STATE OF ILLINOIS
CITY OF CHICAGO
LORI E. LIGHTFOOT, MAYOR
DEPARTMENT OF TRANSPORTATION
GIA BIAGI, COMMISSIONER
DIVISION OF ENGINEERING
DANIEL BURKE, P.E., S.E. MANAGING DEPUTY COMMISSIONER

CONTRACT PLANS
FOR

JACKSON PARK MOBILITY IMPROVEMENTS

S. LAKE SHORE DRIVE (US 41) FROM E. HAYES DRIVE TO E. 57TH DRIVE
S. STONY ISLAND AVENUE FROM E. 64TH STREET TO E. 59TH STREET
S. CORNELL DRIVE FROM 6400 S TO E. HAYES DRIVE
E. HAYES DRIVE FROM S. CORNELL DRIVE TO S. LAKE SHORE DRIVE
E. 63RD STREET FROM S. STONY ISLAND AVENUE TO S. CORNELL DRIVE

midway plaisance from S. STONY ISLAND AVENUE TO S. CORNELL DRIVE

VOLUME 3 OF 4

OUC EFP FILES:
EFP-107977
EFP-108167
EFP-108168

PAGE CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO CALL D.I.G.G.E.R. AT 811 OR 312-744-7000 FOR UNDUG PLACES. LOCATIONS

TRAFFIC DATA

AVG. DAILY TRAFFIC

SPEED LIMIT

GROSS LENGTH = 15817.73 FT. = 3.00 MILES
NET LENGTH = 15817.73 FT. = 3.00 MILES

DEPARTMENT OF PROCUREMENT SERVICES
MONICA JIMENEZ, FIRST DEPUTY PROCUREMENT OFFICER

MONICA JIMENEZ, FIRST DEPUTY PROCUREMENT OFFICER

DEPARTMENT OF PROCUREMENT SERVICES

MONICA JIMENEZ, FIRST DEPUTY PROCUREMENT OFFICER
GENERAL NOTES

1. All structural steel shall be A520 Grade 50.

2. No field welding is permitted except as specified in the contract documents.

3. Reinforcement bars designated (R) shall be epoxy coated.

4. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

5. Elevators shall be verified in the field and may be adjusted as directed by the Engineer.

6. Shoring of the barrier is not allowed.

7. Protective Concrete Sealer shall be applied to the entire top surface and inside vertical face of proposed barrier adjacent to the roadway along with the entire top surface of the exposed gutter of the proposed moment slab. For full depth moment slab without HMA paving, Protective Concrete Sealer shall be applied to the entire top surface of the moment slab. All surfaces to be sealed shall be cleaned thoroughly prior to Protective Concrete Sealer application. See Special Provisions.

8. The Contractor must make his own investigation to determine the existence, nature and exact location of all utility lines and appurtenances within the limits of the project. The Contractor must provide all measures and precautions necessary to protect existing and new utilities.

9. Groundwater information at this location is included in the geotechnical report. All excavation for structures must be kept below water level during construction operations until backfill is placed in place and provisions must be made to prevent the bottom of all excavations from freezing or flooding at all times. This work shall be paid for at the contract lump sum price for Dewatering Location #1. See Special Provisions.


11. Architectural Precast Concrete Cladding is shown for reference only. Architectural Precast Concrete Cladding shall be furnished and erected under a separate contract.

12. See Traffic Signals and Electrical plans for traffic signal and lighting details.

13. See Drainage plans for drainage details.

14. See Civil plans for proposed contours.

15. Proposed Dewatering Wall and Moment Slab are designed for a 42 psi max. equivalent fluid soil pressure, 240 psi of live load surcharge, HASH TL-4 barrier criteria, and a maximum architectural precast concrete cladding weight of 75 psi.

16. Contractor shall prepare and submit Structural Assessment Reports (SARs) for the proposed work, including removals, on structure to the Engineer for approval before beginning work. See Special Provision for Structural Assessment Reports for Contractor’s Means and Methods.

INDEX OF SHEETS

SA-1 General Plan and Elevation
SA-2 General Notes, Index of Sheets and Total Bill of Material
SA-3 Removal Details
SA-4 Wall Plan and Elevation Details (1 of 3)
SA-5 Wall Plan and Elevation Details (2 of 3)
SA-6 Wall Plan and Elevation Details (3 of 3)
SA-7 Soldier Pile Wall Details
SA-8 Soldier Pile Data Table and Bill of Material
SA-9 Moment Slab Plan and Elevation (1 of 3)
SA-10 Moment Slab Plan and Elevation (2 of 3)
SA-11 Moment Slab Plan and Elevation (3 of 3)
SA-12 Moment Slab Details and Bill of Material
SA-13 to SA-16 Soil Boring Logs

TOTAL BILL OF MATERIAL

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<td>Structure Excavation</td>
<td>Cu. Yd.</td>
<td>172,2</td>
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<tr>
<td>High Performance Concrete Structures</td>
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<td>335</td>
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<tr>
<td>Protective Concrete Sealer</td>
<td>Sq. Yd.</td>
<td>290</td>
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<tr>
<td>Soldier Pile Wall</td>
<td>Each</td>
<td>833</td>
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<tr>
<td>Protective Concrete Sealer</td>
<td>Each</td>
<td>290</td>
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<tr>
<td>Reinforcement Bars, epoxy coated</td>
<td>Each</td>
<td>263,500</td>
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<tr>
<td>Reinforcing Soldier Bars (10-18 in.)</td>
<td>Each</td>
<td>41</td>
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<td>Reinforcing Soldier Bars (20 in.)</td>
<td>Each</td>
<td>93</td>
</tr>
<tr>
<td>Driving Soldier Piles</td>
<td>Each</td>
<td>994</td>
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<tr>
<td>Concrete Wall Drain</td>
<td>Sq. Yd.</td>
<td>355</td>
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<td>Fencing Soldier Piles</td>
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<tr>
<td>Granular Backfill for Structures</td>
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<tr>
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EXISTING CURVE

EXLSD-11 DATA

| P.I. Sta. | 143+15.72 |
| S. | 217.25 |
| D. | 37.27 |
| R | 1,411.9 |
| ∆ | 21°11'10" |

EXLSD-12 DATA

| P.I. Sta. | 144+85.53 |
| S. | 217.25 |
| D. | 42.48 |
| R | 1,279.1 |
| ∆ | 97.15 |

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EXISTING PROFILE GRADE

(City of Chicago)
NO.  SECTION COUNTY ILLINOIS FED. AID PROJECT
TOTAL SHEETS SHEET NO. RTE. F.A.U.
SN 016-6542 CDOT PROJECT NO. 17-B7203-00-ES
1  OF 16 SHEETS

JLS JLS RMG MM
PLAN

SECTION A-A
(Wall Sections 2-8)

SECTION B-B
(Wall Section 11)

SECTION C-C
(See Note 2)

NOTES:
1. See Special Provisions for Architectural Precast Concrete Cladding Removal, Concrete Removal and Remove Sheet Piling.
2. Locally remove up to 1'-0" max. as required at the top of Existing Sheet Pile Cut-off wall to facilitate installation of pipe underdrain. Cost included with Remove Sheet Piling.
3. See Existing plans for additional details.

LEGAL
Architectural Precast Concrete Cladding
Removal
Moment Slab Removal
Remove Sheet Piling
Traffic Sign and Light Pole Removal (See Traffic Signals and Electrical plans)

BILL OF MATERIAL

<table>
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<th>UNIT</th>
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<tr>
<td>Architectural Precast Concrete Cladding Removal</td>
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<tr>
<td>Remove Sheet Piling</td>
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PLAN

ELEVATION

SECTION A-A

SECTION B-B

SECTION C-C

Measured along Existing Face of Architectural Precast Concrete Cladding

Verify distance in field. Final vertical distance of panel behind approach and adjacent to cast-in-place retaining wall is intended to remain in place.

Max. Removal Line

Remove Existing Sheet Piling

Temporary Concrete Barrier

Proposed S. Lake Shore Dr.

Exist. Barrier and Railing

Exist. Wall (to remain in place)

Exist. Prestressed Concrete Slab (to remain in place)

Exist. Sheet Pile Retaining Wall (to remain in place)

Proposed Abutment

Exist. Ground Line

Exist. Light Pole (to be removed)

Exist. Traffic Signal (to be removed)

Architectural Precast Concrete Cladding Panel (to remain in place)

Architectural Precast Concrete Cladding Panel (to remain in place)

Architectural Precast Concrete Cladding Panel (to remain in place)

Architectural Precast Concrete Cladding Panel (to remain in place)

Exist. Sheet Pile Retaining Wall (to remain in place)

Removal Sheet Piling (to remain in place)

Sheet Pile Retaining Wall

Exist. Tie Rod, typ.

Exist. Sheet Pile Cut-off Wall to remain (Field Verify location)

Verifying distance in field. Final vertical section of panel behind approach and adjacent to cast-in-place retaining wall is intended to remain in place.

Max. Removal Line

Remove Existing Sheet Piling

Temporary Concrete Barrier

Proposed S. Lake Shore Dr.

Exist. Barrier and Railing

Exist. Wall (to remain in place)

Exist. Prestressed Concrete Slab (to remain in place)

Exist. Sheet Pile Retaining Wall (to remain in place)

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Removal Sheet Piling (to remain in place)

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Exist. Sheet Pile Cut-off Wall to remain (Field Verify location)

Verifying distance in field. Final vertical section of panel behind approach and adjacent to cast-in-place retaining wall is intended to remain in place.

Max. Removal Line

Remove Existing Sheet Piling

Temporary Concrete Barrier

Proposed S. Lake Shore Dr.

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Proposed S. Lake Shore Dr.

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Exist. Sheet Pile Cut-off Wall to remain (Field Verify location)

Verifying distance in field. Final vertical section of panel behind approach and adjacent to cast-in-place retaining wall is intended to remain in place.

Max. Removal Line

Remove Existing Sheet Piling

Temporary Concrete Barrier

Proposed S. Lake Shore Dr.

