403400602	03	Bradford	TROY BORO	FALL BROOK	Rural Minor Arterial	Community Arterial-Suburban Neighborhood	7210	35	2	12	5	5	34	5	5	--	Y	Nominal 1	External context. Bridge is within Historic District but only deck, parapets and sidewalks visible.
Y	99281	6104	08018704000000	03	Bradford	1 MILE SOUTH OF DURELL	DURELL CREEK	Rural Major Collector	Community Collector-Rural	1361	35	2	11	4	4	30	N	N	--	N/A	Base	--
--	5038	6136	08022001301099	03	Bradford	VILLAGE OF STEVENSON	SOUTH BRANCH TOWANDA CR	Rural Minor Arterial	Community Arterial-Rural	5164	50	2	12	8	8	40	N	N	--	N	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Lane Width (ft)	Proposed Design				3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
														Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
Y	5093	6164	08036700101794	03	Bradford	3.5 MI.SOUTH OF SILVARA	FARGO CREEK	Rural Minor Collector	Neighborhood Collector-Rural	626	40	2	10	4	4	28	N	N	--	N/A	Base	--
--	79247	6191	08041403800000	03	Bradford	VILLAGE OF FRANKLINDALE	TRIB.TO TOWANDA CREEK	Rural Minor Arterial	Community Arterial-Rural	2809	40	2	11	5	5	32	N	N	Y	N	Base	--
Y	76863	6193	08046700100052	03	Bradford	2 MILE SOUTH OF ROME BORO	WYSOX CREEK	Rural Major Collector	Community Collector-Rural	2010	55	2	12	8	20	52	N	N	--	N/A	Base	--
Y	5210	6203	08046702700000	03	Bradford	PIKE TWP .4M S SR 1013	OVER ROCKWELL CREEK	Rural Major Collector	Community Collector-Rural	975	55	2	11	5	5	32	N	N	--	N/A	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Lane Width (ft)	Proposed Design				3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
														Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
Y	5039	6216	08051402000863	03	Bradford	2.5 MI.N.OF W.FRANKLIN	N BR TOWANDA CREEK	Rural Major Collector	Community Collector-Rural	936	55	2	11	3	3	28	N	N	--	N/A	Base	--
Y	5208	6224	08070601701340	03	Bradford	2 MI. NE. OF CAMPTOWN	COLD CREEK	Rural Minor Arterial	Community Arterial-Rural	3046	55	2	11	5	5	32	N	N	Y	N/A	Base	--
Y	5215	6227	08070602601160	03	Bradford	STEVENS TWP .1M E LR08034	OVER ROSS CREEK	Rural Minor Arterial	Community Arterial-Rural	2623	45	2	11	5	5	32	N	N	Y	N/A	Base	--
--	98535	6348	08105900700582	03	Bradford	1 MI. W. OF WARREN CENTER	OVER WAPPASENING CREEK	Rural Local	Local Road/Street-Rural	135	55	2	10	2	2	24	N	N	--	Y-If detour required, N-If no detour required	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	5218	6476	08401302501496	03	Bradford	0.25 MI N.OF MIDDLETOWN	MILLER RUN	Rural Major Collector	Community Collector-Rural	1833	45	2	12	4	4	32	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	5589	12486	19004402401397	03	Columbia	1.9 MI NW OF JERSEYTOWN	TRIB E BR CHILLISQUAQUE	Rural Major Collector	Community Collector-Rural	2415	55	2	12	4	4	32	N	N	--	Y-If detour required, N-If no detour required	Base	--
Y	98939	12555	19025402500486	03	Columbia	3.5 MI E OF MILLVILLE	TRIB TO MUD RUN	Rural Major Collector	Community Collector-Rural	2134	55	2	12	4	4	32	N	N	--	N/A	Base	--
Y	5578	12592	19048703700177	03	Columbia	1 MILE N OF LIGHTSTREET	STONY BROOK CREEK	Rural Minor Arterial	Community Arterial-Rural	6201	55	2	12	5	5	34	N	N	Y	N/A	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Lane Width (ft)	Proposed Design				3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
														Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
Y	78822	12738	19403101120000	03	Columbia	3 MI W OF WALLER	OVER LITTLE FISHING CR.	Rural Local	Local Road/Street-Rural	82	55	2	10	2	2	24	N	N	--	N/A	Base	--
--	91436	24511	41001500702198	03	Lycoming	8 MILES S OF WILLIAMSPORT	OVER BLACK HOLE CREEK	Urban Principal Arterial	Regional Arterial-Urban	10194	55	3	12/14	8	8	54	N	N	--	N	Base	--
Y	6049	24566	41004403440880	03	Lycoming	4.5 MI S OF JERSEY SHORE	OVER ANTES CREEK	Rural Minor Arterial	Community Arterial-Rural	4463	55	2	11	5	5	32	N	N	Y	N/A	Base	--
--	6023	24591	41008700600000	03	Lycoming	0.1 MI N OF FARRAGUT	OVER TRIB TO LOYALSOCK C	Rural Minor Arterial	Community Arterial-Rural	5377	55	2	12	8	8	40	N	N	--	N	Base	--
--	6145	24603	41011801700622	03	Lycoming	VILLAGE OF LAIRDSVILLE	OVER BIG RUN	Rural Minor Arterial	Community Arterial-Town/Village Neighborhood	3701	35	2	11	6	9	37	N	N	Y	N	Base	--
--	6045	24748	41041400100417	03	Lycoming	2 MI N OF WATERVILLE	OVER UPPER PINE BOT.R.	Rural Major Collector	Community Collector-Rural	337	45	2	10	4	4	28	N	N	--	N	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Lane Width (ft)	Proposed Design				3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
														Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	6054	24751	4104140080000	03	Lycoming	VILLAGE OF JERSEY MILLS	OVER CALLAHAN RUN	Rural Major Collector	Community Collector-Rural	337	45	2	10	4	4	28	N	N	--	Y-If detour required, N-If no detour required	Base	--
Y	6057	24850	41200200320000	03	Lycoming	3 MI W OF ELIMSPORT	OVER WHITE DEER HOLE CR	Rural Local	Local Road/Street-Rural	213	40	2	10	2	2	24	N	N	--	N/A	Base	--
--	6052	24881	41201501720000	03	Lycoming	1 MI NORTH OF LAIRDSVILLE	OVER BIG RUN	Rural Local	Local Road/Street-Rural	52	55	2	10	2	2	24	N	N	--	Y-If detour required, N-If no detour required	Base	--
Y	74022	24928	41205000120000	03	Lycoming	2.5 MI E OF LAIRDSVILLE	OVER LITTLE MUNCY CREEK	Rural Local	Local Road/Street-Rural	93	55	2	10	2	2	24	N	N	--	N/A	Base	--
--	6144	24938	41206101702204	03	Lycoming	3MI.E OF HUGHESVILLE	OVER SUGAR RUN	Rural Local	Local Road/Street-Rural	435	55	2	11	2	2	26	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	6387	28361	47025400200000	03	Montour	4.5 M W OF LIMESTONEVILLE	OVER LIMESTONE RUN	Rural Major Collector	Community Collector-Rural	2487	55	2	12	6	6	36	N	N	--	N	Base	--
--	6381	28387	47100600100570	03	Montour	3 MI.N.WASHINGTONVILLE	MCKEE CREEK	Rural Local	Local Road/Street-Rural	365	45	2	10	2	2	24	N	N	--	Y-If detour required, N-If no detour required	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Lane Width (ft)	Proposed Design				3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
														Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
Y	74037	28389	47100600500000	03	Montour	7MI NE OF WASHINGTONVILLE	BR OF CHILLISQUAQUE CR.	Rural Local	Local Road/Street-Rural	142	45	2	10	2	2	24	N	N	--	N/A	Base	--
--	97586	29174	49102700400616	03	Northumberland	VILLAGE OF POTTSBORO	OVER ROSS RUN	Rural Minor Collector	Neighborhood Collector-Suburban Neighborhood	298	25	2	10	2	2	24	5	5	Y	Y-If detour required, N-If no detour required	Base	--
--	6669	29178	49200100200000	03	Northumberland	3 MI N OF ELYSBURG BORO	LITTLE ROARING CREEK	Rural Minor Collector	Neighborhood Collector-Rural	136	40	2	10	2	2	24	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	79230	29303	49402000301775	03	Northumberland	2.5 MI NW OF FISHERS FERRY	HOLLOWING RUN	Rural Minor Collector	Neighborhood Collector-Rural	248	40	2	10	2	2	24	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	6603	29306	49402200101591	03	Northumberland	.25 MI E OF FISHERS FERRY	OVER BOILE RUN	Rural Local	Local Road/Street-Rural	170	40	2	10	4	4	28	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	88047	29311	49402600100165	03	Northumberland	2 MI S OF AUGUSTAVILLE	OVER LITTLE SHAMOKIN CR.	Rural Minor Collector	Neighborhood Collector-Rural	770	40	2	10	4	4	28	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	88799	31169	54102300401962	03	Snyder	VILLAGE OF HUMMELS WHARF	TRIB TO SUSQUEHANNA RVR	Urban Major Collector	Community Collector-Urban Core	4441	35	2	10	9	9	38	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	89977	31948	56008701100148	03	Sullivan	VILLAGE OF HILLSGROVE	OVER MILL CREEK	Rural Minor Arterial	Community Arterial-Rural	757	45	2	11	5	5	32	N	N	Y	N	Base	--
Y	7021	31966	56008705202440	03	Sullivan	0.25 MI W OF DUSHORE	OVER LITTLE LOYALSOCK CR	Rural Minor Arterial	Community Arterial-Rural	1694	55	2	11	5	5	32	N	N	Y	N/A	Base	--
--	7009	31981	56015401501564	03	Sullivan	4 MI SE OF FORKSVILLE	OVER DOUBLE RUN	Rural Major Collector	Community Collector-Rural	410	45	2	11	4	4	30	N	N	--	N	Nominal 1	--
--	7326	32822	58004901400434	03	Tioga	0.5 MI E OF WESTFIELD	OVER CALIFORNIA BROOK	Rural Minor Arterial	Community Arterial-Rural	3832	45	2	11	8	8	38	N	N	--	N	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Lane Width (ft)	Proposed Design				3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
														Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
Y	7251	32843	58024903220000	03	Tioga	3.5 MI E OF WESTFIELD	OVER JEMISON CREEK	Rural Major Collector	Community Collector-Rural	1226	55	2	11	3	8	33	N	N	--	N/A	Base	--
--	87929	32931	58054902602539	03	Tioga	0.5 MI S OF JOBS CORNERS	OVER SEELY CREEK	Rural Major Collector	Community Collector-Rural	779	55	2	11	4	4	30	N	N	--	Y-If detour required, N-If no detour required	Base	--
Y	79055	33080	58300103901413	03	Tioga	1 MI S OF WATROUS	OVER ELK RUN	Rural Local	Local Road/Street-Rural	673	40	2	10	3	7	30	N	N	--	N/A	Base	--
Y	7136	33083	58300500400000	03	Tioga	VILLAGE OF DRAPER	OVER STONY FORK CREEK	Rural Local	Local Road/Street-Rural	181	55	2	10	2	3	25	N	N	--	N/A	Base	--
Y	7347	33180	58401702800000	03	Tioga	2 MI NW OF OSCEOLA	HOLDEN CREEK	Rural Minor Collector	Neighborhood Collector-Rural	425	40	2	10	4	4	28	N	N	--	N/A	Base	--
--	83470	33209	58403501300426	03	Tioga	3.5 MI NE OF WELLSBORO	OVER CATLIN HOLLOW CREEK	Rural Minor Collector	Neighborhood Collector-Rural	1743	40	2	11	5	5	32	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	7542	33469	59100101101961	03	Union	2.5 MI W OF KELLY CROSSRD	OVER SPRUCE RUN	Rural Major Collector	Community Collector-Rural	684	40	2	11	3	3	28	N	N	--	Y-If detour required, N-If no detour required	Base	--
--	7542	33470	59100101102058	03	Union	2.5 MI W OF KELLY CROSSRD	OVER SPRUCE RUN	Rural Major Collector	Community Collector-Rural	684	40	2	11	3	3	28	N	N	--	Y-If detour required, N-If no detour required	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Lane Width (ft)	Proposed Design				3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
														Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
Y	83478	33478	59100300200000	03	Union	2 MI NE BUFFALO CROSS RDS	OVER BUFFALO CREEK	Rural Local	Local Road/Street-Rural	477	55	2	11	3	3	28	N	N	--	N/A	Base	--
Y	74043	33543	59300202000501	03	Union	VILLAGE OF LAURELTON	OVER LAUREL RUN	Rural Minor Collector	Neighborhood Collector-Suburban Neighborhood	868	35	2	11	4	4	30	N	N	--	N/A	Base	--
--	96689	20820	35401900200731	04	Lackawanna	S ABINGTON TP OVER I-81	SR 0081 I-81	Urban Minor Collector	Community Collector - Suburban Corridor	3545	35	2	11	2	5	29	N	N	--	N	Base	--
--	67364	23795	40011501200000	04	Luzerne	BEAR CR TW 1.2M S SR 2038	SHADES CREEK	Rural Minor Arterial	Community Arterial - Rural	4976	55	2	12	6	6	36	N	N	Y	N	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	97506	24493	40800500201030	04	Luzerne	BUTLER TWP OVER I-80 WB	SR 0080 I-80 WB	Rural Freeways/Expressways/Interstates	Community Arterial – Rural	6176	40	1	16	12	12	40	N	N	--	N	Base	--
Y	96726	29947	51100700301853	04	Pike	SHOHOLA TWP 1.4M N SR1005	TWIN LAKES CREEK	Rural Local	Local Road/Street – Rural	118	35	2	11	3	3	28	N	N	--	N/A	Base	--
--	67514	29982	51200600100953	04	Pike	DINGMAN TWP .2 M E TR 739	DWARFKILL CREEK	Rural Local	Local Road/Street – Rural	2784	40	2	11	3	3	28	N	N	Y	N	Base	--
--	96737	32153	57001104601461	04	Susquehanna	N MILFRD TP .2M S SR 1018	SALT LICK CREEK	Rural Major Collector	Community Collector – Rural	5266	55	3	12	5	5	46	N	N	--	N	Base	--
--	89023	32244	57010601220638	04	Susquehanna	LENOX TWP .1 M E TR 92	TUNKHANNOCK CREEK	Rural Minor Arterial	Community Arterial-Rural	3610	45	2	12	8	8	40	N	N	--	N	Base	--
Y	9719	32307	57026703200000	04	Susquehanna	FORST LKE TP 2.5M N SR4015	STONE STREET CREEK	Rural Minor Arterial	Community Arterial – Rural	1809	45	2	11	4	4	30	N	N	Y	N/A	Base	--
--	79572	32308	57026703202704	04	Susquehanna	FRST LK TP 4.5M S SR 4014	MIDDLE BR WYALUSING CR	Rural Minor Arterial	Community Arterial – Rural	1809	45	2	11	4	4	30	N	N	--	N	Base	--
--	9656	32327	57037400502476	04	Susquehanna	LENOX TWP .5 M E SR 2016	EAST BR TUNKHANNOCK CRK	Rural Major Collector	Community Collector – Rural	1478	40	2	11	4	4	30	N	N	--	N	Base	--
--	96729	32365	57070602700000	04	Susquehanna	BRIDGWTR TP 2 M W TR 167	PETTIS CREEK	Rural Minor Arterial	Regional Arterial – Rural	2228	45	2	12	6	6	36	N	N	--	N	Base	--
--	100550	32378	57085800500000	04	Susquehanna	RUSH TWP 2 M N TR 706	GAYLORD CREEK	Rural Minor Collector	Community Collector – Rural	288	40	2	11	5	5	32	N	N	--	N	Base	--
Y	85782	32401	57100700500000	04	Susquehanna	THMPNS TWP 1.7M N SR 1004	SOUTH BR CANAWACTA CREEK	Rural Local	Local Road/Street – Rural	84	35	2	10	2	2	24	N	N	--	N/A	Base	--
--	96734	32437	57101801302350	04	Susquehanna	NEW MILFORD .6 M W TR 11	BEAVER CREEK	Rural Minor Collector	Community Collector – Rural	523	35	2	10	2	2	24	N	N	--	N	Base	--
Y	96727	32478	57200800203639	04	Susquehanna	CLIFFORD TWP 200'W TR 106	DUNDAFF CREEK	Rural Local	Local Road/Street – Town/Village Neighborhood	177	35	2	10	2	2	24	5.75	N	--	N/A	Base	--
--	9679	32507	57202100501583	04	Susquehanna	LENOX TWP OVER SR 0081	SR 0081 I-81	Rural Local	Local Road/Street – Rural	242	40	2	11	3	3	28	N	N	--	N	Base	--
--	96736	32647	57400201300000	04	Susquehanna	SILVER LK T 1.2M E SR4001	RHINEY CREEK	Rural Major Collector	Community Collector – Rural	813	35	2	11	3	3	28	N	N	--	N	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level
													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
--	68876	35471	63019106701296	04	Wayne	OREGON TWP 1.5M N SR 4019	BIG BROOK CREEK	Rural Minor Arterial	Community Arterial – Rural	2583	55	2	10	5	5	30	N	N	Y	N	Base	--
--	9969	35508	63029601800000	04	Wayne	CANAAN TWP 1 M S SR 3028	BRANCH OF MIDDLE CREEK	Rural Major Collector	Community Collector – Rural	2317	45	2	11	3	8	33	N	N	Y	N	Base	--
Y	68917	35624	63101801602046	04	Wayne	MANCHSTR TP 3.7M E TR 191	BR LITTLE EQUINUNK CREEK	Rural Local	Local Road/Street – Rural	244	35	2	9	2	2	22	N	N	--	N/A	Base	--
Y	68927	35654	63200700301844	04	Wayne	BERLIN TWP @ JCT SR 2009	HOLBERT CREEK	Rural Local	Local Road/Street – Suburban Neighborhood	471	25	2	10	2	2	24	N	N	Y	N/A	Base	--
--	67584	35675	63300601600000	04	Wayne	SALEM TWP .6 M N SR 3008	ARIEL CREEK	Rural Local	Local Road/Street – Rural	715	35	2	10	2	2	24	N	N	Y	N	Base	--
Y	56752	35765	63401401300733	04	Wayne	SCOTT TWP .5 M E SR 4037	BALLS CREEK	Rural Minor Collector	Community Collector – Rural	137	30	2	9	3	3	24	N	N	--	N/A	Base	--
Y	79580	35802	63403302600090	04	Wayne	BUCKINGHAM TWP 90'N TR370	SHEHAWKEN CREEK	Rural Local	Local Road/Street – Rural	225	35	2	11	4	4	30	N	N	--	N/A	Base	--
--	9978	35810	63403703303161	04	Wayne	SCOTT TWP .2 M S SR 4043	OQUAGA CREEK	Rural Minor Collector	Community Collector – Rural	232	35	2	10	5	2	27	N	N	--	N	Base	--
--	10230	37163	65026700100659	04	Wyoming	MESHOPPEN BOR .1 M N TR 6	LITTLE MESHOPPEN CREEK	Rural Major Collector	Community Collector – Town Center	2571	25	2	11	2	2	26	5	5	--	N	Nominal 1	Functional classification as enhanced. Bridge is a highly visible crossing at the edge of a small town and near recreational facilities.
--	10243	37172	65029201500354	04	Wyoming	N MORELND TP .1M W SR2009	BR WHITELOCK CREEK	Rural Minor Collector	Community Collector – Rural	1200	35	2	11	2	2	26	N	N	--	N	Base	--
Y	68786	37192	65100100500000	04	Wyoming	TUNKHANNOCK TP JCT SR1002	MEADE BROOK	Rural Local	Local Road/Street – Rural	734	35	2	11	2	2	26	N	N	Y	N/A	Base	--
Y	68806	37222	65200100500596	04	Wyoming	MONROE TWP .2 M S SR 2002	SOUTH RUN	Rural Local	Local Road/Street – Rural	292	40	2	10	2	2	24	N	N	--	N/A	Base	--
--	79078	4900	06062501301318	05	Berks	NEW HOLLAND ROAD	ANGELICA CREEK	Urban Minor Arterial	Community Arterial-Urban Core	7444	45	2	11	4	4	30	N	N	Y	Y	Nominal 1	Funct Classif context as Nominal.
--	78877	4946	06100400100619	05	Berks	WILLOW CREEK BRIDGE	WILLOW CREEK	Urban Minor Collector	Community Collector-Suburban Corridor	5636	40	2	11	4	4	30	N	N	Y	Y	Base	--
--	78889	4953	06100601100107	05	Berks	CRYSTALCAVE RD,VIRGINVLE	SACONY CREEK	Rural Minor Collector	Neighborhood Collector-Rural	214	40	2	11	4	4	30	N	N	--	Y	Nominal 2	External context. Bridge is parallel with Philadelphia/Reading Historic Railway and on edge of Virginville Historic District.
--	85635	4957	06100800300000	05	Berks	.5 MI.SOUTH OF HAMBURG	WINDSOR CREEK	Rural Minor Collector	Community Collector -Suburban Neighborhood	702	55	2	10	4	4	28	N	N	--	Y	Base	--
--	79081	5147	06300900701675	05	Berks	W.WYOMISSING AVE.	WYOMISSING CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	4819	30	2	11	4	4	30	N	N	Y	Y	Base	--

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													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
Y	85764	8994	13020902602676	05	Carbon	PACKERTON HOLLOW	BEAVER RUN	Urban Principal Arterial	Community Arterial-Town Center	10305	35	2	12	8	8	40	N	N	--	N/A	Nominal 1 and 2	Funct Classif context as enhanced. Nominal 1 and 2 - at outskirts of popular recreational and kayaking area of Lehigh River Gorge.
--	85762	9104	13401000501489	05	Carbon	GERHARDS, QUAKAKE RD.	QUAKAKE CREEK	Rural Major Collector	Community Collector-Rural	958	45	2	11	4	4	30	N	N	--	Y	Base	--
--	85693	23144	39022202103224	05	Lehigh	HAMILTON ST.	CEDAR CREEK	Urban Principal Arterial	Community Arterial-Urban Core	8100	40	4	11	5	5	54	6	6	--	Y	Enhanced on Superstructure	Funct Classif context as enhanced. Bridge is in a town setting, but substructure is obscured by trees and vegetation.
--	89633	23228	39100400202044	05	Lehigh	1600'E.OF RACE ST.BRIDGE	CATASAUQUA CREEK	Urban Minor Arterial	Community Arterial-Urban Core	18527	35	2	11	5	5	32	5	N	--	Y	Nominal 1	Funct Classif context as nominal. Bridge substructure is all but invisible.
--	85683	23330	39204900302189	05	Lehigh	CAMP MEETING ROAD	SAUCON CREEK	Urban Local	Local Road/Street -Suburban Neighborhood	1558	45	2	11	5	5	32	N	N	--	Y	Nominal 1	External context. Along straight sight line and not really visible on sides.
--	89639	23136	39622200303519	05	Lehigh	TREXLERTOWN NEAR RT.100	IRON RUN	Urban Principal Arterial	Regional Arterial-Suburban Corridor	8891	45	3	11	4	4	41	N	N	--	Y	Base	--
--	85811	26785	45020900401748	05	Monroe	KRESGEVILLE	MIDDLE CREEK	Rural Principal Arterial	Regional Arterial-Rural	9859	35	2	11	8	8	38	N	N	--	Y	Base	--
Y	91680	26795	45020903110000	05	Monroe	AT JUNCT. WITH PA33 SB	APPENZELL CREEK	Urban Principal Arterial	Regional Arterial-Urban Core	18533	55	3	12	4	10	50	N	N	--	N/A	Base	--
Y	79157	26811	45031401101750	05	Monroe	2.5 M. S.OF SWIFTWATER	SWIFTWATER CREEK	Rural Major Collector	Community Collector-Rural	523	35	2	11	4	4	30	N	N	--	N/A	Base	--
Y	79158	26832	45039000300932	05	Monroe	MOUNTAIN HOME	MILL CREEK	Rural Minor Arterial	Community Arterial-Rural	6675	35	2	12	8	8	40	N	N	--	N/A	Base	--
Y	11649	26887	45061105100000	05	Monroe	TOBYHANNA	TOBYHANNA CREEK	Urban Minor Arterial	Community Arterial-Suburban Corridor	4650	55	4	12	8	8	68	N	N	--	N/A	Base	--
Y	11730	26888	45071500201751	05	Monroe	1 M. N.OF BRODHEADSVILLE	MCMICHAELS CREEK	Rural Major Collector	Neighborhood Collector-Rural	5127	45	2	11	4	4	30	N	N	--	N/A	Base	--
Y	96445	26901	45090300200000	05	Monroe	0.33 MI.W.OF PA 115	TRIB.TO TUNKHANNOCK CK.	Rural Major Collector	Community Collector-Rural	4269	55	2	11	5	5	32	N	N	--	N/A	Base	--
Y	85879	26904	45094000701313	05	Monroe	2 M.IE.OF BLAKESLEE	DAVEY RUN	Rural Minor Arterial	Community Arterial-Rural	5966	55	2	12	8	8	40	N	N	--	N/A	Base	--
Y	89628	26907	45094001400882	05	Monroe	5 M.IE.OF BLAKESLEE	TOBYHANNA CK.(POCONO LKE	Rural Minor Arterial	Community Arterial-Rural	5368	55	2	12	8	8	40	N	N	--	N/A	Base	--
Y	79204	26914	45094003900000	05	Monroe	2 M.IE. OF MT.POCONO	PARADISE CREEK	Rural Minor Arterial	Community Arterial-Rural	8406	45	2	12	8	8	40	N	N	--	N/A	Base	--
Y	79170	26924	45100400300941	05	Monroe	1.2 M. E. OF PA 314	PARADISE CREEK	Rural Local	Local Road/Street-Rural	491	35	2	10	2	2	24	N	N	Y	N/A	Base	--
Y	76368	26962	45200900101729	05	Monroe	BRIDGE ST.	POCONO CREEK	Urban Major Collector	Community Collector -Suburban Center	10568	35	2	11	5	5	32	5	5	--	N/A	Nominal 1	Funct Classif context as nominal. Potential for development of pedestrian and bicycle traffic.
Y	96447	27011	45300900220000	05	Monroe	T-939 S.OF MERWINSBURG	POHOPOCO CREEK	Rural Minor Collector	Community Collector-Rural	3707	45	2	11	3	3	28	N	N	Y	N/A	Base	--
Y	11758	27017	45301100300000	05	Monroe	SUGAR HOLLOW ROAD	SUGAR HOLLOW CREEK	Rural Minor Arterial	Community Arterial- Rural	1503	40	2	11	2	2	26	N	N	Y	N/A	Base	--
Y	79185	27042	45302301202040	05	Monroe	RIM ROCK DRIVE	POCONO CREEK	Urban Major Collector	Neighborhood Collector -Urban Core	2377	45	2	12	8	8	40	N	N	--	N/A	Nominal 1	Funct Classif context as enhanced. Bridge near 611 - potential trail along Pocono Creek in future plans. Some what sparse community, but in very close prox to both small and several comercial businesses.

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													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
Y	85849	27055	45400300702976	05	Monroe	LOCUST RIDGE ROAD	TROUT CREEK	Rural Local	Local Road/Street-Rural	2178	35	2	11	3	3	28	N	N	Y	N/A	Base	--
Y	79187	27059	45400600200000	05	Monroe	.7 M. W.OF LR 45024	POCONO CREEK	Rural Local	Local Road/Street-Rural	2810	40	2	11	8	9	39	N	N	--	N/A	Base	--
--	99555	28493	48003300200000	05	Northampton	US22/PA33 INTERCHANGE	SR 22(LR772)	Urban Freeways/Expressways/Interstates	Urban Non-interstate	28249	65	3	12	10	12	58	N	N	--	Y	Base	--
--	99555	28494	48003300210000	05	Northampton	US22/PA33 INTERCHANGE	SR 22(LR772)	Urban Freeways/Expressways/Interstates	Urban Non-interstate	28249	65	3	12	10	12	58	N	N	--	Y	Base	--
--	85947	28606	48051202101582	05	Northampton	W.MOORESTOWN RD.@ HEYER	BUSHKILL CR.	Urban Minor Arterial	Community Arterial-Suburban Corridor	6837	45	2	11	5	5	32	N	N	Y	Y	Base	--
--	67256	28660	48100400601655	05	Northampton	3 MI.W.OF RIVERTON	OUGHUGHTON CREEK	Rural Major Collector	Community Collector-Rural	2599	45	2	11	3	3	28	N	N	Y	Y	Base	--
--	12098	28672	48101500801677	05	Northampton	@ INT. WITH T-604	WALTZ CREEK	Rural Major Collector	Community Collector-Rural	1876	40	2	11	5	5	32	N	N	--	Y	Base	--
Y	12717	30678	53033902000276	05	Schuylkill	VILLAGE OF ZIONS GROVE	CATAWISSA CREEK	Rural Major Collector	Community Collector-Rural	626	40	2	10	2	2	24	N	N	Y	N/A	Base	--
Y	12710	30679	53033902400902	05	Schuylkill	CATAWISSA CREEK ROAD	CATAWISSA CREEK	Rural Major Collector	Community Collector-Rural	196	40	2	10	4	4	28	N	N	N	N/A	Base	--
Y	12710	30680	53033902401098	05	Schuylkill	CATAWISSA CREEK ROAD	TRIB.TO CATAWISSA CREEK	Rural Major Collector	Community Collector-Rural	196	40	2	10	4	8	32	N	N	N	N/A	Base	--
Y	85810	30730	53092400702725	05	Schuylkill	SOUTH SHENANDOAH	REMOVED RR & KEHLY RUN	Rural Principal Arterial	Community Arterial-Urban Core	5531	25	3	12	10	10	56	N	N	--	N/A	Nominal 1	Funct Classif context as enhanced, but substructure not visible from road or sides. Southern gateway to Shenandoah. May have issue with design speed of 55 mph but should attempt nominal treatment.
Y	85724	30832	53401600100000	05	Schuylkill	VILLAGE OF KLINGERSTOWN	MAHANTANGO CREEK	Rural Minor Collector	Community Collector -Suburban Corridor	813	40	2	11	3	3	28	N	N	N	N/A	Base	--
Y	47695	30856	53403600300000	05	Schuylkill	0.75 M.I.E.OF COLUMBIA CO.	TREXLER RUN	Rural Local	Rural Local	323	40	2	9	2	2	22	N	N	Y	N/A	Base	--
Y	12522	30862	53403900200000	05	Schuylkill	VILLAGE OF HAAS	MAHANTANGO CREEK	Rural Local	Rural Local	286	40	2	9	2	2	22	N	N	Y	N/A	Base	--
--	56830	7262	09203701900000	06	Bucks	BILLBOARD 38C08 (3151E10)	EAST BR.QUEEN ANNE CREEK	Urban Principal Arterial	Regional Arterial-Suburban Corridor	7413	40	4	12	8	8	64	N	N	--	Y	Base	--
--	81284	10497	15304401300000	06	Chester	NEAR WEST GROVE 45F06 (3799E7)	MIDDLE BR WHITE CLAY CR	Rural Local	Local Road/Street-Rural	105	55	2	11	2	2	26	N	N	Y	Y	Nominal 2	Funct Classif context as nominal. Bridge in Chester County, crosses wild and scenic river.
--	86306	10599	15400800402407	06	Chester	BRANDYWINE MANOR 19E02 (3360E09)	INDIAN RUN	Rural Local	Local Road/Street-Rural	375	35	2	9	2	2	22	N	N	Y	Y	Nominal 1 and 2	Funct Classif context as nominal. Bridge in Chester County with nearby hstoric farm, pedestrian and bike generators nearby, and located on a high quality trout stream.
--	15232	15002	23042000701072	06	Delaware	FOLSOM, NR MACDADE 35D09/3697K07	STONY CREEK / 3697-K6	Urban Principal Arterial	Regional Arterial-Town/Village Neighborhood	14569	35	2	11	4	6	32	6	N	--	Y	Base	--
--	102315	27513	46066302700894	06	Montgomery	PERKIOMEN HEIGHTS 02D13	BRCH PERKIOMEN CR/2916H1	Rural Principal Arterial	Regional Arterial-Rural	8519	45	2	12	8	8	40	N	N	--	Y	Nominal 1 and 2	Bridge is in park setting in a highly used park.
--	102218	27605	46201300320000	06	Montgomery	1.5MI.WEST PHILA. 33C07	VALLEY CR. 3372B1	Urban Principal Arterial	Regional Arterial-Town Center	14085	35	2	12	6	6	36	N	N	--	Y	Base	--
--	86343	27643	46202700500209	06	Montgomery	SPRINGFIELD TWP. 31B07	SANDY RUN	Urban Minor Arterial	Community Arterial-Rural	12836	35	2	11	5	5	32	N	N	Y	Y	Base	--
--	67373	27757	46304400500389	06	Montgomery	WYNNEWOOD;WOODSIDE 3478H10	BRANCH INDIAN CREEK	Urban Major Collector	Community Collector-Town/Village Neighborhood	9341	35	2	11	2	2	26	6	6	Y	Y	Nominal 1 and 2	Funct Classif context as nominal. Bridge is located inside of community with sidewalks and adjacent to Shortridge Memorial Park.

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level
													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
--	81290	27868	46404200341011	06	Montgomery	NW POTTSTOWN 11B6/3026C8	MANATAWNY CREEK	Urban Major Collector	Community Collector-Town/Village Neighborhood	2319	35	2	11	3	3	28	N	N	Y	Y	Nominal 1	Functional classification as nominal. Traffic context suggests Nominal 1, which would replace a nominal-level existing bridge. Potential for bicycle traffic in future.
--	87428	47	1003003000000	08	Adams	GETTYSBURG	ROCK CREEK	Urban Principal Arterial	Regional Arterial-Suburban Neighborhood	16006	45	2	12	8	8	48	6'	6'	--	Y	Enhanced	Enhanced context. Bridge located in Gettysburg Historic District. Sidewalks on both approaches.
--	87427	71	01003402200745	08	Adams	N. OF BIGLERVILLE	OPOSSUM CREEK	Rural Minor Arterial	Community Arterial-Rural	3671	45	2	12	8	8	40	N	N	--	Y	Nominal 2	External context. Bridge located within large historic district.
--	87417	75	01003402700000	08	Adams	IDAVILLE	BERMUDIAN CREEK	Rural Minor Arterial	Community Arterial-Rural	3090	45	2	12	8	8	40	N	N	--	Y	Base	--
--	87673	87	01009701000240	08	Adams	1 MI. N. OF LITTLESTOWN	ALLOWAY CREEK	Rural Minor Arterial	Community Arterial-Rural	9476	55	2	12	8	8	40	N	N	--	Y	Nominal 1 and 2	Travel context from bridge located on bicycle route S and external context from being within large historic district.
--	18051	98	01011601100000	08	Adams	1 MI N E OF FAIRFIELD	MUDDY RUN	Rural Minor Arterial	Community Arterial-Rural	4088	45	2	12	8	8	40	N	N	--	Y	Base	--
--	99774	128	01019402401689	08	Adams	ABBOTTSTOWN	BRANCH OF BEAVER CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	10200	40	2	12	8	8	40	N	N	--	Y	Base	--
--	87436	135	01023401202343	08	Adams	CULPS CORNERS	CONEWAGO CREEK	Rural Minor Collector	Neighborhood Collector-Rural	593	45	2	11	3	3	28	N	N	--	Y	Nominal 1 and 2	Travel context from bridge located on bicycle route S and external context from being within large historic district.
--	87434	148	01023403100000	08	Adams	2 MI.N.E. OF BIGLERVILLE	OPOSSUM CREEK	Rural Minor Arterial	Community Arterial-Rural	5582	55	2	12	8	8	40	N	N	--	Y	Base	--
--	18146	160	01039400600526	08	Adams	VILLAGE OF TABLE ROCK	CONEWAGO CREEK	Rural Minor Collector	Neighborhood Collector-Rural	2111	35	2	12	8	8	40	N	N	--	Y	Base	--
--	87676	185	01101400501701	08	Adams	VILLAGE OF LIMEROCK MILL	BERMUDIAN CREEK	Rural Minor Collector	Neighborhood Collector-Rural	560	45	2	11	3	3	28	N	N	--	Y	Base	--
--	87671	198	01101601101587	08	Adams	GARDNERS	UPPER BERMUDIAN CREEK	Rural Local	Local Road/Street-Rural	220	45	2	11	3	3	28	N	N	--	Y	Base	--
--	74951	229	01200600400591	08	Adams	2 MI. S.E. HUNTERSTOWN	CSX; WESTERN MARYLAND RR	Rural Minor Collector	Neighborhood Collector-Rural	1173	40	2	11	3	3	28	N	N	--	Y	Base	--
--	87675	319	01301301000061	08	Adams	KNOXLYN	MARSH CREEK	Rural Minor Collector	Neighborhood Collector-Rural	826	40	2	11	3	3	28	N	N	--	Y	Base	--
--	87437	362	01400500101339	08	Adams	1/4 MI.N. OF BENDERSVILLE	OPOSSUM CREEK	Rural Local	Local Road/Street-Rural	191	35	2	11	3	3	28	N	N	--	Y	Nominal 2	External context. Bridge located within large historic district.
--	87438	364	01400601202897	08	Adams	ASPERS	OPOSSUM CREEK	Rural Minor Collector	Neighborhood Collector-Rural	1125	40	2	11	3	3	28	N	N	--	Y	Nominal 2	External context. Bridge located within large historic district.
--	90784	381	01401100101013	08	Adams	NEAR ADAMS & FRANK.LINE	CARBAUGH RUN	Rural Local	Local Road/Street-Rural	176	35	2	11	3	3	28	N	N	--	Y	Nominal 1 and 2	External context and travel context. Bridge located within Caledonia State Park and near Michaux State Forest. Bridge also near Golf course.
--	90694	13564	21001105202844	08	Cumberland	1 MI EAST OF MIDDLESEX	LETORT SPRING CREEK	Urban Principal Arterial	Regional Arterial-Suburban Corridor	12385	35	5	12	5	5	74	5	N	--	Y	Base	--
--	87424	13616	21003400700827	08	Cumberland	HUNTER'S RUN	HUNTERS RUN	Rural Minor Arterial	Community Arterial-Rural	5507	55	2	12	8	8	40	N	N	--	Y	Nominal 1 and 2	External context. Bridge is part of Appalachian Trail. Several camp grounds are located nearby.
--	90695	13735	21023300900266	08	Cumberland	PINE GROVE FURNACE	TOMS RUN	Rural Major Collector	Community Collector-Rural	706	40	2	11	4	4	30	N	N	--	Y	Nominal 1 and 2	External context. Bridge is located on the Appalachian trail, inside of the Michaux State Forest, Pine Grove Furnace State Park and the Buck Ridge Trail.
--	89274	13741	21023303801454	08	Cumberland	NORTH OF NEWVILLE	CONODOQUINET CREEK	Rural Minor Arterial	Community Arterial-Rural	3907	45	2	12	8	8	40	N	N	--	Y	Base	--
--	74054	13824	21099702601555	08	Cumberland	MCCREA	DOUBLING GAP CREEK	Rural Minor Collector	Neighborhood Collector-Rural	400	40	2	11	3	3	28	N	N	--	Y	Base	--
--	90739	13896	21203100100000	08	Cumberland	Spanglers Mill over Yellow Breeches Ck	YELLOW BREECHES CREEK	Urban Major Collector	Community Collector-Rural	4141	40	2	12	8	8	40	N	N	--	Y	Nominal 1 and 2	External context. Bridge is adjacent to boat launch and over water trail.
--	102789	13897	21203100100187	08	Cumberland	S of Lisburn on Spangler Mill, mill race (Y.B.)	MILL RACE	Urban Major Collector	Community Collector-Rural	4155	40	2	12	8	8	40	N	N	--	Y	Nominal 1 and 2	External context. Bridge is adjacent to boat launch and over water trail. Paired with BR Key 13896.
--	74055	13946	21301900100000	08	Cumberland	MONTSERA	YELLOW BREECHES CREEK	Rural Local	Local Road/Street-Rural	402	35	2	11	3	3	28	N	N	--	Y	Base	--
--	90769	13948	21400100200000	08	Cumberland	2 MI.N. OF SHIPPENSBURG	MIDDLE SPRING CR.	Rural Local	Local Road/Street-Rural	1244	40	2	11	3	3	28	N	N	--	Y	Base	--
--	90770	13961	21400800302148	08	Cumberland	WASHINGTON	BACK CREEK	Rural Local	Local Road/Street-Rural	601	35	2	11	3	3	28	N	N	--	Y	Base	--
--	100078	14441	22101800101692	08	Dauphin	3 MI. N W GRATZ	DEEP CREEK	Rural Local	Local Road/Street-Rural	81	40	2	10	2	2	24	N	N	--	Y	Base	--
--	47519	14481	22201200100356	08	Dauphin	.5 MI. N. OF HERSHEY	NS RAILROAD (PENN EAST)	Urban Local	Local Road/Street-Suburban Neighborhood	3114	35	2	12	4	4	32	N	N	--	Y	Nominal 1	External context. Bridge setting is on southern approach to Hershey park.

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level
													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
--	87457	14578	22400400202505	08	Dauphin	2 MI. W. ENDERS	ARMSTRONG CREEK	Rural Local	Local Road/Street-Rural	634	40	2	11	3	3	28	N	N	--	Y	Base	--
--	87686	17407	28023302000092	08	Franklin	AT CALEDONIA STATE PARK	CARBAUGH RUN	Rural Major Collector	Community Collector-Rural	1485	40	2	11	5	5	32	N	N	--	Y	Nominal 1	External context. Bridge located across from Caledonia State park. May be southern access to park. Substructure obscured from Rte 30 or approaches. Bridge is next to t-intersection with light.
--	63173	17408	28027400200000	08	Franklin	1 MI. N. OF DOYLESBURG	BR. TUSCARORA CREEK	Rural Minor Arterial	Community Arterial-Rural	306	55	2	11	3	3	28	N	N	--	Y	Base	--
--	87683	17471	28099706500000	08	Franklin	TOWNSHIP LINE LURG.& LETT	CONODOGUINET CREEK	Rural Minor Arterial	Community Arterial-Rural	4803	55	2	11	8	8	38	N	N	--	Y	Base	--
--	78710	17592	28400801900060	08	Franklin	2 MI. NE OF EDENVILLE	DENNIS RUN	Rural Local	Local Road/Street-Rural	672	45	2	11	3	3	28	N	N	--	Y	Base	--
--	78708	17593	28400802301142	08	Franklin	3 MI E OF EDENVILLE	ROCKY SPRING CREEK	Rural Local	Local Road/Street-Rural	672	45	2	11	3	3	28	N	N	--	Y	Base	--
--	19965	20976	36002300301231	08	Lancaster	1.5 MI.E. of Marietta	Chickies Creek	Rural Minor Arterial	Community Arterial-Rural	2775	55	2	12	8	8	40	N	N	--	Y	Base	--
--	87315	21043	36003004802322	08	Lancaster	LEAMAN PLACE	ESHELMAN'S RUN	Urban Principal Arterial	Regional Arterial-Suburban Corridor	19027	35	3	12	8	8	52	N	N	--	Y	Base	--
--	87316	21196	36032201500954	08	Lancaster	VILLAGE OF CLAY	MIDDLE CREEK	Urban Principal Arterial	Regional Arterial-Suburban Corridor	8535	40	2	12	8	8	40	N	N	--	Y	Base	--
--	87536	21237	36034003700000	08	Lancaster	1 MI. W. OF CAIN	PEQUEA CREEK	Rural Major Collector	Community Collector-Rural	4639	40	2	11	6	6	34	N	N	--	Y	Base	--
--	87554	21238	36034003801674	08	Lancaster	CAINS	MILLER'S RUN	Rural Major Collector	Community Collector-Rural	4639	40	2	12	6	6	36	N	N	--	Y	Nominal 2	External context. Bridge located within Pequa North Rural Historic District. Treatment will be used to avoid adverse effects.
--	19915	21251	36037204240000	08	Lancaster	Christiana Borough	Williams Run	Urban Minor Arterial	Community Arterial-Town/Village Neighborhood	1630	25	2	12	4	4	32	5	5	--	Y	Nominal 1	External context. Bridge is a southern gateway into the town of Christiana. Substructure not visible from road or sides. Nominal 1 should maintain existing look.
--	87505	21277	36046202200000	08	Lancaster	Columbia Ave over Little Conestoga Creek	LITTLE CONESTOGA CREEK	Urban Minor Arterial	Community Arterial-Suburban Corridor	19375	35	3	12	8	8	52	6	6	--	Y	Base	--
--	91194	21292	36062501302573	08	Lancaster	1 MI. S. OF BOWMANVILLE	MUDDY CREEK	Rural Major Collector	Community Collector-Suburban Corridor	5928	45	2	11	4	4	30	N	N	Y	Y	Nominal 1 and 2	Funcnt Classif context as nominal. Bridge located immediately adjacent to Historic Mill in Bowmansville Roller Mill Historic District.
--	78868	21326	36077204500174	08	Lancaster	1.5 MI. S.E. OF LITITZ	LITITZ RUN	Urban Minor Arterial	Community Arterial-Suburban Corridor	9762	40	2	12	8	8	40	N	N	--	Y	Base	--
--	91266	21403	36101900500000	08	Lancaster	1.5 MI. S.E. CHURCHTOWN	Conestoga River	Rural Local	Community Collector-Rural	367	40	2	11	3	3	28	N	N	--	Y	Base	--
--	87521	21409	36102100420000	08	Lancaster	S.OF UNION GROVE	CONESTOGA RIVER	Rural Local	Local Road/Street-Rural	356	40	2	11	3	3	28	N	N	--	Y	Base	--
--	74958	21415	36102402100000	08	Lancaster	WEST OF SPRINGVILLE	INDIAN RUN	Rural Minor Collector	Neighborhood Collector-Rural	948	40	2	11	3	3	28	N	N	--	Y	Base	--
--	19927	21417	36102500801639	08	Lancaster	0.75 mi NW of Farmersville	Conestoga River	Rural Minor Collector	Neighborhood Collector-Rural	1396	45	2	11	3	3	28	N	N	--	Y	Nominal 2	External context. Bridge spans Contestoga River water trail.
--	100523	21439	36103400200000	08	Lancaster	1MI NE DENVER	SWAMP CREEK	Rural Local	Local Road/Street-Rural	1047	40	2	11	3	3	28	N	N	--	Y	Base	--
--	63230	21446	36103501500846	08	Lancaster	0.75 MILE N. OF NEWTOWN	MIDDLE CREEK	Rural Minor Collector	Community Collector-Rural	1115	40	2	11	3	3	28	N	N	--	Y	Base	--
--	20124	21454	36103702100000	08	Lancaster	Speedwell Forge Rd/Hammer Creek	HAMMER CREEK	Rural Minor Collector	Community Collector-Rural	454	40	2	11	3	3	28	N	N	--	Y	Base	--
--	87706	21459	36103900500000	08	Lancaster	1.5 MI.N. OF MILLWAY	MIDDLE CREEK	Rural Minor Collector	Community Collector-Rural	400	45	2	11	3	3	28	N	N	--	Y	Base	--
--	91323	21474	36104800500000	08	Lancaster	1.25 MI.E. OF TERRE HILL	BLACK CREEK	Rural Local	Local Road/Street-Rural	207	35	2	10	2	2	24	N	N	--	Y	Base	--
--	87515	21482	36105300200000	08	Lancaster	0.5 MI. W. DENVER BORO	COCALICO CREEK	Urban Local	Local Road/Street-Rural	622	40	2	11	3	3	28	N	N	--	Y	Base	--
--	87566	21487	36105500202673	08	Lancaster	Reinholds Rd over Swamp Ck (N of i76)	SWAMP CREEK	Rural Local	Local Road/Street-Rural	2477	35	2	11	3	3	28	N	N	--	Y	Nominal 1	External view context obscured by woods. Carries Horse-Shoe Trail, and bridge at outer limits of Denver.
--	91324	21514	36200200602329	08	Lancaster	KIRKS MILL	REYNOLDS RUN	Rural Local	Local Road/Street-Rural	666	35	2	11	3	3	28	N	N	--	Y	Base	--
--	87516	21518	36200500300000	08	Lancaster	1MI NOF NEW TEXAS	LITTLE CONOWINGO CRK	Rural Local	Local Road/Street-Rural	279	40	2	11	3	3	28	N	N	--	Y	Base	--
--	20123	21533	36201000560000	08	Lancaster	PUSEYVILLE	W BR OCTORARO	Rural Local	Local Road/Street-Rural	579	45	2	11	3	3	28	N	N	--	Y	Base	--
--	87562	21536	36201200320000	08	Lancaster	1 MI.N. OF UNION	TRIB W.BR.OCTORARO	Rural Local	Local Road/Street-Rural	248	35	2	11	3	3	28	N	N	--	Y	Base	--
--	91108	21545	36201500400000	08	Lancaster	2 MI E OF COLLINS	WEST BRANCH OCTORARO CR	Rural Minor Collector	Community Collector-Rural	273	35	2	11	3	3	28	N	N	--	Y	Base	--
--	19964	21558	36202000100000	08	Lancaster	CAMARGO	BEAVER CREEK	Rural Local	Local Road/Street-Rural	824	45	2	11	3	3	28	N	N	--	Y	Base	--
--	87518	21559	36202000200000	08	Lancaster	1 MI.N. CAMARGO	BOWEY RUN	Rural Local	Local Road/Street-Rural	484	45	2	11	3	3	28	N	N	--	Y	Base	--
--	87501	21595	36204500700000	08	Lancaster	North of Bird In Hand	Mill Creek	Rural Minor Collector	Community Collector-Rural	1733	40	2	11	4	4	30	N	N	--	Y	Base	--
--	19812	21601	36300400200000	08	Lancaster	DRUMORE	FISHING CREEK	Rural Minor Collector	Community Collector-Rural	348	40	2	11	3	3	28	N	N	--	Y	Base	--
--	63229	21637	36301702401388	08	Lancaster	0.5 MI.NORTH OF LETORT	W.BR.CONESTOGA CREEK	Urban Minor Collector	Neighborhood Collector-Rural	1770	40	2	11	5	5	32	N	N	--	Y	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level
													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
--	20151	21662	36303201100000	08	Lancaster	Letort Road over Little Conestoga Creek	LITTLE CONESTOGA CREEK	Urban Minor Collector	Community Collector-Suburban Corridor	2146	40	2	11	4	4	32	N	N	--	Y	Base	--
--	91352	22812	38402000800000	08	Lebanon	INDIANTOWN GAP	AIRE RUN	Rural Major Collector	Community Collector-Rural	2836	45	4	12	9	9	66	N	N	--	Y	Base	--
--	87462	29426	50001100300893	08	Perry	MARYSVILLE BORO	FISHING CREEK	Urban Principle Arterial	Regional Arterial-Suburban Corridor	17769	40	3	12	8	8	52	N	N	--	Y	Base	--
--	93582	29451	50001701101051	08	Perry	2 MILES WEST OF KISTLER	BIXLERS RUN	Rural Major Collector	Community Collector-Rural	421	40	2	11	3	3	28	N	N	--	Y	Base	--
--	79054	29468	50001707600000	08	Perry	LIVERPOOL BORO	TRIB TO SUSQUEHANNA	Rural Major Collector	Community Collector-Rural	1452	35	2	11	5	5	32	N	N	--	Y	Base	--
--	73961	29518	50007401900530	08	Perry	GREEN PARK	MONTOUR CREEK	Rural Major Collector	Community Collector-Rural	2708	45	2	11	4	4	30	N	N	Y	Y	Base	--
--	87465	29565	50085002201839	08	Perry	1MI NO OF FORT ROBINSON	BIXLERS RUN	Rural Major Collector	Community Collector-Rural	916	45	2	11	3	3	28	N	N	--	Y	Base	--
--	90716	29566	50085002501777	08	Perry	FORT ROBINSON	BIXLERS RUN	Rural Major Collector	Community Collector-Rural	916	45	2	11	3	3	28	N	N	--	Y	Base	--
--	87491	29605	50101502002360	08	Perry	2 M.I.S. OF MILLERSTOWN	WILD CAT RUN	Rural Minor Collector	Neighborhood Collector-Rural	2859	55	2	12	4	4	32	N	N	--	Y	Base	--
--	101098	29651	50300600100014	08	Perry	4 MI SW OF BLAIN	SHAEFFER'S RUN	Rural Local	Local Road/Street-Rural	342	40	2	11	3	3	28	N	N	--	Y	Base	--
--	79042	29673	50301700100000	08	Perry	AT BRIDGEPORT	TRIB SHERMANS CREEK	Rural Local	Local Road/Street-Rural	184	30	2	11	3	3	28	N	N	--	Y	Base	--
--	79047	29693	50400701001472	08	Perry	DONNALLY'S MILLS	RACCOON CREEK	Rural Minor Collector	Neighborhood Collector-Rural	628	35	2	11	3	3	28	N	N	--	Y	Base	--
--	91353	37488	66012401400000	08	York	1.5 W OF DELROY	KREUTZ CREEK	Urban Minor Collector	Community Collector-Suburban Corridor	6106	40	2	12	8	8	40	N	N	--	Y	Base	--
--	87693	37491	66012402502532	08	York	1 MILE N OF CRALEY	CABIN CREEK	Rural Major Collector	Community Collector-Rural	2211	45	2	11	4	4	30	N	N	--	Y	Base	--
--	91191	37590	66042504600314	08	York	1.2 MI.S.E. OF CRALEY	FISHING CREEK	Rural Major Collector	Community Collector-Rural	1625	45	2	11	4	4	30	N	N	--	Y	Base	--
--	78860	37607	66061601000255	08	York	5 MI. N.W. OF GLEN ROCK	TRIB TO S BR CODORUS CR	Rural Major Collector	Community Collector-Rural	1668	35	2	11	5	5	32	N	N	--	Y	Nominal 1	External context. Bridge is near but not on trail, near Glen Rock historic district. Should rate as a travel context treatment as gateway to Glen Rock.
--	87551	37608	66061601001014	08	York	1.0 MI. NW GLEN ROCK	CENTERVILLE CREEK	Rural Major Collector	Community Collector-Rural	1668	35	2	11	5	5	32	N	N	--	Y	Nominal 1	External context. Bridge is near but not on trail, near Glen Rock historic district. Should rate as a travel context treatment as gateway to Glen Rock.
--	78878	37641	66092100900000	08	York	3 M.I.E. OF DOVER	TRIB TO LITTLE CONEWAGO	Urban Minor Collector	Community Collector-Suburban Corridor	7496	40	2	12	8	8	40	N	N	--	Y	Base	--
--	78896	37725	66202800800249	08	York	DELTA BORO	SCOTT'S RUN	Rural Local	Local Road/Street-Suburban Neighborhood	365	25	2	10	3	3	26	5	5	--	Y	Nominal 1 and 2	Funcnt Classif context as nominal. Bridge crosses wild trout stream. Currently has sidewalks on both sides.
--	87695	37726	66202900902536	08	York	5 MILE NE OF RED LION	CABIN CREEK	Urban Collector	Community Collector-Rural	1098	40	2	11	3	3	28	N	N	--	Y	Base	--
--	91367	37878	66304500800853	08	York	JACOBS MILLS	OIL CREEK	Rural Local	Local Road/Street-Rural	1580	35	2	12	4	4	32	N	N	--	Y	Base	--
--	87596	37890	66305100200000	08	York	1 MI.W. OF JEFFERSON	CODORUS CREEK	Rural Local	Local Road/Street-Rural	108	30	2	10	2	2	24	N	N	--	Y	Base	--
--	87595	37921	66307100100000	08	York	1 MILE S.W. OF PA 94	SOUTH BR CONEWAGO CREEK	Rural Local	Local Road/Street-Rural	710	35	2	11	3	3	28	N	N	--	Y	Base	--
--	74944	37946	66400102102301	08	York	2 MILES E. OF DOVER	FOX RUN	Urban Minor Arterial	Community Arterial-Suburban Corridor	8846	40	2	12	8	8	40	N	N	--	Y	Base	--
--	83428	37976	66401200602478	08	York	0.5 M.I.E. OF KRALLTOWN	DOE RUN	Rural Minor Collector	Community Collector-Rural	420	45	2	11	3	3	28	N	N	--	Y	Base	--
--	90222	38007	66403300403136	08	York	1.0 MI.N.E. ANDERSONTOWN	YELLOW BREECHES CREEK	Rural Local	Local Road/Street-Rural	233	30	2	11	3	3	28	N	N	--	Y	Nominal 2	External context. Bridge is located on Yellow Breeches Water Trail.
--	91192	38023	66405100300581	08	York	1 MI. N.E. FARMERS	PARADISE CREEK	Rural Local	Local Road/Street-Rural	1073	40	2	11	3	3	28	N	N	--	Y	Base	--
--	88114	3954	05003001000907	09	Bedford	2.8 MI.W. OF SHELLSBURG	BURNS CREEK	Rural Principal Arterial	Regional Arterial - Rural	2000	55	2	12	8	8	40	N	N	N	N	Base	--
--	21558	3955	05003001100000	09	Bedford	2.3 MI.W.OF SHELLSBURG	SHAWNEE CREEK	Rural Principal Arterial	Regional Arterial - Rural	2000	55	2	12	8	8	40	N	N	N	N	Nominal 2	External context. Bridge is adjacent to Buffalo Farm historic property.
--	21563	4010	05005600901305	09	Bedford	1.68 MILE WEST FROM PA 96	BAREFOOT RUN	Rural Principal Arterial	Regional Arterial - Rural	3752	55	2	12	8	8	40	N	N	N	N	Base	--
--	21455	4044	05009602600000	09	Bedford	MADLEY	WOLF CAMP RUN	Rural Major Collector	Community Collector - Rural	1424	55	2	11	4	4	30	N	N	N	N	Base	--
--	88121	4122	05086901201328	09	Bedford	3.16 MILE WEST FROM PA 96	BOBS CREEK	Rural Major Collector	Community Collector - Rural	747	45	2	11	3	3	28	N	N	N	N	Base	--
--	21596	4174	05101100400000	09	Bedford	2 MI.N.OF BREEZEWOOD	TUB MILL RUN	Rural Local	Local Road/Street - Rural	189	55	2	10	2	2	24	N	N	N	Y	Base	--
--	21552	4177	05101200400000	09	Bedford	1.73 MILE EAST FROM SR 1009	RAYSTOWN BR JUNIATA RIV.	Rural Local	Local Road/Street - Rural	417	55	2	10	2	2	24	N	N	N	Y	Nominal 2	External context. Bridge is located on a water trail.
--	21600	4196	05102000500880	09	Bedford	0.16 MILE EAST FROM SR 1009	PIPERS RUN	Rural Minor Collector	Community Collector - Rural	522	55	2	11	3	3	28	N	N	N	Y	Base	--
--	74424	4386	05403101601407	09	Bedford	VILLAGE OF QUEEN	BEAVERDAM CREEK	Rural Minor Collector	Neighborhood Collector - Rural	1107	45	2	11	3	5	30	N	N	N	Y	Base	--
--	22107	5699	07101302400000	09	Blair	.75 MI.NE.OF CULP	SINKING RUN	Rural Major Collector	Community Collector - Rural	576	55	2	11	4	4	30	N	N	N	Y	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	74376	5702	07101302500908	09	Blair	1.5 MI.NE.OF CULP	SINKING RUN	Rural Major Collector	Community Collector - Rural	576	55	2	11	4	4	30	N	N	N	Y	Base	--
--	21957	5709	07101303601234	09	Blair	0.23 MILE NORTH FROM PA 453	SINKING RUN	Rural Local	Local Road/Street - Rural	564	55	2	11	4	4	30	N	N	N	Y	Base	--
--	21961	5763	07300500100050	09	Blair	.5 MI.W.OF SPROUL	BEAVERDAM CREEK	Rural Local	Local Road/Street - Rural	414	55	2	11	2	2	26	N	N	Y	Y	Base	--
--	21967	5883	07403100301171	09	Blair	TYRONE BOROUGH	DECKER RUN	Urban Minor Collector	Community Collector - Town/Village Neighborhood	1568	35	2	11	4	4	30	N	N	Y	Y	Base	--
--	22626	8424	11016002000862	09	Cambria	0.2 MILE NORTH OF TR 869E	LAUREL RUN	Rural Major Collector	Community Collector - Rural	2879	55	2	11	5	5	32	N	N	Y	N	Base	--
--	22627	8425	11016002200000	09	Cambria	1.0 MILE NORTH OF TR 869E	LAUREL RUN	Rural Major Collector	Community Collector - Rural	2879	55	2	11	5	5	32	N	N	Y	N	Base	--
--	22444	8580	11102601101804	09	Cambria	0.18 MILE WEST FROM PA 53	CLEARFIELD CREEK	Rural Major Collector	Community Collector - Rural	738	55	2	11	5	3	30	N	N	N	Y	Base	--
--	22797	17813	29048400101102	09	Fulton	0.2 MILE EAST OF TR 26	SIDELING HILL CREEK	Rural Major Collector	Community Collector - Rural	167	55	2	10	2	2	24	N	N	N	Y	Base	--
--	22798	17826	29052201401573	09	Fulton	NEEDMORE	BARNETT RUN	Rural Minor Arterial	Community Arterial - Rural	1627	35	2	11	4	4	30	N	N	Y	Y	Base	--
--	22825	17827	29052201600330	09	Fulton	3/4 MILE N. OF NEEDMORE	PALMER RUN	Rural Minor Arterial	Community Arterial - Rural	1916	55	2	11	4	4	30	N	N	Y	N	Base	--
--	22826	17828	29052201601370	09	Fulton	1 MILE NORTH OF NEEDMORE	LITTLE TONOLOWAY CREEK	Rural Minor Arterial	Community Arterial - Rural	1916	55	2	11	4	4	30	N	N	Y	N	Base	--
--	22827	17832	29052202901545	09	Fulton	0.47 MILE NORTH FROM PA 928	BIG COVE CREEK	Rural Minor Arterial	Community Arterial - Rural	2507	55	2	11	4	4	30	N	N	Y	N	Base	--
--	22832	17850	29065503900454	09	Fulton	.1 M N TR30,HARRISONVILLE	SINDELDECKER BRANCH	Rural Major Collector	Community Collector - Rural	204	55	2	11	3	3	28	N	N	N	Y	Base	--
--	88142	17853	29065504501203	09	Fulton	1.4 MI. SOUTH OF TURNPIKE	FORTUNE TELLER CREEK	Rural Major Collector	Community Collector - Rural	204	55	2	11	3	3	28	N	N	N	Y	Base	--
--	22837	17873	29100100100266	09	Fulton	WEBSTER MILLS	SPRING RUN	Rural Local	Local Road/Street - Rural	2424	45	2	11	3	3	28	N	N	Y	Y	Base	--
--	74433	18576	31002202300000	09	Huntingdon	OVER PA 26	PA 0026	Urban Principal Arterial	Regional Arterial - Suburban Corridor	5161	45	4	11	9	9	62	N	N	N	N	Base	--
--	23030	18601	31002604900654	09	Huntingdon	.1 MI N SR1011,CNTR UNION	MURRAY RUN	Rural Minor Arterial	Community Arterial - Rural	1853	55	2	11	5	5	32	N	N	N	N	Base	--
--	22980	18603	31002605100972	09	Huntingdon	0.2 MILE NORTH OF SR 1009	HORN RUN	Rural Minor Arterial	Community Arterial - Rural	2461	55	2	11	5	5	32	N	N	Y	N	Nominal 2	External context. Bridge is adjacent to civic park north of Huntingdon.
--	23039	18703	31065505400533	09	Huntingdon	.7 MI.N.SR 1005,FOUSETOWN	SADDLERS RUN	Rural Minor Arterial	Community Arterial - Rural	1253	55	2	11	5	5	32	N	N	N	N	Nominal 1	External context. Carries 3 trails - Standing Stone Trail, Mid State Trail, Great Eastern Trail - across Saddler Creek. Substructure not visible.
--	23038	18742	31091301901896	09	Huntingdon	0.4 MILE EAST FROM SR 3019, ROBERTSDALE	GREAT TROUGH CREEK	Rural Minor Arterial	Community Arterial - Rural	1308	35	2	11	5	5	32	N	N	N	Y	Base	--
--	23058	18773	31100800400000	09	Huntingdon	1 MIE.OF COTTAGE	SHAVERS CREEK	Rural Local	Local Road/Street - Rural	93	55	2	10	2	2	24	N	N	N	Y	Base	--
--	23114	18784	31101900100185	09	Huntingdon	0.03 MILE NORTH FROM PA 26	STANDING STONE CREEK	Rural Local	Local Road/Street - Rural	242	55	2	10	2	2	24	N	N	N	Y	Base	--
--	74449	18785	31101900600000	09	Huntingdon	1.75 MILE NORTH FROM PA 26	E BR STANDING STONE CRK	Rural Local	Local Road/Street - Rural	242	45	2	10	2	2	24	N	N	N	Y	Base	--
--	23116	18881	31400900200000	09	Huntingdon	0.24 MILE NORTH FROM PA 305	SHAVERS CREEK	Rural Minor Collector	Neighborhood Collector - Rural	407	55	2	10	2	2	24	N	N	Y	Y	Base	--
--	88158	45123	55003003602574	09	Somerset	2.44 MILE WEST FROM PA 160	TRIB CALENDAR RUN	Rural Principal Arterial	Community Arterial - Rural	3530	55	2	12	8	8	40	N	N	N	Y	Base	--
--	92698	41517	55003003702626	09	Somerset	1.74 MILE WEST FROM PA 160	CALENDAR RUN	Rural Principal Arterial	Community Arterial - Rural	3530	35	2	12	8	8	40	N	N	N	Y	Base	--
--	23517	31343	55003104200000	09	Somerset	0.5 MILE EAST OF SR 1005	SANDY HOLLOW CREEK	Rural Minor Arterial	Community Arterial - Rural	2799	55	2	12	8	8	40	N	N	N	Y	Base	--
--	23586	31469	55052300301840	09	Somerset	LISTONBURG	WHITES CREEK	Rural Minor Arterial	Community Arterial - Rural	1066	45	2	11	3	3	28	N	N	Y	Y	Base	--
--	23410	31470	55052300701200	09	Somerset	BEACHLY	LAUREL RUN	Rural Minor Arterial	Community Arterial - Rural	1181	55	2	11	3	3	28	N	N	Y	Y	Base	--
--	74446	31471	55052300801065	09	Somerset	DUMAS	TRIB TO WHITES CREEK	Rural Minor Arterial	Community Arterial - Rural	1181	55	2	11	3	3	28	N	N	Y	Y	Base	--
--	23516	31521	55100400101850	09	Somerset	SHANKSVILLE BORO.	RHOADS CREEK	Rural Major Collector	Community Collector - Suburban Corridor	949	25	2	11	5	5	32	5	N	N	Y	Nominal 1 and 2	Funcn classif context as nominal. Bridge is adjacent to entrance to town park and lake.
--	23571	31528	55100700300000	09	Somerset	0.99 MILE NORTH FROM PA 160	TRIB STONYCREEK RIVER	Rural Local	Local Road/Street - Rural	238	55	2	11	3	3	28	N	N	N	Y	Base	--

