

**BOOK 3
DETAILED SPECIFICATIONS**

**Fifth Avenue Eco-Orchard
*Fifth Avenue and Sacramento Boulevard***

**REQUISITION NO.: 442012
SPECIFICATION NO.: 1238762**



**CITY OF CHICAGO
BRANDON JOHNSON
Mayor**

Prepared by the
DEPARTMENT OF PLANNING AND DEVELOPMENT (DPD)
Contracts Section

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DEPARTMENT OF PROCUREMENT SERVICES

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(The City may from time to time revise these terms and conditions)

All Signatures To Be Sworn To Before A Notary Public

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GENERAL INFORMATION

The following Detailed Specifications supplement the Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction," adopted January 1, 2022 (hereafter referred to as the Standard Specifications or SSRBC); the "Supplemental Specifications and Recurring Special Provisions", adopted January 1, 2023; the latest edition of the "Illinois Manual of Uniform Traffic Control Devices for Streets and Highways" in effect on the date of invitation for bid; the "Manual of Test Procedures for Materials" in effect on the date of invitation for bid; the City of Chicago Department of Transportation Regulations for Openings, Construction and Repair in the Public Way (including Appendix B – ADA Standards) in effect on date of invitation for bids; and the City of Chicago Street Restoration Requirements in effect on date of invitation for bids. The latter two (2) documents are available on the City of Chicago Department of Transportation's web site. In case of conflict with any part or parts of said specifications, these Detailed Specifications will take precedence and will govern.

Unless otherwise specified, the Description, General Requirements, Method of Measurements and Basis of Payment for the following items shall be as stated in the appropriate Sections of the Standard Specifications.

Any references in these Detailed Specifications to the "Engineer" will be read "Department of Planning and Development (DPD) or DPD's Representative," and any reference to "Commissioner" will be read "Department of Planning and Development (DPD), City of Chicago (Commissioner)." Any references in these Detailed Specifications to "2FM" refers to the City of Chicago Department of Fleet and Facility Management, which is a City agency that performed environmental services for this project and the Contractor will be responsible for coordinating and reporting to this agency where indicated.

The following specifications from the City of Chicago are applicable: Standard Specification for Sewer Construction, Department of Water Management, and the Department of Electrical Operations Standard Specifications.

These Detailed Specifications and the referenced standard specifications will govern the construction of the **Chicago DPD Fifth Avenue Eco-orchard**.

LOCATION OF PROJECT

Southwest corner of Fifth Avenue and Sacramento Boulevard

ENVIRONMENTAL ASSESSMENT, REMEDIATION AND REPORTING REQUIREMENTS

Background:

The project site consists of three parcels with the Property Index Numbers (PINs) 16-13-115-009, 16-13-115-010, and 16-13-115-011. PINs 16-13-115-010 and 16-13-115-011 (3001-3011 W Fifth Ave) are owned by the City and are referred to as the City parcels. PIN 16-13-115-009 (3013 W Fifth Ave) is owned by NeighborSpace and is referred to as the NeighborSpace parcel.

Environmental site assessments have been conducted and identified surficial and subsurface soil at the project site in exceedance of the Illinois Environmental Protection Agency's (IEPA) Residential ingestion and/or construction worker objectives included in Title 35 of the Illinois Administrative Code Part 742 for polynuclear aromatic hydrocarbons and metals (primarily lead, arsenic, chromium and mercury). In deeper excavations, groundwater may be encountered that contains contamination from the same constituents. The project site has been enrolled in IEPA's Site Remediation Program (SRP) to obtain a Comprehensive Residential No Further Remediation (NFR) letter. Engineered barriers required to obtain the NFR letter have been incorporated into the design plans and specifications herein.

In 2019, a Phase I Environmental Site Assessment (ESA) was conducted on the City parcels and the NeighborSpace parcel by Brecheisen Engineering, Inc. (Brecheisen) on behalf of the City. The Phase I ESA identified Recognized Environmental Conditions (RECs) on City parcels and the NeighborSpace parcel, including a record of a 1,000-gallon heating oil underground storage tank (UST) on the City parcels along with neighboring properties with histories of potential petroleum products or hazardous substances.

A soil and groundwater investigation was completed on the City parcels in 2019. The City parcels were enrolled in the IEPA SRP for the purpose of obtaining a Comprehensive Residential NFR letter. The City parcels were assigned IEPA Bureau of Land No. 0316275397. A Comprehensive Site Investigation Report/Remediation Objectives Report (CSIR/ROR) for the City parcels, dated July 23, 2019, was prepared by Brecheisen and submitted to the IEPA. Contamination was identified at concentrations above applicable residential Tier 1 Soil Remediation Objectives (SROs) and Groundwater Remediation Objectives (GROs) objectives included in Title 35 of the Illinois Administrative Code (IAC) Part 742. The CSIR/ROR included an Electromagnetic and Ground Penetrating Radar (EM/GPR) survey to investigate potential USTs on the City parcels. One metal anomaly that may indicate the presence of a UST was identified. The IEPA conditionally approved the CSIR/ROR with comments on October 17, 2019.

A DRM-1 form was submitted to the IEPA in 2023 that enrolled the NeighborSpace parcel in the SRP under the existing Bureau of Land No. 0316275397 for City parcels so that all three PINs in the project site are enrolled in the SRP together. In 2023, sampling was conducted on the City parcels and the NeighborSpace parcel by Carnow, Conibear & Assoc., Ltd. (CCA), on behalf of the City. CCA submitted a January 30, 2024, Response to IEPA Comments letter to the IEPA that presented results of the additional assessment. CCA also submitted a January 31, 2024, Remedial Action Plan (RAP) to the IEPA for the entire project site for the purpose of obtaining a Comprehensive Residential NFR letter. The RAP is based on the current construction plans for this Project. The City received a RAP approval letter from IEPA on March 26, 2024, and an email clarification from the IEPA approving an alternative geotextile. Both are attached as Appendix I.

The Phase I ESA, the CSIR/ROR, the IEPA conditional approval letter, the Response to IEPA Comments letter, and the RAP are attached to this document as an appendix to Book 3.

The project site (the City parcels and the NeighborSpace parcel) must receive a Comprehensive Residential NFR letter from the IEPA. The Contractor must perform all site remediation work and perform all necessary steps to receive and record an NFR letter for the project site as part of the Work for the Contract. The cost for the Contractor to perform all of the site remediation work and obtain an NFR letter for the project site must be incorporated in the bid price based on the design included in the bid specification. The City will not pay the Contractor for any costs the Contractor incurs to complete the site remediation and corresponding environmental work to obtain an NFR letter for the project site three parcels above the bid price. Any changes to the site remediation and corresponding environmental work related to the NFR letter process will be considered incidental and part of the Work.

The Contractor must complete the following items as part of the work at the project site:

1. The Contractor must retain an environmental consultant to complete all environmental related scopes listed below.

- The Contractor's environmental consultant must provide oversight and documentation of the remediation activities described in the IEPA-approved RAP and prepare a Remedial Action Completion Report (RACR) that requests a Comprehensive Residential NFR Letter for the project site. The RACR must be submitted to and approved by the IEPA. The CONTRACTOR must secure a Final Comprehensive Residential NFR letter for the project site from IEPA. The letter must be recorded on the corresponding PINs in the Office of the Cook County Clerk, Recordings Division.
- The Contractor must remove any soil or soil gas not meeting the requirements of 35 IAC Section 742.305. Any USTs identified must be removed and closed in accordance with applicable regulations including 41 IAC Part 175 and any identified leaking USTs must be properly addressed in accordance with 35 IAC Part 734.

Project activities not specifically mentioned above but necessary to complete the project scope are considered incidental to the job.

While the final approach to remediation will be identified in the RAP approval from IEPA, it is thought that the scope of work will generally include removing contaminated soil, testing and importing backfill and installing engineered barriers required to obtain the NFR letter. The CONTRACTOR shall assume in their bid that the current design is sufficient to meet IEPA requirements for RAP approval. Engineered barriers will be installed across the entirety of the project site and include concrete, porous aggregate, at least three feet of clean fill, and/or 18 inches of clean fill plus a geotextile barrier. Clean fill may consist of clean, sampled soil or virgin sand, rock, gravel, or other geologic material. Written approval must be provided by 2FM, or its designee, prior to importing any materials to the site. All backfill materials supplied by the Contractor shall meet the APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO); 35 ILL. ADM.CODE 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. Quarry generated virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to 2FM, or its designee, prior to importing the material to the site. Prior to importing, non-virgin source materials shall be sampled at a frequency of one (1) sample per 500 cubic yards per source, at no additional cost to the project. A copy of the analytical results shall be

submitted at least one week prior to importing backfill or topsoil on site, and the analytical data must be provided in a tabular format with comparison to the APPENDIX B, SECTION 742, TABLE A soil remedial objectives to demonstrate compliance. The date of the analysis shall be within 90 days of importing such material to the project site. The laboratory must be accredited by the Illinois Environmental Protection Agency’s Environmental Laboratory Accreditation Program (IL ELAP).

No materials suspected of being impacted by Per- and Polyfluoroalkyl Substances (PFAS), including biosolids, EQ Biosolids, and soil or compost blended with biosolids, from any source, may be imported onto the Site for any purpose. 2FM, or its designee, must approve the source of all materials before they are imported onto the project site.

LIST OF STANDARD PAY ITEMS AND SPECIAL PROVISIONS

SPECIAL PROVISION (SP) NOTE:

"Y" DENOTES ITEMS WITH CONTRACT OR PROJECT SPECIFIC SPECIAL PROVISIONS, AND/OR CONFORMS TO IDOT RECURRING SPECIAL PROVISIONS AND IDOT BUREAU OF DESIGN & ENVIRONMENT (BDE) SPECIAL PROVISIONS.

"N" DENOTES ITEMS WHICH CONFORM TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2022 OR THE LATEST EDITION OF THE SUPPLEMENTAL SPECIFICATIONS.

IDOT Standard Specifications Coded Pay Item Index

No. 201	-----	To No. 672	-----	Road and Bridge Construction Items
No. 701	-----	To No. 783	-----	Traffic Control, Signing, Pavement Marking
No. Z	-----	To No. Z	-----	Special Pay Items
No. XX	-----	To No. XX	-----	Local Roads Temporary Pay Items
No. XZ	-----	To X895	-----	Design Temporary Pay Items

Typical Example and Digit Breakdown of a Coded Pay Item

Code No.	Description
20100110	Tree Removal (6 TO 15 Units Diameter)
201	- First 3 digits indicate the section in the Standard Specifications
00110	- Last 5 digits indicate the numerical sequence the item has in that section.

ITEM NO.	SP REQ.	CODE NO.	ITEM	PAGE NO.
1	Y	*****	TREE REMOVAL	DS-1
2	Y	*****	SALVAGE AND REPURPOSE TREE	DS-2
3	N	20200100	EARTH EXCAVATION	
4	N	66900210	HAZARDOUS WASTE DISPOSAL	
5	N	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	
6	Y	CDOT2510010	SHREDDED HARDWOOD BARK MULCH	DS-3
7	N	25100630	EROSION CONTROL BLANKET	
8	Y	X2500930	SEEDING, CLASS 1B (MODIFIED)	DS-4
9	N	28000400	PERIMETER EROSION BARRIER	
10	N	28000510	INLET FILTERS	
11	Y	*****	AGGREGATE, TYPE CA-7	DS-5
12	Y	*****	POROUS AGGREGATE SUBBASE	DS-8
13	Y	*****	AGGREGATE BASE COURSE, TYPE CA-6	DS-10
14	N	31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	
15	Y	*****	WATER SERVICE TERMINATION	DS-11
16	Y	*****	OBSERVATION WELL	DS-12
17	N	31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	
18	Y	CDOT4240010	PORTLAND CEMENT CONCRETE SIDEWALK, 5-INCH	DS-13
19	N	44000500	COMBINATION CURB AND GUTTER REMOVAL	
20	N	44000600	SIDEWALK REMOVAL	

ITEM NO.	SP REQ.	CODE NO.	ITEM	PAGE NO.
21	Y	*****	CLASS B PATCHES, TYPE III, 8 INCH	DS-14
22	Y	*****	CLASS B PATCHES, TYPE III, 10 INCH	DS-14
23	N	40604172	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "E", N70	
24	Y	*****	PERFORATED PIPE UNDERDRAINS 12"	DS-15
25	Y	*****	CATCH BASINS, 3'-DIAMETER, LIGHTWEIGHT FRAME, INFILTRATION LID AND FLAT SLAB TOP	DS-16
26	Y	*****	INFILTRATION SOLID LID (CITY OF CHICAGO)	DS-17
27	Y	Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	DS-18
28	Y	*****	STANDARD INLETS HEAVYWEIGHT FRAME, STANDARD LID FOR INFILTRATION (CITY OF CHICAGO)	DS-19
29	Y	*****	STORM SEWERS, TYPE 2, 8-INCH (DUCTILE IRON PIPE)	DS-20
30	Y	CDOT6060020	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12	DS-23
31	Y	X0323569	STEEL POST REMOVAL	DS-24
32	N	66900105	UNDERGROUND STORAGE TANK (EST. 1000 GALLON) - REMOVAL, DISPOSAL AND CLOSURE IN ACCRODANCE WITH 41 IAC PART 175 AND/OR 35 IAC PART 734 AS APPLICABLE	
33	Y	CDOT6640010	TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6'	DS-25
34	Y	*****	NON-SPECIAL WASTE DISPOSAL, SPECIAL	DS-26
35	Y	*****	IMPORTED SOIL MATERIAL TESTING	DS-26
36	Y	*****	TRAFFIC CONTROL AND PROTECTION	DS-29
37	Y	*****	FURNISH AND INSTALL PROJECT SIGN, TYPE A	DS-34
38	Y	*****	ENGINEERED TOPSOIL, FURNISH AND PLACE	DS-36