Exist. Barrier and Railing

Exist. Wall (to remain in place)

Exist. Prestressed Concrete Slab (to remain in place)

Exist. Sheet Pile Retaining Wall (to remain in place)
**Expansion Joint**

**Construction Joint**

**Expansion Joint**

**PARTIAL ELEVATION**

Wall sections 1 & 2

(Existing Sheet Pile Retaining Wall not shown for clarity)

**PARTIAL PLAN**

(Wall sections 1 & 2)

<table>
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<th>Partial Plane Details</th>
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<td>Wall sections 1 &amp; 2</td>
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**NOTES:**

1. Reinforcement in wall shall be spaced to miss shear stud.
2. See Sheet SA-7 for typical wall cross sections.
3. See Sheet SA-8 for wall elevation table, bill of materials, field cutting diagram and bar bends.
4. Wall stations and offsets are measured from the proposed location of soldier piles.
5. Horizontal dimensions and lengths are measured along front face of wall.
6. See Sheet SA-8 for soldier pile data table for layout of soldier piles with respect to front face of wall.
7. F.F. denotes front face.
8. B.F. denotes back face.
9. Contractor shall notify the engineer and provide field measurements if the actual layout of existing sheet pile does not conflict with the proposed location of soldier pile number 2.
10. Pile spacing measured along front face of wall. See Sheet SA-8 for specific stations and offsets.
SOIL BORING LOG

Page 1 of 2

FILE NAME
USER NAME
REVISED
DESIGNED
CHECKED
DRAWN
DATE
4/3/2020

ROUTE: F.A.U. 2873
DESCRIPTION: Retaining Wall C
LOGGED BY: EP

SECTION: 17-87203-00-ES
LOCATION: 57th & Lake Shore Northing: 1867645.907 Easting: 1189558.921

COUNTY: Cook
DRILLING METHOD: HSA
HAMMER TYPE: AUTO

STRUCT. NO: 016-6542
Station: N/A
BORING NO: 87-Street 803
Station: 5648+78
Offset: 62.06 ft

Ground Surface Elev: 2.76 ft

12 inches of Topsoil

Gray, Matt
FILL, SILTY CLAY, with sand, gravel

Brown, Wet
FILL, SAND

Loose
Gray, Wet
SILTY SAND (SM)

Soft to Medium Silt
Gray, Matt
CLAY, trace gravel (CL)

Surface Water Elev: N.A. R
Stream Bed Elev: N.A. R
Groundwater Elev: First Encounter -8.2 ft
Upon Completion N.A. R
After Res: N.A. R

NOTES:

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

SOIL BORING LOG (2 of 4)

Page 2 of 2

ROUTE: F.A.U. 2873
DESCRIPTION: Retaining Wall C
LOGGED BY: EP

SECTION: 17-87203-00-ES
LOCATION: 57th & Lake Shore Northing: 1867645.907 Easting: 1189558.921

COUNTY: Cook
DRILLING METHOD: HSA
HAMMER TYPE: AUTO

STRUCT. NO: 016-6542
Station: N/A
BORING NO: 87-Street 803
Station: 5648+78
Offset: 62.06 ft

Ground Surface Elev: 2.76 ft

12 inches of Topsoil

Gray, Matt
FILL, SILTY CLAY, trace gravel (CL/ML)

Medium
Gray, Matt
SILTY CLAY, trace gravel (CL/ML)

End of Boring

NOTE:

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
DETAIL 1
WATER-SPICE DETAIL

DETAIL 3

DETAIL 4
PLAN - SEA WALL

NOTES:
1. ALL SHEET METAL AND GALV. DECKS OF STEEL MUST CONFORM TO THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION G100 HANDBOOK.
2. ALL BOLTED CONNECTIONS MUST BE TYPE A BOLTED CONNECTIONS USING 42K NUTS TO 1095 STEEL MANDATORY. NON-STEEL BOLTED JOINTS MUST BE SEPARATED BY 2 INCHES. BOLTS MUST BE 3/8" DIA 3" LONG or greater. STRUCTURAL Joints using also O.D. and Bolts AND THE AISC HANDBOOK.
3. ALL SHEET METAL AND GALV. DECKS OF STEEL MUST CONFORM TO THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION G100 HANDBOOK.

FOR INFORMATION ONLY
STRUCTURE NO. 016-6542
EXISTING PLANS (16 OF 35)

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION
CUT-OFF WALLS AND SEAWALLS
SECTIONS AND DETAILS

DIVISION OF ENGINEERING

EXISTING PLANS (16 OF 35)
STRUCTURE NO. 016-6542

FOR INFORMATION ONLY

FILE NAME  USER NAME
ABC-sht-6542-ex-016.dgn  jsurber

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NO.  SECTION  COUNTY
17-B7203-00-ES  ILLINOIS

TOTAL  SHEETS  SHEET  NO.
17-B7203-00-ES  17  17

DIVISION OF ENGINEERING

DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO

SN 016-6542
CDOT PROJECT NO.

FOR INFORMATION ONLY
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

RETAINING WALL C
BARRIER WALL RENFORCEMENT DETAILS

NOTE:
1. SEE SHEET NO. 5-8 FOR DETAIL OF MATTING.
2. SEE SHEET NO. 5-9 FOR REINFORCEMENT
    DETAIL OF LIGHT POLES.
3. SEE SHEET NO. 5-8 FOR SECTIONS A, B, C, D, E, AND F.

FOR INFORMATION ONLY
SOUTH LAKE SHORE DRIVE IMPROVEMENTS
57th St. UNDERPASS WALL IMPROVEMENTS

CHICAGO, ILLINOIS

NOTES

1. Unless otherwise noted on the prepared drawings, General Contractor
   approval indicates labiliy conditions (roller tension, seat tension, floor and
   end welds, locations etc. not given herein, and existing roadway, lateral,
   and drainage items are in accordance with the Contract Documents.

2. Longitudinal Profiles (L/P) are not responsible for the design details
   shown, nor the distances of the opposing structural steel frames, nor for
   the detailed supports or the out-of-plane deflections nor for their adequacy
   shown on the General Documents.

3. The Contractor is responsible for verifying all details, dimensions, and
   tolerances indicated on the General Documents.

4. L/P is not responsible for detailing the present enclosures and all other
   trades.

5. If the responsibility of the General Contractor is more than the owner, L/P
   is not responsible for the design details shown in the General Documents.

6. L/P is not responsible for the design details shown in the General
   Documents.

FINISHES

- Equal Grade stone for surfacing.
- Smooth Finish
- Smooth Stone

CONNECTIONS

- Panel to Panel
- Panel to Panel (x) lines
- Panel Support in panel
- Panel Support in adjacent panel
- Panel Support in panel

DRAWING INDEX

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FOR CONSTRUCTION

- Panel to Panel (x) lines
- Panel Support in panel
- Panel Support in panel
- Panel Support in panel
- Panel Support in panel

FOR CONSTRUCTION

- Panel to Panel (x) lines
- Panel Support in panel
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- Panel Support in panel
- Panel Support in panel

FOR CONSTRUCTION

- Panel to Panel (x) lines
- Panel Support in panel
- Panel Support in panel
- Panel Support in panel
- Panel Support in panel

ELECTRONIC DIMENSION CHART AND CLOUDED NUMBERS IN LOWER CORNER OF PANELS FOR PANELS PLACEMENT. CHART GIVES DIMENSION FROM BACK TO Cp WALLS. CLOUDED DIMENSIONS GIVE DIMENSION FROM BACK TO PRECAST PANEL PANEL AT BOTTOM TO EXTERIOR FACE OF SHEETING. ALL DIMENSIONS ARE BASED UPON SUPPLIED SURVEY LAYOUT.

CONTRACTOR PLEASE VERIFY OFFSETS FROM NEW PRECAST TO EXISTING PRECAST @ UNDERPASS, AND TO EXISTING STRUCTURES SUCH AS CIP BARRIER WALLS, PAVEMENT, AND SHIF'T PWH W/ WAT. CAPS SHOULD NOT FIELD MEASURED TO ENSURE PROPER FIT. VERIFY ALL DIMS WITH RETURN TO SHEETING TO ENSURE SURVEY O/W PROVIDE MATCHES THE EXISTING STRUCTURE.
UPPER AND LOWER DIMENSIONS VARY WITH SLOPE OF BEAMS AND PATHWAY.
Existing Structure: S.K. 016-6543 was constructed in 2004 as F.A.P. Route 341, Section 00-B0241-06-PV at Sta. 11+330.007 (metric). Existing structure is a single span bridge. The superstructure consists of a reinforced concrete deck on composite rolled steel beams. The substructure consists of reinforced cast-in-place concrete high wall abutments.

Reinforced cast-in-place concrete high wall abutments are covered with architectural precast concrete cladding. The bridge has a total length of 125'-11" and the total width of the bridge deck is 25'-0". Traffic is to be maintained utilizing stage construction.

No salvage.

Note: All elevations are based on the Chicago City Datum.

LOADING H520-44

Initial Wearing Surface = 31 psf

Allowance for Additional Future Wearing Surface = 18 psf

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (New Construction)

Fc = 6,000 psi (Concrete)
fy = 60,000 psi (Reinforcement)

FIELD UNITS (Existing Construction)

Fc = 6,000 psi (Concrete Superstructure)
fy = 53,000 psi (Concrete Substructure)
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A

Site Coefficient (S) = 1.5

Bedrock Acceleration Coefficient (A) = 0.038g

fy = 36,000 psi (Structural Steel)

P.I. Sta. = 9952+12.63

Stage Construction

Existing Median Irrigation Supply System to be Relocated

Existing 2" PVC Conduit in Barrier for IODI Surveillance System to be Relocated

Existing Junction Box

Existing Manhole

Elevation 9'-8" to be Relocated

Surveillance System

Pedestrian Underpass

Proposed Rehabilitation

Note A : Varies from 50'-9" at station 9951+58.58 to 45'-0" at station 9952+51.45.

Note B : Varies from 43'-7" at station 9952+51.45 to 18'-0" at station 9952+66.72.

Note C : Varies from 45'-8" at station 9951+58.58 to 36'-9" at station 9952+39.14.

Note D : Varies from 36'-9" at station 9952+29.14 to 36'-9" at station 9952+46.72.

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.
1. Reinforcement bars designated (E) shall be epoxy coated.

