



Location Drainage Study

PROJECT ROUTE: US Route41, Cornell Drive, Stony Island Avenue
LIMITS: Mobility Improvements to Support the SLFP
MUNICIPALITY/COUNTY: City of Chicago/Cook County
JOB NUMBER: Section 17-B7203-00-ES

PREPARED FOR: District One
Bureau of Programming
Hydraulics Section

DATE: 12/20/2019

PREPARED BY: CNECT

DATE: 12/20/2019

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LOCATION DRAINAGE STUDY CHECKLIST

Project Route: US Route 41, Cornell Drive, Stony Island Avenue

Limits: Mobility Improvements to Support the SLFP

Municipality/County: City of Chicago/Cook County

Job Number: Section 17-B7203-00-ES

0-00 OVERALL PROJECT SCOPE

This project, in conjunction with the development of the Obama Presidential Center and the Chicago Park District's 2018 South Lakefront Framework Plan, aims to create more contiguous parkland and reduce the effects of vehicular traffic within Jackson Park by consolidating roadways and improving circulation for all modes of travel.

This includes the closure of portions of Cornell Drive and Marquette Drive, the widening along portions of Lake Shore Drive and Stony Island Avenue, the addition and repositioning of trail throughout the park, and the addition of trail underpasses beneath Hayes Drive.

Lake Shore Drive (US Route 41) from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east. Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.

The scope of the 59th Street inlet bridge widening includes removing existing architectural stone cladding and reinstalling to the new bridge structure on the west face. The abutments will be extended to the west and new wingwalls will be constructed on the west side. The bridge widening includes some fill into the existing floodplain.

Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction, an all-day on street parking or loading zone lane on each side of the road, and a raised median with left-turn channelization at intersections. From 64th Street to 67th Street, Stony Island Avenue would be widened to provide a consistent cross section including three northbound lanes and four southbound lanes separated by a raised median. Intersections on Stony Island Avenue from 59th Street to 67th Street would be reconfigured to accommodate the roadway widening and provide additional turn lanes.

Parking would be removed on Hayes Drive from Lake Shore Drive to Cornell Drive to provide two lanes in each direction, separated by a barrier median. Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street. The existing triangular, stop-controlled intersection at Hayes Drive and Richards Drive would be reconfigured to create a signalized T-intersection. Hayes Drive would be realigned at Cornell Drive to provide a through movement for predominant travel through the intersection. The existing portion of Hayes Drive between Stony Island Avenue and Cornell Drive would be realigned to create a T-intersection with the realigned Hayes Drive.

The existing drainage within the project limits includes a large City of Chicago, 13-foot diameter combined sewer that flows to the north under Stony Island Avenue. In general, most of the roadway storm sewers within the project limits are ultimately tributary to this sewer. There is a control structure located on Hayes Drive just east of Stony Island that includes a backflow preventer (to prevent combined sewer flows from backing into the storm sewer) as well as a restrictor to limit discharge to the combined sewer. Flows that exceed the design flow will overflow to the existing Lagoons in Jackson Park through a series of weirs within the existing storm sewer system. The proposed design will maintain all existing control structures, including the orifice and weir overflow system, Per City of Chicago requirements. Modifications will only be made when maintaining existing structures is not possible.

Stony Island is drained entirely by combined sewers. There are local sewers that drain the roadway and surrounding areas that ultimately connect to the large 13-foot diameter interceptor sewer that runs down the center of Stony Island. The sewer is under Chicago Department of Water Management (DWM) jurisdiction. In the existing conditions there are also areas from Jackson Park that drain directly into the lagoons. Cornell Drive, north of Hayes discharges directly to the West Lagoon via an existing storm sewer.

1-00 EXISTING DRAINAGE SYSTEM (see Exhibit 1-00a, General Location Drainage Map;

Exhibit 1-00b, Existing Drainage Plan)

1-01 IDENTIFIED DRAINAGE PROBLEMS (see Appendix C)

Yes No

1-01.1 Description: The only known drainage issue in the project area is the 59th Street Inlet Bridge pedestrian underpass. The underpass was built in approximately 2003 as part of CDOT project number B-1-440. Drainage for the structure was provided by catch basins on either end of the structure and an outlet to the 59th Street Inlet Lagoon. When the structure was built, the water levels in Lake Michigan were lower than the current lake levels, which are now historically high. As a result, there is consistently standing water in the underpass that does not drain because the water level in the lake is higher than the rims of the underpass drainage structures.

Responsibility IDOT Others (Park District)

Action

An investigation of the existing drainage system was conducted (see Appendix D Attachment 14). The existing underpass storm sewers were cleaned and televised, and the sewers and existing backflow preventer were found to be in good condition. When the 59th Street pedestrian underpass was built, some of the structures for a future pump station were installed, but the pumps, control and wet well were not constructed. The pump station will be installed as a part of the proposed project. The pumps will drain storm water from the pedestrian underpass drainage system to the Lake Shore Drive mainline storm sewer. This will drain the underpass regardless of lake water levels and eliminate the current standing water in the pedestrian underpass.

Incorporate into the Study
(See Section Section 2-07)

1-02 IDENTIFIED BASE FLOODPLAINS (see Exhibit 1-02a Flood Insurance Rate Map and Section 3-00)

The Flood Insurance Rate Map for Cook County was examined for identified base floodplains, which were either traversed by or adjacent to (Project Route)

Floodplains Yes No

Location: Traversed by US Route 41
Sta. 81+06 to 81+82
Sta. 128+66 to 129+54

Adjacent to US Route 41
Sta. 81+82 to 128+66
Sta. 129+54 to 150+07

Floodways Yes No

1-03 MAJOR DRAINAGE FEATURES (see Exhibit 1-00a)

1-03.1 Bridges

Location: Lake Shore Drive, over 59th Street inlet.

Structure No.: 016-6195

Hydraulic Report Prepared by IDOT

Waterway Information Table Available:

- Yes (Exhibit 1-03.1a)
- No

Narrative Summary:

The existing structure is a single span arch bridge with a length of 46-feet (back to back of abutments) and a width of 91.2 feet (out to out bridge deck). There are no reports that this structure is subject to overtopping or other types of flooding. The bridge is located in a crest vertical curve above the approach pavements. The low chord for this structure is above the FEMA 100-year Lake Michigan elevation. This structure is over the connecting channel between Lake Michigan and the Jackson Park North Lagoon and provides access for small watercraft. There is no record of flow through the waterway under this structure. Therefore the waterway through this structure was not hydraulically modeled. The design high water elevations uses frequency high water elevations taken from the 'Revised Report on Great Lakes Open-Coast Flood Levels' by the US Army Corp of Engineers. The 50-year freeboard to the roadway is approximately 3.78-feet and the 50-year clearance at the bridge is 5.92-feet.

1-03.2 Major Culvert Crossings

N/A

1-03.3 Pump Stations

N/A

1-03.4 Reservoirs/Detention Facilities

N/A

1-03.5 Depressed Road

N/A

1-03.6 Channel and Zone A Floodplains

N/A

2-00 PROPOSED DRAINAGE SYSTEM (Exhibit 2-00a, Proposed Drainage Plan)

2-01 DESIGN CRITERIA (Exhibit 2-01a - Typical Existing Cross Section.
 Exhibit 2-01b - Typical Proposed Cross Sections

Check all that apply:

- New Construction Reconstruction 3R Projects (Non-Freeways)
 3R Projects (Freeways)

1. Proposed storm sewer conveyance systems will be designed for a (10, 50) year storm frequency with a velocity between 3ft/sec (900mm/sec) and 10 ft/sec (3000mm/sec). For storm sewers oversized for detention minimum velocity is 2 ft/sec.
 Yes No N/A

2. Proposed ditches will be designed for a 50 year storm frequency and desirable ditch grades will be no less than 0.5%.
 Yes No N/A

3. The roadway edge of pavement at the low grade point in a floodplain area for highways with a Design Hourly Volume (DHV) of 100 or more shall be a minimum of three feet above design headwater elevation.
 Yes No (BDE 3100 Required) N/A

4. It is required that a minimum clearance of two (2) feet be established between the design high water and the low beam elevation of bridge structures. The bottom of the bridge super structure shall not be below the all-time high water elevation for the new freeway and expressway construction.
 Yes No (BDE 3100 Required) N/A

5. The waterway openings of bridges and culverts will be designed for a (30, 50) year storm frequency.
 Yes No N/A

The bridges over waterways are over lake waters and are not subject to flows resulting from storm water runoff. No hydraulic analysis is required for these structures. Because the 59th Inlet structure is used for navigation, the existing waterway opening will be maintained. There are no records of complaints that there is insufficient clearance for navigation

6. The vertical alignment for curbed pavements will have a minimum grade of 0.3% and a drainage maximum "K" value of 167 English Unit (51 Metric Units).
 Yes No N/A

7. Minimum Pavement cross slopes will be 1.5% or 2% per BDE Manual Section 34-2.01 (b).

Yes No N/A

List every design exception separately, cite the presentation at the FHWA meeting and cite a copy of the meeting minutes included in Appendix C.

If the scope of work is changed during the P.S. & E. stage, the appropriate drainage design exemption approval, if any, will be processed through the Hydraulics Section by the District's Bureau of Design.

2-02 OUTLET EVALUATION

Unless otherwise noted below, the various outlets within the limits of the subject improvement were determined to be suitable for continued use under proposed conditions without modifications or the provision of storm water detention.

Unsuitable outlets: Yes No

Sensitive (receptor to rate, volume, and / or water quality) outlets:

Yes No

Location: Lake Shore Drive – Outlet #11, Station 9954+19
 Stony Island Avenue – Outlet #6, Station 260+46

Source:

Evaluation:

Recommendation:

For the proposed improvements a more detailed SWMM hydrologic and hydraulic model was created to analyze the existing and proposed conditions. DWM provide hydraulic grade line data for the 13.5' diameter combined sewer (COCCS) along Stony Island Avenue that was used as a starting tailwater elevation for the model analysis. In summary the SWMM modeling shows that the hydraulic grade line for the Hayes Drive and Lake Shore Drive storm sewers are contained within the system up to approximately the 10-year elevation. Note that no revisions to the existing overflow elevations are proposed.

2-03 STORM WATER DETENTION ANALYSIS

This project has been reviewed in accordance with Drainage Manual, Section 1-303.03 "Storm Water Storage".

2-03.1 Evaluation

No storm water detention required

Comments:

The first flush, or 1-year runoff event, will be diverted to the local sewer system. The existing release rate will be maintained as described in Section 2-02 above. The overall roadway improvements will provide a net reduction of approximately 12 acres of impervious area that drain to the lagoons. The improvements on Stony Island Avenue, Hayes Drive, and South Lake Shore Drive will add approximately 2.6 acres of impervious area that will be tributary to the combined sewer on Stony Island. However, by maintaining the existing restrictors, number of catch basins on Stony Island, and release rates to the combined sewer, total flow will be maintained with the overflow being tributary to the lagoons. The total flow to the lagoons will still be reduced due to the overall reduction in impervious area.

Storm water detention required

Comments:

Unsuitable outlets (see Section 2-02)

Location:

Sensitive outlets (see Section 2-02)

Location:

2-03.2 Recommendation

The allowable release rate for maintaining/providing the 1-year event detention will be 1 cfs per acre for the tributary drainage areas to the City of Chicago system.

Detention Ponds Yes No

Storage Pipes Yes No

Oversizing storm sewers/ditches Yes No

For Outlet at Station

Cu. Yds. ()year storm frequency storage; (10, 50, 100) year storm frequency release rate

Oversizing storm sewers/ditches location:

Control structure schematics (see Exhibit 2-03.2a)

Yes No

2-04 RIGHT OF WAY ANALYSIS

The existing right-of-way is located at the back of curb for roadways within or on the side bordering Jackson Park. This defines the existing right-of-way for Lake Shore Drive, Cornell Drive, Midway Plaisance, Hayes Drive, Marquette Drive, and Richards Drive and the east side of Stony Island Avenue.

Right-of-way acquisitions have been avoided entirely and easements have been minimized to the maximum extent possible through detailed design of the proposed horizontal alignments and vertical profiles and selection of the narrowest possible roadway cross-section that meets safety and operational needs. However, dedications of Chicago Park District (CPD) land will still be needed where the existing right-of-way is of insufficient width to accommodate the proposed roadway improvements.

Temporary construction easements are also necessary for grading, driveway and sidewalk reconstruction, and site restoration. Temporary easements are also required around underpass structures, retaining walls and wing walls to allow for construction of these items.

In addition, permanent easements are required for utility relocations related to this improvement. Permanent easements are proposed for future maintenance of the following proposed utilities

- CDWM storm sewer
- CDWM water main
- CDOT electric duct
- Peoples Gas line

No additional right of way is required specifically for the proposed roadway drainage system

Yes No

Additional easments for DWM are required around the proposed underpasses to accommodate the proposed drainage system.

The right of way requirements have been coordinated and accepted by the Project and Environmental Studies Section.

Yes No

A drainage easement(s) is required to accommodate the proposed drainage system.

The drainage easement(s) have been coordinated and accepted by the Project and Environmental Studies Section

2-05 DRAINAGE ALTERNATIVES

2-06 LOCAL AND OTHER AGENCY COORDINATION (see Appendix C)

- Yes No Local ordinances considered
- Yes No Joint participation
- Yes No Sewer separation
- Yes No Jurisdictional transfer
- Yes No Letter of intent required/processed/approved
- Yes No Coordination completed and comments provided.

Comments: Appendix C contains coordination meeting minutes with the various agencies and interest groups involved in the planning of the proposed improvements. This coordination has been with the following agencies:

City of Chicago, Department of Transportation
City of Chicago, Department of Water Management
City of Chicago, Park District
IDNR – Office of Water Resources
US Army Corps of Engineers

2-07 PROPOSED DRAINAGE PLAN

2-07.1 Roadway Drainage

Ditches and Swales

Yes No

Regrade/reestablish existing ditches/swales

Limits:

Comments:

Yes No

Construct new ditches/swales

Limits:

Comments:

Storm Sewers

Yes No

Utilize existing storm sewers with minor extensions and/or adjustment of existing drainage structures

Limits: Lake Shore Drive, Hayes Drive, Marquette Drive, Cornell Drive.

Comments: Storm sewers will remain where not affected by underpass grading or roadway widening/repositioning.

Yes No

Replace/relocate/upsized existing storm sewers

Limits: Lake Shore Drive, Intersection of Hayes Drive and Lake Shore Drive, Intersection of Hayes Drive and Cornell Drive.

Comments: The mainline storm sewer will be relocated along a section of Lake Shore Drive as a result of the proposed pedestrian underpass. The existing storm sewer system at intersections with proposed underpasses will be rerouted to maintain the existing drainage pattern.

Yes No

Abandon existing storm sewers

Limits: Lake Shore Drive

Comments: Small section of storm sewer located under the roadway will be abandoned to avoid unnecessary disturbance to the roadway.

Yes No

Construct new storm sewers (e.g. converting from an open drainage system to closed drainage system)

Limits:

Comments:

Combined Sewers

Yes No

Utilize existing combined sewers with minor extensions and/or adjustment of existing drainage structures

Limits: Stony Island Avenue.

Comments: Combined sewers will remain where not affected by underpass grading or roadway widening/repositioning.

Yes No

Replace/relocate existing combined sewers

Limits: Stony Island Avenue between 59th Street and 68th Street.

Comments: Combined sewer will be replaced due to the poor existing condition. Sewer replacement sizes have been provided by Chicago DWM.

Outlets

Yes No

Regrade/reestablish/maintain existing outlets

Locations: Lake Shore Drive, Hayes Drive, Marquette Drive.

Comments: Existing outlets to the Stony Island Avenue combined storm sewer and overflows to the Jackson Park lagoons will be maintained.

Yes No

Construct new outlets

Locations and types:

Comments:

Cross Road Culverts

Yes No

Maintain/replace/extend existing cross road culverts

Locations:

Comments:

Yes No

Construct new cross road culverts

Locations:

Comments:

Other Items

Yes No

Construct/modify special drainage structures/sewers

Locations/limits and types: Intersection of Hayes Drive and Cornell Drive.

Comments: Control structure and weir will be relocated to account for grading changes caused by the proposed underpass.

2-07.2 Proposed Action for all Major Drainage Features

2-07.2.1 Bridges

Location: Lake Shore Drive over the 59th Street Inlet

Structure No.: 016-6195

Hydraulic Report Prepared by IDOT

Waterway Information Table Available:

Yes (Exhibit 1-03.1a)

No

Narrative Summary:

The existing single span arch bridge structure will be widened from 91.2 feet to 101.7 feet (back to back abutments to the west in order to provide an additional southbound lane. The existing waterway opening, clearance, and freeboard will be maintained. A scour narrative and analysis has been included in Appendix D.

2-07.2.2 Major Culvert Crossings

N/A

2-07.2.3 Pump Stations

Five separate pump stations will be installed as part of the Jackson Park Mobility Improvements to drain pedestrian underpasses. The proposed pump station locations are at two new underpasses at the intersection of Hayes Drive and Cornell Drive , the new underpass under Hayes Drive just west of South Lakeshore Drive, at the existing underpass just north of the 59th Street Inlet Bridge, new underpass under South Shore Drive near 67th Street, and a new underpass under Jeffrey just south of Marquette Drive. The pump station at the 59th Street Underpass will drain the existing underpass, which is experiencing drainage problems as a result of high Lake Michigan water levels. Only the pump stations near the 59th Street Inlet Bridge, as well as South Shore Drive near 67th Street will be under IDOT jurisdictional routes. Note that after construction all of the underpass pump stations will be operated and maintained by the Chicago Park District.

Also note that in addition there are two additional existing underpass pump stations within the project limits located at under the IDOT jurisdiction South Lake Shore Drive at 57th Drive and 63rd Street respectively. These existing underpass pump stations are functioning well and were not studied or analyzed further.

Appendix D, Attachment 9 includes the underpass pump station analysis as well as schematic drawings for the 59th Street Inlet underpass as well as the South Shore Drive near 67th Street underpass. The proposed pump stations will generally consist of a 10 foot manhole, used as the wet well, which pumps into a 7 foot discharge manhole before gravity draining to the main storm sewer system. The pumping rates and pump on/off sequencing have been checked to ensure water is not on the underpass low pavement elevation for the 10-year storm using a critical duration analysis. The 10-year design event was chosen because the downstream drainage systems that the pump station outlet to are also designed for the 10-year storm. The main stormwater storage areas consist of the pump station wet wells and the connected upstream drainage system (storm sewer and manholes). Note that the underpass area was included in the storage calculations in the event that the water level rose above the rim level of the underpass storm sewer system. However, since the 10 year water level remains below the underpass low grade elevation for the 10 year design storm, the underpass area is not considered part of the pump station storage.

2-07.2.4 Reservoirs/Detention Facilities

N/A

2-07.2.5 Depressed Road

N/A

2-07.2.6 Channel and Zone A Floodplain

N/A

2-08 WATER QUALITY BEST MANAGEMENT PRACTICES (BMP) PERMANENT MEASURES

The water quality will be maintained by directing the 1st flush (one-year storm) to the combined sewer. The overflow will drain to the lake or the lagoon. The highly urbanized nature of the area does not allow for any additional water quality features.

Yes N/A Identification of USACE and other Federal/State BMP Requirements
Comments:

Yes N/A Coordination with Project & Environmental Studies
Comments:

Yes No Did you coordinate with other agencies? If yes, list them here
Comments: Chicago Park District

Yes N/A Green Infrastructure BMP Alternatives
Comments:
Limits:

Yes N/A Improve existing vegetated drainage facilities (ditches, swales, etc.)

Yes No Establish new BMP measures (see below)

Yes No Consideration of open drainage system ("daylight" storm sewer)

Yes No Bioretention or rain garden (separate facility)

Yes No Constructed wetland detention or naturalized detention (multi-purpose storage)

Yes No Bioswale or vegetated swale (multi-purpose conveyance)

Yes No Bank/shoreline stabilization, native buffers, invasive species control, etc.

Yes No Lengthened overland flow paths

Yes No Riffle/Pool Conveyance

Yes No Permanent Ditch Checks

Yes No Permanent Sediment Traps

Other:

Yes N/A Grey Infrastructure BMP Alternatives
Comments:
Limits:

Yes N/A Improve existing non-vegetated drainage facilities (paved or lined ditches, riprap, etc.)

Yes No Establish new BMP measures (see below)

Yes No Oversized pipes for detention

Yes No Manufactured vaults or cisterns (underground detention)

Yes above No Wet pond or turf grass dry detention (traditional ground storage)

Yes No Manufactured water quality unit or oil/grit separator

Yes No Riprap erosion protection

Other:

Yes N/A Sufficient Right-of-Way Allocated for Recommended BMP Alternatives
Comments:
Limits:

Yes N/A Sufficient Permanent Easement Allocated for Recommended BMP Alternatives
Comments:
Limits:

Yes N/A Identify BMP Locations on the Proposed Drainage Plans
Comments:
Limits:

Yes N/A Identify Right-of-Way/Permanent Easement on the Proposed Drainage Plans
Comments:
Limits:

Yes N/A Adequate BMP Guidelines provided for Phase II Designer to Comply with NPDES Requirements
Comments:
Limits:

Yes

N/A

Adequate BMP Guidelines provided for Phase II Designer to Comply with USACE Requirements

Comments:

Limits:

3-00 FLOODPLAIN ENCROACHMENT EVALUATION

The proposed project has been reviewed in accordance with Executive Order 11988 "Floodplain Management"; Section 26-7.05(d) "Assessment and Documentation of Floodplain Encroachments" as contained in the Illinois Department of Transportation, Bureau of Design and Environment Manual; Drainage Manual; and 17 Illinois Administration Code 3708 "Floodway Construction in Northeastern Illinois."

No Potential Floodplain Encroachment

Potential Floodplain Encroachment

3-00.1 Location of base floodplain: Station: 59th Street Inlet Bridge Stream:
(see Exhibit 1-02a, Flood Insurance Rate Map)

Type of potential encroachment

Transverse Longitudinal

Overtopping elevation

greater than 100 year frequency flood elevation

less than 100 year frequency flood elevation

Fill in the floodplain fringe, or floodplain if no floodway:

Yes No

32.27 Cubic yards at normal-10 year storm frequency elevation

24.20 Cubic yards at 10-100 year storm frequency elevation

Excavation in the Floodplain fringe, or floodplain if no floodway:

Yes No

Fill in the floodway:

Yes No

Compensatory storage for fill in the floodway

Yes No

Explanation and Location(s):

Evaluation:

The 59th Street Inlet Bridge widening will require a transverse encroachment of fill within the 100-year floodplain to accommodate an additional lane on southbound Lake Shore Drive. The FHWA Alternatives Analysis shows Purpose and Need is not met without widening of Lake Shore Drive in conjunction with reconfiguring Hayes Drive and widening Stony Island Avenue; therefore, there are no practicable alternatives to the impact at this location. Widening of the bridge structure to accommodate an additional

southbound lane and reestablishment of the existing trail connection has been minimized to reduce impacts to floodplain fill. The existing bridge and roadway meet freeboard and clearance criteria. The fill will not result in increased floodplain elevations or impact the adjacent areas and therefore will not increase the risk of flooding. Therefore the encroachment is not considered significant.

Coordination with IDNR has occurred and email correspondence as well as meeting minutes have been included in Appendix C. Lake Michigan is a Public Body of Water therefore an Individual Permit from IDNR will be required and floodplain compensatory storage is not required.

**4-00 ILLINOIS DEPARTMENT OF NATURAL RESOURCES
OFFICE OF WATER RESOURCES (IDNR-OWR) PERMIT**

Required Not Required

Individual Permit

Location: Lake Shore Drive Bridge crossing the 59th Street Inlet

Statewide Permit #

Location:

Floodway Permit

Regulated Floodway Construction Permit

Location:

Regional Permit #1

Location:

Regional Permit #2

Location:

Regional Permit #3

Location:

Permit Summary form completed and included in Appendix C

IDNR-OWR coordination documented and included in Appendix C

5-00 Appendix A: Source Data Reviewed

USGS Maps* - Quadrangle Map and/or Hydrologic Atlas (date)

- A. U.S. Department of the Interior
U.S. Geological Survey
Jackson Park Quadrangle
Illinois – Indiana
Date: 2015

Survey notes*

Local Drainage Plans* Appendix D

As Built and/or Microfilm Highway Plans*** Appendix D

Flood Insurance Study*

- A. National Flood Insurance Program
Firm, Flood Insurance Rate Map
Cook County, Illinois
Panel 540 of 832
Map panel no. 17031C0540J
Date: 08/19/2008

Proposed Geometrics**

- * On file in the Hydraulics Section
- ** On file in the Project and Environmental Studies Section
- *** Transmitted to the Bureau of Design

5-00 Appendix B: Exhibits (suggested exhibits as follows)

General Location Drainage Map, Exhibit 1-00a

Existing Drainage Plan, Exhibit 1-00b

Floodway and Flood Boundary Map, Exhibit 3-00.1a

Proposed Drainage Plan, Exhibit 2-00a

Typical Existing Cross Sections, Exhibit 2-06a

Typical Proposed Cross Sections, Exhibit 2-06b

Control Structure Schematic, Exhibit 2-04.2a

5-00 Appendix C: Correspondence

December 12th, 2017 – Coordination with IDOT Hydraulics

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5-00 Appendix D: Supporting Documents

South Lake Shore Drive As-Builts

Chicago Sewer Atlas

Department of Water Management Sewer Connection Details

Additional Impervious Area Summary

Inlet Spacing Analysis

Jackson Park SWMM Analysis

Outfall Hydrograph Calculations

Underpass Pump Station Analysis

Estimated Floodplain Fill Calculations

East and West Lagoon Hydrology Memorandum

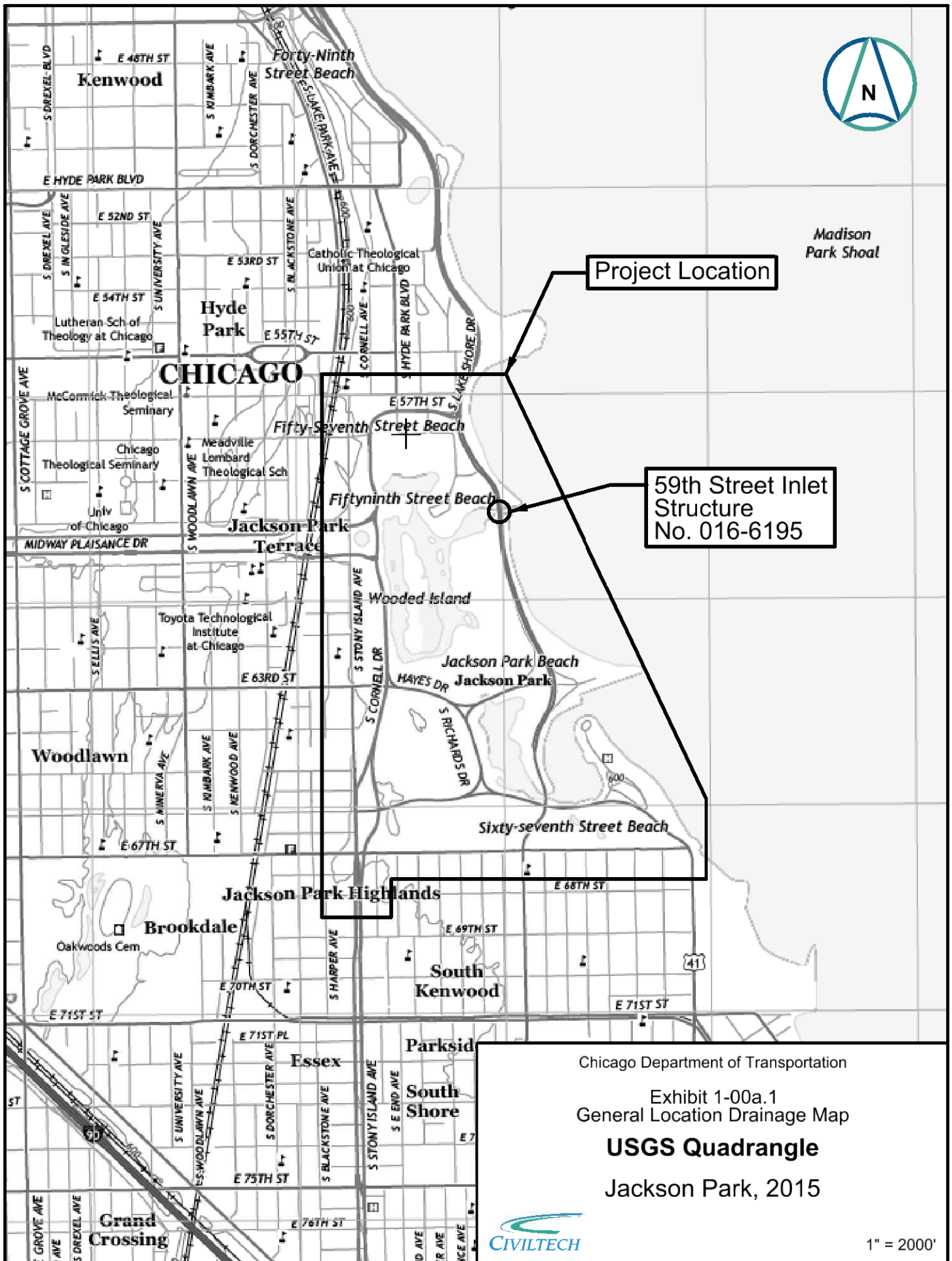
59th Street Bridge Scour

Sewer Televising Summary

59th Street Drainage Investigation

Mobility Improvements to Support the SLFP

Location Drainage Study Appendix B – Exhibits



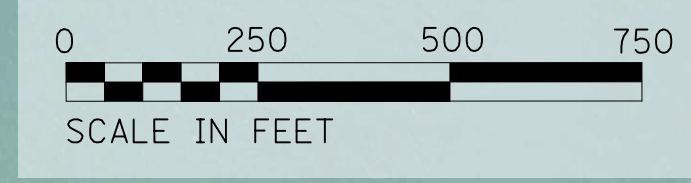
Project Location

59th Street Inlet Structure No. 016-6195

Chicago Department of Transportation
Exhibit 1-00a.1
General Location Drainage Map
USGS Quadrangle
Jackson Park, 2015



1" = 2000'



Reconfigure traffic flow and safety in the area where Midway meets Stony

Widen 59th Street Inlet Bridge

No work will be done east of LSD

Clarence Darrow bridge improvement (via separate contract)

Improve Stony Island, balancing needs for people walking, driving, taking transit, biking, and parking

Improve LSD, Hayes, & intersections to accommodate diverted traffic

Proposed pedestrian underpass

Proposed pedestrian underpass

Reconfigure Cornell and Stony 65th to 67th to accommodate closure of northbound Cornell

Proposed pedestrian underpass

Proposed pedestrian underpass

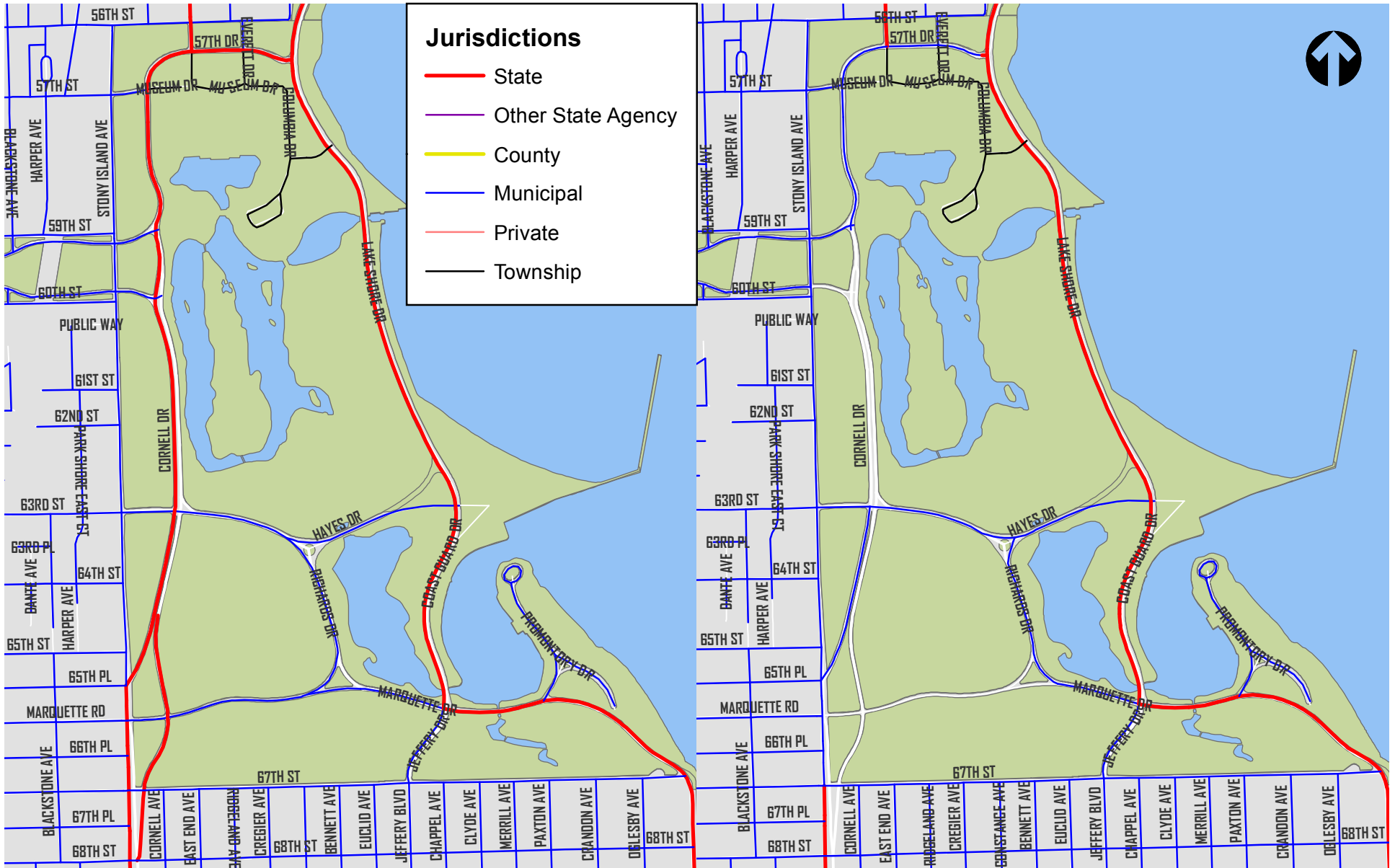
Jackson Park *Proposed Conditions* **IMPROVEMENT OVERVIEW**

South Shore Cultural Center

Obama Presidential Center Improvements to Support the South Lakefront Framework Plan

Section 17-B7203-00-ES

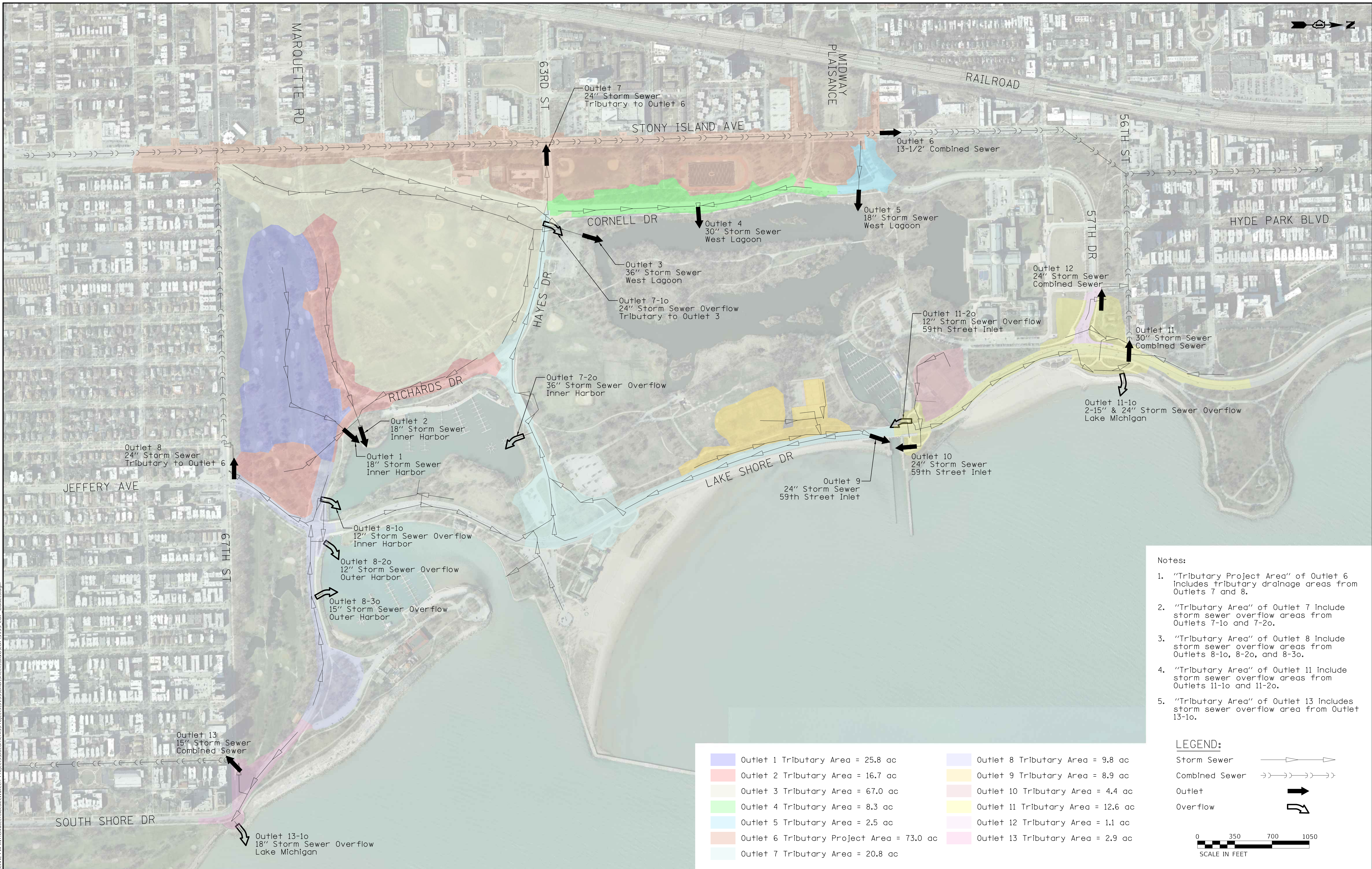
Proposed Revisions to Roadway Jurisdiction



Existing Jurisdiction

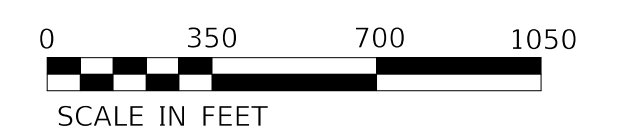
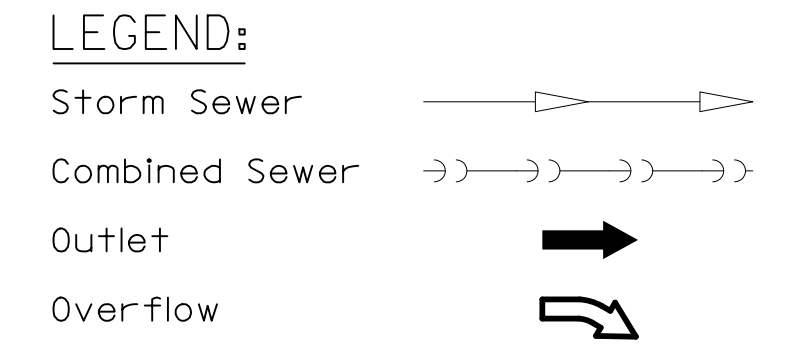
Proposed Jurisdiction

1 in = 0.25 miles



- Notes:**
- "Tributary Project Area" of Outlet 6 includes tributary drainage areas from Outlets 7 and 8.
 - "Tributary Area" of Outlet 7 include storm sewer overflow areas from Outlets 7-1o and 7-2o.
 - "Tributary Area" of Outlet 8 include storm sewer overflow areas from Outlets 8-1o, 8-2o, and 8-3o.
 - "Tributary Area" of Outlet 11 include storm sewer overflow areas from Outlets 11-1o and 11-2o.
 - "Tributary Area" of Outlet 13 includes storm sewer overflow area from Outlet 13-1o.

■ Outlet 1 Tributary Area = 25.8 ac	■ Outlet 8 Tributary Area = 9.8 ac
■ Outlet 2 Tributary Area = 16.7 ac	■ Outlet 9 Tributary Area = 8.9 ac
■ Outlet 3 Tributary Area = 67.0 ac	■ Outlet 10 Tributary Area = 4.4 ac
■ Outlet 4 Tributary Area = 8.3 ac	■ Outlet 11 Tributary Area = 12.6 ac
■ Outlet 5 Tributary Area = 2.5 ac	■ Outlet 12 Tributary Area = 1.1 ac
■ Outlet 6 Tributary Project Area = 73.0 ac	■ Outlet 13 Tributary Area = 2.9 ac
■ Outlet 7 Tributary Area = 20.8 ac	



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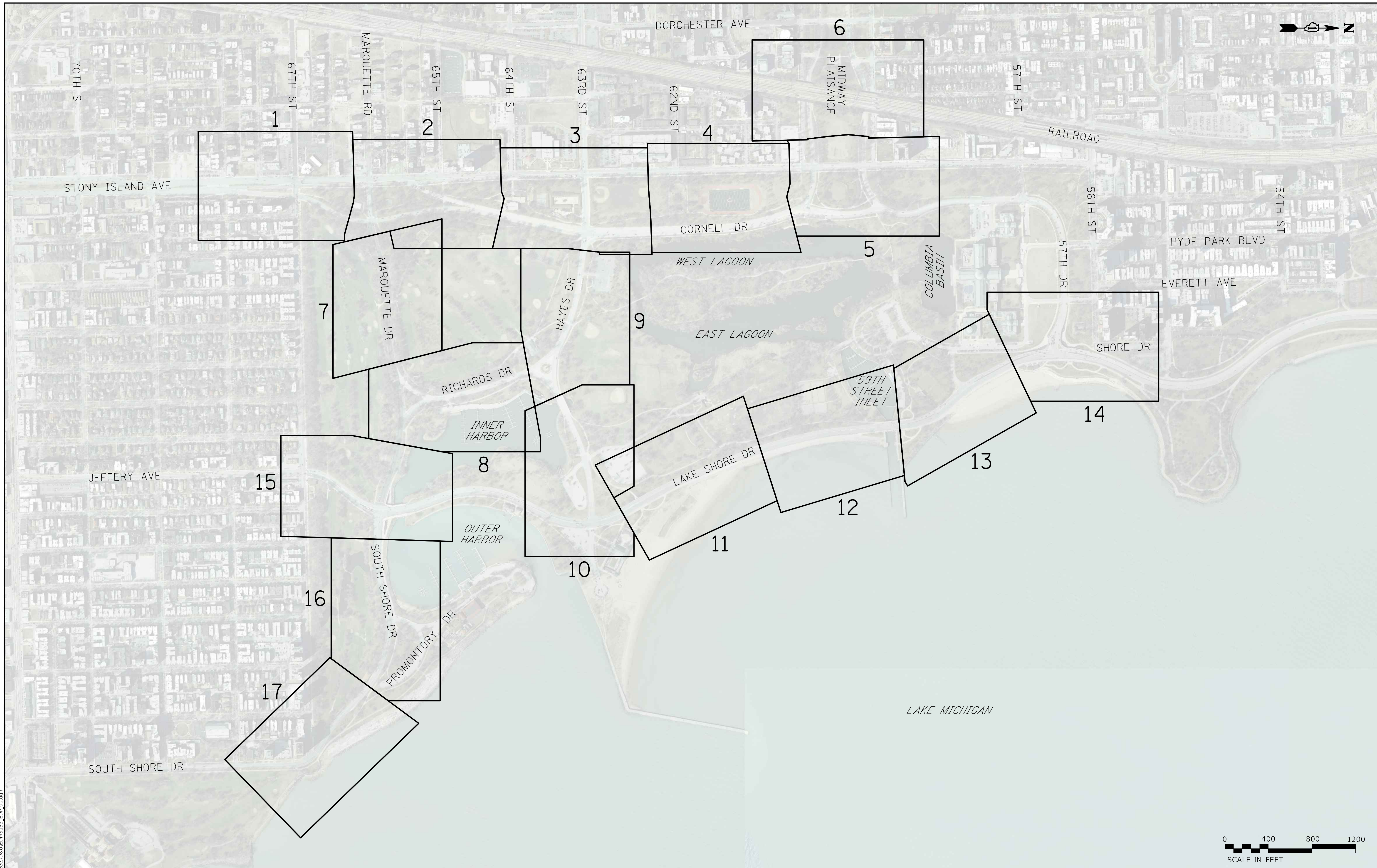


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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAY 2018	REVISED -



OPC MOBILITY IMPROVEMENTS EXISTING OUTLET LOCATION MAP			
SCALE: 1" = 350'	SHEET OF SHEETS	STA. TO STA.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	1	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



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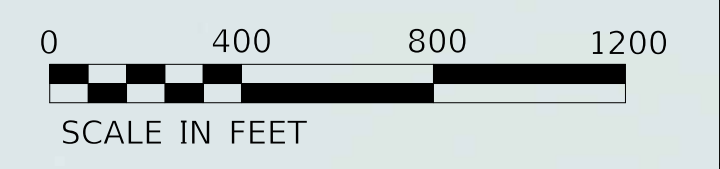


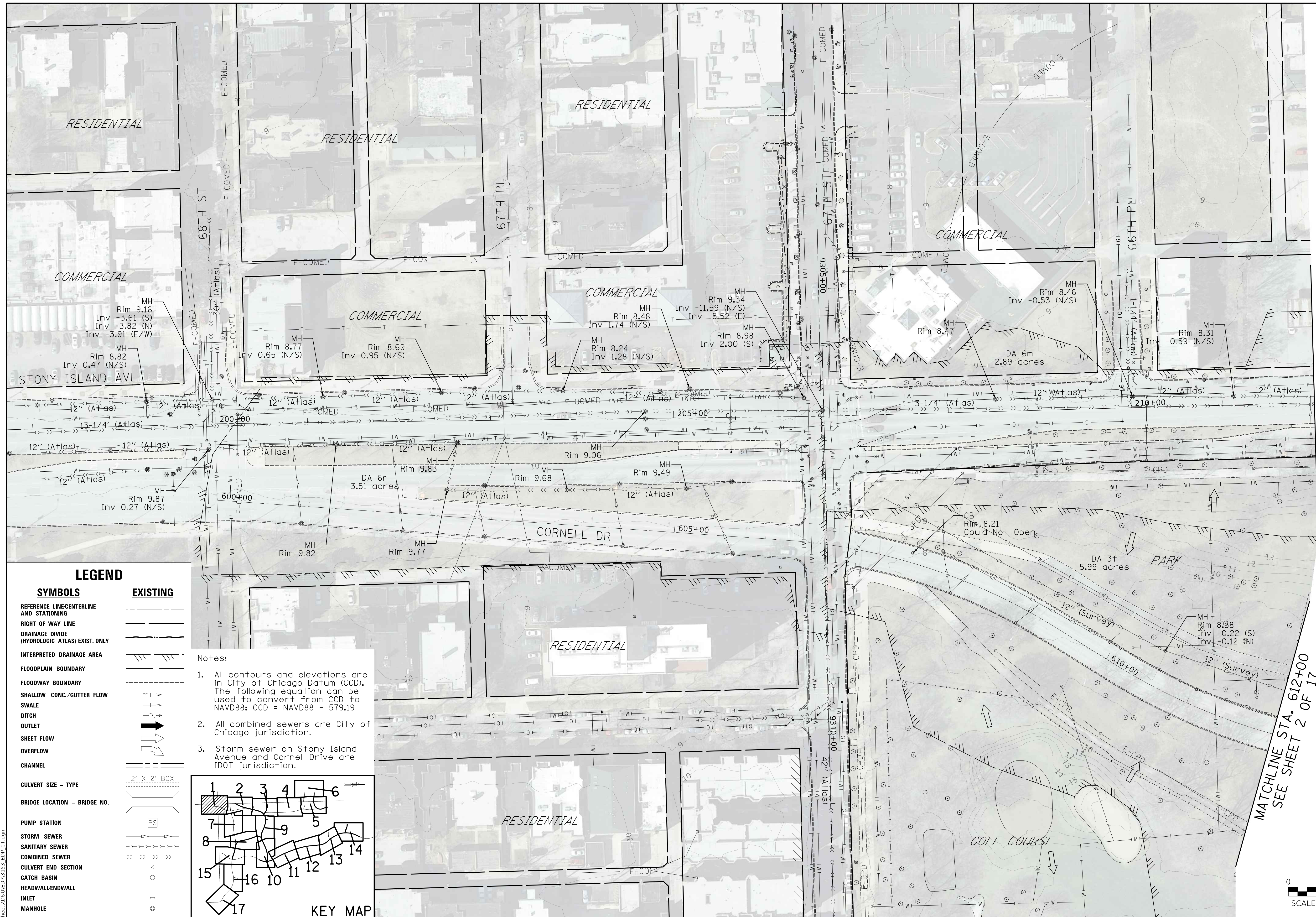
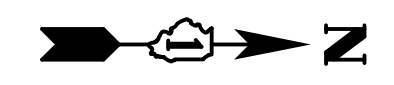
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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS
 EXISTING DRAINAGE PLAN KEY MAP
 SCALE: 1" = 400' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	1	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				





LEGEND

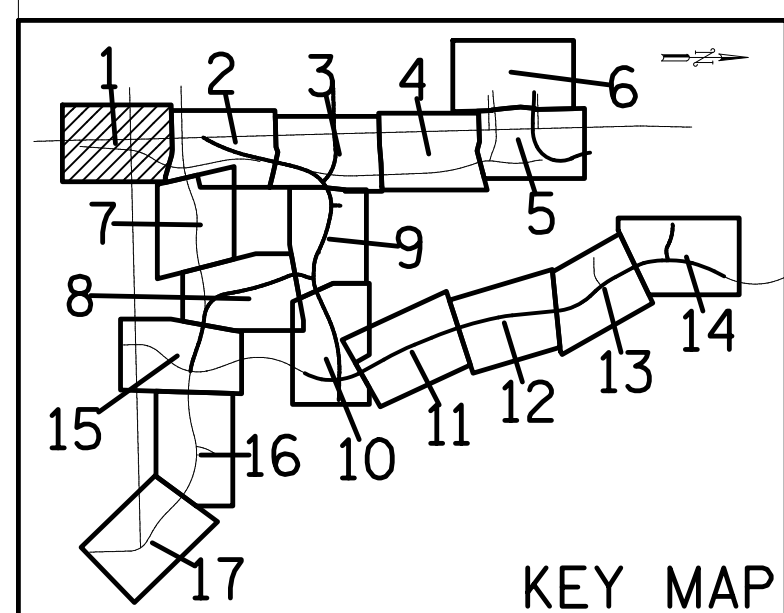
SYMBOLS

REFERENCE LINE/CENTERLINE AND STATIONING
 RIGHT OF WAY LINE
 DRAINAGE DIVIDE (HYDROLOGIC ATLAS) EXIST. ONLY
 INTERPRETED DRAINAGE AREA
 FLOODPLAIN BOUNDARY
 FLOODWAY BOUNDARY
 SHALLOW CONC./GUTTER FLOW SWALE
 DITCH
 OUTLET
 SHEET FLOW
 OVERFLOW
 CHANNEL
 CULVERT SIZE - TYPE
 BRIDGE LOCATION - BRIDGE NO.
 PUMP STATION
 STORM SEWER
 SANITARY SEWER
 COMBINED SEWER
 CULVERT END SECTION
 CATCH BASIN
 HEADWALLENDWALL
 INLET
 MANHOLE

EXISTING

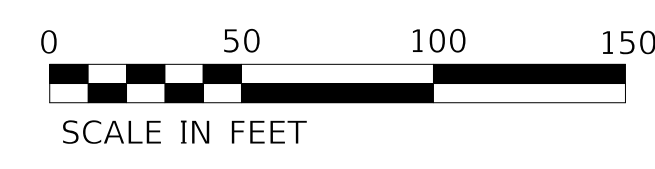
Notes:

- All contours and elevations are in City of Chicago Datum (CCD). The following equation can be used to convert from CCD to NAVD88: CCD = NAVD88 - 579.19
- All combined sewers are City of Chicago jurisdiction.
- Storm sewer on Stony Island Avenue and Cornell Drive are IDOT jurisdiction.



MATCHLINE STA. 212+00
 SEE SHEET 2 OF 17

MATCHLINE STA. 612+00
 SEE SHEET 2 OF 17



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	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS
 EXISTING DRAINAGE PLAN

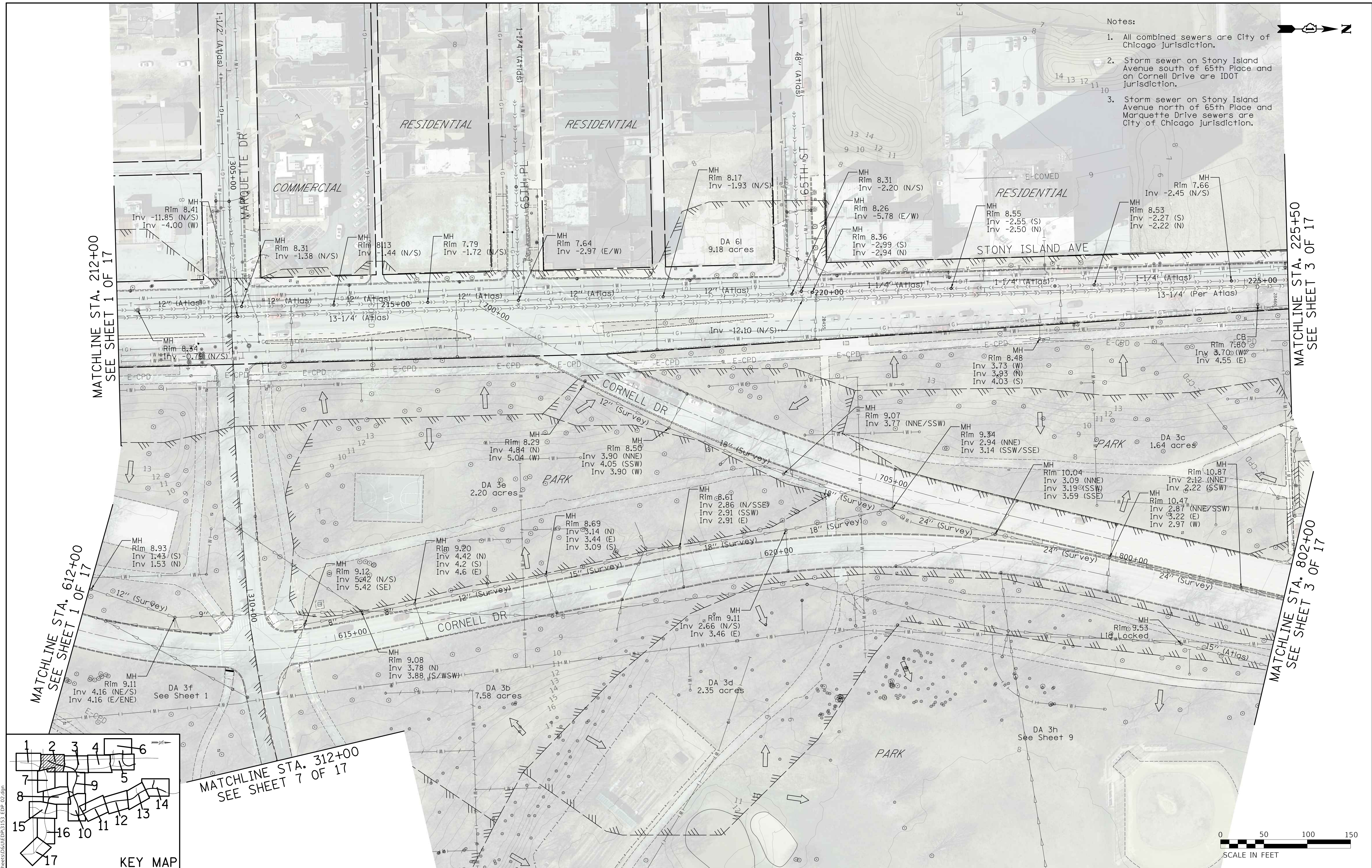
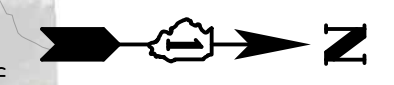
SCALE: 1" = 50'

SHEET 1 OF 17 SHEETS

STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	1
CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				

- Notes:
1. All combined sewers are City of Chicago jurisdiction.
 2. Storm sewer on Stony Island Avenue south of 65th Place and on Cornell Drive are IDOT jurisdiction.
 3. Storm sewer on Stony Island Avenue north of 65th Place and Marquette Drive sewers are City of Chicago jurisdiction.



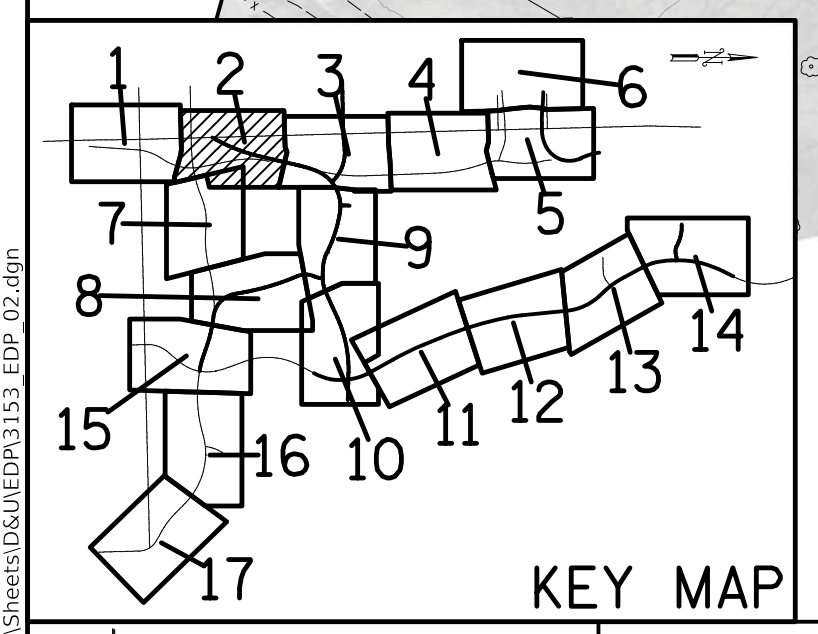
MATCHLINE STA. 612+00
SEE SHEET 1 OF 17

MATCHLINE STA. 212+00
SEE SHEET 1 OF 17

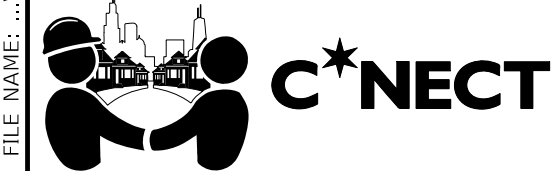
MATCHLINE STA. 312+00
SEE SHEET 7 OF 17

MATCHLINE STA. 225+50
SEE SHEET 3 OF 17

MATCHLINE STA. 802+00
SEE SHEET 3 OF 17



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	DATE - MAR 2019	REVISED -

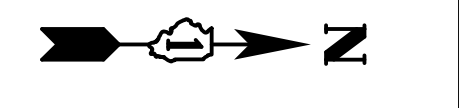


OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN

SCALE: 1" = 50' SHEET 2 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	2
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

- Notes:
- All combined sewers and sewers on Hayes Drive and Stony Island Avenue are City of Chicago jurisdiction.
 - Storm sewer on Cornell Drive is IDOT jurisdiction.
 - "Tributary Area" of Outlet 7 includes tributary drainage areas of Outlets 7-10 and 7-20.



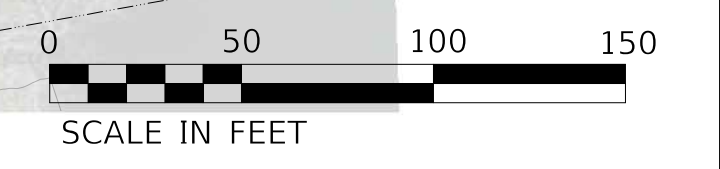
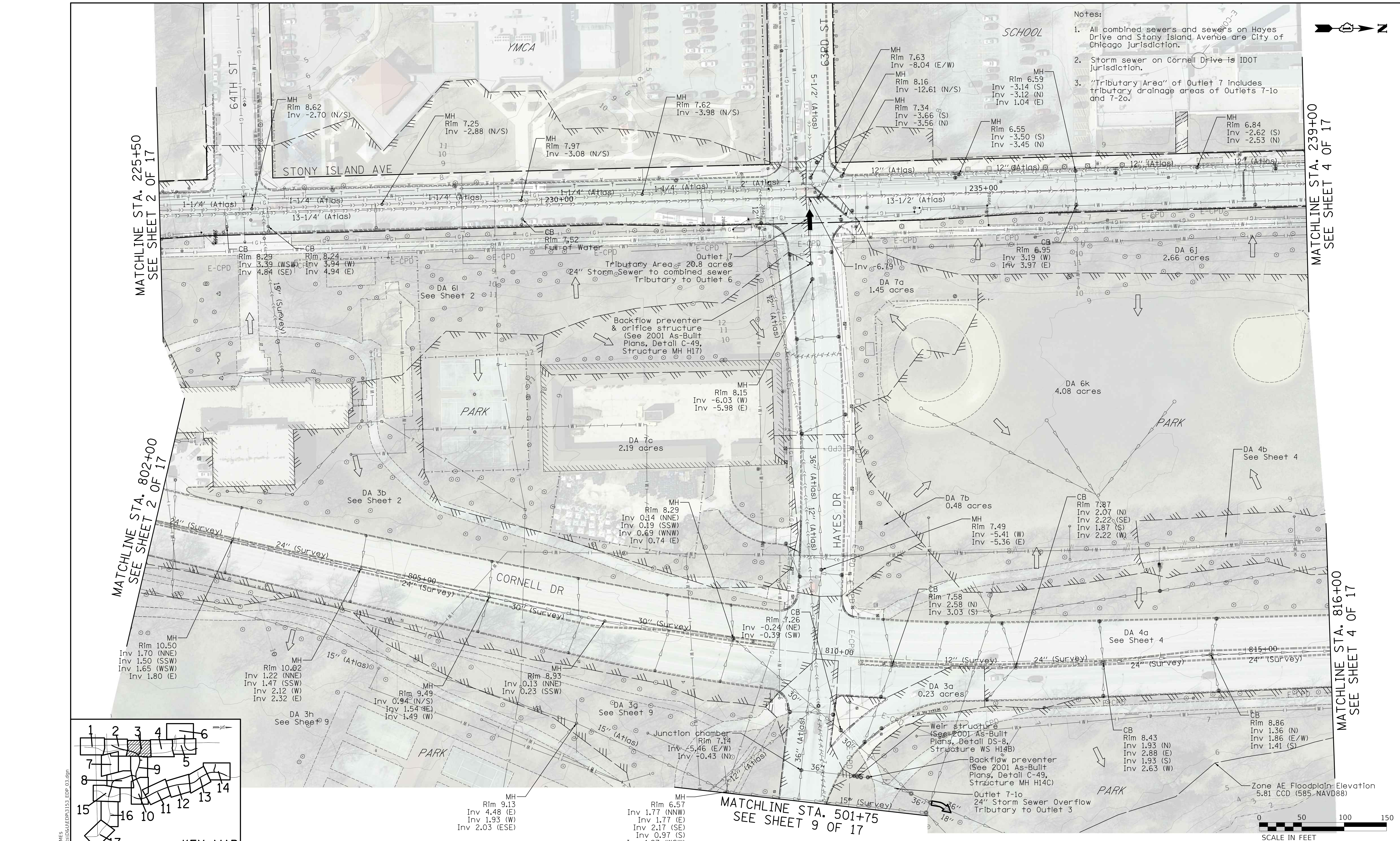
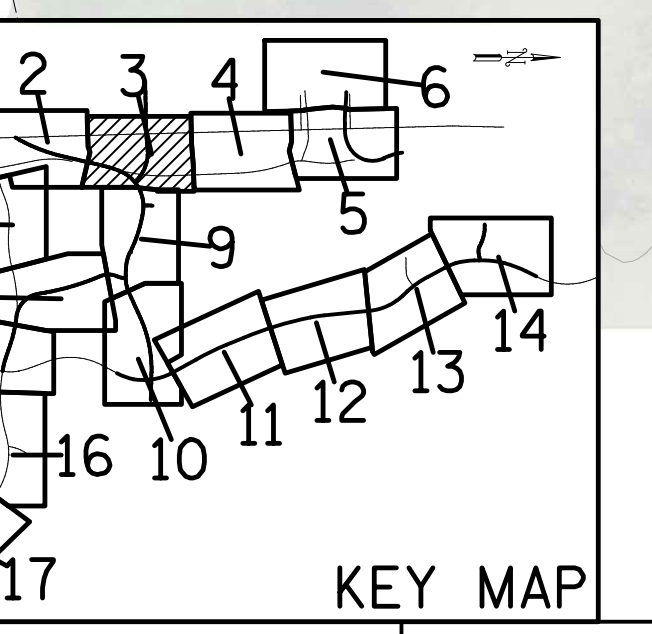
MATCHLINE STA. 225+50
SEE SHEET 2 OF 17

MATCHLINE STA. 239+00
SEE SHEET 4 OF 17

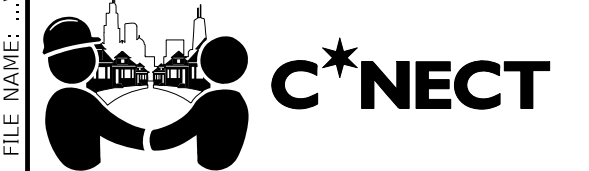
MATCHLINE STA. 802+00
SEE SHEET 2 OF 17

MATCHLINE STA. 816+00
SEE SHEET 4 OF 17

MATCHLINE STA. 501+75
SEE SHEET 9 OF 17



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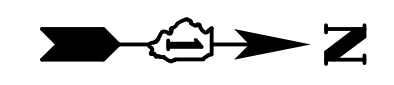


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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



SCALE: 1" = 50'	SHEET 3	OF 17 SHEETS	STA.	TO STA.
OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN				

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	3
CONTRACT NO. B-7-203				
<small>ILLINOIS FED. AID PROJECT</small>				

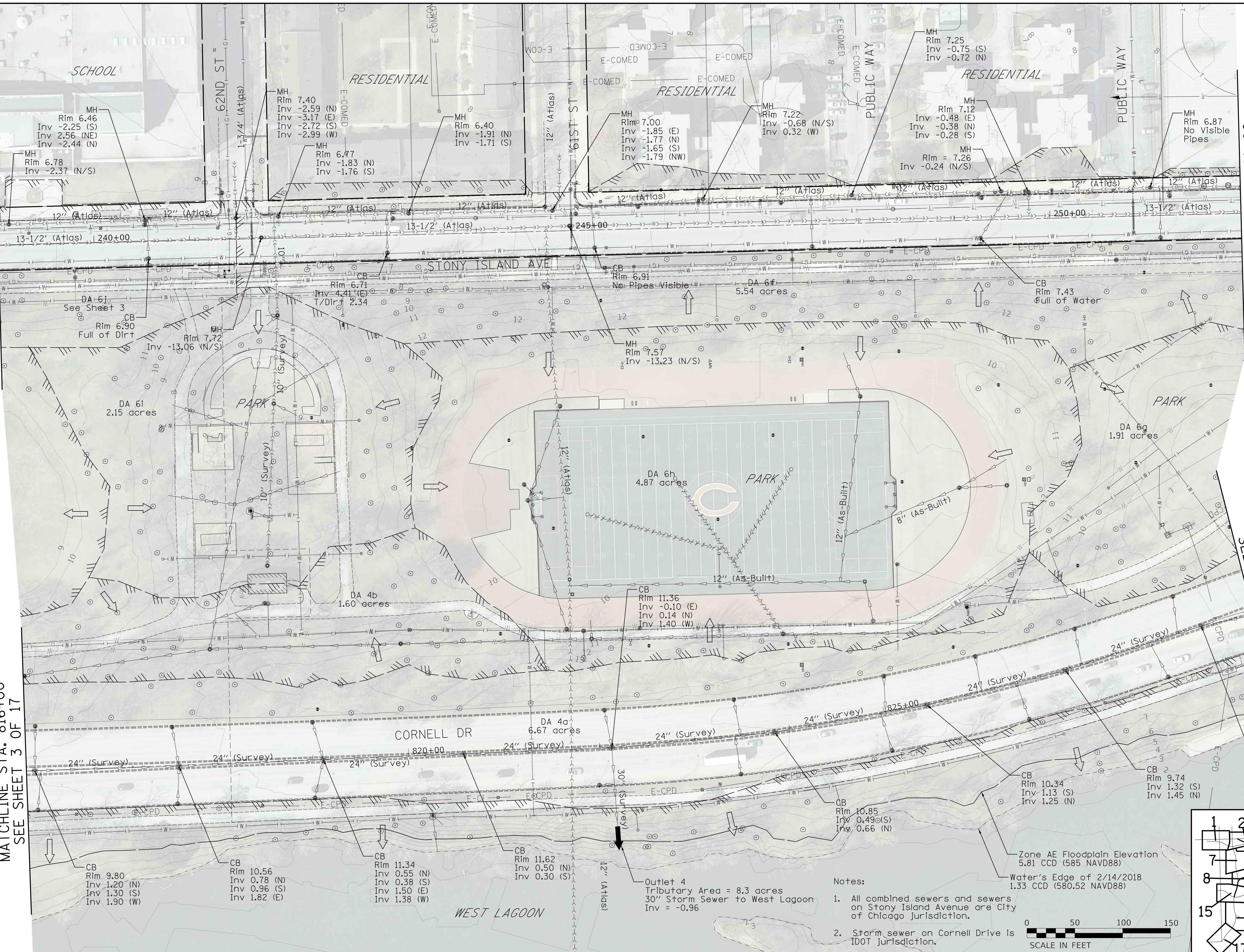


MATCHLINE STA. 239+00
SEE SHEET 3 OF 17

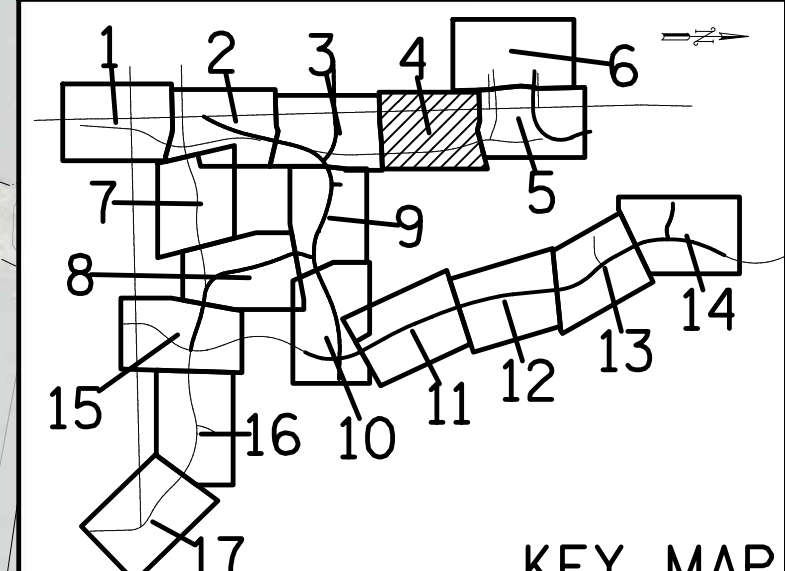
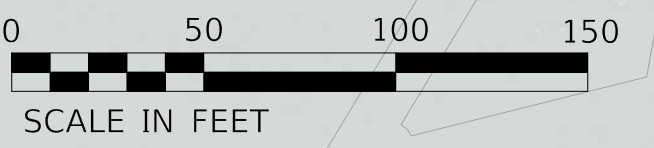
MATCHLINE STA. 252+00
SEE SHEET 5 OF 17

MATCHLINE STA. 816+00
SEE SHEET 3 OF 17

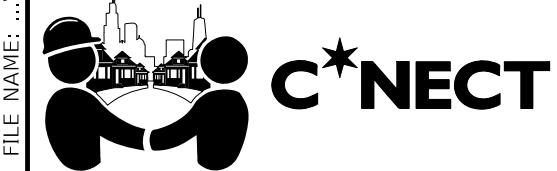
MATCHLINE STA. 829+00
SEE SHEET 5 OF 17



- Notes:
- All combined sewers and sewers on Stony Island Avenue are City of Chicago Jurisdiction.
 - Storm sewer on Cornell Drive is IDOT Jurisdiction.



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PLOT DATE = 7/26/2019	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN

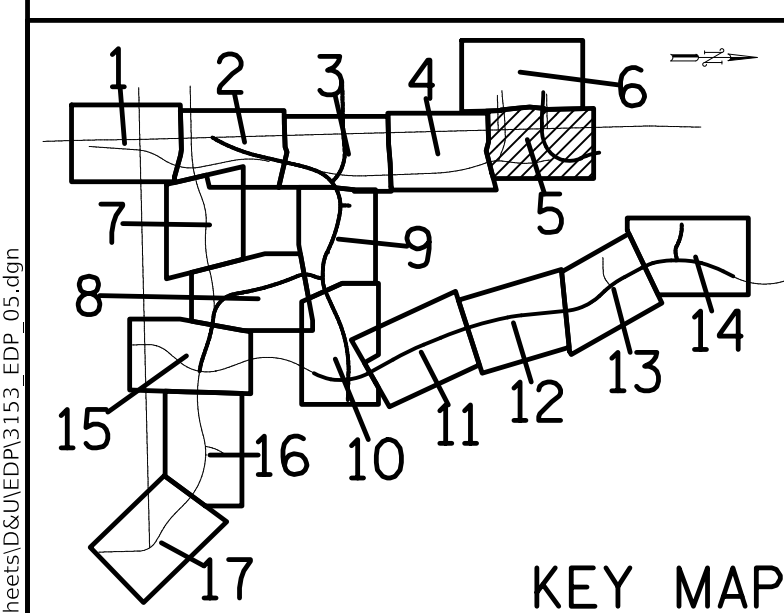
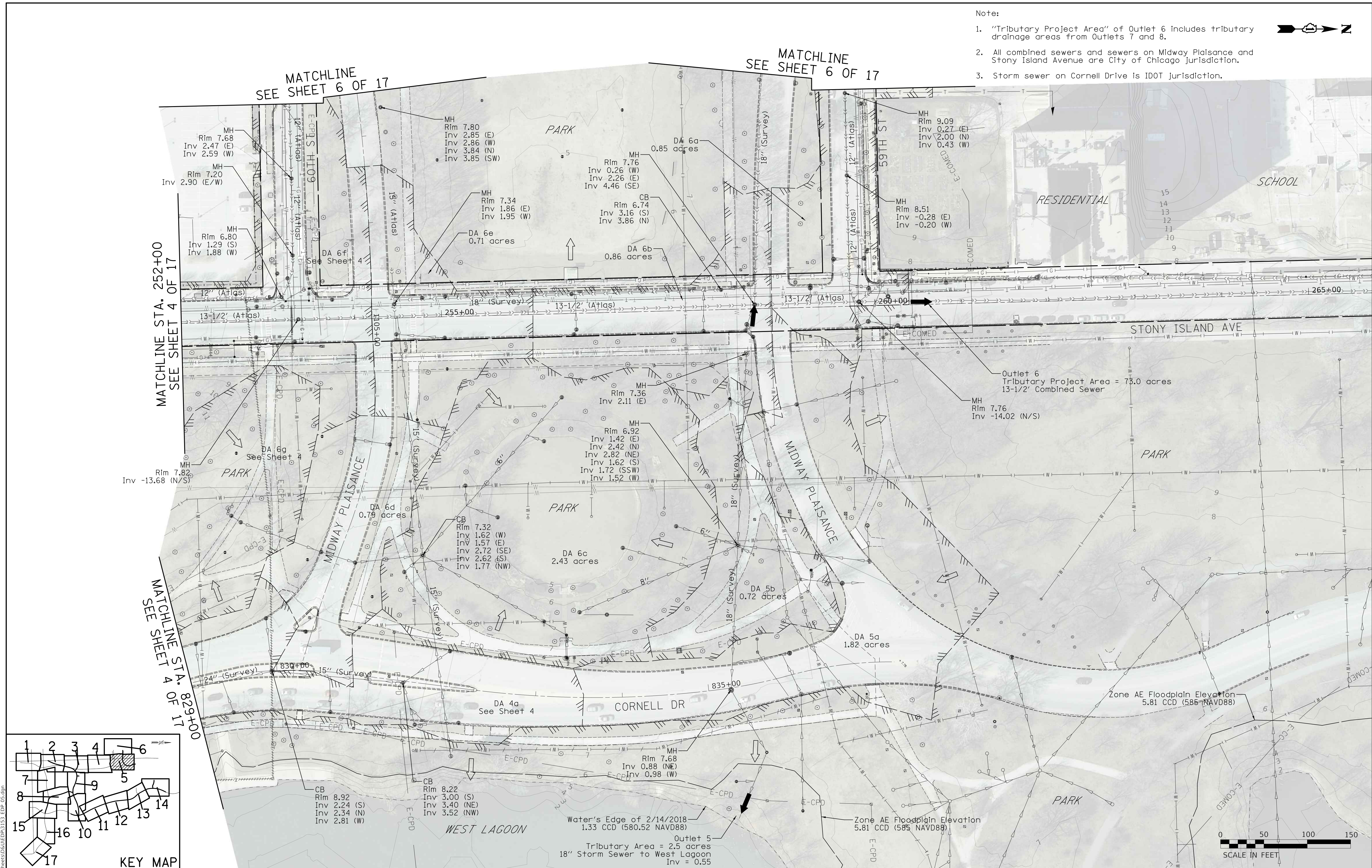
SCALE: 1" = 50'

SHEET 4 OF 17 SHEETS STA. TO STA.

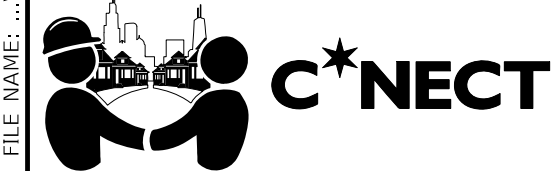
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	17-B7203-00-ES	COOK	17	4
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

Note:

1. "Tributary Project Area" of Outlet 6 includes tributary drainage areas from Outlets 7 and 8.
2. All combined sewers and sewers on Midway Plaisance and Stony Island Avenue are City of Chicago jurisdiction.
3. Storm sewer on Cornell Drive is IDOT jurisdiction.



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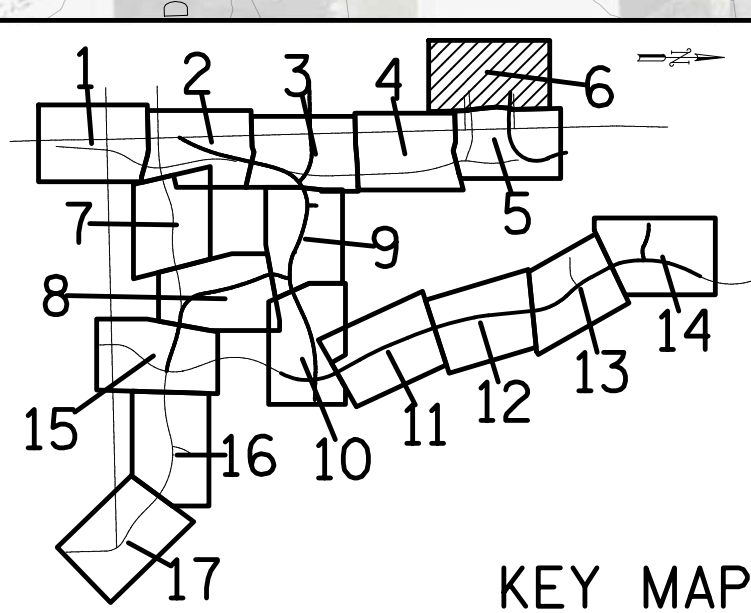
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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN	
SCALE: 1" = 50'	STATION: TO STA.
SHEET 5 OF 17 SHEETS	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	5
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

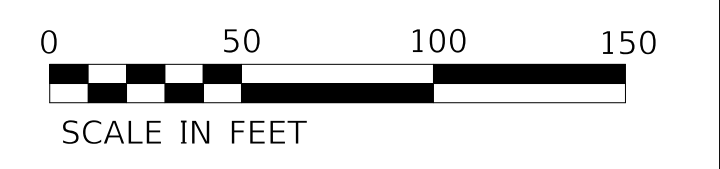
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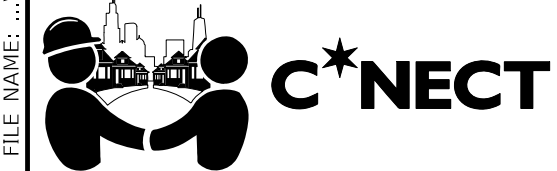
KEY MAP

MATCHLINE
SEE SHEET 5 OF 17

MATCHLINE
SEE SHEET 5 OF 17



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	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 6	OF 17 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	6
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

- Notes:
- Storm sewer on Marquette Drive is City of Chicago jurisdiction.



GOLF COURSE

DA 3d
See Sheet 2

DA 3h
See Sheet 9

MH
Rim 8.16
Inv 4.11 (SE)
Inv 4.16 (NW)
Inv 4.21 (WSW)
Inv 4.36 (N)

MH
Rim 7.79
Inv 4.24 (NE)
Inv 4.39 (S)

MH
Rim 8.58
Inv 3.18 (E)
Inv 3.38 (W)
Inv 3.98 (S)

MH
Rim 8.32
Inv 3.77 (S)
Inv 3.87 (N)
Inv 4.17 (SSE)

DA 2d
See Sheet 8

MATCHLINE STA. 324+00
SEE SHEET 8 OF 17

MATCHLINE STA. 312+00
SEE SHEET 2 OF 17

MARQUETTE DR

DA 2c
1.82 acres

DA 1c
23.52 acres

INL
Rim 7.71
Inv 2.99 (E)
Inv 4.91 (W/NNW)

INL
Rim 7.54
Inv 2.99 (E/W)
Inv 5.49 (S)

INL
Rim 7.45
Inv 3.55 (E)
Inv 3.75 (W/NE)
Inv 4.95 (WSW)

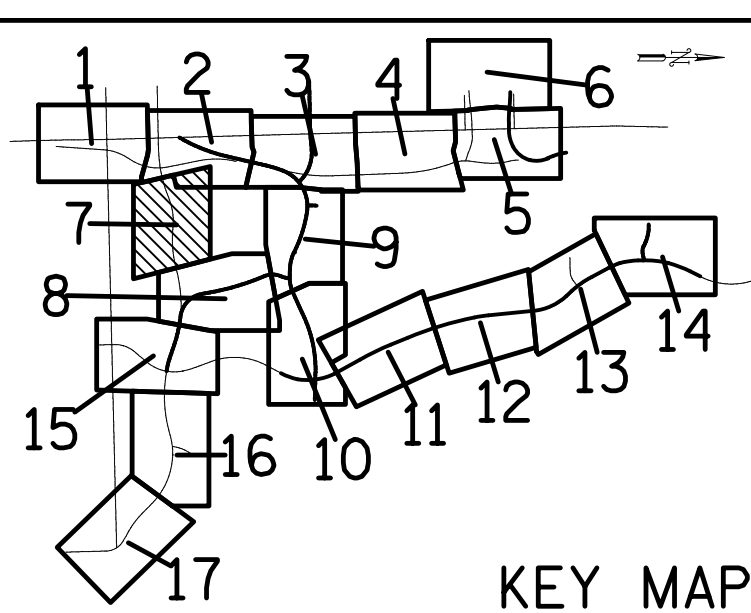
INL
Rim 7.07
Inv 3.37 (E)
Inv 3.42 (W)
Inv 5.07 (N)

INL
Rim 6.87
Inv 3.07 (E/W)
Inv 3.87 (N)

CB
Rim 5.94
Inv 1.59 (E)
Inv 1.64 (W)

INL
Rim 6.37
Inv 2.67 (E/W)
Inv 4.17 (S)

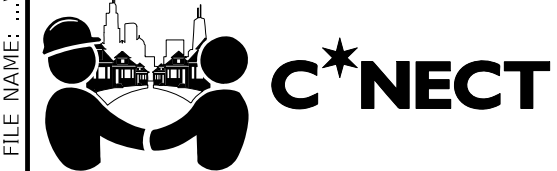
GOLF COURSE



KEY MAP



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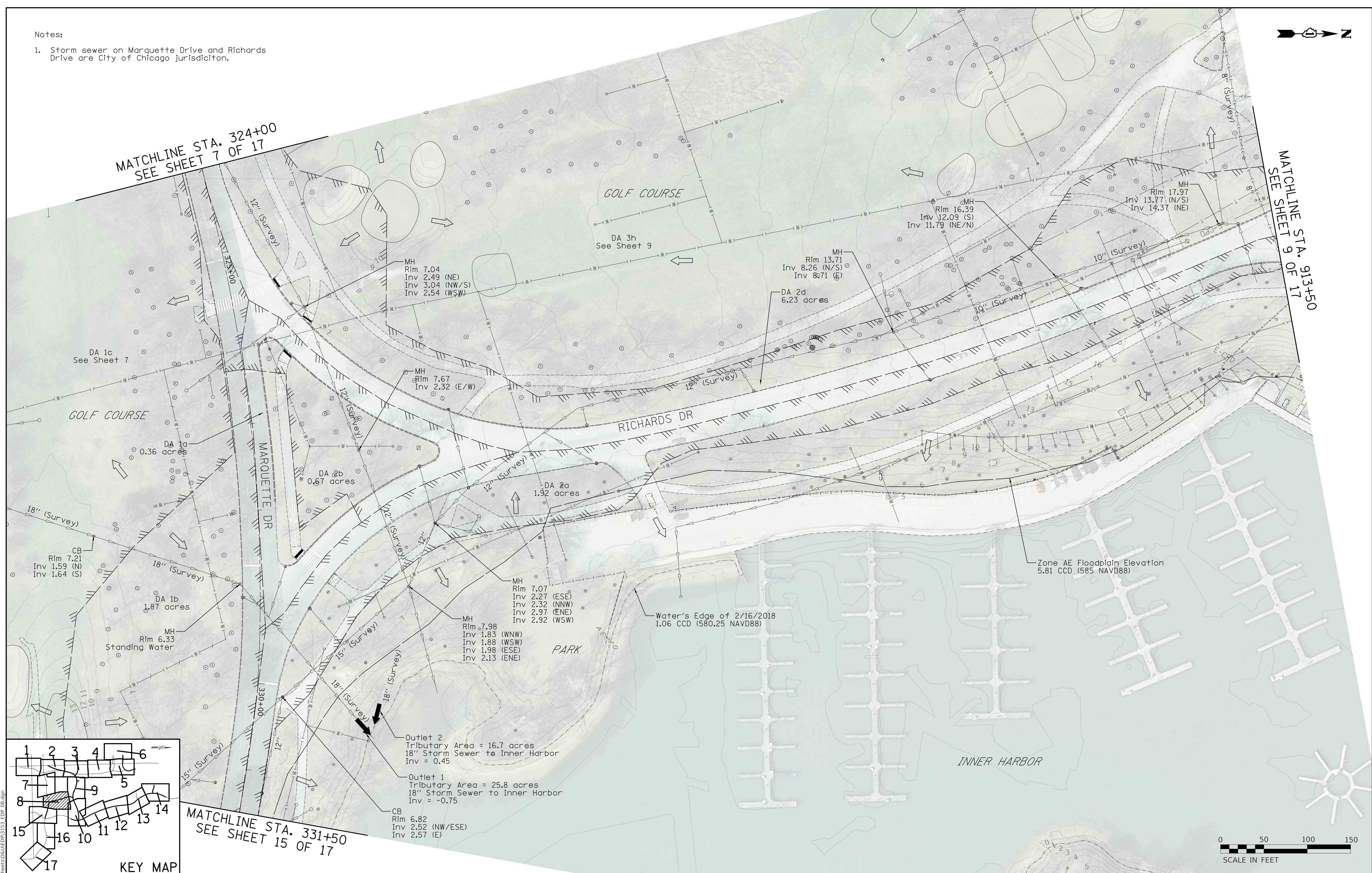


OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN	
SCALE: 1" = 50'	STATION: STA. TO STA.
SHEET 7 OF 17 SHEETS	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	7
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

Notes:

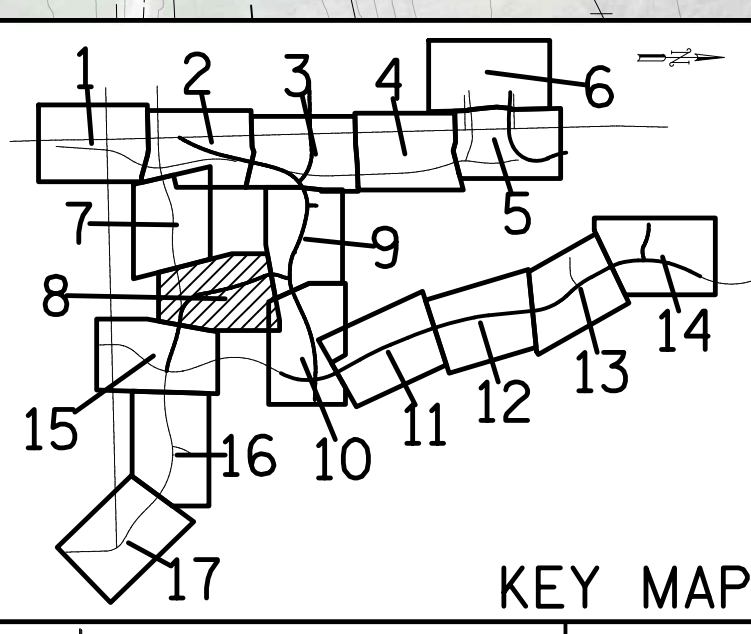
- Storm sewer on Marquette Drive and Richards Drive are City of Chicago jurisdiction.



MATCHLINE STA. 913+50
SEE SHEET 9 OF 17

MATCHLINE STA. 324+00
SEE SHEET 7 OF 17

MATCHLINE STA. 331+50
SEE SHEET 15 OF 17



KEY MAP

Zone AE Floodplain Elevation
5.81 CCD (585 NAVD88)

Water's Edge of 2/16/2018
1.06 CCD (580.25 NAVD88)

Outlet 2
Tributary Area = 16.7 acres
18" Storm Sewer to Inner Harbor
Inv = 0.45

Outlet 1
Tributary Area = 25.8 acres
18" Storm Sewer to Inner Harbor
Inv = -0.75

CB
Rim 6.82
Inv 2.52 (NW/ESE)
Inv 2.57 (E)

MH
Rim 7.98
Inv 1.83 (WNW)
Inv 1.88 (WSW)
Inv 1.98 (ESE)
Inv 2.13 (ENE)

MH
Rim 7.07
Inv 2.27 (ESE)
Inv 2.32 (NNW)
Inv 2.97 (ENE)
Inv 2.92 (WSW)

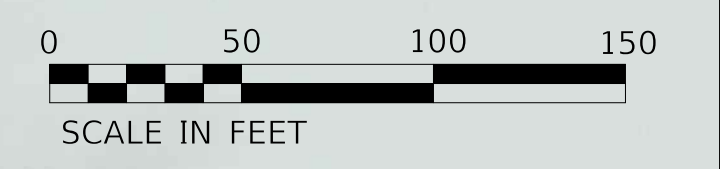
MH
Rim 7.67
Inv 2.32 (E/W)

MH
Rim 7.04
Inv 2.49 (NE)
Inv 3.04 (NW/S)
Inv 2.54 (WSW)

MH
Rim 13.71
Inv 8.26 (N/S)
Inv 8.71 (E)

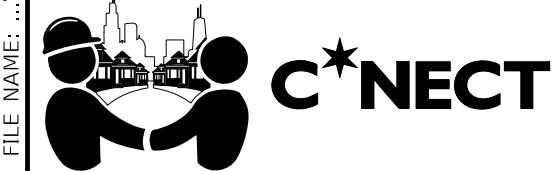
MH
Rim 16.39
Inv 12.09 (S)
Inv 11.79 (NE/N)

MH
Rim 17.97
Inv 13.77 (N/S)
Inv 14.37 (NE)



SCALE IN FEET

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PLOT SCALE = 50.0000' / in.	DRAWN - JLP/WAM	REVISED -
PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 8 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	8
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

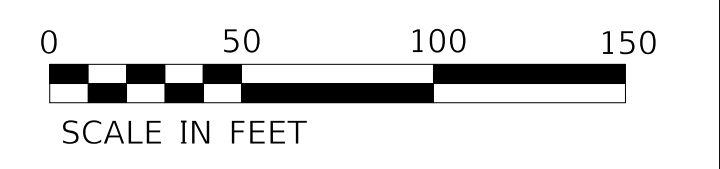
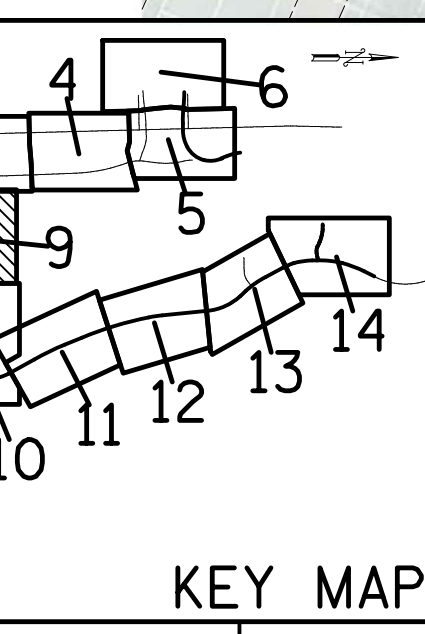
Notes:
 1. All sewers on this sheet are City of Chicago jurisdiction.



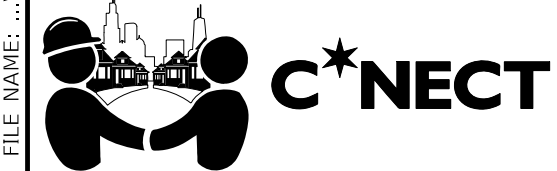
MATCHLINE STA. 501+75
 SEE SHEET 3 OF 17

MATCHLINE STA. 516+00
 SEE SHEET 10 OF 17

MATCHLINE STA. 913+50
 SEE SHEET 8 OF 17



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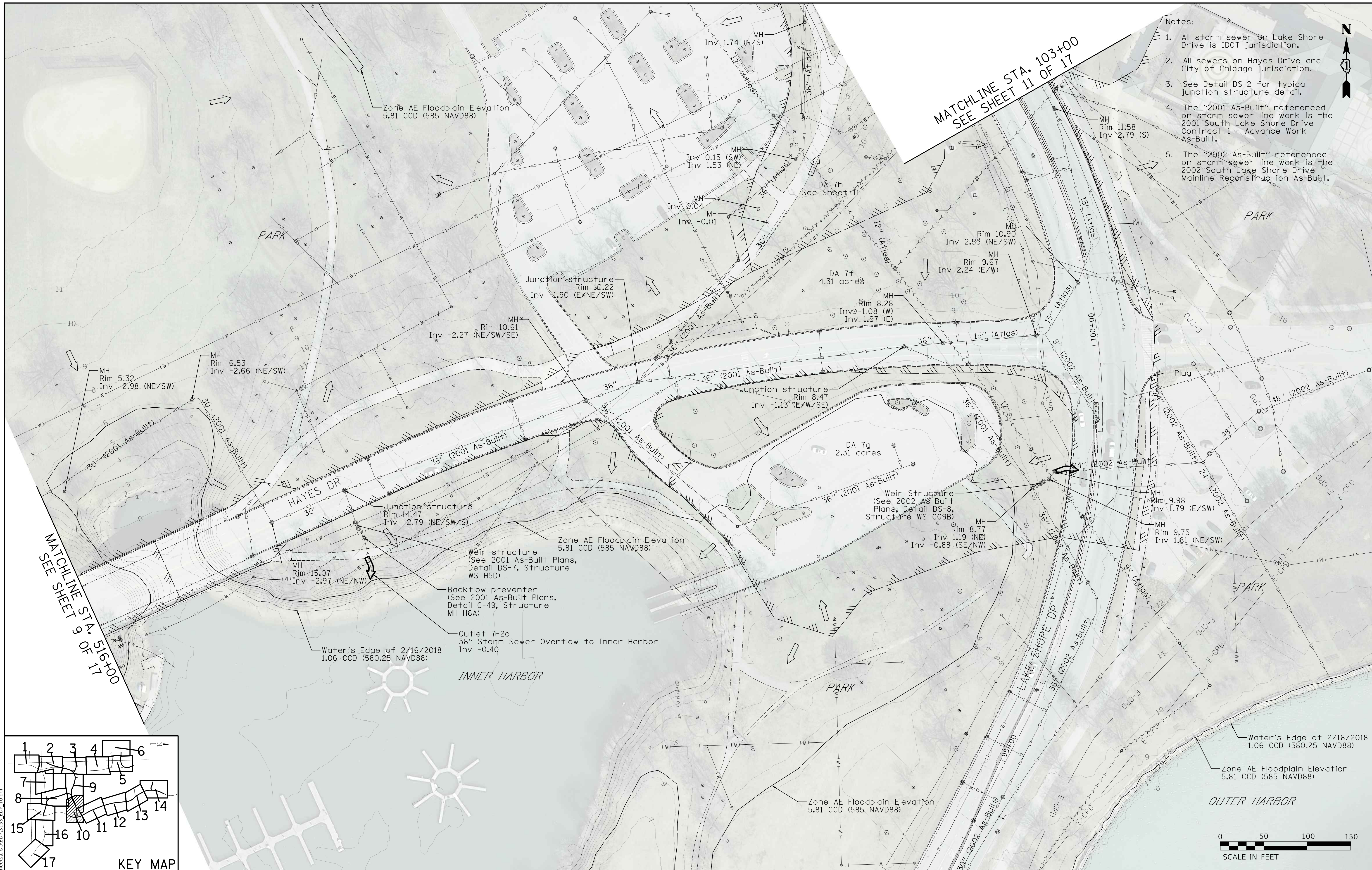


USER NAME = MSA	DESIGNED - JLP	REVISED -
PLOT SCALE = 50.0000' / in.	DRAWN - JLP/WAM	REVISED -
PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 9 OF 17 SHEETS STA. TO STA.

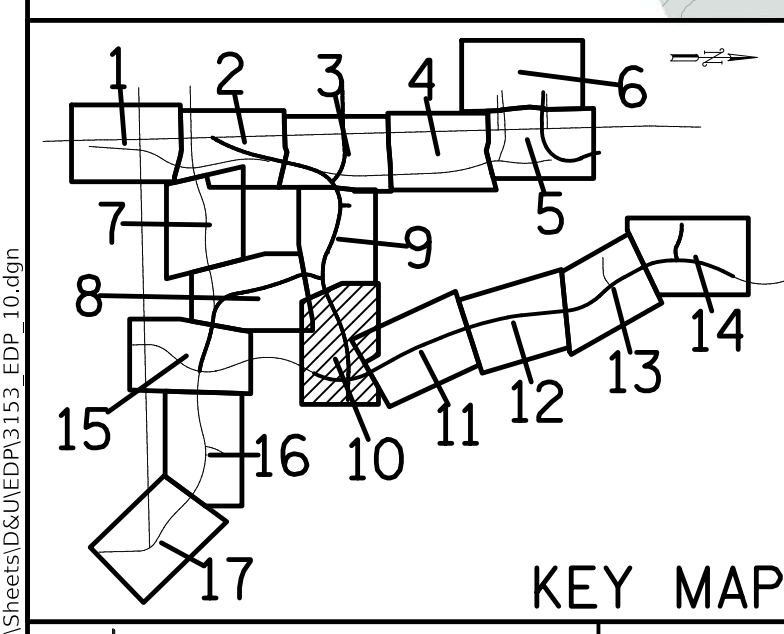
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	9
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



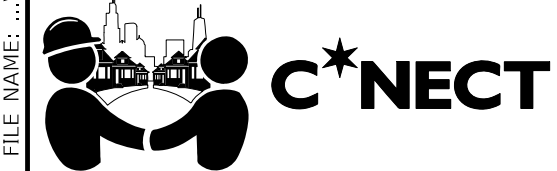
- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. All sewers on Hayes Drive are City of Chicago jurisdiction.
 3. See Detail DS-2 for typical junction structure detail.
 4. The "2001 As-Built" referenced on storm sewer line work is the 2001 South Lake Shore Drive Contract 1 - Advance Work As-Built.
 5. The "2002 As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.

MATCHLINE STA. 103+00
SEE SHEET 11 OF 17

MATCHLINE STA. 516+00
SEE SHEET 9 OF 17



MODEL: S:\MODEL\NAME: FILE NAME: C:\PROJECTS\ASBUILT\3153_EDP_10.dwg



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PLOT DATE = 7/26/2019	DATE - MAR 2019	REVISED -



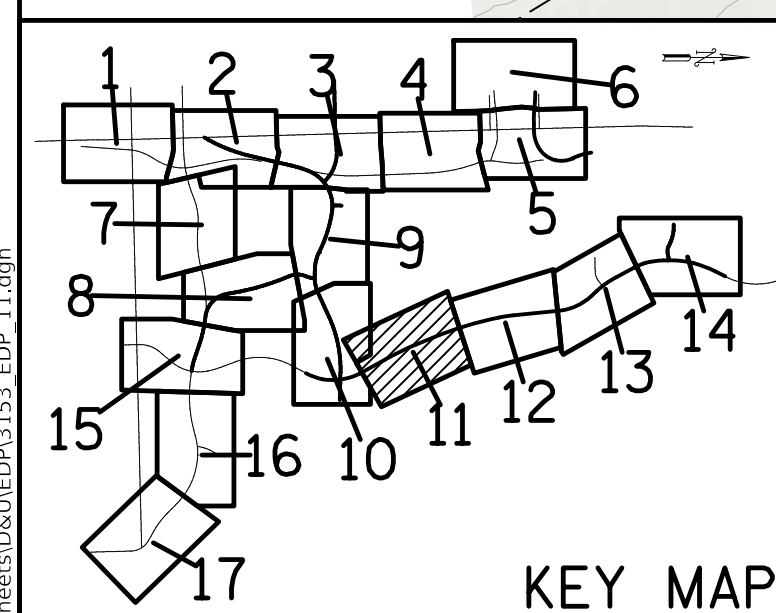
OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 10	OF 17 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	10
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



MATCHLINE STA. 103+00
SEE SHEET 10 OF 17

MATCHLINE STA. 117+00
SEE SHEET 12 OF 17

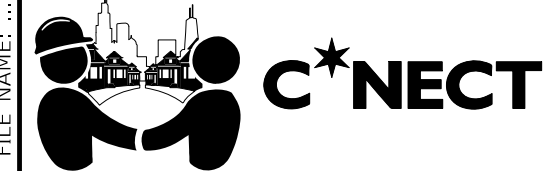


KEY MAP

- Notes:
- All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 - Sewers that drain Jackson Park are Chicago Park District jurisdiction.



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FILE NAME: S:\PROJECTS\3153\EDP_11.dwg



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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



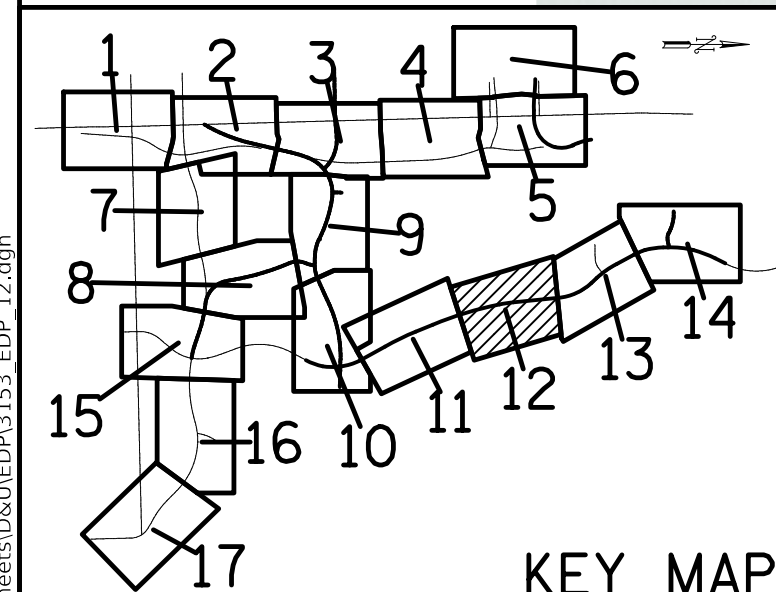
OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 11 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	11
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



MATCHLINE STA. 117+00
SEE SHEET 11 OF 17

MATCHLINE STA. 130+00
SEE SHEET 13 OF 17

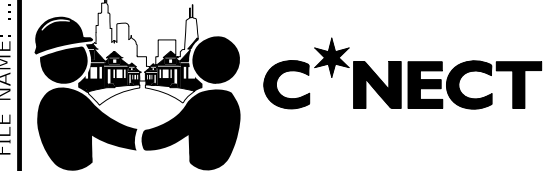


KEY MAP

- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. Sewers that drain Jackson Park are Chicago Park District jurisdiction.



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FILE NAME: C:\PROJECTS\3153\EDP_12.dwg



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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -

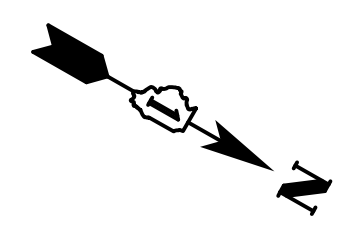


OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 12 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	12
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

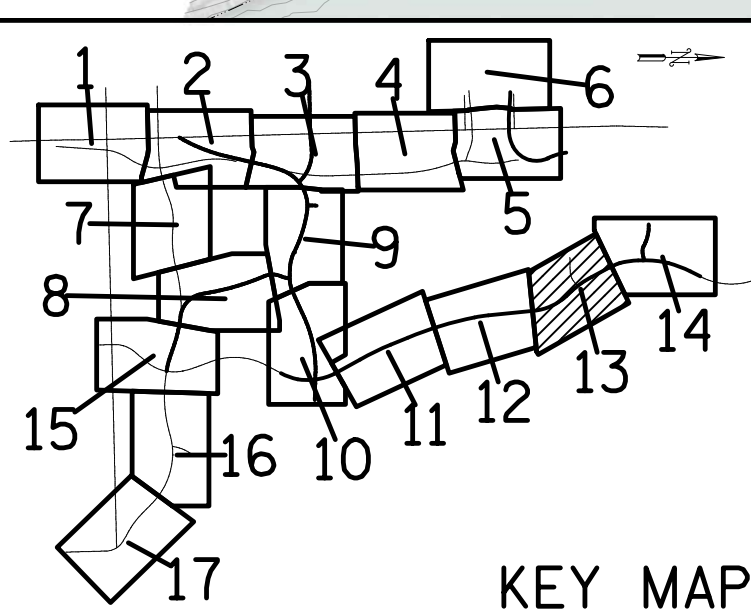
Notes:

1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
2. Sewers that drain Jackson Park are Chicago Park District jurisdiction.
3. The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.

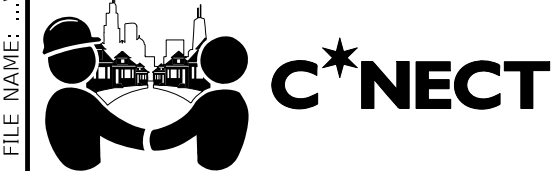


MATCHLINE STA. 130+00
SEE SHEET 12 OF 17

MATCHLINE STA. 142+00
SEE SHEET 14 OF 17



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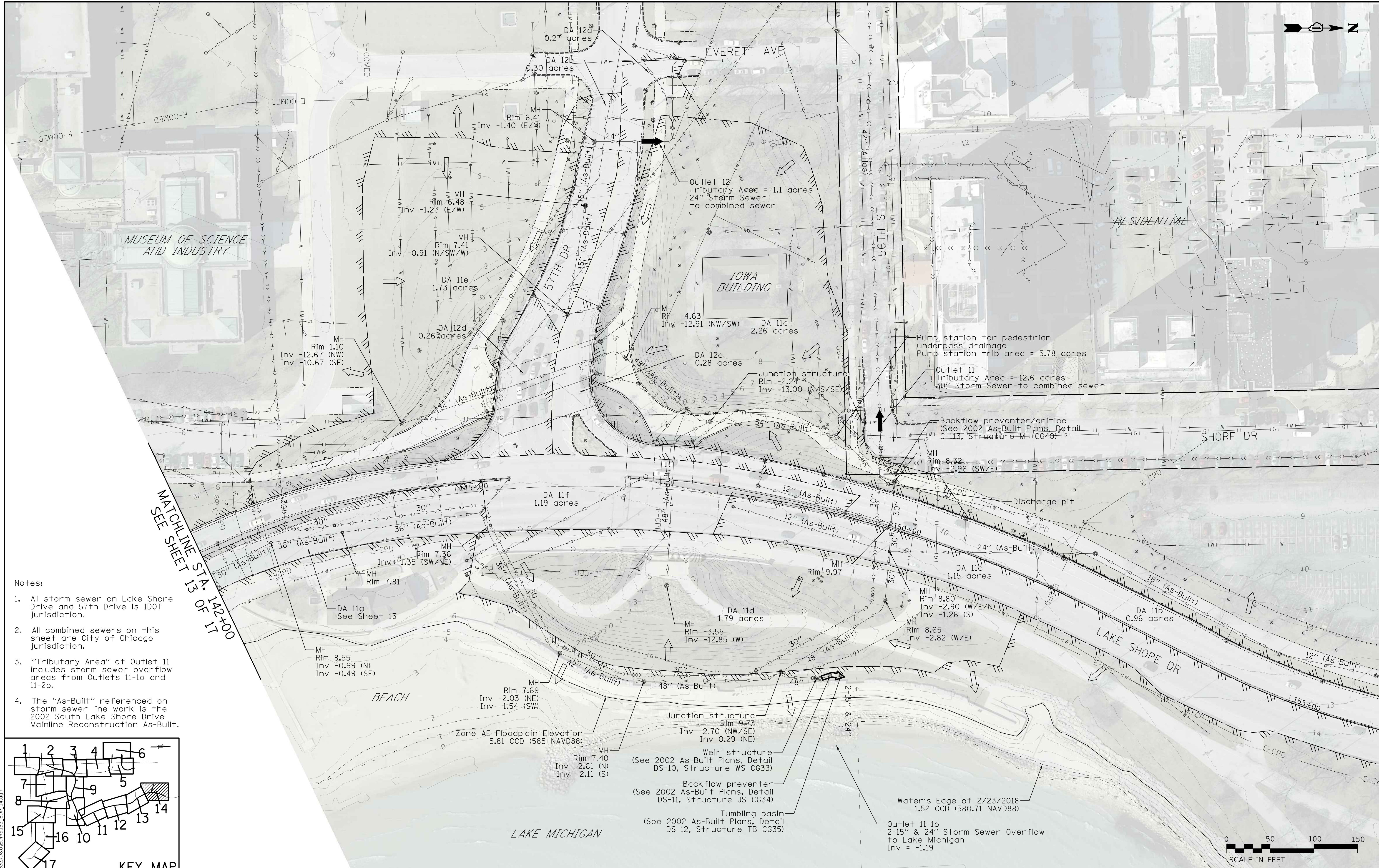


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PLOT SCALE = 50.0000' / in.	DRAWN - JLP/WAM	REVISED -
PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -

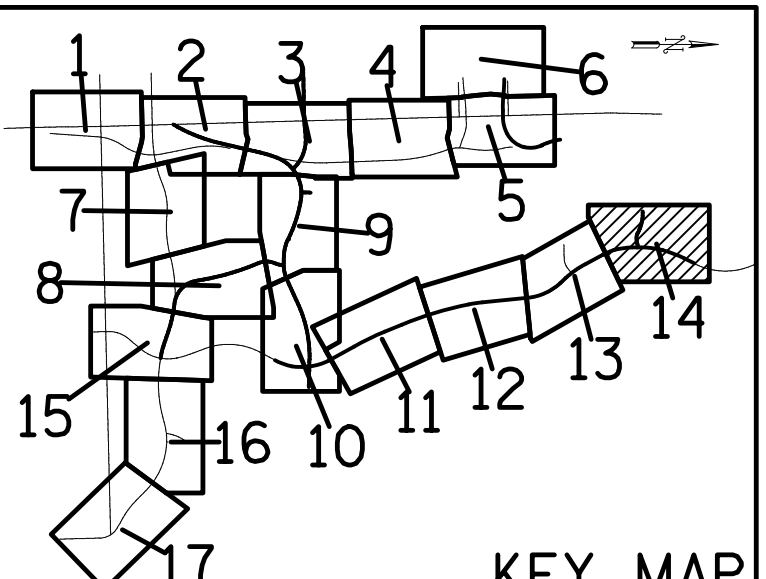


OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 13	OF 17 SHEETS	STA. TO STA.

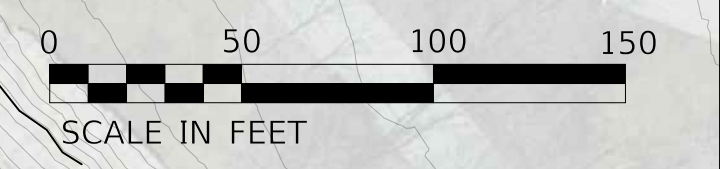
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	13
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



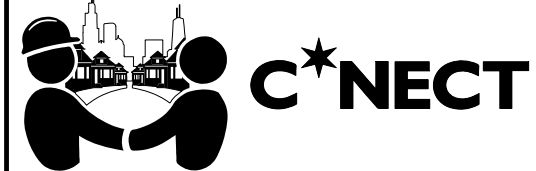
- Notes:
1. All storm sewer on Lake Shore Drive and 57th Drive is IDOT jurisdiction.
 2. All combined sewers on this sheet are City of Chicago jurisdiction.
 3. "Tributary Area" of Outlet 11 includes storm sewer overflow areas from Outlets 11-1o and 11-2o.
 4. The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.



KEY MAP



MODEL: SHORLNAME; FILE NAME: C:\PROJECTS\CHICAGO\17133_EDP_14.dwg

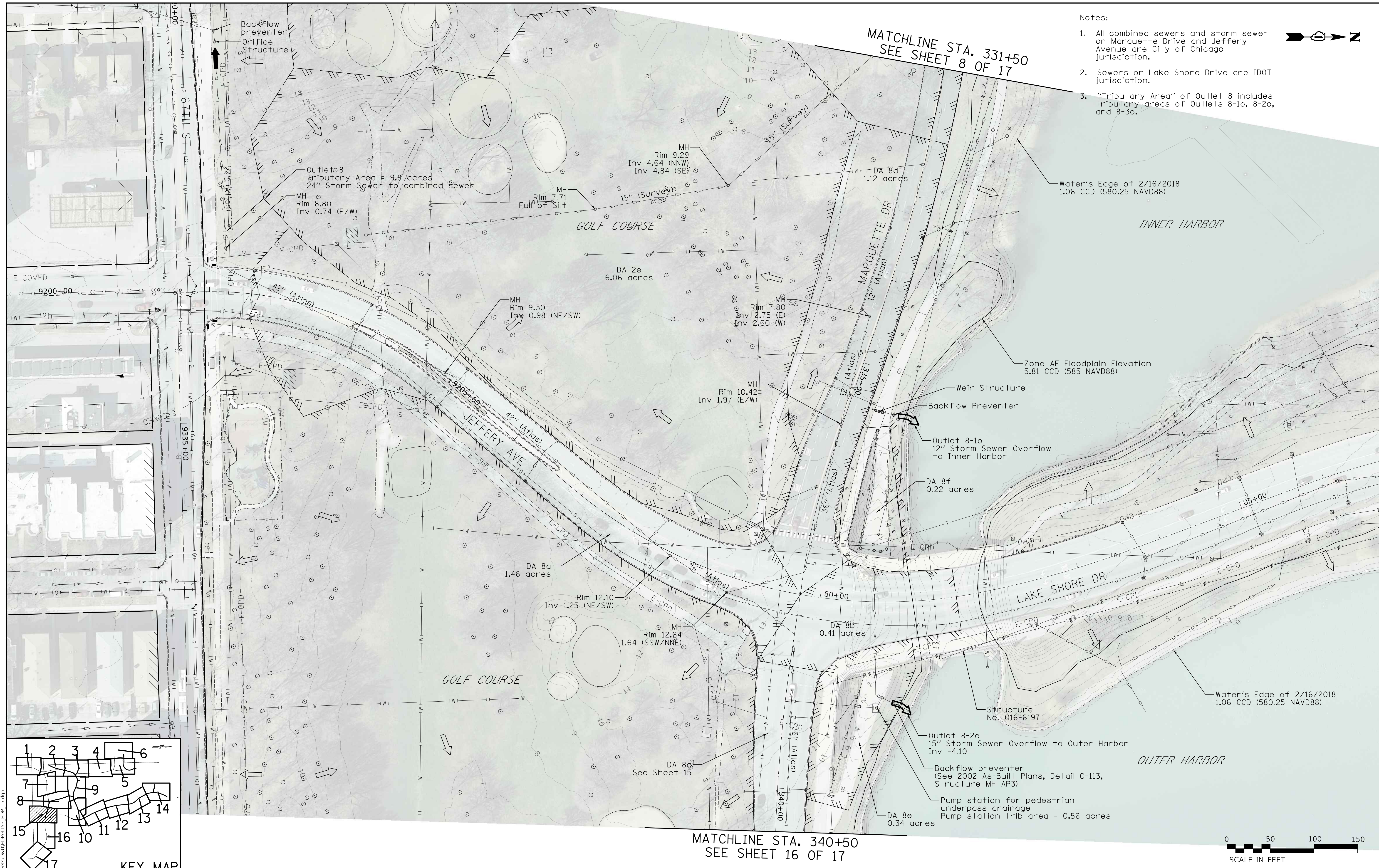


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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 14	OF 17 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	14
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

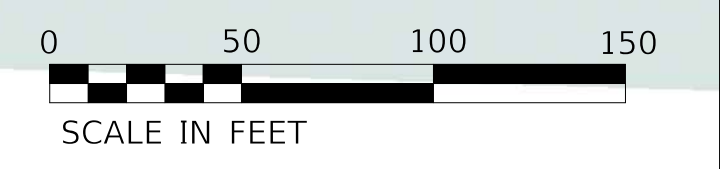
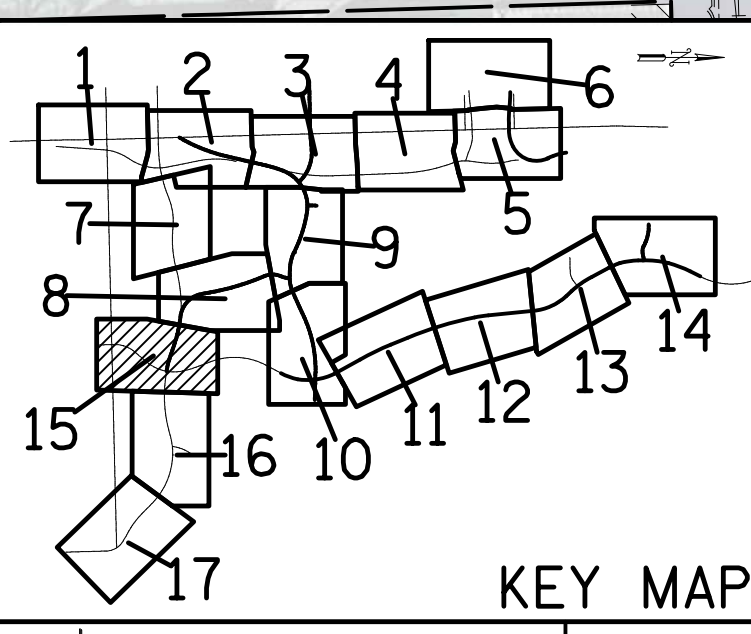


- Notes:
1. All combined sewers and storm sewer on Marquette Drive and Jeffery Avenue are City of Chicago jurisdiction.
 2. Sewers on Lake Shore Drive are IDOT jurisdiction.
 3. "Tributary Area" of Outlet 8 includes tributary areas of Outlets 8-10, 8-20, and 8-30.

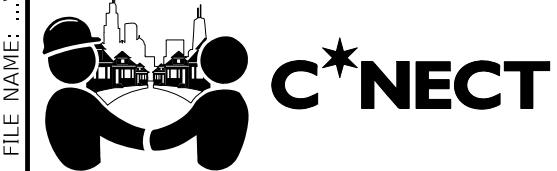


MATCHLINE STA. 331+50
SEE SHEET 8 OF 17

MATCHLINE STA. 340+50
SEE SHEET 16 OF 17



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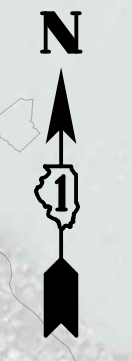


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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



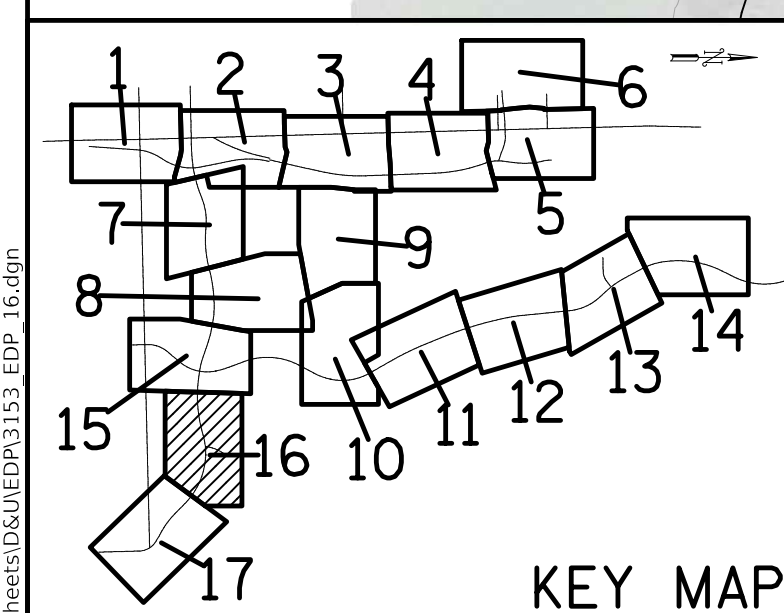
SCALE: 1" = 50'		SHEET 15 OF 17 SHEETS		STA.	TO STA.
OPC MOBILITY IMPROVEMENTS		EXISTING DRAINAGE PLAN			

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	15
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



MATCHLINE STA. 340+50
SEE SHEET 15 OF 17

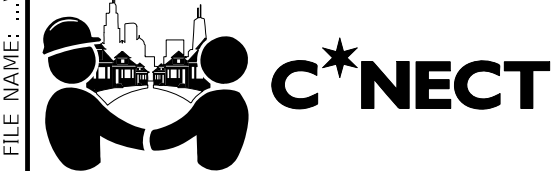
MATCHLINE STA. 354+50
SEE SHEET 17 OF 17



Notes:
1. Sewers on South Shore Drive are IDOT jurisdiction.

SCALE IN FEET

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PLOT DATE = 7/26/2019	DATE - MAR 2019	REVISED -

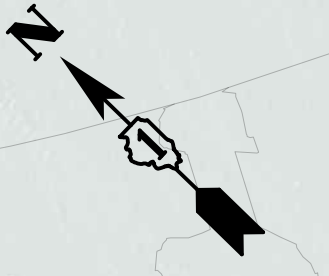


OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN

SCALE: 1" = 50' SHEET 16 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	16
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

- Note:
1. "Tributary Project Area" of Outlet 13 includes storm sewer overflow area from Outlet 13-10.
 2. Sewers on South Shore Drive are IDOT Jurisdiction.
 3. All combined sewers are City of Chicago Jurisdiction.



LAKE MICHIGAN

Water's Edge of 2/23/2018
1.52 CCD (580.71 NAVD88)

Zone AE Floodplain Elevation
5.81 CCD (585 NAVD88)

MH
Rim 8.23
Inv 2.33 (NW/E)

DA 13b
0.18 acres

Outlet 13-10
18" Storm Sewer Overflow to Lake Michigan
Inv 3.86

Backflow preventer
(See 2002 As-Built Plans,
Detail C-113, Structure
MH M4)

Weir structure
(See 2002 As-Built Plans,
Detail DS-2, Structure
WS M3)

MH
Rim 7.55
Inv 1.75 (NNW/SE)

MH
Rim 7.97
Inv 1.72 (ESE)
Inv 1.77 (SW)
INV 1.82 (NW)

MH
Rim 11.08
Inv 1.73 (SE)
Inv 1.78 (W)
Inv 2.10 (NW)

MATCHLINE STA. 354+50
SEE SHEET 16 OF 17

SOUTH SHORE DR

GOLF COURSE

MH
Rim 8.53
Inv 1.23 (NE)
INV 1.33 (WSW)

SOUTH SHORE DR

DA 13c
1.88 acres

DA 13a
0.87 acres

MH
Rim 18.23
Inv 8.03 (NNW/SSE)

MH
Rim 14.52
Inv 4.87 (SSE)
Inv 5.57 (NNW)

Orifice structure

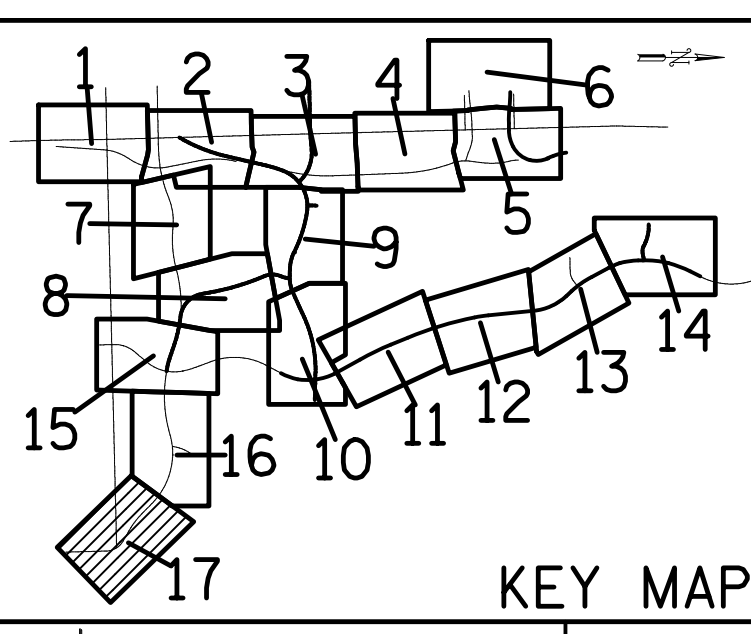
Backflow preventer
(See 2002 As-Built Plans,
Detail C-113, Structure
MH M2)

Outlet 13
Tributary Area = 2.9 acres
15" Storm Sewer to combined sewer

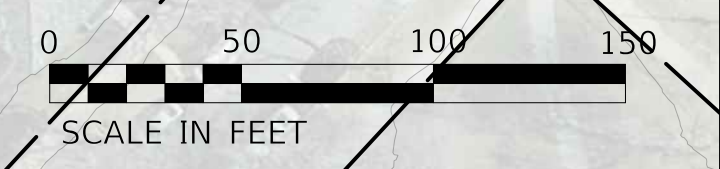
MH
Rim 7.15
Inv 0.80 (W)
Inv -0.96 (NE)

RESIDENTIAL

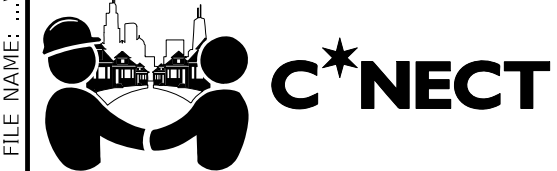
OGLESBY AVE



KEY MAP



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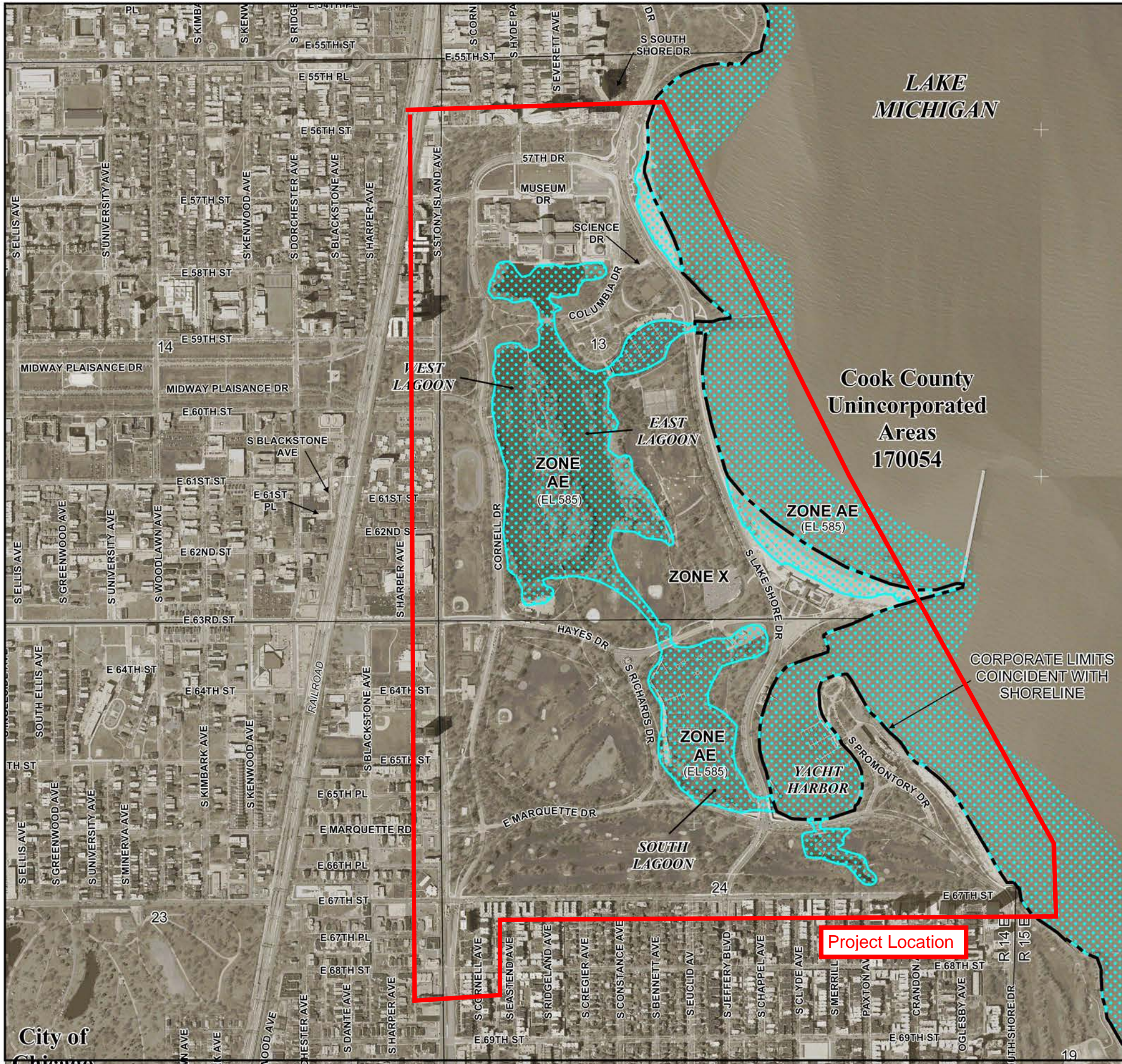


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PLOT DATE = 7/26/2019	CHECKED - TKL	REVISED -
	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 17 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	17
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



Project Location

46°27'000M N

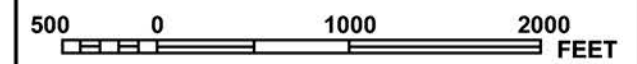
46°26'000M N

46°25'000M N

JOINS PANEL 0545



MAP SCALE 1" = 1000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0540J

FIRM
FLOOD INSURANCE RATE MAP
COOK COUNTY,
ILLINOIS
AND INCORPORATED AREAS

PANEL 540 OF 832
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHICAGO, CITY OF	170074	0540	J
COOK COUNTY	170054	0540	J

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

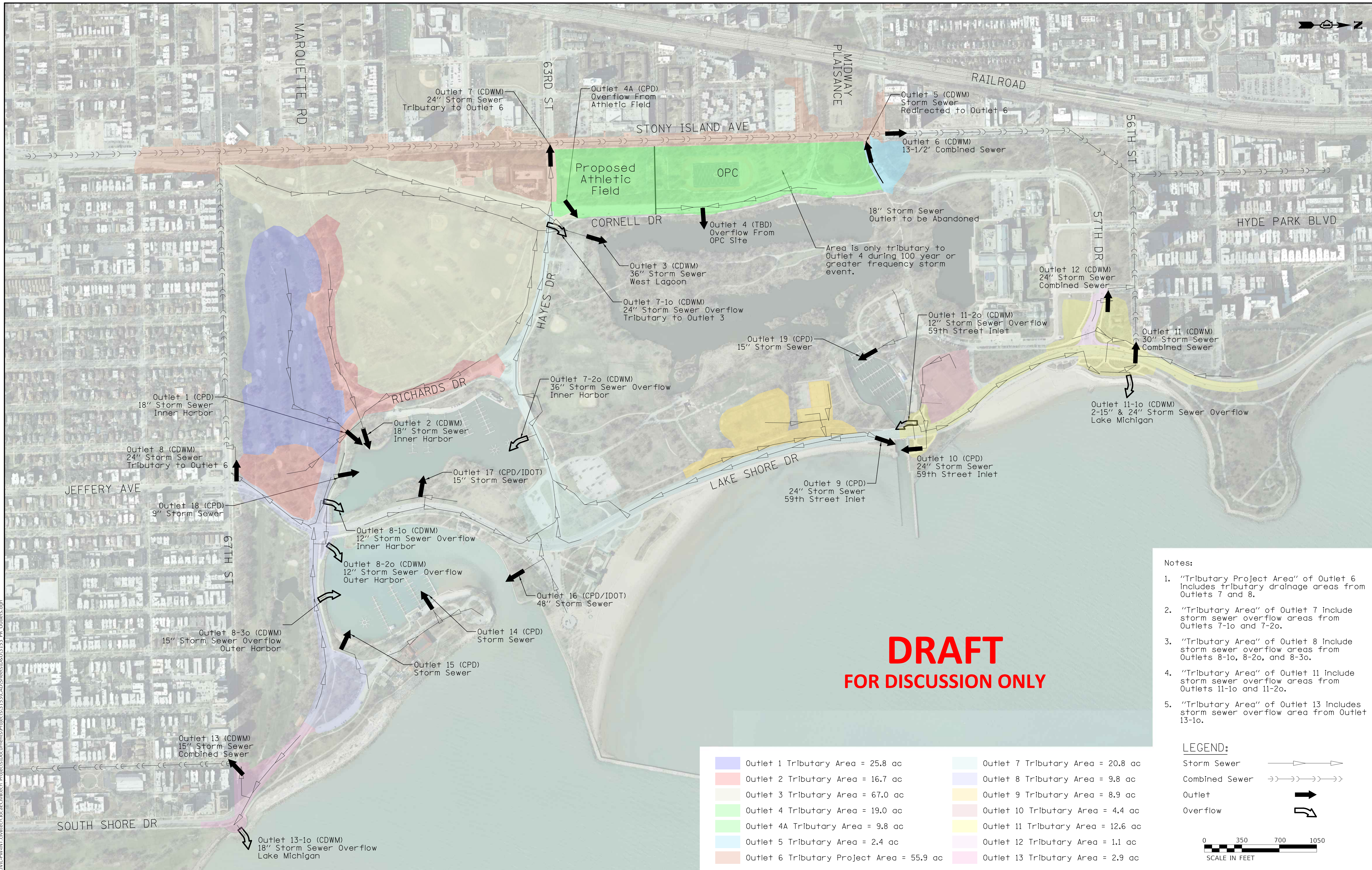
MAP NUMBER
17031C0540J
MAP REVISED
AUGUST 19, 2008

Federal Emergency Management Agency

LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AD, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AD** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

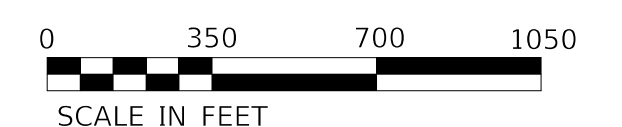
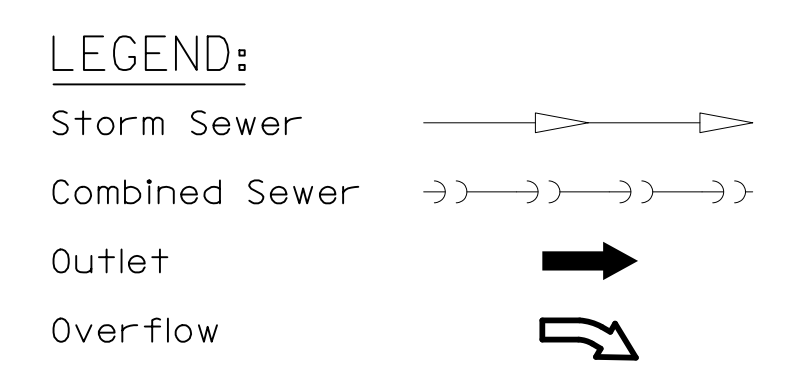
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



DRAFT
FOR DISCUSSION ONLY

- Notes:
1. "Tributary Project Area" of Outlet 6 includes tributary drainage areas from Outlets 7 and 8.
 2. "Tributary Area" of Outlet 7 include storm sewer overflow areas from Outlets 7-1o and 7-2o.
 3. "Tributary Area" of Outlet 8 include storm sewer overflow areas from Outlets 8-1o, 8-2o, and 8-3o.
 4. "Tributary Area" of Outlet 11 include storm sewer overflow areas from Outlets 11-1o and 11-2o.
 5. "Tributary Area" of Outlet 13 includes storm sewer overflow area from Outlet 13-1o.

Outlet 1 Tributary Area = 25.8 ac	Outlet 7 Tributary Area = 20.8 ac
Outlet 2 Tributary Area = 16.7 ac	Outlet 8 Tributary Area = 9.8 ac
Outlet 3 Tributary Area = 67.0 ac	Outlet 9 Tributary Area = 8.9 ac
Outlet 4 Tributary Area = 19.0 ac	Outlet 10 Tributary Area = 4.4 ac
Outlet 4A Tributary Area = 9.8 ac	Outlet 11 Tributary Area = 12.6 ac
Outlet 5 Tributary Area = 2.4 ac	Outlet 12 Tributary Area = 1.1 ac
Outlet 6 Tributary Project Area = 55.9 ac	Outlet 13 Tributary Area = 2.9 ac



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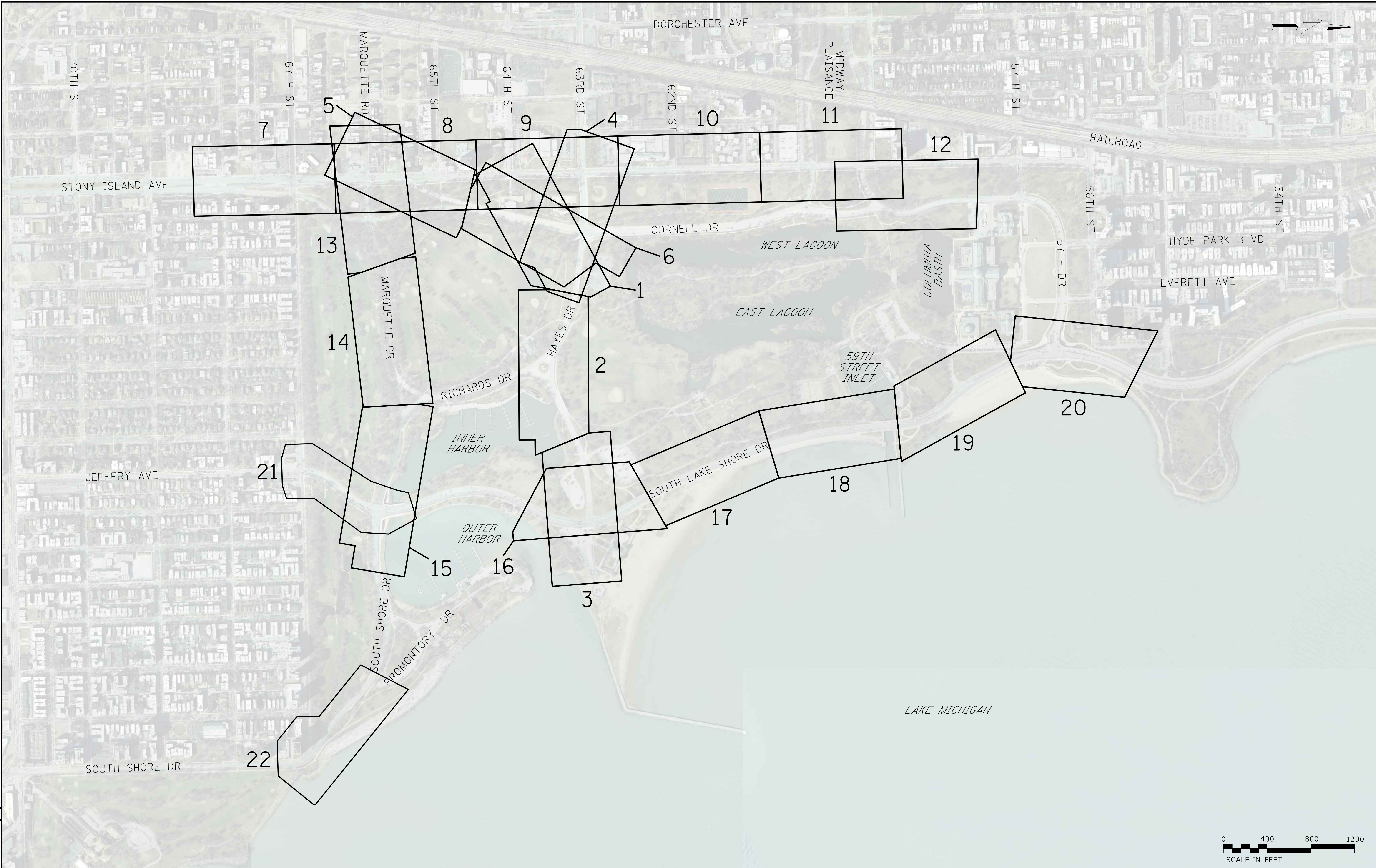


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PLOT DATE = 12/20/2019	CHECKED - TKL	REVISED -
	DATE - JUL 2019	REVISED -



OPC MOBILITY IMPROVEMENTS			
PROPOSED OUTLET LOCATION MAP			
SCALE: 1" = 350'	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	1	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



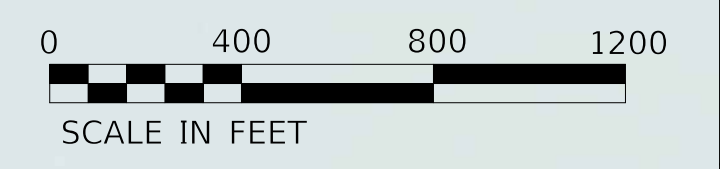
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PLOT DATE = 12/20/2019	DATE - JUL 2019	REVISED -



OPC MOBILITY IMPROVEMENTS
 PROPOSED DRAINAGE PLAN KEY MAP
 SCALE: 1" = 400' SHEET OF SHEETS STA. TO STA.

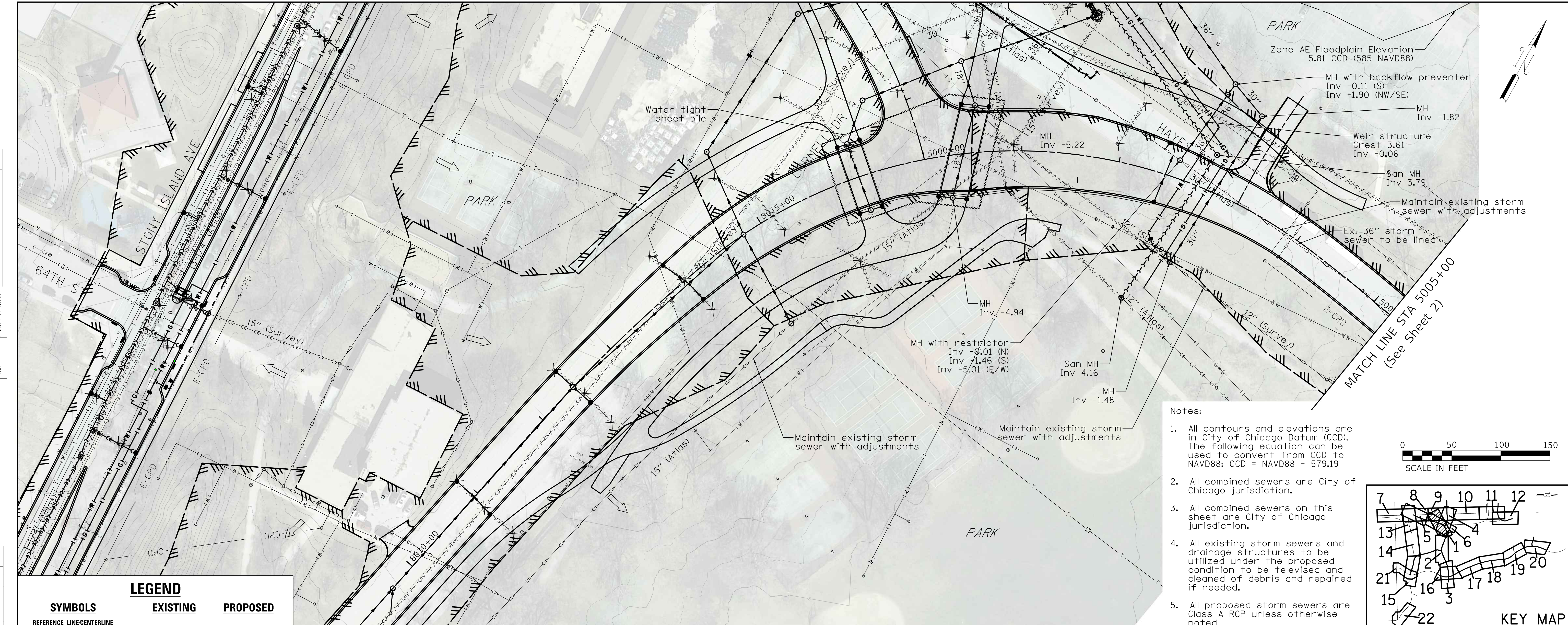


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	1	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

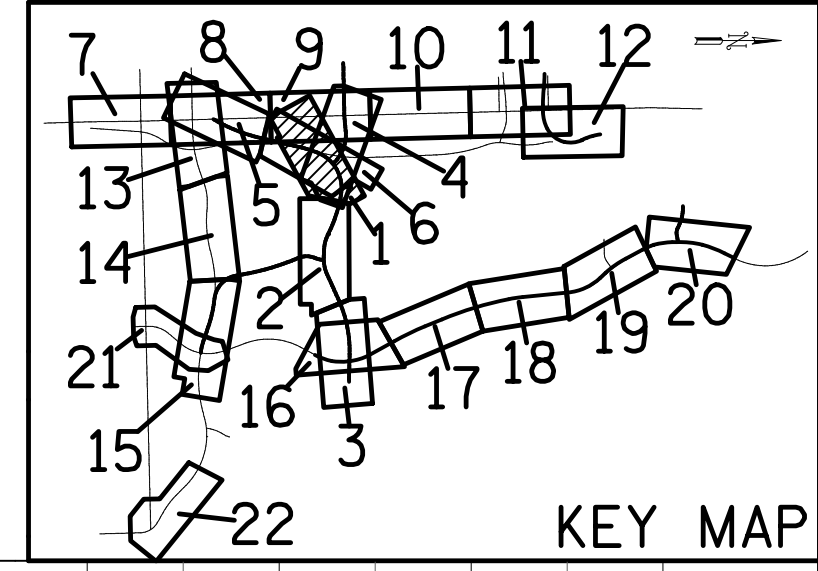
DRAFT

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	CADD FILE NAME	
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	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
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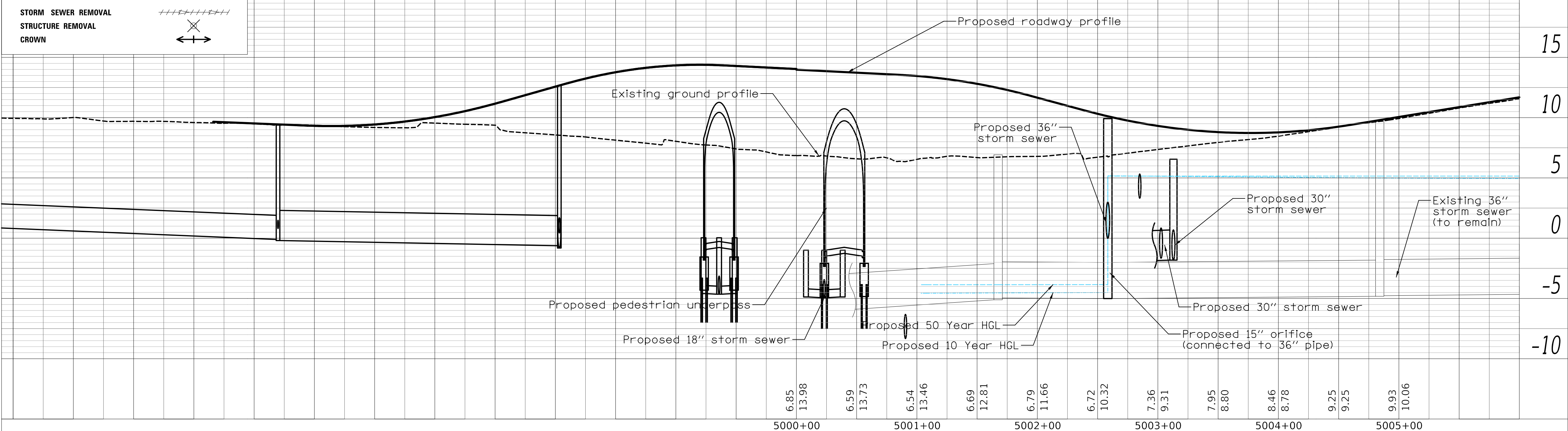


- Notes:
- All contours and elevations are in City of Chicago Datum (CCD). The following equation can be used to convert from CCD to NAVD88: CCD = NAVD88 - 579.19
 - All combined sewers are City of Chicago Jurisdiction.
 - All combined sewers on this sheet are City of Chicago Jurisdiction.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - All proposed storm sewers are Class A RCP unless otherwise noted

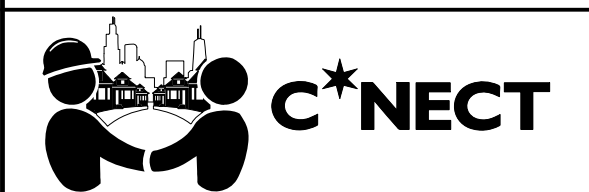


LEGEND

	EXISTING	PROPOSED
REFERENCE LINE/CENTERLINE AND STATIONING	---	---
RIGHT OF WAY LINE	---	---
DRAINAGE DIVIDE (HYDROLOGIC ATLAS) EXIST. ONLY	---	---
INTERPRETED DRAINAGE AREA	---	---
FLOODPLAIN BOUNDARY	---	---
FLOODWAY BOUNDARY	---	---
SHALLOW CONC./GUTTER FLOW	---	---
SWALE	---	---
DITCH	---	---
OUTLET	---	---
SHEET FLOW	---	---
OVERFLOW	---	---
CHANNEL	---	---
DIVERTED AREA (PROPOSED ONLY)	---	---
CULVERT SIZE - TYPE	2' X 2' BOX	2' X 2' BOX
BRIDGE LOCATION - BRIDGE NO.	---	---
PUMP STATION	PS	PS
STORM SEWER	---	---
SANITARY SEWER	---	---
COMBINED SEWER	---	---
CULVERT END SECTION	---	---
CATCH BASIN	---	---
HEADWALL/ENDWALL	---	---
INLET	---	---
MANHOLE	---	---
ADJUST STRUCTURE	---	---



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FILE NAME: ...DSUPDP3152_RDP_S101.dgn



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DRAWN -	WAM/MSA
CHECKED -	TKL
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PLOT DATE =	12/20/2019

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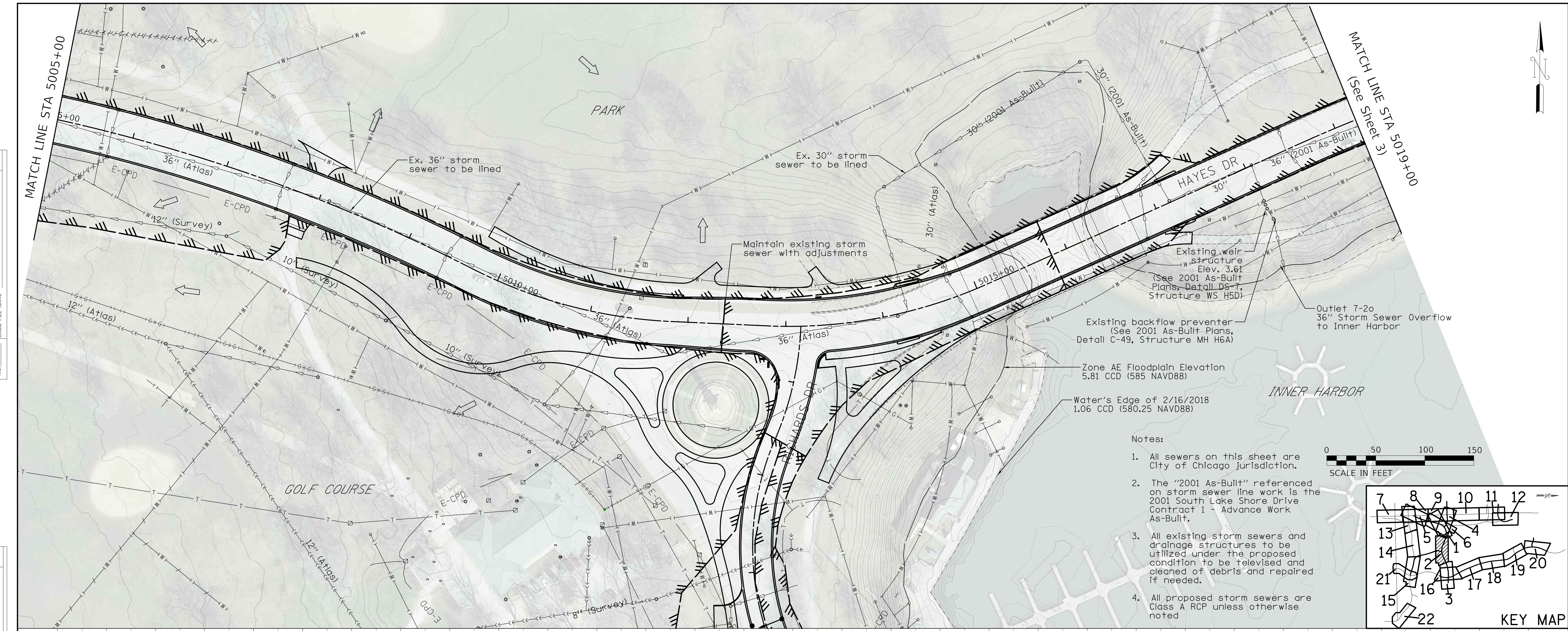
OPC MOBILITY IMPROVEMENTS	
PROPOSED DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 1 OF 22 SHEETS
STA. TO STA.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

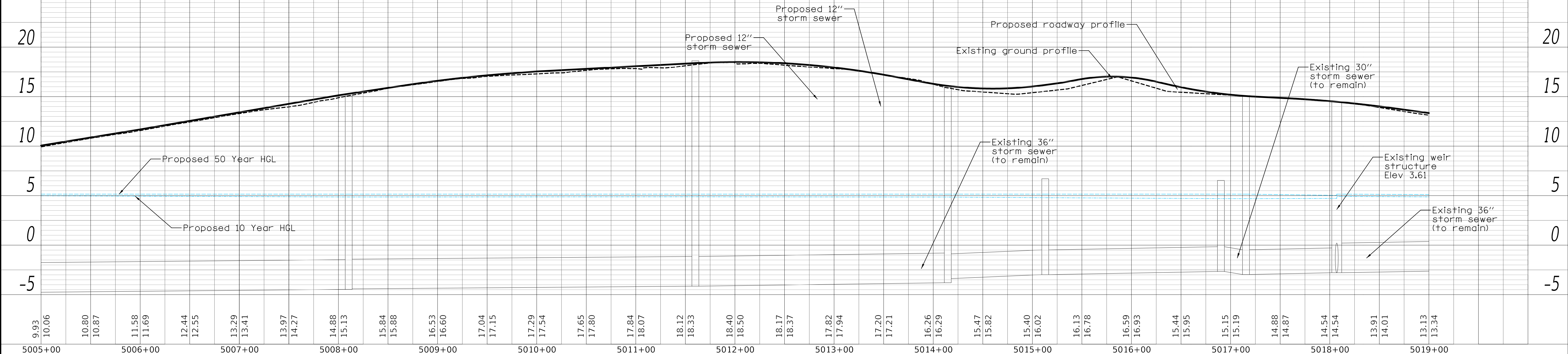
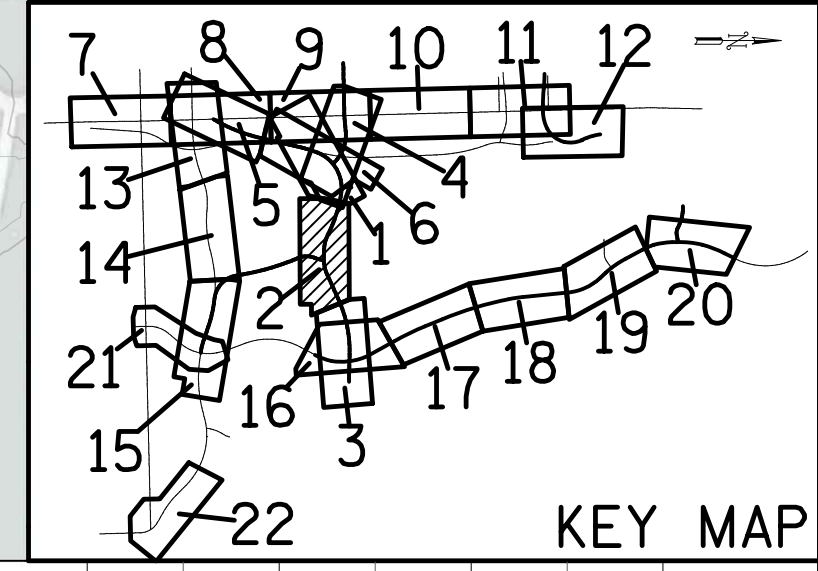
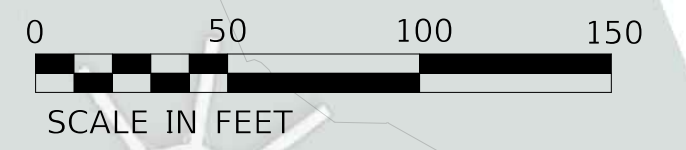
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PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
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	CADD FILE NAME	

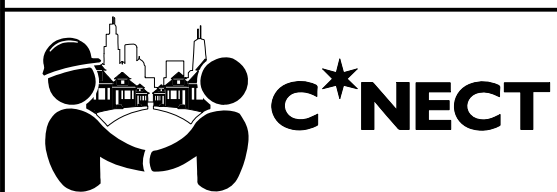
PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATION	



- Notes:
- All sewers on this sheet are City of Chicago Jurisdiction.
 - The "2001 As-Built" referenced on storm sewer line work is the 2001 South Lake Shore Drive Contract 1 - Advance Work As-Built.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - All proposed storm sewers are Class A RCP unless otherwise noted.



MODEL: SPODELNAMES
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DRAWN -	WAM/MSA
CHECKED -	TKL
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PLOT SCALE =	50.0000' / in.
PLOT DATE =	12/20/2019

REVISED -	
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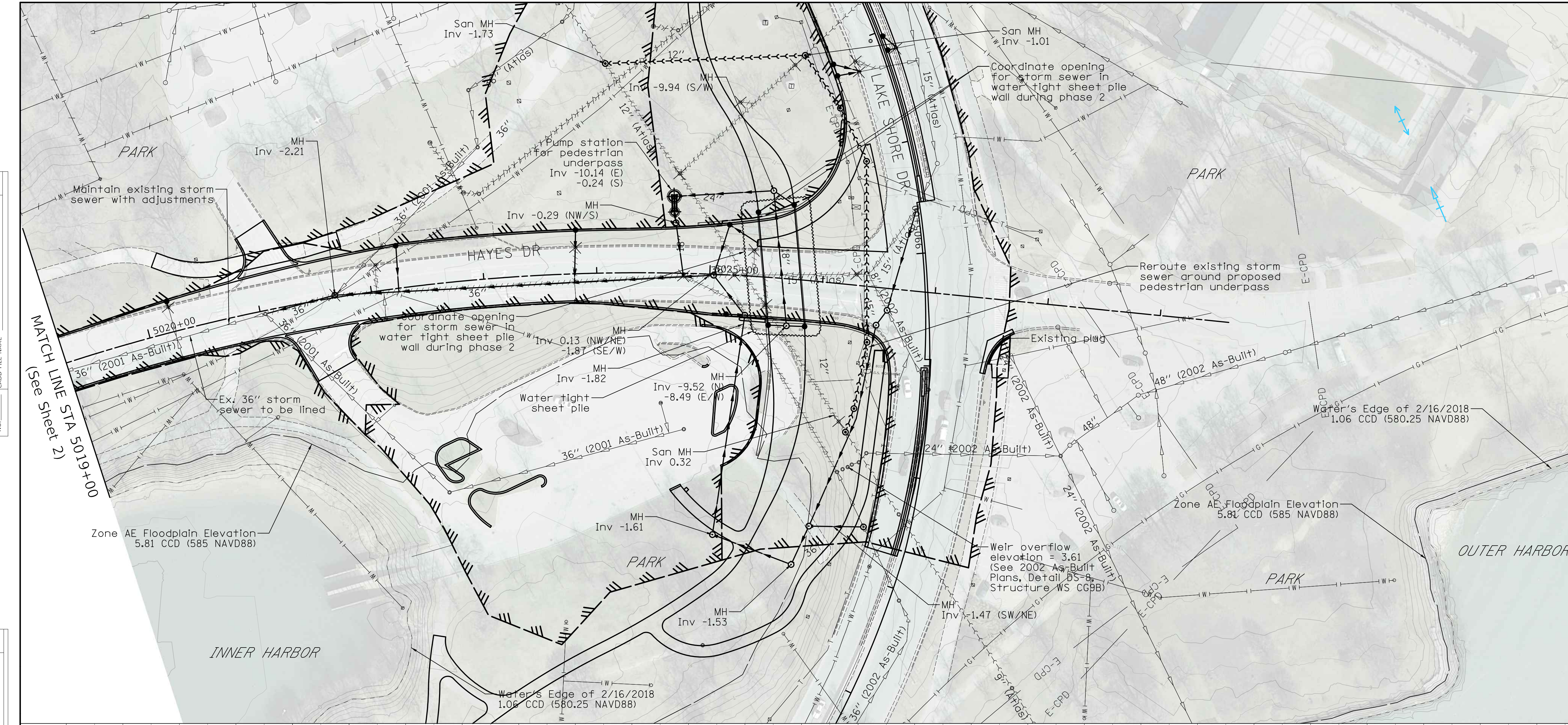
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SCALE: 1" = 50'	SHEET 2 OF 22 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

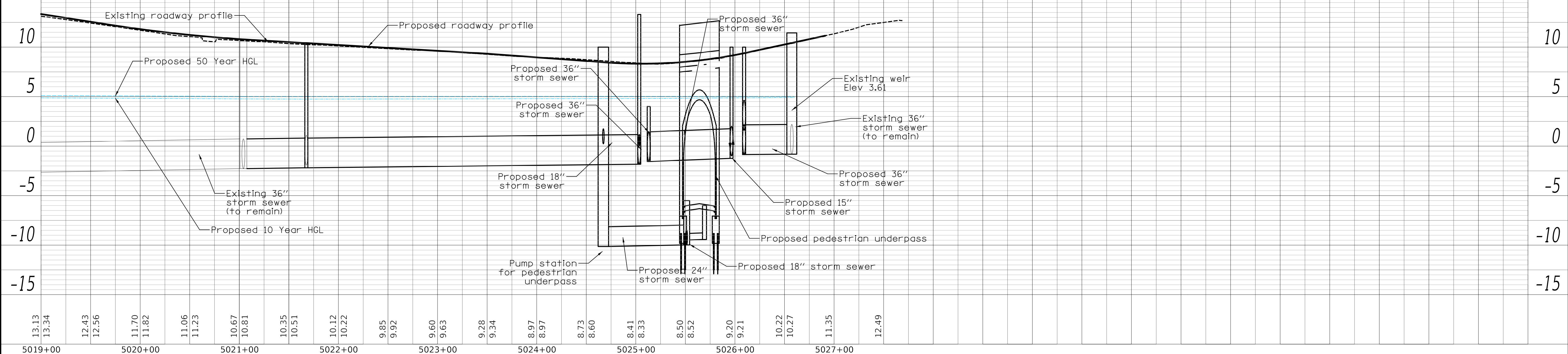
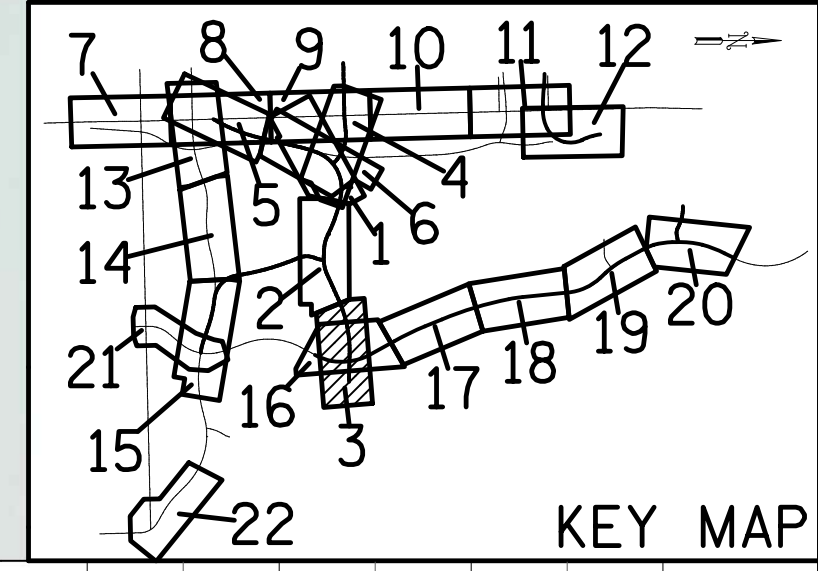
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	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
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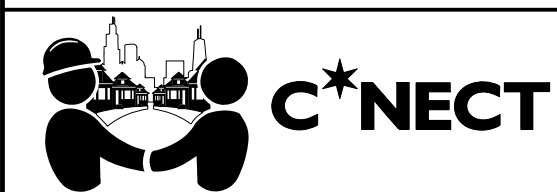
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	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	STRUCTURE NOTATIONS CHECKED	
	NO.	



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. All sewers on Hayes Drive are City of Chicago jurisdiction.
 3. The "2001 As-Built" referenced on storm sewer line work is the 2001 South Lake Shore Drive Contract 1 - Advance Work As-Built.
 4. The "2002 As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 5. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 6. All proposed storm sewers are Class A RCP unless otherwise noted.



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CHECKED -	TKL
DATE -	JUL 2019

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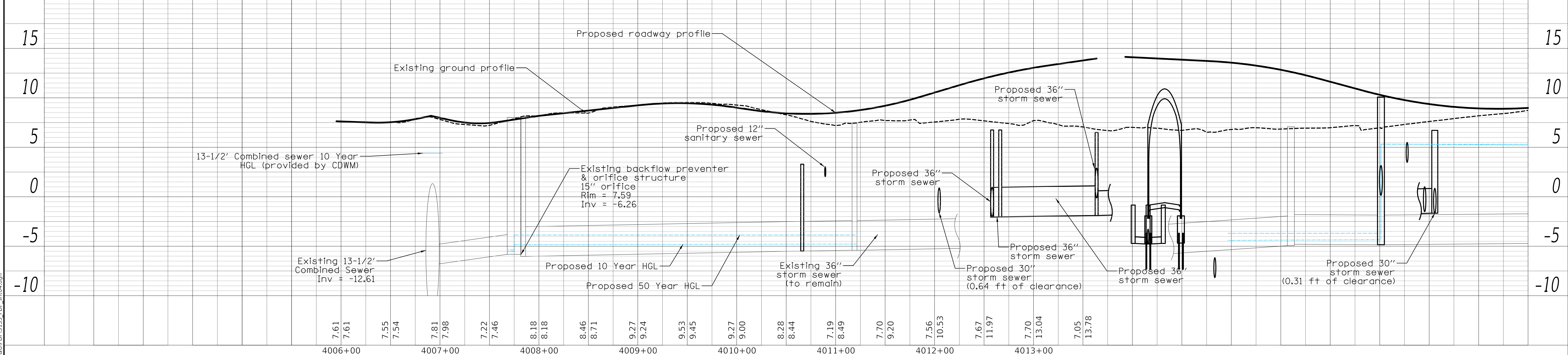
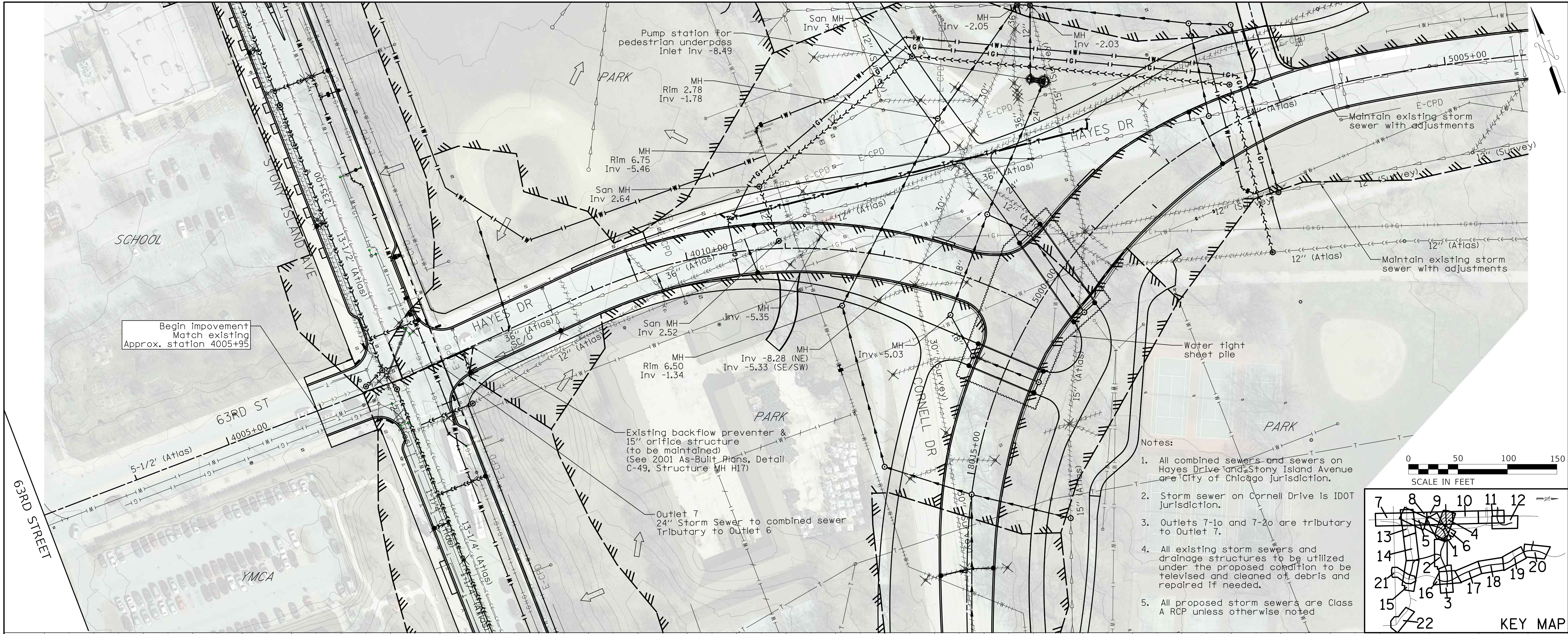
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SCALE: 1" = 50'	SHEET 3 OF 22 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	3
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
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	STRUCTURE NOTATION	



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DRAWN -	WAM/MSA
CHECKED -	TKL
DATE -	JUL 2019

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OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN	
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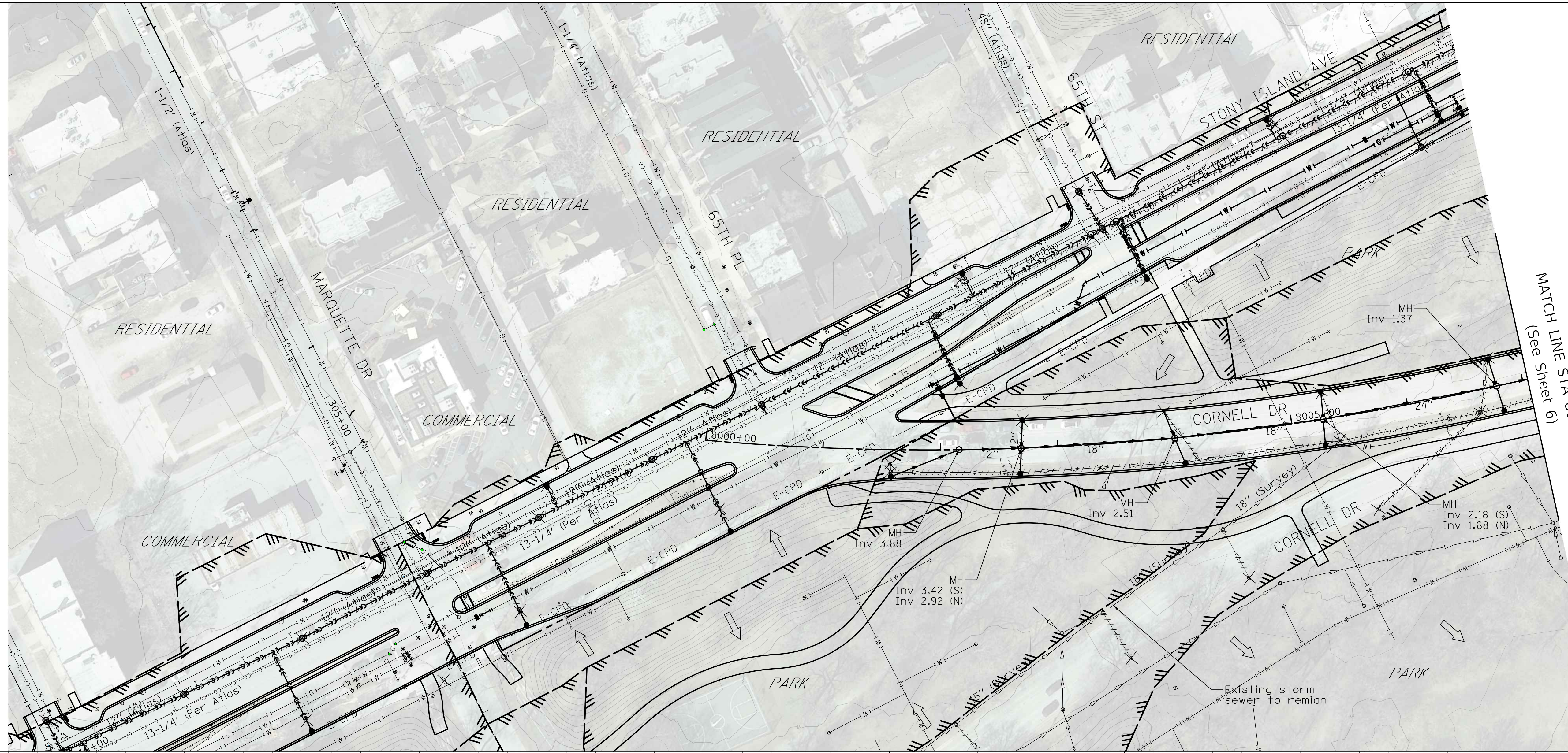
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	4
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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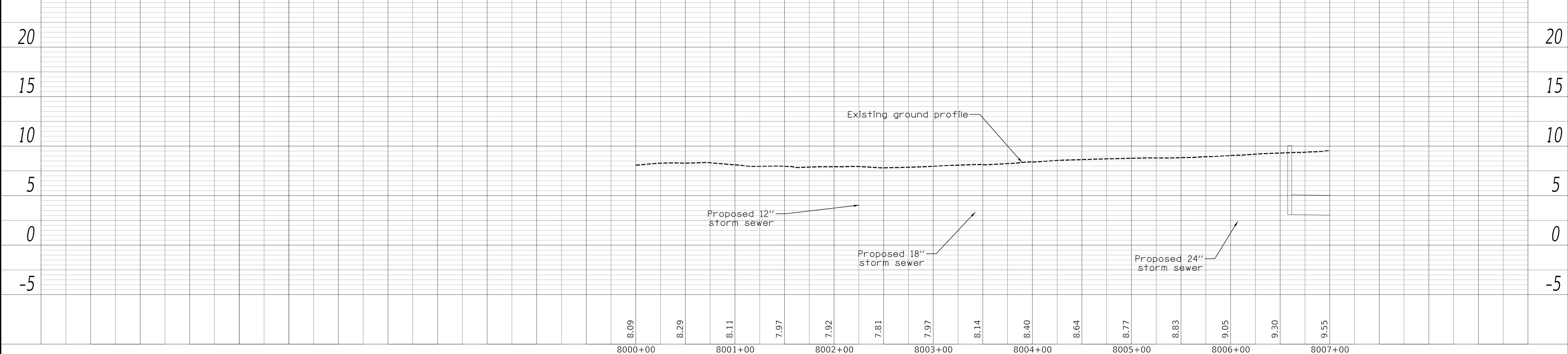
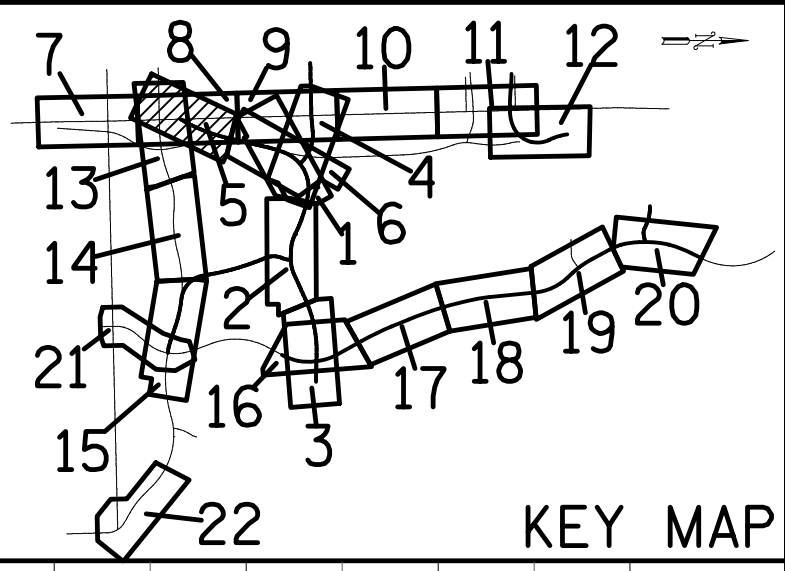
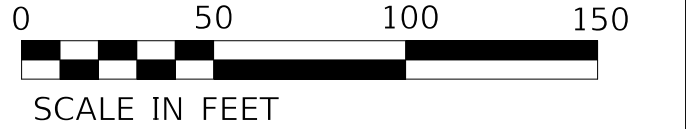
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NOTE BOOK NO.	PLOTTED	
	GRADES CHECKED	
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MODEL: SH06LNAME5
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- Notes:
- All combined sewers are City of Chicago jurisdiction.
 - Storm sewer on Stony Island Avenue south of 65th Place and on Cornell Drive are IDOT jurisdiction.
 - Storm sewer on Stony Island Avenue north of 65th Place and Marquette Drive sewers are City of Chicago jurisdiction.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - All proposed storm sewers are Class A RCP unless otherwise noted

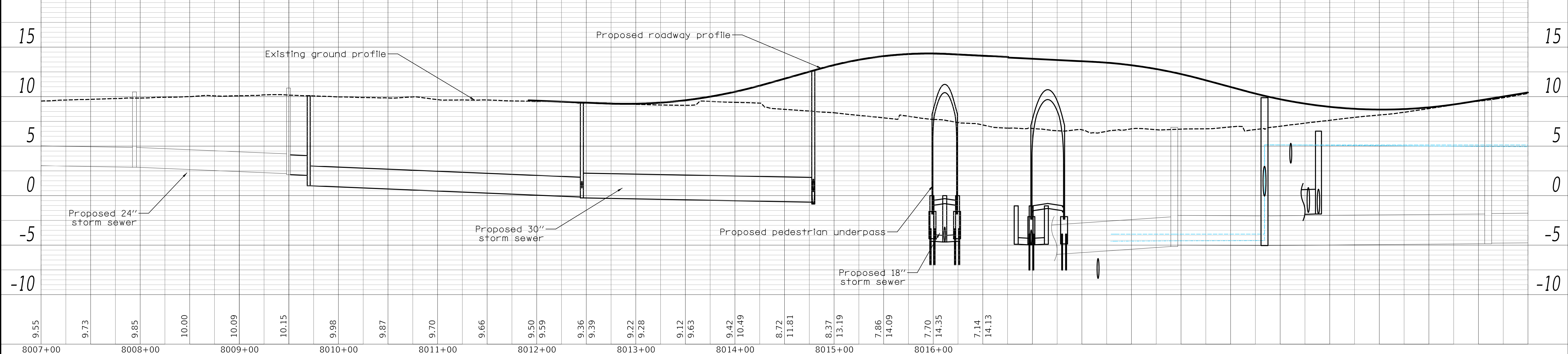
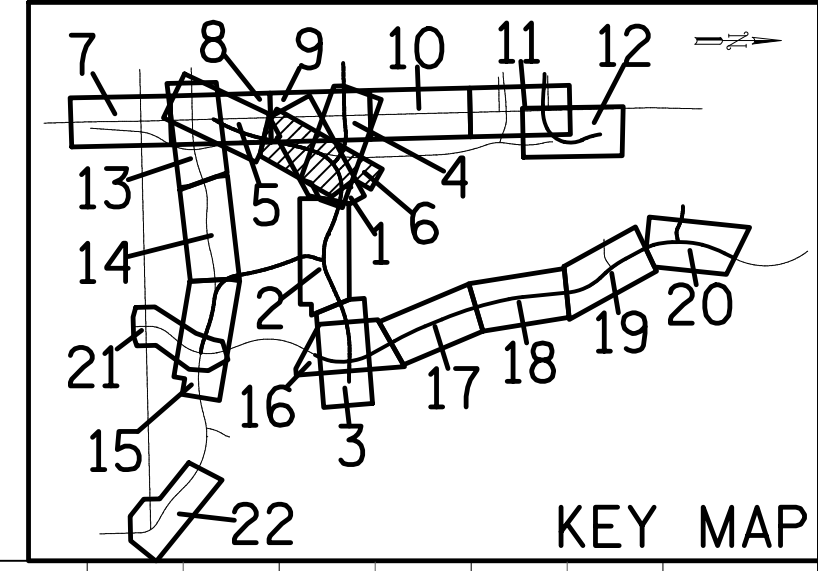
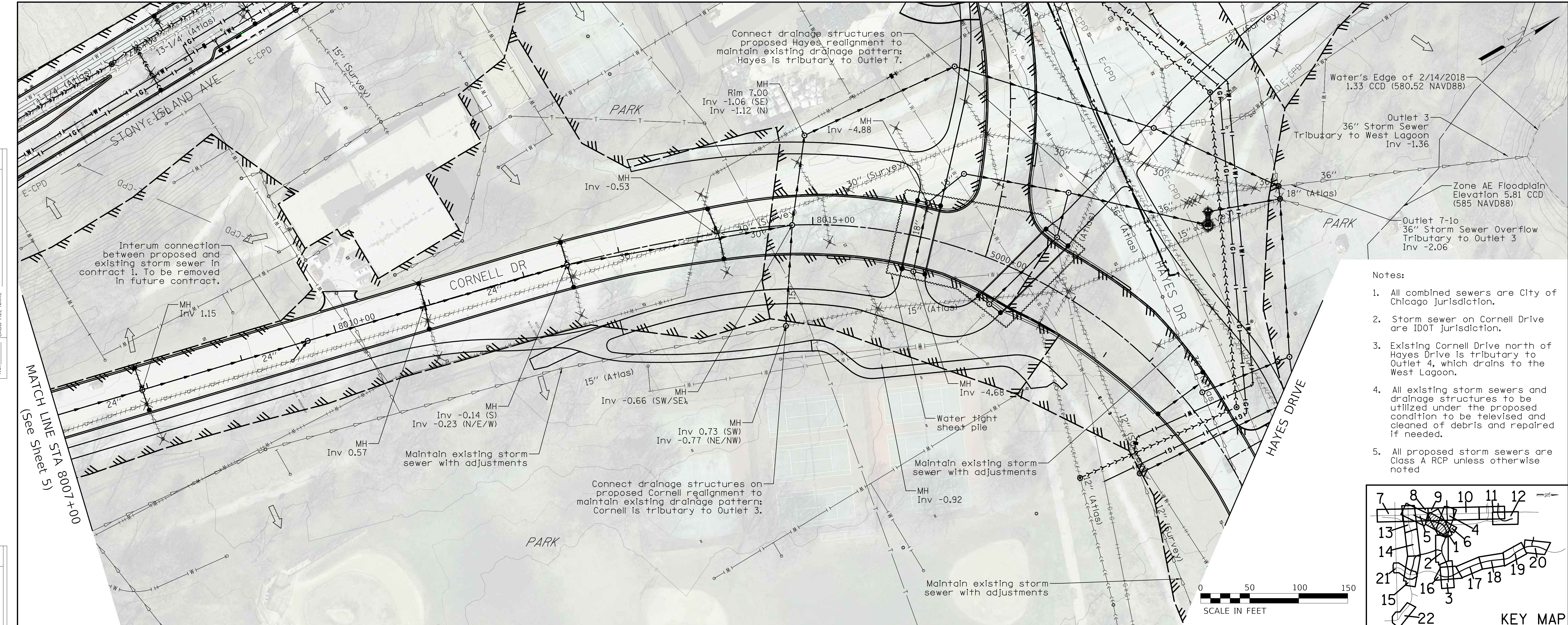


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	DATE - JUL 2019	REVISED -					ILLINOIS / FED. AID PROJECT				

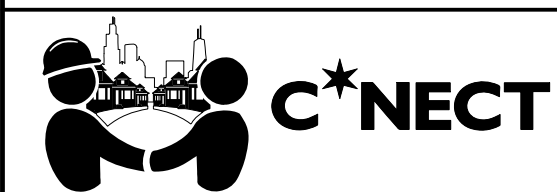
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PLOT DATE = 12/20/2019	DATE - JUL 2019	REVISED -



OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 6 OF 22 SHEETS STA. TO STA.

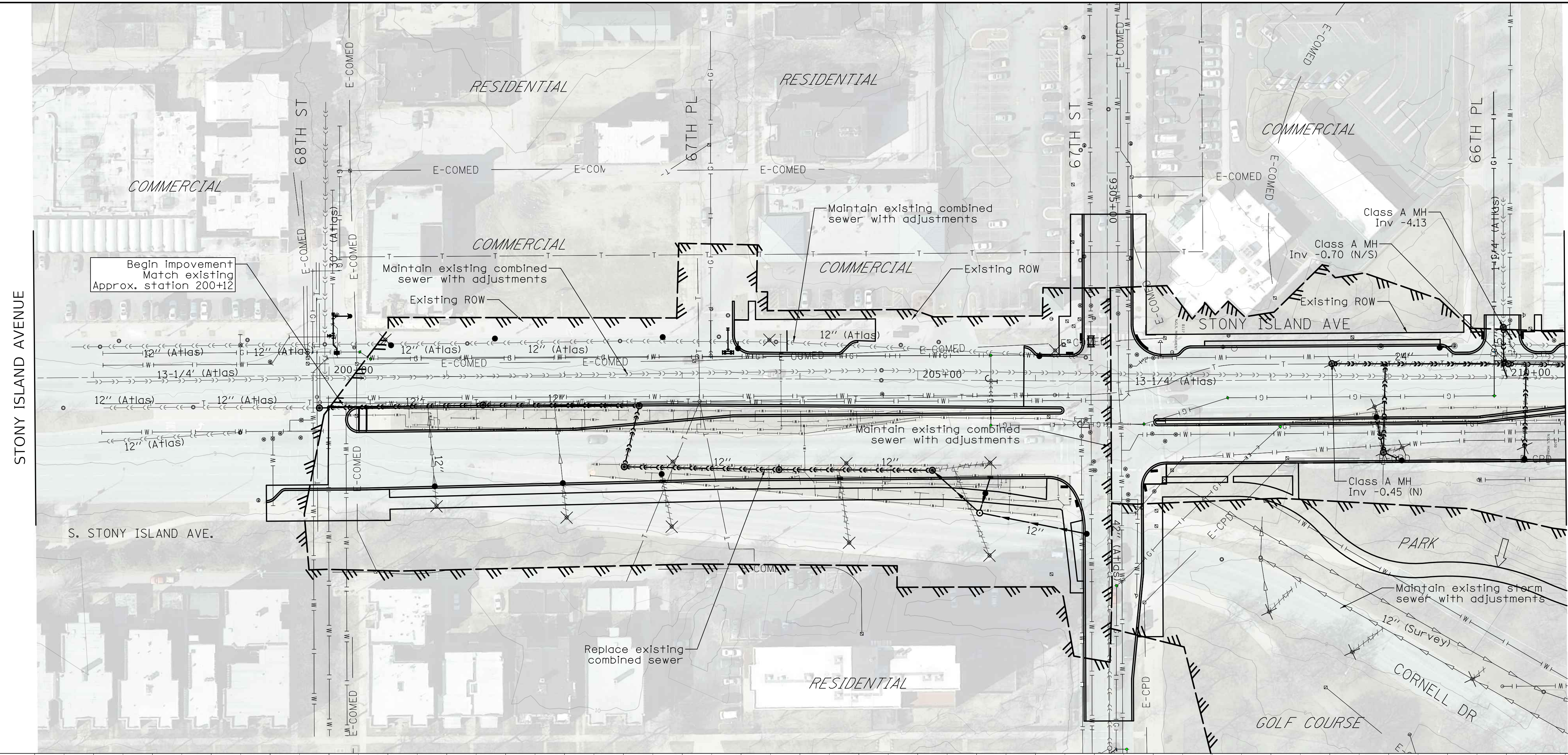
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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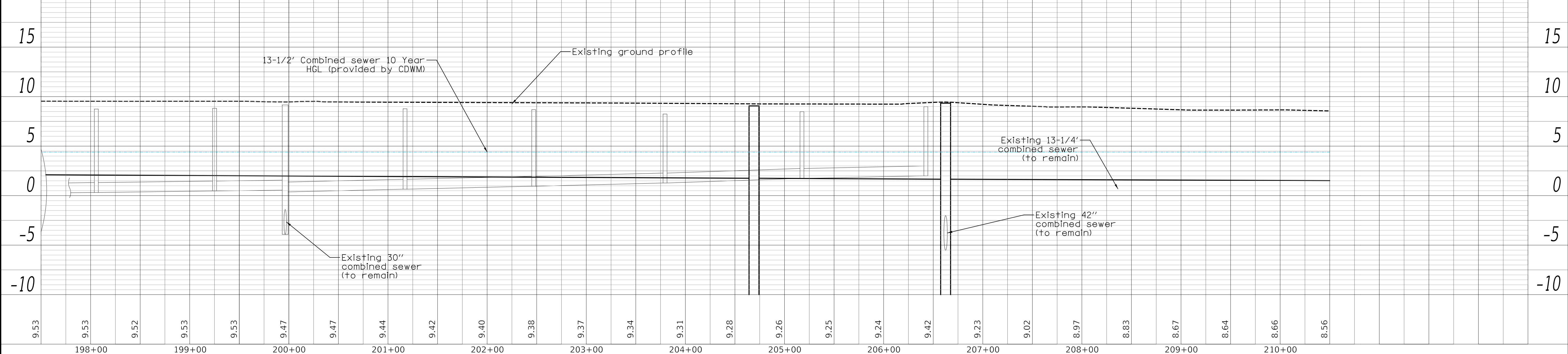
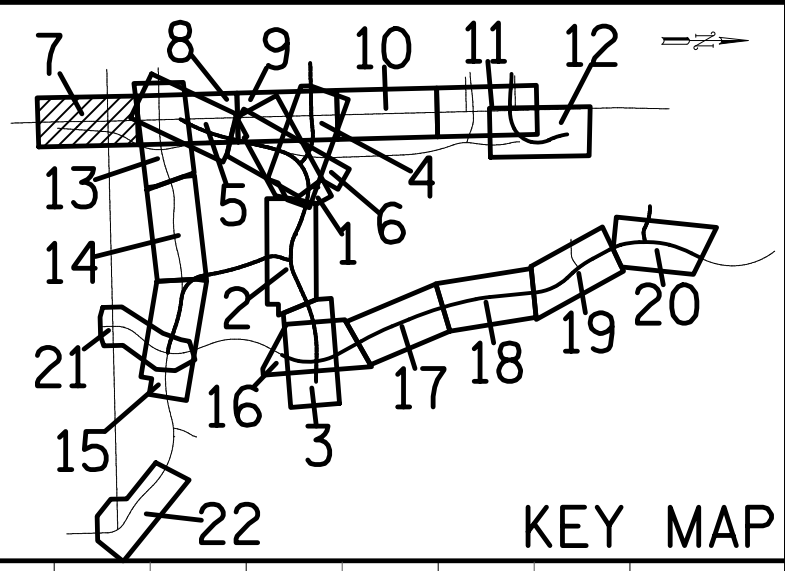
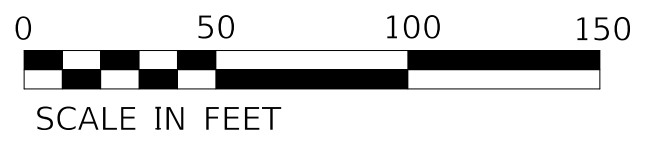
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	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATION	

MODEL: SHIDELNAMES
FILE NAME: ...DSUPDR3153_rdp_sht07.dgn



- Notes:
1. All combined sewers are City of Chicago jurisdiction.
 2. Storm sewer on Stony Island Avenue and Cornell Drive are IDOT jurisdiction.
 3. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 4. Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
 5. All proposed storm sewers are Class A RCP unless otherwise noted



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PLOT DATE =	12/20/2019

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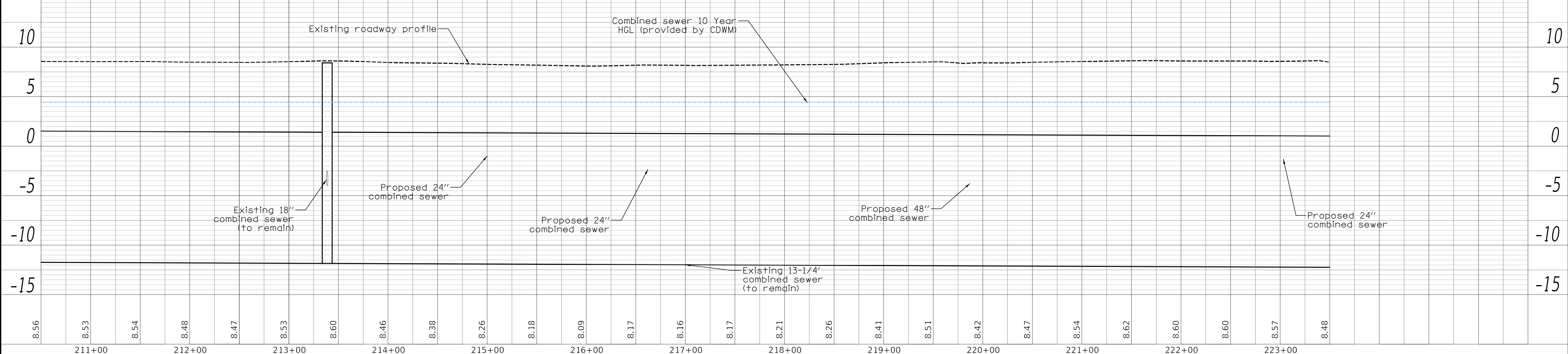
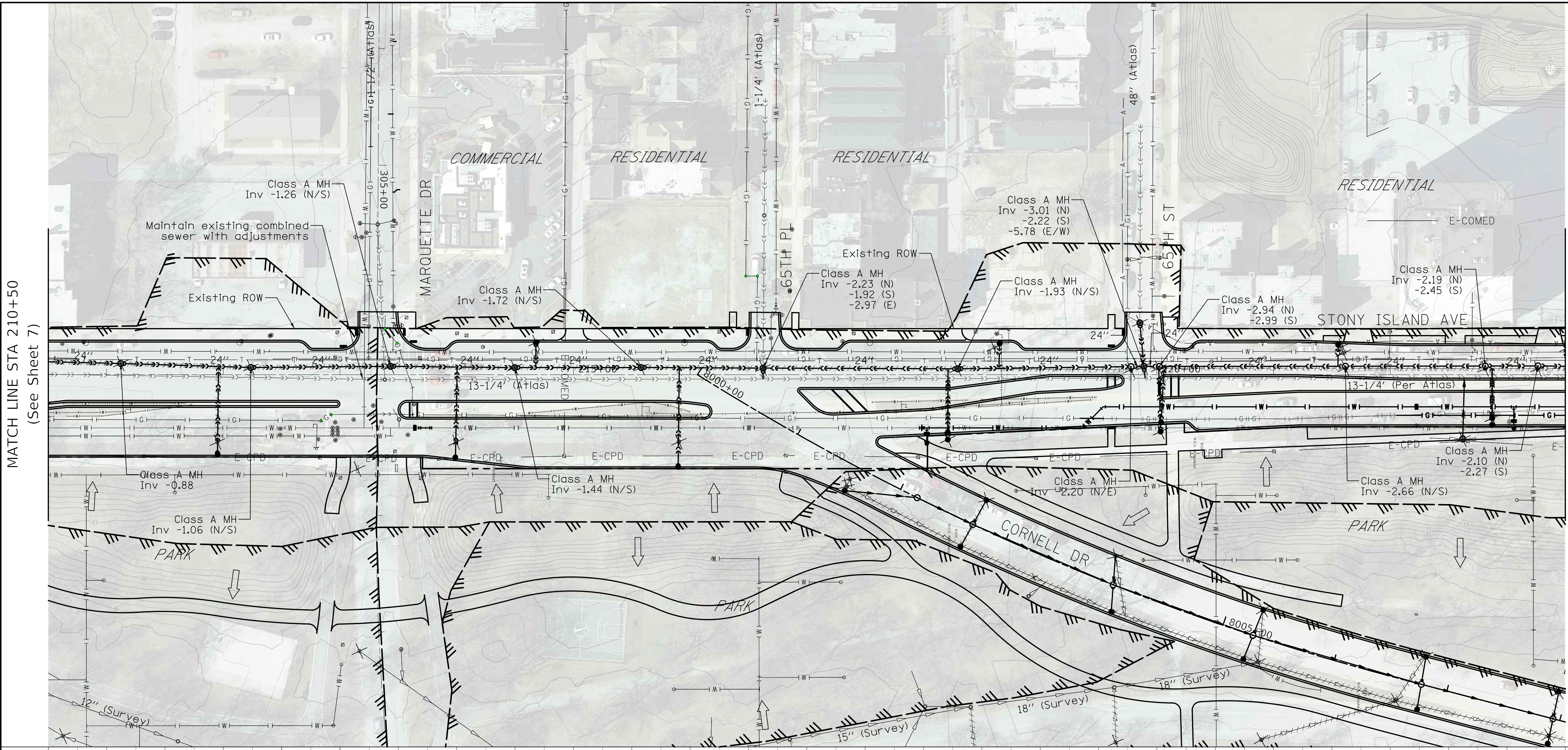
OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 7 OF 22 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	7
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

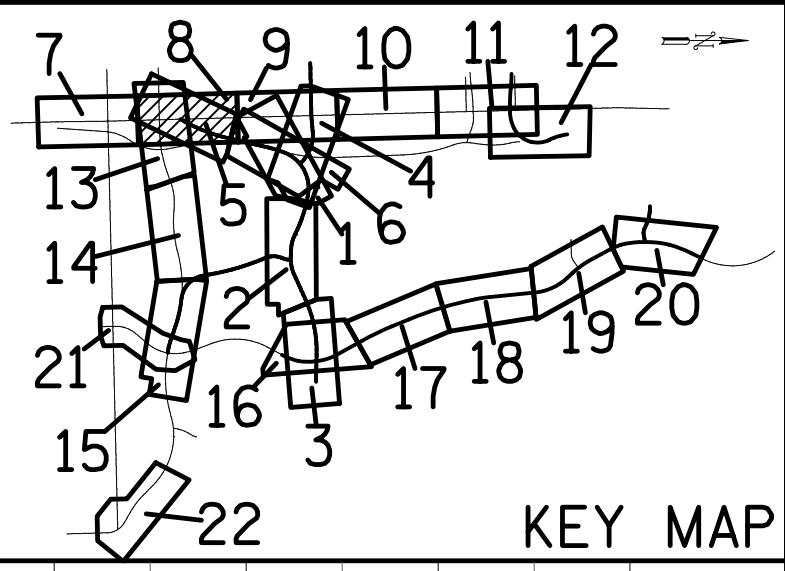
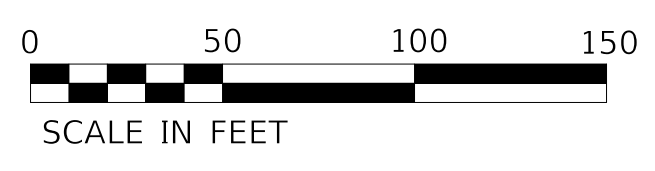
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	NOTE BOOK NO.	
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MODEL: SHIDELNAMES
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- Notes:
- All combined sewers are City of Chicago jurisdiction.
 - Storm sewer on Stony Island Avenue south of 65th Place and on Cornell Drive are IDOT jurisdiction.
 - Storm sewer on Stony Island Avenue north of 65th Place and Marquette Drive sewers are City of Chicago jurisdiction.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
 - All proposed storm sewers are Class A RCP unless otherwise noted



DESIGNED - MSA	REVISED -	CDOT CHICAGO DEPARTMENT OF TRANSPORTATION	OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - WAM/MSA	REVISED -		17-B7203-00-ES	COOK	22	8			
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DATE - JUL 2019	REVISED -		ILLINOIS FED. AID PROJECT						

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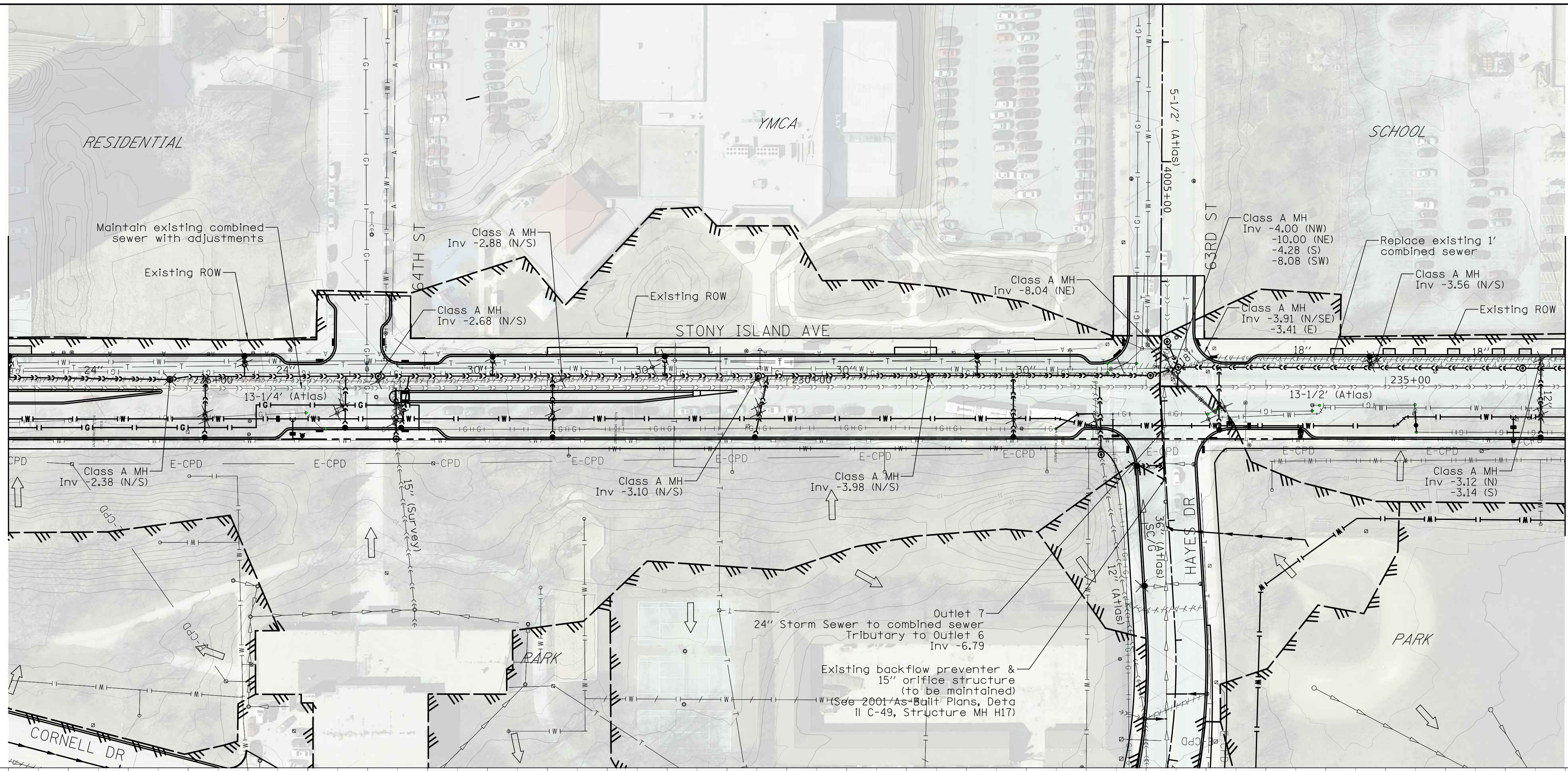
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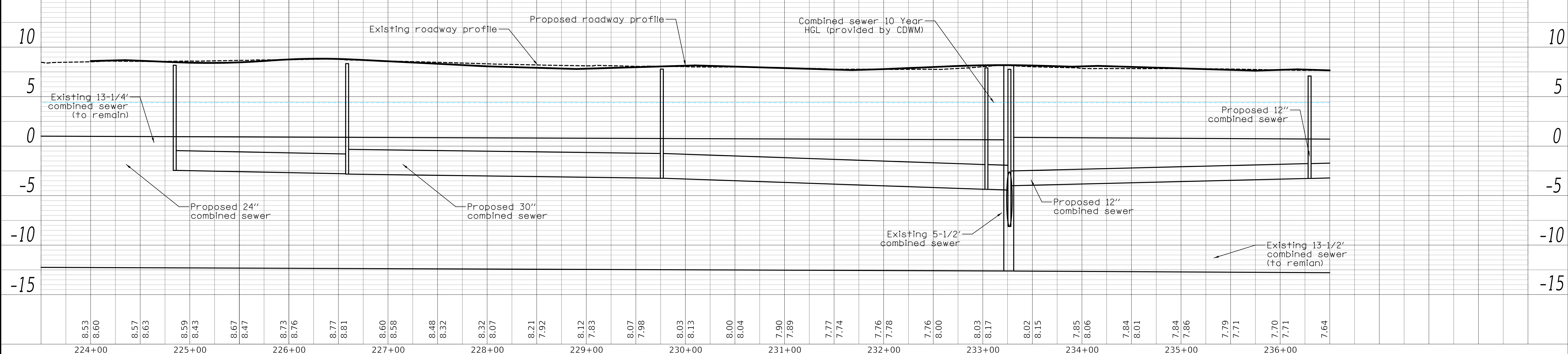
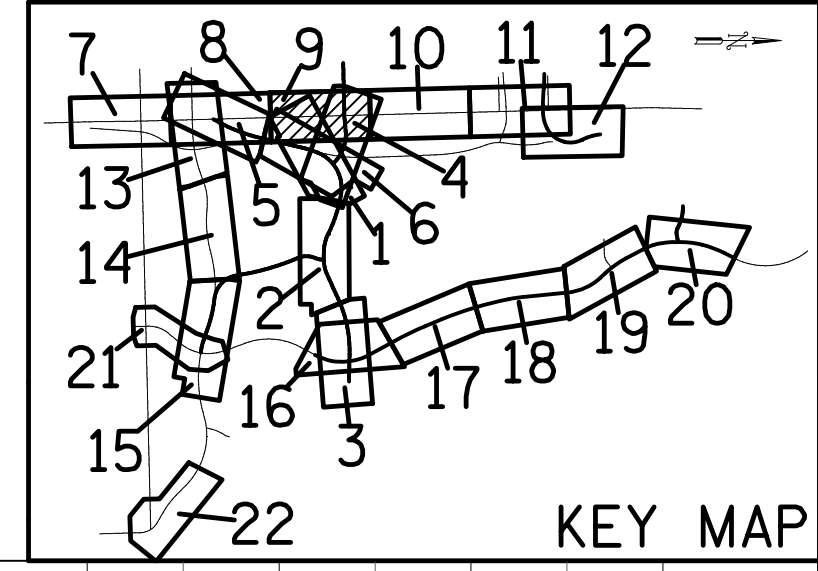
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MATCH LINE STA 223+50
(See Sheet 8)

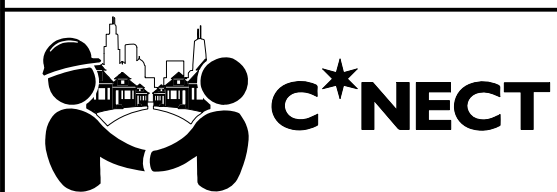
MATCH LINE STA 236+50
(See Sheet 10)



- Notes:
- All combined sewers and sewers on Hayes Drive and Stony Island Avenue are City of Chicago jurisdiction.
 - Outlets 7-1o and 7-2o are tributary to Outlet 7.
 - Stony Island will be reconstructed north of 63rd Street.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
 - All proposed storm sewers are Class A RCP unless otherwise noted



8.53 8.60	8.57 8.63	8.59 8.43	8.67 8.47	8.73 8.76	8.77 8.81	8.60 8.58	8.48 8.32	8.32 8.07	8.21 7.92	8.12 7.83	8.07 7.98	8.03 8.13	8.00 8.04	7.90 7.89	7.77 7.74	7.76 7.78	7.76 8.00	8.03 8.17	8.02 8.15	7.85 8.06	7.84 8.01	7.84 7.86	7.79 7.71	7.70 7.71	7.64	
224+00	225+00	226+00	227+00	228+00	229+00	230+00	231+00	232+00	233+00	234+00	235+00	236+00														



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PLOT DATE = 12/20/2019	DATE - JUL 2019	REVISED -



SCALE: 1" = 50'		SHEET 9 OF 22 SHEETS		STA. TO STA.	
OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN					

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	9
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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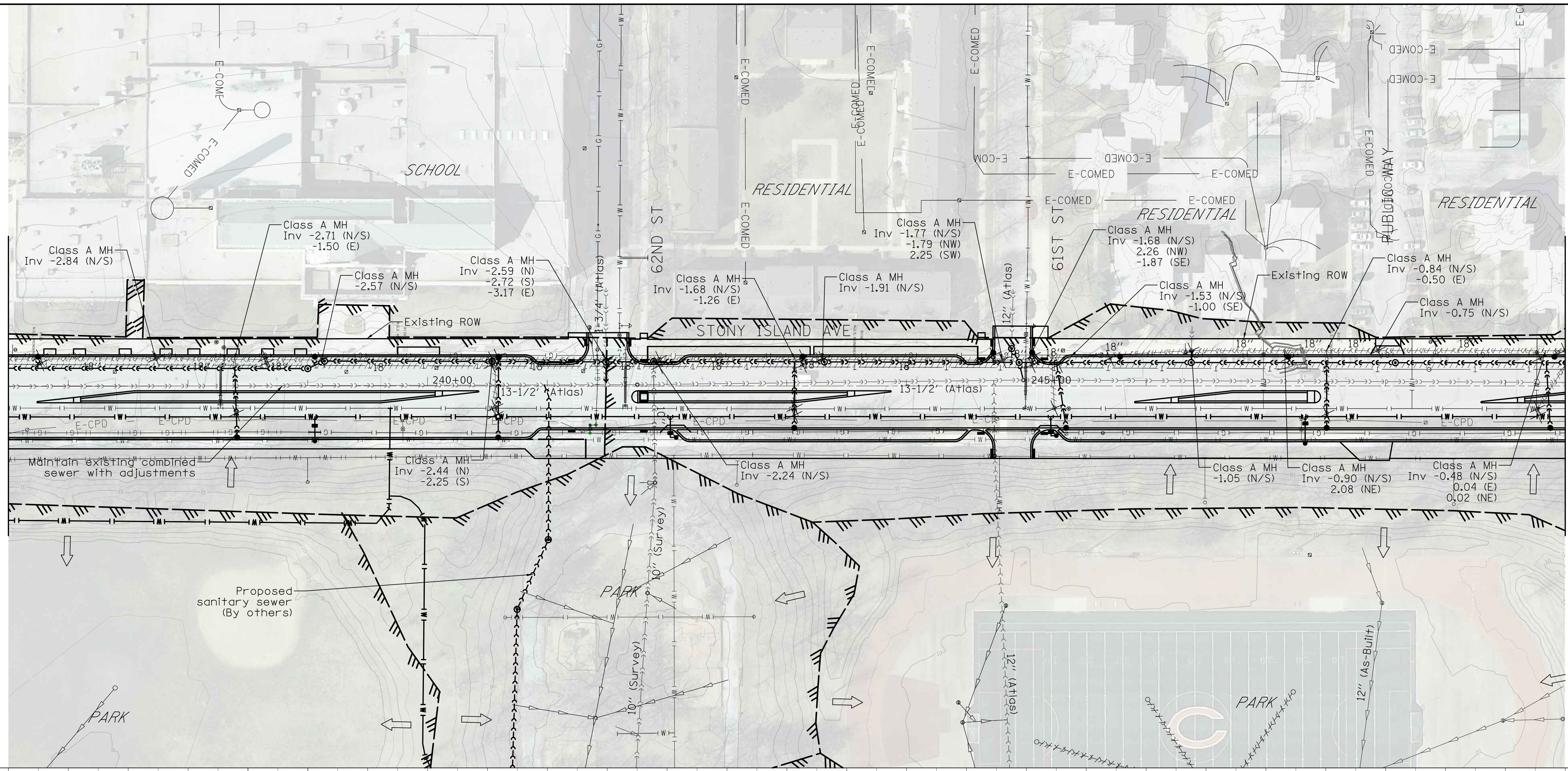
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NOTE BOOK	PLOTTED	BY
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PROFILE	SURVISED	DATE
NOTE BOOK	PLOTTED	BY
NO.	GRADES CHECKED	
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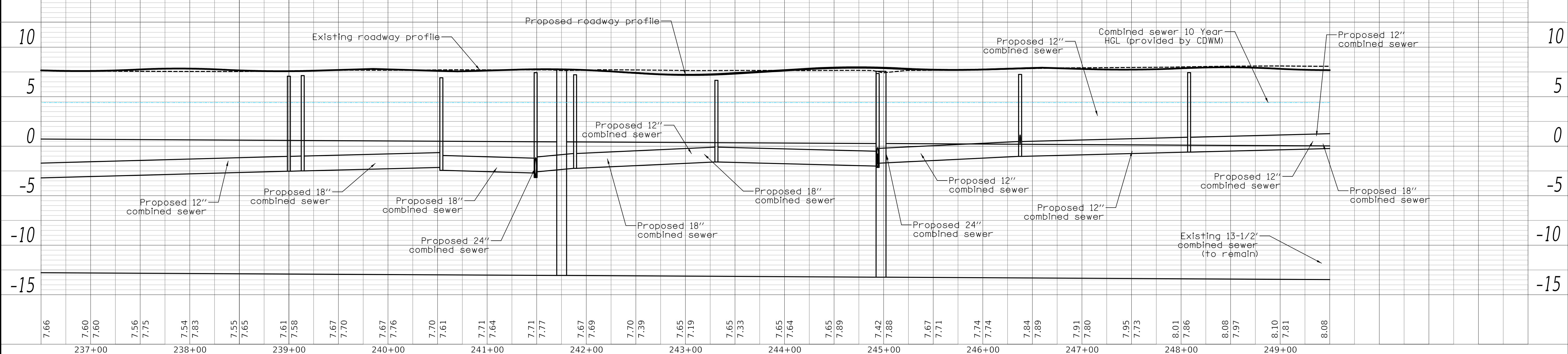
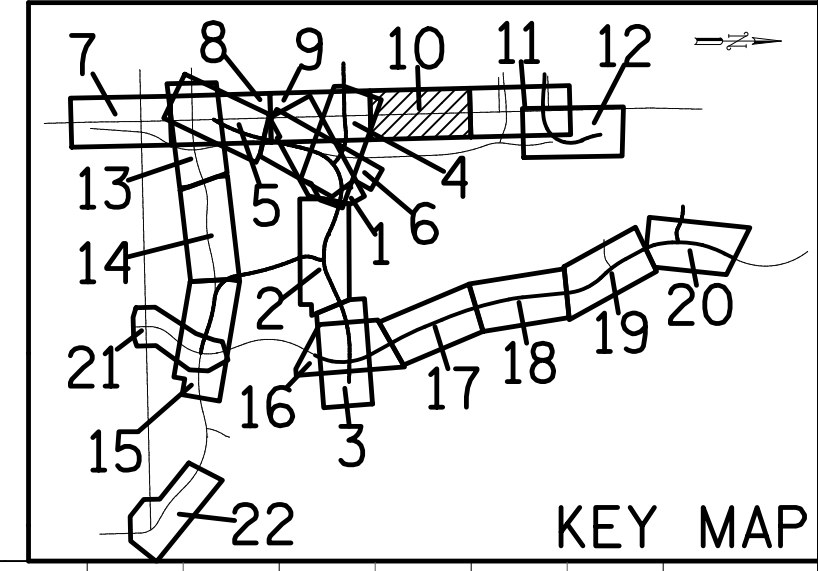
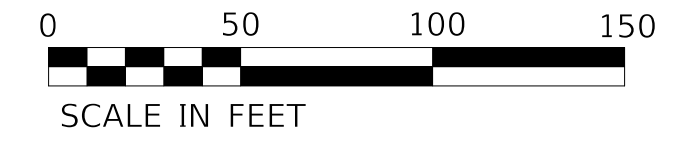
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MATCH LINE STA 236+50
(See Sheet 9)

MATCH LINE STA 249+50
(See Sheet 11)



- Note:
- All sewers on Stony Island Avenue are City of Chicago jurisdiction.
 - Stony Island will be reconstructed north of 63rd Street.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
 - All proposed storm sewers are Class A RCP unless otherwise noted



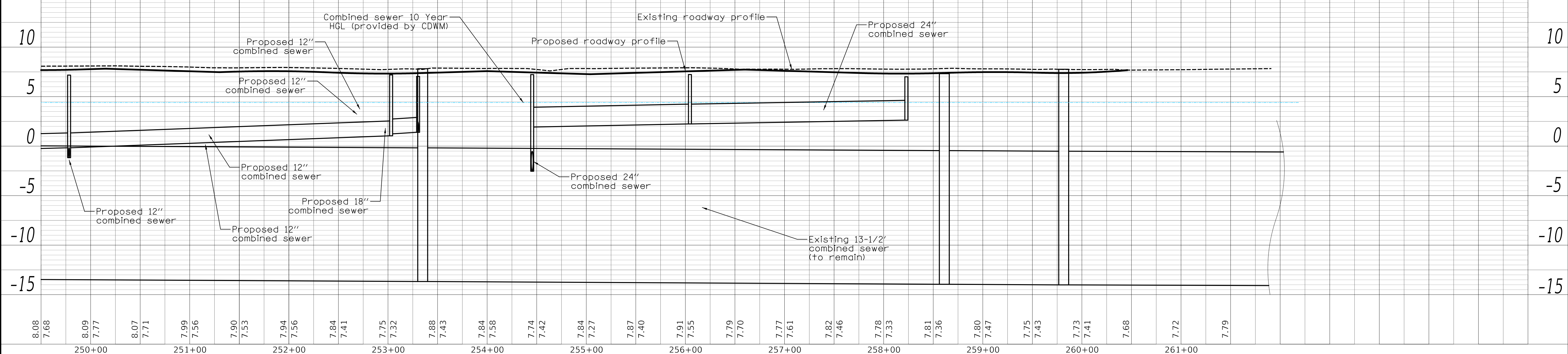
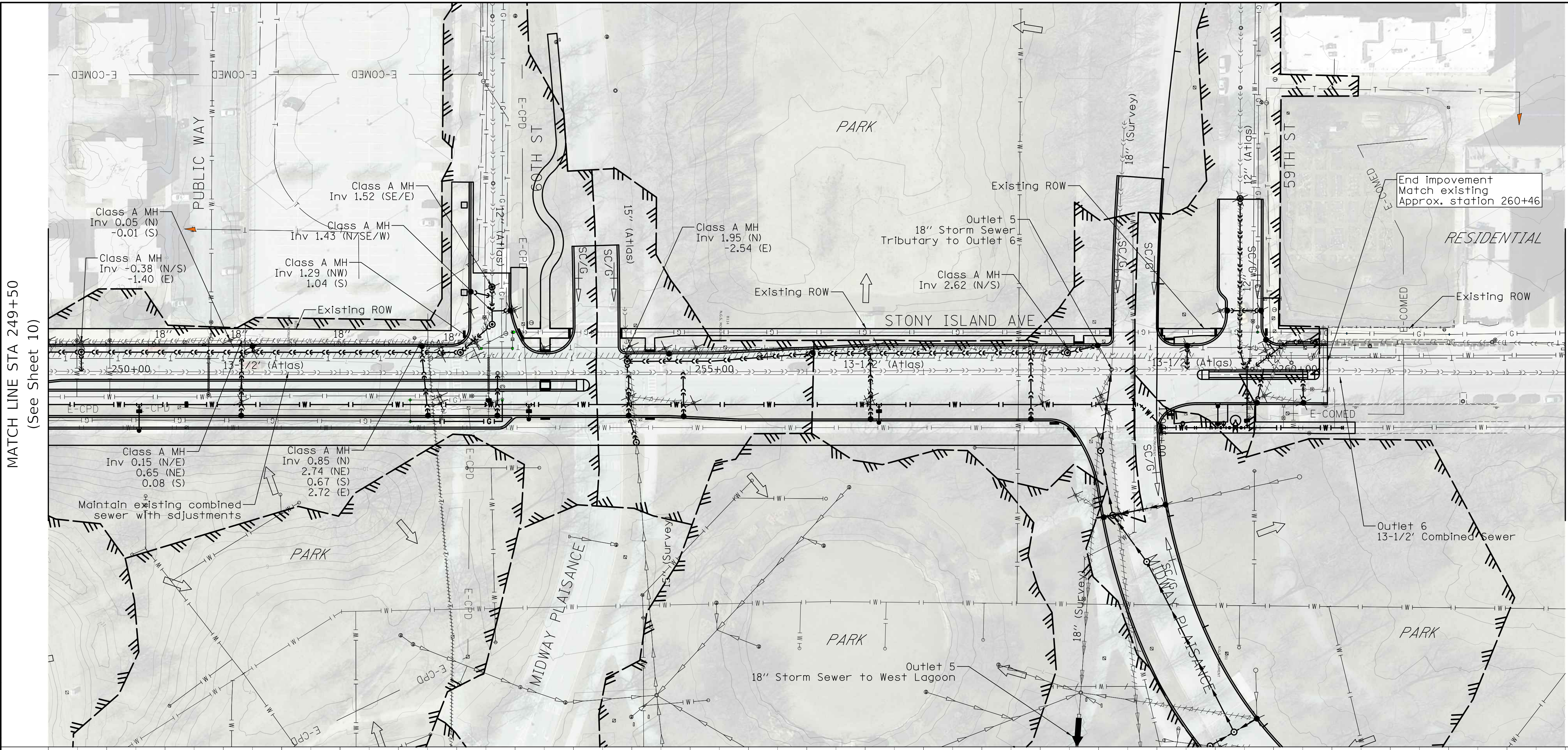
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PLOT SCALE = 50.0000' / in.	DRAWN - WAM/MSA	REVISED -		SCALE: 1" = 50'	SHEET 10 OF 22 SHEETS	STA.	17-B7203-00-ES	COOK	22	10
PLOT DATE = 12/20/2019	CHECKED - TKL	REVISED -		TO STA.			CONTRACT NO. B-7-203			
	DATE - JUL 2019	REVISED -						ILLINOIS / FED. AID PROJECT		

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PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	NO.	
	CADD FILE NAME	
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
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	NOTE BOOK	
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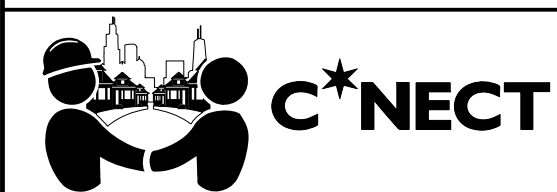
- Outlets 7 and 8, are tributary to Outlet 6.
- All sewers shown on this sheet are City of Chicago jurisdiction.
- All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
- Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
- All proposed storm sewers are Class A RCP unless otherwise noted

End Improvement Match existing Approx. station 260+46

SCALE IN FEET

KEY MAP

8.08 7.68	8.09 7.77	8.07 7.71	7.99 7.56	7.90 7.53	7.94 7.56	7.84 7.41	7.75 7.32	7.88 7.43	7.84 7.58	7.74 7.42	7.84 7.27	7.87 7.40	7.91 7.55	7.79 7.70	7.77 7.61	7.82 7.46	7.78 7.33	7.81 7.36	7.80 7.47	7.75 7.43	7.73 7.41	7.68	7.72	7.79	
250+00	251+00	252+00	253+00	254+00	255+00	256+00	257+00	258+00	259+00	260+00	261+00														



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CHECKED -	TKL
DATE -	JUL 2019
PLOT SCALE =	50.0000' / in.
PLOT DATE =	12/20/2019

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OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN			
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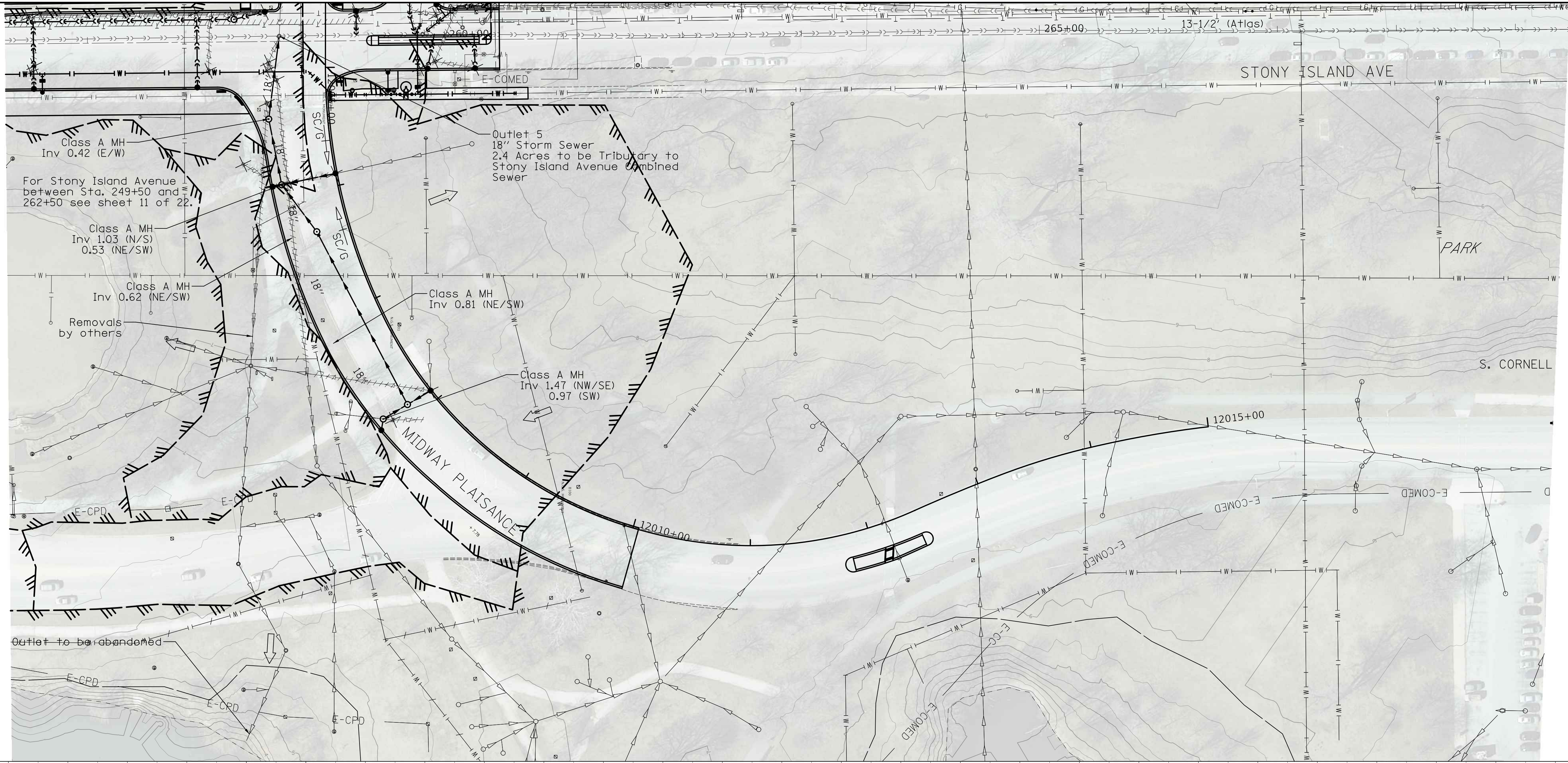
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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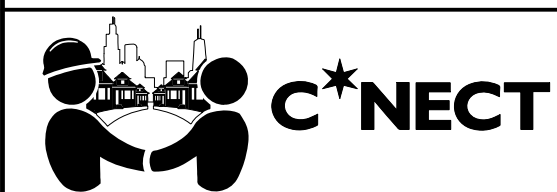
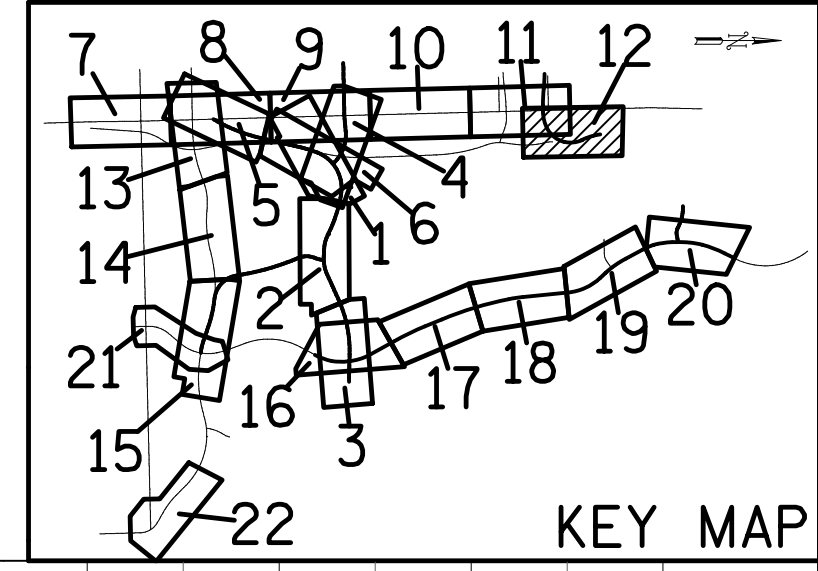
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	PLOTTED	
	GRADES CHECKED	
	NOTE BOOK	
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MODEL: SPODELNAMES
FILE NAME: ...DSUPDR3153_rdp_sht12.dgn



- Note:
1. All sewers shown on this sheet are City of Chicago Jurisdiction.
 2. No proposed drainage improvements on this sheet.
 3. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 4. All proposed storm sewers are Class A RCP unless otherwise noted



USER NAME = untitled	DESIGNED - SDRN_DES	REVISED -
PLOT SCALE = 50.0000' / in.	DRAWN - SDRN_DRA	REVISED -
PLOT DATE = 12/20/2019	CHECKED - SDRN_PM	REVISED -
	DATE - SDATE	REVISED -



OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 12 OF 22 SHEETS	STA.	TO STA.

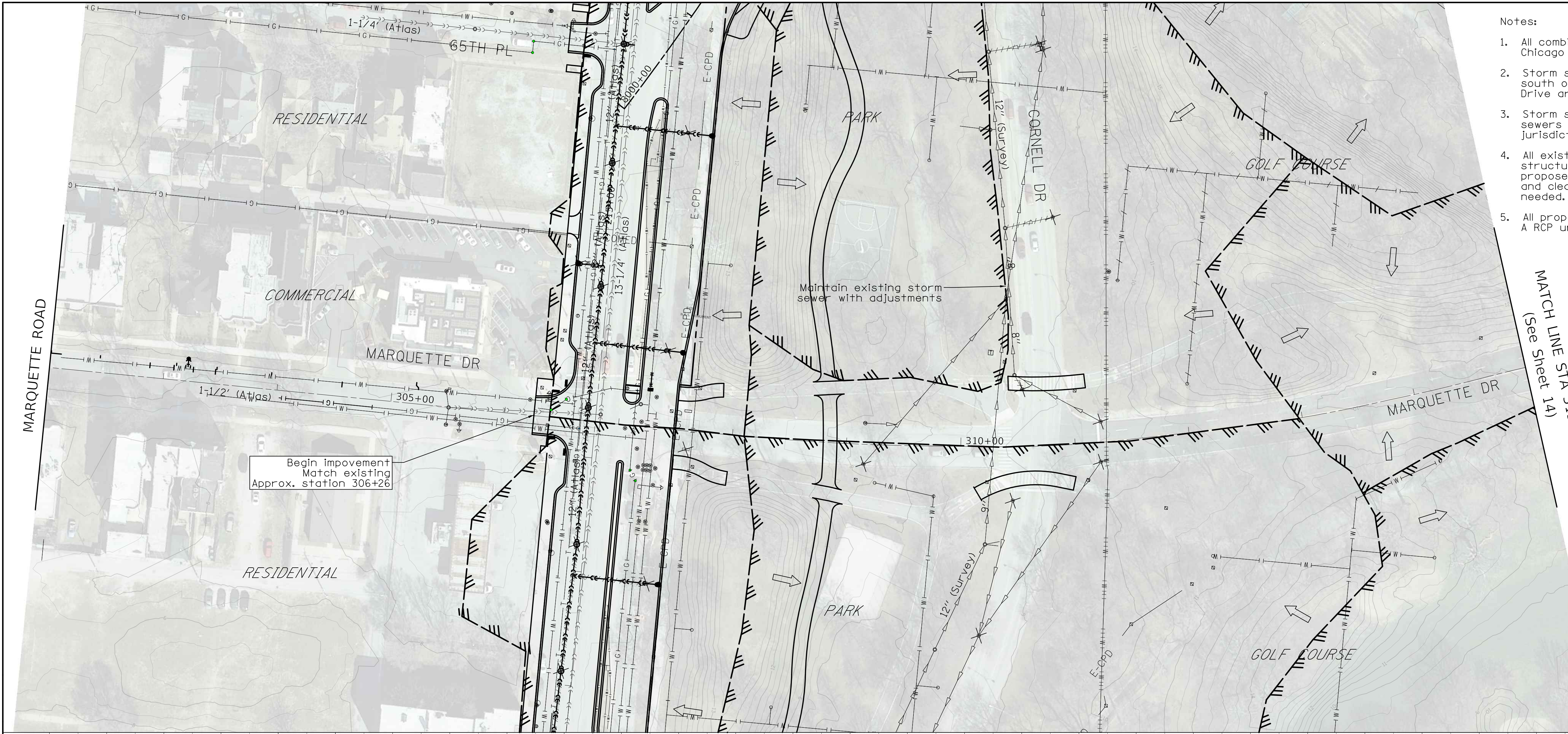
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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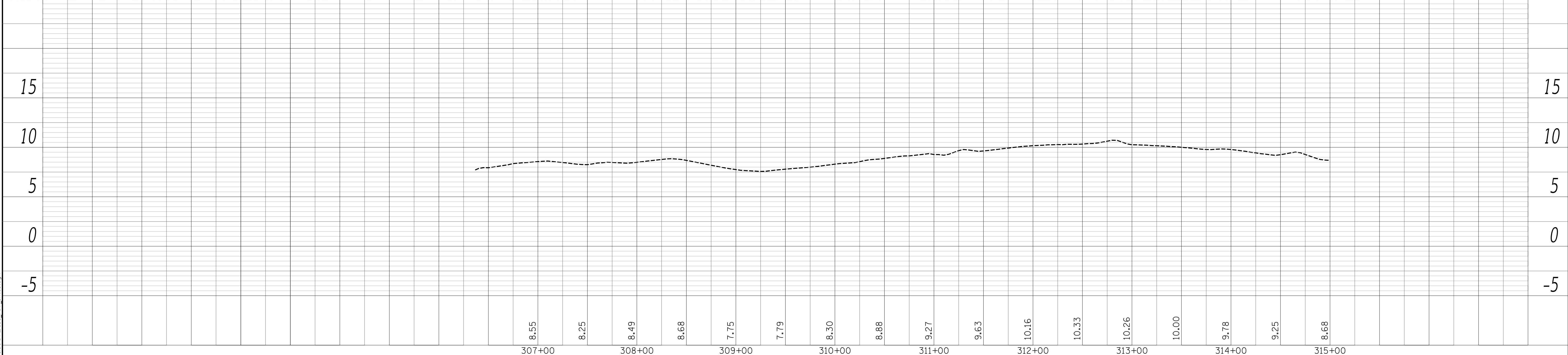
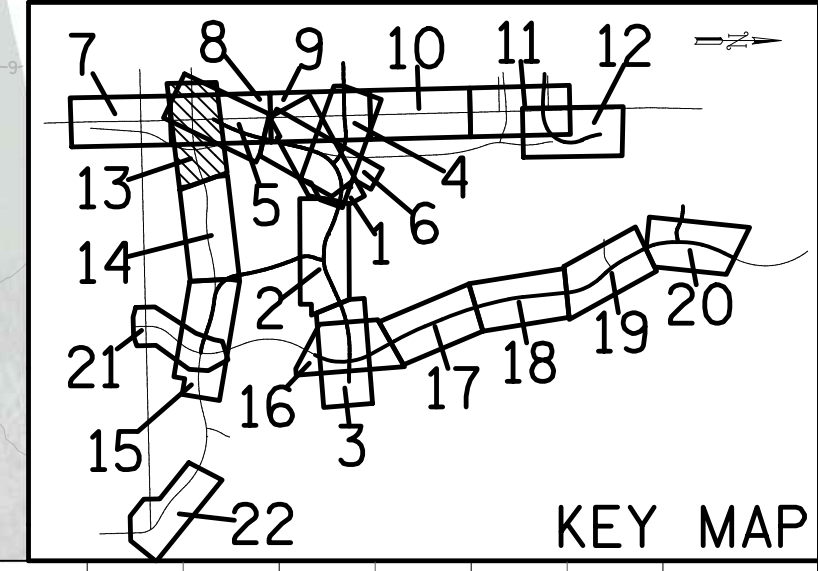
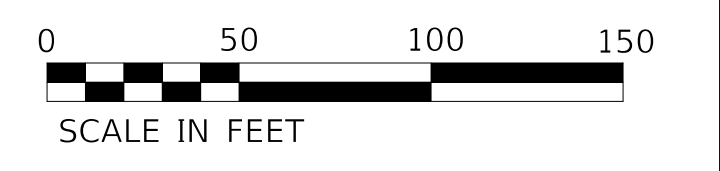
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	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATIONS CHECKED	

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- Notes:
1. All combined sewers are City of Chicago jurisdiction.
 2. Storm sewer on Stony Island Avenue south of 65th Place and on Cornell Drive are IDOT jurisdiction.
 3. Storm sewer on Marquette Drive sewers are City of Chicago jurisdiction.
 4. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 5. All proposed storm sewers are Class A RCP unless otherwise noted

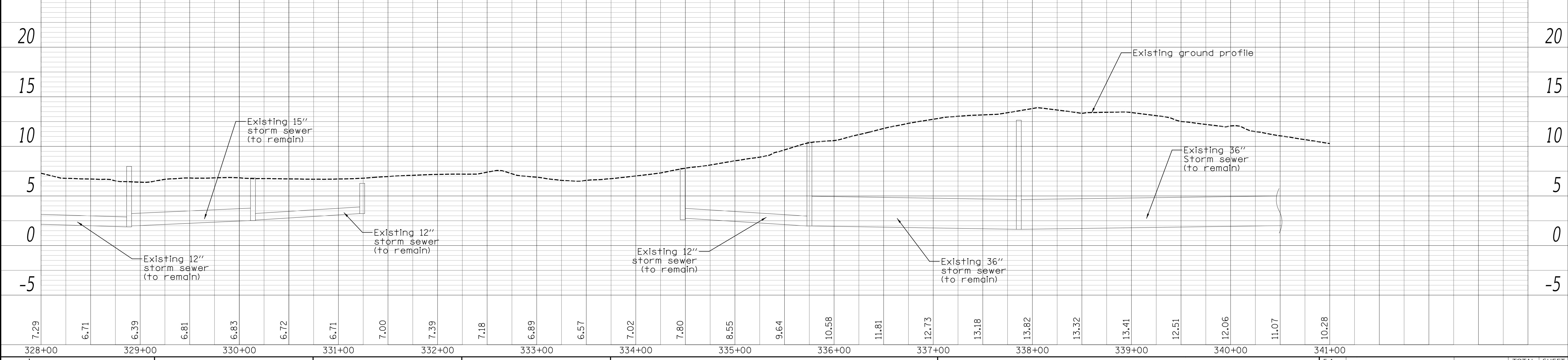
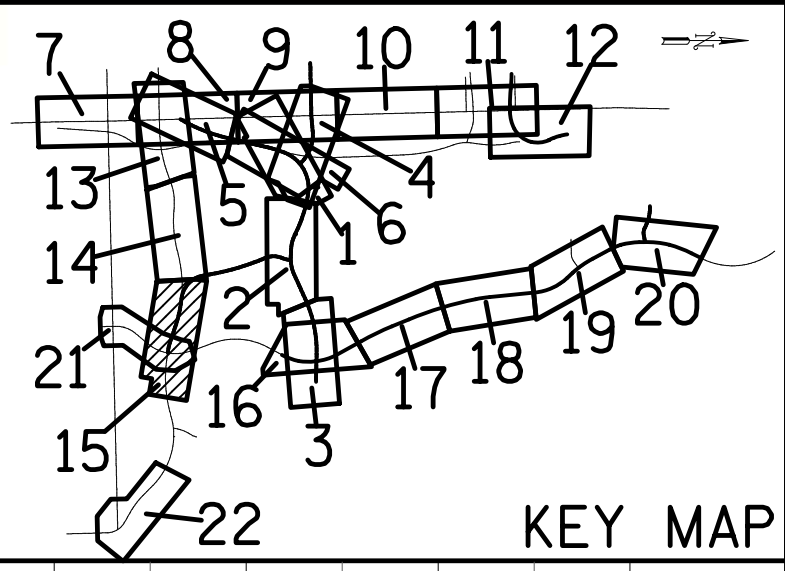
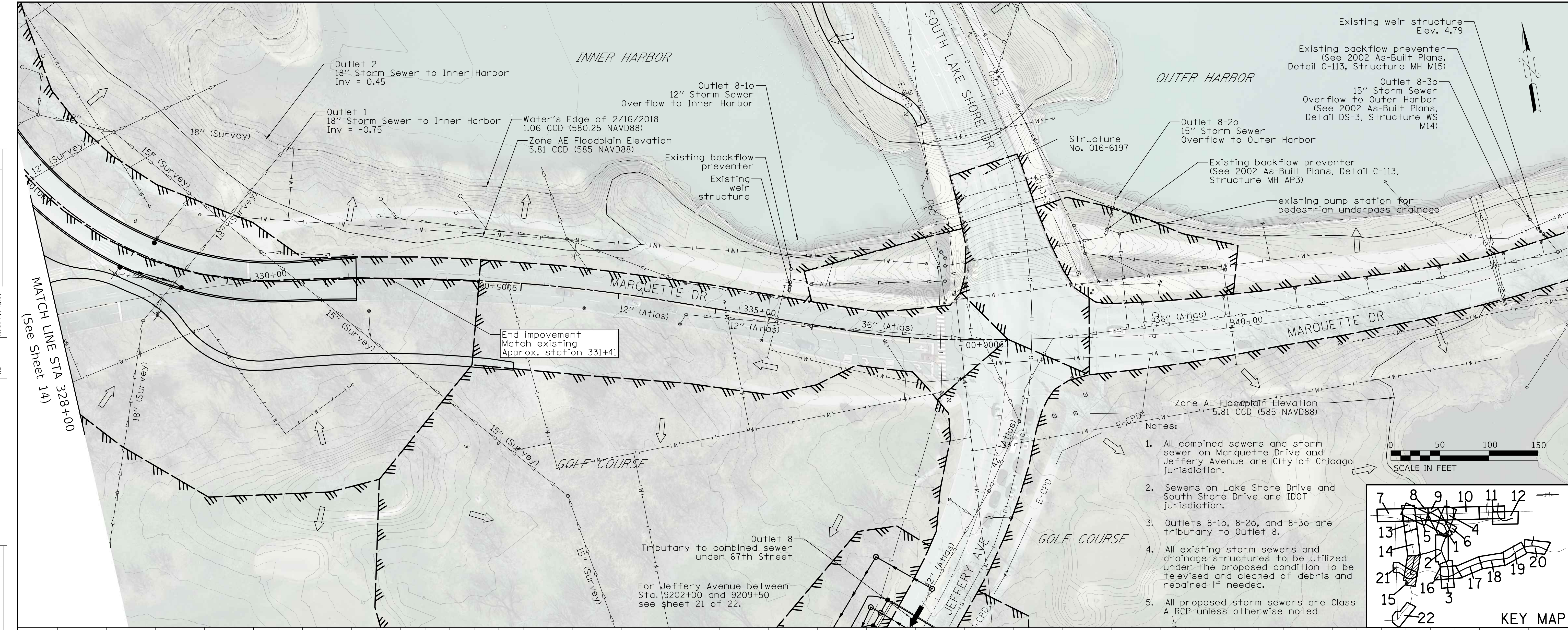


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	PLOT SCALE = 50.0000' / in.	CHECKED - TKL	REVISED -				17-B7203-00-ES	COOK	22	13	
	PLOT DATE = 12/20/2019	DATE - JUL 2019	REVISED -			SCALE: 1" = 50'	SHEET 13 OF 22 SHEETS	STA.	TO STA.	CONTRACT NO. B-7-203	
										ILLINOIS FED. AID PROJECT	

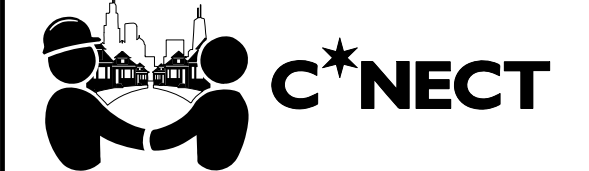
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DESIGNED -	MSA
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CHECKED -	TKL
DATE -	JUL 2019
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PLOT DATE =	12/20/2019

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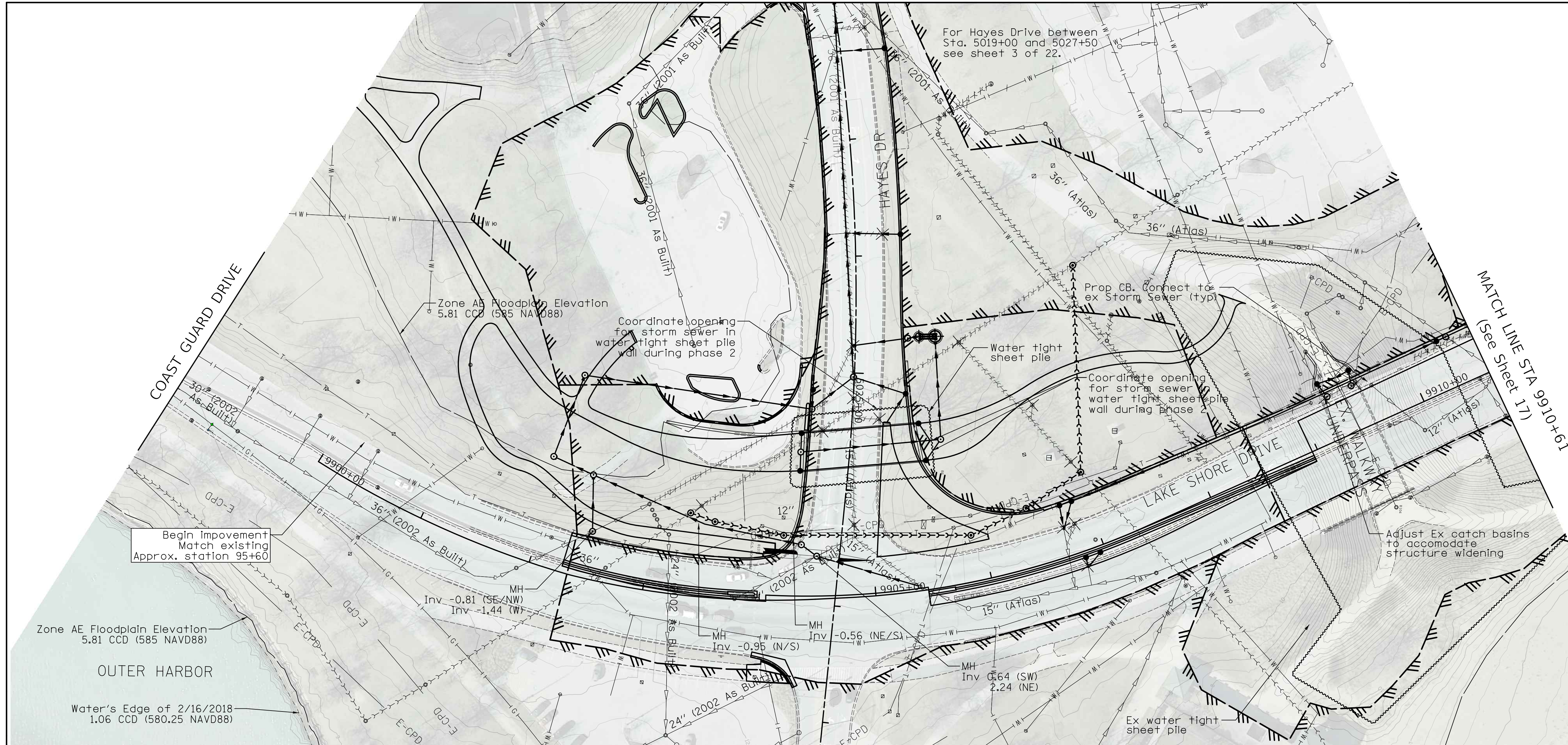
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SCALE: 1" = 50'	SHEET 15	OF 22 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	15
CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				

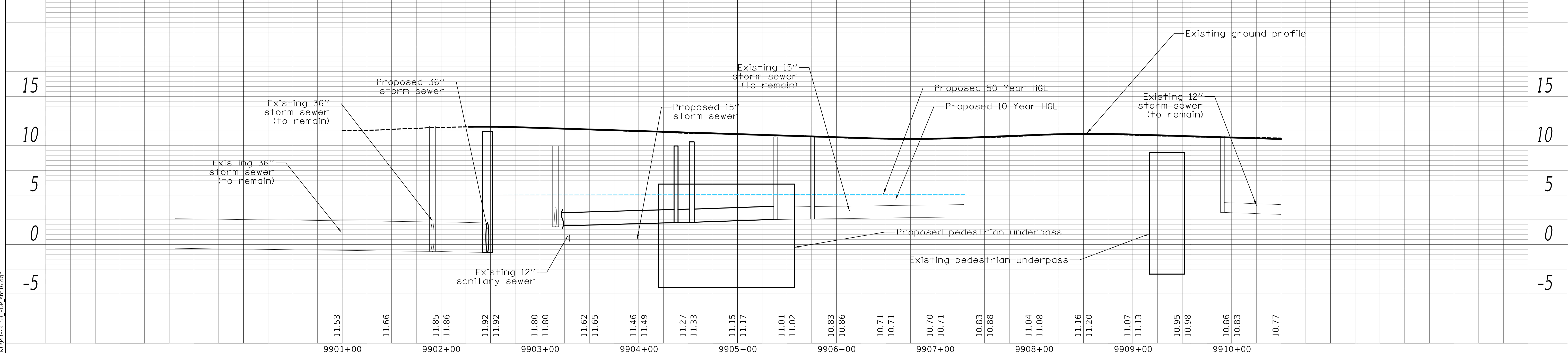
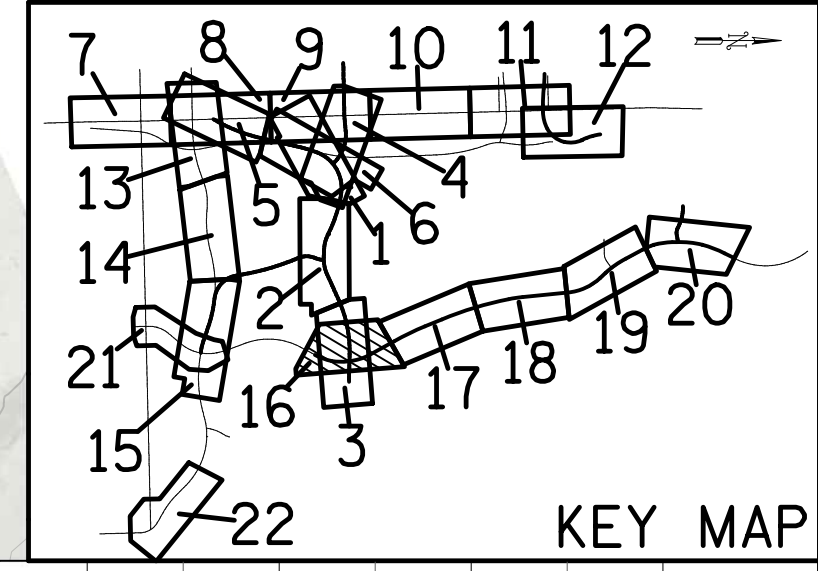
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	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATION CHECKED	



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. All sewers on Hayes Drive are City of Chicago jurisdiction.
 3. The "2001 As-Built" referenced on storm sewer line work is the 2001 South Lake Shore Drive Contract 1 - Advance Work As-Built.
 4. The "2002 As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 5. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 6. All proposed storm sewers are Class A RCP unless otherwise noted



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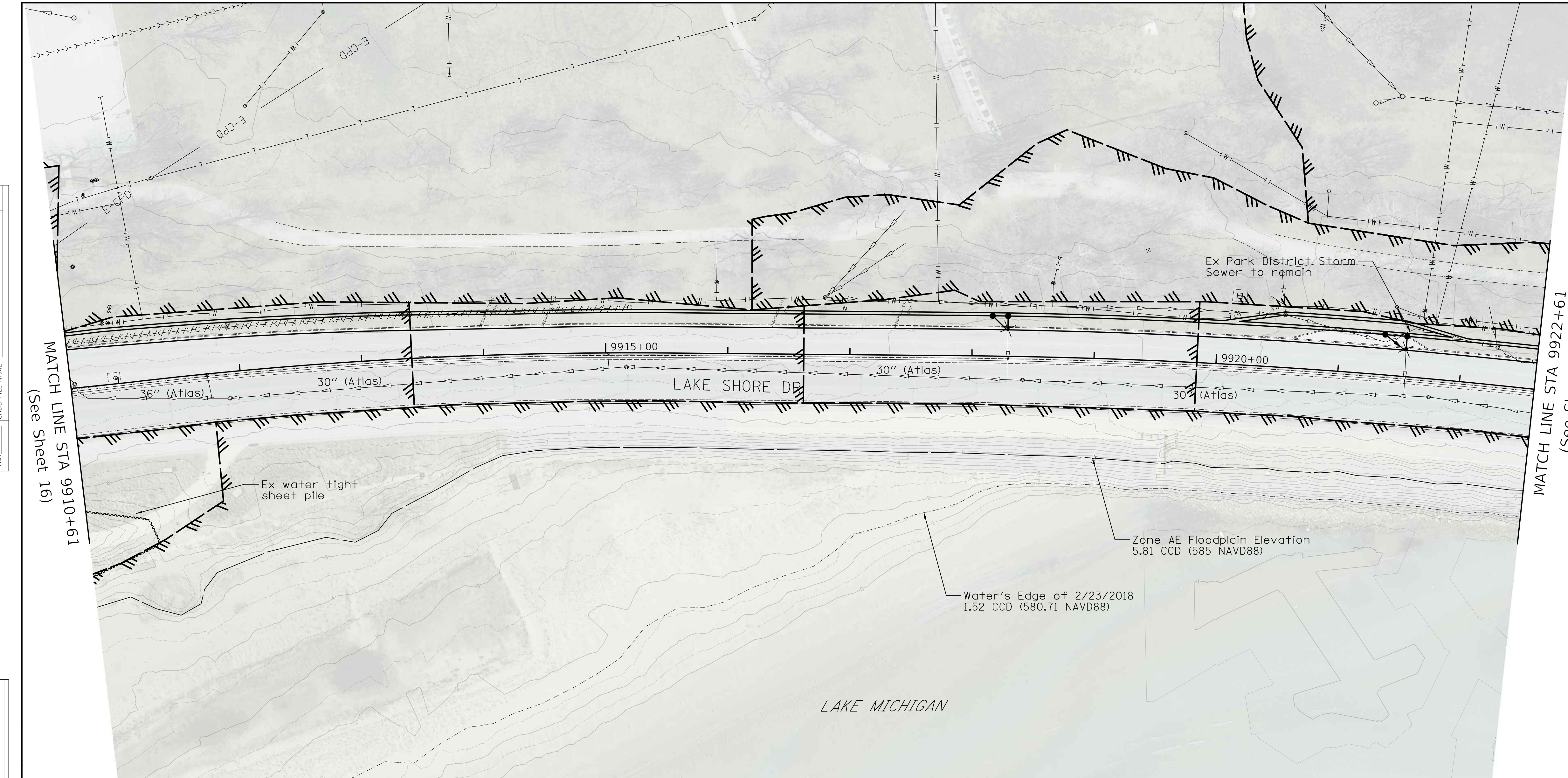
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SCALE: 1" = 50'	SHEET 16	OF 22 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	16
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

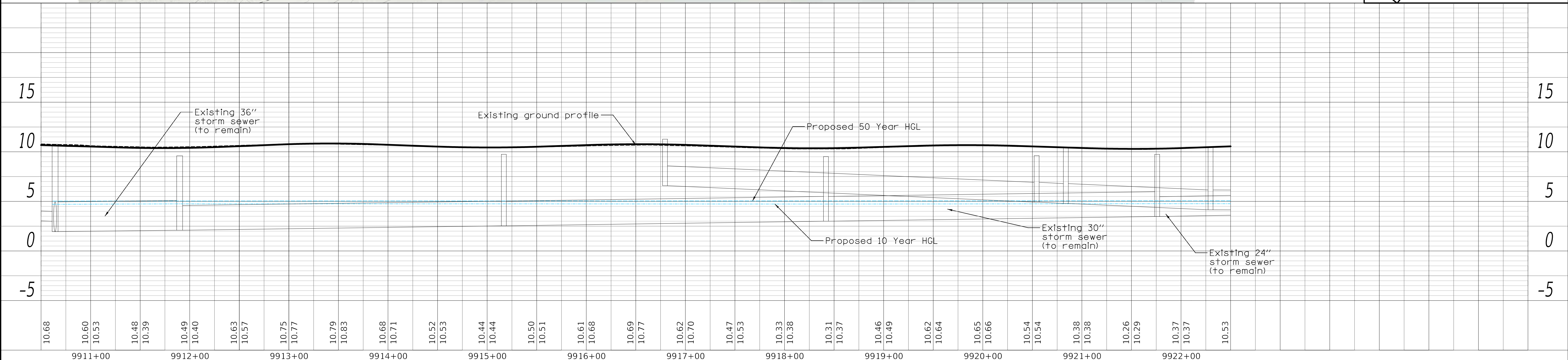
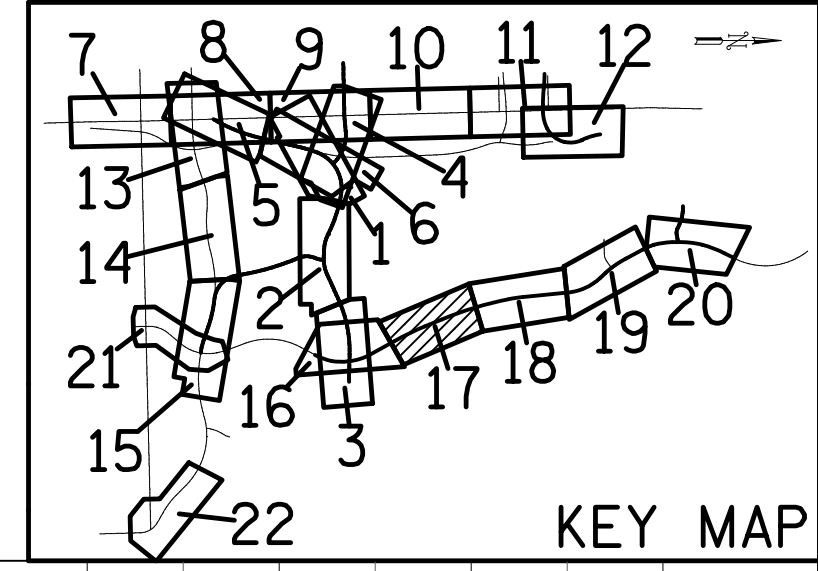
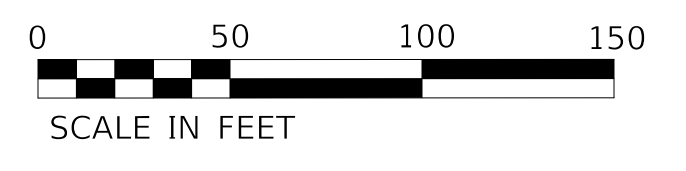
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	GRADES CHECKED	
	NOTE BOOK	
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	STRUCTURE NOTATION	



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. Sewers that drain Jackson Park are Chicago Park District jurisdiction.
 3. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 4. All proposed storm sewers are Class A RCP unless otherwise noted



MODEL: SPODELNAMES
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DESIGNED -	MSA	REVISIONS	
DRAWN -	WAM/MSA	NO.	
CHECKED -	TKL	DESCRIPTION	
DATE -	JUL 2019	DATE	



OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 17	OF 22 SHEETS	STA. TO STA.

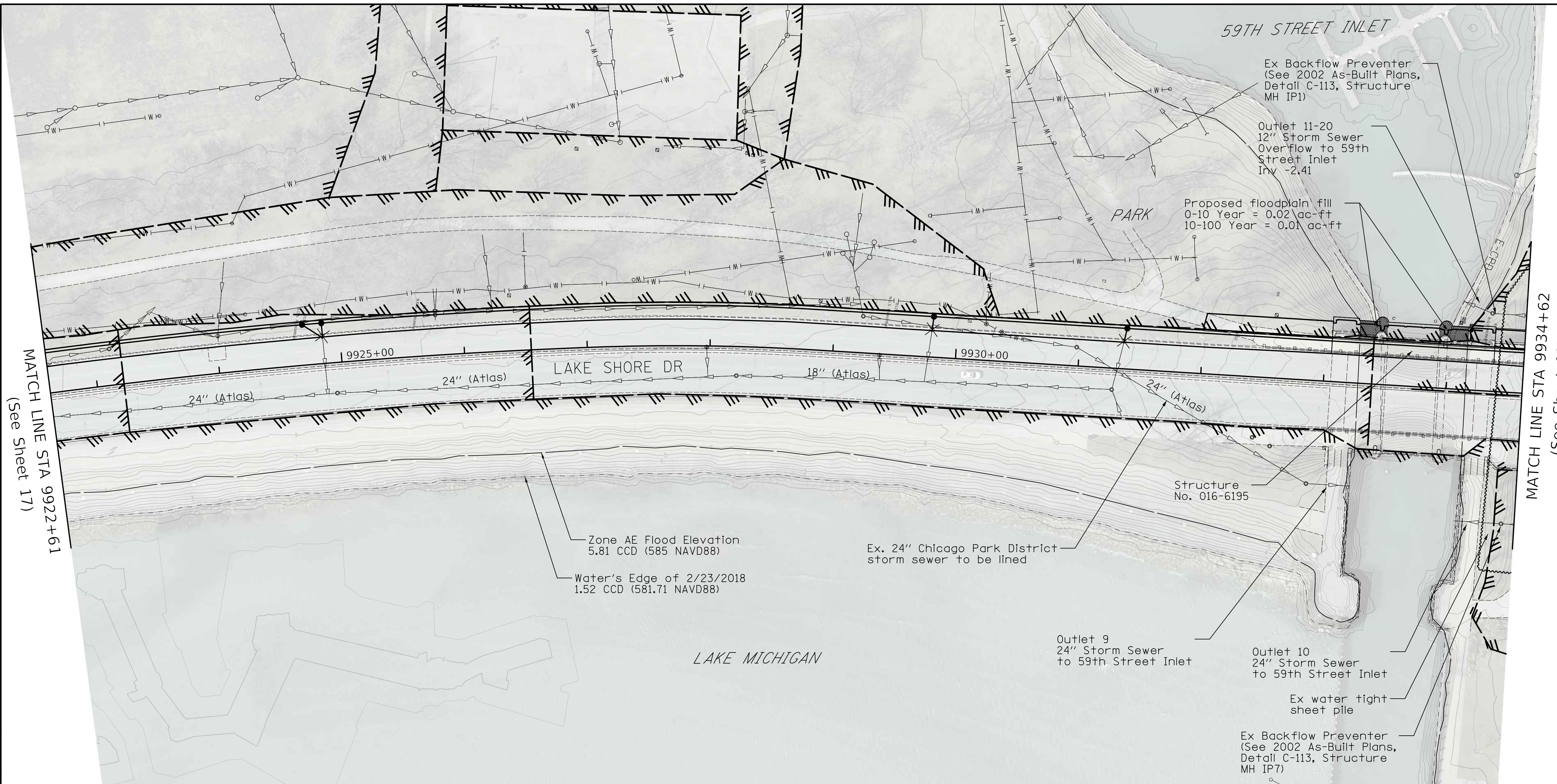
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CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				

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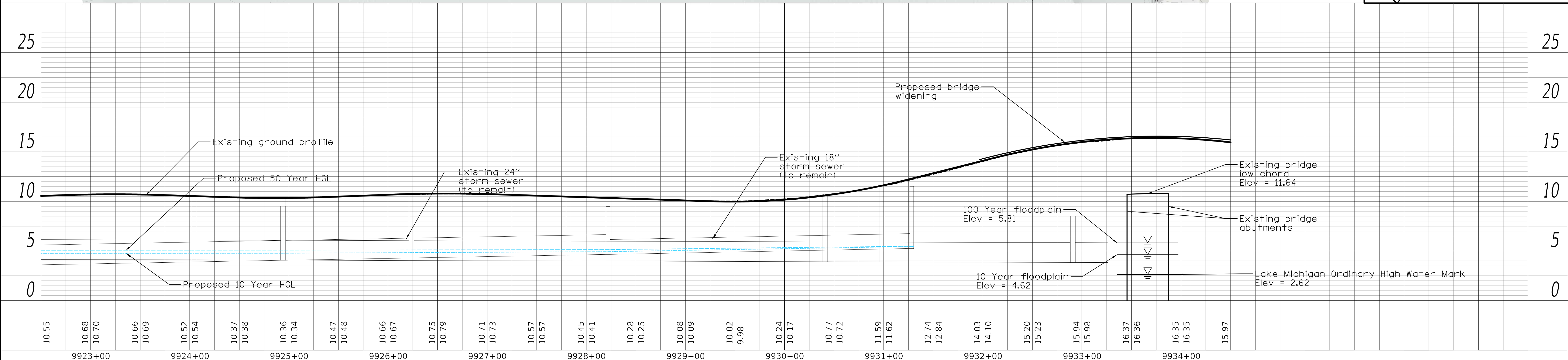
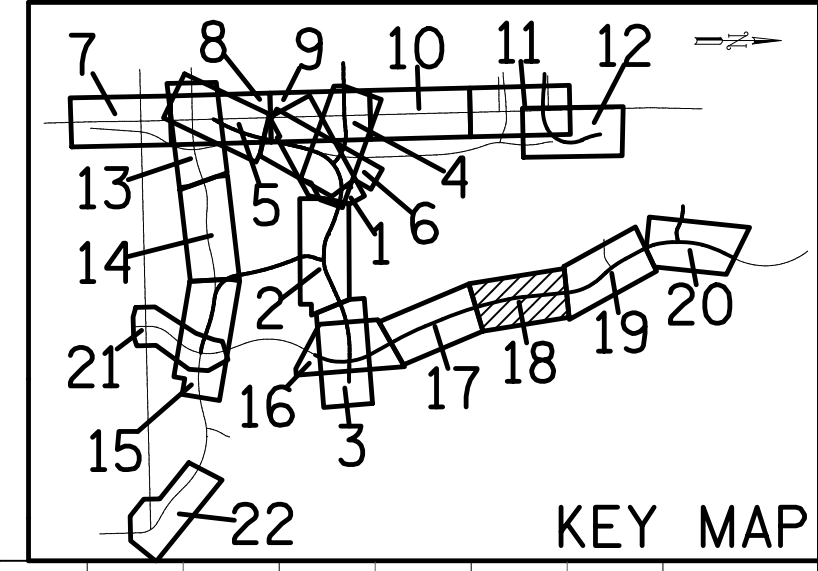
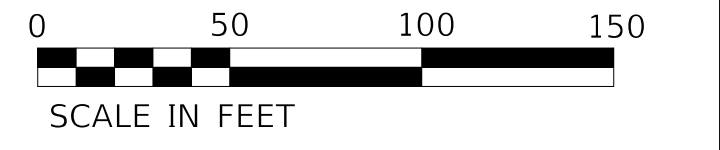
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	STRUCTURE NOTATIONS CHECKED	

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- Notes:
- All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 - Sewers that drain Jackson Park are Chicago Park District jurisdiction.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - All proposed storm sewers are Class A RCP unless otherwise noted



	USER NAME = untitled	DESIGNED - MSA	REVISED -		CHICAGO DEPARTMENT OF TRANSPORTATION	OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	DATE - JUL 2019	REVISED -	ILLINOIS / FED. AID PROJECT										

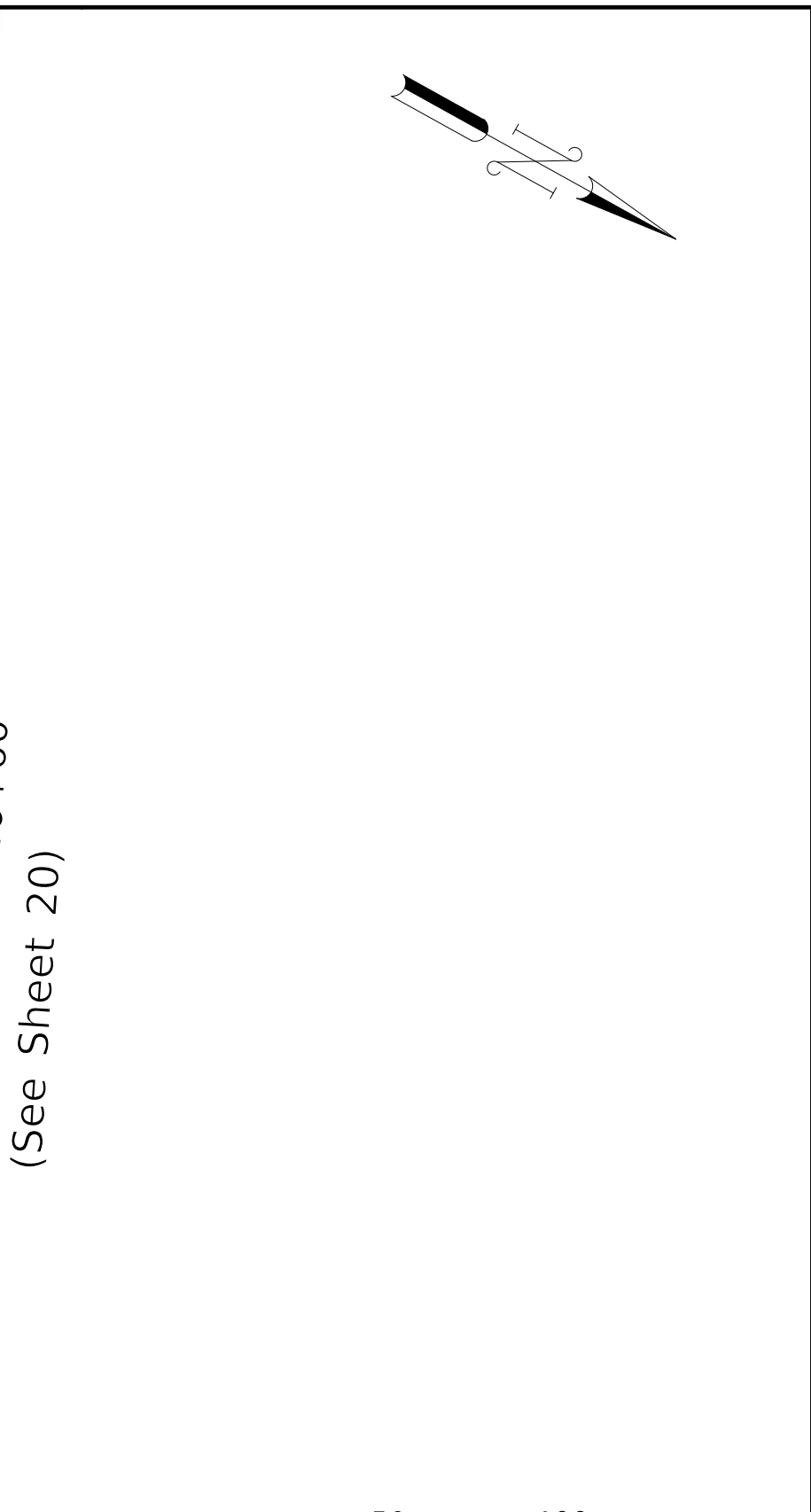
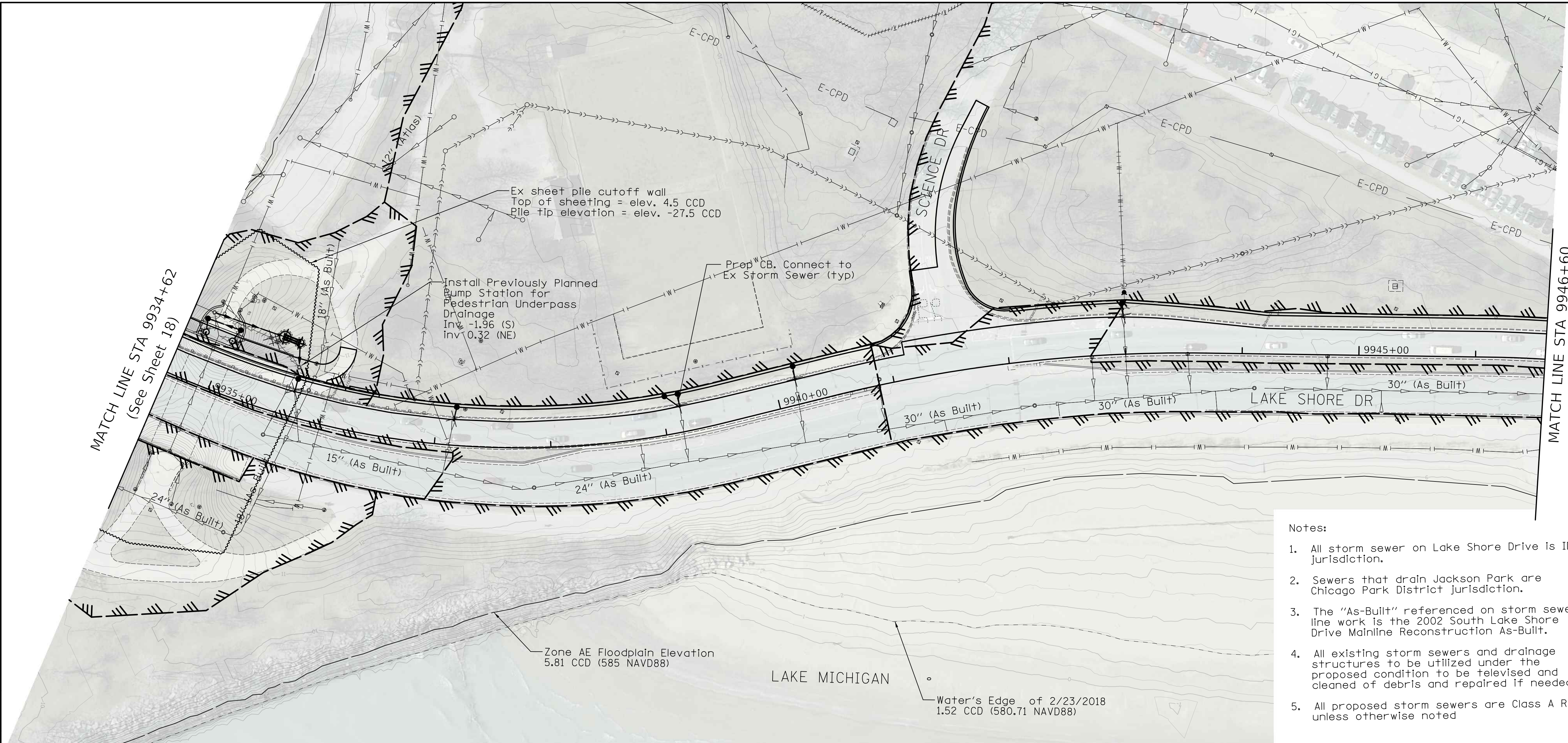
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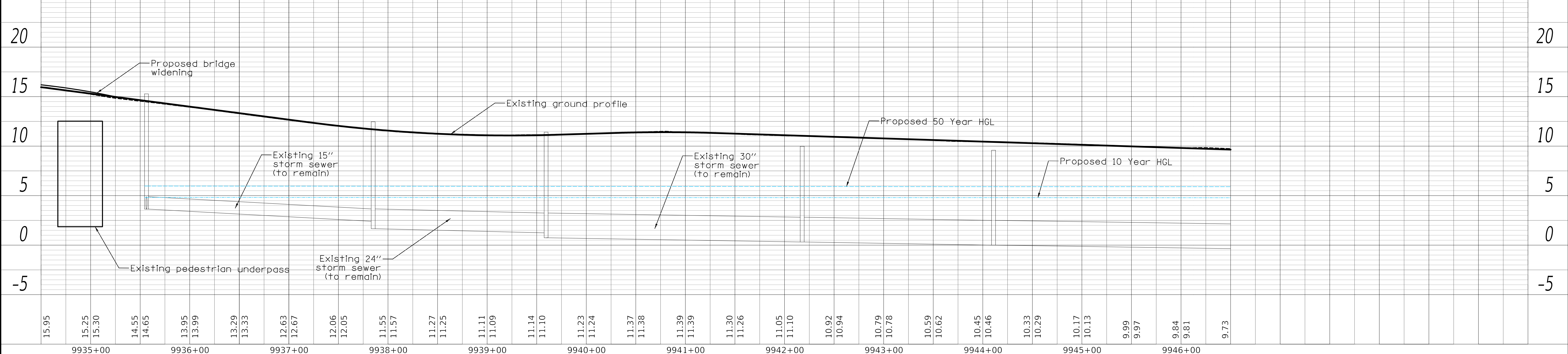
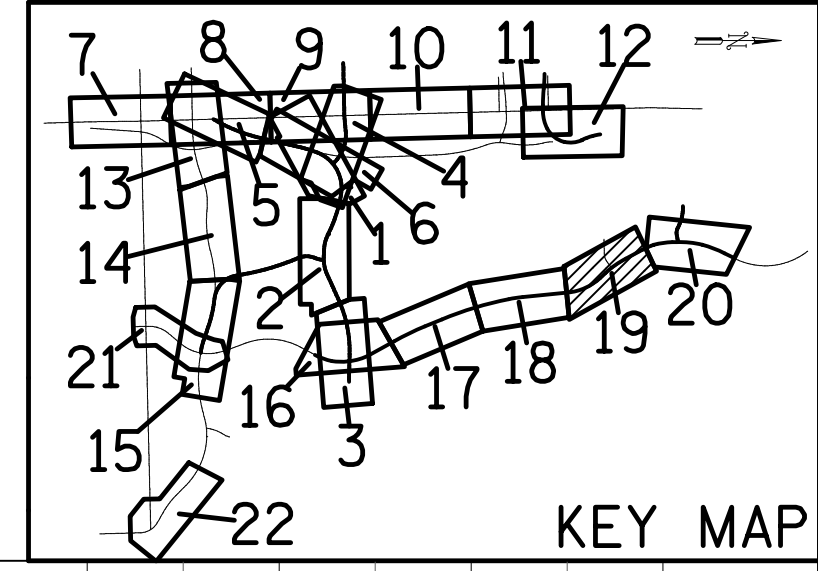
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	NOTE BOOK	
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	STRUCTURE NOTATION CHPKD	

MODEL: SHIDELNAMES
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- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. Sewers that drain Jackson Park are Chicago Park District jurisdiction.
 3. The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 4. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 5. All proposed storm sewers are Class A RCP unless otherwise noted



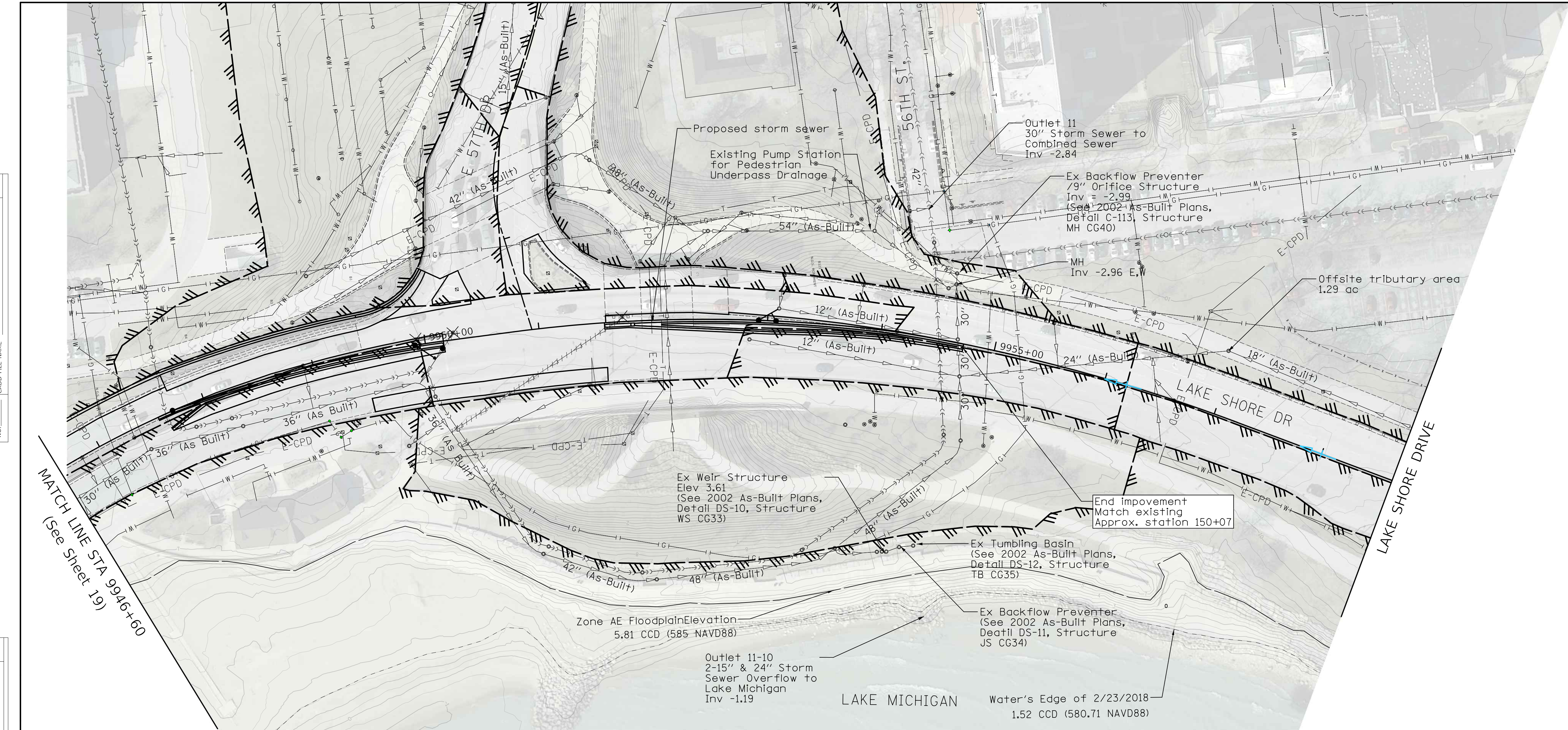
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SCALE: 1" = 50' SHEET 19 OF 22 SHEETS STA. TO STA.

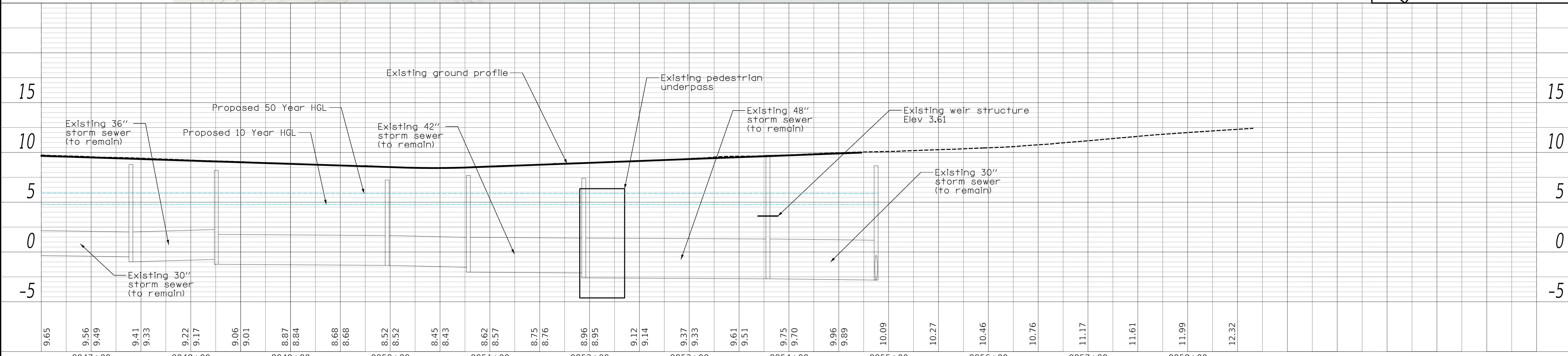
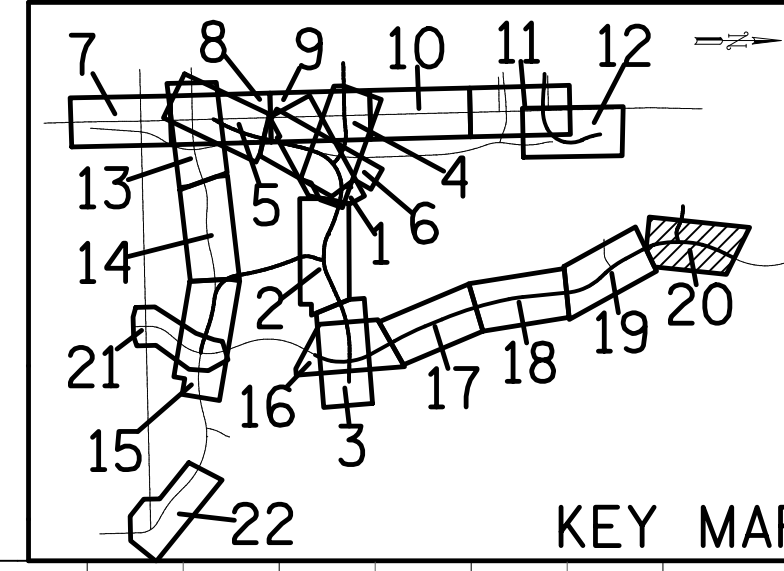
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	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATIONS CHECKED	
	NO.	



- Notes:
- All storm sewer on Lake Shore Drive and 57th Drive is IDOT jurisdiction.
 - All combined sewers on this sheet are City of Chicago jurisdiction.
 - "Tributary Area" of Outlet 11 includes storm sewer overflow areas from Outlets 11-10 and 11-20.
 - The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - All proposed storm sewers are Class A RCP unless otherwise noted



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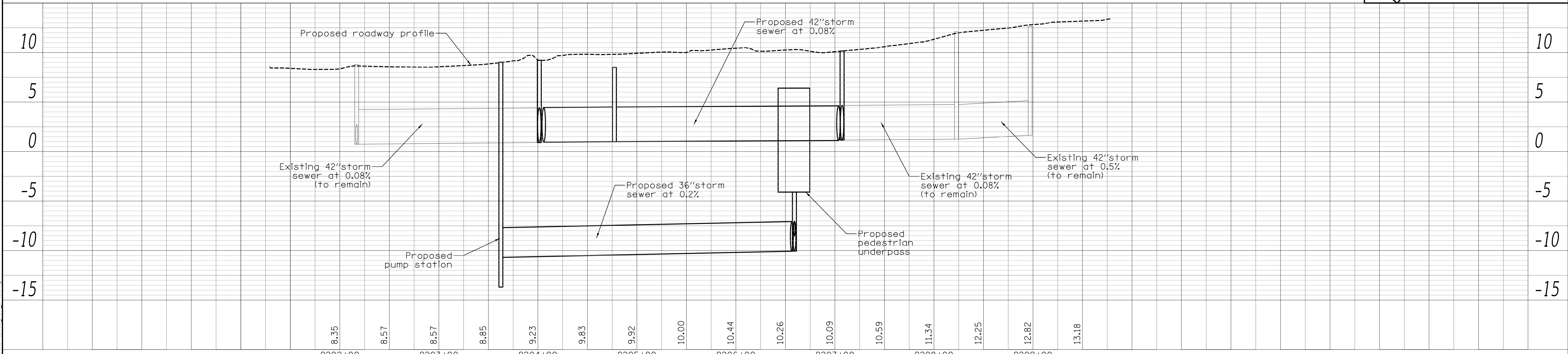
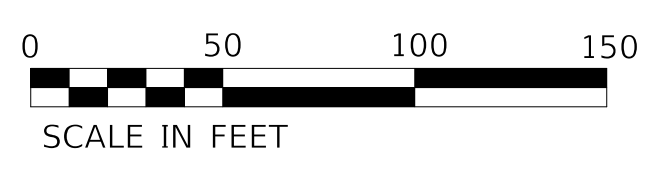
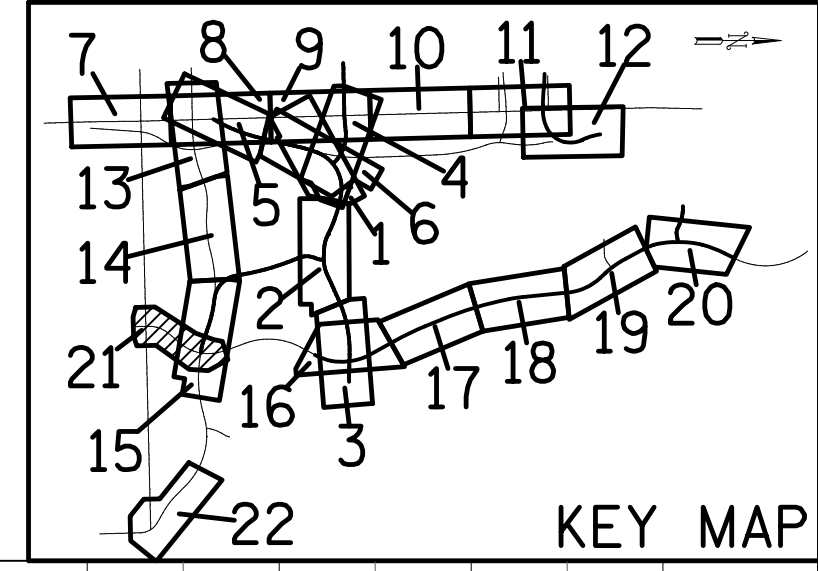
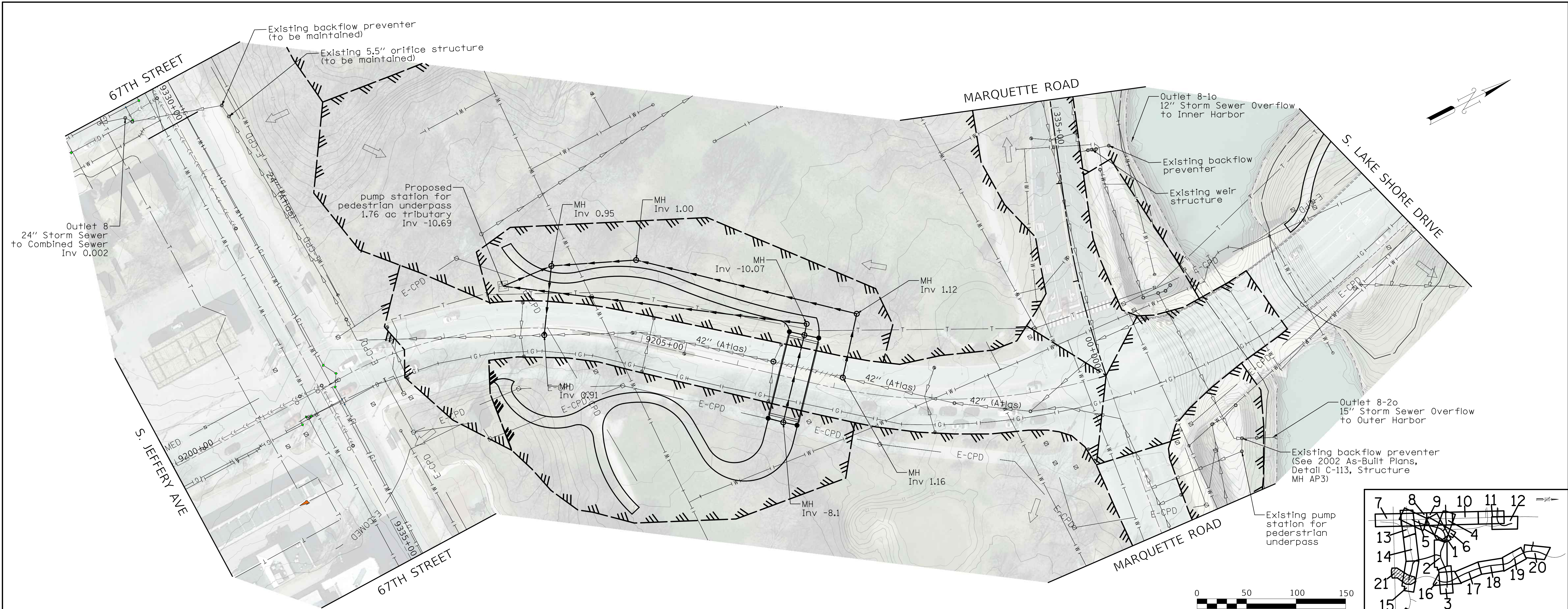
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	PLOT DATE = 12/20/2019	CHECKED - TKL	REVISED -					ILLINOIS FED. AID PROJECT
	DATE - JUL 2019	REVISOR -	REVISED -					

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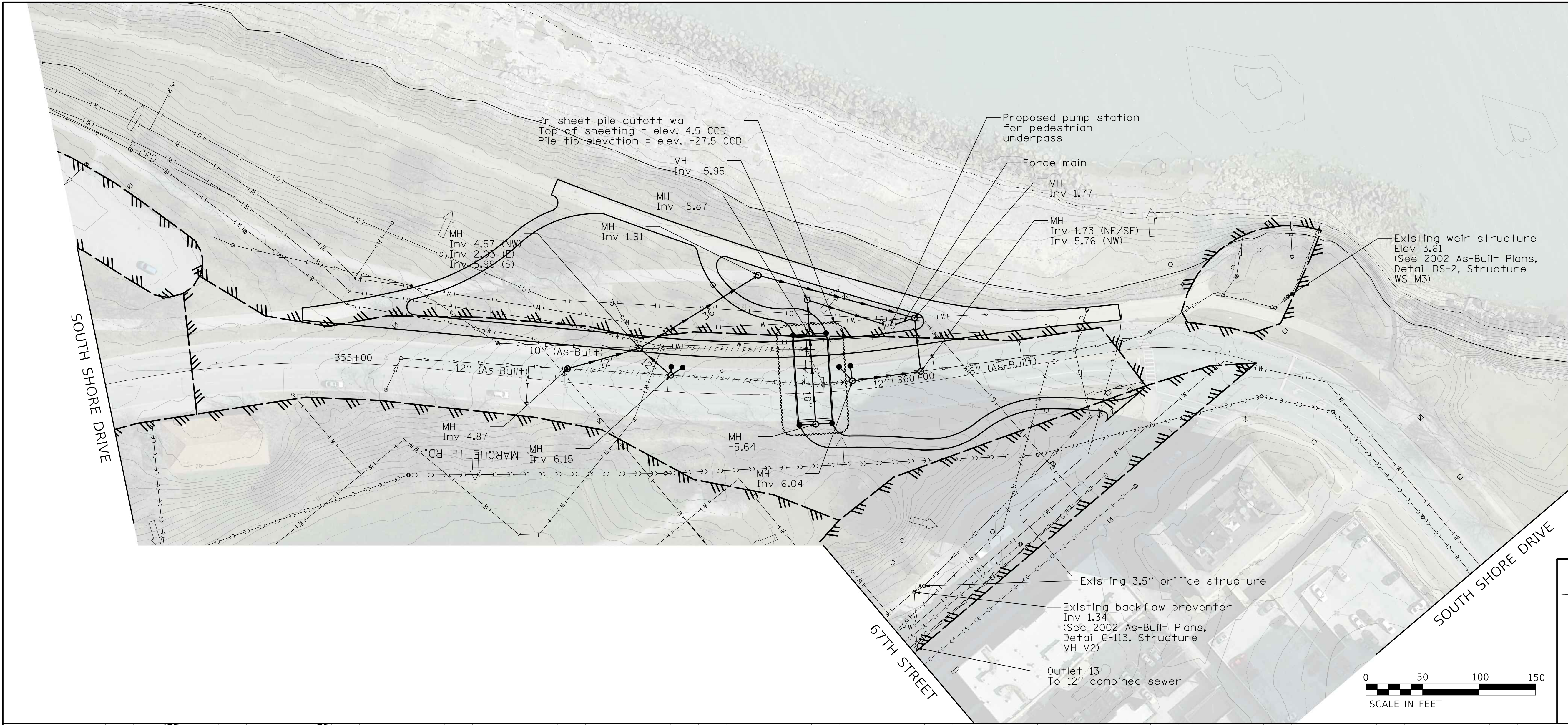
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	PLOT DATE = 12/20/2019	CHECKED - TKL	REVISED -		SCALE: 1" = 50'	SHEET 21 OF 22 SHEETS	STA. TO STA.
		DATE - JUL 2019	REVISED -		F.A. RTE.	SECTION 17-B7203-00-ES	COUNTY COOK
						CONTRACT NO. B-7-203	ILLINOIS FED. AID PROJECT

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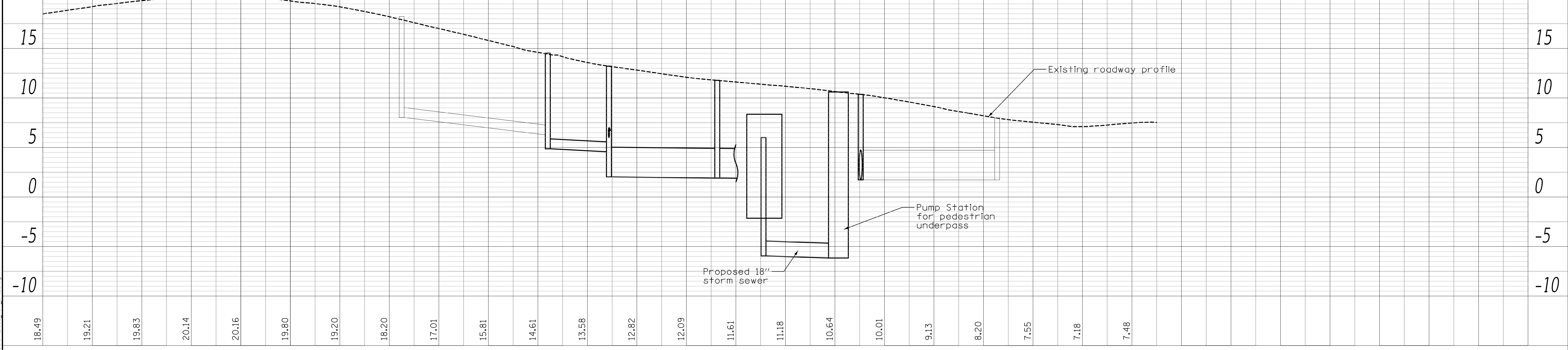
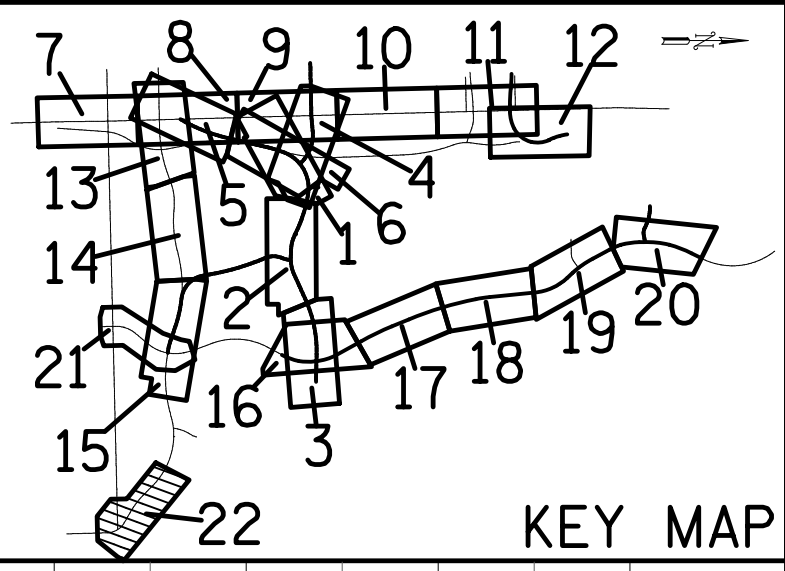
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	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATION CHECKED	

MODEL: SHIDELNAMES
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- Notes:
1. All combined sewers on this sheet are City of Chicago jurisdiction.
 2. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 3. All proposed storm sewers are Class A RCP unless otherwise noted

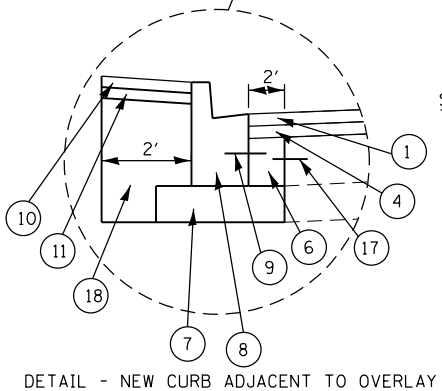
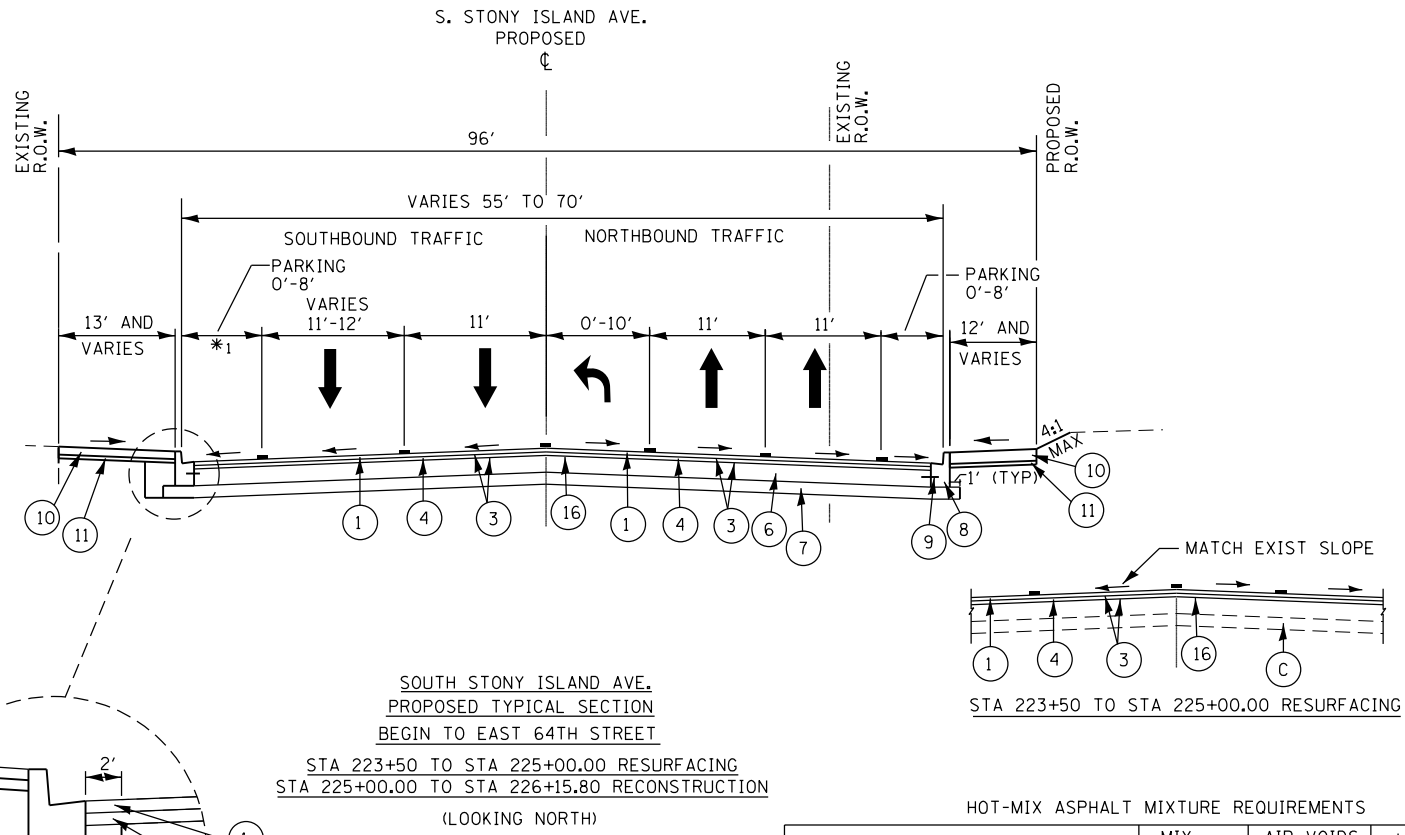
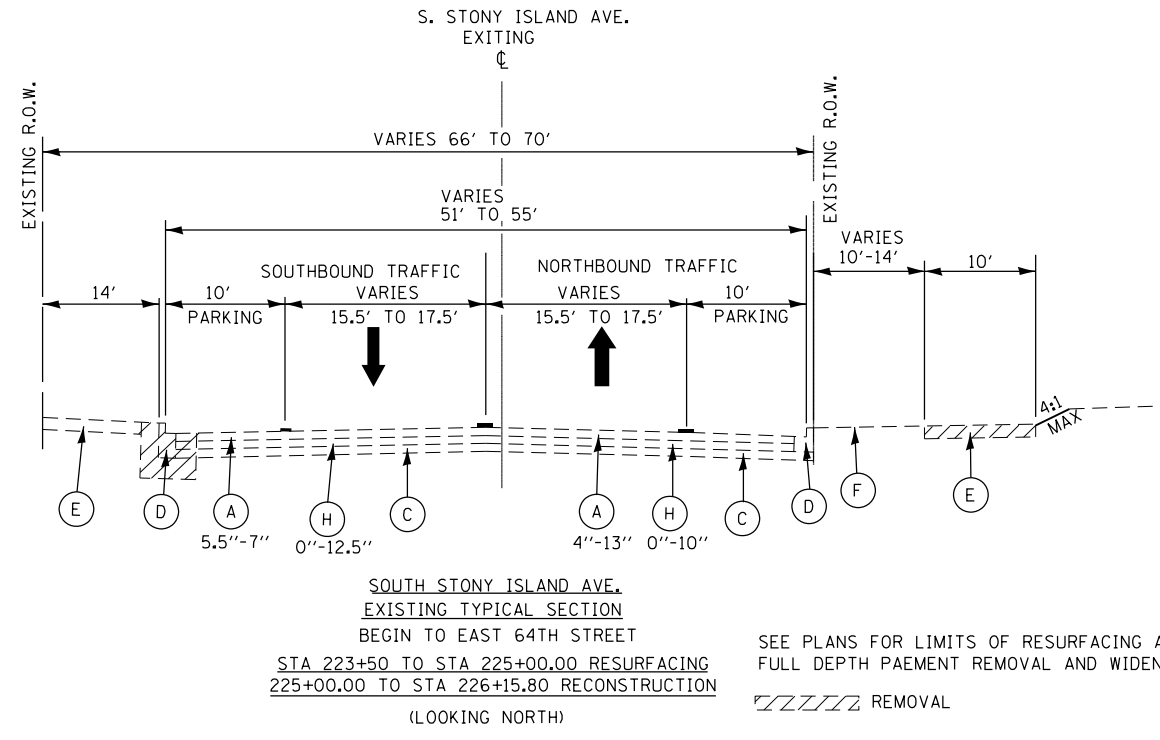


USER NAME = untitled	DESIGNED - MSA	REVISED -
PLOT SCALE = 50.0000' / in.	DRAWN - WAM/MSA	REVISED -
PLOT DATE = 12/20/2019	CHECKED - TKL	REVISED -
	DATE - JUL 2019	REVISED -



OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 22 OF 22 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	22
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



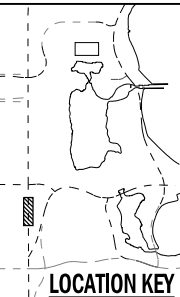
HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ n _{des}	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			

- LEGEND:**
- EXISTING**
- (A) ASPHALT
 - (B) TRACK ZONE
 - (C) SUB BASE GRANULAR MATERIAL
 - (D) COMBINATION CONCRETE CURB AND GUTTER
 - (E) P.C. CONCRETE SIDEWALK
 - (F) EXISTING PARKWAY/LANDSCAPING
 - (G) CONCRETE/LANDSCAPE MEDIAN
 - (H) P.C. CONCRETE BASE
- PROPOSED**
- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
 - (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
 - (3) BITUMINOUS MATERIALS PRIME COAT
 - (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
 - (5) RETAINING WALL, SEE STRUCTURAL PLANS
 - (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
 - (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
 - (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
 - (9) #5 TIE BAR
 - (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
 - (11) SAND CUSHION, VARIABLE DEPTH
 - (12) UNIT PAVER
 - (13) CURB ATTACHED TO CONCRETE SIDEWALK
 - (14) PARKWAY, SEE LANDSCAPE PLANS
 - (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
 - (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
 - (17) DRILL AND GROUT BARS (AT 30" CENTERS)
 - (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

- NOTES:**
- TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
 - TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
 - SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
 - POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
 - TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
 - LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
 - AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
 - ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
 - SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

PLOT DATE: 5/20/2019
 PLOT SCALE: 1/8"=1'-0"
 PROJECT: CHICAGO DEPARTMENT OF TRANSPORTATION PROJECT 3151 (CAD SHEETS) TYPICAL XS (SHEET) 54



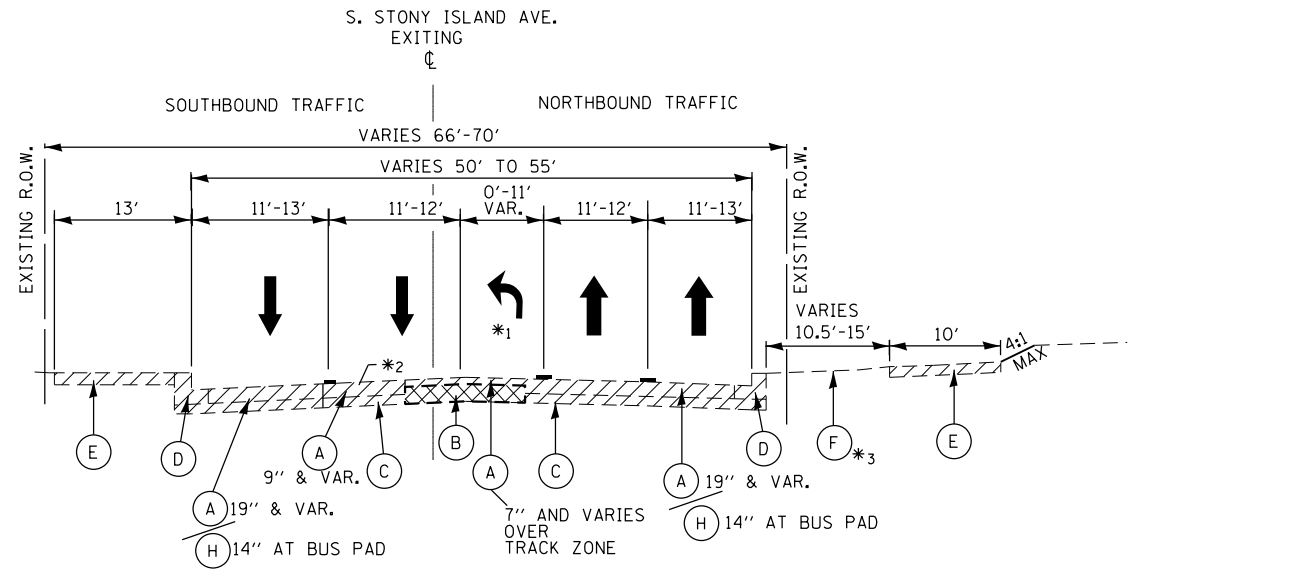
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DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



**TYPICAL SECTIONS
S. STONY ISLAND AVE.**

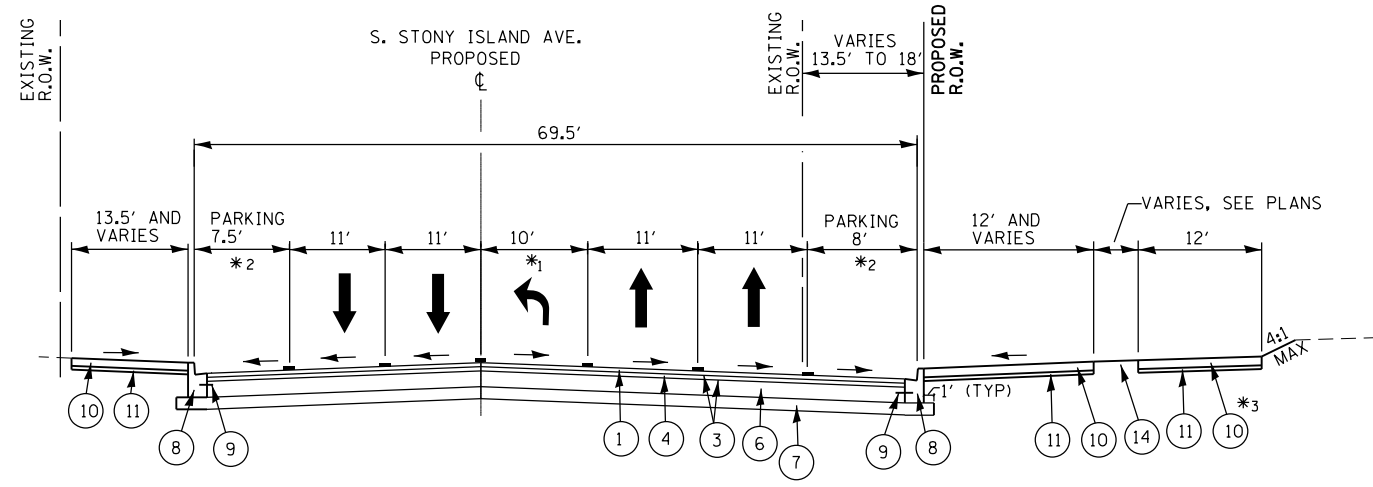
JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	54
PROJECT NO.	DRAWING NO.	
B-7-203	GEN-54	
SCALE: NO SCALE		



SOUTH STONY ISLAND AVE.
EXISTING TYPICAL SECTION
EAST 64TH STREET TO EAST 63RD STREET
STA 226+15.80 TO STA 233+40.30
(LOOKING NORTH)

- *1 LEFT TURN LANE AT 63RD ST. INTERSECTION
- *2 SURFACE REMOVAL VARIABLE DEPTH
- *3 SIDEWALK AT SELECT LOCATIONS FOR PEDESTRIAN ACCESS TO BUS STOP
- ██████████ REMOVAL
- ██████████ TRACK ZONE: EXACT LIMITS UNKNOWN. REMOVE ALL RAILROAD TRACKS, TIES, GRANITE AND MORTAR. SEE PAVEMENT CORE REPORT FOR ADDITIONAL INFORMATION.