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												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	23588	31532	55100701800000	09	Somerset	LAMBERTSVILLE	LAMBERT RUN	Rural Major Collector	Community Collector - Rural	870	55	2	11	3	3	28	N	N	N	Y	Nominal 1	External context. This is the entry route to Flight 93 memorial from Route 30.
--	74467	31588	55200500300000	09	Somerset	1.95 MILE SOUTH FROM SR 2004 @ SUMMIT MILLS	ELK LICK CREEK	Rural Local	Local Road/Street - Rural	231	55	2	10	2	2	24	N	N	N	Y	Base	--
--	23428	31608	55201301000000	09	Somerset	0.46 MILE SOUTH FROM SR 3002	POWDER RUN	Rural Minor Collector	Community Collector - Rural	272	55	2	10	2	2	24	N	N	N	Y	Base	--
--	23549	31630	55201800600000	09	Somerset	BEECHDALE	BUFFALO CREEK	Rural Local	Local Road/Street - Rural	199	55	2	10	2	2	24	N	N	N	Y	Base	--
--	23454	31651	55202600300000	09	Somerset	2 MI.NE.OF MEYERSDALE	BLUE LICK CREEK	Rural Local	Local Road/Street - Rural	155	55	2	10	2	2	24	N	N	N	Y	Base	--
--	23601	31758	55401900700000	09	Somerset	OVER US 30	US 30	Rural Local	Local Road/Street - Rural	190	35	2	11	4	5	31	N	N	N	Y	Nominal 1 and 2	External context. Called Bicycle Overpass bridge for a reason. External context for Route 30. Travel context as gateway into Stoystown from west.
--	83197	2992	03006600600000	10	Armstrong	CARNAHAN RUN NO.1	CARNAHAN RUN	Rural Minor Arterial	Community Arterial-Rural	3142	55	2	12	5	5	34	N	N	--	Y	Base	--
Y	24085	3097	03083901001927	10	Armstrong	SOUTH OF DAYTON NO. 2	GLADE RUN	Rural Major Collector	Community Collector-Rural	1440	55	2	11	8	8	38	N	N	--	N/A	Base	--
Y	79606	3160	03103900600000	10	Armstrong	BRYAN	TRIB S FRK PINE CR	Rural Minor Collector	Neighborhood Collector-Rural	272	40	2	10	2	2	24	N	N	Y	N/A	Base	--
--	24000	3169	03200101402192	10	Armstrong	RURAL VALLEY NO.3	COWANSHANNOCK CREEK	Rural Local	Local Road/Street-Rural	1376	35	2	11	5	5	32	N	N	--	Y	Base	--
--	83252	3176	03200500500000	10	Armstrong	BURRELL TWP-E OF BRICK CH	TRIB TO CHERRY RUN	Rural Minor Collector	Neighborhood Collector-Rural	238	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	74202	3232	03204701200000	10	Armstrong	ROARING RUN	ROARING RUN	Rural Major Collector	Community Collector-Rural	222	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	24023	3245	03205700100245	10	Armstrong	LAUREL POINT	CARNAHAN RUN	Rural Minor Collector	Neighborhood Collector-Rural	547	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	24018	3278	03300900800000	10	Armstrong	CLAYPOOLE ROAD NO.3	TRIB TO BUFFALO CREEK	Rural Local	Local Road/Street -Suburban Neighborhood	633	55	2	11	2	2	26	N	N	--	Y	Base	--
Y	24153	3282	03301300602401	10	Armstrong	NICHOLA NO.1	BUFFALO CREEK	Rural Minor Collector	Neighborhood Collector-Rural	915	55	2	11	2	2	26	N	N	Y	N/A	Base	--
Y	83284	3293	03301702501033	10	Armstrong	CENTER HILL NO. 6	GLADE RUN	Rural Minor Collector	Neighborhood Collector-Rural	2162	45	2	11	3	3	28	N	N	Y	N/A	Base	--
--	98070	3294	03301702801869	10	Armstrong	BRIAR HILL	SR0422 EB/WB & RAMPS F&G	Rural Minor Collector	Neighborhood Collector -Suburban Neighborhood	2162	45	2	12	8	8	40	N	N	--	Y	Nominal 2	Funct classif context as nominal.
Y	24806	7834	10006800200616	10	Butler	ZELIENOPLE BORO NO. 2	GLADE RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	4508	35	2	11	8	8	38	N	N	--	N/A	Base	--
--	24757	7925	10030800801195	10	Butler	RIDER CHURCH	TRIB TO STONY RUN	Rural Major Collector	Community Collector-Rural	4019	55	2	11	5	5	32	N	N	--	Y	Base	--
Y	24667	7935	10035603000333	10	Butler	CALDWELL DRIVE	TRIB TO THORN CREEK	Rural Minor Arterial	Community Arterial-Rural	8547	55	2	12	8	8	40	N	N	--	N/A	Base	--
--	24779	8016	10102500100211	10	Butler	RINGNECK	BONNIE BROOK	Rural Major Collector	Community Collector-Rural	3517	40	2	11	4	4	30	N	N	--	Y	Base	--
Y	78002	8025	10200700101196	10	Butler	SAXONBURG BLVD NO.1	BULL CREEK	Rural Major Collector	Community Collector-Rural	2153	45	2	11	4	4	30	N	N	--	N/A	Base	--

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												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	83332	8061	10300400300433	10	Butler	MCCALMONT NO.1	CONNOQUENESSING CR	Rural Minor Collector	Neighborhood Collector-Rural	2278	40	2	11	3	3	28	N	N	Y	Y	Base	--
--	24703	8071	10301000600000	10	Butler	BROWNSDALE ROAD	GLADE RUN	Rural Minor Collector	Neighborhood Collector-Rural	1607	40	2	11	3	3	28	N	N	Y	Y	Base	--
Y	83335	8073	10301200500000	10	Butler	CRUIKSHANK ROAD	TRIB TO GLADE RUN	Rural Minor Collector	Neighborhood Collector-Rural	1060	35	2	10	2	2	24	N	N	Y	N/A	Base	--
--	77989	8104	10302700500194	10	Butler	SENACA SCHOOL	LIT CONNOQUENESSING CR	Rural Major Collector	Neighborhood Collector -Suburban Neighborhood	2849	40	3	12	4	4	44	N	N	--	Y	Base	--
--	89967	8113	10400201302768	10	Butler	SOUTH OF QUEEN JCT.	B & LE RR	Rural Major Collector	Community Collector-Rural	941	35	2	11	4	4	30	N	N	--	Y	Base	--
--	24710	8334	10800505000898	10	Butler	ROCK LAKE SB RAMP NO.2	SR0019 NB	Urban Freeways/Expressways/Interstates	Regional Arterial-Suburban Neighborhood	2350	55	1	14	8	10	32	N	N	--	Y	Nominal 2	Funcnt classif context as nominal.
--	83229	10975	16032201801102	10	Clarion	SHIPPENVILLE STATION	DEER CREEK	Rural Principal Arterial	Regional Arterial-Rural	4403	55	2	11	8	8	38	N	N	--	Y	Base	--
--	83232	10997	16086100421587	10	Clarion	WILDCAT NO.2	WILDCAT RUN	Rural Minor Arterial	Community Arterial-Rural	923	55	2	11	8	8	38	N	N	--	Y	Base	--
--	83234	10996	16086100620656	10	Clarion	DIAMOND NO.1	WILDCAT RUN	Rural Minor Arterial	Community Arterial-Rural	923	55	2	11	8	8	38	N	N	--	Y	Base	--
--	25221	11042	16200900100000	10	Clarion	LAWSONHAM NO.1	REDBANK CREEK	Rural Major Collector	Community Collector-Rural	551	55	2	11	2	2	26	N	N	Y	Y	Base	--
--	83241	11049	16200902200128	10	Clarion	ELDER ROAD	CHERRY RUN	Rural Minor Collector	Neighborhood Collector-Rural	216	55	2	10	2	2	24	N	N	Y	Y	Base	--
--	83256	11088	16401500301431	10	Clarion	HUEFNER NO.3	LICKING CREEK	Rural Minor Collector	Neighborhood Collector-Rural	498	55	2	11	4	4	30	N	N	--	Y	Base	--
--	83293	19087	32028601500520	10	Indiana	CLARKSBURG NO.3	BLACKLEGS CREEK	Rural Minor Arterial	Community Arterial-Rural	3680	55	2	12	8	8	40	N	N	--	Y	Base	--
--	95851	19183	32055302000620	10	Indiana	ALVERDA NO.2	DUTCH RUN	Rural Major Collector	Community Collector-Rural	2173	45	2	11	4	4	30	N	N	--	Y	Base	--
--	25780	19200	32095403700000	10	Indiana	WILLET	SOUTH BRANCH PLUM CREEK	Rural Major Collector	Community Collector-Rural	826	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	25584	19320	32300701200000	10	Indiana	MARSHALL RUN NO.2	MARSHALL RUN	Rural Local	Local Road/Street-Rural	653	45	2	10	2	2	24	N	N	--	Y	Base	--
--	78120	19392	32401000100530	10	Indiana	KIMMEL RD NO.1	CROOKED CREEK	Rural Local	Local Road/Street-Rural	284	40	2	11	3	3	28	N	N	--	Y	Base	--
--	83282	19550	33003601701535	10	Jefferson	CLOE NO.1	CANOE CREEK	Rural Minor Arterial	Community Arterial-Rural	4362	35	2	11	5	5	32	N	N	Y	Y	Base	--
--	83312	19699	33200300700000	10	Jefferson	FOXBURG	MAHONING CREEK	Rural Minor Collector	Neighborhood Collector-Rural	1126	35	2	11	5	5	32	N	N	--	Y	Base	--
--	26151	19708	33200802100200	10	Jefferson	STUMP CREEK NO.2	STUMP CREEK	Rural Major Collector	Community Collector-Rural	378	55	2	10	5	5	30	N	N	--	Y	Base	--
--	26069	19737	33300302500000	10	Jefferson	NEAR OHL NO. 1	BEAVER RUN	Rural Minor Collector	Neighborhood Collector-Rural	187	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	83343	19807	33400100700000	10	Jefferson	NORTH OF ROSEVILLE	MILL CREEK	Rural Minor Collector	Neighborhood Collector-Rural	327	40	2	10	2	2	24	N	N	Y	Y	Base	--
--	62523	505	02000804101108	11	Allegheny	@ INTERSECTION W/SR 0910	WEST BRANCH DEER CREEK	Urban Principal Arterial	Regional Arterial-Suburban Corridor	7066	50	5	12	0	0	58	N	N	--	N/A	Base	--
--	27272	659	02003001202263	11	Allegheny	400 FEET SE OF SR 3070	SOUTH FORK MONTOUR RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	5590	30	2	11	4	4	30	N	N	Y	Y	Base	--
--	28154	664	02003001901870	11	Allegheny	@ INTER W/ BRADDOCK ROAD	FALLS RUN	Urban Principal Arterial	Regional Arterial-Suburban Neighborhood	13980	40	4	12	2	2	66	N	N	--	N	Nominal 2	External context. Bridge is located in dense population area, with recreational and residential view.
--	73522	709	02005100802710	11	Allegheny	@ INTER.W/WEIGEL HILL RD.	FALLEN TIMBER RUN	Urban Principal Arterial	Regional Arterial-Suburban Neighborhood	9420	45	5	12	8	8	76	N	N	--	N	Base	--
--	37590	954	02013600500000	11	Allegheny	2 MI EAST OF MON CITY BR	MON RIVER TRIBUTARY	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	6687	40	2	11	4	4	30	N	N	--	Y	Base	--
--	28597	961	02013601202172	11	Allegheny	100'W.OF INTER W/SR 2017	BRANCH OF GILLESPIE RUN	Rural Minor Arterial	Community Arterial-Suburban Neighborhood	4341	40	2	11	4	4	30	N	N	--	N	Base	--
--	63321	1334	02091002400485	11	Allegheny	1 MILE EAST OF RT 8 INT	WEST BRANCH OF DEER CREE	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	9196	45	2	11	4	4	30	N	N	--	N	Base	--
Y	63324	1339	02091003000000	11	Allegheny	250' SOUTH OF SR 1020	DEER CREEK	Urban Major Arterial	Regional Arterial-Suburban Corridor	4613	35	2	11	4	4	30	N	N	Y	N/A	Base	--
--	78185	1346	02097800300000	11	Allegheny	2000'N. OF SR 3001	FISHING RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	3695	35	2	10	4	4	28	N	N	--	N	Base	--
--	27185	1365	02100102101194	11	Allegheny	BARGE BASIN O/ABNDONED RR	ABANDONED RR TRACK	Urban Principal Arterial	Regional Arterial-Suburban Corridor	10928	35	3	12	0	0	36	N	N	--	N	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	27188	1372	02100103502537	11	Allegheny	@ J.F.K.ELEM.SCHOOL	CRAWFORD RUN	Urban Minor Arterial	Regional Arterial-Suburban Corridor	10911	35	3	12	2	2	40	5	N	Y	Y	Base	--
--	28128	1373	02100103601567	11	Allegheny	NEAR BAILEY RUN ROAD	BAILEYS RUN	Urban Major Arterial	Community Arterial-Town/Village Neighborhood	10537	35	3	12	2	2	40	5	N	--	N	Base	--
--	78220	1390	02100600402405	11	Allegheny	@ INTERSECT WITH SR 1013	BR LITTLE PINE CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	4306	35	2	11	4	4	30	N	N	--	Y	Base	--
Y	89100	1397	02101100101018	11	Allegheny	1028'N.OF FREEPORT RD.	GUYS RUN	Urban Minor Collector	Community Collector-Suburban Corridor	4276	40	2	11	4	4	30	N	N	Y	N/A	Base	--
Y	63342	1400	02101100102295	11	Allegheny	1/2 MI.N.OF SR 0028	GUYS RUN	Urban Minor Collector	Community Collector-Suburban Neighborhood	4276	30	2	11	4	4	30	N	N	Y	N/A	Base	--
--	28603	1404	02101200602013	11	Allegheny	70'E.INTER.W/TWP.RD.613	SHAFERS RUN	Urban Minor Collector	Neighborhood Collector-Rural	724	30	2	10	2	2	24	N	N	Y	N	Base	--
Y	63343	1405	02101300202226	11	Allegheny	4283' N.E. OF SR 0008	LITTLE PINE CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	9417	30	2	11	4	4	30	N	N	--	N/A	Base	--
Y	63344	1406	02101300300428	11	Allegheny	1 MI. N.E. OF SR 0008	LITTLE PINE CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	9417	30	2	11	4	4	30	N	N	--	N/A	Base	--
Y	78223	42177	02101300400000	11	Allegheny	2 MILES WEST OF SR 1006	BRANCH LITTLE PINE CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	9417	30	2	11	4	4	30	N	N	--	N/A	Base	--
--	99687	1424	02101500702617	11	Allegheny	NORTH/RURAL RIDGE	BR.LITTLE DEER CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	3238	35	2	10	4	4	28	N	N	--	N	Base	--
Y	27287	1435	02101600801980	11	Allegheny	70' WEST OF SR 1015	LITTLE DEER CREEK	Urban Local	Local Road/Street-Rural	751	35	2	11	2	2	26	N	N	--	N/A	Base	--
Y	63356	1455	02102801801751	11	Allegheny	200' WEST OF SR 1031	LARDINTOWN RUN	Rural Minor Arterial	Community Arterial-Rural	2771	45	2	11	4	4	30	N	N	Y	N/A	Base	--
Y	63513	1471	02103400501321	11	Allegheny	4200' S.E. OF SR 1033	BULL CREEK	Rural Minor Arterial	Community Arterial-Rural	3678	45	2	10	4	4	28	N	N	Y	N/A	Base	--
--	28607	1479	02200100800335	11	Allegheny	AT BAPTIST CHURCH	TRIBUT. TO MONOGAHELA R.	Urban Minor Collector	Community Collector-Suburban Neighborhood	907	35	2	10	4	4	28	N	N	--	N	Base	--
Y	62174	1481	02200101300130	11	Allegheny	AT PANGBURN RD	PERRY MILL RUN	Urban Minor Collector	Community Collector-Suburban Neighborhood	928	40	2	10	4	4	28	N	N	--	N/A	Base	--
--	26417	1496	02200800100053	11	Allegheny	@ INTER. WITH SR 2010	WYLIE RUN	Urban Local	Local Road/Street-Rural	1580	40	2	10	4	4	28	N	N	--	N	Base	--
--	73045	1498	02201000102238	11	Allegheny	500'N.E.OF ROSS STREET	BRANCH OF WYLIE RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	8492	40	2	10	4	4	28	N	N	--	N	Base	--
--	27451	1519	02201701301248	11	Allegheny	@ SR 2014	BOYDS HOLLOW RUN	Urban Minor Collector	Neighborhood Collector-Suburban Neighborhood	2029	30	2	10	4	4	28	N	N	--	N	Base	--
--	99665	1520	02201701400112	11	Allegheny	AT ROCK RUN RD	WILDCAT RUN	Urban Minor Collector	Neighborhood Collector-Suburban Neighborhood	2029	30	2	10	4	4	28	5	5	--	Y	Enhanced	Existing bridge contains aesthetic railing and sidewalks on both sides. Replacement should match.
--	78224	1523	02201800400721	11	Allegheny	2082 FEET SW OF SR 48	CREEK	Urban Minor Collector	Neighborhood Collector-Suburban Neighborhood	1594	40	2	10	4	4	28	N	N	--	N	Base	--
--	99670	1527	02202200102622	11	Allegheny	2644'N.E.OF LR02310	BR. LONG RUN	Urban Minor Collector	Neighborhood Collector-Suburban Neighborhood	1896	35	2	10	4	4	28	N	N	--	N	Base	--
--	63529	1559	02204500300840	11	Allegheny	DRAVOSBURG OVER UNION RR	UNION RAILROAD	Urban Principal Arterial	Community Arterial-Suburban Corridor	8367	40	4	12	2	2	52	4	5	--	N	Nominal 1	Funct classif context as nominal. Bridge spans the Historic Union Railroad in village of Dravosburg. Bridge has sidewalks on both sides of bridge but substructure is not visible.
--	78271	1562	02204600401678	11	Allegheny	AT INTER./ SR 3046	STREETS RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	8571	35	2	11	4	4	30	N	N	--	N	Base	--
Y	63547	1567	02204600800256	11	Allegheny	50'EAST/SCHUTE RD.	STREETS RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	7910	35	2	11	5	5	32	N	N	--	N/A	Base	--
--	74324	1568	02204600801088	11	Allegheny	AT LUTZ HOLLOW ROAD	STREETS RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	7910	35	2	11	4	4	30	N	N	--	N	Base	--
Y	27419	1600	02206500402452	11	Allegheny	2656' N.E. OF SR 2053	THOMPSON RUN	Urban Minor Collector	Neighborhood Collector-Suburban Neighborhood	823	25	2	10	6	6	32	N	N	--	N/A	Base	--
--	89124	1620	02207500900000	11	Allegheny	OVER BR. LITTLE PLUM CR.	BR. LITTLE PLUM CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	6342	35	2	11	4	4	30	N	N	--	N	Base	--
--	27275	1626	02207501900000	11	Allegheny	200'N.OF ENTRANCE DRIVE	AVR RAILROAD	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	12824	35	2	11	6	6	34	N	N	--	Y	Base	--
Y	63557	1671	02211800203544	11	Allegheny	500' SOUTHEAST OF SR 0048	LONG RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	9162	35	2	11	5	5	32	N	N	--	N/A	Base	--
--	27436	1704	02300800420000	11	Allegheny	200'W.OF INTER.W/SR 3004	MCLAUGHLIN RUN	Urban Local	Local Road/Street-Suburban Neighborhood	2895	25	2	11	3	3	28	N	N	--	Y	Enhanced	Funct classif context as Enhanced.
Y	28446	1715	02301400302259	11	Allegheny	3/4 MI.N.W.OF SR 3015	PINEY FORK CREEK	Urban Local	Local Road/Street-Suburban Neighborhood	952	25	2	10	4	4	28	N	N	--	N/A	Base	--
--	27386	1727	02301800260000	11	Allegheny	820' S.W. OF SR 3021	LOBBS RUN	Urban Local	Local Road/Street-Suburban Neighborhood	593	25	2	10	2	2	24	N	N	--	N	Base	--
--	28136	1733	02302100300941	11	Allegheny	100' SOUTHEAST OF SR 3018	LOBBS RUN	Urban Local	Local Road/Street-Suburban Neighborhood	1238	40	2	11	2	2	26	N	N	--	N	Base	--
--	27454	1776	02304801200000	11	Allegheny	1 MI.W.OF SR3041	BR.ROBINSON RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	647	30	2	11	2	2	26	N	N	Y	N	Base	--
--	27430	1859	02309800500762	11	Allegheny	1 1/2 MI FROM GLNWOOD INT	GLASS RUN	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	5685	30	2	11	4	4	30	N	N	--	N	Base	--
--	27429	1860	02309800601125	11	Allegheny	NEAR SR 3100	GLASS RUN CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	5685	30	2	11	4	4	30	N	N	--	N	Base	--
--	89079	1881	02310800100174	11	Allegheny	200' S.W. OF SR 3049	NORTH BRANCH ROBINSON RN	Rural Major Collector	Community Collector-Rural	3128	45	2	11	4	4	30	N	N	--	N	Base	--
--	78407	1882	02310800301395	11	Allegheny	100' N.E. OF SR 3053	BR. NORTH BR.ROBINSON RN	Rural Major Collector	Community Collector-Rural	4311	45	2	11	4	4	30	N	N	--	Y	Base	--
Y	74338	1950	02401700500880	11	Allegheny	NEAR TWP GARAGE	LITTLE PINE CREEK	Urban Local	Local Road/Street-Suburban Neighborhood	1581	35	2	11	2	2	26	N	N	Y	N/A	Nominal 1	Funct classif context as nominal. Bridge located in between two very large densely populated developments and its around the corner from the entrance to Kiwanis Park (recreational area).
--	78413	1974	02403200902202	11	Allegheny	419' W OF LR 02090	BR LITTLE SEWICKLEY CRK	Urban Minor Collector	Neighborhood Collector-Rural	994	40	2	10	4	4	28	N	N	--	N	Base	--
--	78414	1976	02403600701676	11	Allegheny	@ INTER.TURKEY FOOT ROAD	BR.BIG SEWICKLEY CREEK	Urban Minor Arterial	Community Arterial-Suburban Corridor	4328	35	2	12	4	4	32	N	N	Y	N	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level
													Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)						
													L	R		L	R					
--	78416	1980	02403601303135	11	Allegheny	@ CAMP MEETING RD. EXT.	BR.BIG SEWICKLEY CREEK	Urban Minor Arterial	Community Arterial-Suburban Corridor	4737	40	2	12	4	4	32	N	N	Y	N	Base	--
--	78417	1982	02403601400961	11	Allegheny	@ INTER.WITH APPL.4846	BR.BIG SEWICKLEY CREEK	Urban Minor Arterial	Community Arterial-Suburban Corridor	4737	40	2	12	4	4	32	N	N	Y	Y	Base	--
--	70804	3599	04016803300983	11	Beaver	100'N.OF SR 4034	UPPER DRY RUN	Rural Major Collector	Community Collector-Rural	3157	40	2	11	5	5	32	N	N	--	Y	Base	--
--	28944	3602	04016805001748	11	Beaver	.4 MI.SW OF TWP.RD.603	PAINTERS RUN	Rural Major Collector	Community Collector-Rural	741	40	2	11	4	4	30	N	N	--	N	Base	--
--	93613	3647	04100500202450	11	Beaver	1/4 MI. NORTH OF SR 1012	BR. CONNOQUENESSING CR.	Urban Minor Collector	Community Collector-Rural	1943	40	2	11	5	5	32	N	N	--	Y	Base	--
--	80062	3654	04101400700193	11	Beaver	100'NORTHEAST OF PIKE	BRUSH CREEK	Rural Local	Local Road/Street-Rural	1267	40	2	11	4	4	30	N	N	--	Y	Base	--
--	69069	3693	04300500800933	11	Beaver	@ INTER.W/TWP.RD.491	MOON RUN	Urban Minor Collector	Community Collector-Suburban Neighborhood	3056	30	2	11	4	4	30	N	N	Y	Y	Base	--
--	67378	3695	04300900600000	11	Beaver	0.5 MI.SOUTH OF SR 3007	TRAMP MILL RUN	Urban Minor Collector	Community Collector-Suburban Neighborhood	1566	35	2	10	4	4	28	N	N	--	Y	Base	--
--	70805	3717	04302500701409	11	Beaver	@ INTER. WITH TWP.RD.544	RAREDON RUN	Rural Minor Collector	Community Collector-Rural	766	40	2	11	4	4	30	N	N	--	Y	Base	--
--	70807	3722	04302700400000	11	Beaver	.5 MILE NORTH OF SR 168	MILL CREEK	Rural Minor Collector	Community Collector-Rural	583	55	2	11	4	4	30	N	N	--	N	Base	--
--	89058	3723	04302700460000	11	Beaver	GREENE TWP.-MILL CREEK	MILL CREEK	Rural Minor Collector	Community Collector-Rural	583	55	2	11	4	4	30	N	N	--	N	Base	--
--	99793	3747	04401201000519	11	Beaver	200'EAST&UNDER SR 0060	SOUTH BRANCH BRADYS RUN	Urban Local	Local Road/Street-Rural	1569	25	2	10	4	4	28	N	N	--	Y	Enhanced	Funct classif context as enhanced. Bridge located in Bradys Run County park, close proximity to pavilion. Group of 3 county park bridges is opportunity for CSS
--	29062	3749	04401201100256	11	Beaver	.2 MI. N.E. OF SR 4018	SOUTH BRANCH BRADYS RUN	Urban Minor Collector	Community Collector-Rural	1202	25	2	10	4	4	28	5	5	--	Y	Enhanced	Funct classif context as Enhanced. Bridge located in Bradys Run County park. Sidewalks on either side with a ped barrier. Group of 3 county park bridges is opportunity for CSS
--	78310	3750	04401201500926	11	Beaver	100 FT WEST OF SR 0051	BRADYS RUN	Urban Minor Collector	Community Collector-Rural	1202	35	2	10	4	4	28	N	N	--	Y	Enhanced	Funct classif context as Enhanced. Bridge located in Bradys Run County park. Group of 3 county park bridges is opportunity for CSS
--	99794	3755	04401900500000	11	Beaver	1/2 MI. WEST OF SR 4021	N.BR.BRADYS RUN	Rural Local	Local Road/Street-Rural	1329	35	2	11	2	2	26	N	N	Y	N	Base	--
--	78313	3769	04403400200000	11	Beaver	500' WEST OF SR 0068	UPPER DRY RUN	Rural Local	Local Road/Street-Rural	391	55	2	9	2	2	22	N	N	--	N	Base	--
--	29374	22262	37020800700000	11	Lawrence	1.5 MI. FROM ST.LINE	OVER DEER CREEK	Rural Minor Arterial	Community Arterial-Rural	1756	45	2	11	3	3	28	N	N	Y	Y	Base	--
--	78362	22265	37020801000000	11	Lawrence	3000' WEST OF SR 0551	BRANCH DEER CREEK	Rural Minor Arterial	Community Arterial-Rural	1756	50	2	11	3	3	28	N	N	Y	Y	Base	--
--	29534	22269	37020802201379	11	Lawrence	1/2 MI.WEST / SR0158	MCCLURES RUN	Rural Minor Arterial	Community Arterial-Rural	4869	45	2	11	6	6	34	N	N	Y	Y	Base	--
--	78318	22277	37022400601429	11	Lawrence	NEAR SR 3016	SWAMP	Rural Principal Arterial	Regional Arterial-Rural	8190	45	2	12	8	8	40	N	N	--	N	Base	--
--	89094	22281	37022401100412	11	Lawrence	@ INTER. WITH SR 4006	BRANCH OF MAHONING RIVER	Rural Principal Arterial	Regional Arterial-Rural	5493	45	2	11	8	8	38	N	N	--	Y	Base	--
--	78370	22358	37095601200542	11	Lawrence	2 MI.EAST OF SR 0018	NESHANNOCK CREEK	Rural Minor Collector	Community Collector-Rural	1226	55	2	11	3	3	28	N	N	Y	Y	Base	--
--	69103	22359	37095601501187	11	Lawrence	1/2 MI. S.E. OF SR 1005	LITTLE NESHANNOCK CREEK	Rural Minor Collector	Community Collector-Rural	1226	55	2	11	3	3	28	N	N	Y	Y	Base	--
--	78374	22362	37095601900000	11	Lawrence	1 MI.NORTH TWP.RD.601	BR.LITTLE NESHANNOCK CR.	Rural Minor Collector	Community Collector-Rural	1550	55	2	11	3	3	28	N	N	Y	Y	Base	--
--	69231	22369	37100501501309	11	Lawrence	1/4 MI. N.E. OF SR 0956	LITTLE NESHANNOCK CREEK	Rural Minor Collector	Community Collector-Rural	1237	40	2	11	2	2	26	N	N	Y	Y	Base	--
--	78378	22374	37100900603315	11	Lawrence	100' SOUTH OF SR 0956	BRANCH NESHANNOCK CREEK	Rural Local	Local Road/Street-Rural	161	40	2	9	2	2	22	N	N	--	Y	Base	--
--	99796	22378	37101200700000	11	Lawrence	300'WEST OF TWP.RD.478	BIG RUN	Rural Local	Local Road/Street-Rural	860	45	2	10	2	2	24	N	N	--	Y	Base	--
--	29321	22379	37101200900000	11	Lawrence	5 MI.W.TWP.RD.488	BIG RUN	Rural Local	Local Road/Street-Rural	860	45	2	10	2	2	24	N	N	--	N	Base	--
--	29387	22396	37200100802619	11	Lawrence	100' SOUTH OF SR 2012	MCKEE RUN	Rural Minor Collector	Neighborhood Collector-Rural	128	40	2	9	2	2	22	N	N	--	Y	Base	--
--	99798	22416	37201200103494	11	Lawrence	100' WEST OF TWP.RD.434	BRANCH OF MCKEE RUN	Rural Major Collector	Community Collector-Rural	1110	55	2	11	3	3	28	N	N	--	Y	Base	--
--	29525	22433	37300100300259	11	Lawrence	1/4 MI. SOUTH OF SR 0317	BESSEMER HAUL ROAD	Rural Minor Collector	Neighborhood Collector-Suburban Neighborhood	304	25	2	12	6	6	36	5	N	--	Y	Base	--
--	99797	22439	37300300800000	11	Lawrence	1/4 MI. SOUTH OF SR 0317	HICKORY CREEK	Rural Local	Local Road/Street-Rural	279	45	2	9	2	2	22	N	N	Y	Y	Base	--
--	29549	22441	37300400600000	11	Lawrence	3/4 MILE W OF TR 551	OVER BR OF HONEY CREEK	Rural Local	Local Road/Street-Rural	188	45	2	9	2	2	22	N	N	--	Y	Base	--
--	80677	22455	37301500201288	11	Lawrence	1/4 MI W OF SR 2012	MCKEE RUN	Urban Minor Collector	Community Collector-Suburban Neighborhood	1239	40	2	12	4	4	30	N	N	--	N	Base	--
--	51503	16651	26016603900000	12	Fayette	REDSTONE & LUZERNE TWPS.	DUNLAP CREEK	Urban Minor Arterial	Community Arterial-Suburban Corridor	4200	25	2	11	4	4	30	N	N	--	Y	Nominal 1	External context. Substructure obscured, but is gateway bridge into Republic and adjacent to historic district, warrants travel context treatment
--	51484	16673	26038100801000	12	Fayette	WHARTON TOWNSHIP	STONY RUN	Rural Major Collector	Community Collector-Rural	326	40	2	11	2	2	26	N	N	--	N	Base	--
--	74174	16713	26100100200639	12	Fayette	SPRINGFIELD TOWNSHIP	MILL RUN	Rural Local	Local Road/Street-Rural	184	40	2	9	2	2	22	N	N	--	Y	Base	--
--	74176	16720	26100300320000	12	Fayette	SPRINGFIELD TOWNSHIP	LAUREL RUN	Rural Minor Collector	Neighborhood Collector-Rural	237	45	2	9	2	2	22	N	N	--	N	Base	--
--	81961	16725	26100700300000	12	Fayette	SALTICK TOWNSHIP	CHAMPION CREEK	Rural Major Collector	Community Collector-Rural	918	35	2	10	4	4	28	N	N	--	Y	Base	--
--	29781	16736	26101800100206	12	Fayette	N. UNION & FRANKLIN TWPS.	BUTE RUN	Rural Minor Collector	Neighborhood Collector-Rural	570	40	2	11	2	2	26	N	N	Y	Y	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design					3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
													Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	69229	16752	26103100100053	12	Fayette	CONNELLSVILLE CITY & TWP.	MOUNTS CREEK	Urban Minor Arterial	Community Arterial-Suburban Neighborhood	2075	40	2	10	4	6	30	N	N	--	Y	Base	--
--	74345	16757	26103100601336	12	Fayette	UPPER TYRONE TOWNSHIP	GALLEY RUN	Rural Major Collector	Community Collector-Rural	594	35	2	10	2	2	24	N	N	Y	Y	Base	--
--	76009	16758	26103100700299	12	Fayette	CONNELLSVILLE & U. TYRONE	BRANCH OF GALLEY RUN	Rural Major Collector	Community Collector-Rural	594	35	2	10	2	2	24	N	N	Y	Y	Base	--
--	76012	16782	26104300200093	12	Fayette	N. UNION & FRANKLIN TWPS.	REDSTONE CREEK	Rural Minor Collector	Neighborhood Collector-Rural	1420	40	2	11	2	2	26	N	N	Y	Y	Base	--
--	29820	16789	26105000101121	12	Fayette	BULLSKIN TOWNSHIP	MOUNTS CREEK	Rural Minor Collector	Neighborhood Collector-Rural	2451	35	2	11	3	3	28	N	N	Y	N	Base	--
--	90965	16794	26105002101302	12	Fayette	SALTICK TOWNSHIP	CHAMPION CREEK	Rural Major Collector	Community Collector-Rural	1059	40	2	11	2	2	26	N	N	Y	Y	Base	--
--	89075	16806	26105103000845	12	Fayette	BULLSKIN TOWNSHIP	BRANCH OF BREAKNECK RUN	Rural Major Collector	Community Collector-Rural	1062	35	2	11	2	2	26	N	N	Y	Y	Base	--
--	29823	16827	26105501401377	12	Fayette	DUNBAR TOWNSHIP	TUCKER RUN	Rural Major Collector	Community Collector-Rural	224	45	2	11	2	2	26	N	N	--	N	Base	--
--	29926	16840	26105801300142	12	Fayette	SALTICK & DONEGAL TWPS.	INDIAN CREEK	Rural Major Collector	Community Collector-Rural	1738	40	2	11	4	4	30	N	N	--	N	Base	--
--	29893	16841	26105801300864	12	Fayette	SALTICK & DONEGAL TWPS.	INDIAN CREEK	Rural Major Collector	Community Collector-Rural	1738	40	2	11	4	4	30	N	N	--	N	Base	--
--	74184	16868	26201500300000	12	Fayette	WHARTON TOWNSHIP	MEADOW RUN	Rural Local	Local Road/Street-Rural	426	40	2	10	2	2	24	N	N	--	Y	Base	--
--	74189	16910	26301100900000	12	Fayette	NICHOLSON & GERMAN TWPS.	CATS CREEK	Rural Minor Collector	Neighborhood Collector -Suburban Neighborhood	630	45	2	10	2	2	24	N	N	Y	N	Base	--
--	81636	16920	26301301601348	12	Fayette	GERMAN TOWNSHIP	MIDDLE RUN	Rural Minor Collector	Neighborhood Collector -Suburban Neighborhood	118	45	2	10	2	2	24	N	N	--	N	Base	--
--	79325	16922	26301301700955	12	Fayette	GERMAN TOWNSHIP	MIDDLE RUN	Rural Minor Collector	Neighborhood Collector -Suburban Neighborhood	424	40	2	10	2	2	24	N	N	Y	N	Base	--
--	79326	16923	26301301701416	12	Fayette	GERMAN TOWNSHIP	MIDDLE RUN	Rural Minor Collector	Neighborhood Collector -Suburban Neighborhood	424	40	2	10	2	2	24	N	N	Y	N	Base	--
--	79328	16928	26301301900753	12	Fayette	GERMAN TOWNSHIP	MIDDLE RUN	Rural Minor Collector	Neighborhood Collector -Suburban Neighborhood	424	40	2	10	2	2	24	N	N	Y	N	Base	--
--	74190	16930	26301301901171	12	Fayette	GERMAN TOWNSHIP	MIDDLE RUN	Rural Minor Collector	Neighborhood Collector -Suburban Neighborhood	424	40	2	10	2	2	24	N	N	Y	N	Base	--
--	79337	17052	26404400201593	12	Fayette	WASHINGTON TOWNSHIP	DOWNERS RUN	Urban Local	Local Road/Street -Suburban Neighborhood	751	40	2	11	2	2	26	N	N	Y	Y	Base	--
--	79340	18013	30001802400670	12	Greene	CENTER TOWNSHIP	HOUSE RUN	Rural Major Collector	Community Collector-Rural	968	40	2	11	4	4	30	N	N	--	N	Base	--
--	79342	18044	30001805800146	12	Greene	MORRIS TOWNSHIP	BROWNS CREEK	Rural Major Collector	Community Collector-Rural	1253	55	2	11	4	4	30	N	N	--	N	Base	--
--	30291	18154	30018800300000	12	Greene	FRANKLIN TOWNSHIP	GRIMES RUN	Urban Minor Arterial	Community Arterial-Suburban Corridor	4877	40	2	12	4	4	32	N	N	Y	N	Base	--
--	76037	18164	30018801800000	12	Greene	JEFFERSON TOWNSHIP	BR SOUTH FORK TENMILE CK	Rural Minor Arterial	Community Arterial-Rural	3150	45	2	11	4	4	30	N	N	Y	N	Base	--
--	89031	18214	30101101500501	12	Greene	JEFFERSON T & CLARKSVILLE	SOUTH FORK TENMILE CREEK	Rural Major Collector	Community Collector-Rural	2186	40	2	11	6	3	31	N	N	--	Y	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
--	74203	18222	30101400803315	12	Greene	MORGAN TOWNSHIP	CASTILE RUN	Rural Local	Local Road/Street-Rural	30	40	2	9	2	2	22	N	N	--	N	Base	--
--	30335	18261	30200303301330	12	Greene	FRANKLIN TOWNSHIP	TENMILE CREEK	Urban Collector	Neighborhood Collector -Suburban Neighborhood	1410	45	2	11	2	2	26	N	N	Y	Y	Nominal 1 and 2	Funct classif context as nominal. Bridge between two city parks and external context is visible from either
--	79353	18279	30201103700000	12	Greene	FRANKLIN TOWNSHIP	COAL LICK RUN	Rural Major Collector	Community Collector-Rural	912	55	2	11	2	2	26	N	N	Y	N	Base	--
--	30289	18287	30201600701702	12	Greene	MONOGAHELA TOWNSHIP	WHITELEY CREEK	Rural Major Collector	Community Collector-Rural	552	25	2	11	2	3	28	N	N	--	Y	Base	--
--	79356	18315	30202600100590	12	Greene	FRANKLIN TOWNSHIP	LAUREL RUN	Urban Collector	Neighborhood Collector -Suburban Neighborhood	3765	40	2	12	6	6	36	N	N	--	Y	Base	--
--	79357	18317	30202600501285	12	Greene	FRANKLIN TOWNSHIP	BRADENS RUN	Urban Collector	Neighborhood Collector -Suburban Neighborhood	1180	40	2	12	6	6	36	N	N	--	N	Base	--
--	88079	18351	30300600100674	12	Greene	GILMORE TOWNSHIP	PA. FORK DUNKARD CREEK	Rural Minor Collector	Neighborhood Collector-Rural	88	40	2	9	2	2	22	N	N	--	N	Base	--
--	30231	18403	30301300900000	12	Greene	WAYNE TOWNSHIP	BELLS RUN	Rural Major Collector	Community Collector-Rural	826	40	2	10	3	3	26	N	N	Y	N	Base	--
--	30975	34335	62001900400000	12	Washington	AMWELL TOWNSHIP	BANE CREEK	Rural Major Collector	Community Collector-Rural	416	45	2	11	4	4	30	N	N	--	N	Base	--
--	30639	34417	62005003300000	12	Washington	CECIL TOWNSHIP	MILLER RUN	Rural Minor Arterial	Community Arterial-Rural	6040	40	2	11	4	4	30	N	N	Y	Y	Base	--
--	30997	34609	62008804902545	12	Washington	SPEERS & CHARLEROI BORO.	MAPLE CREEK	Urban Principal Arterial	Regional Arterial-Urban Core	7380	35	2	11	4	4	30	7	N	--	Y	Nominal 1	Bridge is gateway to Charleroi, but substructure not visible from roadway, and view blocked by adjacent railroad from Monongahela River.
--	73058	34623	62008807600000	12	Washington	FINLEYVILLE BOROUGH	PETERS CREEK	Urban Principal Arterial	Regional Arterial-Suburban Corridor	6341	55	2	12	8	8	40	N	N	--	Y	Base	--
--	89048	34650	62022100802172	12	Washington	MORRIS TOWNSHIP	TENMILE CREEK	Rural Major Collector	Community Collector-Rural	789	55	2	11	3	3	28	N	N	--	N	Base	--
--	88078	34673	62023104300092	12	Washington	BLAINE & INDEPENDENCE TWP	BRUSH RUN	Rural Major Collector	Community Collector-Rural	153	55	2	10	2	2	24	N	N	--	Y	Base	--
--	76062	34692	62048100500000	12	Washington	WEST PIKE RUN TOWNSHIP	PIKE RUN	Rural Minor Arterial	Community Arterial-Rural	1373	55	2	11	4	4	30	N	N	Y	N	Base	--
--	30813	34702	62048102400990	12	Washington	CARROLL TOWNSHIP	TAYLOR RUN	Urban Collector	Community Collector -Suburban Corridor	2262	35	2	11	4	4	30	N	N	Y	Y	Base	--
--	31155	34847	62104900520000	12	Washington	SOUTH STRABANE TOWNSHIP	BR. LITTLE CHARTIERS CK.	Urban Local	Local Road/Street -Suburban Neighborhood	526	55	2	11	3	3	28	N	N	--	N	Base	--
--	98374	34879	62200700200048	12	Washington	AMWELL TOWNSHIP	HORNE RUN	Rural Minor Collector	Neighborhood Collector-Rural	172	50	2	10	2	2	24	N	N	--	Y	Base	--
--	76072	34901	62201102800165	12	Washington	AMWELL TOWNSHIP	LITTLE TENMILE CREEK	Rural Major Collector	Community Collector-Rural	1669	45	2	11	2	2	26	N	N	Y	Y	Base	--
--	98377	34907	62201500200805	12	Washington	WEST BETHLEHEM TOWNSHIP	DANIELS RUN	Rural Minor Collector	Neighborhood Collector-Rural	696	55	2	11	2	2	26	N	N	Y	Y	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	No. of Lanes	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level
													Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L	R				
--	89142	34946	62202300800032	12	Washington	FALLOWFIELD TOWNSHIP	BRANCH OF PIGEON CREEK	Urban Local	Local Road/Street -Suburban Neighborhood	216	35	2	10	2	2	24	N	N	--	Y	Base	--
--	98864	34949	62202301100756	12	Washington	FALLOWFIELD TOWNSHIP	PIGEON CREEK	Rural Minor Collector	Neighborhood Collector-Rural	778	35	2	11	2	2	26	N	N	Y	N	Base	--
--	51507	34977	62203400500000	12	Washington	WEST PIKE RUN TOWNSHIP	BRANCH OF PIKE RUN	Rural Minor Collector	Neighborhood Collector-Rural	159	40	2	9	2	2	22	N	N	--	N	Base	--
--	31157	34980	62203600101601	12	Washington	WEST PIKE RUN TOWNSHIP	PIKE RUN	Rural Major Collector	Community Collector-Rural	261	35	2	10	2	2	24	N	N	--	Y	Base	--
--	81841	34985	62203600500000	12	Washington	WEST PIKE RUN TOWNSHIP	PIKE RUN	Rural Major Collector	Community Collector-Rural	261	35	2	10	2	2	24	N	N	--	Y	Base	--
--	30715	34996	62203700403160	12	Washington	FALLOWFIELD TOWNSHIP	MAPLE CREEK	Urban Collector	Neighborhood Collector -Suburban Neighborhood	332	35	2	10	2	2	24	N	N	Y	Y	Base	--
--	30881	35090	62303700801515	12	Washington	WEST FINLEY TOWNSHIP	ROBINSON RUN	Rural Minor Collector	Neighborhood Collector-Rural	246	35	2	9	2	2	22	N	N	--	Y	Base	--
--	31146	35103	62400300701841	12	Washington	HANOVER TOWNSHIP	KINGS CREEK	Rural Local	Local Road/Street-Rural	498	40	2	9	2	2	22	N	N	--	Y	Base	--
--	30552	35171	62402300200000	12	Washington	CROSS CREEK TOWNSHIP	NORTH FORK CROSS CREEK	Rural Local	Local Road/Street-Rural	196	40	2	10	2	2	24	N	N	--	Y	Base	--
--	30702	35178	62402700100687	12	Washington	CROSS CREEK TOWNSHIP	NORTH FORK CROSS CREEK	Rural Minor Collector	Neighborhood Collector-Rural	242	40	2	10	2	2	24	N	N	--	Y	Base	--
--	81846	35201	62403900701840	12	Washington	MOUNT PLEASANT TOWNSHIP	MILLERS RUN	Rural Minor Collector	Neighborhood Collector-Rural	629	35	2	10	2	2	24	N	N	Y	Y	Base	--
--	30635	35227	62406100401960	12	Washington	HOPEWELL AND BLAINE TWP.	BRUSH RUN	Rural Local	Local Road/Street-Rural	85	35	2	9	2	2	22	N	N	--	Y	Base	--
--	32045	35982	64003103302148	12	Westmoreland	MT. PLEASANT & BULLSKIN T	JACOBS CREEK	Urban Minor Arterial	Community Arterial-Suburban Corridor	7984	55	2	12	8	8	42	N	N	--	Y	Base	--
Y	76089	36002	64005600501506	12	Westmoreland	CITY OF NEW KENSINGTON	LITTLE PUCKETA CREEK	Urban Principal Arterial	Regional Arterial-Suburban Corridor	9389	40	5	12	8	8	80	N	N	--	N/A	Base	--
--	79402	36130	64013602502924	12	Westmoreland	HEMPFIELD TOWNSHIP	BR. LITTLE SEWICKLEY CK.	Urban Minor Arterial	Community Arterial-Suburban Corridor	4626	40	2	11	4	4	30	N	N	Y	Y	Base	--
Y	31601	36168	64025900700000	12	Westmoreland	LIGONIER TOWNSHIP	COALPIT RUN	Rural Minor Collector	Neighborhood Collector-Rural	665	45	2	10	2	2	24	N	N	Y	N/A	Base	--
Y	74418	36207	64036601720000	12	Westmoreland	MUNICIPAL. OF MURRYSVILLE	PUCKETA CREEK	Rural Principal Arterial	Regional Arterial-Rural	7406	55	2	11	8	8	38	N	N	--	N/A	Base	--
Y	31826	36228	64038102400504	12	Westmoreland	LIGONIER TOWNSHIP	LINN RUN	Rural Minor Collector	Neighborhood Collector-Rural	1323	35	2	11	2	2	26	N	N	Y	N/A	Base	--
Y	31614	36230	64038103000000	12	Westmoreland	LIGONIER TOWNSHIP	LAUGHLINTOWN RUN	Rural Minor Collector	Neighborhood Collector-Rural	1323	35	2	11	2	2	26	N	N	Y	N/A	Base	--
--	76121	36248	64071102601107	12	Westmoreland	LIGONIER TOWNSHIP	MILL CREEK	Rural Minor Arterial	Community Arterial-Rural	10390	35	2	11	6	6	34	N	N	Y	Y	Base	--
Y	76122	36251	64071103000565	12	Westmoreland	LIGONIER TOWNSHIP	MILL CREEK	Rural Minor Arterial	Community Arterial-Rural	3457	35	2	11	6	6	34	N	N	Y	N/A	Base	--
--	98633	36331	64098201701219	12	Westmoreland	UNITY TOWNSHIP	NINEMILE RUN	Rural Major Collector	Community Collector-Rural	1510	40	2	11	3	3	28	N	N	Y	Y	Base	--
--	31972	36365	64100400200165	12	Westmoreland	FAIRFIELD TOWNSHIP	HENDRICKS CREEK	Rural Local	Local Road/Street-Rural	63	40	2	9	2	2	22	N	N	--	N	Base	--
Y	31611	36387	64101700400238	12	Westmoreland	LIGONIER TOWNSHIP	MILL CREEK	Rural Major Collector	Community Collector-Rural	575	55	2	10	2	2	24	N	N	Y	N/A	Base	--
--	89037	36389	64101700600042	12	Westmoreland	LIGONIER TOWNSHIP	BRANCH OF HANNAS RUN	Rural Major Collector	Community Collector-Rural	294	35	2	10	2	2	24	N	N	--	Y	Base	--
Y	31304	36431	64103400500000	12	Westmoreland	SALEM TOWNSHIP	BEAVER RUN	Rural Local	Local Road/Street-Rural	726	40	2	10	2	2	24	N	N	--	N/A	Base	--
--	79404	36481	64201201301481	12	Westmoreland	MOUNT PLEASANT TOWNSHIP	BRINKER RUN	Urban Collector	Neighborhood Collector -Suburban Neighborhood	1139	35	2	11	2	2	26	N	N	Y	Y	Base	--

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Feature Intersected	Functional Class	Typology	ADT	Design Speed (mph)	Proposed Design						3R Bridge Width Document Required	NEPA Public Meeting	CSS & Aesthetics Treatment Level	CSS & Aesthetics Treatment Level	
												No. of Lanes	Lane Width (ft)	Minimum Shoulder Width (ft)		Minimum Curb to Curb Bridge Width (ft)	Sidewalk Width (ft)					
														L	R		L					R
Y	79418	36482	64201300201727	12	Westmoreland	HEMPFIELD TOWNSHIP	SLATE CREEK	Urban Collector	Neighborhood Collector -Suburban Neighborhood	4647	35	2	11	4	4	30	N	N	Y	N/A	Base	--
--	79419	36493	64202100601976	12	Westmoreland	MOUNT PLEASANT TOWNSHIP	SEWICKLEY CREEK	Urban Local	Local Road/Street -Suburban Neighborhood	6239	55	2	11	4	1	32	--	5	--	Y	Base	--
--	31699	36684	64400700200691	12	Westmoreland	CITY OF JEANNETTE	BULL RUN	Urban Collector	Neighborhood Collector -Suburban Neighborhood	4269	35	2	11	5	5	32	N	N	Y	Y	Base	--
Y	91189	36750	64405300120000	12	Westmoreland	MUNICIPAL. OF MURRYSVILLE	TURTLE CREEK	Rural Local	Local Road/Street-Rural	2199	55	2	11	4	4	30	N	N	Y	N/A	Base	--
--	89049	37037	64801105100448	12	Westmoreland	ROSTRAVER TOWNSHIP	POLLOCK RUN	Urban Freeways/Expressways/Interstates	Community Arterial-Suburban Corridor	2181	40	2	--	--	--	40	N	N	--	Y	Base	--