2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall verify existing dimensions and details affecting new construction and make necessary adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

3. Cleaning and painting of the existing structural steel shall be specified in the special provision for "Cleaning and Painting Existing Steel Structures". The exterior surfaces and bottom of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning (SSPC-SP15). The color of the final finish coat for all steel surfaces shall be Dark Gray, Munsell No. 9.7/5.

4. Containment of cleaning residue is required to control nuisance dust. See special provisions.

5. Cleaning and painting of the existing structural steel shall be performed per Commercial Grade Power Tool Cleaning (SSPC-SP15) shall be painted according to the requirements of the Organic Zinc-Rich/Epoxy/Urethane Paint System. The color of the final finish coat for all steel surfaces shall be Dark Gray, Munsell No. 9.7/5.

6. The existing sealant in the vertical joint between the abutments and the roadway shall be removed and replaced with a new medium barrier at a different location to accommodate an additional lane.

7. Replace the missing anchor bolt covers for the light fixtures under the deck. See Electrical Drawings for work and pay items.

**GENERAL NOTES**

1. Reinforcement bars designated (E) shall be epoxy coated.

2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall verify existing dimensions and details affecting new construction and make necessary adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

3. Cleaning and painting of the existing structural steel shall be specified in the special provision for "Cleaning and Painting Existing Steel Structures". The exterior surfaces and bottom of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning (SSPC-SP15). The color of the final finish coat for all steel surfaces shall be Dark Gray, Munsell No. 9.7/5.

4. Containment of cleaning residue is required to control nuisance dust. See special provisions.

5. Cleaning and painting of the existing structural steel shall be performed per Commercial Grade Power Tool Cleaning (SSPC-SP15). The designated areas cleaned per Commercial Grade Power Tool Cleaning (SSPC-SP15) shall be painted according to the requirements of the Organic Zinc-Rich/Epoxy/Urethane Paint System. The color of the final finish coat for all steel surfaces shall be Dark Gray, Munsell No. 9.7/5.

6. The existing sealant in the vertical joint between the abutments and the retaining walls shall be removed and replaced with a new medium barrier at a different location to accommodate an additional lane.

7. Replace the missing anchor bolt covers for the light fixtures under the deck. See Electrical Drawings for work and pay items.

**SCOPE OF WORK**

1. Remove the existing median planter barrier walls and construct a new medium barrier at a different location to accommodate an additional lane.

2. Remove and replace the existing wearing surface.

3. Remove and replace the existing joint seals between the approach slabs and the roadway.

4. Clean and paint the steel beams.

5. Replace the sealant in the present joints between the abutments and the retaining walls.

6. Remove and replace the cracked covers for the lights under the deck. See Electrical Drawings for work and pay items.

7. Replace the missing anchor bolt covers for the light standard on the retaining wall. See Electrical Drawings for work and pay items.

**INDEX OF SHEETS**

- SB-1 General Plan and Elevation
- SB-2 South and North Bridge Approach Slab Alterations
- SB-3 South Bridge Approach Slab Alterations
- SB-4 North Bridge Approach Slab Alterations
- SB-5 Deck Concrete Removal
- SB-6 Deck Alterations
- SB-7 Medium Barrier Wall
- SB-8 South Bridge Approach Slab Concrete Removal
- SB-9 South Bridge Approach Slab Alterations
- SB-10 North Bridge Approach Slab Alterations
- SB-11 North Bridge Approach Slab Medium Barrier

For existing structure plans, see Sheets SBX-1 thru SBX-15 immediately following Sheet SB-12.
STAGE I REMOVAL
(Looking North)

STAGE I CONSTRUCTION
(Looking North)

STAGE II REMOVAL
(Looking North)

LEGEND

Concrete Removal

Bridge Deck Scarification 2%
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

Top Bar Splicers

2 5/8" Ø Bolts with washers

Steel Retainer 8" x 8" x "W"

Detail I

Concrete wearing surface

Steel Retainer 8" x 8" x "W"

Detail II

Concrete wearing surface

Steel Retainer 8" x 8" x "W"

Detail III

Concrete wearing surface

Text:

**Notes:**

- Cost of retainer assembly is included with Temporary Concrete Barrier.
- A retainer assembly shall be located at the approximate of each temporary concrete barrier.
- The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
- When the "A" dimension is less than 1", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate.
- For deck beam applications the minimum required "A" distance is 6" to accommodate the shear key clamping device.
- Detail I - Installation for a new bridge deck or bridge slab.
- Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies.
- The cost of the additional bar splicers is included with the concrete wearing surface.

**Detail I - Installation for a new bridge deck or bridge slab.**

**Detail II - Installation for a new deck beam with an initial concrete wearing surface.**

**Detail III - Installation for a new deck beam with no initial wearing surface.**
LEGEND

Concrete Removal
Bridge Deck Scarification 2/3" (Typ)
Concrete Bridge Deck Scarification (1/4" inch)

Notes:
1. Existing Reinforcement bars projecting out of the deck are to be cut flush with the deck and the end of the bars is to be coated with an approved anti-rust compound. Cost included with "Concrete Removal".
2. HPC denotes - High Performance Concrete.

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING
CITY OF CHICAGO

BILL OF MATERIAL

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For Soil and Vegetation Removal
Pay Items see Roadway Plans.

Existing Barrier Rail
Existing Waterproofing Membrane System *
Existing Geotechnical Filter Fabric *
Existing Geocomposite Wall Drain *
Existing Pipe Underdrain 4" *

SECTION A-A
** At right angle

For Soil and Vegetation Removal
Pay Items see Roadway Plans.

SECTION B
** At right angle

Notes:
1. Existing Reinforcement bars projecting out of the deck are to be cut flush with the deck and the end of the bars is to be coated with an approved anti-rust compound. Cost included with "Concrete Removal".
2. HPC denotes - High Performance Concrete.

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING
CITY OF CHICAGO
**WEST MEDIAN PLANTER**

**BARRIER WALL ELEVATION**

(looking west)

**Notes:**
- The \( \frac{3}{4} \)" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with High Performance Concrete Superstructures.
- The polyurethane sealant shall be according to Article 1030.04 of the Standard Specifications and the color shall be gray.
- HPC = High Performance Concrete

**SECTION A-A**

**BARRIER WALL JOINT DETAILS**

- \( \frac{3}{4} \)" Preformed self-expanding cork joint filler
- \( \frac{3}{4} \)" Backer rod

**SECTION B-B**

- Drill and set #5 d202 (E) bar according to Section S84 of the Standard Specifications. Depth of hole shall be 6".
- Cost included with Reinforcement Bars, Epoxy Coated.

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**EXISTING HPC SLAB**

**Notes:**
- For barrier wall outside face formliner see sheet SB-2.
**LEGEND**

- Bridge Deck Thin Polymer Overlay ½"

**BILL OF MATERIAL**

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**Note:**

- Drill and set #5 d204(E) bar according to Section 594 of the Standard Specifications. Depth of hole shall be 6". Cost included with Reinforcement bars. Epoxy Coated.
- Expansion joint. See Special Provision "Remove and Replace Preformed Pavement Joint Seal 7", Recuse 7/16 minimum. Run out to out of slab.
- Existing Pavement Seam 4" (Typ) - Polymer Overlay 1" minimum.

**Per manufacturer recommendations.**

**Note:**

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
Expansion joint. See Special Provision "Remove and Replace Preformed Pavement Joint Seal & Recess 1/2" minimum. Run out to out of Slab.

**SECTION A-A**

***Per manufacturer recommendations***

Note A: The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

**LEGEND**

- Bridge Deck Thin Polymer Overlay 5/8"
**Detail F**

- **Aluminum Joint in barrier**
- **SECTION C-C**
- **SECTION D-D**

**Note:** The Polyurethane sealant shall be according to Article 1556.04 of the Standard Specifications and the color shall be gray.

**Bill of Material**

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<tr>
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**Details:**
- Polyurethane sealant
- W Filler
- W Backer rod
- W Preformed self-expanding core joint filler
- Reinforcement Bars, Epoxy Coated
- Waterproofing Membrane System
- Geocomposite Wall Drain

**Notes:**
- For median barrier wall outside face formliner, see Sheet SB-2.
- Place Preformed Pavement Joint Seal 4" along the top and both vertical faces of each barrier.

**For Soil and vegetation**

- Pay Items see Roadway Plans.
- Pay Items see Drainage Plans.

**For Irrigation supply system**

- Pay Items see Roadway Plans.
- For Soil and Vegetation

**For Pay Items see Drainage Plans.**

**For Pay Items see Electrical Drawings.**

**For Soil and Vegetation**

- Pay Items see Roadway Plans.
- Pay Items see Drainage Plans.

For Soil and Vegetation Pay Items see Roadway Plans.

**For Pay Items see Electrical Drawings.**

**For Pay Items see Roadway Plans.**

**For Soil and Vegetation**

- Pay Items see Roadway Plans.
- Pay Items see Drainage Plans.
NOTES:

GENERAL:
1. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE STRUCTURE AND THE INSTALLATION OF ALL APPLIANCES AND FIXTURES IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. THE CONTRACTOR MUST NOTIFY THE ENGINEER IN CASE OF ANY ERROR OR OMISSION.
3. THE CONTRACTOR MUST NOTIFY THE ENGINEER IN CASE OF ANY CHANGE IN THE CONSTRUCTION PLAN OR SPECIFICATIONS.
4. THE CONTRACTOR MUST NOTIFY THE ENGINEER IN CASE OF ANY ADJUSTMENT TO THE CONSTRUCTION PLAN OR SPECIFICATIONS.
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REINFORCEMENT AND CONCRETE:
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FOUNTAIN:
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10. THE CONTRACTOR MUST NOTIFY THE ENGINEER IN CASE OF ANY CHANGE IN THE CONSTRUCTION PLAN OR SPECIFICATIONS.
FILE NAME: ABC-sht-6543ex-024.dgn
USER NAME: MDiaz

SN 016-6543

EXISTING PLANS (15 OF 15)

FOR INFORMATION ONLY

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

COOK
EXISTING PLANS (15 OF 15)
STRUCTURE NO. 016-6543

SHEET NO. 14 OF 15 SHEETS

FOR INFORMATION ONLY
GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.