SOUTH STONY ISLAND AVE.
PROPOSED TYPICAL SECTION
EAST 64TH STREET TO EAST 63RD STREET
STA 226+22.80 TO STA 233+40.30
(LOOKING NORTH)

- *1 FOR LOCATION OF CONCRETE MEDIAN, SEE PLANS
- *2 FOR LOCATION OF PARKING LANES, SEE PLANS
- *3 FOR LOCATION, SEE PLANS

LEGEND:

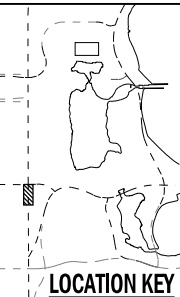
- EXISTING**
- (A) ASPHALT
 - (B) TRACK ZONE
 - (C) SUB BASE GRANULAR MATERIAL
 - (D) COMBINATION CONCRETE CURB AND GUTTER
 - (E) P.C. CONCRETE SIDEWALK
 - (F) EXISTING PARKWAY/LANDSCAPING
 - (G) CONCRETE/LANDSCAPE MEDIAN
 - (H) P.C. CONCRETE BASE
- PROPOSED**
- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
 - (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
 - (3) BITUMINOUS MATERIALS PRIME COAT
 - (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
 - (5) RETAINING WALL, SEE STRUCTURAL PLANS
 - (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
 - (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
 - (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
 - (9) #5 TIE BAR
 - (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
 - (11) SAND CUSHION, VARIABLE DEPTH
 - (12) UNIT PAVER
 - (13) CURB ATTACHED TO CONCRETE SIDEWALK
 - (14) PARKWAY, SEE LANDSCAPE PLANS
 - (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
 - (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
 - (17) DRILL AND GROUT BARS (AT 30" CENTERS)
 - (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ 70 GYR.	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



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DRAWN: DR				
CHECKED: MTK				
APPROVED:				
DATE: 05/31/2019				REVISIONS

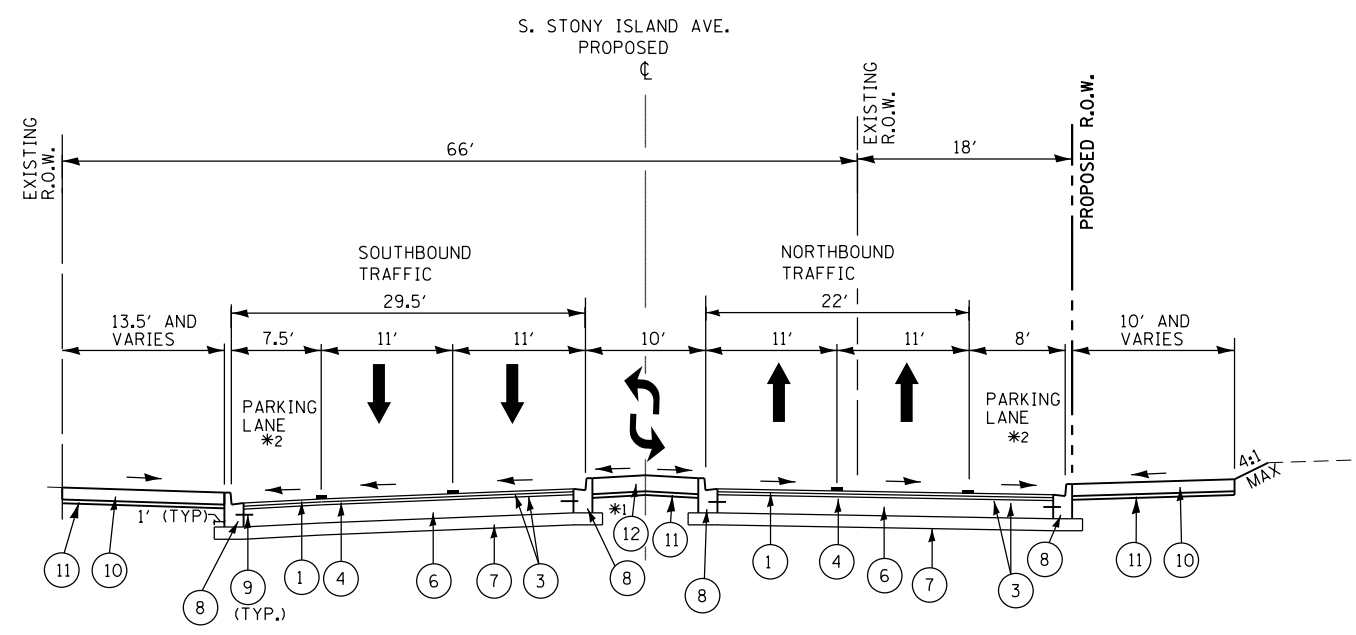
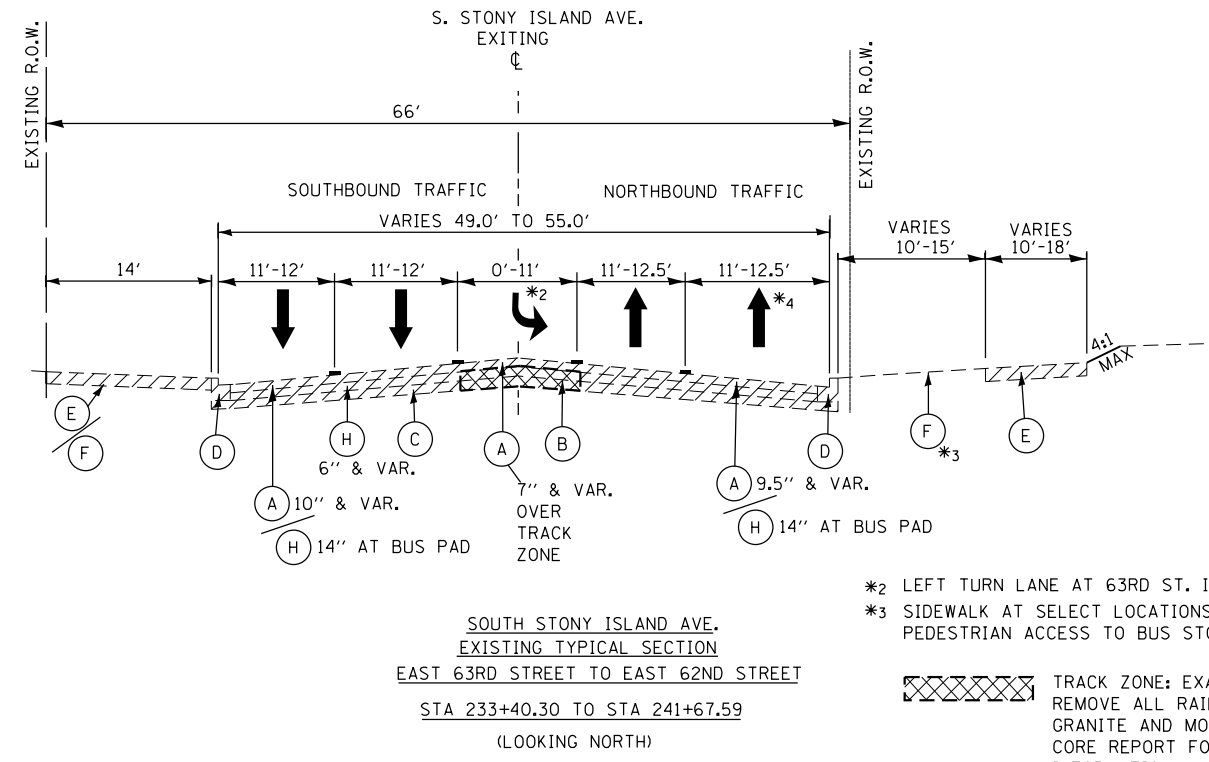


**TYPICAL SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1142	55
SCALE: NO SCALE	DRAWING NO. GEN-55	

STA.	TO STA.
------	---------



LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

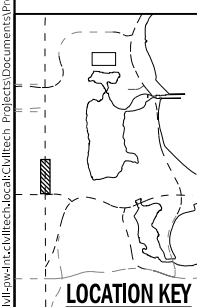
1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ 70 GYR.	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			

**SOUTH STONY ISLAND AVE.
PROPOSED TYPICAL SECTION
EAST 63RD STREET TO EAST 62ND STREET
STA 233+40.30 TO STA 241+67.59
(LOOKING NORTH)**

*1 FOR LOCATION OF CONCRETE MEDIAN, SEE PLANS
*2 FOR LOCATION OF PARKING LANES AND BUMPOUTS, SEE PLANS



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



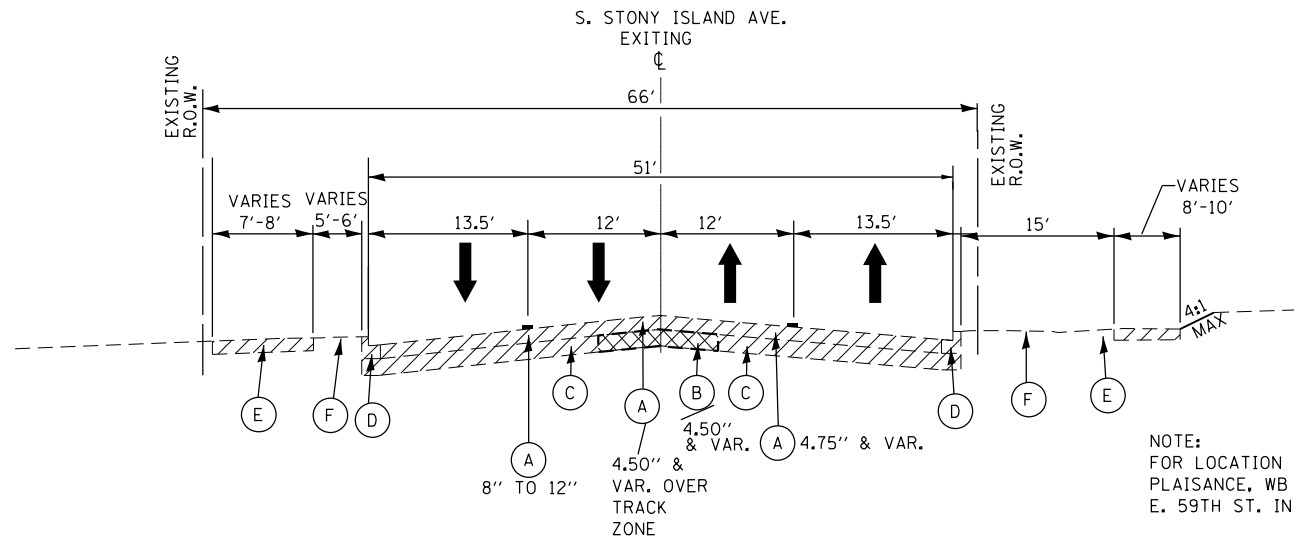
**TYPICAL SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	
PROJECT NO.	B-7-203
SCALE:	NO SCALE

TOTAL SHEETS	1142	SHEET NO.	56
DRAWING NO.	GEN-56		

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
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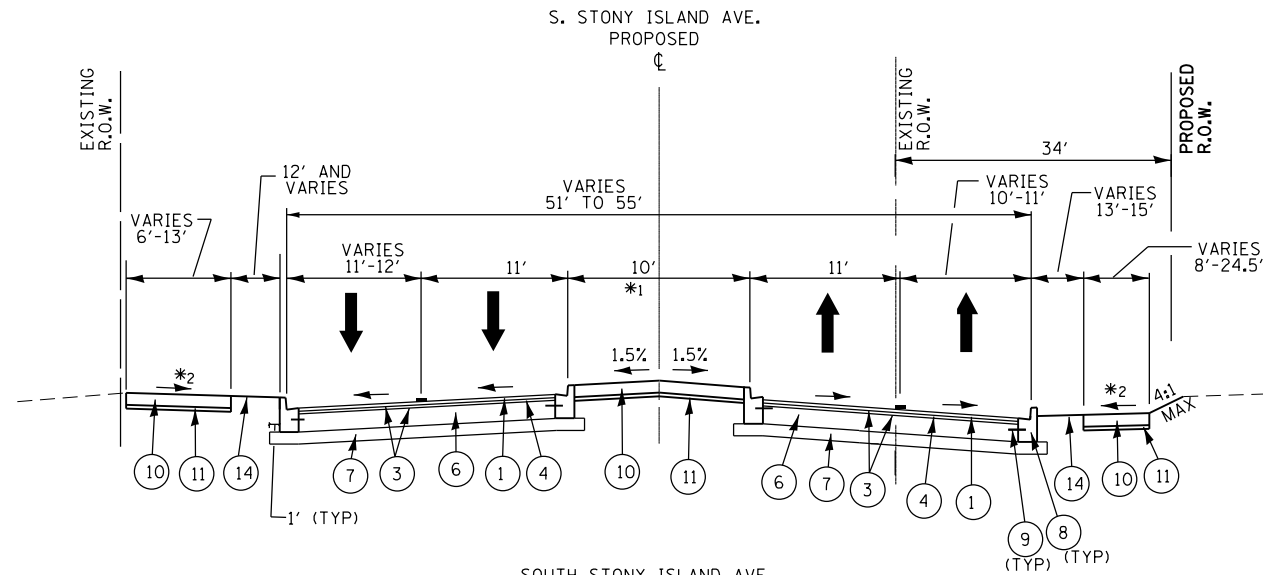
**SOUTH STONY ISLAND AVE.
EXISTING TYPICAL SECTION**
EAST 60TH STREET TO EB MIDWAY PLAISANCE
WB MIDWAY PLAISANCE TO EAST 59TH STREET

STA 253+45.81 TO STA 254+39.50
STA 258+61.60 TO STA 260+46.15

(LOOKING NORTH)

NOTE:
FOR LOCATION OF EB MIDWAY
PLAISANCE, WB MIDWAY PLAISANCE AND
E. 59TH ST. INTERSECTIONS, SEE PLANS

REMOVAL
 TRACK ZONE: EXACT LIMITS UNKNOWN.
REMOVE ALL RAILROAD TRACKS, TIES,
GRANITE AND MORTAR. SEE PAVEMENT
CORE REPORT FOR ADDITIONAL
INFORMATION.



**SOUTH STONY ISLAND AVE.
PROPOSED TYPICAL SECTION**
EAST 60TH STREET TO EB MIDWAY PLAISANCE
WB MIDWAY PLAISANCE TO EAST 59TH STREET

STA 253+45.81 TO STA 254+39.50
STA 258+61.60 TO STA 260+46.15

(LOOKING NORTH)

*1 FOR LOCATION OF CONCRETE MEDIANS AND
STRIPED MEDIANS, SEE PLANS
*2 FOR CURB ATTACHED SIDEWALK, SEE PLANS

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE



PROPOSED

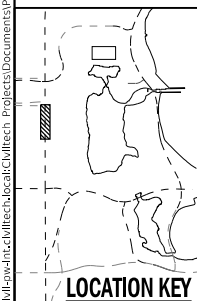
- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



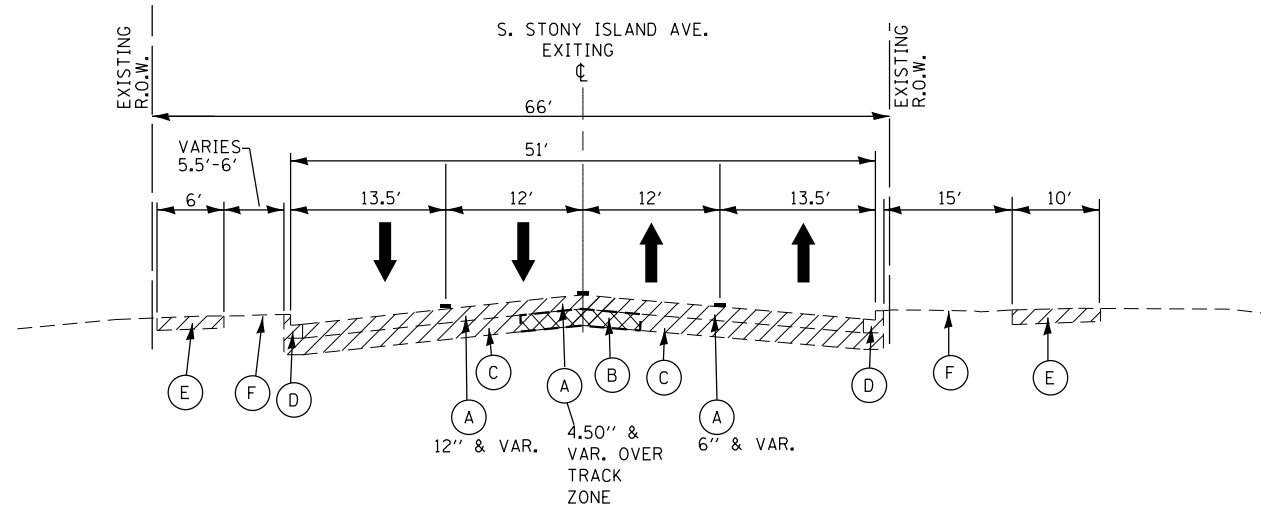
**TYPICAL SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1142	58
SCALE: NO SCALE	DRAWING NO. GEN-58	

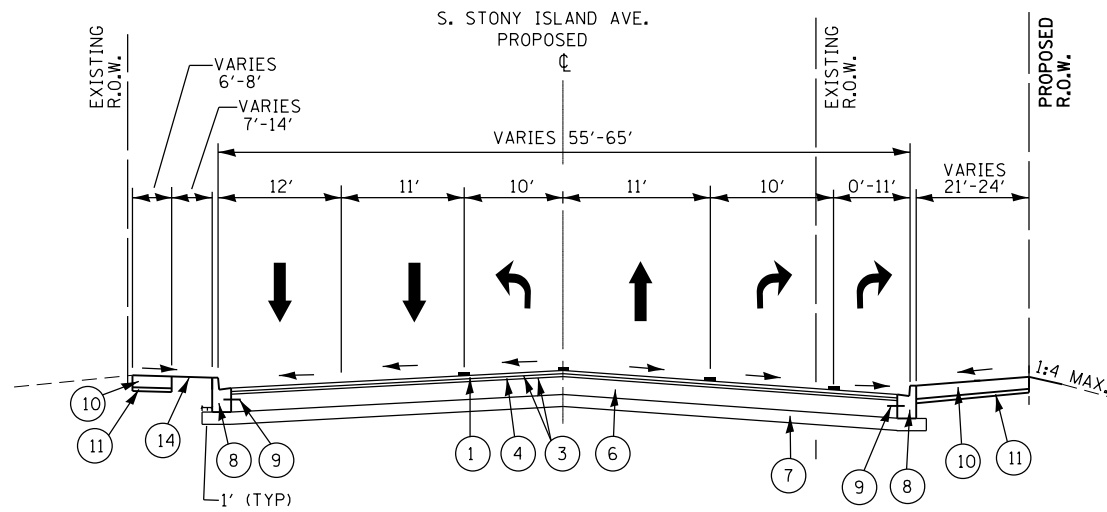
STA.	TO STA.
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PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
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**SOUTH STONY ISLAND AVE.
EXISTING TYPICAL SECTION
EB MIDWAY PLAISANCE TO WB MIDWAY PLAISANCE
STA 254+39.50 TO STA 258+61.60
(LOOKING NORTH)**

REMOVAL
TRACK ZONE: EXACT LIMITS UNKNOWN. REMOVE ALL RAILROAD TRACKS, TIES, GRANITE AND MORTAR. SEE PAVEMENT CORE REPORT FOR ADDITIONAL INFORMATION.



**SOUTH STONY ISLAND AVE.
PROPOSED TYPICAL SECTION
EB MIDWAY PLAISANCE TO WB MIDWAY PLAISANCE
STA 254+39.50 TO STA 258+61.60
(LOOKING NORTH)**

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

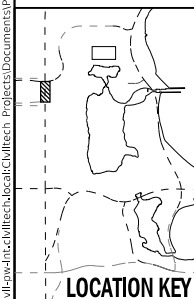
- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ 70 GYR.	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



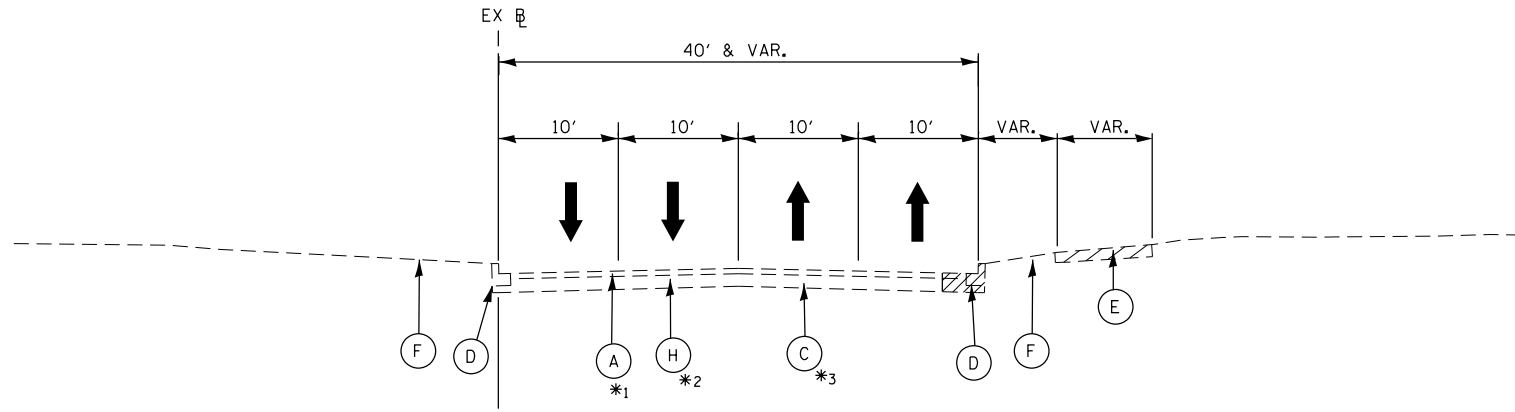
**TYPICAL SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	59
PROJECT NO. B-7-203	DRAWING NO. GEN-59	
SCALE: NO SCALE		

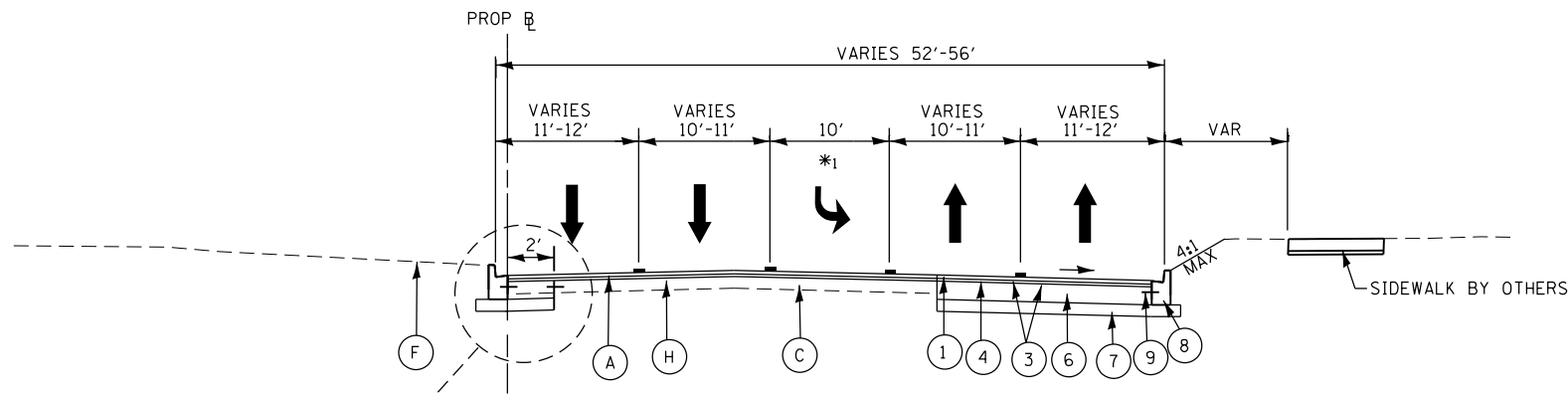
PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
 PROJECT: Jackson Park Mobility Improvements
 DRAWING: Typical Sections
 SHEET: 59 of 1142
 DATE: 05/31/2019



**MIDWAY PLAISANCE (NORTH LEG)
EXISTING TYPICAL SECTION
STA 12005+00 TO STA 1209+95.51
(LOOKING EAST)**

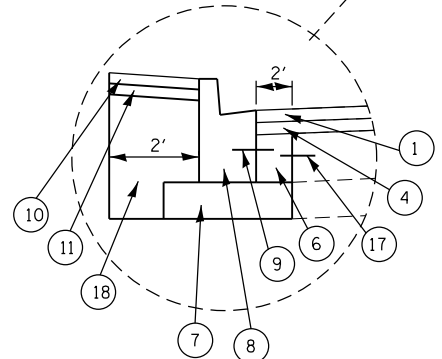
*1 ASPHALT SURFACE (CORE DATA NOT AVAILABLE)
*2 BASE COURSE (CORE DATA NOT AVAILABLE)
*3 SUB BASE (CORE DATA NOT AVAILABLE)

REMOVAL



**MIDWAY PLAISANCE (NORTH LEG)
PROPOSED TYPICAL SECTION
STA 12005+00 TO STA 1209+95.51
(LOOKING EAST)**

*1 ONLY LANE STA 12005+00.00 TO STA 12008+23.00
STRIPED MEDIAN STA 12007+28.00 TO STA 12009+95.51



DETAIL - NEW CURB ADJACENT TO OVERLAY

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

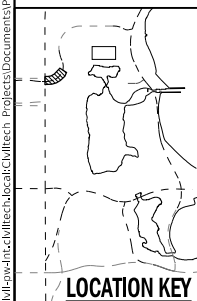
- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"			
LEVELING BINDER (HAND METHOD)			



LOCATION KEY

DESIGN:	DR				
DRAWN:	DR				
CHECKED:	MTK				
APPROVED:		NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019				REVISIONS

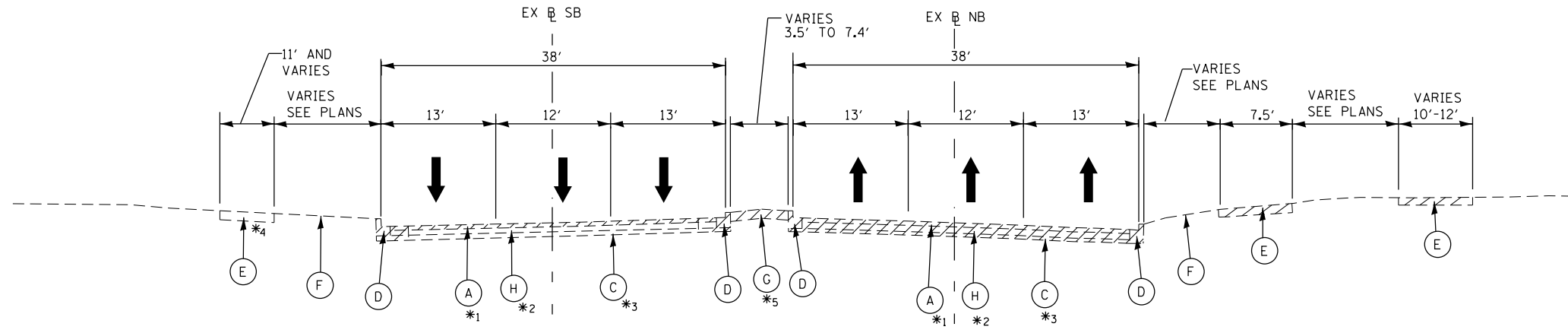


**TYPICAL SECTIONS
MIDWAY PLAISANCE (N ROADWAY)**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	60
PROJECT NO.	DRAWING NO.	
B-7-203	GEN-60	
SCALE: NO SCALE		



**SOUTH CORNELL DRIVE
EXISTING TYPICAL SECTION
STA 8009+00 TO STA 8011+92.00
(LOOKING NORTH)**

*1 ASPHALT SURFACE (CORE DATA NOT AVAILABLE)
*2 BASE COURSE (CORE DATA NOT AVAILABLE)
*3 SUB BASE (CORE DATA NOT AVAILABLE)
*4 SEE PLANS FOR LOCATION OF CONCRETE SIDEWALK TO REMOVE

////// REMOVAL

LEGEND:

EXISTING

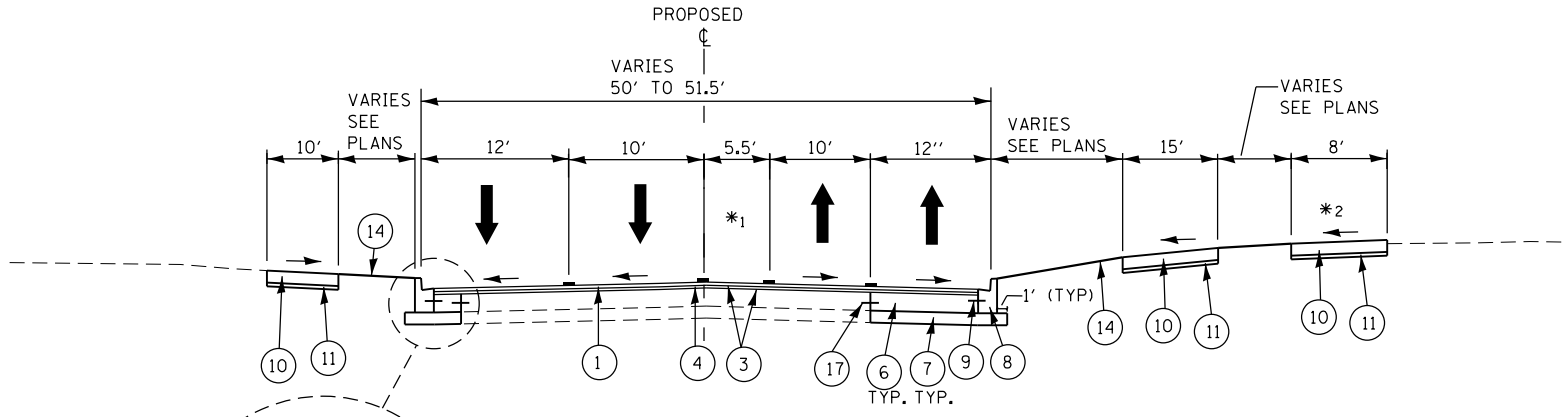
- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

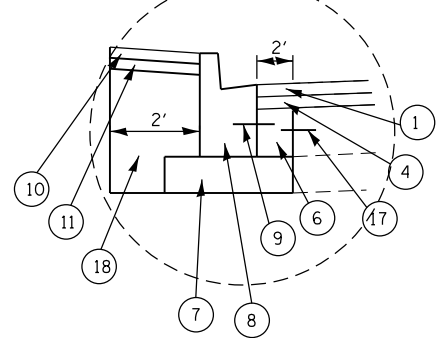
NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.



**SOUTH CORNELL DRIVE
PROPOSED TYPICAL SECTION
STA 8009+00 TO STA 8011+92.00
(LOOKING NORTH)**

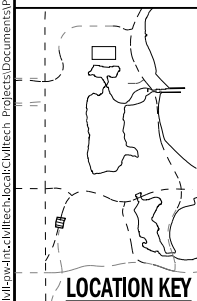
*1 STRIPED MEDIAN
*2 FOR LOCATION OF THIS CONCRETE SIDEWALK, SEE PLANS



DETAIL - NEW CURB ADJACENT TO OVERLAY

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



DESIGN: DR	NO.	BY	DATE	DESCRIPTION
DRAWN: DR				
CHECKED: MTK				
APPROVED:				
DATE: 05/31/2019				REVISIONS



**TYPICAL SECTIONS
S. CORNELL DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	61
PROJECT NO.	DRAWING NO.	
B-7-203	GEN-61	
SCALE: NO SCALE		

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
 PROJECT: Jackson Park Mobility Improvements
 DRAWING: Typical Sections
 SHEET: 61 of 1142
 DATE: 05/31/2019

LEGEND:

EXISTING

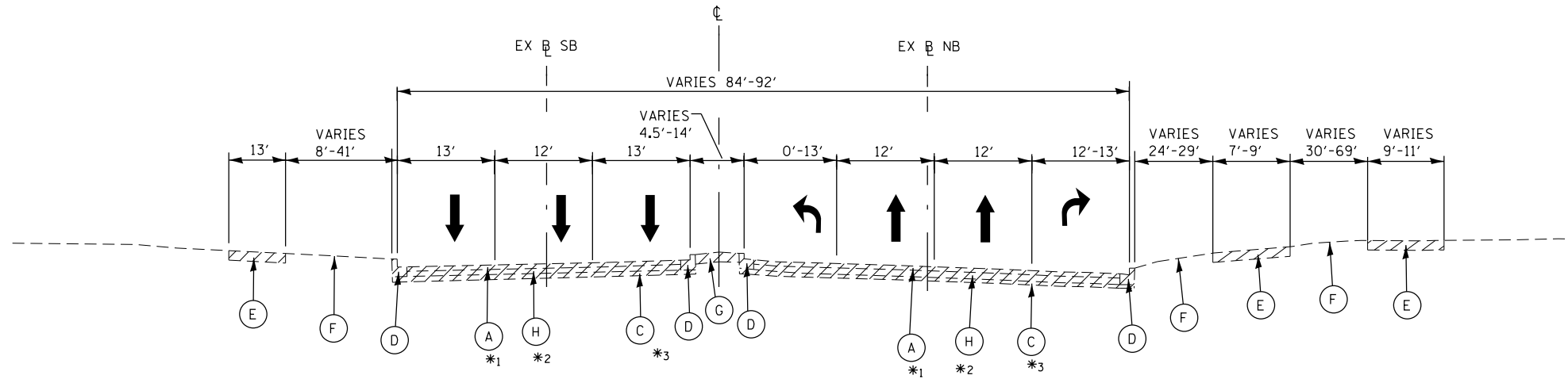
- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

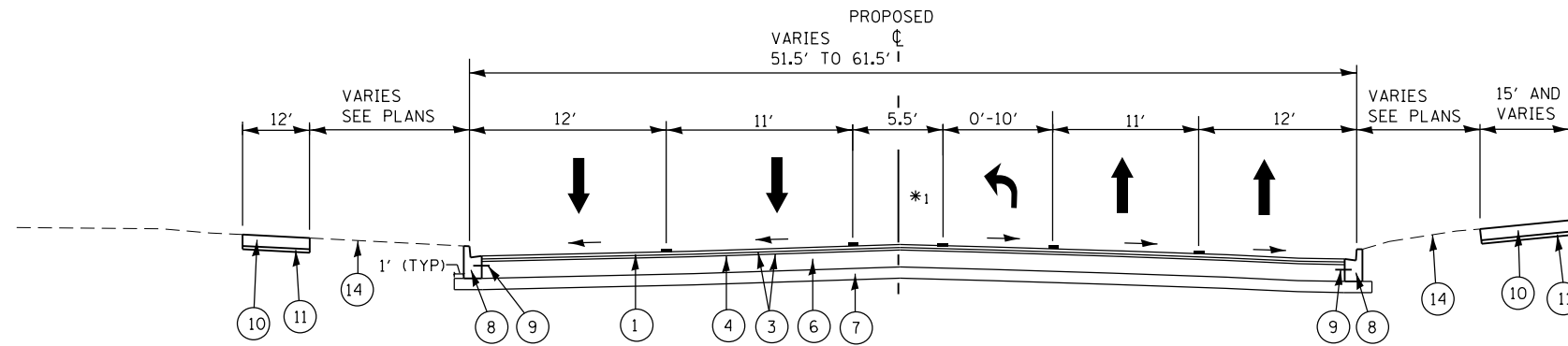
NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
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7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.



**SOUTH CORNELL DRIVE
EXISTING TYPICAL SECTION
STA 8013+45.00 TO STA 8015+38.00
(LOOKING NORTH)**

*1 ASPHALT SURFACE (CORE DATA NOT AVAILABLE)
*2 BASE COURSE (CORE DATA NOT AVAILABLE)
*3 SUB BASE (CORE DATA NOT AVAILABLE)
REMOVAL

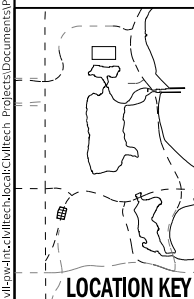


**SOUTH CORNELL DRIVE
PROPOSED TYPICAL SECTION
STA 8013+45.00 TO STA 8015+38.00
(LOOKING NORTH)**

*1 STRIPED MEDIAN

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



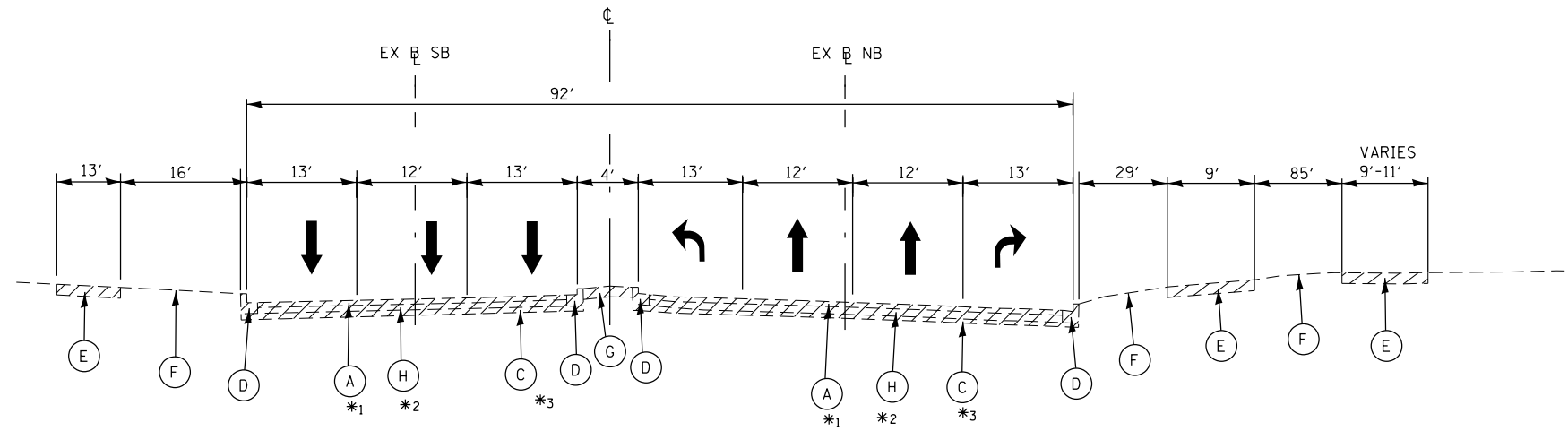
**TYPICAL SECTIONS
S. CORNELL DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1142	63
SCALE: NO SCALE	DRAWING NO. GEN-63	

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
 PROJECT: Jackson Park Mobility Improvements
 SHEET: Typical Sections
 DATE: 05/31/2019

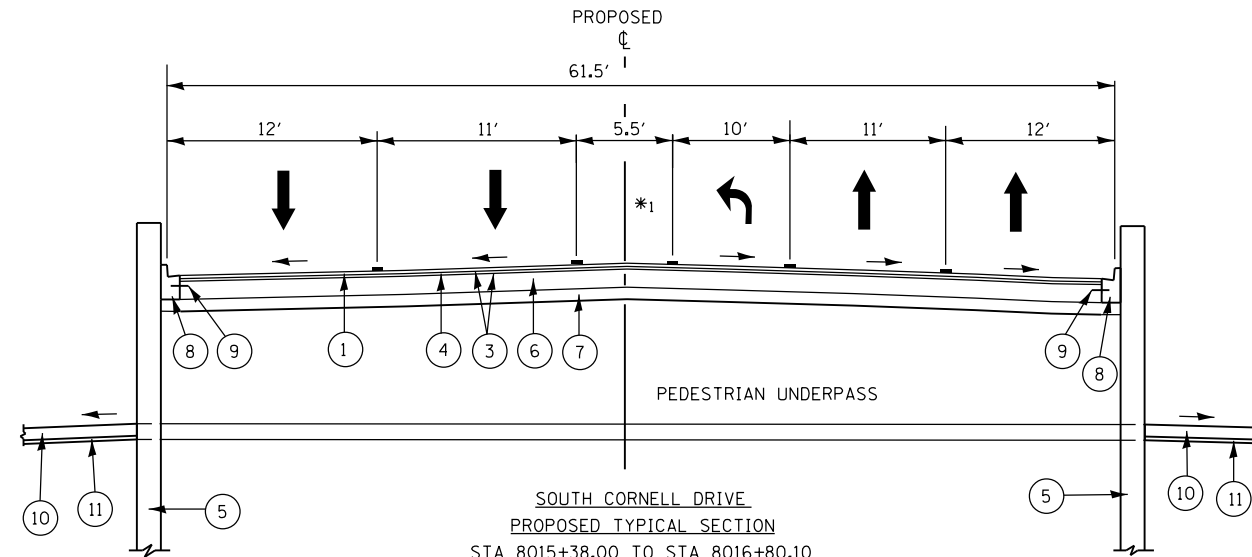


**SOUTH CORNELL DRIVE
EXISTING TYPICAL SECTION
STA 8015+38.00 TO STA 8016+80.10
(LOOKING NORTH)**

*1 ASPHALT SURFACE (CORE DATA NOT AVAILABLE)
*2 BASE COURSE (CORE DATA NOT AVAILABLE)
*3 SUB BASE (CORE DATA NOT AVAILABLE)

REMOVAL

NOTE: EXISTING ALIGNMENT DIFFERS FROM PROPOSED



**SOUTH CORNELL DRIVE
PROPOSED TYPICAL SECTION
STA 8015+38.00 TO STA 8016+80.10
(LOOKING NORTH)**

NOTE:
SEE STRUCTURAL PLANS FOR RETAINING WALLS AND PEDESTRIAN UNDERPASS DETAILS AND STATIONS LOCATIONS

*1 STRIPED MEDIAN

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

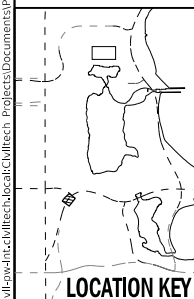
- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



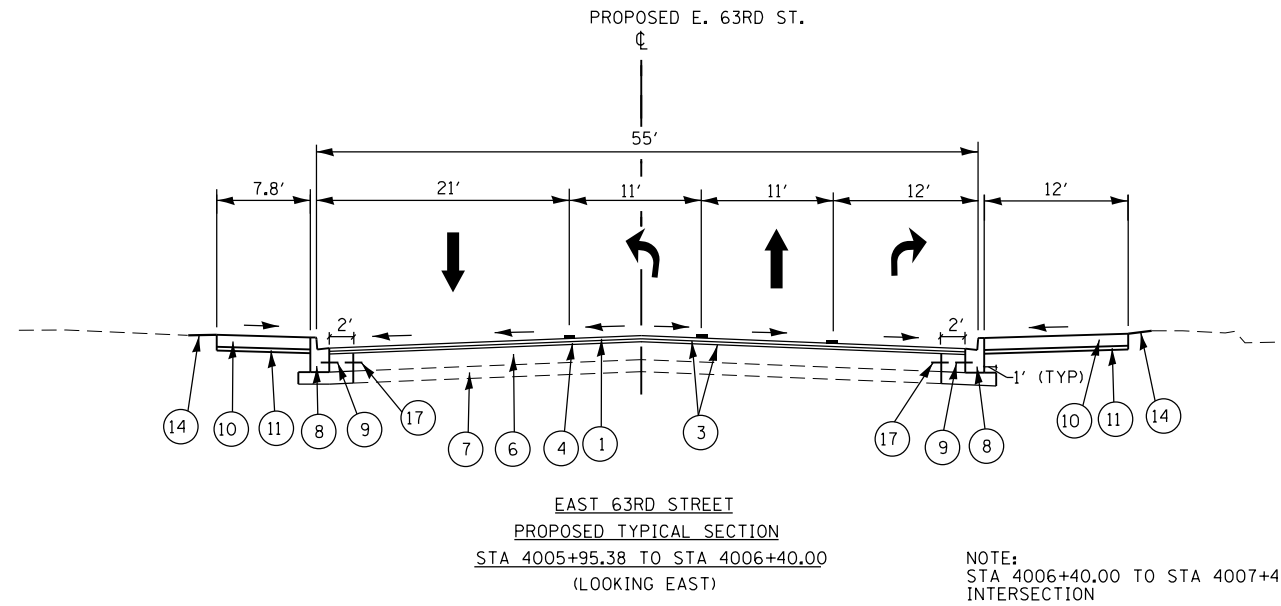
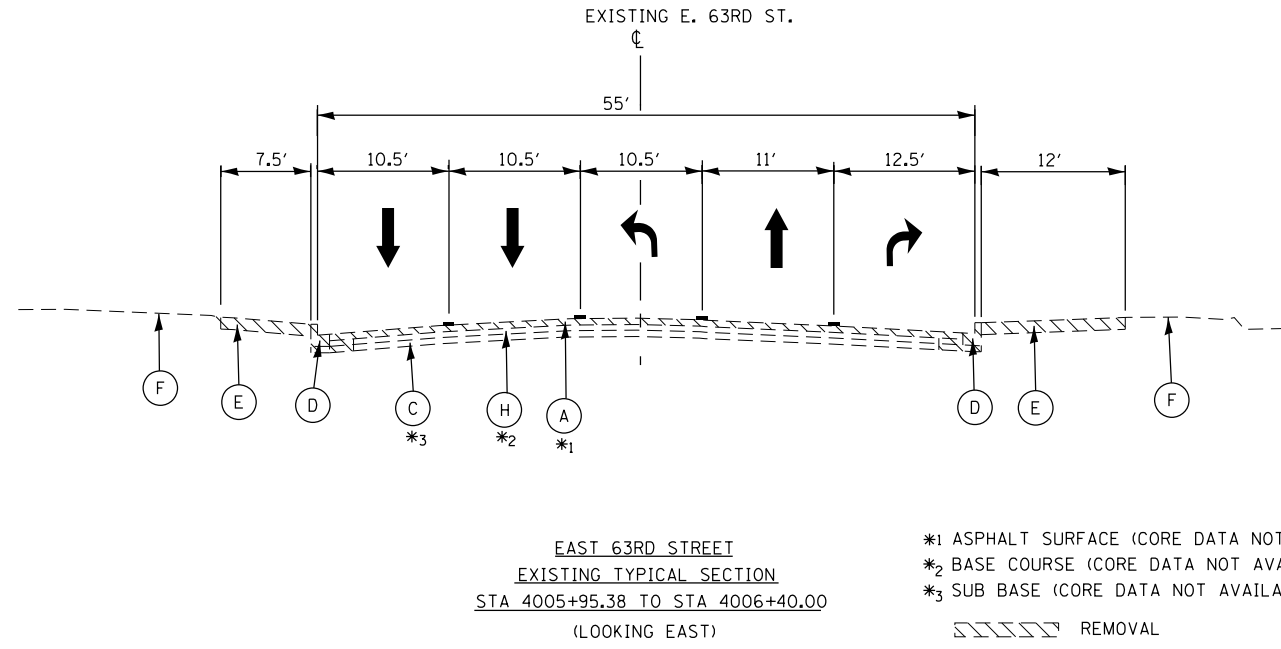
TYPICAL SECTIONS
S. CORNELL DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	64
PROJECT NO.	DRAWING NO.	
B-7-203	GEN-64	
SCALE: NO SCALE		

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
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HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ 70 GYR.	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

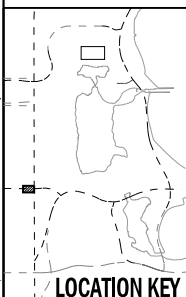
PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

PLOT DATE: 5/20/2019
 PLOT SCALE: 1/8"=1'-0"
 PROJECT: CHICAGO DEPARTMENT OF TRANSPORTATION
 PROJECT NO.: B-7-203
 SHEET NO.: 65
 DRAWING NO.: GEN-65
 DATE: 05/31/2019



DESIGN:	NO.	BY	DATE	DESCRIPTION
DR				
DR				
MTK				
MTK				
NO.				
DATE: 05/31/2019				

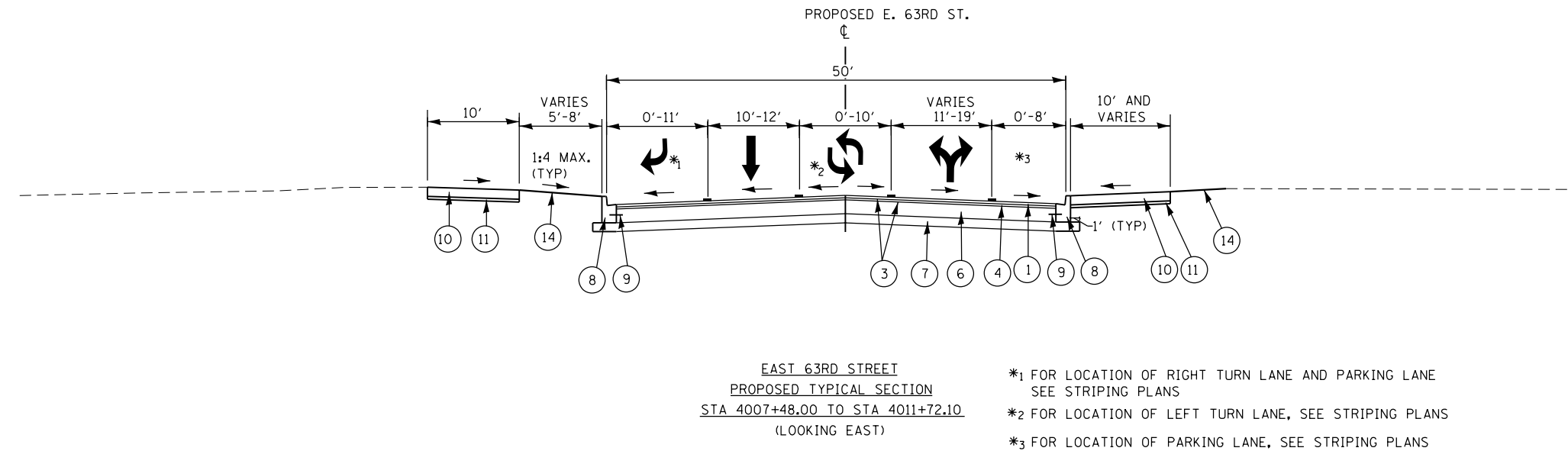
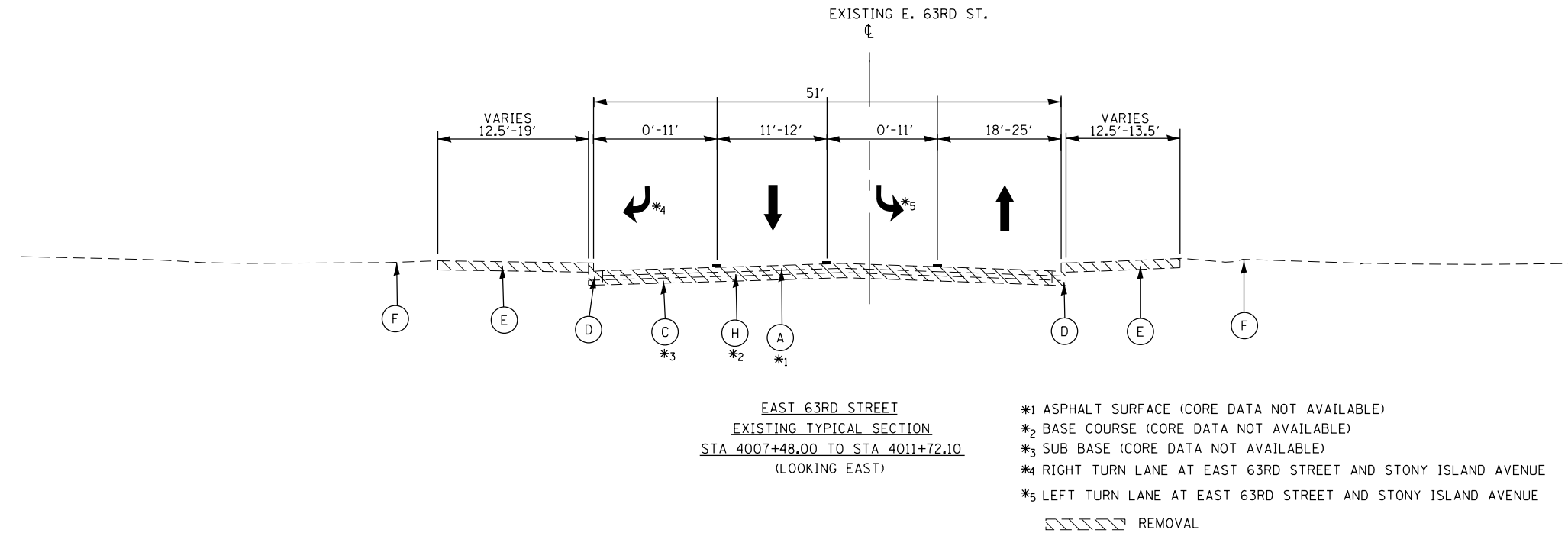


TYPICAL SECTIONS
E. 63RD ST.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	65
PROJECT NO. B-7-203	DRAWING NO. GEN-65	
SCALE: NO SCALE		



HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ nodes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
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7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

PLOT DATE: 5/20/2019
 FILE NAME: I:\00000000\1\in\...
 PROJECT: ...

DESIGN:	NO.	BY	DATE	DESCRIPTION
DR				
DR				
MTK				
NO.				
REVISIONS				

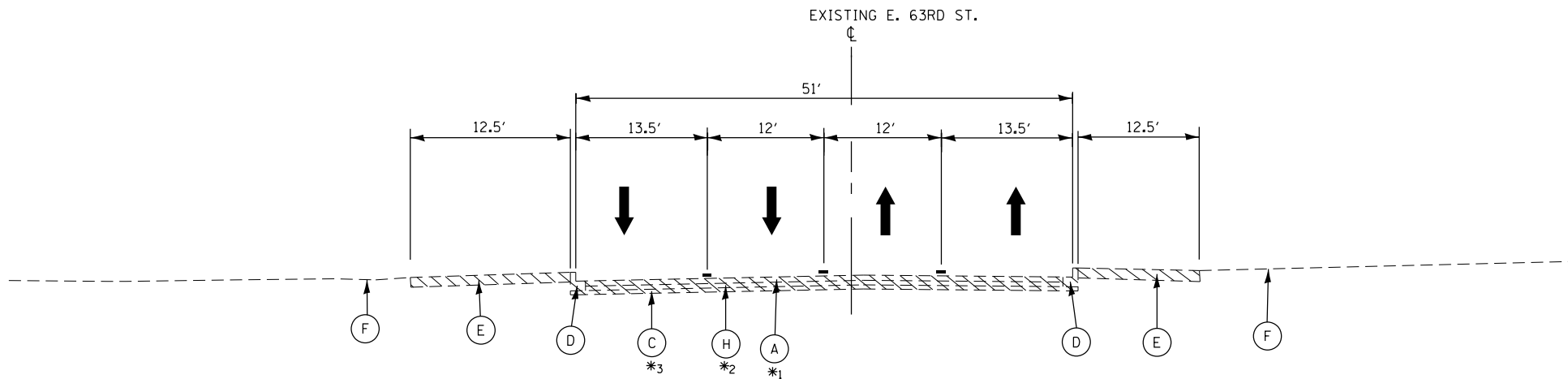


TYPICAL SECTIONS
E. 63RD ST.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	66
PROJECT NO.	DRAWING NO.	
B-7-203	GEN-66	
SCALE: NO SCALE		

STA. TO STA.

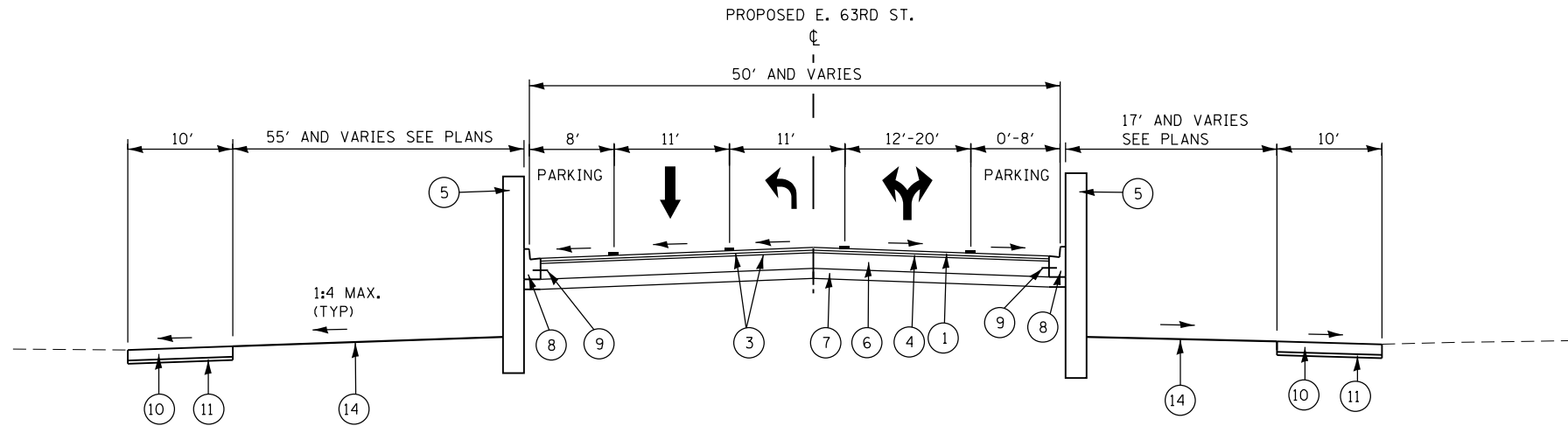


**EAST 63RD STREET
EXISTING TYPICAL SECTION**
STA 4011+72.10 TO STA 4013+07.00
(LOOKING EAST)

NOTE:
1. EXISTING ROADWAY ALIGNMENT DIFFERS FROM PROPOSED ALIGNMENT AT INTERSECTION OF EAST HAYES DRIVE AND SOUTH CORNELL DRIVE-WEST APPROACH, SEE PLANS.
2. FOR LOCATION OF SOUTH DRIVE, SEE PLANS

*1 ASPHALT SURFACE (CORE DATA NOT AVAILABLE)
*2 BASE COURSE (CORE DATA NOT AVAILABLE)
*3 SUB BASE (CORE DATA NOT AVAILABLE)

REMOVAL



**EAST 63RD STREET
PROPOSED TYPICAL SECTION**
STA 4011+72.10 TO STA 4013+07.00
(LOOKING EAST)

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

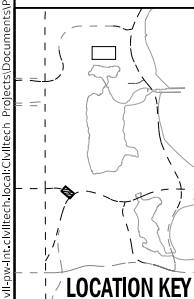
- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
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3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
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8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ 70 GYR.	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
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POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



DESIGN:	NO.	BY	DATE	DESCRIPTION
DR				
DR				
MTK				
NO.				
DATE: 05/31/2019				



**TYPICAL SECTIONS
E. 63RD ST.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.

PROJECT NO.
B-7-203

SCALE: NO SCALE

TOTAL SHEETS

SHEET NO.
67

DRAWING NO.
GEN-67

LEGEND:

EXISTING

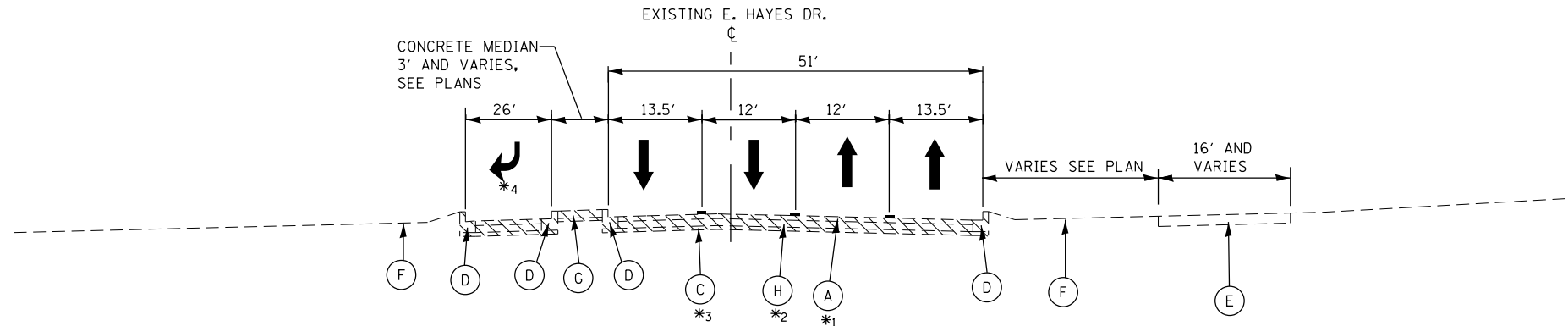
- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

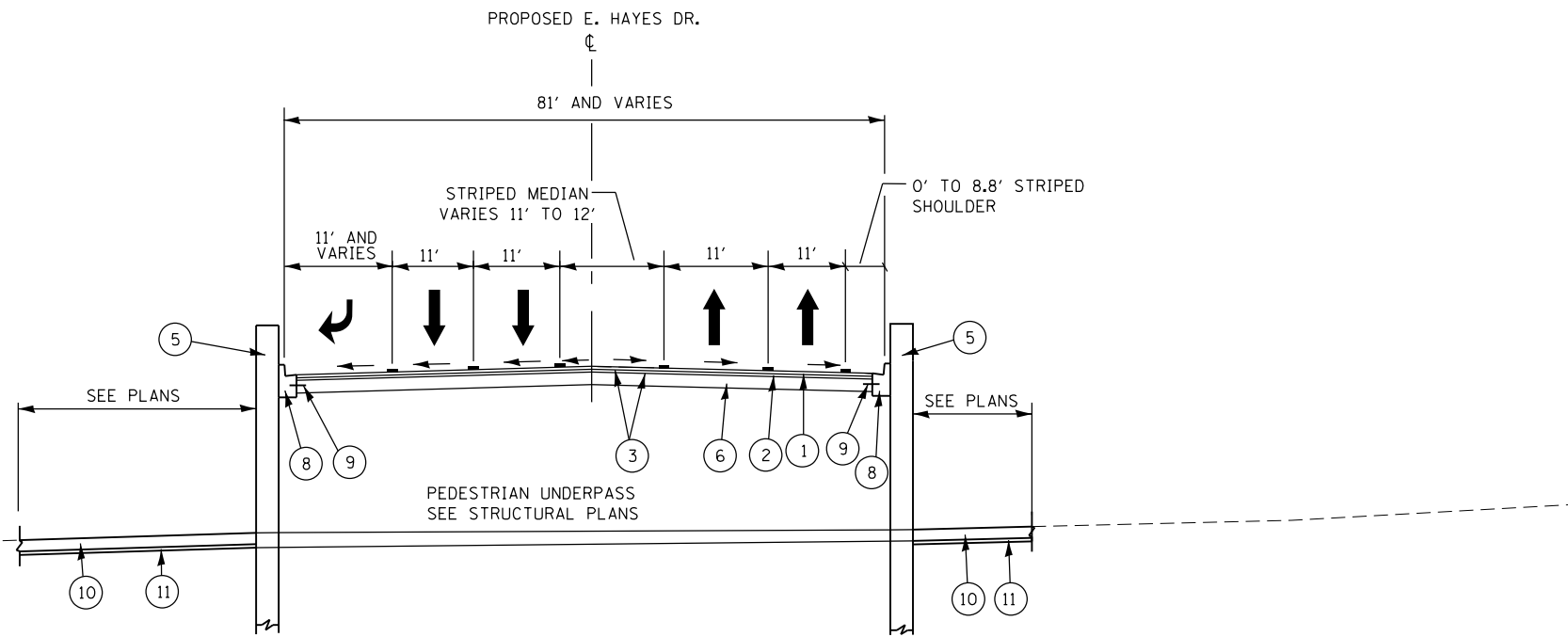
NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
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7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.



**EAST HAYES DRIVE
EXISTING TYPICAL SECTION
STA 5000+00.00 TO STA 5001+19.10
(LOOKING EAST)**
(EXISTING ROADWAY ALIGNMENT DIFFERS FROM PROPOSED)

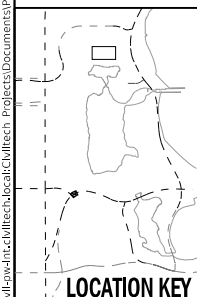
*1 ASPHALT SURFACE (CORE DATA NOT AVAILABLE)
*2 BASE COURSE (CORE DATA NOT AVAILABLE)
*3 SUB BASE (CORE DATA NOT AVAILABLE)
*4 RIGHT TURN LANE AT CORNELL DRIVE AND HAYES AVE INTERSECTION
// // // // REMOVAL



**EAST HAYES DRIVE
PROPOSED TYPICAL SECTION
STA 5000+00.00 TO STA 5001+19.10
(LOOKING EAST)**

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"			
LEVELING BINDER (HAND METHOD)			



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



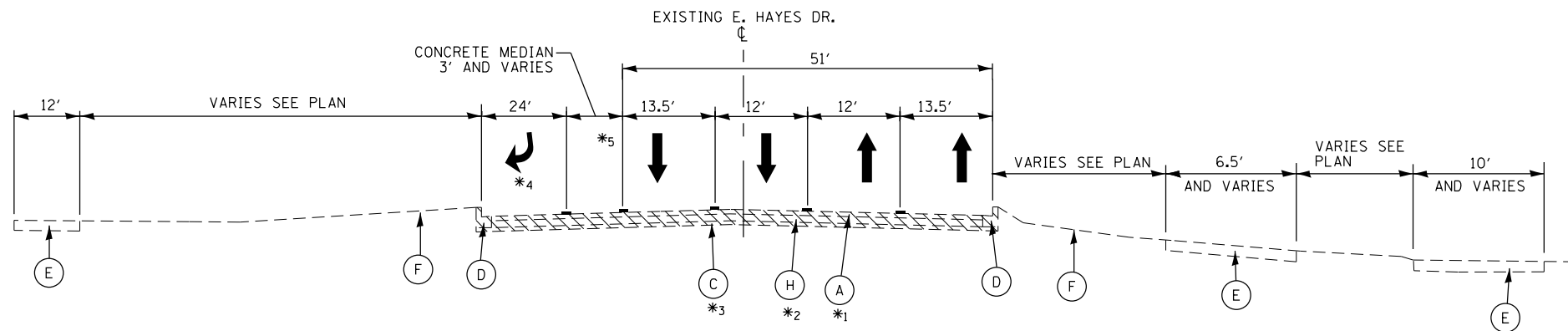
**TYPICAL SECTIONS
E. HAYES DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	68
PROJECT NO. B-7-203	DRAWING NO. GEN-68	
SCALE: NO SCALE		

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
 FILE: \\p01c01\proj\chicago\tech\Documents\Projects\3151\CAD\Sheets\Typical_XS\hct-cy-hayes.dgn



**EAST HAYES DRIVE
EXISTING TYPICAL SECTION
SOUTH CORNELL DRIVE TO SOUTH RICHARDS DRIVE
STA 5001+19.10 TO STA 5013+43.00
(LOOKING EAST)**

STA 5001+19.10 TO STA 5004+60.00
STA 5010+50.00 TO STA 5015+00.00
(STA 5004+60.00 TO STA 5010+50.00 RESURFACING)

- NOTE:**
- FOR LOCATION OF E. HAYES DR. AND S. RICHARDS DR. INTERSECTION, SEE PLANS.
 - FOR LOCATION OF DRIVEWAY ON NORTH SIDE, SEE PLANS.
 - SEE PLANS FOR LIMITS OF RESURFACING AND RECONSTRUCTION.

- *1 ASPHALT (CORE DATA NOT AVAILABLE)
- *2 BASE COURSE (CORE DATA NOT AVAILABLE)
- *3 SUB BASE (CORE DATA NOT AVAILABLE)
- *4 RIGHT TURN LANE AT S. CORNELL DRIVE AND E. HAYES DRIVE INTERSECTION
- *5 CONCRETE MEDIAN AT S. CORNELL DRIVE AND E. HAYES DRIVE INTERSECTION

LEGEND:

EXISTING

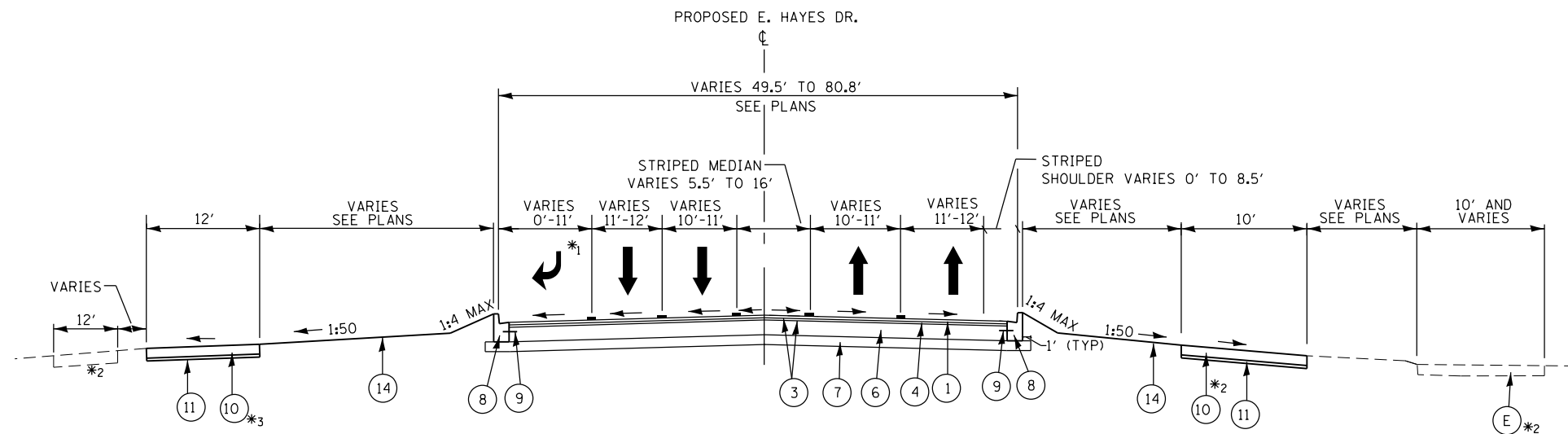
- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

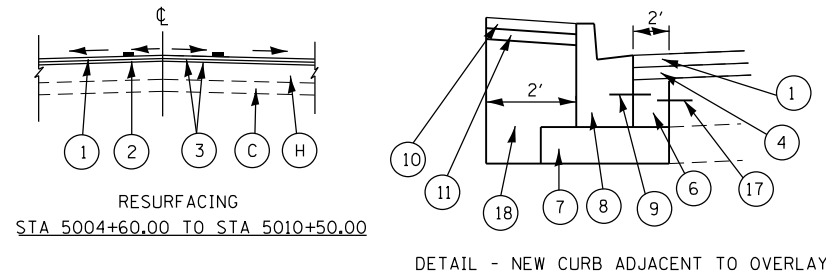
NOTES:

- TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
- TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
- SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
- POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
- TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
- LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
- AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
- ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
- SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.



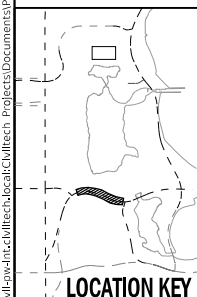
**EAST HAYES DRIVE
PROPOSED TYPICAL SECTION
SOUTH CORNELL DRIVE TO SOUTH RICHARDS DRIVE
STA 5001+19.10 TO STA 5004+60.00
STA 5010+50.00 TO STA 5013+43.00
(STA 5004+60.00 TO STA 5010+50.00 RESURFACING)
(LOOKING EAST)**

- *1 FOR LOCATION OF RIGHT TURN LANE, SEE PLANS
- *2 SEE PLANS FOR LIMITS OF NEW SIDEWALK AND EXISTING SIDEWALK TO REMAIN



HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR Voids @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"			
LEVELING BINDER (HAND METHOD)			



DESIGN: DR
DRAWN: DR
CHECKED: MTK
APPROVED: NO. BY DATE DESCRIPTION
DATE: 05/31/2019 REVISIONS

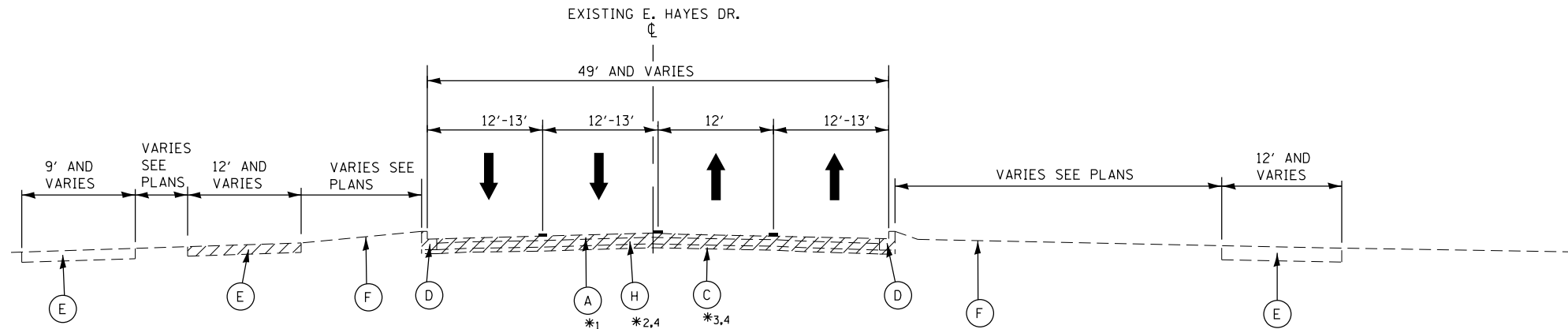


**TYPICAL SECTIONS
E. HAYES DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1142	69
SCALE: NO SCALE	DRAWING NO. GEN-69	

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
 FILE: \\sdr\proj\chicago\tech\Documents\Projects\315\CAD\Sheets\Typical_XS\hrc\typ\hrc\hrc.dgn



**EAST HAYES DRIVE
 EXISTING TYPICAL SECTION**
 STA 5013+43.00 TO STA 5015+00.00 *6
 STA 5016+72.00 TO STA 5020+06.20 *6
 (LOOKING EAST)

- *1 ASPHALT (CORE DATA NOT AVAILABLE)
 *2 BASE COURSE (CORE DATA NOT AVAILABLE)
 *3 SUB BASE (CORE DATA NOT AVAILABLE)
 *4 FULL DEPTH PAVEMENT REMOVAL OR ASPHALT MILLING, 3-3/4". SEE PLANS FOR LOCATIONS.
 SEE PLANS FOR LIMITS OF RESURFACING AND RECONSTRUCTION

LEGEND:

EXISTING

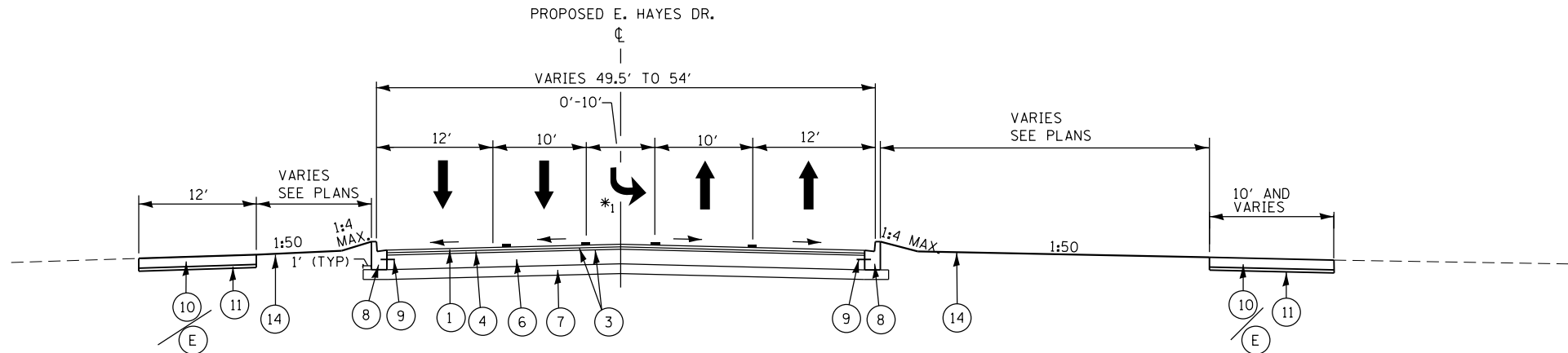
- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

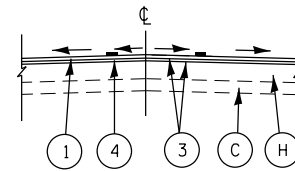


**EAST HAYES DRIVE
 PROPOSED TYPICAL SECTION**
 STA 5013+43.00 TO STA 5015+00.00
 (STA 5016+72.00 TO STA 5020+06.20 RESURFACING)
 (LOOKING EAST)

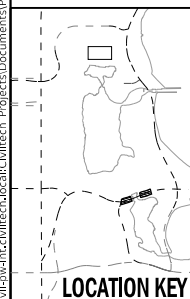
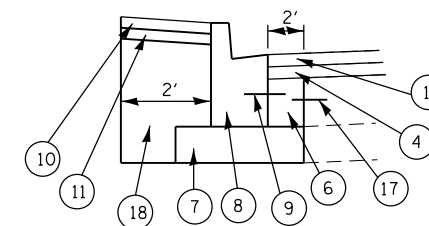
- NOTE:**
 1. FOR LIMITS OF FULL DEPTH RECONSTRUCTION OR OVERLAY, SEE PLANS.
 *1 LEFT TURN LANE AT SOUTH RICHARDS DRIVE INTERSECTION OR STRIPED MEDIAN, 5.5' & VARIES

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ n des	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



STA 5016+72.00 TO STA 5020+06.20
 (FOR WIDTH OF RECONSTRUCTION NEXT TO PROPOSED CURB AND GUTTER ON LT, SEE PLANS)



DESIGN: DR	NO.	BY	DATE	DESCRIPTION
DRAWN: DR				
CHECKED: MTK				
APPROVED:				
DATE: 05/31/2019				REVISIONS



**TYPICAL SECTIONS
 E. HAYES DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1142	70
SCALE: NO SCALE	DRAWING NO. GEN-70	

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
 PROJECT: Jackson Park Mobility Improvements
 SHEET: 1142 OF 1142
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LEGEND:

EXISTING

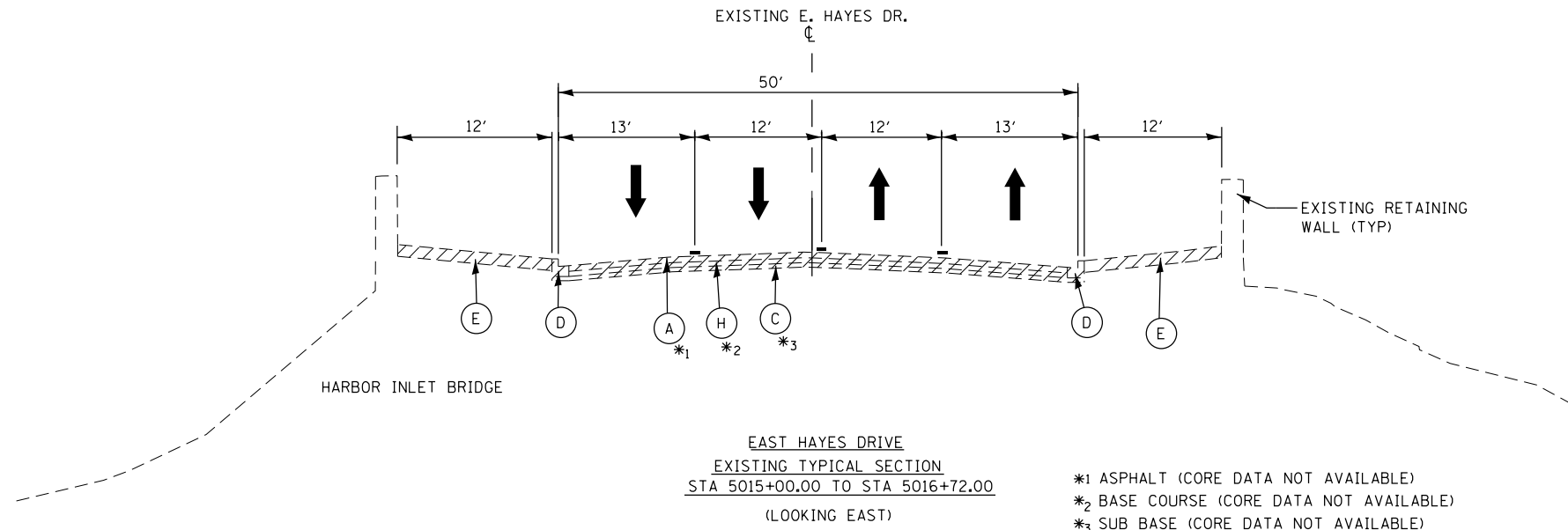
- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

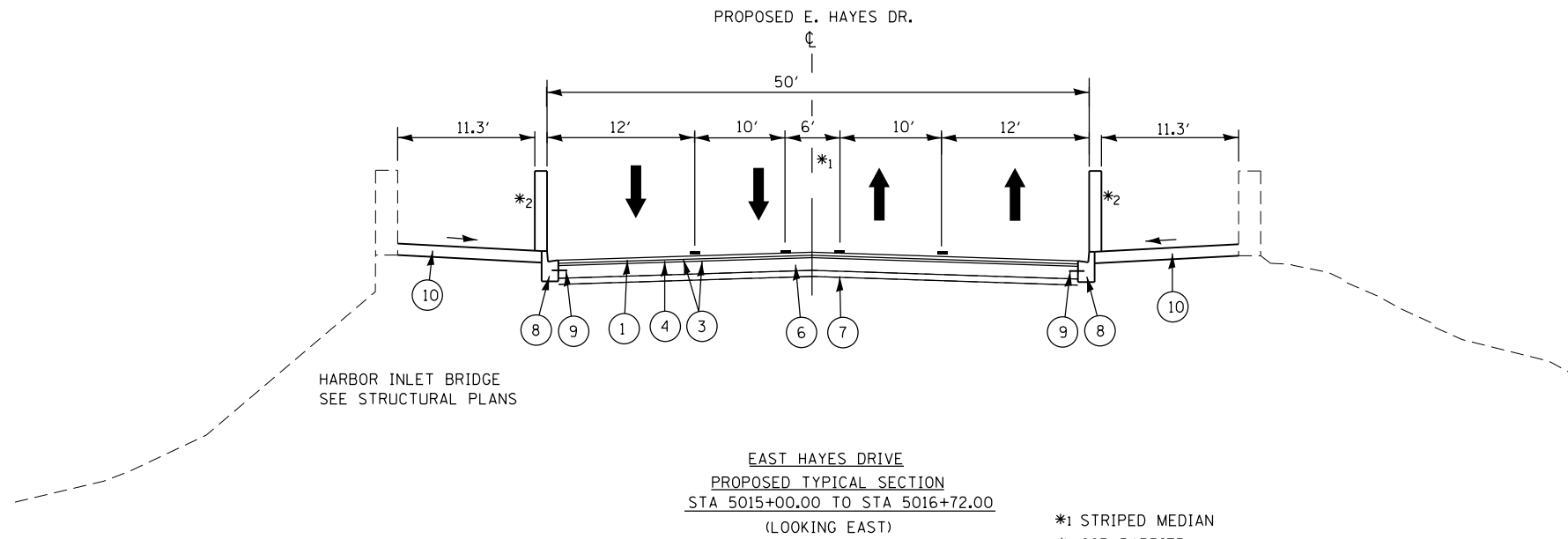
NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.



*1 ASPHALT (CORE DATA NOT AVAILABLE)
 *2 BASE COURSE (CORE DATA NOT AVAILABLE)
 *3 SUB BASE (CORE DATA NOT AVAILABLE)

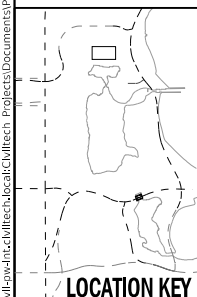
REMOVAL



*1 STRIPED MEDIAN
 *2 C2P BARRIER
 STA 5014+42.00 TO STA 5017+11.00 LT
 STA 5014+32.00 TO STA 5017+09.00 RT
 (SEE STRUCTURAL PLANS)

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



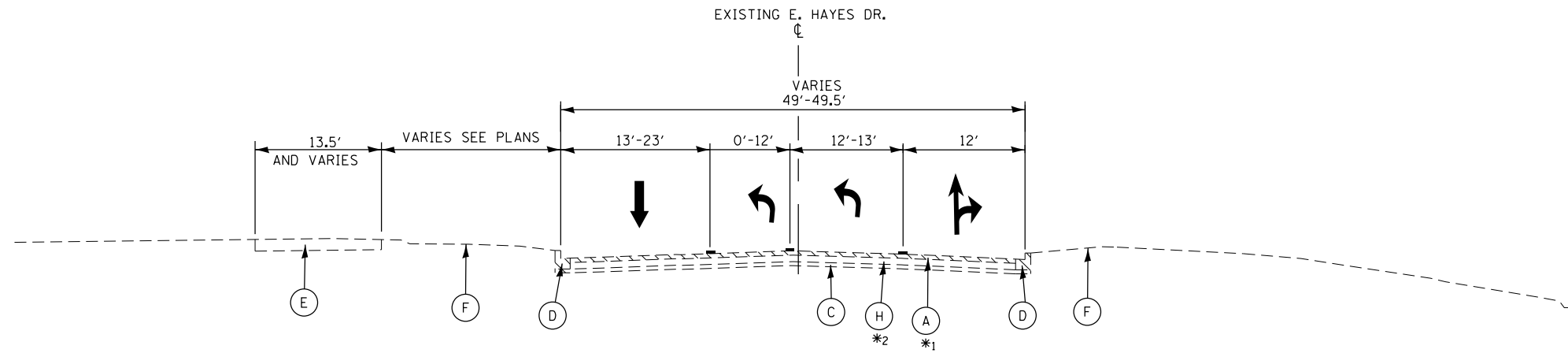
TYPICAL SECTIONS
 E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

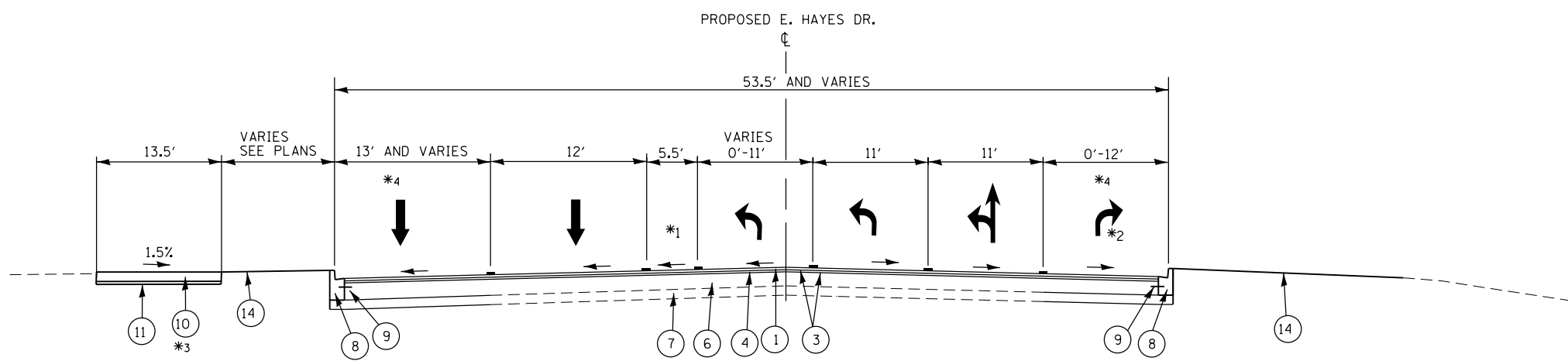
CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	71
PROJECT NO. B-7-203	DRAWING NO. GEN-71	
SCALE: NO SCALE		

PLOT DATE: 5/30/2019
 PLOT SCALE: 1/8"=1'-0"
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**EAST HAYES DRIVE
EXISTING TYPICAL SECTION
STA 5020+06.20 TO STA 5025+25.00
(LOOKING EAST)**

*₂ BASE COURSE (CORE DATA NOT AVAILABLE)
*₃ SUB BASE (CORE DATA NOT AVAILABLE)
REMOVAL



**EAST HAYES DRIVE
PROPOSED TYPICAL SECTION
STA 5020+06.20 TO STA 5025+25.00
(LOOKING EAST)**

NOTE:
1. FOR LIMITS OF FULL DEPTH RECONSTRUCTION OR OVERLAY, SEE PLANS.

*₁ STRIPED MEDIAN
*₂ FOR LOCATION OF RIGHT TURN LANE, SEE PLANS
*₃ FOR LOCATION OF PROPOSED SIDEWALK AND EXISTING SIDEWALK TO REMAIN, SEE PLANS
*₄ RECONSTRUCTION/ RESURFACING FOR WIDTH OF RECONSTRUCTION, SEE PLANS

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ 70 GYR.	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

PLOT DATE: 5/20/2019
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DESIGN:	NO.	BY	DATE	DESCRIPTION
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DR				
MTK				
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NO.				
DATE: 05/31/2019				

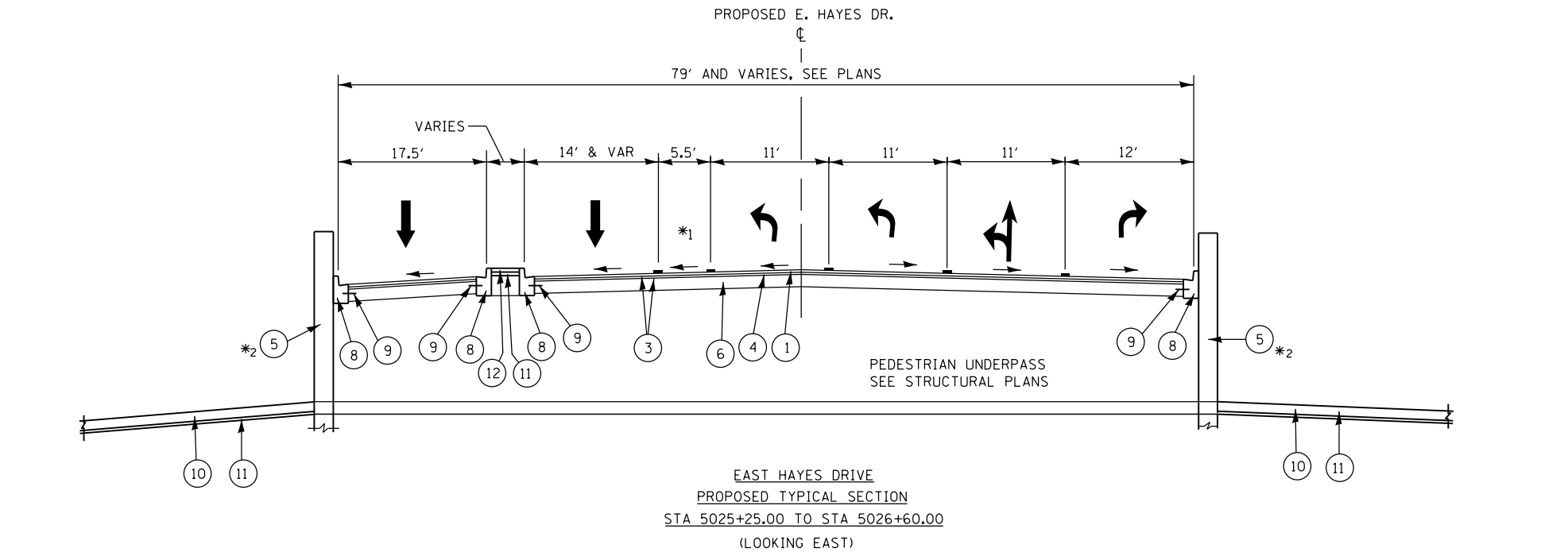
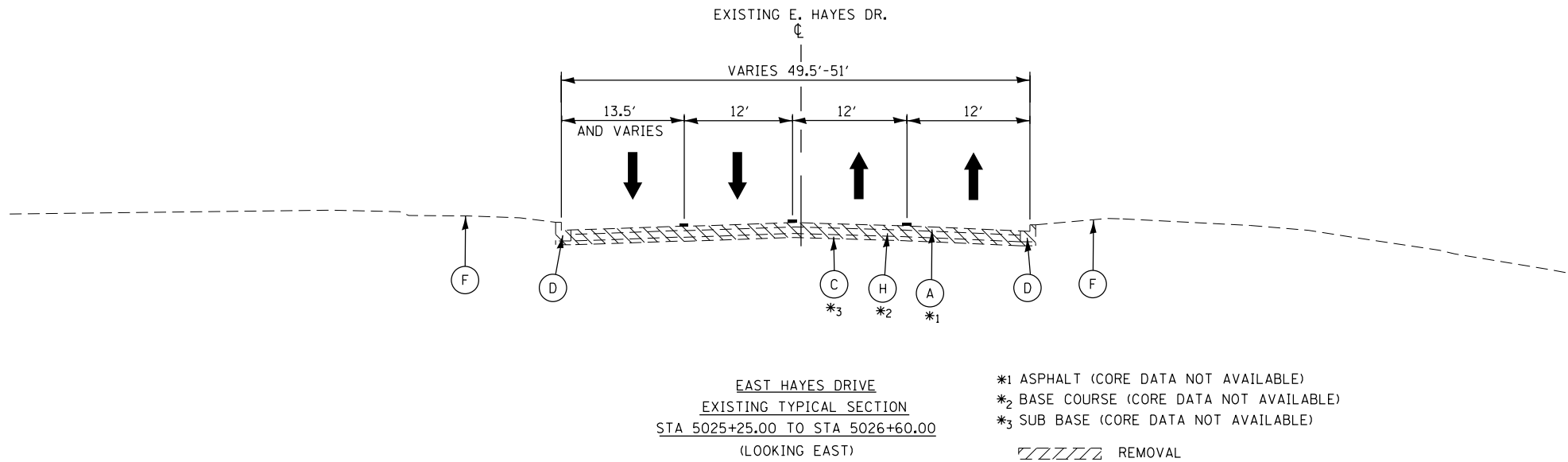


**TYPICAL SECTIONS
E. HAYES DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	72
PROJECT NO.	DRAWING NO.	
B-7-203	GEN-72	
SCALE: NO SCALE		

STA.	TO STA.
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LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.

- *₁ STRIPED MEDIAN
- *₂ FOR RETAINING WALL LOCATIONS SEE STRUCTURAL PLANS

- NOTE:
1. FOR LIMITS OF FULL DEPTH RECONSTRUCTION OR OVERLAY, SEE PLANS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	IL-4.75	4% @ 50 GYR.	0 3/4"
LEVELING BINDER (HAND METHOD)			

LOCATION KEY

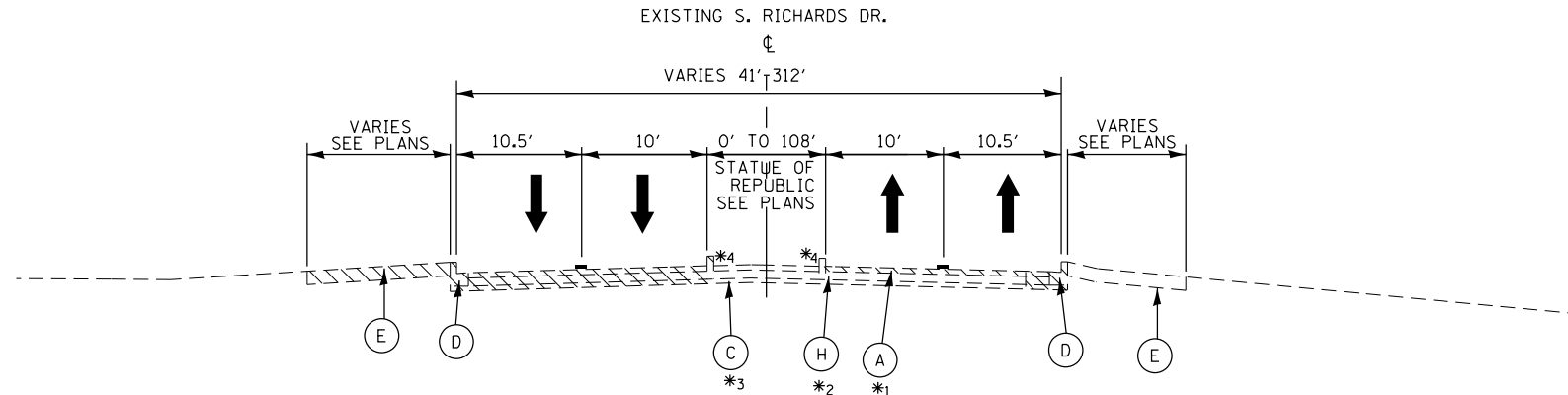
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DR				
DR				
MTK				
DATE:	REVISIONS			



TYPICAL SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	73
PROJECT NO. B-7-203	DRAWING NO.	
SCALE: NO SCALE	GEN-73	



**S. RICHARDS DRIVE
EXISTING TYPICAL SECTION
STA 9019+85.00 TO STA 9023+24.00
(LOOKING NORTH)
(EXISTING ROADWAY ALIGNMENT DIFFERS FROM PROPOSED)**

*1 ASPHALT SURFACE (CORE DATA NOT AVAILABLE)
*2 BASE COURSE (CORE DATA NOT AVAILABLE)
*3 SUB BASE (CORE DATA NOT AVAILABLE)
REMOVAL, SEE PLANS

LEGEND:

EXISTING

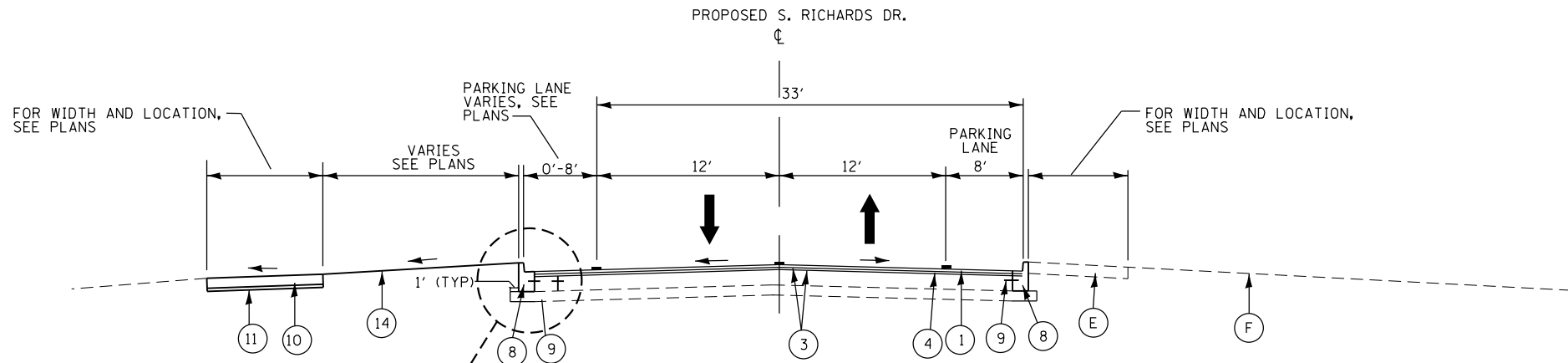
- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUB BASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE/LANDSCAPE MEDIAN
- (H) P.C. CONCRETE BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70, 1 3/4"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 10"
- (7) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12
- (9) #5 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) UNIT PAVER
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) DRILL AND GROUT BARS (AT 30" CENTERS)
- (18) STRUCTURAL SOIL TRENCH (SEE LANDSCAPING DETAILS)

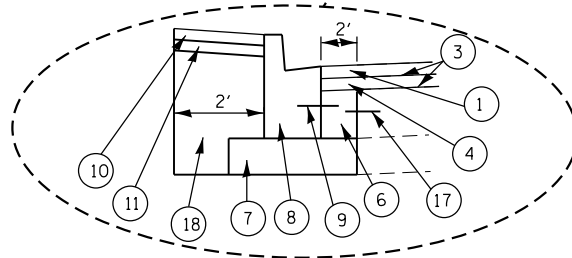
NOTES:

1. TYPICALLY AT LEAST 6' (PREFERRED) / 4' (MINIMUM) OF PROPOSED SIDEWALK / DRIVEWAY / ALLEY WIDTH MUST HAVE A CROSS SLOPE OF 1:64 OR LESS. THE REMAINING WIDTH OF SIDEWALK MAY HAVE A CROSS SLOPE OF 1:24 OR LESS.
2. TYPICAL ROADWAY CROSS SLOPE VARIES BETWEEN 1.4% AND 3.6% AS INDICATED ON THE PLANS.
3. SEE LANDSCAPE PLANS FOR TREE PIT AND PLANTER LOCATIONS.
4. POROUS GRANULAR EMBANKMENT, SUBGRADE SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER UNDER SUB-BASES AND STRUCTURES WHERE THE SUBGRADE IS DEEMED UNSTABLE TO SUPPORT THE PROPOSED CONSTRUCTION.
5. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB AND COMB. CC&G ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS OTHERWISE NOTED.
6. LEVELING BINDER (HAND METHOD), N70 SHALL BE USED AT THE DISCRETION OF THE COMMISSIONER WHERE THE PROPOSED BACK OF DRIVEWAY AND ALLEY APRONS TIE INTO EXISTING HMA PAVEMENT.
7. AGGREGATE PRIME COAT MAY BE PLACED TO PREPARE UNFINISHED HMA SURFACE FOR TEMPORARY TRAFFIC DURING CONSTRUCTION STAGING.
8. ALL HMA MILLING TO BE PAID AS HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.
9. SEE BUS PAD DETAILS FOR PAVING SECTIONS AT RELEVANT LOCATIONS.



**S. RICHARDS DRIVE
PROPOSED TYPICAL SECTION
STA 9019+85.00 TO STA 9023+24.00
(LOOKING NORTH)**

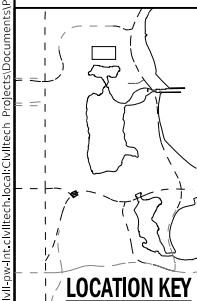
NOTE:
1. FOR LOCATION OF DRIVEWAY ON WEST SIDE, SEE PLANS.



DETAIL - NEW CURB ADJACENT TO OVERLAY

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	MIX TYPE	AIR VOIDS @ ndes	LIFT THICKNESS
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	IL 9.5 mm	4% @ 70 GYR.	1 3/4"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90		4% @ 90 GYR.	2 1/4"
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"			
LEVELING BINDER (HAND METHOD)			



DESIGN: DR				
DRAWN: DR				
CHECKED: MTK				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



**TYPICAL SECTIONS
S. RICHARDS DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

CONTRACT NO.

PROJECT NO.

B-7-203

SCALE: NO SCALE

TOTAL SHEETS

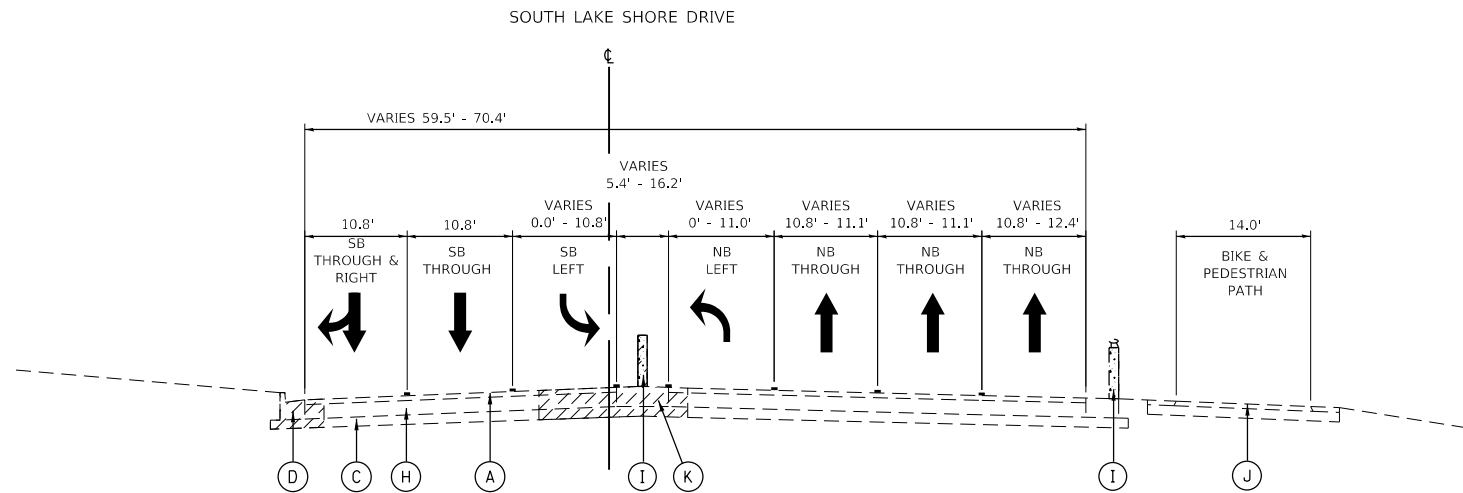
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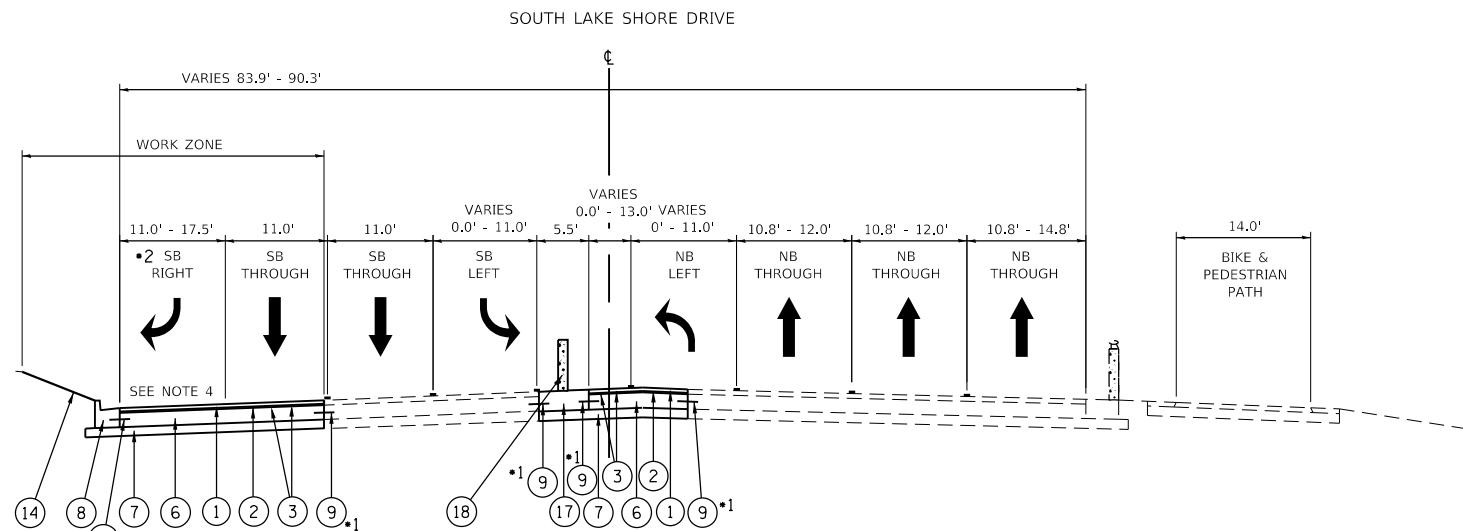
DRAWING NO.

GEN-74

DRAFT



**SOUTH LAKE SHORE DRIVE
EXISTING TYPICAL SECTION**
STA. 9906+60 TO STA. 9914+20
63RD STREET UNDERPASS TO NORTH OF HAYES DR.
STA. 9902+28 TO STA. 9903+98
SOUTH OF HAYES DR.



**SOUTH LAKE SHORE DRIVE
PROPOSED TYPICAL SECTION**
STA. 9906+60 TO STA. 9914+20
63RD STREET UNDERPASS TO NORTH OF HAYES DR.
STA. 9902+28 TO STA. 9903+98
SOUTH OF HAYES DR.

- 1 No. 25 DEFORMED TIE BAR (EPOXY COATED), 24" LONG ϕ 24" (CENTERS) DRILL & GROUT IN PLACE.
- 2 THIS LANE DROPS SOUTH OF HAYES DR.

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUBBASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE MEDIAN/PARKWAY
- (H) P.C. CONCRETE BASE
- (I) PORTLAND CEMENT CONCRETE BARRIER WALL
- (J) BITUMINOUS BIKE AND PEDESTRIAN PATH
- (K) CONCRETE MEDIAN AND BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80, 2"
- (2) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 1"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 9"
- (7) AGGREGATE SUBGRADE IMPROVEMENT, 12"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- (9) #8 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) P.C. CONCRETE PAVED MEDIAN 4"
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPREESED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) CONCRETE MEDIAN AND BASE
- (18) PORTLAND CEMENT CONCRETE BARRIER WALL

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR Voids % Ndes
PAVEMENT WIDENING AND RECONSTRUCTION	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80 (IL 9.5mm), 2"	3.5% ϕ 80 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 1"	3.5% ϕ 50 GYR.
PAVEMENT RESURFACING	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80 (IL 9.5mm), 1-3/4"	3.5% ϕ 80 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	3.5% ϕ 50 GYR.

HMA MIXTURE REQUIREMENT NOTES:

- 1. THE UNIT WEIGHT TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/50 YD/IN.
- 2. FOR PERCENT OF RAP, SEE DISTRICT ONE SPECIAL PROVISIONS.

NOTES:

- 1. SEE ELECTRICAL PLANS FOR LIGHT POLE LOCATIONS.
- 2. TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB, COMB. CC&G, AND PCC BASE BID ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS NOTED OTHERWISE.
- 3. SUB-BASE GRANULAR MATERIAL VARIES AT CURB LOCATIONS.
- 4. SEE CURB DETAIL FOR RIGHT TURN LANE SEPARATION.

PLOT DATE: 5/30/2019
 FILE NAME: 20190507_11n...
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APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019	REVISIONS			

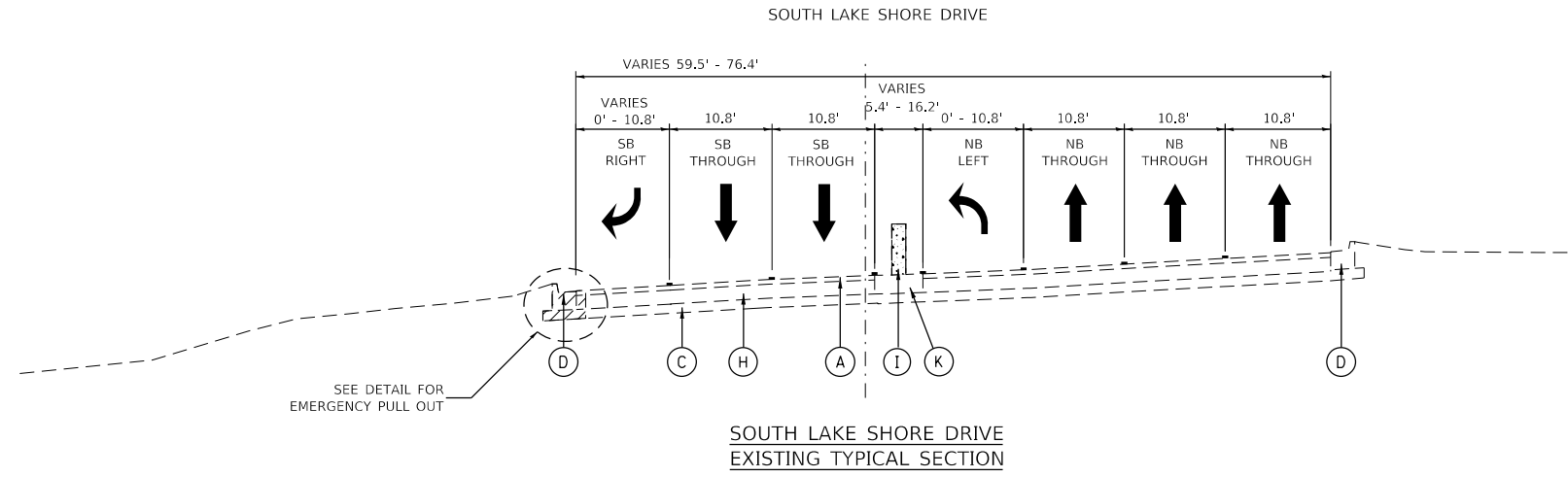


**TYPICAL SECTIONS
S. LAKE SHORE DR.**

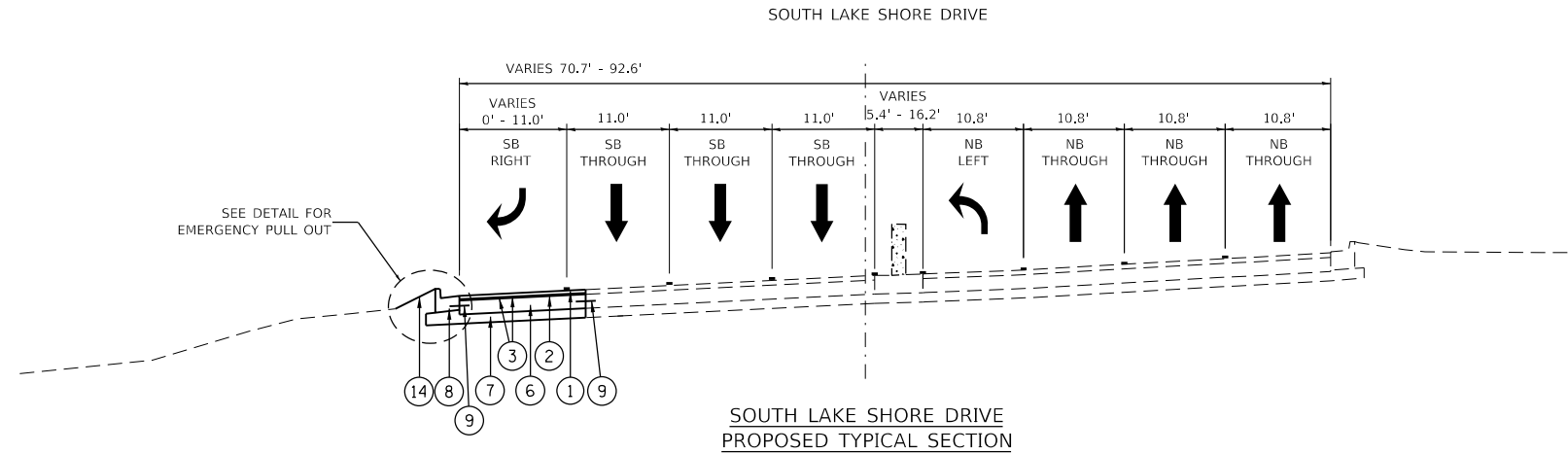
JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO. -
PROJECT NO. B-7-203
SCALE: NO SCALE

TOTAL SHEETS 1142
SHEET NO. 75
DRAWING NO. GEN-75



STA. 9914+20 TO STA. 9932+00 (63RD STREET UNDERPASS TO 59TH ST. INLET BRIDGE)
 STA. 9936+00 TO STA. 9950+16 (59TH ST. UNDERPASS TO SOUTH OF 57TH DRIVE.)



STA. 9914+20 TO STA. 9932+00 (63RD STREET UNDERPASS TO 59TH ST. INLET BRIDGE)
 STA. 9936+00 TO STA. 9950+16 (59TH ST. UNDERPASS TO SOUTH OF 57TH DRIVE.)

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUBBASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE MEDIAN/PARKWAY
- (H) P.C. CONCRETE BASE
- (I) PORTLAND CEMENT CONCRETE BARRIER WALL
- (J) BITUMINOUS BIKE AND PEDESTRIAN PATH
- (K) CONCRETE MEDIAN AND BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80, 2"
- (2) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 1"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 9"
- (7) AGGREGATE SUBGRADE IMPROVEMENT, 12"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- (9) #8 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) P.C. CONCRETE PAVED MEDIAN 4"
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) CONCRETE MEDIAN AND BASE
- (18) PORTLAND CEMENT CONCRETE BARRIER WALL

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

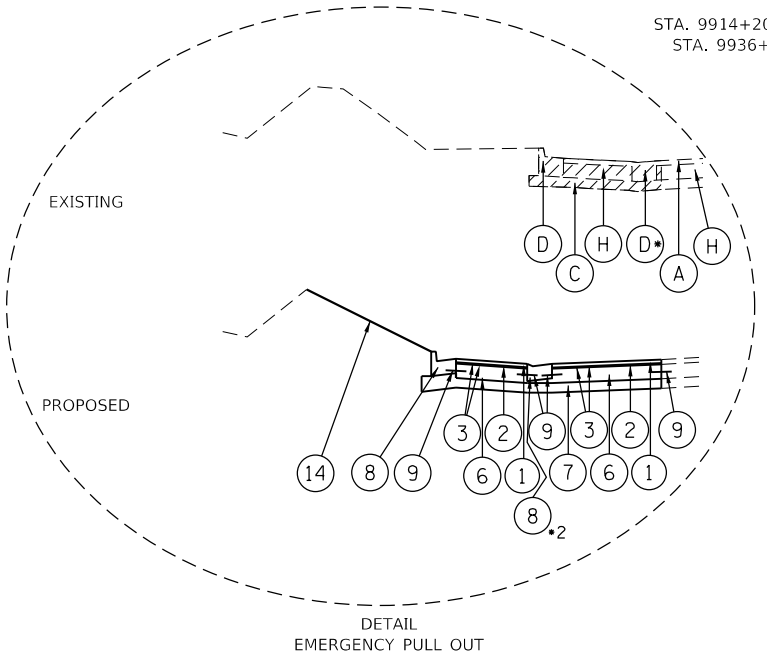
MIXTURE TYPE	AIR VOIDS @ Ndes
PAVEMENT WIDENING AND RECONSTRUCTION	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80 (IL 9.5mm), 2"	3.5% @ 80 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 1"	3.5% @ 50 GYR.
PAVEMENT RESURFACING	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80 (IL 9.5mm), 1-3/4"	3.5% @ 80 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	3.5% @ 50 GYR.

HMA MIXTURE REQUIREMENT NOTES:

- THE UNIT WEIGHT TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SO YD/IN.
- FOR PERCENT OF RAP, SEE DISTRICT ONE SPECIAL PROVISIONS.

NOTES:

- SEE ELECTRICAL PLANS FOR LIGHT POLE LOCATIONS.
- TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB, COMB. CC&G, AND PCC BASE BID ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS, UNLESS NOTED OTHERWISE.
- SUB-BASE GRANULAR MATERIAL VARIES AT CURB LOCATIONS.



- *1 No. 25 DEFORMED TIE BAR (EPOXY COATED), 24" LONG @ 24" (CENTERS) DRILL & GROUT IN PLACE.
- *2 IDOT DEPRESSED CURB (TYPICAL) FOR B-6.24.

PLOT DATE: 5/30/2019
 FILE NAME: 20190507_1.in
 PROJECT: C:\Users\chiltech\local\chiltech\Projects\Documents\Projects\31513\CAD\Sheets\Typical_XS\chicpyrdr003.dgn

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DATE: 05/31/2019				REVISIONS

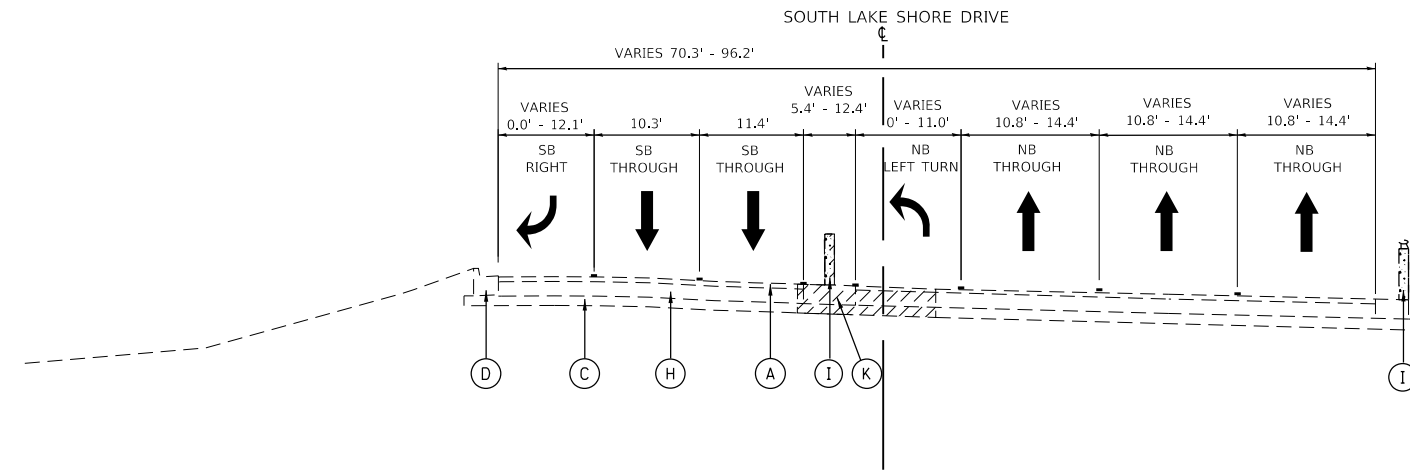


**TYPICAL SECTIONS
S. LAKE SHORE DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

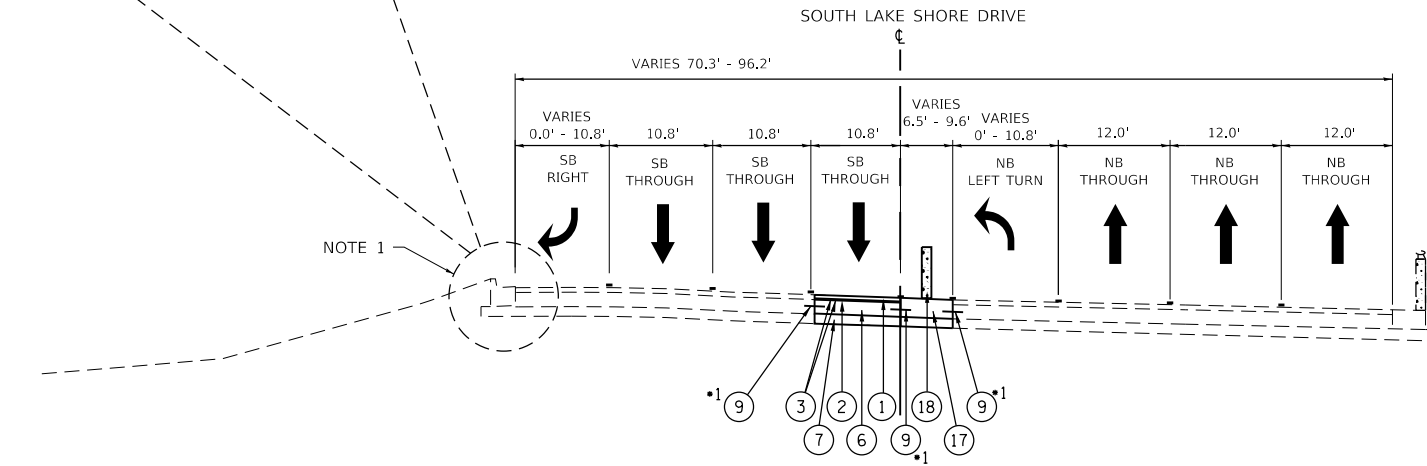
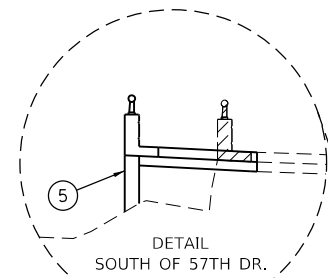
STA. TO STA.

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	76
PROJECT NO. B-7-203	DRAWING NO. GEN-76	
SCALE: NO SCALE		



**SOUTH LAKE SHORE DRIVE
EXISTING TYPICAL SECTION**

STA. 9947+50 TO STA. 9949+75 (NORTH OF 57TH DR.)
STA. 9951+90 TO STA. 9954+72 (SOUTH OF 57TH DR.)



**SOUTH LAKE SHORE DRIVE
PROPOSED TYPICAL SECTION**

STA. 9947+50 TO STA. 9949+75 (NORTH OF 57TH DR.)
STA. 9951+90 TO STA. 9954+72 (SOUTH OF 57TH DR.)

*1 No. 25 DEFORMED TIE BAR (EPOXY COATED), 24" LONG @ 24" (CENTERS) DRILL & GROUT IN PLACE.

LEGEND:

EXISTING

- (A) ASPHALT
- (B) TRACK ZONE
- (C) SUBBASE GRANULAR MATERIAL
- (D) COMBINATION CONCRETE CURB AND GUTTER
- (E) P.C. CONCRETE SIDEWALK
- (F) EXISTING PARKWAY/LANDSCAPING
- (G) CONCRETE MEDIAN/PARKWAY
- (H) P.C. CONCRETE BASE
- (I) PORTLAND CEMENT CONCRETE BARRIER WALL
- (J) BITUMINOUS BIKE AND PEDESTRIAN PATH
- (K) CONCRETE MEDIAN AND BASE

PROPOSED

- (1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80, 2"
- (2) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 1"
- (3) BITUMINOUS MATERIALS PRIME COAT
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"
- (5) RETAINING WALL, SEE STRUCTURAL PLANS
- (6) PORTLAND CEMENT CONCRETE BASE COURSE, 9"
- (7) AGGREGATE SUBGRADE IMPROVEMENT, 12"
- (8) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- (9) #8 TIE BAR
- (10) PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- (11) SAND CUSHION, VARIABLE DEPTH
- (12) P.C. CONCRETE PAVED MEDIAN 4"
- (13) CURB ATTACHED TO CONCRETE SIDEWALK
- (14) PARKWAY, SEE LANDSCAPE PLANS
- (15) COMBINATION CONCRETE CURB AND GUTTER B-V.12 (DEPRESSED)
- (16) AGGREGATE PRIME COAT (DURING TEMPORARY STAGING)
- (17) CONCRETE MEDIAN AND BASE
- (18) PORTLAND CEMENT CONCRETE BARRIER WALL

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR Voids @ Ndes
PAVEMENT WIDENING AND RECONSTRUCTION	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80 (IL 9.5mm), 2"	3.5% @ 80 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 1"	3.5% @ 50 GYR.
PAVEMENT RESURFACING	
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, N80 (IL 9.5mm), 1-3/4"	3.5% @ 80 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4" - 1"	3.5% @ 50 GYR.

HMA MIXTURE REQUIREMENT NOTES:

- THE UNIT WEIGHT TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/50 YD/IN.
- FOR PERCENT OF RAP, SEE DISTRICT ONE SPECIAL PROVISIONS.

NOTES:

- SEE ELECTRICAL PLANS FOR LIGHT POLE LOCATIONS.
- TIE BARS AT CURBLINE AND LONGITUDINAL PAVEMENT JOINTS ARE INCIDENTAL TO CURB, COMB. CC&G, AND PCC BASE BID ITEMS UNLESS DRILLING AND GROUTING INTO EXISTING PCC BASE IS REQUIRED; THEN THEY SHALL BE PAID FOR SEPARATELY AS DRILL AND GROUT BARS. UNLESS NOTED OTHERWISE.
- SUB-BASE GRANULAR MATERIAL VARIES AT CURB LOCATIONS.
- PROPOSED IMPROVEMENTS FOR SOUTH OF 57TH DR. NOT SHOWN. SEE STRUCTURAL PLANS FOR DETAILS.

PLOT DATE: 5/30/2019
 SCALE: 20.0000' = 1" IN.
 PROJECT: C:\Users\jacob\Documents\Projects\Documents\Projects\3151\CAD\Sheets\Typical_XS\hsc\typical_002.dwg

DESIGN:	CZ				
DRAWN:	CZ				
CHECKED:	DM				
APPROVED:		NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019					REVISIONS



**TYPICAL SECTIONS
S. LAKE SHORE DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. TO STA.

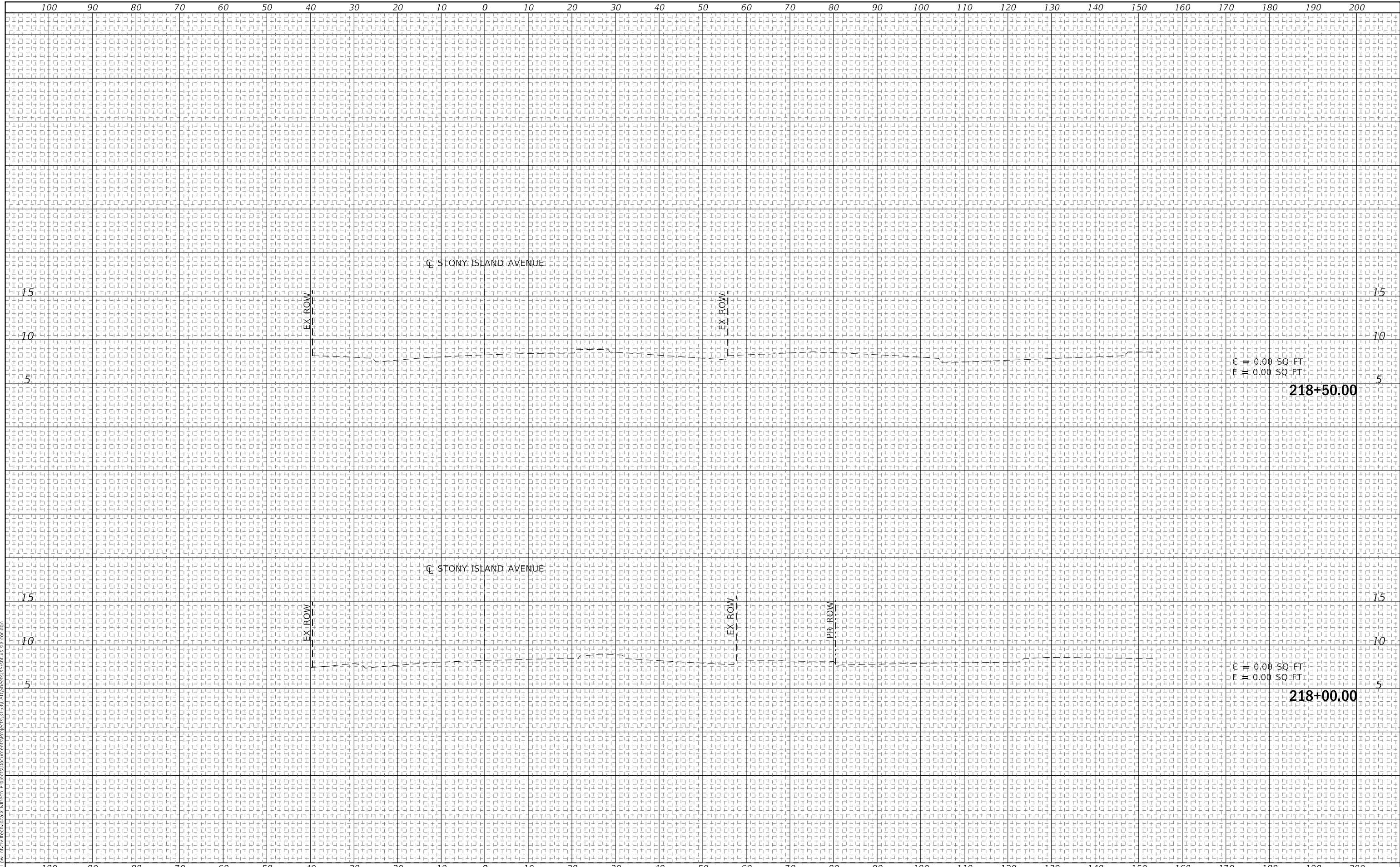
CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1142	77
PROJECT NO. B-7-203	DRAWING NO. GEN-77	
SCALE: NO SCALE		

DRAFT

BY	DATE
FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE
	AREAS CHECKED

BY	DATE
ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE
	AREAS CHECKED

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' / 1" = 100.0000'
 FILE NAME: I:\GIS\Projects\2019\20190529\20190529_SonyIslandAve_CrossSections.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
			REVISIONS



**CROSS SECTIONS
 S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 218+00 TO STA. 218+50

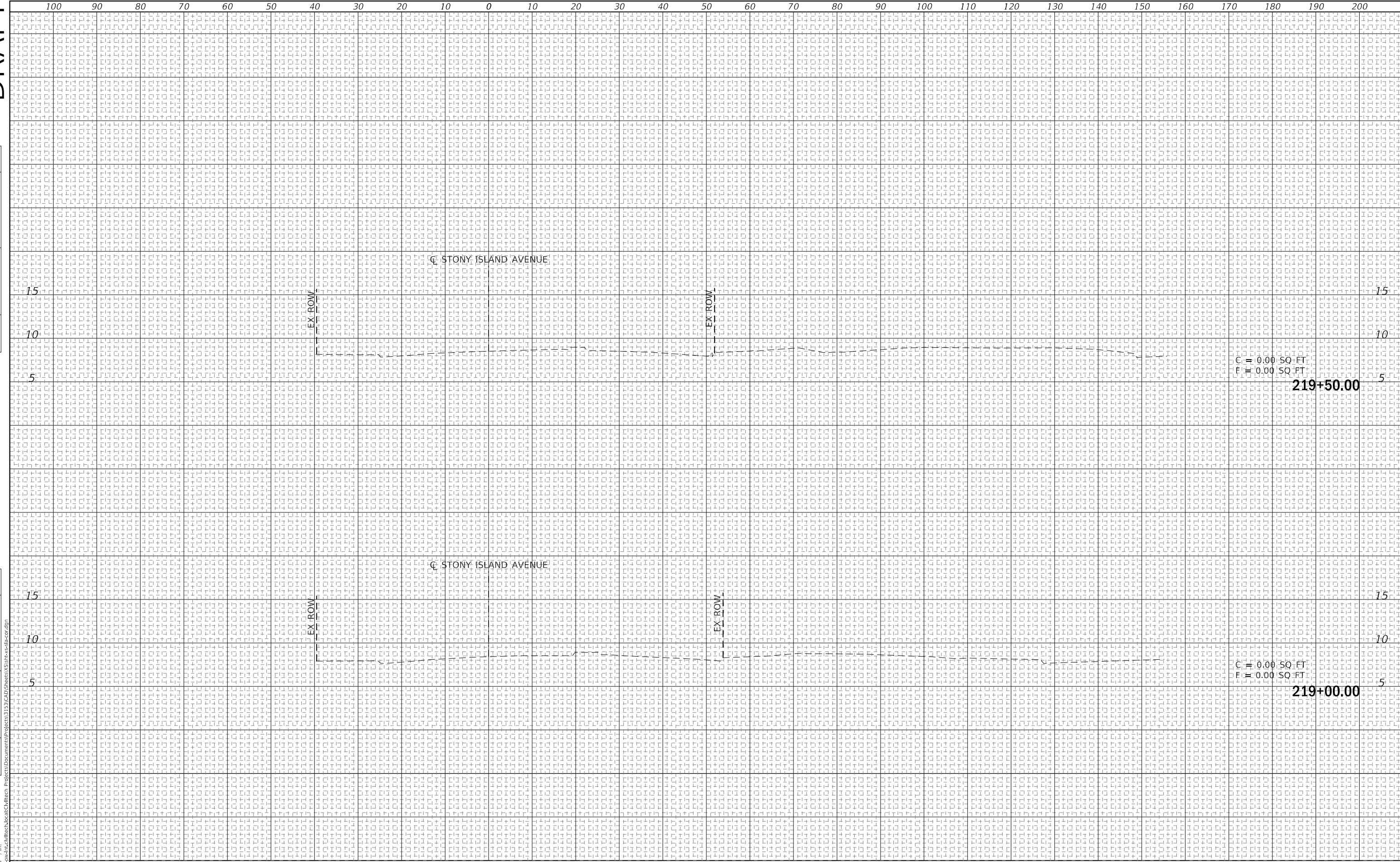
CONTRACT NO.	
PROJECT NO.	B-7-203
SCALE:	AS INDICATED

TOTAL SHEETS	1142	SHEET NO.	1000
DRAWING NO.	XS-1		

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DESCRIPTION
DATE: 05/31/2019		REVISIONS	

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1.00'
 FILE NAME: R:\01\1616\1616\1616\1616\1616\CAD\Sheet\XS\stony-island-draft.dwg



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 219+00 TO STA. 219+50

CONTRACT NO.
PROJECT NO. B-7-203
SCALE: AS INDICATED

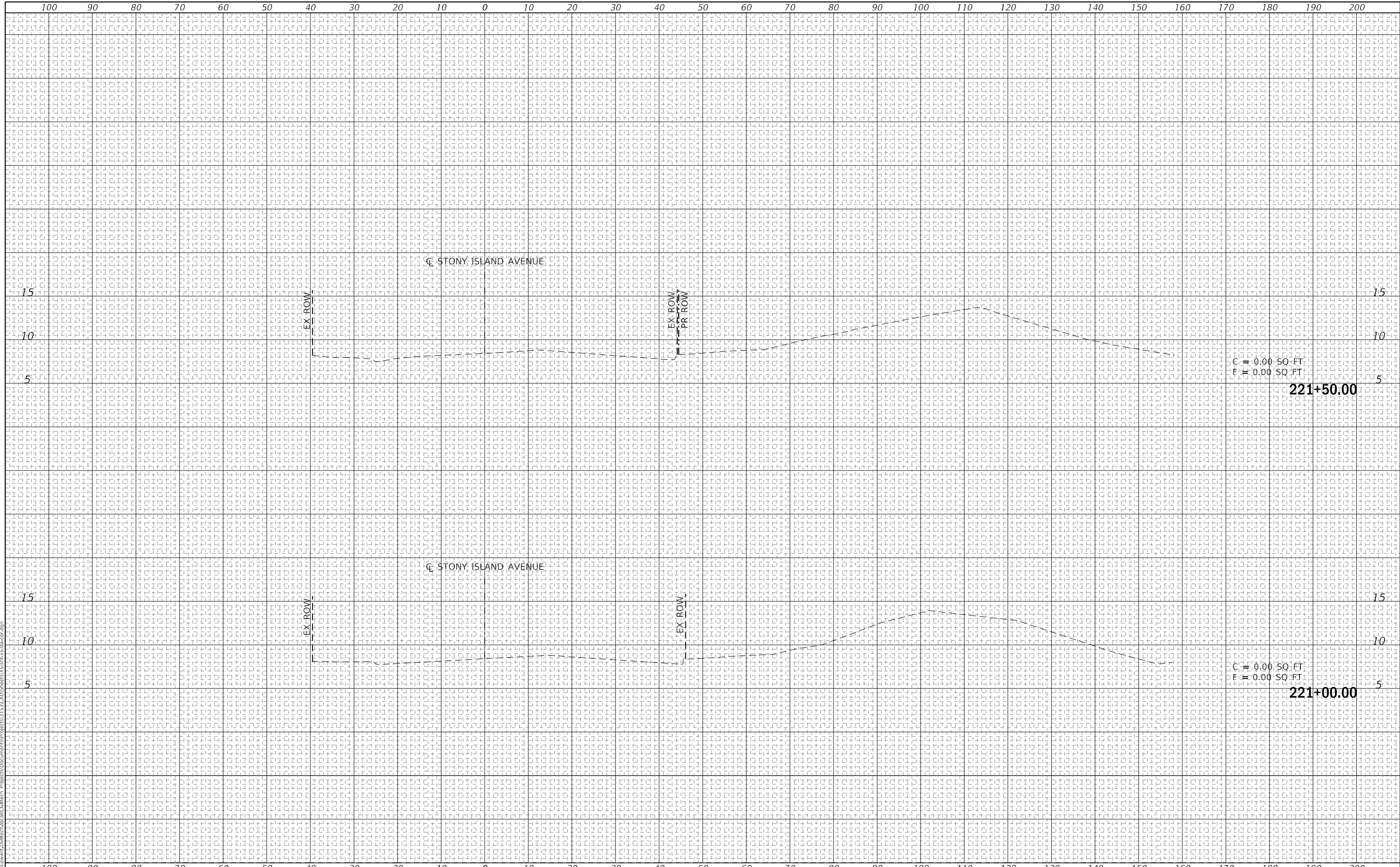
TOTAL SHEETS	SHEET NO.
1142	1001
DRAWING NO.	XS-2

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Drawings\CDOT\Projects\Documents\Project\CDOT\Drawings\XS\stony-island-draft.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

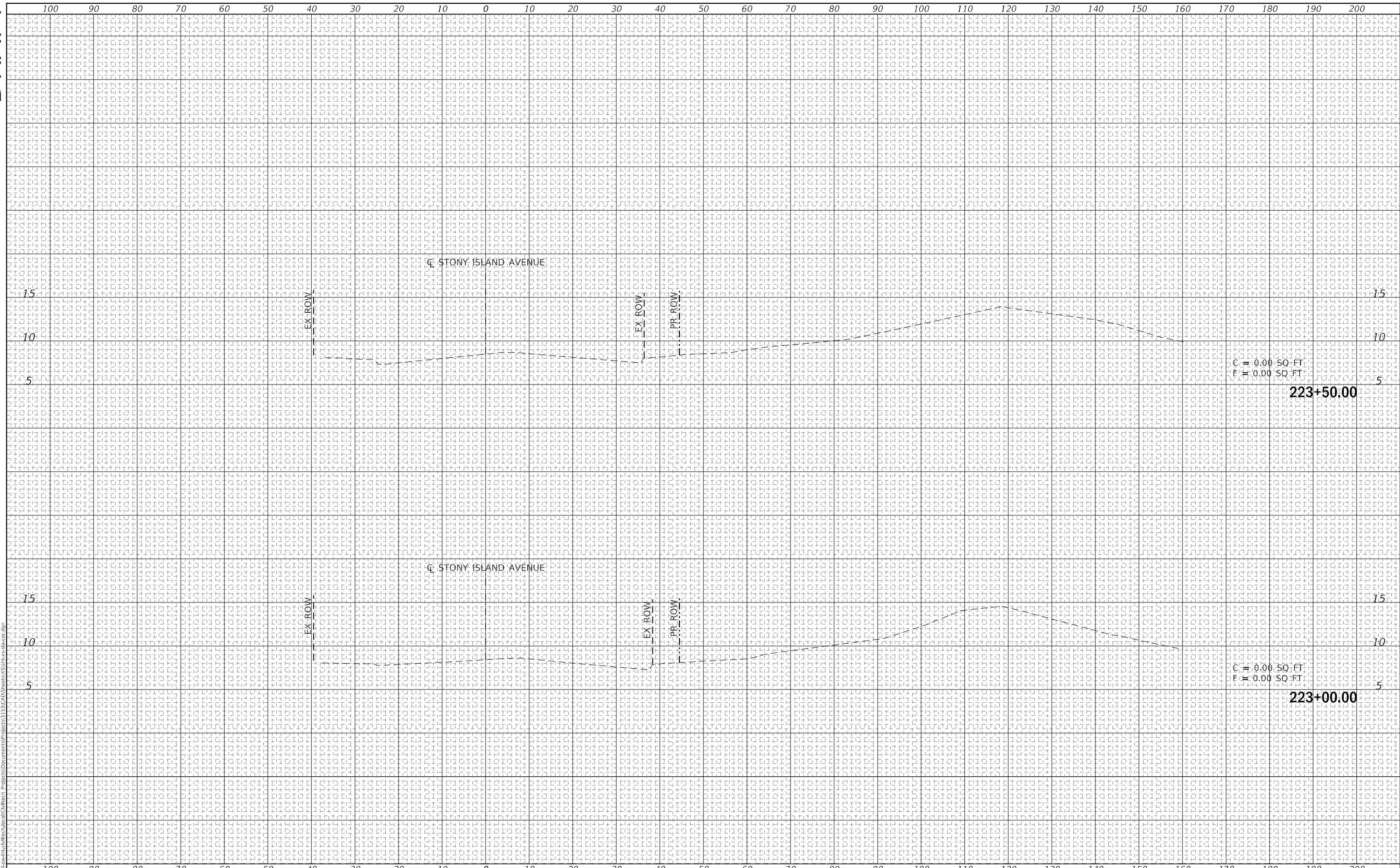
JACKSON PARK MOBILITY IMPROVEMENTS

STA. 221+00 TO STA. 221+50

CONTRACT NO.		TOTAL SHEETS	SHEET NO.
PROJECT NO.	B-7-203	1142	1003
SCALE: AS INDICATED		DRAWING NO.	XS-4

DRAFT

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



PLOT DATE: 5/29/2019
 PLOT SCALE: 20,000.00 / 1 in.
 FILE NAME: I:\s\16114\16114.dwg

DESIGN:	MPK	\$REV3		
DRAWN:	MPK	\$REV2		
CHECKED:		\$REV1		
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.
 PROJECT NO. B-7-203
 SCALE: AS INDICATED

TOTAL SHEETS	SHEET NO.
1142	1005
DRAWING NO.	
XS-6	

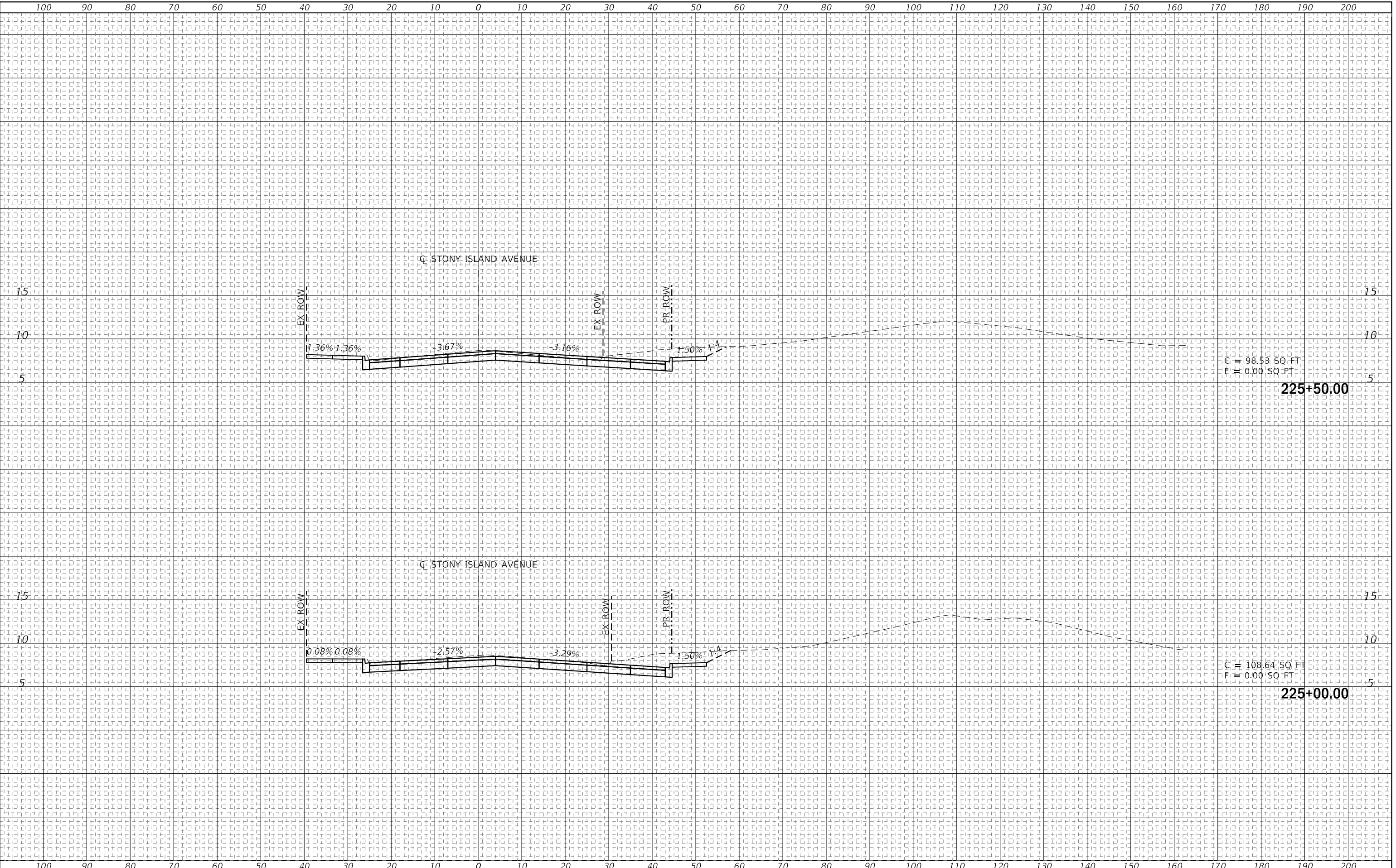
STA. 223+00 TO STA. 223+50

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

PLOT DATE: 5/29/2019
PLOT SCALE: 20.0000' = 1" IN.
FILE NAME: I:\GIS\InfoWorks\I\Tech\AutoCAD\Drawings\Projects\Documents\PROJECTS\3131\CAD\Sheet\XS\stony-sid-cs-draft.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE:	05/31/2019		

NO.	REVISIONS



**CROSS SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 225+00 TO STA. 225+50

CONTRACT NO.	B-7-203
PROJECT NO.	B-7-203
SCALE:	AS INDICATED

TOTAL SHEETS	1142	SHEET NO.	1007
DRAWING NO.	XS-8		

DRAFT

BY	DATE

FINAL SURVEY NO.	SURVEYED PLOTTED

NOTE BOOK	TEMPLE

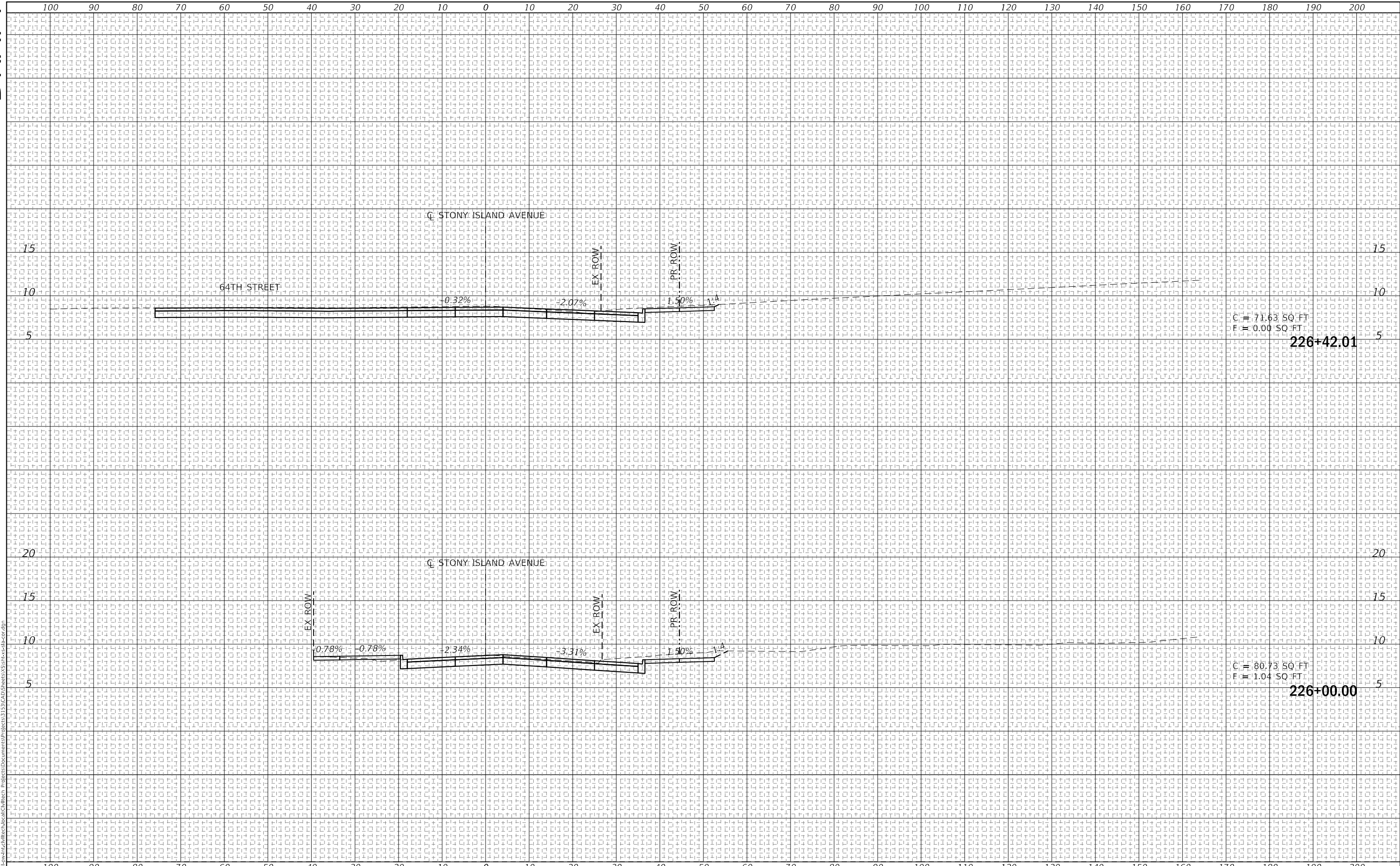
AREAS CHECKED

BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED

NOTE BOOK	TEMPLE

AREAS CHECKED



C = 71.63 SQ FT
 F = 0.00 SQ FT
 226+42.01

C = 80.73 SQ FT
 F = 1.04 SQ FT
 226+00.00

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1' in.
 FILE NAME: \\pbl\m\work\proj\c\illinois\chicago\mtech\proj\c\131\CAD\Sheet\XS\stony-ave-cross-draft

DESIGN:	MPK	\$REV3
DRAWN:	MPK	\$REV2
CHECKED:		\$REV1
APPROVED:	NO.	BY
DATE:	05/31/2019	

REVISIONS	DESCRIPTION



**CROSS SECTIONS
 S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO. B-7-203
 PROJECT NO. B-7-203
 SCALE: AS INDICATED
 STA. 226+00 TO STA. 226+42

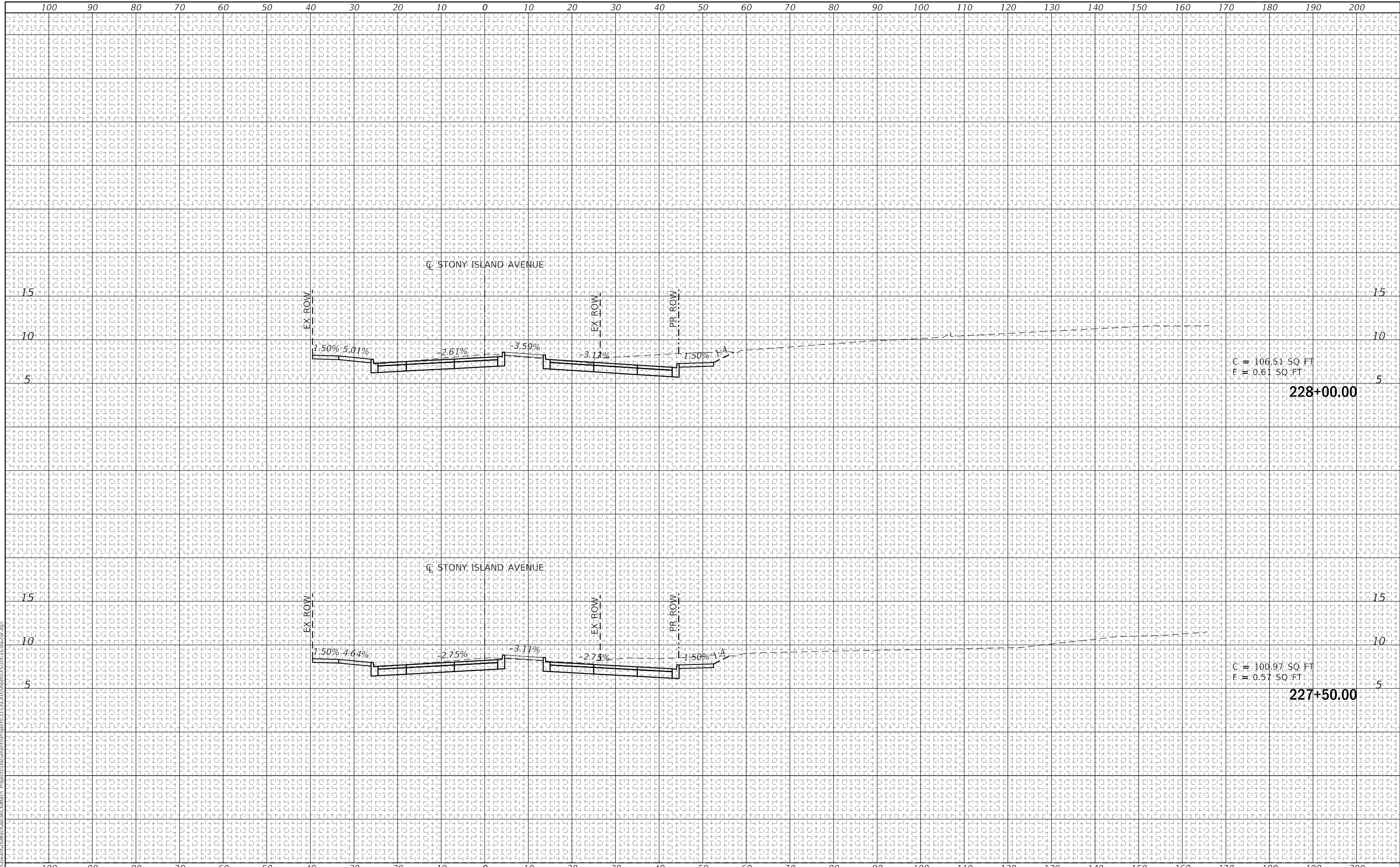
TOTAL SHEETS	1142	SHEET NO.	1008
DRAWING NO.		XS-9	

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	DATE
NOTE BOOK	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	DATE
NOTE BOOK	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\m\m\work\1411\chicago\mtech\projects\documents\proj\c3131\cad\sheet\XS\stony-isle-cs-draft.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 227+50 TO STA. 228+00

CONTRACT NO.	
PROJECT NO.	B-7-203
SCALE:	AS INDICATED

TOTAL SHEETS	1142	SHEET NO.	1010
DRAWING NO.	XS-11		

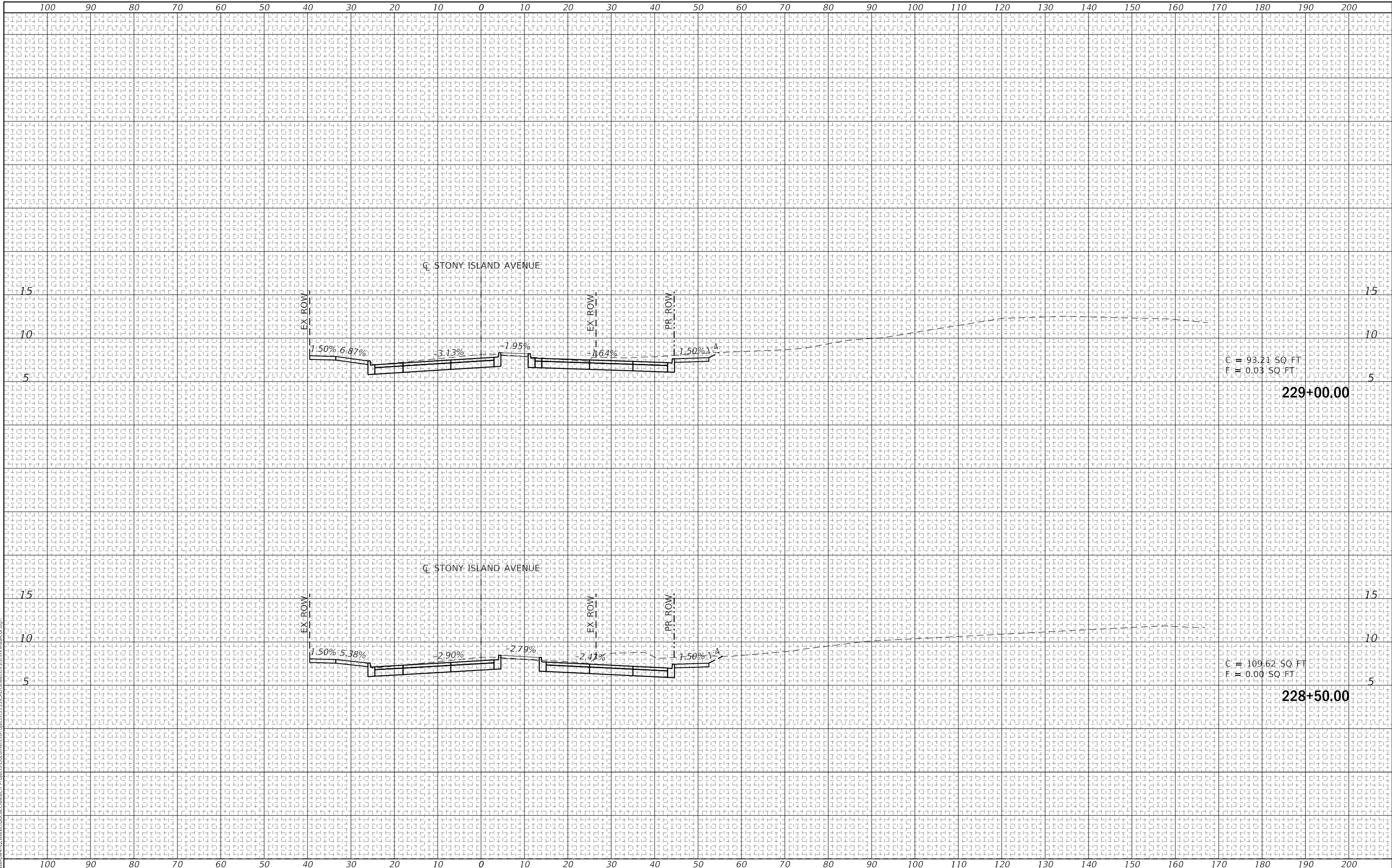
DRAFT

BY	DATE
FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE
	AREAS CHECKED

BY	DATE
ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE
	AREAS CHECKED

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1"

FILE NAME: \p01\m20190528\1116\chicago\mtech\projects\documents\proj\c131\c131\c131\CAD\Streets\US\stony-isle-ct.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
REVISIONS			



CROSS SECTIONS
 S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS
 STA. 228+50 TO STA. 229+00

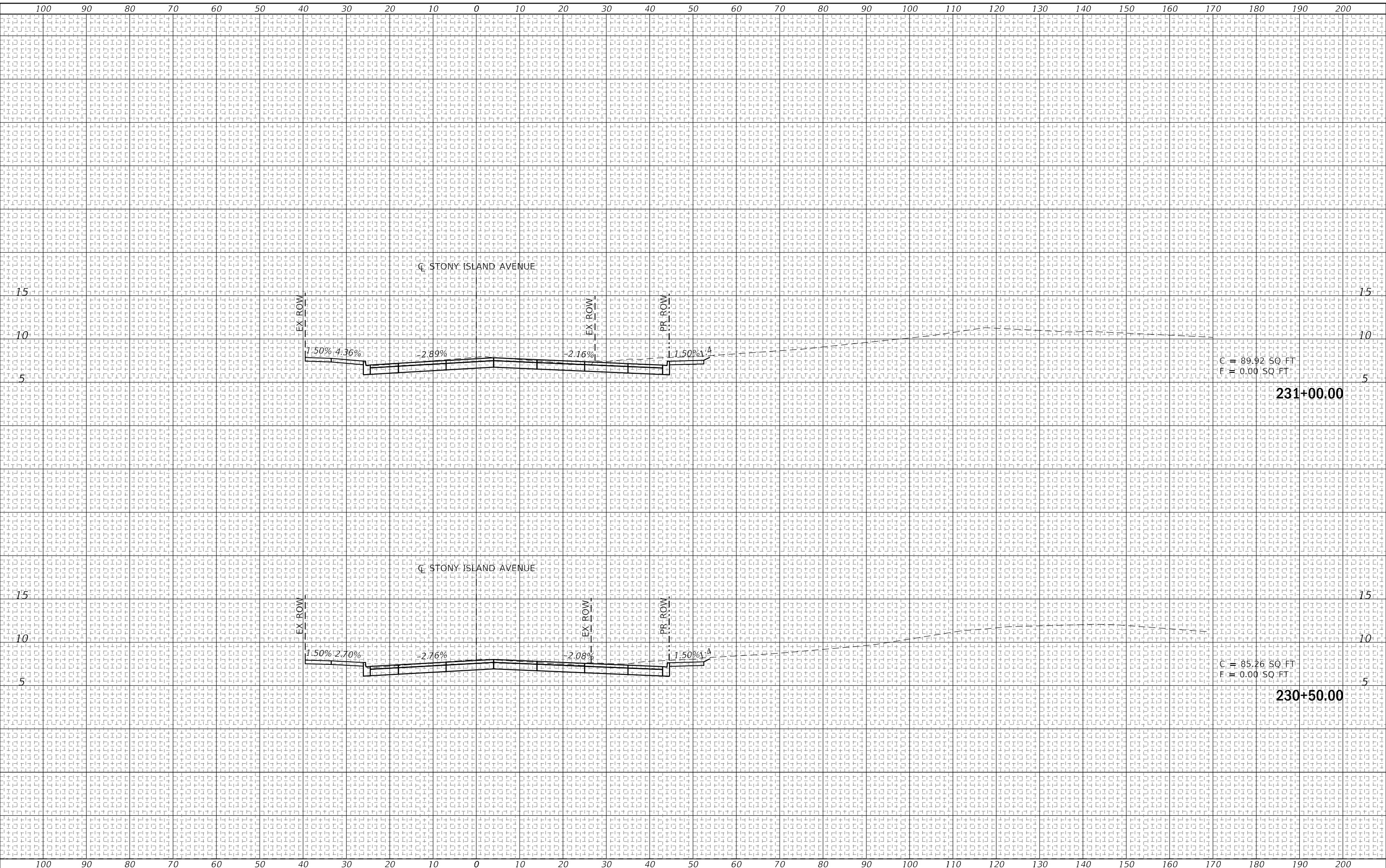
CONTRACT NO.		TOTAL SHEETS	SHEET NO.
PROJECT NO.	B-7-203	1142	1011
SCALE:	AS INDICATED	DRAWING NO.	XS-12

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

PLOT DATE: 5/29/2019
PLOT SCALE: 20.0000" = 1.00'
FILE NAME: J:\Milestones\2018\Chicago\Wrench\Projects\Documents\Project\3131\CAD\Sheets\XS-stony-isle-draft.dwg



DESIGN:	MPK	\$REV3
DRAWN:	MPK	\$REV2
CHECKED:		\$REV1
APPROVED:	NO.	BY
DATE: 05/31/2019		DESCRIPTION
		REVISIONS



**CROSS SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 230+50 TO STA. 231+00

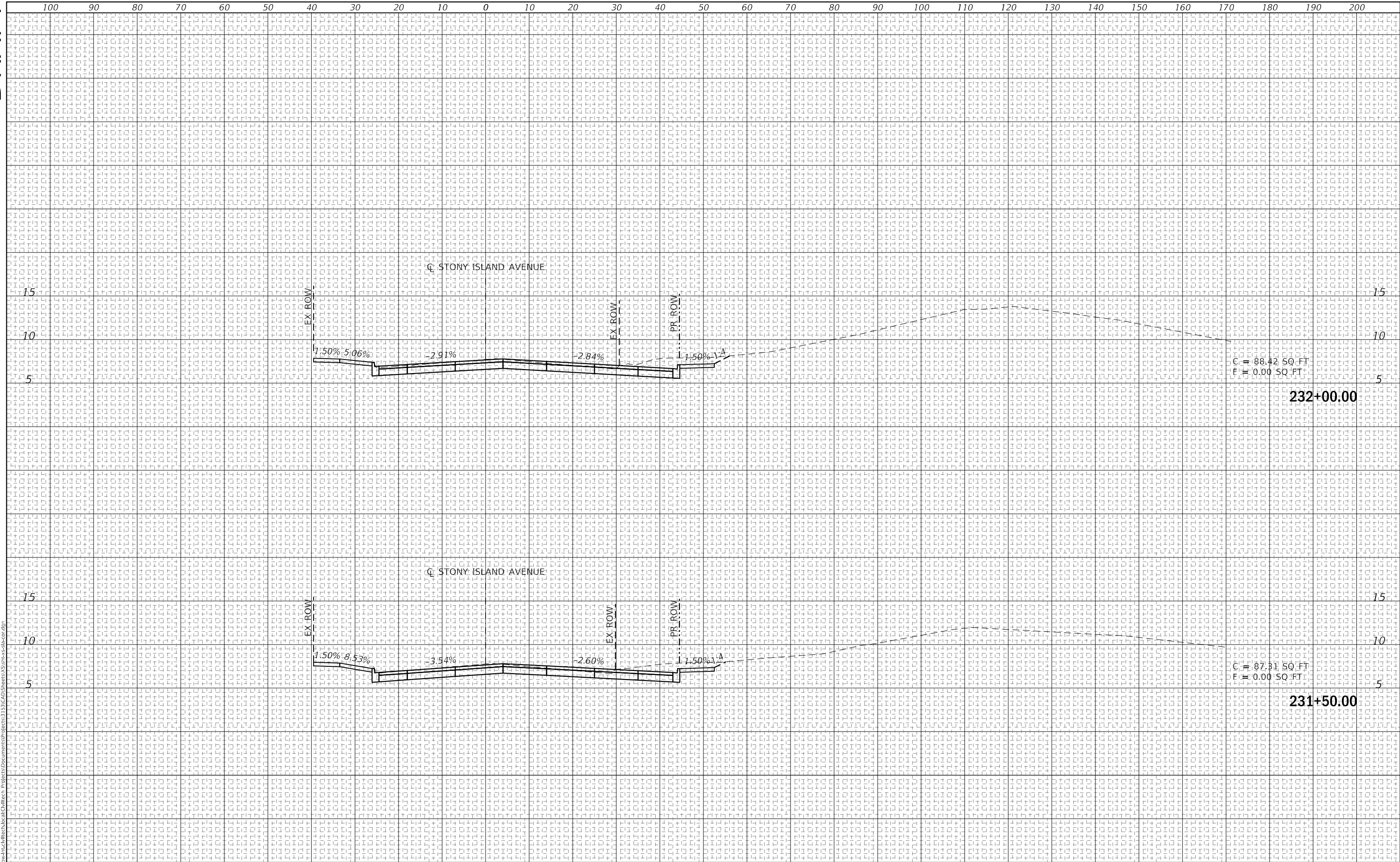
CONTRACT NO.	1142	TOTAL SHEETS	1013
PROJECT NO.	B-7-203	DRAWING NO.	XS-14
SCALE:	AS INDICATED		

DRAFT

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" / in.
 FILE NAME: D:\MIDWEST\2019\5\11\chicago\mtech\Projects\Documents\Project\3131\CD\Sheet\XS\stony-isle-draft.dwg



C = 88.42 SQ. FT
 F = 0.00 SQ. FT

232+00.00

C = 87.31 SQ. FT
 F = 0.00 SQ. FT

231+50.00

DESIGN:	MPK		\$REV3	
DRAWN:	MPK		\$REV2	
CHECKED:			\$REV1	
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019			REVISIONS



**CROSS SECTIONS
 S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 231+50 TO STA. 232+00

CONTRACT NO.		TOTAL SHEETS	SHEET NO.
PROJECT NO.	B-7-203	1142	1014
SCALE:	AS INDICATED	DRAWING NO.	XS-15

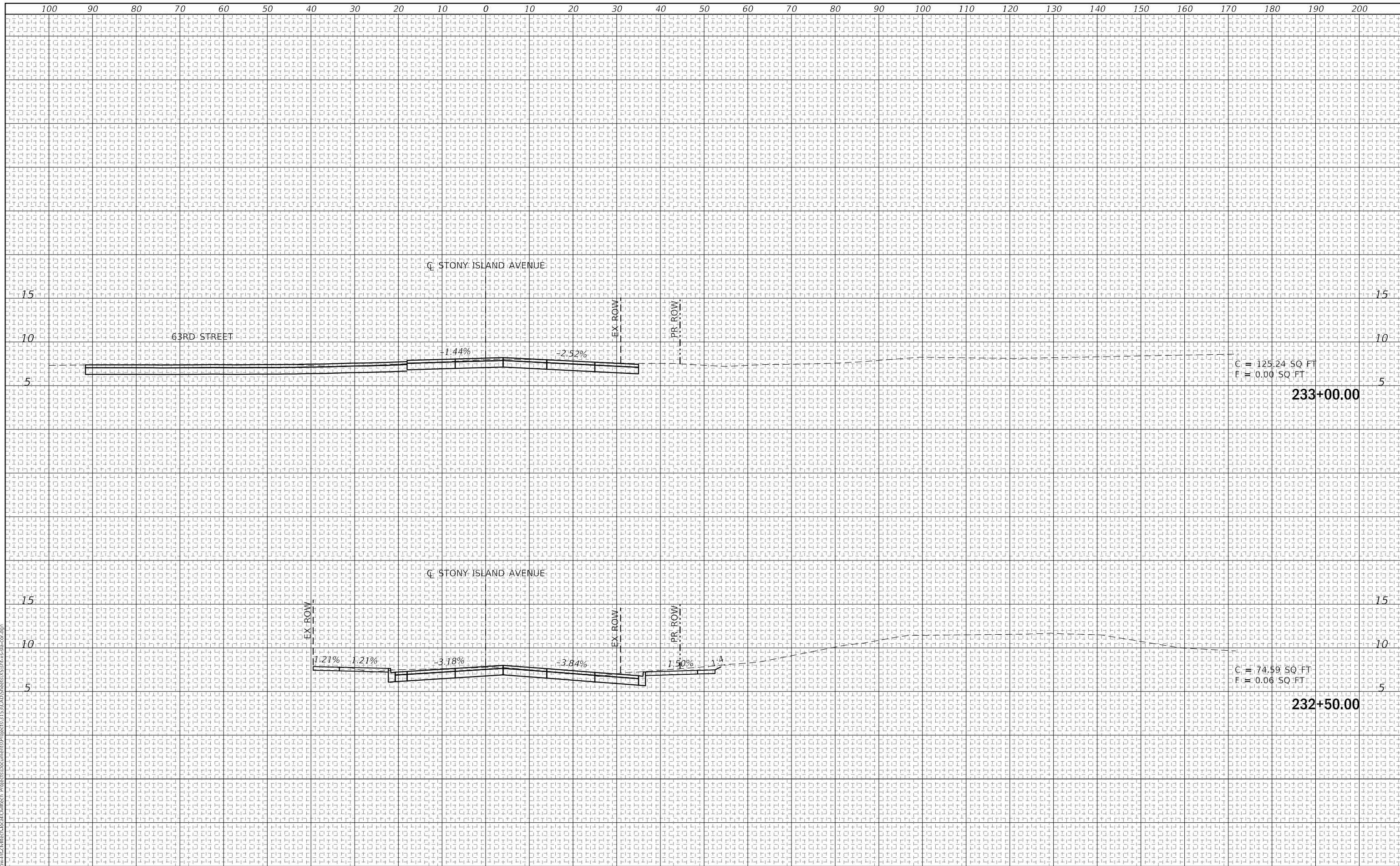
DRAFT

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	

PROJECT: S. Stony Island Ave. Mobility Improvements
FILE NAME: I:\s1313131\Projects\Drawings\CDOT\CDOT\Drawings\S\stony-island-draft.dwg

PLOT DATE: 5/29/2019
PLOT SCALE: 20.0000' = 1" in.
FILE NAME: I:\s1313131\Projects\Drawings\CDOT\CDOT\Drawings\S\stony-island-draft.dwg



C = 125.24 SQ FT
F = 0.00 SQ FT
233+00.00

C = 74.59 SQ FT
F = 0.06 SQ FT
232+50.00

DESIGN:	MPK	SREV3	SREV2	SREV1
DRAWN:	MPK			
CHECKED:				
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 232+50 TO STA. 233+00

CONTRACT NO.
PROJECT NO.
SCALE: AS INDICATED

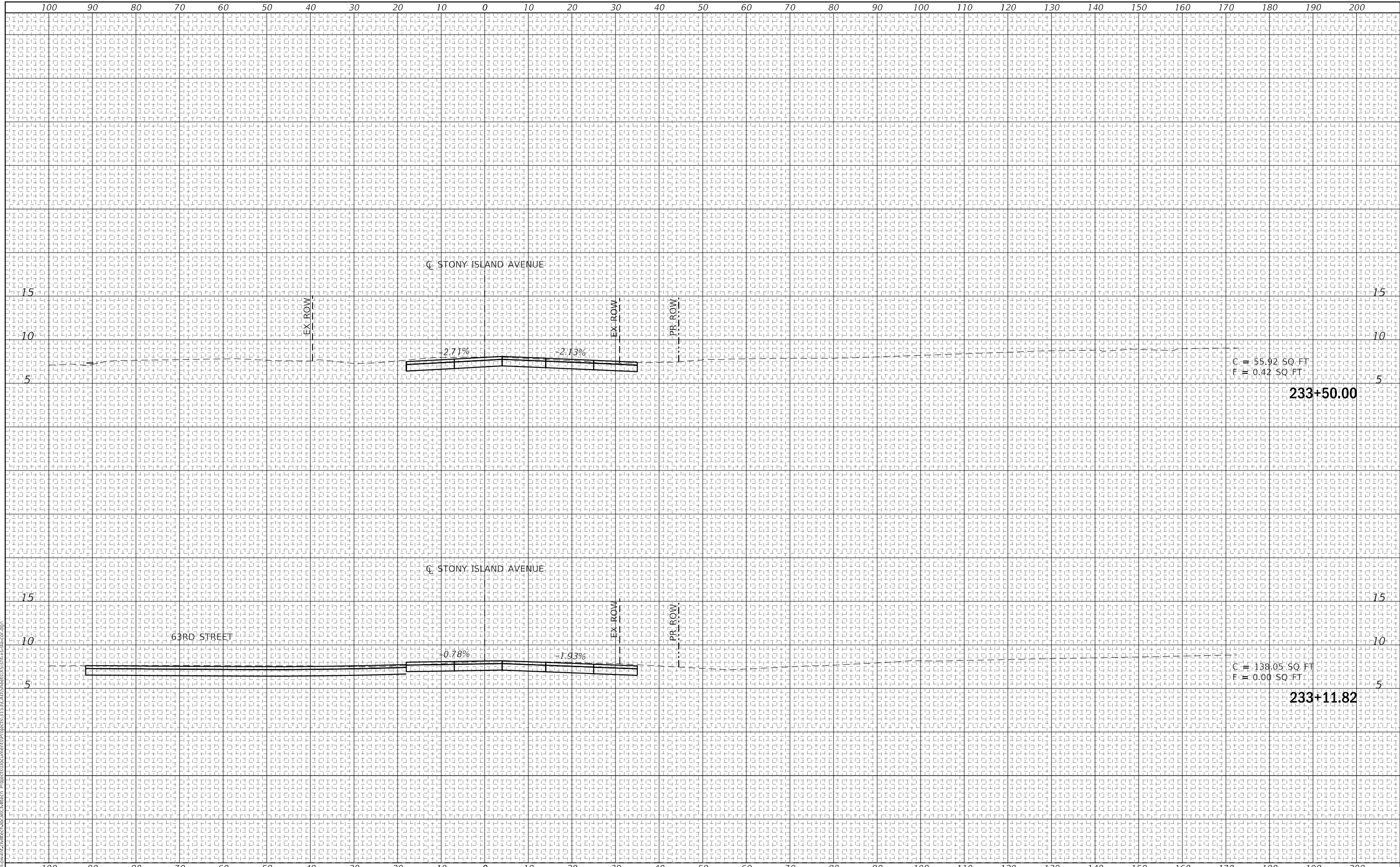
TOTAL SHEETS	SHEET NO.
1142	1015
DRAWING NO.	XS-16

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\CDOT\Projects\Documents\Project\CDOT\StonyIsland\StonyIsland.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 233+12 TO STA. 233+50

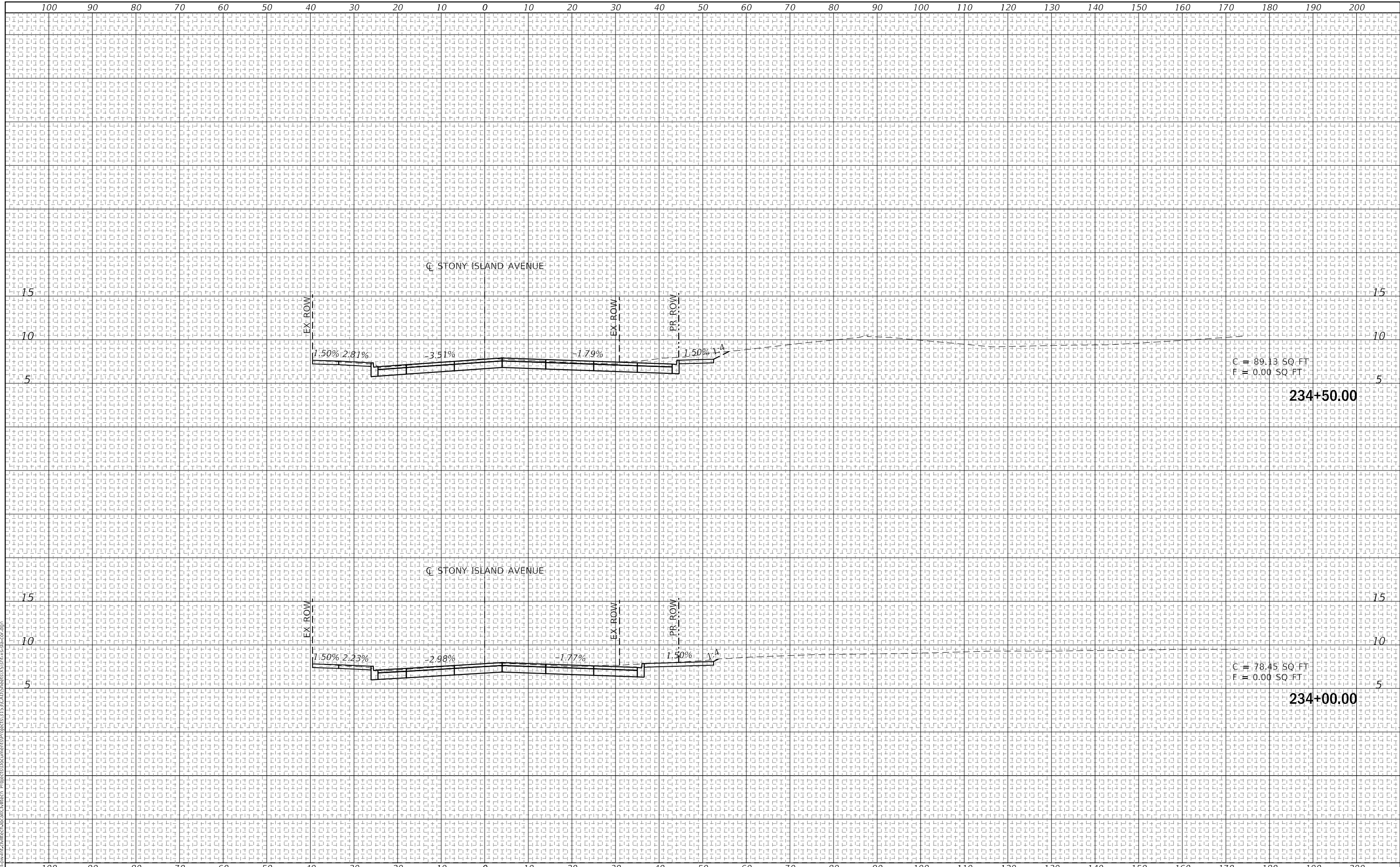
CONTRACT NO.		TOTAL SHEETS	SHEET NO.
PROJECT NO.	B-7-203	1142	1016
SCALE: AS INDICATED		DRAWING NO.	XS-17

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
NOTE BOOK	TEMPLATE		
AREAS CHECKED	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
NOTE BOOK	TEMPLATE		
AREAS CHECKED	AREAS CHECKED		

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: I:\GIS\Projects\2019\JPMI\Drawings\CDOT\Sheet\XS-S-I-A-draft.dwg



DESIGN:	MPK		\$REV3	
DRAWN:	MPK		\$REV2	
CHECKED:			\$REV1	
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019			REVISIONS



CROSS SECTIONS
 S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 234+00 TO STA. 234+50

CONTRACT NO. B-7-203
 PROJECT NO. B-7-203
 SCALE: AS INDICATED

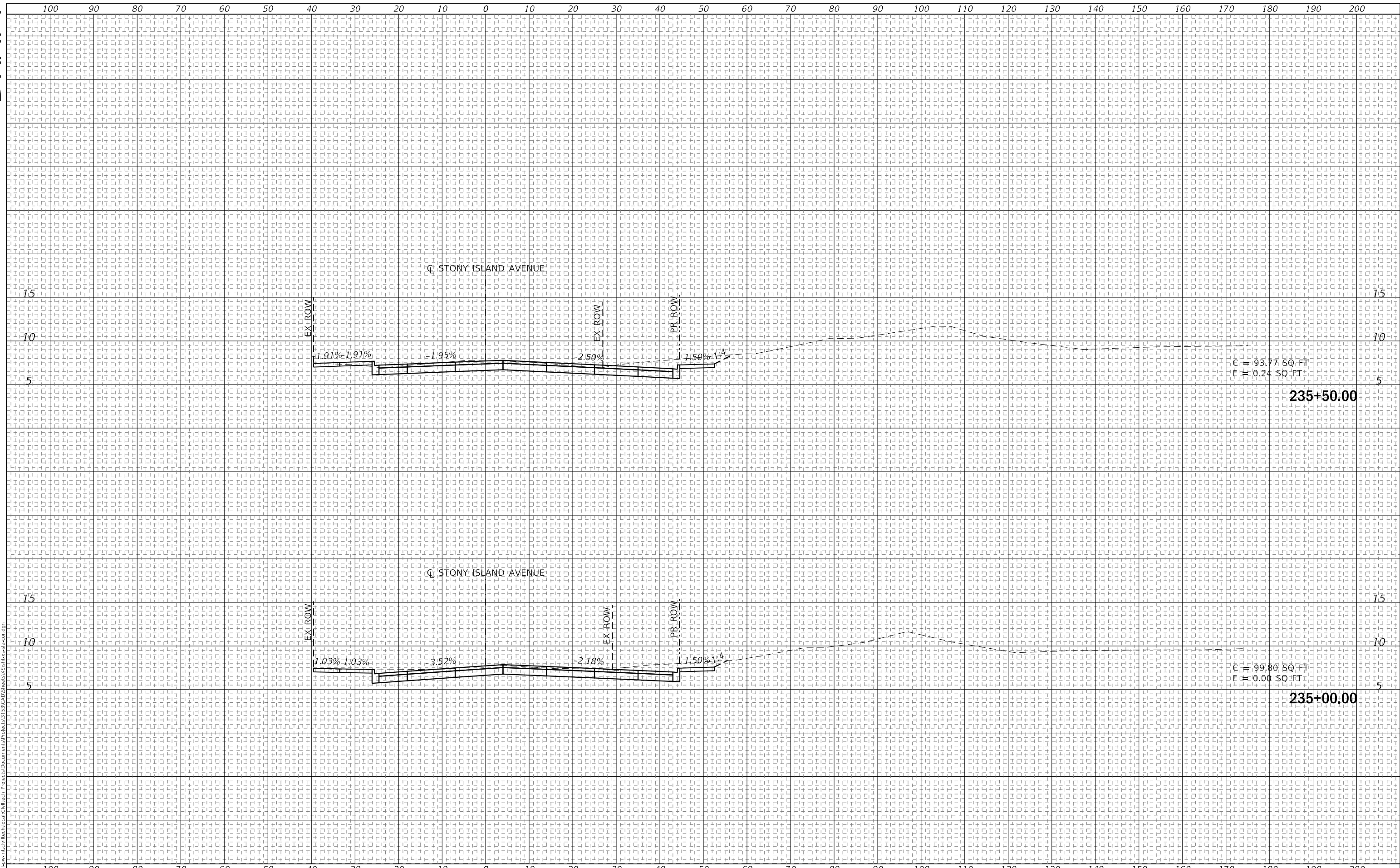
TOTAL SHEETS	1142	SHEET NO.	1017
DRAWING NO.	XS-18		

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\2019\20190529\20190529_1142\1142_CrossSections\1142_CrossSections.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
 S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 235+00 TO STA. 235+50

CONTRACT NO.
 PROJECT NO. B-7-203
 SCALE: AS INDICATED

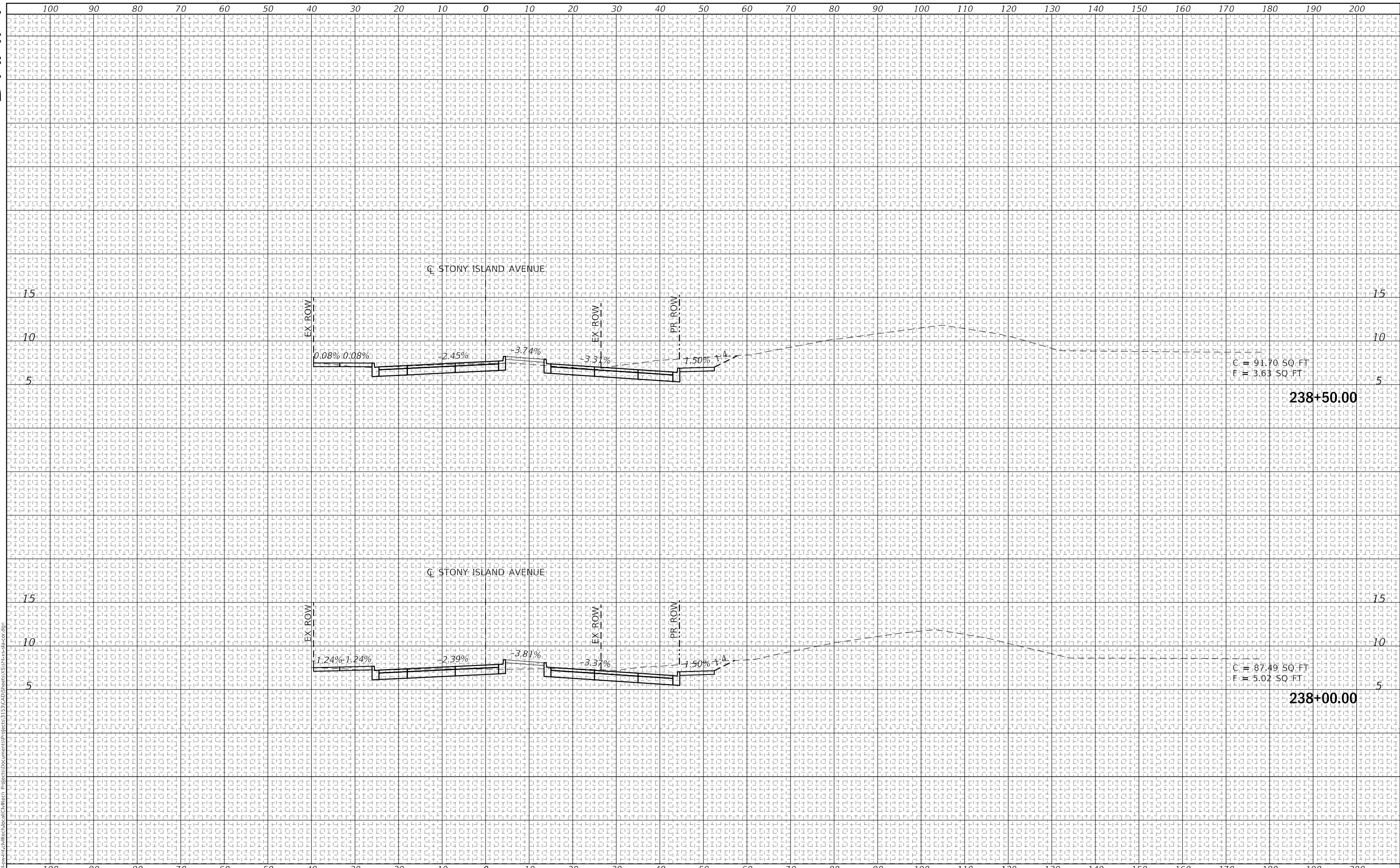
TOTAL SHEETS	SHEET NO.
1142	1018
DRAWING NO.	XS-19

DRAFT

BY	DATE
FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE
	AREAS CHECKED

BY	DATE
ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE
	AREAS CHECKED

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1'-0"
 FILE NAME: C:\wmi\work\proj\wmi\cadd\tech\proj\chicago\mtech\projects\documents\proj\ce3131\CAD\Sheet\XS-stony-island.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



**CROSS SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 238+00 TO STA. 238+50

CONTRACT NO.
PROJECT NO.
SCALE: AS INDICATED

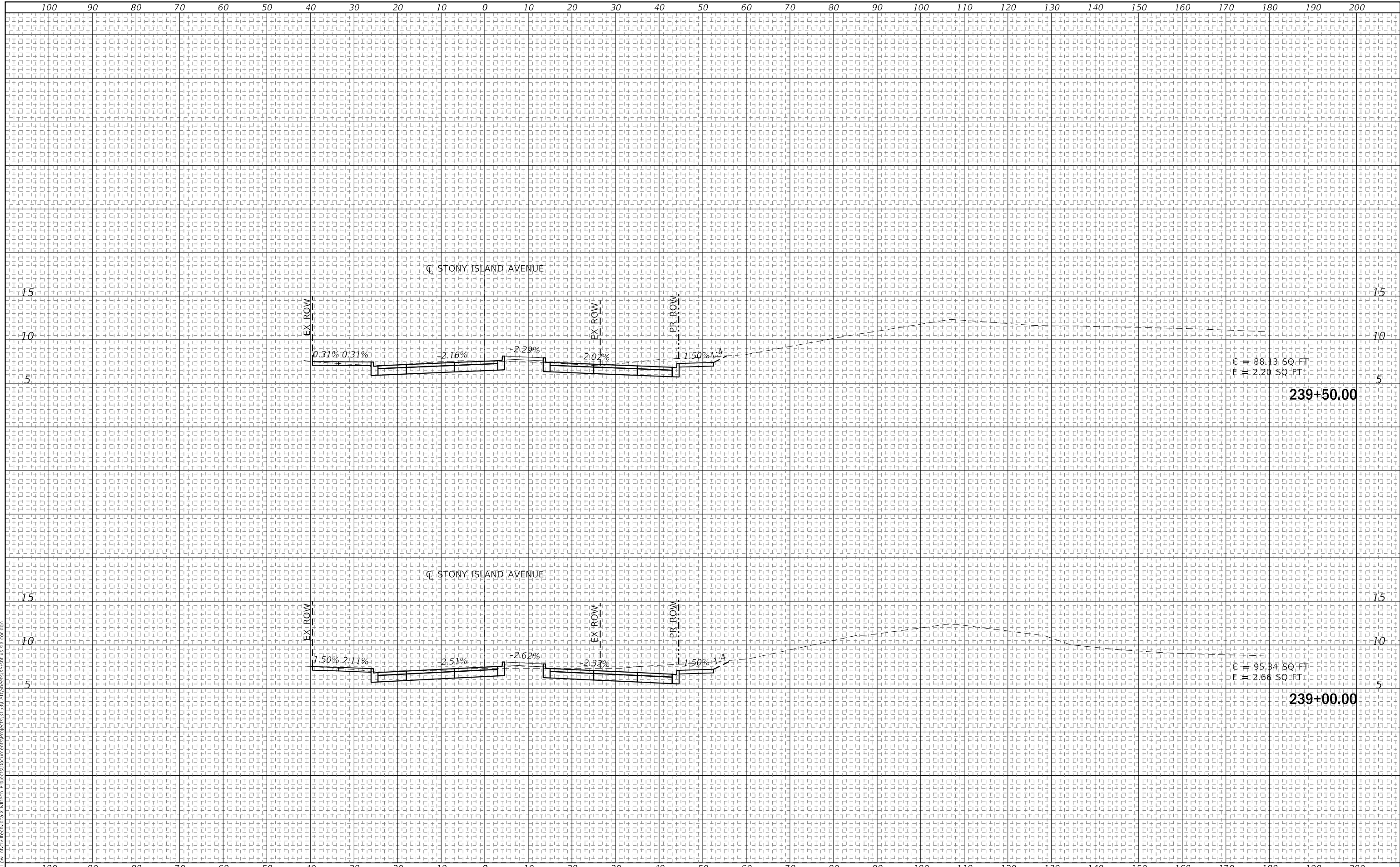
TOTAL SHEETS	SHEET NO.
1142	1021
DRAWING NO.	XS-22

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1.00'
 FILE NAME: I:\GIS\Projects\2019\JPMI\Drawings\Cross\XS-23.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
REVISIONS			



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 239+00 TO STA. 239+50

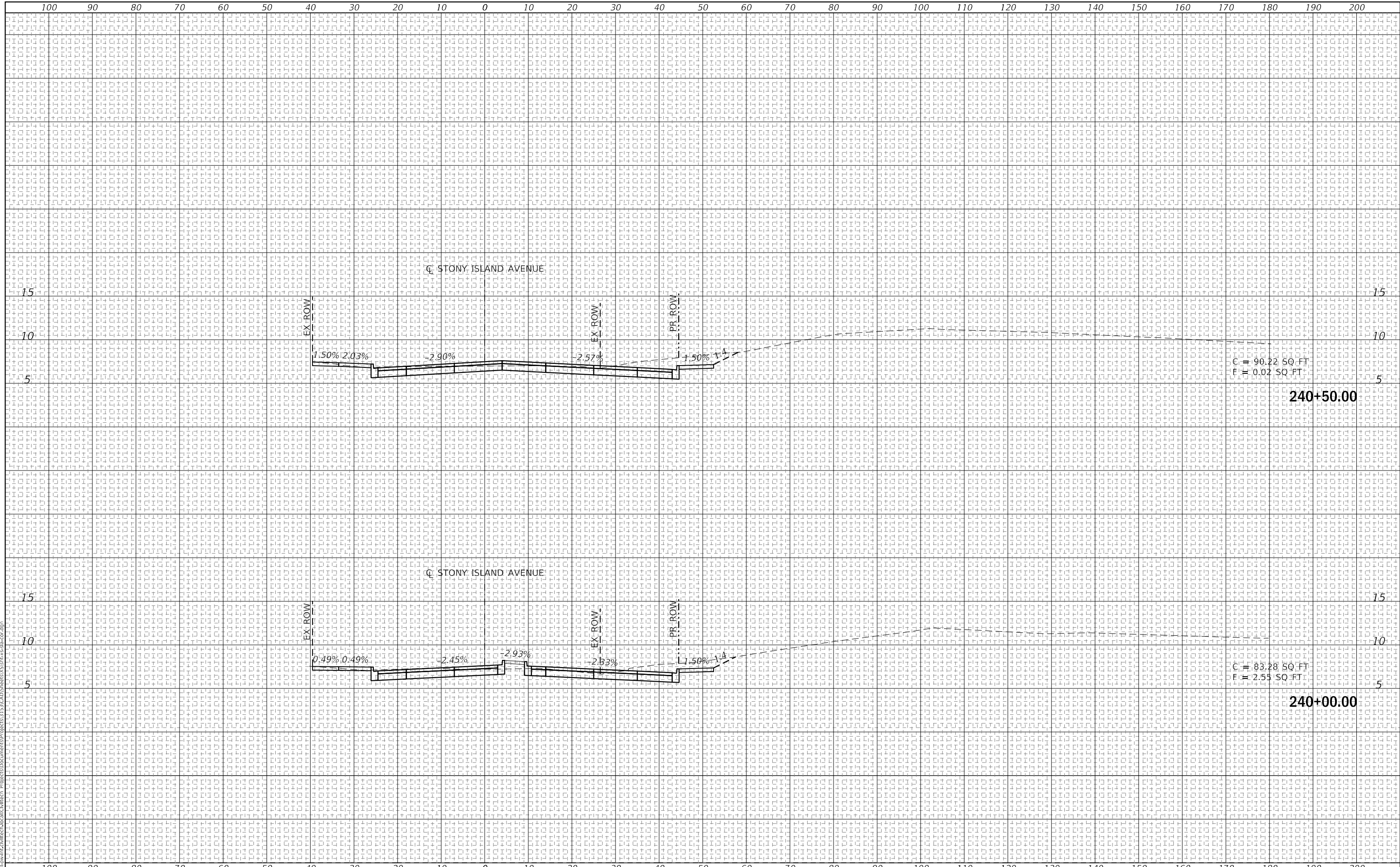
CONTRACT NO.		TOTAL SHEETS	1142	SHEET NO.	1022
PROJECT NO.	B-7-203	DRAWING NO.	XS-23		
SCALE:	AS INDICATED				

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\2019\19-000001\19-000001.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

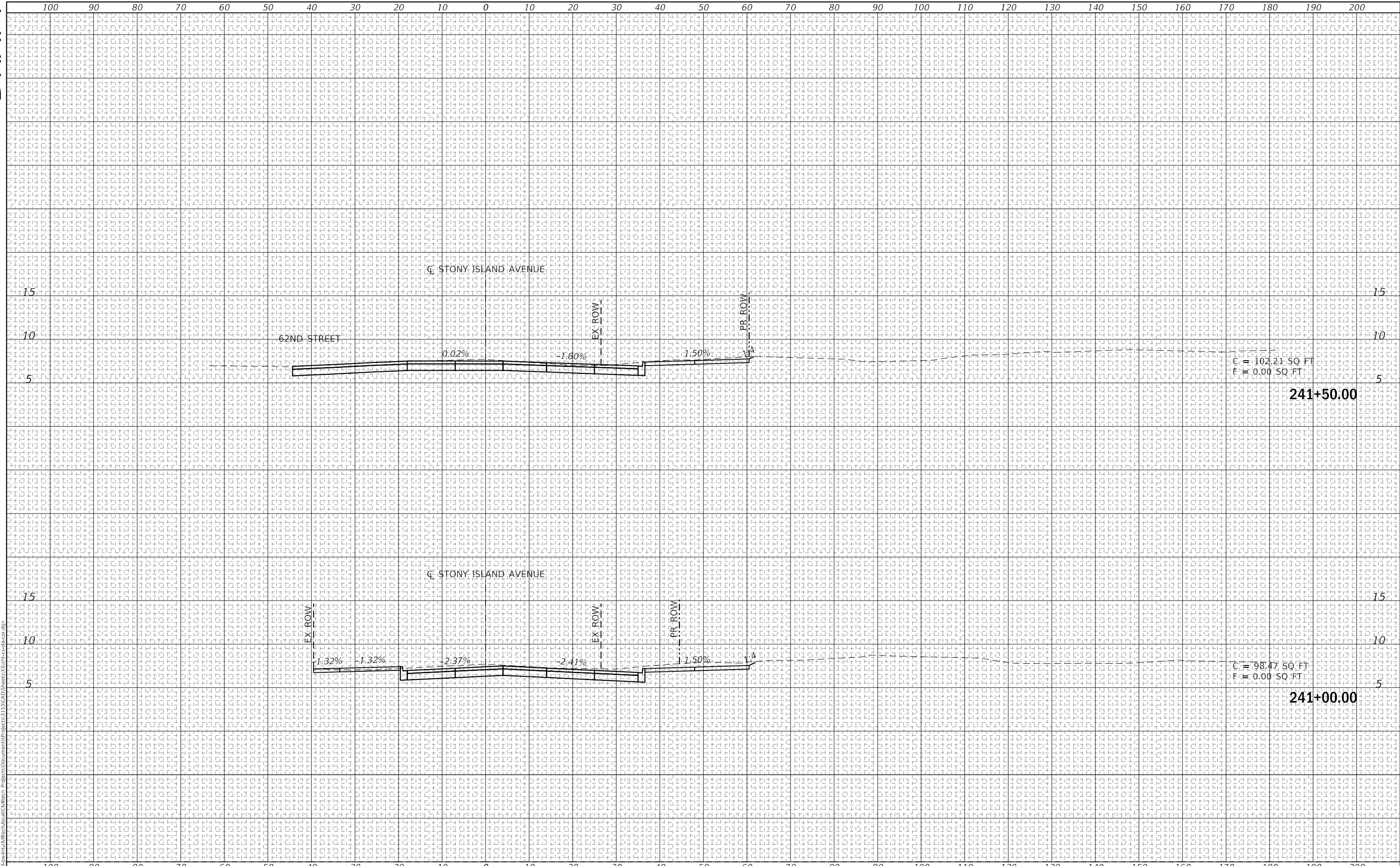
JACKSON PARK MOBILITY IMPROVEMENTS

STA. 240+00 TO STA. 240+50

CONTRACT NO.
PROJECT NO. B-7-203
SCALE: AS INDICATED

TOTAL SHEETS	SHEET NO.
1142	1023
DRAWING NO.	XS-24

DRAFT



FINAL SURVEY NO.	SURVEYED	DATE
	NOTED	
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
	NOTED	
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' / 1" = 110.0000'
 FILE NAME: I:\2019\05\05\1906\1906_05_29_2019\1906_05_29_2019.dwg

DESIGN:	MPK	SREV3
DRAWN:	MPK	SREV2
CHECKED:		SREV1
APPROVED:	NO.	BY
DATE:	05/31/2019	DATE
REVISIONS		
NO.	BY	DESCRIPTION



CROSS SECTIONS
 S. STONY ISLAND AVE.

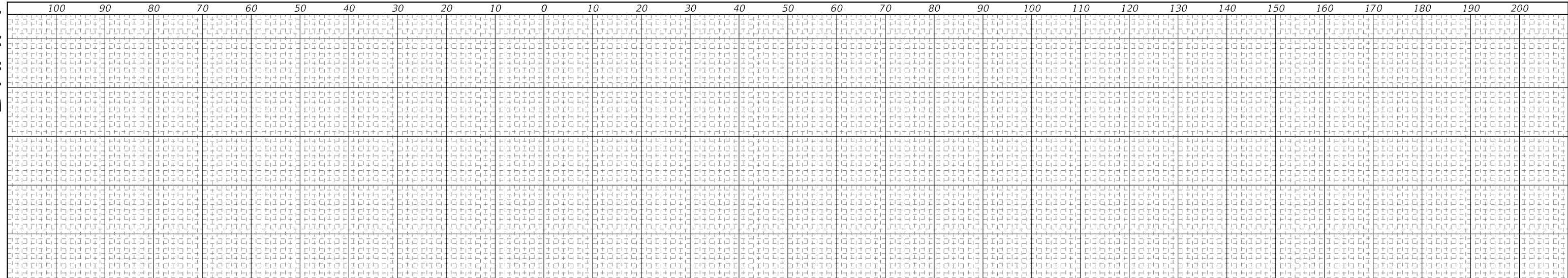
JACKSON PARK MOBILITY IMPROVEMENTS

STA. 241+00 TO STA. 241+50

CONTRACT NO.	
PROJECT NO.	B-7-203
SCALE:	AS INDICATED

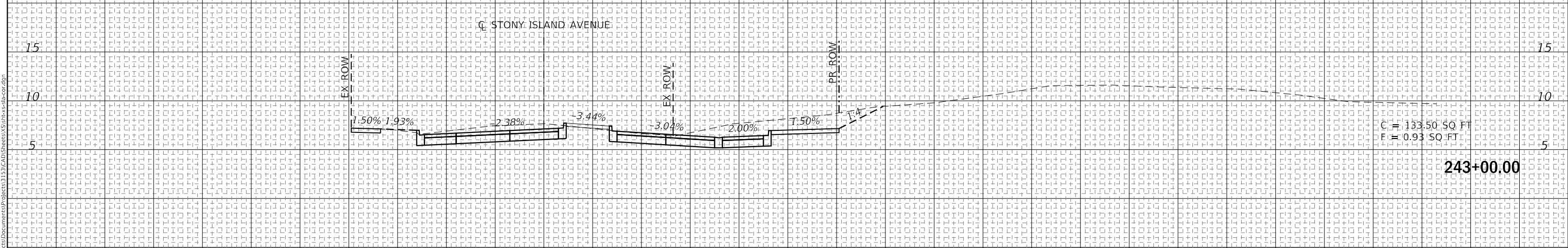
TOTAL SHEETS	1142	SHEET NO.	1024
DRAWING NO.		XS-25	

DRAFT



C = 123.24 SQ FT
F = 3.04 SQ FT

243+50.00



C = 133.50 SQ FT
F = 0.93 SQ FT

243+00.00

PLOT DATE: 5/29/2019
PLOT SCALE: 20.0000' = 1" (ft)
FILE NAME: D:\GIS\Drawings\2019\B-7-203\243+00\243+00-Site-Plan.dwg

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

DESIGN: MPK	\$REV3		
DRAWN: MPK	\$REV2		
CHECKED: NO.	\$REV1		
APPROVED: NO.	DATE	BY	DESCRIPTION
DATE: 05/31/2019			REVISIONS



**CROSS SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO. B-7-203
PROJECT NO. B-7-203
SCALE: AS INDICATED

TOTAL SHEETS: 1142	SHEET NO. 1026
DRAWING NO. XS-27	

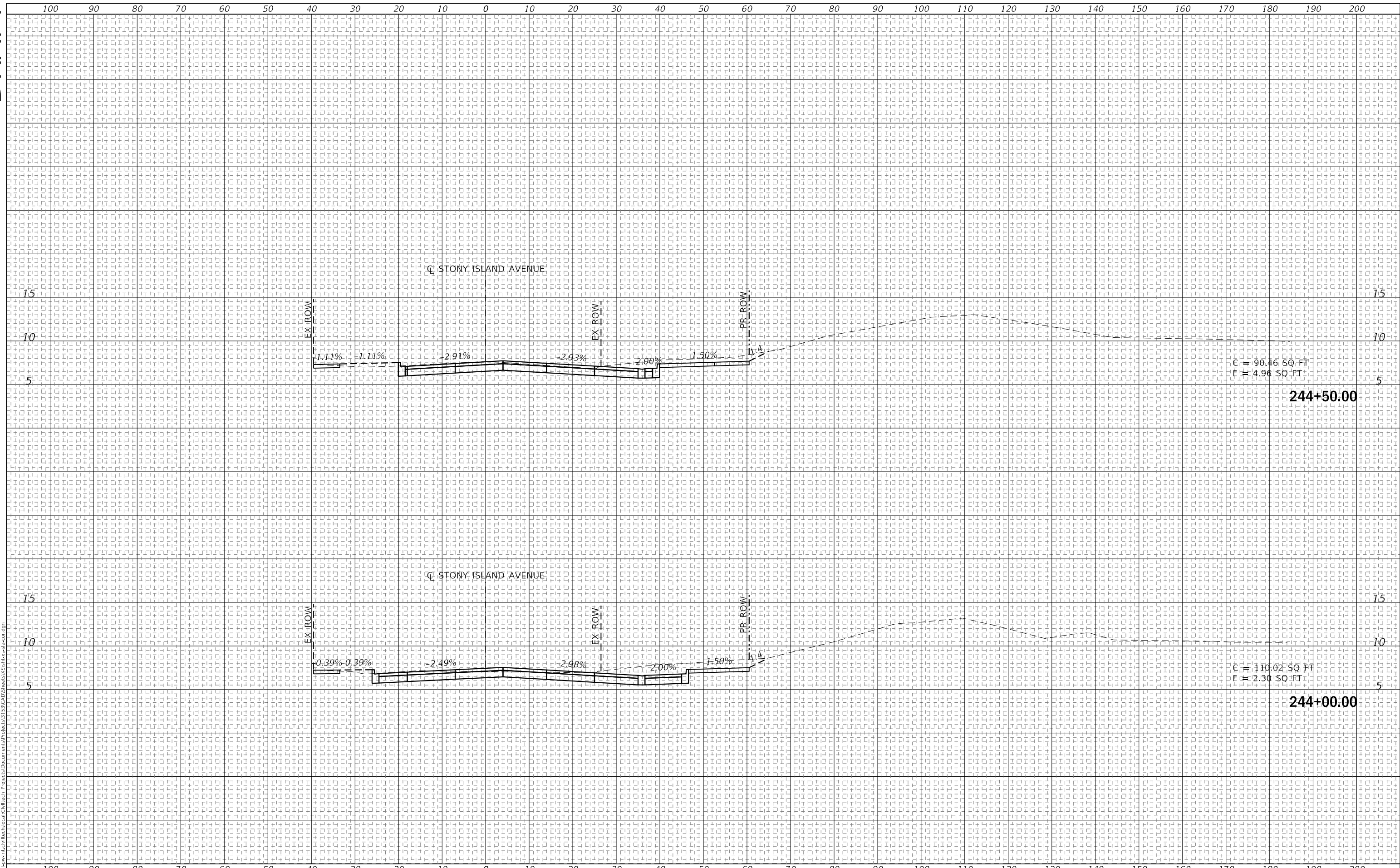
STA. 243+00 TO STA. 243+50

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
	NOTE BOOK		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
	NOTE BOOK		
	AREAS CHECKED		

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1'-0"
 FILE NAME: D:\GIS\Projects\2019\JPMI\CrossSections\StonyIsland\CDOT\StonyIsland\StonyIsland.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 244+00 TO STA. 244+50

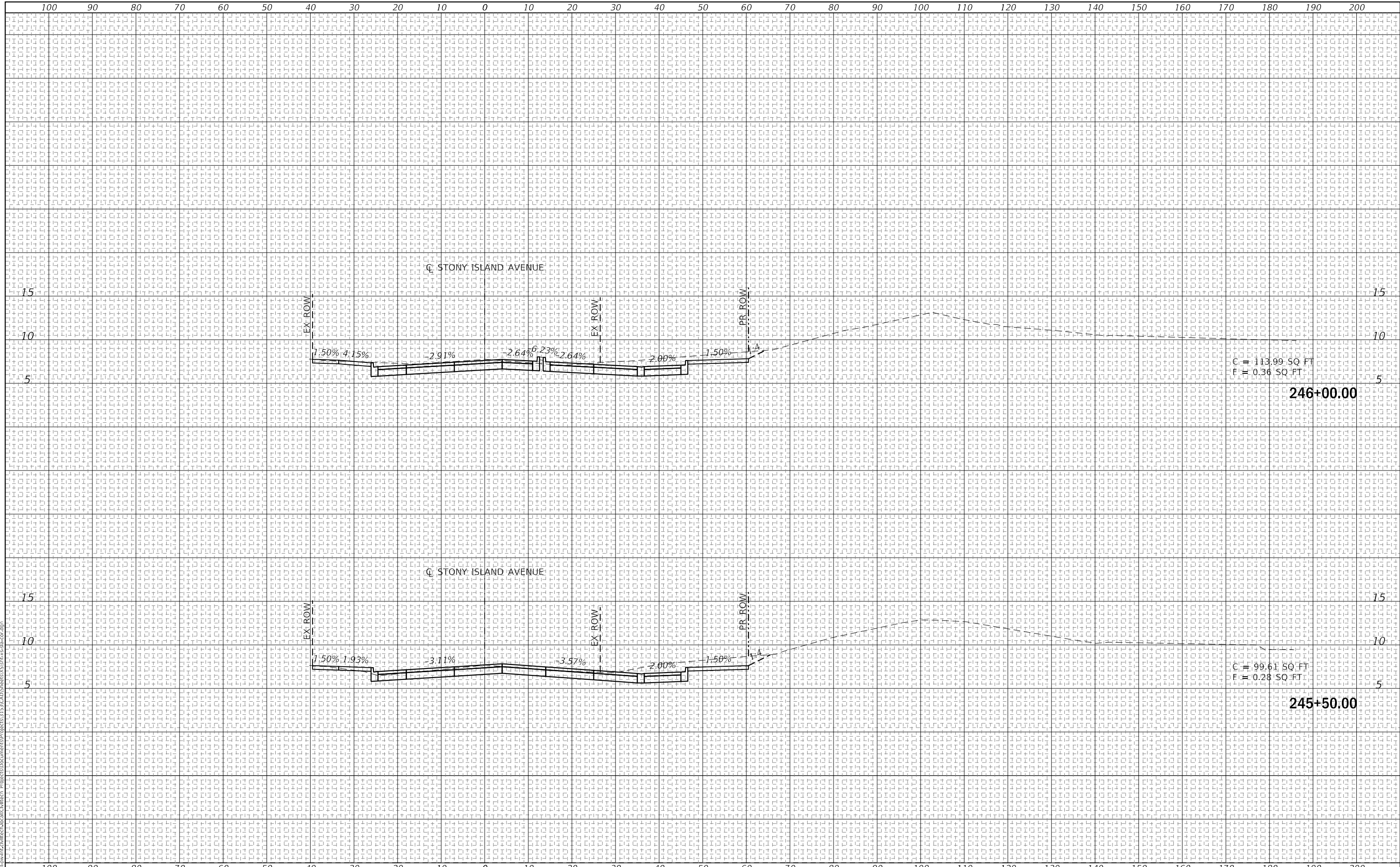
CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1142	1027
SCALE: AS INDICATED	DRAWING NO.	XS-28

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

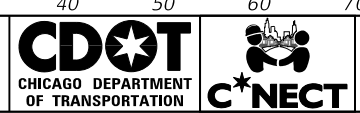
ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\2019\JPMI\Drawings\XS-30.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE:	05/31/2019		

NO.	BY	DATE	DESCRIPTION
REVISIONS			



**CROSS SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 245+50 TO STA. 246+00

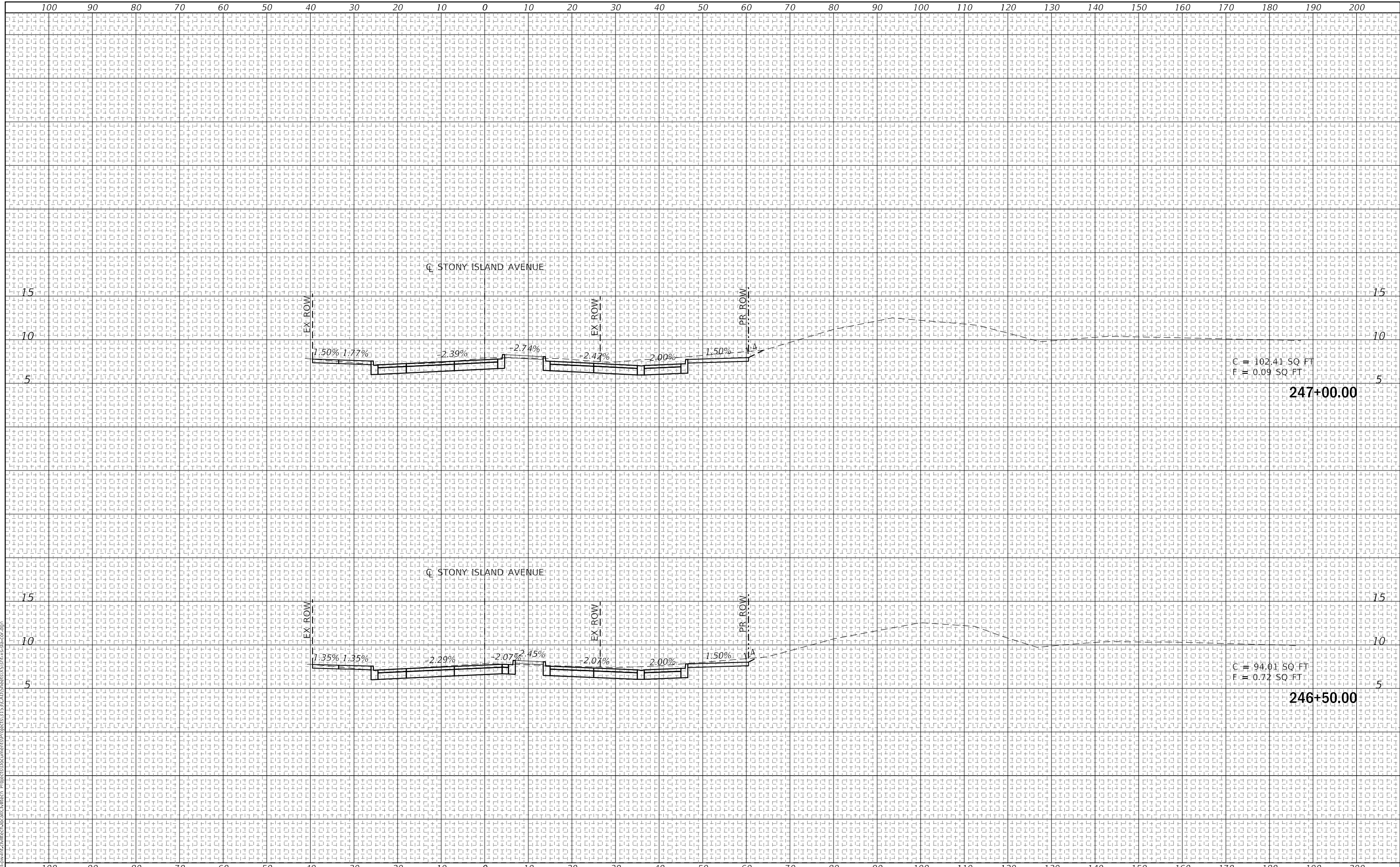
CONTRACT NO.		TOTAL SHEETS	1142	SHEET NO.	1029
PROJECT NO.	B-7-203	DRAWING NO.	XS-30		
SCALE:	AS INDICATED				

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\2019\19-0000\19-0000-01\19-0000-01-01\19-0000-01-01-01.dwg



C = 102.41 SQ FT
 F = 0.09 SQ FT

247+00.00

C = 94.01 SQ FT
 F = 0.72 SQ FT

246+50.00

DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
			REVISIONS



CROSS SECTIONS
 S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 246+50 TO STA. 247+00

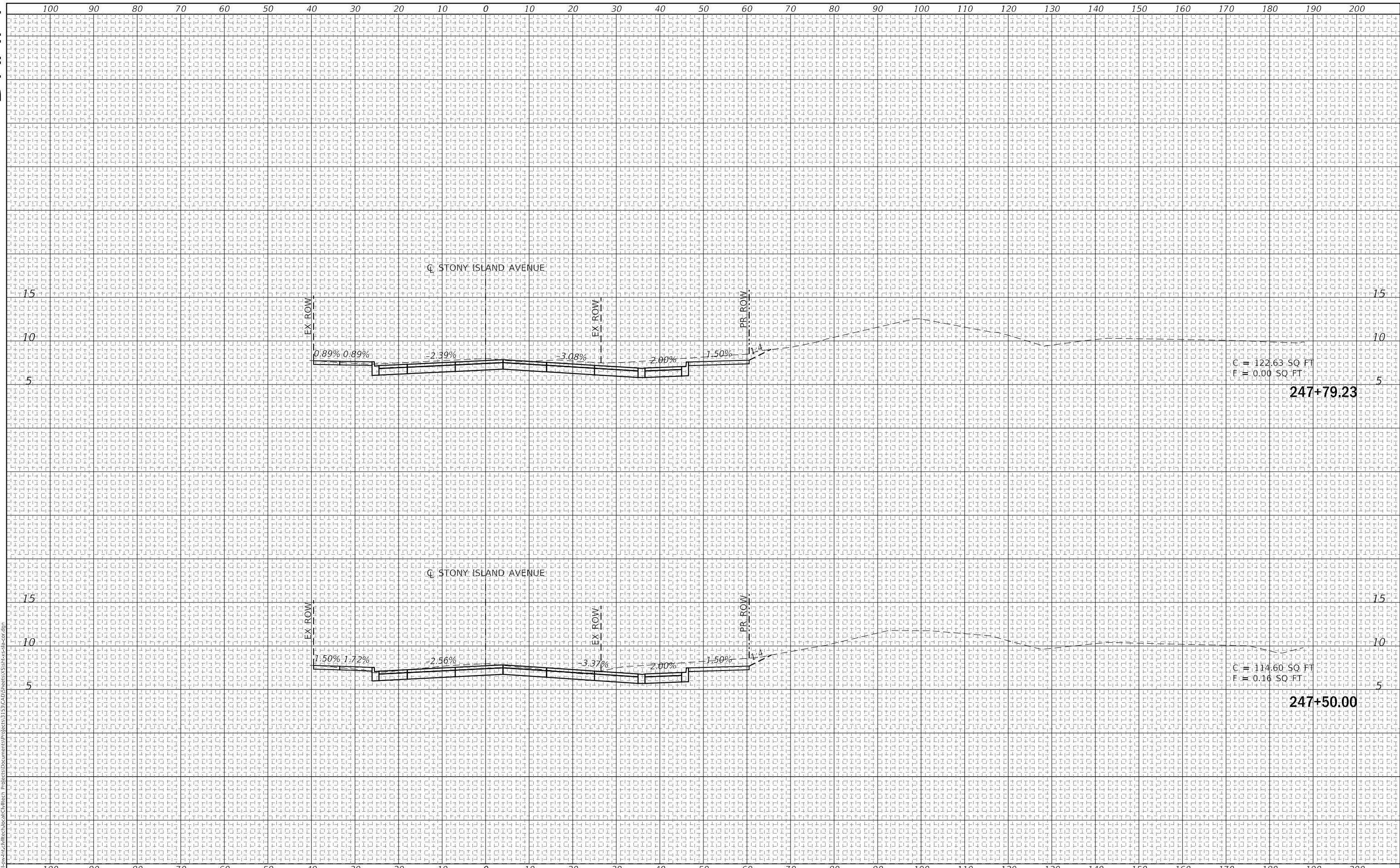
CONTRACT NO.		TOTAL SHEETS	SHEET NO.
PROJECT NO.	B-7-203	1142	1030
SCALE: AS INDICATED		DRAWING NO.	XS-31

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\2019\19-000001\19-000001.dwg



DESIGN:	MPK	\$REV3
DRAWN:	MPK	\$REV2
CHECKED:		\$REV1
APPROVED:	NO.	BY
DATE:	05/31/2019	REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 247+50 TO STA. 247+79

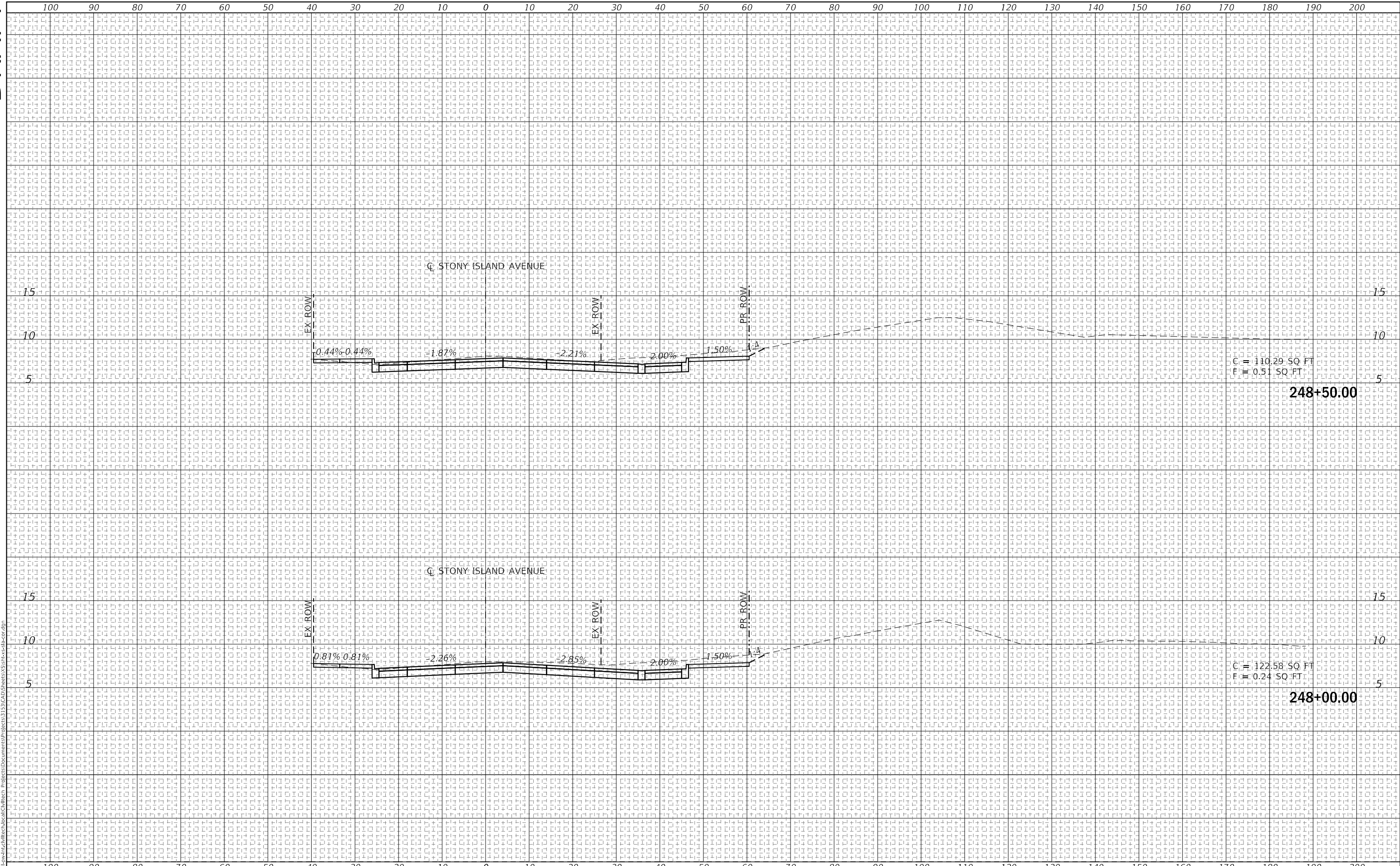
CONTRACT NO.		TOTAL SHEETS	1142	SHEET NO.	1031
PROJECT NO.	B-7-203	DRAWING NO.	XS-32		
SCALE:	AS INDICATED				

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

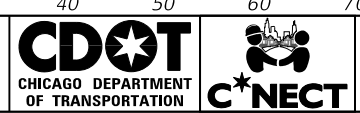
ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\2019\JPMI\Drawings\XS-33.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE:	05/31/2019		

NO.	BY	DATE	DESCRIPTION
			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO. _____
 PROJECT NO. B-7-203
 SCALE: AS INDICATED

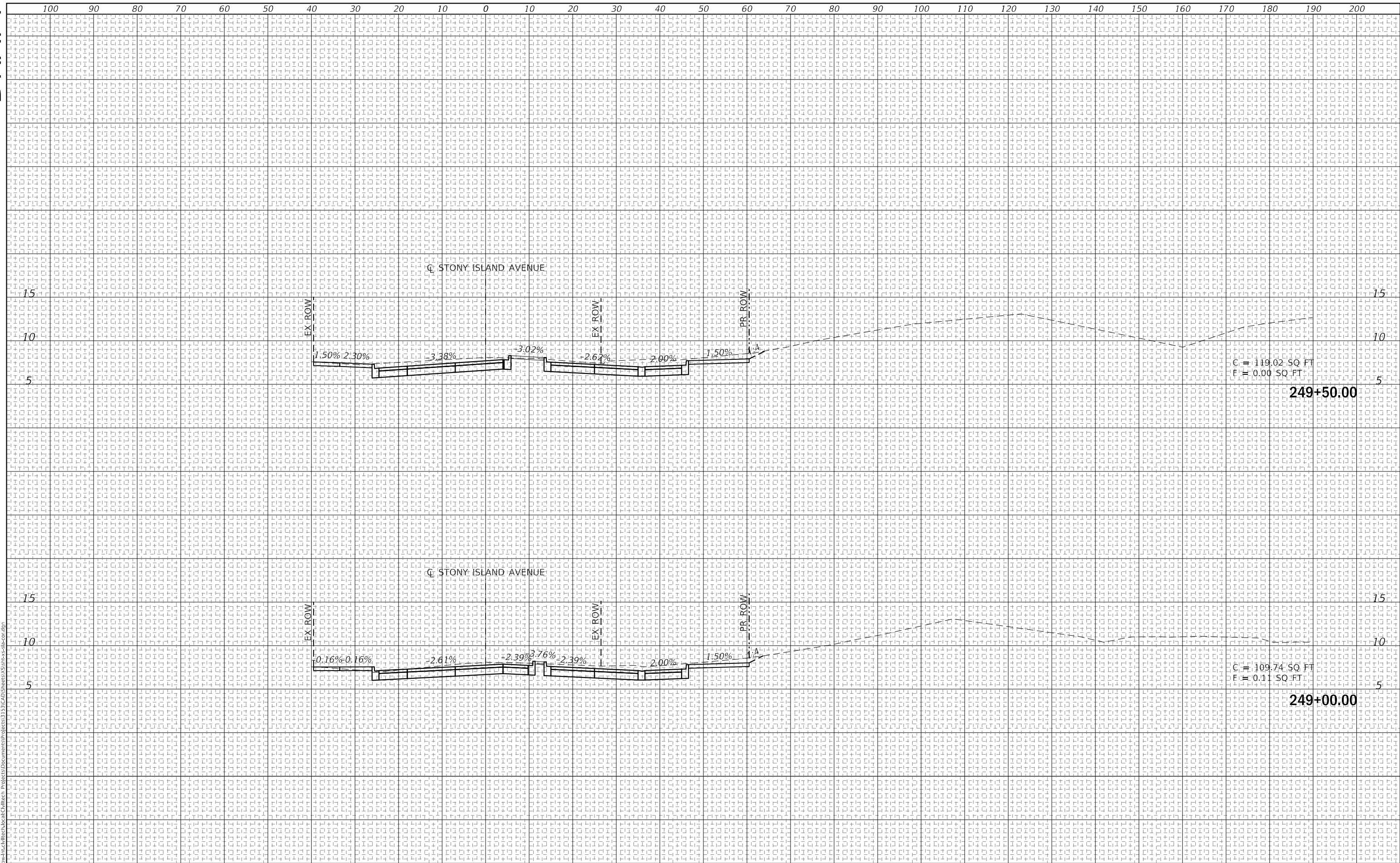
TOTAL SHEETS	1142	SHEET NO.	1032
DRAWING NO.	XS-33		

DRAFT

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' / 1" = 110.0000'
 FILE NAME: I:\work\2019\1142\1142-1033\1142-1033-XS-34.dwg



DESIGN:	MPK		\$REV3	
DRAWN:	MPK		\$REV2	
CHECKED:			\$REV1	
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019			REVISIONS



CROSS SECTIONS
 S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 249+00 TO STA. 249+50

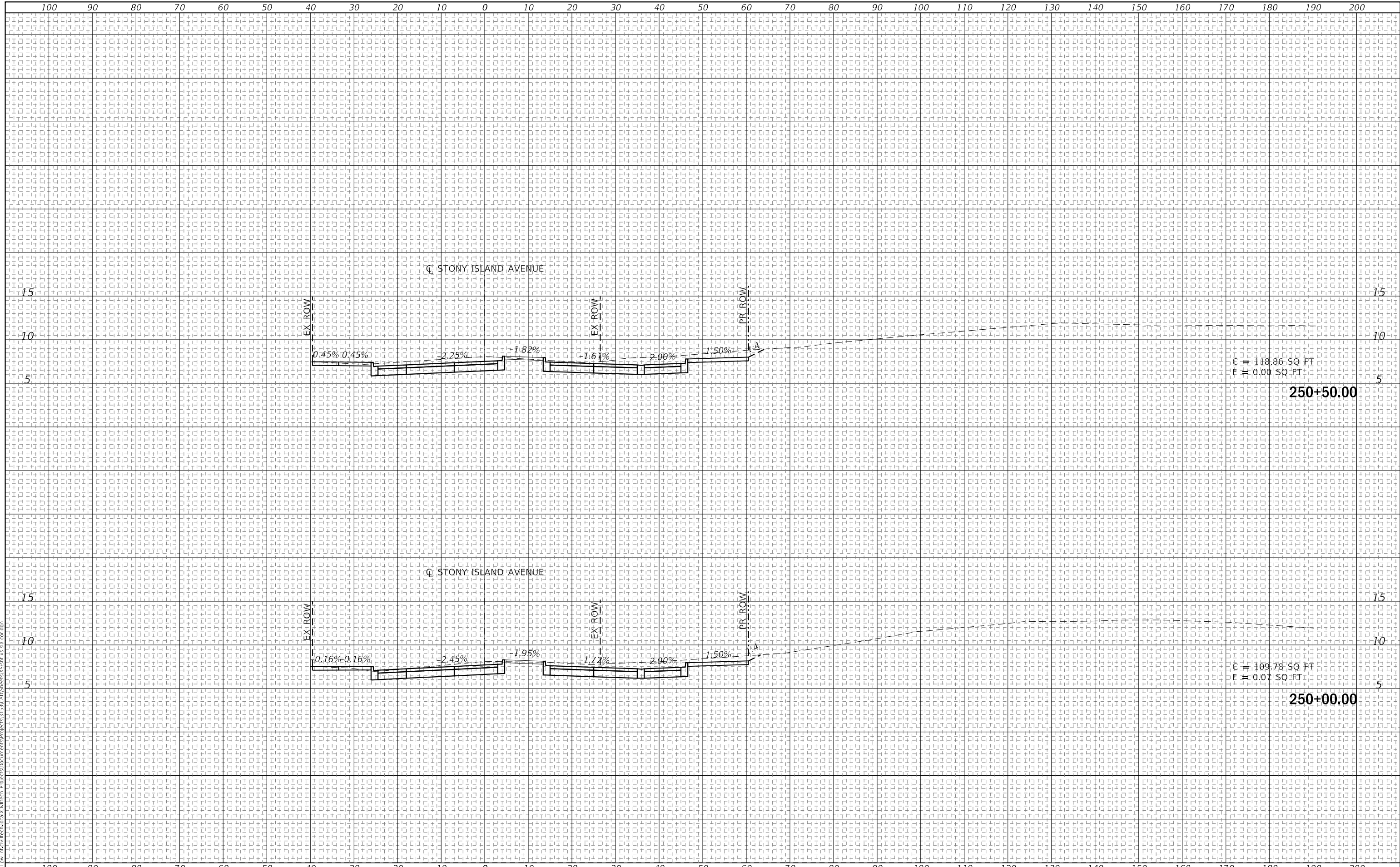
CONTRACT NO.		TOTAL SHEETS	1142	SHEET NO.	1033
PROJECT NO.	B-7-203	DRAWING NO.	XS-34		
SCALE:	AS INDICATED				

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
	NOTE BOOK		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	BY	DATE
	NOTE BOOK		
	TEMPLATE		
	AREAS CHECKED		

PLOT DATE: 5/29/2019
PLOT SCALE: 20.0000' = 1"n.
FILE NAME: \\msi\work\p1\c\l\litch\cib\mitch\proj\files\documents\proj\cees\3131\CAD\Sheet\XS\stony-ave-cs-draft.dwg



DESIGN: MPK	\$REV3		
DRAWN: MPK	\$REV2		
CHECKED:	\$REV1		
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 250+00 TO STA. 250+50

CONTRACT NO.	
PROJECT NO.	B-7-203
SCALE:	AS INDICATED

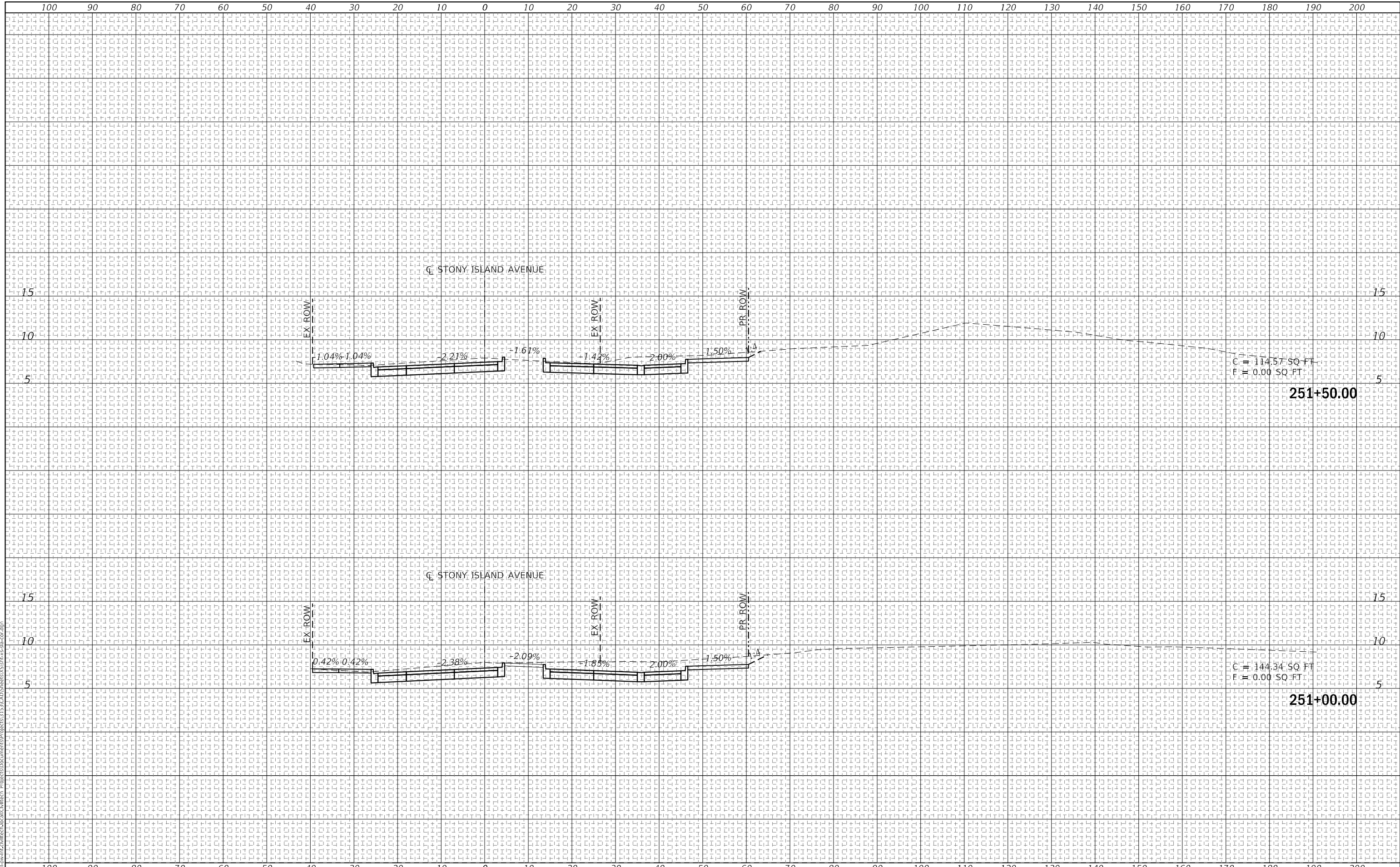
TOTAL SHEETS	1142	SHEET NO.	1034
DRAWING NO.	XS-35		

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: D:\GIS\Projects\2019\1142\1142-03\1142-03-01\1142-03-01-01.dwg



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 251+00 TO STA. 251+50

CONTRACT NO.
PROJECT NO. B-7-203
SCALE: AS INDICATED

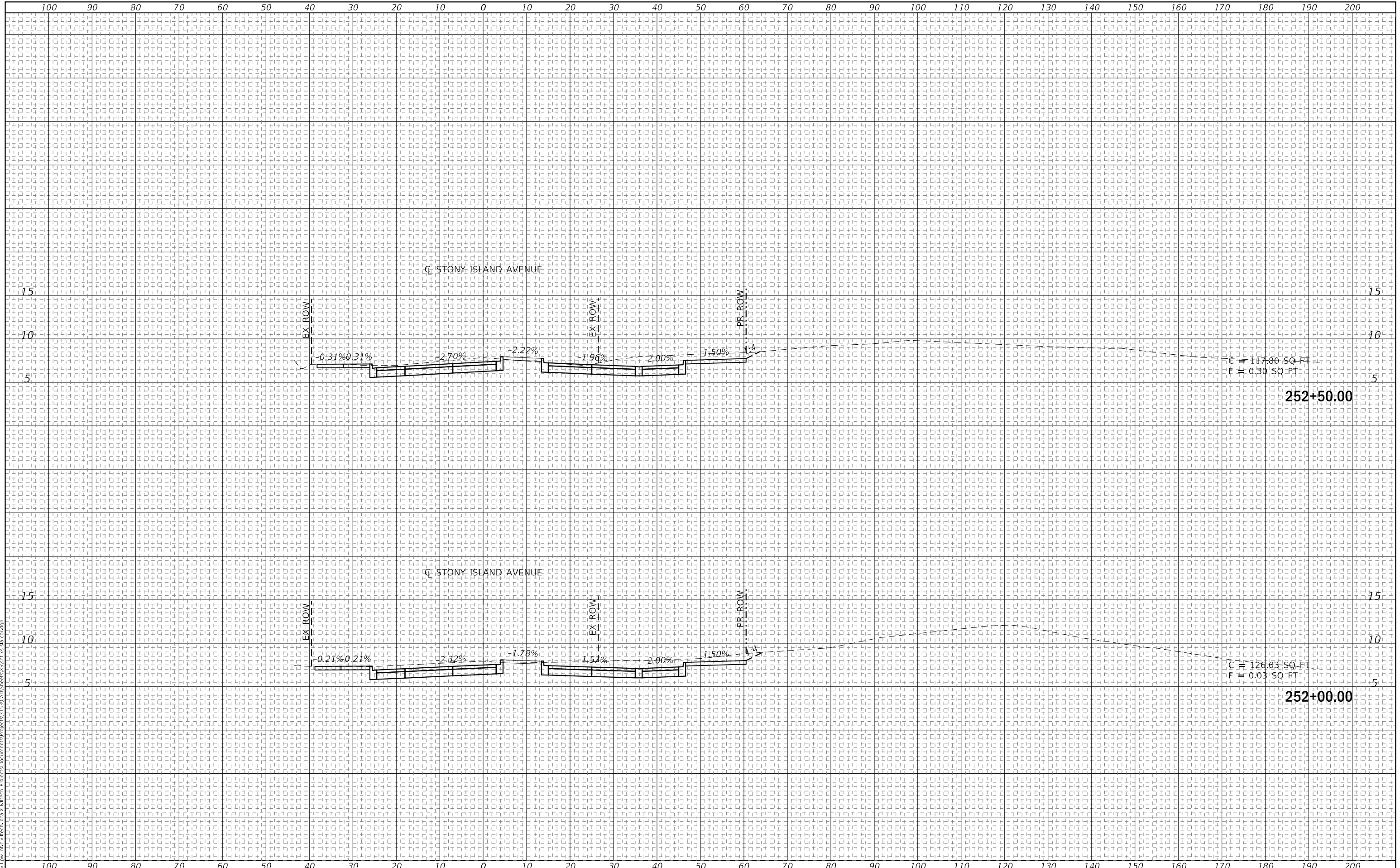
TOTAL SHEETS	SHEET NO.
1142	1035
DRAWING NO.	XS-36

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1'-0"
 FILE NAME: D:\m\m\work\14111\chicago\mitch\projects\documents\project\3131\CAD\Sheet\XS\stony-island-draft.dwg



C = 117.86 SQ. FT.
 F = 0.30 SQ. FT.

252+50.00

C = 126.03 SQ. FT.
 F = 0.03 SQ. FT.

252+00.00

DESIGN:	MPK	\$REV3
DRAWN:	MPK	\$REV2
CHECKED:		\$REV1
APPROVED:	NO.	BY
DATE:	05/31/2019	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CROSS SECTIONS
 S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 252+00 TO STA. 252+50

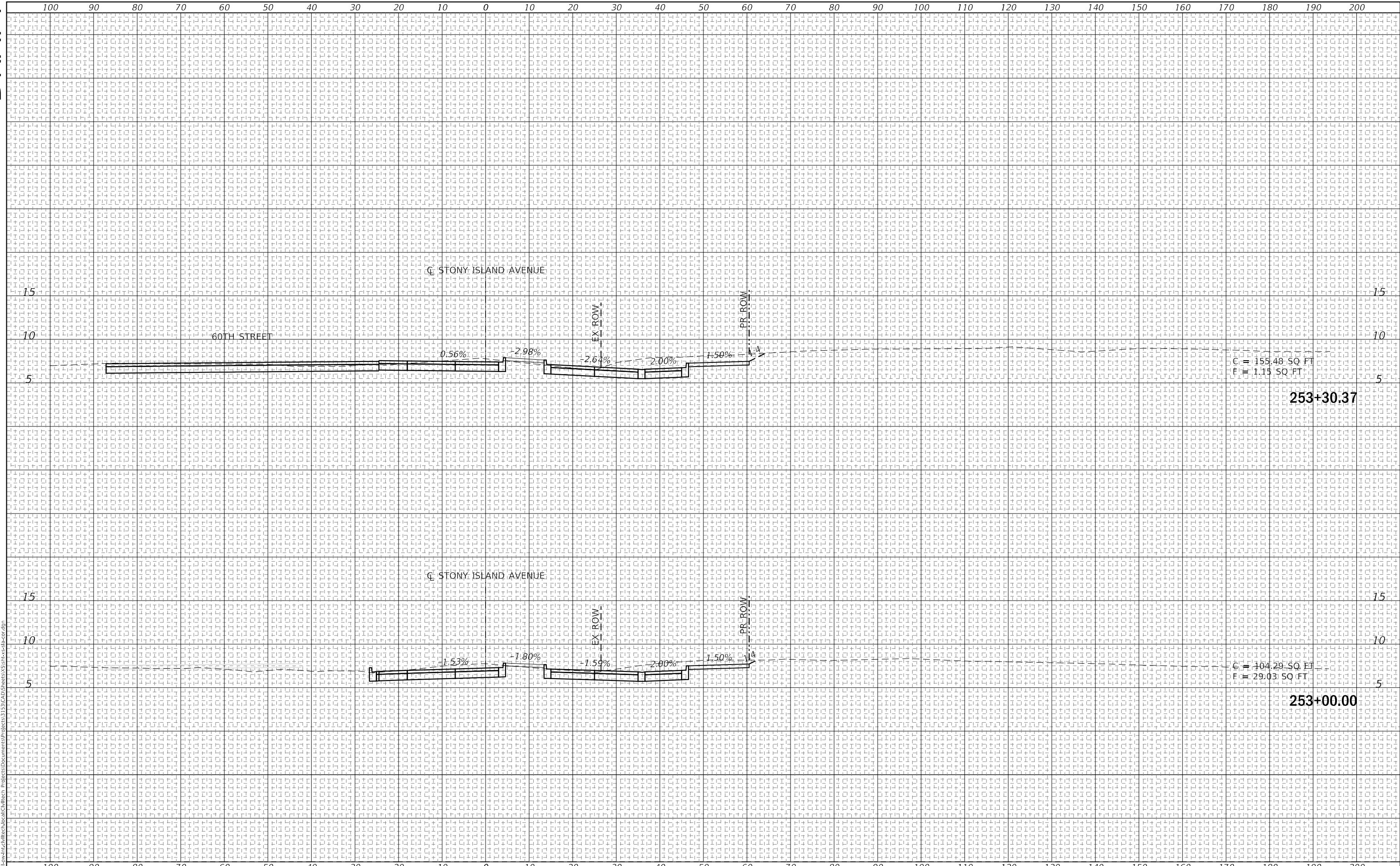
CONTRACT NO.		TOTAL SHEETS	SHEET NO.
PROJECT NO.	B-7-203	1142	1036
SCALE:	AS INDICATED	DRAWING NO.	XS-37

DRAFT

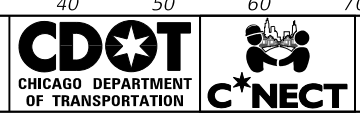
FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1.00'
 FILE NAME: I:\GIS\Drawings\2019\5-29-2019\1142-JacksonParkMobilityImprovements\1142-JacksonParkMobilityImprovements\1142-JacksonParkMobilityImprovements\1142-JacksonParkMobilityImprovements.dwg



DESIGN:	MPK	\$REV3
DRAWN:	MPK	\$REV2
CHECKED:		\$REV1
APPROVED:	NO.	BY
DATE:	05/31/2019	
		REVISIONS



**CROSS SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 253+00 TO STA. 253+30

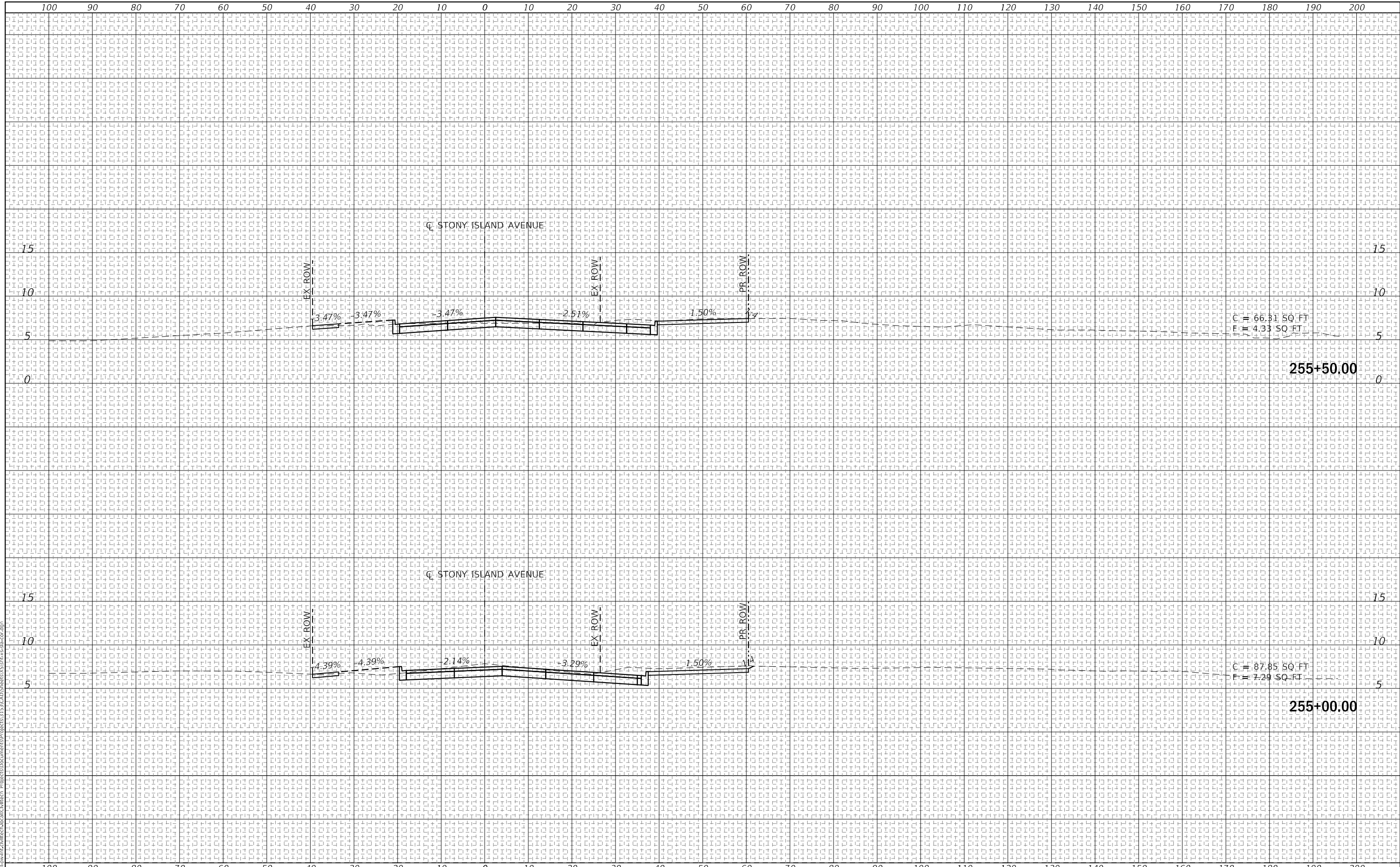
CONTRACT NO.	1142	TOTAL SHEETS	1037
PROJECT NO.	B-7-203	DRAWING NO.	XS-38
SCALE:	AS INDICATED		

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000" = 1'-0"
 FILE NAME: J:\Projects\2019\19-012\19-012.dwg



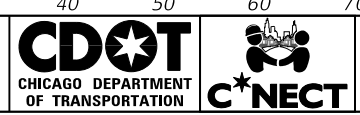
C = 66.31 SQ. FT.
 F = 4.33 SQ. FT.

255+50.00

C = 87.85 SQ. FT.
 F = 7.29 SQ. FT.

255+00.00

DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			
	REVISIONS		



CROSS SECTIONS
 S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 255+00 TO STA. 255+50

CONTRACT NO.	1142	SHEET NO.	1040
PROJECT NO.	B-7-203	DRAWING NO.	XS-41
SCALE:	AS INDICATED		

DRAFT

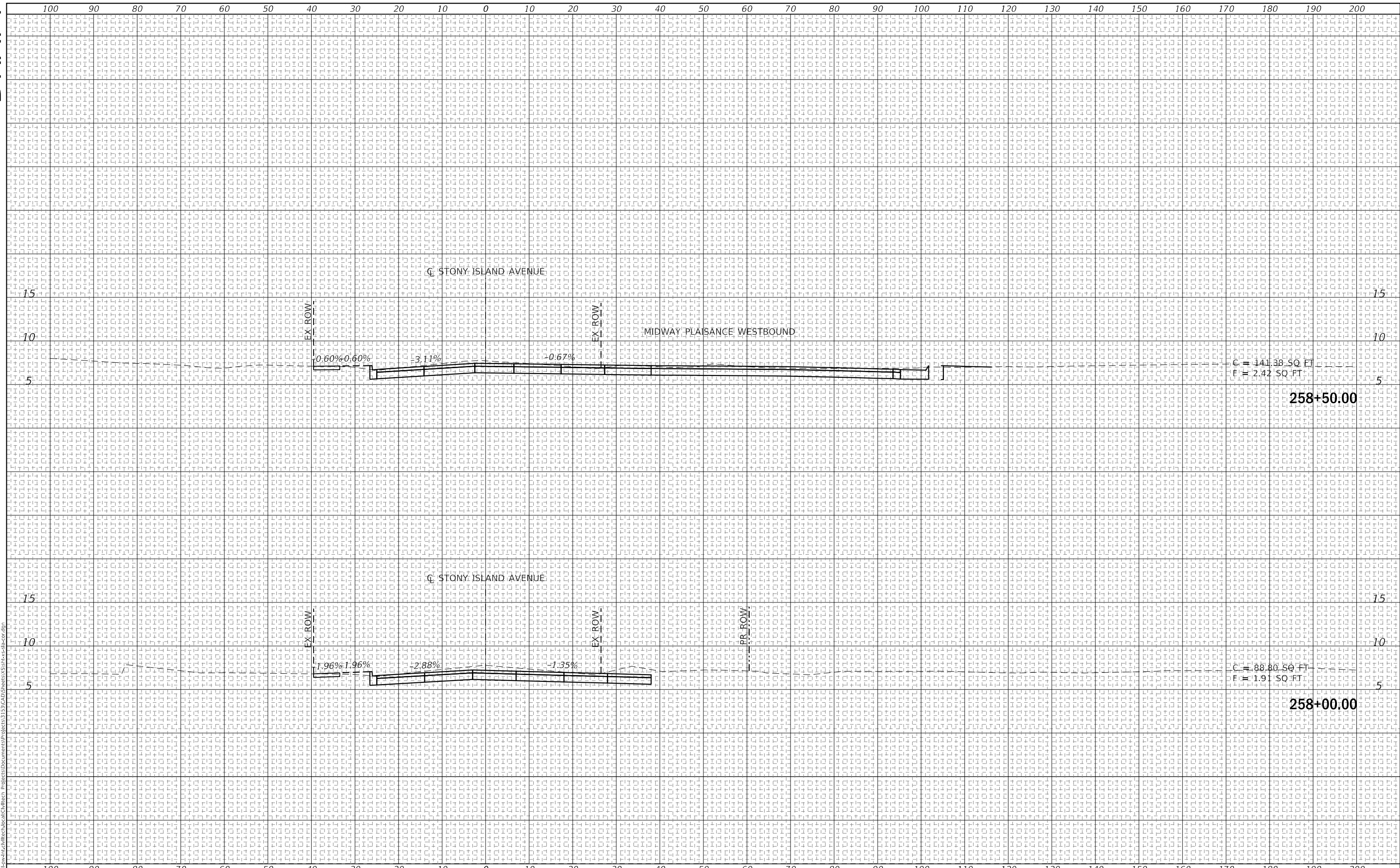
BY	DATE

FINAL SURVEY NO.	SURVEYED PLOTTED	TEMPLATE AREAS CHECKED

BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	TEMPLATE AREAS CHECKED

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1"
 FILE NAME: D:\Midway\MTI\Utility\chicago\w\tech Projects\Documents\Project\3131CAD\Streets\US\stony-sid-cs.dwg



C = 141.38 SQ FT
 F = 2.42 SQ FT

258+50.00

C = 88.80 SQ FT
 F = 1.91 SQ FT

258+00.00

DESIGN:	MPK	SREV3	BY	NO.
DRAWN:	MPK	SREV2		
CHECKED:		SREV1		
APPROVED:				
DATE:	05/31/2019			

REVISIONS



**CROSS SECTIONS
 S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

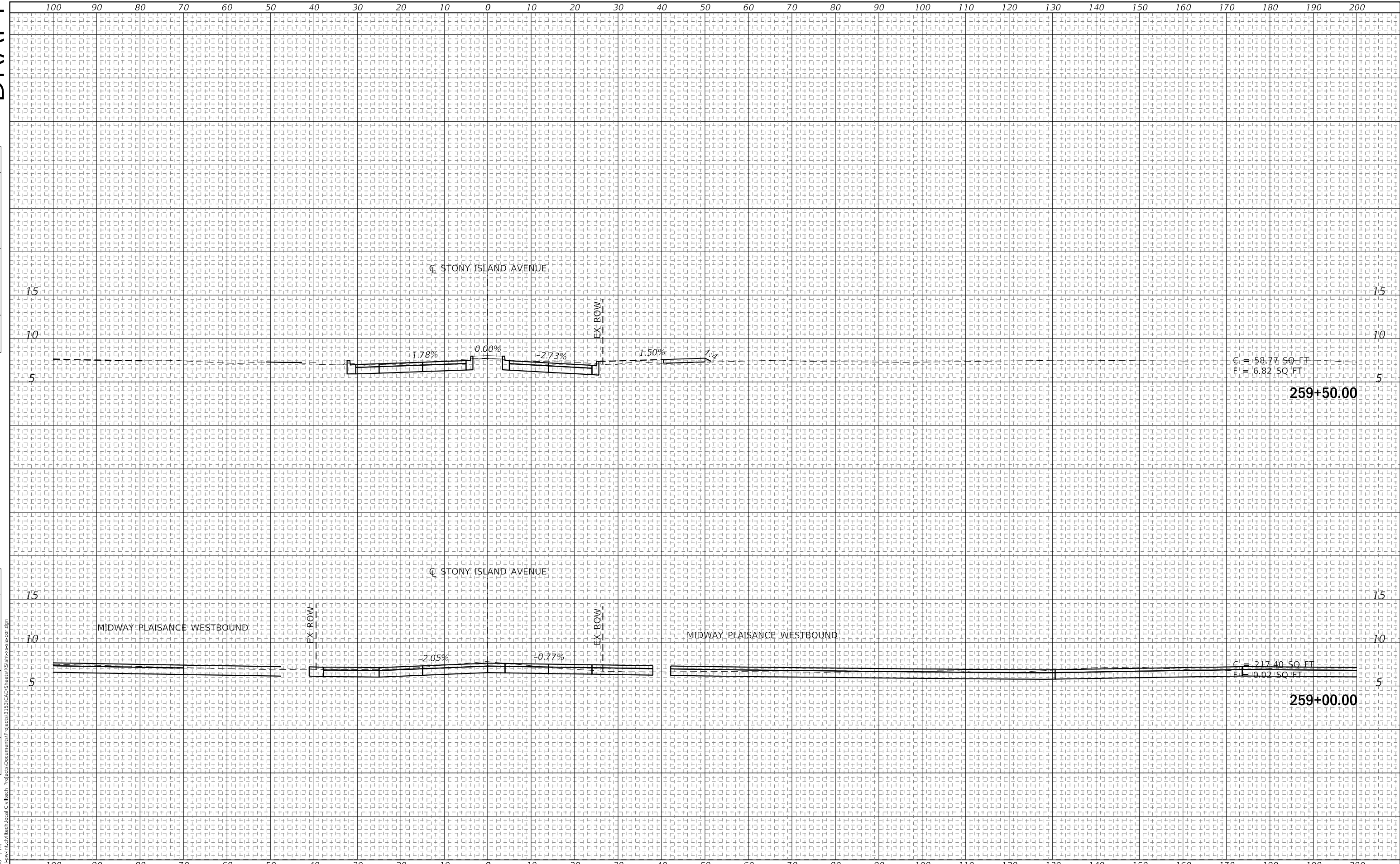
STA. 258+00 TO STA. 258+50

CONTRACT NO. B-7-203	TOTAL SHEETS 1142	SHEET NO. 1043
SCALE: AS INDICATED	DRAWING NO. XS-44	

FINAL SURVEY NO.	SURVEYED	BY	DATE
	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED	BY	DATE
	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' / 1" IN.
 FILE NAME: I:\MIDWAY\11442\11442\11442\11442\11442\CAD\Sheets\XS\sta-x-s-11442.dwg



DESIGN:	MPK		\$REV3
DRAWN:	MPK		\$REV2
CHECKED:			\$REV1
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



**CROSS SECTIONS
S. STONY ISLAND AVE.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 259+00 TO STA. 259+50

CONTRACT NO.	
PROJECT NO.	B-7-203
SCALE:	AS INDICATED

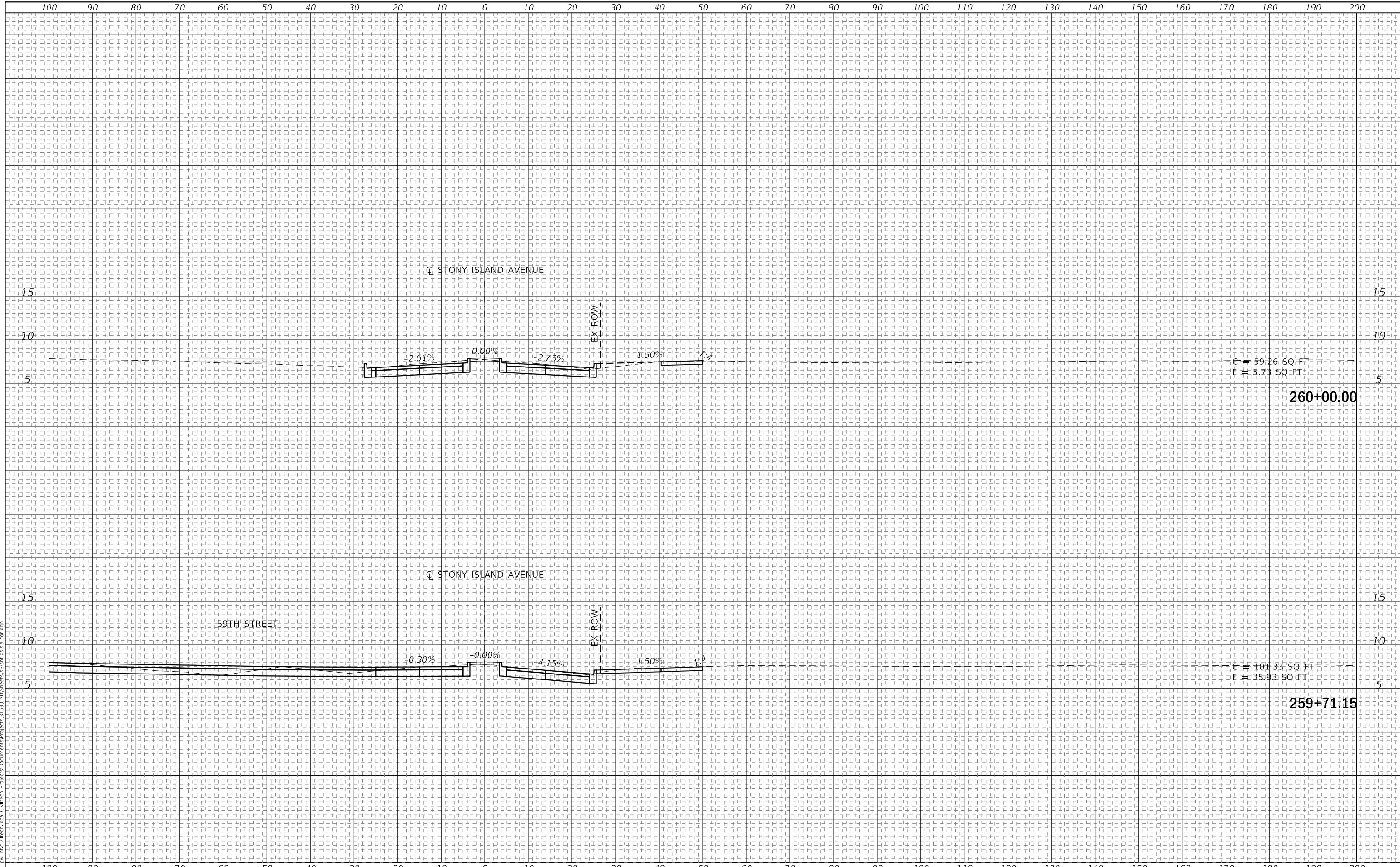
TOTAL SHEETS	SHEET NO.
1142	1044
DRAWING NO.	XS-45

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" FILE NAME: D:\MIDWEST\CDOT\Illinois\CDOT\Projects\Documents\Project\3131\CD Streets\59th-st-std-cr.dgn



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS
STA. 259+71 TO STA. 260+00

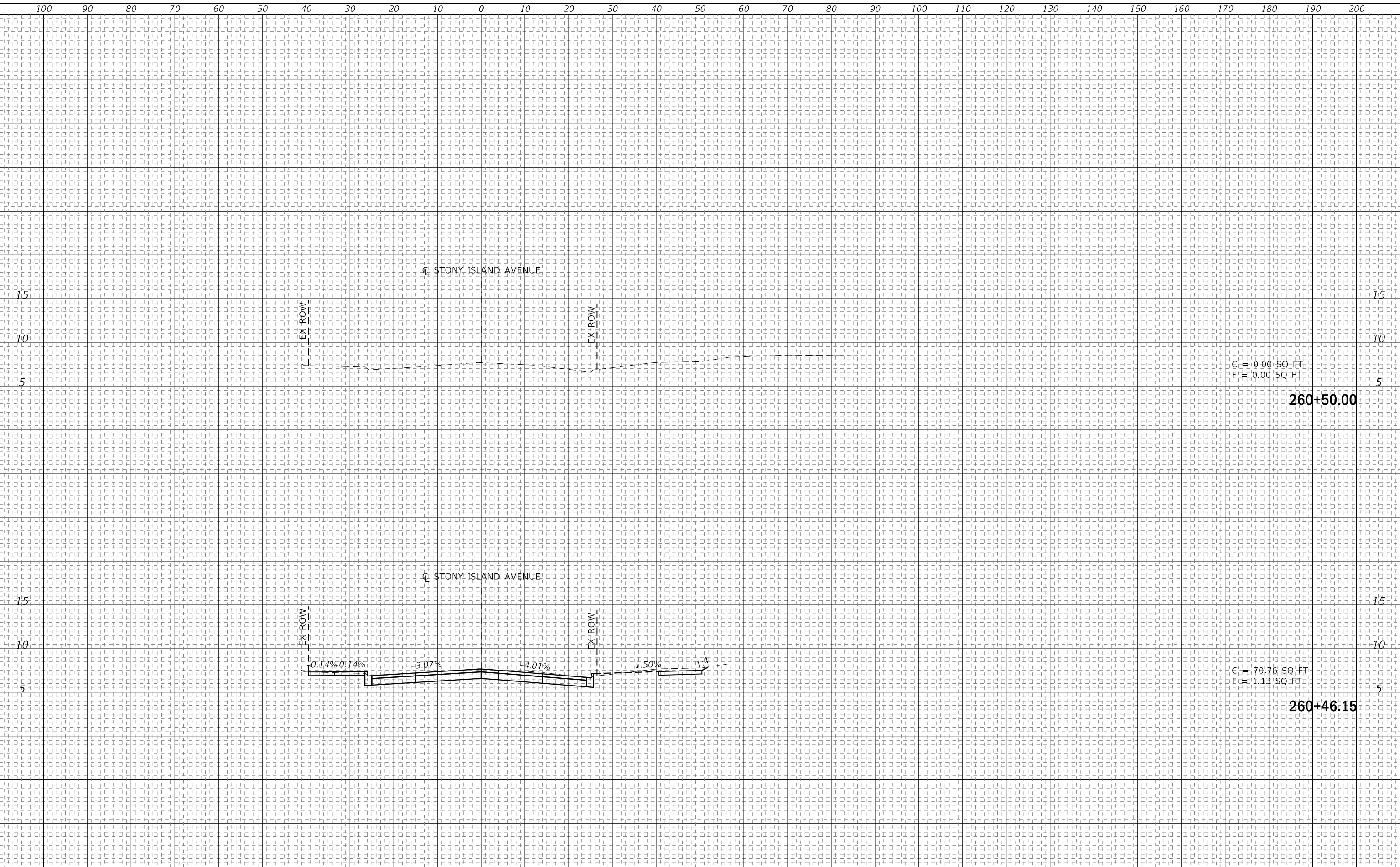
CONTRACT NO.	B-7-203	TOTAL SHEETS	1142	SHEET NO.	1045
PROJECT NO.	B-7-203	DRAWING NO.	XS-46		
SCALE:	AS INDICATED				

DRAFT

DATE	BY	SURVEYED	PLOTTED
		NO.	NO.
		AREAS CHECKED	AREAS CHECKED
		TEMPLATE	TEMPLATE
		NOTE BOOK	NOTE BOOK

DATE	BY	SURVEYED	PLOTTED
		NO.	NO.
		AREAS CHECKED	AREAS CHECKED
		TEMPLATE	TEMPLATE
		NOTE BOOK	NOTE BOOK

PLOT DATE: 5/29/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: \\planning\dwg\chicago\mitch\proj\proj\documents\project\3131\CAD\Sheet3\StonyIsland-sites-draft.dwg



DESIGN:	MPK	\$REV3
DRAWN:	MPK	\$REV2
CHECKED:		\$REV1
APPROVED:	NO.	BY
DATE:	05/31/2019	REVISIONS



CROSS SECTIONS
S. STONY ISLAND AVE.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 260+46 TO STA. 260+50

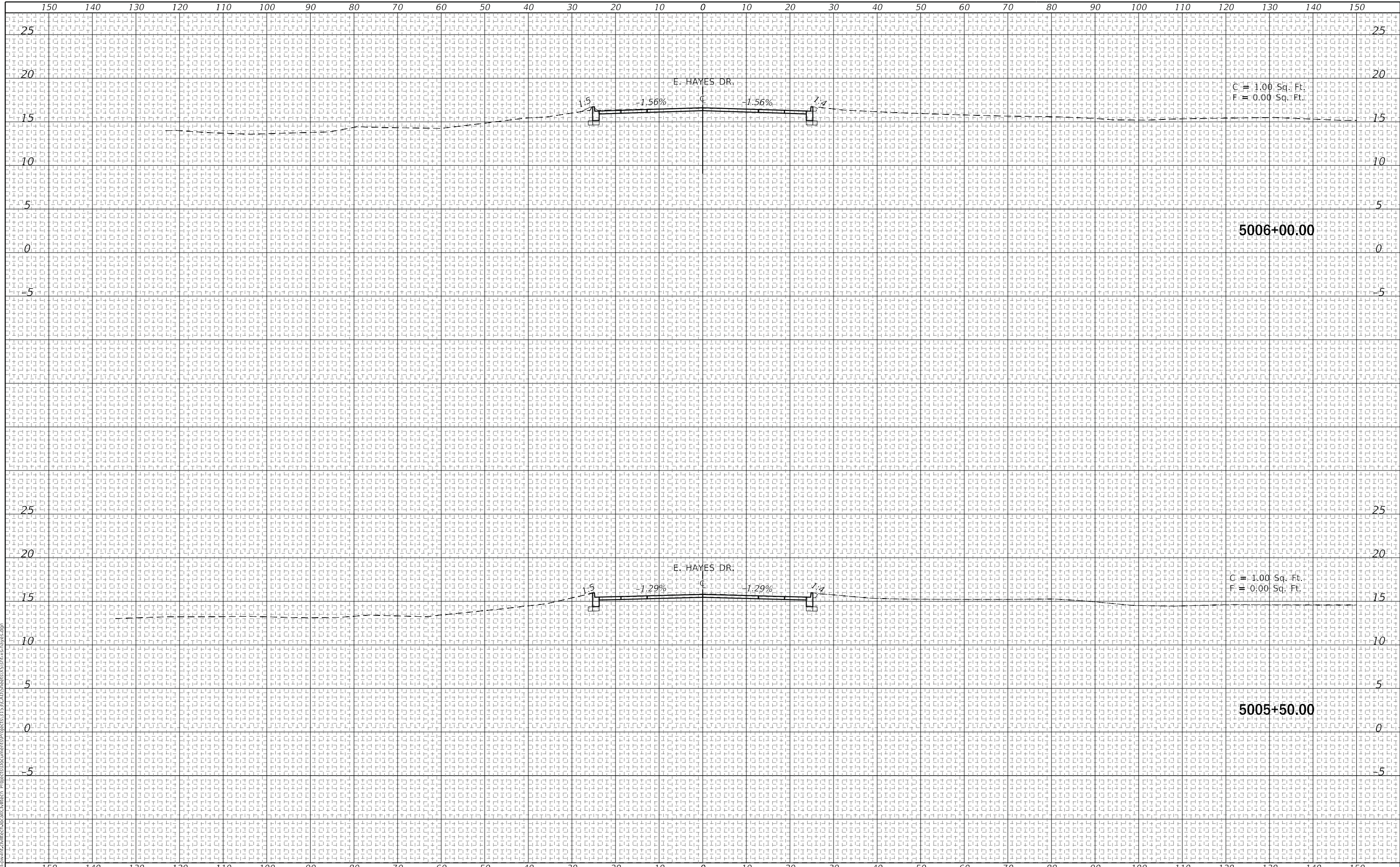
CONTRACT NO.	PROJECT NO.	TOTAL SHEETS	SHEET NO.
B-7-203		1142	1046
SCALE: AS INDICATED	DRAWING NO.		
	XS-47		

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	DATE
NOTE BOOK	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	DATE
NOTE BOOK	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 9/2/2019
 PLOT SCALE: 20.0000' / 1" / in.
 FILE NAME: D:\work\m\1909\chicago\mtech\projects\documents\project\3131\CAD\Sheet\XS\5055-hayes.dgn



DESIGN:	MPK	\$REV3	
DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 08/09/2019			REVISIONS



CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.		TOTAL SHEETS	1242	SHEET NO.	1179
PROJECT NO.	B-7-203	DRAWING NO.	XS-56		
SCALE:	AS INDICATED				

5005+50.00 5006+00.00

DRAFT

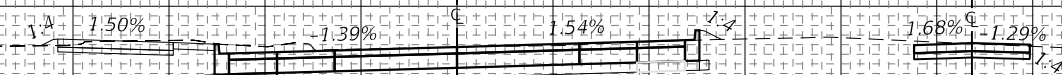
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

30
25
20
15
10
5
0

E. HAYES DR.

PATH HS

C = 31.00 Sq. Ft.
F = 77.10 Sq. Ft.



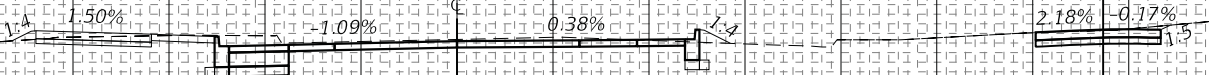
5011+00.00

30
25
20
15
10
5
0

E. HAYES DR.

PATH HS

C = 21.00 Sq. Ft.
F = 0.00 Sq. Ft.



5010+50.00

DATE	BY
DATE	BY
DATE	BY
DATE	BY
DATE	BY

DATE	BY
DATE	BY
DATE	BY
DATE	BY
DATE	BY

PLOT DATE: 9/2/2019
 PLOT SCALE: 20.0000' = 1" IN.
 FILE NAME: C:\Users\jcs\Documents\Projects\Documents\5011\5011+00.00\5011+00.00.dgn

DESIGN:	MPK	SREV3
DRAWN:	MPK	SREV2
CHECKED:		SREV1
APPROVED:	NO.	BY
DATE: 08/09/2019		DATE
		DESCRIPTION
		REVISIONS



CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

5010+50.00 5011+00.00

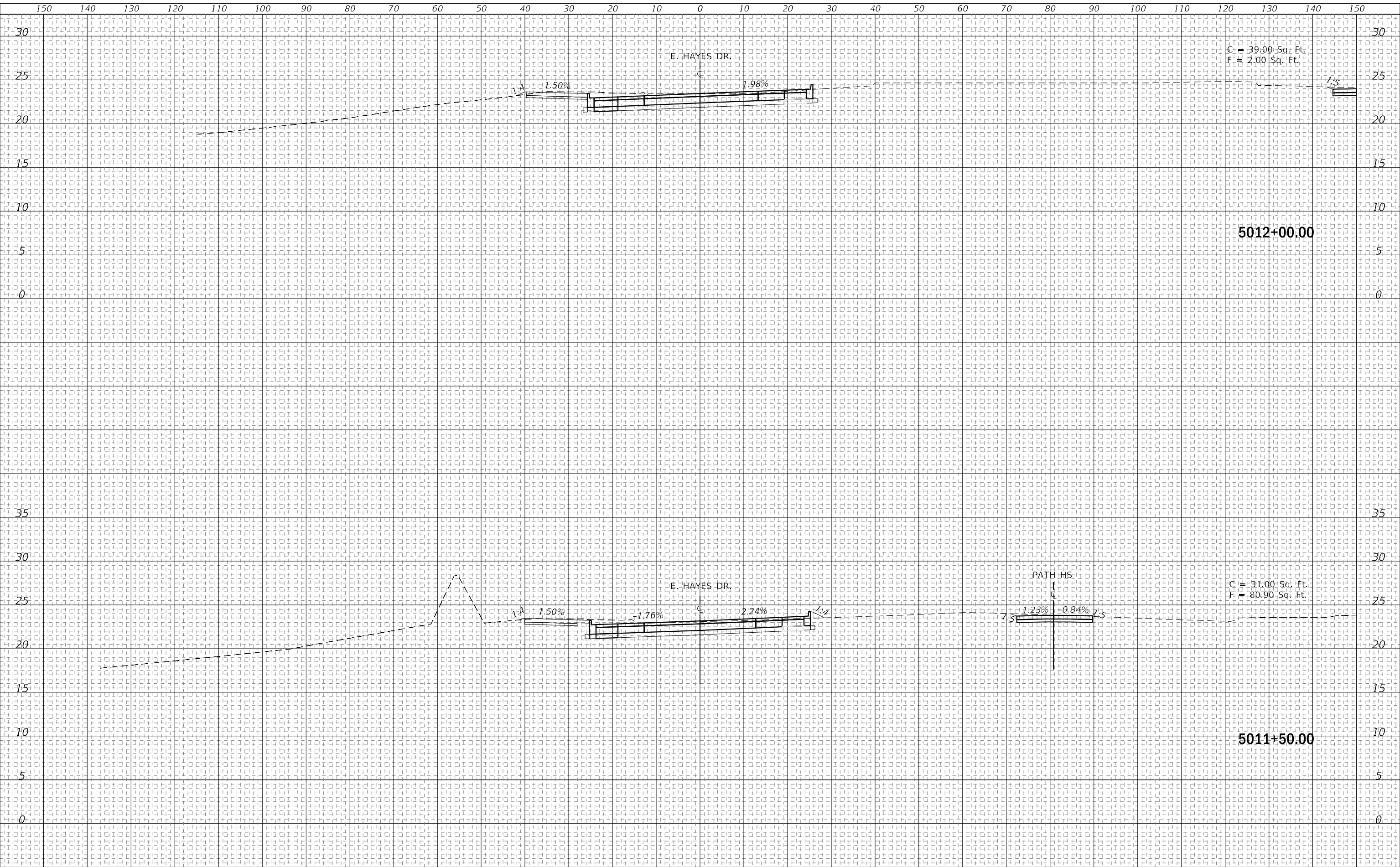
CONTRACT NO.	B-7-203
PROJECT NO.	SCALE: AS INDICATED

TOTAL SHEETS	1242	SHEET NO.	1184
DRAWING NO.	XS-61		

DRAFT

DATE	BY

DATE	BY



PLOT DATE: 9/2/2019
PLOT SCALE: 20.0000' = 1" IN.
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DRAWN:	MPK	\$REV2	
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APPROVED:	NO.	BY	
DATE: 08/09/2019			



CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

5011+50.00 5012+00.00

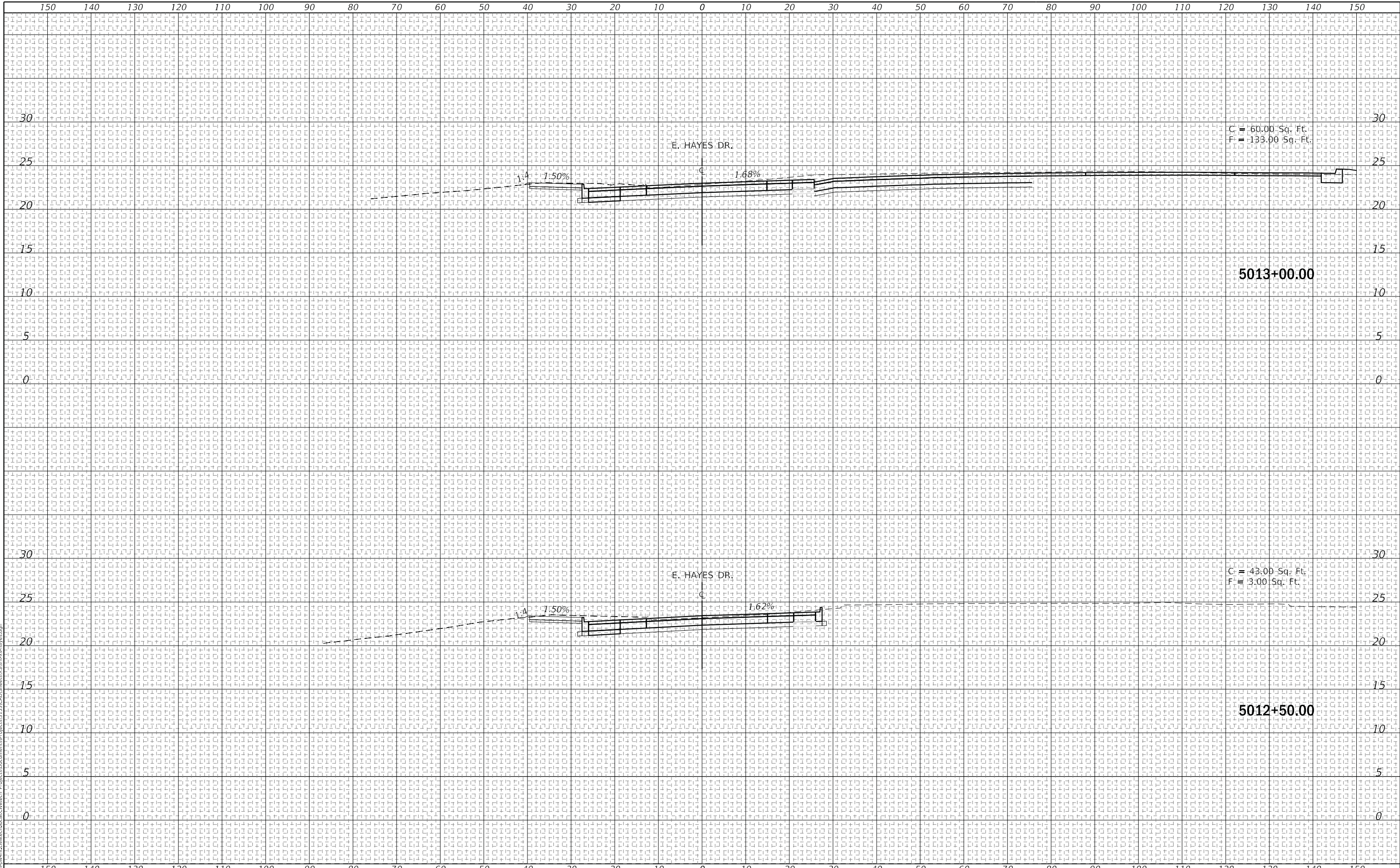
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PROJECT NO.	B-7-203	DRAWING NO.	XS-62		
SCALE:	AS INDICATED				

DRAFT

BY		DATE	
FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED		
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

BY		DATE	
ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED		
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

PLOT DATE: 9/2/2019
PLOT SCALE: 20.0000' / 1" in.
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F = 133.00 Sq. Ft.

5013+00.00

C = 43.00 Sq. Ft.
F = 3.00 Sq. Ft.

5012+50.00

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APPROVED:	NO.	BY	DATE	DESCRIPTION
				REVISIONS



CROSS SECTIONS
E. HAYES DR.

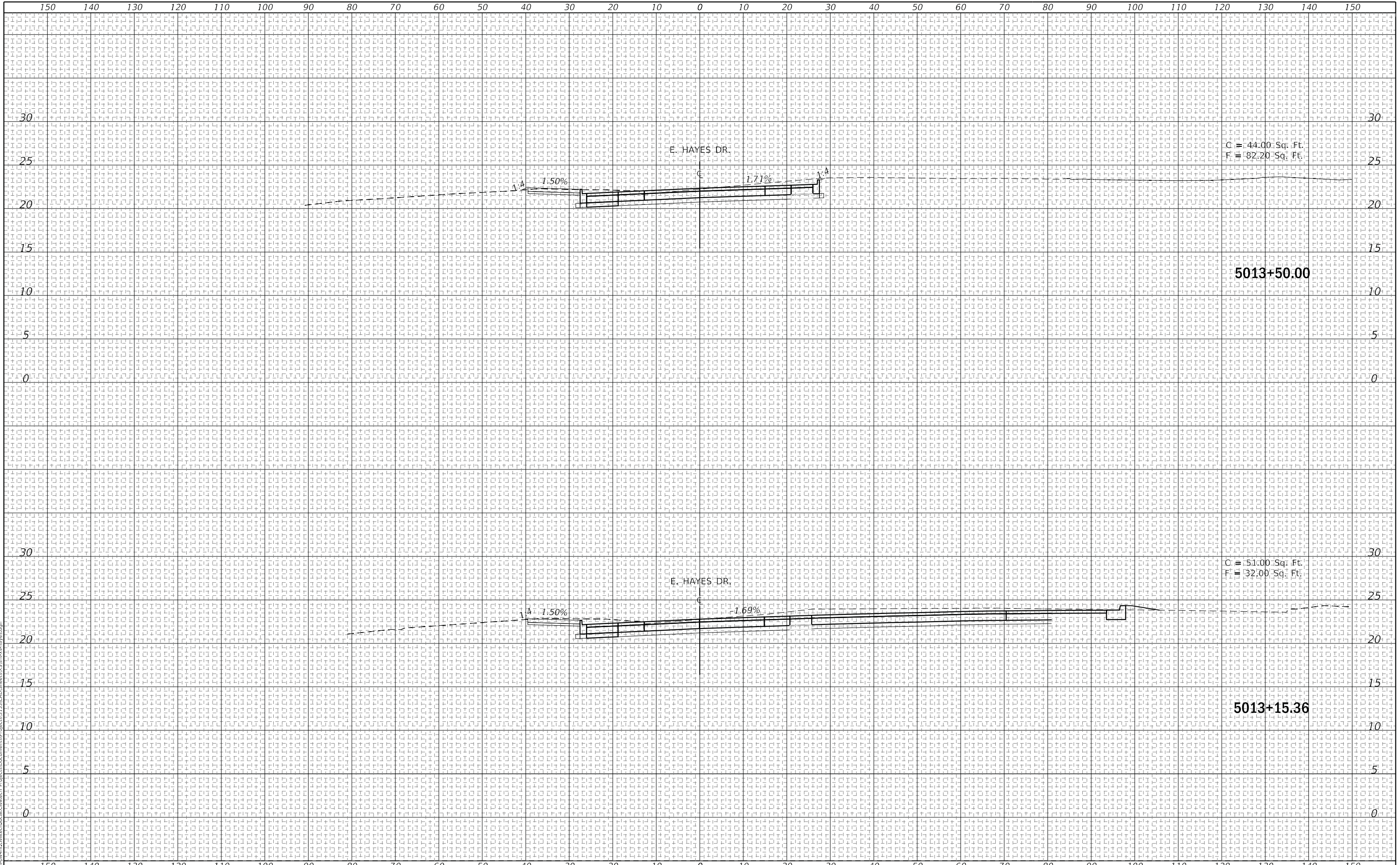
JACKSON PARK MOBILITY IMPROVEMENTS
5012+50.00 5013+00.00

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1242	1186
SCALE: AS INDICATED	DRAWING NO. XS-63	

DATE	BY

DATE	BY

PLOT DATE: 8/9/2019
 PLOT SCALE: 20.0000' = 1" in.
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C = 51.00 Sq. Ft.
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5013+50.00

5013+15.36

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APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 08/09/2019				REVISIONS



CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

5013+15.36 5013+50.00

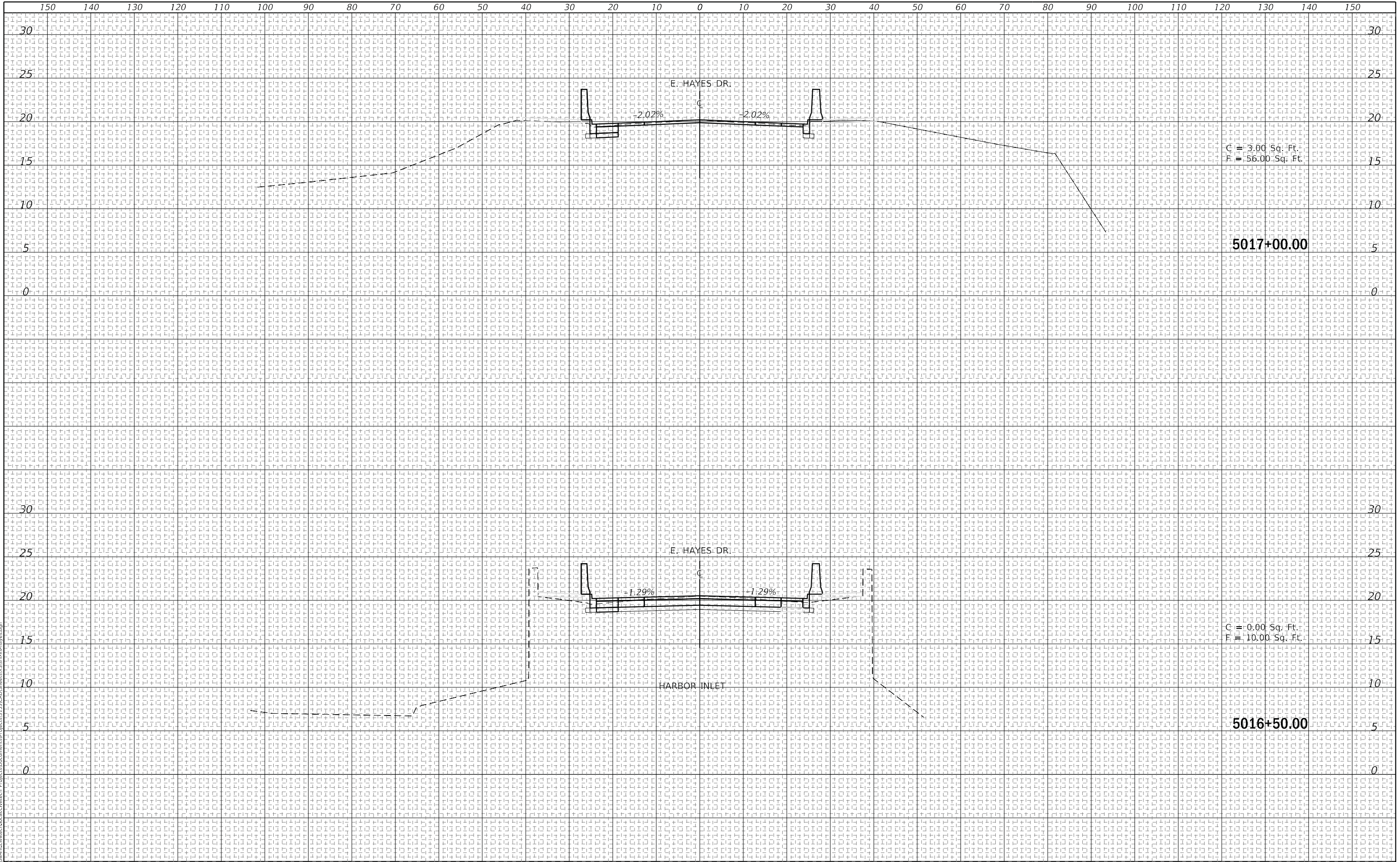
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PROJECT NO.	B-7-203	1242	1187
SCALE:	AS INDICATED	DRAWING NO.	XS-64

DRAFT

FINAL	SURVEYED	DATE
SURVEY	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

ORIGINAL	SURVEYED	DATE
SURVEY	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

PLOT DATE: 9/2/2019
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DESIGN:	NO.	BY	DATE	DESCRIPTION
MPK				
MPK				
NO.				

