



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

September 9, 2026

SUBJECT FAI Route 290 (I-290)
Project NHPP-PROT-6WLW(875)
Section 2024-991-DR
Cook County
Contract No. 62X09
Item No. 6 September 18, 2026, Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Revised the Schedule of Prices
2. Revised the Table of Contents to the Special Provisions
3. Revised pages 3-10, 125-126, 128-129, 131-132, & 200 of the Special Provisions
4. Added pages 258-284 to the Special Provisions
5. Revised sheets 1-25, 29-30, 35-47, 49-52, 63-71, 73-77, 81-90, 92-115, 117-120, 122, 125-126, 131-132, 143, 146-147, 149, 151-157, 159-190, 193-218-222, 231, 238, 243-251, 253-255, 257-264, 268-269, 279-281, 285-289, 307-310, 374-378, 380-381, 387, 390-397, 399, 408, 413, 418-421, 424, 429-430, 433-434, 458-459, 461-462, & 464 of the Plans
6. Added sheets 25A, 103A, 103B, 105A, 115A-K, 156A, 167A, 168A, & 293A-I to the Plans
7. Deleted sheets 291-293 of the Plans

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Jack A. Elston'.

Jack A. Elston, P.E.
Bureau Chief, Design and Environment

MTS

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Stage 1

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Harrison Street Sta. 4375+90 LT/RT	Telephone Lines	Proposed storm sewer is in direct conflict with the existing telecommunication.	Unknown	TBD
Harrison Street Sta. 4376+08 32.1' LT	2" PE CMS	Proposed water main is in direct conflict with the existing fiber optic.	Unknown	14 Days
Harrison Street Sta. 4378+21 3.1' LT/RT	2" PE CMS	Proposed storm sewer is in direct conflict with the existing telecommunication.	IDOT	TBD
Harrison Street Sta. 4378+93 LT/RT	Electric Lines	Proposed storm sewer is in direct conflict with the existing electrical duct.	Unknown	TBD
Harrison Street Sta. 4380+10 LT/RT	2" Electric Lines	Proposed storm sewer is in direct conflict with the existing electrical line.	Unknown	TBD
Harrison Street Sta. 4380+58 29.1' LT to Sta. 4382+14 26.0' LT	2x1 Duct Package of Electric Lines	Proposed storm sewer is in direct conflict with the existing electrical line.	ComEd	14 Days
Bataan Drive Sta. 3374+87 32.0' RT	2x1 Duct Package of Electric Lines	Proposed water main is in direct conflict with the existing electrical line.	ComEd	14 Days

Stage 2

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Harrison Street Sta. 4363+13 30.7' LT	2" Gas Main	Proposed water main is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4364+49 32.4' LT to Sta. 4375+90 23.1' RT	0.5" DBC Telephone line	Proposed storm sewer is in direct conflict with the existing telephone line.	AT&T	7 Days
Harrison Street Sta. 4364+49 32.4' LT to Sta. 4364+47 24.0' RT	18x12 Duct	Proposed storm sewer is in direct conflict with the existing electrical line.	ComEd	21 Days
Harrison Street Sta. 4369+43 23.0' RT	2" PE CMS	Proposed storm sewer is in direct conflict with the existing fiber optic.	Unknown	TBD

Harrison Street Sta. 4372+84 26.8' LT	2" PE CMS	Proposed storm sewer is in direct conflict with the existing fiber optic.	Unknown	TBD
Harrison Street Sta. 4375+90 2.7' LT to Sta. 4375+90 23.1' RT	0.25" DBC Telephone line	Proposed storm sewer is in direct conflict with the existing telephone line.	AT&T	7 Days

Stage 3

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Harrison Street Sta. 4337+71 24.3' LT to Sta. 4346+05 23.0' LT	Aerial Electric Lines	Proposed water main is in direct conflict with the existing electrical line.	ComEd	14 Days
Harrison Street Sta. 4335+69 29.8' LT to Sta. 4346+37 32.1' LT	2" Gas Main	Proposed watermain is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4342+05 25.7' LT to Sta. 4349+20 27.3' LT	2- 2" Telecommunication Lines	Proposed storm sewer is in direct conflict with the existing telecommunication.	Comcast	10 Days
Harrison Street Sta. 4342+98 23.8' LT to Sta. 4343+62 31.2' LT	Unk	Proposed storm sewer is in direct conflict with the existing electrical line	ComEd	14 Days
Harrison Street Sta. 4345+46 31.3' LT to Sta. 4346+59 20.1' LT	4" PE Fiber Optic Cable	Proposed storm sewer is in direct conflict with the existing telecommunication.	AT&T	7 Days
Harrison Street Sta. 4345+59 22.6' LT to	2" Electrical Line	Proposed storm sewer is in direct conflict with the existing electrical line	ComEd	14 Days

Sta. 4345+60 31.3' LT				
Harrison Street Sta. 4345+59 22.6' LT to Sta. 4345+79 34.3' LT	Unk	Proposed storm sewer is in direct conflict with the existing electrical line	ComEd	14 Days
Harrison Street Sta. 4349+17 25.8' LT to Sta. 4354+50 23.0' LT	Aerial Electric Lines	Proposed water main is in direct conflict with the existing electrical line.	ComEd	14 Days
Harrison Street Sta. 4349+45 27.9' LT to Sta. 4356+40 27.0' LT	2" Gas Main	Proposed storm sewer is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4353+02 42.9' LT to Sta. 4353+02 29.5' LT	Unk	Proposed storm sewer is in direct conflict with the existing electrical line	ComEd	7 Days
Harrison Street Sta. 4356+13 23.5' LT to Sta. 4356+53 23.8' LT	2" Gas Main	Proposed storm sewer is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4356+53 30.7' LT	2" Gas Main	Proposed storm sewer is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4357+84, 23.0' LT	Aerial Electric Lines	Proposed water main is in direct conflict with the existing electrical line.	ComEd	7 Days
Harrison Street Sta. 4359+35 23.3' LT to Sta. 4359+35 30.7' LT	2" Gas Main	Proposed storm sewer is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4359+52 23.2' LT	2" Gas Main	Proposed storm sewer is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4362+83 24.2' LT	2" Gas Main	Proposed storm sewer is in direct conflict with the existing gas main.	Nicor	5 Days

Stage 4

No facilities requiring extra consideration

Stage 5

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Harrison Street Sta. 4329+13 30.1' LT to Sta. 4335+69 29.8' LT	2" Gas Main	Proposed watermain is in direct conflict with the existing gas main.	Nicor	5 Days

Stage 6

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Harrison Street Sta. 4319+08 22.4' LT to Sta. 4319+21 43.7' RT	4 in PVC with a 48 strand Fiber Optic Cable	Proposed storm sewer is in direct conflict with the existing telecommunication.	Verizon/ MCI	14 Days
Harrison Street Sta. 4316+40 21.9' LT to Sta. 4329+59 16.0' LT	2" Gas Main	Proposed watermain is in direct conflict with the existing gas main.	Nicor	5 Days
Harrison Street Sta. 4319+55 LT/RT	4" Communication Line	Proposed storm sewer is in direct conflict with the existing telecommunication.	Comcast	10 Days

Stage 1: TBD Days Total Installation

Stage 2: TBD Days Total Installation

Stage 4: 136 Days Total Installation

Stage 5: 5 Days Total Installation

Stage 6: 29 Days Total Installation

The following contact information is what was used during the preparation of the plans as provided by the Agency/Company responsible for resolution of the conflict.

Agency/Company Responsible to Resolve Conflict	Name of contact	Phone	E-mail address
Village of Maywood	Greg Buchanan	708-450-4463 708-774-3621	gbuchanan@maywood-il.gov
AT&T	Chris Cass	708-972-8993	Cc4361@att.com
ComEd	Jesus Mendoza	312-696-9994	Jesus.Mendoza@comed.com
Comcast	Martha Gieras	224-229-5862	Martha_gieras@cable.comcast.com
Verizon/ MCI	Joe Chaney	312-617-2131	Joe.Chaney@Verizon.com
Nicor	Karey Johnson	224-471-9356	karejohn@southernco.com

UTILITIES TO BE WATCHED AND PROTECTED

The areas of concern noted below have been identified by following the suggested staging plan included for the contract. The information provided is not a comprehensive list of all remaining utilities, but those which during coordination were identified as ones which might require the Department's contractor to take into consideration when making the determination of the means and methods that would be required to construct the proposed improvement. In some instances, the contractor will be responsible to notify the owner in advance of the work to take place so necessary staffing on the owner's part can be secured.