2. The foundation design is based on the following maximum service reactions applied at the top of each of the metal shell piles:
   
   **Maximum Service Reactions**
   
   - Vertical: 88 kips
   - Horizontal: 3 kips

   The contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete foundation design with calculations, details, and the required seals shall be submitted for review and approval.

3. The contractor shall furnish all tools, materials and equipment necessary to ensure that the precast units do not occur crushing while being transported to and from the project site, stored during construction and when being installed.

4. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

5. Elevations shall be verified in the field and may be adjusted as directed by the Engineer.

6. Protective Concrete Sealer shall be applied to the entire exterior surface of proposed CIP. Concrete Cap and top of proposed Retaining Wall and Headwall adjacent to sidewalks. All surfaces to be sealed shall be cleaned thoroughly prior to Protective Concrete Sealer application. See Special Provisions.

7. The Contractor must make its own investigation to determine the existence, nature and exact location of all utility lines and appurtenances within the limits of the project. The Contractor must provide all measures and precautions necessary to protect existing and new utilities.

8. All excavation for structures shall be kept dewatered during construction operations until backfill is in place and provisions must be made to prevent the pooling of all excavations from freezing or flooding at all times. This work shall be paid for at the contract lump sum price for Dewatering Location #2. See Special Provisions.

9. Granular Backfill for Structures shall be placed per Article 586 of the 2019 Supplemental Specifications except mechanical compaction shall be required per Articles 502 and 205 of the Standard Specifications.

10. See Traffic Signals and Electrical Plans for traffic signal and lighting details.

11. See Drainage Plans for proposed drainage details.

12. See Civil Plans for proposed contours.

13. Contractor shall prepare and submit Structural Assessment Reports (SARs) for the proposed work, including removals, on structure to the Engineer for approval before beginning work. See Special Provision for Structural Assessment Reports for Contractor's Means and Methods.

SCOPE OF WORK

1. Remove and store existing precast concrete pedestals, aluminum railing and architectural precast concrete cladding.
2. Remove and dispose of precast concrete cap and top of retaining wall as shown in the plans.
3. Install temporary soil retention system and excavate as required.
4. Drive metal shell piles for 3-sided structure widening.
5. Widen existing arch footing and 3-sided structure.
6. Construct retaining wall footings, stems and headwall.
7. Place waterproofing system, geocomposite wall drain and backfill.
8. Remove temporary, soil retention system.
9. Remove existing, architectural precast concrete cladding.
10. Backfill and grade in front of retaining wall.
11. Construct concrete cap above retaining wall and clading, apply Protective Concrete Sealer and reinstall architectural aluminum railing.
12. Install new underpass lighting and architectural elements on inside of 3-sided structure.
ELEVATION - TEMPORARY SOIL RETENTION SYSTEM

Temporary Soil Retention System

El. 4.50± (Field Verify)
Exist. North Retaining Wall
Exist. Sheet Pile Cut-off Wall (to remain)
Temporary Soil Retention System

El. 14.21
Exposed Surface Area = 336 Sq. Ft.
Max. Excavation Line

Exist. Water Service
El. -2.98
Exposed Surface Area = 69 Sq. Ft.
Max. Excavation Line

El. -3.23 (Existing)
El. -2.98 (Existing)

Maximum Excavation Line varies from El. -2.98 at existing structure to El. -3.33 at proposed structure
(See Note 4)

NOTES:
1. A cantilevered sheet pile design does not appear feasible and additional members or other retention systems may be necessary. Since two rows of existing piles are battered, the contractor is responsible for retaining an Illinois Licensed Structural Engineer to detail the design of the proposed temporary soil retention system per Article 522 of the Standard Specifications. All supporting documents, calculations and details must be submitted to the Engineer for review and approval prior to starting construction.
2. The Temporary Soil Retention System shall be designed to support a minimum live load surcharge of 240 psf.
3. Existing utility locations to be field verified prior to design, approval and installation of Temporary Soil Retention System.
4. Maximum elevation difference between soils on either side of the existing sheet pile cut-off wall at the South Retaining Wall shall be 6 feet during construction. For any proposed height differential greater than 6 feet, the Contractor is responsible for retaining an Illinois Licensed Structural Engineer to check the existing cantilever sheet pile cut-off wall for structural adequacy. Cost included with Temporary Soil Retention System.

BILL OF MATERIAL

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City of Chicago
Department of Transportation
Division of Engineering

CDOT Project No. B-7-203
Temporary Soil Retention System Details
Structure No. 316-6544

El. 14.21
Exposed Surface Area = 336 Sq. Ft.
Max. Excavation Line

El. 4.50± (Field Verify)
Exist. North Retaining Wall
development of the proposed temporary soil retention system per Article 522 of the Standard Specifications. All supporting documents, calculations and details must be submitted to the Engineer for review and approval prior to starting construction.
2. The Temporary Soil Retention System shall be designed to support a minimum live load surcharge of 240 psf.
3. Existing utility locations to be field verified prior to design, approval and installation of Temporary Soil Retention System.
4. Maximum elevation difference between soils on either side of the existing sheet pile cut-off wall at the South Retaining Wall shall be 6 feet during construction. For any proposed height differential greater than 6 feet, the Contractor is responsible for retaining an Illinois Licensed Structural Engineer to check the existing cantilever sheet pile cut-off wall for structural adequacy. Cost included with Temporary Soil Retention System.

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City of Chicago
Department of Transportation
Division of Engineering

CDOT Project No. B-7-203
Temporary Soil Retention System Details
Structure No. 316-6544

El. 14.21
Exposed Surface Area = 336 Sq. Ft.
Max. Excavation Line

El. 4.50± (Field Verify)
Exist. North Retaining Wall
development of the proposed temporary soil retention system per Article 522 of the Standard Specifications. All supporting documents, calculations and details must be submitted to the Engineer for review and approval prior to starting construction.
2. The Temporary Soil Retention System shall be designed to support a minimum live load surcharge of 240 psf.
3. Existing utility locations to be field verified prior to design, approval and installation of Temporary Soil Retention System.
4. Maximum elevation difference between soils on either side of the existing sheet pile cut-off wall at the South Retaining Wall shall be 6 feet during construction. For any proposed height differential greater than 6 feet, the Contractor is responsible for retaining an Illinois Licensed Structural Engineer to check the existing cantilever sheet pile cut-off wall for structural adequacy. Cost included with Temporary Soil Retention System.

BILL OF MATERIAL

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<tr>
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<td>Sq. Ft.</td>
<td>405</td>
</tr>
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</table>

City of Chicago
Department of Transportation
Division of Engineering

CDOT Project No. B-7-203
Temporary Soil Retention System Details
Structure No. 316-6544

El. 14.21
Exposed Surface Area = 336 Sq. Ft.
Max. Excavation Line

El. 4.50± (Field Verify)
Exist. North Retaining Wall
development of the proposed temporary soil retention system per Article 522 of the Standard Specifications. All supporting documents, calculations and details must be submitted to the Engineer for review and approval prior to starting construction.
2. The Temporary Soil Retention System shall be designed to support a minimum live load surcharge of 240 psf.
3. Existing utility locations to be field verified prior to design, approval and installation of Temporary Soil Retention System.
4. Maximum elevation difference between soils on either side of the existing sheet pile cut-off wall at the South Retaining Wall shall be 6 feet during construction. For any proposed height differential greater than 6 feet, the Contractor is responsible for retaining an Illinois Licensed Structural Engineer to check the existing cantilever sheet pile cut-off wall for structural adequacy. Cost included with Temporary Soil Retention System.

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<td>405</td>
</tr>
</tbody>
</table>
NOTES:
1. Existing and Proposed footing for SN 016-6195 not shown for clarity.
2. See Sheet SC-13 for Metal Shell Pile Details.
STAGE 2 REMOVAL - CROSS SECTION ALONG CENTERLINE OF 3-SIDED STRUCTURE
(Looking North)

STAGE 2 CONSTRUCTION - CROSS SECTION ALONG CENTERLINE OF 3-SIDED STRUCTURE
(Looking North)

NOTES:
1. See Civil plans for additional details.
2. See Civil plans for proposed roadway widening, sidewalk, curb and gutter, Temporary Concrete Barrier and railing details.
**TYPICAL SECTION**

(Steel bars A through E only required at headwall)

**NOTES:**

1. The Contractor shall submit a complete design of the Precast Arch Structure and all construction documents to the Engineer for review and approval prior to starting construction. All documents shall be prepared and sealed by an Illinois Licensed Structural Engineer.

2. The three-sided structure shall be designed, manufactured, installed, and load rated per the requirements of the Special Provision for "Three Sided Precast Concrete Structure" except that the design shall be according to the AASHTO LFD Standard Specifications, as shown on the plans, and shall include the effects of unyielding foundation conditions for the sequence of construction anticipated.

3. Joint waterproofing, Membrane Waterproofing System and Geocomposite Wall Drain shall be applied to the outer surfaces of the arch and headwall below the proposed sidewalk prior to backfilling per the applicable portions of Sections 503, 504, 540.06 and 591 of the Standard Specifications and per the Special Provisions for "Membrane Waterproofing System for Buried Structures" and "Three-Sided Precast Concrete Structure"防水系统. Waterproofing must meet the minimum requirements of the three-sided structure manufacturer. Joint spacing between precast arches shall be per the manufacturer's recommendations and shall be 2'-6" minimum.

4. Work this drawing with Sheet SC-9, Headwall Details, for placement of reinforcing bars shown.

5. Painting of the underside of arch and other architectural elements on the underside of arch to be installed in a future contract.

6. See Electrical Lighting Plans for Precast Arch Lighting Details.

**BILL OF MATERIAL**

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<tr>
<td>d310(E)</td>
<td>99</td>
<td>#5</td>
<td>6'-0&quot;</td>
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ELEVATION - HEADWALL
(looking East)

SECTION A-A

SECTION B-B

SECTION C-C

Notes:
1. Work this sheet with Sheet SC-8, Arch Details, for billing of bars d310(E) and d311(E).
2. See Existing Plans for railing and precast concrete pedestrian details. Contractor shall be responsible for detailing pockets and hardware to reinstall Architectural Precast Concrete Cladding.
3. See Sheet SC-12 for C.I.P. Concrete Cap Detail and Pipe Underdrain Details. Pipe Underdrain and Geocomposite Wall Drain not shown along arch for clarity.
4. E.F. denotes Each Face.
5. Piles in Footing for Precast Arch not shown for clarity.