\$REV3
 \$REV2
 \$REV1
 DATE: 08/09/2019
 REVISIONS



CROSS SECTIONS
 E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS
 5016+50.00 5017+00.00

CONTRACT NO.
 PROJECT NO. B-7-203
 SCALE: AS INDICATED

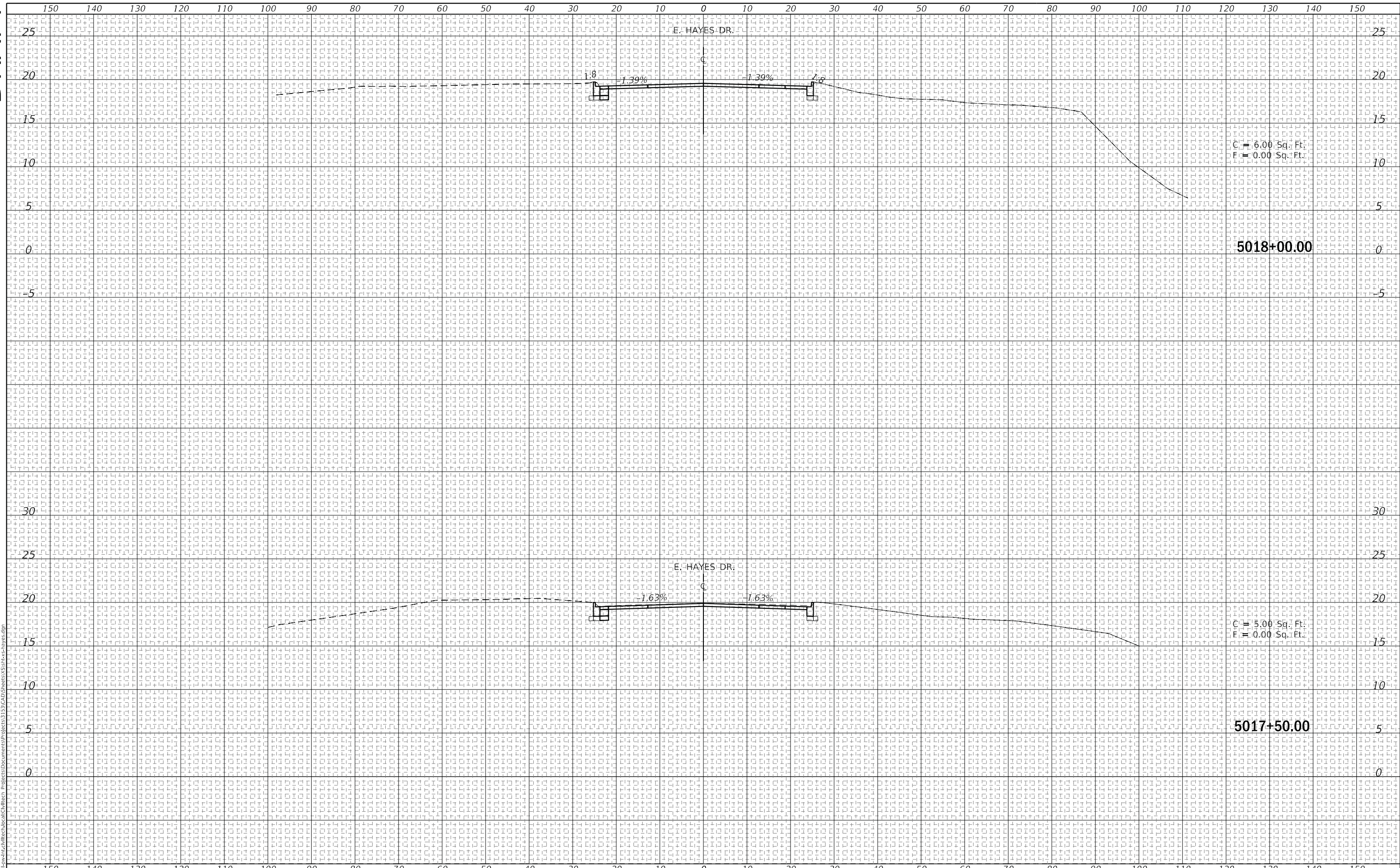
TOTAL SHEETS	SHEET NO.
1242	1191
DRAWING NO.	XS-68

DRAFT

BY	DATE

BY	DATE

PLOT DATE: 9/2/2019
 PLOT SCALE: 20.0000' = 1"m
 FILE NAME: D:\City\Work\Projects\Documents\Project\53131\CAD\Sheets\XS\53131-xs-hayes.dgn



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CHECKED:		\$REV1	
APPROVED:	NO.	BY	
DATE:	08/09/2019		

NO.	BY	DATE	DESCRIPTION



CROSS SECTIONS
 E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.		TOTAL SHEETS	1242	SHEET NO.	1192
PROJECT NO.	B-7-203	DRAWING NO.	XS-69		
SCALE:	AS INDICATED				

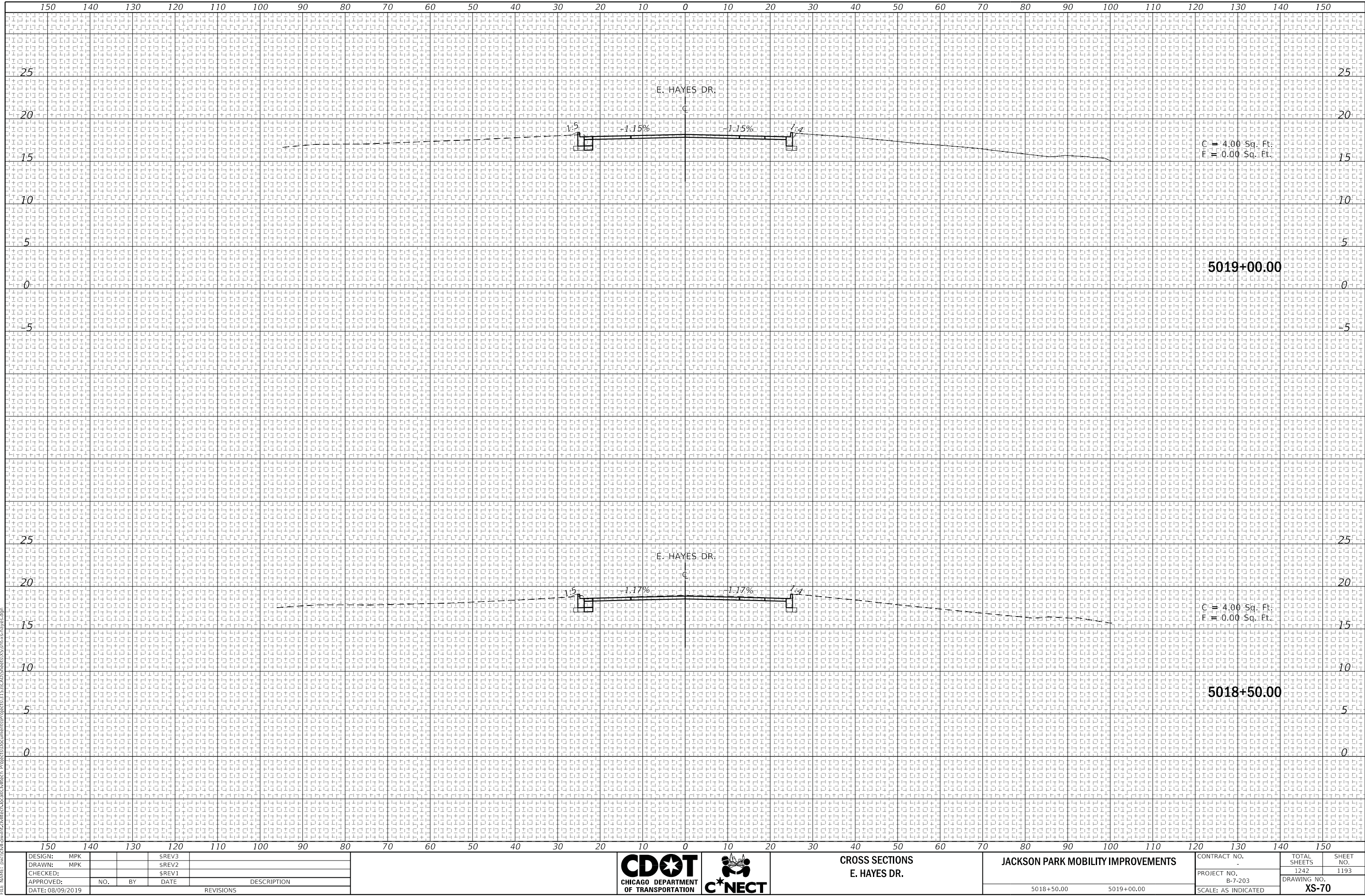
5017+50.00	5018+00.00
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DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 9/2/2019
 PLOT SCALE: 20.0/000' = 1" = 100'
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APPROVED:	NO.	BY
DATE: 08/09/2019		DATE
REVISIONS DESCRIPTION		



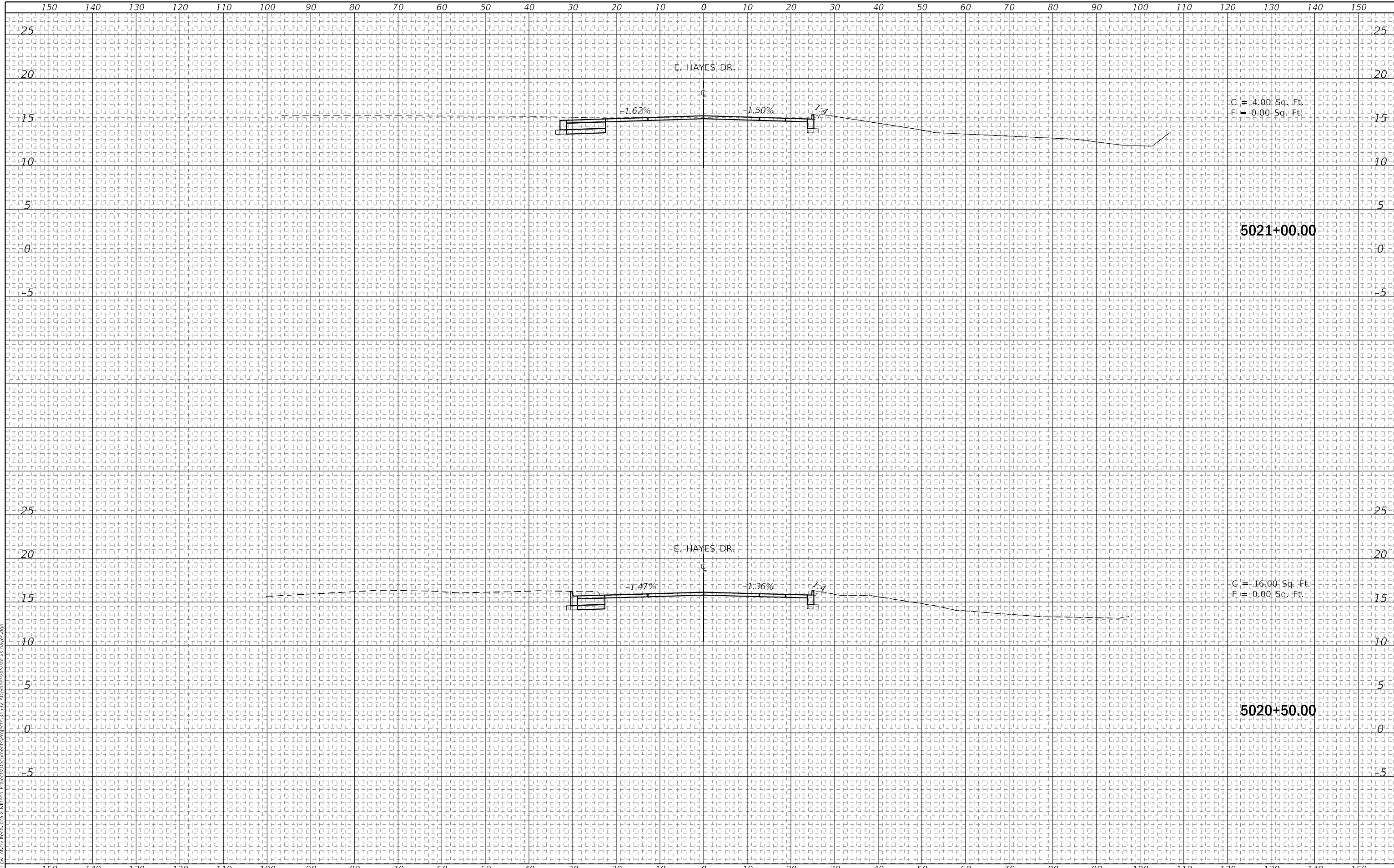
CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.		TOTAL SHEETS	SHEET NO.
PROJECT NO.	B-7-203	1242	1193
SCALE: AS INDICATED		DRAWING NO. XS-70	

5018+50.00 5019+00.00

DRAFT



FINAL SURVEY NO.	SURVEYED	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

DESIGN:	MPK	SREV3		
DRAWN:	MPK	SREV2		
CHECKED:		SREV1		
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 08/09/2019		REVISIONS		



CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

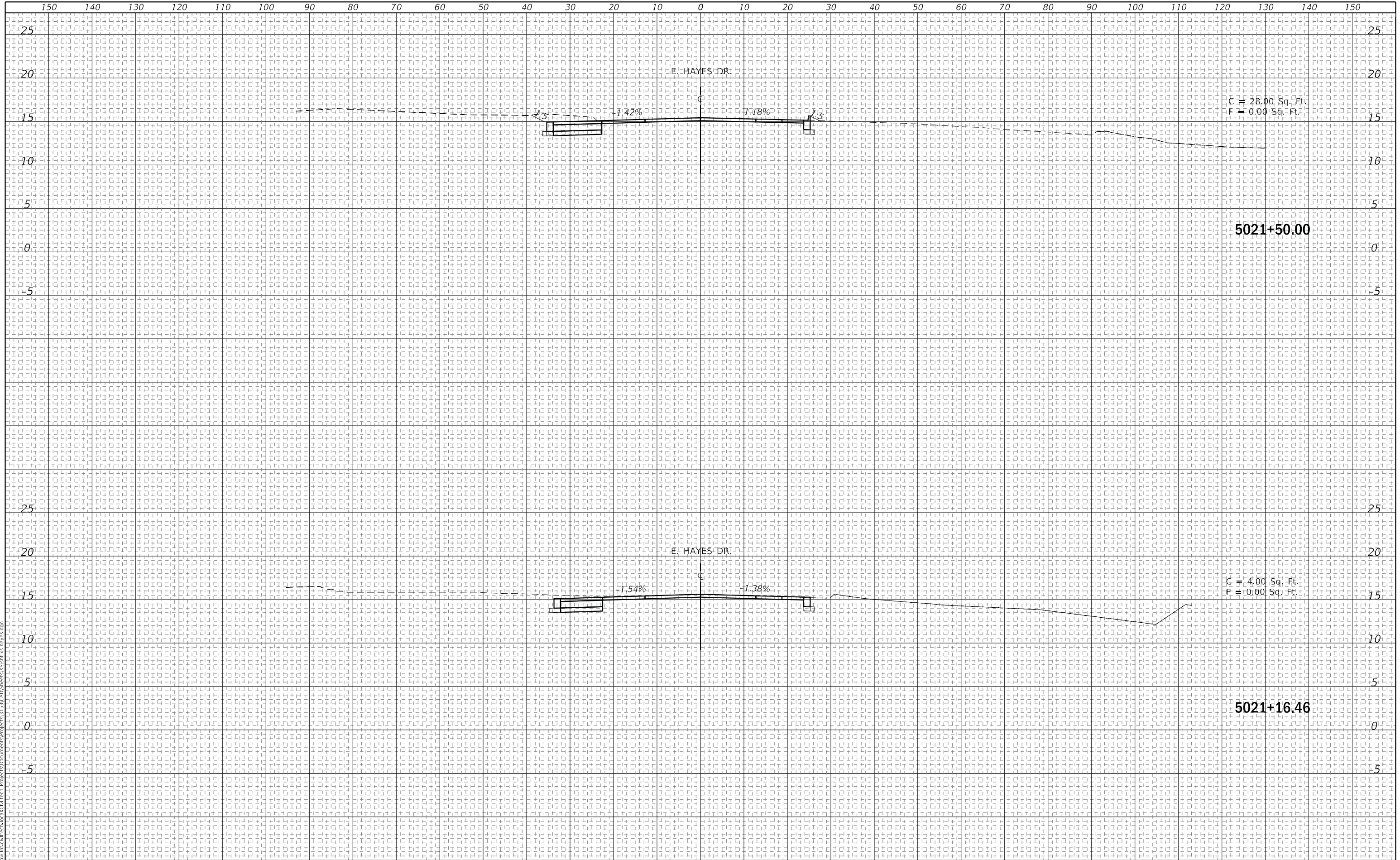
5020+50.00 5021+00.00

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1242	1195
SCALE: AS INDICATED	DRAWING NO. XS-72	

FINAL SURVEY NO.		BY		DATE	
SURVEYED PLOTTED		NO.			
NOTE BOOK					
AREAS CHECKED					

ORIGINAL SURVEY NO.		BY		DATE	
SURVEYED PLOTTED		NO.			
NOTE BOOK					
AREAS CHECKED					

PLOT DATE: 9/2/2019
PLOT SCALE: 20.0000' = 1" IN.
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DRAWN: MPK	SREV2			
CHECKED:	SREV1			
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 08/09/2019				REVISIONS



CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

5021+16.46 5021+50.00

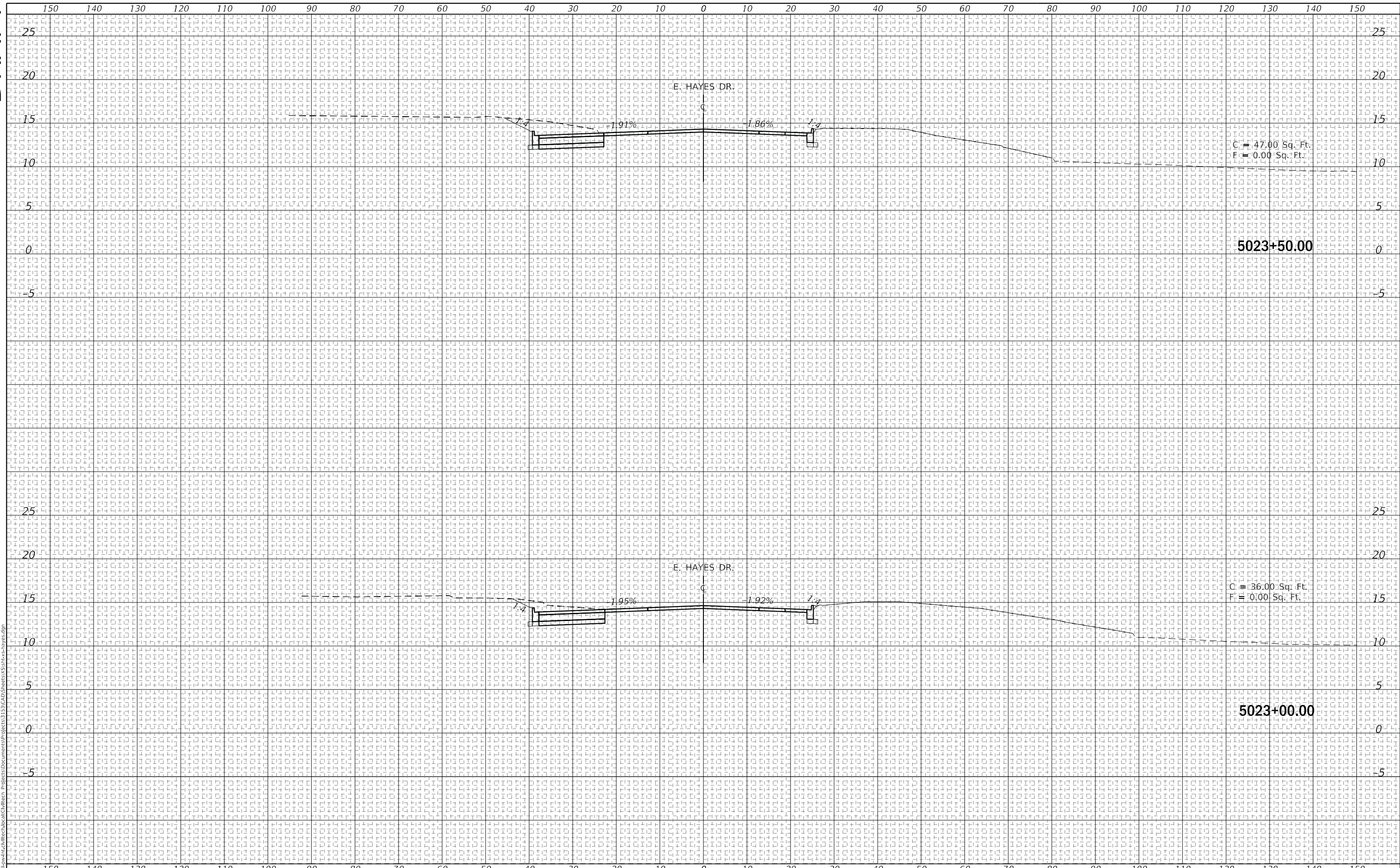
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PROJECT NO. B-7-203	1242	1196
SCALE: AS INDICATED	DRAWING NO. XS-73	

DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

PLOT DATE: 9/2/2019
 PLOT SCALE: 20.0000' = 1" IN.
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DRAWN:	MPK		\$REV2
CHECKED:			\$REV1
APPROVED:	NO.	BY	DATE
DATE: 08/09/2019			REVISIONS



CROSS SECTIONS
E. HAYES DR.

JACKSON PARK MOBILITY IMPROVEMENTS

5023+00.00 5023+50.00

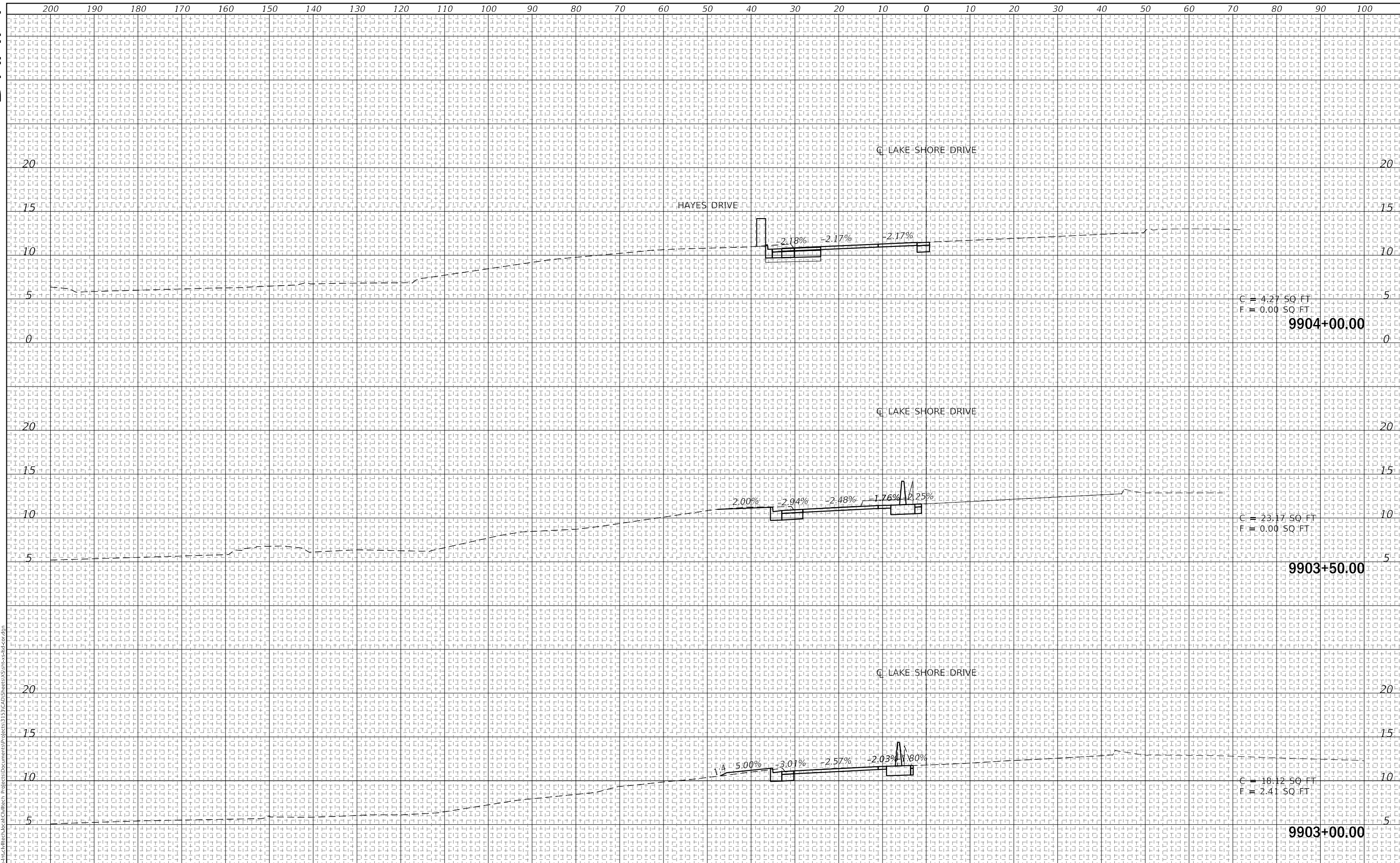
CONTRACT NO.
PROJECT NO. B-7-203
SCALE: AS INDICATED

TOTAL SHEETS	SHEET NO.
1242	1198
DRAWING NO.	XS-75

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	DATE
AREAS CHECKED	TEMPLATE	DATE

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	DATE
AREAS CHECKED	TEMPLATE	DATE

PLOT DATE: 5/30/2019
 PLOT SCALE: 20.0000" = 1'
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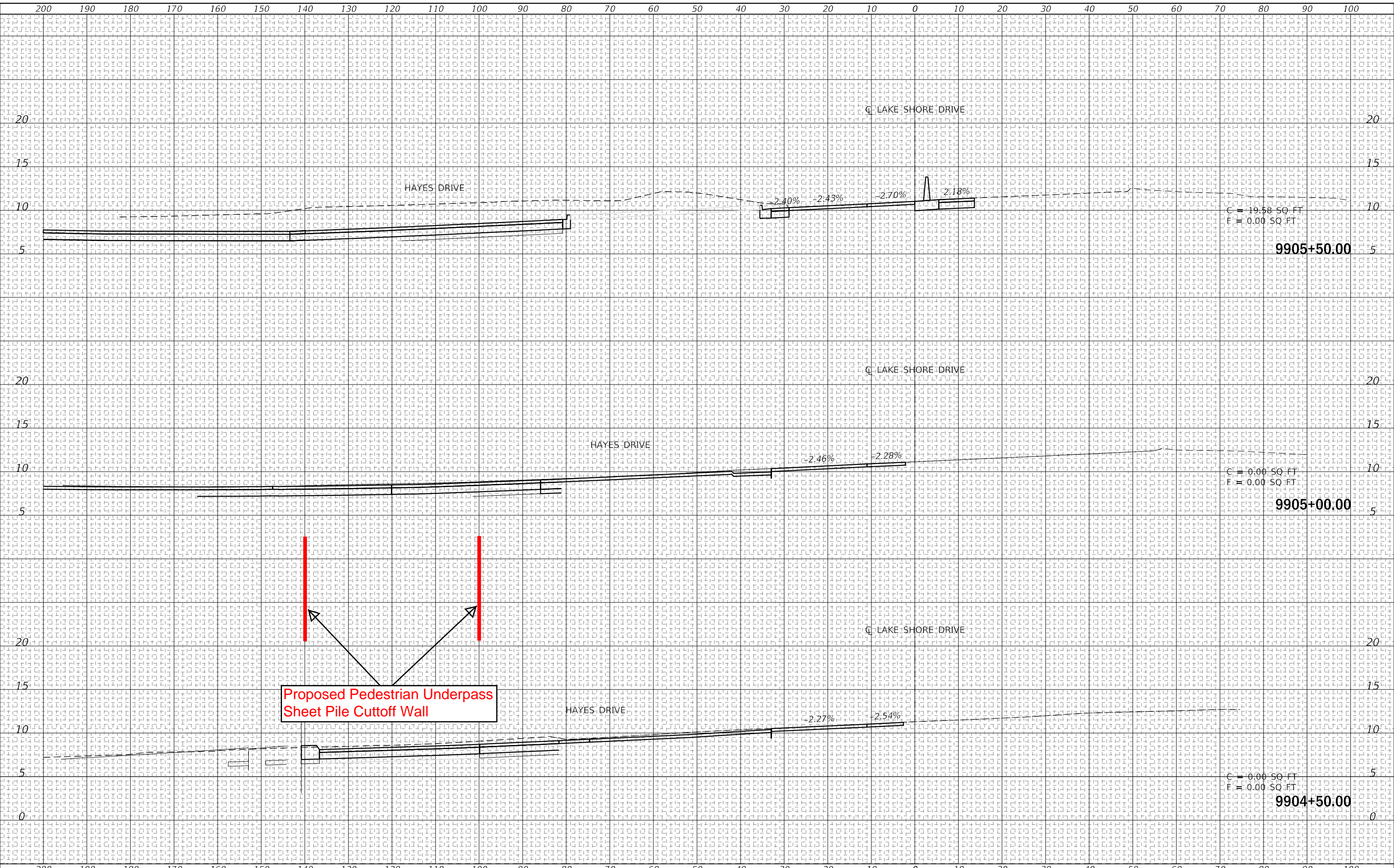


CONTRACT NO.	B-7-203
PROJECT NO.	AS INDICATED
TOTAL SHEETS	1142
SHEET NO.	1108
DRAWING NO.	XS-109

DRAFT

BY	DATE

FINAL SURVEY	SURVEYED	PLOTTED	TEMPLATE	AREAS CHECKED
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Proposed Pedestrian Underpass Sheet Pile Cutoff Wall

PLOT DATE: 5/30/2019
PLOT SCALE: 20.0000' = 1 in.
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CHECKED:		SREV1	
APPROVED:	NO.	BY	
DATE:	05/31/2019		



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9904+50 TO STA. 9905+50

CONTRACT NO.
PROJECT NO.
SCALE: AS INDICATED

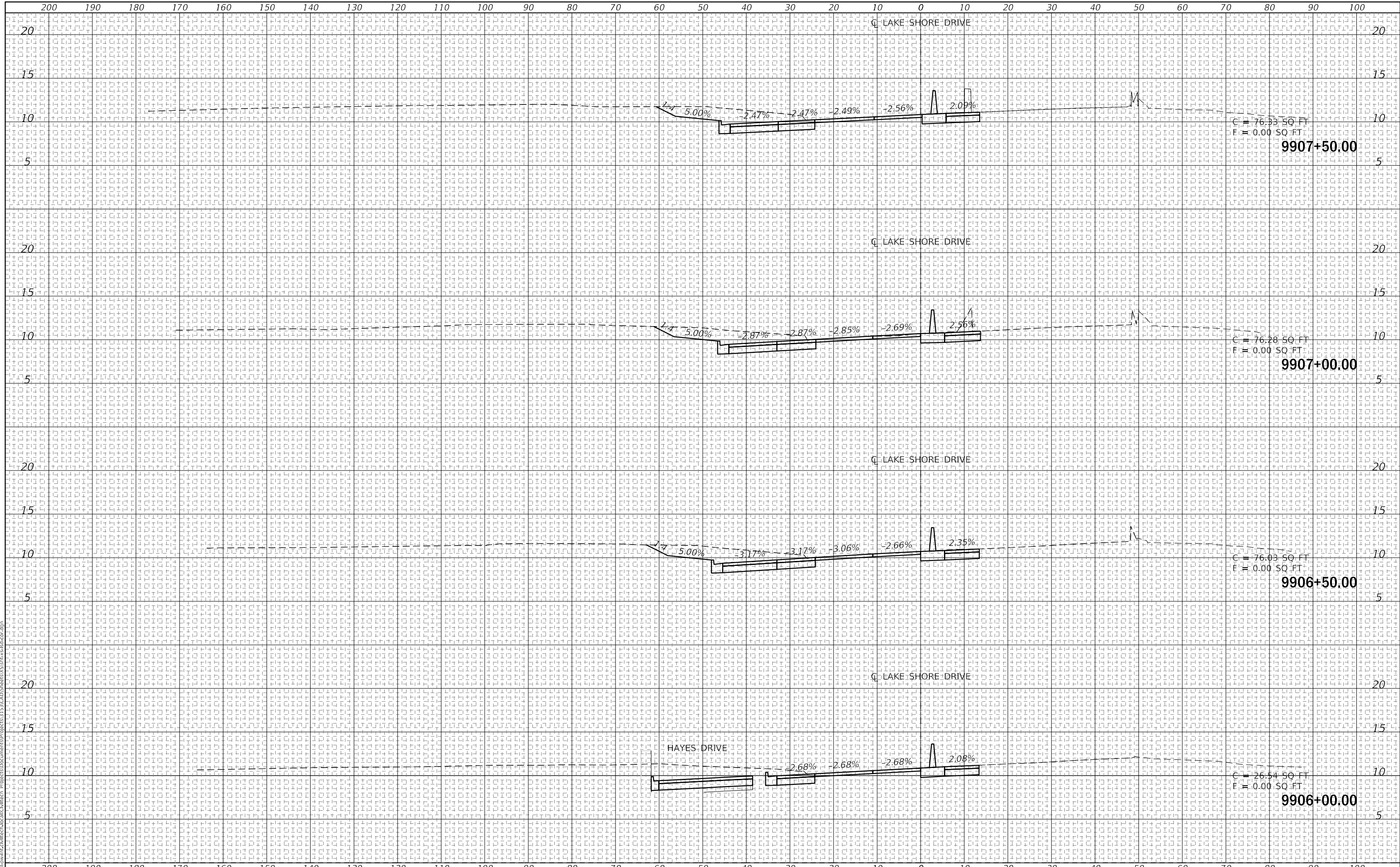
TOTAL SHEETS	SHEET NO.
1142	1109
DRAWING NO.	XS-110

DRAFT

FINAL SURVEY NO.	SURVEYED	DATE
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NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/30/2019
 PLOT SCALE: 20.0000' = 1" FILE NAME: D:\GIS\mwp\proj\1142\chicago\mtech\proj\docs\documents\proj\c3131\c3131\cross\sections\lake-shore-dr-std.dwg



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APPROVED:	NO.	BY	DESCRIPTION
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9906+00 TO STA. 9907+50

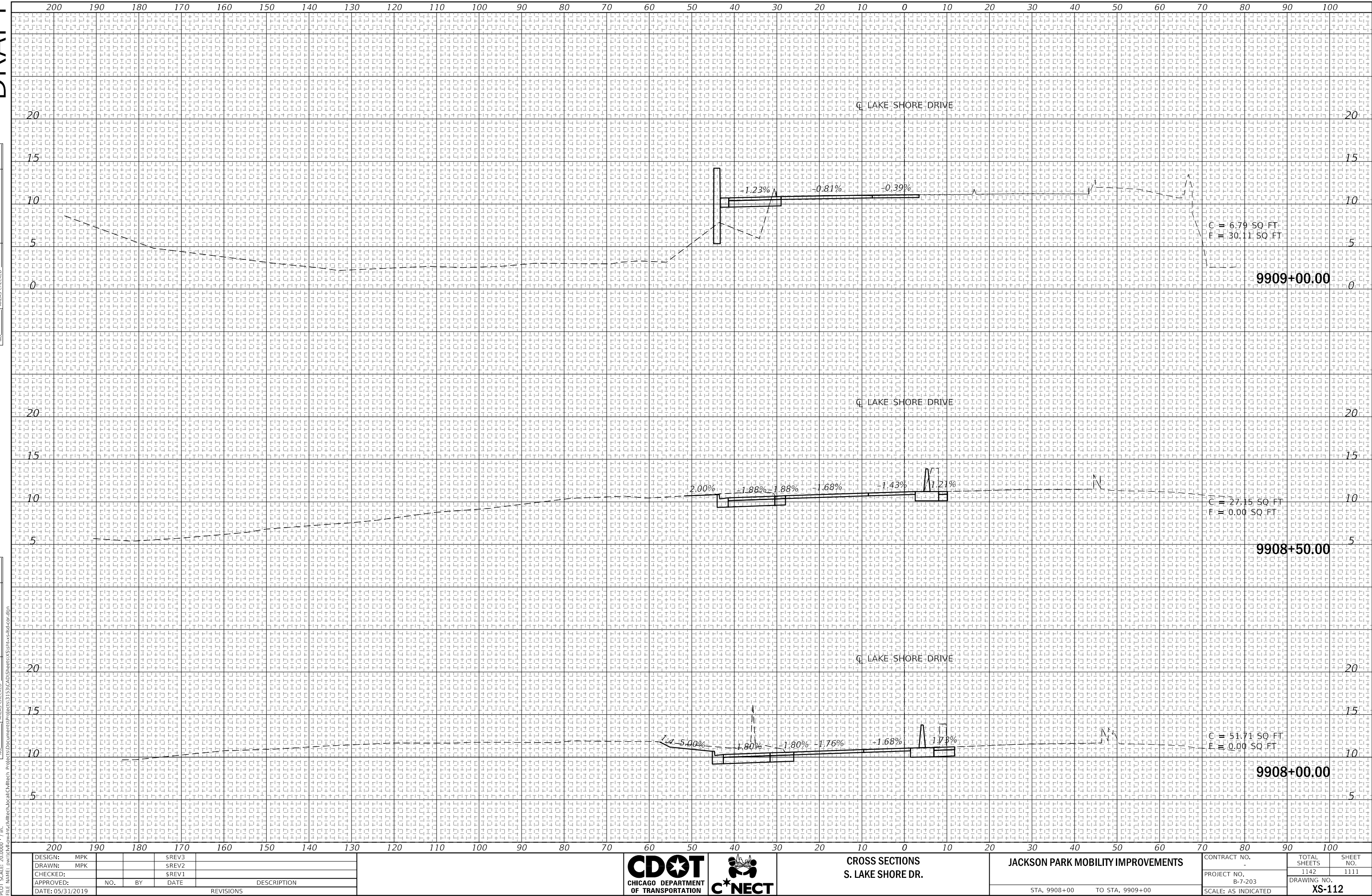
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PROJECT NO. B-7-203	1142	1110
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DRAFT

DATE	BY

DATE	BY

PLOT DATE: 5/30/2019
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DRAWN:	MPK	SREV2
CHECKED:		SREV1
APPROVED:	NO. BY	DATE
DATE: 05/31/2019		REVISIONS



**CROSS SECTIONS
 S. LAKE SHORE DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

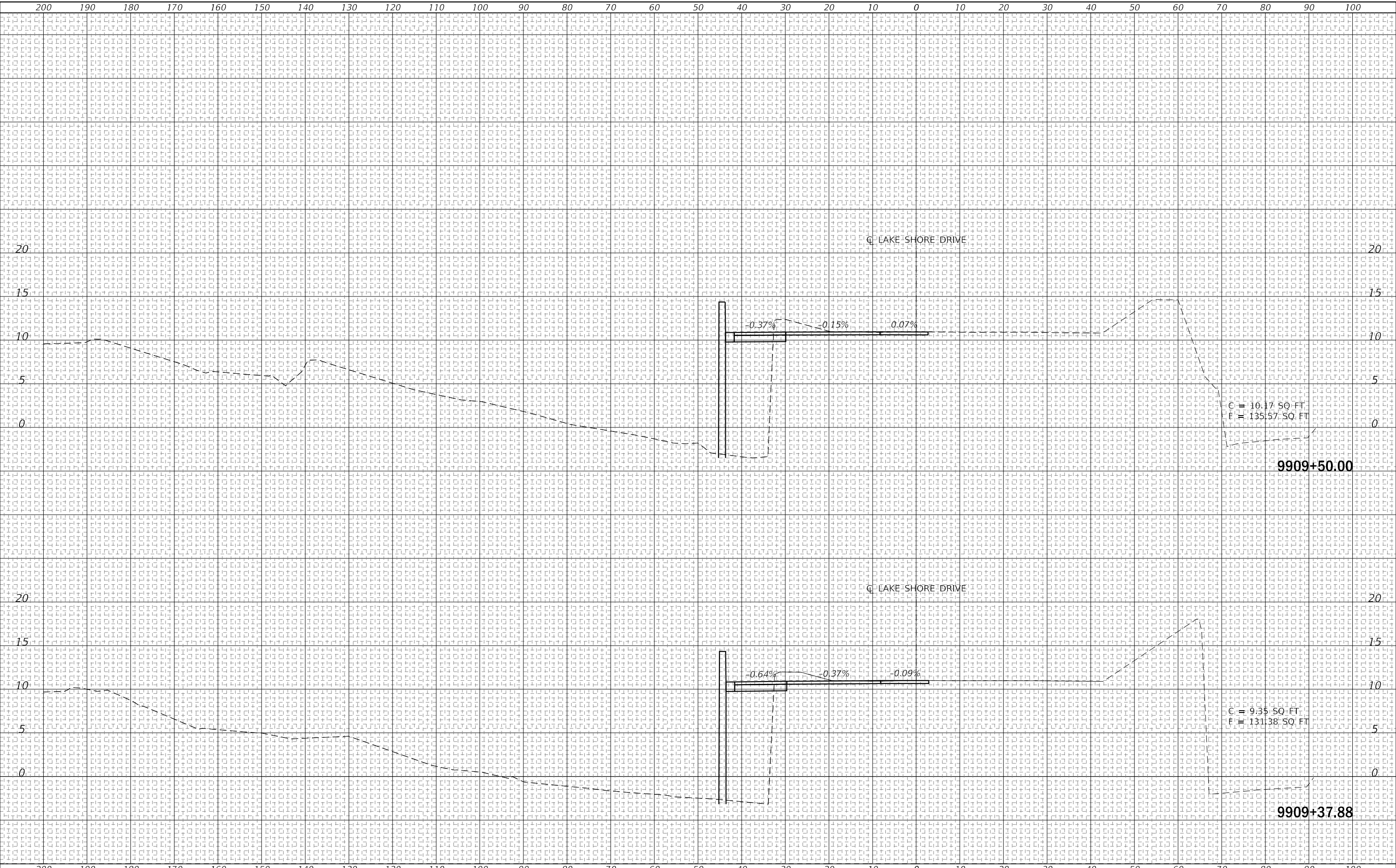
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PROJECT NO.	1142	1111
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DRAFT

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NOTE BOOK	TEMPLATE	
AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

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FILE NAME: I:\GIS\Projects\CH2M Hill\chicago\mitch\Projects\Documents\9909\9909\9909+37.88+50.00.dwg



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DRAWN:	MPK	SREV2		
CHECKED:		SREV1		
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019			REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9909+38 TO STA. 9909+50

CONTRACT NO.
PROJECT NO. B-7-203
SCALE: AS INDICATED

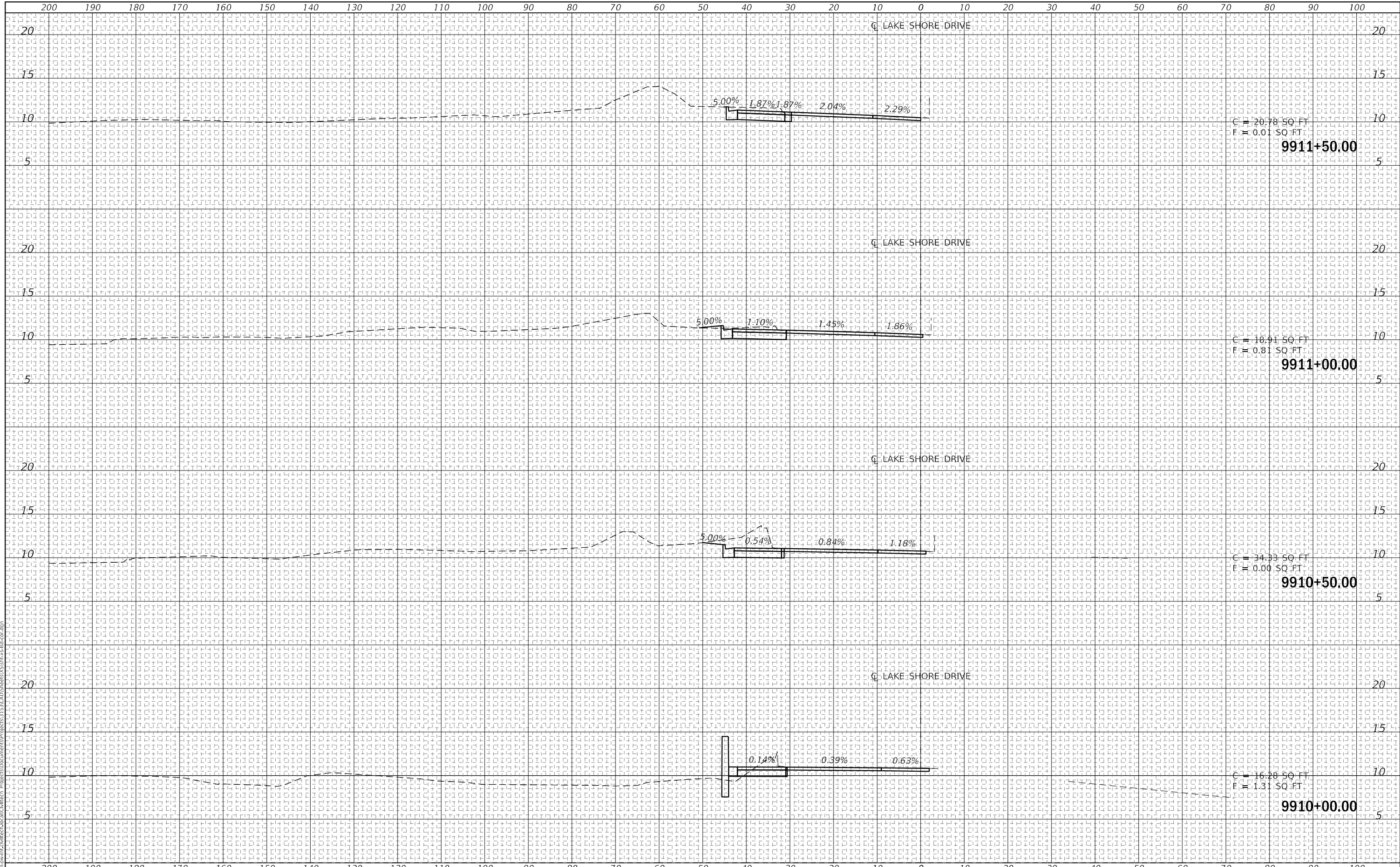
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DRAWING NO. XS-113	

DRAFT

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ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

PLOT DATE: 5/30/2019
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APPROVED:	NO.	BY	DESCRIPTION
DATE:	05/31/2019		REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
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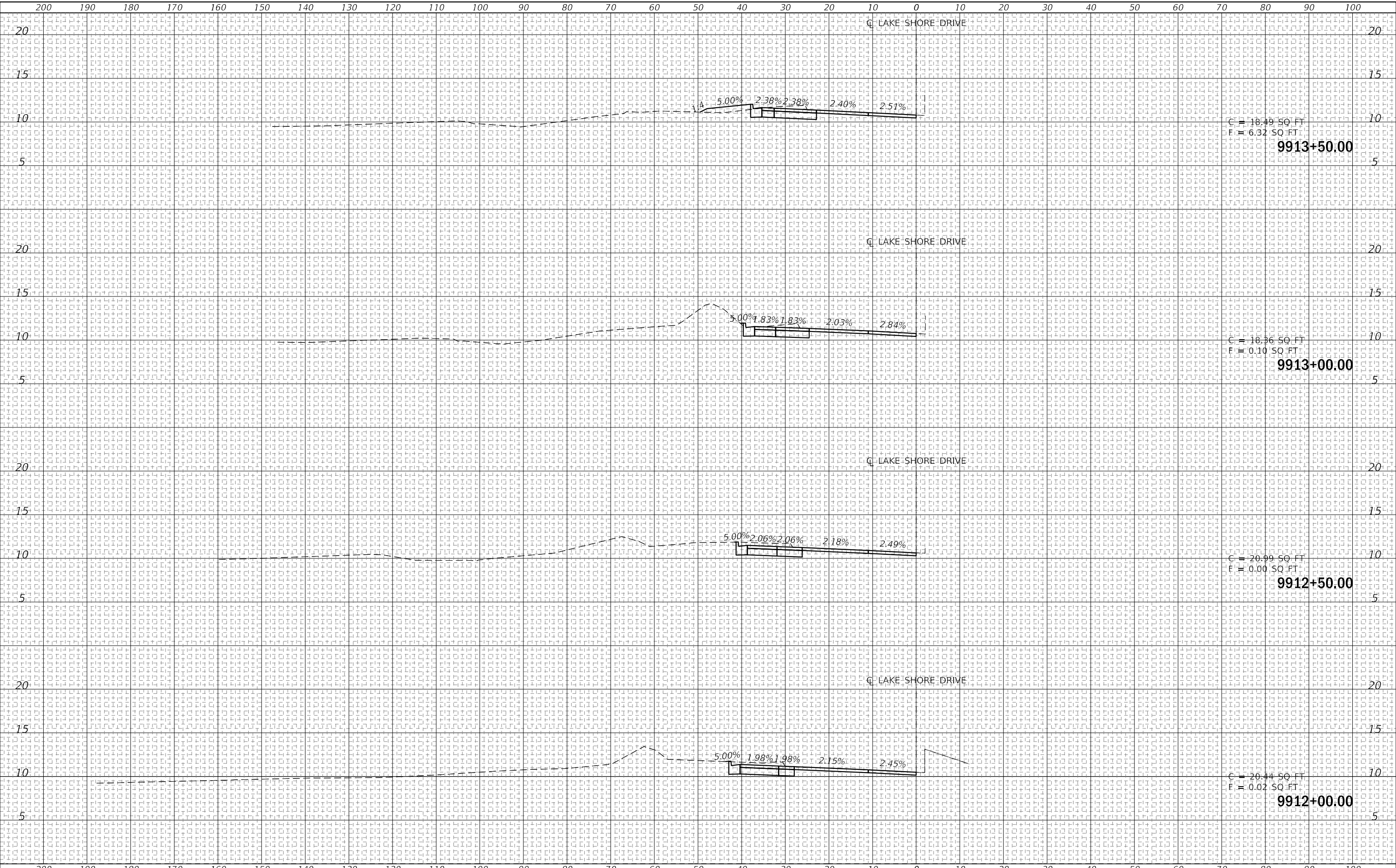
STA. 9910+00 TO STA. 9911+50

DRAFT

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NOTE BOOK	TEMPLATE	
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ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/30/2019
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DRAWN:	MPK	\$REV2	
CHECKED:		\$REV1	
APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
 S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9912+00 TO STA. 9913+50

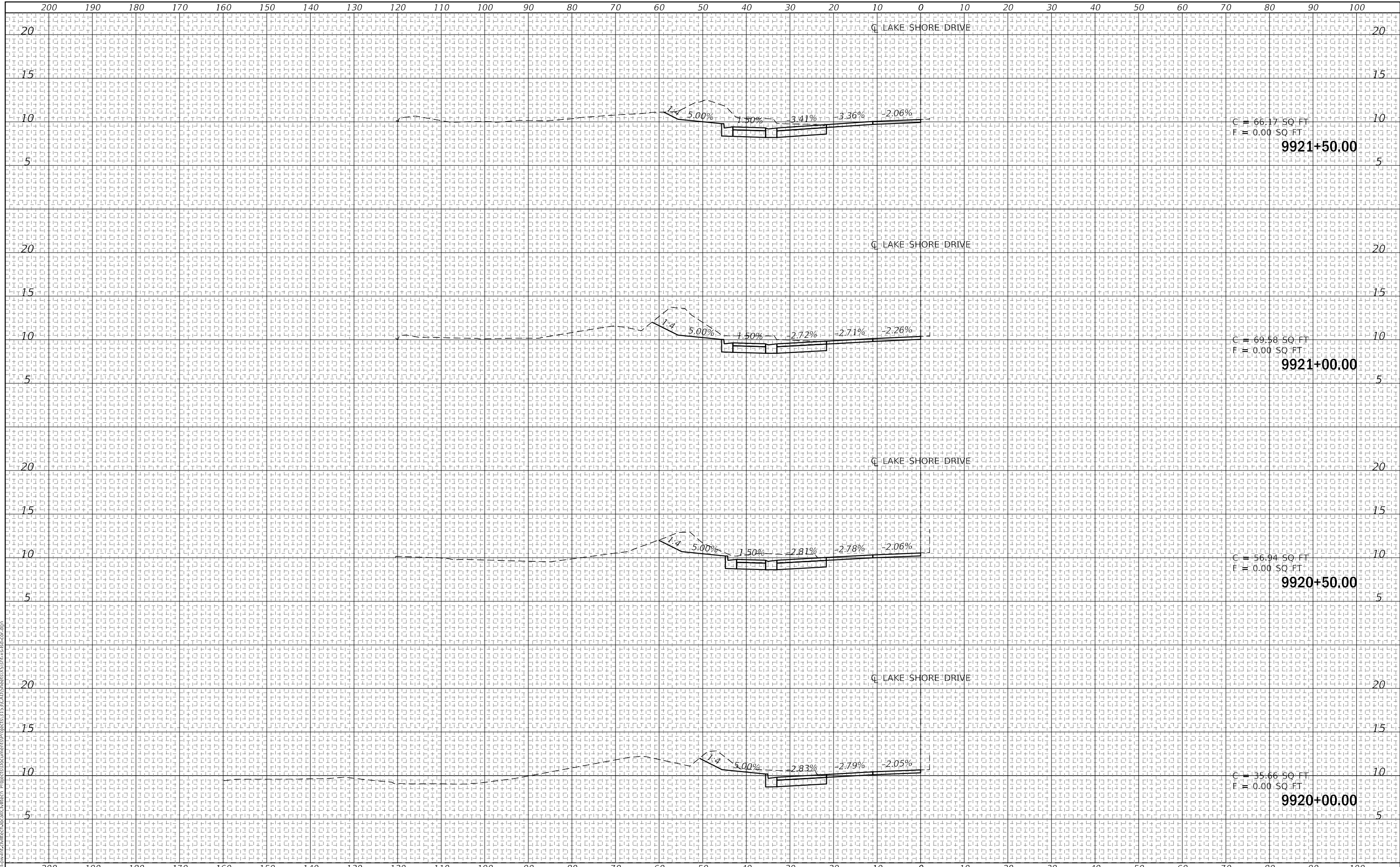
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PROJECT NO. B-7-203	1142	1114
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DRAFT

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NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

PLOT DATE: 5/30/2019
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DRAWN:	MPK	\$REV2	
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APPROVED:	NO.	BY	DESCRIPTION
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS
STA. 9920+00 TO STA. 9921+50

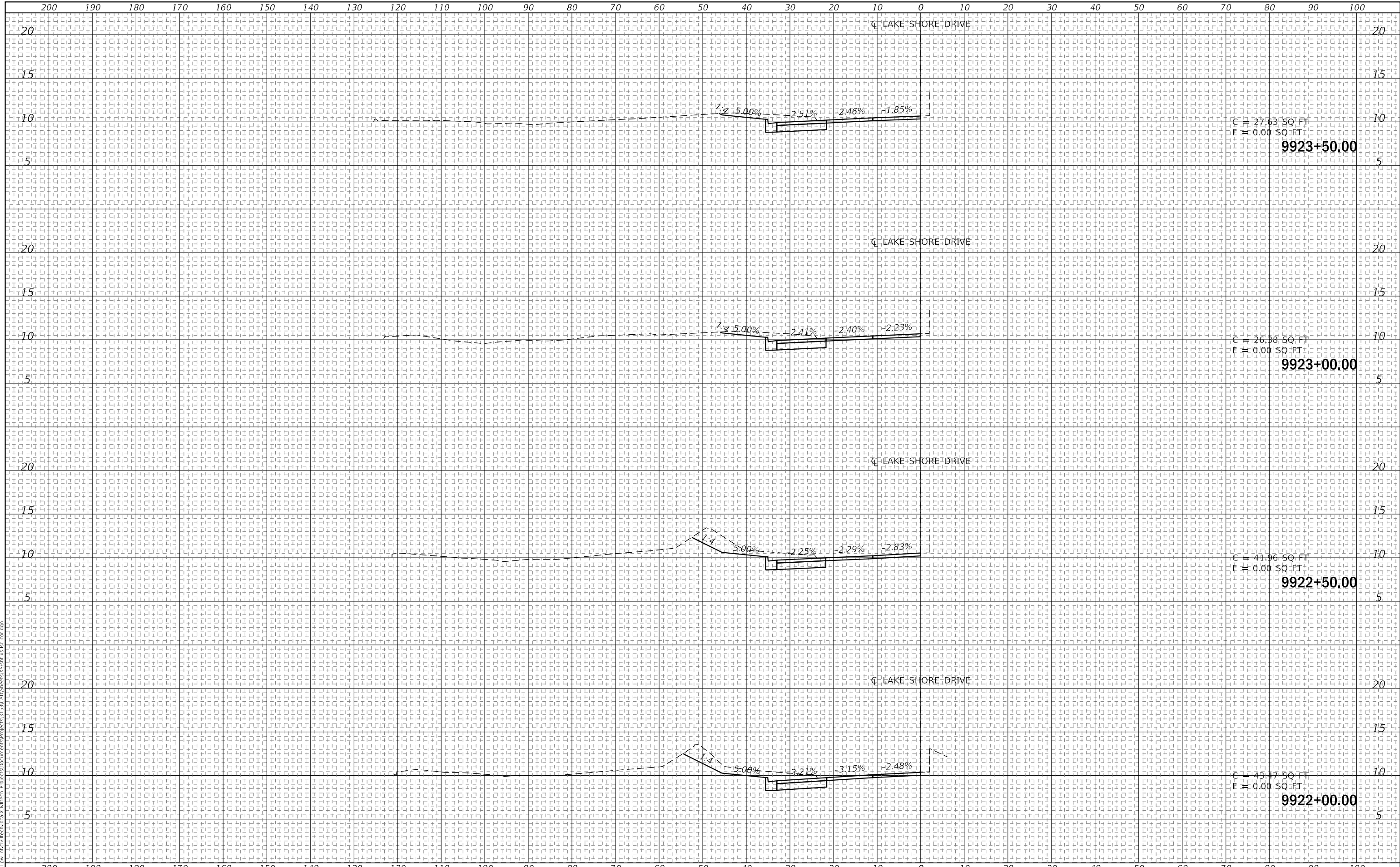
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PROJECT NO. B-7-203	1142	1118
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DRAFT

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE		
	AREAS CHECKED		

PLOT DATE: 5/30/2019
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APPROVED:	NO.	BY	DESCRIPTION
DATE: 05/31/2019			REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9922+00 TO STA. 9923+50

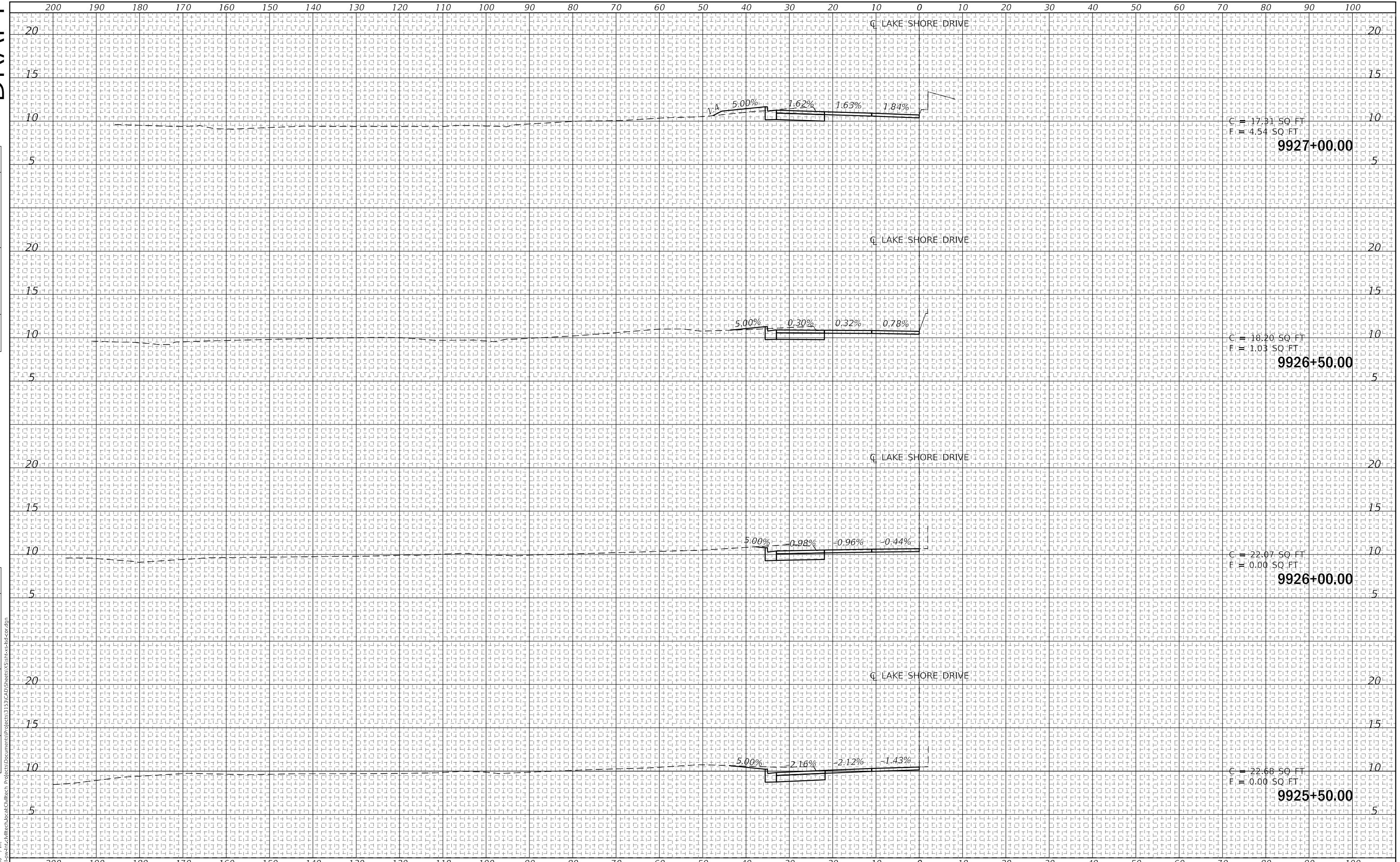
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PROJECT NO. B-7-203	1142	1119
SCALE: AS INDICATED	DRAWING NO.	XS-120

DRAFT

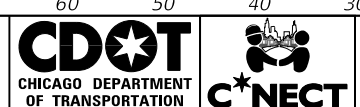
BY	DATE

BY	DATE

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DRAWN:	MPK	\$REV2		
CHECKED:		\$REV1		
APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO.	1142	1121
SCALE: AS INDICATED	DRAWING NO.	
	XS-122	

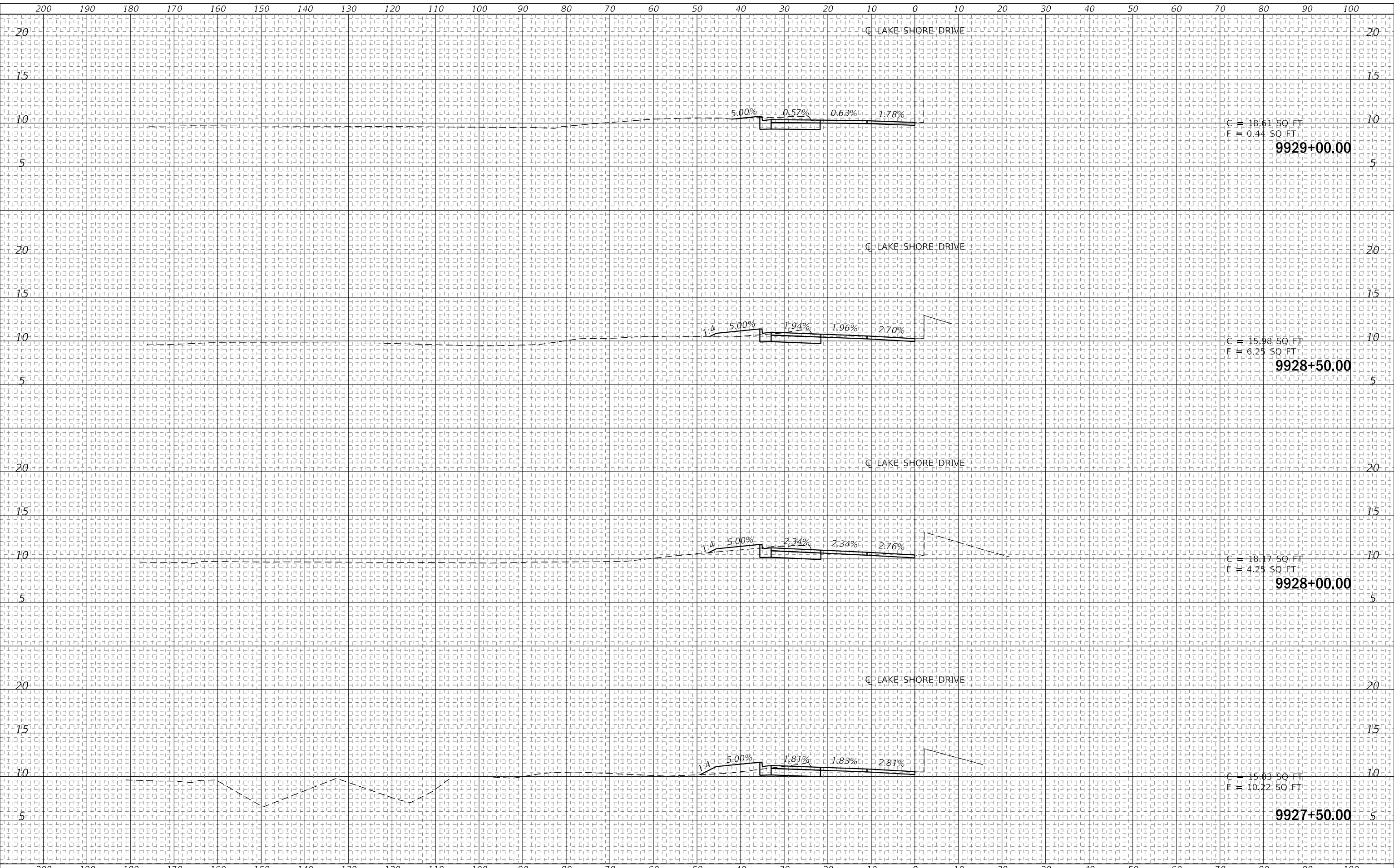
STA. 9925+50 TO STA. 9927+00

DRAFT

BY	DATE
BY	DATE
BY	DATE
BY	DATE
BY	DATE
BY	DATE

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE AREAS CHECKED

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE AREAS CHECKED



PLOT DATE: 5/30/2019
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APPROVED:	NO.	BY	DATE
DATE: 05/31/2019			REVISIONS



**CROSS SECTIONS
S. LAKE SHORE DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9927+50 TO STA. 9929+00

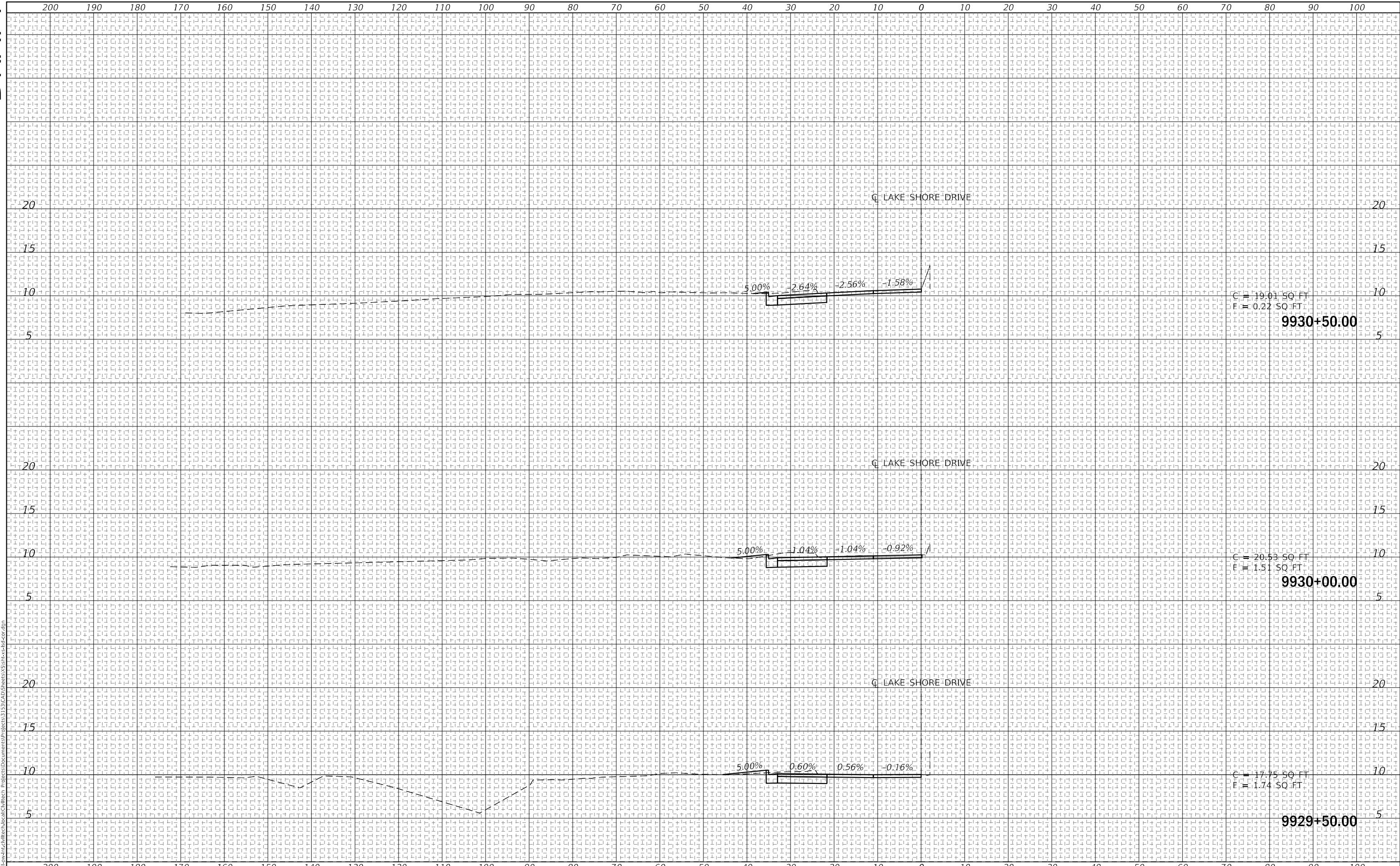
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PROJECT NO. B-7-203	1142	1122
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DRAFT

BY		DATE	

ORIGINAL SURVEY		SURVEYED	

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 F = 0.22 SQ. FT.

9930+50.00

C = 20.53 SQ. FT.
 F = 1.51 SQ. FT.

9930+00.00

C = 17.75 SQ. FT.
 F = 1.74 SQ. FT.

9929+50.00

DESIGN:	MPK	\$REV3
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APPROVED:	NO. BY	DATE
DATE: 05/31/2019		



CROSS SECTIONS
 S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

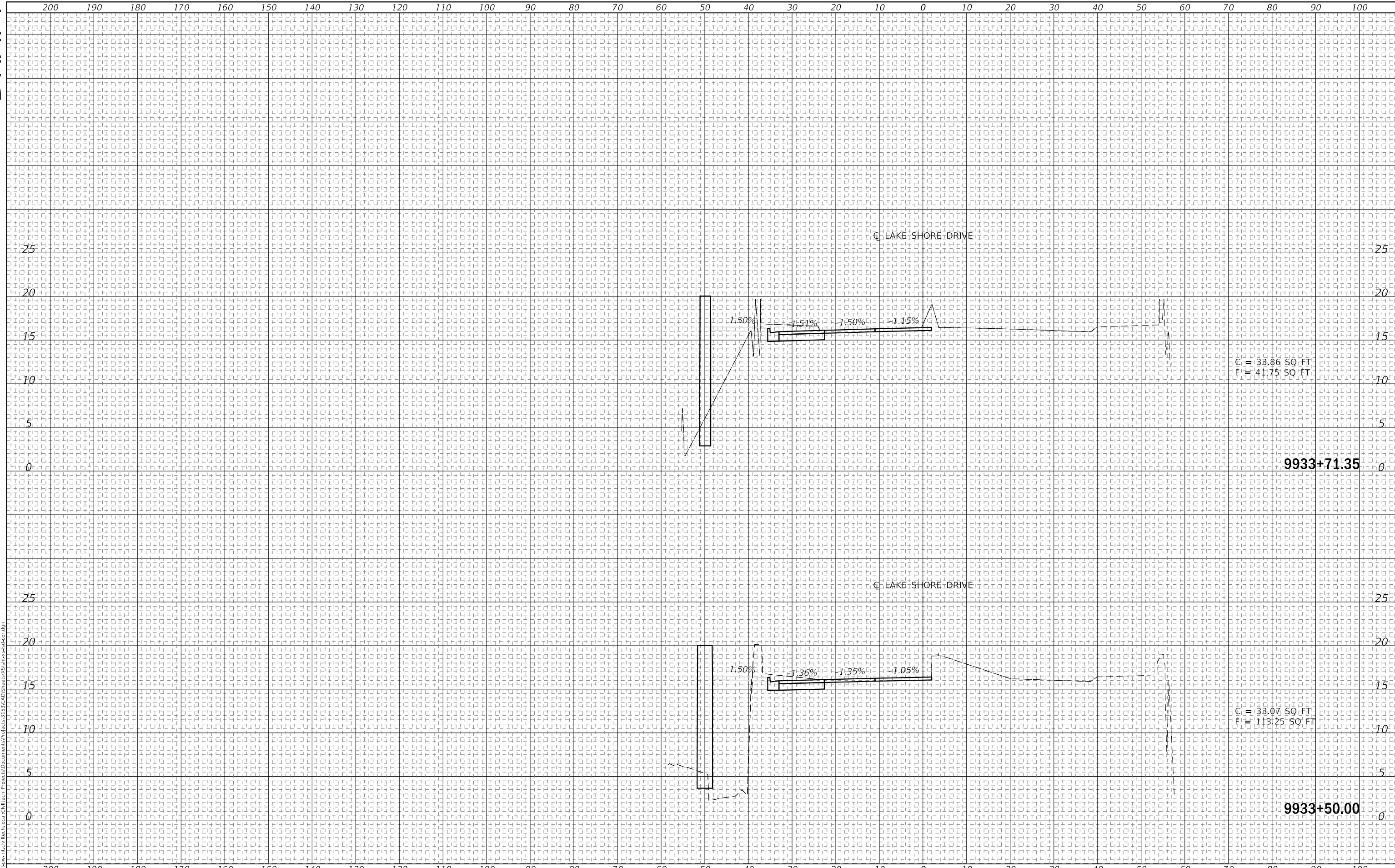
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CONTRACT NO.	
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DRAWING NO.	XS-124

DRAFT

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ORIGINAL SURVEY NO.	SURVEYED	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	



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APPROVED:	NO.	BY	DATE
DATE: 05/31/2019	REVISIONS		



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

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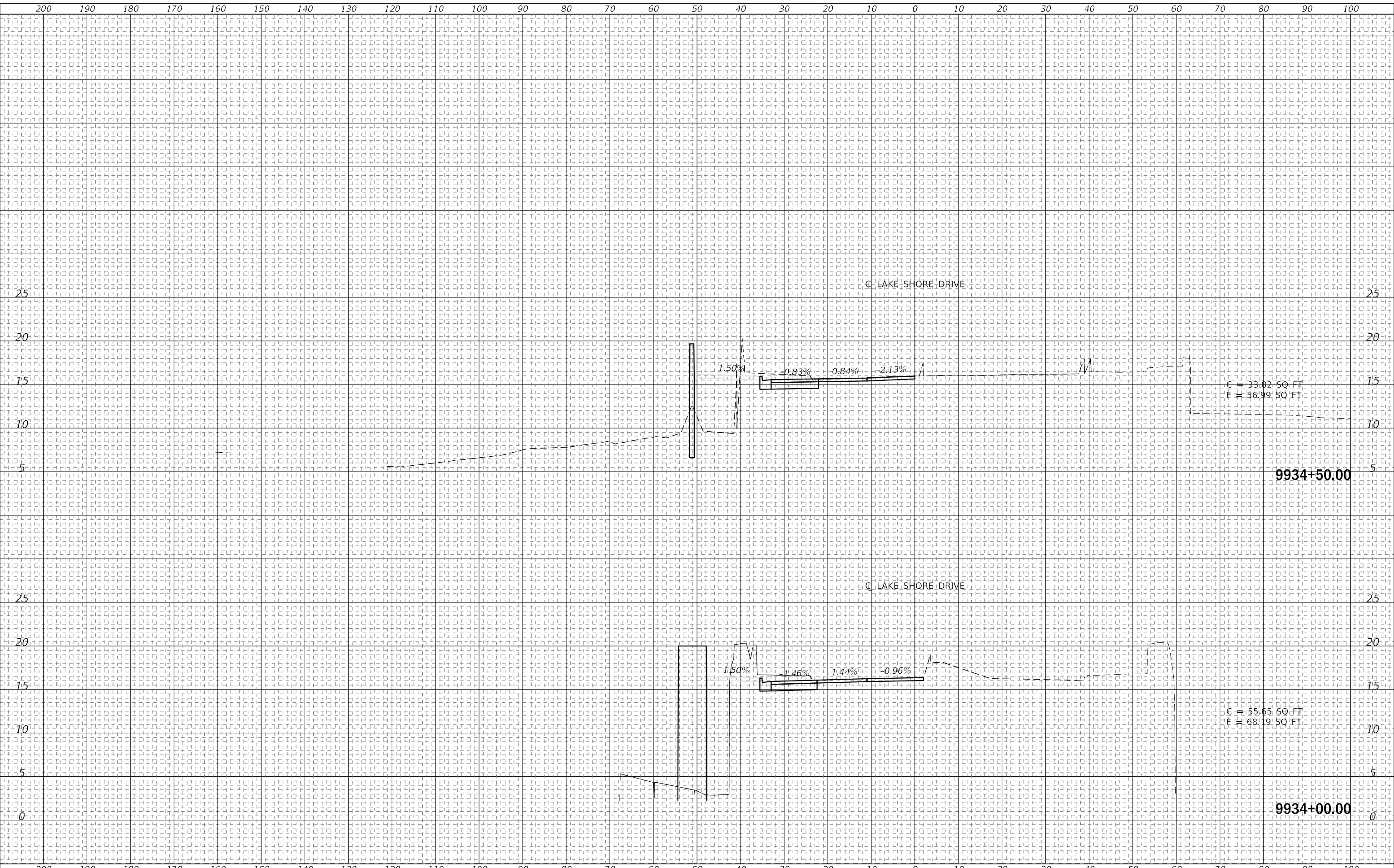
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ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
	NOTE BOOK	
	TEMPLATE	
	AREAS CHECKED	

PLOT DATE: 5/30/2019
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APPROVED:	NO.	BY
DATE: 05/31/2019		DATE
		DESCRIPTION
		REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

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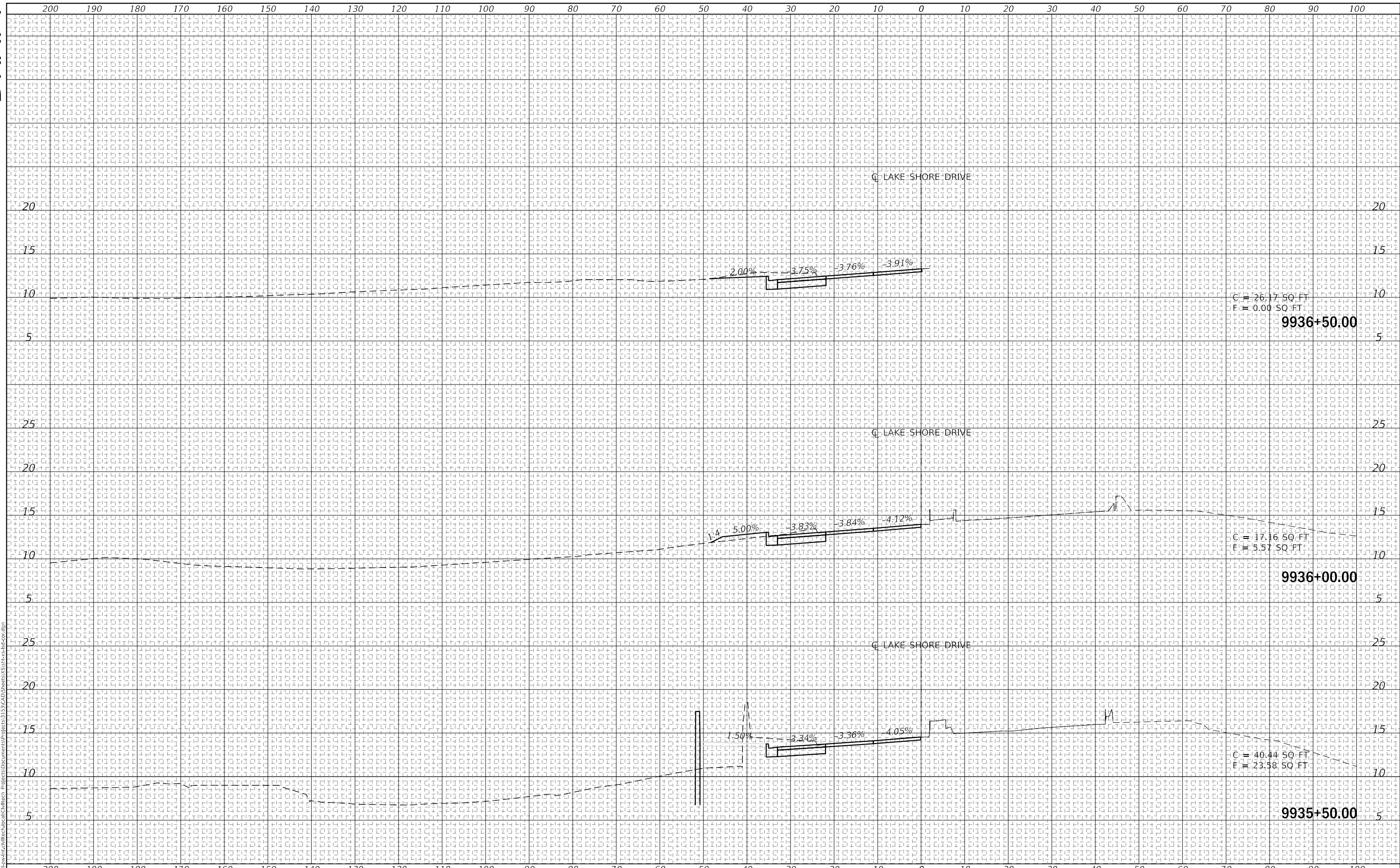
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DRAFT

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APPROVED:	NO.	BY	DATE
REVISIONS			



CROSS SECTIONS
 S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

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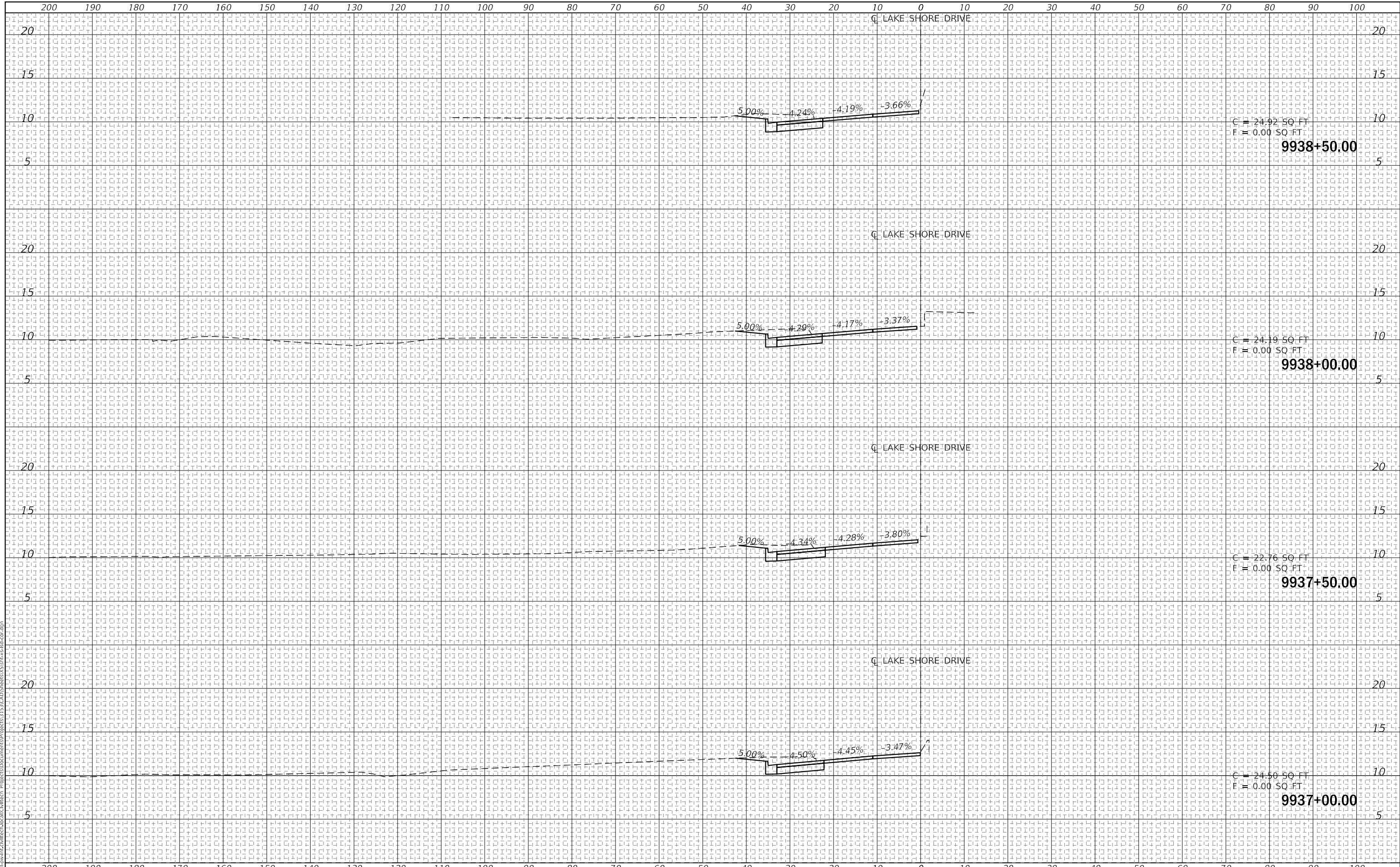
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DRAFT

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SUMMERED PLOTTED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
SUMMERED PLOTTED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

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APPROVED:	NO.	BY	
DATE:	05/31/2019		
		REVISIONS	



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9937+50 TO STA. 9939+00

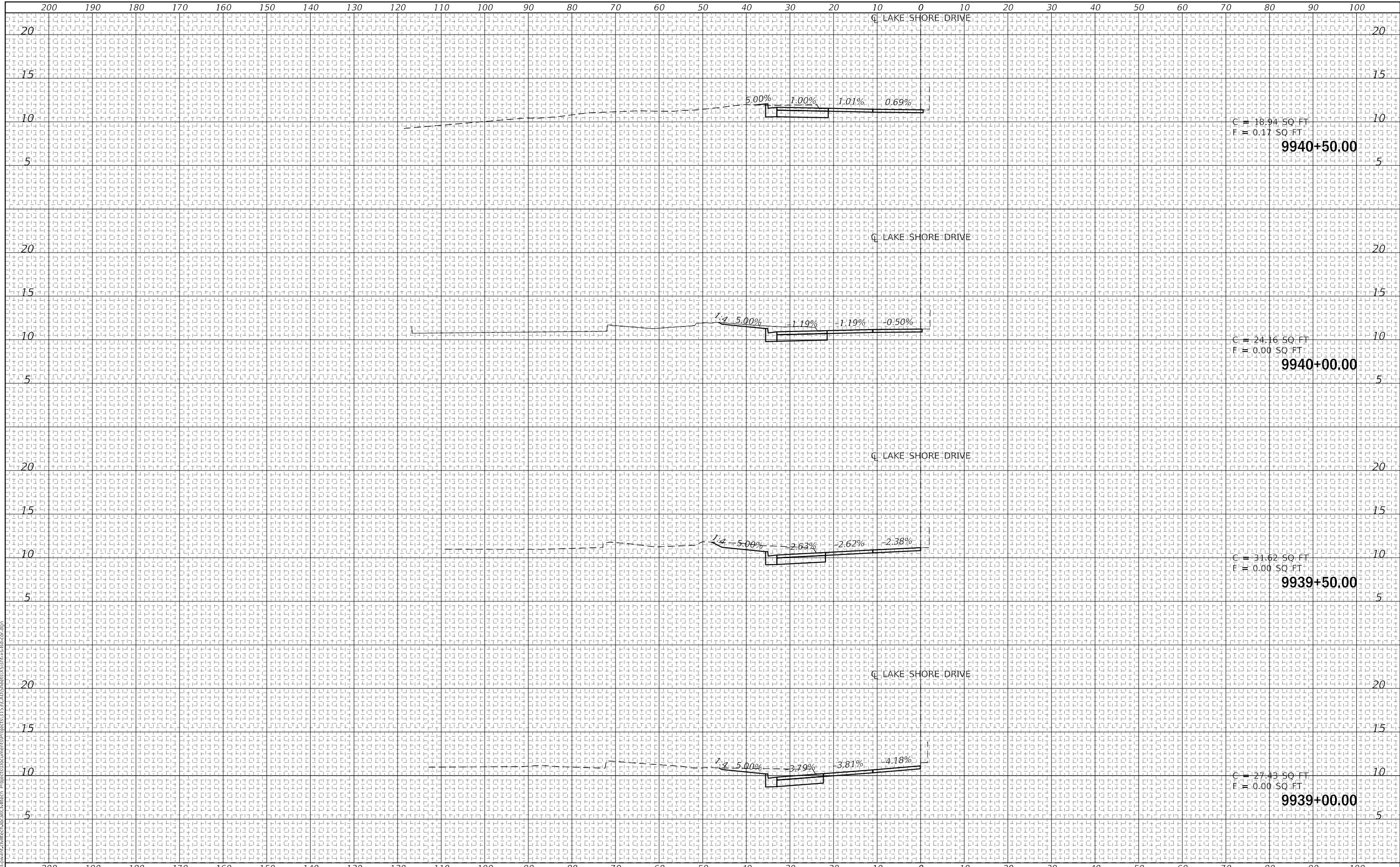
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DRAFT

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	AREAS CHECKED	

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NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	

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CROSS SECTIONS
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JACKSON PARK MOBILITY IMPROVEMENTS

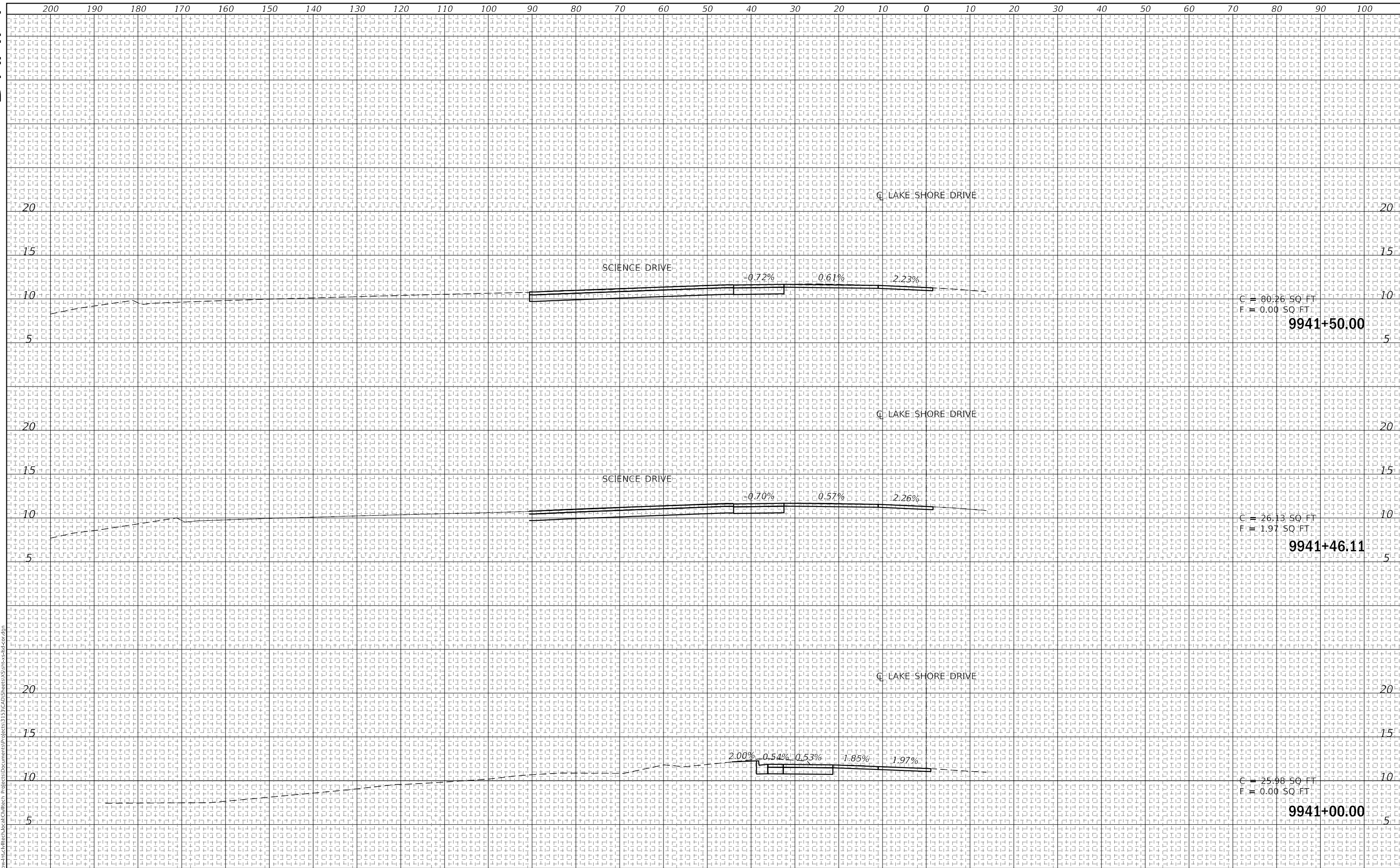
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DRAFT

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ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



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9941+50.00

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9941+46.11

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9941+00.00

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APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019			
REVISIONS				



CROSS SECTIONS
 S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9941+00 TO STA. 9941+50

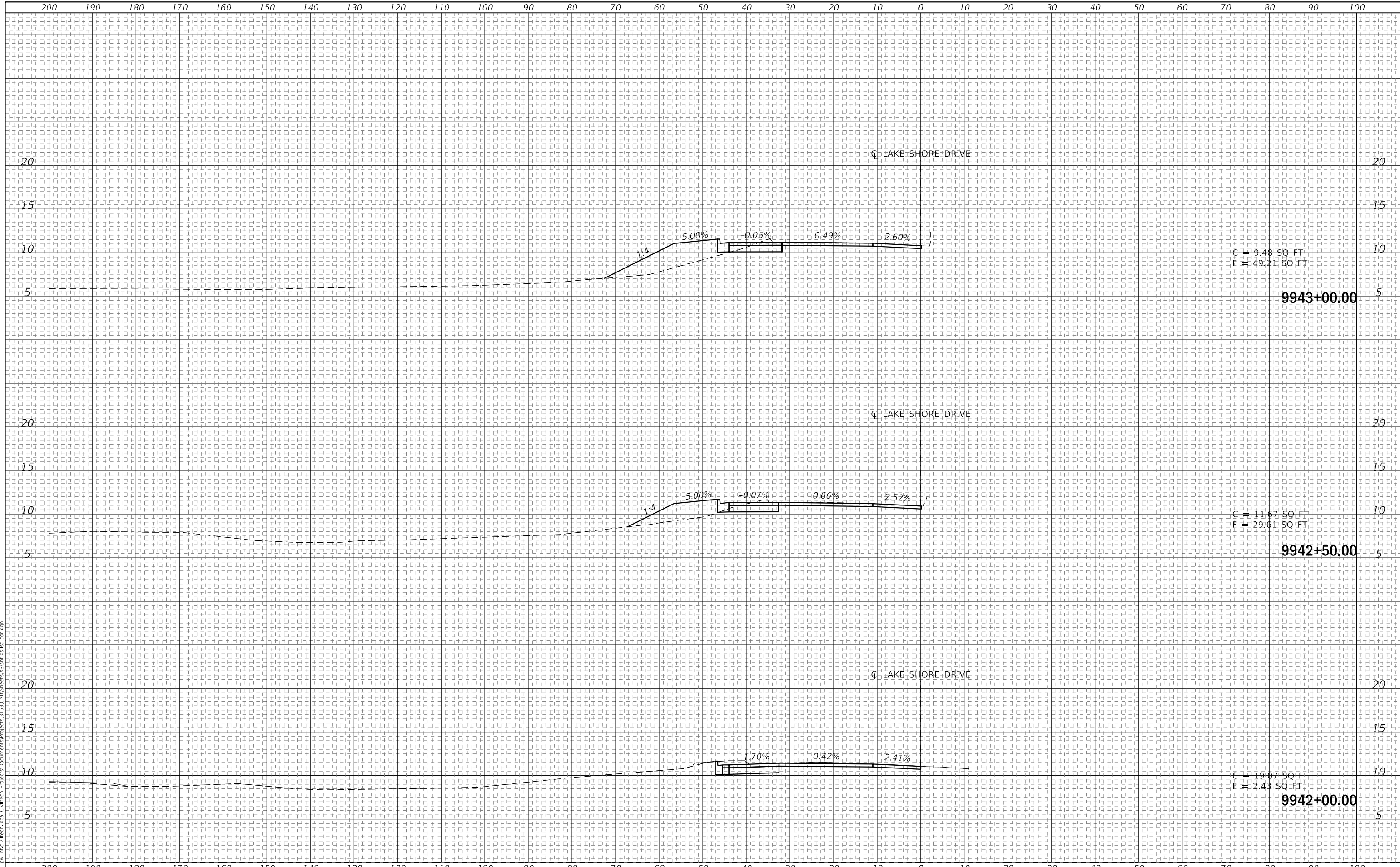
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DRAFT

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AREAS CHECKED	TEMPLATE	
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ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
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DATE:	05/31/2019		

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9942+00 TO STA. 9943+00

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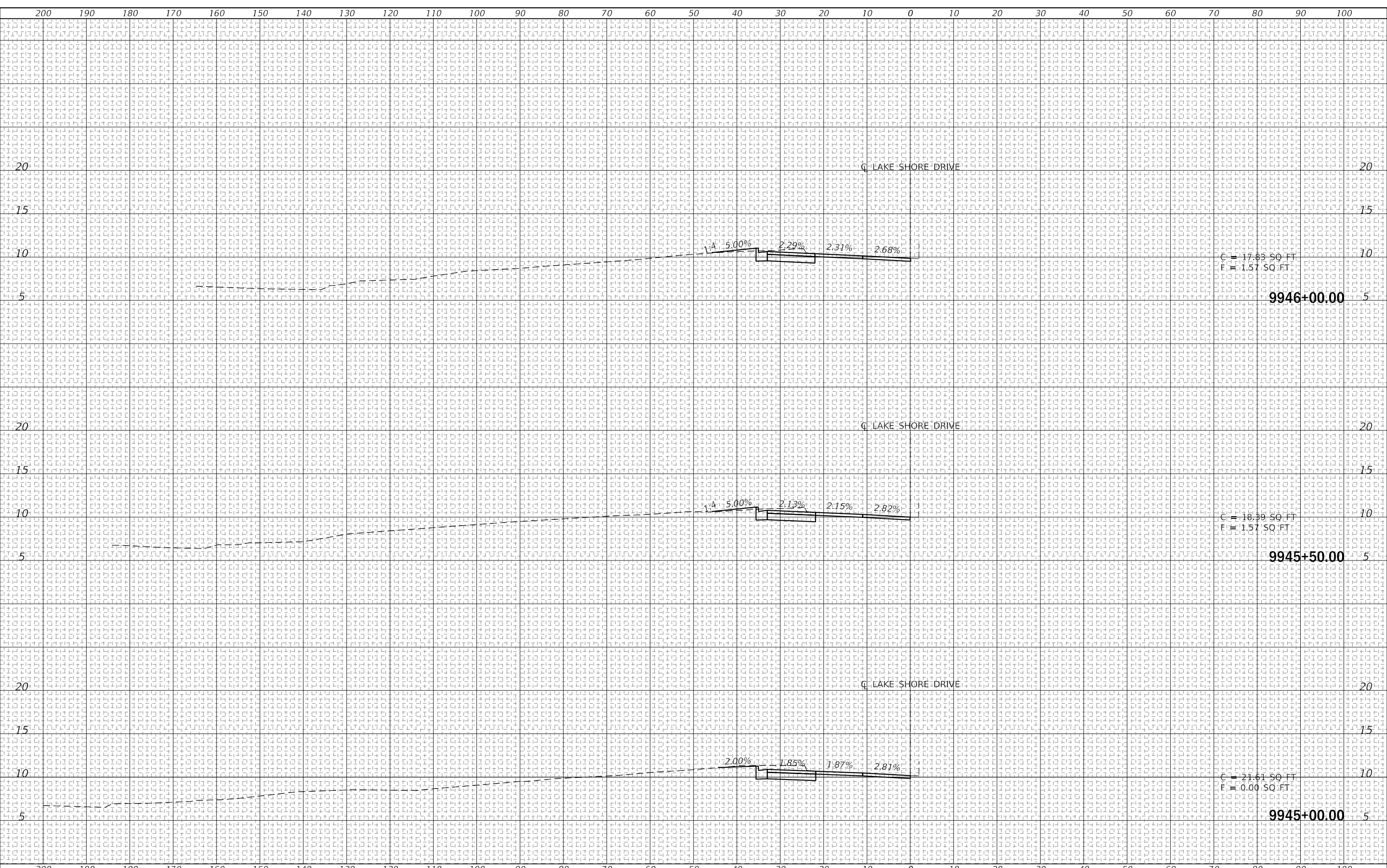
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ORIGINAL SURVEY NO.	SURVEYED PLOTTED	TEMPLATE AREAS CHECKED

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CHECKED: MPK	SREV1
APPROVED:	NO. BY DATE DESCRIPTION
DATE: 05/31/2019	

REVISIONS	



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9945+00 TO STA. 9946+00

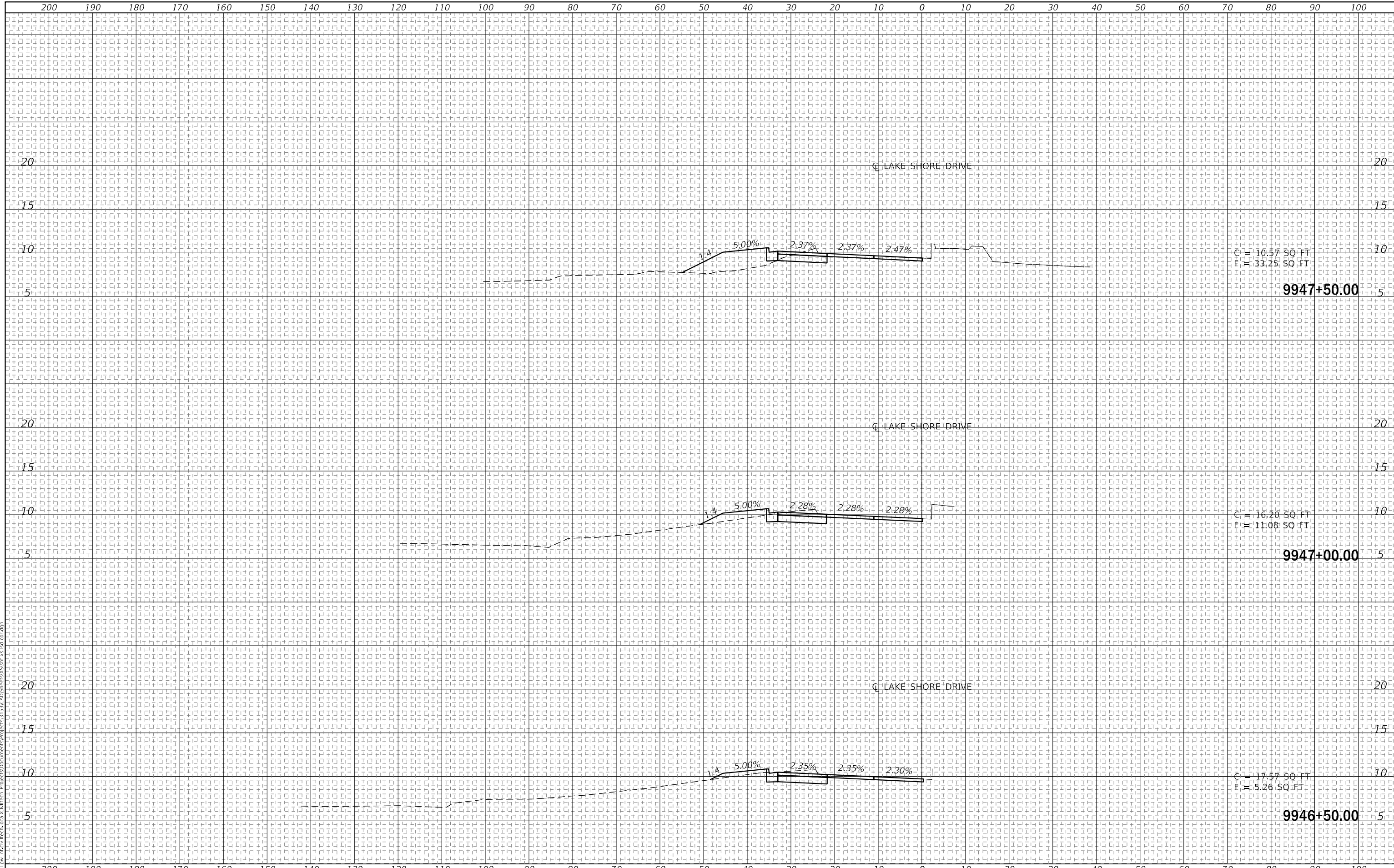
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PROJECT NO.	1142	1135
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DRAFT

BY	DATE

BY	DATE

PLOT DATE: 5/30/2019
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DATE:	05/31/2019		REVISIONS



**CROSS SECTIONS
S. LAKE SHORE DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

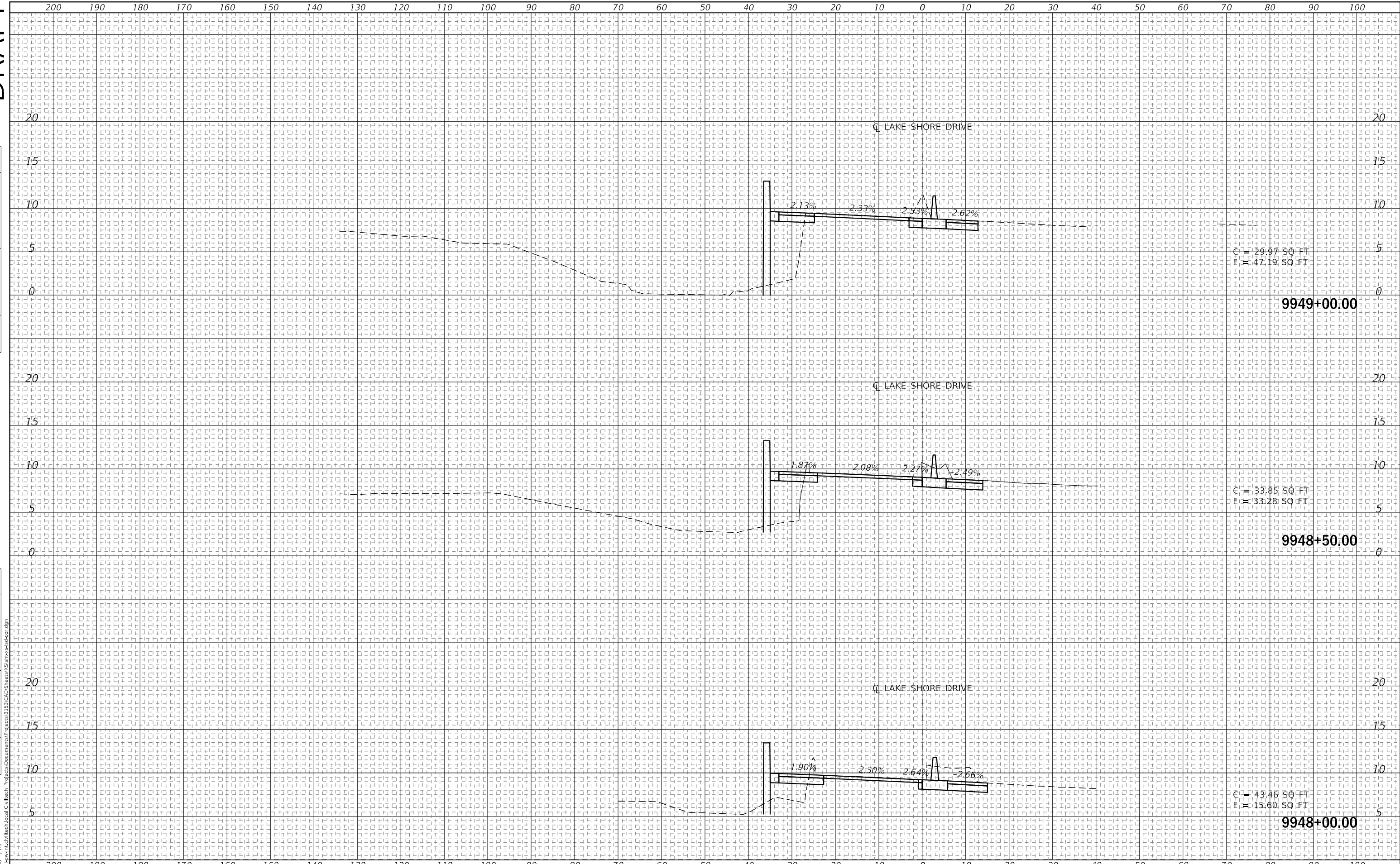
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PROJECT NO.	B-7-203	1142	1136
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DRAFT

BY	DATE

BY	DATE



PLOT DATE: 5/30/2019
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APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE: 05/31/2019				REVISIONS



**CROSS SECTIONS
S. LAKE SHORE DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9948+00 TO STA. 9949+00

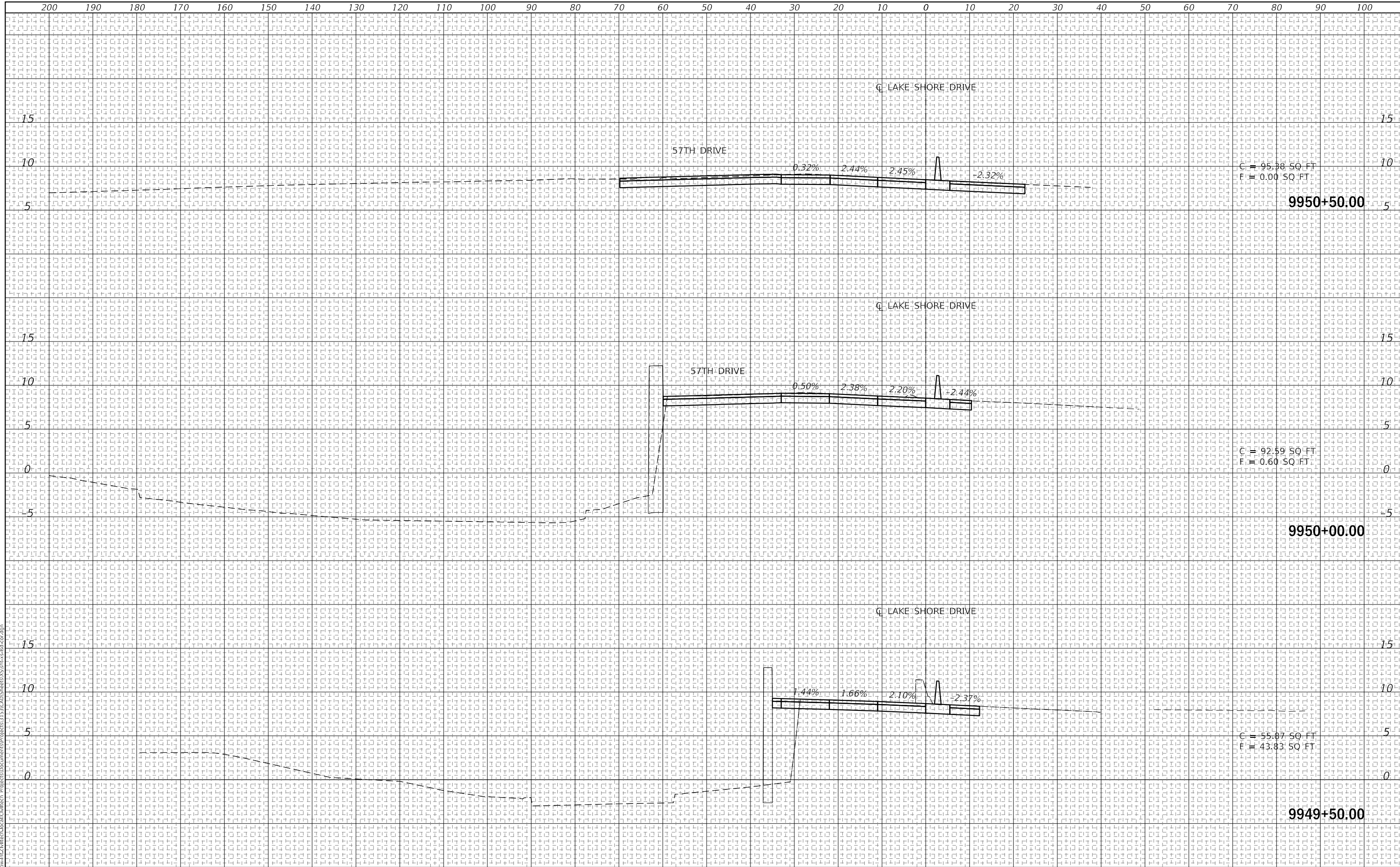
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PROJECT NO. B-7-203	1142	1137
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DRAFT

DATE	
BY	
FINAL SURVEY NO.	
SURVEYED	
PLOTTED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED	
PLOTTED	
NOTE BOOK	
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CROSS SECTIONS
 S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

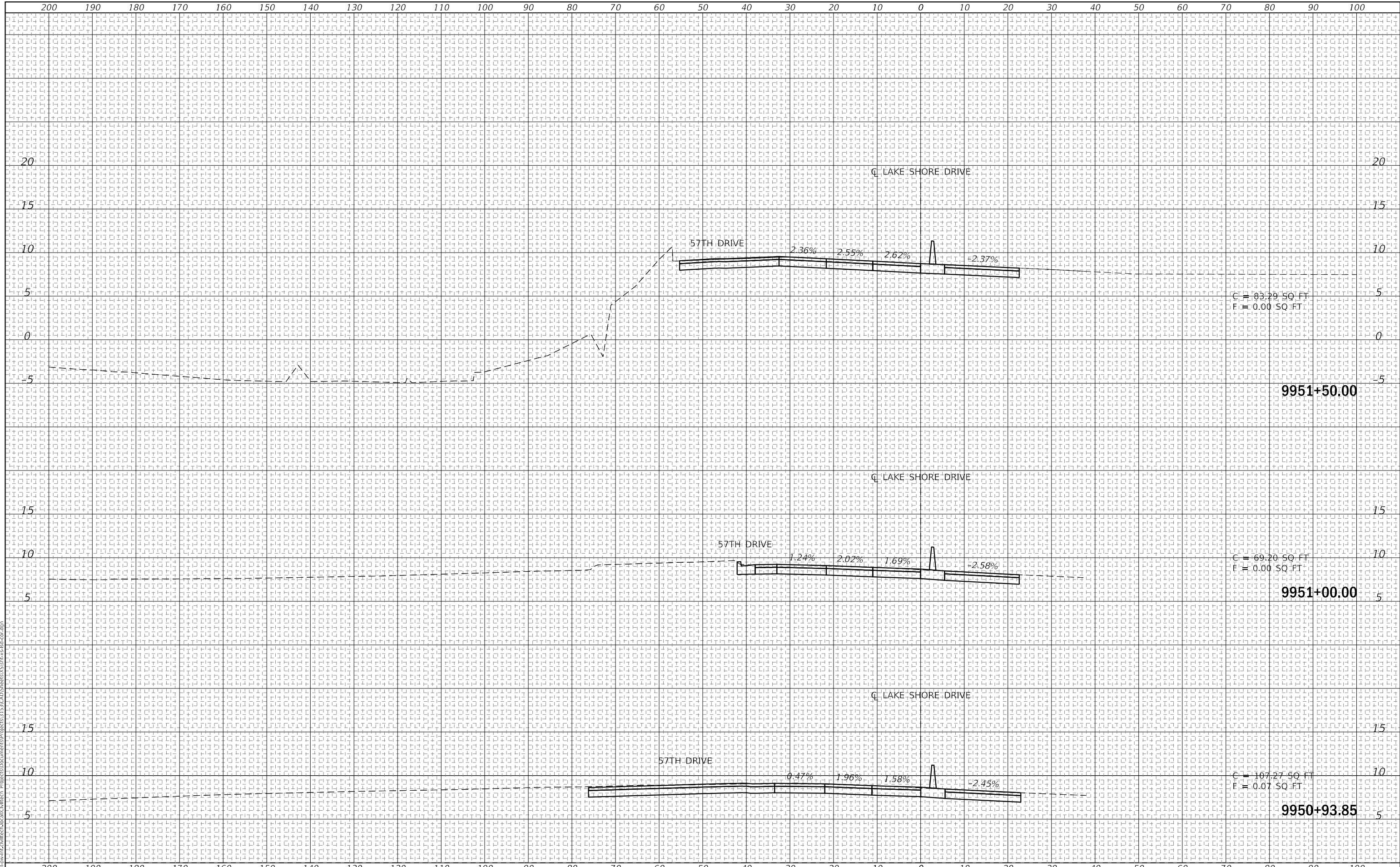
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DATE	
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APPROVED:	NO.	BY
DATE: 05/31/2019		DATE
REVISIONS DESCRIPTION		



**CROSS SECTIONS
S. LAKE SHORE DR.**

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9950+94 TO STA. 9951+50

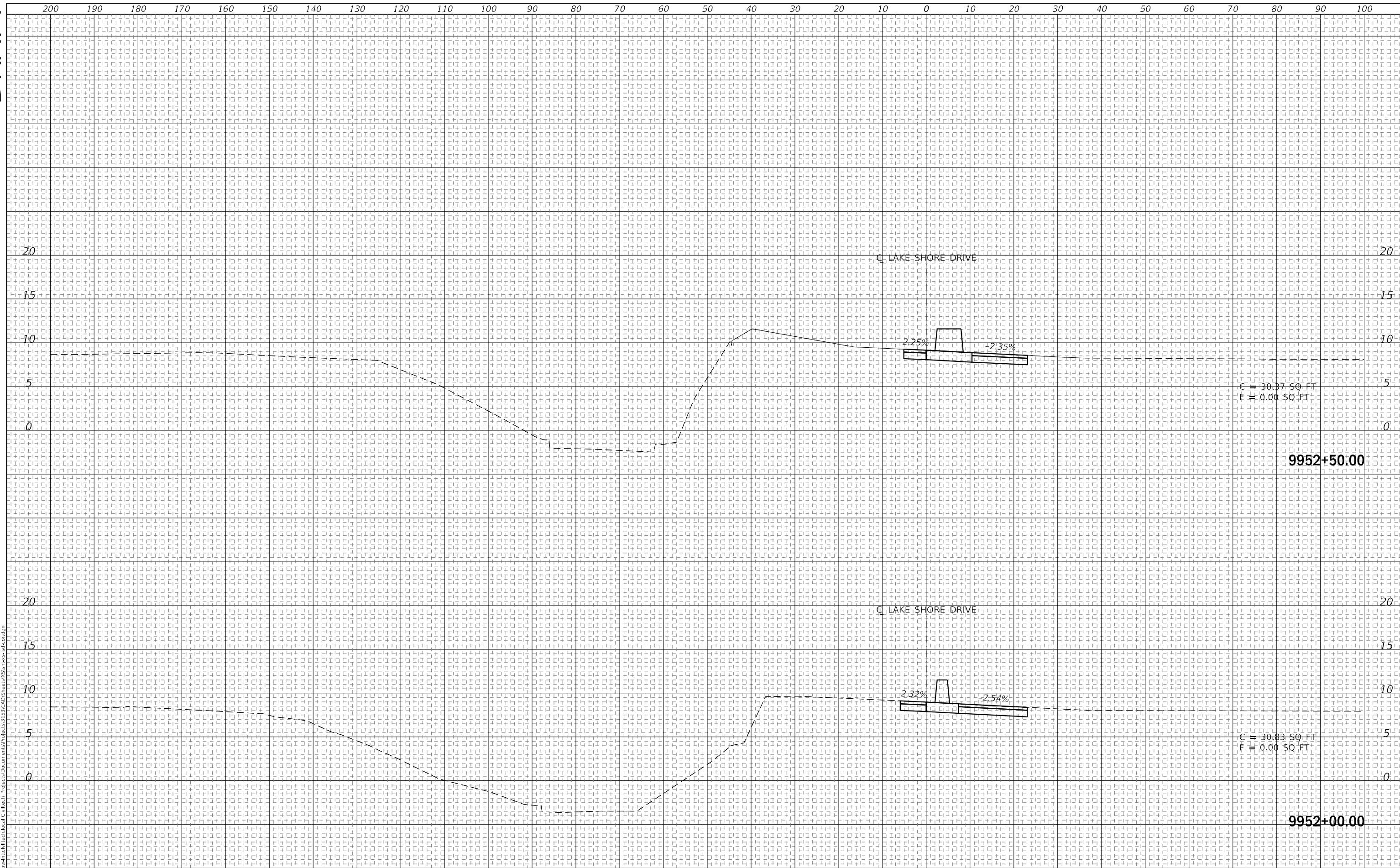
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DRAFT

DATE	
BY	
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SURVEYED PLOTTED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
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NOTE BOOK	
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DATE:	05/31/2019		REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9952+00 TO STA. 9952+50

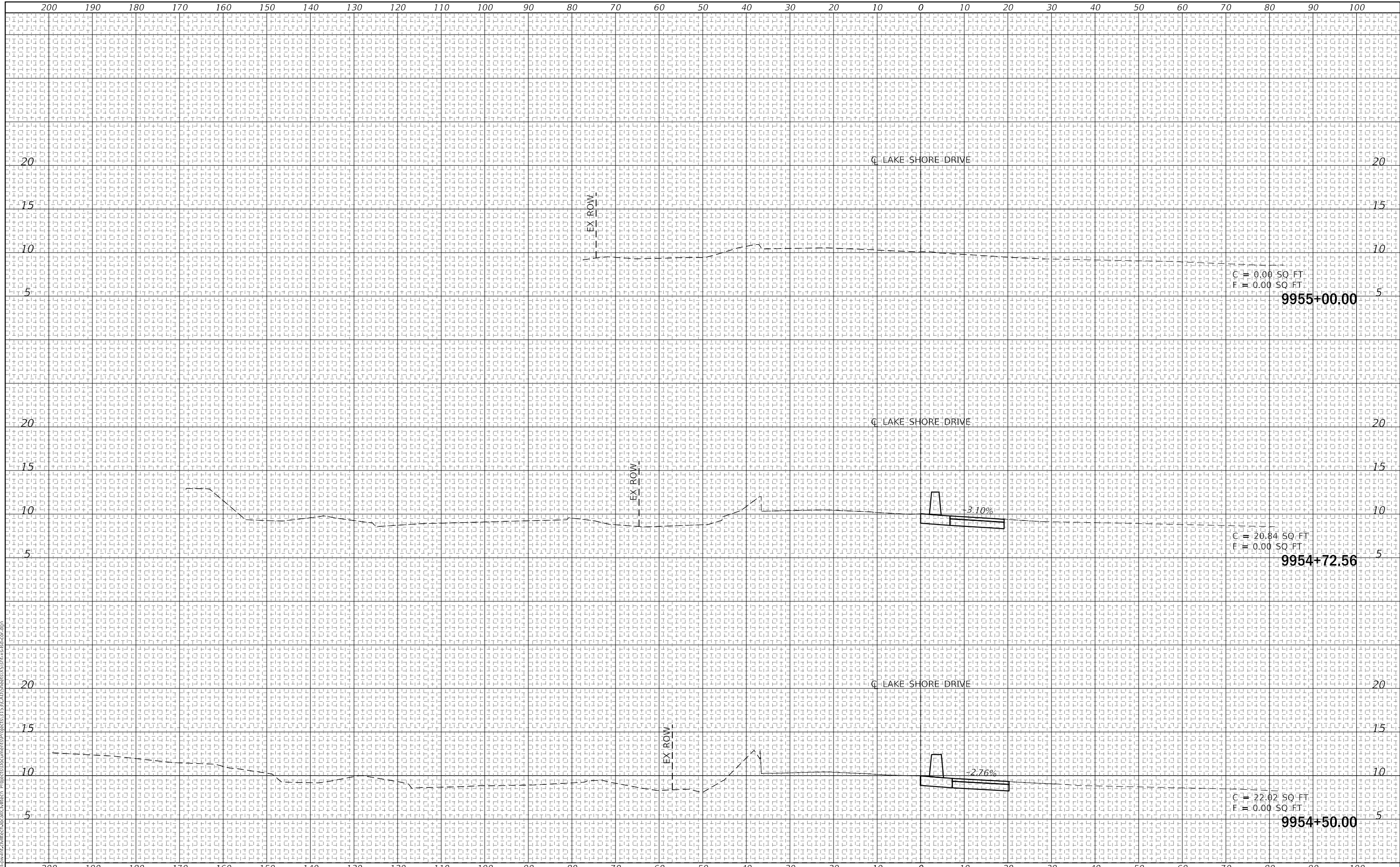
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DRAFT

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NOTE BOOK	TEMPLATE	
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APPROVED:	NO.	BY	DATE	DESCRIPTION
DATE:	05/31/2019			REVISIONS



CROSS SECTIONS
S. LAKE SHORE DR.

JACKSON PARK MOBILITY IMPROVEMENTS

STA. 9954+50 TO STA. 9955+00

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
PROJECT NO. B-7-203	1142	1142
SCALE: AS INDICATED	DRAWING NO.	XS-143

Mobility Improvements to Support the SLFP

Location Drainage Study Appendix C – Correspondence

Table of Contents

1. December 12th, 2017 – Coordination with IDOT Hydraulics
2. June 6th, 2018 – Coordination with Department of Water Management
3. June 19th, 2018 – Coordination with USACE
4. June 26th, 2018 – Coordination with USACE
5. September 5th, 2018 – Coordination with Department of Water Management
6. September 26th, 2018 – Coordination with IDOT Hydraulics and Department of Water Management
7. August 28th, 2018 – Coordination with IDNR
8. November 16th, 2018 – Coordination with USACE
9. November 30th, 2018 – Coordination with CDOT, Chicago Park District, and Department of Water Management.
10. May 1st, 2019 – Coordination with CDOT and Department of Water Management
11. June 10th, 2019 – Coordination with IDNR

Meeting Minutes

Re: OPC Mobility Improvements to Support the SLFP
IDOT Hydraulics Coordination Meeting **Date:** December 12, 2017

Location: IDOT District One – Schaumburg
Programming Conference Room **Time:** 10:00 a.m.

Attending: See attached.

The primary purpose of the meeting was to discuss with the IDOT Hydraulics Section the proposed Obama Presidential Center (OPC) Mobility Improvements and the required drainage submittals. The following is a summary of the meeting discussion:

Project Overview

- The proposed OPC Mobility Improvements are generally located in the City of Chicago between 56th Street and 67th Street and bounded by Stony Island to the west and South Lake Shore Drive to the east. Cornell Drive will be closed, and an additional traffic lane will be added to south bound Lake Shore Drive, and additional lanes will be added to Stony Island Avenue.
- Generally within the project limits Cornell Drive and South Lake Shore Drive are under IDOT jurisdiction. Stony Island is under CDOT jurisdiction, however south of 55th it becomes IDOT jurisdiction.
- The proposed improvements are following the NEPA 404 Merger process. The purpose and need for the project will be presented on January 5, 2018. The project team is currently working on roadway design alternatives.
- The Timeframes Agreement (12/01/2017) targets completion of NEPA on 11/19/2018.

Existing Drainage

- With regards to existing drainage within the project limits there is a large City of Chicago 13-foot diameter combined sewer that flows to the north under Stony Island Avenue. In general most of the roadway storm sewers within the project limits are tributary to this sewer. There is a control structure located on Hayes Drive just east of Stony that acts as a backflow preventer (to prevent combined sewer flows from backing into the storm sewer) as well as a restrictor to limit discharge to the combined sewer to the 1 year flow. Flows that exceed the 1-year design flow will overflow to the existing Lagoons in Jackson Park through a series of weirs within the existing storm sewer system.
- A Location Drainage Study dated September 2000 was completed for the previous South Lake Shore Drive Improvements.

Anticipated Drainage Submittals

- The proposed improvements will require an Existing Drainage Plan (EDP) as well as a Proposed Drainage Plan (PDP). The possibility of doing an Addendum to the South Lake Shore Drive Location Drainage Study (LDS) was discussed, however this was dismissed as this study is older (circa 2000) and was completed in metric units. So a new separate LDS will be completed for the OPC Mobility Improvements.
- The need for a Hydraulic Report for the 59th Street Inlet Structure on South Lake Shore Drive was also discussed. The existing structure will be widened on the west side to accommodate an additional traffic lane. Civiltech will investigate what was include in the previous South Lake Shore Drive LDS for this structure. *Subsequent to the meeting it was determined that there was not a previous Hydraulic Report prepared for the 59th Street Inlet Structure (Structure No. 016-6195). The LDS includes a discussion that the bridge low chord is above the FEMA defined 100-year elevation and there is no history of overtopping. Since there is not a tributary drainage area a hydraulic analysis was not completed.*
- IDOT requested that the EDP document the sources of the information shown (i.e. survey, record plans, etc.)
- Submittals should go through IDOT Local Roads. Civiltech will submit the first draft of the EDP for review in mid-January 2018. IDOT committed to review times on submittals of between 2 weeks and 1 month. In order to meet the overall project schedule the PDP will likely need to be approved by July 2018.

Local Drainage Coordination

- The project will require drainage coordination with Chicago Department of Water Management as well as the Chicago Park District. There are no sewers under MWRD jurisdiction within the project limits.

By: Tom Liliensiek, P.E. (CNECT)

Date: December 23, 2017

Attendance Roster

Project Description: Drainage Coordination Meeting
OPC Mobility Improvements

Date: December 12, 2017

Meeting Location: IDOT District One
Schaumburg, IL
Programming Conference Room

Time: 10:00 a.m.

Attending:

NAME / AFFILIATION	TEL	EMAIL
Ken Smorynski	(312) 960 1260	ksmorynski@ infrastructure-eng.com
Tom Liliensiek	312-564-2492	tliliensiek@civiltechinc.com
John Perkins	312-564-3698	jperkins@civiltechinc.com
James Skvarla	847-705-4680	JAMES.SKVARLA@ILLINOIS.GOV
Mateo Geramirez	847 705 4574	mateo.geramirez@illinois.gov
Peteri Masouridis	847 705 4474	eleftherios.masouridis@illinois.gov
John Sadler (via conference call)		

Meeting Minutes

Re: Mobility Improvements to Support the SLFP
DWM Coordination Meeting

Date: June 8, 2018

Location: Jardine Water Plant

Time: 9:00 a.m.

Attending: See attached.

The primary purpose of the meeting was to discuss with the Department of Water Management the proposed OPC Mobility Improvements, potential impacts to the existing drainage in the corridor, and the proposed drainage design criteria for the project. The following is a summary of the meeting discussion:

Project Overview

- Lake Shore Drive from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east. Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.
- Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction, an all-day onstreet parking or loading zone lane on each side of the road, and a raised median with left-turn channelization at intersections. From 64th Street to 67th Street, Stony Island Avenue would be widened to provide a consistent cross section including three northbound lanes and four southbound lanes separated by a raised median. Intersections on Stony Island Avenue from 59th Street to 67th Street would be reconfigured to accommodate the roadway widening and provide additional turn lanes.
- Parking would be removed on Hayes Drive from Lake Shore Drive to Cornell Drive to provide two lanes in each direction, separated by a barrier median. Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street. The existing triangular, stop-controlled intersection at Hayes Drive and Richards Drive would be reconfigured to create a signalized T-intersection. Hayes Drive would be realigned at Cornell Drive to provide a through movement for predominant travel through the intersection. The existing portion of Hayes Drive between Stony Island Avenue and

Cornell Drive would be realigned to create a T-intersection with the realigned Hayes Drive.

- Roadway Improvements are scheduled to begin in 2019.

Existing Drainage

- Under existing conditions there are areas from Jackson Park that drain directly into the lagoons. Cornell Drive, north of Hayes discharges directly to the West Lagoon via an existing storm sewer. The roadway right of way on South Lake Shore Drive south of 59th Street as well as Hayes Drive discharges to the combined sewer on Stony Island. The system is designed to take the 1-year flow (first flush) with the storm sewer overflow that exceeds the 1-year storm going to the Lagoons. In general the intent of the OPC Mobility Improvements is to maintain the existing drainage patterns as closely as possible.
- The water levels in the East and West Lagoons are generally maintained by a control structure located to the west of the 59th Street inlet. When Lake Michigan is low the weir/control structure maintains the levels in the East and West lagoons.
- Stony Island is drained entirely by combined sewers. There are local sewers that drain the roadway and surrounding areas that ultimately connect to the large 13-foot diameter interceptor sewer that runs down the center of Stony Island. The sewer is DWM jurisdiction (not MWRD).
- Lake Michigan as well as the inner harbors are mapped FEMA floodplains.

Proposed Drainage

- The overall proposed improvements will have a net reduction in impervious area within the project corridor. However there will be increased impervious area on Stony Island that will be directly tributary to existing combined sewers. Proposed catch basins on Stony Island will be the City of Chicago standard for arterial streets.
- The DWM will be concerned with maintaining the existing flow/release rates to the combined sewer on Stony Island. DWM will not require any specific modeling analysis but may incorporate the proposed drainage into their own model.
- Details of the proposed pedestrian underpasses at Hayes and Cornell as well as at Hayes and South Lake Shored Drive are still being developed. The proposed underpasses may require stormwater pump stations.
- Additional drainage coordination with the Park District, USACE, as well as with DWM will be required for the proposed roadway improvements.

Next Steps/Immediate Action Items

- When further developed, CNECT (TKL) to provide DWM with a full sized copy of the project Proposed Drainage Plan.

By: Tom Liliensiek, P.E. (CNECT)

Date: July 31, 2018

Meeting Materials:

1. Agenda
2. Attendance Roster

OPC Mobility Improvements – Coordination Meeting
June 8, 2018, 9:00 AM
JARDINE WATER PLANT

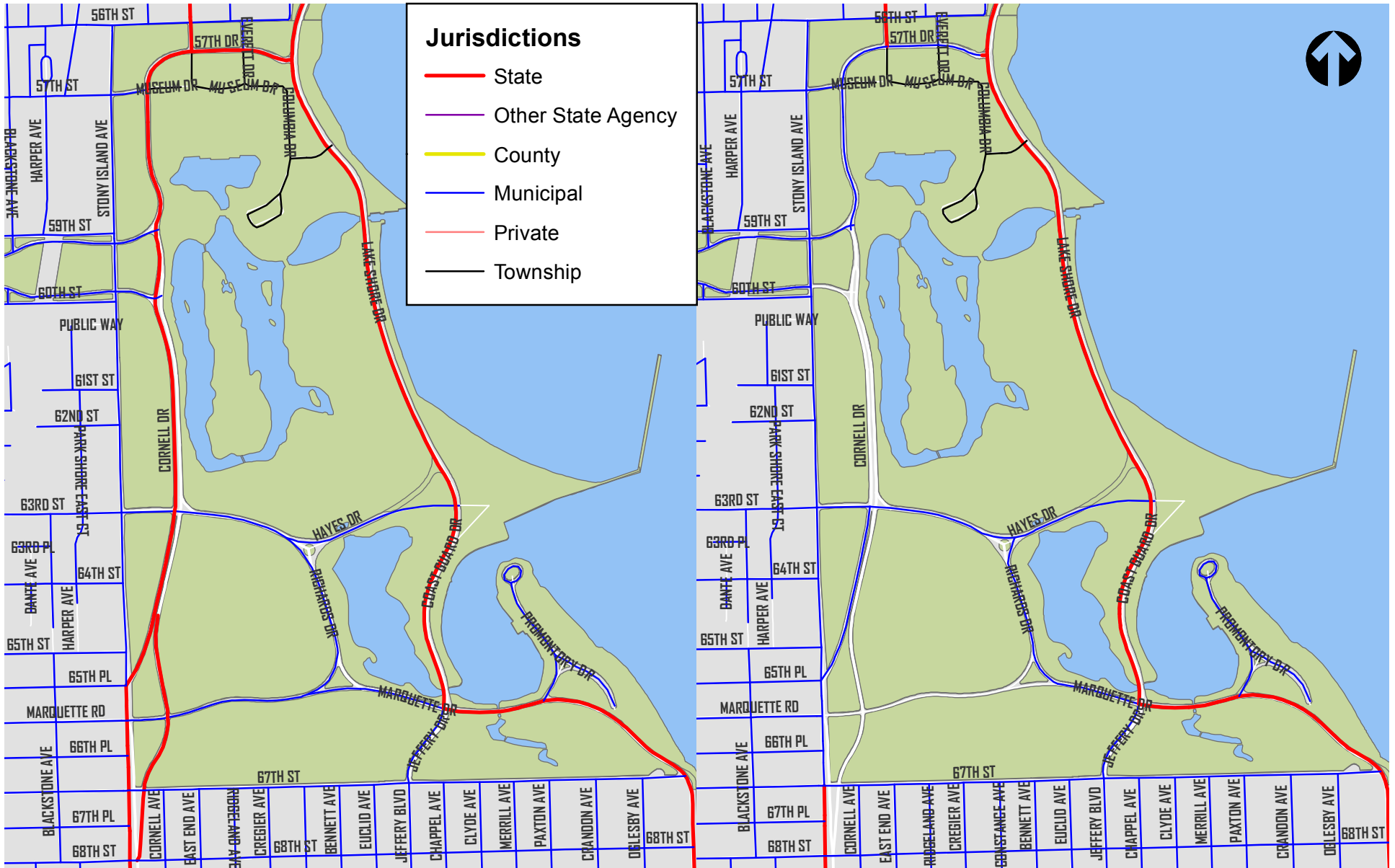
The purpose of the meeting is to discuss with the Department of Water Management the proposed OPC Mobility Improvements, potential impacts to existing drainage in the corridor, and the proposed drainage design criteria for the project.

1. Introductions
2. Project Overview
 - a. Overview of Proposed Improvement
 - b. Jurisdictions within the Project Limits
 - c. Project Status and Schedule
3. Midway and Cornell Vacation and Dedication
4. Existing Drainage
 - a. Existing Major Watershed Divides within the Project Limits
 - b. Major Drainage Features
 - c. Existing Drainage Problems
 - d. South Lake Shore Drive LDS (Study for previous improvements)
 - e. Existing Underpass Drainage
5. Proposed Drainage
 - a. Hayes/Cornell/South Lake Shore Drive Proposed Drainage
 - b. Stony Island Proposed Drainage
 - c. Drainage Design Criteria
 - d. Proposed Underpass Drainage
6. Drainage Coordination
 - a. Chicago Park District
 - b. USACE
7. Open Discussion

Obama Presidential Center Improvements to Support the South Lakefront Framework Plan

Section 17-B7203-00-ES

Proposed Revisions to Roadway Jurisdiction



Existing Jurisdiction

Proposed Jurisdiction

1 in = 0.25 miles

Attendance Roster

Re: OPC Mobility Improvements – Coordination Meeting **Date:** June 8, 2018

Location: Jardine Water Plant **Time:** 9:00 a.m.

Attending:

NAME	AFFILIATION	INITIAL	EMAIL
John Sadler	CDOT	✓	John.Sadler@cityofchicago.org
David Gleason	CDOT	DLG	David.Gleason@cityofchicago.org
Anupam Verma	DWM	✓	Anupam.Verma@cityofchicago.org
Sid Osakaka	DWM	✓	Sid.Osakada@cityofchicago.org
Dhara Patel	DWM		Dhara.Patel@cityofchicago.org
Duane Mahone	IEI	DM	DMahone@infrastructure-eng.com
Ken Smorynski	IEI	KS	KSmorynski@infrastructure-eng.com
Tom Liliensiek	Civiltech	TKL	TLiliensiek@civiltechinc.com
Dhara Patel	CDWM	DP	dhara.patel@cityofchicago.org

Meeting Minutes

Re: Mobility Improvements to Support the SLFP
USACE Coordination Meeting

Date: June 19, 2018

Location: 30 N LaSalle Suite 2624

Time: 10:30 a.m.

Attending: See attached.

The primary purpose of the meeting was to begin coordination with the USACE regarding the required permitting for the proposed OPC Mobility Improvements. The following is a summary of the meeting discussion:

Status of NEPA 404 Merger Process

- The Purpose and Need obtained concurrence in March.
- Alternatives to be carried forward obtained concurrence in May.
- Presenting the Preferred Alternative on Thursday June 21.

Preferred Improvement Plan

- Lake Shore Drive from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east. Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.
- The scope of the inlet bridge widening includes removing existing architectural stone cladding and reinstalling to the new bridge structure on the west face. The abutments will be extended to the west and new wingwalls will be constructed on the west side. The construction includes both temporary and permanent impacts to waters of the US, but the areas are minimal totaling less than 0.04 acres for both.
- Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction, an all-day onstreet parking or loading zone lane on each side of the road, and a raised median with left-turn channelization at intersections. From 64th Street to 67th Street, Stony Island Avenue would be widened to provide a consistent cross section including three northbound lanes and four southbound lanes separated by a raised median. Intersections on Stony Island Avenue from 59th Street to 67th Street would be reconfigured to accommodate the roadway widening and provide additional turn lanes.

- Parking would be removed on Hayes Drive from Lake Shore Drive to Cornell Drive to provide two lanes in each direction, separated by a barrier median. Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street. The existing triangular, stop-controlled intersection at Hayes Drive and Richards Drive would be reconfigured to create a signalized T-intersection. Hayes Drive would be realigned at Cornell Drive to provide a through movement for predominant travel through the intersection. The existing portion of Hayes Drive between Stony Island Avenue and Cornell Drive would be realigned to create a T-intersection with the realigned Hayes Drive.

Section 404 Process

- The widening of the Lake Shore Drive Bridge spanning the 59th Street Inlet will result in permanent fill/impact to Lake Michigan and will therefore require a Section 404/10 Permit from the USACE. This is the only anticipated project impact to USACE jurisdictional wetlands or Waters of the US as a result of the OPC Mobility Improvements. It is anticipated that the bridge construction would be covered under Regional Permit 3 and the cofferdams under Regional Permit 7.
- The USACE has already established an LRC permit number for the proposed OPC Mobility Improvements. This permit/reference number should be used on all future submittals to the USACE.
- The USACE has already discussed internally and the OPC Mobility Improvements will be considered a separate project (for permitting purposes) from the Obama Library development.
- The OPC Mobility Improvements project has completed a Wetland Delineation Report for the entire project corridor. The USACE recommended submitting the report for concurrence (it can be submitted prior to the full permit application). The USACE offered a field meeting in Jackson Park to confirm wetland review. The USACE will likely provide a formal determination of the isolated wetlands in the Midway Plaisance, just west of Stony Island Avenue.
- The NEPA 404 merger process has initiated the Section 7 (i.e. endangered species) consultation. The coordination is ongoing, however IDNR has already indicated that there are no anticipated impacts to state endangered species.
- If the Obama Library site development has no impacts to Wetlands or Waters of the US they could submit the plans and wetland delineation and apply for a Letter of No Objection from the USACE. This process is not mandatory but provides a concurrence from the USACE that a permit is not required.

- The USACE recommended a pre-application meeting for the 404 permit process.

Section 408 Coordination

- The GLFER project consists of restoration and improvements within Jackson Park that were completed and funded by the USACE and the Chicago Park District.
- Because the OPC Mobility Improvements will impact some of the restored GLFER areas within Jackson Park the Section 408 process will be initiated.
- The Section 408 process is a separate track from the 404 process. However the 408 process will need to be approved prior to the issuance of a 404 permit.
- The status of the GLFER project is that everything around the east and west lagoons is completed. In general the areas north of Hayes Drive have also been planted. The areas south of Hayes Drive have had the invasive species removed, but have not been planted yet.
- The direct impacts to the GLFER project as a result of the OPC Mobility Improvements will need to be quantified and mitigated.
- It was suggested recommended to have a separate follow-up meeting with the USACE to specifically discuss the GLFER project and 408 coordination. This meeting could include additional personnel from the USACE specific to the GLFER project (i.e. hydrologist, botanist).

Schedule

- The first construction contracts for the OPC Mobility Improvements are anticipated for the Spring of 2019. Therefore the 404 Permit will be needed in the February/March of 2019 time frame.

Next Steps/Immediate Action Items

- City to forward wetland delineation report to USACE.
- Schedule a follow-up meeting with the USACE to discuss the GLFER Impacts and 408 permit process

By: Tom Liliensiek, P.E. (CNECT)
Date: July 6, 2018

Meeting Materials:

1. Agenda
2. Attendance Roster

OPC Mobility Improvements – USACE Coordination Meeting
June 19, 2018, 10:30 AM
30 North LaSalle Suite 2624

The purpose of the meeting is to discuss with the USACE the proposed OPC Mobility Improvements and potential impacts to the corridor.

1. Introductions
2. Status of NEPA/404 Merger Process
 - Purpose & Need
 - Alternatives to be Carried Forward
 - Preferred Alternative
3. Preferred Improvement Plan
 - Lake Shore Drive
 - Stony Island Avenue
 - Hayes Drive
 - 59th Street Inlet Bridge
4. Section 404 Process
 - Status of the bridge design and review
 - Anticipated impacts
 - Schedule
5. Section 408 Process
 - Anticipated GLFER Impacts
 - Lagoon Outfall
 - Schedule
6. Overall Project Schedule

Attendance Roster

Re: OPC Mobility Improvements – USACE Coordination Meeting

Date: June 19, 2018

Location: Civiltech Engineering – 30 North LaSalle Suite 2624

Time: 10:30 a.m.

Attending:

NAME	AFFILIATION	INITIAL	EMAIL
John Sadler	CDOT	<i>[Handwritten Signature]</i>	John.Sadler@cityofchicago.org
David Gleason	CDOT	<i>[Handwritten Signature]</i>	David.Gleason@cityofchicago.org
Nate Roseberry	CDOT	<i>NR</i>	Nathan.Roseberry@cityofchicago.org
Vasile Jurca	CDOT	<i>VMJ</i>	Vasile.Jurca@cityofchicago.org
Lauren Umek	CPD	<i>[Handwritten Signature]</i>	Lauren.Umek@ChicagoParkDistrict.com
Heather Gleason	CPD	<i>HG</i>	Heather.Gleason@chicagoparkdistrict.com
Nicole Sheehan	CPD	<i>CALL</i>	Nichole.Sheehan@ChicagoParkDistrict.com
Sarah Gelder	CPD	<i>SG</i>	Sarah.Gelder@ChicagoParkDistrict.com
William Raffensperger	IDOT	<i>CALL</i>	William.Raffensperger@illinois.gov
Michael Murphy	USACE	<i>MM</i>	michael.j.murphy@usace.army.mil
Kriston Buczak	USACE	<i>CALL</i>	kirston.a.buczak@usace.army.mil
Duane Mahone	IEI		DMahone@infrastructure-eng.com
Ken Smorynski	IEI	<i>KS</i>	KSmorynski@infrastructure-eng.com
Tom Liliensiek	Civiltech	<i>TKL</i>	TLiliensiek@civiltechinc.com
Mary Young	Civiltech	<i>CALL</i>	MYoung@civiltechinc.com
Tom Kracun	David Mason	<i>[Handwritten Signature]</i>	tkracun@davidmason.com
Chris Brooks	Obama Foundation		cbrooks.consultant@obama.org
Aparna Bapu	Obama Foundation		abapu.consultant@obama.org
Roark Frankel	Obama Foundation		rfrankel@obama.org
<i>ROBERT ROCK</i>	<i>Living Habitats</i>	<i>[Handwritten Signature]</i>	<i>robert.rock@livinghabitats.com</i>
<i>ALAN</i>	<i>DR WILLIAMS</i>	<i>CALL</i>	

Meeting Minutes

Re: Mobility Improvements to Support the SLFP
USACE Coordination Meeting

Date: June 26, 2018

Location: 30 N LaSalle Suite 2624

Time: 10:30 a.m.

Attending: See attached.

The primary purpose of the meeting was to begin coordination with the USACE regarding the Section 408 process due to the impacts to the GLFER project in Jackson Park as a result of the proposed OPC Mobility Improvements. The following is a summary of the meeting discussion:

Preferred Improvement Plan

- Lake Shore Drive from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east. Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.
- Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction, an all-day onstreet parking or loading zone lane on each side of the road, and a raised median with left-turn channelization at intersections. From 64th Street to 67th Street, Stony Island Avenue would be widened to provide a consistent cross section including three northbound lanes and four southbound lanes separated by a raised median. Intersections on Stony Island Avenue from 59th Street to 67th Street would be reconfigured to accommodate the roadway widening and provide additional turn lanes.
- Parking would be removed on Hayes Drive from Lake Shore Drive to Cornell Drive to provide two lanes in each direction, separated by a barrier median. Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street. The existing triangular, stop-controlled intersection at Hayes Drive and Richards Drive would be reconfigured to create a signalized T-intersection. Hayes Drive would be realigned at Cornell Drive to provide a through movement for predominant travel through the intersection. The existing portion of Hayes Drive between Stony Island Avenue and

Cornell Drive would be realigned to create a T-intersection with the realigned Hayes Drive.

Section 408 Coordination

- The GLFER project consists of restoration and improvements within Jackson Park that were completed and funded by the USACE and the Chicago Park District.
- Because the OPC Mobility Improvements will impact some of the restored GLFER areas within Jackson Park the Section 408 process will be required.
- The Section 408 process is a separate track from the 404 permit process. However the 408 process will need to be approved prior to the issuance of a 404 permit.
- The current status of the GLFER project is that the proposed improvements surrounding the East and West Lagoons are complete. In general the areas north of Hayes Drive have also been planted, along with the removal of invasive species. The areas south of Hayes Drive have had the invasive species removed, but have not been planted yet.
- The direct impacts to the GLFER project as a result of the OPC Mobility Improvements will need to be quantified and mitigated. It is preferred to mitigate the impacted areas within Jackson Park as close by as possible. The USACE stated that direct impacts may be mitigated through planting of the areas south of Hayes that were part of the original GLFER project but never planted. The Park District stated that they would consider recent updates to the South Lakefront Framework Plan in assessing potential mitigation areas.
- The GLFER project did not complete a detailed hydrologic/hydraulic analysis of the water levels in the lagoons. The water levels in the East and West Lagoons are generally maintained by a control structure located to the west of the 59th Street inlet. When Lake Michigan is low the weir/control structure maintains the levels in the East and West lagoons.
- Under existing conditions there are areas from Jackson Park that drain directly into the lagoons. Cornell Drive, north of Hayes discharges directly to the West Lagoon via an existing storm sewer. The roadway right of way on South Lake Shore Drive south of 59th Street as well as Hayes Drive discharges to the combined sewer on Stoney Island. The system is designed to take the 1-year flow (first flush) with the storm sewer overflow that exceeds the 1-year storm going to the Lagoons. In general the intent of the OPC Mobility Improvements is to maintain the existing drainage patterns as closely as possible.
- The USACE will be concerned with quality of flow/runoff entering the lagoons. If additional flow or volume is proposed the USACE will be concerned if the plants can

tolerate the increase or will be impacted and this could be considered an indirect impact to the GLFER project.

- As part of the 408 approval process a public notice is not required and the submittals will be reviewed at the District level. There is no formal 408 permit application or permit issued.
- The mitigated areas will require a Maintenance and Monitoring Plan. The maintenance and monitoring will likely be required for 5 years.
- The Chicago Park District will act as applicant for all Section 408 coordination with the USACE (including both CDOT and OPC work).

Schedule

- Based on previous coordination, the Section 408 coordination will likely require two months between the Chicago Park District and USACE. The Section 408 coordination will need to conclude prior to the Section 404 permit, which is needed in the February/March of 2019 time frame.

Next Steps/Immediate Action Items

- The USACE can provide the project specifications and quantity of plants that have been put in place.
- CONNECT (TKL) to complete an initial estimate of the GLFER impact areas as a result of the OPC Mobility Improvements.
- CONNECT (TKL) to complete a memorandum that describes and documents the hydrologic and hydraulic impacts to Jackson Park as a result of the OPC Mobility Improvements.

By: Tom Liliensiek, P.E. (CNECT)

Date: July 6, 2018

Meeting Materials:

1. Agenda
2. Attendance Roster

OPC Mobility Improvements – USACE Coordination Meeting
June 26, 2018, 10:30 AM
30 North LaSalle Suite 2624

The purpose of the meeting is to discuss with the USACE the proposed OPC Mobility Improvements and potential impacts within the corridor to the GLFER project.

1. Introductions
2. GLFER Project
 - History
 - Project Status
3. Roadway Preferred Improvement Plan
 - Lake Shore Drive
 - Stony Island Avenue
 - Hayes Drive
 - 59th Street Inlet Bridge
 - OPC Site Plan
4. Anticipated GLFER Impacts
 - Adjacent to OPC
 - Roadway Improvements
5. Section 408 Application Process
6. Mitigation
7. Next Steps

Attendance Roster

Re: OPC Mobility Improvements – USACE Coordination Meeting

Date: June 26, 2018

Location: Civiltech Engineering – 30 North LaSalle Suite 2624

Time: 10:30 a.m.

Attending:

NAME	AFFILIATION	INITIAL	EMAIL
John Sadler	CDOT	<i>[Handwritten Initial]</i>	John.Sadler@cityofchicago.org
David Gleason	CDOT	<i>[Handwritten Initial]</i>	David.Gleason@cityofchicago.org
Nate Roseberry	CDOT	<i>[Handwritten Initial]</i>	Nathan.Roseberry@cityofchicago.org
Vasile Jurca	CDOT	<i>[Handwritten Initial]</i>	Vasile.Jurca@cityofchicago.org
Lauren Umek	CPD	<i>[Handwritten Initial]</i>	Lauren.Umek@ChicagoParkDistrict.com
Heather Gleason	CPD	<i>[Handwritten Initial]</i>	Heather.Gleason@chicagoparkdistrict.com
Nicole Sheehan	CPD	<i>[Handwritten Initial]</i>	Nichole.Sheehan@ChicagoParkDistrict.com
Sarah Gelder	CPD	<i>[Handwritten Initial]</i>	Sarah.Gelder@ChicagoParkDistrict.com
William Raffensperger	IDOT	<i>[Handwritten Initial]</i>	William.Raffensperger@illinois.gov
Michael Murphy	USACE		michael.j.murphy@usace.army.mil
Kriston Buczak	USACE	<i>[Handwritten Initial]</i>	kirston.a.buczak@usace.army.mil
Duane Mahone	IEI		DMahone@infrastructure-eng.com
Ken Smorynski	IEI	<i>[Handwritten Initial]</i>	KSmorynski@infrastructure-eng.com
Tom Liliensiek	Civiltech	<i>[Handwritten Initial]</i>	TLiliensiek@civiltechinc.com
Mary Young	Civiltech	<i>[Handwritten Initial]</i>	MYoung@civiltechinc.com
Tom Kracun	David Mason	<i>[Handwritten Initial]</i>	tkracun@davidmason.com
Chris Brooks	Obama Foundation		cbrooks.consultant@obama.org
Aparna Bapu	Obama Foundation		abapu.consultant@obama.org
Roark Frankel	Obama Foundation		rfrankel@obama.org
<i>ROBERT BUCK</i>	<i>LIVING HABITATS</i>	<i>[Handwritten Initial]</i>	<i>robertbuck@livinghabitats.com</i>
<i>Robbie Skumski</i>	<i>WACE</i>	<i>[Handwritten Initial]</i>	

Jenn Hyman
Aaron Peales
Page 1 of 1

Civiltech conf
OPC consultant conf

Meeting Minutes

Re: Mobility Improvements to Support the SLFP
DWM Coordination Meeting

Date: Sept. 5, 2018

Location: Jardine Water Plant

Time: 10:30 a.m.

Attending: See attached.

The primary purpose of the meeting was to discuss with the Department of Water Management (DWM) the proposed OPC Mobility Improvements, as well as the Vacation Dedication Exhibits and Proposed Drainage Plan provided for DWM review on 8/21/2018. The following is a summary of the meeting discussion:

Project Overview

- Lake Shore Drive from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east. Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.
- Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction, an all-day on-street parking or loading zone lane on each side of the road, and a raised median with left-turn channelization at intersections. From 64th Street to 67th Street, Stony Island Avenue would be widened to provide a consistent cross section including three northbound lanes and four southbound lanes separated by a raised median. Intersections on Stony Island Avenue from 59th Street to 67th Street would be reconfigured to accommodate the roadway widening and provide additional turn lanes.
- Parking would be removed on Hayes Drive from Lake Shore Drive to Cornell Drive to provide two lanes in each direction, separated by a barrier median. Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street. The existing triangular, stop-controlled intersection at Hayes Drive and Richards Drive would be reconfigured to create a signalized T-intersection. Hayes Drive would be realigned at Cornell Drive to provide a through movement for predominant travel through the intersection. The existing portion of Hayes Drive between Stony Island Avenue and

Cornell Drive would be realigned to create a T-intersection with the realigned Hayes Drive.

- Roadway Improvements are scheduled to begin in 2019.

Hayes Drive and South Lake Shore Drive – Vacation and Dedications

- DWM inquired if the existing 36-inch storm sewer near the existing intersection of Cornell and Hayes could be relocated under the proposed roadway pavement. The proposed pedestrian underpasses prohibit the relocation of the storm sewer. DWM prefers that the sewers be located within the roadway footprint (i.e. the roadway right of way under CDOT jurisdiction). There is a proposed 'utility corridor' that will be located within a permanent easement.
- DWM expressed concern that DWM sewers within Jackson Park, outside the roadway right of way, would be difficult access and to coordinate/locate in OUC. CDOT proposed memorializing the proposed easements on the Park District Atlases to ensure future coordination.
- DWM requested a 33-foot easement on each side of a sewer (66-feet overall) as a starting point, since this is a typical right of way.
- The proposed easements will require future coordination with the Park District to establish final limits that will be memorialized in an agreement. The easements will also need to be coordinated with the Park Districts South Lake Framework Plan.

Proposed Drainage

- DWM provided their marked comments on the full size Proposed Drainage Plan. A few of the general comments were to show the proposed Hydraulic Grade Line elevations on the profile, add sheet numbers on the key map, and to clarify the drainage areas in the legend.
- DWM noted that the existing mainline 12-inch sewers on the west side of Stony Island may require lining (the existing clay sewer dates to 1894). DWM requested that these existing sewers be televised and agreed to TV with DWM forces utilizing CDOT funding. DWM would clean the sewers prior to televising.
- The DWM capacity map shows several issues to the west of Stony Island. DWM requested to verify that the existing overflows to the interceptor sewer exist. They may request that additional overflows be included in the proposed sewer design.

- The DWM is concerned with maintaining the existing flow/release rates to the combined sewer on Stony Island. CNECT is currently developing a SWMM hydrologic/hydraulic model to simulate the existing and proposed conditions.
- Details of the proposed pedestrian underpasses at Hayes and Cornell as well as at Hayes and South Lake Shore Drive are still being developed. The proposed underpasses will likely require stormwater pump stations. Details for the pump stations will be provided when available.
- Additional drainage coordination with the Park District, USACE, as well as with DWM will be required for the proposed roadway improvements.
- CDOT confirmed it would fund build-out of impacted facilities related to roadway improvements.

Next Steps/Immediate Action Items

- CNECT (TKL) to scan and provide a PDF copy of the Proposed Drainage Plan with DWM marked comments.
- DWM to provide a written summary of their comments on the Vacation/Dedication Exhibits as well as the Proposed Drainage Plan.
- A follow-up meeting with IDOT is scheduled for September 26 at DWM. CNECT (TKL) to provide updated Proposed Drainage Plan after the meeting.

By: Tom Liliensiek, P.E. (CNECT)

Date: October 1, 2018

Meeting Materials:

1. Agenda
2. Attendance Roster

OPC Mobility Improvements – Coordination Meeting
September 5, 2018, 10:30 AM
JARDINE WATER PLANT

The purpose of the meeting is to discuss with the Department of Water Management the proposed OPC Mobility Improvements, Vacations and Dedications, potential impacts to existing drainage in the corridor, and the proposed drainage design for the project.

1. Introductions
2. Project Update
 - a. Brief Overview of Proposed Improvement
 - b. Project Status and Schedule
3. Hayes Drive and South Lake Shore Drive - Vacation and Dedications
4. Existing Drainage
 - a. Existing Drainage Problems
 - b. Existing Underpass Drainage
5. Proposed Drainage Plan
 - a. Hayes/Cornell/South Lake Shore Drive Proposed Drainage
 - b. Stony Island Proposed Drainage
 - c. Drainage Design Criteria
 - d. Proposed Underpass Drainage
6. On Going Drainage Coordination
 - a. IDOT (DWM Coordination meeting on 9/26)
 - b. Chicago Park District
 - c. USACE
7. Open Discussion

Attendance Roster

Re: OPC Mobility Improvements – Coordination Meeting Date: September 5, 2018

Location: Jardine Water Plant

Time: 10:30 a.m.

Attending:

NAME	AFFILIATION	INITIAL	EMAIL
John Sadler	CDOT	<i>[Signature]</i>	John.Sadler@cityofchicago.org
Nathan Roseberry	CDOT	<i>[Signature]</i>	Nathan.Roseberry@cityofchicago.org
David Gleason	CDOT	<i>[Signature]</i>	David.Gleason@cityofchicago.org
Anupam Verma	DWM	<i>[Signature]</i>	Anupam.Verma@cityofchicago.org
Sid Osakaka	DWM	<i>[Signature]</i>	Sid.Osakada@cityofchicago.org
Dhara Patel	DWM	<i>[Signature]</i>	Dhara.Patel@cityofchicago.org
Duane Mahone	IEI	<i>[Signature]</i>	DMahone@infrastructure-eng.com
Ken Smorynski	IEI	<i>[Signature]</i>	KSmorynski@infrastructure-eng.com
Tom Liliensiek	Civiltech	TKL	TLiliensiek@civiltechinc.com
Bulent Ager	DWM	AA	bulent.ager@cityofchicago.org
Joeluke Chirayil	DWM	JL	joeluke.chirayil@cityofchicago.org
SCOTT WARDINGER	DWM	SW	SCOTT.WARDINGER@CITYOFCHICAGO.ORG

Meeting Minutes

Re: Mobility Improvements to Support the SLFP
DWM/IDOT Drainage Coordination Meeting

Date: Sept 26, 2018

Location: Jardine Water Plant

Time: 1:00 p.m.

Attending: See attached.

The primary purpose of the meeting was to discuss with the Department of Water Management (DWM) and IDOT Hydraulics the proposed OPC Mobility Improvements, review comments from both agencies, potential impacts to existing drainage in the corridor and the proposed drainage design for the project. The following is a summary of the meeting discussion:

Project Overview

- Lake Shore Drive from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east. Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.
- Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction, an all-day on-street parking or loading zone lane on each side of the road, and a raised median with left-turn channelization at intersections. From 64th Street to 67th Street, Stony Island Avenue would be widened to provide a consistent cross section including three northbound lanes and four southbound lanes separated by a raised median. Intersections on Stony Island Avenue from 59th Street to 67th Street would be reconfigured to accommodate the roadway widening and provide additional turn lanes.
- Parking would be removed on Hayes Drive from Lake Shore Drive to Cornell Drive to provide two lanes in each direction, separated by a barrier median. Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street. The existing triangular, stop-controlled intersection at Hayes Drive and Richards Drive would be reconfigured to create a signalized T-intersection. Hayes Drive would be realigned at Cornell Drive to provide a through movement for predominant travel through the intersection. The existing portion of Hayes Drive between Stony Island Avenue and

Cornell Drive would be realigned to create a T-intersection with the realigned Hayes Drive.

- It is anticipated that the Jurisdictional Transfer will be effective March/April of 2019. Roadway Improvements are scheduled to begin in 2019.

Hayes Drive, Cornell, and South Lake Shore Drive – Proposed Drainage

- CNECT has completed a preliminary SWMM model hydrologic and hydraulic analysis of the existing and proposed mainline storm sewer that extends from South Lake Shore Drive, west on Hayes and discharges to the interceptor combined sewer on Stony Island. The original design limited the discharge to the combined sewer on Stony Island to the one-year 'first flush' flow with the remainder going over weir control structures to the adjacent lagoons and harbors. CNECT noted that the SWMM model has produced different results as compared to the original HYDRA analysis that was included in the circa 2000 South Lake Shore Drive Location Drainage Study.
- The proposed pedestrian underpass at Hayes Drive, near the intersection of South Lake Shore Drive will require a stormwater pump station. The existing storm sewer that drains a section of South Lake Shore Drive to the east of the underpass is proposed to be routed around the underpass.
- On the Hayes mainline storm sewer, a new restrictor and overflow is proposed upstream of the proposed pedestrian underpass at Hayes and Cornell. The new restrictor location will lower the hydraulic grade line just downstream in the area of the pedestrian underpass.
- In general it is the preference of DWM to maintain the existing release rate to the interceptor sewer on Stony Island.

Stony Island - Proposed Drainage

- CNECT noted that the proposed gutter flow line on the east side of Stony will be located where the proposed bus drop-off lane meets the mainline pavement. DWM noted that the catch basins in the depressed gutter should still use the standard city round open lid, but that these structures would not have restrictors. The catch basins on the west side of Stony will have the standard restrictors. Additional stormwater detention as a result of the widened pavement on Stony Island is not required.

Cornell South of Hayes - Proposed Drainage

- Under existing conditions the roadway section of Cornell south of Hayes is under IDOT jurisdiction. The existing drainage for Cornell includes a storm sewer that drains the roadway to the north, crosses Hayes, and discharges into the West Lagoon. Under proposed conditions this section of Cornell will be jurisdictionally transferred to the City.
- The proposed storm sewer for this section of Cornell will be routed around the pedestrian underpass at Hayes and Cornell and will remain tributary to the West Lagoon (not tributary to the storm sewer that flows to the combined sewer on Stony Island). DWM inquired if there were any possible ways to treat the water prior to discharging to the Lagoon.
- There was a discussion regarding MS4 reporting. The IEPA MS4 is a general permit that covers stormwater outfalls. It was noted that although the upstream storm sewer will be revised, the existing outfall to the West Lagoon will remain unchanged. There are no new stormwater outfalls as a result of the proposed improvements.

South Lake Shore Drive – North of 59th Street Inlet Bridge - Proposed Drainage

- North of 59th Street, South Lake Shore Drive drains north, around an existing pedestrian underpass at 57th Street and discharge to an existing combined sewer on 56th Street. There is an existing restrictor and backflow preventer just upstream of the connection to the 56th Street combined sewer. In the proposed condition there will be an additional lane in the south bound direction between 57th and 59th that will be tributary to this outlet. CNECT is preparing a SWMM model hydrologic/hydraulic analysis to compare the existing and proposed conditions. The model analysis will document if there is a change in the proposed release rate to the combined sewer. The current design leaves the existing storm sewer and restrictor in place, with new catch basins to accommodate the widened pavement.
- In approximately 2004, shortly after the previously South Lake Shore Drive improvements were completed there was a flooding issue related to the storm sewer overflow just east of South Lake Shore Drive at the 57th Street Pedestrian underpass. Apparently the overflow storm sewers had been covered up by lake/beach sand.

Proposed Drainage Coordination

- Additional drainage coordination with the Park District, USACE, as well as with DWM will be required for the proposed roadway improvements.

Next Steps/Immediate Action Items

- CNECT (TKL) to provide updated Proposed Drainage Plan with a disposition of IDOT and DWM comments.
- DWM to provide tailwater elevations for the Stony Island interceptor for reference in hydraulic analysis of existing and proposed sewers.

By: Tom Liliensiek, P.E. (CNECT)

Date: October 5, 2018

Meeting Materials:

1. Agenda
2. Attendance Roster

OPC Mobility Improvements – Coordination Meeting
September 26, 2018, 1:00 PM
JARDINE WATER PLANT

The purpose of the meeting is to discuss with the Department of Water Management and IDOT the proposed OPC Mobility Improvements, review comments from both agencies, potential impacts to existing drainage in the corridor, and the proposed drainage design for the project.

1. Introductions
2. Project Update
 - a. Brief Overview of Proposed Improvement
 - b. Project Status and Schedule
 - c. Existing/Proposed Jurisdictions within the Project Limits
 - d. Review Comments, IDOT and DWM
3. Existing Drainage
 - a. Existing Drainage Problems?
4. Proposed Drainage Plan
 - a. Hayes/Cornell/South Lake Shore Drive Proposed Drainage
 - i. SWMM HGL Analysis
 - ii. Proposed Underpass Pump Station
 - b. Stony Island Proposed Drainage
 - i. Inlet Spacing Criteria
 - ii. Connections to Existing Sewers
 - iii. Sewer Televising and Lining
 - c. Cornell South of Hayes
 - i. Jurisdictional Transfer
 - ii. Drainage Outlet
 - d. South Lake Shore Drive – North of 59th Street Inlet Bridge
 - i. Stormwater Detention
 - ii. HGL Analysis
5. On Going Drainage Coordination
 - a. IDOT
 - b. Chicago Park District
 - c. USACE
6. Open Discussion

Attendance Roster

Re: OPC Mobility Improvements – Coordination Meeting **Date:** Sept. 26, 2018

Location: Jardine Water Plant **Time:** 1:00 p.m.

Attending:

NAME	AFFILIATION	INITIAL	EMAIL
John Sadler	CDOT	<i>[Signature]</i>	John.Sadler@cityofchicago.org
David Gleason	CDOT	<i>[Signature]</i>	David.Gleason@cityofchicago.org
Anupam Verma	DWM	<i>[Signature]</i>	Anupam.Verma@cityofchicago.org
Sid Osakada	DWM	<i>[Signature]</i>	Sid.Osakada@cityofchicago.org
Dhara Patel	DWM	<i>[Signature]</i>	Dhara.Patel@cityofchicago.org
Bulent Agar	DWM	<i>BA</i>	Bulent.Agar@cityofchicago.org
Perry Masouridis	IDOT	<i>P.M.</i>	Eleftherios.Masouridis@illinois.gov
Jeanbaptiste Edouard	IDOT	<i>JE</i>	Jeanbaptiste.Edouard@illinois.gov
Ken Smorynski	IEI	<i>KPS</i>	KSmorynski@infrastructure-eng.com
Tom Liliensiek	Civiltech	<i>TKL</i>	TLiliensiek@civiltechinc.com

Michael S. Anaszewicz

From: Thomas K. Liliensiek, P.E.
Sent: Wednesday, August 29, 2018 10:19 AM
To: Michael S. Anaszewicz
Subject: FW: City of Chicago - S. Lake Shore Drive/59th Street Inlet Structure - IDNR Permit Requirements

Mike – Can you please include this email in the ‘correspondence section’ of the LDS

Thanks

From: Casey, James [mailto:James.Casey@Illinois.gov]
Sent: Tuesday, August 28, 2018 8:39 AM
To: Thomas K. Liliensiek, P.E. <TLiliensiek@civiltechinc.com>
Cc: Kessen, James <James.Kessen@illinois.gov>; Hall, Soren G LRC (Soren.G.Hall@usace.army.mil) <Soren.G.Hall@usace.army.mil>
Subject: RE: City of Chicago - S. Lake Shore Drive/59th Street Inlet Structure - IDNR Permit Requirements

Dear Mr. Liliensiek,

Gary Jereb forwarded me your email below. In response to your questions;

1. The project would be considered in Lake Michigan (a public body of water) and would require an Illinois Department of Natural Resources, Office of Water Resources (IDNR/OWR) permit. For projects in Lake Michigan the IDNR/OWR issues a joint permit with the Illinois Environmental Protection Agency (IEPA).
2. IDNR/OWR Statewide Permit No. 12 would not apply as the project will take place within a public body of water. An Individual Permit will be required.
3. Compensatory storage will not be required.

The application-for-permit should be submitted to the IDNR/OWR’s Chicago Office at the address below.

If you have any questions, feel free to contact me.

Sincerely,

James P. Casey, Chief
Lake Michigan Management Section
IDNR/OWR
160 N. LaSalle Street, Suite S-703
Chicago, IL 60601
(312) 793-5947
(312) 793-5968 fax
James.casey@illinois.gov

From: Thomas K. Liliensiek, P.E. [mailto:TLiliensiek@civiltechinc.com]
Sent: Friday, August 24, 2018 11:27 AM
To: Jereb, Gary <Gary.Jereb@Illinois.gov>
Subject: [External] City of Chicago - S. Lake Shore Drive/59th Street Inlet Structure - IDNR Permit Requirements

Hi Gary

I was hoping to clarify the IDNR permit requirements for a bridge widening project.

The project is located on South Lake Shore Drive which is IDOT jurisdictional and maintained by the City of Chicago. In the area on Lake Shore Drive, south of 59th Street, the pavement will be widened to the west in order to provide an additional southbound lane. This will require widening the existing 59th Street Inlet structure bridge approximately 12-feet to the west.

- My understanding is that since Lake Michigan is a Public Body of Water, IDOT would not issue the permit...the permit would be issued by IDNR?
- Do you think Statewide Permit #12 would apply? The structure has not been a source of flood damage
- There will be some fill in the floodplain due to the bridge/roadway embankment widening. Is floodplain compensatory storage required?

As always, appreciate your help/guidance

Thanks
Tom

Thomas K. Liliensiek, P.E.

Director of Water Resources | tliliensiek@civiltechinc.com

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30 N. LaSalle St, Suite 2624 | Chicago, IL 60602

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Meeting Minutes

Re: Mobility Improvements to Support the SLFP
USACE Coordination Meeting

Date: Nov. 16, 2018

Location: US Army Corp of Engineers -
231 South LaSalle Suite 1500

Time: 1:30 p.m.

Attending: See attached.

The primary purpose of the meeting was to present/update the USACE on the proposed Mobility Improvements to Support the South Lakefront Framework Plan (SLFP) and to discuss the anticipated permit requirements. The following is a summary of the meeting discussion:

Status of Project Federal Approval Process

The project is being processed as a joint federal approval by Federal Highway Administration (FHWA) and the National Park Service (NPS). NPS is the lead federal agency for the NEPA Environmental Assessment (E.A.), FHWA is the lead federal agency for the NHPA Section 106 Review. The project team presented at the NEPA / 404 agency coordination meetings for the FHWA portion of the E.A. earlier this year. The project team is now working on a combined E.A. for public review. The project team is also currently drafting a Section 106 Assessment of Effects and Section 4(f) document. The goal is to conclude the Phase I portion of the project in April 2019.

Preferred Improvement Plan

- Lake Shore Drive from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east (i.e. towards Lake Michigan). Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.
- The scope of the inlet bridge widening includes removing existing architectural stone cladding and reinstalling to the new bridge structure on the west face. The abutments will be extended to the west and new wingwalls will be constructed on the west side. The construction includes both temporary and permanent impacts to waters of the US, but the areas are minimal totaling less than 0.04 acres for both.
- Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction, an all-day on-street parking or

Meeting Minutes

loading zone lane on each side of the road, and a raised median with left-turn channelization at intersections. From 64th Street to 67th Street, Stony Island Avenue would be widened to provide a consistent cross section including three northbound lanes and four southbound lanes separated by a raised median.

- Parking would be removed on Hayes Drive from Lake Shore Drive to Cornell Drive to provide two lanes in each direction, separated by a barrier median. Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street. The existing triangular, stop-controlled intersection at Hayes Drive and Richards Drive would be reconfigured to create a signalized T-intersection. Hayes Drive would be realigned at Cornell Drive to provide a through movement for predominant travel through the intersection. The existing portion of Hayes Drive between Stony Island Avenue and Cornell Drive would be realigned to create a T-intersection with the realigned Hayes Drive.
- The USACE noted that they will be a cooperating agency for the NEPA E.A. and will be a signatory to the NHPA Section 106 Memorandum of Agreement (MOA) Programmatic Agreement (PA).

Section 404 Permit

- The widening of the Lake Shore Drive Bridge spanning the 59th Street Inlet will result in permanent fill/impact to Lake Michigan and will therefore require a Section 404 Permit from the USACE. This is the only anticipated project permanent impact to USACE jurisdictional wetlands or Waters of the US as a result of the Mobility Improvements. It is anticipated that the bridge construction would be covered under Regional Permit 3 (Transportation Projects) and the cofferdams under Regional Permit 7 (Temporary Impacts). The City is also considering repairs to the existing Hayes Drive Bridge spanning the inner harbor. Proposed repairs to the substructure may require temporary cofferdams and dewatering, but no permanent impacts.
- The USACE inquired if coordination with the Coast Guard had occurred to confirm that they do not have jurisdiction. *Subsequent to the meeting the City/CNECT received correspondence from the US Coast Guard confirming that a Section 9 Permit will not be required. The correspondence with the US Coast Guard will be included the 404 application to the USACE.*

Meeting Minutes

- The USACE has established a permit number, LRC-2017-676, for the proposed OPC Mobility Improvements. This permit number should be used on all future submittals to the USACE.
- The Federal process has initiated the Section 7 (i.e. endangered species) consultation. The coordination is ongoing, however IDNR has already indicated that there are no anticipated impacts to state endangered species.

Section 408 Coordination

- The GLFER project consists of restoration and improvements within Jackson Park that were completed and funded by the USACE and the Chicago Park District.
- Because the OPC Mobility Improvements will impact some of the restored GLFER areas within Jackson Park the Section 408 process will be initiated.
- The Section 408 process is a separate track from the 404 process, with different USACE staff providing the review. However the 408 process will need to be approved prior to the issuance of a 404 permit.
- Currently, GLFER improvements have been completed around the east and west lagoons (north of Hayes Drive). Invasive species have been removed south of Hayes Drive, GLFER planting scope still remains to be completed
- The direct impacts to the GLFER project as a result of the OPC Mobility Improvements have been quantified. CNECT and the City are currently working with the Chicago Park District to develop the restoration and improvement plan.
- The Chicago Park District will be the applicant for the 408 application.

Schedule

- The NEPA Public Hearing for the project is planned for February 2019
- Anticipate NEPA Determination in the Spring of 2019.
- Advertisement of the project construction documents after NEPA Determination, possibly in late April 2019 with construction beginning in the Fall of 2019.

Meeting Minutes

Next Steps/Immediate Action Items

- CNECT/City to inform the USACE when the Environmental Assessment (EA) is ready.
- Submit 404/408 permit applications for USACE review.

By: Tom Liliensiek, P.E. (CNECT)

Date: December 10, 2018

Meeting Materials:

1. Agenda
2. Attendance Roster

OPC Mobility Improvements – USACE Coordination Meeting
November 16, 2018, 1:30 PM
USACE Office – 231 South LaSalle

The purpose of the meeting is to present/update to the USACE the proposed OPC Mobility Improvements and anticipated permit requirements.

1. Introductions
2. Preferred Improvement Plan
 - Lake Shore Drive
 - Stony Island Avenue
 - Hayes Drive
 - 59th Street Inlet Bridge
3. Status of Environmental Reviews
 - NPS / FHWA Co-Federal Leads
 - NEPA E.A. Status (NPS)
 - NHPA Section 106 Status (FHWA)
4. Section 404 Process
 - Status of the bridge design and review
 - Anticipated impacts
 - Schedule
5. Section 408 Process
 - Anticipate GLFER Impacts
 - CDOT / CPD Coordination
6. Overall Project Schedule

Attendance Roster

Re: OPC Mobility Improvements – USACE Coordination Meeting - LRC-2017-676

Date: November 16, 2018

Location: US Army Corp of Engineers – 231 South LaSalle Suite 1500

Time: 1:30 p.m.

Attending:

NAME	AFFILIATION	INITIAL	EMAIL
John Sadler	CDOT	<i>JS</i>	John.Sadler@cityofchicago.org
Nate Roseberry	CDOT	<i>NR</i>	Nathan.Roseberry@cityofchicago.org
Colin Smalley	USACE	<i>CS</i>	Colin.C.Smalley@usace.army.mil
Kathy Chernich	USACE	<i>via phone</i>	Kathleen.G.Chernich@usace.army.mil
Ken Smorynski	IEI	<i>KS</i>	KSmorynski@infrastructure-eng.com
Tom Liliensiek	Civiltech	<i>TKL</i>	TLiliensiek@civiltechinc.com

**OPC Mobility Improvements – Coordination Meeting
November 30, 2018
Chicago Park District (CPD) Office, Conference Room 6A**

The primary purpose of the meeting was to coordinate Chicago water main and storm sewer facilities in and adjacent to Jackson Park. The following are notes summarizing the discussion and **action items** (responsibility noted in **bold**) resulting from the meeting:

1. Introduction

- CDOT noted that the City of Chicago and the Chicago Park District (CPD) have an opportunity to memorialize existing city facilities that are not documented and new ones required as part of the roadway improvements through new vacations/dedication and easements.

2. Museum Campus Agreements

- CDOT and CPD made reference to the Museum Campus project documentation for lighting facilities as an example. The reference demonstrates the level of detail that will likely be needed and how responsibilities could be assigned.

3. Proposed 36" Water Main relocation along Stony Island Avenue

- CDOT explained that the existing 36" water main is shallow and would be in conflict with the proposed roadway improvements.
- Within the OPC site area, CDOT proposes to locate the replacement water main in its same location, but deeper at approximately 5 feet below grade. In this area, there will be City ROW behind the curb extending to the OPC site boundary which could accommodate drainage structures, light poles and electrical ducts.
- South of the OPC site/62nd Street, the ROW by definition is located at the back of curb. Therefore, any utilities behind the curb would be on CDP property and require some type of easement or agreement. In this area, the current proposal is also to relocate the water main in its same location 5 feet below grade.
- In the area south of 62nd Street relocating the water main in its same location would require easements for the water main, drainage structures, lighting and electrical conduits/ducts. Additionally, there are existing trees and likely proposed trees that would probably fall within DWM-desired "no build" limits.
- Participants discussed potential "no build" limits. For the 36" water main DWM mentioned potential limits of an approximate 6' wide trench and 5' offset to a tree's drip line which could result in 20' to 25' or more from the edge of the water main to a tree.
- Participants discussed the possibility of stating a DWM-desired "no build" limit of 15' each side of their facilities along with a variance for a reduced limit for trees in the easement documents.

Future DWM repairs to the 36" water main would require CPD to fund and facilitate tree roots pruning or other protective measures to ensure the survival of trees after repair activities. Given the location of this project in/adjacent to Jackson Park, participants discussed that a 15' easement could result in undesirable impacts. "No build" restrictions could be considered as permanent impacts to the parkland. Permanent easements would be considered parkland impacts whereas access permits would not.

- Considering easement challenges, **DWM** will evaluate relocating the 36" water main in the Stony Island roadway south of 62nd Street to a location west of the current alignment. **DWM** noted that it will need to be verified that the proposed water main meets the 10-foot IEPA separation requirements from the Stony Island Interceptor sewer. **CNECT** will send **DWM** the preliminary line of lay CAD drawing that they have already created. **DWM** will send **CDOT/CNECT** the as built information for their recently installed 12" water main. **CDOT** requested, and **DWM** is targeting evaluation of the new location within 2 weeks. **CPD** stated that they prefer an option with the water main relocated into the roadway.
4. Storm Sewers/Easement Requirements/Agreements & Access Permits
- The proposed storm sewers are designed to be installed primarily within the City ROW. However, due to underpasses and other proposed and existing structures, there are some locations where existing and proposed storm sewer facilities will be located outside of the City ROW and within CPD property, as defined by back to back of roadway curbs.
 - **CPD** asked that **CDOT/CNECT** and **DWM** consider potential SLFP projects such as the dog friendly area, maintenance facility and field house when locating facilities outside of the ROW to minimize restrictions that they could cause.
 - At the proposed underpasses, proposed storm sewers are routed outside of the structures, paths and roadways because of grading constraints resulting from the underpasses. Participants discussed how to memorialize restrictions related to the storm sewers at these locations, potentially via access permit requirements/stipulations as part of the easement agreement.
 - **DWM** noted that vacuum truck access should be accommodated via no-planting zones and slopes/grading/surfaces in the underpass drainage system designs. Additional manholes may be included in the design in order to facilitate future maintenance and minimize no-planting zones. Proposed sewers could be oversized to allow for relining as a future maintenance action. Ductile iron pipes could be utilized (especially in the underpass areas) in an attempt to minimize future maintenance issues.
 - Participants agreed that the locations where sewers are installed in **CPD** property will require an easement. The easements will be developed based on a minimum offset from the sewer facility granting the City the right to have the facility within **CPD** property. The easements will not be developed based on areas required to access the sewers in the future. Access to the sewers would be granted by **CPD** via permit issuance for any future maintenance and repair work required. The language for this approach must be developed and approved by the Participants'

legal counsels. **DWM** will provide their minimum easement offset distance from sewer facilities to CDOT and CPD.

- For the new underpasses, CPD will be responsible for maintenance of the portion of the system outside the roadway (similar to a private connection) which includes the drainage overflow structures, pump stations, forcemain connections, and upstream gravity sewers. CDOT will be responsible for constructing the pump stations and future pump replacement. DWM is responsible for the system beyond the drainage overflow structures (downstream) to connection with the combined sewer. In general terms, CPD/CDOT responsible for the mechanical system and DWM is responsible for the system once it becomes gravity flow within the roadway right of way. The pump station ownership and maintenance responsibilities will require an update to the CPD-recently-drafted "Underpass Agreement" with CDOT by CPD.
- Participants discussed the MS4 Permit responsibility for the existing lagoon outlets. CPD and DWM will review their records for any existing information pertaining to MS4 reporting within Jackson Park. At the OPC site, a few existing outlets along Cornell and into the lagoon that currently have both site (CPD) and roadway (CDOT/DWM) drainage will be maintained, but the roadway drainage will no longer use the outlets. Participants discussed ownership and who would have MS4 reporting responsibility for such outlets. CNECT/CDOT will prepare an overview exhibit showing all the existing drainage outlets within the project limits and their tributary drainage areas, and will provide to CPD and DWM for review and future discussion.
- CPD stated that water quality within the lagoons is a priority and best management practices (BMP's) should be considered for the proposed drainage system where practical. CDOT/CNECT will consider and evaluate the potential for incorporating BMP's into the drainage design.

Attendance Roster

Re: OPC Mobility Improvements – Coordination Meeting **Date:** Nov. 30, 2018

Location: Chicago Park District – Conference Room 6A **Time:** 10:30 a.m.

Attending:

NAME	AFFILIATION	INITIAL	EMAIL
John Sadler	CDOT	<i>[Signature]</i>	John.Sadler@cityofchicago.org
David Gleason	CDOT	<i>[Signature]</i>	David.Gleason@cityofchicago.org
Anupam Verma	DWM	<i>AV</i>	Anupam.Verma@cityofchicago.org
Sid Osakada	DWM	<i>S</i>	Sid.Osakada@cityofchicago.org
Bulent Agar	DWM	<i>BA</i>	Bulent.Agar@cityofchicago.org
Albert Wtorkowski	DWM	<i>A.W.</i>	Albert.Wtorkowski@cityofchicago.org
Brendan Schreiber	DWM	<i>BS</i>	Brendan.Schreiber@cityofchicago.org
Heather Gleason	CPD		Heather.Gleason@ChicagoParkDistrict.com
Doreen O'Donnell	CPD	<i>[Signature]</i>	Doreen.O'Donnell@ChicagoParkDistrict.com
Nichole Sheehan	CPD	<i>[Signature]</i>	Nichole.Sheehan@ChicagoParkDistrict.com
Duane Mahone	IEI	<i>DM</i>	DMahone@infrastructure-eng.com
Ken Smorynski	IEI	<i>KS</i>	KSmorynski@infrastructure-eng.com
Tom Liliensiek	Civiltech	<i>TKL</i>	TLiliensiek@civiltechinc.com
<i>Sarah Gelder</i>	CPD	<i>SG</i>	<i>Sarah.gelder@chicagoparkdistrict.com</i>
<i>Dhara Patel</i>	DWM	<i>DP</i>	<i>dhara.patel@cityofchicago.org</i>
BRIAN McGAHAN	CTR (DWM)	<i>BMc</i>	<i>brian.megahan@ctrwater.net</i>

Michael S. Anaszewicz

From: Thomas K. Liliensiek, P.E.
Sent: Friday, June 14, 2019 1:25 PM
To: Michael S. Anaszewicz
Subject: FW: OPC - CDOT/DWM - Drainage Coordination

Can you also please add this email to the correspondence section of the LDS?

From: Dhara Patel [mailto:Dhara.Patel@cityofchicago.org]
Sent: Wednesday, May 1, 2019 2:01 PM
To: Nathan Roseberry <Nathan.Roseberry@cityofchicago.org>; David Gleason <David.Gleason@cityofchicago.org>; Thomas K. Liliensiek, P.E. <TLiliensiek@civiltechinc.com>; Duane Mahone <DMahone@infrastructure-eng.com>; Kenneth Smorynski <KSmorynski@infrastructure-eng.com>
Cc: Adonna Murray <Adonna.Murray@cityofchicago.org>; Anupam Verma <Anupam.Verma@cityofchicago.org>; Brendan Schreiber <Brendan.Schreiber@cityofchicago.org>; Sid Osakada <Sid.Osakada@cityofchicago.org>; Bulent Agar <Bulent.Agar@cityofchicago.org>
Subject: Re: OPC - CDOT/DWM - Drainage Coordination

Good afternoon,

Based on a hydraulic analysis of the area around the stretch of Stony Island Ave that will be affected by planned mobility improvements, DWM has determined that it would be best to do the following sewer work (instead of simply replacing local sewers in place):

on S Stony Island Avenue

- from E 64th St to E 63rd St : upsize to a 30" diameter sewer (currently a 15" sewer)
- from E 61st St to E 63rd St : upsize to 18" diameter sewer (currently a 12" sewer)
- at 61st St : add a 24" overflow connection between the MWRD interceptor & the local sewer
- from E 61st St to E 60th St : upsize to a 24" diameter sewer (currently a 12" sewer)

I am planning on reiterating this in my response to the OUC EFP covering this portion of the drainage plan (due this Friday), as the current plan does not yet reflect this new recommendation.

Best,

Dhara Patel

Civil Engineer III

Chicago Department of Water Management

(312)744-7014 :+ : dhara.patel@cityofchicago.org

From: Dhara Patel

Sent: Wednesday, April 3, 2019 2:35:14 PM

To: Nathan Roseberry; David Gleason; Thomas K. Liliensiek, P.E.; Duane Mahone; Kenneth Smorynski

Cc: Adonna Murray; Anupam Verma; Brendan Schreiber; Sid Osakada

Subject: Re: OPC - CDOT/DWM - Drainage Coordination

Good afternoon,

Just an update from the evaluation of sewer televising: we think it is necessary to replace all of the "local" sewers televised in Stony Island Ave between 60th & 63rd. Since some portions of that sewer also happen to have bad hydraulic capacity (particularly between 62nd to 60th), we are working with modelers to determine a sufficient size to upsize to, and to determine whether or not any changes to overflows may be beneficial in combination with upsizing. I will send a final determination once we have it.

Thanks,

Dhara Patel

Civil Engineer III

Chicago Department of Water Management

(312)744-7014 :+ : dhara.patel@cityofchicago.org

From: Dhara Patel

Sent: Monday, April 1, 2019 8:50:52 AM

To: Nathan Roseberry; David Gleason; Thomas K. Liliensiek, P.E.; Duane Mahone; Kenneth Smorynski

Cc: Adonna Murray; Anupam Verma; Brendan Schreiber; Sid Osakada; Bulent Agar

Subject: Re: OPC - CDOT/DWM - Drainage Coordination

Hi Nate,

I appreciate you touching base. We are hoping to meet internally about the sewer televising early this week and put a response together for you - apologies for the delay. We don't have any update from IDOT yet. I will review the documents you've attached and let you know as soon as I can if we think an in-person meeting would be productive.

Best,

Dhara Patel

Civil Engineer III

Chicago Department of Water Management

(312)744-7014 :+ : dhara.patel@cityofchicago.org

From: Nathan Roseberry

Sent: Friday, March 29, 2019 11:15:21 AM

To: Dhara Patel; David Gleason; Thomas K. Liliensiek, P.E.; Duane Mahone; Kenneth Smorynski

Cc: Adonna Murray; Anupam Verma; Brendan Schreiber; Sid Osakada; Bulent Agar

Subject: RE: OPC - CDOT/DWM - Drainage Coordination

Dhara,

Thanks for update, we wanted to touch base again on status and provide a couple updates on our end. Please let me know if it'd be most productive to schedule an in person meeting next week.

1. Ok, thanks.
2. Do you have an update on the review of the sewer televising?
3. Understood, detailed plans will include requested restrictors. We are submitting for OUC EFP today, so you should see these plans soon.
4. Attached is an updated outfall exhibit addressing the comment below. Do you have an update on IDOT coordination? Let us know if you want any further updates to the attached MS4 Exhibit.

We also wanted to daylight the attached concept our design team has created hoping to address DWM easement requirements for storm sewers that will be located in Jackson Park, but not under roadway. We plan to include root barriers on either side of any new storm sewer pipes or around existing storm sewer pipes near proposed ground disturbance hopefully to address your concerns on root penetration into pipes. We are trying to balance both DWM and CPD requirements, hope this would satisfy your technical needs with storm sewer. Let me know if you have any questions or want to discuss.

Thanks again,

Nate

Nathan Roseberry, P.E.

CDOT Division of Engineering

Acting Assistant Chief Highway Engineer

nathan.roseberry@cityofchicago.org

(312) 744-5936

From: Dhara Patel

Sent: Wednesday, March 20, 2019 4:35 PM

To: Nathan Roseberry; David Gleason; Thomas K. Liliensiek, P.E.; Duane Mahone; Kenneth Smorynski

Cc: Adonna Murray; Anupam Verma; Brendan Schreiber; Sid Osakada; Bulent Agar

Subject: Re: OPC - CDOT/DWM - Drainage Coordination

Good afternoon,

Regarding the exhibits you sent to DWM for review:

(1) - The **revised proposed condition outfall exhibit** notes ownership in a way that is consistent with past conversations. For more, see (4).

(2) - The **summary overview of sewer televising** was forwarded to our evaluation team the same day you sent it to us. We have received communication that they are almost finished reviewing it, and we hope to have a response to this early next week if not later this week.

(3) - The revised **proposed drainage plan** is acceptable. However, we will need a detailed plan of the connection for permit approval. It recommended that restrictors be placed in all four proposed catch basins upstream of this new connection, in order to restrict flow to the extent possible per our rate control BMPs.

(4) - Regarding **MS4 permits** - we've looked into our records and noted some discrepancies between our records and your mapping - please see the attached exhibit as well as annotated sewer atlases suggesting ownership based on drainage. Ownership must be clarified between CDWM, the Park District, and IDOT. We have reached out to IDOT but have not gotten a response yet. Once ownership is clarified, we should work to ensure all parties have up-to-date MS4 permits in the area.

Best,

Dhara Patel

Civil Engineer III

Chicago Department of Water Management

(312)744-7014 :+ : dhara.patel@cityofchicago.org

From: Nathan Roseberry

Sent: Wednesday, March 13, 2019 2:54:06 PM

To: David Gleason; Thomas K. Liliensiek, P.E.; Duane Mahone; Kenneth Smorynski; Dhara Patel; Sid Osakada; Bulent Agar; Anupam Verma; Brendan Schreiber
Subject: RE: OPC - CDOT/DWM - Drainage Coordination

Good Afternoon,

I wanted to touch base on the status of DWM review of the revised exhibits highlighted below. In addition, we would appreciate an update on the MS4 action item from the minutes (DWM to review MS4 permits to confirm whether CPD is excluded). We would appreciate any comments by 3/20/19, let us know if you'd like us to schedule a meeting to discuss.

Thanks,

Nate

Nathan Roseberry, P.E.
CDOT Division of Engineering
Acting Assistant Chief Highway Engineer
nathan.roseberry@cityofchicago.org
(312) 744-5936

From: David Gleason
Sent: Friday, March 01, 2019 3:56 PM
To: Thomas K. Liliensiek, P.E.; Duane Mahone; Kenneth Smorynski; Dhara Patel; Sid Osakada; Bulent Agar; Anupam Verma; Brendan Schreiber; Nathan Roseberry
Subject: Re: OPC - CDOT/DWM - Drainage Coordination

All,

As a follow-up to the OPC Mobility / DWM coordination meeting on February 8, the following items are linked below for DWM review:

<https://civiltechftp.exavault.com/share/view/1f0ub-dxbccgwx>

1. **Revised Proposed Condition Outfall Exhibit.** The exhibit was revised based on the discussions in our meeting (revising the outfalls designated as 'IDOT' to 'DWM')
2. **Summary Overview of Sewer Televising.** A summary of the existing sewer televising has been annotated onto the project Proposed Drainage Plan.
3. **Revised Proposed Drainage Plan** in the vicinity of the intersection Midway Plaisance and Stony Island Avenue. As discussed in the meeting the drainage design has been revised to redirect approximately 2.4 acres currently tributary to the lagoon to the existing combined sewer on Stony Island. The redirection will allow for the abandonment of the existing storm sewer and outlet tributary to the lagoon. *Please consider this the request to discharge this area to the existing combined sewer on Stony Island.*
4. For reference, the February 8, 2019 DWM coordination meeting minutes and action items are included (originally sent 2/19 via email).

Please let us know if you have any questions or need any additional information.

Thanks, and have a good weekend.

David

David B. Gleason

Traffic Engineer IV

CDOT Division of Engineering

30 N. LaSalle St.; Suite 400

Chicago, IL 60602-2570

312.744.3775

david.gleason@cityofchicago.org

From: Thomas K. Liliensiek, P.E.

Sent: Wednesday, February 6, 2019 12:26 PM

To: Thomas K. Liliensiek, P.E.; John Sadler; David Gleason; Duane Mahone; Kenneth Smorynski; Dhara Patel; Sid Osakada; Bulent Agar; Anupam Verma; Brendan Schreiber

Subject: OPC - CDOT/DWM - Drainage Coordination

When: Friday, February 8, 2019 1:00 PM-2:00 PM.

Where: Jardine Water Plant

Updated to include meeting agenda

Meeting Minutes

Re: OPC Mobility Improvements
Illinois Department of Natural Resources
Office of Water Resources

Date: June 10, 2019

Location: 160 N LaSalle Suite S-703

Time: 11:00 a.m.

Attending: See attached.

The primary purpose of the meeting was to present the IDNR-OWR Lake Michigan Section the proposed Mobility Improvements to Support the South Lakefront Framework Plan (SLFP) and to discuss the anticipated permit requirements. The following is a summary of the meeting discussion:

Project Overview

- Lake Shore Drive from north of 57th Street to Hayes Drive would be widened to the west by 11 feet to provide a third southbound lane. The intersections of Lake Shore Drive at 57th Street would also be modified to accommodate the additional southbound lane. No widening is occurring to the east (i.e. towards Lake Michigan). Additionally, bridge modifications are required at the 63rd Street underpass, the 59th Street underpass, and the bridge over the 59th Street Harbor Inlet to accommodate the roadway widening.
- The scope of the inlet bridge widening includes removing existing architectural stone cladding and reinstalling to the new bridge structure on the west face. The abutments will be extended to the west and new wingwalls will be constructed on the west side. The construction includes both temporary and permanent impacts to waters of the US, but the areas are minimal totaling less than 0.04 acres for both.
- Stony Island Avenue from 59th Street to 64th Street would be widened to the east to provide an additional through lane in each direction.
- Modifications are required at the Lake Shore Drive/Coast Guard Drive, Richards Drive, and Cornell Drive/63rd Street intersections with Hayes Drive to accommodate the additional through lanes as well as the proposed closure of Cornell Drive north of 63rd Street.
- Phase 1 is still ongoing and the preparation of Phase 2 design plans is underway. The Federal Review is anticipated to be completed in the 4th Quarter of 2019. The first design bid package would go out shortly after the Federal approval is received.

Meeting Minutes

Status of Project Federal Approval Process

- The project is being processed as a joint federal approval by Federal Highway Administration (FHWA) and the National Park Service (NPS). NPS is the lead federal agency for the NEPA Environmental Assessment (E.A.), FHWA is the lead federal agency for the NHPA Section 106 Review.

IDNR Permit

- The widening of the Lake Shore Drive Bridge spanning the 59th Street Inlet will result in permanent fill/impact to the Lake Michigan floodplain and will therefore require an IDNR permit. This is the only anticipated permanent impact to floodplain as a result of the Mobility Improvements. The City is also proposing repairs to the existing Hayes Drive Bridge spanning the inner harbor. Proposed repairs to the substructure may require temporary cofferdams and dewatering, but no permanent fill. IDNR will review, but this repair work may not require a separate permit.
- The IDNR review will be for compliance with the Part 3704 Regulation of Public Waters Rules which generally cover encroachment on a public body of water, and ensure the project will not be a hindrance to navigation.
- The submittal should include an existing and proposed plan view as well as profile view of the proposed structure and the drawings should be to scale. In general the submittal can follow what was provided to USACE for the 404 permit.
- The permit fee for the review is \$2,690.
- IDNR will issue a 30-day public notice.
- As part of their permit process IDNR-OWR will send the project for clearance to the IDNR Division of Ecosystems and Environment (DEE) concurrent with their review. To help facilitate this review the EcoCAT consultation should be included with the permit application.
- IDNR noted that their review will be concurrent to the IEPA Lake Michigan Final Determination for Water Quality Section 39 review. Daren Gove with IEPA is typically the reviewer and IDNR cannot issue their permit until IEPA has issued the Section 39.

Meeting Minutes

Next Steps/Immediate Action Items

- Submit permit applications for IDNR and IEPA review.

By: Tom Liliensiek, P.E. (CNECT)

Date: June 10, 2019

Meeting Materials:

1. Attendance Roster
2. Agenda

Attendance Roster

Re: OPC Mobility Improvements – IDNR Pre-Application Meeting

Date: June 10, 2019

Location: IDNR Office – 160 N. LaSalle Suite S-703

Time: 11:00 a.m.

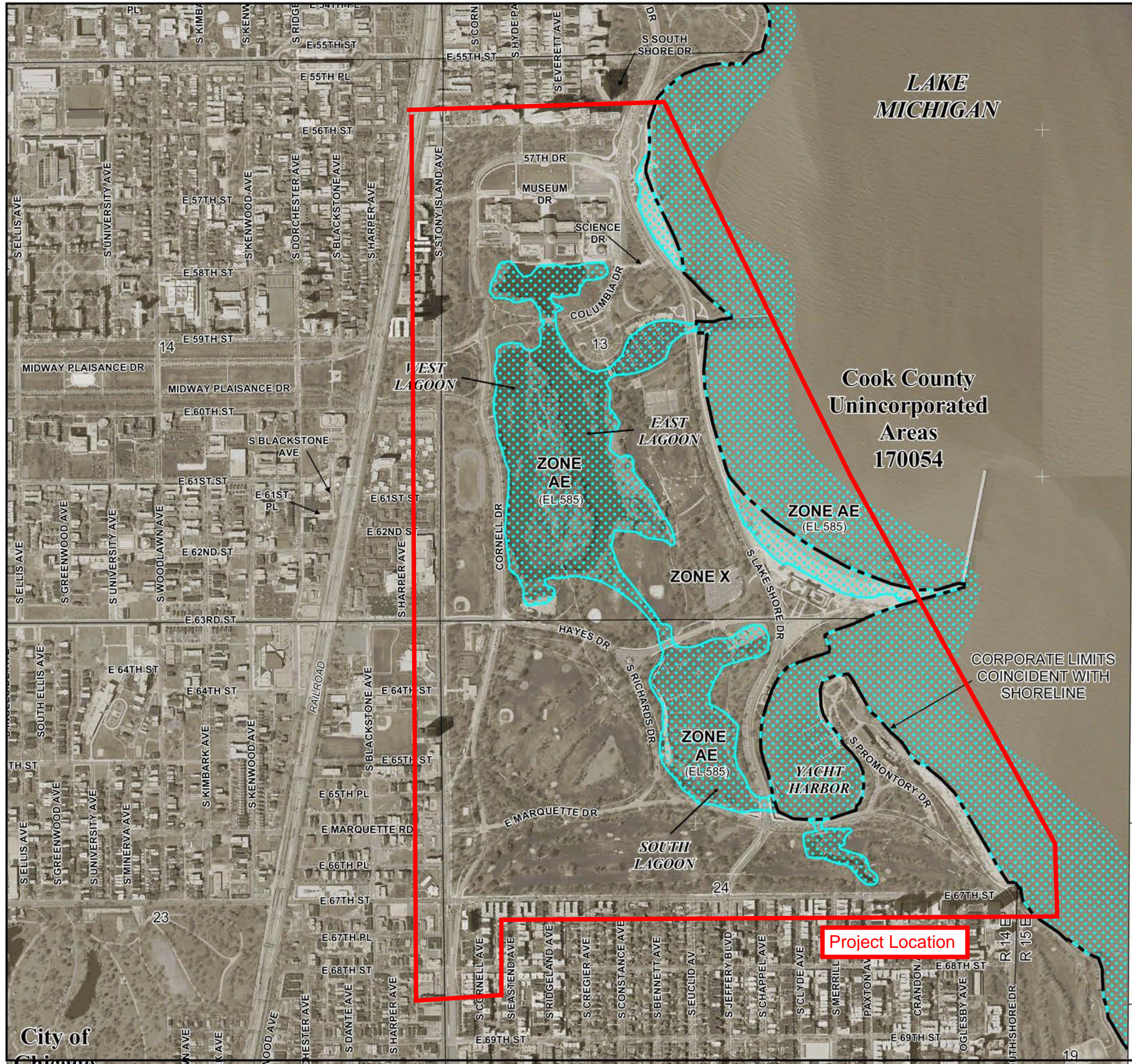
Attending:

NAME	AFFILIATION	INITIAL	EMAIL
Nathan Roseberry	CDOT		Nathan.Roseberry@cityofchicago.org
Allen Curry	CDOT	AC	Allen.Curry@cityofchicago.org
Tom Liliensiek	Civiltech	TL	TLiliensiek@civiltechinc.com
James Casey	IDNR	JC	James.Casey@illinois.gov
James Kessen	IDNR	JK	James.Kessen@illinois.gov

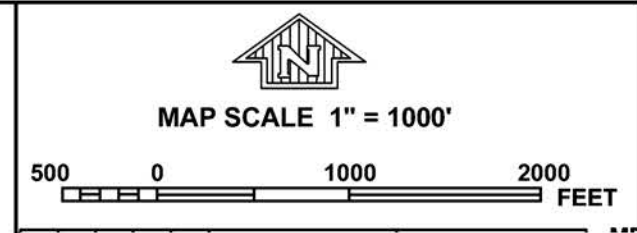
OPC Mobility Improvements – IDNR-OWR Coordination Meeting
June 10, 2019, 11:00 AM
IDNR Office – 160 N. LaSalle, Suite S-703

The purpose of the meeting is to present to the IDNR Office of Water Resources (OWR) the proposed OPC Mobility Improvements and discuss the anticipated permit requirements.

1. Introductions
2. Project Overview
 - Overview of Proposed Improvements
 - Jurisdictions within the Project Limits
 - Project Status and Schedule
3. Status of Environmental Reviews
 - NPS / FHWA Co-Federal Leads
 - NEPA E.A. Status (NPS)
 - NHPA Section 106 Status (FHWA)
4. Floodplain Impacts
 - 59th Street Inlet Bridge Widening
 - Hayes Drive Bridge Repair Work
5. Submittal Requirements
 - Permit Application
 - Plan Sheets
 - Permit Fees



Project Location



NFP PANEL 0540J

FIRM
FLOOD INSURANCE RATE MAP
COOK COUNTY,
ILLINOIS
AND INCORPORATED AREAS

PANEL 540 OF 832
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHICAGO, CITY OF	170074	0540	J
COOK COUNTY	170054	0540	J

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
17031C0540J
MAP REVISED
AUGUST 19, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Mobility Improvements to Support the SLFP

Location Drainage Study Appendix D – Supporting Documents

Table of Contents

1. South Lake Shore Drive As-Builts
 - a. 2001 Plans (Project No. B-0-242)
 - i. Storm Sewer Profile Sheets
 - ii. Storm Sewer Plan Sheets
 - iii. Control Structure Detail Sheets
 - b. 2002 Plans (Project No. B-1-440)
 - i. Vol 1
 1. Storm Sewer Profile Sheets
 2. Storm Sewer Plan Sheets
 3. Control Structure Detail Sheets
 - ii. Vol 2
 1. Control Structure Detail Sheets
2. Chicago Sewer Atlas
 - a. Atlas Pages 15-20, and 22
3. Lake Michigan Water Level Data
4. Department of Water Management Details
5. Additional Impervious Area Summary
6. Inlet Spacing Analysis
7. Jackson Park SWMM Analysis
 - a. SWMM Model Structure Locations
 - b. SWMM HGL Profiles
8. Outfall Hydrograph Calculations
9. Underpass Pump Station Analysis
10. Estimated Floodplain Fill Calculations
11. East and West Lagoon Hydrology Memorandum
12. 59th Street Bridge Scour
13. Sewer Televising Summary
14. 59th Street Drainage Investigation

South Lake Shore Drive As-Builts



THESE PLANS COMPLY WITH THE CURRENT POLICY OF THE CITY OF CHICAGO TO FACILITATE THE MOBILITY OF PEOPLE WITH DISABILITIES.

STATE OF ILLINOIS
CITY OF CHICAGO
 RICHARD M. DALEY, MAYOR
DEPARTMENT OF TRANSPORTATION
 MIGUEL d' ESCOTO, COMMISSIONER
BUREAU OF HIGHWAYS
 BRUCE H. WORTHINGTON, CHIEF HIGHWAY ENGINEER

CONTRACT PLANS
 FOR
SOUTH LAKE SHORE DRIVE RECONSTRUCTION
JACKSON PARK SECTION
 FROM 55TH STREET TO 67TH STREET

CONTRACT 1 - ADVANCE WORK
 C.D.O.T PROJECT NO. : B-0-242
 CITY SECTION NO. :00-B0241-02-PV
 STATE JOB NO. C-88-013-01
 GROSS LENGTH 1641.839 M (1.641 KM)
 NET LENGTH 1402.645 M (1.402 KM)

TRAFFIC DATA

JEFFERY BOULEVARD (67TH TO MARQUETTE DR.)

ADT: 24,700 (1998) 27,00 (2000)
 POSTED SPEED: 50 Kkm/h (30 mph)
 DESIGN DESIGNATION: TWS-4

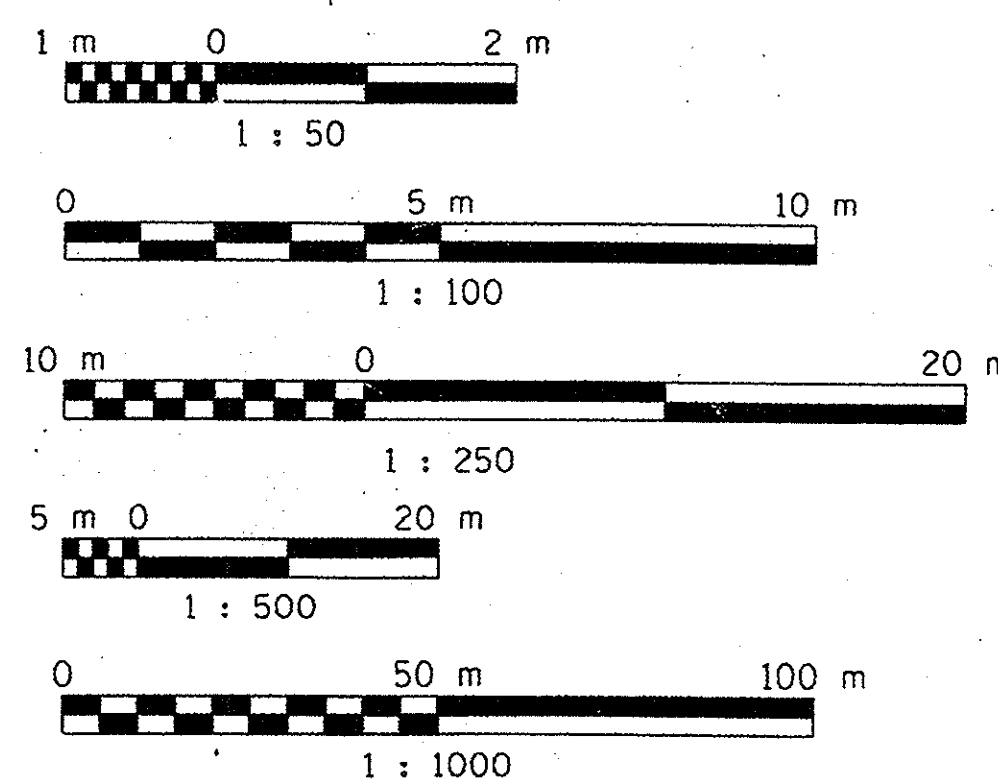
COAST GUARD DRIVE (MARQUETTE DR. TO HAYES DR)

ADT: 46,600 (1998) 50,000 (2000)
 POSTED SPEED: 60 Kkm/h (35 mph)
 DESIGN DESIGNATION: TWS-4 & 6

LAKE SHORE DRIVE (HAYES DR. TO 57TH DR.)

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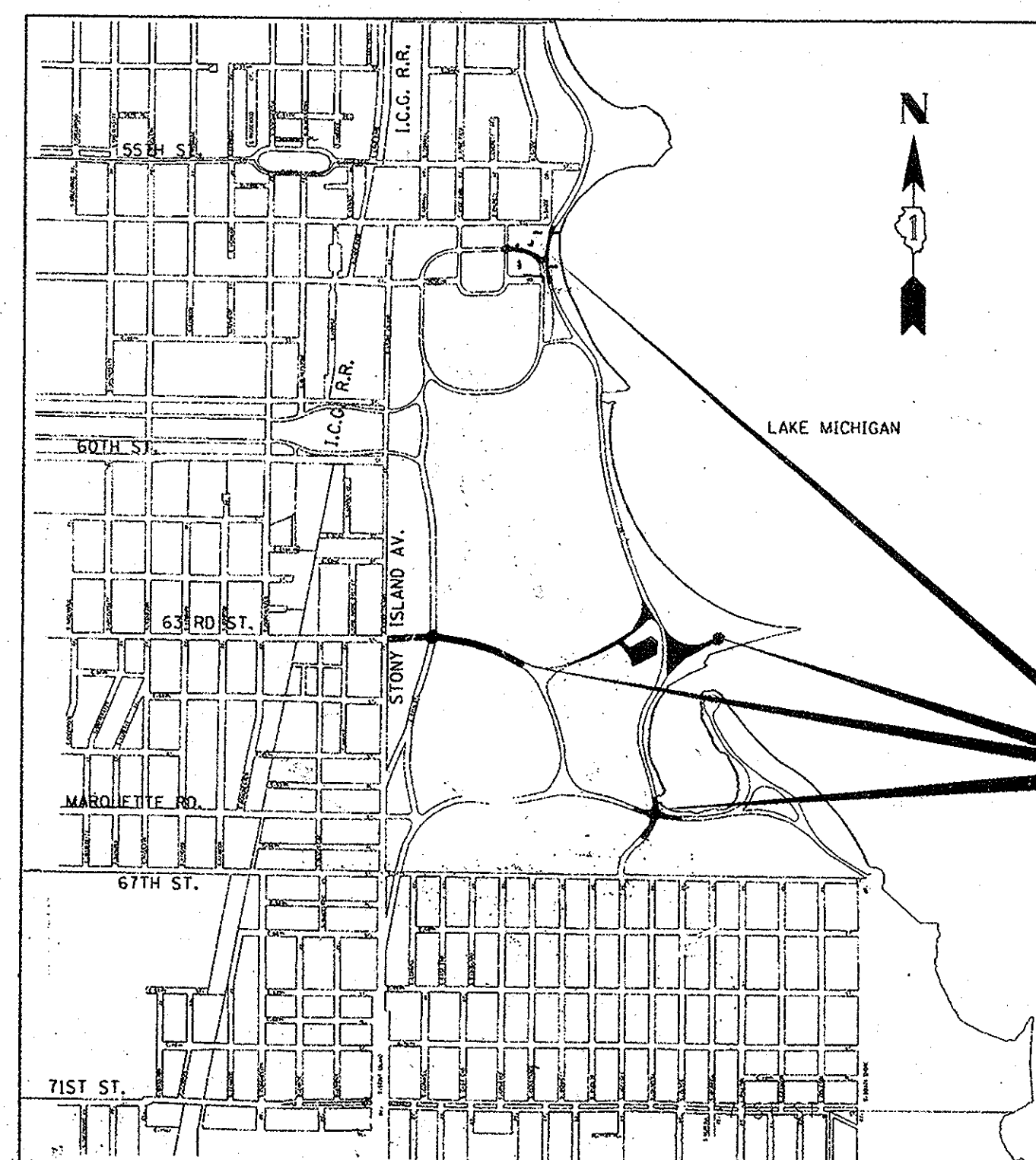
METRIC RATIOS



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

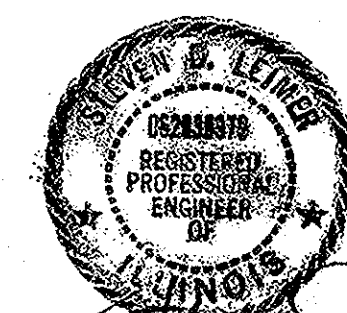
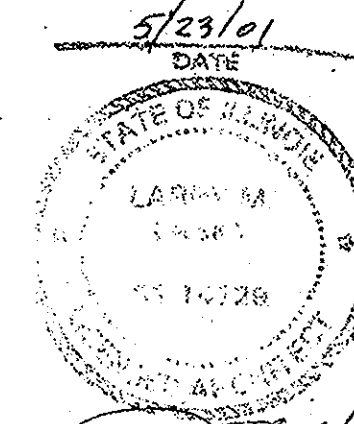
DEPARTMENT OF PROCUREMENT SERVICES
 DAVID E. MALONE, CHIEF PROCUREMENT OFFICER

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 PASSED: 7-12 20 01
 DISTRICT ENGINEER OF LOCAL ROADS & STREETS
 APPROVED: 7-12 20 01
 DISTRICT ENGINEER

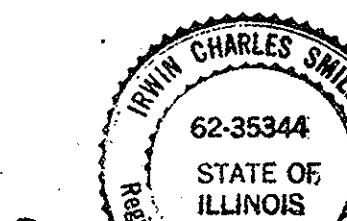


LOCATION MAP
 NOT TO SCALE

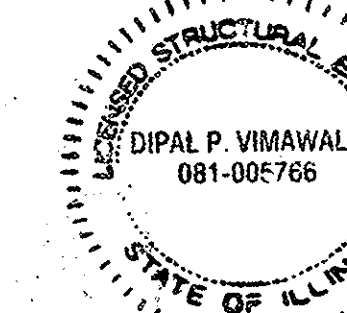
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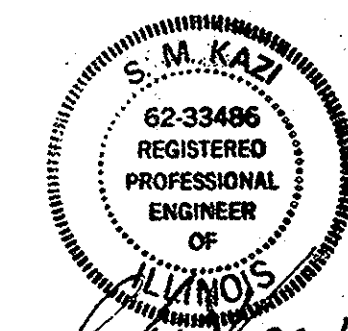
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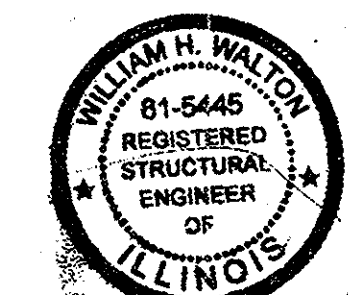
IRWIN CHARLES SMILEY
 EXPIRES: NOVEMBER 30, 2001



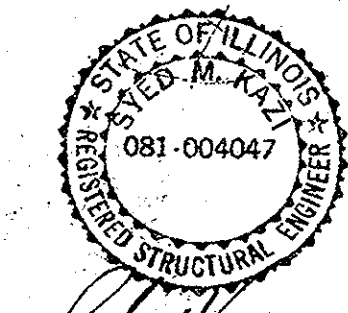
DIPAL P. VIMAWALA
 EXPIRES: NOVEMBER 30, 2002



S. M. KAZI
 EXPIRES: NOV. 30, 2001
 FOR "TS" DRAWINGS ONLY



WILLIAM H. WALTON
 EXPIRES: NOVEMBER 30, 2002



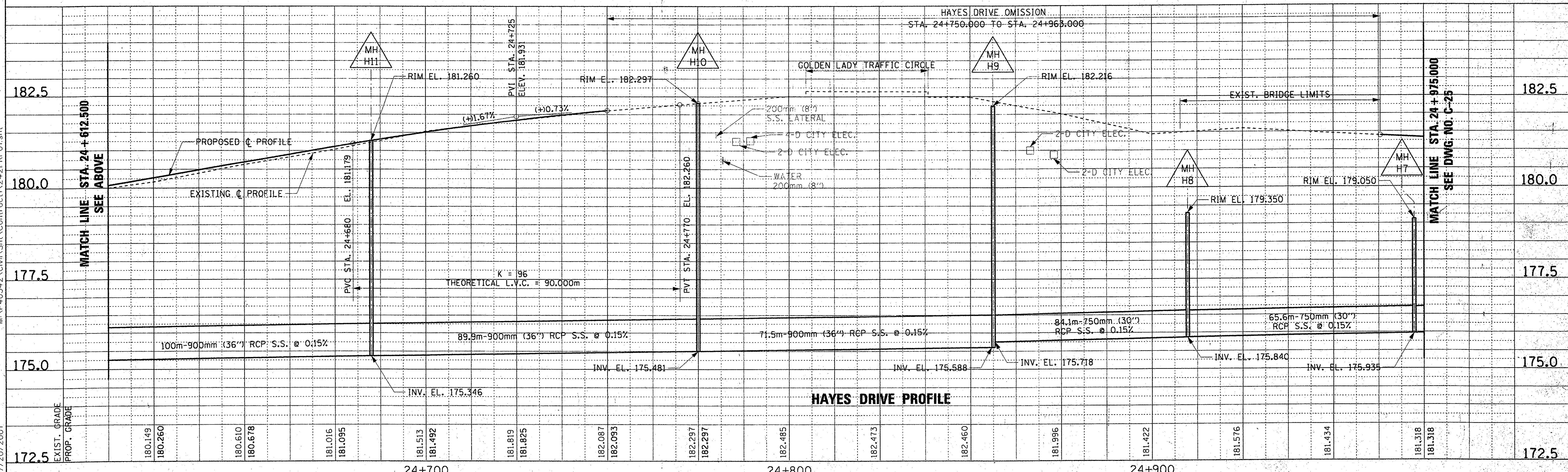
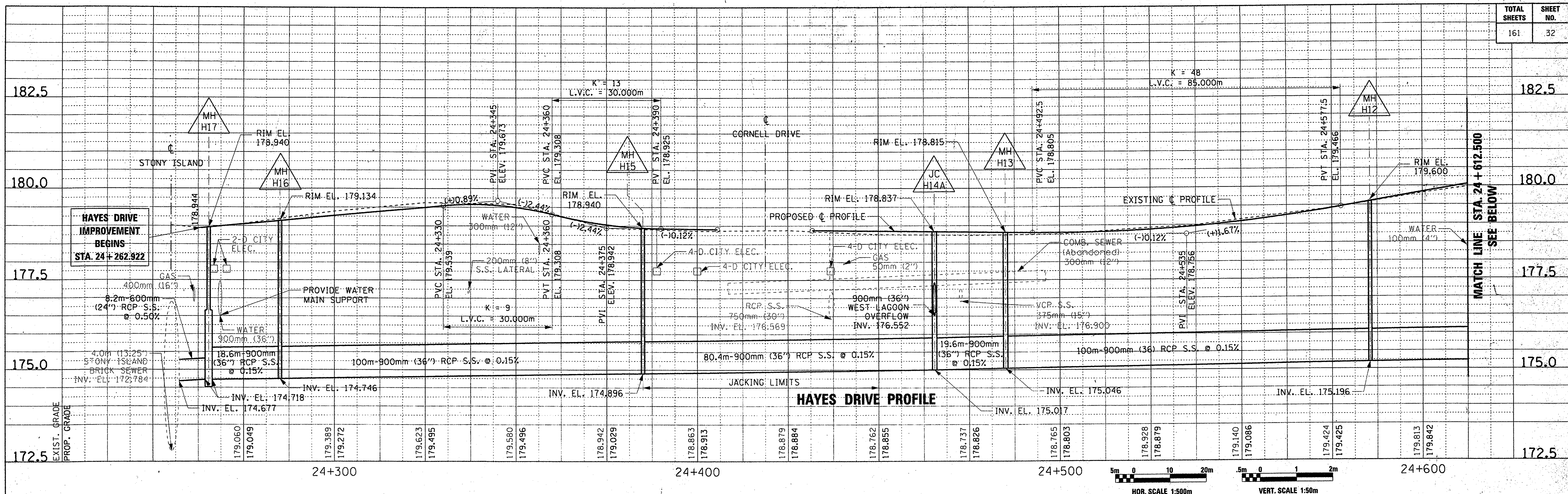
SYED M. KAZI
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 FOR "DS" DRAWINGS ONLY

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DATE: _____ 19____
 APPROVED: *David Klein*
 PROJECT COORDINATOR
 APPROVED: *Dwight G. Adams* 5/30/01
 DEPUTY COMMISSIONER, BUREAU OF TRAFFIC
 APPROVED: *Bruce Worthington*
 CHIEF HIGHWAY ENGINEER
 APPROVED: *Alfred Cunningham*
 DEPUTY COMMISSIONER, BUREAU OF STREETS
 APPROVED: *J. D. St.*
 COMMISSIONER

CITY OF CHICAGO
 DEPARTMENT OF STREETS AND SANITATION
 APPROVED: *John J. Walsh*
 DEPUTY COMMISSIONER, BUREAU OF ELECTRICITY
 APPROVED: *John J. Walsh*
 DEPUTY COMMISSIONER, BUREAU OF FORESTRY
 APPROVED: *John J. Walsh*
 COMMISSIONER

CITY OF CHICAGO
 DEPARTMENT OF WATER
 APPROVED: *Richard B. Rice*
 CHIEF ENGINEER
 APPROVED: *Richard B. Rice*
 COMMISSIONER

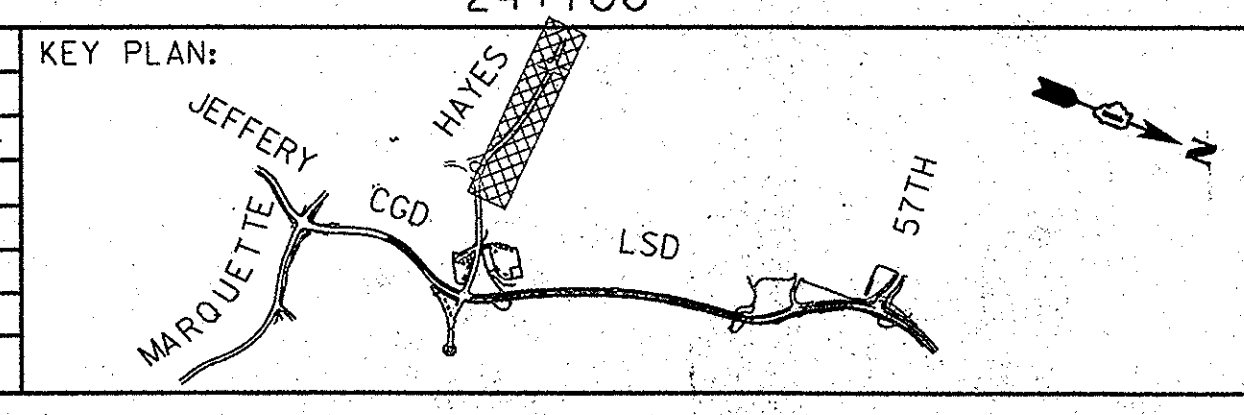
CITY OF CHICAGO
 DEPARTMENT OF SEWERS
 APPROVED: *Bill Klein* 6/28/01
 CHIEF ENGINEER
 APPROVED: *John J. Walsh*
 FIRST DEPUTY COMMISSIONER
 APPROVED: *John J. Walsh*
 COMMISSIONER



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07/20/2001

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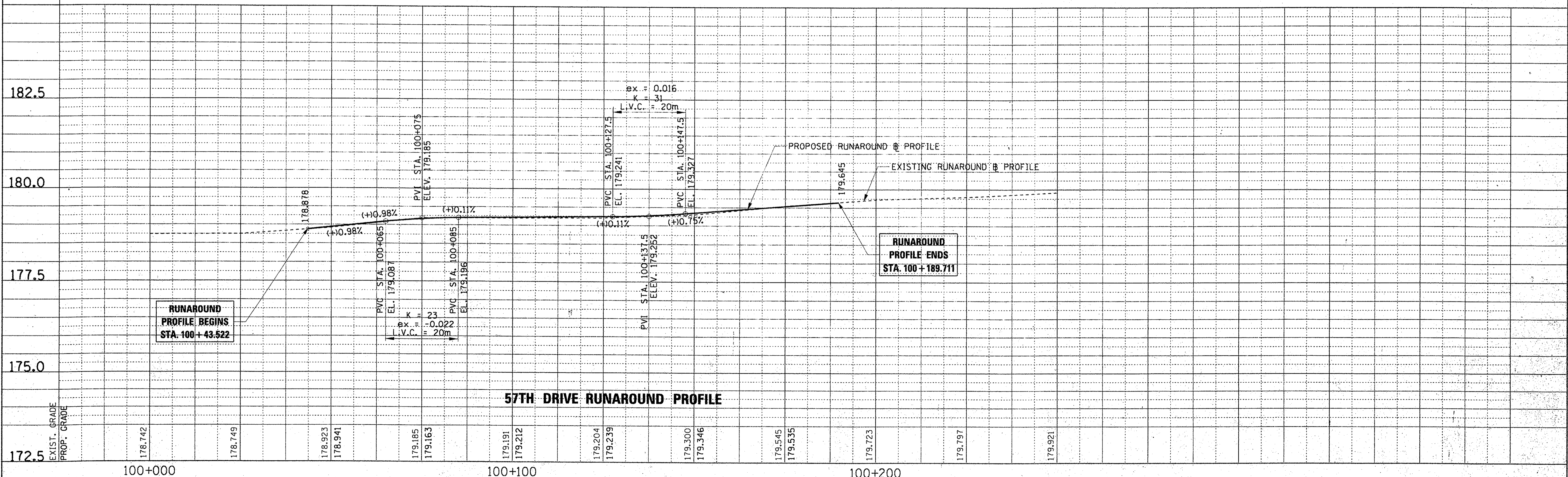
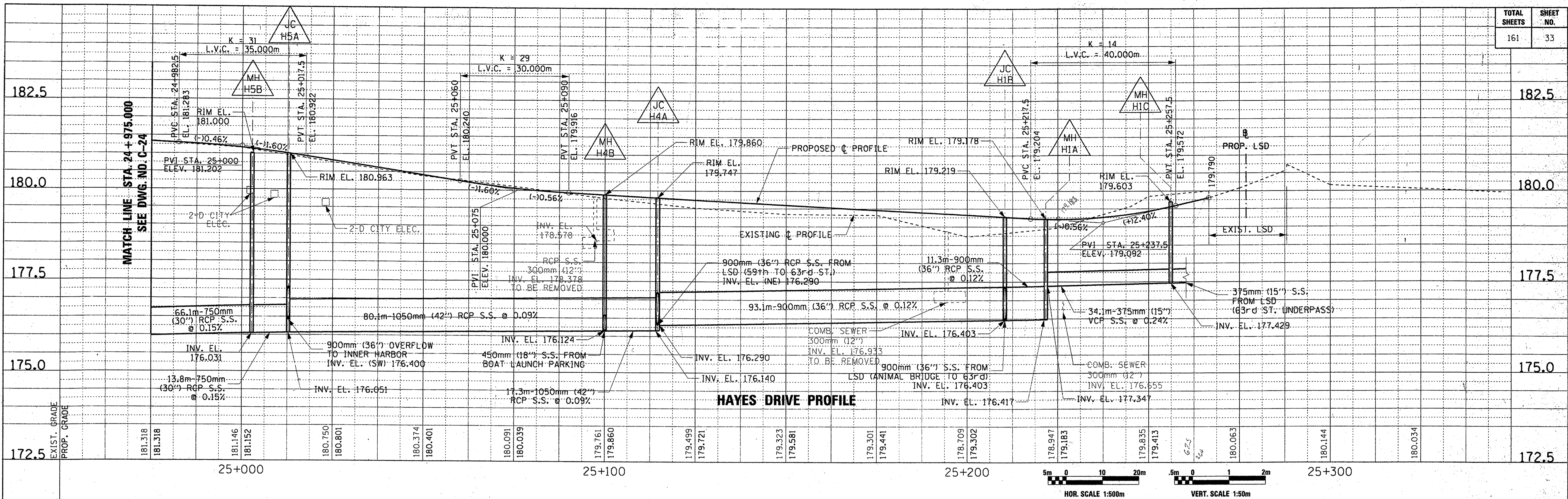
CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOER TOWSEND ENVIRONMENTAL ENGINEERS, INC.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1

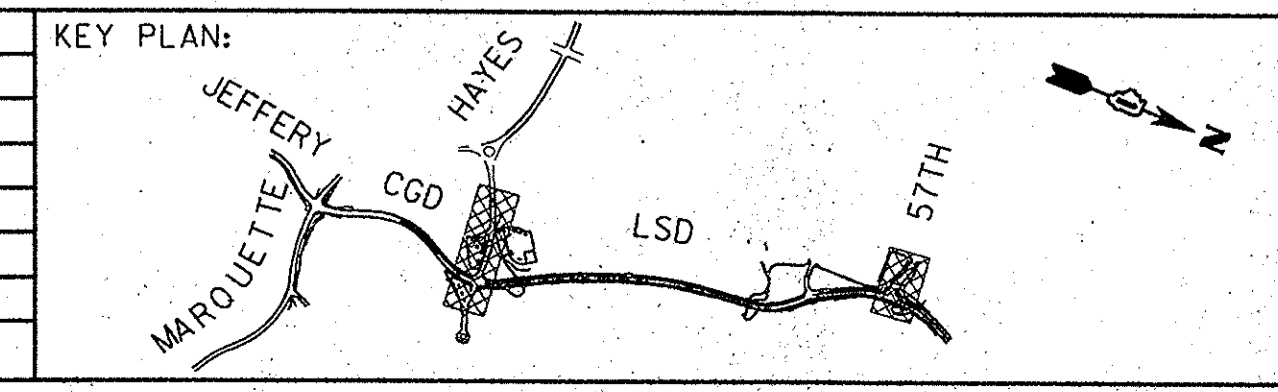
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DRAWING NO. C-24
PROJECT NO. B-0-242



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NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1**

PROFILE

**HAYES DRIVE
57TH DRIVE RUNAROUND**

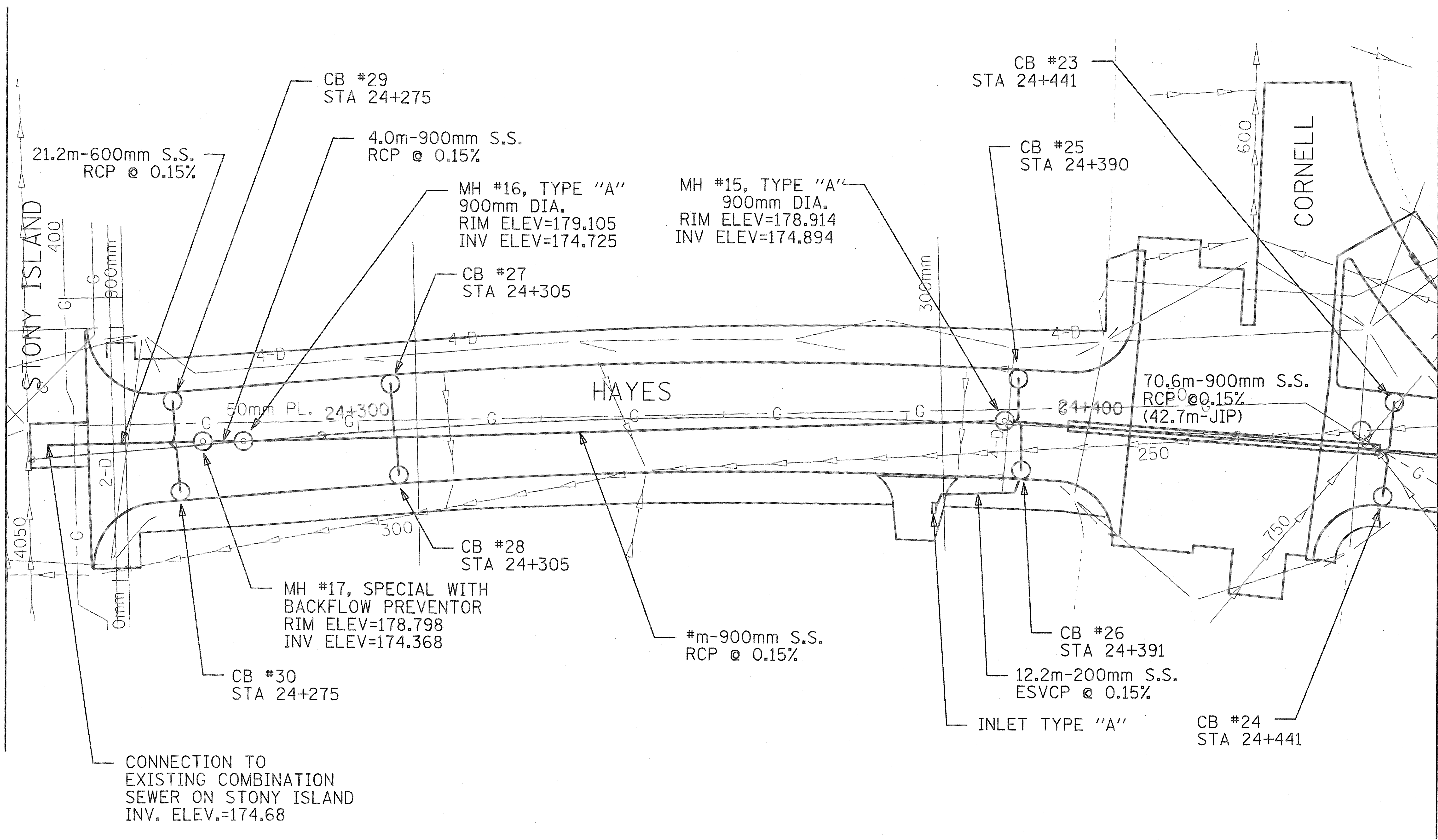
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DRAWING NO.	C-25
PROJECT NO.	B-0-242

07/20/2001 MAP40342\Civil\SH\Contract\242PRF02.sht

BEGIN IMPROVEMENT

MATCHLINE SHEET 2



DATE: 07/15/09

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DATE:	
SCALE:	
FILE:	
NO. BY DATE DESCRIPTION	
REVISIONS	

KEY PLAN:

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

SOUTH LSD RECON.
JACKSON PARK

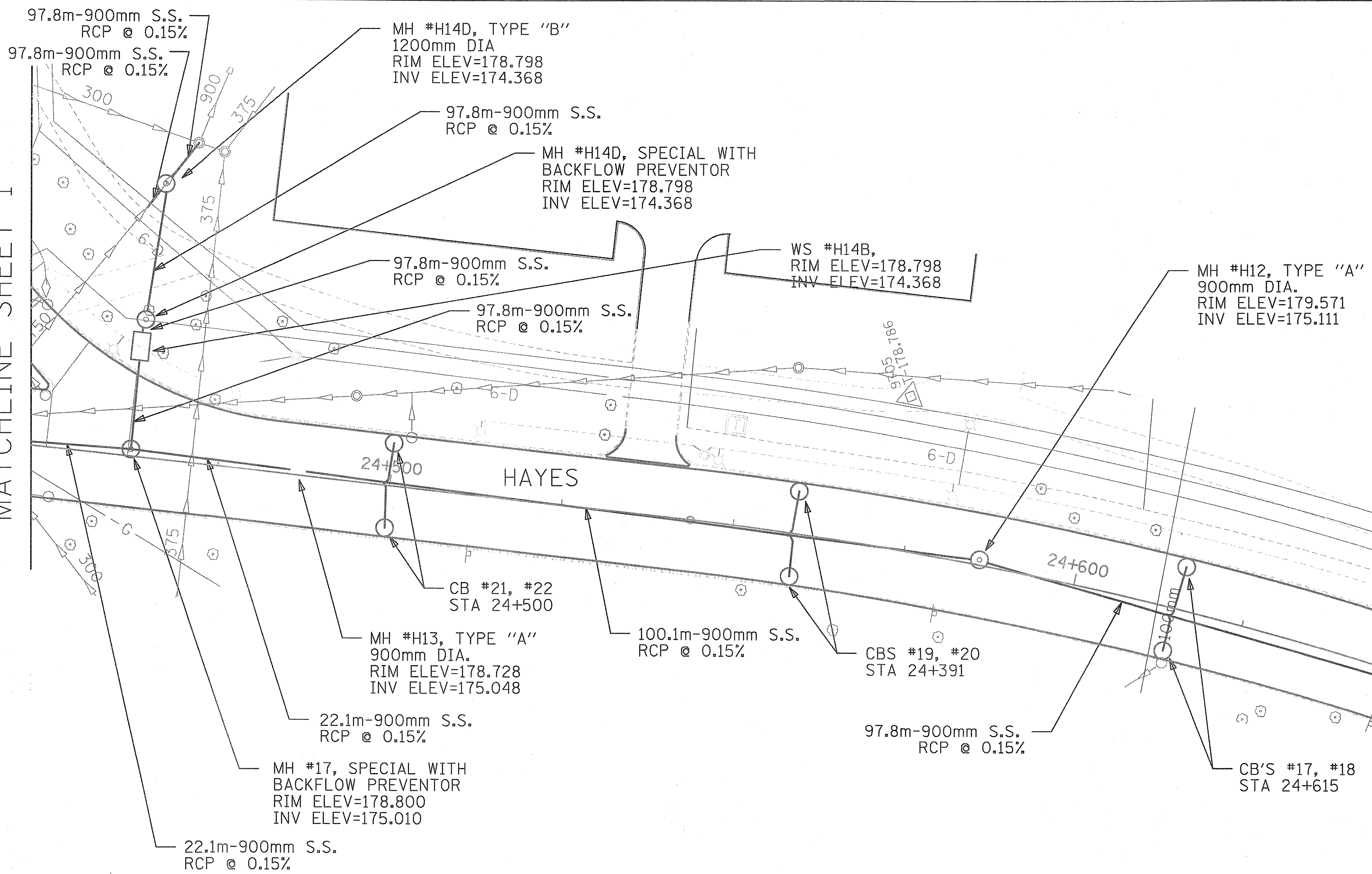
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RECORD DRAWINGS
SEWER INSTALLATION

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CONTRACT NO.
SHEET NO.
PROJECT NO.

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MATCHLINE SHEET 3

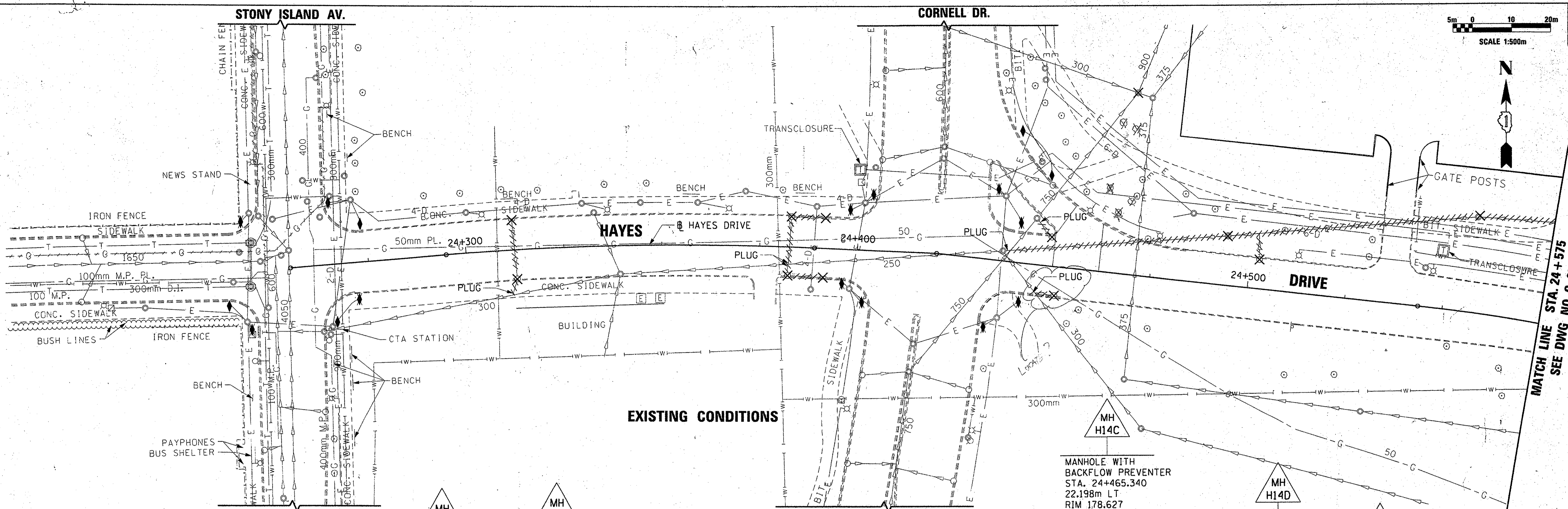


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REVISIONS			

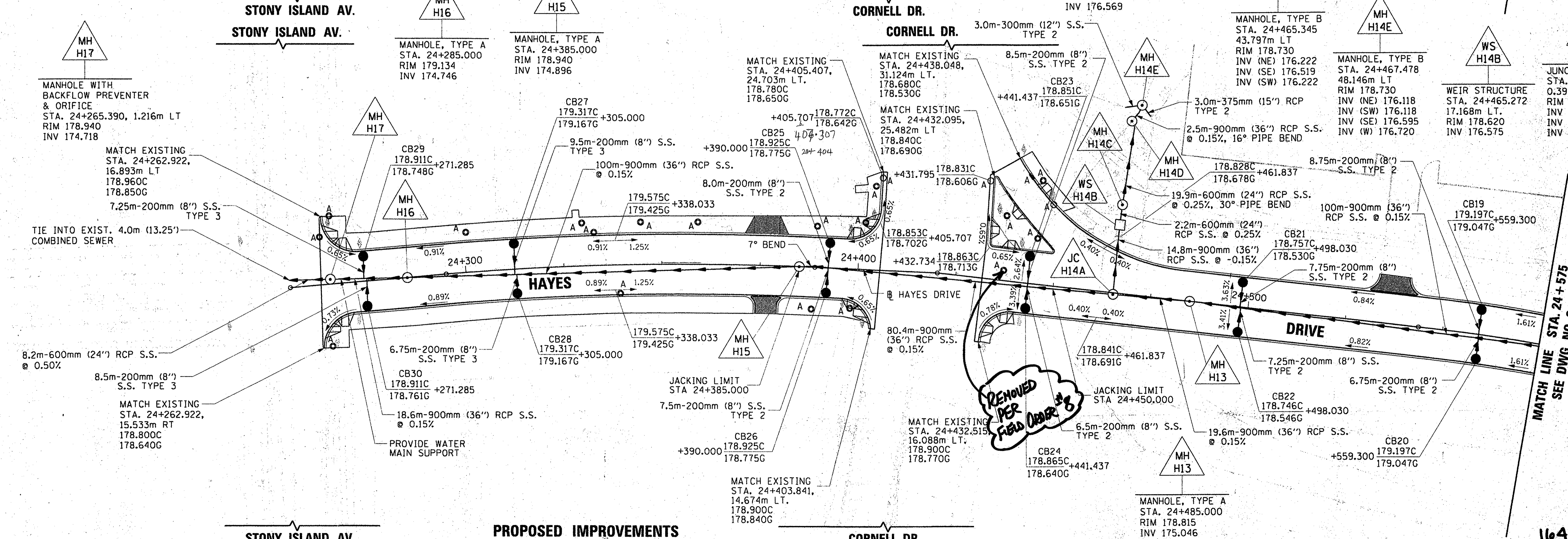
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	BUREAU OF HIGHWAYS		SOUTH LSD RECON. JACKSON PARK	SEWER INSTALLATION	PROJECT NO.

16A0090037



EXISTING CONDITIONS

MATCH LINE STA. 24+575
SEE DWG NO. C-27



PROPOSED IMPROVEMENTS

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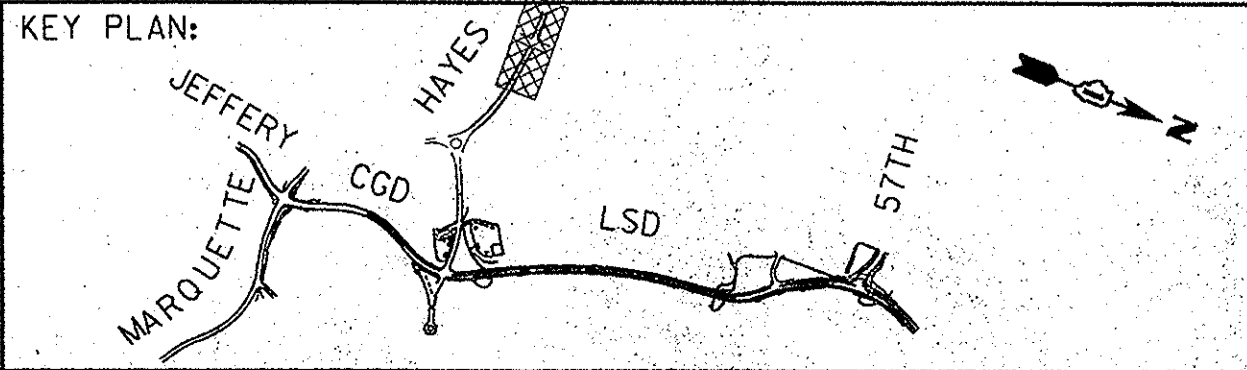
CORNELL DR.

MATCH LINE STA. 24+575
SEE DWG NO. C-27

1640090038

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DESIGN:	BH
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CHECKED:	MD
APPROVED:	SL
DATE:	7/23/01
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CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

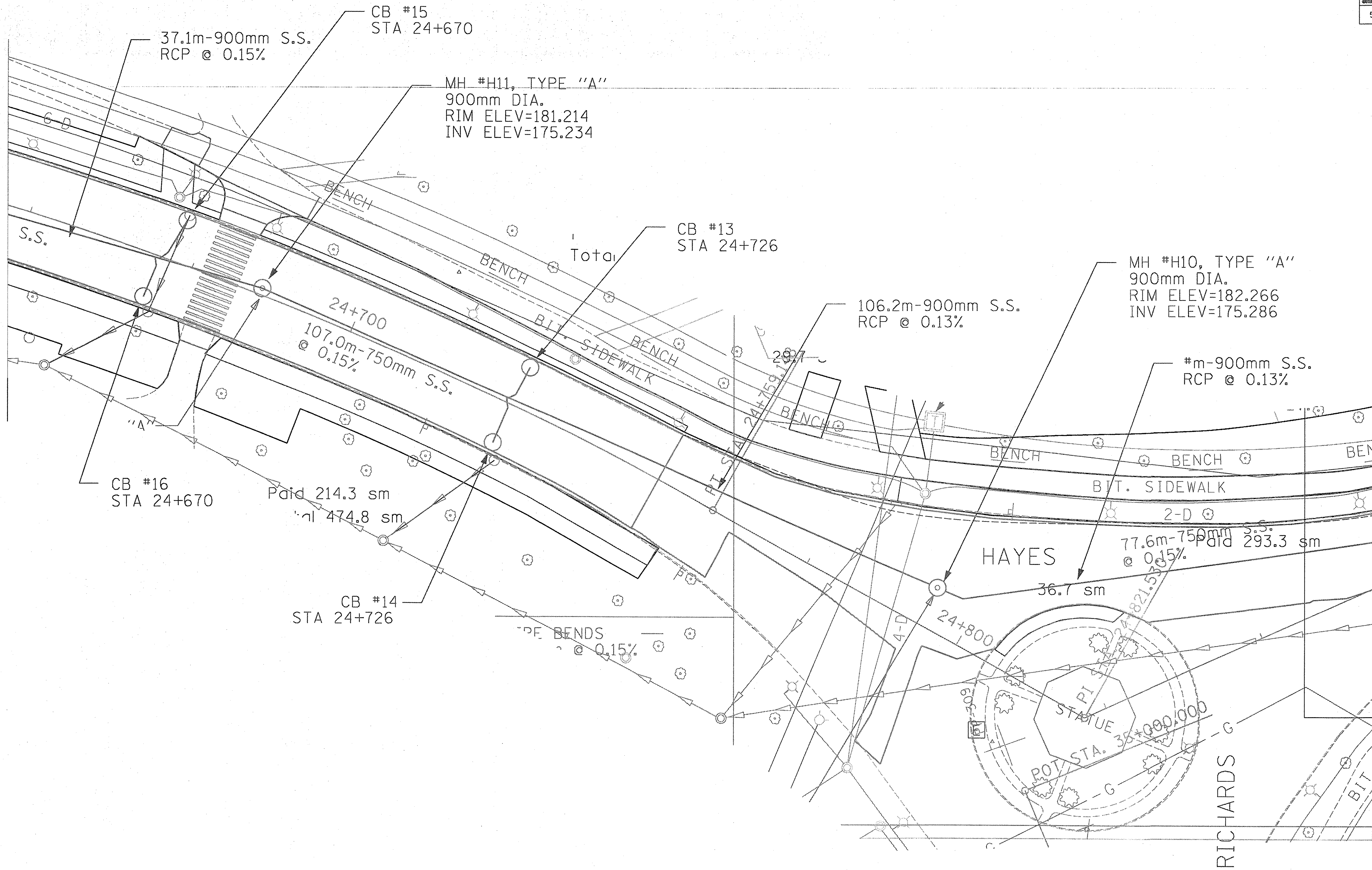
CTE ENGINEERS
CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1**

**DRAINAGE AND UTILITY PLAN
HAYES DRIVE**

CONTRACT NO.	00-80241-02-PV
DRAWING NO.	C-26
PROJECT NO.	B-0-242

MATCHLINE SHEET 2

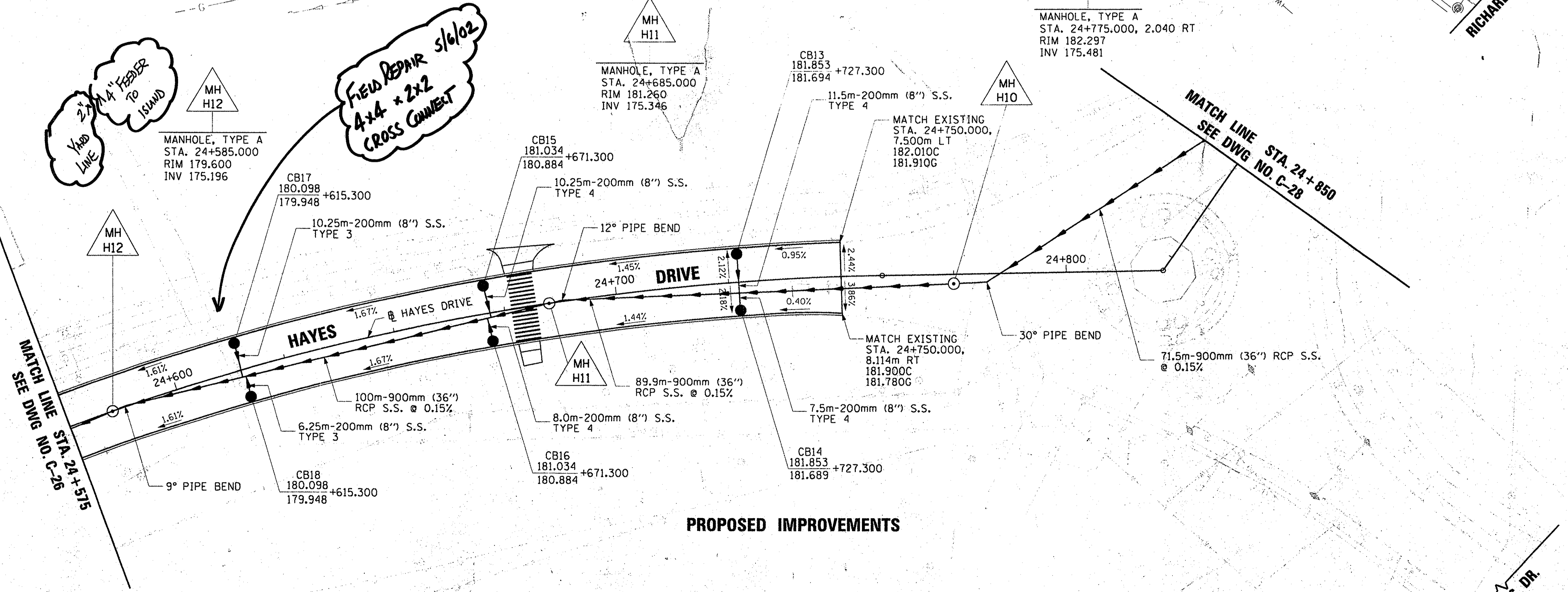
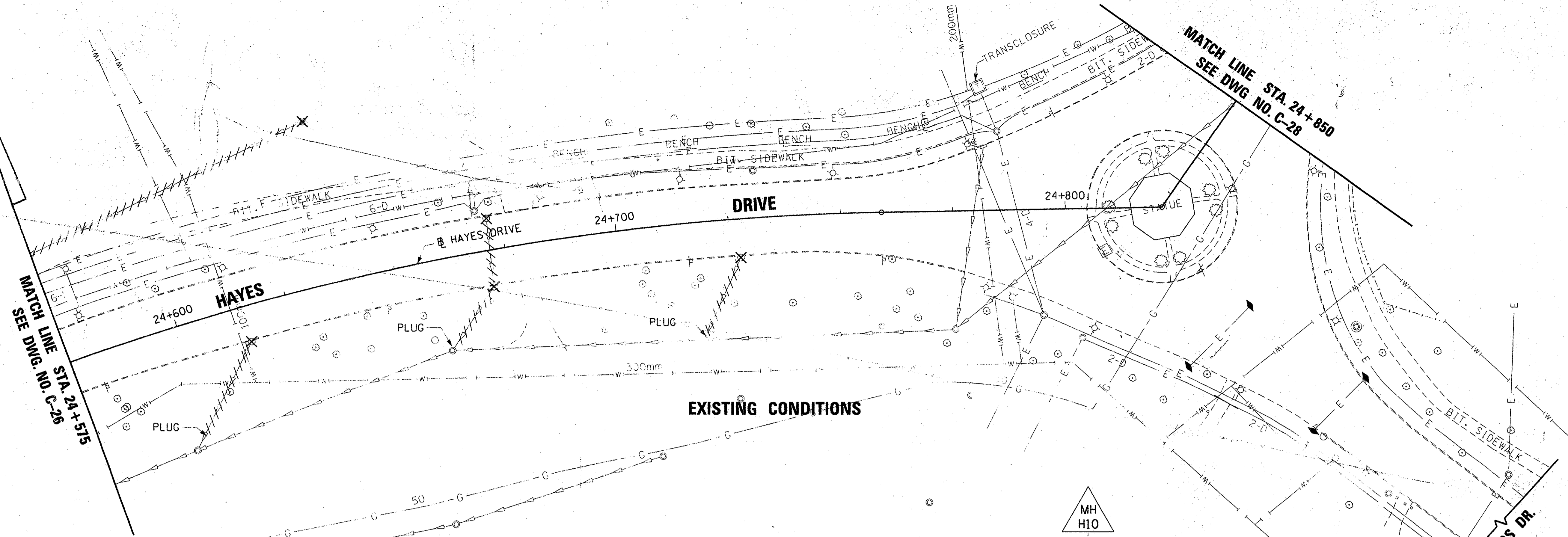
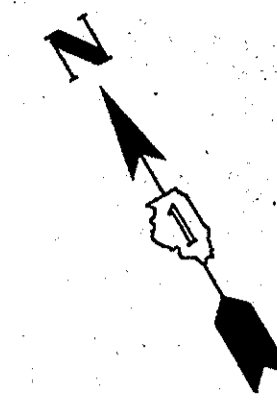


MATCHLINE SHEET 4

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NO.	BY	DATE	DESCRIPTION
REVISIONS			

KEY PLAN:	CITY OF CHICAGO		PLAN	CONTRACT NO.
	DEPARTMENT OF TRANSPORTATION		RECORD DRAWINGS	SHEET NO.
	BUREAU OF HIGHWAYS	SOUTH LSD RECON.	SEWER INSTALLATION	PROJECT NO.
		JACKSON PARK		

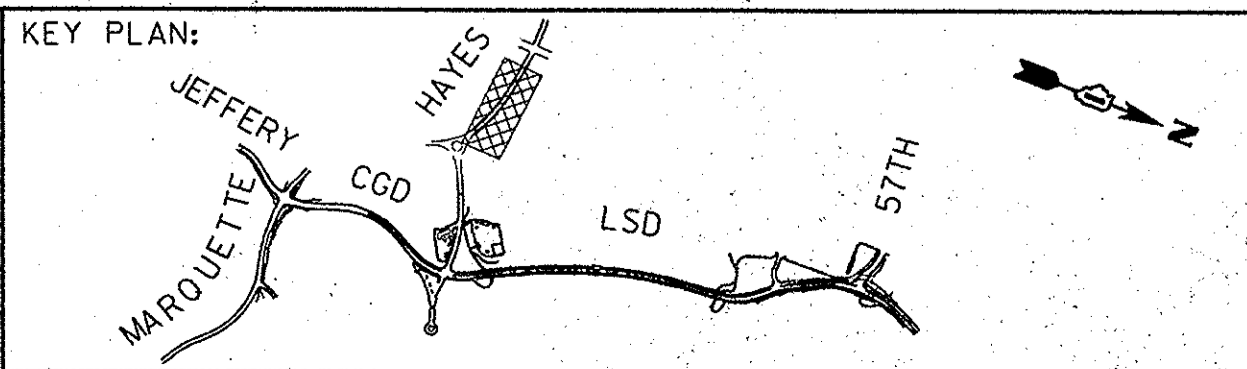
1640090039



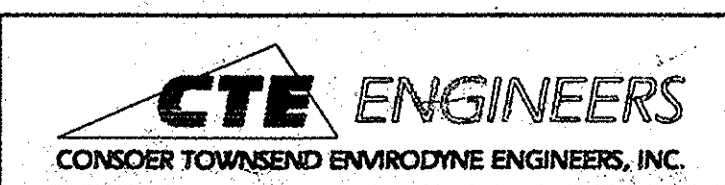
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07/20/2001

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CHECKED:	MD		
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DATE:	7/23/01		
SCALE:	1:500m		
FILE:			
NO.	BY	DATE	DESCRIPTION
REVISIONS			



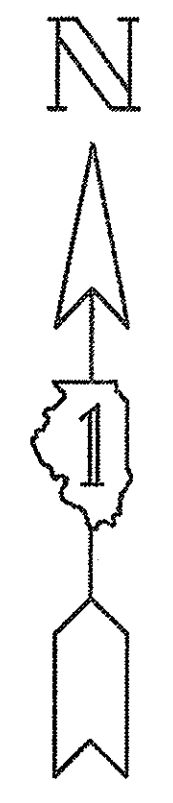
CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS



SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1

DRAINAGE AND UTILITY PLAN
HAYES DRIVE

1640090040
CONTRACT NO.
00-B0241-02-PV
DRAWING NO.
C-27
PROJECT NO. B-0-242



MATCHLINE SHEET 3

MH #H12, TYPE "A" 900mm DIA.
RIM ELEV=179.798
INV ELEV=175.111

69.5m-750mm S.S.
RCP @ 0.15%

51.7m-750mm S.S.
RCP @ 0.15%

MH #H12, TYPE "A"
900mm DIA.
RIM ELEV=181.033 CB #7, 8
INV ELEV=175.833 STA 25+070

CB #9
STA 25+016

CB #9
STA 25+016

MH #H12, TYPE "A"
900mm DIA.
RIM ELEV=179.798
INV ELEV=175.111

11.1m-300mm S.S.
RCP @ 0.15%

43.3m-750mm S.S.
RCP @ 0.15%

CB'S #11, #12
STA 24+965

22.4m-200mm S.S.
RCP @ 0.15%

25+000

CB #10
STA 25+018

74.3m-900mm S.S.
RCP @ 0.15%

HAYES

MH #H12, TYPE "A" 900mm DIA.
RIM ELEV=179.798
INV ELEV=175.111

MH #H12, TYPE "A" 900mm DIA.
RIM ELEV=179.798
INV ELEV=175.111

CONC FES #H12, 750mm DIA.
INV ELEV=175.111

16.8m-900mm S.S.
RCP @ 0.15%

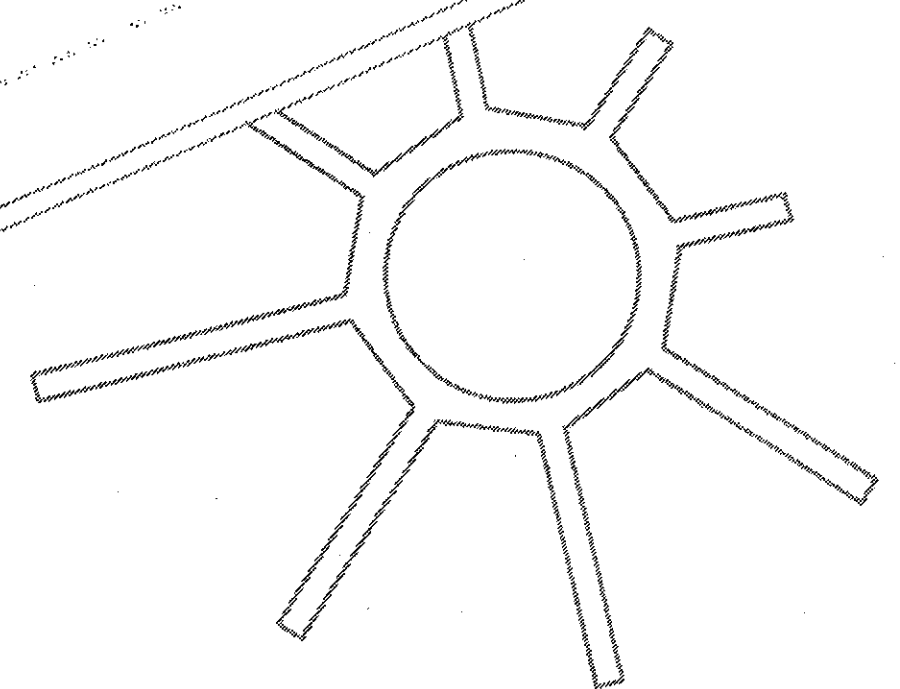
3.1m-900mm S.S.
RCP @ 0.15%

7.3m-900mm S.S.
RCP @ 0.15%

22.8m-750mm S.S.
RCP @ 0.15%

MH #H9, TYPE "A" 900mm DIA.
RIM ELEV=179.798
INV ELEV (W) =175.111
INV ELEV (N) =

MH #H12, TYPE "A"
900mm DIA.
RIM ELEV=181.216
INV ELEV=175.776



DESIGN:			
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REVISIONS			
NO.	BY	DATE	DESCRIPTION

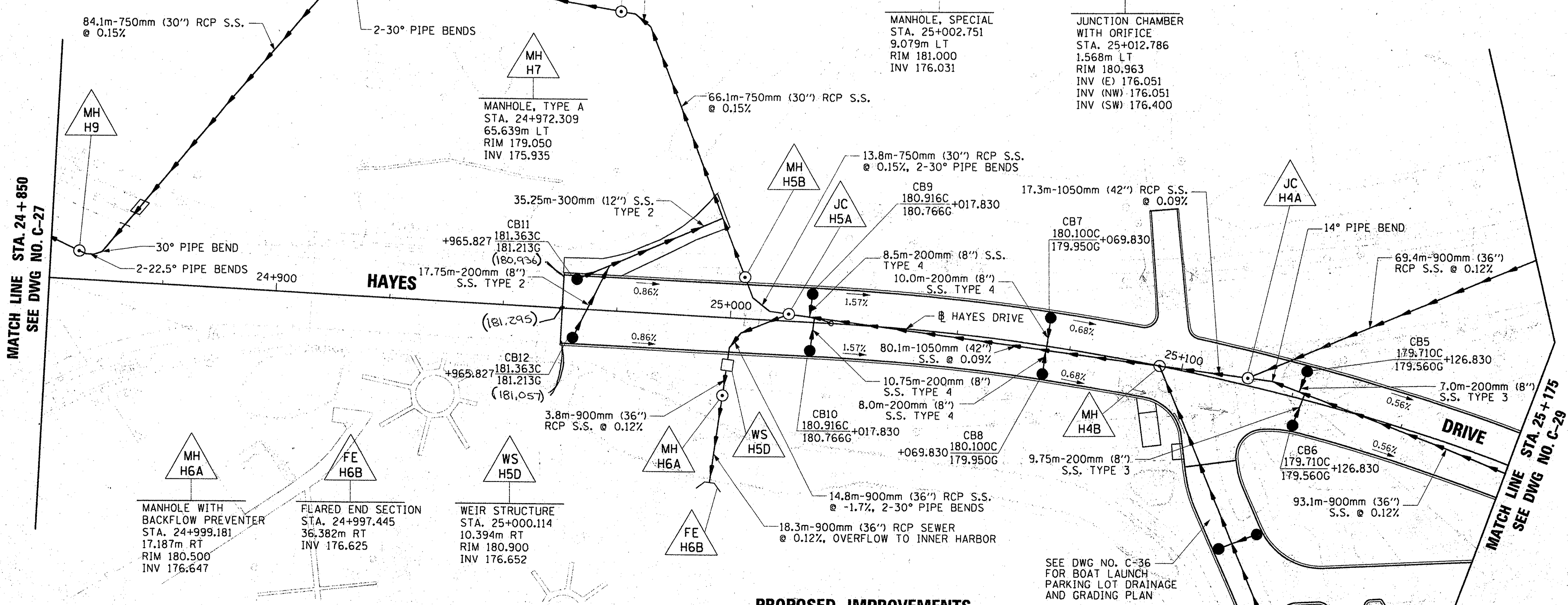
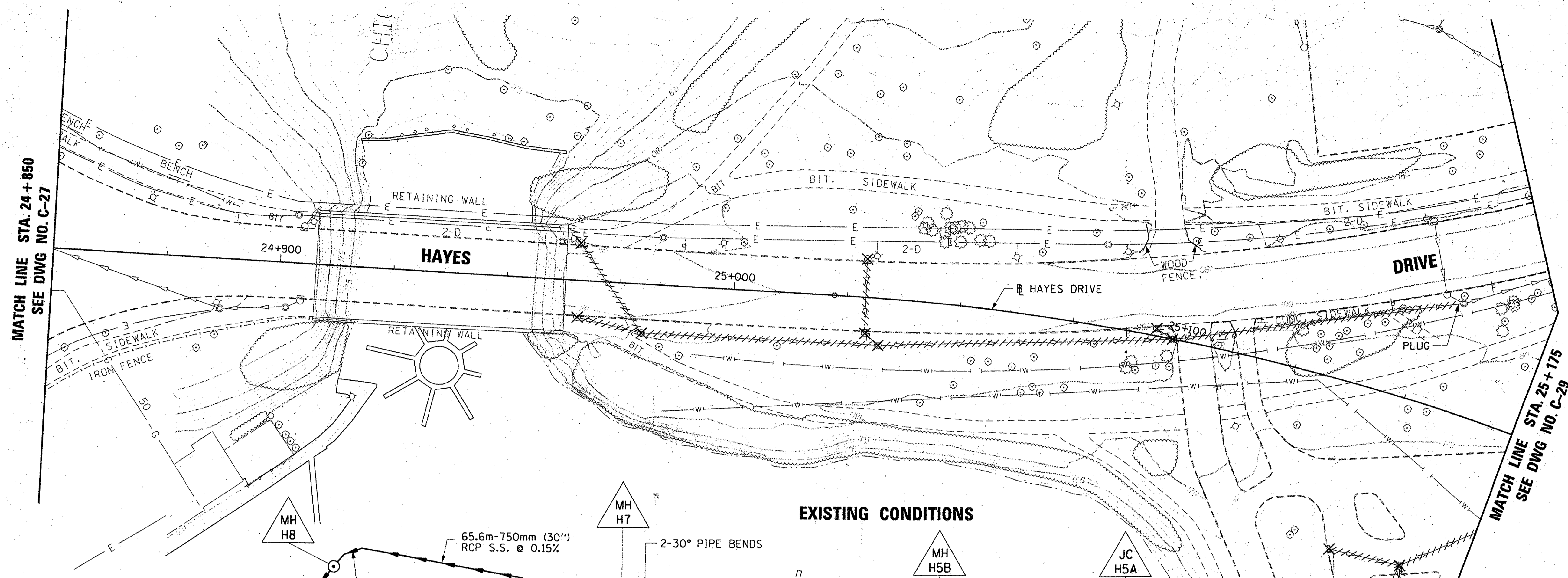
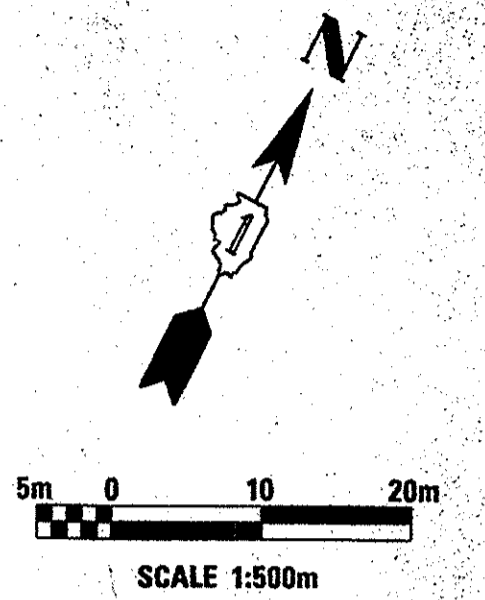
KEY PLAN:

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

SOUTH LSD RECON.
JACKSON PARK

PLAN
RECORD DRAWINGS
SEWER INSTALLATION

16A0090041
CONTRACT NO.
SHEET NO.
PROJECT NO.

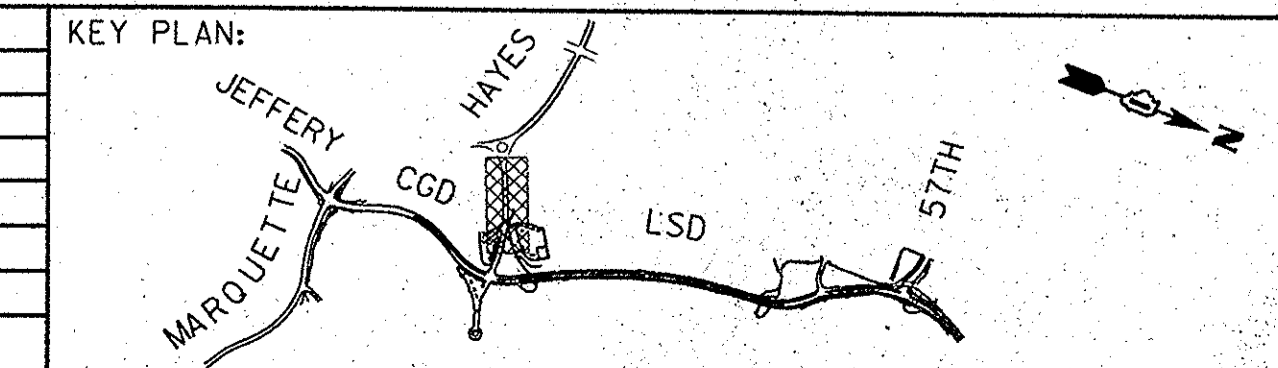


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07/20/2001

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APPROVED:	SL
DATE:	7/23/01
SCALE:	1:500m
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NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSOR TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

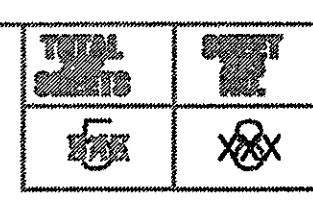
**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 CONTRACT 1**

1640090042

CONTRACT NO.
00-B0241-02-PV

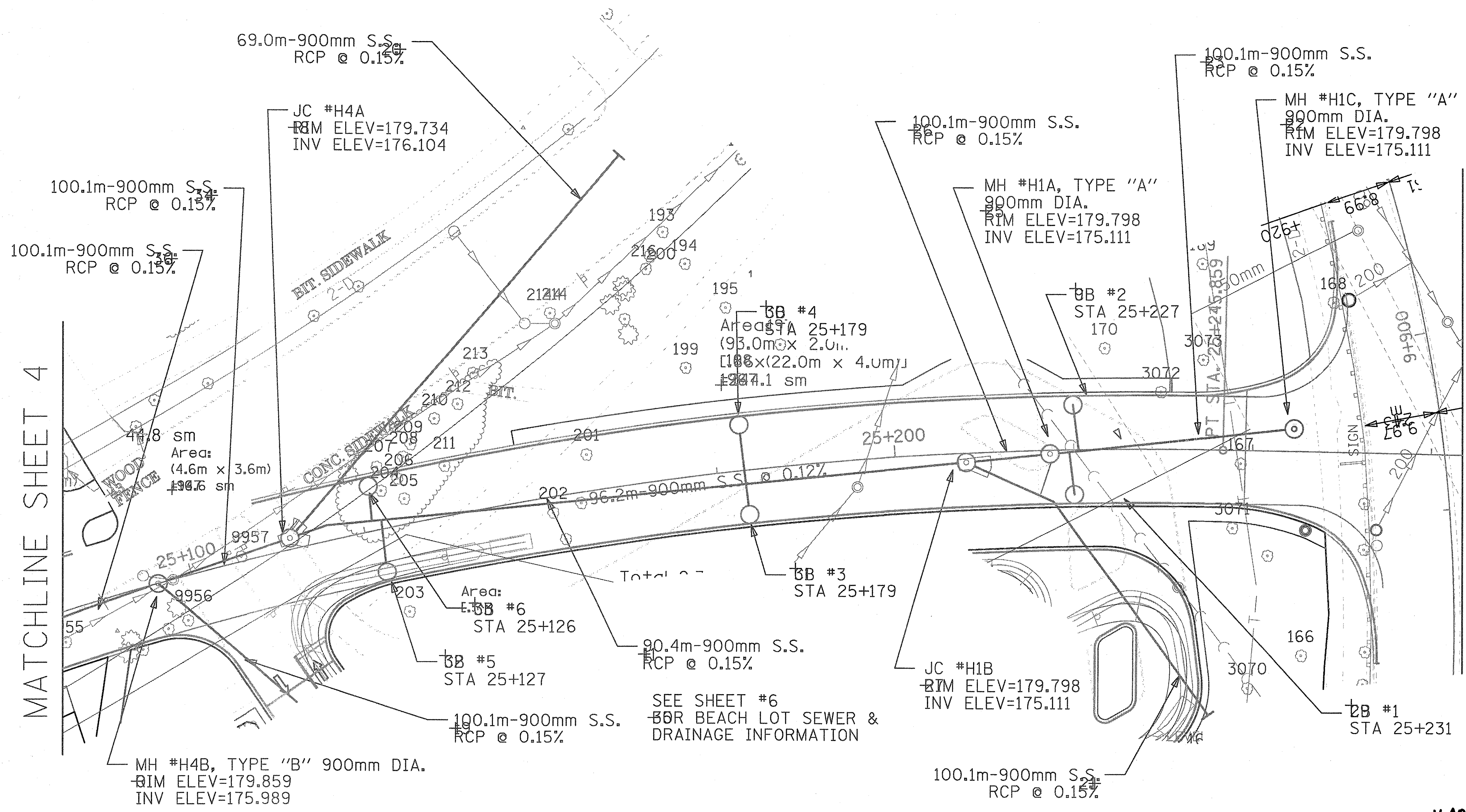
DRAWING NO.
C-28

PROJECT NO. B-0-242



MATCHLINE SHEET 4

END IMPROVEMENT



DESIGN: CTE				
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DATE: 04/20/02				
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REVISIONS				

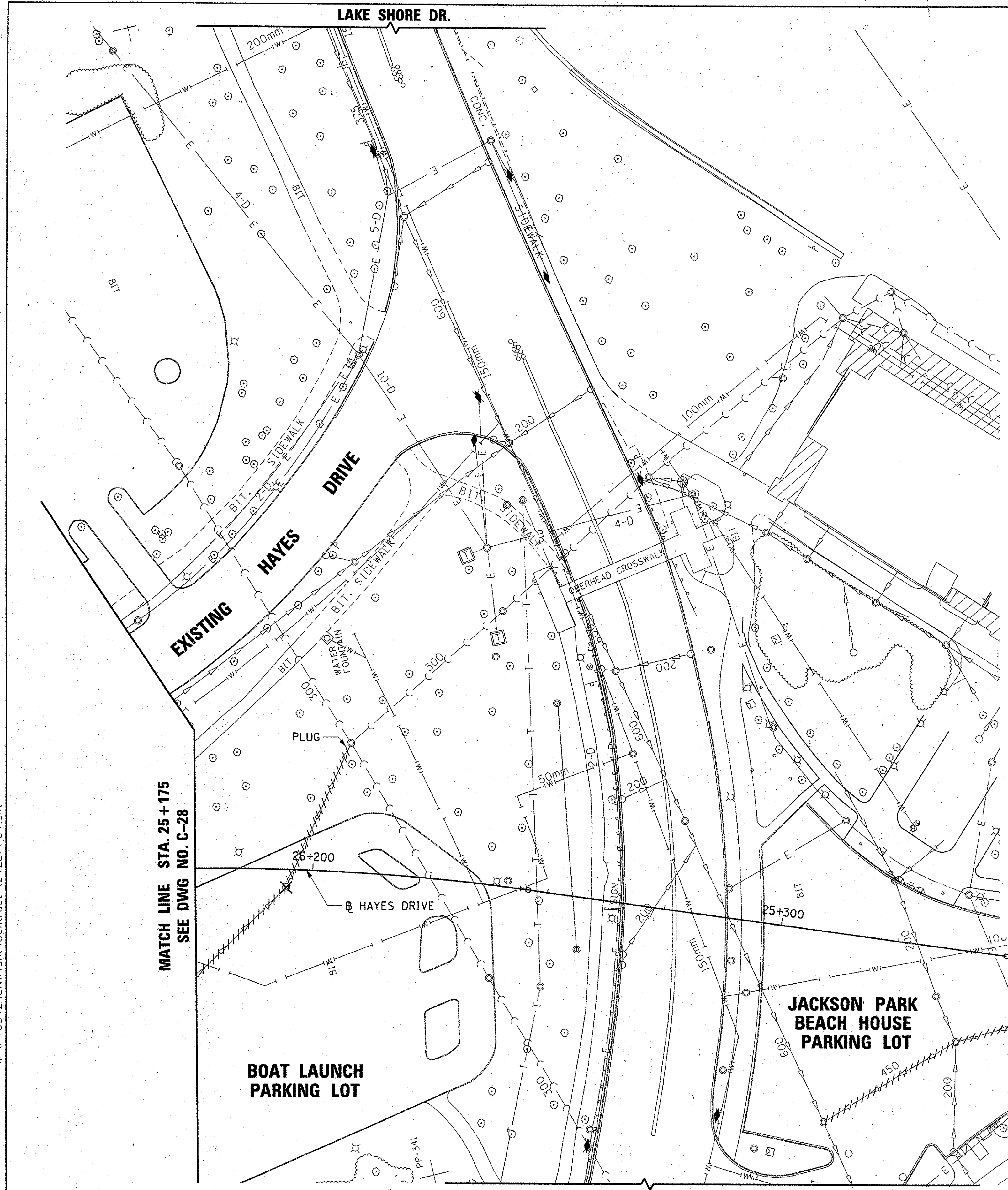
KEY PLAN:	
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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

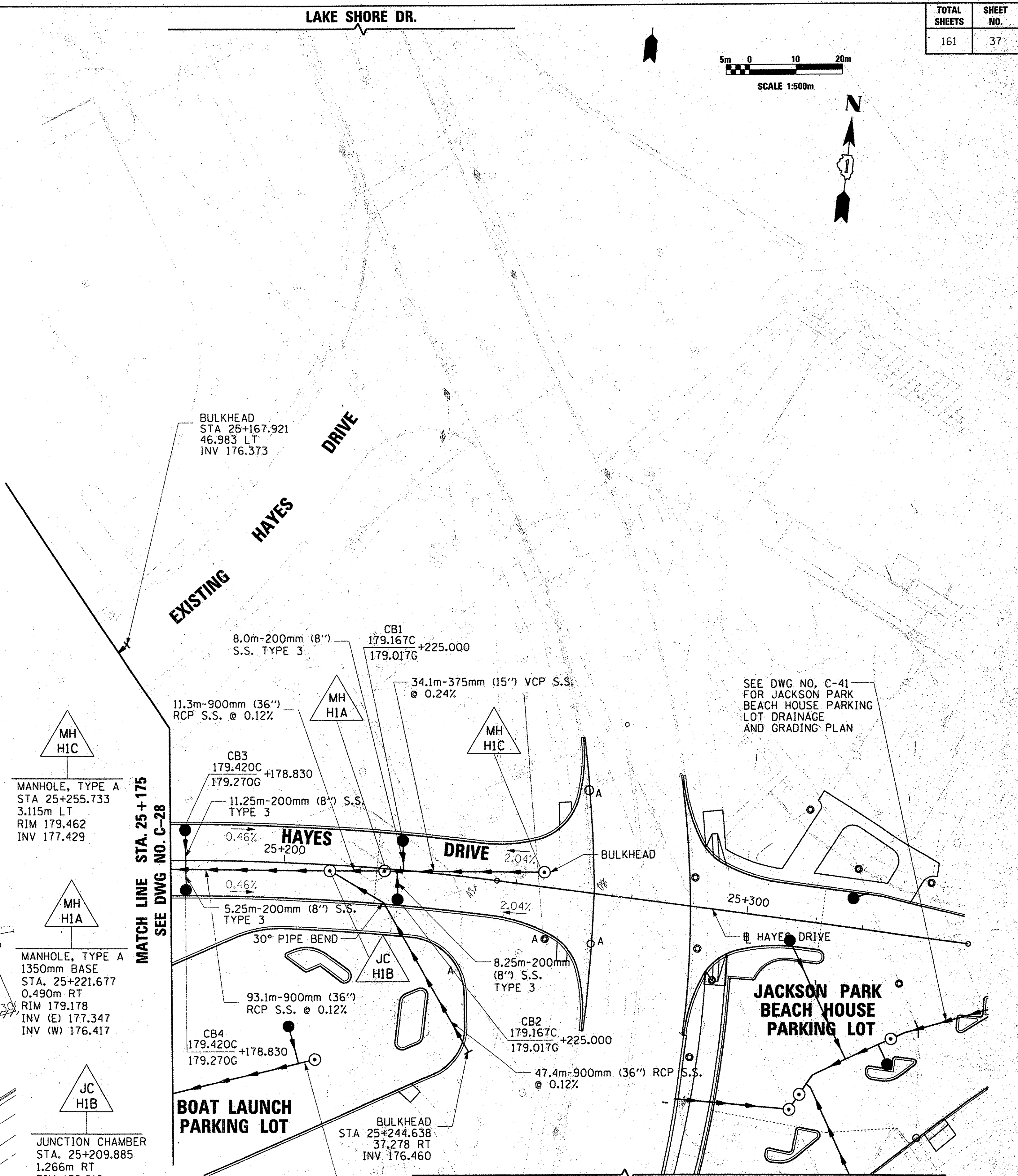
SOUTH LSD RECON.
JACKSON PARK

PLAN
RECORD DRAWINGS
SEWER INSTALLATION

1640090043
CONTRACT NO.
SHEET NO.
DWG NO.
PROJECT NO.



EXISTING CONDITIONS



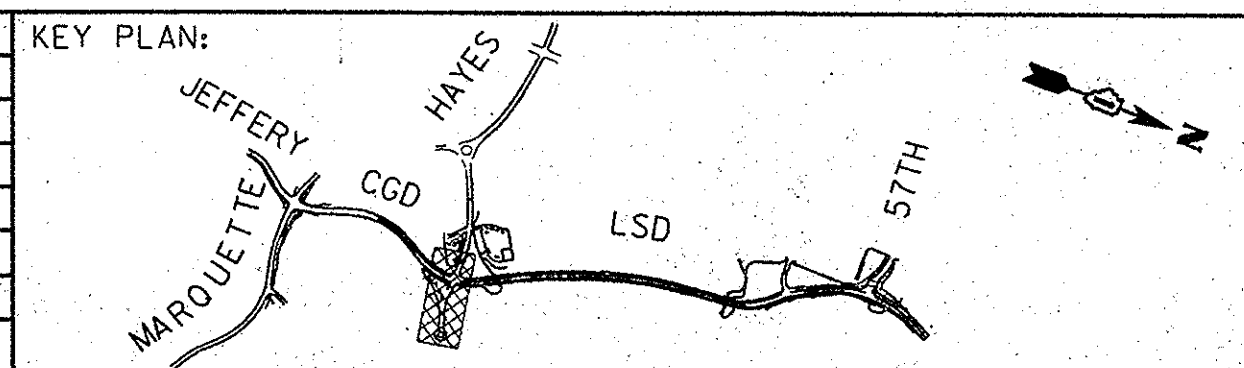
PROPOSED IMPROVEMENTS

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07/20/2001

DESIGN:	BH
DRAWN:	BH
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APPROVED:	SL
DATE:	7/23/01
SCALE:	1:500m
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NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1

DRAINAGE AND UTILITY PLAN
HAYES DRIVE

1640090044
CONTRACT NO.
00-B0241-02-PV
DRAWING NO.
C-29
PROJECT NO. B-0-242

MH #BH11, TYPE "A"
1200mm DIA.
RIM ELEV=178.798
INV ELEV=174.368

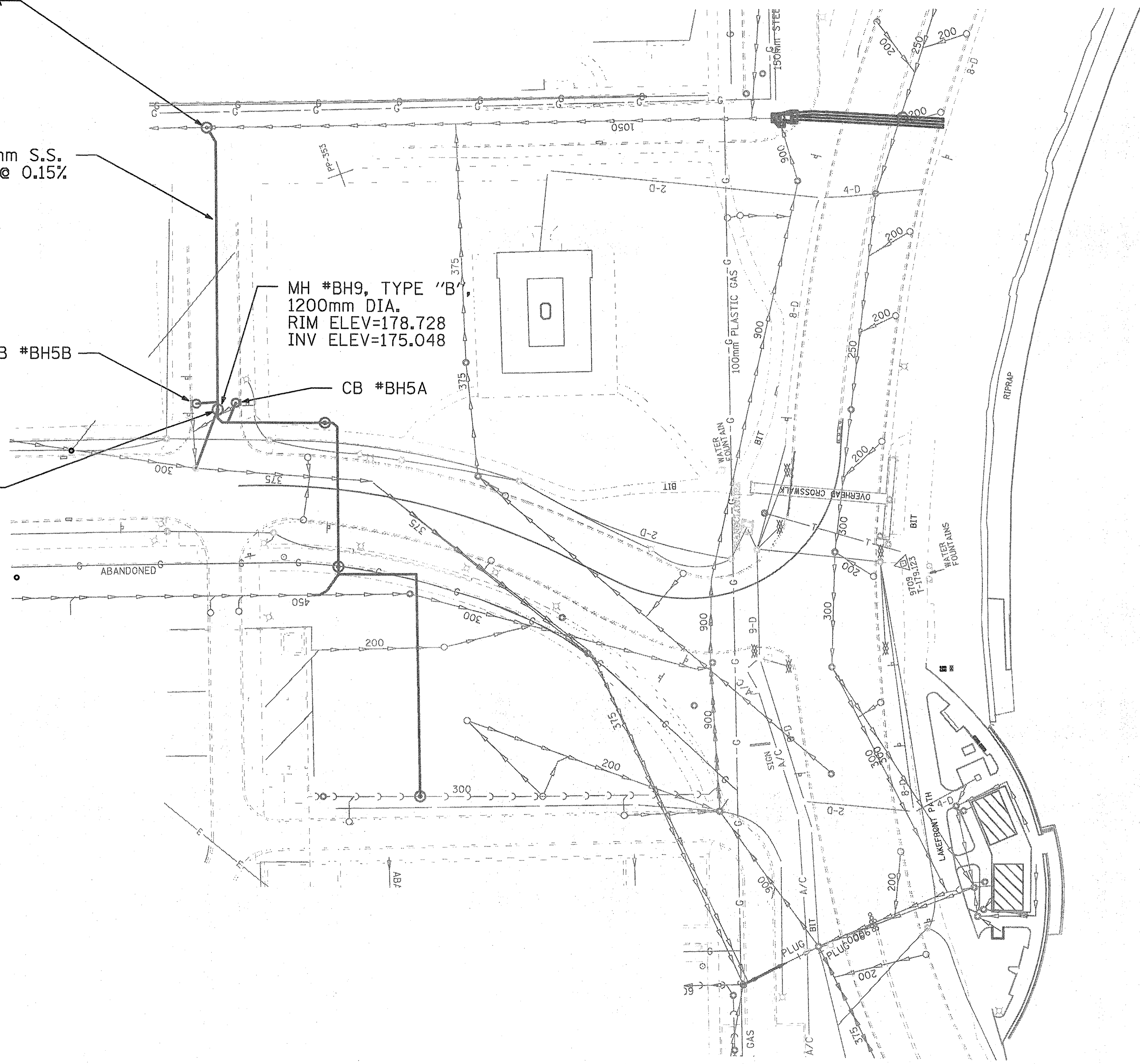
97.8m-900mm S.S.
RCP @ 0.15%

MH #BH9, TYPE "B"
1200mm DIA.
RIM ELEV=178.728
INV ELEV=175.048

CB #BH5B

CB #BH5A

MH #BH11, TYPE "A"
1200mm DIA.
RIM ELEV=178.798
INV ELEV=174.368



DATE

DATE

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	NO.	BY	DATE	DESCRIPTION
	REVISIONS			

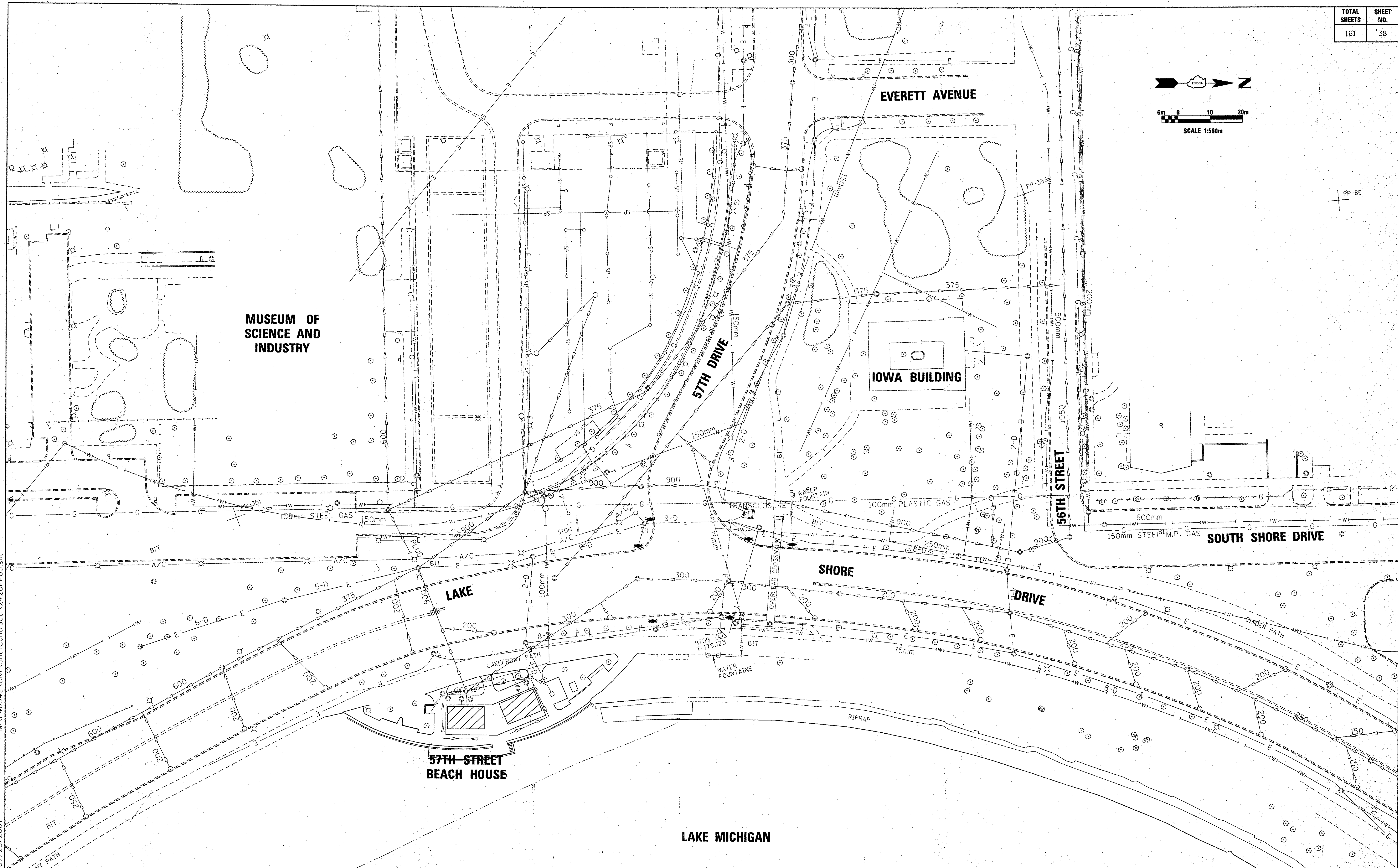
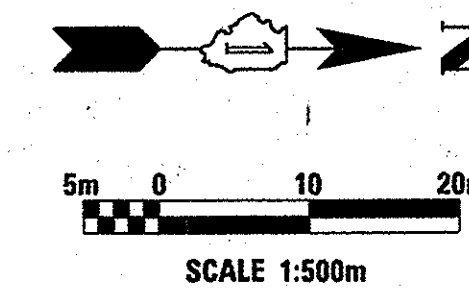
KEY PLAN:

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

SOUTH LSD RECON.
JACKSON PARK

PLAN
RECORD DRAWINGS
SEWER INSTALLATION

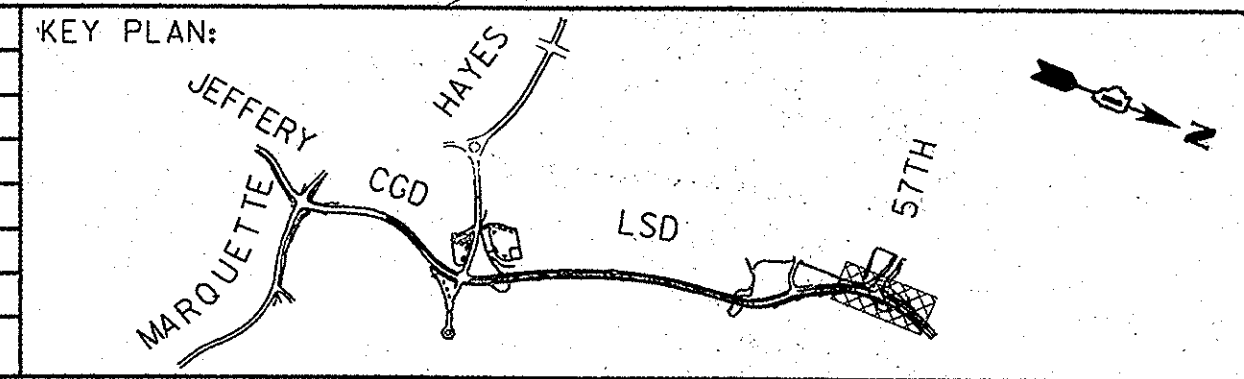
16A0090045
CONTRACT NO.
SHEET NO.
PROJECT NO.



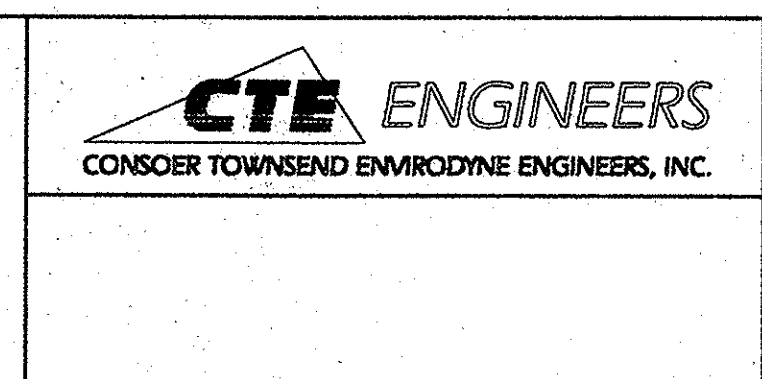
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07/20/2001

DESIGN: DM				
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DATE: 7/23/01				
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	REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS



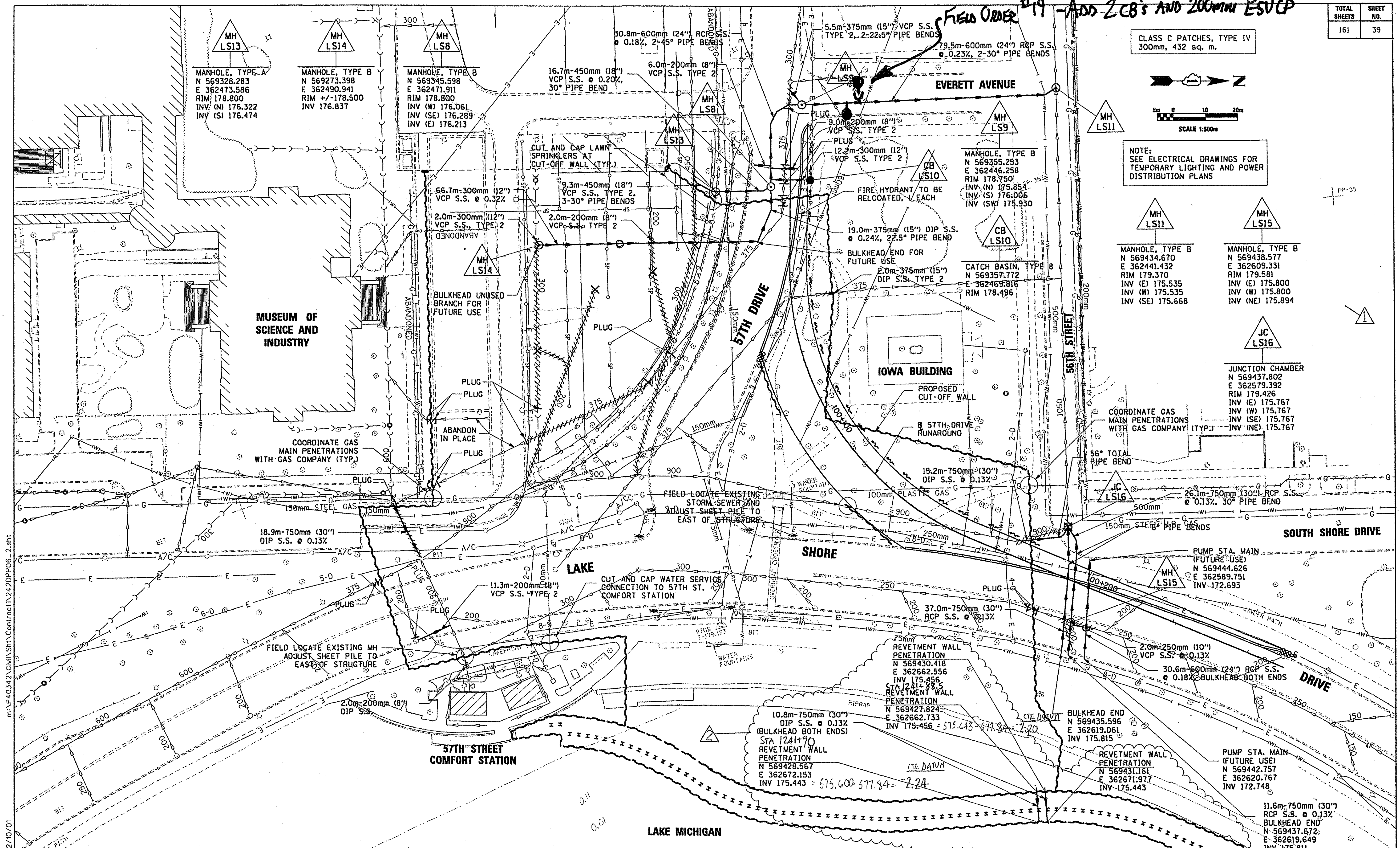
SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1

EXISTING DRAINAGE AND UTILITY PLAN
57th DRIVE / LAKE SHORE DRIVE

CONTRACT NO. 00-B0241-02-PV
 DRAWING NO. C-30
 PROJECT NO. B-0-242

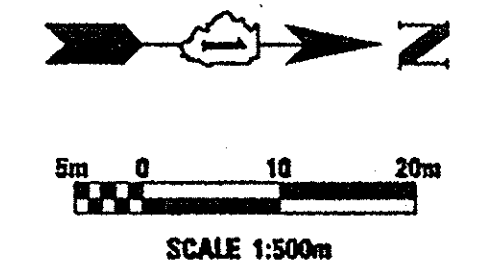
1640090046

TOTAL SHEETS	SHEET NO.
161	39



FIELD ORDER #19 - ADD 2 CB'S AND 200mm ESUCP

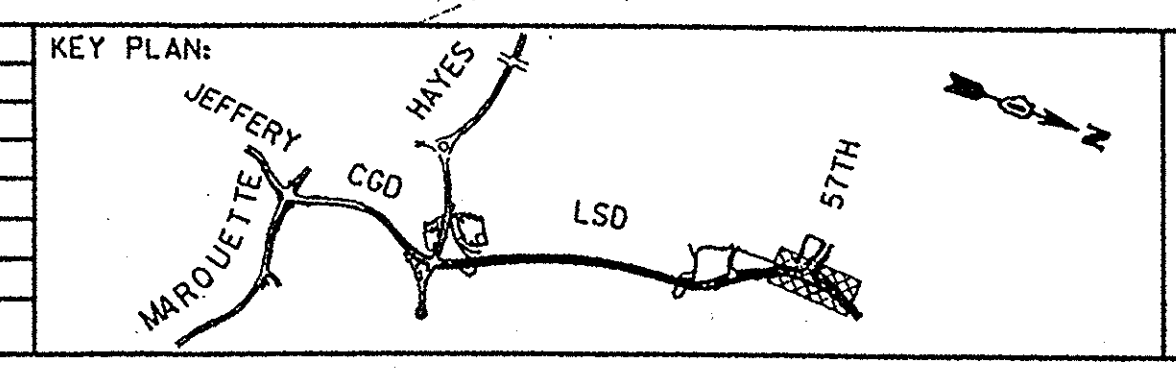
CLASS C PATCHES, TYPE IV
300mm, 432 sq. m.