ITEM NO.	SP REQ.	CODE NO.	ITEM	PAGE NO.
39	Y	*****	GEOTEXTILE BARRIER	DS-39
40	Y	*****	FILTER FABRIC	DS-42
41	Y	CDOT5870010	PROTECTIVE CONCRETE SEALER	DS-44
42	Y	*****	SPLIT RAIL WESTERN RED CEDAR FENCE	DS-45
43	Y	*****	SPLIT RAIL WESTERN RED CEDAR GATE (4' WIDE)	DS-45
44	Y	*****	INTERPRETIVE SIGNAGE COMPLETE	DS-48
45	Y	*****	PERENNIAL PLANTS, ALLIUM CERNUUM, #1 CONTAINER	DS-50
46	Y	*****	PERENNIAL PLANTS, AMORPHA CANESCENS, #1 CONTAINER	DS-50
47	Y	*****	PERENNIAL PLANTS, ASCLEPIAS TUBEROSA, #1 CONTAINER	DS-50
48	Y	*****	PERENNIAL PLANTS, ASCLEPIAS VERTICILLATA, #1 CONTAINER	DS-50
49	Y	*****	PERENNIAL PLANTS, CAREX BREVIOR, #1 CONTAINER	DS-50
50	Y	*****	PERENNIAL PLANTS, COREOPSIS LANCEOLATA, #1 CONTAINER	DS-50
51	Y	*****	PERENNIAL PLANTS, ECHINACEA PALLIDA, #1 CONTAINER	DS-50
52	Y	*****	PERENNIAL PLANTS, SPOROBOLUS HETEROLEPIS, #1 CONTAINER	DS-50
53	Y	*****	PERENNIAL PLANTS, TRADESCANTIA OHIENSIS, #1 CONTAINER	DS-50
54	Y	*****	SHRUB, RIBES AMERICANUM, #5 CONTAINER	DS-53
55	Y	*****	SHRUB, RIBES SATIVUM 'ROVADA', #5 CONTAINER	DS-53
56	Y	*****	TREE, CERCIS CANADENSIS, #15 CONTAINER	DS-53
57	Y	*****	TREE, CORYLUS AVELLANA 'McDONALD', #15 CONTAINER	DS-53

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58	Y	*****	TREE, CORYLUS AVELLANA 'WEPSTER', #15 CONTAINER	DS-53
59	Y	*****	TREE, PRUNUS AVIUM 'BING', BARE ROOT, GISELA 5 ROOTSTOCK	DS-53
60	Y	*****	TREE, PRUNUS AVIUM 'RAINIER', BARE ROOT, GISELA 5 ROOTSTOCK	DS-53
61	Y	*****	TREE, PYRUS PYRIFOLIA 'SHINSEIKI', BARE ROOT, OHxF97 STANDARD ROOTSTOCK	DS-53
62	Y	*****	TREE, PYRUS PYRIFOLIA 'KOREAN GIANT', BARE ROOT, OHxF97 STANDARD ROOTSTOCK	DS-53
63	N	*****	OVERSIGHT AND DOCUMENTATION OF REMEDIATION ACTIVITIES	
64	N	*****	SUBMITTAL OF AN APPROVED REMEDIAL ACTION COMPLETION REPORT (RACR), RECEIPT OF A FINAL COMPREHENSIVE RESIDENTIAL NO FURTHER REMEDIATION (NFR) LETTER FOR CITY AND NEIGHBORSPACE PARCELS. EACH LETTER WILL BE RECORDED ON THE CORRESPONDING PIN IN THE OFFICE OF THE COOK COUNTY CLERK, RECORDINGS DIVISION.	

GENERAL CONSTRUCTION REQUIREMENTS

The following Detailed Specifications supplement the following documents, which shall govern the construction of this project:

- Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction," adopted January 1, 2022 (hereafter referred to as the Standard Specifications or SSRBC).
- "Supplemental Specifications and Recurring Special Provisions", adopted January 1, 2023.
- Bureau of Design & Environment (BDE) Special Provisions, Local Roads and Streets Special Provisions, and District 1 (D1) Special Provisions included herein.
- "Illinois Manual of Uniform or Streets and Highways" in effect on the date of invitation for bid.
- Illinois Department of Transportation "Guide Bridge Special Provision," (applicable Special Provisions are indicated on the Check Sheet included herein).
- "Manual of Test Procedures for Materials" in effect on the date of invitation for bid.
- City of Chicago Department of Transportation "Rules and Regulations for Construction in the Public Way" (including Section 3.3 – Office of Underground Coordination (OUC) Submittal Guidelines and Procedures and Appendix B – ADA Standards) in effect on date of invitation for bids. The latter document is available on the City of Chicago Department of Transportation's web site:

http://www.cityofchicago.org/city/en/depts/cdot/provdrs/construction_information/svcs/view_constructionstandards.html

In case of conflict with any part or parts of said specifications, these Detailed Specifications will take precedence and will govern.

Unless otherwise specified, the Description, General Requirements, Method of Measurements and Basis of Payment for the following items shall be as stated in the appropriate Sections of the Standard Specifications.

Any references in these Detailed Specifications to "the Engineer" will be read "the Commissioner, Department of Planning and Development, City of Chicago" (Commissioner), and any reference to the "Department" will be read "Chicago Department of Planning and Development" ("DPD").

These Detailed Specifications and the referenced standard specifications will govern the construction of the FIFTH AVENUE ECO-ORCHARD project.

TRAFFIC CONTROL PLAN

Traffic Control will be according to the applicable sections of the Standard Specifications for Road and Bridge Construction, the guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, the Supplemental Specifications and the Recurring Special Provisions, the Specifications, CDOT's Rules and Regulations for Construction in the Public Way, and any special details and highway standards contained herein and in the plans.

Special attention is called to Articles 107.09 and 107.14 and Section 701 of the Standard Specifications for Road and Bridge Construction and the following traffic control related (1) Highway Standards; (2) Supplemental Specifications and Recurring Special Provisions; and (3) Other Specifications contained herein:

1. Standards:

IDOT HIGHWAY STANDARDS: 701501-06, 701701-10, 701801-06, 701901-08, 704001-08, TC-22, TC-24

CITY OF CHICAGO STANDARD CONSTRUCTION DETAILS: A-6-1A, A-6-1B, A-6-2, A-6-3, SIGN POST MOUNTING AND INSTALLATION DETAILS, DRILL-SIGN POST MOUNTING AND INSTALLATION DETAILS, SIGN LAYOUT INSTALLATION

DETAILS: Detour Plan and Pedestrian Detour Plan

2. Supplemental Specifications and Recurring Special Provisions:
(See Book 3 Appendices)

3. Specifications:

CDOT TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6'
RELOCATE TEMPORARY CHAIN LINK FENCE WITH SCREENING

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)
WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

TEMPORARY INFORMATION SIGNING (D1)

TRAFFIC CONTROL AND PROTECTION
FURNISH AND INSTALL PROJECT SIGN, TYPE A
MAINTENANCE OF ACCESS TO ABUTTING PROPERTY

STAGING RESTRICTIONS

Prior to the actual beginning and completion of the various stages of construction and traffic protection, the Contractor will be required to provide lane closures and barricade systems, for preparation work such as pavement marking removal, temporary lane marking, placing temporary concrete barrier, etc. These lane closures and barricade systems, including barricades, drums, cones, lights, signs, flaggers etc. shall be provided in accordance with details in the plans and these Special Provisions and as approved by the Commissioner. The cost of this work will not be paid for separately but shall be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL). The cost of partially opening vehicular and pedestrian traffic along 5th Avenue, Sacramento Boulevard and the alley shall be included in the contract unit price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

ITEM 1 *** TREE REMOVAL**

Description: Work under this item shall consist of cutting, removing, and disposing of all trees, saplings, clusters of individual trees and stumps at the locations shown on the plans or as directed by the Commissioner. Work under this item shall be performed according to Section 201 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified. Grind all tree trunks to below final grades (typically 18" to 36") as necessary to install work as shown in the plans.

Method of Measurement: Removal of trees, saplings, clusters of individual trees and stumps measuring less than (1-inch) unit diameter will not be measured for payment.

Basis of Payment: This work will be paid at the contract unit price per (1-inch) unit diameter for TREE REMOVAL.

ITEM 2 *** SALVAGE AND REPURPOSE TREE**

Description: Work under this item shall consist of cutting, selectively salvaging items for reuse by Commissioner, and disposing of all remaining tree components, including stumps at the location shown on the plans or as directed by the Commissioner. Work under this item shall be performed according to Section 201 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified. Grind all tree trunks to below final grades (typically 18" to 36") as necessary to install work as shown in the plans.

Quality Assurance:

1. Review areas where existing construction is to remain and requires protection.
2. Review method for removing materials from the site.
3. Review staging area for materials on the site.

Execution:

- A. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to workers and damage to salvageable materials.
- B. Provide weather protection for all salvage materials (and items to remain) before, during and after deconstruction.
- C. Salvaged Items (as noted in drawings):
 - a. Sort and organize salvaged materials as they are cut in 4-inch thick disks.
 - b. Store items in a secure and weather protected area until relocated on site or removed from the site.
- D. Grind all tree trunks to a minimum of 18"-36" below grade or deeper as necessary to install work as shown in the plans.
- E. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain the City's property, remove demolished materials from Project site and legally dispose of them in accordance with specifications.

Method of Measurement: This work will be measured and paid for in units of the size specified; Removal of trees, saplings, clusters of individual trees and stumps measuring less than (1-inch) unit diameter will not be measured for payment.

Basis of Payment: This work will be paid at the contract unit price per (1-inch) unit diameter for SALVAGE AND REPURPOSE TREE.

ITEM 6 CDOT2510010 SHREDDED HARDWOOD BARK MULCH

Effective: June 1, 2012

Description: The work under this item shall consist of furnishing, transporting, and placing shredded hardwood mulch into planting beds or around trees as described herein.

Materials: Hardwood bark mulch shall be clean, finely shredded mixed hardwood bark, not to exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. All hardwood bark mulch shall be processed through a hammermill.

Construction Requirements: The Contractor shall supply and install shredded hardwood bark mulch to mulch around trees, shrubs and herbaceous plants in landscaped planting beds.

The Contractor shall remove all litter and plant debris, repair grade by raking and adding engineered topsoil as needed prior to mulching. Care shall be taken not to bury leaves, stems, or vines under mulch material.

All finished mulch areas shall be left smooth and level to maintain a uniform surface and appearance. All work areas shall be clean of debris and mulch prior to leaving the site.

Submittal: A sample and source certification shall be provided prior to performing the work.

Construction Requirements: Place mulch manually around plants as follows:

Perennials, bulbs, groundcovers, vines, grasses: Spread two (2) inches of mulch around plants. Ensure mulch is away from crowns of plants.

Shrubs, including roses: Spread three (3) inches of mulch around shrub. Ensure mulch is away from stems and crown of shrub.

Trees, shade and intermediate: Spread three (3) inches of mulch around trees. Do not pile mulch around trunk; ensure root flare is visible.

Mechanical or power mulch systems are not acceptable methods of placing shredded hardwood mulch.

Method of Measurement: SHREDDED HARDWOOD BARK MULCH will be measured in place and the area computed in cubic yards.

Basis of Payment: This work will be paid at the contract unit price per cubic yard for SHREDDED HARDWOOD BARK MULCH which price shall be payment for completing the work as specified.

ITEM 8 X2500930 SEEDING, CLASS 1B (MODIFIED)

Description: Work under this item shall be performed according to Section 250 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified.

Materials:

Article 250.07 materials shall be modified as follows:

Class 1B (Modified)

<u>Seeds</u>	<u>lbs/acre</u>
Longfellow II Chewings Fescue	50
Sheep's Fescue ¹	50
Rhizomatous Tall Fescue (RTF)	50
Creeping Red Fescue ²	20
Perennial Rye Grass ³	30
TOTAL	200

Notes

¹ Barok, Quattro, Nakiska or other variety approved by the Engineer

² Chantilly, Navigator or other variety approved by the Engineer

³ Barlennium or other fine-leafed variety approved by the Engineer

Method of Measurement: SEEDING, CLASS 1B (MODIFIED) will be measured for payment in acre. To be acceptable for final payment, seeding shall be growing in place for a minimum of 60 days in a live, healthy condition.

Watering will not be measured for payment and shall be incidental to the work. The Contractor shall be responsible for continued watering of all seeding as necessary for establishment. All watering shall be done with a spray application; an open end hose will not be acceptable. The method of watering shall meet the approval of the Engineer.

Basis of Payment: This item of work will be paid for at the contract unit price per acre as shown in the Schedule of Unit Prices for SEEDING, CLASS 1B (MODIFIED).

ITEM 11 *** AGGREGATE, TYPE CA-7**

Description: This work shall consist of providing and installing coarse aggregate type CA-7 as indicated on the plans and as specified herein. This work also includes subgrade testing and preparation in conformance with the plans, specifications and other contract documents.

Materials: The material selected shall be a clean, washed, coarse aggregate, generally comprised of No. 57 sized (about one-inch diameter) crushed gravel or crushed limestone particles (limestone material is not acceptable under proposed planting areas), and commonly has a void content in excess of 30% of its bulk volume, with a wash loss of no more than 3%. The material shall conform to one of the Standard gradations of those specifications and be capable of having minimum voids of 38% by weight measured in accordance with ASTM Standard C 29. Test reports showing void content shall be submitted to the Engineer to be used on the project. The storage layer shall match the dimensions shown in the plans.

All backfill materials supplied by the Contractor shall meet the APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO); 35 ILL. ADM.CODE 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. Quarry generated virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to the 2FM or 2FM's representative prior to importing the material to the site. Prior to importing, non-virgin source materials shall be sampled at a frequency of one (1) sample per 1,000 cubic yards per source, at no additional cost. A copy of the analytical results shall be submitted at least one week prior to importing backfill or topsoil on site. The date of the analysis shall be within 90 days of importing such material to a site. The laboratory must be accredited by the Illinois Environmental Protection Agency's Environmental Laboratory Accreditation Program (IL ELAP) and written approval provided by the Engineer prior to importing any materials to the site.

Construction Requirements:

A. Work must be performed as follows:

1. Subgrade Preparation – work under this item must be performed in accordance with Section 301 of the SSRBC except as herein modified or as directed by the Commissioner.
 - a. Existing subgrade shall NOT be compacted or subject to excessive construction equipment traffic prior to AGGREGATE, TYPE CA-7 bed placement and may be scarified to improve infiltration rates.
 - b. Where erosion of subgrade has caused accumulation of fine materials and/or surface ponding, this material shall be removed with light equipment and the underlying soils scarified to a minimum depth of 6 in.
 - c. Bring subgrade to line, grade, and elevations required.
 - d. Fill and lightly re-grade any areas damaged by erosion or ponding before the placing of geotextile barrier.