GEOMETRIC DESIGN INFORMATION: All Districts
8/5/2014

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Unavailability Value		Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]	
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control	Other Mandatory Project Special Conditions	Detour Unavailability Value		Lane Closure Unavailability Value
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am					
--	97120	12879	20000604100000	01	Crawford	VERNON TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	2	2	--	--	\$ 6,635.00	\$ 4,368.00	
--	90155	12902	20000608400273	01	Crawford	CAMBRIDGE TOWNSHIP	N	Y	N/A	N/A	Y	Y	11	1	1	--	PAFBC made comment on 5/28/14 to remove paved stream bed to allow fish passage. Bridge width exceeds 3R minimum width - set to match approach roadway width.	\$ 3,560.00	\$ 1,320.00	
--	97121	13084	20028501000629	01	Crawford	NORTH SHENANGO TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Bridge width exceeds 3R minimum width - set to match width of existing bridges along corridor.	\$ 1,832.00	\$ 1,416.00	
--	97117	13122	20040801800428	01	Crawford	RICHMOND TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 1,331.00	\$ 1,033.00	
--	97118	13128	20040805201643	01	Crawford	HYDETOWN BOROUGH	N	Y	N/A	Y	Y	Y	11	1	1	--	--	\$ 2,183.00	\$ 498.00	
--	89176	13027	20088601600750	01	Crawford	WOODCOCK BOROUGH	N	Y	N/A	N/A	Y	Y	11	1	1	--	--	\$ 2,644.00	\$ 1,159.00	
--	97124	13367	20401100200000	01	Crawford	HAYFIELD TOWNSHIP	N	N/A	Y	N/A	Y	Y	11	1	1	MOU needed for Hutchinson Rd. and North Mead Rd. verify radii and road conditions	--	\$ 1,149.00	\$ 505.00	
--	1140	16373	25401100800860	01	Erie	MILL CREEK TOWNSHIP	N	N/A	Y	N/A	Y	Y	11	1	1	Verification of weight limit on Love Rd. needed, MOU needed for Local roads	Bridge width exceeds 3R minimum width - set to provide extra shoulder width for pedestrians/bikes. Bridge is near urban area. No sidewalks exist.	\$ 5,215.00	\$ 1,695.00	
--	74663	17195	27006201302194	01	Forest	TIONESTA BOROUGH	Y	N/A	N/A	N/A	N/A	N	11	1	1	1/2 width w/ signal	PAFBC made comment on 5/28/14 to remove paved stream bed to allow fish passage.	\$ 1,833.00	\$ 1,312.00	
--	1370	17207	27066600700000	01	Forest	HICKORY TOWNSHIP	N	Y	N/A	Y	Y	Y	11	1	1	Do not use detour during Kelleetville Rodeo. Do not close SR 666 bridges at same time. Houses are between bridges.	--	\$ 626.00	\$ 270.00	
--	93595	17208	27066600900000	01	Forest	HICKORY TOWNSHIP	N	Y	N/A	Y	Y	Y	11	1	1	Do not use detour during Kelleetville Rodeo. Do not close SR 666 bridges at same time. Houses are between bridges.	--	\$ 626.00	\$ 256.00	
--	1398	17209	27066601100240	01	Forest	HICKORY TOWNSHIP	N	Y	N/A	Y	Y	Y	11	1	1	Do not use detour during Kelleetville Rodeo. Do not close SR 666 bridges at same time. Houses are between bridges.	--	\$ 275.00	\$ 111.00	
--	97328	25833	43017304703518	01	Mercer	NEW LEBANON BOROUGH	N	Y	N/A	N/A	Y	Y	11	1	1	--	Bridge width exceeds 3R minimum width - set to match width of existing bridges along corridor.	\$ 2,069.00	\$ 1,614.00	
--	1686	25858	43031801500622	01	Mercer	LACKAWANNOCK TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Bridge width exceeds 3R minimum width - set to match width of existing bridges along corridor.	\$ 2,077.00	\$ 1,302.00	
--	58092	26008	43302001700000	01	Mercer	JEFFERSON TOWNSHIP	N	N/A	Y	Y	N/A	Y	11	1	1	--	--	\$ 462.00	\$ 143.00	
--	93160	33765	60042702200000	01	Venango	PLUM TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Bridge width exceeds 3R minimum width - set to match width of existing bridges along corridor.	\$ 345.00	\$ 261.00	
--	2251	33788	60201301000000	01	Venango	CRANBERRY TOWNSHIP	N	N/A	Y	N/A	Y	Y	11	1	1	Half width construction not feasible due to existing bridge type.	Single span bridge is required due to frequent scour and debris accumulation at existing pier.	\$ 1,753.00	\$ 1,313.00	
--	97457	33956	61000603502233	01	Warren	BROKENSTRAW TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	1/2 width w/ signal	--	\$ 8,583.00	\$ 5,555.00	
--	2438	33957	61000603900000	01	Warren	BROKENSTRAW TOWNSHIP	N	N/A	N/A	N/A	N/A	N	11	1	1	Long Detour - Use Temp. Roadway	--	\$ 8,583.00	\$ 5,555.00	
--	2546	33982	61000608200000	01	Warren	SHEFFIELD TOWNSHIP	N	N/A	N/A	N/A	N/A	N	11	1	1	Temp. Roadway	--	\$ 7,347.00	\$ 1,866.00	
--	2580	34001	61002705203359	01	Warren	BROKENSTRAW TOWNSHIP	N	N/A	Y	N/A	Y	Y	11	1	1	--	Bridge width exceeds 3R minimum width - set to match width of existing bridges along corridor.	\$ 1,866.00	\$ 1,236.00	
--	2548	34056	61012700902381	01	Warren	TRIUMPH TOWNSHIP	N	N/A	Y	N/A	Y	Y	11	1	1	Car and Truck Detour. MOU needed for car detour using Youngsville Road.	Bridge width exceeds 3R minimum width - bridge is located on a curve. Set to match width of existing bridge to maintain sight distance.	\$ 979.00	\$ 363.00	
--	84954	34077	61095701700981	01	Warren	FREEHOLD TOWNSHIP	N	Y	N/A	N/A	Y	Y	11	1	1	--	--	\$ 1,584.00	\$ 566.00	
--	97452	34169	61301000600428	01	Warren	SPRING CREEK TOWNSHIP	N	Y	N/A	N/A	Y	Y	11	1	1	--	Bridge width exceeds 3R minimum width - set to match width of existing bridges along corridor.	\$ 502.00	\$ 332.00	
--	85095	8831	12012000400000	02	Cameron	TRUMAN	Y	N/A	N/A	N/A	N/A	N	14	1	1	ADT too high for detour route. Assume half width construction with temp traffic signal	--	\$ 2,224.00	\$ 2,038.00	
--	88201	9265	14004507902031	02	Centre	WOODWARD	N	N/A	Y	Y	N/A	Y	14	1	1	Truck turning movements are an issue in Milheim. Use PA 144, PA 192, US 15 and PA 45 as the detour route. Coordinate around PSU events.	--	\$ 2,498.00	\$ 598.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	88155	9360	14014403400099	02	Centre	BELLEFONTE	Y	N/A	N/A	N/A	N/A	N	14	1	1	ADT too high for detour. Alternate routes will cause massive congestion. Assume half width construction with temp traffic signal. Coordinate around PSU events.	--	\$ 9,029.00	\$ 7,425.00	
--	85135	9576	14100200501555	02	Centre	YARNELL	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 313.00	\$ 72.00	
--	81359	9577	14100200801726	02	Centre	YARNELL	N	N/A	N/A	N/A	Y	Y	-	-	-	Will need to coordinate with 14-1002-0050-1555.	--	\$ 309.00	\$ 102.00	
--	2893	9679	14201300100000	02	Centre	2 MI NE COBURN	N	N/A	N/A	N/A	Y	Y	--	--	--	Will need to coordinate with 14-0045-0790-2031.	--	\$ 166.00	\$ 73.00	
--	85125	9431	14304001301062	02	Centre	PORT MATILDA	Y	N/A	N/A	N/A	N/A	N	14	1	1	May have conflict with existing signal 1000' feet away. Only detour route for this section of I-99. Assume half width construction with temp traffic signal	--	\$ 2,955.00	\$ 2,548.00	
--	85128	9434	14304001500701	02	Centre	1 MI E PORT MATILDA	Y	N/A	N/A	N/A	N/A	N	14	1	1	Sight distance good on both ends for temporary signal - too high ADT for detour. Assume half width construction with temp traffic signal	--	\$ 3,197.00	\$ 1,724.00	
--	88199	9451	14304003701668	02	Centre	UNIONVILLE BORO	Y	N/A	N/A	N/A	N/A	N	14	1	1	Heavily traveled by trucks and cars - available detour of 30 miles is not feasible. Assume half width construction with temp traffic signal	--	\$ 2,767.00	\$ 982.00	
--	91413	9778	14400200702338	02	Centre	CLARENCE	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 717.00	\$ 230.00	
--	3195	9790	14400600100000	02	Centre	CASANOVA	N	N/A	N/A	N/A	Y	Y	--	--	--	Must coordinate with municipality.	--	\$ 487.00	\$ 220.00	
--	69443	11245	17005306400000	02	Clearfield	MORRISDALE	N	Y	N/A	N/A	Y	Y	14	1	1	Proposed ADT too high for detour to be feasible long-term	--	\$ 5,357.00	\$ 2,204.00	
--	91508	11390	17021902800000	02	Clearfield	MCGEES MILLS	Y	N/A	N/A	N/A	N/A	N	14	1	1	Proposed detour length is 60 miles. Assume half width construction with temp traffic signal.	--	\$ 2,852.00	\$ 2,610.00	
--	85076	11399	17021904201459	02	Clearfield	CURRY RUN	Y	N/A	N/A	N/A	N/A	N	14	1	1	Temporary road would be difficult. Assume half width construction with temp traffic signal.	--	\$ 2,817.00	\$ 2,321.00	
--	85079	11403	17021904602606	02	Clearfield	BELLS LANDING	Y	N/A	N/A	N/A	N/A	N	14	1	1	Temporary road would be difficult. Assume half width construction with temp traffic signal.	--	\$ 2,403.00	\$ 2,160.00	
--	93323	11404	17021904700185	02	Clearfield	BELLS LANDING	Y	N/A	N/A	N/A	N/A	N	14	1	1	Temporary road would be difficult; sight distance is good. Assume half width construction with temp traffic signal.	--	\$ 3,179.00	\$ 1,400.00	
--	93372	11454	17025502200000	02	Clearfield	2 MI SW PENFIELD	Y	N/A	N/A	N/A	N/A	N	14	1	1	Route ADT is too high to detour. Incident Route for I-80. Assume half width construction with temp traffic signal.	--	\$ 4,224.00	\$ 1,848.00	
--	88626	11461	17025503200000	02	Clearfield	HOLLYWOOD	Y	N/A	N/A	N/A	N/A	N	14	1	1	Detour route too long. Assume half width construction with temp traffic signal.	--	\$ 5,250.00	\$ 1,737.00	
--	89978	11658	17100900401885	02	Clearfield	HAWK RUN	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 291.00	\$ 234.00	
--	3571	11698	17200703101047	02	Clearfield	WEST DECATUR	N	N/A	N/A	Y	N/A	Y	--	--	--	Need to coordinate with Post Office located on one side of the bridge; 7 Mile detour	--	\$ 1,492.00	\$ 487.00	
--	85119	11807	17300902501042	02	Clearfield	2 MI SE TROUTVILLE	N	N/A	Y	Y	N/A	Y	14	1	1	--	--	\$ 317.00	\$ 209.00	
--	91510	12163	18015000701624	02	Clinton	3 MILE EAST BEECH CREEK	Y	N/A	N/A	N/A	N/A	Y	14	1	1	Detour route too long - temp road upstream would be difficult. Amish traffic. Assume half width construction with temp traffic signal.	--	\$ 4,862.00	\$ 3,214.00	
--	69040	12239	18047700300000	02	Clinton	SALONA	N	N/A	N/A	Y	N/A	Y	--	--	--	Good to detour only when school is out-of-session.	--	\$ 2,332.00	\$ 685.00	
--	85152	15531	24012002801546	02	Elk	CITY OF ST MARYS	Y	N/A	N/A	N/A	N/A	N	14	1	1	Possible temp road may be needed. Widths and number of lanes assume half width construction with temp traffic signal.	--	\$ 11,303.00	\$ 2,734.00	
--	69088	15535	24021900201858	02	Elk	BROCKPORT	Y	N/A	N/A	N/A	N/A	N	14	1	1	Possible temp road may be needed. Widths and number of lanes assume half width construction with temp traffic signal.	--	\$ 6,690.00	\$ 2,191.00	
--	88185	15560	24021904900000	02	Elk	JOHNSONBURG	Y	N/A	N/A	N/A	N/A	N	12	2	2	Possible temp road may be needed - Intersection with Route 255 is nearby	--	\$ 4,793.00	\$ 1,577.00	
--	88195	19992	34003507200000	02	Juniata	MCALISTERVILLE	Y	N/A	N/A	N/A	N/A	N	14	1	1	Sight Distance is minimal - electric is available. Assume half width construction with temp traffic signal.	--	\$ 5,708.00	\$ 1,855.00	
--	4194	20021	34007502501504	02	Juniata	EAST WATERFORD	N	N/A	Y	Y	N/A	Y	14	1	1	School on detour route.	--	\$ 991.00	\$ 321.00	
--	4214	20106	34100200200000	02	Juniata	0.5 MI E CUBA MILLS	N	Y	N/A	Y	N/A	Y	14	1	1	--	--	\$ 428.00	\$ 286.00	
--	4218	20118	34100400300549	02	Juniata	MCALISTERVILLE	N	N/A	Y	Y	N/A	Y	14	1	1	School on detour route.	--	\$ 906.00	\$ 293.00	
--	81508	20137	34200601501696	02	Juniata	VAN WERT	N	Y	N/A	Y	N/A	Y	14	1	1	--	--	\$ 1,293.00	\$ 418.00	
--	91518	20147	34200701400000	02	Juniata	OAKLAND MILLS	Y	N/A	N/A	N/A	N/A	N	12	1	1	Available detour route is not sufficient for truck turning movements. Assume half width construction with temp traffic signal.	--	\$ 429.00	\$ 185.00	
--	78606	25213	42000605100562	02	McKean	HAZELHURST	Y	N/A	N/A	N/A	N/A	N	14	1	1	Bike Route; possible temporary road. Widths and number of lanes assume half width construction with temp traffic signal.	--	\$ 1,986.00	\$ 1,715.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	78605	25216	42000605800309	02	McKean	MARVINDALE	Y	N/A	N/A	N/A	N/A	N	14	1	1	Bike Route. Coordinate with 42-0006-0510-0562; possible temporary road. Widths and number of lanes assume half width construction with temp traffic signal.	--	\$ 2,035.00	\$ 1,759.00	
--	4344	25243	42004600600000	02	McKean	3 MI SE BETULA	Y	N/A	N/A	N/A	N/A	N	14	1	1	Possible temp road. Widths and number of lanes assume half width construction with temp traffic signal.	--	\$ 853.00	\$ 853.00	
--	88664	25281	42005904500000	02	McKean	1 MI W ORMSBY	N	N/A	Y	Y	N/A	N	14	1	1	Coordinate with 42-0006-0510 & 42-0006-0580 bridges	--	\$ 800.00	\$ 934.00	
--	88183	25297	42015500200000	02	McKean	LIBERTY	Y	N/A	N/A	N/A	N/A	N	14	1	1	Assume half width construction with temp traffic signal.	--	\$ 1,048.00	\$ 821.00	
--	85215	25308	42015501900182	02	McKean	1 MI N PORT ALLEGHENY	N	N/A	Y	Y	N/A	N	14	1	1	--	--	\$ 2,838.00	\$ 1,658.00	
--	4341	25313	42015502701162	02	McKean	3 MI SE LARABEE	N	N/A	Y	Y	N/A	N	14	1	1	--	--	\$ 1,978.00	\$ 1,533.00	
--	85259	25314	42015502900238	02	McKean	2 MI SE LARABEE	N	N/A	Y	Y	N/A	N	14	1	1	--	--	\$ 1,978.00	\$ 1,533.00	
--	85234	25418	42034604101617	02	McKean	3 MI E BRADFORD	N	Y	N/A	Y	N/A	Y	14	1	1	Coordinate with 42-0346-0420-1811; ADT too high for detour	--	\$ 3,353.00	\$ 2,666.00	
--	4336	25420	42034604201811	02	McKean	DERRICK CITY	N	Y	N/A	Y	N/A	Y	14	1	1	Coordinate with 42-0346-0410-1617; possible temporary road	--	\$ 4,204.00	\$ 1,833.00	
--	85237	25459	42064602900000	02	McKean	1 MI N GILMORE	N	N/A	Y	Y	N/A	Y	14	1	1	Use state road for detour. Coordinate with NY State & County	--	\$ 1,431.00	\$ 822.00	
--	4340	25461	42077001300784	02	McKean	CUSTER CITY	N	N/A	Y	N/A	Y	N	14	1	1	--	--	\$ 1,348.00	\$ 1,048.00	
--	88630	25462	42077001400000	02	McKean	CUSTER CITY	N	N/A	Y	N/A	Y	N	14	1	1	--	--	\$ 1,355.00	\$ 1,002.00	
--	68965	25489	42101500100472	02	McKean	WRIGHTS CORNERS	N	N/A	Y	N/A	Y	Y	14	1	1	--	--	\$ 330.00	\$ 217.00	
--	4486	25495	42200100100806	02	McKean	6 MI SW CLERMONT	Y	N/A	N/A	N/A	N/A	N	14	1	1	Detour of 40 miles too long need to over widen new bridge. Assume half width construction with temp traffic signal.	--	\$ 270.00	\$ 186.00	
--	78611	25500	42200200320000	02	McKean	BETULA	Y	N/A	N/A	N/A	N/A	N	12	1	1	Road Ends. Assume half width construction with temp traffic signal.	--	\$ 52.00	\$ 14.00	
--	93322	25535	42401100102339	02	McKean	BRADFORD	N	N/A	N/A	N/A	Y	Y	--	--	--	UPH-Bradford Campus coordinate 44-0655-0230-0022	--	\$ 507.00	\$ 111.00	
--	4642	26468	44065502201820	02	Mifflin	KISHACOQUILLAS	Y	N/A	N/A	N/A	N/A	N	14	1	1	Will need to coordinate with 44-0655-0230-0022. Assume half width construction with temp traffic signal.	--	\$ 5,285.00	\$ 4,077.00	
--	85297	26469	44065502300022	02	Mifflin	KISHACOQUILLAS	Y	N/A	N/A	N/A	N/A	N	14	1	1	Will need to coordinate with 44-0655-0220-1820. Assume half width construction with temp traffic signal.	--	\$ 5,285.00	\$ 4,077.00	
--	4676	26472	44100200800896	02	Mifflin	3 MI NE REEDSVILLE	N	N/A	N/A	Y	N/A	Y	--	--	--	Amish will need to be informed.	--	\$ 1,236.00	\$ 468.00	
--	4677	26477	44100201200618	02	Mifflin	LOCKE MILLS	N	N/A	Y	Y	N/A	Y	14	1	1	Using local roads. State Park nearby needs access.	--	\$ 730.00	\$ 291.00	
--	85275	26595	44401300500000	02	Mifflin	1 MI NW STRODES MILLS	N	N/A	Y	Y	N/A	Y	14	1	1	Need local coordination.	--	\$ 1,041.00	\$ 260.00	
--	88640	30090	52000602300000	02	Potter	COUDERSPORT BORO	N	Y	N/A	Y	N/A	Y	14	1	1	Detour not feasible for long term - weekend and 2 week detour would need to be coordinated with the Boro	--	\$ 3,830.00	\$ 4,521.00	
--	69501	30144	52004402700000	02	Potter	CARTER CAMP	Y	N/A	N/A	N/A	N/A	N	14	1	1	Detour too long. Assume half width construction with temp traffic signal.	--	\$ 338.00	\$ 303.00	
--	93375	30156	52004408101925	02	Potter	1 MI SE HEBRON CENTRE	Y	N/A	N/A	N/A	N/A	N	14	1	1	Detour not feasible. Assume half width construction with temp traffic signal.	--	\$ 1,276.00	\$ 988.00	
--	85309	30162	52004409500000	02	Potter	CLARA	Y	N/A	N/A	N/A	N/A	N	14	1	1	Detour route is not feasible; 18 mile detour. Assume half width construction with temp traffic signal.	--	\$ 1,261.00	\$ 1,107.00	
--	4805	30166	52004410100000	02	Potter	SHARON CENTER	Y	N/A	N/A	N/A	N/A	N	14	1	1	Detour not feasible for trucks. Assume half width construction with temp traffic signal.	--	\$ 1,797.00	\$ 1,388.00	
--	4897	30190	52004904300530	02	Potter	MILLS	Y	N/A	N/A	N/A	N/A	N	14	1	1	Over-widen new bridge. Assume half width construction with temp traffic signal.	--	\$ 1,530.00	\$ 1,548.00	
--	4898	30191	52004904400406	02	Potter	MILLS	Y	N/A	N/A	N/A	N/A	N	14	1	1	Over-widen new bridge. Assume half width construction with temp traffic signal.	--	\$ 1,514.00	\$ 1,613.00	
--	4899	30233	52044900501401	02	Potter	2 MI N WALTON	N	Y	N/A	Y	N/A	Y	14	1	1	--	--	\$ 493.00	\$ 391.00	
--	93373	30348	52200201302331	02	Potter	2 MI SW GERMANIA STATION	N	Y	N/A	Y	N/A	Y	14	1	1	State Park Entrance - only allow detour after Labor Day to Oct 31st	--	\$ 2,873.00	\$ 1,325.00	
--	85402	30435	52402600220000	02	Potter	ROULETTE	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour available	--	\$ 738.00	\$ 220.00	
--	83457	6074	08001403400602	03	Bradford	TROY BORO	Y	N/A	N/A	N/A	N/A	N	11	1	1	--	Pedestrian traffic shall be maintained throughout construction.	\$ 9,786.00	\$ 1,693.00	
Y	99281	6104	08018704000000	03	Bradford	1 MILE SOUTH OF DURELL	Y	N/A	N/A	N/A	N/A	N	11	1	1	--	Protective fence will be placed around any portion of wetlands within the project area (TCE) that will not be impacted by the project.	\$ 1,722.00	\$ 557.00	
--	5038	6136	08022001301099	03	Bradford	VILLAGE OF STEVENSON	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Bridge	In - stream work will not be permitted from March 1 to June 15 due to stocked trout. An ATON plan will be prepared and implemented during construction.	\$ 4,830.00	\$ 3,557.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
Y	5093	6164	08036700101794	03	Bradford	3.5 MI.SOUTH OF SILVARA	N	N/A	N/A	Y	Y	Y	--	--	--	--	Place all trees cut down for project adjacent to Required Right of Way. Owners wants to retain all timber. Please contact the owners: Sharon Newberry (#5, 570-869-1600), Allen Carmeta and Thomas Champluvier (#4), Bradley Shatinsky (#6, 570-337-2320). In - stream work will not be permitted from March 1 to June 15 due to stocked trout.	\$ 692.00	\$ 278.00	
--	79247	6191	08041403800000	03	Bradford	VILLAGE OF FRANKLINDALE	N	Y	N/A	N/A	Y	Y	11	2	2	Temporary Roadway/Pipes	32 ft proposed to allow for 5 ft shoulder to match existing shoulder width. Bridge is within horizontal curve.	\$ 3,535.00	\$ 849.00	
Y	76863	6193	08046700100052	03	Bradford	2 MILE SOUTH OF ROME BORO	Y	N/A	N/A	N/A	N/A	N	14' in phase 1, 17' in phase 2	1	1	Phased Construction with temporary signals at intersection, Truck Detour. The PA 467 eastbound truck detour is SR 187, SR 1036, SR 1051, back to SR 467. The PA 467 westbound truck detour is SR 1010, SR 1017, SR 1012, SR 6, SR 187, back to SR 467.	Bridge at T intersection. Extra width to allow for phased construction. In - stream work will not be permitted from March 1 to June 15 due to stocked trout. Protective fence will be placed around all wetlands within or adjacent to the project area (TCE). If rumble strips are proposed, ensure they are designed in accordance with SOL 470-02-13. Ensure that MPT methods address pedestrians in accordance with 470-00-03, Provisions for Detours for Bicyclists and Pedestrians During Construction Projects and 470-04-04, Bicyclist and Pedestrian Accommodation in Work Zones. An ATON plan will be prepared and implemented during construction.	\$ 1,293.00	\$ 2,820.00	
Y	5210	6203	08046702700000	03	Bradford	PIKE TWP .4M S SR 1013	N	N/A	Y	Y	Y	Y	11	1	1	--	A maximum 5 week detour shall be outside of the school year (between June 15 and August 15). Coordination with the Bradford County S.R. 1011 detour (as part of 08-0706-0260-1160, MPMS 5215) is required. Extra bridge width provided to better match width of other bridges in the corridor. Protective fence will be placed around all wetland areas within or adjacent to the project area that will not be impacted by the project. In areas of temporary wetland impacts due to excavation (structure, diversion channel...) the topsoil will be stockpiled separate from the subsoil and replaced at original condition upon completion of the project. Soil should be stockpiled outside of wetland areas. If it is required to stockpile in a wetland area, geo - textile should be placed on the ground surface prior to stockpiling. Perform narrated video documentation including distance measurements at 100 foot intervals on the following local roads one week prior to initiating the detour and within one week after the detour has been removed: Pike Township • T-782 Powell Road • T-706 Gorham Road/Maple Street Le Raysville Borough • Gorham Road Include Department and local municipal officials in this field view process.	\$ 789.00	\$ 782.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Unavailability Value		Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am							
Y	5039	6216	08051402000863	03	Bradford	2.5 MI.N.OF W.FRANKLIN	N	N/A	N/A	N/A	Y	Y	--	--	--	--			Protective fence will be placed around all wetlands within the APE (TCE) to avoid temporary impacts. Additionally, protective fence will be placed along the edge of the TCE where wetlands are adjacent to the project area. Perform narrated video documentation including distance measurements at 100 foot intervals on the following local roads one week prior to initiating the detour and within one week after the detour has been removed: Granville Township • T-317 Beach Road • T-364 Bolt Road • T-365 Clark Road Leroy Township • T-317 Beach Road • T-328 Woodruff Road • T-330 Rockwell Road • T-339 Bonney Road • T-364 Bolt Road • T-365 Clark Road Franklin Township • T-339 Bonney Road • T-352 Cross Road Include Department and local municipal officials in this field view process. Deliver video of the roadway conditions before the detour is implemented to the Department.	\$ 818.00	\$ 614.00	
Y	5208	6224	08070601701340	03	Bradford	2 MI. NE. OF CAMPTOWN	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Bridge			Protective fence should be placed around all wetlands within or adjacent to the project area that will not be impacted by the project. If temporary impacts to PSS wetlands exceed 0.05 acres, coordination with DEP will be required to determine if a planting plan will need to be developed and completed following construction. Access to field drive at station 919+50 Right must be maintained throughout construction. Place all trees cut down for project adjacent to Required Right of Way. Owners want to retain all timber and timber from adjacent parcel 2 (Robert and Suzanne Preston). Parcel 2 owner (Robert and Suzanne Preston) have agreed. Please contact the owners: James C./Lydia L. Gavek (#4, 570-250-6199 or 570-746-2311), Robert and Suzanne Preston (#2). Place all trees cut down for project adjacent to Required Right of Way. Owners want to retain all timber. Please contact the owners: Michael and Maria Robinson (#3).	\$ 2,981.00	\$ 1,724.00	
Y	5215	6227	08070602601160	03	Bradford	STEVENS TWP .1M E LR08034	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Bridge, S.R. 1011 detour will be S.R. 1026, S.R. 467, S.R. 706			Near intersection with S.R. 1011. The Detour for S.R. 1011 may be implemented twice for a maximum of 3 days for each closure. Coordination with the 08-0467-0270-0000 (MPMS 5210) detour is required. Extra width provided to match width on other bridges in the corridor. If any portion of a wetland is adjacent to the project area, protective fence should be placed along the edge of the TCE.	\$ 2,762.00	\$ 1,427.00	
--	98535	6348	08105900700582	03	Bradford	1 MI. W. OF WARREN CENTER	N	N/A	N/A	N/A	Y	Y	--	--	--				Perform narrated video documentation including distance measurements at 100 foot intervals on the following local roads one week prior to initiating the detour and within one week after the detour has been removed: Warren Township • T-889 Reagan Hill Road Include Department and local municipal officials in this field view process. Deliver video of the roadway conditions before the detour is implemented to the Department.	\$ 132.00	\$ 105.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	5218	6476	08401302501496	03	Bradford	0.25 MI N.OF MIDDLETOWN	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Pipes	--	\$ 1,808.00	\$ 1,240.00	
--	5589	12486	19004402401397	03	Columbia	1.9 MI NW OF JERSEYTOWN	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 2,579.00	\$ 1,123.00	
Y	98939	12555	19025402500486	03	Columbia	3.5 MI E OF MILLVILLE	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Pipes	Protective fence will be placed around all wetland areas within or adjacent to the project area that will not be impacted by the project. Geo - textile will be placed in wetlands temporarily impacted by the temporary roadway prior to any other construction activities in the vicinity. In areas of temporary wetland impacts due to excavation, the topsoil will be stockpiled separate from the subsoil and replaced at original condition upon completion of the project. Soil should be stockpiled outside of wetland areas. If it is required to stockpile in a wetland area, geo - textile should be placed on the ground surface prior to stockpiling.	\$ 2,439.00	\$ 901.00	
Y	5578	12592	19048703700177	03	Columbia	1 MILE N OF LIGHTSTREET	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Bridge. S.R. 1007 will be detoured using S.R. 487.	3R specifies 32 ft min bridge width (11' lanes) 34 ft proposed to match existing 12' lanes. Contractor should be cognizant of potentially contaminated soils during any earth disturbance (especially behind the east abutment), due to potential contamination encountered during soil borings. If any contaminated material is encountered, proper handling and disposal procedures must be followed. In - stream work will not be permitted from March 1 to June 15 due to stocked trout. In - stream work will not be permitted from October 1 to December 31 due to wild trout. Protective fence should be placed along all wetland within or adjacent to the project area that will not be impacted by the project. Geo - textile and fill should be placed over wetlands temporarily impacted by equipment access or staging. In areas of temporary wetland impacts due to excavation, the topsoil will be stockpiled separate from the subsoil and replaced at original condition upon completion of the project. Soil should be stockpiled outside of wetland areas. If it is required to stockpile in a wetland area, geo - textile should be placed on the ground surface prior to stockpiling.	\$ 5,191.00	\$ 4,724.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
Y	78822	12738	19403101120000	03	Columbia	3 MI W OF WALLER	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Owner wants all wood/timber removed from his property placed in an area that will be staked out by the claimant adjacent to the TCE (Walter Cole, #1). Owner wants all wood/timber removed from his property placed with his neighbor's wood/timber in an area that will be staked out by the claimant adjacent to the TCE (Frank Daddio Jr. #2). In - stream work will not be permitted from March 1 to June 15 due to stocked trout. In - stream work will not be permitted from October 1 to December 31 due to wild trout. Protective fence should be placed along all wetlands within or adjacent to the project area that will not be impacted by the project. Geo - textile and fill should be placed over wetlands temporarily impacted by the ATON portage, equipment access, or staging. If staging is required in forested wetlands, the trees and shrubs should be cut at ground level and the stumps and root masses should not be disturbed. Perform narrated video documentation including distance measurements at 100 foot intervals on the following local roads one week prior to initiating the detour and within one week after the detour has been removed: Greenwood Township • T-458 Parker Road Jackson Township	\$ 85.00	\$ 64.00	
--	91436	24511	41001500702198	03	Lycoming	8 MILES S OF WILLIAMSPORT	Y	N/A	N/A	N/A	N/A	N	11	2	2	Staged Construction, Centerlane width - 14'	In - stream work will not be permitted from October 1 to December 31 due to wild trout.	\$ 10,863.00	\$ 5,805.00	
Y	6049	24566	41004403440880	03	Lycoming	4.5 MI S OF JERSEY SHORE	N	N/A	N/A	N/A	N/A	N	--	--	--	Construct new bridge off alignment. Maintain traffic on existing bridge.	In - stream work will not be permitted from October 1 to December 31 due to the presence of wild trout. It is anticipated that permanent wetland impacts will be debited from the Vargo Bank site with ratios being 1:1 for PEM and 1.5:1 for PSS. This should be confirmed with DEP and USACOE prior to permit submission. An updated accounting sheet for the Vargo Bank site along with mapping of the project and bank site will be included in the permit submission. Protective fence will be placed around all wetland areas within or adjacent to the project area that will not be impacted by the project. In areas of temporary wetland impacts due to excavation, the topsoil will be stockpiled separate from the subsoil and replaced at original condition upon completion of the project. Soil should be stockpiled outside of wetland areas. If it is required to stockpile in a wetland area, geo - textile should be placed on the ground surface prior to stockpiling. If possible, in the area of PSS wetland to be temporarily impacted, the shrubs should be cut at ground level and the root masses should be left in place. Geo - textile and fill (if required) should be placed prior to equipment access to allow the area to naturally revegetate following completion of the project. All trees or dead snags greater than 5	\$ 4,051.00	\$ 2,196.00	
--	6023	24591	41008700600000	03	Lycoming	0.1 MI N OF FARRAGUT	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Pipes		\$ 5,198.00	\$ 3,436.00	
--	6145	24603	41011801700622	03	Lycoming	VILLAGE OF LAIRDSVILLE	Y	N/A	N/A	N/A	N/A	N	11	1	1	Staged Construction - Shoulder widths will vary to tie into curbed approach. - Match existing curb to curb	Extra width provided to match existing curb to curb width. Shoulder widths vary to tie into curbed approach. In - stream work will not be permitted from March 1 to June 15 due to stocked trout. In - stream work will not be permitted from October 1 to December 31 due to wild trout.	\$ 4,545.00	\$ 1,043.00	
--	6045	24748	41041400100417	03	Lycoming	2 MI N OF WATERVILLE	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Bridge	In - stream work will not be permitted from March 1 to June 15 due to stocked trout. In - stream work will not be permitted from October 1 to December 31 due to wild trout.	\$ 331.00	\$ 184.00	

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							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	6054	24751	41041400800000	03	Lycoming	VILLAGE OF JERSEY MILLS	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Pipes	In - stream will not be permitted from March 1 to June 15 due to stocked trout and October 1 to April 1 due to Class A wild trout. Due to proximity to Pine Creek, an ATON plan will be prepared and implemented during construction if required through coordination with PFBC.	\$ 344.00	\$ 146.00	
Y	6057	24850	41200200320000	03	Lycoming	3 MI W OF ELIMSPORT	N	N/A	N/A	N/A	N/A	N	--	--	--	Construct new bridge off alignment. Maintain traffic on existing bridge.	Place all trees cut down for project adjacent to Required Right of Way. Owner wants to retain all timber. (Parcel #6, Terry L and Lyndelle E Ober). In - stream work will not be permitted from March 1 to June 15 due to stocked trout. PA Fish & Boat Commission personnel are to be on site for approving the mud sill structure location and to estimate normal water flow conditions for setting log heights. Notify David Keller with PFBC at 814-359-5158, William Savage with PFBC at 814-359-5145, and Jacob Carson with DEP at 570-327-0527 a minimum of 14 days prior to the installation of the mudsills to schedule and coordinate site approval.	\$ 217.00	\$ 80.00	
--	6052	24881	41201501720000	03	Lycoming	1 MI NORTH OF LAIRDSVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--		In - stream work will not be permitted from October 1 to December 31 due to wild trout. Perform narrated video documentation including distance measurements at 100 foot intervals on the following local roads one week prior to initiating the detour and within one week after the detour has been removed: Penn Township • T-695 Crawley Hill Road • T-694 Crawley Hill Road • T-692 Loop Hill Road Franklin Township • T-692 Dugan Road Include Department and local municipal officials in this field view process. Deliver video of the roadway conditions before the detour is implemented to the Department.	\$ 52.00	\$ 44.00	
Y	74022	24928	41205000120000	03	Lycoming	2.5 MI E OF LAIRDSVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--		Place all trees cut down for project adjacent to Required Right of Way. Owner wants to retain all timber. (Parcel #7, John J. Tamalis). As a Wild Trout Stream, there are instream construction restrictions from October 1 to December 31. In - stream work will not be permitted from March 1st to June 15th due to stocked trout.	\$ 91.00	\$ 69.00	
--	6144	24938	41206101702204	03	Lycoming	3MI.E OF HUGHESVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--			\$ 376.00	\$ 329.00	
--	6387	28361	47025400200000	03	Montour	4.5 M W OF LIMESTONEVILLE	N	Y	N/A	N/A	Y	Y	12	2	2	Temporary Roadway/Bridge	Extra bridge width provided to match width of other bridges in the corridor.	\$ 2,321.00	\$ 1,289.00	
--	6381	28387	47100600100570	03	Montour	3 MI.N.WASHINGTONVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--			\$ 377.00	\$ 125.00	

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							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
Y	74037	28389	47100600500000	03	Montour	7MI NE OF WASHINGTONVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Protective fencing will be placed during construction to prevent additional impacts to the wetlands. There is a triathlon at the PPL Montour Preserve the 1st Saturday in October. The bike leg of the race uses the bridge. The project must be completed and open to traffic by September 30th. Project must be developed understanding the presence of the Montour Preserve, especially with regard to traffic control. While a detour may be practical for vehicular traffic, it would not serve pedestrian modes. Project should be coordinated with the Preserve Manager. Perform narrated video documentation including distance measurements at 100 foot intervals on the following local roads one week prior to initiating the detour and within one week after the detour has been removed: Anthony Township • T-423 Sportsmans Road/White Hall Road • T-381 McCormick Road Include Department and local municipal officials in this field view process. Deliver video of the roadway conditions before the detour is implemented to the Department.	\$ 146.00	\$ 55.00	
--	97586	29174	49102700400616	03	Northumberland	VILLAGE OF POTTS GROVE	N	N/A	N/A	N/A	Y	Y	--	--	--	Turning movements and sight distance at drives needs to be reviewed.	Min. of 24 ft curb-curb is proposed. A wider bridge may be required to accommodate turning movements. Drainage facilities at the near approach are to be replaced. The inlet at the near left shall be moved to the near side of the driveway.	\$ 437.00	\$ 103.00	
--	6669	29178	49200100200000	03	Northumberland	3 MI N OF ELYSBURG BORO	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 140.00	\$ 45.00	
--	79230	29303	49402000301775	03	Northumberland	2.5 MI NW OF FISHERS FERRY	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 261.00	\$ 101.00	
--	6603	29306	49402200101591	03	Northumberland	.25 MI E OF FISHERS FERRY	N	N/A	N/A	Y	Y	Y	--	--	--	Bridge closure may only occur June - August.	Extra bridge width provided due to accommodation of seasonal wide farm equipment and seasonal high truck volumes for farming operation.	\$ 175.00	\$ 65.00	
--	88047	29311	49402600100165	03	Northumberland	2 MI S OF AUGUSTAVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 913.00	\$ 489.00	
--	88799	31169	54102300401962	03	Snyder	VILLAGE OF HUMMELS WHARF	N	N/A	N/A	N/A	Y	Y	--	--	--	Turning movements into business must be reviewed. Guide rail damaged.	Extra bridge width provided to more closely match existing bridge width and accommodate turning movements into businesses.	\$ 5,651.00	\$ 2,467.00	
--	89977	31948	56008701100148	03	Sullivan	VILLAGE OF HILLSGROVE	Y	N/A	N/A	N/A	N/A	N	11	1	1	Staged Construction	In - stream work will not be permitted from March 1 to June 15 due to stocked trout. In - stream work will not be permitted from October 1 to December 31 due to wild trout.	\$ 750.00	\$ 440.00	
Y	7021	31966	56008705202440	03	Sullivan	0.25 MI W OF DUSHORE	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Bridge	An ATON plan will be prepared and implemented during construction. In - stream work will not be permitted from March 1 to June 15 due to stocked trout. No ground disturbance will occur in the area of the old foundation (where filter bags are to be placed) in the SE quadrant.	\$ 1,473.00	\$ 1,148.00	
--	7009	31981	56015401501564	03	Sullivan	4 MI SE OF FORKSVILLE	Y	N/A	N/A	N/A	N/A	N	11	1	1	Staged Construction - 1 shoulder may need to be widened for staging	In - stream work will not be permitted from March 1 to June 15 due to stocked trout. In - stream work will not be permitted from October 1 to December 31 due to wild trout.	\$ 413.00	\$ 175.00	
--	7326	32822	58004901400434	03	Tioga	0.5 MI E OF WESTFIELD	Y	N/A	N/A	N/A	N/A	N	11	1	1	Staged Construction - 1 shoulder may need to be widened for staging or sight distance at intersection.	In - stream work will not be permitted from March 1 to June 15 due to stocked trout.	\$ 3,786.00	\$ 2,342.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
Y	7251	32843	58024903220000	03	Tioga	3.5 MI E OF WESTFIELD	Y	N/A	N/A	N/A	N/A	N	11	1	1	--	Extra width provided to accommodate staged construction. In - stream work will not be permitted from March 1 to June 15 due to stocked trout. Protective fence will be placed around wetlands within the project area not impacted by the project. Geo - textile and fill will be placed over wetlands in the area of the temporary road. In areas where excavation will occur in wetlands, the topsoil will be stockpiled separately from the subsoil and replaced upon completion of the project. The area will be graded to original contours and seeded with a wetland seed mix upon completion of the project. Stockpiles should be placed outside of wetlands, in an upland area. If it is required to stockpile in a wetland area, geo - textile should be placed prior to stockpiling to minimize encroachments.	\$ 1,061.00	\$ 825.00	
--	87929	32931	58054902602539	03	Tioga	0.5 MI S OF JOBS CORNERS	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 716.00	\$ 393.00	
Y	79055	33080	58300103901413	03	Tioga	1 MI S OF WATROUS	Y	N/A	N/A	N/A	N/A	N	10.5	1	1	--	Extra width provided to accommodate staged construction. Parcel #3: There is an old foundation from the original home within the take area. Claimant (Thomas and Thelma Vroman) are requesting any artifacts be given to them. There are animals that have been buried in the area of the take. Claimant requests any remains be properly taken care of. Parcel #4: Claimant (J3 Investors) would like timber from project, informed Mr. Srobra that the contractor would place timber on landing just outside of the project area between stations 1045 and 1046. There will be instream construction restrictions from October 1st to April 1st due to the presence of Class A wild trout. Protective fence should be placed around all wetlands within the project study area that will not be impacted by this project.	\$ 710.00	\$ 383.00	
Y	7136	33083	58300500400000	03	Tioga	VILLAGE OF DRAPER	N	N/A	N/A	N/A	N/A	N	--	--	--	Temporary Roadway/Bridge	Extra bridge width provided to accommodate curve on bridge. Place all trees cut down for project adjacent to Required Right of Way. Owner wants to retain all timber (Parcel #1, Katelyn S. and Joshua K. Losinger). In - stream work will not be permitted from March 1 to June 15 due to stocked trout. Protective fence will be placed around wetland areas within the APE (TCE) not impacted by the project.	\$ 155.00	\$ 119.00	
Y	7347	33180	58401702800000	03	Tioga	2 MI NW OF OSCEOLA	N	N/A	N/A	N/A	N/A	Y	--	--	--	Temporary Roadway/Pipes - Other option is detour with accelerated construction if coordinated with local municipalities, emergency service providers, and school district. Detour routes would be SR 4019, Steuben County Routes 127, 100 & 99	--	\$ 482.00	\$ 212.00	
--	83470	33209	58403501300426	03	Tioga	3.5 MI NE OF WELLSBORO	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 1,911.00	\$ 1,081.00	
--	7542	33469	59100101101961	03	Union	2.5 MI W OF KELLY CROSSRD	N	N/A	N/A	N/A	Y	Y	--	--	--	--	In - stream work will not be permitted from October 1 to December 31 due to wild trout.	\$ 799.00	\$ 359.00	
--	7542	33470	59100101102058	03	Union	2.5 MI W OF KELLY CROSSRD	N	N/A	N/A	N/A	Y	Y	--	--	--	--	In - stream work will not be permitted from October 1 to December 31 due to wild trout.	\$ 799.00	\$ 319.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
Y	83478	33478	59100300200000	03	Union	2 MI NE BUFFALO CROSS RDS	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Place all trees cut down for project adjacent to Required Right of Way. Owner wants to retain all timber. (Parcel #3, Calvin R. and Joann Stoltzfus). An ATON Plan will be prepared and implemented during construction. In order to obtain NEPA clearance and begin the ROW process, additional Archaeology was "deferred". Once the Department purchases the ROW, Phase II Archaeology field work will begin. A reevaluation of the NEPA document will be required to document findings of the additional Archaeology work. One pre-contact period archaeological site (36UN114) was identified within the southwest bridge quadrant. The area of 36UN114 located within the current project Area of Potential Effect (APE) is 310.25 square meters. Phase I archaeological investigations determined site 36UN114 to be potentially eligible for inclusion in the National Register of Historic Places. The P3 Bridge Consultant will be responsible for completion of the Section 106 process for this bridge project. This will include Phase II archaeological testing and Phase III archaeological mitigation, if necessary, at site 36UN114. The District 3-0 cultural resource professional calculated the man-hour estimate to be 1616 hours for all tasks associated with Phase II archaeological testing. The	\$ 421.00	\$ 330.00	
Y	74043	33543	59300202000501	03	Union	VILLAGE OF LAURELTON	N	N/A	N/A	N/A	Y	Y	--	--	--	Temporary Pedestrian Bridge	In - stream work will not be permitted from March 1 to June 15 due to stocked trout. In - stream work will not be permitted from October 1 to December 31 due to wild trout. Per DOM 07-15, page 2 and 3 of the Bike / Ped Checklist must be completed by the PM during Final Design. Avoidance measure provided by USFWS -> Cut trees between November 16 and March 31. Where possible, retain shagbark hickory trees, dead and dying trees, and large diameter trees (> 12 inches d.b.h) to serve as roost trees for bats. Where possible, also retain forested riparian corridors and forested wetlands. If this avoidance measure cannot be followed, coordination with the USFWS will be required. Schedule and hold a pre-construction meeting with the Union County Conservation District: Contact is Eric Ernst, E&S Control Technician (570)524-3860, Union County Government Center, 155 North 15th Street, Lewisburg, PA 17837. The Development Entity will be responsible for soil sampling near the areas of interest on the Boop property if excavation and excess fill generation is going to occur. The Development Entity will be responsible for removal of UST's if tanks are encountered.	\$ 1,022.00	\$ 326.00	
--	96689	20820	35401900200731	04	Lackawanna	S ABINGTON TP OVER I-81	N	N/A	N/A	N/A	Y	Y	--	--	--	Contact Municipality to coordinate Detour. Coordinate closure with the PA Turnpike who plan on replacing their bridge over the Turnpike in 2017. Bridge A-130.23. Any lane closure or shutdown of the interstate will have to follow the Interstate Restriction Protocol DOC10-01. Additionally, a detour of the Interstate is strongly discouraged. State police assistance will be required.	Sewer line attached to bridge can't be shut down, will affect staging, reduce to 2-span	\$ 3,865.00	\$ 2,081.00	
--	67364	23795	40011501200000	04	Luzerne	BEAR CR TW 1.2M S SR 2038	Y	N/A	N/A	N/A	N/A	N	11	2	1	No detour due to high ADT. Truck Route and none available. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	--	\$ 4,761.00	\$ 1,771.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	97506	24493	40800500201030	04	Luzerne	BUTLER TWP OVER I-80 WB	Y	N/A	N/A	N/A	N/A	N	11	1	1	1/2 width or ramp realignment check truck turning template. No detour as per FHWA. Any lane closure or shutdown of the interstate will have to follow the Interstate Restriction Protocol DOC 10-01. Additionally, a detour of the Interstate is strongly discouraged. Statepolice assistance will be required. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	Federal Oversight, Ramp realignment, underclearance correction required	\$ 7,925.00	\$ 6,866.00	
Y	96726	29947	51100700301853	04	Pike	SHOHOLA TWP 1.4M N SR1005	N	N/A	N/A	Y	N/A	Y	--	--	--	Contact Municipality for Possible use of Parkers Glenn Road, verify condition & restore. SR 1005 is posted for 10 TON. A video inspection of the posted road(s) on the detour can be completed prior to the detour and afterwards to identify the areas needing repairs.	use TL-4 barrier	\$ 129.00	\$ 45.00	
--	67514	29982	51200600100953	04	Pike	DINGMAN TWP .2 M E TR 739	Y	N/A	N/A	N/A	N/A	N	11	1	1	Single Lane temp runaround due to Fire Dept. Near bridge that needs access. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	Detailed FEMA study required, wetlands	\$ 2,982.00	\$ 1,206.00	
--	96737	32153	57001104601461	04	Susquehanna	N MILFRD TP .2M S SR 1018	Y	N/A	N/A	N/A	N/A	N	11	2	1	No detour due to SR 11 is I-81 emergency detour route. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	--	\$ 4,654.00	\$ 3,080.00	
--	89023	32244	57010601220638	04	Susquehanna	LENOX TWP .1 M E TR 92	N	N/A	N/A	N/A	N/A	Y	--	--	--	Contact Municipality to coordinate Detour	--	\$ 3,240.00	\$ 3,202.00	
Y	9719	32307	57026703200000	04	Susquehanna	FORST LKE TP 2.5M N SR4015	N	Y	N/A	Y	N/A	Y	11	1	0	Seperate Detour for trucks, SR 4015 is Posted 10 Ton. Detour overlaps detour for SR 858 using SR 4015, Contact Municipality. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	Box Culvert recommended	\$ 1,769.00	\$ 1,009.00	
--	79572	32308	57026703202704	04	Susquehanna	FRST LK TP 4.5M S SR 4014	N	Y	N/A	Y	N/A	Y	11	1	0	Seperate Detour for trucks, SR 4015 is Posted 10 Ton. Detour overlaps detour for SR 858 using SR 4015, Contact Municipality. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	--	\$ 1,749.00	\$ 1,203.00	
--	9656	32327	57037400502476	04	Susquehanna	LENOX TWP .5 M E SR 2016	N	N/A	N/A	N/A	Y	Y	--	--	--	Contact Municipality to coordinate Detour	Widen bridge , wider shoulder to improve sight distance	\$ 1,564.00	\$ 719.00	
--	96729	32365	57070602700000	04	Susquehanna	BRIDGWTR TP 2 M W TR 167	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 3029 is Posted 10 Ton, need separate truck detour. Contact Municipality to coordinate Detour	--	\$ 2,170.00	\$ 1,354.00	
--	100550	32378	57085800500000	04	Susquehanna	RUSH TWP 2 M N TR 706	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 858, SR 4014 & SR 4015 are Posted 10 Ton. Verify Detour roadway width to get approval for trucks. Detour overlaps detour for SR 267 using SR 4015, Contact Municipality	--	\$ 296.00	\$ 153.00	
Y	85782	32401	57100700500000	04	Susquehanna	THMPSN TWP 1.7M N SR 1004	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 1007 & SR 1004 are Posted 10 Ton. Contact Municipality & School District to coordinate Detour	--	\$ 89.00	\$ 35.00	
--	96734	32437	57101801302350	04	Susquehanna	NEW MILFORD .6 M W TR 11	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 1018 is Posted 10 Ton. Detour on local roads, contact municipality, verify condition & restore	--	\$ 642.00	\$ 142.00	
Y	96727	32478	57200800203639	04	Susquehanna	CLIFFORD TWP 200'W TR 106	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 2008 , SR 2012, SR 1013, SR 1002 & SR 1015 are Posted 10 Ton. Contact Municipality to coordinate Detour	Coordinate w/Businesses next to bridge, channel clearing required, use TL-4 barrier	\$ 180.00	\$ 95.00	
--	9679	32507	57202100501583	04	Susquehanna	LENOX TWP OVER SR 0081	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 2021 is Posted 10 Ton. Detour on local roads, contact municipality, verify condition & restore. Any lane closure or shutdown of the interstate will have to follow the Interstate Restriction Protocol DOC 10-01. Additionally, a detour of the Interstate is strongly discouraged. State police assistance will be required.	--	\$ 247.00	\$ 95.00	
--	96736	32647	57400201300000	04	Susquehanna	SILVER LK T 1.2M E SR4001	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 4002 & SR 4008 is Posted 10 Ton. Contact Municipality to coordinate Detour	--	\$ 946.00	\$ 301.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	68876	35471	63019106701296	04	Wayne	OREGON TWP 1.5M N SR 4019	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 1001 & SR 1003 are Posted 10 Ton. Need separate truck detour. Contact Municipality to coordinate detours.	--	\$ 2,276.00	\$ 1,671.00	
--	9969	35508	63029601800000	04	Wayne	CANAAN TWP 1 M S SR 3028	N	Y	N/A	N/A	Y	Y	11	1	0	SR 3018 & SR 3026 are Posted 10 Ton. Need separate Truck Detour. Coordinate detours with Municipality. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	Box culvert recommended	\$ 2,234.00	\$ 1,539.00	
Y	68917	35624	63101801602046	04	Wayne	MANCHSTR TP 3.7M E TR 191	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 1018 is Posted 10 Ton. Detour on local roads, contact municipality, verify condition & restore	Box Culvert recommended; Access to the Adam's Barn must be maintained at all times	\$ 287.00	\$ 95.00	
Y	68927	35654	63200700301844	04	Wayne	BERLIN TWP @ JCT SR 2009	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 2007 is Posted 10 Ton. Contact Municipality to coordinate Detour	Parcel #2 Eilese wants all trees in TCE to be cut down and logs stacked on property just outside TCE. Contact Dr. Kurt Eisele at 570-470-8295. Parcel #4 Rickert Property owner is member of volunteer Fire Dept. Wants to coordinate installation of Dry Hydrant near bridge while area excavated. Contractor to coordinate on site. Contact Bob Rickert at 570-253-4141	\$ 690.00	\$ 154.00	
--	67584	35675	63300601600000	04	Wayne	SALEM TWP .6 M N SR 3008	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 3006 is Posted 10 Ton. Contact Municipality to coordinate Detour	--	\$ 838.00	\$ 266.00	
Y	56752	35765	63401401300733	04	Wayne	SCOTT TWP .5 M E SR 4037	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 4014, SR 4012 & SR 4037 are Posted 10 Ton. Contact Municipality to coordinate Detour	--	\$ 182.00	\$ 45.00	
Y	79580	35802	63403302600090	04	Wayne	BUCKINGHAM TWP 90'N TR370	N	N/A	N/A	Y	N/A	Y	--	--	--	SR 4020 is Posted. Require a special provision for maintenance of the posted roads on the detour route. An inspection of the posted road on the detour can be completed prior to the detour and afterwards to identify the areas needing repairs. Contact school District	Adjust guiderail on left to improve sight distance	\$ 265.00	\$ 97.00	
--	9978	35810	63403703303161	04	Wayne	SCOTT TWP .2 M S SR 4043	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 4037 is Posted 10 Ton. Detour on local roads, contact municipality, verify condition & restore	--	\$ 272.00	\$ 100.00	
--	10230	37163	65026700100659	04	Wyoming	MESHOPPEN BOR .1 M N TR 6	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour uses local road. Require a special provision for maintenance of the posted roads on the detour route. An inspection of the posted road on the detour can be completed prior to the detour and afterwards to identify the areas needing repairs. Separate Truck Detour required.	--	\$ 3,876.00	\$ 537.00	
--	10243	37172	65029201500354	04	Wyoming	N MORELND TP .1M W SR2009	N	Y	N/A	N/A	Y	Y	11	1	0	SR 2003 & SR 2009 are Posted 10 Ton. Need separate Truck Detour. Contact Municipality to coordinate Detour. Temp Pavement widths may have to be widened, through horizontal curves, to provide adequate turning radii for trucks.	--	\$ 1,451.00	\$ 331.00	
Y	68786	37192	65100100500000	04	Wyoming	TUNKHANNOCK TP JCT SR1002	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 1001 is Posted 10 Ton. Contact Municipality to coordinate Detour	--	\$ 865.00	\$ 256.00	
Y	68806	37222	65200100500596	04	Wyoming	MONROE TWP .2 M S SR 2002	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 2001 is Posted 10 Ton. Contact Municipality to coordinate Detour	Trim trees to ROW on left from STA 109+00 to 110+50, Raise drive at STA 110+60RT, Use TL-4 barrier; Parcel #3 Derolf wants to retain large rocks near TCE Contact Brian at 570-690-5310	\$ 420.00	\$ 72.00	
--	79078	4900	06062501301318	05	Berks	NEW HOLLAND ROAD	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 7,339.00	\$ 3,192.00	
--	78877	4946	06100400100619	05	Berks	WILLOW CREEK BRIDGE	N	N/A	N/A	N/A	Y	Y	--	--	--	--	The proposed curb-to-curb width and shoulder width may need to be wider for intersection sight distance. The proposed structure should be widened to the west. Guide rail needs to be set back. SR 1004's vertical alignment and its intersection sight distance at Willow Creek Road should be evaluated during preliminary engineering.	\$ 6,023.00	\$ 2,404.00	
--	78889	4953	06100601100107	05	Berks	CRYSTALCAVE RD, VIRGINVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Preliminary design shall include the replacement of cable guiderails at the north approach.	\$ 218.00	\$ 103.00	
--	85635	4957	06100800300000	05	Berks	.5 MI. SOUTH OF HAMBURG	N	N/A	N/A	N/A	Y	Y	--	--	--	--	The bridge is near a horizontal and vertical curve that shall be considered. May need wider bridge for SSD.	\$ 615.00	\$ 411.00	
--	79081	5147	06300900701675	05	Berks	W.WYOMISSING AVE.	N	N/A	N/A	Y	N/A	Y	--	--	--	school bus route	Guide rail needs to be set back	\$ 6,138.00	\$ 2,083.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
Y	85764	8994	13020902602676	05	Carbon	PACKERTON HOLLOW	Y	N/A	N/A	N/A	N/A	N	12	2	2	Two-lane run-around due to high ADT and impact to local roadway system. Existing HOP for adjacent commercial drive will need addressed.	--	\$ 12,390.00	\$ 2,774.00	
--	85762	9104	13401000501489	05	Carbon	GERHARDS, QUAKAKE RD.	N	Y	N/A	Y	N/A	Y	--	--	--	Currently this bridge carries the Truck Route 93 detour. Stage construction is NOT a viable alternative for this bridge due to minimal bridge width	The alignment for SR 4010 within the project limits is on a horizontal curve. May need wider bridge for horizontal SSD.	\$ 942.00	\$ 388.00	
--	85693	23144	39022202103224	05	Lehigh	HAMILTON ST.	Y	N/A	N/A	N/A	N/A	N	11	2	2	This is currently a four lane bridge. 1/2 width construction is OK if two lanes (1 in each direction) are maintained at all times. Note: This is also the main route to nearby St Luke's Hospital and main route to PPL Arena.	--	\$ 9,305.00	\$ 3,434.00	
--	89633	23228	39100400202044	05	Lehigh	1600'E.OF RACE ST.BRIDGE	Y	N/A	N/A	N/A	N/A	N	11	1	1	1/2 WIDTH maintain 1 direction and using local roads for one direction. Local coordination. OR max 2 week detour during summer	--	\$ 22,457.00	\$ 3,787.00	
--	85683	23330	39204900302189	05	Lehigh	CAMP MEETING ROAD	N	N/A	N/A	Y	N/A	Y	--	--	--	--	--	\$ 1,410.00	\$ 1,138.00	
--	89639	23136	39622200303519	05	Lehigh	TREXLERTOWN NEAR RT.100	Y	N/A	N/A	N/A	N/A	N	11	2	2	1/2 width construction possible if critical for constructability reasons. Staged construction is preferred: keep at least one lane open northbound and detour southbound due to intercepting detoured traffic prior to the bridge and the location of the fire company adjacent to the bridge.	--	\$ 9,212.00	\$ 2,993.00	
--	85811	26785	45020900401748	05	Monroe	KRESGEVILLE	Y	N/A	N/A	N/A	N/A	N	11	1	1	This currently is a two lane bridge. 1/2 width construction is OK if 1 lane is maintained at all times using temporary traffic signals to control alternating two-way flow.	Need to check ISD. May need wider bridge for ISD.	\$ 11,709.00	\$ 4,173.00	
Y	91680	26795	45020903110000	05	Monroe	AT JUNCT. WITH PA33 SB	Y	N/A	N/A	N/A	N/A	N	11	2	2	Two lanes necessary: one "receiving lane" each for US 209 and SR 33; 11' lanes required. Advance traffic control measures to reduce speeds and warning signs may be required.	Carry the full width of the auxiliary lane all the way across the bridge.	\$ 16,731.00	\$ 8,952.00	
Y	79157	26811	45031401101750	05	Monroe	2.5 M. S.OF SWIFTWATER	N	N/A	N/A	N/A	Y	Y	--	--	--	All MPT schemes should incorporate driveway access and be coordinated with the Township. Detour must be coordinated with SR1004-01B	The structure is on a horizontal curve. The bridge width will need to be verified for adequate sight distance and widened, if required.	\$ 610.00	\$ 222.00	
Y	79158	26832	45039000300932	05	Monroe	MOUNTAIN HOME	Y	N/A	N/A	N/A	N/A	N	11	1	1	This currently is a two lane bridge. 1/2 width construction is OK if 1 lane is maintained at all times using temporary traffic signals to control alternating two-way flow.	Bridge may need to be wider for ISD.	\$ 8,052.00	\$ 1,835.00	
Y	11649	26887	45061105100000	05	Monroe	TOBYHANNA	Y	N/A	N/A	N/A	N/A	N	11	2	2	This is currently a four lane bridge. 1/2 width construction is OK if two lanes (1 in each direction) are maintained at all times.	--	\$ 6,436.00	\$ 3,603.00	
Y	11730	26888	45071500201751	05	Monroe	1 M. N.OF BRODHEADSVILLE	N	N/A	N/A	Y	Y	Y	--	--	--	--	--	\$ 4,906.00	\$ 3,389.00	
Y	96445	26901	45090300200000	05	Monroe	0.33 MI.W.OF PA 115	Y	N/A	N/A	N/A	N/A	N	11	2	2	--	--	\$ 3,872.00	\$ 2,102.00	
Y	85879	26904	45094000701313	05	Monroe	2 M.I.E.OF BLAKESLEE	Y	N/A	N/A	N/A	N/A	N	11	1	1	TCP should include intersection to the east. Construction will be staged according to approved TS&L staging concept	--	\$ 5,760.00	\$ 1,962.00	
Y	89628	26907	45094001400882	05	Monroe	5 M.I.E.OF BLAKESLEE	Y	N/A	N/A	N/A	N/A	N	13	1	1	This currently is a two lane bridge. 1/2 width construction is OK if 1 lane is maintained at all times using temporary traffic signals to control alternating two-way flow.	Two lanes must be open during the two major Pocono Raceway NASCAR races. Typically June and August.	\$ 7,321.00	\$ 3,979.00	
Y	79204	26914	45094003900000	05	Monroe	2 M.I.E. OF MT.POCONO	Y	N/A	N/A	N/A	N/A	N	12	1	1	This currently is a two lane bridge. 1/2 width construction is OK if 1 lane is maintained at all times using temporary traffic signals to control alternating two-way flow.	Avoid major Pocono Race events. Coordinate with Horse Riding Property owner for possible barrier between horse riding trail and construction site	\$ 8,746.00	\$ 2,897.00	
Y	79170	26924	45100400300941	05	Monroe	1.2 M. E. OF PA 314	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour must be coordinated with SR314-19B	Verify sight distance isn't negatively impacted by improvements. May need wider bridge for sight distance.	\$ 570.00	\$ 251.00	
Y	76368	26962	45200900101729	05	Monroe	BRIDGE ST.	Y	N/A	N/A	N/A	N/A	N	11	1	1	1/2 width construction is OK if 1 lane is maintained at all times using temporary traffic signals to control alternating two-way flow.	Need to check HLSD.	\$ 12,272.00	\$ 3,640.00	
Y	96447	27011	45300900220000	05	Monroe	T-939 S.OF MERWINSBURG	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Extra width may be need for horizontal curve.	\$ 3,631.00	\$ 1,604.00	
Y	11758	27017	45301100300000	05	Monroe	SUGAR HOLLOW ROAD	N	N/A	N/A	N/A	Y	Y	--	--	--	--	May need extra width for ISD.	\$ 1,608.00	\$ 654.00	
Y	79185	27042	45302301202040	05	Monroe	RIM ROCK DRIVE	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 2,280.00	\$ 1,431.00	

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Y	85849	27055	45400300702976	05	Monroe	LOCUST RIDGE ROAD	N	N/A	Y	N/A	Y	Y	--	--	--	Detour must be able to accommodate large trucks from Locust Ridge Quarry. Coordination with District 4 necessary for proposed detour route. Stage construction is NOT a viable alternative for this bridge due to minimal bridge width	--	\$ 2,522.00	\$ 813.00	
Y	79187	27059	45400600200000	05	Monroe	.7 M. W.OF LR 45024	Y	N/A	N/A	N/A	N/A	N	11	1	1	Staged construction (1 lane with temp signal) or a temporary roadway	no lane restrictions during winter	\$ 3,011.00	\$ 1,218.00	
--	99555	28493	48003300200000	05	Northampton	US22/PA33 INTERCHANGE	Y	N/A	N/A	N/A	N/A	N	12	2	2	Two 12' lanes required. Route 33 approach shoulder upgrades and special signing necessary to keep Route 22 exit ramp from backing up. Additional signage and ITS queue detection and warning message boards will be needed on Route 22 for safety.	Substandard clearance under the bridge to SR 22 below. This project to correct this deficiency. Bridge width needs to take into account the full width of the ramp across the structure. Keep all ramps open during construction.	\$ 25,349.00	\$ 20,338.00	
--	99555	28494	48003300210000	05	Northampton	US22/PA33 INTERCHANGE	Y	N/A	N/A	N/A	N/A	N	12	2	2	Half width construction, maintain two-12' lanes at all times. Upgrade Route 33 approach shoulders and install special signing on Route 33 to prevent Route 22 exit ramp from backing up and stopping on Route 22 main line. Additional signage and ITS queue detection and warning message boards will be needed on Route 22 for safety.	Substandard clearance under the bridge to SR 22 below. This project is to correct this deficiency. Bridge width needs to take into account the full width of the ramp across the structure. Keep all ramps open during construction.	\$ 24,693.00	\$ 19,814.00	
--	85947	28606	48051202101582	05	Northampton	W.MOORESTOWN RD.@ HEYER	Y	N/A	N/A	N/A	N/A	N	11	1	1	1/2 WIDTH with temp signal for two-way traffic	--	\$ 6,665.00	\$ 3,428.00	
--	67256	28660	48100400601655	05	Northampton	3 MI.W.OF RIVERTON	N	N/A	Y	Y	Y	Y	11	1	1	Depending on the type of structure decided on, staged construction should be a viable option. Use temporary signals for alternating two way flow in a single lane.	--	\$ 2,721.00	\$ 896.00	
--	12098	28672	48101500801677	05	Northampton	@ INT. WITH T-604	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Horizontal curvature appears substandard	\$ 2,114.00	\$ 761.00	
Y	12717	30678	53033902000276	05	Schuylkill	VILLAGE OF ZIONS GROVE	N	N/A	N/A	N/A	Y	Y	--	--	--	See note for MPMS 12710	May need wider bridge for ISD. Confirm if bridge meets 3R width criteria; if not, use full criteria.	\$ 663.00	\$ 245.00	
Y	12710	30679	53033902400902	05	Schuylkill	CATAWISSA CREEK ROAD	N	N/A	N/A	N/A	Y	Y	--	--	--	Both bridges can be closed at same time but not concurrently with SR 339-02B (MPMS 12717)	28' Curb to Curb to account for truck movements, ISD and SSD.	\$ 199.00	\$ 72.00	
Y	12710	30680	53033902401098	05	Schuylkill	CATAWISSA CREEK ROAD	N	N/A	N/A	N/A	Y	Y	--	--	--	Both bridges can be closed at same time but not concurrently with SR 339-02B (MPMS 12717)	32' Curb to Curb to account for truck movements, ISD and SSD.	\$ 199.00	\$ 72.00	
Y	85810	30730	53092400702725	05	Schuylkill	SOUTH SHENANDOAH	Y	N/A	N/A	N/A	N/A	N	13	1	1	1/2 width construction is OK as long as one lane plus sidewalk (for peds) is open throughout construction. Use temporary signals for alternating two way flow in a single lane.	--	\$ 5,626.00	\$ 2,856.00	
Y	85724	30832	53401600100000	05	Schuylkill	VILLAGE OF KLINGERSTOWN	N	Y	N/A	N/A	N/A	N	--	--	--	Proposed detour extends into District 3-0, requiring add'l coordination. Current structure is a concrete deck arch which is not recommended for staged construction	--	\$ 1,089.00	\$ 438.00	
Y	47695	30856	53403600300000	05	Schuylkill	0.75 M.I.E.OF COLUMBIA CO.	N	N/A	Y	Y	N/A	N	--	--	--	Proposed detour extends into District 3-0, requiring add'l coordination. Proposed Concrete Rigid Frame on a hard skew makes staged construction not a viable option.	--	\$ 371.00	\$ 83.00	
Y	12522	30862	53403900200000	05	Schuylkill	VILLAGE OF HAAS	N	N/A	N/A	Y	N/A	Y	--	--	--	local road detour; state bridge on local route.	--	\$ 300.00	\$ 94.00	
--	56830	7262	09203701900000	06	Bucks	BILLBOARD 38C08 (3151E10)	Y	N/A	N/A	N/A	N/A	N	11	2	1	--	--	\$ 7,984.00	\$ 2,464.00	
--	81284	10497	15304401300000	06	Chester	NEAR WEST GROVE 45F06 (3799E7)	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 98.00	\$ 76.00	
--	86306	10599	15400800402407	06	Chester	BRANDYWINE MANOR 19E02 (3360E09)	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 455.00	\$ 106.00	
--	15232	15002	23042000701072	06	Delaware	FOLSOM, NR MACDADE 35D09/3697K07	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 17,503.00	\$ 3,903.00	
--	102315	27513	46066302700894	06	Montgomery	PERKIOMEN HEIGHTS 02D13	Y	N/A	N/A	N/A	N/A	N	11	2	1	--	--	\$ 9,090.00	\$ 3,351.00	
--	102218	27605	46201300320000	06	Montgomery	1.5MI.WEST PHILA. 33C07	Y	N/A	N/A	N/A	N/A	N	11	1	1	1-way detour	--	\$ 16,918.00	\$ 3,776.00	
--	86343	27643	46202700500209	06	Montgomery	SPRINGFIELD TWP. 31B07	Y	N/A	N/A	N/A	N/A	N	11	2	1	--	--	\$ 15,436.00	\$ 3,486.00	
--	67373	27757	46304400500389	06	Montgomery	WYNNEWOOD;WOODSIDE 3478H10	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Match approach curb	\$ 11,231.00	\$ 2,534.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]				
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value		
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value	
--	81290	27868	46404200341011	06	Montgomery	NW POTTSTOWN 11B6/3026C8	N	N/A	N/A	N/A	Y	Y	--	--	--	--			\$ 2,674.00	\$ 868.00	
--	87428	47	1003003000000	08	Adams	GETTYSBURG	Y	N/A	N/A	N/A	N/A	N	11	2	2	Route 30 access to Gettysburg	Sidewalks needed on both sides. Aerial utilities present.	\$ 14,451.00	\$ 11,479.00		
--	87427	71	01003402200745	08	Adams	N. OF BIGLERVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Adjacent apple processing facility. Road must be open for fall harvest time ~ Labor Day.	Aerial utilities present.	\$ 3,293.00	\$ 3,252.00		
--	87417	75	01003402700000	08	Adams	IDAVILLE	N	N/A	N/A	Y	N/A	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 2,778.00	\$ 2,550.00		
--	87673	87	01009701000240	08	Adams	1 MI. N. OF LITTLESTOWN	Y	N/A	N/A	N/A	N/A	N	11	1	1		Aerial utilities present.	\$ 9,073.00	\$ 3,972.00		
--	18051	98	01011601100000	08	Adams	1 MI N E OF FAIRFIELD	N	N/A	N/A	Y	N/A	Y	--	--	--		Aerial utilities present.	\$ 3,631.00	\$ 3,751.00		
--	99774	128	01019402401689	08	Adams	ABBOTTSTOWN	N	N/A	N/A	Y	N/A	Y	--	--	--		Aerial utilities present.	\$ 10,160.00	\$ 7,297.00		
--	87436	135	01023401202343	08	Adams	CULPS CORNERS	N	N/A	N/A	N/A	Y	Y	--	--	--	Conewago Campground entrance immediately west of bridge. Detour only during one school session.	Aerial utilities present.	\$ 580.00	\$ 240.00		
--	87434	148	01023403100000	08	Adams	2 MI.N.E. OF BIGLERVILLE	N	N/A	N/A	Y	N/A	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 4,828.00	\$ 3,767.00		
--	18146	160	01039400600526	08	Adams	VILLAGE OF TABLE ROCK	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 2,281.00	\$ 1,461.00		
--	87676	185	01101400501701	08	Adams	VILLAGE OF LIMEROCK MILL	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 543.00	\$ 291.00		
--	87671	198	01101601101587	08	Adams	GARDNERS	N	N/A	N/A	N/A	Y	Y	--	--	--	Adjacent to fruit processing facility. Road must be open for fall harvest time ~ Labor Day.	Aerial utilities present.	\$ 222.00	\$ 119.00		
--	74951	229	01200600400591	08	Adams	2 MI. S.E. HUNTERSTOWN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	CSX RAIL ROAD. Aerial utilities present.	\$ 1,242.00	\$ 657.00		
--	87675	319	01301301000061	08	Adams	KNOXLYN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 870.00	\$ 471.00		
--	87437	362	01400500101339	08	Adams	1/4 MI.N. OF BENDERSVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 221.00	\$ 71.00		
--	87438	364	01400601202897	08	Adams	ASPERS	N	N/A	N/A	N/A	Y	Y	--	--	--	Massive fruit processing facility east of bridge. Road must be open for fall harvest time ~ Labor Day.	Aerial utilities present.	\$ 1,190.00	\$ 633.00		
--	90784	381	01401100101013	08	Adams	NEAR ADAMS & FRANK.LINE	N	N/A	N/A	N/A	Y	Y	--	--	--	Access to Caledonia State Park Public Golf Course	Aerial utilities present.	\$ 202.00	\$ 67.00		
--	90694	13564	21001105202844	08	Cumberland	1 MI EAST OF MIDDLESEX	Y	N/A	N/A	N/A	N/A	N	11	2	2	Maintain traffic between Turnpike to I-81	Aerial/UG utilities, High ADT signalized corridor, side road at approach	\$ 14,889.00	\$ 3,319.00		
--	87424	13616	21003400700827	08	Cumberland	HUNTER'S RUN	Y	N/A	N/A	N/A	N/A	N	11	1	1	Bridge carries NR Appalachian Trail.	Aerial utilities, side road at approach	\$ 4,422.00	\$ 4,628.00		
--	90695	13735	21023300900266	08	Cumberland	PINE GROVE FURNACE	N	Y	N/A	N/A	Y	Y	11	1	1	Access to Pine Grove Furnace State Park. Bridge carries Buck Ridge Trail that connects Kings Gap to Pine Grove Furnace. Detour during Park off-season. For work beyond two weeks, maintain one 11 foot lane with stop sign controls in off-season.	Aerial Utilities, driveways at approaches, assume 33' ROW	\$ 749.00	\$ 294.00		
--	89274	13741	21023303801454	08	Cumberland	NORTH OF NEWVILLE	Y	N/A	N/A	N/A	N/A	N	11	1	1		Aerial utilities	\$ 3,470.00	\$ 3,584.00		
--	74054	13824	21099702601555	08	Cumberland	MCCREA	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities, side road at approach	\$ 419.00	\$ 169.00		
--	90739	13896	21203100100000	08	Cumberland	Spanglers Mill over Yellow Breeches Ck	N	N/A	N/A	N/A	Y	Y	--	--	--	PA Fish and Boat Launch adjacent to bridge, Yellow Breeches Water Trail. Detour only during one school session.	Aerial Utilities, property entrance far approach, another like bridge at far approach, sharp turn at near approach	\$ 4,348.00	\$ 2,967.00		
--	102789	13897	21203100100187	08	Cumberland	S of Lisburn on Spangler Mill, mill race (Y.B.)	N	N/A	N/A	N/A	Y	Y	--	--	--	PA Fish and Boat Launch adjacent to bridge, Yellow Breeches Water Trail. Detour only during one school session.	Overhead utilities, property entrance far approach, another like bridge at near approach, sharp turn at near approach. The team should evaluate need for this bridge since it is over Mill Race and close to the BRKEY 13896 main bridge. The existing mill race is not in use.	\$ 4,666.00	\$ 2,450.00		
--	74055	13946	21301900100000	08	Cumberland	MONTSERA	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial Utilities, narrow approaches, curve at far approach	\$ 465.00	\$ 171.00		
--	90769	13948	21400100200000	08	Cumberland	2 MI.N. OF SHIPPENSBURG	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial Utilities, narrow approaches, Y intersection far approach	\$ 1,318.00	\$ 603.00		
--	90770	13961	21400800302148	08	Cumberland	WASHINGTON	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities, narrow approaches, side roads at approaches	\$ 1,757.00	\$ 404.00		
--	100078	14441	22101800101692	08	Dauphin	3 MI. N W GRATZ	N	N/A	N/A	N/A	Y	Y	--	--	--	Long detour impacts to community. Detour only during one school session.	Aerial utilities present.	\$ 82.00	\$ 36.00		
--	47519	14481	22201200100356	08	Dauphin	.5 MI. N. OF HERSHEY	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Railroad coordination. Aerial utilities present.	\$ 3,560.00	\$ 1,638.00		