Stage 1

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Harrison Street Sta. 4376+08 25.6' LT	2" Gas Main	Facility runs along the north side of Harrison Street at 2 nd Ave	Nicor
Harrison Street Sta. 4376+34 29.1' LT to Sta. 4380+88 31.0' LT	2" PE CMS	Facility runs along the north side of Harrison Street	Unknown
Harrison Street Sta. 4375+90 24.0' LT to Sta. 4379+16 32.5' LT	0.5" Telephone Lines	Facility runs along the north side of Harrison Street	AT&T
Harrison Street Sta. 4379+77 LT/RT	2x2 Duct Package of Electric Lines	Proposed storm sewer is in direct conflict with the existing electrical line.	ComEd
Harrison Street Sta. 4375+90 25.1' LT to Sta. 4379+16 33.0' LT	6" Watermain	Facility runs along the north side of Harrison Street	Village of Maywood
Harrison Street Sta. 4379+62 LT/RT	54" Sewer	Facility crosses Harrison Street at 1 st Ave	MWRD
Bataan Drive Sta. 3344+80 14.6' LT to Sta. 3345+43 14.7' LT	6" Watermain	Facility runs along the north side of Bataan Drive	Village of Maywood
Bataan Drive Sta. 3374+87 LT/RT	3x1 Duct Package of Electric Lines	Proposed storm sewer is in direct conflict with the existing electrical line.	ComEd

Stage 2

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Harrison Street Sta. 4365+18 27.3' LT to Sta. 4375+90 25.1' LT	8" Watermain	Facility runs along the north side of Harrison Street	Village of Maywood
Harrison Street	Telephone Duct	Facility crosses Harrison Street at	AT&T

Sta. 4365+96 32.4' LT to Sta. 4365+90 3.8' RT		5 th Ave. This facility shall be supported during construction.	
Harrison Street Sta. 4369+43 23.0' LT	2" Gas Main	Facility runs along the north side of Harrison Street at 4 th Ave	Nicor
Harrison Street Sta. 4372+79 19.5' LT	2" Gas Main	Facility runs along the north side of Harrison Street at 3 rd Ave	Nicor

Stage 3

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Harrison Street Sta. 4346+59 20.1' LT to Sta. 4349+18 27.9' LT	4" PE Fiber Optic Cable	Facility runs along the north side of Harrison Street	AT&T
Harrison Street Sta. 4366+32 26.2' LT	2" Gas Main	Facility runs along the north side of Harrison Street	Nicor
Harrison Street Sta. 4369+43 23.0' LT	2" Gas Main	Facility runs along the north side of Harrison Street	Nicor
Harrison Street Sta. 4353+02 42.9' LT to Sta. 4353+02 11.6' RT	3x2 Duct Package of Electric Lines Duct	Proposed storm sewer is in direct conflict with the existing electrical line	ComEd

Stage 4

No facilities requiring extra consideration

Stage 5

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Harrison Street Sta. 4339+64 to Sta. 4344+00	2" HDPE with a 144 Strand Fiber Optic Cable	Facility runs along the north side of Harrison Street	Verizon/ MCI

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Stage 6

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Harrison Street Sta. 4326+26 1.5' RT	4x4 Duct Package of Electric Lines	Proposed storm sewer is in direct conflict with the existing electrical line.	ComEd
Harrison Street Sta. 4318+96 LT/RT	Duct Package including 9- 4" PC	Facility crosses Harrison Street at 19 th Avenue. This facility shall be supported during construction	AT&T
Harrison Street Sta. 4318+98 LT/RT	Duct Package Telephone Line	Facility crosses Harrison Street at 19 th Avenue. This facility shall be supported during construction	AT&T
Bataan Drive Sta. 3342+26 8.4' LT to Sta. 3342+64 14.3' LT	6" Watermain	Facility runs along the north side of Bataan Drive	Village of Maywood

The following contact information is what was used during the preparation of the plans as provided by the owner of the facility.

Agency/Company Responsible to Resolve Conflict	Name of contact	Phone	E-mail address
AT&T	Chris Cass	708-972-8993	cc4361@att.com
Village of Maywood	Greg Buchanan	708-450-4463 708-774-3621	gbuchanan@maywood-il.gov
Verizon/ MCI	Joe Chaney	312-617-2131	joe.chaney@verizon.com
MWRD	Paul Sobanski	708-588-4080	sobanskip@mwrdr.org
Nicor	Karey Johnson	224-471-9356	karejohn@southernco.com

The above represents the best information available to the Department and is included for the convenience of the bidder. The days required for conflict resolution should be considered in the bid as this information has also been factored into the timeline identified for the project when setting the completion date. The applicable portions of the Standard Specifications for Road and Bridge Construction shall apply.

Estimated duration of time provided above for the first conflicts identified will begin on the date of the executed contract regardless of the status of the utility relocations. The responsible agencies will be working toward resolving subsequent conflicts in conjunction with contractor activities in the number of days noted.

Bataan Drive.:

Stage 1A – Open cut remainder of Utility
Stage 2 – Open cut remainder of Utility
Stage 3B – Open cut remainder of Utility
Stage 3C – Open cut remainder of Utility
Stage 4 – Open cut remainder of Utility
Stage 6 – Open cut remainder of Utility

All materials shall conform to sections 1006 and 1030 of the Standard Specifications for Road and Bridge Construction.

Construction Requirements. The contractor shall place (2) steel plates 8ft by 5ft per stage at the locations specified in the plans on Harrison St. and Bataan Dr., or as specified by the engineer. The steel plate shall be a minimum of (3/4) inch in thickness and a minimum ASTM-A-36 grade steel.

The Contractor must keep plates in place when not working in the open cut locations specified in the plans. The Contractor must cover the openings with the Steel Plates to open to the traffic at the end of each day.

Method of Payment. This work shall be paid for at the contract unit price per LUMP SUM for STEEL PLATE.

STORM SEWERS (WATER MAIN REQUIREMENTS)

Description. This work shall include installation of water main-quality storm sewers at locations shown on the plans and/or as directed the Engineer. This work shall conform to applicable sections of the Standard Specifications and the Standard Specifications for Water and Sewer Main Construction in Illinois 2020 Edition, or the latest edition thereof.

Polyvinyl-Chloride (PVC) pipe shall comply with AWWA C900 for the size indicated in plans. The thickness class for PVC pipe shall be DR25. Pipe joint shall be push-on in open cut application. Pipe joint shall be restrained in trenchless construction. Joint shall be elastomeric and comply with ASTM F477.

Ductile Iron Pipe (DIP) shall comply with AWWA C151 (ANSI A21.51). Joint gaskets shall comply with AWWA C111 (ANSIA21.11). Pipe joint shall be push-on in open cut application. Pipe joint shall be restrained in trenchless construction. All Ductile Iron Pipe shall be internally lined with Cement-mortar in accordance with AWWA C104 (ANSIA21.4). All Ductile Iron Pipe shall be coated externally with a bituminous coating or coal tar primer approximately 1 mil thick. The finished coating shall be continuous and smooth. The thickness class for Ductile Iron Pipe shall be Class 50. All Ductile Iron Pipe shall be wrapped with polyethylene complying with AWWA C105 (ANSI A21.5).

Reinforced Concrete Culvert, Storm Drain and Sewer Pipe shall comply with Article 1042.06 of the "Standard Specifications for Road and Bridge Construction". Each pipe section shall be sealed with a preformed flexible rubber gasket. The gasket shall be confined in a recessed groove

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cast into the spigot of the pipe, which will hold the gasket in place when the joint is assembled, forming a watertight seal, according to ASTM C443. Reinforced Concrete Pipe (RCP) shall be provided with a stainless steel casing where used for STORM SEWER (WATER MAIN REQUIREMENTS). The stainless steel casing, including all materials and installation necessary for a complete installation, shall be included in the cost of STORM SEWER (WATER MAIN REQUIREMENTS).

Method of Measurement. This work shall be measured in units of foot complete in place. The unit price payment shall be considered full compensation for furnishing and installing water main quality storm sewers complete.

Basis of Payment. This work shall be paid for at the contract unit price per FOOT for STORM SEWER (WATER MAIN REQUIREMENTS) of the size indicated in plans. When RCP is used, the stainless steel casing shall be included in the contract unit price and no additional compensation will be allowed.

STORM SEWERS JACKED IN PLACE (SPECIAL)

Description. This work shall be done in accordance with Section 552 of the Standard Specifications except as modified herein.

Add the following to Article 552.04 General.:

This item shall consist of furnishing and installing storm sewer pipe by jacking, including furnishing and installing a steel casing pipe to house the storm sewer. The work shall include excavation of jacking and receiving pits, shoring or sheeting as required, jacking of the steel casing, installation of the carrier pipe, and all incidental work necessary to complete the installation.

The Contractor shall submit a plan detailing the construction process, equipment, lubrication fluids, dewatering plans, layout and machinery setup to the Engineer for review and approval prior to ordering material or beginning construction.

A temporary shoring plan for the launching and receiving, signed and sealed by a Structural Engineer licensed in the State of Illinois, shall be submitted to the Engineer with corresponding calculations and other necessary information, for all temporary shoring required to accommodate safety and other requirements during construction. Temporary shoring plan shall be approved by the Engineer prior to installation of temporary shoring. Excavation, disposal of excavated material shall be according to Section 202.03 of the Standard Specifications for Road & Bridge Construction and shoring for the construction of the launching and receiving pits will not be paid for separately.

If ground water is anticipated, pumps of sufficient capacity to handle the flow shall be maintained at the site. Ground water pumped from the excavation must pass a sediment filter bag prior to being discharged.

If excessive voids, or too large a bored hole is produced during pipe installation, or if it is necessary to abandon a bored or tunneled hole, it shall be promptly filled with Controlled Low Strength Material meeting IDOT requirements, installed with a method that will fill the voids.

STUMP REMOVAL

Description. This work shall consist of removal of existing tree stumps at the locations shown on the plans or as directed by the engineer.

Construction Requirements. The existing stump shall be removed to a depth not less than that specified in article 201.04 of the standard specifications. Stump holes shall be immediately backfilled with stump chips so as not to pose a hazard to pedestrians and workers. All surplus removed material and debris shall be properly disposed of outside the right-of-way.