2. Installation of Subbase and Base Course. In locations where the AGGREGATE, TYPE CA-7 will serve as a subbase or base course, work shall be performed according to the requirements for Subbase Granular Material, Type B in Section 311 of the SSRBC, except as herein modified or as directed by the Commissioner.
 - a. Upon completion of subgrade preparation, the Engineer shall be notified and shall inspect at his discretion before the contractor may proceed with coarse aggregate and storm chamber layer installation.
 - b. Where indicated in the plans, a geotextile barrier shall be placed immediately after approval of subgrade preparation. Any accumulation of debris or sediment which has taken place after approval of subgrade shall be removed prior to installation of geotextile barrier at the contractor's expense.
 - c. Place geotextile barrier in accordance with manufacturer's standards and recommendations. Adjacent strips of geotextile barrier shall overlap a minimum of 16 in. The contractor shall secure geotextile barrier at least 2 ft. outside of bed and take steps necessary to prevent any runoff or sediment from entering the storage bed.
 - d. Revise Article 311.05(b) Subbase Granular Material, Type B of the SSRBC to read:

“(b) Subbase Granular Material, Type B. The subbase shall be constructed in lifts not more than 6 in. thick when compacted, except that if tests indicate the desired results are being obtained, the compacted thickness of any lift may be increased to a maximum of 8 in. Each lift of material shall be compacted using the largest practical piece of equipment that can be accommodated by the width of the opening as determined by the Engineer. The compactive effort shall be sufficient to consolidate the subbase material so no further consolidation can take place or additional compaction would cause unwanted degradation of the material or compaction of the subgrade. Final compaction is to the satisfaction of the Engineer.
 - e. Do not install aggregate during heavy rain or snowfall. Do not install aggregates over frozen base materials. Do not install frozen bedding aggregates.
 - f. Following placement of the coarse aggregate, the filter fabric shall be folded back along all bed edges to protect from sediment washout along bed edges. At least a 2-ft. strip shall be used to protect beds from adjacent bare soil. This edge strip shall remain in place until all bare soils contiguous to beds are stabilized and vegetated. In addition, hay bales shall be placed at the toe of slopes which may be adjacent to beds to further prevent sediment from washing into beds during site development. As the site is

fully stabilized, excess filter fabric along the bed edges can be cut back to coarse aggregate edge.

Method of Measurement: AGGREGATE, TYPE CA-7 will be measured for payment in cubic yards. The aggregate will be measured in place and the volume computed in cubic yards. The volume of material in place will be computed by the method of average end areas. Compaction and settlement of material shall be accommodated to meet final grades and will not be measured for payment. Water required to be added for compaction on the grade will not be measured for payment, but shall be considered as included in the cost of the item.

Basis of Payment: This item of work will be paid for at the contract unit price per cubic yard as shown in the Schedule of Unit Prices for AGGREGATE, TYPE CA-7. The work of maintaining or proof rolling the completed aggregate base will not be paid for separately, but shall be considered as included in the unit price, and no additional compensation will be allowed.

ITEM 12 *** POROUS AGGREGATE SUBBASE**

Description: This work shall consist of furnishing and placing gap-graded coarse aggregate material to the thickness shown on the plans and as specified herein. Work under this item shall be performed according to Sections 301, 311 and 1004 of the IDOT Standard Specifications for Road and Bridge Construction (SSRBC), except as herein modified.

Materials:

Revise Article 1004.04(a) of the SSRBC to read:

“(a) Description. The coarse aggregate shall be clean, washed, crushed gravel or crushed stone. Use of limestone will not be permitted.”

Revise Article 1004.04(b) of the SSRBC to read:

“(b) Quality. The coarse aggregate shall be Class A quality.”

Revise Article 1004.04(c) of the SSRBC to read:

“(c) Gradation. The coarse aggregate gradation shall be CA7 or CA11.”

Article 1004.04(d) of the SSRBC shall not apply.

All backfill materials supplied by the Contractor shall meet the APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO); 35 ILL. ADM.CODE 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. Quarry generated virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to the 2FM or 2FM’s representative prior to importing the material to the site. Prior to importing, non-virgin source materials shall be sampled at a frequency of one (1) sample per 1,000 cubic yards per source, at no additional cost. A copy of the analytical results shall be submitted at least one week prior to importing backfill or topsoil on site. The date of the analysis shall be within 90 days of importing such material to a site. The laboratory must be accredited by the Illinois Environmental Protection Agency’s Environmental Laboratory Accreditation Program (IL ELAP) and written approval provided by the Engineer prior to importing any materials to the site.

Construction Requirements:

The subgrade shall be prepared according to the applicable portions of Section 301 of the SSRBC.

The existing subgrade shall not be subject to excessive construction equipment traffic prior to placement of the porous aggregate subbase.

The porous aggregate subbase shall be constructed according to the requirements for Subbase Granular Material, Type B in Section 311 of the SSRBC, except as herein modified:

Revise Article 311.06 Finishing of Subbase for Base Course and Pavement of the SSRBC to read:

“The compacted subbase shall be placed at or above plan elevation with any excess trimmed as required by the Engineer. Should the subbase material be disturbed due to construction equipment, the subbase layer shall be lightly re-graded and trimmed to plan elevation before laying the surface layer.

Following placement and trimming of subbase aggregate to plan elevation, the geotextile fabric shall be folded back along all bed edges to protect from sediment washout along

bed edges. At least a 2-foot strip shall be used to protect beds from adjacent bare soil. This edge strip shall remain in place until all bare soils contiguous to subbase are stabilized and vegetated or until the pervious pavement has been placed. If additional site conditions present a potential for contamination of the subbase, extra measures shall be taken to prevent such contamination from occurring. Subbase material found to be contaminated through poor protection methods shall be removed and replaced at the Contractor's own expense. When the site is fully stabilized, temporary sediment control devices shall be removed.

Revise Article 311.05(b) Subbase Granular Material, Type B of the SSRBC to read:

“(b) Subbase Granular Material, Type B. The subbase shall be constructed in lifts not more than 6 in. thick when compacted, except that if tests indicate the desired results are being obtained, the compacted thickness of any lift may be increased to a maximum of 8 in. The compactive effort shall be sufficient to consolidate the subbase material so no further consolidation can take place or additional compaction would cause unwanted degradation of the material or compaction of the subgrade. Final compaction is to the satisfaction of the Engineer.

Method of Measurement: POROUS AGGREGATE SUBBASE will be measured for payment in cubic yards. The aggregate will be measured in place and the volume computed in cubic yards. The volume of material in place will be computed by the method of average end areas. Compaction and settlement of material shall be accommodated to meet final grades and will not be measured for payment. Water required to be added for compaction on the grade will not be measured for payment, but shall be considered as included in the cost of the item.

Basis of Payment: This item of work will be paid for at the contract unit price per cubic yard for POROUS AGGREGATE SUBBASE. The work of maintaining or proof rolling the completed aggregate base will not be paid for separately, but shall be considered as included in the unit price, and no additional compensation will be allowed.

ITEM 13 *** AGGREGATE BASE COURSE, TYPE CA-6**

Description: Work under this item shall be performed according to Section 351 Aggregate Base Course, Type B of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified.

The aggregate shall be according to article 1004.01 and the coarse aggregate gradation shall be CA 6.

The aggregate shall be compacted at the rate indicated in the Plans.

All backfill materials supplied by the Contractor shall meet the APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO); 35 ILL. ADM.CODE 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. Quarry generated virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to the 2FM or 2FM's representative prior to importing the material to the site. Prior to importing, non-virgin source materials shall be sampled at a frequency of one (1) sample per 500 cubic yards per source, at no additional cost. A copy of the analytical results shall be submitted at least one week prior to importing backfill or topsoil on site. The date of the analysis shall be within 90 days of importing such material to a site. The laboratory must be accredited by the Illinois Environmental Protection Agency's Environmental Laboratory Accreditation Program (IL ELAP) and written approval provided the Engineer prior to importing any materials to the site.

Method of Measurement: AGGREGATE BASE COURSE, TYPE CA-6 will be measured for payment in cubic yards. Water required to be added for compaction on the grade will not be measured for payment, but shall be considered as included in the cost of the item.

The requirements for the use of contract quantities and measured quantities shall be according to Articles 311.08(a) and 311.08(b), respectively, of the Standard Specifications.

Basis of Payment: This item of work will be paid for at the contract unit price per cubic yard as shown in the Schedule of Prices for AGGREGATE BASE COURSE, TYPE CA-6. The work of maintaining or proof rolling the completed aggregate base will not be paid for separately, but shall be considered as included in the unit price, and no additional compensation will be allowed.

ITEM 15 *** WATER SERVICE TERMINATION**

Description: Work under this item shall include all associated work necessary for termination of existing unused water services on existing water mains.

Construction Requirements:

Work of the following Specification

The water service termination work shall include the following:

- A. Saw cutting to full pavement depth, removal and disposal of existing features including, but not limited to asphalt or concrete pavement / reinforced pavement, curb and gutter, pavers to be discarded, landscaping, sidewalk or other flatwork encountered.
- B. Excavation and disposal of soils.
- C. Furnishing, placing and removing excavation protection system.
- D. Dewatering excavation.
- E. Furnishing, placing and compacting trench backfill and bedding.
- F. Salvaging and delivering the meter, frame and lid to the Department of Water Management.
- G. Testing the existing water service for control.
- H. Cutting, removal of the tee and replacement with straight pipe and plugging the abandoned service.
- I. Removing the corporation cock and replacing with a brass plug. Plugging the abandoned service.
- J. Cutting and removing the existing shut-off box or meter vault.

All work required to terminate these water services shall be performed by a licensed plumber employed by the Contractor and each installation shall be inspected by the Department of Water Management (DWM) at a fixed cost of \$410.00 per service, based on straight time. Any corrective work associated with the service termination deemed necessary by the DWM shall be performed by the Contractor at no additional cost. The Contractor's licensed plumber will be responsible for obtaining all applicable permits, tracing equipment, excavation/OSHA shoring, backfill/compaction, abandonment of appurtenances (meter vault, valve box, valve basin, etc.) and all restoration to CDOT standards.

Method Measurement: This work shall be measured by each water service terminated, where indicated in the Contract Drawings

Basis of Payment: This work shall be paid for at the contract unit price for WATER SERVICE TERMINATION for each terminated existing unused water service on existing water mains, where indicated on the Contract Drawings. Work under this item shall include all associated work necessary for termination of existing unused water services on existing water mains, including but not limited to DWM inspection costs, obtaining applicable permits, furnishing tracing equipment, excavation/OSHA shoring, backfill/compaction, abandonment of appurtenances and all restoration to CDOT standards.

ITEM 16 *** OBSERVATION WELL**

Description. This specification covers the furnishing and installation of an OBSERVATION WELL as shown on the plans.

Materials. The observation well shall be constructed of Schedule 40 PVC perforated pipe and caps, aggregate type CA-7, filter fabric and rebar as shown on the plans.

Construction Requirements.

Monitoring well will be installed within a 12-inch column of CA-7 aggregate. The CA-7 aggregate will be encased in filter fabric. The filter fabric used to line the observation well installation shall be of the same material specified for FILTER FABRIC. The excavation and disposal of materials, coarse aggregate and fabric envelope shall not be paid for separately but considered incidental to this item. Any dewatering required during the installation of the OBSERVATION WELL shall be considered included as part of the successful installation of the underdrain pipes.

Method of Measurement. This work will be measured for payment per each OBSERVATION WELL.

Basis of Payment. This work shall be paid for at the contract unit price per each OBSERVATION WELL which price will include all costs for excavation and disposal of material required to install the well, and the installation of all perforated PVC pipe, caps and fittings, stone aggregate and fabric envelope.

ITEM 18 CDOT4240010 PORTLAND CEMENT CONCRETE SIDEWALK, 5-INCH

Effective: December 1, 2008

Revised: July 1, 2010

Description. Work under this item shall be performed according to Section 424 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified.

Construction Requirements. This work shall be constructed according to current City of Chicago Department of Transportation ADA Standards.

Method of Measurement. This work will be measured for payment in place in square feet.

Basis of Payment. This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK, 5-INCH.

ITEM 21 *** CLASS B PATCHES, TYPE III, 8-INCH**
ITEM 22 *** CLASS B PATCHES, TYPE III, 10-INCH**

Description: This work shall consist of the removal, disposal, and replacement of the existing pavement including surface course, binder course, aggregate and Portland cement concrete base courses and any other material to the specified depth. This work shall be performed in accordance with Sections 406 and 442 of the IDOT Standard Specifications. PCC shall be in accordance with Class B patching portions of Section 442 of the IDOT Standard Specifications. The PCC and HMA products provided shall be CDOT approved.

Construction Requirements: The Contractor shall mark and coordinate with Engineer all locations where pavement is to be removed. Full depth saw-cuts shall be made along the perimeter of the portion of the pavement designated for removal. The removal shall be made in a neat workman-like manner. Any damage to the existing pavement beyond saw-cut lines shall be re-sawcut and replaced by the Contractor at the Contractor's expense to the satisfaction of the Engineer.

The Contractor shall then remove the HMA surface, binder, base, and subbase to the depths shown on the plans. All of the existing pavement materials shall be picked up and disposed of off-site.

After placement and compaction of a minimum of 6 inches of subbase granular course, the Engineer shall inspect it and, if found to be in good condition, the Contractor shall then replace the pavement as called for on the plans.

Replacement of PCC Base shall be to the depths specified. Replacement of the HMA surface course shall match the depth of the surrounding pavement. All work shall be completed in accordance with the CDOT Pavement Patching Detail A-2-2C. The surface course overlap shall extend 12" beyond the full depth saw cut as shown on the detail. The finished surface shall be flush with the surface of the adjoining existing pavement surface.

Replacement of PCC base course shall include tie bars, dowel bars, expansion joints and contraction joints to match joints in the existing pavement.

The surface course of all HMA patches shall be HMA surface course, Mix "E", N70.

Method of Measurement: Pavement removal and replacement will be measured in place and the areas computed in square yards.

Basis of Payment: This work will be paid for at the contract unit price per square yard for CLASS B PATCHES, TYPE III for the thicknesses indicated. This price shall include the cost of removal, sub-base preparation, prime coats, patching, expansion and contraction joints, tie-in steel reinforcement bars and embedment, dowel bars, 12" HMA surface course overlap, and all necessary incidental work.

ITEM 24 *** PERFORATED PIPE UNDERDRAINS 12”**

Description. Work under these items shall be performed according to Sections 209 and 601 of the IDOT Standard Specifications for Road and Bridge Construction and the current City of Chicago Department of Water Management (DWM) Regulations for Sewer Construction and Stormwater Management and DWM Standard Specifications for Water and Sewer Main Construction, except as herein modified. This work shall consist of installing perforated pipe of the required inside diameter including the furnishing of materials and construction of the trench, bedding, trench backfill, geotextiles and connections to catch basins.