NOTE:
SEE ELECTRICAL DRAWINGS FOR
TEMPORARY LIGHTING AND POWER
DISTRIBUTION PLANS

12/10/01
m:\p40344\Civil\SH\Contract\11242\DPPO6_2_sht

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APPROVED: SL			
DATE: 7/23/01	BH	12/05/01	BULLETIN NO. 2
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FILE:	NO.	BY	DATE DESCRIPTION
			REVISIONS



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

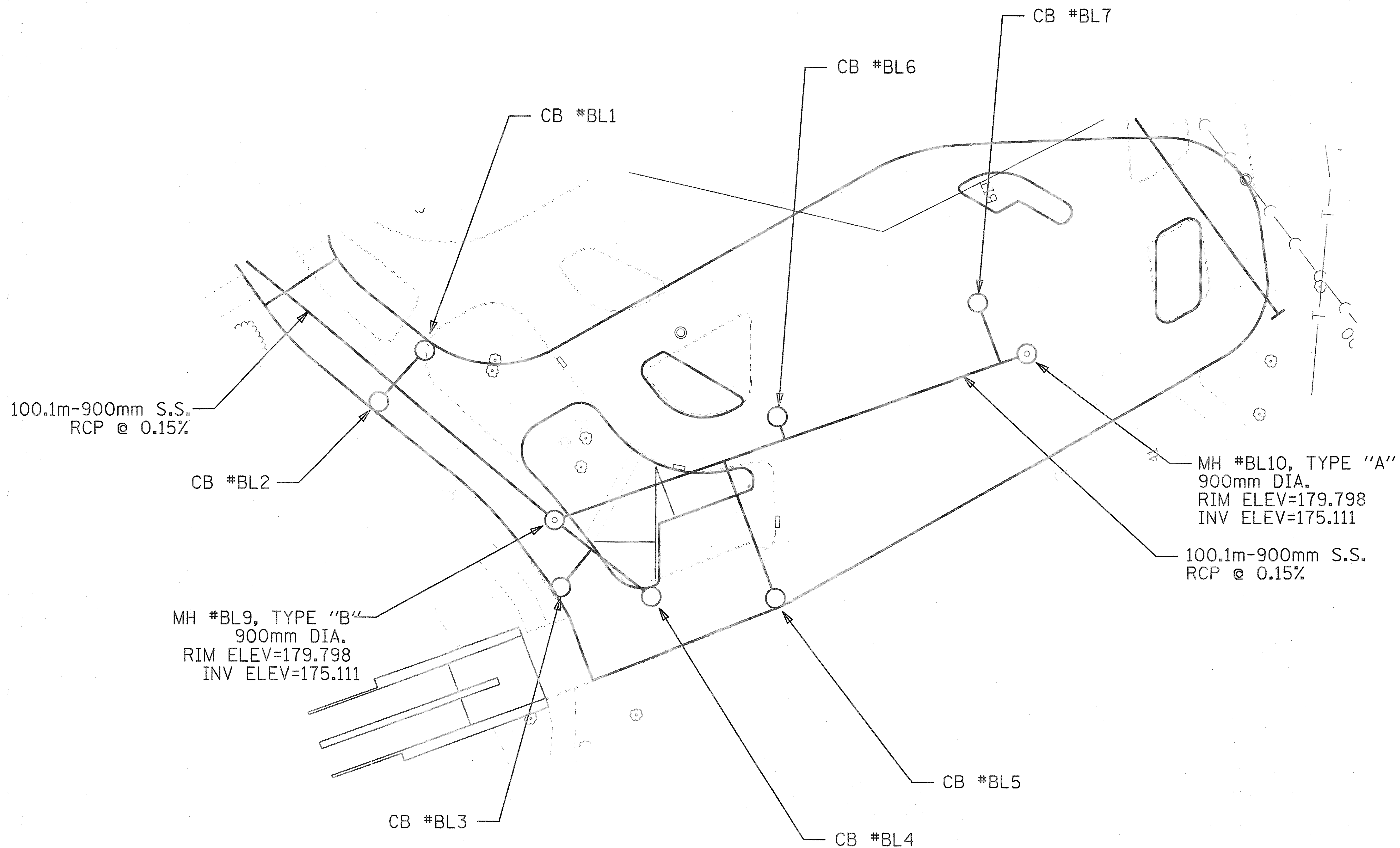
CTE ENGINEERS
CONSER TOWNSEND ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1**

**INTERIM DRAINAGE AND UTILITY PLAN
57th DRIVE /LAKE SHORE DRIVE**

CONTRACT NO. 00-B0241-02-PV
DRAWING NO. C-31
PROJECT NO. B-0-242

1640090047



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REVISIONS				

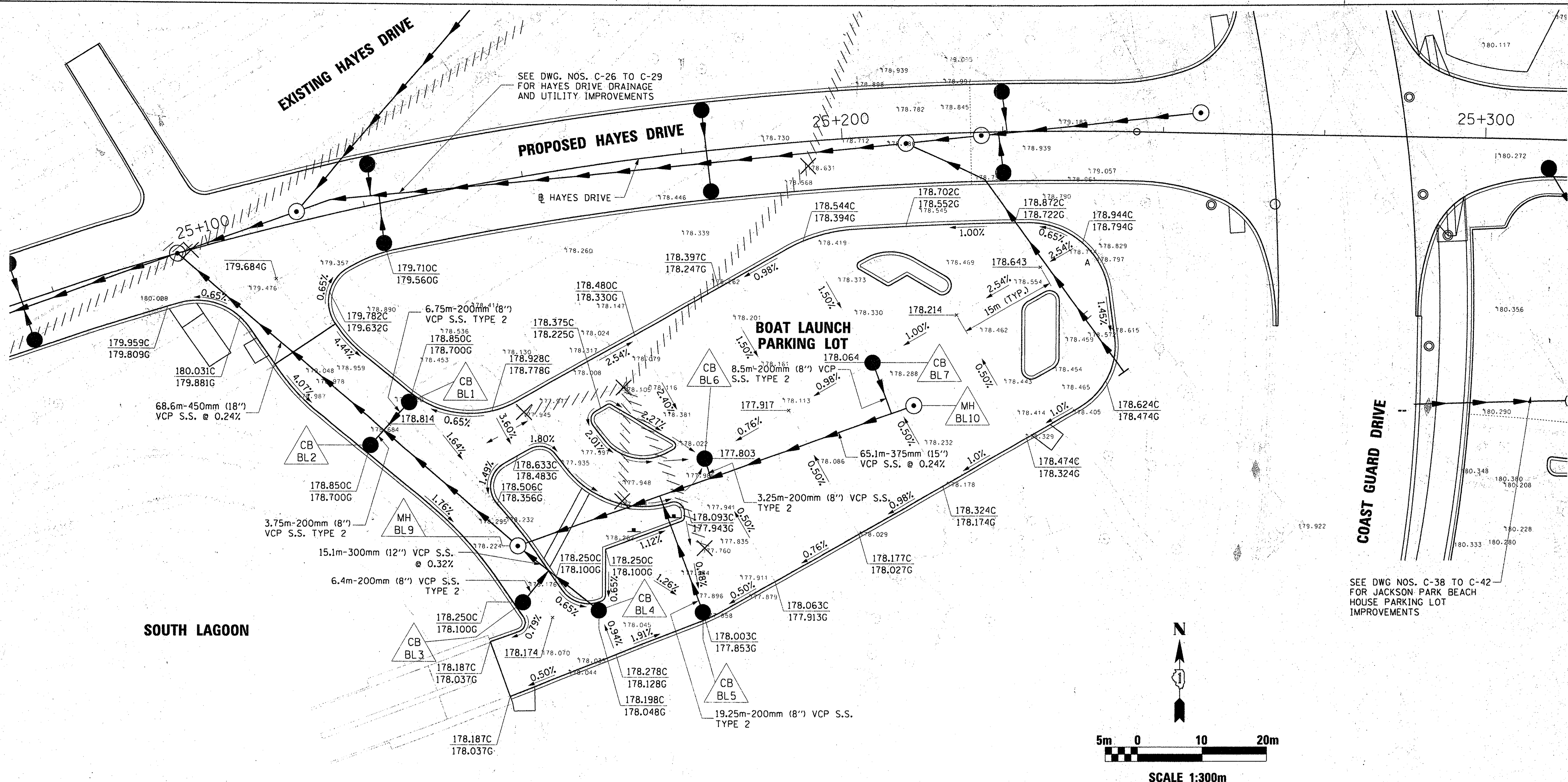
KEY PLAN:

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

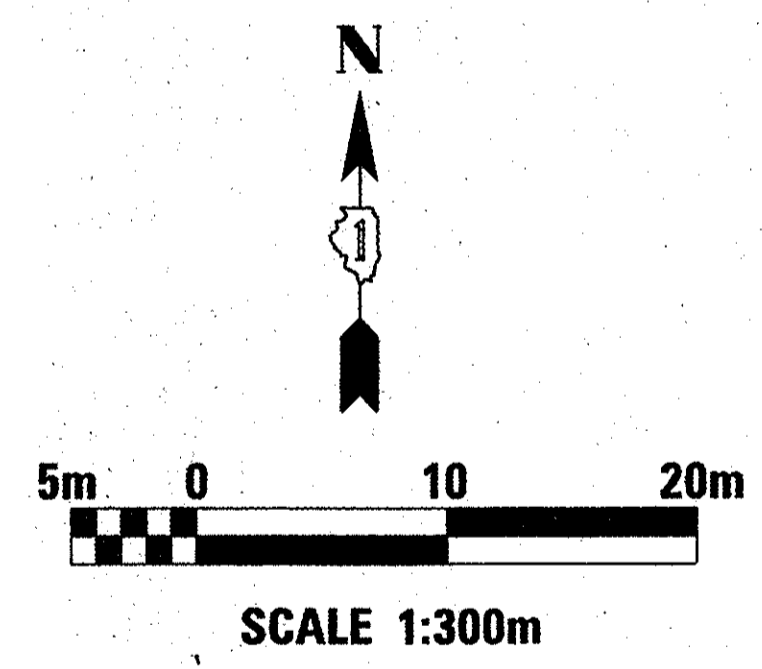
SOUTH LSD RECON.
JACKSON PARK

PLAN
RECORD DRAWINGS
SEWER INSTALLATION

1640090052
CONTRACT NO.
SHEET NO.
PROJECT NO.



SEE DWG. NOS. C-38 TO C-42 FOR JACKSON PARK BEACH HOUSE PARKING LOT IMPROVEMENTS



CB BL1
CATCH BASIN
N 567982.558
E 362923.176
178.850C
178.700G

CB BL2
CATCH BASIN
N 567975.915
E 362917.193
178.850C
178.700G

CB BL3
CATCH BASIN
N 567951.650
E 362940.869
178.250C
178.100G

CB BL4
CATCH BASIN
N 567950.420
E 362952.640
178.198C
178.048G

CB BL5
CATCH BASIN
N 567950.203
E 362968.773
178.003C
177.853G

CB BL6
CATCH BASIN
N 567974.096
E 362969.016
RIM 177.917

CB BL7
CATCH BASIN
N 567989.001
E 362995.051
RIM 178.064

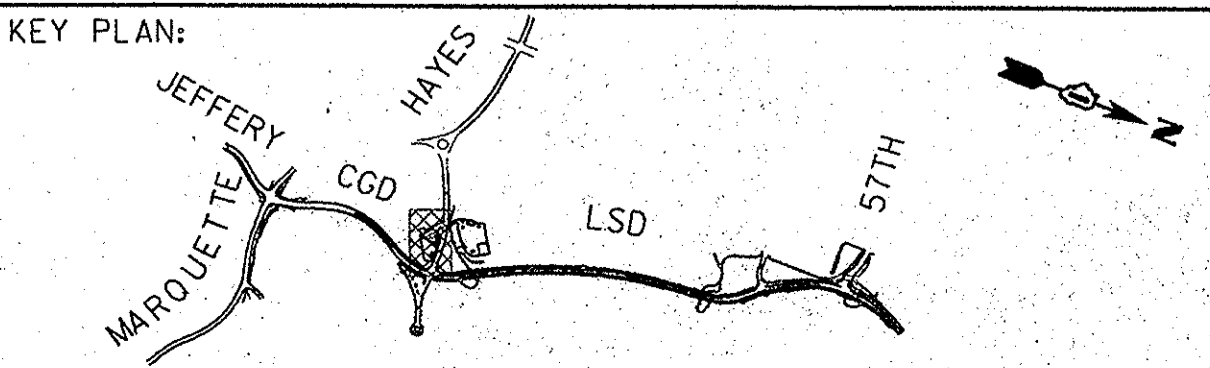
MH BL9
MANHOLE, TYPE B
N 567960.480
E 362940.076
RIM 178.197
INV (NW) 176.289
INV (SE) 176.289
INV (E) 176.289

MH BL10
MANHOLE, TYPE A
N 567982.311
E 363001.450
RIM 178.110
INV 176.445

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07/20/2001

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REVISIONS			



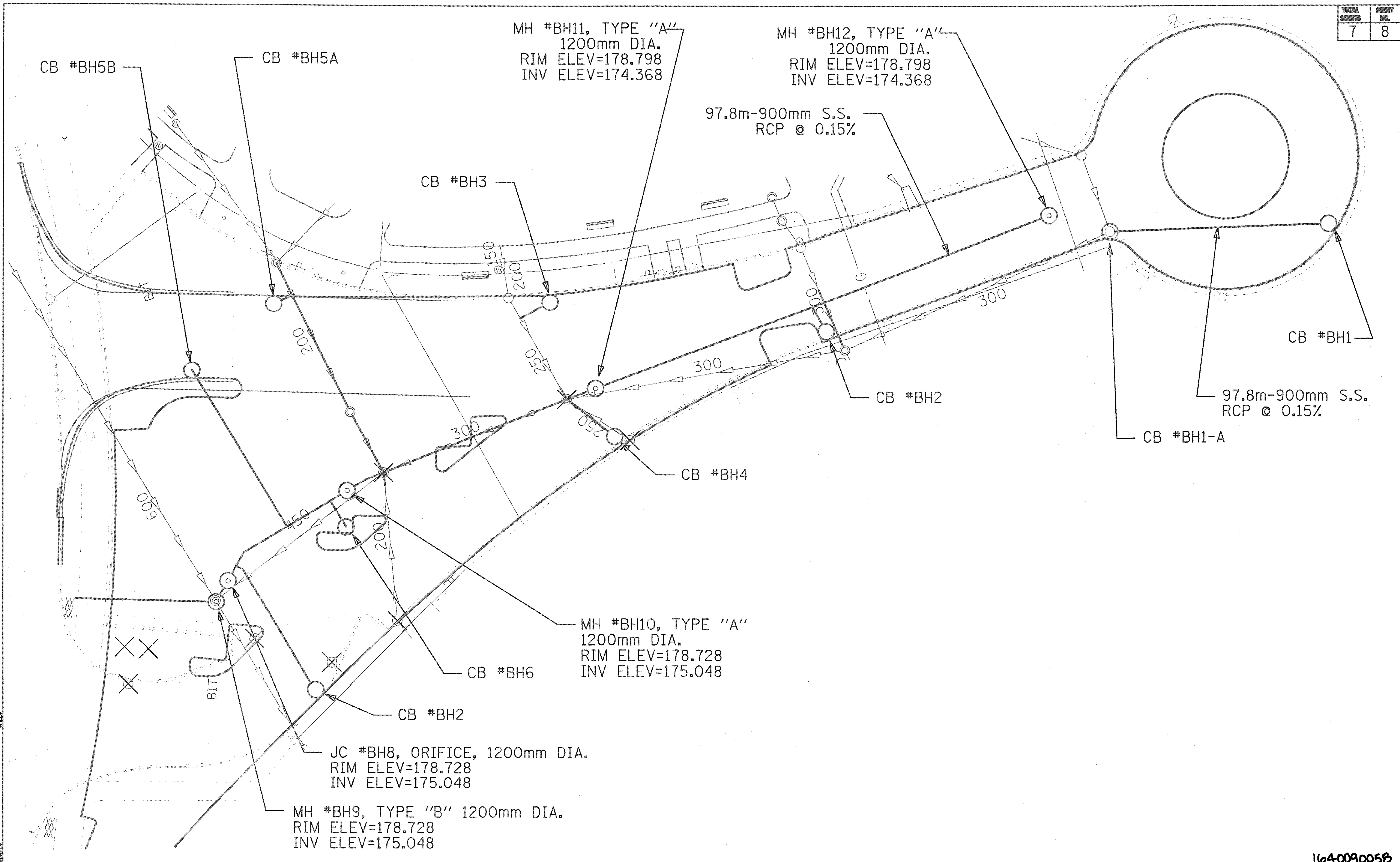
CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS



SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1

DRAINAGE AND GRADING PLAN
BOAT LAUNCH PARKING LOT

1640090053
CONTRACT NO.
00-B0241-02-PV
DRAWING NO.
C-36
PROJECT NO. B-0-242



DATE: _____

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REVISIONS			
NO.	BY	DATE	DESCRIPTION

KEY PLAN:

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

SOUTH LSD RECON.
JACKSON PARK

PLAN

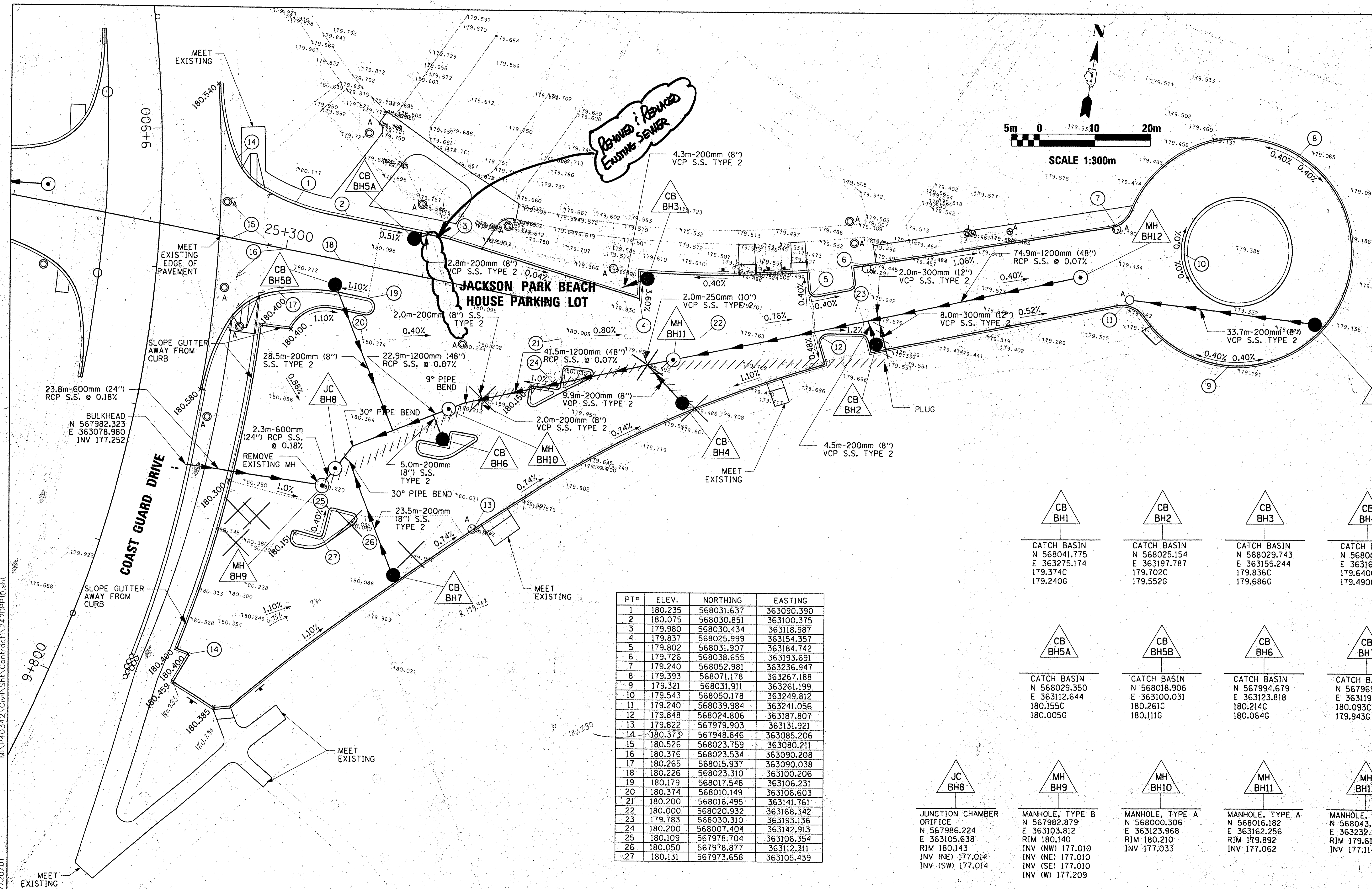
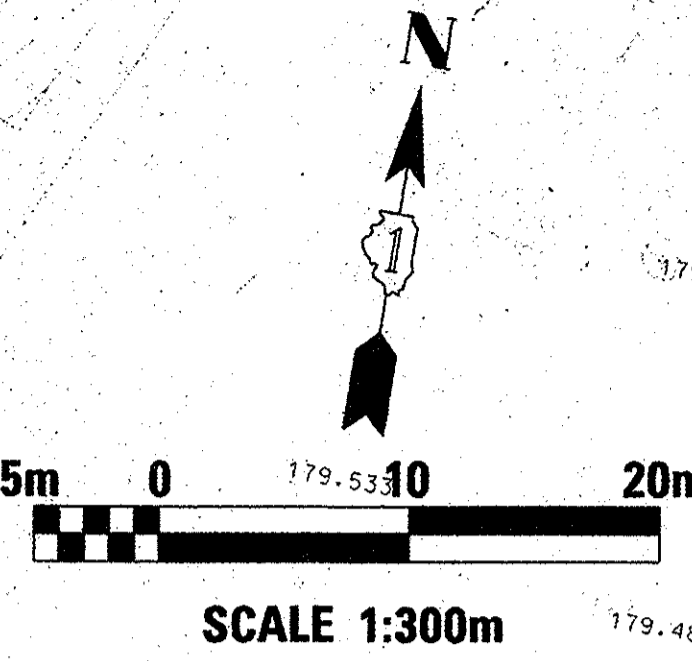
RECORD DRAWINGS
SEWER INSTALLATION

164009005B

CONTRACT NO.

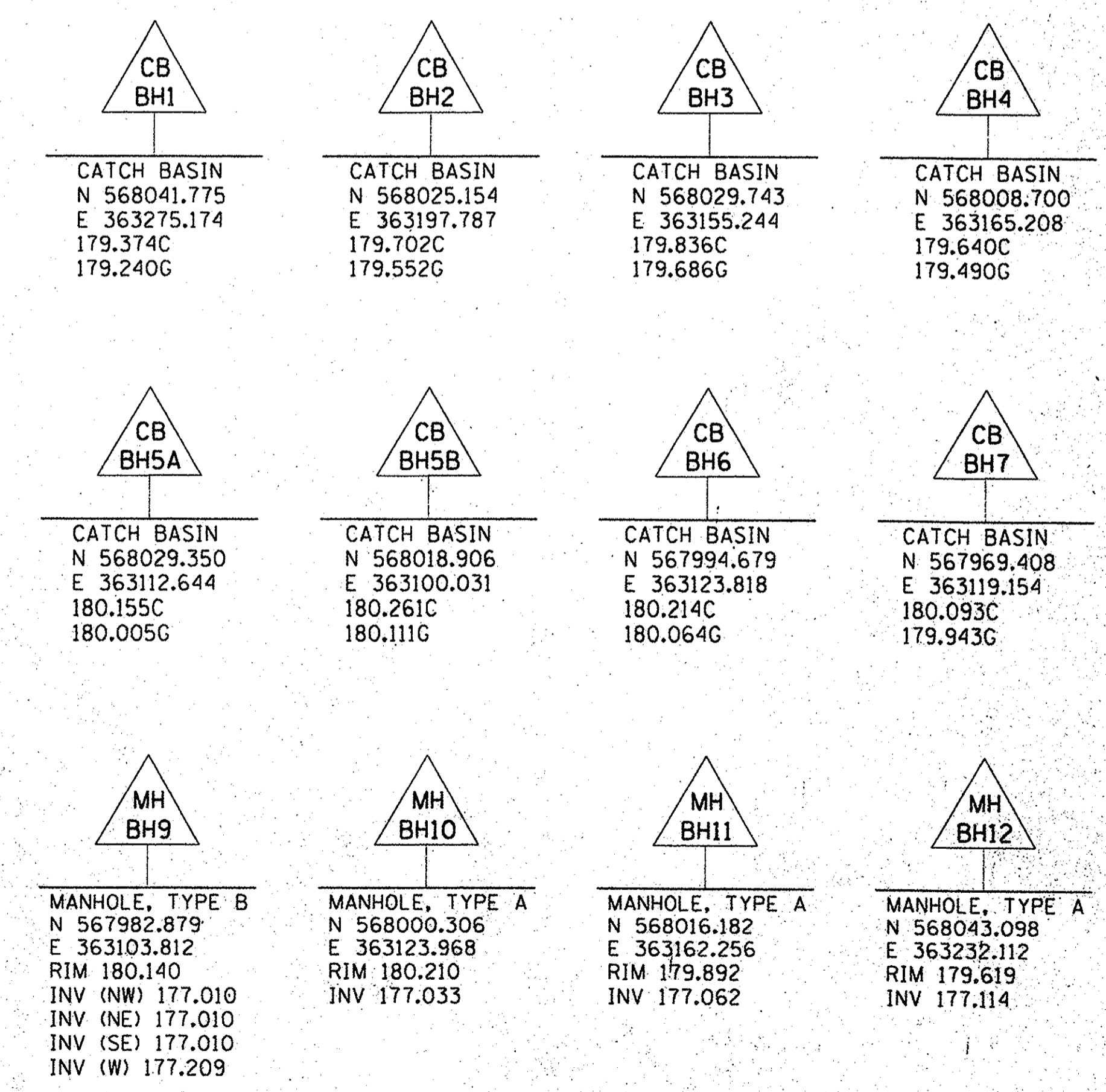
SHEET NO.

PROJECT NO.

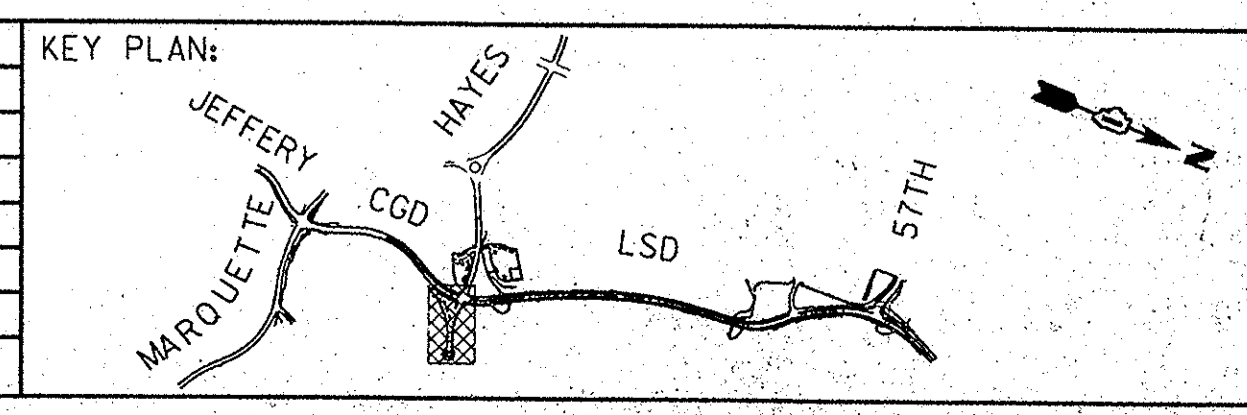


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07/20/01

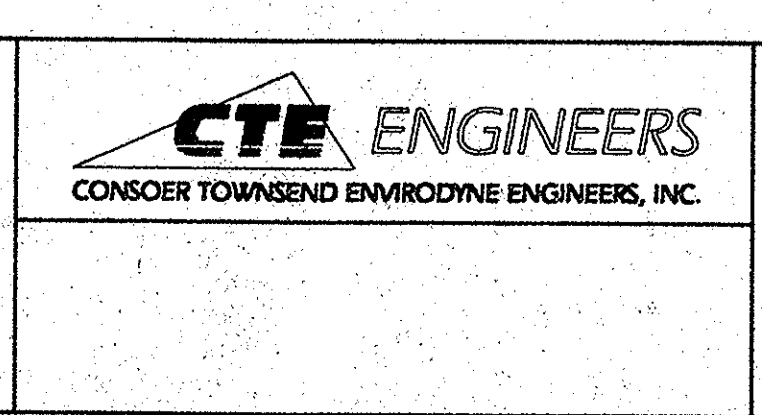
PT#	ELEV.	NORTHING	EASTING
1	180.235	568031.637	363090.390
2	180.075	568030.851	363100.375
3	179.980	568030.434	363118.987
4	179.837	568025.999	363154.357
5	179.802	568031.907	363184.742
6	179.726	568038.655	363193.691
7	179.240	568052.981	363236.947
8	179.393	568071.178	363267.188
9	179.321	568031.911	363261.199
10	179.543	568050.178	363249.812
11	179.240	568039.984	363241.056
12	179.848	568024.806	363187.807
13	179.822	567979.903	363131.921
14	180.373	567948.846	363085.206
15	180.526	568023.759	363080.211
16	180.376	568023.534	363090.208
17	180.265	568015.937	363090.038
18	180.226	568023.310	363100.206
19	180.179	568017.548	363106.231
20	180.374	568010.149	363106.603
21	180.200	568016.495	363141.761
22	180.000	568020.932	363166.342
23	179.783	568030.310	363193.136
24	180.200	568007.404	363142.913
25	180.109	567978.704	363106.354
26	180.050	567978.877	363112.311
27	180.131	567973.658	363105.439



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APPROVED: SL			
DATE: 7/23/01			
SCALE: 1:300m			
FILE:			
NO.	BY	DATE	DESCRIPTION
REVISIONS			



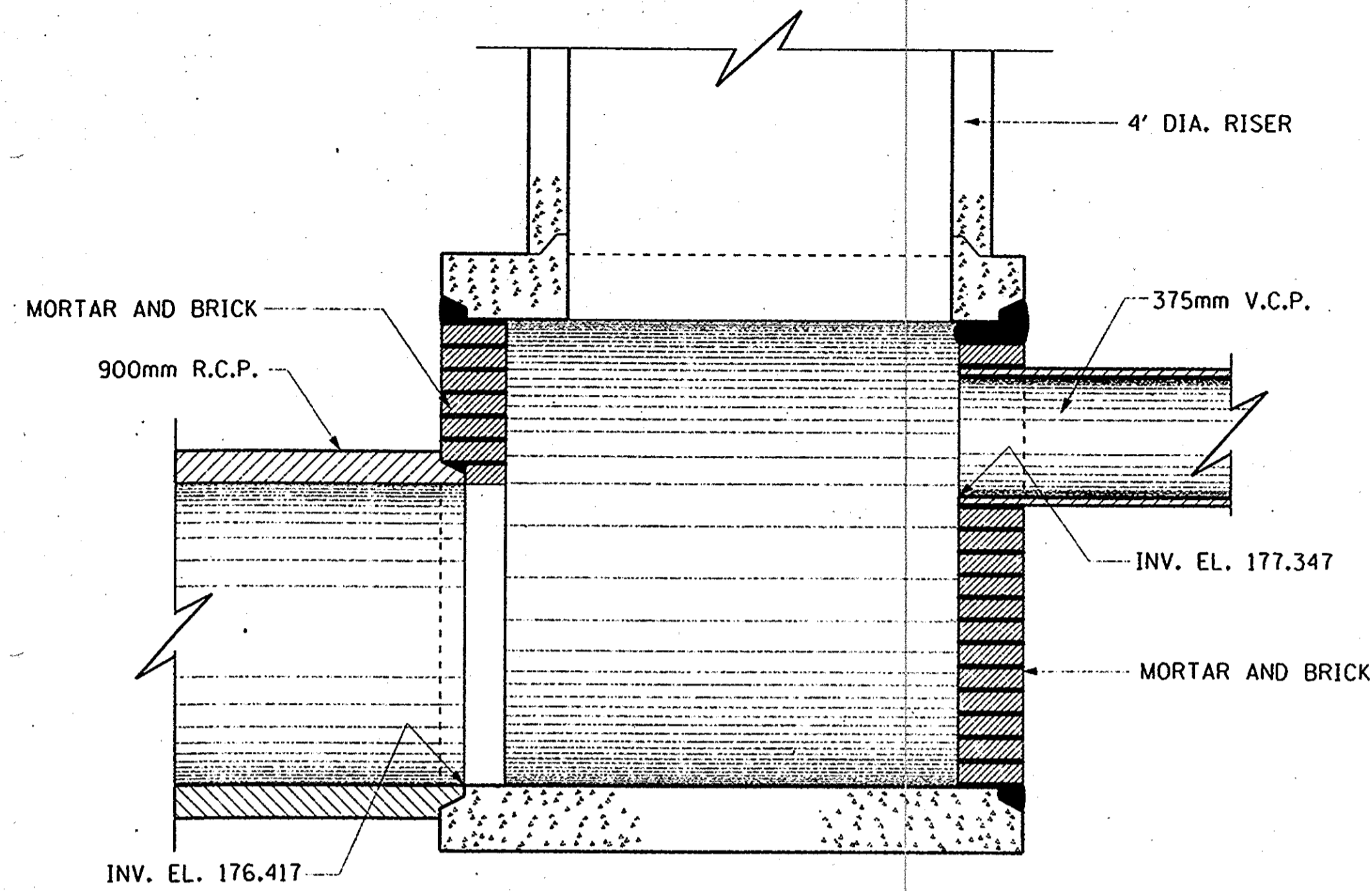
CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS



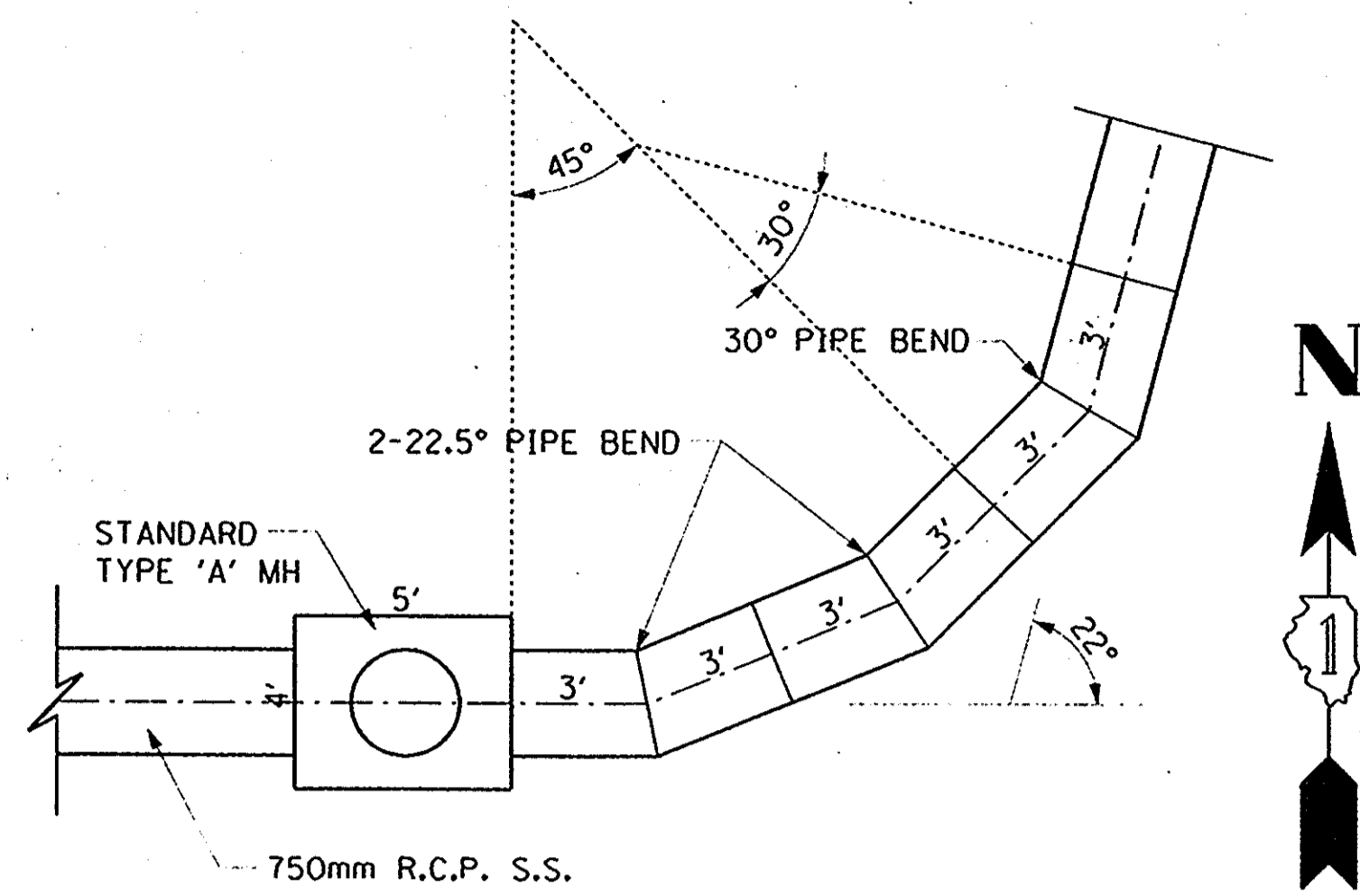
SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1

DRAINAGE AND GRADING PLAN
JACKSON PARK BEACH HOUSE PARKING LOT

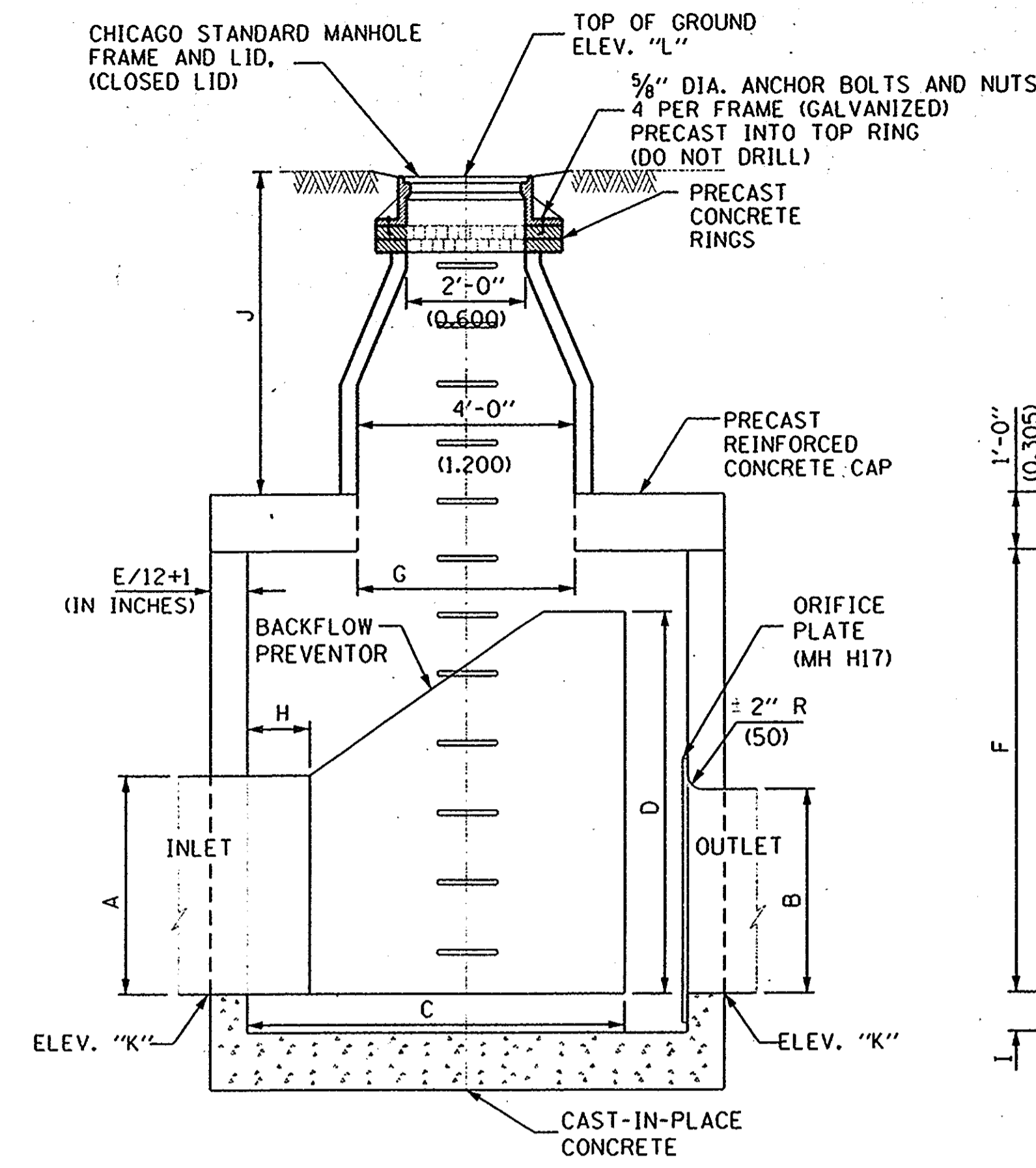
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CONTRACT NO.
00-B0241-02-PV
DRAWING NO.
C-41
PROJECT NO. B-0-242



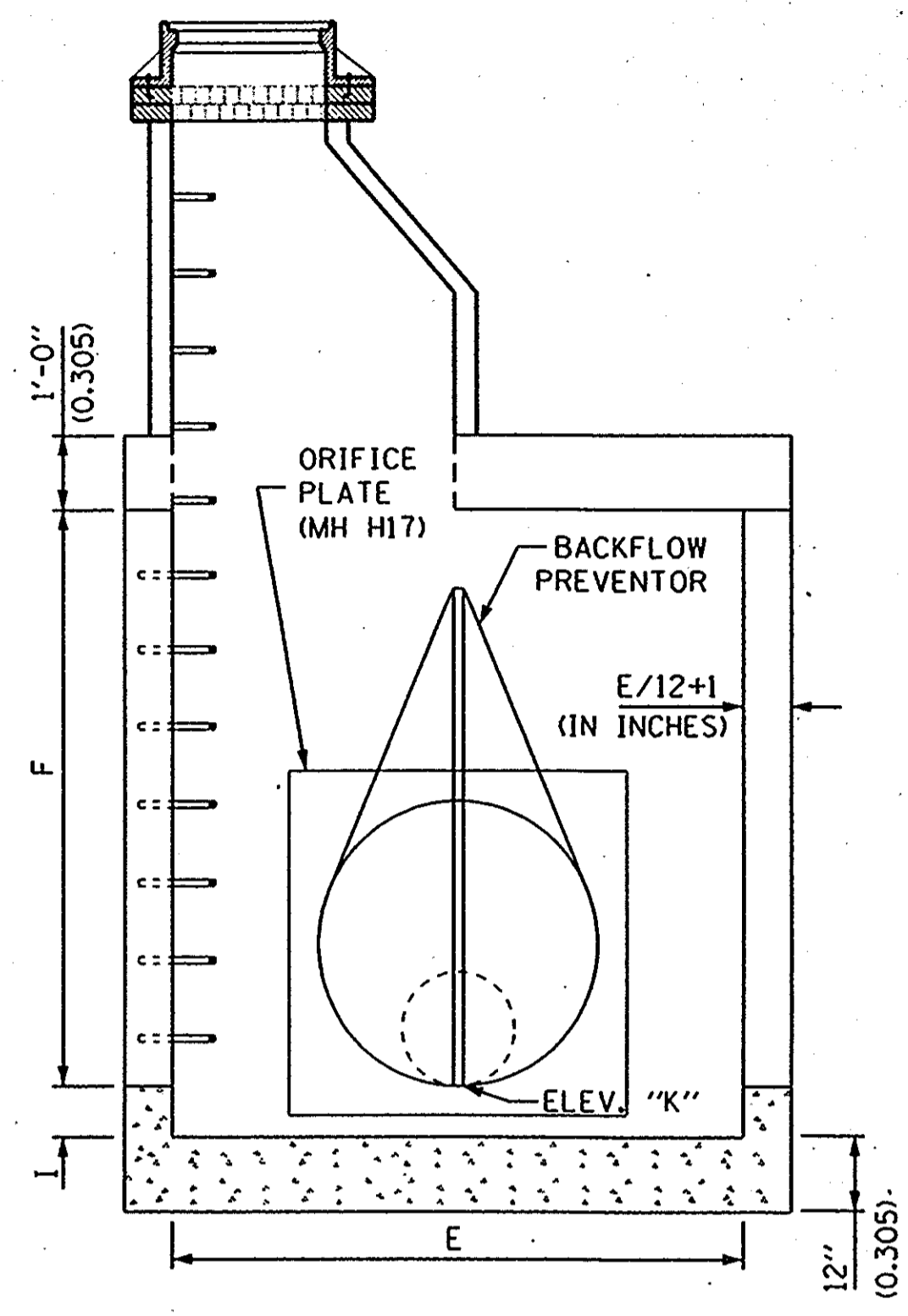
**MH H1A DETAIL
54" TYPE 'A' MANHOLE**



**MH H9
UPSTREAM PIPE DETAIL**

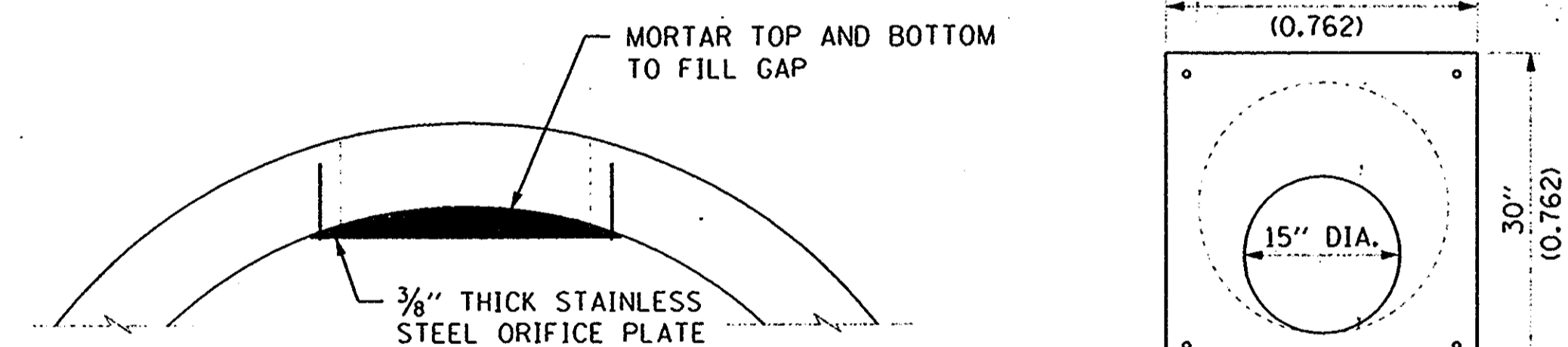


ELEVATION - ECCENTRIC

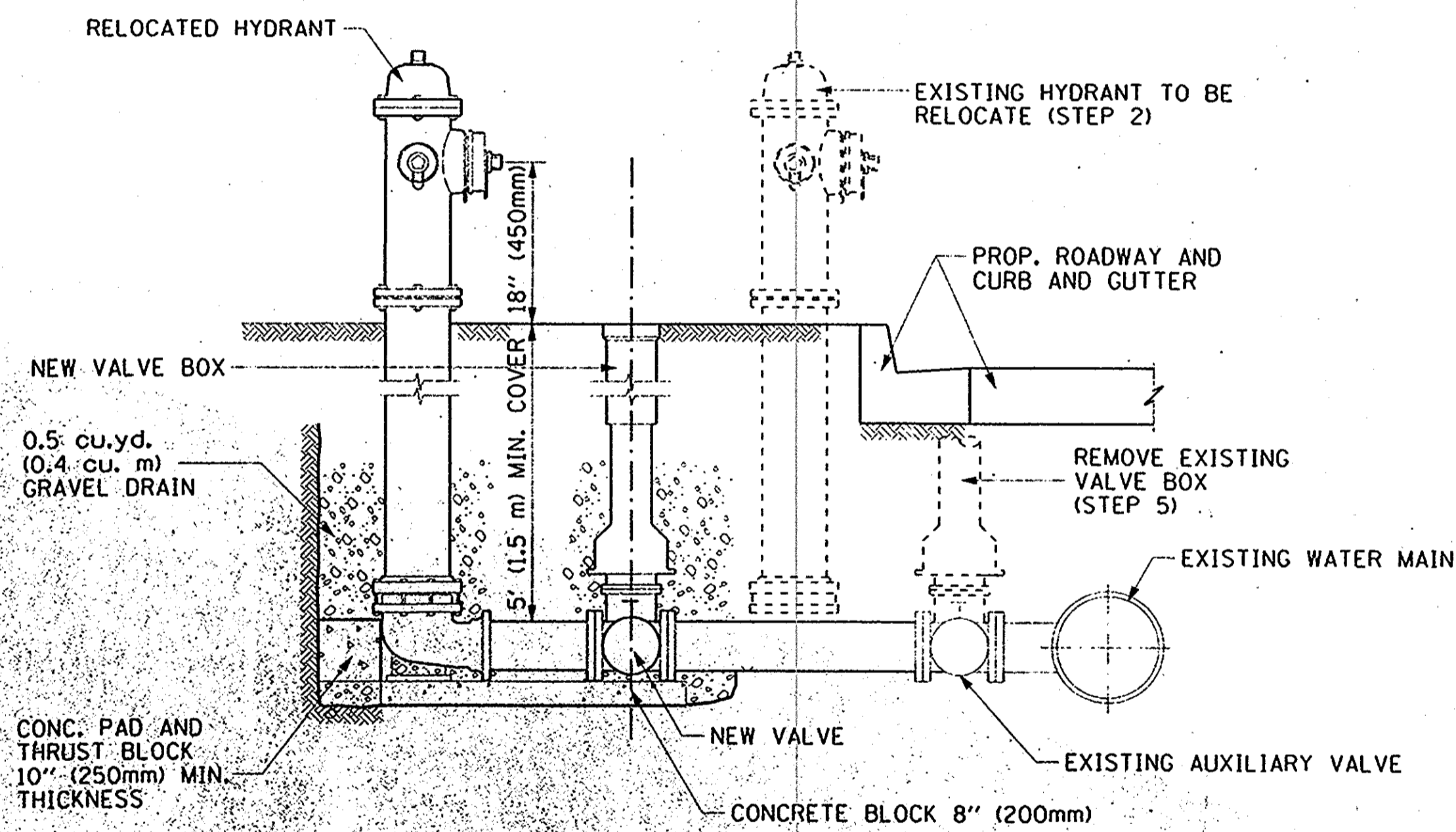


ELEVATION - CONCENTRIC

**MANHOLE WITH BACKFLOW PREVENTER DETAIL
(NTS)**



**MH H17 ORIFICE DETAIL
(NTS)**

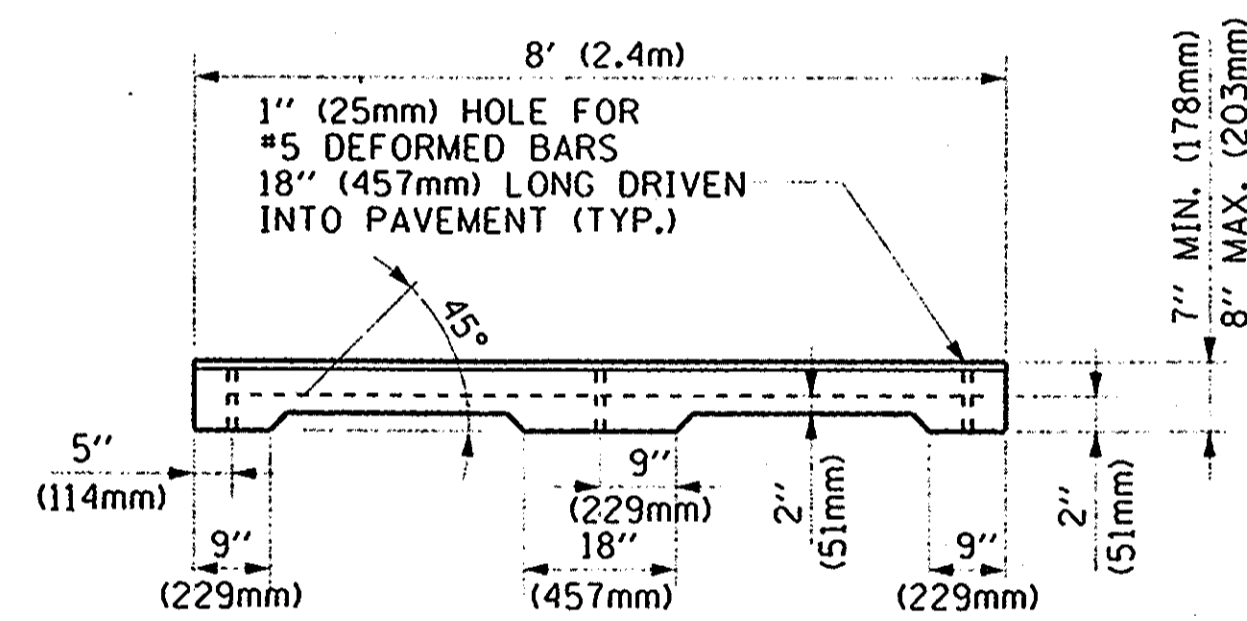


SEQUENCE OF CONSTRUCTION:

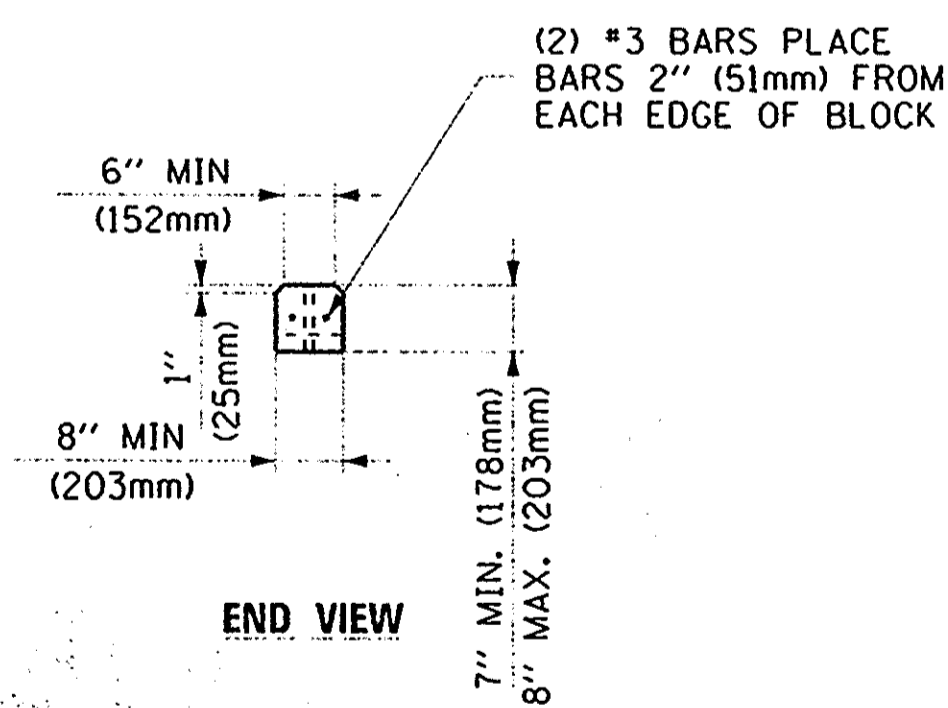
- CLOSE EXISTING VALVE.
- REMOVE EXISTING VALVE.
- INSTALL HYDRANT EXTENSION AND NEW VALVE.
- RELOCATE EXISTING HYDRANT.
- OPEN EXISTING VALVE, REMOVE BOX.
- BACKFILL.
- FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE RELOCATED



SIDE VIEW



END VIEW

CONCRETE BUMPER DETAIL

NUMBER	LOCATION		DIMENSION										ELEVATION	
	STATION	OFFSET	A	B	C	D	E	F	G	H	I	J	K	L
MH H6A	24+999.181	17.187 RT	3.00' (0.900)	3.00' (0.900)	4.96' (1.511)	5.88' (1.791)	7.00' (1.981)	7.00' (2.134)	4.00' (1.200)	10'' (0.254)	8'' (0.203)	4.64' (1.414)	0.07 CCD (176.647)	12.71 CCD (180.500)
MH H14C	24+465.340	22.198 LT	2.00' (0.600)	2.00' (0.600)	4.67' (1.422)	4.58' (1.753)	6.50' (1.981)	5.00' (1.524)	2.00' (0.600)	9'' (0.229)	8'' (0.203)	0.75' (176.569)	6.54 CCD (178.627)	
MH H17	24+265.390	1.216 LT	3.00' (0.900)	2.00' (0.600)	4.96' (1.511)	5.88' (1.791)	7.00' (1.981)	7.00' (2.134)	4.00' (1.200)	10'' (0.254)	24'' (0.610)	5.85' (1.783)	-6.26 CCD (174.718)	7.59 CCD (178.940)
*MH LSI	N 569437.224 E 362586.333		2.50' (0.750)	2.50' (0.750)	5.00' (1.524)	5.92' (1.803)	7.00' (1.981)	7.00' (2.134)	4.00' (1.200)	10'' (0.254)	24'' (0.610)	3.24' (0.987)	-2.79 CCD (175.774)	8.45 CCD (179.200)

*NOTE: BACKFLOW PREVENTER FOR MH LSI NOT INSTALLED IN THIS CONTRACT.

() = UNIT IN METER

M:\P4\0342\Civil\Shr\Contract\242D\102.sht 07/20/01

DESIGN: BH				KEY PLAN:
DRAWN: BH				
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APPROVED: SL				
DATE: 7/23/01				
SCALE: NONE				
FILE:	NO.	BY	DATE	DESCRIPTION
				REVISIONS

**CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS**

CTE ENGINEERS
CONSOER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
CONTRACT 1**

MISCELLANEOUS DETAILS

CONTRACT NO. 00-B0241-02-PV
DRAWING NO. C-49
PROJECT NO. B-0-242

1640090067

STRUCTURAL NOTES:

1. ALL SECTIONS, DETAILS, AND NOTES ARE INTENDED TO BE TYPICAL UNLESS OTHERWISE INDICATED. SHOP DRAWING SHALL BE PREPARED BY THE CONTRACTOR SHOWING THE APPLICATION OF TYPICAL SECTIONS AND DETAILS FOR SIMILAR SITUATIONS.
2. EXPOSED CORNERS SHALL HAVE A 3/4" (19) CHAMFER AND RE-ENTRANT CORNERS SHALL HAVE A 3/4" (19) FLAT FILLET UNLESS OTHERWISE NOTED.
3. COMPRESSIVE STRENGTH OF CONCRETE: ALL CAST-IN-PLACE CONCRETE MINIMUM (EXCEPT CONCRETE WORKMATS) F'C = 3,000 PSI (21 MPa) AT 28 DAYS. CONCRETE WORKMATS, F'C = 2,000 PSI (14 MPa) AT 28 DAYS.
4. CONCRETE SURFACES EXPOSED TO FLOW OF WATER MUST BE SMOOTH.
5. ALL CONCRETE SURFACES RECEIVING A BONDED CONCRETE FINISH SHALL BE PREPARED AS PER THE MANUFACTURER'S PRINTED INSTRUCTIONS.
6. ALL CONSTRUCTION JOINTS SHALL BE SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER. KEYS SHALL BE PROVIDED AT ALL CONSTRUCTION JOINTS EXCEPT WHERE NOTED. KEY DETAILS WILL BE AS SHOWN IN TYPICAL WALL KEYS DETAIL, UNLESS SHOWN ON DRAWING. PROVIDE WATER STOPS AT ALL JOINTS AND WHERE PIPE INTERSECTS WITH CONCRETE STRUCTURE. WATER STOP SHALL BE PER SPECIFICATIONS
7. ALL EMBEDDED STEEL, ANCHORS, DRAIN OUTLETS, EMBEDDED RUNGS EMBEDDED METAL, ETC. SHALL BE IN PLACE BEFORE CONCRETE IS PLACED, EXCEPT AS NOTED.
8. ALL ELEVATIONS NOTED FOR INVERT, GRADE TOP OF BOTTOM OF CONCRETE STRUCTURES ARE IN FEET & METRIC UNITS UNLESS NOTED OTHERWISE.
9. PROVIDE EXTERIOR QUALITY JOINT SEALANTS WHICH CONFORMS TO EITHER ASTM 5893 OR ASTM D 3406 WITH TYPE I BACKER ROD AS PER ASTM 5249.
10. ALL REINFORCED STEEL SHALL BE AASHTO DESIGNATION M31 GRADE 60 AND SHALL BE DETAILED ACCORDING TO THE ACI DETAILING MANUAL 1989 PUBLICATION SP-66.
11. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS, UNLESS OTHERWISE INDICATED ON THE PLANS OR ORDERED BY THE COMMISSIONER.
 - A. SURFACE EXPOSED TO SEWAGE
 - A) CAST-IN-PLACE CONCRETE2 1/2" (64)
 - B) PRECAST CONCRETE2" (51)
 - B. BEAMS, COLUMNS, AND WALLS EXPOSED TO EARTH, WATER, OR WEATHER
 - A) STIRRUPS AND TIES1 1/2" (38)
 - B) PRINCIPAL REINFORCEMENT2" (51)
 - C. EXTERIOR SURFACE WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND3" (76)
12. REINFORCEMENT BARS SHALL HAVE DEVELOPMENT AND LAP SPLICE LENGTH AS FOLLOWS:

	DEVELOPMENT LENGTH		SPLICE LENGTH (CLASS B)		HOOK BAR DEVELOPMENT LENGTH
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	
#4 (#10)	1'-7" (480)	1'-2" (360)	2'-0" (610)	1'-7" (480)	7" (180)
#5 (#15)	1'-11" (585)	1'-6" (460)	2'-6" (770)	1'-11" (585)	8" (210)
#6 (#20)	2'-4" (710)	1'-9" (540)	3'-0" (920)	2'-4" (710)	10" (260)
#7	2'-8" (820)	2'-1" (640)	3'-6" (1.070m)	2'-8" (820)	1'-0" (305)
#8 (#25)	3'-3" (990)	2'-6" (760)	4'-3" (1.300m)	3'-3" (990)	1'-2" (360)
#9 (#30)	4'-2" (1.270m)	3'-2" (960)	5'-4" (1.630m)	4'-2" (1.270m)	1'-3" (380)
#10	5'-3" (1.600m)	4'-0" (1.220m)	6'-9" (2.060m)	5'-3" (1.600m)	1'-5" (430)
#11 (#35)	6'-5" (1.955m)	4'-11" (1.500m)	8'-4" (2.540m)	6'-5" (1.955m)	1'-7" (480)

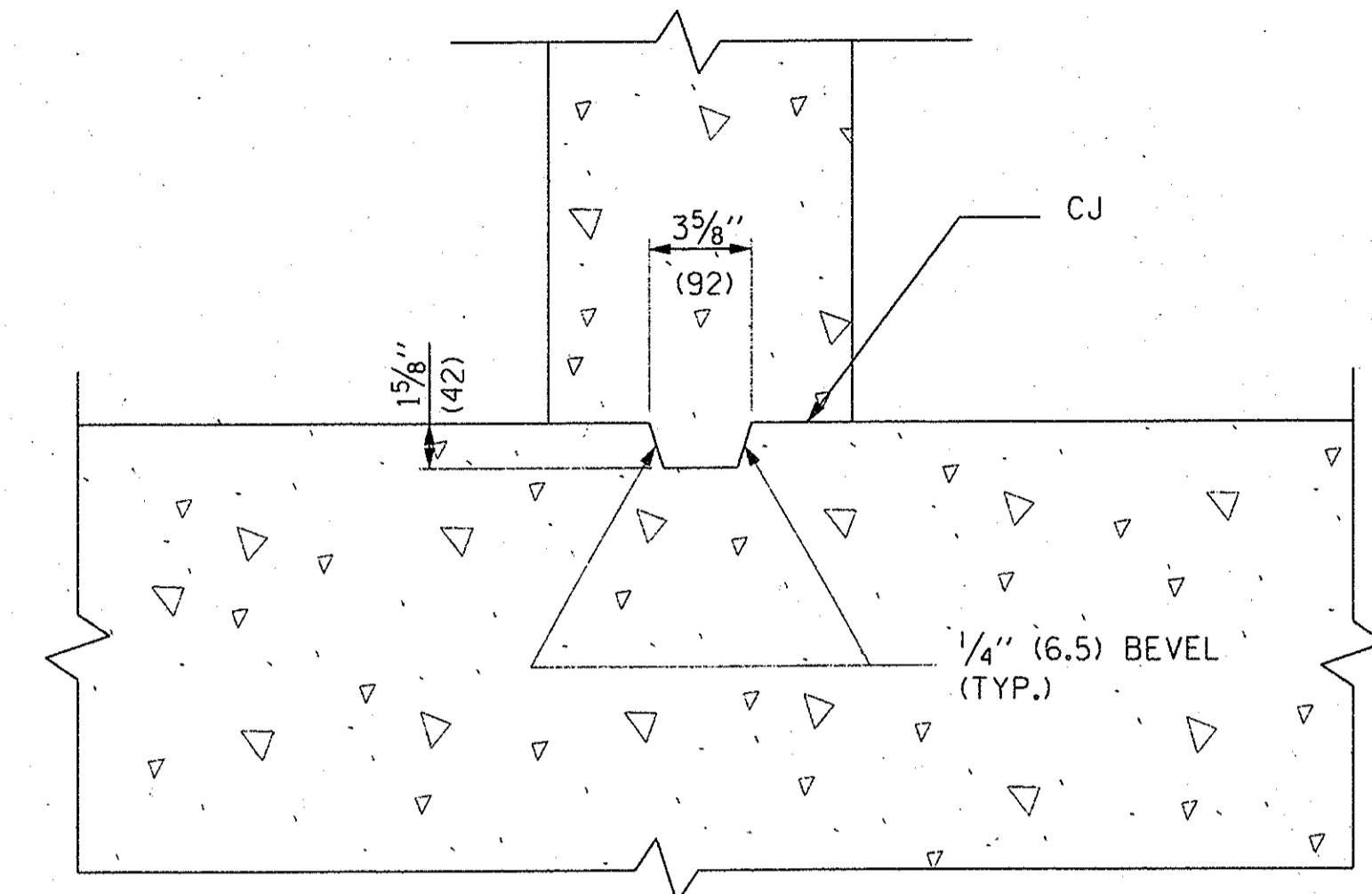
- A. TOP BARS ARE DEFINED AS HORIZONTAL BARS HAVING 12" OR MORE OF FRESH CONCRETE PLACED BENEATH THEM.
- B. ALL LAPS ARE TENSION SPLICES CLASS B, UNLESS NOTED ON THE DRAWINGS.
- C. FOR REBARS SPACED AT 12" OC, THE SPACING OF REBAR IS NOT SHOWN ON DRAWING. e.g. #5 ON DWG. INDICATE #5@12" OC BUT 1-#5 INDICATE SINGLE BAR AND LOCATION AS SHOWN ON DWG.

D. ABOVE TABLE IS BASED ON 2 INCHES (51) CLEAR CONCRETE COVER AND BAR SPACINGS 6 INCHES (150) ON CENTER OR GREATER. FOR LESSER CONCRETE COVER AND BAR SPACINGS SEE REQUIREMENTS OF PARAGRAPHS 12.1, 12.12, AND 12.15 OF ACI 318.95.

13. STANDARD ABBREVIATIONS:

ABT.	ABOUT	I.E.	INVERT ELEVATION
ADD'L	ADDITIONAL	LLH	LONG LEG HORIZONTAL
ALT.	ALTERNATE	LLV	LONG LEG VERTICAL
APPROX.	APPROXIMATELY	L.P.	LOW POINT
BF	BOTTOM FACE	MAX	MAXIMUM
BL	BOTTOM LAYER	MH	MANHOLE
BOT	BOTTOM	MIN	MINIMUM
B/	BOTTOM OF	ML	MIDDLE LAYER
CC	CENTER TO CENTER	NF	NEAR FACE
C.I.	CAST IRON	N.T.S.	NOT TO SCALE
CJ	CONSTRUCTION JOINT	NO.	NUMBER
C.I.P.	CAST IN PLACE	OC	ON CENTERS
C/L	CENTER LINE	OD	OUTSIDE DIAMETER
CL	CLEAR	OF	OUTSIDE FACE
CONC.	CONCRETE	OL	OUTSIDE LAYER
CONT.	CONTINUOUS	OPNG	OPENING
DJA	DIAMETER	P.C.C.P.	PRESTRESSED CONCRETE CYLINDER PIPE
DWGS.	DRAWINGS	R.C.	REINFORCED CONCRETE
DWL	DOWEL	R.C.P.	REINFORCED CONCRETE PIPE
EE	EACH END	REINF.	REINFORCEMENT
EF	EACH FACE	SH. NO.	SHEET NUMBER
EL	EACH LAYER	S.S.	STAINLESS STEEL
EL.	ELEVATION	STD	STANDARD
ES	EACH SIDE	STA.	STATION
EW	EACH WAY	STIRR	STIRRUPS
EXIST.	EXISTING	T&B	TOP & BOTTOM
FF	FAR FACE	TF	TOP FACE
FIN.	FINISH	TL	TOP LAYER
ML	MIDDLE LAYER	T/	TOP OF
HORIZ	HORIZONTAL	T/C	TOP OF CONCRETE
HK	STANDARD HOOK	U.N.O.	UNLESS NOTED OTHERWISE
H.P.	HIGH POINT	VERT	VERTICAL
ID	INSIDE DIAMETER	W.P.	WORKING POINT
IF	INSIDE FACE	W.S.	WATERSTOP
IL	INSIDE LAYER		

14. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "ACI MANUAL OF CONCRETE PRACTICE", "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI 315 LATEST EDITION.
15. ALL VERTICAL DOWELS SHALL MATCH THE VERTICAL REINFORCEMENT UNLESS NOTED OTHERWISE.
16. MINIMUM REINFORCEMENT HORIZONTAL AND VERTICAL ON EACH FACE SHALL BE #5 AT 12" (#15@305) OC UNLESS NOTED OTHERWISE.
17. MISCELLANEOUS DETAILS SHOWN ON THE DRAWINGS ARE TYPICAL.
18. FOR SOIL BORINGS AND DRILL HOLE DATA, SEE CIVIL SHEETS.
19. ALL DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS AND CODES, LATEST EDITION.
20. ALL OTHER STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE A36, UNLESS NOTED OTHERWISE.
21. AFTER FABRICATION, ALL STEEL SHALL BE CLEANED OF ALL RUST, LOOSE MILL SCALE AND ALL OTHER FOREIGN MATERIALS. PRIMING IS REQUIRED FOR ALL STRUCTURAL STEEL WHERE IT IS NOT GALVANIZED.



WATERSTOP IS NOT SHOWN FOR CLARITY (SEE NOTES).

TYPICAL DETAIL OF KEYWAY AT CONSTRUCTION JOINTS

SCALE: 1" = 1'-0"

M:\NP40342\SUBS\DELTA\CONTRACT 1\MUNCTION.CHAMBERS.ISSUED FOR BIDDING-1A.DWG 07/23/2001

DESIGN: N.S.			
DRAWN: S.R.			
CHECKED: S.I.			
APPROVED: S.M.K.			
DATE: 7/23/01			
SCALE: 1' = 1/2"			
FILE:	NO.	BY	DATE
			DESCRIPTION
REVISIONS			

KEY PLAN:	

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, INC.

DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION**

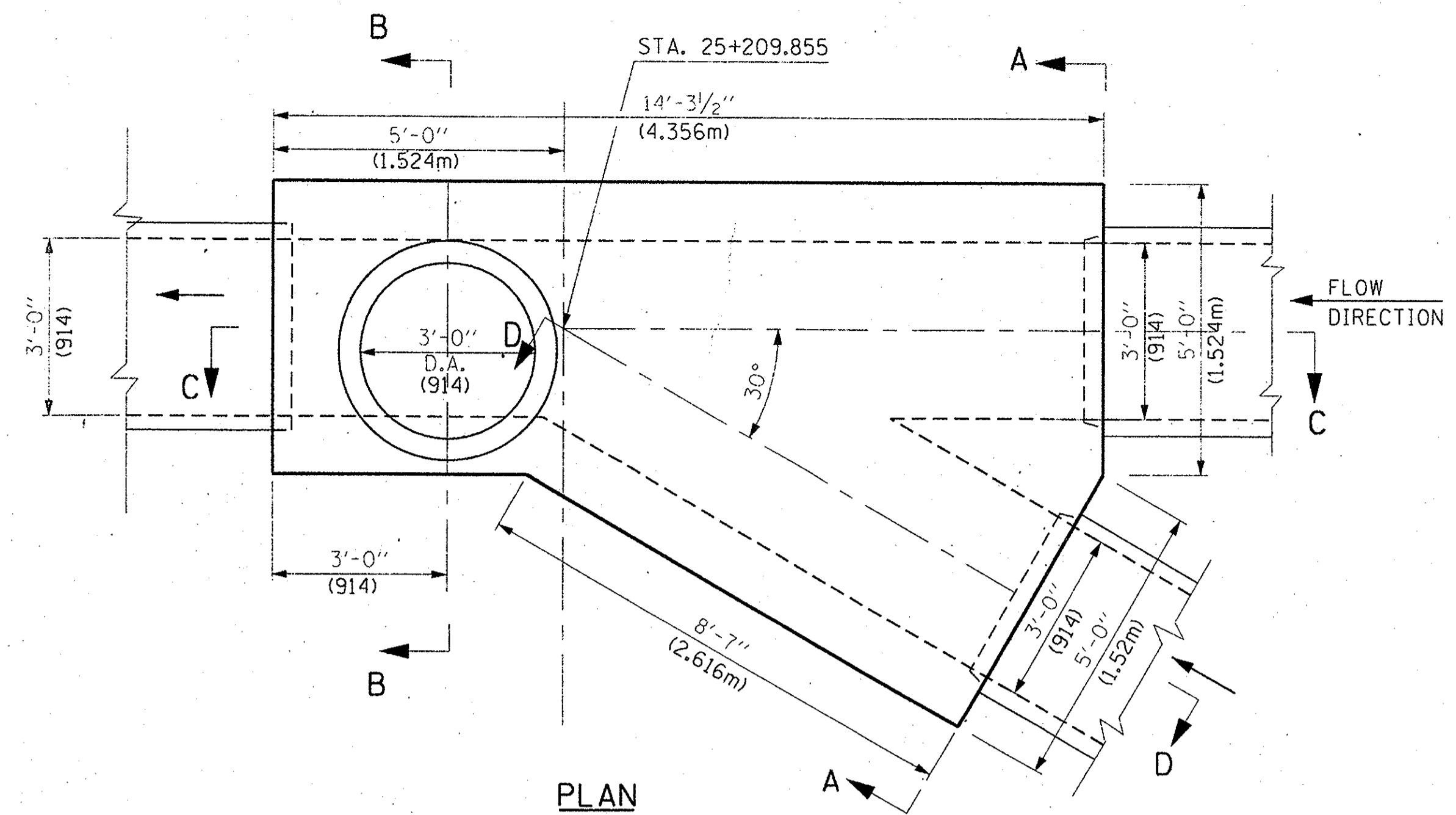
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CONTRACT NO.
00-B0241-02-PV

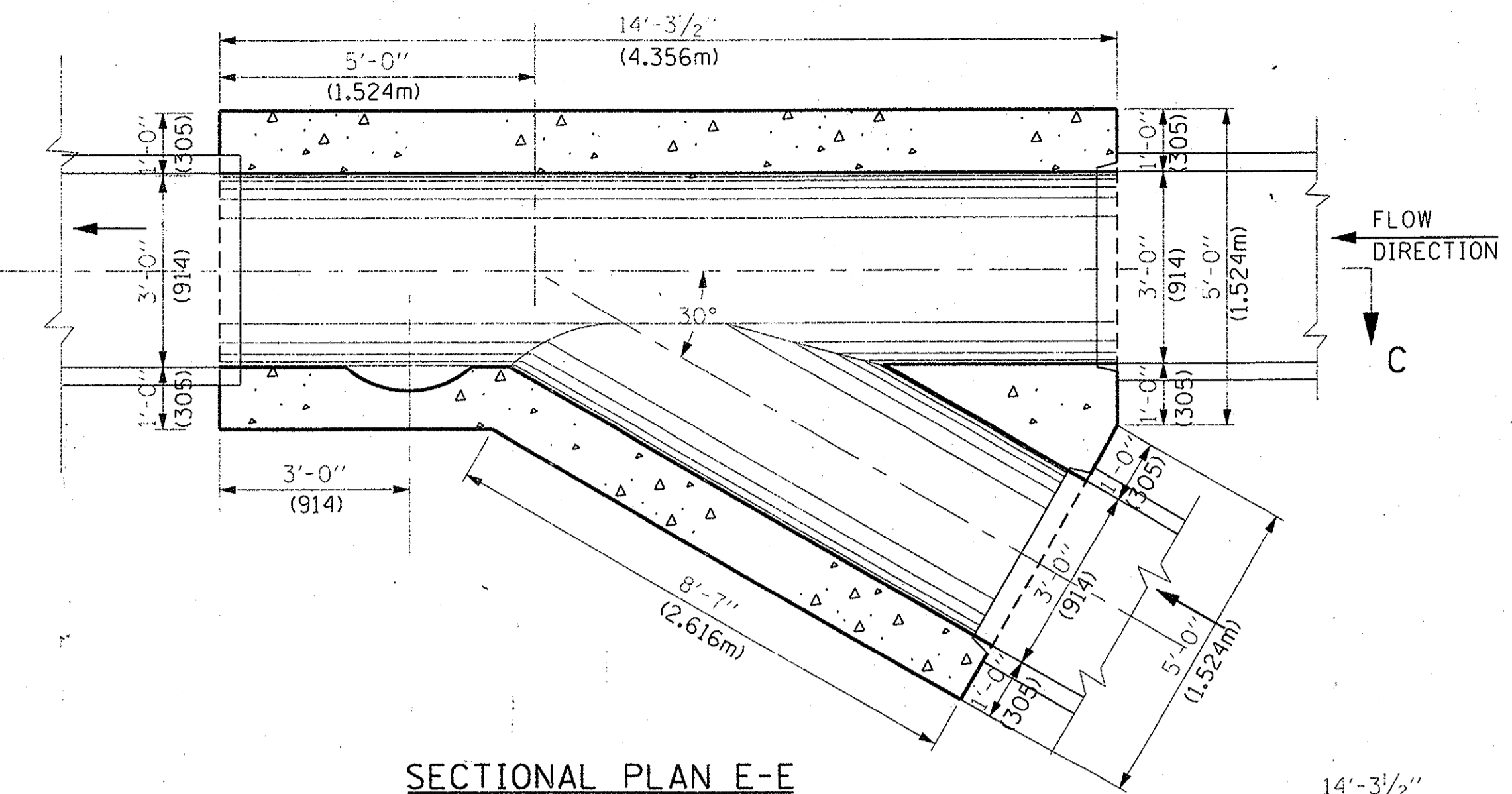
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DS - 1

PROJECT NO. B-0-242

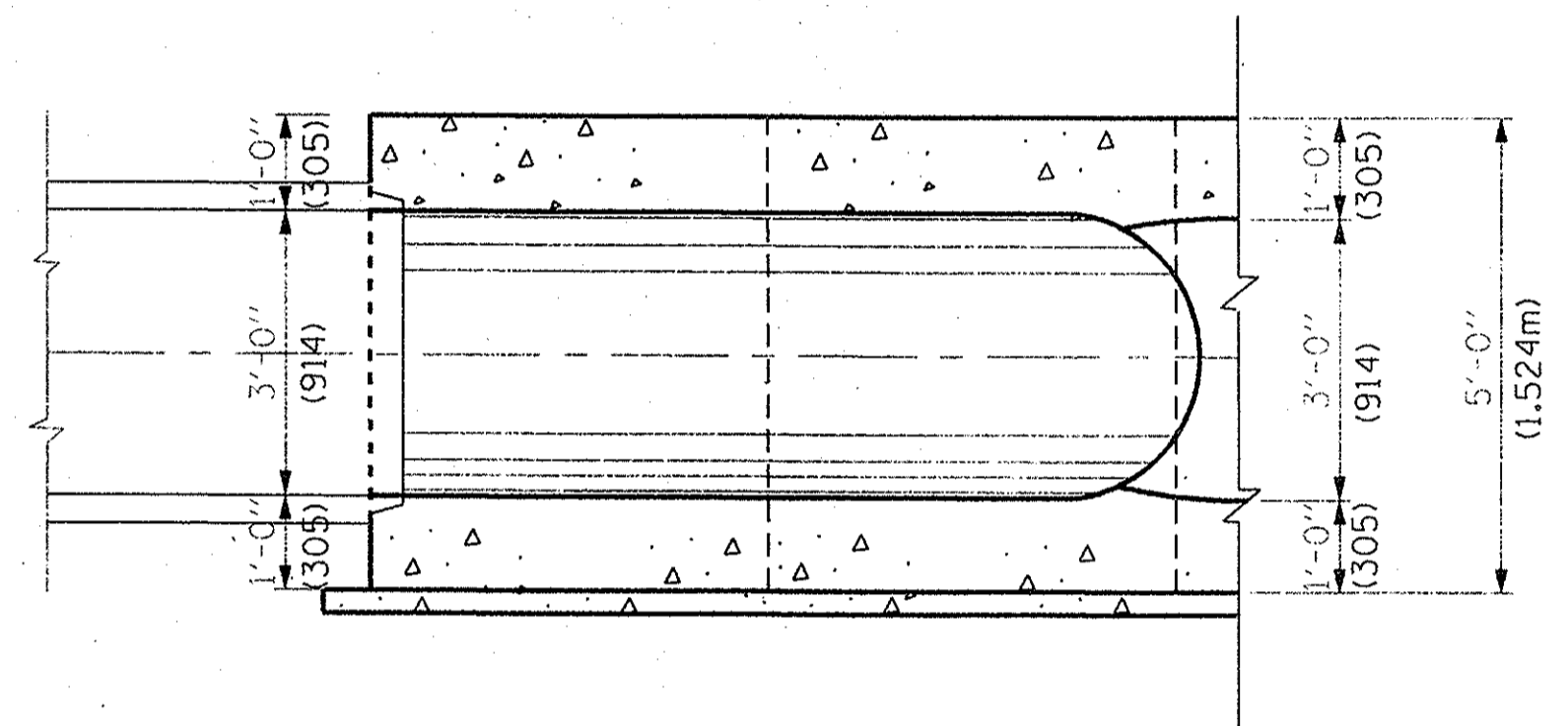
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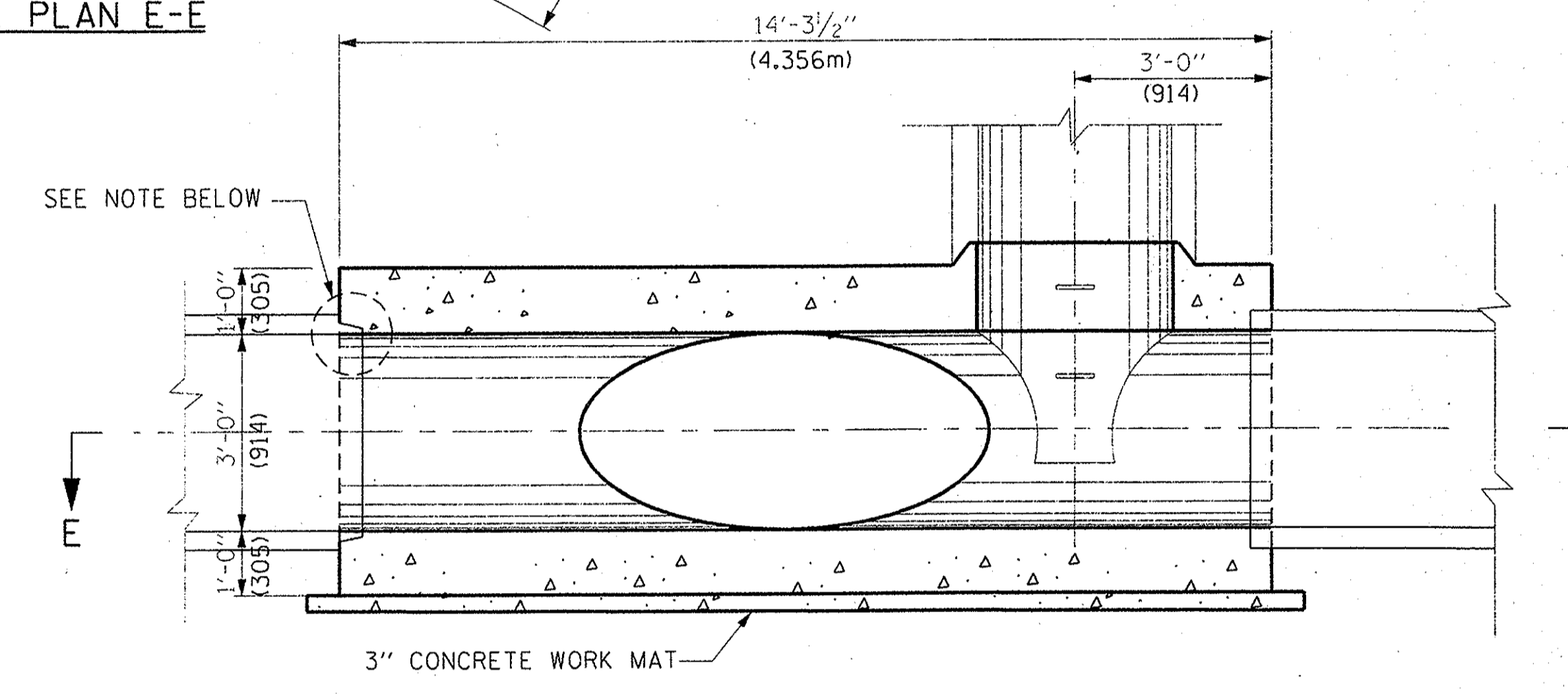
PLAN



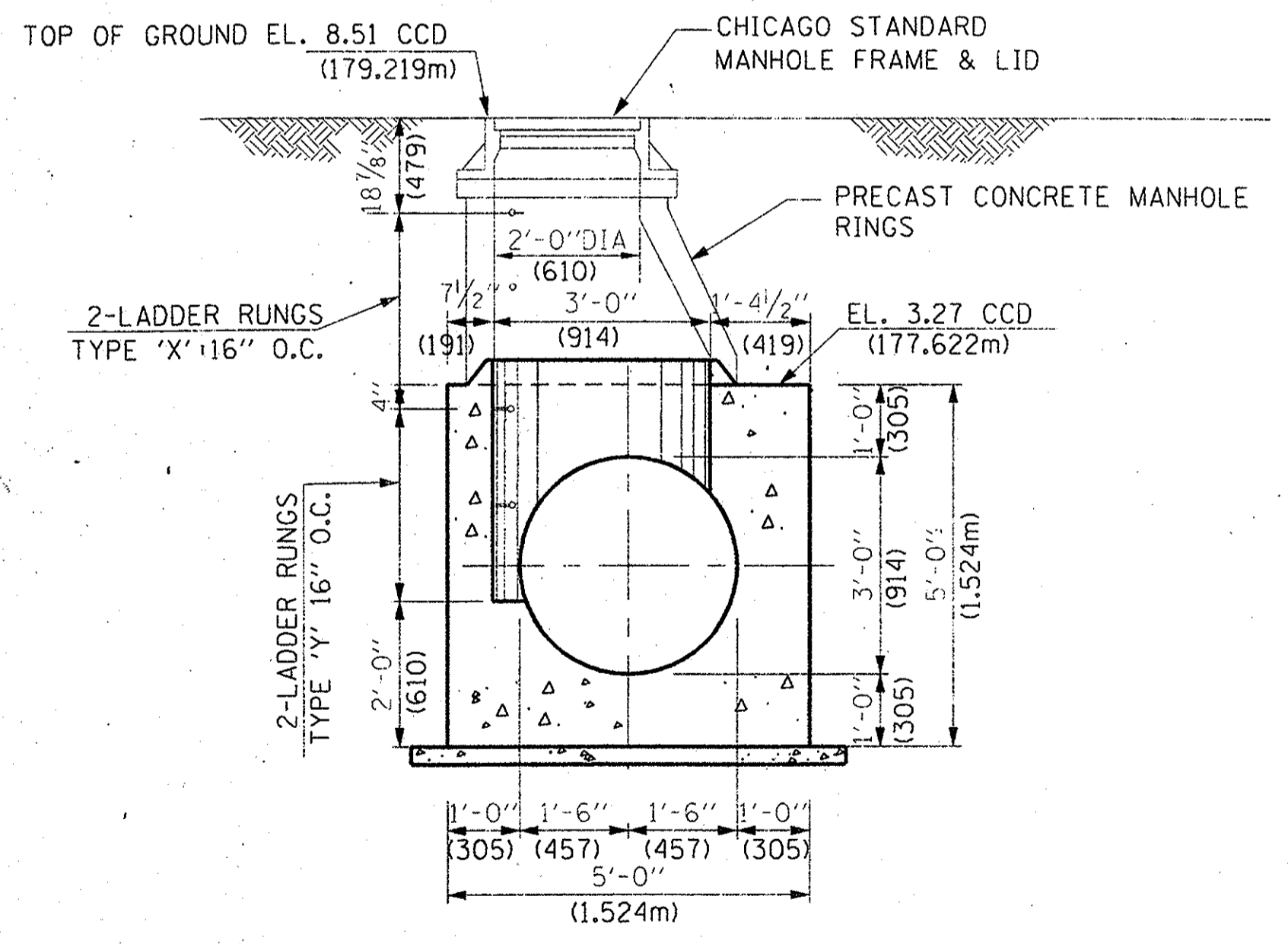
SECTIONAL PLAN E-E



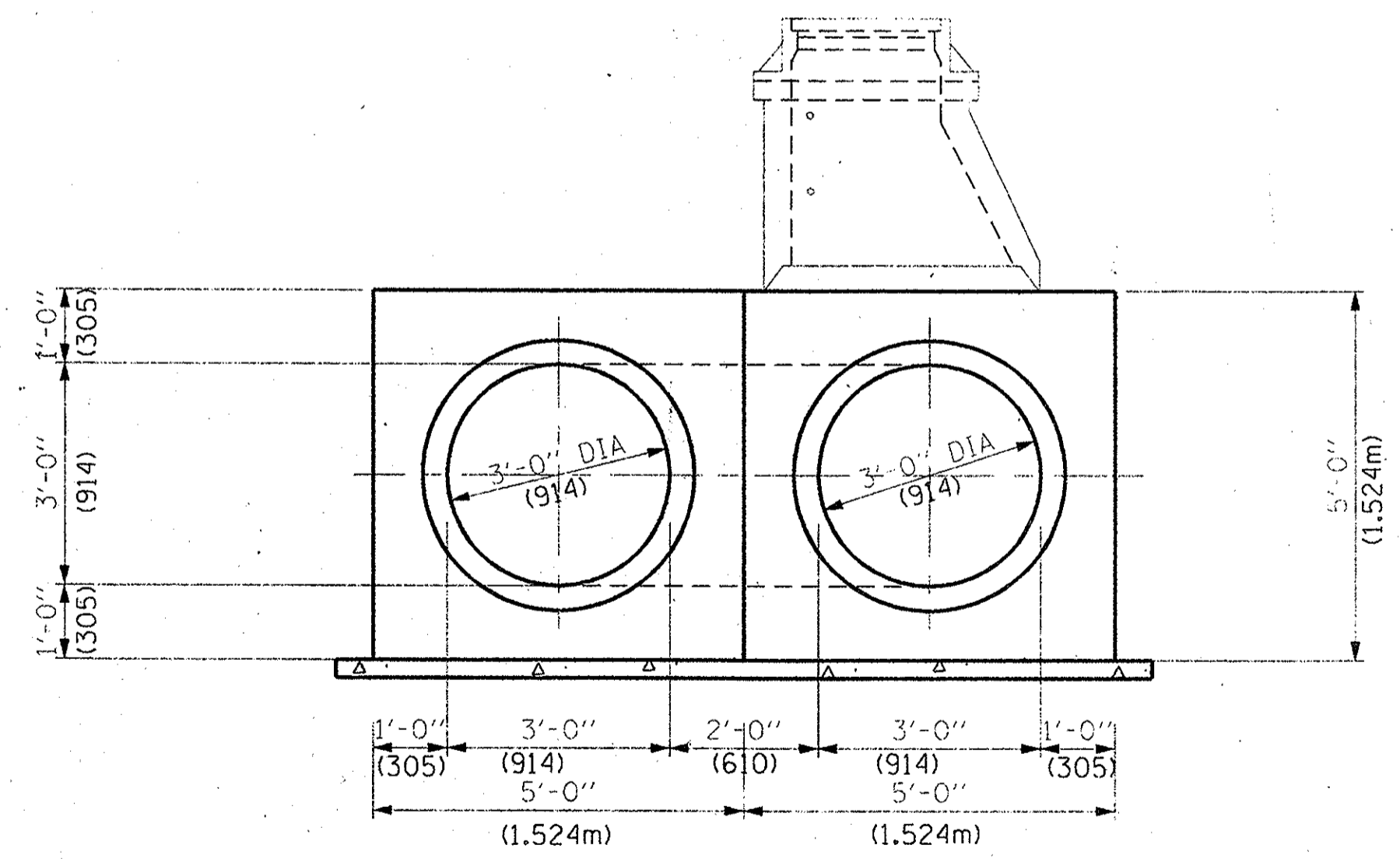
SECTION D-D



SECTION C-C



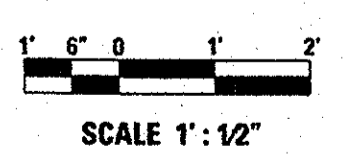
SECTION B-B



ELEVATION A-A

ALL INV. EL. = -0.73 CCD (176.403)

NOTES:
 UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM H1B FOR GENERAL NOTES SEE SHEET NO. C-1
 FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-9
 COORDINATE CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES AND TOPOGRAPHY.
 COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



07/23/2001 M:\P\032\SUBS\DELTA\CONTRACT I\JUNCTION CHAMBERS\ISSUED FOR BIDDING-2.DWG

DESIGN:	N.S.
DRAWN:	S.R.
CHECKED:	S.I.
APPROVED:	S.M.K.
DATE:	7/23/01
SCALE:	1" = 1/2"
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NO.	BY	DATE	DESCRIPTION
REVISIONS			

KEY PLAN:			
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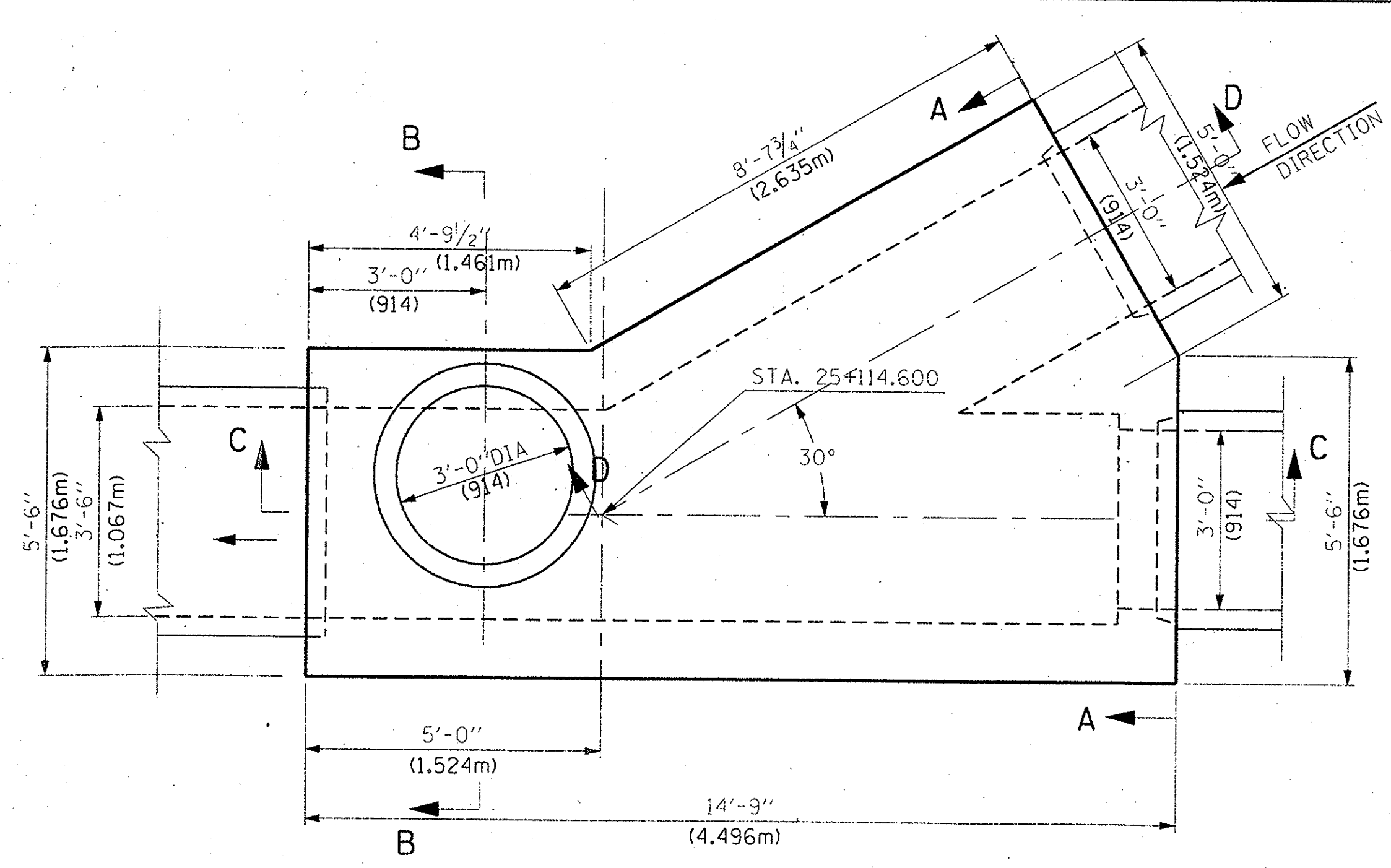
CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION**

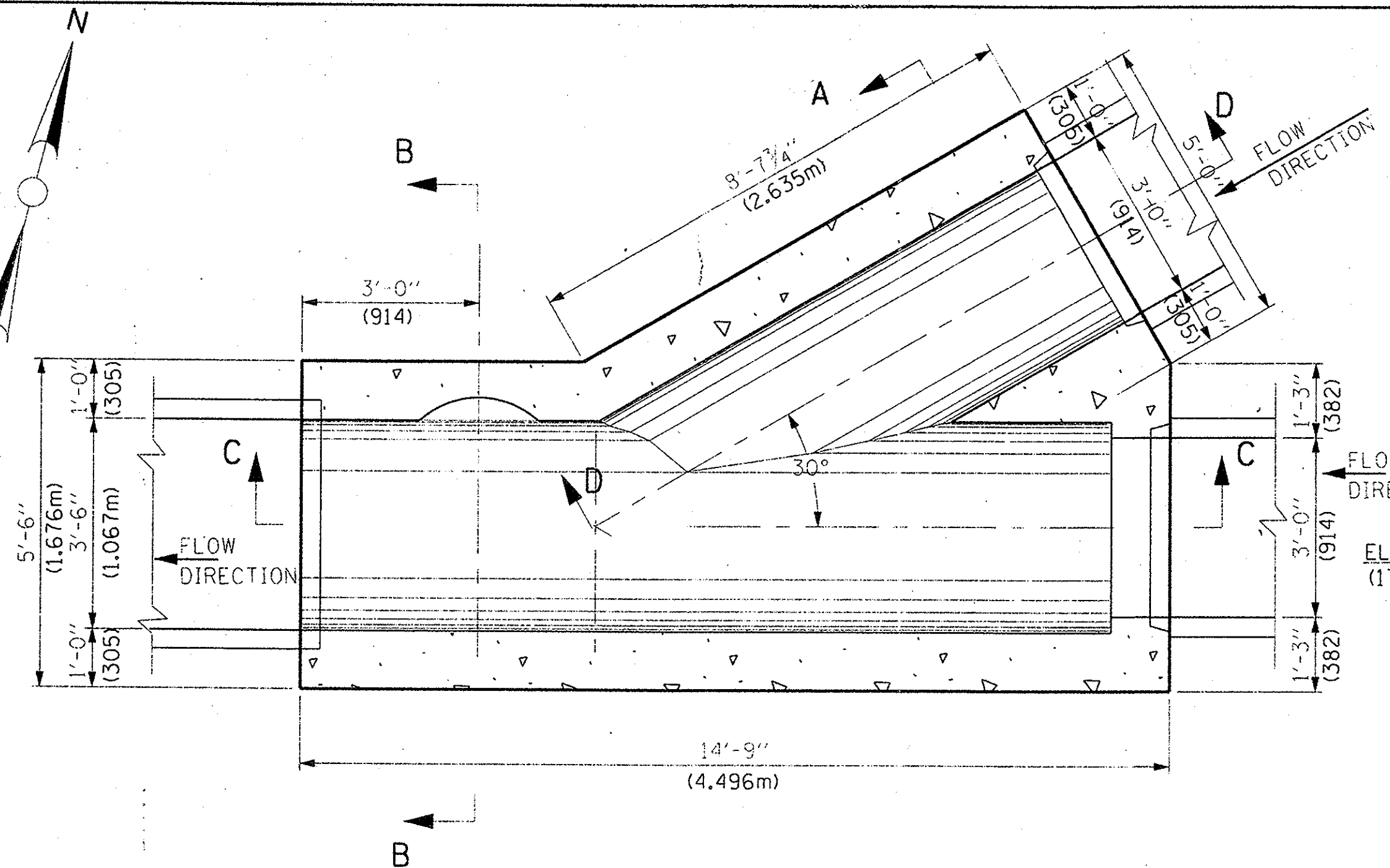
**JUNCTION STRUCTURE - H1B
 STATION 25 + 209.855**

CONTRACT NO.	00-B0241-02-PV
DRAWING NO.	DS - 2
PROJECT NO.	B-0-242

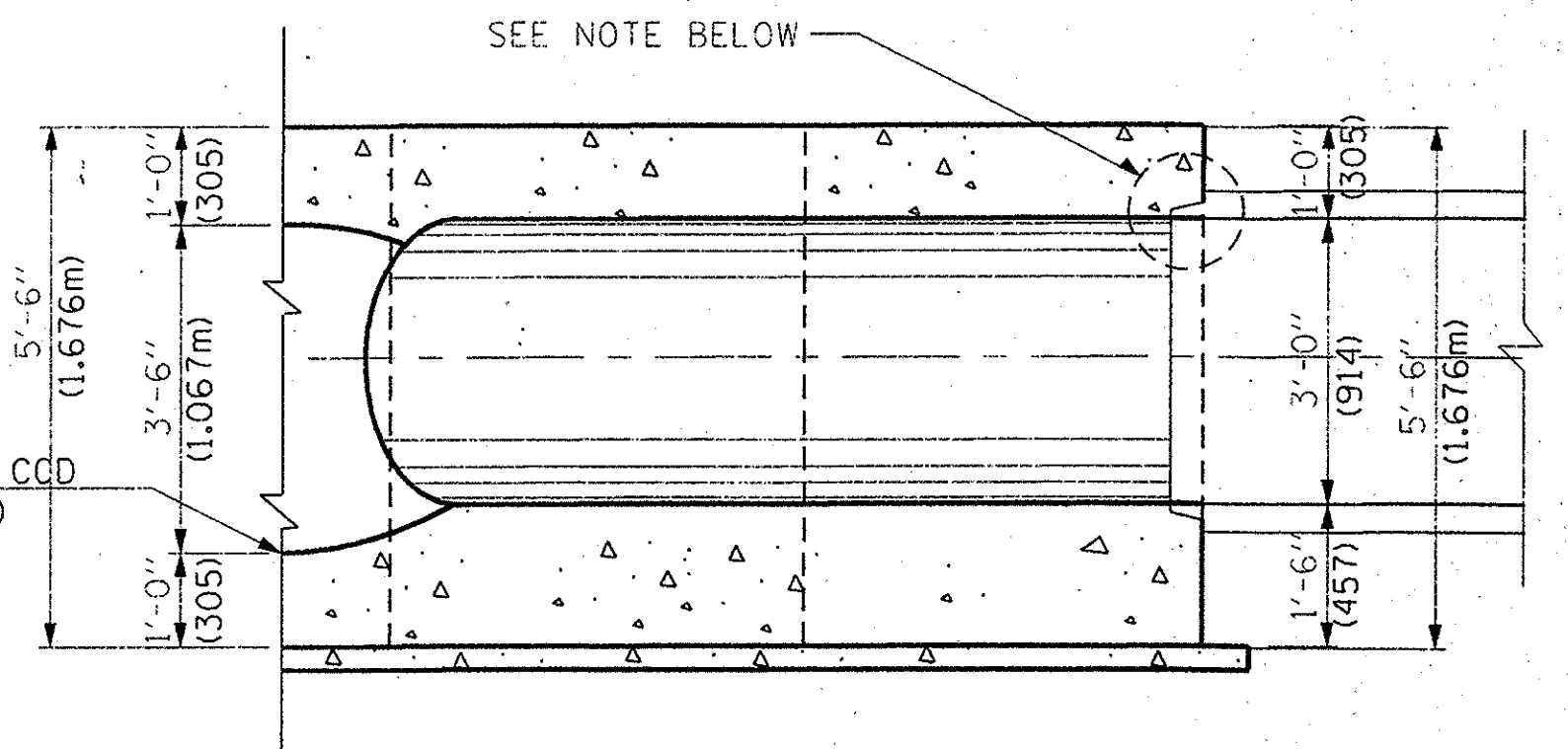
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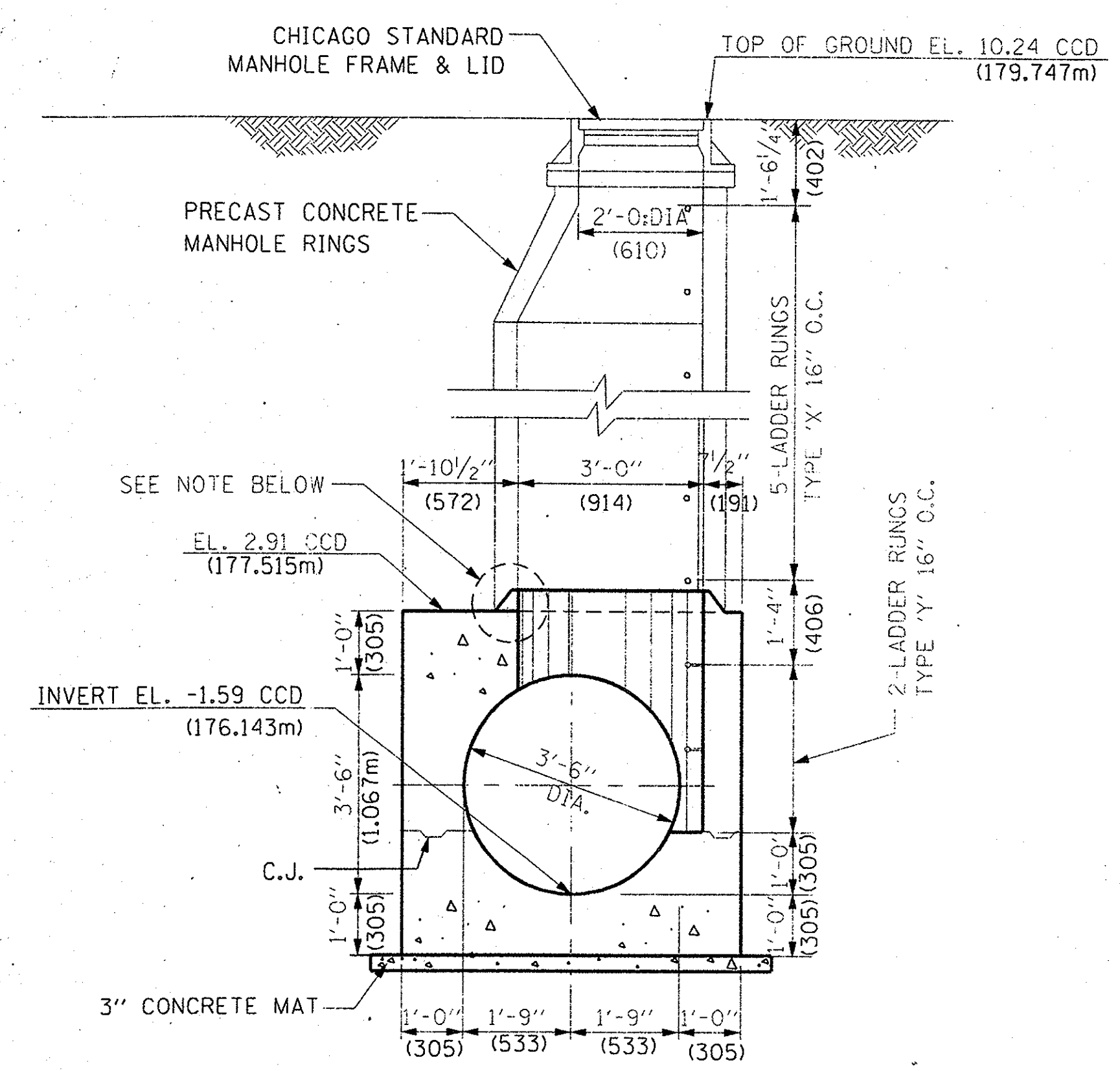
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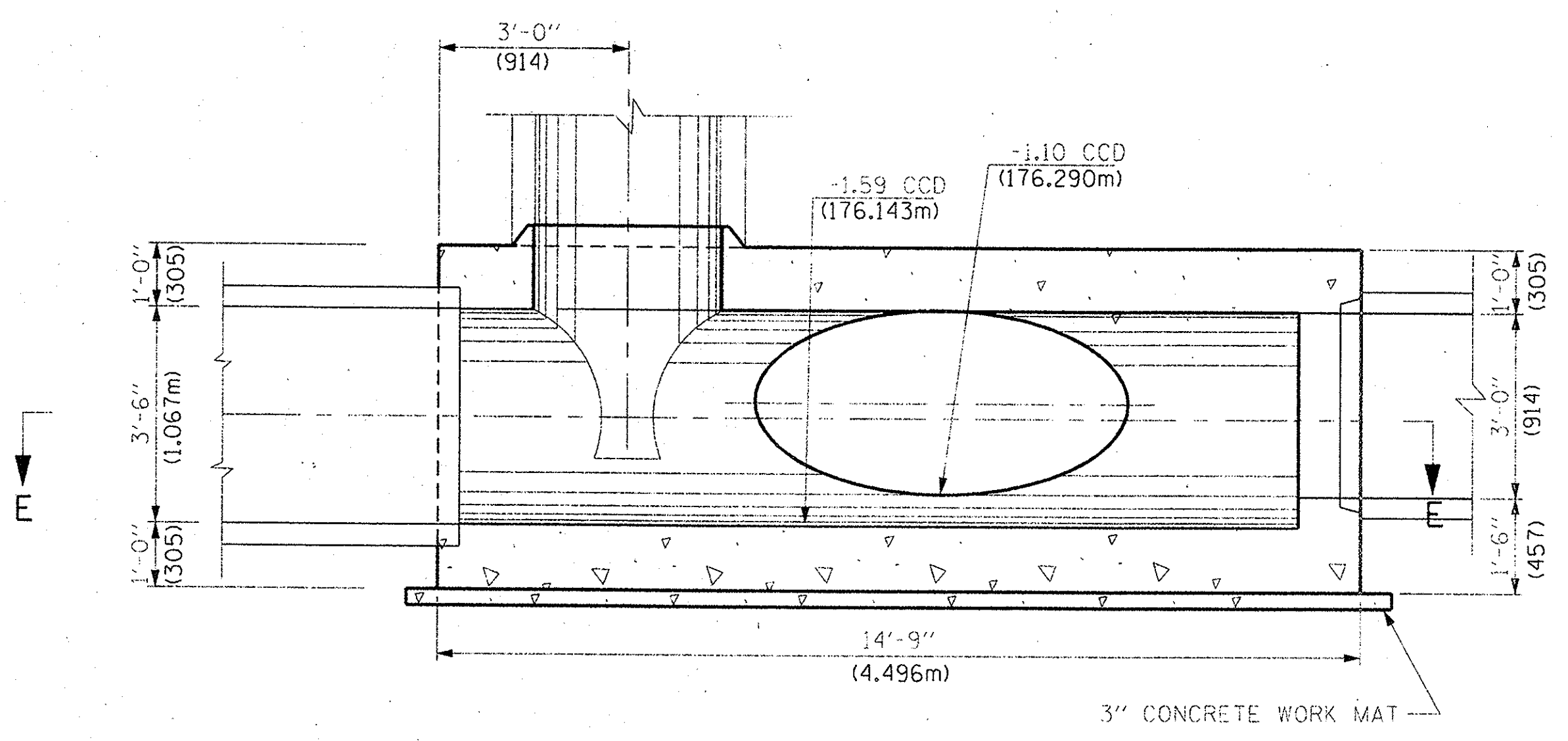
SECTIONAL PLAN E-E



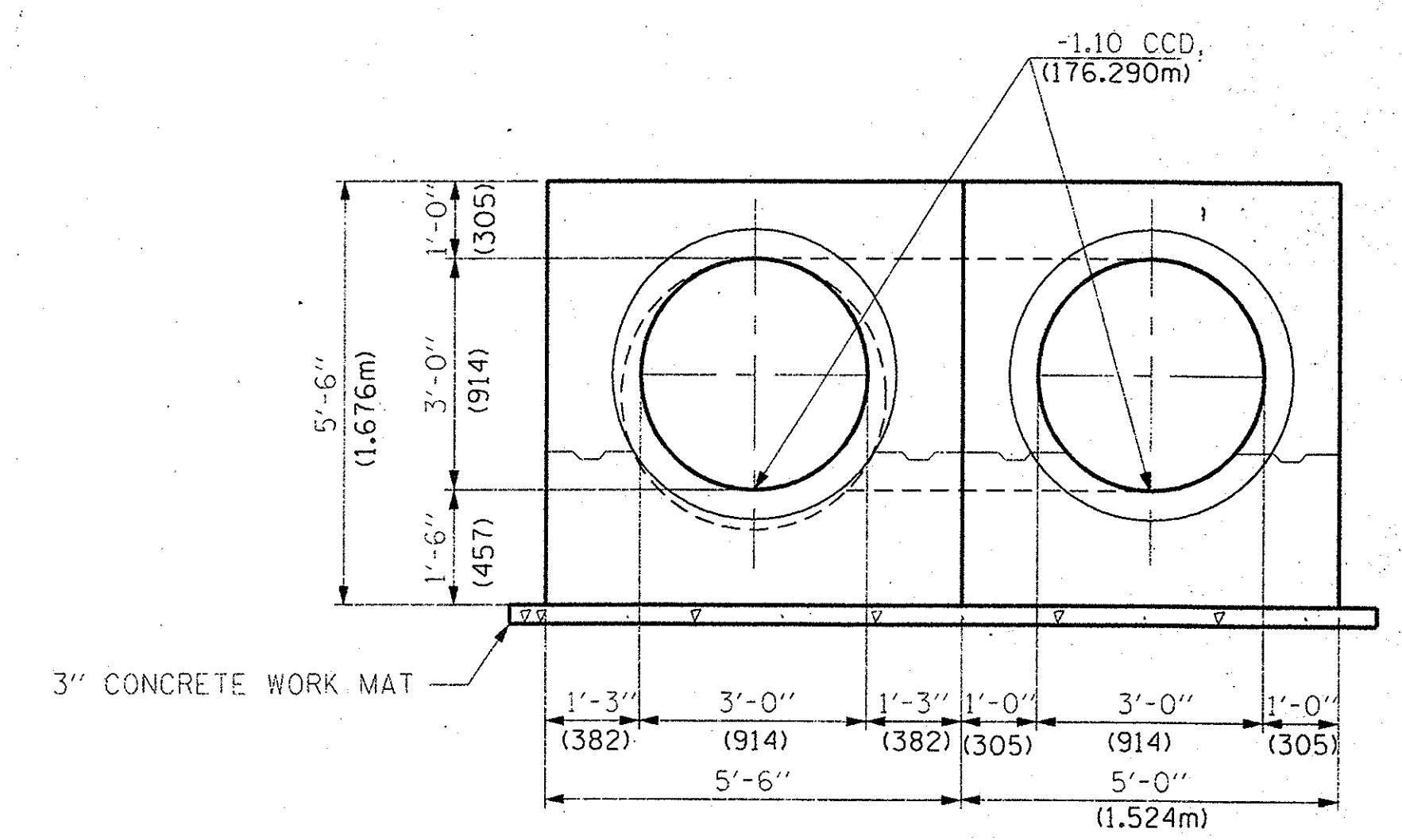
SECTION D-D



SECTION B-B

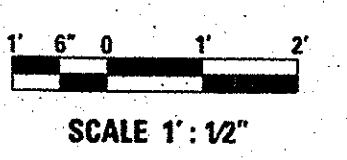


SECTION C-C



ELEVATION A-A

NOTES:
 UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM H4A
 FOR GENERAL NOTES SEE SHEET NO. C-1
 FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-10
 COORDINATE CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES
 AND TOPOGRAPHY.
 COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH
 SUPPLIER AND OR MANUFACTURER.



DESIGN:	N.S.				
DRAWN:	S.R.				
CHECKED:	S.I.				
APPROVED:	S.M.K.				
DATE:	7/23/01				
SCALE:	1' : 1/2"				
FILE:					
	NO.	BY	DATE	DESCRIPTION	
	REVISIONS				

KEY PLAN:	
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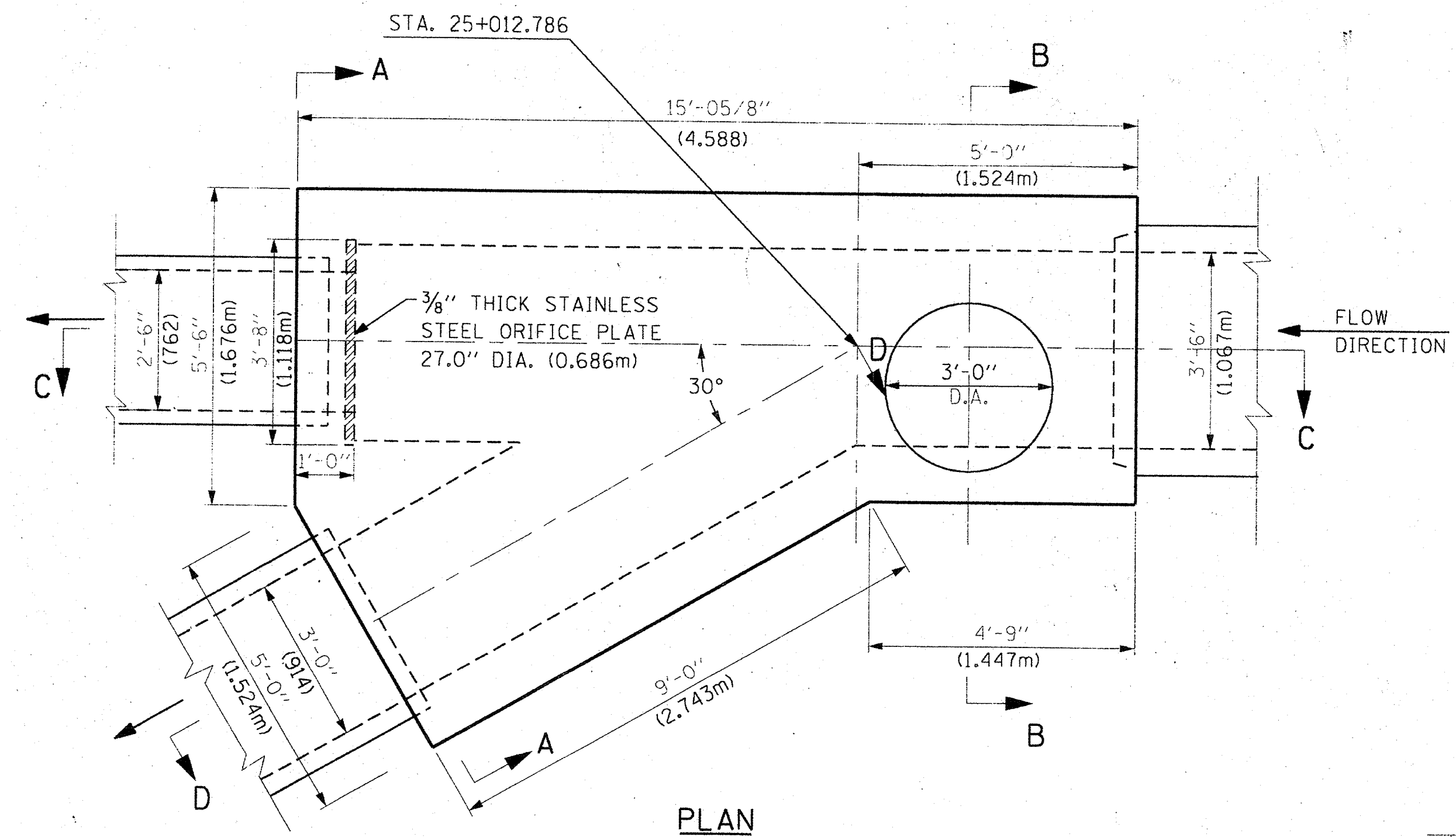
CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSERVATION ENVIRONMENTAL ENGINEERS, INC.
DEI DELTA ENGINEERING, INC.
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS

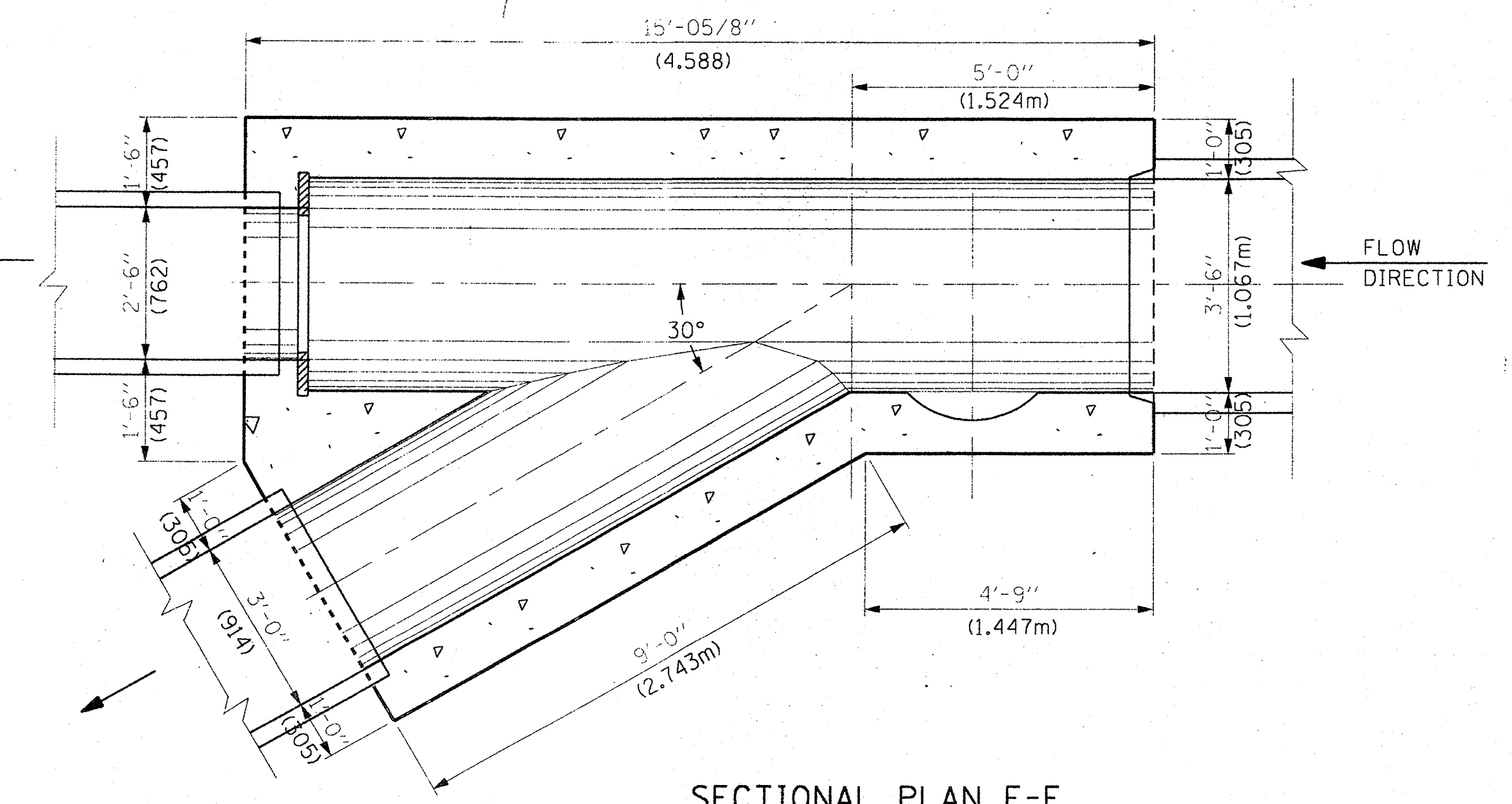
**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION**

**JUNCTION STRUCTURE - H4A
 STATION 25+114.600**
 1640090091

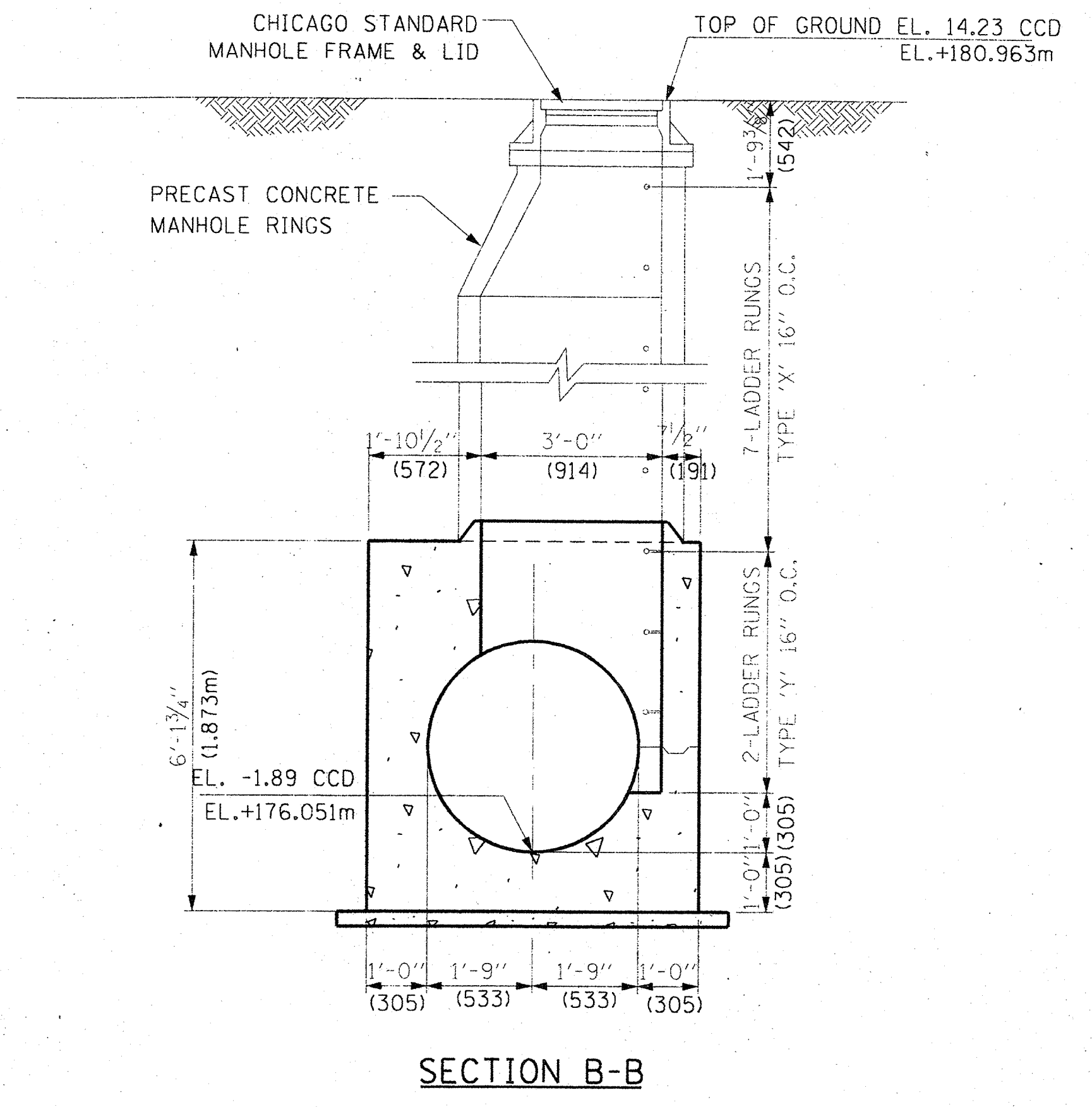
CONTRACT NO.	00-B0241-02-PV
DRAWING NO.	DS - 3
PROJECT NO.	B-0-242



PLAN

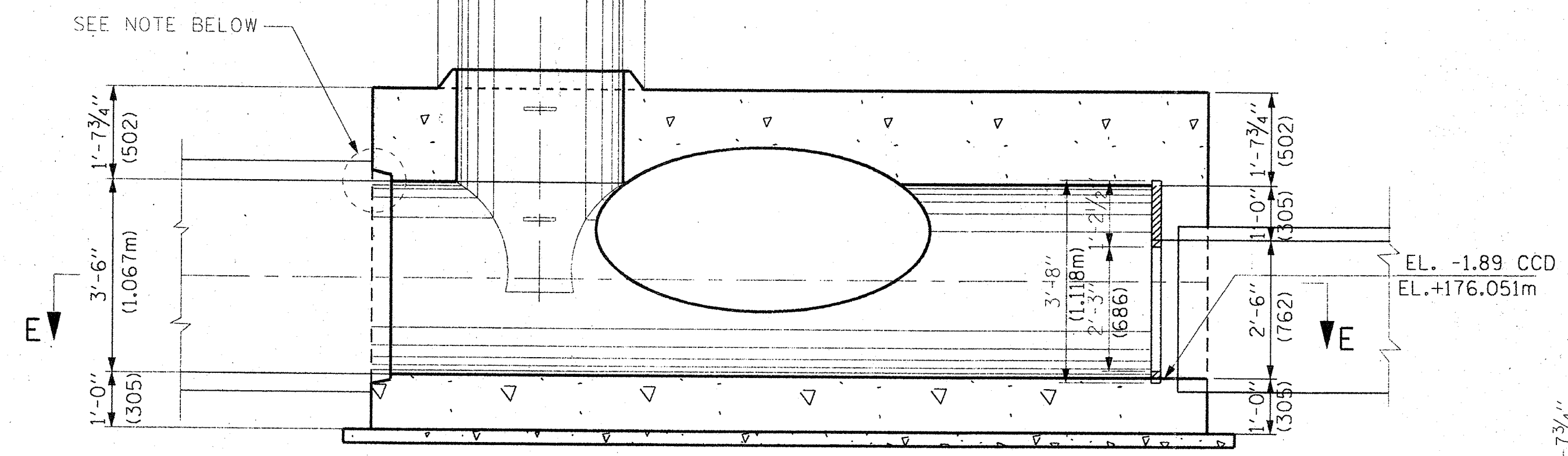


SECTIONAL PLAN E-E

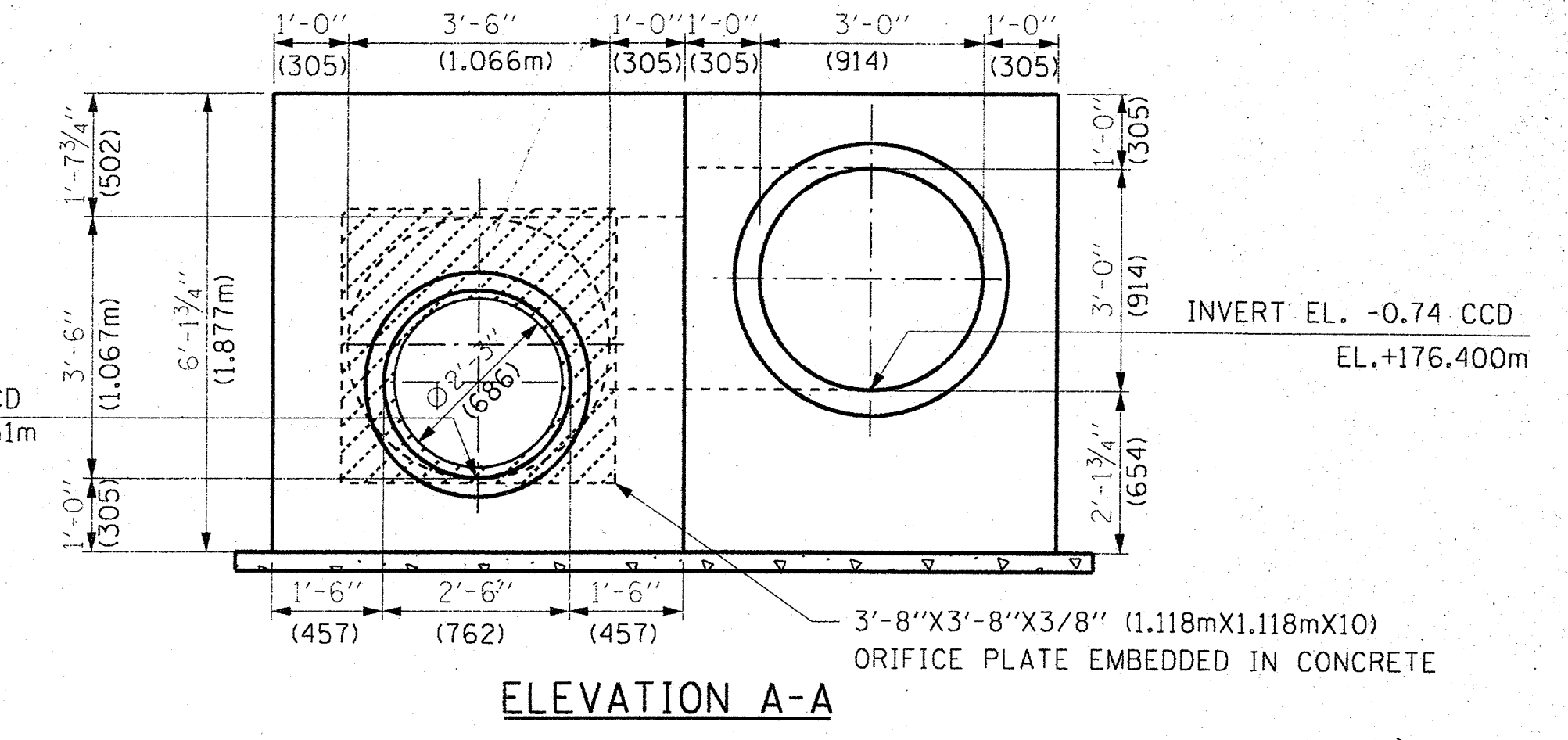


SECTION B-B

SECTION C-C

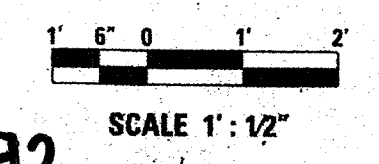


SECTION D-D



ELEVATION A-A

NOTES:
 UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM H5A
 FOR GENERAL NOTES SEE SHEET NO. C-1
 FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-11
 COORDINATE CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES
 AND TOPOGRAPHY.
 COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH
 SUPPLIER AND OR MANUFACTURER.



1640090092

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CHECKED: S.I.				
APPROVED: S.M.K.				
DATE: 7/23/01				
SCALE: 1" = 1/2"				
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KEY PLAN:				
NO.	BY	DATE	DESCRIPTION	
REVISIONS				

CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

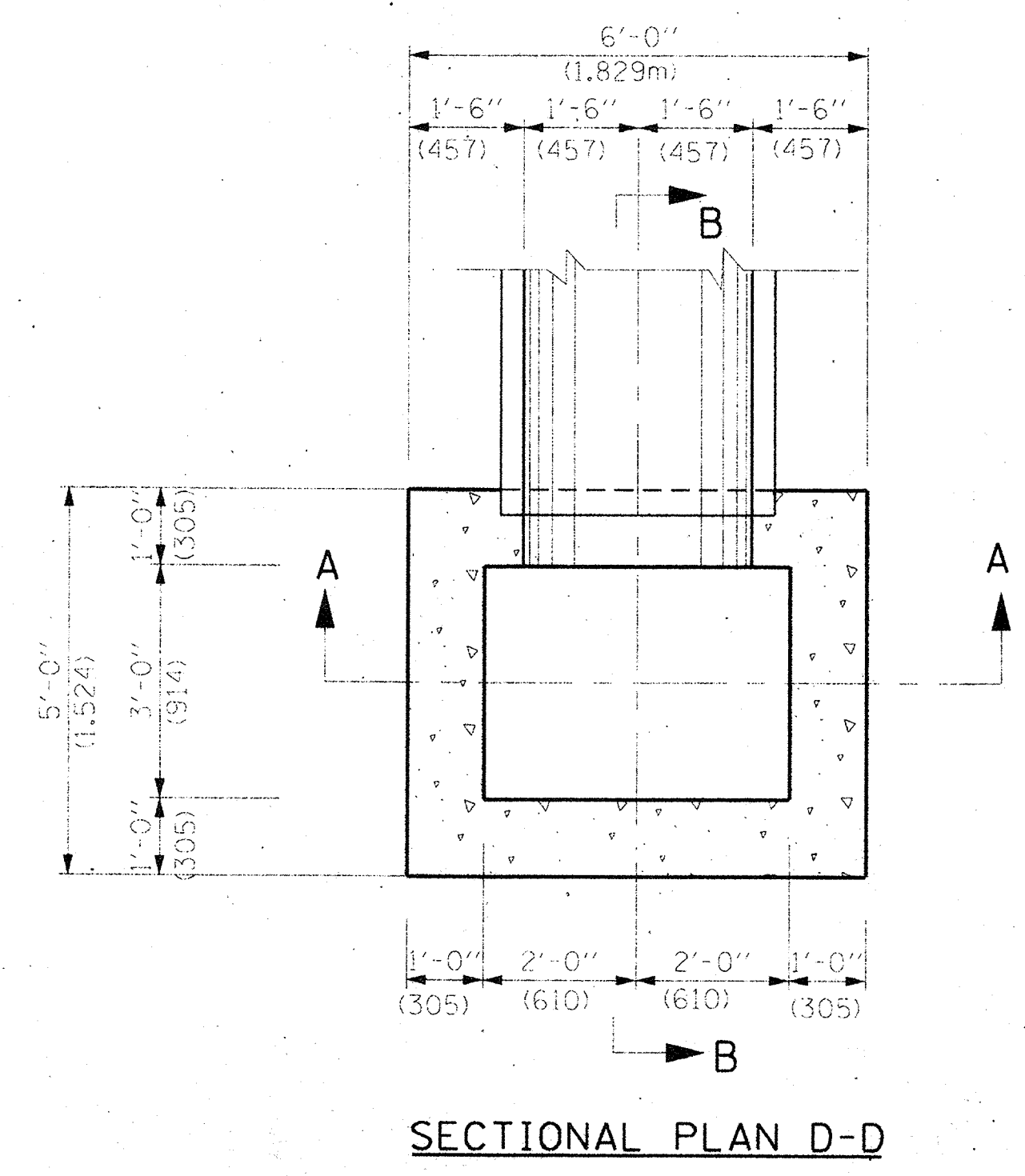
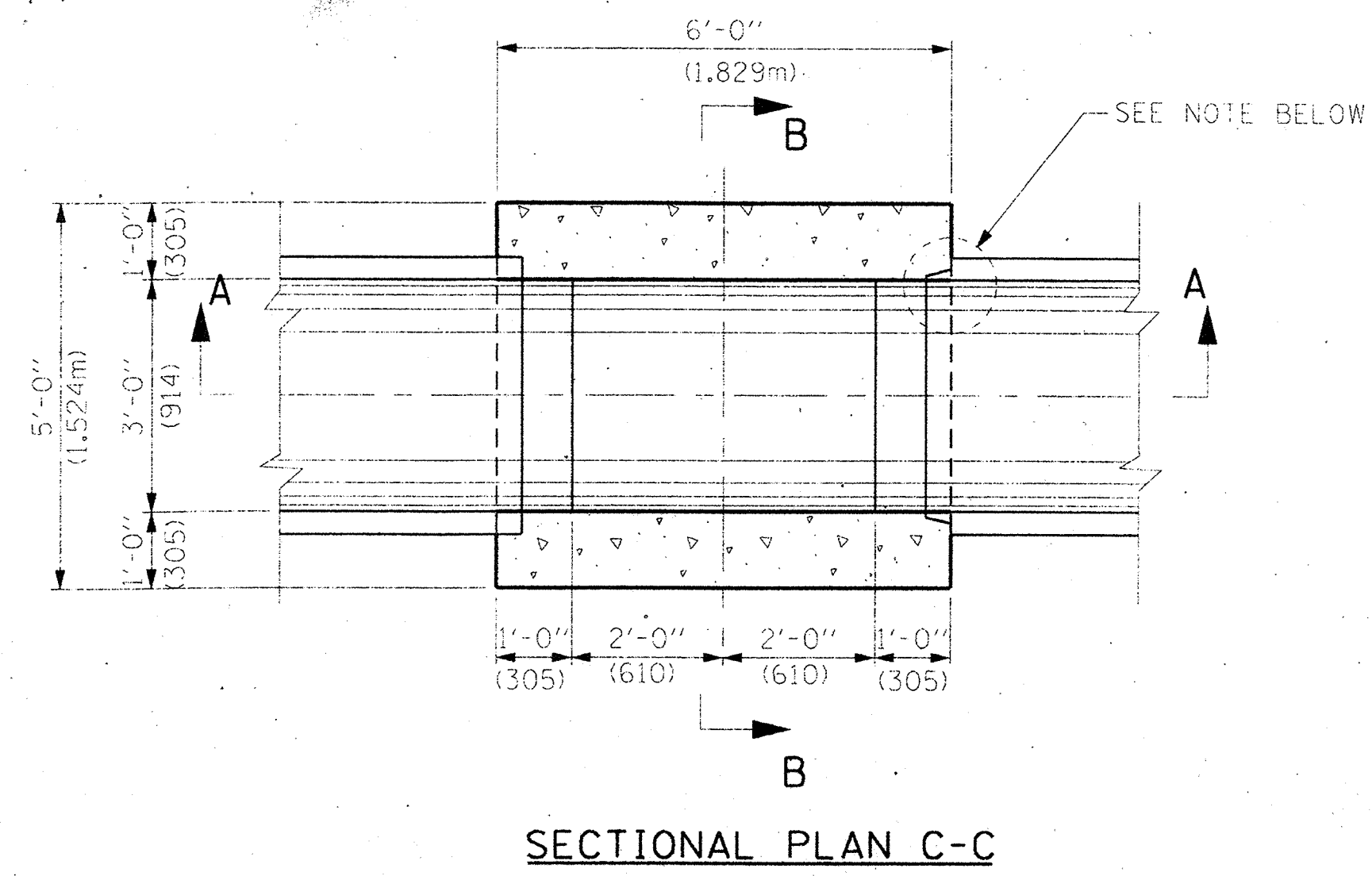
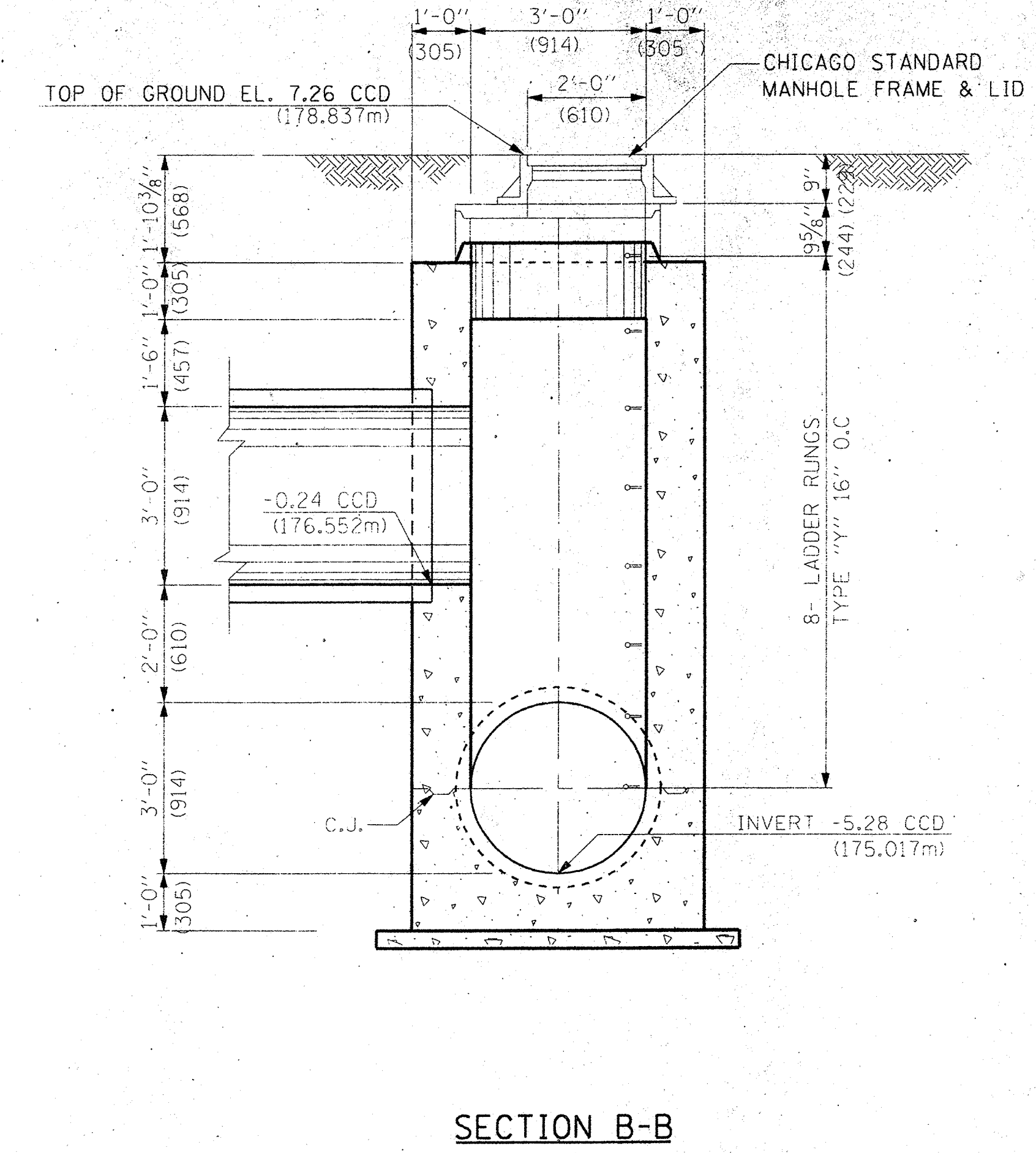
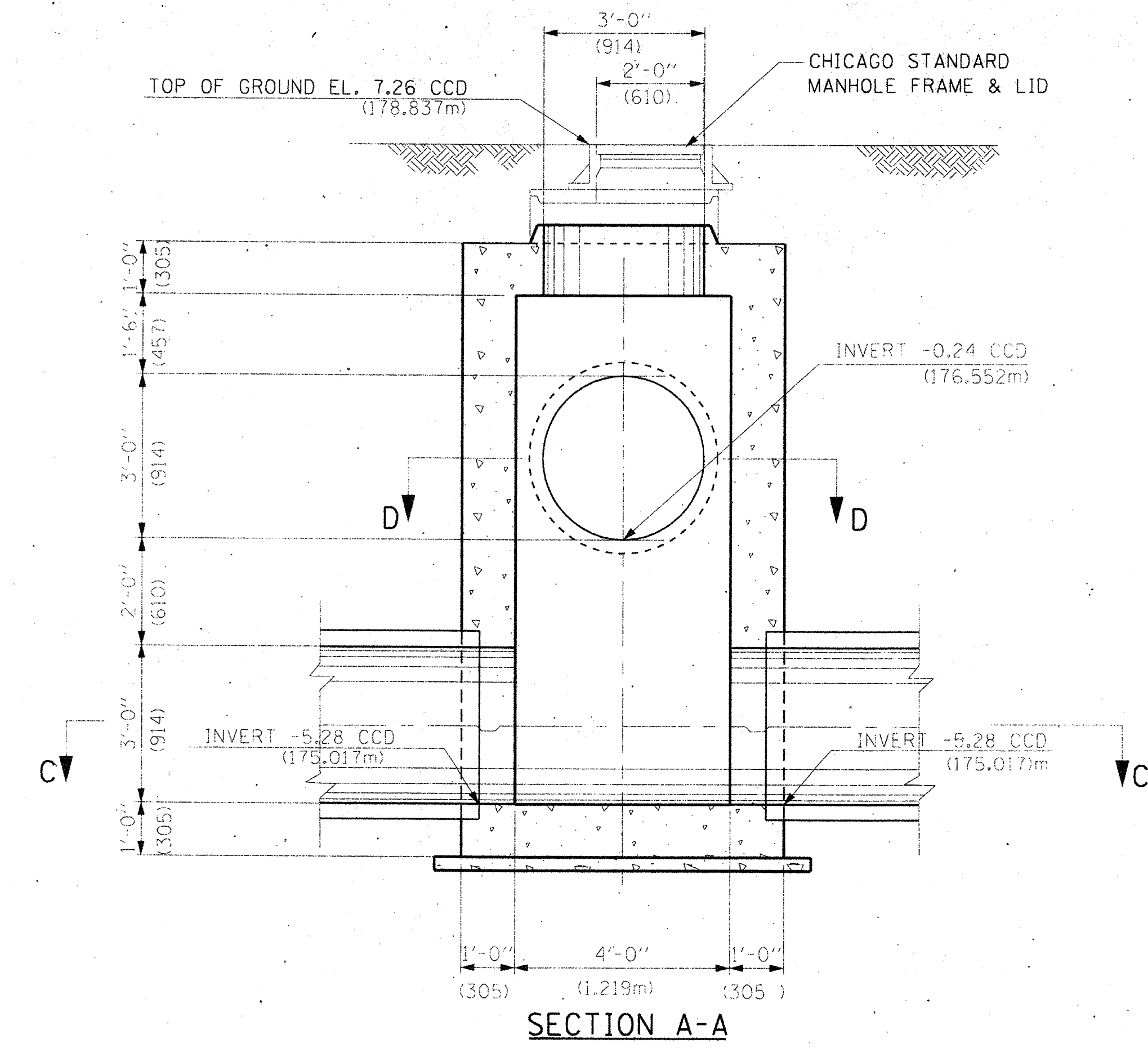
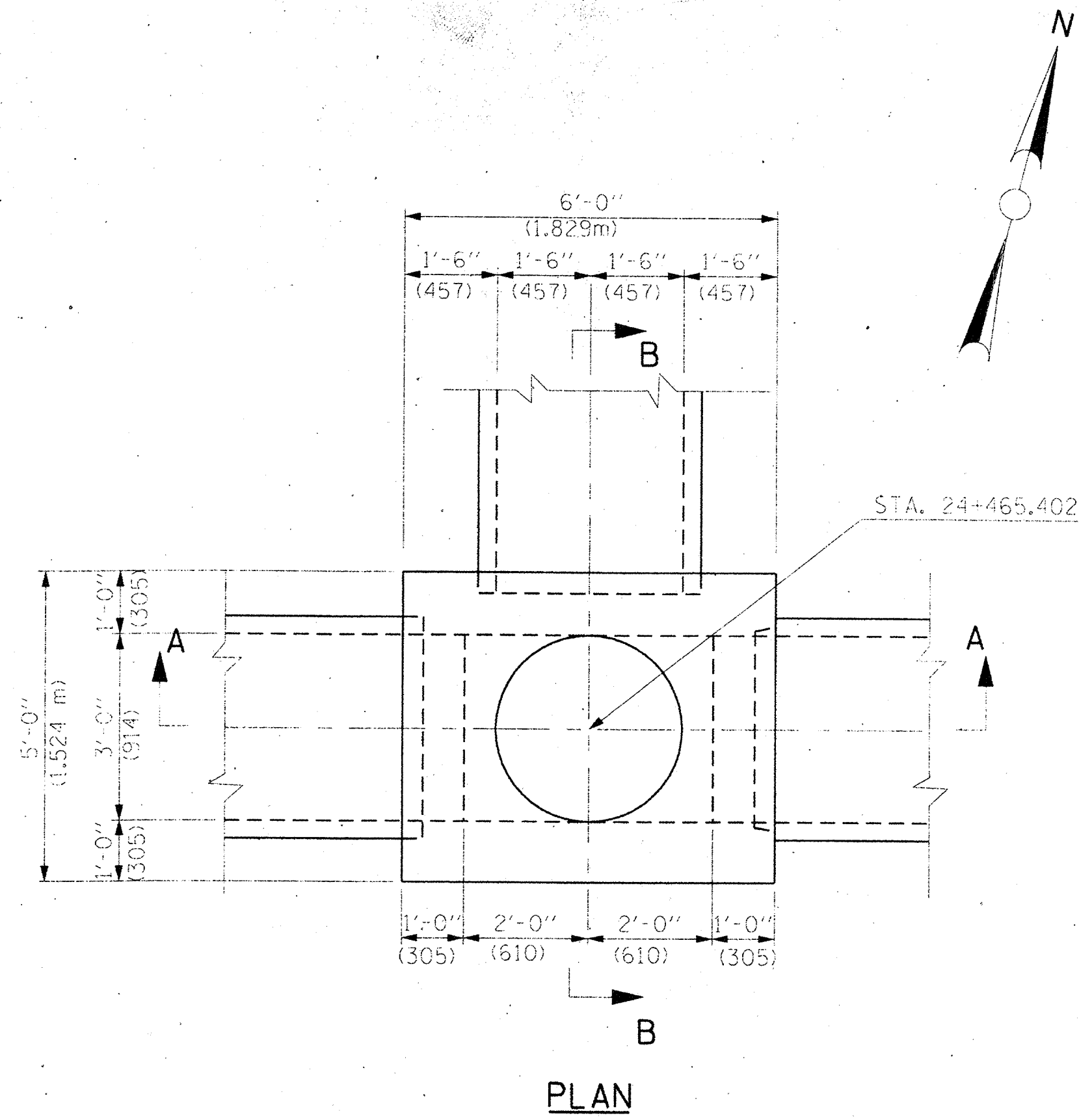
CTE ENGINEERS
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS

DEI DELTA ENGINEERING, INC.
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS

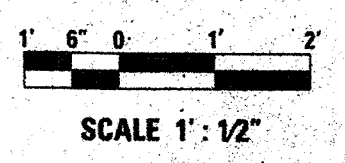
SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION

JUNCTION STRUCTURE - H5A
STATION 25 + 012.786

CONTRACT NO.	00-80241-02
DRAWING NO.	DS-11
PROJECT NO.	00-8-0742



NOTES:
 UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM H14A
 FOR GENERAL NOTES SEE SHEET NO. C-1
 FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-12
 COORDINATE CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES
 AND TOPOGRAPHY.
 COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH
 SUPPLIER AND OR MANUFACTURER.



DESIGN: N.S.				
DRAWN: S.R.				
CHECKED: S.L.				
APPROVED: S.M.K.				
DATE: 7/23/01				
SCALE: 1' = 1/2"				
FILE:	NO.	BY	DATE	DESCRIPTION
	REVISIONS			

KEY PLAN:

CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

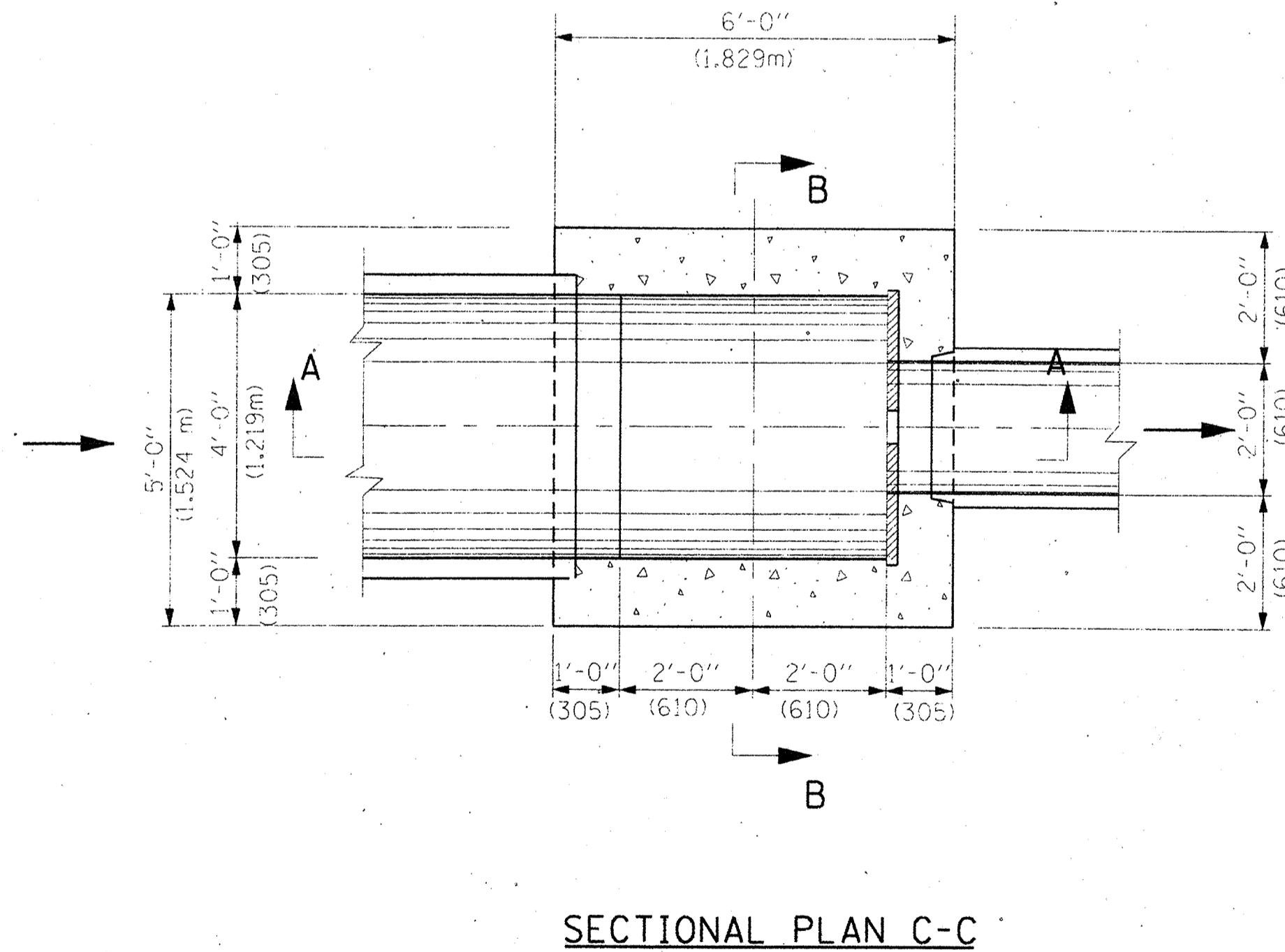
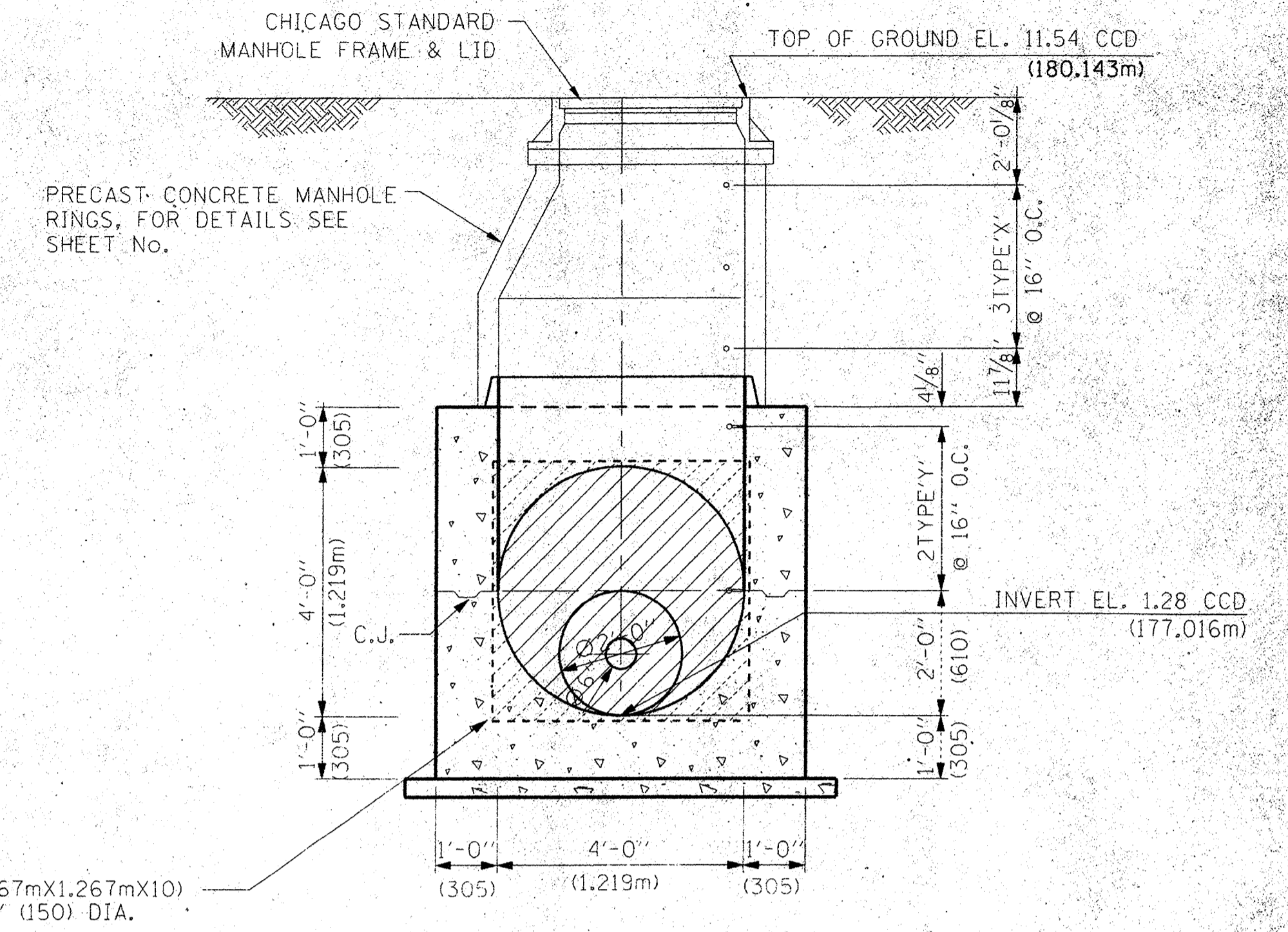
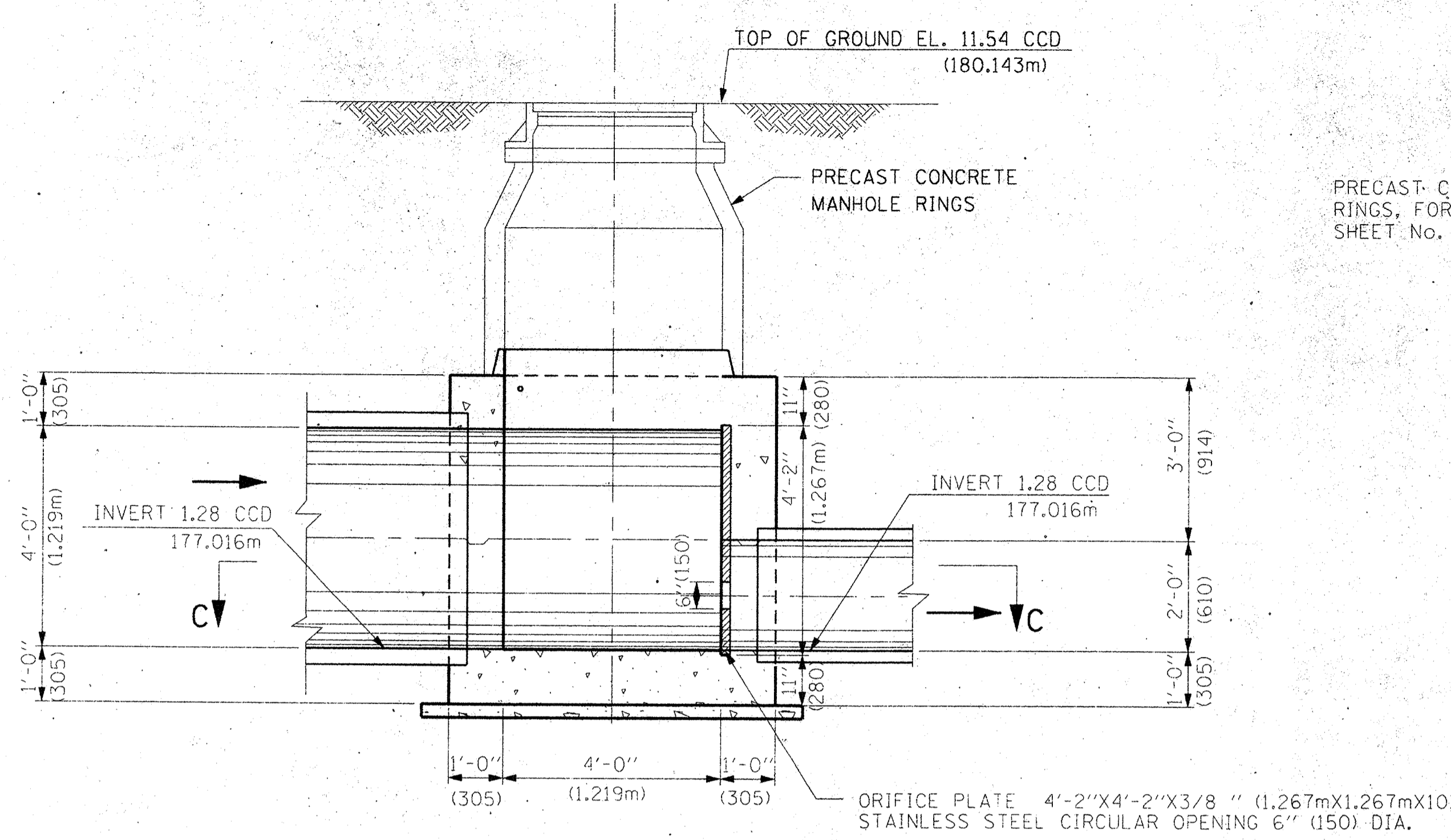
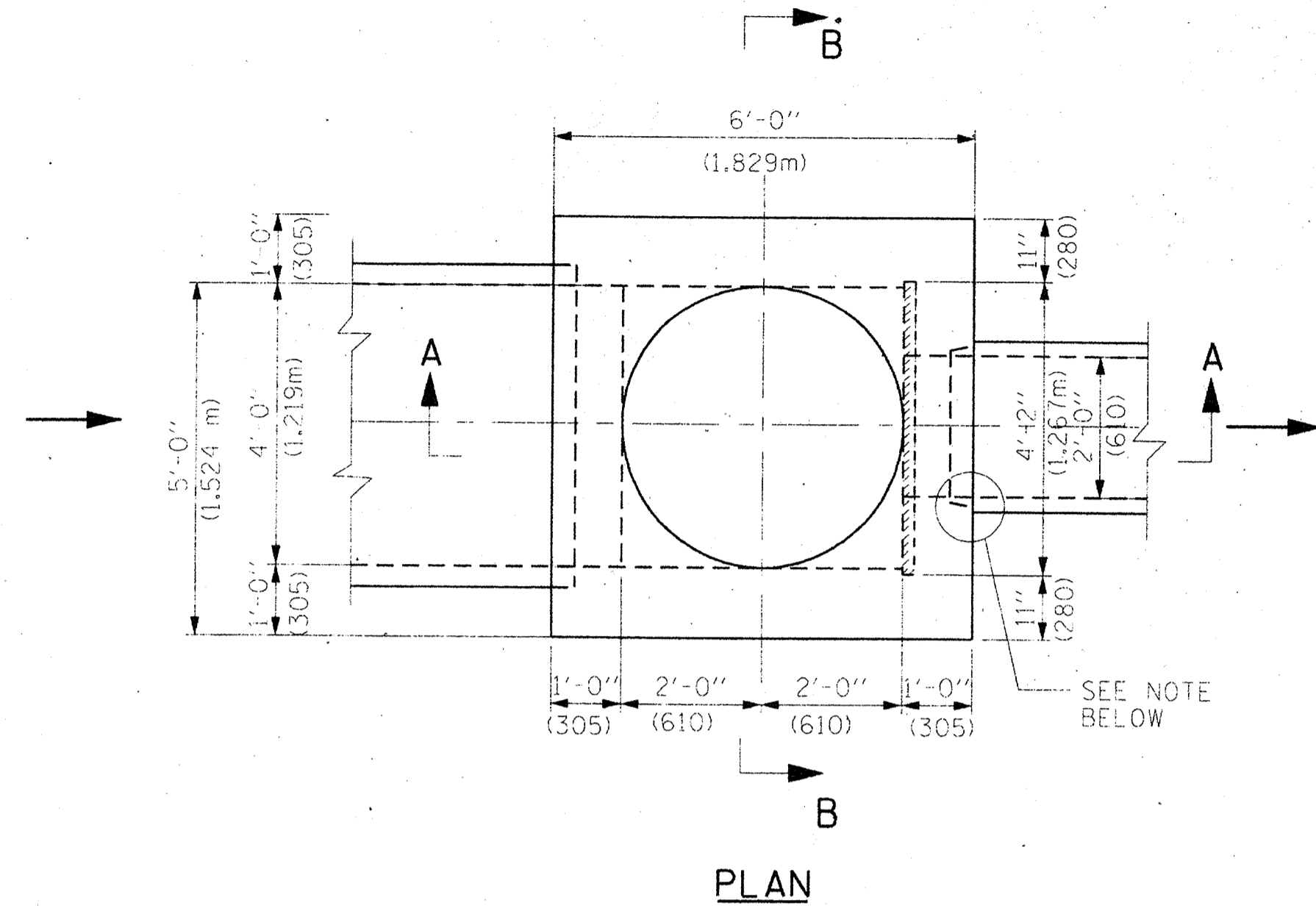
CTE ENGINEERS
 CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.
DEI DELTA ENGINEERING, INC.
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION

JUNCTION STRUCTURE- H14A
STATION 24 + 465.402

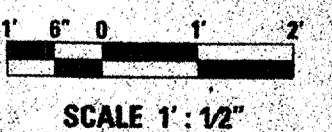
CONTRACT NO.
 00-80241-02-PV
 DRAWING NO.
DS - 5
 PROJECT NO. B-0-242

1640090093



NOTES:

- UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM BH8
- FOR GENERAL NOTES SEE SHEET NO. C-1
- FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-15
- COORDINATE CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES AND TOPOGRAPHY.
- COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN: N.S.				
DRAWN: S.R.				
CHECKED: S.I.				
APPROVED: S.M.K.				
DATE: 7/23/01				
SCALE: 1' : 1/2"				
FILE:				
REVISIONS				
NO.	BY	DATE	DESCRIPTION	

KEY PLAN:

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

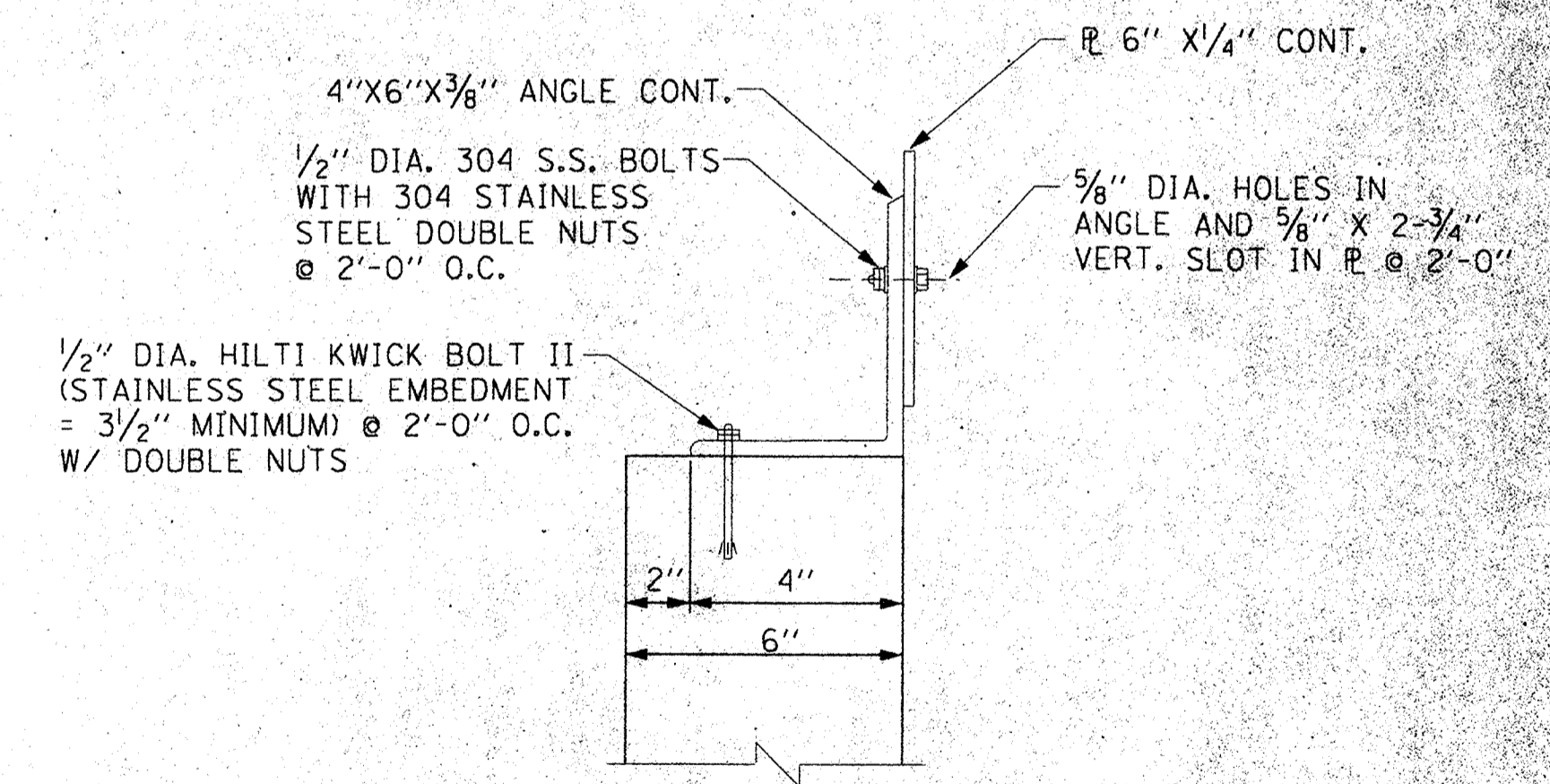
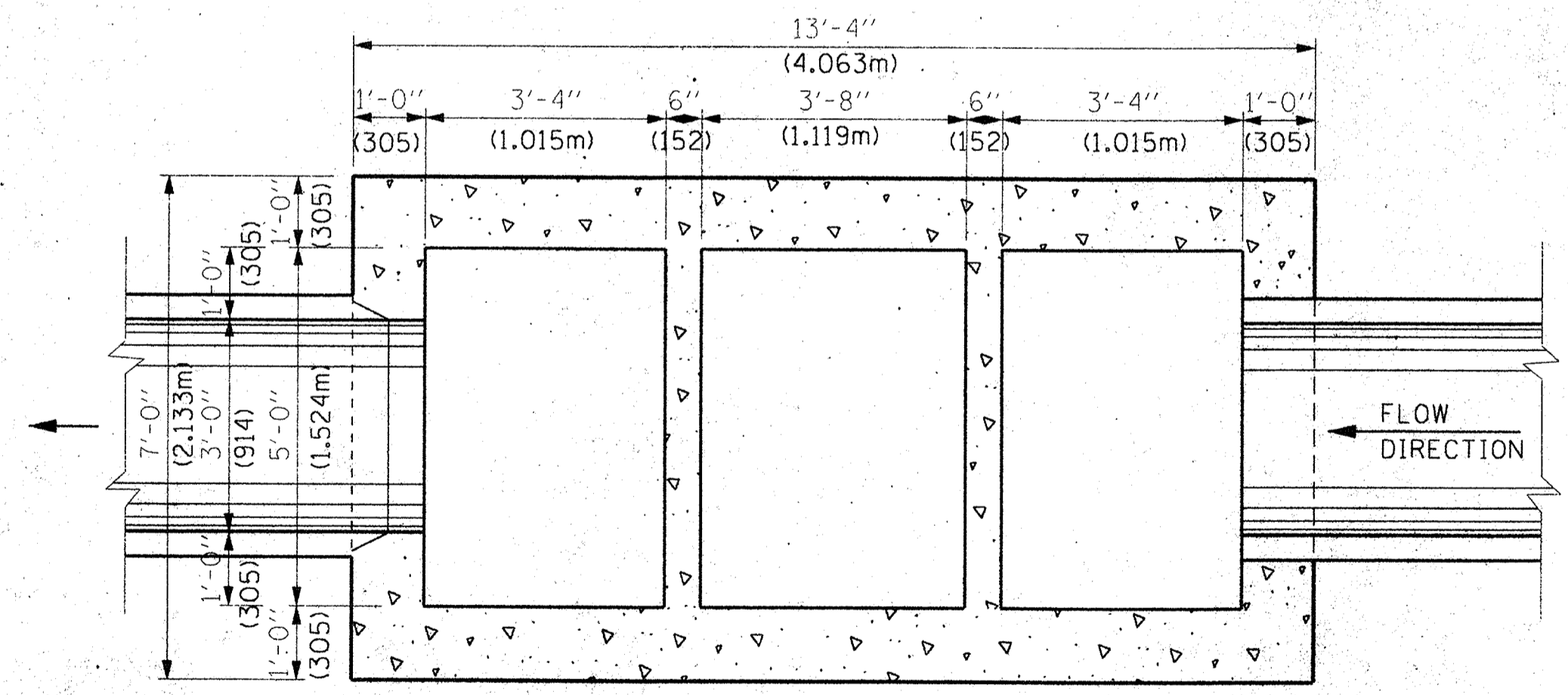
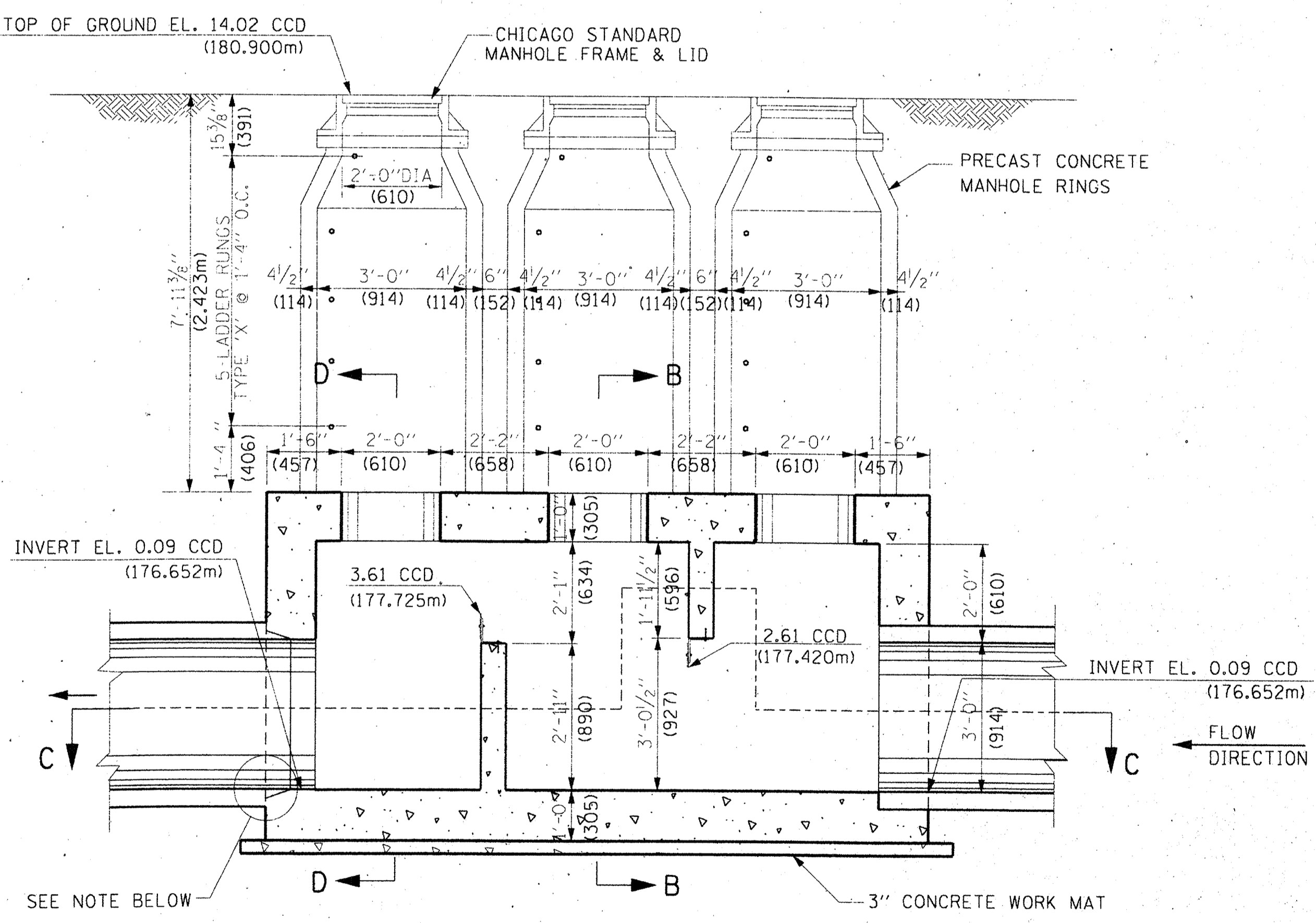
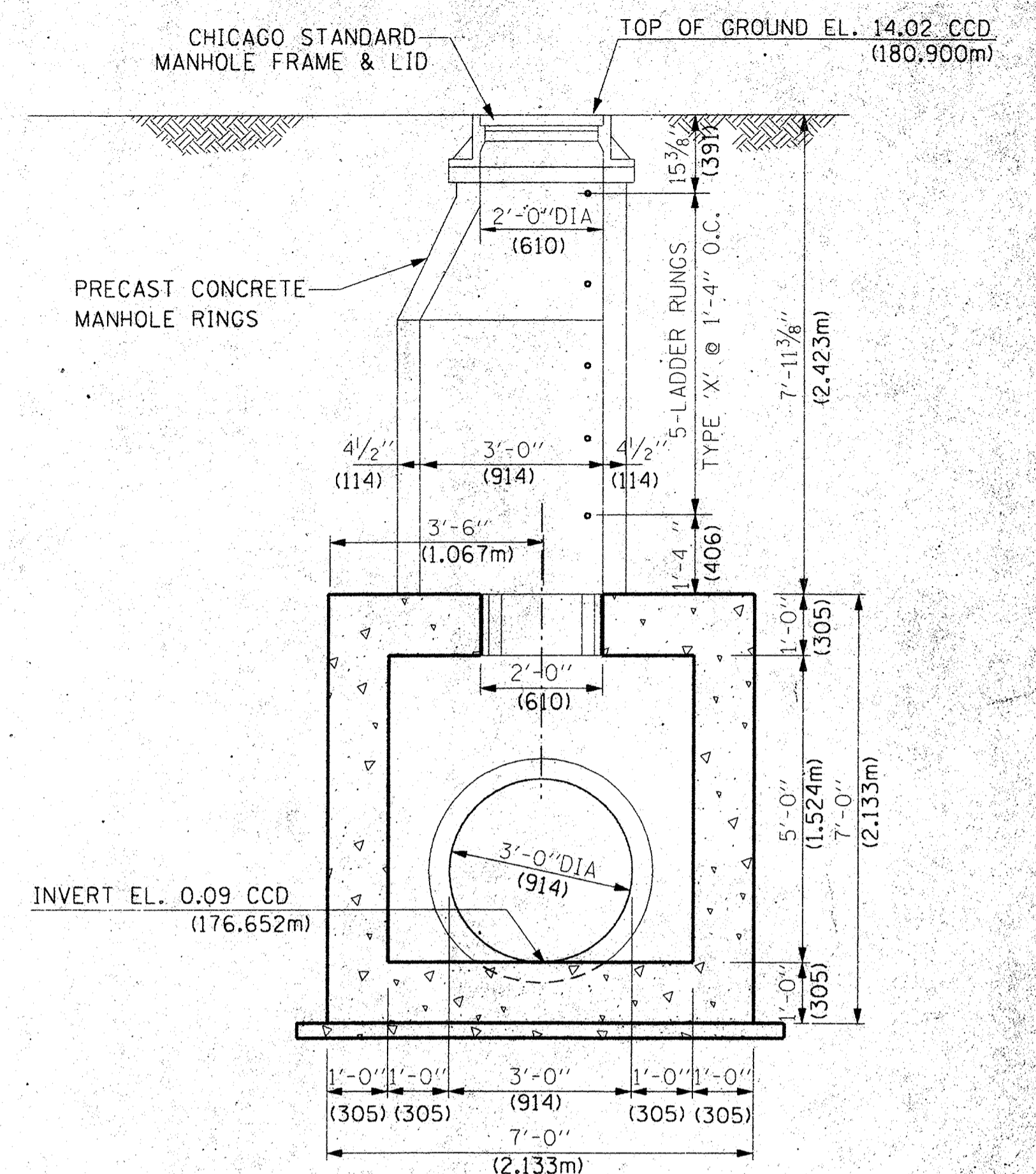
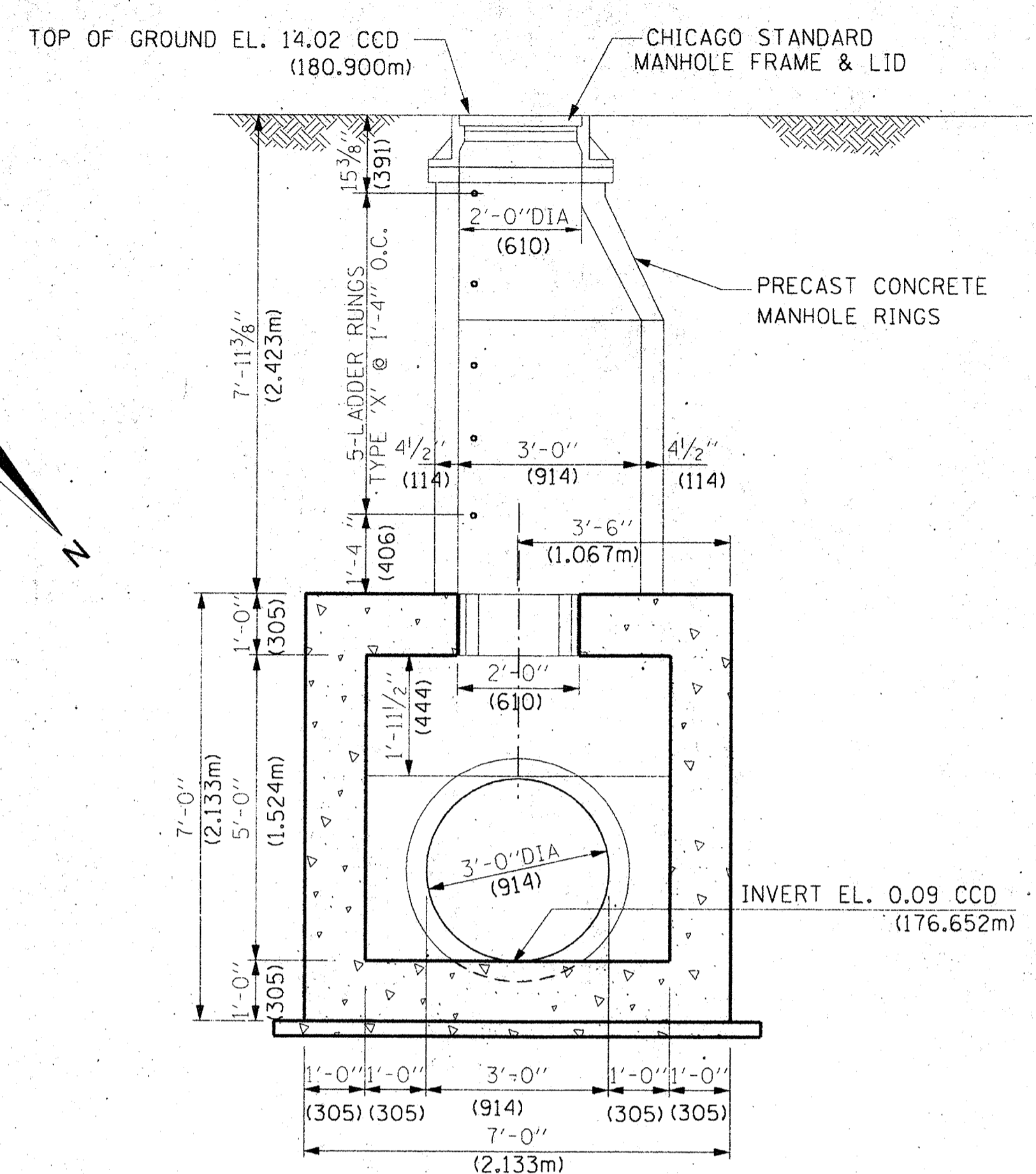
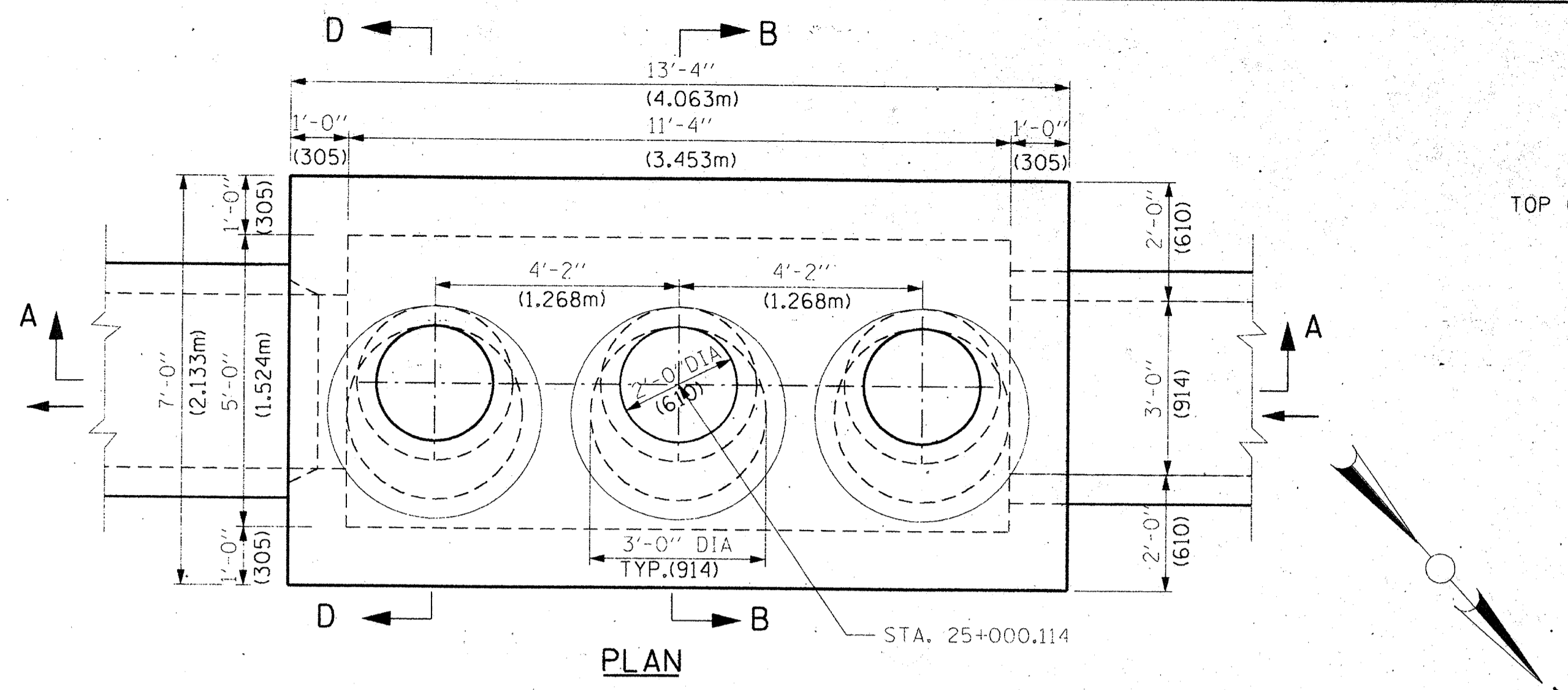
DEI DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION

JUNCTION STRUCTURE - BH8

CONTRACT NO.	00-B0241-02-PV
DRAWING NO.	DS - 6
PROJECT NO.	B-0-242

1640090094



NOTES:
UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM H5D
FOR GENERAL NOTES SEE SHEET NO. C-1
FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-13
COORDINATE CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES AND TOPOGRAPHY.
COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.

SCALE 1" = 12"

DESIGN: N.S.			
DRAWN: S.R.			
CHECKED: S.I.			
APPROVED: S.M.K.			
DATE: 7/23/01			
SCALE: 1' = 1/2"			
FILE:			
NO.	BY	DATE	DESCRIPTION
REVISIONS			

KEY PLAN:	
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CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

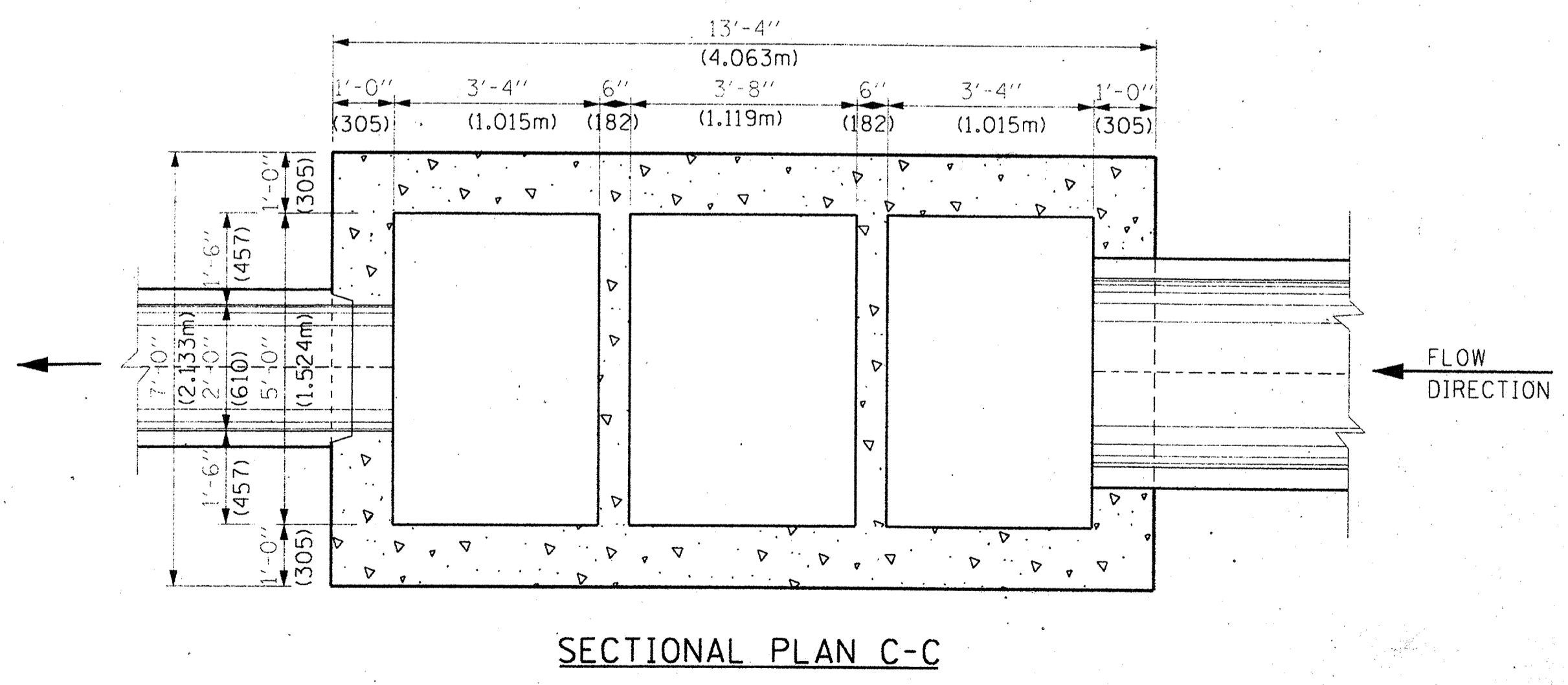
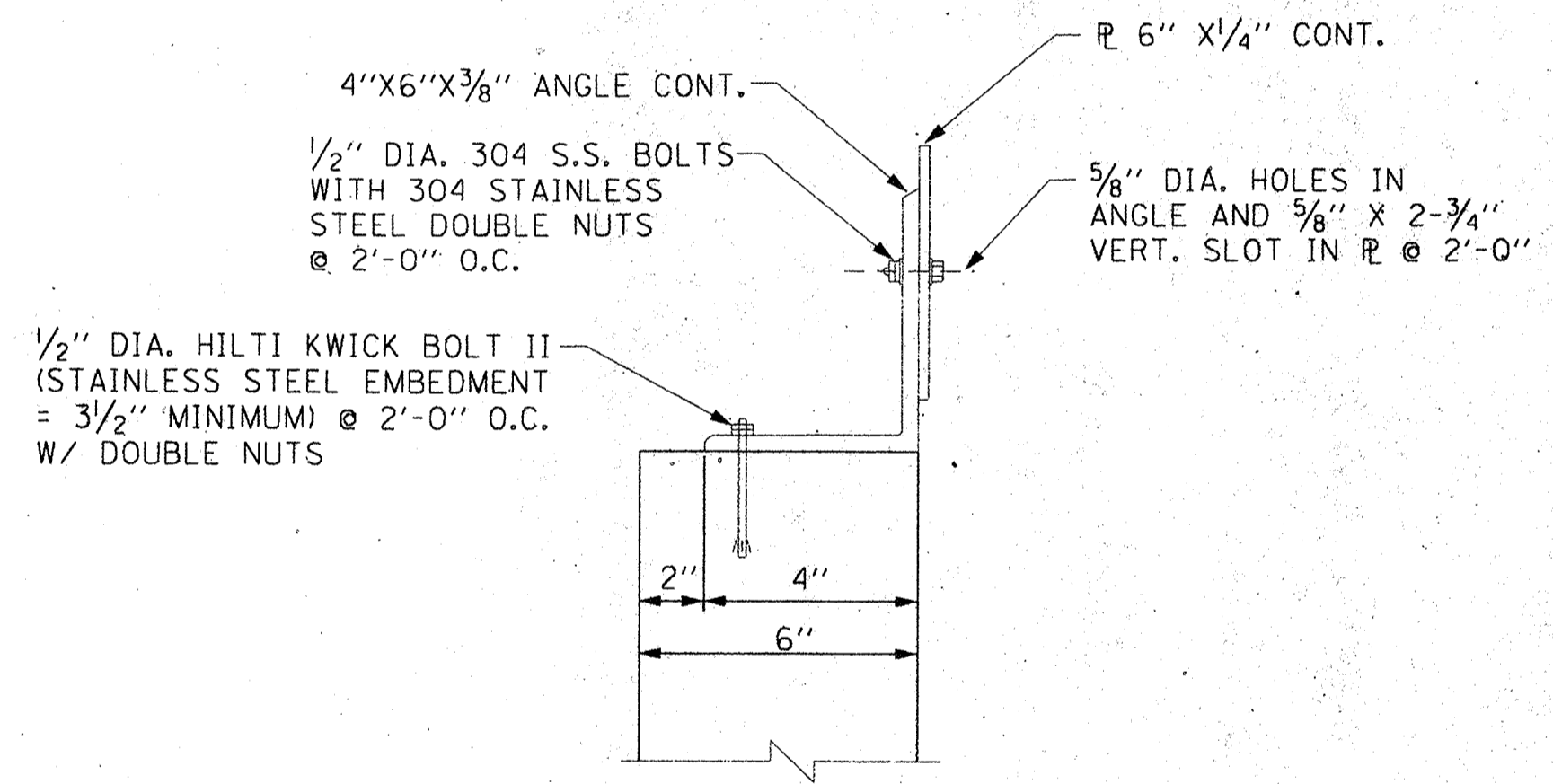
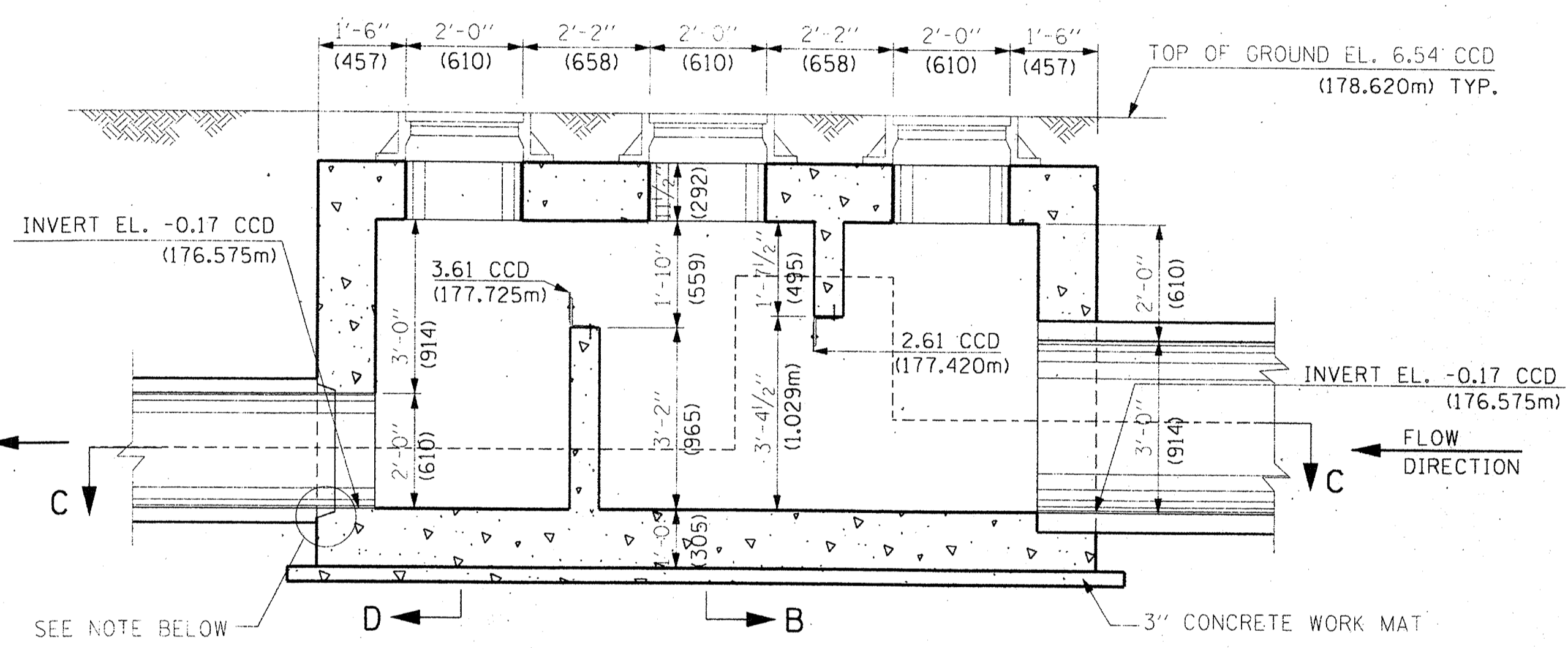
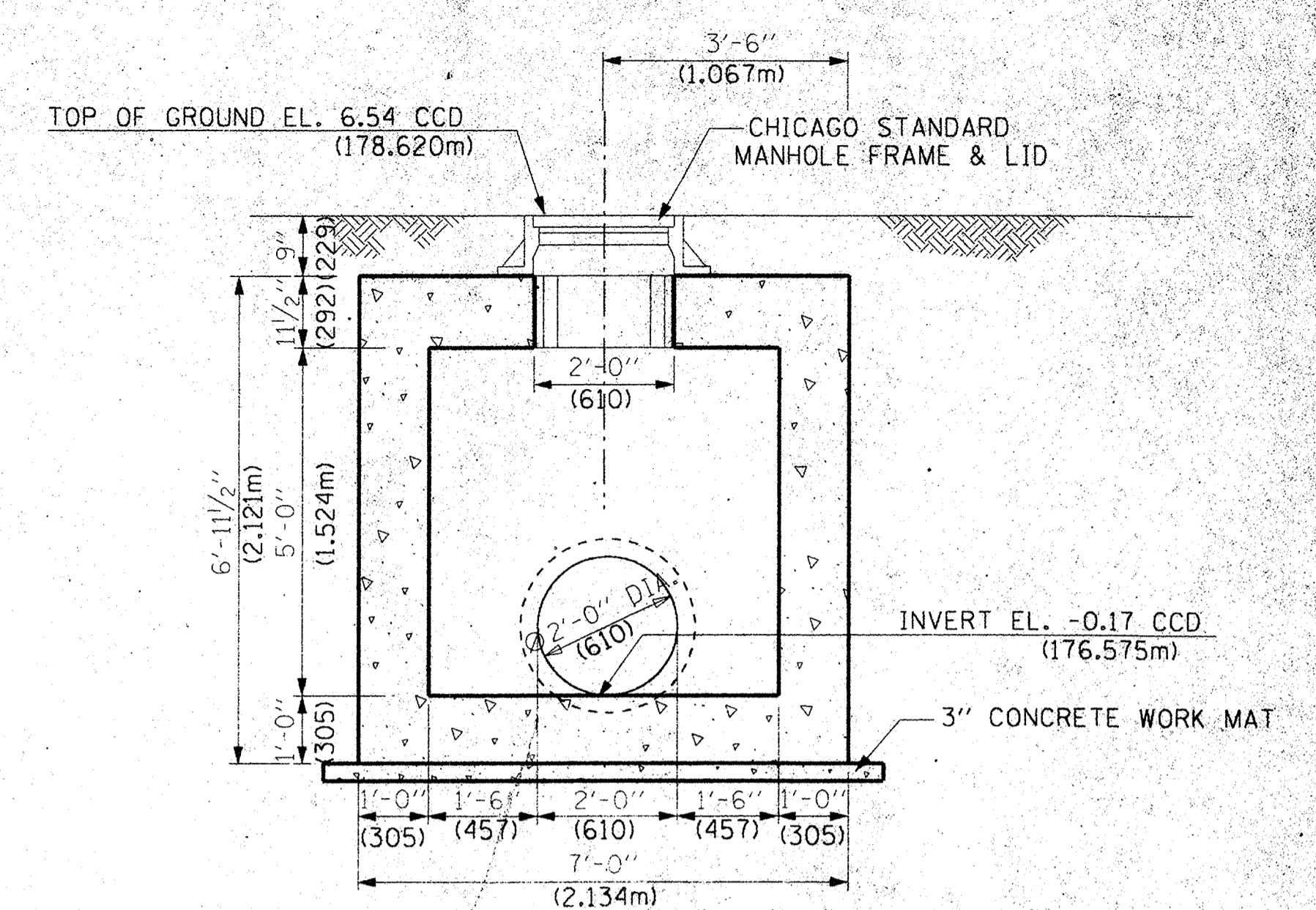
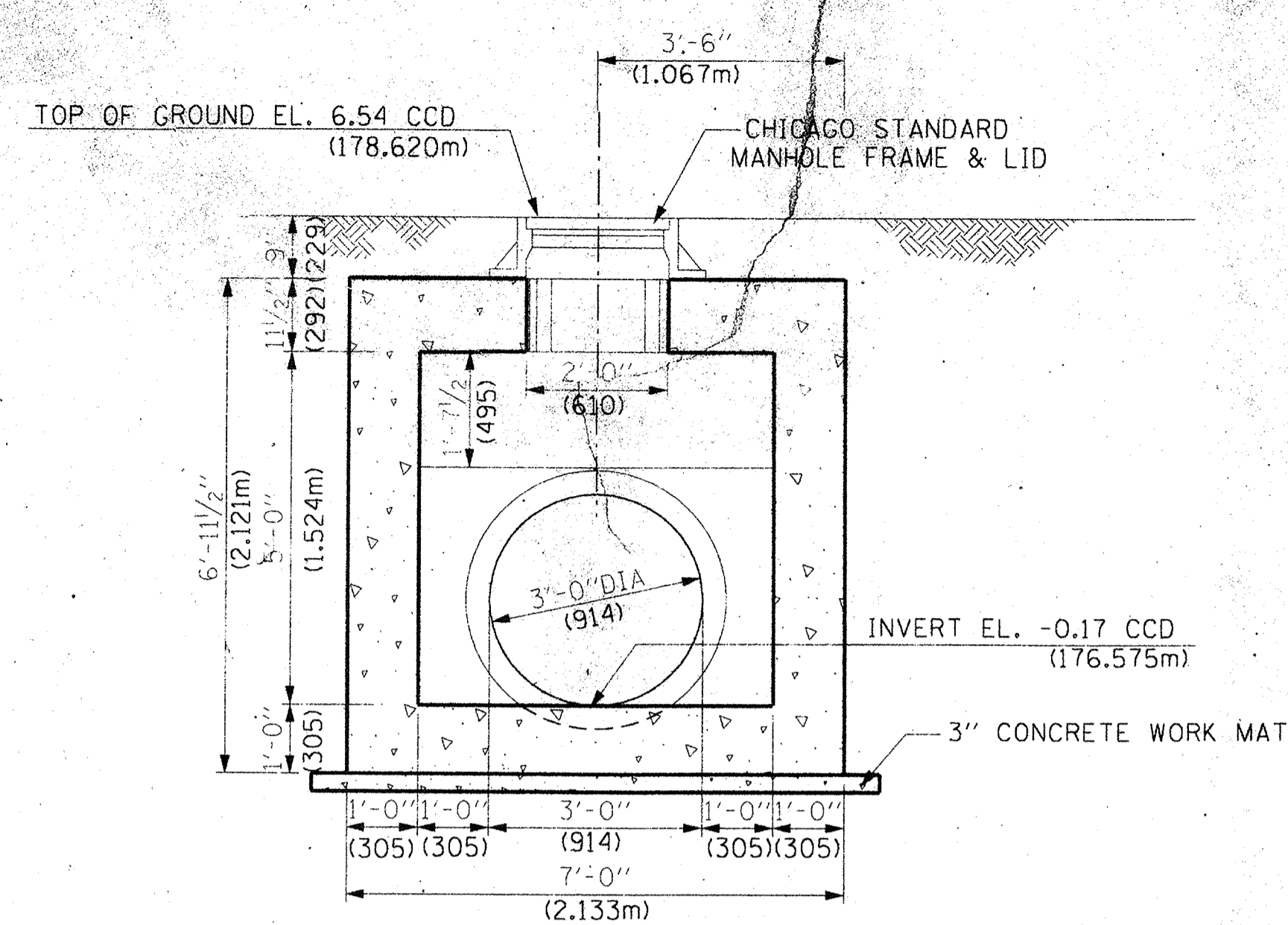
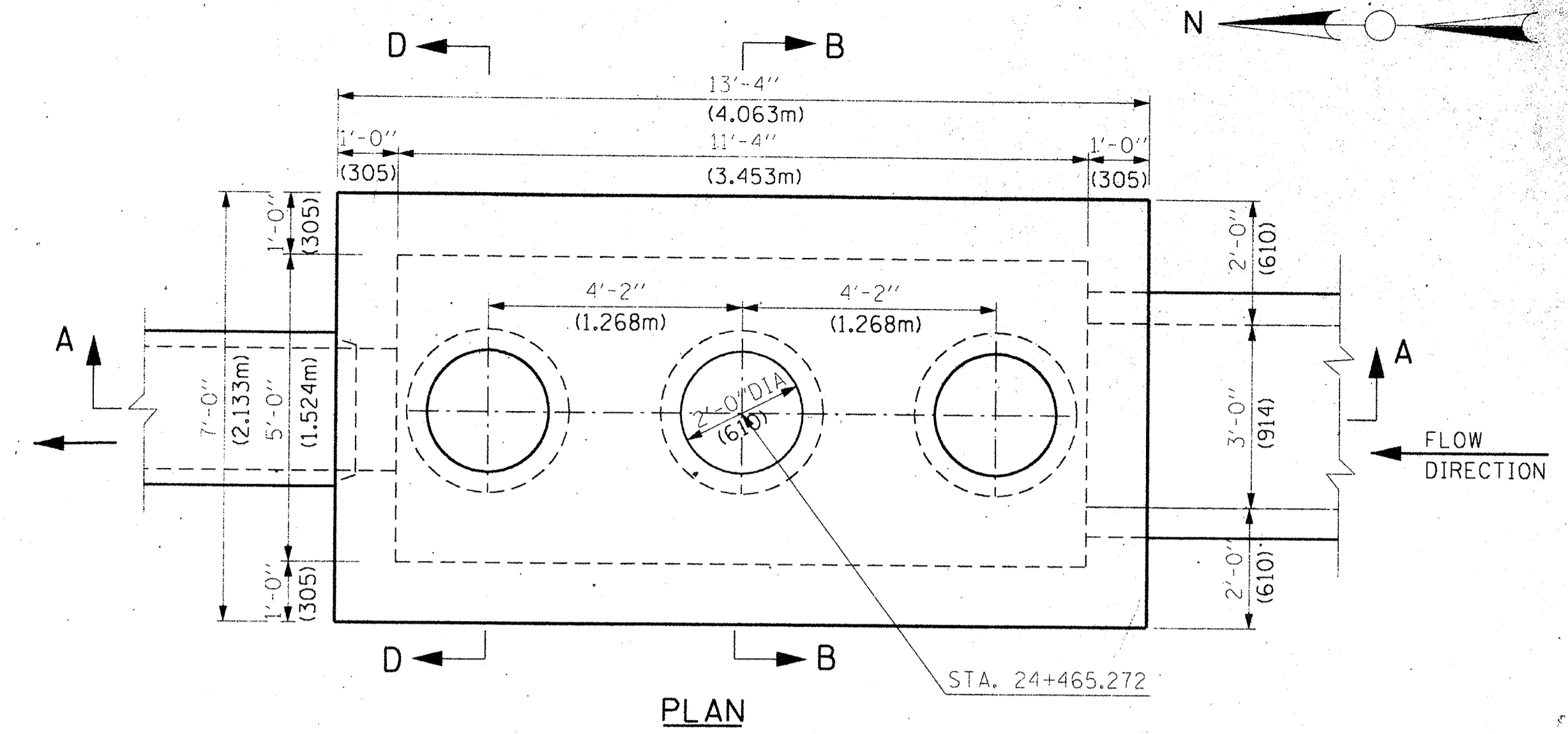
CTE ENGINEERS
CONSULTING ENGINEERS, INC.
DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION**

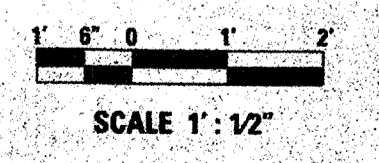
**WEIR STRUCTURE - H5D
STATION 25+000.114**

CONTRACT NO. 00-B0241-02-PV
DRAWING NO. DS - 7
PROJECT NO: B-0-242

1640090095



NOTES:
 UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM H14B
 FOR GENERAL NOTES SEE SHEET NO. C-1
 FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-14
 COORDINATE CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES AND TOPOGRAPHY.
 COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



8/23/2001 M:\148424\SUBAREA\TAC\INJECT 1\JUNCTION CHAMBER\ISSUED FOR BIDDING.B.DWG

DESIGN: N.S.	KEY PLAN:		
DRAWN: S.R.			
CHECKED: S.I.			
APPROVED: S.M.K.			
DATE: 7/23/01			
SCALE: 1" = 1/2"			
FILE:			
NO.	BY	DATE	DESCRIPTION
REVISIONS			

CITY OF CHICAGO	
DEPARTMENT OF TRANSPORTATION	
BUREAU OF HIGHWAYS	

CTE ENGINEERS
 CONSULTING ENGINEERS, INC.

DELTA ENGINEERING, INC.
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION

WEIR STRUCTURE - H14B
STATION 25 + 465.272

CONTRACT NO. 00-B0241-02-PV
 DRAWING NO. DS - 8
 PROJECT NO. B-0-242

1640090096



THESE PLANS COMPLY WITH THE CURRENT POLICY OF THE CITY OF CHICAGO TO FACILITATE THE MOBILITY OF PEOPLE WITH DISABILITIES.

STATE OF ILLINOIS
 CITY OF CHICAGO
 RICHARD M. DALEY, MAYOR
 DEPARTMENT OF TRANSPORTATION
 MIGUEL d' ESCOTO, COMMISSIONER

BUREAU OF HIGHWAYS
 BRUCE H. WORTHINGTON, CHIEF HIGHWAY ENGINEER

CONTRACT PLANS
 FOR
**SOUTH LAKE SHORE DRIVE RECONSTRUCTION
 JACKSON PARK SECTION
 FROM 56TH STREET TO 67TH STREET**

MAINLINE RECONSTRUCTION

C.D.O.T PROJECT NO. : B-1-440

CITY SECTION NO. :00-B0241-06-PV

STATE JOB NO. C-88-025-01

GROSS LENGTH 3700.787 M (3.700 KM)
 NET LENGTH 3589.221 M (3.589 KM)

4-16-02

RECORD DOCUMENT
 Harbour Engineering, Inc.
 218 West Main St.
 Plainfield, Illinois 60544
 By: [Signature]
 Date: 3/15/06

TRAFFIC DATA

JEFFERY BOULEVARD (67TH ST. TO MARQUETTE DR.)

ADT: 24,700 (1998) 27,00 (2000)
 POSTED SPEED: 50 km/h (30 mph)
 DESIGN DESIGNATION: TWS-4

COAST GUARD DRIVE (MARQUETTE DR. TO HAYES DR)

ADT: 46,600 (1998) 50,000 (2000)
 POSTED SPEED: 60 km/h (35 mph)
 DESIGN DESIGNATION: TWS-4 & 6

LAKE SHORE DRIVE (HAYES DR. TO 57TH DR.)

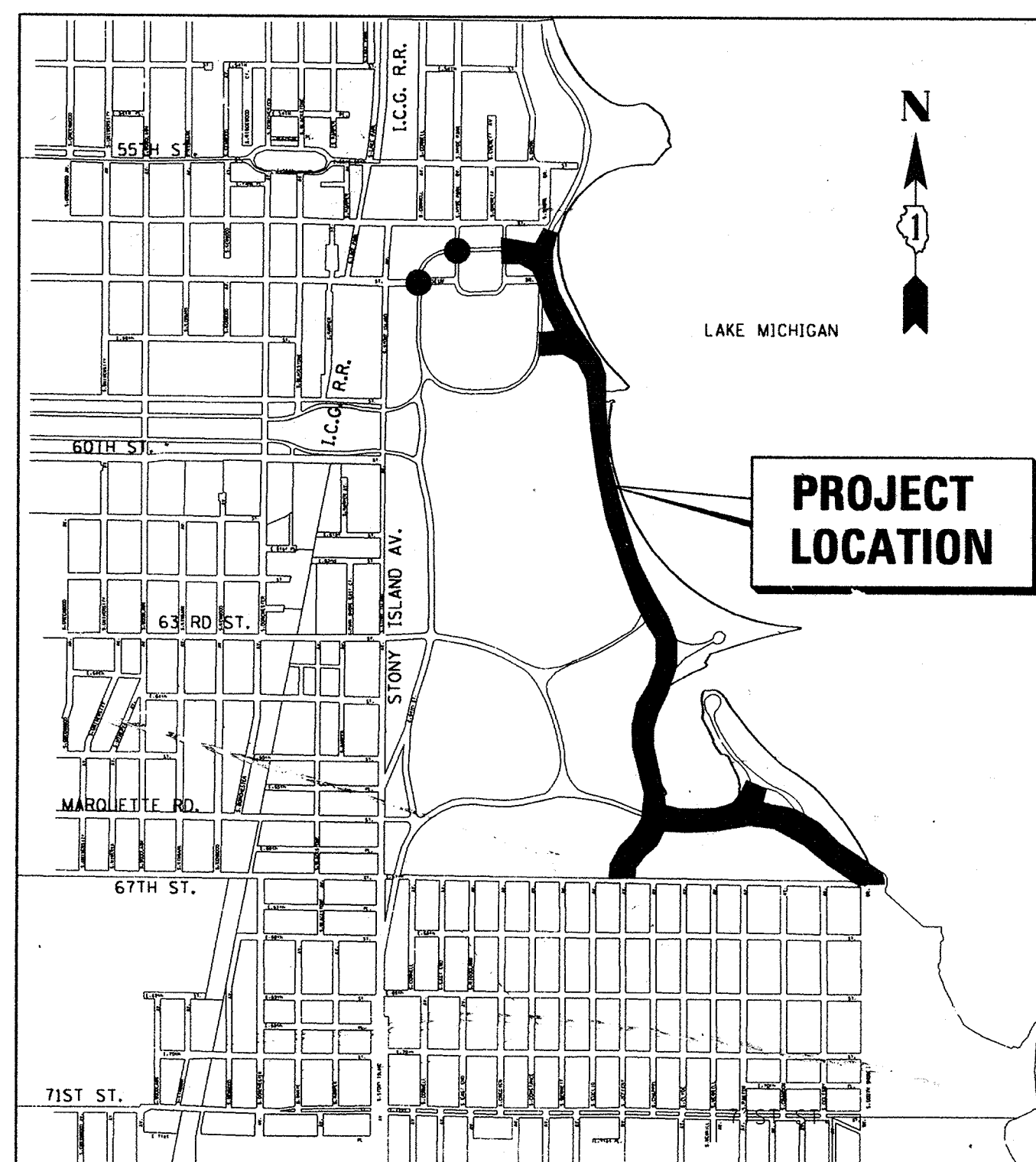
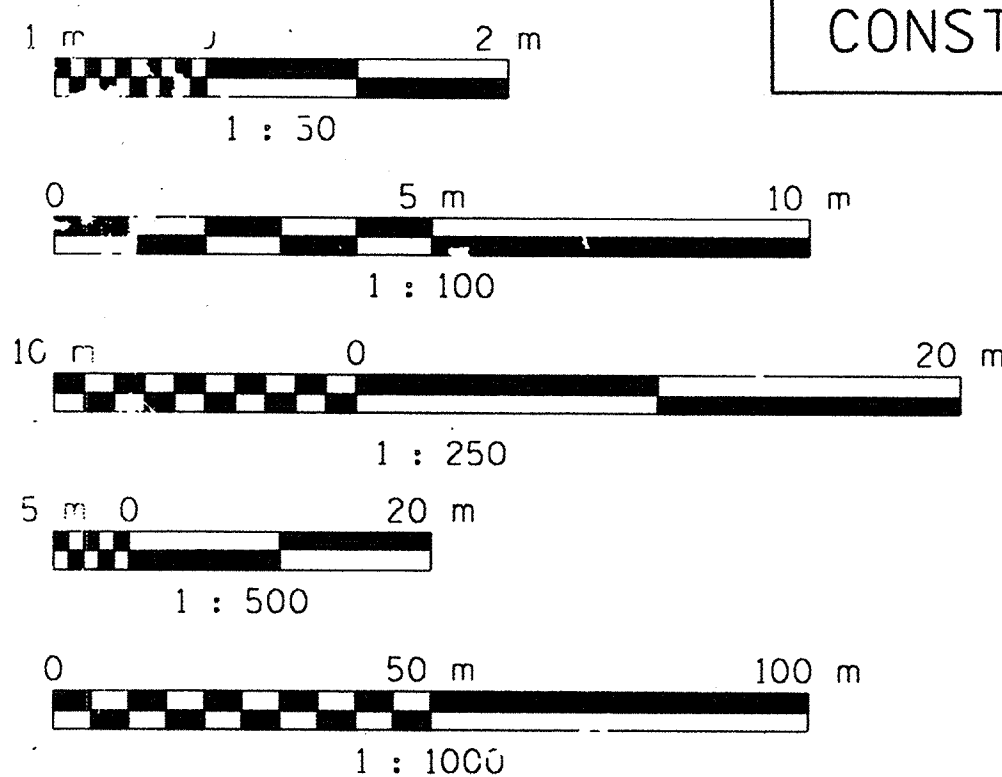
ADT: 55,300 (1998) 58,000 (2000)
 POSTED SPEED: 60 km/h (35 mph)
 DESIGN DESIGNATION: TWS-4 & 6

MARQUETTE DRIVE (67TH ST. TO COAST GUARD DR.)

ADT: 30,700 (1998) 52,000 (2000)
 POSTED SPEED: 50 km/h (30 mph)
 DESIGN DESIGNATION: TWS-4

EXCEPT AS MAY BE OTHERWISE STATED OR MODIFIED IN THE CONTRACT DOCUMENTS, THE WORK MUST CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 1997

METRIC RATIOS



LOCATION MAP
 NOT TO SCALE

STATE OF ILLINOIS
 SAIFDAR ALI GILL
 81-3062
 REGISTERED PROFESSIONAL ENGINEER

Kenneth A. Jonak
 KENNETH A. JONAK, P.E.
 EXPIRES: NOVEMBER 30, 2003
 FOR "TRAFFIC SYSTEMS" DRAWINGS

CTE ENGINEERS
 CONSIDER TOWNSHIP ENGINEERS, INC.

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

DEPARTMENT OF PROCUREMENT SERVICES
 DAVID E. MALONE, CHIEF PROCUREMENT OFFICER

CITY OF CHICAGO
 DEPARTMENT OF TRANSPORTATION
 DATE: DEC 24, 2001 2001
 APPROVED: [Signature] PROJECT COORDINATOR
 APPROVED: [Signature] 12/17/01 DEPUTY COMMISSIONER, BUREAU OF TRAFFIC
 APPROVED: [Signature] CHIEF HIGHWAY ENGINEER
 APPROVED: [Signature] CHIEF BRIDGE ENGINEER
 APPROVED: [Signature] DEPUTY COMMISSIONER, BUREAU OF STREETS
 APPROVED: [Signature] COMMISSIONER

CITY OF CHICAGO
 DEPARTMENT OF STREETS AND SANITATION
 APPROVED: [Signature] DEPUTY COMMISSIONER, BUREAU OF ELECTRICITY
 APPROVED: [Signature] DEPUTY COMMISSIONER, BUREAU OF FORESTRY
 APPROVED: [Signature] COMMISSIONER

CITY OF CHICAGO
 DEPARTMENT OF WATER
 APPROVED: [Signature] CHIEF ENGINEER
 APPROVED: [Signature] COMMISSIONER

CITY OF CHICAGO
 DEPARTMENT OF SEWERS
 APPROVED: [Signature] CHIEF ENGINEER
 APPROVED: [Signature] DEPUTY COMMISSIONER
 APPROVED: [Signature] COMMISSIONER

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 PASSED: 5-3 20 02
 APPROVED: [Signature] DISTRICT ENGINEER OF LOCAL ROADS & STREETS
 APPROVED: [Signature] DISTRICT ENGINEER



[Signature] MICHAEL D. DUVAS, P.E.
 EXPIRES: NOVEMBER 30, 2003

[Signature] IRWIN CHARLES SMILEY, P.E.
 EXPIRES: NOVEMBER 30, 2003
 FOR "E" DRAWINGS

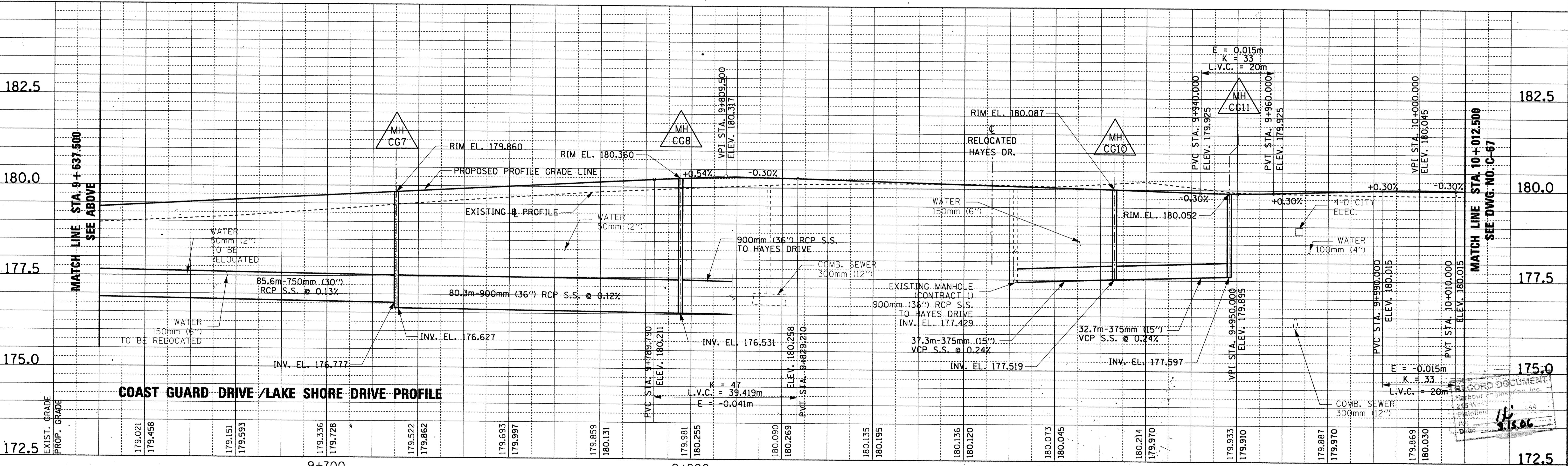
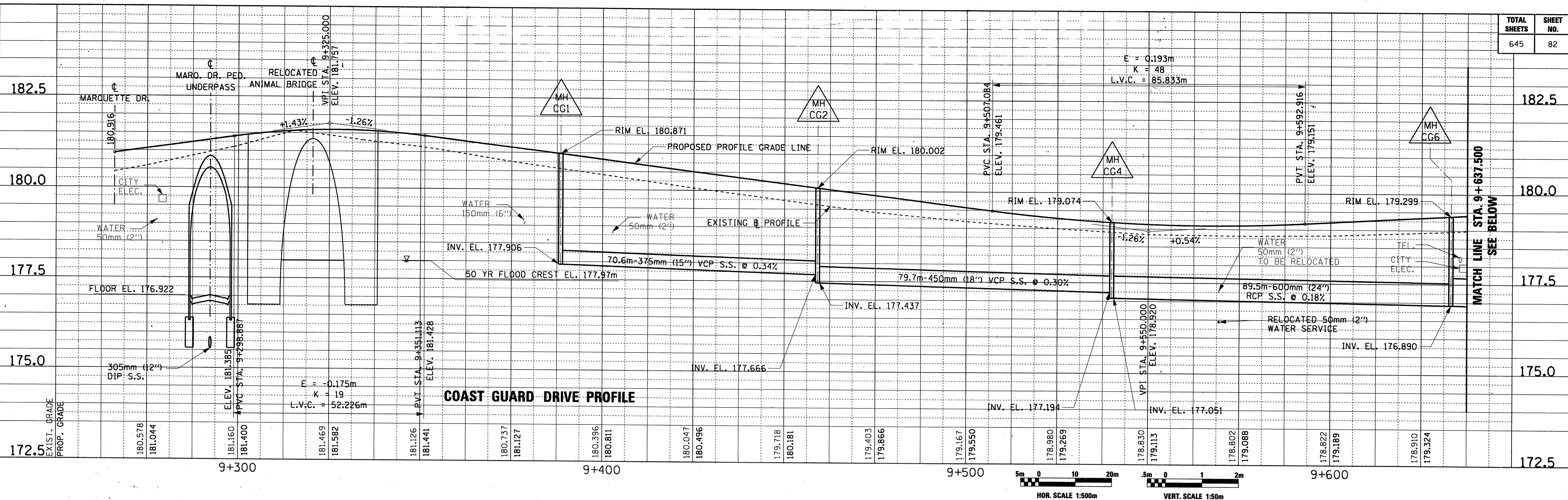
[Signature] DIPAL P. VIMAWALA, S.E.
 EXPIRES: NOVEMBER 30, 2002
 FOR "S" DRAWINGS

[Signature] SYED M. KAZI, P.E.
 EXPIRES: NOVEMBER 30, 2003
 FOR "IS, PS, AND PE" DRAWINGS

[Signature] SYED M. KAZI, S.E.
 EXPIRES: NOVEMBER 30, 2002
 FOR "US, DS, AND PS" DRAWINGS

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 1665440001
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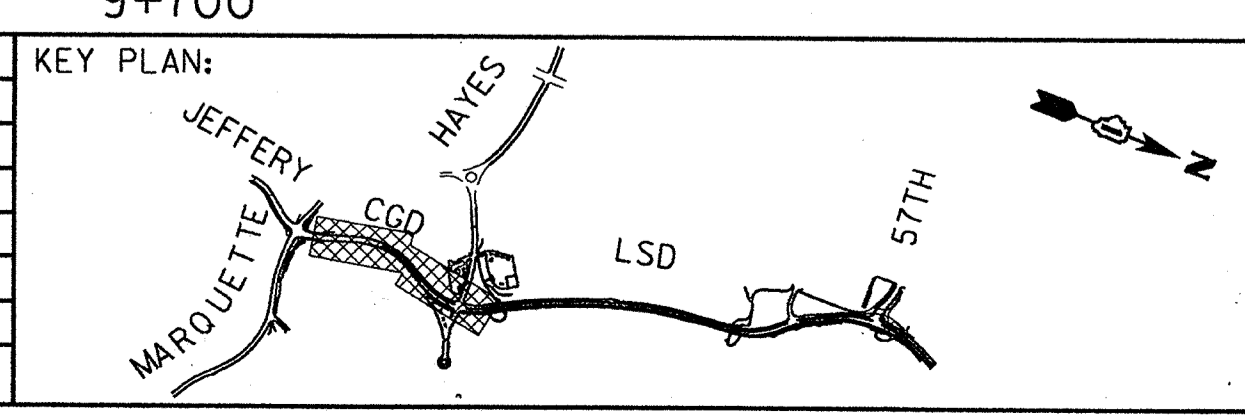
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DRAWN:	BH
CHECKED:	MD
APPROVED:	SL
DATE:	4/16/02
SCALE:	AS SHOWN
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS



**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

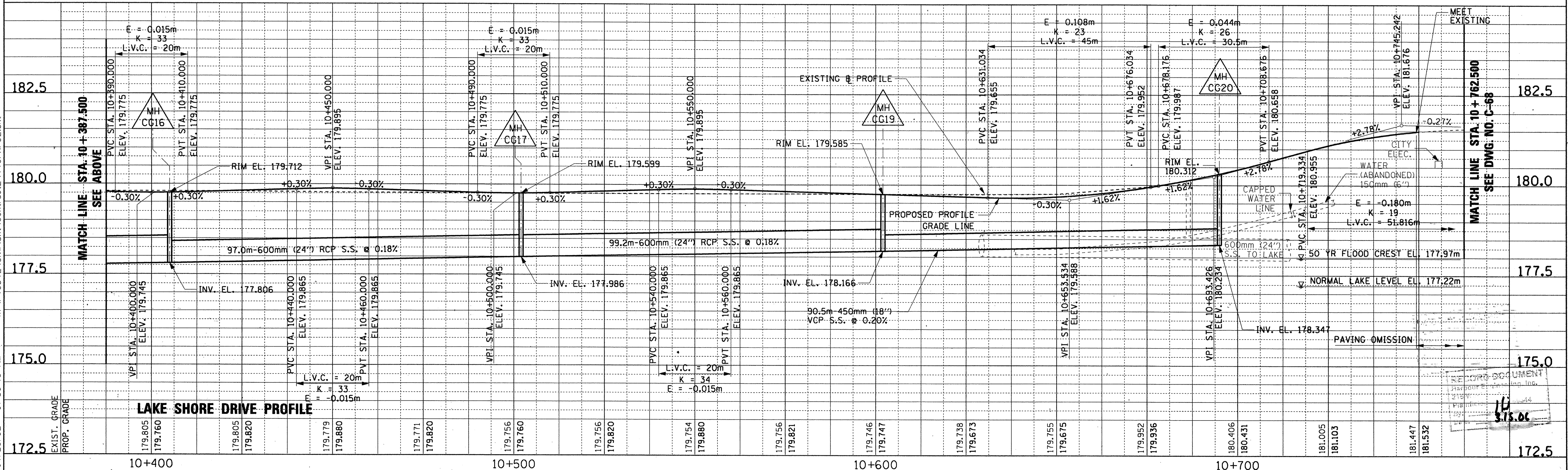
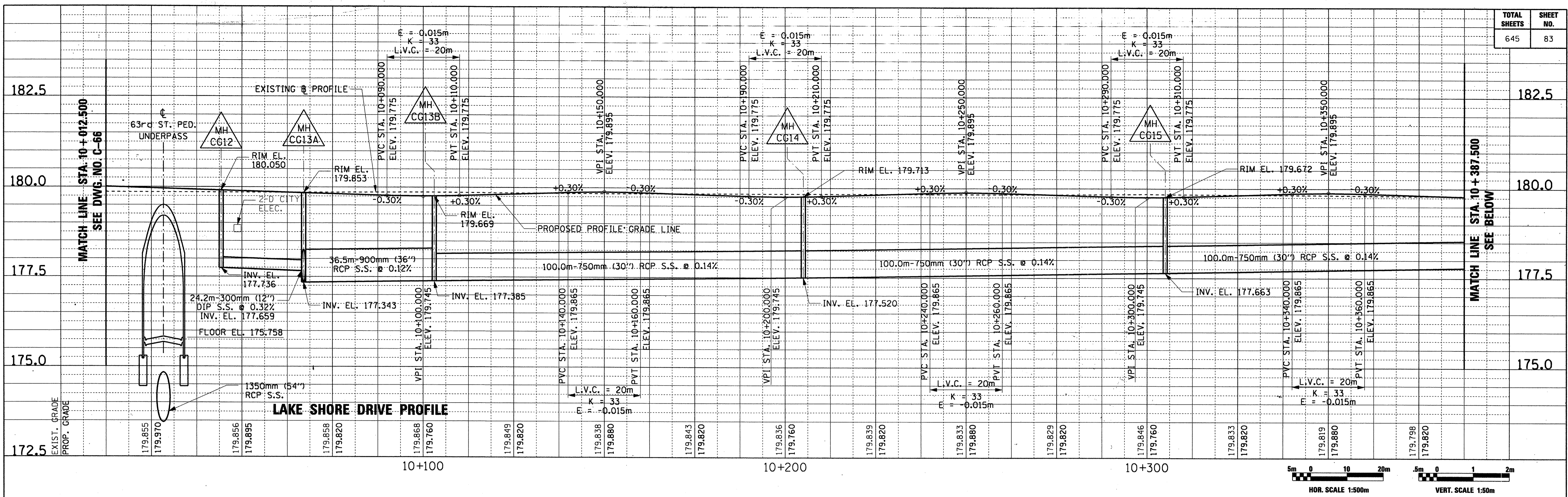
PROFILE
**COAST GUARD DRIVE
 LAKE SHORE DRIVE**

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
C-66

PROJECT NO. B-1-440

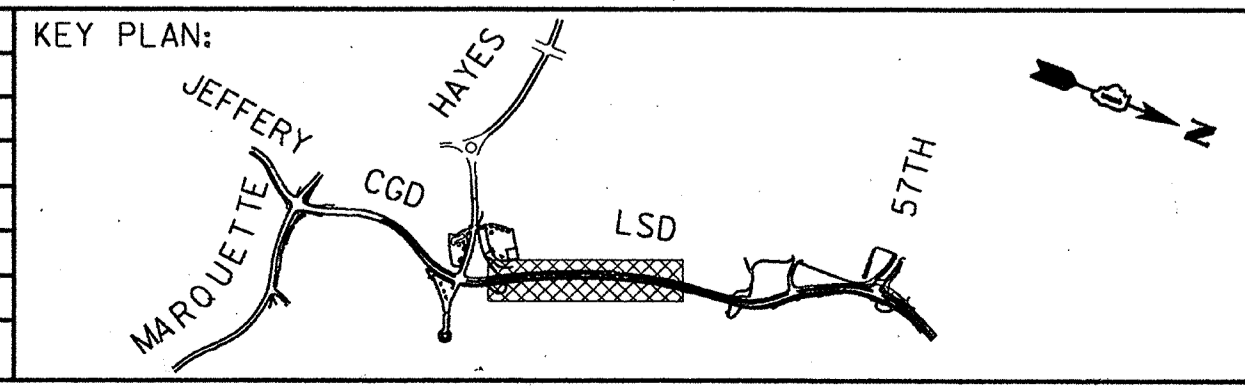
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CHECKED:	MD
APPROVED:	SL
DATE:	4/16/02
SCALE:	AS SHOWN
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSER TOWNSEND ENVIRODYNE ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

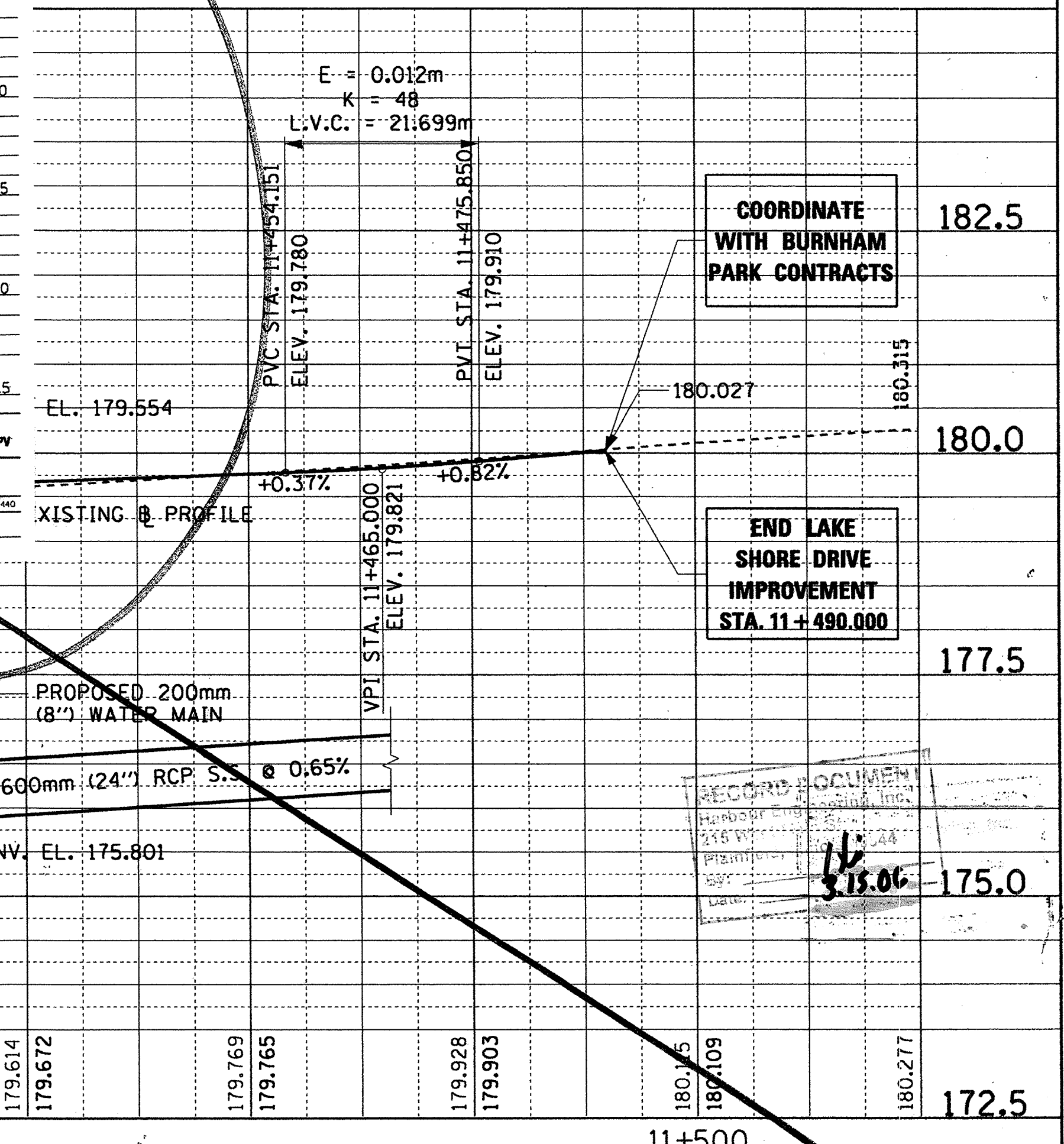
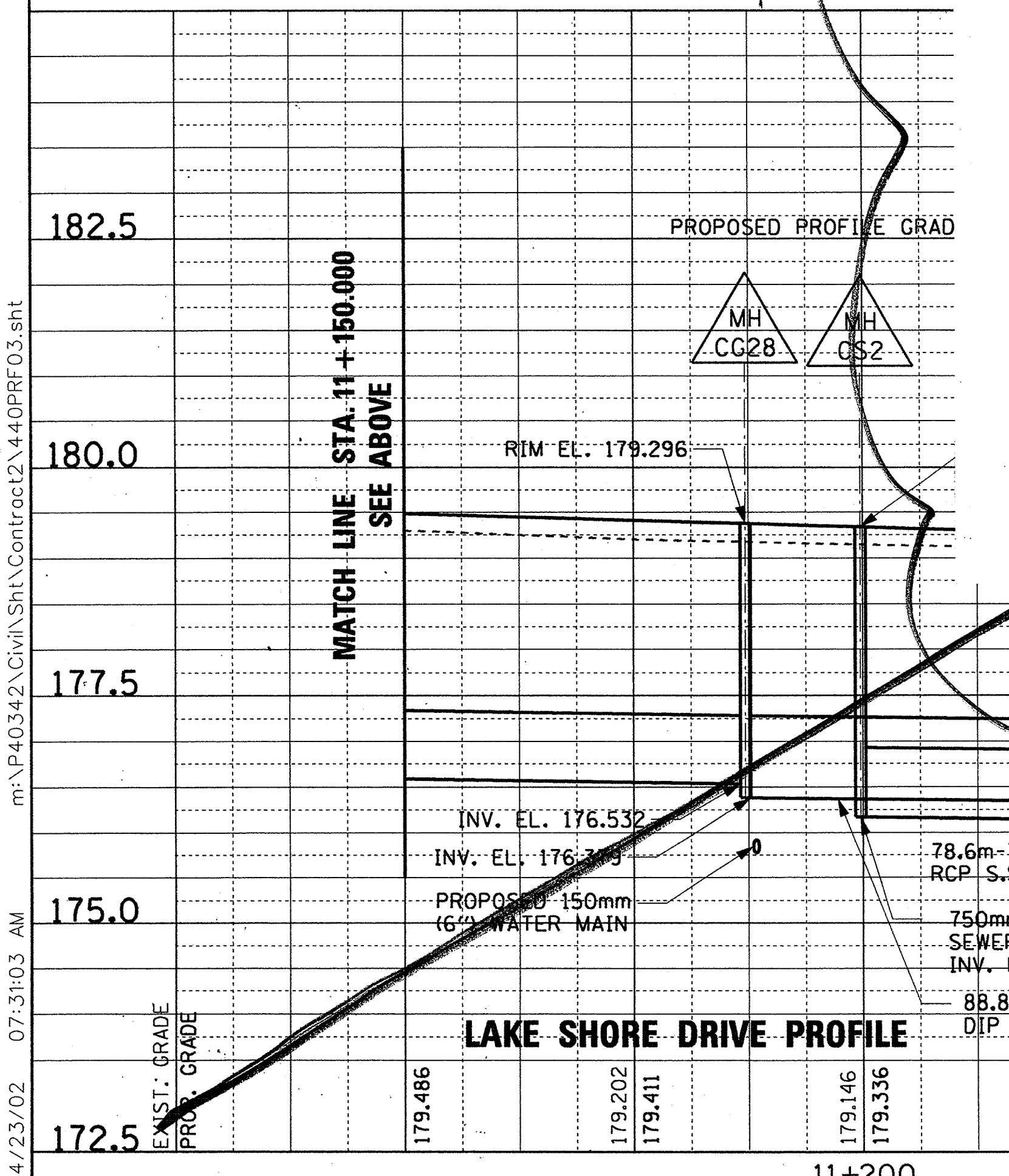
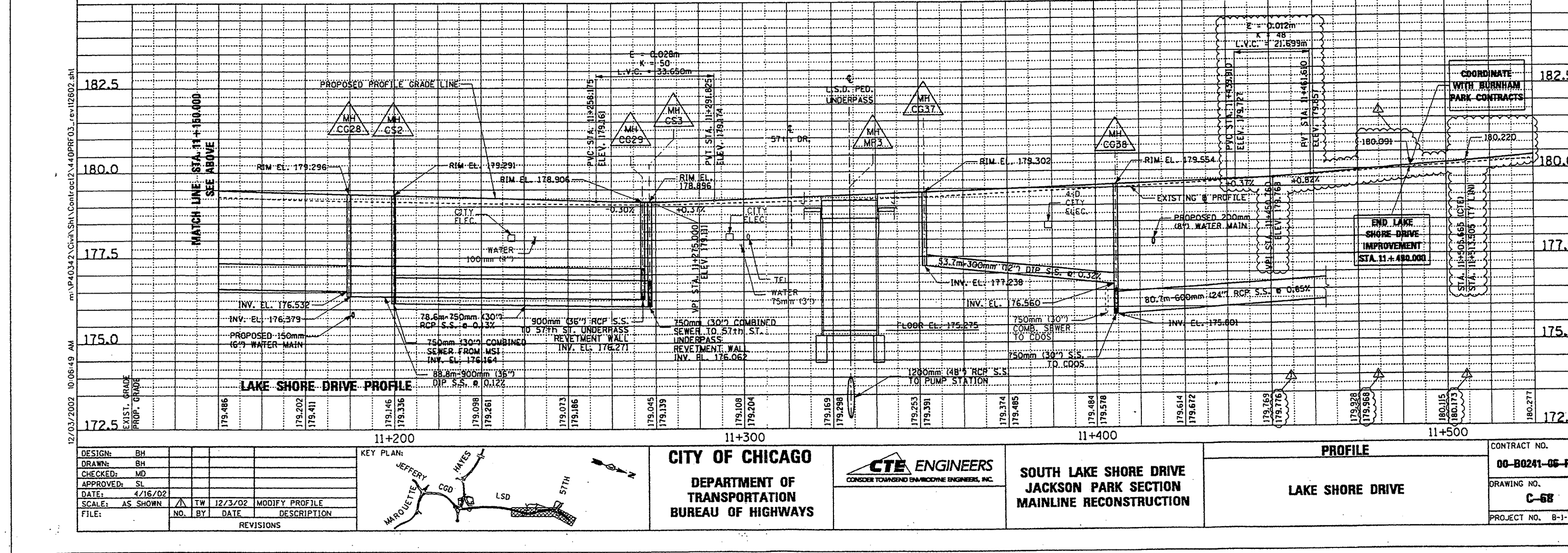
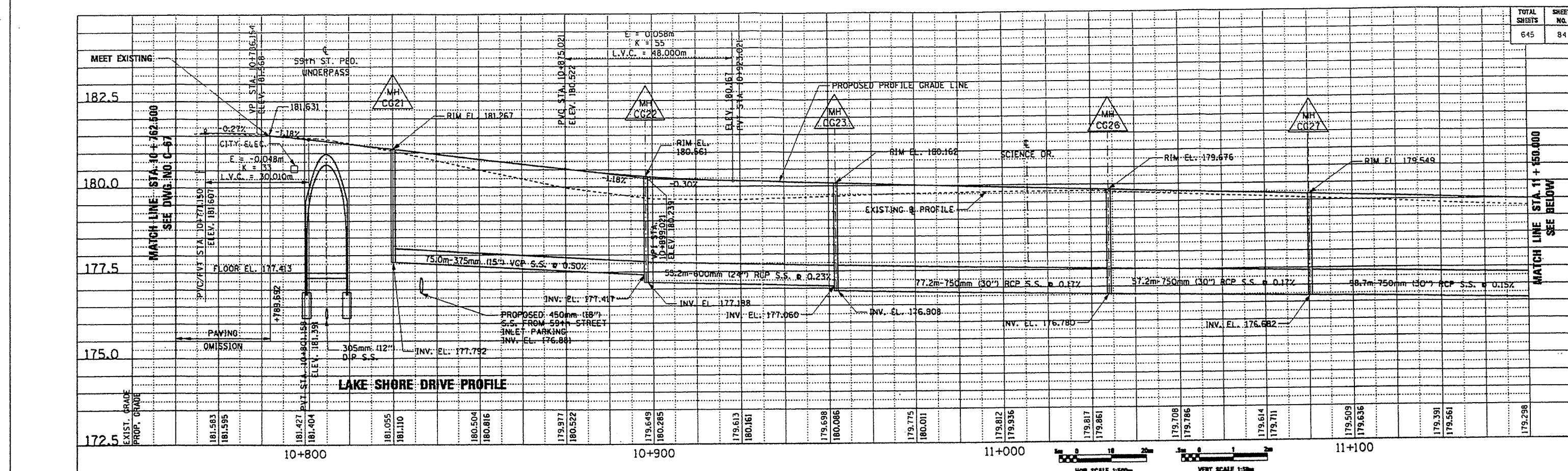
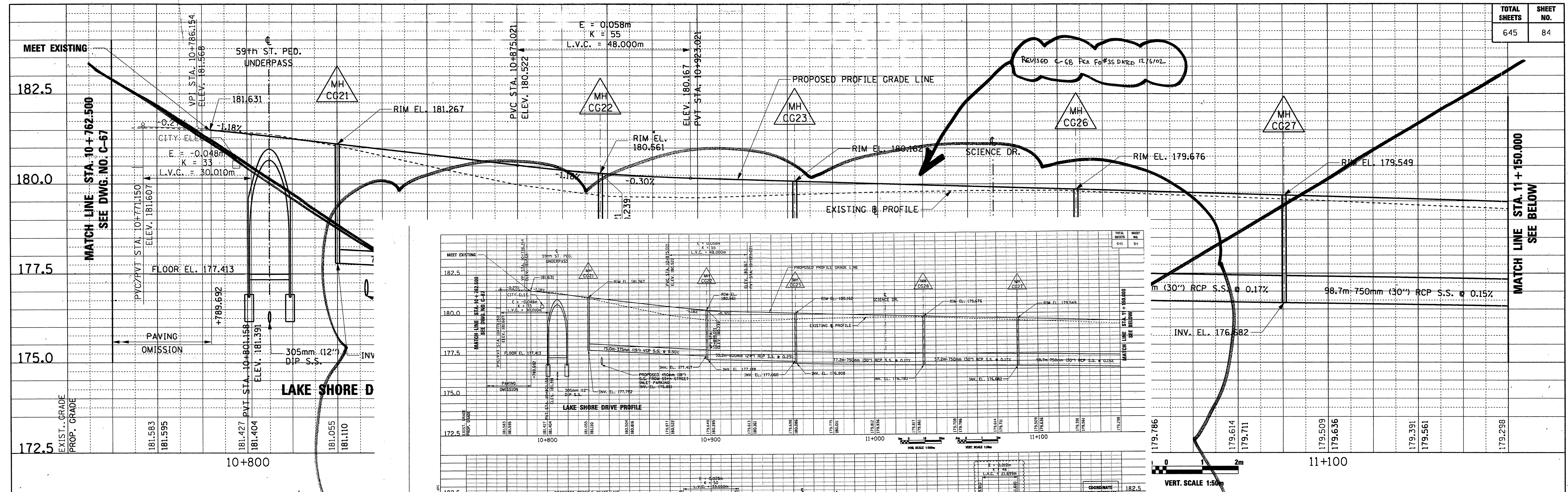
PROFILE
LAKE SHORE DRIVE

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
C-67

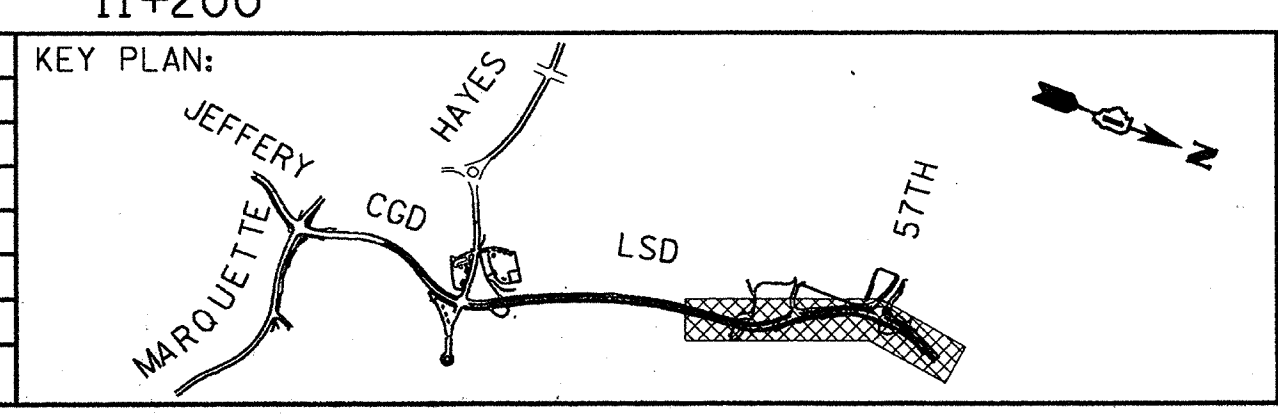
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DESIGN: BH			
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APPROVED: SL			
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NO.	BY	DATE	DESCRIPTION



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

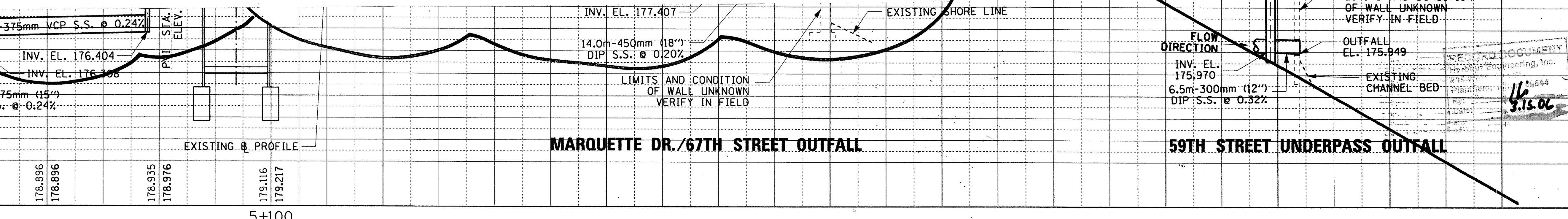
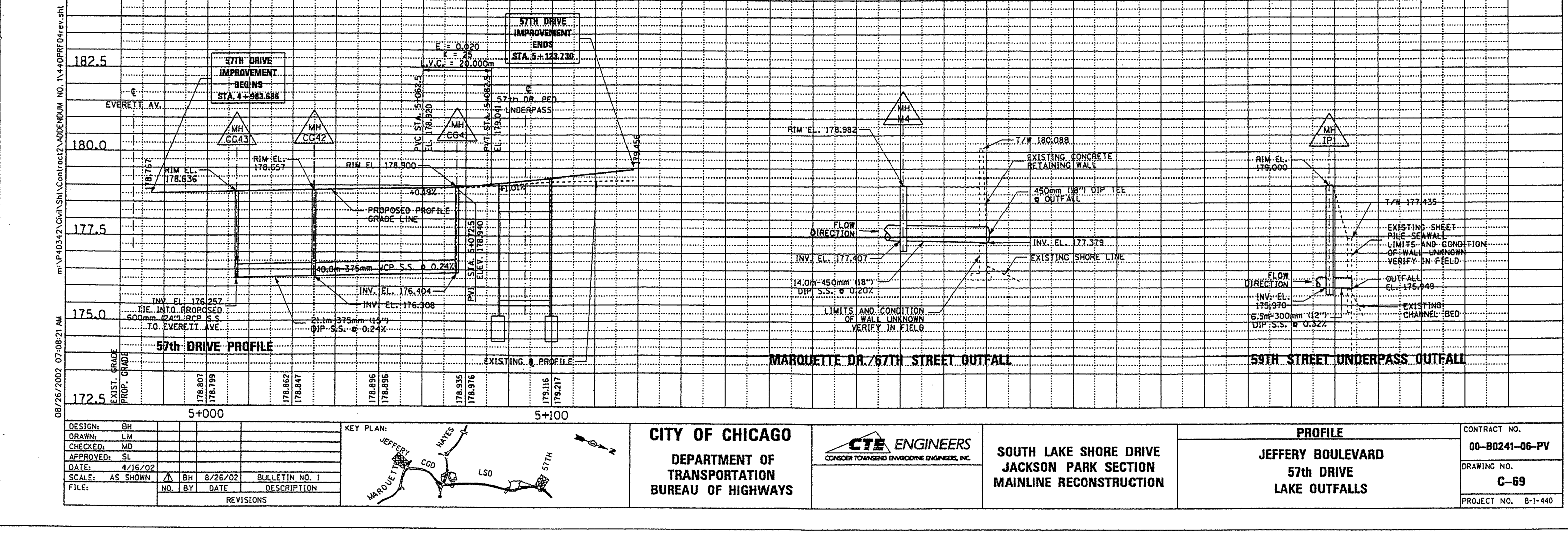
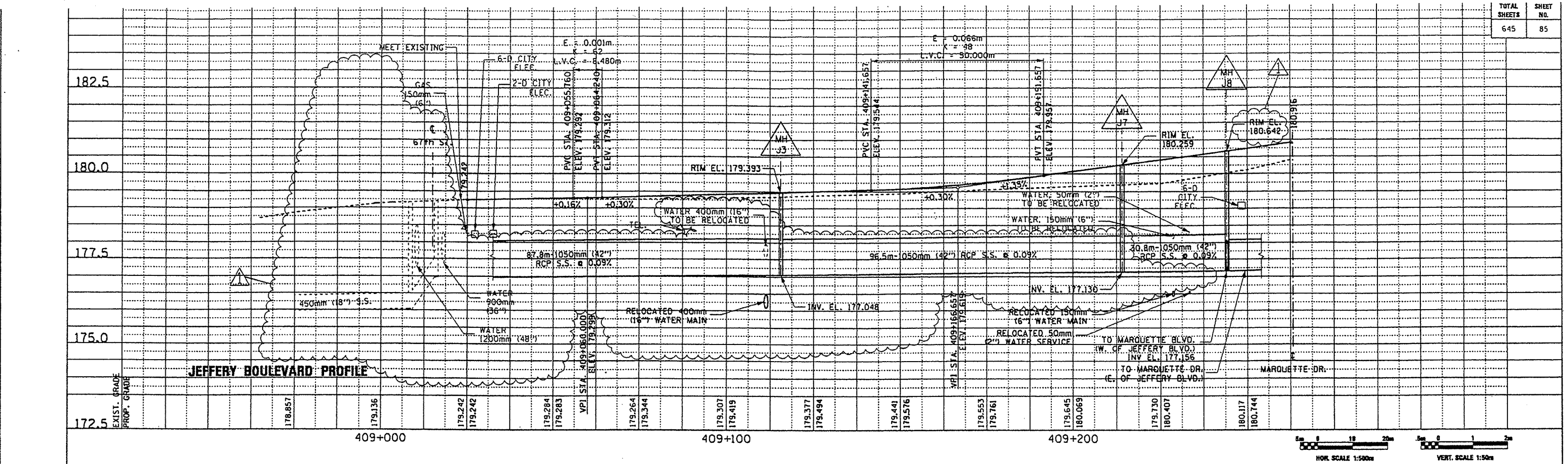
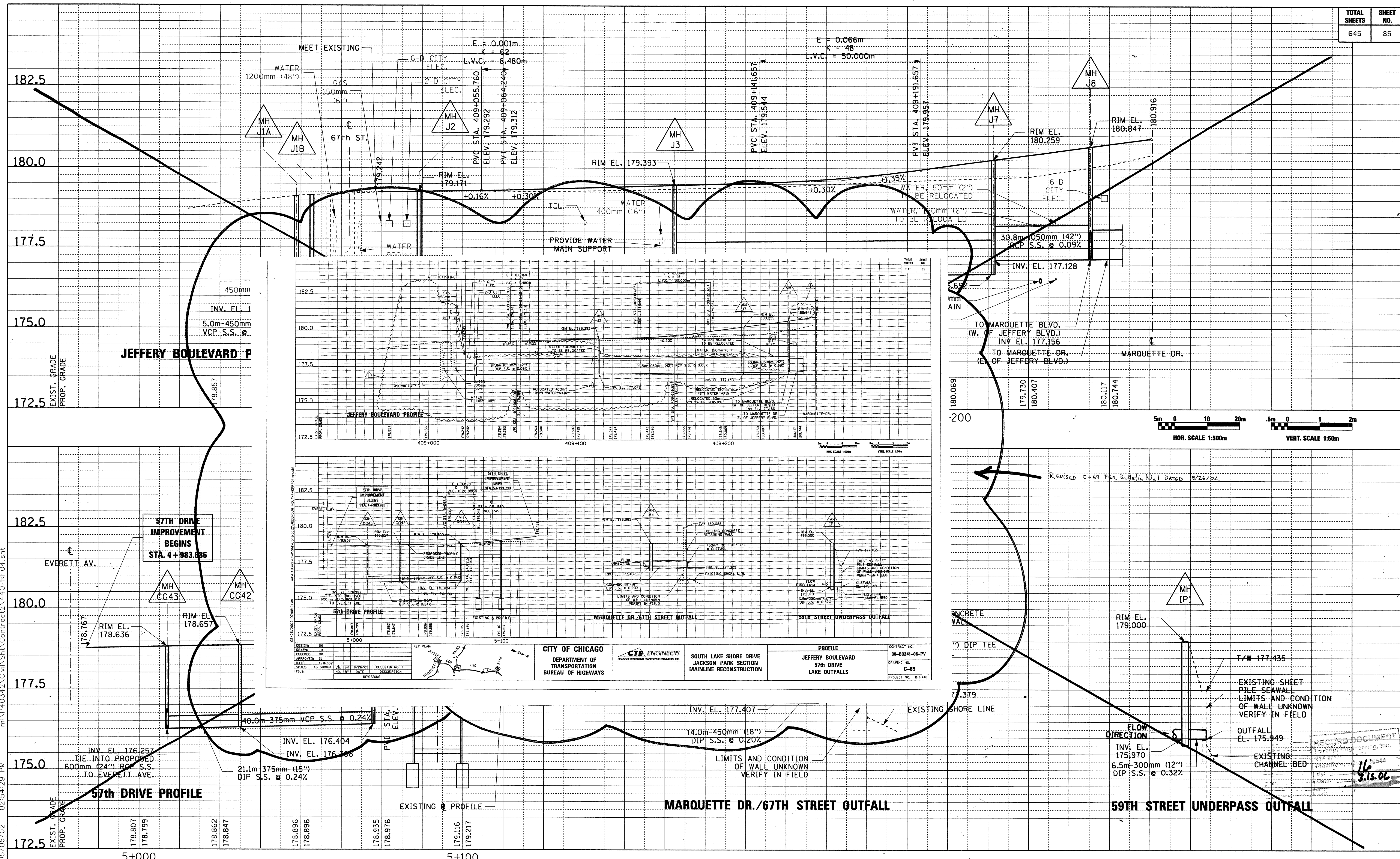
**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

PROFILE
LAKE SHORE DRIVE

CONTRACT NO. 00-B0241-06-PV
DRAWING NO. C-68
PROJECT NO. B-1-440

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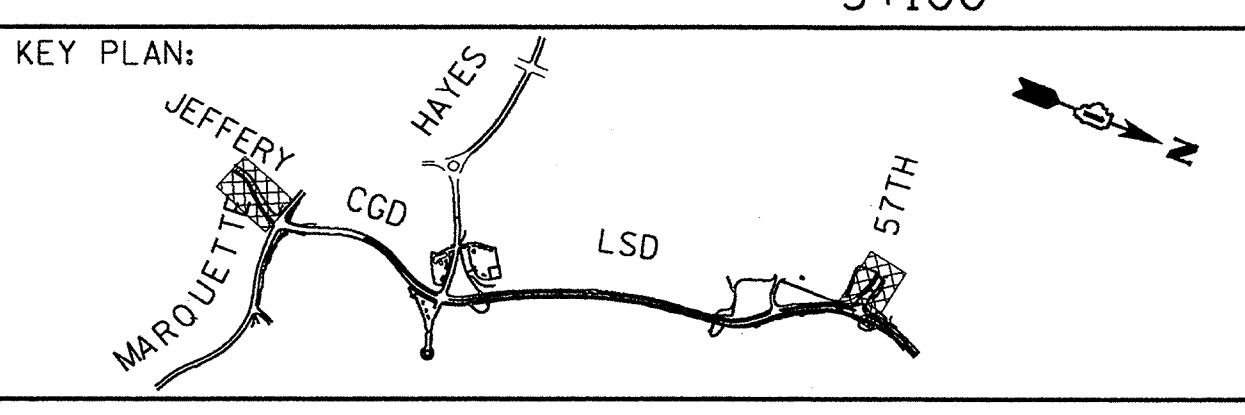
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DRAWN:	LM
CHECKED:	MD
APPROVED:	SL
DATE:	4/16/02
SCALE:	AS SHOWN
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NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

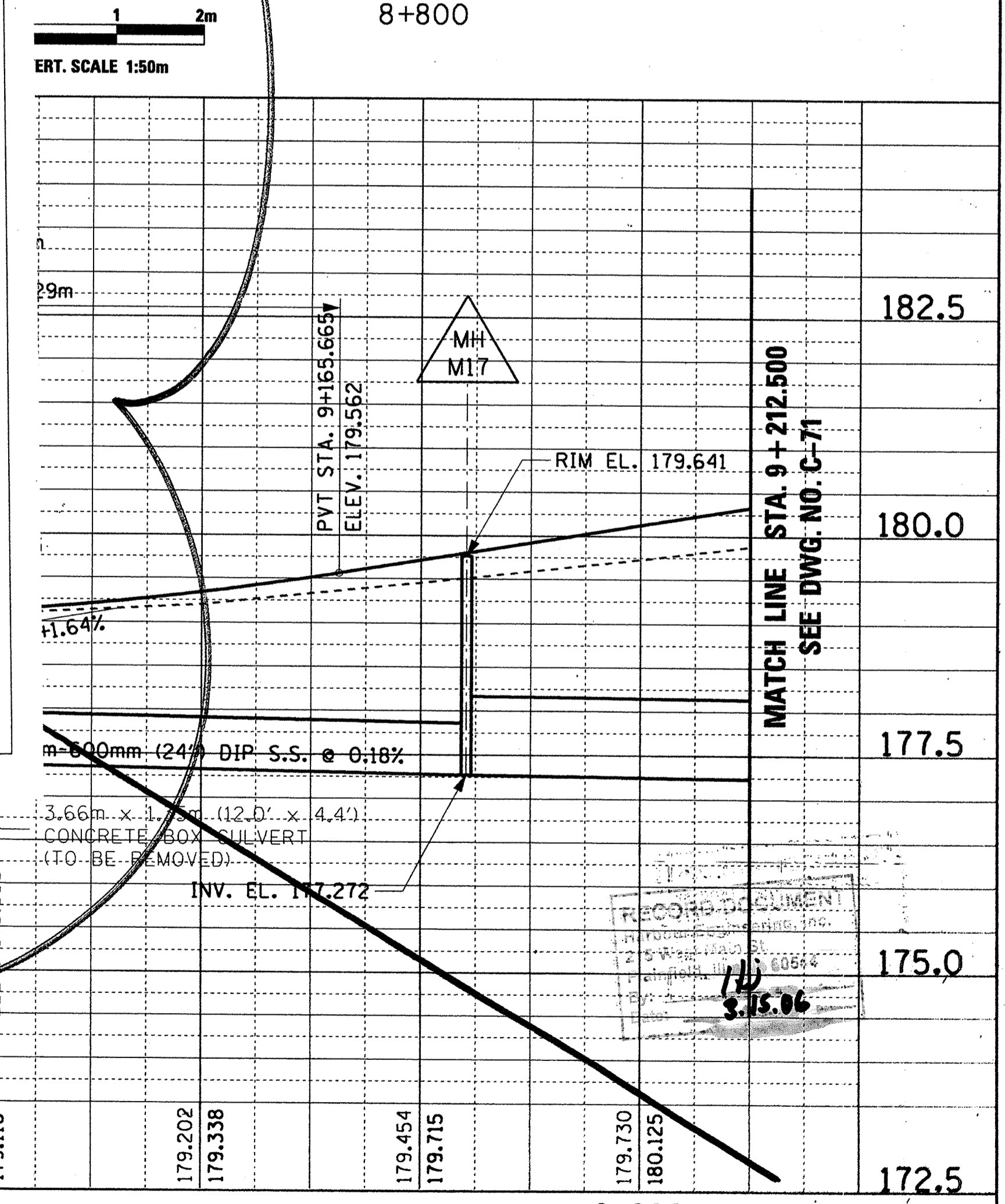
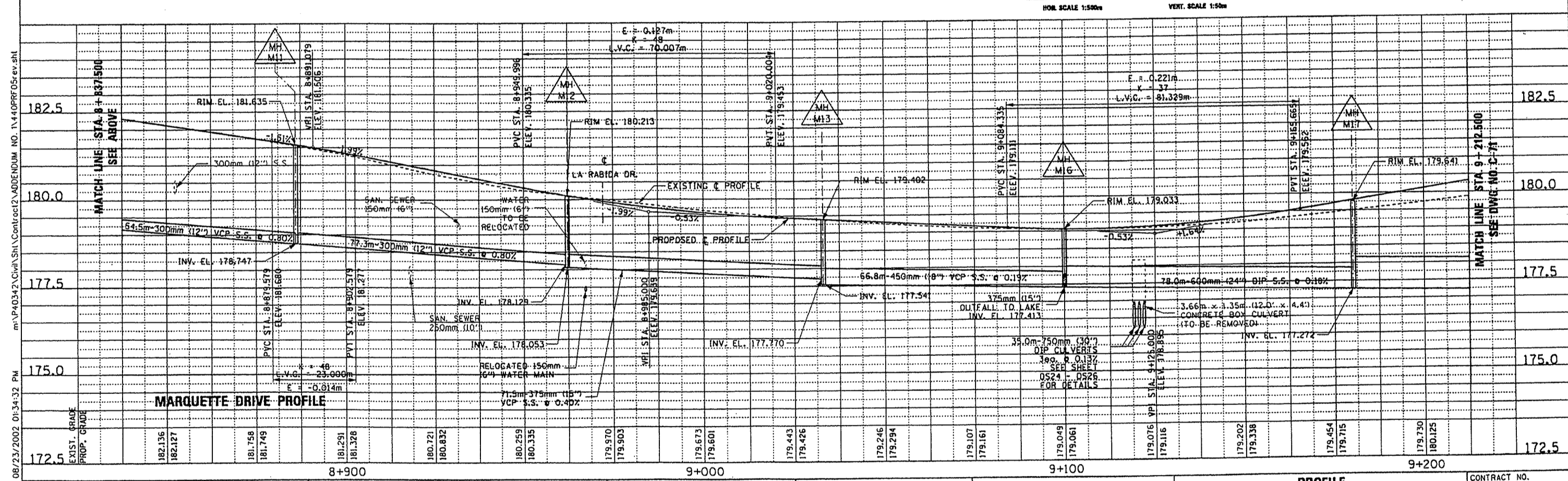
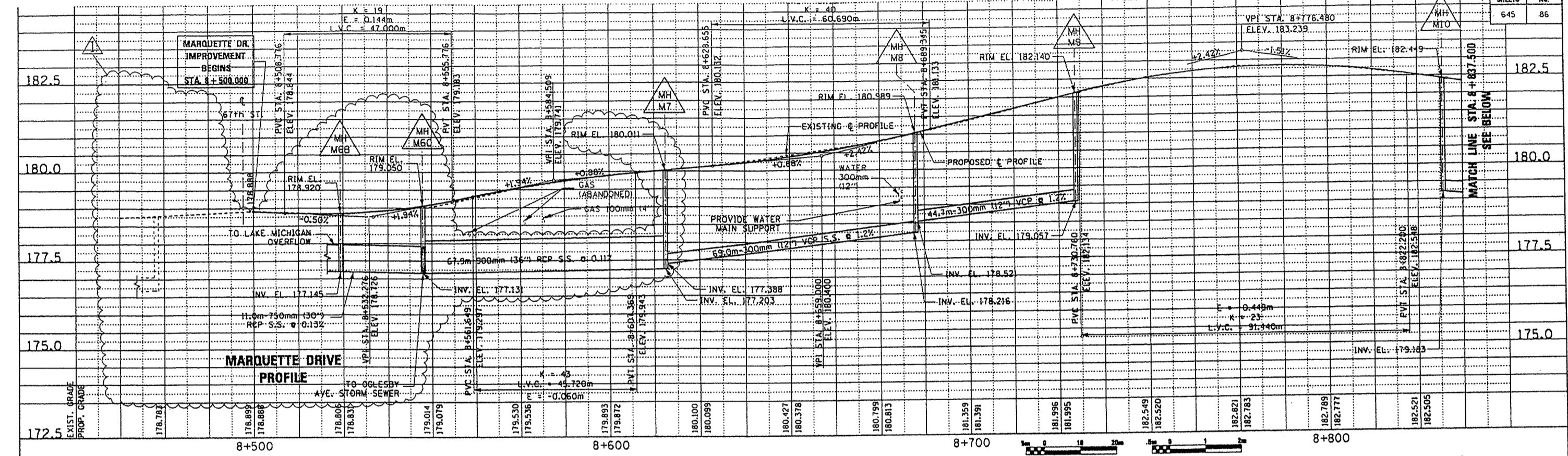
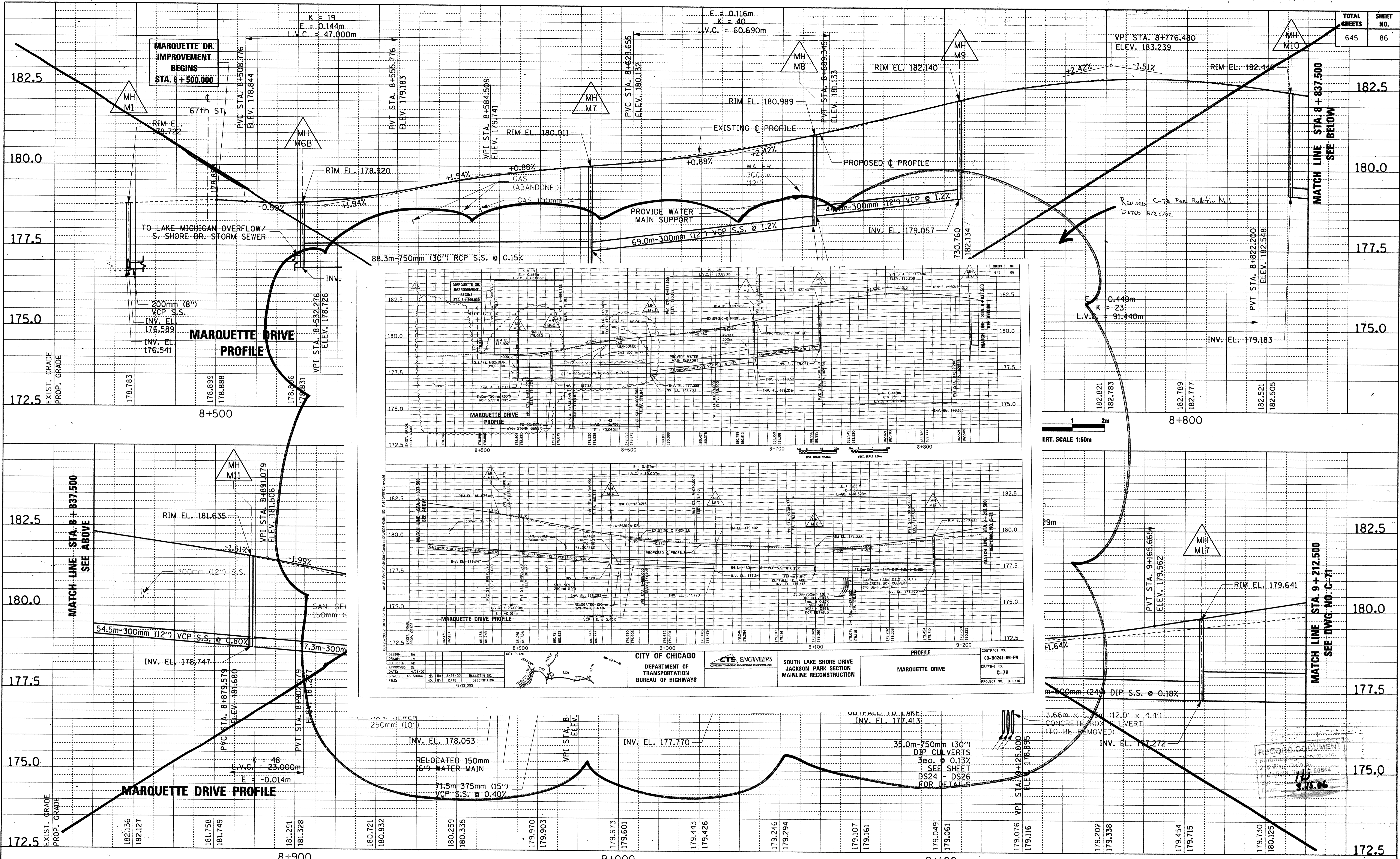
CTE ENGINEERS
CONSOER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**PROFILE
JEFFERY BOULEVARD
57th DRIVE
LAKE OUTFALLS**

CONTRACT NO.
00-80241-06-PV
DRAWING NO.
C-69
PROJECT NO. B-1-440

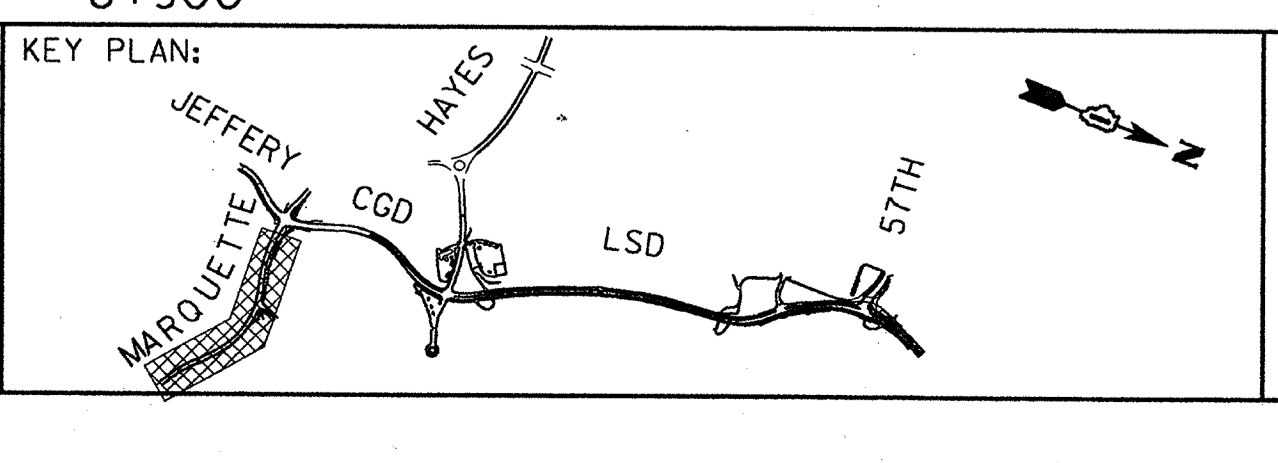
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DRAWN: LM	DEPARTMENT OF TRANSPORTATION	CONSOR TOWNSEND ENVIRONMENTAL ENGINEERS, INC.	MARQUETTE DRIVE	00-80241-06-PV
CHECKED: MD	BUREAU OF HIGHWAYS			DRAWING NO.
APPROVED: SL				C-70
DATE: 4/16/02				PROJECT NO. 8-1-440
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FILE:				

REVISIONS				
NO.	BY	DATE	DESCRIPTION	

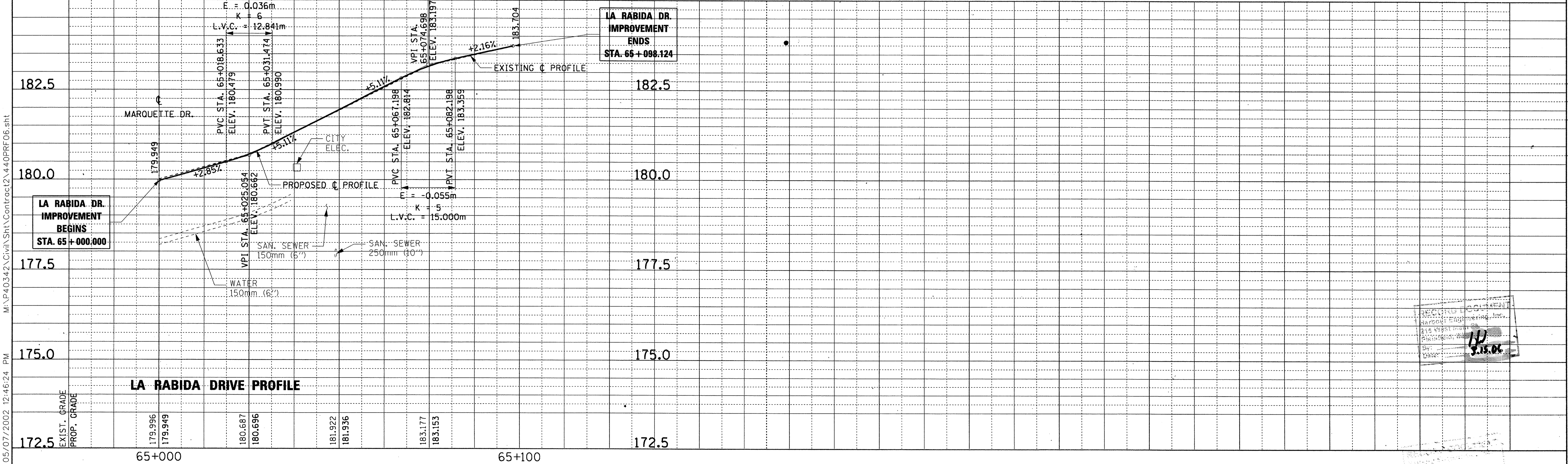
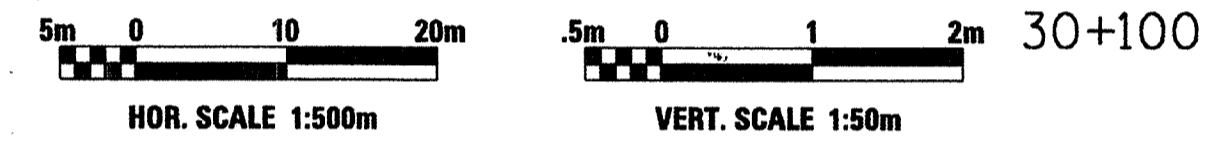
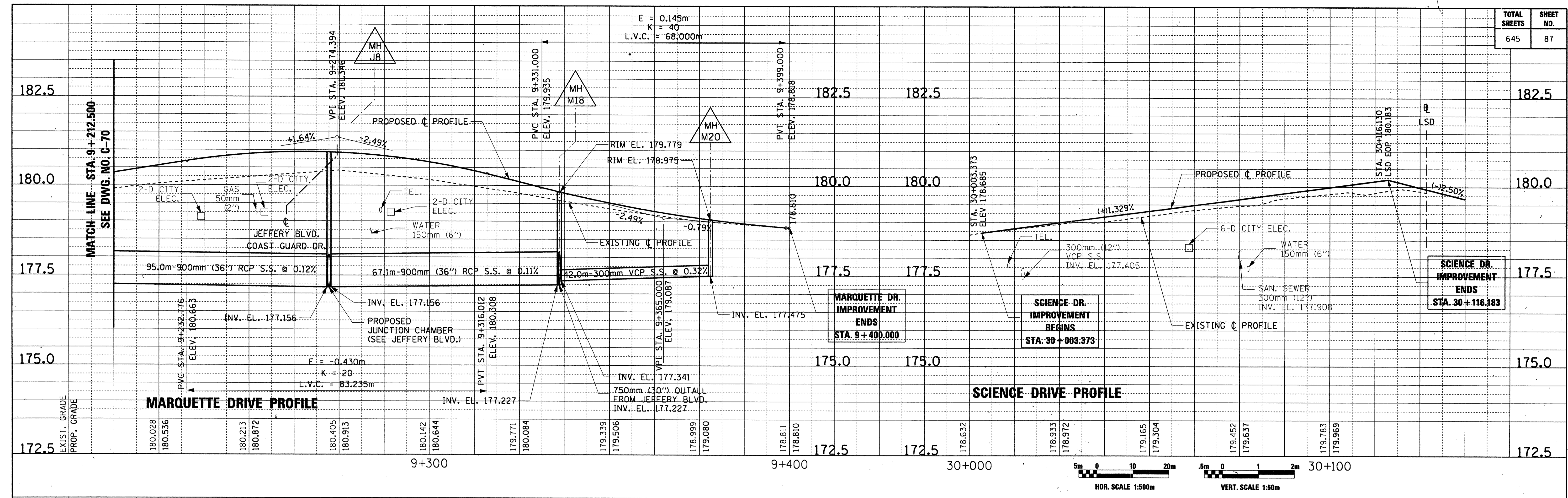


CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOR TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

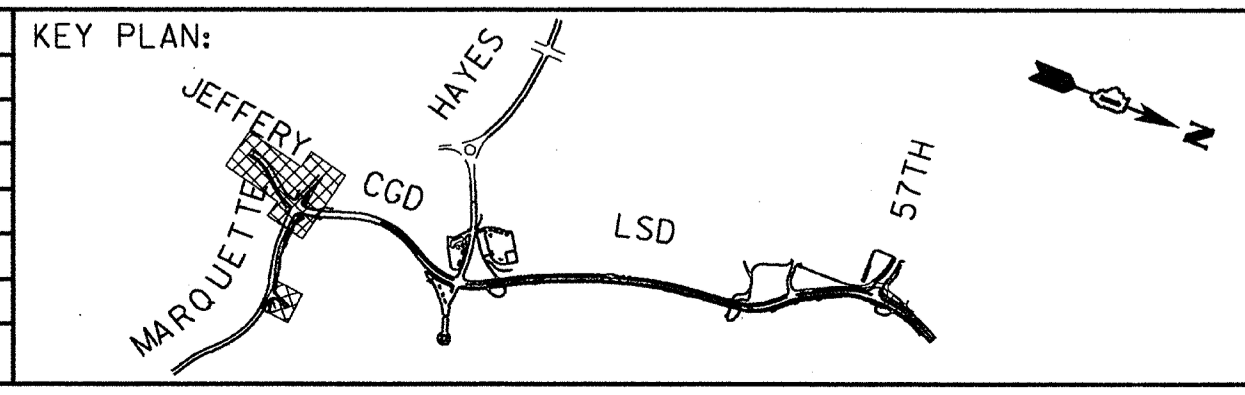
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MARQUETTE DRIVE		00-80241-06-PV
DRAWING NO.		C-70
PROJECT NO. 8-1-440		
		1640091353



RECORDED & INDEXED
 ENGINEERING, INC.
 214 West Madison
 Chicago, IL 60604
 By: [Signature]
 Date: 3.15.02

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CHECKED:	MD
APPROVED:	SL
DATE:	4/16/02
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FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

PROFILE
**MARQUETTE DRIVE
 LA RABIDA DRIVE
 SCIENCE DRIVE**

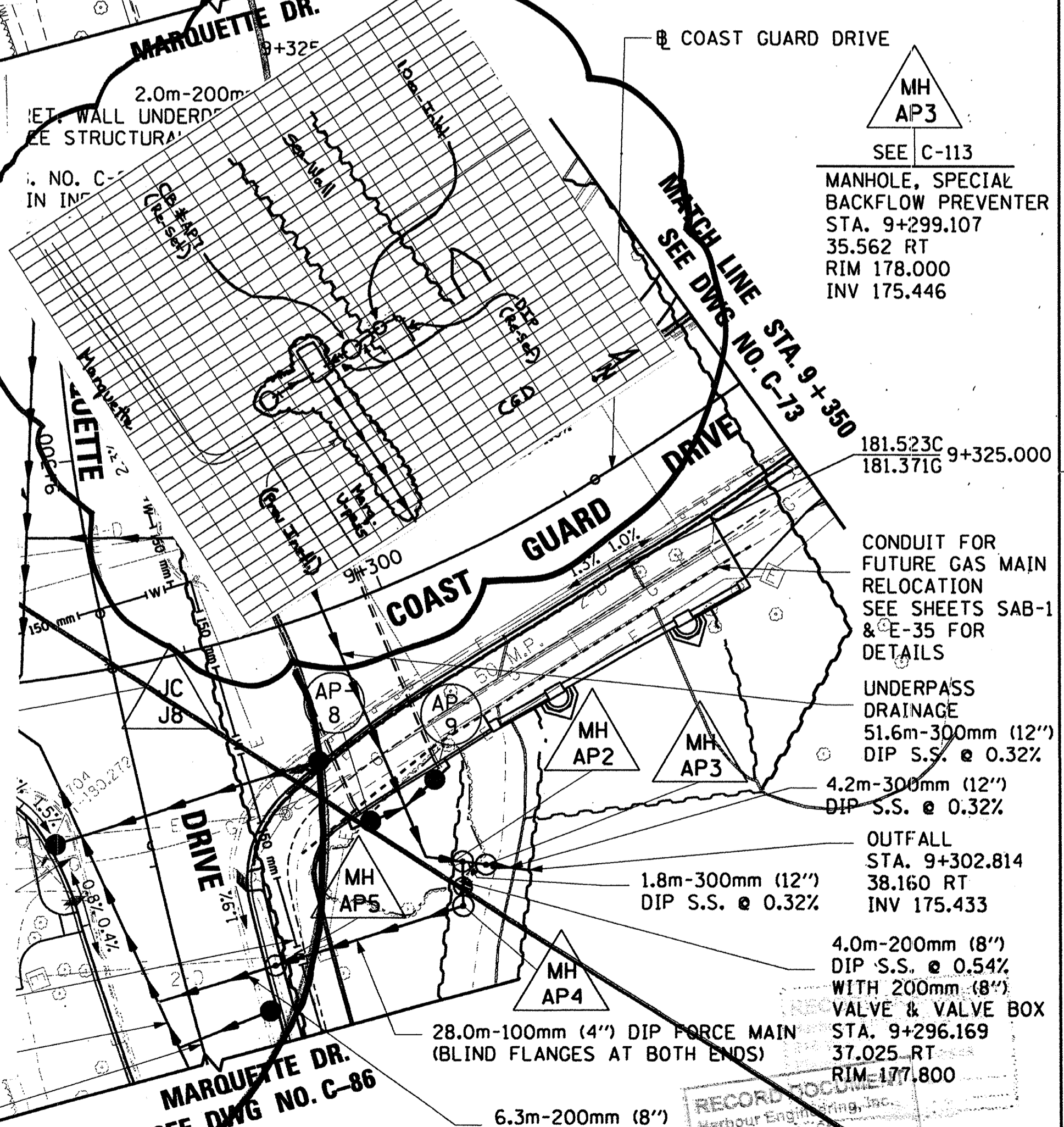
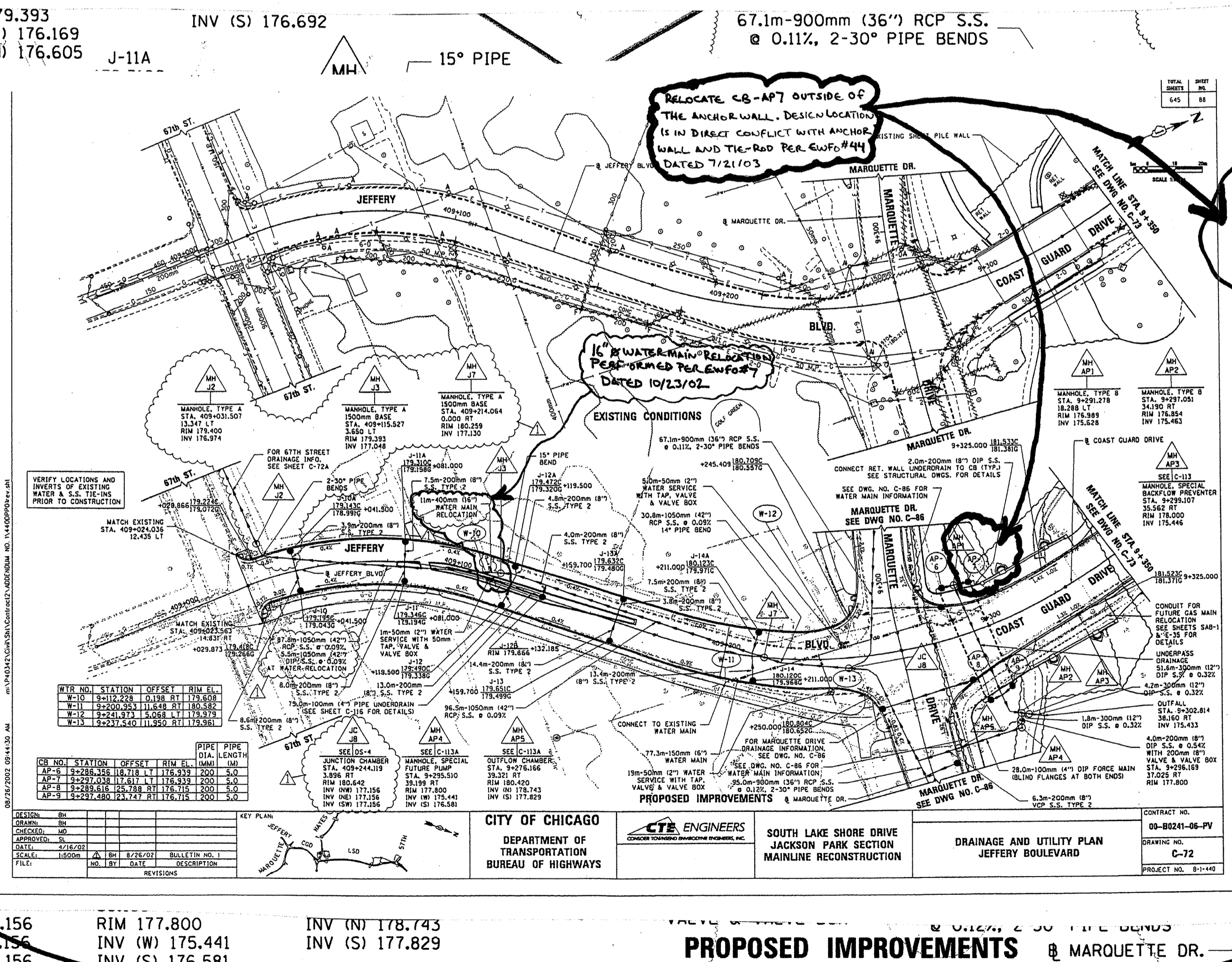
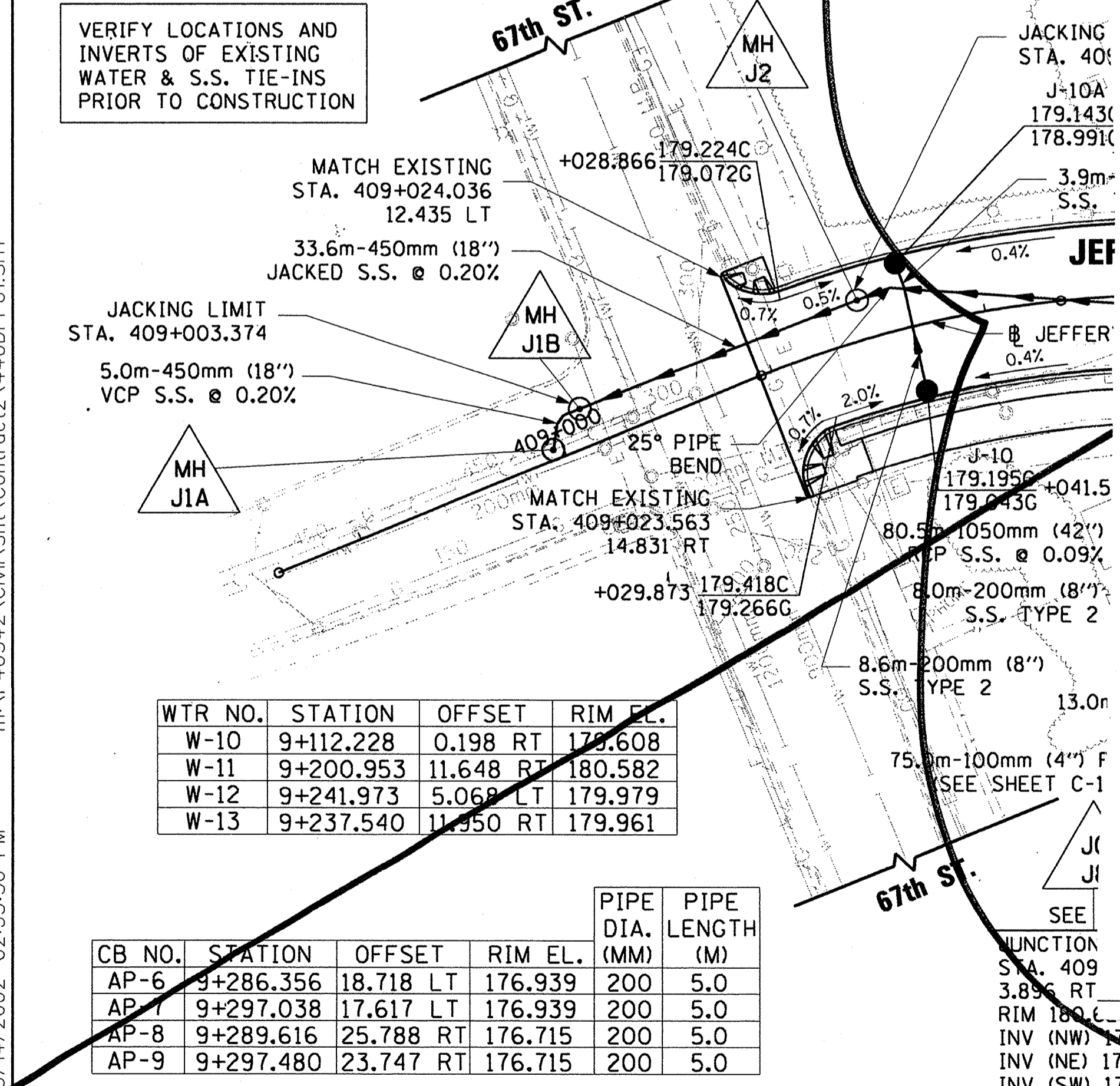
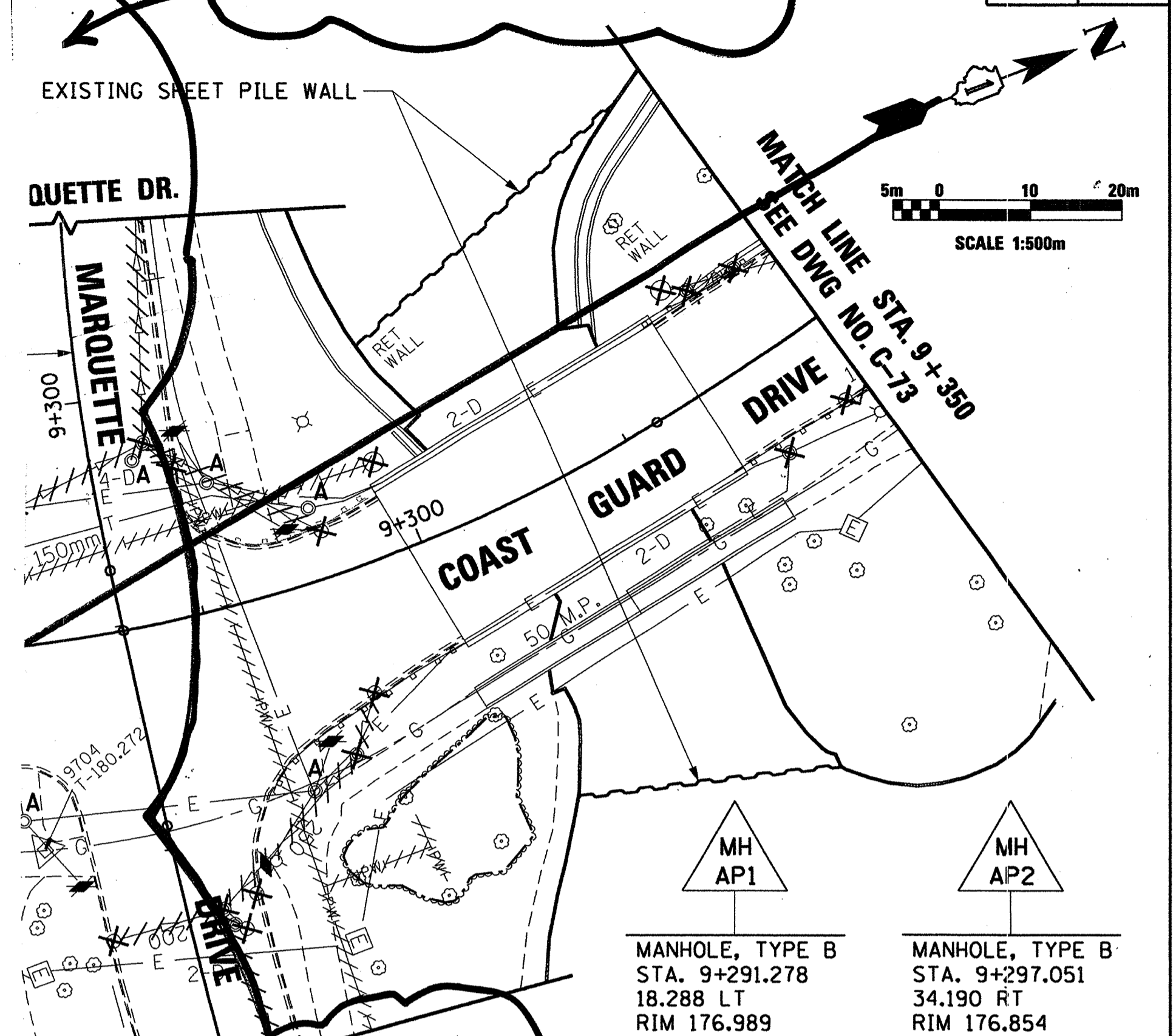
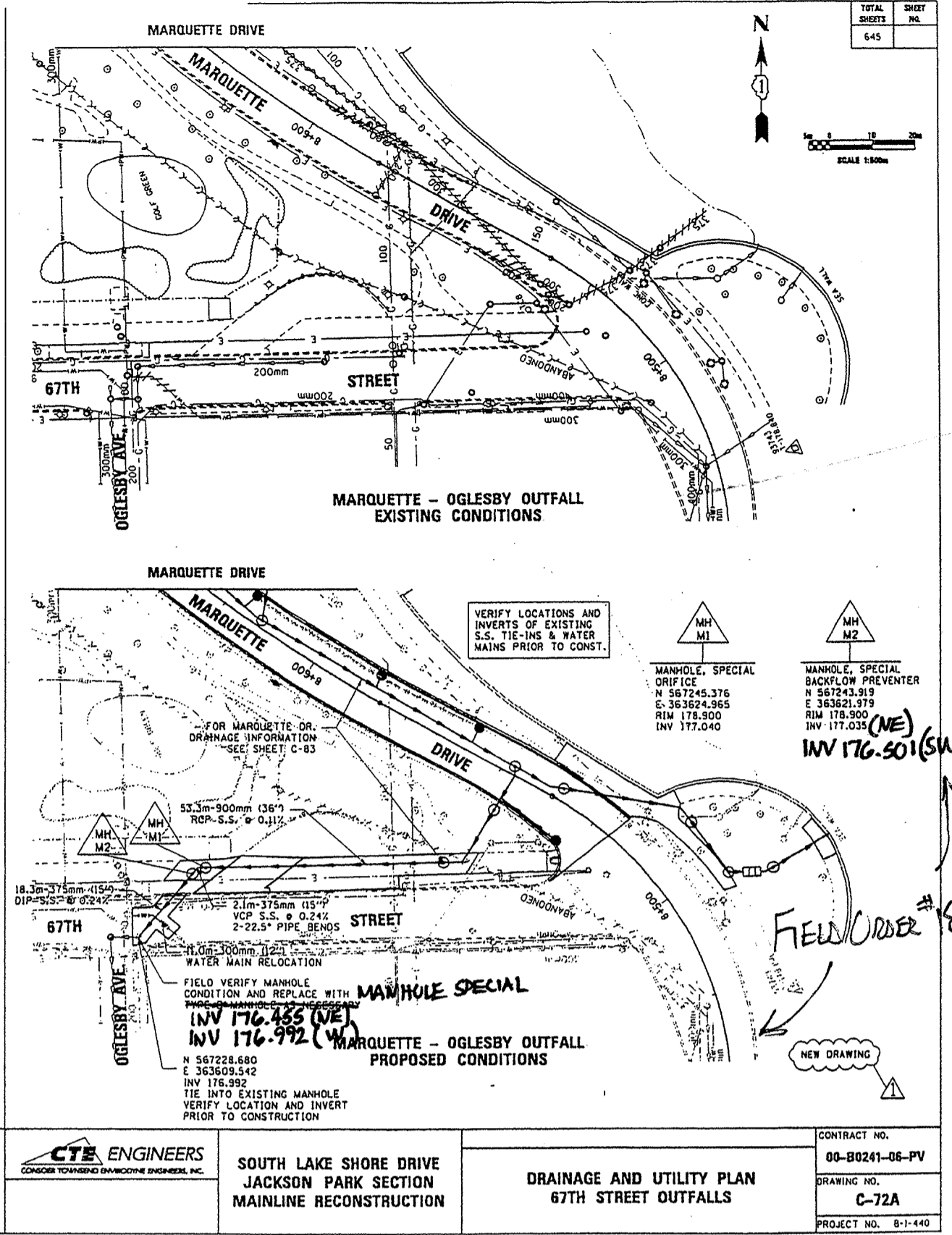
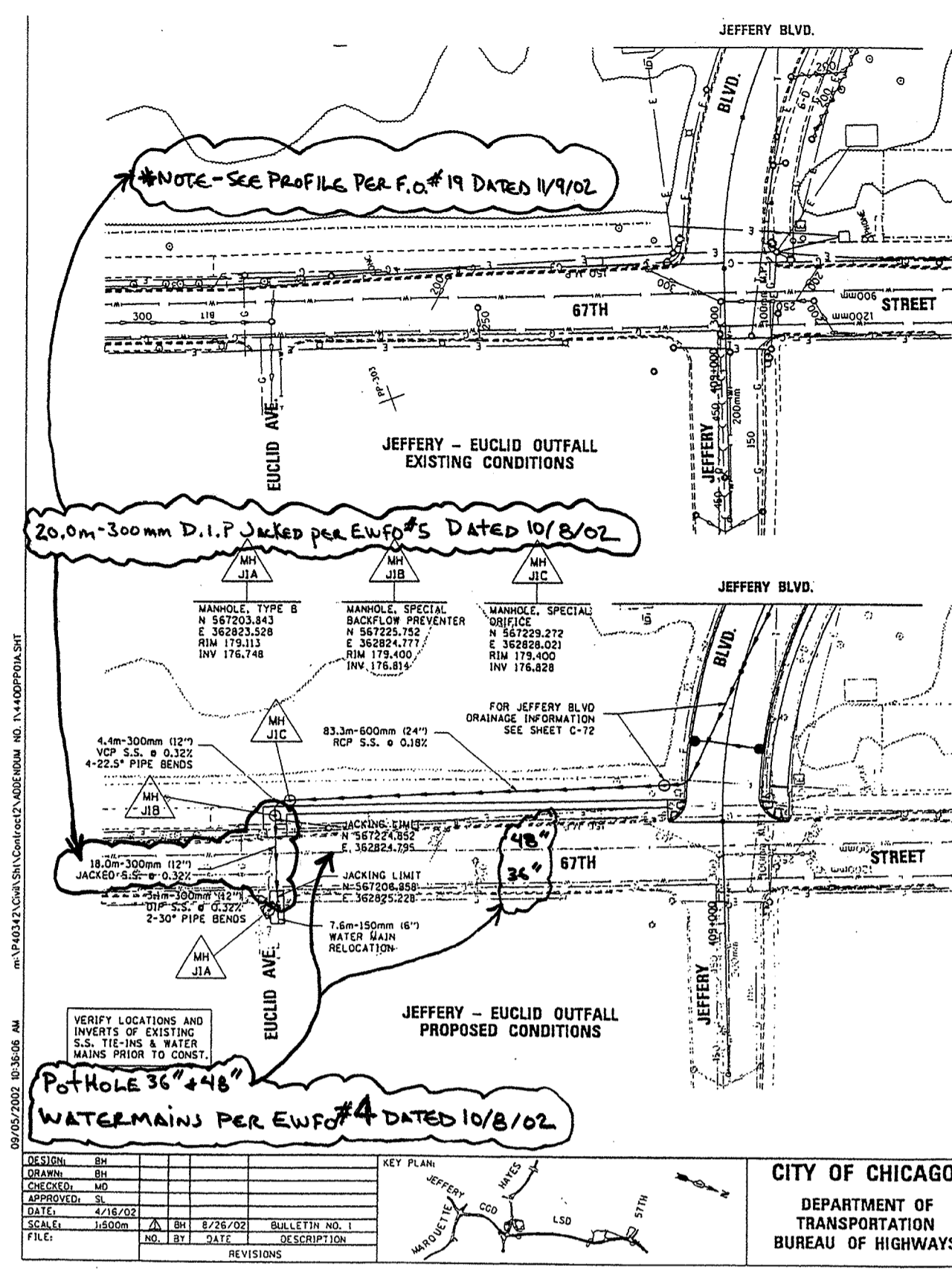
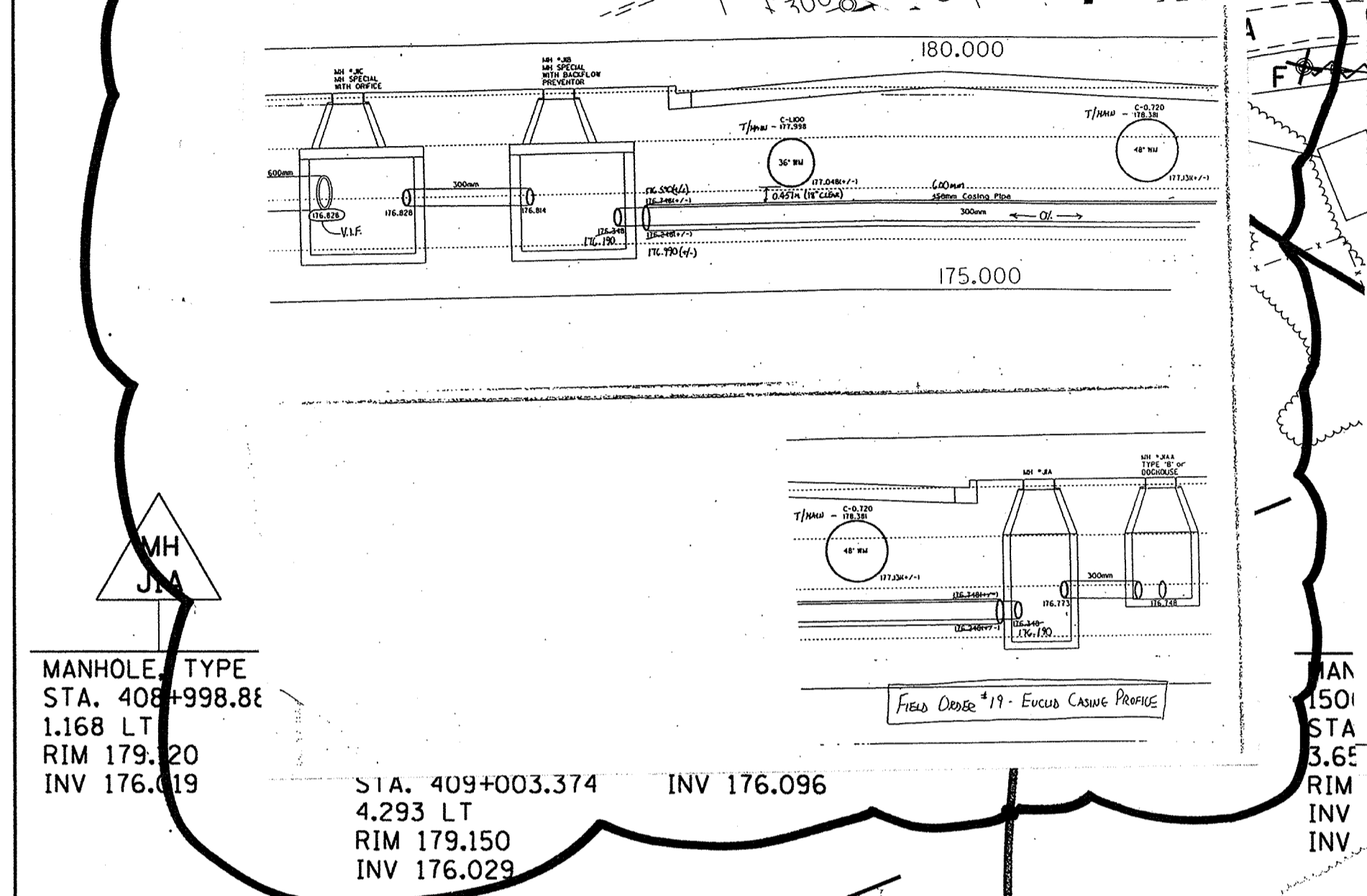
CONTRACT NO. 00-80241-06-PV
 DRAWING NO. C-71
 PROJECT NO. B-1-440

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16A009135A

REVISED C-72A + C-72 PER BULLETIN NO. 1 DATED 8/24/02

EUCLID SEWER CASING PROFILE PER F.O.#19 DATED 11/9/02

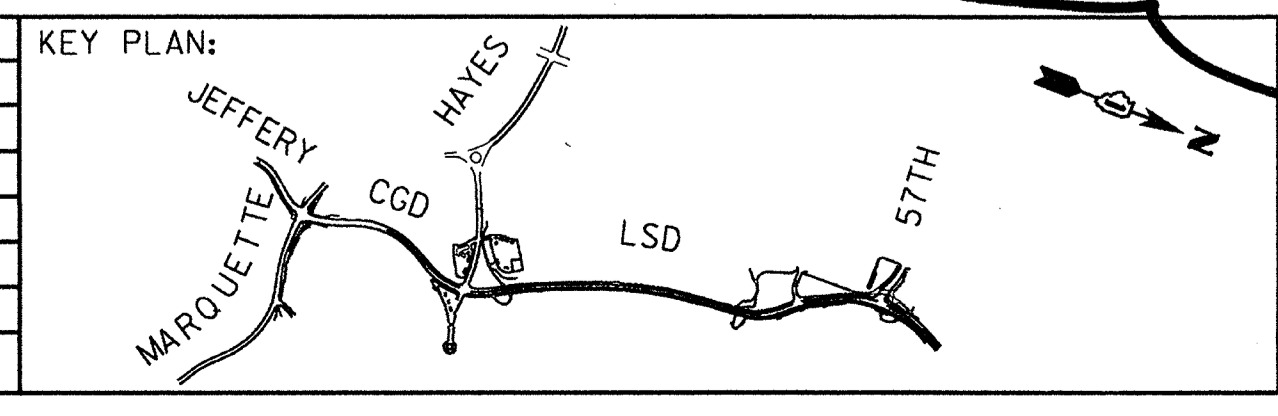


WTR NO.	STATION	OFFSET	RIM EL.
W-10	9+112.228	0.198 RT	179.608
W-11	9+200.953	11.648 RT	180.582
W-12	9+241.973	5.068 LT	179.979
W-13	9+237.540	11.950 RT	179.961

CB NO.	STATION	OFFSET	RIM EL.	PIPE DIA. (MM)	PIPE LENGTH (M)
AP-6	9+286.356	18.718 LT	176.939	200	5.0
AP-7	9+297.038	17.617 LT	176.939	200	5.0
AP-8	9+289.616	25.788 RT	176.715	200	5.0
AP-9	9+297.480	23.747 RT	176.715	200	5.0

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DATE:	4/16/02
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NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOR TOWNSEND ENVIRODYNE ENGINEERS, INC.