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
	87457	14578	22400400202505	08	Dauphin	2 MI. W. ENDERS	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 645.00	\$ 283.00	
--	87686	17407	28023302000092	08	Franklin	AT CALEDONIA STATE PARK	N	N/A	N/A	N/A	N/A	N/A	--	--	--	State Park access. Detour during Park off-season.	Located within State Park and Forest Boundary	\$ 1,719.00	\$ 696.00	
--	63173	17408	28027400200000	08	Franklin	1 ML. N. OF DOYLESBURG	N	N/A	N/A	Y	N/A	Y	--	--	--	Access for driveway located near bridge		\$ 271.00	\$ 158.00	
--	87683	17471	28099706500000	08	Franklin	TOWNSHIP LINE LURG. & LETT	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial Utilitys close to bridge	\$ 4,196.00	\$ 3,249.00	
--	78710	17592	28400801900060	08	Franklin	2 MI. NE OF EDENVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Amish area - Portico River Brethren Meeting House and School just to east.		\$ 655.00	\$ 285.00	
--	78708	17593	28400802301142	08	Franklin	3 MI E OF EDENVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Amish area Portico River Brethren Meeting House and School just to west. Detour only during one school session.	If detour is utilized may have to use township roads. Aerial utilities present.	\$ 655.00	\$ 285.00	
--	19965	20976	36002300301231	08	Lancaster	1.5 MILE. of Marietta	N	N/A	N/A	Y	N/A	Y	--	--	--		Aerial utilities present.	\$ 2,246.00	\$ 2,254.00	
--	87315	21043	36003004802322	08	Lancaster	LEAMAN PLACE	Y	N/A	N/A	N/A	N/A	N	11	1	1	Heavy Amish buggy area access to Route 30	Aerial utilities present.	\$ 21,880.00	\$ 8,136.00	
--	87316	21196	36032201500954	08	Lancaster	VILLAGE OF CLAY	Y	N/A	N/A	N/A	N/A	N	11	1	1		Aerial utilities present.	\$ 11,192.00	\$ 2,689.00	
--	87536	21237	36034003700000	08	Lancaster	1 MI. W. OF CAIN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 4,970.00	\$ 1,990.00	
--	87554	21238	36034003801674	08	Lancaster	CAINS	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 4,945.00	\$ 1,851.00	
--	19915	21251	36037204240000	08	Lancaster	Christiana Borough	N	N/A	N/A	N/A	Y	Y	--	--	--		Aerial utilities present.	\$ 2,369.00	\$ 529.00	
--	87505	21277	36046202200000	08	Lancaster	Columbia Ave over Little Conestoga Creek	Y	N/A	N/A	N/A	N/A	N	11	1	1		Aerial utilities present.	\$ 22,115.00	\$ 9,656.00	
--	91194	21292	36062501302573	08	Lancaster	1 MI. S. OF BOWMANVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Bowmansville Roller Mill Listed Historic District. Historic buildings immediately adjacent to bridge on north approach. Detour only during one school session.	Aerial utilities present.	\$ 6,115.00	\$ 1,630.00	
--	78868	21326	36077204500174	08	Lancaster	1.5 MI. S.E. OF LITITZ	N	N/A	N/A	Y	N/A	Y	--	--	--		Aerial utilities present.	\$ 10,299.00	\$ 5,478.00	
--	91266	21403	36101900500000	08	Lancaster	1.5 MI. S.E. CHURCHTOWN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	no utilities	\$ 369.00	\$ 170.00	
--	87521	21409	36102100420000	08	Lancaster	S.OF UNION GROVE	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 345.00	\$ 160.00	
--	74958	21415	36102402100000	08	Lancaster	WEST OF SPRINGVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--		Aerial utilities present.	\$ 981.00	\$ 446.00	
--	19927	21417	36102500801639	08	Lancaster	0.75 mi NW of Farmersville	N	N/A	N/A	N/A	Y	Y	--	--	--	Amish area. Large farms on either side of bridge. Large river - Not may other bridges in close proximity. Detour only during one school session.	no utilities	\$ 1,379.00	\$ 781.00	
--	100523	21439	36103400200000	08	Lancaster	1MI NE DENVER	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 1,188.00	\$ 353.00	
--	63230	21446	36103501500846	08	Lancaster	0.75 MILE N. OF NEWTOWN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 1,179.00	\$ 540.00	
--	20124	21454	36103702100000	08	Lancaster	Speedwell Forge Rd/Hammer Creek	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 896.00	\$ 340.00	
--	87706	21459	36103900500000	08	Lancaster	1.5 MI.N. OF MILLWAY	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 379.00	\$ 254.00	
--	91323	21474	36104800500000	08	Lancaster	1.25 MILE. OF TERRE HILL	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Look at to see if structure will be on same alignment	\$ 254.00	\$ 47.00	
--	87515	21482	36105300200000	08	Lancaster	0.5 MI. W. DENVER BORO	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	There appears to be no utiliteis near structure	\$ 647.00	\$ 350.00	
--	87566	21487	36105500202673	08	Lancaster	Reinholds Rd over Swamp Ck (N of i76)	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 2,864.00	\$ 1,092.00	
--	91324	21514	36200200602329	08	Lancaster	KIRKS MILL	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 781.00	\$ 245.00	
--	87516	21518	36200500300000	08	Lancaster	1MI NOF NEW TEXAS	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 318.00	\$ 109.00	
--	20123	21533	36201000560000	08	Lancaster	PUSEYVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 566.00	\$ 232.00	
--	87562	21536	36201200320000	08	Lancaster	1 MI.N. OF UNION	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 294.00	\$ 82.00	
--	91108	21545	36201500400000	08	Lancaster	2 MI E OF COLLINS	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 315.00	\$ 135.00	
--	19964	21558	36202000100000	08	Lancaster	CAMARGO	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 797.00	\$ 470.00	
--	87518	21559	36202000200000	08	Lancaster	1 MI.N. CAMARGO	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 441.00	\$ 365.00	
--	87501	21595	36204500700000	08	Lancaster	North of Bird In Hand	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 1,856.00	\$ 755.00	
--	19812	21601	36300400200000	08	Lancaster	DRUMORE	N	N/A	Y	N/A	Y	Y	11	1	1	Amish area near Susquehanna. Detour needs to use local roads.	There doesn't appear to be any utilities near structure	\$ 356.00	\$ 164.00	
--	63229	21637	36301702401388	08	Lancaster	0.5 MI.NORTH OF LETORT	N	N/A	N/A	N/A	Y	Y	--	--	--		Aerial utilities present.	\$ 1,888.00	\$ 764.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
	20151	21662	36203201100000	08	Lancaster	Letort Road over Little Conestoga Creek	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Aerial utilities present.	\$ 2,271.00	\$ 1,194.00	
--	91352	22812	38402000800000	08	Lebanon	INDIANTOWN GAP	Y	N/A	N/A	N/A	N/A	N	12	2	2	Located in Ft Indiantown Gap HD. Land use is military buildings Moose Lodge to the east next to bridge.	--	\$ 2,319.00	\$ 2,942.00	
--	87462	29426	50001100300893	08	Perry	MARYSVILLE BORO	Y	N/A	N/A	N/A	N/A	N	11	2	2	Lions Park immediately adjacent to bridge to west. May have issues closing bridge if done with rock scaling on SR 11.	Conc. Arch under fill, steep fill slopes and retaining walls, close to business building, aerial utilities and possible underground, near Railroad	\$ 18,783.00	\$ 8,543.00	
--	93582	29451	50001701101051	08	Perry	2 MILES WEST OF KISTLER	N	N/A	N/A	Y	N/A	Y	--	--	--	--	Aerial utilities present.	\$ 435.00	\$ 200.00	
--	79054	29468	50001707600000	08	Perry	LIVERPOOL BORO	N	N/A	N/A	Y	N/A	Y	--	--	--	--	possible underground utilities	\$ 1,682.00	\$ 543.00	
--	73961	29518	50007401900530	08	Perry	GREEN PARK	N	N/A	N/A	Y	N/A	Y	--	--	--	Adjacent to West Perry School	aerial utilities, Possible Historic quadrant	\$ 2,204.00	\$ 972.00	
--	87465	29565	50085002201839	08	Perry	1MI NO OF FORT ROBINSON	N	N/A	N/A	Y	N/A	Y	--	--	--	--	side road and field entrance at far approach	\$ 899.00	\$ 391.00	
--	90716	29566	50085002501777	08	Perry	FORT ROBINSON	N	N/A	N/A	Y	N/A	Y	--	--	--	--	near approach T-intersection with SR 0274, aerial utilities	\$ 897.00	\$ 477.00	
--	87491	29605	50101502002360	08	Perry	2 MI.S. OF MILLERSTOWN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 2,742.00	\$ 1,187.00	
--	101098	29651	50300600100014	08	Perry	4 MI SW OF BLAIN	N	N/A	N/A	N/A	Y	Y	--	--	--	--	aerial utilities, significant approach work due to widening narrow width	\$ 181.00	\$ 113.00	
--	79042	29673	50301700100000	08	Perry	AT BRIDGEPORT	N	N/A	N/A	N/A	Y	Y	--	--	--	--	aerial utilities, structure directly at trib. Connecting to Shermans Creek	\$ 241.00	\$ 47.00	
--	79047	29693	50400701001472	08	Perry	DONNALLY'S MILLS	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	aerial utilities, business and residential driveways at approaches	\$ 734.00	\$ 232.00	
--	91353	37488	66012401400000	08	York	1.5 W OF DELROY	Y	N/A	N/A	N/A	N/A	N	11	1	1	Bridge is at entrance to Modern Landfill. Construction will have impacts to waste haulers.	Aerial utilities present.	\$ 8,064.00	\$ 4,278.00	
--	87693	37491	66012402502532	08	York	1 MILE N OF CRALEY	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 2,115.00	\$ 1,283.00	
--	91191	37590	66042504600314	08	York	1.2 MI.S.E. OF CRALEY	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 1,659.00	\$ 558.00	
--	78860	37607	66061601000255	08	York	.5 MI. N.W. OF GLEN ROCK	N	N/A	N/A	N/A	Y	Y	--	--	--	Adjacent to access to Rail Trail County Park. PA bike route J. Detour only during one school session. Cannot close both 78860 & 87551 at same time.	Railroad tracks are adjacent to project limits. Aerial utilities are present.	\$ 1,897.00	\$ 721.00	
--	87551	37608	66061601001014	08	York	1.0 MI. NW GLEN ROCK	N	N/A	N/A	N/A	Y	Y	--	--	--	Adjacent to access to Rail Trail County Park. PA bike route J. Detour only during one school session. Cannot close both 78860 & 87551 at same time.	Houses at the NE & NW quads. Railroad tracks are adjacent to project limits. Aerial utilities are present.	\$ 1,979.00	\$ 451.00	
--	78878	37641	66092100900000	08	York	3 MILE. OF DOVER	N	N/A	N/A	Y	N/A	Y	--	--	--	Detour only during one school session. Detour will most likely need to go into Maryland.	Aerial utilities present.	\$ 7,838.00	\$ 4,405.00	
--	78896	37725	66202800800249	08	York	DELTA BORO	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Aerial utilities present.	\$ 549.00	\$ 100.00	
--	87695	37726	66202900902536	08	York	5 MILE NE OF RED LION	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 1,156.00	\$ 523.00	
--	91367	37878	66304500800853	08	York	JACOBS MILLS	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Aerial utilities present.	\$ 1,814.00	\$ 793.00	
--	87596	37890	66305100200000	08	York	1 MI.W. OF JEFFERSON	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 146.00	\$ 40.00	
--	87595	37921	66307100100000	08	York	1 MILE S.W. OF PA 94	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Sheppard-Meyers Reservoir. Aerial utilities present.	\$ 816.00	\$ 256.00	
--	74944	37946	66400102102301	08	York	2 MILES E. OF DOVER	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 9,265.00	\$ 5,766.00	
--	83428	37976	66401200602478	08	York	0.5 MILE. OF KRALLTOWN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 400.00	\$ 227.00	
--	90222	38007	66403300403136	08	York	1.0 MI.N.E. ANDERSONTOWN	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 298.00	\$ 120.00	
--	91192	38023	66405100300581	08	York	1 MI. N.E. FARMERS	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour only during one school session.	Aerial utilities present.	\$ 1,335.00	\$ 500.00	
--	88114	3954	05003001000907	09	Bedford	2.8 MI.W. OF SHELLSBURG	Y	N/A	N/A	N/A	N/A	N	14	2	2	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,769.00	\$ 1,555.00	
--	21558	3955	05003001100000	09	Bedford	2.3 MI.W. OF SHELLSBURG	Y	N/A	N/A	N/A	N/A	N	14	2	2	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,790.00	\$ 1,555.00	
--	21563	4010	05005600901305	09	Bedford	1.68 MILE WEST FROM PA 96	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 3,365.00	\$ 2,914.00	
--	21455	4044	05009602600000	09	Bedford	MADLEY	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,297.00	\$ 710.00	
--	88121	4122	05086901201328	09	Bedford	3.16 MILE WEST FROM PA 96	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 735.00	\$ 318.00	
--	21596	4174	05101100400000	09	Bedford	2 MI.N. OF BREEZEWOOD	N	N/A	N/A	Y	N/A	Y	12	1	1	--	--	\$ 161.00	\$ 93.00	
--	21552	4177	05101200400000	09	Bedford	1.73 MILE EAST FROM SR 1009	N	N/A	Y	N/A	Y	Y	12	1	1	--	Coordination with township is required for use of local road on detour route. Development entity must repair damage to local road following completion of bridge replacement.	\$ 360.00	\$ 284.00	
--	21600	4196	05102000500880	09	Bedford	0.16 MILE EAST FROM SR 1009	N	N/A	N/A	Y	N/A	Y	12	1	1	--	--	\$ 476.00	\$ 253.00	
--	74424	4386	05403101601407	09	Bedford	VILLAGE OF QUEEN	N	N/A	Y	Y	N/A	Y	12	1	1	Detour cannot be concurrent w/ detour for MPMS #21961.	Proposed 5 ft wide shoulder on bridge is to accommodate pedestrians.	\$ 1,093.00	\$ 752.00	
--	22107	5699	07101302400000	09	Blair	.75 MI.NE. OF CULP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour cannot be concurrent with MPMS #74376.	--	\$ 512.00	\$ 285.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	74376	5702	07101302600008	09	Blair	1.5 MI.NE.OF GULP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour cannot be concurrent with MPMS #22107.	--	\$ 512.00	\$ 285.00	
--	21957	5709	07101303601234	09	Blair	0.23 MILE NORTH FROM PA 453	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 496.00	\$ 332.00	
--	21961	5763	07300500100050	09	Blair	.5 MI.W.OF SPROUL	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour cannot be concurrent w/ detour for MPMS #74424.	Coordination required with potential expansion of Sheetz distribution center.	\$ 360.00	\$ 236.00	
--	21967	5883	07403100301171	09	Blair	TYRONE BOROUGH	N	N/A	N/A	Y	N/A	Y	12	1	1	Detour cannot be concurrent with detour for MPMS #21895 (TIP project, not P3.)	--	\$ 1,807.00	\$ 577.00	
--	22626	8424	11016002000862	09	Cambria	0.2 MILE NORTH OF TR 869E	Y	N/A	N/A	N/A	N/A	N	14	2	2	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 2,569.00	\$ 1,488.00	
--	22627	8425	11016002200000	09	Cambria	1.0 MILE NORTH OF TR 869E	Y	N/A	N/A	N/A	N/A	N	14	2	2	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 2,539.00	\$ 1,683.00	
--	22444	8580	11102601101804	09	Cambria	0.18 MILE WEST FROM PA 53	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 650.00	\$ 361.00	
--	22797	17813	29048400101102	09	Fulton	0.2 MILE EAST OF TR 26	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 145.00	\$ 89.00	
--	22798	17826	29052201401573	09	Fulton	NEEDMORE	N	N/A	Y	N/A	Y	Y	12	1	1	--	The spring head for Needmore Water Co. is located approximately 80 yards to the south of the bridge. This spring, Gordon Spring, is the sole source of drinking water for approximately 276 people in the Borough of Needmore and surrounding Belfast Twp. It is also the source of water for the fire company.	\$ 1,966.00	\$ 449.00	
--	22825	17827	29052201600330	09	Fulton	3/4 MILE N. OF NEEDMORE	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,675.00	\$ 1,244.00	
--	22826	17828	29052201601370	09	Fulton	1 MILE NORTH OF NEEDMORE	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,675.00	\$ 1,113.00	
--	22827	17832	29052202901545	09	Fulton	0.47 MILE NORTH FROM PA 928	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 2,187.00	\$ 1,624.00	
--	22832	17850	29065503900454	09	Fulton	.1 M N TR30,HARRISONVILLE	N	N/A	Y	N/A	Y	Y	12	1	1	--	--	\$ 176.00	\$ 104.00	
--	88142	17853	29065504501203	09	Fulton	1.4 MI. SOUTH OF TURNPIKE	N	N/A	Y	N/A	Y	Y	12	1	1	--	--	\$ 189.00	\$ 98.00	
--	22837	17873	29100100100266	09	Fulton	WEBSTER MILLS	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 2,359.00	\$ 1,471.00	
--	74433	18576	31002202300000	09	Huntingdon	OVER PA 26	Y	N/A	N/A	N/A	N/A	N	14	2	2	Staged construction on US 22 is not permitted from Nov. 1 through March 31. Traffic on PA 26 is not to be impacted except for short-duration (less than 20 minutes) night-time (9 pm to 5 am) stoppages for existing bridge removal and beam erection operations.	Sidewalk to be installed on both sides of SR 26 beneath overpass bridge. If design speed on SR 26 in this portion of roadway under bridge is greater than 35mph, a separating barrier will be required.	\$ 5,034.00	\$ 2,562.00	
--	23030	18601	31002604900654	09	Huntingdon	.1 MI N SR1011,CNTR UNION	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,811.00	\$ 660.00	
--	22980	18603	31002605100972	09	Huntingdon	0.2 MILE NORTH OF SR 1009	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 2,191.00	\$ 1,274.00	
--	23039	18703	31065505400533	09	Huntingdon	.7 MI.N.SR 1005,FOUSETOWN	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	32' bridge width to accommodate Great Eastern Trail crossing	\$ 1,078.00	\$ 812.00	
--	23038	18742	31091301901896	09	Huntingdon	0.4 MILE EAST FROM SR 3019, ROBERTSDALE	Y	N/A	N/A	N/A	N/A	N	14	1	1	Staged construction is not permitted from Nov. 1 through March 31. Temporary signals need tied to adjacent post office parking and intersection w/ RR St. Maintain pedestrians access during construction.	Proposed 5' shoulders to accommodate pedestrians on new bridge.	\$ 1,580.00	\$ 358.00	
--	23058	18773	31100800400000	09	Huntingdon	1 M.IE.OF COTTAGE	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Approach roadway experiences frequent flooding (bridge is severely perched.) The grade of both approaches are to be raised to prevent inundation of a 10-year storm event.	\$ 83.00	\$ 62.00	
--	23114	18784	31101900100185	09	Huntingdon	0.03 MILE NORTH FROM PA 26	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 211.00	\$ 117.00	
--	74449	18785	31101900600000	09	Huntingdon	1.75 MILE NORTH FROM PA 26	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 247.00	\$ 103.00	
--	23116	18881	31400900200000	09	Huntingdon	0.24 MILE NORTH FROM PA 305	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 354.00	\$ 205.00	
--	88158	45123	55003003602574	09	Somerset	2.44 MILE WEST FROM PA 160	Y	N/A	N/A	N/A	N/A	N	14	2	2	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 3,199.00	\$ 2,386.00	
--	92698	41517	55003003702626	09	Somerset	1.74 MILE WEST FROM PA 160	Y	N/A	N/A	N/A	N/A	N	14	2	2	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 4,409.00	\$ 848.00	
--	23517	31343	55003104200000	09	Somerset	0.5 MILE EAST OF SR 1005	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 2,543.00	\$ 1,383.00	
--	23586	31469	55052300301840	09	Somerset	LISTONBURG	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,420.00	\$ 376.00	
--	23410	31470	55052300701200	09	Somerset	BEACHLY	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,042.00	\$ 612.00	
--	74446	31471	55052300801065	09	Somerset	DUMAS	Y	N/A	N/A	N/A	N/A	N	12	1	1	Staged construction is not permitted from Nov. 1 through March 31.	--	\$ 1,042.00	\$ 585.00	
--	23516	31521	55100400101850	09	Somerset	SHANKSVILLE BORO.	N	N/A	N/A	Y	N/A	Y	12	1	1	--	Pedestrian access must be maintained during construction.	\$ 1,376.00	\$ 447.00	
--	23571	31528	55100700300000	09	Somerset	0.99 MILE NORTH FROM PA 160	N	N/A	N/A	Y	N/A	Y	12	1	1	--	--	\$ 208.00	\$ 167.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	23588	31532	55100701800000	09	Somerset	LAMBERTSVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Construct MPMS #'s 88158 & #92698 prior to this bridge to remove posted bridges on detour route. Flight 93 Memorial located in close proximity to this bridge - coordination required.	\$ 751.00	\$ 567.00		
--	74467	31588	55200500300000	09	Somerset	1.95 MILE SOUTH FROM SR 2004 @ SUMMIT MILLS	N	N/A	N/A	N/A	Y	Y	--	--	--		\$ 201.00	\$ 129.00		
--	23428	31608	55201301000000	09	Somerset	0.46 MILE SOUTH FROM SR 3002	N	N/A	Y	N/A	Y	Y	12	1	1		\$ 237.00	\$ 176.00		
--	23549	31630	55201800600000	09	Somerset	BEECHDALE	N	N/A	N/A	N/A	Y	Y	--	--	--		\$ 198.00	\$ 93.00		
--	23454	31651	55202600300000	09	Somerset	2 MI.NE.OF MEYERSDALE	N	N/A	N/A	N/A	Y	Y	--	--	--		\$ 136.00	\$ 108.00		
--	23601	31758	55401900700000	09	Somerset	OVER US 30	N	N/A	N/A	N/A	Y	Y	--	--	--	US 30 may be detoured for maximum of 1 weekend for demolition of existing bridge. Detour not permitted during Memorial Day Parade and Tractor Show in August.	\$ 220.00	\$ 71.00		
--	83197	2992	03006600600000	10	Armstrong	CARNAHAN RUN NO.1	Y	N/A	N/A	N/A	N/A	N	12	1	1	Phased construction or 2 lane temporary runaround only for this project.	\$ 3,012.00	\$ 1,305.00		
Y	24085	3097	03083901001927	10	Armstrong	SOUTH OF DAYTON NO. 2	Y	N/A	N/A	N/A	N/A	N	11	1	1		\$ 1,246.00	\$ 964.00		
Y	79606	3160	03103900600000	10	Armstrong	BRYAN	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 280.00	\$ 114.00		
--	24000	3169	03200101402192	10	Armstrong	RURAL VALLEY NO.3	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 1,584.00	\$ 723.00		
--	83252	3176	03200500500000	10	Armstrong	BURRELL TWP-E OF BRICK CH	N	N/A	N/A	N/A	Y	Y	--	--	--	May have an impact to a private gas line.	\$ 272.00	\$ 93.00		
--	74202	3232	03204701200000	10	Armstrong	ROARING RUN	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 227.00	\$ 106.00		
--	24023	3245	03205700100245	10	Armstrong	LAUREL POINT	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 577.00	\$ 213.00		
--	24018	3278	03300900800000	10	Armstrong	CLAYPOOLE ROAD NO.3	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 551.00	\$ 263.00		
Y	24153	3282	03301300602401	10	Armstrong	NICHOLA NO.1	Y	N/A	N/A	N/A	N/A	N	10	1	1		Fish and Boat Commission has an access road used for stocking trout at the bridge. Access road is to be maintained. Any disturbance to the access road during construction is to be replaced in-kind.	\$ 831.00	\$ 446.00	
Y	83284	3293	03301702501033	10	Armstrong	CENTER HILL NO. 6	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 2,254.00	\$ 751.00		
--	98070	3294	03301702801869	10	Armstrong	BRIAR HILL	N	N/A	N/A	Y	N/A	Y	12	1	1	Project can only be detoured when school is not in session. Project detour cannot exceed 5 weeks. If project cannot be completed within a 5 week detour, a 12 foot temporary lane width must be maintained during construction. SR 422 and SR 28 SB ramp can only be closed between the hours of 10pm to 5am. 2 lanes of SR 422 (1 EB & 1 WB) must be kept open at all times between 5am to 10pm. The SR 28 SB ramp must be kept open at all times between 5am and 10pm.	\$ 1,948.00	\$ 1,780.00		
Y	24806	7834	10006800200616	10	Butler	ZELIENOPE BORO NO. 2	Y	N/A	N/A	N/A	N/A	N	11	1	1	2 lane temporary rundaround needs investigated	Nearby Fire Department access must be maintained at all times. Temporary signal pre-emption to Fire Department is necessary.	\$ 5,191.00	\$ 1,674.00	
--	24757	7925	10030800801195	10	Butler	RIDER CHURCH	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 3,593.00	\$ 2,082.00		
Y	24667	7935	10035603000333	10	Butler	CALDWELL DRIVE	Y	N/A	N/A	N/A	N/A	N	12	1	1	2 lane temporary rundaround needs investigated	Crash history located at this site due to the Intersection Sight Distance on 2 local roads.	\$ 6,942.00	\$ 6,940.00	
--	24779	8016	10102500100211	10	Butler	RINGNECK	N	N/A	N/A	N/A	Y	Y	--	--	--	May have Railroad and PUC involvement.	\$ 3,768.00	\$ 1,417.00		
Y	78002	8025	10200700101196	10	Butler	SAXONBURG BLVD NO.1	N	N/A	N/A	Y	N/A	Y	--	--	--	Project can only be detoured when school is not in session.	\$ 2,097.00	\$ 1,213.00		

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							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	83322	8061	10300400300433	10	Butler	MCCALMONT NO.1	N	N/A	N/A	N/A	Y	Y	--	--	--	--	PUC coordination is necessary for this project.	\$ 2,418.00	\$ 1,273.00	
--	24703	8071	10301000600000	10	Butler	BROWNSDALE ROAD	N	N/A	N/A	N/A	Y	Y	--	--	--	--	History of flooding at bridge.	\$ 1,703.00	\$ 903.00	
Y	83335	8073	10301200500000	10	Butler	CRUIKSHANK ROAD	N	N/A	N/A	Y	N/A	Y	--	--	--	--	Project can only be detoured when school is not in session.	\$ 1,236.00	\$ 372.00	
--	77989	8104	10302700500194	10	Butler	SENACA SCHOOL	Y	N/A	N/A	N/A	N/A	N	12	2	2	--	Maintaining only 1 lane of traffic during construction is a concern due to morning and afternoon peak traffic. Initial discussions with the School District indicate they might be in favor of a full closure/detour but this must occur outside the school seasons. The District does not believe a viable detour exists at this location. Maintaining 2 lanes of traffic during construction would be preferred.	\$ 2,845.00	\$ 2,128.00	
--	89967	8113	10400201302768	10	Butler	SOUTH OF QUEEN JCT.	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Detour will use Local Road once in Center Township.	\$ 1,090.00	\$ 479.00	
--	24710	8334	10800505000898	10	Butler	ROCK LAKE SB RAMP NO.2	N	N/A	N/A	N/A	Y	Y	--	--	--	--	SR 19 can only be closed between the hours of 10pm to 5am. 1 lane of SR 19 NB must be kept open at all times between 5am to 10pm.	\$ 2,088.00	\$ 2,957.00	
--	83229	10975	16032201801102	10	Clarion	SHIPPENVILLE STATION	Y	N/A	N/A	N/A	N/A	N	11	1	1	--	2 lane temporary rundaround needs investigated	\$ 4,278.00	\$ 2,169.00	
--	83232	10997	16086100421587	10	Clarion	WILDCAT NO.2	Y	N/A	N/A	N/A	N/A	N	11	1	1	--	--	\$ 804.00	\$ 601.00	
--	83234	10996	16086100620656	10	Clarion	DIAMOND NO.1	Y	N/A	N/A	N/A	N/A	N	11	1	1	--	--	\$ 748.00	\$ 737.00	
--	25221	11042	16200900100000	10	Clarion	LAWSONHAM NO.1	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Detour will use Local Roads	\$ 477.00	\$ 323.00	
--	83241	11049	16200902200128	10	Clarion	ELDER ROAD	N	N/A	N/A	N/A	Y	Y	--	--	--	--	May have coordination with farmer regarding any disturbance to the nearby fence.	\$ 215.00	\$ 82.00	
--	83256	11088	16401500301431	10	Clarion	HUEFNER NO.3	N	N/A	N/A	Y	N/A	Y	--	--	--	--	Project can only be detoured when school is not in session.	\$ 433.00	\$ 327.00	
--	83293	19087	32028601500520	10	Indiana	CLARKSBURG NO.3	Y	N/A	N/A	N/A	N/A	N	12	1	1	--	2 lane temporary rundaround needs investigated	\$ 3,525.00	\$ 1,542.00	
--	95851	19183	32055302000620	10	Indiana	ALVERDA NO.2	Y	N/A	N/A	N/A	N/A	N	11	1	1	--	Temporary signal location	\$ 2,265.00	\$ 886.00	
--	25780	19200	32095403700000	10	Indiana	WILLET	N	N/A	N/A	Y	N/A	Y	--	--	--	--	Project can only be detoured when school is not in session.	\$ 876.00	\$ 327.00	
--	25584	19320	32300701200000	10	Indiana	MARSHALL RUN NO.2	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Appears to be 3 gas companies within the project limits.	\$ 634.00	\$ 342.00	
--	78120	19392	32401000100530	10	Indiana	KIMMEL RD NO.1	N	N/A	N/A	N/A	Y	Y	--	--	--	--	--	\$ 292.00	\$ 153.00	
--	83282	19550	33003601701535	10	Jefferson	CLOE NO.1	N	N/A	N/A	Y	N/A	Y	--	--	--	--	Project can only be detoured when school is not in session.	\$ 5,079.00	\$ 1,204.00	
--	83312	19699	33200300700000	10	Jefferson	FOXBURG	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Amish may have an issue with detour.	\$ 1,300.00	\$ 571.00	
--	26151	19708	33200802100200	10	Jefferson	STUMP CREEK NO.2	N	N/A	N/A	N/A	Y	Y	--	--	--	--	Amish may have an issue with detour.	\$ 324.00	\$ 290.00	
--	26069	19737	33300302500000	10	Jefferson	NEAR OHL NO. 1	N	N/A	N/A	Y	N/A	Y	--	--	--	--	Project can only be detoured when school is not in session.	\$ 190.00	\$ 74.00	
--	83343	19807	33400100700000	10	Jefferson	NORTH OF ROSEVILLE	N	N/A	N/A	Y	N/A	Y	--	--	--	--	Project can only be detoured when school is not in session.	\$ 340.00	\$ 142.00	
--	62523	505	02000804101108	11	Allegheny	@ INTERSECTION W/SR 0910	Y	N/A	N/A	N/A	N/A	N	11	2	2	--	Revised D-419 will need to be completed	\$ 6,526.00	\$ 3,985.00	
--	27272	659	02003001202263	11	Allegheny	400 FEET SE OF SR 3070	N	N/A	N/A	Y	N/A	Y	11	2	1	--	--	\$ 7,472.00	\$ 1,153.00	
--	28154	664	02003001901870	11	Allegheny	@ INTER W/ BRADDOCK ROAD	Y	N/A	N/A	N/A	N/A	N	11	2	2	--	Grass Median	\$ 14,916.00	\$ 5,871.00	
--	73522	709	02005100802710	11	Allegheny	@ INTER.W/WEIGEL HILL RD.	Y	N/A	N/A	N/A	N/A	N	11	2	2	--	--	\$ 9,276.00	\$ 3,742.00	
--	37590	954	02013600500000	11	Allegheny	2 MI EAST OF MON CITY BR	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 6,117.00	\$ 1,562.00	
--	28597	961	02013601202172	11	Allegheny	100'W.OF INTER W/SR 2017	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 4,889.00	\$ 1,743.00	
--	63321	1334	02091002400485	11	Allegheny	1 MILE EAST OF RT 8 INT	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 9,073.00	\$ 3,698.00	
Y	63324	1339	02091003000000	11	Allegheny	250' SOUTH OF SR 1020	N	N/A	N/A	N/A	Y	Y	12	2	1	--	--	\$ 3,333.00	\$ 1,239.00	
--	78185	1346	02097800300000	11	Allegheny	2000'N. OF SR 3001	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 4,474.00	\$ 763.00	
--	27185	1365	02100102101194	11	Allegheny	BARGE BASIN O/ABNDONED RR	Y	N/A	N/A	N/A	N/A	N	10	2	2	--	--	\$ 13,140.00	\$ 2,936.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]				
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value		
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value	
	27188	1372	02100103602537	11	Allegheny	@ J.F.K.ELEM.SCHOOL	N	N/A	N/A	Y	N/A	Y	10	3	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 13,223.00	\$ 2,251.00		
--	28128	1373	02100103601567	11	Allegheny	NEAR BAILEY RUN ROAD	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 11,249.00	\$ 2,516.00		
--	78220	1390	02100600402405	11	Allegheny	@ INTERSECT WITH SR 1013	N	N/A	N/A	Y	N/A	Y	11	2	1	--	--	\$ 5,213.00	\$ 1,935.00		
Y	89100	1397	02101100101018	11	Allegheny	1028'N.OF FREEPORT RD.	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 4,575.00	\$ 1,718.00		
Y	63342	1400	02101100102295	11	Allegheny	1/2 MI.N.OF SR 0028	N	N/A	N/A	Y	N/A	Y	10	2	1	Detour Route Not Available in 2016	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 5,676.00	\$ 1,418.00		
--	28603	1404	02101200602013	11	Allegheny	70'E.INTER.W/TWP.RD.613	N	N/A	N/A	N/A	Y	Y	9	1	1	--	--	\$ 961.00	\$ 197.00		
Y	63343	1405	02101300202226	11	Allegheny	4283' N.E. OF SR 0008	N	N/A	N/A	Y	N/A	Y	10	2	1	Coordinate with other P3 Bridges and Projects on SR 1013	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 12,491.00	\$ 2,520.00		
Y	63344	1406	02101300300428	11	Allegheny	1 MI. N.E. OF SR 0008	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 12,665.00	\$ 2,539.00		
Y	78223	42177	02101300400000	11	Allegheny	2 MILES WEST OF SR 1006	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 12,581.00	\$ 2,520.00		
--	99687	1424	02101500702617	11	Allegheny	NORTH/RURAL RIDGE	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 3,888.00	\$ 872.00		
Y	27287	1435	02101600801980	11	Allegheny	70' WEST OF SR 1015	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 3,425.00	\$ 165.00		
Y	63356	1455	02102801801751	11	Allegheny	200' WEST OF SR 1031	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 2,976.00	\$ 987.00		
Y	63513	1471	02103400501321	11	Allegheny	4200' S.E. OF SR 1033	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 3,000.00	\$ 1,269.00		
--	28607	1479	02200100800335	11	Allegheny	AT BAPTIST CHURCH	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 1,106.00	\$ 196.00		
Y	62174	1481	02200101300130	11	Allegheny	AT PANGBURN RD	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 984.00	\$ 394.00		
--	26417	1496	02200800100053	11	Allegheny	@ INTER. WITH SR 2010	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 1,779.00	\$ 526.00		
--	73045	1498	02201000102238	11	Allegheny	500'N.E.OF ROSS STREET	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 4,400.00	\$ 1,987.00		
--	27451	1519	02201701301248	11	Allegheny	@ SR 2014	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 2,687.00	\$ 703.00		
--	99665	1520	02201701400112	11	Allegheny	AT ROCK RUN RD	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 2,333.00	\$ 421.00		
--	78224	1523	02201800400721	11	Allegheny	2082 FEET SW OF SR 48	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,800.00	\$ 299.00		
--	99670	1527	02202200102622	11	Allegheny	2644'N.E.OF LR02310	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 2,267.00	\$ 350.00		
--	63529	1559	02204500300840	11	Allegheny	DRAVOSBURG OVER UNION RR	Y	N/A	N/A	N/A	N/A	N	11	2	2	0	--	--	\$ 8,841.00	\$ 4,014.00	
--	78271	1562	02204600401678	11	Allegheny	AT INTER./ SR 3046	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier. Adjacent intersections and RR crossing.	\$ 9,955.00	\$ 2,950.00		
Y	63547	1567	02204600800256	11	Allegheny	50'EAST/SCHUTE RD.	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 3,800.00	\$ 2,157.00		
--	74324	1568	02204600801088	11	Allegheny	AT LUTZ HOLLOW ROAD	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 3,800.00	\$ 1,636.00		
Y	27419	1600	02206500402452	11	Allegheny	2656' N.E. OF SR 2053	Y	N/A	N/A	N/A	N/A	Y	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,237.00	\$ 215.00		
--	89124	1620	02207500900000	11	Allegheny	OVER BR. LITTLE PLUM CR.	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 7,681.00	\$ 1,312.00		
--	27275	1626	02207501900000	11	Allegheny	200'N.OF ENTRANCE DRIVE	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 14,891.00	\$ 4,410.00		
Y	63557	1671	02211800203544	11	Allegheny	500' SOUTHEAST OF SR 0048	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 11,099.00	\$ 1,891.00		
--	27436	1704	02300800420000	11	Allegheny	200'W.OF INTER.W/SR 3004	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 3,000.00	\$ 760.00		
Y	28446	1715	02301400302259	11	Allegheny	3/4 MI.N.W.OF SR 3015	N	N/A	N/A	N/A	Y	Y	9	1	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,387.00	\$ 329.00		
--	27386	1727	02301800260000	11	Allegheny	820' S.W. OF SR 3021	N	N/A	N/A	N/A	Y	Y	9	2	1	--	--	\$ 889.00	\$ 132.00		
--	28136	1733	02302100300941	11	Allegheny	100' SOUTHEAST OF SR 3018	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,396.00	\$ 496.00		
--	27454	1776	02304801200000	11	Allegheny	1 MI.W.OF SR3041	N	N/A	N/A	Y	N/A	Y	12	2	1	--	--	\$ 869.00	\$ 142.00		
--	27430	1859	02309800500762	11	Allegheny	1 1/2 MI FROM GLNWOOD INT	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 7,663.00	\$ 1,544.00		
--	27429	1860	02309800601125	11	Allegheny	NEAR SR 3100	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 7,544.00	\$ 1,520.00		
--	89079	1881	02310800100174	11	Allegheny	200' S.W. OF SR 3049	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 3,264.00	\$ 1,590.00		
--	78407	1882	02310800301395	11	Allegheny	100' N.E. OF SR 3053	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 3,200.00	\$ 2,454.00		
Y	74338	1950	02401700500880	11	Allegheny	NEAR TWP GARAGE	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 1,807.00	\$ 328.00		
--	78413	1974	02403200902202	11	Allegheny	419' W OF LR 02090	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 1,132.00	\$ 330.00		
--	78414	1976	02403600701676	11	Allegheny	@ INTER.TURKEY FOOT ROAD	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 5,238.00	\$ 892.00		

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
	78416	1980	02402601202135	11	Allegheny	@ CAMP MEETING RD. EXT.	N	N/A	N/A	N/A	Y	Y	11	2	1	--	Adjacent side roads.	\$ 5,369.00	\$ 1,278.00	
--	78417	1982	02403601400961	11	Allegheny	@ INTER.WITH APPL.4846	N	N/A	N/A	N/A	Y	Y	11	2	1	--	Adjacent side roads.	\$ 3,200.00	\$ 1,591.00	
--	70804	3599	04016803300983	11	Beaver	100'N.OF SR 4034	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 3,352.00	\$ 1,774.00	
--	28944	3602	04016805001748	11	Beaver	.4 MI.SW OF TWP.RD.603	N	N/A	N/A	Y	N/A	Y	11	2	1	--	--	\$ 786.00	\$ 294.00	
--	93613	3647	04100500202450	11	Beaver	1/4 MI. NORTH OF SR 1012	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 2,181.00	\$ 780.00	
--	80062	3654	04101400700193	11	Beaver	100'NORTHEAST OF PIKE	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,334.00	\$ 847.00	
--	69069	3693	04300500800933	11	Beaver	@ INTER.W/TWP.RD.491	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Adjacent side roads.	\$ 2,800.00	\$ 812.00	
--	67378	3695	04300900600000	11	Beaver	0.5 MI.SOUTH OF SR 3007	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 1,823.00	\$ 541.00	
--	70805	3717	04302500701409	11	Beaver	@ INTER. WITH TWP.RD.544	N	N/A	N/A	Y	N/A	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 805.00	\$ 364.00	
--	70807	3722	04302700400000	11	Beaver	.5 MILE NORTH OF SR 168	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 559.00	\$ 200.00	
--	89058	3723	04302700460000	11	Beaver	GREENE TWP.-MILL CREEK	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 556.00	\$ 208.00	
--	99793	3747	04401201000519	11	Beaver	200'EAST&UNDER SR 0060	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 2,283.00	\$ 548.00	
--	29062	3749	04401201100256	11	Beaver	.2 MI. N.E. OF SR 4018	N	N/A	N/A	N/A	Y	Y	12	2	1	--	--	\$ 1,806.00	\$ 393.00	
--	78310	3750	04401201500926	11	Beaver	100 FT WEST OF SR 0051	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 1,403.00	\$ 421.00	
--	99794	3755	04401900500000	11	Beaver	1/2 MI. WEST OF SR 4021	N	N/A	N/A	N/A	Y	Y	10	1	1	--	--	\$ 1,556.00	\$ 664.00	
--	78313	3769	04403400200000	11	Beaver	500' WEST OF SR 0068	N	N/A	N/A	N/A	Y	Y	12	1	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 373.00	\$ 137.00	
--	29374	22262	37020800700000	11	Lawrence	1.5 MI. FROM ST.LINE	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 1,091.00	\$ 710.00	
--	78362	22265	37020801000000	11	Lawrence	3000' WEST OF SR 0551	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 1,664.00	\$ 917.00	
--	29534	22269	37020802201379	11	Lawrence	1/2 MI.WEST / SR0158	N	N/A	N/A	N/A	Y	Y	11	2	1	--	--	\$ 5,114.00	\$ 1,230.00	
--	78318	22277	37022400601429	11	Lawrence	NEAR SR 3016	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	--	\$ 8,745.00	\$ 3,224.00	
--	89094	22281	37022401100412	11	Lawrence	@ INTER. WITH SR 4006	N	N/A	N/A	N/A	Y	Y	11	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 5,574.00	\$ 2,712.00	
--	78370	22358	37095601200542	11	Lawrence	2 MI.EAST OF SR 0018	N	N/A	N/A	Y	N/A	Y	9.5	2	1	--	--	\$ 1,069.00	\$ 715.00	
--	69103	22359	37095601501187	11	Lawrence	1/2 MI. S.E. OF SR 1005	N	N/A	N/A	Y	N/A	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,075.00	\$ 634.00	
--	78374	22362	37095601900000	11	Lawrence	1 MI.NORTH TWP.RD.601	N	N/A	N/A	Y	N/A	Y	10	2	1	--	--	\$ 1,338.00	\$ 1,040.00	
--	69231	22369	37100501501309	11	Lawrence	1/4 MI. N.E. OF SR 0956	N	N/A	N/A	N/A	Y	Y	11	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,311.00	\$ 601.00	
--	78378	22374	37100900603315	11	Lawrence	100' SOUTH OF SR 0956	N	N/A	N/A	N/A	Y	Y	9	1	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 164.00	\$ 67.00	
--	99796	22378	37101200700000	11	Lawrence	300'WEST OF TWP.RD.478	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 840.00	\$ 449.00	
--	29321	22379	37101200900000	11	Lawrence	.5 MI.W.TWP.RD.488	N	N/A	N/A	N/A	Y	Y	10	2	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 840.00	\$ 366.00	
--	29387	22396	37200100802619	11	Lawrence	100' SOUTH OF SR 2012	N	N/A	N/A	N/A	Y	Y	9	1	1	--	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 137.00	\$ 47.00	
--	99798	22416	37201200103494	11	Lawrence	100' WEST OF TWP.RD.434	N	N/A	N/A	N/A	Y	Y	10	2	1	--	--	\$ 959.00	\$ 715.00	
--	29525	22433	37300100300259	11	Lawrence	1/4 MI. SOUTH OF SR 0317	N	N/A	N/A	N/A	Y	Y	12	2	1	--	--	\$ 295.00	\$ 106.00	
--	99797	22439	37300300800000	11	Lawrence	1/4 MI. SOUTH OF SR 0317	N	N/A	N/A	N/A	Y	Y	9	2	1	--	--	\$ 287.00	\$ 71.00	
--	29549	22441	37300400600000	11	Lawrence	3/4 MILE W OF TR 551	N	N/A	N/A	N/A	Y	Y	9	2	1	--	--	\$ 191.00	\$ 48.00	
--	80677	22455	37301500201288	11	Lawrence	1/4 MI W OF SR 2012	Y	N/A	N/A	N/A	N/A	N	11	1	1	Temp Signal Req'd. Alt. One Way Traffic	Sight distance issue -- may be mitigated by using a 32" barrier	\$ 1,397.00	\$ 326.00	
--	51503	16651	26016603900000	12	Fayette	REDSTONE & LUZERNE TWPS.	N	Y	N/A	N/A	N/A	Y	11	1	1	Detour traffic using SR 4006 to SR 40.	Coordinate with EMS, Fire & Schools. Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 6,107.00	\$ 1,468.00	
--	51484	16673	26038100801000	12	Fayette	WHARTON TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 381 during construction due to no suitable detour route traffic on.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 370.00	\$ 105.00	
--	74174	16713	26100100200639	12	Fayette	SPRINGFIELD TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 381 to SR 653	--	\$ 187.00	\$ 71.00	
--	74176	16720	26100300320000	12	Fayette	SPRINGFIELD TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 1003 to SR 1054 to SR 381 to SR 711 to SR 653.	Coordinate road closure with Springfield Twp.	\$ 238.00	\$ 126.00	
--	81961	16725	26100700300000	12	Fayette	SALTICK TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Coordinate with local authorities & MPMS # 90965 to use detour route.	--	\$ 1,116.00	\$ 253.00	
--	29781	16736	26101800100206	12	Fayette	N. UNION & FRANKLIN TWPS.	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 1043 to SR 4010 to SR 1051.	--	\$ 651.00	\$ 189.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	69229	16752	26103100100053	12	Fayette	CONNELLSVILLE CITY & TWP.	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 1033 to SR 1035 & maintain pedestrian access during construction	--	\$ 2,219.00	\$ 892.00	
--	74345	16757	26103100601336	12	Fayette	UPPER TYRONE TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 1033 to SR 1031. Can't be done concurrent to MPMS #76009.	--	\$ 725.00	\$ 165.00	
--	76009	16758	26103100700299	12	Fayette	CONNELLSVILLE & U. TYRONE	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 1033 to SR 1031. Can't be done concurrent to MPMS #74345.	--	\$ 701.00	\$ 211.00	
--	76012	16782	26104300200093	12	Fayette	N. UNION & FRANKLIN TWPS.	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 4010 to SR 51.	--	\$ 1,501.00	\$ 689.00	
--	29820	16789	26105000101121	12	Fayette	BULLSKIN TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 1050 during construction due to the routes trucks need to use to access the stone quarry.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 2,836.00	\$ 916.00	
--	90965	16794	26105002101302	12	Fayette	SALTICK TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 1058 to SR 381 to Melcroft Rd (twp rd).	Coordinate with Saltlick Twp.	\$ 1,202.00	\$ 287.00	
--	89075	16806	26105103000845	12	Fayette	BULLSKIN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 1019 to SR 1050	--	\$ 1,297.00	\$ 231.00	
--	29823	16827	26105501401377	12	Fayette	DUNBAR TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 1055 during construction.	Bridge on curve, narrowest point on structure should be 26' Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 229.00	\$ 53.00	
--	29926	16840	26105801300142	12	Fayette	SALTICK & DONEGAL TWPS.	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 1058 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 1,862.00	\$ 758.00	
--	29893	16841	26105801300864	12	Fayette	SALTICK & DONEGAL TWPS.	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 1058 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 1,862.00	\$ 758.00	
--	74184	16868	26201500300000	12	Fayette	WHARTON TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 2010 to SR 40	Bridge on curve, narrowest point on structure should be 24'	\$ 483.00	\$ 139.00	
--	74189	16910	26301100900000	12	Fayette	NICHOLSON & GERMAN TWPS.	N	N/A	Y	N/A	Y	Y	11	1	1	SR 3011, South Water Street, SR 3010, SR 3011	Bridge on curve, narrowest point on structure should be 24' Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 645.00	\$ 164.00	
--	81636	16920	26301301601348	12	Fayette	GERMAN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 166 to SR 21.	--	\$ 96.00	\$ 130.00	
--	79325	16922	26301301700955	12	Fayette	GERMAN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 4002 to SR 166	Construction cannot begin until MPMS #19188 is completed. Only one structure on SR 3013 can be worked on at a time	\$ 446.00	\$ 166.00	
--	79326	16923	26301301701416	12	Fayette	GERMAN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 4002 to SR 166	Construction cannot begin until MPMS #19188 is completed. Only one structure on SR 3013 can be worked on at a time	\$ 435.00	\$ 284.00	
--	79328	16928	26301301900753	12	Fayette	GERMAN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 4002 to SR 166	Construction cannot begin until MPMS #19188 is completed. Only one structure on SR 3013 can be worked on at a time	\$ 446.00	\$ 166.00	
--	74190	16930	26301301901171	12	Fayette	GERMAN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 4002 to SR 166	This bridge must be done before any other structure is done on SR 3013.	\$ 435.00	\$ 284.00	
--	79337	17052	26404400201593	12	Fayette	WASHINGTON TOWNSHIP	N	N/A	Y	N/A	Y	Y	11	1	1	Detour traffic using SR 201 to Perry Ave (Washington Twp Rd).	Coordinate with Washingtwn Twp. Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 792.00	\$ 299.00	
--	79340	18013	30001802400670	12	Greene	CENTER TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 18 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 1,027.00	\$ 415.00	
--	79342	18044	30001805800146	12	Greene	MORRIS TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 18 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 1,020.00	\$ 1,014.00	
--	30291	18154	30018800300000	12	Greene	FRANKLIN TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 188 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 5,214.00	\$ 2,080.00	
--	76037	18164	30018801800000	12	Greene	JEFFERSON TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 188 during construction.	Utilize widening to adjust horizontal alignment if possible. Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 3,083.00	\$ 1,368.00	
--	89031	18214	30101101500501	12	Greene	JEFFERSON T & CLARKSVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 88 to SR 188.	--	\$ 2,345.00	\$ 946.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	74203	18222	30101400803315	12	Greene	MORGAN TOWNSHIP	N	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 1014 and all other access during construction since other portion of road contains multiple instream crossings.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 30.00	\$ 4.00	
--	30335	18261	30200303301330	12	Greene	FRANKLIN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 21 to SR 2028.	--	\$ 1,396.00	\$ 611.00	
--	79353	18279	30201103700000	12	Greene	FRANKLIN TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 2011 during construction since potential detour route contains a turn restriction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 863.00	\$ 375.00	
--	30289	18287	30201600701702	12	Greene	MONOGAHELA TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 2029, SR 2014, SR 88	Widen to inside of curve to provide better horizontal alignment	\$ 797.00	\$ 226.00	
--	79356	18315	30202600100590	12	Greene	FRANKLIN TOWNSHIP	N	Y	N/A	N/A	Y	Y	11	1	1	Use, SR21, SR 19, SR 2026 . . Bridge key 18317 must be completed proper. Coordination with municipality and businesses must take place.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 4,229.00	\$ 1,262.00	
--	79357	18317	30202600501285	12	Greene	FRANKLIN TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	2	2	Maintain traffic on SR 2026 during construction since this portion serves as the I-79 Emergency Detour Route.	--	\$ 1,253.00	\$ 504.00	
--	88079	18351	30300600100674	12	Greene	GILMORE TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 3006 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 90.00	\$ 38.00	
--	30231	18403	30301300900000	12	Greene	WAYNE TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 3013 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 876.00	\$ 327.00	
--	30975	34335	62001900400000	12	Washington	AMWELL TOWNSHIP	N	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 19 during construction. (I-79 Emerg Detour Route). Maintain one lane of traffic in each direction.	--	\$ 399.00	\$ 280.00	
--	30639	34417	62005003300000	12	Washington	CECIL TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 50. Concern with the adjacent 4-way stop.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 6,805.00	\$ 2,429.00	
--	30997	34609	62008804902545	12	Washington	SPEERS & CHARLEROI BORO.	N	Y	N/A	N/A	Y	Y	11	1	1	SR 70, SR 906, SR 2018, SR 88 - 6 Miles	Sidewalk will need to be replaced, maintenance agreement required. Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 11,860.00	\$ 2,029.00	
--	73058	34623	62008807600000	12	Washington	FINLEYVILLE BOROUGH	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 88.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue. Widening will be needed, widening should be done to minimize impacts to businesses.	\$ 4,559.00	\$ 7,230.00	
--	89048	34650	62022100802172	12	Washington	MORRIS TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 221 due to posted bridge on SR 2020.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue. Replace inlet and cross pipes.	\$ 698.00	\$ 382.00	
--	88078	34673	62023104300092	12	Washington	BLAINE & INDEPENDENCE TWP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 231.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 134.00	\$ 106.00	
--	76062	34692	62048100500000	12	Washington	WEST PIKE RUN TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 481 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 1,191.00	\$ 923.00	
--	30813	34702	62048102400990	12	Washington	CARROLL TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 2025 to SR SR 88 to SR 837.	Construction cannot begin until the SR 481-K00 project is complete. Pending completion date is 1/19/2015. Widen across structure to the inside to improve horizontal alignment.	\$ 2,606.00	\$ 988.00	
--	31155	34847	62104900520000	12	Washington	SOUTH STRABANE TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using SR 136 to SR 519 to SR 40 to SR 1049.	Consider shifting structure to improve horizontal alignment.	\$ 453.00	\$ 352.00	
--	98374	34879	62200700200048	12	Washington	AMWELL TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 2020 to SR 19 to SR2004	--	\$ 166.00	\$ 67.00	
--	76072	34901	62201102800165	12	Washington	AMWELL TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Need county approval to use SR 2006 (posted 10 ton). Arch Brdg - no phasing	Poor horizontal alignment, widening to left side would improve issue	\$ 1,643.00	\$ 112.00	
--	98377	34907	62201500200805	12	Washington	WEST BETHLEHEM TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 2008 to SR 2013 to SR 2011)	Remove abandoned R/R abutments to greatly improve SD	\$ 569.00	\$ 518.00	

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								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
--	89142	34946	62202300800032	12	Washington	FALLOWFIELD TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 2023 during construction	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 264.00	\$ 56.00	
--	98864	34949	62202301100756	12	Washington	FALLOWFIELD TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 2023 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 909.00	\$ 293.00	
--	51507	34977	62203400500000	12	Washington	WEST PIKE RUN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour with Local coordination. SR 2041 to SR 40 to SR 2071.	--	\$ 175.00	\$ 51.00	
--	31157	34980	62203600101601	12	Washington	WEST PIKE RUN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 481 to SR 40 to SR 2081. Construct before MPMS # 81841.	--	\$ 308.00	\$ 87.00	
--	81841	34985	62203600500000	12	Washington	WEST PIKE RUN TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 481 to SR 40 to SR 2081. Not at the same time as MPMS # 77873.	Bad horizontal alignment, utilize lane widen to improve alignment.	\$ 308.00	\$ 69.00	
--	30715	34996	62203700403160	12	Washington	FALLOWFIELD TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use I-70 to SR 2016 to SR 481.	--	\$ 406.00	\$ 93.00	
--	30881	35090	62303700801515	12	Washington	WEST FINLEY TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 3035 to SR 3029 to SR 3025 to SR 3019	--	\$ 289.00	\$ 96.00	
--	31146	35103	62400300701841	12	Washington	HANOVER TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 4003 with stop signs.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 527.00	\$ 212.00	
--	30552	35171	62402300200000	12	Washington	CROSS CREEK TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Need county approval to use SR 4014 (posted 10 ton). Must go after SR 4027.	--	\$ 199.00	\$ 96.00	
--	30702	35178	62402700100687	12	Washington	CROSS CREEK TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Need county approval to use SR 4014 (posted 10 ton). Must go before SR 4023	--	\$ 247.00	\$ 95.00	
--	81846	35201	62403900701840	12	Washington	MOUNT PLEASANT TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 50.	Horizontal and vertical alignment improvements shall be considered	\$ 744.00	\$ 222.00	
--	30635	35227	62406100401960	12	Washington	HOPEWELL AND BLAINE TWP.	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 221. Detouring 3 ton bridge traffic over a 36 ton bridge on SR 221.	--	\$ 93.00	\$ 35.00	
--	32045	35982	64003103302148	12	Westmoreland	MT. PLEASANT & BULLSKIN T	Y	N/A	N/A	N/A	N/A	N	11	2	2	Must maintain 2 lanes of traffic at all times during construction on SR 31.	Retaining wall attached to NE wingwall, place scour protection where needed.	\$ 7,227.00	\$ 3,857.00	
Y	76089	36002	64005600501506	12	Westmoreland	CITY OF NEW KENSINGTON	Y	N/A	N/A	N/A	N/A	N	11	2	2	Must maintain 2 lanes of traffic at all times during construction on SR 56.	--	\$ 10,616.00	\$ 2,523.00	
--	79402	36130	64013602502924	12	Westmoreland	HEMPFIELD TOWNSHIP	N	Y	N/A	N/A	Y	Y	11	1	1	Use SR 3069/3071 to SR 30 to SR 3077. Must be a 2 week project for detour.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 4,937.00	\$ 1,972.00	
Y	31601	36168	64025900700000	12	Westmoreland	LIGONIER TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 259, SR 1019, SR 1017, SR 711, SR 30, SR 259. Early completion bridge SR 1017 must be completed first.	--	\$ 679.00	\$ 229.00	
Y	74418	36207	64036601720000	12	Westmoreland	MUNICIPAL. OF MURRYSVILLE	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 366 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 7,273.00	\$ 3,650.00	
Y	31826	36228	64038102400504	12	Westmoreland	LIGONIER TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour with mitigations at SR 711 & Darlington road.	--	\$ 1,548.00	\$ 466.00	
Y	31614	36230	64038103000000	12	Westmoreland	LIGONIER TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour with mitigations at SR 711 & Darlington road.	--	\$ 1,598.00	\$ 364.00	
--	76121	36248	64071102601107	12	Westmoreland	LIGONIER TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 711 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue. eliminate sidewalk, current sidewalk leads pedestrians to drop offs	\$ 12,094.00	\$ 2,860.00	
Y	76122	36251	64071103000565	12	Westmoreland	LIGONIER TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic on SR 711 during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 4,032.00	\$ 1,206.00	
--	98633	36331	64098201701219	12	Westmoreland	UNITY TOWNSHIP	N	Y	N/A	N/A	Y	Y	11	1	1	SR 982, SR 30, SR 2027, SR 981 - local road (Musickal Road) - 10 Mile detour - Local Approval to use Musickal needed. Coordination with stone quarry, ems, and schools	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 1,615.00	\$ 656.00	
--	31972	36365	64100400200165	12	Westmoreland	FAIRFIELD TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 711 to SR 1007	--	\$ 64.00	\$ 24.00	
Y	31611	36387	64101700400238	12	Westmoreland	LIGONIER TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 711 to SR 1017	--	\$ 510.00	\$ 336.00	
--	89037	36389	64101700600042	12	Westmoreland	LIGONIER TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 711 to SR 1018	Rdwy. Drainage needs updated, intersection shall be improved	\$ 357.00	\$ 55.00	
Y	31304	36431	64103400500000	12	Westmoreland	SALEM TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	SR 819 to SR 1061	--	\$ 770.00	\$ 308.00	
--	79404	36481	64201201301481	12	Westmoreland	MOUNT PLEASANT TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour traffic using PA 819, SR 2010, SR 2007, SR 2021	Construction cannot begin until ECMS Project 31756 is complete (Anticipated 10/2014) and coordinate with MPMS 36493.	\$ 1,386.00	\$ 416.00	

Early Completion Bridge	MPMS #	BR Key	BMS #	District	County	Location	Construction Requirements										Baseline Substantial Completion Date [To be completed for each Replacement Bridge after selection of the Preferred Proposer]			
							Staged Construction Required	Maximum Allowable Detour Period		Detours Prohibited Outside these Periods		Weekend Detour Allowed	Minimum Lane Width (ft)	Total Minimum Number of Lanes that Must Remain Open		Mandatory Traffic Control		Other Mandatory Project Special Conditions	Unavailability Value	
								Two Weeks	Five Weeks	School Summer Recess	From March 15 to November 15			From 6:00 am to 6:00 pm	From 6:00 pm to 6:00 am				Detour Unavailability Value	Lane Closure Unavailability Value
Y	79418	36482	64201300201727	12	Westmoreland	HEMPFIELD TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Use SR 2015, SR 30 and SR 130	--	\$ 5,352.00	\$ 2,025.00	
--	79419	36493	64202100601976	12	Westmoreland	MOUNT PLEASANT TOWNSHIP	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue. Sidewalk will need to be replaced, maintenance agreement required	\$ 7,120.00	\$ 3,177.00	
--	31699	36684	64400700200691	12	Westmoreland	CITY OF JEANNETTE	Y	N/A	N/A	N/A	N/A	N	11	1	1	Maintain traffic during construction.	Temporary signals should be considered if ADT or sight distance is a issue. Stop signs can be utilized at sites where these factors are not a issue.	\$ 5,168.00	\$ 881.00	
Y	91189	36750	64405300120000	12	Westmoreland	MUNICIPAL. OF MURRYSVILLE	N	N/A	N/A	N/A	Y	Y	--	--	--	Need to coordinate with Murrysville on detour route.	--	\$ 1,912.00	\$ 1,987.00	
--	89049	37037	64801105100448	12	Westmoreland	ROSTRAVER TOWNSHIP	N	N/A	N/A	N/A	Y	Y	--	--	--	Detour the private development traffic using SR 201 to SR 51 North to SR 51 South (at intersection with SR 3008) to SR 8011.	Coordinate closure with local businesses.	\$ 2,159.00	\$ 1,760.00	

**Pennsylvania Department of
Transportation**

Technical Provisions

Rapid Bridge Replacement Program

**Attachment 10-2
Approved Design Exceptions**

BRIDGE DECK CRACKING INPUT FORM				Type of Review: Initial (post construction):			
						Follow-Up (1-year):	
Project Information:							
Refer to BMS2 for data		ECMS					
		SR/Section					
		Structure Number (NBI Bridge Key)					
		BMS Number					
Date of Deck Review							
Date of Scheduled Opening (enter for initial review)							
Date Opened to Traffic (enter for 1-year review)							
Structure Information							
Refer to plans for data		Type. P/S. steel, etc					
		Number of Spans					
		Construction: New or Preservation?					
		Type of Beams					
		Beam Spacing c-c (in)					
		Deck Thickness (in)					
		Total Deck Area (sy)					
Concrete Mix Design							
Refer to approved mix design form		Concrete Supplier (Bulletin #42 supplier code)					
		Type (AAA, AAAP, HPC, lightweight, etc.)					
		Mix Design (JMF# from mix design form)					
		Cement (pcy)					
		Slag/GGBFS (pcy)					
		Fly Ash (Type F/C) (pcy)					
		Silica Fume (pcy)					
		Admixture - WR (Y/N)					
		Admixture - AE (Y/N)					
		Admixture - RE (Y/N)					
		QC Target Slump (in)					
		Water/Cement Ratio (from mix design form)					
Concrete Placement Data							
Refer to construction data		Actual Curing Duration (days) (14-days per Pub-408)					
		Ambient Temperature High (F) include curing time					
		Ambient Temperature Low (F) include curing time					
		Average slump at point of placement (in.)					
		7-Day Break Range (High/Low) (psi)					
		28-Day Break Range (High/Low) (psi)					
		28/7-Day Break Ratio (based on average strengths)					
Half-Width or Staged Construction (Y/N)							
Deck Cracking per Span							
Span No.	Span Length (ft)	Span Width (ft)	Moment	Transverse Crack Length (yd)	Longitudinal Crack Length (yd)	Transverse Cracks/Span (yd/sy)	Longitudinal Cracks/Span (yd/sy)
			positive			#DIV/0!	#DIV/0!
			negative			#DIV/0!	#DIV/0!
			positive			#DIV/0!	#DIV/0!
			negative			#DIV/0!	#DIV/0!
			positive			#DIV/0!	#DIV/0!
			negative			#DIV/0!	#DIV/0!
			positive			#DIV/0!	#DIV/0!
			negative			#DIV/0!	#DIV/0!
			positive			#DIV/0!	#DIV/0!
			negative			#DIV/0!	#DIV/0!
			positive			#DIV/0!	#DIV/0!
			negative			#DIV/0!	#DIV/0!
TOTALS				0	0		
Total Transverse Deck Cracking (yd/sy)						#DIV/0!	
Total Longitudinal Deck Cracking (yd/sy)						#DIV/0!	
Comments: did placements follow design pour sequence? Specify evaporation rate or if foggers were used. Time pours started and ended.							
Performed By							

*ATTACH SKETCH OF BRIDGE DECK MAPPING CRACK LOCATIONS AND POUR SEQUENCE

Revised 09/25/13

Pennsylvania Department of Transportation
TECHNICAL PROVISIONS
EXCEPTIONS EXHIBIT 1
(ATTACHMENT 1-X)

RAPID BRIDGE REPLACEMENT (RBR)
Project

September 16, 2014

Technical Provisions

Exceptions Exhibit 1 (Attachment 1-X)

Index

Exceptions Exhibit 1 (Attachment 1-X)

1. *Purpose*
2. *Publication No. 13M – Design Manual Part 2: Highway Design (Dual Unit)*
 - *DM-2 Chapter 12 – Guide Rail, Median Barrier and Roadside Safety Devices*
 - *DM-2 Chapter 18 – Temporary Roads and Bridges*
3. *Publication No. 15M – DM-4 – Structures*
 - *Chapter 1 – Administrative Considerations*
 - *Chapter 2 – Bridge Selection*
 - *Chapter 3 – Design Considerations*
 - *Chapter 4 – Bridge Economics*
 - *Chapter 5 – Rehabilitation Strategies*
 - *Chapter 6 – Geotechnical*
 - *Chapter 7 – Drainage Structures*
 - *Section 1 – Technical Requirements*
 - *Section 2 – General Design and Location Features*
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 - *Section 9 – Decks and Deck Systems*
 - *Section 10 – Foundations*
 - *Section 11 – Abutments, Piers and Walls*
 - *Section 12 – Buried Structures*
 - *Section 13 – Railings*
 - *Section 14 – Joints and Bearings*
4. *Publication No. 408 – Sections 1000 to 1124 Exceptions*
5. *P3 RBR – HDTS Publication List with Exclusions & Modifications*

Exceptions Exhibit 2 (Attachment 1-X+1)

6. *Publication No. 408 Section 200, 300, 400, 500, 600, 700, 800, & 900*

1. Purpose

The Technical Provisions incorporate the requirements of the Department's publications and manuals. Exception Exhibit 1 and Exception Exhibit 2 identify changes to these requirements for the Project and are part of the Technical Provisions.