Materials. Materials shall be per the most current DWM Standard Specifications for Water and Sewer Main Construction. All pipe underdrains must be constructed of perforated PVC SDR 35 with a smooth interior, in accordance with the Municipal Code of Chicago, Section 18-29-702.3 and 18-29-1102.5 unless otherwise noted on the plans or directed by the Commissioner.

Construction Requirements.

All pipe underdrains constructed shall be a perforated pipe, without fabric, installed in a geotextile wrapped trench that is backfilled with CA 7. The CA 7 will serve as both bedding and backfill and shall surround the pipe for a minimum of 6 inches in all directions. The geotechnical fabric used to line the pipe underdrain trench shall be of the same material specified for GEOTEXTILE BARRIER. The geotechnical fabric envelope and coarse aggregate shall not be paid for separately but considered incidental to this item.

Any dewatering required during the installation of underdrain pipes shall be considered included as part of the successful installation of the underdrain pipes.

Method of Measurement. This work will be measured for payment in place per (lineal) foot for the PERFORATED PIPE UNDERDRAIN of the DIAMETER specified.

Basis of Payment. This work will be paid for at the contract unit price per (lineal) foot for the PERFORATED PIPE UNDERDRAIN of the DIAMETER specified which price will include all costs for excavation and disposal of unsuitable material, and the installation of all perforated PVC pipe, aggregate backfill, fabric envelope, fittings, openings to existing manhole wall, connections to cleanouts, cleanouts as shown on plans, bedding aggregate, porous granular backfill, and all other work required to complete the pipe underdrain installation as specified.

ITEM 25 *** CATCH BASINS, 3'-DIAMETER, LIGHTWEIGHT FRAME, INFILTRATION LID AND FLAT SLAB TOP**

Description. Work under this item shall be performed according to Sections 602 and 604 of the IDOT Standard Specifications for Road and Bridge Construction and the current City of Chicago Department of Water Management Standard Specifications for Water and Sewer Main Construction, except as herein modified.

Materials. Materials shall be according to the following:

- (a) Coarse aggregate for granular embedment shall meet a CA 11 gradation in accordance with Article 1004.05 of the IDOT Standard Specifications.
- (b) Fine aggregate for trench backfill shall meet a FA 6 gradation in accordance with Article 1003.04 of the IDOT Standard Specifications.
- (c) City of Chicago standard frame and lid shall meet be in accordance with the City of Chicago Department of Water Management Standard Specifications for Water and Sewer Main Construction.

Construction Requirements.

Any dewatering required during the installation of catch basins shall be considered included as part of the successful installation of the catch basins.

Method of Measurement: Work under this item will be measured for payment per each catch basin of the type or type and diameter specified, and with the type of frame and grate or frame and lid specified.

Basis of Payment. This work will be paid for at the contract unit price per each for the type or type and diameter specified, and with the type of frame and grate or frame and lid specified.

ITEM 26 *** INFILTRATION SOLID LID (CITY OF CHICAGO)**

Description: Work under this item shall be performed according to Section 604 of the IDOT Standard Specifications for Road and Bridge Construction and the City of Chicago Department of Water Management Standard Specifications for Water and Sewer Main Construction, except as herein modified.

Materials: Materials shall be according to the following:

- City of Chicago lid of the types specified shall meet the City of Chicago Department of Water Management Standard Specifications for Water and Sewer Main Construction.

Construction Requirements: Existing lids on existing structures shall be removed and replaced with a new lid as specified.

Method of Measurement: Work under this item will be measured for payment per each INFILTRATION SOLID LID (CITY OF CHICAGO).

Basis of Payment: This work will be paid at the contract unit per each for INFILTRATION SOLID LID (CITY OF CHICAGO).

ITEM 27 Z0018500 DRAINAGE STRUCTURES TO BE CLEANED

Description: This item will consist of furnishing all labor, materials, tools and equipment necessary to clean drainage structures (catch basins, manholes and inlets). Work shall include the removal and disposal of all foreign debris and liquids from these storm sewers and drainage structures.

Cleaning: Cleaning will include the opening of manhole lids and placing the lid back in place after cleaning. This work shall also include removing the grates or lids of drainage structures to remove all debris, organic matter and other miscellaneous items. The manhole lids and catch basin / inlet grates will be placed back after work is completed. All debris removed from the drainage structures shall be properly disposed of in an approved manner and not be left in the public way or dumped into the City sewer system. The Contractor shall identify drainage structures that are broken or defective or cannot be cleaned due to accessibility or maintenance issues, and notify the Commissioner of such locations. Guidelines outlined in Section 202.03 of the Standard Specifications shall be followed.

Method of Measurement: This work will be measured per each for DRAINAGE STRUCTURES TO BE CLEANED.

Basis of Payment: This work will be paid at the contract unit price per each for DRAINAGE STRUCTURES TO BE CLEANED, as directed by the Commissioner, which payment will include both cleaning and debris disposal.

ITEM 28 *** STANDARD INLETS HEAVYWEIGHT FRAME, STANDARD LID FOR INFILTRATION SYSTEMS (CITY OF CHICAGO)**

Description: Work under this item shall be performed according to Section 602 and Section 604 of the IDOT Standard Specifications for Road and Bridge Construction and the City of Chicago Department of Water Management Standard Specifications for Water and Sewer Main Construction, except as herein modified.

Materials. Materials shall be according to the following:

- A. Coarse aggregate for granular embedment shall meet a CA 11 gradation in accordance with Article 1004.05 of the IDOT Standard Specifications.
- B. Fine aggregate for trench backfill shall meet a FA 6 gradation in accordance with Article 1003.04 of the IDOT Standard Specifications.
- C. All connections to inlets must be 8-inch Ductile Iron Pipe.
- D. City of Chicago frame and lid of the types specified shall meet the City of Chicago Department of Water Management Standard Specifications for Water and Sewer Main Construction.

Method of Measurement: Work under this item will be measured for payment per each STANDARD INLETS, HEAVEYWEIGHT FRAME, STANDARD LID FOR INFILTRATION SYSTEMS (CITY OF CHICAGO).

Basis of Payment: This work will be paid at the contract unit per each for STANDARD INLETS, HEAVYWEIGHT FRAME, STANDARD LID FOR INFILTRATION SYSTEMS (CITY OF CHICAGO).

ITEM 29 *** STORM SEWERS, TYPE 2, 8-INCH (DUCTILE IRON PIPE)**

Description. Work under these items shall be performed according to Section 550 of the IDOT Standard Specifications for Road and Bridge Construction and the current City of Chicago Department of Water Management (DWM) Regulations for Sewer Construction and Stormwater Management and DWM Standard Specifications for Water and Sewer Main Construction, except as herein modified. This work shall consist of constructing storm sewers at locations designated by the Commissioner, including any connections, concrete collars, dewatering, sheeting and/or shoring required to perform the work as specified.

Materials. Materials shall be per the most current DWM Standard Specifications for Water and Sewer Main Construction:

Construction Requirements.

All right-of-way inlet connections must be 8-inch Ductile Iron Pipe.

All ductile iron pipe must be encased in 4-mil, cross-laminated, high density polyethylene tubing meeting the requirements of AWWA C105.

The pipe bedding material must be a 4-inch thick cushion of CA-11 conforming to Article 1004.01 below and around the pipe and so placed that at least the lower half of the pipe will be uniformly supported for its entire length. The cost of furnishing, placing and compacting bedding material will be considered incidental to the cost of STORM SEWERS of the type and size specified.

All trench backfill material for trenches made in the subgrade of the proposed improvement, and trenches where the inner edge of the trench is within 2 feet of the proposed edge of pavement, curb, curb and gutter, stabilized shoulder, or sidewalk, shall be trench backfill according to Section 208.

All bedding and backfill materials supplied by the Contractor shall meet the APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO); 35 ILL. ADM.CODE 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. Quarry generated virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to the 2FM or 2FM's representative prior to importing the material to the site. Prior to importing, non-virgin source materials shall be sampled at a frequency of one (1) sample per 1,000 cubic yards per source, at no additional cost. A copy of the analytical results shall be submitted at least one week prior to importing backfill or topsoil on site. The date of the analysis shall be within 90 days of importing such material to a site. The laboratory must be accredited by the Illinois Environmental Protection Agency's Environmental Laboratory Accreditation Program (IL ELAP) and written approval provided by the Engineer prior to importing any materials to the site.

Unless otherwise directed by the Commissioner, all excavated material not needed on the work must be legally disposed of beyond the limits of the improvement within 24 hours.

The removal and disposal of existing storm sewer and sewer structures within the proposed sewer trench will be incidental to the cost of STORM SEWERS, of the type and size specified.

Any dewatering required during the installation of storm sewers shall be considered included as part of the successful installation of the storm sewers.

QC/QA Requirements.

The Contractor must provide a Manufacturer's written certification that the materials comply with these specifications.

Inspection and Acceptance

All sewers and sewer structures must be inspected by the City of Chicago Department of Water Management prior to the final payment to the Contractor. In conjunction with these sewer inspections, the Contractor must furnish a videotape of a televised inspection of the interior of all main line sewer constructed and the existing main line sewers connected to under this contract. Record the videotape under the supervision of the Commissioner. The cost of producing and furnishing the video tape will be incidental to the STORM SEWER items(s) of the contract. Perform 2 sessions of videotaping of the sewer: 1) before construction and 2) prior to the placement of final wearing surface. The name, phone number, and contact person of the firm which will be performing the videotaping of the sewer must be provided by the Contractor at the pre-construction meeting. Clean all sewers prior to videotaping. The final acceptance of the sewer shall be based on the sewer videotape. All deficiencies exposed on the videotape must be corrected by the Contractor within 30 calendar days of notification. All costs incurred by the Contractor to make the required repairs are to be borne solely by the Contractor. Pavement removal, if required, must be in full panel sections and pavement anchors will be required for pavement restoration. The Contractor is required to re-videotape the sewer to verify that the deficiencies noted on any previous videotape have been corrected to the satisfaction of the Chicago Department of Water Management (Sewers). All costs to re-videotape the sewer, regardless of the number of times required, will be borne solely by the Contractor. Every effort is to be made by the Contractor to correct all deficiencies prior to the placement of the final wearing surface. If, in the opinion of the Commissioner, the Contractor has delayed in submitting the videotape, the placement of the final wearing surface may be suspended. No time extension will be granted due to this suspension and the Commissioner will be sole judge as to any delays. Include location maps, legends and descriptions on all videotape submittals. 2 copies of each submittal are required.

Method of Measurement. This work will be measured for payment in place per (lineal) foot for the STORM SEWER of the TYPE, DIAMETER, and MATERIAL specified. When a proposed sewer is to be placed at the same location of an existing sewer, the removal of the existing sewer will not be measured for payment.

Trench backfill will not be measured separately for payment and is considered incidental to the work.

Televising and inspection of sewers will not be measured separately for payment and is considered incidental to the work.

Basis of Payment. This work will be paid for at the contract unit price per (lineal)foot for the STORM SEWER of the TYPE, DIAMETER, and MATERIAL specified which price will include pipe, fittings, openings to existing manhole wall, excavation, and disposal of existing material, sewer structures and storm sewers, bedding, trench backfill, video taping and all other work required to complete the sewer installation as specified. Any dewatering and sheeting or shoring

required to do the work as specified will not be paid for separately but will be incidental to the contract unit price of this item.

Trench backfill will not be paid for separately and is considered incidental to the work.

ITEM 30 CDOT6060020 COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12

Perform work in accordance with Section 606 of the IDOT Standard Specifications for Road and Bridge Construction except as herein modified, and with the details shown on the plans.

Description: Work under this item shall be performed according to Section 606 of the IDOT Standard Specifications for Road and Bridge Construction and to the City of Chicago Department of Transportation Regulations for Openings, Construction and Repair in the Public Way (also referred to as Rules and Regulation for Construction in the Public Way). The work consists of constructing Portland Cement Concrete (PCC) combination curb and gutter applying joint sealer where it is indicated in the plans or at the direction of the Commissioner.

Method of Measurement: COMBINATION CURB AND GUTTER, TYPE B-V.12 will be measured for payment in (lineal) feet in the flow line along the face of concrete curb, which measurement will include drainage castings incorporated in various curbs.

Basis of Payment: This Work will be paid for at the Contract Unit Price per (lineal) foot for COMBINATION CURB AND GUTTER, TYPE B-V.12. Contract Unit Price of which shall include furnishing and installing joints, reinforcing steel, rebar, dowel bars, tie bars, curb anchors, curing, excavating, drilling and grouting dowel bars and backfilling as required.

ITEM 31 X0323569 STEEL POST REMOVAL

Description: This work shall consist of removing and disposing the existing fence posts and foundations located on site as shown in the Plans or otherwise directed by the Engineer.

Construction Requirements: No removal work shall be completed without the approval of the Engineer. All associated hardware and appurtenances of the existing post including but not limited to post foundations, fittings, and accessories, shall be removed off-site and disposed of by the Contractor in a legal disposal site.

Method of Measurement: Steel post removal shall be measured for payment of each STEEL POST REMOVAL.

Basis of Payment: This work will be paid for at the contract unit price per each STEEL POST REMOVAL, at the specified locations. This price shall include all equipment materials necessary to remove and dispose of the existing posts and foundations.

ITEM 33 CDOT6640010 TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6'

Effective: October 1, 2008

Revised: July 1, 2009

Description: Work under this item shall consist of constructing, installing, maintaining and removing a chain link fence and gates with screening, of the height specified on the plans, or as directed by the Commissioner. Work under this item shall be performed according to Section 664 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified.

Construction Requirements: The chain link fence shall be anchored sufficient to resist wind loads of 30 pounds per square foot without deflection of more than three inches between top and bottom fence. The base shall not interfere with pedestrian and/or vehicular traffic and shall be approved by the Commissioner.

Opaque Fabric Meshing shall be affixed to the chain link fence face. The fabric meshing shall allow passage of air but shall contain dust and dirt. The mesh fabric shall be the full height of the fence and cover the entire length of the fence including any gated opening. The fabric meshing and fence shall not contain any advertisement. The color of the fabric shall be approved by the Commissioner.

Method of Measurement: Chain link fence will be measured for payment in (lineal) feet, along the top of fence from center to center of end posts, including the length occupied by gates.

Basis of Payment: This work will be paid at the contract unit price per (lineal) foot for TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6'. All appurtenances needed to make the fence freestanding are included in the cost.

ITEM 34 *** NON-SPECIAL WASTE DISPOSAL, SPECIAL
ITEM 35 ***** IMPORTED SOIL MATERIAL TESTING**

Description: Work under this item shall include the permitting of excavation, stockpiling, loading, hauling, importing, exporting and disposal of soil materials according to the scope of work or as directed by DPD or DPD's Representative.