Bill of Material

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<td>2</td>
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Geocomposite Wall Drain

Concrete Structures

Reinforcement Bars

Epoxy Coated

Pound 3.660
**Bill of Material**

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<tr>
<td>Reinforcement Bars</td>
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<td>#8</td>
<td>Each</td>
</tr>
<tr>
<td>Reinforcement Bars, Epoxy Coated</td>
<td>3</td>
<td>#7</td>
<td>Each</td>
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<tr>
<td>Perforating Shell Pipe</td>
<td>1</td>
<td>12&quot; x 0.250&quot;</td>
<td>Each</td>
</tr>
<tr>
<td>Concrete Curb</td>
<td>1</td>
<td>8'-8&quot;</td>
<td>Each</td>
</tr>
<tr>
<td>Concrete Cap</td>
<td>2</td>
<td>11'-10&quot;</td>
<td>Each</td>
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<tr>
<td>Concrete Cap</td>
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<tr>
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<td>2'-6&quot;</td>
<td>Each</td>
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<td>4'-4&quot;</td>
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<tr>
<td>Geocomposite Wall Drain</td>
<td>1</td>
<td>100 sq. ft.</td>
<td>Each</td>
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**Pipe Underdrain Detail**

- Included in the cost of Pipe Underdrains for Structures, 4".

**Concrete Cap Detail**

- Cost included with pay item "High Performance Concrete Structures".
- See Special Provision 'Removing and Re-erecting Existing Railing' for reinstallation of Existing Aluminum Railing.

**Pipe Data - Upper Footing**

- Type: 12" x 0.250" Metal Shell Pile w/ Pile Shoes nominal Required Bearing: 244 kips
- Allowable Resistance Available: 81 kips
- Ext. Length: 40 ft.
- No. Production Piles: 4
- No. Test Piles: 0

**Pipe Data - Lower Footing**

- Type: 12" x 0.250" Metal Shell Pile w/ Pile Shoes nominal Required Bearing: 244 kips
- Allowable Resistance Available: 81 kips
- Ext. Length: 30 ft.
- No. Production Piles: 11
- No. Test Piles: 1

**Plan - Pipe Underdrain Layout**

- Existing underdrain connections to storm drainage system shall be maintained. Cost included with Pipe Underdrains for Structures, 4".

**Concrete Curb**

- Shall be reinforced with 1 1/2" #8 bars placed at 24" o.c. and 2" 10d nails spaced 8" o.c.

**Geocomposite Wall Drain**

- SSS 016-6544
- 7,910
- 490
- 59.4
- 490
- 3.910

**Notes**

- Existing underdrain connections to storm drainage system shall be maintained. Cost included with Pipe Underdrains for Structures, 4".
PLAN – PRECAST ARCH AND CLADDING REPAIR DETAILS

LEGEND

1. Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
2. Grout Repair (for Missing Non-shrink Grout)

NOTES:
1. Verify in the field during construction all locations that require repairs. All quantities of repairs shall be approved by the Engineer.
2. Wingwalls not shown for clarity as there were no repairs required at the time of inspection.
3. Match existing finish of architectural precast concrete cladding for structural repairs to cladding. Cost included with Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches).

BILL OF MATERIAL

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<th>TOTAL</th>
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</tr>
<tr>
<td>Grout Repair</td>
<td>Foot</td>
<td>20</td>
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No., typical Precast Segment

Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
Ground Engineering Consultants,
350 Pfingsten Road, Suite 106
Lake Forest, IL 60045
Phone (847) 559-0205 Fax (847) 559-038

DESIGNED: CJC
DRAWN: RMG
CHECKED: JLW
REVISED: SC-18

FOR INFORMATION ONLY

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

2001 SOIL BORING LOGS (4 OF 4)
STRUCTURE NO. 016-6544

1434   862
1434   862

FOR INFORMATION ONLY
Notes:
1. Minimum 28-Day Concrete Compressive Strength shall be 33.0 MPa.
2. Overlap Length shall be measured from test crossings.
3. Dimensions shown are for form system "A".
4. Minimum yield strength for welded wire fabric shall be 448.0 MPa.
5. Reinforcing shall be limited to a maximum of three layers of reinforcing (wire or bars) per area (A1a + A1b or A2b shall not have more than three layers total).

Design Loading: 50 kPa + 2.4 kPa/m²
Future Wearing Surface

Notes:
1. All dimensions shown are in millimeters unless otherwise noted.

Sheet

Circumferential Area (m²/m)

Longitudinal Area (mm²/m)

Mesh Size

Length (m)

Circumferential Area (m²/m)

Longitudinal Area (mm²/m)

1 A10 = 1370
2 A1h = 1370
3 A2 = 1016
4 A2a = 1016
5 A2b = 1016
6 A2c = 1016
7 A3a = 1776
8 A3b = 1524
9 A4 = 1016
10 A5 = 1016

Design Loading: 50 kPa + 2.4 kPa/m²
Future Wearing Surface

Cover = 594
Total Weight = 16.8 Metric Tons

Notes:
1) All dimensions shown are in millimeters unless otherwise noted.
2) Install Cable Tie before unit is set upright & leave in place until单元 is grouted into final position.

Vertical Weight = 16.8 Metric Tons

EXISTING PLANS (13 OF 45)

SCX-13 STRUCTURE NO. 016-6544

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

FOR INFORMATION ONLY

FOR INFORMATION ONLY

SN 016-6544

CDOT PROJECT NO. B-7-203

SHEET NO. 1 OF 45 SHEETS
SOUTH LAKESHORE DR.
UNDERPASS AT 55th ST.
STRUCT. NO. 016-6544
CDOT PROJECT NO. B-7-203
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING
EXISTING PLANS (15 OF 45)

1. All dimensions shown are in millimeters unless otherwise noted.
2. Electrical Junction Box, Lighting Fixture Recessed Cast Housing (not extra fixture) & Embedded PVC conduit to be Supplied by EXPR6HAN CONCRETE CO.
3. Install Cable Tie before unit is set upright & leave in place until unit is grouted into final position.

Total Weight = 22.0 Metric Tons

FOR INFORMATION ONLY
1) All dimensions shown are in millimeters unless otherwise noted.
2) Install Cable Tie before unit is set upright & leave a piece until it is
    provided into final position.

Total Weight = 18.6 Metric Tons

16000922,02
16654A0056
Richmond Two-Bolt Preset Wingwall Anchor

**Side View**

**Front View**

**DETAIL**

1. Structural steel for tie plate shall be ASTM A709 Grade 36 and shall be
   Galvanized as per ASTM A153.
2. Bolts and threaded rods shall be ASTM A325.
   All bolts, threaded rods and nuts shall be
   mechanically zinc coated in accordance with
   ASTM B 695 Class 50.

**NOTES:**

PW-1

1. 29" x 102" x 102"

4. 29" x 64" Shallow Holes

(13 x 102 x 102)

Themes inserted

for 25# bolt

(13 x 20 x Typ.)

45" Bend

SHARP HOLE

(6 holes, 13 x 102 x 102)

(4) per connection

(29 x 64 Shallow Holes)

(6) Galvanized

Bridge Unit

5. Richmond (2) bolt preset wingwall anchor for 25# bolts (152 pitch)
### Existing Plans (24 of 45)

<table>
<thead>
<tr>
<th>SHEET NO.</th>
<th>OF 45 SHEETS</th>
</tr>
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<tbody>
<tr>
<td>2/5/2022</td>
<td>SHEET NO.</td>
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</table>

#### Backbone Exit:
- Backbone shall be considered as all required connection and new placement included in the C/D/P/W/I bridge walls, sidewalks, and walkways. The project construction specifications which follow the specifications for structure and roadway excavation and environment construction, shall apply to all modifications.
- Backbone shall be placed against any structural elements that may have been approved by the Engineer.
- Backbone against a preexisting structure shall be placed to ensure that it is not damaged to the pre-existing material.
- The connection must be made in such a manner as to ensure that it is not damaged to the pre-existing material.
- Any additional A and subsequent acceptance required to provide this estimate and final approval shall be modified by C/D/P/W/I.

#### Backbone:
- For information only

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- For information only

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#### Backbone:
- For information only
SOUTH LAKE SHORE DRIVE IMPROVEMENTS
57th St. UNDERPASS WALL IMPROVEMENTS

CHICAGO, ILLINOIS

NOTES
1. Unless otherwise noted on the approved drawings, General Contractor.
   approved indicates all building materials (cement masonry, steel framing,
   and wood construction, insulation, and finish materials and dimensions)
   is in accordance with the General Documents.

2. United Precision Products (UPP) is not responsible for the design or
   manufacture of the materials used in the project. It is the
   responsibility of the GC to refer to the General Documents.

3. 2006ADA is preferred as the standard code of practice. A
   preferred code for construction with updated requirements, and
   including the structural issues in the structure. The
   General Contractor is responsible for the structural issues.

4. PCCP is not responsible for the structural issues in the
   General Contractor is responsible for the structural issues.

5. It is the responsibility of the General Contractor to ensure all
   structural issues in the structure are addressed.

6. When necessary, the General Contractor may alter the materials
   used in the project.

7. The General Contractor is responsible for all changes.

8. All materials and construction shall be installed in accordance
   with the approved drawings.

9. All materials and construction shall be installed in accordance
   with the approved drawings.

10. Contractor shall verify offsets from new precast to
    existing precast underpass, and existing structures
    such as CHS barrier walls, pavement, and
    sheet pile walls. Vertical alignment with respect to
    existing side wall, and to existing structures such as
    CHS barrier walls, pavement, and sheet pile walls.