Method of Measurement. This work shall be measured for payment per each stump removed to the satisfaction of the engineer, regardless of the diameter of the tree stump or the number of roots.

Basis of Payment. This work shall be paid for at the contract unit price per EACH for STUMP REMOVAL, which includes all materials, labor, equipment and incidentals required to complete the work.

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BRUSH AND TREE TRIMMING

Description. This work shall consist of brush and tree trimming at locations directed by the Engineer where the entire length of brush and trees shall not be removed but one or more branches require removal. In general, brush and trees requiring trimming are located adjacent to the right-of-way, easement lines or in area where construction activities conflict with overhead work.

Brush and trees requiring trimming can include brush and trees both located within the right-of-way/easements and located outside the right-of-way/easement where branches overhang the IDOT property/easement.

Method of Measurement. Brush and tree trimming shall be measured per FOOT, regardless of the number of branches cut.

Basis of Payment. Tree and brush trimming will be paid for at the contract unit price per FOOT for BRUSH AND TREE TRIMMING.

TRENCH BACKFILL (SPECIAL)

Description. This work shall be performed in accordance with Sections 208 and 550 of the Standard Specifications, except as modified herein.

Revise Article 550.04 as follows:

For storm sewers 66 inches in diameter and larger, the minimum trench width shall provide a clearance of 2.1 feet on each side of the pipe, measured from the outside diameter of the pipe to the face of the trench. This requirement supersedes the trench width requirements of Article 550.04.

All other requirements of Sections 208 and 550 shall remain in effect.

Basis of Payment. This work shall be paid for at the contract unit price per CUBIC YARD for TRENCH BACKFILL (SPECIAL).

The unit price shall include all labor, materials, and equipment required to furnish, place, and compact trench backfill in accordance with this Special Provision and the applicable portions of Sections 208 and 550.

Revised 9/3/2026

WATER MAIN REMOVAL

Description. This work shall consist of the removal of portions of the existing water main. This work shall be performed at locations shown on the plans and/or subject to the review of the ENGINEER.

Excavation required for water main removal shall be performed in accordance with the applicable portion of the "DUCTILE IRON WATER MAIN" Special Provision included herein. Water main removal shall end either at a joint or at a location where the existing pipe has been saw cut to provide a smooth, even surface to allow a watertight joint. After removal of the existing pipe, the integrity of that portion which is to remain in place shall be checked to ensure that the pipe end has not been damaged. Additional removal required by non-compliance with this Special Provision will be performed at the Contractor's expense and no additional compensation will be allowed.

If the excavation required for the removal operation falls within a paved area (existing or proposed), it shall be backfilled with selected granular backfill and paid for separately as "TRENCH BACKFILL".

Basis of Payment. This work shall be measured and paid for at the contract unit price per FOOT for WATER MAIN REMOVAL, of the diameter specified, measured as removed.

WATER MAINS JACKED IN PLACE (SPECIAL)

Description. This work shall consist of furnishing and installing steel carrier and ductile iron water main pipe by boring or jacking methods below existing ground at locations shown in the plans. The requirements of Article 552.04 of the Standard Specifications shall apply to the construction of water mains jacked in place, except as modified herein.

The Contractor shall submit a plan detailing the construction process, equipment, lubrication fluids, dewatering plans, layout and machinery setup to the Engineer for review and approval prior to ordering material or beginning construction.

A temporary shoring plan for the launching and receiving, signed and sealed by a Structural Engineer licensed in the State of Illinois, shall be submitted to the Engineer with corresponding calculations and other necessary information, for all temporary shoring required to accommodate safety and other requirements during construction. Temporary shoring plan shall be approved by the Engineer prior to installation of temporary shoring. Excavation, disposal of excavated material shall be according to Section 202.03 of the Standard Specifications for Road & Bridge Construction and shoring for the construction of the launching and receiving pits will not be paid for separately.

If ground water is anticipated, pumps of sufficient capacity to handle the flow shall be maintained at the site. Ground water pumped from the excavation must pass a sediment filter bag prior to being discharged.

The Contractor shall protect the trenchless construction area with 6' chain link fence. The fence shall be erected at the end of each workday.

If excessive voids, or too large a bored hole is produced during pipe installation, or if it is necessary to abandon a bored or tunneled hole, it shall be promptly filled with Controlled Low Strength Material meeting IDOT requirements, installed with a method that will fill the voids.

The use of water pressure jetting or puddling will not be permitted.

An adequate steel leading-edge band shall be used to protect the leading edge of the pipe from obstacles in the boring path.

After completion of the pipe installation, the launch and receiving pits shall be backfilled with trench backfill as per the Section 550.07 of the Standard Specifications for Road & Bridge Construction. This work will not be paid for separately but shall be included in the cost of the steel pipe.

The alignment and elevation of the forward end of the pipe shall be checked at regular intervals as work proceeds and appropriate measures taken to correct any observed deviation. The maximum horizontal alignment deviation of the pipe shall not exceed $\pm 1.0'$ per 100 feet of tunneling. The maximum vertical alignment deviation shall be $\pm 0.15'$ for up to 200 feet of tunneling.

The Contractor shall submit details and calculations of the proposed jacking systems, cribbing and procedures for approval of the Engineer before commencing work. The system shall be designed and sealed by a Structural Engineer licensed in Illinois. Approval will not relieve the Contractor of responsibility for the safety of the structure.

This item shall consist of furnishing and installing ductile iron water main pipe by jacking, including the installation of a steel casing pipe to house the ductile iron water main.

Method of Measurement. The work will be measured for payment in place in FOOT.

Basis of Payment. The work will be paid for at the Contract unit price per FOOT for WATER MAINS JACKED IN PLACE, (SPECIAL) of the diameter size specified.

WATER SERVICE LINE

Description. This work shall be completed according to Section 562 of the Standard Specifications for Road and Bridge Construction and as described herein.

This item shall include the installation of water services to certain properties as shown on the plans. The proposed water services will be installed to properties located on the same side of the street as the proposed water main. The transferring of the water services shall be done after the new water main has been placed into service and before the existing water main has been disconnected.

PAVEMENT MARKING (BDE)

Effective: April 1, 2025

Revised: November 1, 2025

Revise the fourth sentence of the fourth paragraph of Article 780.05 of the Standard Specifications to read:

“Grooves for letters and symbols shall be cut in a rectangular shape or in the shape of the proposed marking so the entire marking will fit within the limits of the grooved area.”

Revise the last sentence of the third paragraph of Article 780.08 of the Standard Specifications to read:

“The Contractor shall install the preformed plastic pavement markings according to the manufacturer’s recommendations.”

Revise the second sentence of the first paragraph of Article 780.13 of the Standard Specifications to read:

“In addition, thermoplastic, preformed plastic, epoxy, preformed thermoplastic, polyurea, and modified urethane pavement markings will be inspected following a winter performance period that extends from November 15 to April 1 of the next year.”

Revised 9/3/2026

TEMPORARY BULKHEAD

Description:

This work shall consist of designing, furnishing, installing, and maintaining temporary bulkheads in proposed storm sewers, interim drainage sewers, and drainage structures at the locations shown on the plans or as directed by the Engineer. Temporary bulkheads shall be used to isolate portions of the proposed Harrison Street storm sewer system until the downstream drainage system is completed and placed into service. Removal of the temporary bulkheads will be performed under future contracts.

This work shall be performed according to the applicable portions of Section 550 of the Standard Specifications, except as modified herein.

Temporary bulkheads are temporary construction features and shall not be considered permanent sewer abandonment plugs. Bulkheads shall remain functional for the full duration of temporary service, including extended interim conditions between construction contracts.

Materials:

Materials shall be suitable for the pipe size, anticipated duration of service, loading, exposure, and future removal. Materials may include concrete masonry, reinforced concrete, structural steel, precast components, or other removable materials proposed by the Contractor and accepted by the Engineer.

Temporary bulkhead materials, coatings, connections, seals, and other components shall be suitable for prolonged exposure to stormwater, moisture, sewer atmosphere, and other environmental conditions anticipated during the design service duration identified in the Temporary Bulkhead Schedule. The design shall account for corrosion, deterioration, and degradation of materials and components over the specified service period.

For sewers 36 inches in diameter and smaller, temporary bulkheads shall consist of concrete masonry, fabricated steel, precast components, or other removable materials suitable for the anticipated loading and duration of service. The bulkhead shall prevent the passage of flow, sediment, and debris and shall be capable of future removal without damage to the sewer pipe or drainage structure.

For sewers greater than 36 inches in diameter, including the 72-inch storm sewer, provide an engineered removable temporary bulkhead system. Mass concrete or mortar plugs shall not be used unless specifically shown on the plans or accepted by the Engineer.

Temporary Bulkhead Schedule:

Temporary bulkheads shall be provided at the locations identified in the following table. The pipe size, pipe material, depth to pipe centerline, calculated hydrostatic force, and design service duration shown shall be used as the design criteria for the temporary bulkheads.