Dispose of all materials removed from the site at an active licensed landfill/permitted Subtitle D landfill. This includes soils generated from all site construction activities including soils excavated in accordance with SIDEWALK REMOVAL within property lines.

All soils, construction debris, and buried concrete generated from the sites are classified as non-hazardous special waste. Refer to Section 669 of Illinois Department of Transportation Standard Specification for Road and Bridge Construction for additional requirements for removal and disposal of regulated substances; however, note that the requirements of this special provision govern in the event there is a conflict.

The Contractor shall perform the work under this section in accordance with all applicable local, county, Illinois EPA, U.S. EPA, and Occupational Safety and Health Administration rules and regulations. Contractor must be licensed to handle special waste and hazardous (if encountered).

Construction Requirements:

Contractor shall prepare and submit waste profile to the DPD or DPD's Representative for review and signature at least one week before starting any soil removal from the site. Obtain authorization from an active permitted Subtitle D landfill indicating acceptance of the site materials at the facility. The Authorization letter must be signed by an authorized representative of the active Subtitle D landfill stating that the facility complies with all local zoning codes and all local, State, and Federal rules and regulations. Contractor shall receive written authorization of the landfill location from the DPD or DPD's Representative prior to hauling materials offsite.

Prepare disposal tickets, disposal receipts, and/or manifests, prior to starting any soil removal activities.

Excavate, load, and transport all materials to the active pre-approved licensed Subtitle D landfill disposal sites in tarp covered hauling trucks. Prior to removal of any soils from the site, contact DPD or DPD's Representative forty-eight (48) hours in advance to schedule a soil hauling and disposal meeting. No soil shall be removed from the site without the presence of DPD or DPD's Representative. All transporting trucks shall hold, and present upon request, a current valid Commercial Driver's License (CDL).

Provide copies of all daily reports, transport/waste manifests, weight tickets, and disposal receipts (as applicable) to DPD or DPD's Representative on a daily basis documenting proper disposal of all materials removed from the site.

All backfill materials supplied by the Contractor shall meet the APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO); 35 ILL. ADM.CODE 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. In addition, backfill samples must also be tested for synthetic precipitation leaching

procedure (SPLP) Target Analyte List (TAL) metals. Quarry generated virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to DPD or DPD's Representative prior to importing the material to the site.

The Contractor must document the required excavations and finished grades as follows:

- A. Post-Excavation Survey - The Contractor shall survey the bottom elevations of all excavations with a maximum of 15-foot spacing grid distance to document that all excavations are at the required depths.
- B. Post-Backfill Survey - The Contractor shall survey the elevations of all finished grades with the same grid spacing to document that the required engineered barriers have been properly installed.
- C. As-built drawings showing the elevations of the bottom of all excavations, the location and elevations of all imported fill materials and geotextile barriers, along with the elevations of the final surfaces must also be prepared and provided by the Contractor. The as-built drawings must demonstrate that the finished site meets the required thickness of imported materials shown in the construction requirements (for example, 36" of engineered topsoil).

Materials:

The Contractor shall furnish all necessary means, products, tools, and equipment required to remove the soil as directed by DPD or DPD's Representative.

Submittals:

Copies of the following submittals shall be prepared and submitted to DPD or DPD's Representative at Contractor's own cost:

Contractor's Site Specific Health and Safety Plan for all workers engaged in excavation, stockpiling, loading, hauling, removal, and disposal of any soils (including non-special waste soils and non-hazardous special waste soils), fill, general construction, and demolition debris from the site. The plan shall comply with all OSHA requirements. The work shall be performed under the direct supervision of a trained experienced site supervisor.

Decontamination Plan outlining decontamination procedures, dust control, and mud cleaning from all field equipment and trucks prior to leaving the site.

Name, address, and telephone number of the active permitted Subtitle D landfill where excavated materials are to be transported. This submittal must be made prior to removal of any materials from the site. This information shall include, at a minimum, the following:

1. Facility Name and Address and Telephone Number.
2. Site Contact.
3. Facility Identification Number issued by Illinois, U.S. EPA, or other state licensing agencies for site outside Illinois

Letter of authorization from the landfill where excavated materials are to be disposed. The authorization must be signed by the active Subtitle D landfill representative and state that the facility complies with all local zoning codes and all local, State, and Federal rules and regulations, that all required laboratory analyses has been received by the facility, and that the facility has agreed to accept the soils (including non-special waste soils, and non-hazardous

special waste soils), fill, and general construction and demolition debris materials. The Authorization shall further state that the soils (including non-special waste soils and non-hazardous special waste soils), fill, general construction and demolition debris fill materials are being accepted for permanent placement on site, and that the material will not be removed from the site unless required by a local, State or Federal Authority.

Copies of all daily reports, transport/waste manifests, weight tickets and receipts (as applicable) to DPD or DPD's Representative on a daily basis.

Any sampling data collected during the course of the Work.

Laboratory results verifying imported materials do not exceed the parameter values listed in APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO):35 ILL. ADM. CODE 742. The laboratory must be accredited by the Illinois Environmental Protection Agency's Environmental Laboratory Accreditation Program (IL ELAP) and written approval provided by DPD or DPD's Representative prior to importing any materials to the site.

Imported quarry generated virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to DPD or DPD's Representative prior to importing the material to the site.

A copy of the analytical results shall be submitted at least one week prior to importing backfill or topsoil on site. The date of the analysis shall be within 90 days of importing such material to a site. Prior to importing, each source of non-virgin source materials shall be sampled at a frequency of one (1) sample per 500 cubic yards per source.

Provide copies of waste disposal manifests/receipts or trip tickets fully executed by the generator, transporter and designated disposal facility within 10 days of off-site removal.

Method of Measurement:

NON-SPECIAL WASTE DISPOSAL, SPECIAL: The non-special waste disposal work shall be measured in cubic yards for the volume of soil material removed offsite in accordance with the plan documents and requirements specified herein.

IMPORTED SOIL MATERIAL TESTING: This testing work shall be measured by each soil sample collected and analyzed, including all reporting requirements listed herein.

Basis of Payment:

This work shall be paid for at the contract unit price cubic yard of NON-SPECIAL WASTE DISPOSAL, SPECIAL and each IMPORTED SOIL MATERIAL TESTING that is performed.

ITEM 36 *** TRAFFIC CONTROL AND PROTECTION**

Description: This item consists of the following items and includes a charge for failure to provide this Work.

- A. **Traffic Control and Protection:** Work includes furnishing, installing, maintaining, relocating and removing signs, signals, markings, traffic cones, drums, barricades, temporary barriers, warning lights, flaggers and other devices for regulating, warning or guiding traffic during construction and special events for motorized traffic, non-motorized traffic, and pedestrians. Work also includes the establishment and maintenance of temporary detours detailed in the plans.
- B. **Maintenance of Access to Abutting Property:** Work consists of providing, maintaining, removing and disposing of temporary access from the street being improved to abutting property. Use pedestrian bridges, temporary walkways, steel plates, crushed stone, or other items as directed by the Commissioner.

Traffic Control and Protection:

Construction Requirements: Perform work in accordance with Section 701 and Articles 107.09 and 107.14 of the Standard Specifications and applicable sections of the Supplemental Specifications and Recurring Special Provisions, guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, Interim Special Provisions and any Special Details and Highway Standards contained herein and in the plans. Placement and maintenance of all traffic control devices shall be as directed by the Commissioner. The Commissioner shall be the sole judge as to the acceptability of placement and maintenance of the traffic control devices prescribed in the appropriate standards.

Care shall be taken to adhere to provisions of the City of Chicago Municipal Code Section 13-32-125 Construction Site Cleanliness. Should contractor fail to comply, they may be cited for violation of the ordinance. Erection of a chain link fence and permeable mesh fabric as specified by the ordinance will be paid for under TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6'.

This item of work shall include furnishing, installation, maintenance, relocation and subsequent removal of all signs, signals, markings, traffic cones, barricades, temporary barrier, warning lights, flaggers, variable message sign, and other devices which are to be used for the purpose of regulating, warning or guiding traffic and maintaining pedestrian access during the construction of this improvement.

Temporary information signing necessary for detours or maintaining access and community relations will not be measured separately for payment but is considered incidental to the contract.

Special attention must be given to advance guide signs during these operations in order to keep barricade placement consistent with lane assignment.

At the completion of each stage of construction or whenever operations indicate that a relocation of a proposed or existing traffic control device is advisable as determined by the Commissioner, the Contractor must remove all traffic control devices which were furnished,

installed and maintained by him/her under this contract, and such devices shall remain the property of the Contractor. Any traffic control devices furnished, installed and maintained by the City will be removed by City forces and will remain the property of the City. All traffic control devices must remain in place until specific authorization for relocation or removal is received from the Commissioner.

The Commissioner will provide to the Contractor "NO PARKING AT ANY TIME - TOW ZONE" signs to be banded to all light poles or existing sign posts within the work zone, when construction is in progress.

Personal vehicles will not be permitted to park within the right of way except in specific areas designated by the Commissioner.

The Contractor must immediately furnish a certified flagger or flaggers if, in the opinion of the Commissioner, the Contractor's construction means or methods warrant. No additional compensation shall be made for flaggers. If no flaggers are available the Contractor must cease operations until they become available.

The Contractor must be aware of the requirements for coordination of all work in this project and adjoining or overlapping projects and for coordination of barricade placement necessary to provide a uniform traffic detour pattern. The Contractor will not be permitted to erect, change or remove his/her detour barricade system without the prior approval of the Commissioner.

Traffic Control Deficiencies:

The following tasks are incidental to this item. **Failure to complete any of the following in a timely manner will result in the CHARGE FOR TRAFFIC CONTROL DEFICIENCIES being assessed daily until adequate traffic control is provided or the task is completed satisfactorily in the opinion of the Commissioner.**

1. Pavement Removal/ Replacement: Traffic control and protection required to safely route traffic around the removed pavement until the replacement pavement has cured and is ready to be opened to traffic. This traffic control and protection must include the use of arrow boards when required. The Commissioner will be the sole judge of the need for arrow boards.
2. Sidewalk at Corners: At intersections, pedestrian access to all corners must be maintained at all times. If pedestrians must be directed onto the roadway and away from sidewalk and curb ramps to complete the work, temporary ramps must be installed and a well-defined walkway a minimum of 3' wide and shielded from traffic with temporary concrete barrier must be provided.
3. Driveway Access: The sole access to properties must never be closed completely. Access must be maintained at all times.

Maintenance of Roadways: Beginning on the date when the Contractor begins work on this project he/she shall assume responsibility for the normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Commissioner but shall not include snow removal operations.

The work involved in maintaining the existing pavement as above specified will be paid for as extra work, in accordance with Article 109.04 of the Standard Specifications. Traffic control and

protection required for this work shall be considered included in the lump sum price for TRAFFIC CONTROL AND PROTECTION.

Arrow Boards: A flashing arrow board meeting the requirements of Article 1106.02(H) of the Standard Specifications shall be operating at all times when a lane is closed to traffic on a multi-lane roadway. Arrow boards shall be provided and located in ahead-on position within each lane closure taper. The cost of furnishing and maintaining arrow boards will be considered incidental to the Contract Lump Sum Price for TRAFFIC CONTROL AND PROTECTION.

Delays to the Contractor caused by complying with these requirements will be considered incidental to the item for Traffic Control and Protection, and no additional compensation will be allowed.

Pedestrian Access: The Contractor must maintain pedestrian access to adjacent properties by installing ADA compliant wood frame-constructed walkways and ramps from the curb line to adjacent property entrances, and at either end of the pedestrian path as directed by the Commissioner. These ramps can be reused, if maintained in acceptable condition, throughout the project. Pedestrian access to adjacent properties must be uninterrupted until the walk is fully restored. The cost of furnishing and maintaining ADA compliant wood frame –constructed walkways and ramps will be considered incidental to the Contract Lump Sum Price for TRAFFIC CONTROL AND PROTECTION.

The Contractor must maintain disabled person pedestrian access to crosswalks across the main arterial street and side streets at all times via ADA compliant wood frame-constructed walkways and ramps through the work zones. These accesses must be observed and protected by the Contractor at all times.

Installation, maintenance and removal of necessary signs and barricades needed to direct pedestrians to usable sidewalks and walkways during the construction is incidental to this item. Contractor may provide temporary access with clean crushed stone as described in Maintenance of Access to Abutting Property in conjunction with wood ramps compliant with the ADA to provide walkways and access to abutting properties. TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6" may be used to also delineate the pedestrian path in addition to being the perimeter of the construction work site, however, care must be taken to not obstruct the proposed path with fence footings.

NOTES:

- 1) Pedestrian access paths will be maintained on both sides of the street and from all corners at all times. Full closures of sidewalk must be approved by Commissioner.
- 2) Pedestrian walkways shall be maintained free of any obstructions and hazards such as holes, debris, mud, construction equipment, stored materials, etc.
- 3) All hazards near or adjacent to walkways shall be clearly delineated.
- 4) Care shall be taken to comply with the ADA Accessibility Guidelines while providing temporary pedestrian access, including: a) at minimum a 4' wide unobstructed path and a 5' wide x 5' long area at minimum every 200', b) maintain curb ramp access to open sidewalks and c) open excavations adjacent to pedestrian access paths must be protected by barricades or fence and delineated by a continuous bottom edge at least 6" high from walkway and a continuous rail or surface (fence) at 3' above the walkway.

- 5) In accordance with the ADA guidelines, a 4' wide unobstructed sidewalk shall be maintained adjacent to the property line. Should this sidewalk be removed, replacement must be completed within 72 hours, unless otherwise directed by the Commissioner.

Submittals:

- A. Name of the individual in his/her direct employ who is to be responsible for the installation and maintenance of the traffic control and any temporary chain link fence for this project (see Article 701.04)
- B. The Contractor must notify the O.E.M.C. – Permit Section at (312) 744-0330, 121 N. La Salle St., Room 905, Chicago, IL and apply for the required permits at least seven (7) days before commencing construction or changing traffic flow unless otherwise approved by the Commissioner.
- C. Contractor must submit a traffic control plan at the beginning of the project identifying proposed pedestrian access path, access to adjacent business and residential entrances, and delineating proposed signage to clearly define pedestrian walkways during each construction phase. The Plan should identify placement of TEMPORARY CHAIN LINK FENCE WITH SCREENING, 6'.

Traffic control plans must be approved by the Commissioner prior to start of work.