CONNECTIONS
A. Concrete Connection
   - Concrete Connection
   - Pin Connection
   - Pin Connection
   - Pin Connection
   - Pin Connection

FINISHES
- Standard Finishes
- Standard Finishes
- Standard Finishes
- Standard Finishes
- Standard Finishes

FOR INFORMATION ONLY
- Standard Finishes
- Standard Finishes
- Standard Finishes
- Standard Finishes
- Standard Finishes
GENERAL NOTES

1. Calculated weight of Structural Steel: 29,020 lbs (M720 Grade 50).
2. Reinforcement bars designated (E) shall be epoxy coated.
3. No field welding is permitted except as specified in the contract documents.
4. Existing structure has an inorganic zinc-silicate/acrylic/polyacrylic paint system. The epoxy material/paint system shall be used for shop and field painting of new structural steel and also for existing structural steel in contact with new steel. The color of acrylic (flush coat) shall be light gray (Munsell 7.5 YR 6/1). When matching to be gray (Munsell No. 9B 7/1) if the first is unavailable.
5. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field check dimensions and details affecting new construction and make necessary adjustments prior to construction or ordering of materials. Such variations shall not cause the additional compensation for a change in scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
6. Protective Concrete Sealer shall be applied to the entire top surface of west sidewalk and inside vertical face of west curb adjacent to the roadway. All surfaces to be sealed shall be cleaned thoroughly prior to Protective Concrete Sealer application. See Special Provisions.

7. Water/groundwater location at this location is included in the geotechnical report. All excavation for structures must be bottom-dewatered during construction operations until backfill is in place and provisions (drainage) must be made to prevent the bottom of all excavations from freezing or flooding at all times. This work shall be paid for at the contract lump sum price for Waterproofing Location #2. See Special Provisions.

8. Seal coat thickness is based on the Cofferdam Design Water Level (CDW). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the Cofferdam design. The Contractor shall exercise caution during all construction operations to prevent any damage to the existing structure, adjacent structures, and other facilities. Structures and other facilities damaged during construction shall be repaired or replaced at the expense of the Contractor to the satisfaction of the Engineer of the City of Chicago.

9. See Electrical plans for lighting details.

10. See Drainage plans for drainage details.

11. See Civil plans for proposed contours.

12. Match existing surface finish of existing west and east sidewalks for the proposed west sidewalk. Existing painted symbols on west sidewalk for no diving shall be repainted on the proposed west sidewalk in the same locations. Cost included with High Performance Concrete Superstructures.

13. Contractor shall prepare and submit Structural Assessment Reports (SARs) for the proposed work, including removals, on structure to the Engineer for approval before beginning work. See Special Provision for Structural Assessment Reports for Contractor’s Methods and Bands.


15. As of 9/22/02:

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The item shown is an estimate. Actual repair areas and locations shall be determined by the Engineer and shown on As-Built plans.

4. Include cost of Removal and Disposal of Existing Joint Seals.

The quantity shown is an estimate. Actual repair areas and locations shall be determined by the Engineer and shown on As-Built plans.

5. Includes cost of Removal and Disposal of Existing Joint Seals.

GENERAL NOTES

1. Calculated weight of Structural Steel: 29,020 lbs (M720 Grade 50).
2. Reinforcement bars designated (E) shall be epoxy coated.
3. No field welding is permitted except as specified in the contract documents.
4. Existing structure has an inorganic zinc-silicate/acrylic/polyacrylic paint system. The epoxy material/paint system shall be used for shop and field painting of new structural steel and also for existing structural steel in contact with new steel. The color of acrylic (flush coat) shall be light gray (Munsell 7.5 YR 6/1). When matching to be gray (Munsell No. 9B 7/1) if the first is unavailable.
5. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field check dimensions and details affecting new construction and make necessary adjustments prior to construction or ordering of materials. Such variations shall not cause the additional compensation for a change in scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
6. Protective Concrete Sealer shall be applied to the entire top surface of west sidewalk and inside vertical face of west curb adjacent to the roadway. All surfaces to be sealed shall be cleaned thoroughly prior to Protective Concrete Sealer application. See Special Provisions.

7. Water/groundwater location at this location is included in the geotechnical report. All excavation for structures must be bottom-dewatered during construction operations until backfill is in place and provisions (drainage) must be made to prevent the bottom of all excavations from freezing or flooding at all times. This work shall be paid for at the contract lump sum price for Waterproofing Location #2. See Special Provisions.

8. Seal coat thickness is based on the Cofferdam Design Water Level (CDW). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the Cofferdam design. The Contractor shall exercise caution during all construction operations to prevent any damage to the existing structure, adjacent structures, and other facilities. Structures and other facilities damaged during construction shall be repaired or replaced at the expense of the Contractor to the satisfaction of the Engineer of the City of Chicago.

9. See Electrical plans for lighting details.

10. See Drainage plans for drainage details.

11. See Civil plans for proposed contours.

12. Match existing surface finish of existing west and east sidewalks for the proposed west sidewalk. Existing painted symbols on west sidewalk for no diving shall be repainted on the proposed west sidewalk in the same locations. Cost included with High Performance Concrete Superstructures.

13. Contractor shall prepare and submit Structural Assessment Reports (SARs) for the proposed work, including removals, on structure to the Engineer for approval before beginning work. See Special Provision for Structural Assessment Reports for Contractor’s Methods and Bands.


15. As of 9/22/02:

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</table>

The item shown is an estimate. Actual repair areas and locations shall be determined by the Engineer and shown on As-Built plans.

4. Include cost of Removal and Disposal of Existing Joint Seals.

5. Includes cost of Removal and Disposal of Existing Joint Seals.
NOTES:

1. The streambed elevations and layout of existing sheet piles to be removed is approximate based on the latest underwater inspection report. Tops of the existing sheet piles may or may not be submerged at the time of construction.

2. This work shall be in accordance with the Special Provision for Remove Sheet Piling.

3. The Contractor shall remove all existing sheet piles above and in front of the existing footings (see Section B-B). Sheet piles shall be cut flush with the existing streambed where applicable.

4. See Sheets SD-3, SD-6, SD-13 and SD-14 for partial Seawall sheet pile removal required for widened abutment construction.
**PLAN - TEMPORARY SOIL RETENTION SYSTEM**

**ELEVATION - TEMPORARY SOIL RETENTION SYSTEM**

**BILL OF MATERIAL**

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**NOTES:**

1. A cantilevered sheet pile design does not appear feasible and additional members or other retention systems may be necessary. The Contractor is responsible for retaining an Illinois Licensed Structural Engineer to detail the design of the proposed temporary soil retention system per Article 522 of the Standard Specifications. All supporting documents, calculations and details must be submitted to the Engineer for review and approval prior to starting construction.

2. The Temporary Soil Retention System shall be designed to support a minimum live load surcharge of 240 psf.

3. Existing utility locations to be field verified prior to design, approval, and installation of Temporary Soil Retention System.

4. The top of Temporary Soil Retention System elevation assumes the top of existing southwest wingwall concrete is removed as shown on the plans. All excavation lines behind wall shall be at a minimum slope of 1.5(H):1.0(V).

5. See SN 016-6544 proposed structure plans for Temporary Soil Retention System details near the interface of SN 016-6544 and SN 016-6195.
STAGES LSD-3 & LSD-3.1 BRIDGE REMOVAL - ALONG CENTERLINE OF INLET BRIDGE

MNT NOTES:
1. Temporary Concrete Barrier located along the Stage Removal Line and placed per Detail 1 on Temporary Concrete Barrier for Stage Construction Sheet (Sheet SD-8) after deck and sidewalk removal. Existing deck slab reinforcement to remain (See Sheet SD-21).
2. Temporary Concrete Barrier shall not be pinned to existing bridge deck or approach slabs.
3. See MNT plans for additional details and lane widths during construction.

STAGES LSD-3 & LSD-3.1 BRIDGE CONSTRUCTION - ALONG CENTERLINE OF INLET BRIDGE

NOTES:
1. After the portion of the existing deck is removed, Contractor shall survey the edge of the existing deck to remain along the Stage Construction Line at the top of slab elevation points shown on Sheet SD-18. If survey elevation differs from Theoretical Grade Elevations Adjusted for Dead Load Deflection by more than 1/2", then Engineer shall be notified immediately.
2. See Maintenance of Traffic plans for additional details.
3. See Civil plans for proposed roadway widening, Temporary Concrete Barrier, and curb and gutter details.
**NOTES:**

1. Cost of retainer assemblies and splicers/couplers are included with Temporary Concrete Barrier.

2. A retainer assembly shall be located at the approximate third points of each temporary concrete barrier.

3. The retainer plates shall not be removed until the concrete on the adjacent stage is ready to be poured.

4. Detail I - Installation for a widened bridge deck or bridge slab adjacent to an existing bridge deck or bridge slab to remain. Splicers and couplers shall develop full tensile capacity of the existing reinforcement.
BAR DIMENSIONS

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BAR u402(E)

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WEEPER HOLE DETAIL

Back Face of Wall Stem

3" diameter weep hole

Cut Impervious Side of Geocomposite to allow for flow

NOTES:

1. Geomembrane for Structures shall be placed per Section 386 of the 2019 Supplemental Specifications except for mechanical connection shall be required per Sections 502 and 503 of the Standard Specifications. Waterproofing shall be per Article 303.18 of the Standard Specifications. Cost included with "High Performance Concrete Structures".

2. B.S.注明 Each Face.

SHEET NO.:

4/22/2020

MASONRY FACING

SD-15 for masonry railing attachment details

Masonry Facing 1/2" [v405(E), v409(E)]

Granular Backfill for Structures (Compacted) - Full width between proposed and existing wall (See Note 1)

Geocomposite Wall Drain

WATERPROOFING (E.F.)

Section H-H

Varies, 11'-6" max.

2'-5" Tall

Elev. 2.93

Waterproofing (E.F.)

Section G-G

Varies

Granular Backfill for Structures (Compacted) - Full width between proposed and existing wall (See Note 1)

Geocomposite Wall Drain

WATERPROOFING (E.F.)

Cut Impervious Side of Geocomposite to allow for flow

BAR DIMENSIONS

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MIN BAR LAP (Abutment and Wingwall)

#4 bar = 2'-7"

#5 bar = 3'-11"

#7 bar = 4'-5"

CITY OF CHICAGO

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING

ABUTMENT AND WINGWALL WIDENING (4 OF 4)

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CDOT PROJECT NO.  B-7-203

RTE. 2873

F.A.U.