STATION	DIRECTION	PIPE	SIZE (IN)	STRUCTURE	Depth to Pipe C.L. (ft)	Design Hydrostatic Force (lbs)	Pipe Material	Design Service Duration (Years)
4312+41	LT	P-100A	18	S-400	10.92	1,204	RCP	20
4315+79	LT	P-101A	18	S-401	8.28	913	RCP	20
4319+18	LT	P-103A	18	S-402	8.02	884	DIP	20
4322+54	LT	P-105A	18	S-403	8.15	899	DIP	20
4329+29	LT	P-108A	18	S-404	7.14	787	DIP	20
4332+63	LT	P-109A	18	S-405	7.29	804	DIP	20
4335+98	LT	P-110A	18	S-406	7.20	794	DIP	20
4349+36	LT	P-113A	18	S-409	8.58	946	RCP	20
4356+23	LT	P-116A	18	S-410	12.75	1,406	RCP	10
4359+52.76	LT	P-117A	18	S-411	10.34	1,140	RCP	10
4362+81.01	LT	P-118A	18	S-412	13.34	1,471	RCP	10
4366+30	LT	P-120A	18	S-413	7.08	781	DIP	10
4369+40.17	LT	P-121A	18	S-414	11.24	1,239	RCP	10
4372+84	LT	P-122A	18	S-415	8.16	900	RCP	10
4376+03.26	LT	P-123A	18	S-416	10.44	1,151	RCP	10
4382+01.64	LT	P-128	72	S-126	10.12	17,855	RCP	10
4312+77.39	LT	P-200	12	S-200	5.59	274	DIP	20
4313+31.57	RT	P-202	12	S-202	2.15	105	DIP	20
4315+28.41	RT	P-203	12	S-203	2.07	101	DIP	20
4315+56.15	LT	P-207	12	S-205	2.70	132	DIP	20
4317+10.23	LT	P-209	12	S-209	4.25	208	RCP	20
4317+13.8	RT	P-210	12	S-210	5.01	246	RCP	20
4318+97.83	RT	P-216	12	S-211	5.46	268	RCP	20
4319+06.25	LT	P-213	12	S-213	4.04	198	RCP	20
4322+27.15	LT	P-218	12	S-219	4.76	233	RCP	20
4322+27.51	RT	P-221	12	S-217	5.44	267	RCP	20
4322+26	LT	P-220	12	S-219	4.86	238	RCP	20
4325+14.57	LT	P-223	12	S-222	5.10	250	RCP	20
4325+15.1	RT	P-224	12	S-223	5.13	251	RCP	20
4326+74.17	RT	P-226	12	S-225	5.03	247	RCP	20
4326+97.73	LT	P-225	12	S-224	4.75	233	RCP	20
4329+15.82	LT	P-228	12	S-230	4.73	232	RCP	20
4329+48.39	RT	P-233	12	S-226	6.23	305	RCP	20
4332+50.84	LT	P-234	12	S-235	4.86	238	RCP	20
4332+87.73	RT	P-235	12	S-237	4.64	227	RCP	20
4338+97.13	RT	P-249	12	S-247	2.78	136	RCP	20
4339+19.55	LT	P-246	12	S-245	4.17	204	RCP	20
4342+49.9	LT	P-253	12	S-251	5.22	256	RCP	20
4342+52.81	RT	P-273	12	S-254	4.48	220	RCP	20
4344+37.9	LT	P-278	12	S-255	4.83	237	RCP	20
4345+71.35	RT	P-257	12	S-258	3.77	185	RCP	20
4349+22.76	LT	P-260	12	S-260	5.94	291	DIP	20
4349+24.02	RT	P-266	12	S-262	6.10	299	RCP	20
4349+60.02	LT	P-261	12	S-263	5.76	282	DIP	20
4352+00.19	RT	P-267	12	S-268	6.21	304	RCP	20
4352+13.19	LT	P-269	12	S-279	7.25	355	RCP	20

The design service duration identified in the schedule applies to the complete temporary bulkhead system, including materials, coatings, connections, seals, and other components.

Submittals:

For temporary bulkheads in sewers greater than 36 inches in diameter, and at other locations designated by the Engineer, submit design calculations, drawings, and details for the design and construction of the temporary bulkhead. The submittal shall be signed and sealed by an Illinois licensed Structural Engineer employed by or retained by the Contractor. The submittal shall identify the pipe diameter and material; bulkhead materials and dimensions; attachment or restraint system; design loads; design hydraulic head; installation and sealing details; anticipated duration of service; and provisions for future removal without damage to the permanent sewer or drainage structure.

Submit the temporary bulkhead design to the Engineer for review prior to installation. Where required by the MWRD permit, obtain MWRD acceptance prior to installation. Review or acceptance of the submittal shall not relieve the Contractor of responsibility for the design, adequacy, stability, watertightness, installation, or maintenance of the temporary bulkhead.

Design Requirements:

Temporary bulkheads shall be designed for all loads that may reasonably occur during the period of temporary service. At a minimum, the design shall consider the following loading conditions and requirements, as applicable:

- Backfill, earth, surcharge, construction, and other external loads acting against the temporary bulkhead with the sewer empty.
- Hydrostatic pressure corresponding to the design hydraulic head with no balancing external pressure acting against the temporary bulkhead.
- Buoyancy, seepage, leakage, sediment, debris, and other conditions associated with the interim drainage system.
- The anticipated duration of temporary service, including conditions where the bulkhead remains in place through a future or adjacent contract.
- Future removal of the temporary bulkhead without damage to the pipe barrel, pipe joints, reinforcement, lining, drainage structure, or other work to remain.
- The installation conditions at each bulkhead location, including the pipe size and material, location of the bulkhead within the pipe or drainage structure, accessibility, and available means of attachment or restraint.

Unless a design hydraulic head is specifically shown on the plans, the Contractor shall determine the maximum reasonably anticipated hydraulic head for the temporary condition and include it in the design calculations. The design hydraulic head shall not be less than the maximum water surface elevation reasonably anticipated in the connected interim drainage system.

Construction Requirements:

Install temporary bulkheads according to the accepted design at the locations shown on the plans. Bulkheads shall prevent unintended flow, sediment, debris, and construction materials from entering the isolated sewer and shall be sufficiently watertight for the intended interim drainage condition.

The Contractor shall inspect and maintain each temporary bulkhead for the duration of this contract. Leakage, displacement, deterioration, or other deficiencies shall be repaired promptly at no additional cost to the Department.

Temporary bulkheads shall remain in place upon completion of this contract and become the property of the Department upon final acceptance of the project. Removal of the temporary bulkheads will be performed under future contracts after the downstream outfall system is completed and ready to be placed into service. Each temporary bulkhead shall be left in a stable and serviceable condition suitable for continued temporary service

The temporary bulkhead shall be designed and installed to facilitate future removal without damage to the sewer pipe, pipe joints, reinforcement, lining, drainage structure, or other work to remain. Removal details shall be included in the submittal for use in the future contract.

Future removal provisions shall identify the intended removal sequence and any temporary components, connections, or attachments that must be removed, released, or disconnected so the bulkhead can be removed without damaging the permanent sewer or drainage structure.

Method of Measurement:

TEMPORARY BULKHEAD will be measured for payment in units of each for each temporary bulkhead installed complete and accepted, regardless of pipe diameter. Design, submittals, installation, sealing, and maintenance will not be measured separately for payment. Removal of temporary bulkheads will not be measured under this contract.

Basis of Payment:

This work will be paid for at the contract unit price per EACH for TEMPORARY BULKHEAD, which price shall include all labor, materials, equipment, engineering, design calculations, drawings, submittals, fabrication, installation, sealing, inspection, maintenance for the duration of this contract, and incidentals necessary to complete the work. Removal and disposal of temporary bulkheads are not included in this pay item and will be performed under future contracts.

COMBINED SEWERS

Description: This work shall consist of furnishing and installing combined sewer of the material, type, and size, specified in the plans, including all fittings, jointing materials, appurtenances, connections to existing sewers, testing, cleaning, and all incidental work necessary to complete the installation in accordance with the Contract Documents/or as directed by the Engineer.

Materials: Reinforced concrete pipe (RCP) shall conform to ASTM C-76 and with pipe joints conforming to ASTM C-443.

Ductile Iron Pipe (DIP) shall comply with AWWA C151 (ANSI A21.51). Joint gaskets shall comply with AWWA C111 (ANSI A21.11). Pipe joints shall be push-on joints for open cut applications. Pipe joints shall be restrained for trenchless construction. All Ductile Iron Pipe shall be internally lined with cement-mortar in accordance with AWWA C104 (ANSI A21.4). All Ductile Iron Pipe shall be coated externally with a bituminous coating or coal tar primer approximately 1 mil thick. The finished coating shall be continuous and smooth. The thickness class for Ductile Iron Pipe shall be Class 50. All Ductile Iron Pipe shall be wrapped with polyethylene complying with AWWA C105 (ANSI A21.5).

Construction Requirements: Construction shall comply with the applicable requirements of Section 550 of the Standard Specifications, except as modified herein, and the plans and this special provision.

The work shall include excavating the trench, disposing of the excavated materials, furnishing and placing the pipe, furnishing and installing the polyethylene encasement around the pipe, furnishing and placing the bedding material under and to twelve inches (12") above the top of pipe, and properly compacting the materials placed into the trench after the installation of the combined sewer.

The bedding material shall be CA 11.

Trench Backfill: Trench Backfill, where required by the plans, shall conform to the applicable requirements of Section 208 of the Standard Specifications. Aggregate for Trench Backfill shall meet the CA 6 gradation requirements. Trench Backfill will be measured and paid for separately under the applicable TRENCH BACKFILL pay item.