MAINTENANCE OF ACCESS TO ABUTTING PROPERTY

Construction Requirements: The Contractor must at all times conduct the work in such a manner as to insure the least obstruction to vehicular and pedestrian traffic. The convenience of the general public and of residents along the involved streets shall be provided for in an adequate and satisfactory manner as directed by the Commissioner.

Where possible, the Contractor must provide the temporary access by placing clean crushed stone fill having a CA-6 gradation meeting the requirements of Article 1004.04 of the Standard Specifications, from the street under improvement to abutting side streets, alleys, driveways, parking lots, buildings, houses, crosswalks, CTA bus stops disturbed by the construction, including access from sidewalks to the bus stops, and to any other property where egress and ingress is required.

The Contractor must provide and install steel plates to cover open trenches until pavement or sidewalk is placed.

When permanent access has been re-established, the materials used for temporary access shall be removed by the Contractor and shall become his/her property for disposal thereof. However, he/she may use the same material in other locations to provide temporary access if approved by and as directed by the Commissioner.

Method of Measurement: TRAFFIC CONTROL AND PROTECTION, which consists of the items of Traffic Control and Protection and Maintenance of Access to Abutting Property as described, will be measured for payment on a lump sum basis.

Basis of Payment: This work will be paid for at the Contract Lump Sum Price for TRAFFIC CONTROL AND PROTECTION, which price shall be payment in full for all labor, materials, equipment, transportation, handling and incidentals necessary to furnish, install, maintain,

removing, and disposing of all traffic control devices, materials for temporary access, and materials for security and weather protection required by the appropriate standards and as approved by the Commissioner.

No adjustment or additional compensation will be allowed except as specified herein. The salvage value of the materials removed shall be reflected in the bid price for this item.

Charge for Traffic Control Deficiency:

To ensure a prompt response to incidents involving the integrity of the work zone traffic control devices, the Contractor must provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis.

When the Commissioner is notified or determines a deficiency exists, in Traffic Control, Maintenance of Access to Abutting Property, Security and Weather protection, or pedestrian access/safety, (s)he will be the sole judge as to whether the deficiency is an immediate safety hazard. The Contractor must dispatch sufficient resources within 2 hours of notification to make needed corrections of deficiencies that constitute an immediate safety hazard. Other deficiencies shall be corrected within 12 hours. If the Contractor fails to restore the required traffic control and protection within the time limits specified above, the Commissioner will impose a daily monetary deduction for each 24-hour period (or portion thereof) the deficiency exists. This time period will begin with the time of notification to the Contractor and end with the Commissioner's acceptance of the corrections. For this project, the daily deduction will be **\$5,000** per deficiency/occurrence. For those deficiencies where corrective action was not an option, this monetary deduction will be immediate.

In addition, if the Contractor fails to respond, the Commissioner may correct the deficiencies and the cost thereof will be deducted from monies due or which may become due the Contractor. This corrective action will in no way relieve the Contractor of his/her contractual requirements or responsibilities. In addition any work performed by the Contractor within the work zone that presents a hazard to vehicular or pedestrian traffic shall be subject to charges for TRAFFIC CONTROL DEFICIENCY. Debris removal, fly dumping, proper access to abutting property, timely and correct placement of short term, temporary and permanent pavement markings, along with all items of work contained within this item are also subject to this charge.

ITEM 37 *** FURNISH AND INSTALL PROJECT SIGN, TYPE A**

Description: Work under this item shall consist of furnishing and installing signs at the project site. Work under this item shall be according to Section 720 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified.

Construction Requirements: The sign size, composition and wording for the “Chicago Works” signs shall be as shown in the following image and as specified by the Commissioner.



SITE SIGN SPECIFICATIONS

<u>Size:</u>	Sign A: 4' x 8' x 1-7/8" Sign B: 4' x 4' x 3/4"
<u>Materials:</u>	Face: Sign A – 1/4" tempered Masonite Sign B – 3/4" or greater shop sanded (exterior) plywood (one side only)
<u>Framing:</u>	Sign A: 2" x 4" nominal on four sides and center cross bracing Sign B: 2" x 4" center cross bracing only
<u>Supports:</u>	4" x 4" 12' nominal post
<u>Assembly:</u>	Sign A: 2" x 4" frame to fit 4' x 8' board with 2" x 4" cross braces Sign B: To be mounted directly to the 4" x 4" post, with cross bracing
<u>Mounting:</u>	Signs A and B are to be mounted to the 4" x 4" post with 3/8" minimum bolt and nut, four on each side of the sign. Each bolt is to have two washers, one between the sign and the head of the bolt and the other between the post and the nut.
<u>Erection:</u>	4" x 4" posts are to be set three to four feet deep into concrete 12" in diameter.
<u>Colors:</u>	Background – White Striping – Black or Blue (As Noted) Lettering – Red (stars), White or Blue

A minimum of one sign at each construction site shall be provided. The sign shall be mounted as directed by the Commissioner. The bottom of the sign shall be seven (7) feet above the sidewalk.

The signs shall be erected prior to the beginning of construction and shall be removed within forty-eight (48) hours of notice by the Commissioner.

Method of Measurement: Work under this item will be measured for payment per each sign.

Basis of Payment: Work under this item will be paid at the contract unit price per each for FURNISH AND INSTALL PROJECT SIGN, TYPE A.

ITEM 38 *** ENGINEERED TOPSOIL, FURNISH AND PLACE****Description:**

This work shall consist of furnishing and placement of an engineered topsoil in conformance with the plans, specifications, and as directed by the Engineer in the field.

Materials:

The Engineered Topsoil shall consist of one-third (1/3) sand, one-third (1/3) compost, and one-third (1/3) topsoil. Clay content of the final Engineered Topsoil product shall be less than twelve percent (12%) by volume.

- A. Contaminants – Engineered Topsoil components shall meet the APPENDIX B, SECTION 742, TABLE A; TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO); 35 ILL. ADM.CODE 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. In addition, backfill samples must also be tested for synthetic precipitation leaching procedure (SPLP) Target Analyte List (TAL) metals. Sand derived from virgin source materials do not need to be tested, but certification from the source (quarry) must be provided to DPD or DPD’s Representative prior to importing the material to the site. Compost derived from IEPA-approved sources do not need to be tested, but certification from the source (quarry) must be provided to DPD or DPD’s Representative prior to importing the material to the site. Non-virgin source materials (e.g. topsoil) and compost from non-approved sources shall be sampled at a frequency of one (1) sample per 500 cubic yards.
- B. Sand shall meet the requirements of FA2 of Article 1003.01 of the Standard Specifications
- C. Compost shall be aerobically decayed organic waste meeting the following requirements:
 1. Particle Size – 98% of the compost shall pass through a 0.75-inch screen.
 2. Compost must be derived exclusively from food wastes, leaves (i.e. leaf mold), and branches. Note that all compost sources must be approved by the IEPA or must be tested as described above.
 3. The following are not acceptable: compost derived from sewage sludge, compost containing grass clippings, and mushroom compost processed less than 90 days.
 4. Physical Contaminants – Less than 1% combined glass, metal and plastic.
 5. Organic Matter/Ash Content – At least 40% organic matter; less than 60% ash content.
 6. Carbon to Nitrogen Ratio – 10-20:1 C:N ratio.
 7. Soluble Salts – Electrical conductivity below 10 dS m⁻¹ (mmhos cm⁻¹)
 8. Moisture Content – Between 35% and 50% by weight.
 9. Maturity – The compost shall be resistant to further decomposition and free of compounds, such as ammonia and organic acids, in concentrations toxic to plant growth.
 10. Residual Seeds & Pathogens – Pathogens and noxious seeds shall be minimized.
- D. Topsoil shall conform to the requirements of Article 1081.05(a) of the Standard Specifications.
 1. Topsoil shall have a maximum fine content (clay and silt) of 10% or less.
- E. Soil blend shall meet the following requirements:
 2. pH – Between 5.2 and 7.2.

3. Organic matter content not to exceed 20%.

Submittals:

Submit written verification, including analytical test results and source certification, that document Engineered Topsoil and its components meet the specified requirements.

The Contractor must document the required excavations and finished grades as follows:

- A. Post-Excavation Survey - The Contractor shall survey the bottom elevations of all excavations with a maximum of 15-foot spacing grid distance to document that all excavations are at the required depths.
- B. Post-Backfill Survey - The Contractor shall survey the elevations of all finished grades with the same grid spacing to document that the required engineered barriers have been properly installed.
- C. As-built drawings showing the elevations of the bottom of all excavations, the location and elevations of all imported fill materials and geotextile barriers, along with the elevations of the final surfaces must also be prepared and provided by the Contractor. The as-built drawings must demonstrate that the finished site meets the required thickness of imported materials shown in the construction requirements (for example, 36" of engineered topsoil).

Placement:

The Contractor shall ensure that all other work preparatory to the placement of the Engineered Topsoil including but not limited to excavation, storm sewer construction, concrete curb and gutter, pavers, sidewalk, and subsurface stormwater storage is complete prior to placement of the Engineered Topsoil. The subgrade in the planting areas shall be constructed to the elevations shown on the plans prior to the placement of the Engineered Topsoil. The subgrade shall be loosened by disking or rototilling prior to placing of the Engineered Topsoil.

The Contractor shall thoroughly and evenly mix the sand, compost, and topsoil to the specified proportions prior to bringing on site. Engineered Topsoil shall be placed in lifts of not more than six inches in depth. The Contractor shall take steps to induce mild settling of the Engineered Topsoil to prepare a stable planting medium and uniform surface elevation. Vibrating plate-style compactors shall not be used to induce settling. After inducing mild settling, lightly compacted to 75-82% standard proctor density to support plant material, place additional Engineered Topsoil to create a uniform finished elevation as shown on the drawings. The Contractor shall not over compact the Engineered Topsoil. If segregation or compaction occurs during placement, the Engineered Topsoil shall be re-mixed with a rototiller or by other suitable methods.

Inspection Requirements:

The Contractor shall contact the Engineer for inspection at least 24 hours prior to the following events:

1. Schedule an inspection of sand and compost before mixing.
2. Schedule an inspection of Engineered Topsoil after mixing but before placement.
3. Schedule an inspection of in place Engineered Topsoil prior to commencement of planting.

Method of Measurement:

Engineered Topsoil shall be measured for payment in place in cubic yards. The volume of material in place will be computed by the method of average end areas. Tamping and

settlement of material shall be accommodated to meet final grades and will not be measured for payment, but shall be considered as included in the cost of the item.

Basis of Payment:

This work will be paid for at the contract unit price per cubic yard for ENGINEERED TOPSOIL, FURNISH AND PLACE which includes the sand, compost, and topsoil to the specified proportions. Payment will include the cost of all equipment and labor needed to complete this work as specified herein and to the satisfaction of the Engineer.

ITEM 39 *** GEOTEXTILE BARRIER**

Description:

This specification covers the performance requirements and quality of Geotextile Barrier. The furnishing and installation of Geotextile Barrier shall be performed in accordance with IDOT Standard Specification 282.

Construction Requirements:

Fibers (threads and yarns) used in the manufacture of geotextile shall consist of synthetic polymers composed of a minimum of 95 percent by weight polypropylenes, polyesters, polyethylene, or polyvinylidene-chlorides. They shall be formed into a stable network of filaments or yarns retaining dimensional stability relative to each other. The filaments shall be resistant to delamination. The geotextile shall be uniform in texture, thickness, and appearance, and be free of defects, flaws or tears. The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet light.

Thread used for factory or field sewing shall be of contrasting color to the fabric and made of high strength polypropylene, polyester, or polyamide thread. Thread shall be as resistant to ultraviolet light as the geotextile being sewn.

The geotextile shall conform to the physical requirements listed below.

REQUIREMENTS FOR NONWOVEN GEOTEXTILE BARRIER

Property	Test Method	Unit	Minimum Average Roll Value
Tensile Strength	ASTM D4632	lbs (N)	205
Grab Tensile Elongation	ASTM D4632	%	50
Trapezoidal Tear Strength	ASTM D4533	lbs (N)	80 – 85
Puncture (CBR)	ASTM D6241	lbs (N)	500 – 535
			Minimum Roll Value
Permittivity	ASTM D4491	sec ⁻¹	1.4
Flow Rate	ASTM D4491	Gal/min/ft ²	95
			Minimum Test Value
UV Resistance (at 500 hours)	ASTM D4355	% Strength retained	70
			Maximum Opening Size
Apparent Opening Size – AOS	ASTM D4751	U.S. Sieve (mm)	80

Product / Manufacturers:

Geotextile barrier provided by the following manufacturers:

Mirafi 180N by Solmax, 365 S. Holland Drive, Pendergrass, GA, 30567; Phone: (706) 693-2226

US 205NW, by US Fabrics, 3904 Virginia Avenue, Cincinnati, OH, 45227; Phone: (800) 518-2290; Fax: (513) 217-4420

NOTE – These two products (Mirafi 180N and US 205NW) are the only two products that have been proposed in the Remedial Action Plan (RAP) for this project that has been submitted to the Illinois Environmental Protection Agency (IEPA) Site Remediation Program (SRP). No other products may be used for this project unless they receive preapproval in a RAP Addendum from the IEPA SRP. The Contractor may not submit RAP Addendum to the IEPA without preauthorization from the City. If the Contractor installs a Geotextile Barrier that is subsequently rejected by the IEPA, the Contractor shall be wholly responsible for removing the product and replacing it with an approved product.

Surveying and Documentation

The Contractor must document that the required excavations and finished grades have been met.

1. Post-Excavation Survey - The Contractor shall survey the bottom elevations of all excavations with a maximum of 15-foot spacing grid distance to document that all excavations are at the required depths.
2. Post-Backfill Survey - The Contractor shall survey the elevations of all finished grades with the same grid spacing to document that the required engineered barriers have been properly installed.
3. As-built drawings showing the elevations of the bottom of all excavations, the location and elevations of all imported fill materials and geotextile barriers, along with the elevations of the final surfaces must also be prepared and provided by the Contractor. The as-built drawings must demonstrate that the finished site meets the required thickness of imported materials shown in the construction requirements (for example, 36" of engineered topsoil).
 - 1.

Certification, Sampling, and Testing:

One sample of the Geotextile Barrier must be provided by the Contractor and approved by the City prior to installation.

Along with each shipment of Geotextile Barrier, a Certificate of Compliance shall be furnished by the supplier, along with a document stating the manufacturer's minimum average roll values (MARV) for the Geotextile Barrier. Product properties as listed in the "Specifier's Guide" (current version), Geotechnical Fabrics Report, Industrial Fabrics Association International, 1801 County Road BW Roseville, Minnesota 55113; and that represents minimum average roll values, will be acceptable documentation that the product style meets the requirements of these specifications. For products that do not appear in the above directory, or do not have minimum average roll values listed, typical test data from the identified production run of the geotextile will be required for each of the specified tests as covered under clause AGAR 452.236-76. These tests must be conducted by third party research institutions

Shipping and Storage:

The Geotextile Barrier shall be shipped in rolls wrapped with a cover for protection against moisture, dust, dirt, debris, and ultraviolet light. The cover shall be kept in place to the maximum extent possible prior to placement.