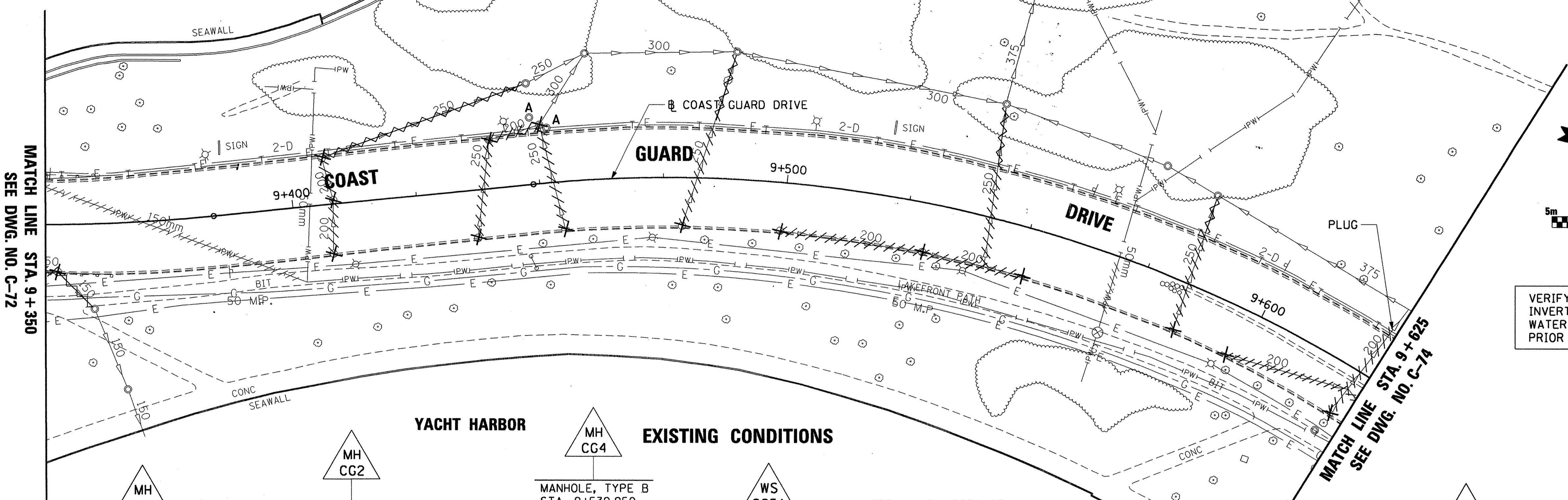
SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

DRAINAGE AND UTILITY PLAN
JEFFERY BOULEVARD

CONTRACT NO. 00-B0241-06-PV
DRAWING NO. C-72
PROJECT NO. B-1-440

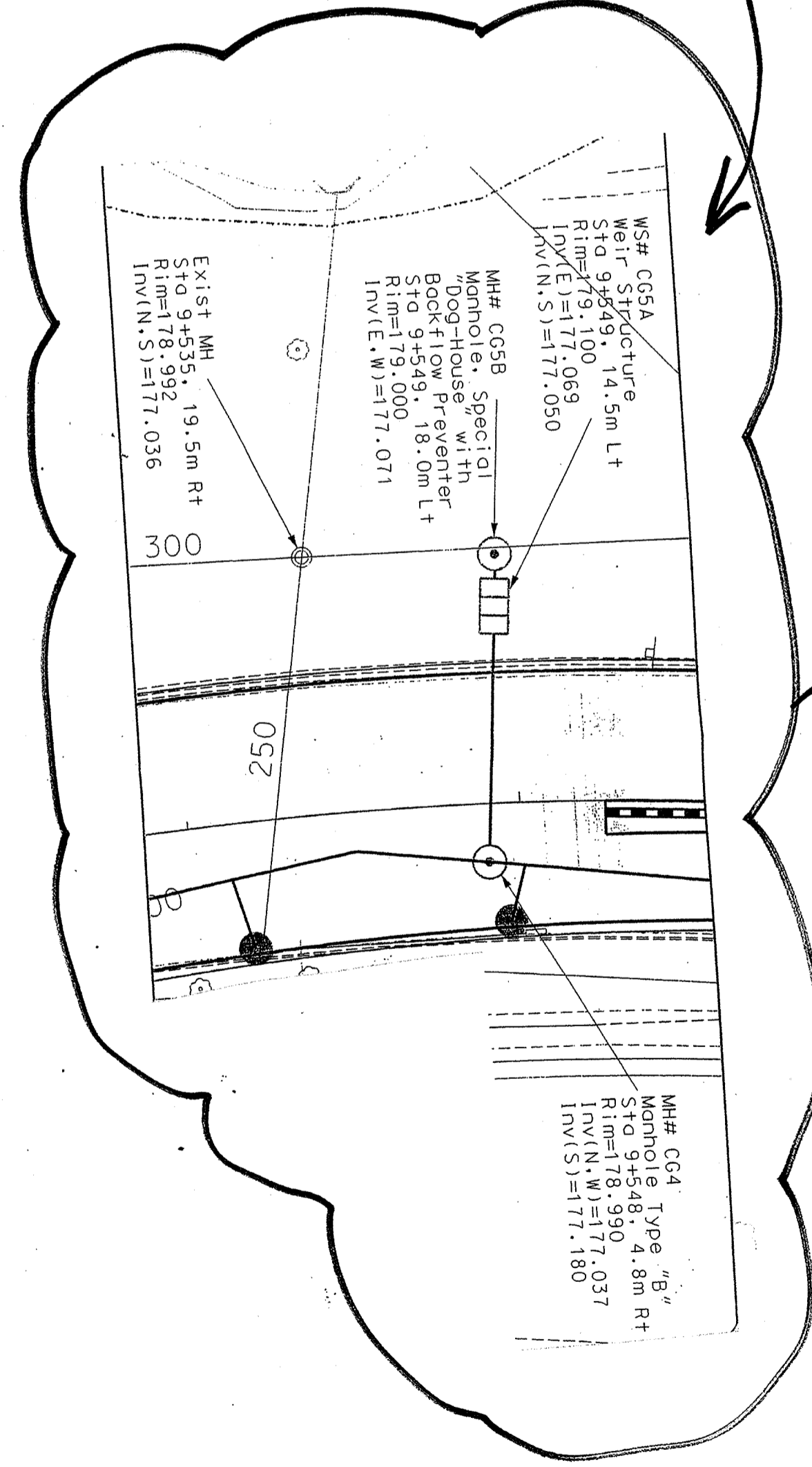
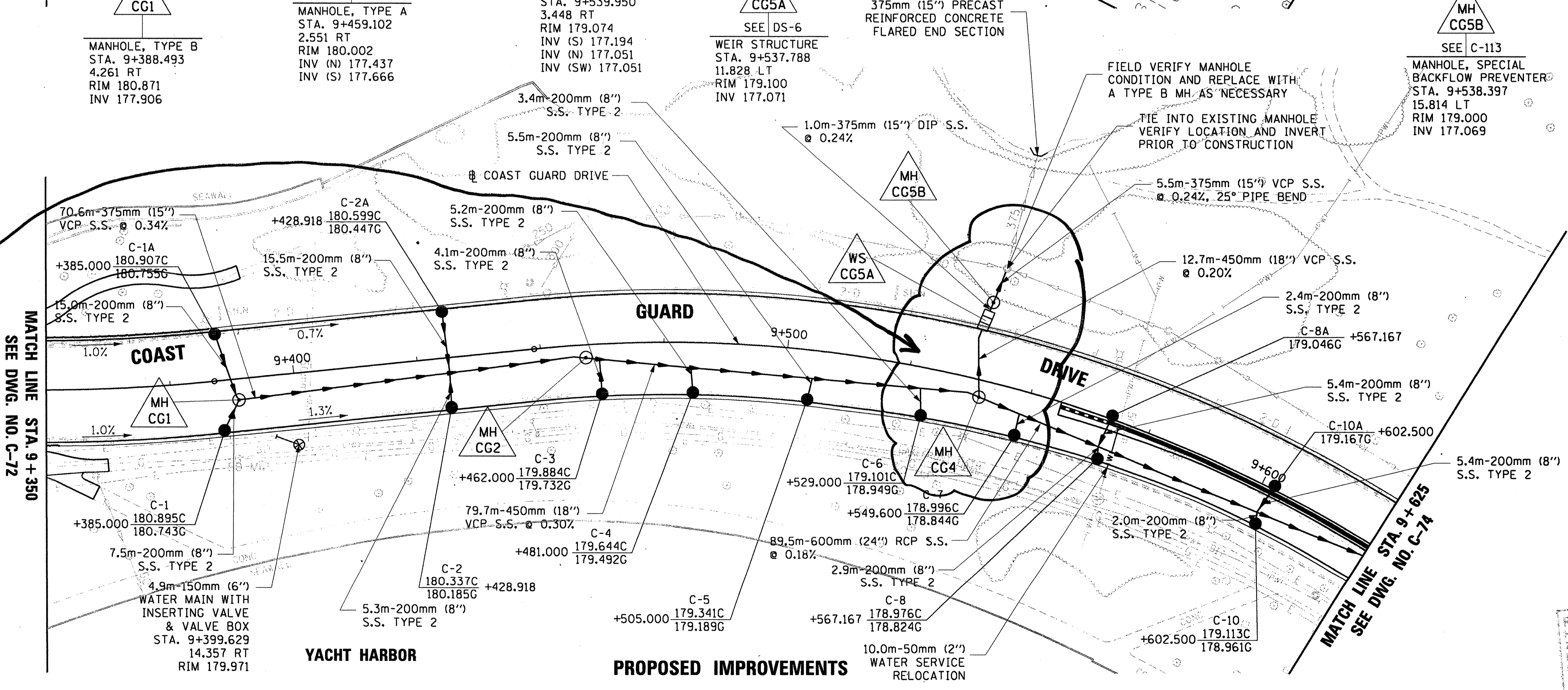
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LOCATION ADJUSTMENTS TO DRAINAGE STRUCTURES MHC64, MHC65A, AND MHC65B PER F.O.#37 DATED 12/11/02

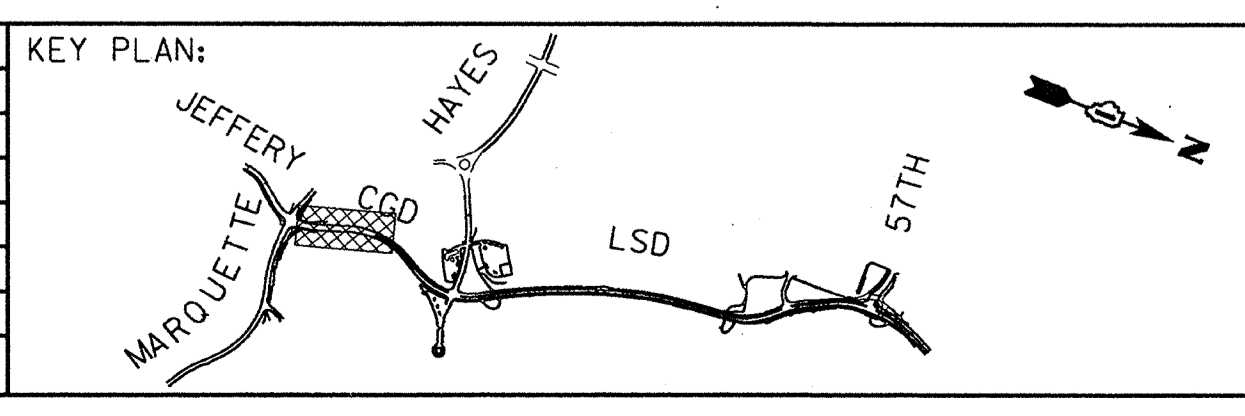
VERIFY LOCATIONS AND INVERTS OF EXISTING WATER & S.S. TIE-INS PRIOR TO CONSTRUCTION



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RECORD DOCUMENT
 Harbor Engineering, Inc.
 215 West
 Plainfield,
 IL 60544
 By: [Signature]
 Date: 8.15.06

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	REVISIONS			



CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

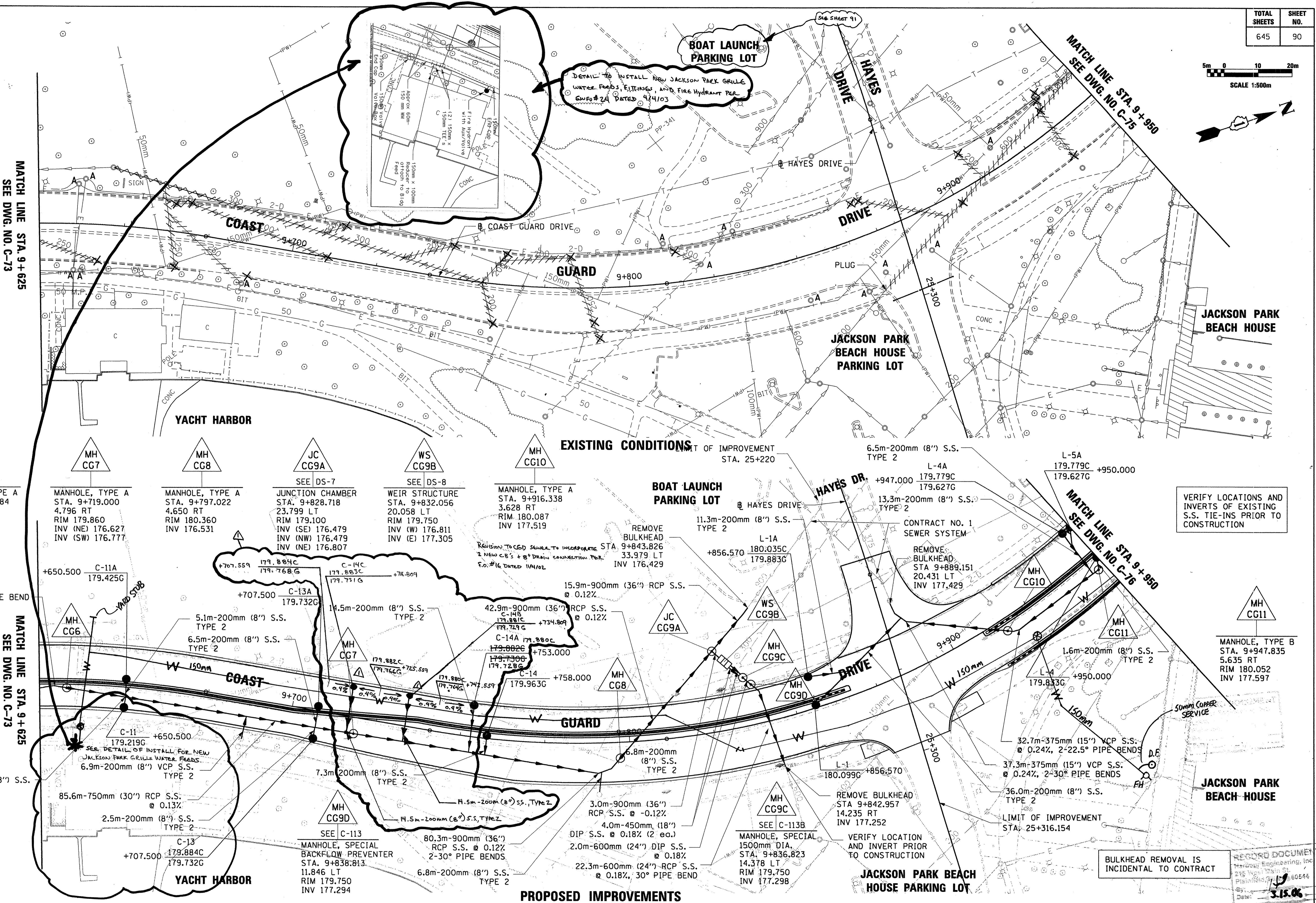
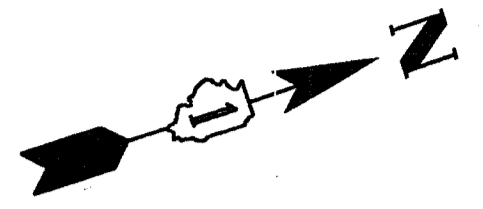
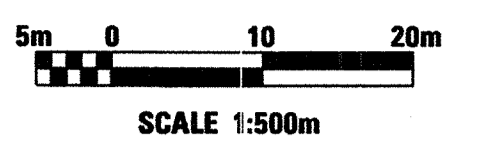
CTE ENGINEERS
 CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

**DRAINAGE AND UTILITY PLAN
 COAST GUARD DRIVE**

CONTRACT NO.
00-B0241-06-PV
 DRAWING NO.
C-73
 PROJECT NO. B-1-440

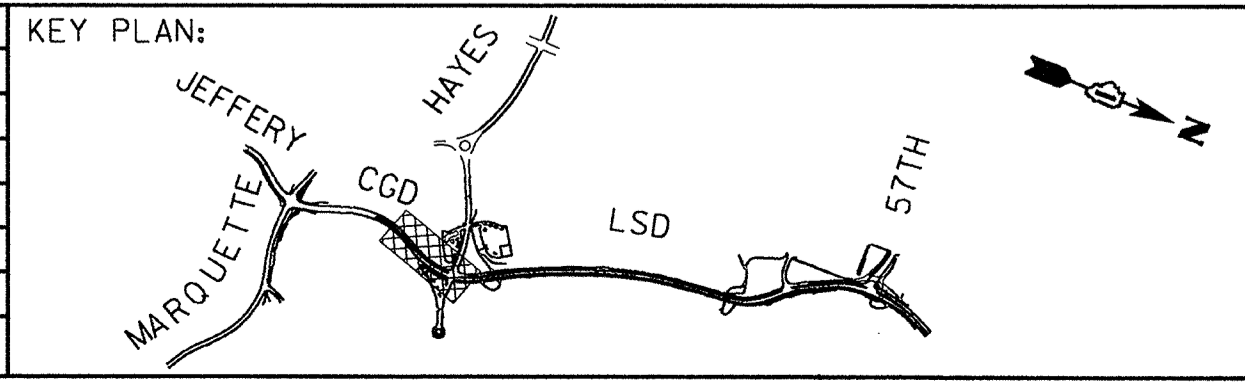
16A0091356



MANHOLE, TYPE A	MANHOLE, TYPE A	MANHOLE, TYPE A	JUNCTION CHAMBER	WEIR STRUCTURE	MANHOLE, TYPE A	REMOVE BULKHEAD	REMOVE BULKHEAD	MANHOLE, TYPE B
STA. 9+633.084 2.709 RT RIM 179.299 INV 176.890	STA. 9+719.000 4.796 RT RIM 179.860 INV (NE) 176.627 INV (SW) 176.777	STA. 9+797.022 4.650 RT RIM 180.360 INV 176.531	STA. 9+828.718 23.799 LT RIM 179.100 INV (SE) 176.479 INV (NW) 176.479 INV (NE) 176.807	STA. 9+832.056 20.058 LT RIM 179.750 INV (W) 176.811 INV (E) 177.305	STA. 9+916.338 3.628 RT RIM 180.087 INV 177.519	STA. 9+843.826 33.979 LT INV 176.429	STA. 9+889.151 20.431 LT INV 177.429	STA. 9+947.835 5.635 RT RIM 180.052 INV 177.597

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				DESCRIPTION
				REVISIONS



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

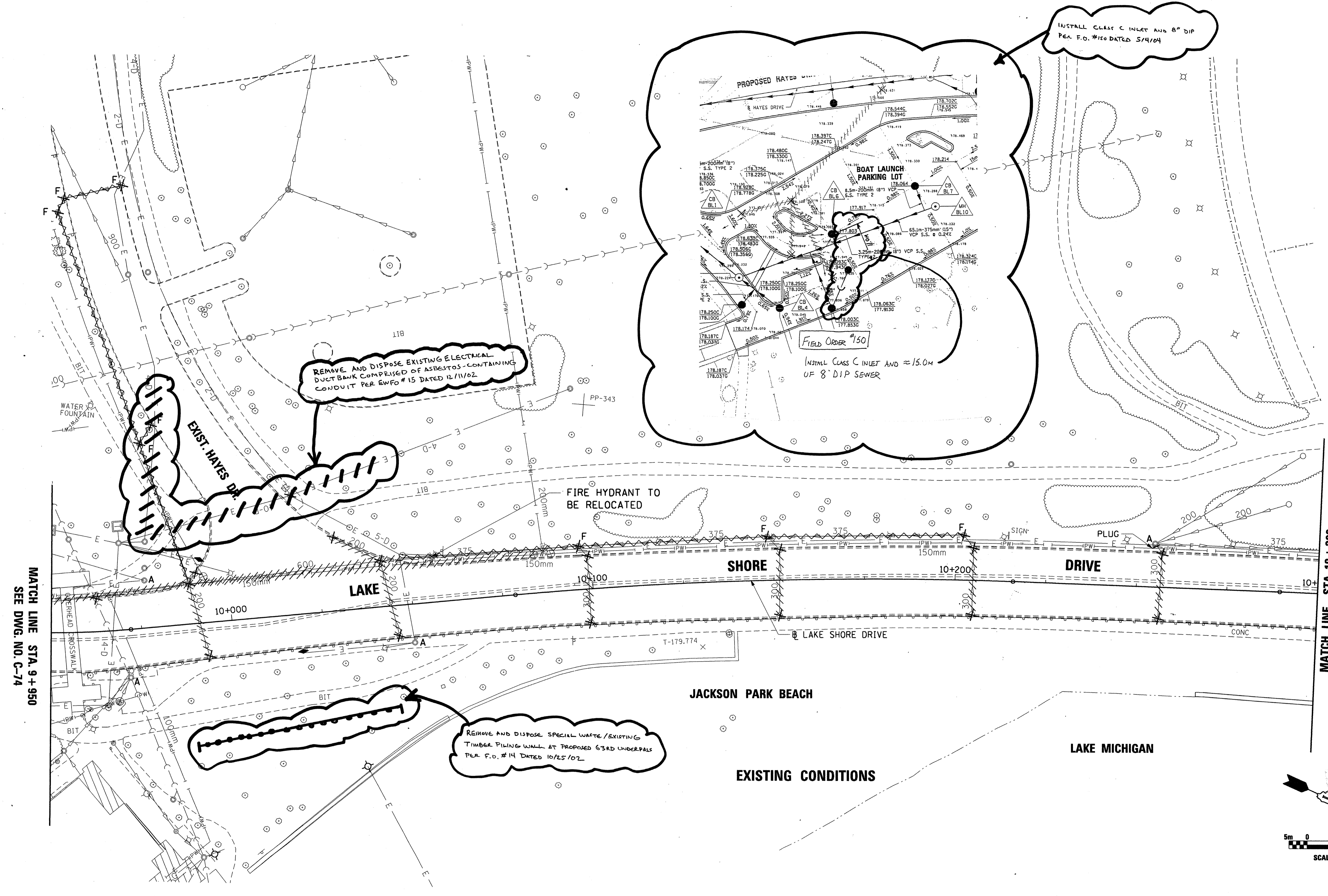
**DRAINAGE AND UTILITY PLAN
COAST GUARD DRIVE**

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
C-74

PROJECT NO. B-1-440
16A0091357

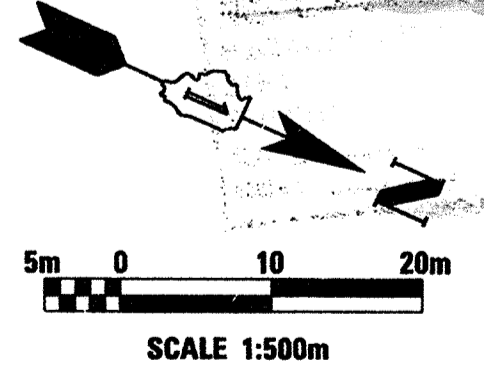
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SEE DWG. NO. C-74

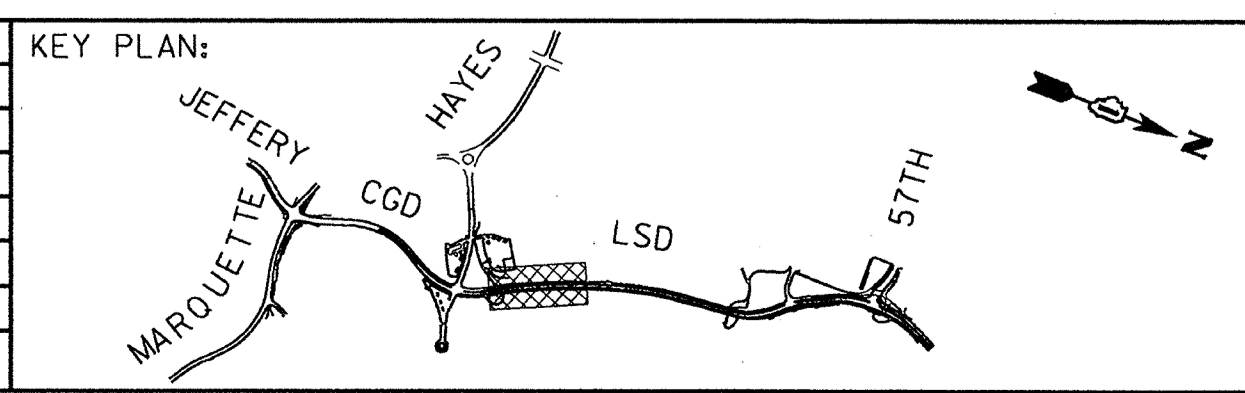
MATCH LINE STA. 10+300
SEE DWG. NO. C-77

RECORD DOCUMENT
Harbour Engineering, Inc.
215 West Main St.
Plainfield, IL 60544
By: [Signature]
Date: 4/15/02



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REVISIONS				



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

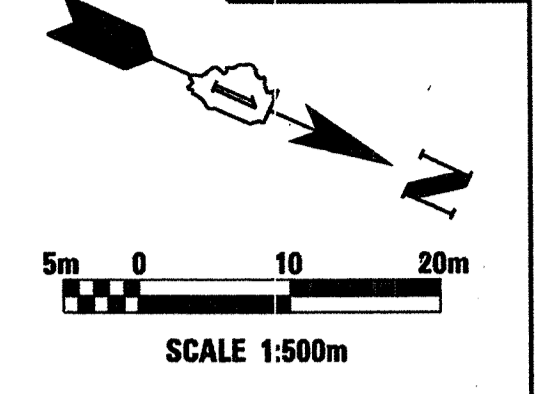
**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**DRAINAGE AND UTILITY PLAN
LAKE SHORE DRIVE**

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
C-75

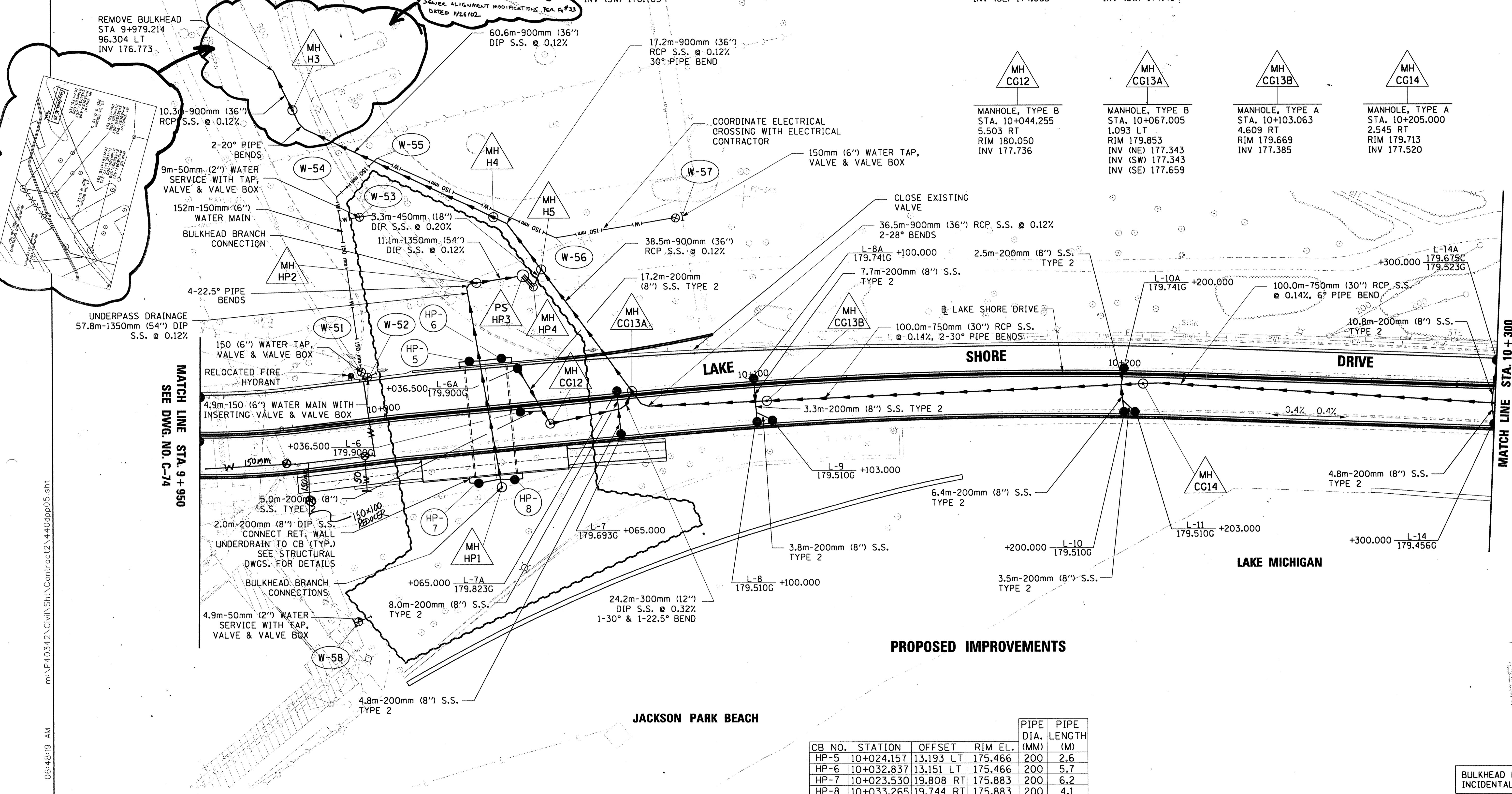
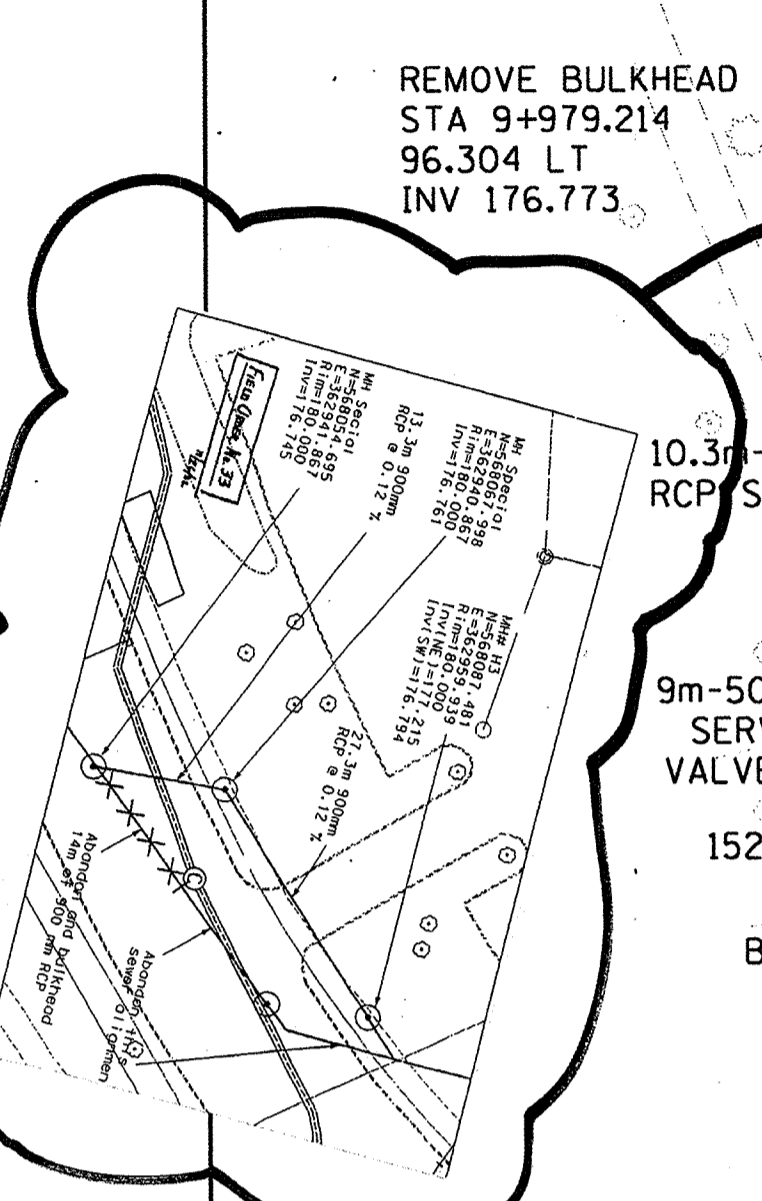
PROJECT NO. B-1-440
164009135B



WTR NO.	STATION	OFFSET	GRD. EL.
W-51	9+995.027	11.010 LT	180.000
W-52	9+996.440	11.589 LT	179.900
W-53	9+998.500	54.853 LT	178.375
W-54	9+992.889	60.892 LT	178.800
W-55	10+004.823	70.211 LT	179.600
W-56	10+050.581	44.310 LT	179.200
W-57	10+084.794	46.884 LT	179.800
W-58	9+987.595	53.976 RT	179.200

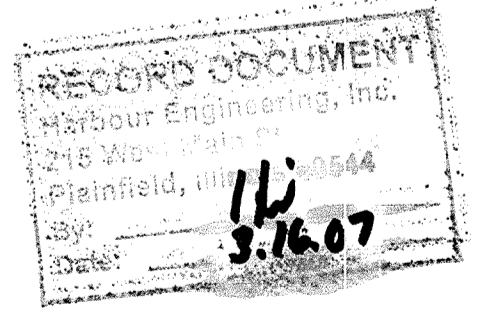
MH	MANHOLE, TYPE	STA	RT/LT	RIM	INV
MH H3	MANHOLE, TYPE A	1350mm BASE			
MH H4	MANHOLE, TYPE A	10+034.421	51.409 LT	179.200	177.277
MH H5	MANHOLE, TYPE B	10+045.836	36.146 LT	179.400	177.298
MH HP1	MANHOLE, TYPE B	10+029.594	21.461 RT	176.150	173.475
MH HP2	MANHOLE, TYPE B	10+028.135	34.102 LT	176.750	173.406
PS HP3	PUMP STATION	10+040.773	34.883 LT	179.100	173.393
MH HP4	DISCHARGE PIT	10+043.293	31.534 LT	179.300	177.729
MH CG12	MANHOLE, TYPE B	10+044.255	1.093 LT	180.050	177.736
MH CG13A	MANHOLE, TYPE B	10+067.005	1.093 LT	179.853	177.343
MH CG13B	MANHOLE, TYPE A	10+103.063	4.609 RT	179.669	177.385
MH CG14	MANHOLE, TYPE A	10+205.000	2.545 RT	179.713	177.520

VERIFY LOCATIONS AND INVERTS OF EXISTING WATER & S.S. TIE-INS PRIOR TO CONSTRUCTION



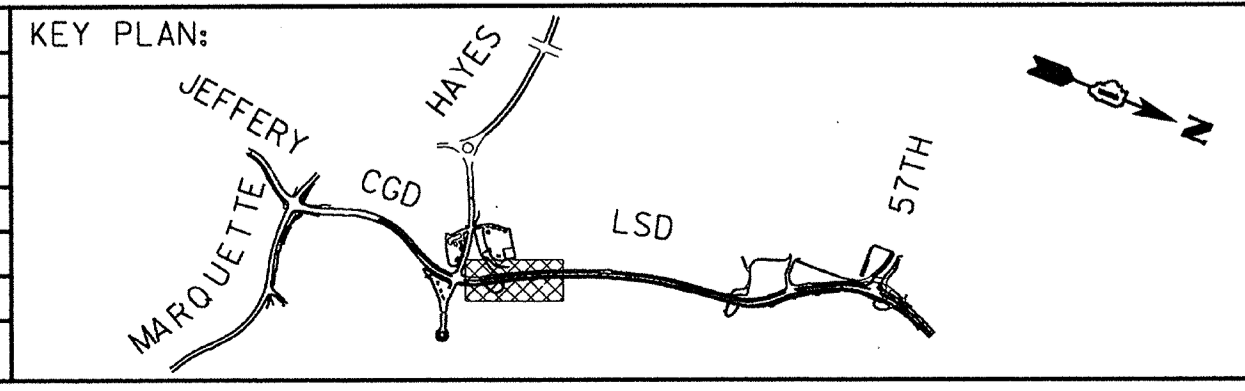
CB NO.	STATION	OFFSET	RIM EL.	PIPE DIA. (MM)	PIPE LENGTH (M)
HP-5	10+024.157	13.193 LT	175.466	200	2.6
HP-6	10+032.837	13.151 LT	175.466	200	5.7
HP-7	10+023.530	19.808 RT	175.883	200	6.2
HP-8	10+033.265	19.744 RT	175.883	200	4.1

BULKHEAD REMOVAL IS INCIDENTAL TO CONTRACT

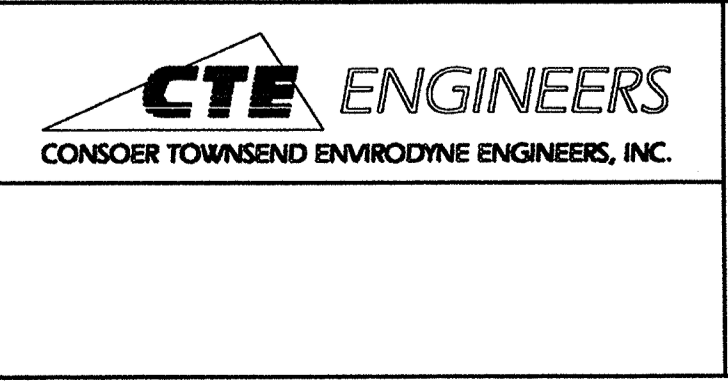


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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS



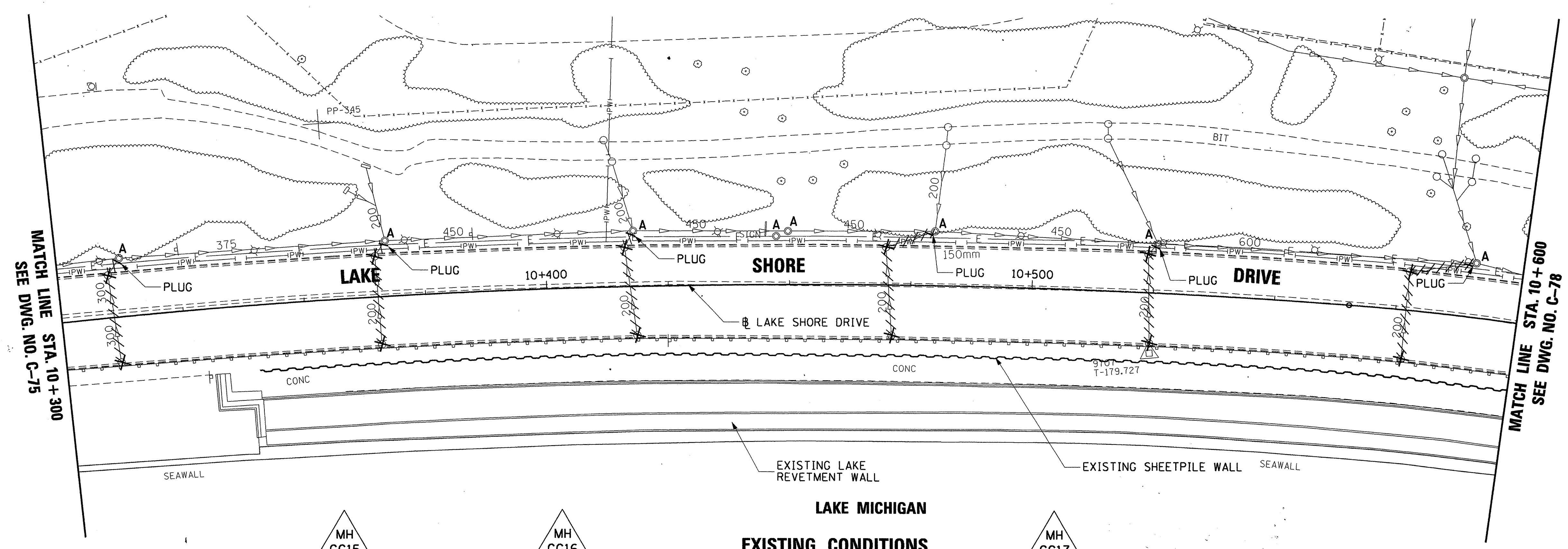
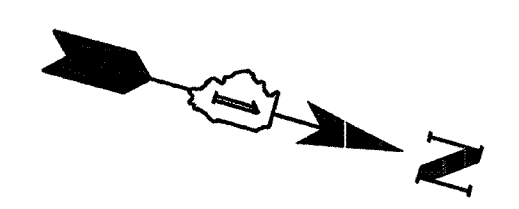
**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**DRAINAGE AND UTILITY PLAN
LAKE SHORE DRIVE**

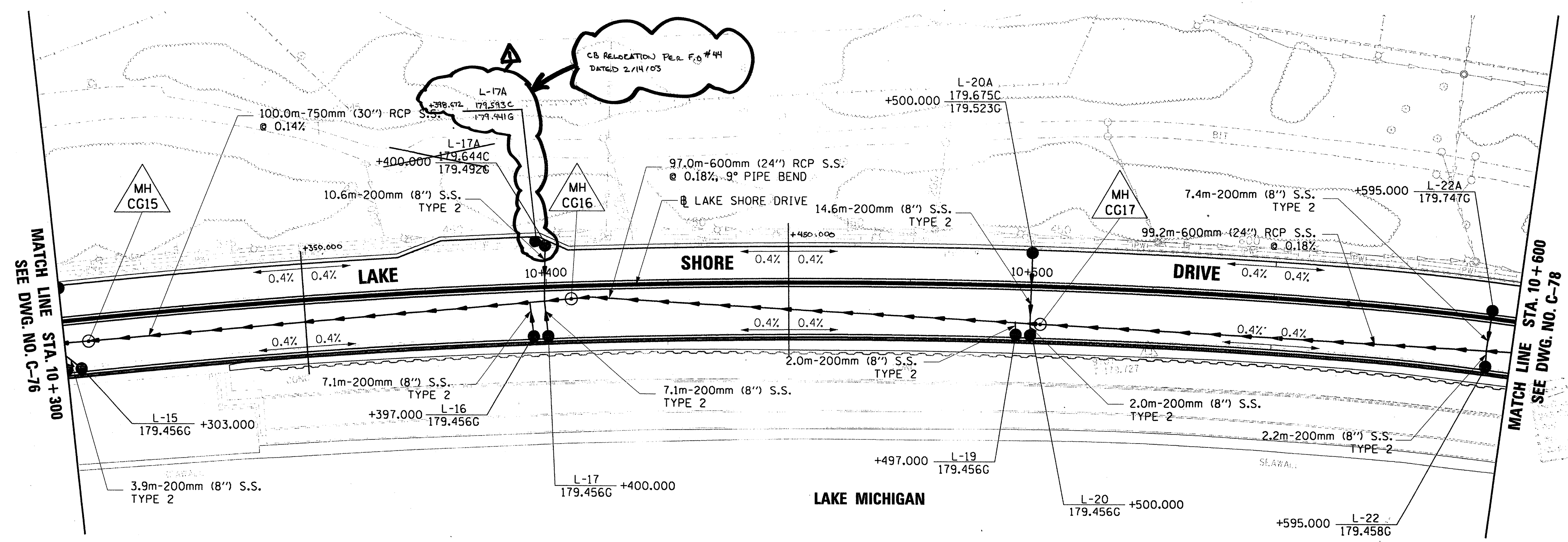
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DRAWING NO.	C-76
PROJECT NO.	B-1-440

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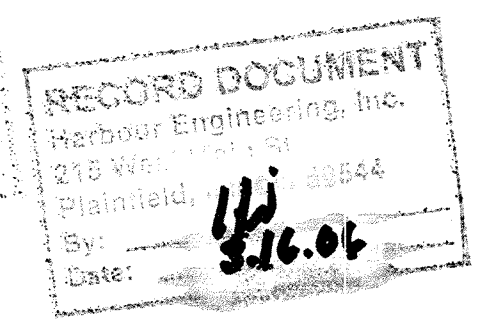
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MANHOLE ID	MANHOLE TYPE	STATION	RIM ELEVATION (RT)	INVERT ELEVATION (INV)
MH CG15	MANHOLE, TYPE A	STA. 10+305.000	4.594 RT	179.672
				177.663
MH CG16	MANHOLE, TYPE A	STA. 10+405.000	2.587 RT	179.712
				177.806
MH CG17	MANHOLE, TYPE A	10+502.000	7.807 RT	179.599
				177.986



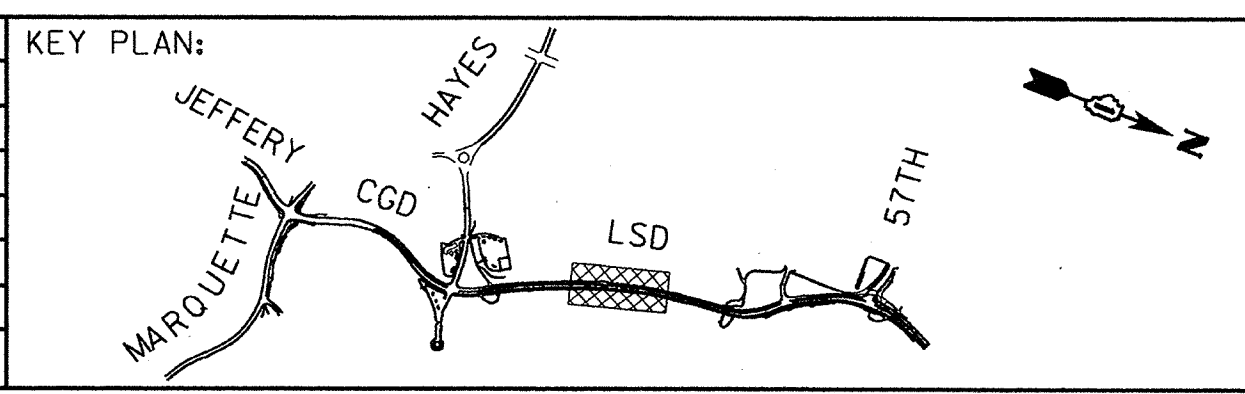
PROPOSED IMPROVEMENTS



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CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

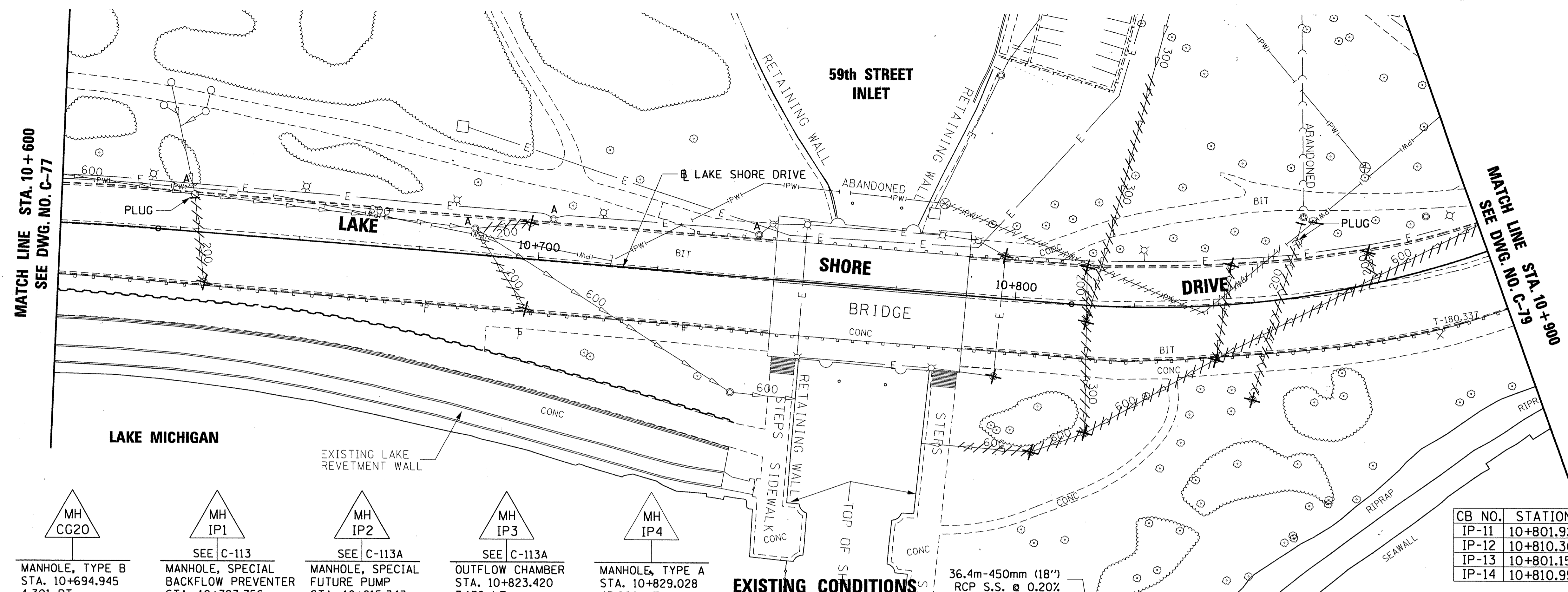
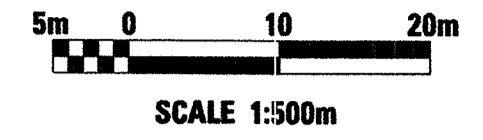


SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

DRAINAGE AND UTILITY PLAN
LAKE SHORE DRIVE

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	C-77
PROJECT NO.	B-1-440

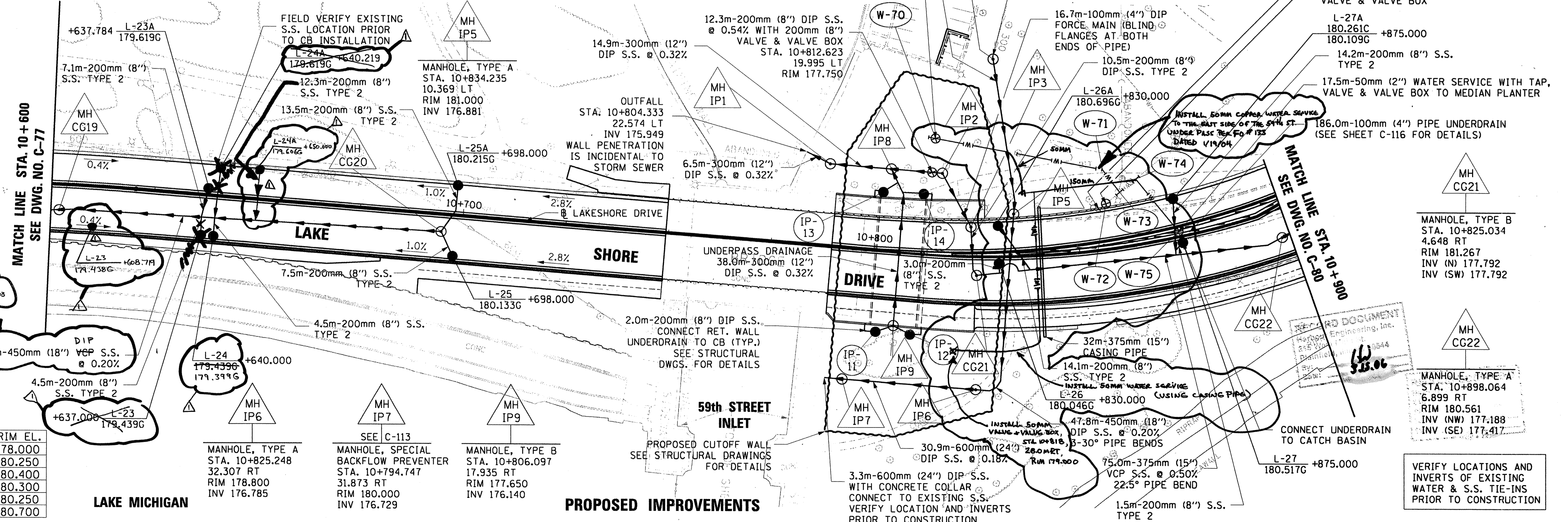
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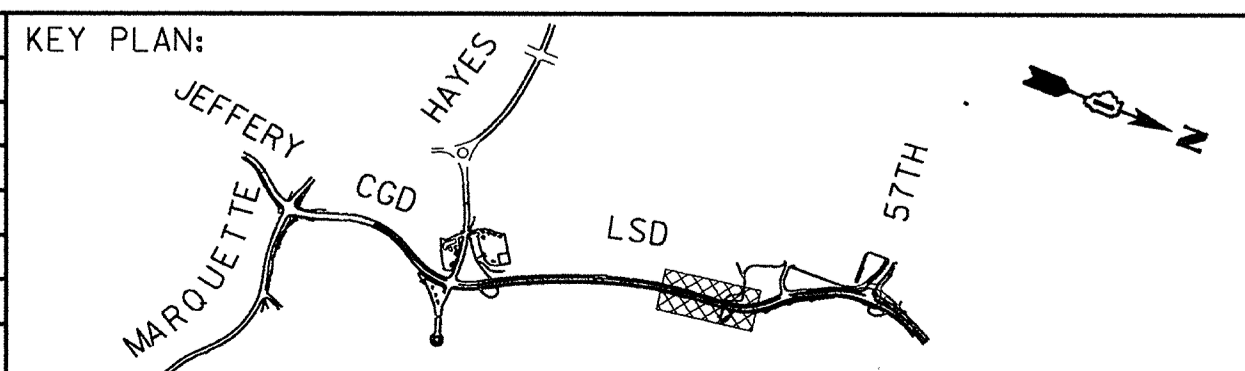
CB NO.	STATION	OFFSET	RIM EL.	PIPE DIA. (MM)	PIPE LENGTH (M)
IP-11	10+801.921	19.765 RT	177.607	200	4.6
IP-12	10+810.303	19.759 RT	177.607	200	4.5
IP-13	10+801.153	14.268 LT	176.848	200	4.0
IP-14	10+810.951	14.625 LT	176.848	200	4.8

- MH CG19
MANHOLE, TYPE A
STA. 10+602.000
6.250 RT
RIM 179.585
INV 178.166
- MH CG20
MANHOLE, TYPE B
STA. 10+694.945
4.301 RT
RIM 180.312
INV 178.347
- MH IP1
SEE C-113
MANHOLE, SPECIAL BACKFLOW PREVENTER
STA. 10+787.756
20.069 LT
RIM 179.000
INV 175.970
- MH IP2
SEE C-113A
MANHOLE, SPECIAL FUTURE PUMP
STA. 10+815.347
19.963 LT
RIM 178.000
INV (S) 176.084
INV (NE) 176.781
- MH IP3
SEE C-113A
OUTFLOW CHAMBER
STA. 10+823.420
7.170 LT
RIM 180.857
INV (SW) 178.266
INV (E) 179.180
- MH IP4
MANHOLE, TYPE A
STA. 10+829.028
47.968 LT
RIM 179.100
INV 176.954

- MH IP8
MANHOLE, TYPE B
STA. 10+802.661
20.026 LT
RIM 177.400
INV 176.018



WTR NO.	STATION	OFFSET	RIM EL.
W-70	10+812.826	28.220 LT	178.000
W-71	10+858.307	19.386 LT	180.250
W-72	10+857.970	11.905 LT	180.400
W-73	10+861.893	13.342 LT	180.300
W-74	10+866.598	15.884 LT	180.250
W-75	10+874.565	1.252 LT	180.700



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS



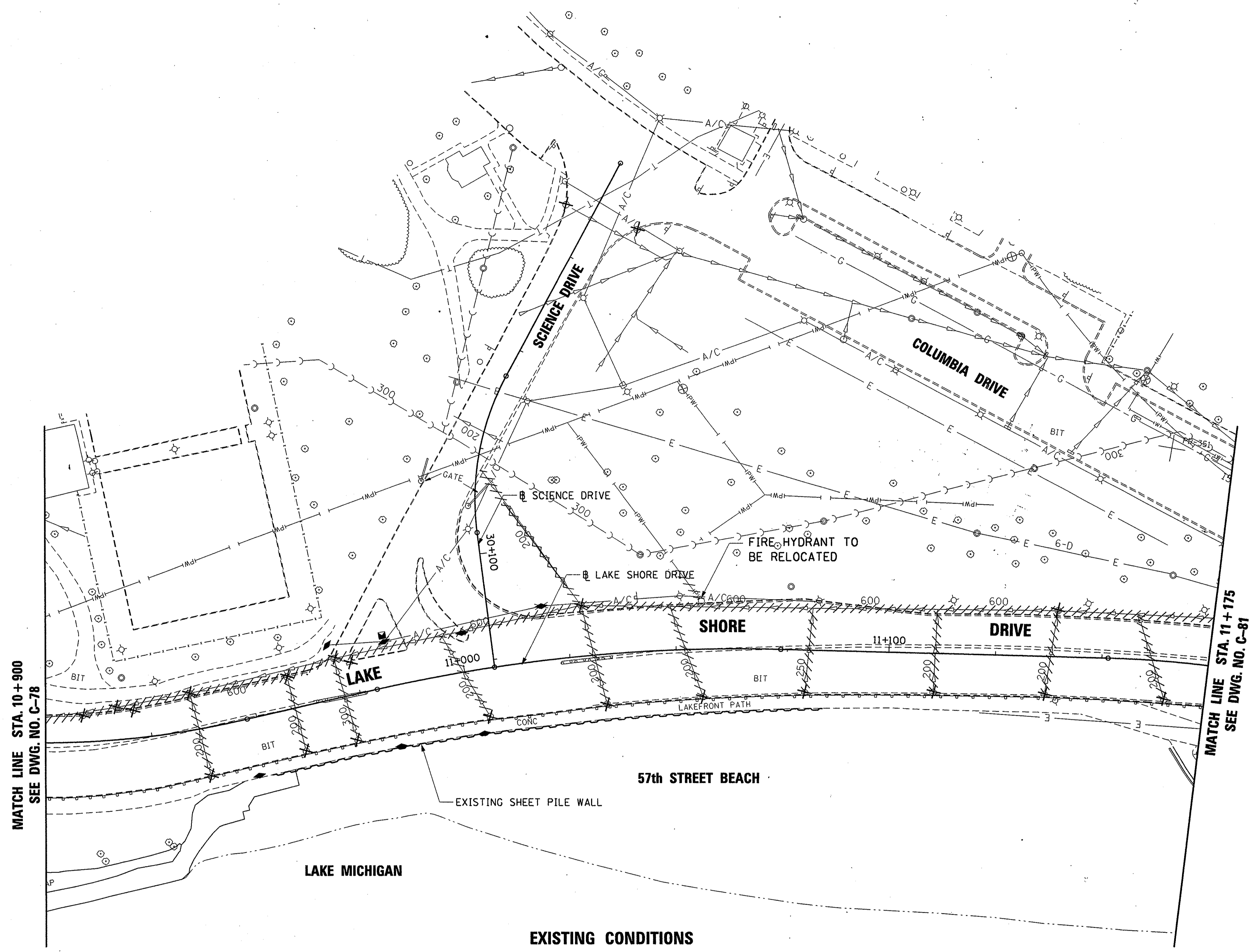
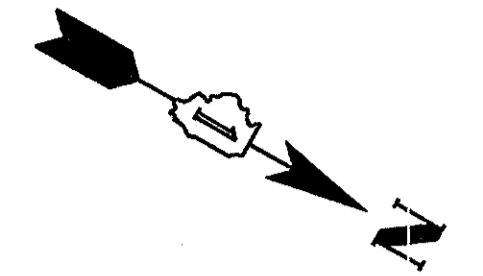
**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**DRAINAGE AND UTILITY PLAN
LAKE SHORE DRIVE**

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	C-78
PROJECT NO.	B-1-440

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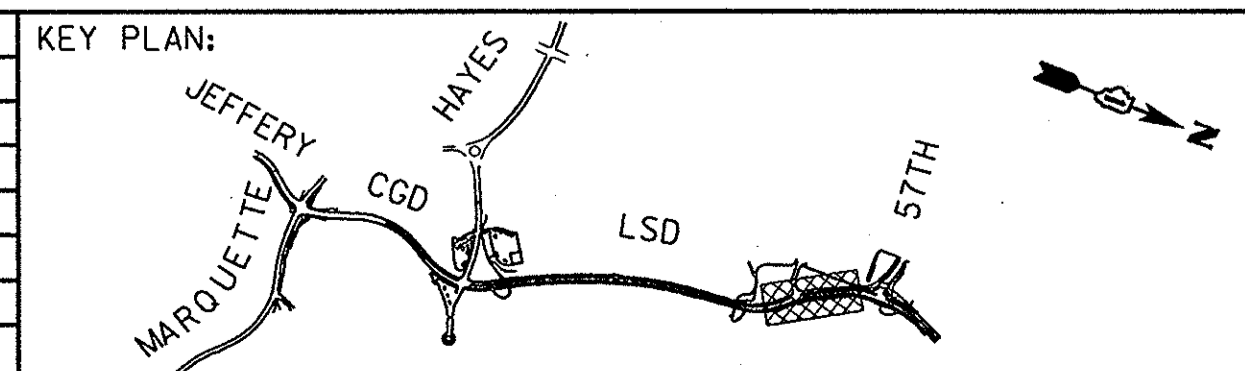
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SEE DWG. NO. C-78

MATCH LINE STA. 11+175
SEE DWG. NO. C-81

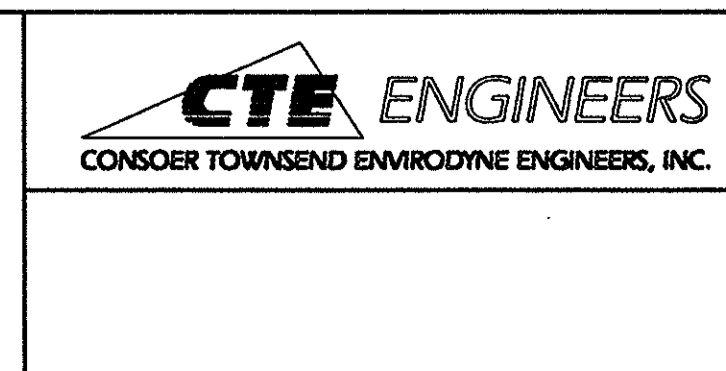
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245 W. Plainfield
By: *HL* J544
Date: 5.15.06

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CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS



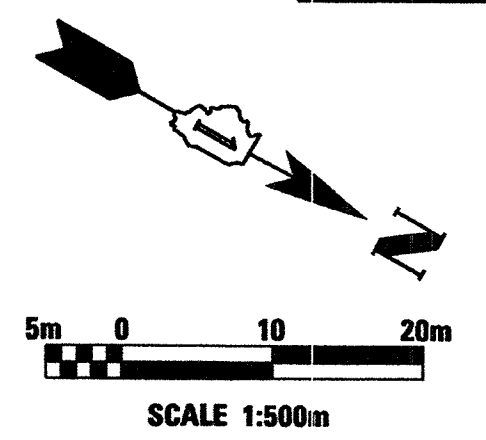
**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**DRAINAGE AND UTILITY PLAN
LAKE SHORE DRIVE**

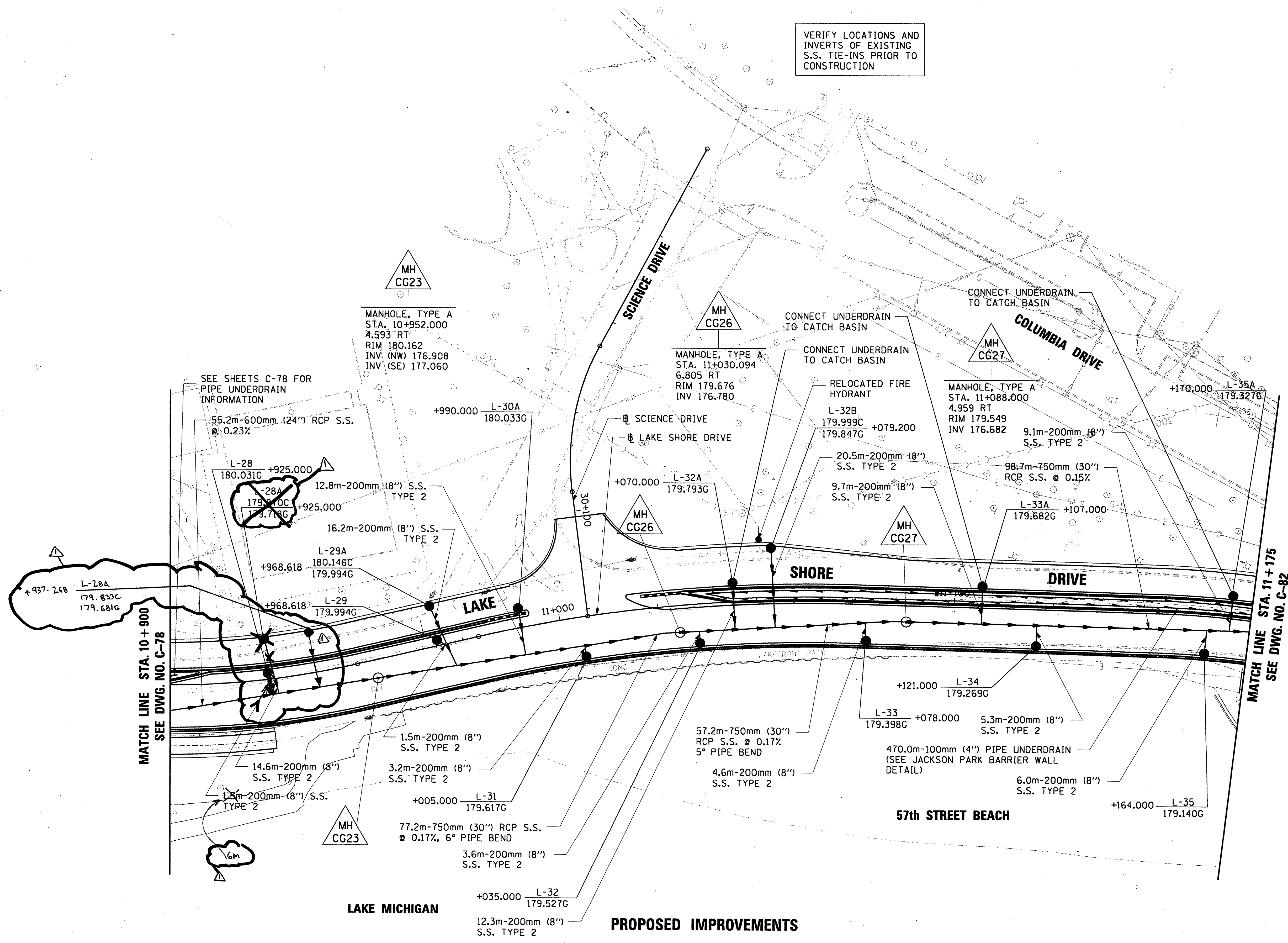
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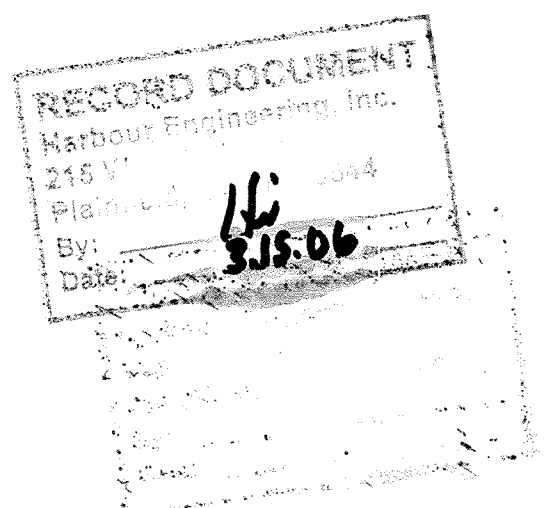
PROJECT NO. B-1-440
16A0091362



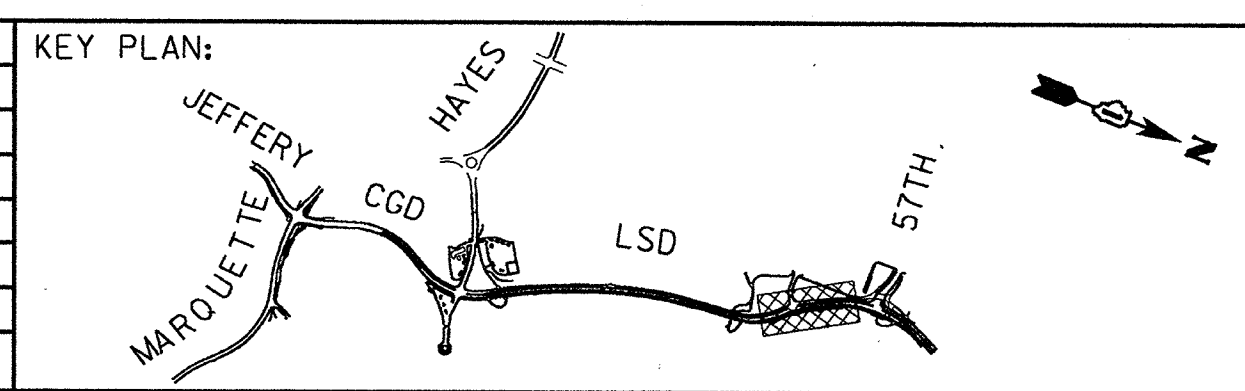
VERIFY LOCATIONS AND
INVERTS OF EXISTING
S.S. TIE-INS PRIOR TO
CONSTRUCTION



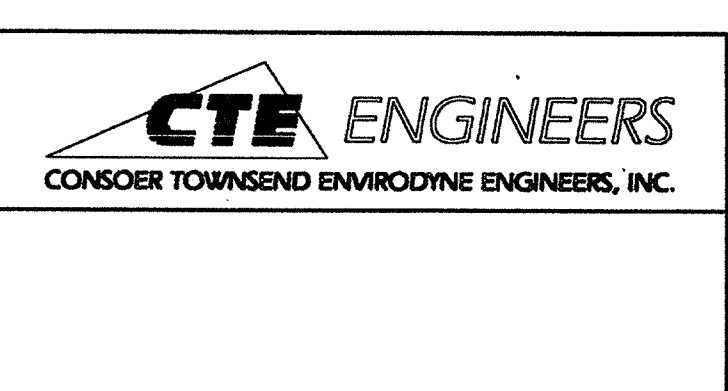
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DATE:	4/16/02			
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NO.		BY	DATE	DESCRIPTION
REVISIONS				



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

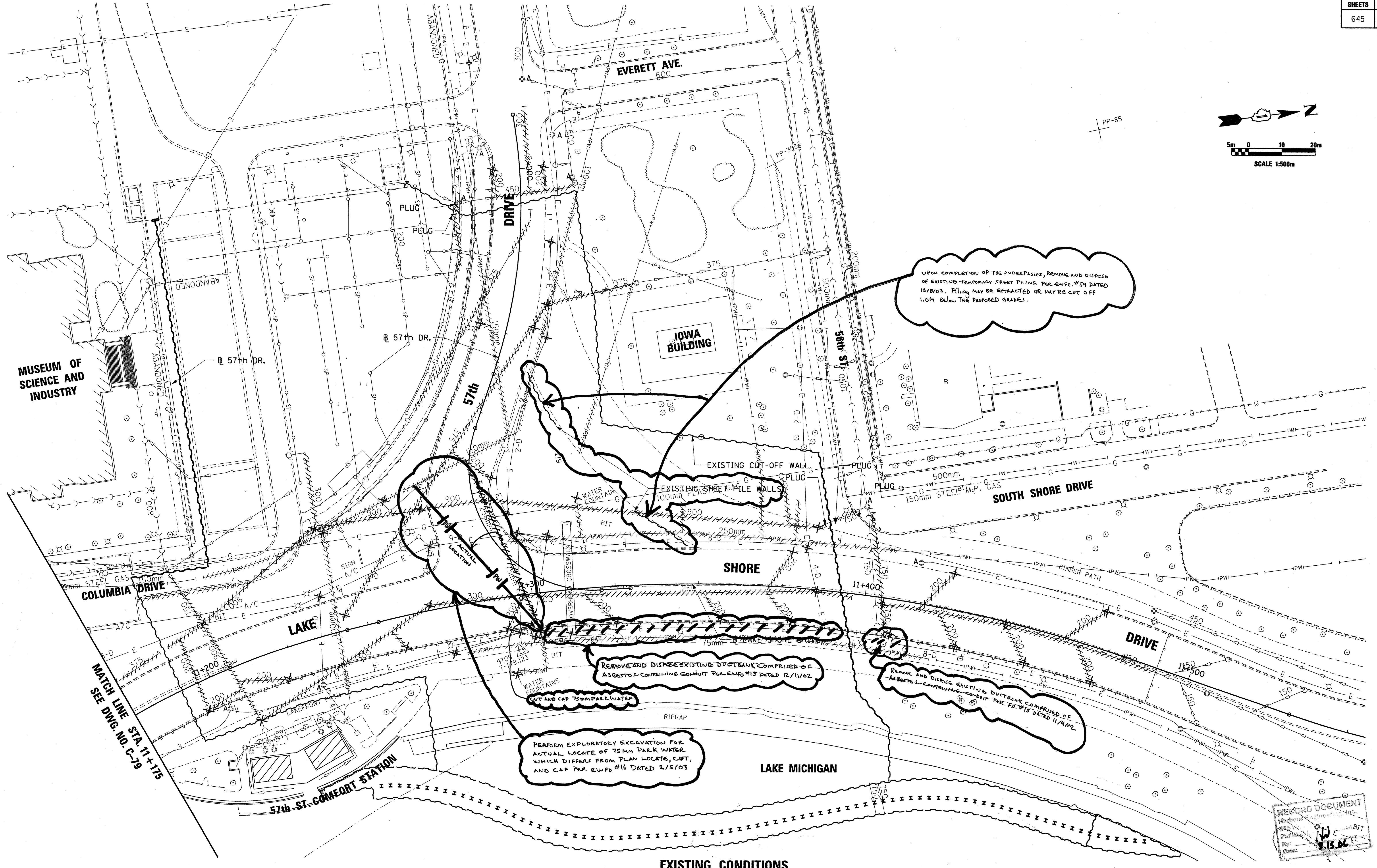
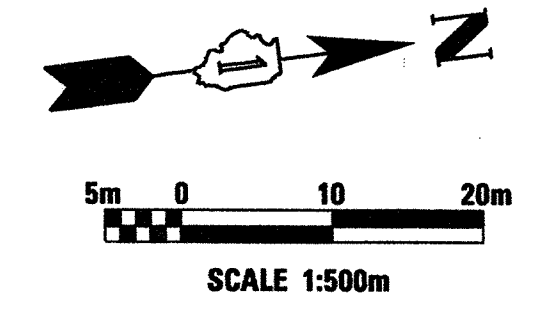


**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**DRAINAGE AND UTILITY PLAN
LAKE SHORE DRIVE**

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	C-80
PROJECT NO.	B-1-440

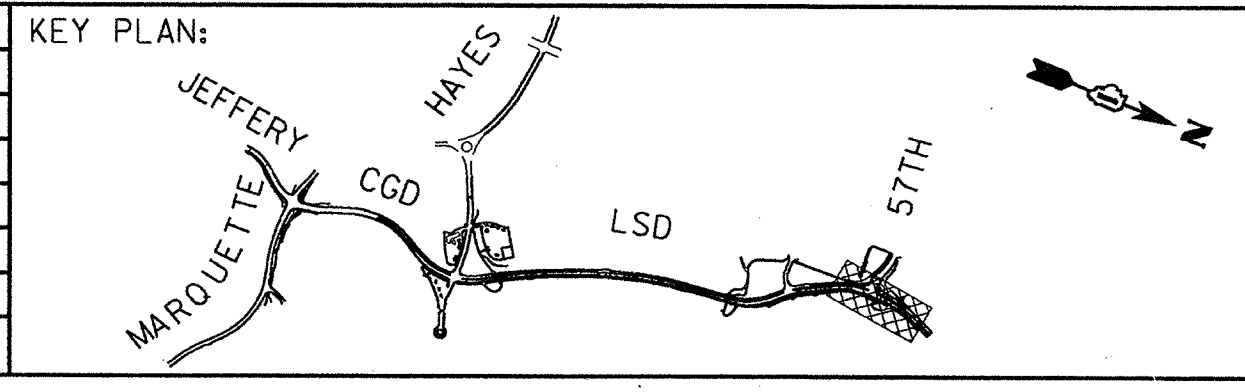
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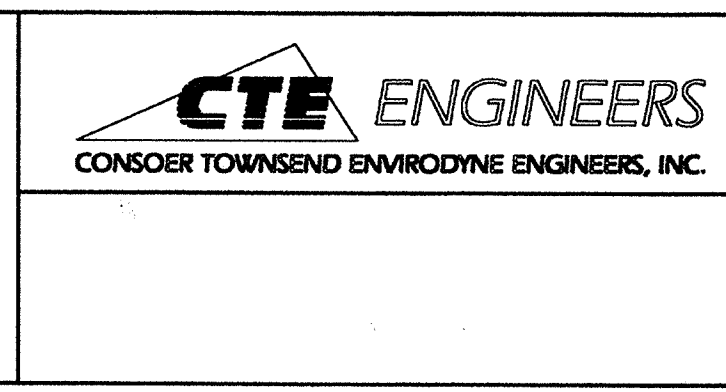
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EXISTING CONDITIONS

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	REVISIONS			



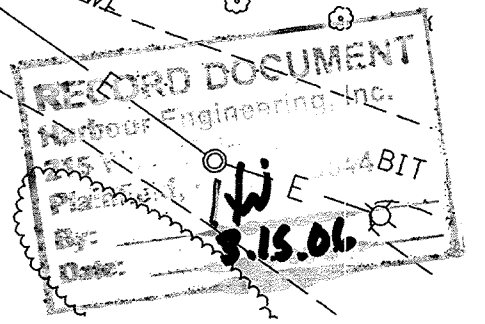
CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

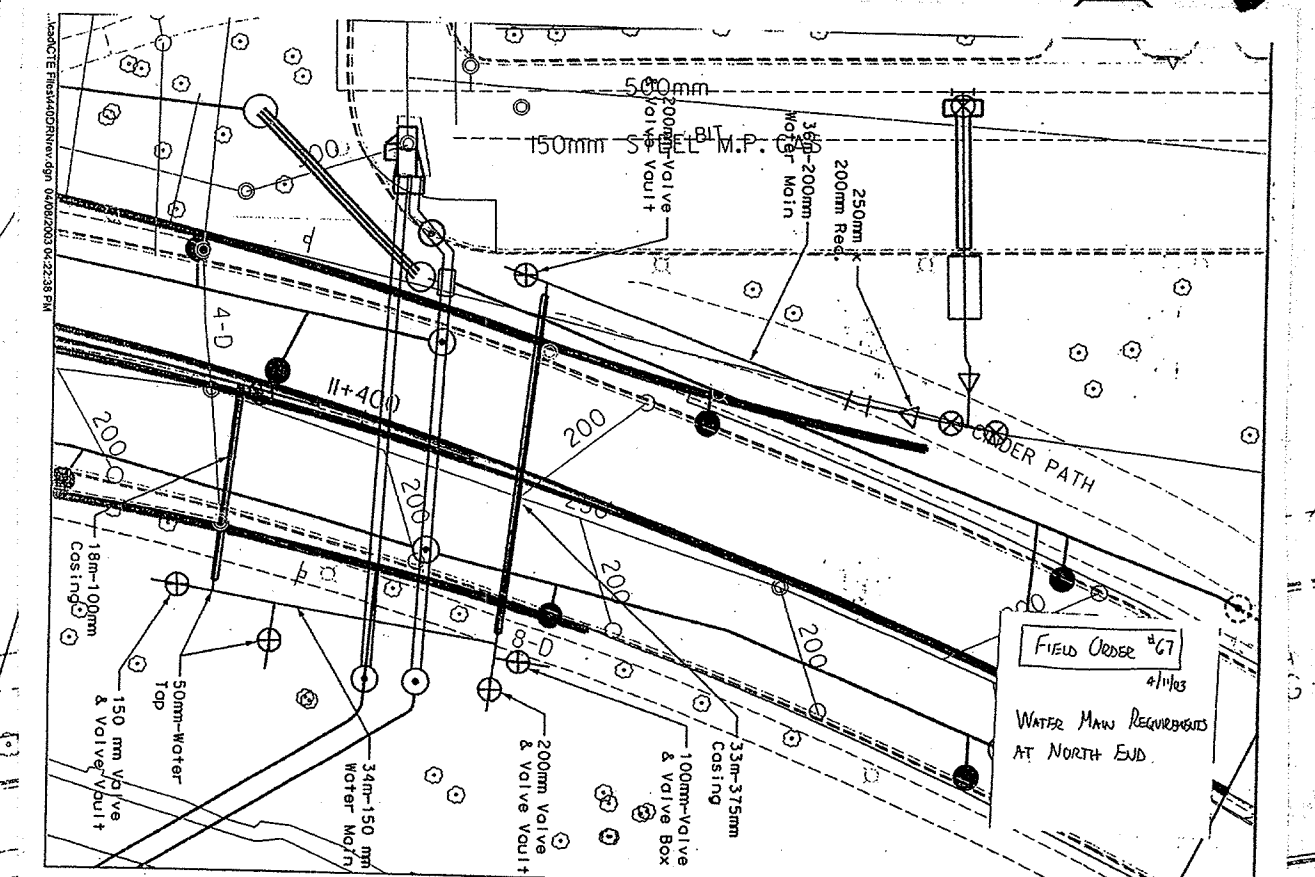
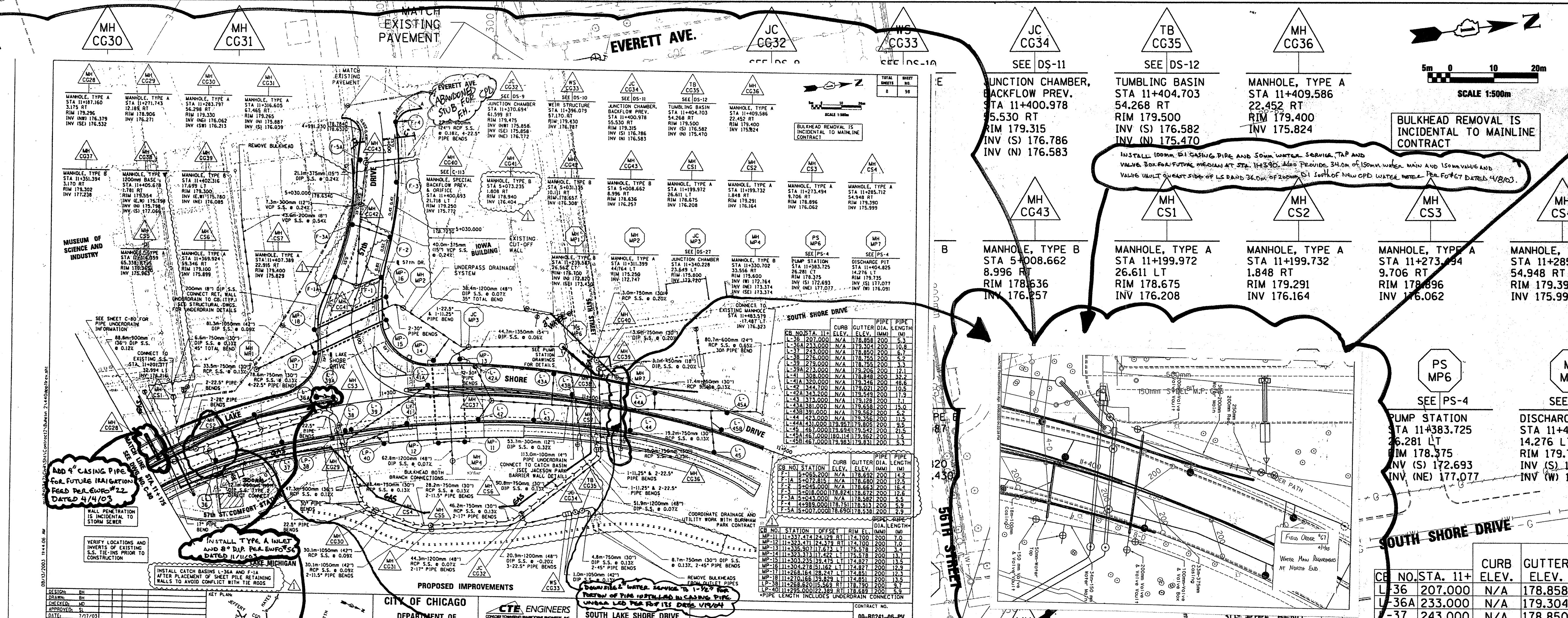
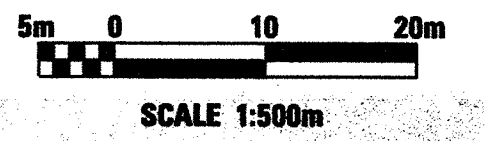


SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

CONTRACT NO.	00-80241-06-PV
DRAWING NO.	C-81
PROJECT NO.	B-1-440

1665420012
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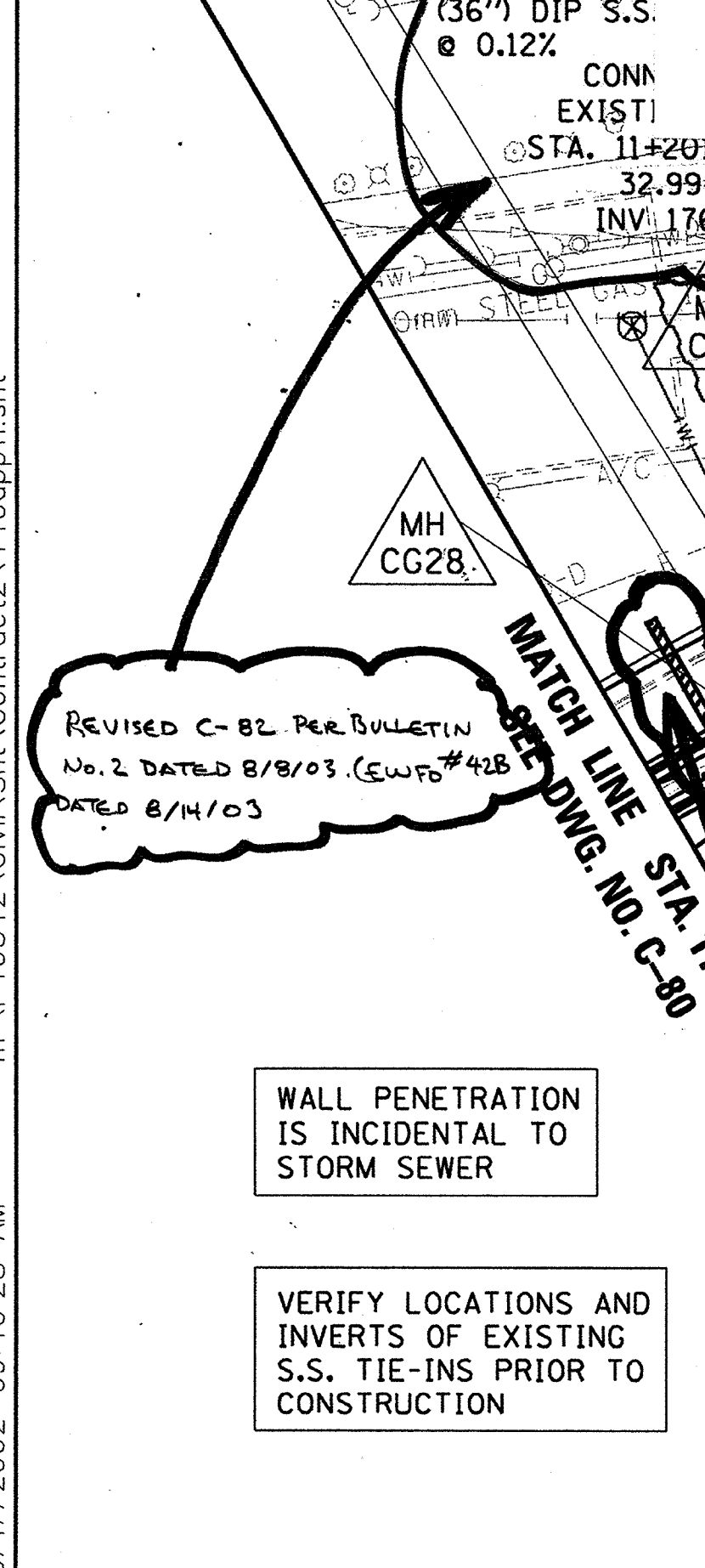
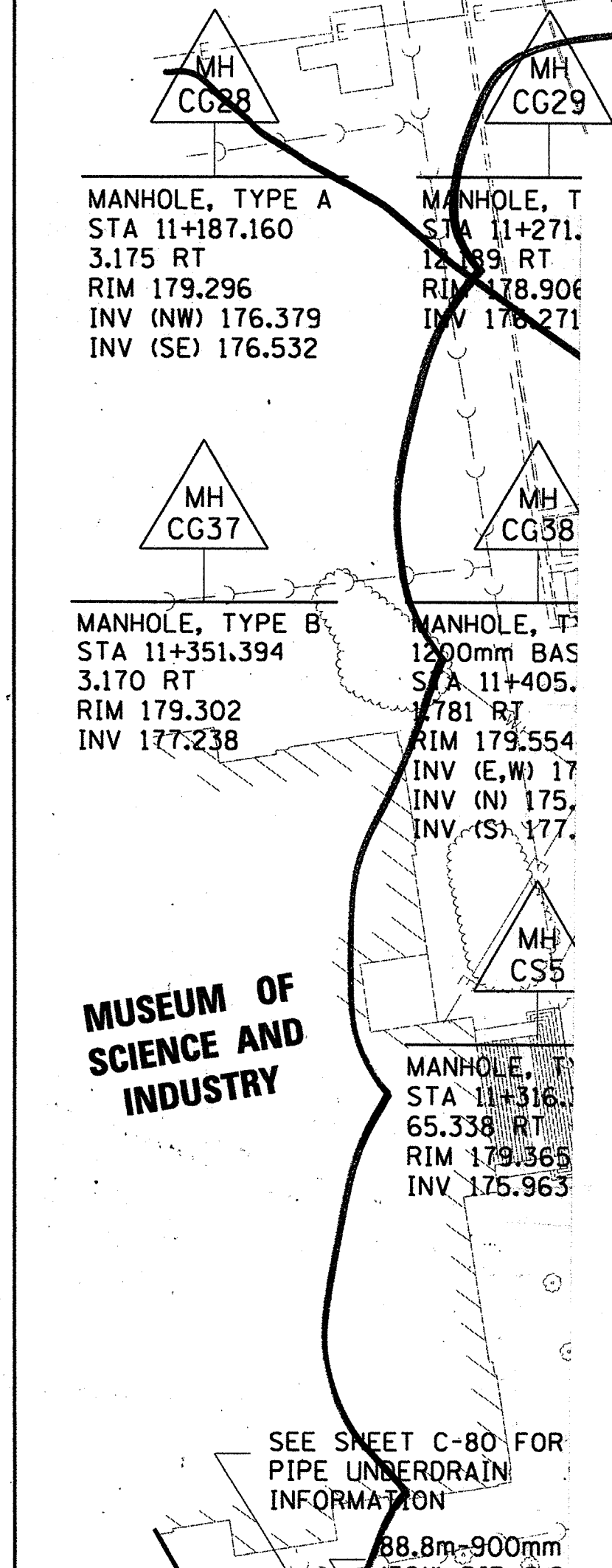




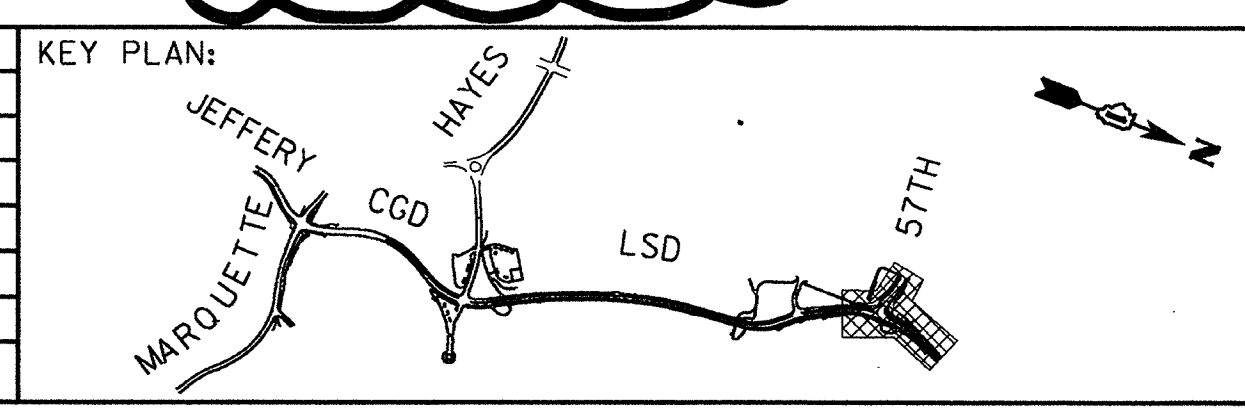
CB NO.	STA. 11+	CURB ELEV.	GUTTER ELEV.	PIPE DIA. (MM)	PIPE LENGTH (M)
L-36	207.000	N/A	178.858	200	5.3
L-36A	233.000	N/A	179.304	200	10.8
L-37	243.000	N/A	178.850	200	6.7
L-38	276.000	N/A	178.755	200	5.2
L-39	279.000	N/A	178.755	200	3.3
L-39A	273.000	N/A	179.206	200	12.1
L-41	308.000	N/A	178.848	200	32.2
L-41A	320.000	N/A	179.346	200	48.6
L-42	344.700	N/A	179.021	200	10.5
L-42A	343.200	N/A	179.549	200	17.9
L-43	373.000	N/A	179.128	200	7.1
L-43A	381.000	N/A	179.658	200	15.0
L-43B	391.000	N/A	179.562	200	5.2
L-44	423.000	N/A	179.356	200	11.5
L-44A	431.000	179.957	179.805	200	9.5
L-45	467.000	179.694	179.542	200	21.5
L-45A	467.000	180.114	179.962	200	1.5
L-45B	467.000	179.983	179.831	200	5.3

CB NO.	STATION	CURB ELEV.	GUTTER ELEV.	PIPE DIA. (MM)	PIPE LENGTH (M)
F-1	5+065.200	N/A	178.692	200	14.4
F-1A	5+080.000	N/A	178.773	200	13.1
F-2	5+045.000	N/A	178.663	200	17.7
F-3	5+018.000	178.824	178.672	200	12.6
F-3A	5+043.000	N/A	178.582	200	3.2
F-4	4+989.000	178.751	178.513	200	5.9
F-5A	5+007.000	178.690	178.538	200	2.9

CB NO.	STATION	OFFSET	RIM EL.	PIPE DIA. (MM)	PIPE LENGTH (M)
MP-11	11+337.474	24.129 RT	174.700	200	7.0
MP-12	11+323.471	24.379 RT	174.700	200	7.0
MP-13	11+335.907	17.673 LT	175.578	200	3.4
MP-14	11+323.373	17.422 LT	175.578	200	13.7
MP-15	11+303.235	39.475 LT	174.827	200	13.5
MP-16	11+304.278	51.162 LT	174.827	200	12.9
MP-17	11+268.164	28.247 LT	174.851	200	12.3
MP-18	11+270.166	39.829 LT	174.851	200	13.5
LP-38	11+268.620	15.569 RT	178.790	200	9.7
LP-40	11+295.000	22.389 RT	178.689	200	5.9



DESIGN:	BH		
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DATE:	4/16/02		
SCALE:	1:500m		
FILE:			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

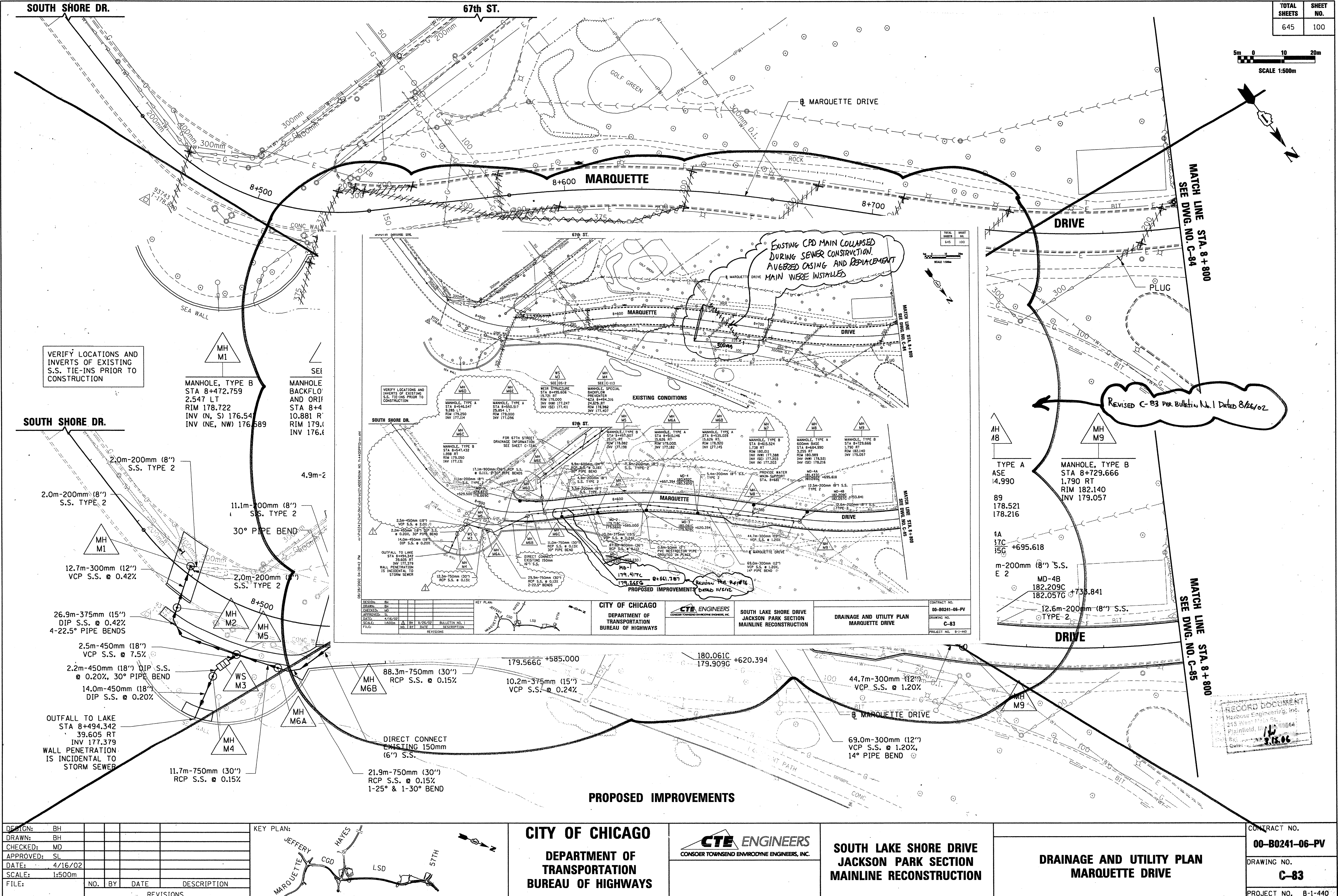
CTE ENGINEERS
 CONSOR TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

DRAINAGE AND UTILITY PLAN
LAKE SHORE DRIVE / 57th DRIVE

CONTRACT NO. **00-B0241-06-PV**
 DRAWING NO. **C-82**
 PROJECT NO. **8-1-440**

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VERIFY LOCATIONS AND INVERTS OF EXISTING S.S. TIE-INS PRIOR TO CONSTRUCTION

MANHOLE, TYPE B
 STA 8+472.759
 2.547 LT
 RIM 178.722
 INV (N, S) 176.54
 INV (NE, NW) 176.589

MANHOLE BACKFLOW AND ORIF
 STA 8+4
 RIM 179.1
 INV 176.4

SOUTH SHORE DR.

2.0m-200mm (8")
 S.S. TYPE 2

2.0m-200mm (8")
 S.S. TYPE 2

MH M1

12.7m-300mm (12")
 VCP S.S. @ 0.42%

26.9m-375mm (15")
 DIP S.S. @ 0.42%
 4-22.5° PIPE BENDS

2.5m-450mm (18")
 VCP S.S. @ 7.5%

2.2m-450mm (18") DIP S.S.
 @ 0.20%, 30° PIPE BEND

14.0m-450mm (18")
 DIP S.S. @ 0.20%

OUTFALL TO LAKE
 STA 8+494.342
 39.605 RT
 INV 177.379
 WALL PENETRATION
 IS INCIDENTAL TO
 STORM SEWER

11.7m-750mm (30")
 RCP S.S. @ 0.15%

MH M6B
 88.3m-750mm (30")
 RCP S.S. @ 0.15%

10.2m-375mm (15")
 VCP S.S. @ 0.24%

DIRECT CONNECT
 EXISTING 150mm
 (6") S.S.

21.9m-750mm (30")
 RCP S.S. @ 0.15%
 1-25° & 1-30° BEND

PROPOSED IMPROVEMENTS

EXISTING CPD MAIN COULDED
 DURING SEWER CONSTRUCTION.
 AVERGED CASING AND REPLACEMENT
 MAIN WERE INSTALLED

REVISED C-83 PER BULLETIN NO. 1 DATED 8/26/02

MH M8

TYPE A
 ASE
 14.990
 89
 178.521
 178.216
 1A
 17C
 15C +695.618
 m-200mm (8") S.S.
 E 2

MANHOLE, TYPE B
 STA 8+729.666
 1.790 RT
 RIM 182.140
 INV 179.057

MH M9

MD-4B
 182.209C
 182.057C +735.841

12.6m-200mm (8") S.S.
 TYPE 2

CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

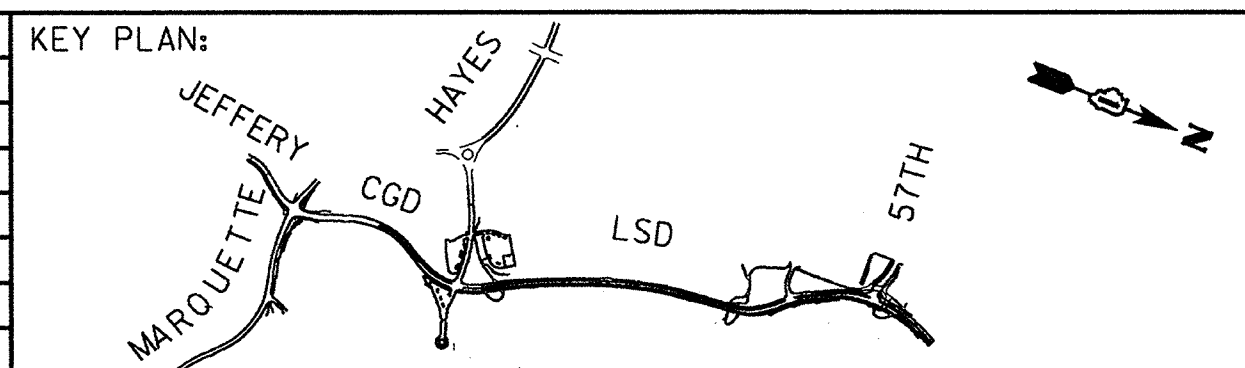
SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION

DRAINAGE AND UTILITY PLAN
 MARQUETTE DRIVE

CONTRACT NO.
 00-B0241-06-PV
 DRAWING NO.
 C-83
 PROJECT NO.
 B-1-440

DESIGN:	BH			
DRAWN:	BH			
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NO.	BY	DATE	DESCRIPTION



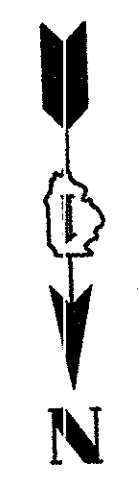
CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

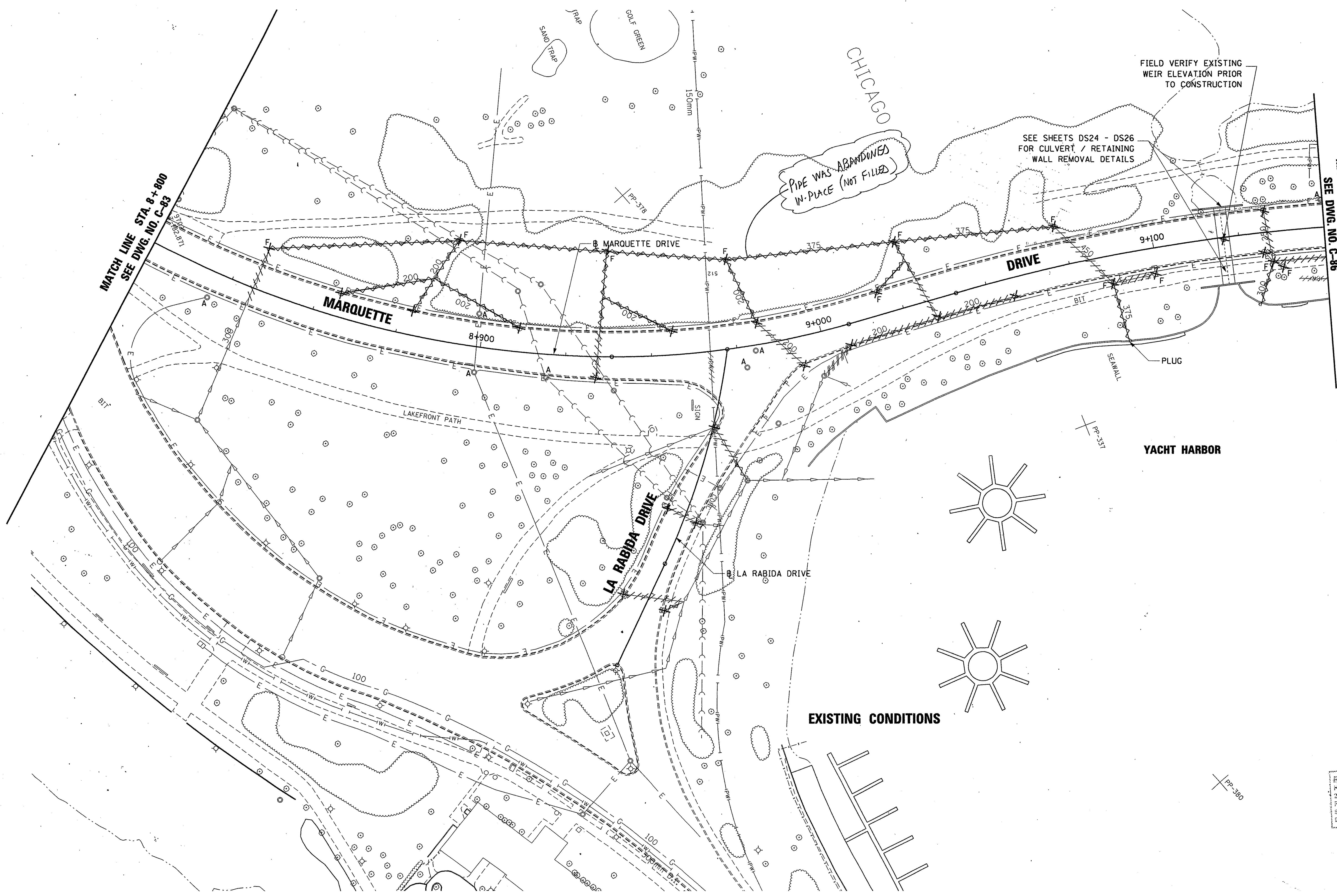
**DRAINAGE AND UTILITY PLAN
 MARQUETTE DRIVE**

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	C-83
PROJECT NO.	B-1-440



MATCH LINE STA. 8+800
SEE DWG. NO. C-83

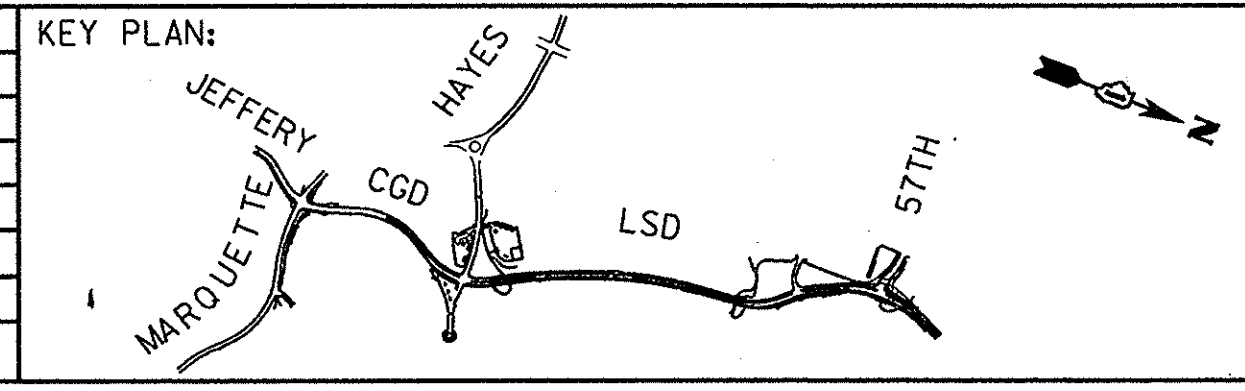
MATCH LINE STA. 9+150
SEE DWG. NO. C-86



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RECORD DOCUMENT
Randour Engineering, Inc.
218 West 11th St.
Plainfield, IL 60544
By: *[Signature]*
Date: 4/15/02

DESIGN:	BH			
DRAWN:	BH			
CHECKED:	MD			
APPROVED:	SL			
DATE:	4/16/02			
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FILE:				
	NO.	BY	DATE	DESCRIPTION
REVISIONS				



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS



**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

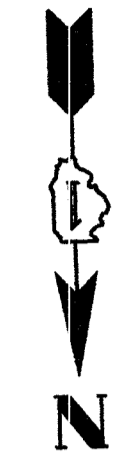
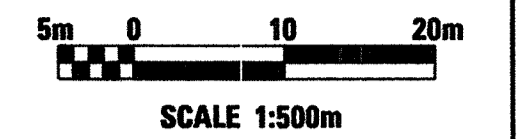
**DRAINAGE AND UTILITY PLAN
MARQUETTE DRIVE / LA RABIDA DRIVE**

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
C-84

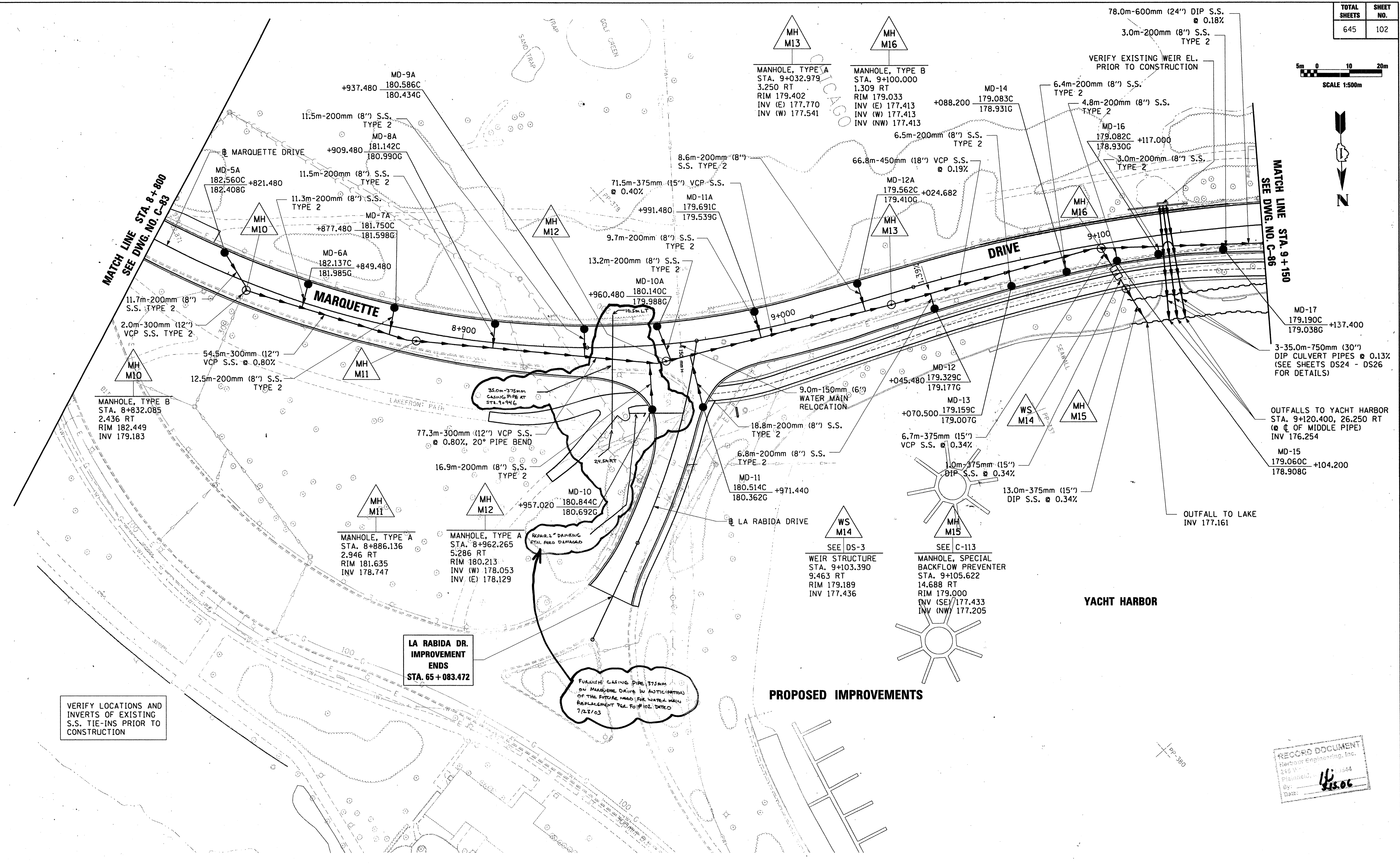
PROJECT NO. B-1-440
1640091368

TOTAL SHEETS	SHEET NO.
645	102



MATCH LINE STA. 8+800
SEE DWG. NO. C-83

MATCH LINE STA. 9+150
SEE DWG. NO. C-86



VERIFY LOCATIONS AND INVERTS OF EXISTING S.S. TIE-INS PRIOR TO CONSTRUCTION

FURNISH CASING PIPE 375MM ON MARQUETTE DRIVE IN ANTICIPATION OF THE FUTURE NEED FOR WATER MAIN REPLACEMENT PER FOR #102 DATED 7/23/03

LA RABIDA DR. IMPROVEMENT ENDS STA. 65+083.472

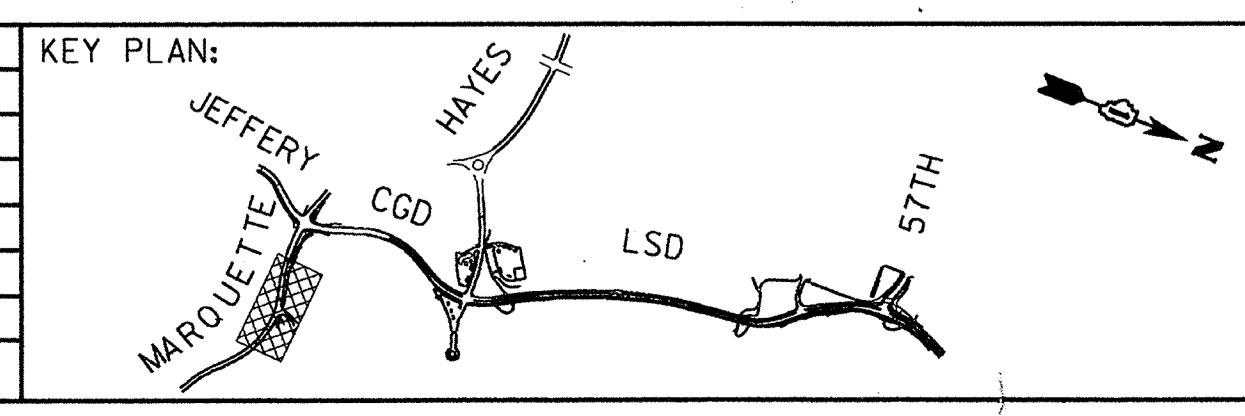
PROPOSED IMPROVEMENTS

YACHT HARBOR

RECORD DOCUMENT
Harbour Engineering, Inc.
245 W. ...
By: *UJ*
Date: 4/16/02

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NO.		BY	DATE	DESCRIPTION
REVISIONS				



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOER TOWNSEND ENVIRODINE ENGINEERS, INC.

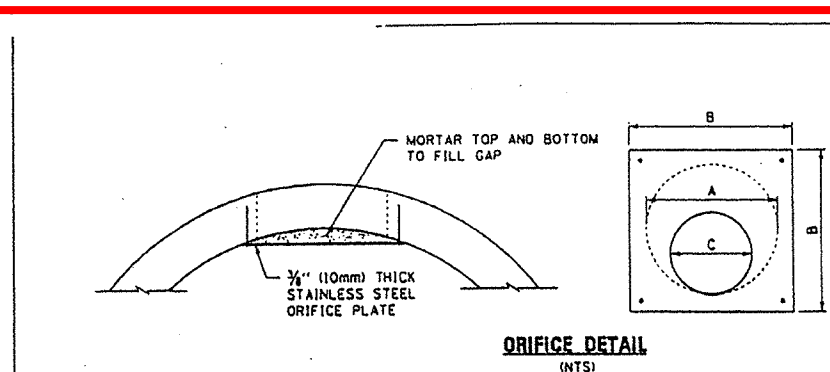
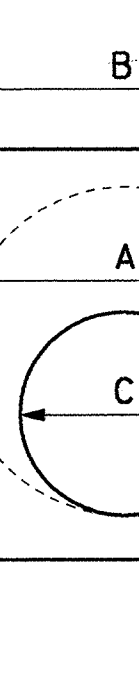
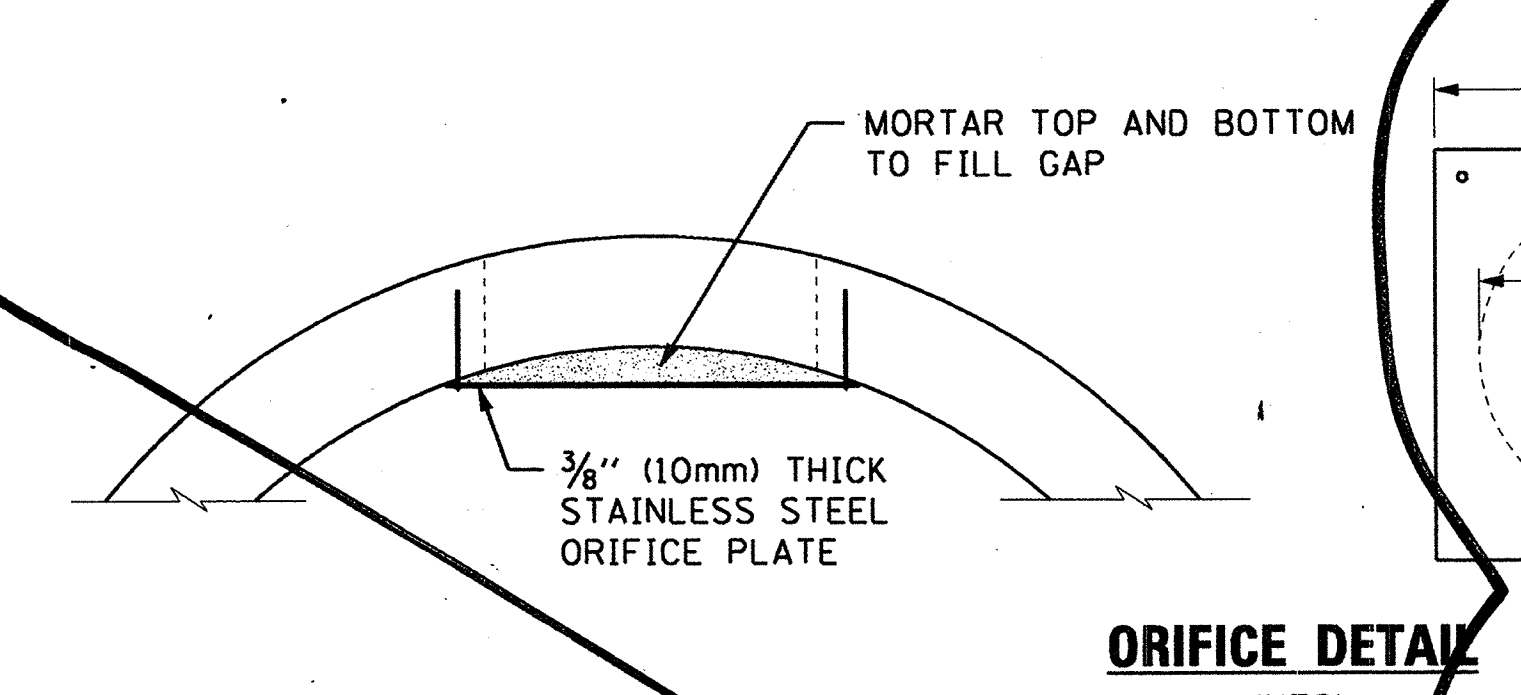
SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

DRAINAGE AND UTILITY PLAN
MARQUETTE DRIVE / LA RABIDA DRIVE

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
C-85

PROJECT NO. B-1-440
1640091369



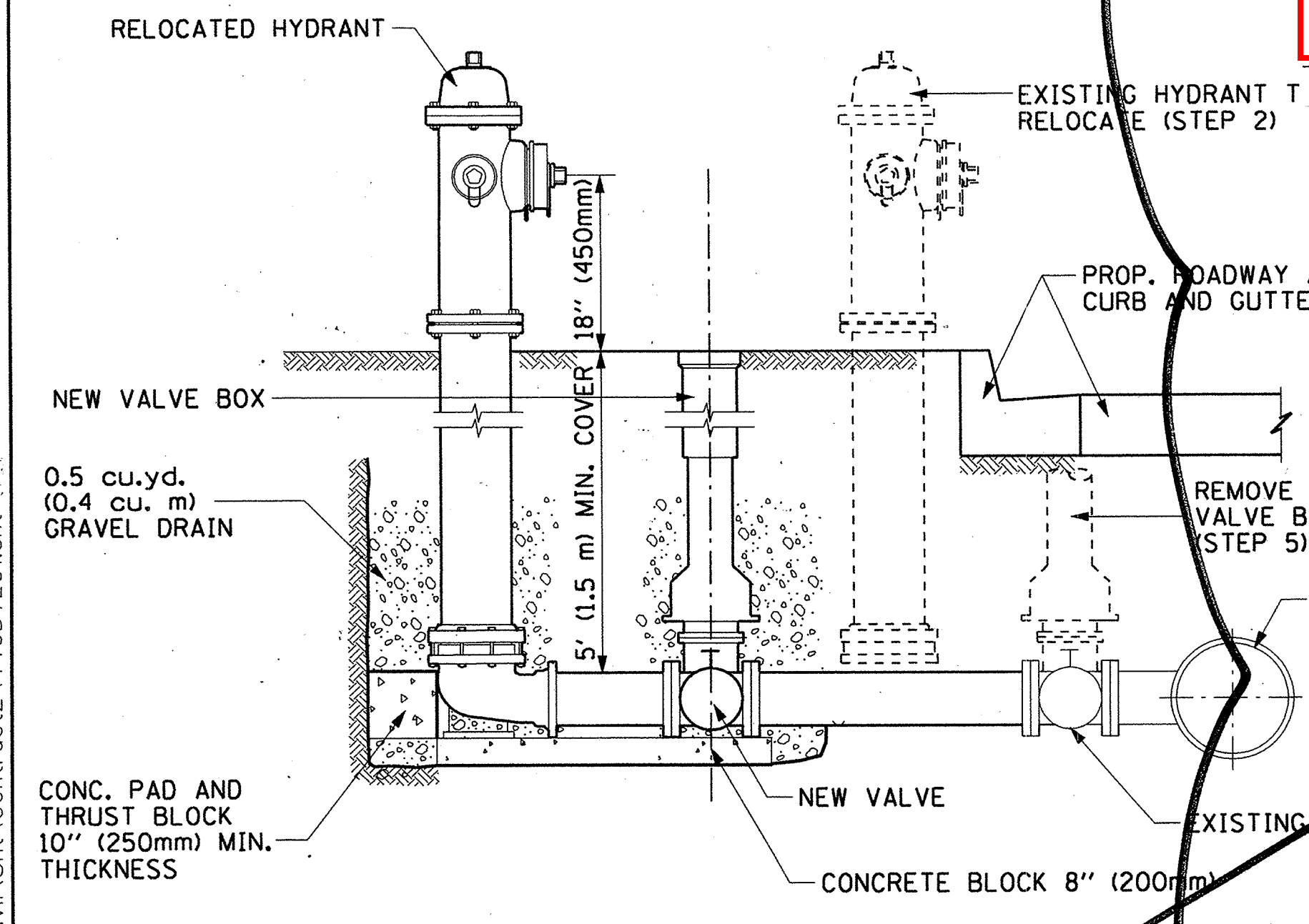
ORIFICE DETAIL (INTS)

ORIFICE STRUCTURE DIMENSIONS

LOCATION NUMBER	STATION	OFFSET (m)	STRUCTURE DIAMETER	DIMENSION		
				A	B	C
MH J1B	409+003.374	4.293 LT	6.0' (1.829)	18" (0.450)	8" (0.203)	9" (0.229)
MH CG40	11+400.693	21.718 LT	6.0' (1.829)	30" (0.750)	36" (0.914)	9" (0.229)
MH M2	8+477.104	10.881 RT	5.0' (1.524)	12" (0.300)	18" (0.450)	6" (0.152)

ORIFICE COST IS INCIDENTAL TO MH J1B, CG40, & M2

REVISED C-113A AND C-113 PER BULLETIN NO. 1 DATED 8/26/02



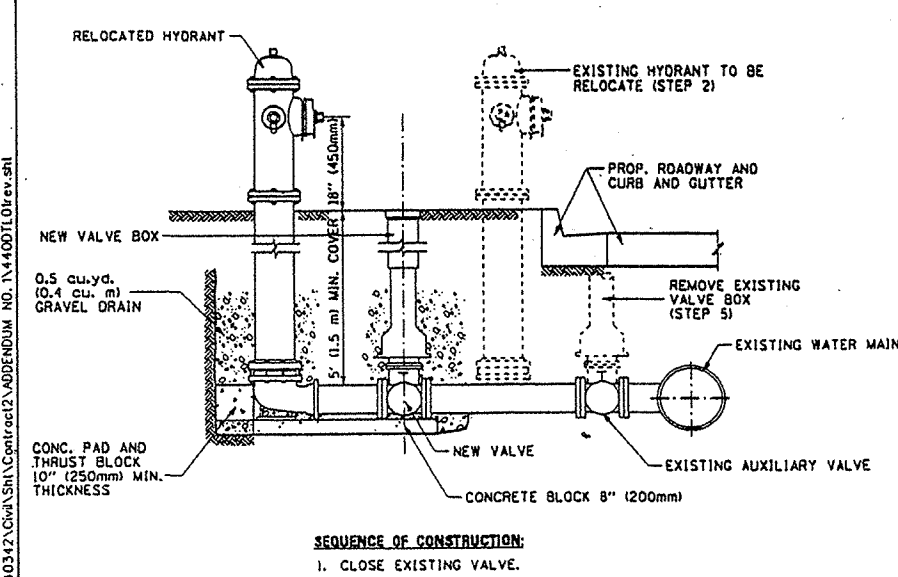
SEQUENCE OF CONSTRUCTION:

1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING VALVE.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

FIRE HYDRANT TO BE RELOCATED

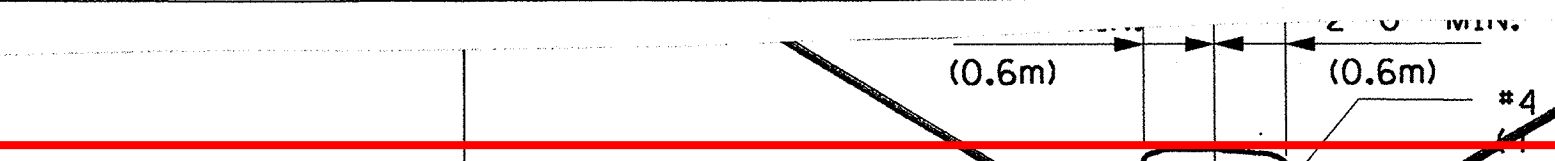
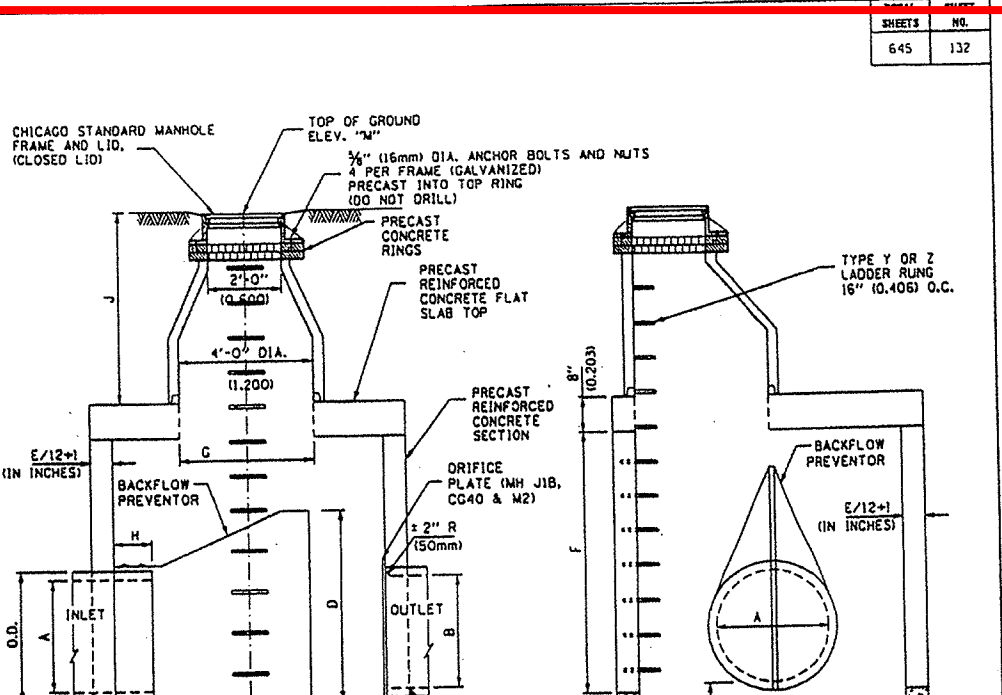
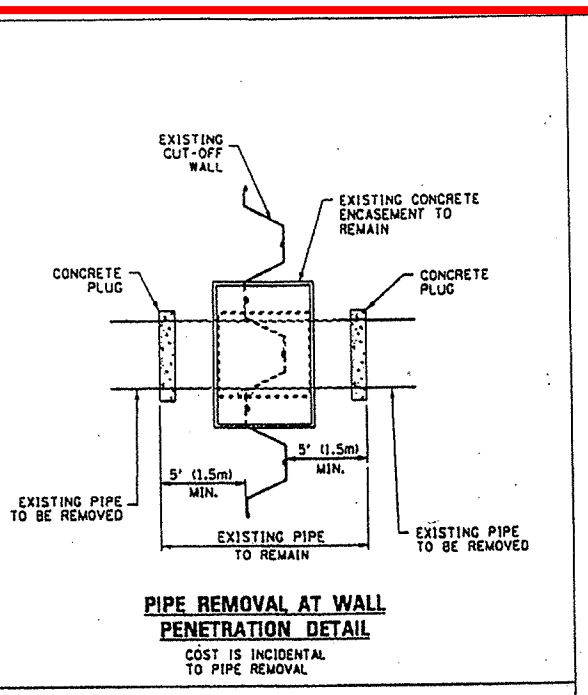
LOCATION NUMBER	STATION	OFFSET (m)	STRUCTURE DIAMETER	DIMENSION		
				A	B	C
MH J1B	409+003.374	4.293 LT	6.0' (1.829)	18" (0.450)	8" (0.203)	9" (0.229)
MH CG40	11+400.693	21.718 LT	6.0' (1.829)	30" (0.750)	36" (0.914)	9" (0.229)
MH M2	8+477.104	10.881 RT	5.0' (1.524)	12" (0.300)	18" (0.450)	6" (0.152)

ORIFICE COST IS INCIDENTAL TO MH J1B, CG40, & M2

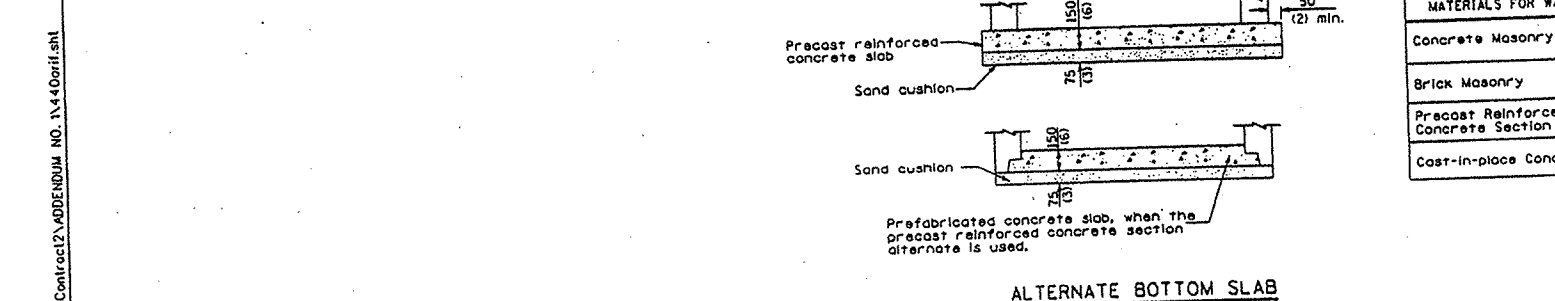
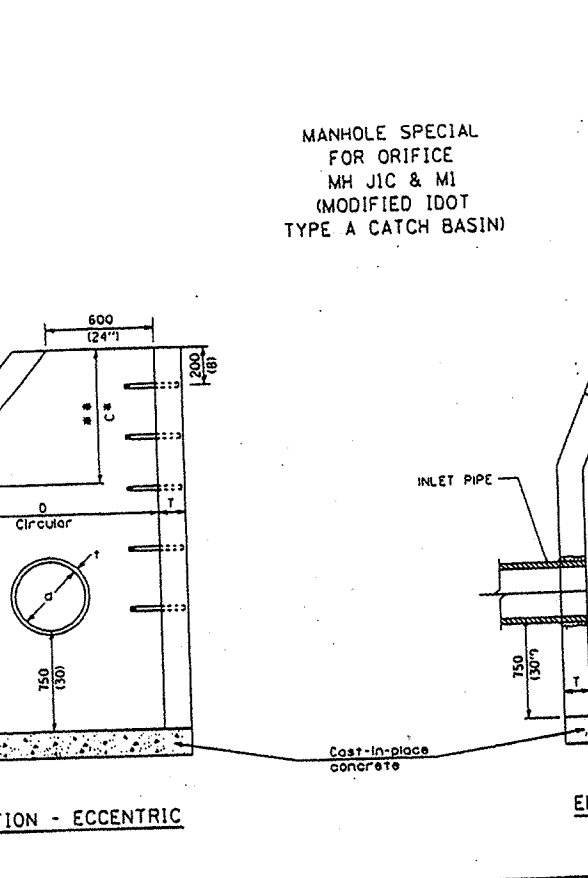


1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING VALVE.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

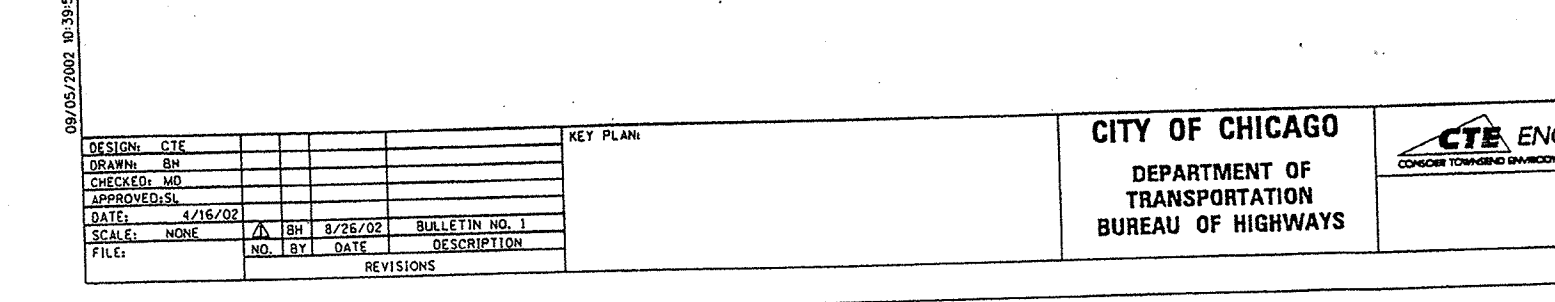
SECTION	NO.	DATE	REVISION



SECTION	NO.	DATE	REVISION



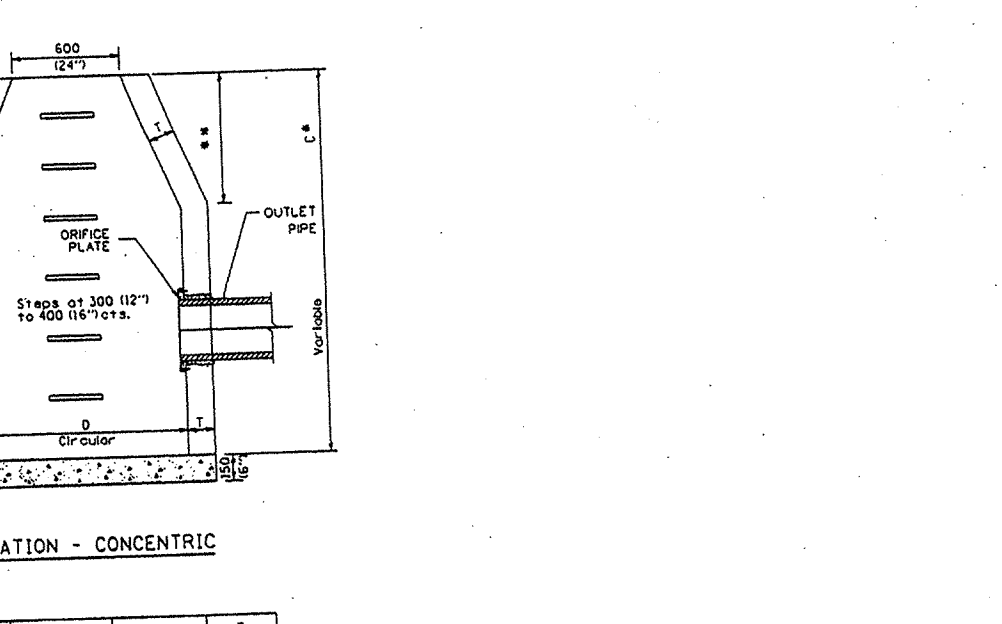
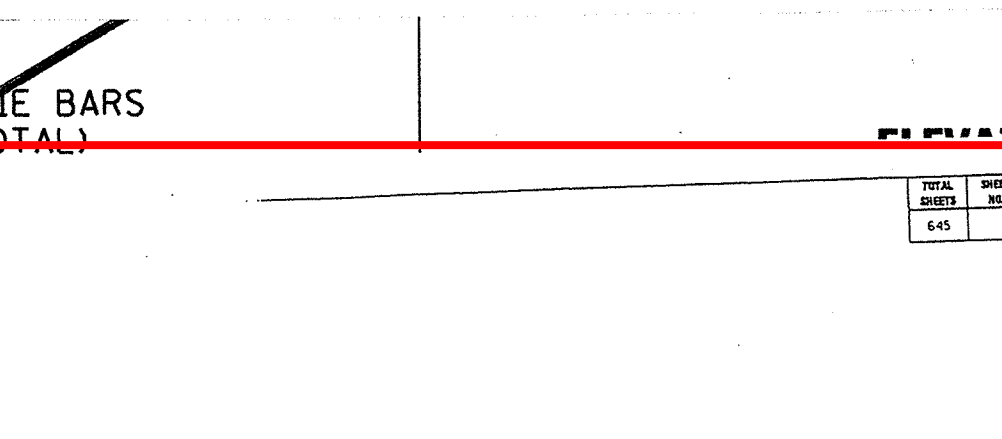
SECTION	NO.	DATE	REVISION



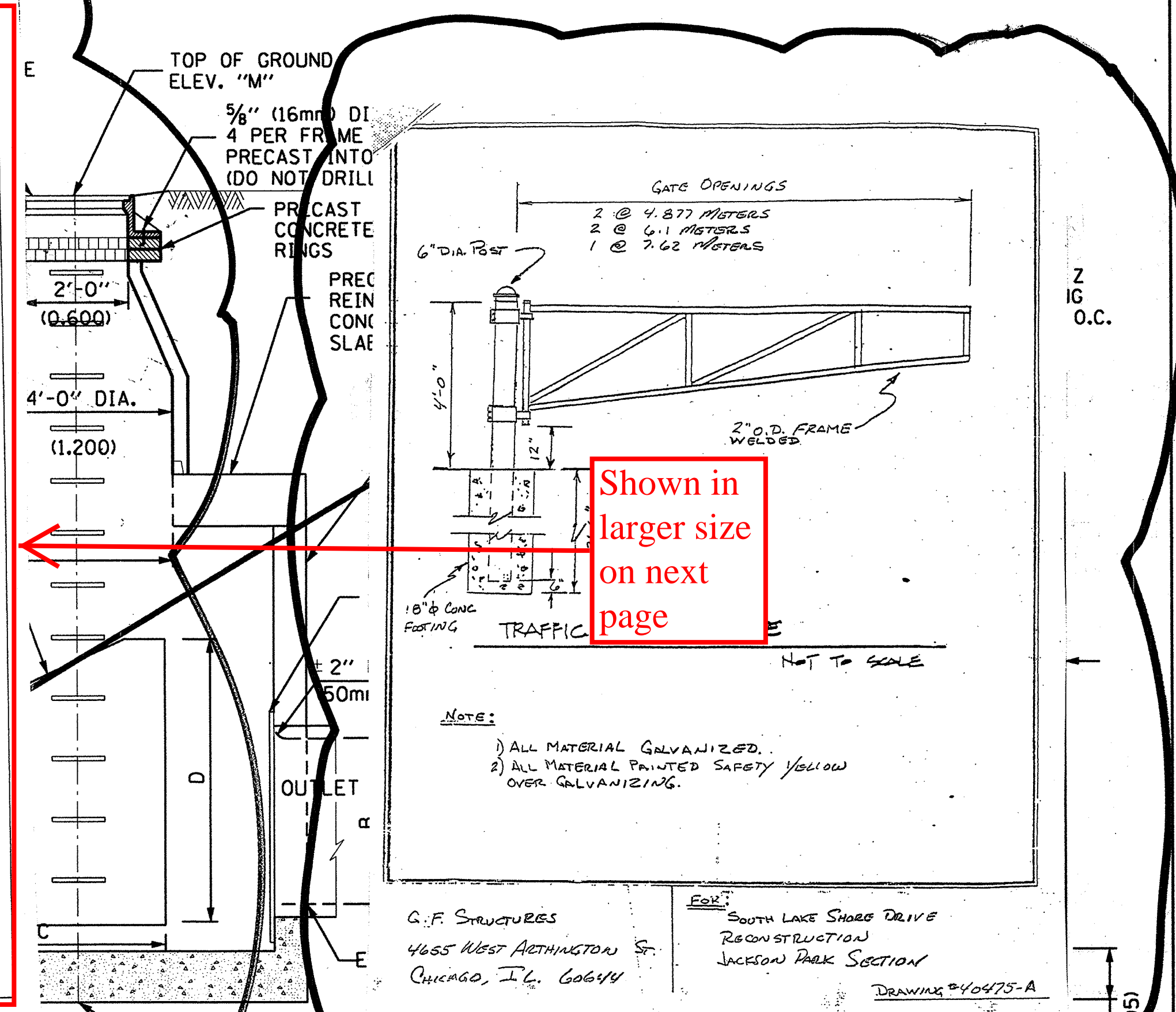
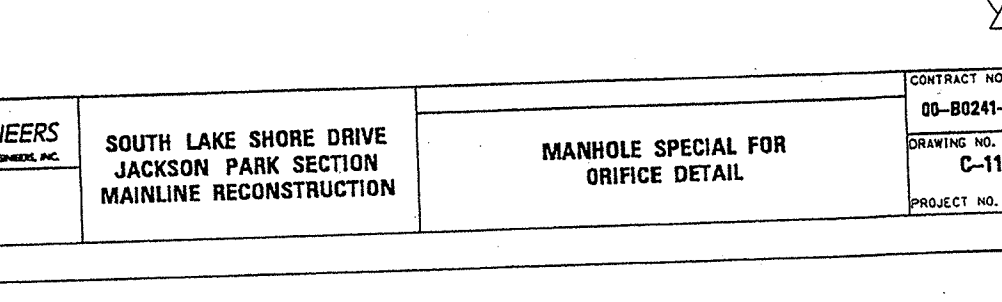
LOCATION NUMBER	STATION	OFFSET (m)	STRUCTURE DIAMETER	DIMENSION		
				A	B	C
MH J1B	409+003.374	4.293 LT	6.0' (1.829)	18" (0.450)	8" (0.203)	9" (0.229)
MH CG40	11+400.693	21.718 LT	6.0' (1.829)	30" (0.750)	36" (0.914)	9" (0.229)
MH M2	8+477.104	10.881 RT	5.0' (1.524)	12" (0.300)	18" (0.450)	6" (0.152)

ORIFICE COST IS INCIDENTAL TO MH J1B, CG40, & M2

SECTION	NO.	DATE	REVISION



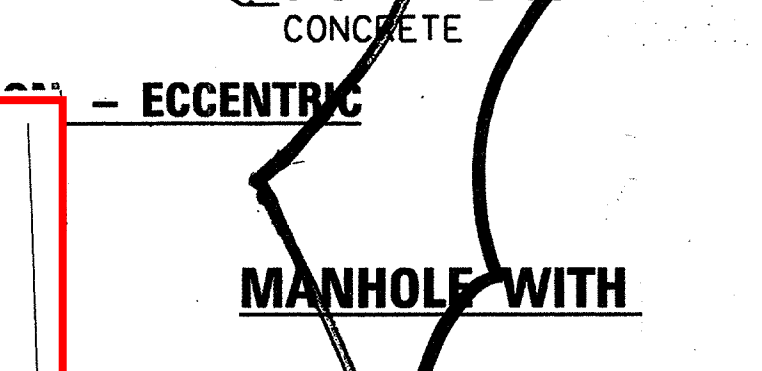
SECTION	NO.	DATE	REVISION



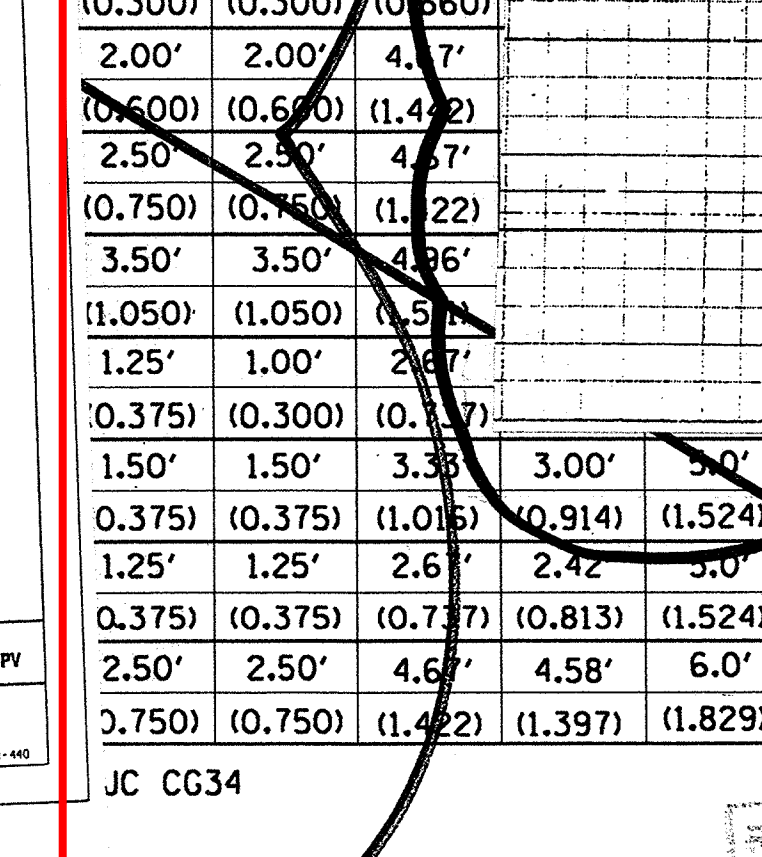
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NOTE:
1) ALL MATERIAL GALVANIZED.
2) ALL MATERIAL PAINTED SAFETY YELLOW OVER GALVANIZING.

*TRAFFIC CONTROL GATE DETAILS AS DIRECTED ON CONTRACT DRAWING C-97 PER SUR# 70 DATED 3/2/04



SECTION	NO.	DATE	REVISION



GATE HOLD-BACK POSTS

A	B	C	OTHER
1.50'	1.50'	3.00'	CCD
(0.450)	(0.450)	(0.914)	(50)
1.00'	1.00'	2.00'	CCD
(0.300)	(0.300)	(0.610)	(100)
1.25'	1.25'	2.50'	CCD
(0.375)	(0.375)	(0.762)	(100)
2.00'	2.00'	4.00'	CCD
(0.600)	(0.600)	(1.219)	(100)
(0.300)	(0.300)	(0.660)	(100)
2.00'	2.00'	4.00'	CCD
(0.600)	(0.600)	(1.219)	(100)
2.50'	2.50'	4.75'	CCD
(0.750)	(0.750)	(1.433)	(250)
3.50'	3.50'	7.00'	A
(1.050)	(1.050)	(2.134)	A
1.25'	1.00'	2.25'	CCD
(0.375)	(0.300)	(0.673)	(100)
1.50'	1.50'	3.00'	CCD
(0.375)	(0.375)	(0.914)	(177.907)
1.25'	1.25'	2.62'	CCD
(0.375)	(0.375)	(0.813)	(1.77205)
2.50'	2.50'	4.58'	CCD
(0.750)	(0.750)	(1.422)	(176.837)

Labels: 2 1/2" PIPE (PAINT YELLOW), CHAIN HOOK (WELDED U-CHANNEL), EXISTING PAVEMENT (OR SOIL/TUBE REMOVAL), EMBEDDED POST.

Shown in larger size two pages ahead

DESIGN: BH			
DRAWN: BH			
CHECKED: DM			
APPROVED: SL			
DATE: 4/16/02			
SCALE: NONE			
FILE:			

NO.	BY	DATE	DESCRIPTION

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

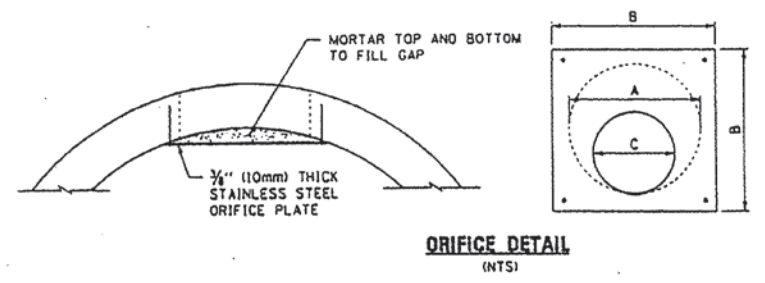
CTE ENGINEERS
CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

MISCELLANEOUS DETAILS
CONTRACT NO. 00-B0241-06-PV
DRAWING NO. C-113
PROJECT NO. B-1-440
1640091402

RECORD DOCUMENT
Harbour Engineering, Inc.
285 West Madison St.
Chicago, IL 60644
Date: 3.15.06

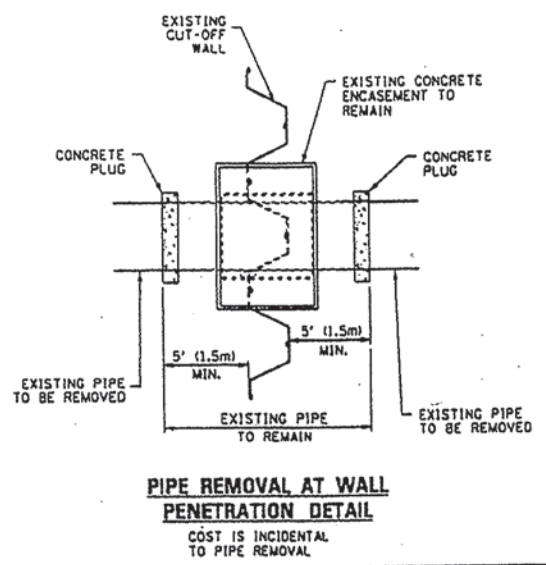
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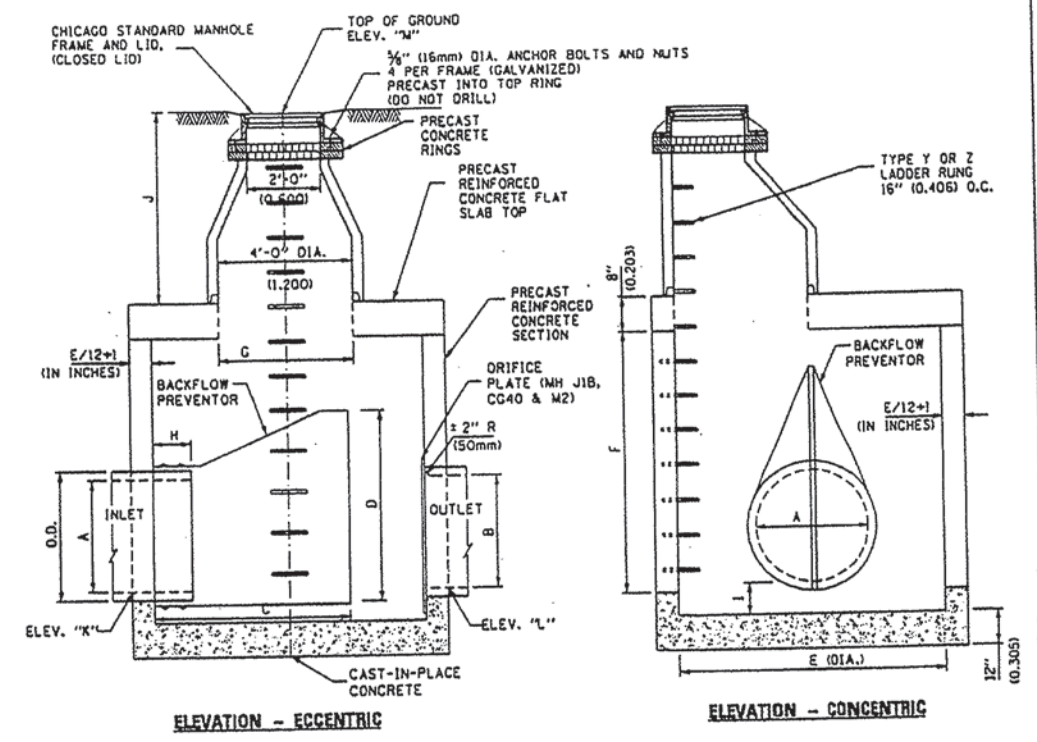
ORIFICE STRUCTURE DIMENSIONS

LOCATION			DIMENSION			
NUMBER	STATION (NORTHING)	OFFSET (EASTING)	STRUCTURE DIAMETER	A	B	C
MH J1C	567229.272	362828.021	5.0' (1.524)	12" (0.300)	18" (0.457)	5.5" (0.140)
MH CG40	11+400.693	21,718 LT	6.0' (1.829)	30" (0.750)	36" (0.914)	9" (0.229)
MH M1	567245.376	363624.965	5.0' (1.524)	15" (0.375)	21" (0.533)	3.5" (0.089)

ORIFICE COST IS INCIDENTAL TO MH J1B, CG40, & M2
 () = UNIT IN METER



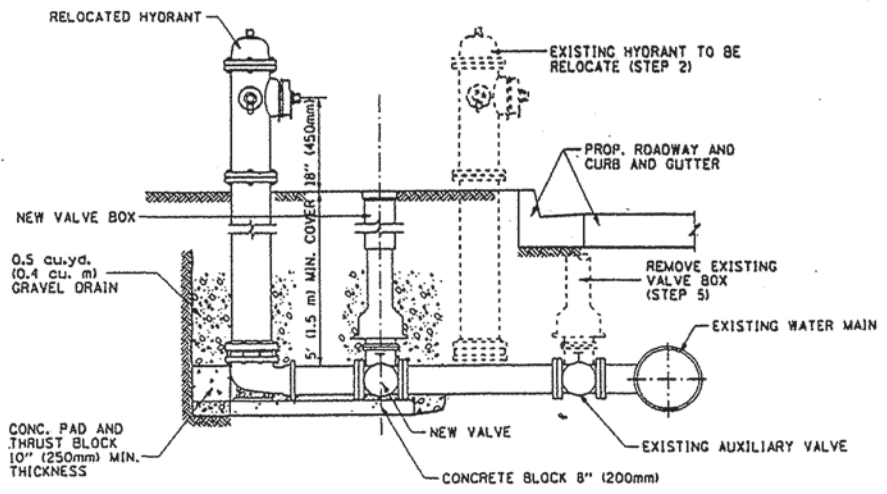
PIPE REMOVAL AT WALL PENETRATION DETAIL
 COST IS INCIDENTAL TO PIPE REMOVAL



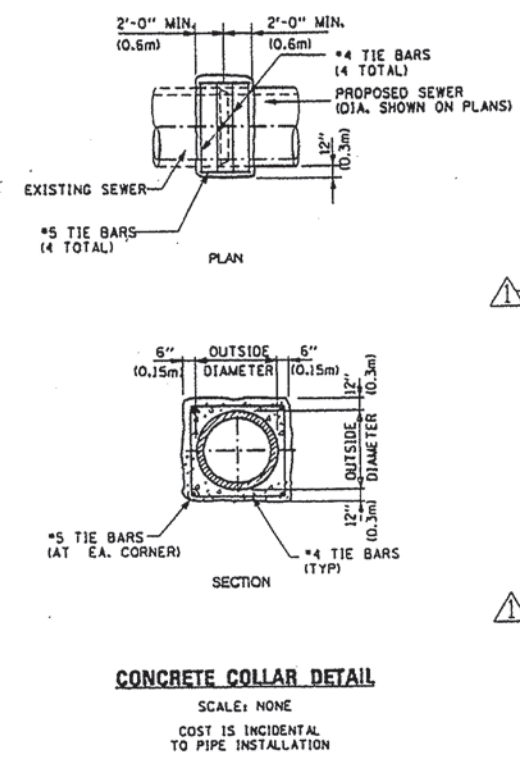
MANHOLE WITH BACKFLOW PREVENTER DETAIL (NTS)

LOCATION			DIMENSION													ELEVATION		
NUMBER	STATION	OFFSET	A	B	C	D	E	F	G	H	I	J	K	L	M			
MH J1B	N 567225.752	362824.777	1.00'	1.00'	2.17'	1.83'	5.0'	7.00'	2.00'	4"	8"	0.82'	0.62' CCD	0.62' CCD	9.10' CCD			
MH AP3	9+299.107	35.562 RT	1.00'	1.00'	2.17'	1.83'	5.0'	6.00'	2.00'	4"	8"	1.71'	1.87' CCD	1.87' CCD	4.51' CCD			
MH CG58	9+538.397	15.814 LT	1.25'	1.25'	2.67'	2.42'	5.0'	4.00'	2.00'	5"	8"	1.67'	1.46' CCD	1.46' CCD	7.79' CCD			
MH CG90	9+838.813	11.846 LT	2.00'	2.00'	4.67'	4.58'	6.0'	6.00'	2.00'	7.5"	8"	1.39'	2.19' CCD	2.19' CCD	10.25' CCD			
MH IP1	10+787.756	20.069 LT	1.00'	1.00'	2.17'	1.83'	5.0'	5.00'	4.00'	4"	8"	4.05'	0.30' CCD	0.30' CCD	11.07' CCD			
MH IP7	10+794.747	31.873 RT	2.00'	2.00'	4.67'	4.58'	6.0'	6.00'	4.00'	7.5"	8"	4.00'	-2.81' CCD	-2.81' CCD	8.61' CCD			
MH CG40	11+400.693	21.718 LT	2.50'	2.50'	4.67'	4.58'	6.0'	6.75'	4.00'	9"	8"	4.00'	-2.81' CCD	-2.81' CCD	179.250'			
JC CG34	11+400.978	55.530 RT	3.50'	3.50'	4.36'	5.88'	N/A	N/A	N/A	10"	N/A	N/A	N/A	N/A	N/A			
MH M2	N 567243.919	363621.979	1.25'	1.25'	2.67'	2.42'	5.0'	4.50'	2.00'	5"	8"	0.95'	1.34' CCD	1.34' CCD	1.46' CCD			
MH M4	8+494.316	24.619 RT	1.50'	1.50'	3.33'	3.00'	5.0'	3.75'	2.00'	8.5"	12"	1.22'	2.65' CCD	1.90' CCD	7.79' CCD			
MH M5	9+105.622	14.688 RT	1.25'	1.25'	2.67'	2.42'	5.0'	4.00'	2.00'	5"	9"	1.22'	2.65' CCD	1.90' CCD	7.79' CCD			
MH M9B	9+344.413	16.019 RT	2.50'	2.50'	4.67'	4.58'	6.0'	6.50'	2.00'	9"	15.6"	0.75'	1.65' CCD	0.69' CCD	7.79' CCD			

SEE SHEET DS-11 FOR DETAILS OF JC CG34
 () = UNIT IN METER



- SEQUENCE OF CONSTRUCTION:**
1. CLOSE EXISTING VALVE.
 2. REMOVE EXISTING VALVE.
 3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
 4. RELOCATE EXISTING HYDRANT.
 5. OPEN EXISTING VALVE, REMOVE BOX.
 6. BACKFILL.
 7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.



CONCRETE COLLAR DETAIL
 SCALE: NONE
 COST IS INCIDENTAL TO PIPE INSTALLATION

09/05/2002 09:29:58 AM m:\p40342\Civil\Shi\Contract2\ADDENDUM NO. 11\4001010101.dwg

DESIGN: BH	KEY PLAN:
DRAWN: BH	
CHECKED: DM	
APPROVED: SL	
DATE: 4/16/02	
SCALE: NONE	
FILE:	

NO.	BY	DATE	DESCRIPTION

CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

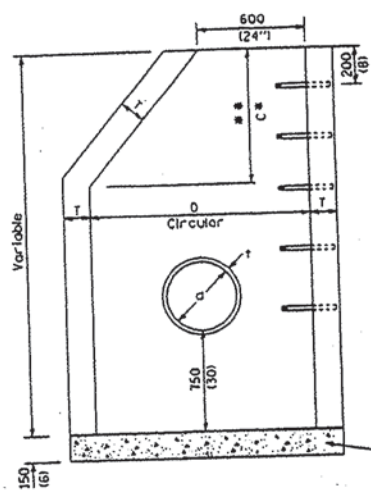
CTE ENGINEERS
 CONSULTANTS AND ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

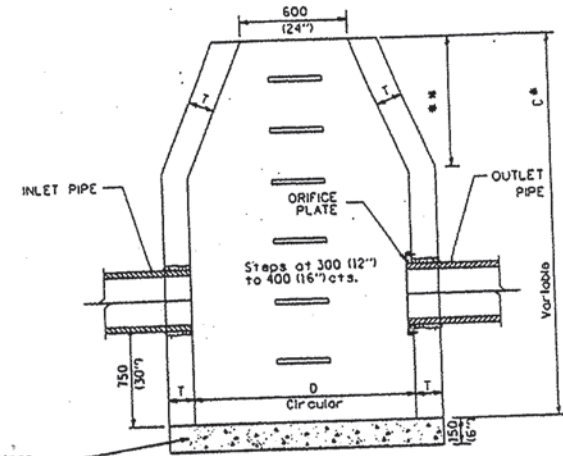
MISCELLANEOUS DETAILS

CONTRACT NO. 00-80241-06-PV
DRAWING NO. C-113
PROJECT NO. 8-1-440

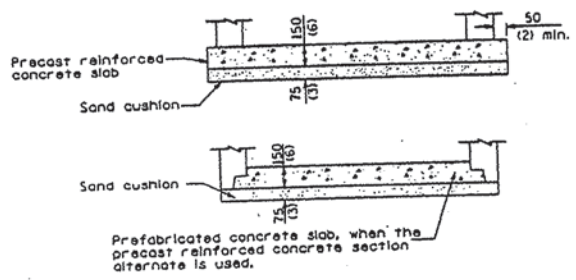
MANHOLE SPECIAL
FOR ORIFICE
MH J1C & M1
(MODIFIED IDOT
TYPE A CATCH BASIN)



ELEVATION - ECCENTRIC



ELEVATION - CONCENTRIC



ALTERNATE BOTTOM SLAB

ALTERNATE MATERIALS FOR WALLS	D	C	T (min.)
Concrete Masonry Unit	1.5 m (5'-0")	1.15 (45)	125 (5)
Brick Masonry	1.5 m (5'-0")	1.15 (45)	200 (8)
Precast Reinforced Concrete Section	1.5 m (5'-0")	1.15 (45)	125 (5)
Cast-in-place Concrete	1.5 m (5'-0")	1.15 (45)	150 (6)

GENERAL NOTES

- See Standard 602701 for details of steps.
 - * Dimension "C" for Precast Reinforced Concrete Sections may vary from the dimension given to plus 150 mm (6").
 - ** See Standard 602601 for Optional Precast Reinforced Concrete Flat Slab Top.
- All dimensions are in millimeters (inches) unless otherwise shown.
- City of Chicago Standard Frame and Closed Lid are incidental to J1C and M1

NEW DRAWING

m:\p\0342\Civil\SH\Contract12\ADDENDUM NO. 1\440oriff.sht

09/05/2002 10:39:54 AM

DESIGN: CTE				
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CHECKED: MD				
APPROVED: SL				
DATE: 4/16/02				
SCALE: NONE				
FILE:				

KEY PLAN:				

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

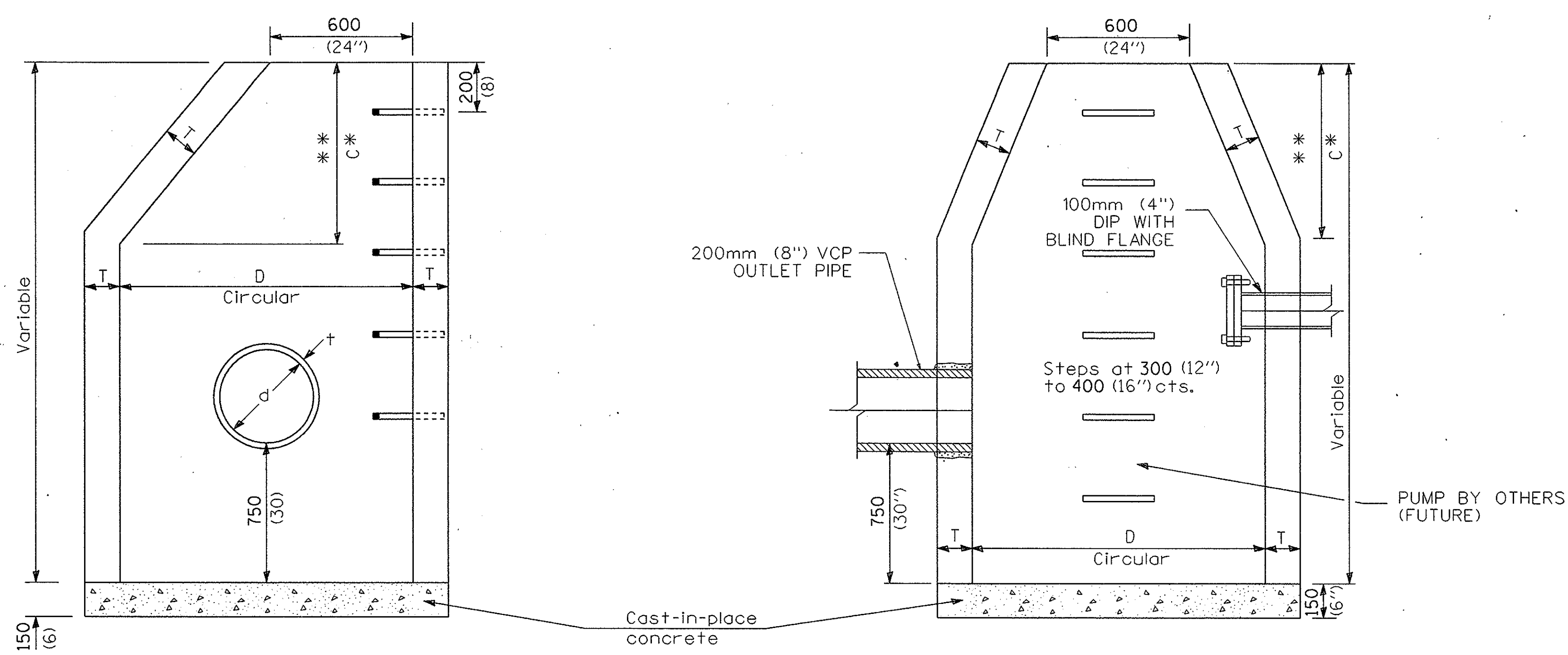


**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**MANHOLE SPECIAL FOR
ORIFICE DETAIL**

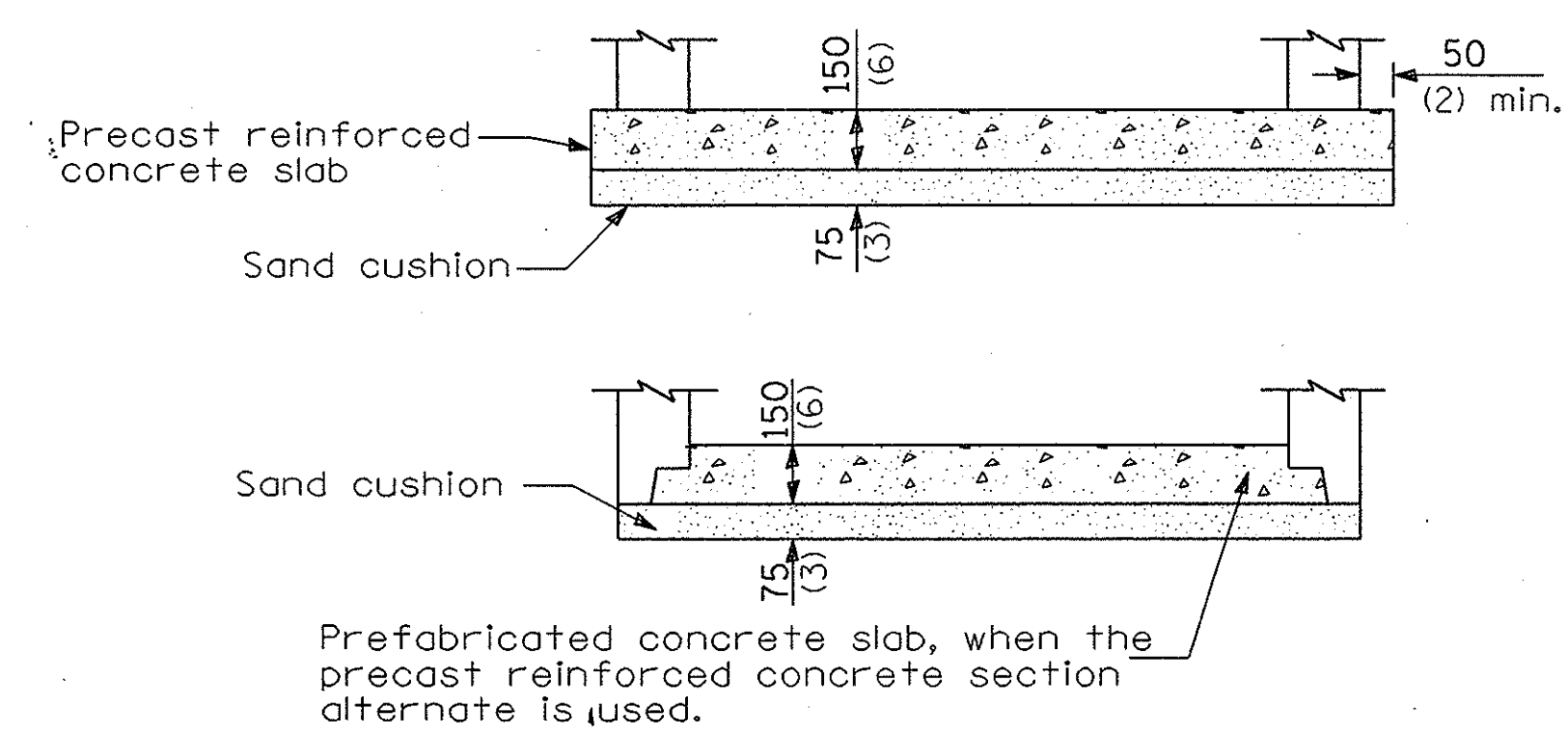
CONTRACT NO.
00-80241-08-PV
DRAWING NO.
C-113A
PROJECT NO. 8-1-440

**MANHOLE SPECIAL
FOR FUTURE PUMP
MH AP4 & IP2
(MODIFIED IDOT TYPE A MANHOLE)**



ELEVATION - ECCENTRIC

ELEVATION - CONCENTRIC



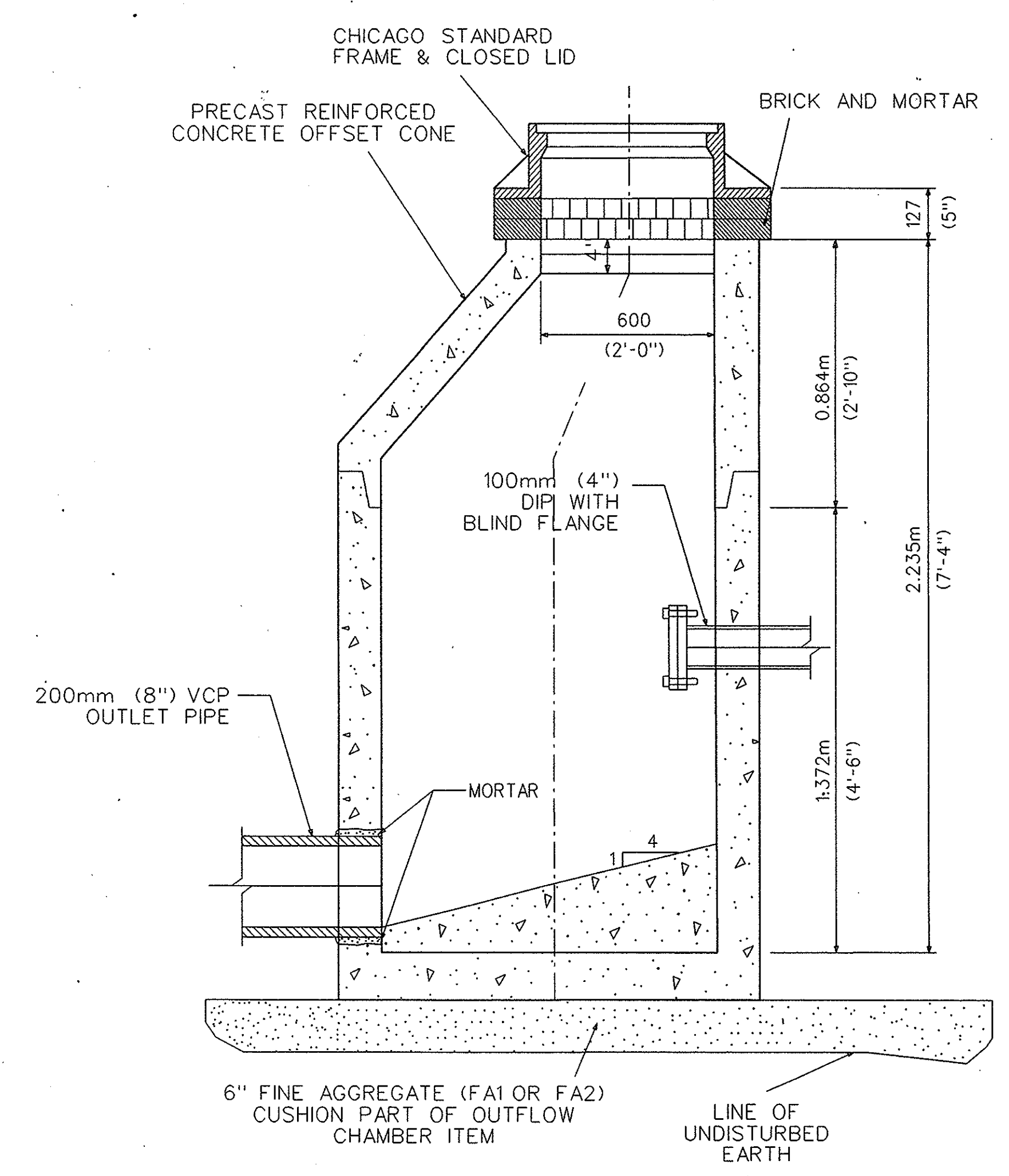
ALTERNATE BOTTOM SLAB

ALTERNATE MATERIALS FOR WALLS	D	C	T (min.)
Concrete Masonry Unit	1.2 m (4'-0")	750 (30)	125 (5)
Brick Masonry	1.2 m (4'-0")	750 (30)	200 (8)
Precast Reinforced Concrete Section	1.2 m (4'-0")	750 (30)	100 (4)
Cast-in-place Concrete	1.2 m (4'-0")	750 (30)	150 (6)

GENERAL NOTES

- See Standard 602701 for details of steps.
- * Dimension "C" for Precast Reinforced Concrete Sections may vary from the dimension given to plus 150 mm (6").
- ** See Standard 602601 for Optional Precast Reinforced Concrete Flat Slab Top.
- All dimensions are in millimeters (inches) unless otherwise shown.
- City of Chicago Standard Frame and Closed Lid are incidental to AP4 and IP2

**OUTFLOW CHAMBER
MH AP5 & IP3
(MODIFIED CITY STANDARD
CATCH BASIN, TYPE A, 4' DIAMETER)**



RECORD DOCUMENT
 215 W. Main St.
 Plainfield, NJ 07034
 By: *[Signature]*
 Date: 5.15.06

M:\AP\0342\CIVIL\SHIT\CONTRACT\4801\02.SHT

DESIGN:				
DRAWN:				
CHECKED:				
APPROVED:				
DATE:				
SCALE:				
FILE:	NO.	BY	DATE	DESCRIPTION
REVISIONS				

KEY PLAN:

CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSER TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

**MANHOLE SPECIAL FOR
 FUTURE PUMP DETAIL
 & OUTFLOW CHAMBER DETAIL**

CONTRACT NO.
00-80241-06-PV
 DRAWING NO.
C-114
 PROJECT NO. B-1-440

1640091403

VOLUME 2 OF 2



THESE PLANS COMPLY WITH THE CURRENT POLICY OF THE CITY OF CHICAGO TO FACILITATE THE MOBILITY OF PEOPLE WITH DISABILITIES.

STATE OF ILLINOIS CITY OF CHICAGO RICHARD M. DALEY, MAYOR DEPARTMENT OF TRANSPORTATION MIGUEL d' ESCOTO, COMMISSIONER BUREAU OF HIGHWAYS BRUCE H. WORTHINGTON, CHIEF HIGHWAY ENGINEER

RECORD DOCUMENT
Harbour Engineering, Inc.
215 West Main St.
Plainfield, Illinois 60544
By: *[Signature]*
Date: 3/15/06

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DATE: DEC 24 2001 2002
APPROVED: *[Signature]*
PROJECT COORDINATOR
APPROVED: *[Signature]*
DEPUTY COMMISSIONER, BUREAU OF TRAFFIC
APPROVED: *[Signature]*
CHIEF HIGHWAY ENGINEER
APPROVED: *[Signature]*
CHIEF BRIDGE ENGINEER
APPROVED: *[Signature]*
DEPUTY COMMISSIONER, BUREAU OF STREETS
APPROVED: *[Signature]*
COMMISSIONER

TRAFFIC DATA

JEFFERY BOULEVARD (67TH ST. TO MARQUETTE DR.)

ADT: 24,700 (1998) 27,000 (2000)
POSTED SPEED: 50 km/h (30 mph)
DESIGN DESIGNATION: TWS-4

COAST GUARD DRIVE (MARQUETTE DR. TO HAYES DR.)

ADT: 46,600 (1998) 50,000 (2000)
POSTED SPEED: 60 km/h (35 mph)
DESIGN DESIGNATION: TWS-4 & 6

LAKE SHORE DRIVE (HAYES DR. TO 57TH DR.)

ADT: 55,300 (1998) 58,000 (2000)
POSTED SPEED: 60 km/h (35 mph)
DESIGN DESIGNATION: TWS-4 & 6

MARQUETTE DRIVE (67TH ST. TO COAST GUARD DR.)

ADT: 30,700 (1998) 52,000 (2000)
POSTED SPEED: 50 km/h (30 mph)
DESIGN DESIGNATION: TWS-4

SOUTH LAKE SHORE DRIVE RECONSTRUCTION JACKSON PARK SECTION FROM 56TH STREET TO 67TH STREET

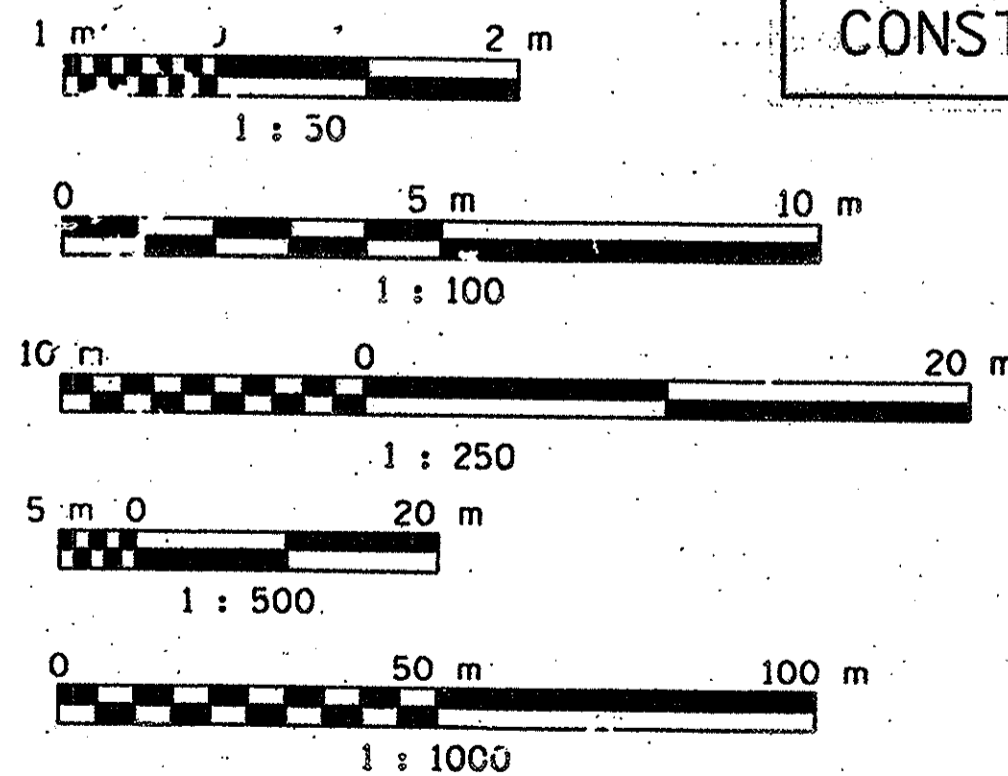
MAINLINE RECONSTRUCTION
C.D.O.T PROJECT NO.: B-1-440
CITY SECTION NO.: 00-B0241-06-PV
STATE JOB NO. C-88-025-01

GROSS LENGTH 3700.787 M (3.700 KM)
NET LENGTH 2589.221 M (3.589 KM)

4-16-02

EXCEPT AS MAY BE OTHERWISE STATED OR MODIFIED IN THE CONTRACT DOCUMENTS, THE WORK MUST CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 1997.

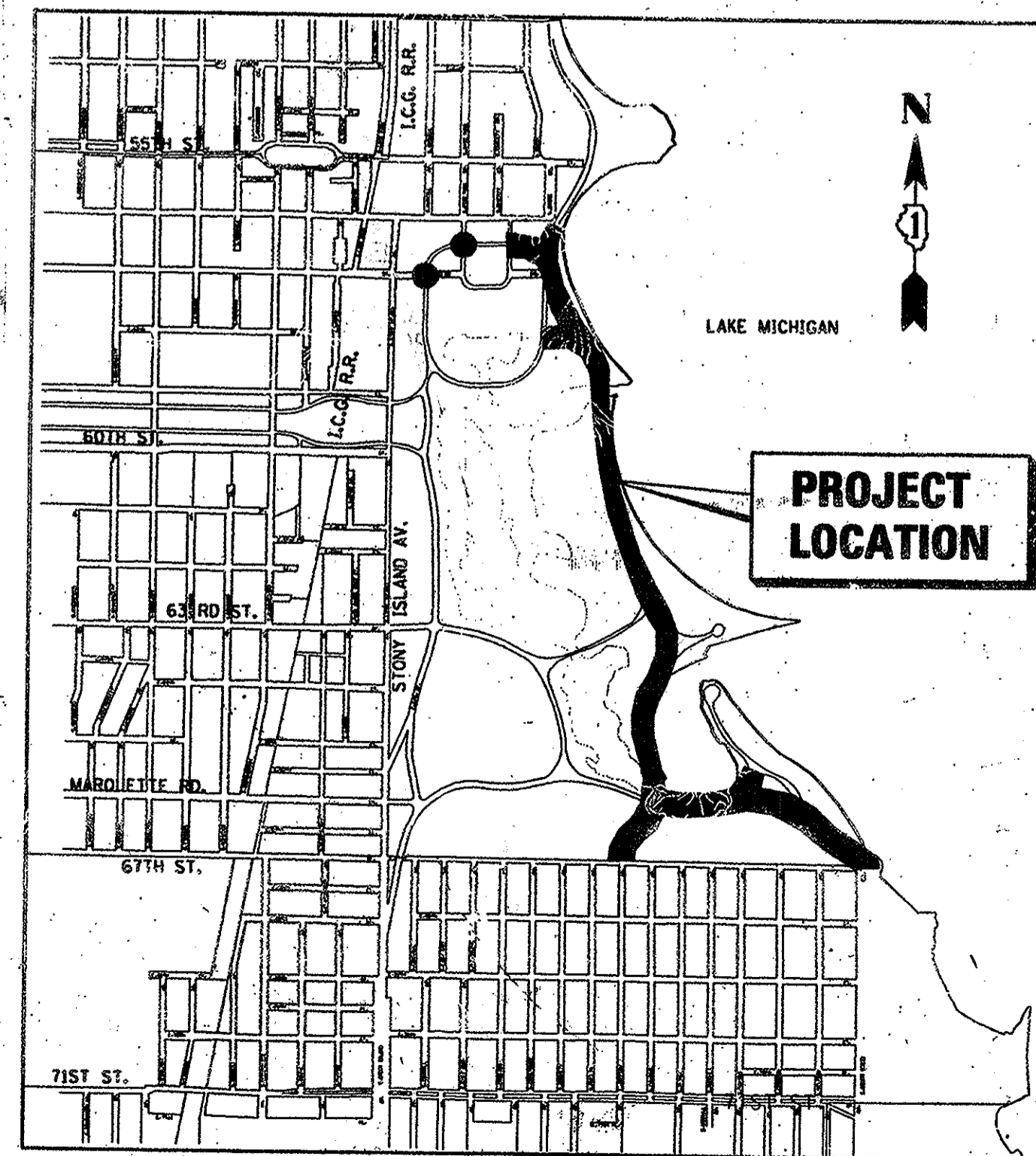
METRIC RATIOS



Safdar Ali Gill
Ground Engineering
Consultants, Inc.
Exp. 11/30/02



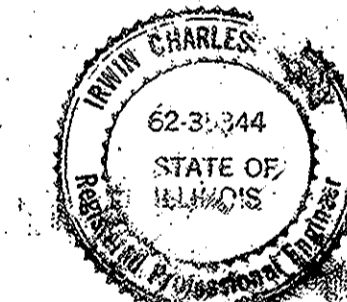
Kenneth A. Johnson
Exp. November 30, 2002
FOR "TRAFFIC SYSTEMS" DRAWINGS



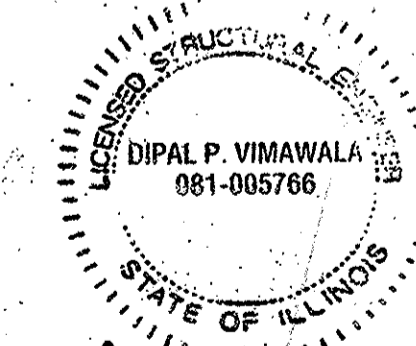
LOCATION MAP
NOT TO SCALE



Michael D. Duvas
MICHAEL D. DUVAS, P.E.
EXPIRES: NOVEMBER 30, 2003



Irwin Charles Smiley
IRWIN CHARLES SMILEY, P.E.
EXPIRES: NOVEMBER 30, 2003
FOR "E" DRAWINGS



Dipal P. Vimawala
DIPAL P. VIMAWALA, S.E.
EXPIRES: NOVEMBER 30, 2002
FOR "S" DRAWINGS



Syed M. Kazi
SYED M. KAZI, P.E.
EXPIRES: NOVEMBER 30, 2003
FOR "US, PS, AND PE" DRAWINGS

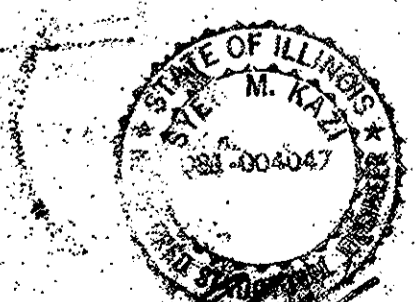
CITY OF CHICAGO
DEPARTMENT OF STREETS AND SANITATION
APPROVED: *[Signature]*
DEPUTY COMMISSIONER, BUREAU OF ELECTRICITY
APPROVED: *[Signature]*
DEPUTY COMMISSIONER, BUREAU OF FORESTRY
APPROVED: *[Signature]*
COMMISSIONER

CITY OF CHICAGO
DEPARTMENT OF WATER
APPROVED: *[Signature]*
CHIEF ENGINEER
APPROVED: *[Signature]*
COMMISSIONER

CITY OF CHICAGO
DEPARTMENT OF SEWERS
APPROVED: *[Signature]*
CHIEF ENGINEER
APPROVED: *[Signature]*
COMMISSIONER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PASSED: 5-3 20 02
DISTRICT ENGINEER OF LOCAL ROADS & STREETS
APPROVED: 5-3 20 02
DISTRICT ENGINEER

ISSUED FOR CONSTRUCTION



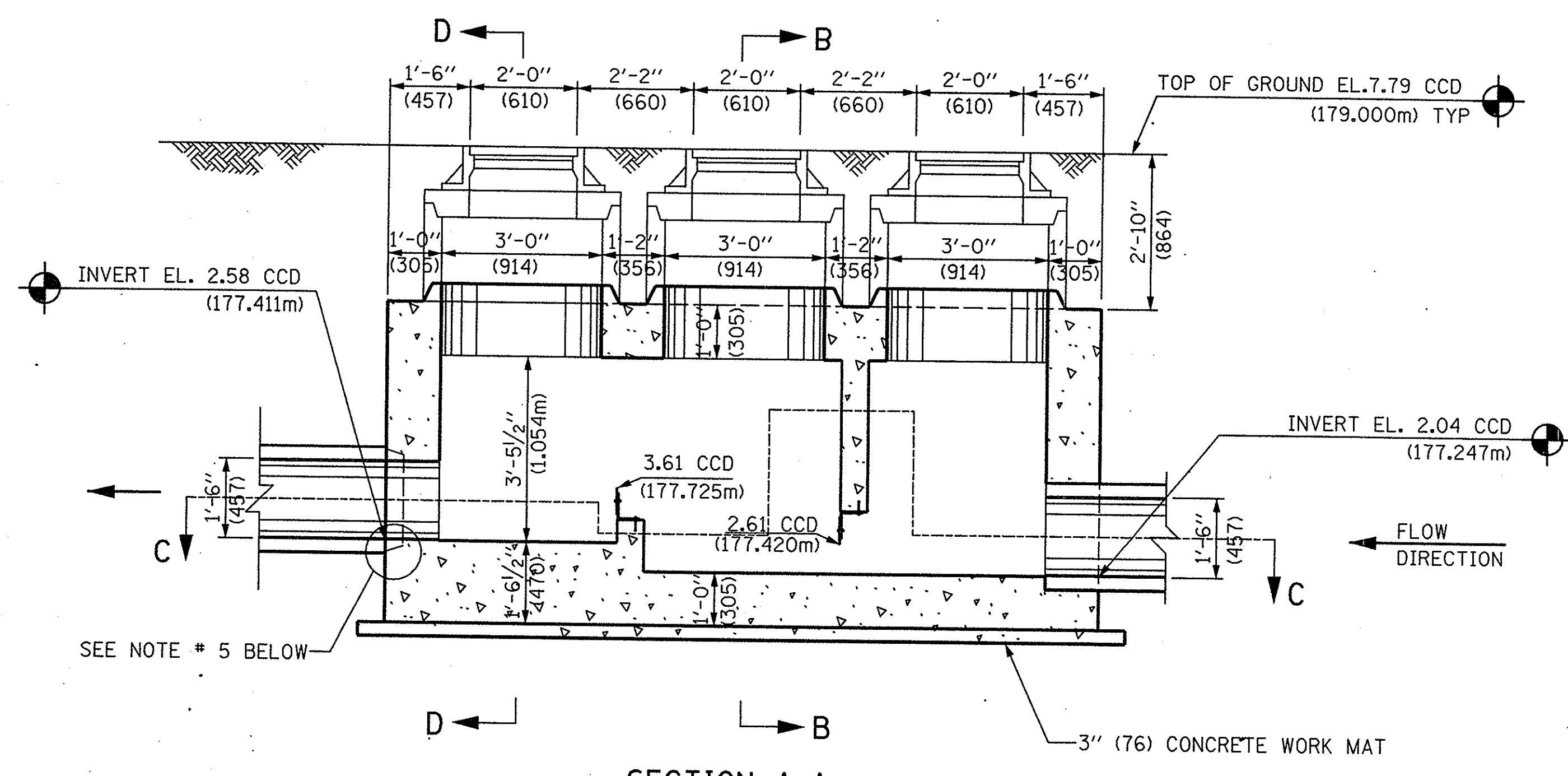
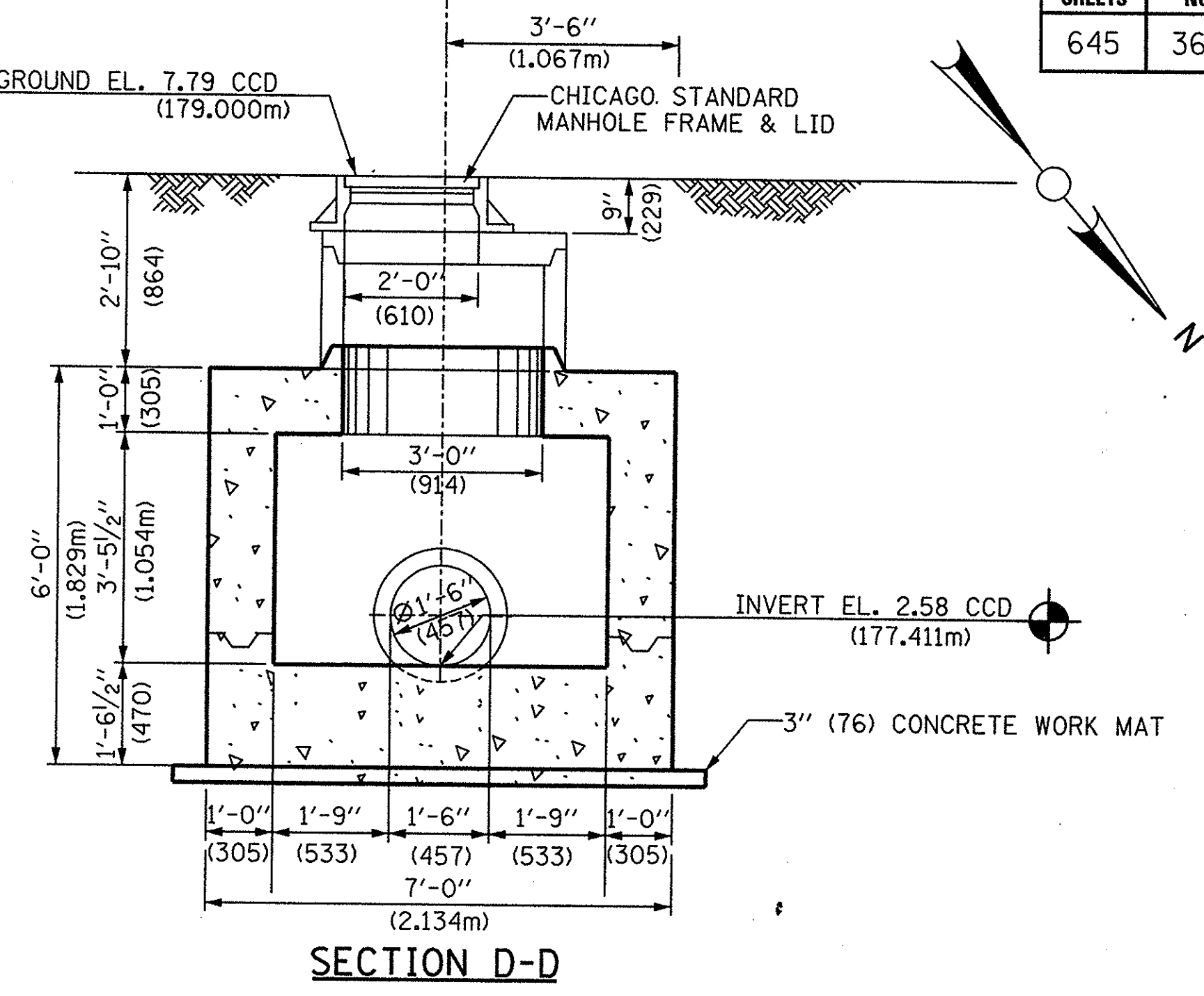
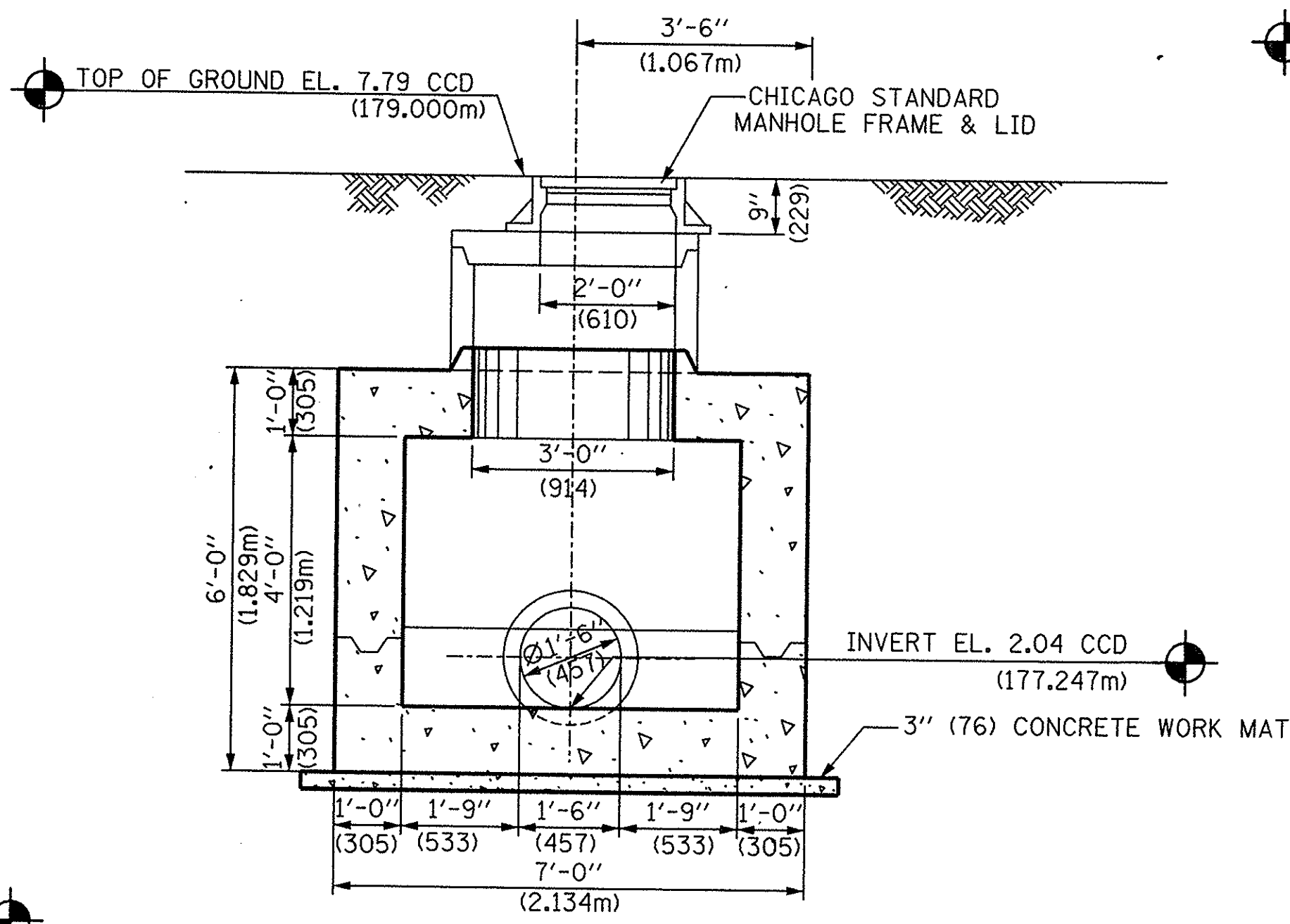
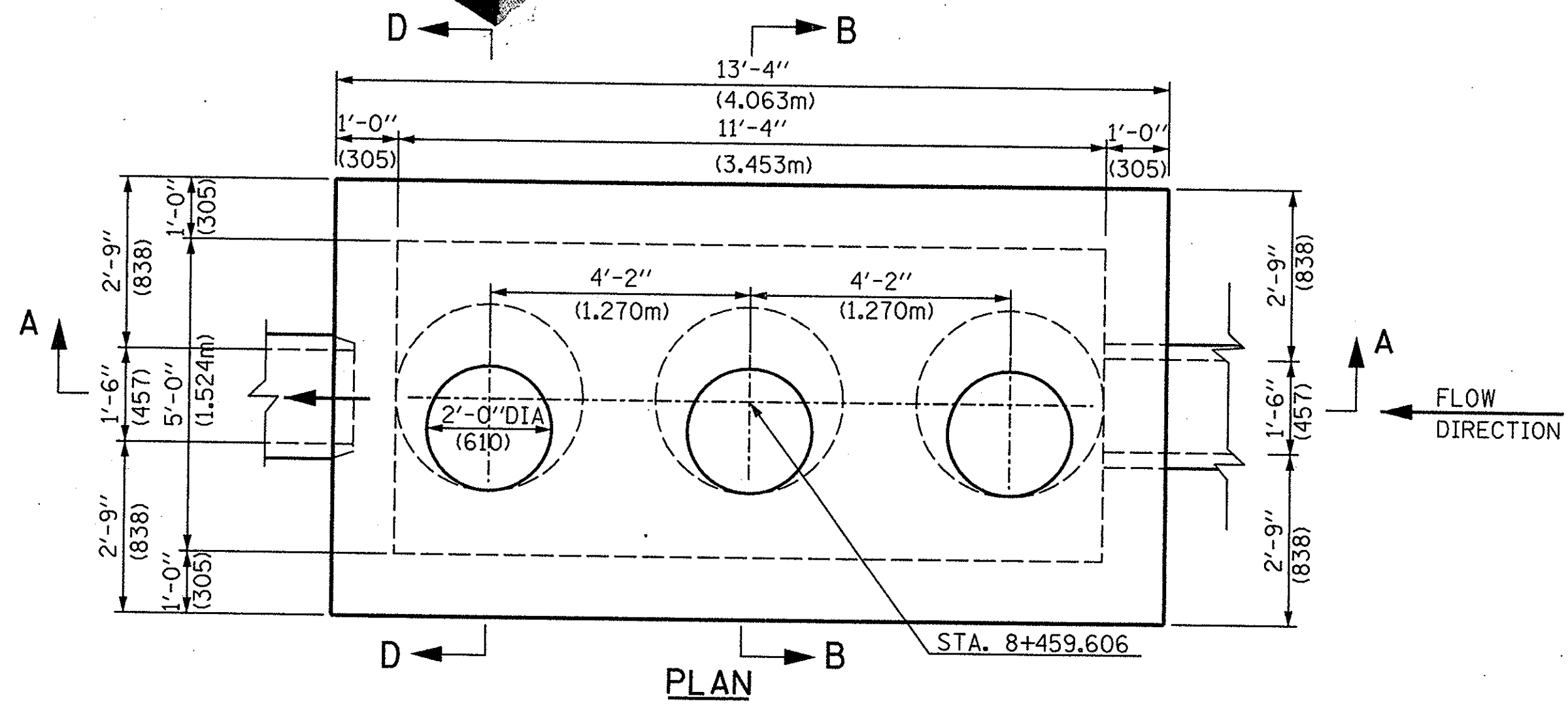
Syed M. Kazi
SYED M. KAZI, S.E.
EXPIRES: NOVEMBER 30, 2003
FOR "US, PS, AND PE" DRAWINGS

12/14/2001 12:40:32 \General\SHK\40cover.sht

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

DEPARTMENT OF PROCUREMENT SERVICES
DAVID E. MALONE, CHIEF PROCUREMENT OFFICER

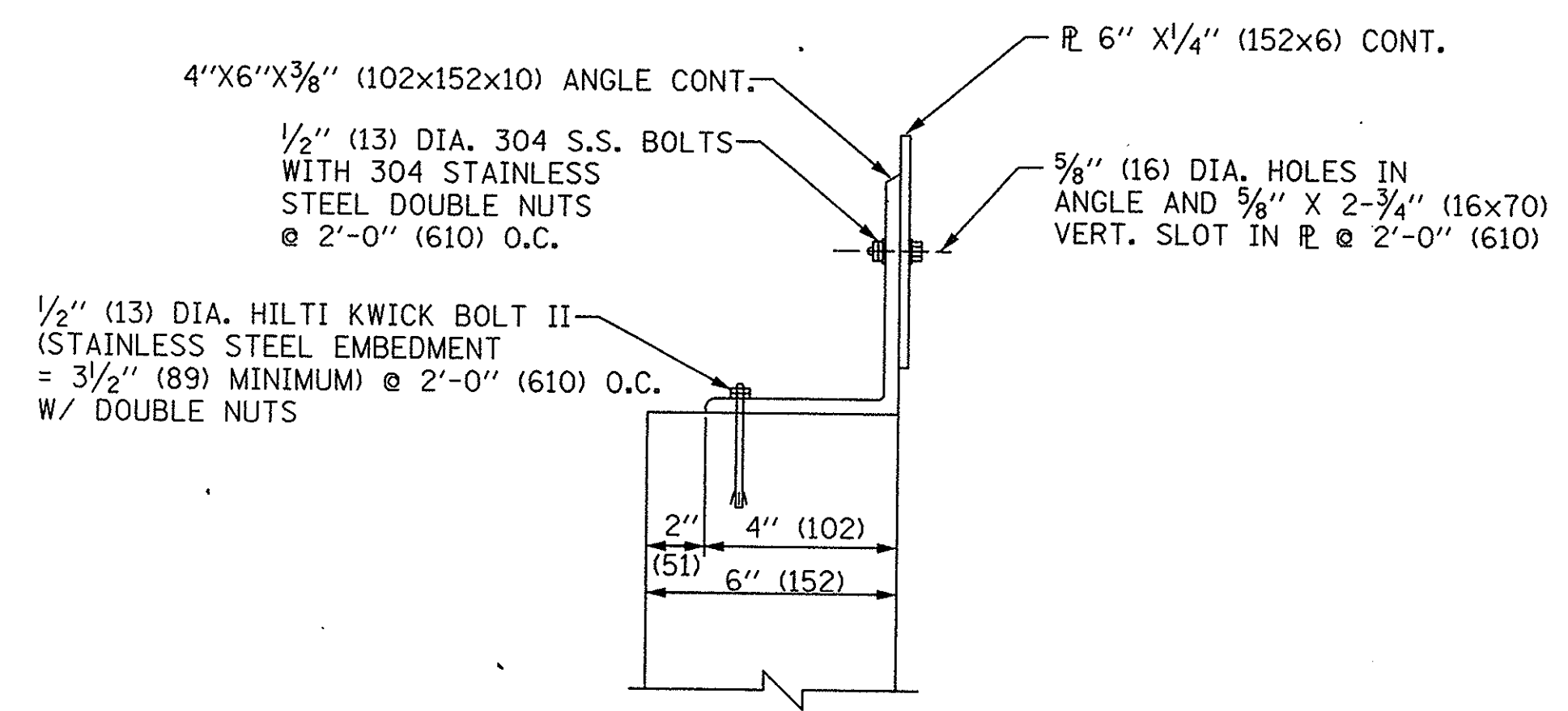
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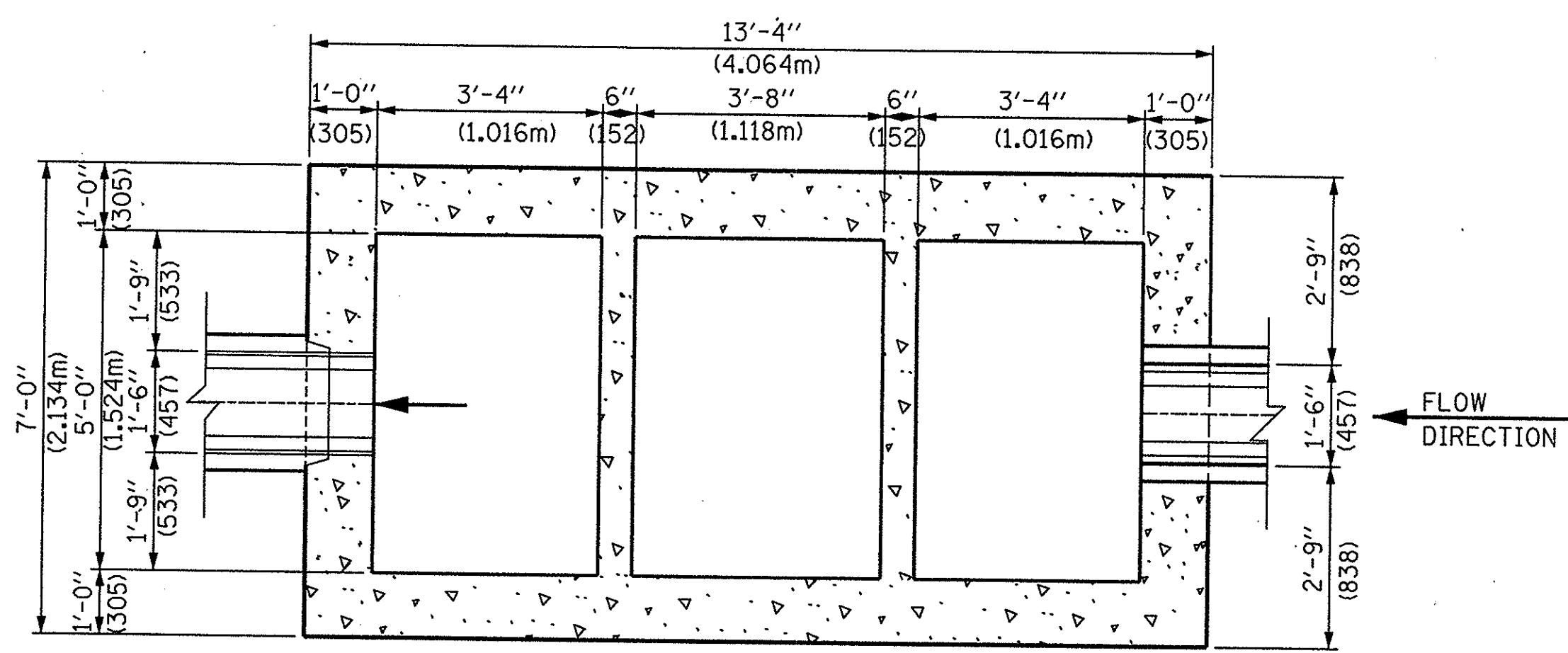
SECTION B-B

SECTION D-D

SECTION A-A



WEIR & SKIMMER PLATE

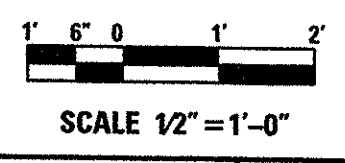


SECTIONAL PLAN C-C

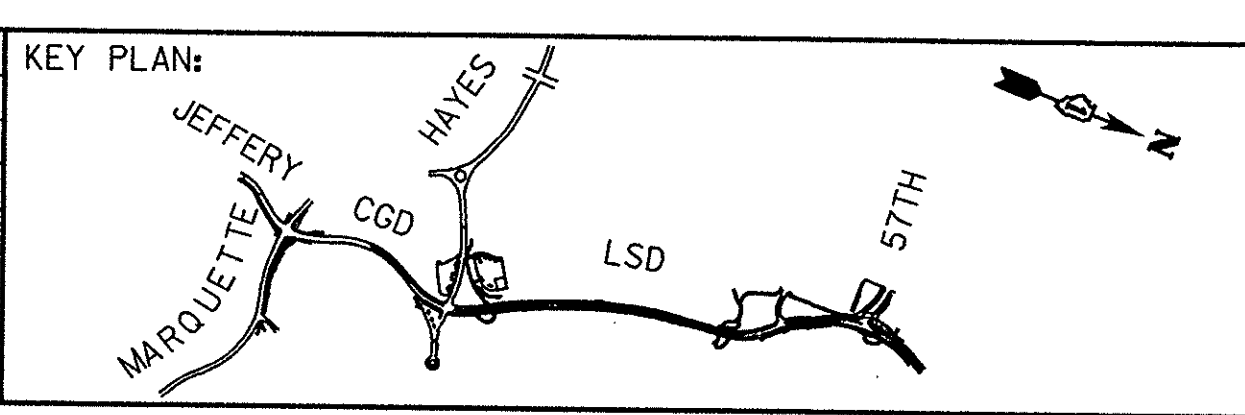
NOTES:

1. UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM M3
2. FOR GENERAL NOTES SEE SHEET NO. DS-1
3. FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-13
4. COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
5. COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.

RECORD DOCUMENT
 Harbour Engineering, Inc.
 215 West Madison Street
 Plainfield, Ill. 60544
 By: [Signature]
 Date: 3-15-06



DESIGN: G.M.K./N.S.			
DRAWN: G.M.K.			
CHECKED: M.T.P.			
APPROVED: S.M.K.			
DATE: 4/16/02			
SCALE: AS NOTED			
FILE:			
REVISIONS			
NO.	BY	DATE	DESCRIPTION



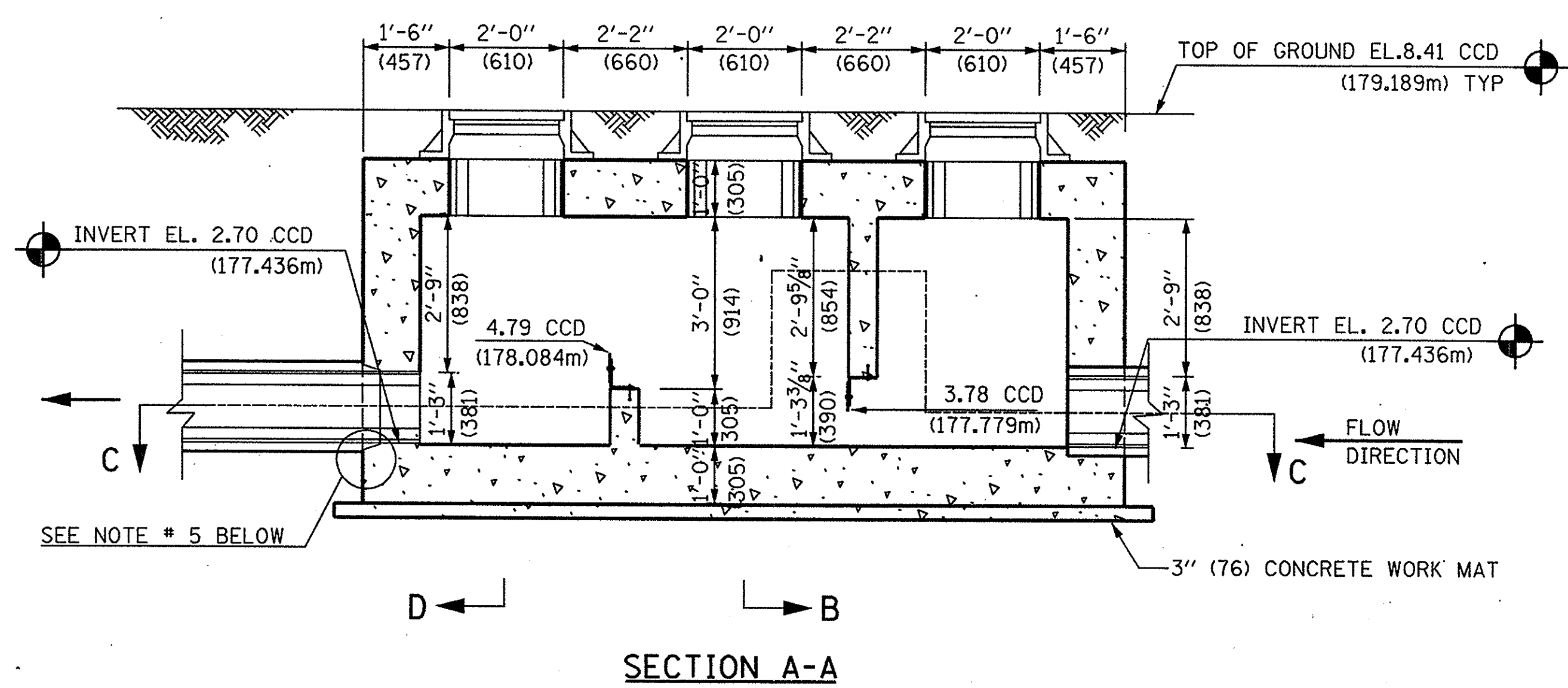
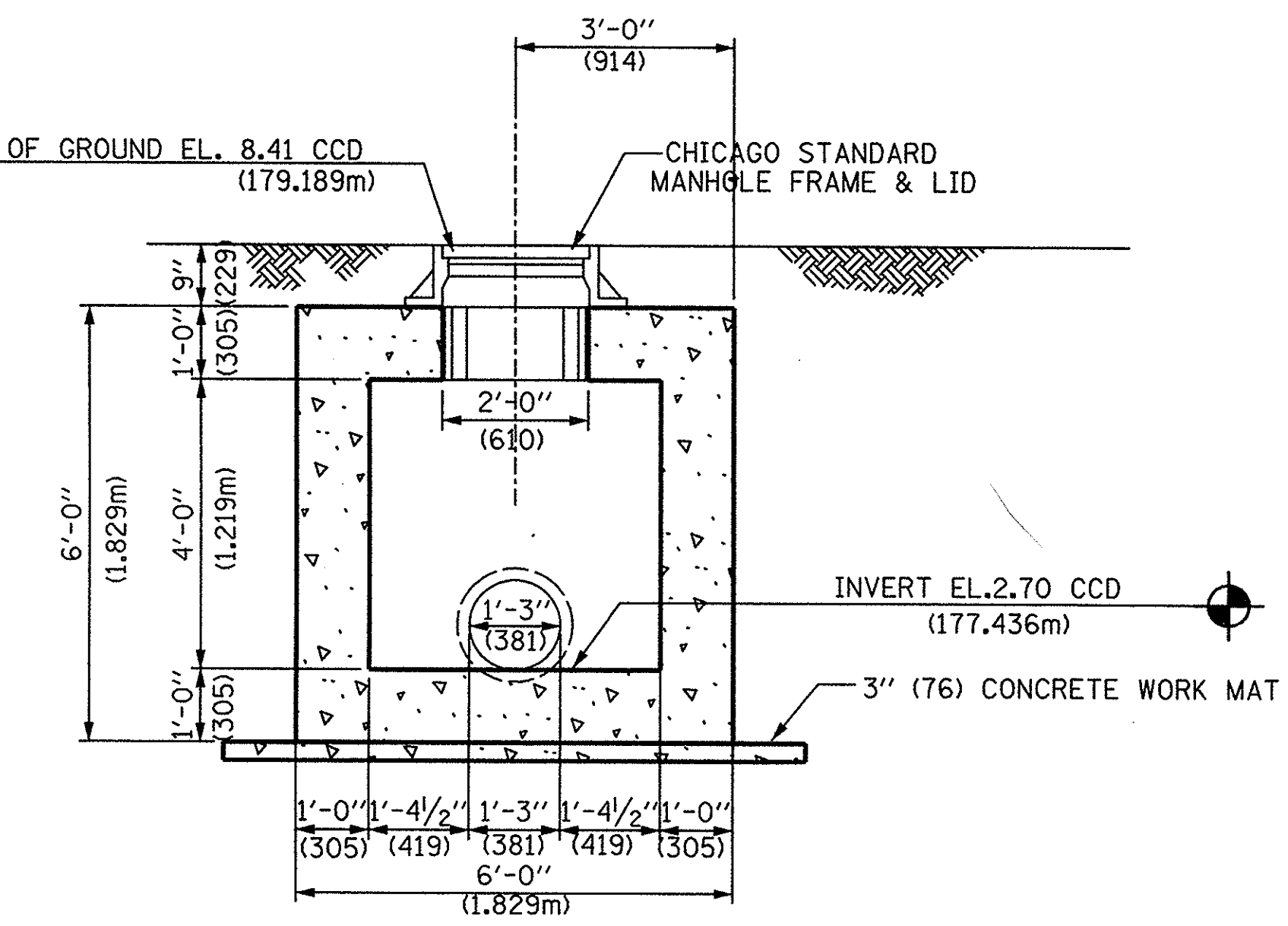
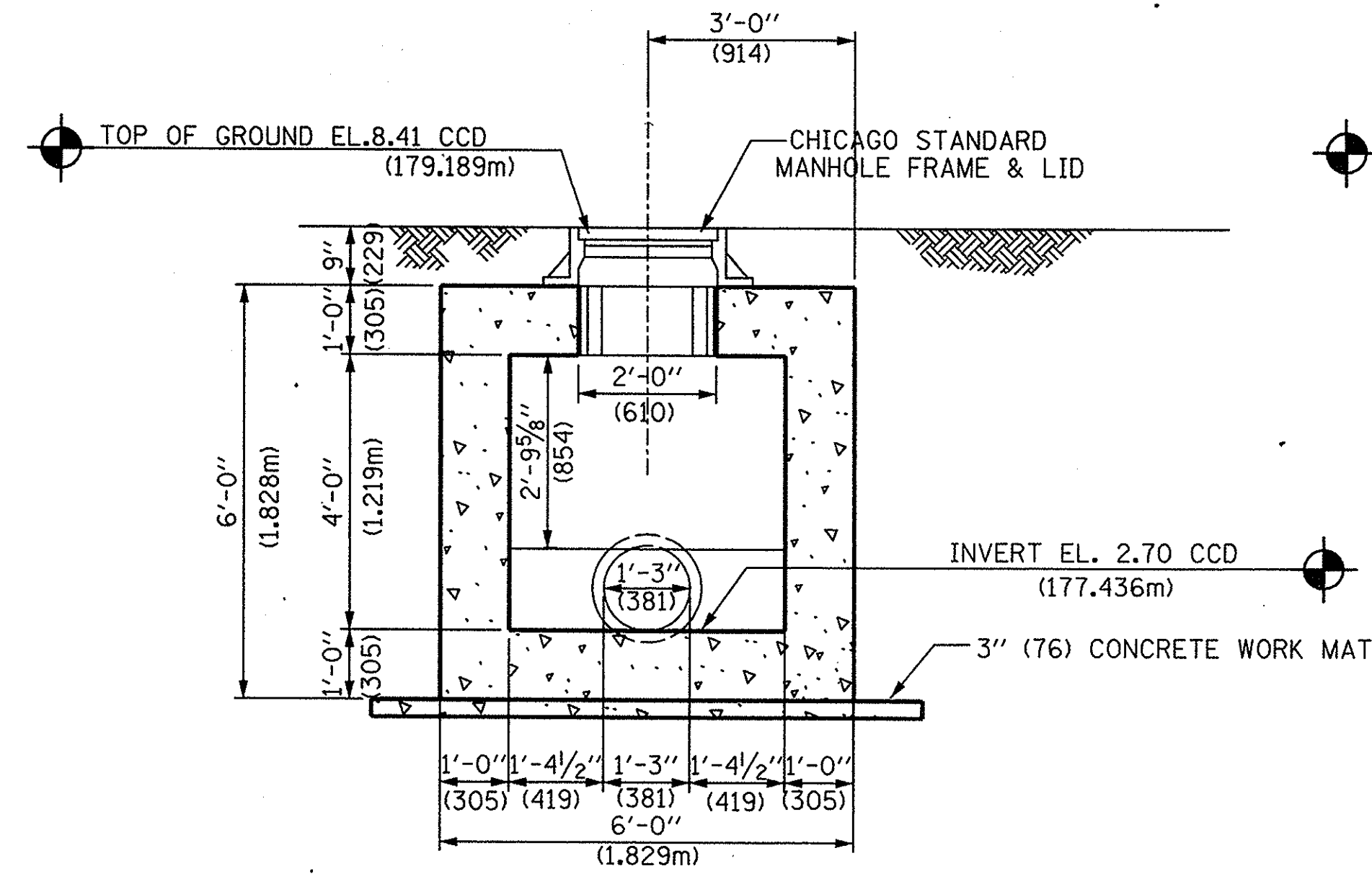
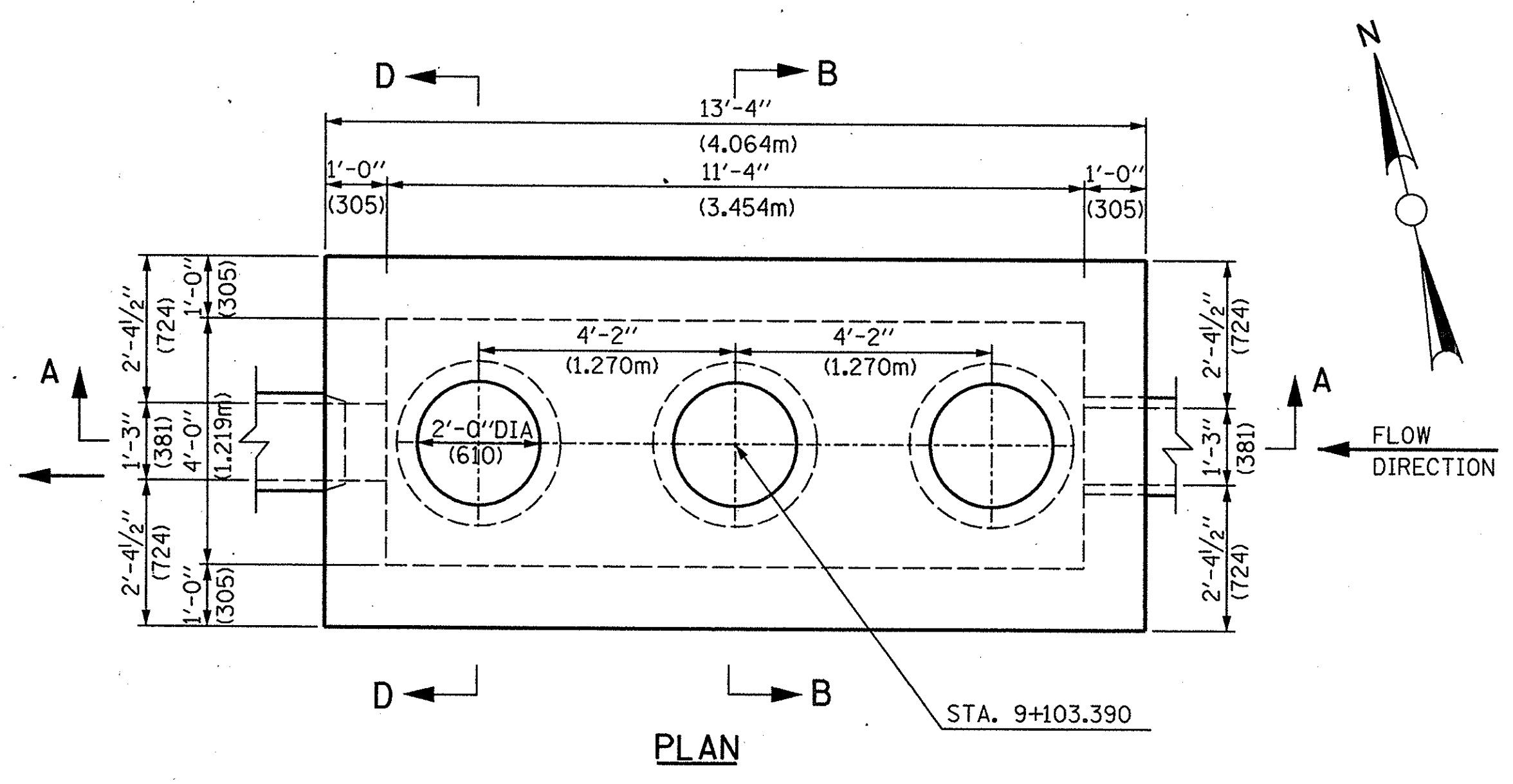
CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSULTING ENGINEERS, INC.
DELTA ENGINEERING, INC.
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

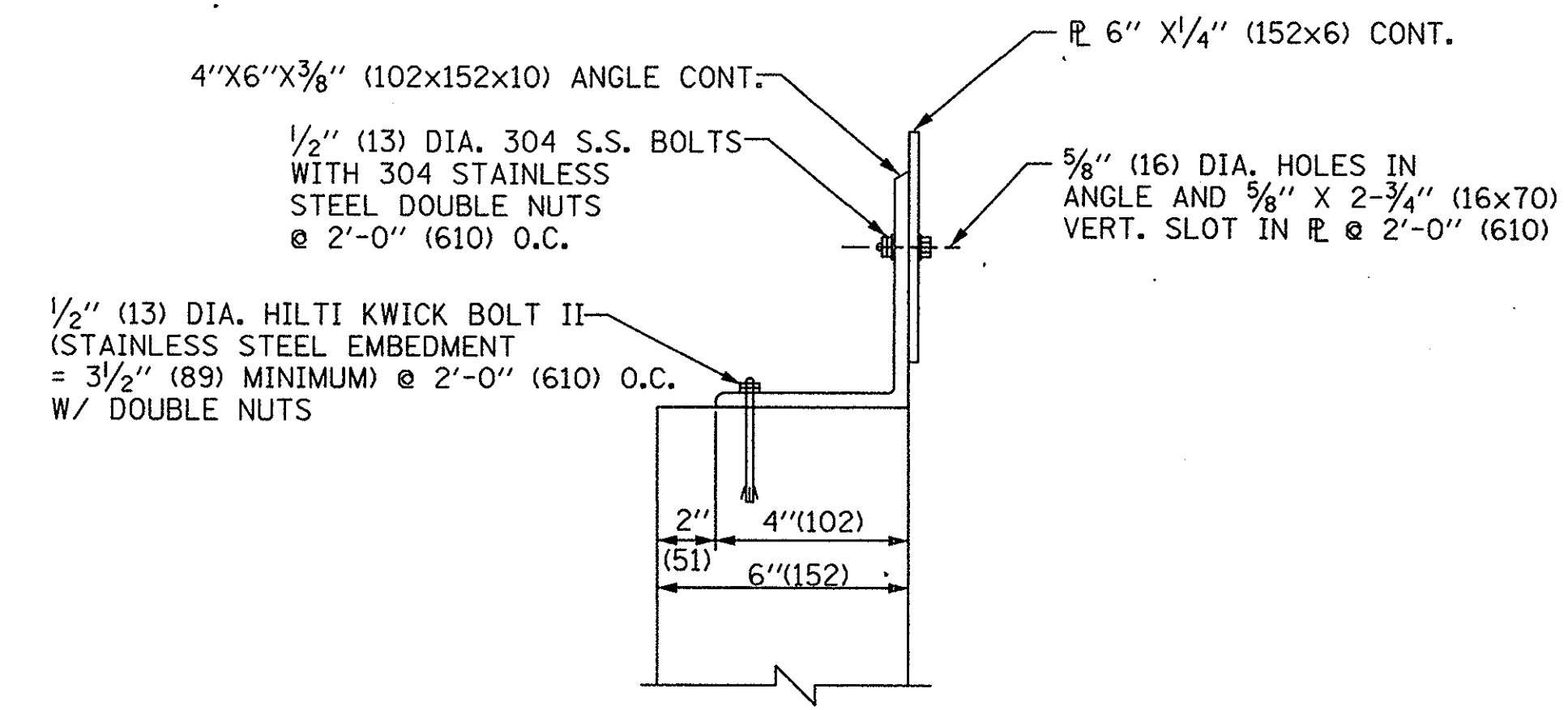
**WEIR STRUCTURE - M3
 STATION 8 + 459.606**

CONTRACT NO.
00-B0241-06-PV
 DRAWING NO.
DS - 2
 PROJECT NO. B-1-440
 640091641

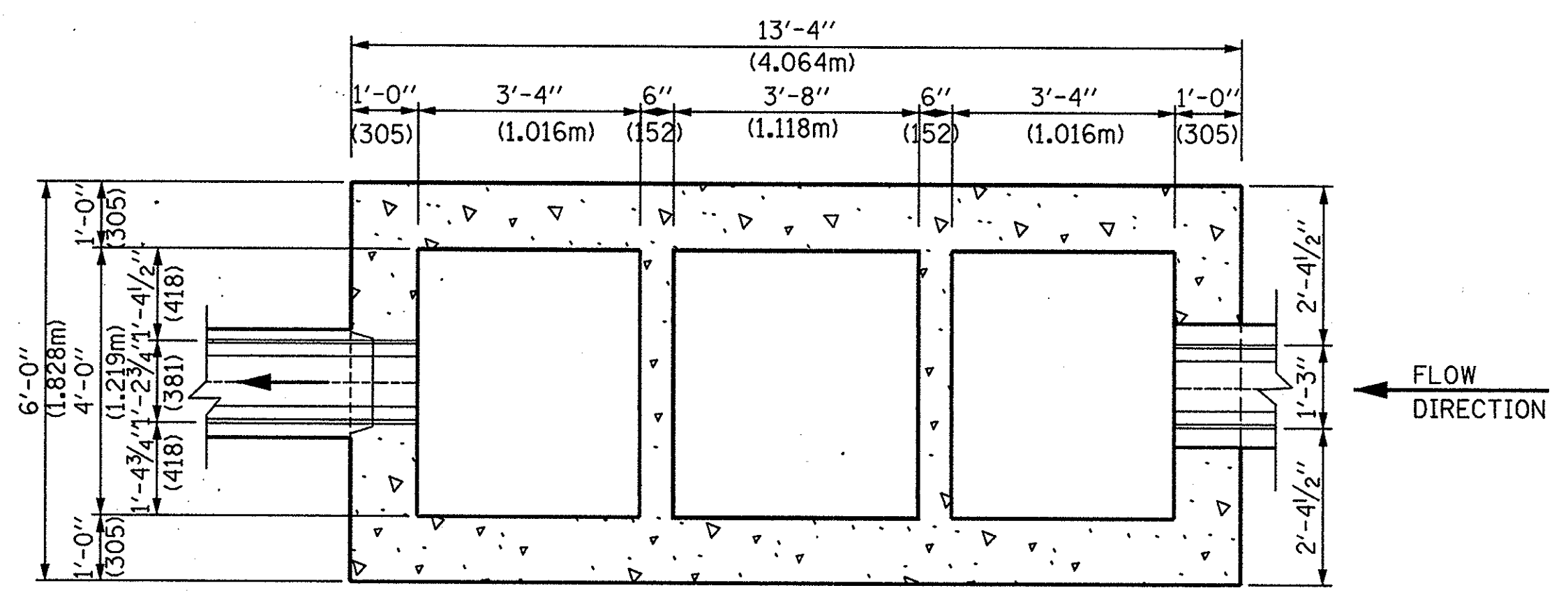


SECTION B-B

SECTION D-D



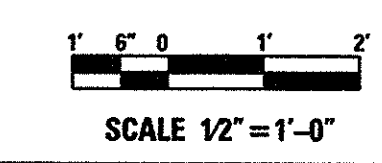
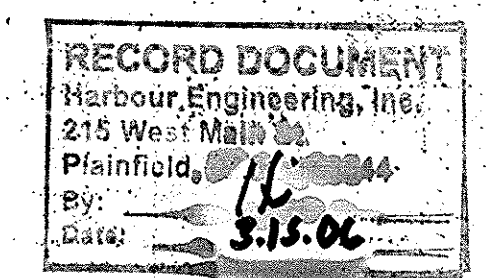
WEIR & SKIMMER PLATE



SECTIONAL PLAN C-C

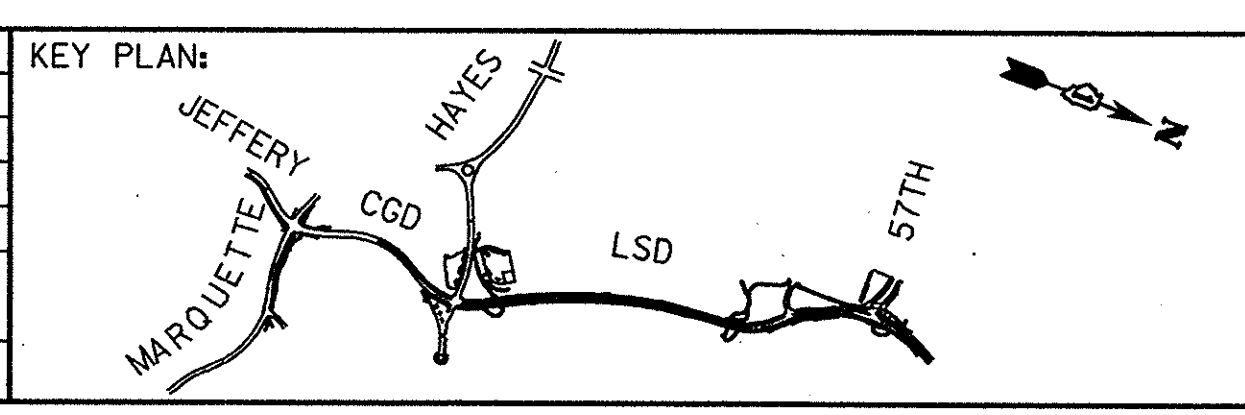
NOTES:

- UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM M14
- FOR GENERAL NOTES SEE SHEET NO. DS-1
- FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-14
- COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
- COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

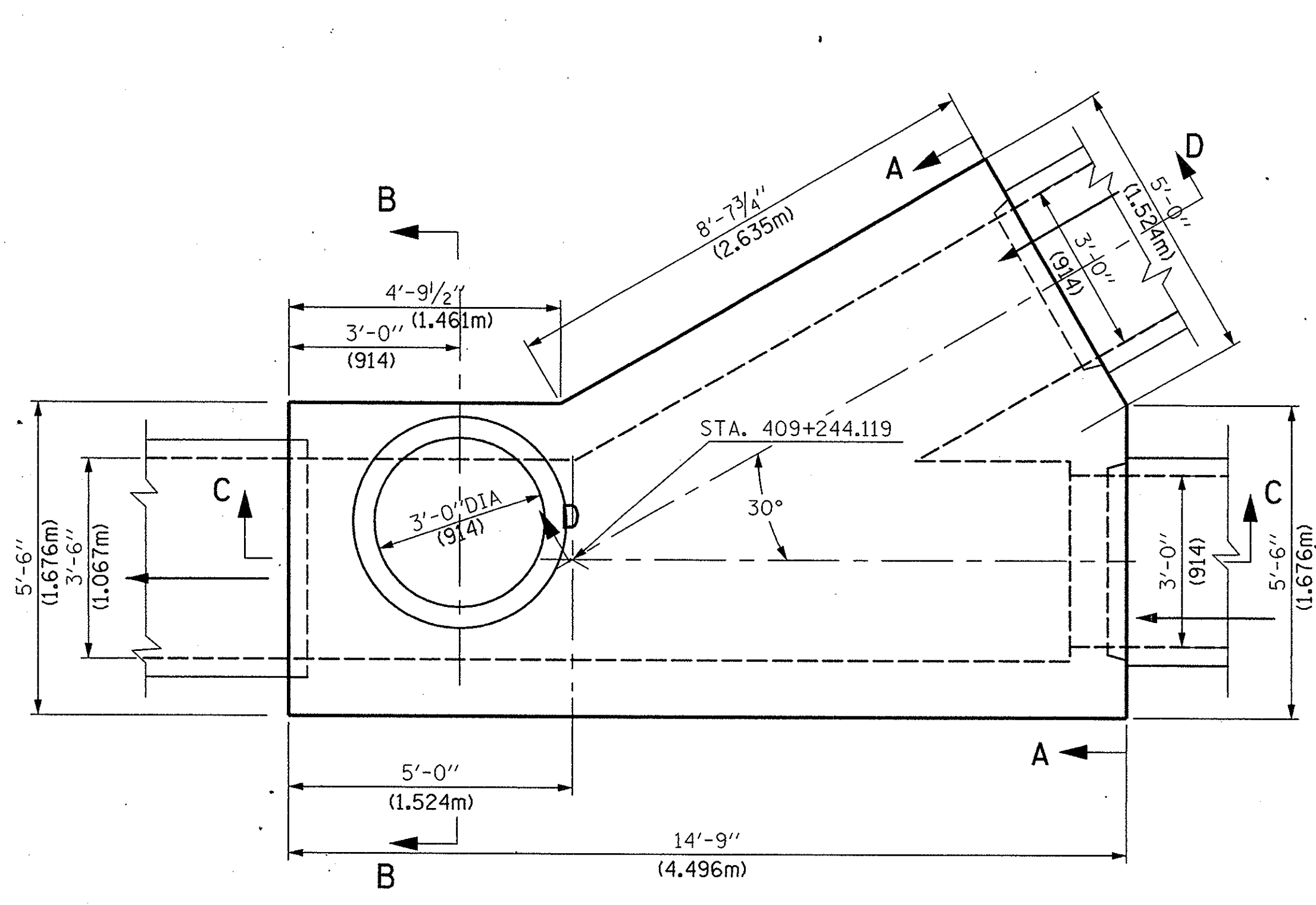


SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

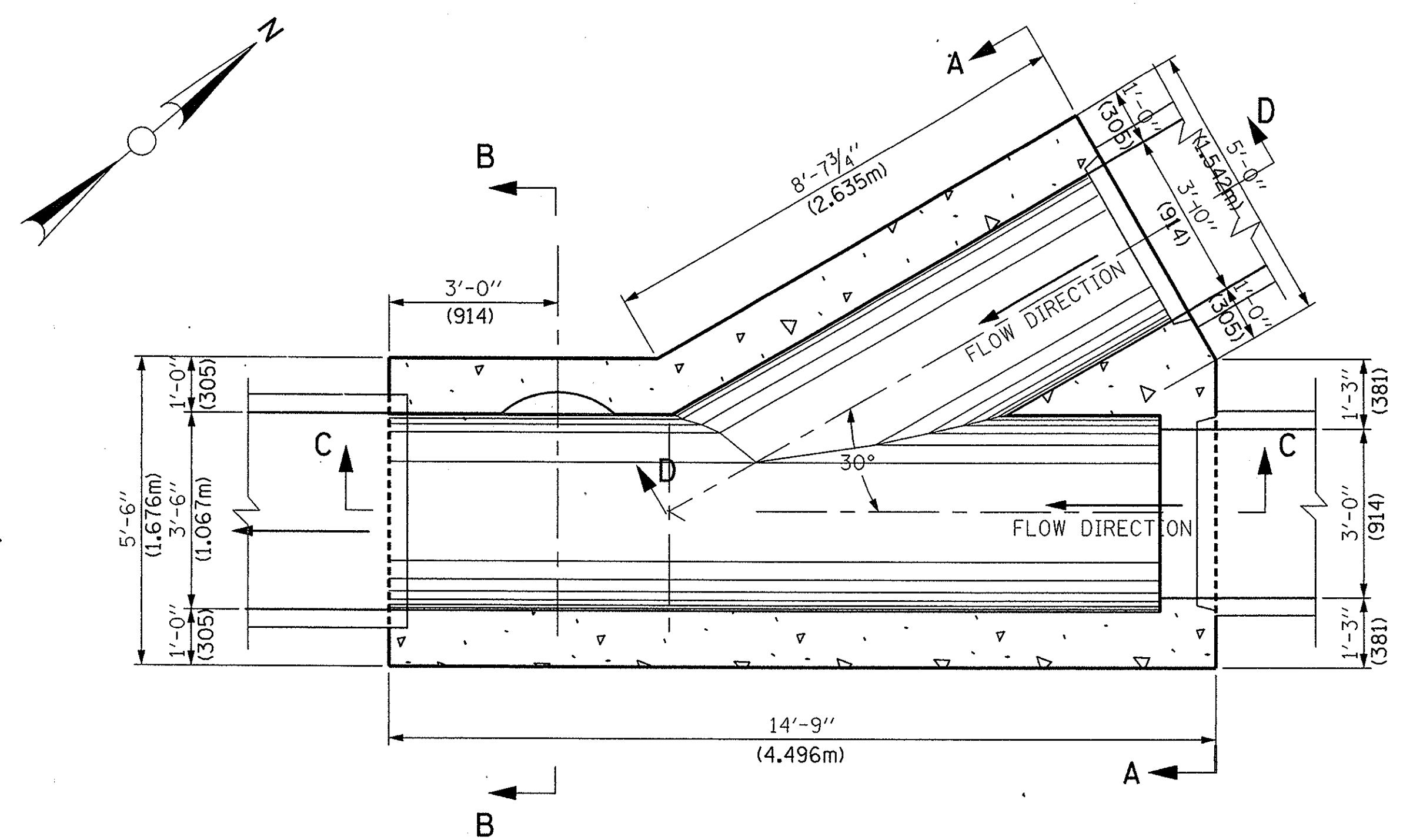
WEIR STRUCTURE - M14
STATION 9 + 103.390

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	DS - 3
PROJECT NO.	B-1-440

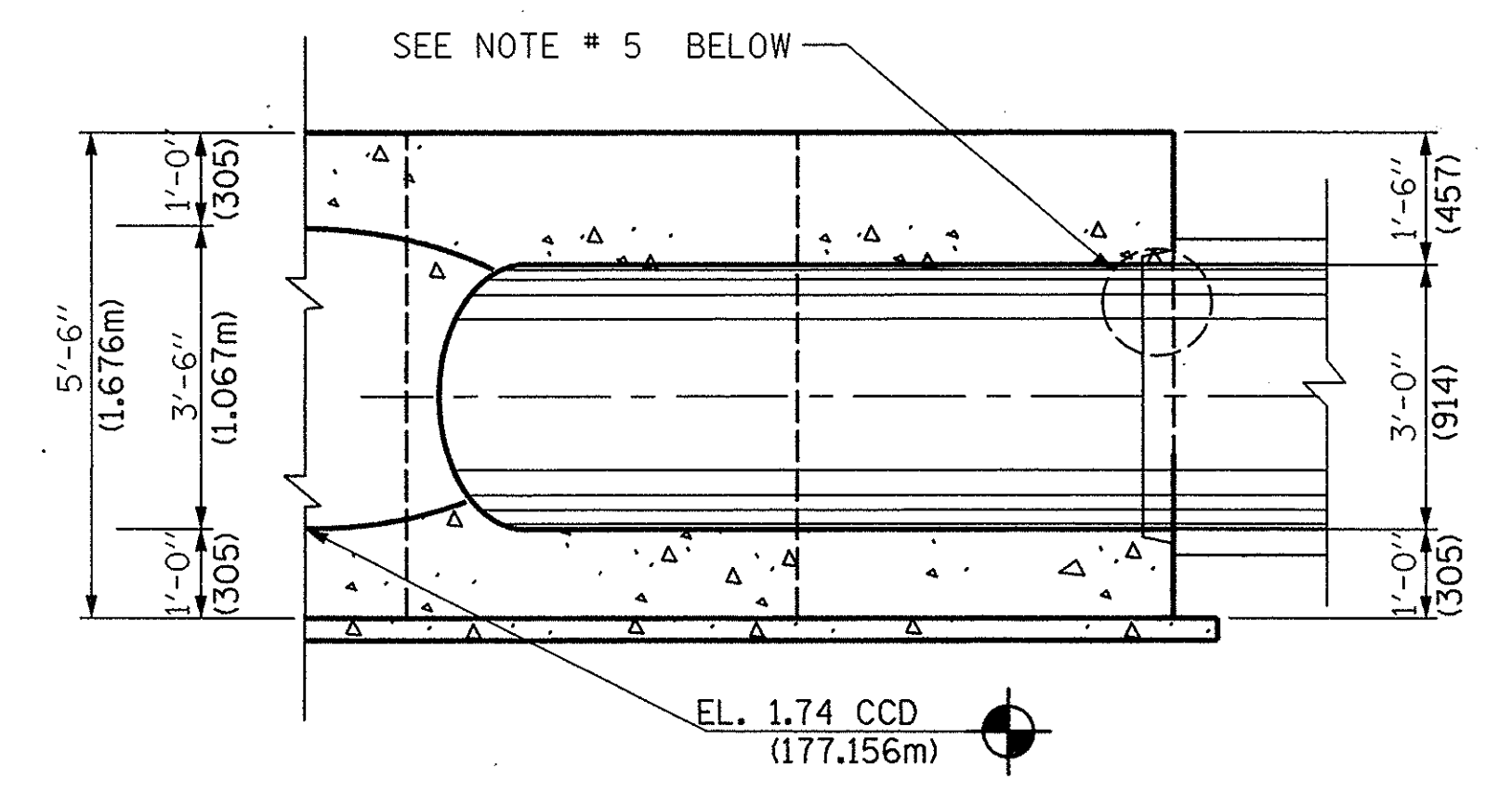
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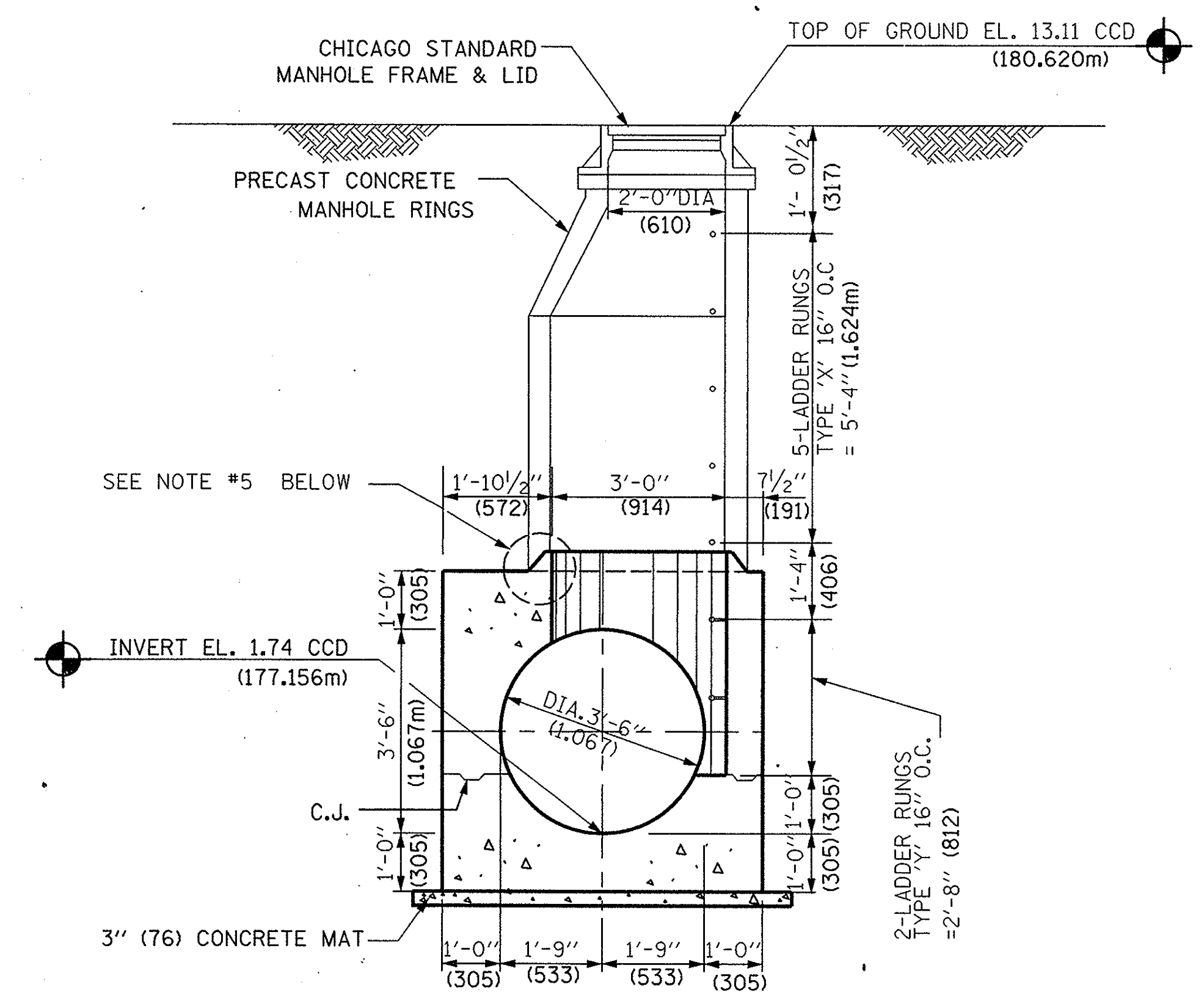
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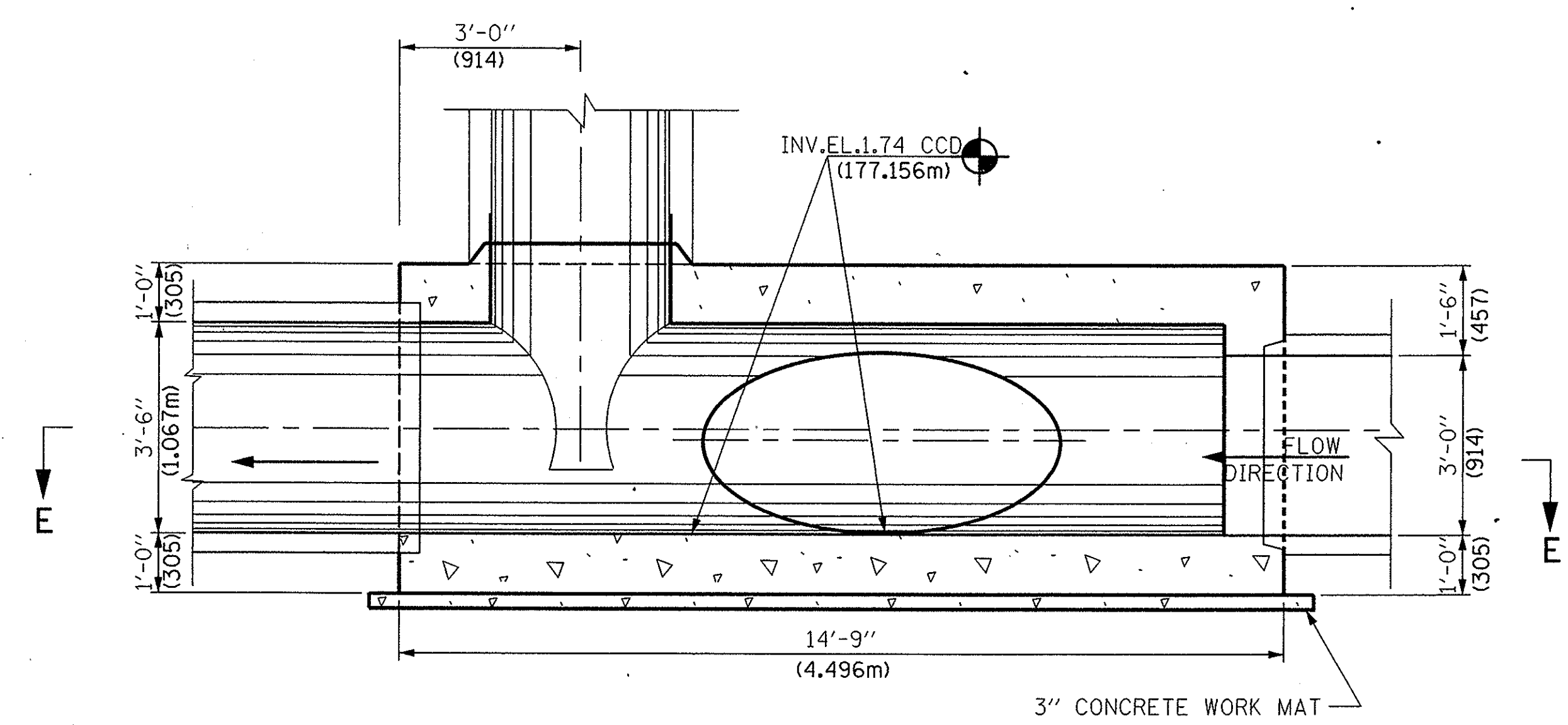
SECTIONAL PLAN E-E



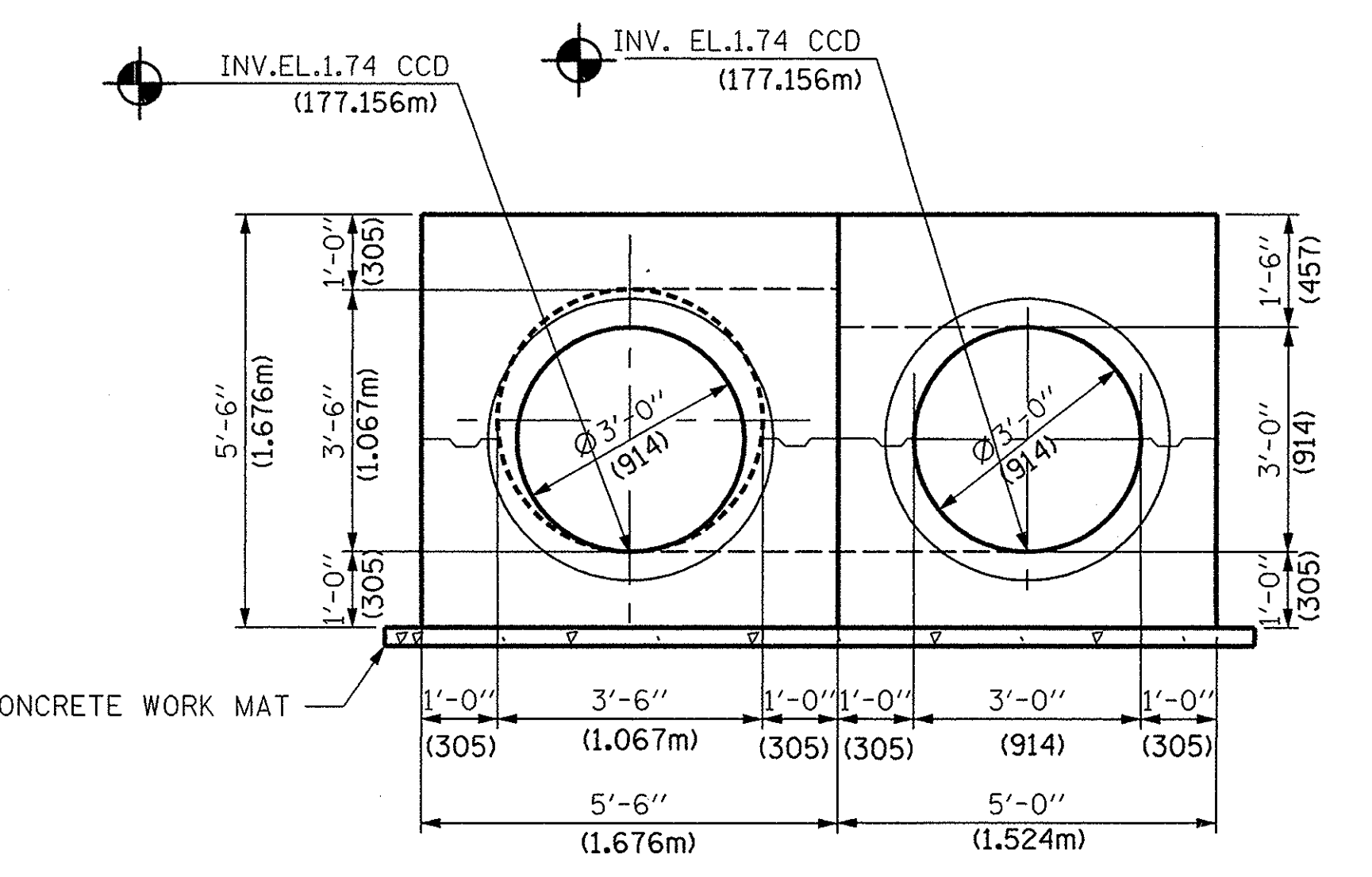
SECTION D-D



SECTION B-B

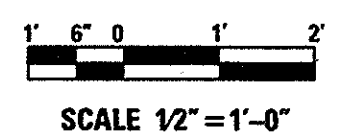
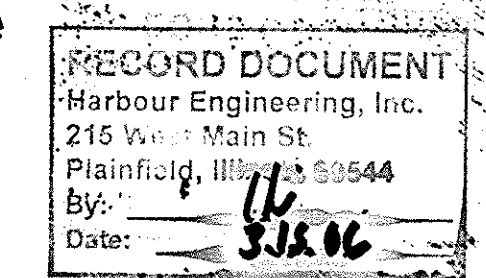


SECTION C-C



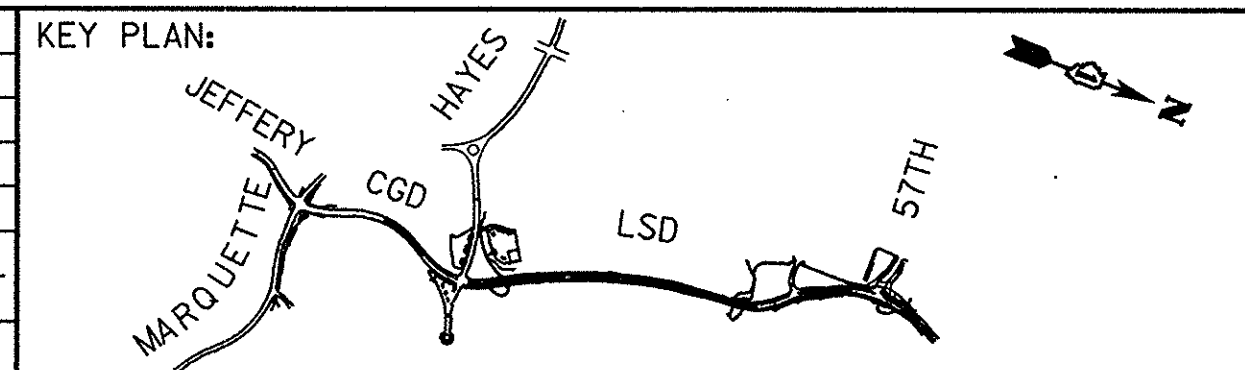
ELEVATION A-A

- NOTES:**
1. UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM J8
 2. FOR GENERAL NOTES SEE SHEET NO. DS-1
 3. FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-15
 4. COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
 5. COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.

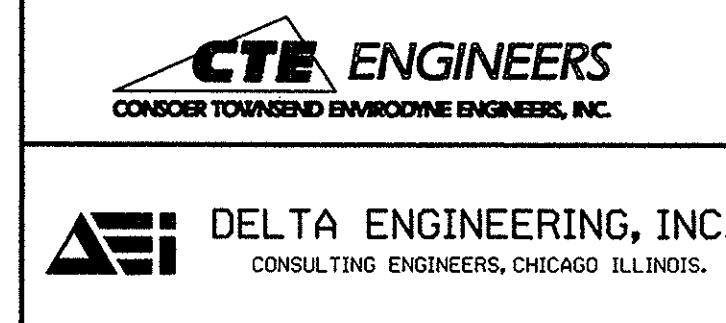


DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

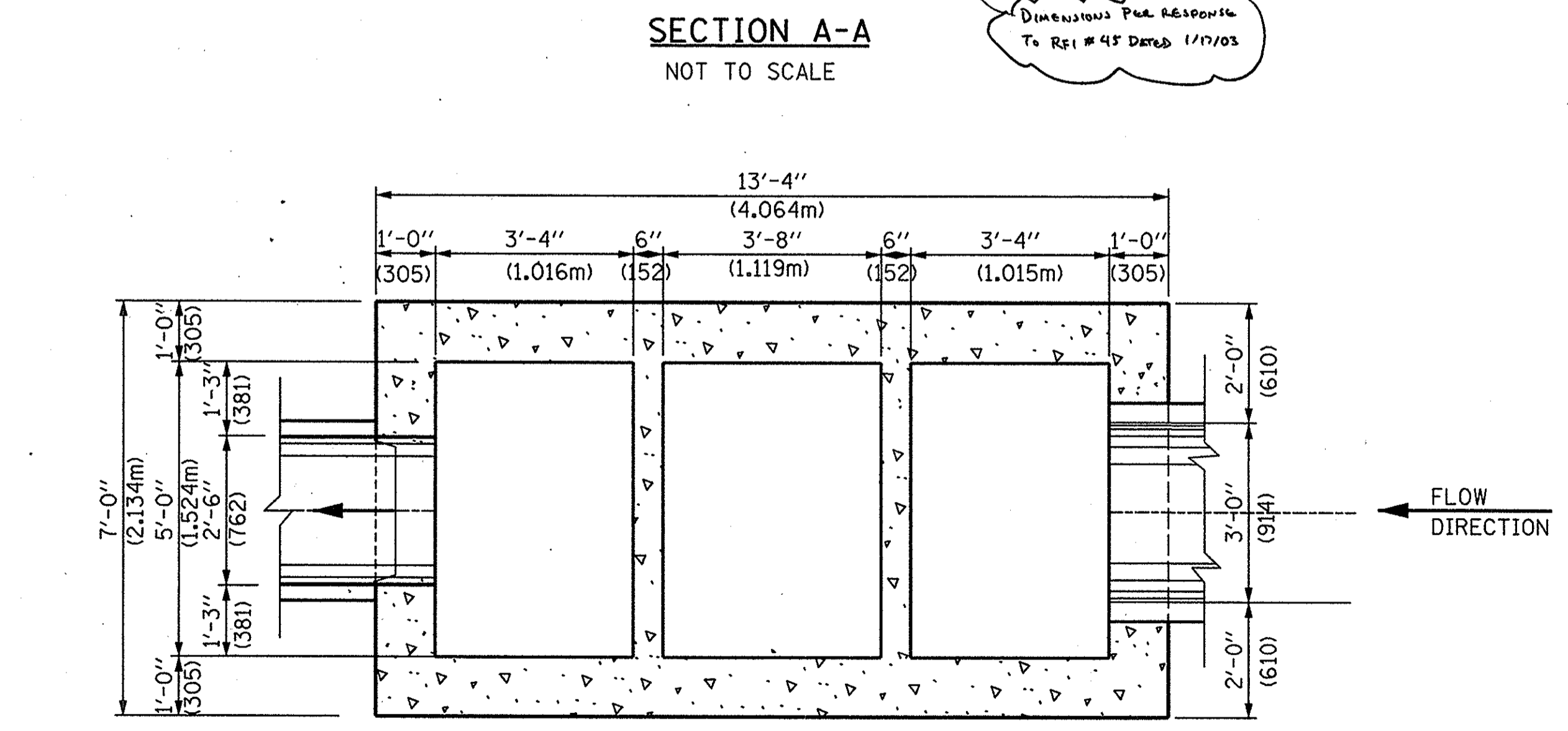
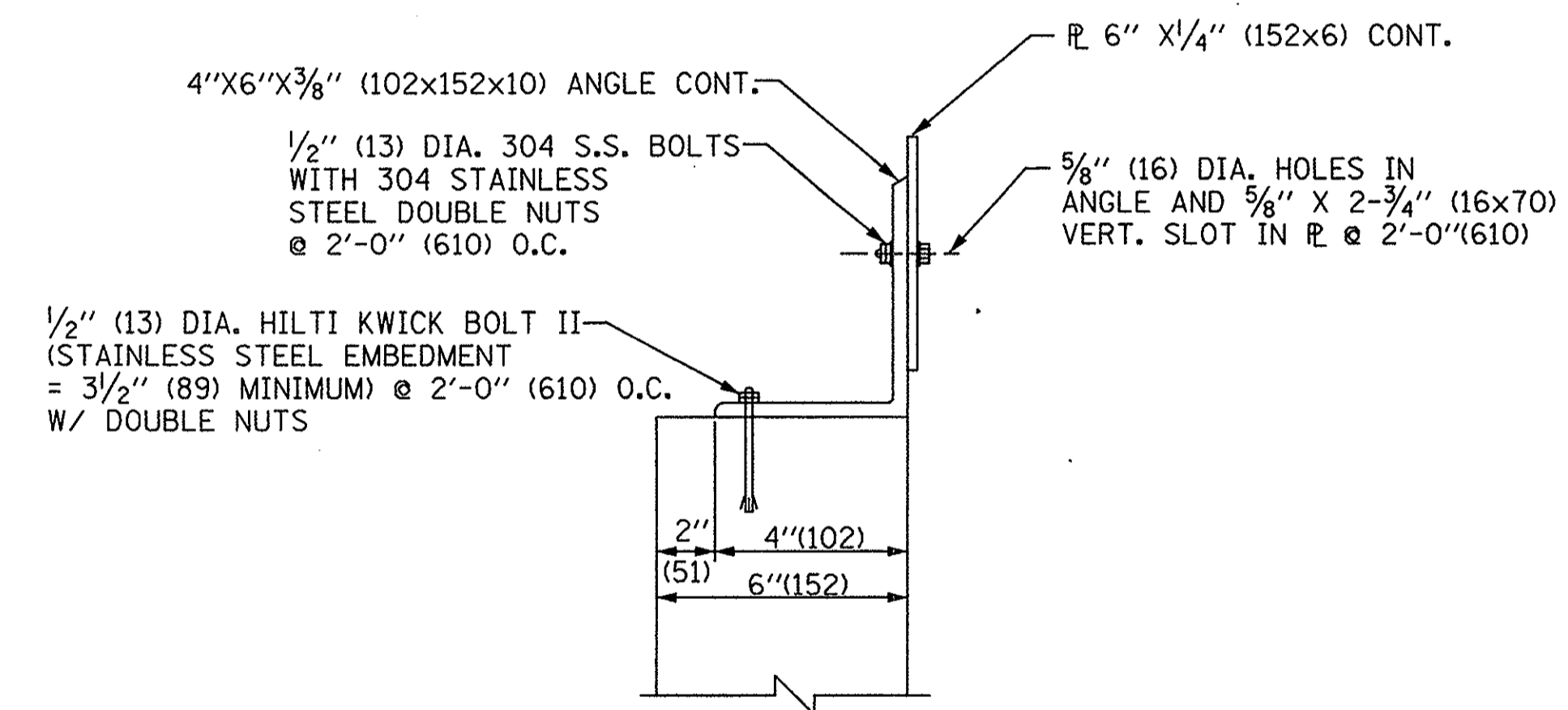
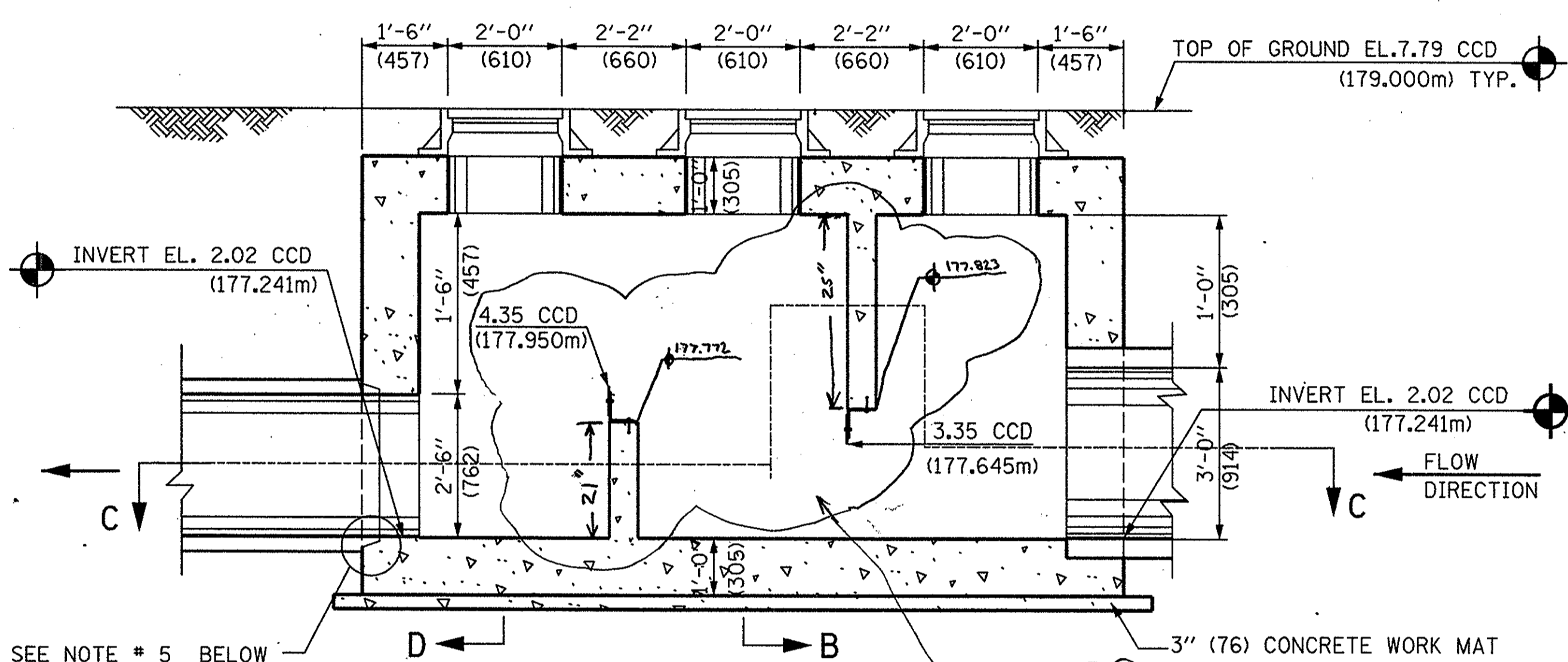
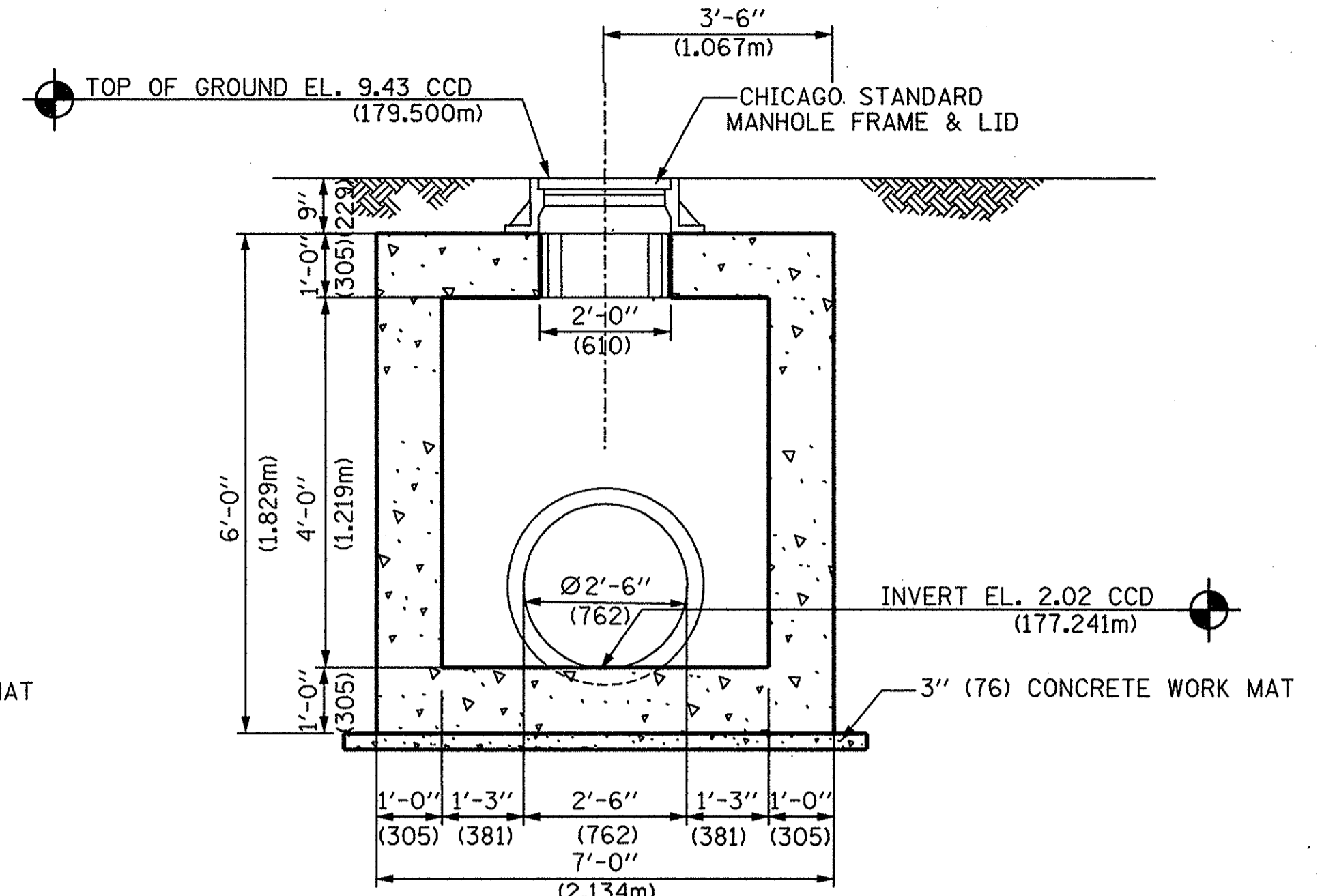
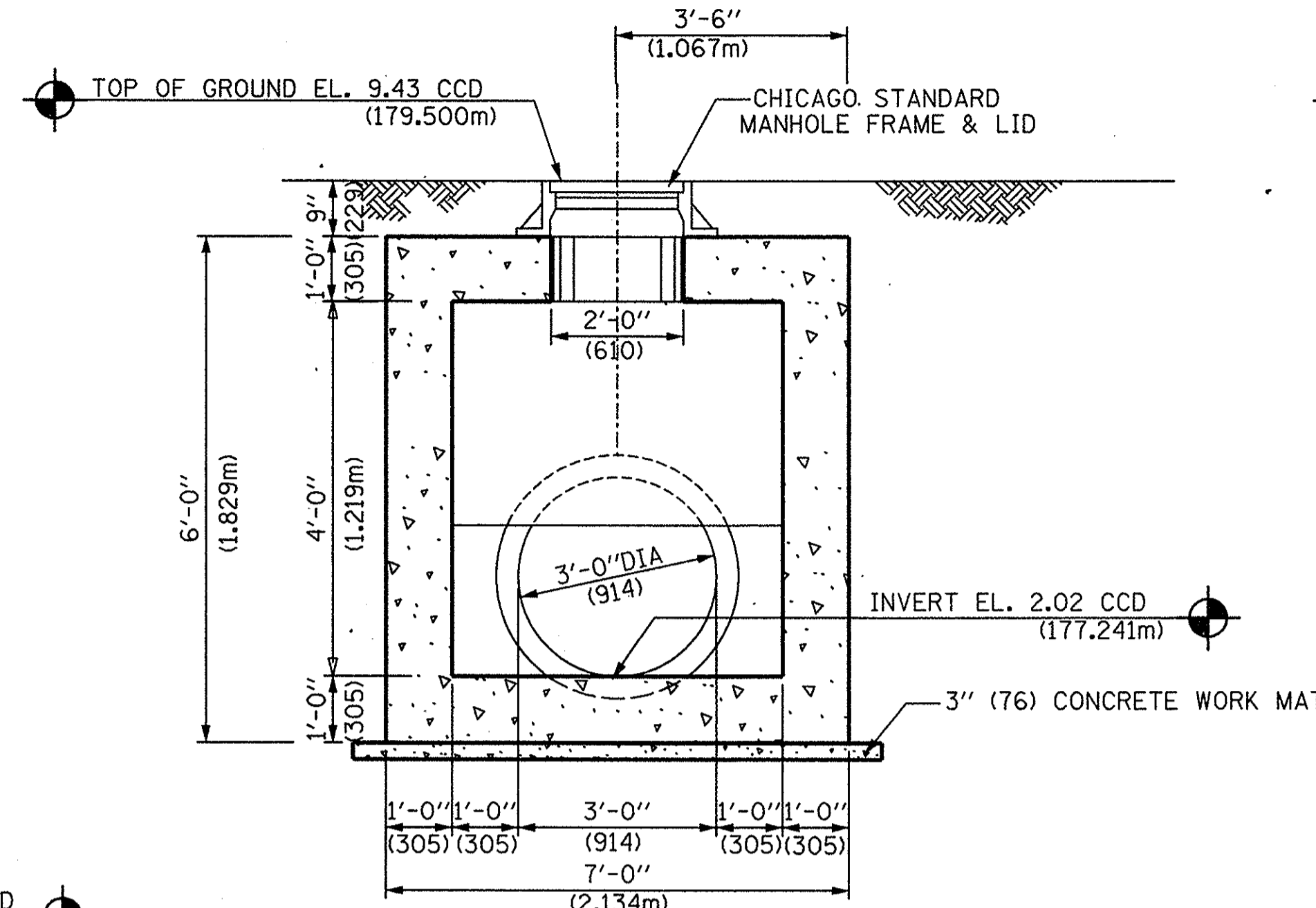
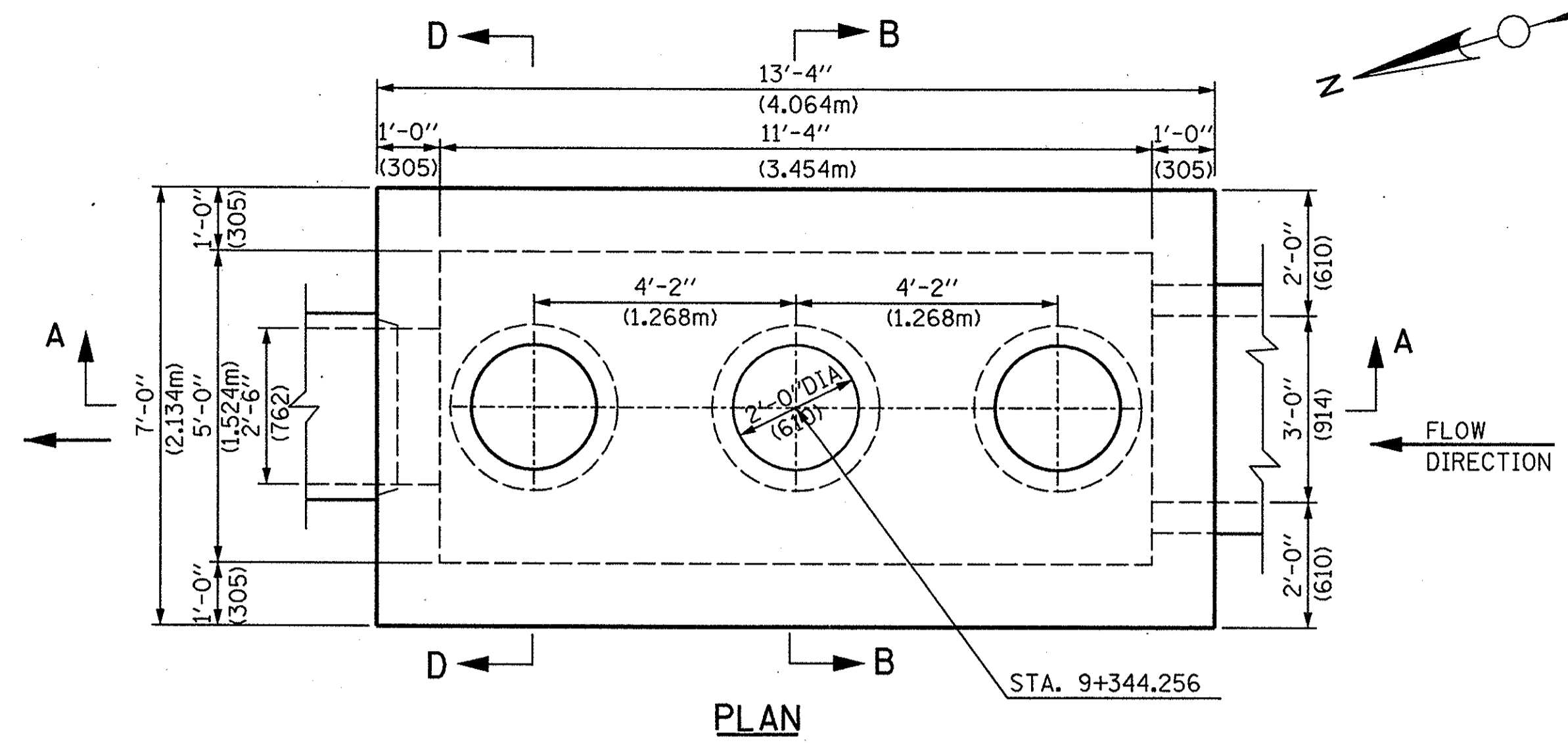


SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

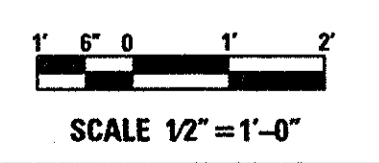
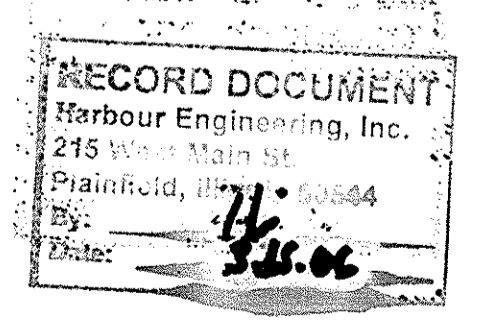
JUNCTION STRUCTURE - J8
STATION 409 + 244.119

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	DS - 4
PROJECT NO.	B-1-440

164091643



- NOTES:**
- UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM M19A
 - FOR GENERAL NOTES SEE SHEET NO. DS-1
 - FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-16
 - COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
 - COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN: G.M.K./N.S.	KEY PLAN:
DRAWN: G.M.K.	
CHECKED: M.T.P.	
APPROVED: S.M.K.	
DATE: 4/16/02	
SCALE: AS NOTED	
FILE:	NO. BY DATE DESCRIPTION
	REVISIONS

CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

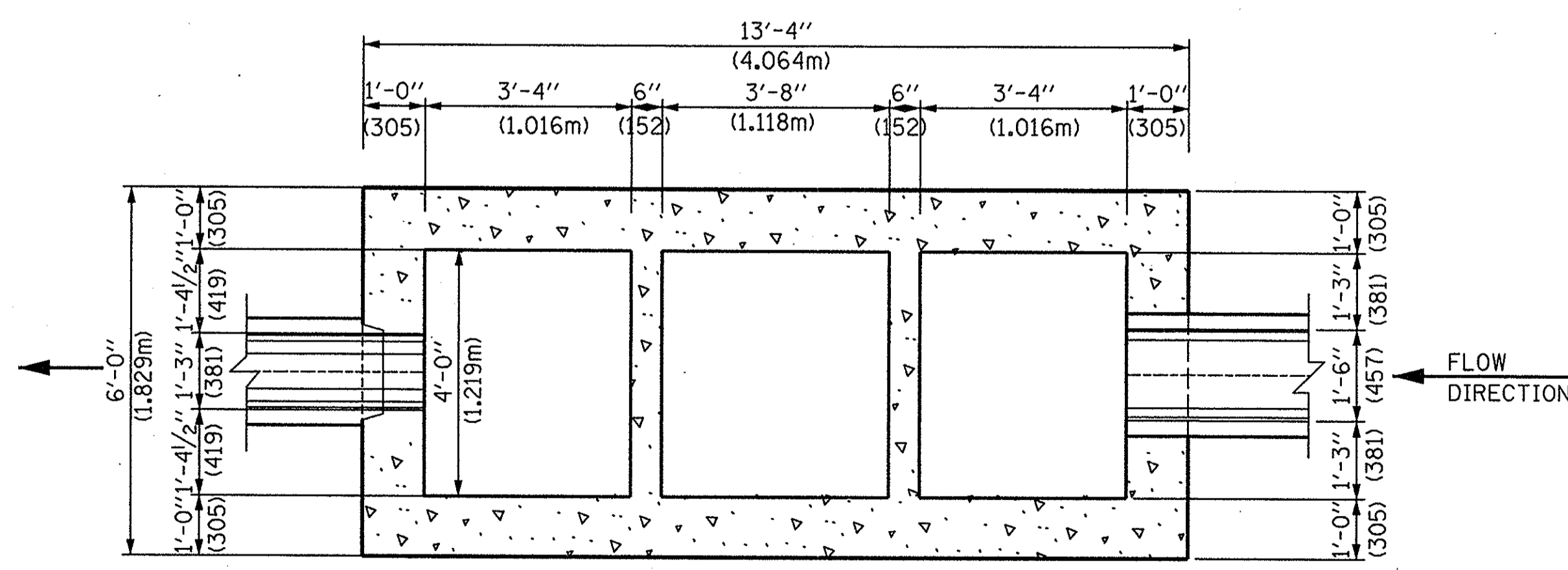
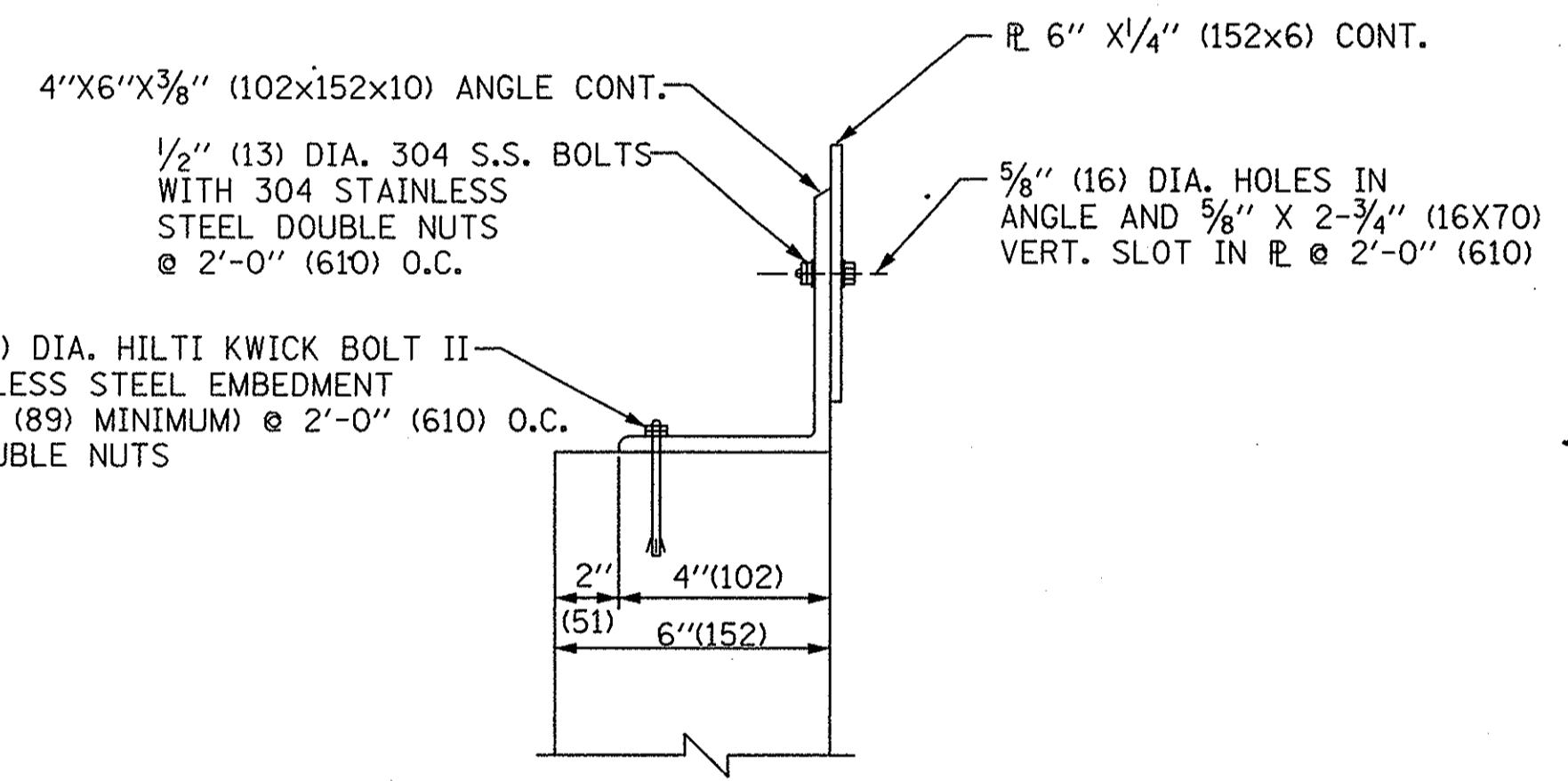
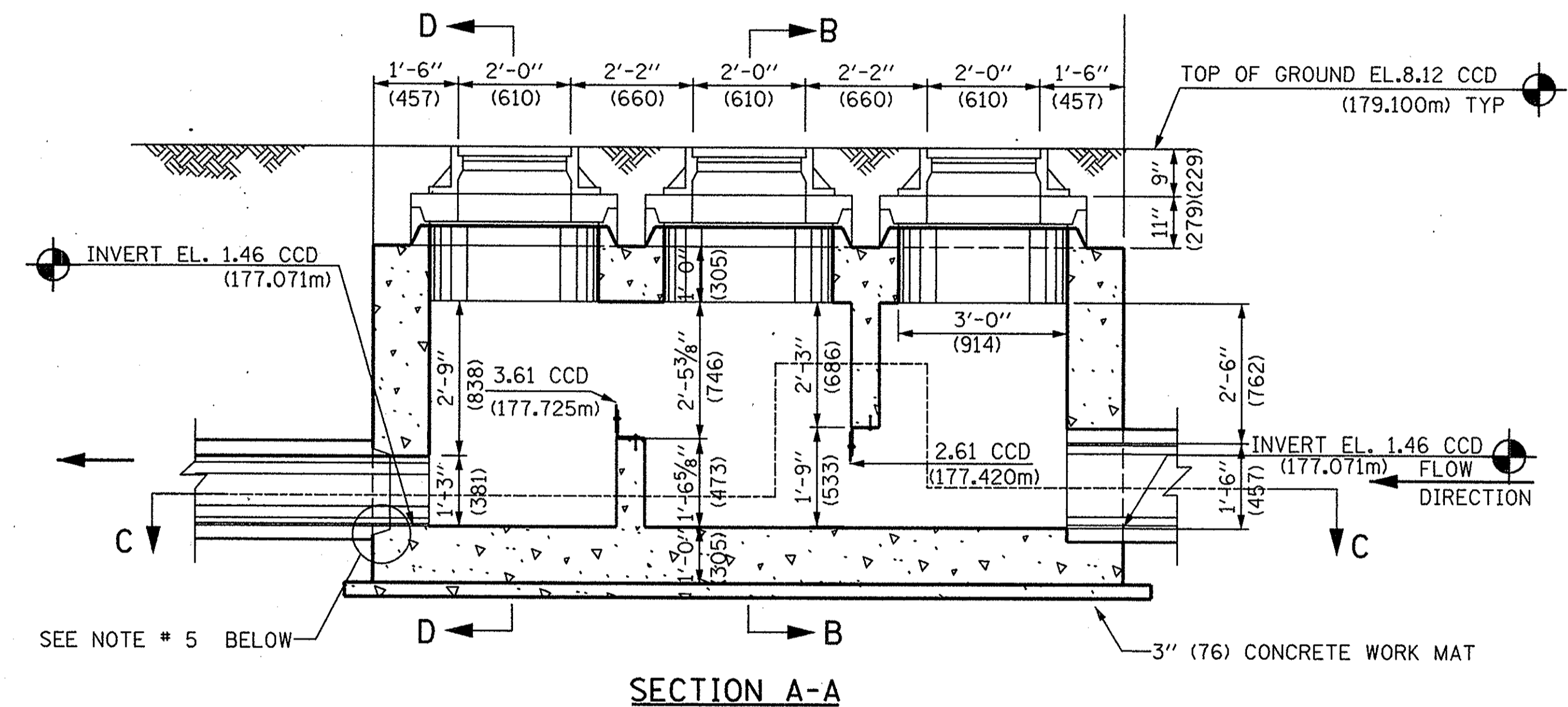
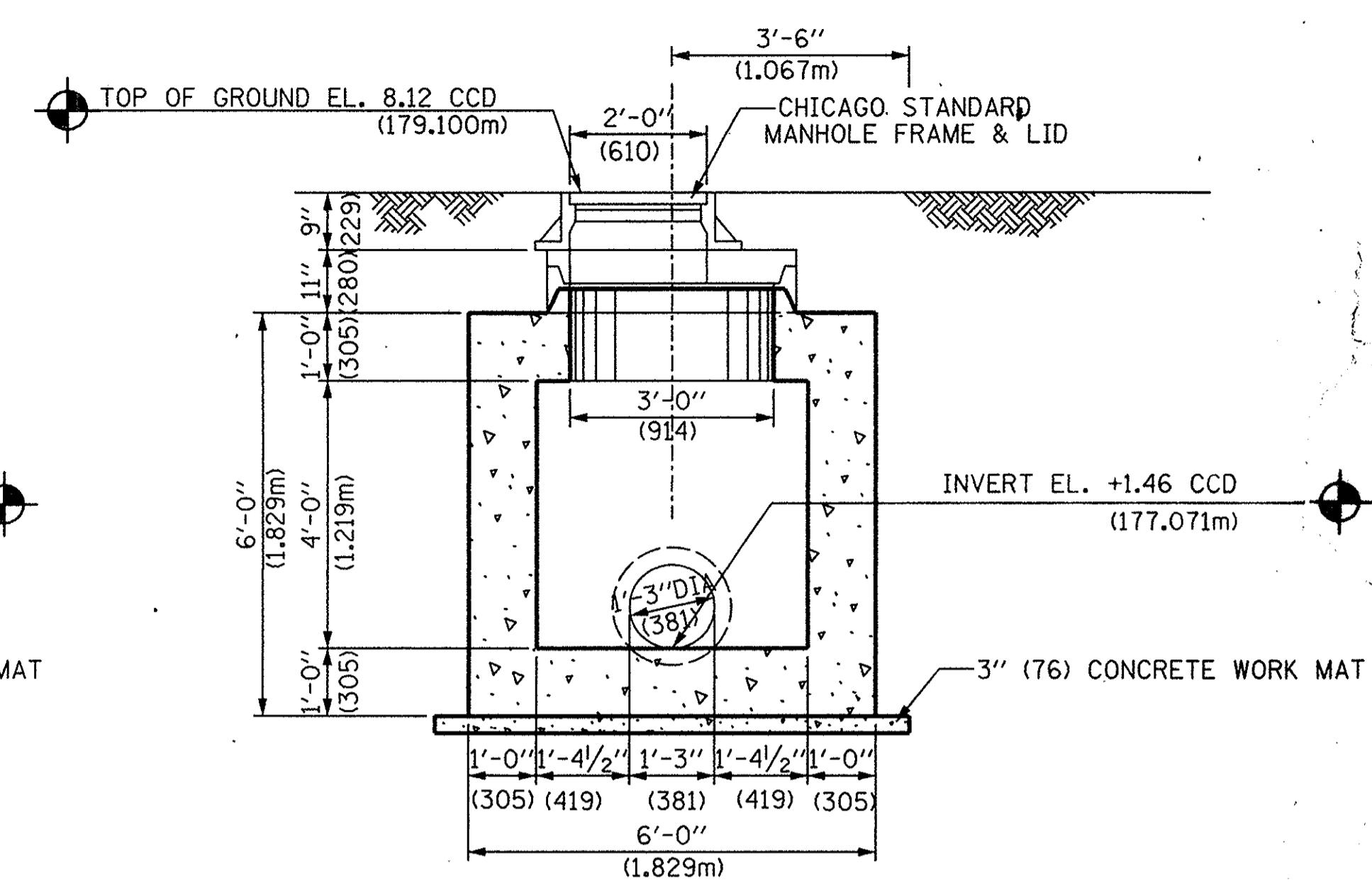
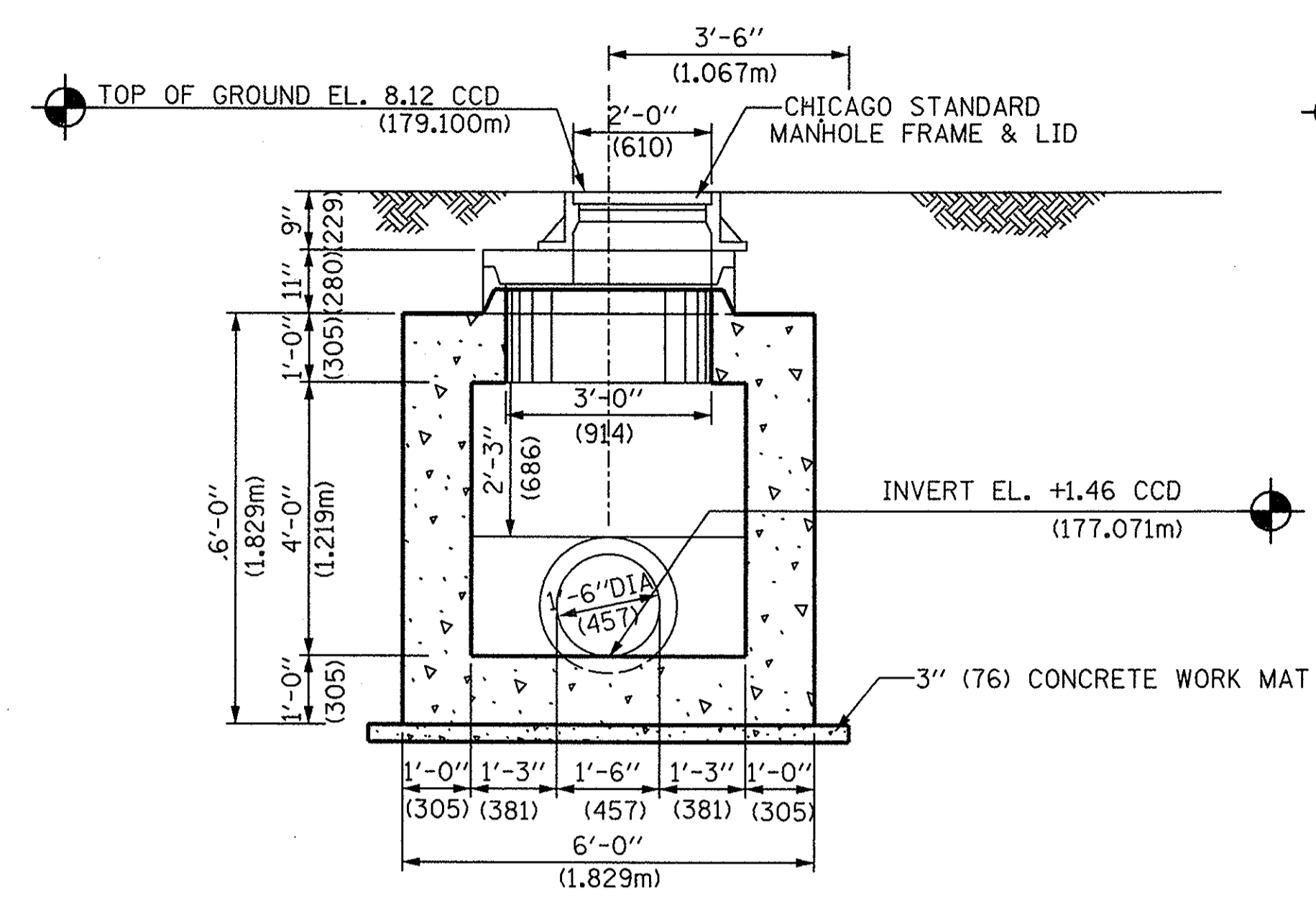
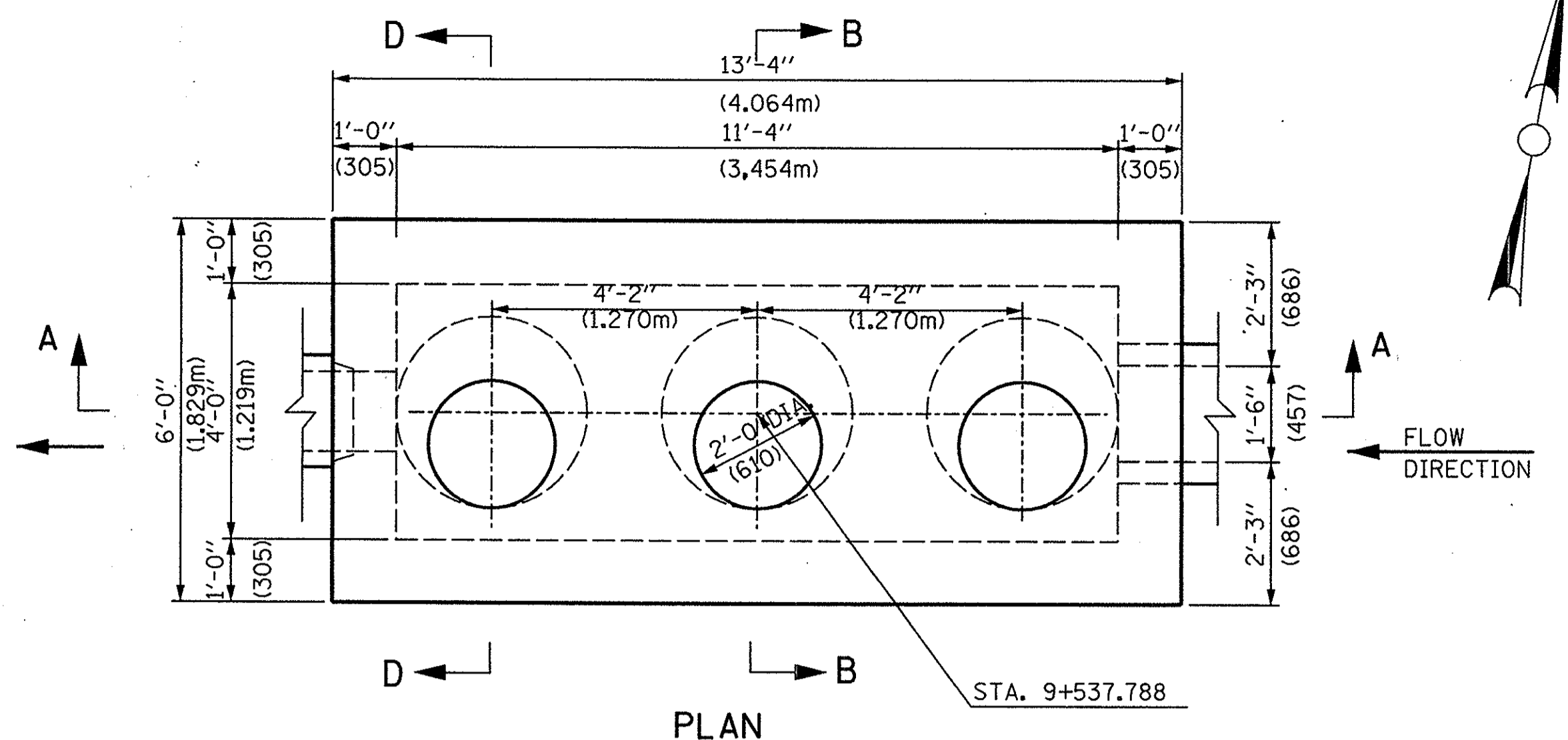
CTE ENGINEERS
CONSULTING ENGINEERS, INC.