All combined sewer work is located within the jurisdiction of the MWRD and shall comply with the requirements of MWRD WMO Permit No. 2026-0185, including all permit conditions, approved plans, Standard Details, Technical Specifications, and any additional requirements contained therein.

Whenever there are conflicting requirements between another ordinance, the more restrictive regulation should be followed. The Contractor shall immediately notify the Engineer of any conflict between the Contract Documents and the MWRD permit prior to proceeding with the affected work.

The Contractor shall maintain continuous operation of the existing combined sewer system throughout construction unless otherwise approved by the Engineer and MWRD. Temporary bypass pumping, flow diversion, or other methods necessary to maintain uninterrupted sewer service shall be provided whenever required.

Added 9/3/2026

The Contractor shall coordinate all shutdowns, sewer connections, inspections, testing, and acceptance activities with the Engineer and MWRD.

The Contractor shall protect the existing combined sewer system from damage and shall prevent sediment, concrete washout, debris, fuels, oils, and other foreign materials from entering the sewer system. Damage resulting from the Contractor's operations shall be repaired or replaced at the Contractor's expense to the satisfaction of the Engineer and MWRD.

Dewatering operations shall comply with the requirements of MWRD WMO Permit No. 2026-0185 and shall not adversely affect existing utilities or the operation of the combined sewer system.

Testing and Acceptance: Upon completion of the work, the completed combined sewer shall be cleaned, inspected, and tested in accordance with the Contract Documents, the Standard Specifications, and the requirements of MWRD WMO Permit No. 2026-0185.

Any deficiencies identified during inspection or testing shall be corrected by the Contractor at no additional cost to the Department prior to acceptance.

Method of Measurement: Combined sewer will be measured for payment in accordance with Article 550.09 of the Standard Specifications.

Basis of Payment: This work shall be paid for at the contract unit price per FOOT for COMBINED SEWERS of the size indicated in the plans.

The contract unit price shall include furnishing all labor, materials, equipment, pipe, fittings, jointing materials, appurtenances, connections to existing sewers, CA 11 for pipe bedding and encasement as shown in the plans, testing, cleaning, and all incidental work necessary to complete the installation. Trench Backfill will be measured and paid for separately under the applicable TRENCH BACKFILL pay item.

COMBINED SEWERS (WATER MAIN REQUIREMENTS)

Description. This work shall include installation of water main-quality combined sewers at locations shown on the plans and/or as directed by the Engineer. The work shall conform to applicable sections of the Standard Specifications and the Standard Specifications for Water and Sewer Main Construction in Illinois 2020 Edition, or the latest edition thereof.

Ductile Iron Pipe (DIP) shall comply with AWWA C151 (ANSI A21.51). Joint gaskets shall comply with AWWA C111 (ANSI 21.11). Pipe joints shall be push-on in open cut application. Pipe joint shall be restrained in trenchless construction. All Ductile Iron Pipe shall be internally lined with Cement-mortar in accordance with AWWA C104 (ANSI 21.4). All Ductile Iron Pipe shall be coated externally with a bituminous coating or coal tar primer approximately 1 mil thick. The finished coating shall be continuous and smooth. The thickness class for Ductile Iron Pipe shall be Class 50. All Ductile Iron Pipe shall be wrapped with polyethylene complying with AWWA C105 (ANSI A21.5).

Method of Measurement. This work shall be measured in units of foot complete in place. The unit price payment shall be considered full compensation for furnishing and installing water main-quality combined sewers complete.

Basis of Payment. This work shall be paid for at the contract unit price per FOOT for COMBINED SEWERS (WATER MAIN REQUIREMENTS) of the size indicated in the plans.

MANHOLES TO BE RECONSTRUCTED

This work shall be performed in accordance with **Section 602** of the Standard Specifications except as modified herein.

Revise Article 602.02 by deleting the following materials:

- (b) Building Brick (Made from Clay or Shale) 1041.01”
- (c) Concrete Masonry Units..... 1042,
- (o) Concrete Brick 1042

Add the following note Article 602.02:

Note 8. Metropolitan Water Reclamation District (MWRD) does not allow brick and mortar for reconstructed manholes.

Delete Article 602.05, "Brick Masonry," in its entirety.

WIRELESS VEHICLE DETECTION SYSTEM

Description

This work shall consist of furnishing, installing, configuring, and testing a Wireless In-Pavement Vehicle Detector System at the locations identified in the Plans or as directed by the Engineer.

Materials

The Wireless In-Pavement Vehicle Detector System (VDS) shall include the following elements and features:

Wireless In-Pavement Detector

The Wireless In-Pavement Detector shall be a Wireless Battery-Operated Sensor including epoxy (recommended by the wireless in-pavement VDS manufacturer):

- The Wireless Sensor shall transmit wireless vehicle detection and other output data to a Wired Radio Assembly or Repeater.
- The Wireless Sensor shall detect volume, occupancy, and speed as shown in the Plans and may be adjusted based on each deployment.
- The Wireless Sensor shall be designed for installation in pavement. Only the manufacturer's approved red or orange epoxy shall be used to seal the in-pavement sensor into its resting hole.
- The Wireless Sensor shall be battery powered with minimum battery life of 10 years.
- Firmware of the Wireless Sensor shall be capable of being upgraded through wireless connection.
- The transmission range for a Wireless In-Pavement Detector shall meet the following requirements:

Added 9/3/2026

Height of Wired Radio or Repeater	Distance Range to Detector
Minimum of 25 feet above pavement elevation and cleared of any visual obstruction	Maximum of 150 feet with a minimum distance based on the mounting angle of the wired radio or repeater

- The Wireless In-Pavement Detector shall be NEMA 6P rated.
- The Wireless In-Pavement Detector shall operate within a temperature range of -40°F to +176°F (ambient).
- The wireless in pavement sensor shall be a max. diameter of 2.5", mounted flush to the roadway surface, be able to be installed in less than 5 minutes using a standard drill and with a rolling road closure.
- The sensor shall be encased in a cup and shall have the ability to be removed and replaced or relocated.
- Hole size shall be 3-1/8" diameter and 3.5" deep or per manufacturer.
- Prior to installation, the proposed details shall be submitted to the Engineer for approval.

Wired Radio Assembly

The Wired Radio Assembly shall be a 2.4 GHZ Wired Radio Assembly including a mounting kit, associated cabling, and surge protection device.

- The Wired Radio Assembly shall receive wireless output from in-pavement detectors or Repeaters.
- The Wired Radio Assembly shall operate within the temperature range -40°F to + 176°F (ambient).
- The Wired Radio Assembly shall be designed for mounting on an existing or proposed pole, tower, or building per the Plans or as directed by the Engineer.
- All other ancillary connection cables, brackets, and other items required for the installation of a fully functional Wireless In-Ground Pavement Vehicle Detector System are included as part of this pay item. This includes but is not limited to, required cabling, conduit, and cabinet wiring needed from the Wired Radio to the In-Cabinet Isolation Module.

Wireless Detector In-Cabinet Processor Module

The Wireless Detector In-Cabinet Processor Module shall be an in-cabinet assembly central processor unit including power supply.

- The In-Cabinet Processor Module shall include manufacturer's license and capability for Ethernet connection to the IDOT Traffic Systems Center.
- The In-Cabinet Processor Module shall be powered via a 9-28 VDC input.
- The In-Cabinet Processor Module shall operate within the temperature range -40°F to +176°F (ambient).
- All required cabling, conduit, and cabinet wiring needed from the In-Cabinet Processor Module to the IDOT network communications switch shall be paid for as part of this item.
- All required cabling, conduit, and cabinet wiring needed from the In-Cabinet Processor Module to the In-Cabinet Isolation Module shall be paid for as part of this item.

Wireless Detector In-Cabinet Isolation Module

The Wireless Detector In-Cabinet Isolation Module shall be an In-Cabinet Surge Suppression and Isolation Module powered by in-cabinet processor module.

- An In-Cabinet Isolation Module shall be used between each Wired Radio Assembly and In-Cabinet Processor Module.
- The In-Cabinet Isolation Module shall support two Wired Radio Assembly ports.
- The In-Cabinet Isolation Module shall extend the communication range between the In-Cabinet Processor Module and Wired Radio Assembly up to a maximum of 2000 feet.
- The In-Cabinet Isolation Module shall provide electrical isolation of 1500V.
- The In-Cabinet Isolation Module shall provide surge protection of up to 12A.
- The In-Cabinet Isolation Module shall provide AC power cross protection.
- All required cabling, conduit, and cabinet wiring needed from the In-Cabinet Isolation Module to the In-Cabinet Processor Module shall be paid for as part of this item.
- In-Cabinet Isolation Module shall operate within the temperature range -40°F to + 176°F (ambient).

Wireless Repeater

The Wireless Repeater shall be a wireless solar mounted repeater and mounting kit:

- The Wireless Repeater shall have an operating temperature range -40°F to + 176°F. (ambient)
- The Wireless Repeater shall be a relay of radio communications.
 - To/From wireless sensors (downlink)
 - To/From access point (uplink)
 - To/From another repeater (uplink or downlink)
- The Wireless Repeater shall be capable of tandem operation to sensors and to another access point or another repeater.
- Maximum single hop range of approx. 2000 feet from supported access point or repeater with a long-range external antenna.
- Maximum single hop range of approx. 300 feet from supported sensors with long range external antenna.
- The Wireless Repeater shall be powered by 2 Solar Panels (0.33 W each), a 3.6V, 2.2Ah rechargeable Lithium ion battery, and a 57AH Li-SOCL2 3.6V backup battery.