Each roll of Geotextile Barrier shall be labeled or tagged to clearly identify the manufacturer, class and the individual production run in accordance with ASTM D4873.

Method of Measurement: GEOTEXTILE BARRIER will be measured in place and the area computed in square yards.

Basis of Payment: This work will be paid at the contract unit price per square yard for GEOTEXTILE BARRIER which price shall be payment for completing the work as specified.

ITEM 40 *** FILTER FABRIC**

Description:

This specification covers the performance requirements and quality of Filter Fabric. The furnishing and installation of Filter Fabric shall be performed in accordance with IDOT Standard Specification 282.

Construction Requirements:

Fibers (threads and yarns) used in the manufacture of filter fabric shall consist of synthetic polymers composed of a minimum of 95 percent by weight polypropylenes, polyesters, polyethylene, or polyvinylidene-chlorides. They shall be formed into a stable network of filaments or yarns retaining dimensional stability relative to each other. The filaments shall be resistant to delamination. The filter fabric shall be uniform in texture, thickness, and appearance, and be free of defects, flaws or tears. The filter fabric shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet light.

Thread used for factory or field sewing shall be of contrasting color to the fabric and made of high strength polypropylene, polyester, or polyamide thread. Thread shall be as resistant to ultraviolet light as the filter fabric being sewn.

The filter fabric shall conform to the physical requirements listed below.

REQUIREMENTS FOR NONWOVEN FILTER FABRIC

Property	Test Method	Unit	Minimum Average Roll Value
Tensile Strength	ASTM D4632	lbs (N)	120
Grab Tensile Elongation	ASTM D4632	%	50
Trapezoidal Tear Strength	ASTM D4533	lbs (N)	50
Puncture (CBR)	ASTM D6241	lbs (N)	310
			Minimum Roll Value
Permittivity	ASTM D4491	sec ⁻¹	1.7
Flow Rate	ASTM D4491	Gal/min/ft ²	135
			Minimum Test Value
UV Resistance (at 500 hours)	ASTM D4355	% Strength retained	70
			Maximum Opening Size
Apparent Opening Size – AOS	ASTM D4751	U.S. Sieve (mm)	70

The Contractor must document the required excavations and finished grades as follows:

- A. Post-Excavation Survey - The Contractor shall survey the bottom elevations of all excavations with a maximum of 15-foot spacing grid distance to document that all excavations are at the required depths.

- B. Post-Backfill Survey - The Contractor shall survey the elevations of all finished grades with the same grid spacing to document that the required engineered barriers have been properly installed.
- C. As-built drawings showing the elevations of the bottom of all excavations, the location and elevations of all imported fill materials and geotextile barriers, along with the elevations of the final surfaces must also be prepared and provided by the Contractor. The as-built drawings must demonstrate that the finished site meets the required thickness of imported materials shown in the construction requirements (for example, 36" of engineered topsoil).

Certification, Sampling, and Testing:

Along with each shipment of Filter Fabric, a Certificate of Compliance shall be furnished by the supplier, along with a document stating the manufacturer's minimum average roll values (MARV) for the Filter Fabric. Product properties as listed in the "Specifier's Guide" (current version), Filter Fabric Report, Industrial Fabrics Association International, 1801 County Road BW Roseville, Minnesota 55113; and that represents minimum average roll values, will be acceptable documentation that the product style meets the requirements of these specifications. For products that do not appear in the above directory, or do not have minimum average roll values listed, typical test data from the identified production run of the filter fabric will be required for each of the specified tests as covered under clause AGAR 452.236-76. These tests must be conducted by third party research institutions.

Shipping and Storage:

The Filter Fabric shall be shipped in rolls wrapped with a cover for protection against moisture, dust, dirt, debris, and ultraviolet light. The cover shall be kept in place to the maximum extent possible prior to placement.

Each roll of Filter Fabric shall be labeled or tagged to clearly identify the manufacturer, class and the individual production run in accordance with ASTM D4873.

Method of Measurement: FILTER FABRIC will be measured in place and the area computed in square yards.

Basis of Payment: This work will be paid at the contract unit price per square yard for FILTER FABRIC which price shall be payment for completing the work as specified.

ITEM 41 *** CDOT5870010 PROTECTIVE CONCRETE SEALER**

Effective: July 1, 2010

Description: Work under this item shall be performed according to the applicable portions of Sections 420, 421, 483, 503 and 587 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified.

This work shall consist of providing and applying the protecting concrete sealer as directed by the Commissioner.

Materials: The use of linseed oil shall not be permitted. Material shall be in accordance with Section 1026 of the IDOT Standard Specifications for Road and Bridge Construction. The material shall not affect the appearance of the concrete.

General Requirements: Proposed material shall be submitted for approval by the Commissioner. No material application work shall be allowed without the approval of the Commissioner.

Construction Requirements: The material shall be applied according to the Manufacturer's specifications.

Method of Measurement: This work will be measured per square yard of surface treated.

Basis of Payment: This work will be paid for at the contract unit price per square yard for PROTECTIVE CONCRETE SEALER.

ITEM 42 *** SPLIT RAIL WESTERN RED CEDAR FENCE****ITEM 43 ***** SPLIT RAIL WESTERN RED CEDAR FENCE GATE (4' WIDE)****Summary:**

Work under these items shall be performed according to Section 641 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified. This work includes: furnishing and installing two-rail split rail fence and gates of Western Red Cedar; coring and preparation of all work, including excavating, backfilling and all related work, complete as shown on drawings and as specified.

General:

Shop Drawings: Show location of fencing / gates and posts, and details of post / gate installation, mesh specifications and attachment / hardware details.

Mock-Up: Individual piece samples and full mock-up of fence segment and gate.

Quality Assurance

Installer Qualifications: Engage an experienced Installer who has completed at least five fence projects with similar material and scope to that indicated for this Project with a successful construction record of in-service performance.

Project Conditions

Field Measurements: Verify layout information for fencing shown on the Drawings in relation to the property survey and structures. Verify dimensions by field measurements.

If an electric transmission, distribution or secondary line crosses a wood post fence, the contractor shall furnish and install a ground conforming to Article 250 of the National Electrical Code. The ground rod shall be a minimum diameter of 1/2 in. and 8 ft. in length, and driven at least 7 1/2 ft. into the ground. The rod shall be connected to each wire with a minimum awg no. 8 stranded copper wire. Grounding will not be paid for separately but shall be included in the work.

Products**Split Rail Fencing and Gates**

1. Western Red Cedar Materials: Use only materials that are free from loose knots, cracks, and other imperfections.
2. 2-rail "American Style" split rail system shall be used.
3. 2-rail posts shall be approximately 64-inches in height. Any deviations shall be approved by Commissioner.
4. Posts shall be 18-inch girth (approximately 25 square inches). Any deviations shall be approved by Commissioner.
5. Posts shall be buried by 30-inches into ground or as shown in drawings.
6. The concrete for footing shall be Class SI Portland Concrete Cement conforming to the requirements of Section 1020 of the IDOT Standard Specifications.
7. Gate hinge system shall be as per gate manufacturer's recommendations.

8. Latching system shall be positive lock chain and slot or equal.

Miscellaneous Items: This specification is intended to include complete fence materials, and the Contractor must furnish all necessary 1x1 wire mesh, bolts, nuts, latches, fittings, and, connections necessary to securely and rigidly install the fence. Color must be black. All materials to be the same color; black.

Execution:

Erect the split rail fence to line up with consistent height as shown in plans. The overall height of the fence when erected, is the height above finished grade.

Repair or replace fence damaged by construction beyond the limits of the new fence installation shown on the plans. Removed split rail fence components that cannot be salvaged and used in the installation of the new fence become the property of the Contractor.

Setting Posts:

Center and align posts in predrilled holes as shown in plans. Plumb and permanently position posts with anchorages firmly set before installing rails.

1. Posts shall be set true to line and grade.
2. Line posts do not require concrete footings; gate, corner, or end posts do require 12-inch diameter concrete footings extending at least 30-inches into properly compacted fill
3. Postholes: Drill holes for footings for line posts and concrete footings for gate posts.

Where solid rock is encountered before reaching required depth, penetrate the solid rock at least 12 in. (18 in. for end posts) or to the depth noted in plans. Drill holes in solid rock with a diameter at least 1 in. greater than the outside diameter of the post.

After the posts are set and plumbed, fill the hole in the solid rock with grout consisting of 1 part hydraulic cement and 3 parts clean, well-graded sand. Other grouting materials may be used if approved. Thoroughly work the grout into the hole, leaving no voids. Construct concrete footings from the solid rock to the top of the ground.

4. Concrete Footing: Concrete footing shall be a minimum twelve inches (12") diameter and forty-two inches (42") deep. Center posts in their footings. Place concrete and compact by tamping or other approved methods. Use forms for footings, keeping the forms in place for at least 24 hours. Backfill the footing with moistened material as soon as each form is removed, and thoroughly tamp. Remove excess concrete and other construction debris from the site. Curing and protection shall conform to Article 1020.13 of the IDOT Standard Specifications.

Center and align posts in predrilled holes as shown in plans. Plumb and permanently position posts with anchorages firmly set before installing rails.

Installation of Gates:

Install gates plumb, level and secure for full 180 degree inward opening without interference. Install ground-set items in concrete for anchorage as recommended by the fence manufacturer. Adjust hardware for smooth operation and once gate is installed, coordinate with Commissioner on lock installation.

Attach 1 x 1 galvanized and vinyl coated woven wire mesh to fence with 1 ¼" galvanized staples onto fencepost and rails – do not install above the top of bottom rail and a minimum 6" below grade.

Disposal:

All excess excavated and unsuitable material is to be legally disposed of off site and per remediation requirements.

Method of Measurement: SPLIT RAIL WESTERN RED CEDAR FENCE will be measured for payment in place per (lineal) foot and SPLIT RAIL WESTERN RED CEDAR FENCE GATE will be measured for payment in place per each.

Basis of Payment: This work will be paid for at the contract price per (lineal) foot SPLIT RAIL WESTERN RED CEDAR FENCE and each for SPLIT RAIL WESTERN RED CEDAR FENCE GATE, of the type and size specified, which price will include all labor, tools, equipment, and appurtenances required to fabricate, supply, assemble and install completed components, including excavation; repair or replacement fencing; cleaning, grading and backfilling with pea gravel (line posts) or concrete (end, corner and gate posts); removal or disposal of excavated, surplus or damaged materials; gate hardware; wire mesh and incidentals necessary to complete the work.

ITEM 44 *** INTERPRETIVE SIGNAGE COMPLETE**

Description: This work includes the fabrication, supply and installation of interpretive signage. Under this item, the Contractor shall supply and install Interpretive Signs in the locations and manner specified in the plans. Work includes the sign and frame fabrication, excavation, backfill, concrete footings, support posts, installation, welding, fittings, any necessary adjustments and site restoration.

Materials: The sign panel shall be one-half inch (0.5") thick Digital High Pressure Laminate (dHPL) or equivalent as approved by the Commissioner for use as an outdoor exhibit panel. Sign panel shall be solid plastic phenolic HPL with a matte finish. No wood or wood fiber laminate of any kind will be permitted. Sign panel shall be fabricated with not less than four (4) screw inserts on the back side. Sign panel shall come with a minimum ten (10) year limited warranty. Graphics to be provided as an electronic file by the City.

Frameless pedestal shall be a single or double extruded aluminum post(s) with a 45-degree mounting plate and a powder coat finish as approved by the Commissioner. Frameless pedestal shall have four pre-drilled screw holes corresponding to screw inserts on back of sign panel. Frameless pedestal will be ground-mounted on a concrete footing. The concrete for footing shall be Class SI Portland Concrete Cement conforming to the requirements of Section 1020 of the IDOT Standard Specifications.

Submittals: The manufacturer shall provide one full size 600 dpi ink jet proof for engineer's final review and approval for each exhibit. Submit complete shop drawings and manufacturer's specifications for review prior to ordering materials. Provide shop drawings of concrete footing.

Construction Methods: Sign shall be assembled and installed in accordance with the manufacturer's recommendations and as shown in the plans.

Concrete footing shall be a minimum twelve inches (12") diameter and forty-two inches (42") deep.

Protect and allow concrete to cure a minimum of seven (7) days before completing interpretive signage installation. Curing and protection shall conform to Article 1020.13 of the IDOT Standard Specifications.

Install frameless pedestal plumb with the surrounding finished grade.

Provide copies of manufacturer's maintenance instructions and warranty to Commissioner.

Method of Measurement: INTERPRETIVE SIGNAGE COMPLETE will be measured in place on a per each basis.

Basis of Payment: INTERPRETIVE SIGNAGE COMPLETE shall be paid for at the contract unit price per each which price shall be payment in full for all materials, labor, tools, equipment, and appurtenances required to fabricate, supply, assemble and install each unit, including

excavation, concrete footings, sign, frame, pedestal, backfill, grading, and incidentals necessary to complete this item of work.

- ITEM 45 ***** PERENNIAL PLANTS, ALLIUM CERNUUM, #1 CONTAINER**
ITEM 46 *** PERENNIAL PLANTS, AMORPHA CANESCENS, #1 CONTAINER**
ITEM 47 *** PERENNIAL PLANTS, ASCLEPIAS TUBEROSA, #1 CONTAINER**
ITEM 48 *** PERENNIAL PLANTS, ASCLEPIAS VERTICILLATA, #1 CONTAINER**
ITEM 49 *** PERENNIAL PLANTS, CAREX BREVIOR, #1 CONTAINER**
ITEM 50 *** PERENNIAL PLANTS, COREOPSIS LANCEOLATA, #1 CONTAINER**
ITEM 51 *** PERENNIAL PLANTS, ECHINACEA PALLIDA, #1 CONTAINER**
ITEM 52 *** PERENNIAL PLANTS, SPOROBOLUS HETEROLEPIS, #1 CONTAINER**
ITEM 53 *** PERENNIAL PLANTS, TRADESCANTIA OHIENSIS, #1 CONTAINER**

Description:

This work consists of furnishing, installing, and initial care of live potted perennial plants. This work shall be completed, measured, and paid for in accordance with Section 254 of the Standard Specifications except as modified herein.