DELT ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

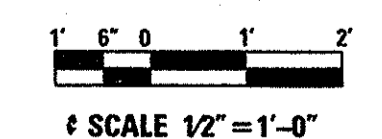
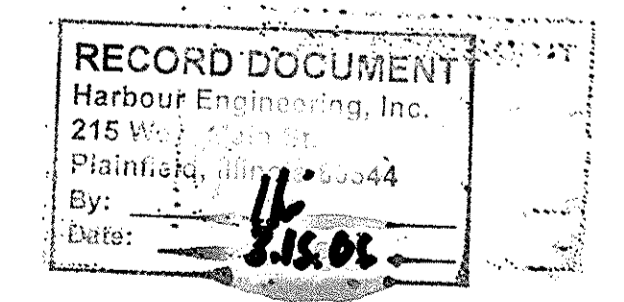
SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

WEIR STRUCTURE - M19A
STATION 9 + 344.256

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	DS - 5
PROJECT NO. B-1-	1640091644

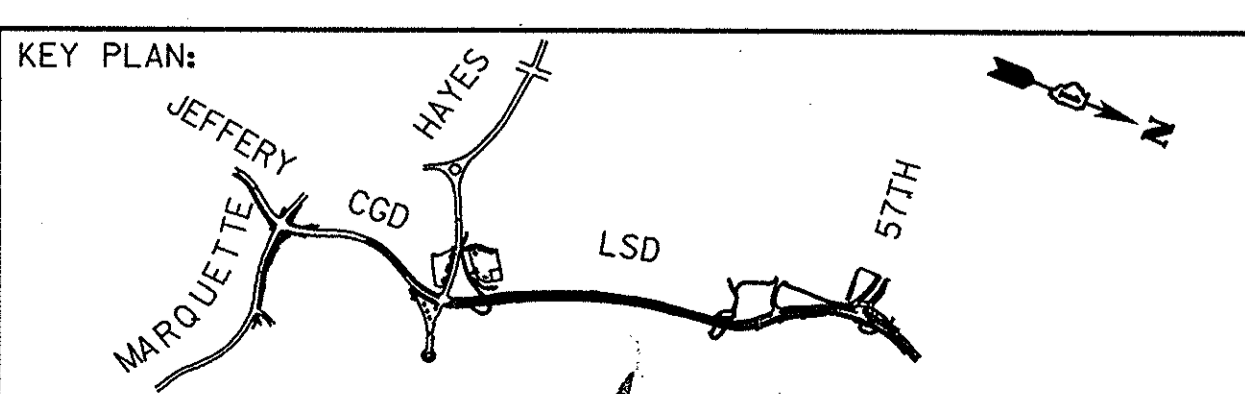


- NOTES:
1. UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM CG5A
 2. FOR GENERAL NOTES SEE SHEET NO. DS-1
 3. FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-17
 4. COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
 5. COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

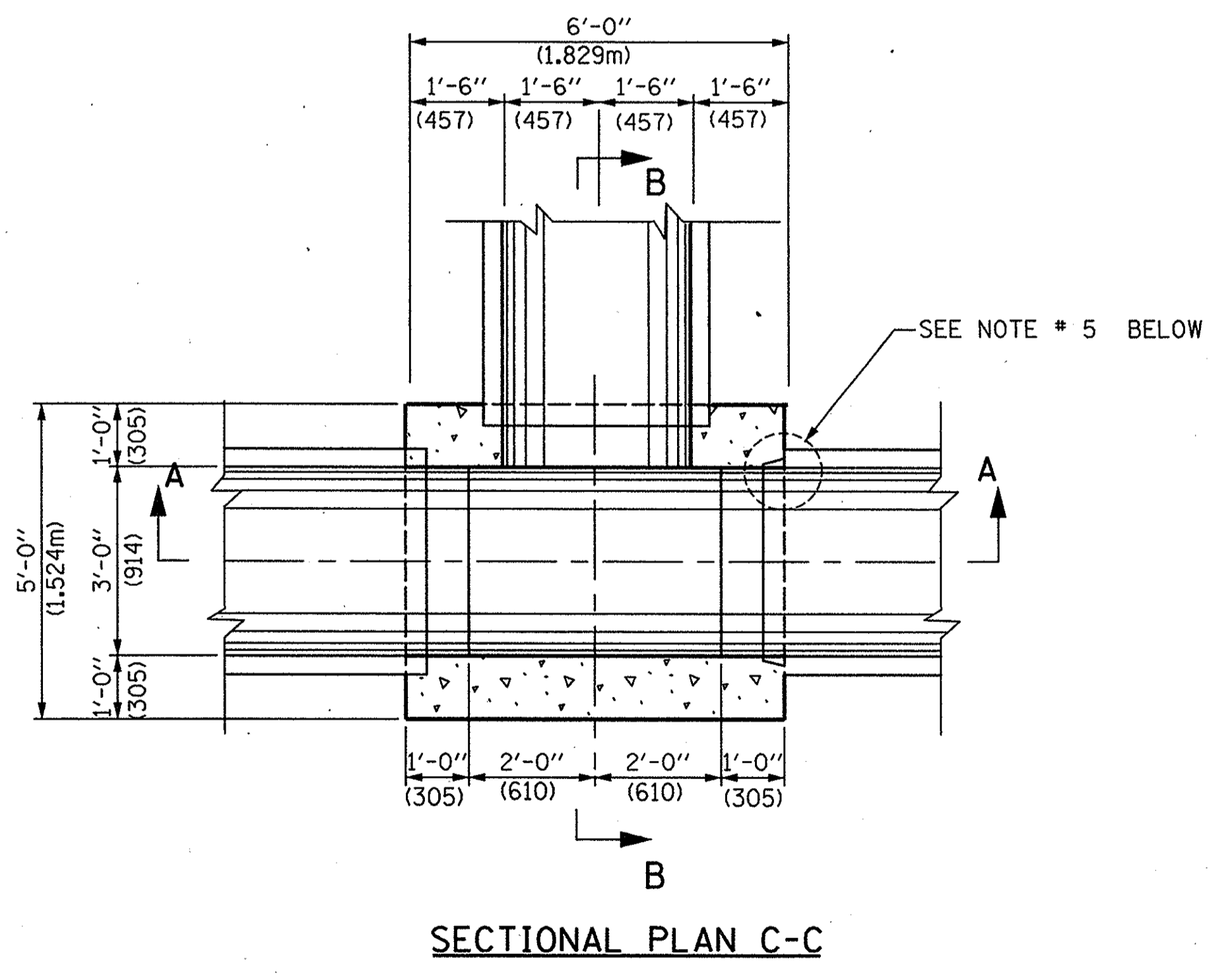
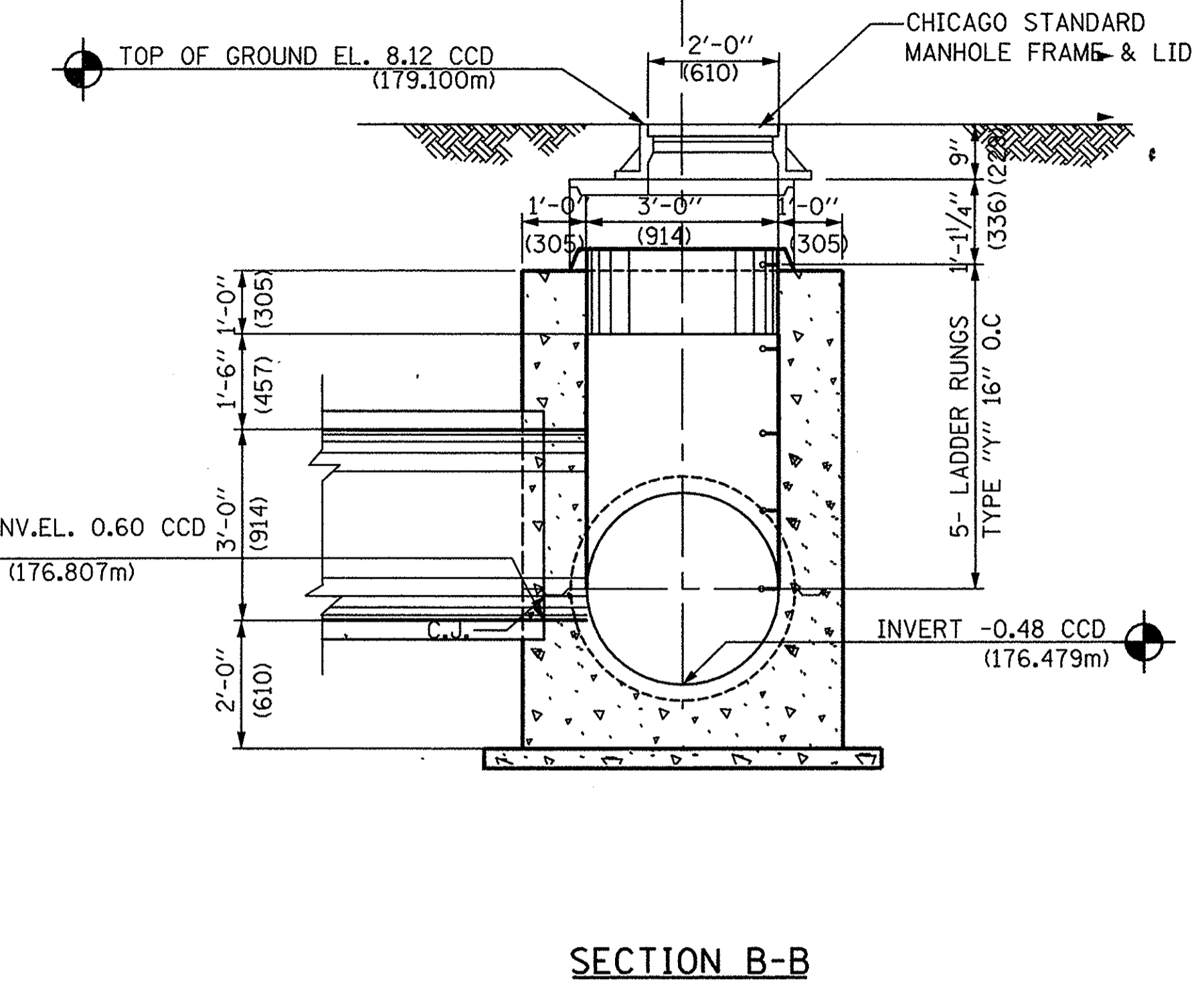
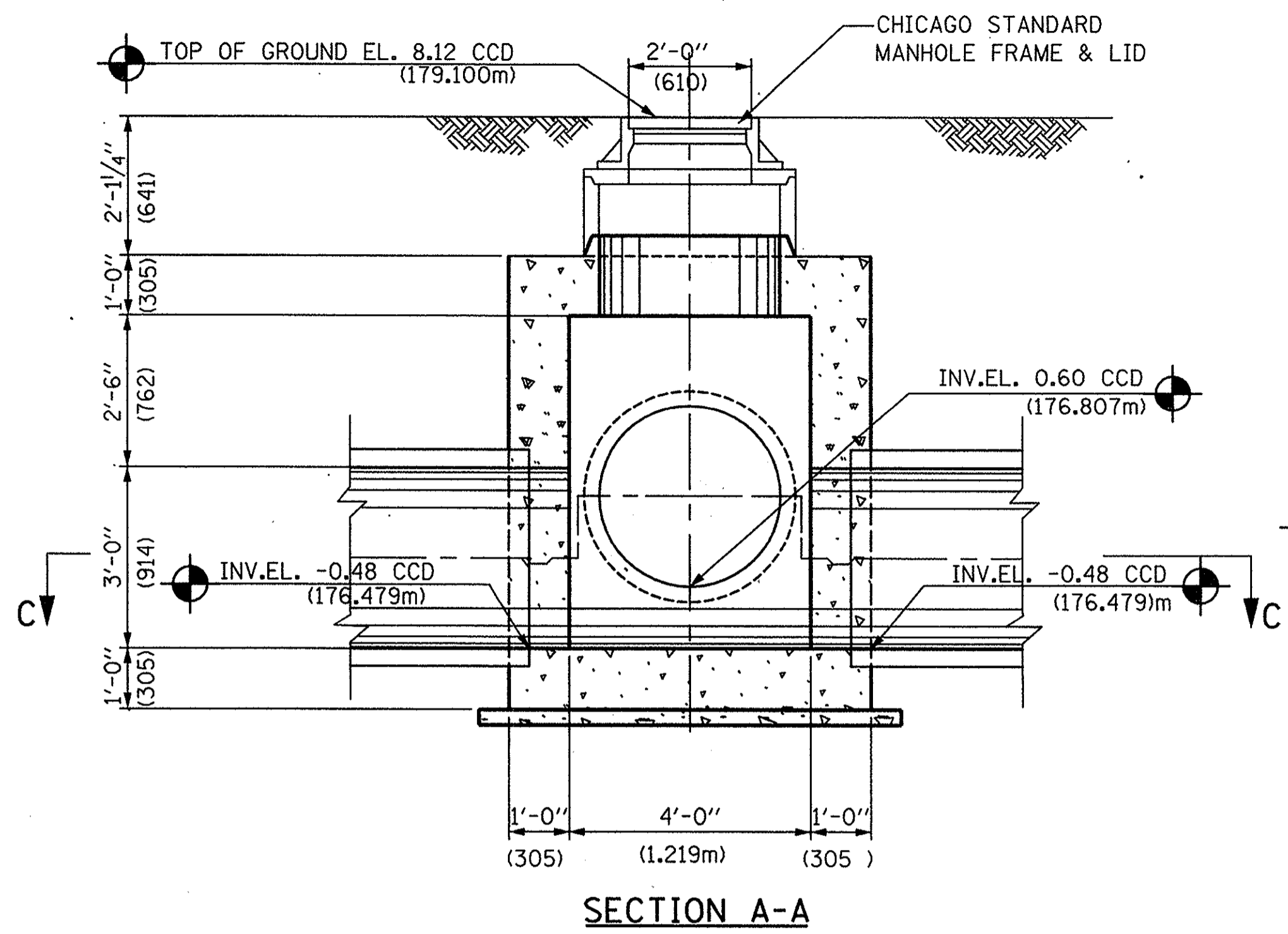
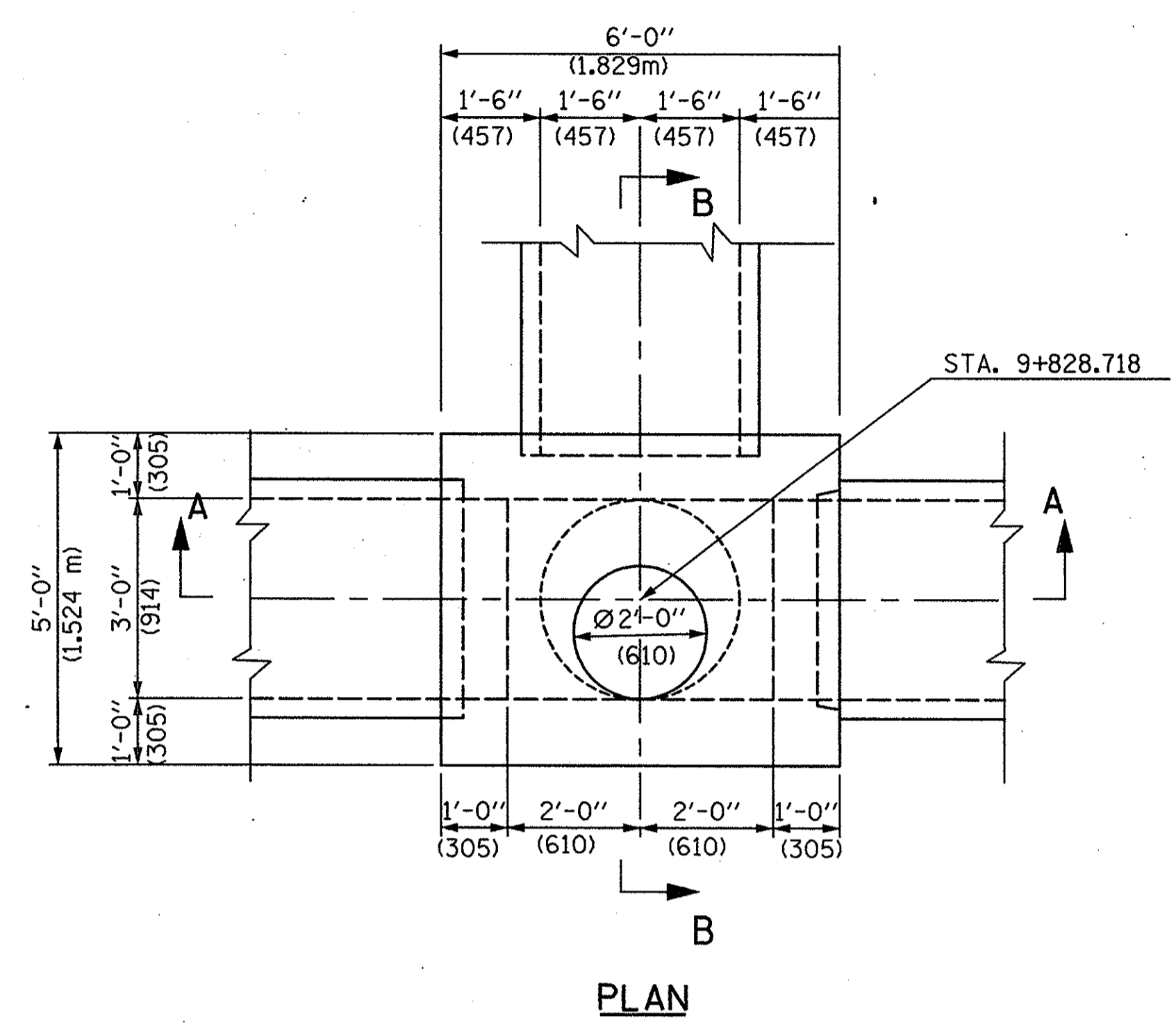
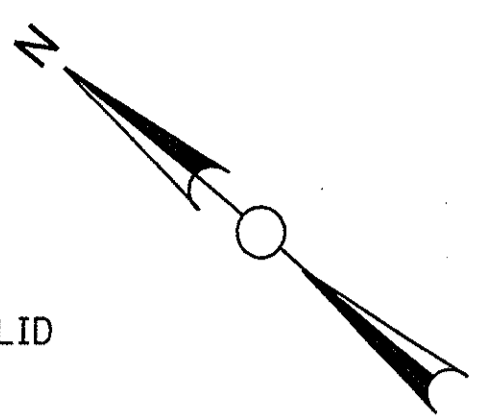
**WEIR STRUCTURE - CG5A
STATION 9 + 537.788**

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
DS - 6

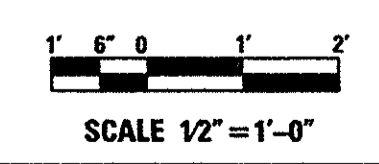
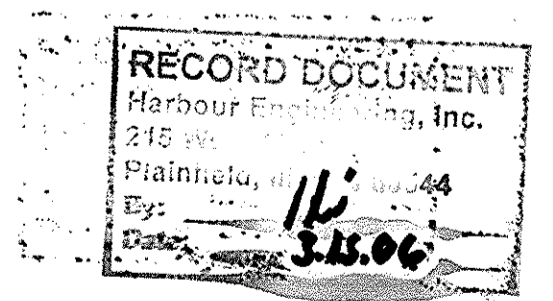
PROJECT NO. B-1-44

1640091645

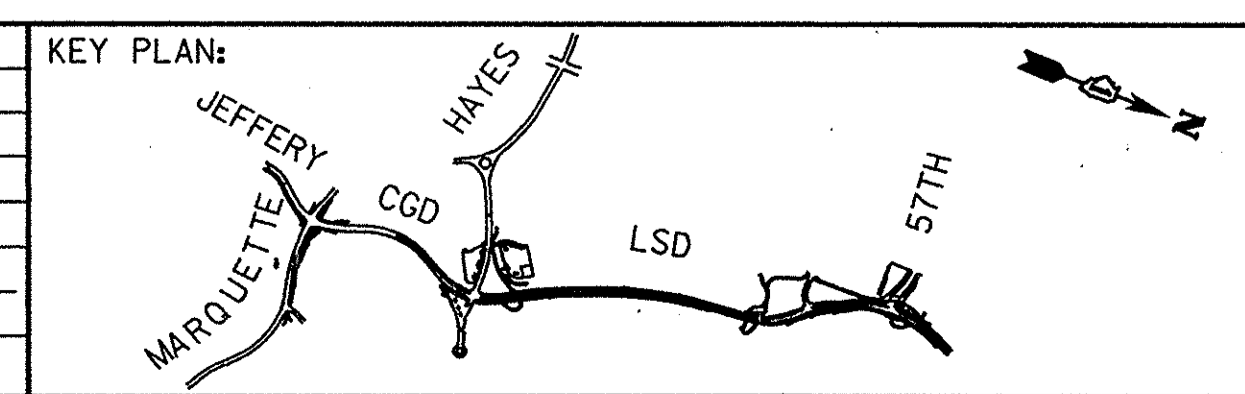


NOTES:

1. UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM CG9A
2. FOR GENERAL NOTES SEE SHEET NO. DS-1
3. FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-18
4. COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
5. COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN: G.M.K./N.S.				
DRAWN: G.M.K.				
CHECKED: M.T.P.				
APPROVED: S.M.K.				
DATE: 4/16/02				
SCALE: AS NOTED				
FILE:	NO.	BY	DATE	DESCRIPTION
				REVISIONS



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, INC.

DEI DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO ILLINOIS.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

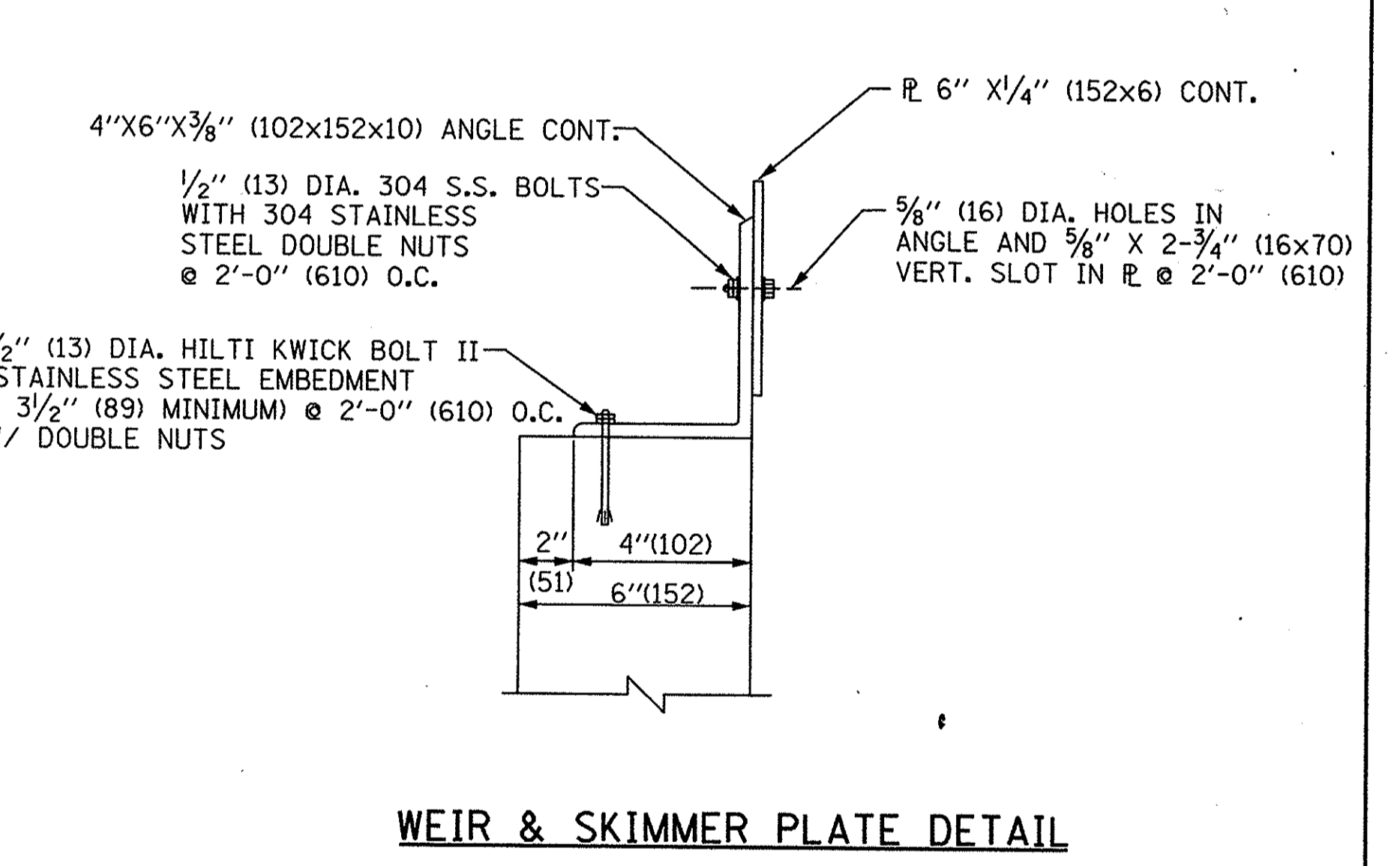
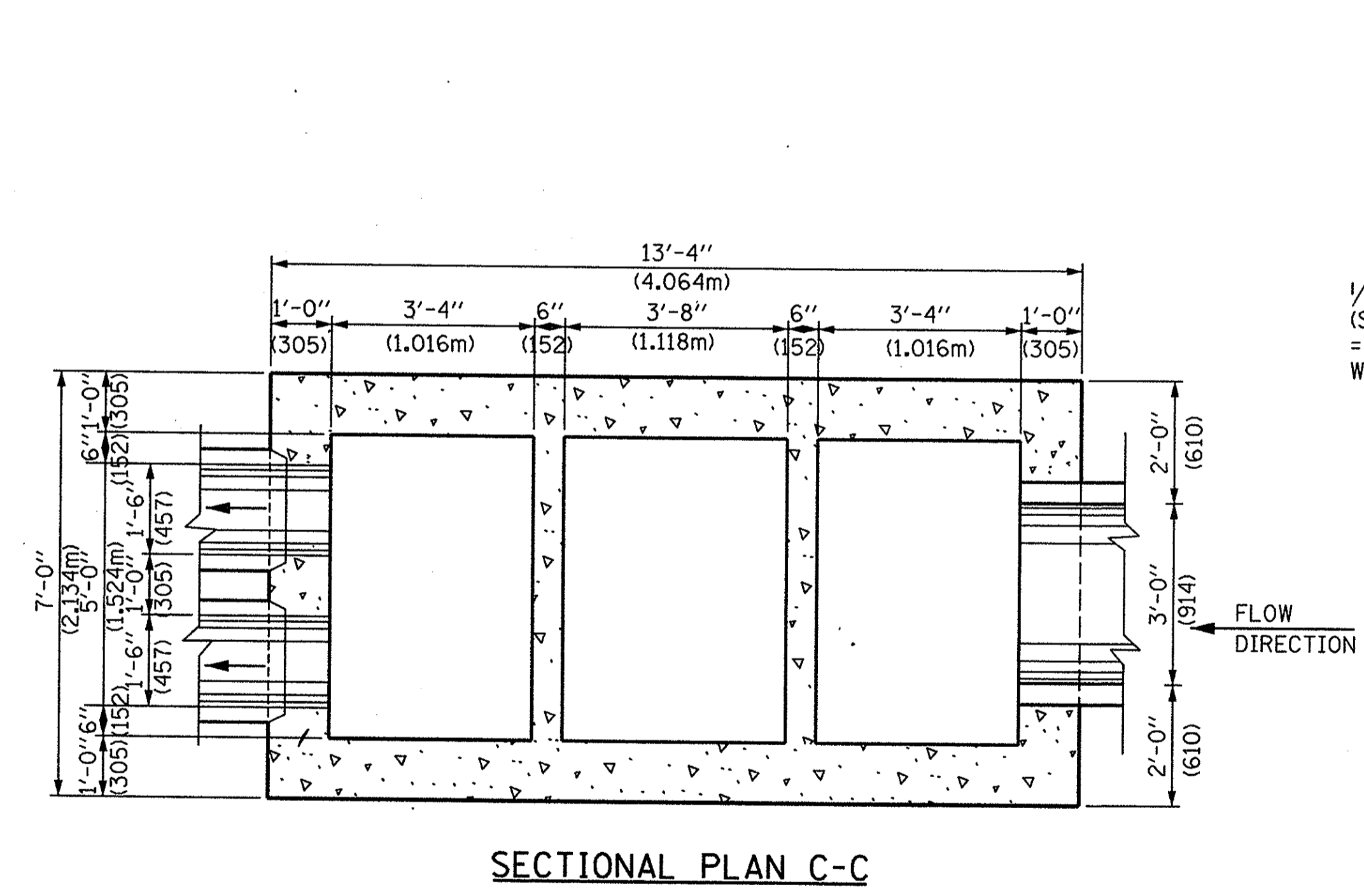
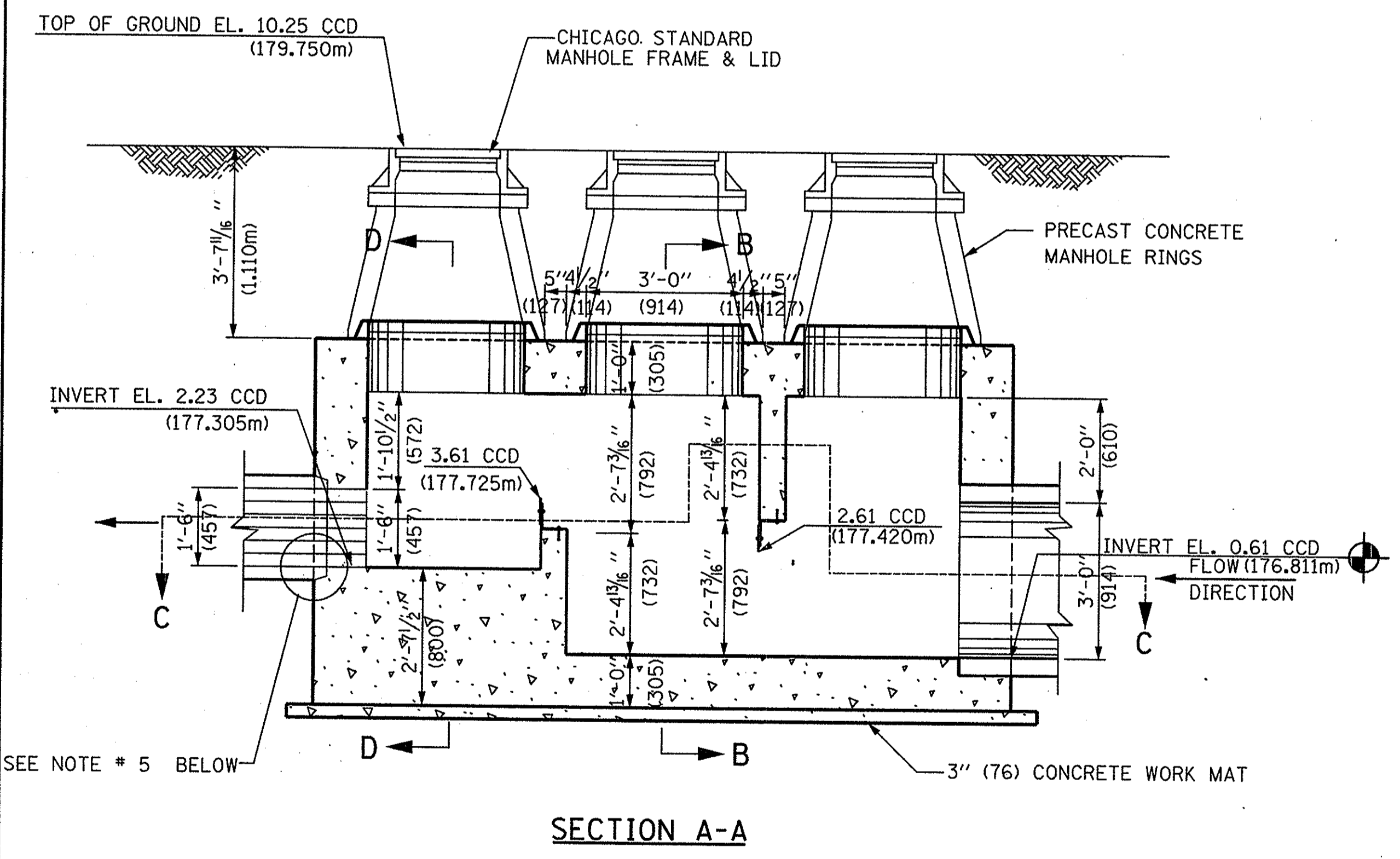
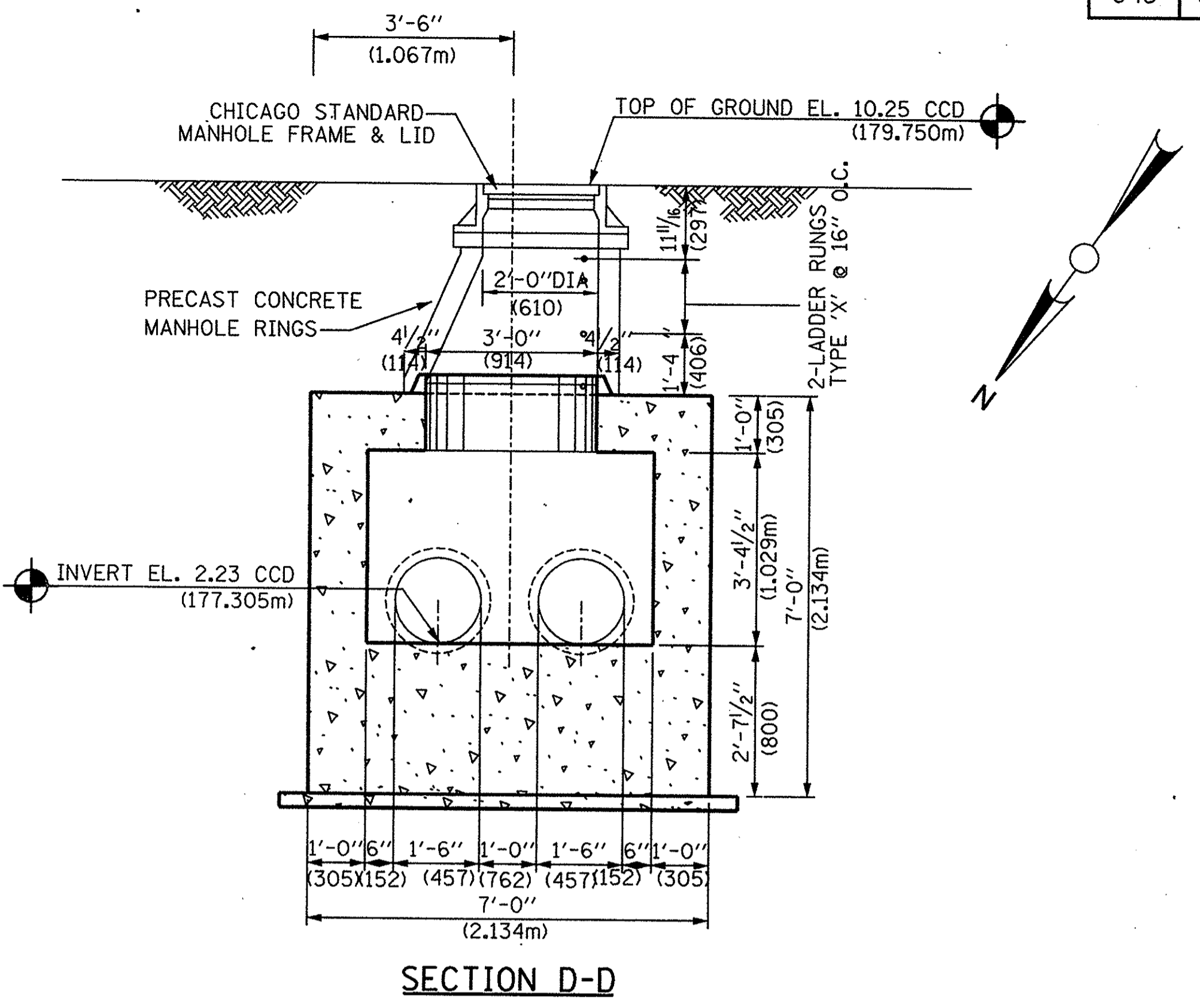
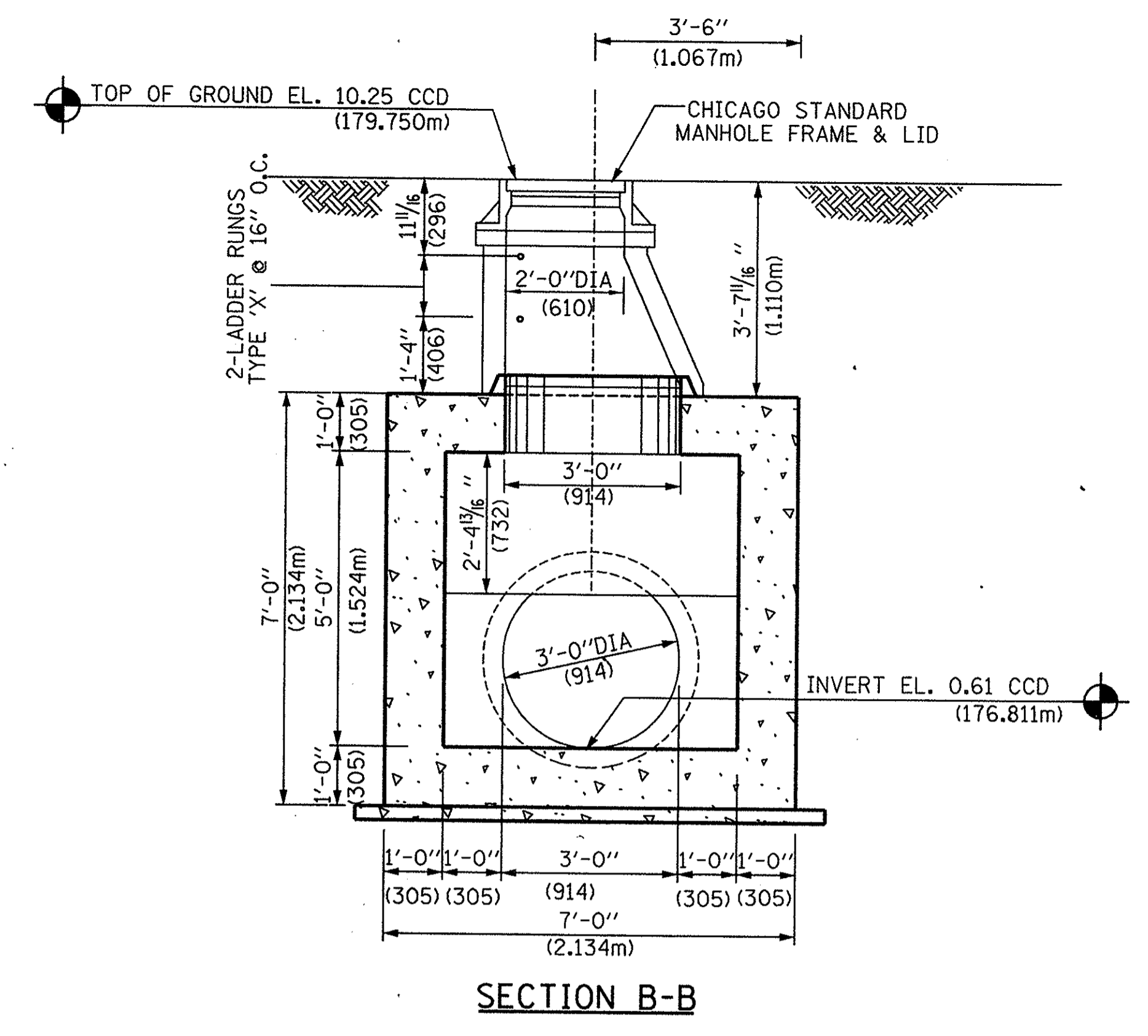
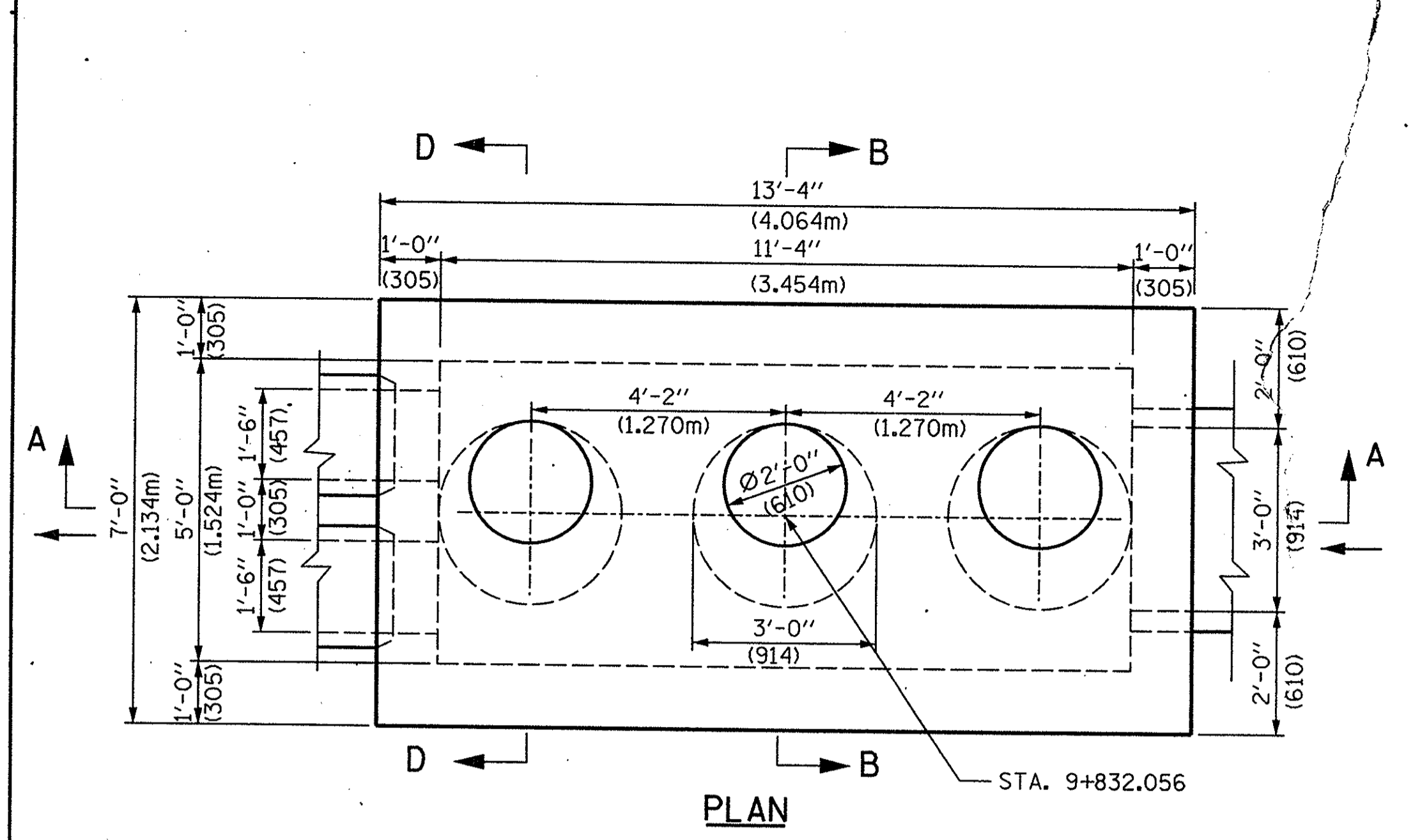
JUNCTION STRUCTURE- CG9A
STATION 9 + 828.718

CONTRACT NO.
00-B0241-06-PV

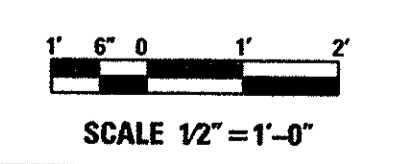
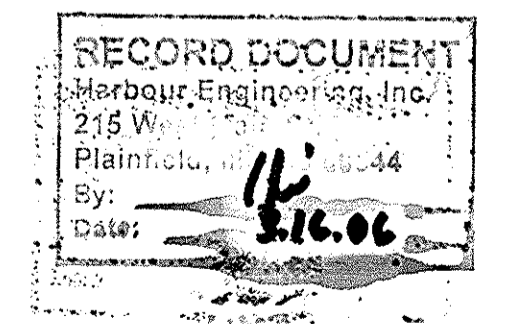
DRAWING NO.
DS - 7

PROJECT NO. B-1-440

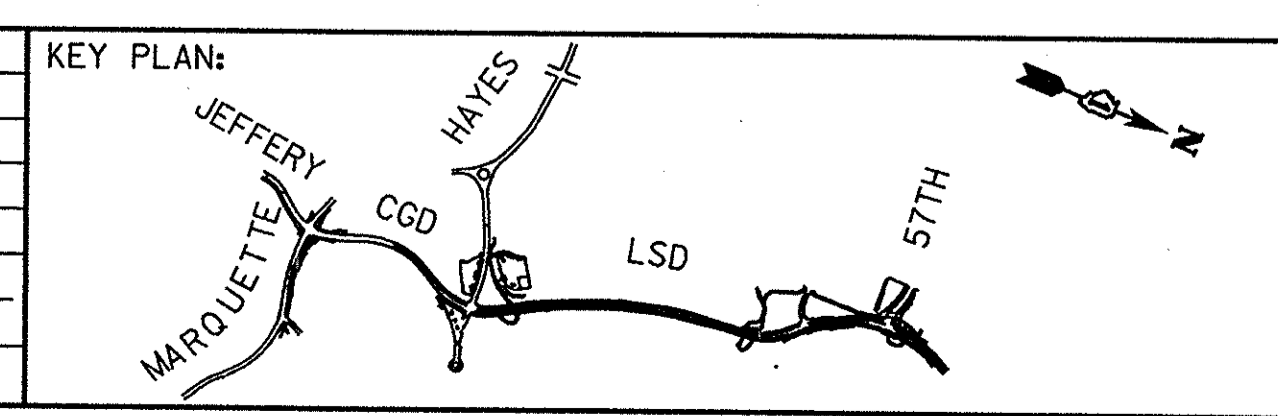
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- NOTES:
- UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM CG9B
 - FOR GENERAL NOTES SEE SHEET NO. DS-1
 - FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-19
 - COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
 - COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

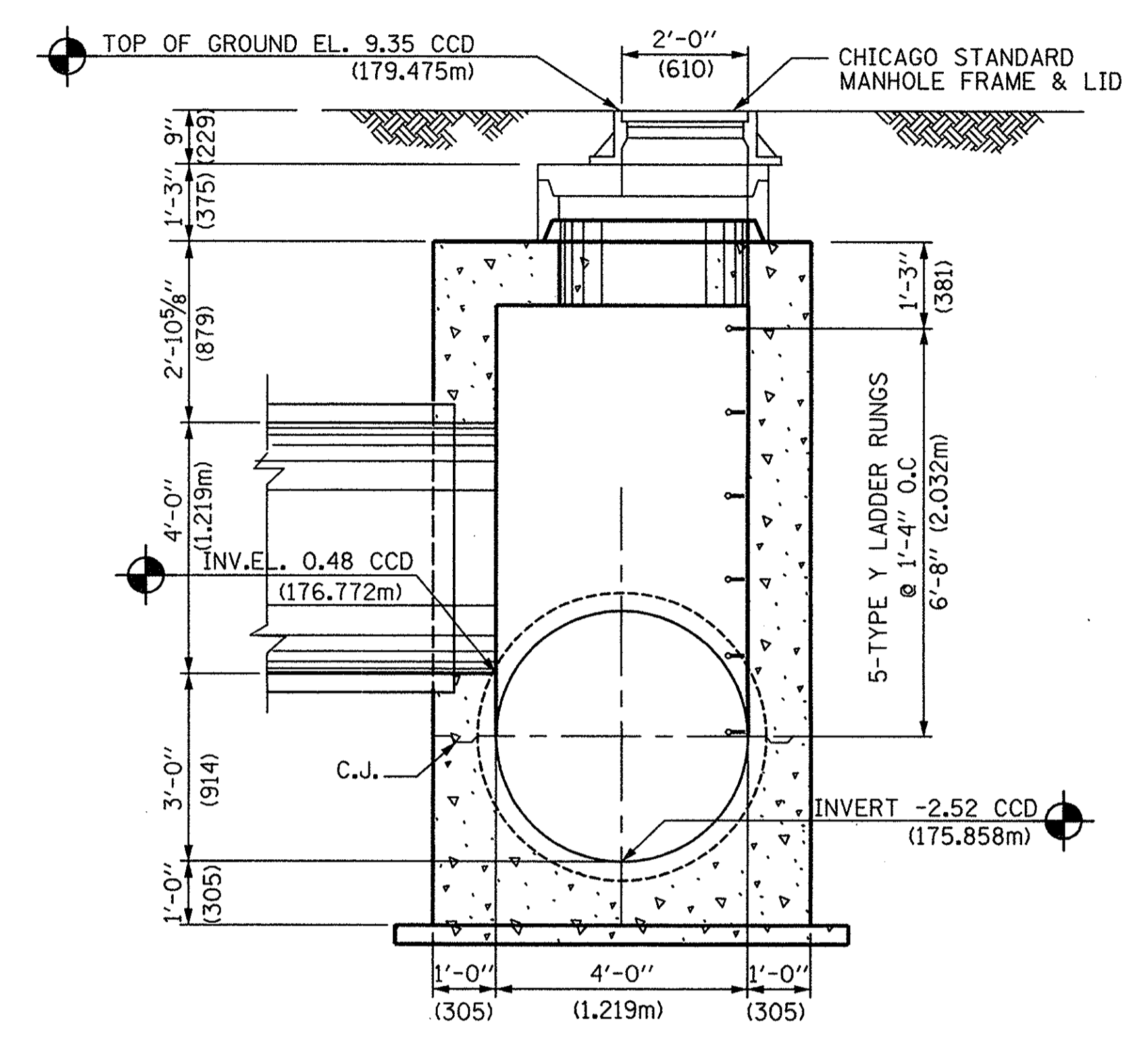
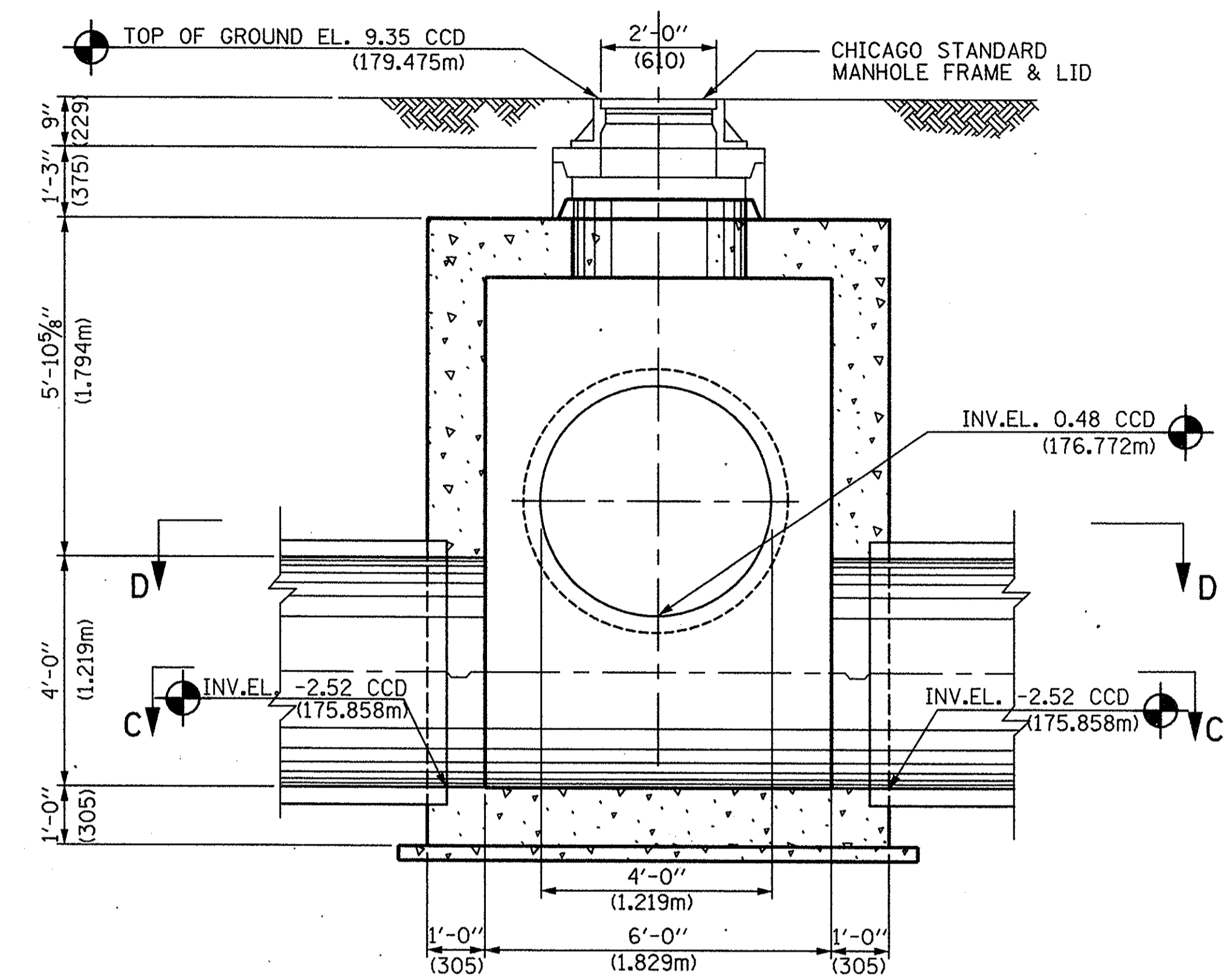
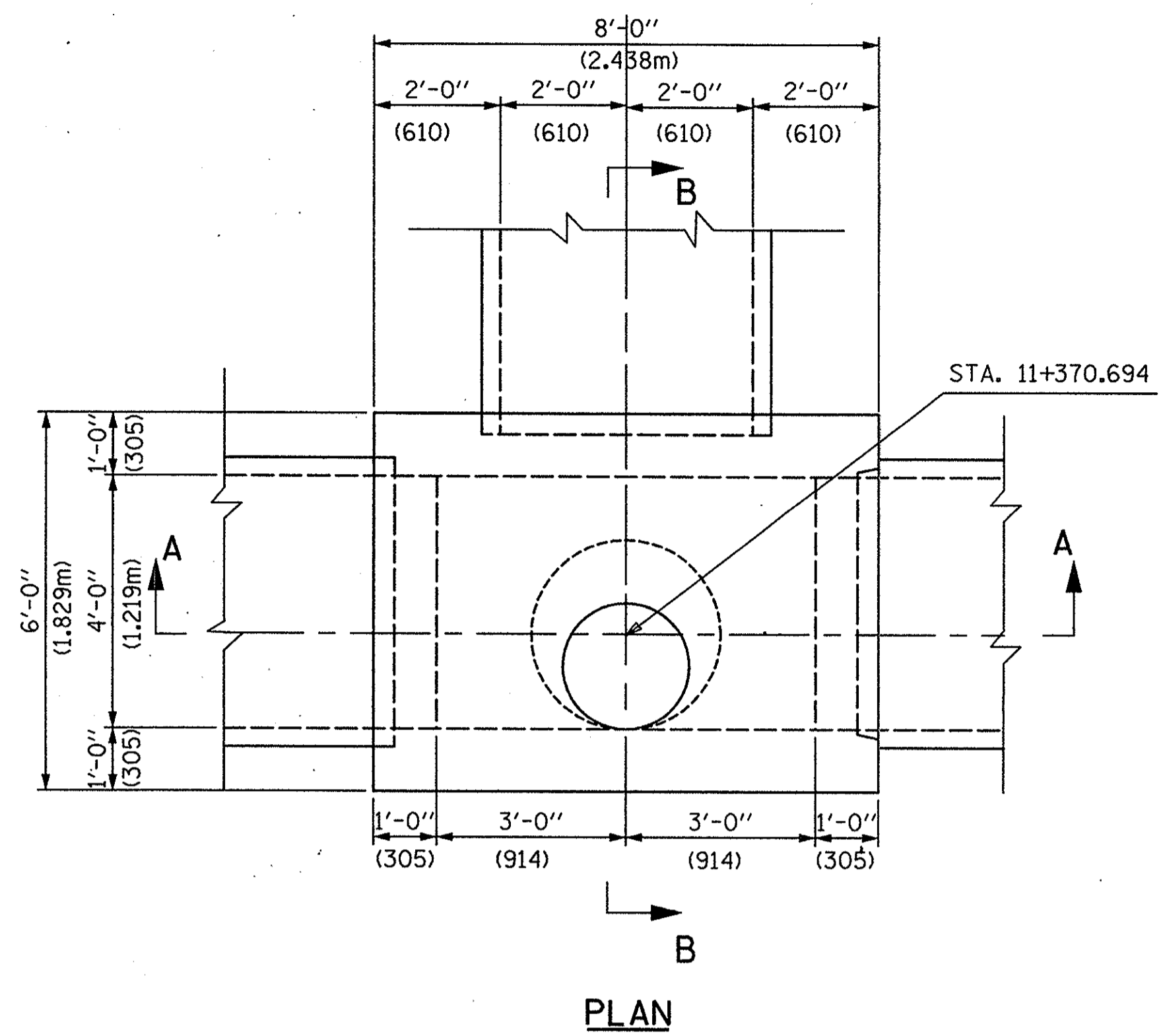
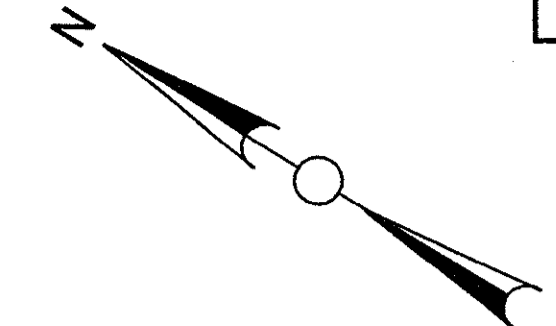
CTE ENGINEERS
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**WEIR STRUCTURE - CG9B
STATION 9+832.056**

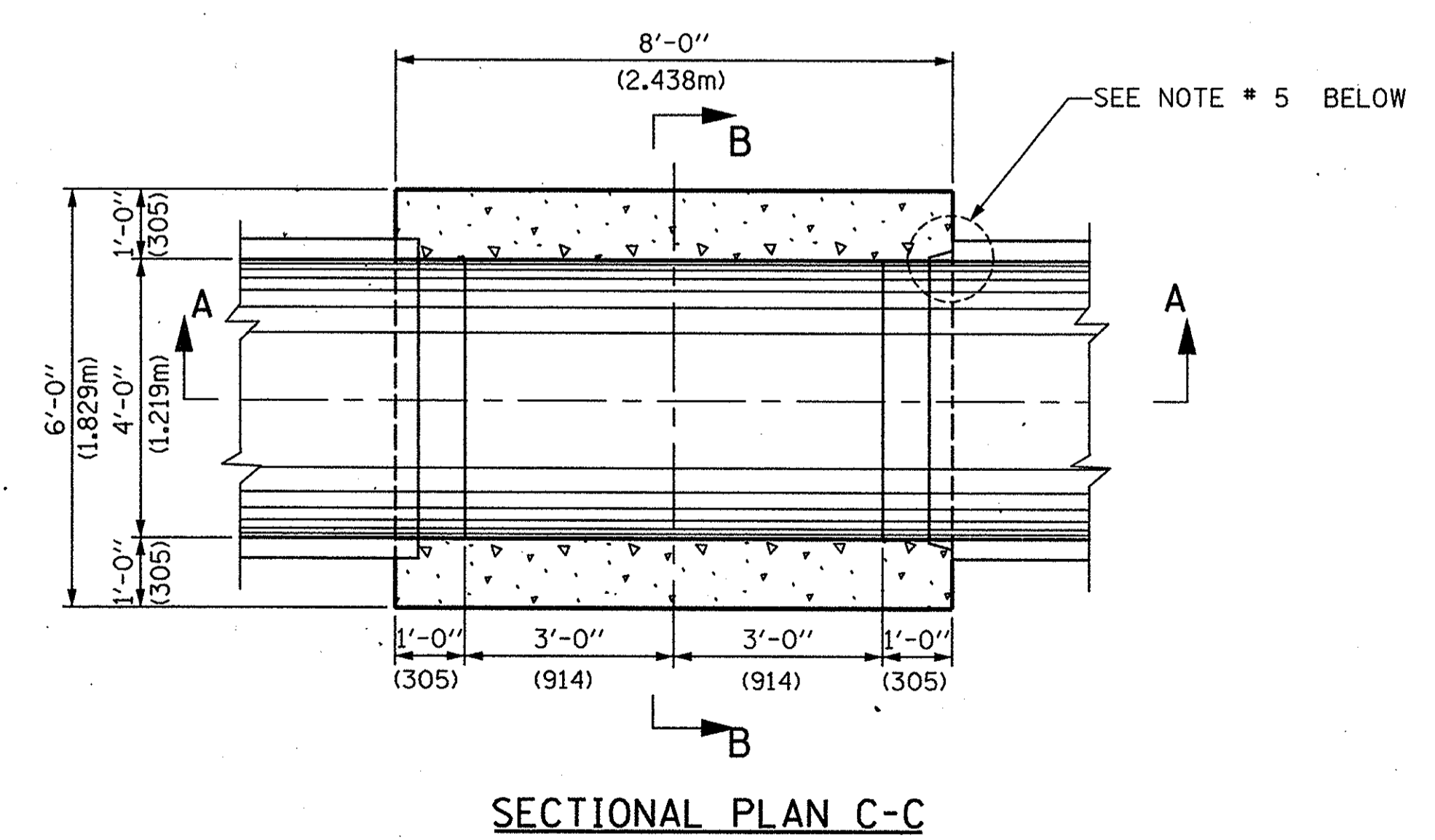
CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	DS - 8
PROJECT NO.	B-1-440

16400916A7

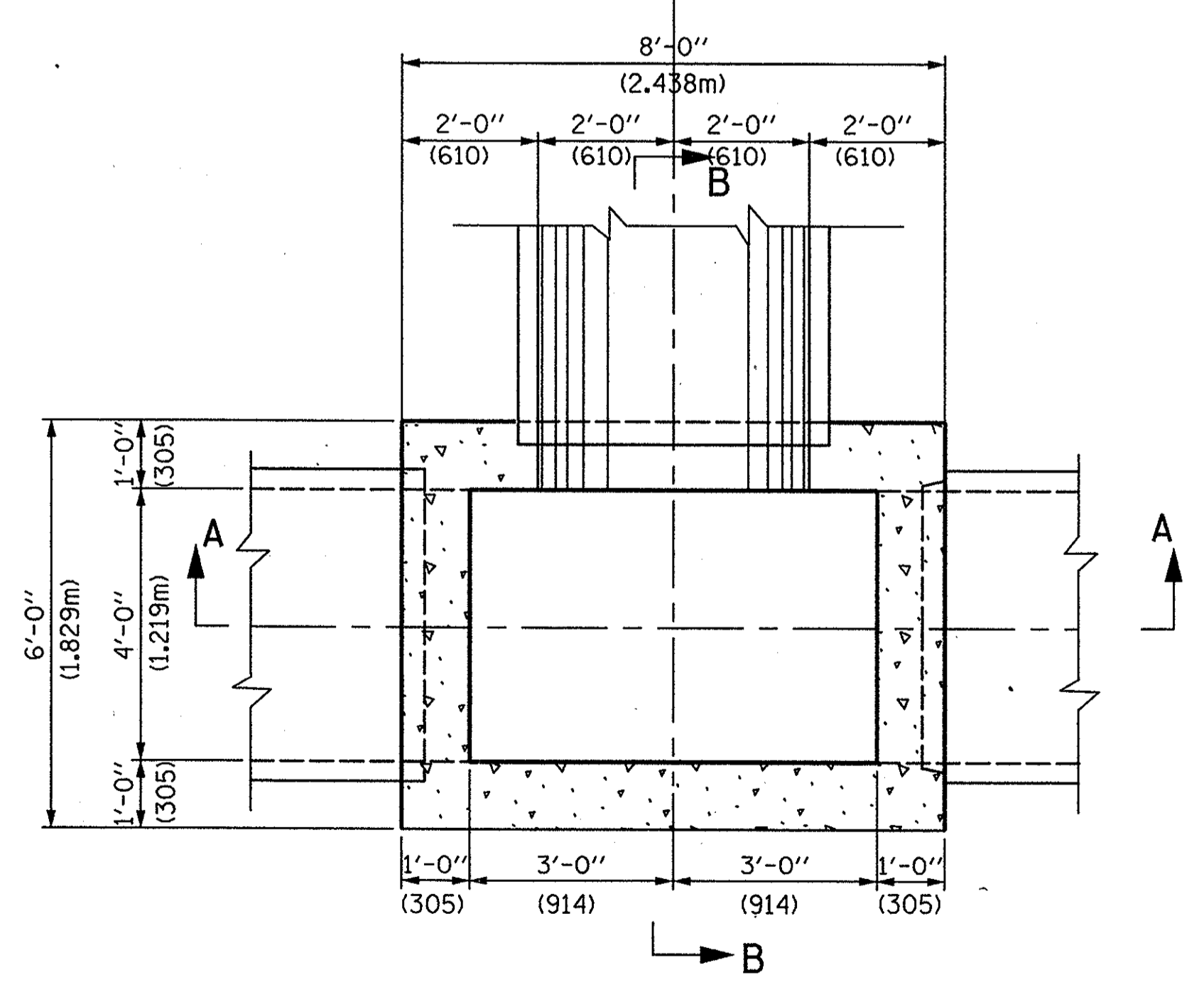


SECTION A-A

SECTION B-B



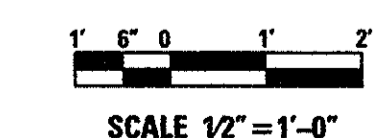
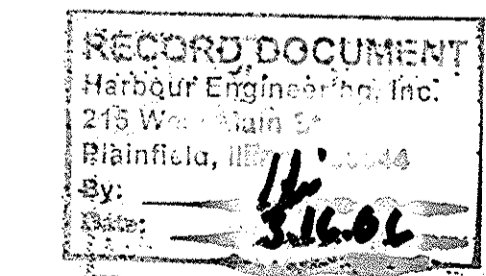
SECTIONAL PLAN C-C



SECTIONAL PLAN D-D

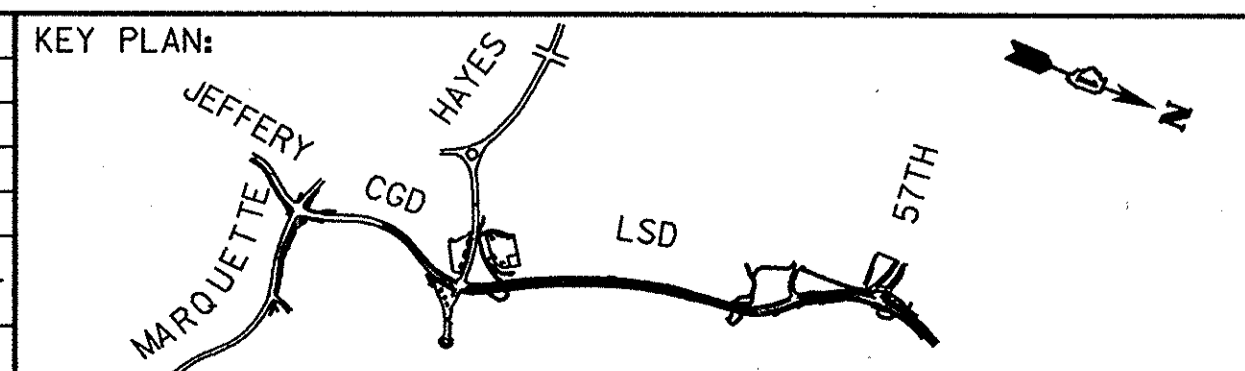
NOTES:

1. UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM CG32
2. FOR GENERAL NOTES SEE SHEET NO. DS-1
3. FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-20
4. COORDINATE WITH CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES AND TOPOGRAPHY.
5. COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSER TOWNSEND ENGINEERS, INC.

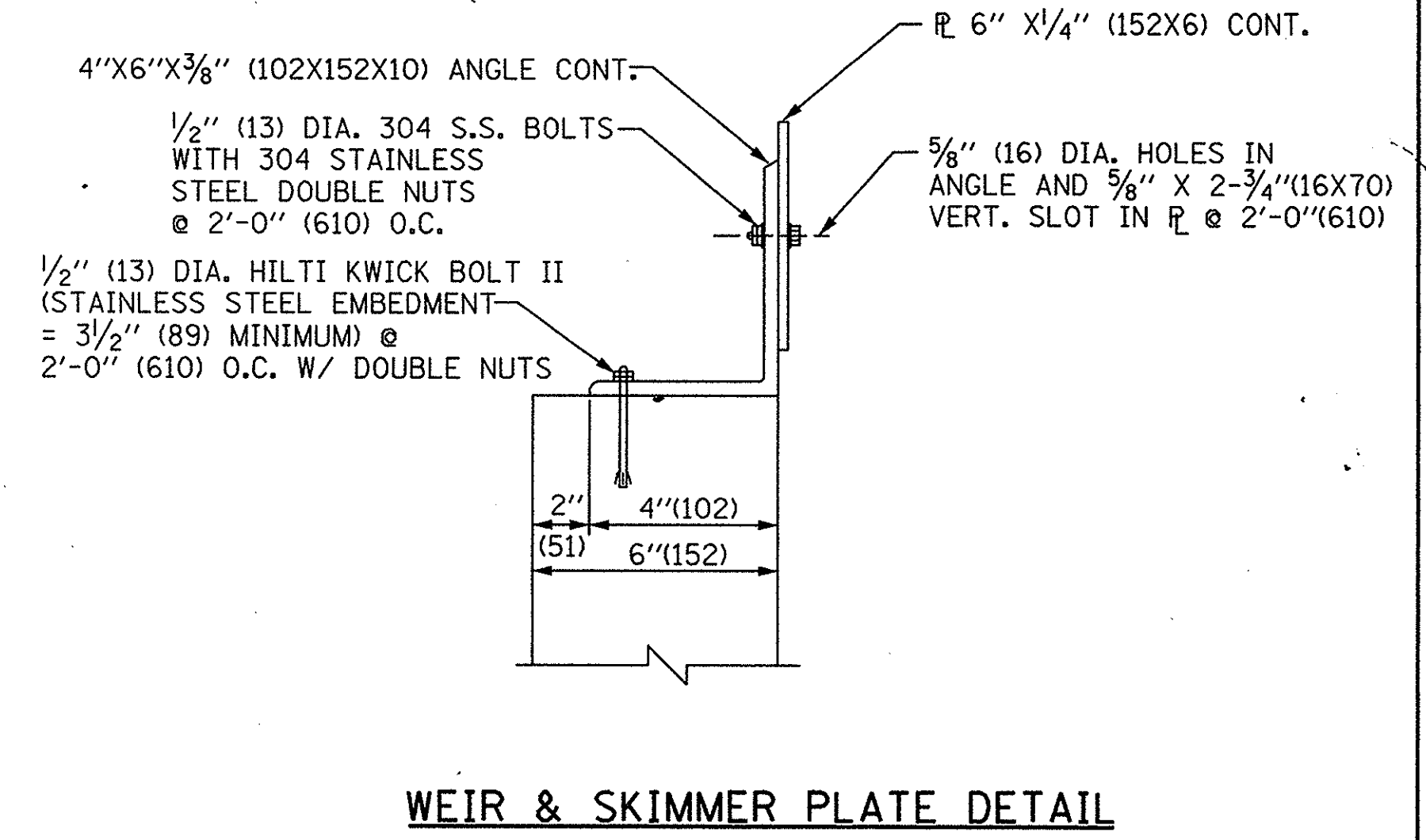
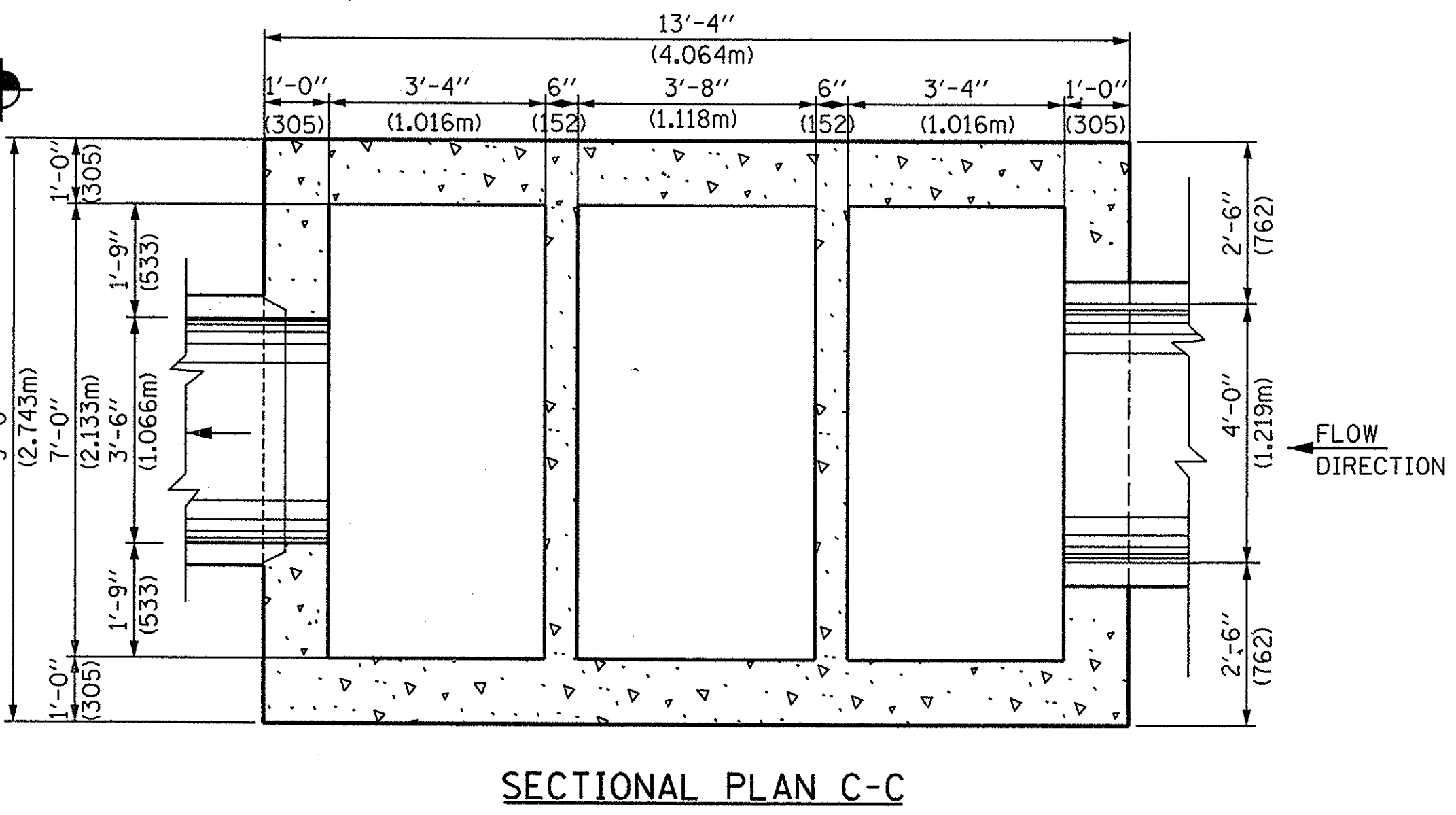
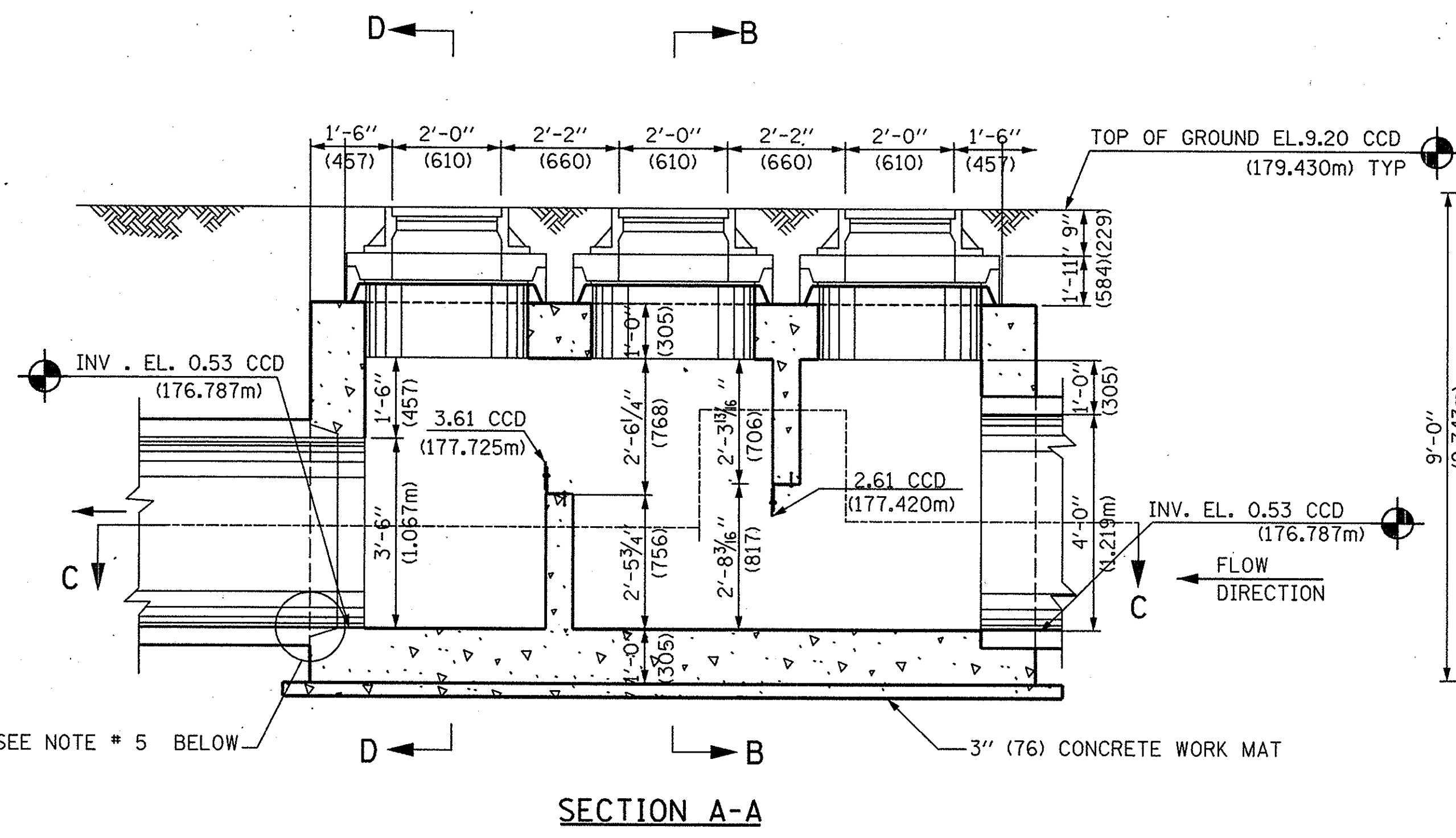
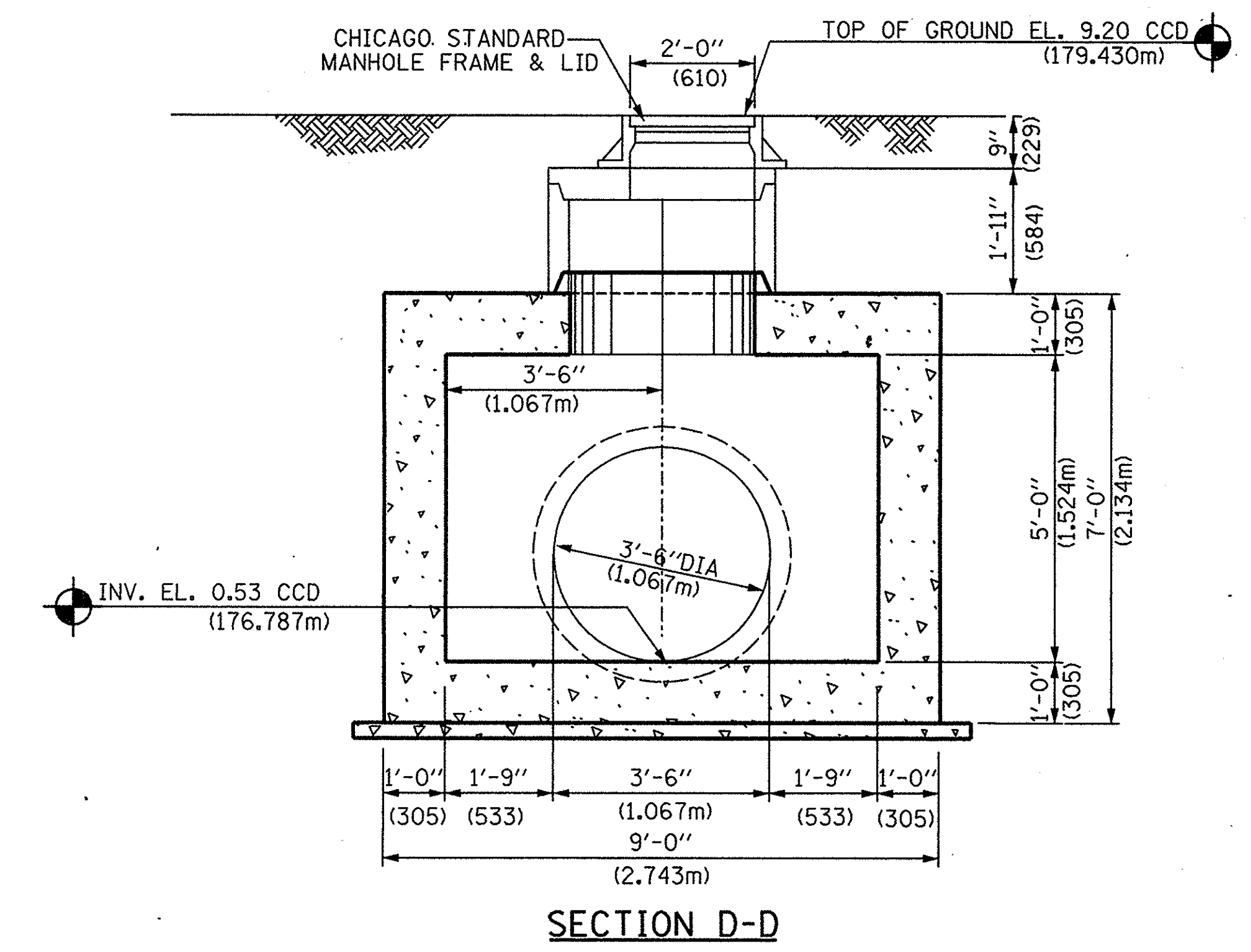
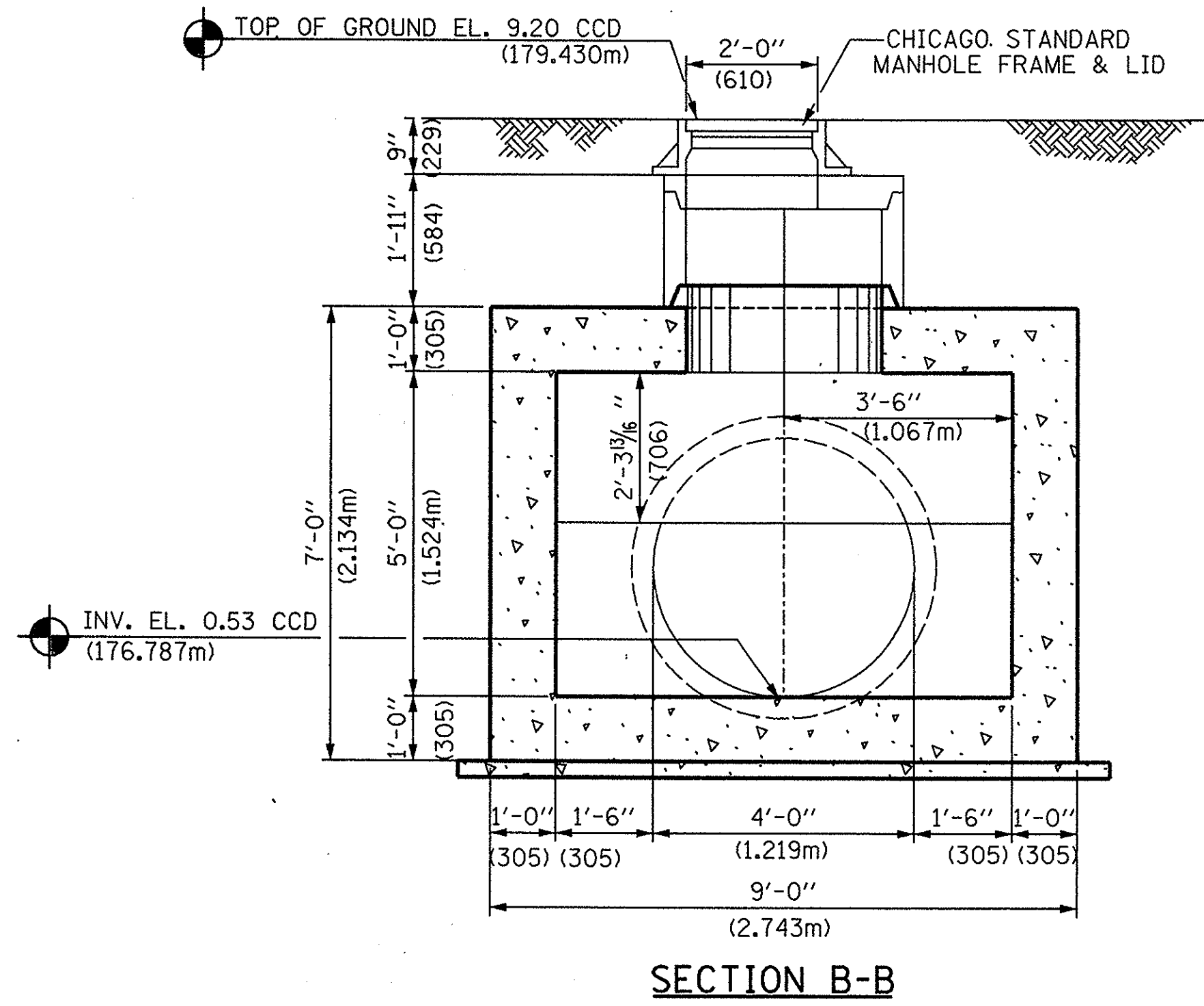
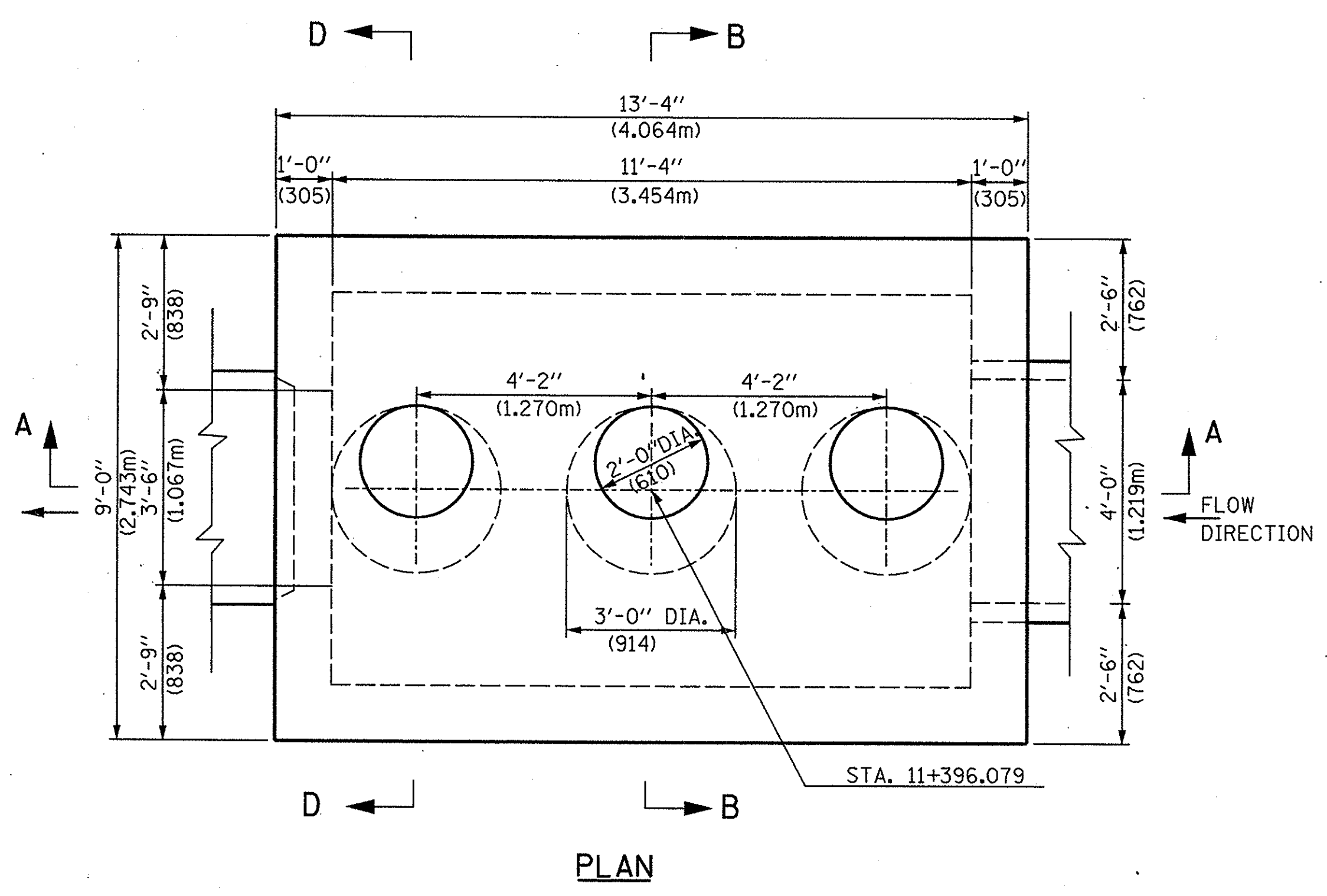
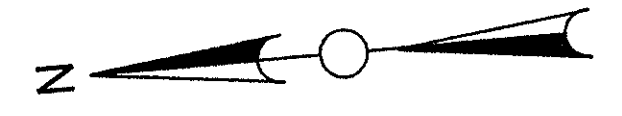
DEI DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO ILLINOIS.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

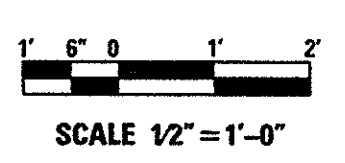
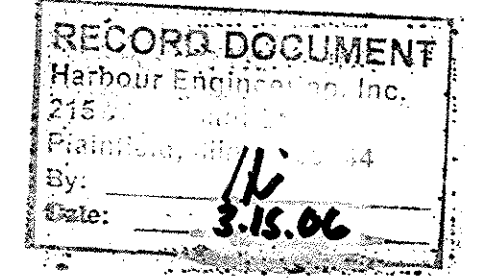
JUNCTION STRUCTURE- CG32
STATION 11 + 370.694

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	DS - 9
PROJECT NO.	B-1-440

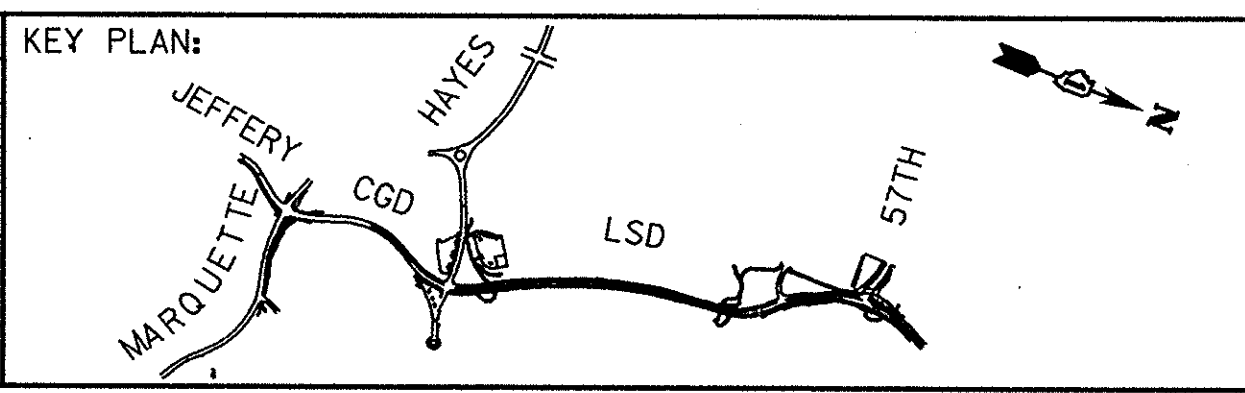
164009164B



- NOTES:**
- UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM CG33
 - FOR GENERAL NOTES SEE SHEET NO. DS-1
 - FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-21
 - COORDINATE WITH CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES AND TOPOGRAPHY.
 - COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN: G.M.K./N.S.			
DRAWN: G.M.K.			
CHECKED: M.T.P.			
APPROVED: S.M.K.			
DATE: 4/16/02			
SCALE: AS NOTED			
FILE:			
NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

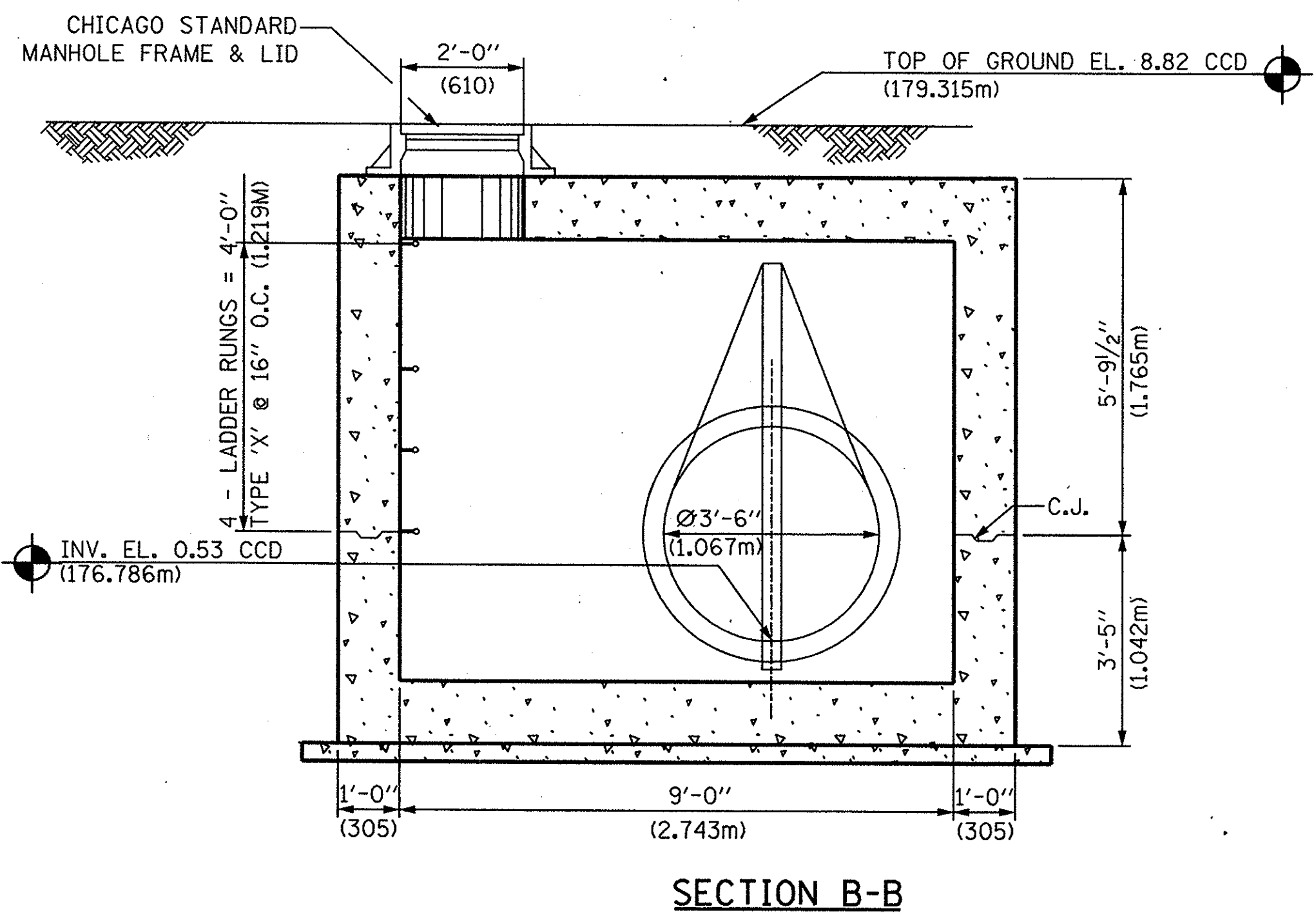
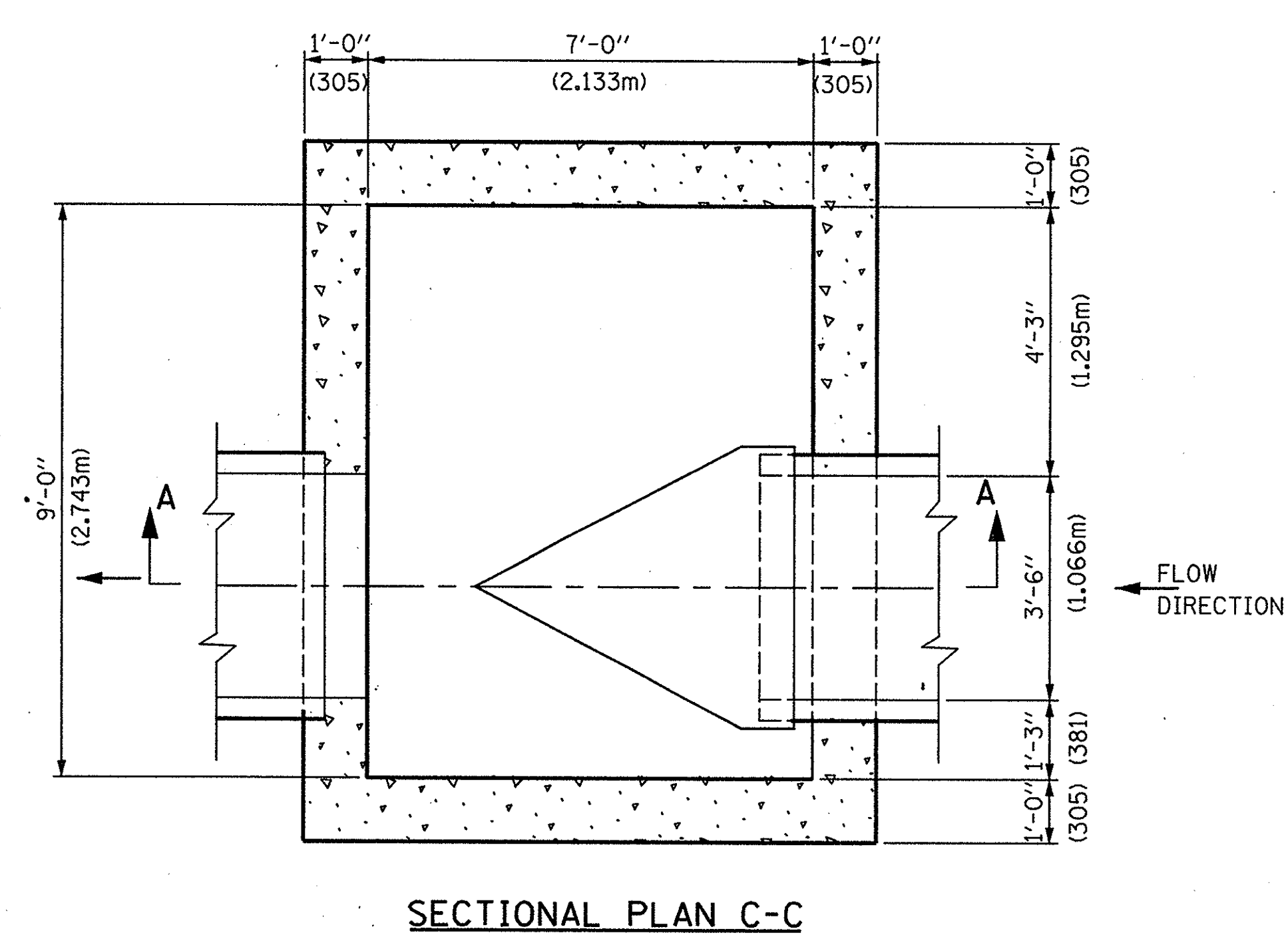
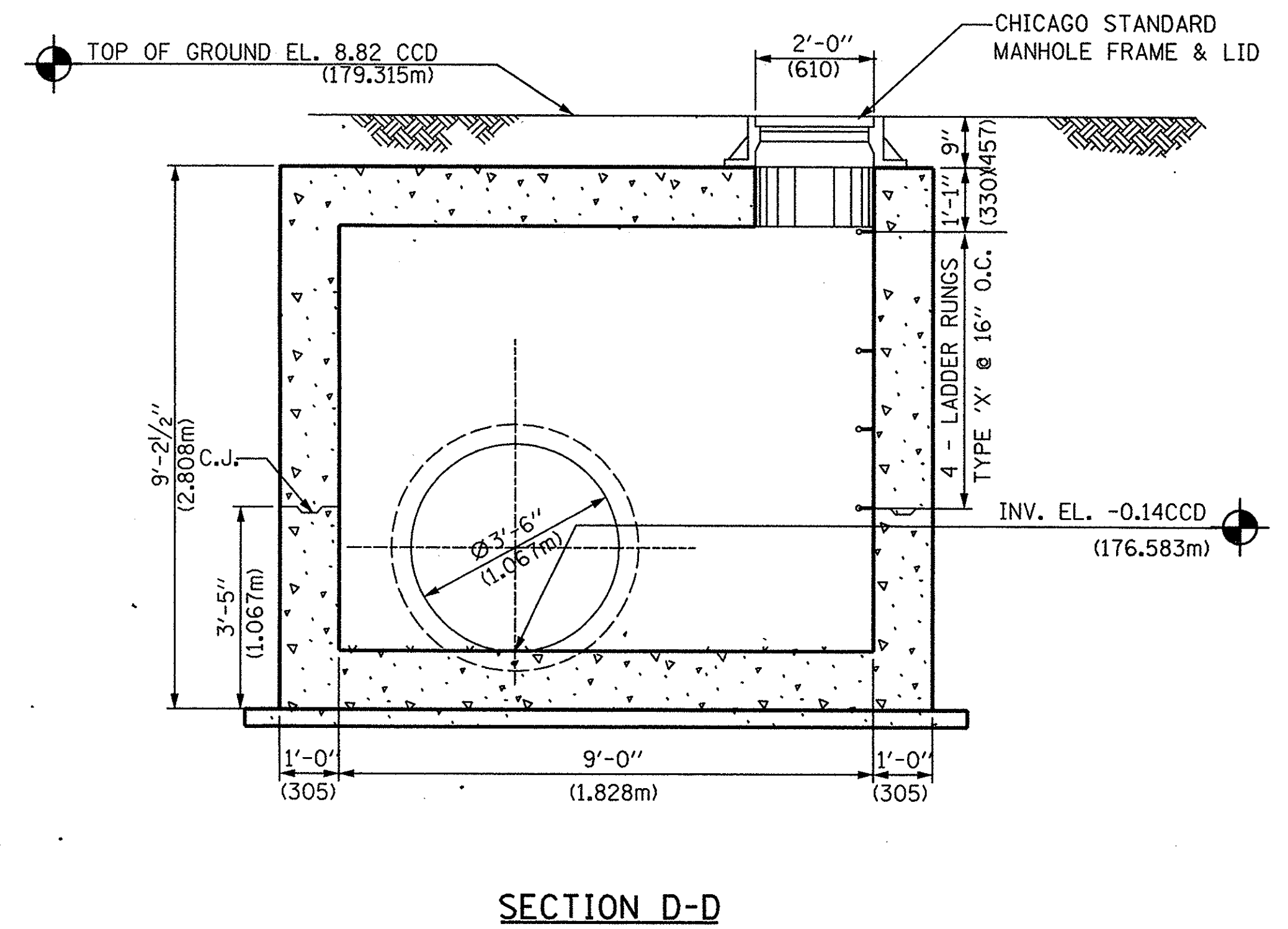
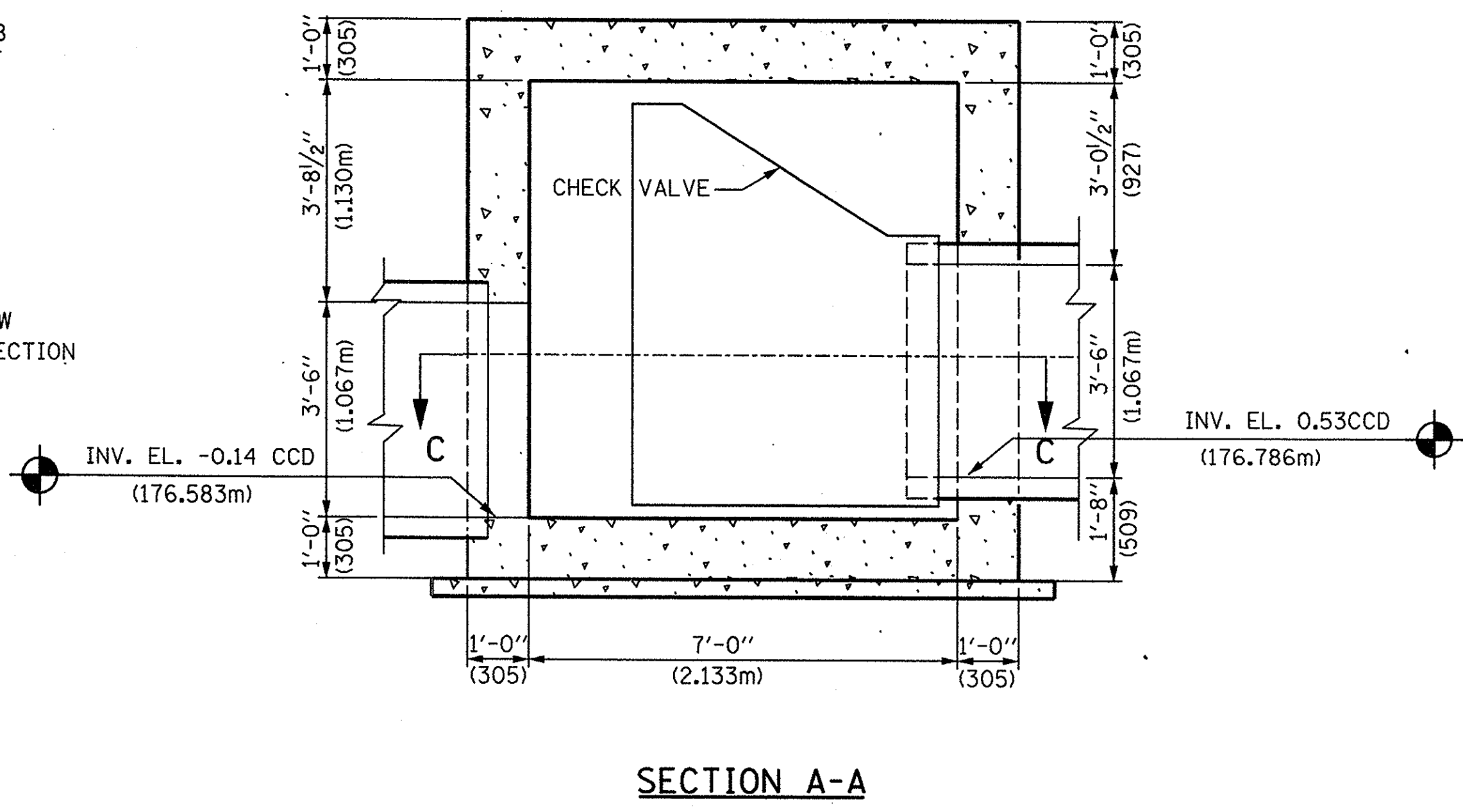
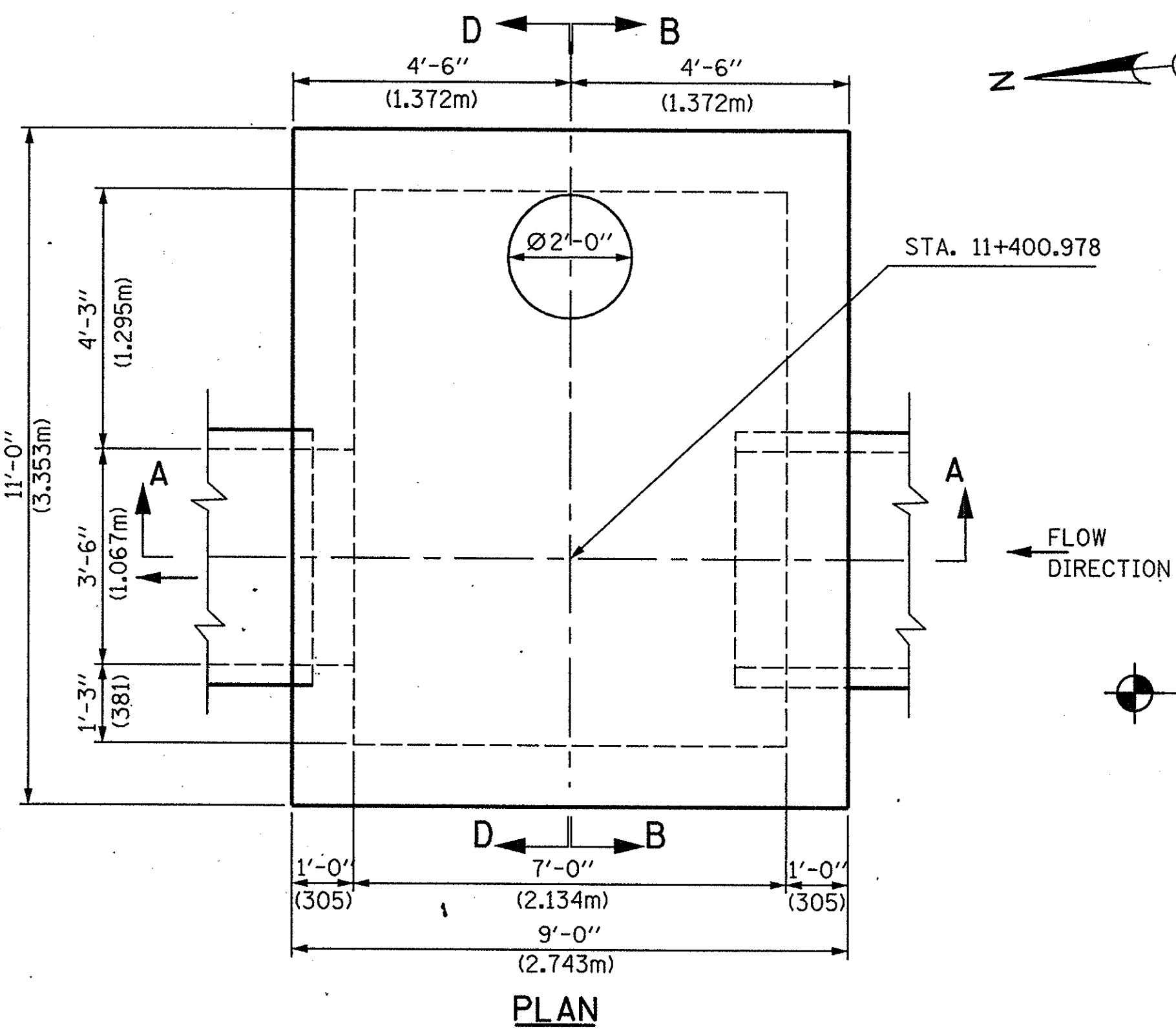
CTE ENGINEERS
 CONCOR TOWNSEND ENVIRONMENTAL ENGINEERS, INC.
DELTA ENGINEERING, INC.
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

WEIR STRUCTURE - CG33
STATION 11 + 396.079

CONTRACT NO.
00-B0241-06-PV
 DRAWING NO.
DS - 10
 PROJECT NO. B-1-440

1640091649



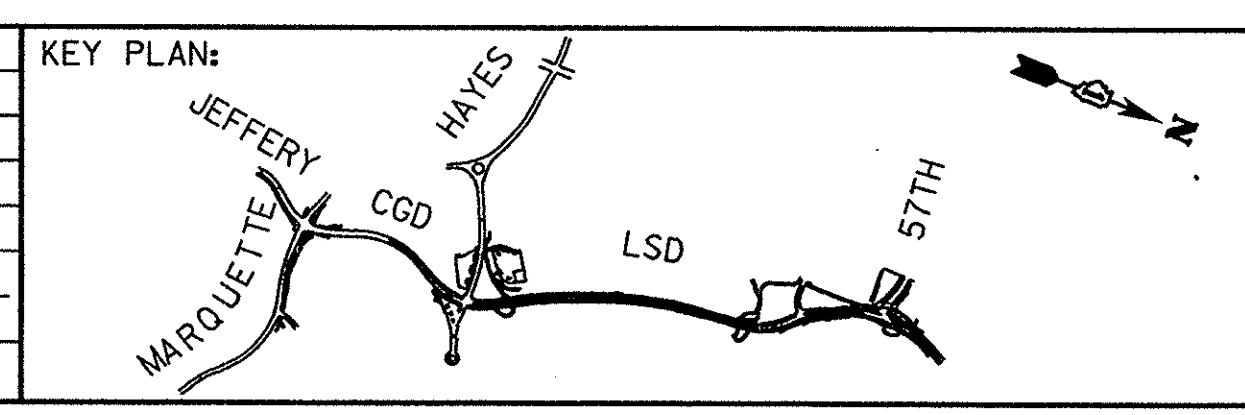
- NOTES:**
1. ALL WORK SHOWN IS PART OF ITEM CG34, EXCEPT CHECK VALVE SHOWN ON THIS DRAWING.
 2. FOR GENERAL NOTES SEE SHEET NO. DS-1
 3. FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-22
 4. COORDINATE WITH CIVIL DRAWINGS FOR LOCATION EXISTING UTILITIES AND TOPOGRAPHY.
 5. COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.

RECORD DOCUMENT
 Harbour Engineering, Inc.
 215 West
 Plainfield
 IL 60544
 Date: 3.15.02

SCALE 1/2" = 1'-0"

DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

CTE ENGINEERS
 CONSULTING ENGINEERS, INC.

DETA ENGINEERING, INC.
 CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

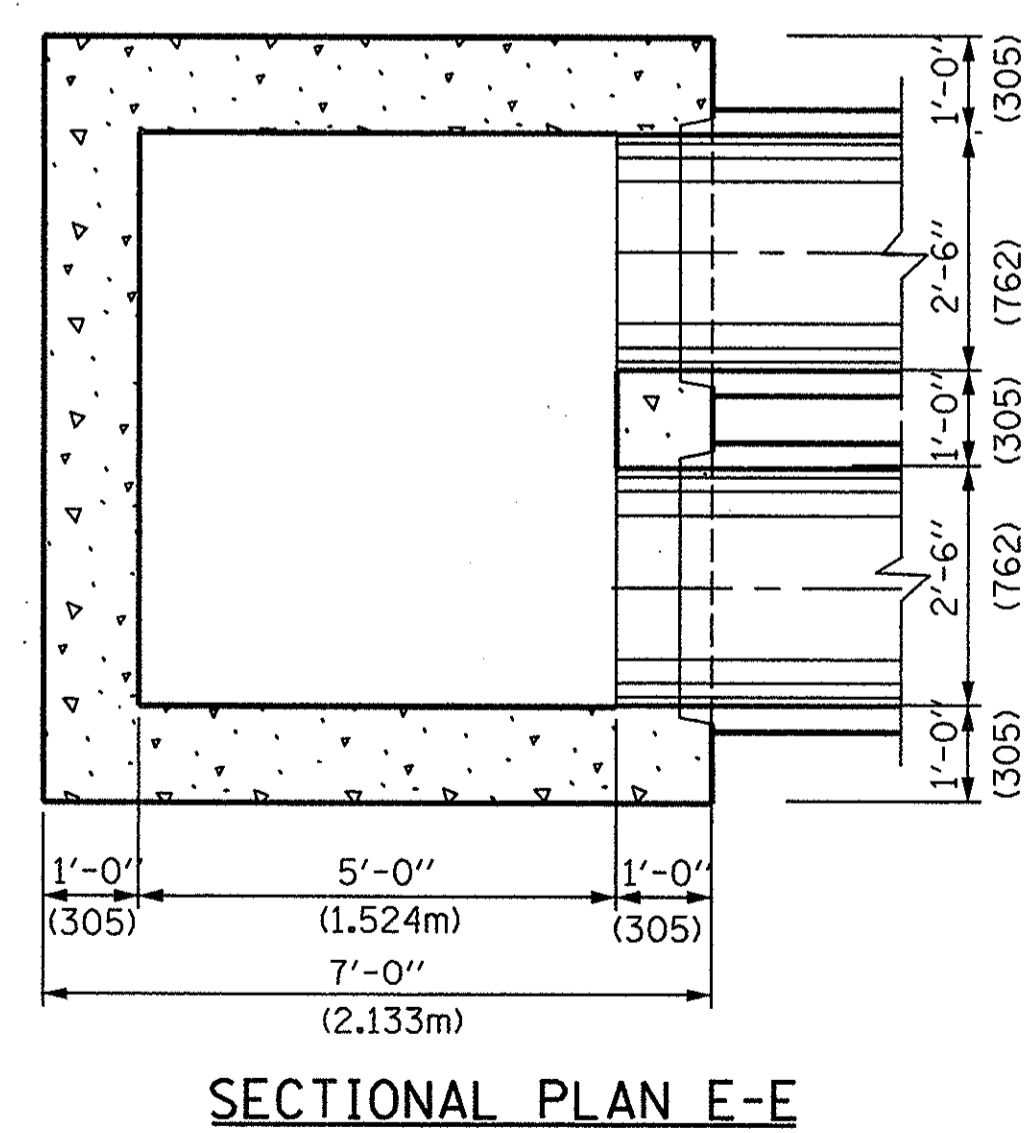
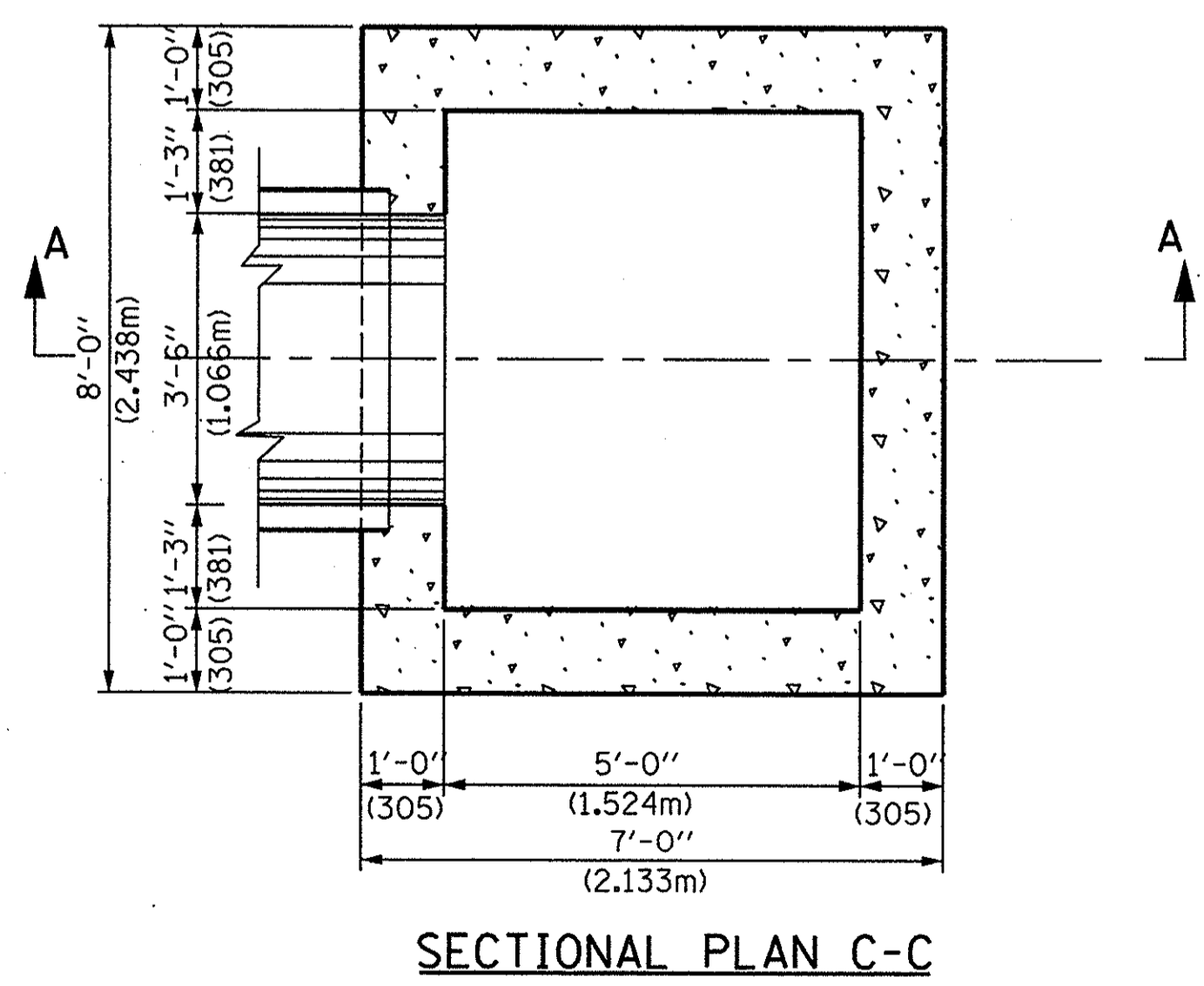
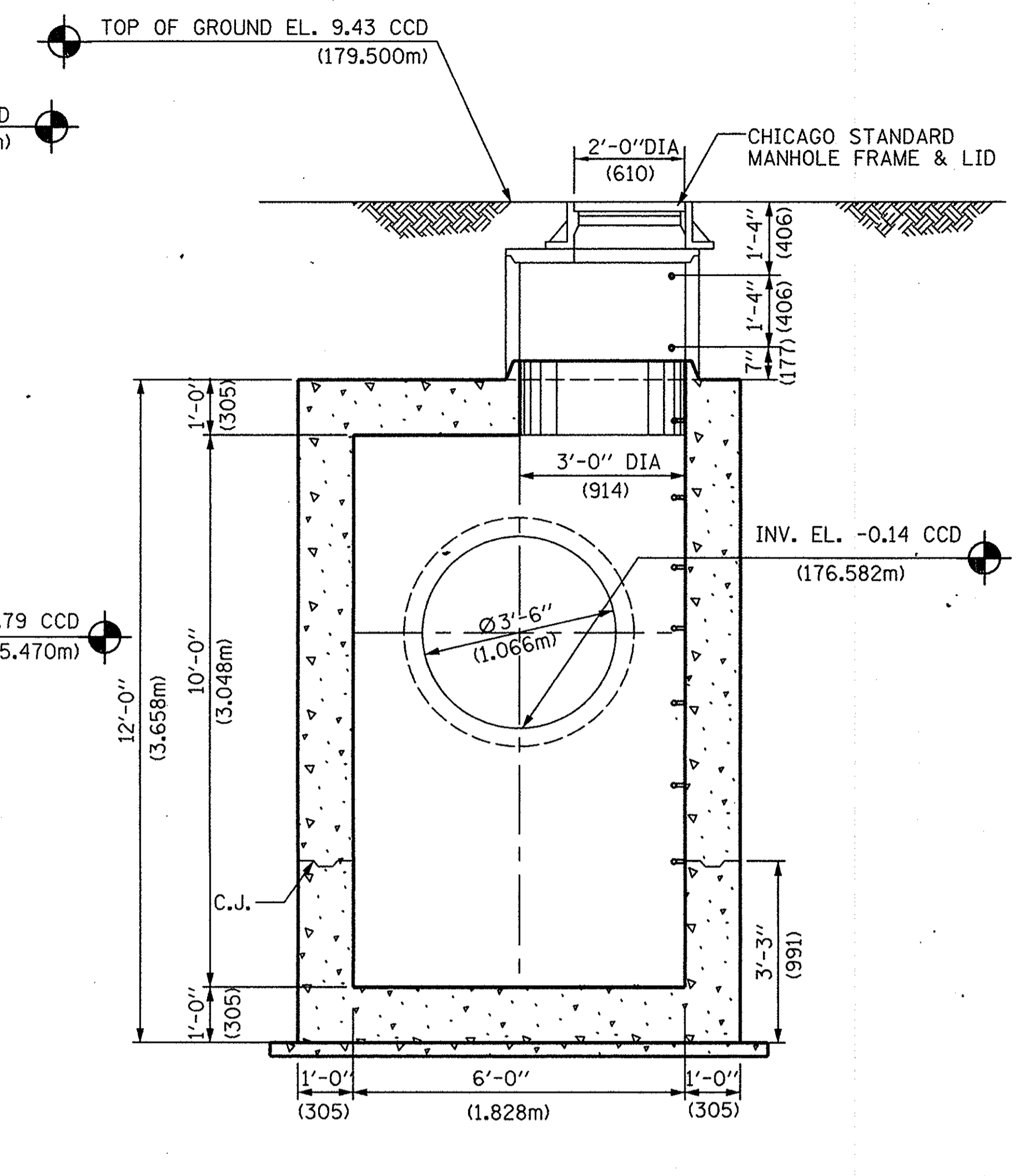
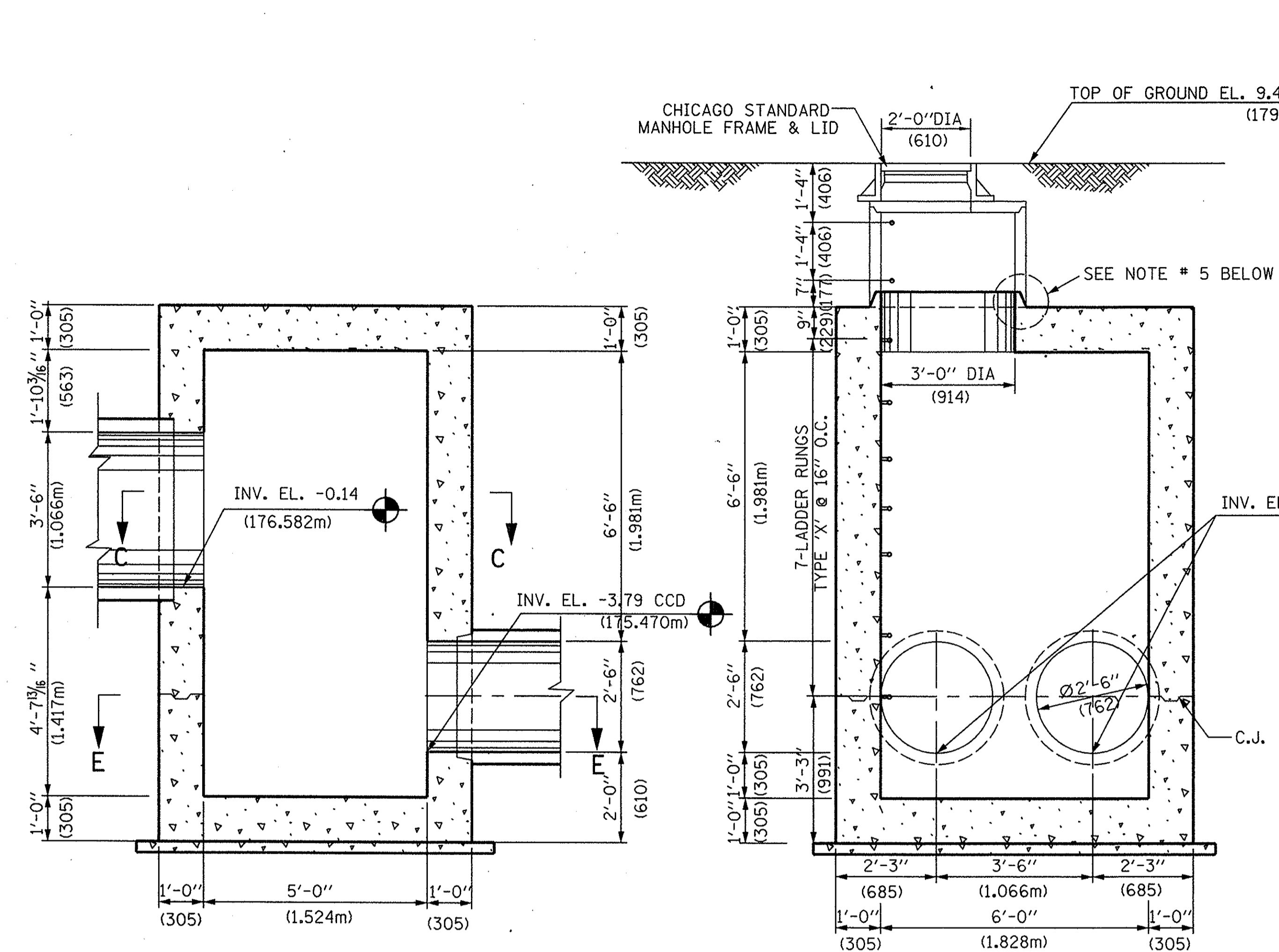
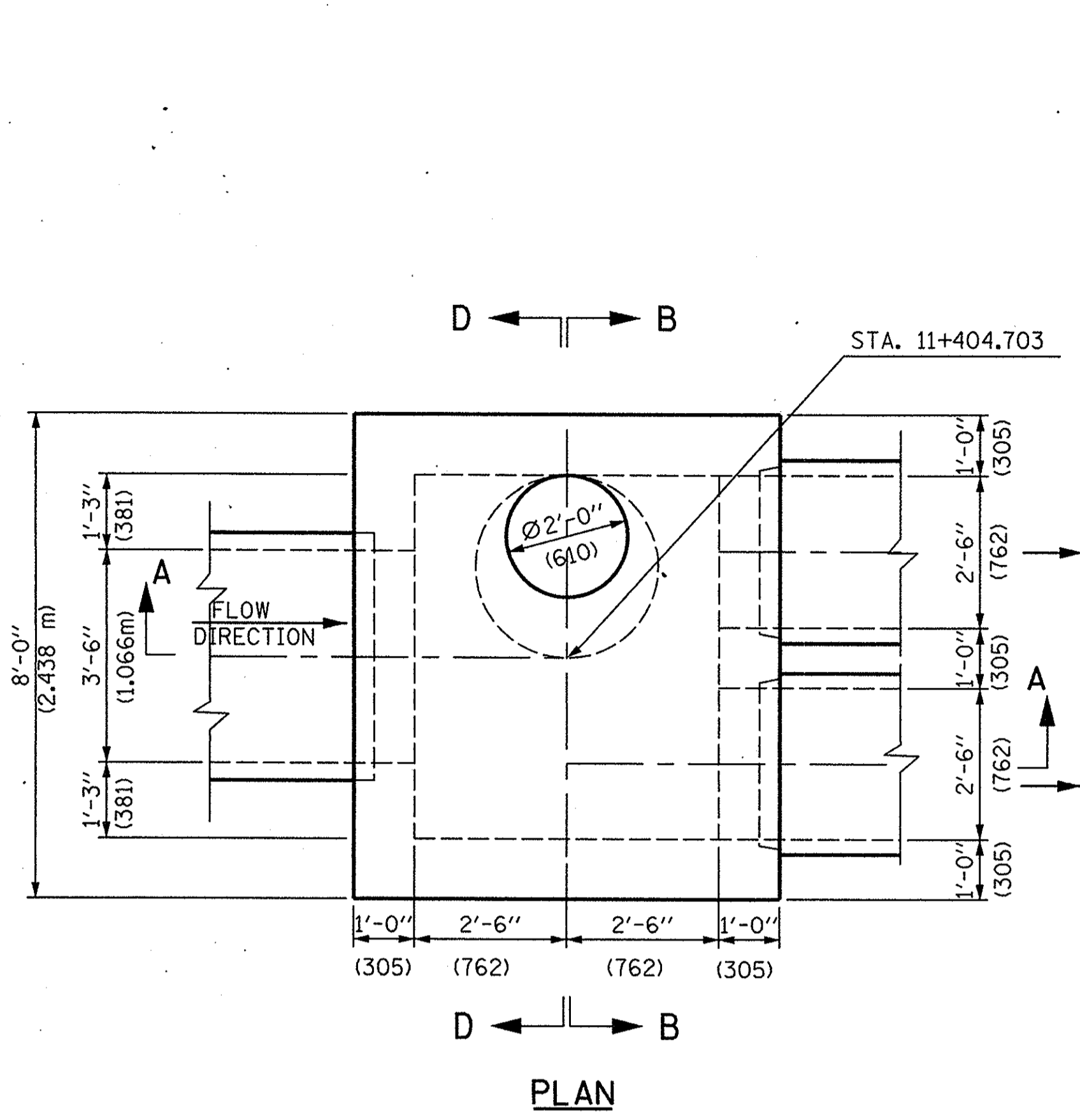
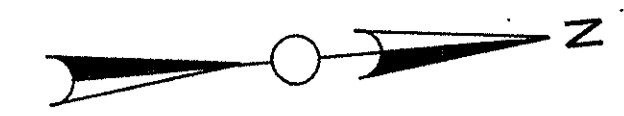
**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

**JUNCTION STRUCTURE- CG34
 STATION 11+400.978**

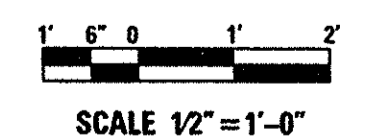
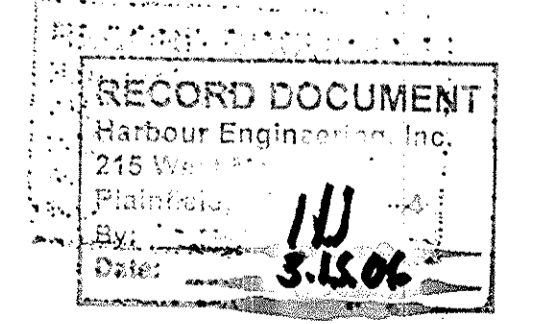
CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
DS - 11

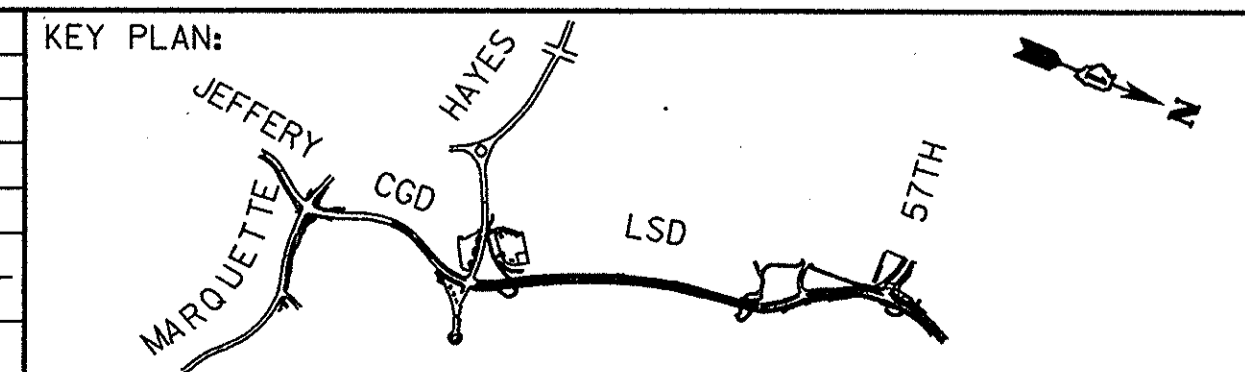
PROJECT NO. B-1-440
1640091650



- NOTES:**
1. UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM CG35
 2. FOR GENERAL NOTES SEE SHEET NO. DS-1
 3. FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-23
 4. COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
 5. COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOR TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

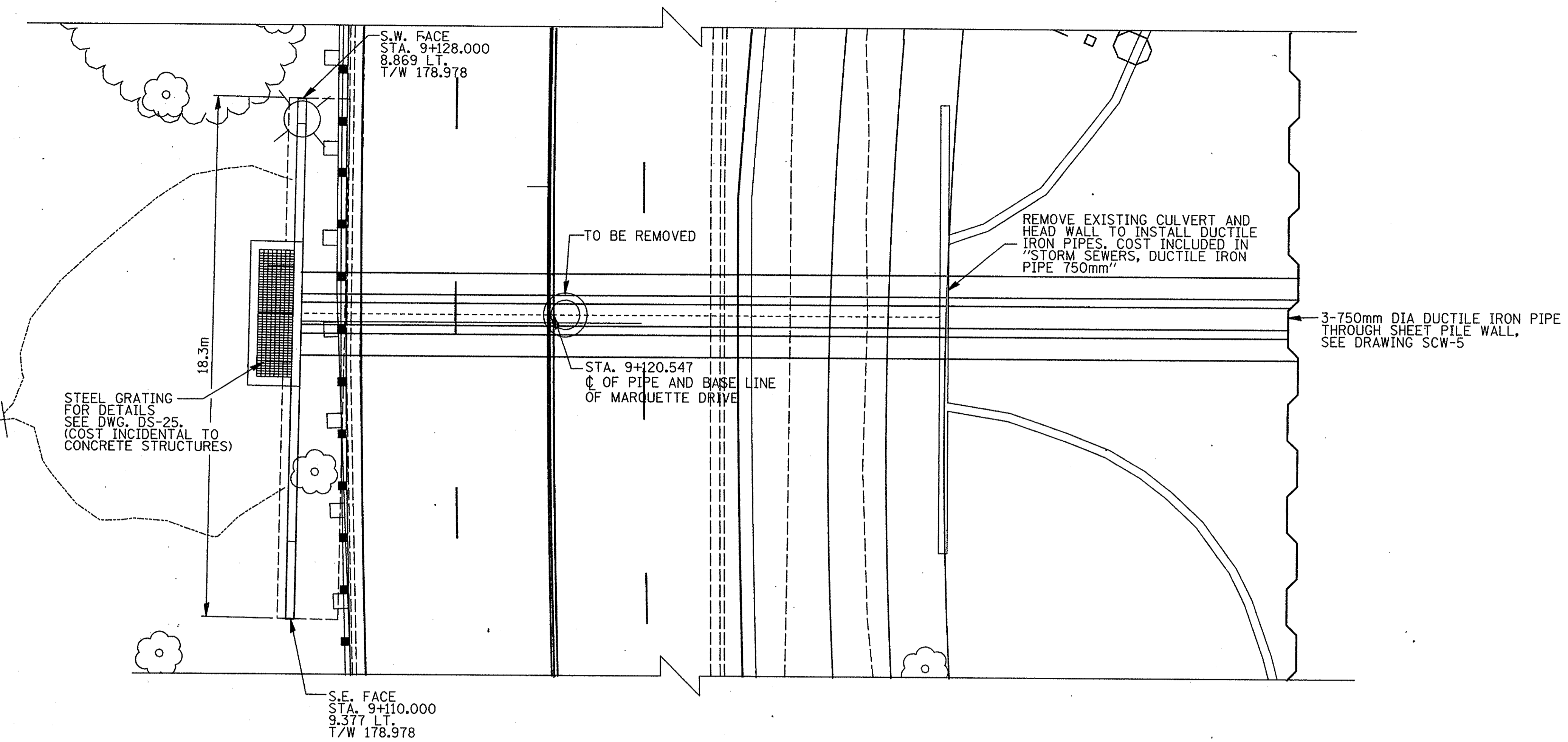
DETA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

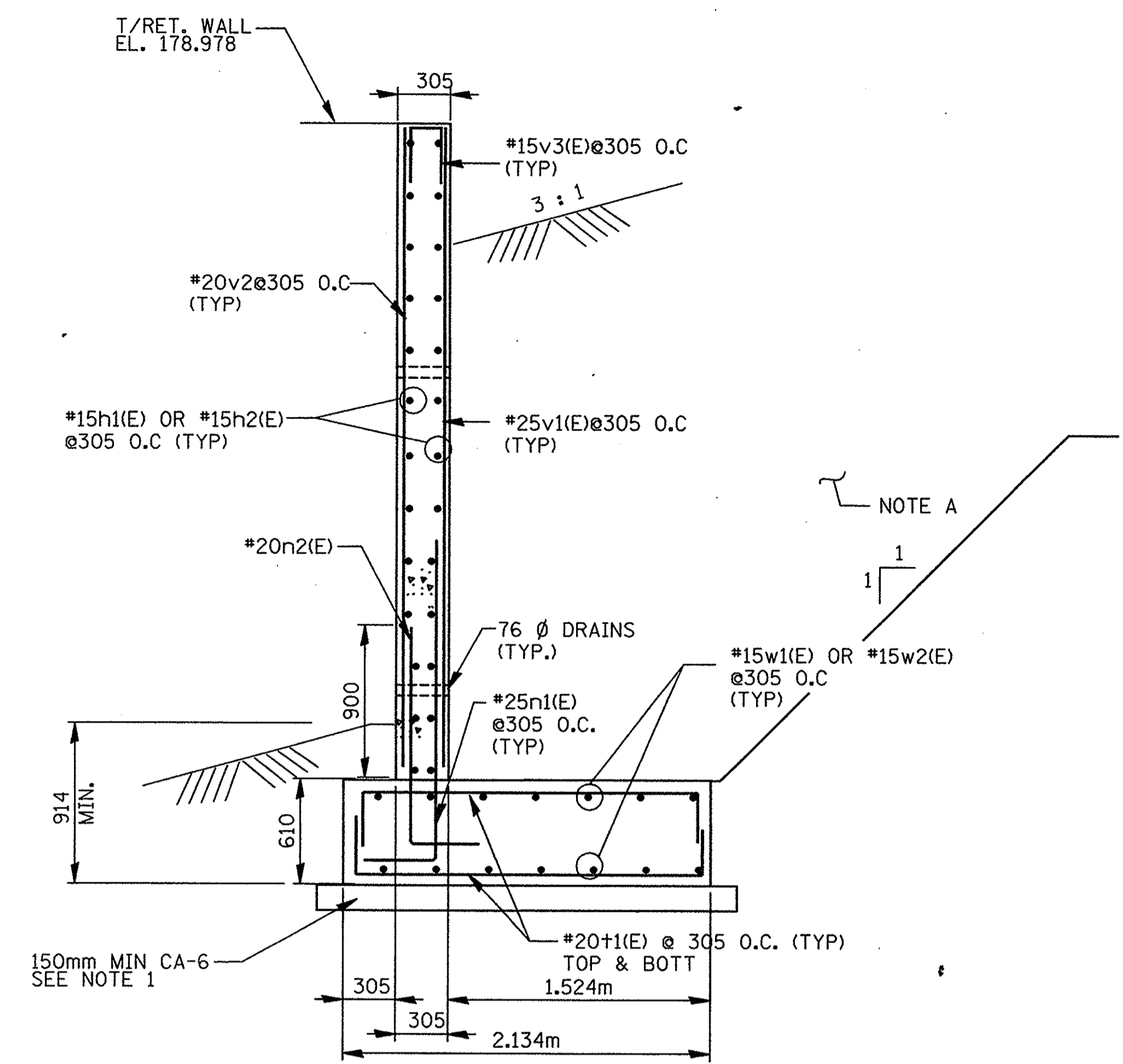
TUMBLING BASIN- CG35
STATION 11 + 404.703

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	DS - 12
PROJECT NO.	B-1-440

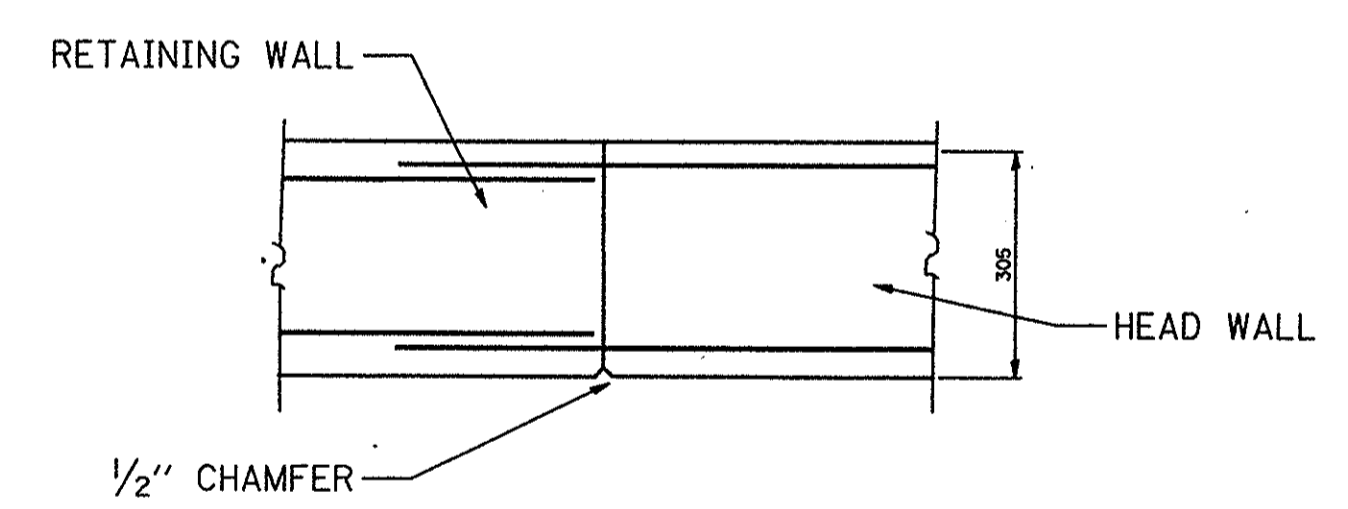
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PLAN

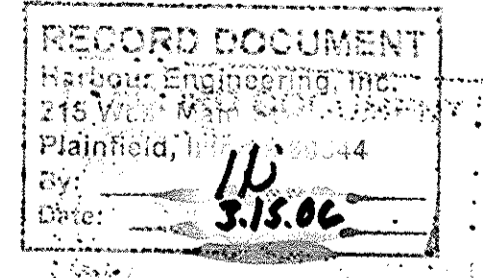


**SECTION A1-A1
TYPICAL SECTION THRU RETAINING WALL**
SCALE 1:25

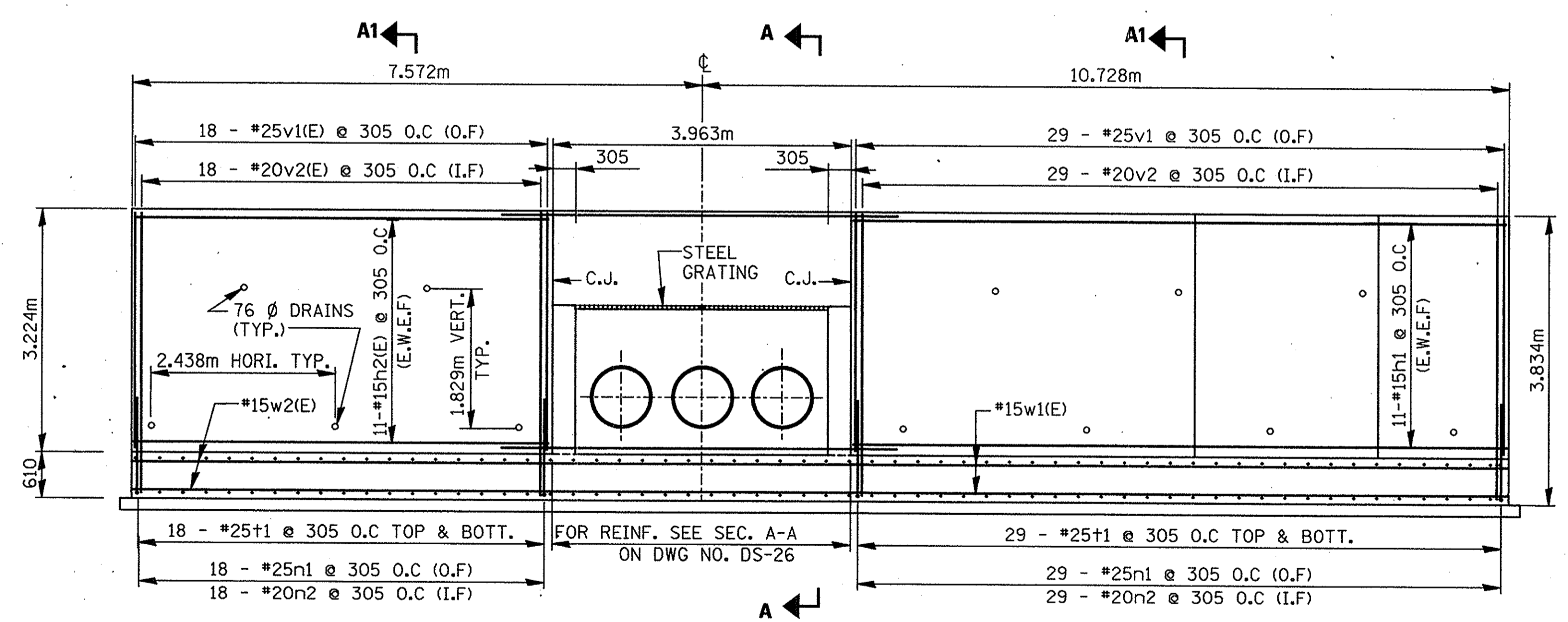


**SECTION 1-1
TYPICAL CONSTRUCTION JOINT**

NOTE A
BACKFILL WITH POROUS GRANULAR EMBANKMENT WITH A GRADATION OF CA-5 OR CA-7.

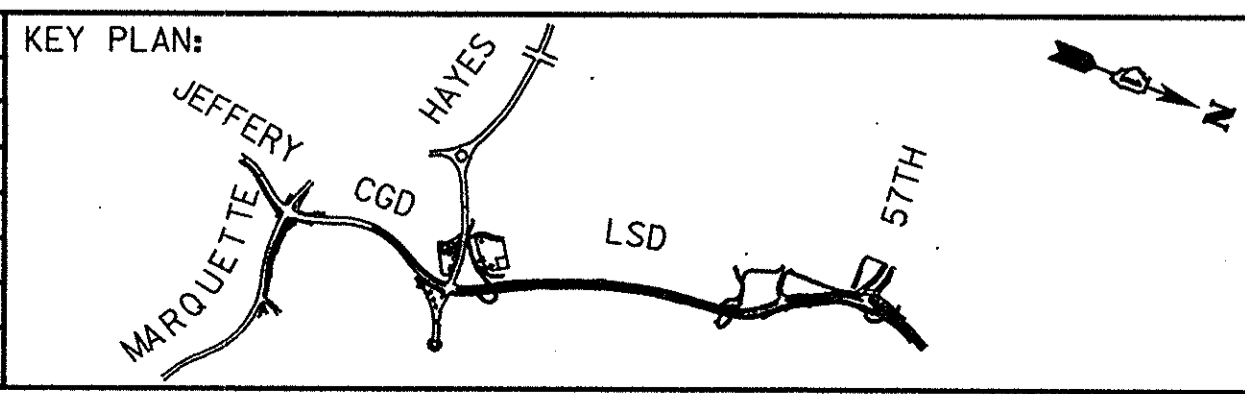


GENERAL NOTE
ALL UNITS IN MM UNLESS NOTED OTHERWISE.

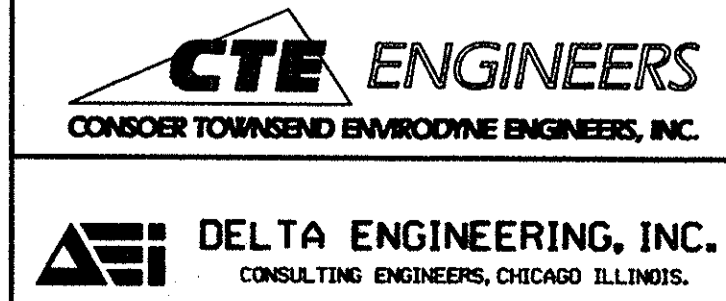


ELEVATION RETAINING SOUTH HEAD WALL
(LOOKING NORTH)
SCALE 1:50

DESIGN: MTP/N.S.			
DRAWN: GMK/JL			
CHECKED: MTP/SMK			
APPROVED: SMK			
DATE: 4/16/02			
SCALE: AS NOTED			
FILE:	NO.	BY	DATE
			DESCRIPTION
			REVISIONS



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

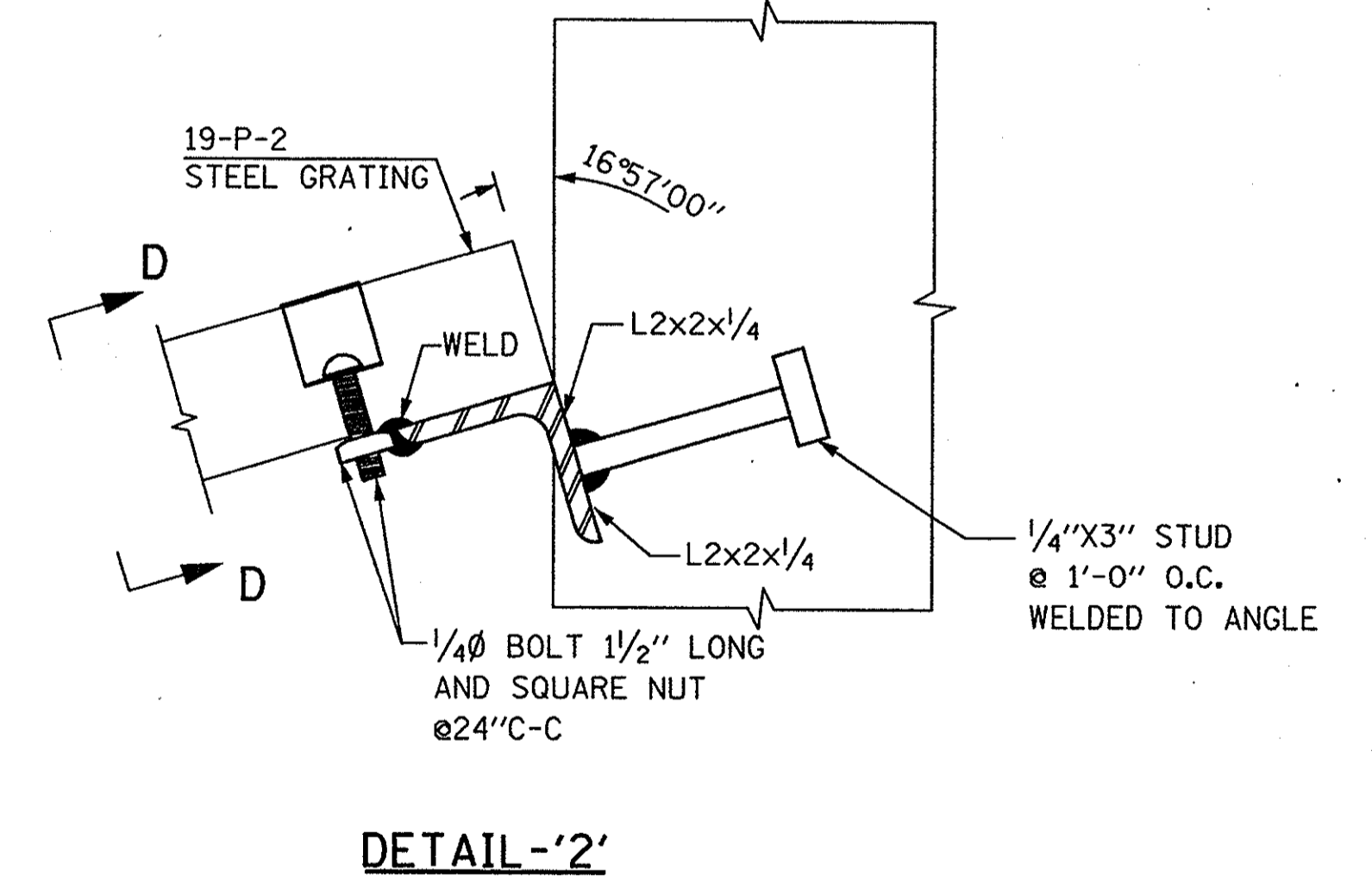
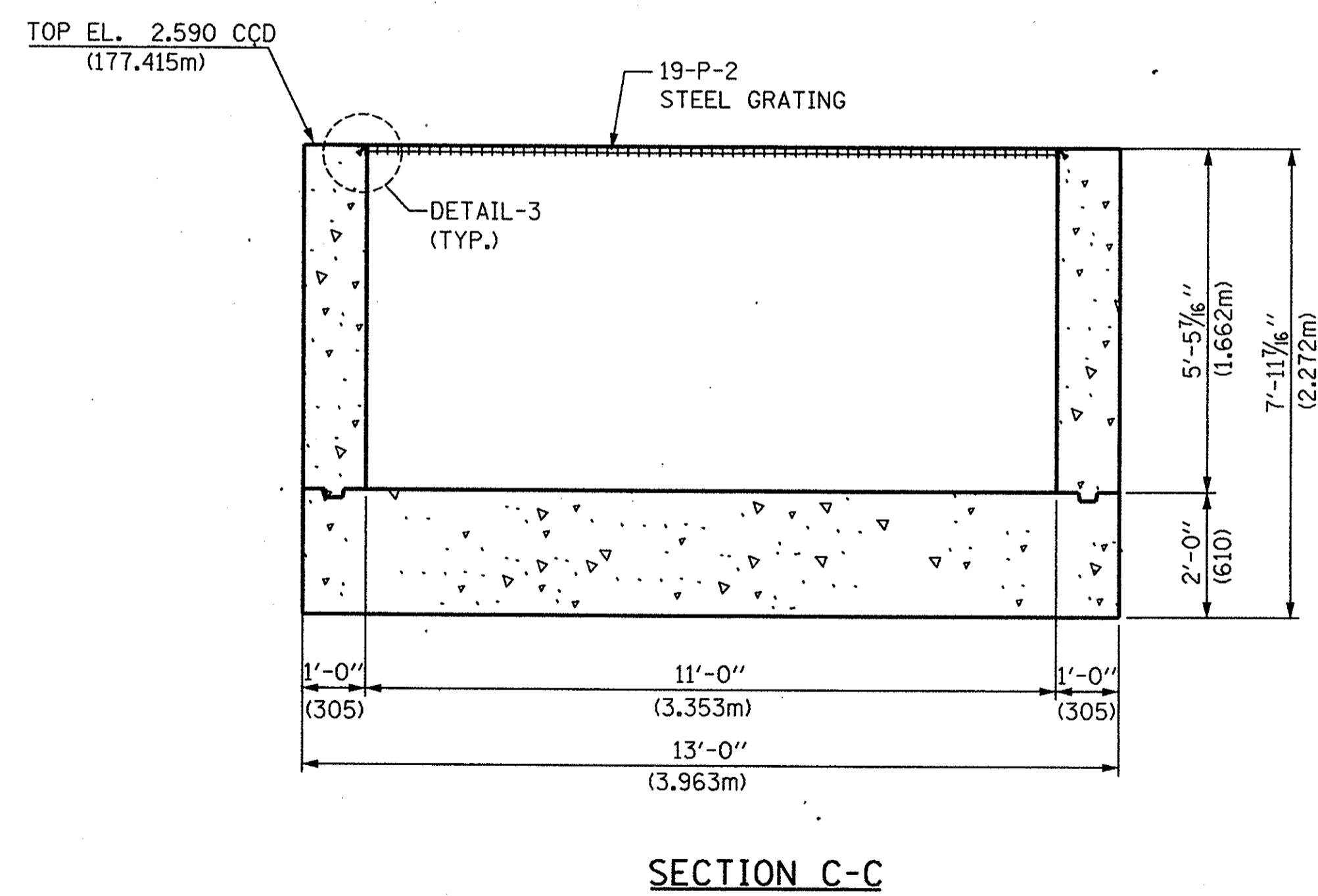
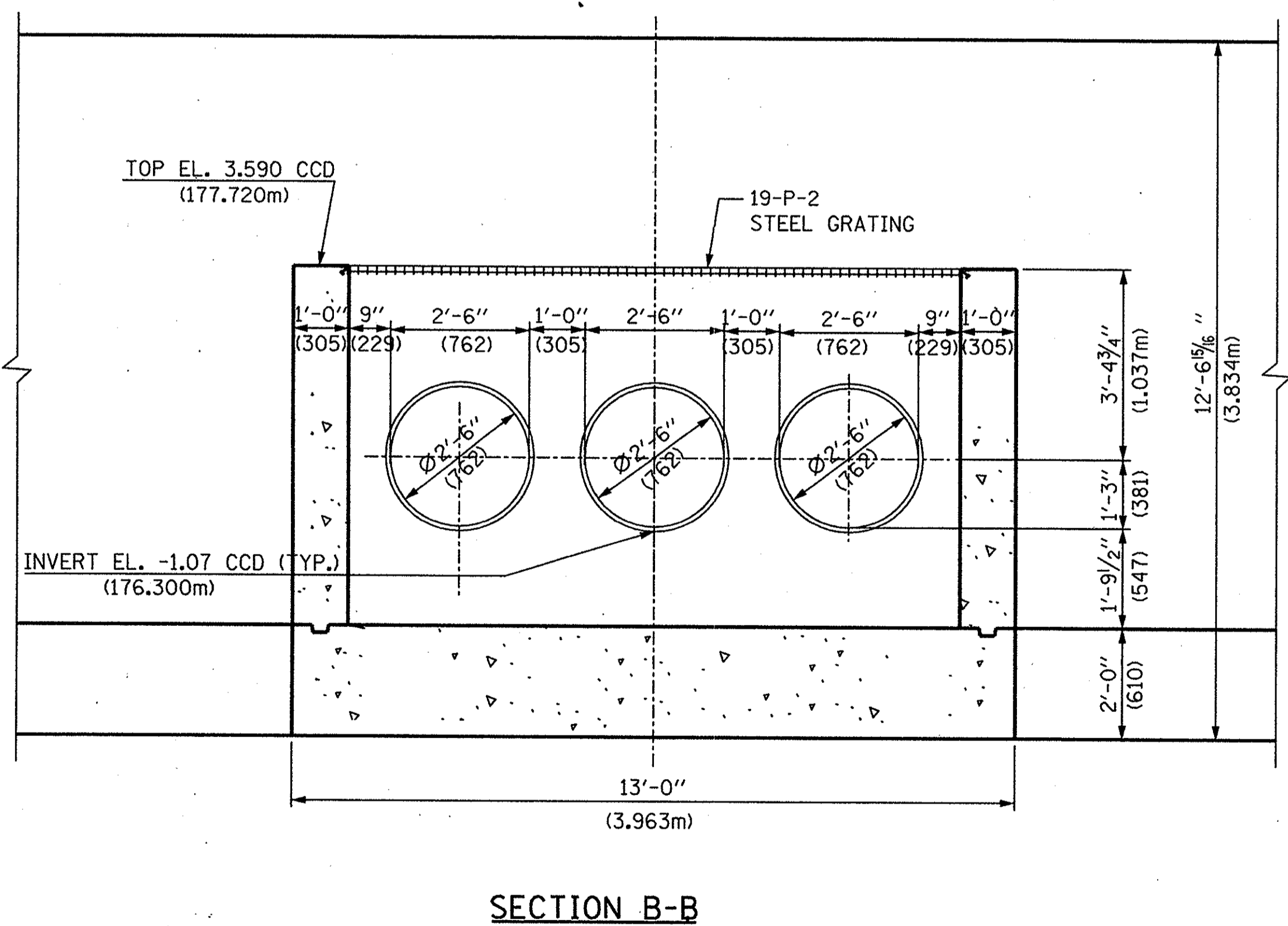
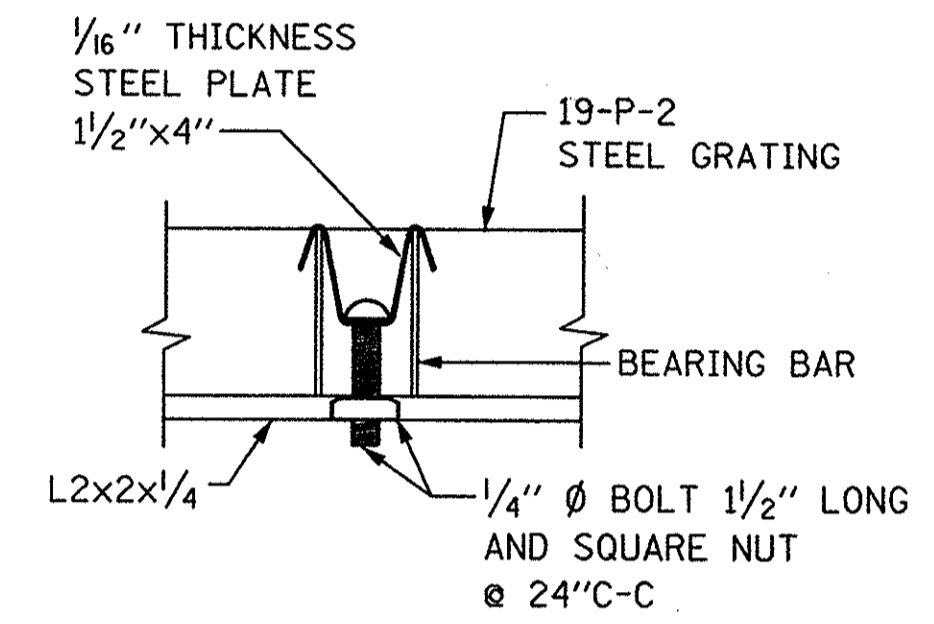
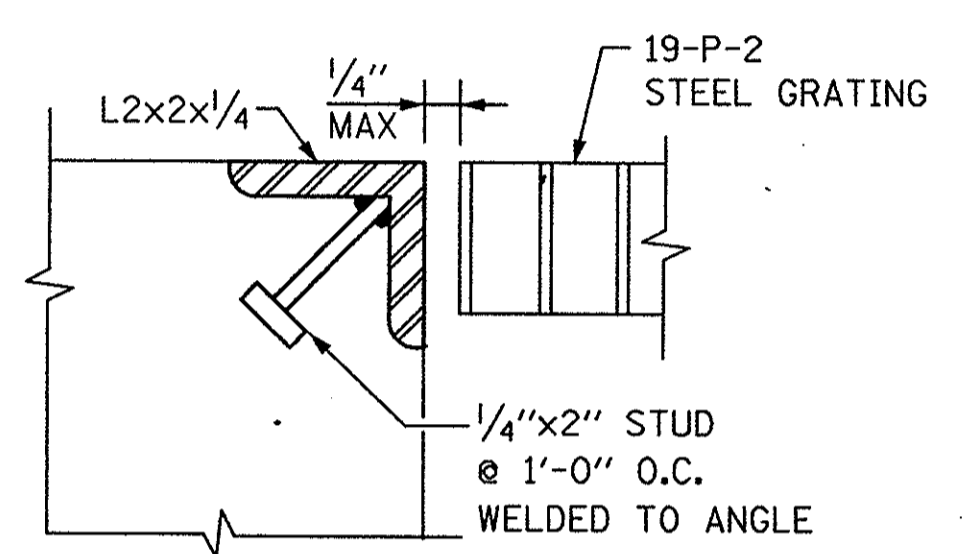
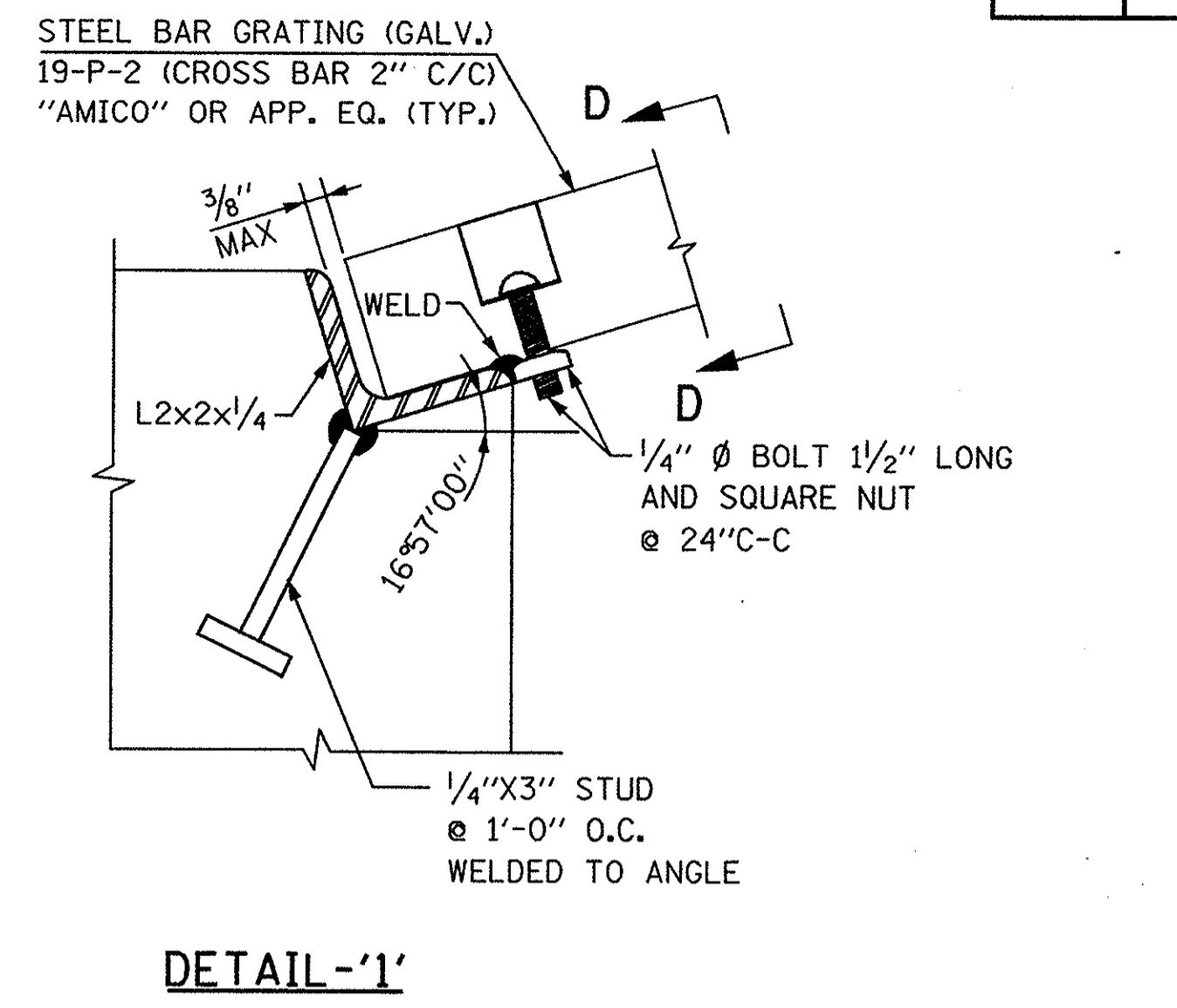
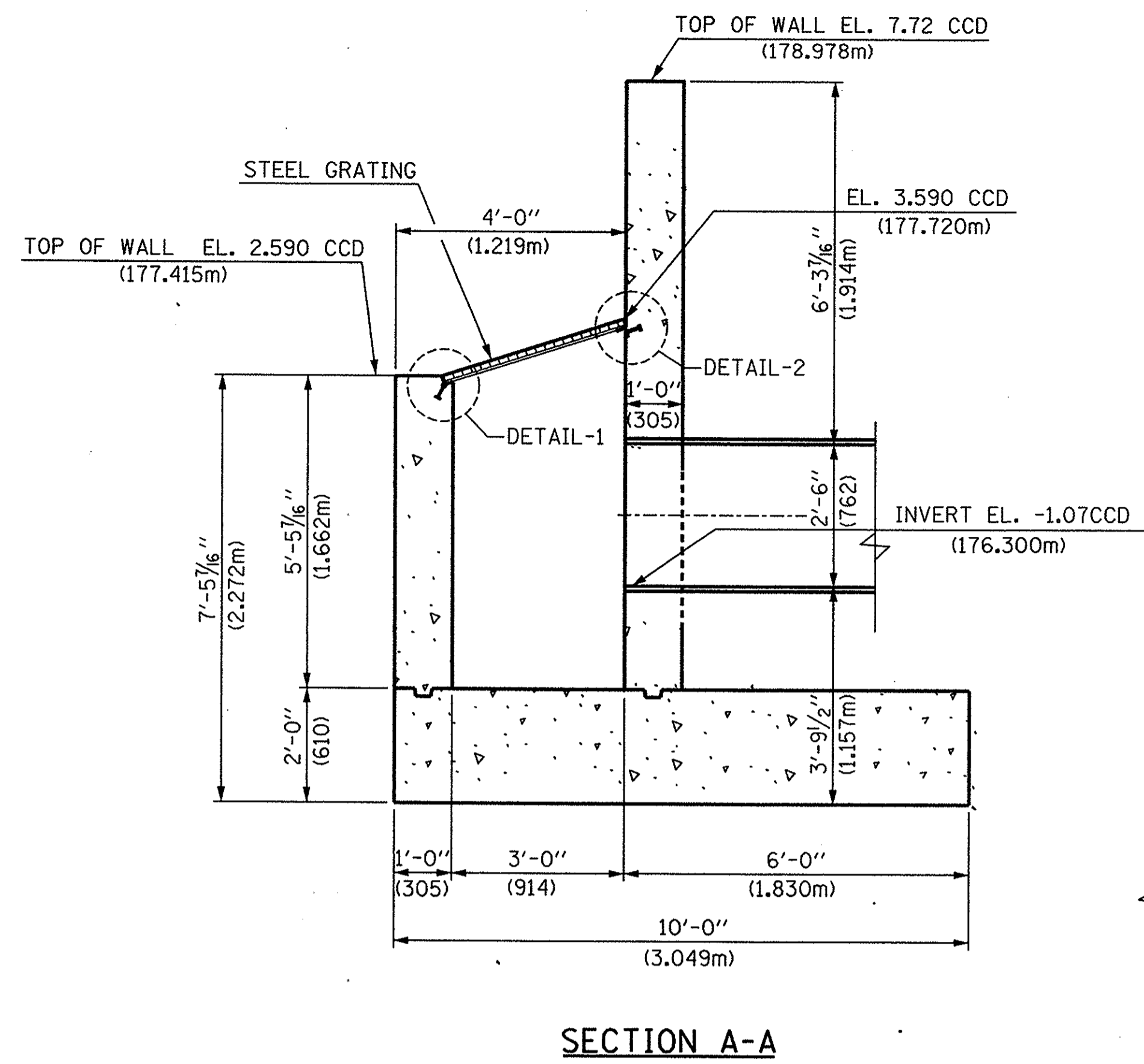
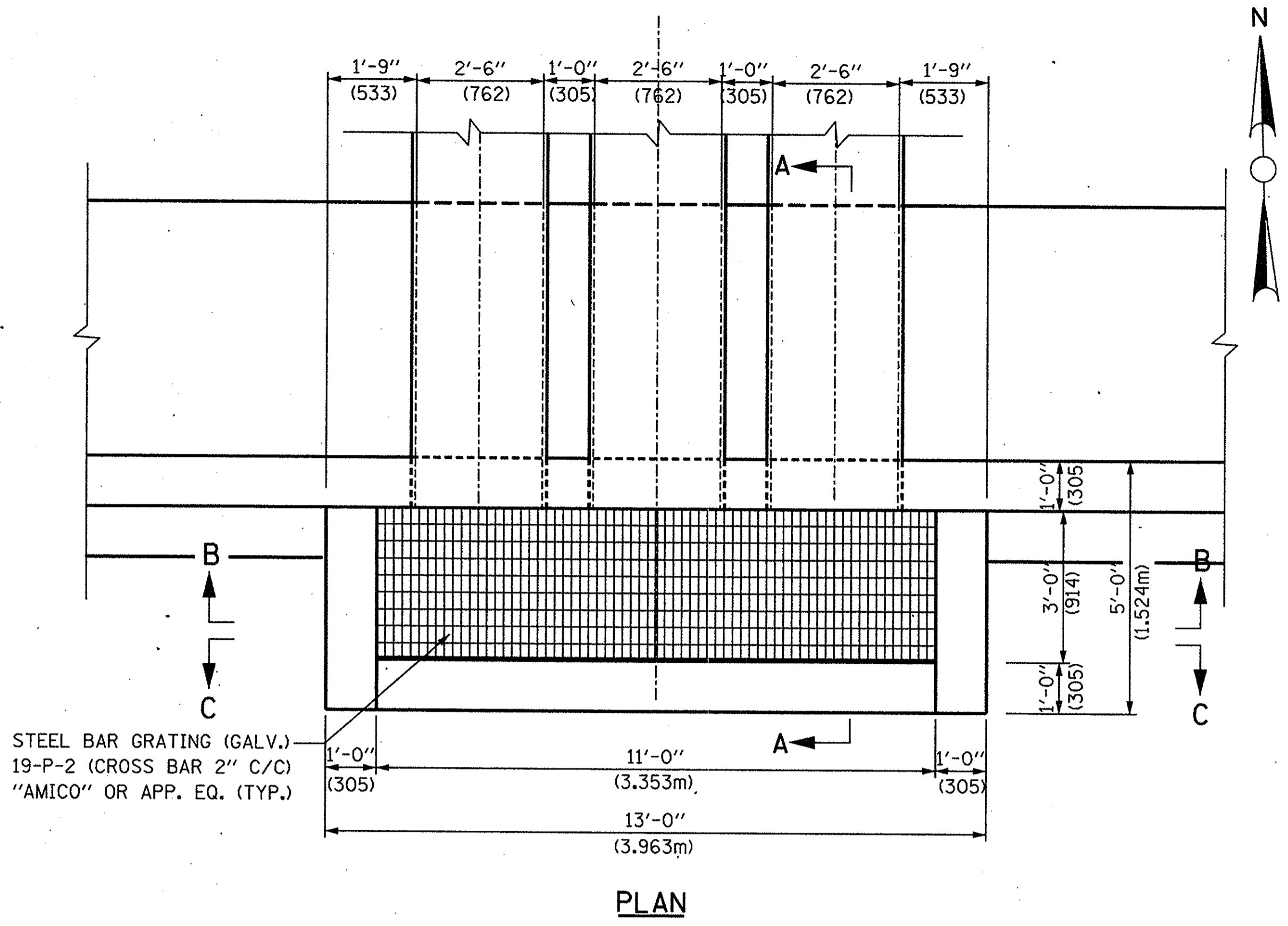


**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**PLAN & ELEVATION
SOUTH WEIR STRUCTURE HEAD WALLS
@ STATION 9+112**

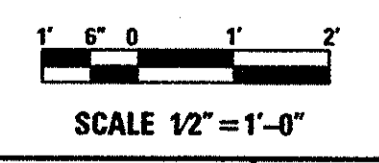
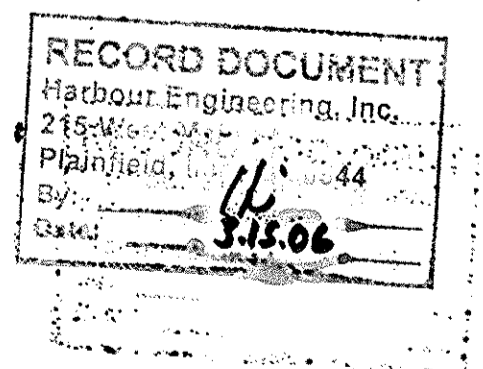
CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	DS - 24
PROJECT NO.	B-1-440

1640091603



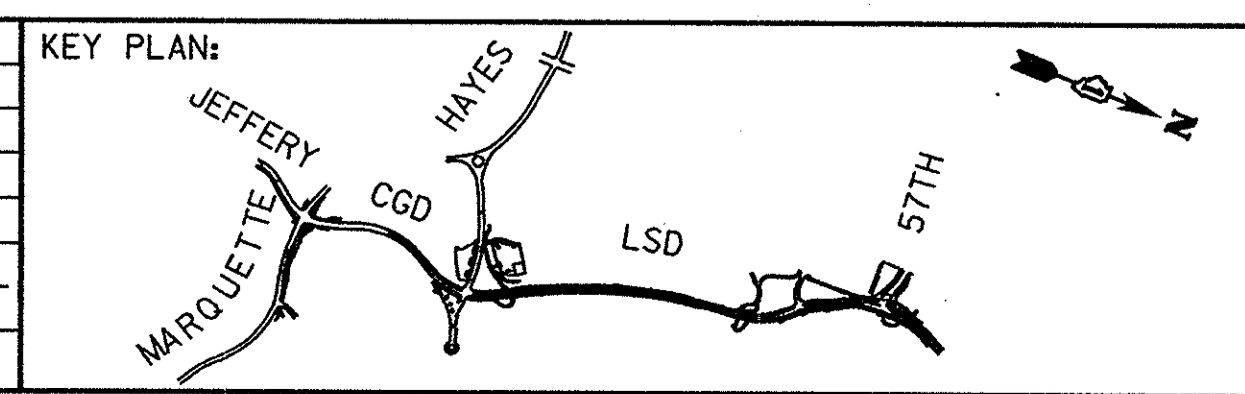
NOTES:

- UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM. FOR GENERAL NOTES SEE SHEET NO. DS-1
- FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-26
- COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
- COORDINATE KEY DETAILS FOR PIPE WITH SUPPLIER AND OR MANUFACTURER.



DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

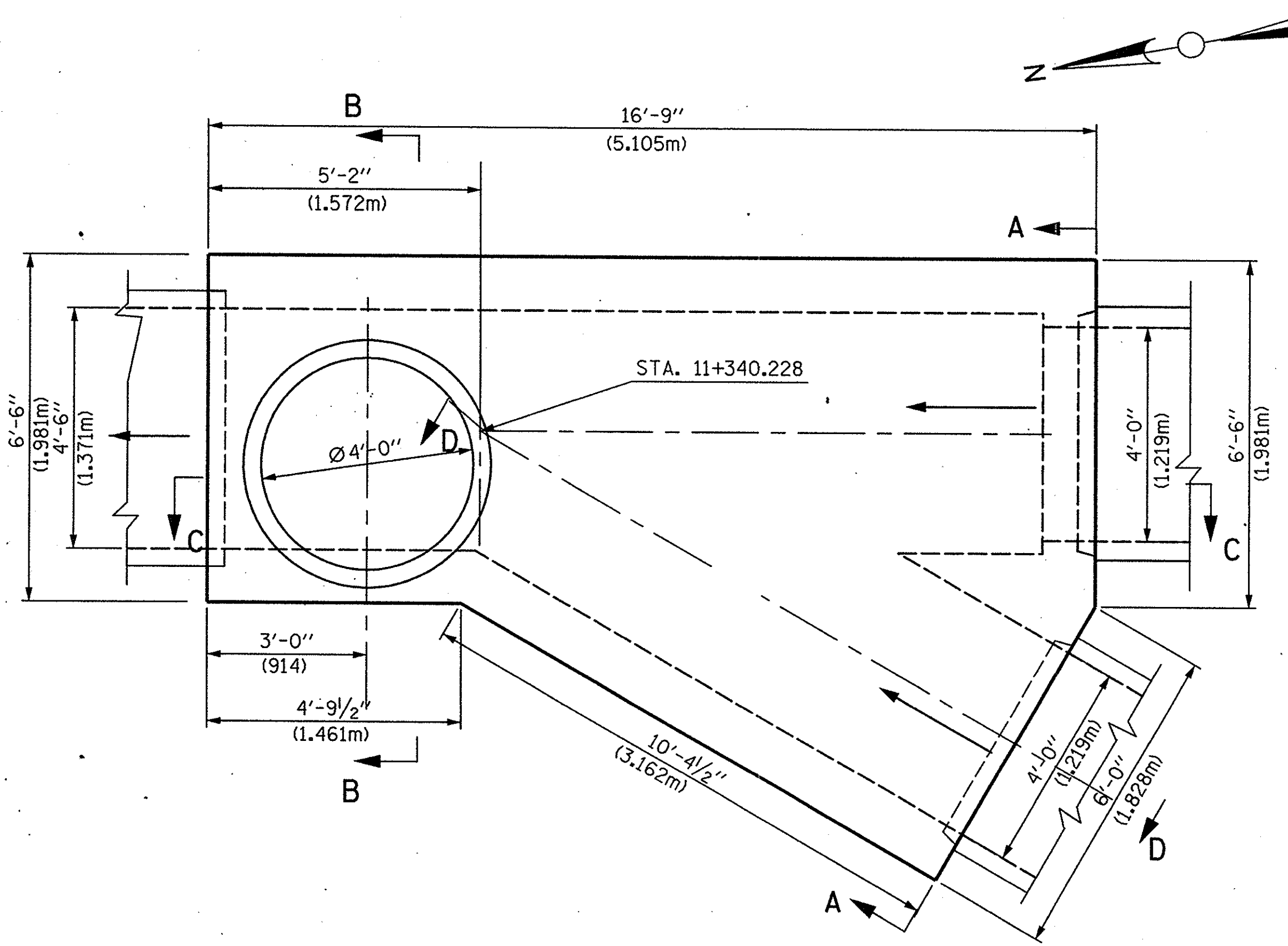
SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

WEIR STRUCTURE
STATION 9 + 112

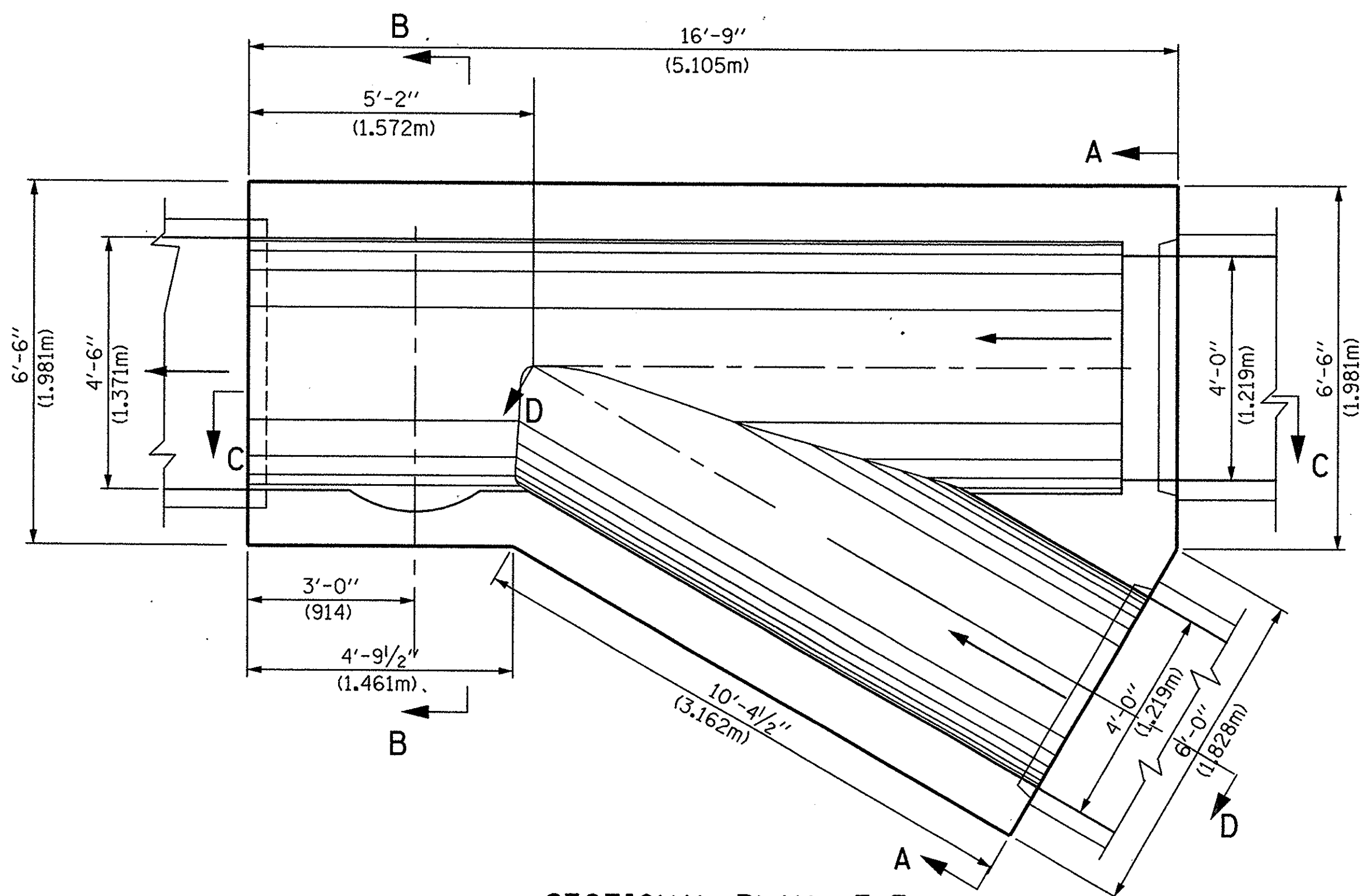
CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
DS - 25

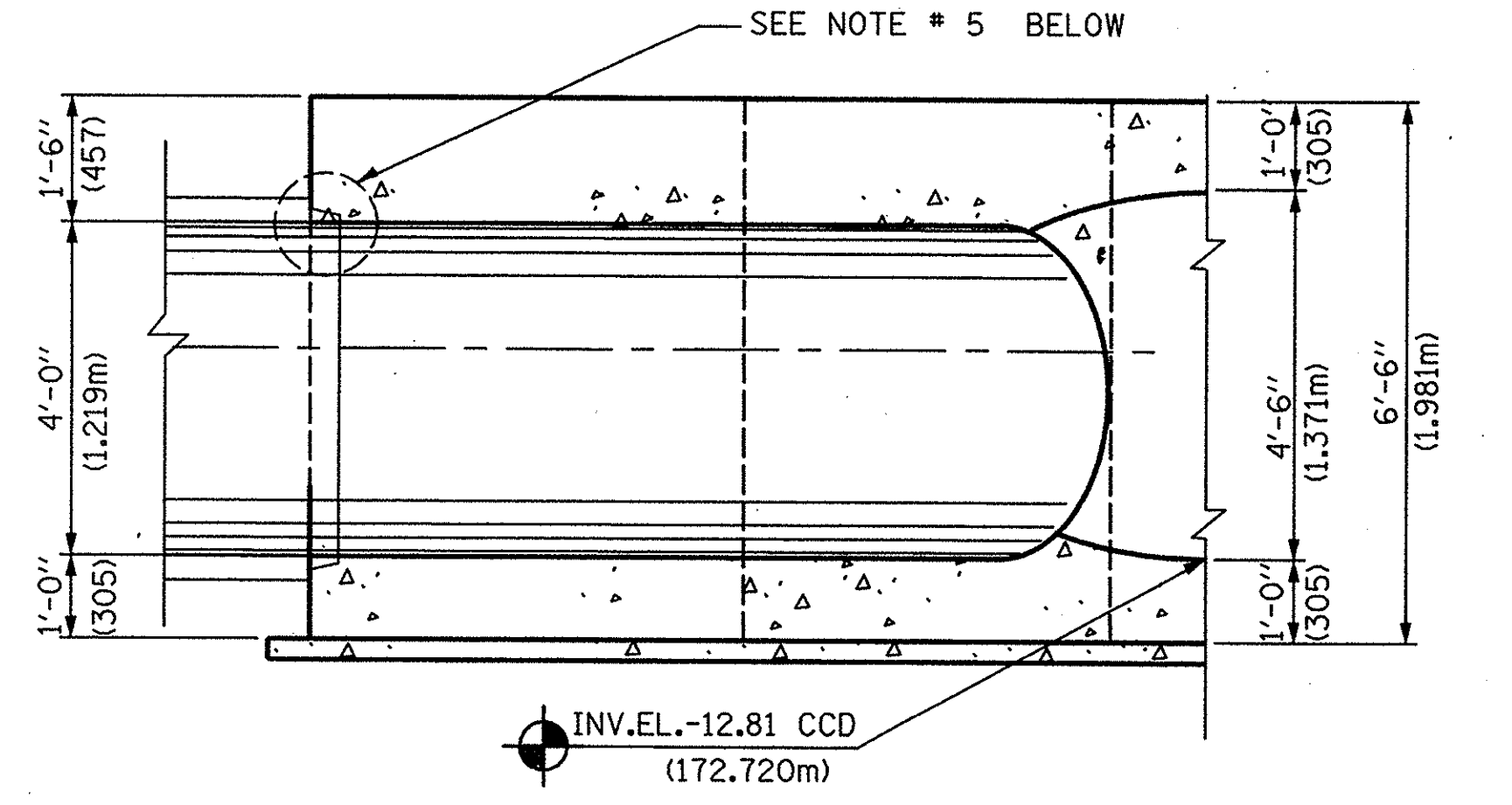
PROJECT NO. B-1-440
1040091664



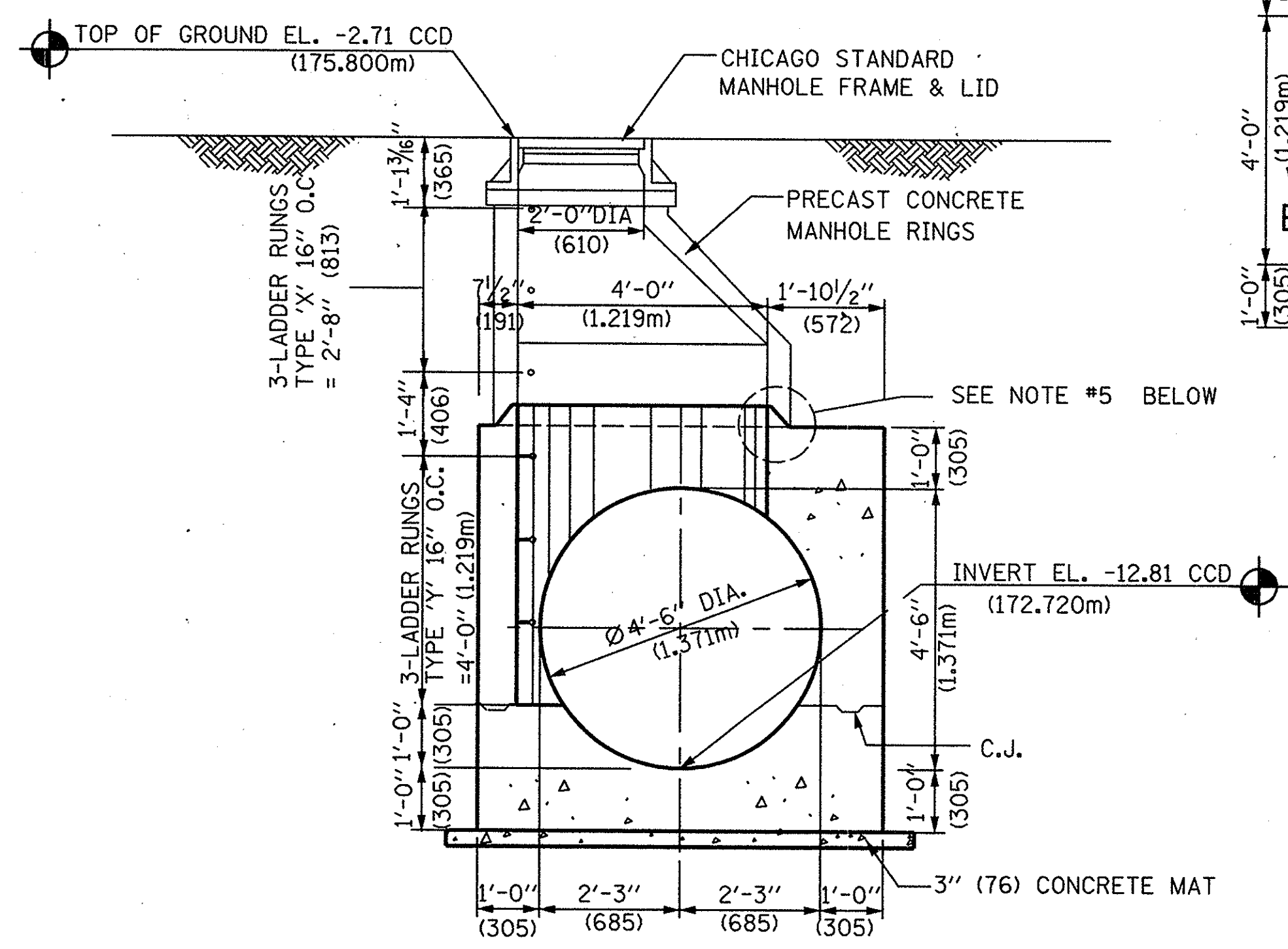
PLAN



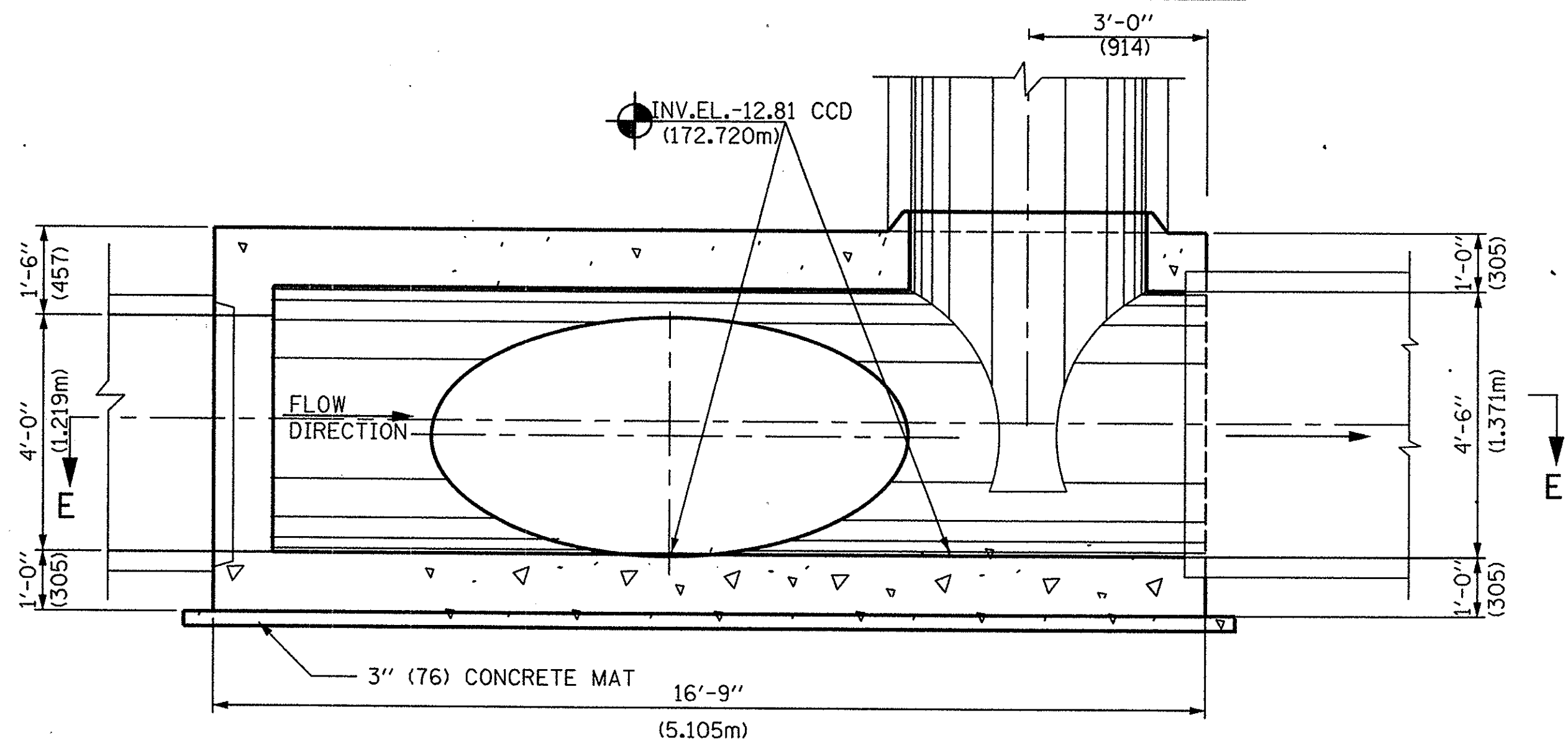
SECTIONAL PLAN E-E



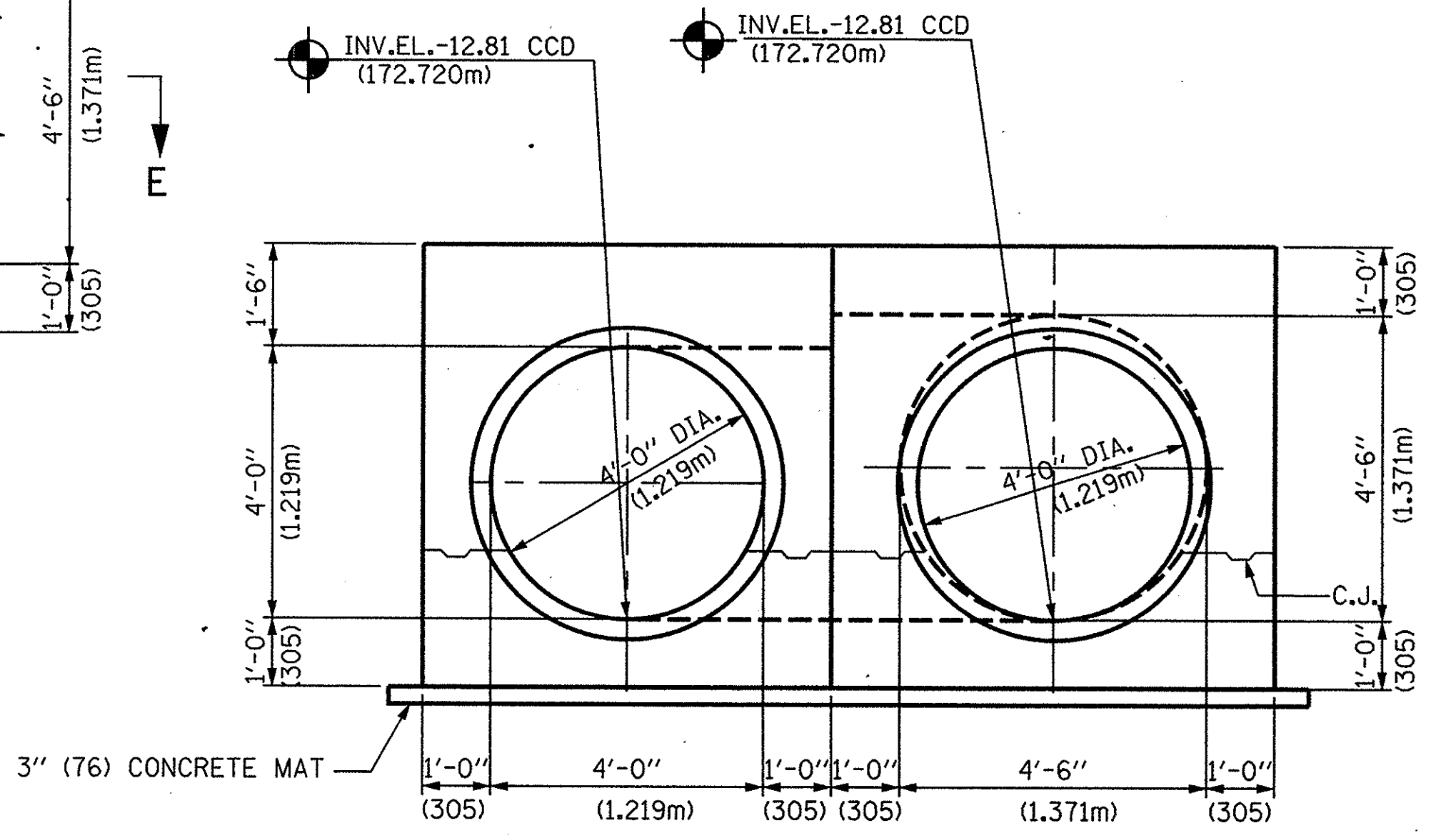
SECTION D-D



SECTION B-B

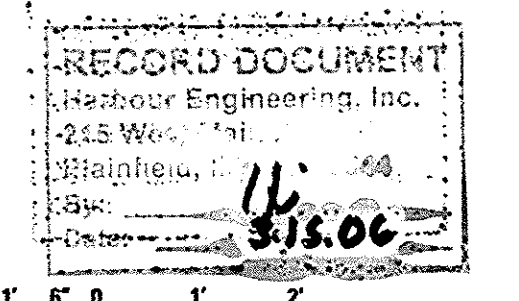


SECTION C-C



ELEVATION A-A

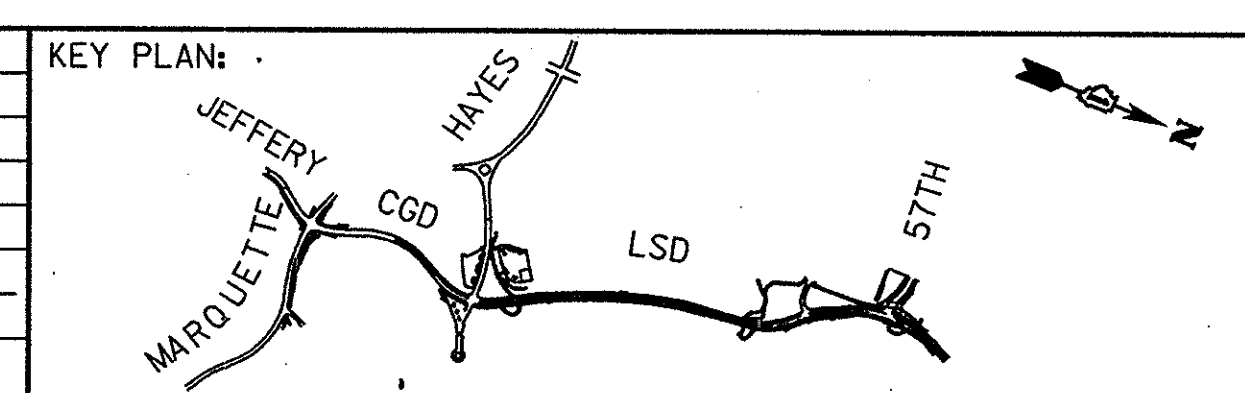
- NOTES:**
- UNLESS OTHERWISE NOTED, ALL WORK SHOWN IS PART OF ITEM MP3
 - FOR GENERAL NOTES SEE SHEET NO. DS-1
 - FOR REINFORCEMENT DETAILS SEE SHEET NO. DS-28
 - COORDINATE WITH CIVIL DRAWINGS FOR LOCATION, EXISTING UTILITIES AND TOPOGRAPHY.
 - COORDINATE KEY DETAILS FOR PIPE AND MANHOLE RING WITH SUPPLIER AND OR MANUFACTURER.



SCALE 12" = 1'-0"

DESIGN:	G.M.K./N.S.
DRAWN:	G.M.K.
CHECKED:	M.T.P.
APPROVED:	S.M.K.
DATE:	4/16/02
SCALE:	AS NOTED
FILE:	

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOR TOWSEND ENGINEERING, INC.
DEI DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO ILLINOIS.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

JUNCTION STRUCTURE - MP3
STATION 11 + 340.228

CONTRACT NO.
00-B0241-06-PV
DRAWING NO.
DS - 27
PROJECT NO. B-1-440

16A00916d6

LEGEND

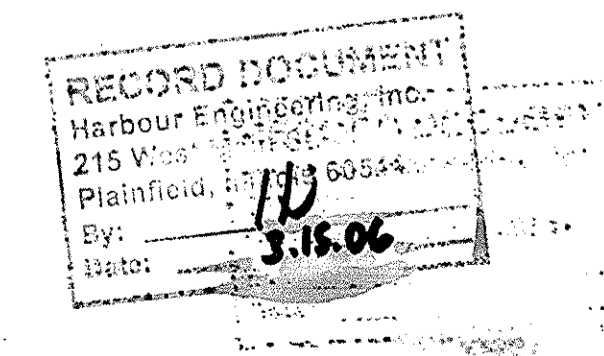
- ⊕ CENTER LINE
- PIPE TURNING UP
- ∩ PIPE TURNING DOWN
- DIRECTION OF FLOW
- ↯ CHECK VALVE
- ∅ DIAMETER

ABBREVIATION LIST

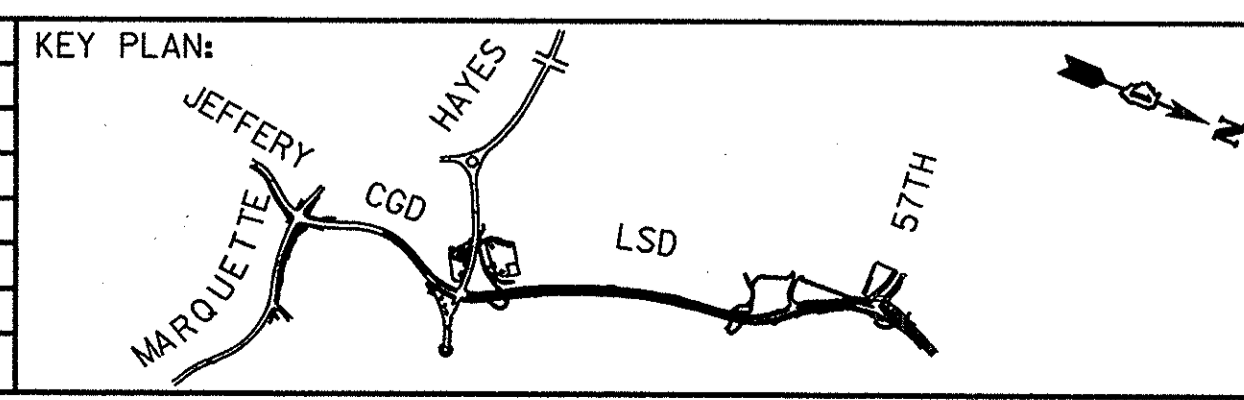
- PUMP
- CU. M/SEC CUBIC METER PER SECOND
- CFS CUBIC FEET PER SECOND
- AFF ABOVE FINISHED FLOOR
- LPS. LITERS PER SECOND
- EL. ELEVATION
- CONC. CONCRETE
- DIA. DIAMETER
- EA. EACH
- INV. INVERT
- TYP. TYPICAL
- MH MANHOLE
- mm MILLIMETERS
- m METERS
- DISC. DISCHARGE
- MANHOLE COVER
- INV. EL. INVERT ELEVATION
- I.P.D. INSIDE PIPE DIAMETER
- O.P.D. OUTSIDE PIPE DIAMETER
- MIN. MINIMUM
- DWG. DRAWING
- D.I.P. DUCTILE IRON PIPE
- ACCESS HATCH

GENERAL NOTES

- PRIOR TO SUBMITTING BID, THE CONTRACTOR MUST VISIT THE PROJECT SITE AND THOROUGHLY EVALUATE EXISTING CONDITIONS AND DETERMINE HOW THEY AFFECT WORK. CONTRACTOR MUST INCLUDE IN BID ANY ALTERATIONS, RELOCATING, REROUTING, ETC. OF PIPING, AND EQUIPMENT REQUIRED FOR INSTALLATION OF WORK.
- THE CONTRACTOR MUST SUBMIT COMPLETE, COORDINATED SHOP DRAWING INCLUDING ALL WORK AND MATERIALS, PIPE LOCATIONS AND ELEVATIONS, CORES THROUGH SLAB AND/OR BEAMS, ETC., WHICH MUST BE APPROVED BY THE ENGINEER PRIOR TO STARTING WORK.
- ALL WORK AND MATERIALS MUST BE IN ACCORDANCE WITH SPECIFICATIONS. ALL WORK MUST MEET ALL APPLICABLE LOCAL AND STATE CODES AND ORDINANCES. CONTRACTOR MUST SUBMIT ALL WORK AND MATERIALS, WHICH MUST BE APPROVED BY THE ENGINEER, PRIOR TO INSTALLATION.
- PROTECT STRUCTURE FROM ANY DAMAGE WHICH MAY OCCUR DURING INSTALLATION OF MECHANICAL WORK. ANY DAMAGE TO FACILITIES MUST BE REPAIRED, REPLACED OR RESTORED TO THE ORIGINAL CONDITION AND SATISFACTION OF THE ENGINEER.
- CUTTING AND PATCHING OF STRUCTURES MUST BE COORDINATED THOROUGHLY, WITH WRITTEN APPROVAL BY THE ENGINEER.
- PROVIDE DUCTILE IRON SLEEVES FOR PIPING THROUGH WALLS.
- THE GENERAL RUN AND LOCATION OF THE PIPES AND EQUIPMENTS IS SHOWN ON THE DRAWING. HOWEVER, IT MUST BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SIZES, DIMENSIONS, CLEARANCES, ETC. IF A DIFFERENT ARRANGEMENT THAN THAT SHOWN IS PROPOSED, IT MUST BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND INSTALL SUCH WORK AS MAY BE REQUIRED WITHOUT ADDITIONAL CHARGE TO THE OWNER.
- DRAWINGS ARE INTENDED TO SHOW THE PROPER SIZE AND GENERAL LOCATION OF THE EQUIPMENT, PIPING, ETC. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND FIELD CONNECTIONS.
- CONTRACTOR TO COORDINATE WITH ALL TRADES BEFORE INSTALLING ANY PIPING, EQUIPMENT, ETC.
- THE CONTRACTOR MUST VERIFY CLEARANCES AND STRUCTURAL CONDITIONS PRIOR TO PIPING INSTALLATION AND ROUTING.



DESIGN: S.A.			
DRAWN: B.D.			
CHECKED: Z.M.			
APPROVED: S.A.			
DATE: 4/16/02			
SCALE: AS NOTED			
FILE:			



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

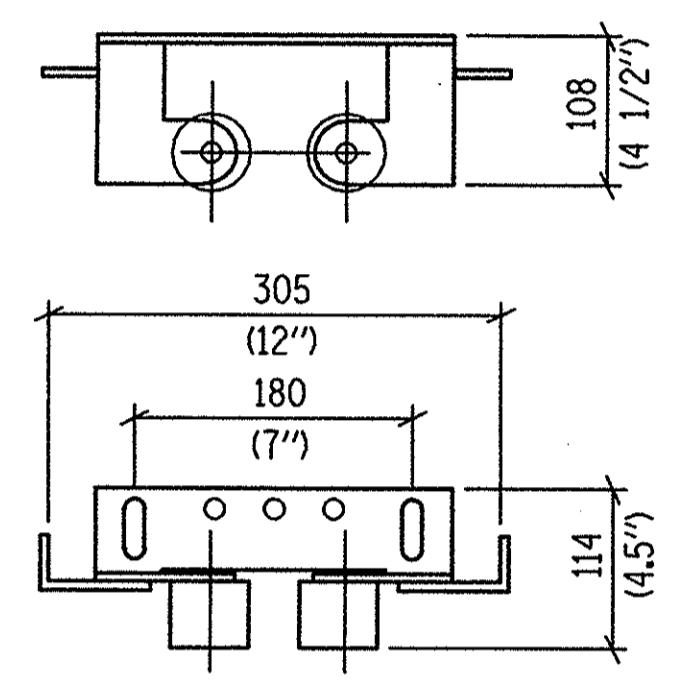
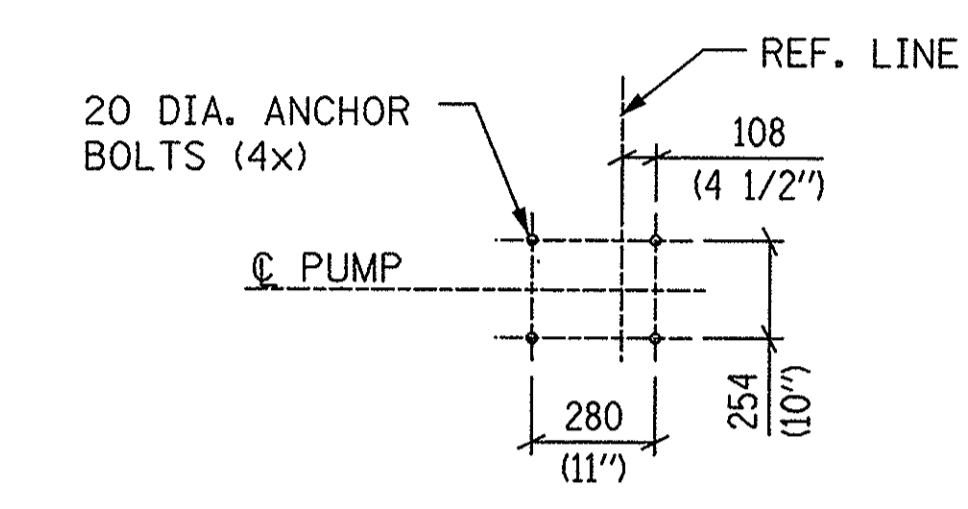
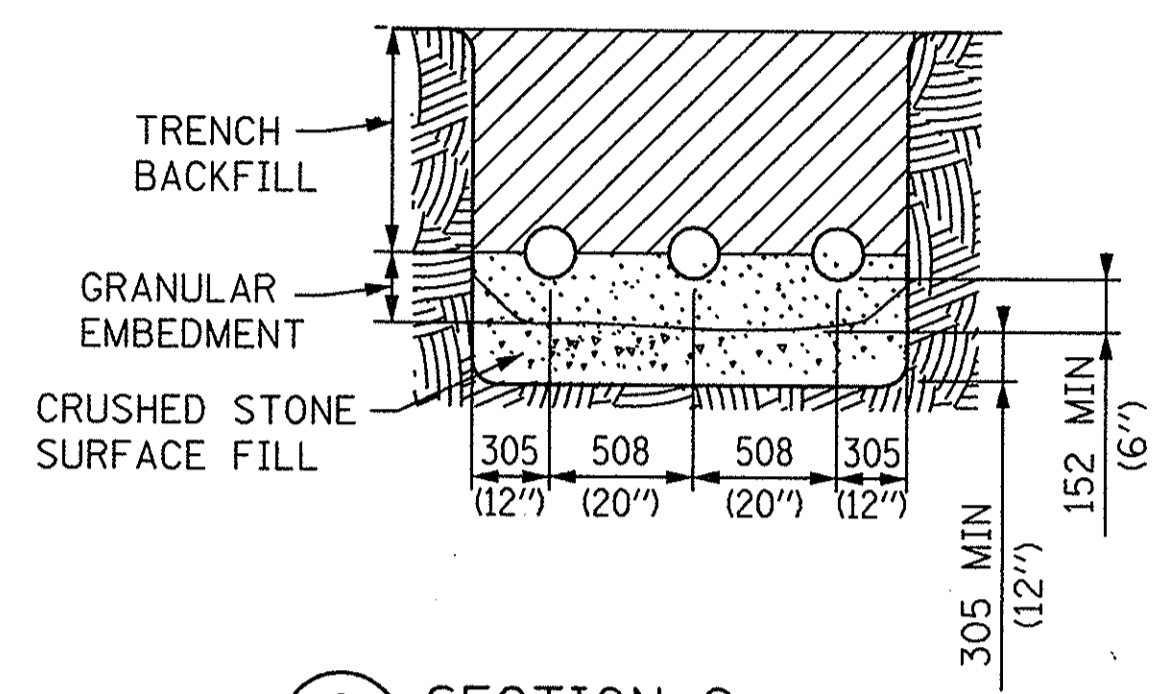
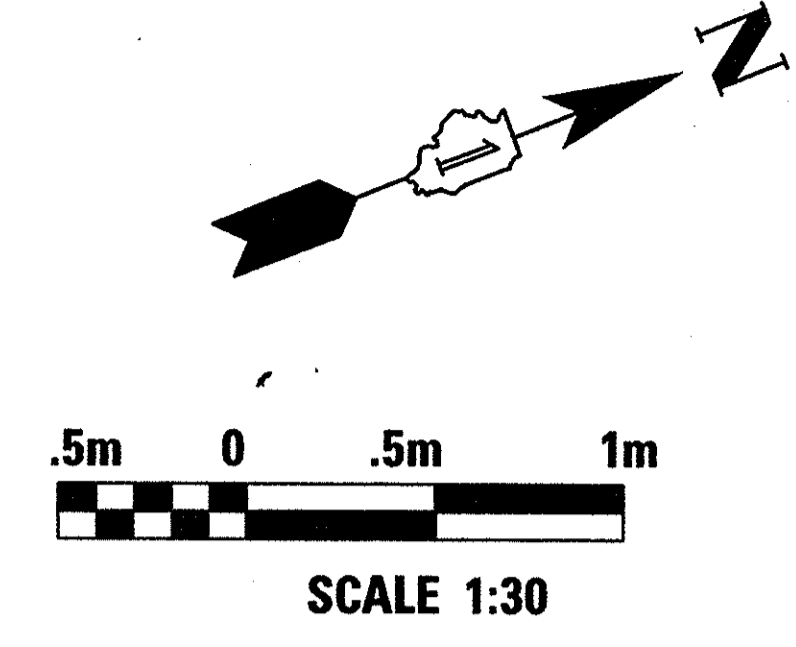
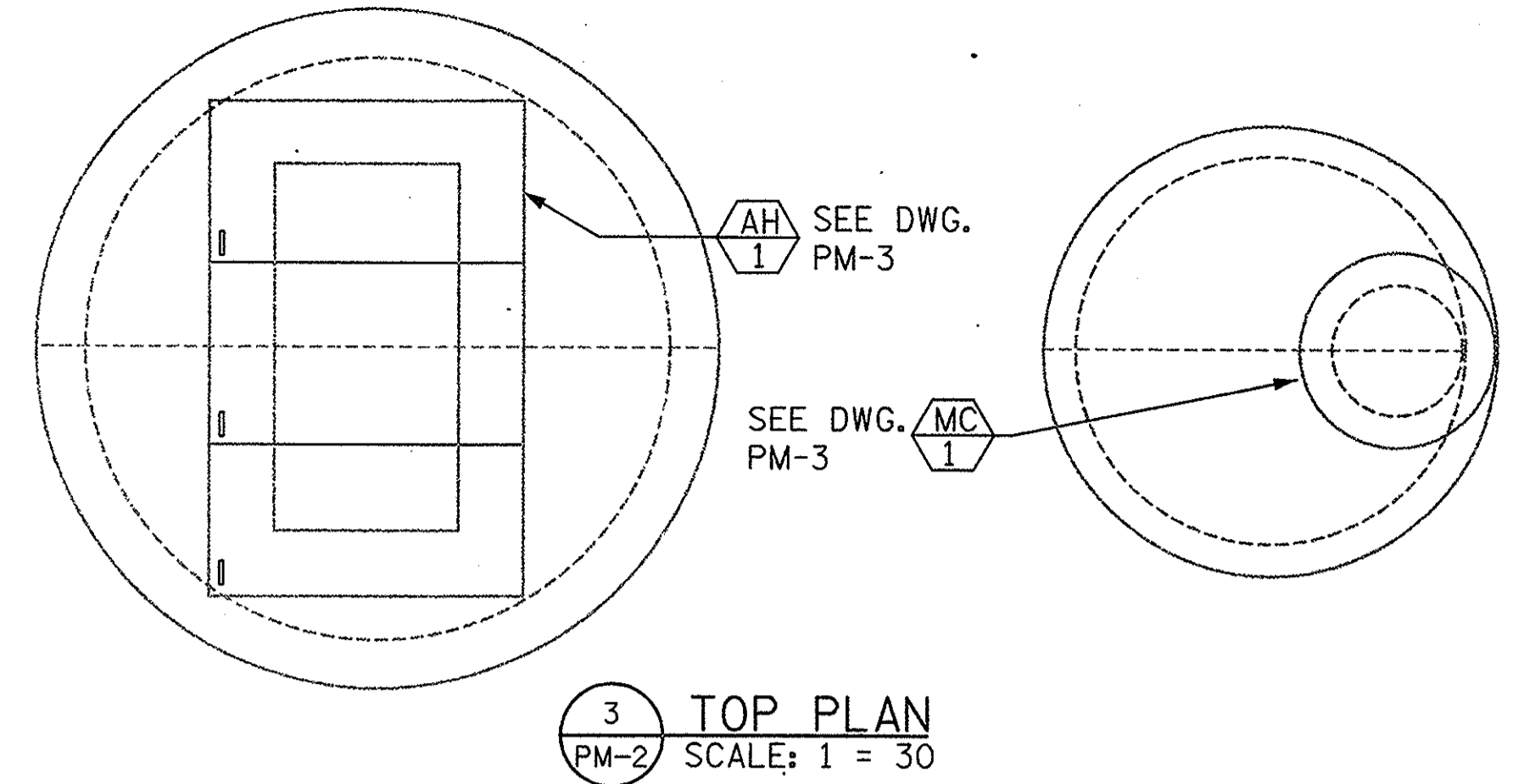
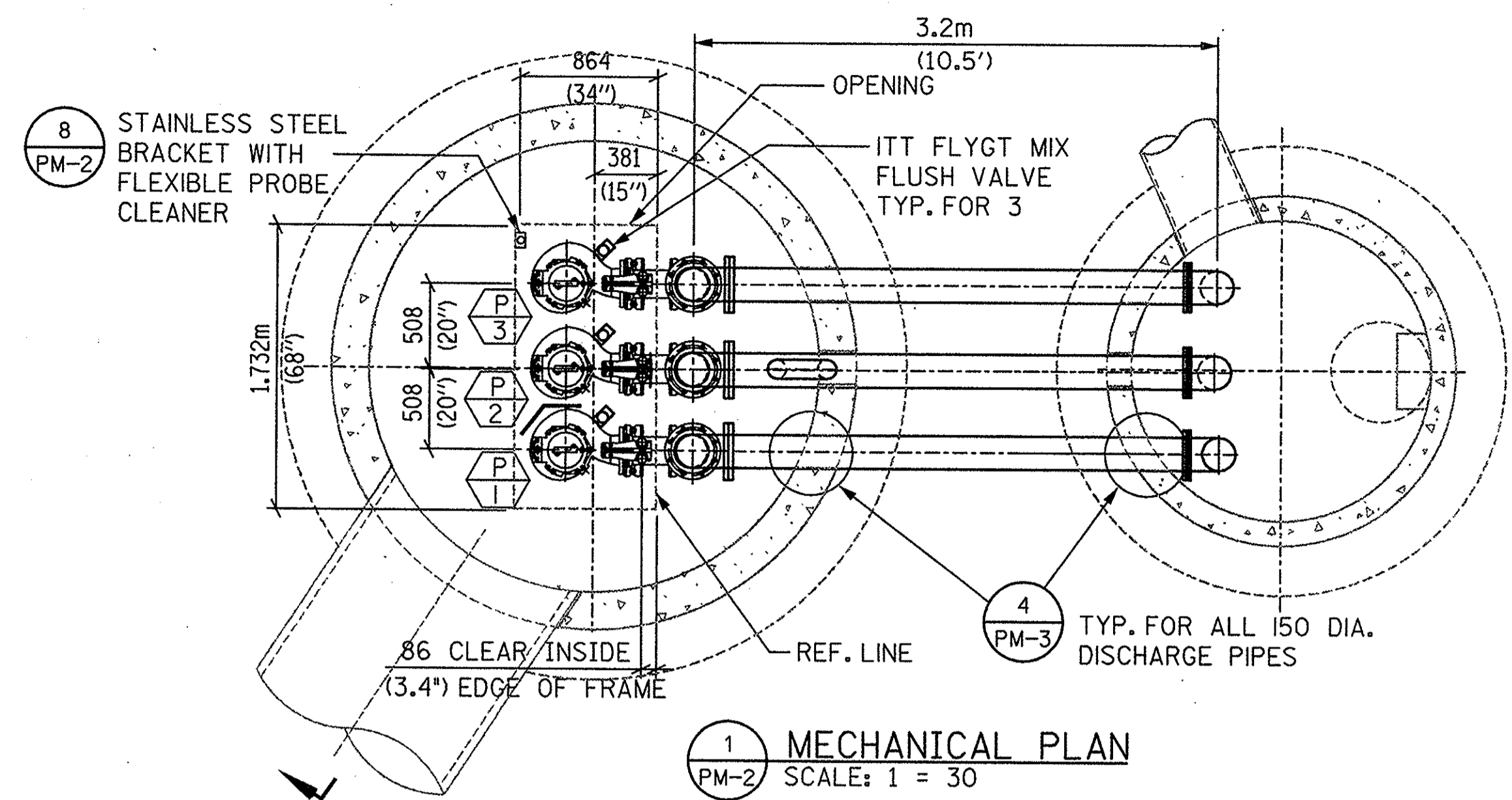


SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

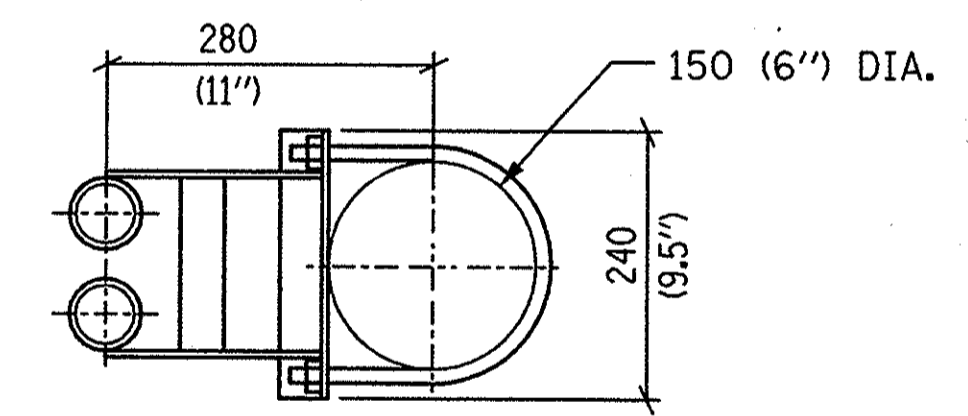
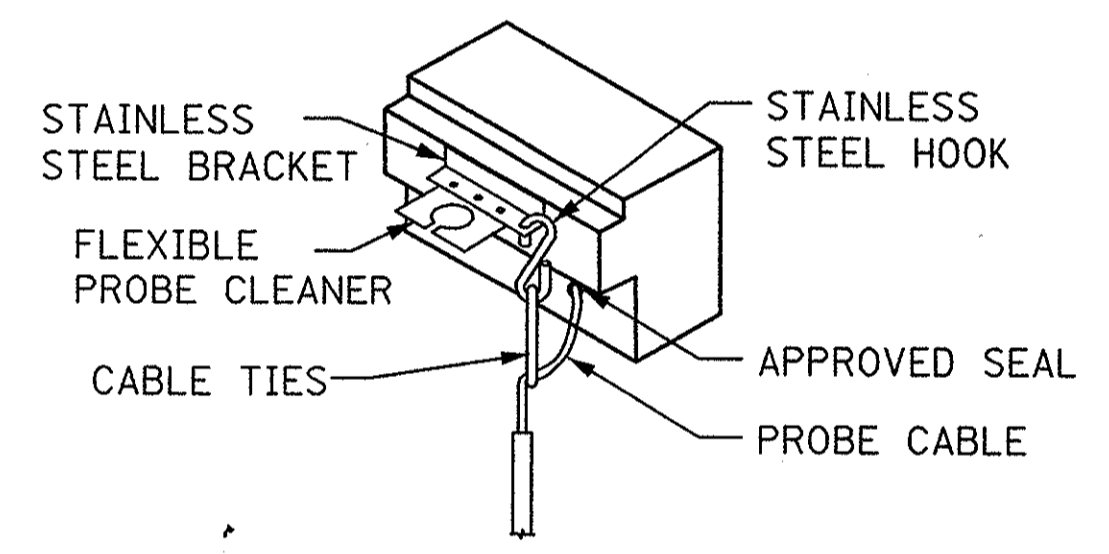
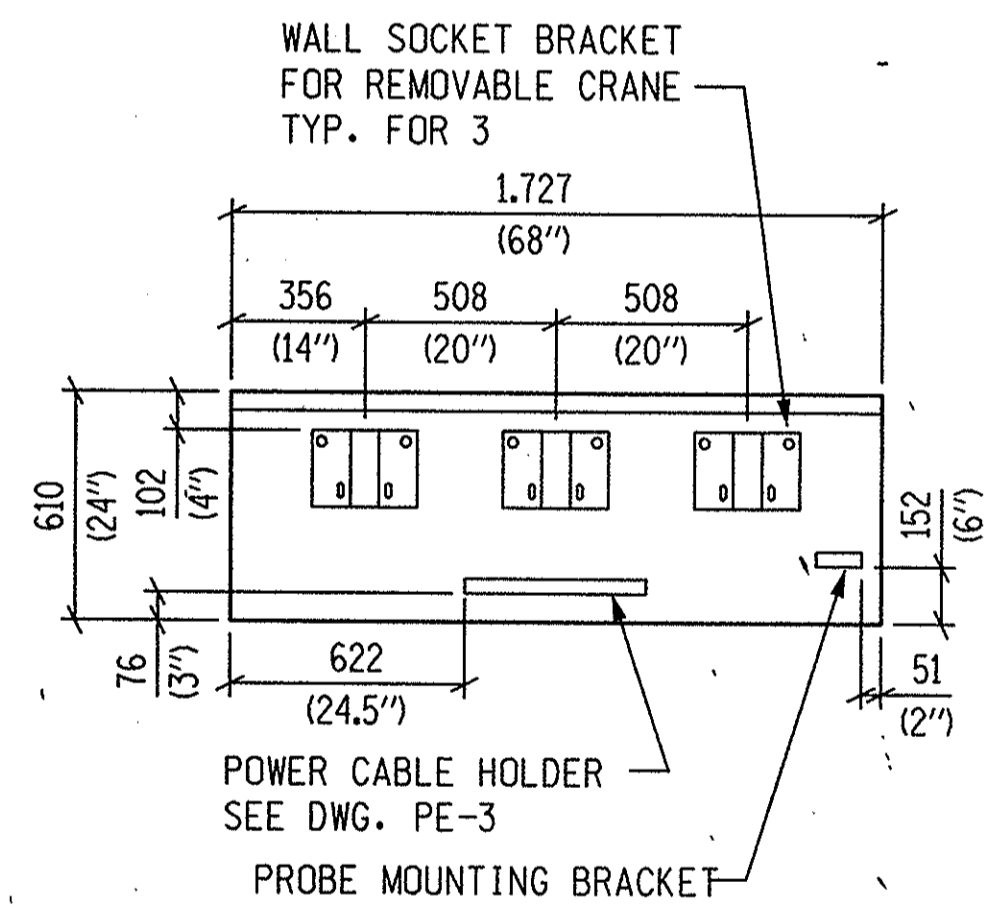
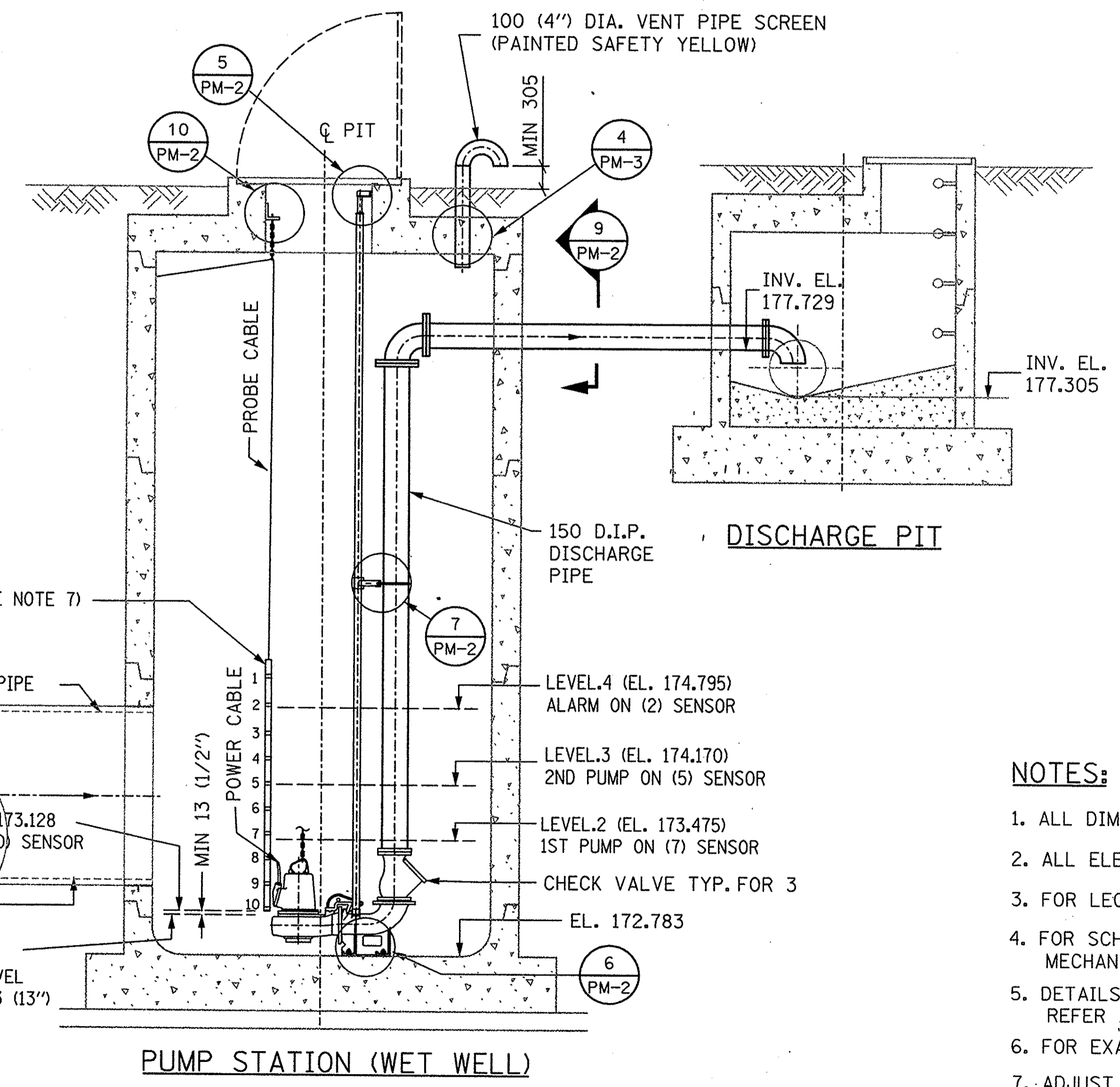
GENERAL NOTES, LEGEND
AND ABBREVIATIONS
PUMP STATIONS - 57TH & 63RD STREETS

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	PM-1
PROJECT NO.	B-1-440

1640091706



NOTE: USE WITH 51 NOMINAL GUIDE BAR



NOTE: DUAL RAIL INTERMEDIATE GUIDE BAR BRACKET (USED FOR GUIDE BARS OVER 6.100 (20') LONG SPACED EVERY 3.050 (10').

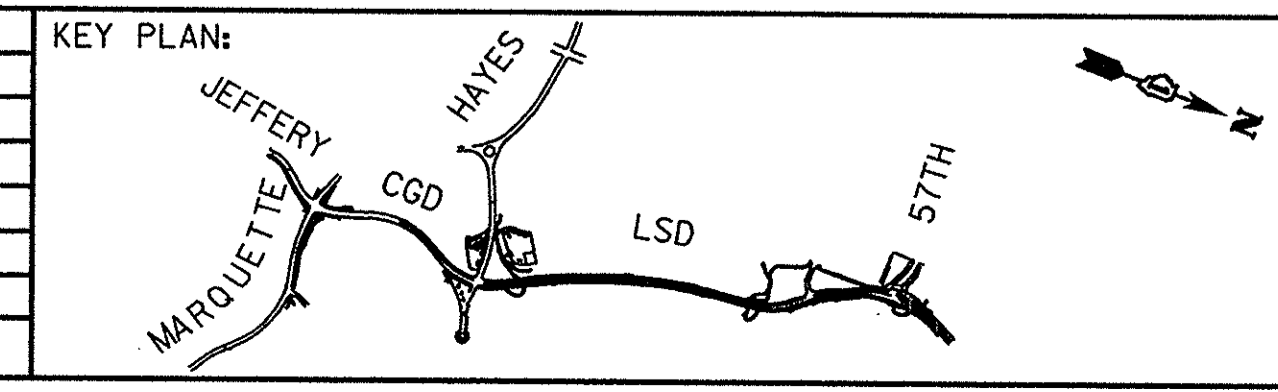
- NOTES:**
1. ALL DIMENSION ARE IN MM UNLESS OTHERWISE NOTED
 2. ALL ELEVATIONS ARE IN METERS.
 3. FOR LEGEND, ABBREVIATION AND GENERAL NOTES SEE DRAWING PM-1.
 4. FOR SCHEMATIC, SEQUENCE OF OPERATION AND SCHEDULES AND MECHANICAL NOTES SEE DRAWING PM-3.
 5. DETAILS SHOWN ARE FOR GENERAL REFERENCE ONLY, FOR ACTUAL DETAILS REFER APPROVED VENDORS INSTALLATION INSTRUCTIONS.
 6. FOR EXACT LOCATION OF PUMP STATION & DISCHARGE PIT SEE CIVIL DRAWINGS.
 7. ADJUST THE LEVELS IN FIELD TO CLOSEST SENSOR NUMBER ON SELECTED PROBE.
 8. SEE DETAIL 4 ON DWG PM-3.

RECORD DOCUMENT
Harbour Engineering, Inc.
216 West Main Street
Plainfield, Illinois 60546
By: [Signature]
Date: 3.15.06

1
2
3
4
5
6
7
8
9
10

DESIGN:			
DRAWN:			
CHECKED:			
APPROVED:			
DATE:	4/16/02		
SCALE:	AS NOTED		
FILE:			

NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

SOUTH LAKE SHORE DRIVE JACKSON PARK SECTION MAINLINE RECONSTRUCTION

PLAN, SECTIONS AND DETAILS, PUMP STATION - 63RD STREET

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
PM-2

PROJECT NO. B-1-440
1640091707

TAG	SERVICE	TYPE	CU. M/SEC (CFS)	HEAD M (FT)	RPM	DISC. SIZE (MM)	MOTOR DATA				MANUFACTURER AND MODEL	REMARKS
							HP	VOLT	PH	HZ		
P1	STORM WATER	SUBMERSIBLE	0.033 (1.14)	6.1 (20)	1735	100	5	208	3	60	FLYGT PUMPS MODEL CP-3102-MT	*
P2	STORM WATER	SUBMERSIBLE	0.033 (1.14)	6.1 (20)	1735	100	5	208	3	60	FLYGT PUMPS MODEL CP-3102-MT	*
P3	STORM WATER	SUBMERSIBLE	0.033 (1.14)	6.1 (20)	1735	100	5	208	3	60	FLYGT PUMPS MODEL CP-3102-MT	*

* PROVIDE DUAL RAIL SYSTEM WITH DUAL RAIL GUIDE SUPPORT BRACKETS, SUPPORT FOR BASE ELBOW OF PUMPS AND MIX-FLUSH VALVE SYSTEM AS MANUFACTURED BY FLYGT MODEL 4901 AND ALSO PROVIDE MT3PC TRIPLEX PUMP CONTROLLER WITH MULTITRODE LIQUID LEVEL CONTROL.

ROOM NAME	ROOM PURPOSE	ROOM SQM	NATURAL LIGHT & VENTILATION				MECHANICAL VENTILATION				REMARKS
			CODE		ACTUAL		CODE		ACTUAL		
			GL AREA SQM	VENT AREA SQM	GL AREA SQM	VENT AREA SQM	AIR-SUP LPS	AIR-EXH LPS	AIR-SUP LPS	AIR-EXH LPS	
PUMP STATION (WET WELL)	PUMP LIQUID	40.92	0	0	0	0.03	0	0	0	0	VENTILATION THRU 100 (4") PIPE
DISCHARGE PIT	DISCHARGE	6.6	0	0	0	0.34	0	0	0	0	GRATED COVER

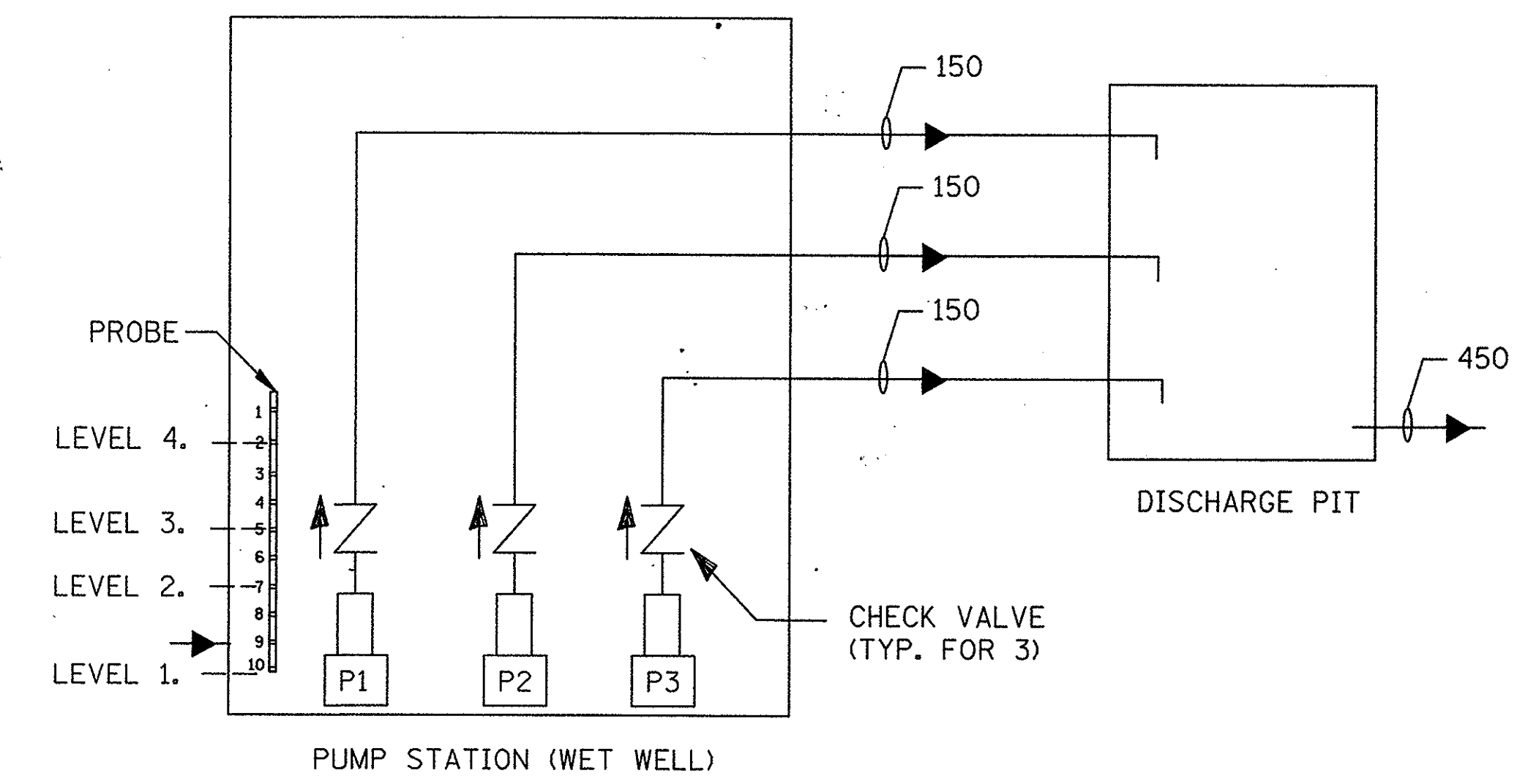
TAG	LOCATION	CLEAR OPENING SIZE W x L	OUTSIDE MANHOLE COVER SIZE (EA) W x L	NO. OF COVERS	TYPE OF COVER	MATERIAL	STYLE	MAKE	MODEL #	REMARKS
AH1	PUMP STATION (WET WELL)	1732 x 864 (68" x 34")	1994 x 1333 (78.5" x 52.5")	3	SOLID	HEAVY DUTY ALUMINUM	CHANNEL H20	SYRACUSE CASTINGS	FDRNT-HD 34X68A0	SEE MANHOLE COVER NOTES BELOW
MC1	DISCHARGE PIT	610 DIA. (24" DIA.)	850 DIA. (33.5" DIA.)	1	GRATED	GRAY IRON	-	NEENAH	R-2565	SEE MANHOLE COVER NOTES BELOW

ACCESS HATCH / MANHOLE COVER NOTES:

1. MANHOLE COVERS MUST BE BOLTED TO FRAMES WITH STAINLESS STEEL CAP SCREWS.
2. SOLID COVERS MUST BE PROVIDED WITH RING HANDLES.
3. OPENING SIZES & COVER SIZES ARE IN mm.
4. VERIFY IN FIELD MANHOLE COVER SIZES AS PER THE MODEL SELECTED, MATCHING THE CORRESPONDING CLEAR OPENINGS.
5. FOR SPECIFICATIONS SEE STRUCTURAL WORK SECTION.

MECHANICAL NOTES:

1. INSTALL PUMPS AS PER LOCATIONS SHOWN ON DRAWING'S WITH ALL ACCESSORIES.
2. PROVIDE AND INSTALL DUAL RAILS ON PUMPS AS SHOWN ON DWG'S. MATERIAL FOR DUAL RAIL MUST BE 304 STAINLESS STEEL.
3. INSTALL DUAL RAIL UPPER SUPPORT GUIDE BAR BRACKET AS SHOWN ON DWG PM-2.
4. INSTALL DUAL RAIL INTERMEDIATE SUPPORT GUIDE BAR BRACKET AT EVERY 3050 (10') AS SHOWN ON DWG PM-2.
5. INSTALL MIX-FLUSH VALVE SYSTEM ON ALL PUMPS, AS PER MANUFACTURER'S INSTRUCTION.
6. INSTALL HIGH WATER WARNING ALARM THROUGH AUTO-DIALER SYSTEM TO EITHER DEPT. OF STREETS AND SANITATION'S RADIO OR 311 AS DECIDED BY BOE. FOR CONTROLLER SCHEMATIC DIAGRAM SEE DWG. PE-3A
7. INSTALL 100 (4") VENT PIPE
8. FOR NOTES, LEGEND AND ABBREVIATIONS, REFER DWG PM-1
9. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
10. INSTALL PROBE LIQUID CONTROL SYSTEM AS SHOWN ON DWG. PM-2 AS PER MANUFACTURER'S INSTRUCTION.



PUMPS SCHEMATIC DIAGRAM
NTS:

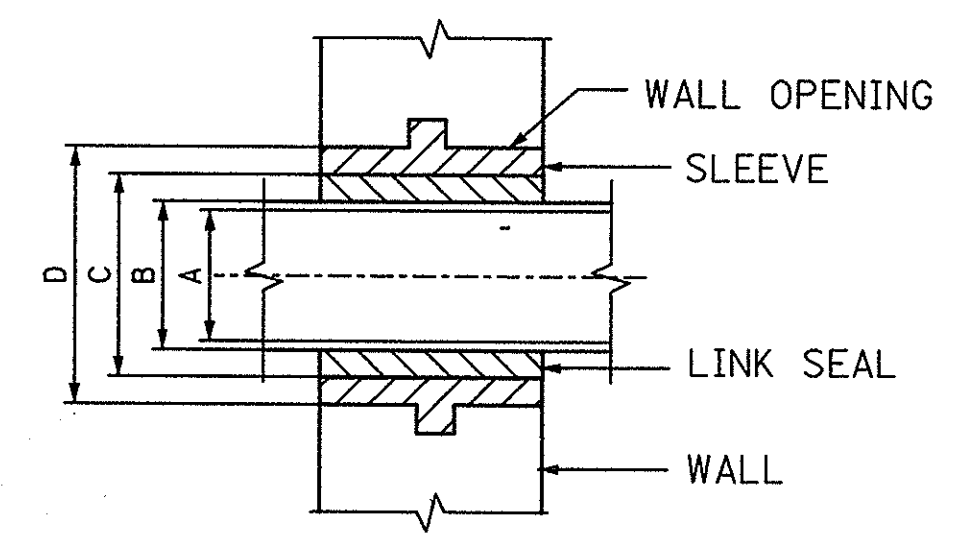
SEQUENCE OF OPERATIONS:

1. AT ANY TIME ANY ONE PUMP OR TWO PUMPS WILL BE WORKING DEPENDING UPON THE LEVEL OF WATER. THE THIRD PUMP WILL BE STAND-BY.
THE CONTROL FUNCTION MUST PROVIDE FOR THE OPERATION OF THE PUMPS UNDER NORMAL CONDITIONS, AND MUST ALTERNATE THE PUMPS ON EACH PUMP DOWN CYCLE TO EQUALIZE THE RUN TIME. IN THE EVENT THE INCOMING FLOW EXCEEDS THE PUMPING CAPACITY OF THE LEAD PUMP, SUBSEQUENT PUMPS MUST AUTOMATICALLY START TO HANDLE THE INCREASED FLOW. AS THE FLOW DECREASES, THE PUMPS MUST CUT OFF AT THE ELEVATIONS AS SHOWN ON THE PLANS.

2. THE FEATURE ON MT3PC TRIPLEX PUMP CONTROLLER "MAX PUMP OFF TIME" WILL BE USED TO PREVENT WET WELL BECOMING SEPTIC. IF NO PUMP HAS ACTIVATED WITHIN THE SET TIME WHEN WATER IS BELOW LEVEL 2, THE DUTY PUMP WILL RUN. MAXIMUM PUMP OFF TIME CAN BE SET BETWEEN 15 MIN AND 10 HOURS.

OPERATIONAL SEQUENCE AS FOLLOWS: (SEE DWG. PM-2)

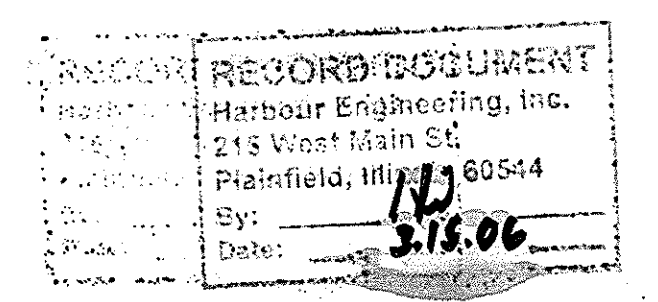
- LEVEL 1: PUMP WILL STOP
- LEVEL 2: FIRST PUMP WILL START
- LEVEL 3: SECOND PUMPS WILL START AND WILL STOP AT LEVEL 2.
- LEVEL 4: ALARM ON



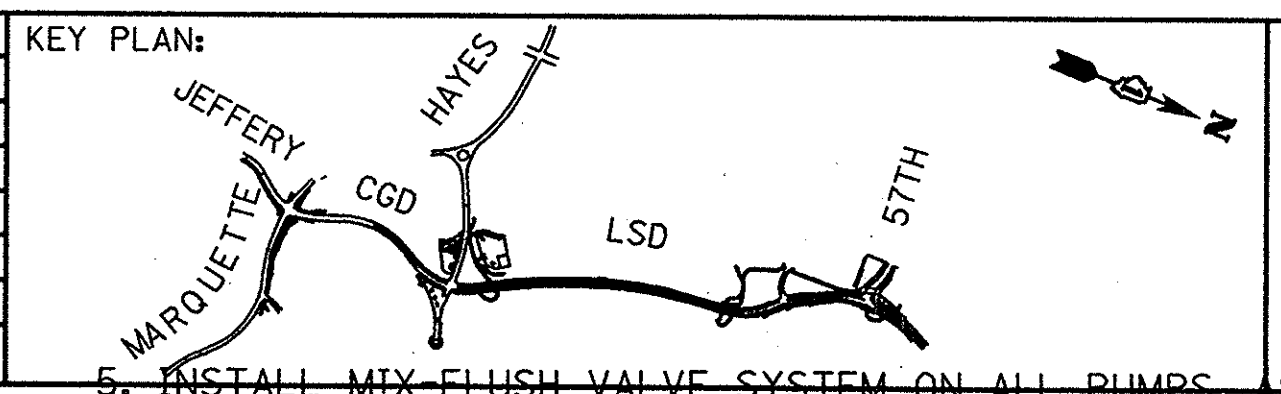
NOTE:
LINK SEAL MODEL WS-12-37-S, LINK-SEAL SIZE LS-400 AS MANUFACTURED BY THUNDERLINE LINK-SEAL.

NOM. PIPE DIA	A	B	C	D	LINK SEAL	
					MODEL#	SIZE
100	100	122	203	229	WS-8-32-S	LS-400
150	150	175	254	282	WS-10-36-S	LS-400
200	200	240	305	335	WS-12-37-S	LS-400

4 DETAIL 4
PM-3 PIPE PENETRATION
(N.T.S.)



DESIGN: S.A.				
DRAWN: B.D.				
CHECKED: Z.M.				
APPROVED: S.A.				
DATE: 4/16/02				
SCALE: AS NOTED				
FILE:	NO.	BY	DATE	DESCRIPTION
REVISIONS				



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

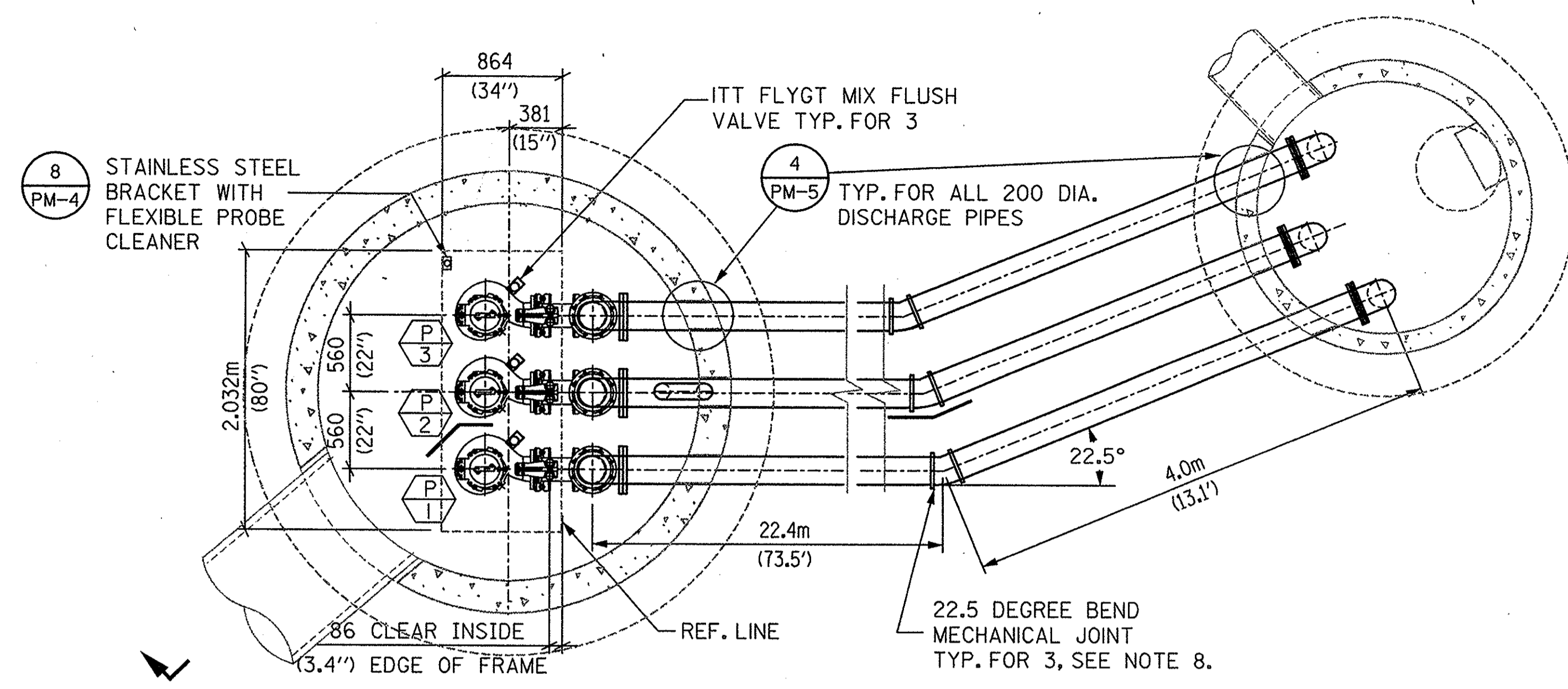
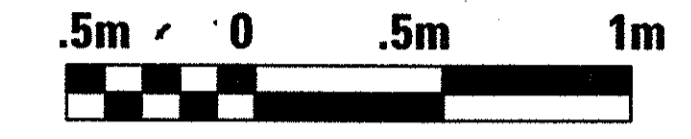
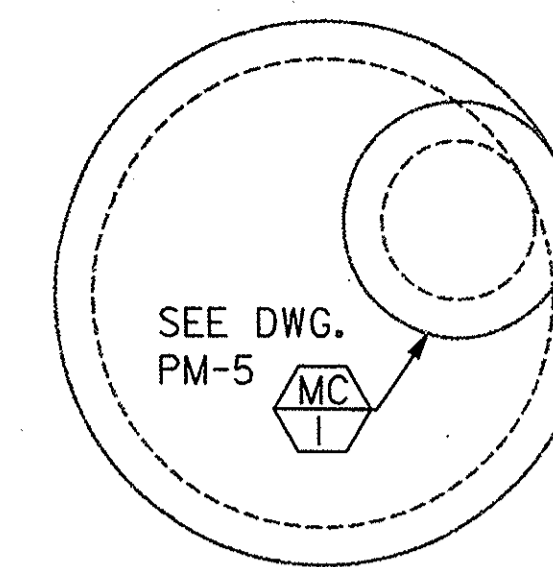
CTE ENGINEERS
CONDOR TOWNSEND ENGINEERS, INC.

DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

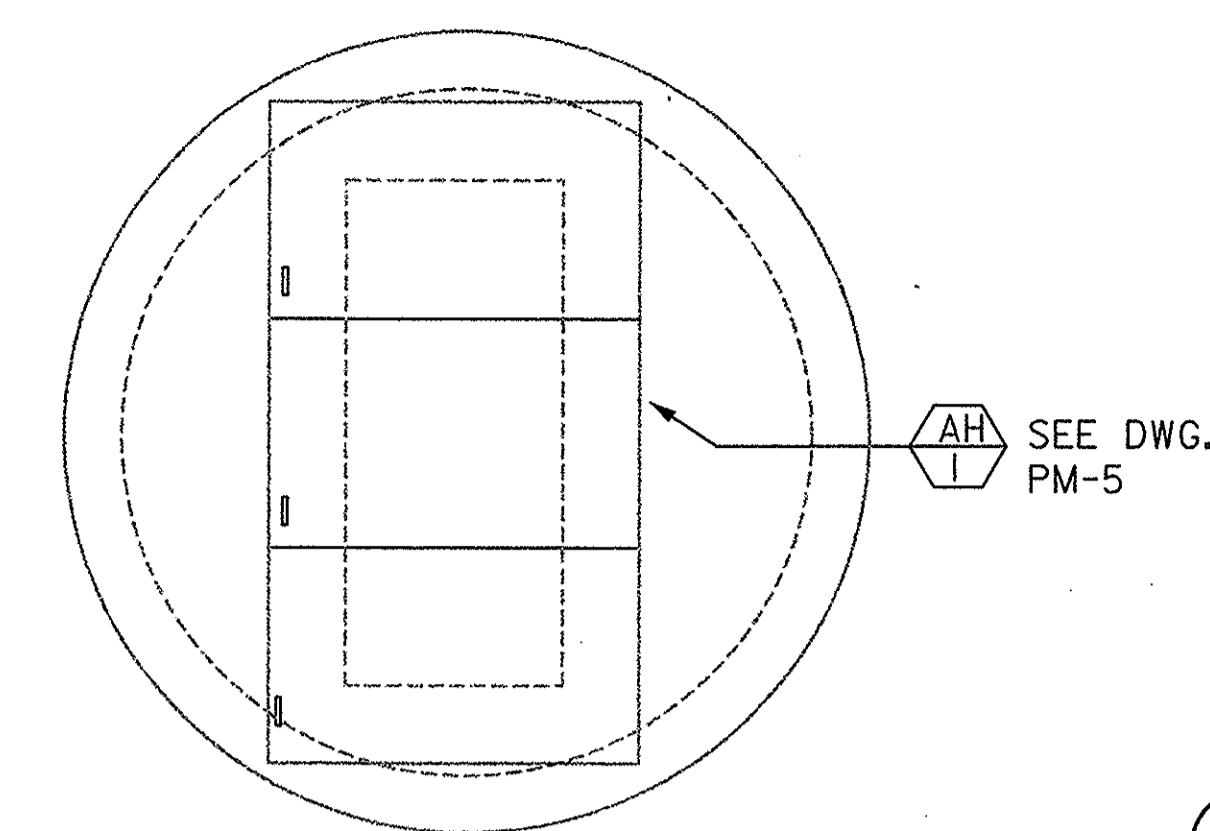
**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**PUMP SCHEDULES, NOTES,
PUMPING SCHEMATIC AND SEQUENCE
PUMP STATION - 63RD STREET**

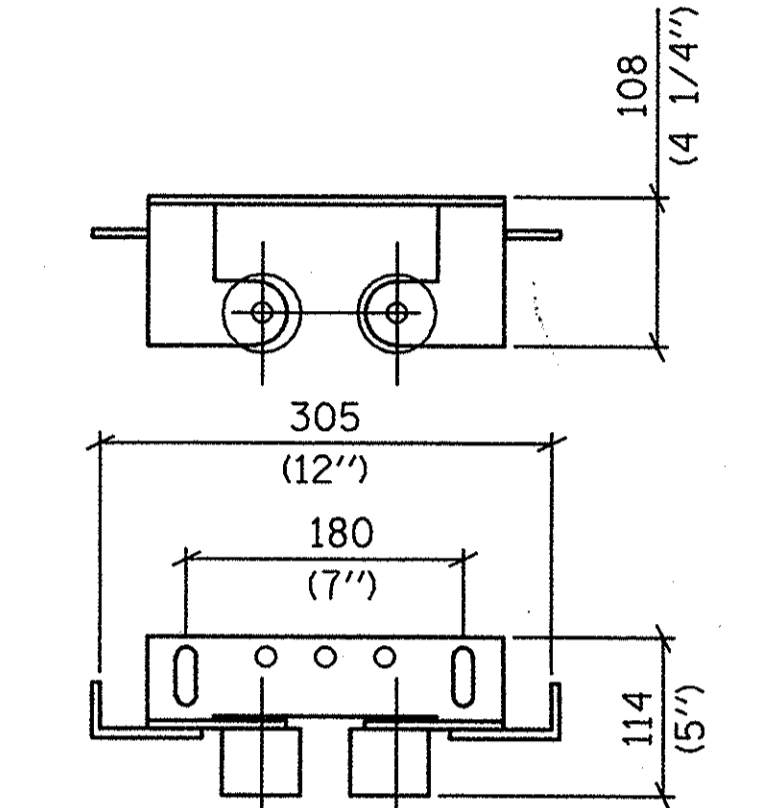
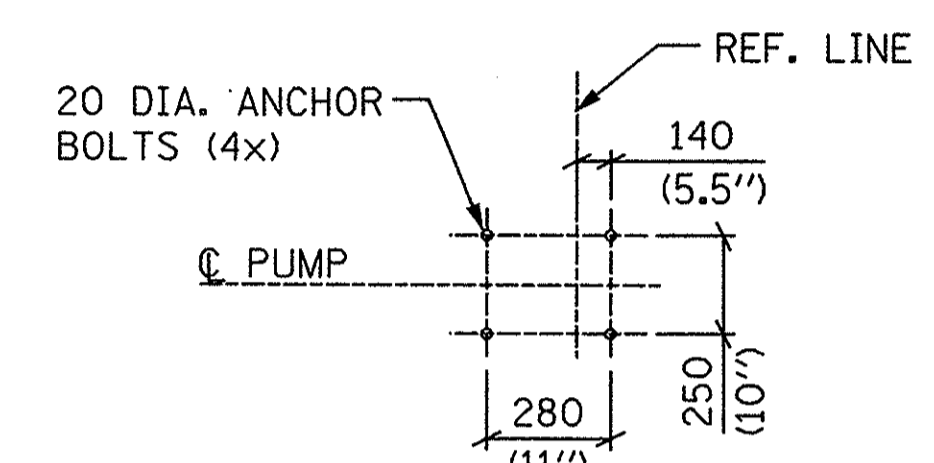
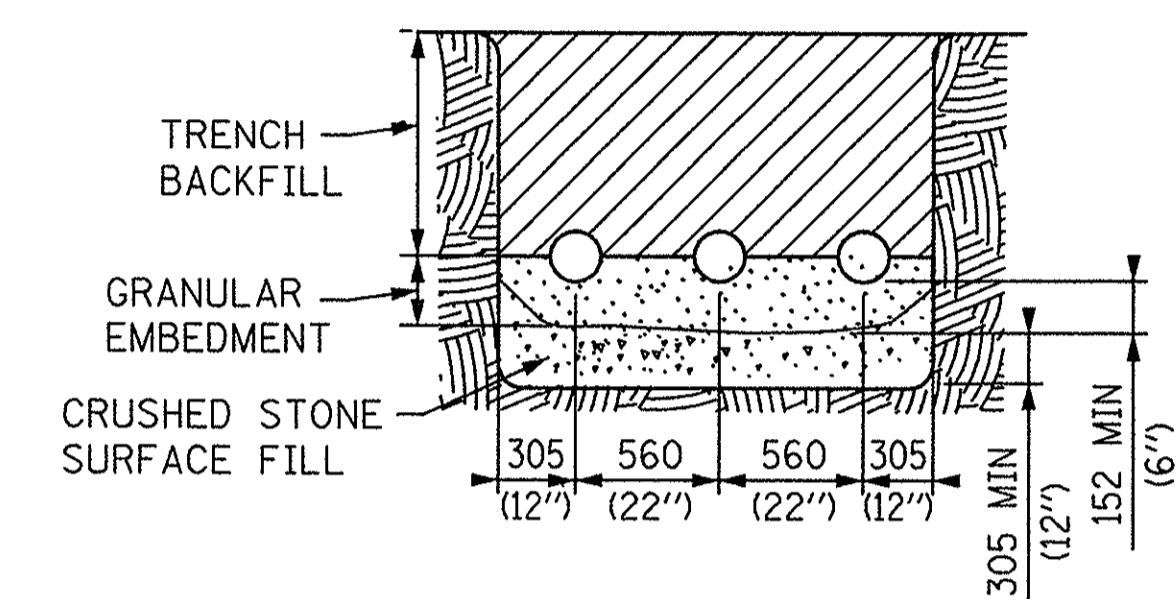
CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	PM-3
PROJECT NO.	B-1-440



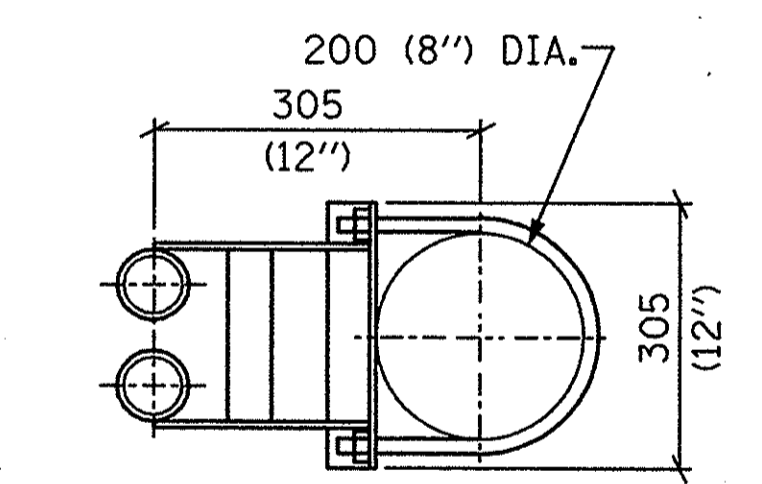
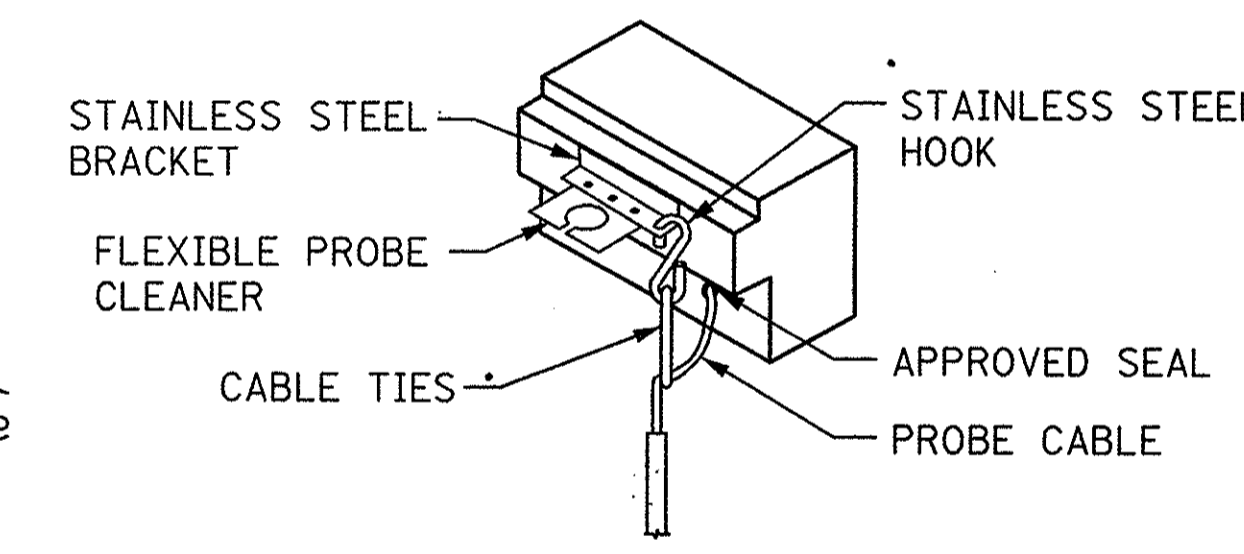
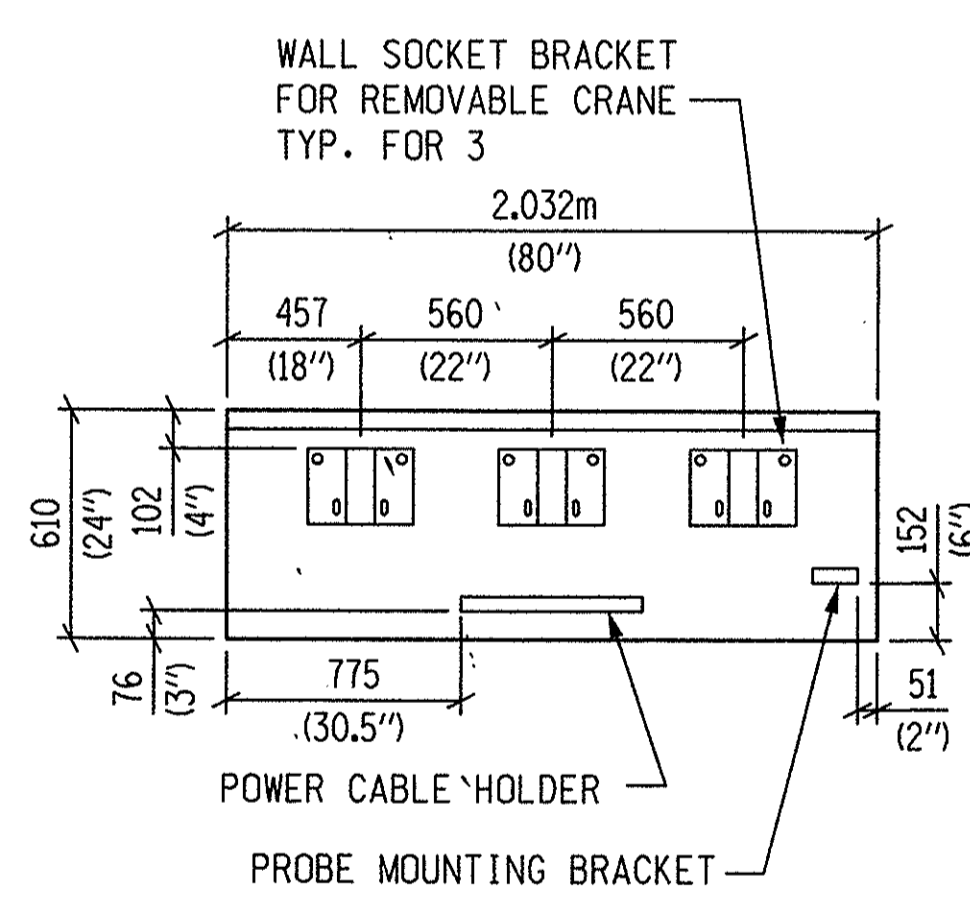
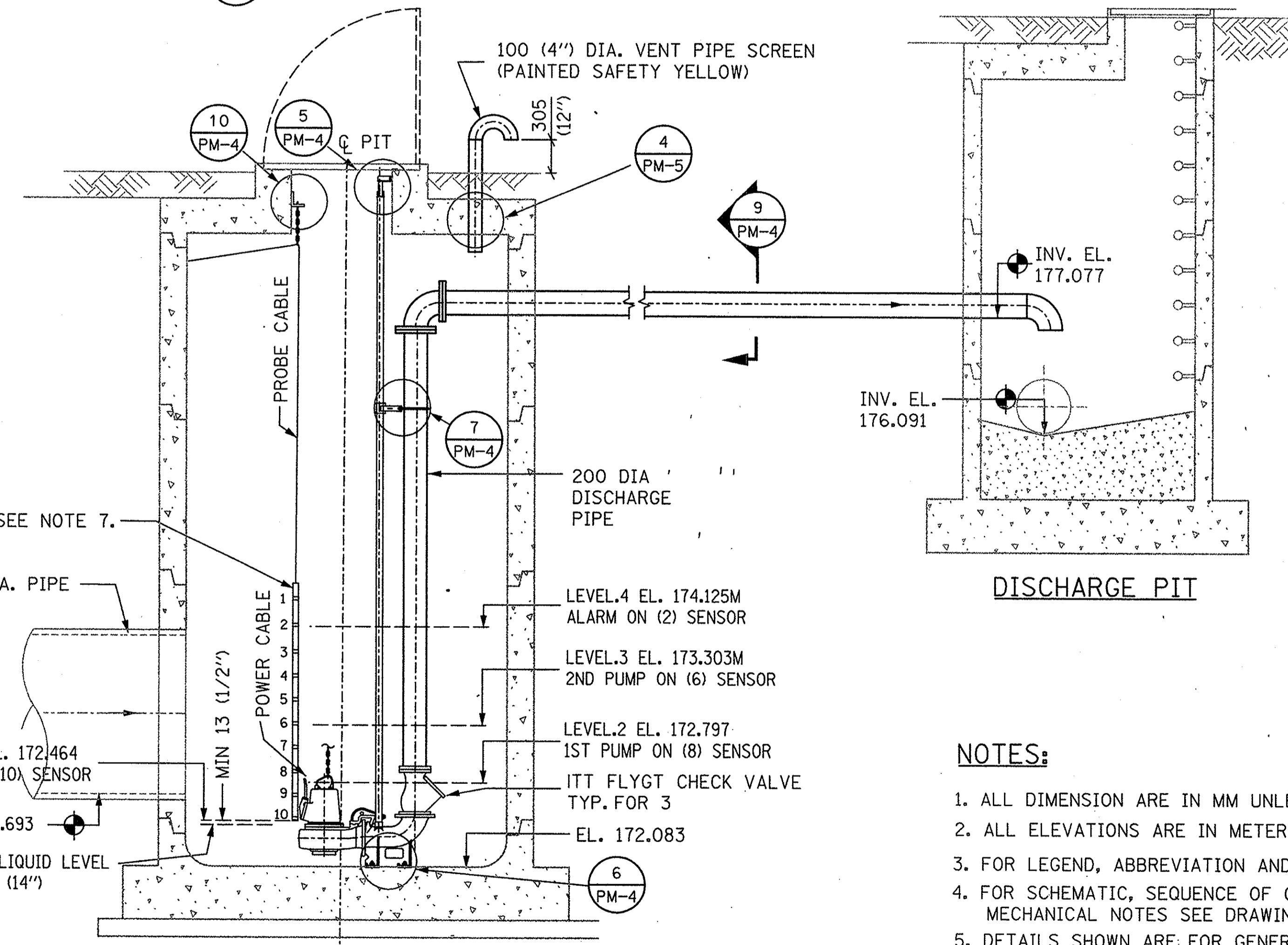
1 MECHANICAL PLAN
SCALE: 1 = 30



3 TOP PLAN
SCALE: 1 = 30



NOTE: USE WITH 51 NOMINAL GUIDE BAR



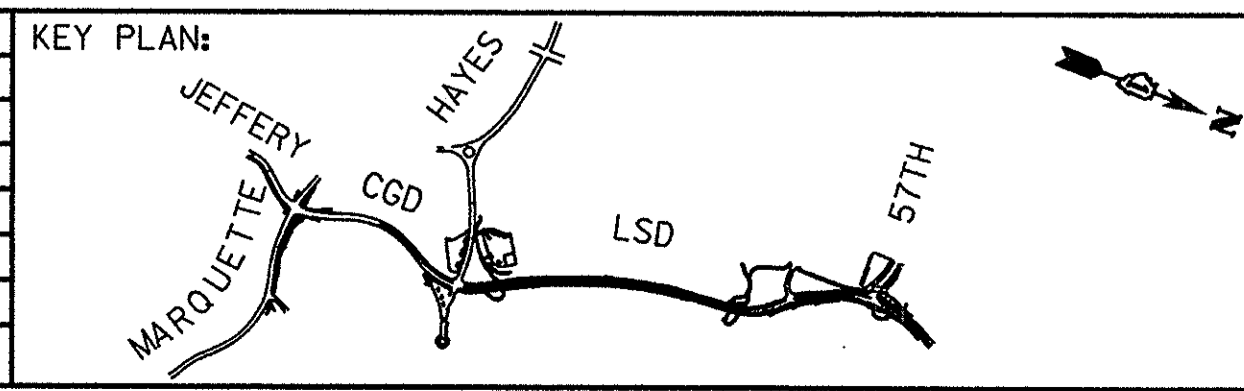
NOTE: DUAL RIAL INTERMEDIATE GUIDE BAR BRACKET (USED FOR GUIDE BARS OVER 6.100 (20') LONG SPACED EVERY 3.050 (10').

NOTES:

1. ALL DIMENSION ARE IN MM UNLESS OTHERWISE NOTED
2. ALL ELEVATIONS ARE IN METERS.
3. FOR LEGEND, ABBREVIATION AND GENERAL NOTES SEE DRAWING PM-1.
4. FOR SCHEMATIC, SEQUENCE OF OPERATION AND SCHEDULES AND MECHANICAL NOTES SEE DRAWING PM-5.
5. DETAILS SHOWN ARE FOR GENERAL REFERENCE ONLY, FOR ACTUAL DETAILS REFER APPROVED VENDORS' INSTALLATION INSTRUCTIONS.
6. FOR EXACT LOCATION OF PUMP STATION & DISCHARGE PIT SEE CIVIL DWG'S
7. ADJUST THE LEVELS IN FIELD TO CLOSEST SENSOR NUMBER ON SELECTED PROBE.
8. MECHANICAL JOINT DUCTILE IRON CEMENT LINED FITTING.
9. SEE DETAIL 4 ON DWG PM-5.

RECORD DOCUMENT
Harbour Engineering, Inc.
215 West Main St.
Plainfield, Illinois 60544
By: [Signature]
Date: 3.15.06

DESIGN: S.A.				
DRAWN: B.D.				
CHECKED: Z.M.				
APPROVED: S.A.				
DATE: 4/16/02				
SCALE: AS NOTED				
FILE:				
REVISIONS				
NO.	BY	DATE	DESCRIPTION	



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSIDER TOMORROW'S ENVIRONMENTAL ENGINEERS, INC.
DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

PLAN, SECTIONS AND DETAILS
PUMP STATION - 57TH STREET

CONTRACT NO.
00-B0241-06-PV
DRAWING NO.
PM-4
PROJECT NO. B-1-440

16A0091709

PUMP SCHEDULE												
TAG	SERVICE	TYPE	CU. M/SEC (CFS)	HEAD M (FT)	RPM	DISC. SIZE (MM)	MOTOR DATA				MANUFACTURER AND MODEL	REMARKS
							HP	VOLT	PH	HZ		
P1	STORM WATER	SUBMERSIBLE	0.063 (2.20)	6.1 (20)	1745	200	10	208	3	60	FLYGT PUMPS MODEL CP-3127-LT	*
P2	STORM WATER	SUBMERSIBLE	0.063 (2.20)	6.1 (20)	1745	200	10	208	3	60	FLYGT PUMPS MODEL CP-3127-LT	*
P3	STORM WATER	SUBMERSIBLE	0.063 (2.20)	6.1 (20)	1745	200	10	208	3	60	FLYGT PUMPS MODEL CP-3127-LT	*

* PROVIDE DUAL RAIL SYSTEM WITH DUAL RAIL GUIDE SUPPORT BRACKETS, SUPPORT FOR BASE ELBOW OF PUMPS AND MIX-FLUSH VALVE SYSTEM AS MANUFACTURED BY FLYGT MODEL 4901 AND ALSO PROVIDE MT3PC TRIPLEX PUMP CONTROLLER WITH MULTITRODE LIQUID LEVEL CONTROL.

VENTILATION SCHEDULE											
ROOM NAME	ROOM PURPOSE	ROOM SQM	NATURAL LIGHT & VENTILATION				MECHANICAL VENTILATION				REMARKS
			CODE		ACTUAL		CODE		ACTUAL		
			GL. AREA SQM	VENT. AREA SQM	GL. AREA SQM	VENT. AREA SQM	AIR-SUP LPS	AIR-EXH LPS	AIR-SUP LPS	AIR-EXH LPS	
PUMP STATION (WET WELL)	PUMP LIQUID	40.92	0	0	0	0.03	0	0	0	0	VENTILATION THRU. 100 (4") PIPE
DISCHARGE PIT	DISCHARGE	12.0	0	0	0	0.34	0	0	0	0	GRATED COVER

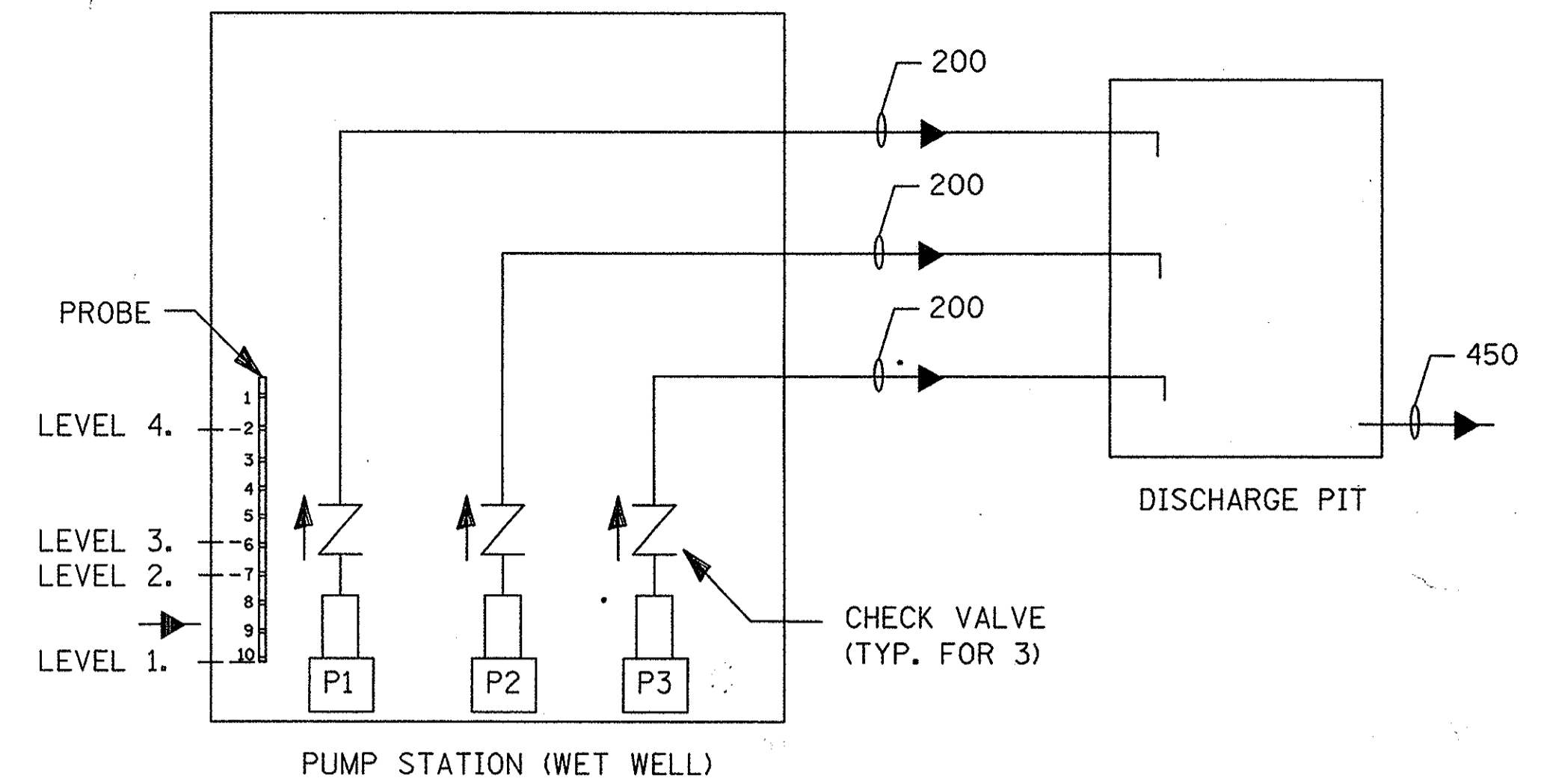
ACCESS HATCH / MANHOLE COVERS SIZES & TYPES											
TAG	LOCATION	CLEAR OPENING SIZE W x L	OUTSIDE MANHOLE COVER SIZE (EA) W x L	NO. OF COVERS	TYPE OF COVER	MATERIAL	STYLE	MAKE	MODEL #	REMARKS	
AH1	PUMP STATION (WET WELL)	2032 x 864 (80" x 34")	2300 x 1333 (90.5" x 52.5")	3	SOLID	HEAVY DUTY ALUMINUM	CHANNEL H20	SYRACUSE CASTINGS	FDRNT-HD 34X80A0	SEE MANHOLE COVER NOTES BELOW	
MC1	DISCHARGE PIT	610 DIA. (24" DIA.)	850 DIA. (33.5" DIA.)	1	GRATED	GRAY IRON	-	NEENAH	R-2565	SEE MANHOLE COVER NOTES BELOW	

MANHOLE COVER NOTES:

1. MANHOLE COVERS MUST BE BOLTED TO FRAMES WITH STAINLESS STEEL CAP SCREWS.
2. SOLID COVERS MUST BE PROVIDED WITH RING HANDLES.
3. OPENING SIZES & COVER SIZES ARE MM.
4. VERIFY IN FIELD MANHOLE COVER SIZES AS PER THE MODEL SELECTED, MATCHING THE CORRESPONDING CLEAR OPENINGS.
5. FOR SPECIFICATIONS SEE STRUCTURAL WORK SECTION.

MECHANICAL NOTES:

1. INSTALL PUMPS AS PER LOCATIONS SHOWN ON DRAWING'S WITH ALL ACCESSORIES.
2. PROVIDE AND INSTALL DUAL RAILS ON PUMPS AS SHOWN ON DWG'S MATERIAL FOR DUAL RAIL MUST BE 304 STAINLESS STEEL
3. INSTALL DUAL RAIL UPPER SUPPORT GUIDE BAR BRACKET AS SHOWN ON DRAWING PM-4.
4. INSTALL DUAL RAIL INTERMEDIATE SUPPORT GUIDE BAR BRACKET AT EVERY 3050 (10') AS SHOWN ON DRAWING PM-4.
5. INSTALL MIX-FLUSH VALVE SYSTEM ON ALL PUMPS, AS PER MANUFACTURER'S INSTRUCTION.
6. INSTALL HIGH WATER WARNING ALARM THROUGH AUTO-DIALER SYSTEM TO EITHER DEPT. OF STREETS AND SANITATION'S RADIO OR 311 AS DECIDED BY BOE. FOR CONTROLLER SCHEMATIC DIAGRAM SEE DWG. PE-3A
7. INSTALL 100 (4") VENT PIPE
8. FOR NOTES, LEGEND AND ABBREVIATIONS, REFER DRAWING PM-1
9. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
10. INSTALL PROBE LIQUID CONTROL SYSTEM AS SHOWN ON DWG. PM-2 AS PER MANUFACTURER'S INSTRUCTION.



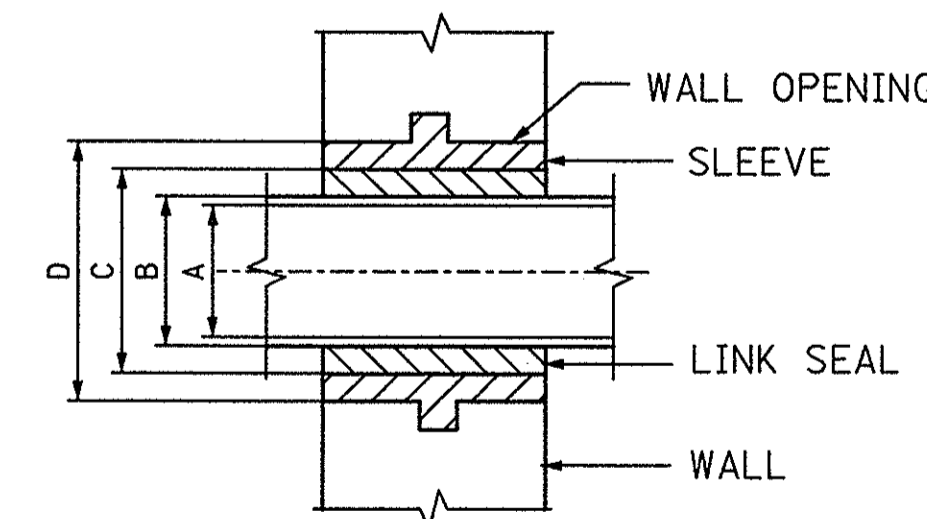
PUMPS SCHEMATIC DIAGRAM
SCALE: NONE

SEQUENCE OF OPERATIONS:

1. AT ANY TIME ANY ONE PUMP OR TWO PUMPS WILL BE WORKING DEPENDING UPON THE LEVEL OF WATER. THE THIRD PUMP WILL BE STAND-BY.
THE CONTROL FUNCTION MUST PROVIDE FOR THE OPERATION OF THE PUMPS UNDER NORMAL CONDITIONS, AND MUST ALTERNATE THE PUMPS ON EACH PUMP DOWN CYCLE TO EQUALIZE THE RUN TIME. IN THE EVENT THE INCOMING FLOW EXCEEDS THE PUMPING CAPACITY OF THE LEAD PUMP, SUBSEQUENT PUMPS MUST AUTOMATICALLY START TO HANDLE THE INCREASED FLOW. AS THE FLOW DECREASES, THE PUMPS MUST CUT OFF AT THE ELEVATIONS AS SHOWN ON THE PLANS.
2. THE FEATURE ON MT3PC TRIPLEX PUMP CONTROLLER, "MAX PUMP OFF TIME" WILL BE USED TO PREVENT WET WELL BECOMING SEPTIC. IF NO PUMP HAS ACTIVATED WITHIN THE SET TIME WHEN WATER IS BELOW LEVEL 2, THE DUTY PUMP WILL RUN. MAXIMUM PUMP OFF TIME CAN BE SET BETWEEN 15 MIN AND 10 HOURS.

OPERATIONAL SEQUENCE AS FOLLOWS: (SEE DWG. PM-2)

- LEVEL 1: PUMP WILL STOP
LEVEL 2: FIRST PUMP WILL START
LEVEL 3: SECOND PUMP WILL START AND WILL STOP AT LEVEL 2.
LEVEL 4: ALARM ON



NOTE:
LINK SEAL MODEL WS-12-37-S, LINK-SEAL SIZE LS-400 AS MANUFACTURED BY THUNDERLINE LINK-SEAL.

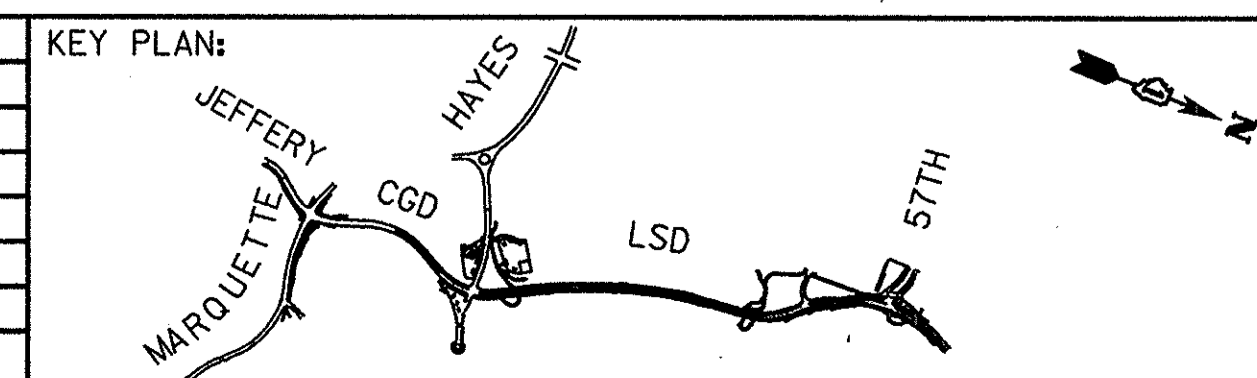
4 DETAIL 4
PM-5 PIPE PENETRATION
(N.T.S.)

NOM. PIPE DIA	LINK SEAL				MODEL#	SIZE
	A	B	C	D		
100	100	122	203	229	WS-8-32-S	LS-400
150	150	175	254	282	WS-10-36-S	LS-400
200	200	240	305	335	WS-12-37-S	LS-400

TABLE FOR DETAIL 4.

RECORD DOCUMENT
MacGour Engineering, Inc.
215 West Main St.
Prairieville, IL 62204
By: [Signature]
Date: 5/16/06

DESIGN: S.A.			
DRAWN: B.D.			
CHECKED: Z.M.			
APPROVED: S.A.			
DATE: 4/16/02			
SCALE: AS NOTED			
FILE:	NO.	BY	DATE DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

PUMP SCHEDULES, NOTES,
PUMPING SCHEMATIC & SEQUENCE
PUMP STATION - 57TH STREET

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
PM-5

PROJECT NO. B-1-440

GENERAL NOTES

TOTAL SHEETS	SHEET NO.
645	424

DESIGN CRITERIA

1. STRUCTURE DESIGNED IN ACCORDANCE WITH THE CITY OF CHICAGO BUILDING CODE.
2. SUPERIMPOSED SERVICE LOADS:
 ROOF LIVE LOAD 1.2 KPA (25 PSF)
 FLOOR LIVE LOAD 2.4 KPA (50 PSF)
 SUSPENDED PIPING, LIGHTS, DUCT WORKS, CEILING ETC 0.5 KPA (10 PSF)

STRUCTURAL CAST-IN-PLACE CONCRETE

1. DESIGNED IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE BY AMERICAN CONCRETE INSTITUTE ACI 318 - LATEST EDITION.
2. CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH ACI 301-SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS - LATEST EDITION.
3. ALL DETAILS, SECTIONS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND WILL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE INDICATED.
4. ALL CAST-IN-PLACE CONCRETE MUST BE OF THE TYPES AND HAVING MINIMUM (EXCEPT CONCRETE WORK MATS) F'c = 28 MPa (4.0 KSI) AT 28 DAYS. CONCRETE WORK MAT, F'c = 14 MPa (2.0 KSI) AT 28 DAYS.
5. ALL CONSTRUCTION JOINTS MUST BE SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER. KEYS MUST BE PROVIDED AT ALL CONSTRUCTION JOINTS EXCEPT WHERE NOTED. KEY DETAILS WILL BE AS SHOWN IN TYPICAL WALL KEYS DETAIL, UNLESS SHOWN ON THE DRAWING. PROVIDE WATER STOPS AT ALL JOINTS AND WHERE PIPE INTERSECTS WITH CONCRETE STRUCTURE. WATER STOP MUST BE PROVIDED PER SPECIFICATIONS.
6. ALL EMBEDDED STEEL, ANCHORS, DRAIN OUTLETS, EMBEDDED METAL, ETC. MUST BE IN PLACE BEFORE CONCRETE IS PLACED, EXCEPT AS NOTED.
7. ALL DIMENSIONS NOTED FOR INVERT, GRADE TOP OR BOTTOM OF CONCRETE STRUCTURE ARE IN MILLIMETERS (MM) EXCEPT AS NOTED.
8. ALL REINFORCING BARS MUST NEW BILLET STEEL CONFORMING TO THE STANDARDS OF ASTM A615M, Fy = 420 MPA (ASTM A615 Fy = 60 KSI). ALL CONCRETE REINFORCEMENT MUST BE DETAILED FABRICATED, LABELED, SUPPORTED, SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318 AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315.
9. UNLESS OTHERWISE SHOWN, THE CLEAR COVER FOR REINFORCING STEEL MUST BE AS FOLLOWS:
 A. SLABS AND WALLS EXPOSED TO EARTH, WATER, OR WEATHER 51 (2")
 B. EXTERIOR SURFACE WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND '76 (3")
10. ALL REINFORCEMENT BARS MUST BE EPOXY COATED
11. ALL VERTICAL DOWELS MUST MATCH THE VERTICAL REINFORCEMENT UNLESS NOTED OTHERWISE.
12. MINIMUM REINFORCEMENT HORIZONTAL AND VERTICAL ON EACH FACE MUST BE #15 @ 305 OUTER TO CENTER UNLESS NOTED OTHERWISE.
13. MISCELLANEOUS DETAILS SHOWN ON THE DRAWINGS ARE TYPICAL.
14. REINFORCEMENT BARS MUST HAVE DEVELOPMENT AND LAP SPLICE LENGTH CONFORMING TO BUILDING CODE REQUIREMENTS OF ACI-318 - LATEST EDITION.

STRUCTURAL PRE-CAST CONCRETE

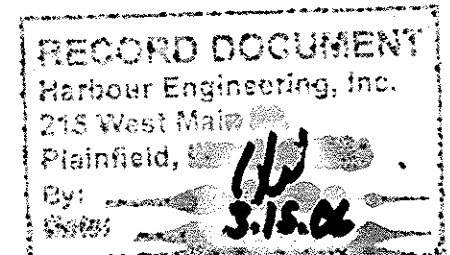
1. ALL PRE-CAST CONCRETE MUST BE OF THE TYPES AND HAVING MINIMUM F'c = 35 MPa (5.0 KSI) AT 28 DAYS.
2. ALL EMBEDDED STEEL, ANCHORS, PIPE SLEEVES, DRAIN OUTLETS, EMBEDDED METAL, ETC. MUST BE PROVIDED IN PRE-CAST PANELS AS AND WHERE REQUIRED.
3. ALL REINFORCING BARS MUST BE EPOXY COATED NEW BILLET STEEL CONFORMING TO THE STANDARDS OF ASTM A615M, Fy = 420 MPa (ASTM A615, Fy = 60 KSI). ALL CONCRETE REINFORCEMENT MUST BE DETAILED FABRICATED, LABELED, SUPPORTED, SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318 AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315.
4. PRE-CAST PUMP STATION AND DISCHARGE PIT SECTIONS MUST HAVE MINIMUM REINFORCEMENT AS SPECIFIED IN ASTM C478.
5. UNLESS OTHERWISE SHOWN, THE CLEAR COVER FOR REINFORCING STEEL MUST BE AS FOLLOWS:
 A. PRE-CAST WALLS EXPOSED TO EARTH, WATER, OR WEATHER..... 25 (1")
 B. PRE-CAST SLABS EXPOSED TO EARTH, WATER, OR WEATHER..... 38 (1 1/2")
 C. PRE-CAST SLABS NOT EXPOSED TO EARTH, WATER, OR WEATHER..... 25 (1")
6. CONTRACTOR TO SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS SIGNED AND STAMPED BY STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ILLINOIS.