These comments will apply throughout the Exception Exhibit documents.

1. The term or phrase as applied to many items in the Exception Exhibit is stated as.

- “No additional time or money will be given to attain (identified Person i.e., Department) approval,” and various other combinations.

This statement is being called to attention where it exists. This is being done to exclude possibilities in the Department's publications where an implied time or money relief would be anticipated.

There will be no implied additional time or money to comply with the requirements as stated in the TP or Exception Exhibit requirements unless specifically stated in the PPA as a compensation or Relief Event.

2. *Publication No. 13M – Design Manual Part 2: Highway Design (Dual Unit)*

- ***DM-2 Chapter 12 – Guide Rail, Median Barrier and Roadside Safety Devices***

Revise Section 12.11 as follows:

- Paragraph 2, Sentence 1, change “is authorized by the District Executive” to “is authorized by the Development Entity”
- Paragraph 2, Sentence 3, change “unless the District Executive authorizes” to “unless the Development Entity authorizes”
- Paragraph 3, Sentence 1, change “may be authorized by the District Executive” to “may be authorized by the Development Entity”

- ***DM-2 Chapter 18 – Temporary Roads and Bridges***

Revise Section 8.3, Paragraph 1 to read:

Temporary roads can be single-lane or two-lane. Single-lane temporary roads can be used if they provide adequate capacity to handle the traffic and the Department concurs with the use of a single-lane temporary road. The minimum number of lanes to be maintained during construction in each direction on each roadway component of the project shall be the number of lanes currently available prior to construction on such roadway component of the project.

Revise Section 8.3.E, Paragraph 1 to read:

E. Pavement Type and Shoulder Type. Pavement and shoulders of temporary roads are to be maintained in a smooth and dust-controlled condition during use. Any temporary road that will not be paved with bituminous material needs the concurrence/approval of the Department.

Revise Section 8.3.E.1 to read:

1. Selected material surfacing may be used as the pavement material for temporary roads with low ADTs and/or low speeds if permitted by the Department.

3. *Publication No. 15M – DM-4 – Structures*

- *Chapter 1 – Administrative Considerations*
- *Chapter 2 – Bridge Selection*
- *Chapter 3 – Design Considerations*
- *Chapter 4 – Bridge Economics*
- *Chapter 5 – Rehabilitation Strategies*
- *Chapter 6 – Geotechnical*
- *Chapter 7 – Drainage Structures*
- *Section 1 – Technical Requirements*
- *Section 2 – General Design and Location Features*
- *Section 3 – Loads and Load Factors*
- *Section 4 – Structural Analysis and Evaluation*
- *Section 5 – Concrete Structures*
- *Section 6 – Steel Structures*
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- *Section 8 – Wood Structures*
- *Section 9 – Decks and Deck Systems*
- *Section 10 – Foundations*
- *Section 11 – Abutments, Piers, and Walls*
- *Section 12 – Buried Structures*
- *Section 13 – Railings*
- *Section 14 – Joints and Bearings*

DM-4, Policy & Procedure: Chapter 1 – ADMINISTRATIVE CONSIDERATIONS

1.1.1.2 Deviations from Specifications

Add the following to the end of the section:

“No additional time or money will be given to attain approval.”

1.1.1.3 Order of Precedence

Delete this section.

1.1.1.6 AASHTO Guide Specifications

Delete the last paragraph of Item 2.

Delete the last paragraph of Item 3.

Add the following to the end of Item 3:

“Refer to Section 13 of this Exception Exhibit if proposing a railing system other than those specified in the Department’s standard details.”

Add the following to part (d) of Item 4:

“No additional time or money will be given to attain Department approval.”

Delete Item 7.

1.3 BRIDGE DESIGNS AND REVIEWS BY CONSULTANTS

Delete this section and all related subsections.

1.4.1 Modification, Acquisition, or Development of Programs

Revise the second sentence of the first paragraph to read:

“If software for a particular application is not available from the Department, the designer may use other commercially available software.”

Delete the second and third paragraphs.

1.4.2.1 Department Use

Delete this section.

1.4.2.2 Use of BRADD on Consultant Designed State Projects

Revise the first paragraph to read:

“The Department suggests the use of BRADD on all single span bridge RBR projects.”

Delete the third paragraph.

1.4.2.3 Use of BRADD on Non-Departmental Pennsylvania Bridge Projects

Delete this section.

1.4.3 CADD Cells for Bridge Details

Delete this section.

1.4.4 Bridge Engineering Software on PC's

Delete this section.

1.4.5 Commercial Software

Delete this section. Commercially available software may be used if the results are confirmed with hand calculations to ensure the veracity of the program output.

1.4.6 Computer Programs for Girder Bridges

Delete this section. Commercially available software may be used if the results are confirmed with hand calculations to ensure the veracity of the program output.

Figure 1.6.2-1

Revise the RECOMMENDED block to read: "Development Entity Engineer of Record" in place of "BRIDGE ENGINEER".

1.6.2.1 Basic Information

Revise the first sentence to read: "The outline of the title block, dividing lines, and information basic to all projects will be reprinted on CADD generated sheets meeting the requirements of PP.1.6.1 and as modified herein."

1.6.4.3 Checking

Revise the first sentence to read:

"Each sheet of design drawings shall be thoroughly checked and initialed by the designer and the checker prior to construction in accordance with Development Entity PMP."

1.7.4 General

Revise #5 to read:

"A higher class concrete may be substituted for a lower class concrete at no additional cost to the Department."

Delete third sentence in #6.

1.7.4.2 Notes for Bridge Rehabilitation

Delete this section.

1.7.5.1 Notes for Pile Driving Requirements

Revise part (a) to read:

“Method A – Use when bearing piles are driven to absolute refusal.

Control pile driving by the wave equation analysis. Drive test piles to absolute refusal. The Development Entity Engineer of Record shall verify, with concurrence from the Department, the test pile driving results and the capability of the pile hammer selected. Drive bearing piles to absolute refusal into the stratum defined by a tip elevation which is predetermined by the Development Entity’s Engineer of Record from test piles. The Development Entity Engineer of Record shall determine the acceptability of the bearing piles which attain absolute refusal above the predetermined tip elevations.”

Revise part (b) to read:

“Method B – Use when bearing piles are driven to a capacity determined by the wave equation, but to less than absolute refusal.

Drive test piles to absolute refusal unless otherwise directed by the Development Entity’s Engineer of Record. The Development Entity’s Engineer of Record shall verify, with concurrence from the Department, from the test pile driving results, the capability of the pile hammer selected. Drive bearing piles to a tip elevation and a driving resistance predetermined by the Development Entity Engineer of Record from a wave equation analysis of the test piles. The Development Entity Engineer of record shall determine the acceptability of the bearing piles which attain absolute refusal above the predetermined tip elevations.”

Revise subpart (2) of part (c) to read:

“Drive test piles to absolute refusal unless otherwise directed by the Development Entity’s Engineer of Record. The Development Entity’s Engineer of Record shall verify, with concurrence from the Department, from the test pile driving results the capability of the pile hammer selected.”

Revise subpart (6) of part (c) to read:

“Drive load test piles to a driving resistance and/or a tip elevation predetermined by the Development Entity’s Engineer of Record from a wave equation analysis of the test piles.”

Revise subpart (8) of part (c) to read:

“Do not drive bearing piles before the representative pile load test is completed and the results are evaluated by the Development Entity’s Engineer of Record and concurred with by the Department.”

Revise subpart (9) of part (c) to read:

“Drive bearing piles to a tip elevation and a driving resistance predetermined by the Development Entity’s Engineer of Record from the pile load tests. The Development Entity’s Engineer of Record shall

determine the acceptability of the bearing piles which attain absolute refusal above the predetermined tip elevations.”

1.7.7 Notes for Steel Beams and Girders

Delete #1 and #2.

1.7.8 Welding Notes for Rehabilitation of Structures or where Field Welding is permitted

Delete this section.

1.8.1.1 Policy for Designer’s Responsibility for Constructability

Delete the sixth paragraph of Case B.

1.8.3 Rating Computations

Revise the last sentence under part (a) to read:

“The ratings shall be determined by the design method and analysis method (DM-4 distribution factors or a refined method) which were used in design.”

1.9 BRIDGE SUBMISSIONS – DESIGN PHASE

Revise this section and all related subsections to read:

“In accordance with the Technical Provisions of this contract.”

1.10 BRIDGE SUBMISSIONS – CONSTRUCTION PHASE

1.10.1 Alternate Design by Contractors

Delete this section and all associated subsections.

1.10.2 Shop Drawings

Revise the first and second sentence to read:

“Shop drawings submitted for acceptance shall be prepared by the Development Entity in accordance with the requirements of the design drawings, Department standards and Technical Provisions Section 12. Shop drawings shall be properly reviewed and accepted by the Development Entity’s Engineer of Record before fabrication begins.”

1.10.2.1.1 In-House Design

Delete this section.

1.10.2.1.2 Consultant Design

Revise this section to read:

“The shop drawings for the project shall be reviewed and approved by the Development Entity’s Engineer of Record.”

1.10.2.5 Review Procedure

Revise this section to read:

“Copies of the approved shop drawings shall be submitted to the Department.

Generally, shop drawings shall be submitted for each structure individually (items pertaining to the same S-number). This procedure will facilitate bookkeeping and avoid confusion when microfilm records are made. Each drawing shall follow the title block requirements as stated in Section 12.4.4 of the Technical Provisions.”

1.10.2.6

Delete the second paragraph.

Revise the third paragraph to read:

“ “As-built” shop drawings thereof shall be furnished by the Development Entity in accordance with Section 12 of the Technical Provisions.”

1.10.3 Pile Hammer Approvals

Revise this section to read:

“Pile hammer evaluation shall be made by the Development Entity’s Engineer of Record. GRLWEAP evaluations shall be submitted in accordance with the Technical Provisions of this contract. Pile hammers may not be used without a formal approval letter from the Development Entity’s Engineer of Record, specifying the approved pile driving parameters. Tip reinforcement and splice details shall be approved by the Development Entity’s Engineer of Record based upon Standard Drawing BC-757M.”

1.10.4 Pile Load Test Evaluations

Delete the first sentence.

1.10.5 Construction Problems

Delete the second and third paragraph.

1.10.6.1 Revisions During Bidding Phase

Delete this section.

1.10.6.2.1 Revisions Due to Errors/Omissions or Field Conditions

Revise this section to read:

“The Development Entity will revise the contract drawings, as necessary, to correct errors or omissions uncovered during construction or to document changes necessitated by field conditions. The Development

Entity will make the necessary copies and distribute the revised plans to all affected parties in accordance with the Technical Provisions of this contract.”

1.10.6.2.2 Revisions Due to Minor Design Changes Requested by the Contractor

Delete this section.

10.6.3 Acceptance of Plan Revisions

Delete this section.

1.10.6.4 Drafting Procedures for Plan Revisions

Delete this section

1.11 STRUCTURE SUBMISSIONS – DESIGN-BUILD, LOW BID

Delete this section and all associated subsections.

1.12 STRUCTURE SUBMISSIONS – DESIGN-BUILD, ADJUSTED BID

Delete this section and all associated subsections.

1.13 HAULING RESTRICTIONS AND PERMITS

Revise this section to read:

“All state hauling and permit laws must be adhered to by Development Entity. No waivers will be granted.”

1.14 SYSTEMS APPROVAL

Revise this section to read:

“In accordance with the Technical Provisions of this contract.”

DM-4, Policy & Procedure: Chapter 2 – SELECTION OF BRIDGE TYPES

2.0 GENERAL

Delete the third paragraph.

Add the following Section:

2.0.1 Restricted Bridge Types

Bridges are to be designed with consideration given to the Department's 100 year bridge life initiative. The following is a list of bridges types or bridge components which are specifically restricted from use by the Development Entity's team:

- Multi-cell culverts except at bridge sites 27011.
- Multiple lines of pipe
- Non-composite superstructure (including, but not limited to, box beams with asphalt overlay)
- Prestressed Concrete hollow core slab with metallic prestressing strands
- Open Steel Grid Decks
- Aluminum bridges
- Timber bridges
- Metal pipe or culvert structures
- Structure types specifically restricted in Sections 2.1.2 or 3.2.1 and their associated exceptions in the Exceptions Exhibit.
- Fracture critical members shall not be used for bridges without written authorization from the Department and FHWA. If allowed, fracture critical members shall be designed to allow full access for inspection. Development Entity shall investigate providing redundancy as described in FHWA Memorandum dated June 20, 2012, Clarification of Requirements for Fracture Critical Members.

Use of any alternate bridge type not contained in this Chapter must be approved by the Department. No additional time or money will be given to attain Department approval.

2.3.2 General Requirements

Delete second sentence of the third paragraph.

Revise third sentence of the third paragraph to read:

“Use of superbeams is permitted in design and construction if all hauling restrictions are obeyed, a hauling permit can be issued by the Department, and beams can be safely transported to the bridge site.”

Add the following to the end of the section:

“No additional time or money will be given for the Department review and approval for beam cross-sections and section properties that deviate from the current standards. If non-standard beams are used, a complete bridge beam standard will be provided. Submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including barrier attachment, deck overhang and connection with integral approach slab.”

2.4 TIMBER BRIDGES

Delete this section and all associated subsections.

2.5.1 Metal Culverts

Delete this section.

2.5.6 Precast Concrete Box Culverts At Grade

Provide a concrete structural overlay on precast concrete box culverts at grade with fills less than or equal to two (2) feet at Project Sites where the approach pavement is concrete. At Project Sites where the approach pavement is bituminous, either provide concrete structural overlay or bituminous pavement with waterproofing membrane.

DM-4, Policy & Procedure: Chapter 3 – DESIGN CONSIDERATIONS

3.2.1 Girder Bridges

Revise the first sentence to read: “Girder bridges shall have a minimum of four girders.”

Delete the last paragraph.

3.2.3.1 Scupper Location

Add the following:

“Scuppers other than those shown in the BC standards may be proposed for use. Proposed scupper designs shall be shown to be used by states with similar weather conditions to Pennsylvania. Proposed scupper designs will be reviewed and approved by the Department. No additional time or money will be given for review and approval of the proposed scupper design. Scuppers with downspouting less than 8 in. diameter will not be approved.”

3.2.3.2 Scupper Types

Delete the first sentence of the first paragraph.

Delete the first sentence of the second paragraph.

Revise the second sentence of the second paragraph to read:

“Type 2 scuppers shall be used with 8 in. diameter downspouting to eliminate debris accumulation and subsequent vegetative growth, and to ensure the downspouting capacity is greater than the scupper interception capacity.”

3.2.3.4 Downspouting

Add the following to the end of the section:

“Determine number of anchors and spacing of the hangers to eliminate clogging of the long runs due to dirt, debris and icing conditions. Assume a unit weight of 120 pcf for downspouting types specified in BC-751M. Unit weights of alternate downspouting conditions are to be calculated by the Development Entity.”

3.2.3.5 Splash Block

Modify the last sentence to read:

“The splash block shall be contoured and dished to contain and direct the flow into a rock lined ditch, or channel with a rock size to eliminate erosion within the ROW.”

3.2.3.6 Drainage for Rehabilitation Projects

Delete this section.

3.2.3.7.1 Scupper Types

Add the following to the end of the section:

“See Section 3.2.3.1 of this Chapter and the associated exceptions in the Exceptions Exhibit for acceptance of scupper not shown on standard drawings.”

3.2.3.7.2 Scupper Location

Revise the parenthetical sentence to read:

“(For shoulders less than 6 ft. wide, a portion of the adjacent traffic lane, up to a maximum of one-fifth of the lane, may be included in the width of flow.)”

3.2.4 Paving Notch and Bridge Approach Slab

Revise to read:

“Approach slabs shall be required for Project Sites where the approach pavement is concrete, with bridges using integral abutments and where expansion joints can be eliminated on the structure. Other Project Sites may utilize approach slabs at the discretion of the Development Entity’s EOR where ADT and truck traffic may warrant.”

3.3.1 Slope Walls

Revise the first sentence to read:

“Slope walls under the end spans are required to protect the slopes from erosion and to eliminate unsightly appearance of barren slopes where aesthetics is a factor or where maintenance is impractical.”

3.3.2 Substructure Drainage

Revise the sentence to read:

“Underdrain pipes which extend from the end or from the face of walls to the highway drainage system shall be identified on the structure drawings.”

3.3.3 Abutments and Cast-in-Place Retaining Walls

Revise the first paragraph to read:

“Abutments, wingwalls and retaining walls shall be of the reinforced concrete cantilever, integral abutment, or geosynthetically reinforced soil type, based on site conditions and structure type, size and location. Wingwalls and retaining walls with an overall height of 12 ft. or less may be of the type shown on Standard Drawing BD-631M.”

Delete the third paragraph.

3.3.4.1 General

Revise the first sentence of the first paragraph to read:

“Prefabricated walls, including approved proprietary systems may be used where site conditions.”

Delete the second sentence of the first paragraph.

3.3.4.3 Selection Procedure

Delete this section.

3.3.4.5 Plan Preparation

Revise the first sentence to read:

“Where prefabricated retaining walls are being used, the final design and drawings shall contain the following minimum information:”

Revise the first sentence of the last paragraph of subsection (t) to read:

“The designer shall estimate the applied or design bearing pressure and compare it with the calculated factored bearing resistance.”

3.3.4.6 Proposal Preparation and Bidding Instructions

Delete this section.

3.3.4.7 Requirements for Contractor Prepared Plans

Delete subsections (k) and (l).

Replace the last three paragraphs of this section with:

“The number of sets of design drawings, shop drawings, and computations and who they shall be submitted to are to be specified by the Development Entity’s Project Baseline Schedule (PBS).”

3.4.1 Overlays

Delete this section.

3.4.3 Cathodic Protection

Delete this section.

3.5.1 Service Utilities

Delete the first, second, and third paragraphs.

Add the following to the end of the section:

“Submit calculations and standard details for a typical utility attachment detail for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including connection details, limitations of the design, and fabrication details.”

3.6.3 Sign Structures

Add the following to the beginning of the section:

“Determination of whether a sign structure will be required to be attached to the bridge will be made at the TS&L submission stage.”

Delete the last sentence of the fifth paragraph.

Revise the last sentence to read:

“Sign structure shop drawings are to be reviewed and accepted by the Development Entity’s Engineer of Record.”

3.6.4 Sound Barrier Walls

Add the following:

“Determination of whether a sound barrier wall will be required to be attached to the bridge will be made at the TS&L submission stage.”

3.6.4.1 General

Revise the second sentence of (d) to read:

“Alternate wall types using steel, concrete, timber, masonry, plastic, or any other material must be approved by the Department prior to fabrication and construction. If an alternate wall system is proposed, submit calculations and standard details for approval to the Department for submittal to the FHWA (as applicable). Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including post spacing, panel height limitations, and connection details.

No additional time or money will be given to attain approval.”

Delete (e).

Revise (j) to read:

“Provide access doors in the wall if required by local fire departments or for inspection in accordance with the Standard Drawings.”

Revise (k) to read:

“Provide a constant post spacing for the entire length of wall. The constant post spacing may be interrupted to miss drainage pipes, utilities, expansion joints, construction joints, and/or any other physical features.”

3.6.4.2 Wall Types

Delete the second sentence of the fifth bullet in part (b)(1).

Delete the second sentence of the seventh bullet in part (b)(1).

3.6.4.3 Geometry and Layout

Add the following to the end of the first bullet in part (k):

“No additional time or money will be given for discussions or to attain acceptance.”

3.6.4.4 Public Involvement and Aesthetics

Add the following to the end of part (c):

“No additional time or money will be given to attain approval.”

Delete subpart (2) of part (d).

Revise subpart (9) of part (e) to read:

“Stamped finishes are permitted.”

Revise the last sentence of subpart (11) of part (e) to read:

“Thicker architectural surface treatments are permitted if accounted for in the design of the precast concrete panel.”

3.6.4.5 Design Specifications and Design Loads

Add the following to the end of part (b) subpart 8.20.1:

“No additional time or money will be given to attain Department approval.”

3.6.4.8 Base Plates

Revise the second sentence of part (g) to read:

“If an alternate design is proposed, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects of the design.

No additional time or money will be given to attain approvals.”

3.6.4.10 Foundations

Add the following to the end of this section:

“The following is applicable to all subsections of this section: No additional time or money will be given to attain acceptance of foundation parameters.”

3.6.4.11 Offset Walls

Add the following to the end of subpart (10) of part (f):

“No additional time or money will be given to attain acceptance of foundation parameters.”

3.6.4.13 Special Provisions

Delete this section.

3.6.4.16 Design Build

Delete this section.

3.6.5 Pedestrian Structures and Bridges on Shared Use Trails

Delete this section and all related subsections.

3.6.6 Usage of Unapproved Products

Revise this section to read:

“Use of Unapproved Products shall conform to the requirements of PP Section 1.14 and the associated exceptions in the Exceptions Exhibit.”

3.6.7 Bridge Inspectability

Delete guidelines (5) and revise (8) to evaluate the inspectability of the bridge using a scaled drawing.

3.6.9 Self Consolidating Concrete

Revise the sentence to read: “Consideration can be given to the use of self-consolidating concrete in caissons to aid in constructability, and in precast members to aid in fabrication.”

3.7 SPECIAL PROVISIONS

Delete the second and third paragraphs of this section.

DM-4, Policy & Procedure: Chapter 4 – BRIDGE ECONOMICS

4.1.3(a) Selection of Superstructure Types

Add the following to Subsection # 5:

“No additional time or money will be given to attain Department review and approval.”

4.1.7 Value Engineering

Delete this section.

4.2 LIFE-CYCLE COSTS

Delete this section.

4.3.1 Guidelines for Economical Steel Girder Bridges

Add the following to Subsection # 1:

“No additional time or money will be given to attain Department review and approval.”

4.3.3 Composite Beams

Revise the first sentence to read:

“Composite design is required for simple span and continuous bridges.”

Delete the second sentence.

DM-4, Policy & Procedure: Chapter 5 – REHABILITATION STRATEGIES

Delete this entire chapter and all subsections.

DM-4, Policy & Procedure: Chapter 6 – PROCEDURES FOR GEOTECHNICAL EXPLORATIONS

6.2 RECONNAISSANCE

Delete this section.

6.3.1 Foundation Exploration Plan

In accordance with Technical Provision Section 8.

6.3.2 Foundation Exploration Meeting

In accordance with Technical Provision Section 8.

6.3.3 Entry onto Railroad Right-of-Way

Delete this Section and all related Sub-Sections. All coordination is the responsibility of the Development Entity's Team.

6.3.4 Preparation and Management of Subsurface Boring, Sampling and Testing (SBST) Contract

Delete this section and refer to Publication 222.

6.3.5 Prequalification for Drilling Contractors

Delete this section and all related subsections.

6.4 SERVICE PURCHASE TEST BORING CONTRACTS

Delete this section.

DM-4, Policy & Procedure: Chapter 7 – DRAINAGE STRUCTURES, SCOUR AND CULVERTS

7.2.4 Footing Location Guidelines

The following guidelines are provided as minimum criteria for foundations in river environment:

- a) General
 - 1. The minimum placement dimension, D, is the nominal placement thickness as per Publication 408, Section 850.
 - 2. Refer to Figure 7.2.4-5 for definition of adjacent stream bed to be used for meeting minimum footing embedment depth requirement.
 - 3. For substructure units above the design floodplain but within the 500-year floodplain, the bottom of footing may be placed per Section PP1.9.4.4(c), but scour calculations and riprap requirements must be met.

Add the following to 7.2.4(a)2:

In a typical bridge crossing a stream, the streambed elevation is to be considered Figure 7.2.4-5

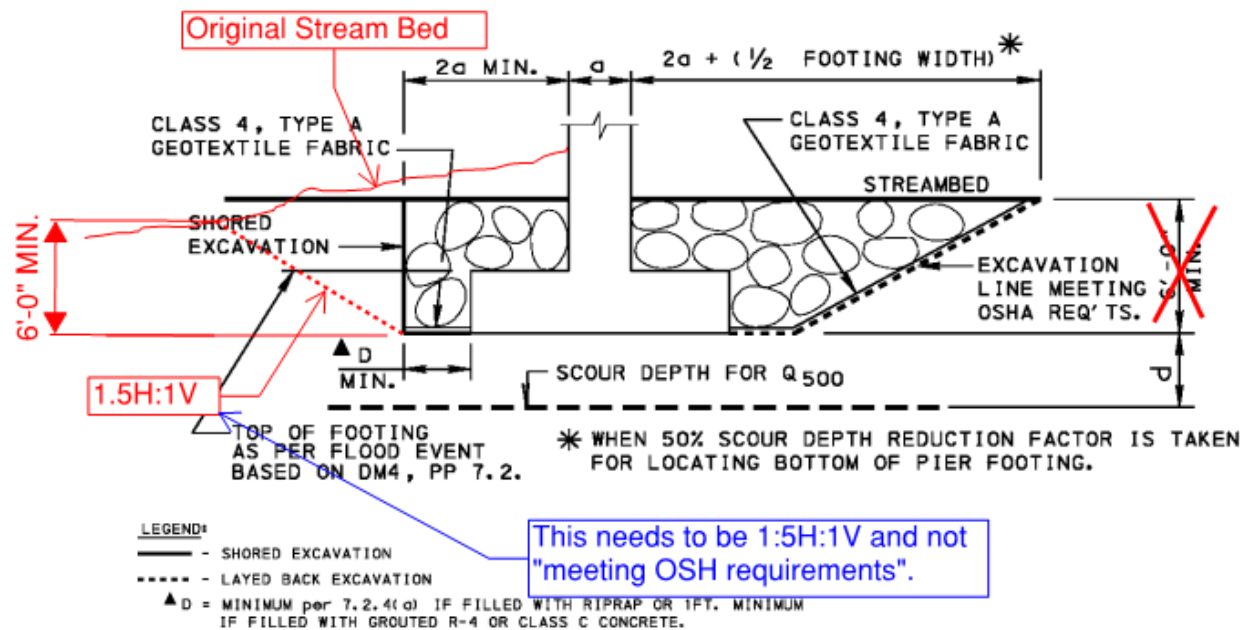


Figure 7.2.4-5 – Pier Footing on Soil

7.3.3 Corrugated Metal Buried Structures

Delete this section.

DM-4, Design Specifications: Section 1 – INTRODUCTION

1.1 SCOPE OF THE SPECIFICATIONS

Revise the second paragraph to read:

“The design of any structure, or portion thereof, which is not covered by the DM-4 or the AASHTO LRFD Specifications shall be designed by other appropriate Department or AASHTO documents as specified in PP1.1 or applicable Specifications and Standards approved by the Development Entity’s Engineer of Record with concurrence from the Department”.

Add the following sentence to the end of the second paragraph: “No additional time or money will be given to attain Department concurrence.”

C1.3.3 Ductility

Delete this section.

1.3.4 Redundancy

Delete the last paragraph.

DM-4, Design Specifications: Section 2 – GENERAL DESIGN AND LOCATION FEATURES

2.3.2.2.2. Protection of Users

Revise the second paragraph to read:

“When sidewalks are provided on bridges, with a posted vehicular speed greater than 45 mph or structures longer than 200 ft. (regardless of the speed), the sidewalk shall be protected by a barrier.”

2.5.2.2.1P General

Revise last sentence to read:

“For special bridge conditions, the inspectability provisions shall be as determined by the Development Entity’s Engineer of Record.”

2.5.2.2.2aP General

Revise the first paragraph to read:

“Inspection walks shall be provided for long bridges (over 1,000 ft.) which cannot be readily inspected using inspection crane or which are otherwise inaccessible from underneath. Inspection walks are required under the following conditions:”

2.5.2.2.5P Sound Barriers

Revise the last sentence to read:

“For special conditions, the inspectability shall be determined by the Development Entity’s Engineer of Record.”

2.5.2.7.1 Exterior Beams on Multi-Beam Bridges

Revise the second paragraph to read:

“The load carrying capacity of exterior beams shall not be less than the load carrying capacity of an interior beam.”

2.5.3 Constructability

Delete the last paragraph and associated bullets.

2.10P CONSTRUCTION LOADS

Delete the last paragraph.

2.10.2.1P Bridge Painting Projects

Delete this section.

2.10.2.2P Deck Milling/Overlay Projects

Delete this section.

2.10.2.4P Construction Loads and Permit Evaluations

Revise the first sentence to read:

“In the development of the bridge design and/or approval of construction loads, Development Entity’s Engineer of Record shall consider the effects of construction loads in conjunction with permit load evaluation.”

Add the following to the end of the paragraph:

“For partial-width construction, Development Entity’s Engineer of Record shall inform the Department of the construction load and provide updated bridge rating files accounting for the reconfigured typical sections, loads on the bridge, and distribution of the position of the live load. This submittal shall be submitted to the Department three weeks prior to invoking the lane restrictions. Maintain continuous contact with the Department concerning staging and phasing related to permit vehicle passage.”

DM-4, Design Specifications: Section 3 – LOADS AND LOAD FACTORS

3.1 SCOPE

Delete this section.

C3.1 Scope

Delete this section.

C3.4.1 Load Factors and Load Combinations

Revise the fourth and fifth sentences of the ninth paragraph to read:

“If the Development Entity’s Engineer of Record believes that an intermediate case will govern to an appreciable degree, then intermediate cases shall be investigated.”

C3.6.2.1.2P Components for which IM is Not Applicable

Revise the first sentence to read:

“The VBent program carries the live loads from the pier cap through to the footing without the removal of the effect of the dynamic load allowance (IM) input by the user.”

C3.6.4 Braking Force: BR

Delete this section.

C3.8.1.2.1 General

Delete this section.

3.8.3.4 Wind Tunnel Tests

Delete this section.

C3.9.1 General

Revise the second paragraph to read:

“The VBent programs use a default ice thickness of 6 in. and a default ice crushing strength of 58 ksf.”

Delete the third paragraph.

3.10.9.5 Longitudinal Restrainers

Delete this section.

C3.13 Friction Force: FR

Add the following to the end of the section:

“No additional time or money will be given to attain Department approval and concurrence.”

C3.14.15 Protection of Substructures

Delete this section.

DM-4, Design Specifications: Section 4 – STRUCTURAL ANALYSIS AND EVALUATION

4.1 SCOPE

Delete this section.

C4.5.1

Delete this section.

4.5.2.3 Inelastic Behavior

Delete this section.

4.6.2.1.9 Inelastic Analysis

Delete this section.

C4.6.2.2.1

Revise the second paragraph to read:

“The use of transverse mild steel rods secured by nuts, or similar unstressed dowels shall not be considered sufficient to achieve full transverse flexural continuity.”

4.6.2.2.4 Curved Steel Bridges

Revise this section to read:

“Curved steel bridges require a refined method of analysis.”

4.6.3.2.3 Orthotropic Plate Model

Revise last sentence to read:

“Where the torsional stiffness of the deck is not contributed solely by a solid plate of uniform thickness, the torsional rigidity shall be established by a three-dimensional elastic analysis.”

4.6.3.3.1 General

Add the following to the end of the fourth paragraph:

“No additional time or money will be given to attain approval.”

4.6.3.3.2 Curved Steel Bridges

Revise the second paragraph to read:

“Refined analysis methods shall be used for the analysis of curved steel bridges.”

C4.7.1.4

Delete this section.

4.7.2.2.1 Wind Velocities

Delete this section.

C4.7.4.3.1

Delete this section.

4.7.4.6.1P General

Delete the first paragraph.

4.8.2 Bridge Testing

Delete this section.

DM-4, Design Specifications: Section 5 – CONCRETE STRUCTURES

5.2 DEFINITIONS

Add the following to the definition of Special Anchorage Device:

“No additional time or money will be given to attain Department approval.”

5.4.1 General

Add the following to the end of the third paragraph:

“No additional time or money will be given to attain Department approval.”

5.4.2.1 Compressive Strength

Delete the ninth paragraph.

5.4.2.2 Coefficient of Thermal Expansion

Delete the last sentence in the last paragraph.

5.4.2.5 Poisson’s Ratio

Delete the last sentence in the second paragraph.

5.4.2.6 Modulus of Rupture

Delete the last sentence in the last paragraph.

5.4.3.1 General

Delete the third and fourth sentence from the third paragraph.

Revise the fourth paragraph to read:

“Welding of reinforcement bars during fabrication or construction will not be allowed.”

5.4.3.3 Special Applications

Revise this section to read:

“The use of ASTM A1035 reinforcement is permitted in substructure units only at a design yield strength of 100 ksi. In all other applications, A1035 may be used only as a bar for bar replacement where the design has been done using 60 ksi yield strength reinforcement or as specified in BD-601M deck reinforcement.”

5.4.4.1 General

Add the following to end of fourth paragraph:

“No additional time or money will be given to attain Department approval.”

C5.4.5 Post-Tensioning Anchorages and Couplers

Revise the fifth paragraph to read:

“Couplers are to be used only at locations shown on the contract documents.”

Revise the sixth paragraph to read:

“Qualification of anchorages and couplers are to be verified by testing. Testing results shall be included in the design calculations.”

5.5.4.2.1 Conventional Construction

Revise the last paragraph to read:

“Partial prestressed components shall not be used.”

5.5.4.2.2 Segmental Construction

Add the following to the end of the section:

“No additional time or money will be given to attain Department approval.”

5.7.2.1 General

Revise the first bullet to read:

“If a maximum strain exceeding 0.003 is to be utilized, the concrete must be confined, test results must show that it is obtainable, and the test results shall be included in the design calculations.”

Delete the second sentence of the second bullet.

5.7.3.1.2 Components with Unbonded Tendons

Revise the last sentence of the last paragraph to read:

“Full-length unbonded tendons are not allowed.”

5.7.3.2.5 Strain Compatibility Approach

Delete this section.

5.7.3.3.1 Maximum Reinforcement

Delete this section.

C5.9.5.1

Delete this section.

5.9.5.4.3c Relaxation of Prestressing Strands

Revise the first sentence of the second paragraph to read:

“The total loss due to relaxation should be based on test data.”

5.10.3.3.1 Pretensioning Strand

Revise the third paragraph to read:

“The clear distance between strands at the end of a member may be decreased, if justified by performance tests of full-scale prototypes of the design.”

5.10.8.1P Minimum Reinforcement

Delete the last sentence.

C5.10.9.4.2

Delete this section.

C5.10.9.7.2

Revise the last sentence of the second paragraph to read:

“Alternatively, these limits may be exceeded if an anchorage system passes the acceptance test. Test results shall be included in the design calculations.”

5.10.9.7.3 Special Anchorage Devices

Revise the second paragraph to read:

“Special anchorage devices that do not satisfy the requirements specified in A5.10.9.7.2 may be used, provided that they have been tested by an independent testing agency and meet the requirements of Publication 408, Section 1108 and the associated exceptions in the Exceptions Exhibit. Test results shall be included in the design calculations.”

C5.10.9.7.3

Delete this section.

5.11.3 Development of Mechanical Anchorages

Delete this section.

5.13.2.2 Diaphragms

Add the following to the end of the section:

“If any diaphragms are used for segmental box girder bridges, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including the diaphragm details, connections to the girders and the effect on girder performance. No additional time or money will be given to attain Department approval.”

5.13.4.4 Precast Prestressed Piles

Revise the second paragraph to read:

“If precast prestressed piles are used, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards.

No additional time or money will be given to attain Department approval.”

5.14.1.1 General

Add the following between the second and third paragraphs:

“If any deviation of beam cross section from the current standards is used, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards.”

Revise the third paragraph to read:

“The allowable skew limitations shown in the Standard Drawing BD-651M shall not be exceeded.”

Add the following to the end of this section:

“No additional time or money will be given to attain Department approval.”

5.14.1.2.2 Extreme Dimensions

Revise the last paragraph to read:

“Field splices in precast members are not permitted, except if approved by the Development Entity’s Engineer of Record with concurrence from the Department.”

Add the following:

“If field splices in precast members are used, submit calculations and standard details for approval and concurrence to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including design specifications, design calculations, materials, segment assembly procedures and erection of assembled precast members.

No additional time or money will be given to attain Department approval and concurrence.”

C5.14.1.3.1

Add the following to the first bullet:

“Submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards.

No additional time or money will be given to attain Department approval.”

5.14.1.4.1 General

Revise the second sentence of the third paragraph to read:

“The same number of beams shall be used in adjacent spans.”

5.14.1.4.11P Precast Girder Design

Revise the second bullet to read:

“• the more critical of either a continuous span analysis assuming full continuity, or a simple span analysis assuming the complete loss of continuity for composite dead load and live load (without creep and shrinkage effects).”

C5.14.1.4.11P Precast Girder Design

Delete this section.

5.14.2.3.6 Creep and Shrinkage

Revise the last paragraph to read:

“Creep coefficient $\Psi(t, t_i)$ shall be determined in accordance with A5.4.2.3 and D5.4.2.3.”

C5.14.2.3.7 Prestress Losses

Delete this section.

5.14.2.5 Use of Alternative Construction Methods

Add the following to the end of the section:

“If an alternative segmental construction method is used, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards.

No additional time or money will be given to attain Department approval.”

DM-4, Design Specifications: Section 6 – STEEL STRUCTURES

6.1.1.1P Steel Tied Arch Bridges

Delete this section.

6.1.1.2P Steel Box Bridges

Delete this section.

6.4.1 Structural Steels

Revise the fourth paragraph to read:

“Steel Grades 100 or 100W shall not be used.”

Revise the first four sentences of the fifth paragraph to read:

“Unpainted ASTM A 709/A 709M, Grade 50W or HPS-70W, steel is not permitted in acidic or corrosive environments, in locations subject to salt water spray or fog, in depressed roadway sections (less than 20 ft. clearance) where salt spray and other pollutants may be trapped, in low underclearance situations where the steel is either less than 5 ft. from normal water elevation or continuously wet, or where the steel may be buried in soil.”

6.4.3.1 Bolts

Revise the third paragraph to read:

“AASHTO M 253 (ASTM A 490) bolts are not permitted.”

6.4.3.4 Alternate Fasteners

Revise the section to read:

“The following shall replace the first sentence of A6.4.3.4.
Other fasteners or fastener assemblies, not specified heretofore, may not be used.”

6.4.7 Stainless Steel

Delete this section.

6.6.1.2.6P Restricted Use Details

Revise the second sentence of the first paragraph to read:

“Such details shall be excluded from new designs.”

6.8.2.2 Reduction Factor, U

Add the following to the end of the section:

“No additional time or money will be given to attain Department approval.”

6.10.1.1.1a Sequence of Loading

Delete the third paragraph.

6.10.1.3 Hybrid Sections

Delete this section.

6.10.1.4 Variable Web Depth Members

Delete this section.

C6.10.1.5

Delete the fifth paragraph.

6.10.1.9.3P Nominal Flexural Resistance

Revise the definition of γ_w to read:

“ $\gamma_w = 1.0$ where diaphragms or cross-frames are not staggered; 1.3 where diaphragms or cross-frames are staggered.”

6.10.3.2.5.1P Slab Placement

Revise the last sentence of the fourth paragraph to read:

“If the contractor can demonstrate that the concrete will provide lateral support for the embedded top flange in less than 24 hours (or 48 hours old when retarder is used), that limiting time may be used with the approval of the Development Entity’s Engineer of Record.”

6.10.3.2.5.2P Deck Slab Overhang Form Support

Revise the first sentence of part (b) to read:

“For deck slab overhangs which do not meet the requirements of (a), the designer of the original structure shall review the condition with the Development Entity’s Engineer of Record.”

6.10.12.3P Cover Plate Length and Width

Revise the first sentence of the first paragraph to read:

“The length of any welded cover plate added to a rolled beam shall extend the full-length of the rolled beam, including the bearing area, or the full-length of the rolled beam field section in the case of a spliced beam.”

6.11 BOX-SECTION FLEXURAL MEMBERS

Delete this section and all related subsections.

6.13.2.4.1b Oversize Holes

Add the following to the end of the section:

“No additional time or money will be given to attain Department approval.”

6.13.6.1.4c Flange Splices

Revise the first sentence of the second paragraph to read:

“For bolted flexural members, bolted splices in flange parts should not be used between field splices.”

6.13.6.1.5 Fillers

Revise the first sentence of the second paragraph to read:

“Fillers 1/4 in. or more in thickness shall consist of not more than two plates.”

6.13.6.2 Welded Splices

Revise the second paragraph to read:

“Welded field splices shall not be used.”

C6.15.3.3

Revise the second sentence of to read:

“The use of an approximate method in lieu of a P- Δ analysis is not allowed.”

DM-4, Design Specifications: Section 7 – ALUMINUM STRUCTURES

Delete this entire Section.

DM-4, Design Specifications: Section 8 – WOOD STRUCTURES

Delete this entire Section.

DM-4, Design Specifications: Section 9 – DECKS AND DECK SYSTEMS

C9.5.2

Delete the first sentence of the second paragraph.

Revise the second sentence of the second paragraph to read:

“The results of this testing must be submitted to the Department for concurrence. No additional time or money will be given to perform testing or attain concurrence.”

9.6.1 Methods of Analysis

Add the following to the end of the section:

“No additional time or money will be given to attain Department approval.”

9.7.1.5.1P Overhang of Deck Slab on Concrete and Steel Girder Bridges

Delete the first paragraph after the bulleted items.

Delete the first paragraph after the definition of Δ .

Add the following to the end of the section:

“Temporary bracing schemes must be submitted to the Department for acceptance only where bridge construction will be conducted over live traffic.

No additional time or money will be given to attain acceptance.”

9.7.2 Empirical Design

Add the following to the end of the section:

“If an empirical design is performed, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including barrier attachment, deck overhang and connection with integral approach slab.

In addition, the barrier attachment shall receive FHWA review and approval prior to construction.

No additional time or money will be given to attain approvals.”

9.7.4.1 General

Delete the last paragraph.

9.7.4.3 Concrete Formwork

Delete this section and subsections, including 9.7.4.3.5P.

9.8.2.1 General

Add the following to the end of this section:

“No additional time or money will be given to attain Department approval.”

9.8.2.3.1 General

Revise the last paragraph to read:

“Do not provide any deck joints.”

9.8.3.3 Wearing Surface

Revise the second paragraph to read:

“Before any testing of the orthotropic steel deck is begun (in order to determine long-term composite action between deck plate and wearing surface), the Development Entity’s Engineer of Record must review and approve the testing procedure. The results of this testing must also be submitted to the Department for concurrence. No additional time or money will be given to perform testing or attain concurrence.”

9.9 WOOD DECKS AND DECK SYSTEMS

Delete this section and all associated subsections.

9.11.1P General

Delete 1st bullet.

DM-4, Design Specifications: Section 10 – FOUNDATIONS

10.2 DEFINITIONS

Revise the first sentence of the Predetermined Pile Tip Elevation definition to read:

“The tip elevation, determined by the Development Entity’s Engineer of Record with concurrence from the Department, from the pile load tests or test piles.”

10.4.7.2.4P Claystone

Revise the first paragraph to read:

“Piles bearing on claystone have the potential to experience long-term settlement. Piles bearing on claystone shall be approved by the Department based on a determination by the Development Entity’s Engineer of Record. No additional time or money will be given for attaining approval. The Department will make the determination for estimated pile tip elevation and bearing material due to the significant remedial effort required for piles bearing on claystone subject to long term settlement.”

10.5.2.2 Tolerable Movements and Movement Criteria

Revise the first sentence of the second paragraph to read:

“The following shall supplement A10.5.2.2. Allowable settlement criteria for footings on soil shall be developed by the Development Entity’s structural designer consistent with the function and type of structure, the anticipated service life and the consequences of unacceptable settlements on the performance of the structure.”

10.6.1.5 Anchorage of Inclined Footings

Add the following to the end of the second paragraph:

“Inclined footing bases shall not be used.”

10.6.3.1.2hP Footing Base Inclination

Revise this section to read:

“Inclined footing bases shall not be used.”

10.6.5.1P Unreinforced Concrete Footing

Revise this section to read:

“Plain cement concrete footings shall not be used.”

10.7.1.2 Minimum Pile Spacing, Clearance, and Embedment into Cap

Revise the sixth paragraph to read:

“If piles are out of position more than 6 inches preventing proper placement of reinforcement bars, the Development Entity will have the option of either placing the reinforcement bars on top of the piles and providing additional thickness at no additional cost to the Department or providing bottom reinforcement bars in such a way (splayed or spliced) to provide adequate structural strength, if approved by the Department. No additional time or money will be given to attain approval.”

10.7.1.3 Piles Through Embankment Fill

Revise the second paragraph to read:

“The minimum penetration length of piles should be 10 feet.”

10.7.1.4 Batter Piles

Revise the last sentence of the fifth paragraph to read:

“The Development Entity’s Engineer of Record should consider the slope of top of bedrock when setting pile batter.”

C10.7.3.2.5P

Revise the last sentence of the third paragraph to read:

“Drive the pile to absolute refusal, following the specified driving procedure, unless otherwise directed by the Development Entity’s Engineer of Record.”

Revise the first sentence of the fourth paragraph to read:

“The Development Entity’s Engineer of Record may order additional piles to be driven if driving records suggest that any of the piles are not properly seated.”

Revise the last sentence of the fifth paragraph to read:

“Piles driven in conformance with the above requirements, but determined by the Development Entity’s Engineer of Record to be inadequately seated, will be considered acceptable.”

10.7.3.8.1 General

Revise item (4) under the fourth paragraph to read:

“4. Based on the proposed pile hammer system, the Development Entity’s Engineer of Record shall perform a wave equation analysis and provide a Pile Hammer Approval to be kept in the design file and submitted to the Department. The wave equation analysis shall also be provided to the Department at least seven days prior to driving test piles.”

10.7.3.8.3dP Redriving

Revise the second sentence to read:

“A minimum of five days shall elapse between the end of initial driving and redrive testing, unless otherwise approved by the Development Entity’s Engineer of Record. No additional time or money will be given to attain approval.”

10.7.3.8.4aP General

Revise the fourth, fifth and sixth sentences to read:

“The wave equation analyses will be performed by the Development Entity’s Engineer of Record based on hammer data submitted by the contractor. Revised wave equation analyses incorporating actual field conditions (e.g., as determined by pile installation, static load tests, dynamic monitoring, or CAPWAP analyses) shall be performed during the design phase if directed by the Development Entity’s Engineer of Record. Each analysis shall include a completed "Pile Hammer Acceptance Letter". Analyses shall reflect optimized drivability as set forth in D10.7.8.”

10.7.3.8.5 Dynamic Formula

Revise the second paragraph to read:

“A Dynamic Formula shall not be used to establish the driving criterion unless pre-approved by the Development Entity’s Engineer of Record. No additional time or money will be given to attain approval.”

10.7.3.12.1P Batter Piles

Add the following to the end of the first paragraph:

“If an alternate method is performed, submit calculations and standard details for approval to the Development Entity’s Engineer of Record. Standard details shall be in a format consistent with Department Design and Construction Standards. No additional time or money will be given for the review and approval of the alternate method.”

10.7.3.12.2P Vertical Piles

Add the following to the end of the sixth paragraph:

“No additional time or money will be given to attain approval.”

10.7.5.4P Timber Piles

Delete this section. Timber Piles will not be allowed.

10.7.6 Determination of Minimum Pile Penetration

Revise the second sentence of the sixth paragraph to read:

“The minimum penetration length of pile shall be 10 feet.”

10.7.8.1P General

Revise the second sentence of the second paragraph to read:

“Except as specified herein, the drivability analysis shall be performed by the Development Entity’s Engineer of Record using a wave equation analysis. The driving stresses (σ_{dr}) anywhere in the pile determined from the analysis shall be less than the limits contained herein:”

Delete item (d) of the third paragraph.

10.7.8.3P Driving Criteria

Revise the third sentence to read:

“If a test pile does not achieve absolute refusal within 2 feet of the estimated tip elevation, driving should be stopped and the Development Entity’s Engineer of Record shall be contacted.”

10.7.9 Probe Piles

Revise the last sentence of the second paragraph to read:

“Test piles may be used as bearing piles, if approved by the Development Entity’s Engineer of Record. No additional time or money will be given to attain approval.”

C10.7.10.1P

Revise the fourth and fifth sentences of the second paragraph of item (a) to read:

“The Development Entity’s Engineer of Record shall evaluate the driving and/or testing results to determine if bearing piles may be expected to penetrate the boulders and reach the bearing stratum. If a significant number of piles fail to penetrate the boulders, the Development Entity’s Engineer of Record shall evaluate several factors before proceeding with piling installation.”

10.8.1.1 Scope

Revise the third paragraph to read:

“Drilled shafts not founded on or socketed into rock are not permitted.”

10.8.1.3 Shaft Diameter and Enlarged Bases

Revise the third sentence of the second paragraph to read:

“Inclined or battered shafts shall not be used.”

C10.8.3.5.1c

Add the following after the first sentence of the second paragraph:

“No additional time or money will be given to attain approval.”

10.8.3.5.4a General

Revise the bullet in the first paragraph to read:

- “• No additional time or money will be given to attain approval.”

C 10.8.3.5.4c

Revise the last sentence of the second paragraph to read:

“Resistance factors for this method have not been developed and must therefore be estimated by the designer with review and approval by the Development Entity’s Engineer of Record. No additional time or money will be given for the review and approval.”

10.8.3.7 Uplift Resistance

Revise the second paragraph to read:

“No additional time or money will be given to attain approval.”

C10.9.1.4

Add the following to the end of the second paragraph:

“No additional time or money will be given to attain approval.”

C10.9.1.5

Add the following to the end of the second paragraph:

“No additional time or money will be given to attain approval.”

10.9.3.5.4 Micropile Load Test

Add the following to the end of the second paragraph:

“No additional time or money will be given to attain approval.”

DM-4, Design Specifications: Section 11 – ABUTMENTS, PIERS AND WALLS

11.1.1P Use

Revise the second paragraph to read:

“Walls other than those approved shall follow the approval process dictated in PP1.14 and as revised by the Technical Provisions of this contract.”

Add the following:

“Section 11.1.1.1.5P Geosynthetic Reinforced Soil Abutments

Geosynthetic reinforced soil abutments, used in combination with an integrated bridge system (GRS_IBS) will be permitted for use in locations where applicable according to the design limitations set forth in Standard Drawing BD-697M. For GRS abutment details, refer to BD-697M. The maximum span length permissible with this type of abutment 30 feet.”

11.1.1.2.2P Double Wall Piers

Add the following to the end of the section:

“If a double wall pier is used, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including the connection details between the pier and the superstructure.

No additional time or money will be given to attain Department approval.”

11.1.1.2.5P Tubular Piers

Add the following to the end of the section:

“If a tubular pier is used, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including the tubular pier performance due to both lateral and parallel loadings from superstructure.

No additional time or money will be given to attain Department approval.”

11.1.1.4P Anchored Walls

Revise the last sentence to read:

“Anchored walls in fill situations are not permitted.”

11.1.1.7P Nongravity Cantilevered Walls

Add the following to the end of the section:

“If a nongravity cantilevered wall in fill situation is used, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including the justification of selecting wall type, the backfill operation details and measures to prevent excessive lateral wall deflections due to the passive earth pressure during backfill compaction if applicable.

No additional time or money will be given to attain Department approval.”

11.1.1.8P Temporary Excavation Support for Structures

Delete this section.

11.6.7P Submittals

Revise the entire section to read:

“In accordance with the Technical Provisions of this contract.”

11.8.9P Submittals

Revise the entire section to read:

“In accordance with the Technical Provisions of this contract.”

11.9.1 General

Delete this section. Use of Anchored Walls in fill situations are not permitted.

C11.9.1 General

Delete this section.

11.9.4.2 Anchor Pullout Capacity

Revise the second paragraph to read:

“Anchor embedment and inclination for straight shaft anchors installed in small diameter holes using low grout pressure shall follow the guidelines in Figure A11.9.1-1.

Final determination of the anchor pullout capacity and required bond length shall be the responsibility of the anchor wall specialty contractor.”

C11.9.5.0P General

Revise part (b) subpart (2) to read:

“(2) Develop a lateral earth pressure diagram (including surcharge and water pressures) using the simplified procedures of A3.11.5.7 and D3.11.5.7 as outlined in Figures A3.11.5.7.1-1 and

A3.11.5.7.2b-1. Develop an expression for the lateral pressure on the anchored portion of the vertical wall elements as a function of the anchor force, R.”

11.10.1 General

Delete part (d) of the fourth paragraph.

11.10.10.2

Add the following after the fourth paragraph:

“If any barrier reinforcements shown on Standard Drawings need to be modified, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including the reason for the modification, the justification for the appropriate crash test level, and connection with moment slab.

In addition, the barrier reinforcement shall receive FHWA review and approval prior to construction.

No additional time or money will be given to attain Department approval.”

11.13P GABION RETAINING WALLS

Delete this section.

DM-4, Design Specifications: Section 12 – BURIED STRUCTURES

12.4.2.9P

Delete this section.

12.5.6

Delete this section.

12.5.6.2

Delete this section.

12.6.2.1

Delete this section.

12.6.2.2.4

Delete this section.

12.6.2.2.7P

Delete the second sentence.

12.6.6.3

Revise the last sentence of the last paragraph to read: “Pipe is not to be placed in the pavement structure.”

12.6.7

Delete this section.

12.6.8.1

Delete the last paragraph.

12.6.9

Delete this section.

12.6.9.4P

Revise the first bullet to read: “Shop- or field-applied coatings applied in accordance with AASHTO M224 for concrete pipe products.”

Delete the second and third bullet.

Delete the last paragraph.

12.6.9.5P

Delete the first, second, fourth and fifth paragraphs and related figures.

12.6.10.1.1P

Delete this section.

12.7.2.7P

Delete the first and second paragraphs.

12.7.4

Delete this section.

12.8

Delete this section and all related subsections.

12.9

Delete this section and all related subsections.

12.11.4.1.2

Delete the second sentence of the second paragraph.

12.12.3.2

Revise the last sentence to read:

“The section properties presented in Appendix A12, Tables A12-11 through A12-13, shall be verified by testing in an independent laboratory, certified by the manufacturer and approved by the Development Entity’s Engineer of Record.”

12.12.3.3

Revise the last sentence to read:

“Use actual long-term (50-year) values of tensile strength (f_u) and Modulus of Elasticity (E) tested by an independent laboratory, certified by the manufacturer, approved by the Development Entity’s Engineer of Record and meeting minimum requirements as shown.”

DM-4, Design Specifications: Section 13 – RAILINGS

13.4 GENERAL

Add the following after the second paragraph:

“If any barriers other than those given on the BD or BC standard drawings are used, submit calculations and standard details for approval to the Department. Standard details shall be in a format consistent with Department Design and Construction Standards. The submission shall address key aspects including calculations, crash test report, and construction drawings. Provide necessary details to construct the barrier including attachment to the deck, barrier transition to the level of detail of Department barrier standards.

The Development Entity shall submit the above information to the Department for submittal to the FHWA (as applicable) for their review and approval prior to construction.

Add the following at the end of the last paragraph:

“No additional time or money will be given to attain Department and FHWA approval.”

13.7.1.1 General

Add the following to the last paragraph:

“No additional time or money will be given for coordination with Railroad or Public Utility Commission.”

13.7.2 Test Level Selection Criteria

Revise this section to read:

“Test Level Criteria for each structure shall be in accordance with the Development Entity Technical Provisions of this contract. In no case shall the Test Level be less than 4 for structures on the National Highway System (NHS).”

DM-4, Design Specifications: Section 14 – JOINTS AND BEARINGS

14.4.2.2

Revise the last bullet to read:

“An allowance for uncertainties, which shall be taken as 0.01 radians.”

14.5.1.1

Delete the last sentence.

14.5.6.10P

Revise the first bullet to read:

“Strip seals shall be specified for anticipated movements between 0 in. minimum and 5 in. maximum. For construction requirements, refer to Standard Drawing BC-767M.”

Delete the second bullet. Compression seals shall not be permitted.