CDOT PROJECT NO.  B-7-203

RTE. 2873

F.A.U.
SUGGESTED SEQUENCE OF CONSTRUCTION

1. Install Cofferdams (Type 2).
2. Partially remove Cofferdams (Type 2) per Sheet SD-14.
3. Reconstruct the Seawall concrete slab.
4. Pour the Concrete Plug.
5. Install the new structural steel for the Seawall Closure including the proposed substructure and rebuild the Masonry Facing.
6. Construct the proposed footings.
7. Install Cofferdams (Type 2).

PLAN OF PROPOSED CONSTRUCTION

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Contractor shall be responsible for designing and constructing cofferdams in order to facilitate construction of the proposed footing in the dry. This includes, but is not limited to, sizing of all members and achieving a seal between new and existing elements as needed to permit dewatering.

The steel plates shown may be anchored into the end of the existing footing as needed per the Contractor's design. After the seal coat pour has cured and prior to construction of the footing, the steel plate shall be cut off at the top of footing and remain in place. The cost of the plate and any associated work shall be included in the cost of Cofferdam (Type 2) of the location specified.

Sandbags are shown as one potential option around the existing footings. Contractor shall design and construct a closed system at the locations shown to allow dewatering, demolition of existing abutment wall, and construction of new elements. The cost of this portion of the enclosure and any associated work shall be included in the cost of Cofferdam (Type 2) of the location specified.

After completion of the abutments, installation of masonry facing and Seawall Closure and accompanying concrete slab construction, then the sheet piling on the west and channel side of the cofferdams shall be cut off at the bottom of footing (top of seal coat) and remain in place. Seal coat thickness shown is based on the Cofferdam Design Water Elevation (CDWE).

Proposed changes to the seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design. The seal coat is used to encase the abutment metal shell piles and to brace the existing Seawall after removal of the tiebacks and cannot be eliminated.

Existing tie rod locations are unknown. The Contractor shall field locate all existing tie rods in the vicinity of proposed piles or sheeting. Existing tie rods outside the limits of the cofferdam shall remain.

The top of the existing Seawall (approx. +3.00 CCD) may be overtopped at the time of construction. The Contractor may use sheeting, sandbags, or other barriers behind the existing Seawall to facilitate dewatering. The cost of this portion of the enclosure and any associated work shall be included in the cost of Cofferdam (Type 2) of the location specified.

Cofferdam layout shall not reduce the channel width between the existing Channel Markers.
MASONRY RESTORATION NOTES:

1. Non-abrasively clean all exposed masonry surfaces including removal of staining, graffiti and signage painting.
2. Record masonry unit locations and positions. Record the location and elevation of each weep hole.
3. Unbuild and dismantle masonry units without damage, salvaging for rebuilding and/or reuse as dutchman repair where applicable.
4. Protective store masonry units for reuse.
5. Repair any damages and clean masonry removed and stored off-site.
6. Reinstall repaired units, including west fascia arch, fitted together with new replica Masonry units and weep system encased on new structure. Reinstall weep holes in their original location and at their original elevation. Install Stainless Steel (S.S.) anchor pins utilizing existing holes or new for proper assembly. Existing pins should be reused wherever possible.
7. Re-erect existing railing (See Special Provision for Removing and Re-erecting Existing Railing). Point joints and re-install Lead Came Cover System.
8. Non-abrasively clean all exposed masonry surfaces including removal of staining, graffiti and signage painting.
9. For available existing bridge masonry plans and details, see Sheets SDX-25 to SDX-36.

NOTES:

1. Existing stainless steel anchor pins for masonry shall be cleaned and incorporated into the new construction. Cost included with Masonry Wall Construction.
2. Cast-in-place concrete facing may have been placed in lieu of limestone and granite in some areas of the existing Masonry Facing when 2' or more below grade. Cost in place concrete facing may be replaced in kind on the widened structure when 2' or more below grade, subject to the approval of the Engineer. See Sheets SDX-17 and SDX-36 for more information.
3. The Contractor shall clean and reuse the existing dowel bars wherever possible, as approved by the Engineer. The Contractor shall not drill new holes into the existing cornice to be reused unless approved by the Engineer. All cost of drilling, grinding, new epoxy coated dowel bars, and any other incidental work included with Masonry Wall Construction.

LEGEND

- A

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

MASONRY RESTORATION (1 OF 3)
STRUCTURAL NO. 316-6195

MASSIVE RESTORATION (1 OF 3)
STRUCTURAL NO. 316-6195

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

MASONRY RESTORATION (1 OF 3)
STRUCTURAL NO. 316-6195
NOTES:
1. Provide 1" sealant and backer rod between abutment cap and top of Proposed Masonry Facing. Sealant color to match existing and shall be approved by the Engineer. Cost included with Masonry Wall Construction. See Sheets SDX-7 and SDX-18 for details of existing joint.
2. For available existing bridge masonry plans and details, see Sheets SDX-25 to SDX-38.
3. Cast-in-place concrete facing may have been placed in lieu of limestone and granite in some areas of the existing Masonry Facing when 2 or more below grade. Cast-in-place concrete facing may be replaced in kind on the widened structure when 2' or more below grade subject to the approval of the Engineer. See Sheets SDX-17 and SDX-36 for more information.

LEGEND
- Remove and Re-erect Existing Railing
- Relocated Limestone (See Note 3)
- Relocated Granite (See Note 3)
- Proposed New Limestone
- Proposed New Granite
- Weep Hole

Fascia Arch
Abutment Cap
Expansion Joint between proposed abutment cap and top of exist. or prop. Masonry Facing (See Note 1)
Existing Limestone to remain
Existing Granite to remain
Conceptual Masonry Stage Removal Line to facilitate proposed abutment widening. Masonry Contractor shall determine removal limits and limits shall be approved by the Engineer (See Special Provisions).

SOUTH ABUTMENT ELEVATION

NORTH ABUTMENT ELEVATION

Notice and information included with Masonry Wall Construction. Sealant color to match existing and shall be approved by the Engineer. Cost included with Masonry Wall Construction. See Sheets SDX-7 and SDX-18 for details of existing joint.

SDX-17  ENGINEERING WORK CENTER  L  12/16/2019  2:30:14 PM
DETAILS OF WEEP INSTALLATION

- Waterproofing
- New or existing replica Limestone or Granite (See Note 5)
- Existing Lead Came

SECTION OF ASHLAR

- Portland Cement Parging
- (fill void completely)
- Condensation Cavity
- Waterproofing
- Free Moving Pin
- S.S. Anchors
- (4 per block minimum)
- See Tuckpointing Detail for joint design

TUCKPOINTING DETAIL

1. Match original joint width
2. Jointing material to a depth of 1 3/4" (minimum)
4. Match new pointing mortar to old color, texture, & profile, typ. (See Special Provisions)

LEAD CAME JOINT DETAIL

1. At designated horizontal surface, remove all existing jointing material to a depth of 1 3/4" (minimum)
2. Install Backer Rod, Sealant and continuous Lead Came for full length of the joint and overlap.

NOTE:
1. Dutchman repairs, if necessary, shall be per Detail "A" on Sheet SDX-17 of the existing bridge plans.
2. Stone crack repairs, if necessary, shall be per Detail "B" on Sheet SDX-18 of the existing bridge plans.
3. Existing hole patches, if necessary, shall be per Detail "C" on Sheet SDX-19 of the existing bridge plans.
4. For available existing bridge masonry plans and details, see Sheets SDX-23 to SDX-38.
5. Cast-in-place concrete facings may have been placed in lieu of Limestone and Granite in some areas of the existing Masonry Facing when 2' or more below grade. Cast-in-place concrete facings may be replaced in kind on the widened structure when 2' or more below grade, subject to the approval of the Engineer. See Sheets SDX-17 and SDX-36 for more information.

BILL OF MATERIAL

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NOTES:
- For full length of the joint and overlap.
- Install Backer Rod, Sealant and continuous Lead Came for full length of the joint and overlap.
- Match new pointing mortar to old color, texture, & profile, typ. (See Special Provisions)
DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

NOTE:
The above deflections are not to be used in the field if the Engineer is working from the 'Theoretical Grade Elevations Adjusted for Dead Load Deflection' as shown on Sheet SD-19.

STAGE CONSTRUCTION LINE DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

NOTE:
The above deflections are not to be used in the field if the Engineer is working from the 'Theoretical Grade Elevations Adjusted for Dead Load Deflection' as shown on Sheet SD-19.

TOP OF SLAB ELEVATIONS PLAN

ELEVATION LOCATION

DEAD LOAD DEFLECTION DIAGRAM
(Continued weight of concrete only)

NOTE:
The above deflections are not to be used in the field if the Engineer is working from the 'Theoretical Grade Elevations Adjusted for Dead Load Deflection' as shown on Sheet SD-19.

STAGE CONSTRUCTION LINE DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

NOTE:
The above deflections are not to be used in the field if the Engineer is working from the 'Theoretical Grade Elevations Adjusted for Dead Load Deflection' as shown on Sheet SD-19.

TOP OF SLAB ELEVATIONS PLAN

ELEVATION LOCATION

DEAD LOAD DEFLECTION DIAGRAM
(Continued weight of concrete only)

NOTE:
The above deflections are not to be used in the field if the Engineer is working from the 'Theoretical Grade Elevations Adjusted for Dead Load Deflection' as shown on Sheet SD-19.

STAGE CONSTRUCTION LINE DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

NOTE:
The above deflections are not to be used in the field if the Engineer is working from the 'Theoretical Grade Elevations Adjusted for Dead Load Deflection' as shown on Sheet SD-19.
## STAGE CONSTRUCTION LINE

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<tr>
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After the portion of the existing deck is removed, Contractor shall survey the edge of the existing deck to remain along the Stage Construction Line at the top of slab. Theoretical Grade Elevations Adjusted for Dead Load Deflection at Stage Construction Line shall be matched to match survey elevation. If survey elevation differs from Theoretical Grade Elevations Adjusted for Dead Load Deflection by more than ½" then Engineer shall be notified immediately.

## BEAM 14

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### North Approach West Edge of Shoulder

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### South Approach West Edge of Shoulder

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### Notes
- Elevations taken at top of concrete approach slabs and do not include the additional overlay thickness on top of the approach slabs.