STRUCTURAL STEEL

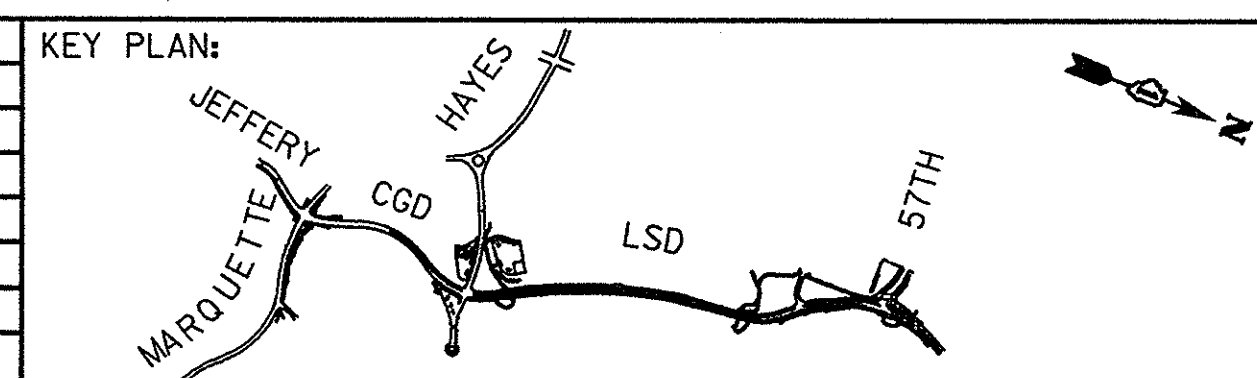
1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL MUST CONFORM TO REQUIREMENTS AS SPECIFIED IN MANUAL OF STEEL CONSTRUCTION BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), LATEST EDITION.
2. AFTER FABRICATION, ALL STEEL MUST BE CLEANED OF ALL RUST, LOOSE MILL SCALE AND ALL OTHER FOREIGN MATERIALS. PRIMING IS REQUIRED FOR ALL STRUCTURAL STEEL WHERE IT IS NOT GALVANIZED.
3. ALL STRUCTURAL STEEL, SHAPES AND PLATES MUST BE AASHTO M270M GRADE 250 (AASHTO M270, GRADE 36) STEEL AND MUST BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS, INCLUDING COMMENTARY AND CODE OF STANDARD PRACTICE.
4. ALL ANCHOR BOLTS MUST BE AASHTO M164M (ASTM A325), WITH HEAVY HEXAGONAL NUTS AND HEAVY WASHERS.
5. ALL WELDING WORK MUST BE IN ACCORDANCE WITH THE LATEST AWS CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AND THE AISC SPECIFICATIONS USING E70XX LOW-HYDROGEN ELECTRODES.
6. ALL STRUCTURAL STEEL MUST BE SHOP PAINTED WITH A RUST INHIBITIVE GRAY PRIMER. NO PAINT MUST BE APPLIED ON CONTACT SURFACES OF BOLTED CONNECTIONS OR WITHIN 50mm OF SURFACES TO BE WELDED.

COORDINATION

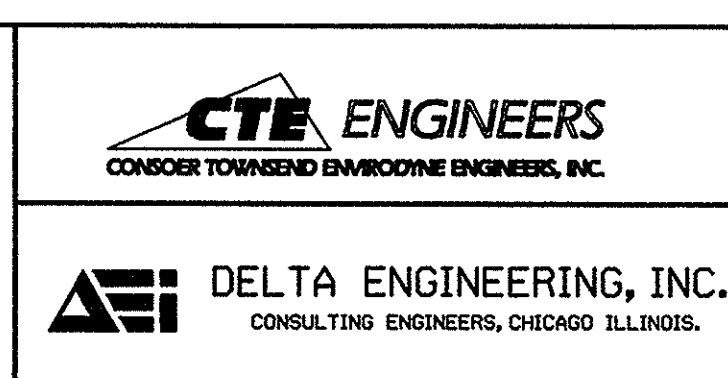
1. ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE VERIFIED AT SITE BY THE GENERAL CONTRACTOR BEFORE CONSTRUCTION AND ORDERING ANY MATERIAL AND ANY DISCREPANCY MUST BE REPORTED TO THE COMMISSIONER IMMEDIATELY.
2. DO NOT SCALE DRAWING PLANS, DETAILS, SECTIONS, ETC.
3. THE INFORMATION CONTAINED ON THE DRAWINGS IS, IN ITSELF INCOMPLETE AND VOID, UNLESS USED IN CONJUNCTION WITH ALL OF THE CONTRACT DOCUMENTS, ALL SPECIFICATIONS, TRADE PRACTICES, APPLICABLE STANDARDS, CODES, ETC. INCORPORATED THEREIN BY REFERENCES.
4. THE USE OF THE PLANS MUST BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. ANY REPRODUCTION OR DISTRIBUTION IS LIMITED TO SUCH USE. ANY DISCLOSURE, REUSE OR DISCLOSURE BY ANY OTHER METHOD IN WHOLE OR IN PART OR FOR ANY PURPOSE OTHER THAN THAT AS CONTRACT DOCUMENT IS PROHIBITED.
5. FOR ALL EMBEDMENT, PIPE SLEEVES IN PRE-CAST PUMP STATIONS, COORDINATE WITH THE MECHANICAL AND ELECTRICAL DRAWINGS.
6. FOR SOIL BORING LOGS, SEE DRAWINGS B-1 THRU B-25.



DESIGN: G.M.K./S.M.K.			
DRAWN: G.M.K./N.S.			
CHECKED: S.I.			
APPROVED: S.M.K.			
DATE: 4/16/02			
SCALE: AS NOTED			
FILE: \$FILEABBREV\$	NO.	BY	DATE
			DESCRIPTION
			REVISIONS



CITY OF CHICAGO
 DEPARTMENT OF
 TRANSPORTATION
 BUREAU OF HIGHWAYS

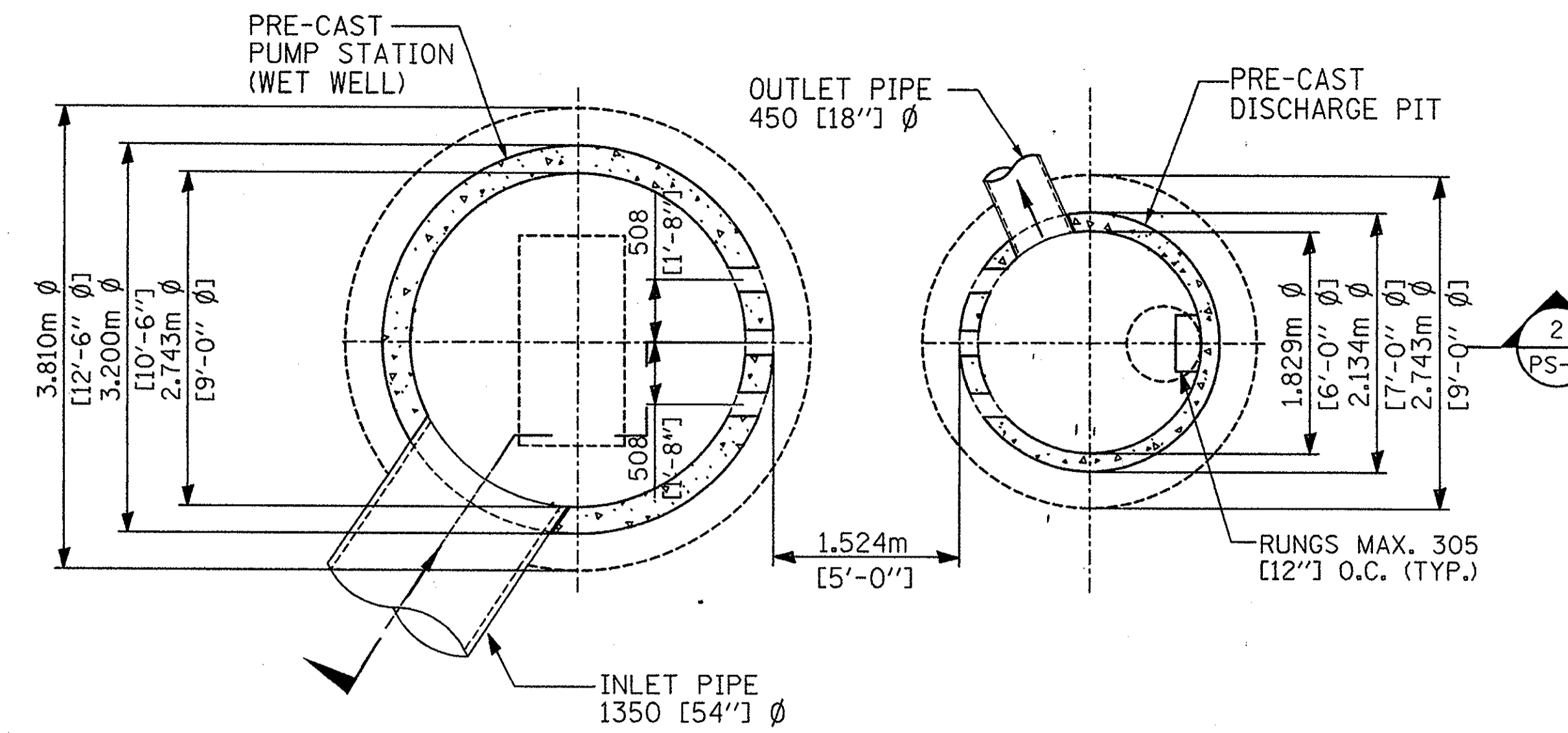


**SOUTH LAKE SHORE DRIVE
 JACKSON PARK SECTION
 MAINLINE RECONSTRUCTION**

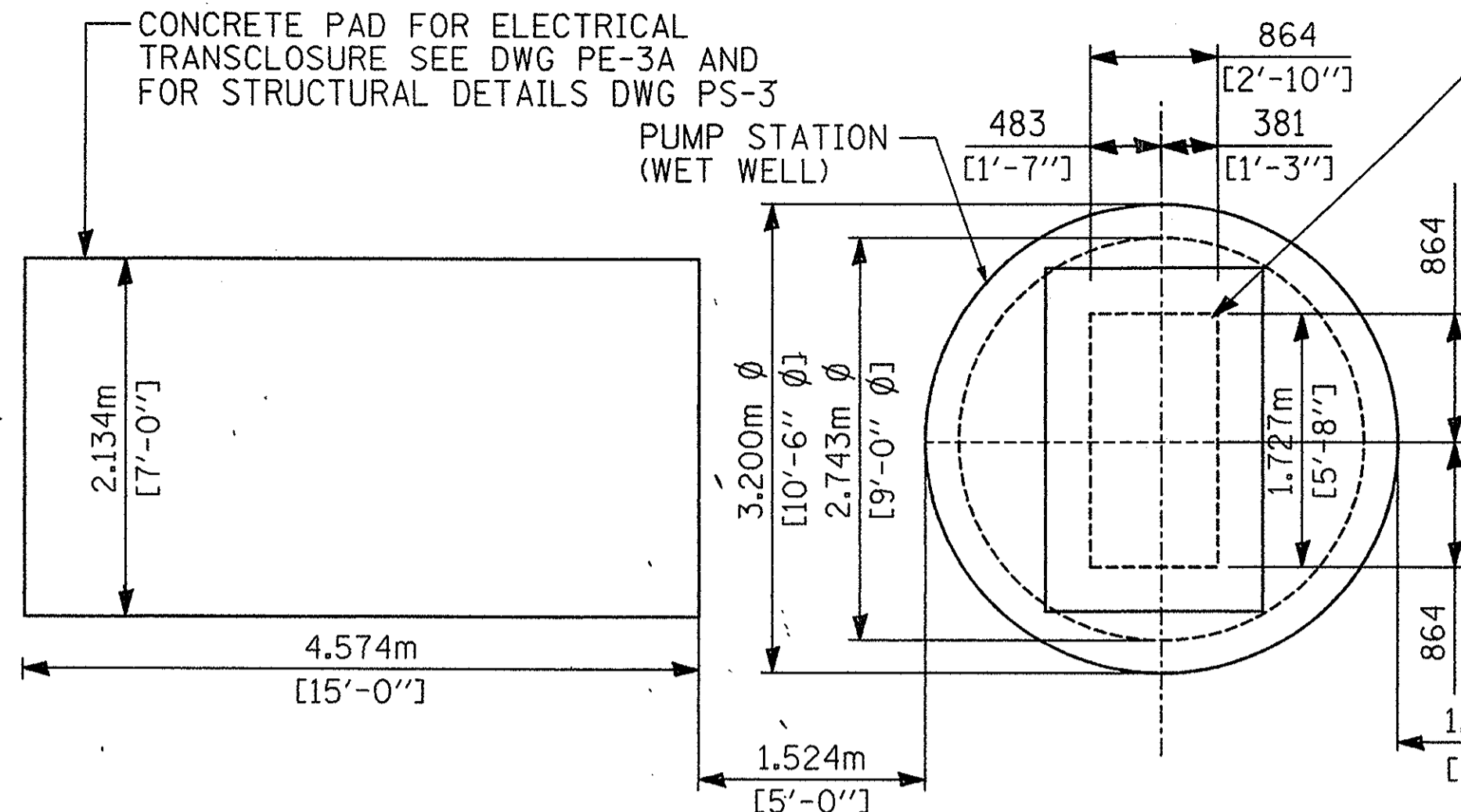
**GENERAL NOTES
 PUMP STATIONS - 57TH & 63RD STREETS**

CONTRACT NO. 00-B0241-06-PV
DRAWING NO. PS-1
PROJECT NO. B-1-440

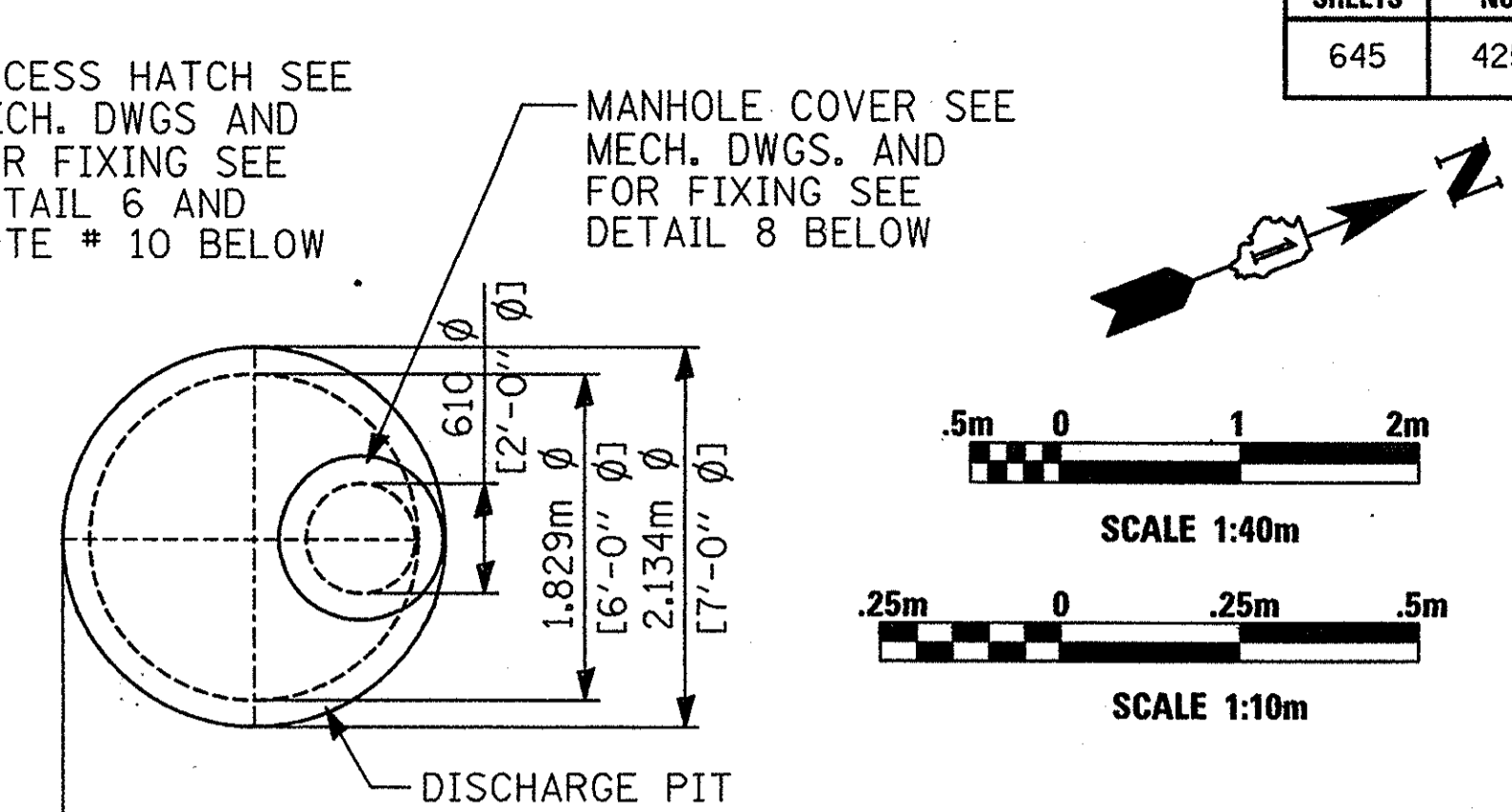
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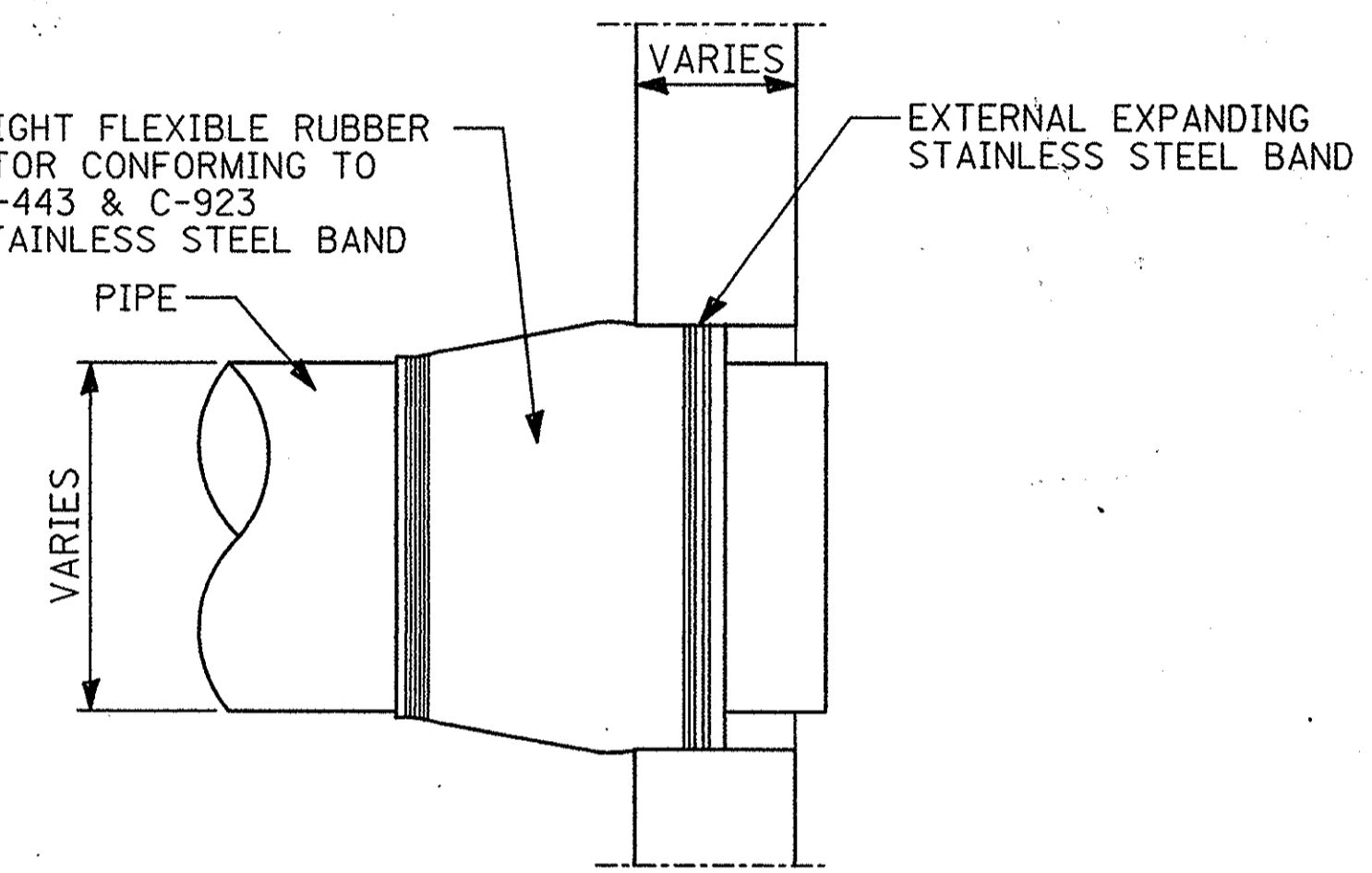
1 SECTIONAL PLAN
PS-2 SCALE: 1:40



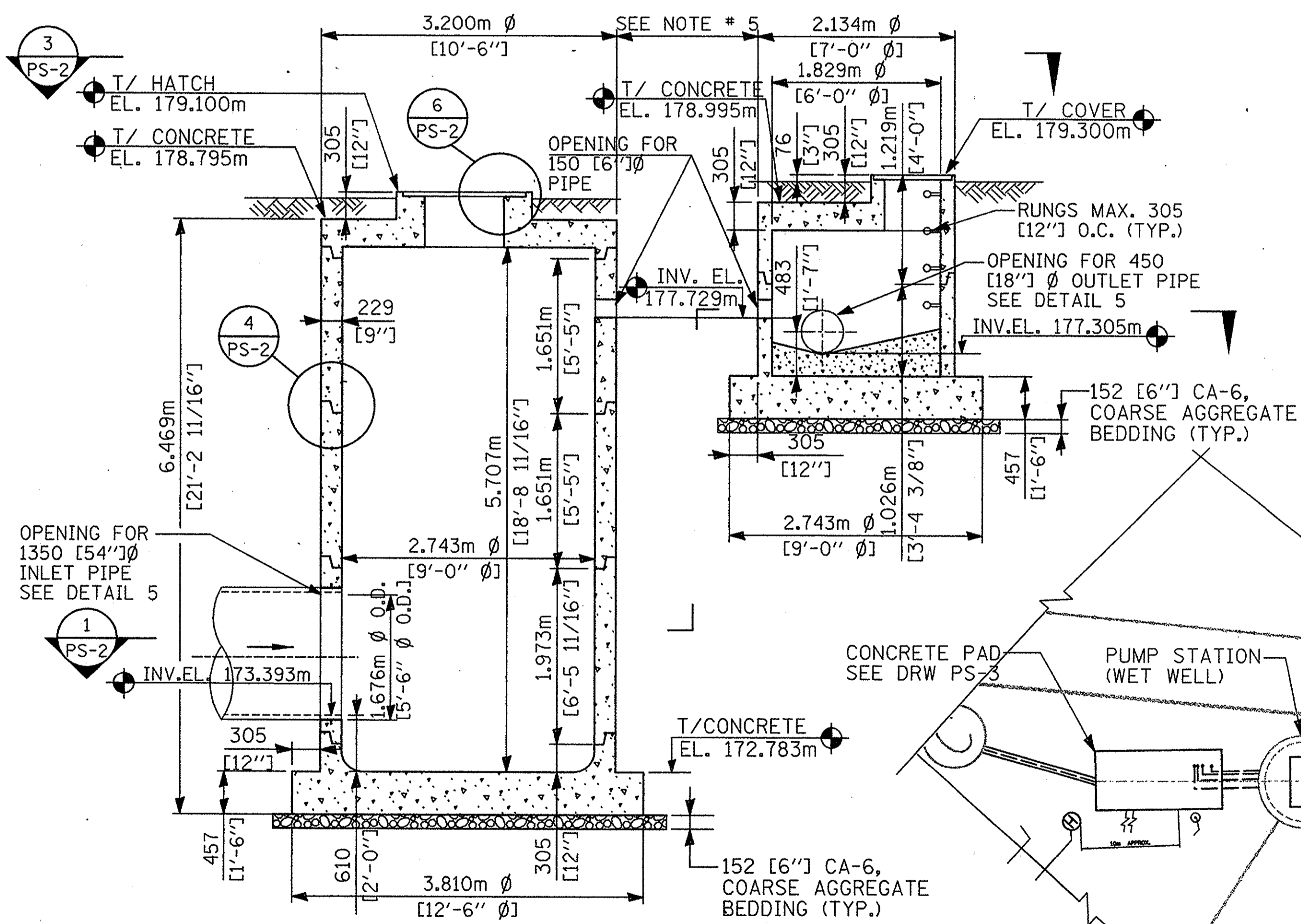
3 TOP PLAN
PS-2 SCALE: 1:40



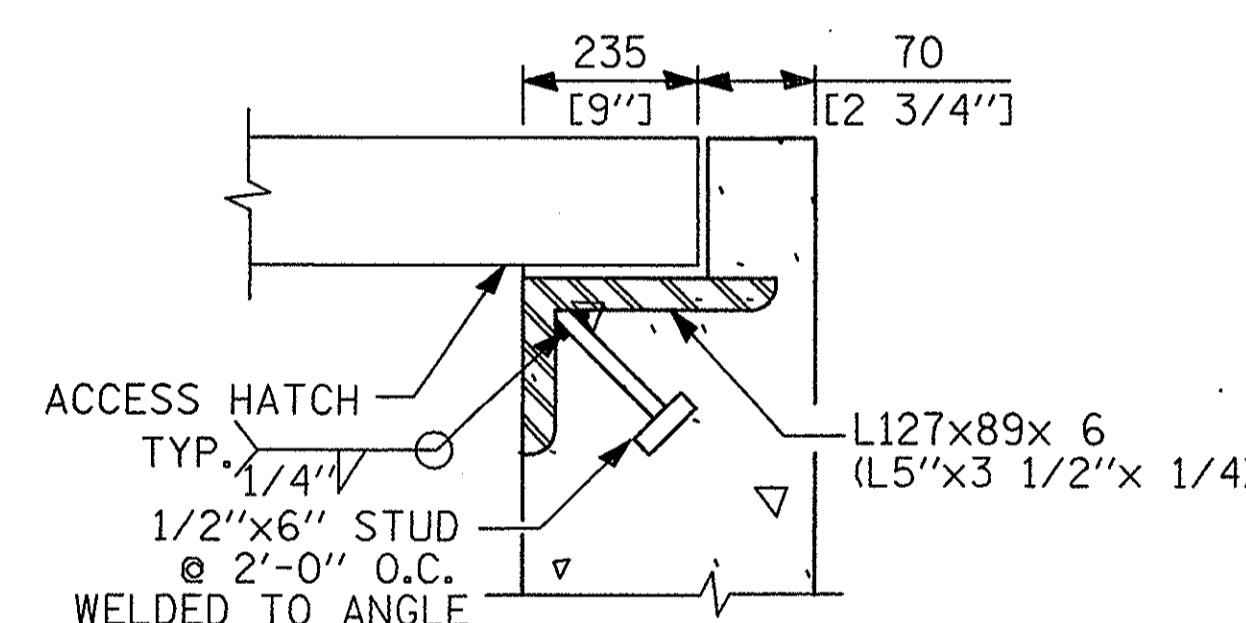
4 TYPICAL DETAIL 4
PS-2 SCALE: 1:10



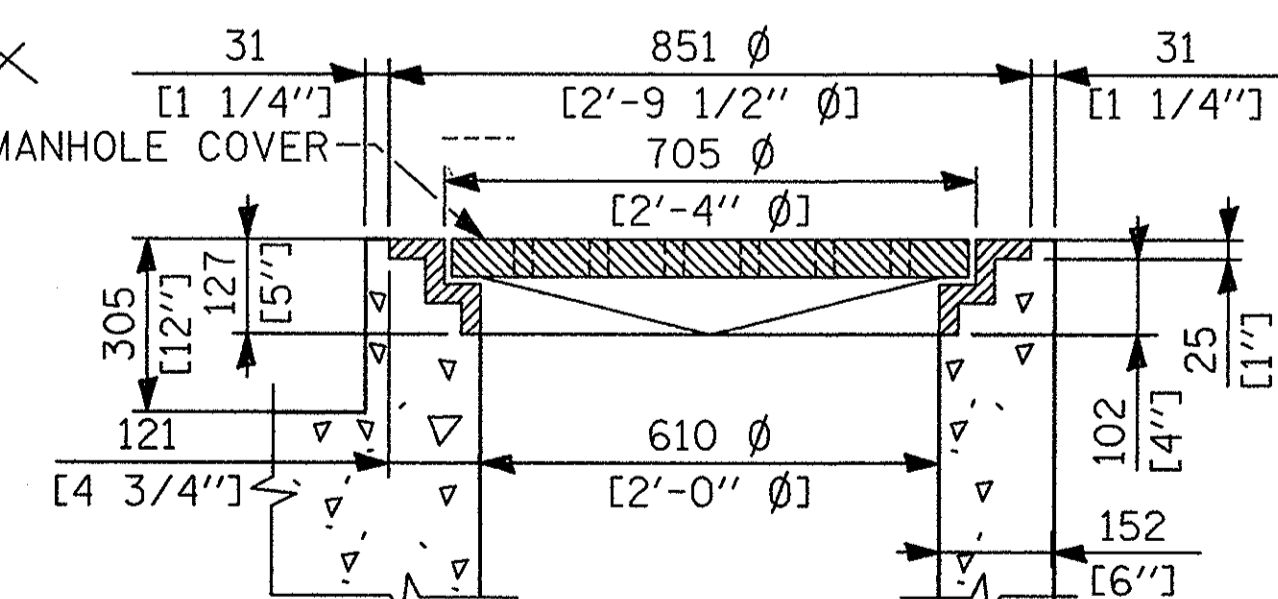
5 TYPICAL DETAIL 5
PS-2 SCALE: 1:10



2 SECTION 2
PS-2 SCALE: 1:40



6 TYPICAL DETAIL 6
PS-2 NOT TO SCALE



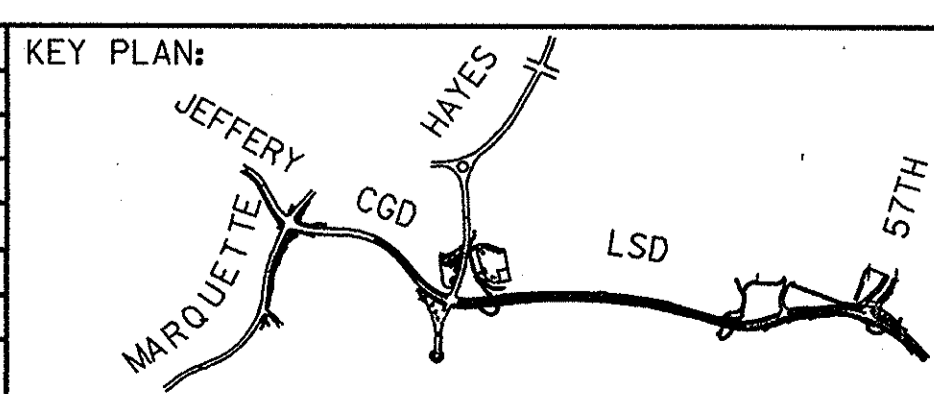
8 DETAIL 8 (TYP.)
PS-2 R-2565-F MANHOLE COVER NOT TO SCALE

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED IN PARENTHESIS (FEET) DIMENSIONS.
- ALL ELEVATIONS ARE IN METERS.
- FOR GENERAL NOTES SEE SHEET PS-1.
- FOR REINFORCEMENT DETAILS SEE SHEET PS-3.
- FOR LOCATION OF PUMP STATION, DISCHARGE PIT, INLET AND OUTLET PIPES SEE CIVIL DRAWINGS.
- FOR EXACT LOCATION AND ELEVATION OF PIPE SLEEVES, SEE MECHANICAL AND CIVIL DRAWINGS.
- CONTRACTOR TO PROVIDE TEMPORARY EARTH SUPPORT SHEET PILING, DEWATERING, ETC. FOR CONSTRUCTION OF PUMP STATION AND DISCHARGE PIT.
- FOR PROVISION OF HOLES IN CONCRETE FOR ELECTRICAL CONDUITS AND OTHER ELECTRICAL WORKS SEE ELECTRICAL DRAWINGS.
- CONTRACTOR TO VERIFY ALL OPENING SIZES AND CASTINGS WITH MECHANICAL DRAWINGS AND CIVIL DRAWINGS.
- ACCESS HATCH 0.864m x 1.727m (34"x68") TO BE INSTALLED IN THE PRE-CAST ROOF SLAB AT THE TIME OF PRE-CASTING. ACCESS HATCH TO BE "FDRN-HD-0.864m X 1.727m (34X68)A0" H-20 ALUMINUM HATCH) AS MANUFACTURED BY "ITT FLYGHT CORP." (TEL. # (203) 380-4700, FAX # (203) 380-4705) OR APPROVED EQUAL.
- FOR EXACT LOCATION OF CONCRETE PAD SEE ELECTRICAL DRAWING PE-2

7 LOCATION PLAN
PS-2 NOT TO SCALE

DESIGN:	MP/NDS		
DRAWN:	GMK/NDS		
CHECKED:	SI		
APPROVED:	SMK		
DATE:	4/16/02		
SCALE:	AS NOTED		
FILE:			
NO.	BY	DATE	DESCRIPTION
REVISIONS			



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

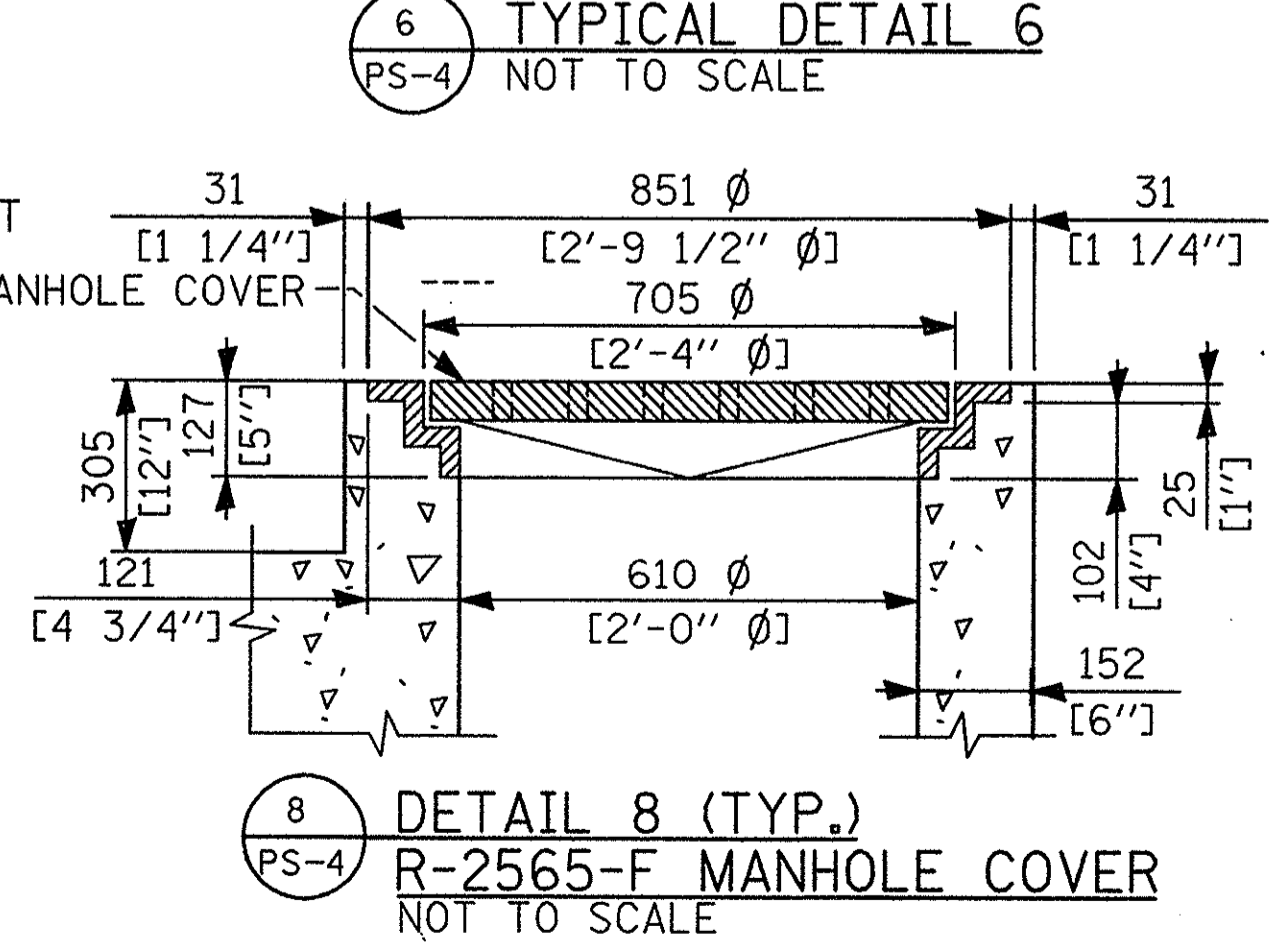
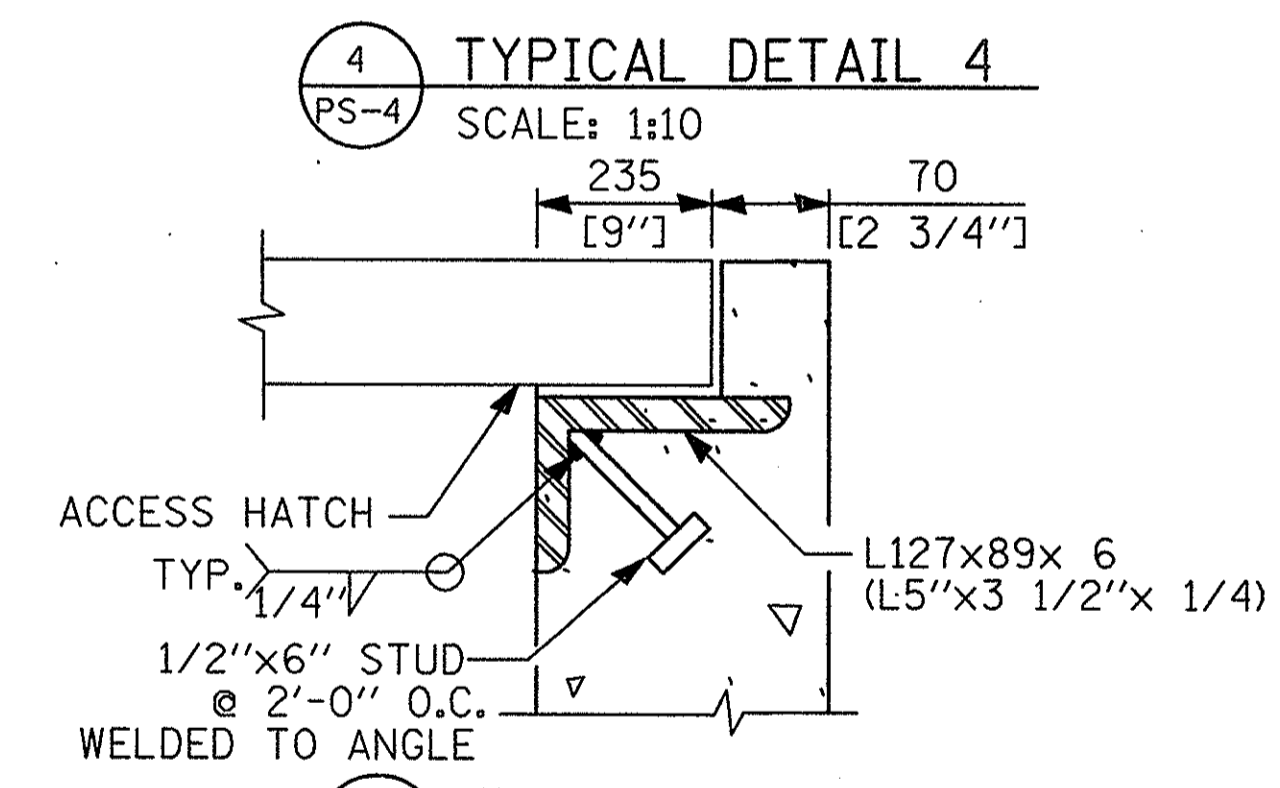
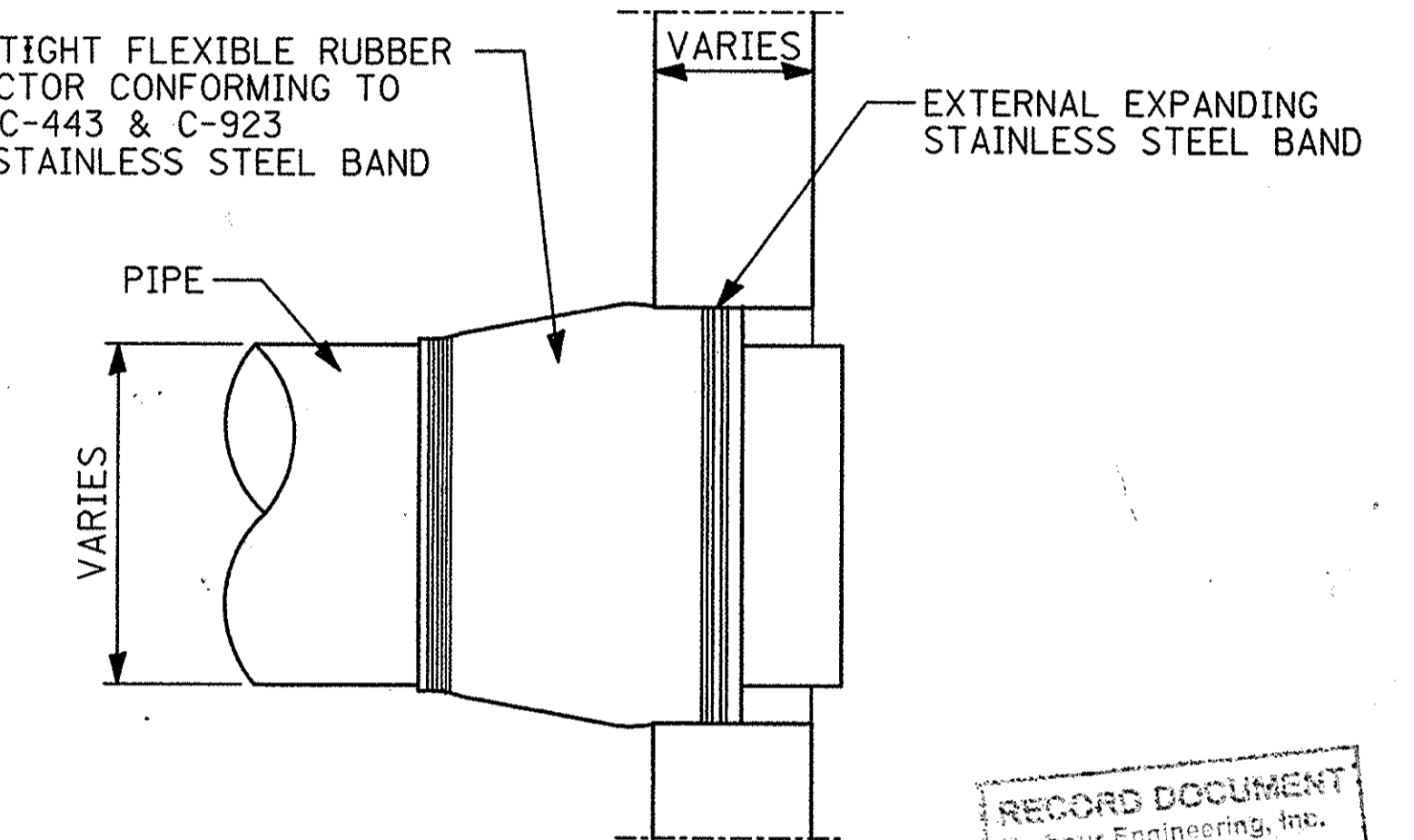
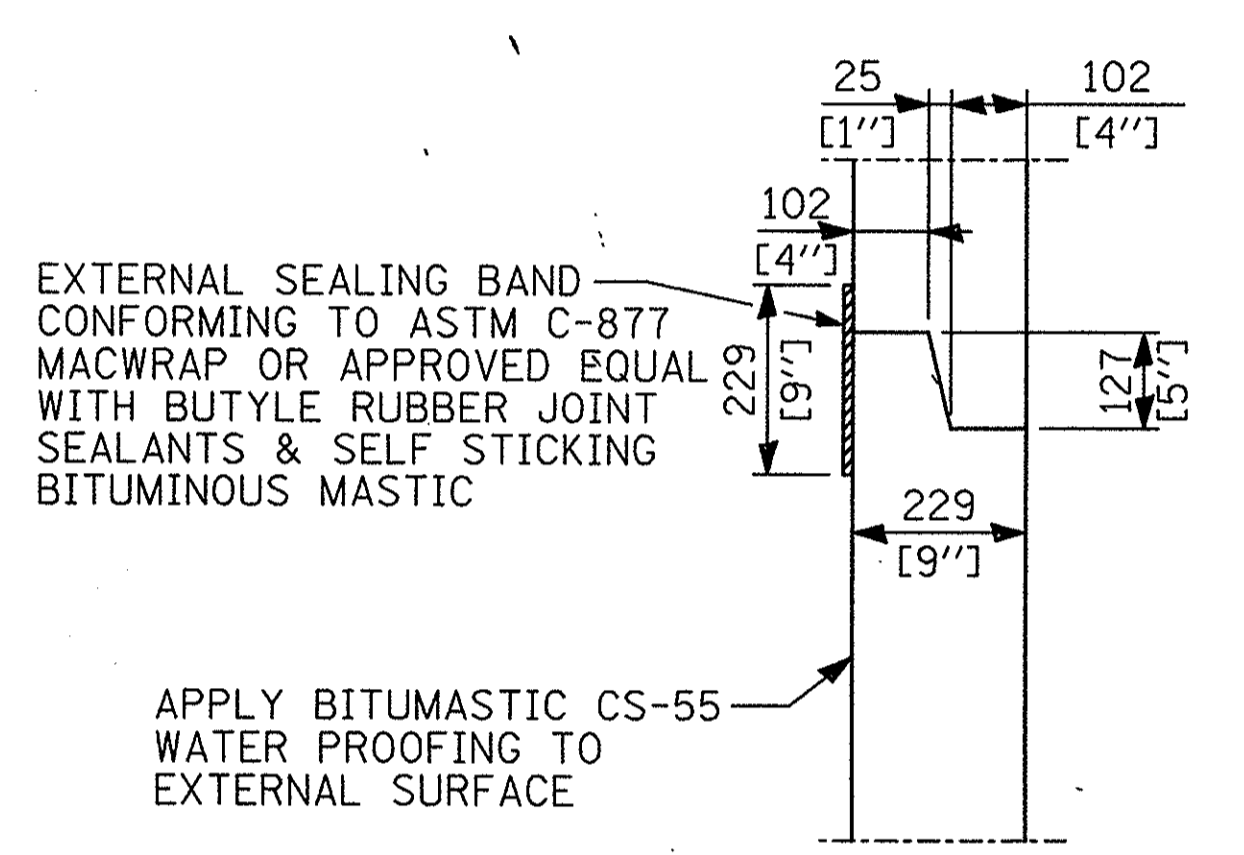
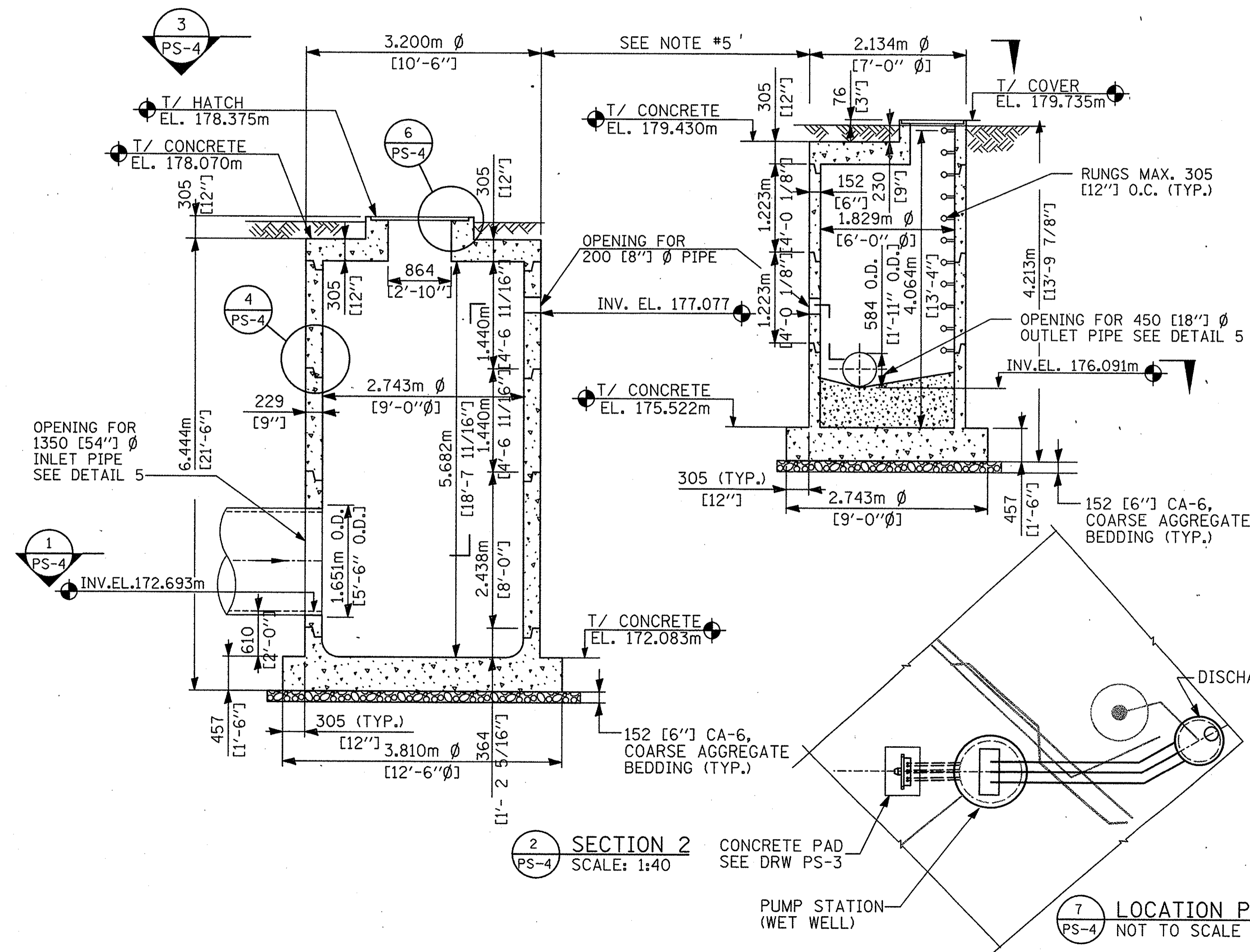
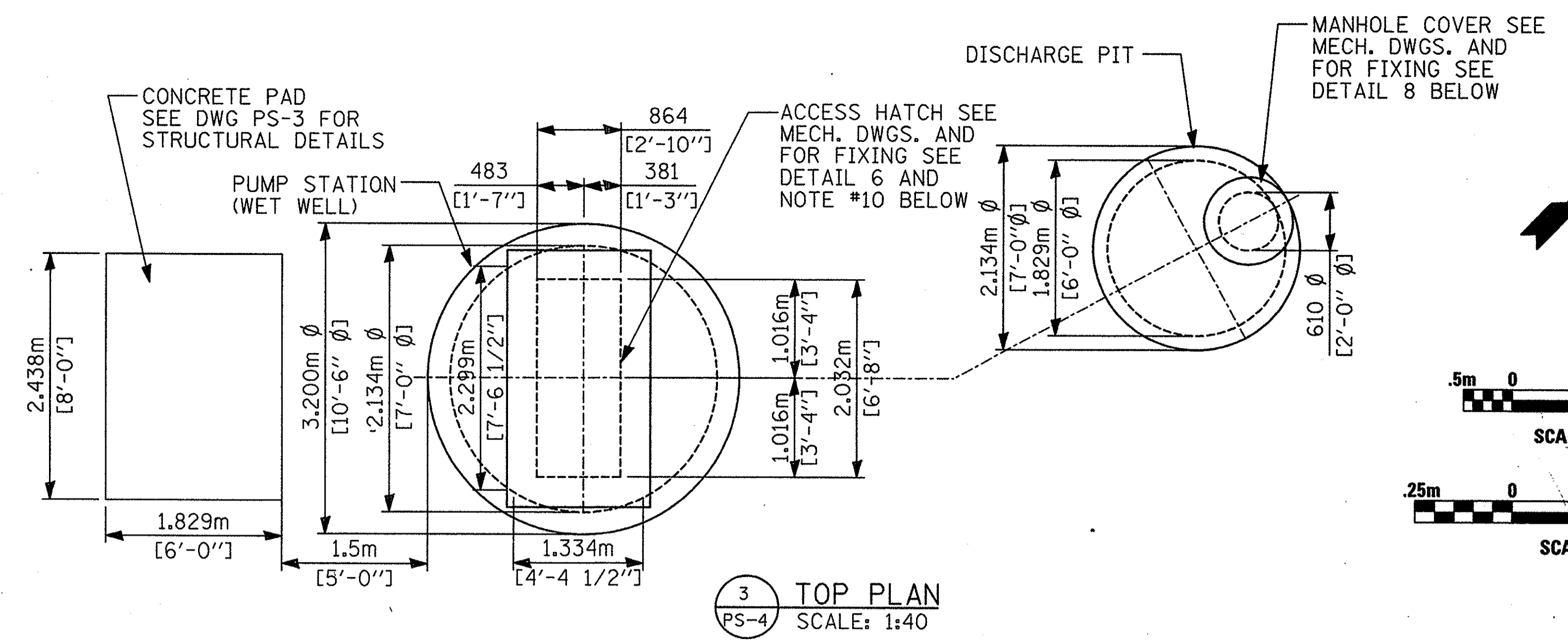
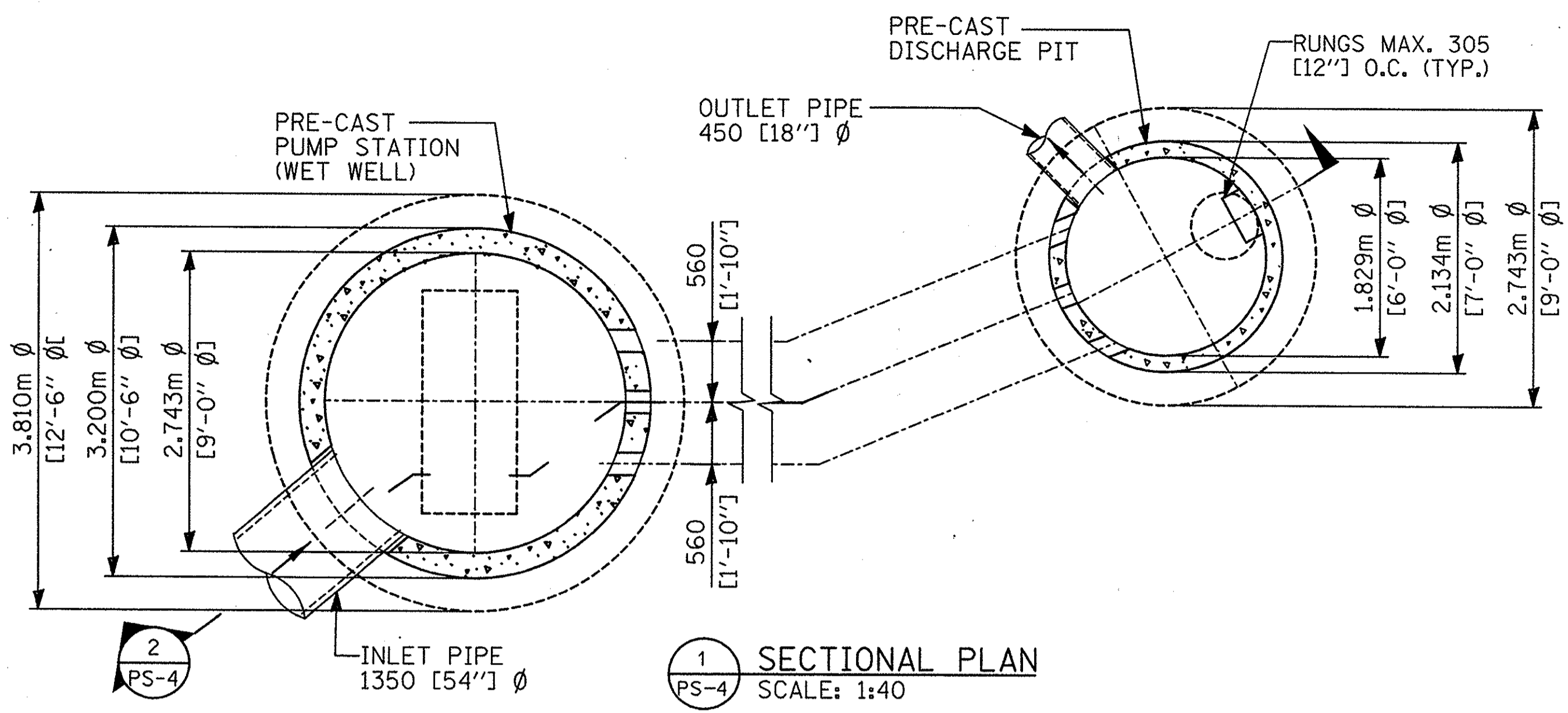
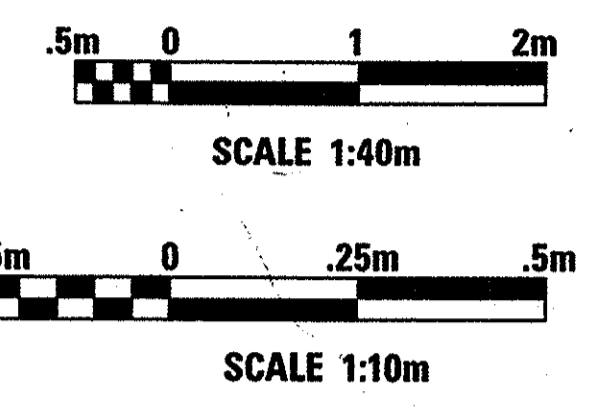
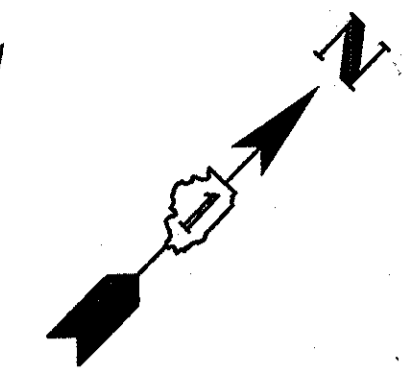
CTE ENGINEERS
CONSOR TOWNSEND ENGINEERING, INC.
DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

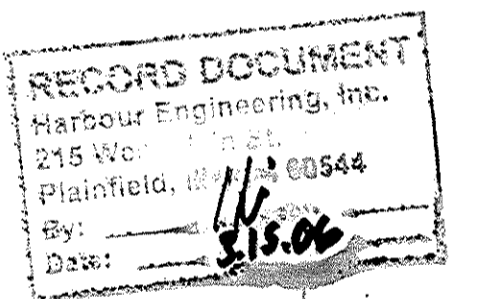
PLANS AND SECTIONS
PUMP STATION - 63RD STREET

CONTRACT NO.
00-B0241-06-PV
DRAWING NO.
PS-2
PROJECT NO. B-1-440
1640091712

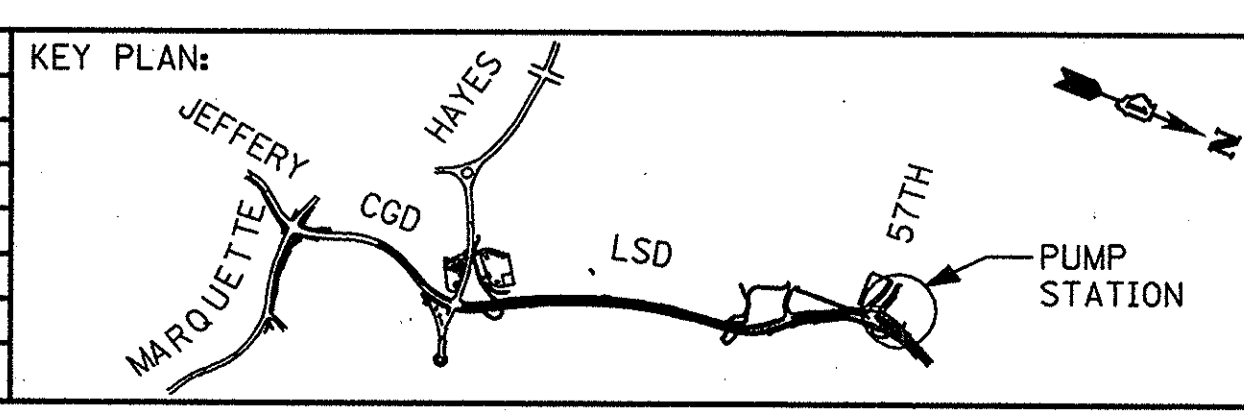
RECORD DOCUMENT
Harbour Engineering, Inc.
215 West Main St.
Plainfield, IL 60544
By: [Signature]
Date: 4/16/02



- NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED IN PARENTHESIS (FEET) DIMENSIONS.
 - ALL ELEVATIONS ARE IN METERS.
 - FOR GENERAL NOTES SEE SHEET PS-1.
 - FOR REINFORCEMENT DETAILS SEE SHEET PS-3.
 - FOR LOCATION OF PUMP STATION, DISCHARGE PIT, INLET AND OUTLET PIPES SEE CIVIL DRAWINGS.
 - FOR EXACT LOCATION AND ELEVATION OF PIPE SLEEVES, SEE MECHANICAL AND CIVIL DRAWINGS.
 - CONTRACTOR TO PROVIDE TEMPORARY EARTH SUPPORT SYSTEM, SHEET PILING, DEWATERING, ETC. FOR CONSTRUCTION OF PUMP STATION AND DISCHARGE PIT.
 - FOR PROVISION OF HOLES IN CONCRETE FOR ELECTRICAL CONDUITS AND OTHER ELECTRICAL WORKS SEE ELECTRICAL DRAWINGS.
 - CONTRACTOR TO VERIFY ALL OPENING SIZES AND CASTINGS WITH MECHANICAL DRAWINGS AND CIVIL DRAWINGS.
 - ACCESS HATCH 0.864m X 2.032m (34"X80") TO BE INSTALLED IN THE PRE-CAST ROOF SLAB AT THE TIME OF PRE-CASTING. ACCESS HATCH TO BE "FDRN-HD-0.864m X 2.032m (34X80)AO" (0.864m X 2.032m (34"X80") H-20 ALUMINUM HATCH) AS MANUFACTURED BY "ITT FLYGHT CORP." (TEL. * (203) 380-4700, FAX * (203) 380-4705) OR APPROVED EQUAL.
 - FOR EXACT LOCATION OF CONCRETE PAD SEE ELECTRICAL DRAWING PE-5



DESIGN: M.P./NDS			
DRAWN: N.D.S.			
CHECKED: S.I.			
APPROVED: S.M.K.			
DATE: 4/16/02			
SCALE: AS NOTED			
FILE:	NO.	BY	DATE
			DESCRIPTION
			REVISIONS



CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSULTING ENGINEERS, CHICAGO ILLINOIS

DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO ILLINOIS

SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION

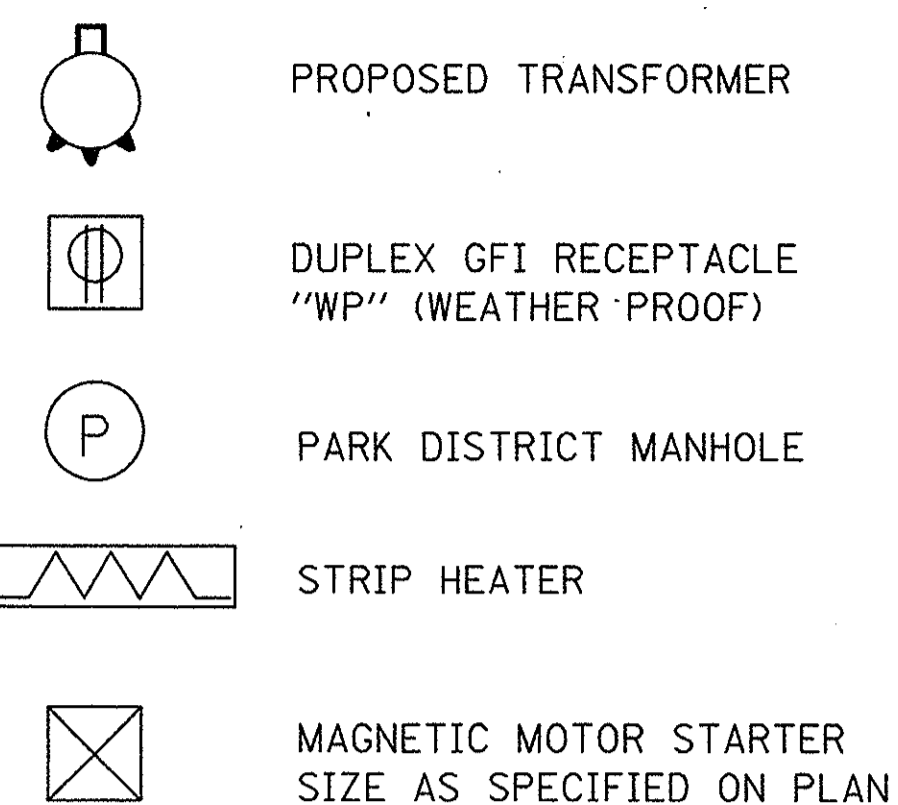
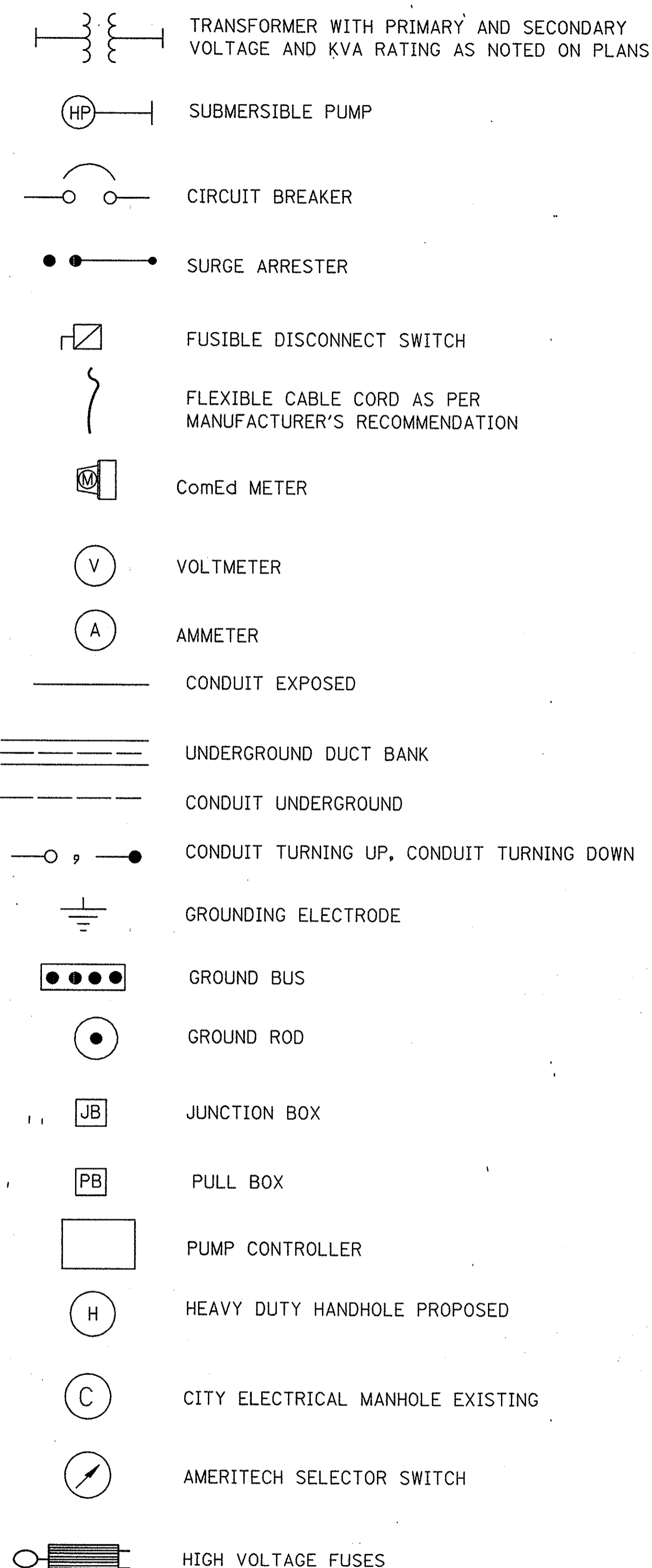
PLANS AND SECTIONS
PUMP STATION - 57TH STREET

CONTRACT NO. 00-B0241-06-PV
DRAWING NO. PS-4
PROJECT NO. B-1-440

GENERAL NOTES

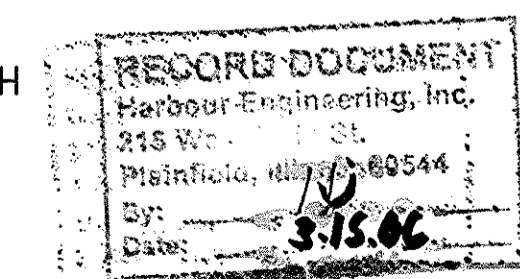
1. THE ELECTRICAL WORK IS TO BE EXECUTED IN ACCORDANCE WITH THE CURRENTLY APPLICABLE NATIONAL ELECTRIC CODES, STATE AND CITY OF CHICAGO CODES AND THE ATTACHED SPECIFICATIONS. ANY MODIFICATIONS AND/OR ELECTRICAL ADDITIONS TO THESE PLANS REQUIRED FOR PROPER COMPLIANCE TO ANY APPLICABLE CODES MUST BE THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE INCLUDED IN HIS ORIGINAL BID.
2. CONTRACTOR MUST PROVIDE LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE SITE ELECTRICAL SYSTEMS AS DESCRIBED IN THE SPECIFICATIONS.
3. CONTRACTOR MUST FURNISH AND INSTALL ALL SECONDARY SERVICE CONDUCTORS IN CONDUITS. CONTRACTOR TO PROVIDE CONDUIT SUPPORTS FOR ALL CONDUITS. ALL ELBOWS MUST BE HEAVY WALL STEEL.
4. MATERIALS AND EQUIPMENT MUST BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
5. ALL MATERIALS, AND EQUIPMENT MUST BE ERECTED, INSTALLED, TOOLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
6. ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE FACILITY, MUST BE DONE BY THE CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED; BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF ENGINEER OR HIS REPRESENTATIVE.
7. VERIFY CLEARANCES FOR ALL ELECTRICAL WORK BEFORE PROCEEDING WITH CONSTRUCTION. COORDINATE USAGE OF AVAILABLE SPACE WITH ALL TRADES. IN THE EVENT OF CONFLICTS, NOTIFY ENGINEER BEFORE PROCEEDING WITH THE WORK.
8. ONE-LINE DIAGRAM SHOWS CIRCUIT IDENTIFICATION, WIRE QUANTITY AND SIZES, AND CONDUIT SIZE WITHIN STRUCTURES. ONE-LINE DIAGRAM ALSO INDICATES ORIGIN AND DESTINATION OF CIRCUITS.
9. SITE POWER PLANS INDICATE THE GENERAL ROUTING OF UNDERGROUND CONDUIT AND CABLES.
10. ALL POWER CONDUIT ALONG WALLS AND CEILING TO BE EXPOSED.

LEGEND & SYMBOLS

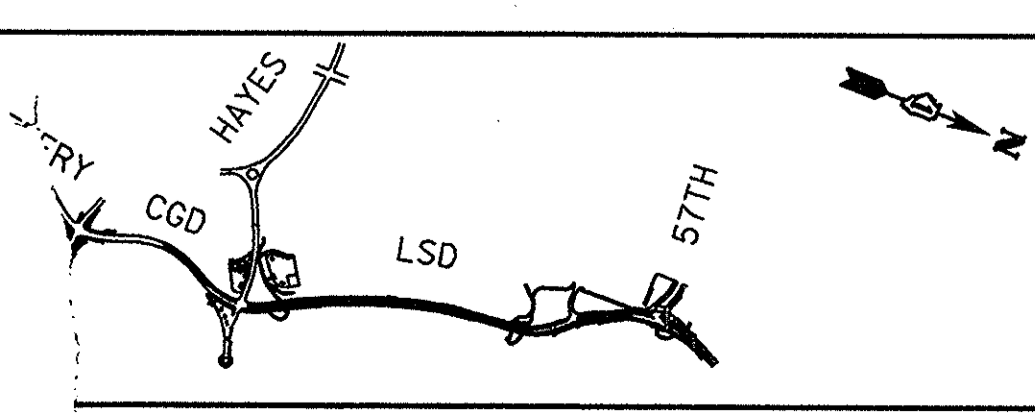


ABBREVIATIONS

A	AMPERE, ALARM
AC	ALTERNATING CURRENT
ACB	AIR CIRCUIT BREAKER
AIC	ASYMMETRIC INTERRUPTING CAPACITY
AM	AMMETER
AR	ALARM RELAY
AS	AMMETER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CLOSE, CONDUIT OR CONTACTOR
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CP	CONTROL PANEL
CR	CURRENT OR CONTROL RELAY
CS	CONTROL STATION
DS	DISCONNECT SWITCH
EC	EMPTY CONDUIT
EMH	ELECTRICAL MANHOLE
ER	ELECTRODE RELAY
EX	EXISTING
FS	FLOW SWITCH
G	GREEN OR GROUND
GFI	GROUND FAULT INTERRUPTER
GRD	GROUND
HH	HANDHOLE
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HP	HORSEPOWER
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LR	LOAD RELAY
LS	LIMIT OR LEVEL SWITCH
M	MAGNETIC MOTOR STARTER
MA	MILLIAMPERE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MH	MANHOLE OR MOUNTING HEIGHT
MM	MILLIMETER
MOV	MOTOR OPERATED VALVE
MS	MANUAL MOTOR STARTER
MV	MILLIVOLT
N	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN, NUMBER
O	OPEN
OL	OVERLOAD
P	PRIMARY
PB	PUSH BUTTON OR PULL BOX
PC	PROGRAMMABLE CONTROLLER
PH	PHASE
1P	SINGLE PHASE/SINGLE POLE
3P	THREE PHASE/THREE POLE
SH	SPACE HEATER
SS	SELECTOR SWITCH
T	THERMOSTAT, TIMER, TRANSFORMER
TB	TERMINAL BLOCK
TEMP	TEMPERATURE
TTC	TELEPHONE TERMINAL CABINET
UG	UNDERGROUND
V	VOLTS
VA	VOLT AMPERE
VLS	VALVE LIMIT SWITCH
VM	VOLTMETER
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER



DESIGN: S.K.					KEY PLAN
DRAWN: I.H.S.					
CHECKED: S.K.					
APPROVED: S.A.					
DATE: 4/16/02					
SCALE: AS NOTED					
FILE:	NO.	BY	DATE	DESCRIPTION	
REVISIONS					



CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSERVATION ENGINEERS, INC.

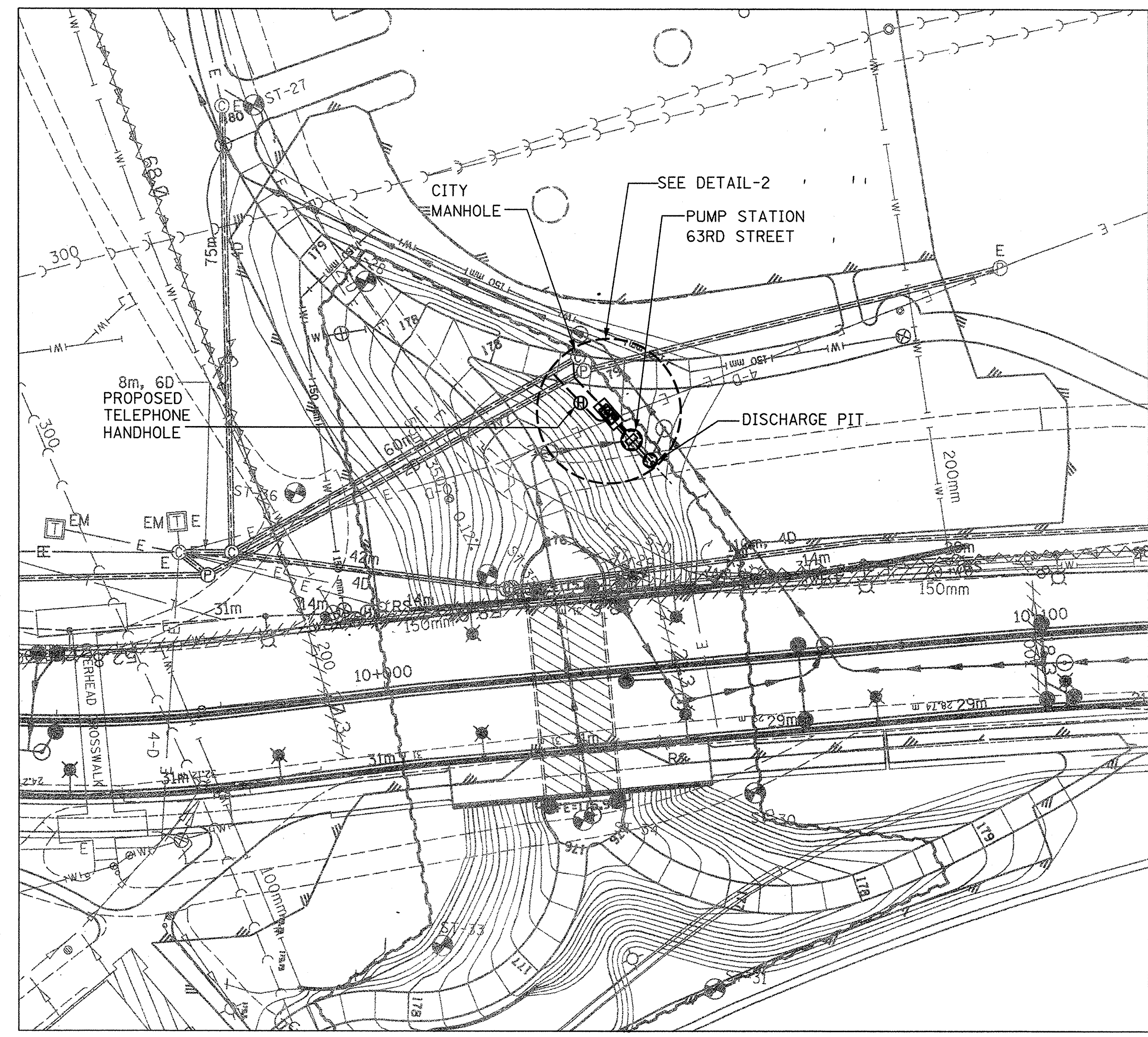
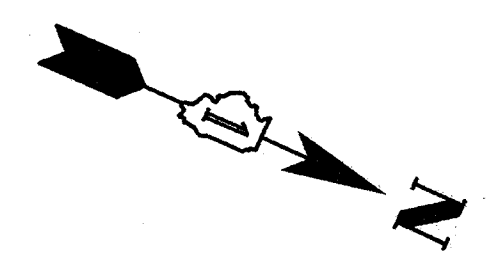
DEI DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO ILLINOIS.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

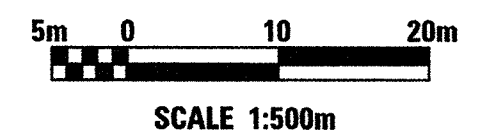
**GENERAL NOTES, LEGEND
SYMBOLS AND ABBREVIATIONS
PUMP STATIONS - 57TH & 63RD STREETS**

CONTRACT NO.	00-B0241-06-PV
DRAWING NO.	PE-1
PROJECT NO.	B-1-440

1640091715

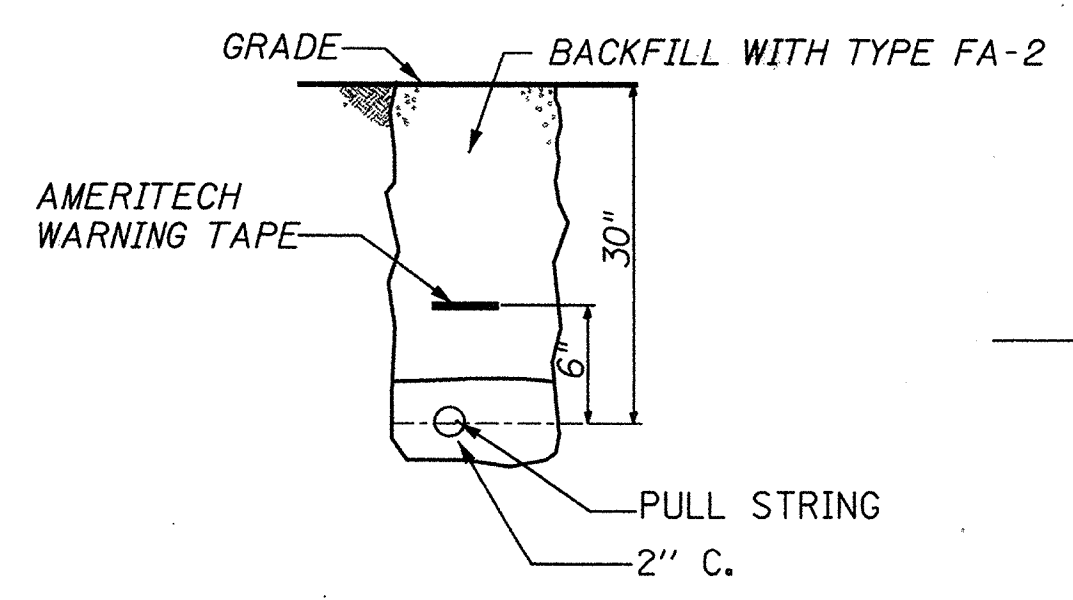


1 SITE POWER PLAN
PE-2
SCALE: 1:500



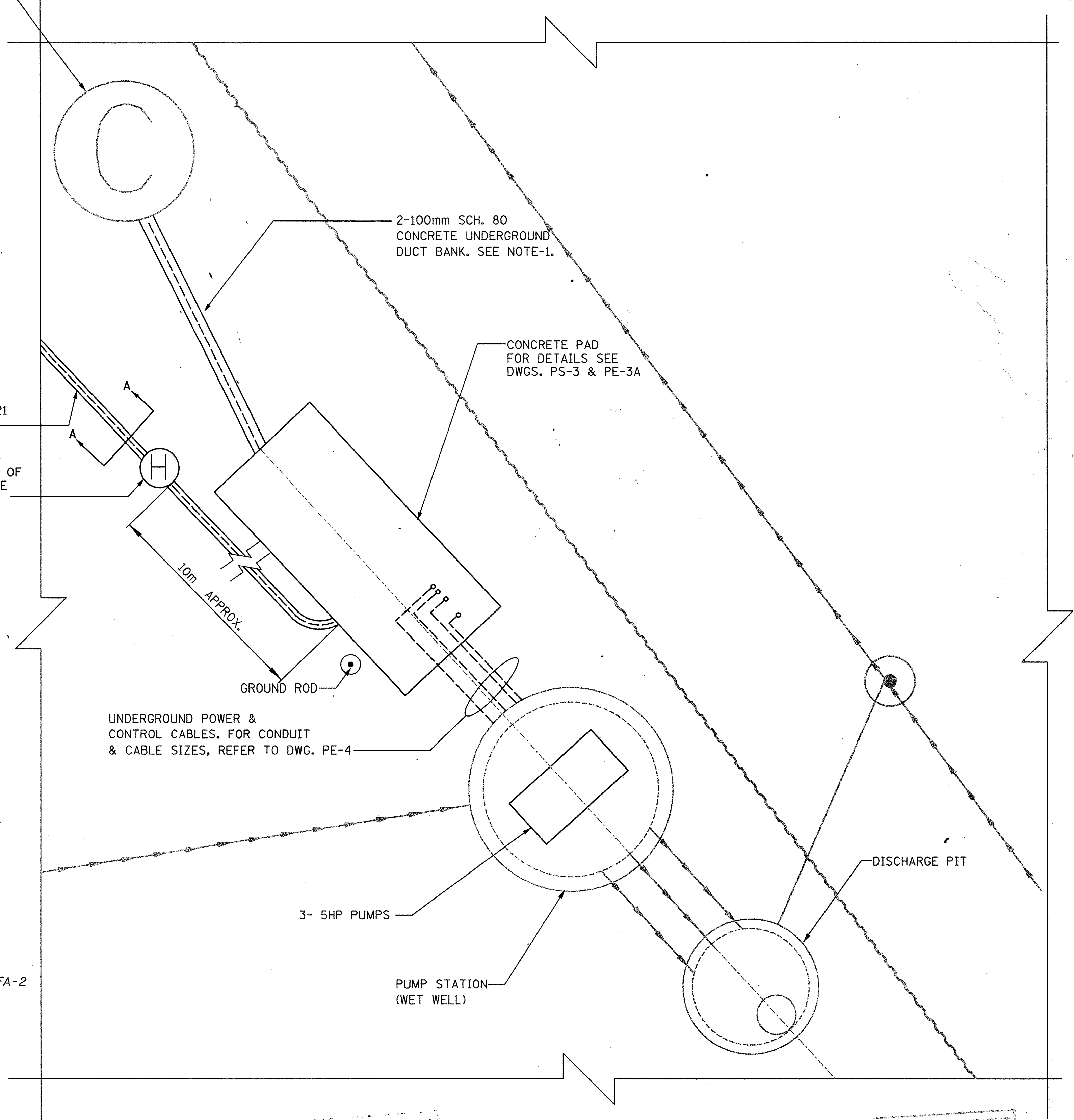
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- NOTE:**
- FOR LOCATIONS OF MANHOLE AND DUCT BANK SEE DWG. E-9.
 - SEE NOTES ON DWG.#PE-3A.

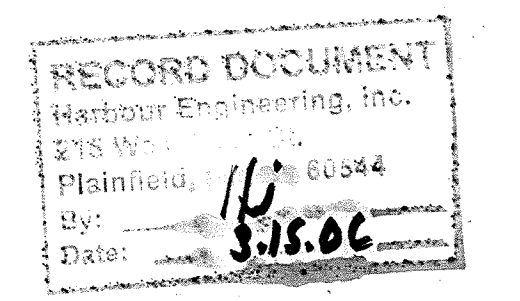


3 SECTION A-A
PE-2
NOT TO SCALE

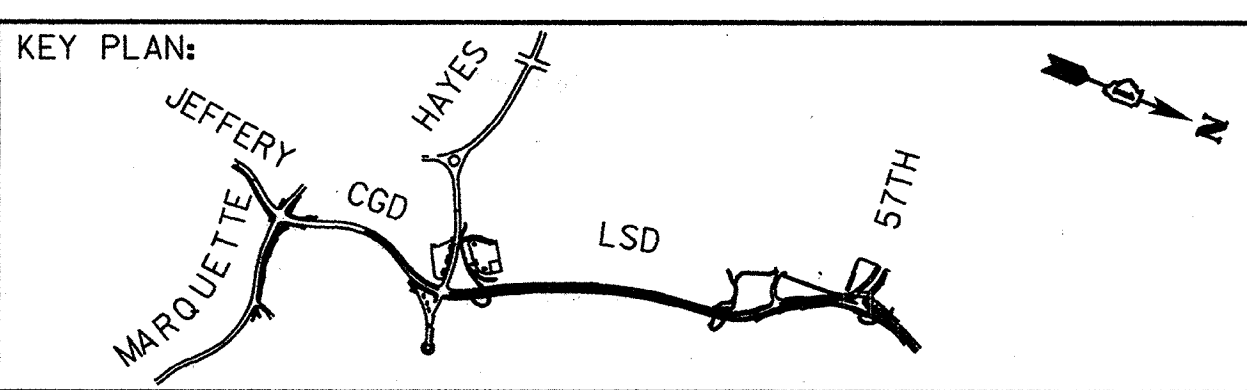
CITY MANHOLE
SEE DWG. E-9
FOR DETAILS



2 DETAIL - 2
PE-2
NOT TO SCALE



DESIGN: D.C.M.				
DRAWN: DCM/SR				
CHECKED: S.K.				
APPROVED:				
DATE: 12-17-01				
SCALE: AS NOTED				
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REVISIONS				
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CITY OF CHICAGO
DEPARTMENT OF
TRANSPORTATION
BUREAU OF HIGHWAYS

CTE ENGINEERS
CONSOR TOWNSEND ENVIRONMENTAL ENGINEERS, INC.

DELTA ENGINEERING, INC.
CONSULTING ENGINEERS, CHICAGO, ILLINOIS.

**SOUTH LAKE SHORE DRIVE
JACKSON PARK SECTION
MAINLINE RECONSTRUCTION**

**SITE POWER PLAN
PUMP STATION - 63RD STREET**

CONTRACT NO.
00-B0241-06-PV

DRAWING NO.
PE-2

PROJECT NO. B-1-440
16A0091716

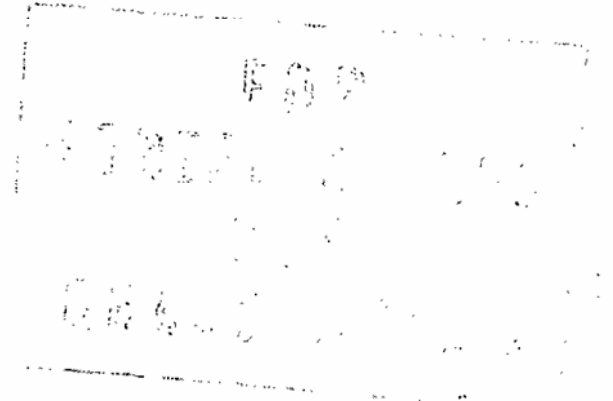
Chicago Sewer Atlas

N.W. 1/4 Sec. 13 - 38-14.

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VOL. 38-3

DATE	DESCRIPTION	Drawn by
9/2/09	30" RCP main-Everett to 57th-2008	SM
		SM



55TH

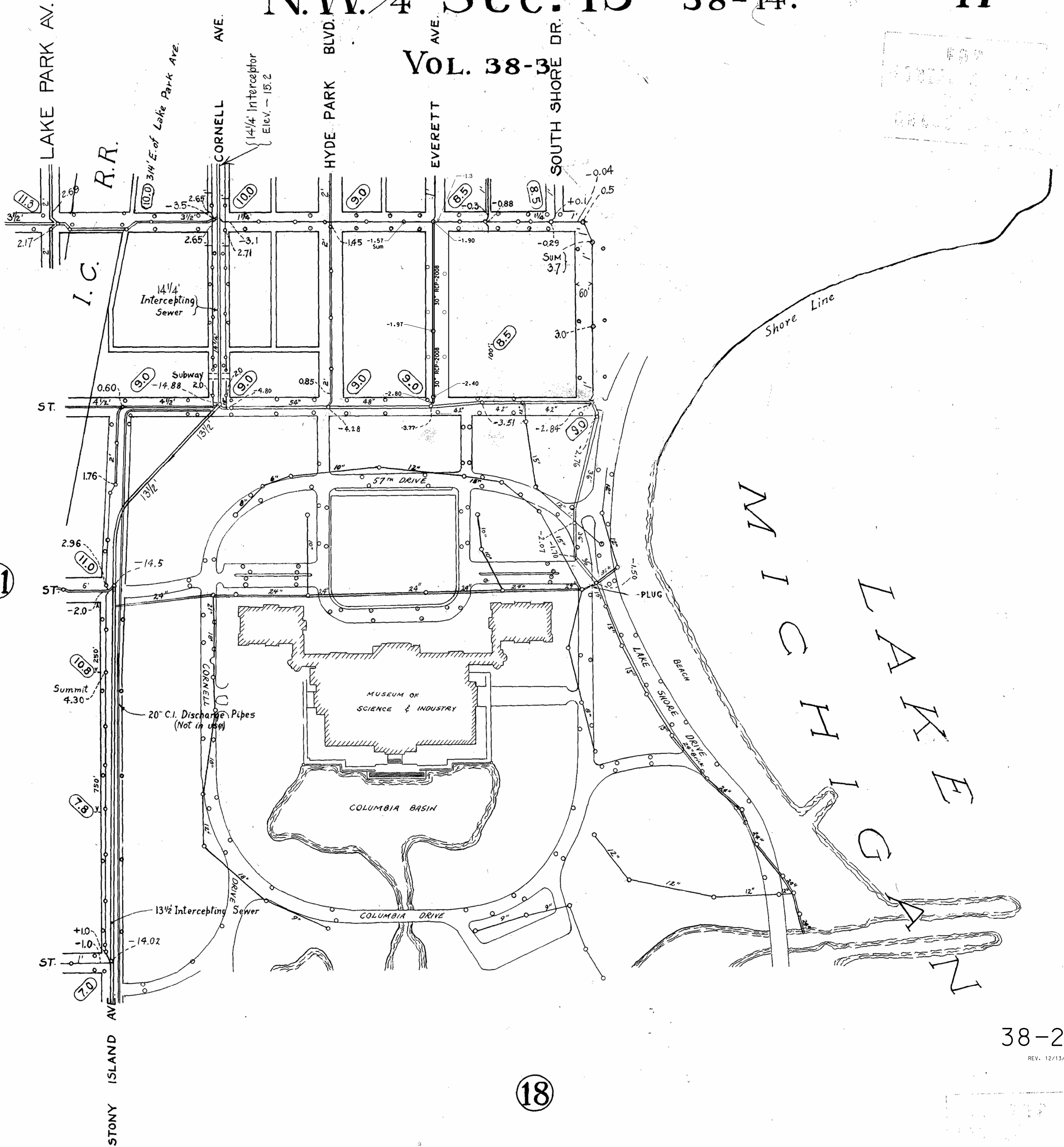
56TH

57TH

59TH

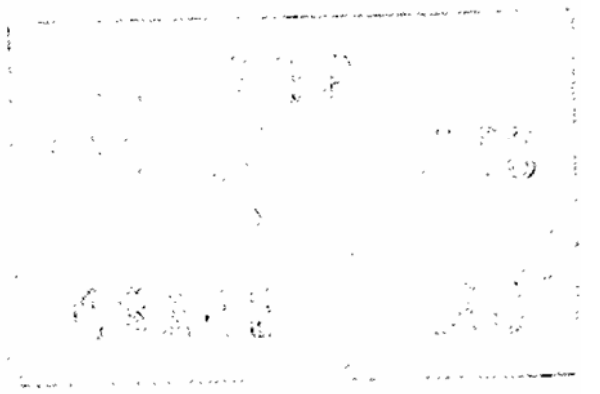
(21)

(18)



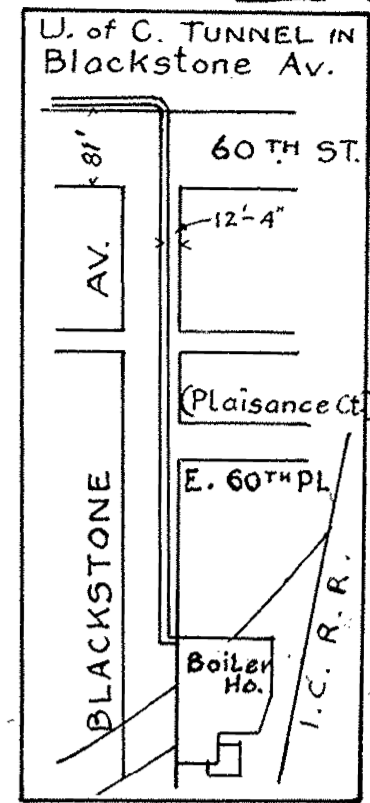
38-2-17

REV. 12/13/11



SE 1/4 Sec 14 38-14

DATE	DESCRIPTION	Drawn by
3/4/09	Blackstone/ 63rd to 64th-30"	SRW
6/17/10	Dorchester/ 63rd to 64th-18"	SRW
5/27/14	62nd/ Woodlawn to Dorchester-36" x 42"	SRW
5/27/14	Kimbarck/ 61st to 63rd-24"	SRW



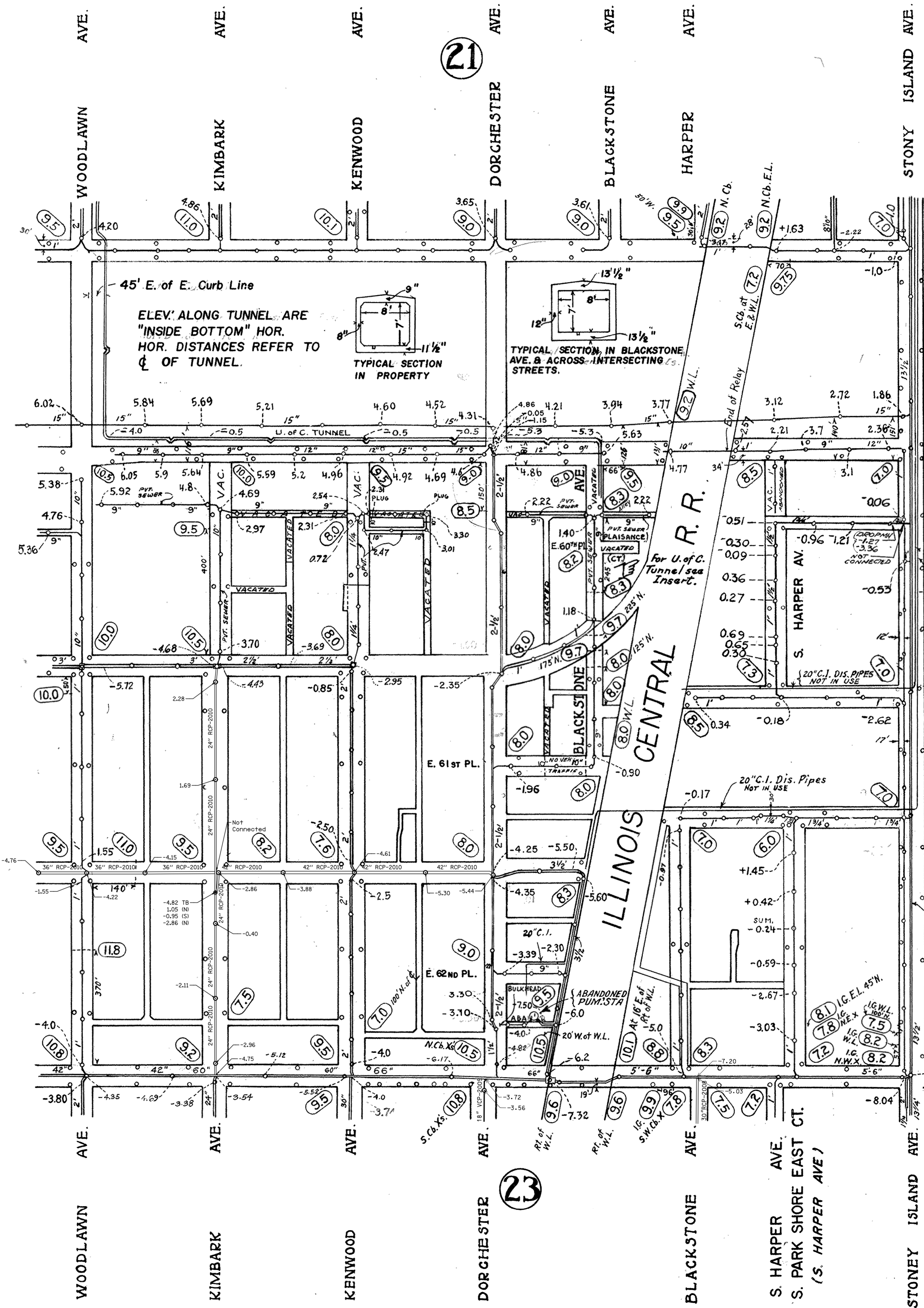
59th ST.

60th ST.

61st ST.

62nd ST.

63rd ST.



59th ST.

60th ST.

61st ST.

62nd ST.

63rd ST.

18

21

23

26

S.W. 1/4 Sec. 13. 38-14

DATE	DESCRIPTION	Drawn by
10/10/2016	HAYES/STONY ISLAND TO LAKE SHORE DRIVE -15'-18" x 24' x 30' x 36' x 42' x 48' - 2006	SRW
10/10/2016	LAKE SHORE DRIVE/56TH ST TO 67TH ST -12'-18" x 24' x 30' x 36' x 42' x 48' - 2006	SRW

E. 59TH ST.

E. 60TH ST.

E. 61ST ST.

E. 62ND ST.

E. 63RD ST.

STONY ISLAND AVE.

S. CORNELL DR.

S. LAKE SHORE DRIVE

17

22



JACKSON PARK

LAKE MICHIGAN

19

STONY ISLAND AVE

S. CORNELL DR.

E. HAYES DR.

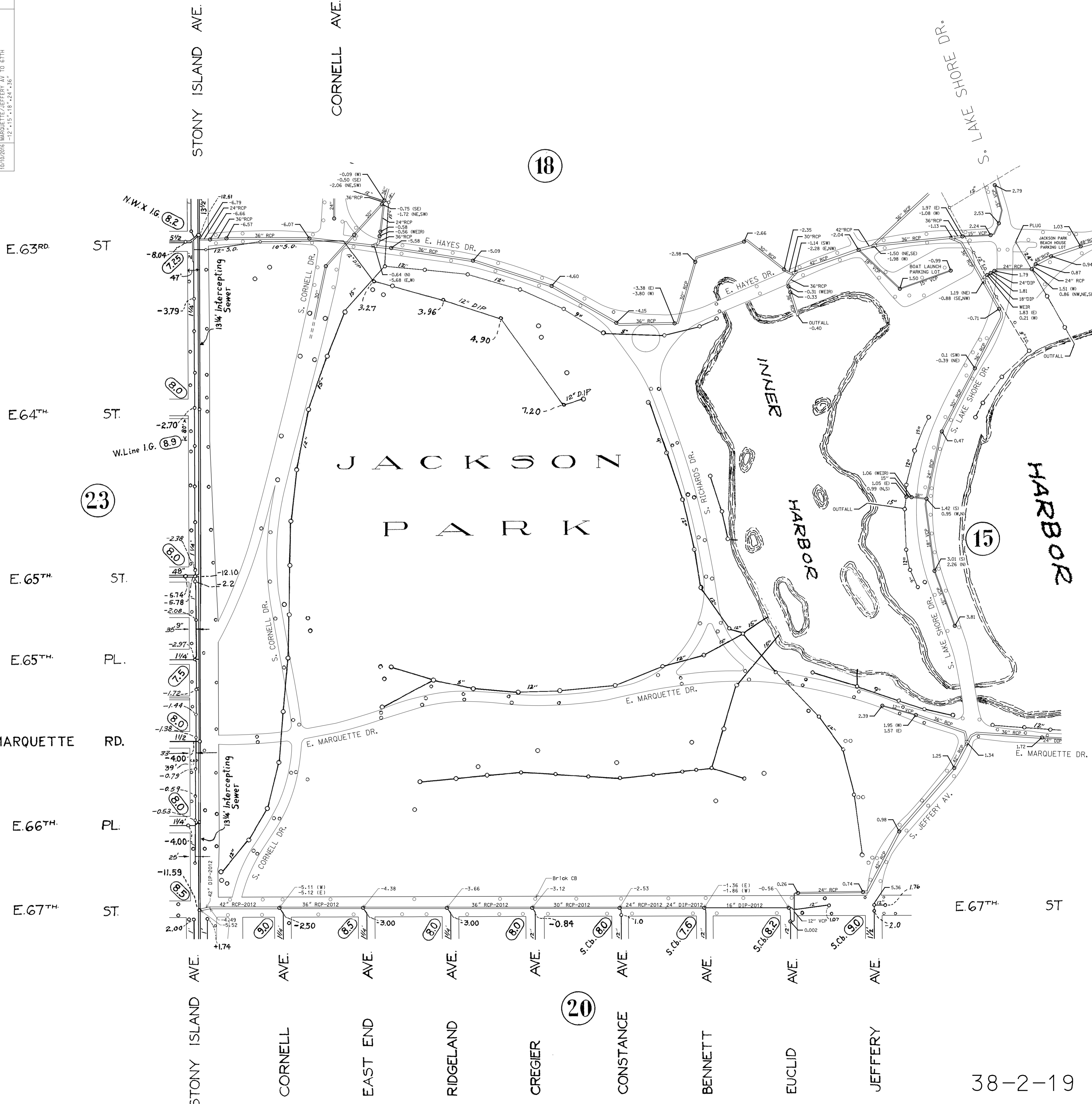
S. LAKE SHORE DRIVE

N.W. 1/4 Sec. 24. 38-14

38-2

19

DATE	DESCRIPTION	Drawn by
1/22/13	67TH/STONY ISLAND TO EUGENE-42"-36"	SM
10/10/2016	HAYES/STONY ISLAND TO LAKE SHORE DRIVE -15' 18" 24" 30" 36" 42" 48"	SM
10/10/2016	LAKE SHORE DRIVE/65TH ST TO 67TH ST -12" 18" 24" 30" 36" 54"	SM
10/10/2016	JEFFERY AV/MARQUETTE TO 67TH -12" 24" 42"	SM
10/10/2016	MARQUETTE/JEFFERY AV TO 67TH -12" 15" 18" 24" 36"	SM



23

18

15

20

DATE	DESCRIPTION	Drawn by
3/20/14	Paxton/ 67th to 69th-36", 30"	SRW
3/20/14	67th/CRANDON TO Merr 11-12", 16"	SRW
10/10/2016	JEFFERY AV/MARQUETTE TO 67TH -12", 24", 42"-2006	SRW
10/10/2016	LAKE SHORE DRIVE/56TH ST TO 67TH ST -12", 18", 24", 30", 36", 54"-2006	SRW
10/10/2016	MARQUETTE/JEFFERY AV TO 67TH -12", 15", 18", 24", 30", 36"-2006	SRW

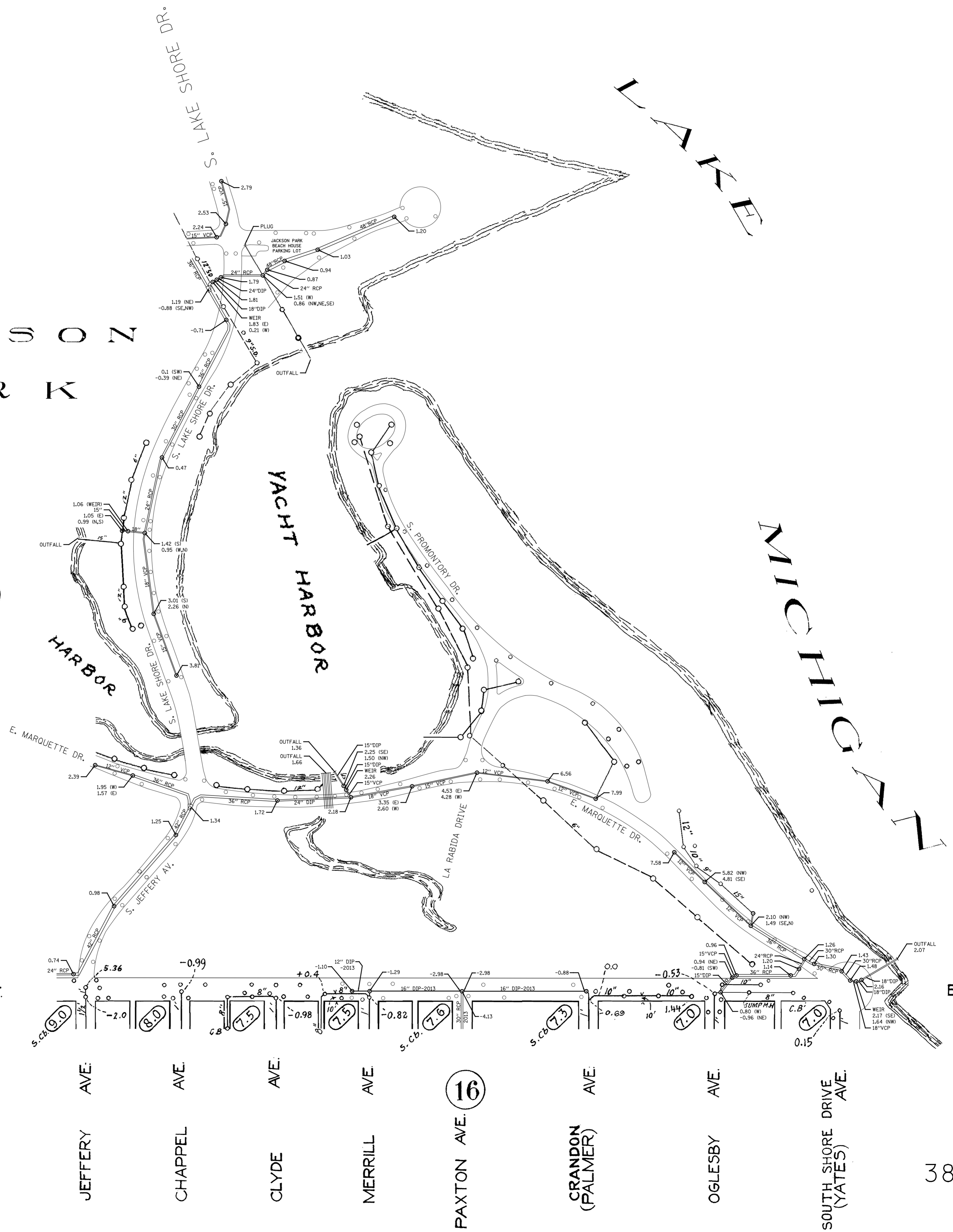
N.E. 1/4 Sec.24. 38-14

38-2

15

JACKSON
PARK

19



E. 67TH ST.

ST.

E. 67TH ST.

JEFFERY AVE.

CHAPPEL AVE.

CLYDE AVE.

MERRILL AVE.

PAXTON AVE. 16

CRANDON (PALMER) AVE.

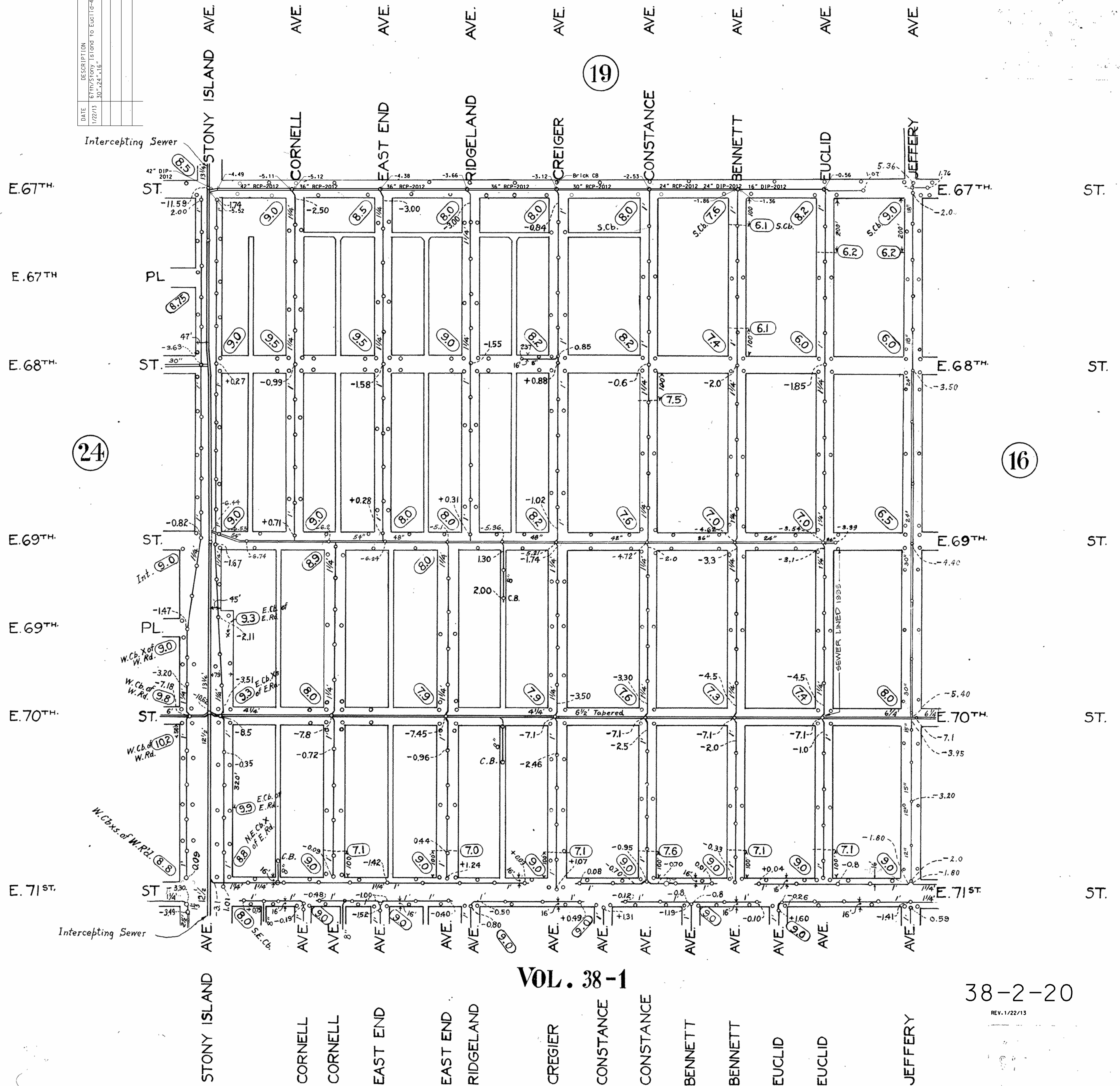
OGLESBY AVE.

SOUTH SHORE DRIVE (YATES) AVE.

38-2-15

S.W. 1/4 Sec. 24. 38-14

DATE	DESCRIPTION	Drawn by
1/22/13	67th/STONY ISLAND TO EUCLID-42"-36"	SBM
	30"-24"-16"	SBM
		SBM
		SBM



24

16

VOL. 38-1

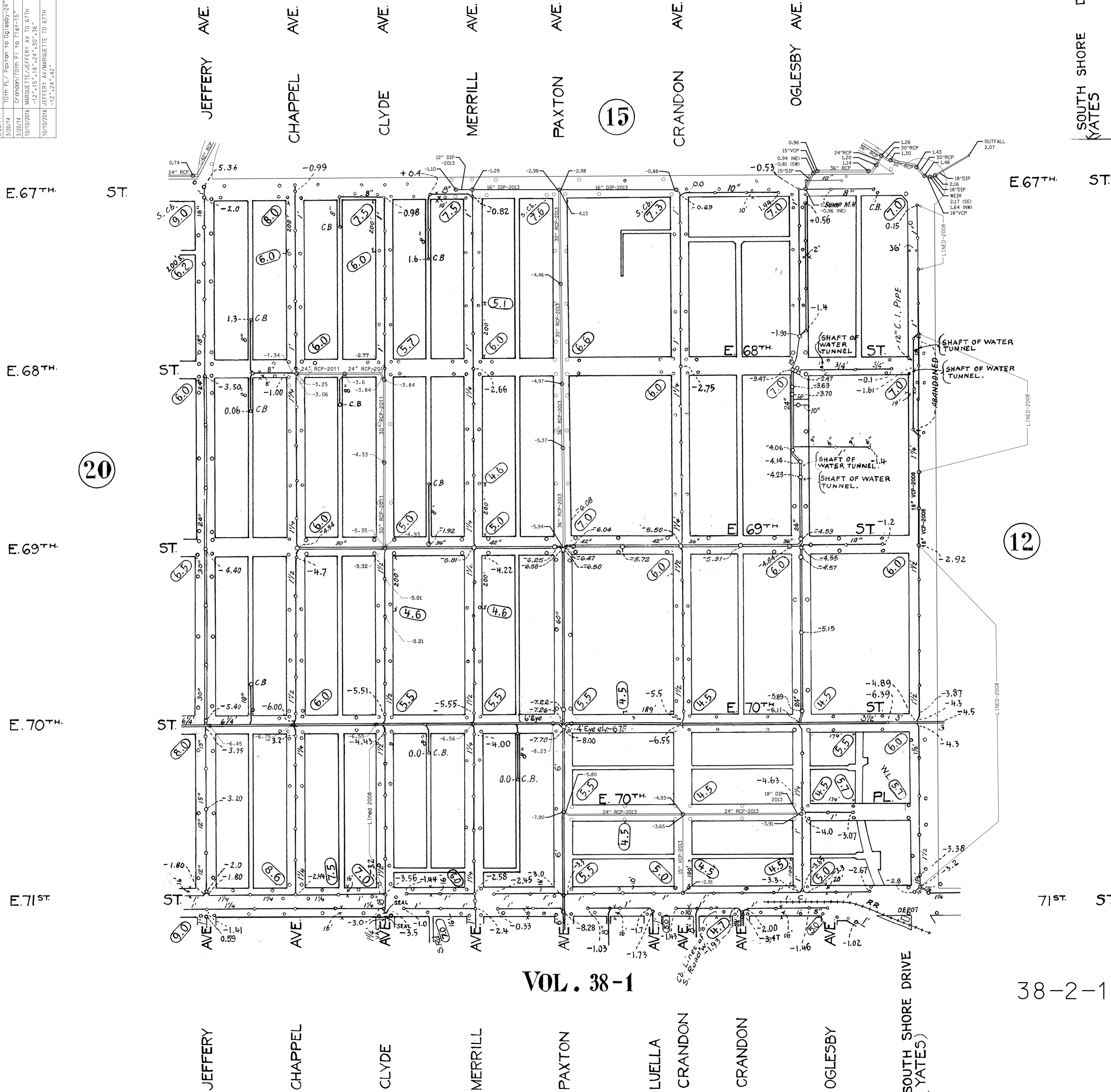
38-2-20

REV. 1/22/13

S.E. 1/4 Sec. 24. 38-14

SOUTH SHORE DRIVE (AVE.)
YATES

DATE	DESCRIPTION	Drawn by
3/4/09	18" VCP - 60TH ST. TO 247' NORTH	SBW
11/24/10	Clyde & 69th - updated invert elevs.	SBW
6/21/11	Clyde/ 69th to 68th-30"	SBW
3/20/14	Paxton/ 67th to Crandon-24"	SBW
3/20/14	67th/Crandon to Merrill-12", 18"	SBW
3/20/14	70th PL/ Paxton to Oglesby-24"	SBW
3/20/14	Crandon/70th Pl. to Tish-15"	SBW
10/10/2016	MARQUETTE/JEFFERY AV TO 67TH -12", 15", 18", 24", 30", 36"	SBW
10/10/2016	JEFFERY AV/MARQUETTE TO 67TH -12", 24", 42"	SBW



VOL. 38-1

Lake Michigan Water Level Data

PHASE I

REVISED REPORT ON GREAT LAKES OPEN-COAST FLOOD LEVELS



Prepared by the U.S. Army Corps of Engineers
for the Federal Emergency Management Agency

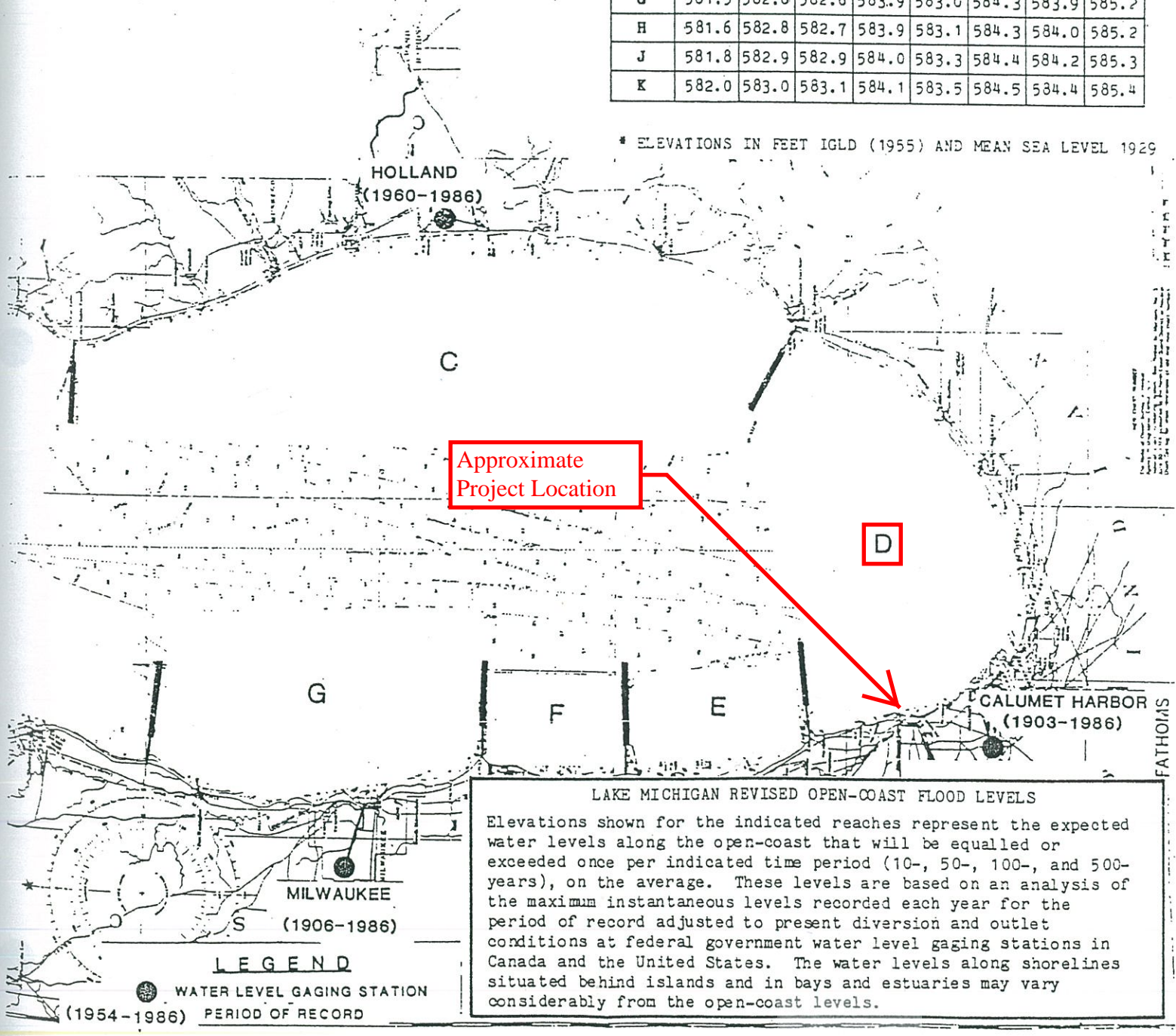
Detroit, Michigan
April 1988

OD LEVELS ARE APPLICABLE
 E MICHIGAN SHORELINES
 OLLOWING PHASE II AREAS:
 LITTLE TRAVERSE BAY
 GRAND TRAVERSE BAY
 GREEN BAY
 STRAITS OF MACKINAC

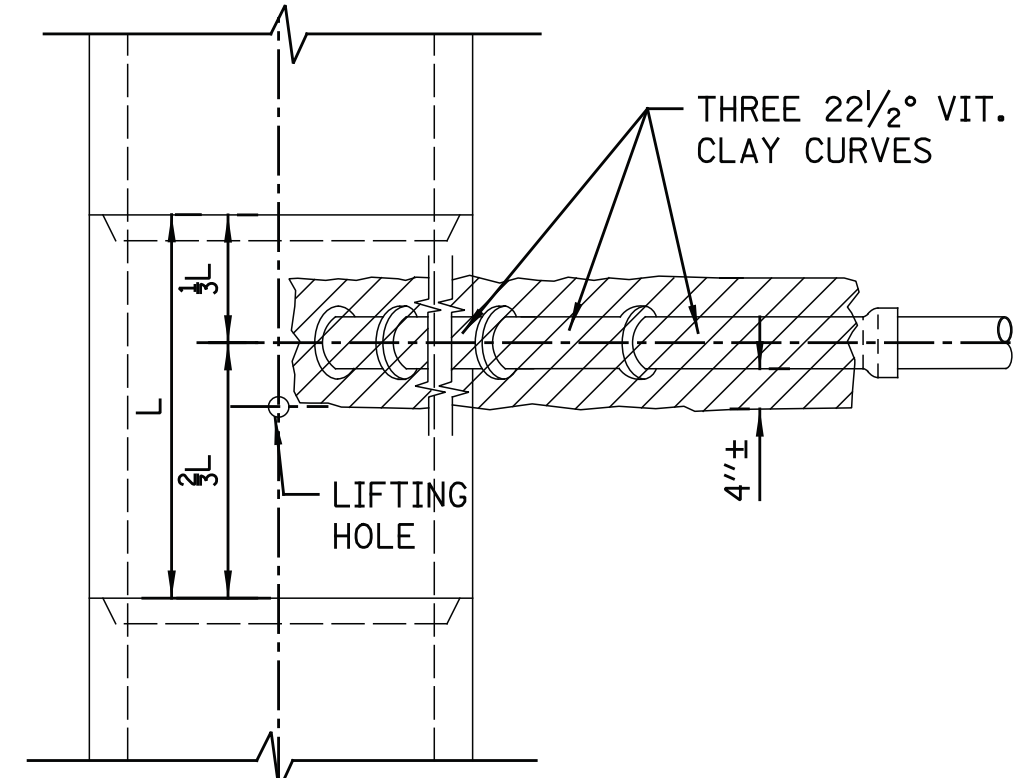
LAKE MICHIGAN TABLE

REACH	10-YEAR		50-YEAR		100-YEAR		500-YEAR	
	IGLD	MSL	IGLD	MSL	IGLD	MSL	IGLD	MSL
A	581.7	582.9	582.8	584.0	583.2	584.4	584.1	585.3
B	581.8	583.1	582.9	584.2	583.3	584.6	584.2	585.5
C	581.9	583.3	583.0	584.4	583.4	584.8	584.3	585.7
D	582.0	583.5	583.1	584.6	583.5	585.0	584.4	585.9
E	581.9	583.3	583.0	584.4	583.4	584.8	584.3	585.7
F	581.7	583.1	582.8	584.2	583.2	584.6	584.2	585.6
G	581.5	582.8	582.6	583.9	583.0	584.3	583.9	585.2
H	581.6	582.8	582.7	583.9	583.1	584.3	584.0	585.2
J	581.8	582.9	582.9	584.0	583.3	584.4	584.2	585.3
K	582.0	583.0	583.1	584.1	583.5	584.5	584.4	585.4

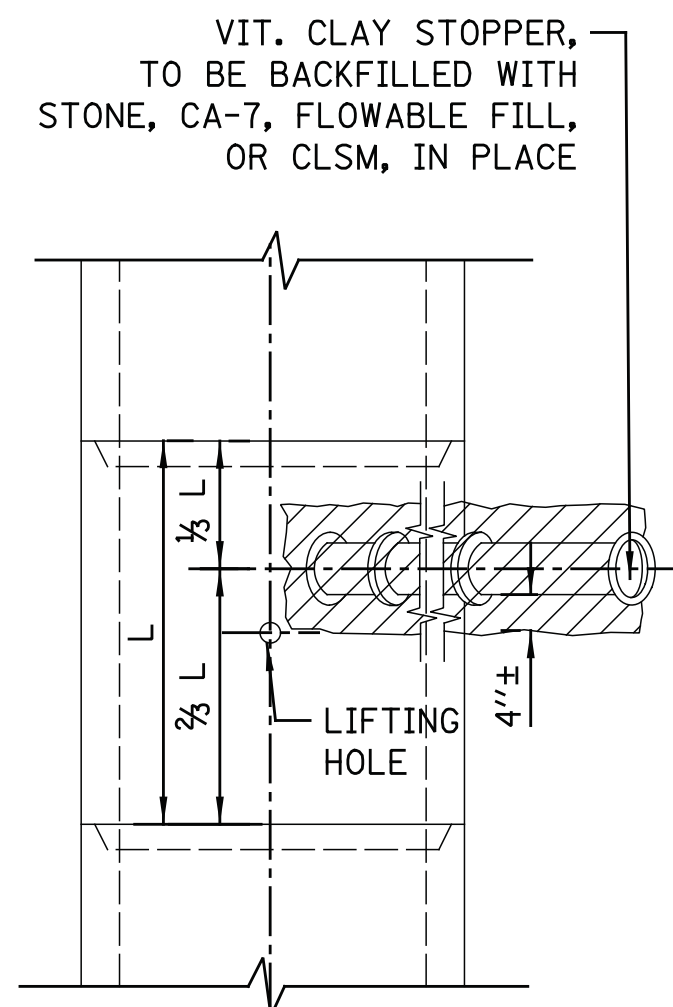
* ELEVATIONS IN FEET IGLD (1955) AND MEAN SEA LEVEL 1929



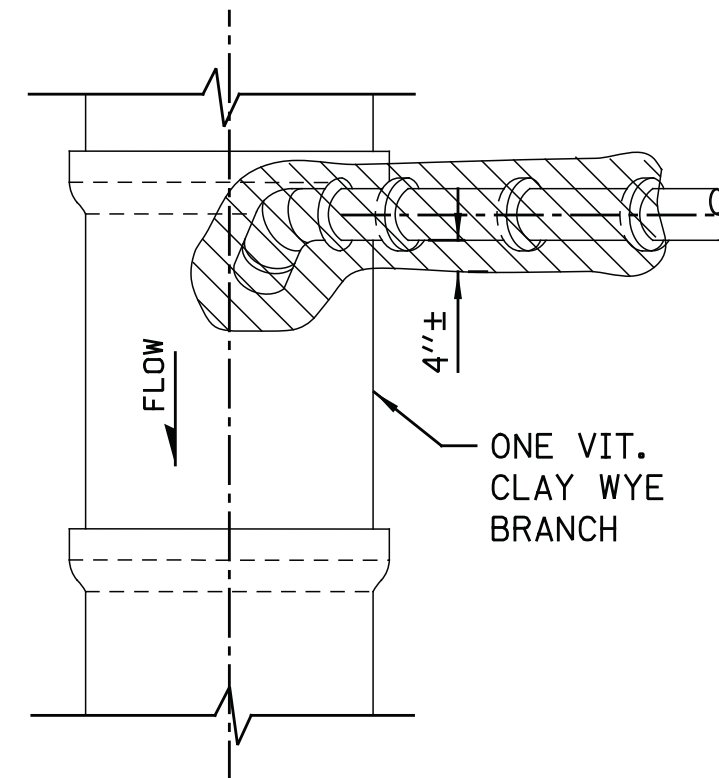
Department of Water Management Details



PLAN

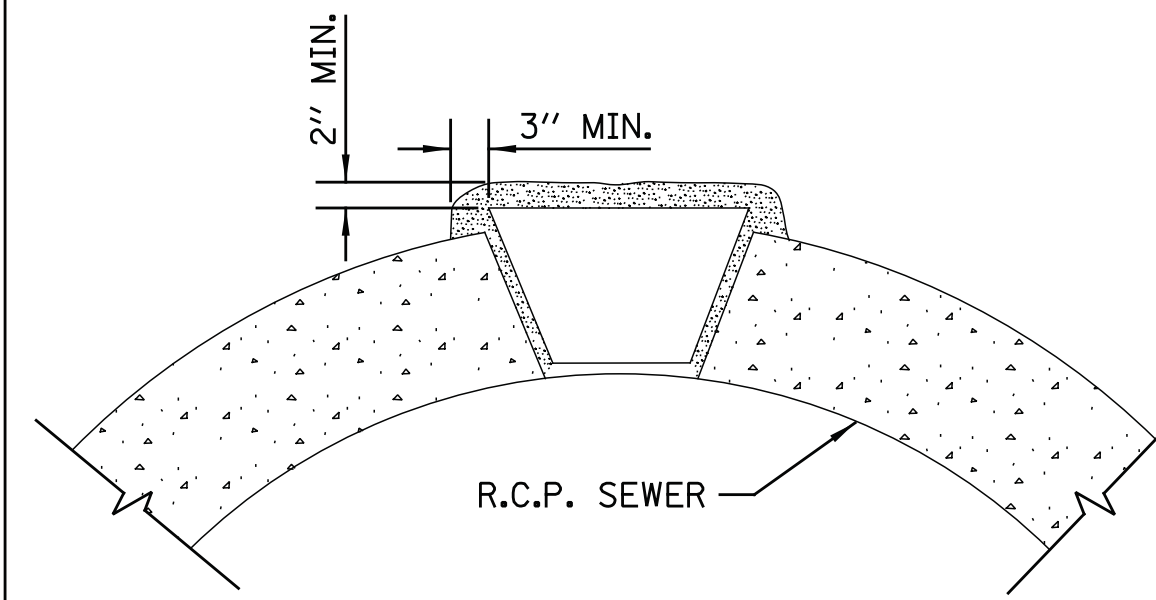


PLAN

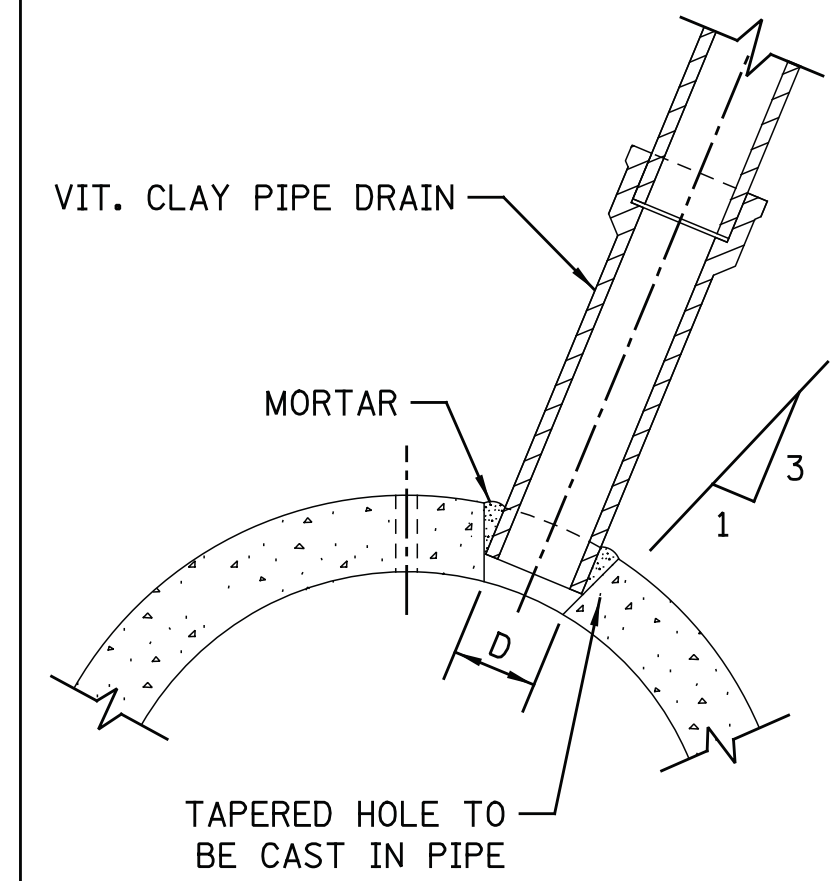


PLAN

NOTE:
PLUG TO BE COATED WITH MORTAR AND
DRIVEN INTO PLACE WITH A WOODEN
MALLET AND THEN SEALED WITH MORTAR.

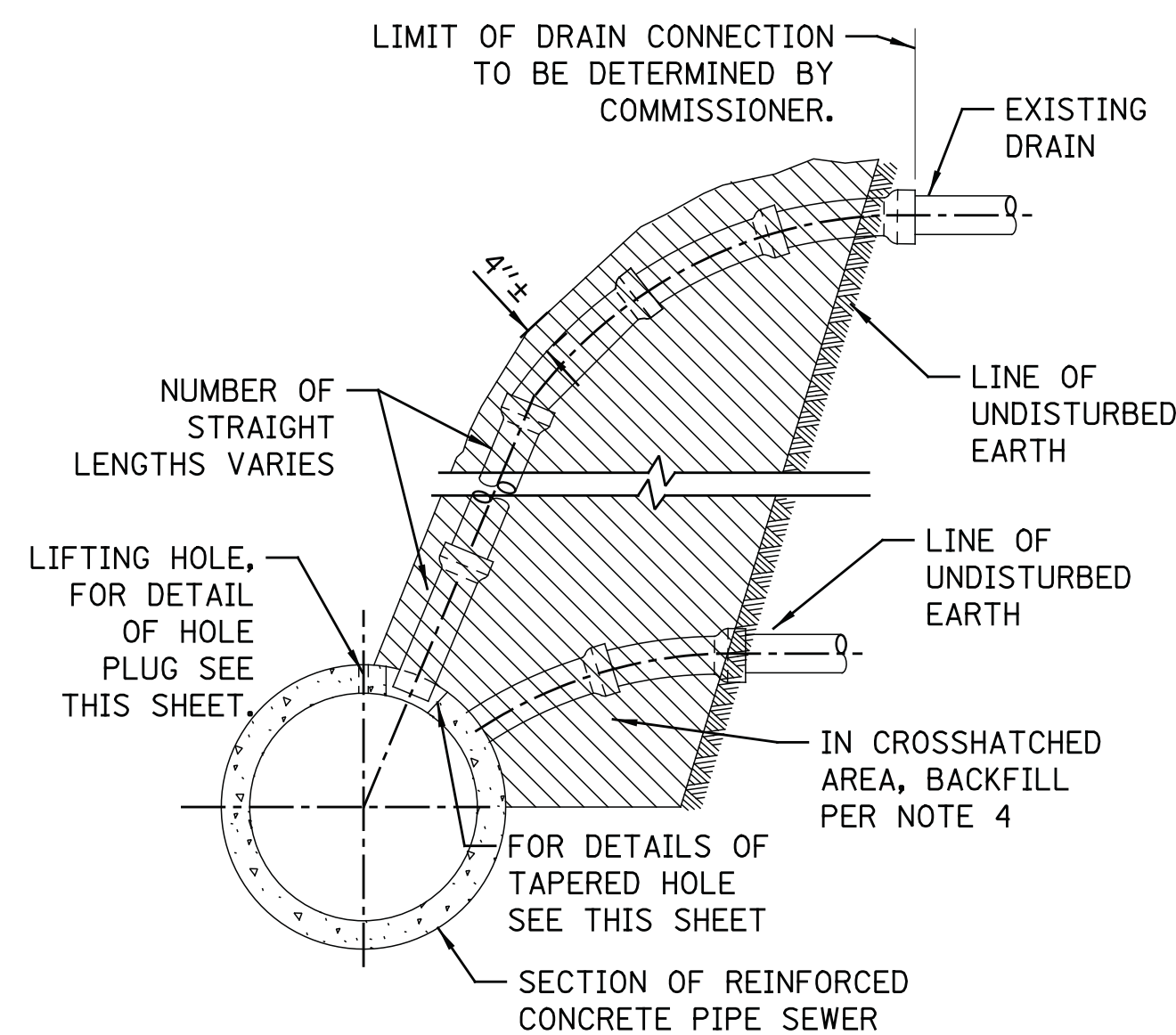


LIFTING HOLE PLUG DETAIL
FOR CONCRETE PIPE



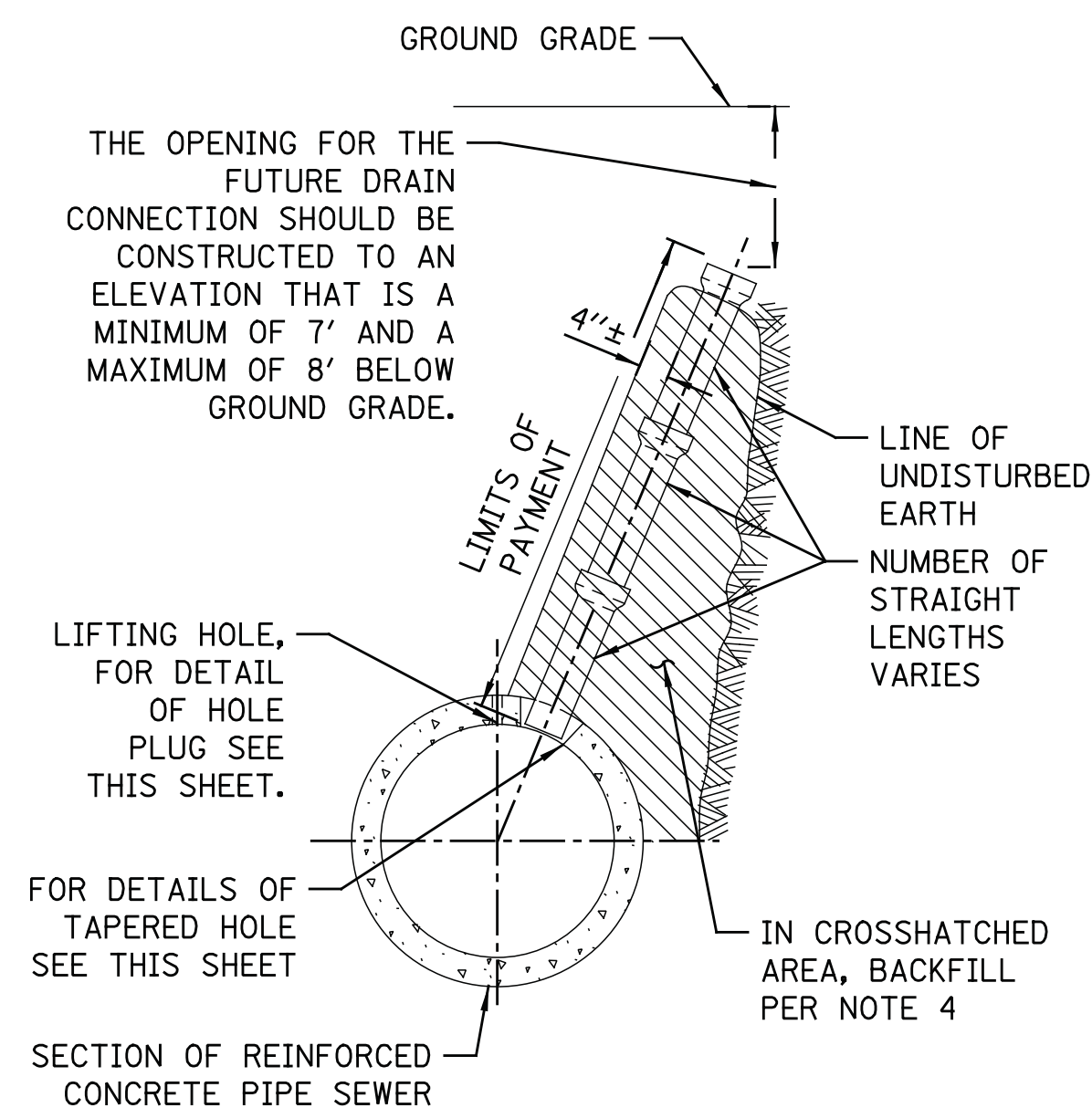
DETAIL OF TAPERED HOLE

SIZE OF DRAIN	"D"
6"	6 7/8"
8"	9 1/8"
10"	11 1/8"
12"	13 1/2"
15"	17"
18"	20 1/4"
21"	23 7/8"



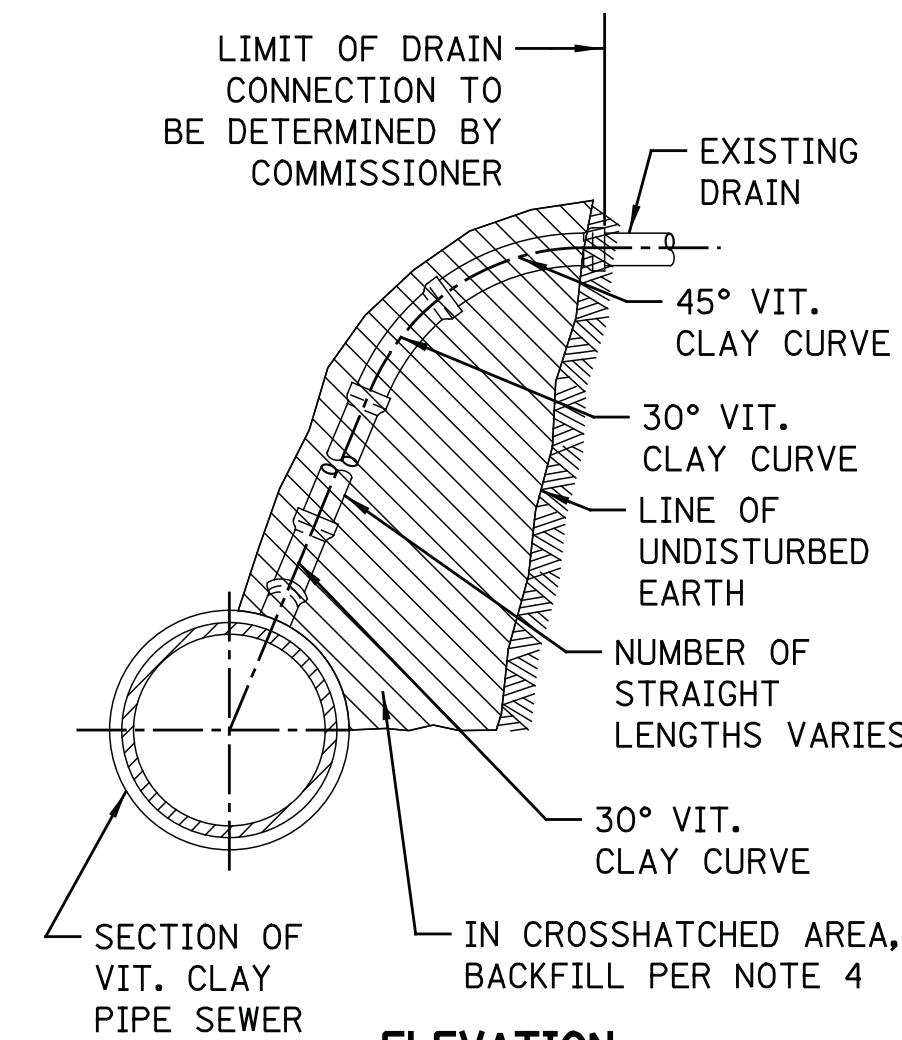
ELEVATION

TYPICAL DRAIN CONNECTIONS
FOR EXISTING DRAINS



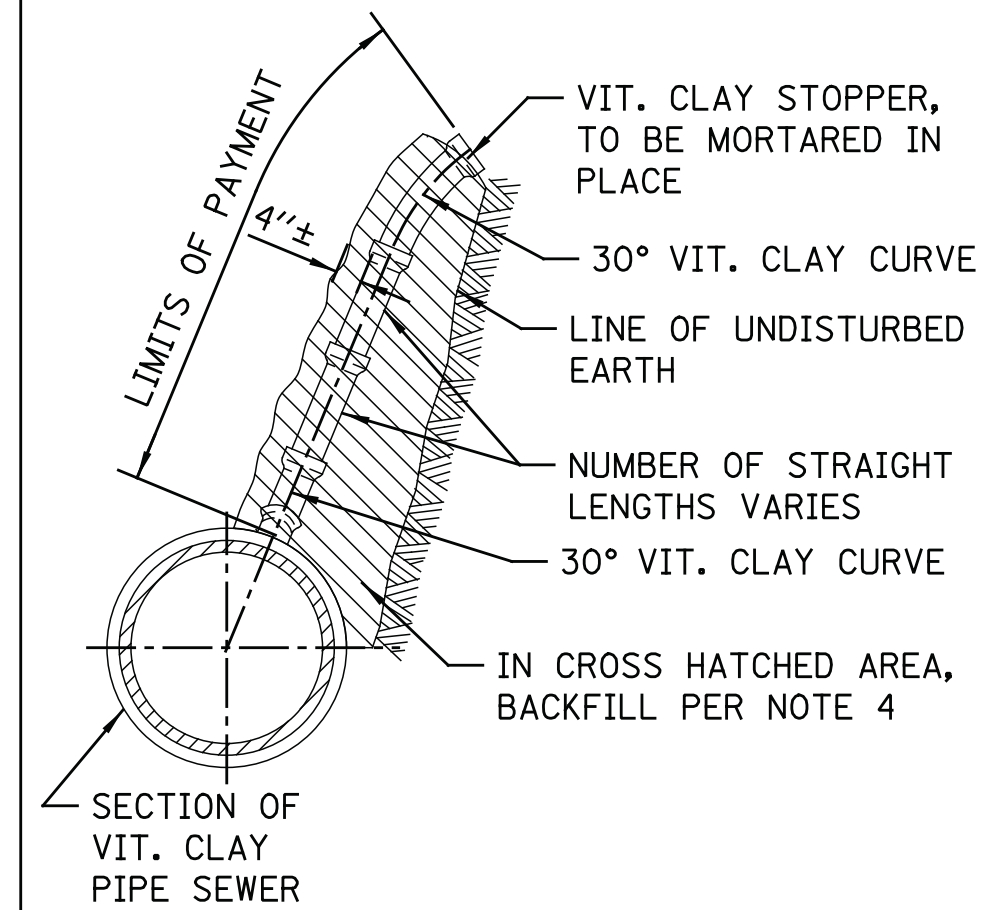
ELEVATION

TYPICAL DRAIN STACKS
FOR FUTURE USE



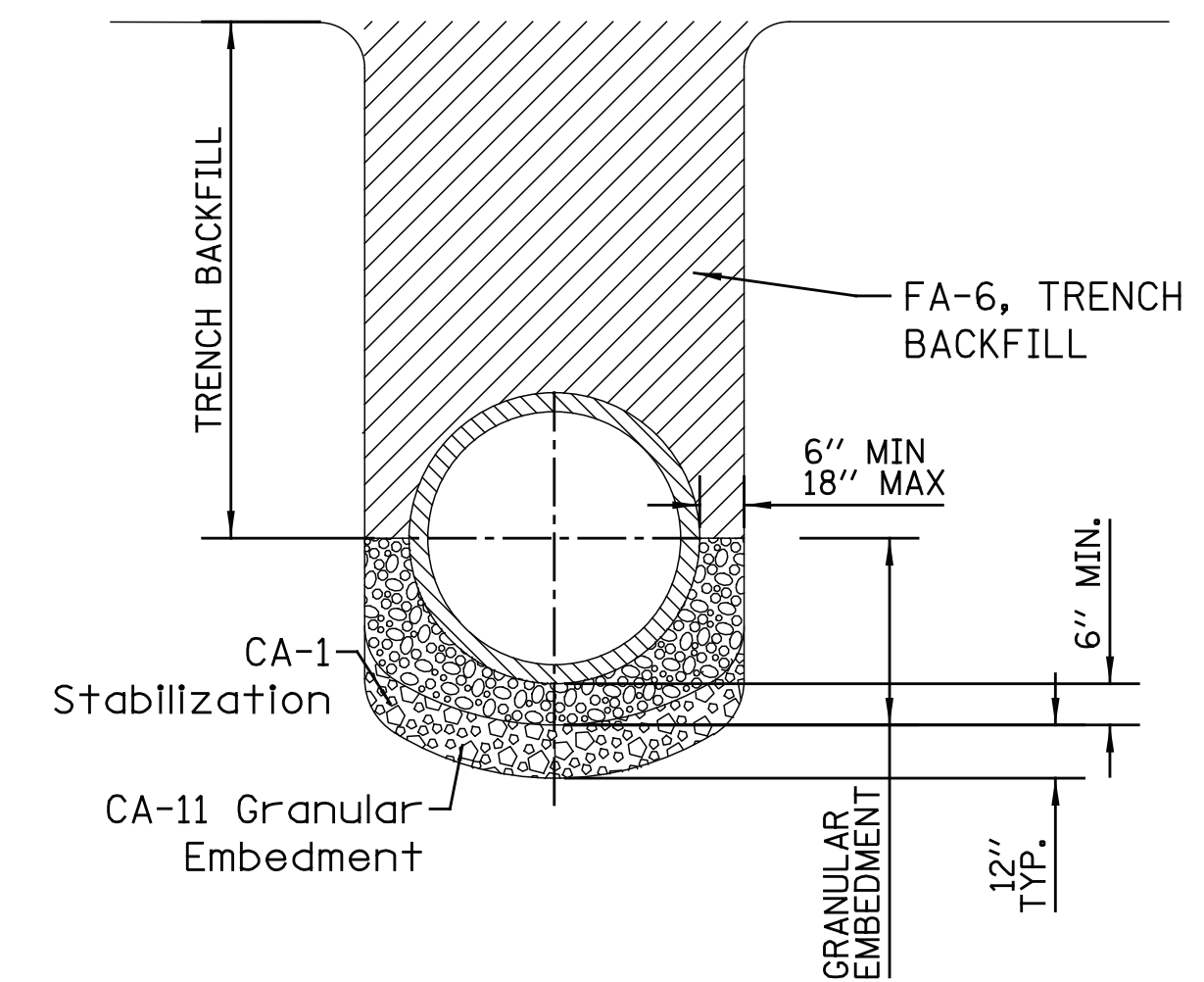
ELEVATION

TYPICAL DRAIN CONNECTIONS FOR
EXISTING DRAINS



ELEVATION

TYPICAL DRAIN STACKS
FOR FUTURE USE



NOTE:
1. FOR TRENCH BACKFILL, USE FA-6 SAND, CRUSHED CONCRETE SAND OR STONE SAND.
2. FOR GRANULAR EMBANKMENT, USE CA-11, CRUSHED GRAVEL, CRUSHED STONE, OR CRUSHED CONCRETE.
3. 12" OF CA-1 STONE IS ONLY REQUIRED WHEN UNSTABLE MATERIAL IS ENCOUNTERED AT TRENCH BOTTOM.

SEWER TRENCH DETAIL

NOTES:

1. ALL DRAIN CONNECTION JOINTS MUST BE MADE AS SPECIFIED IN SPECIFICATIONS..
2. FOR DUCTILE IRON PIPE DRAIN CONNECTIONS SEE SHEET NO. A.2.
3. FOR ALL GRANULAR EMBANKMENT, USE CA-7 OR CA-11
4. FOR BACKFILL OF HATCHED SUPPORT AREAS, USE CONCRETE, CA-11, FLOWABLE FILL, OR CLSM.

STANDARD REVISIONS

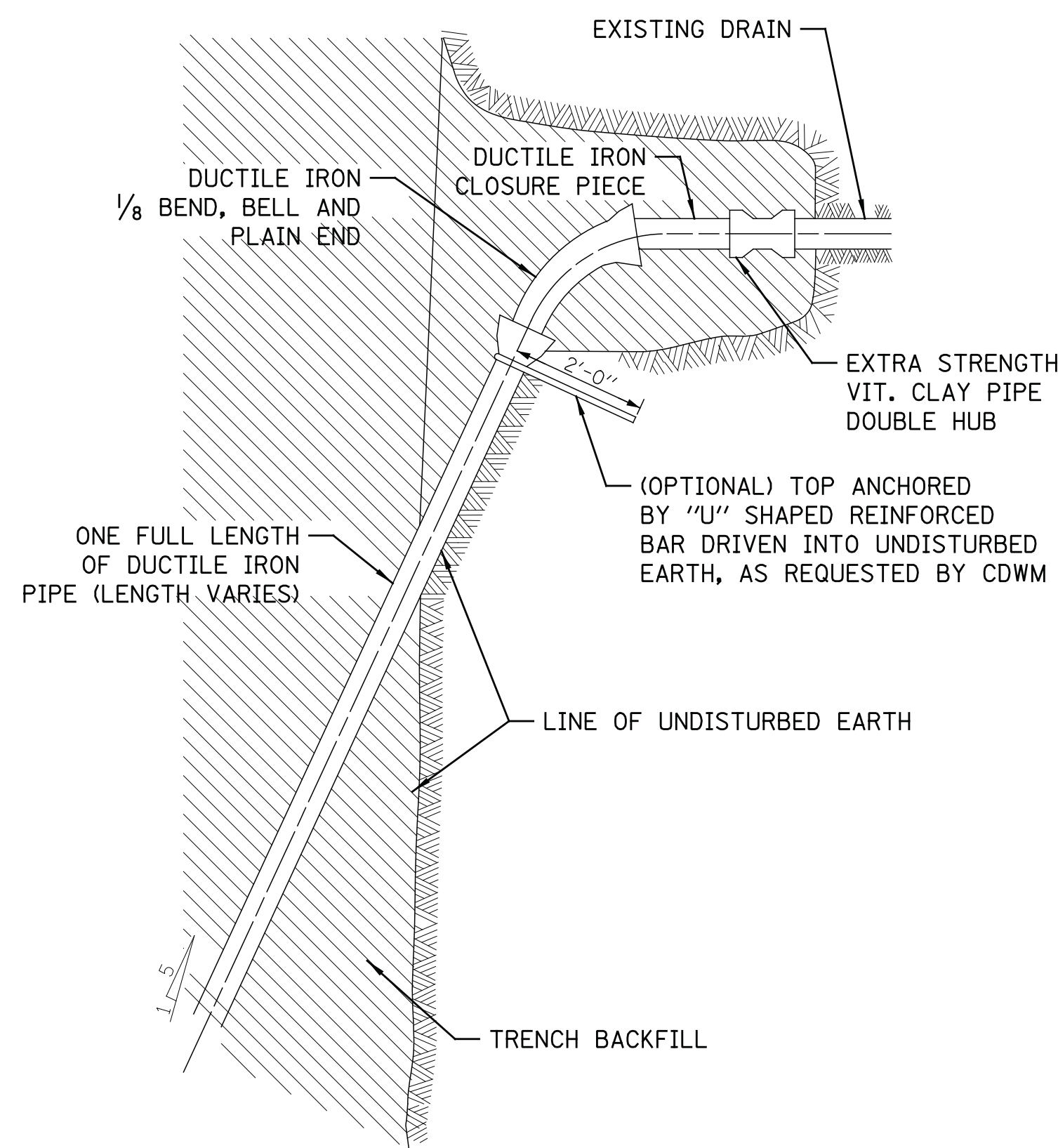
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2/24/15	APPROVED PLAN

PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

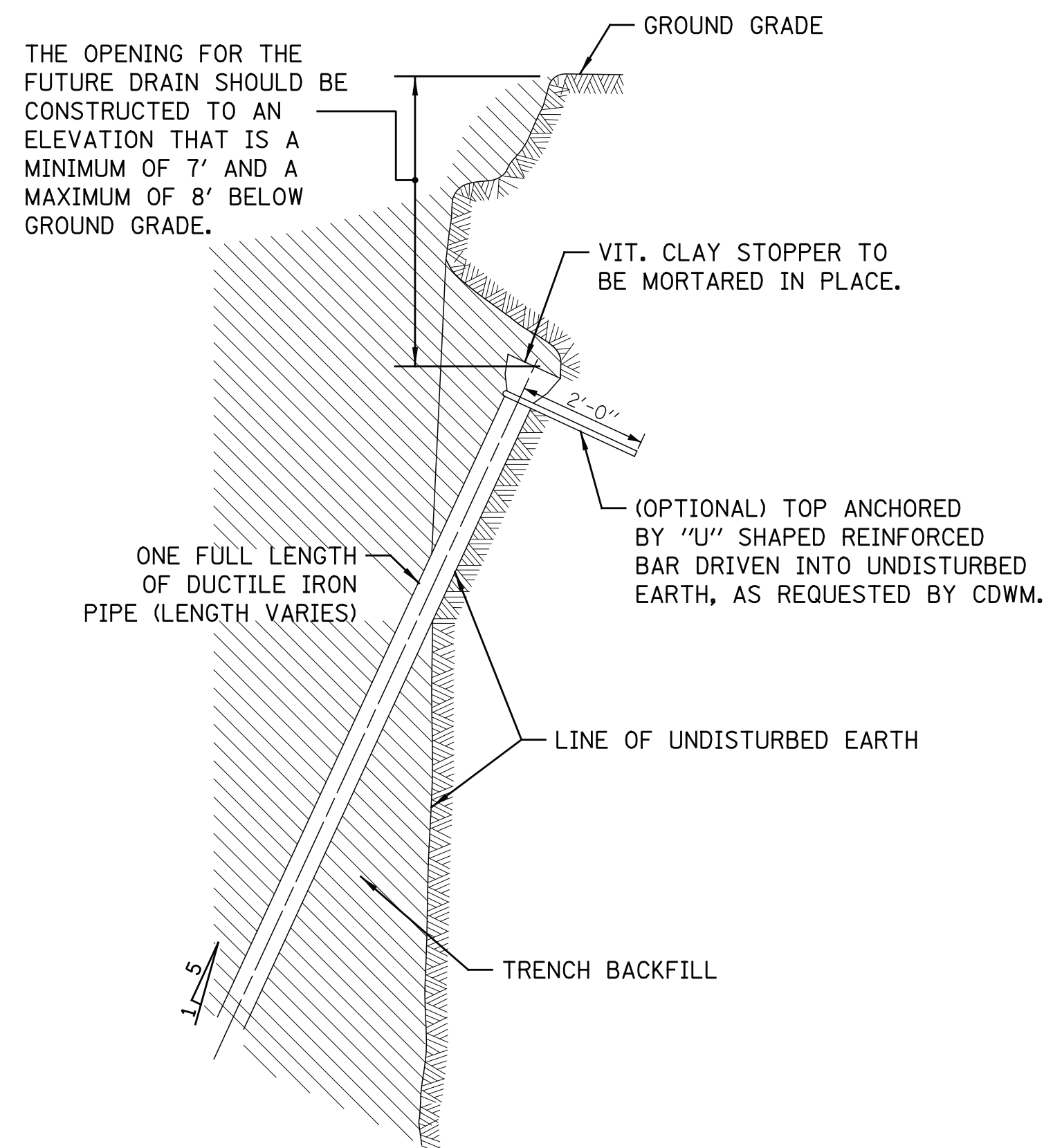
CITY OF CHICAGO
DEPARTMENT OF WATER MANAGEMENT
BUREAU OF ENGINEERING SERVICES

VITRIFIED CLAY PIPE
DRAIN CONNECTIONS

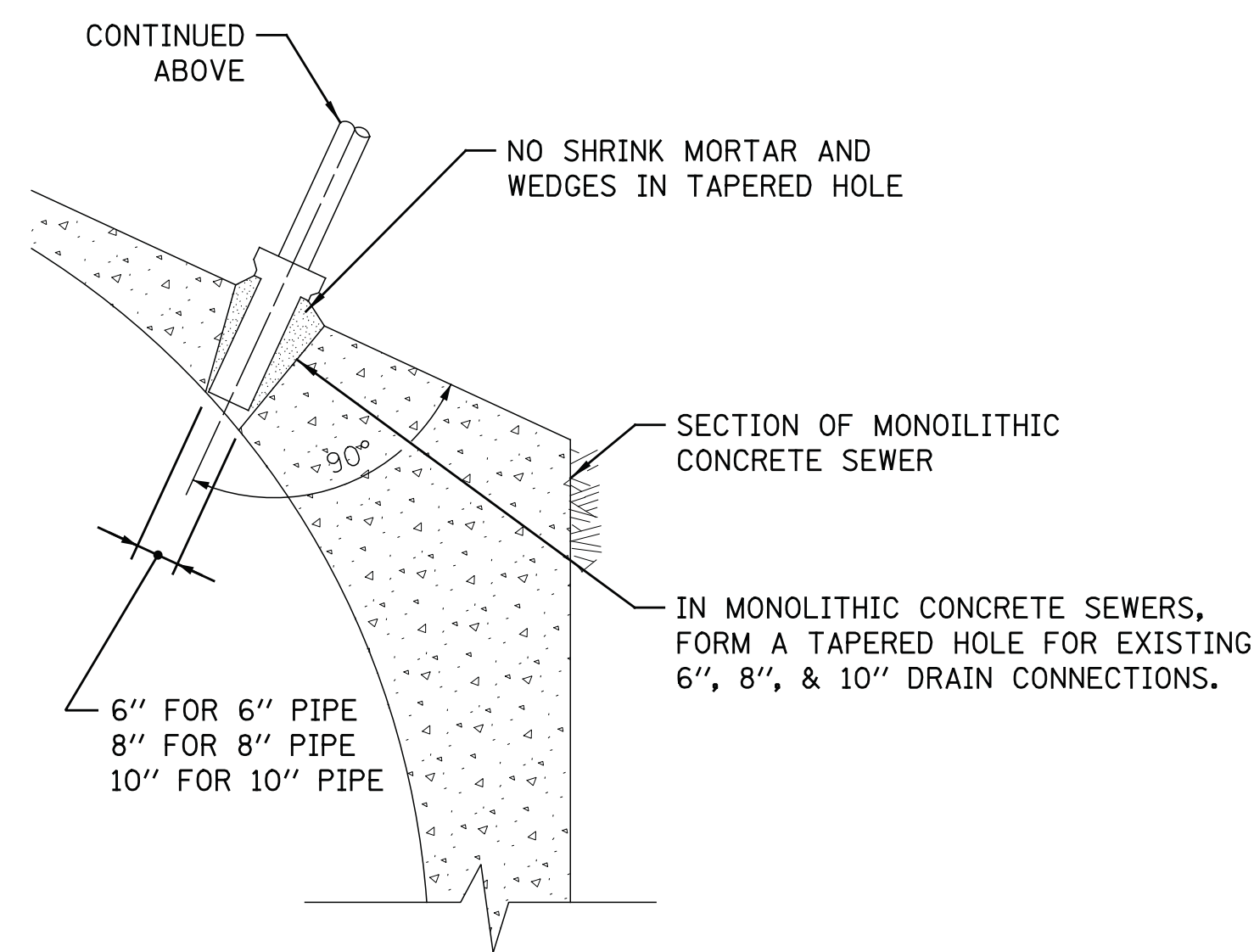
DRAWN: SEW
DESIGNED: A.1
CHECKED: GD, GC, SD
REVIEWED: _____
OF _____
PN _____



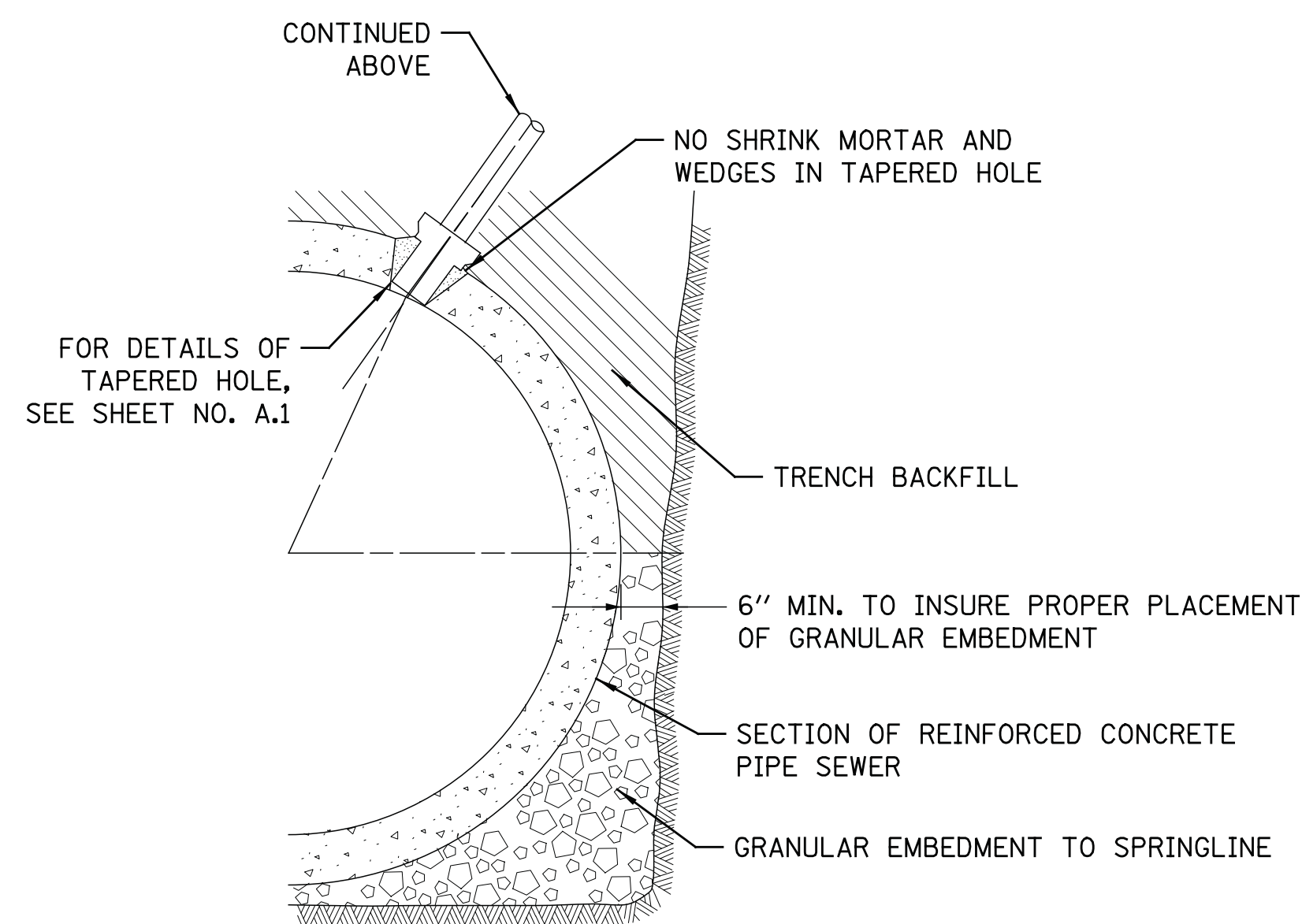
TYPICAL DRAIN CONNECTIONS FOR EXISTING DRAINS



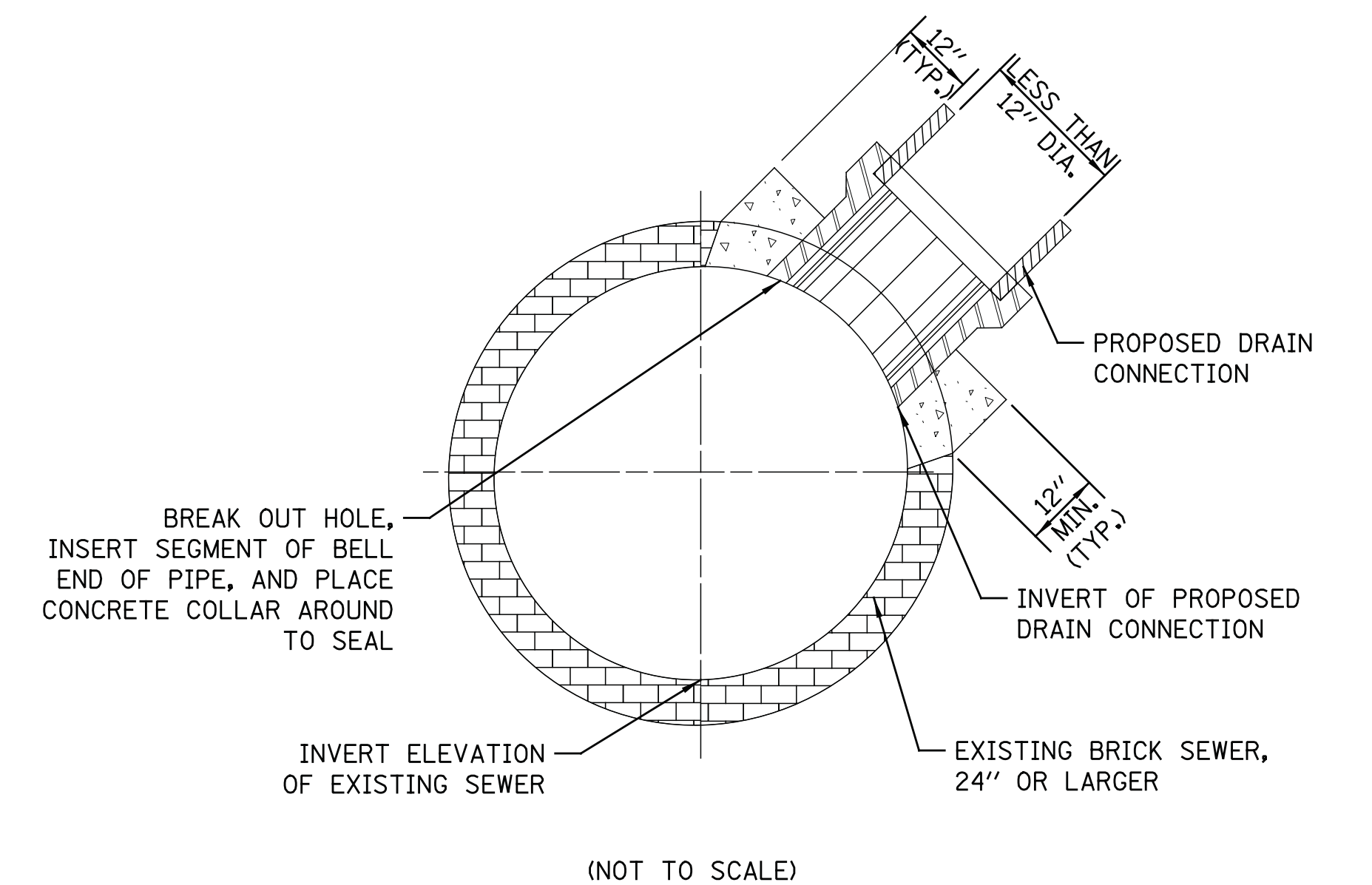
TYPICAL DRAIN STACKS FOR FUTURE USE



FOR MONOLITHIC CONCRETE SEWERS



FOR REINFORCED CONCRETE PIPE SEWERS



FOR BRICK SEWERS

DUCTILE IRON PIPE DRAIN CONNECTIONS

BRICK SEWER DRAIN CONNECTIONS

NOTES:

1. DUCTILE IRON PIPE MUST BE BELL END WITH PUSH-ON JOINTS CONFORMING TO ANSI SPECIFICATIONS A21.51 WITH CLASS 52 THICKNESS.
2. CONNECTIONS AND STACKS SHOWN MUST BE USED FOR 6", 8", & 10" DRAINS ONLY.
3. FOR VITRIFIED CLAY PIPE DRAIN CONNECTION AND DRAIN STACK CONSTRUCTION, SEE SHEET NO. A.1.
4. FOR TRENCH BACKFILL, USE FA-6 SAND, CRUSHED CONCRETE SAND, OR STONE SAND.
5. FOR GRANULAR EMBEDMENT, USE CA-11, CRUSHED GRAVEL, CRUSHED STONE, OR CRUSHED CONCRETE.

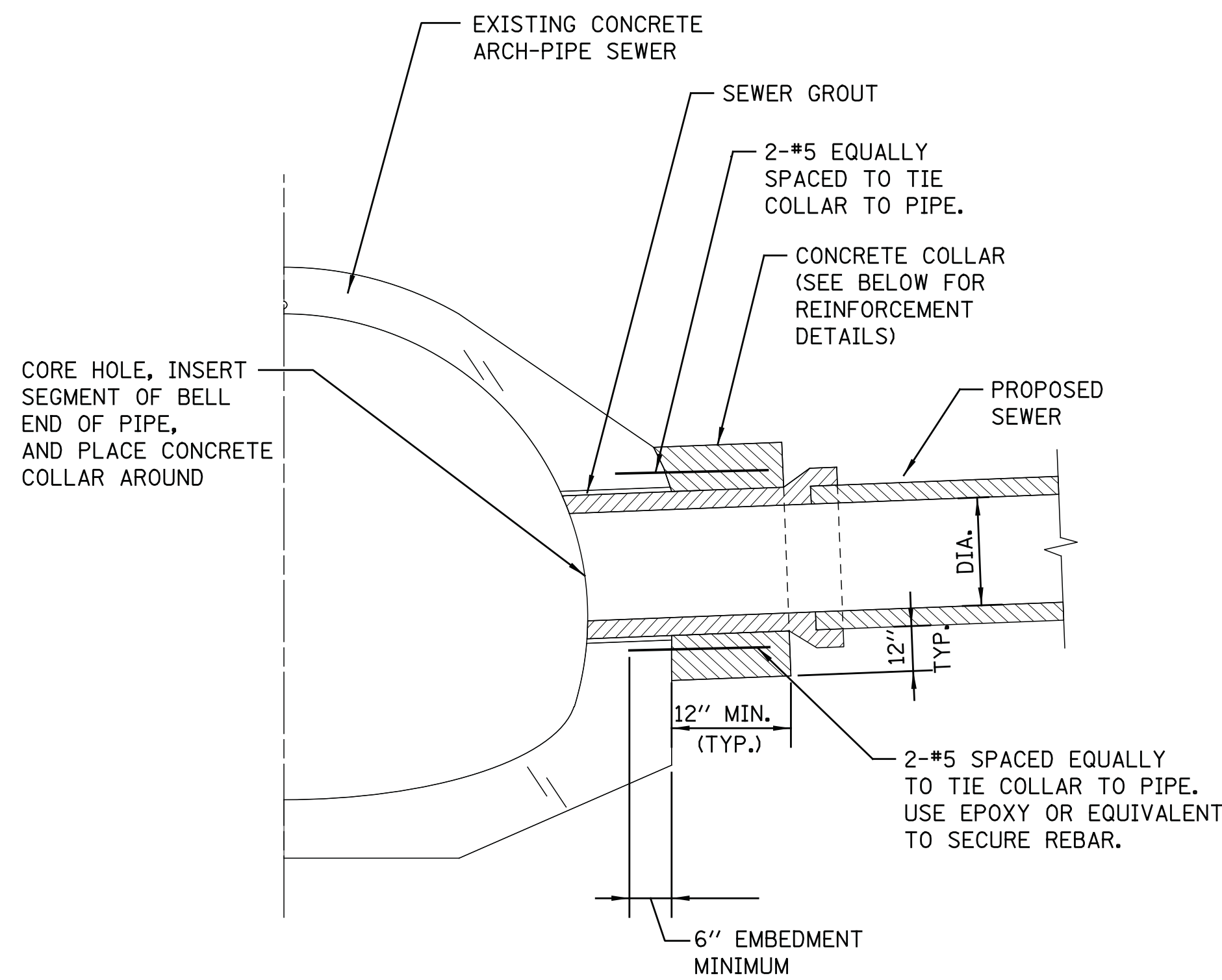
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BULLETIN	

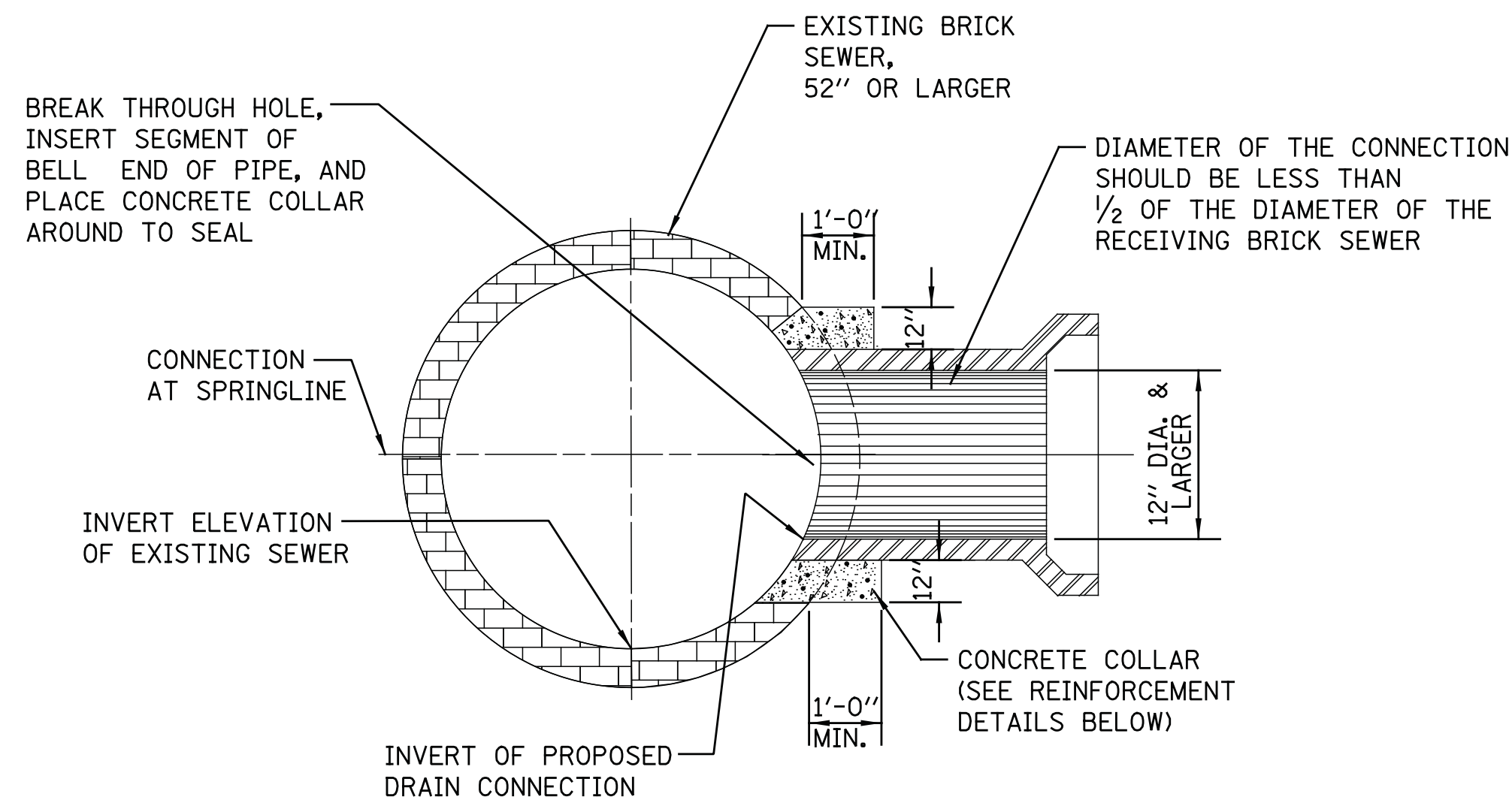
CITY OF CHICAGO	
DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES	
DUCTILE IRON PIPE DRAIN CONNECTIONS	

DRAWN: SEW	A.2
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CHECKED: _____	
REVIEWED: _____	_____ OF _____
	PN _____

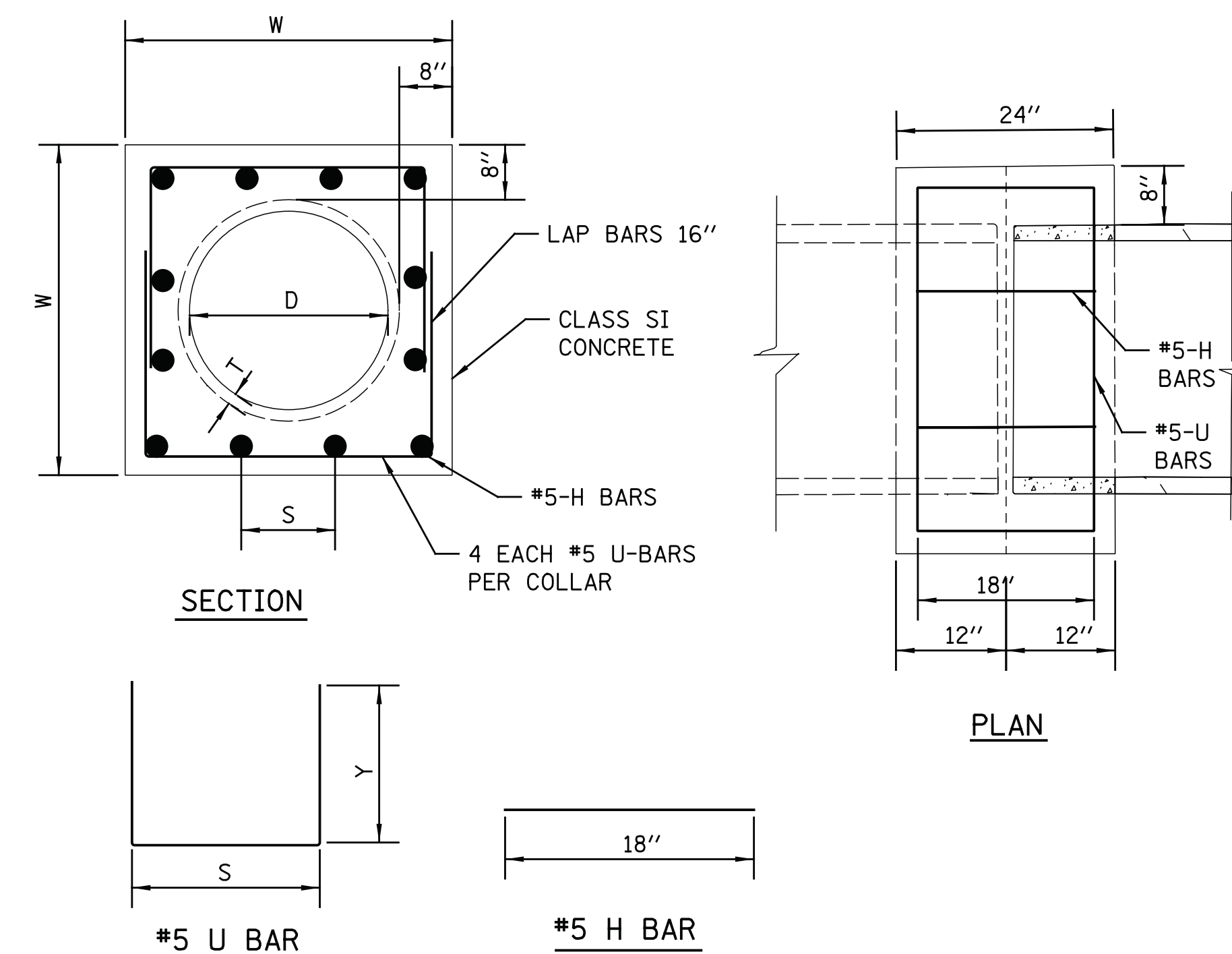
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\$DATES\$



EXAMPLE TYPICAL CONNECTION DETAIL
(NOT TO SCALE)



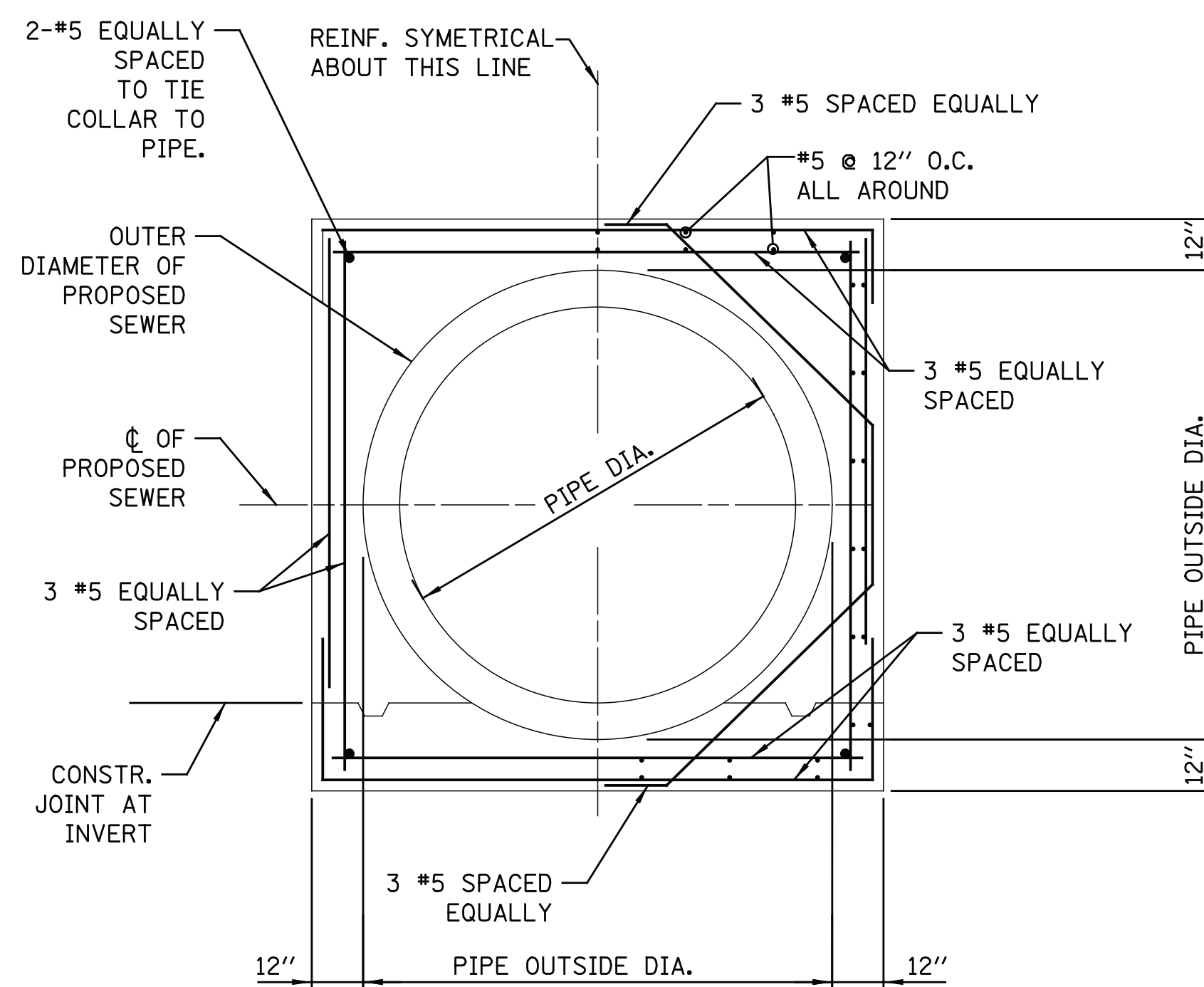
EXAMPLE TYPICAL BRICK SEWER CONNECTION FOR CONNECTING PIPE SIZES GREATER THAN 12" DIA.
(NOT TO SCALE)



PIPE TO PIPE REINFORCED CONCRETE COLLAR DETAIL
SCALE: N.T.S.

CONCRETE COLLAR NOTES:

- ALL ITEMS AND MATERIALS SHALL CONFORM TO THE LATEST IDOT SSRBC SPECIFICATIONS, UNLESS OTHERWISE NOTED IN SUPPLEMENTAL SPECIFICATIONS FOR THE SPECIFIC PROJECT BEING CONSTRUCTED.
- ALL CONCRETE SHALL CONFORM TO IDOT SSRBC ARTICLE 1020.04, CLASS SI, WITH A COMPRESSIVE STRENGTH OF 3500 PSI.
- ALL EPOXY COATED REINFORCEMENT BARS SHALL CONFORM TO IDOT SSRBC SECTION 508, AND ARTICLE 1006.10.
- UNLESS OTHERWISE SHOWN, THE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS: A.) CONCRETE CAST AGAINST PERMANENTLY EXPOSE EARTH: 3" B.) ALL OTHER REINFORCING BARS: 2"
- CONCRETE COLLARS SHALL BE USED AT ALL EXISTING/PROPOSED PIPE CONNECTIONS. TRIM EXISTING PIPE END TO PROVIDE FLUSH BUTT JOINT, INSTALL REBAR, AND PLACE CONCRETE COLLAR.
- THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE EXISTING SEWER DURING CONSTRUCTION. CONTRACTOR SHALL ADEQUATELY BRACE OR SHORE EXISTING SEWER IF REQUIRED TO MAINTAIN INTEGRITY OF SEWER DURING CONSTRUCTION. SUBMIT DESIGN AND DETAILS, SEALED AND SIGNED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER, SHOWING TEMPORARY BRACING FOR THE EXISTING SEWER DURING CONSTRUCTION FOR REVIEW PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING STRUCTURE IS RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL DIVERT ALL FLOW FROM THE EXISTING SEWER PRIOR TO CONSTRUCTION SO THAT THE WORK CAN BE PERFORMED IN THE DRY CONDITION. SEWER MUST BE MAINTAINED IN SERVICE AT ALL TIMES. SUBMIT MEANS OF FLOW DIVERSION FOR REVIEW PRIOR BREAKING INTO EXISTING BRICK SEWER. ALL EXCAVATION SHALL BE KEPT DEWATERED DURING CONSTRUCTION OPERATIONS UNTIL BACKFILL IN PLACE. PROVISIONS SHALL BE MADE TO PREVENT THE BOTTOM OF ALL EXCAVATIONS FROM FREEZING OR FLOODING AT ALL TIMES. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE SHALL BE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE OF THE WORK.



EXAMPLE CONCRETE COLLAR REINFORCEMENT - SECTION
(NOT TO SCALE)

D	T	W	U BAR				H BAR				CLASS SI CONCRETE	#5 EPOXY REBAR
			X	Y	QTY	LENGTH	S	QTY	LENGTH			
RCP DIA.	PIPE THICKNESS	WIDTH	(IN)	(IN)	(EACH)	(FT)	(IN)	(EACH)	(FT)	(CU YD)	(LBS)	
12*	2.00	32.0	26.00	21.00	4	22.7	8 1/8	12.0	18.0	0.42	42.5	
15*	2.25	35.5	29.50	22.75	4	25.0	9 3/8	12.0	18.0	0.49	44.8	
18*	2.50	39.0	33.00	24.50	4	27.3	10 1/2	12.0	18.0	0.57	47.2	
21*	2.75	42.5	36.50	26.25	4	29.7	8 3/4	16.0	24.0	0.65	56.0	
24	3.00	46.0	40.00	28.00	4	32.0	9 5/8	16.0	24.0	0.72	58.4	
27	3.25	49.5	43.50	29.75	4	34.3	10 1/2	16.0	24.0	0.81	60.8	
30	3.50	53.0	47.00	31.50	4	36.7	11 3/8	16.0	24.0	0.89	63.3	
33	3.75	56.5	50.50	33.25	4	39.0	9 4/5	20.0	30.0	0.98	72.0	
36	4.00	60.0	54.00	35.00	4	41.3	10 1/2	20.0	30.0	1.07	74.4	
42	4.50	67.0	61.00	38.50	4	46.0	9 7/8	24.0	36.0	1.26	85.5	
48	5.00	74.0	68.00	42.00	4	50.7	11 1/8	24.0	36.0	1.46	90.4	

*NOTE: OPTION TO USE WITHOUT REBAR

STANDARD REVISIONS	
DATE	DESCRIPTION
1/22/14	APPROVED PLAN

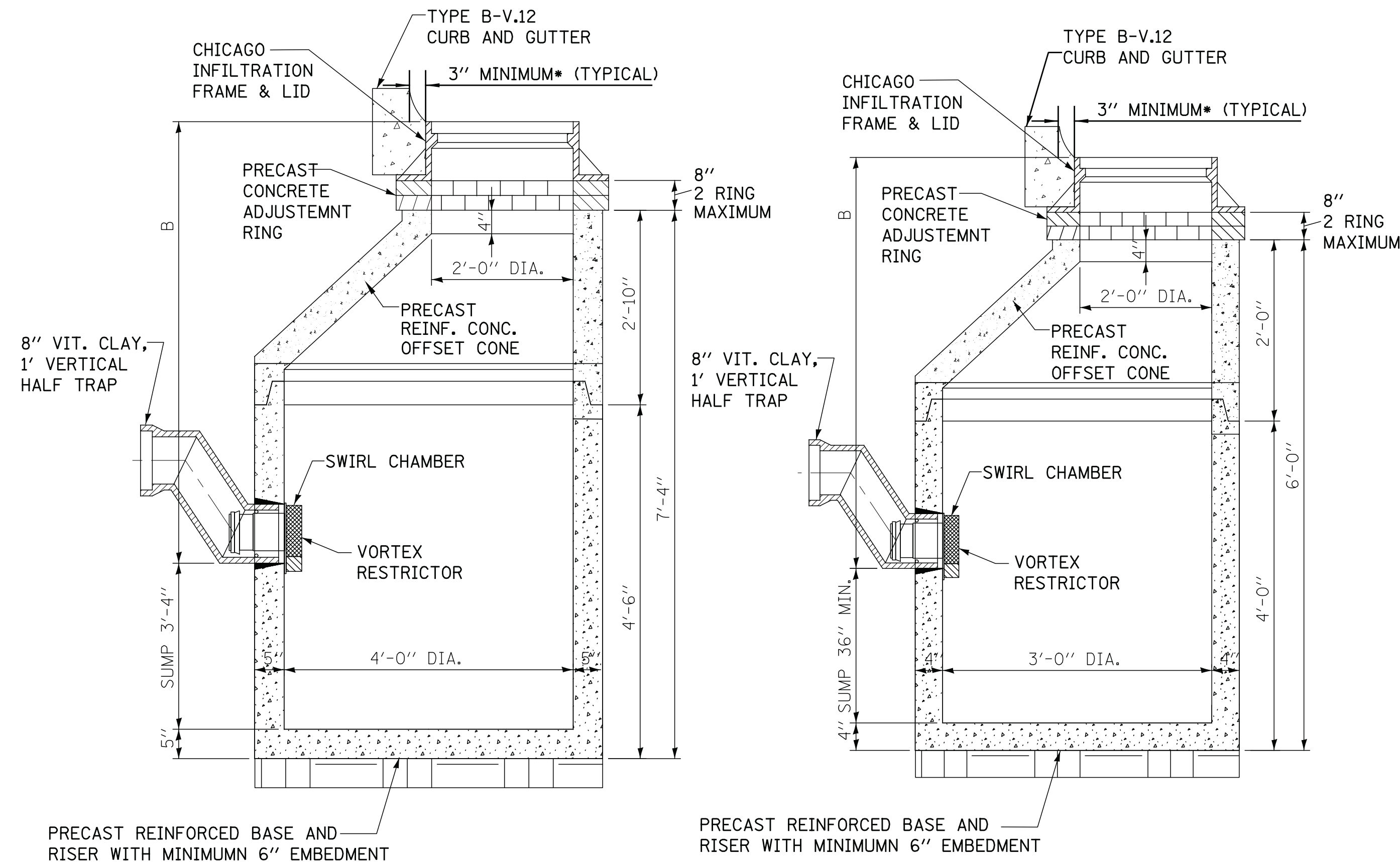
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BULLETIN	

CITY OF CHICAGO
DEPARTMENT OF WATER MANAGEMENT
BUREAU OF ENGINEERING SERVICES

CONCRETE COLLAR / CONNECTION DETAILS

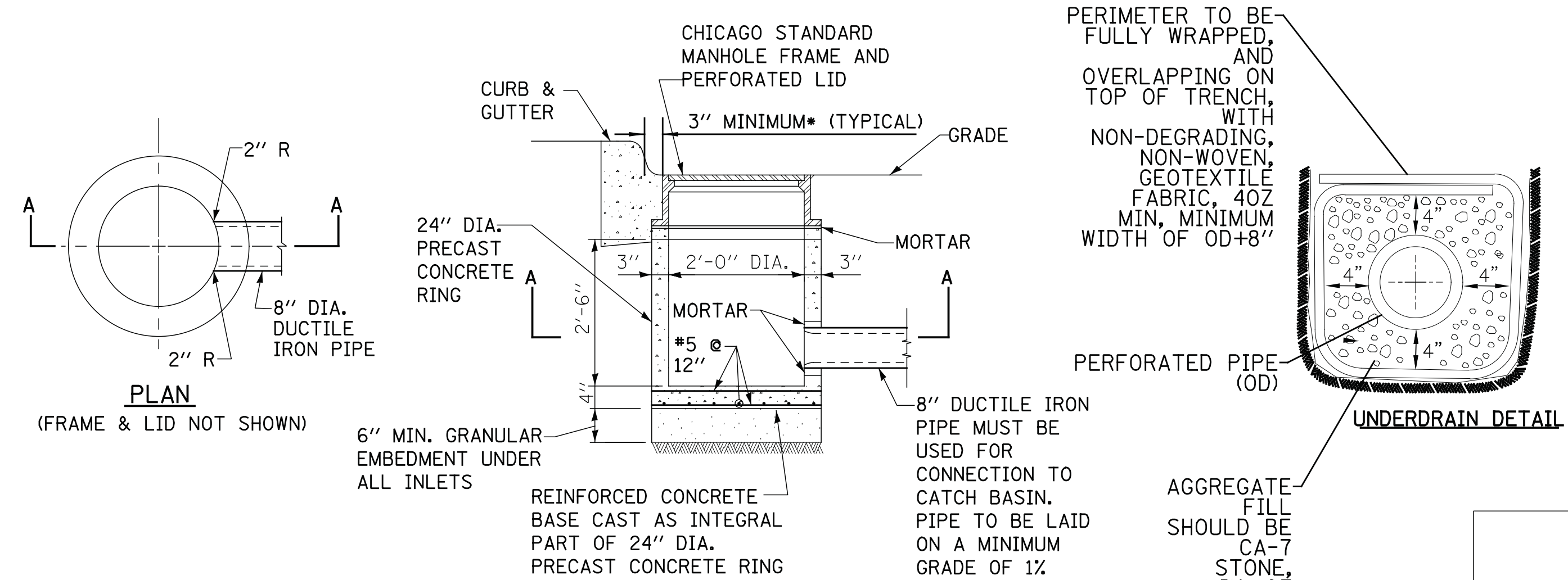
DRAWN: **SEB**
DESIGNED:
CHECKED:
REVIEWED:
A.17
OF
PN

STANDARD DRAINAGE STRUCTURES FOR PUBLIC STREETS



STANDARD CATCH BASIN-4' DIA.

STANDARD CATCH BASIN-3' DIA.



STANDARD INLET-2' DIA.

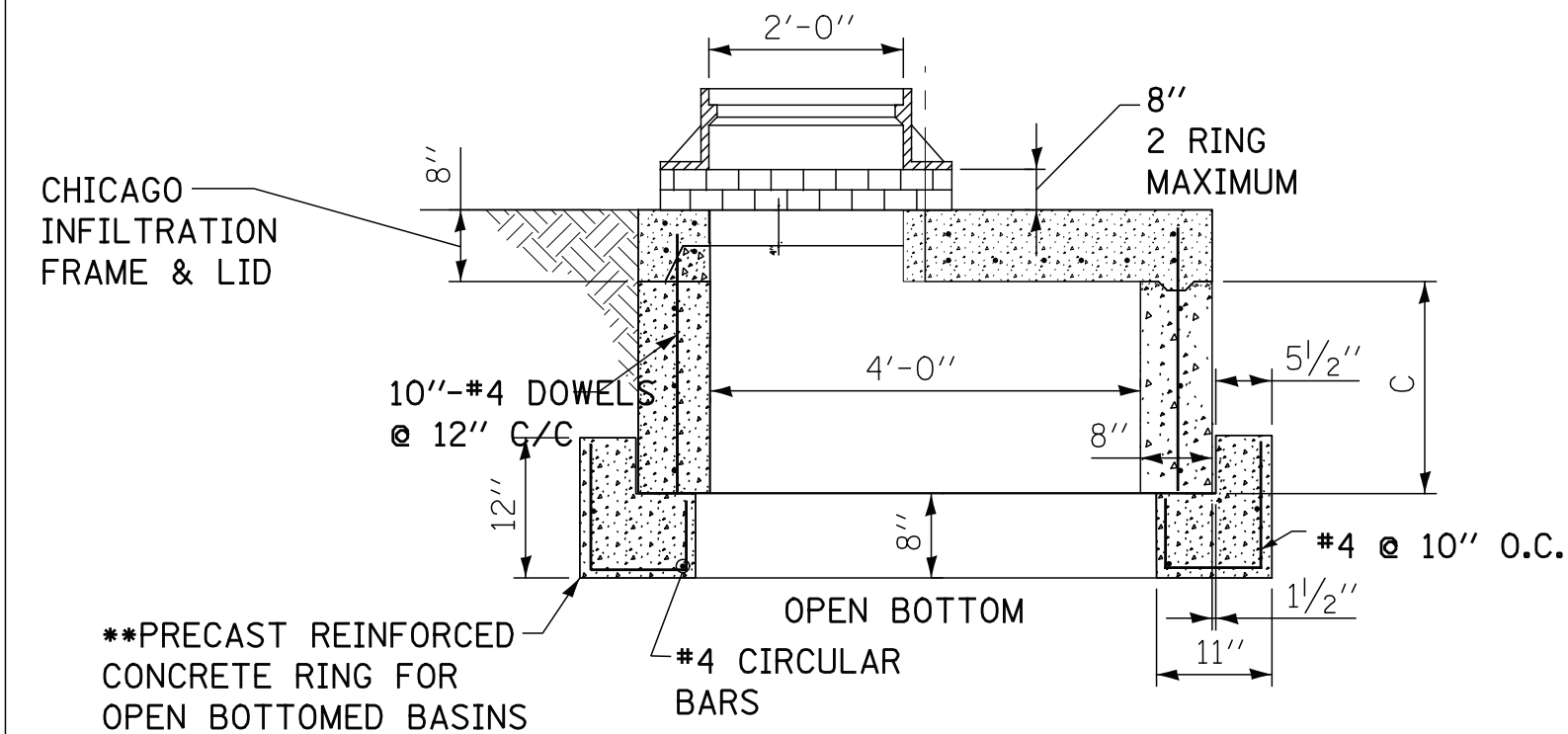
NOTE:
INLETS AND 3' DIAMETER CATCH BASINS ARE TO BE USED ONLY WITH PRIOR APPROVAL OF DWM SEWER ENGINEER OR FIELD INSPECTOR.

FOR TRENCH BACKFILL, USE FA-6 SAND, CRUSHED CONCRETE SAND, OR STONE SAND.

FOR GRANULAR EMBEDMENT, USE CA-11, CRUSHED GRAVEL, CRUSHED STONE, OR CRUSHED CONCRETE.

*OUTER EDGE OF FRAME TO FACE OF CURB

STANDARD DRAINAGE STRUCTURES FOR PUBLIC ALLEYS

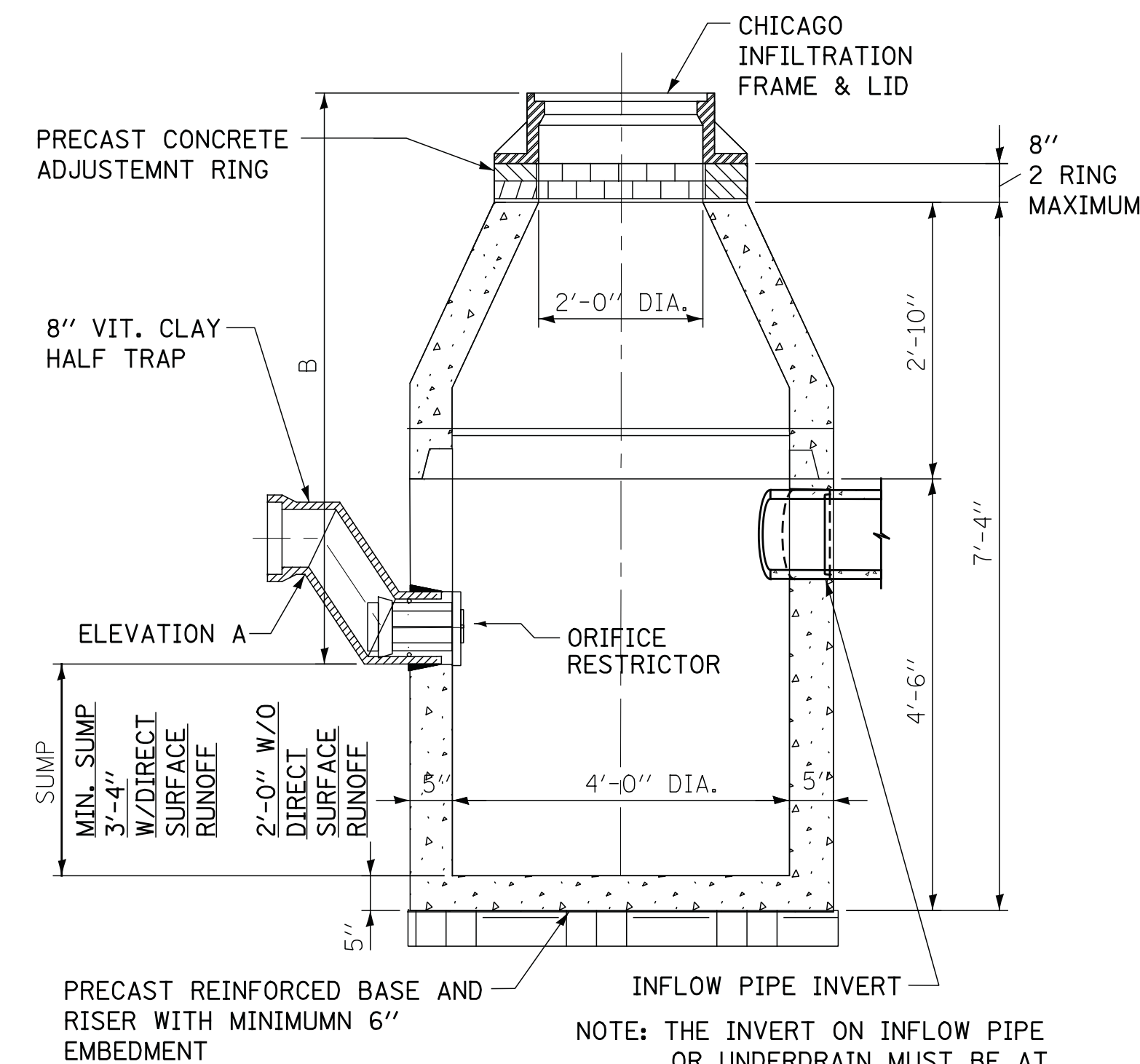


GREEN ALLEY OPEN BOTTOM CATCH BASIN

TO BE USED IF STANDARD CONE WITH REQUIRED SUMP DEPTH INSTALLATION IS IMPOSSIBLE.

**IF FLAT TOP SLAB CATCH BASIN IS USED IN AN OPEN BOTTOM APPLICATION, THE FOLLOWING CRITERIA MUST BE FOLLOWED:

- "C" MUST BE A MINIMUM OF 3 FEET.
- PROVIDE A MINIMUM AGGREGATE BASE OF 1.0 FEET BELOW PRECAST REINFORCED CONCRETE RING.
- GEOTECH FABRIC MUST BE PLACED ON SIDES AND BOTTOM OF AGGREGATE SURROUNDING BASIN.
- AGGREGATE BASE MUST PROVIDE ADEQUATE STORMWATER STORAGE CAPACITY PER THE APPROVED/PERMITTED PLANS.



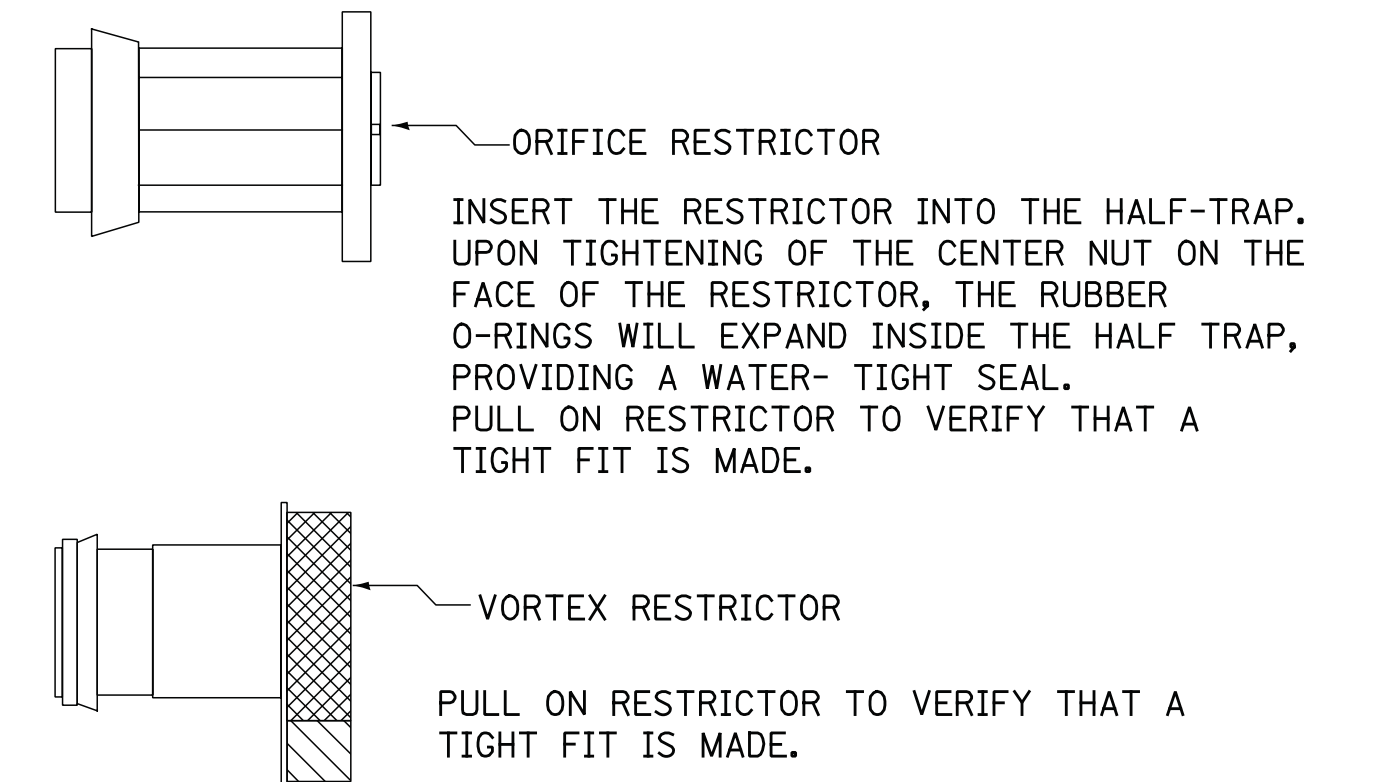
CATCH BASIN-ORIFICE RESTRICTOR

N.T.S.

NOTES:

1. FOR ANY DRAIN TILE CONNECTION, THE WATER TABLE MUST BE AT LEAST 3.5 FEET BELOW ELEVATION A.
2. PVC UNDERDRAINS MUST BE 4" MINIMUM DIAMETER, (6" RECOMMENDED) AND MUST BE WRAPPED IN GEOTECH FABRIC.

DRAINAGE STRUCTURES RESTRICTORS



GENERAL NOTES:

1. CATCH BASIN TO CATCH BASIN CONNECTIONS ARE ALLOWED IN PRIVATE SITES & ALLEYS. ONLY THE DOWNSTREAM CATCH BASIN IS REQUIRED TO HAVE A HALF-TRAP.
2. IF B < 4 FEET, THEN USE A DUCTILE IRON PIPE HALF TRAP AND FLAT TOP SLAB CATCH BASIN AS NECESSARY.
3. INLETS AND 3' DIAMETER CATCH BASINS ARE TO BE USED ONLY WITH PRIOR APPROVAL OF DWM FIELD INSPECTOR.

RESTRICTOR NOTES:

THE DWM'S RAIN BLOCKER RESTRICTOR PROGRAM MUST BE MAINTAINED WITH ANY ROADWAY IMPROVEMENT.
THE DESIGN OF ANY ROADWAY IMPROVEMENT MUST CONSIDER LIMITING THE NUMBER OF CATCH BASINS TO THE EXTENT PRACTICAL. THE NUMBER OF EXISTING STRUCTURES SHOULD NOT BE INCREASED.
THE RESTRICTORS CAN BE OBTAINED FROM DWM CENTRAL DISTRICT AT 3901 S. ASHLAND AVE. THE CONTRACTOR SHOULD ARRANGE FOR PICK UP BY CONTACTING 312-747-1177 (7AM TO 3PM, M-F)

FLOW RESTRICTORS MUST BE INSTALLED IN ALL CATCH BASINS OUTSIDE OF THE CENTRAL BUSINESS DISTRICT. RESTRICTORS MUST NOT BE INSTALLED IN CATCH BASINS IN CLOSE PROXIMITY TO VIADUCT AREAS, BUS STOPS, OR EMERGENCY ENTRANCES. THE DWM MUST APPROVE THE NON-INSTALLATION OR REMOVAL OF ANY RESTRICTOR. REQUIREMENTS FOR RESTRICTOR INSTALLATION ARE AS FOLLOWS:

- *ARTERIAL STREETS: 3-INCH ORIFICE RESTRICTOR
- *BUS ROUTES: 3-INCH ORIFICE RESTRICTOR
- *RESIDENTIAL STREETS: 3-INCH VORTEX RESTRICTOR
- *ALLEYS: 3-INCH ORIFICE RESTRICTOR IN THE LAST CB.
- *CLOSED LIDS ARE REQUIRED ON ALL MANHOLES EXCEPT AT INTERSECTIONS WHERE A PERFORATED LID SHALL BE USED.

STANDARD REVISIONS	
DATE	DESCRIPTION
12/28/15	APPROVED

PERCENT COMPLETE	DATE	CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES	DRAWN: <input type="checkbox"/> SBR DESIGNED: <input type="checkbox"/> CHECKED: <input type="checkbox"/> REVIEWED: <input type="checkbox"/>
30			
60			
75			
90			
100			
BULLETIN			

Additional Impervious Area Summary

Summary of Proposed Additional Impervious Area

Roadway	Added Impervious Area Tributary to COCCS (ac)	Added Impervious Area Tributary to Lagoons (ac)	Removed Impervious Area Tributary to COCCS (ac)	Removed Impervious Area Tributary to Lagoons (ac)	Net Impervious Area Increase Tributary to COCCS(ac)	Net Impervious Area Increase Tributary to Lagoons (ac)
Stony Island Avenue	2.25		1.09		1.16	0.00
Midway Plaisance		0.06		0.32	0.00	-0.27
Cornell Drive		0.17		8.57	0.00	-8.40
Hayes Drive	1.43		0.64		0.78	0.00
Marquette Drive		0.00		2.46	0.00	-2.46
Richards Drive		0.00		0.58	0.00	-0.58
South Lake Shore Drive	0.68		0.00		0.68	0.00
TOTAL	4.36	0.23	1.74	11.93	2.62	-11.70

Inlet Spacing Analysis

		Drainage Area Characteristics								Actual Flow to Structure			Actual spread and depth on pavement		
Drainage Area		Notes	Station	Distance from Upstream (ft)	Pavement Drainage Width - Measured (ft)	Drainage Area (Acre)	Tc (min)	i (in/hr)	C Value - Measured	Q (cfs)	Upstream Bypass (cfs)	Total Flow (cfs)	Solve for Total Flow by finding dp	Actual Depth on Pavement, dp (ft)	Actual Spread on Pavement (T) (ft)
Main	Secondary (If Sag)														
		CREST	9902+34								0.00		0.00	0.000	
1a		U	9903+80	145.68	35.0	0.117	5.00	6.48	0.90	0.68	0.000	0.68	0.68	0.084	3.516
1b	2a	SAG	9906+69	295.49	42.0	0.285	5.00	6.48	0.90	1.66	0.192	1.85	1.85	0.168	5.612
2b		D	9906+75	11.55	49.0	0.013	5.00	6.48	0.90	0.08	0.314	0.39	0.39	0.051	1.689
2c		D	9906+87	162.80	49.0	0.183	5.00	6.48	0.90	1.07	0.000	1.07	1.07	0.119	3.976
		CREST	9908+49									0.00	0.00	0.000	
3a		U	9909+60	110.76	49.0	0.125	5.00	6.48	0.86	0.69	0.000	0.69	0.69	0.058	19.195
3b	4a	SAG	9911+72	212.64	51.0	0.249	5.00	6.48	0.81	1.31	0.728	2.04	2.04	0.173	8.672
4b		D	9911+73	168.31	53.0	0.205	5.00	6.48	0.76	1.01	0.000	1.01	1.01	0.114	5.721
		CREST	9913+41									0.00	0.00	0.000	
5	6a	SAG	9914+94	160.63	43.5	0.160	5.00	6.48	0.79	0.83	0.291	1.12	1.12	0.116	5.777
6b		D	9915+02	160.49	43.0	0.158	5.00	6.48	0.81	0.83	0.000	0.83	0.83	0.110	5.492
		CREST	9916+62									0.00	0.00	0.000	
7a		U	9918+17	154.27	52.0	0.184	5.00	6.48	0.73	0.87	0.000	0.87	0.87	0.109	3.408
7b		U	9918+29	12.58	52.0	0.015	5.00	6.48	0.73	0.07	0.221	0.29	0.29	0.038	1.182
7c	8	SAG	9918+34	155.20	50.5	0.180	5.00	6.48	0.72	0.84	0.016	0.85	0.85	0.108	3.375
		CREST	9919+84									0.00	0.00	0.000	
9a		U	9921+36	152.10	53.0	0.185	5.00	6.48	0.80	0.95	0.000	0.95	0.95	0.114	3.802
9b	10a	SAG	9921+52	17.86	51.0	0.021	5.00	6.48	0.78	0.11	0.337	0.44	0.44	0.061	1.921
10b		D	9921+54	74.39	49.0	0.084	5.00	6.48	0.77	0.42	0.084	0.50	0.50	0.068	2.133
10c		D	9922+29	93.20	49.0	0.105	5.00	6.48	0.77	0.52	0.000	0.52	0.52	0.069	2.574
		CREST	9923+22									0.00	0.00	0.000	
11a		U	9924+02	79.74	45.0	0.082	5.00	6.48	0.78	0.42	0.000	0.42	0.42	0.056	2.169
11b		U	9924+70	68.65	45.0	0.071	5.00	6.48	0.78	0.36	0.051	0.41	0.41	0.056	1.992
11c		U	9924+86	15.66	45.0	0.016	5.00	6.48	0.78	0.08	0.046	0.13	0.14	0.000	0.000
11d	12	SAG	9924+92	168.56	41.5	0.161	5.00	6.48	0.83	0.87	0.000	0.87	0.87	0.107	3.560
		CREST	9926+54									0.00	0.00	0.000	
13a		U	9929+80	325.99	38.0	0.284	5.00	6.48	0.90	1.66	0.000	1.66	1.66	0.110	15.704
13b	14a	SAG	9930+22	157.65	38.0	0.138	5.00	6.48	0.90	0.80	1.110	1.91	1.91	0.138	11.471
14b		D	9931+38	201.11	38.0	0.175	5.00	6.48	0.90	1.02	0.000	1.02	1.02	0.047	2.615
		CREST	9933+39									0.00	0.00	0.000	
15a		U	9935+72	232.90	38.0	0.203	5.00	6.48	0.90	1.18	0.000	1.18	1.18	0.080	2.215
15b		U	9937+17	144.73	38.0	0.126	5.00	6.48	0.90	0.74	0.188	0.92	0.92	0.064	1.493
15c	16a	SAG	9938+41	186.93	38.0	0.163	5.00	6.48	0.90	0.95	0.096	1.05	1.05	0.072	1.726
16b		D	9939+04	12.00	38.0	0.010	5.00	6.48	0.90	0.06	0.113	0.17	0.17	0.014	0.377
16c		D	9939+16	103.14	38.0	0.090	5.00	6.48	0.90	0.52	0.055	0.58	0.58	0.084	2.807
16d		D	9940+19	67.67	38.0	0.059	5.00	6.48	0.90	0.34	0.000	0.34	0.34	0.046	3.831
16e		D	9940+87	0.68	38.0	0.001	5.00	6.48	0.90	0.00	0.00	0.00	0.13	0.000	0.000
		CREST	9940+87									0.00	0.00	0.000	
17a		U	9942+71	183.87	38.0	0.160	5.00	6.48	0.90	0.94	0.000	0.94	0.94	0.074	14.729
17b		U	9943+53	82.19	38.0	0.072	5.00	6.48	0.90	0.42	0.476	0.89	0.89	0.093	6.642
17c		U	9944+73	119.94	38.0	0.105	5.00	6.48	0.90	0.61	0.326	0.94	0.94	0.102	5.379
17d		U	9946+82	208.93	38.0	0.182	5.00	6.48	0.90	1.06	0.312	1.38	1.38	0.135	5.869
17e		U	9947+71	88.99	38.0	0.078	5.00	6.48	0.90	0.45	0.538	0.99	0.99	0.110	4.792
17f		U	9948+92	120.49	38.0	0.105	5.00	6.48	0.90	0.61	0.318	0.93	0.93	0.106	4.597
17g		U	9949+93	101.18	38.0	0.088	5.00	6.48	0.90	0.51	0.285	0.80	0.80	0.095	4.143
17h	18a	SAG	9950+47	174.93	41.5	0.167	5.00	6.48	0.90	0.97	0.643	1.61	1.61	0.150	6.230
18b		D	9951+68	92.32	45.0	0.095	5.00	6.48	0.90	0.56	0.678	1.23	1.23	0.121	5.045
18c		D	9952+60	153.46	45.0	0.159	5.00	6.48	0.90	0.92	0.689	1.61	1.61	0.138	6.576
18d		D	9954+14	205.85	45.0	0.213	5.00	6.48	0.90	1.24	0.000	1.24	1.24	0.082	16.405
		CREST	9956+19									0.00	0.00	0.000	

Lake Shore Drive
South Bound

	Drainage Area				Actual Gutter Flow & Depth			Pavement Characteristics				Max. Shoulder flow		
	Main	Secondary (If Sag)	Notes	Station	Actual Gutter Depth dg+x (ft)	Actual Gutter Flow (cfs)	Spread on Pavement less than or equal Maximum Spread	n	Long Slope (ft/ft)	Cross Slope (ft/ft)	Z Table (8-202)	Maximum depth at pavement, dp	Max spread Pavement (T)	Maximum Pavement Flow, Qp
				CREST	9902+34									
	1a		U	9903+80	0.204	0.598	TRUE	0.013	0.0033	0.024	41.7	0.144	6.000	0.587
	1b	2a	SAG	9906+69	0.288	1.497	TRUE	0.013	0.0033	0.030	33.3	0.180	6.000	0.852
	2b		D	9906+75	0.171	0.375	TRUE	0.013	0.0034	0.030	33.3	0.180	6.000	0.865
	2c		D	9906+87	0.239	0.924	TRUE	0.013	0.0034	0.030	33.3	0.180	6.000	0.865
			CREST	9908+49										
	3a		U	9909+60	0.178	0.358	FALSE	0.013	0.0025	0.003	333.3	0.018	6.000	0.016
	3b	4a	SAG	9911+72	0.293	1.365	FALSE	0.013	0.0025	0.020	50.0	0.120	6.000	0.377
	4b		D	9911+73	0.234	0.779	TRUE	0.013	0.0027	0.020	50.0	0.120	6.000	0.392
			CREST	9913+41										
	5	6a	SAG	9914+94	0.236	0.859	TRUE	0.013	0.0032	0.020	50.0	0.120	6.000	0.427
	6b		D	9915+02	0.230	0.652	TRUE	0.013	0.0021	0.020	50.0	0.120	6.000	0.346
			CREST	9916+62										
	7a		U	9918+17	0.229	0.773	TRUE	0.013	0.0030	0.032	31.3	0.192	6.000	0.905
	7b		U	9918+29	0.158	0.286	TRUE	0.013	0.0030	0.032	31.3	0.192	6.000	0.905
	7c	8	SAG	9918+34	0.228	0.763	TRUE	0.013	0.0030	0.032	31.3	0.192	6.000	0.905
			CREST	9919+84										
	9a		U	9921+36	0.234	0.832	TRUE	0.013	0.0031	0.030	33.3	0.180	6.000	0.826
	9b	10a	SAG	9921+52	0.181	0.422	TRUE	0.013	0.0031	0.032	31.3	0.192	6.000	0.920
	10b		D	9921+54	0.188	0.473	TRUE	0.013	0.0032	0.032	31.3	0.192	6.000	0.934
	10c		D	9922+29	0.189	0.481	TRUE	0.013	0.0032	0.027	37.0	0.162	6.000	0.704
			CREST	9923+22										
	11a		U	9924+02	0.176	0.391	TRUE	0.013	0.0031	0.026	38.5	0.156	6.000	0.651
	11b		U	9924+70	0.176	0.388	TRUE	0.013	0.0031	0.028	35.7	0.168	6.000	0.736
	11c		U	9924+86	0.120	0.140	TRUE	0.013	0.0031	0.029	34.5	0.174	6.000	0.780
	11d	12	SAG	9924+92	0.227	0.765	TRUE	0.013	0.0031	0.030	33.3	0.180	6.000	0.826
			CREST	9926+54										
	13a		U	9929+80	0.230	0.806	FALSE	0.013	0.0032	0.007	142.9	0.035	5.000	0.046
	13b	14a	SAG	9930+22	0.258	1.092	FALSE	0.013	0.0032	0.012	83.3	0.072	6.000	0.182
	14b		D	9931+38	0.167	0.948	TRUE	0.013	0.0243	0.018	55.6	0.108	6.000	0.987
			CREST	9933+39										
	15a		U	9935+72	0.200	1.120	TRUE	0.013	0.0131	0.036	27.8	0.216	6.000	2.300
	15b		U	9937+17	0.184	0.902	TRUE	0.013	0.0131	0.043	23.3	0.258	6.000	3.093
	15c	16a	SAG	9938+41	0.192	1.015	TRUE	0.013	0.0131	0.042	23.8	0.252	6.000	2.974
	16b		D	9939+04	0.134	0.173	TRUE	0.013	0.0026	0.038	26.3	0.228	6.000	1.121
	16c		D	9939+16	0.204	0.529	TRUE	0.013	0.0026	0.030	33.3	0.180	6.000	0.756
	16d		D	9940+19	0.166	0.305	TRUE	0.013	0.0026	0.012	83.3	0.072	6.000	0.164
	16e		D	9940+87	0.120	0.128	TRUE	0.013	0.0026	0.014	71.4	0.084	6.000	0.212
			CREST	9940+87										
	17a		U	9942+71	0.194	0.510	FALSE	0.013	0.0032	0.005	200.0	0.030	6.000	0.042
	17b		U	9943+53	0.213	0.657	FALSE	0.013	0.0032	0.014	71.4	0.084	6.000	0.236
	17c		U	9944+73	0.222	0.736	TRUE	0.013	0.0032	0.019	52.6	0.114	6.000	0.392
	17d		U	9946+82	0.255	1.062	TRUE	0.013	0.0032	0.023	43.5	0.138	6.000	0.539
	17e		U	9947+71	0.230	0.809	TRUE	0.013	0.0032	0.023	43.5	0.138	6.000	0.539
	17f		U	9948+92	0.226	0.767	TRUE	0.013	0.0032	0.023	43.5	0.138	6.000	0.539
	17g		U	9949+93	0.215	0.676	TRUE	0.013	0.0032	0.023	43.5	0.138	6.000	0.539
	17h	18a	SAG	9950+47	0.270	1.231	FALSE	0.013	0.0032	0.024	41.7	0.144	6.000	0.578
	18b		D	9951+68	0.241	0.996	TRUE	0.013	0.0038	0.024	41.7	0.144	6.000	0.630
	18c		D	9952+60	0.258	1.195	FALSE	0.013	0.0038	0.021	47.6	0.126	6.000	0.505
	18d		D	9954+14	0.202	0.622	FALSE	0.013	0.0038	0.005	200.0	0.030	6.000	0.046
			CREST	9956+19										

Lake Shore Drive
South Bound

Drainage Area	Notes	Station	Gutter Characteristics						Maximum Flow in Gutter				Total Maximum Flow		
			Main	Secondary (If Sag)	Gutter Type	Width of gutter	Cross slope	Z Table (8-202)	n	dx=dp	Qx	Maximum Depth at Gutter, dg+x (max) (ft)	Qg+x	Gutter flow Qg (cfs)	Maximum total flow Qt (cfs)
	CREST	9902+34													
1a	U	9903+80			2	0.0600	16.7	0.013	0.144	0.235	0.264	1.183	0.948	1.535	
1b	2a	SAG	9906+69		2	0.0600	16.7	0.013	0.180	0.426	0.300	1.663	1.237	2.089	
2b		D	9906+75		2	0.0600	16.7	0.013	0.180	0.432	0.300	1.688	1.256	2.121	
2c		D	9906+87		2	0.0600	16.7	0.013	0.180	0.432	0.300	1.688	1.256	2.121	
	CREST	9908+49													
3a	U	9909+60			2	0.0600	16.7	0.013	0.018	0.001	0.138	0.183	0.182	0.198	
3b	4a	SAG	9911+72		2	0.0600	16.7	0.013	0.120	0.126	0.240	0.799	0.673	1.050	
4b		D	9911+73		2	0.0600	16.7	0.013	0.120	0.131	0.240	0.830	0.699	1.091	
	CREST	9913+41													
5	6a	SAG	9914+94		2	0.0600	16.7	0.013	0.120	0.142	0.240	0.903	0.761	1.188	
6b		D	9915+02		2	0.0600	16.7	0.013	0.120	0.115	0.240	0.732	0.617	0.962	
	CREST	9916+62													
7a	U	9918+17			2	0.0600	16.7	0.013	0.192	0.482	0.312	1.761	1.278	2.183	
7b		U	9918+29		2	0.0600	16.7	0.013	0.192	0.482	0.312	1.761	1.278	2.183	
7c	8	SAG	9918+34		2	0.0600	16.7	0.013	0.192	0.482	0.312	1.761	1.278	2.183	
	CREST	9919+84													
9a	U	9921+36			2	0.0600	16.7	0.013	0.180	0.413	0.300	1.612	1.199	2.025	
9b	10a	SAG	9921+52		2	0.0600	16.7	0.013	0.192	0.490	0.312	1.790	1.300	2.219	
10b		D	9921+54		2	0.0600	16.7	0.013	0.192	0.498	0.312	1.819	1.320	2.255	
10c		D	9922+29		2	0.0600	16.7	0.013	0.162	0.317	0.282	1.389	1.072	1.776	
	CREST	9923+22													
11a	U	9924+02			2	0.0600	16.7	0.013	0.156	0.282	0.276	1.291	1.009	1.659	
11b		U	9924+70		2	0.0600	16.7	0.013	0.168	0.344	0.288	1.446	1.102	1.839	
11c		U	9924+86		2	0.0600	16.7	0.013	0.174	0.377	0.294	1.528	1.150	1.931	
11d	12	SAG	9924+92		2	0.0600	16.7	0.013	0.180	0.413	0.300	1.612	1.199	2.025	
	CREST	9926+54													
13a	U	9929+80			2	0.0600	16.7	0.013	0.035	0.005	0.155	0.282	0.276	0.322	
13b	14a	SAG	9930+22		2	0.0600	16.7	0.013	0.072	0.036	0.192	0.498	0.462	0.644	
14b		D	9931+38		2	0.0600	16.7	0.013	0.108	0.296	0.228	2.171	1.875	2.862	
	CREST	9933+39													
15a	U	9935+72			2	0.0600	16.7	0.013	0.216	1.380	0.336	4.484	3.103	5.404	
15b		U	9937+17		2	0.0600	16.7	0.013	0.258	2.217	0.378	6.138	3.921	7.015	
15c	16a	SAG	9938+41		2	0.0600	16.7	0.013	0.252	2.082	0.372	5.882	3.800	6.774	
16b		D	9939+04		2	0.0600	16.7	0.013	0.228	0.710	0.348	2.193	1.483	2.605	
16c		D	9939+16		2	0.0600	16.7	0.013	0.180	0.378	0.300	1.477	1.098	1.855	
16d		D	9940+19		2	0.0600	16.7	0.013	0.072	0.033	0.192	0.449	0.416	0.581	
16e		D	9940+87		2	0.0600	16.7	0.013	0.084	0.050	0.204	0.528	0.478	0.691	
	CREST	9940+87													
17a	U	9942+71			2	0.0600	16.7	0.013	0.030	0.004	0.150	0.258	0.254	0.297	
17b		U	9943+53		2	0.0600	16.7	0.013	0.084	0.055	0.204	0.586	0.531	0.766	
17c		U	9944+73		2	0.0600	16.7	0.013	0.114	0.124	0.234	0.844	0.720	1.112	
17d		U	9946+82		2	0.0600	16.7	0.013	0.138	0.207	0.258	1.096	0.889	1.428	
17e		U	9947+71		2	0.0600	16.7	0.013	0.138	0.207	0.258	1.096	0.889	1.428	
17f		U	9948+92		2	0.0600	16.7	0.013	0.138	0.207	0.258	1.096	0.889	1.428	
17g		U	9949+93		2	0.0600	16.7	0.013	0.138	0.207	0.258	1.096	0.889	1.428	
17h	18a	SAG	9950+47		2	0.0600	16.7	0.013	0.144	0.231	0.264	1.165	0.934	1.512	
18b		D	9951+68		2	0.0600	16.7	0.013	0.144	0.252	0.264	1.269	1.017	1.648	
18c		D	9952+60		2	0.0600	16.7	0.013	0.126	0.177	0.246	1.052	0.875	1.379	
18d		D	9954+14		2	0.0600	16.7	0.013	0.030	0.004	0.150	0.281	0.277	0.323	
	CREST	9956+19													

Lake Shore Drive
South Bound

Drainage Area				Inlet Capacity Calculation					
Main	Secondary (If Sag)	Notes	Station	Inlet Typ	Grate width (T) (ft)	Depth at grate, df (cfs)	Qf Flow at Grate (cfs)	Intercepted Flow (cfs)	Bypass Flow (cfs)
		CREST	9902+34						
1a		U	9903+80	24	1.875	0.0919	0.071	0.53	0.16
1b	2a	SAG	9906+69	24	1.875	0.1759	0.400	1.10	0.76
2b		D	9906+75	24	1.875	0.0582	0.021	0.35	0.04
2c		D	9906+87	24	1.875	0.1268	0.170	0.75	0.31
		CREST	9908+49						
3a		U	9909+60	24	1.875	0.0651	0.025	0.33	0.36
3b	4a	SAG	9911+72	24	1.875	0.1809	0.376	0.99	1.05
4b		D	9911+73	24	1.875	0.1219	0.136	0.64	0.37
		CREST	9913+41						
5	6a	SAG	9914+94	24	1.875	0.1230	0.152	0.71	0.41
6b		D	9915+02	24	1.875	0.1173	0.109	0.54	0.29
		CREST	9916+62						
7a		U	9918+17	24	1.875	0.1166	0.128	0.64	0.22
7b		U	9918+29	24	1.875	0.0453	0.010	0.28	0.02
7c	8	SAG	9918+34	24	1.875	0.1155	0.124	0.64	0.22
		CREST	9919+84						
9a		U	9921+36	24	1.875	0.1216	0.145	0.69	0.27
9b	10a	SAG	9921+52	24	1.875	0.0690	0.032	0.39	0.05
10b		D	9921+54	24	1.875	0.0758	0.042	0.43	0.07
10c		D	9922+29	24	1.875	0.0770	0.044	0.44	0.08
		CREST	9923+22						
11a		U	9924+02	24	1.875	0.0639	0.026	0.37	0.05
11b		U	9924+70	24	1.875	0.0633	0.025	0.36	0.05
11c		U	9924+86	24	1.875	0.0075	0.000	0.14	-0.01
11d	12	SAG	9924+92	24	1.875	0.1143	0.123	0.64	0.23
		CREST	9926+54						
13a		U	9929+80	24	1.875	0.1174	0.134	0.67	0.99
13b	14a	SAG	9930+22	24	1.875	0.1452	0.236	0.86	1.06
14b		D	9931+38	24	1.875	0.0546	0.048	0.90	0.12
		CREST	9933+39						
15a		U	9935+72	24	1.875	0.0872	0.123	1.00	0.19
15b		U	9937+17	24	1.875	0.0717	0.073	0.83	0.09
15c	16a	SAG	9938+41	24	1.875	0.0800	0.098	0.92	0.13
16b		D	9939+04	24	1.875	0.0218	0.001	0.17	0.00
16c		D	9939+16	24	1.875	0.0917	0.063	0.47	0.11
16d		D	9940+19	24	1.875	0.0535	0.015	0.29	0.05
16e		D	9940+87	24	1.875	0.0075	0.000	0.13	-0.12
		CREST	9940+87						
17a		U	9942+71	24	1.875	0.0811	0.050	0.46	0.48
17b		U	9943+53	24	1.875	0.1005	0.089	0.57	0.33
17c		U	9944+73	24	1.875	0.1097	0.112	0.62	0.31
17d		U	9946+82	24	1.875	0.1425	0.225	0.84	0.54
17e		U	9947+71	24	1.875	0.1177	0.135	0.67	0.32
17f		U	9948+92	24	1.875	0.1132	0.122	0.65	0.29
17g		U	9949+93	24	1.875	0.1028	0.094	0.58	0.22
17h	18a	SAG	9950+47	24	1.875	0.1570	0.291	0.94	0.68
18b		D	9951+68	24	1.875	0.1286	0.186	0.81	0.42
18c		D	9952+60	24	1.875	0.1456	0.260	0.94	0.68
18d		D	9954+14	24	1.875	0.0895	0.071	0.55	0.69
		CREST	9956+19						

Lake Shore Drive
South Bound

	Drainage Area Characteristics									Actual Flow to Structure			Actual spread and depth on pavement			
	Drainage Area		Notes	Station	Distance from Upstream (ft)	Pavement Drainage Width - Measured (ft)	Drainage Area (Acre)	Tc (min)	i (in/hr)	C Value - Measured	Q (cfs)	Upstream Bypass (cfs)	Total Flow (cfs)	Solve for Total Flow by finding dp	Actual Depth on Pavement, dp (ft)	Actual Spread on Pavement (T) (ft)
	Main	Secondary (If Sag)														
			CREST	224+00								0.00	0.00	0.000		
	1	3a	SAG	225+00	147.28	39.0	0.132	5.00	6.48	0.89	0.76	0.014	0.78	0.78	0.150	5.565
		3b	D	225+47	52.72	38.0	0.046	5.00	6.48	0.90	0.27	0.000	0.27	0.27	0.034	1.297
			CREST	226+00									0.00	0.00	0.000	
		5a	U	228+98	298.09	108.0	0.739	5.00	6.48	0.53	2.54	0.000	2.54	2.54	0.202	6.724
		5b	7	SAG	229+00	101.91	0.283	5.00	6.48	0.43	0.79	1.195	1.98	1.98	0.173	5.780
			CREST	230+00									0.00	0.00	0.000	
		9	11	SAG	232+00	300.00	0.496	5.00	6.48	0.59	1.91	0.000	1.91	1.91	0.196	6.547
			CREST	233+00									0.00	0.00	0.000	
		13a	U	234+87	186.62	81.0	0.347	5.00	6.48	0.72	1.62	0.000	1.62	1.62	0.185	6.161
		13b	U	236+75	187.97	81.0	0.350	5.00	6.48	0.72	1.63	0.713	2.34	2.34	0.214	8.578
		13c	15	SAG	237+00	125.41	0.176	5.00	6.48	0.74	0.85	1.253	2.10	2.10	0.203	8.111
			CREST	238+00									0.00	0.00	0.000	
		17	19a	SAG	239+00	105.91	0.100	5.00	6.48	0.77	0.50	0.061	0.56	0.56	0.069	2.644
		19b	D	239+06	94.09	41.0	0.089	5.00	6.48	0.66	0.38	0.000	0.38	0.38	0.069	2.639
			CREST	240+00									0.00	0.00	0.000	
		21a	U	240+59	59.35	41.0	0.056	5.00	6.48	0.88	0.32	0.000	0.32	0.32	0.051	1.952
		21b	23	SAG	241+00	140.65	0.131	5.00	6.48	0.88	0.74	0.033	0.78	0.78	0.109	4.176
			CREST	242+00									0.00	0.00	0.000	
		25	27a	SAG	243+00	113.44	0.145	5.00	6.48	0.69	0.65	0.268	0.92	0.92	0.106	4.251
		27b	D	243+13	158.95	55.0	0.201	5.00	6.48	0.72	0.94	0.000	0.94	0.94	0.105	4.183
		27c	D	244+72	27.61	55.0	0.035	5.00	6.48	0.72	0.16	0.000	0.16	0.16	0.004	0.161
			CREST	245+00									0.00	0.00	0.000	
		29a	U	245+05	4.84	60.0	0.007	5.00	6.48	0.67	0.03	0.000	0.03	0.10	0.000	0.000
		29b	U	245+78	73.46	60.0	0.101	5.00	6.48	0.67	0.44	0.000	0.44	0.44	0.080	2.750
		29c	31a	SAG	246+00	140.32	0.182	5.00	6.48	0.70	0.83	0.633	1.46	1.46	0.178	5.918
		31b	D	247+19	181.38	53.0	0.221	5.00	6.48	0.73	1.05	0.000	1.05	1.05	0.209	8.358
			CREST	249+00									0.00	0.00	0.000	
		33a	U	249+41	41.01	55.0	0.052	5.00	6.48	0.69	0.23	0.000	0.23	0.23	0.033	1.268
		33b	35a	SAG	251+00	180.00	0.213	5.00	6.48	0.73	1.00	0.100	1.10	1.10	0.135	5.392
		35b	D	251+21	78.99	48.0	0.087	5.00	6.48	0.77	0.43	0.000	0.43	0.43	0.079	3.162
			CREST	252+00									0.00	0.00	0.000	
		37a	U	252+74	73.66	47.0	0.079	5.00	6.48	0.73	0.37	0.000	0.37	0.37	0.052	2.585
		37b	39a	SAG	253+00	71.32	0.091	5.00	6.48	0.75	0.44	0.118	0.56	0.56	0.074	4.088
		39b	D	253+45	55.02	64.0	0.081	5.00	6.48	0.78	0.41	0.000	0.41	0.41	0.056	3.475
			CREST	254+00									0.00	0.00	0.000	
		41	43	SAG	255+00	200.00	0.209	5.00	6.48	0.68	0.92	0.000	0.92	0.92	0.181	7.867
			CREST	256+00									0.00	0.00	0.000	
		45	47a	SAG	258+00	249.23	0.300	5.00	6.48	0.74	1.44	0.033	1.47	1.47	0.173	5.756
		47b	D	258+49	50.77	76.0	0.089	5.00	6.48	0.67	0.38	0.000	0.38	0.38	0.045	1.744
			CREST	259+00									0.00	0.00	0.000	
		49a	U	259+26	25.92	77.0	0.046	5.00	6.48	0.66	0.20	0.000	0.20	0.20	0.032	1.262
		49b	U	259+93	67.23	77.0	0.119	5.00	6.48	0.66	0.51	0.009	0.52	0.52	0.094	2.677
		49c	SAG	260+00	106.85	77.0	0.189	5.00	6.48	0.66	0.81	0.104	0.92	0.92	0.139	3.975
			CREST	261+00									0.00	0.00	0.000	

Stony Island Avenue
South Bound

Stony Island Avenue South Bound	Drainage Area				Actual Gutter Flow & Depth			Pavement Characteristics				Max. Shoulder flow		
	Main	Secondary (If Sag)	Notes	Station	Actual Gutter Depth dg+x (ft)	Actual Gutter Flow (cfs)	Spread on Pavement less than or equal Maximum Spread	n	Long Slope (ft/ft)	Cross Slope (ft/ft)	Z Table (8-202)	Maximum depth at pavement, dp	Max spread Pavement (T)	Maximum Pavement Flow, Qp
			CREST	224+00										
1	3a	SAG	225+00		0.270	0.620	TRUE	0.013	0.0008	0.027	37.0	0.162	6.000	0.352
3b		D	225+47		0.154	0.262	TRUE	0.013	0.0029	0.026	38.5	0.156	6.000	0.629
			CREST	226+00										
5a		U	228+98		0.322	1.974	FALSE	0.013	0.0032	0.030	33.3	0.180	6.000	0.839
5b	7	SAG	229+00		0.293	1.591	TRUE	0.013	0.0034	0.030	33.3	0.180	6.000	0.865
			CREST	230+00										
9	11	SAG	232+00		0.316	1.492	FALSE	0.013	0.0020	0.030	33.3	0.180	6.000	0.663
			CREST	233+00										
13a		U	234+87		0.305	1.282	FALSE	0.013	0.0018	0.030	33.3	0.180	6.000	0.629
13b		U	236+75		0.334	1.642	FALSE	0.013	0.0018	0.025	40.0	0.150	6.000	0.464
13c	15	SAG	237+00		0.323	1.493	FALSE	0.013	0.0018	0.025	40.0	0.150	6.000	0.464
			CREST	238+00										
17	19a	SAG	239+00		0.189	0.512	TRUE	0.013	0.0037	0.026	38.5	0.156	6.000	0.711
19b		D	239+06		0.189	0.346	TRUE	0.013	0.0017	0.026	38.5	0.156	6.000	0.482
			CREST	240+00										
21a		U	240+59		0.171	0.302	TRUE	0.013	0.0022	0.026	38.5	0.156	6.000	0.548
21b	23	SAG	241+00		0.229	0.658	TRUE	0.013	0.0022	0.026	38.5	0.156	6.000	0.548
			CREST	242+00										
25	27a	SAG	243+00		0.226	0.772	TRUE	0.013	0.0032	0.025	40.0	0.150	6.000	0.619
27b		D	243+13		0.225	0.791	TRUE	0.013	0.0035	0.025	40.0	0.150	6.000	0.648
27c		D	244+72		0.124	0.162	TRUE	0.013	0.0035	0.025	40.0	0.150	6.000	0.648
			CREST	245+00										
29a		U	245+05		0.120	0.104	TRUE	0.013	0.0017	0.025	40.0	0.150	6.000	0.451
29b		U	245+78		0.200	0.404	TRUE	0.013	0.0017	0.029	34.5	0.174	6.000	0.578
29c	31a	SAG	246+00		0.298	1.168	TRUE	0.013	0.0017	0.030	33.3	0.180	6.000	0.612
31b		D	247+19		0.329	0.740	FALSE	0.013	0.0004	0.025	40.0	0.150	6.000	0.219
			CREST	249+00										
33a		U	249+41		0.153	0.225	TRUE	0.013	0.0022	0.026	38.5	0.156	6.000	0.548
33b	35a	SAG	251+00		0.255	0.879	TRUE	0.013	0.0022	0.025	40.0	0.150	6.000	0.513
35b		D	251+21		0.199	0.388	TRUE	0.013	0.0016	0.025	40.0	0.150	6.000	0.438
			CREST	252+00										
37a		U	252+74		0.172	0.346	TRUE	0.013	0.0028	0.020	50.0	0.120	6.000	0.399
37b	39a	SAG	253+00		0.194	0.476	TRUE	0.013	0.0028	0.018	55.6	0.108	6.000	0.335
39b		D	253+45		0.176	0.361	TRUE	0.013	0.0027	0.016	62.5	0.096	6.000	0.270
			CREST	254+00										
41	43	SAG	255+00		0.301	0.653	FALSE	0.013	0.0005	0.023	43.5	0.138	6.000	0.213
			CREST	256+00										
45	47a	SAG	258+00		0.293	1.182	TRUE	0.013	0.0019	0.030	33.3	0.180	6.000	0.646
47b		D	258+49		0.165	0.369	TRUE	0.013	0.0039	0.026	38.5	0.156	6.000	0.730
			CREST	259+00										
49a		U	259+26		0.152	0.193	TRUE	0.013	0.0017	0.025	40.0	0.150	6.000	0.451
49b		U	259+93		0.214	0.483	TRUE	0.013	0.0017	0.035	28.6	0.210	6.000	0.791
49c		SAG	260+00		0.259	0.808	TRUE	0.013	0.0017	0.035	28.6	0.210	6.000	0.791
			CREST	261+00										

	Drainage Area		Notes	Station	Gutter Characteristics					Maximum Flow in Gutter				Total Maximum Flow		
	Main	Secondary (If Sag)			Gutter Type	Width of gutter	Cross slope	Z Table (8-202)	n	dx=dp	Qx	Maximum Depth at Gutter, dg+x (max) (ft)	Qg+x	Gutter flow Qg (cfs)	Maximum total flow Qt (cfs)	
			CREST	224+00												
	1	3a	SAG	225+00		2	0.0600	16.7	0.013	0.162		0.158	0.282	0.694	0.536	0.888
	3b		D	225+47		2	0.0600	16.7	0.013	0.156		0.273	0.276	1.248	0.976	1.605
			CREST	226+00												
	5a		U	228+98		2	0.0600	16.7	0.013	0.180		0.419	0.300	1.638	1.219	2.058
	5b	7	SAG	229+00		2	0.0600	16.7	0.013	0.180		0.432	0.300	1.688	1.256	2.121
			CREST	230+00												
	9	11	SAG	232+00		2	0.0600	16.7	0.013	0.180		0.332	0.300	1.295	0.963	1.627
			CREST	233+00												
	13a		U	234+87		2	0.0600	16.7	0.013	0.180		0.315	0.300	1.229	0.914	1.543
	13b		U	236+75		2	0.0600	16.7	0.013	0.150		0.193	0.270	0.928	0.734	1.198
	13c	15	SAG	237+00		2	0.0600	16.7	0.013	0.150		0.193	0.270	0.928	0.734	1.198
			CREST	238+00												
	17	19a	SAG	239+00		2	0.0600	16.7	0.013	0.156		0.308	0.276	1.410	1.102	1.813
	19b		D	239+06		2	0.0600	16.7	0.013	0.156		0.209	0.276	0.956	0.747	1.229
			CREST	240+00												
	21a		U	240+59		2	0.0600	16.7	0.013	0.156		0.237	0.276	1.087	0.850	1.398
	21b	23	SAG	241+00		2	0.0600	16.7	0.013	0.156		0.237	0.276	1.087	0.850	1.398
			CREST	242+00												
	25	27a	SAG	243+00		2	0.0600	16.7	0.013	0.150		0.258	0.270	1.237	0.979	1.598
	27b		D	243+13		2	0.0600	16.7	0.013	0.150		0.270	0.270	1.293	1.024	1.671
	27c		D	244+72		2	0.0600	16.7	0.013	0.150		0.270	0.270	1.293	1.024	1.671
			CREST	245+00												
	29a		U	245+05		2	0.0600	16.7	0.013	0.150		0.188	0.270	0.901	0.713	1.165
	29b		U	245+78		2	0.0600	16.7	0.013	0.174		0.279	0.294	1.131	0.852	1.430
	29c	31a	SAG	246+00		2	0.0600	16.7	0.013	0.180		0.306	0.300	1.194	0.888	1.500
	31b		D	247+19		2	0.0600	16.7	0.013	0.150		0.091	0.270	0.437	0.346	0.565
			CREST	249+00												
	33a		U	249+41		2	0.0600	16.7	0.013	0.156		0.237	0.276	1.087	0.850	1.398
	33b	35a	SAG	251+00		2	0.0600	16.7	0.013	0.150		0.214	0.270	1.026	0.812	1.325
	35b		D	251+21		2	0.0600	16.7	0.013	0.150		0.182	0.270	0.875	0.692	1.130
			CREST	252+00												
	37a		U	252+74		2	0.0600	16.7	0.013	0.120		0.133	0.240	0.845	0.712	1.111
	37b	39a	SAG	253+00		2	0.0600	16.7	0.013	0.108		0.100	0.228	0.737	0.637	0.972
	39b		D	253+45		2	0.0600	16.7	0.013	0.096		0.072	0.216	0.627	0.555	0.825
			CREST	254+00												
	41	43	SAG	255+00		2	0.0600	16.7	0.013	0.138		0.082	0.258	0.433	0.351	0.564
			CREST	256+00												
	45	47a	SAG	258+00		2	0.0600	16.7	0.013	0.180		0.323	0.300	1.262	0.939	1.585
	47b		D	258+49		2	0.0600	16.7	0.013	0.156		0.316	0.276	1.448	1.132	1.861
			CREST	259+00												
	49a		U	259+26		2	0.0600	16.7	0.013	0.150		0.188	0.270	0.901	0.713	1.165
	49b		U	259+93		2	0.0600	16.7	0.013	0.210		0.461	0.330	1.539	1.078	1.869
	49c		SAG	260+00		2	0.0600	16.7	0.013	0.210		0.461	0.330	1.539	1.078	1.869
			CREST	261+00												

Stony Island Avenue
South Bound

Drainage Area				Inlet Capacity Calculation					
Main	Secondary (If Sag)	Notes	Station	Inlet Typ	Grate width (T) (ft)	Depth at grate, df (cfs)	Qf Flow at Grate (cfs)	Intercepted Flow (cfs)	Bypass Flow (cfs)
		CREST	224+00						
1	3a	SAG	225+00	24	1.875	0.1578	0.148	0.47	0.31
3b		D	225+47	24	1.875	0.0412	0.008	0.25	0.01
		CREST	226+00						
5a		U	228+98	24	1.875	0.2092	0.626	1.35	1.19
5b	7	SAG	229+00	24	1.875	0.1809	0.438	1.15	0.83
		CREST	230+00						
9	11	SAG	232+00	24	1.875	0.2039	0.462	1.03	0.88
		CREST	233+00						
13a		U	234+87	24	1.875	0.1923	0.375	0.91	0.71
13b		U	236+75	24	1.875	0.2219	0.550	1.09	1.25
13c	15	SAG	237+00	24	1.875	0.2103	0.476	1.02	1.08
		CREST	238+00						
17	19a	SAG	239+00	24	1.875	0.0762	0.046	0.47	0.09
19b		D	239+06	24	1.875	0.0761	0.031	0.32	0.06
		CREST	240+00						
21a		U	240+59	24	1.875	0.0583	0.017	0.29	0.03
21b	23	SAG	241+00	24	1.875	0.1161	0.108	0.55	0.23
		CREST	242+00						
25	27a	SAG	243+00	24	1.875	0.1138	0.123	0.65	0.27
27b		D	243+13	24	1.875	0.1121	0.124	0.67	0.27
27c		D	244+72	24	1.875	0.0115	0.000	0.16	0.00
		CREST	245+00						
29a		U	245+05	24	1.875	0.0075	0.000	0.10	-0.07
29b		U	245+78	24	1.875	0.0873	0.044	0.36	0.08
29c	31a	SAG	246+00	24	1.875	0.1850	0.329	0.84	0.62
31b		D	247+19	24	1.875	0.2165	0.243	0.50	0.55
		CREST	249+00						
33a		U	249+41	24	1.875	0.0405	0.006	0.22	0.01
33b	35a	SAG	251+00	24	1.875	0.1423	0.186	0.69	0.41
35b		D	251+21	24	1.875	0.0866	0.042	0.35	0.09
		CREST	252+00						
37a		U	252+74	24	1.875	0.0592	0.020	0.33	0.05
37b	39a	SAG	253+00	24	1.875	0.0811	0.047	0.43	0.13
39b		D	253+45	24	1.875	0.0631	0.024	0.34	0.07
		CREST	254+00						
41	43	SAG	255+00	24	1.875	0.1884	0.187	0.47	0.46
		CREST	256+00						
45	47a	SAG	258+00	24	1.875	0.1802	0.324	0.86	0.61
47b		D	258+49	24	1.875	0.0529	0.018	0.35	0.03
		CREST	259+00						
49a		U	259+26	24	1.875	0.0391	0.005	0.19	0.01
49b		U	259+93	24	1.875	0.1012	0.066	0.42	0.10
49c		SAG	260+00	24	1.875	0.1466	0.177	0.63	0.29
		CREST	261+00						

Stony Island Avenue
South Bound

Drainage Area Characteristics										Actual Flow to Structure			Actual spread and depth on pavement		
Drainage Area		Notes	Station	Distance from Upstream (ft)	Pavement Drainage Width - Measured (ft)	Drainage Area (Acre)	Tc (min)	i (in/hr)	C Value - Measured	Q (cfs)	Upstream Bypass (cfs)	Total Flow (cfs)	Solve for Total Flow by finding dp	Actual Depth on Pavement, dp (ft)	Actual Spread on Pavement (T) (ft)
Main	Secondary (If Sag)														
		CREST	224+00								0.00		0.00	0.000	
2	4a	SAG	225+00	113.83	134.0	0.350	5.00	6.48	0.43	0.97	0.221	1.19	1.19	0.176	8.823
4b		D	225+14	86.17	148.0	0.293	5.00	6.48	0.40	0.76	0.000	0.76	0.76	0.093	4.642
		CREST	226+00									0.00	0.00	0.000	
6a		U	226+31	31.08	204.0	0.146	5.00	6.48	0.47	0.44	0.000	0.44	0.44	0.057	2.856
6b		U	226+78	46.87	204.0	0.220	5.00	6.48	0.47	0.67	0.067	0.73	0.73	0.087	4.359
6c		U	228+04	126.39	204.0	0.592	5.00	6.48	0.47	1.79	0.197	1.99	1.99	0.149	9.949
6d	8a	SAG	229+00	168.91	177.5	0.688	5.00	6.48	0.43	1.90	1.061	2.96	2.96	0.182	12.123
8b		D	229+73	26.75	151.0	0.093	5.00	6.48	0.38	0.23	0.000	0.23	0.23	0.021	1.407
		CREST	230+00									0.00	0.00	0.000	
10a		U	231+89	189.24	126.0	0.547	5.00	6.48	0.42	1.50	0.000	1.50	1.50	0.155	8.133
10b	12a	SAG	232+00	55.29	110.0	0.140	5.00	6.48	0.51	0.46	0.727	1.19	1.19	0.138	6.878
12b		D	232+45	13.26	94.0	0.029	5.00	6.48	0.59	0.11	0.025	0.13	0.16	0.000	0.000
12c		D	232+58	42.21	94.0	0.091	5.00	6.48	0.59	0.35	0.000	0.35	0.35	0.037	1.753
		CREST	233+00									0.00	0.00	0.000	
14a		U	233+61	61.16	97.0	0.136	5.00	6.48	0.61	0.54	0.000	0.54	0.54	0.084	4.670
14b		U	236+30	268.39	97.0	0.598	5.00	6.48	0.61	2.35	0.148	2.50	2.50	0.211	10.069
14c	16	SAG	237+00	170.45	99.5	0.389	5.00	6.48	0.56	1.42	1.428	2.85	2.85	0.222	11.104
		CREST	238+00									0.00	0.00	0.000	
18a		U	238+41	41.05	105.0	0.099	5.00	6.48	0.50	0.32	0.000	0.32	0.32	0.036	1.983
18b	20	SAG	239+00	158.95	106.5	0.389	5.00	6.48	0.49	1.24	0.024	1.27	1.27	0.117	6.484
		CREST	240+00									0.00	0.00	0.000	
22a		U	240+59	58.99	99.0	0.134	5.00	6.48	0.56	0.48	0.000	0.48	0.48	0.070	4.405
22b	24	SAG	241+00	141.01	80.5	0.261	5.00	6.48	0.70	1.18	0.116	1.30	1.30	0.134	8.346
		CREST	242+00									0.00	0.00	0.000	
26	28a	SAG	243+00	106.19	101.0	0.246	5.00	6.48	0.61	0.97	0.834	1.80	1.80	0.146	8.612
28b		D	243+06	193.81	112.0	0.498	5.00	6.48	0.54	1.75	0.000	1.75	1.75	0.141	8.267
		CREST	245+00									0.00	0.00	0.000	
30a		U	245+24	24.21	104.0	0.058	5.00	6.48	0.57	0.21	0.000	0.21	0.21	0.034	2.130
30b	32a	SAG	246+00	226.61	102.5	0.533	5.00	6.48	0.57	1.96	0.814	2.78	2.78	0.205	13.674
32b		D	247+51	149.18	101.0	0.346	5.00	6.48	0.57	1.28	0.000	1.28	1.28	0.204	12.753
		CREST	249+00									0.00	0.00	0.000	
34a		U	249+38	37.53	128.0	0.110	5.00	6.48	0.47	0.33	0.000	0.33	0.33	0.051	3.003
34b	36a	SAG	251+00	177.78	123.5	0.504	5.00	6.48	0.48	1.58	0.315	1.90	1.90	0.171	8.979
36b		D	251+15	84.69	119.0	0.231	5.00	6.48	0.50	0.75	0.000	0.75	0.75	0.112	5.605
		CREST	252+00									0.00	0.00	0.000	
38a		U	252+75	75.39	86.0	0.149	5.00	6.48	0.70	0.67	0.000	0.67	0.67	0.089	3.571
38b	40a	SAG	253+00	59.39	81.0	0.110	5.00	6.48	0.66	0.48	0.236	0.71	0.71	0.093	3.730
40b		D	253+35	65.22	76.0	0.114	5.00	6.48	0.63	0.47	0.000	0.47	0.47	0.067	2.692
		CREST	254+00									0.00	0.00	0.000	
42a		U	254+95	94.50	114.0	0.247	5.00	6.48	0.51	0.82	0.000	0.82	0.82	0.174	6.942
42b	44	SAG	255+00	105.50	93.0	0.225	5.00	6.48	0.63	0.93	0.379	1.31	1.31	0.220	8.817
		CREST	256+00									0.00	0.00	0.000	
46a		U	256+55	54.66	71.0	0.089	5.00	6.48	0.75	0.43	0.000	0.43	0.43	0.070	3.891
46b		U	257+92	137.35	71.0	0.224	5.00	6.48	0.75	1.09	0.095	1.19	1.19	0.130	8.679
46c	48	SAG	258+00	107.99	69.0	0.171	5.00	6.48	0.77	0.85	0.567	1.42	1.42	0.143	9.551
		CREST	259+00									0.00	0.00	0.000	
50a		U	259+79	79.32	55.0	0.100	5.00	6.48	0.68	0.44	0.000	0.44	0.44	0.080	2.768
50b		SAG	260+00	120.68	55.0	0.152	5.00	6.48	0.68	0.68	0.083	0.76	0.76	0.120	3.882
		CREST	261+00									0.00	0.00	0.000	

Stony Island Avenue
North Bound

	Drainage Area				Actual Gutter Flow & Depth			Pavement Characteristics				Max. Shoulder flow		
	Main	Secondary (If Sag)	Notes	Station	Actual Gutter Depth dg+x (ft)	Actual Gutter Flow (cfs)	Spread on Pavement less than or equal Maximum Spread	n	Long Slope (ft/ft)	Cross Slope (ft/ft)	Z Table (8-202)	Maximum depth at pavement, dp	Max spread Pavement (T)	Maximum Pavement Flow, Qp
				CREST	224+00									
	2	4a	SAG	225+00	0.296	0.794	FALSE	0.013	0.0008	0.020	50.0	0.120	6.000	0.213
	4b		D	225+14	0.213	0.624	TRUE	0.013	0.0029	0.020	50.0	0.120	6.000	0.406
			CREST	226+00										
	6a		U	226+31	0.177	0.402	TRUE	0.013	0.0032	0.020	50.0	0.120	6.000	0.427
	6b		U	226+78	0.207	0.610	TRUE	0.013	0.0032	0.020	50.0	0.120	6.000	0.427
	6c		U	228+04	0.269	1.227	FALSE	0.013	0.0032	0.015	66.7	0.090	6.000	0.264
	6d	8a	SAG	229+00	0.302	1.665	FALSE	0.013	0.0032	0.015	66.7	0.090	6.000	0.264
	8b		D	229+73	0.141	0.226	TRUE	0.013	0.0034	0.015	66.7	0.090	6.000	0.272
			CREST	230+00										
	10a		U	231+89	0.275	1.022	FALSE	0.013	0.0020	0.019	52.6	0.114	6.000	0.310
	10b	12a	SAG	232+00	0.258	0.862	FALSE	0.013	0.0020	0.020	50.0	0.120	6.000	0.337
	12b		D	232+45	0.120	0.165	TRUE	0.013	0.0043	0.021	47.6	0.126	6.000	0.537
	12c		D	232+58	0.157	0.337	TRUE	0.013	0.0043	0.021	47.6	0.126	6.000	0.537
			CREST	233+00										
	14a		U	233+61	0.204	0.440	TRUE	0.013	0.0018	0.018	55.6	0.108	6.000	0.269
	14b		U	236+30	0.331	1.603	FALSE	0.013	0.0018	0.021	47.6	0.126	6.000	0.347
	14c	16	SAG	237+00	0.342	1.743	FALSE	0.013	0.0018	0.020	50.0	0.120	6.000	0.320
			CREST	238+00										
	18a		U	238+41	0.156	0.306	TRUE	0.013	0.0037	0.018	55.6	0.108	6.000	0.385
	18b	20	SAG	239+00	0.237	0.936	FALSE	0.013	0.0037	0.018	55.6	0.108	6.000	0.385
			CREST	240+00										
	22a		U	240+59	0.190	0.405	TRUE	0.013	0.0022	0.016	62.5	0.096	6.000	0.244
	22b	24	SAG	241+00	0.254	0.867	FALSE	0.013	0.0022	0.016	62.5	0.096	6.000	0.244
			CREST	242+00										
	26	28a	SAG	243+00	0.266	1.193	FALSE	0.013	0.0032	0.017	58.8	0.102	6.000	0.326
	28b		D	243+06	0.261	1.176	FALSE	0.013	0.0035	0.017	58.8	0.102	6.000	0.340
			CREST	245+00										
	30a		U	245+24	0.154	0.202	TRUE	0.013	0.0017	0.016	62.5	0.096	6.000	0.214
	30b	32a	SAG	246+00	0.325	1.479	FALSE	0.013	0.0017	0.015	66.7	0.090	6.000	0.193
	32b		D	247+51	0.324	0.711	FALSE	0.013	0.0004	0.016	62.5	0.096	6.000	0.104
			CREST	249+00										
	34a		U	249+38	0.171	0.304	TRUE	0.013	0.0022	0.017	58.8	0.102	6.000	0.270
	34b	36a	SAG	251+00	0.291	1.248	FALSE	0.013	0.0022	0.019	52.6	0.114	6.000	0.325
	36b		D	251+15	0.232	0.584	TRUE	0.013	0.0016	0.020	50.0	0.120	6.000	0.302
			CREST	252+00										
	38a		U	252+75	0.209	0.587	TRUE	0.013	0.0028	0.025	40.0	0.150	6.000	0.579
	38b	40a	SAG	253+00	0.213	0.617	TRUE	0.013	0.0028	0.025	40.0	0.150	6.000	0.579
	40b		D	253+35	0.187	0.428	TRUE	0.013	0.0027	0.025	40.0	0.150	6.000	0.569
			CREST	254+00										
	42a		U	254+95	0.294	0.611	FALSE	0.013	0.0005	0.025	40.0	0.150	6.000	0.245
	42b	44	SAG	255+00	0.340	0.907	FALSE	0.013	0.0005	0.025	40.0	0.150	6.000	0.245
			CREST	256+00										
	46a		U	256+55	0.190	0.374	TRUE	0.013	0.0019	0.018	55.6	0.108	6.000	0.276
	46b		U	257+92	0.250	0.778	FALSE	0.013	0.0019	0.015	66.7	0.090	6.000	0.204
	46c	48	SAG	258+00	0.263	0.891	FALSE	0.013	0.0019	0.015	66.7	0.090	6.000	0.204
			CREST	259+00										
	50a		U	259+79	0.200	0.406	TRUE	0.013	0.0017	0.029	34.5	0.174	6.000	0.578
	50b		SAG	260+00	0.240	0.661	TRUE	0.013	0.0017	0.031	32.3	0.186	6.000	0.646
			CREST	261+00										

 Stony Island Avenue
North Bound

	Drainage Area				Gutter Characteristics						Maximum Flow in Gutter				Total Maximum Flow	
	Main	Secondary (If Sag)	Notes	Station	Gutter Type	Width of gutter	Cross slope	Z Table (8-202)	n	dx=dp	Qx	Maximum Depth at Gutter, dg+x (max) (ft)	Qg+x	Gutter flow Qg (cfs)	Maximum total flow Qt (cfs)	
			CREST	224+00												
	2	4a	SAG	225+00		2	0.0600	16.7	0.013	0.120		0.071	0.240	0.452	0.381	0.594
	4b		D	225+14		2	0.0600	16.7	0.013	0.120		0.135	0.240	0.860	0.725	1.131
			CREST	226+00												
	6a		U	226+31		2	0.0600	16.7	0.013	0.120		0.142	0.240	0.903	0.761	1.188
	6b		U	226+78		2	0.0600	16.7	0.013	0.120		0.142	0.240	0.903	0.761	1.188
	6c		U	228+04		2	0.0600	16.7	0.013	0.090		0.066	0.210	0.633	0.567	0.831
	6d	8a	SAG	229+00		2	0.0600	16.7	0.013	0.090		0.066	0.210	0.633	0.567	0.831
	8b		D	229+73		2	0.0600	16.7	0.013	0.090		0.068	0.210	0.652	0.584	0.857
			CREST	230+00												
	10a		U	231+89		2	0.0600	16.7	0.013	0.114		0.098	0.234	0.668	0.569	0.879
	10b	12a	SAG	232+00		2	0.0600	16.7	0.013	0.120		0.112	0.240	0.714	0.602	0.939
	12b		D	232+45		2	0.0600	16.7	0.013	0.126		0.188	0.246	1.119	0.931	1.467
	12c		D	232+58		2	0.0600	16.7	0.013	0.126		0.188	0.246	1.119	0.931	1.467
			CREST	233+00												
	14a		U	233+61		2	0.0600	16.7	0.013	0.108		0.081	0.228	0.591	0.510	0.779
	14b		U	236+30		2	0.0600	16.7	0.013	0.126		0.122	0.246	0.724	0.602	0.949
	14c	16	SAG	237+00		2	0.0600	16.7	0.013	0.120		0.107	0.240	0.678	0.571	0.891
			CREST	238+00												
	18a		U	238+41		2	0.0600	16.7	0.013	0.108		0.116	0.228	0.847	0.732	1.117
	18b	20	SAG	239+00		2	0.0600	16.7	0.013	0.108		0.116	0.228	0.847	0.732	1.117
			CREST	240+00												
	22a		U	240+59		2	0.0600	16.7	0.013	0.096		0.065	0.216	0.566	0.501	0.745
	22b	24	SAG	241+00		2	0.0600	16.7	0.013	0.096		0.065	0.216	0.566	0.501	0.745
			CREST	242+00												
	26	28a	SAG	243+00		2	0.0600	16.7	0.013	0.102		0.092	0.222	0.734	0.642	0.967
	28b		D	243+06		2	0.0600	16.7	0.013	0.102		0.096	0.222	0.767	0.671	1.011
			CREST	245+00												
	30a		U	245+24		2	0.0600	16.7	0.013	0.096		0.057	0.216	0.497	0.440	0.654
	30b	32a	SAG	246+00		2	0.0600	16.7	0.013	0.090		0.048	0.210	0.461	0.413	0.606
	32b		D	247+51		2	0.0600	16.7	0.013	0.096		0.028	0.216	0.241	0.213	0.317
			CREST	249+00												
	34a		U	249+38		2	0.0600	16.7	0.013	0.102		0.076	0.222	0.608	0.532	0.802
	34b	36a	SAG	251+00		2	0.0600	16.7	0.013	0.114		0.103	0.234	0.700	0.597	0.922
	36b		D	251+15		2	0.0600	16.7	0.013	0.120		0.101	0.240	0.639	0.538	0.840
			CREST	252+00												
	38a		U	252+75		2	0.0600	16.7	0.013	0.150		0.241	0.270	1.157	0.916	1.495
	38b	40a	SAG	253+00		2	0.0600	16.7	0.013	0.150		0.241	0.270	1.157	0.916	1.495
	40b		D	253+35		2	0.0600	16.7	0.013	0.150		0.237	0.270	1.136	0.899	1.468
			CREST	254+00												
	42a		U	254+95		2	0.0600	16.7	0.013	0.150		0.102	0.270	0.489	0.387	0.632
	42b	44	SAG	255+00		2	0.0600	16.7	0.013	0.150		0.102	0.270	0.489	0.387	0.632
			CREST	256+00												
	46a		U	256+55		2	0.0600	16.7	0.013	0.108		0.083	0.228	0.607	0.524	0.800
	46b		U	257+92		2	0.0600	16.7	0.013	0.090		0.051	0.210	0.488	0.437	0.640
	46c	48	SAG	258+00		2	0.0600	16.7	0.013	0.090		0.051	0.210	0.488	0.437	0.640
			CREST	259+00												
	50a		U	259+79		2	0.0600	16.7	0.013	0.174		0.279	0.294	1.131	0.852	1.430
	50b		SAG	260+00		2	0.0600	16.7	0.013	0.186		0.334	0.306	1.259	0.925	1.571
			CREST	261+00												

Stony Island Avenue
North Bound

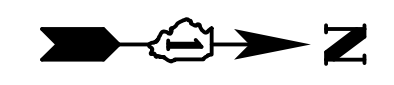
Drainage Area				Inlet Capacity Calculation						
Main	Secondary (If Sag)	Notes	Station	Inlet Typ	Grate width (T) (ft)	Depth at grate, df (cfs)	Qf Flow at Grate (cfs)	Intercepted Flow (cfs)	Bypass Flow (cfs)	
		CREST	224+00							
2	4a	SAG	225+00	24	1.875	0.1840	0.222	0.57	0.62	
4b		D	225+14	24	1.875	0.1003	0.084	0.54	0.22	
		CREST	226+00							
6a		U	226+31	24	1.875	0.0646	0.027	0.37	0.07	
6b		U	226+78	24	1.875	0.0947	0.076	0.53	0.20	
6c		U	228+04	24	1.875	0.1567	0.290	0.94	1.05	
6d	8a	SAG	229+00	24	1.875	0.1893	0.480	1.18	1.77	
8b		D	229+73	24	1.875	0.0286	0.003	0.22	0.01	
		CREST	230+00							
10a		U	231+89	24	1.875	0.1620	0.251	0.77	0.73	
10b	12a	SAG	232+00	24	1.875	0.1451	0.187	0.68	0.51	
12b		D	232+45	24	1.875	0.0075	0.000	0.16	-0.03	
12c		D	232+58	24	1.875	0.0443	0.012	0.33	0.02	
		CREST	233+00							
14a		U	233+61	24	1.875	0.0916	0.052	0.39	0.15	
14b		U	236+30	24	1.875	0.2189	0.530	1.07	1.43	
14c	16	SAG	237+00	24	1.875	0.2296	0.602	1.14	1.70	
		CREST	238+00							
18a		U	238+41	24	1.875	0.0432	0.010	0.30	0.02	
18b	20	SAG	239+00	24	1.875	0.1242	0.168	0.77	0.50	
		CREST	240+00							
22a		U	240+59	24	1.875	0.0780	0.037	0.37	0.12	
22b	24	SAG	241+00	24	1.875	0.1410	0.182	0.69	0.61	
		CREST	242+00							
26	28a	SAG	243+00	24	1.875	0.1539	0.276	0.92	0.89	
28b		D	243+06	24	1.875	0.1480	0.260	0.92	0.83	
		CREST	245+00							
30a		U	245+24	24	1.875	0.0416	0.006	0.20	0.02	
30b	32a	SAG	246+00	24	1.875	0.2126	0.477	1.00	1.78	
32b		D	247+51	24	1.875	0.2115	0.228	0.48	0.80	
		CREST	249+00							
34a		U	249+38	24	1.875	0.0586	0.017	0.29	0.05	
34b	36a	SAG	251+00	24	1.875	0.1781	0.338	0.91	0.99	
36b		D	251+15	24	1.875	0.1196	0.100	0.48	0.27	
		CREST	252+00							
38a		U	252+75	24	1.875	0.0968	0.075	0.51	0.16	
38b	40a	SAG	253+00	24	1.875	0.1007	0.083	0.53	0.18	
40b		D	253+35	24	1.875	0.0748	0.037	0.39	0.08	
		CREST	254+00							
42a		U	254+95	24	1.875	0.1811	0.168	0.44	0.38	
42b	44	SAG	255+00	24	1.875	0.2279	0.311	0.60	0.71	
		CREST	256+00							
46a		U	256+55	24	1.875	0.0775	0.034	0.34	0.10	
46b		U	257+92	24	1.875	0.1377	0.158	0.62	0.57	
46c	48	SAG	258+00	24	1.875	0.1508	0.201	0.69	0.73	
		CREST	259+00							
50a		U	259+79	24	1.875	0.0878	0.045	0.36	0.08	
50b		SAG	260+00	24	1.875	0.1279	0.123	0.54	0.22	
		CREST	261+00							

Stony Island Avenue
North Bound

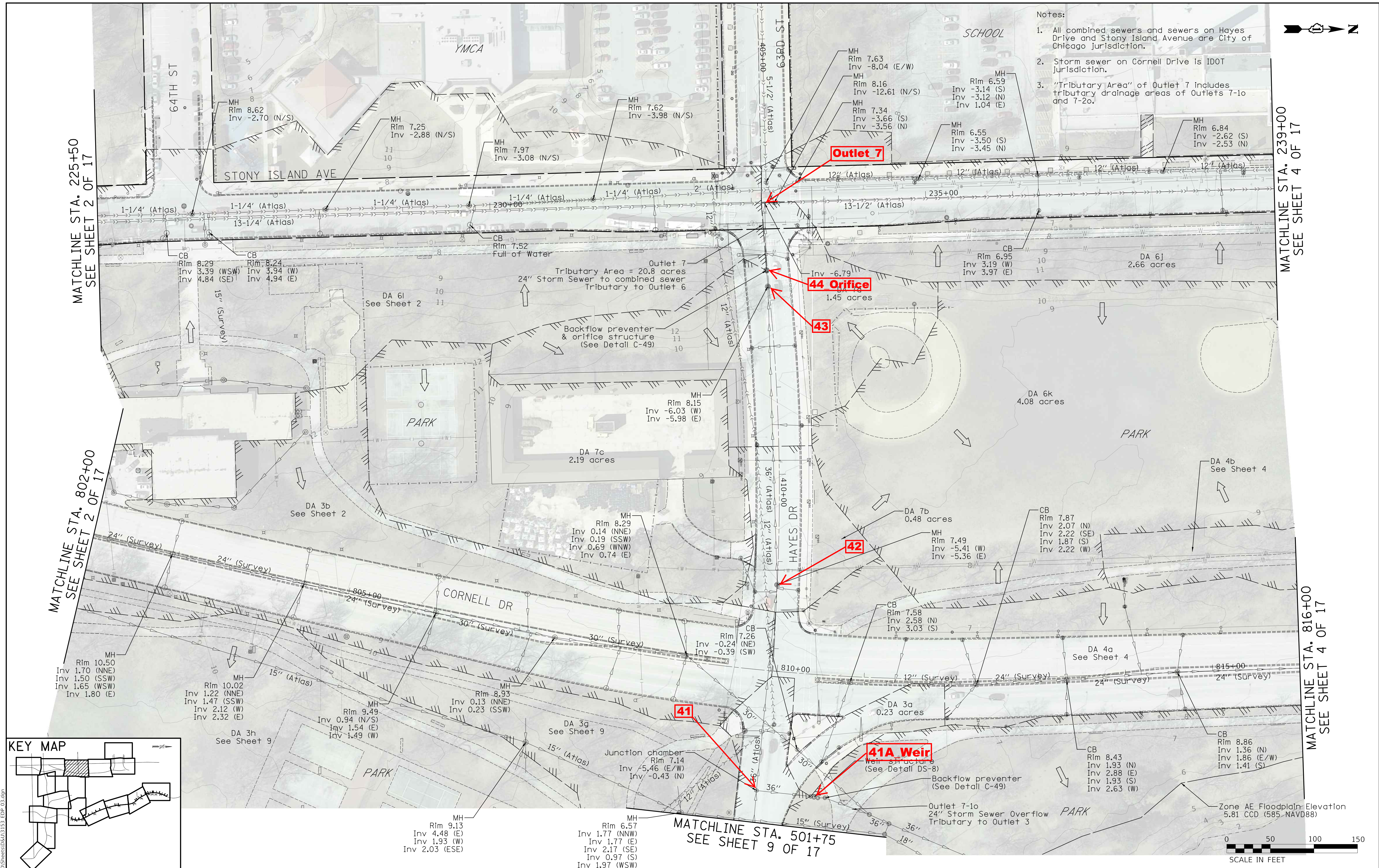
Jackson Park SWMM Analysis

SWMM Structure Overview

Existing Condition



- Notes:
1. All combined sewers and sewers on Hayes Drive and Stony Island Avenue are City of Chicago jurisdiction.
 2. Storm sewer on Cornell Drive is IDOT jurisdiction.
 3. "Tributary Area" of Outlet 7 includes tributary drainage areas of Outlets 7-10 and 7-20.



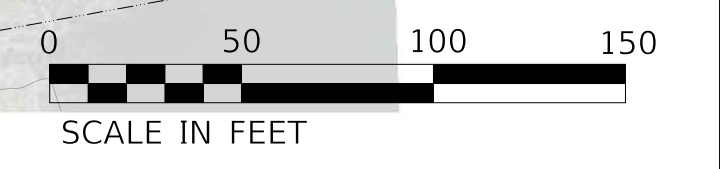
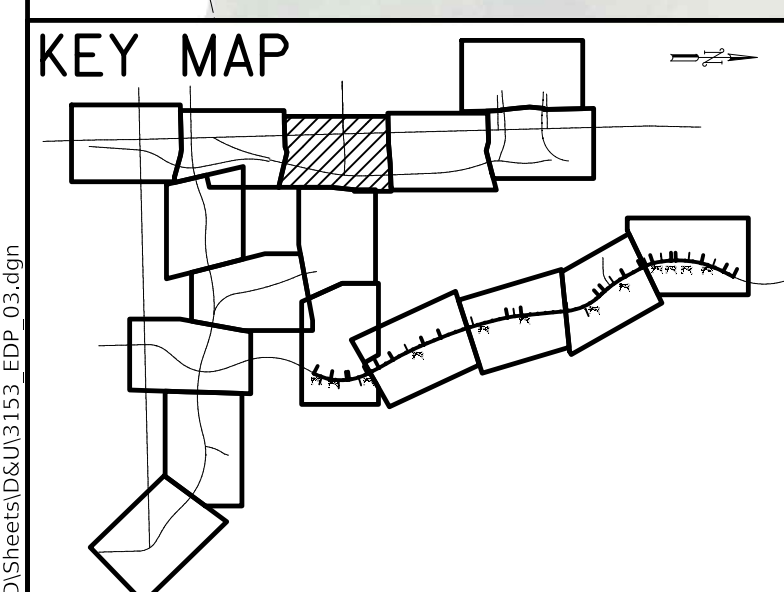
MATCHLINE STA. 225+50
SEE SHEET 2 OF 17

MATCHLINE STA. 802+00
SEE SHEET 2 OF 17

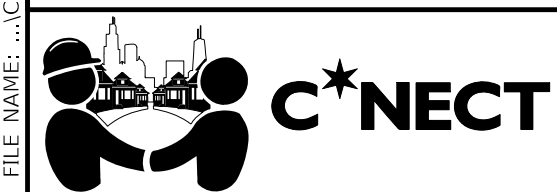
MATCHLINE STA. 239+00
SEE SHEET 4 OF 17

MATCHLINE STA. 816+00
SEE SHEET 4 OF 17

MATCHLINE STA. 501+75
SEE SHEET 9 OF 17



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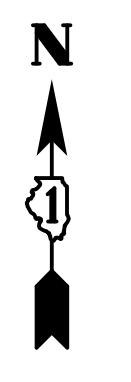
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PLOT DATE = 7/27/2018	CHECKED - TKL	REVISED -
	DATE - APR 2018	REVISED -



SCALE: 1" = 50'		SHEET 3 OF 17 SHEETS		STA.	TO STA.
OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN					

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	3
CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				

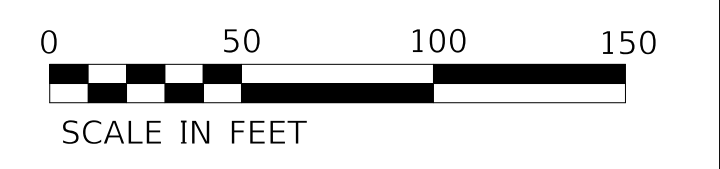
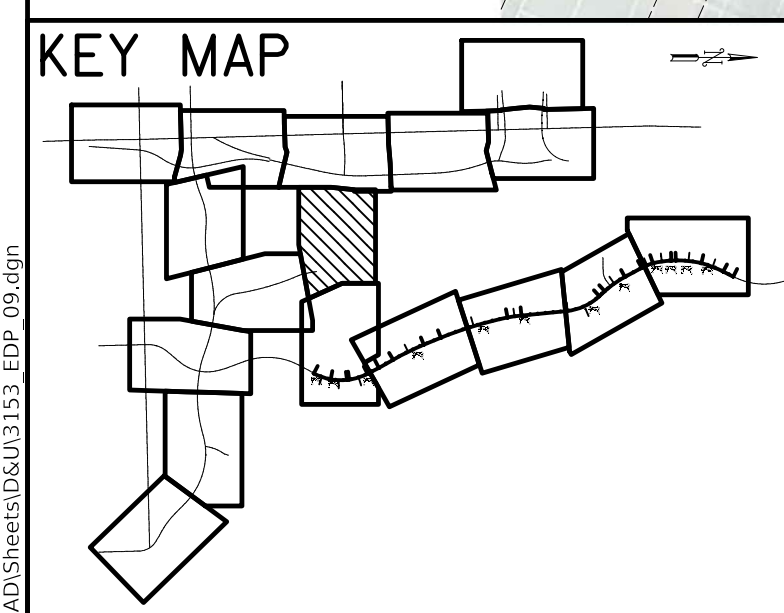
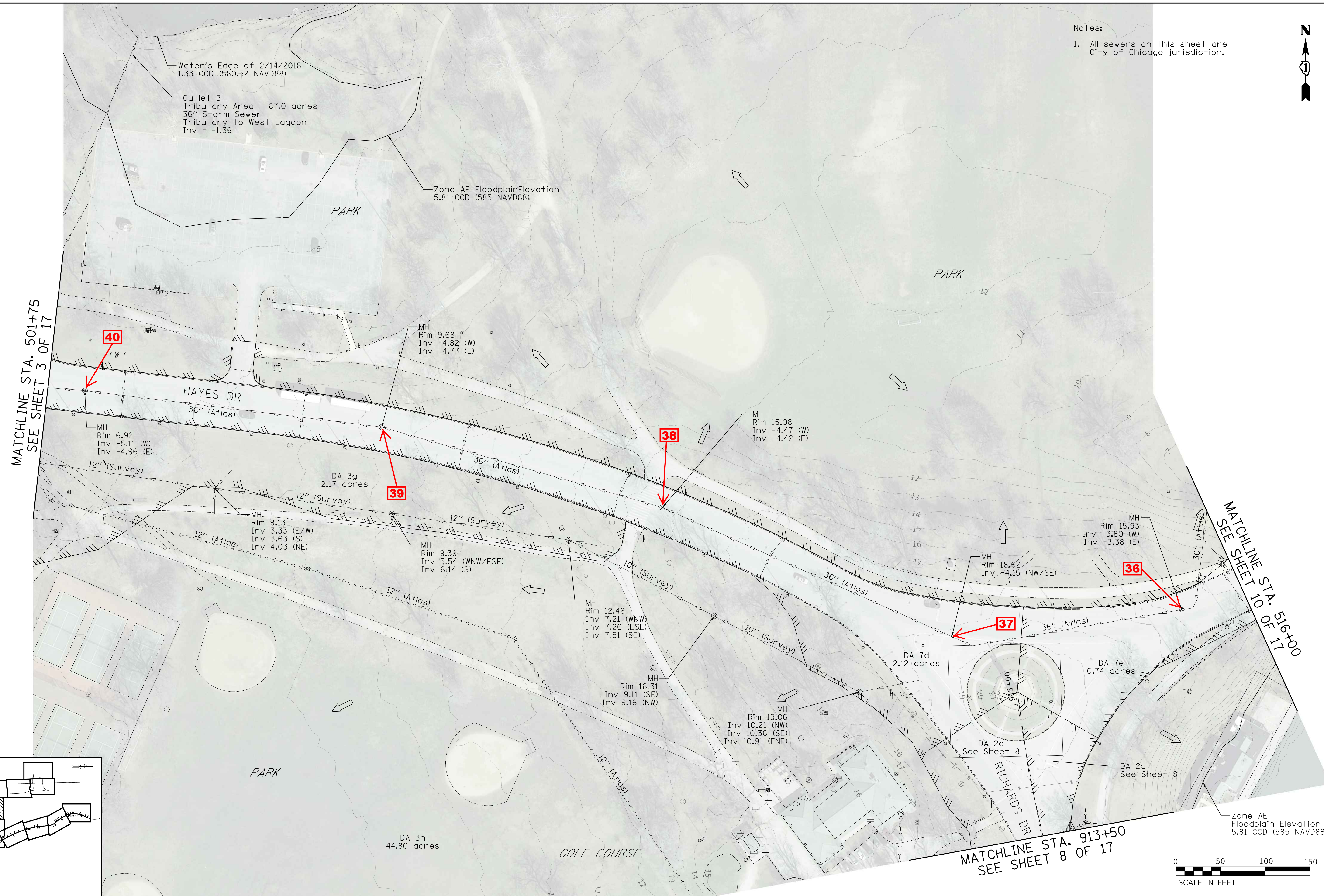
Notes:
1. All sewers on this sheet are City of Chicago jurisdiction.



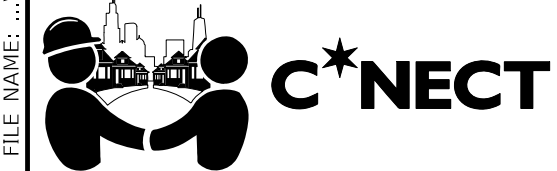
MATCHLINE STA. 501+75
SEE SHEET 3 OF 17

MATCHLINE STA. 516+00
SEE SHEET 10 OF 17

MATCHLINE STA. 913+50
SEE SHEET 8 OF 17



MODEL: S:\MODEL\NAME: FILE NAME: ...



USER NAME = MSA	DESIGNED - JLP	REVISED -
PLOT SCALE = 50.0000' / in.	DRAWN - JLP/WAM	REVISED -
PLOT DATE = 7/27/2018	CHECKED - TKL	REVISED -
	DATE - APR 2018	REVISED -

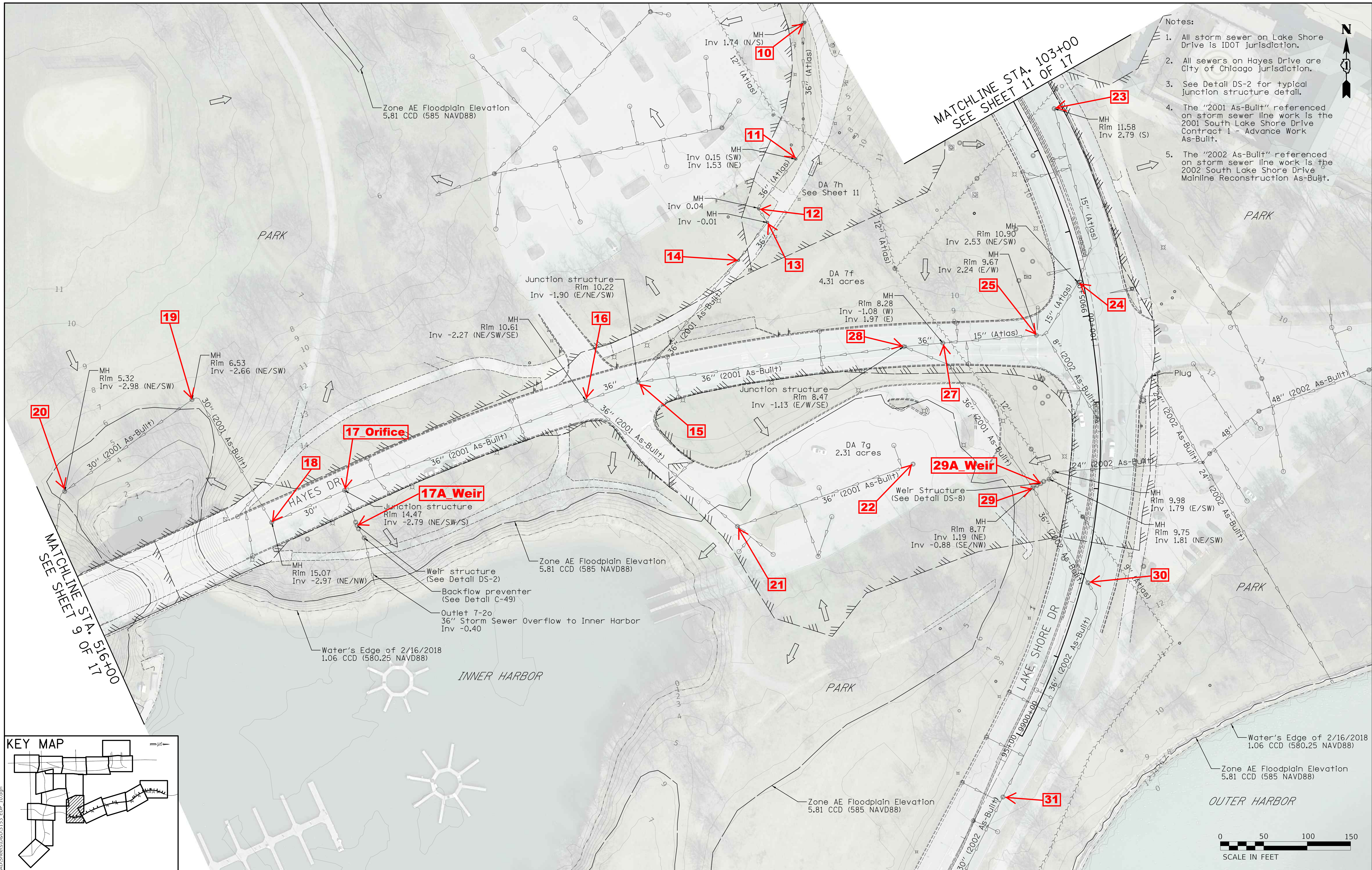


OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN

SCALE: 1" = 50'

SHEET 9 OF 17 SHEETS STA. TO STA.

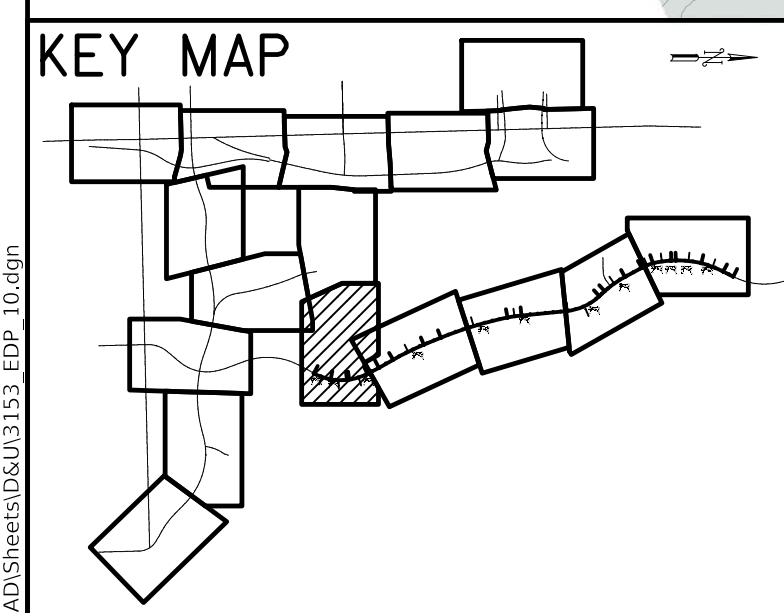
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	9
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. All sewers on Hayes Drive are City of Chicago jurisdiction.
 3. See Detail DS-2 for typical junction structure detail.
 4. The "2001 As-Built" referenced on storm sewer line work is the 2001 South Lake Shore Drive Contract 1 - Advance Work As-Built.
 5. The "2002 As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.

MATCHLINE STA. 516+00
SEE SHEET 9 OF 17

MATCHLINE STA. 103+00
SEE SHEET 11 OF 17



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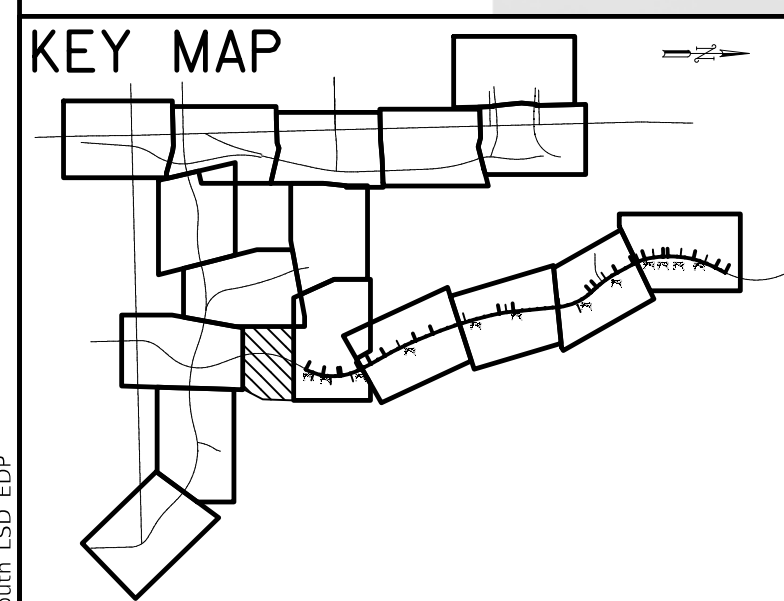
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PLOT DATE = 7/27/2018	DATE - APR 2018	REVISED -



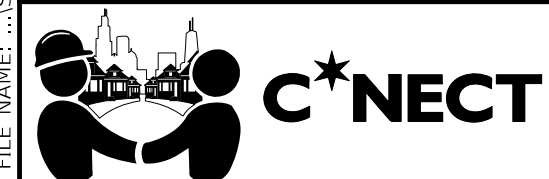
OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN

SCALE: 1" = 50' SHEET 10 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	10
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



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PLOT DATE = 7/31/2018

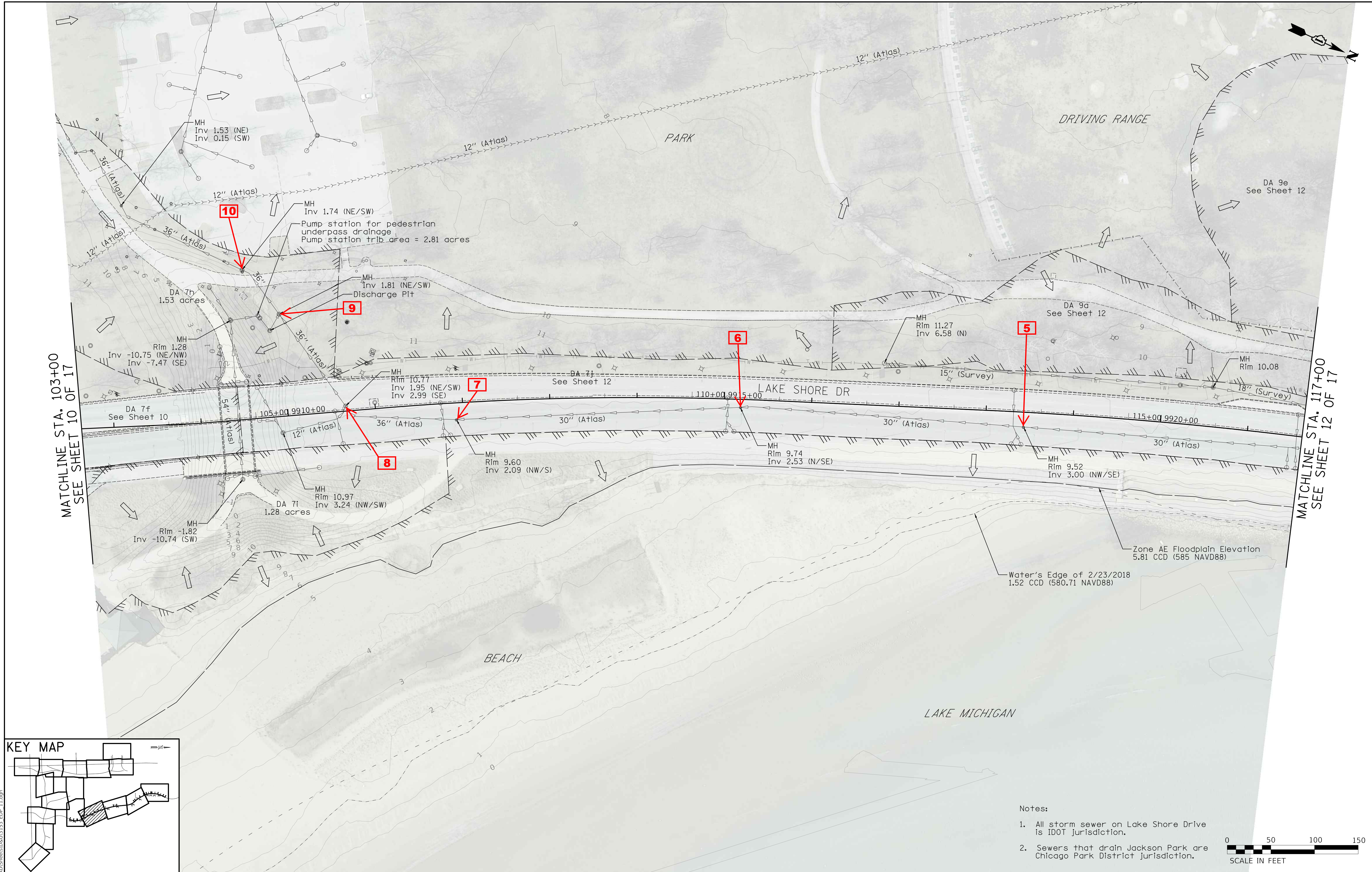
DESIGNED - SDRN_DES	REVISD - _____
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DATE - SDATE	REVISD - _____

REVISD - _____
REVISD - _____
REVISD - _____
REVISD - _____



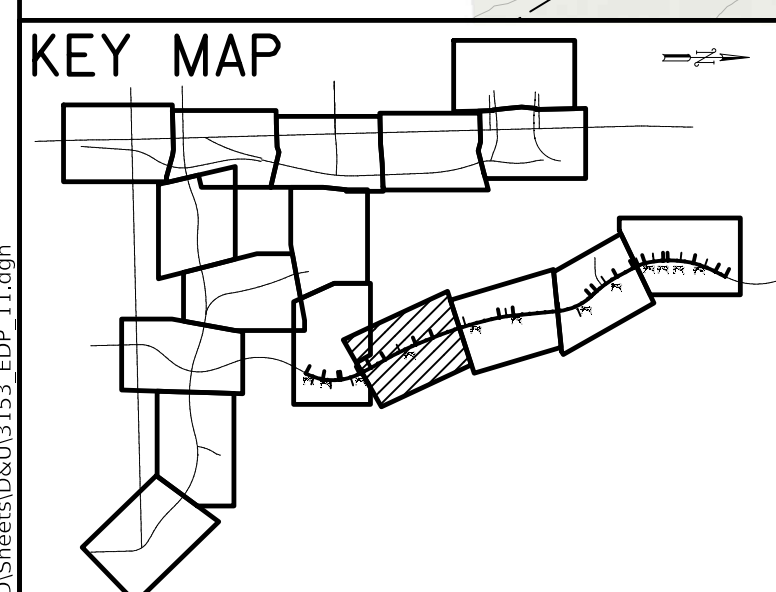
OPC MOBILITY IMPROVEMENTS
 EXISTING DRAINAGE PLAN
 SCALE: 1" = 50' SHEET 9 OF 17 SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	9
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

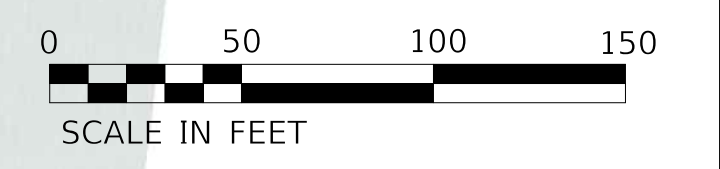


MATCHLINE STA. 103+00
SEE SHEET 10 OF 17

MATCHLINE STA. 117+00
SEE SHEET 12 OF 17



- Notes:
- All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 - Sewers that drain Jackson Park are Chicago Park District jurisdiction.