Dual Antenna Wireless Repeater

The Dual Antenna Wireless Repeater shall be a Wireless Battery-Operated Repeater with two antenna housings and two mounting kits:

- The Wireless Repeater shall have an operating temperature range from -40°F to + 185°F (ambient).
- The Wireless Repeater shall be a relay of radio communications.
 - To/From wireless sensors (downlink)
 - To/From access point (uplink)
 - To/From another repeater (uplink or downlink)

- The Wireless Repeater shall be capable of tandem operation to sensors and to another access point or another repeater.
- Maximum single hop range of approx. 2000 feet from supported access point or repeater with a long-range external antenna.
- Maximum single hop range of approx. 300 feet from supported sensors with long range external antenna.
- The Wireless Repeater shall be powered by 2 Solar Panels (0.33 W each), a 3.6V, 2.2Ah rechargeable Lithium ion battery, and a 57AH Li-SOCL2 3.6V backup battery

CONSTRUCTION REQUIREMENTS

The Contractor shall closely coordinate with the Engineer throughout the duration of the construction contract. This includes, but is not limited to, the following:

Pre-Procurement Meeting and Documentation Approval

- The Contractor shall submit for approval to the Engineer, within 10 business days from notice to proceed (NTP), a detailed schedule showing dates for: product submittals and approvals; device configuration; construction/installation; testing; burn-in period; and warranty of each Wireless In-Pavement Vehicle Detector System. This detailed schedule shall be included in the project schedule. Schedules for each Wireless In-Pavement Vehicle Detector System to be deployed within the larger construction contract and shall be staggered based on resources to be employed.
- If this installation is part of a larger ITS deployment or construction project, then the furnishing, installation, calibration, and testing of the Wireless In-Pavement Vehicle Detector System site(s), shall be specifically noted in the overall project schedule.
- The Contractor shall submit for approval to the Engineer, within 10 business days from Notice to Proceed (NTP), a completed Contractor Submittal Checklist and associated submittals.
- Design locations of each sensor system component including Wireless In-Pavement Vehicle Detectors, wired radios, in-cabinet processor, and repeater locations shall be field verified and recommended for construction by the manufacturer in the submittal described below and shall be submitted to the Engineer for approval.
- The Contractor is responsible for the choice of communication channels for programming each wireless device and shall be approved by the Engineer.

The Contractor shall obtain approval of the schedule, catalog cut sheets, cabinet wiring diagrams, and calculations from the Engineer prior to purchasing any equipment and subsequently performing the installation per the approved documents, contract plans, and specifications.

Pre-Installation Requirements

The Contractor shall follow the Plans as no deviations shall be allowed.

The Contractor and subcontractor employees assigned to work on the wireless sensor installation shall be required to attend installation training by the wireless sensor manufacturer prior to the installation of the equipment. Training certificates shall be submitted to the Engineer for record. The Contractor is advised that the Contractor's failure to request training sufficiently in advance of when the employee is required on the work site shall not be cause for relaxing the requirement for installation training. Upon completion of sensor installation training, each trainee will be issued a nontransferable sensor installation identification card with the trainee's photo and a decal with pressure sensitive adhesive to be affixed on the hard hat. The installation identification card and the decal are valid for one (1) year from the date of issue. The validity of the card and decal are in no way related to the length of this contract. Contractor and subcontractor personnel shall renew their installation identification cards annually by successfully completing installation training again. Contractor or subcontractor personnel who fail to maintain a valid sensor installation identification card are not permitted to work on sensor installation sites. The Engineer reserves the right to remove such personnel from the work site.

The costs incurred by the Contractor for sensor installation training will not be reimbursed. Thirty (30) days prior to the scheduled field installation of each Wireless In-Pavement Vehicle Detector System, the Contractor shall notify the Engineer of the anticipated delivery date of System(s) and name of the certified field installation personnel.

The Contractor shall provide documentation to the Engineer during acceptance of the equipment showing the equipment, each equipment specific serial number, and the field location of each piece of equipment. Documentation shall include signature lines to be signed by both the Engineer and the Contractor upon completion of acceptance testing.

Installation

Each device (radio, in-cabinet processor, repeater, and sensor) shall be first upgraded to the latest firmware version, then configured in the field by the Contractor using manufacturer's configuration software and its installation parameters documented on the installation record form attached.

The Contractor shall request IP addresses for the In-Cabinet Processor Module from the Engineer in writing by a minimum of two weeks prior to installation.

The Contractor shall install sensor units in the pavement at locations shown in the plans following manufacturer recommended procedures for installation.

Any costs resulting from damage incurred shall be the sole responsibility of the Contractor.

The Contractor shall mount the Wireless Wired Radio Assembly and the Wireless Repeater units to the structures indicated on the Plans, or other nearby locations as directed by the Engineer and as recommended by the manufacturer. Tapping existing poles to run cables inside the pole shall be included with this item.

Poles and handholes penetrated to install the in-pavement wireless detection unit cables shall be environmentally sealed to prevent water entry. Contractor must use caution to avoid camera, existing camera cables, and lowering device cables within the pole. Existing infrastructure damaged must be repaired at no additional cost to the contract.

The Contractor shall configure appropriate RF channels and aim all repeaters and wired radios to provide a greater than -79dBm signal strength and greater than 90 LQI on all wireless RF path segments unless approved by the Engineer.

During the site acceptance test, the Contractor shall coordinate with the Engineer to ensure that the Wireless In-Pavement Vehicle Detector System can communicate back to the IDOT Traffic System Center.

Testing

The Contractor shall be required to perform the following tests after the installation of the Wireless In-Pavement Vehicle Detector System. The Contractor shall use the test plans within this special provision to conduct the following tests in the presence of the Engineer.

First Unit Factory Acceptance Inspection

1. Site Test
2. System Test
3. 30-Day Burn-in Period
4. Final System Acceptance and Training

Site Test

The purpose of the Site Test is to have the Contractor demonstrate to the Engineer that all Wireless In-Pavement Vehicle Detector System components have been installed, connected, labeled, and configured correctly as per contract plans and as per the manufacturer's requirements. This installation shall result in the reviewing of accurate (per manufacturer's specification) volume and speed data at the site before being connected to the switch and communications system. The site testing also requires monitoring the speed and vehicle count manually for the specified duration.

For the Site Test to be accepted, the Contractor shall demonstrate to the Engineer that:

- The installation has been performed as per contract plans and as per the manufacturer's recommendations.

All connections are tight and cannot be dislodged by incidental contact.

- Verify presence and quality of Wireless In-Pavement Vehicle Detector System device data through visual checks to verify volume, occupancy, speed, and classifications as determined by the required functionality. Use a local laptop running manufacturer's configuration software to verify that the In-Cabinet Processor Module is receiving vehicle detection data from each sensor.
- Connect the In-Cabinet Processor Module Ethernet port Cat 6 cable into the communication network's assigned switch port.
- Configure the System Manager to recognize and accept data from the In-Cabinet Processor Module.
- The Wireless In-Pavement Vehicle Detector System form and configuration spreadsheet have been fully completed, signed by the Engineer at the finish of the Site Test. Configure each In-Cabinet Processor Module and sensor to achieve the accuracy specified below:
 - A minimum 20 vehicle count (manual and via the Sensor System) has been conducted, per lane, has accurately recorded the counts on the Volume Verification Sheet (attached to this specification), and the Volume Verification Sheet has been signed by the Engineer.
- The counts from the Sensor System shall be within 10.0% of the manual counts taken.
 - A one for one vehicle comparison has been conducted when determining the recorded speed results on the Speed Verification Sheets (attached to this special provision).
- The Contractor shall test a minimum of 40 vehicles per lane of traffic, per site. The observed average speed of the detector shall be within 10.0% of the average speed measured by the Lidar gun. If this requirement cannot be attained, then the Contractor shall adjust the unit and repeat the entire volume and speed tests.
- The Contractor shall perform a Subsystem Test during Site Testing, which will involve personnel on-site at the Wireless In-Pavement Vehicle Detector System stations and at the IDOT Traffic System Center to confirm that data collected by the Wireless In-Pavement Vehicle Detector System devices is being properly and accurately received by the IDOT Advanced Traffic Management System (ATMS). During the Subsystem Test, the Contractor shall provide qualified personnel to support the diagnosing and repair of Wireless In-Pavement Vehicle Detector System devices and ancillary components. These personnel shall be available for this support within 48 hours of notification of the need for their services.
- The In-Cabinet Processor Module diagnostic records application shall be run by the Contractor once every 30 minutes over a 6 hour period and all available parameters shall be recorded on a test data sheet. The parameters include average RSSI, LQI, # of reboots (of each sensor), stuck Hi, blips, and total counts by sensor, as well as average speed and deviation from average speed (if 3 sensors are installed in the lane). This speed data is to be compared with nearby loop detector count station data by the Contractor and any significant differences explained. The Subsystem Test Data Sheet and Test Report are to be delivered to the Engineer for approval prior to proceeding with the System test.

System Test

The System Test will be conducted by the Department.

The System Test demonstrates that the field devices can be operated at the IDOT Traffic System Center utilizing the Advanced Traffic Management Software.