## Plan (North Approach)
- Prop. S. Lake Shore Dr. & P.G.L.
- N. End of South Appr. Pavement
- 3 spa. at 10'-0" = 30'-0"

## Plan (South Approach)
- Prop. S. Lake Shore Dr. & P.G.L.
- S. End of North Appr. Pavement
- West Edge of Shoulder
- 3 spa. at 10'-0" = 30'-0"
Framing Plan and Beam Details

Structure No: 016-6195

**Interior Diaphragm**
(Diaphragms Mk. D1 thru D3)

Size Sheet 50-24 for additional details

**Proposed Interior Beam 12 Moment Table**

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**Proposed Interior Beam 12 Reaction Table**

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**Notes:**
1. All structural steel shall be AASHTO M270 Grade 50.
2. All beams shall conform to the AASHTO Impact Testing Requirement, Zone 2.

---

**Framing Plan**

Proposed Beams W24x146 (Composite)
Proposed Diaphragm, typ.
Existing W24x146 (Composite, typ.)
Existing Diaphragm, typ.
Proposed W24x4 beam

**Section AA**

**Beam Elevation - Beams 12 thru 15**

**NOTES:**
1. All structural steel shall be AASHTO M270 Grade 50.
2. All beams shall conform to the AASHTO Impact Testing Requirement, Zone 2.
NOTES:

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 1/2" O.D., holes 5/8" O.D. unless otherwise noted.

2. All structural steel (including the components of the diaphragms and bearing assemblies) shall be AASHTO M270 Grade 50. Cost is included with Furnishing and Erecting Structural Steel.

3. Anchor bolts shall be according to Article 521.06 of the Standard Specifications.

4. Beams shall be braced for stability during erection and remain braced until the deck is poured and cured.

5. Contractor shall ensure existing diaphragms are supported during removal of adjacent existing diaphragm until the angles are reinstalled. Cost included with Removal of Existing Superstructures.

6. Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

7. Stainless and welded conduit and fittings shall be extra strong, galvanized steel meeting the requirement of ASTM A53.

8. Steel straps, bars and plates for the hanger assembly shall meet the requirements of AASHTO M270, Grade 56.

9. All conduit hangers, supports and hardware shall be hot-dip galvanized after fabrication in accordance with AASHTO M252 (ASTM A153) unless otherwise noted. All bolts, nuts and washers shall be stainless steel. Stainless steel bolts and washers shall conform to the requirements of the Standard Specifications: Article 1006.29(d).

10. Galvanized steel conduit shall not be painted.

11. The Electrical Contractor shall coordinate the location of the conduit assembly with the Bridge Contractor.

12. Conduit shall not come into contact with any bracing or other structural members.

13. Provide 1" minimum clearance between the conduit and hanger assemblies and all structural members. Hanger assemblies and conduits shall not extend below the bottom flanges of the nearest beams in order not to reduce the vertical clearance.

14. See Electrical plans for additional conduit information.
APPROACH SLAB DETAILS

**SECTION A-A**

1. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

2. Approach slab shall be paid for as High Performance Concrete Structures.

3. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

4. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

5. Cost of excavation for approach footing included with High Performance Concrete Structures.

6. For Granular Backfill for Structures and drainage treatment details, see Sheet SD-12.

7. For railing details, see Civil plans.

8. Drill and grout dowel bars into the existing approach slab and approach footing according to Article 584 of the Standard Specifications with a minimum embedment of 8". Cast in place dowel bars into the new approach slab and approach footing. Cost of drilling and grouting included with High Performance Concrete Superstructures.

9. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

10. Joint opening to be increased by 1/4" for expansion joint. See Special Provision 'Preformed Pavement Joint Seal' between curb and edge of pavement.


12. Cost of excavation for approach footing included with High Performance Concrete Superstructures.

13. Approach slab shall be paid for as High Performance Concrete Superstructures.

14. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

15. Approach slab shall be paid for as High Performance Concrete Superstructures.

16. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

17. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

18. Approach slab shall be paid for as High Performance Concrete Superstructures.

19. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

20. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

21. Approach slab shall be paid for as High Performance Concrete Superstructures.

22. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

23. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

24. Approach slab shall be paid for as High Performance Concrete Superstructures.

25. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

26. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

27. Approach slab shall be paid for as High Performance Concrete Superstructures.

28. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

29. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

30. Approach slab shall be paid for as High Performance Concrete Superstructures.

31. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

32. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

33. Approach slab shall be paid for as High Performance Concrete Superstructures.

34. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

35. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

36. Approach slab shall be paid for as High Performance Concrete Superstructures.

37. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

38. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

39. Approach slab shall be paid for as High Performance Concrete Superstructures.

40. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

41. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

42. Approach slab shall be paid for as High Performance Concrete Superstructures.

43. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

44. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

45. Approach slab shall be paid for as High Performance Concrete Superstructures.

46. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

**SECTION B-B**

1. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

2. Approach slab shall be paid for as High Performance Concrete Superstructures.

3. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

4. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

5. Cost of excavation for approach footing included with High Performance Concrete Superstructures.

6. For Granular Backfill for Structures and drainage treatment details, see Sheet SD-12.

7. For railing details, see Civil plans.

8. Drill and grout dowel bars into the existing approach slab and approach footing according to Article 584 of the Standard Specifications with a minimum embedment of 8". Cast in place dowel bars into the new approach slab and approach footing. Cost of drilling and grouting included with High Performance Concrete Superstructures.

9. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

10. Approach slab shall be paid for as High Performance Concrete Superstructures.

11. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

12. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

13. Approach slab shall be paid for as High Performance Concrete Superstructures.

14. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

15. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

16. Approach slab shall be paid for as High Performance Concrete Superstructures.

17. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

18. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

19. Approach slab shall be paid for as High Performance Concrete Superstructures.

20. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

21. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

22. Approach slab shall be paid for as High Performance Concrete Superstructures.

23. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

24. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

25. Approach slab shall be paid for as High Performance Concrete Superstructures.

26. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

27. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

28. Approach slab shall be paid for as High Performance Concrete Superstructures.

29. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

30. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

31. Approach slab shall be paid for as High Performance Concrete Superstructures.

32. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

33. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

34. Approach slab shall be paid for as High Performance Concrete Superstructures.

35. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.

36. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the joint shall be equal to half the total bridge length plus the length of the bridge approach slab.

37. Approach slab shall be paid for as High Performance Concrete Superstructures.

38. Approach footing concrete shall be paid for as High Performance Concrete Superstructures.
**Metal Shell Pile Table**

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**Detail A**

- Metal shell pile
- See Detail A, typ.

**Welded Commercial Splice**

Notes:
- The 3/4" min. fill bar may be constructed of 2 bars with a 3/4" max. gap between them.
- Pile segments shall be driven to solid contact with splicer before welding.

**Pile Shoe Attachment**

- When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

**Complete Penetration Weld Splice**

- Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

**Notes:**

- The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.
STANDARD BAR SPICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

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<tr>
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INSTALLATION AND SETTING METHODS

*A* : Set bar splicer assembly by means of a template bolt
*B* : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.

NOTES:

- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.
### Profile Grade Line

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**Diaphragm D1**

**Diaphragm D2**

**Interior Beam Moment Table**

**Interior Beam Reaction Table**

**Bearing Details**

**Top of Beam Elevations**

---

**Note:**

- The dimensions provided are for reference and may vary.
- The diagram illustrates the structural layout and dimensions of the diaphragms and interior beams.
- The bearing details indicate anchor bolts and their locations.
- The top of beam elevations provide a detailed view of the structural elements.

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**Structural Steel and Bearing Details**

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**City of Chicago**

**Department of Transportation**

**Division of Engineering**

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**Design:**

- **File Name:** ABC-sht-6195ex-010.dgn
- **User Name:** jsurber
- **File Path:** C:\pworks\civiltech\production\pw-jsurber\dm36106\ABC-sht-6195ex-010.dgn
- **Date:** 3/31/2020

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**For Information Only**
MASONRY RESTORATION NOTES

1. RECORD MASONRY UNIT LEGENDS AND POSITIONS
2. INSTALL AND ATTACH MASONRY UNITS WITHOUT DAMAGE, SALVAGING ANY MASONRY MATERIALS AND REUSABLE MATERIALS AS PART OF THE RESTORATION Effort
3. PROTECTIVELY STORE MASONRY UNITS FOR REUSE
4. REPLACE DETERIORATED CEMENT
5. REPLACE PERIODICALLY UNIT JOINTS WITH NEW MIX FOR MASONRY UNITS AND CONCRETE EXPOSED IN NEW STRUCTURE. INSTALL NEW GROUTED UNITS. T.K.
6. INSTALL FAUX UTILIZATION EXISTING HELPS FOR PRE-TREATMENT STAIN.
7. PAINT JOINTS AND INSTALL LEAD COMB BEAM SYSTEM.
8. NON-MARKING ONLY CLEAR ALL EXISTING MASONRY SURFACES INCLUDING REMOVAL OF STAINING, GRAFFITI, AND STORMIC PAINTING.

LEGEND

EXISTING STONE (STORMIC, PERIODIC), 3 HEAVY LINE OUTLINE (SHH); SHEET 3-19-19
NEW LIMESTONE, (PERIODIC), SPRAY; SHEET 3-19-19
NEW GROUTED (PERIODIC), 11 HEAVY LINE OUTLINE (SHH); SHEET 3-19-19
CRACK REPAIR (PERIODIC), 11 HEAVY LINE OUTLINE (SHH); SHEET 3-19-19
STAIN REMOVAL (PERIODIC, Special Provision)
EXISTING SIMPLE TASS (PERIODIC), 11 HEAVY LINE OUTLINE (SHH); SHEET 3-19-19
LUG JOINT CASE (PERIODIC), 11 HEAVY LINE OUTLINE (SHH); SHEET 3-19-19
WEPH (PERIODIC), 11 HEAVY LINE OUTLINE (SHH); SHEET 3-19-19
ELEVATION OF ARCH

SECTION X-X

SCALE: 1" = 1'-0"

NOTE:
DEPARTMENTS AT APARTMENTS MUST MAKE SEPARATE PREP TO A DIY CONSTRUCTION CONTRACT.