Requirements:

Add the following to Article 254.02 Materials:

- A. All plant materials shall comply with ANSI Z60.1-2014 American Standard for Nursery Stock.
- B. All plant materials shall be subject to the review and approval of the Engineer.
- C. The Contractor shall begin locating all specified plant materials immediately upon contract award or arrange for custom grown nursery stock. All specified plant material requiring substitution due to unavailability, inferior quality, or size limitations must be approved by the Engineer. Proof that the plant materials have been secured must be on file with the Engineer prior to the processing of any payment to the Contractor. However, if the Contractor proceeded to do everything required to secure the specified plant materials and for reasons beyond the Contractor's control plant substitutions are required, such substitutions shall follow the process detailed below.
- D. The Contractor shall make every effort to maintain the design intent of all landscape plans. To this end, substitutions of plant materials shall be kept to an absolute minimum and requests for substitutions shall be obtained as an unspecified item. The Engineer may inspect plant materials at the source prior to delivery on site. This will be done upon submittal of a Request for Material Inspection (RFIM) sheets. These sheets must be turned into the Engineer at least 6 (six) weeks prior to the expected date of installation.
- E. An on-site inspection of plant materials will be made by the Engineer prior to the installation of plant material. Any plant material not meeting the specified requirements shall be removed and replaced.
- F. Submittals:
 - A. Within 30 days of Contract Award, Contractor must submit verifiable proof that required plant materials have been secured.

Add the following to Article 254.03 Planting Time:

- A. Naturalized Plantings shall be planted between May 1 and June 15 or between August 15 and September 30 or as otherwise approved by the Engineer.

Modify Article 254.05 Layout of Planting as follows:

- A. The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape

plans and as directed by the Engineer. The Engineer reserves the right to make minor adjustments to the planting layout. The limits of beds/masses must be painted with representative plants laid out in a mock-up of at least 20 individual plants within each bed or mass. Planting shall proceed after the Engineer has approved the layout.

Modify Article 254.06 Planting Procedures as follows:

- A. Ensure all other Work preparatory to planting including but not limited to excavation, engineered topsoil placement, storm sewer construction, concrete curb and gutter, paver installation, and other improvements are complete prior to commencing planting.
- B. Ensure engineered topsoil has been installed to specified elevation prior to commencement of planting. Account for quantity of soil displaced by soil in plant containers.
- C. All plant materials shall be subject to inspection and approval by the Engineer prior to installation.
- D. Excavate plant pits with hand tools. Plant pits shall be round with vertical sides and flat bottoms.
- E. When conditions detrimental to plant growth are encountered during excavation such as rubble fill, adverse drainage, or other obstructions, notify Engineer immediately prior to continuing with planting operations.
- F. Install all plant materials straight, true, and plumb.
- G. In beds containing more than one species, cluster plants in groupings of 3-5 individuals of the same species or as directed by the Engineer.
- H. Remove container from container grown planting stock prior to placement in pit. If container grown stock is root bound, score sides and bottom of root mass.
- I. All plant materials shall be adequately healed in to prevent desiccation and/or upheaval.
- J. All plant materials shall be watered with at least 1 gallon of water at the time of planting. The Contractor shall be responsible for continued watering of all plant materials as necessary during guarantee period.

Modify Article 254.07 Mulching as follows:

- A. All plant beds shall be mulched to a depth of 2" immediately upon planting. Mulch shall be kept out of the crown of plant materials, off pavement, and other structures. Do not mound mulch around the base of plant materials. All finished mulched and cultivated areas shall be left smooth and level to maintain a uniform surface and appearance.

Replace Article 254.08 Period of Establishment with the following:

- A. Replace the first paragraph with the following: Prior to being accepted, the plants shall endure a period of establishment (POE). This period shall begin when the plants are installed and accepted by the Commissioner and extend for one full calendar year from planting substantial completion date. To qualify for substantial completion inspection, plants shall have been in place, in a live healthy condition. To be acceptable at the end of the POE, plants shall be in a live healthy condition, representative of their species, at the time of inspection during the month prior to the end of the POE.
- B. During the POE provide watering, pesticide application, weed control, replanting, and continue as necessary until the performance criteria are achieved. Maintenance of planting areas will not be paid for separately, but is incidental to all other Work of this section.
- C. The Contractor shall be required to water all live plant material during the POE. During this POE, the Contractor shall water at least once every 7 days. If additional watering is required due to extreme weather conditions, the Contractor will be required to water to

meet the POE requirements or per the direction of the Engineer at no additional cost during the POE. Damage to plant material that is a result of the Contractor's failure to water in a timely manner or reckless application shall be corrected at the Contractor's expense. The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth. Water shall be supplied by the Contractor.

- D. The Contractor must notify the Engineer in writing of any concerns related to the project design prior to commencement of planting Work. Later claims of non-performance resulting from project design will be rejected if concerns were not thoroughly and specifically described in writing by the Contractor prior to commencement of planting.
- E. The Contractor shall guarantee no less than 100% of all plant materials shall be healthy and vigorous, as determined by the Commissioner at the end of the POE. At no additional cost to the Commissioner, the Contractor shall replace all plant materials that do not meet any of the above criteria. All replacement plantings must be completed before the end of the POE. Replacement plantings shall be subject to 30 days of plant care as described in B and C above.

Modify Article 254.09 Method of Measurement as follows:

PERENNIAL PLANTS, ALLIUM CERNUUM, #1 CONTAINER, PERENNIAL PLANTS, AMORPHA CANESCENS, #1 CONTAINER, PERENNIAL PLANTS, ASCLEPIAS TUBEROSA, #1 CONTAINER, PERENNIAL PLANTS, ASCLEPIAS VERTICILLATA, #1 CONTAINER, PERENNIAL PLANTS, CAREX BREVIOR, #1 CONTAINER, PERENNIAL PLANTS, COREOPSIS LANCEOLATA, #1 CONTAINER, PERENNIAL PLANTS, ECHINACEA PALLIDA, #1 CONTAINER, PERENNIAL PLANTS, SPOROBOLUS HETEROLEPIS, #1 CONTAINER, PERENNIAL PLANTS, TRADESCANTIA OHIENSIS, #1 CONTAINER will be measured per each. Only acceptable plants will be measured for payment. All materials required to provide and establish healthy, thriving plant material shall be considered incidental to this item.

Modify Article 254.10 Basis of Payment as follows:

PERENNIAL PLANTS, ALLIUM CERNUUM, #1 CONTAINER, PERENNIAL PLANTS, AMORPHA CANESCENS, #1 CONTAINER, PERENNIAL PLANTS, ASCLEPIAS TUBEROSA, #1 CONTAINER, PERENNIAL PLANTS, ASCLEPIAS VERTICILLATA, #1 CONTAINER, PERENNIAL PLANTS, CAREX BREVIOR, #1 CONTAINER, PERENNIAL PLANTS, COREOPSIS LANCEOLATA, #1 CONTAINER, PERENNIAL PLANTS, ECHINACEA PALLIDA, #1 CONTAINER, PERENNIAL PLANTS, SPOROBOLUS HETEROLEPIS, #1 CONTAINER, PERENNIAL PLANTS, TRADESCANTIA OHIENSIS, #1 CONTAINER will be paid for at the contract price per each, which price shall include furnishing and installing the plant material of the type and size specified, and all materials, equipment and labor necessary to complete the work. Also included with these items is all initial maintenance as described and meeting the acceptance and guarantee provisions above.

One-half (50%) of the cost of this work will be paid upon initial completion of planting, and the remaining half (50%) after the POE has been successfully completed to the satisfaction of the Engineer.

- ITEM 54 ***** SHRUB, RIBES AMERICANUM, #5 CONTAINER**
ITEM 55 *** SHRUB, RIBES SATIVUM 'ROVADA', #5 CONTAINER**
ITEM 56 *** TREE, CERCIS CANADENSIS, #15 CONTAINER**
ITEM 57 *** TREE, CORYLUS AVELLANA 'MCDONALD', #15 CONTAINER**
ITEM 58 *** TREE, CORYLUS AVELLANA 'WEPSTER', #15 CONTAINER**
ITEM 59 *** TREE, PRUNUS AVIUM 'BING', BARE ROOT, GISELA 5 ROOTSTOCK**
ITEM 60 *** TREE, PRUNUS AVIUM 'RAINIER', BARE ROOT, GISELA 5 ROOTSTOCK**
ITEM 61 *** TREE, PYRUS PYRIFOLIA 'SHINSEIKI', BARE ROOT, OHXF97 STANDARD**
ROOTSTOCK
ITEM 62 *** TREE, PYRUS PYRIFOLIA 'KOREAN GIANT', BARE ROOT, OHXF97**
STANDARD ROOTSTOCK

Description: This work shall be completed, measured, and paid for in accordance with Section 253 of the Standard Specifications except as modified herein.

Requirements:

Add the following to Article 253.02 Materials:

- (a) All woody plant materials shall comply with ANSI Z60.1-2014 American Standard for Nursery Stock.
- (b) All plant materials shall be selected and tagged by the Engineer.
- (c) Rodent protection consists of wire mesh material embedded and staked into the ground as shown in the construction detail in the plans.
- (d) The Contractor shall begin locating all specified plant materials immediately upon contract award or arrange for custom grown nursery stock. All specified plant material requiring substitution due to unavailability, inferior quality, or size limitations must be selected and approved by the Engineer. Proof that the plant materials have been secured must be on file with the Engineer prior to the processing of any payment to the Contractor. However, if the Contractor proceeded to do everything required to secure the specified plant materials and for reasons beyond the Contractor's control plant substitutions are required, such substitutions shall follow the process detailed below.
- (e) The Contractor shall make every effort to maintain the design intent of all landscape plans. To this end, substitutions of plant materials shall be kept to an absolute minimum and requests for substitutions shall adhere to the following requirements.
- (f) Requests for substitution of plant material shall be obtained as an unspecified item. The Engineer will inspect plant materials at the source prior to delivery on site. The Engineer may elect to inspect plant materials via photographs, noting source, conditions and details of delivery prior to coordinating delivery on site if source is beyond 50 miles. Inspection requests will be done upon submittal of a Request for Material Inspection (RFIM) sheets. These sheets must be turned into the Engineer at least 8 weeks prior to the expected date of installation. No plant materials shall be delivered without the Engineer's seal. Plant materials not installed within 30 days of initial inspection shall be required to be re-inspected prior to installation. RFIMs for fall planting will not be accepted after October 1 unless otherwise approved by the Engineer.
- (g) An on-site inspection of plant materials will be made prior to the installation of plant material. Any plant material not meeting the specified requirements shall be removed and replaced.
- (h) Submittals:
 - Within 30 days of Contract Award, Contractor must submit verifiable proof that required plant materials have been secured.

- Request for Material Inspection (RFIM) sheets.

Modify Article 253.07 Layout of Planting as follows:

The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plans and as directed by the Engineer. The Engineer reserves the right to make minor adjustments to the planting layout. The tree locations must be marked by staking and limits of beds/masses must be painted. Planting shall proceed after the Engineer has approved the layout.

Modify Article 253.11 Mulch Cover as noted below:

ITEM Mulch shall be placed within 48 hours of planting.

ITEM Weed barrier fabric shall be excluded.

Modify Article 253.14 Period of Establishment as noted below:

Replace the first paragraph with the following: Prior to being accepted, the plants shall endure a period of establishment (POE). This period shall begin when the plants are installed and accepted by the Commissioner and extend for one full calendar year from planting substantial completion date. To qualify for substantial completion inspection, plants shall have been in place, in a live healthy condition. To be acceptable at the end of the POE, plants shall be in a live healthy condition, representative of their species, at the time of inspection during the month prior to the end of the POE.

Replace the second and third sentences of the third paragraph with the following: Plants that do not meet the requirements for acceptance shall be replaced following the date of inspection per industry standards and as directed by the Commissioner.

Delete the last sentence of the third paragraph.

Modify Article 253.16 Method of Measurement as follows: SHRUB, RIBES AMERICANUM, #5 CONTAINER, SHRUB, RIBES SATIVUM 'ROVADA', #5 CONTAINER, TREE, CERCIS CANADENSIS, #15 CONTAINER, TREE, CORYLUS AVELLANA 'MCDONALD', #15 CONTAINER, TREE, CORYLUS AVELLANA 'WEPSTER', #15 CONTAINER, TREE, PRUNUS AVIUM 'BING' BARE ROOT, GISELA 5 ROOTSTOCK, TREE, PRUNUS AVIUM 'RAINIER' (RAINIER SWEET CHERRY), BARE ROOT, GISELA 5 ROOTSTOCK, TREE, PYRUS PYRIFOLIA 'SHINSEIKI' (SHINSEIKI ASIAN PEAR), BARE ROOT, OHXF97 STANDARD ROOTSTOCK, TREE, PYRUS PYRIFOLIA 'KOREAN GIANT' (KOREAN GIANT ASIAN PEAR), BARE ROOT, OHXF97 STANDARD ROOTSTOCK will be measured per each. Only acceptable plants will be measured for payment. All materials required to provide and establish healthy, thriving plant material shall be considered incidental to this item.

Modify Article 253.17 Basis of Payment as noted below:

Revise first sentence with the following: This work will be paid for at the contract unit price per each for TREES and RODENT PROTECTION, and SHRUBS, of the species root type, and plant size specified, meeting the acceptance and guarantee provisions above.

SHRUB, RIBES AMERICANUM, #5 CONTAINER, SHRUB, RIBES SATIVUM 'ROVADA', #5 CONTAINER, TREE, CERCIS CANADENSIS, #15 CONTAINER, TREE, CORYLUS

AVELLANA 'MCDONALD', #15 CONTAINER, TREE, CORYLUS AVELLANA 'WEPSTER', #15 CONTAINER, TREE, PRUNUS AVIUM 'BING', BARE ROOT, GISELA 5 ROOTSTOCK, TREE, PRUNUS AVIUM 'RAINIER', BARE ROOT, GISELA 5 ROOTSTOCK, TREE, PYRUS PYRIFOLIA 'SHINSEIKI', BARE ROOT, OHXF97 STANDARD ROOTSTOCK, TREE, PYRUS PYRIFOLIA 'KOREAN GIANT', BARE ROOT, OHXF97 STANDARD ROOTSTOCK will be paid for at the contract price per each, which price will include furnishing and installing the plant material of the type and size specified, and all materials, equipment and labor necessary to complete the work. Also included with these items is all initial maintenance as described.

One-half (50%) of the cost of this work will be paid upon initial completion of planting, and the remaining half (50%) after the POE has been successfully completed to the satisfaction of the Engineer.