Add the following as a fourth bullet:

“Modular dams may be used for movements over 5 in. where inspection and maintenance of tooth dams would be impeded by high traffic volumes.”

14.7.1.1

Delete the third paragraph.

14.7.2.1.1P

Revise the fourth bullet to read:

“Calculations showing the determinations of the radius shall be approved by the Development Entity Engineer of Record.”

14.7.4.1.1P

Revise the last sentence of the first bullet to read:

“This pot bearing must be designed for Department structures.”

14.7.5.2

Revise the last paragraph to read: “Bearings shall be made from low temperature elastomer grade 3.”

14.7.6.3.11cP

Add the following to the end of the section:

“No additional time or money will be given to conduct testing or analysis.”

14.7.7.5P

Revise the fourth paragraph to read:

“Calculations showing the determinations of the radius shall be approved by the Development Entity Engineer of Record.”

14.8.3.1

Revise the fourth sentence of the second paragraph to read:

“The Development Entity Engineer of Record shall evaluate and approve the use of swedged anchor bolts for cases when the anchor bolt will experience direct tension.”

4. *Publication No. 408 – Sections 1000 to 1124* *Exceptions*

1. Pub 408 Section 1001 – CEMENT CONCRETE STRUCTURES

SECTION 1001.2 – MATERIAL

- a) Section 1001.2(h)2: Revise second paragraph to read: “An alternate form system may be used, if indicated or if accepted in writing by the Development Entity’s Engineer of Record. Submit material details and erection methods of the alternate form system to the Development Entity’s Engineer of Record for review and acceptance.”
- b) Section 1001.2(d): Last sentence, second paragraph: Revise to read “Certify according to the Technical Provisions of this Contract”.
- c) Section 1001.2(e): Last sentence, second paragraph: Revise to read “Certify according to the Technical Provisions of this Contract”.
- d) Section 1001.2(h)2: Third paragraph: Revise to read “Certify according to the Technical Provisions of this Contract”.

SECTION 1001.3 – CONSTRUCTION

- e) Section 1001.3(a)1: Revise the first two sentences of the seventh paragraph to read: “Before starting construction, obtain the Development Entity Engineer of Record’s acceptance of working drawings required for centering and falsework, as specified in the Technical Provisions Section 12.4.3. Before placing concrete, obtain the CQAF’s acceptance of in-place forms.”
- f) Section 1001.3(a)2. First sentence of the first paragraph: Replace “Chief Bridge Engineer” with Development Entity’s Engineer of Record and concurrence from the Department”.
- g) Section 1001.3(a)2: Revise the first sentence of the second paragraph to read: “Submit shop drawings of the forms as specified in the Technical Provisions Section 12.4.4 to the Development Entity’s Engineer of Record for review and acceptance.”
- h) Section 1001.3(k)(1): Revise first sentence to read: “Ensure the methods, sequence and schedule for placing concrete is in accordance with the Development Entity’s Quality Management Plan.” Revise the fourth sentence to read “For spread footings on soil, performing an IN SITU Bearing Capacity verification test using a method such as the Dynamic Cone Penetrometer test. Contact the Structure Control Engineer 15 days in advance of testing to coordinate the actual date for witnessing this test. Coordinate the date of testing to ensure the Department is present.

To perform IN SITU blow count to compare to the blow counts on the core boring sheets for reasonableness, multiply value found on the IN SITU test by 0.80 and compare to counts found on the core boring sheet.”

i) Section 1001.3(k)2: Revise the first sentence in the second paragraph to read: “Use an acceptable mechanical vibrator, as approved by the CQAF.”

j) Section 1001.3(k)3.a: Revise the first sentence in the second paragraph to read: “Hold a concrete placement meeting and present all details of the placement to the CQAF.”

k) Section 1001.3(k)3.c:

Revise the first sentence of the first paragraph to read: “If concrete is placed in water deeper than 2 feet, place in approximately horizontal layers, in a consolidated mass in its final position, using the tremie method or other acceptable method approved by the Development Entity’s Engineer of Record , and do not disturb after placing.”

Revise the last sentence in the fourth paragraph to read: “Place tremie concrete only in the presence of the CQAF.”

Revise the second sentence of the seventh paragraph to read: “Upon completion of dewatering, and in the presence of the CQAF, thoroughly inspect the hardened tremie concrete.”

l) Section 1001.3(k)4.b: Revise the third paragraph to read: “The CQAF may require acceptance testing and QC testing to be performed at the point of placement at any time the quality of the material comes into question.”

m) Section 1001.3(k)6:

Revise the fourth paragraph to read: “Unless allowed in writing by the Development Entity’s Engineer of Record , do not allow truck mixers, truck agitators, or other heavy motorized equipment on the deck spans in which concrete is being placed.”

Revise the sixth paragraph to read: “Obtain the Development Entity’s Engineer of Record’s acceptance of changes or additions to indicated construction joints, before incorporating into the work.”

Revise the second sentence of the seventh paragraph to read: “Submit a sketch to the CQAF, describing the equipment and showing complete details of supports for the equipment.”

Revise the first sentence of the ninth paragraph to read: “Vibrating screeds may be used, with the written permission of the Development Entity.”

Revise the last sentence of the fourteenth paragraph to read: “Obtain the Development Entity’s Engineer of Record’s acceptance of placing sequences, procedures, and mixes before placing concrete.”

Revise the third sentence of the last paragraph to read: “If hollow sounding areas are found, and if directed, remove the forms for the CQAF’s inspection after the concrete has attained adequate strength.”

n) Section 1001.3(k)12.b: Revise first sentence to read: “Ensure the Slip Form Method is in accordance with the Development Entity’s Quality Management Plan.”

o) Section 1001.3(k)12.b: Replace “Representative” with “CQAF.”

p) Section 1001.3(k)12.b.1: Replace “District Executive” with “Department.”

q) Section 1001.3(k)12.b.1:

Delete the last sentence of the first paragraph.

Revise the last sentence in second paragraph to read: “Test reinforcement cover in the presence of the CQAF, using a Pachometer, or other non-destructive test method.”

Revise the first two sentences in the last paragraph to read: “The CQAF will evaluate the procedure, material, equipment, and appearance of the test section. If the test section is rejected by the CQAF, place and additional test section, with the approval of the CQAF, or use the fixed-form method of construction.”

r) Section 1001.3(k)12.b.2: Revise third sentence to read: If modifications are necessary, correct any deficiencies and perform another dry run, in the presence of the CQAF, before starting the slip-form operation.

s) Section 1001.3(p): Second paragraph, last sentence: Replace “Department” with “Development Entity’s Engineer of Record”.

t) Section 1001.3(p)1.a: Replace “Section 101.03” with “The measured temperature in the degrees Fahrenheit (F) in the shade, not in the direct rays of the sun, and away from artificial heat”.

u) Section 1001.3(p)2: Revised the last two sentences to read: In the presence of the CQAF, take curing temperatures on the surface of the concrete, at representative locations on a structure. Submit these temperature records daily to the CQAF.

v) Section 1001.3(p)5.b: Revise last sentence in last paragraph to read: Failure to properly place the insulation material or failure to maintain the necessary concrete temperature will be cause for the CQAF to deny continued use of the material on the project, for curing in cold weather, and require the use of heating, as specified in Section 1001.3(p)5.a.

w) Section 1001.3(q)2.c: Revise first sentence in third paragraph to read: Do not allow truck mixers, truck agitators, other heavy equipment, construction traffic, or the traveling public on a structure until authorized by the Development Entity’s Engineer of Record .

2. Pub 408 Section 1002 – REINFORCEMENT BARS

SECTION 1002.2 MATERIALS

a) Section 1002.2(c):

Revise the next to last paragraph to read: The CQAF will select, for each size of epoxy coated and/or galvanized reinforcement bar used, four splices, either sample or actual, three are to be assembled for

testing to verify the physical properties and one is to remain unassembled for testing of coating thickness. The CQAF will select, for each size of stainless steel reinforcement bar used, three splices, either sample or actual, to be assembled for testing to verify the physical properties. Assemble samples or actual splices in the presence of the CQAF in accordance with the manufacturer's recommendations and Section 1002.3(e). Immediately package and deliver the samples to the CQAF. The CQAF will test the field verification samples (Sample Class FV) at an accredited laboratory for testing and conformance to the specified requirements.

Last sentence, last paragraph: Revise to read “Certify according to the Technical Provisions of this Contract”.

SECTION 1002.3 – CONSTRUCTION

b) Section 1002.3(a):

In the third sentence of the first paragraph: Replace “Department” with “CQAF”.

Revise the third and fourth sentences in the second paragraph to read: The CQAF will reject reinforcement bars with rusting that has caused detectable reduction in cross-sectional area. Obtain the CQAF’s acceptance of in-place reinforcement bars before concrete is placed.

Revise second sentence in third paragraph to read: Make adjustments to the bar schedule, including reinforcement bar details and quantities, and obtain the Development Entity’s Engineer of Record’s acceptance before fabrication.

c) Section 1002.3(b): Revise first paragraph to read: “Storage. Technical Provisions of this contract and as follows:”

d) Section 1002.3(c): Revise second sentence to read: Do not field bend except to make minor adjustments when approved by the Development Entity’s Engineer of Record.

e) Section 1002.3(d)1: Delete last sentence and replace with: “Do not weld cross bars (tack weld) for assembly of reinforcement bars.”

f) Section 1002.3(d)3: Revise to read: Adjust reinforcement used in post-tensioned concrete, or relocate it during the installation of prestressing ducts or tendons, as required to provide planned clearances to the prestressing tendons, anchorages, and stressing equipment, as approved by the Development Entity’s Engineer of Record .

g) Section 1002.3(e):

Revise first sentence to read: Furnish all reinforcement in the full lengths, as indicated, unless otherwise allowed by the Development Entity’s Engineer of Record .

Revise second sentence of the second paragraph to read: Do not substitute alternate bars unless allowed by the Development Entity’s Engineer of Record .

Revise first sentence in fifth paragraph to read: Only use welded splices if indicated, or if the Development Entity's Engineer of Record gives written authorization to do so.

Revise the second sentence of the eighth paragraph to read: Furnish a copy of the manufacturer's recommendations to the CQAF.

- h) Section 1002.3(h)2: Revise first sentence in fourth paragraph to read: Do not field bend galvanized reinforcement bars except to make minor adjustments when approved by the Development Entity's Engineer of Record .
- i) Section 1002.3(h)4: Revise second sentence to read: Submit to the Development Entity's Engineer of Record any proposed alternate support devices for acceptance
- j) Section 1002.3(i)3: Revise first sentence of fourth paragraph to read: Do not field bend except to make minor adjustments when approved by the Development Entity's Engineer of Record .
- k) Section 1002.3(j)3: Revise first sentence of fifth paragraph to read: Do not field bend except to make minor adjustments when approved by the Development Entity's Engineer of Record .

3. Pub 408 Section 1003 – DOWEL HOLES No Modification

4. Publication 408 Section 1005 – PILES

SECTION 1005.1 – DESCRIPTION

- a) Section 1005.1(m): Revise the first sentence to read: "The tip elevation, determined by the CQAF with concurrence by the Structure Control Engineer, from the pile load test or test piles."
- b) Section 1005.1(o): Delete this section.

SECTION 1005.2 – MATERIAL

- c) Section 1005.2(a): Delete this section.
- d) Section 1005.2(b)1:

Revise the fourth bullet under Steel Shells to read: "Having a tip diameter of not less than 8 inches for uniformly tapered shells."

Revise the first paragraph after the last bullet to read: "Retain a certified report showing the base metal chemical and physical properties used in the shells, end closures, and splice material. Before pile driving, obtain the Development Entity's Engineer of Record's acceptance for end closure details and splicing details."

Revise the third paragraph after the last bullet to read: "Retain a certification from the manufacture of steel shell piles stating that the shells, end closures and splice material comply with the specification requirements. These certifications and a copy of the certified report showing the chemical and physical

properties of the base metal shall be retained in the project files and submitted in accordance with the Development Entity's PBS."

Revise the last paragraph to read "Certify according to the Technical Provisions of this Contract".

e) Section 1005.2(b)1.a: Revise the first paragraph to read: "Provide shells having a wall thickness of 9 gage or thicker; consisting of steel pipe, ASTM A 53, Grade B; ASTM A 500, Grade B or C; ASTM A 501, Grade A or B; ASTM API 5L, Grade B, PSL 1 or PSL 2, X42 or X52; ASTM A 252, Grade 2, or 3; or cold-rolled steel tubing, basic open-hearth steel (AISI C1010 or SAE 1010) with a minimum yield strength of 50,000 pounds per square inch. The use of ASTM A 252 or AISI C1010 or SAE 1010 is not recommended when splicing will be utilized; a Procedure Qualification Record must be submitted along with a Welding Procedure Specification in accordance with AASHTO/AWS D1.1-2008 to the Development Entity's Engineer of Record for acceptance."

f) Section 1005.2(b)1.b: Revise the second sentence of the first paragraph to read: "Provide shells having a wall thickness less than 9 gage consisting of steel pipe, ASTM A 53, Grade B; ASTM A 501, Grade A or B; ASTM API 5L, Grade B, PSL 1 X42 or X52; ASTM A 252, Grade 2, or 3; or cold-rolled steel tubing, basic open-hearth steel (AISI C1010 or SAE 1010) with a minimum yield strength of 50,000 pounds per square inch. The use of ASTM A 252 or AISI C1010 or SAE 1010 is not recommended when splicing will be utilized; a Procedure Qualification Record must be submitted along with a Welding Procedure Specification in accordance with AASHTO/AWS D1.1-2008 to the Development Entity's Engineer of Record for acceptance."

g) Section 1005.2(c):

Revise the third paragraph to read: "Retain a certified report showing the base metal chemical and physical properties used in the piles or pile sections, tip reinforcement, and splice material. Before pile driving, obtain the Development Entity's Engineer of Record's acceptance of tip reinforcement, splice location and splicing details."

Revise the fourth paragraph to read: "Retain a certification from the manufacturer of the steel H-piles and pile tip reinforcement as specified in the Technical Provision of this contract."

SECTION 1005.3 – CONSTRUCTION

h) Section 1005.3(a):

Revise the first sentence to read: "Use pile-driving equipment of a sufficient type, weight, and capacity."

Revise the second paragraph to read: "The pile hammer and driving equipment shall properly drive the piles, in satisfactory condition, to the driving resistance and tip elevations indicated or directed."

i) Section 1005.3(a)1:

Revise the second paragraph to read: "Use hammers capable of developing at least 12,000 foot-pounds per blow, unless otherwise allowed by the CQAF."

Revise the second and third sentences of the fifth paragraph to read: “The CQAF, with concurrence of the Department, will verify the capability of the hammer to properly drive the piles from driving records of test piles at each substructure unit, at locations indicated or directed. If information from indicated soundings, dug test pits, and auger or test borings is used to analyze subsurface conditions, refer to the contract documents for conditions pertaining to use of this information.”

Revise the last sentence of the seventh paragraph to read: “The CQAF will reject hammers that cause damage in steel piles at any driving resistance.”

Revise the eighth paragraph to read: “Do not utilize a hammer that causes damage to a pile due to misalignment of the leads, failure of capblock or cushion material, failure of splices, malfunctioning of the hammer, or other improper construction methods. The CQAF will reject piles damaged for these reasons if it is determined that the damage impairs the strength of the completed pile installation.”

Revise the ninth paragraph to read: “Prior to driving test piles, the CQAF shall review and accept the hammer’s operating specifications and pile information. The review and acceptance shall be in accordance with DM-4 Section 10.7.3.8.4 and information provided on the Pile Hammer Data Form, CS-5. Forward a copy of the Pile hammer Data Form, CS-5, the signed Foundation Approval Letter, and the Pile Hammer Acceptance Letter along with the wave equation analysis bearing graphs for each accepted hammer to the Department at least seven calendar days prior to driving test piles. Retain a copy of the Pile Hammer Data Form, CS-5, the Foundation Approval Letter, Pile Hammer Acceptance letter along with the wave equation analysis bearing graphs for each accepted hammer and the electronic files of each wave equation analysis for each accepted hammer in the project files. The Pile Hammer Acceptance Letter shall follow the standard format and include notes, as appropriate, regarding the driving method, tip reinforcement, overdrive criteria, pre-drilling, dynamic monitoring, the use of a proximity switch, redrive criteria, and requirement for Notes for Pile Installation information to be included on the as-built plans per DM-4 Section 1.7.5.2. The Pile Hammer Acceptance Letter shall be signed and sealed by a Professional Engineer registered in the State.”

j) Section 1005.3(a)2: Revise the last sentence to read: “With the Development Entity’s Engineer of Record’s approval, bearing piles around cofferdams, or in areas where headroom is limited, may be driven without leads.”

k) Section 1005.3(b)1:

Revise the first sentence of the first paragraph to read: “Do not drive piles until the excavation is complete in the areas the piles are to occupy, unless otherwise allowed by the Development Entity’s Engineer of Record”

Revise the third sentence of the second paragraph to read: “Furnish each steel shell for cast-in-place concrete piles or steel beam pile of the full length indicated and in one continuous unit, unless otherwise allowed by the Development Entity’s Engineer of Record.”

l) Section 1005.3(b)2:

Add the following to the beginning of the first paragraph: “The Structural Control Engineer is to be present for the driving of all test piles and will provide concurrence of the driving criteria (pile tip

elevations, driving resistance, etc.) established by the test piles and set by the CQAF. Contact the Department at least three weeks prior to the anticipated date for driving test piles to coordinate the actual date for driving test piles. Do not schedule test pile operations on State holidays. Coordinate the date of the test pile driving to ensure the Department is present. Test piles driven without the Department present will not be accepted.”

Revise the first and second sentences of the first paragraph to read: “Drive test piles in one continuous operation. Drive piles to absolute refusal for point and end bearing piles and end of driving criteria for friction piles. Pile Driving Analyzer (PDA) will be required as designated in the attachment to Section 8 of the Technical Provisions and consistent with Development Entity foundation report. Additional PDA may also be required at the discretion of the Development Entity’s Engineer of Record.”

m) Section 1005.3(b)3:

Revise the first sentence of the first paragraph to read: “Do not drive bearing piles until the CQAF, with concurrence from the Structure Control Engineer, has established the predetermined pile tip elevation and driving resistance from representative test piles or pile load tests.”

Revise the first sentence of the sixth paragraph to read: “The CQAF will reject driven piles with a deviation of more than 2 inches in 10 feet, from vertical or from the batter indicated.”

n) Section 1005.3(b)4.a:

Revise the last sentence of the Case 2 paragraph to read: “After the pile tip enters the intended bearing stratum, if an unreasonably large number of blows is required to increase the driving resistance from 10 blows per 1 inch to 20 blows per 1 inch, the Development Entity’s Engineer of Record may waive the requirement for driving to absolute refusal.”

Revise the first sentence of the Case 3 paragraph to read: “If hard driving is encountered because of dense strata or because of obstructions located above the bearing stratum identified by a predetermined pile tip elevation, absolute refusal is not reached until the CQAF, in consultation with the Development Entity’s Engineer of Record, determines that the total number of blows, as the average driving resistance specified for absolute refusal, indicates that further driving will not advance the pile through the dense strata or obstructions.”

Revise the first sentence of the first paragraph after the Absolute Refusal Case descriptions to read: “The Development Entity’s Engineer of Record will determine the acceptability of the bearing piles that do not achieve absolute refusal and capacity at the predetermined pile tip elevation for piles intended to bear in soft or decomposed bedrock.”

Revise the last sentence of the first paragraph after the Absolute Refusal Case descriptions to read: “The CQAF will notify the Development Entity’s Engineer of Record if the continued driving exceeds the criteria provided in the Pile Hammer Acceptance Letter and notify the Department of the intended course of action.”

Revise the first sentence of the second paragraph after the Absolute Refusal Case descriptions to read: “The Development Entity’s Engineer of Record will determine the acceptability of bearing piles that attain absolute refusal above the predetermined pile tip elevation.”

Revise the last paragraph to read: “If bearing piles attain absolute refusal above the predetermined pile tip elevation due to freezing resulting from discontinuous driving, the CQAF will reject the piles.”

o) Section 1005.3(b)4.b:

Revise the first sentence of the second paragraph to read: “If friction piles reach the required resistance above the predetermined pile tip elevation due to freezing from discontinuous driving, the CQAF will reject the piles.”

Revise the last sentence of the third paragraph to read: “If the required resistance is still not attained after the additional 10 feet of driving depth, the Development Entity’s Engineer of Record is to review geotechnical information and recommend further actions.”

p) Section 1005.3(b)5: Revise the first sentence of the last paragraph to read: “Thoroughly clean driven shells of water and debris and obtain the CQAF’s acceptance before placing concrete in them.”

q) Section 1005.3(b)6: Delete this section.

r) Section 1005.3(b)9:

Delete the first paragraph.

Revise the first sentence of the second paragraph to read: “Splice or extend steel piles during driving operation with the Development Entity’s Engineer of Record’s approval.”

s) 1005.3(b)11: Revise the last sentence to read: “Submit details, including method of attaching, to the Development Entity’s Engineer of Record for acceptance. Retain a copy of the submission and acceptance in the project files and submit in accordance with the Development Entity’s PBS.”

t) Section 1005.3(c): Delete the second paragraph.

u) Section 1005.3(e):

Revise the first paragraph to read: “Piles may be rebuilt or extended by splicing piles driven below the indicated top of pile elevations, or piles cut off after being driven, if the Development Entity’s Engineer of Record approves.”

Delete the second paragraph.

Revise the third paragraph to read: “Piles may be rebuilt or extended by splicing thick-wall shells for cast-in-place concrete piles and steel-beam piles, if both of the following conditions exist:”

Revise the fourth paragraph to read: “Thin-wall shells for cast-in-place piles may be spliced at any point if the alignment of the shell is maintained.”

- v) 1005.3(g) Revise the first sentence of the first paragraph to read: “If piles are not required to be driven to absolute refusal, the CQAF, with concurrence from the Structure Control Engineer, will determine driving resistances, tip elevations, and safe bearing values from pile load tests, pile driving analyzer tests, or wave equation analysis of the test pile-driving results.”
- w) Section 1005.3(h): Add the following to the end of the first paragraph – Retain a copy of the pile log in the project file.

5. Publication No. 408 Section 1006 – DRILLED CAISSONS

SECTION 1006.2 – MATERIAL

- a) Section 1006.2(d): Revise the second sentence to read: “Submit manufacturer’s specifications, type, and properties of the slurry to the Development Entity’s Engineer of Record for approval. Retain the approval in the project file.”

SECTION 1006.3 – CONSTRUCTION

- b) Section 1006.3(a):

Revise the seventh and eighth sentences of the first paragraph to read: “Blasting may be allowed if approved by the Development Entity’s Engineer of Record and with concurrence from the Department. Submit a blasting plan to the Development Entity’s Engineer of Record for review and acceptance at least three weeks before the start of blasting operations.”

Revise the second sentence of the fourth paragraph to read: “As an alternate, drilling in a bentonite slurry may be used with removal of cuttings or dewatering, or other construction methods that control the size of the excavation, provided the ability to perform such work is demonstrated to the satisfaction of the Development Entity’s Engineer of Record.”

- c) Section 1006.3(b): Revise the second sentence to read: “Drill, log, store, and ship the samples according to the Geotechnical Investigation Manual, Publication 222.”
- d) Section 1006.3(c): Revise the second sentence to read: “The CQAF will use the rate of drilling of the holes to determine whether there is satisfactory material or rock of sufficient thickness and type to support the required load, and to locate the presence of open joints, voids, soft rock, or other deleterious material that may be inadequate for support of the required load.”

- e) Section 1006.3(e):

First sentence, second Paragraph: Replace “Section 107.08” with “the Technical Provisions of this contract”.

Add the following to the end of this section: “The Department shall be on site during the following activities to verify and concur with the findings of the testing:

- Any Cross Hole Sonic Logging (CSL) performed

- Inspection of the drilled caisson excavation, including the use of video cameras
- Any Osterberg Cell Load Tests or other load testing
- Any technique shaft drilling or construction

Notify the Department three weeks prior to performing any of the above tasks to allow for scheduling of personnel to be present during operations.”

f) Section 1006.3(h):

Revise the first sentence of the first paragraph to read: “Submit the method of concrete placement, including details on equipment, rate of placement, concrete head, etc., to the Development Entity’s Engineer of Record for review and acceptance three weeks before anticipated first placement.”

Revise the eighth and ninth sentence of the first paragraph to read: “If the Development Entity’s Engineer of Record determines that water seepage will be detrimental to the quality of the caisson or hinder proper placement of concrete by the free fall method. Provide, and retain in the project file, documentation to satisfactorily demonstrate experience in the use of tremie or pumping procedures for placement of concrete for drilled caisson, and submit details of the placement method for review and acceptance; retain the details in the project file.”

g) Section 1006.3(h)3: Revise the fourth sentence of the first paragraph to read: “If directed, pump 1 cubic foot of concrete into a container so that the CQAF may verify that the concrete is not segregating during the pumping operation.”

h) Section 1006.3(j): Revise the first paragraph to read: “Prepare and submit detailed inspection reports for each shaft, retain in the project file and include the following information:”

i) Section 1006.3(k): Revise the fifth bullet to read: “Submit documentation of staff qualifications to the Development Entity and allow at least 21 calendar days for approval.”

6. Pub 408 Section 1012 – PEDESTRIAN RAILING

SECTION 1012.2–MATERIAL

a) Section 1012.2(a): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.

7. Pub 408 Section 1013 – ALUMINUM BRIDGE RAILING

SECTION 1013.2–MATERIAL

a) Section 1013.2(a): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.

8. Pub 408 Section 1014 – STEEL BRIDGE RAILING

SECTION 1014.2–MATERIAL

- a) Section 1014.2(a): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.

9. Pub 408 Section 1015 – PROTECTIVE BARRIER

SECTION 1015.2–MATERIAL

- a) Section 1015.2(a): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.

10. Pub 408 Section 1016 – PROTECTIVE FENCE

SECTION 1016.2–MATERIAL

- a) Section 1016.2(a)2: Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.
- b) Section 1016.2(a)3: Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.

11. Pub 408 Section 1017 – PRESSURE MORTAR POINTING AND SURFACING

SECTION 1017.2–MATERIAL

- a) Section 1017.2(e): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.
- b) Section 1017.2(h): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.

12. Pub 408 Section 1018 – REMOVAL OF EXISTING BRIDGES OR CULVERTS

SECTION 1018.3 – CONSTRUCTION:

- a) Section 1018.3(a):

Revise first sentence to read: “Submit a plan to the Department showing or describing the demolition methods to be used for the removal of an existing bridge in situations that are over live traffic or staged construction to the Department for review and acceptance.

Add: “Besides submittal of plan, direct coordination must be made with the Department, for disposition of material.”

13. Pub 408 Section 1019 – PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES

SECTION 1019.2 – MATERIAL

- a) Section 1019.2(a): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.
- b) Section 1019.2(b)5: First sentence: Revise to read “If directed, certify according to the Technical Provisions of this Contract”.
- c) Section 1019.2(c): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.
- d) Section 1019.2(d): Last sentence: Revise to read “Certify according to the Technical Provisions of this Contract”.

SECTION 1019.3 – CONSTRUCTION

- e) Section 1019.3(b)1.a: Revise fourth sentence in second paragraph to read: Where, in the CQAF's opinion, acid etching is insufficient to clean the concrete, sandblast or use another acceptable method of mechanical abrading

14. Pub 408 Section 1020 – TOOTH EXPANSION DAM WITH DRAIN TROUGH

SECTION 1020.2 MATERIAL

- a) Section 1020.2(c): Revise to read “Certify according to the Technical Provisions of this Contract”.
- b) Section 1020.2(d): Revise to read “Certify according to the Technical Provisions of this Contract”.
- c) Section 1020.2(f): Revise to read “Certify according to the Technical Provisions of this Contract”.
- d) Section 1020.2(g): Revise to read “Certify according to the Technical Provisions of this Contract”.

SECTION 1020.3 – CONSTRUCTION

- e) Section 1020.3: Revise second paragraph to read: Before fabrication, submit shop drawings to the Development Entity’s Engineer of Record. Obtain Development Entity’s Engineer of Record acceptance of the shop drawings before beginning fabrication.

15. Pub 408 Section 1021 – ARMORED PREFORMED NEOPRENE COMPRESSION DAM

SECTION 1021.3 – CONSTRUCTION

- a) Section 1021.3: Revise second paragraph to read: Before fabrication, submit shop drawings to the Development Entity’s Engineer of Record, showing complete details, dimensions, size, type, and compression-deflection characteristics of the seal, as well as other information and data necessary for

the complete fabrication and erection of the dam. Obtain the Development Entity's Engineer of Record acceptance of shop drawings before beginning manufacture.

16. Pub 408 Section 1022 – STEEL BRIDGE HAND RAILING

SECTION 1022.2 – MATERIAL

- a) Section 1022.2(a): First bullet: Replace "Certify as specified in Section 106.03(b)3" with "Certify according to the Technical Provisions of this Contract".
- b) Section 1022.2(a): Second bullet Replace "Certify as specified in Section 106.03(b)3" with "Certify according to the Technical Provisions of this Contract".
- c) Section 1022.2(b): Last sentence, last paragraph: Revise to read "Certify according to the Technical Provisions of this Contract".
- d) Section 1022.2(c): Last sentence: Revise to read "Certify according to the Technical Provisions of this Contract".

17. Pub 408 Section 1023 – ALUMINUM BRIDGE HAND RAILING

SECTION 1023.2 MATERIAL

- a) Section 1023.2(a): Last sentence: Revise to read "Certify according to the Technical Provisions of this Contract".
- b) Section 1023.2(b): Last sentence: Revise to read "Certify according to the Technical Provisions of this Contract".
- c) Section 1023.2(c): Last sentence: Revise to read "Certify according to the Technical Provisions of this Contract".

18. Pub 408 Section 1025 – MODIFICATION OF EXISTING BARRIER

SECTION 1025.2 MATERIAL

- a) Section 1025.2(a) Seventh bullet: Replace "Certify as specified in Section 106.03(b)3" with "Certify according to the Technical Provisions of this Contract".

SECTION 1025.3 – CONSTRUCTION

- b) Add "Development Entity, as part of their plan submission, shall coordinate removal and storage of material with the Department."
- c) Revise first sentence of the second paragraph to read: Before beginning barrier modification, submit plans for review and acceptance to the Development Entity's Engineer of Record.

19. Pub 408 Section 1026 – NEOPRENE STRIP SEAL DAM

SECTION 1026.3 – CONSTRUCTION

- a) Section 1026.3: Revise the second paragraph to read: Before fabrication, submit shop drawings to the Development Entity’s Engineer of Record, showing complete details, dimensions, size, and type of seal as well as other information and data necessary for the complete fabrication and erection of the dam. Obtain Development Entity’s Engineer of Record acceptance of the shop drawings before beginning fabrication.

20. Pub 408 Section 1031 – TIMBER STRUCTURES

This section is deleted.

21. Pub 408 Section 1032 – HARDWOOD GLULAM TIMBER STRUCTURES

This section is deleted.

22. Pub 408 Section 1040 – CONCRETE BRIDGE DECK REPAIR

SECTION 1040.3- CONSTRUCTION

- a) Section 1040.3(a): Revise to read: Provide a chain drag 3 feet in width with chain drops spaced every 6 inches for CQAF’s use. As directed by the CQAF, provide assistance to the CQAF for the purpose of sounding the entire deck surface with the chain drag before and after scarification.
- b) Section 1040.3(b): Revise the first sentence of first paragraph to read: The CQAF will determine and delineate the type and extent of the repair areas. The Department will maintain the right to accept or reject the CQAF designation of the repair area.

23. Pub 408 Section 1042 - LATEX MODIFIED MORTAR OR CONCRETE WEARING SURFACE

SECTION 1042.2 – MATERIAL

- a) Section 1042.2(f): Replace “Representative” with “Development Entity’s Engineer of Record”.

SECTION 1042.3 – CONSTRUCTION

- b) Section 1042.3(a): Revise first sentence to read: Obtain the Development Entity’s acceptance of all equipment for the deck preparation, mixing, placing, and finishing of the latex wearing surface, before start of wearing-surface work.
- c) Section 1042.3(a)2.e: Revise second sentence of second paragraph to read: Provide an approved device on the mixing unit for the CQAF to use to check the rate of flow of the latex modified

admixture entering the mix along with the total amount of latex modified admixture contained in the mix.

d) Section 1042.3(a)2.f:

Revise second sentence of first paragraph to read: Have the calibration conducted by the supplier of the latex in the presence of the CQAF, and recalibrate after every 100 cubic yards of production for each unit.

Revise fourth sentence of first paragraph to read: Have the supplier of the latex make satisfactory arrangements with the CQAF at least 7 calendar days in advance of calibration.

e) Section 1042.3(a)2.h:

Revise first sentence of first paragraph to read: Charge aggregate bins no more than 6 hours before time of scheduled placement unless otherwise approved by the Development Entity.

Revise second and third sentences of the second paragraph to read: Empty the cement bin and latex tank unless use on a previous project can be verified in writing by the CQAF, or, in the presence of the CQAF, obtain a sample of the liquid latex admixture and cement being used in the mixture and deliver the samples to the CQAF for testing. The CQAF will submit the samples for testing.

f) Section 1042.3(a)3: Revise first sentence of second paragraph to read: Use finishing machine approved by the Development Entity complying with the following requirements for finishing all large areas of work:

g) Section 1042.3(c):

Revise first sentence of first paragraph to read: Prepare and submit to the Development Entity a field operation QC Plan for review and acceptance by the Development Entity, as outlined on CS-1042.

Revise third sentence of first paragraph to read: Do not proceed with latex placement until the QC Plan has been accepted by the Development Entity.

h) Section 1042.3(d)2: Revise last sentence to read: Wet, burlap-backed, white polyethylene sheets may be substituted for the polyethylene film with the approval of the Development Entity, but do not use them to replace the initial wet burlap.

i) Section 1042.3(e):

Revise second and third sentences of first paragraph to read: At ambient temperatures above 80F, conduct the overlay placement at night or early morning hours, when directed by the Development Entity, if in their opinion, a satisfactory placement cannot otherwise be achieved. If the ambient temperature is expected to reach 80F at any time 24 hours before the overlay placement, take any steps necessary, but

not limited to the following to mitigate the mix component temperatures that are acceptable to the Development Entity:

Revise second sentence in second paragraph to read: Stop the placement at any time the CQAF determines that a satisfactory surface finish is not being achieved.

Revise second sentence in fourth paragraph to read: The CQAF may order removal of any material damaged by rainfall.

Revise the sixth paragraph to read: Discontinue any placement when the CQAF determines that flash set of the latex does not provide a suitable placement or finish. Submit redesign and corrective action plan to the Development Entity as directed.

j) Section 1042.3(f)3.a:

Revise last sentence of first paragraph to read: Furnish a copy of the QC Plan to be maintained by the CQAF.

Revise the fifth, sixth and seventh sentences of the second paragraph to read: Notify the CQAF when sampling and QC testing are to be performed. The CQAF will witness the sampling and QC testing. Report test results to the CQAF promptly.

k) Section 1042.3(f)3.b: Revise the first three sentences of the second paragraph to read: The CQAF will select acceptance samples (n=1) according to PTM No. 1. Obtain samples of fresh latex at the point of placement under the direction and supervision of the CQAF and according to PTM No. 601. Acceptance testing of plastic concrete will be performed at a site near the point of placement, as selected by the CQAF.

l) Section 1042.3(h):

First sentence of the first paragraph: Replace “Section 105.12” with “Technical Provisions”.

Revise first sentence of the second paragraph to read: When latex overlays exhibit cracking or surface tears, perform an investigation with the Development Entity to determine the type of cracking, source of cracking, and extent of cracking.

Revise last sentence in second paragraph to read: If coring is required, obtain two cores at each location, submit one core to an independent laboratory for analysis of the cracks and submit one core to the CQAF for analysis of the cracks.

Revise the last sentence of the fourth paragraph to read: Do not perform any crack sealing before the Quality Control and Action Plan has been reviewed by the Development Entity.

Revise the fifth paragraph to read: Keep cracks clean, covered, and dry until the crack sealing operation is performed to the satisfaction of the CQAF.

Revise the fifth paragraph to read: Unless directed in writing by the Development Entity, remove and replace wearing surface deficient in surface tolerance as specified in Section 501.3(o); defective in air content as specified in Section 1042.2(f); defective in compressive strength as specified in Section 1042.3(f)3.b; failing to bond to the substrate; exhibiting nonstructural cracks or tears greater than 1/4 inch depth and greater than 0.016 inch width; or showing surface defects resulting from the effects of rain, improper finish, improper cure, or honeycombing, which, in the Development Entity 's opinion, cannot be repaired.

24. Pub 408 Section 1043 – SHOTCRETE

This section is deleted.

25. Pub 408 Section 1050 – STEEL BRIDGE SUPERSTRUCTURE

- a) Add Section 1050. GENERAL: The Department will conduct oversight quality assurance inspections. Steel bridge erection will be performed per Development Entity's QMP and the Department's specifications. Erection documentation will be maintained in accordance with the Department's Project Office Manual.

SECTION 1050.3 – CONSTRUCTION

- b) Section 1050.3(c)2: Replace "Section 105.03(c)" with Technical Provisions Section 12.4.3.
- c) Section 1050.3(c)2.e: first paragraph: Replace "Representative" with "Development Entity's Engineer of Record".
- d) Section 1050.3(c)4.a.4: Replace "Representative" with "Development Entity's Engineer of Record".
- e) Section 1050.3(c)4.g.1: Replace "Department" with "Development Entity's Engineer of Record".
- f) Section 1050.3(c)7.b: Replace "MTD" with "CQAF". Replace "Representative" with "Development Entity's Engineer of Record".
- g) Section 1050.3(c)7.f: Delete this section.
- h) Section 1050.3(c)7.g: Delete this section.
- i) Section 1050.3(c)7.h: Delete this section.
- j) Section 1050.3(c)7.i:

Replace "Inspector" with "CQAF" and replace "Representative's" with "Development Entity's Engineer of Record".

Add "Notify the Department when bolting operation will occur".

- k) Section 1050.4 MEASUREMENT AND PAYMENT: Replace "Chief Bridge Engineer" with Development Entity's Engineer of Record with concurrence from the Department".

26. Pub 408 Section 1052 – METAL CURB DRAIN

SECTION 1052.2 MATERIAL

- a) Section 1052.2(a): Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.
- b) Section 1052.2(c): Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

27. Pub 408 Section 1060 – SHOP PAINTING STRUCTURAL STEEL

SECTION 1060.2 – MATERIALS

- a) Section 1060.2(a).1.: Replace “District Executive” with “Development Entity”.
- b) Section 1060.2(a).1. Bullet 7: Replace “by the District Bridge Engineer” with “the Department”.
- c) Section 1060.2(a).3.: Damage Prevention and Repair Procedures. Revise to read: Include a damage prevention plan with the structural steel shop drawings that describes the procedures and protective materials to be used to prevent damage to paint coats in the Development Entity’s QMP. Have the plan cover the period of time from when paint coats are applied in the shop until erection is completed in the field.

SECTION 1060.3 – CONSTRUCTION

- d) Section 1060.3(a).2.: Replace “Department” with “CQAF”.
- e) Section 1060.3(c).4.: Replace “Department” with “CQAF”.
- f) Section 1060.3(c)5: Third paragraph, last sentence: Replace “Certify the coating material as specified in Section 106.03(b)3” with “Certify the coating material according to the Technical Provisions of this Contract”.
- g) Section 1060.3(c)6: Fifth paragraph: Replace “District Executive” with “Department”.
- h) Section 1060.3(c).7: Replace “Inspector In Charge” with “CQAF”.
- i) Section 1060.3(c).8.: Replace “Representative” with “CQAF”.

28. Pub 408 Section 1070 –PAINTING EXISTING STRUCTURAL STEEL

SECTION 1070.2 – MATERIALS

- a) Section 1070.2(b).: Replace “District Executive” with “CQAF”.
- b) Section 1070.2(b)2.: Replace “Representative” with “CQAF”.

- c) Section 1070.2(b)6: Replace “as specified in Section 106.03(b)3” with “according to the Technical Provisions of this Contract”.
- d) Section 1070.2(d): Replace “Section 106.03(b)3” with “Technical Provisions of this Contract”.

Section 1070.3 – CONSTRUCTION

- e) Section 1070.3(c)4.: Replace “Representative” with “CQAF”.
- f) Section 1070.3(c)5.: Replace “Inspector” with “CQAF”. 2 locations.
- g) Section 1070.3(c)6.: Replace “Inspector” with “CQAF”.
- h) Section 1070.3(c)7.: Replace “Inspector” with “CQAF”.
- i) Section 1070.3(c)8.: Replace “Inspector” with “CQAF”.
- j) Section 1070.3(c)9.: Replace “Representative” with “CQAF”.
- k) Section 1070.3(d)3: Replace “Department” with “CQAF”.
- l) Section 1070.3(d)3.3a.: Replace “Inspector” with “CQAF”.
- m) Section 1070.3(d)4.4b.: Replace “Inspector” with “CQAF”.
- n) Section 1070.3(d)5.5a.: Replace “Inspector” with “CQAF”. 2 locations
- o) Section 1070.3(d)8.: Replace “Representative” with “CQAF”.
- p) Section 1070.3(d)9.: Replace “Representative” with “CQAF”. Replace “Department” with “CQAF”.

29. Pub 408 Section 1071 –SPOT/ZONE PAINTING EXISTING STRUCTURAL STEEL

SECTION 1071.3 – CONSTRUCTION

- a) Section 1071.3(c)1.: Replace “Inspector” with “CQAF”.
- b) Section 1071.3(d)6.c.: Replace “Inspector-in-Charge” with “CQAF”.

30. Pub 408 Section 1080 – PRESTRESSED CONCRETE BRIDGE SUPERSTRUCTURE

SECTION 1080.2 – MATERIALS

- a) Section 1080.2(c): First bullet: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

- b) Section 1080.2(e): Fifth bullet, last sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.
- c) Section 1080.2(d): Revise to read: Section 1105. At least 2 weeks before the start of fabrication, furnish to the CQAF a complete list of the names and addresses of firms that are to fabricate or supply incidental, fabricated structural steel items to be used in conjunction with, or as a part of, the prestressed concrete members.

31. Pub 408 Section 1085 – PRECAST REINFORCED CONCRETE BOX CULVERT

Add **SECTION 1085. GENERAL**: The Development Entity will use Department approved Bulletin 15 Fabrication Plants, Machine Shops and Coating Shops.

SECTION 1085.2 – MATERIALS

- a) Section 1085.2(e): Last sentence, second paragraph: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.
- b) Section 1085.2(m): Last sentence : Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

SECTION 1085.3 – CONSTRUCTION

- c) Section 1085.3(b) Revise to Read: Provide shop drawings as specified in Technical Provisions Section 12.4.4. Obtain approval by the Development Entity’s Engineer of Record of shop drawings before fabricating precast box culverts.

Show segment length on drawing. Provide segments of maximum length compatible with hauling equipment in order to minimize the number of joints.

Provide shop drawings clearly showing all items incorporated into the box culvert including all reinforcing. List items such as chairs and inserts by source, type, and supplier.

- d) Section 1085.3(c) Delete this section.
- e) Section 1085.3 (d) will remain the responsibility of the Department to approve precast facilities.
- f) Section 1085.3(f): Replace “Representative” with “CQAF” and replace “Department Representative” with “CQAF”.

Add the following as an addendum to Section 1085:

Development Entity’s Construction Quality Control and Quality Assurance shall meet or exceed the requirements of Publication 145, Inspection of Precast/Prestressed Concrete Products and Reinforced Concrete Pipe, with the following requirements:

- All inspection records shall be documented in the Department’s Electronic Quality Management System (EQMS).
- In addition to documenting Fabrication Incident and Quality Reports in EQMS, the CQAF shall submit weekly to the Department a summary of any non-conformance issues and resolutions for review.

- Any submissions to the Chief Structural Materials Engineer will be replaced with CQAF.

Development Entity's Fabrication Quality Assurance Personnel shall meet the following requirements and qualifications:

- Fabrication Quality Assurance Manager (FQAM):

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- Maintains overall responsibility for the performance of shop inspectors while fabrication is in progress to ensure conformance to contract requirements, and the firm's approved QMP.
- Reviews, evaluates and provides consultation to the Department for difficult problems related to, production, construction, inspection and repairs. Provides expert interpretation of applicable codes and special provisions of contracts to inspection agency staff.
- Reviews current fabrication and material specifications as promulgated by the Department, including the American Association of State Highway and Transportation Officials (AASHTO), the American Society for Testing and Materials (ASTM), the American Concrete Institute (ACI) and the Prestressed Concrete Institute (PCI).
- The FQAM position requires a thorough knowledge of the principles and practices relating to precast and prestressed concrete construction, inspection and testing of materials, material properties, plans and specifications.
- Submit weekly to the Department a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- The individual must have a minimum of 10 years experience in precast and prestressed concrete inspection /construction and either a Professional Engineer registered in the Commonwealth of Pennsylvania with a Bachelor of Science degree in Civil Engineering or holds a Prestressed Concrete Institute Level 3 Certification.
- Fabrication Quality Assurance Supervisor(FQAS):

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- Knowledge of the principles and methods applied in inspecting the fabrication of prestressed concrete bridge beams.
- Effectively operate a personal portable computer Microsoft Word and Access, digital camera, e-mail and the internet.

- Communicates effectively in English, both speaking and writing.
- Knowledge of the use of concrete materials and their use in transportation construction.
- Knowledge of the characteristics and properties of natural and manufactured materials used in precast and prestressed concrete construction.
- Skill in performing sampling and testing of concrete and constituent materials, including but not limited to Self Consolidating Concrete.
- Ability to interpret and translate shop drawings, standards and specifications.
- Ability to establish and maintain effective working relationships.
- Ability to effectively direct and supervise an inspection force including the coordination of the inspection force to accommodate varying fabrication schedules.
- Submit weekly to the FQAM a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- A minimum of 5 years experience in actual precast and prestressed concrete inspection. The supervisor must be a high school graduate or hold an equivalent GED certificate. The supervisor must possess a current ACI Level I Field Technician Certification or have performed actual hands on testing with no lapse in testing exceeding six months from the expiration of the certification and must maintain PCI Level 2 certification.
- Fabrication Quality Assurance Inspector (FQAI):

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- Knowledge of the principles and methods applied in inspecting the fabrication of precast concrete and RC pipe.
- Knowledge of the characteristics and properties of natural and manufactured material used in precast concrete construction.
- Skill in performing sampling and testing of concrete and constituent materials, including but not limited to Self-Consolidating Concrete.
- Effectively operate a personal portable computer Microsoft Word and Access, digital camera, e-mail and the internet.
- Communicates effectively in English, both speaking and writing.

- Ability to interpret shop drawings, standards and specifications and to enforce these requirements.
- Ability to establish and maintain effective working relationships.
- Submit Daily to the FQAS a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- A minimum of 1 year experience in precast concrete inspection. The inspector must be a high school graduate or hold an equivalent GED certificate. The inspector must possess a current ACI Level I Field Technician Certification or have performed actual hands on testing with no lapse in testing greater exceeding six months from the expiration of the certification.

In order to maintain the existing Quality Assurance (QA) program on fabricated products, all prestressed concrete bridge beam fabrication will occur at an existing approved Bulletin 15 shop. A list will be generated by the fabricator for each item to be incorporated into the design drawings and shop drawings for each product. Fabricator quality control, Development Entity's QA and the Department's oversight will be defined on the shop drawing. This will be reviewed for acceptance per the agreement by the Department during the design phase of the Project.

The CQAF shall provide acceptance staff with the same qualifications as the Development Entity's Fabrication Quality Assurance Personnel.

32. Pub 408 Section 1086 – SOUND BARRIERS

SECTION 1086.2 – MATERIAL

- a) Section 1086.2(k): Replace "Section 106.03(b)3" with "the Technical Provisions of this Contract".

SECTION 1086.3 – CONSTRUCTION

- b) Section 1086.3(a)1:

Revise second paragraph to read: Submit design calculations to the Development Entity's Engineer of Record for acceptance, for the precast concrete panels in accordance with the requirements of the Standard Drawings.

Revise third paragraph to read: Submit design calculations to the Development Entity's Engineer of Record for acceptance, for the panel and post lifting inserts for actual strength of concrete at time of stripping, transportation, and erection in accordance with the requirements of the Standard Drawings.

- c) Section 1086.3(b): Revise first paragraph to read: Before beginning fabrication, submit shop drawings to the Development Entity's Engineer of Record for acceptance, showing fabrication details and handling and transportation procedures for all wall elements including connections. Submit shop drawings for the posts and panels concurrently.

33. Pub 408 Section 1087 – PA HT BRIDGE BARRIER

SECTION 1087.2 – MATERIAL

- a) Section 1087.2 Materials: Revise second sentence to read: Before fabrication, submit shop drawings to the Development Entity’s Engineer of Record. Obtain Development Entity’s Engineer of Record acceptance of the shop drawings before beginning fabrication.
- b) Section 1087.2(a):Last sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

34. Pub 408 Section 1088 – PA TYPE 10M BRIDGE BARRIER

SECTION 1088.2 – MATERIAL

- a) Section 1088.2 Materials: Revise second sentence to read: Before fabrication, submit shop drawings to the Development Entity’s Engineer of Record. Obtain Development Entity’s Engineer of Record acceptance of the shop drawings before beginning fabrication.
- b) Section 1088.2(a):Last sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

35. Pub 408 Section 1089 – PA BRIDGE BARRIER

SECTION 1089.2 – MATERIAL

- a) Section 1089.2 Materials: Revise second sentence to read: Before fabrication, submit shop drawings to the Development Entity’s Engineer of Record. Obtain Development Entity’s Engineer of Record acceptance of the shop drawings before beginning fabrication.
- b) Section 1089.2(a):Last sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

36. Pub 408 Section 1091 – EPOXY INJECTION CRACK SEAL

SECTION 1091.2 – MATERIAL

- a) Section 1091.2(d): Replace “Section 106.03(b)” with “The Technical Provisions”.

SECTION 1091.3 – CONSTRUCTION

- b) Section 1091.3(a): Revise to read: The CQAF will mark areas to be sealed.

37. Pub 408 Section 1092 – EPOXY PROTECTION FOR STRUCTURAL STEEL

SECTION 1092.2 – MATERIAL

- a) Section 1092.2(a): First paragraph, last sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

38. Pub 408 Section 1101 – Highway Lighting

SECTION 1101.01 GENERAL REQUIREMENTS

- a) Section 1101.01 paragraph 3: Replace with the following: Design calculations are required for all poles. Submit design calculations and fatigue analysis to the Development Entity’s Engineer of Record and according to the Development Entity’s QMP. The Development Entity can use previously Department approved identical lighting material and equipment, submission of design calculations and fatigue analysis may not be required. Provide calculations signed and sealed by a Professional Engineer registered in Pennsylvania to the Development Entity’s Engineer of Record.
- b) Section 1101.01 paragraph 8: Replace “MTD” with “Development Entity”
- c) Section 1101.01 paragraph 8: Replace “Department’s Agency Inspector” with “CQAF”
- d) Section 1101.01 fourth sentence, paragraph 8: Replace “section 106.03(b)3” with “the Technical Provisions of this Contract”.
- e) Section 1101.01 paragraph 9 & 10: Replace “Department” with “Development Entity’s Engineer of Record”

SECTION 1101.02 POLES AND BASES (CONVENTIONAL LIGHTING)

- f) Section 1101.02(a)4.:Revise third Sentence to read: Submit a copy of the FHWA acceptance letter with the catalog cut or shop drawing information for approval to the Development Entity’s Engineer of Record.

39. Pub 408 Section – 1103 Traffic Signing and Marking

SECTION 1103 GENERAL REQUIREMENTS

- a) Section 1103.01: Replace “Section 106.03(b)3” with “the Technical Provision of this contract”.

40. Pub 408 Section 1104 – Traffic Signals

No modifications as the Department will retain approval authority.

41. Pub 408 Section 1105 – FABRICATED STRUCTURAL STEEL AND ALUMINUM

SECTION 1105.01 GENERAL REQUIREMENTS

- a) Add: the Development Entity will use Department approved Bulletin 15 Fabrication Plants, Machine Shops and Coating Shops.
- b) Sections 1105.01(a), 1105.01(g) and 1105.03(a) 1.b will remain the responsibility of the Department.

- c) Section 1105.01(b): Replace “Section 105.04” with “Technical Provisions”.
- d) Section 1105.01(c): Replace “Section 105.02” with “Technical Provisions Section 12.4.4”.
- e) Section 1105.01(c) second paragraph: Replace “ District Executive” with Development Entity’s Engineer of Record
- f) Section 1105.01 (e) 1. Delete this section.”
- g) Section 1105.01 (e) 3. Revise. CQAF has the authority to reject any material or work not conforming to the requirements of the Contract Documents. In case of dispute, the Contractor may appeal to the Development Entity and the Department, whose decision will be final
- h) Section 1105.01 (e)4, 5 and 6: Revise: As specified in the Technical Provisions of this contract.
- i) Section 1105.01(f): Replace “Section 106.05” with “According to the Technical Provisions of this contract”.

SECTION 1105.02 MATERIAL

- j) Section 1105.02(d)6: Delete this section.
- k) Section 1105.02(g)3: Revise second paragraph to read: The Contractor may correct defects not affecting the strength and value of the casting for the service intended if allowed in writing by the Development Entity’s Engineer of Record. The CQAF may reject castings containing:
- l) Section 1105.02(v) Replace “Section 106.03(b)3” with “The Technical Provisions of this contract”.

SECTION 1105.03 FABRICATION

- m) Section 1105.03(c)1. Revise second sentence paragraph 4 to read: Obtain advance approval from the Development Entity’s Engineer of Record to produce round or slotted holes using plasma, laser, water jet, or oxygenacetylene methods.
- n) Section 1105.03(e)1: Replace “Representative” with “CQAF”, both locations.
Section 1105.03(m): The Department will remain responsible for oversight of welder qualifications, Procedure Qualification Record (PQR) and Weld Procedure Specification (WPS) Qualifications in the plant.
- o) Section 1105.03(m)1. Bullet Seven: Replace “Department Inspector” with “CQAF”. Replace “Chief Structural Materials Engineer” with “Development Entity’s Engineer of Record”.
- p) Section 1105.03(m)1. Bullet 18: Replace “Chief Structural Materials Engineer” with “Development Entity’s Engineer of Record and concurrence with Department’s Chief Structural Materials Engineer”.
- q) Section 1105.03(n): Replace “Department’s Inspector” with “CQAF”.

- r) Section 1105.03(dd): Paragraph 5, Replace “Representative” with “Development Entity’s Engineer of Record or Department’s Chief Structural Materials Engineer”.

Add the following as an addendum to Section 1105:

Development Entity’s Construction Quality Control and Quality Assurance shall meet or exceed the requirements of Publication 135, Inspection of Fabricated Structural Steel with the following requirements:

- All inspection records shall be documented in the Department’s Electronic Quality Management System (EQMS).
- In addition to documenting Fabrication Incident and Quality Reports in EQMS, the CQAF shall submit weekly to the Department a summary of any non-conformance issues and resolutions for review.
- Any submissions to the Chief Structural Materials Engineer will be replaced with CQAF.

Development Entity’s Fabrication Quality Assurance Personnel shall meet the following requirements and qualifications:

- Fabrication Project Manager:

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- This is a professional and managerial position in the field of Civil, Metallurgy and Welding Engineering. Responsible for the overall implementation of the inspection program. Ensures coordination with the Department when required.
- This engineer is responsible for enforcing the standards of good workmanship and the requirements of the contract, special provisions and applicable specifications in the fabrication of simple and complex welded structures.
- Maintains overall responsibility for the performance of shop inspectors while fabrication is in progress to ensure conformance to contract requirements, and the firm’s approved QMP.
- Reviews, evaluates and provides consultation to the Department for difficult problems related to weldment design, production, construction, inspection and repairs. Provides expert interpretation of applicable codes and special provisions of contracts to plant engineers and inspection agency staff.
- Reviews current fabrication and material specifications as promulgated by the Department, including the American Welding Society (AWS), the American Association of State Highway and Transportation Officials (AASHTO), the American Society for Testing and Materials (ASTM).

- Reviews/develops Department standards and specifications related to construction and fabrication of structural steel and aluminum.
- The Project Manager position requires a thorough knowledge of the engineering principles and practices relating to bridge construction, inspection and testing of materials, material properties, plans and specifications.

QUALIFICATIONS:

- The individual must be a Professional Engineer registered in the State with a Bachelor of Science degree in Civil Engineering or a related field with at least five years of structural steel and aluminum welding related experience.
- Metallurgical Engineer:

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- This is a professional and managerial position in the field of metallurgy and welding engineering.
- The engineer should have a thorough knowledge of the behavior, structure, properties and composition of metals, applicable to the field of welding and fabrication. The engineer should be familiar with all metals, including aluminum used in the fabrication of bridges, and other items incidental to highway construction at steel fabrication shops.
- Areas of expertise should include carbon steels, high-strength low-alloy steels, tempered alloy steels, weathering steels, stainless steels and aluminum including their weldability, chemical, mechanical, tensile and toughness requirements.
- Have a working knowledge of the principles and practices involving visual inspection and non-destructive testing as per AWS, AASHTO and ASNT specifications.
- Reviews and handles difficult problems in the field of metallurgy and performs as a trouble-shooting engineer, when problems arise.
- Communicates clearly and effectively in English.

QUALIFICATIONS:

- The individual should have a Bachelor of Science degree in Metallurgical or Welding Engineering or a closely related engineering discipline with at least five years of metallurgical experience.
- ASNT Level III Technician:

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- This position provides expertise and consultation to the Department in the areas of non-destructive testing of both ferrous and non-ferrous metals.
- This position acts as an expert consultant to the Department to review and approve/disapprove fabricator written practices. Assesses non-destructive testing procedures related to welding and repairs.
- Evaluates, tests and certifies welding inspectors to oversee non-destructive testing at fabricator and field locations.
- Provides non-destructive testing inspection training to Department field personnel, when required.
- Performs other related duties when required.

QUALIFICATIONS:

- The technician must hold a valid ASNT Level III certification (by ASNT exam) for all disciplines of non-destructive testing, including RT, UT, MT and PT.
- Certified Coatings Inspector:

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- This individual provides advanced inspection and/or consultation for a wide variety of coatings applications, including traditional three coat painting systems, powder coatings, hot dipped and mechanical galvanizing and metallizing. Reviews and handles difficult problems related to coating applications, including assessment of coating performance and failure mechanisms. Performs as a troubleshooting specialist when problems arise.
- Ability to interpret shop drawings, standards and specifications
- Be able to effectively communicate in English, both speaking and writing
- Ability to establish and maintain effective working relationships.
- Effectively operate a personal portable computer Microsoft Word and Access and Excel. Ability to operate a digital camera, utilize e-mail (including attachment of photographs, documents, etc.) and the internet.
- Minimum Experience and Training:

QUALIFICATIONS:

- High School Diploma and four (4) years minimum experience in structural steel coating application inspection, which includes one (1) year of coatings inspection experience on bridges, and has successfully completed NACE Coating Inspection Technician – Session II course or SSPC C-2 training.

- Fabrication Quality Assurance Manager (FQAM):

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- This is a technical and managerial position in the field of Civil, Metallurgy and Welding Engineering. Serves as the primary point of contact of day to day operations for the Development Entity when questions arise.
- This engineer assists the Project Manager in enforcing the standards of good workmanship and the requirements of the contract, special provisions and applicable specifications in the fabrication of welded structures.
- Reviews shop fabrication practices including welding procedures, repair procedures, non-destructive testing and preparation and painting/coating of steel and aluminum structures.
- Reviews and handles daily problems arising at the plants. Coordinates with the Department on issues related to welding procedures, specification enforcement, inspection and repairs. Advises the Structural Material Unit on alternative actions for resolving problems.
- Reviews Procedure Qualification Records and approves/disapproves Welding Procedure Specifications for the Department. Provides written reports when required.
- Provides expert interpretation of applicable codes and special provisions of contracts to plant engineers and inspection agency staff.
- Submit weekly to the Department a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- The individual must possess a Bachelor of Science degree in Civil Engineering or Welding Engineering with at least four years of structural steel and aluminum welding related experience. The individual must also possess an American Welding Society, Certified Welding Inspector (CWI) certification.

- Fabrication Quality Assurance Supervisor (FQAS):

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- This is a technical position involving supervision of their firm's inspection personnel assigned to structural steel and aluminum fabrication plants.
- The supervisor conducts regular reviews at the structural steel fabrication plants to assure that the required inspection duties are fulfilled, and products which are accepted meet contract requirements and Department specifications.
- The supervisor may, on occasion be required to represent the Department at prefabrication meetings and other meetings.
- Conducts regular supervisory reviews at fabrication steel plants, reviews inspection reports for assigned locations and attends meetings when directed by the Department.
- Knowledge of the principles and methods applied in inspecting the fabrication of fabricated structural steel items.
- Knowledge of the characteristics and properties of materials used in fabrication.
- Knowledge of applying and witnessing the following non-destructive testing methods used in the fabrication of structural steel – VT, UT, MT and RT and aluminum – PT.
- Ability to interpret shop drawings, standards and specifications and to enforce these requirements.
- Ability to establish and maintain effective working relationships.
- Ability to effectively communicate in English, both speaking and writing.
- Ability to effectively direct and supervise an inspection force including the coordination of the inspection force to accommodate varying fabrication schedules.
- Proficiency in using a personal portable computer Microsoft Word, Access and Excel. Ability to operate a digital camera (including attachment of photographs, documents, etc. to e-mail) and use the internet.
- Submit weekly to FQAM a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- The supervisor must be a high school graduate or hold an equivalent high school (GED) certificate with no less than five (5) years experience in inspection and/or quality assurance/quality control in structural steel and aluminum fabrication produced for transportation related projects, including three (3) years as a supervisor or lead inspector.
- Supervisors must be certified as a Level II ASNT technician in the appropriate methods of NDT used in the shops which they are assigned to supervise.
- The supervisor must maintain a valid certified welding inspector (CWI) certificate issued by the American Welding Society. A Canadian Welding Bureau level II or level III certification (certified to the requirements of the Canadian Standard Association standard CSA W 178.2) may be accepted with the approval of the Department.
- Fabrication Quality Assurance Inspector:

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- This position provides quality assurance inspection for welded fabricated structural steel and aluminum.
 - Work may involve outlining procedures for subordinate inspectors, reviewing and monitoring work and test results, interpreting specifications and determining procedures where standard operations cannot be used.
 - Inspection is performed with considerable independence but is reviewed and managed by the Supervisor and Civil Engineer.
 - Reviews regular shop fabrication practices including fit-up, welding and use of approved welding procedures, surface preparation and application of coatings, member assembly, bolting and non-destructive testing. Ensures fabrication is performed in accordance with the fabricator's Quality Control plan, contract requirements and Department specifications.
 - Monitors subordinate inspectors to ensure conformance to contract requirements.
- Maintains both handwritten and electronic records of inspection and test data and forwards this information to the Development Entity's Construction Fabrication Quality Assurance Acceptance Manager.
- Must have knowledge of the standards, codes and specifications required in the field of structural steel and aluminum fabrication to meet current Department Specifications.
 - Must have ability to read and interpret shop drawings, specifications and other technical information.

- Ability to understand and follow oral and written instructions.
- Ability to effectively communicate in English, both speaking and writing.
- Effectively operate a personal portable computer Microsoft Word and Access and Excel. Ability to operate a digital camera, utilize e-mail (including attachment of photographs, documents, etc.) and the internet.
- Ability to establish and maintain fair and harmonious working relationship with shop personnel while diligently attending to the required inspection activities.
- Submit daily to Development Entity's Construction FQAS a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- Must be a high school graduate or hold an equivalent high school (GED) certificate and have a minimum of three (3) years experience in inspection and/or quality assurance/quality control in structural steel and aluminum fabrication.
- Must be qualified as Level II ASNT technicians in the appropriate methods of NDE for the shops which they are assigned.
- Must maintain a valid certified welding inspector (CWI) certificate issued by the American Welding Society. A Canadian Welding Bureau level II or level III certification (certified to the requirements of the Canadian Standard Association standard CSA W 178.2) may be accepted with the approval of the Department.