For the System Test to begin the Contractor shall notify the Engineer in writing, within 5-Days prior to the start of System Testing, stating that all project Wireless In-Ground Pavement Sensor System sites are ready for integration into the IDOT ATMS:

System Acceptance of the Wireless In-Pavement Vehicle Detector System

- Successfully complete a pre-final walk-through with the Engineer.
- Contact the Engineer, after the 5-Day request from above, to request that all Wireless In-Pavement Vehicle Detector System sites within the project are tested for:
 - Communications connectivity from the IDOT Traffic System Center to each Wireless In-Pavement Vehicle Detector System device.
 - Accurate Wireless In-Pavement Vehicle Detector System data transmission from each Sensor System site to the IDOT Traffic System Center.
- Receive written approval from the Engineer verifying the communications connectivity and data transmission are within Department requirements.
- Receive written approval from the Engineer verifying the communications connectivity and data transmission are within the Department requirements, and that the System Test has passed and the 30-Day Burn-In Period has immediately started.

The Department will complete the System Test within 2 weeks of notification from the Engineer requesting that all Wireless In-Pavement Vehicle Detector System sites be tested.

30-Day Burn-in Period

The purpose of the 30-Day Burn-in Period is to demonstrate that the Wireless In-Pavement Vehicle Detector System communicates 100% of the time with the IDOT Traffic System Center and that accurate speed and volume data is being received during the duration of the test.

- In most cases, for every one (1) day the Contractor is required to mitigate/fix a problem, an additional one (1) day of testing will be added to the 30-Day test. If components need to be replaced, then the entire 30-day burn-in process shall restart.
- The Engineer will provide written approval upon successful completion of the 30-Day Burn-In period.

Final System Acceptance and Training

The final inspection of the Wireless In-Pavement Vehicle Detector System will be performed by the Engineer in the presence of a representative of the Contractor. Final acceptance of the work associated with this pay item will be made after:

- Successful completion of the project final walk-through and successful resolution of the Engineer's punch list.
- Submission and written approval by the Engineer of all Record Drawings and Warranty documents including an electronic computer file (MicroStation and PDF) including a sketch of each ITS element assembly, user/operator manuals, listing each device's location, identification number, wireless channel information and GPS coordinates to the Engineer.
 - The Contractor shall provide three hard and three electronic (PDF) copies of each of the operation and maintenance manuals to the Engineer for approval.
- Notification of Final Acceptance will be sent in writing by the Engineer.
- The Contractor shall coordinate with the Engineer and manufacturer to provide a (two) 2-day Owner/Operator Maintenance Training session to include IDOT personnel at a location provided by the Department. The Engineer shall determine the number of attendees to be included for the training.

WARRANTY

All Wireless In-Pavement Vehicle Detector System and associated components shall be warrantied and guaranteed against defects and/or failure in design, materials, and workmanship for one year from date of contract completion. The Contractor shall submit the warranty terms as part of each material item's shop drawing submittal for approval.

The warranty shall provide that, in the event of a malfunction during the warranty period, the defective system component shall be replaced with a new component by the manufacturer or his/her representative.

Any system component that, in the opinion of the Engineer, fails three (3) times prior to the expiration of the warranty will be judged as an unsuitable system and shall require the entire system be replaced by the device manufacturer or representative with a new system of the same type at no additional cost to the IDOT. The unsuitable system shall be permanently removed from the project. A failure shall also be defined as the field device becoming unable to comply with all applicable standards at the time of original construction.

All manufacturer's equipment guarantees or warranties shall be included in the maintenance manuals for the subject equipment.

Method of Measurement.

Units will be measured for payment for each site where the Wireless Vehicle Detection System is installed, configured, and tested. Each site may have a different number of radio assemblies, repeaters, wireless sensors, and supporting infrastructure. Sites will be defined by the number of processor controller units. Device poles, foundations, and conduits will be paid separately.

Basis of Payment.

This work will be paid for at the contract unit price per each site WIRELESS VEHICLE DETECTION SYSTEM.

The payment to the Contractor will adhere to the following schedule: Ten percent (10%) of the contract unit price will be paid upon receipt of submission and approval of all product submittal documentation, shop drawings, and calculations.

Sixty-five percent (65%) of the contract unit price will be paid by the Engineer at full completion of the requirements listed under the Site Test and System Test of the Wireless In-Pavement Vehicle Detector System location(s). Written approval from the Engineer of acceptance of the Site Test is required before payment is released.

Twenty-five percent (25%) of the contract unit price will be paid after the acceptance of the 30-Day Burn-In period, Final System Acceptance, and Training by the Engineer in the presence of the Contractor. Written approval from the Engineer that Final Acceptance is required before payment is released.

Wireless In-Pavement Vehicle Data Station or Queue Detection System Installation Record Data Sheet

In-Cabinet Processor Module Installation Parameters

IP Mode	
Ethernet Mode	
Network Mask	
IP Address	
Gateway	
DNS	
DHCP Monitor Host	
NTP Servers	
In-Cabinet Process Firmware version	

Wireless Communication Paths to Wired Radio

#of Repeater Paths	
Transmission Speed1	
1st path channel #	
1st path minimum RSSI (>-79dBm)	
1st path minimum LQI (>90)	
1st path Sensitivity	
2nd path channel #	
2nd path minimum RSSI (>-79dBm)	
2nd path minimum LQI (>90)	
2nd path Sensitivity	
Repeat for each additional channel	

Repeater Installation Parameters

Repeater			
Firmware Version			
Repeater Model Number			
# of In-pavement Sensors in path to AP			
Uplink channel #			
Downlink RSSI (>-79dBm)			
Downlink LQI (>90)			

In-Pavement Sensor Parameters

Lane	1	2	3	4
SensorID (Dot Id 16*)				
Name in SM				
Firmware Version				
Mode				
Repeater (Hex)				
Channel				
Detection threshold				
Adv Settings				
Color Code				

Lane	5	6	7	8
SensorID (Dot Id 16*)				
Name in SM				
Firmware Version				
Mode				
Repeater (Hex)				
Channel				
Detection threshold				
Adv Settings				
Color Code				

Wireless In-Pavement Sensor Calibration Sheet

Project Number and Name: _____

Route: _____

Mile Post: _____ Direction (Circle One): NB / SB / EB / WB / Median

Latitude: _____ Longitude : _____

Date / Time: _____

Contractor: _____

CM: _____

Manufacture: _____

Model: _____

Protocol: _____

Zone Number	Lane Number	Lane Direction	Actual Count	Sensor Count	% Difference	Speed Observed	Actual Speed	% Difference

Site Checklist					
Site Number Verification		Lane Configuration		Message Period	
Vehicle Classification		Speed Set to KPH		Lane minimum 20 vehicle count	
Speed Calibration		Saved Sensor		Saved to Final	

Comments

Sensor Site Acceptance Test Form

Project Number and Name: _____

Route: _____

Mile Post: _____ Direction (Circle One): NB / SB / EB / WB / Median

Latitude: _____ Longitude: _____

Date / Time: _____

Site Acceptance Testing verifies that the installed Sensor(s) are fully operational at each device site, **prior** to connection to the field switch.

PROCEDURE

From the Contractor's laptop, access the Sensor. Verify that the Sensor is communicating with vendor supplied software.

Use manufacturer software to start automatic setup.

Use manufacturer supplied software to adjust settings as required.

Fill out the Sensor calibration sheet.

Fill out the Sensor configuration spreadsheet.

Save file to storage device.

Submit calibration sheet(s).

Additional Comments: _____

Test Conducted By: _____ Date: _____

Engineer* _____ Date: _____

* The Site Test shall not be official until the Engineer signs and dates this sheet

LIGHT POLE, SPECIAL, 30'

Description

This work shall consist of furnishing and installing a 30-foot aluminum light pole without a mast arm, and all hardware and accessories required for the intended permanent use of the pole. The light pole will be utilized to mount traffic surveillance equipment at the locations shown on the Plans according to applicable portions of Section 830 of the Standard Specifications and as directed by the Engineer.

Materials

The light pole shall consist of a single shaft.

CONSTRUCTION REQUIREMENTS

The pole shall be set plumb on the foundation without the use of shims, grout, or any other leveling devices under the pole base.

Method of Measurement

Units will be measured for payment as each on a per pole basis.

Basis of Payment

This work will be paid for at the contract unit price per each for LIGHT POLE, SPECIAL, 30'. Foundation, transformer base, and traffic surveillance equipment will be paid for separately.

LIGHT POLE BREAKAWAY DEVICE

Effective: November 1, 2025

Description.

This work shall consist of furnishing and installing a breakaway device. The device may be either a transformer base or a set of four breakaway couplings at the Contractor's discretion. However, all breakaway devices for the contract must be of the same type; mixing transformer bases and couplings in the same contract is not allowed.

Materials.

Breakaway Couplings

General.

Certification shall be submitted from the supplier that the device used under the conditions of the particular design meets the AASHTO breakaway specification. Certification shall include test results performed by the manufacturer, supplier or others. If test results have been previously approved by a letter from the FHWA, a copy of the approval letter from FHWA should accompany the certification. The coupling shall not alter the bolt circle of the pole. The breakaway device shall be vandal resistant and shall not adversely affect the light pole installation and maintenance or decrease the resistance of the light pole to non-collision type of design loading. The breakaway device shall be field attachable and detachable.