In order to maintain the existing Quality Assurance (QA) program on fabricated products, all steel and aluminum fabrication will occur at existing approved Bulletin 15 shops. A list of details will be generated by the fabricator for each item to be incorporated into the design drawings and shop drawings for each product. Fabricator Quality Control, Development Entity's QMP, and the Department oversight will be defined on the shop drawing. This will be reviewed for acceptance per the agreement by the Department during the design phase of the Project.

The CQAF shall provide acceptance staff with the same qualifications as the Development Entity's Fabrication Quality Assurance Personnel

42. Pub 408 Section 1107 – PRESTRESSED CONCRETE BRIDGE BEAMS

SECTION 1107.01 GENERAL REQUIREMENTS

- a) Add: the Development Entity will use Department approved Bulletin 15 Fabrication Plants, Machine Shops and Coating Shops.
- b) Sections 1107.03(a) & 1107.03(b) will remain the responsibility of the Department.
- c) Section 1107.01(b): Replace “Section 105.02” with “Technical Provisions Section 12.4.4”.
- d) Section 1107.01(b)1.a: Revise second sentence second paragraph to read: Submit bridge shop drawings as specified in the Technical Provisions Section 12.4.4 for review and acceptance by the Development Entity’s Engineer of Record showing the alternate pattern and stress computation documenting the change.
- e) Section 1107.01(b)2: Revise first sentence to read: Prepare and submit separate shop drawings for prestressed beam sub-items or items fabricated separately, such as steel bearings, moment connections, and post-tensioning operations according to Technical Provisions Section 12.4.4 for review and approval by the Development Entity’s Engineer of Record.
- f) Section 1107.01(d): Replace “Representative” with “CQAF” and “Department” with “Development Entity’s Engineer of Record.”
- g) Section 1107.01(d): Replace “Section 106.07(c) with “the Technical Provisions of this contract”.

SECTION 1107.02 - MATERIALS

- h) Section 1107.02(h): First sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.
- i) Section 1107.02(j): Second sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.
- j) Section 1107.02(m): First sentence, last paragraph: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.
- k) Section 1107.02 (n)1: Revise second Paragraph to read: At the fabrication plant the CQAF will select samples to be submitted an independent lab.
- l) Section 1107.02(n)1: First sentence, last paragraph: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.
- m) Section 1107.02(p): Last paragraph: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

SECTION 1107.03 – BEAM CONSTRUCTION

- n) Section 1107.03(c)6.h.2.a.1: Replace “Representative” with “CQAF”.
- o) Section 1107.03(c)6.h.2.b: Replace “Representative” with “CQAF”.
- p) Section 1107.03(d)5.a.: Replace “Section 110.11” with “the Technical Provisions of this contract”.
- q) Section 1107.03(d)5.e: Last sentence, second paragraph: Replace “Chief Structural Materials Engineer” with Development Entity’s Engineer of Record”
- r) Section 1107.03(d)5.e.1: First sentence, first paragraph: Replace “Department” with “CQAF”.
- s) Section 1107.03(d)5.e.1: Second sentence, third paragraph: Replace “Department” with “CQAF”.
- t) Section 1107.03(d)5.e.1: Last sentence, third paragraph: Replace “Department” with “CQAF”.
- u) Section 1107.03(d)5.e.1: Last paragraph: Replace “Section 110.11” with “Technical Provisions of this Contract”
- v) Section 1107.03(d)5.f: First sentence, first paragraph: Replace “Chief Structural Materials Engineer” with Development Entity’s Engineer of Record”
- w) Section 1107.03(d)5.f: Replace “Department’s Representative” with “CQAF”. Both Locations.
- x) Section 1107.03(d)5.g.2.c: Last paragraph, Replace “Inspector in Charge” with “CQAF”.
- y) Section 1107.03(d)5.h.: Replace “Representative” with “Development Entity’s Engineer of Record”.
- z) Section 1107.03(e)1: Second Sentence: Replace “Representative” with “CQAF”
- aa) Section 1107.03(e)1:Second sentence: Replace “Section 106.07(c)” with “The Technical Provisions of this contract”.
- bb) Section 1107.03(e)1.a: Seventh Bullet: Replace “Chief Structural Materials Engineer” with Development Entity’s Engineer of Record”.
- cc) Section 1107.03(e)1.b: Seventh Bullet: Replace “Chief Structural Materials Engineer” with Development Entity’s Engineer of Record”.
- dd) Section 1107.03(f): Fifth Paragraph Replace “Chief Structural Materials Engineer” with “Development Entity’s Engineer of Record”.

- ee) Section 1107.03(g): First Paragraph, Replace “Representative” with “Development Entity’s Engineer of Record”.
- ff) Section 1107.03(g): Fourth paragraph: Replace “as specified in Section 107.23” with “according to the Technical Provisions of this contract”.

Add the following as an addendum to Section 1107:

Development Entity’s Construction Quality Control and Quality Assurance shall meet or exceed the requirements of Publication 145, Inspection of Precast/Prestressed Concrete Products and Reinforced Concrete Pipe, with the following requirements:

- All inspection records shall be documented in the Department’s Electronic Quality Management System (EQMS).”
- In addition to documenting Fabrication Incident and Quality Reports in EQMS, the CQAF shall submit weekly to the Department a summary of any non-conformance issues and resolutions for review.
- Any submissions to the Chief Structural Materials Engineer will be replaced with CQAF.

Development Entity’s Fabrication Quality Assurance Personnel will meet the following requirements and qualifications:

- Fabrication Quality Assurance Manager (FQAM):

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- Maintains overall responsibility for the performance of shop inspectors while fabrication is in progress to ensure conformance to contract requirements, and the firm’s approved QMP.
- Reviews, evaluates and provides consultation to the Department for difficult problems related to, production, construction, inspection and repairs. Provides expert interpretation of applicable codes and special provisions of contracts to inspection agency staff.
- Reviews current fabrication and material specifications as promulgated by the Department, including the American Association of State Highway and Transportation Officials (AASHTO), the American Society for Testing and Materials (ASTM), the American Concrete Institute (ACI) and the Prestressed Concrete Institute (PCI).
- The FQAM position requires a thorough knowledge of the principles and practices relating to precast and prestressed concrete construction, inspection and testing of materials, material properties, plans and specifications.

- Submit weekly to the Department a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- The individual must have a minimum of 10 years experience in precast and prestressed concrete inspection /construction and either a Professional Engineer registered in the Commonwealth of Pennsylvania with a Bachelor of Science degree in Civil Engineering or holds a Prestressed Concrete Institute Level 3 Certification.
- Fabrication Quality Assurance Supervisor (FQAS):

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- Knowledge of the principles and methods applied in inspecting the fabrication of prestressed concrete bridge beams.
- Effectively operate a personal portable computer Microsoft Word and Access, digital camera, e-mail and the internet.
- Communicates effectively in English, both speaking and writing.
- Knowledge of the use of concrete materials and their use in transportation construction.
- Knowledge of the characteristics and properties of natural and manufactured materials used in precast and prestressed concrete construction.
- Skill in performing sampling and testing of concrete and constituent materials, including but not limited to Self Consolidating Concrete.
- Ability to interpret and translate shop drawings, standards and specifications.
- Ability to establish and maintain effective working relationships.
- Ability to effectively direct and supervise an inspection force including the coordination of the inspection force to accommodate varying fabrication schedules.
- Submit weekly to the FQAM a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- A minimum of five (5) years experience in actual precast and prestressed concrete inspection. The supervisor must be a high school graduate or hold an equivalent GED certificate. The supervisor must possess a current ACI Level I Field Technician Certification

or have performed actual hands on testing with no lapse in testing greater exceeding six months from the expiration of the certification and must maintain PCI Level 2 certification.

- Fabrication Quality Assurance Inspector:

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- Knowledge of the principles and methods applied in inspecting the fabrication of precast and prestressed concrete.
- Knowledge of the characteristics and properties of natural and manufactured material used in precast concrete construction.
- Skill in performing sampling and testing of concrete and constituent materials, including but not limited to Self Consolidating Concrete.
- Effectively operate a personal portable computer Microsoft Word and Access, digital camera, e-mail and the internet.
- Communicates effectively in English, both speaking and writing.
- Ability to interpret shop drawings, standards and specifications and to enforce these requirements.
- Ability to establish and maintain effective working relationships.
- Submit daily to the FQAS a summary of any non-conformance issues and resolutions for review.

QUALIFICATIONS:

- A minimum of three (3) years experience in prestressed concrete inspection. The inspector must be a high school graduate or hold an equivalent GED certificate. The inspector must possess a current ACI Level I Field Technician Certification or have performed actual hands on testing with no lapse in testing greater exceeding six months from the expiration of the certification and must have/maintain PCI Level 2 certification.

In order to maintain the existing Quality Assurance (QA) program on fabricated products, all prestressed concrete bridge beam fabrication will occur at an existing approved Bulletin 15 shop. A list will be generated by the fabricator for each item to be incorporated into the design drawings and shop drawings for each product. Fabricator quality control, Development Entity's QA and the Department's oversight will be defined on the shop drawing. This will be reviewed for acceptance per the agreement by the Department during the design phase of the Project.

The CQAF shall provide acceptance staff with the same qualifications as the Development Entity's Fabrication Quality Assurance Personnel

43. Publication 408 Section 1108 – POST-TENSIONING OPERATIONS

SECTION 1108.1 GENERAL REQUIREMENTS

- a) Section 1108.01(b): Revise to read: Perform post-tensioning operations in the presence of the CQAF, either in a prestressing plant or on the project site.

Retain a Professional Engineer registered in the State, experienced in post-tensioning operations, to be present and in charge of tensioning and grouting operations. Two weeks before the start of the post-tensioning operations, submit, in writing, to the Development Entity, the Engineer's name and the date and place of post-tensioning. A Professional Engineer registered in the State is not necessary for post-tensioning box culverts or transversely posttensioning adjacent box beam bridges.

- b) Section 1108.01(c): Replace "Section 105.02" with "Technical Provisions Section 12.4.4".

SECTION 1108.022 – MATERIALS

- c) Section 1108.02(b):

Revise second sentence to read: Submit the grout mixture to the Development Entity's Engineer of Record for review and approval before use.

Second paragraph: Replace "Certify as specified in Section 106.03(b)3" with "Certify according to the Technical Provisions of this Contract".

- d) Section 1108.02(c): Second paragraph: Replace "Certify as specified in Section 106.03(b)3" with "Certify according to the Technical Provisions of this Contract".
- e) Section 1108.02(d): Second paragraph: Replace "Certify as specified in Section 106.03(b)3" with "Certify according to the Technical Provisions of this Contract".

SECTION 1108.03 – CONSTRUCTION3 – CONSTURCTION

- f) Section 1108.03(b): Revise fourth paragraph to read: Before use submit to the Development Entity's Engineer of Record the coating system for tendon corrosion protection in a bonded system for approval.

- g) Section 1108.03(e):

Revise first sentence of second paragraph to read: Within 20 days before stressing, calibrate all jacks and pressure gauge system and furnish certified copies of the load calibration curves to the CQAF except jack calibration for post tensioning of box culverts and adjacent box beams.

Revise the last sentence of the sixth paragraph to read: If sources of error cannot be determined or verified by the Professional Engineer in charge of post-tensioning operations, to the satisfaction of the Development Entity's Engineer of Record, the post-tensioning of the member will be stopped and the member rejected.

44. Pub 408 Section 1109 – GUIDE RAIL AND METAL MEDIAN BARRIER

SECTION 1109.03 POSTS

- a) Section 1109.03(c): Fifth paragraph: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

SECTION 1109.04 OFFSET BRACKETS

- b) Section 1109.04(a): Second sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

SECTION 1109.09 CERTIFICATION

- c) Section 1109.09: Replace “Section 106.03(b)3” with “the Technical Provisions of this Contract”.

45. Pub 408 Section 1110– RIGHT-OF-WAY FENCE

SECTION 1110.05 INSPECTION

- a) Section 1110.05: Revise second sentence to read: Provide facilities for the CQAF to determine that the material is being furnished as indicated.

SECTION 1110.06 CERTIFICATION

- b) Section 1110.06: Replace “Section 106.03(b)3” with “the Technical Provisions of this Contract”.

46. Pub 408 Section 1111–HIGH LOAD MULTI-ROTATIONAL BEARINGS

SECTION 1111.03 FABRICATION

- a) Section 1111.03(g) Shop Drawings: Revise first sentence to read: Submit Shop Drawings to the Development Entity’s Engineer of Record for review and approval. Include in the submission the following information: Section 1110.06: Replace “Section 106.03(b)3” with “the Technical Provisions of this Contract”.
- b) Section 1111.03(h): Replace “Section 106.03(b)3” with “the Technical Provisions of this Contract”.

47. Pub 408 Section 1112 – GLUED LAMINATED HARDWOOD TIMBER MEMBERS

48. Delete this section. Pub 408 Section 1113–PLAIN AND LAMINATED NEOPRENE BEARING PADS

SECTION 1113.03 FABRICATION

- a) Section 1113.03(h): Third sentence: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

49. Pub 408 Section 1119– THRIE BEAM GUIDE RAIL

SECTION 1119.09 CERTIFICATION

- a) Section 1119.09: Replace “Section 106.03(b)3” with “The Technical Provisions of this Contract”.

50. Pub 408 Section 1124 – TEMPORARY TRAFFIC CONTROL SIGNALS

SECTION 1124.01 GENERAL REQUIREMENTS

- a) Section 1124.01: Second sentence, third paragraph: Replace “Certify as specified in Section 106.03(b)3” with “Certify according to the Technical Provisions of this Contract”.

SECTION 1124.02 – TEMPORARY TRAFFIC CONTROL SIGNALS OR FIXED SUPPORTS

- a) Section 1124.02(b): Revise last sentence to read: Install additional signs and devices as required in Publications 149, 213, and 236, the approved traffic control plan, and as required based on actual site conditions and as directed by the Development Entity.

- b) Section 1124.02(i):

Revise the first sentence of the first paragraph to read: Notify the Development Entity’s Engineer of Record and Department’s Traffic Engineer a minimum of 7 calendar days before a turn-on and a new construction phase.

Revise the second paragraph to read: Make any timing adjustments as directed by the Development Entity and document accordingly on the approved plans. Any modifications will require Development Entity’s authorization and concurrence from the Department . Update the approved plans accordingly. Submit any proposed signal timing changes to the Development Entity for approval and concurrence from the Department prior to implementation. Timing adjustments and/or other approved plan modifications will be considered incidental to this item.

SECTION 1124.03 – TEMPORARY TRAFFIC CONTROL SIGNALS ON PEDESTAL-MOUNTED PORTABLE TRAFFIC CONTROL SYSTEMS

- a) Section 1124.03(h)4: Revise to read: If the system has software to automatically determine timing patterns based on certain input data, submit a complete description from the manufacturer of the logic behind the timing algorithm for the Development Entity’s Engineer of Record’s and Department Traffic Engineer’s review and approval.

- b) Section 1124.03(j): Revise last sentence to read: Submit documentation to the Development Entity and Department Traffic Engineer showing that the trained personnel are knowledgeable of the signal system's operation and function.

5. *P3 RBR – HDTs Publication List with Exclusions & Modifications*

- Pub. 10C (DM-1C) – Transportation Engineering Procedures
 - Exclude – Ch. 3.3.A.6, Design Value Engineering
 - Modified – Ch. 3.3.D, Design Field View and Approval
 - Page 3-52, next to last paragraph, 2nd Sentence – Change “The District Project Manager is responsible for preparing...” to “The Development Entity’s Team is responsible for preparing.”
 - Ch.4.13, General Design Coordination
 - Exclude – A, Constructability Reviews
 - Exclude – E, Final Design Office Meeting
 - Exclude – F, Letters of Transmittal
 - Exclude – I, Cost Containment
 - Exclude – K, Addenda
 - Exclude – Ch. 4.14. C, Contract Management Review
- Pub. 10X (DM-1X) – Appendices to DM-1, 1A, 1B, 1C
 - Exclude – Appendix N, Constructability review
 - Exclude – Appendix R, Design Value Engineering Procedures
- Pub. 13M (DM-2) – Highway Design
 - Modified – Ch. 12, Guide Rail, Median Barrier and Roadside Safety Devices
 - Exclude – Ch.14, Cost Estimating
 - Modified – Ch. 18, Temporary Roads and Bridges
- Pub. 70M – Local Roads and Streets – Exclude this Publication

See Exception Exhibit 2 (Attachment 1-X+1)

6. *Publication No. 408 Section 200, 300, 400, 500, 600 & 700*

Items within Publication 408 for the identified sections have been specifically called out for responsibilities of approval, inclusion, exception or deletion. A table has been inserted for each series. Items of approval authority to be retained by the Department will be in accordance to Publication 408. Items to be completed by the Development Entity or in an exception manner have been indicated in the table. Items to be deleted have been so noted.

Pennsylvania Department of Transportation

TECHNICAL PROVISIONS

EXCEPTIONS EXHIBIT 2

(ATTACHMENT 1-X+1)

RAPID BRIDGE REPLACEMENT (RBR)

Project

September 16, 2014

Technical Provisions

Exception Exhibit 2 (Attachment 1-X+1)

Index

6. *Publication No. 408 Section 200 300, 400, 500, 600, 700, 800, & 900*

Items within Publication 408 for the identified sections have been specifically called out for responsibilities of approval, inclusion, exception or deletion. A table has been inserted for each series. Items of approval authority to be retained by the Department will be in accordance to Publication 408. Items to be completed by the DEVELOPMENT ENTITY or CQAF or in an exception manner have been indicated in the table. Items to be deleted have been so noted. All payment related provisions in Publication 408 are deleted. Payment shall be in accordance with the PPA.

- a. 200 – Earthwork
- b. 300 – Base Courses
- c. 400 – Flexible Pavements
- d. 500 – Rigid Pavements
- e. 600 – Incidental Construction
- f. 700 – Material
- g. 800 – Roadside Development
- h. 900 – Traffic Accommodation and Control

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a. Publication No. 408 Section 200 – Earthwork

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	202.3	a	202-1	The Department will obtain the vacation of all buildings or structures to be demolished as expeditiously as possible.	Department retains responsibility.	
2	201.3		201-1	Remove remaining topsoil over 200 mm (8 inches) in depth, when directed, as specified in Section 203.	Approval authority shifts to the DEVELOPMENT ENTITY.	
3	202.3	d	202-2	Submit a demolition plan to the representative at least 2 weeks before beginning demolition.	Approval authority shifts to the DEVELOPMENT ENTITY.	
4	202.3	d	202-2	Leave contiguous buildings in a safe condition. Do not deface, mar, or jeopardize them. Repair damage and restore them as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
5	202.3	d	202-2	Do not disturb existing curbs, sidewalks, and street paving unless directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
6	202.3	d	202-2	Burn debris only with written permission of local police or fire authorities and if the burning conforms to State Air Pollution Control Commission regulations. Do not begin burning debris until the Department receives a copy of the written permission.	Approval authority shifts to the DEVELOPMENT ENTITY.	
7	202.3	d	202-2	Do not disturb these chimneys other than to give them support as necessary for	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				continued stability. Repoint and cap as directed.	ENTITY.	
8	202.3	d	202-2	The Contractor may perform bay or sectional-type demolition provided a detailed plan, including the building's structural framework, is submitted and accepted before beginning the work.	Approval authority shifts to the DEVELOPMENT ENTITY.	
9	202.3	e	202-3	Where indicated or directed, cap party walls and restore by insulating and plastering to an acceptable finish. Before work, thoroughly clean the party wall of old plaster, sand, and dirt. Rake pit joints in the brickwork to a minimum depth of 6 mm (1/4 inch), as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
10	202.3	f	202-4	Before starting backfilling operations, submit the method of backfill and compaction for review and acceptance.	Approval authority shifts to the CQAF.	
11	202.3	g	202-4	Treat disturbed areas resulting from demolition with seeding and soil supplements as specified in Section 804. Use a seeding type as indicated or directed. When directed, mulch as specified in Section 805.	Approval authority shifts to the DEVELOPMENT ENTITY.	
12	203.3	b	203-1	Perform deeper drilling and blasting only with the written approval of the Geotechnical Engineer.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
13	203.3	b1		Excavate material overlying rock or hard shale to the elevation directed before start of presplit blasting.	Approval authority shifts to the DEVELOPMENT ENTITY.	
14	203.3	b1	203-2	Arrange a meeting with the Representative to discuss presplit blasting operation at least 2 weeks before anticipated start of operation. Submit a presplit blasting plan to the Representative 1 week before the meeting, with a copy for the Project Geotechnical Engineer, for review.	Approval authority shifts to the DEVELOPMENT ENTITY.	
15	203.3	b1	203-2	Expose test area for the Representative and Project Geotechnical Engineer to examine and evaluate upon completion of the presplit blasting test. Prepare presplit blasting plan for full-scale operations based on evaluation of loads and hole spacing in presplit blasting test. Adjust presplit blasting lift based on presplit blasting test evaluation.	Approval authority shifts to the DEVELOPMENT ENTITY.	
16	203.3	b1	203-2	Submit a plan for correction when more than 5% of presplit holes in any lift are misaligned.	Approval authority shifts to the DEVELOPMENT ENTITY.	
17	203.3	d	203-3	If a slide occurs, notify the Inspector-in-Charge immediately and cease operations in the slide area until directed to resume.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
18	203.3	e	203-3	Do not remove or excavate any material beyond the slope lines indicated, without written authorization.	Approval authority shifts to the DEVELOPMENT ENTITY.	
19	203.3	f	203-3	Do not excavate stream channels until directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
20	203.3(g)	g		Stockpile topsoil removed from within the excavation or under embankment areas as specified in Section 801, unless otherwise directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
21	203.3(h)	h		Remove bracing and shoring when no longer required, unless otherwise indicated or directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
22	203.3(i)	i		Remove sheeting or bracing when no longer required, unless otherwise indicated or directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
23	204.3(a)	a		Notify the Representative 2 weeks in advance of excavation for structures so that cross sections may be obtained.	Approval authority shifts to the DEVELOPMENT ENTITY.	
24	204.3(a)	a		Excavate to a depth that provides a satisfactory foundation, as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
25	204.3(a)	a		Do not place concrete or masonry until the	Approval authority shifts	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				foundation area has been accepted.	to the CQAF.	
26	204.3	d	204-1	The Representative may require the cofferdam to be sealed below the foundation with sufficient concrete so that it may be pumped reasonably dry where the foundation area is of sandy or other porous materials.	Approval authority shifts to the DEVELOPMENT ENTITY.	
27	204.3	d	204-1	Remove sheeting and bracing when no longer required, unless otherwise indicated or directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
28	204.3	f	204-1	Do not remove or excavate any material beyond the slope lines indicated, without written authorization.	Approval authority shifts to the DEVELOPMENT ENTITY.	
29	204.3	j	204-1	Remove and satisfactorily dispose of all soil and organic matter from within the limits of the existing ditch and side slopes as indicated or directed and as specified in Section 204.3(f).	Approval authority shifts to the DEVELOPMENT ENTITY.	
30	205.3	a	205-1	Do not use material from borrow excavation until all suitable and available project excavation is used, unless otherwise directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
31	205.3	a	205-1	The contractor may waste suitable material and replace it with common borrow material after obtaining written authorization from the District Executive.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
32	205.3	a	205-1	If suitable material is available on the project, the Representative may, upon request, authorize in writing the widening of areas adjacent to slopes to obtain a portion or all of the excavation in place of borrow excavation, as shown on the Standard Drawings.	Approval authority shifts to the DEVELOPMENT ENTITY.	
33	205.3	c	205-1	When foreign or selected borrow excavation is required, do not begin operations until the material and placement sequence is accepted in writing and an Erosion and Sediment Pollution Control Plan is accepted by the County Conservation District and/or the DEP and by the Representative, as applicable.	Approval authority shifts to the DEVELOPMENT ENTITY.	
34	206.3	a	206-2	Where undercutting is not directed, loosen embankment foundation areas to a depth of at least 200 mm (8inches) and compact to the required dry mass (dry weight) density as determined in AASHTO T 99, Method C. In wet areas or unstable areas, the Representative may waive this requirement.	Approval authority shifts to the DEVELOPMENT ENTITY.	
35	206.3	b1	206-2	Except as specified in Section 206.3(b)2 or except for rock, place embankment material for the full width in uniform horizontal layers of not more than a loose 200 mm (8-inch) depth, unless otherwise directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
36	206.3	b1	206-2	The Contractor may end-dump material in water to the elevation necessary to establish	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				a satisfactory working platform if rock is used, as approved by the Representative.	ENTITY.	
37	206.3	c	206-4	Replace embankment that, in the Representative's judgment, has been damaged or displaced due to the following: carelessness or negligence, natural causes such as storms and floods, shrinkage of embankment material, and all other reasons not attributable to other than movement of the natural ground upon which embankment is placed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
38	210.	c	210-1	Whenever the Representative suspects an area is deficient or irregular, check the finished surface with a template and 3-foot straightedge.	Approval authority shifts to the CQAF.	
39	212.3	c	212-1	Undercut areas of soft material and replace with acceptable compacted material, as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
40	212.3	c	212-1	Overlap only when directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
41	212.3	c	212-2	Use a minimum (6-inch layer of bedding stone and a greater drop height combination if the combination produces the placement, thickness, gradation, and fabric integrity requirements, and if permitted.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
42	212.3	f	212-2	Compact the subbase material with a roller in static mode, if directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
43	220.2	j	220-1	Submit a mix design and test results (density and strength) to the Representative, at least 3 weeks before construction.	Approval authority shifts to the DEVELOPMENT ENTITY.	
44	220.3	a	220-3	Produce and transport according to Section 704, excluding maximum temperature range of 90F, or by other approved methods from a facility accepted by the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
45	220.3	b	220-3	Submit the sequence of operations at least 4 weeks before starting the work.	Approval authority shifts to the DEVELOPMENT ENTITY.	
46	220.3	b	220-3	If excavation cannot be dewatered, place flowable backfill by a tremie procedure approved by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
47	220.3	b	220-3	Protect finished surface from frost, erosion, and damage with suitable covers of soil, aggregate, concrete, pavement, or other material approved by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
48	220.3	b	220-3	For the mix for dikes use less water to produce a 3-inch minimum slump, as directed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
49	220.3	b	220-3	The Contractor may thicken the mix in other areas if allowed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
50	220.3	b1	220-3	Repair or replace any damaged items, as directed by the Representative, at no additional cost to the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
51	220.3	b1	220-3	Provide preformed drain, no more than 2 inches thick, between the wall and the flowable fill and provide outlets at not more than 15 feet through the wall, or as directed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
52	220.3	d	220-4	For flowable backfill Type A, Type B, and Type C material, do not open to traffic until 1 hour after the surface bleed water has dissipated and as allowed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
53	220.3	d	220-4	Open flowable backfill Type D to traffic when directed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	

b. Publication No. 408 Section 300 – Base Courses

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	303.2	e	303-1	Submit, for review by the Representative, a mix design using 90.72 kg (200 pounds of cement per cubic meter (cubic yard) based on the saturated surface-dry rodded unit weight of aggregate.	Approval authority shifts to the DEVELOPMENT ENTITY.	
2	303.3	e	303-2	Use an approved asphalt paver or mechanical spreader, equipped with screed, plate vibrator, and fully automated sensors to control profile and transverse grade.	Approval authority shifts to the DEVELOPMENT ENTITY.	
3	303.3	e	303-2	One roller pass is defined as one trip of the roller in one direction over any one spot. Perform handwork as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
4	303.3	f	303-2	Test the finished surface at locations the Representative suspects are irregular and at transverse joints and paving notches.	Approval authority shifts to the CQAF.	
5	303.3	g	303-2	Cure with white membrane forming curing compound as specified in Section 501.3(1)1.c except apply at a rate of 1 L/2 m ² (1 gallon per 75 sq. ft.) + 10% of the surface area or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
6	303.3	j	303-2	After curing the CTPBC and at locations determined by the Representative, carefully dig or drill one full-depth, test hole for each. The Representative will measure the depth of the CTPBC.	Approval authority shifts to the CQAF.	
7	303.3(k)	k	303-2	CTPBC is defective when the depth is deficient by 12mm (1/2 inch) or more from the indicated depth, deficient in surface tolerance, or when the surface contains defects caused by rain or improper finish that in the Representative's opinion cannot be repaired.	Approval authority shifts to the CQAF.	
8	303.3(k)	k	303-2	Unless otherwise directed by in writing by the District Executive, remove the defective CTPBC full depth at no cost to the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
9	303.3(k)	k	303-2	Submit a plan to the Representative with proposed methods to remove and replace the CTPBC. Remove and replace the CTPBC after review of the plan.	Approval authority shifts to the DEVELOPMENT ENTITY.	
10	309.3(b)	b	309-1	If the work is halted because of weather conditions, the Representative may allow the contractor to place limited quantities of base course that are en route to the project.	Approval authority shifts to the DEVELOPMENT ENTITY.	
11	309.3(m)	m	309-1	On the top lift and in the presence of the Inspector, drill full depth cores at one random location selected by the Inspector according to PTM No.1 in each 2500m3	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				(3000 square yards) of completed base course and at other locations the Inspector suspects are deficient.		
12	Section 316			No instances.	No Change required.	
13	320.2	c1	220-1	When Asphalt cement is used in the mixture, prepare and submit a JMF to the District Materials Engineer/District Materials Manager for acceptance.	Approval authority shifts to the DEVELOPMENT ENTITY.	
14	320.2	c1	320-1	The Representative may require a new JMF if unsatisfactory results or other conditions make it necessary.	Approval authority shifts to the DEVELOPMENT ENTITY.	
15	320.3	b1	320-2	If using bituminous material other than Asphalt Cements, do not place base course from September 15 to May 1, unless otherwise permitted.	Approval authority shifts to the DEVELOPMENT ENTITY.	
16	320.3	f	320-2	If additional compaction does not obtain satisfactory density, remove and replace the defective lot. The Representative may require additional density tests to determine if the defective area is less than the entire lot.	Approval authority shifts to the DEVELOPMENT ENTITY.	
17	320.3	h	320-3	At locations determined by the Representative, carefully dig or drill one test hole to the full depth of the completed base course...The Representative will measure the depth of the base course. After	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				the Representative completes depth measurements, backfill and compact base course mixture in the test holes. Immediately remove and replace sections where the depth is deficient by 1/2" or more. Start correction at point of determined deficiency...		
18	321.3	b1	320-1	The Contractor may use bulk cement with acceptable equipment and handling methods.	Approval authority shifts to the DEVELOPMENT ENTITY.	
19	321.3	b1	321-2	Allow only the necessary shaping and processing equipment to travel over the spread cement or mixture; remove and replace cement or mixture that becomes displaced or contaminated, as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
20	321.3	d	321-2	During the shaping operation, if directed, scarify and recompact the surface to eliminate imprints left by equipment.	Approval authority shifts to the DEVELOPMENT ENTITY.	
21	321.3	f	321-2	After completing the base course, sweep it free of foreign material. Moisten and roll to integrate loose and dry surface material, as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
22	321.3	f	321-2	If required, use an acceptable method to protect the completed base course from freezing until applying the surface course.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
23	321.3	g	321-2	As directed, remove and replace sections where the density is 80 kg/m ³ (5 pounds per cubic foot) or more below that specified.	Approval authority shifts to the DEVELOPMENT ENTITY.	
24	341.2(b)			Add bituminous material to the reclaimed material according to the approved mix design.	Approval authority shifts to the DEVELOPMENT ENTITY.	
25	341.2(d)	d	341-1	Establish the mix design according to Bulletin 27, and submit the mix design to the District Materials Engineer/District Materials Manager for review at least 3 weeks before the planned start of mixture production.	Approval authority shifts to the DEVELOPMENT ENTITY.	
26	341.2	e1	341-1	Prepare a QC Plan, as specified in Section 106, and submit for review at the start of the project. Do not start actual work until the QC Plan has been reviewed and approved by the Engineer.	Approval authority shifts to the DEVELOPMENT ENTITY.	
27	341.3	b	341-2	With written approval of the Representative, the Contractor may place base course when no freezing temperatures occur for 24 hours before paving and when the project ambient air temperature is 7°C (45F) and rising.	Approval authority shifts to the DEVELOPMENT ENTITY.	
28	341.3	c	341-2	Continue compaction until the Representative determines additional passes do not appreciably increase the density.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
29	341.3	c	341-2	If the Representative determines that the Contractor achieved the minimum density with minimal compaction, the Representative may require the Contractor to construct a new control strip to verify or establish a new minimum density.	Approval authority shifts to the DEVELOPMENT ENTITY.	
30	341.3	e	341-2	Immediately correct damage to the base course caused by construction equipment to the Representative's satisfaction.	Approval authority shifts to the DEVELOPMENT ENTITY.	
31	342.3	a1	342-1	Provide a continuous-flow or batch-type mixer accepted by the Engineer and equipped with batching or metering devices to measure the specified quantities of the materials.	Approval authority shifts to the DEVELOPMENT ENTITY.	
32	342.3	c	342-1	The Representative may require vehicle protective covers.	Approval authority shifts to the DEVELOPMENT ENTITY.	
33	342.3	c	342-1	Unless allowed, do not use motor graders.	Approval authority shifts to the DEVELOPMENT ENTITY.	
34	342.3	c	342-1	With written approval of the Representative, the Contractor may place base course when no freezing temperatures occur for 24 hours before paving and when the project ambient air temperature is 7°C (45F) and rising.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
35	342.3	h	342-2	The Representative will designate one test location in each 2500 m ² (3,000 square yards) of completed base course and at locations the Representative suspects the depth is deficient.	Approval authority shifts to the CQAF.	
36	350.3	b	350-1	For quantities greater than 1500 tonnes (1,500 tons), prepare and submit a Subbase Delivery Plan to the Representative, if directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
37	350.3	b	350-1	If directed, correct unsatisfactory subbase conditions developing ahead of the base and paving operations by scarifying, reshaping, and recompacting, or by replacing the subbase.	Approval authority shifts to the DEVELOPMENT ENTITY.	
38	350.3	c	350-1	Use acceptable methods to mix materials and water before delivery to the project.	Approval authority shifts to the DEVELOPMENT ENTITY.	
39	350.3	c	350-1	Use a blend of materials from different sources only if allowed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
40	350.3	d	350-1	If permitted and when using granulated slag, the Contractor may place a maximum compacted layer of 150 mm (6 inches) when the full layer depth is compacted as specified in this Section.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
41	350.3	d	350-1	In areas inaccessible to spreaders or in special areas, and if permitted, deposit the subbase material on the prepared area.	Approval authority shifts to the DEVELOPMENT ENTITY.	
42	350.3	e	350-2	At locations directed by the Representative, determine the in-place density for each 2500 m ² (3,000 square yards), of each layer according to AASHTO T 191 or T 310.	Approval authority shifts to the CQAF.	
43	350.3	e	350-2	If the retained is 20% or more for the 19.0 mm (3/4-inch) sieve or if the subbase material is No. OGS, the Representative will accept compaction when the material does not move under the compaction equipment specified in Section 350.3(a)2.	Approval authority shifts to the CQAF.	
44	350.3	g	350-2	The Representative will measure the depth of the finished subbase.	Approval authority shifts to the CQAF.	
45	350.3	g	350-2	The Representative may require additional test holes to determine the limits of the defective area.	Approval authority shifts to the CQAF.	
46	350.3	g	350-2	After recompacting, the Representative may require test holes to verify the subbase depth is within 13 mm (1/2 inch) of the indicated depth.	Approval authority shifts to the CQAF	
47	360.2	d1	360-1	Before production, obtain approval of the method to introduce and mix the lime and aggregate.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
48	360.2	e1	360-2	When required, the Department will perform the tests at the LTS.	Approval authority shifts to the DEVELOPMENT ENTITY.	
49	360.2	e1	360-2	Submit a copy of the JMF to the District Materials Engineer/District Materials Manager at least 3 weeks before the scheduled start of producing the mixture for the project.	Approval authority shifts to the DEVELOPMENT ENTITY.	
50	360.2	e2	360-2	Do not start ATPBC production until after the Representative reviews the QC Plan.	Approval authority shifts to the DEVELOPMENT ENTITY.	
51	360.2	e4	360-2	Provide the certification to the Inspector-in-Charge within 1 working day after taking QC tests.	Approval authority shifts to the CQAF.	
52	360.2	e4	360-2	For approved gravel and slag mixtures, the Representative may allow the Contractor to exceed the upper limit.	Approval authority shifts to the DEVELOPMENT ENTITY.	
53	360.3	b	360-2	If work is halted because of weather conditions, the Representative may allow the Contractor to place limited quantities of ATPBC that are en-route to the project.	Approval authority shifts to the DEVELOPMENT ENTITY.	
54	360.3	h	360-3	Perform handwork at locations directed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
55	360.3	l	360-3	Test the finished surface at locations the Representative suspects are irregular and at transverse joints and paving notches.	Approval authority shifts to the CQAF.	
56	360.3	m	360-3	The Representative may require additional test holes in areas the Representative suspects are deficient in depth.	Approval authority shifts to the CQAF.	
57	360.3	m	360-3	The Representative will measure the depth of the base course.	Approval authority shifts to the CQAF.	
58	360.3	m	360-3	Using material acceptable to the Representative, backfill the test holes and compact the material to fill the test hole flush with the completed base course.	Approval authority shifts to the CQAF.	
59	360.3	n	360-4	Replace areas damaged or contaminated, as directed and at no cost to the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
60	360.3	o	360-4	Unless otherwise directed in writing by the District Executive, remove and replace ATPBC deficient in surface tolerance, deficient in depth, defective in asphalt content, or excessive in percent passing the 75 µm (No. 200 sieve).	Approval authority shifts to the DEVELOPMENT ENTITY.	
61	360.3	o	360-4	With written permission from the District Executive, the Contractor may fill low areas during construction of the next pavement course.	Approval authority shifts to the DEVELOPMENT ENTITY.	

c. Publication No. 408 Section 400 – Flexible Pavements

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	409.2	e	409-2 to 6	<p>Do not ship the mixture to the project until after the Representative reviews and verifies that results conform to the single and multiple sample tolerances in Tables A and B. Certify the theoretical maximum specific gravity value to the Inspector daily using Form CS-4171 or another acceptable form. After sampling, test the mixture and provide test results to the Representative within 500 tons of production. Provide a written explanation of the problem and a proposed solution to the Department. After the Representative reviews the proposed solution and authorizes production to continue, resume production and perform JMF verification according to the QC Plan. Maintain and provide the Representative access to records of all sampling, testing, and calculations.</p>	<p>Department retains responsibility.</p>	<p>DEVELOPMENT ENTITY should be made aware of corrective actions occurring at a HMA/WMA production facility by Department as it may impact and be applicable to other mixtures being supplied from this plant to other RBR project packages by the DEVELOPMENT ENTITY.</p>
2	409.2	f	409-6	<p>Mixture Acceptance. For standard construction, the Department will accept the mixture according to the appropriate level in Table C. For RPS construction, the specified in Section 409.3(h)2.</p> <p>Certification Acceptance. Acceptance by certification is appropriate for the following mixtures, appropriate level in Table C. For RPS construction, the</p>	<p>Approval authority shifts to the DEVELOPMENT ENTITY.</p>	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				Department will accept the mixtures by lot acceptance as Department will accept the mixtures by lot acceptance as conditions, or applications: <ul style="list-style-type: none"> • Scratch courses, leveling courses less than 2 inch depth and driveway adjustments. • Mixtures used by Department maintenance forces. • Mixtures purchased by local or municipal governments. • Mixtures placed in quantities not exceeding 500 tons in a continuous placement operation unless otherwise directed by the Representative. • Other mixtures, conditions, or applications as approved by the Representative. Provide the form to the Inspector-in-Charge within 1 working day after completing the QC tests. If the mixture does not conform to the above requirements, do not certify the mixture. Instead, provide all QC test results to the Inspector-in-Charge.		
3	409.2 CONTINUED	f		If using printed ticket results for asphalt content, provide the percentage of daily printed ticket results within 0.2 percentage points of the JMF to the Inspector-in-Charge.	Approval authority shifts to the CQAF.	
4	409.2	f		Maintaining Approval to Certify Mixtures.	Department retains	IA samples are part of a

No.	Pub 408 Section Reference and page No.		Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
	CONTINUED		<p>The Department may suspend a plant's approval to certify mixtures if QC is not performed according to the producer QC Plan, mixtures are not produced according to Bulletin 27, a mixture cannot be certified on 2 consecutive production days, or as described below.</p> <p>The Department may take IA samples of the completed mixture at the plant. In the presence of the Department, test the IA samples for asphalt content and gradation according to the test methods indicated in the producer QC Plan.</p>	responsibility.	systematic IA approach to ensure equipment and tester proficiency for all Department projects. QA samples collected at the plant may be part of a quality assurance review of a producer performing work on other Department projects and may be collected during a random, unannounced QA visit/review of the plant.
5	409.2 CONTINUED	f	<p>The Department may take QA samples of the completed mixture at the plant or on the roadway directly from the uncompacted mixture placed by the paving equipment specified in Section 409.3(e).</p> <p>The Department will test QA samples according to PTM No. 757 or PTM No. 702, Modified Method D, if previously identified problematic aggregates are used in the mixture, for conformance to Table A. If the results of the QA samples do not comply with Table A, review the producer QC Plan and the QC test results that followed the QA samples for conformance to Table A. If QC results do not conform to Table A, perform the corrective actions</p>	Approval authority shifts to the DEVELOPMENT ENTITY.	QA samples collected at the plant may be part of a quality assurance review of a producer performing work on other Department projects and may be collected during a random, unannounced QA visit/review of the plant.

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				necessary to provide a mixture conforming to Table A. After completing corrective actions or the sample review, the Department will perform an on-site evaluation of the producer's plant operation and QC and then take a sample of the completed mixture at the plant. In the presence of the Representative, test the sample. If the sample does not comply with Table A, the Department will suspend certification. Immediately suspend shipping mixtures accepted by certification to the project. After testing verifies that the produced mixture conforms to Tables A and B and with the Representative present, conduct JMF verification according to the producer QC Plan.		
6	409.3	A1,2	409-7	1. Submit the QC Plan to the Representative before or at the pre-construction conference. Do not start paving until after the Representative reviews the QC Plan. 2. Preplacement Meeting. At least 2 weeks before placing bituminous paving mixtures, schedule a bituminous preplacement meeting with the Representative to review at a minimum the specification, paving operation QC Plan, sequence of paving operations, mixture acceptance, density acceptance and the care and custody of bituminous	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				acceptance samples.		
7	409.3	g	409-9	Apply a tack coat to previously placed courses if the Representative determines a tack coat is necessary to ensure bonding between the two courses.	Approval authority shifts to the DEVELOPMENT ENTITY.	
8	409.3	h	409-9	The Contractor may use Class AET, Class E-6 (AASHTO SS-1 or CSS-1), or E-8 (AASHTO SS-1h or CSS-1h) emulsified asphalt instead of hot bituminous material if allowed by the Inspector-in-Charge.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.		Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
9	409.3 CONTINUED	h	<p>The Inspector will select different sample locations in each subplot according to PTM No. 1 and PTM No. 746. In the presence of the Inspector, obtain one loose mixture sample for each subplot directly from the uncompacted mixture placed by the paving equipment specified in Section 409.3(e) and immediately package. Immediately after packaging and in the presence of the Inspector, identify the samples by ECMS project number, lot and subplot number, location (station and offset), date of placement, mixture type, and as acceptance samples (Sample Class AS). Immediately after identifying, submit the samples to the Inspector.</p> <p>LTS Testing. If discarding an extreme value reduces a lot to less than three remaining test results, the Department will accept the lot as specified in Section 409.3(h)2.a.1. The Department will accept lots with three or more test results as specified in Section 409.4(a)4 or Section 409.4(b). If the asphalt content or the percent passing the 75 mm (No. 200) sieve is not within the single sample (n=1) or multiple sample (n≥3) tolerances in Table A for two consecutive lots or a total of three lots, stop all production of the JMF. Determine the cause of the problem and provide a proposed solution to the Department. Do not resume production of</p>	Approval authority shifts to the CQAF.	It is assumed that the Department would want to collect and retain material test results for historical analysis and reporting. With eCAMMS, the DEVELOPMENT ENTITY’s consultant will be added as a new “Owning Lab” so that they have access to eCAMMS and access to input material test result data.

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				<p>the JMF until the Representative reviews the proposed solution and authorizes production to continue. The Department will address pattern segregation as follows:</p> <p>3.a Evaluating Pattern Segregation. If the Representative observes pattern segregation that may result in defective pavement, then:</p> <ul style="list-style-type: none"> • The Inspector will notify the Contractor of the observed pattern segregation. • The Contractor may continue to work at his or her own risk while he or she immediately and continually adjusts the operation to eliminate the pattern segregation from future work. • As a minimum and in the presence of the Representative, determine the average depth of pavement surface macrotexture according to PTM No. 751 in areas with the pattern segregation and in areas with non-segregated pavement. The pattern segregation is unacceptable if the difference in average pavement texture depth between the non-segregated and segregated areas exceeds 0.024 inch. The Representative will determine if the pavement is defective as specified in Section 409.3(h)3.c. <p>3.b Test Section. If the macrotexture tests identify unacceptable pattern segregation, then:</p>		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				<ul style="list-style-type: none"> • Immediately suspend placing the bituminous course. Evaluate the cause of pattern segregation according to the Paving Operation QC Plan and, as directed, provide proposed corrective actions to the Representative and do not resume placing the bituminous course until after the Representative reviews the proposed corrective actions and authorizes paving to continue. • Determine if the pattern segregation resulted in defective pavement as specified in Section 409.3(h) 3.c. • After the Representative allows paving to resume, place a test section not to exceed 200 tons. If the corrective actions do not eliminate observed pattern segregation, the Department will suspend paving, even if it is before the Contractor places the entire test section. Propose additional corrective actions, and construct another test section. Resume normal paving operations after constructing an entire test section without pattern segregation as determined by the Representative. <p>3.c Defective Pavement. At locations selected by the Inspector and with the Inspector present, drill a minimum of three 6-inch diameter cores from the area of pattern segregation and a minimum of three cores from the pavement representing a non-segregated area. Do</p>		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				<p>not compress, bend, or distort samples during cutting and handling and immediately provide the cores to the Inspector. The Inspector will transport cores to the producer's laboratory. With the Inspector present, test the cores at the plant for density, asphalt content, and gradation. The Department may request additional tests as part of its evaluation of pattern segregation. Determine the maximum theoretical density according to Bulletin 27, the core density according to PTM No. 715, and asphalt content according to PTM No. 757 if previously identified problematic aggregates are used in the mixture, PTM No. 702 modified Method D, or other test method identified in the producer QC Plan.</p> <p>Evaluating Flushing. When the Representative observes flushing, then:</p> <ul style="list-style-type: none"> • The Representative will immediately notify the Contractor of the observed flushing. • The Contractor may continue work at its own risk while it immediately and continually adjusts the operation to eliminate flushing from future work. • In the presence of the Representative, determine the average depth of pavement surface macrotexture according to PTM No. 751 in areas of suspected flushing. If the average texture depth is less than or equal to 0.006 inches, then the pavement 		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				<p>will be considered to be flushed and is defective.</p> <p>4.b Test Section. If the macrotexture tests identify flushing, then:</p> <ul style="list-style-type: none"> • Immediately suspend placing the paving course. Evaluate the cause of flushing according to the Paving Operation QC Plan and as directed. Provide proposed corrective actions to the Representative and do not resume placing the paving course until after the Representative reviews the proposed corrective actions and authorizes paving to continue. • Remove and replace the defective wearing course at no cost to the Department for the full width of the affected lane and a minimum of 5 feet beyond each end of the area of defective wearing course. Construct replacement wearing course conforming to the appropriate surface tolerances as specified in Section 409.3(1). • After the Representative allows paving to resume, place a test section not to exceed 200 tons. If the corrective actions do not eliminate observed flushing, the Department will suspend paving even if it is before the Contractor places the entire test section. Propose additional corrective actions and construct another test section. Resume normal paving operations after constructing an entire test section without flushing as determined by the 		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				Representative.		
10	409.3	j	409-14	<p>Mat Density Acceptance.</p> <p>1. General. The Department will accept the mat density of standard construction according to one of the levels in Table F. Areas may be accepted by non-movement or optimum-rolling pattern based on the criteria in Sections 409.3(j)2 and 409.3(j)3. Do not place mixtures for non-movement or optimum-rolling pattern acceptance until the Department has approved the density-acceptance level. For courses with mixture acceptance by certification, the density acceptance level will be either non-movement or optimum-rolling pattern. The Department will accept the mat density of RPS construction by lots and pavement cores as specified in Section 409.3(j)4.</p> <p>Non-Movement. The Inspector-in-Charge will approve density acceptance by non-movement for the following materials, conditions, or applications:</p> <ul style="list-style-type: none"> • Scratch courses or leveling courses less than 1-inch in depth or equal to or less than 110 pounds per square yard. • Areas of paving or patching less than 4 feet in width or narrow enough to cause bridging of the area by approved compaction equipment. <p>The Inspector-in-Charge will accept</p>	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				<p>density by non-movement for the following materials, conditions, or applications if they are determined by the Representative to be non-critical for density:</p> <ul style="list-style-type: none"> • Materials placed in small quantities not exceeding 500 tons in a continuous placement. • Mixtures placed on unstable or non-uniform bases. • Mixtures used for patching, road widening, shoulders, driveway adjustments, and other miscellaneous applications determined by the Representative. Shoulders where density is critical will be accepted by pavement cores as specified in Section 409.3(j)4.a. The Department will accept the density when the mixture does not move under the compaction equipment. <p>Optimum-Rolling Pattern. The Inspector-in-Charge may accept density using an optimum-rolling pattern for the following materials, conditions, or applications:</p> <ul style="list-style-type: none"> • Materials placed in small quantities not exceeding 500 tons in a continuous placement. • Mixtures placed on unstable or non-uniform bases. • Leveling courses or other courses that are greater than or equal to 1-inch in depth or greater than or equal to 110 pounds per 		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				<p>square yard. 409.3(j) 409.3(j) 409-15 Change No. 6</p> <ul style="list-style-type: none"> • Mixtures used for patching, road widening, driveway adjustments, shoulders where density is not critical, and other miscellaneous applications determined by the Representative. Shoulders where density is critical will be accepted by pavement cores as specified in Section 409.3(j)4.a. • Mixtures placed at less than the minimum compacted depths in Table G. With the Inspector and the Contractor's certified HMA field technician present, determine density with an approved nuclear gauge according to PTM 402, or determine density with an approved electrical impedance gauge according to PTM No. 403. In the presence of the Inspector, follow the control strip technique specified in PTM No. 402 to construct at least one control strip to establish the optimum-rolling pattern for each course. Document readings using the forms provided in PTM No. 402 and provide the completed forms to the Inspector. Compact the course according to the optimum rolling pattern. During paving, the Representative may require the Contractor to construct a new control strip to verify the optimum-rolling pattern. <p>Density Acceptance Samples. The Inspector will select different sample</p>		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				<p>locations in each sub-lot according to PTM No. 1, PTM No. 729, and PTM No. 746. With the Inspector present, drill 6-inch diameter cores as soon as possible but no later than the day following placement. If samples are damaged, immediately obtain replacement samples, as 409.3(j) 409.3(k) 409-16 Change No. 6 directed by the Inspector, from within 12 inches of the original sample location. In the presence of the Inspector, identify the samples by ECMS project number, lot and subplot number, location (station and offset), date of placement, mixture type, and as acceptance samples (Sample Class AS). Immediately deliver the samples to the Inspector and provide sample containers of sufficient strength to prevent samples from being damaged during transport. The Representative will submit samples for one lot in one container. For quality control purposes, a maximum of one pavement core per sub-lot may be obtained unless the Representative allows additional cores.</p> <p>LTS Acceptance Testing. The Department will determine acceptance, with respect to density, as specified in Section 409.4(a)4 or Section 409.4(b). Do not resume paving until after the Representative reviews the proposed solution and authorizes paving to</p>		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				continue.		
11	409.3	k	409-16	Other Joints. Remove excess bituminous material and immediately cover the sealed area with a light application of dry sand that is acceptable to the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
12	409.3	l	409-17	Surface Tolerance. Test the finished surface with a 10-foot straightedge at areas the Representative determines may be deficient or irregular.	Approval authority shifts to the CQAF.	
13	409.3	m	409-18	For courses with a designed course depth and density acceptance by non-movement or optimum rolling pattern, the Inspector will calculate the mass per square meter (weight per square yard) for verification of yield. If yield results indicate insufficient course depth, drill one 6 inch diameter core for each 500 tons of material placed to determine the extent of the deficient depth. Core locations will be determined using PTM No. 1. For courses with density acceptance by lots, the inspector will measure the depth of each sub-lot according to PTM No. 737 using density acceptance samples. Pavement deficient in depth by more than 1/4 inch is defective work. Pavement deficient in depth by more than 1/8 inch in three or more adjacent core locations is defective work. The extent of the defective work is the entirety of all sublots represented by	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				the adjacent deficient core samples. After the Inspector completes depth measurements, backfill, compact, and seal core holes with the mixture used to construct the course.		
14	409.3	o	409-18	Defective Work. Department acceptance and QA testing shall not relieve the Contractor of responsibility for material or workmanship that the Representative determines is defective before the Department issues the acceptance certificate. BOCM will review Representative determinations of defective material or workmanship.	Approval authority shifts to the DEVELOPMENT ENTITY.	
15	411.2	e	411-1	Maintain records of the testing of WMA and make available for review by the Representative when requested.	Approval authority shifts to the CQAF.	
16	411.2	i	411-3	Technical Representative present during the initial production of the WMA and subsequently at the project location during the initial placement operations or, if not required to be on site, on-call and capable of being in direct, verbal contact with the Producer, Contractor, and/or Department Representative within 2 hours after initial contact. If the Department directs a Technical Representative is not required to be present on-site, have the Technical Representative identified in the Producer's QC Plan remain on-call for technical	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				support.		
17	411.2	i	411-4	If there are no apparent technical issues, request that the Department Representative agree to release the Technical Representative from being present on-site.	Approval authority shifts to the CQAF.	
18	411.2	j	411-4	Indicate on the Producer’s QC Plan that exceeding the WMA production temperature range (50F maximum) is an acceptable practice for their specific WMA Technology when placed as an overlay on membrane systems.	Approval authority shifts to the DEVELOPMENT ENTITY.	
19	411.3	a	411-5	Prepare and submit additional information specifically related to all aspects of the field control of WMA concrete paving operations to the Representative as part of the paving operation QC Plan that addresses all recommendations and direction from the Technical Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
20	411.3	c	411-5	Make any plant modifications needed to introduce the WMA Technology additives, modifiers, or processes according to specific recommendations and direction from the Technical Representative or process manufacturer to achieve a uniform blend of the WMA Technology additive, modifier or foaming process and produce a WMA	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				mixture meeting these specifications.		
21	411.3	c	411-5	Dry the aggregate according to the specific recommendations and direction from the Technical Representative and heat to a suitable temperature so that the resulting completed mixture temperature is within the mixture temperature range established in the Producer QC Plan and recommended by the Technical Representative or manufacturer and that is within the master temperature range in Table A.	Approval authority shifts to the DEVELOPMENT ENTITY.	
22	419.2	a	419-1	Provide the Representative a copy of a Bill of Lading for bituminous material on the first day of paving and when the batch number changes.	Approval authority shifts to the CQAF.	
23	419.2	e	419-5	Reviews and verifies that results conform to the single and multiple sample tolerances in Tables D and E.	Approval authority shifts to the CQAF.	
24	419.2	e	419-5	Test the mixture and provide test results to the Representative within 500 tons. After the Representative reviews the proposed solution and authorizes production to continue, resume production and perform JMF verification according to the QC Plan.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
25	419.3	b	419-6	If work is halted because of weather conditions, the Representative may allow the Contractor to place limited quantities of mixture that are en route to the project.	Approval authority shifts to the CQAF.	
26	419.3	c2	419-6	Have the Representative approve all stabilizer addition systems.	Approval authority shifts to the CQAF.	
27	419.3	c	419-6	Perform an equipment calibration to the satisfaction of the Representative to show that the fiber is being accurately metered and uniformly distributed into the mix.	Approval authority shifts to the CQAF.	
28	419.3	g	419-6	Demonstrated during the trial demonstration specified in Section 419.3(g) and to the satisfaction of the Representative that no breaking of aggregate or flushing of asphalt binder results from the vibration.	Approval authority shifts to the DEVELOPMENT ENTITY.	
29	419.3	g	419-7	Demonstrate to the Representative that the proposed SMA mix can be produced, placed, and compacted to meet the requirements of this specification.	Approval authority shifts to the DEVELOPMENT ENTITY.	
30	419.3	i	419-7	Do not resume paving until the Representative reviews the proposed solution and authorizes production to continue.	Approval authority shifts to the DEVELOPMENT ENTITY.	
31	419.3	j	419-8	Adjust amplitude and frequency if vibratory rolling is approved by the	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				Representative.	ENTITY.	
32	419.3	p	419-8	Responsibility for workmanship that the Representative determines is defective before the Department issues the acceptance certificate.	Approval authority shifts to the CQAF.	
33	430.3	j	430.-2	Will accept density when the mixture does not move under the compaction equipment.	Approval authority shifts to the CQAF.	
34	439.3	c	439-1	Will accept density when the mixture does not move under compaction equipment.	Approval authority shifts to the CQAF.	
35	450.3	d	450-1	Cut out and patch the outlined area as marked by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
36	460.2	a	460-1	Submit a certificate to the Representative indicating the asphalt residue content of the material being used.	Approval authority shifts to the CQAF.	
37	460.3	b	460-1	Apply emulsified asphalt tack coat, at a rate approved by the Representative Correct all uncoated or lightly coated areas to the Representative's satisfaction.	Approval authority shifts to the DEVELOPMENT ENTITY.	
38	460.3	c	460-1	Repair damaged areas to the Representative's satisfaction before placing succeeding construction.	Approval authority shifts to the DEVELOPMENT ENTITY.	
39	461.3	b	461-1	Cover areas the Representative identifies	Approval authority shifts	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				as showing an excess of prime coat material with sufficient dry fine aggregate to blot up or remove excess prime coat material.	to the DEVELOPMENT ENTITY.	
40	461.3	c	461-1	Repair damaged areas to the Representative's satisfaction before placing succeeding construction.	Approval authority shifts to the DEVELOPMENT ENTITY.	
41	467.1		467-1	This work is placing heavy duty membranes over transverse and longitudinal joints and random cracks in existing concrete pavements at locations indicated or directed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
42	470.3		470-1	CONSTRUCTION—At least 2 weeks before the scheduled start work, submit a seal coat design for the Representative's review.	Approval authority shifts to the DEVELOPMENT ENTITY.	
43	470.3	b	470-1	Do not apply emulsified asphalt if, in the Representative's opinion, rain is imminent or if the Representative expects freezing temperatures within 24 hours after application.	Approval authority shifts to the DEVELOPMENT ENTITY.	
44	471.2	d1	471-1	Use an asphalt cement to pre-coat the aggregate only if it pre-coats the aggregate to the Representative's satisfaction.	Approval authority shifts to the DEVELOPMENT ENTITY.	
45	471.2	d2	471-1,2	Before producing the pre-coated aggregate, prepare a sample of the pre-	Approval authority shifts	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				coated aggregate for the Representative's inspection. The Representative will use the sample to establish the visual inspection standard associated with at least 90% of the visible surface area covered. During production, the Representative will determine if less than 90% of the visible surface area is covered. If the Representative determines less than 90% of the visible surface area is covered, the Contractor may determine the percent of uncoated material passing the 75 m (No. 200) sieve after dry sieving for 10 minutes. The Representative will accept the pre-coated aggregate if the percent passing does not exceed 0.5%.	to the CQAF.	
46	480.3		480-1	At least 2 weeks before the scheduled start of work, submit a surface treatment design for the Representative's review.	Approval authority shifts to the DEVELOPMENT ENTITY.	
47	480.3	b	480-1	Allow the first application to cure to the Representative's satisfaction.	Approval authority shifts to the CQAF.	
48	482.2	e	482-1	Provide fine aggregate, asphalt emulsion, water, and, if required, filler conforming to the Representative directed composition by mass (weight) percentages that are within the limits of Table A.	Approval authority shifts to the DEVELOPMENT ENTITY.	
49	483.2	f	483-1	If minor adjustments are required during construction, based on field conditions, provide the changes in writing to the	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				Representative.	ENTITY.	
50	483.3	a	483-3	Hold a preplacement meeting on site or at a location that is acceptable to the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
51	483.3	g1	483-4	Give the Contractor a warning and an opportunity to immediately correct mixture application and set time.	Approval authority shifts to the CQAF.	
52	483.3	j	483-5	Obtain samples of the aggregates from stockpiles designated and constructed for each mixture type and each project. All acceptance samples will be obtained and all acceptance tests will be performed by the Representative.	Approval authority shifts to the CQAF.	
53	483.3	k	483-6	Will identify a location to perform the test strip will evaluate and approve the test strip. Does not have the authority to waive or eliminate the test strip requirement.	Approval authority shifts to the CQAF.	
54	483.3	l	483-6	If these areas exist they will be considered defective work, as determined by the Representative.	Approval authority shifts to the CQAF.	
55	483.3	1	483-6	Do not overlap longitudinal joints more than 4 inches, except on irregular roadway widths when approved by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
56	483.3	m	483-6	Do not allow traffic on newly completed surface course until mix has set sufficiently to prevent pick-up and until directed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
57	483.4	a	483-7	Under the direction and supervision of the Representative complete measurements.	Approval authority shifts to the DEVELOPMENT ENTITY.	
58	490.3		490-1	Carefully remove the existing bituminous surface course, within limits shown on the plans or where the Representative directs. At locations determined by the Representative, clean the surface of the existing base course and repair damage to the adjacent surface or underlying base.	Approval authority shifts to the DEVELOPMENT ENTITY.	
59	491.3	b	491-1	Maintain all milled surfaces and repair or replace any areas damaged due to the bituminous overlay not being placed within 7 calendar days of the milling operation methods accepted by the Representative at no additional cost to the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
60	492.3	a	492-1	Suitable supplemental equipment or methods, approved by the Representative, may be used in small or confined areas and around utility facilities.	Approval authority shifts to the DEVELOPMENT ENTITY.	
61	492.3	b	492-1	Repair areas where sound pavement has been damaged by milling operations at no additional cost to the Department, in a	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				manner satisfactory to the Representative. Maintain all milled surfaces and repair or replace any areas damaged due to the bituminous overlay not being placed within 7 calendar days of the milling operation methods accepted by the Representative.	ENTITY.	
62	492.3	c	492-1	Areas of the milled surface to be patched due to spalling or dislodgement of unsound pavement during profile milling operation will be designated by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	

d. Publication No. 408 Section 500 – Rigid Pavements

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	501.3	a1	501-1	1. Field Operation QC Plan. Prepare a paving operation QC Plan, as specified in Section 704.1(d)1.a, and submit it to the Department for approval	Approval authority shifts to the DEVELOPMENT ENTITY.	
2	501.3	n2	501-10	Prepare and submit a QC Plan to the Representative at the start of the project.	Approval authority shifts to the DEVELOPMENT ENTITY.	
3	501.3	o	501-11	The Representative will consider pavements more than 1/4" to be defective.	Approval authority shifts to the CQAF.	
4	501.3	q	501-11	The Representative will determine when pavement may be opened to traffic.	Approval authority shifts to the DEVELOPMENT ENTITY.	
5	501.3	s	501-11	The Department will divide the mainline pavement into lots representing not more than 3,000 square yards of pavement in each traffic lane.	Approval authority shifts to the DEVELOPMENT ENTITY.	
6	501.3	s	501-11	The Inspector will determine the core depth according to PTM No. 614.	Approval authority shifts to the CQAF.	
7	501.3	s	501-12	If any core measurement is deficient by more than 1/2 inch in required depth, the Inspector will consider the pavement to be defective.	Approval authority shifts to the CQAF.	
8	501.3	s	501-12	Provide a written evaluation of the problem	Approval authority shifts	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				and the proposed solution to the Department.	to the DEVELOPMENT ENTITY.	
9	501.3	t	501-12	Unless otherwise directed in writing by the District Executive, remove and replace pavement that is defective.	Approval authority shifts to the DEVELOPMENT ENTITY.	
10	501.3	t	501-12	If removing and replacing pavement defective in depth, start at the determined point of deficiency as determined by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
11	501.3	d	501-2	“The Contractor may use forms with a base of not less than 6 inches in width...for narrow strips of widening ... if approved by the District Executive.”	Approval authority shifts to the DEVELOPMENT ENTITY.	
12	501.3	h	501-4	(h) Handling and Placing Reinforcement. The Representative will reject reinforcement with rust that has caused detectable reduction in cross-sectional area.	Approval authority shifts to the CQAF.	
13	501.3	i2	501-4	The Representative will not allow displacing coarse aggregate from the joint location by use of a vibrating T-bar, or by use of a filler at the joint.	Approval authority shifts to the CQAF.	
14	501.3	i2	501-4	Field coat the dowels with the graphite lubricant, as specified in Section 501.3(i), where necessary as determined by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
15	501.3	j	501-7	“The Representative will select 15 tie bars from the first day’s concrete placement according to PTM No. 1.”	Approval authority shifts to the CQAF.	
16	501.3	l	501-8	The Representative will suspend concrete operations immediately if sufficient curing is not provided.	Approval authority shifts to the CQAF.	
17	501.3	11c	501-9	The Representative will allow this method of curing if the air temperature is above 40 degrees F at the time of placement.	Approval authority shifts to the CQAF.	
18	506.3	s	506-1	The Inspector will determine lots and sublots as specified in Section 506.3(u). The Inspector will determine the location of each core using PTM No. 1.	Approval authority shifts to the CQAF.	
19	506.3	s	506-1	Provide a written evaluation of the problem and the proposed solution to the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
20	506.3	u1	506-2	The Representative will accept each lot for compliance with the specifications, for depth if the average core depth of the lot is more than the design thickness (D) minus 12.5 mm (0.5 inch) and not more than one individual subplot core depth is less than the design thickness minus 12.5 mm (0.5 inch).	Approval authority shifts to the CQAF.	
21	506.3	u2	506-2	The Representative will accept concrete for compliance with the specification requirements, for compressive strength and air content, on a lot-by-lot basis, as	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				specified in Section 105 and Section 106.		
22	506.3	u2	506-2	The Representative will accept concrete based on the adequacy and uniformity of compressive strength at the age of 28 days, and, with respect to the air content, when the PWL is 55% or greater.	Approval authority shifts to the CQAF.	
23	514.3	d1	514-1	Provide the Representative with documentation recording each cross slope test location and the maximum depth of depression or slope misalignment at that location.	Approval authority shifts to the CQAF.	
24	514.3	d2	514-1	Test the pavement surface roughness in the longitudinal direction and submit the record of the information to the IIC before beginning rehab work.	Approval authority shifts to the CQAF.	
25	514.3	d2	514-1	Test the pavement surface roughness in the longitudinal direction and submit the record of the information to the Inspector-in-Charge before beginning any diamond grinding work.	Approval authority shifts to the CQAF.	
26	514.3	e1	514-2	The Representative will designate lots starting at the beginning limit of paving and continuing to the ending limit of paving for each pavement lane and ramp that is 3.6 m (12 feet) or wider.	Approval authority shifts to the CQAF.	
27	515.3	a	515-1	Submit the QC plan to the Representative at least 21 days before the start of referencing	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				operations.	ENTITY.	
28	516.3	a	516-1	Prepare a QC Plan as specified in Section 106.03(a)2.a and submit it for review.	Approval authority shifts to the DEVELOPMENT ENTITY.	
29	518.3	c	518-2	Discontinue use of the wheel saw if unsatisfactory results are obtained as determined by the Representative.	Approval authority shifts to the CQAF.	
30	523.3	a	523-2	Submit the QC Plan for review before the start of the project. Do not start work until the QC plan has been approved.	Approval authority shifts to the DEVELOPMENT ENTITY.	
31	523.3	r	523-2	The Representative will determine when pavement will be opened to traffic, but no sooner than 24 hours or when the concrete attains the minimum required compressive strength.	Approval authority shifts to the DEVELOPMENT ENTITY.	
32	524.3	f	524-2	Obtain three drilled cores for each test in the presence of the Inspector. The Inspector will select coring locations at random, according to PTM No. 1. When directed, supply the Department with a minimum of three additional 100 mm or 150 mm (4-inch or 6-inch) diameter cores.	Approval authority shifts to the CQAF.	
33	524.3	m	524-3	Before opening to traffic, sound the newly placed bonded overlay/inlay as directed by and in the presence of the Inspector.	Approval authority shifts to the CQAF.	
34	525.3	a	525-2	Sound the pavement surface around the spalled area with a light hammer to detect	Approval authority shifts	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				delaminated areas in the presence of the inspector. Resound the repair area in the presence of the Inspector to ensure that all delaminated material has been removed.	to the CQAF.	
35	526.3	a	526-1	Submit a pavement rubblizing plan and list of proposed equipment for Department approval before start of construction.	Approval authority shifts to the DEVELOPMENT ENTITY.	
36	526.3	c	526-1	Provide equipment suitable to the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
37	528.3	a	528-1	Prepare a QC Plan as specified in Section 106.03 and submit it for review a minimum of 14 days before the start of work.	Approval authority shifts to the DEVELOPMENT ENTITY.	

e. Publication No. 408 Section 600 – Incidental Construction

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	601.2	a3b	601-1	Submit an annual endorsed copy to the Structural Materials Engineer for continued qualification.	Department retains responsibility.	
2	601.3	a	601-4	In advance of installations, submit to the Representative a detailed list of lifting equipment and hardware...	Approval authority shifts to the DEVELOPMENT ENTITY.	
3	601.3	g	601-5	Do not use movable supports below the top of the pipe backfill pay limit zone unless methods for maintaining integrity are submitted to and approved by the Chief Bridge Engineer.	Approval authority shifts to the DEVELOPMENT ENTITY.	
4	601.3	h	601-5	Before commencement of this work, submit a complete plan and schedule for pipe installation ... Do not proceed with pipe installation until the plan and schedule are accepted.	Approval authority shifts to the DEVELOPMENT ENTITY.	
5	601.3	n	601-6	Provide written documentation on Form CS-600 of all inspections to the Representative within 72 hours following each inspection	Approval authority shifts to the CQAF.	
6	601.3	n1	601-6	If signs of damage are identified during inspection, submit a plan for repair or replacement as specified in 601.3p for approval.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
7	601.3	o2	601-8	Perform a manual inspection according to PTM No. 450, Section 3, in the presence of the Representative for all 100 year design life pipe installations larger than 48 inch in diameter.	Approval authority shifts to the CQAF.	
8	601.3	p	601-8	All pipe remediation plans to the Representative for approval.	Approval authority shifts to the DEVELOPMENT ENTITY.	
9	603.3	b1a	603-3	Submit a plan for review before placing timber strutting, showing strut sizes, spacing, and jacking methods.	Approval authority shifts to the DEVELOPMENT ENTITY.	
10	605.3		605-2	Before construction or fabrication, obtain acceptance of shop drawings, if required.	Approval authority shifts to the DEVELOPMENT ENTITY.	
11	609			Inspector's Field Office and Inspection Facilities		Delete this section.
12	610.2	1f	610-1	Flexible plastic pipe, 150 mm (6 inches) or less in diameter, may be supplied in specified coiled lengths or standard increments agreeable to the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
13	610.2	3	610-2	The Department will determine the lot size for acceptance.	Approval authority shifts to the CQAF.	
14	610.2	9.d	610-3	Resins are to be virgin materials, unless otherwise approved, and identified as such in the certification statement.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
15	610.2	a9h	610-4	Provide standard fittings and splice connections along the pavement base drain, as indicated or as directed, of sufficient strength to withstand construction handling and permanent loading. Obtain approval for any nonstandard fittings and connections.	Approval authority shifts to the DEVELOPMENT ENTITY.	
16	610.3	a	610-4	Complete backfilling after having the pipe inspected by the Inspector-in-Charge.	Approval authority shifts to the CQAF.	
17	610.3	c.1	610-4	Submit the proposed installation method to the Representative, in writing, and note any deviation from the plans or from the manufacturer's approved drawings. Upon request by the Representative, have a technical representative from the manufacturer present during installation.	Approval authority shifts to the DEVELOPMENT ENTITY.	
18	610.3	c.5	610-5	The Representative may restrict installation of additional sections of base drain until acceptable outlet installations are completed.	Approval authority shifts to the CQAF.	
19	618.3	a	618-1	Obtain acceptance for drilling equipment and methods before drilling. Obtain acceptance for adjustments required to obtain final horizontal and concentric alignment.	Approval authority shifts to the DEVELOPMENT ENTITY.	
20	623.3	c	623-2	For precast units on curved sections, the Representative will allow a maximum 12 mm (1/2-inch) longitudinal joint.	Approval authority shifts to the CQAF.	
21	624.3	d	624-2	Place fabric on the side of the fence toward the highway unless otherwise indicated or directed.	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
					ENTITY.	
22	624.3	e	624-2	Install gates where indicated or directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
23	626.3	d	626-2	Correct any damage to gabions during construction at no cost to the Department, as directed by the Representative. Remove and replace gabions deemed unacceptable by the Representative.	Approval authority shifts to the CQAF.	
24	627.3	a	627-1	Immediately replace or repair barriers showing signs of damage that would hinder its performance, as determined by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
25	628.3	a	628-1	Reset barrier if construction operations require a change in protection or traffic or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
26	636.3	e	636-2	The Representative will determine the mixture temperature from within the range of 143 °C to 157 °C (290F to 315F) based on weather conditions and workability requirements at the time of placement.	Approval authority shifts to the DEVELOPMENT ENTITY.	
27	643.2	c1	643-1	When using bolts treated for future removal, provided manufacture recommendation to the Representative...	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
28	643.2	6a	643-2	Provide independent test results from the adhesive bolt manufacturer, of the following properties, for review and approval by MTD.	Approval authority shifts to the CQAF.	
29	643.2	c.6.c	643-2	Adhesives designed for installation below 5°C (41F) may be submitted and evaluated for approval if the lowest temperature of use specified is the installation/application temperature for physical properties testing.	Approval authority shifts to the CQAF.	
30	643.3	b3	643-5	Do not install anchors below 5°C (41F) or above 42.8°C (109F) unless manufacturer data can be provided and MTD has approved and listed the material in Bulletin 15 in advance. Anchors that are improperly bonded, as determined by the Representative, will be rejected.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
31	643.3 CONTINUED	b3		If removal of adhesive anchors is required, perform under the direction of the Representative, and provide manufacturer test data to support that this operation will not damage the surrounding concrete.	Approval authority shifts to the DEVELOPMENT ENTITY.	
32	643.3	b4	643-5	If electing to use another type of field testing equipment, submit details to the BOCM for review and conceptual approval with field verification by the Contractor.	Department retains responsibility.	
33	643.3	b4	643-6	Perform field testing of the installed anchors in accordance with the applicable sections of ASTM E 488 and ASTM E 1512, in the presence of the Representative.	Approval authority shifts to the CQAF.	
34	643.3	b6	643-6	Otherwise, the opening of the work zone to traffic will be allowed by the Representative before field-testing of the adhesive bonded anchors.	Approval authority shifts to the CQAF.	
35	643.3	b7	643-6	Fractures or cracks that, in the opinion of the Representative, will hinder the adhesive/barrier performance;	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
36	643.3	c4	643-7	Fractures or cracks, that, in the opinion of the Representative, will hinder the pin connected drop pin anchor performance.	Approval authority shifts to the CQAF.	
37	658.3	f	658-1	Repair or replace any damaged areas to the satisfaction of the Engineer.	Approval authority shifts to the DEVELOPMENT ENTITY.	
38	660.3	b	660-1	Discontinue milling operations if satisfactory results are not being obtained, and submit an alternate construction plan for approval. At the end of each working day, move all equipment to a location designated by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
39	674.3	c	674-1	Construct concrete toe, anchor, and cutoff walls as indicated and as specified in the applicable parts of 1001.3. Obtain approval.	Approval authority is not required as section is to be deleted.	Delete this section.
40	675.4		674-1	The Department will measure to include toe, anchor, and cutoff walls.	Approval authority shifts to the DEVELOPMENT ENTITY.	
41	676.3	f	676-2	As directed, remove and replace defective major honeycombed areas.	Approval authority shifts to the DEVELOPMENT ENTITY.	
42	679.2	f	679-1	Submit a mix design to the District Executive for review and acceptance before starting work.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
43	679.3	a	679-1	Do not begin this work until it is satisfactorily shown that qualified personnel, with successful experience, are available at the job.	Approval authority shifts to the DEVELOPMENT ENTITY.	
44	686.3	a	686-2	The Department will provide all pertinent survey information at the preconstruction conference. The Representative will refurbish the alignment by marking and placing new guard stakes at the pre-established control points. Prior to removal of any existing benchmark disc(s), give the Representative written notice at least 3 weeks in advance of intent to remove the disc.	Approval authority shifts to the DEVELOPMENT ENTITY.	
45	686.3	b	686-2	The Contractor is responsible for the construction stakeout of the project, using the horizontal and vertical control established by the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
46	686.3	b1	686-3	Submit a machine control grading Quality Control (QC) Plan to the Department in accordance with Section 106.03(b).	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
47	686.3	b1	686-3	The Department will review the network and monitor the project. At a minimum, the Representative will test the finished surface at all hinge points and/or centerline, edge of lane, and edge of shoulders on the cross section at a random locations every 150 m (500 feet) in accordance with PTM No. 1 for acceptance.	Approval authority shifts to the CQAF.	
48	686.3	d	686-4	The Department will stake R/W on flatchain projects, if curved alignments or complex configurations are beyond the scope of the flatchain survey.	Approval authority shifts to the DEVELOPMENT ENTITY.	
49	686.3	f	686-5	Obtain approval for any variance or exception to the field stakeout plan, before performing work.	Approval authority shifts to the DEVELOPMENT ENTITY.	
50	686.3	f	686-5	Review, with the Representative, the structure stakeout plan sheet designating work points to be referenced, before performing the field stakeout.	Approval authority shifts to the DEVELOPMENT ENTITY.	
51	686.3	g	686-5	Review, with the Representative, the structure stakeout plan sheet designating the work points to be referenced, before performing the field stakeout.	Approval authority shifts to the DEVELOPMENT ENTITY.	
52	688.3	a	688-3	The Representative may direct that the system be maintained for more than 30 days after physical work has been satisfactorily completed, as necessary, to allow time for Department personnel to process outstanding project records.	Approval authority shifts to the DEVELOPMENT ENTITY.	

f. Publication No. 408 Section 700 – Material

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	701.1	c	701-2	Use a form acceptable to the MTD that contains the following information: ...	Approval authority shifts to the DEVELOPMENT ENTITY.	
2	701.1	c	701-2	Reject cement bags with net mass (weight) more than 3% below that specified.	Approval authority shifts to the DEVELOPMENT ENTITY.	
3	701.1	f	701-2	Obtain cement for each project from a single source, unless otherwise allowed by the Representative in writing.	Approval authority shifts to the DEVELOPMENT ENTITY.	
4	702.1	a	702-1	Submit the QC Plan to the LTS for review before shipping material to the project and at least annually.	Approval authority shifts to the DEVELOPMENT ENTITY.	
5	702.1	b1	702-1	The LTS will evaluate QC on the basis of verification samples.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
6	702.1	b2	702-1	The Department' QA Teams will periodically review the QC Plan, inspect the facilities, and take QA samples of material at the point where the material is introduced into the final product. The LTS will determine the level of certification based on the results of verification and QA samples.	Approval authority shifts to the CQAF.	
7	702.1	b2.b	702-1	Test material at an increased frequency according to a revised QC Plan coordinated with the LTS.	Approval authority shifts to the CQAF.	
8	702.1	b2.d	702-1	Certify that the material conforms to specifications and submit samples to the LTS for verification. Ship only after notification of acceptable lot test results from the ISSD.	Approval authority shifts to the DEVELOPMENT ENTITY.	
9	702.1	c	702-1	For each shipment to the project or bituminous concrete producer, submit one copy of the vendor's bill of lading on a form acceptable to the LTS that contains the following information: ...	Approval authority shifts to the DEVELOPMENT ENTITY.	
10	703.1	a2	703-1	The Department will accept manufactured sand only if it is the primary product of the crushing operation and sized by a sand classifier.	Approval authority shifts to the CQAF.	
11	703.1	a2	703-1	Steel slag fine aggregate may only be used in bituminous wearing courses with the approval of the MTD; however, do not use steel slag fine aggregate in conjunction with steel slag coarse aggregate.	Approval authority shifts to the DEVELOPMENT ENTITY.	
12	703.1	a2	703-1	Submit the method of constructing and controlling the stockpile to the Representative for review.	Approval authority shifts to the	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
					DEVELOPMENT ENTITY.	
13	703.1	a2	703-1	After the minimum cure period, the Representative will sample and test the stockpile for expansive characteristics according to PTM No. 130. The Representative will approve the stockpile for use if the average total volumetric expansion according to PTM No. 130 is less than 0.50%.	Approval authority shifts to the CQAF.	
14	703.1	a2	703-1	The Representative will resample and retest the stockpile after the required additional cure period.	Approval authority shifts to the CQAF.	
15	703.1	b1	703-2	Provide a separate set of sieves for exclusive use by the Department for acceptance testing.	Approval authority shifts to the CQAF.	
16	703.1	b1	703-2	Have balances calibrated annually by an independent agency acceptable to the Department.	Approval authority shifts to the CQAF.	
17	703.1	b2	703-2	The strength ratio and soundness tests may be performed by the producer, a laboratory accredited by the AASHTO Materials Reference Laboratory (AMRL), or other inspection agency approved by the LTS.	Approval authority shifts to the CQAF.	
18	703.2	a4	703-4	After crushing, grading, and forming a stockpile, take a sample from the stockpile and submit it to the MTD for testing of expansive characteristics. The MTD will accept the stockpile for use if the total expansion determined according to PTM No. 130 is less than 0.50%.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
19	703.2	a4	703-4	Submit the proposed method of constructing and controlling the stockpile during the cure period for review and acceptance.	Approval authority shifts to the CQAF.	
20	703.2	a4	703-4	Take a sample after this curing period and submit it to the MTD for testing according to PTM No. 130.	Approval authority shifts to the CQAF.	
21	703.2	a4	703-4	The Representative will accept the stockpile for use if the total expansion is less than 0.50%.	Approval authority shifts to the CQAF.	
22	703.2	a7	703-5	Other recycled concrete may be used in subbase if the concrete was made using materials approved by the Department.	Approval authority shifts to the CQAF.	
23	703.2	b1	703-6	Provide a separate set of sieves for exclusive use by the Department for acceptance testing.	Approval authority shifts to the CQAF.	
24	703.2	b1	703-6	Have balances calibrated annually by an independent agency acceptable to the Department.	Approval authority shifts to the CQAF.	
25	703.2	b2	703-6	The soundness and abrasion tests may be performed by the producer, a laboratory accredited by the AMRL, or other inspection agency approved by the MTD.	Approval authority shifts to the CQAF.	
26	703.2	c1	703-7	The MTD may accept aggregate failing the test if it can be demonstrated in writing that the aggregate has a satisfactory service record in both pavements and structures.	Approval authority shifts to the CQAF.	
27	703.2	c7	703-9	The MTD will use petrographic analysis to confirm the results.	Approval authority shifts to the CQAF.	
28	703.2	c9	703-9	If required, the MTD will use petrographic analysis to confirm the results.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
29	703.2	c11	703-9	The MTD will use petrographic analysis to determine the content of metallic iron.	Approval authority shifts to the CQAF.	
30	703.2	c12	703-9	If required, the MTD will use petrographic analysis to confirm the results.	Approval authority shifts to the CQAF.	
31	703.4	d	703-12	A Department representative will verify the test results.	Approval authority shifts to the CQAF.	
32	703.4	d	703-12	The Department will adjust the delivery quantity by deducting the average moisture content from the aggregate quantity shipped.	Approval authority shifts to the DEVELOPMENT ENTITY.	
33	703.5	b1	703-13	Submit for annual review a QC Plan conforming to the minimum Department requirements for aggregate suppliers.	Approval authority shifts to the DEVELOPMENT ENTITY.	
34	703.5	b2	703-12	Under the direction and supervision of the Representative, obtain a verification sample (n=3) from each stockpile to be tested.	Approval authority shifts to the CQAF.	
35	703.5	b2	703-12	Immediately deliver the sample to the Representative for testing using the equipment provided as specified in Sections 703.1(b) and 703.2(b). The Representative will test all three increments for compliance with Tables A, B, C, and D, as applicable.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
36	703.5	b2	703-12	If the material does not conform to the specifications, the Representative will determine the percent within limits (PWL) according to Section 106.03(a)3. If results indicate a PWL for the material of less than 90, the Representative will reject the stockpile.	Approval authority shifts to the CQAF.	
37	703.5	b2	703-12	The Representative will accept the material under certification if test results verify that the material from the new stockpile conforms to the specifications.	Approval authority shifts to the CQAF.	
38	703.5	b3	703-12	Under the direction and supervision of the Inspector, obtain verification samples (n=3) according to Table F for each type of aggregate at the point of placement (loose aggregate sample immediately before compaction):	Approval authority shifts to the CQAF.	
39	703.5	b3	703-13	The Inspector will select sample locations according to PTM No. 1.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
40	703.5	b3	703-13	Under the direction and supervision of the Inspector, immediately deliver the sample(s) to the test site at either the producers' location or the project site. The Inspector will test the sample(s) using the equipment provided as specified in Sections 703.1(b) and 703.2(b). The Inspector will test all three increments for compliance with Tables C and D, plus the Crushed Fragments Test of Table B when applicable. The Department will continue to accept material under certification if test results verify that the material conforms to the specifications.	Approval authority shifts to the CQAF.	
41	703.5	b3	703-13	If the material does not conform to the specifications, the Inspector will determine the average PWL of the material as specified in Section 106.03(a)3.	Approval authority shifts to the CQAF.	
42	703.5	b3	703-13	Discontinue all operations using that type of aggregate until the results of the second verification sample are evaluated.	Approval authority shifts to the CQAF.	
43	703.5	b3	703-13	Under the direction and supervision of the Inspector, obtain an acceptance sample (n=3) at the point of placement (loose aggregate sample immediately before compaction) for each day's placement. The Inspector will select sample locations according to PTM No. 1. Immediately transport the sample from the sampling point to the testing site. The Inspector will test all three sample increments for compliance with Section 703.2(c), Tables C and D.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
44	703.5	b3	703-13	The Department will continue project acceptance testing until ten consecutive day's placements are accepted with no rejected material. The Contractor will be charged \$200 per day, for each day the material is placed, for project acceptance testing performed by the Department.	Approval authority shifts to the CQAF.	
45	703.5	b3	703-13	For test values not conforming to the specifications, the Department will determine the PWL according to Section 106.03(a)3. If results indicate a PWL for the material of less than 90, remove and replace the material at no additional cost to the Department.	Approval authority shifts to the CQAF.	
46	703.5	b4	703-13	Submit samples to the MTD for testing. If results for any type of material indicate a PWL of less than 90, the District will immediately obtain an additional verification sample (n=3) at the appropriate site (project or source). The Department will test all three sample increments at either the producer's location or at the project site and determine the PWL for the material.	Approval authority shifts to the CQAF.	
47	703.5	c	703-14	Ensure that scales are calibrated annually by an independent agency acceptable to the Department. A Department Inspector may provide random checking.	Approval authority shifts to the CQAF.	
48	703.5	c	703-14	If the invoice mass (weight) exceeds the net mass (net weight) determined by a Department mobile weigh team by more than 3%, the Department will consider the deviation to be excessive.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
49	704.1	b1	704-3	Pozzolan Based on the LTS Tests.	Approval authority shifts to the DEVELOPMENT ENTITY.	
50	704.1	c3	704-4	If the hardened concrete exhibits deficiencies or the Representative suspects the hardened concrete to have deficiencies, and, if directed, determine the percent of entrained air in the hardened concrete according to PTM No. 623.	Approval authority shifts to the CQAF.	
51	704.1	c4	704-4	Submit a copy of each completed mix design to the Representative before its use in the work. The Department reserves the right to review any design through plant production before its use in Department work at no additional cost to the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
52	704.1	c4	704-4	The Department will accept concrete designs on the basis of the 7-day strength tests (Class High Early Strength (HES) may be accepted on the basis of 3-day strength tests); however, conduct 28-day tests to show the potential of the design mix. The Department may also accept designs based on the 28-day tests.	Approval authority shifts to the CQAF.	
53	704.1	c4	704-4	A Department inspector will witness the compressive strength tests.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
54	704.1	c4	704-4	A waiver by the DME/ DMM for Section 704.1 Table A for cement factor and/or water cement ratio may be allowed if mix designs using the limits of the Table cannot achieve the 1.33 ratio.	Approval authority shifts to the CQAF.	
55	704.1	c4	704-4	In no case will the Department accept any mixture during design which fails to meet a minimum 28 day to 7 day compressive strength ratio less than 1.20.	Approval authority shifts to the CQAF.	
56	704.1(c)4	c4	704-4	A higher class concrete may be used in place of an indicated lower class concrete if the higher class concrete conforms to all of the requirements of the indicated lower class, and if approved by the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	
57	704.1(d)1	d1	704-4	Prepare a QC Plan as specified in Section 106.03 and submit it for review before the start of the project and at least annually thereafter.	Approval authority shifts to the DEVELOPMENT ENTITY.	
58	704.1(d)1	d1	704-4	Do not start work until the Department has reviewed the QC Plan. Furnish a copy of the QC Plan to be maintained in the Department's project field office.	Approval authority shifts to the DEVELOPMENT ENTITY.	
59	704.1(d)1.a	d1.a	704-4	Prepare a field operation QC Plan for the Representative's review, as outlined on Form CS-704, to evaluate concrete field operation.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
60	704.1(d)2	d2	704-5	The Department's concrete plant Inspector will not allow concrete that is considered unacceptable to be shipped to the project. The Inspector will not assume, by act or by word, any responsibility for batch control adjustments; calculations; or for setting of any dials, gauges, scales, or meters. Failure of the Inspector to reject unacceptable concrete will not relieve the Contractor's obligation to provide concrete conforming to the specifications.	Approval authority shifts to the CQAF.	
61	704.1	d3	704-5	In the presence of the Inspector, calibrate all air meters a maximum 2 weeks before beginning concrete placement. Re-calibrate all air meters, in the presence of the Inspector, every 2 weeks during concrete placement.	Approval authority shifts to the CQAF.	
62	704.1	d3	704-5	Using an independent agency acceptable to the Department, calibrate scales, balances, and the compression machine at least once per year.	Approval authority shifts to the CQAF.	
63	704.1	d4.a	704-6	Select concrete batches for sampling according to the reviewed QC Plan or as directed by the Inspector. Notify the Inspector when sampling and QC testing are to be performed. The Inspector will witness the sampling and QC testing.	Approval authority shifts to the DEVELOPMENT ENTITY.	
64	704.1	d4.b	704-6	Notify the Inspector when QC testing is to be performed. The Inspector will witness the QC testing.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
65	704.1	d4.b2	704-7	Submit an investigation report to the District Executive within 10 working days for review and approval.	Approval authority shifts to the CQAF.	
66	704.1	d5	704-7	The Representative will select sample locations for acceptance testing according to PTM No. 1 (n=1). Perform sampling and testing for acceptance in the presence of the Representative.	Approval authority shifts to the CQAF.	
67	704.1	d6	704-8	The Representative will perform verification testing on the initial acceptance sample for each type of concrete specified in Table B and a minimum of one verification test for every ten acceptance samples thereafter.	Approval authority shifts to the CQAF.	
68	704.1	d6	704-8	The Representative will obtain the temperature of the sample concurrently with the acceptance sample. Immediately after an acceptable air content test result for acceptance is obtained, the Representative will test the sample for air content according to AASHTO T 196 or T 152 using the same air meter.	Approval authority shifts to the CQAF.	
69	704.1	d6	704-8	The Representative will mold two verification cylinders according to PTM No. 611.	Approval authority shifts to the CQAF.	
70	704.1	d6	704-8	Conduct 28-day compressive strength testing of the verification cylinders according to PTM No. 604 in the presence of the Representative.	Approval authority shifts to the CQAF .	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
71	704.1	d6	704-8	Verification test results will be compared to the associated acceptance test results and will not be used to determine acceptance of the lot. If there is a difference in test results of more than 5F for temperature, 1.0% for air content, or 500 pounds per square inch for compressive strength, the Representative will immediately review the testing procedures, equipment, and personnel used in the acceptance testing and implement corrective measures to ensure the tests are performed within the prescribed tolerances. The Representative will record the acceptance test results, the verification test results and applicable corrective measures in the Concrete Inspector's Daily Record Book, Form CS-472.	Approval authority shifts to the CQAF.	
72	704.1	d7	704-8	The Representative will forward the remaining three QA cylinders to the LTS for 28-day compressive strength testing according to PTM No. 604 and hardened air content testing according to PTM No. 623. Furnish packaging material and package cylinders under the direction and supervision of the Representative.	Approval authority shifts to the CQAF .	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
73	704.1	d7	704-8	QA personnel will perform an independent assurance evaluation of the 28-day compressive strength test results. If the difference between the test results of the cylinders tested at the project site and the cylinders tested at the LTS is more than 500 pounds per square inch, the Representative will immediately review the testing procedures, equipment, and personnel used in the acceptance testing and implement corrective measures to ensure the tests are performed within the prescribed tolerances.	Department Retains Responsibility.	
74	704.1	g3.c	704-11	The Department may waive flyash or ground granulated blast furnace slag requirements if the Contractor presents test results from an independent laboratory showing that a lesser amount of pozzolan will mitigate ASR expansion to below 0.10% when tested according to AASHTO T 303.	Approval authority shifts to the DEVELOPMENT ENTITY.	
75	704.1	g5	704-11	If a service record of nonreactivity can be documented, the Department may exempt aggregates classified as potentially reactive, as specified in Section 704.1(g)2, from the cement/cement-pozzolan requirements of Section 704.1(g)3.	Approval authority shifts to the DEVELOPMENT ENTITY.	
76	704.2	c	704-13	Submit the plant delivery slip and batcher-mixer slip (as specified in AASHTO M 157) to the Inspector-in-Charge. Do not use any concrete until it is approved for use by the Inspector-in-Charge.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
77	704.3	d	704-15	Conduct a calibration once a year in the presence of Department representatives.	Approval authority shifts to the CQAF.	
78	704.3	d	704-15	After performing the yearly calibration and before starting work, provide a mix design for review and acceptance and run a yield test to verify the design.	Approval authority shifts to the DEVELOPMENT ENTITY.	
79	704.3	e2	704-16	Do not use the concrete until the Inspector-in-Charge verifies the data noted on the slip complies with the specifications.	Approval authority shifts to the CQAF.	
80	705.3	a2	705-2	Bars with properties equivalent to conventional, round steel-coated dowel bars, may be used, when accepted by the LTS.	Approval authority shifts to the CQAF.	
81	705.4	d2	705-2	Before using each lot of seal, obtain the eCAMMS generated laboratory test report with the automated statement of approval or rejection.	Approval authority shifts to the CQAF.	
82	705.5(c)2.c	c2c	705-6	Submit samples to the LTS for material confirmation and compliance.	Approval authority shifts to the CQAF.	
83	706.1		706-1	Submit a copy of the manufacturer's recommendations for proper application to the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	May not be applicable
84	709.1(g)	g	709-2	The VE must be approved and accepted in writing by the Department before any substructure bar substitutions are allowed.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
85	709.5		709-3	Epoxy Coaters or galvanizers... Make files available for inspection and verification by a Department Representative.	Approval authority shifts to the CQAF.	
86	709.5		709-3	Fabricators of epoxy coated or galvanized reinforcement... Make files available for inspection and verification by a Department Representative.	Approval authority shifts to the CQAF.	
87	713.2(c)	c	713-1	Prepare a QC Plan, as specified in Section 106.03(a)2.a, and submit it for review at the start of the project.	Approval authority shifts to the DEVELOPMENT ENTITY.	
88	714.1(b)	b	714-1	Standard precise elements may be fabricated as shown on the Standard Drawings without submitting shop drawings to the Bureau of Project Delivery for acceptance, unless otherwise indicated.	Approval authority shifts to the DEVELOPMENT ENTITY.	
89	714.4	a	714-2	Provide a permanent building offered for the Department's acceptance.	Approval authority shifts to the /CQAF.	
90	714.4	b1	714-2	Submit the plant's QC Plan and mix design(s) to the Chief Structural Materials Engineer, Bridge Design & Technology Division, Structural Materials Section, for review and approval.	Approval authority shifts to the DEVELOPMENT ENTITY.	
91	714.4	b3	714-2	Do not proceed with production until qualified personnel are present and approved by the Department.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
92	714.6	a	714-3	Plants must produce a sample element to verify their competency before receiving approval to produce a new product type.	Department retains responsibility.	
93	714.7	d	714-4	Mold additional test cylinders for Department acceptance testing if directed.	Approval authority shifts to the CQAF.	
94	714.7	d	714-4	Record test results and give records to the Department representative.	Approval authority shifts to the CQAF.	
95	714.12		714-5	In matters of disputes over products, the Chief Structural Materials Engineer, BDTD, Structural Materials Section, or the designated on-site representative have the final word on acceptability of the product.	Department retains responsibility.	
96	724.1		724-1	The material is subject to assurance sampling and testing by the MTD.	Department retains responsibility	
97	724.1		724-1	The supply source may reapply for approval after making corrections necessary to ensure that any sampled or tested material test meets all applicable Specifications.	Department retains responsibility.	
98	725.1		725-1	Submit samples to the MTD for testing, a minimum of 60 days before anticipated use.	Approval authority shifts to the CQAF.	
99	735.1	c	735-1	Acceptance of the geotextile will be based on certified test data submitted by the manufacturer and on testing by MTD.	Approval authority shifts to the CQAF.	
100	736.1	c	736-1	Acceptance of the geomembrane will be based on certified test data submitted by the manufacturer and on testing by MTD.	Approval authority shifts to the CQAF.	

g. Publication No. 408 Section 800 – Roadside Development

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	804.2		804-1	The Department may require pretesting reports from the Pennsylvania Department of Agriculture for verification of analysis and legality of labeling...	Approval authority shifts to the DEVELOPMENT ENTITY.	
2	804.2	(b)	804-3	Mix the seed species to the designated formula or mixture specifications under Department supervision	Approval authority shifts to the CQAF.	
3	805.3	(d)	805-6	After mulching work on a slope has been satisfactorily completed, if a slope failure occurs, one that requires redressing, excavation, or the establishment of a new slope, replace the much, as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
4	806.3	(d)	806-4	If protected slope, swale, or other soil surface failure occurs after installation of work, redress affected soil areas and reinstall protection material as specified for original treatment, unless directed otherwise.	Approval authority shifts to the DEVELOPMENT ENTITY.	
5	808.2	(a)1	808-1	The Department reserves the right to reject plants from nurseries that do not qualify for the USDA Hardiness Zone growing requirement	Department retains responsibility.	
6	808.2	(a)4	808-2	The Department will reject plants that exhibit a "pot-bound" condition with girdling and encircling primary roots.	Approval authority shifts to the CQAF.	
7	808.2	e	808-4	Where it is determined by the Representative that wet and poorly drained planting conditions exist, backfill with soil removed from the planting pit.	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
					ENTITY.	
8	808.3	b	808-7	If rocks or other obstructions prevent planting at indicated locations, the Representative will determine alternate locations or deletions.	Approval authority shifts to the DEVELOPMENT ENTITY.	
9	808.3	f	808-8	Move plants while dormant unless otherwise approved.	Approval authority shifts to the DEVELOPMENT ENTITY.	
10	808.3	g	808-9	Where local conditions warrant, these date may be extended, with written approval from the District Executive	Approval authority shifts to the DEVELOPMENT ENTITY.	
11	808.3	9.a	808-10	The Representative will determine plants that are unacceptable. Remove unacceptable plants from the project and replace with approved plants within 30 days of official notification from the District Executive and before acceptance of the entire project	Approval authority shifts to the CQAF.	
12	808.3	9.b	808-10	If directed, make replacements at the beginning of the new planting season	Approval authority shifts to the DEVELOPMENT ENTITY.	
13	809.3	d	809-2	If directed, use a roller have a mass (weight) not more than 100kg/m of width to complete firming and smoothing the sod	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
					ENTITY.	
14	810.3	b	810-1	Repeat the herbicide treatment, as directed, if suckers or sprouts develop at any time before final inspection	Approval authority shifts to the DEVELOPMENT ENTITY.	
15	811.2	b	811-1	The Representative may accept other posts	Approval authority shifts to the DEVELOPMENT ENTITY.	
16	811.3		811-1	To verify extent of protection, conduct a field observation before clearing and grubbing operations with the Representative, and if necessary, the Design Project Manager and District Environmental Manager	Approval authority shifts to the DEVELOPMENT ENTITY.	
17	845.3		845-1	If directed, place pollution control measures for authorized construction areas outside the right-of-way.	Approval authority shifts to the DEVELOPMENT ENTITY.	
18	849.3		849-1	When directed, place additional rock to satisfactorily maintain the rock construction entrance.	Approval authority shifts to the DEVELOPMENT ENTITY.	
19	850.2		850-1	...submit samples to the MTD for petrographic examination for durability before use.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.		Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
20	855.3		As shown on the Standard Drawings, at the location indicated or directed, and as follows:	Approval authority shifts to the DEVELOPMENT ENTITY.	
21	855.3		Dispose of bag and sediment in a manner satisfactory to the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
22	857.3		Excavate to allow placement of the geotextile and concrete blocks as indicated or directed	Approval authority shifts to the DEVELOPMENT ENTITY.	
23	857.3 CONTINUED		Secure cable connected concrete block systems to the slope with soil anchors as indicated or directed. Do not use unsound or damaged blocks. Minor cracks, incidental to the usual methods of manufacturer, or minor chipping resulting from shipment and delivery are not grounds for rejection unless the Representative determines the material unacceptable....	Approval authority shifts to the CQAF.	
24	857.3 CONTINUED		Use an erosion control mulch blanket (ECB), as specified in Section 806.2(a)2, to establish vegetation in a wet weather channel as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
25	857.3		Submit field samples to MTD to verify that the manufacturer's prescribed geotextile is installed.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
26	858.3	d		Properly maintain slope erosion protection systems until the entire project has been completed. Maintenance includes regrading of washed-out areas and replacing fill material, reseeding, and mulching, as directed as specified in Section 105.13.	Approval authority shifts to the DEVELOPMENT ENTITY.	
27	859.3			When the sedimentation dam is no longer required, or if otherwise directed, ...	Approval authority shifts to the DEVELOPMENT ENTITY.	
28	860.2	a	2	Submit manufacturer's inlet filter bag specifications including product spec sheets and drawings, for local approval by the Representative (i.e. at the District or project level).	Approval authority shifts to the DEVELOPMENT ENTITY.	
29	860.2	d		Sandbags—Provide sandbags as indicated, directed and approved by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
30	860.3			As shown on the Standard Drawings, at the location indicated or directed, and as follows:	Approval authority shifts to the DEVELOPMENT ENTITY.	
31	860.3	a		Construct downstream earthen or sandbag berm as indicated and directed...Upon final stabilization of tributary area, when directed, remove bag and downstream earthen or sandbag berm in a manner satisfactory to the Representative. Dispose	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				of bag and sediment in a manner satisfactory to the Representative.		
32	860.3	b		Construct downstream earthen or sandbag berm as indicated and directed. ... Upon final stabilization of tributary area, when directed, remove inlet protection and downstream earthen or sandbag berm in a manner satisfactory to the Representative. Dispose of sediment and materials in a manner satisfactory to the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
33	860.3	c		Construct downstream earthen or sandbag berm as indicated and directed. ... Upon final stabilization of tributary area, when directed, remove inlet protection and downstream earthen or sandbag berm in a manner satisfactory to the Representative. Dispose of sediment and materials in a manner satisfactory to the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
34	861.3			Install cleanout stakes near the center of sediment trap and/or sediment basin as indicated or directed. When sediment accumulation has reached the associated cleanout elevations indicated on plans and as directed, remove and dispose of the sediment. Do not damage the structure or device. Maintain or replace cleanout stake as required, as indicated, or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
35	865.3	b		When directed, provide rock filter outlets to replace undercut and overtopped sections of the silt barrier fence.	Approval authority shifts to the DEVELOPMENT ENTITY.	
36	866.3	a		Provide drive anchors when required or as directed by the Representative.	Approval authority	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				shifts to the DEVELOPMENT ENTITY.		
37	866.3	b	When directed, provide rock filter outlets to replace undercut and overtopped sections of the heavy duty silt barrier fence.	Approval authority shifts to the DEVELOPMENT ENTITY.		
38	866.3	b	When the fence is no longer needed, as directed, remove the fence and restore the area as specified in Section 105.14.	Approval authority shifts to the DEVELOPMENT ENTITY.		
39	867.2	a	Submit to the Representative, for District acceptance, a written statement by the supplier certifying that the compost meets these requirements.	Approval authority shifts to the CQAF.		
40	867.2	b	Submit catalog cuts, drawings, and manufacturer's specifications to the Representative for District acceptance of the filter sock.	Approval authority shifts to the DEVELOPMENT ENTITY.		
41	867.3	b	Routinely inspect compost filter sock installation for damage that would make the compost filter sock non-functioning. Repair or replace damaged areas as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.		
42	867.3	b	Remove the filter sock unless the Representative authorizes it to remain.	Approval authority shifts to the DEVELOPMENT		

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
					ENTITY.	
43	868.2	a		Submit to the Representative, for District acceptance, a written statement by the supplier certifying that the compost meets these requirements.	Approval authority shifts to the CQAF.	
44	868.3	b	2	At completion of project or when directed, leave compost in place by pushing over the berm and spreading the compost material evenly over the adjacent ground to match the contours of the site.	Approval authority shifts to the DEVELOPMENT ENTITY.	
45	870.3			Construct, as shown on the Standard Drawings, at the location indicated or directed, as follows:	Approval authority shifts to the DEVELOPMENT ENTITY.	
46	870.3			Install and maintain cleanout stake as required, as indicated, or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
47	870.3			Inspect sediment trap after each runoff event. Remove accumulated sediment as specified in Section 861.3 and replace aggregate when it is contaminated with sediment, washed out, or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
48	870.3			When the tributary area to the sediment trap is stabilized, or the sediment trap is no longer required, or when directed, recondition the site by filling in excavated areas,	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
49	871.3			As shown on the Standard Drawings, at the location indicated or directed, and as follows:	Approval authority shifts to the DEVELOPMENT ENTITY.	
50	871.3			Install and maintain cleanout stake as required, as indicated, or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
51	871.3			Inspect sediment trap after each runoff event to assure that it continues to function properly. Remove accumulated sediment as specified in Section 861.3 and repair as required or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
52	871.3			When the tributary area to the sediment trap is stabilized or the sediment trap is no longer required, or if otherwise directed, satisfactorily recondition the site as follows:	Approval authority shifts to the DEVELOPMENT ENTITY.	
53	872.3			As shown on the Standard Drawings, at the location indicated or directed, and as follows:	Approval authority shifts to the DEVELOPMENT ENTITY.	
54	872.3			When the tributary area to the sediment basin is stabilized, or the basin is no longer required, or when directed, satisfactorily recondition the site as follows:	Approval authority shifts to the DEVELOPMENT ENTITY.	

h. Publication No. 408 Section 900 – Traffic Accommodation and Control

No.	Pub 408 Section Reference and page No.		Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
1	901.2		901-2 "However, temporary traffic control devices permanently incorporated as part of the project require Form CS-4171, unless otherwise specified in the contract for that particular item."	Approval authority shifts to the DEVELOPMENT ENTITY.	
2	901.3	a	901-2 "Install and maintain traffic control devices as indicated on the TCP, or an approved alternate plan submitted at the preconstruction conference. The Representative may revise the TCP in writing during construction"..."and at locations designated in writing by the Representative."..."Install and maintain reduced regulatory speed limit signs in work areas, as indicated on the TCP, approved alternate plan, or as directed." ... "Temporarily remove or cover reduced regulatory speed limit signs when workers are not present, except as otherwise indicated on the TCP, approved alternate plan, or as directed." ... "Maintain rumble strips in place for the period indicated or as directed, and remove them immediately thereafter. Restore the surface after removal and obtain acceptance." ... "Open any substantially completed section of roadway for the use and convenience of traffic, as directed, and as specified in Section 107.15"	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
3	901.3	b	901-2	Treat existing earth roads or improved roads that have been graded, with calcium chloride or by other approved dust control palliatives, as specified in the proposal or as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
4	901.3	e	901-3	"Provide and maintain local access to and from the nearest intersecting public road or street, unless otherwise directed. As directed, provide temporary approaches for local vehicular and pedestrian access...Also, provide and maintain adequate bridging over base and surface courses, trenches, or other construction, when directed."	Approval authority shifts to the DEVELOPMENT ENTITY.	
5	901.3	g	901-3	"When directed, replace the complete tubular marker...Remove all tubular markers when no longer necessary for traffic control or as directed."	Approval authority shifts to the DEVELOPMENT ENTITY.	
6	901.3	j	901-3	"Space all channelizing devices at a maximum distance in feet, equal to 0.55 (2) times the posted speed limit in miles per hour, or closer as directed." ... "Temporary concrete median barrier may be used at the discretion of the Representative."	Approval authority shifts to the DEVELOPMENT ENTITY.	
7	901.3	k	901-4 thru 901-5	"...the Representative may waive the curing period specified in the above bulleted item" ... "Place standard pavement markings in the same location as covered or destroyed pavement markings, unless otherwise indicated in	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				the TCP or directed."		
8	901.3	m	901-5	"...written notification of construction activities that will create a physical lateral restriction to roadway width...All restrictions are subject to Department approval."	Department retains responsibility.	
9	901.3	p	901-6	"The Representative and the Contractor's designee shall conduct periodic reviews of the traffic control devices throughout the duration of the project to ensure continuous compliance with the approved TCP." ... "Clean or replace all delineators once per month or as directed. Clean in an approved method."	Approval authority shifts to the CQAF.	
10	901.3	r	901-6	"Remove conflicting pavement markings during any phase of construction and relocate as indicated."	Approval authority shifts to the DEVELOPMENT ENTITY.	
11	901.3	s	901-6	"Stop traffic during the placement... and overhead sign structure components as directed."	Approval authority shifts to the DEVELOPMENT ENTITY.	
12	901.3	u	901-7	"...raised pavement markers according to the locations, spacings, and configurations indicated or directed." ... "Maintain the nonplowable markers in place for the period indicated or directed,"	Approval authority shifts to the DEVELOPMENT ENTITY.	
13	901.3	w	901-7	"...changeable message signs...Have all locations, messages, and times of	Approval authority shifts to the	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				operation approved by the District Traffic Engineer or authorized Representative."	DEVELOPMENT ENTITY.	
14	901.3	x	901-7	Furnish, install, maintain, and remove all items required to provide temporary signalization in accordance with the approved plans, specifications, and Section 1124.	Approval authority shifts to the DEVELOPMENT ENTITY.	
15	901.3	z	901-8	"Place the shadow vehicle upstream of the construction area at the distance specified in Publication 213 and the MUTCD, as directed."	Approval authority shifts to the DEVELOPMENT ENTITY.	
16	901.3	aa	901-8	"Use an approved system listed in Bulletin 15 for speed display signs....Have all locations and times of operation approved by the District Traffic Engineer or authorized Representative."	Department retains responsibility.	
17	901.3	bb	901-8	"Furnish, place, program, operate, relocate, maintain, and remove a trailer mounted citizen band traffic alert radio as directed... Relocate the device as required." ... "Have all locations, messages, and times of operation approved by the District Traffic Engineer, Traffic Management Center, or authorized Representative."	Department retains responsibility.	
18	901.3	cc	901-8	"Obtain the approval of the Representative, the municipality, and District Traffic Engineer for any changes to	Department retains responsibility.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				the existing signalization, including timing, phasing, and operation adjustments."		
19	902.3		902-1	"Maintain and protect the project during suspension, as specified in Section 105.13(b), as directed, and as follows:... Apply a calcium chloride dust control solution or other approved dust control palliative in the manner and at the rate of application directed	Approval authority shifts to the DEVELOPMENT ENTITY.	
20	903.2		903-1	As indicated or as shown on the accepted detailed drawings.	Approval authority shifts to the DEVELOPMENT ENTITY.	
21	903.3	a	903-1	"Submit detailed drawings of the proposed bridge and approaches for the Representative's review and acceptance."	Approval authority shifts to the DEVELOPMENT ENTITY.	
22	903.3	a	903-1	"Design the proposed temporary bridge for PHL-93 at the operating level,...when directed." ... "Provide sidewalks and sidewalk protection when indicated." ... "The method of moving, placing, and maintaining the structure will be subject to the Representative's review and acceptance."	Approval authority shifts to the DEVELOPMENT ENTITY.	
23	910.2	a	910-1	"Submit for approval, before purchase and at no cost to the Department, catalog cuts, drawings, and manufacturer's specifications for all lighting material..."	Department retains responsibility.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
24	910.3	b	910-2	"Do not proceed with work until the foundation excavation is accepted. The foundation design may need to be revised based on the actual conditions encountered as determined by the Representative. Obtain approval of the completed foundation forms before concrete placement. Remove water from the foundation holes before concrete placement."	Approval authority shifts to the DEVELOPMENT ENTITY.	
25	910.3	c	910-2	"Remove rock within the excavation unless an alternate layout is authorized. Remove and dispose unsuitable material and excess excavation as directed."	Approval authority shifts to the DEVELOPMENT ENTITY.	
26	910.3	e	910-2	"Orient the handhole in the direction of traffic, unless otherwise indicated" ... "Install luminaires and ballasts according to the manufacturer's instructions or as indicated."	Approval authority shifts to the DEVELOPMENT ENTITY.	
27	910.3	h	910-3	"Do not damage the cable insulation. Manually remove the cable from the drum or reel. Notify the Representative when cable is to be placed. Do not proceed without the Representative being present."	Approval authority shifts to the DEVELOPMENT ENTITY.	
28	910.3	i	910-4	Use only if indicated. Install similar to conduits as specified in Section 910.3(g), and according to the manufacturer's instructions.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
29	910.3	k	910-4	"Guy service poles...Obtain approval for the guys before the conductors are strung. Install a guy guard if the guy is adjacent to the roadway."	Approval authority shifts to the DEVELOPMENT ENTITY.	
30	910.3	p	910-4	Obtain acceptance of any change in box location before installation	Approval authority shifts to the DEVELOPMENT ENTITY.	
31	910.3	s	910-5	Make arrangements with the local electric utility company for electrical service for the lighting system.	Approval authority shifts to the DEVELOPMENT ENTITY.	
32	910.3	u	910-5	Perform the tests in the presence of an authorized representative of the Department.	Approval authority shifts to the CQAF.	
33	910.3	v	910-6	"The guarantee begins the day after the lighting system is fully operational, as determined by the Representative..." & "Execute the in-service guarantee notification Form CS-4225H, provided by the Department"	Approval authority shifts to the CQAF.	
34	910.4	k	910-7	Unless otherwise authorized, no allowance will be made for additional conduit lengths as a result of deviation from the indicated conduit location.	Approval authority shifts to the DEVELOPMENT ENTITY.	
35	910.4	m	910-7	Unless otherwise authorized, no allowance will be made for additional cable lengths, or cable size, as a result of	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				deviation from the indicated cable location.	ENTITY.	
36	910.4	n	910-8	Unless otherwise authorized, no allowance will be made for additional trench lengths as a result of deviation from the indicated trench locations.	Approval authority shifts to the DEVELOPMENT ENTITY.	
37	920.3	f	920-1	Submit mounting method and materials for approval.	Approval authority shifts to the DEVELOPMENT ENTITY.	
38	920.3	i	920-1	Deviation from the indicated layout may be allowed if it is necessary to overcome obstacles during construction, provided that drawings showing the deviations are submitted for approval.	Approval authority shifts to the DEVELOPMENT ENTITY.	
39	930.3	c	930-2	Remove existing signs or sign installations as indicated. Existing signs or sign installations that are permanently removed shall become the property of the Contractor unless indicated otherwise.	Approval authority shifts to the DEVELOPMENT ENTITY.	
40	930.3	d	930-2	When directed, and as specified in Section 201.3, remove material, brush, trees, or branches, which obstruct the clear view of signs being placed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
41	930.3	g	930-2	Submit a sketch for acceptance for each plan location before post fabrication, showing the following:	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
42	931.3	b	931-1	Remove existing signs or sign installations, only when indicated or directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
43	931.3 CONTINUED	b		Return aluminum and steel removed from existing sign installations to the Department unless indicated otherwise.	Department retains responsibility.	
44	936.3		936-1	Submit to the Department all street name sign layout sheets for review and approval before fabrication.	Department retains responsibility.	
45	938.3		938-1	The location of an initial marker will be established by the Representative. Locate the markers in order along both main roadway sides, beginning as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
46	940.3		940-1	If specified or indicated, store existing posts for Department pickup. Otherwise, dispose of existing posts outside the right-of-way.	Department retains responsibility.	
47	941.3		941-1	If specified or indicated, store existing posts for Department pickup. Otherwise, dispose of existing posts outside the right-of-way.	Department retains responsibility.	
48	942.3		942-1	If specified or indicated, store existing posts for Department pickup. Otherwise, dispose of existing posts outside the right-of-way.	Department retains responsibility.	
49	944.3		944-1	If specified or indicated, store existing posts for Department pickup. Otherwise, dispose of existing posts outside the right-of-way.	Department retains responsibility.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
50	945.3		945-1	If specified or indicated, store existing posts for Department pickup. Otherwise, dispose of existing posts outside the right-of-way.	Department retains responsibility.	
51	948.2	d	948-2	If necessary, repair base connection welds one time. If more than one repair is necessary, obtain approval.	Approval authority shifts to the DEVELOPMENT ENTITY.	
52	948.2	d4	948-2	The Department's plant inspector will select weld locations and weldments to be tested.	Approval authority shifts to the CQAF.	
53	948.3	a	948-3	Submit detailed shop drawings for review and acceptance. Submit erection drawings as directed by the Structure Control Engineer conforming to Section 105.02. Material and workmanship not previously inspected will be inspected on the work site.	Approval authority shifts to the DEVELOPMENT ENTITY.	
54	948.3	b	948-3	Securely brace the bolts against displacement before concrete is placed. Provide conduit sweeps when required.	Approval authority shifts to the DEVELOPMENT ENTITY.	
55	948.3	e	948-4	Clean, to the satisfaction of the Representative, the top of the concrete pedestals or caissons to ensure that they are free of dirt or other foreign materials.	Approval authority shifts to the DEVELOPMENT ENTITY.	
56	951.3	a	951-1	Before forming and placing concrete, each foundation excavation will be inspected for the actual soil conditions encountered.	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				Do not proceed with the work until the excavation is accepted...Before submitting the revised design for approval...	ENTITY.	
57	952.3	a	952-1	demonstrate that all functions are operating ... Conduct the demonstration, as directed, in the presence of the Representative....Once the 30-day period has expired with no recordable system faults and meets the approval of the Representative the system will be considered for final acceptance ... Once the 30-day period has expired with no recordable system faults and meets the approval of the Representative the system will be considered for final acceptance.	Approval authority shifts to the CQAF.	
58	952.3	d1	952-1	Connect the traffic signal cable and interconnection cable to the proper color coded controller terminals as directed by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
59	953.3	d2	953-1	Conduct a 30-day systems test after the completion of all individual intersections' 30-day tests.	Approval authority shifts to the CQAF.	
60	953.3	e	953-2	Upon completion of the radio system installation conduct the following tests in the presence of the Representative to ensure the installation is functioning adequately... Upon successful completion of the testing requirements the Representative will provide the contractor with final approval that the system is complete.	Approval authority shifts to the CQAF.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
61	953.3	h	953-3	Upon completion of the cellular system installation, demonstrate to the Representative that the installation is functioning properly and according to the approved plans.	Approval authority shifts to the CQAF.	
62	953.3	i	953-3	Facilitate the telephone connections with the Service Representative and coordinate with the Representative to ensure that all telephone lines are turned over to the proper responsible parties... Upon completion of the dialup system installation, demonstrate to the Representative that the installation is functioning properly and according to the approved plans.	Approval authority shifts to the CQAF.	
63	953.3	j	953-4	Upon completion of the FO system installation, demonstrate to the Representative that the installation meets the operational limits and Section 952. Demonstrate to the Representative that the installation is according to the approved plans.	Approval authority shifts to the CQAF.	
64	953.3	k	953-4	Conduct a separate 30-day operations test on the system and communications...Change inputs, outputs, and programming controls, and adjust or revise initial signal timing parameters, as directed.	Approval authority shifts to the CQAF.	
65	953.3	l	953-4	Provide initial system training during the first week of the 30-day system test lasting a minimum of 5 calendar days.	Department retains responsibility.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				Trainees include both local municipalities and Department staff as directed by the Representative.		
66	954.3	a	954-1	Cut existing pavement only when indicated... Restore existing pavement. For flexible pavement, use bituminous material of a type equal to the existing pavement, as determined by the Representative.	Approval authority shifts to the DEVELOPMENT ENTITY.	
67	954.3	b	954-1	Keep boring pits at least 2 feet from the edge of pavement unless otherwise authorized in writing.	Approval authority shifts to the DEVELOPMENT ENTITY.	
68	954.3	c	954-1	If allowed by the Representative, indicated conduit runs may be changed to avoid underground obstructions.	Approval authority shifts to the DEVELOPMENT ENTITY.	
69	954.3	e1	954-1	Replace existing cable damaged during removal as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
70	954.3	l	954-4	Submit shop drawings/catalog cuts of the kit conforming to Section 1104.05(h) before installation. Provide and attach to the signal controller cabinet after approval.	Approval authority shifts to the DEVELOPMENT ENTITY.	
71	955.3	a	955-1	Variations to the permit should not be completed without approval of the District Traffic Engineer... Aimvehicular signal	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				heads, as directed, toward a point... Install backplates and visors as directed on the approved plans.	ENTITY.	
72	956.3	a4	955-2	Provide field validation that the detector equipment is properly working.	Approval authority shifts to the CQAF.	
73	956.3	c	955-2	Review each detector location in the field with a Service Representative and a representative of the District Traffic Unit before installation in order to provide optimum operation.	Approval authority shifts to the CQAF.	
74	960.3	a	960-1	Identify the location of the final pavement markings by applying spots on the pavement at 12 m (40-foot) intervals. The Inspector-in-Charge will approve the locations.	Approval authority shifts to the DEVELOPMENT ENTITY.	
75	960.3	c	960-1	Under the direction and supervision of the Representative, measure retroreflectivity	Approval authority shifts to the CQAF.	
76	960.3	d	960-1	Repair those markings, which after application and drying, are determined to be defective by the Inspector-in-Charge	Approval authority shifts to the DEVELOPMENT ENTITY.	
77	960.3	e	960-2	Where directed, remove and replace material that has not remained within close conformity to location or has not remained effective in performing useful service.	Approval authority shifts to the DEVELOPMENT ENTITY.	
78	961.3	a	961-1	Identify the location of the final pavement markings. The Inspector-in-Charge will approve the locations.	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
					ENTITY.	
79	961.3	b	961-1	Under the direction and supervision of the Representative, measure with a 30-meter geometry retroreflectometer	Approval authority shifts to the DEVELOPMENT ENTITY.	
80	961.3	e	961-1	Where directed, remove or replace material that in accordance with Section 107.16(b) has not remained within close conformity to location or has not remained effective in performing useful service	Approval authority shifts to the DEVELOPMENT ENTITY.	
81	962.3	d	962-2	Identify the location of the final pavement markings by applying spots on the pavement at 12 m (40-foot) intervals. The Inspector-in-Charge will approve the locations.	Approval authority shifts to the DEVELOPMENT ENTITY.	
82	962.3	e	962-2	Apply on a dry pavement with minimum ambient and pavement temperatures of 10 °C (50 F) and a maximum relative humidity of 80%. Confirm the proper atmospheric and pavement surface conditions with the Inspector-in-Charge.	Approval authority shifts to the DEVELOPMENT ENTITY.	
83	962.3	f	962-2	Repaint marked or damaged areas, as directed.	Approval authority shifts to the DEVELOPMENT ENTITY.	
84	962.3	g	962-2	Where centerlines do not exist or existing centerlines are improperly located, apply at the correct location, as determined by	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
				the Inspector-in-Charge.	ENTITY.	
85	962.3	i	962-2	Under the direction and supervision of the Representative, measure with a 30-meter geometry retroreflector	Approval authority shifts to the DEVELOPMENT ENTITY.	
86	962.3	j	962-2	Repair those markings, which after application and drying, the Inspector-in-Charge determines to be defective.	Approval authority shifts to the DEVELOPMENT ENTITY.	
87	963.3		963-1	Obtain approval from the Representative for the proposed removal method before beginning work...Dispose of all residue in an acceptable manner.	Approval authority shifts to the DEVELOPMENT ENTITY.	
88	964.3	a	964-2	Obtain from the manufacturer of the epoxy material being used, specifications for the proper mix ratios of the epoxy component, proper temperatures, proper mixing techniques, and any other data to ensure that the epoxy material is being properly installed. Furnish this information to the Inspector-in-Charge at least 5 days before beginning work.	Approval authority shifts to the CQAF.	
89	964.3	b1	964-2	Identify the location of the final pavement markings by applying spots on the pavement at 12 m (40-foot) intervals. The Inspector-in-Charge will approve the locations.	Approval authority shifts to the DEVELOPMENT ENTITY.	

No.	Pub 408 Section Reference and page No.			Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
90	964.3	b4	964-2	Under the direction and supervision of the Representative measure retroreflectivity	Approval authority shifts to the DEVELOPMENT ENTITY.	
91	964.3	b7	964-2	Install epoxy on dry pavement only if the road surface and ambient temperatures are 4° C (40 F) or higher unless otherwise approved by the Inspector-in-Charge and acceptable to the manufacturer.	Approval authority shifts to the DEVELOPMENT ENTITY.	
92	964.3	c	964-2	Repair those markings, which after application and drying, the Inspector-in-Charge determines to be defective.	Approval authority shifts to the DEVELOPMENT ENTITY.	
93	964.3	d	964-3	The Representative will identify material to be repaired or replaced. Begin all repair or replacement work within 30 days of notification by the Representative and perform as specified in these specifications.	Approval authority shifts to the DEVELOPMENT ENTITY.	
94	965	a	965-1	At least 5 days before beginning work, provide the Inspector-in-Charge with a schedule of operations	Approval authority shifts to the CQAF.	
95	965.3	b	965-1	The Inspector-in-Charge will approve the locations	Approval authority shifts to the DEVELOPMENT ENTITY.	
96	965.3	e	965-2	Remove any markings placed incorrectly and replace them. Repair those markings, which after application and drying, are	Approval authority shifts to the DEVELOPMENT	

No.	Pub 408 Section Reference and page No.	Verbiage From Existing Pub 408 Section	Approval Authority per Exception Exhibit 2	RBR Project Requirement
		determined to be defective by the Inspector-in-Charge	ENTITY.	