Breakaway Coupling Cover.

The breakaway device shall have a cover enclosing the space between the bottom of the pole base plate and the foundation consisting of a Type 304 stainless steel wire cloth mesh with a maximum opening of 1/4 in. (6 mm) and a minimum wire diameter of AWG No. 16 (1.6 mm) with a minimum lap of 6 in. (150 mm) to enclose the void between the pole base and the foundation. The lap shall be tied together with Type 304 stainless steel wire ties. When specified, an aluminum skirt cover shall be provided over the wire cloth. The aluminum skirt shall be made of ASTM B209 Alloy 3003-H14 or 5052-H32, 0.0625 in. (1.6 mm) thick minimum. The enclosure shall fit snugly around the wire cloth and breakaway devices between the bottom face of the pole base plate and the top of the foundation. Vertical or horizontal movement of the cover will not be acceptable.

Transformer Base.

General.

The breakaway device shall be a cast and welded aluminum transformer base type pole base. The breakaway device shall have a listing of approval by FHWA to AASHTO breakaway requirements. This shall require compliance to AASHTO "Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, Sixth Edition, 2013". Submittal information shall document the approval listing.

The device shall be approximately 17 in. (430 mm) high or approximately 9 in. (230 mm) high and shall have a large fiberglass or polyethylene access door of a color to match the base finish which shall be held in place with a button-type tamper resistant stainless-steel screw or other means approved by the Engineer.

The 17-inch high transformer base cannot be installed on metal helix foundations.

Bolt Circle Size.

The transformer base shall come in two standard bolt circles.

11.5 in. (290 mm) Pole Bolt Circle Devices. Breakaway devices for poles having nominal 11.5 in. (290 mm) bolt circles shall accommodate bottom (foundation) bolt circles ranging roughly 10 to 12 in. (255 to 300 mm) and shall accommodate top (pole) bolt circles ranging roughly 10.5 to 12 in. (265 to 300 mm).

15 in. (380 mm) Pole Bolt Circle Devices. The bottom foundation bolt circle shall have a range of 15 to 17 in. (380 to 430 mm) and shall accommodate top (pole) bolt circles having a range of 13 to 15 in. (330 to 380 mm).

Access door.

The polyethylene access door shall be fabricated from a high-density polyethylene. The door shall withstand temperature extremes of -76 to 150°F (-60 to 65°C). Ultraviolet light inhibitors shall also be incorporated into the door material. The door shall be reinforced and have tabs to lock into the transformer base door frame.

The appearance of the breakaway device shall be of such general configuration as not to detract from the aesthetic value of the light pole. The device shall have finish that matches the finish of the pole.

Installation.

All entryway points created using breakaway devices shall be permanently and completely sealed against rodent entry. This includes the pole base plate and foundation plate openings, elongated holes for anchor rods, the opening below the pole base plate, and the wiring windows in both steel and concrete foundations. Where breakaway couplings are used in conjunction with steel foundations, the Contractor shall match the plate sizes to seal out rodents between the foundation and pole base. Breakaway devices are not allowed on bridge parapets, barrier walls, or pedestrian conflict areas, and are not required behind guardrail. The Contractor shall verify that the loading of the pole, arm(s), luminaire(s), banner(s), and appurtenances does not exceed the capacity of the breakaway device.

Transformer Base.

The transformer base shall be installed level and flush with the foundation without the use of leveling washers or shims according to the manufacturer's installation procedures. The anchor rods shall be inserted full depth into the slotted holes of the transformer base. The transformer base shall be installed with access door aligned with light pole handhole. All nuts, bolts, washers, and lock washers required to complete the installation of the transformer base shall be included. A minimum of two thread pitches shall extend beyond the top surface of the nut.

Breakaway Couplings.

The breakaway couplings shall be coordinated to match anchor rod size. The breakaway coupling shall be installed on the anchor rod according to the manufacturer's recommendations and fully coordinated with the foundation. When used with a metal foundation, a nut shall be installed under the foundation plate on the stud bolt to prevent it from backing out of the breakaway coupling. The coupling installation shall not be used to level the pole base in lieu of a level foundation. The screen shall be tied back on itself and secured with stainless steel wire ties. The screen shall fit tightly and shall completely fill all openings including the voids in the bottom of the pole base

Method of Measurement.

Transformer bases used for breakaway devices will be measured for payment as each, breakaway couplings will be measured as each, for a set of four couplings.

Basis of Payment.

This work will be paid for at the contract unit price per each for **LIGHT POLE BREAKAWAY DEVICE**.

MODIFY EXISTING CONTROLLER AND CABINET

Description

This work shall consist of providing labor and materials necessary to modify an existing ITS controller cabinet to support the WIRELESS VEHICLE DETECTION SYSTEM equipment. This work includes:

- Installation of a 20 AMP circuit breaker.
- Modification to existing cabinet components to accommodate the installation of a Wireless In-Pavement Vehicle Detector System and associated cabling.
- Modifications may include, but are not limited to, relocation of existing cabinet equipment, modifications to the power supply, and configuration of cellular modem and network switch.
- Organizing existing cabinet components to neatly layout equipment.
- Update cabinet electrical drawings.
- Test and commission equipment.
- Stainless steel conduit and fittings for wireless detection system cable to enter the side of the existing cabinet.

CONSTRUCTION REQUIREMENTS

General requirements shall be in accordance with Section 801 of the Standard Specifications. The cabinet penetration shall be environmentally sealed. The Contractor shall update the cabinet electrical drawings to illustrate connections to the new equipment. The Contractor shall program the switch as necessary to accommodate the new equipment. IP addresses for all new cabinet components will be provided to the Contractor.

Method of Measurement

Units will be measured for payment for each controller cabinet modified and tested.

Basis of Payment

This work will be paid for at the contract unit price each for MODIFY EXISTING CONTROLLER AND CABINET. Wireless detection system cable is included in the WIRELESS VEHICLE DETECTION SYSTEM and is not included in this pay item.

REMOVE AND RELOCATE SIGN PANEL

Description: This work shall include all labor, material, and equipment necessary to remove, store, and re-erect existing regulatory and warning sign panel assembly on new posts in accordance with Section 724 of the Standard Specifications and as specified herein.

The Contractor shall store the existing sign panel assembly in a location that won't promote vandalism or theft. The Contractor shall replace, at no additional cost to the Owner, any sign panel assembly which has been vandalized, stolen or damaged due to neglect, misconduct or poor workmanship.

The sign panel assembly shall be installed on a new post in accordance with applicable sections of the Manual on Uniform Traffic Control Devices. Construction equipment such as a backhoe or skid steer shall not be used to drive posts into the ground.

Basis of Payment: This work will be measured in place and paid for at the contract unit price per EACH for REMOVE AND RELOCATE SIGN PANEL, which shall include all labor, material, and equipment required to complete the work as specified herein.

STORM SEWERS (LESS THAN 66 INCH DIAMETER)

Description: This work shall consist of furnishing and installing storm sewers of the type and size specified, less than 66 inches in diameter, at the locations shown on the plans. The work shall be performed in accordance with Section 550 of the Standard Specifications, except as modified herein.

Materials: Pipe and joint materials shall conform to the applicable requirements of Article 550.02 of the Standard Specifications and shall be of the material, type, class, and size shown on the plans.

Aggregate used for pipe bedding and encasement shall meet the CA 11 gradation requirements of Section 1004 of the Standard Specifications.

Aggregate used for Trench Backfill shall meet the CA 6 gradation requirements of Section 1004 of the Standard Specifications.

Construction Requirements: Construction shall comply with the applicable requirements of Section 550 of the Standard Specifications, except as modified herein, and the plans and this special provision.

The work shall include excavating the trench, disposing of excavated materials not suitable or required for reuse, furnishing and placing the pipe, furnishing and placing CA 11 pipe bedding and encasement, and properly compacting the materials placed into the trench after installation of the storm sewer.

CA 11 bedding shall be placed a minimum of four inches (4 in.) below the outside bottom of the pipe and shall extend around the pipe and to twelve inches (12 in.) above the top of pipe, as shown on the plans. CA 11 shall be placed and compacted in accordance with the applicable requirements of Section 550.

Trench Backfill: Trench Backfill, where required by the plans, shall conform to the applicable requirements of Section 208 and Article 550.07 of the Standard Specifications. Aggregate for Trench Backfill shall be CA 6. CA 6 Trench Backfill shall be placed and compacted by mechanical means in accordance with the applicable requirements of Sections 208 and 550.

Trench Backfill shall begin at the top of the CA 11 encasement and extend to the limits shown on the plans. The use of CA 6 does not alter the trench width or payment limits established by the Standard Specifications and the plans.

Method of Measurement: Storm sewer will be measured for payment in accordance with Article 550.09 of the Standard Specifications. CA 11 used for pipe bedding and encasement will not be measured separately for payment.

Trench Backfill will be measured for payment in accordance with Section 208 of the Standard Specifications.

Basis of Payment: Storm sewer will be paid for in accordance with Article 550.10 of the Standard Specifications under the applicable STORM SEWERS pay item of the type and size specified. The contract unit price shall include CA 11 pipe bedding and encasement and all labor, equipment, and materials necessary to complete the storm sewer installation, except Trench Backfill.

CA 6 Trench Backfill will be paid for separately at the contract unit price per CUBIC YARD for TRENCH BACKFILL.