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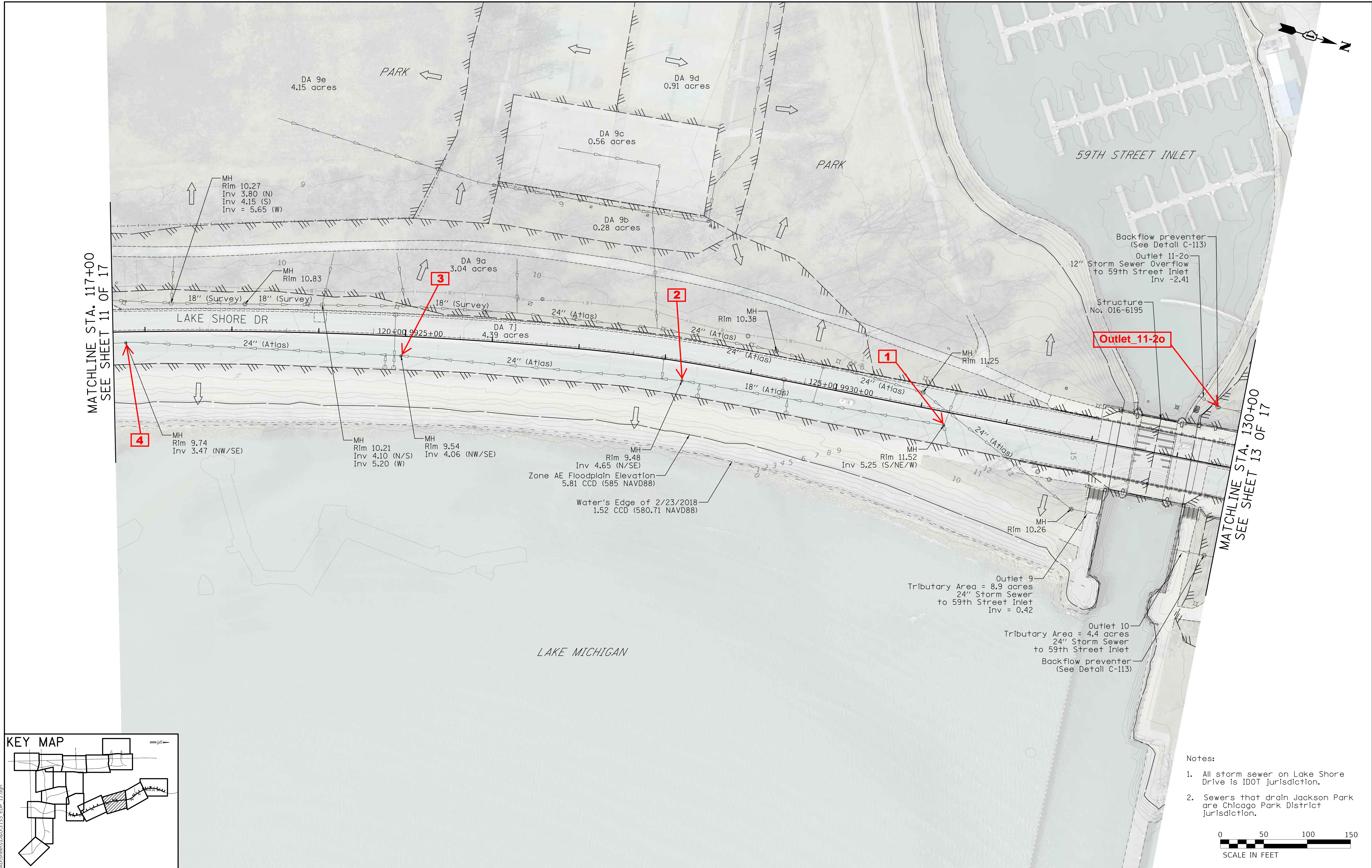
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PLOT DATE = 7/27/2018	CHECKED - TKL	REVISED -
	DATE - APR 2018	REVISED -



SCALE: 1" = 50'		SHEET 11 OF 17 SHEETS		STA.	TO STA.
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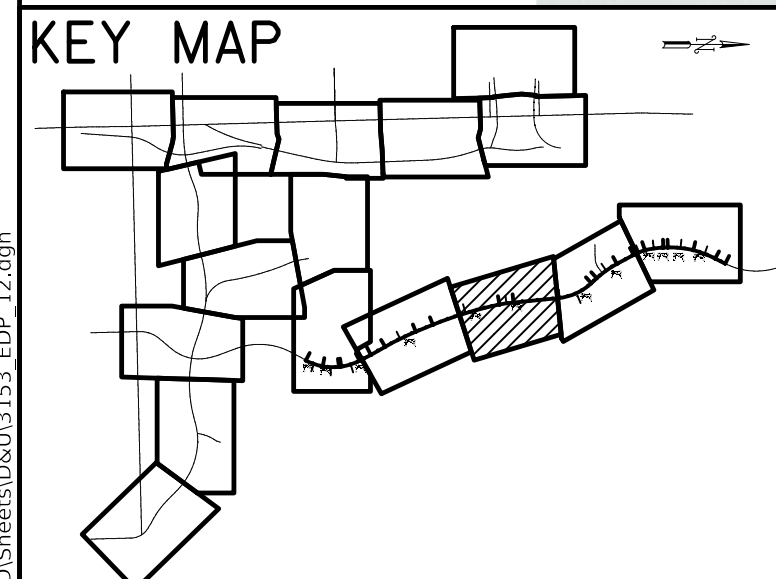
OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	11
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

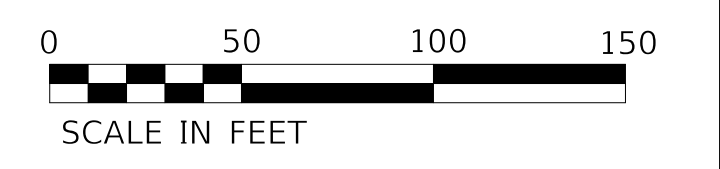


MATCHLINE STA. 117+00
SEE SHEET 11 OF 17

MATCHLINE STA. 130+00
SEE SHEET 13 OF 17



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. Sewers that drain Jackson Park are Chicago Park District jurisdiction.



MODEL: S:\MODEL\NAME... FILE NAME: ...\CD\ShoreDr\03183_EDP_12.dwg



USER NAME = MSA	DESIGNED - JLP	REVISED -
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	DATE - APR 2018	REVISED -



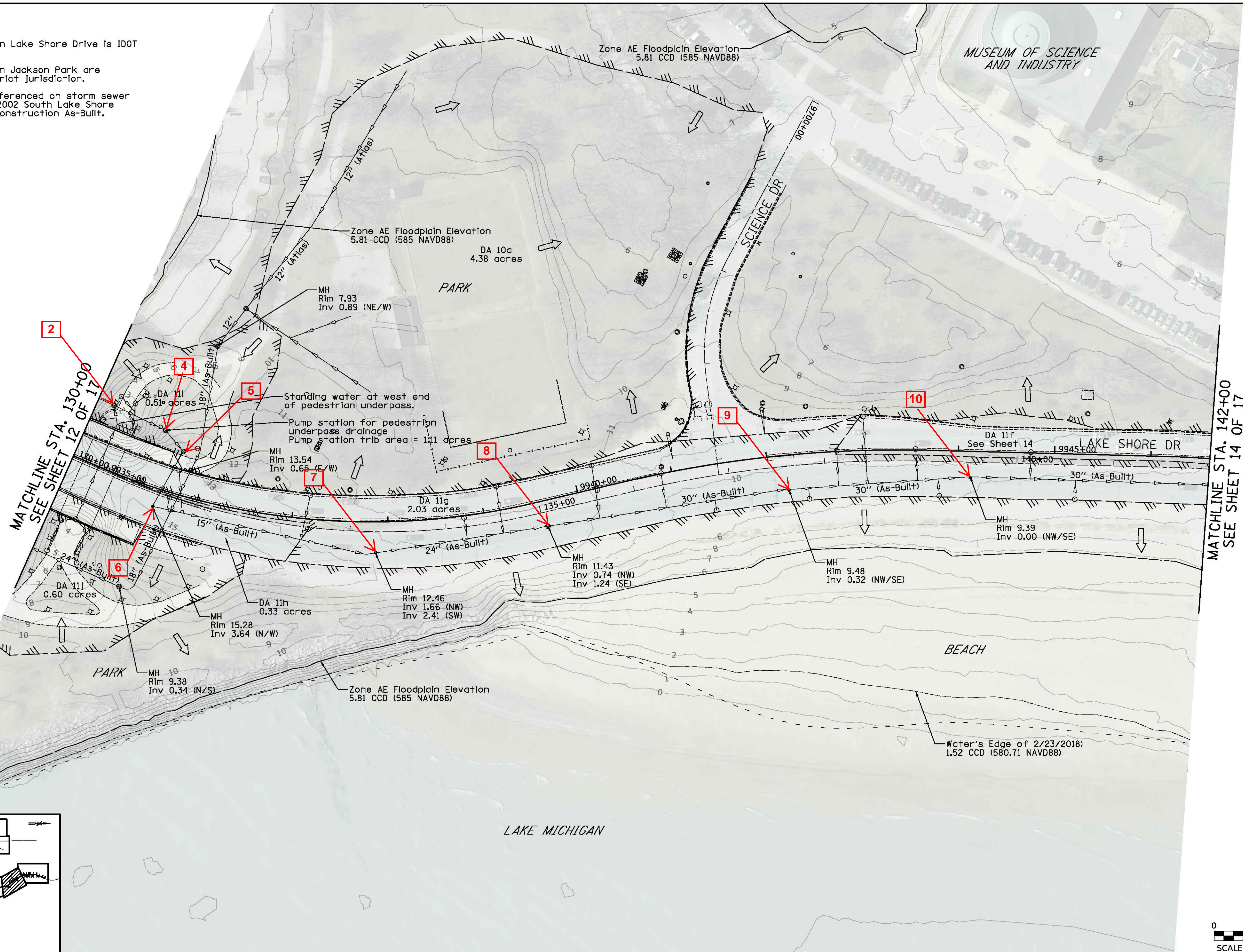
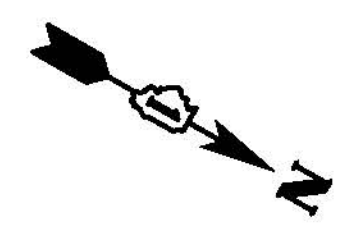
OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN

SCALE: 1" = 50' SHEET 12 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	12
CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				

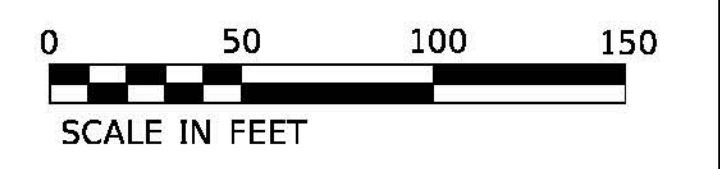
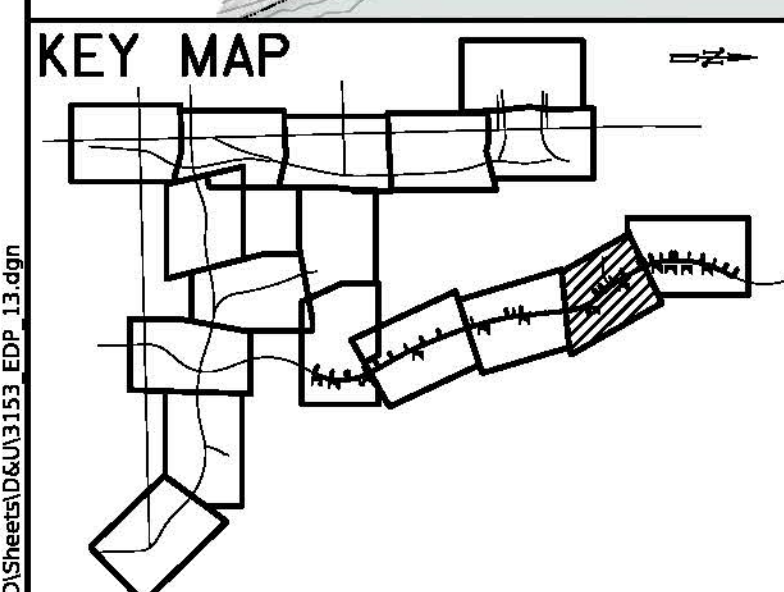
Notes:

1. All storm sewer on Lake Shore Drive is IDOT Jurisdiction.
2. Sewers that drain Jackson Park are Chicago Park District Jurisdiction.
3. The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.



MATCHLINE STA. 130+00
SEE SHEET 12 OF 17

MATCHLINE STA. 142+00
SEE SHEET 14 OF 17



MODEL: SMOBELMAME
FILE NAME: C:\CD\Sheet\03183_EDP_13.dgn

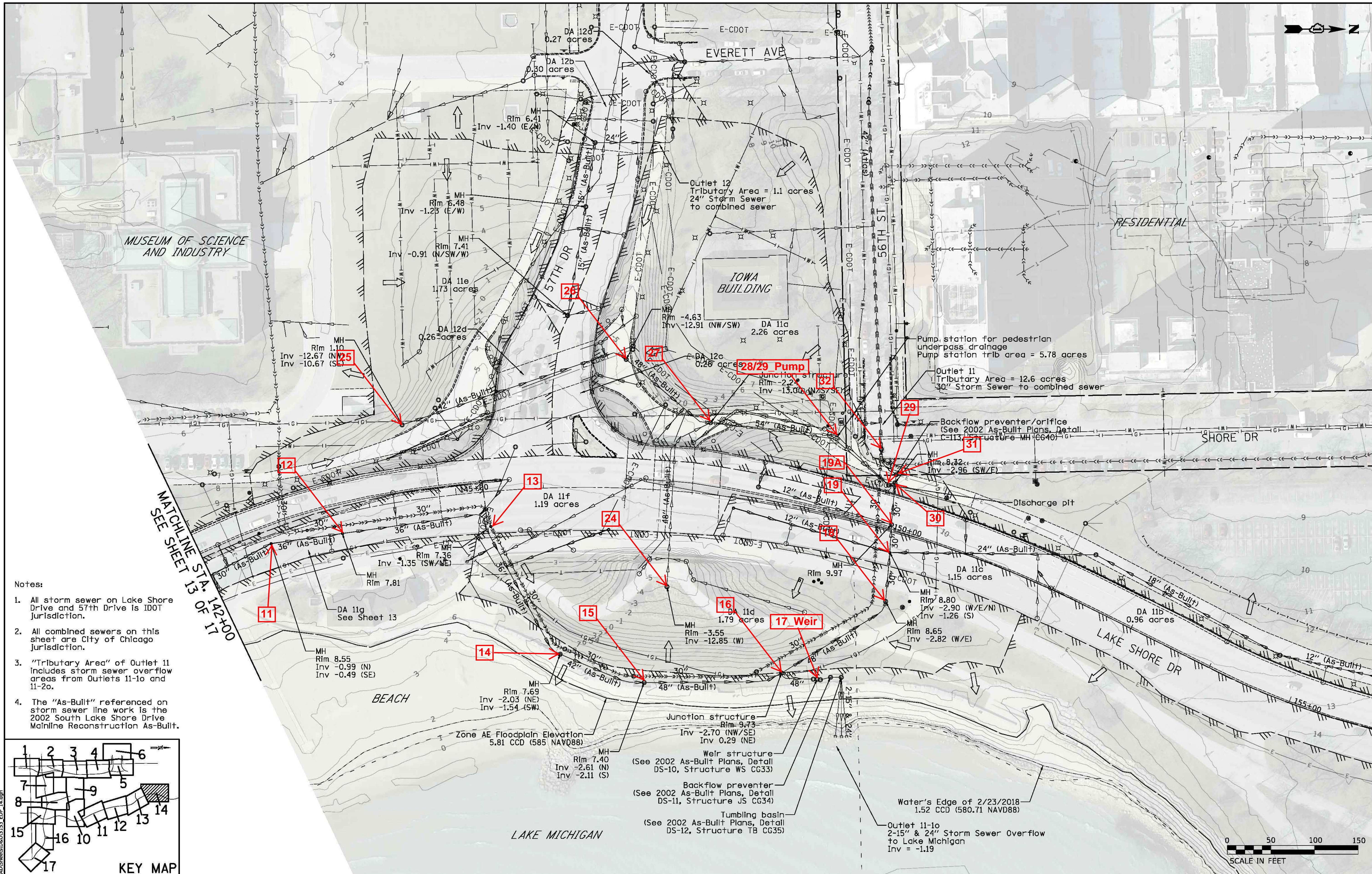


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PLOT DATE = 7/27/2018	CHECKED - TKL	REVISED -
	DATE - APR 2018	REVISED -

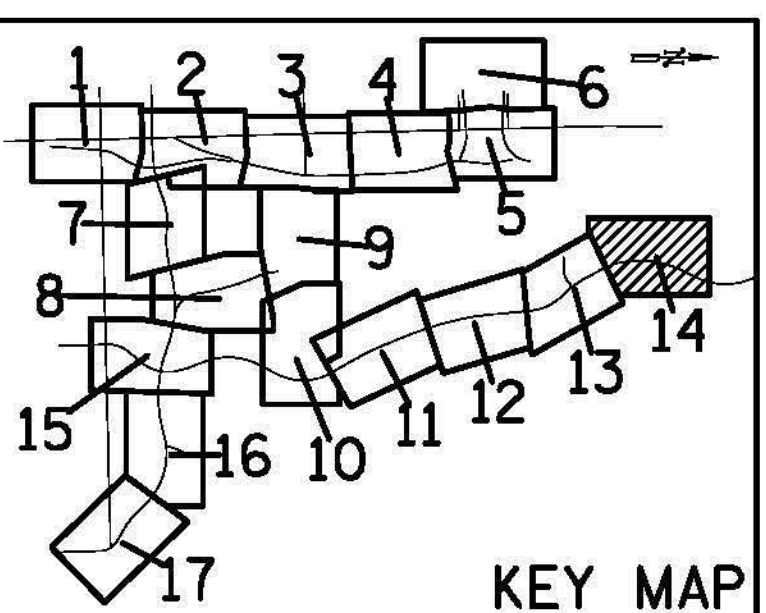


OPC MOBILITY IMPROVEMENTS EXISTING DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 13	OF 17 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	13
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



- Notes:
1. All storm sewer on Lake Shore Drive and 57th Drive is IDOT Jurisdiction.
 2. All combined sewers on this sheet are City of Chicago Jurisdiction.
 3. "Tributary Area" of Outlet 11 includes storm sewer overflow areas from Outlets 11-1o and 11-2o.
 4. The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.



KEY MAP

MODEL: SHORLNAME
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PLOT DATE = 10/8/2018	DATE - APR 2018	REVISED -



SCALE: 1" = 50'		SHEET 14 OF 17 SHEETS		STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	17	14
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

**OPC MOBILITY IMPROVEMENTS
EXISTING DRAINAGE PLAN**

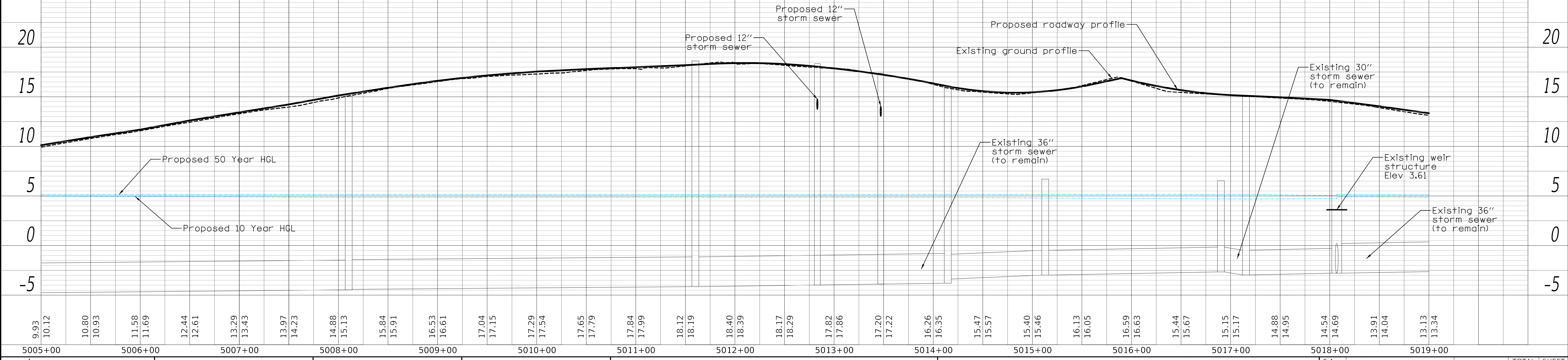
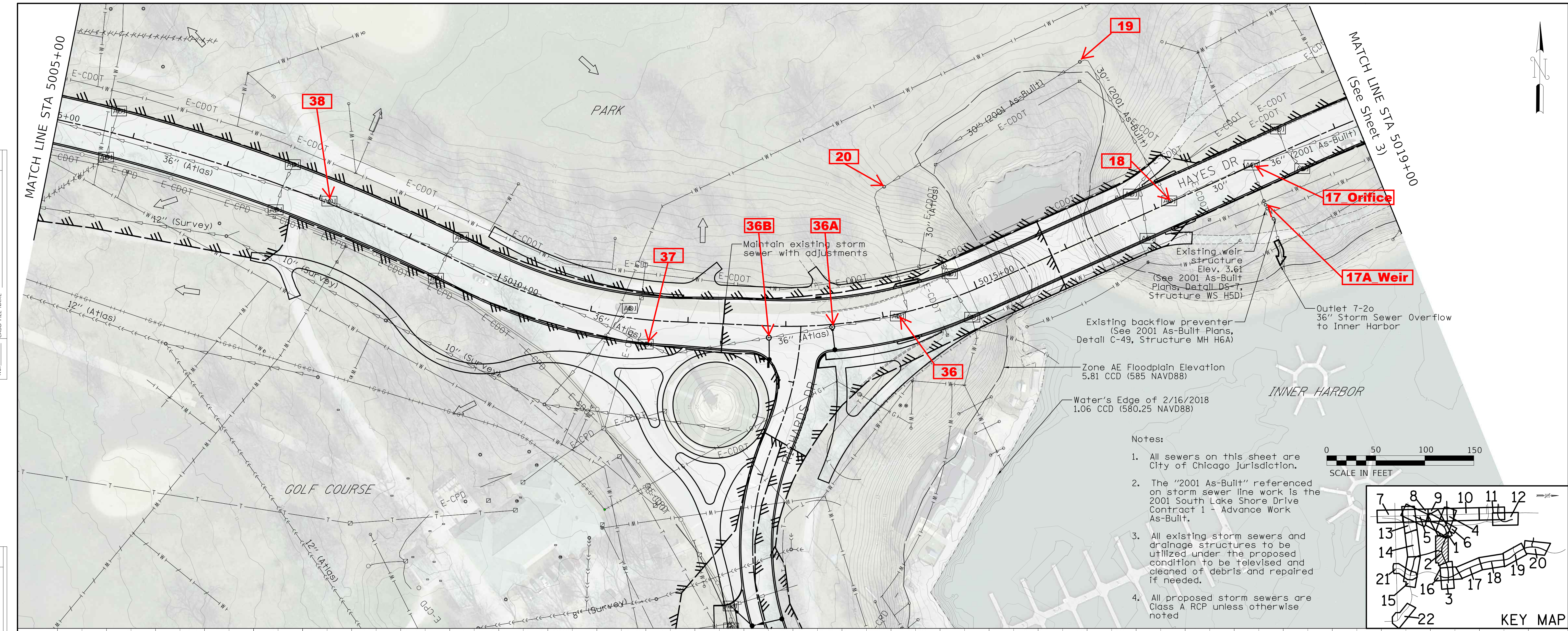
SWMM Structure Overview

Proposed Condition

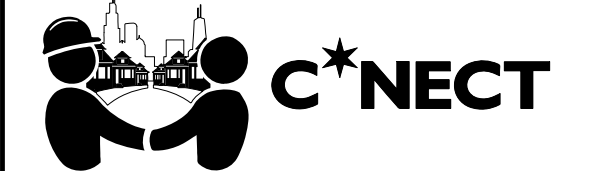
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	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
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	CADD FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATION	



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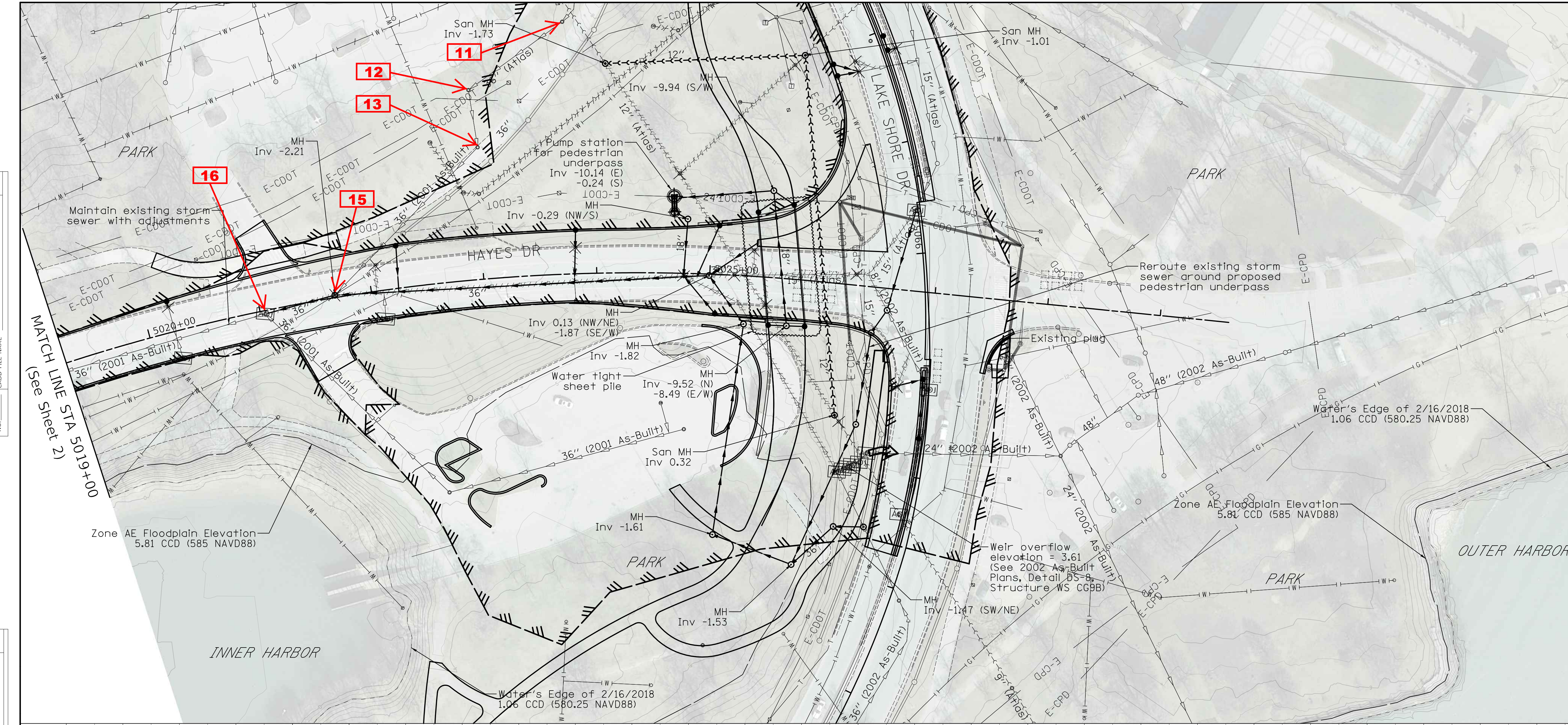
OPC MOBILITY IMPROVEMENTS	
PROPOSED DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 2 OF 22 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	2
CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				

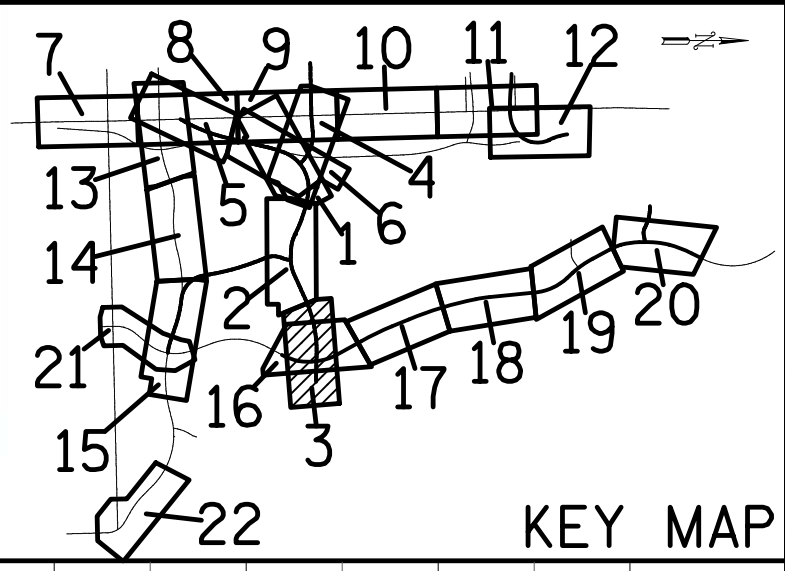
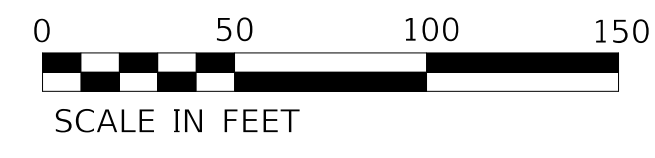
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PLAN	SURVISED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	NO.	
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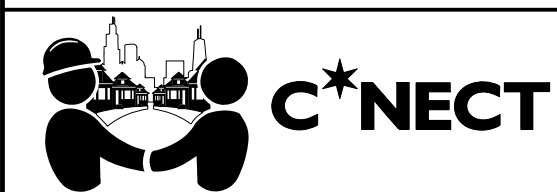
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	PLOTTED	BY
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	NOTE BOOK	
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	STRUCTURE NOTATION	
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- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. All sewers on Hayes Drive are City of Chicago jurisdiction.
 3. The "2001 As-Built" referenced on storm sewer line work is the 2001 South Lake Shore Drive Contract 1 - Advance Work As-Built.
 4. The "2002 As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 5. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 6. All proposed storm sewers are Class A RCP unless otherwise noted.



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	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN	
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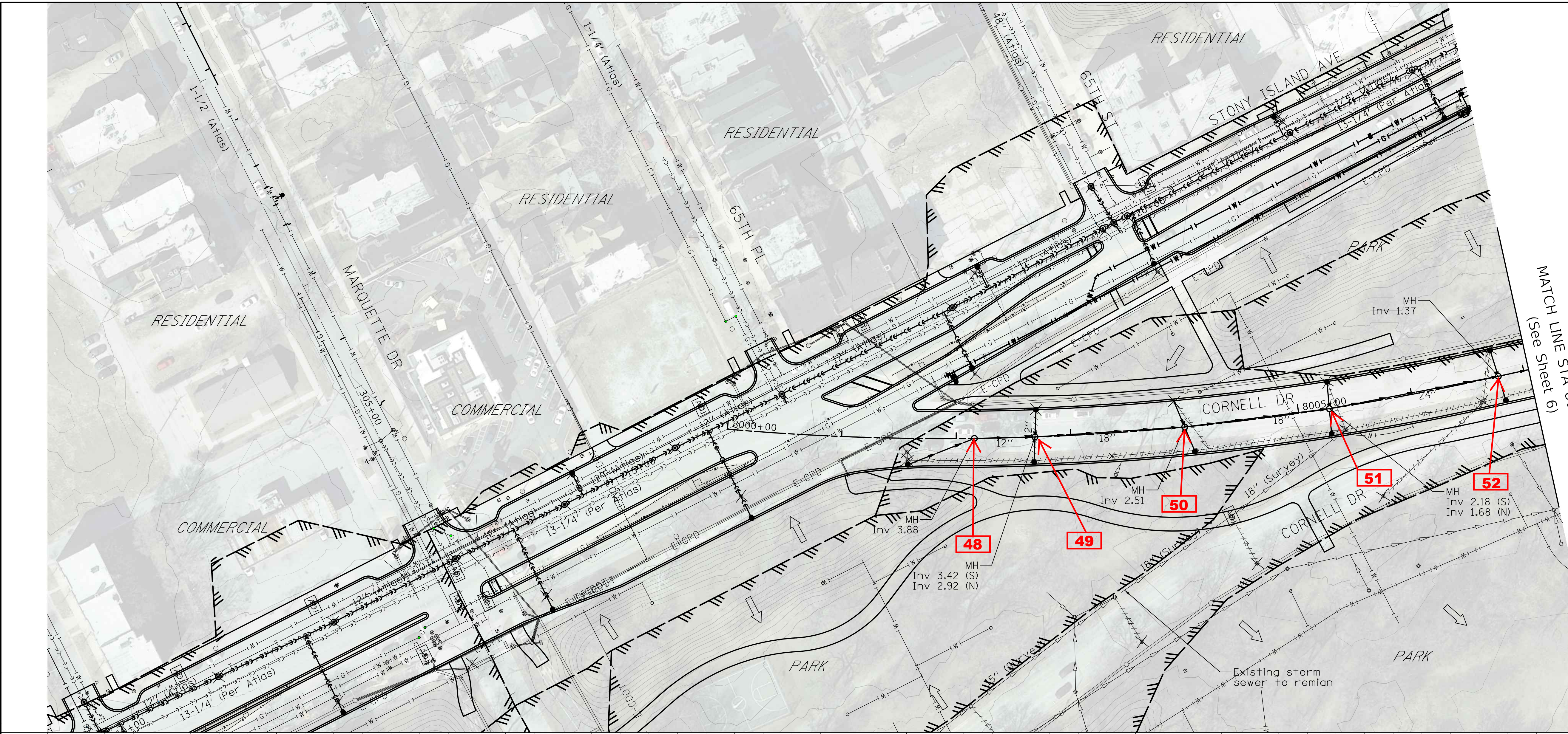
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	17-B7203-00-ES	COOK	22	3
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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PLAN	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
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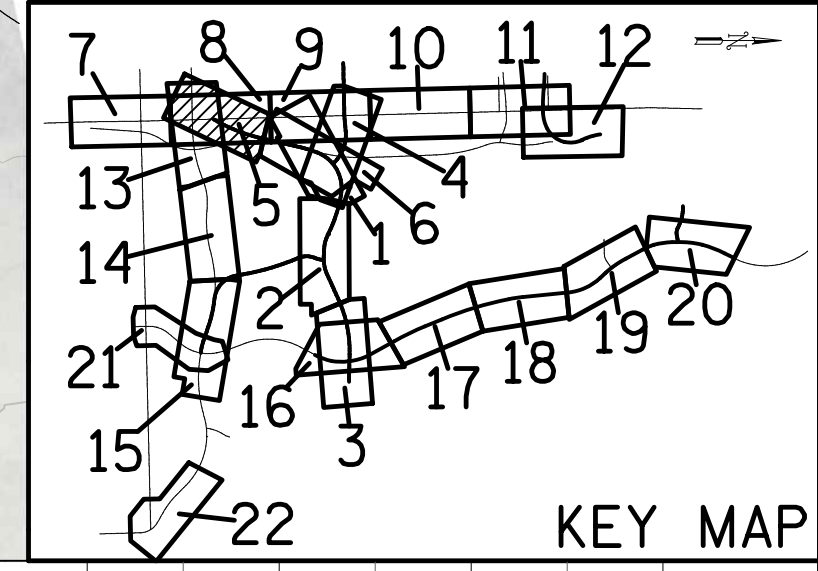
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NOTE BOOK	PLOTTED	BY
NO.	GRADES CHECKED	
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- Notes:
1. All combined sewers are City of Chicago jurisdiction.
 2. Storm sewer on Stony Island Avenue south of 65th Place and on Cornell Drive are IDOT jurisdiction.
 3. Storm sewer on Stony Island Avenue north of 65th Place and Marquette Drive sewers are City of Chicago jurisdiction.
 4. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 5. All proposed storm sewers are Class A RCP unless otherwise noted

MATCH LINE STA 8007+00
(See Sheet 6)

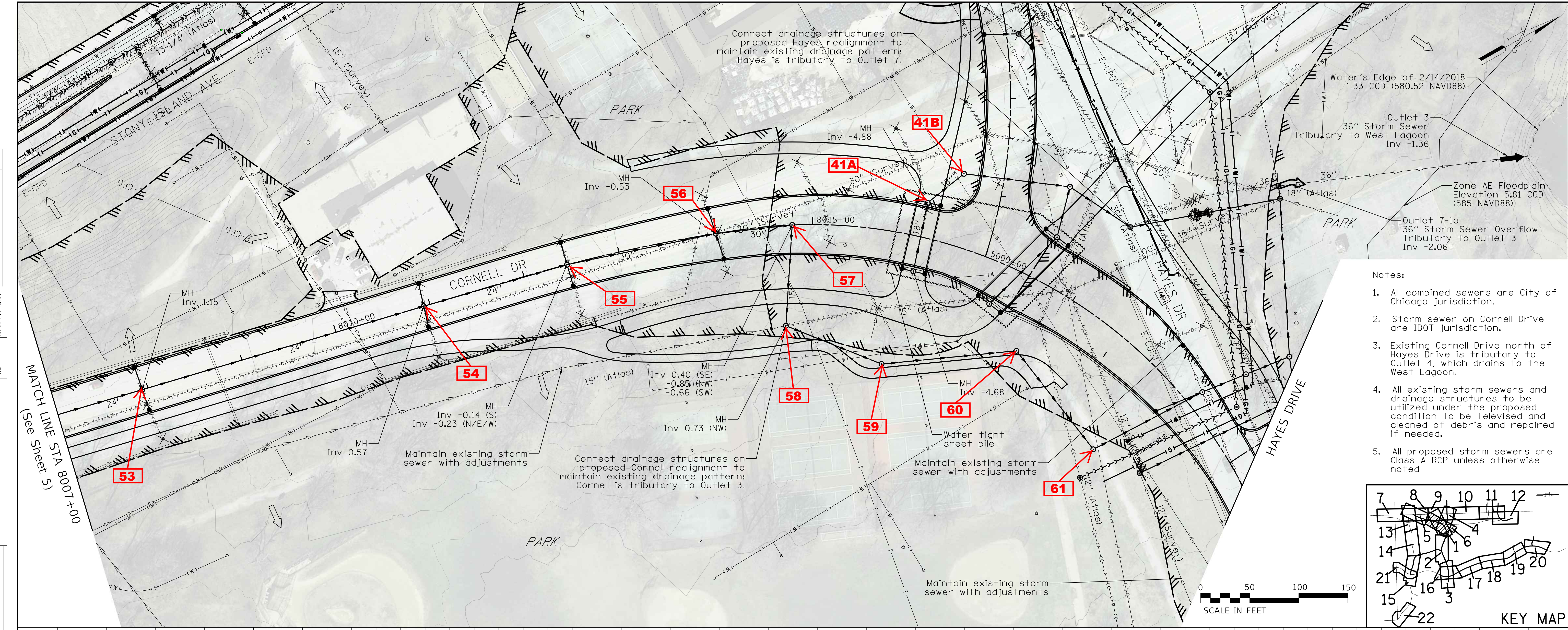


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	PLOT SCALE = 50.0000' / in.	DRAWN - WAM/MSA	REVISED -					17-B7203-00-ES	COOK	22	5	
	PLOT DATE = 6/12/2019	CHECKED - TKL	REVISED -					CONTRACT NO. B-7-203				
				DATE - MAR 2019	REVISED -	SCALE: 1" = 50'			SHEET 5 OF 22 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT

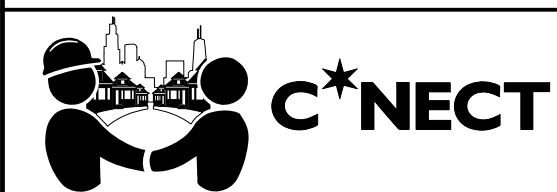
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	NOTE BOOK	
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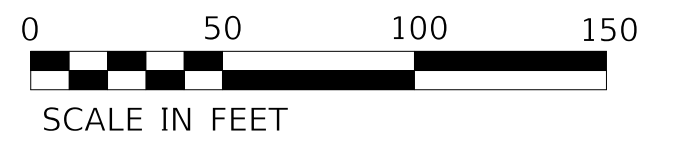
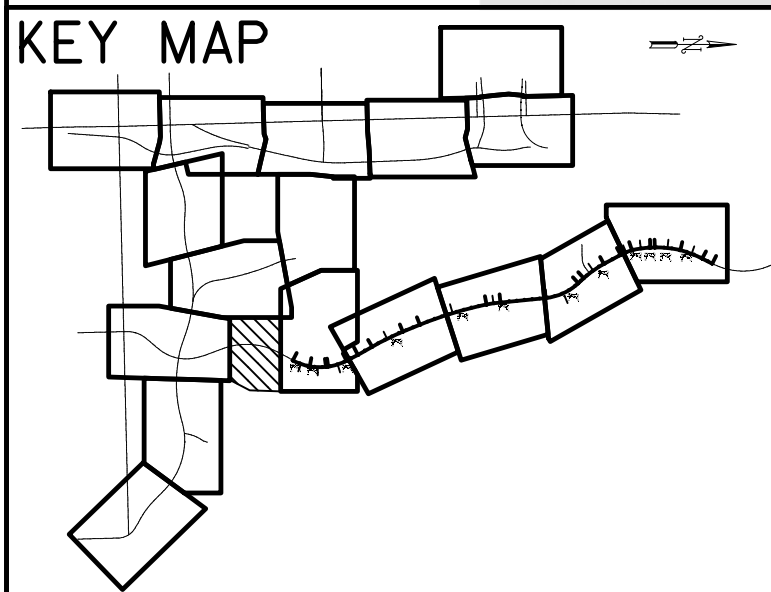
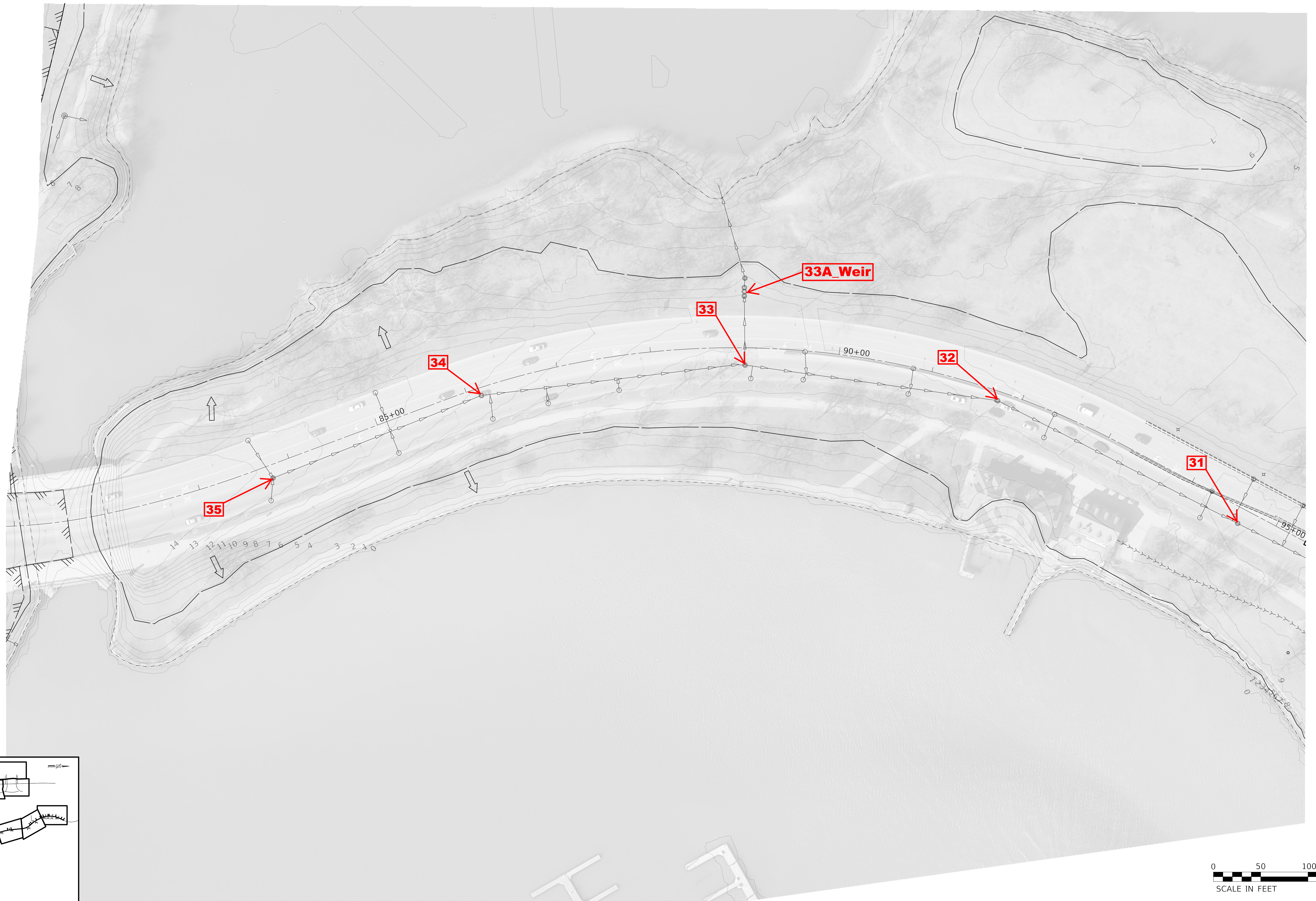


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	DATE - MAR 2019	REVISED -

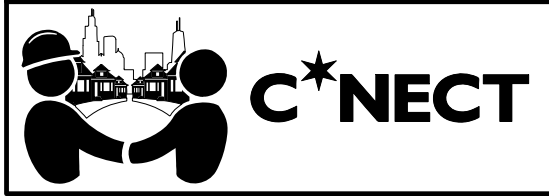


OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN	
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				



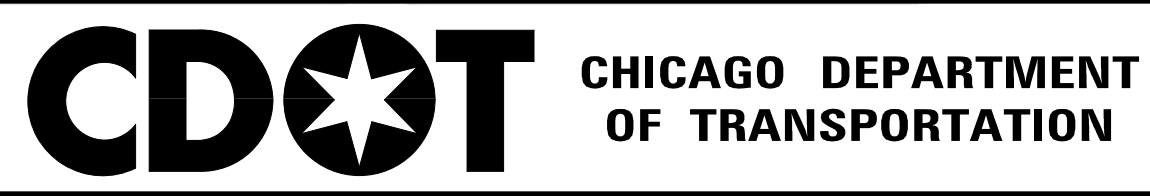
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DATE - SDATE	REVISD - _____

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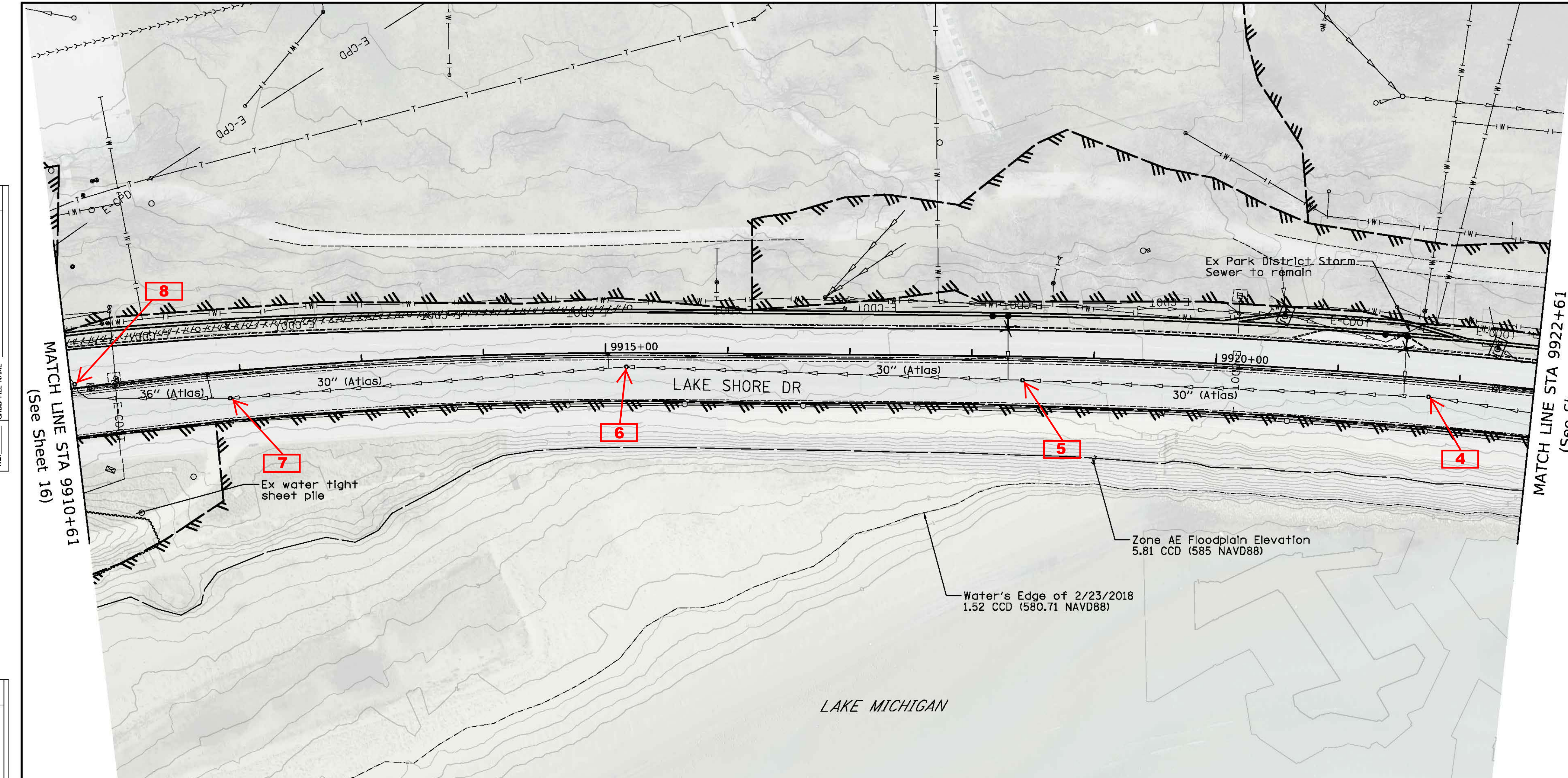
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 EXISTING DRAINAGE PLAN
 SCALE: 1" = 50' SHEET 9 OF 17 SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

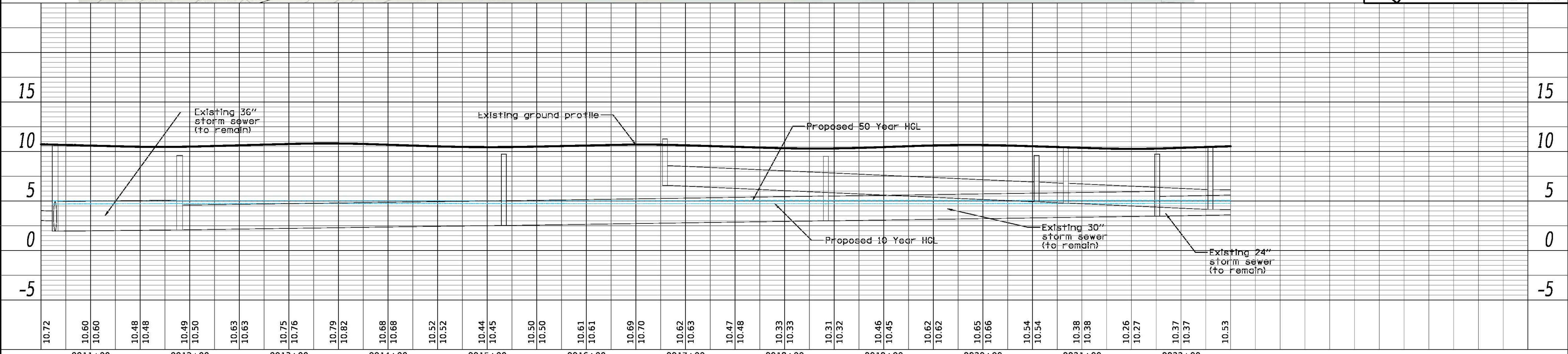
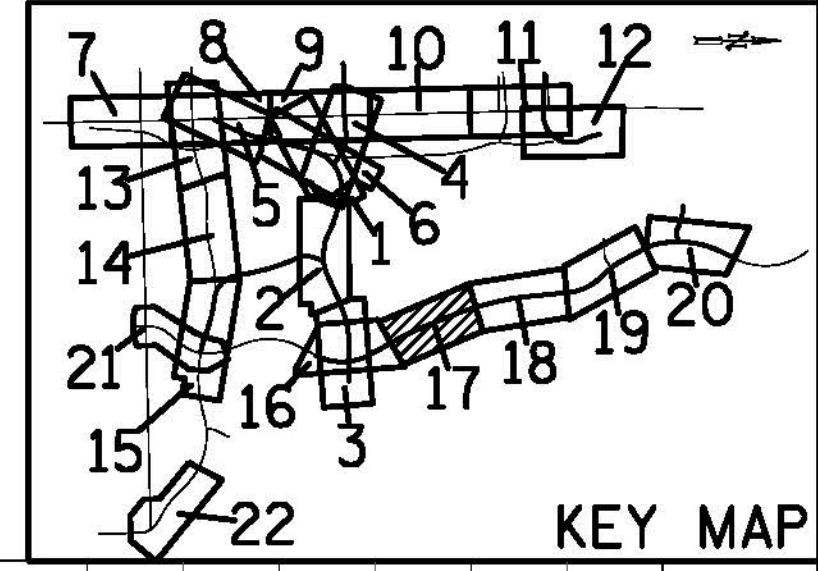
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	NOTE BOOK	
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	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATIONS CHKD	
	NO.	



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT Jurisdiction.
 2. Sewers that drain Jackson Park are Chicago Park District Jurisdiction.
 3. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 4. All proposed storm sewers are Class A RCP unless otherwise noted



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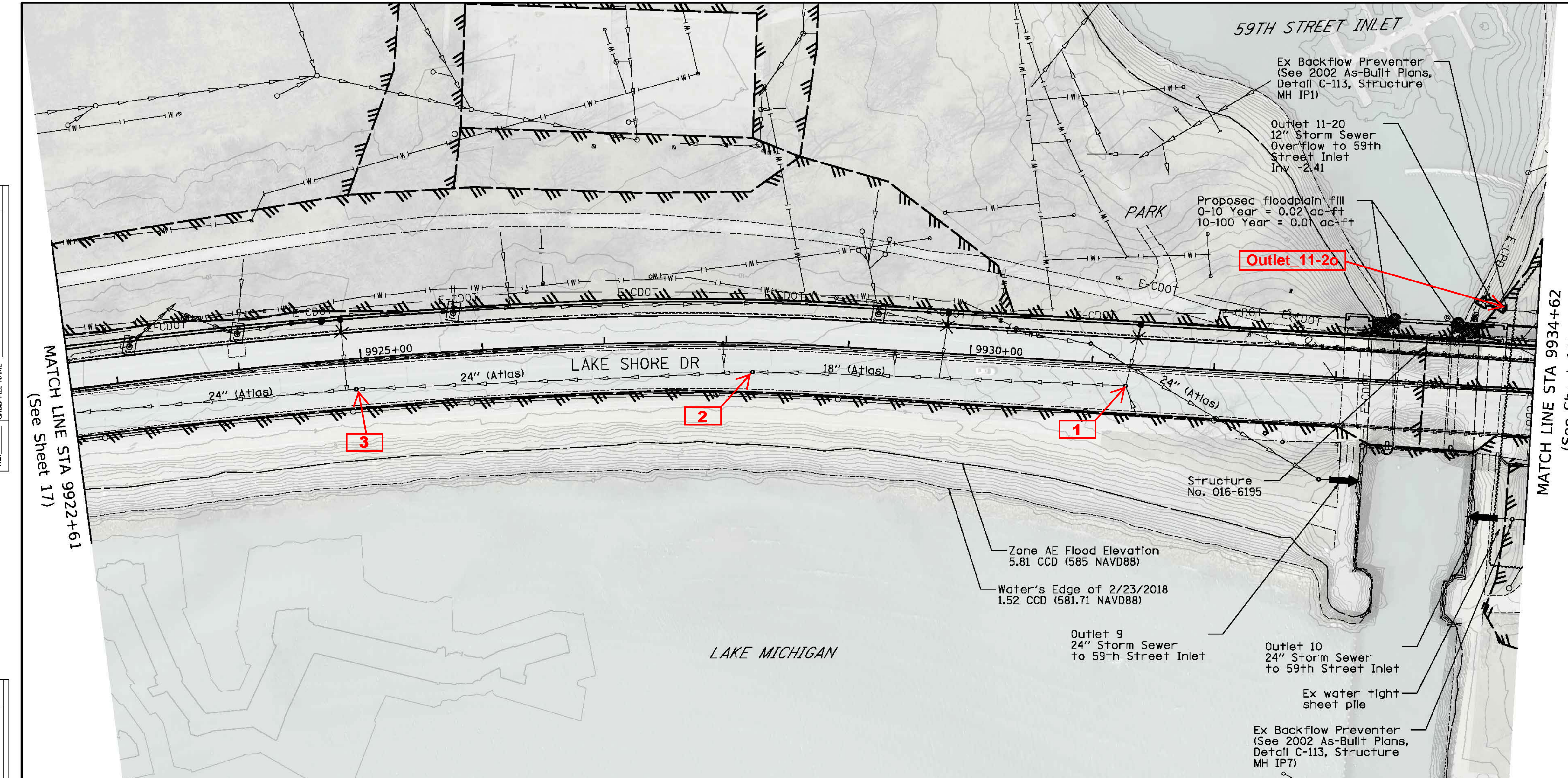
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

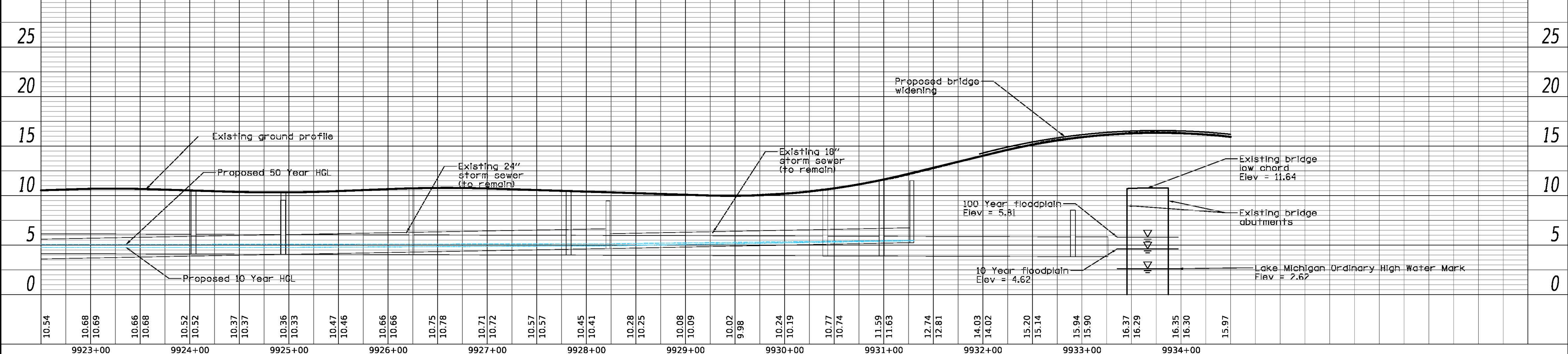
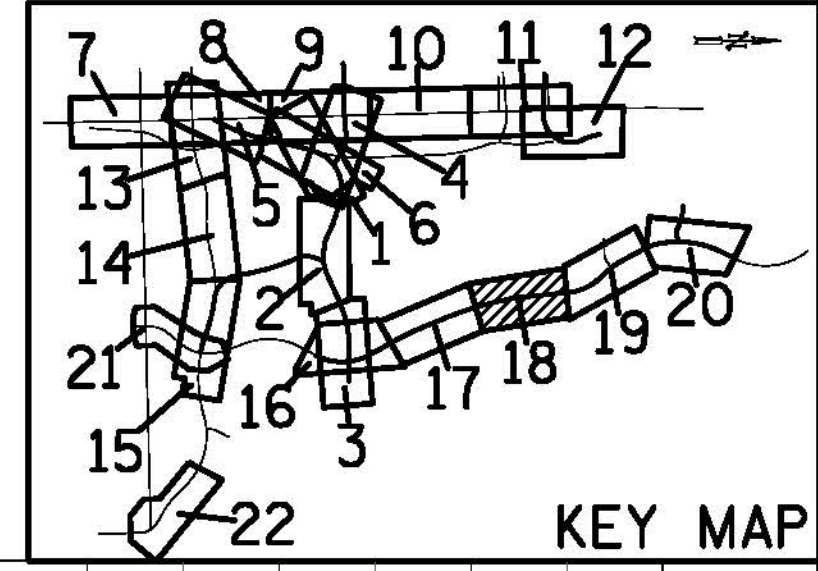
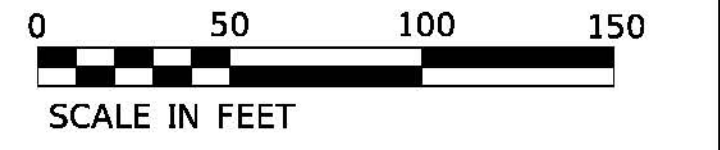
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	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	NO.	
	FILE NAME	
	FILE NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATION CHKD	



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT Jurisdiction.
 2. Sewers that drain Jackson Park are Chicago Park District Jurisdiction.
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 4. All proposed storm sewers are Class A RCP unless otherwise noted



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	DATE - MAR 2019	REVISED -



OPC MOBILITY IMPROVEMENTS
PROPOSED DRAINAGE PLAN

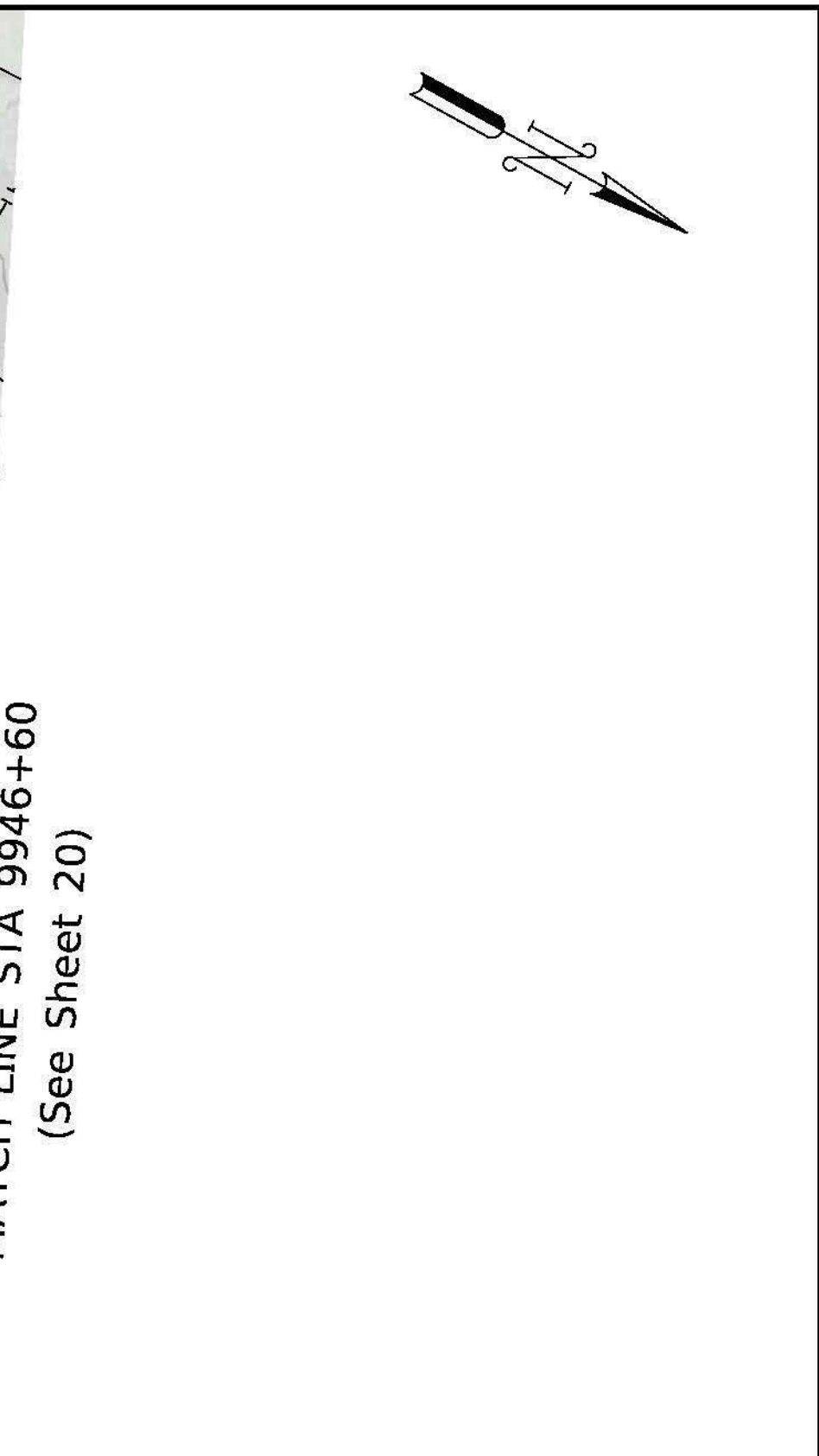
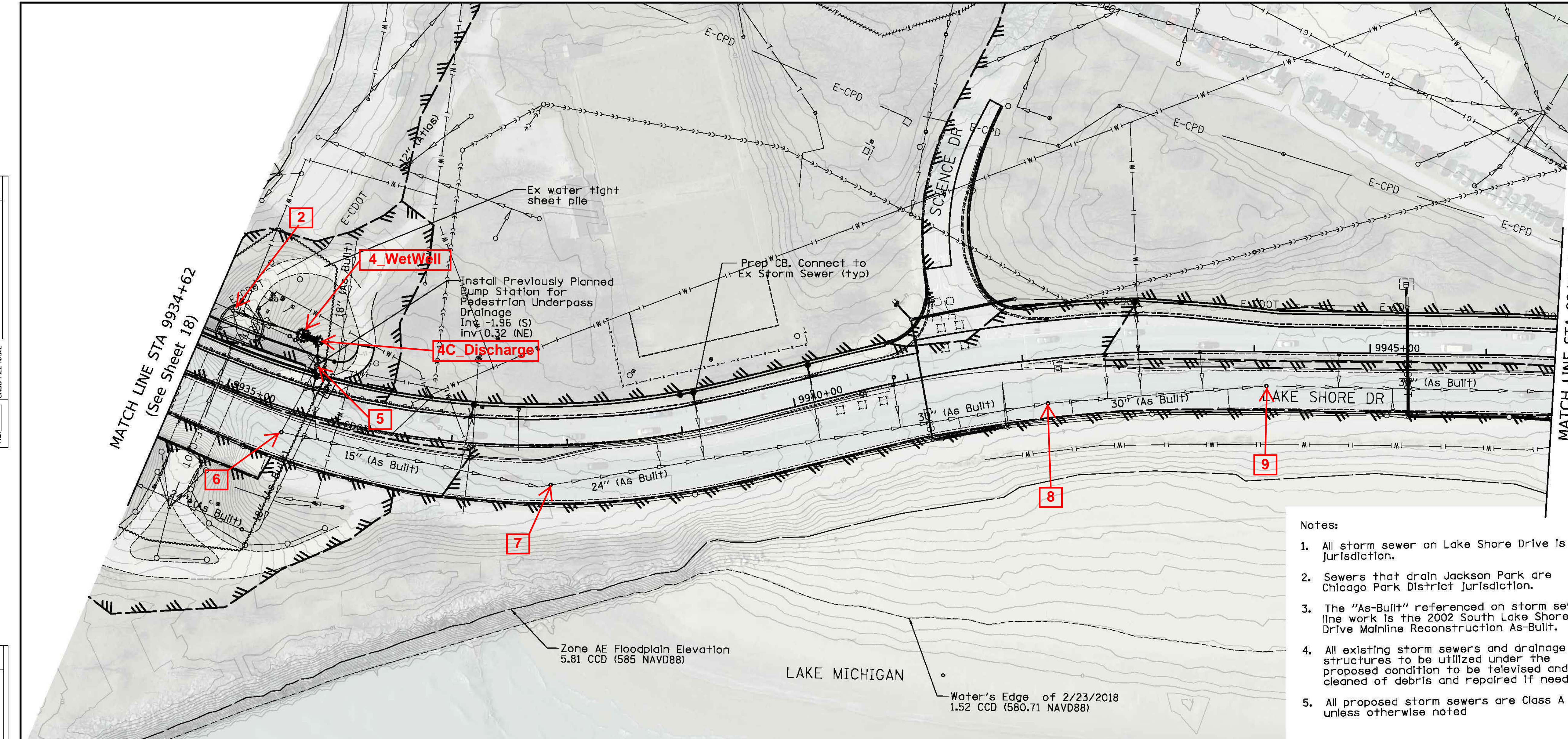
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. B-7-203				
ILLINOIS / FED. AID PROJECT				

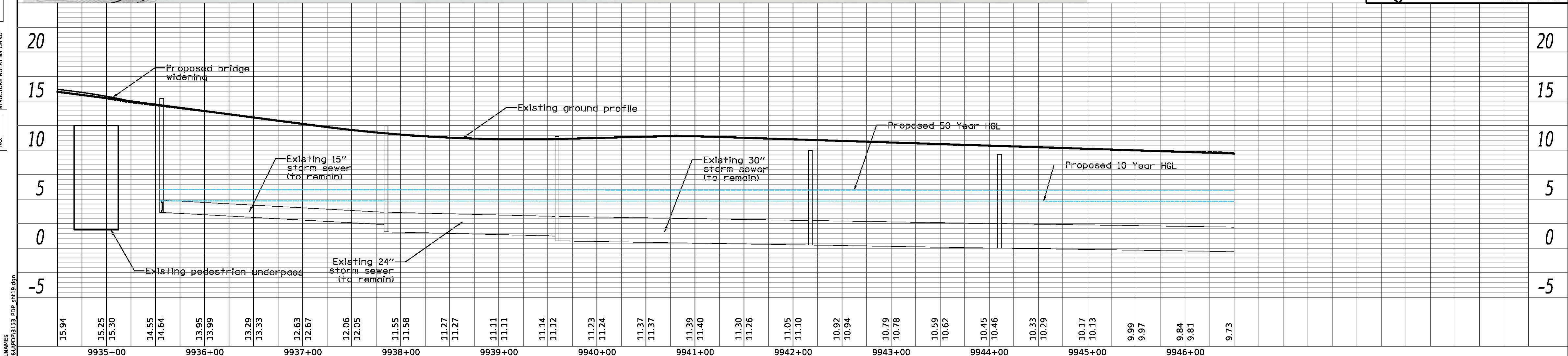
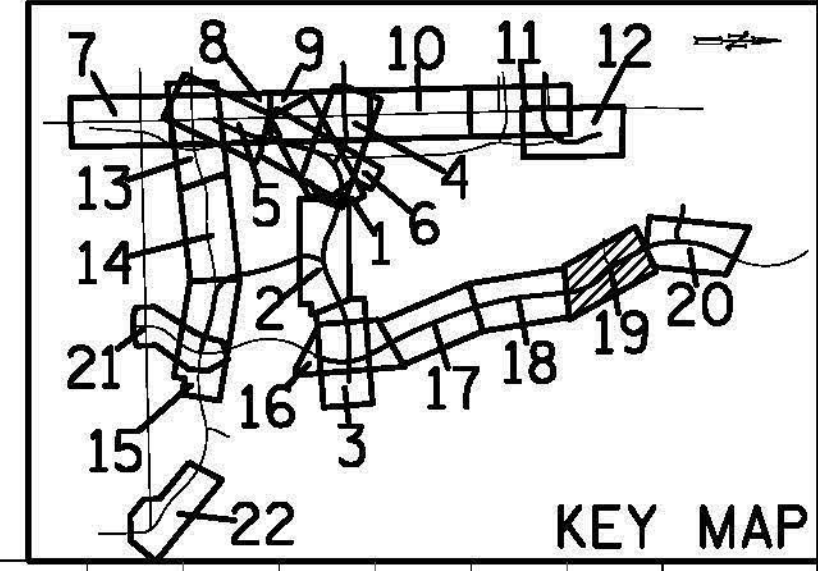
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	ALIGNMENT CHECKED	
	NOTE BOOK	
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHKD	
	NO.	



- Notes:
1. All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 2. Sewers that drain Jackson Park are Chicago Park District jurisdiction.
 3. The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 4. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 5. All proposed storm sewers are Class A RCP unless otherwise noted.



15.94	15.25	15.30	14.55	14.64	13.95	13.99	13.29	13.33	12.63	12.67	12.06	12.05	11.55	11.58	11.27	11.27	11.11	11.11	11.14	11.12	11.23	11.24	11.37	11.37	11.39	11.40	11.30	11.26	11.05	11.10	10.92	10.94	10.79	10.78	10.59	10.62	10.45	10.46	10.33	10.29	10.17	10.13	9.99	9.97	9.84	9.81	9.73						
9935+00			9936+00				9937+00				9938+00				9939+00						9940+00								9941+00																								



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DATE - MAR 2019	REVISED -	



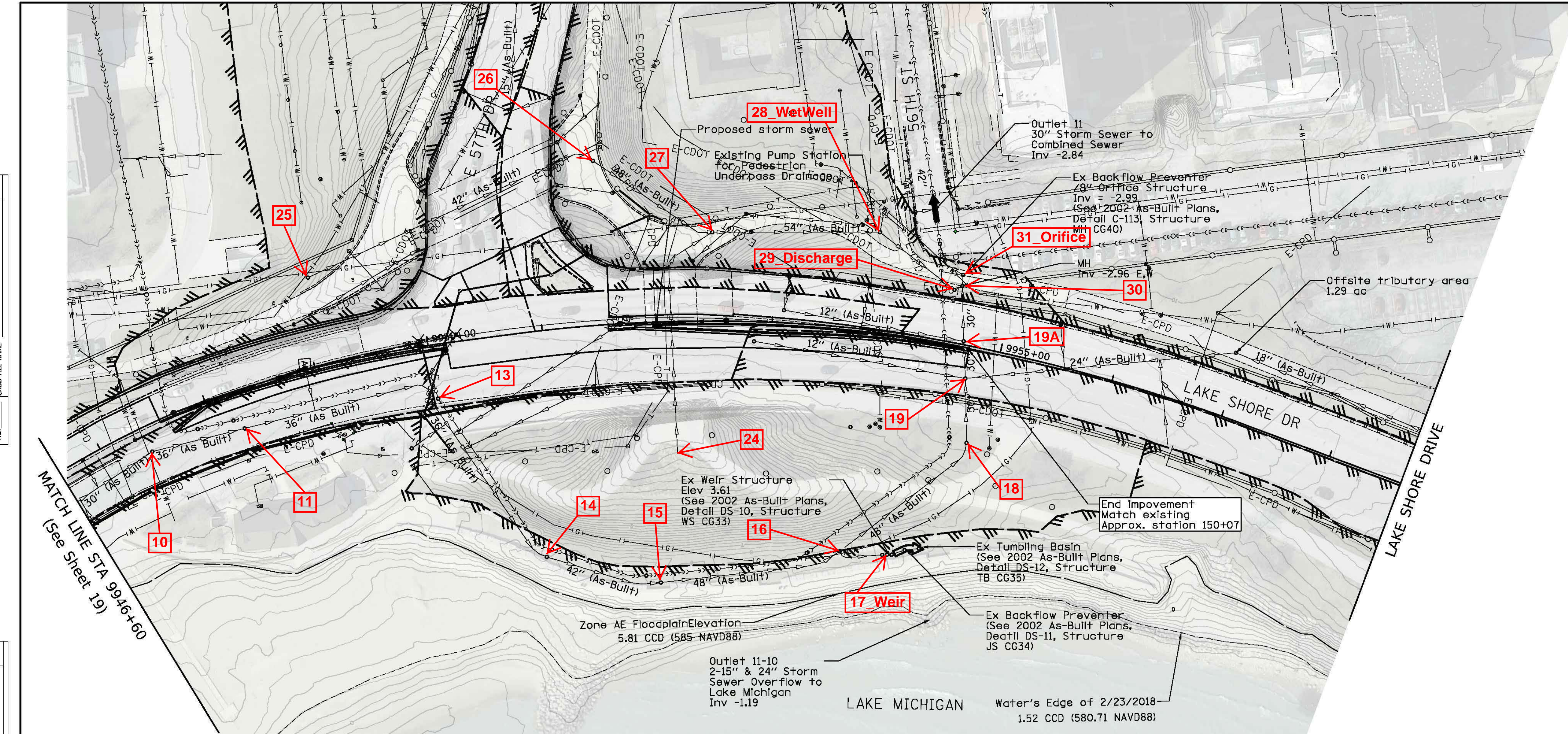
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

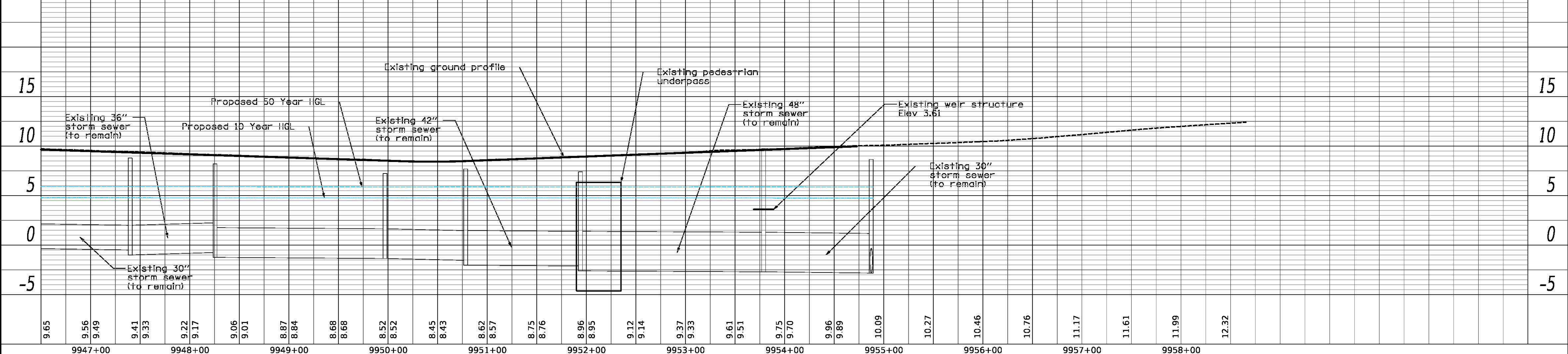
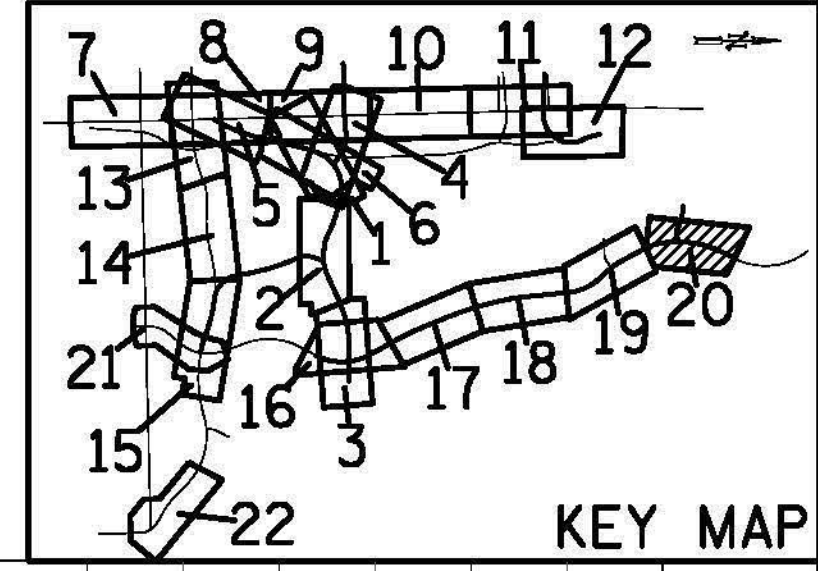
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATION CHECKED	
	FILE NAME	
	NO.	



- Notes:
- All storm sewer on Lake Shore Drive and 57th Drive is IDOT jurisdiction.
 - All combined sewers on this sheet are City of Chicago jurisdiction.
 - "Tributary Area" of Outlet 11 includes storm sewer overflow areas from Outlets 11-10 and 11-20.
 - The "As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - All proposed storm sewers are Class A RCP unless otherwise noted.



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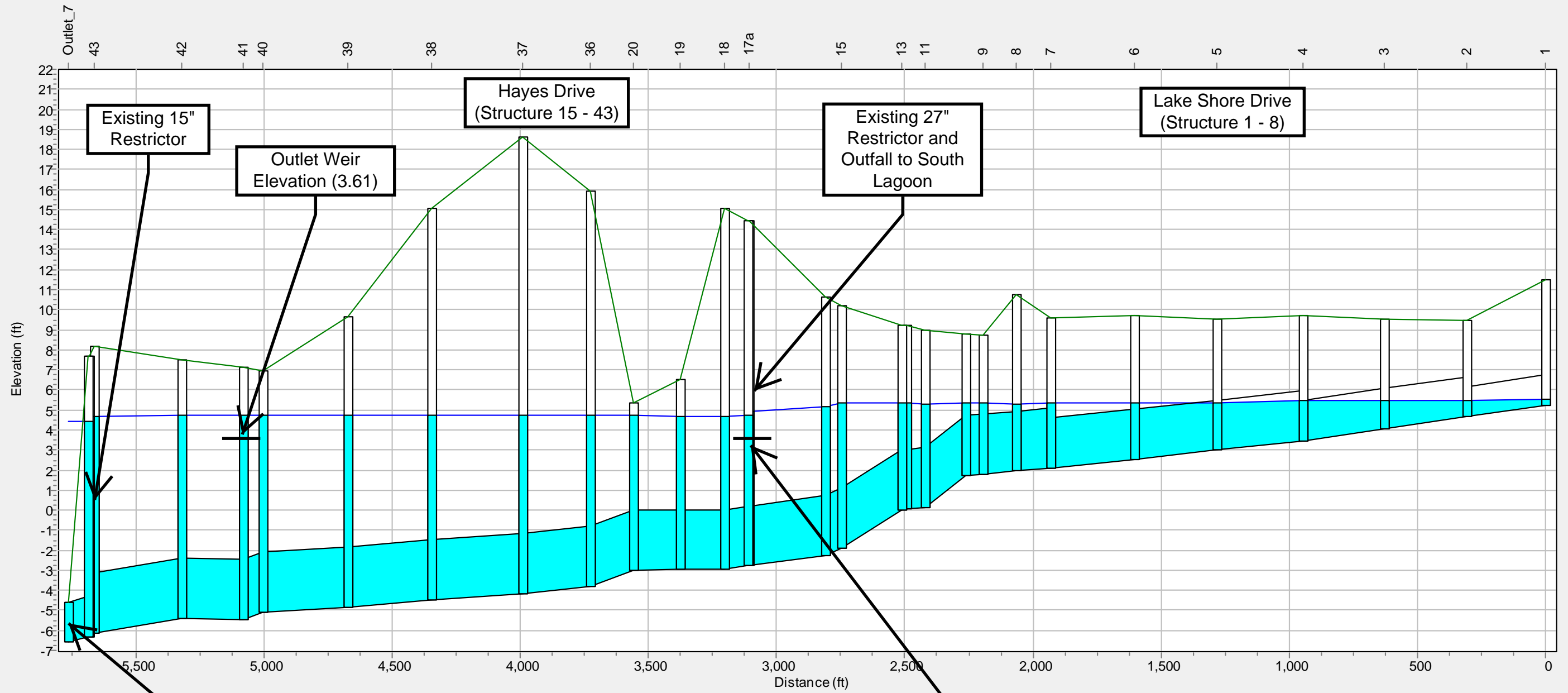


OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN			
SCALE: 1" = 50'	SHEET 20 OF 22 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	20
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

Jackson Park Storm Sewer System
Existing Condition - 10 Year Storm

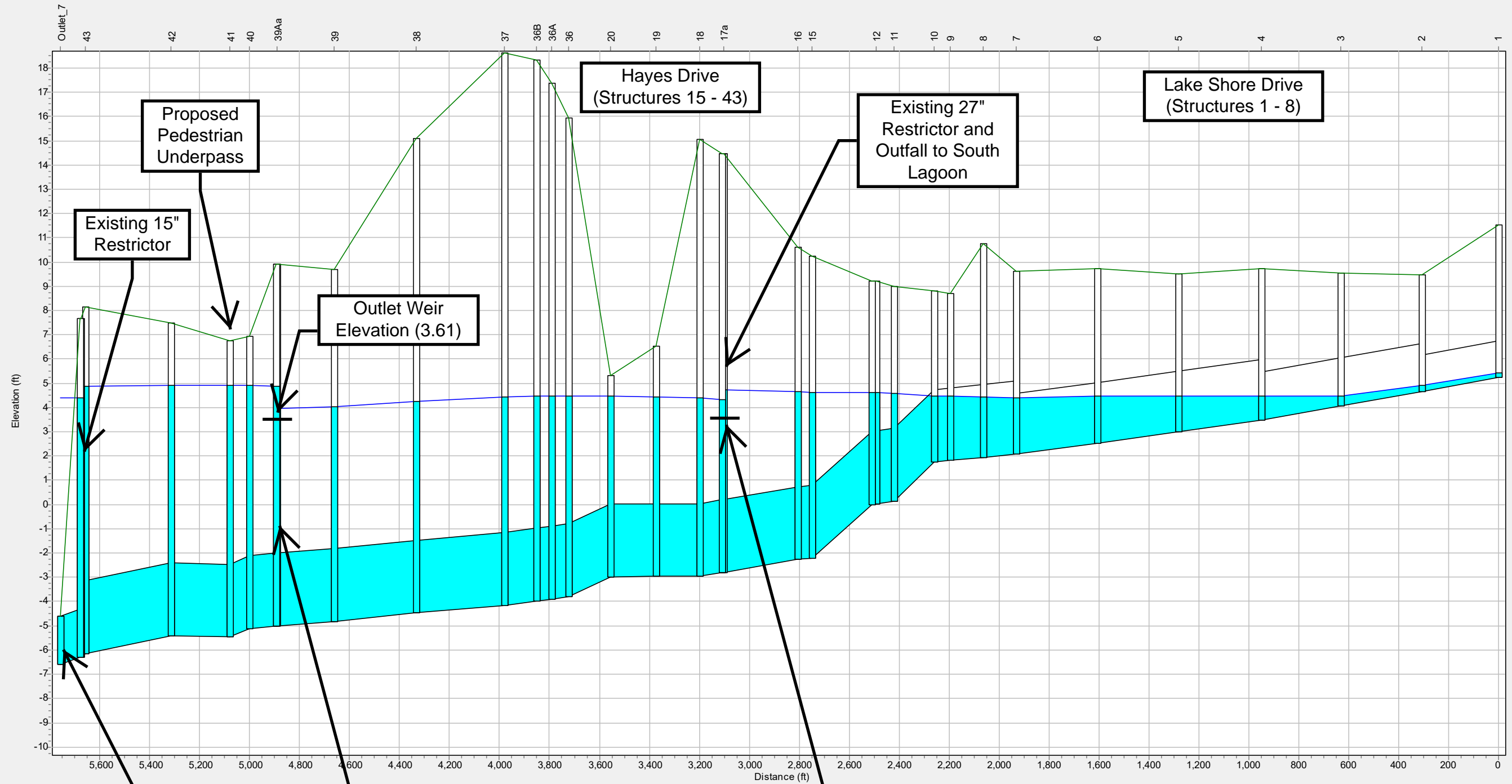
Water Elevation Profile: Node 1 - Outlet_7



08/29/2018 11:45:00

Jackson Park Storm Sewer System Proposed Condition - 10 Year Storm

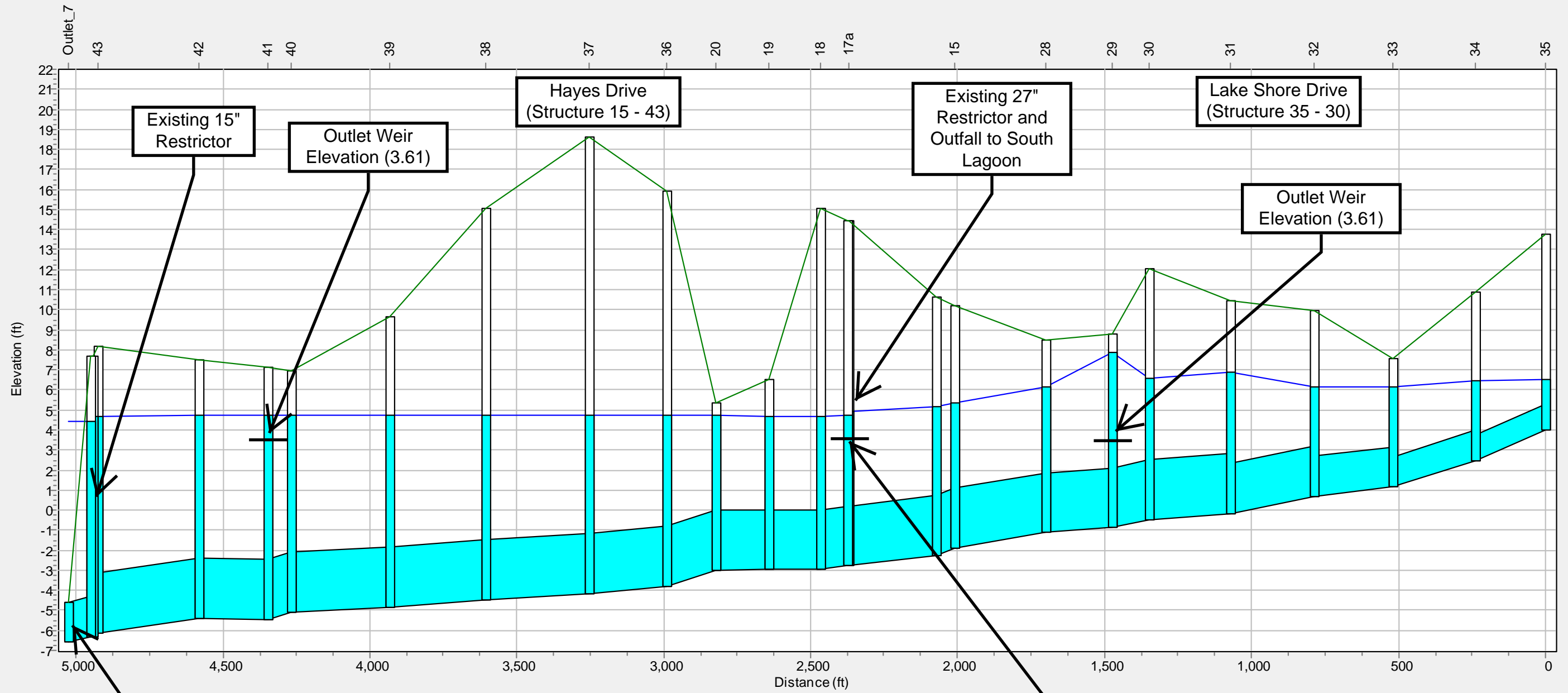
Water Elevation Profile: Node 1 - Outlet_7



08/29/2018 14:15:00

Jackson Park Storm Sewer System
Existing Condition - 10 Year Storm

Water Elevation Profile: Node 35 - Outlet_7



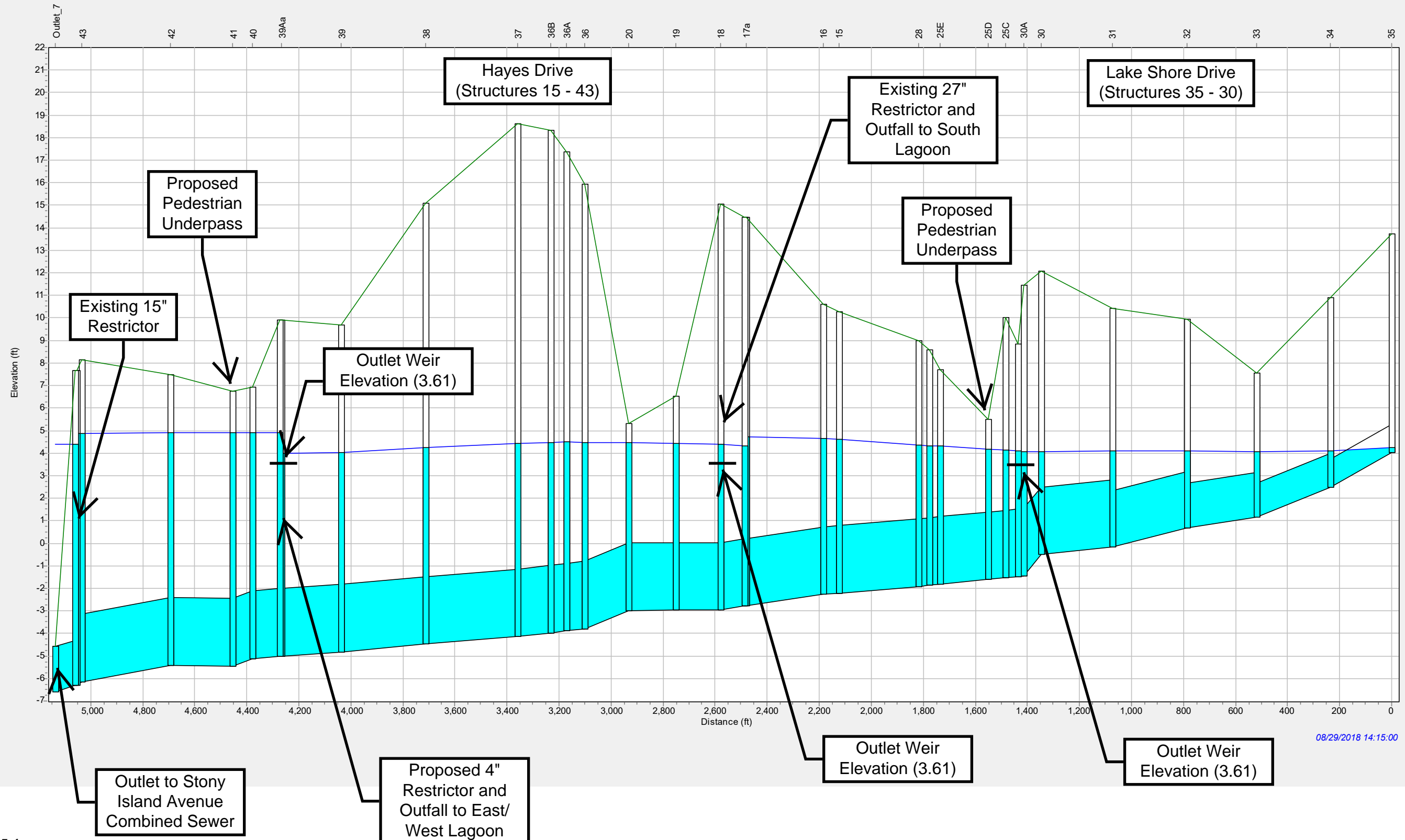
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Outlet to Stony Island Avenue Combined Sewer

Outlet Weir Elevation (3.61)

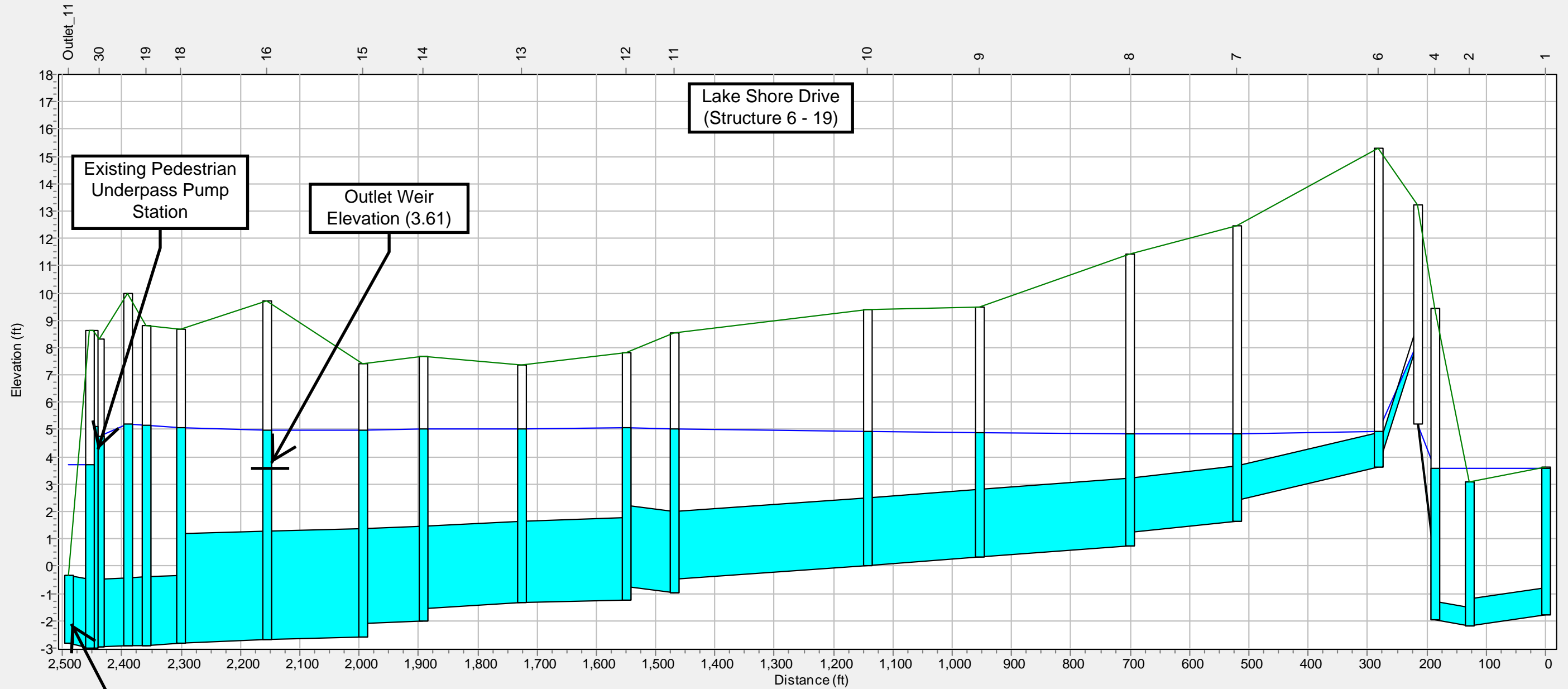
Jackson Park Storm Sewer System
Proposed Condition - 10 Year Storm

Water Elevation Profile: Node 35 - Outlet_7



Jackson Park Storm Sewer System
Existing Condition - 10 Year Storm

Water Elevation Profile: Node 1 - Outlet_11

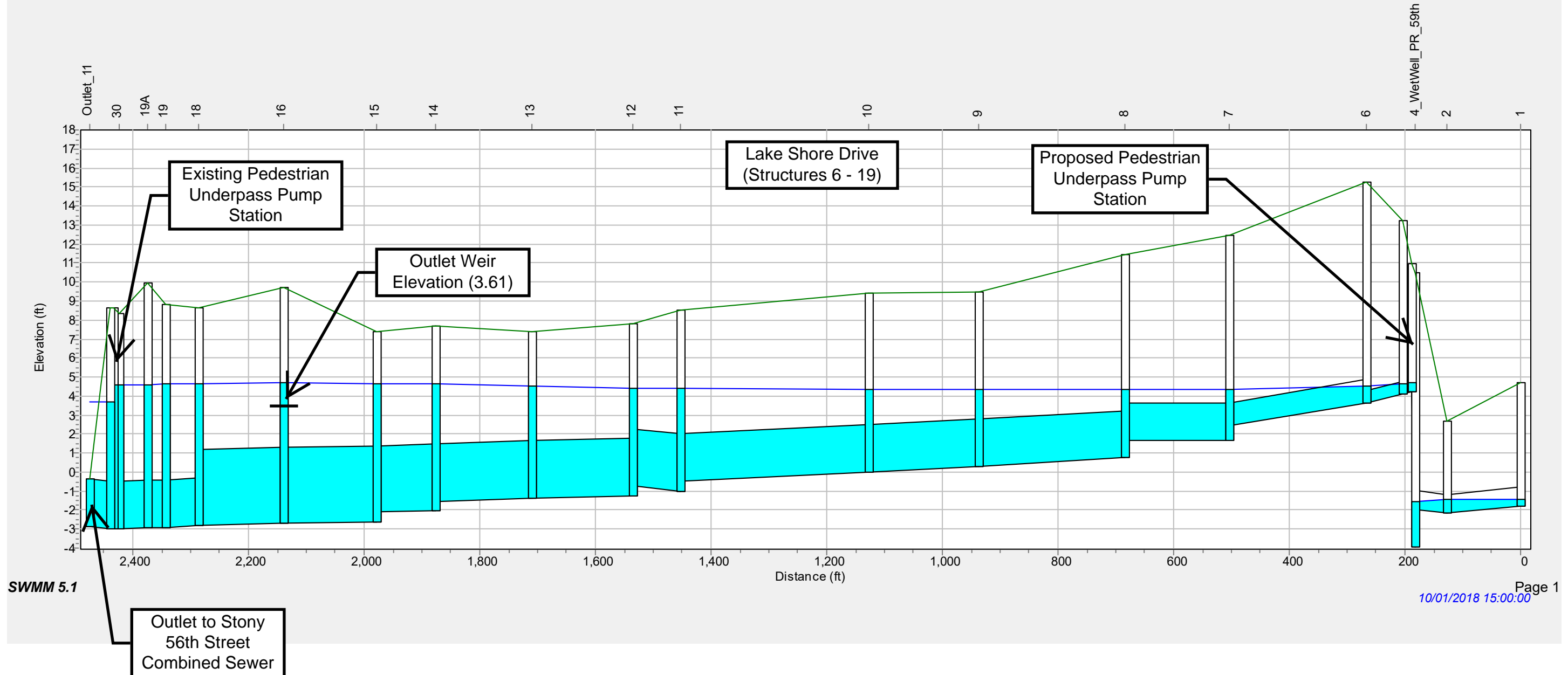


10/01/2018 15:30:00

Outlet to 56th Street Combined Sewer

Jackson Park Storm Sewer System
Proposed Condition - 10 Year Storm

Water Elevation Profile: Node 1 - Outlet_11



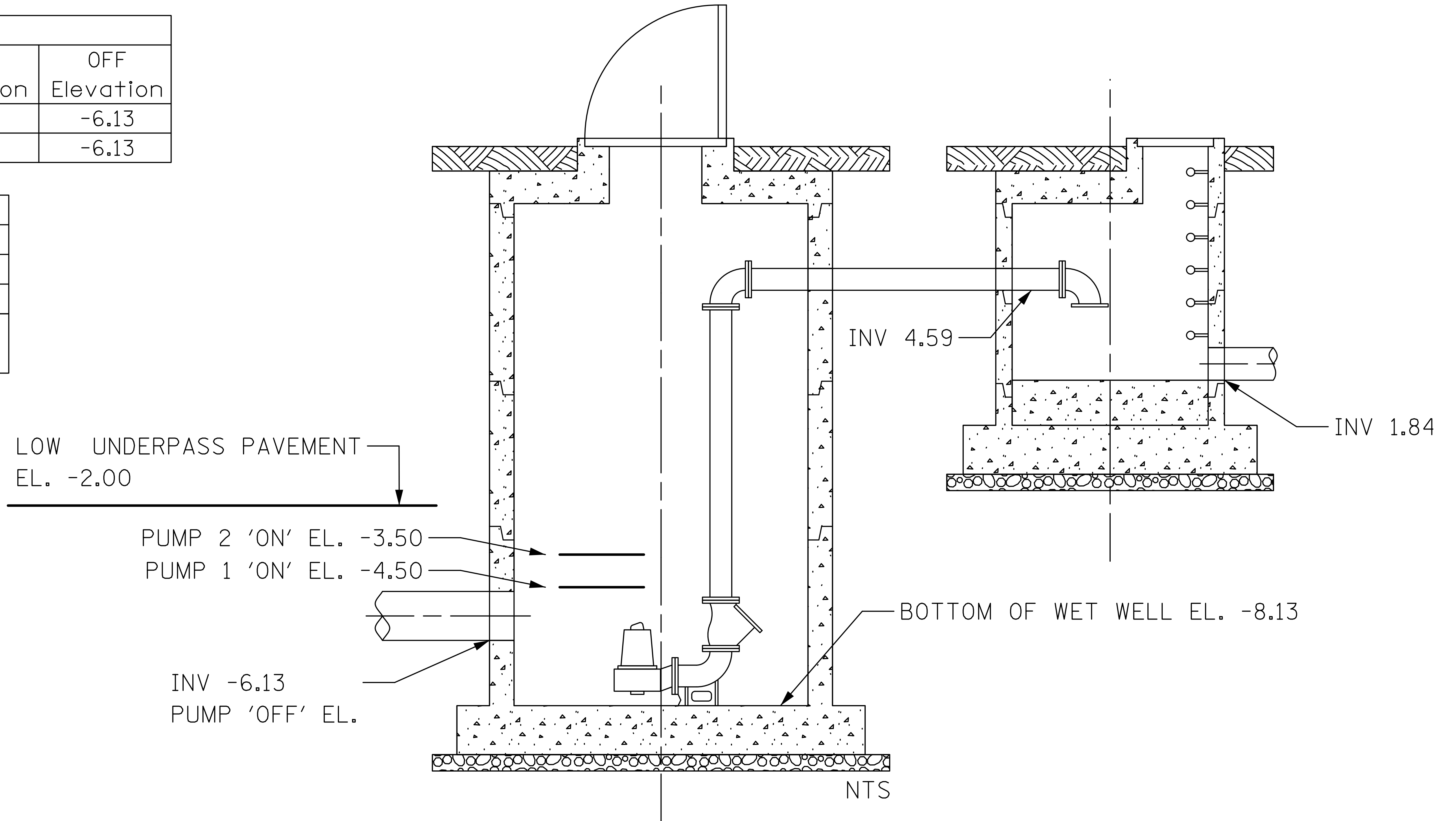
Underpass Pump Station Analysis

Storage Summary (Below -2, Low Pavement Elev.)		
	Description	Volume (ft ³)
Wet Well	1 - 9' Diameter	263
Manhole	3 - 4' Diameter	144
Storm Sewer	169' of 18" Storm Sewer	299
	TOTAL STORAGE	706

Key Elevations	
Low Water Elevation	-6.13
Low Underpass Pavement Elevation	-2.00
Pump Discharge Elevation	4.59

Pump Summary			
Pump	Flow Rate (cfs)	ON Elevation	OFF Elevation
1	0.50	-4.50	-6.13
2	0.50	-3.50	-6.13

Hydrology Summary	
Subarea	Area (Ac)
13-1	0.51
13-2	0.39
TOTAL AREA TRIBUTARY TO PUMP STATION	0.90



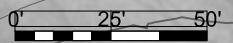
South Shore Drive Underpass Pump Station



SUBAREA 13-2
AREA = 0.39 AC
IMP = 0.04 AC

SUBAREA 13-1
AREA = 0.51 AC
IMP = 0.07 AC

360+00

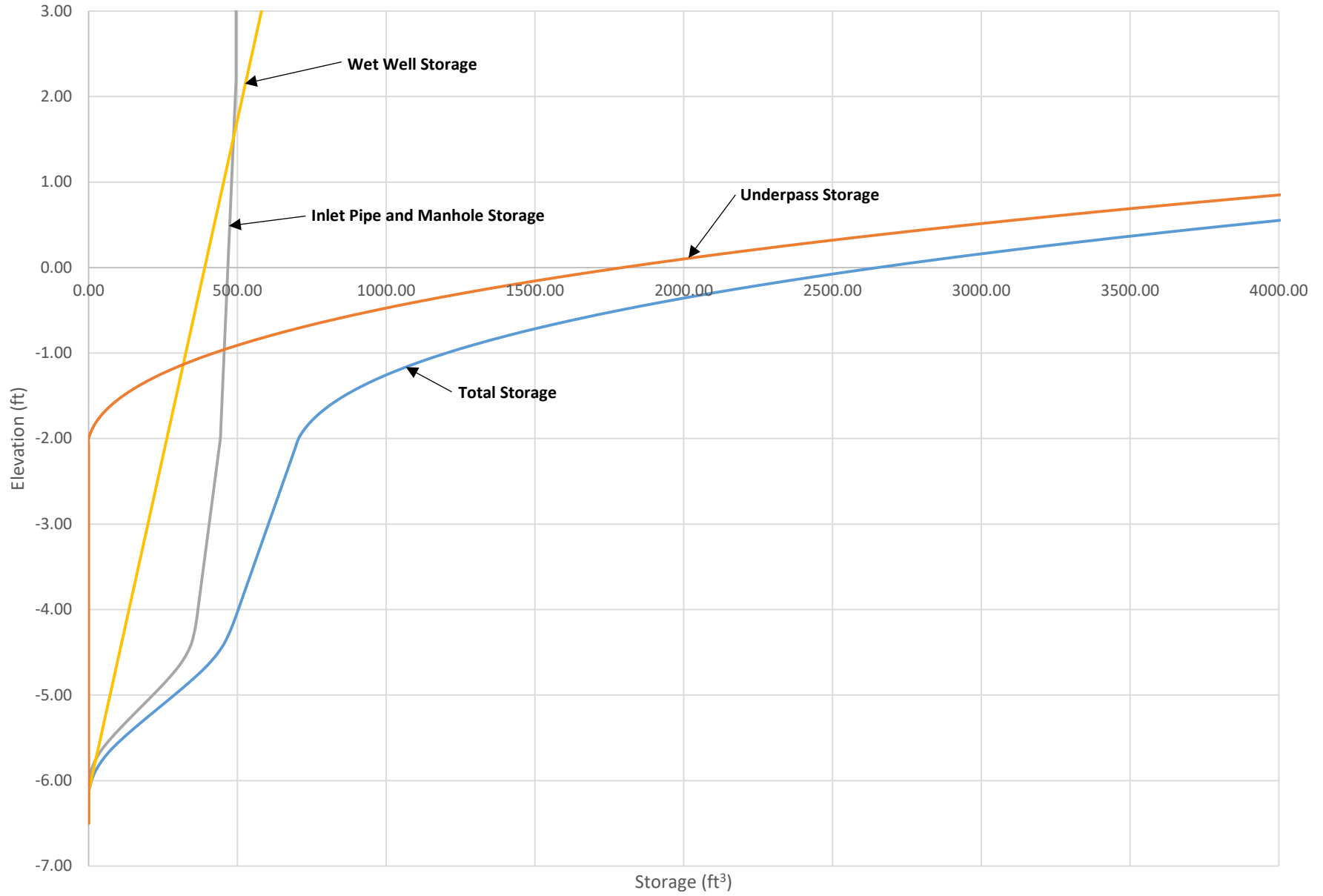


South Shore Drive Underpass Tributary Area

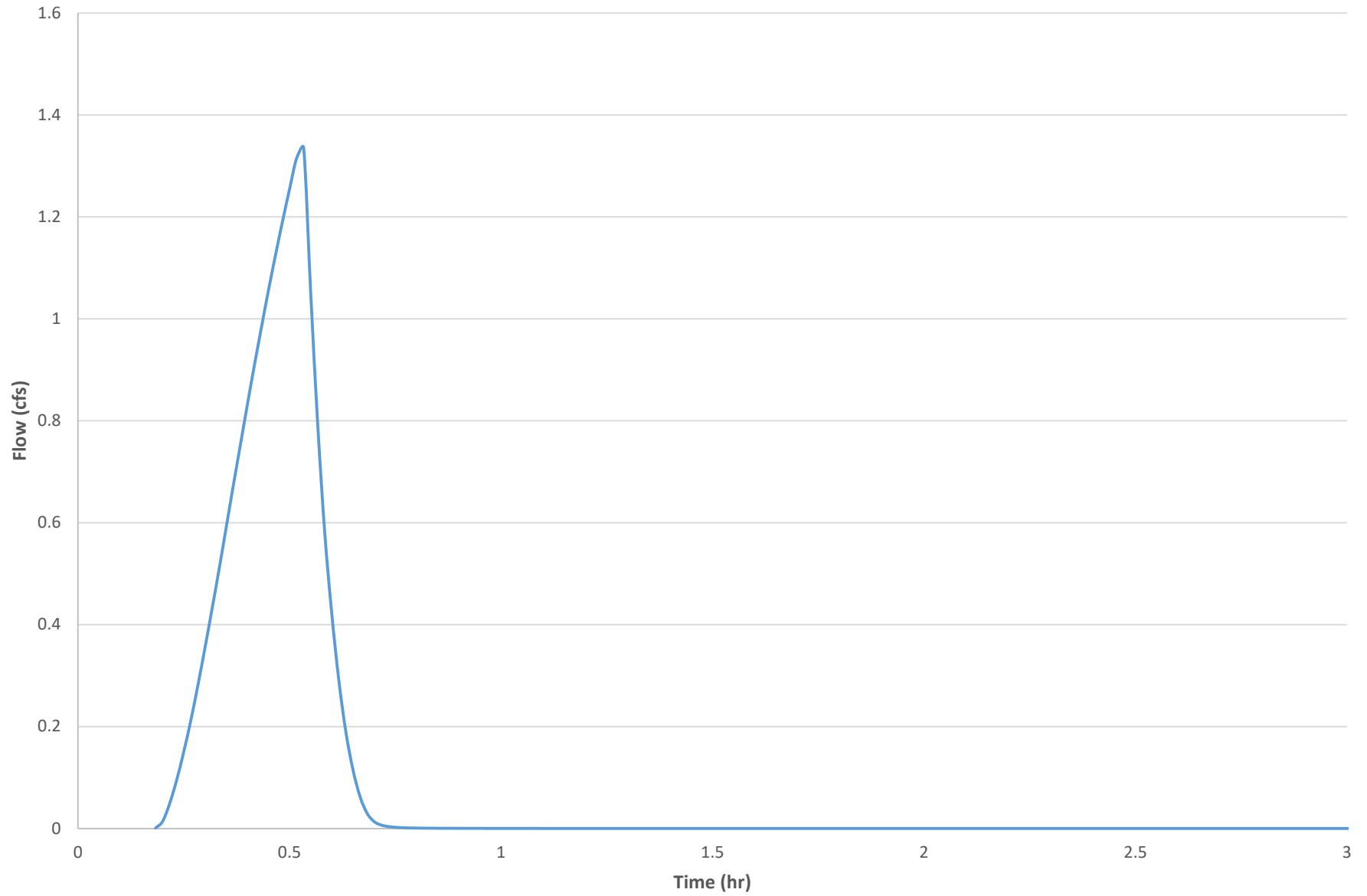
Critical Duration Analysis for Proposed Conditions

Storm Duration (hr)	10 Year Storm
	Storage Needed (ft3)
15 Min	0
30 Min	577.47
1	544.98
2	531.44
6	462.22
24	435.93

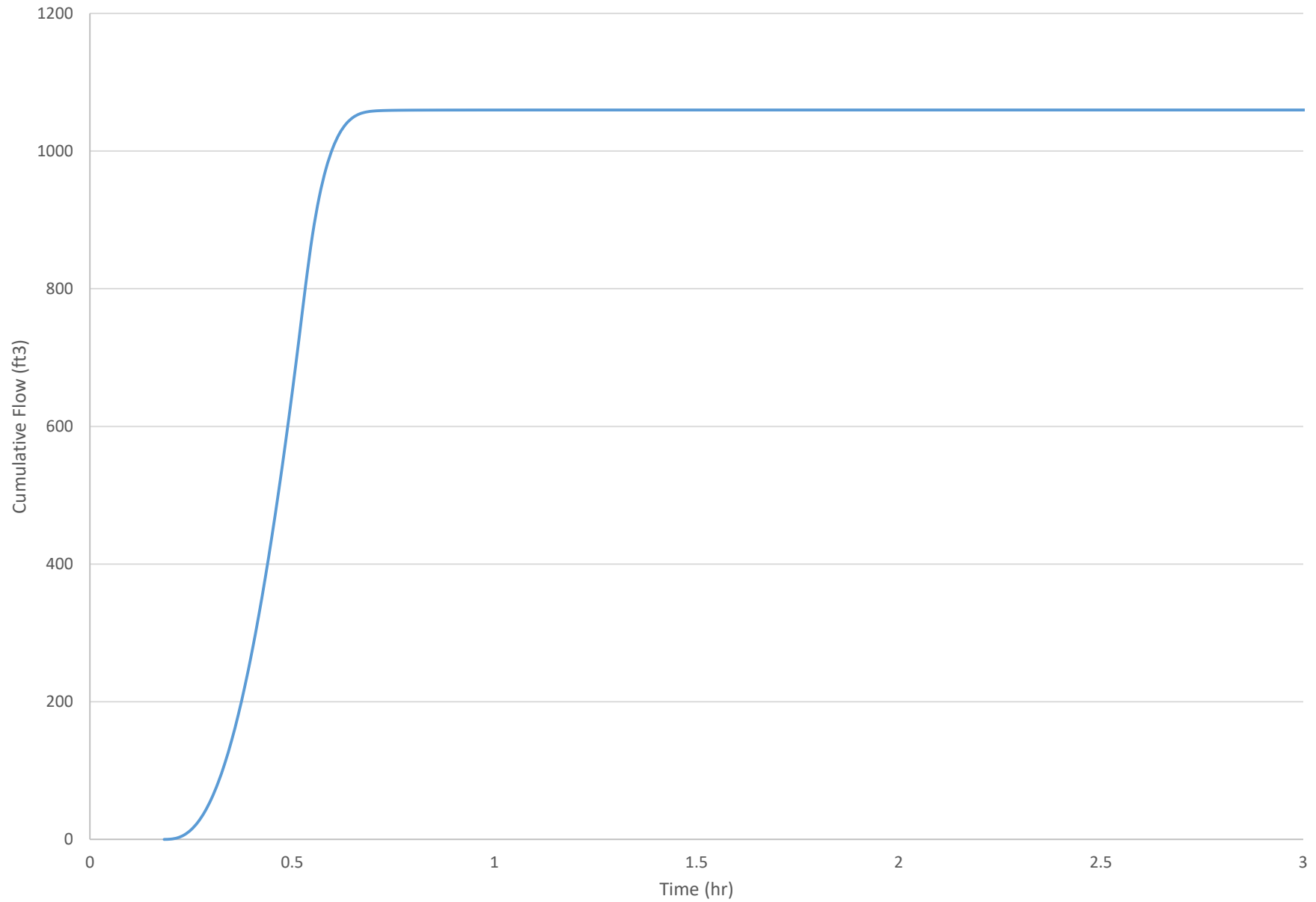
Stage Storage Curve for Proposed Condition



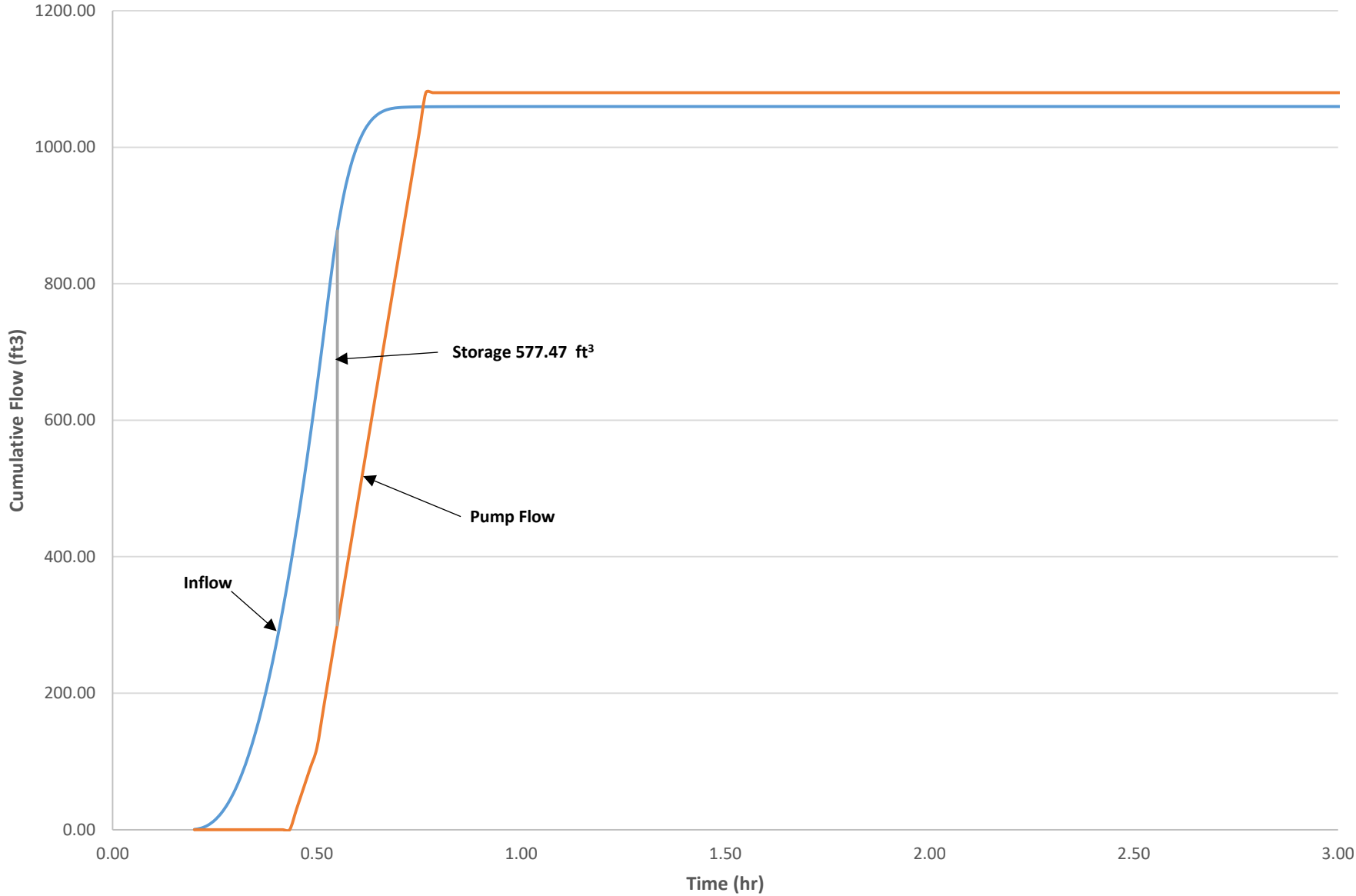
Inflow Hydrograph for 10 Year - 30 Minute Event South Shore Drive Underpass



Inflow Mass Curve for 10 Year - 30 Minute Event South Shore Drive Underpass



Mass Routing Curve for 10 Year - 30 Minute Event South Shore Drive Underpass



Mass Routing Table for 10 Year - 30 Minute Event
South Shore Drive Underpass

Pump #1			Pump #2			Elevation Equivalents			
Off Elevation	On Elevation	Flow (cfm)	Off Elevation	On Elevation	Flow (cfm)	Elev.	-6.1	-4.5	-3.5
-6.1	-4.5	30	-6.1	-3.5	30	Vol. (ft ³)	0	436	553

Time (min)	Inflow (ft3)	Pump Outflows (ft3)		Total Outflow (ft3)	Required Storage (ft3)	On-Off Counters (1=On / 0=Off)		Time (hr)
		#1	#2			#1	#2	
12	0.44	0.00	0.00	0.00	0.44	0	0	0.20
13	2.33	0.00	0.00	0.00	2.33	0	0	0.22
14	6.67	0.00	0.00	0.00	6.67	0	0	0.23
15	14.05	0.00	0.00	0.00	14.05	0	0	0.25
16	24.93	0.00	0.00	0.00	24.93	0	0	0.27
17	39.71	0.00	0.00	0.00	39.71	0	0	0.28
18	58.75	0.00	0.00	0.00	58.75	0	0	0.30
19	82.26	0.00	0.00	0.00	82.26	0	0	0.32
20	110.40	0.00	0.00	0.00	110.40	0	0	0.33
21	143.32	0.00	0.00	0.00	143.32	0	0	0.35
22	181.12	0.00	0.00	0.00	181.12	0	0	0.37
23	223.75	0.00	0.00	0.00	223.75	0	0	0.38
24	271.16	0.00	0.00	0.00	271.16	0	0	0.40
25	323.28	0.00	0.00	0.00	323.28	0	0	0.42
26	379.97	0.00	0.00	0.00	379.97	0	0	0.43
27	441.08	30.00	0.00	30.00	411.08	1	0	0.45
28	506.47	60.00	0.00	60.00	446.47	1	0	0.47
29	575.93	90.00	0.00	90.00	485.93	1	0	0.48
30	649.28	120.00	0.00	120.00	529.28	1	0	0.50
31	726.35	150.00	30.00	180.00	546.35	1	1	0.52
32	805.85	180.00	60.00	240.00	565.85	1	1	0.53
33	877.47	210.00	90.00	300.00	577.47	1	1	0.55
34	932.79	240.00	120.00	360.00	572.79	1	1	0.57
35	973.94	270.00	150.00	420.00	553.94	1	1	0.58
36	1003.93	300.00	180.00	480.00	523.93	1	1	0.60
37	1025.24	330.00	210.00	540.00	485.24	1	1	0.62
38	1039.60	360.00	240.00	600.00	439.60	1	1	0.63
39	1048.71	390.00	270.00	660.00	388.71	1	1	0.65
40	1054.04	420.00	300.00	720.00	334.04	1	1	0.67
41	1056.81	450.00	330.00	780.00	276.81	1	1	0.68
42	1058.12	480.00	360.00	840.00	218.12	1	1	0.70
43	1058.72	510.00	390.00	900.00	158.72	1	1	0.72
44	1059.04	540.00	420.00	960.00	99.04	1	1	0.73
45	1059.22	570.00	450.00	1020.00	39.22	1	1	0.75
46	1059.33	600.00	480.00	1080.00	-20.67	1	1	0.77

Mass Routing Table for 10 Year - 30 Minute Event
South Shore Drive Underpass

Pump #1			Pump #2			Elevation Equivalents			
Off Elevation	On Elevation	Flow (cfm)	Off Elevation	On Elevation	Flow (cfm)	Elev.	-6.1	-4.5	-3.5
-6.1	-4.5	30	-6.1	-3.5	30	Vol. (ft ³)	0	436	553

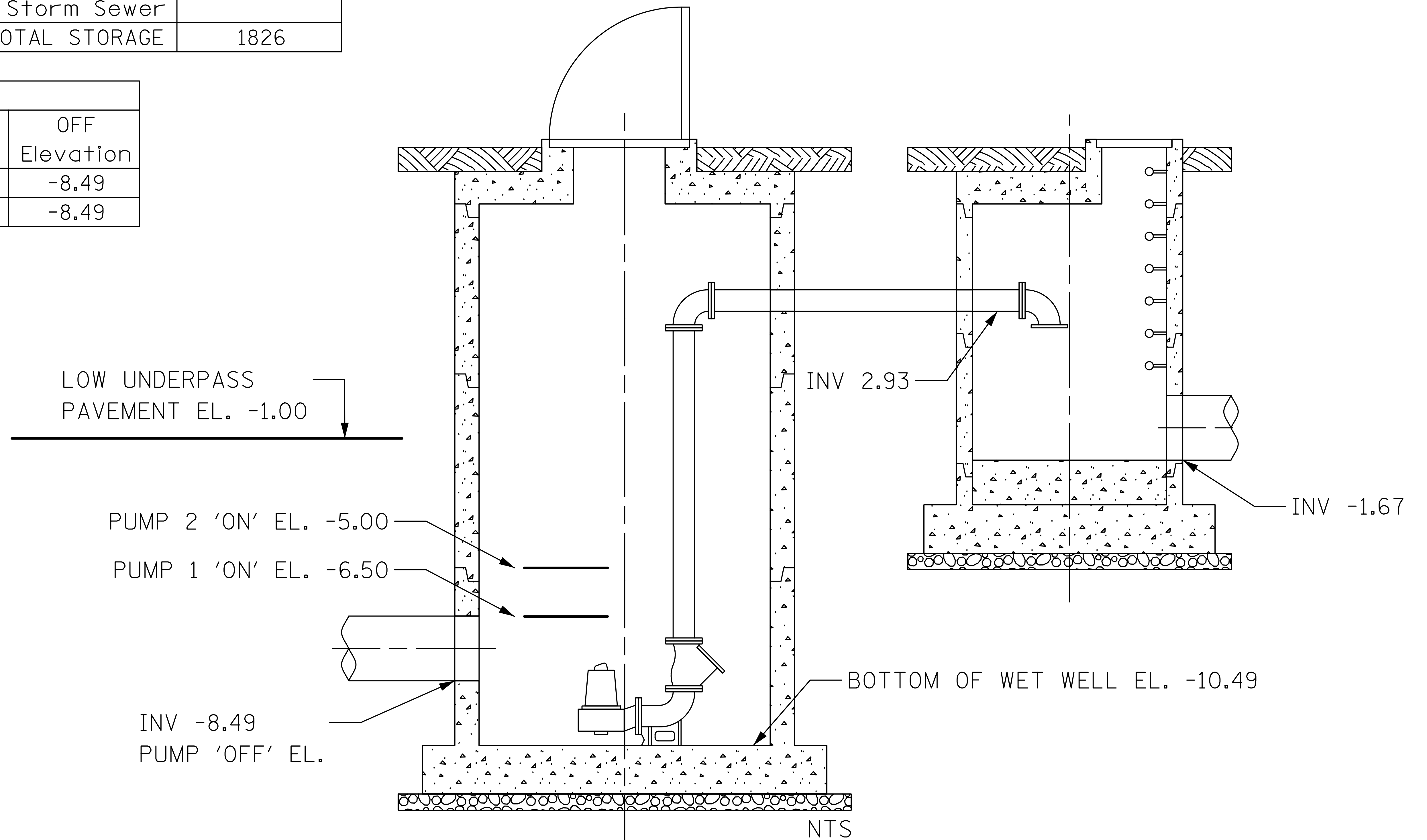
Time (min)	Inflow (ft3)	Pump Outflows (ft3)		Total Outflow (ft3)	Required Storage (ft3)	On-Off Counters (1=On / 0=Off)		Time (hr)
		#1	#2			#1	#2	
47	1059.41	600.00	480.00	1080.00	-20.59	0	0	0.78
48	1059.46	600.00	480.00	1080.00	-20.54	0	0	0.80
49	1059.50	600.00	480.00	1080.00	-20.50	0	0	0.82
50	1059.54	600.00	480.00	1080.00	-20.46	0	0	0.83
51	1059.56	600.00	480.00	1080.00	-20.44	0	0	0.85
52	1059.59	600.00	480.00	1080.00	-20.42	0	0	0.87
53	1059.60	600.00	480.00	1080.00	-20.40	0	0	0.88
54	1059.62	600.00	480.00	1080.00	-20.38	0	0	0.90
55	1059.63	600.00	480.00	1080.00	-20.37	0	0	0.92
56	1059.64	600.00	480.00	1080.00	-20.36	0	0	0.93
57	1059.65	600.00	480.00	1080.00	-20.35	0	0	0.95
58	1059.66	600.00	480.00	1080.00	-20.34	0	0	0.97
59	1059.67	600.00	480.00	1080.00	-20.33	0	0	0.98
60	1059.68	600.00	480.00	1080.00	-20.33	0	0	1.00
61	1059.68	600.00	480.00	1080.00	-20.32	0	0	1.02
62	1059.69	600.00	480.00	1080.00	-20.31	0	0	1.03
63	1059.69	600.00	480.00	1080.00	-20.31	0	0	1.05
64	1059.70	600.00	480.00	1080.00	-20.30	0	0	1.07
65	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.08
66	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.10
67	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.12
68	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.13
69	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.15
70	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.17
71	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.18
72	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.20
73	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.22
74	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.23
75	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.25
76	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.27
77	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.28
78	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.30
79	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.32
80	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.33
81	1059.71	600.00	480.00	1080.00	-20.29	0	0	1.35

Storage Summary (Below -1, Low Pavement Elev.)		
	Description	Volume (ft ³)
Wet Well	1 - 9' Diameter	476
Manhole	6 - 4' Diameter	340
Storm Sewer	355' of 18" Storm Sewer 122' of 24" Storm Sewer	1010
TOTAL STORAGE		1826

Pump Summary			
Pump	Flow Rate (cfs)	ON Elevation	OFF Elevation
1	1.14	-6.50	-8.49
2	1.14	-5.00	-8.49

Hydrology Summary	
Subarea	Area (Ac)
3-25	0.53
3-26	1.02
3-27	1.60
TOTAL AREA TRIBUTARY TO PUMP STATION	3.15

Key Elevations	
Low Water Elevation	-8.49
Low Underpass Pavement Elevation	-1.00
Pump Discharge Elevation	2.93

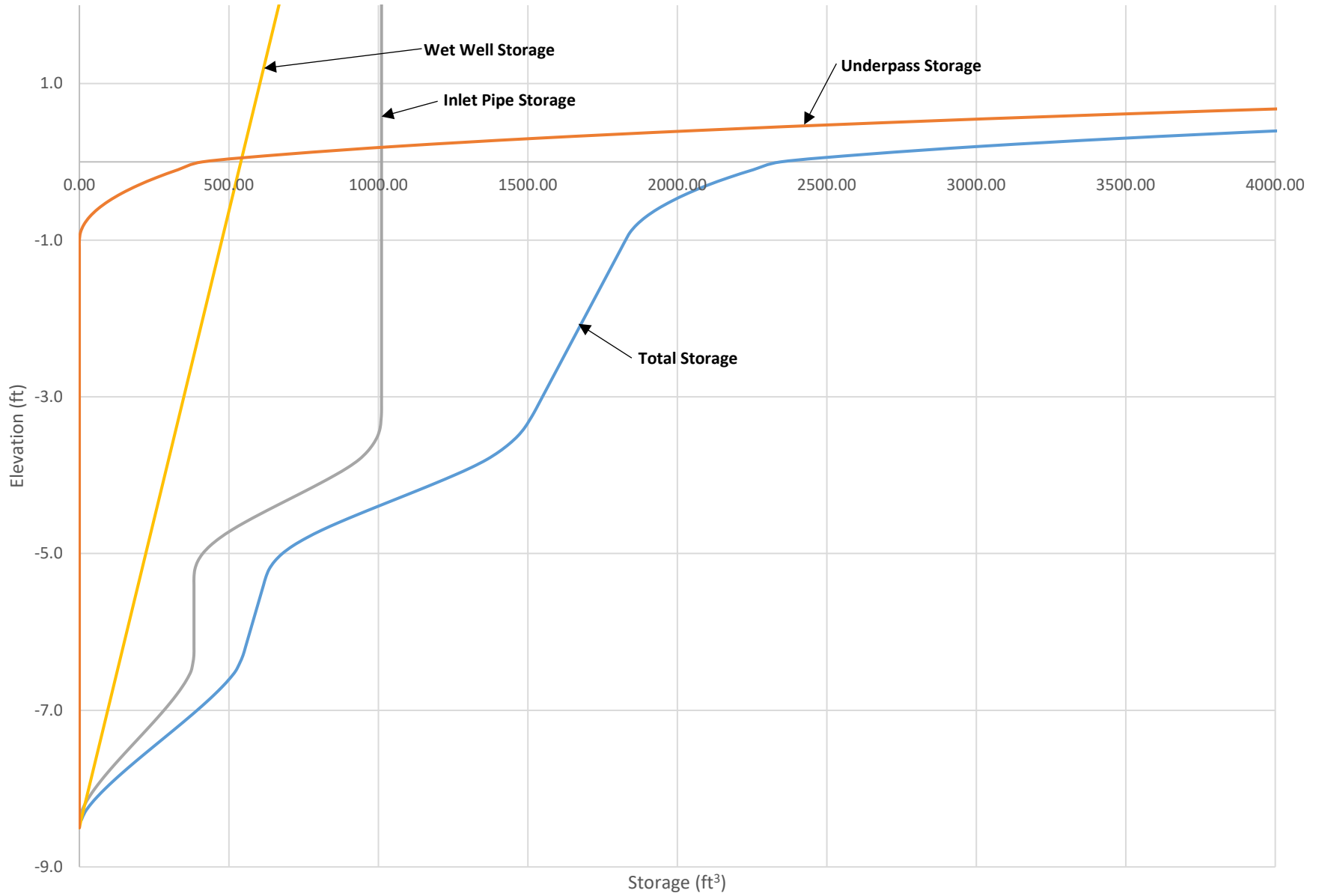


Cornell Drive and Hayes Drive Underpass Pump Station

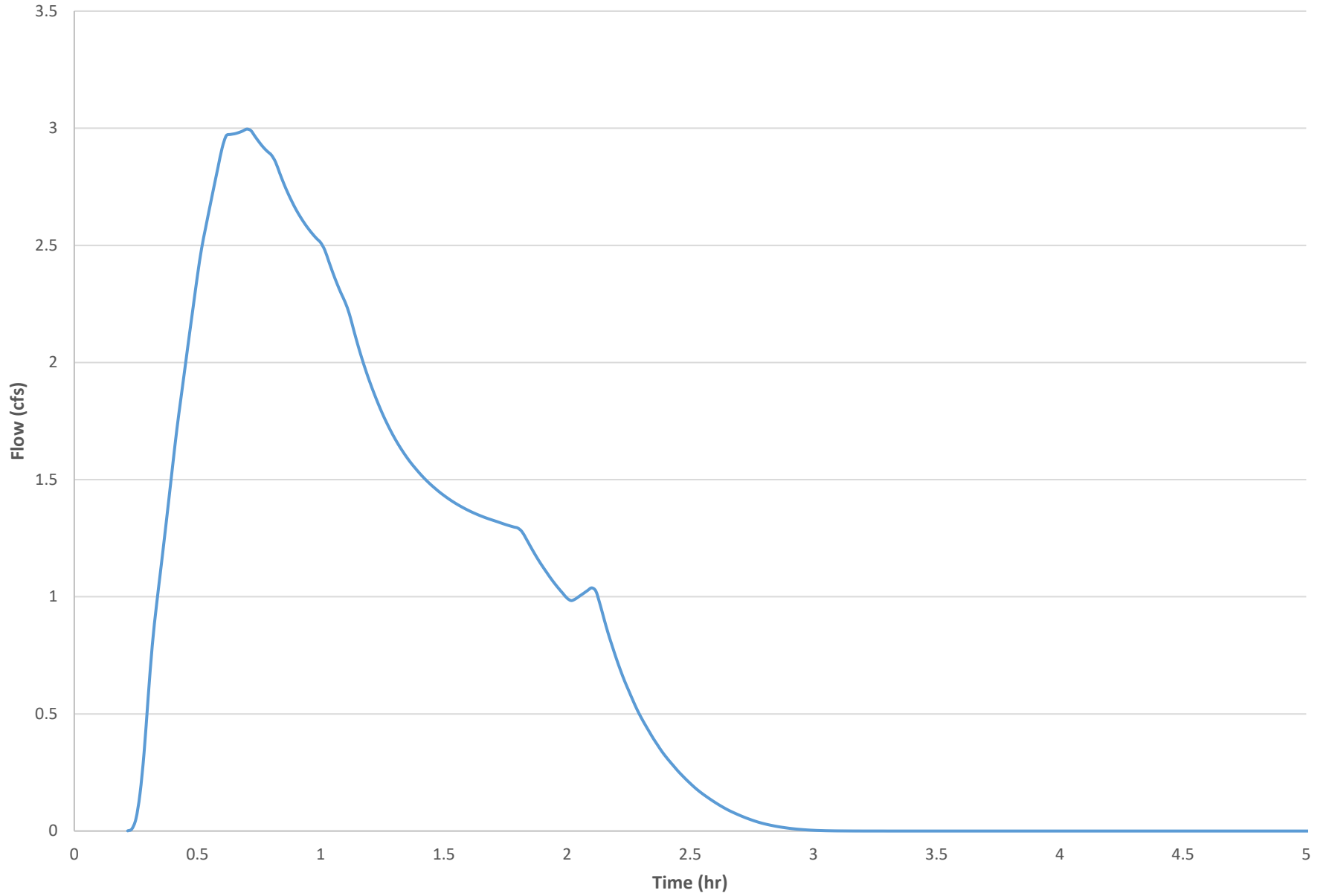


Cornell Drive and Hayes Drive Underpass Tributary Area

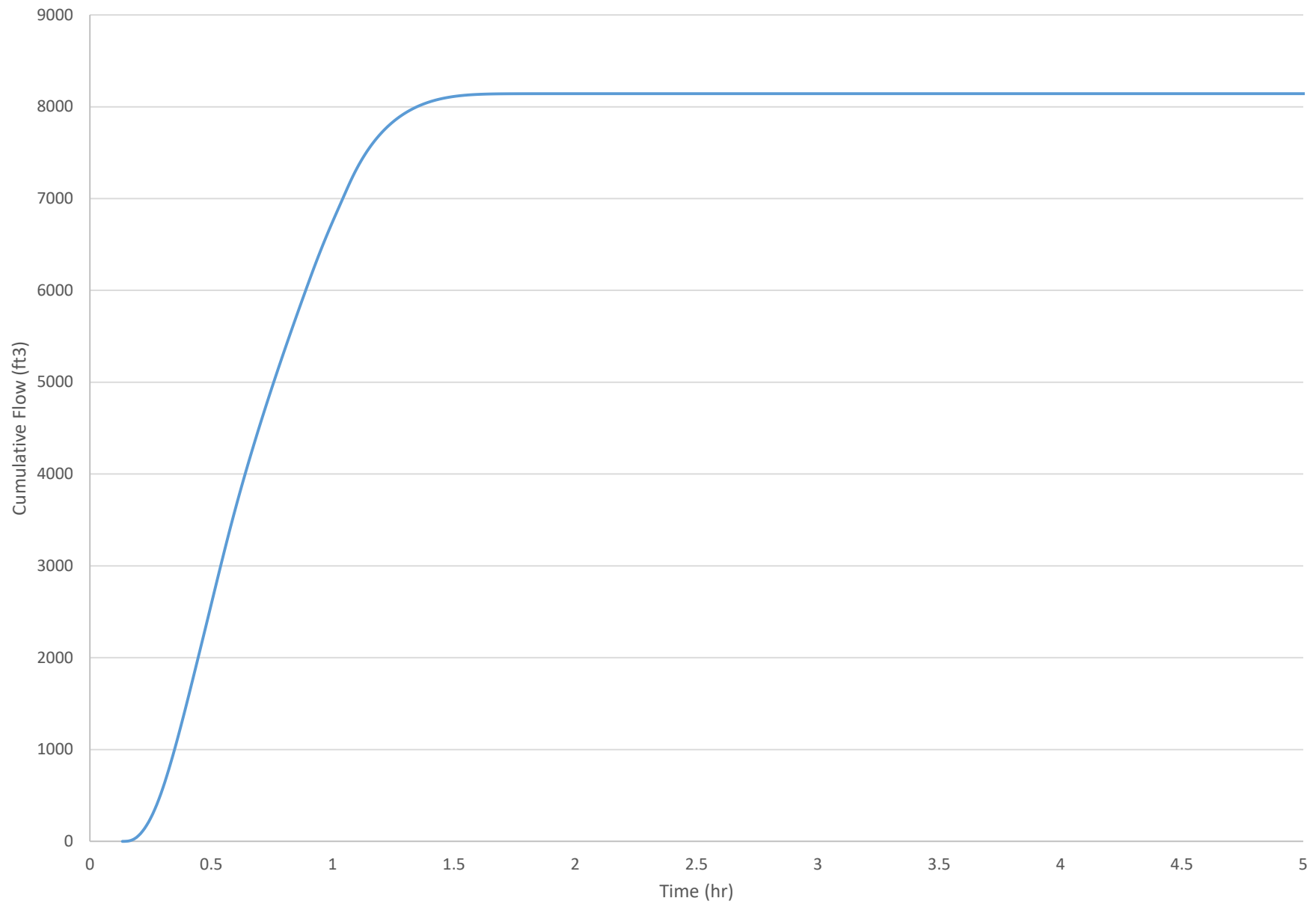
Stage Storage Curve for Proposed Condition



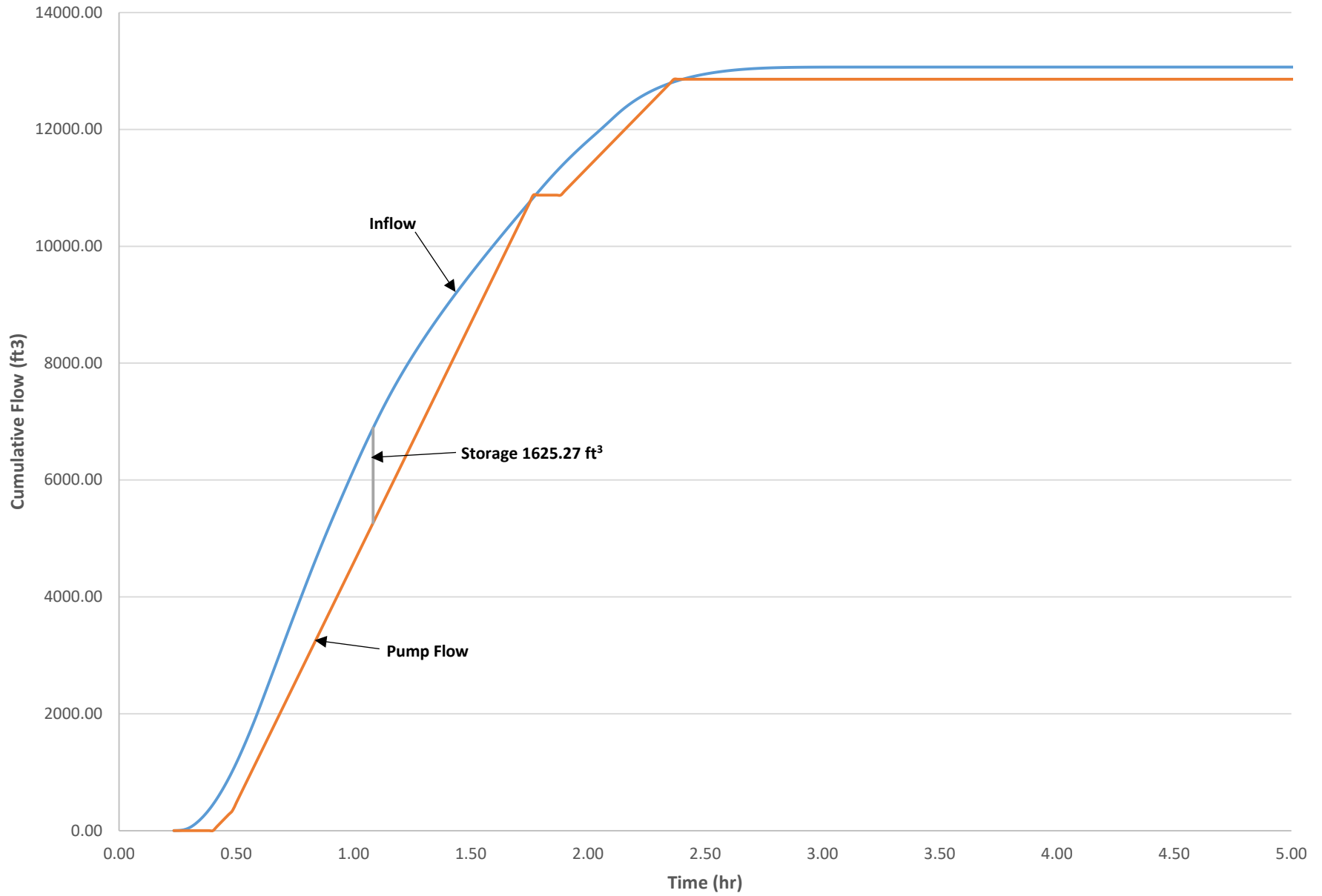
Inflow Hydrograph for 10 Year - 2 Hour Event



Inflow Mass Curve for 10 Year - 2 Hour Event



Mass Routing Curve for 10 Year - 2 Hour Event



Mass Routing Table for 10 Year - 2 Hour Event

Pump #1			Pump #2			Elevation Equivalentents			
Off Elevation	On Elevation	Flow (cfm)	Off Elevation	On Elevation	Flow (cfm)	Elev.	-8.5	-6.5	-5
-8.5	-6.5	68.4	-8.5	-5	68.4	Vol.	0	523	679

Time (min)	Inflow (ft3)	Pump Outflows (ft3)		Total Outflow (ft3)	Required Storage (ft3)	On-Off Counters (1=On / 0=Off)		Time (hr)
		#1	#2			#1	#2	
14	0.28	0.00	0.00	0.00	0.28	0	0	0.23
15	2.06	0.00	0.00	0.00	2.06	0	0	0.25
16	8.34	0.00	0.00	0.00	8.34	0	0	0.27
17	23.15	0.00	0.00	0.00	23.15	0	0	0.28
18	50.38	0.00	0.00	0.00	50.38	0	0	0.30
19	91.37	0.00	0.00	0.00	91.37	0	0	0.32
20	144.00	0.00	0.00	0.00	144.00	0	0	0.33
21	206.07	0.00	0.00	0.00	206.07	0	0	0.35
22	277.06	0.00	0.00	0.00	277.06	0	0	0.37
23	357.14	0.00	0.00	0.00	357.14	0	0	0.38
24	446.48	0.00	0.00	0.00	446.48	0	0	0.40
25	545.00	68.40	0.00	68.40	476.60	1	0	0.42
26	652.07	136.80	0.00	136.80	515.27	1	0	0.43
27	767.08	205.20	0.00	205.20	561.88	1	0	0.45
28	890.00	273.60	0.00	273.60	616.40	1	0	0.47
29	1020.74	342.00	0.00	342.00	678.74	1	0	0.48
30	1159.20	410.40	68.40	478.80	680.40	1	1	0.50
31	1304.95	478.80	136.80	615.60	689.35	1	1	0.52
32	1456.84	547.20	205.20	752.40	704.44	1	1	0.53
33	1614.05	615.60	273.60	889.20	724.85	1	1	0.55
34	1776.44	684.00	342.00	1026.00	750.44	1	1	0.57
35	1943.92	752.40	410.40	1162.80	781.12	1	1	0.58
36	2116.37	820.80	478.80	1299.60	816.77	1	1	0.60
37	2292.87	889.20	547.20	1436.40	856.47	1	1	0.62
38	2471.11	957.60	615.60	1573.20	897.91	1	1	0.63
39	2649.61	1026.00	684.00	1710.00	939.61	1	1	0.65
40	2828.34	1094.40	752.40	1846.80	981.54	1	1	0.67
41	3007.43	1162.80	820.80	1983.60	1023.83	1	1	0.68
42	3186.96	1231.20	889.20	2120.40	1066.56	1	1	0.70
43	3366.55	1299.60	957.60	2257.20	1109.35	1	1	0.72
44	3545.22	1368.00	1026.00	2394.00	1151.22	1	1	0.73
45	3722.43	1436.40	1094.40	2530.80	1191.63	1	1	0.75
46	3898.26	1504.80	1162.80	2667.60	1230.66	1	1	0.77
47	4072.89	1573.20	1231.20	2804.40	1268.49	1	1	0.78

Mass Routing Table for 10 Year - 2 Hour Event

Pump #1			Pump #2			Elevation Equivalentents			
Off Elevation	On Elevation	Flow (cfm)	Off Elevation	On Elevation	Flow (cfm)	Elev.	-8.5	-6.5	-5
-8.5	-6.5	68.4	-8.5	-5	68.4	Vol.	0	523	679

Time (min)	Inflow (ft3)	Pump Outflows (ft3)		Total Outflow (ft3)	Required Storage (ft3)	On-Off Counters (1=On / 0=Off)		Time (hr)
		#1	#2			#1	#2	
48	4246.50	1641.60	1299.60	2941.20	1305.30	1	1	0.80
49	4418.75	1710.00	1368.00	3078.00	1340.75	1	1	0.82
50	4588.73	1778.40	1436.40	3214.80	1373.93	1	1	0.83
51	4755.96	1846.80	1504.80	3351.60	1404.36	1	1	0.85
52	4920.62	1915.20	1573.20	3488.40	1432.22	1	1	0.87
53	5082.95	1983.60	1641.60	3625.20	1457.75	1	1	0.88
54	5243.15	2052.00	1710.00	3762.00	1481.15	1	1	0.90
55	5401.43	2120.40	1778.40	3898.80	1502.63	1	1	0.92
56	5558.00	2188.80	1846.80	4035.60	1522.40	1	1	0.93
57	5713.01	2257.20	1915.20	4172.40	1540.61	1	1	0.95
58	5866.63	2325.60	1983.60	4309.20	1557.43	1	1	0.97
59	6018.98	2394.00	2052.00	4446.00	1572.98	1	1	0.98
60	6170.22	2462.40	2120.40	4582.80	1587.42	1	1	1.00
61	6319.97	2530.80	2188.80	4719.60	1600.37	1	1	1.02
62	6467.28	2599.20	2257.20	4856.40	1610.88	1	1	1.03
63	6611.64	2667.60	2325.60	4993.20	1618.44	1	1	1.05
64	6753.16	2736.00	2394.00	5130.00	1623.16	1	1	1.07
65	6892.07	2804.40	2462.40	5266.80	1625.27	1	1	1.08
66	7028.58	2872.80	2530.80	5403.60	1624.98	1	1	1.10
67	7162.44	2941.20	2599.20	5540.40	1622.04	1	1	1.12
68	7292.88	3009.60	2667.60	5677.20	1615.68	1	1	1.13
69	7419.47	3078.00	2736.00	5814.00	1605.47	1	1	1.15
70	7542.41	3146.40	2804.40	5950.80	1591.61	1	1	1.17
71	7661.96	3214.80	2872.80	6087.60	1574.36	1	1	1.18
72	7778.37	3283.20	2941.20	6224.40	1553.97	1	1	1.20
73	7891.87	3351.60	3009.60	6361.20	1530.67	1	1	1.22
74	8002.66	3420.00	3078.00	6498.00	1504.66	1	1	1.23
75	8110.89	3488.40	3146.40	6634.80	1476.09	1	1	1.25
76	8216.75	3556.80	3214.80	6771.60	1445.15	1	1	1.27
77	8320.42	3625.20	3283.20	6908.40	1412.02	1	1	1.28
78	8422.05	3693.60	3351.60	7045.20	1376.85	1	1	1.30
79	8521.81	3762.00	3420.00	7182.00	1339.81	1	1	1.32
80	8619.85	3830.40	3488.40	7318.80	1301.05	1	1	1.33
81	8716.29	3898.80	3556.80	7455.60	1260.69	1	1	1.35

Mass Routing Table for 10 Year - 2 Hour Event

Pump #1			Pump #2			Elevation Equivalentents			
Off Elevation	On Elevation	Flow (cfm)	Off Elevation	On Elevation	Flow (cfm)	Elev.	-8.5	-6.5	-5
-8.5	-6.5	68.4	-8.5	-5	68.4	Vol.	0	523	679

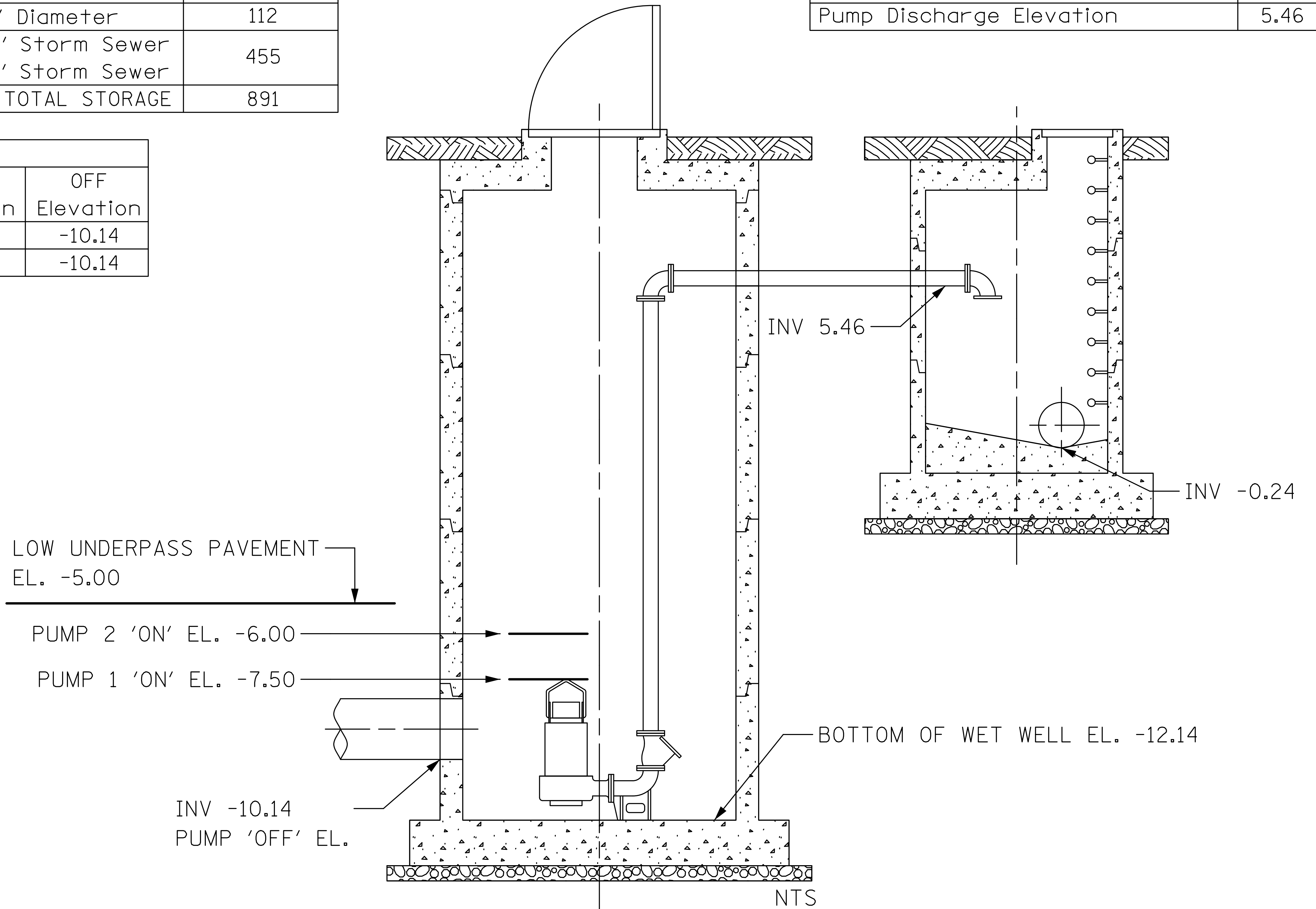
Time (min)	Inflow (ft3)	Pump Outflows (ft3)		Total Outflow (ft3)	Required Storage (ft3)	On-Off Counters (1=On / 0=Off)		Time (hr)
		#1	#2			#1	#2	
82	8811.25	3967.20	3625.20	7592.40	1218.85	1	1	1.37
83	8904.86	4035.60	3693.60	7729.20	1175.66	1	1	1.38
84	8997.23	4104.00	3762.00	7866.00	1131.22	1	1	1.40
85	9088.40	4172.40	3830.40	8002.80	1085.59	1	1	1.42
86	9178.46	4240.80	3898.80	8139.60	1038.86	1	1	1.43
87	9267.50	4309.20	3967.20	8276.40	991.10	1	1	1.45
88	9355.60	4377.60	4035.60	8413.20	942.40	1	1	1.47
89	9442.79	4446.00	4104.00	8550.00	892.79	1	1	1.48
90	9529.16	4514.40	4172.40	8686.80	842.35	1	1	1.50
91	9614.74	4582.80	4240.80	8823.60	791.14	1	1	1.52
92	9699.58	4651.20	4309.20	8960.40	739.18	1	1	1.53
93	9783.74	4719.60	4377.60	9097.20	686.54	1	1	1.55
94	9867.27	4788.00	4446.00	9234.00	633.27	1	1	1.57
95	9950.20	4856.40	4514.40	9370.80	579.40	1	1	1.58
96	10032.58	4924.80	4582.80	9507.60	524.98	1	1	1.60
97	10114.43	4993.20	4651.20	9644.40	470.03	1	1	1.62
98	10195.81	5061.60	4719.60	9781.20	414.61	1	1	1.63
99	10276.73	5130.00	4788.00	9918.00	358.73	1	1	1.65
100	10357.24	5198.40	4856.40	10054.80	302.44	1	1	1.67
101	10437.35	5266.80	4924.80	10191.60	245.75	1	1	1.68
102	10517.10	5335.20	4993.20	10328.40	188.70	1	1	1.70
103	10596.51	5403.60	5061.60	10465.20	131.31	1	1	1.72
104	10675.55	5472.00	5130.00	10602.00	73.55	1	1	1.73
105	10754.24	5540.40	5198.40	10738.80	15.44	1	1	1.75
106	10832.59	5608.80	5266.80	10875.60	-43.01	1	1	1.77
107	10910.62	5608.80	5266.80	10875.60	35.02	0	0	1.78
108	10988.36	5608.80	5266.80	10875.60	112.76	0	0	1.80
109	11065.51	5608.80	5266.80	10875.60	189.91	0	0	1.82
110	11141.34	5608.80	5266.80	10875.60	265.74	0	0	1.83
111	11215.34	5608.80	5266.80	10875.60	339.74	0	0	1.85
112	11287.48	5608.80	5266.80	10875.60	411.88	0	0	1.87
113	11357.81	5608.80	5266.80	10875.60	482.21	0	0	1.88
114	11426.45	5677.20	5266.80	10944.00	482.45	1	0	1.90
115	11493.51	5745.60	5266.80	11012.40	481.11	1	0	1.92

Storage Summary (Below -5, Low Pavement Elev.)		
	Description	Volume (ft ³)
Wet Well	1 - 9' Diameter	324
Manhole	2 - 4' Diameter	112
Storm Sewer	115' of 18" Storm Sewer 80' of 24" Storm Sewer	455
TOTAL STORAGE		891

Pump Summary			
Pump	Flow Rate (cfs)	ON Elevation	OFF Elevation
1	1.14	-7.50	-10.14
2	1.14	-6.00	-10.14

Hydrology Summary	
Subarea	Area (Ac)
304	0.82
307	0.57
TOTAL AREA TRIBUTARY TO PUMP STATION	1.39

Key Elevations	
Low Water Elevation	-10.14
Low Underpass Pavement Elevation	-5.00
Pump Discharge Elevation	5.46

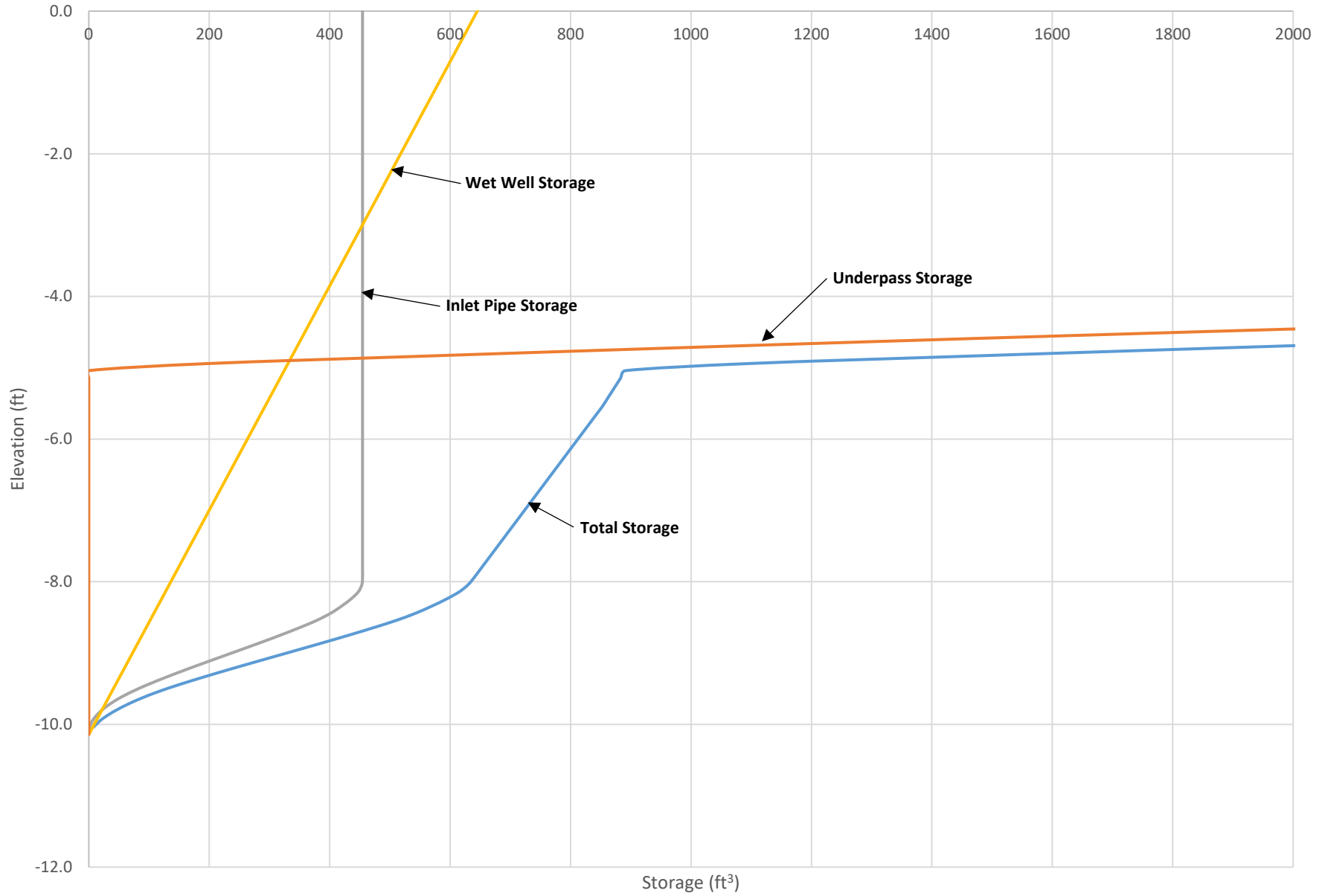


Hayes and Lake Shore Drive Underpass Pump Station

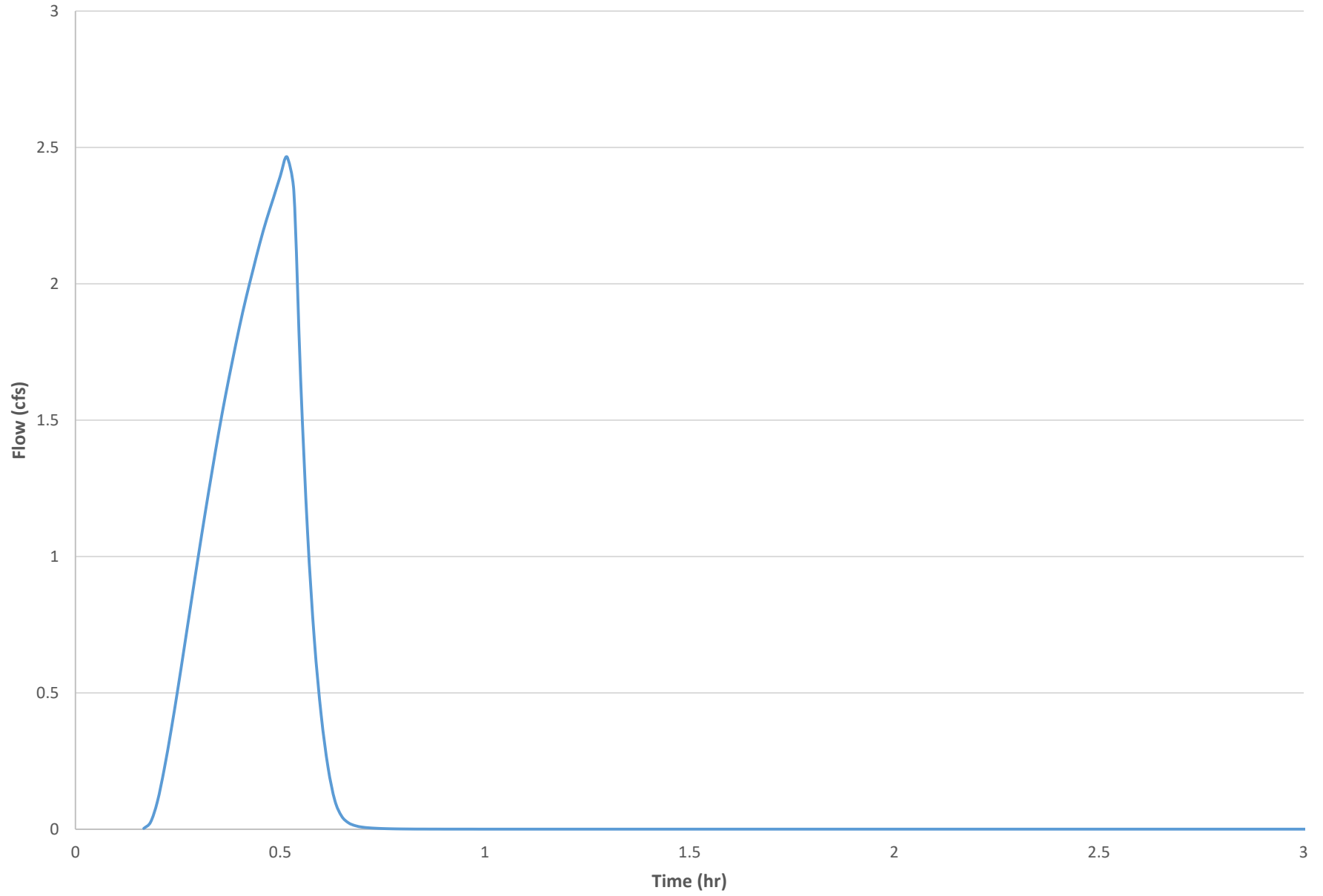


Hayes Drive and Lake Shore Drive Underpass Tributary Area

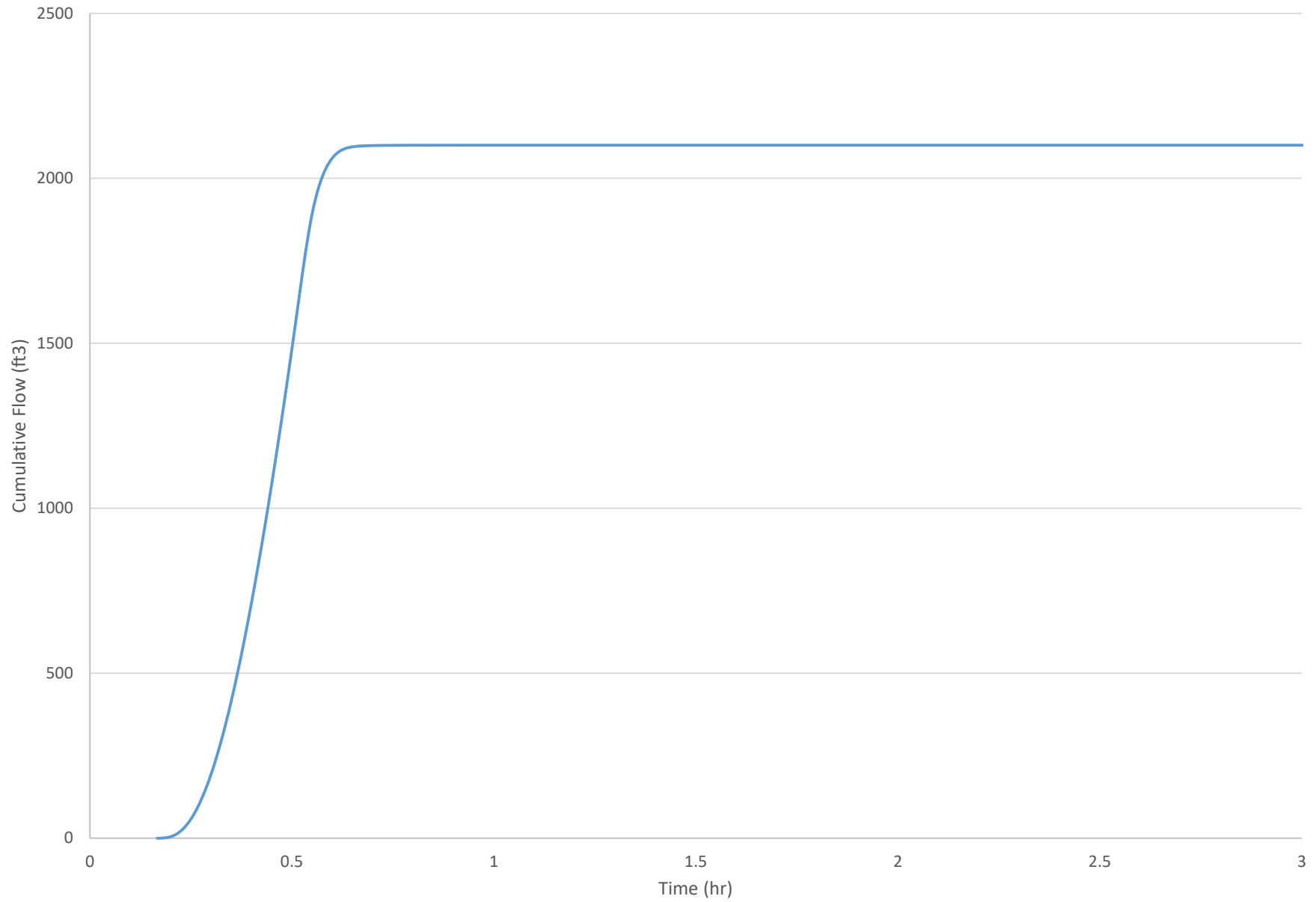
Stage Storage Curve for Proposed Condition



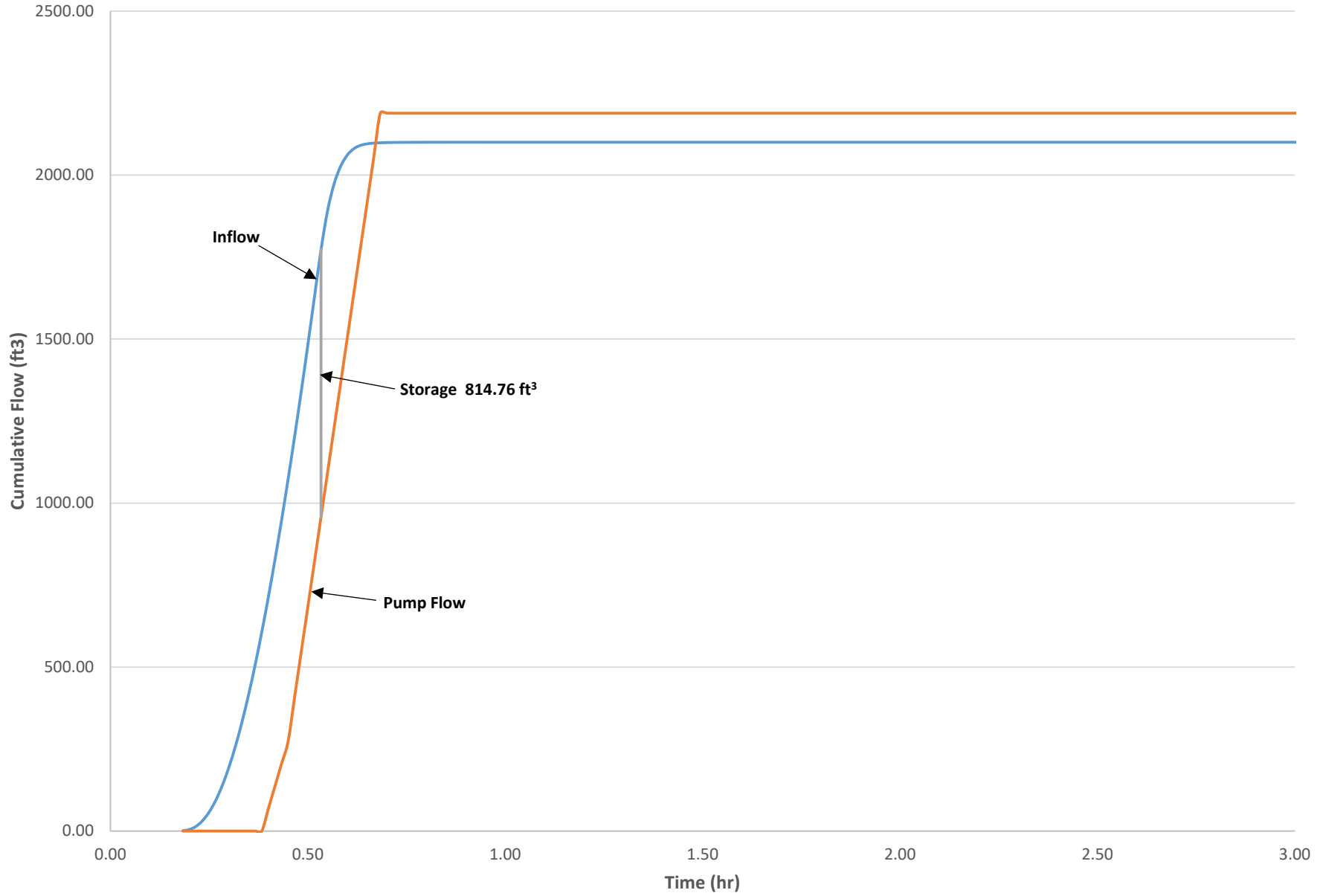
Inflow Hydrograph for 10 Year - 30 Minute Event



Inflow Mass Curve for 10 Year - 30 Minute Event



Mass Routing Curve for 10 Year - 30 Minute Event



Mass Routing Table for 10 Year - 30 Minute Event

Pump #1			Pump #2			Elevation Equivalentents			
Off Elevation	On Elevation	Flow (cfm)	Off Elevation	On Elevation	Flow (cfm)	Elev.	-10.1	-7.5	-6
-10.1	-7.5	68.4	-4.0	-6	68.4	Vol.	0	675	809

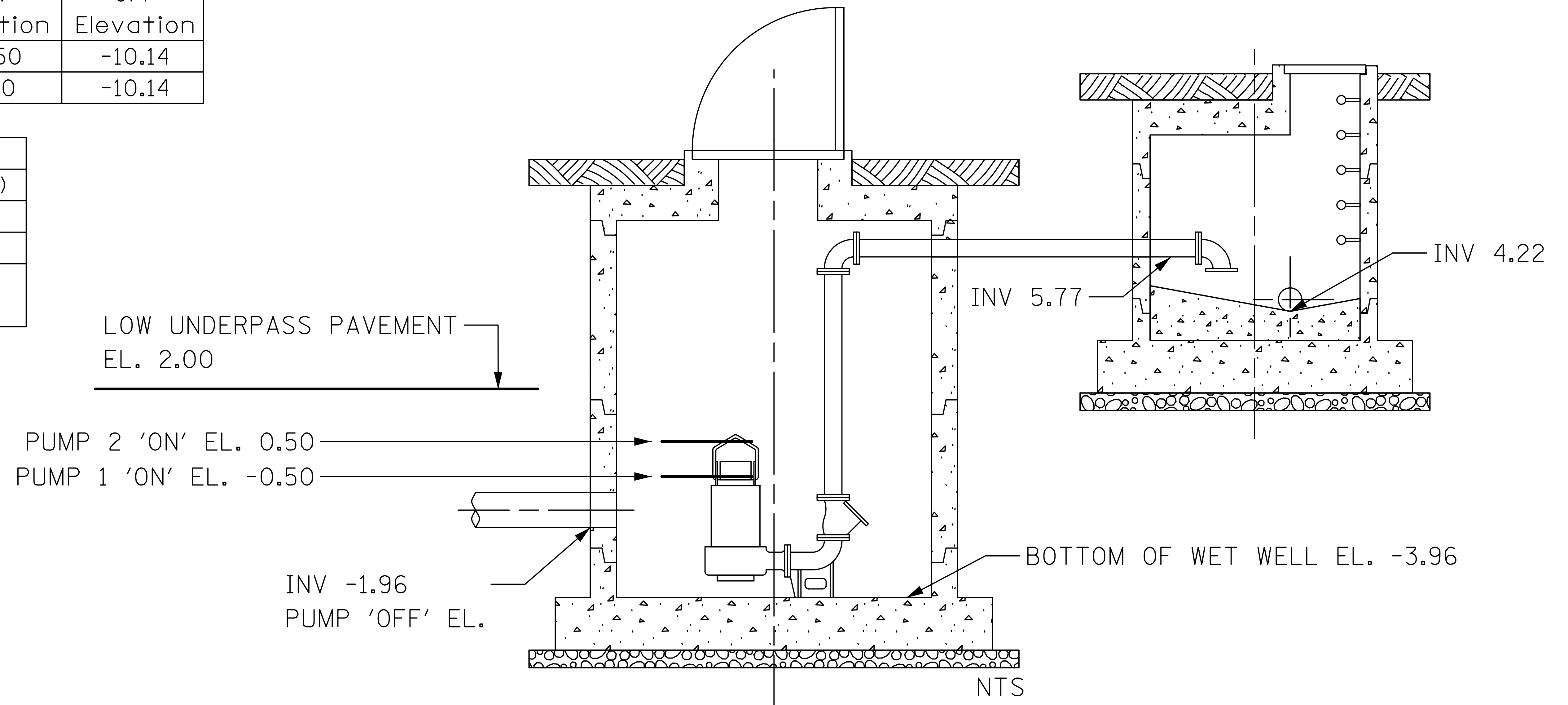
Time (min)	Inflow (ft3)	Pump Outflows (ft3)		Total Outflow (ft3)	Required Storage (ft3)	On-Off Counters (1=On / 0=Off)		Time (hr)
		#1	#2			#1	#2	
11	0.84	0.00	0.00	0.00	0.84	0	0	0.18
12	4.63	0.00	0.00	0.00	4.63	0	0	0.20
13	14.26	0.00	0.00	0.00	14.26	0	0	0.22
14	31.68	0.00	0.00	0.00	31.68	0	0	0.23
15	57.95	0.00	0.00	0.00	57.95	0	0	0.25
16	93.68	0.00	0.00	0.00	93.68	0	0	0.27
17	139.16	0.00	0.00	0.00	139.16	0	0	0.28
18	194.39	0.00	0.00	0.00	194.39	0	0	0.30
19	259.20	0.00	0.00	0.00	259.20	0	0	0.32
20	333.28	0.00	0.00	0.00	333.28	0	0	0.33
21	416.28	0.00	0.00	0.00	416.28	0	0	0.35
22	507.75	0.00	0.00	0.00	507.75	0	0	0.37
23	607.06	0.00	0.00	0.00	607.06	0	0	0.38
24	713.76	68.40	0.00	68.40	645.36	1	0	0.40
25	827.39	136.80	0.00	136.80	690.59	1	0	0.42
26	947.35	205.20	0.00	205.20	742.15	1	0	0.43
27	1073.25	273.60	0.00	273.60	799.65	1	0	0.45
28	1204.74	342.00	68.40	410.40	794.34	1	1	0.47
29	1341.23	410.40	136.80	547.20	794.03	1	1	0.48
30	1482.47	478.80	205.20	684.00	798.47	1	1	0.50
31	1628.24	547.20	273.60	820.80	807.44	1	1	0.52
32	1772.36	615.60	342.00	957.60	814.76	1	1	0.53
33	1891.93	684.00	410.40	1094.40	797.53	1	1	0.55
34	1974.12	752.40	478.80	1231.20	742.92	1	1	0.57
35	2027.78	820.80	547.20	1368.00	659.78	1	1	0.58
36	2061.25	889.20	615.60	1504.80	556.45	1	1	0.60
37	2080.69	957.60	684.00	1641.60	439.09	1	1	0.62
38	2090.71	1026.00	752.40	1778.40	312.31	1	1	0.63
39	2095.32	1094.40	820.80	1915.20	180.12	1	1	0.65
40	2097.45	1162.80	889.20	2052.00	45.45	1	1	0.67
41	2098.53	1231.20	957.60	2188.80	-90.27	1	1	0.68
42	2099.14	1231.20	957.60	2188.80	-89.66	0	0	0.70
43	2099.51	1231.20	957.60	2188.80	-89.29	0	0	0.72
44	2099.76	1231.20	957.60	2188.80	-89.04	0	0	0.73

Storage Summary (Below 2, Low Pavement Elev.)		
	Description	Volume (ft ³)
Wet Well	1 - 9' Diameter	252
Manhole	2 - 4' Diameter	100
Storm Sewer	228' of 12" Storm Sewer	179
	TOTAL STORAGE	531

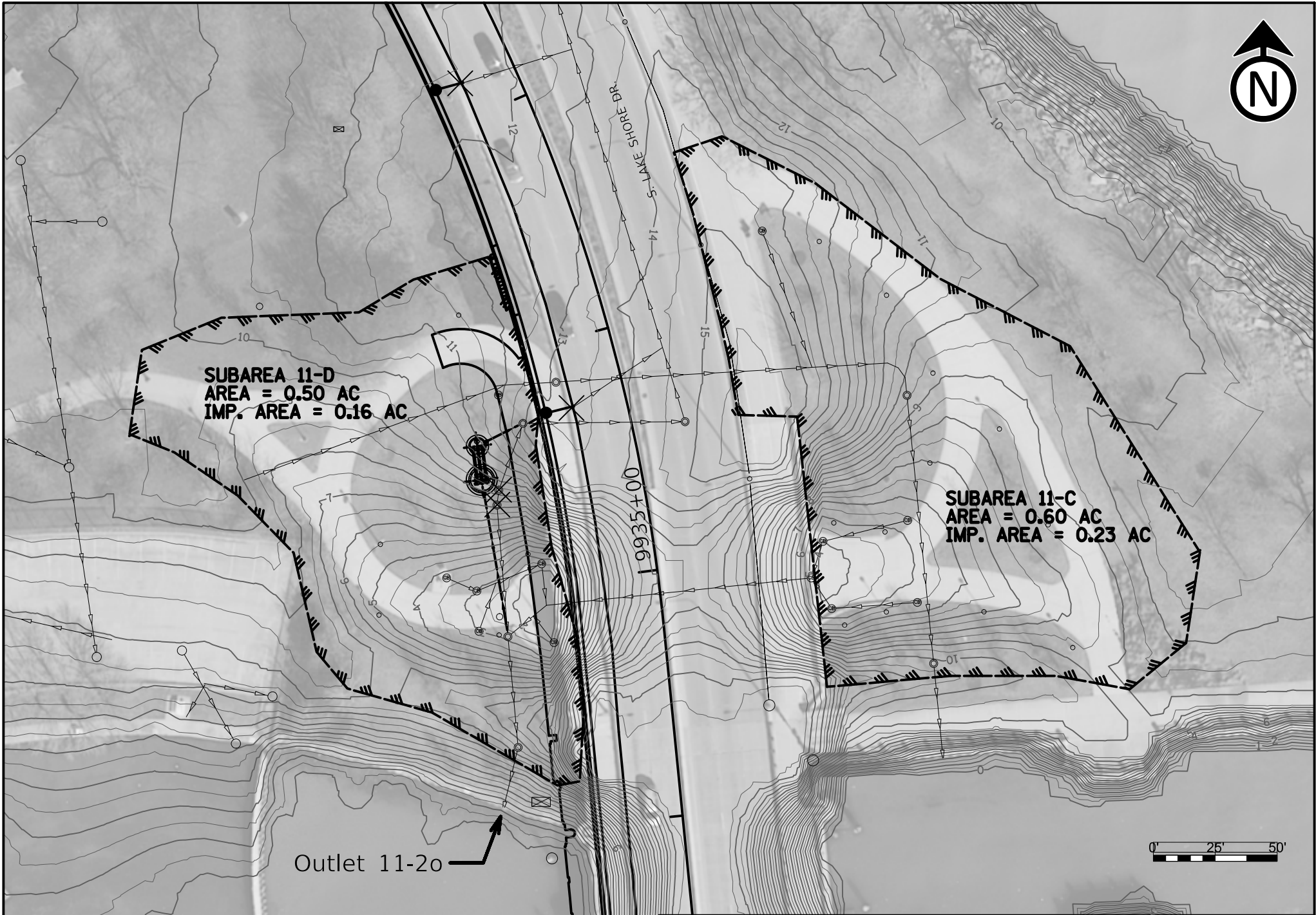
Key Elevations	
Low Water Elevation	-1.96
Low Underpass Pavement Elevation	2.00
Pump Discharge Elevation	5.77

Pump Summary			
Pump	Flow Rate (cfs)	ON Elevation	OFF Elevation
1	1.14	-0.50	-10.14
2	1.14	0.50	-10.14

Hydrology Summary	
Subarea	Area (Ac)
11-C	0.60
11-D	0.50
TOTAL AREA TRIBUTARY TO PUMP STATION	1.10



59th Street Underpass Pump Station

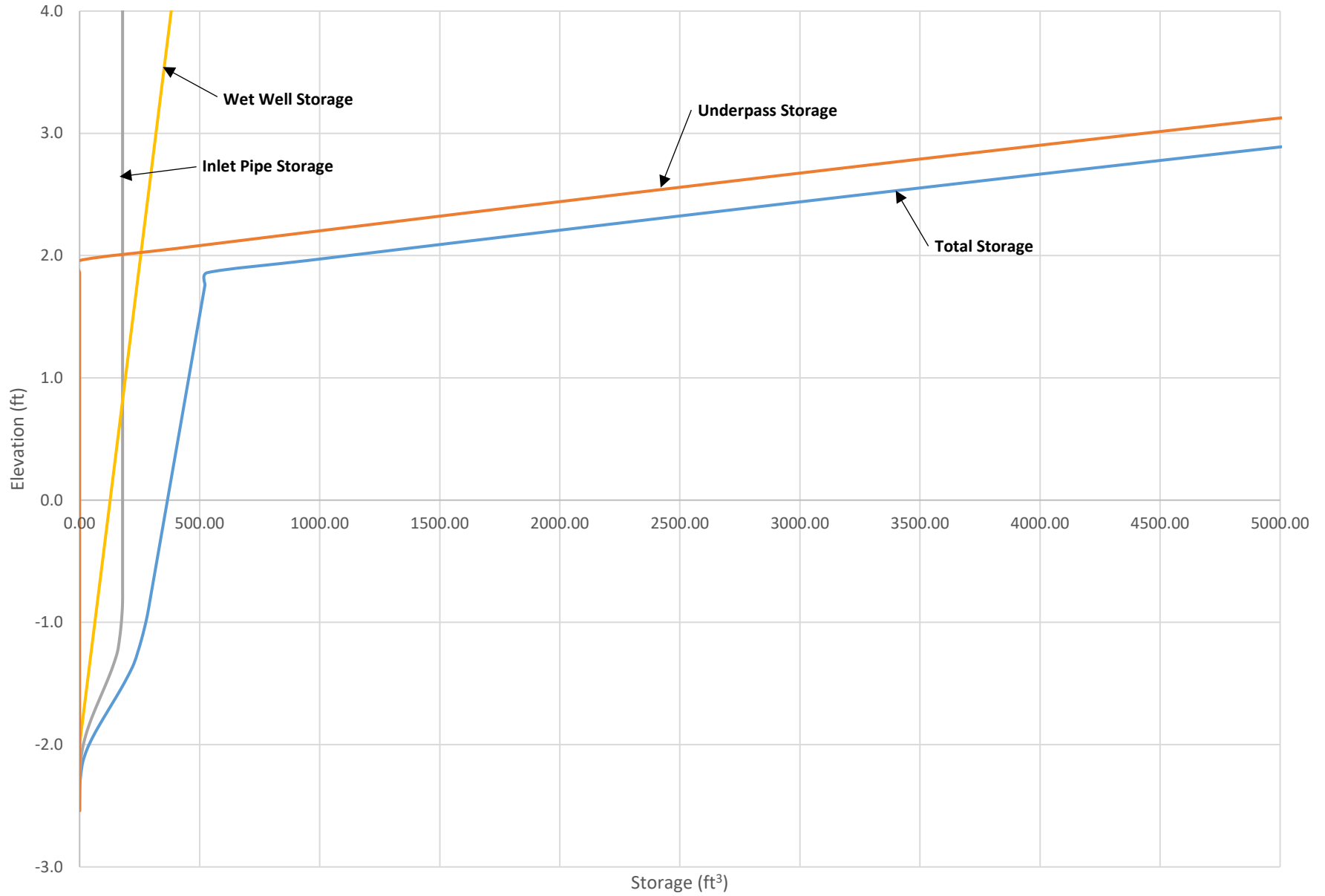


59th Street Underpass Tributary Area

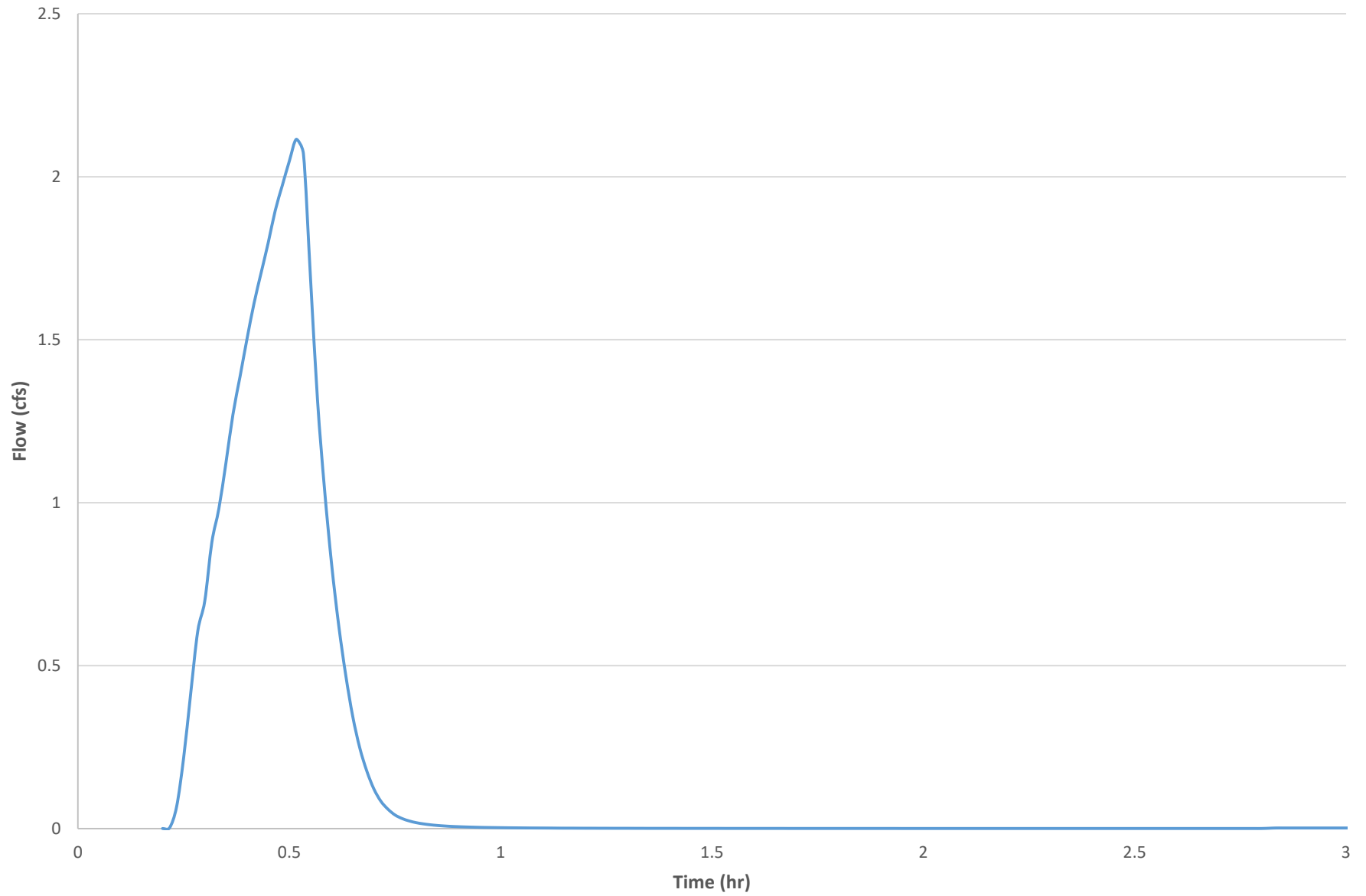
Critical Duration Analysis for Proposed Conditions

Storm Duration (hr)	10 Year Storm
	Storage Needed (ft3)
15 Min	313.44
30 Min	391.13
1	365.92
2	389.54
6	307.20
24	308.76

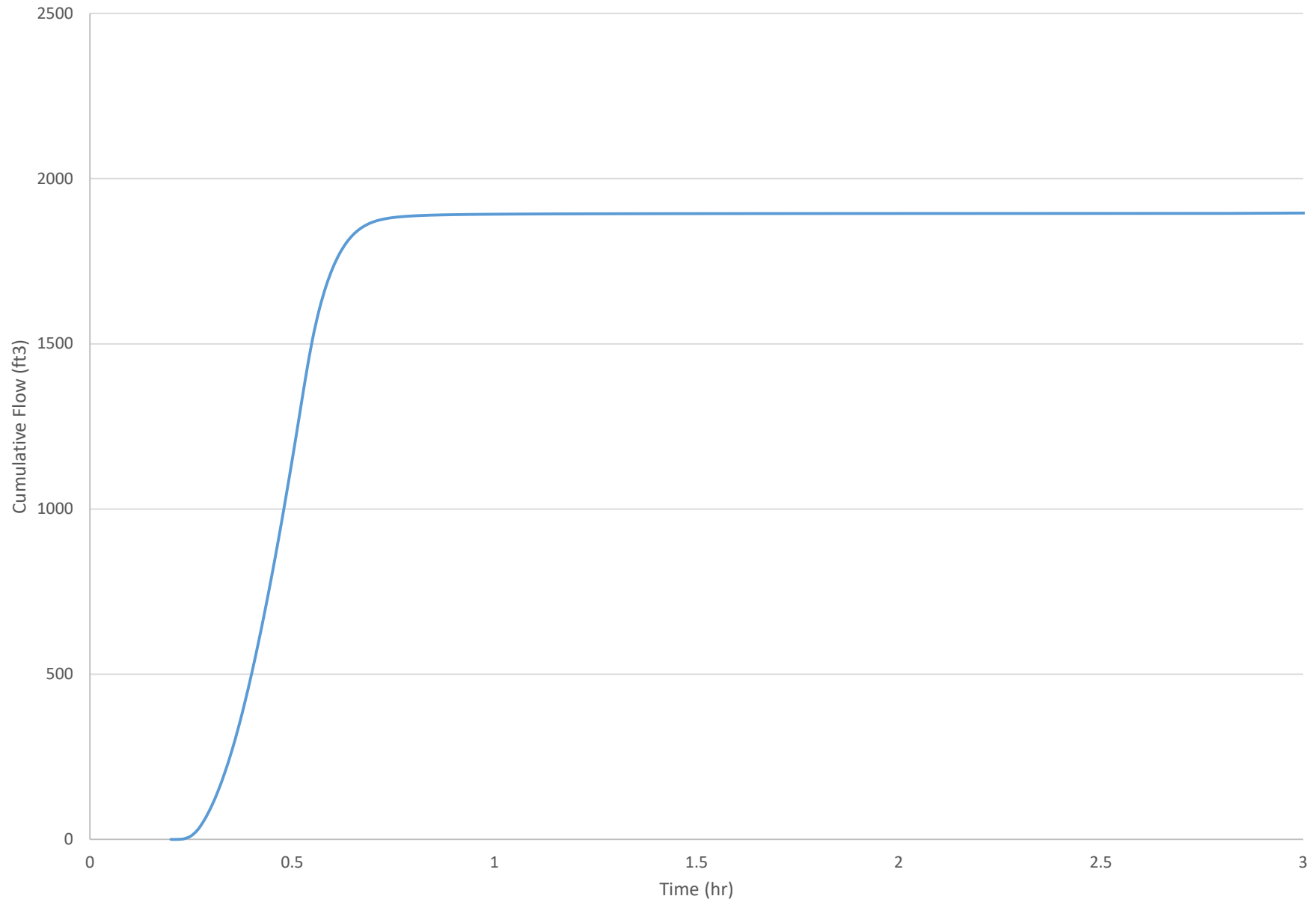
Stage Storage Curve for Proposed Condition



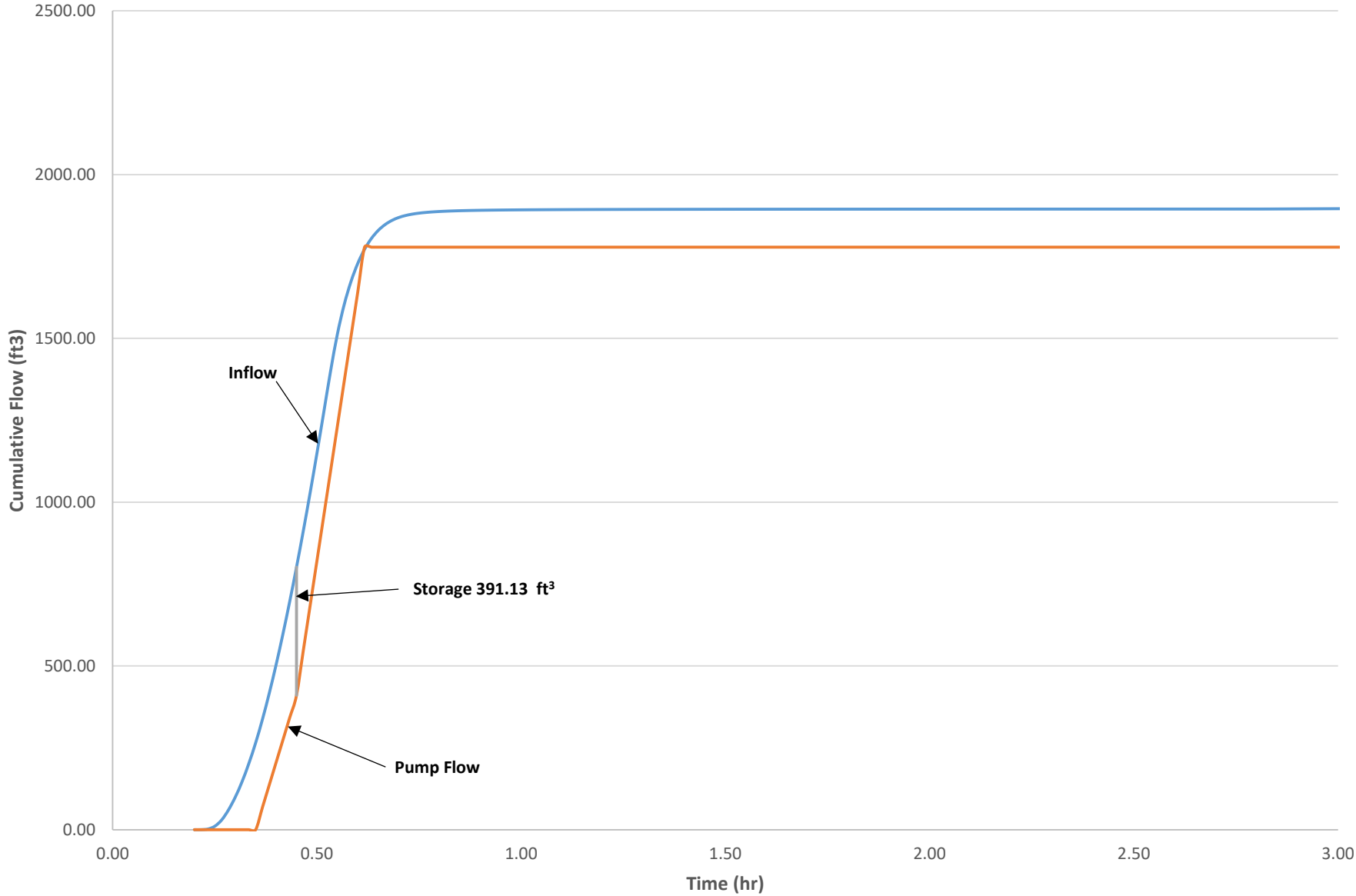
Inflow Hydrograph for 10 Year - 30 Minute Event 59th St. Underpass



**Inflow Mass Curve for 10 Year - 30 Minute Event
59th St. Underpass**



Mass Routing Curve for 10 Year - 30 Minute Event 59th St. Underpass



Mass Routing Table for 10 Year - 30 Minute Event

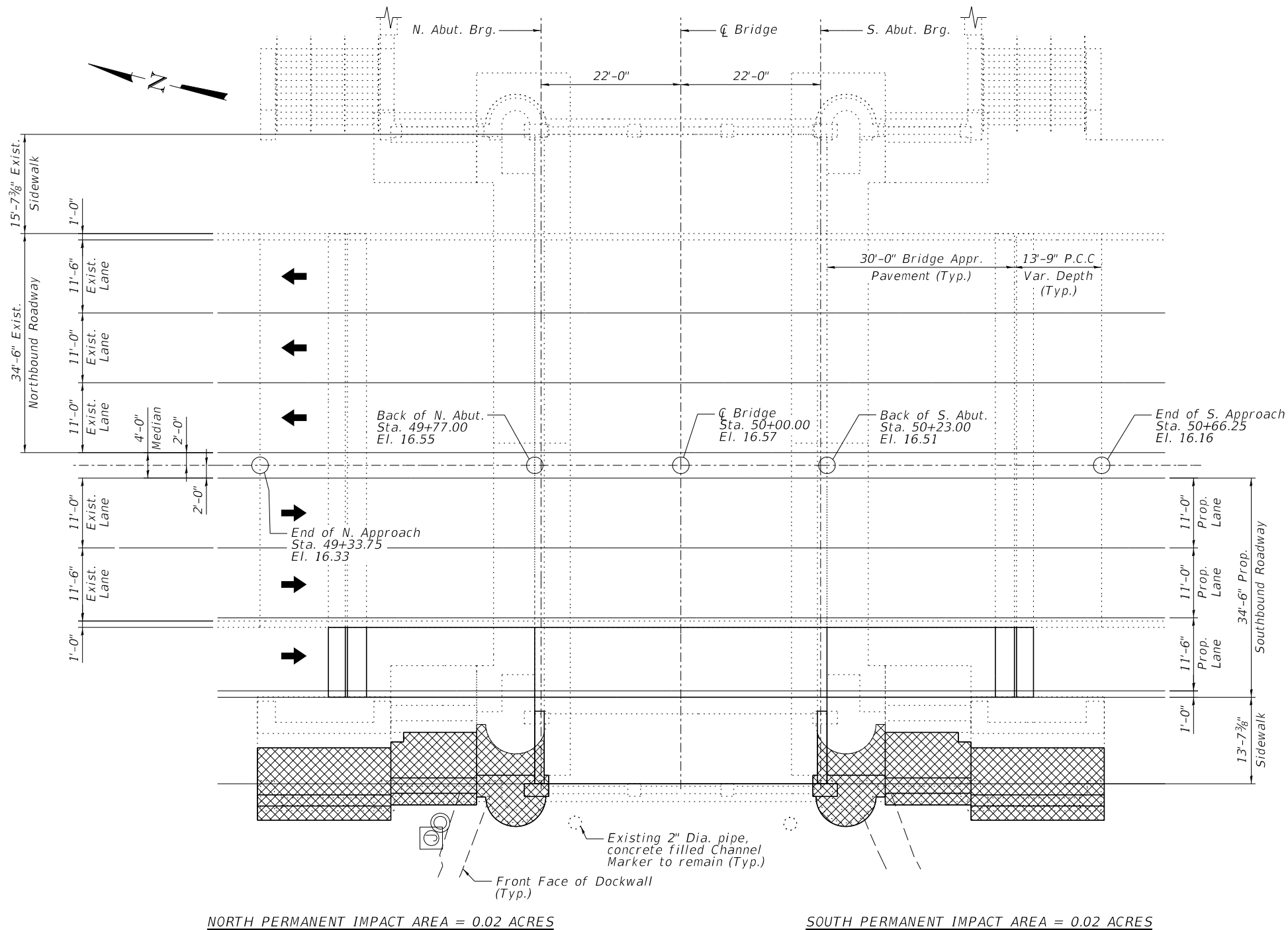
59th Street Underpass

Pump #1			Pump #2			Elevation Equivalentents			
Off Elevation	On Elevation	Flow (cfm)	Off Elevation	On Elevation	Flow (cfm)	Elev.	-2.0	-0.5	0.5
-2.0	-0.5	68.4	-2.0	0.5	68.4	Vol. (ft ³)	14	309	398

Time (min)	Inflow (ft3)	Pump Outflows (ft3)		Total Outflow (ft3)	Required Storage (ft3)	On-Off Counters (1=On / 0=Off)		Time (hr)
		#1	#2			#1	#2	
12	0.00	0.00	0.00	0.00	0.00	0	0	0.20
13	0.06	0.00	0.00	0.00	0.06	0	0	0.22
14	2.12	0.00	0.00	0.00	2.12	0	0	0.23
15	10.64	0.00	0.00	0.00	10.64	0	0	0.25
16	29.57	0.00	0.00	0.00	29.57	0	0	0.27
17	60.14	0.00	0.00	0.00	60.14	0	0	0.28
18	99.23	0.00	0.00	0.00	99.23	0	0	0.30
19	146.50	0.00	0.00	0.00	146.50	0	0	0.32
20	202.27	0.00	0.00	0.00	202.27	0	0	0.33
21	265.35	0.00	0.00	0.00	265.35	0	0	0.35
22	337.10	68.40	0.00	68.40	268.70	1	0	0.37
23	416.80	136.80	0.00	136.80	280.00	1	0	0.38
24	503.47	205.20	0.00	205.20	298.27	1	0	0.40
25	596.93	273.60	0.00	273.60	323.33	1	0	0.42
26	696.46	342.00	0.00	342.00	354.46	1	0	0.43
27	801.53	410.40	0.00	410.40	391.13	1	0	0.45
28	912.31	478.80	68.40	547.20	365.11	1	1	0.47
29	1028.38	547.20	136.80	684.00	344.38	1	1	0.48
30	1148.99	615.60	205.20	820.80	328.19	1	1	0.50
31	1273.87	684.00	273.60	957.60	316.27	1	1	0.52
32	1399.45	752.40	342.00	1094.40	305.05	1	1	0.53
33	1512.35	820.80	410.40	1231.20	281.15	1	1	0.55
34	1602.57	889.20	478.80	1368.00	234.57	1	1	0.57
35	1673.25	957.60	547.20	1504.80	168.45	1	1	0.58
36	1728.83	1026.00	615.60	1641.60	87.23	1	1	0.60
37	1771.95	1094.40	684.00	1778.40	-6.45	1	1	0.62
38	1804.86	1094.40	684.00	1778.40	26.46	0	0	0.63
39	1829.35	1094.40	684.00	1778.40	50.95	0	0	0.65
40	1847.10	1094.40	684.00	1778.40	68.70	0	0	0.67
41	1859.82	1094.40	684.00	1778.40	81.42	0	0	0.68
42	1868.75	1094.40	684.00	1778.40	90.35	0	0	0.70
43	1874.91	1094.40	684.00	1778.40	96.51	0	0	0.72
44	1879.20	1094.40	684.00	1778.40	100.80	0	0	0.73

Estimated Floodplain Fill Calculations

59th Street Inlet Bridge - Proposed Floodplain Fill				
Storm Frequency (yr)	OHWE (CCD)	Flood Elevation (CCD)	Impact Area (ac)	Total Fill (ac-ft)
10	2.62	4.62	0.04	0.08
100	2.62	6.12	0.04	0.14



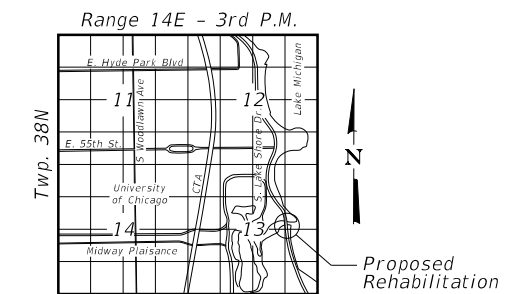
NORTH PERMANENT IMPACT AREA = 0.02 ACRES

SOUTH PERMANENT IMPACT AREA = 0.02 ACRES

PLAN

LEGEND

 Permanent Wetland Impact Area



LOCATION SKETCH

GENERAL PLAN - PERMANENT WETLAND IMPACTS
S. LAKE SHORE DRIVE OVER 59TH ST LAGOON INLET

F.A.U. 2873 - SEC. 80-E-418-00-BR

COOK COUNTY

STATION 50+00.00

STRUCTURE NO. 016-6195

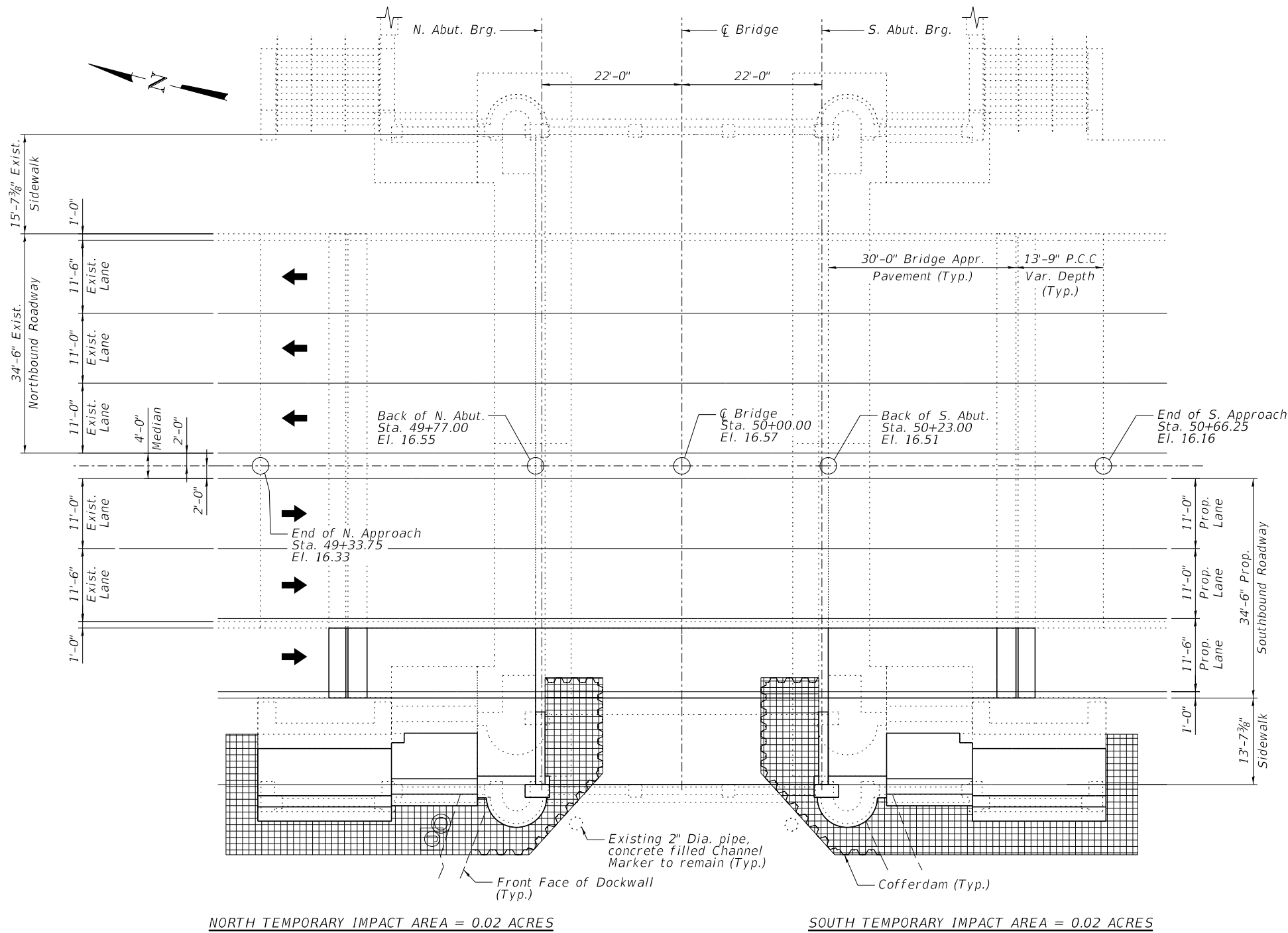
benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10641.00

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59th St. Lagoon Inlet.Wetland Exhibit.dgn	PLOT SCALE =	CHECKED - AJK	REVISED -
	PLOT DATE = 9/29/2017	DRAWN - JLS	REVISED -
		CHECKED - AJK	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

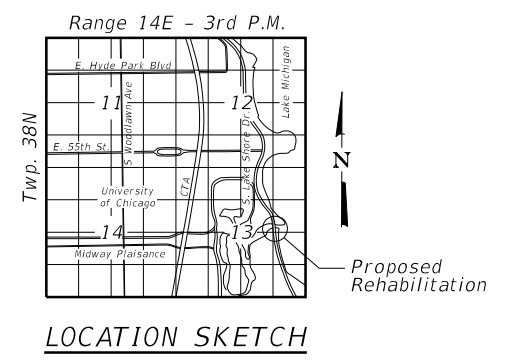
SHEET NO. 1 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	2	1
CDOT PROJECT NO.			SN 016-6195	
ILLINOIS FED. AID PROJECT				



LEGEND

Temporary Wetland Impact Area



PLAN

GENERAL PLAN - TEMPORARY WETLAND IMPACTS
S. LAKE SHORE DRIVE OVER 59TH ST LAGOON INLET
F.A.U. 2873 - SEC. 80-E-418-00-BR
COOK COUNTY
STATION 50+00.00
STRUCTURE NO. 016-6195

benesch
 Alfred Benesch & Company
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450 Job No. 10641.00

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59th St. Lagoon Inlet.Wetland Exhibit.dgn	PLOT SCALE =	CHECKED - AJK	REVISED -
	PLOT DATE = 9/29/2017	DRAWN - JLS	REVISED -
		CHECKED - AJK	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

SHEET NO. 2 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	2	2
CDOT PROJECT NO.		SN 016-6195		
ILLINOIS FED. AID PROJECT				

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East and West Lagoon Hydrology Memorandum

Memorandum

Date: July 11, 2018

To: Nate Roseberry

Re: **Mobility Improvements to Support the South Lakefront Framework Plan
Jackson Park, Chicago, Illinois
Section No. 17-B7203-00-ES
Jackson Park – East and West Lagoon Hydrology**

Purpose

The purpose of this memorandum is to summarize the hydrologic analysis completed to evaluate any potential impacts to the water levels in the Jackson Park East and West Lagoons as a result of the proposed OPC Mobility Improvements. Demonstrating minimal change to the water levels in the lagoons will therefore demonstrate no indirect impacts to the Lagoon bank plantings that we installed as part of the GLFER project.

Existing Conditions

Lake Michigan generally controls ground water elevations at Jackson Park. However the water levels in the East and West Lagoons are generally maintained by a concrete weir control structure located in the northeast corner of the East Lagoon. When Lake Michigan is low the concrete weir control structure maintains the water level in the East and West Lagoons at approximately elevation 1.3. There is also a sluice gate structure that prevents backflow from Lake Michigan when the Lake level is high.

Under existing conditions there are also areas from Jackson Park that drain directly into the lagoons. (See attached Exhibit for the Tributary Drainage Areas). There is overland flow from the surrounding parkland as well as existing storm sewer discharges. Cornell Drive, north of Hayes discharges directly to the West Lagoon via an existing storm sewer. The roadway right of way on South Lake Shore Drive south of 59th Street as well as Hayes Drive discharges to the existing combined sewer on Stoney Island. However the system is designed to take the 1-year flow (first flush) with the storm sewer overflow that exceeds the 1-year storm going to the Lagoons.

Memorandum

Proposed Improvements

Within the drainage area tributary to the East and West Lagoons the proposed roadway improvements will include adding an additional traffic lane to Southbound Lake Shore Drive, the realignment of Hayes Drive, and the removal of Cornell Drive between Hayes Drive and Midway Plaisance. The improvements on South Lake Shore Drive will add approximately 0.68 acres of additional pavement area. However the removal of Cornell Drive will reduce the impervious area by 8.40 acres. Therefore there will be a net reduction of 7.72 acres of impervious area tributary to the East and West Lagoons.

The proposed improvements will also include new pedestrian underpasses under Hayes near the intersection with Lake Shore Drive, as well as on Hayes near the Cornell Drive intersection. The underpasses will require reconfiguring the existing storm sewer systems around these areas. In general the intent of the OPC Mobility Improvements is to maintain the existing drainage patterns as closely as possible.

Hydrologic Analysis

In order to analyze the impacts of the change in pavement area and drainage area to the East and West Lagoons a hydrologic analysis using HEC-HMS software was completed. A runoff curve number of 87.0 and 84.3 was used for the existing and proposed conditions respectively to represent the change in impervious area. The initial water elevation for the East and West Lagoons was set to 1.3 feet, based on the top of the outlet weir which controls the minimum water elevation in the East and West Lagoons.

The analysis was performed for the existing and proposed conditions using the 1, 2, and 10 year storm events for a 24 hour duration. The following table shows a summary of the peak East and West Lagoon water surface elevations for the existing and proposed conditions.

Memorandum

Storm Event	Existing Peak Elevation in the Lagoons	Proposed Peak Elevation in the Lagoons
1-Year	1.67	1.63
2-Year	1.78	1.73
10-Year	2.07	2.01
100-Year	2.67	2.61
500-Year	2.95	2.90

Conclusions

There is minimal ‘bounce’ in the lagoon water levels as a result of the runoff from the surrounding drainage area tributary to the lagoon. For the one year storm the lagoon elevation rises from 1.3 to 1.67 feet, an increase of only 0.37 feet. The reduction in impervious area tributary to the lagoon will only lower the peak lagoon level by 0.04 feet. For the 10-year event the lagoon elevation rises from 1.3 to 2.07 feet, an increase of only 0.77 feet. The reduction in impervious area tributary to the lagoon will only lower the peak lagoon level by 0.06 feet. It is important to also note that the peak levels occur over a very short period of time and the overall fluctuation in water levels remains largely unchanged (see attached HEC-HMS analysis outputs)

The proposed improvements will reduce the existing impervious area as well as the total tributary drainage area to the East and West Lagoons. However as demonstrated by hydrologic analysis the reduction in pavement and drainage areas will have a negligible impact on water levels within the Lagoons since they are generally controlled by existing concrete weir structure.

Attachments

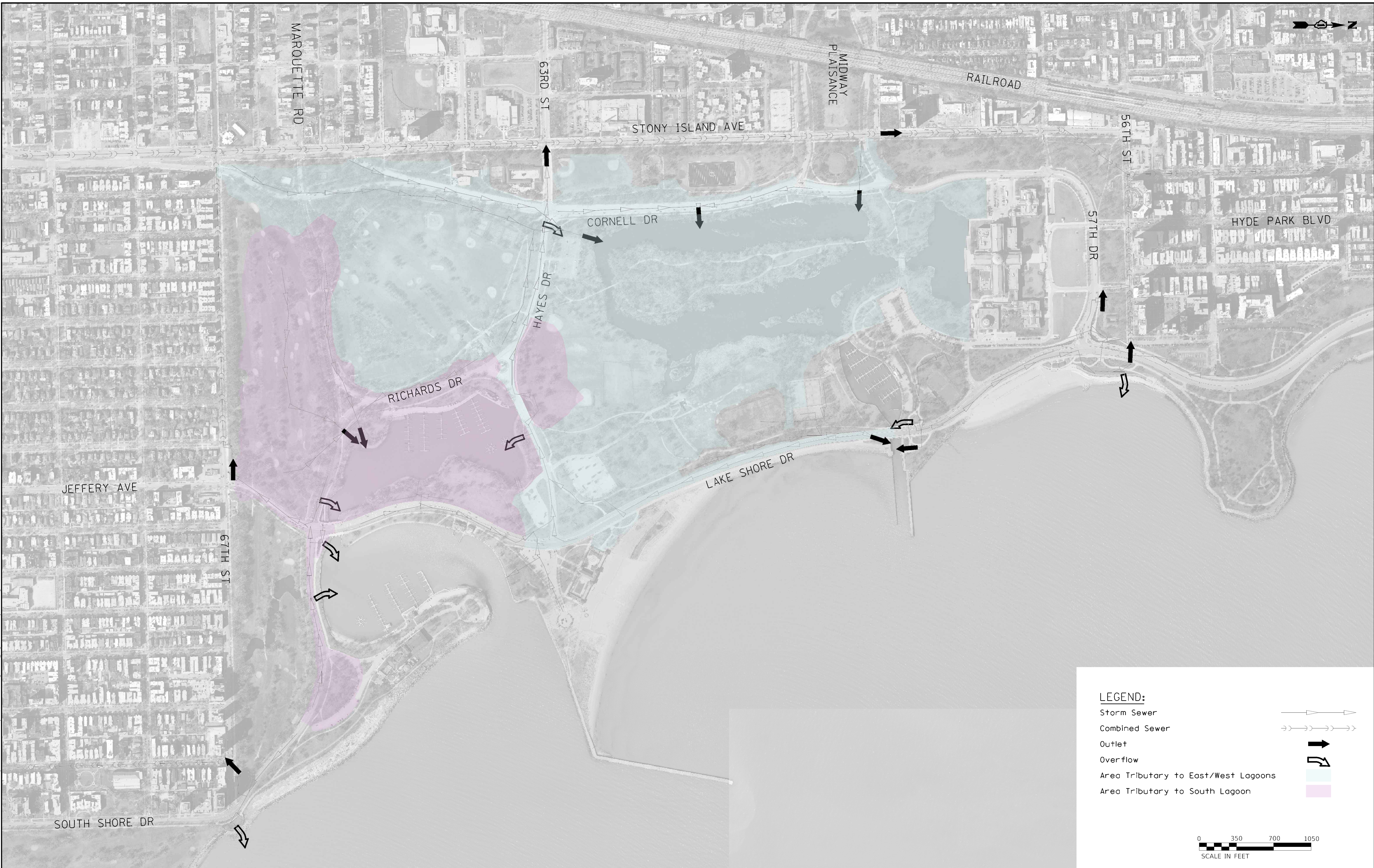
OPC Mobility Improvement Overview

Tributary Drainage Area

HEC-HMS Analysis Outputs

Thomas Liliensiek

Thomas Liliensiek, P.E.
CNECT



MODEL: ST08ELMAME
 FILE NAME: P:\CIVIL\PRINT\cui\tech\local\Civiltech - Projects\Documents\Projects\3153\Drainage\3153_Lagoon_Tributary_Areas.dgn



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PLOT DATE = 6/15/2018	CHECKED - TKL	REVISED - _____
	DATE - MAY 2018	REVISED - _____

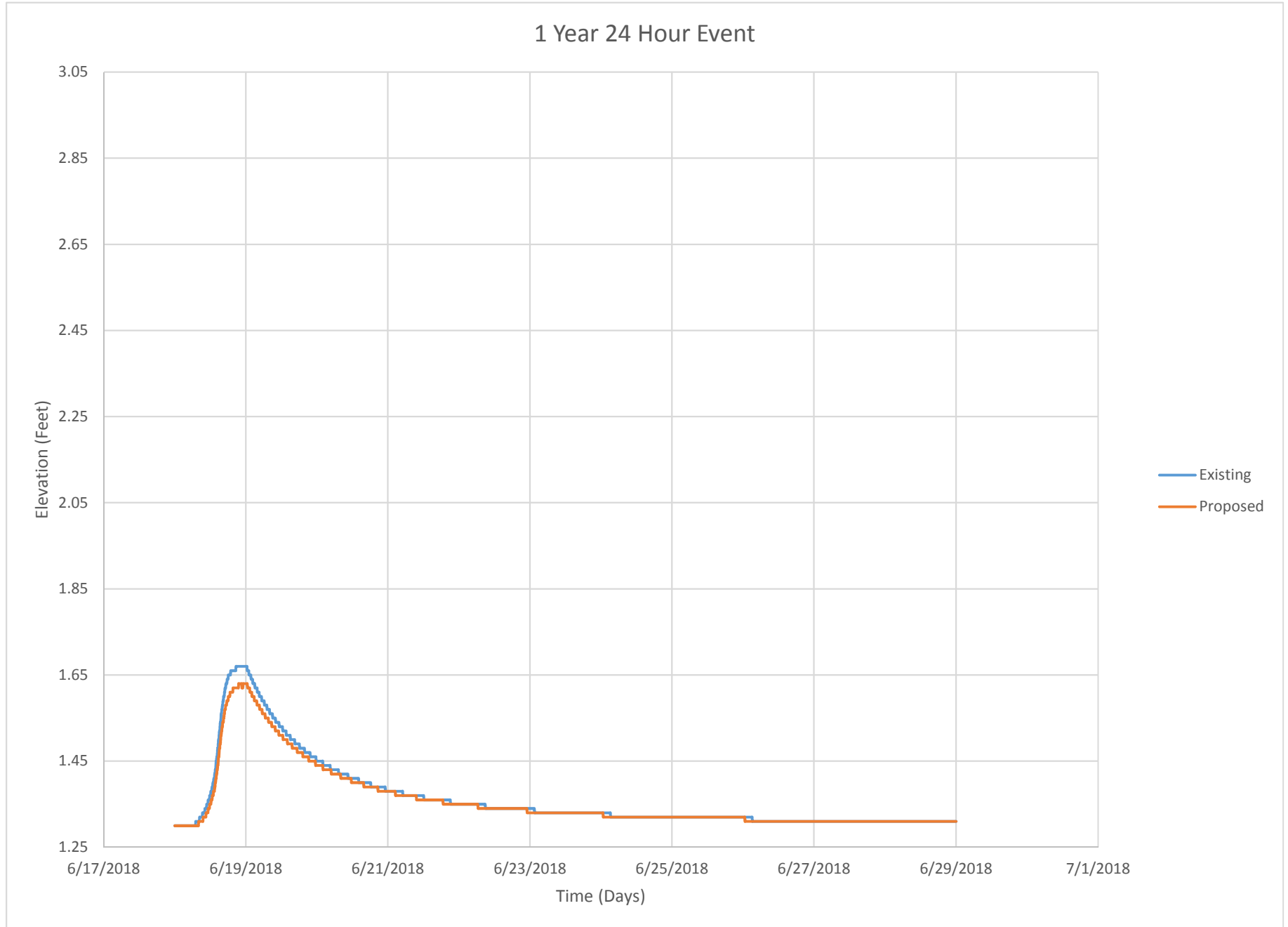


SCALE: 1" = 350'
 SHEET ___ OF SHEETS STA. _____ TO STA. _____

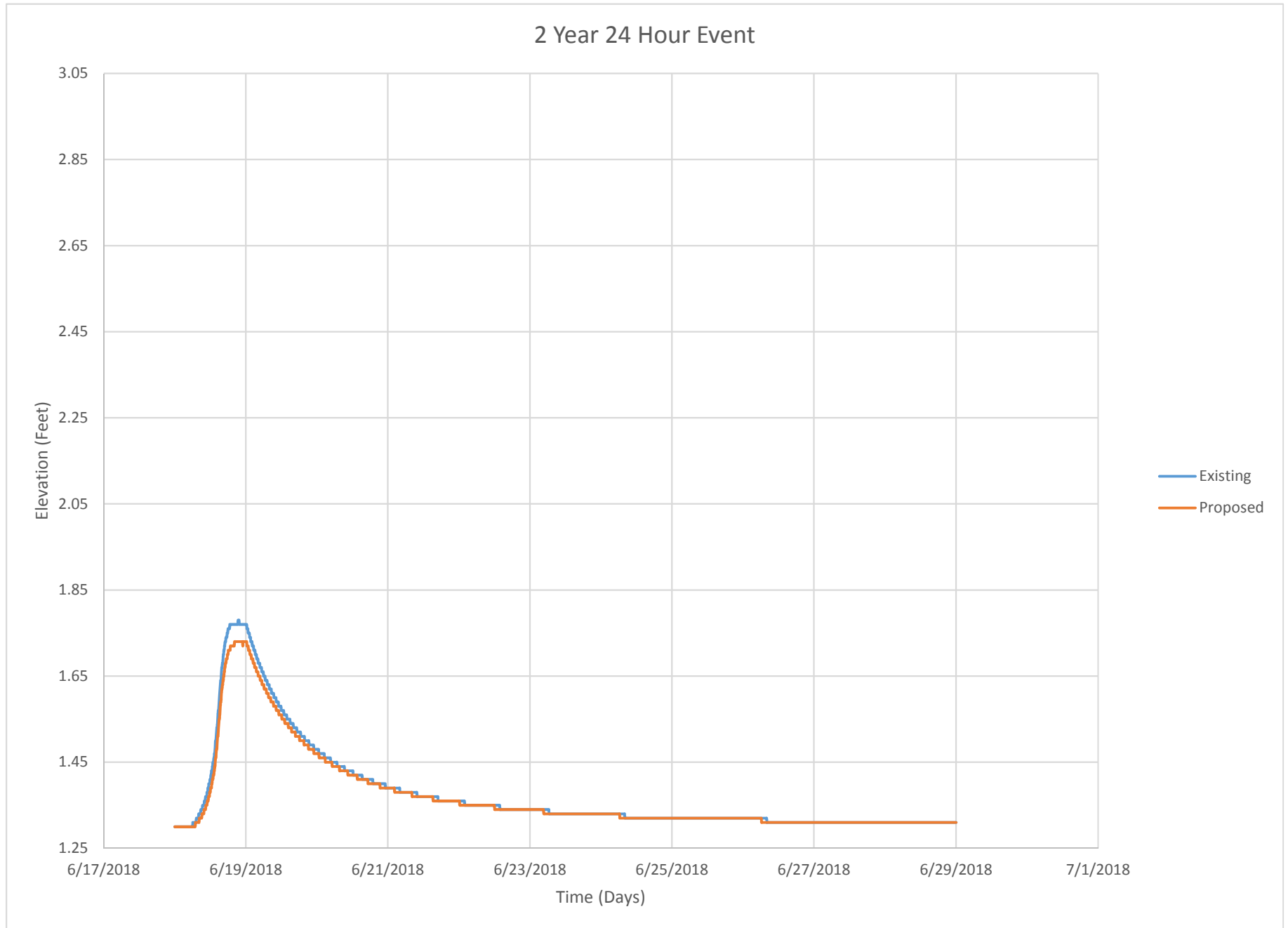
OPC MOBILITY IMPROVEMENTS
OUTLET LOCATION MAP

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-87203-00-ES	COOK	1	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

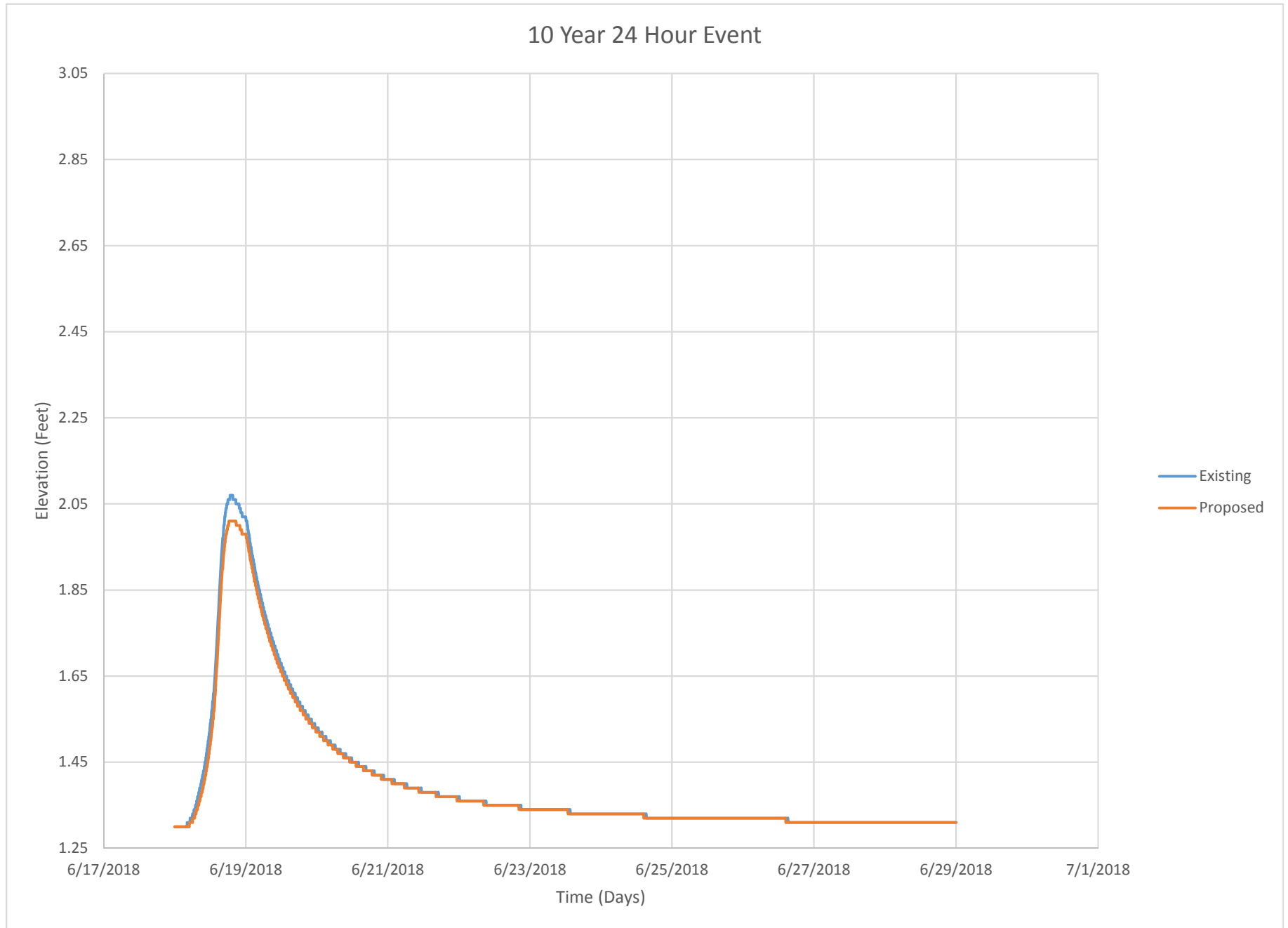
Jackson Park East and West Lagoon - Water Surface Elevation



Jackson Park East and West Lagoon - Water Surface Elevation

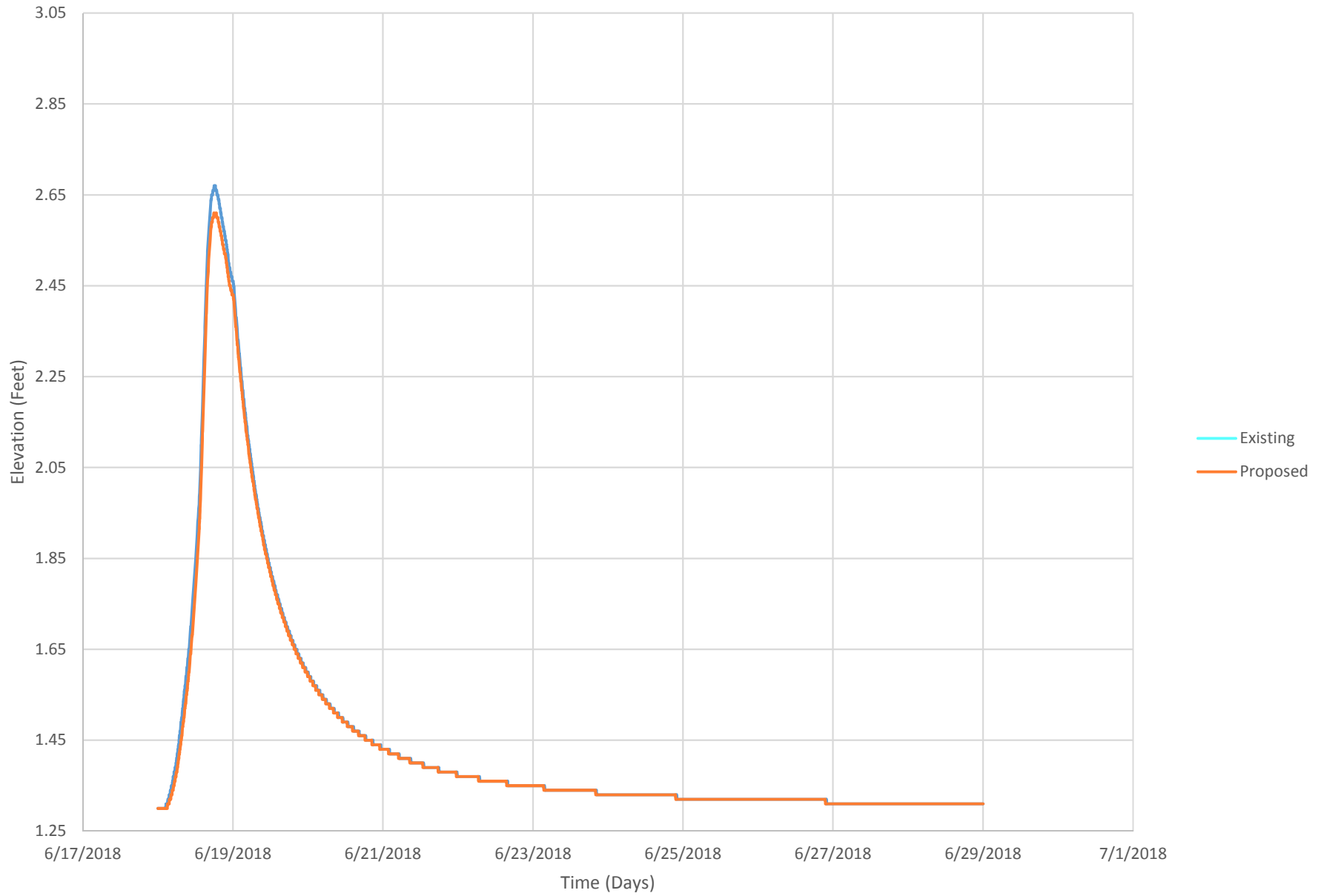


Jackson Park East and West Lagoon - Water Surface Elevation

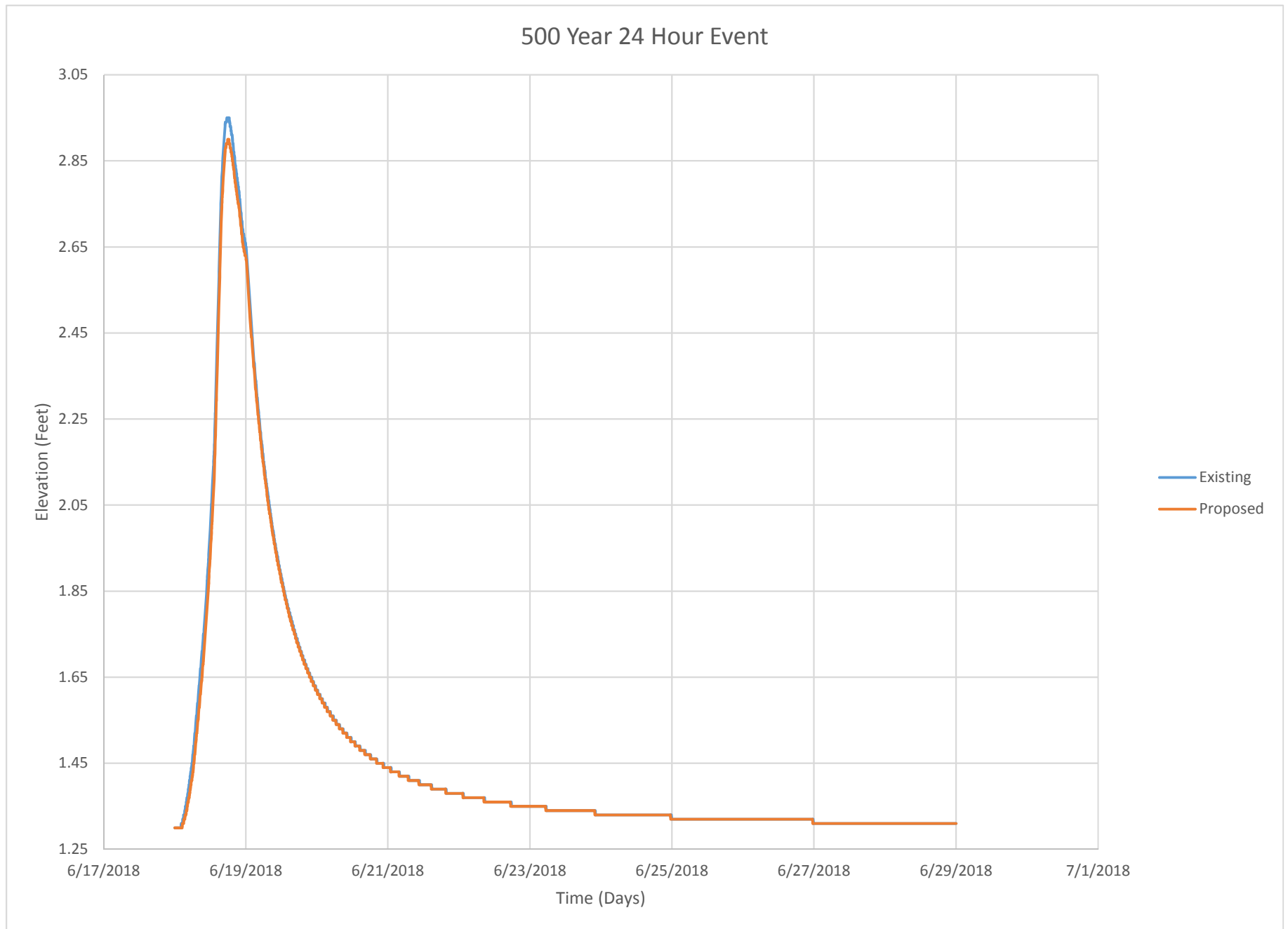


Jackson Park East and West Lagoon - Water Surface Elevation

100 Year 24 Hour Event



Jackson Park East and West Lagoon - Water Surface Elevation



59th Street Bridge Scour Analysis

OPC Mobility Improvement US 41, 59th Street Bridge Scour Analysis Discussion

Flow Estimation

The US 41, 59th Street bridge connects the Lake Michigan (the lake) to the Jackson Park (the park) boat docking area. The docking area receives storm runoff from the lagoons located west of the docking area. There is about 130 acres upstream tributary area of overland flow to the lagoons. However, the lagoons have control structures to restrict flow to the docking area to maintain certain water level in the lagoons. Additionally, the docking area is open to the lake; its water elevation fluctuates with the lake water elevation. As such, any effect of upstream flow from the lagoons to the docking area is inconsequential to this study.

Water level in the lake fluctuates due to storm surge, wind, and barometric pressure. Lake Michigan is non-tidal, meaning the tidal affect is insignificant relative to the effects from other sources described above. The approach proposed in HEC 20 and HEC 25 for tidal waterway is used for wave current or storm surge for scour analysis in this project.

USACE websites provide daily record of the lake climatology data. This record includes current velocity and significant wave height among other data. An example of such a record is attached. Daily significant wave height of 1 to 2 feet is typical for the lake in Chicago area. Typical current velocity in the lake is less than 1 foot per second. A wave height of over 7' to 10' was recorded in North Avenue Beach in Chicago on September 8, 2018. This was a possibly 2-year storm frequency. Under heavier storm intensities, wave heights of over 15' are good possibilities.

Under a combination of storm surge of 10-year and higher intensities and wave heights of over 15 feet, the flow from the lake through the bridge toward the docking area will be restricted. In accordance with HEC 18 (e.g., 9.3.2) orifice equation may be used to estimate the maximum discharge and velocity through the bridge. Considering the roadway overtopping elevation of about 16.6' CCD (PDP plan sheet 18 of 22), a maximum upstream water elevation 16.6' CCD may be assumed in the orifice equation. The lake normal water elevation is assumed at 3' CCD.

Subsurface Soil Condition

Two soil borings were performed near the 59th Street bridge in 2018. The boring logs indicate that subsurface soil consists of poorly graded sand classified as "SP" down to the approximate elevation of -13' CCD. Underlying the sand layer is silty clay layer, with increasing strength with depth from medium stiff to hard clay. The borings extended to Elevations of -46.66' CCD and -35.99' CCD.

The presence of highly permeable sand layer at the top of the borings indicates that the docking area is also hydraulically connected to the lake through groundwater. The sand layer extends down to two feet below the streambed elevation. The sand layer is highly susceptible to erosion and scouring.

The unconfined compressive strength of the silty clay layer is provided in the boring logs. This parameter ranges from 0.5 tons per square foot (tsf) at the top of the boring to 8 tsf at the bottom of the boring (Elevation -46.66 CCD). This parameter is needed to estimate the critical shear stress for scour analysis in cohesive soils.

Bridge Foundation

The reinforced concrete bridge abutment walls are built over reinforced concrete footing slabs supported by H piles. The piles extend to elevation of -45.5' CCD. The channel connecting lake to the docking area is restricted by sheet pile retaining walls on both sides of the channel. The sheet piles horizontally extend to the bridge abutment wall.

Scour Calculations

FHWA suggests a three-level analysis approach like HEC-20 for the analyses of bridges crossing of tidal waterways. This approach is used for this bridge.

Level 1 analysis includes a qualitative evaluation of the stability of the bridge. This level includes estimating the magnitude of storm surge and determining whether the hydraulic analyses depend on the storm surge and wind from the lake or from the riverine flow to the bay area and or both. Level 2 analysis includes engineering analysis to obtain velocity, depth, and discharges due to storm surge, wave, etc. to estimate the scour depth. Levels 1 and 2 analyses are feasible, and performed, for this project. Level 3 requires detailed analysis using computer modeling that is beyond the scope of this project.

As described above, the effect of upstream flow to the bridge is inconsequential for this bridge. So, in this study, the effect of storm surge on the scour is estimated.

Because of the configuration of the retaining walls along the channel connecting the lake to the docking area, there is no abutment scour as well as conventional contraction scour. However, because of storm surge and the flow restriction through the bridge opening (orifice effect), contraction scour is estimated for this bridge in accordance with HEC-20.

The stream bed at the bridge is at Elevation -11' CCD. Because the top 2' (from Elevation -11' to -13' CCD) of sand is highly susceptible to scour, the scour depth is conservatively calculated from Elevation -13' CCD, top of the silty clay layer.

HEC 18, Section 6.7 provides methodology for estimating the contraction scour in cohesive materials. Equation 6.6 calculates the ultimate scour. Parameters needed in the equation include initial shear stress, critical shear stress, and average velocity in the contracted section.

HEC 18 Equation 6.6 references to a document entitled "Ultimate Pier and Contraction Scour...", the cover page is attached. Figure 2 in this document provides correlation between unconfined compressive strength and critical shear stress. Section 4.2.1 provides equation to calculate critical shear stress and initial shear stress. The critical shear stress and initial shear stress are needed to calculate the ultimate scour. Contraction scour occurs if the initial shear stress is higher than the critical shear stress.

The maximum scour occurs when velocity would be the greatest. This condition occurs when storm surge enters the loading docking area. See the attached spread sheet for contraction scour calculation.

The scour calculation is conservative because the wave action is cyclical not steady state and the subsurface soil unconfined compressive strength increases with depth which was not considered in the calculation.

Underwater Inspection Report:

An underwater investigation for the bridge footing was conducted by Collins Engineers, Inc. (Collins) for the Chicago Department of Transportation on November 21, 2017. The report is attached. According to the underwater inspection report, the top 3' to 4' of the H piles were exposed due to scour. This corresponded to scour elevation of approximately -9.00' CCD. Based on the soil boring logs, the scour depth is limited to the top poorly graded sand material. This material is highly susceptible to scouring. The underlying silty clay layer remains intact. It should be noted that the underwater inspection was not performed during storm events. The scour depth during storm events should be higher.

Conclusion and Recommendation:

Based on the analytical modeling, the scour depth under all storm events is conservatively estimated at 21.88', corresponding to elevation -34.88' CCD. Considering the bottom of H pile at -45.5' CCD, the analytical maximum scour depth is about 10.62' ($45.5' - 34.88' = 10.62'$) above the bottom of the H pile footing.

There is significant discrepancy between the underwater inspection and analytical scour depth. One main factor is that the analytical analysis is very conservative due to:

- The storm surge is cyclical, and the velocity direction switch back and forth with the wave flow direction.
- The silty clay layer, due to its cohesiveness, may withstand the cyclical flow associated with storm surge with no measurable scour.

Based this finding a scour rating of 5 is suggested for the bridge.

As discussed in the bridge under water inspection report, the exposure of the steel H-piles results in accelerated corrosion of pile elements. It is therefore recommended that the gaps between the tops of the encasements and the underside of the footing be filled by hand packing with an epoxy polymer concrete, comprised of a mix designed for underwater applications. It is also recommended that the H piles, especially non-encasement H piles, be protected by some type of corrosion control system.

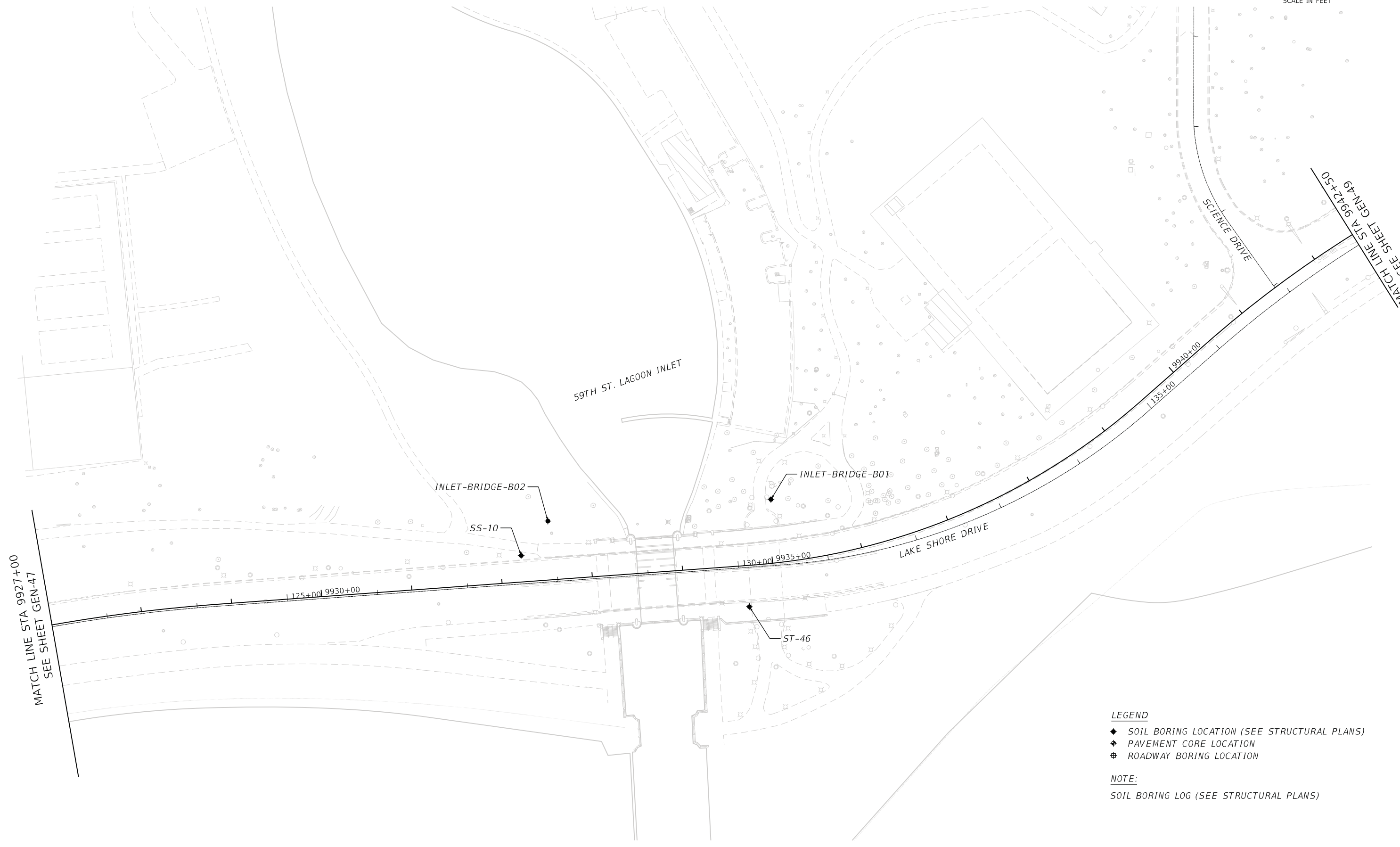
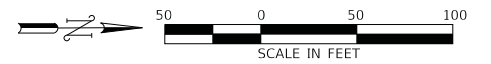
US 41, 59th Street Bridge Contraction Ultimate Scour

Storm Frequency	Velocity in Contracted Section (v), Orifice Equation (ft/s)	Orifice Equation, Delta H	W (ft)	Initial Flow Depth (ft/)	Y1(ft)	Critical Shear Stress, psf	initial Shear Stress, psf	Ku for cohesive	Manning, n	Water density, slug/cuft	g, ft/ square sec	Ys, ft, HEC 18, Eq. 6.6	Ys, ft, (CCD)
10	17.59	5.00	41.67	14	27.6	0.15	1.17	1.486	0.018	1.938	32.2	21.88	-34.88
50	17.59	5.00	41.67	14	27.6	0.15	1.17	1.486	0.018	1.938	32.2	21.88	-34.88
100	17.59	5.00	41.67	14	27.6	0.15	1.17	1.486	0.018	1.938	32.2	21.88	-34.88
200	17.59	5.00	41.67	14	27.6	0.15	1.17	1.486	0.018	1.938	32.2	21.88	-34.88
500	17.59	5.00	41.67	14	27.6	0.15	1.17	1.486	0.018	1.938	32.2	21.88	-34.88

Notes:

Reference : FHWA-ICT-13-025, Ultimate Pier and Contraction Scour in Cohesive Soils at Selected Bridges in Illinois. The streambed elevation at the bridge crossing is -11.00 CCD. The Critical Shear Strength was calculated based on the unconfined compressive strength of soil samples from borings performed in 2018. It was based on linear equation provided in Chapter 3 of reference. The roadway overtopping elevation of 16.6' CCD is conservatively used as the height of the storm for all storm frequencies. This correlates to wave height of about 13.6' ($16.6'-3'=13.6'$). Top of the cohesive layer is at -13.00' CCD. Y1 is calculated using the elevation difference between the overtopping elevation and streambed elevation ($16.6-(-11)=27.6'$). Bottom of H pile foundation is at Elevation -45.5' CCD. Equation 6.6 of HEC 18 is used for the calculation of the ultimate scour depth. Orifice equation is used to calculate flow velocity. "n" is estimated based on smooth surface silty clay layer. Delta H is calculated by subtracting overtopping elevation from the lowest arc elevation bottom of the bridge ($16.6'-11.6'=5'$).

DRAFT



MATCH LINE STA 9927+00
SEE SHEET GEN-47

MATCH LINE STA 9942+50
SEE SHEET GEN-49

LEGEND

- ◆ SOIL BORING LOCATION (SEE STRUCTURAL PLANS)
- ◇ PAVEMENT CORE LOCATION
- ⊕ ROADWAY BORING LOCATION

NOTE:
SOIL BORING LOG (SEE STRUCTURAL PLANS)

PLOT DATE: 9/5/2019
SCALE: 1/8" = 1'-0"
FILE NAME: C:\Users\cchiltech\local\chiltech\Projects\Documents\Projects\315\CAD\Sheets\Utility\Soil_Boring\sh-bor-002.dgn

DESIGN:	CZ				
DRAWN:	CZ				
CHECKED:	DM				
APPROVED:		NO.	BY	DATE	DESCRIPTION
DATE: 08/09/2019					REVISIONS



BORING LOCATION

JACKSON PARK MOBILITY IMPROVEMENTS
STA. 9927+00 TO STA. 9942+50

CONTRACT NO.	TOTAL SHEETS	SHEET NO.
	1242	48
PROJECT NO.	DRAWING NO.	
B-7-203	GEN-48	
SCALE: AS INDICATED		



SOIL BORING LOG

Page 1 of 3
Date 7/31/18

ROUTE F.A.U. 1520 DESCRIPTION 59th Street Inlet Bridge LOGGED BY JJR
 SECTION 17-B7203-00-ES LOCATION 59th & Lake Shore Northing 1866455.146 Easting 1190187.705
 COUNTY Cook DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 016-6195 Surface Water Elev. N/A ft
 Station 9933+72 Stream Bed Elev. N/A ft
 BORING NO. Inlet-Bridge-B01 Groundwater Elev.:
 Station 9935+07 First Encounter -0.2 ft ▼
 Offset 72.30ft LT Upon Completion N/A ft
 Ground Surface Elev. 3.34 ft After N/A Hrs. N/A ft

DEPTH (ft)	GRAIN SIZE	U.C.S. (/6") (tsf)	M.O.I.S.T. (%)	ORGANIC (%)	NOTES
0 - 2.84	6 inches of TOPSOIL				
2.84 - 3.0	Medium Dense Brown and Gray SAND (SP)				
3.0 - 3.5		25			
3.5 - 4.0					
4.0 - 4.5					
4.5 - 5.0		25			
5.0 - 5.5					
5.5 - 6.0					
6.0 - 6.5					
6.5 - 7.0		25			
7.0 - 7.5					
7.5 - 8.0					
8.0 - 8.5		22			
8.5 - 9.0					
9.0 - 9.5					
9.5 - 10.0					
10.0 - 10.5					
10.5 - 11.0					
11.0 - 11.5					
11.5 - 12.0					
12.0 - 12.5					
12.5 - 13.0					
13.0 - 13.5					
13.5 - 14.0					
14.0 - 14.5					
14.5 - 15.0					
15.0 - 15.5					
15.5 - 16.0					
16.0 - 16.5					
16.5 - 17.0					
17.0 - 17.5					
17.5 - 18.0					
18.0 - 18.5					
18.5 - 19.0					
19.0 - 19.5					
19.5 - 20.0					
20.0 - 20.5					
20.5 - 21.0					
21.0 - 21.5					
21.5 - 22.0					
22.0 - 22.5					
22.5 - 23.0					
23.0 - 23.5					
23.5 - 24.0					
24.0 - 24.5					
24.5 - 25.0					
25.0 - 25.5					
25.5 - 26.0					
26.0 - 26.5					
26.5 - 27.0					
27.0 - 27.5					
27.5 - 28.0					
28.0 - 28.5					
28.5 - 29.0					
29.0 - 29.5					
29.5 - 30.0					
30.0 - 30.5					
30.5 - 31.0					
31.0 - 31.5					
31.5 - 32.0					
32.0 - 32.5					
32.5 - 33.0					
33.0 - 33.5					
33.5 - 34.0					
34.0 - 34.5					
34.5 - 35.0					
35.0 - 35.5					
35.5 - 36.0					
36.0 - 36.5					
36.5 - 37.0					
37.0 - 37.5					
37.5 - 38.0					
38.0 - 38.5					
38.5 - 39.0					
39.0 - 39.5					
39.5 - 40.0					

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)



SOIL BORING LOG

Page 2 of 3
Date 7/31/18

ROUTE F.A.U. 1520 DESCRIPTION 59th Street Inlet Bridge LOGGED BY JJR
 SECTION 17-B7203-00-ES LOCATION 59th & Lake Shore Northing 1866455.146 Easting 1190187.705
 COUNTY Cook DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 016-6195 Surface Water Elev. N/A ft
 Station 9933+72 Stream Bed Elev. N/A ft
 BORING NO. Inlet-Bridge-B01 Groundwater Elev.:
 Station 9935+07 First Encounter -0.2 ft ▼
 Offset 72.30ft LT Upon Completion N/A ft
 Ground Surface Elev. 3.34 ft After N/A Hrs. N/A ft

DEPTH (ft)	GRAIN SIZE	U.C.S. (/6") (tsf)	M.O.I.S.T. (%)	ORGANIC (%)	NOTES
0 - 22.66	Medium Stiff to Stiff Gray, CLAY (CL) (continued)				
1					
2		1.0	20		
3					
1					
3		1.3	20	122	
3					
2					
3		1.5	20		
5					
7					
3					
5		1.7	20		
7					
7					
8		5.0	12		
9					
4					
10		7.1	12		
13					

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)



SOIL BORING LOG

Page 3 of 3
Date 7/31/18

ROUTE F.A.U. 1520 DESCRIPTION 59th Street Inlet Bridge LOGGED BY JJR
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 Station 9935+07 First Encounter -0.2 ft ▼
 Offset 72.30ft LT Upon Completion N/A ft
 Ground Surface Elev. 3.34 ft After N/A Hrs. N/A ft

DEPTH (ft)	GRAIN SIZE	U.C.S. (/6") (tsf)	M.O.I.S.T. (%)	ORGANIC (%)	NOTES
0 - 46.66	Stiff to Hard Gray, SILTY CLAY, trace gravel (CL/ML) (continued)				
11					
13		8.0	12		
25					
11					
17		7.8	12		
23					

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)



FILE NAME =	USER NAME = <u>jsurber</u>	DESIGNED - <u>MM</u>	REVISED -
ABC-sht-6195-boring-001.dgn	PLOT SCALE =	CHECKED - <u>JLS</u>	REVISED -
	PLOT DATE = <u>8/5/2019</u>	DRAWN - <u>RMG</u>	REVISED -
		CHECKED - <u>JLS</u>	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

SOIL BORING LOGS (1 OF 2)
STRUCTURE NO. 016-6195
 SHEET NO. 5D-27 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2873	17-B7203-00-ES	COOK	1242	775
CDOT PROJECT NO.	B-7-203	SN	016-6195	
ILLINOIS FED. AID PROJECT				

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SOIL BORING LOG

Page 1 of 3
Date 7/31/18

ROUTE F.A.U. 1520 DESCRIPTION 59th Street Inlet Bridge LOGGED BY JJR
 SECTION 17-B7203-00-ES LOCATION 59th & Lake Shore Northing 1866209.199 Easting 1190217.975
 COUNTY Cook DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 016-6195 Surface Water Elev. N/A ft
 Station 9933+72 Stream Bed Elev. N/A ft
 BORING NO. Inlet-Bridge-B02 Groundwater Elev.:
 Station 9932+57 First Encounter 3.0 ft ▼
 Offset 67.00ft LT Upon Completion N/A ft
 Ground Surface Elev. 14.01 ft After Hrs. N/A ft

DEPTH (ft)	GRAIN SIZE	UCS (/ft)	MOIST (%)	ORGANIC (%)	NOTES
12 inches of TOPSOIL					
13.51	3				Medium Dense Brown SAND (SP)
11.51	5	11			
	6				
	1				Very Loose to Medium Dense Brown and Gray SAND (SP)
	2	10			
	1				
	3				
	1	10			
	1				
		18			
	3				
	4	21			
	6				
	7				
	9	27			
	8				
	4				Loose to Medium Dense Brown SAND, with silt (SP)
	9	30			
	10				
	3				
	4	24			
	4				
	4				

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)



SOIL BORING LOG

Page 2 of 3
Date 7/31/18

ROUTE F.A.U. 1520 DESCRIPTION 59th Street Inlet Bridge LOGGED BY JJR
 SECTION 17-B7203-00-ES LOCATION 59th & Lake Shore Northing 1866209.199 Easting 1190217.975
 COUNTY Cook DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 016-6195 Surface Water Elev. N/A ft
 Station 9933+72 Stream Bed Elev. N/A ft
 BORING NO. Inlet-Bridge-B02 Groundwater Elev.:
 Station 9932+57 First Encounter 3.0 ft ▼
 Offset 67.00ft LT Upon Completion N/A ft
 Ground Surface Elev. 14.01 ft After Hrs. N/A ft

DEPTH (ft)	GRAIN SIZE	UCS (/ft)	MOIST (%)	ORGANIC (%)	NOTES
					Loose to Medium Dense (Gray SAND (SP) (continued)
	3				
	6	25			
	9				
	5				
	4	23			
	3				
	4	0.8 P	22		
	6				
	1				Medium Stiff to Stiff Gray CLAY (CL)
	3	1.0 P	20	118.2	
	3				
	2				
	3	1.0 B	20		
	4				
	3				
	4	1.7 B	19		
	4				

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)



SOIL BORING LOG

Page 3 of 3
Date 7/31/18

ROUTE F.A.U. 1520 DESCRIPTION 59th Street Inlet Bridge LOGGED BY JJR
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 COUNTY Cook DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 016-6195 Surface Water Elev. N/A ft
 Station 9933+72 Stream Bed Elev. N/A ft
 BORING NO. Inlet-Bridge-B02 Groundwater Elev.:
 Station 9932+57 First Encounter 3.0 ft ▼
 Offset 67.00ft LT Upon Completion N/A ft
 Ground Surface Elev. 14.01 ft After Hrs. N/A ft

DEPTH (ft)	GRAIN SIZE	UCS (/ft)	MOIST (%)	ORGANIC (%)	NOTES
					Stiff to Hard (Gray SILTY CLAY, trace gravel (CL/ML) (continued)
	7				
	10	5.4 B	13		
	12				
	10				
	14		16		
	16				
					Dense (Gray SILT, trace gravel (ML)
					End of Boring

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)



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	PLOT DATE = <u>8/5/2019</u>	DRAWN - <u>RMG</u>	REVISED -
		CHECKED - <u>JLS</u>	REVISED -

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

SOIL BORING LOGS (2 OF 2)
STRUCTURE NO. 016-6195
 SHEET NO. 5D-28 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2873	17-B7203-00-ES	COOK	1242	776
CDOT PROJECT NO.	B-7-203	SN	016-6195	
ILLINOIS FED. AID PROJECT				

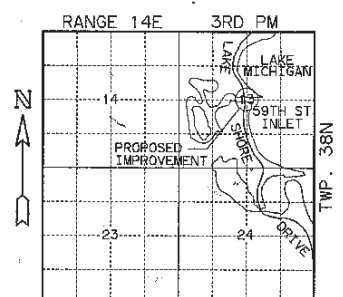
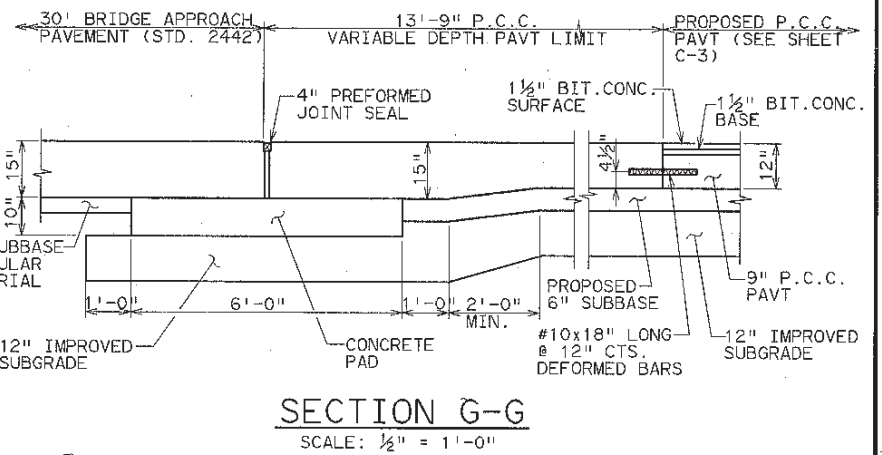
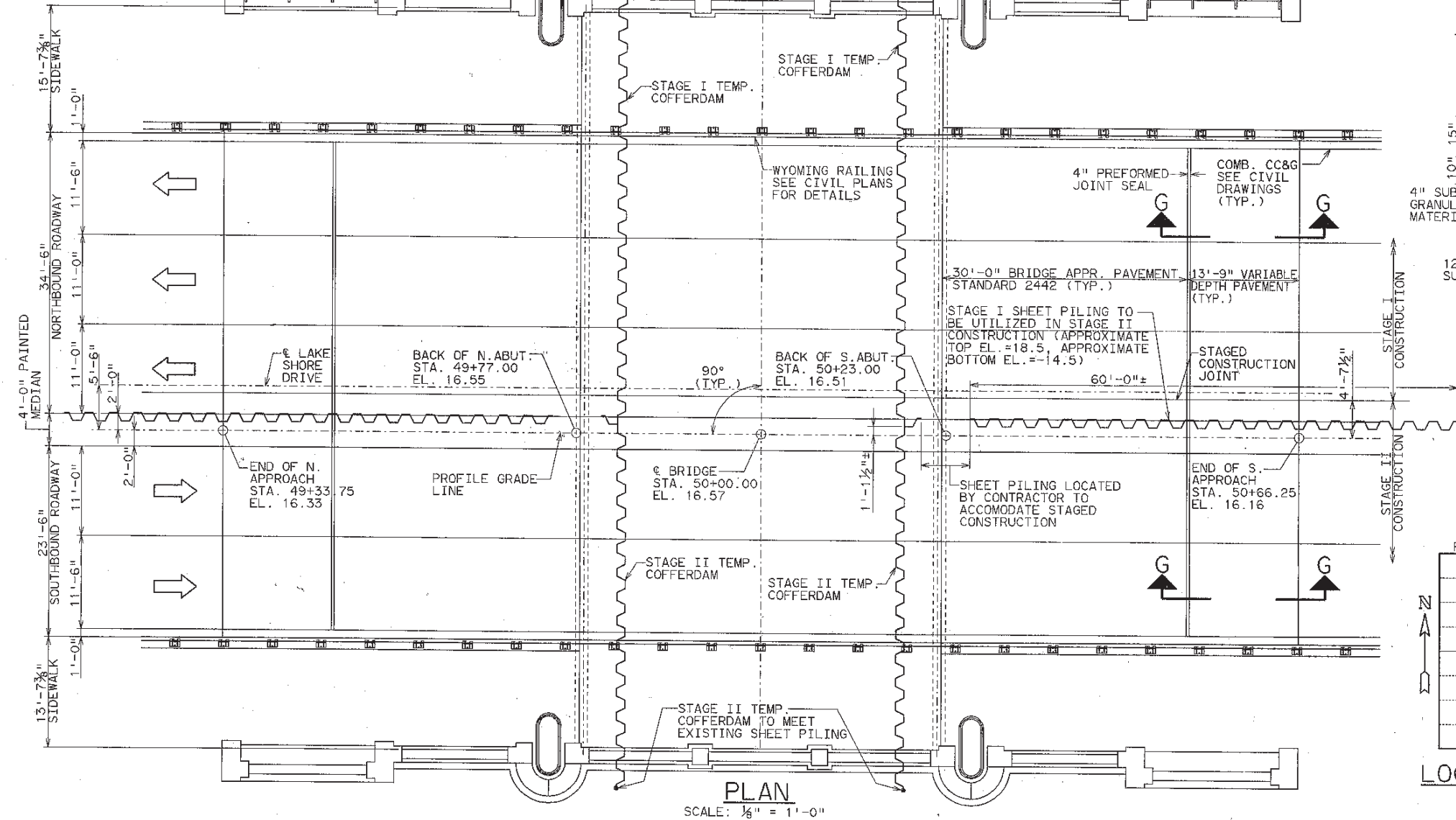
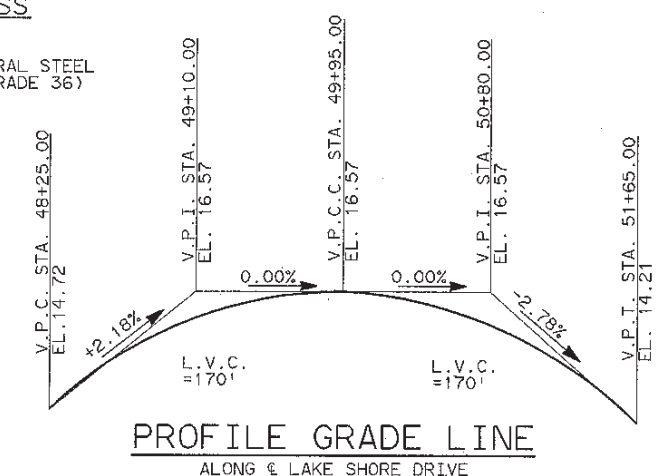
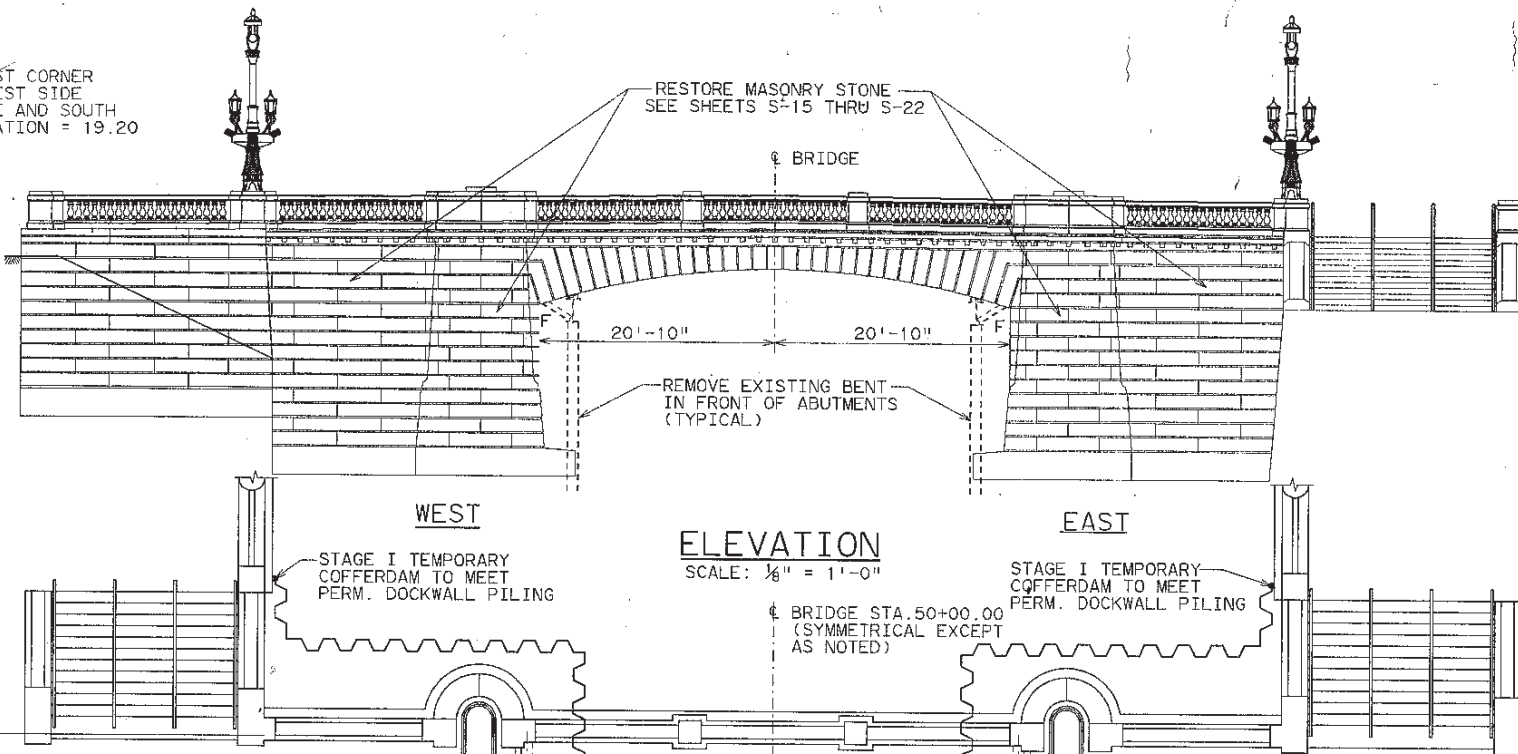
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 3/22/20 PM
 8/5/2019

BENCH MARK:
 CUT ON SOUTHEAST CORNER
 OF STONE WALL ON WEST SIDE
 OF LAKE SHORE DRIVE AND SOUTH
 END OF BRIDGE ELEVATION = 19.20

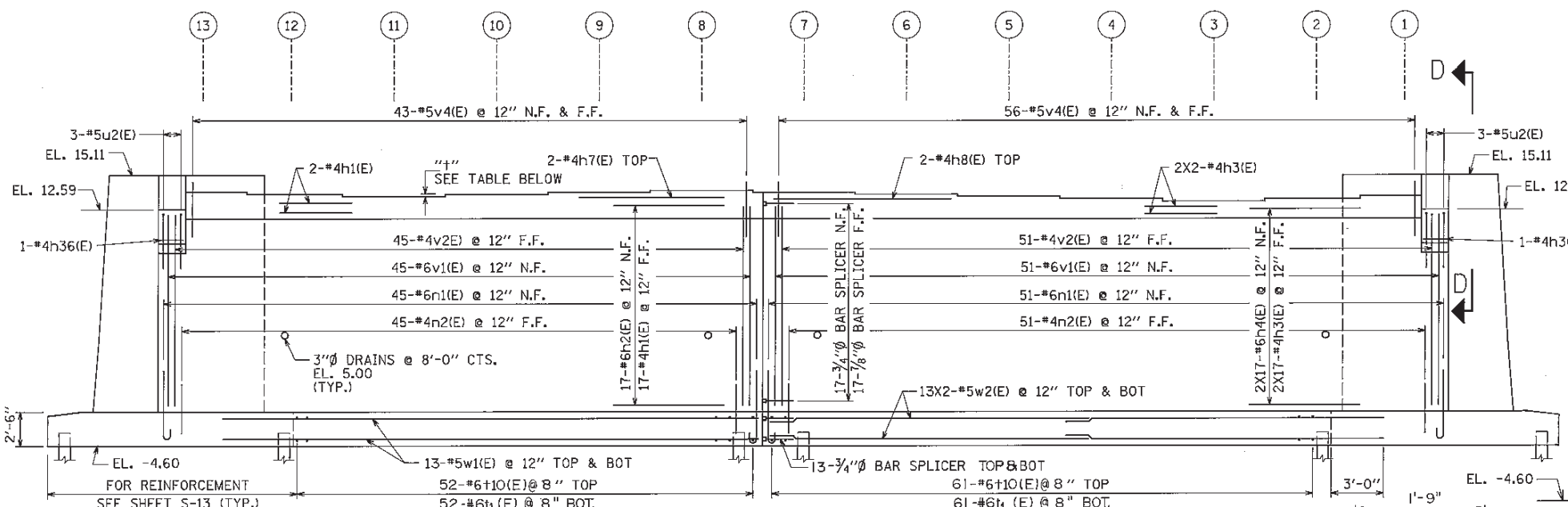
DESIGN SPECIFICATIONS
 1992 AASHTO
 SEISMIC ACCELERATION COEFFICIENT = 0.038
LOADING HS-20
 ALLOW 25#/SQ. FT. FOR FUTURE
 WEARING SURFACE

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK		
FHWA REGION NO.		ILLINOIS PROJECT		

DESIGN STRESS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (REINF.)
 $f_y = 36,000$ psi (STRUCTURAL STEEL
 M 270 GRADE 36)



NO.	BY	DATE	DESCRIPTION
REVISIONS			
LAKE SHORE DRIVE BRIDGE OVER 59th STREET INLET			
GENERAL PLAN AND ELEVATION			
CONSULTANT MERIDIAN ENGINEERS & PLANNERS, INC.			
CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION			
BUREAU OF BRIDGES			
DRAWN BHO	SHEET NO.		S-1
CHECKED SCL			
APPROVED MEZ			
DATE FEB. 1994			
SCALE AS SHOWN			
CONTRACT NO.	PROJECT NO. E-0-418		

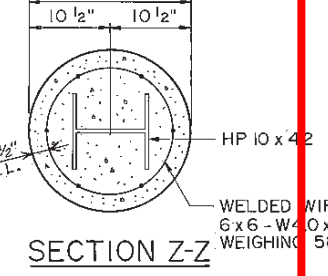


ELEVATION (NORTH ABUTMENT)
SOUTH ABUTMENT (OPPOSITE HAND)
SCALE = 3/16"=1'-0"

BEARING SEAT ELEVATIONS

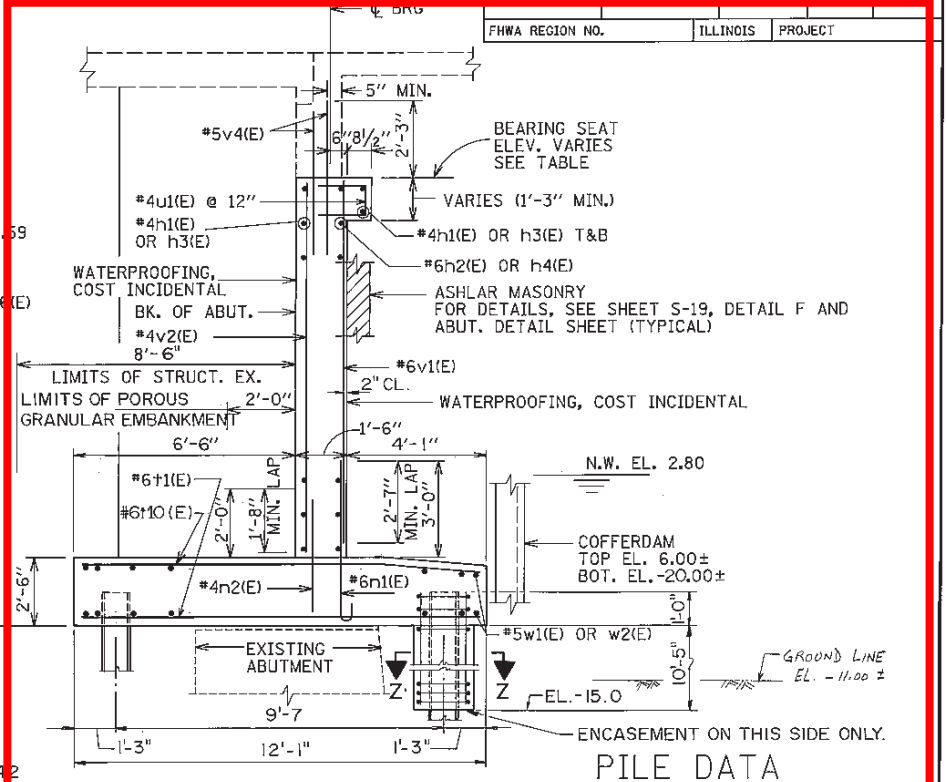
GIRDER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13
NORTH ABUT.	13.40	13.27	13.12	13.21	13.30	13.39	13.46	13.52	13.44	13.34	13.19	13.26	13.39
SOUTH ABUT.	13.17	13.04	12.89	13.04	13.19	13.34	13.42	13.48	13.40	13.30	13.15	13.22	13.35

BEARING SEAT STEP HEIGHT "t"	
NORTH ABUT.	1/2", 3/4", 1/8", 1/8", 1/8", 7/8", 3/4", -, 1", 1/4", 3/4", 7/8", 1/2"
SOUTH ABUT.	1/2", 3/4", 3/4", 3/4", 3/4", 1", 3/4", -, 1", 1/4", 3/4", 7/8", 1/2"



SECTION Z-Z

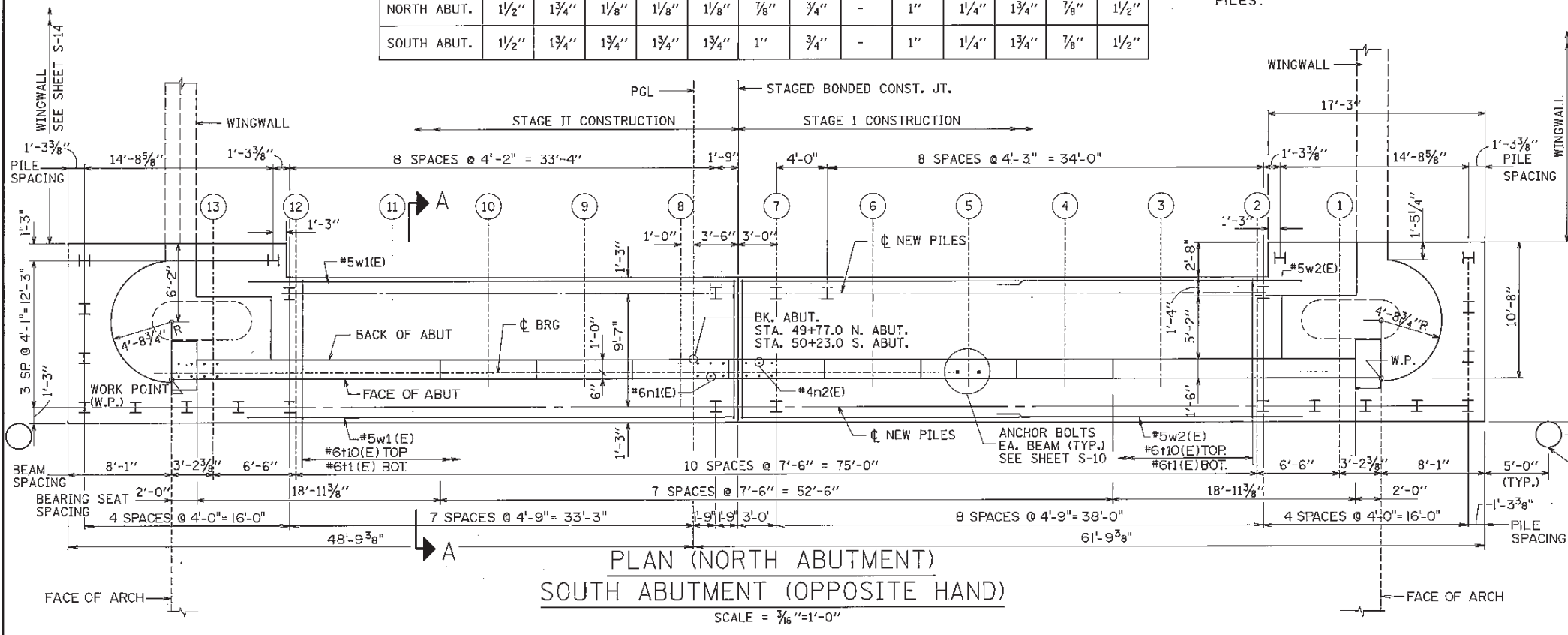
NOTE:
THE COST OF EXCAVATION, CLASS X CONC ENCASEMENT & REINFORCEMENT IS INCIDENTAL TO THE COST OF FURNISHING PILES.



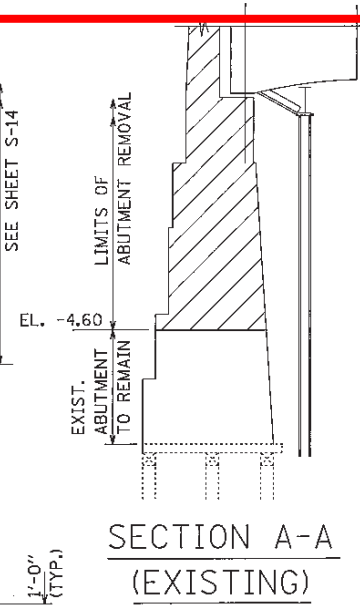
SECTION A-A

PILE DATA
TYPE - STEEL
SIZE - HP10X42
EST. LENGTH - 42'-0"
CAPACITY - 45 TONS
DRIVE TO 67.5 TONS

NOTE:
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
BARS INDICATED THUS 12X2-#5w2(E) INDICATES 12 LINES OF BARS WITH 2 LENGTHS PER LINE.
FOR SECTION D-D, SEE SHEET S-13.



PLAN (NORTH ABUTMENT)
SOUTH ABUTMENT (OPPOSITE HAND)
SCALE = 3/16"=1'-0"



SECTION A-A (EXISTING)
SCALE = 3/16"=1'-0"

NO.	BY	DATE	DESCRIPTION
REVISIONS			
LAKE SHORE DRIVE BRIDGE OVER 80th STREET INLET			
ABUTMENTS			
CONSULTANT			
CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION BUREAU OF BRIDGES			
DRAWN	JGN	SHEET NO.	
CHECKED	RCE		
APPROVED	MEZ		
DATE	FEB. 1994		
SCALE	AS SHOWN		
CONTRACT NO.		PROJECT NO. E-O-418	

Nakawatase, Wyns and Associates, Inc.
Engineers
315 N. Dearborn St.
Chicago, IL 60610



Underwater Inspection Report

**59th Street Lagoon Inlet Bridge
(South Lake Shore Drive)
SN 016-6195
over the
Jackson Park Lagoon**

Chicago, Illinois

Prepared for:
Chicago Department of Transportation

Inspected:
November 21, 2017

Prepared by:



A Joint Venture Teaming of Alfred Benesch &
Company and Collins Engineers, Inc.

UNDERWATER INSPECTION SUMMARY

GENERAL:

Inspection Date: November 21, 2017
Firm: Collins Engineers, Inc.
Insp. Team Leader/Diver: Brian Dilworth, P.E., ADCI
Engineer-Divers: Brad Syler, S.E., P.E., ADCI; Jacob Green, ADCI;
 Breanne Stromberg, E.I.T.
Inspection Method: Commercial Surface-Supplied Air Diving

BRIDGE INFORMATION:

Superstructure Type: Steel Multi-Beam Bridge
Substructure Type: Reinforced Concrete Abutment Walls founded on Timber Piles with a Steel Pile Supported Footing
SSUs Inspected: North and South Abutments

GENERAL CONDITIONS:

Water Visibility: 3 Foot **Water Velocity:** < 1 ft/s
Water Temperature: 41 °F **Weather:** Clear, 40 °F
Waterline Elevation: +0.7 CCD
Waterline Reference: Top of the Sidewalk at the West Fascia (mid-span): +16.0 CCD
Maximum Depth at SSU: 12.5 feet – Mid-Point of the North Abutment
Shoreline Conditions: No Erosion
Channel Conditions: No Significant Degradation

SUBSTRUCTURE CONDITIONS: (See Appendix A for detailed notes.)

North Abutment: Satisfactory Condition – Footing exposed and undermined, voids in the steel pile concrete encasement, section loss
South Abutment: Satisfactory Condition – Footing exposed and undermined, voids in the steel pile concrete encasement, section loss

MAINTENANCE/REPAIR RECOMMENDATIONS:

Re-inspect underwater in 60 months.

UNDERWATER INSPECTION NBI CODING RECOMMENDATIONS:

Item	Description	Coding (Prev)	Coding (New)	Condition/Comments
92B	UW Insp. Freq.	60	60	60 Months
93B	UW Insp. Date	12 14 12	11 21 17	November 21, 2017
93B1	UW Appraisal	6	6	Section Loss
113*	Scour	8	5	Scour Within Piles

*Codings are recommendations based on observed conditions during the underwater inspection only. Final NBI codings are to be determined by bridge owner.

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 Purpose and Scope	1
1.2 General Description of the Structure	1
1.3 Method of Investigation.....	2
2.0 EXISTING CONDITIONS.....	3
2.1 Waterway Conditions.....	3
2.2 Shoreline Conditions.....	3
2.3 Substructure Conditions.....	3
3.0 EVALUATION AND RECOMMENDATIONS	4

APPENDICES

APPENDIX A - FIGURES

APPENDIX B – PHOTOGRAPHS

APPENDIX C – RATING FORM

1.0 INTRODUCTION

1.1 Purpose and Scope

This report consists of the results of a detailed underwater investigation of Structure No. 016-6195 in Chicago, Illinois. Collins Engineers, Inc. (Collins) conducted the underwater investigation for the Chicago Department of Transportation on November 21, 2017. The purpose of the investigation was as follows:

- Determine the condition of the substructure elements located in the waterway at the time of the inspection from the waterline to the channel bottom.
- Determine the condition of the submerged substructure elements above the waterline within the areas that may be submerged or inaccessible during routine above water inspections.
- Obtain channel bottom depth measurements along the bridge fascias, upstream and downstream of the bridge.
- Determine the condition of the shorelines in the vicinity of the structure.
- Obtain photographs of the bridge and any significant defects.

The following report includes a description of the structure, the method of investigation, description of existing conditions, an evaluation and recommendations based on the conditions, inspection figures, and photographs.

1.2 General Description of the Structure

Structure No. 016-6195 is a steel multi-girder bridge that carries South Lake Shore Drive over the Jackson Park Lagoon in Chicago, Illinois. Refer to Figure 1 in Appendix A for a location map. The orientation of the longitudinal axis of the bridge is north to south. The substructure units along the river are labeled as the North and South Abutments. The original reinforced concrete shafts are founded on 3 rows of timber piles, while the reinforced concrete footings are supported by concrete encased steel H-piles. The above water portions of

the abutments have a stone masonry façade. Refer to Photograph 1 in Appendix B for an overall view of the structure.

1.3 Method of Investigation

A team consisting of a licensed Structural Engineer, a licensed Professional Engineer-Diver, an Engineer-Diver, and a Technician-Diver conducted the underwater investigation. Dive team members are certified through the Association of Diving Contractors International (ADCI). The inspection was conducted using commercial surface-supplied air diving equipment. During the inspection, the diver entered the water from a boat while an engineer on the boat recorded the inspection notes.

The underwater inspection consisted of a visual and tactile examination of the accessible surfaces of the submerged substructure units from the waterline to the channel bottom with particular attention given to any areas of deterioration or apparent distress. The type of channel bottom material, presence and extent of scour, presence and extent of riprap, presence and extent of debris, and the location of any structural defects were noted. In addition, the conditions of the shorelines in the vicinity of the structure were noted. Photographs were taken to document general conditions and observed deficiencies.

The channel bottom elevations were obtained using a continuous running digital fathometer and an incremental sounding rod. The channel bottom depths were recorded along the upstream and downstream bridge fascias, 100 feet upstream and downstream of the bridge, and along each submerged substructure unit. The waterline at the time of water depth recording was referenced to a known elevation on the structure.

2.0 EXISTING CONDITIONS

2.1 Waterway Conditions

At the time of inspection, the waterline was located approximately 15.3 feet below the top of the sidewalk at the mid-span of the west bridge fascia. This corresponds to a waterline elevation of +0.7 feet Chicago City Datum (CCD). The water was moving ebb and flood, east and west, of the lagoon at less than 1 foot per second. The visibility below water was approximately 3 foot. Refer to Figure 2 in Appendix A for the bridge configuration, sounding plan, and a channel cross-section.

2.2 Shoreline Conditions

The north and south shorelines east and west of the structure were constructed of steel sheet pile retaining walls, which appeared to be in stable condition.

2.3 Substructure Conditions

The North Abutment was generally in satisfactory condition below water with moderate defects observed. The concrete and masonry of the abutment was sound, above and below the waterline. The footing was exposed and undermined along most of the length of the abutment, with horizontal penetrations up to 4 feet, at which point the vertical face of the original abutment was encountered. The 2 foot diameter concrete encased steel H-piles were exposed under the footing, with a maximum vertical exposure of 4 feet near the center of the abutment. Four piles were misaligned/offset toward the channel such that 2 to 3 inches of the top of the concrete encasement was not under the footing. Voids were typically located in the top 6 inches of the pile encasement at the interface of the underside of the footing with typical penetrations of 1 to 2 inches. Voids resulted in the exposure of the reinforcing steel and steel H-piles exhibiting minor surface corrosion. Sections of steel sheet piles from the temporary cofferdam, used during the bridge reconstruction, were located in line with the abutment footing at several locations. Sheeting extended from the top of footing to the channel bottom. The bottom of the footing was observed to be very irregular with random areas of concrete construction over-pour which

extended from the bottom of the footing to the channel bottom. The excess concrete appeared to be the result of poor forming during construction. Refer to Figure 3 in Appendix A for the detailed inspection notes for the North Abutment and Photographs 2 and 3 in Appendix B for views of the North Abutment.

The South Abutment was generally in satisfactory condition below water with moderate defects observed. The concrete and masonry of the abutment was sound, above and below the waterline. The footing was exposed and undermined along most of the length of the abutment, with penetrations of approximately 3 to 4 feet, at which point the vertical face of the original abutment was encountered. The 2 foot diameter concrete encased steel H-piles were exposed under the footing, with a maximum vertical exposure of 4 feet near the center of the abutment. The bottom of the footing was observed to be very irregular with random areas of concrete construction over-pour which extended from the bottom of the footing to the channel bottom. The excess concrete appeared to be the result of poor forming during construction. Sections of steel sheet piles from the temporary cofferdam, used during the bridge reconstruction, were located in line with the abutment footing at several locations. Sheeting extended from the top of footing to the channel bottom. Steel protection piles measuring 2 feet in diameter, were in good condition above and below water exhibiting minor surface corrosion. An area of section loss was located 1.5 feet above the top of the concrete footing near the east corner of the abutment. The area measured 1 foot in diameter with up to 1.5 inches of penetration. Refer to Figure 4 in Appendix A for the detailed inspection notes for the South Abutment and Photograph 4 in Appendix B for a view of the South Abutment.

3.0 EVALUATION AND RECOMMENDATIONS

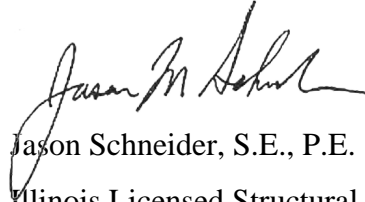
Overall, the submerged substructure units of Structure No. 016-6195 were in satisfactory condition below water. A comparison of the soundings recorded during the previous inspection in December 2012 and the soundings taken during this inspection revealed no significant change in the channel bottom profile in the vicinity of the structure. The footing exposure at the North and South Abutments are not concerns at this time given that the footings were designed to be exposed and they are pile supported. The channel bottom configuration

should continue to be monitored during future underwater inspections to verify that localized scour or overall channel degradation is not occurring and that all footings remain adequately embedded in the channel bottom.

The amount of pile exposure and undermining of the footing, at the North and South Abutments, was not found to be excessive, given the overall length of the H-piles. The design plans indicate that the H-piles were encased in concrete for a length of 10.5 feet, suggesting that pile exposure was anticipated and indicating that a minimum of 6.5 feet of the encasement is still embedded in the channel bottom at each of the abutments. The noted misalignment and gaps between the top of the concrete encasements and the underside of the footing at the North Abutment is not structurally significant at this time. With regard to the misalignment, all of the load bearing H-piles themselves are entirely below the footing, so there is no reduction in foundation support. However, the exposure of the reinforcing steel and steel H-piles could result in accelerated corrosion of those elements. It is therefore recommended that the gaps between the tops of the encasements and the underside of the footing be filled by hand packing with an epoxy polymer concrete, comprised of a mix designed for underwater applications. This will insure adequate corrosion protection to the exposed steel, in accordance with the original design plans.

In accordance with the National Bridge Inspection Standards, it is recommended the subsequent underwater inspection of Structure No. 016-6195 be performed within 60 months.

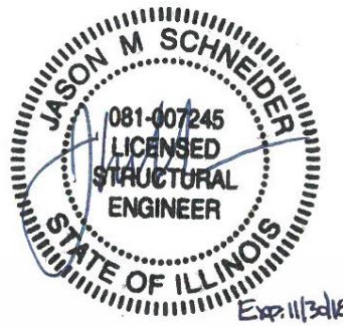
Respectfully submitted,
COLLINS ENGINEERS, INC.



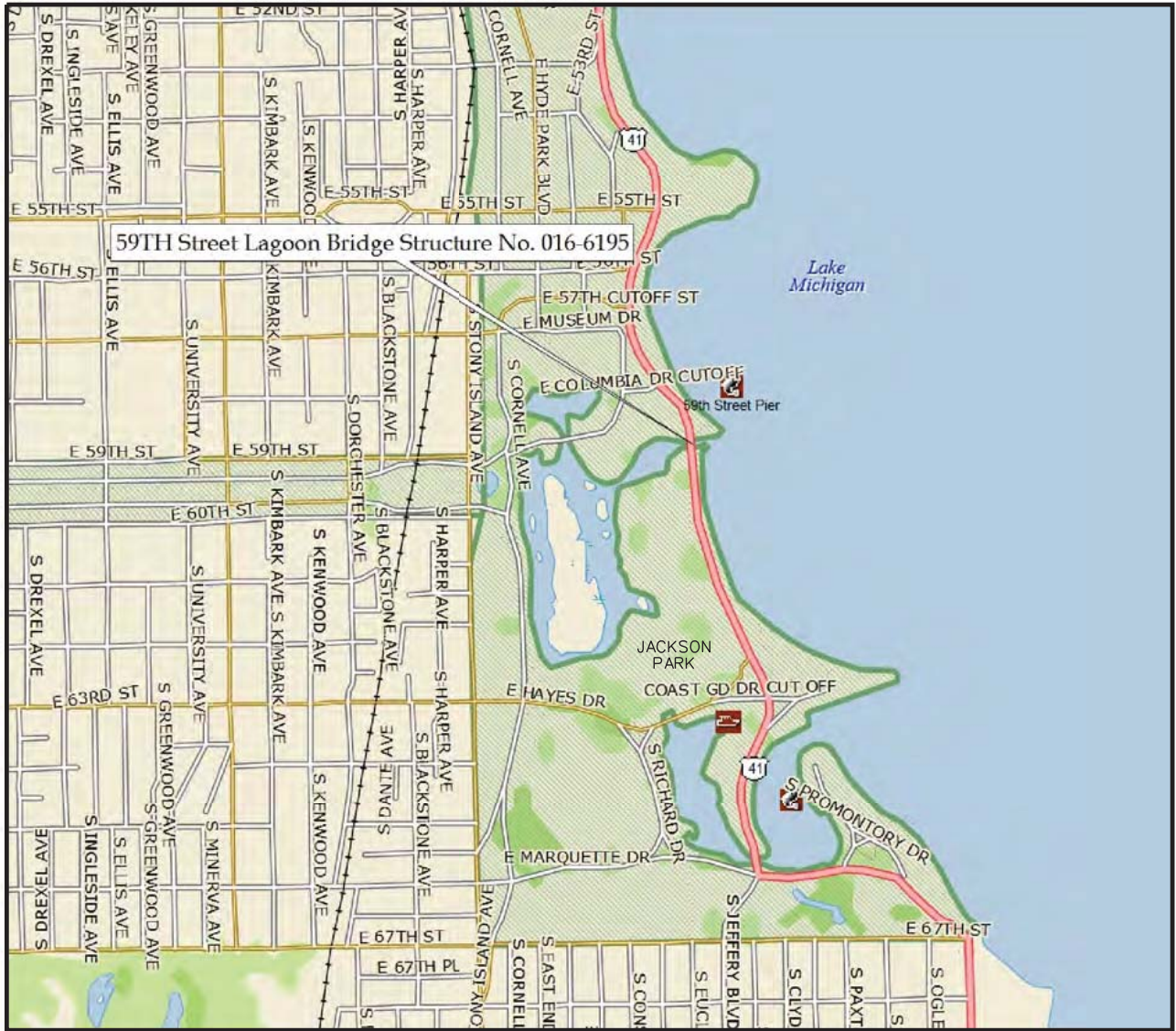
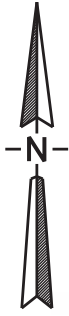
Jason Schneider, S.E., P.E.
Illinois Licensed Structural Engineer

Inspection Team Leader
Brian P. Dilworth, P.E.

Originated by:
Michael Spencer, P.E.



APPENDIX A
FIGURES

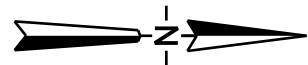


**CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION**

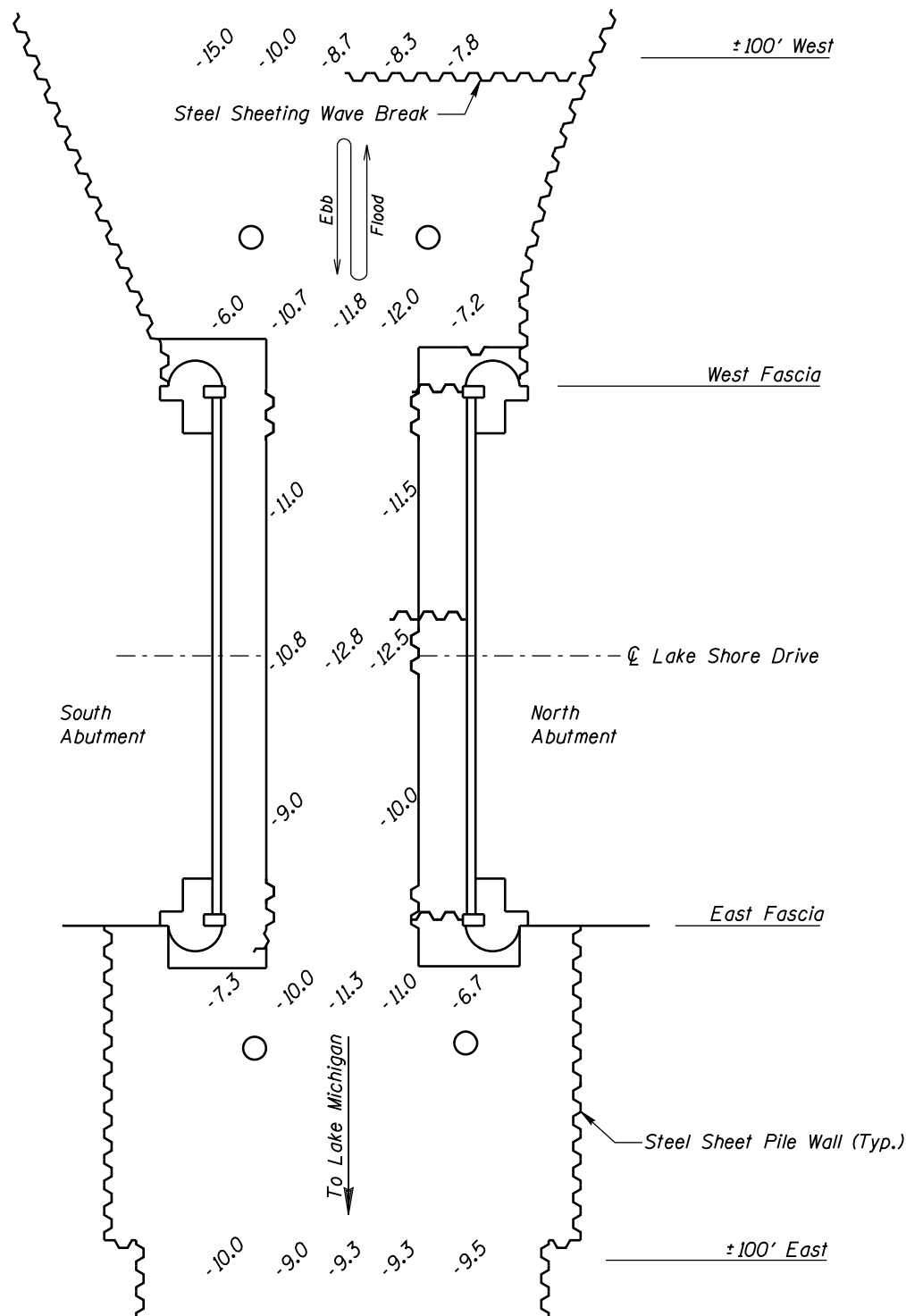
59TH STREET LAGOON INLET BRIDGE OVER THE
JACKSON PARK LAGOON
STRUCTURE NO. 016-6195

LOCATION MAP

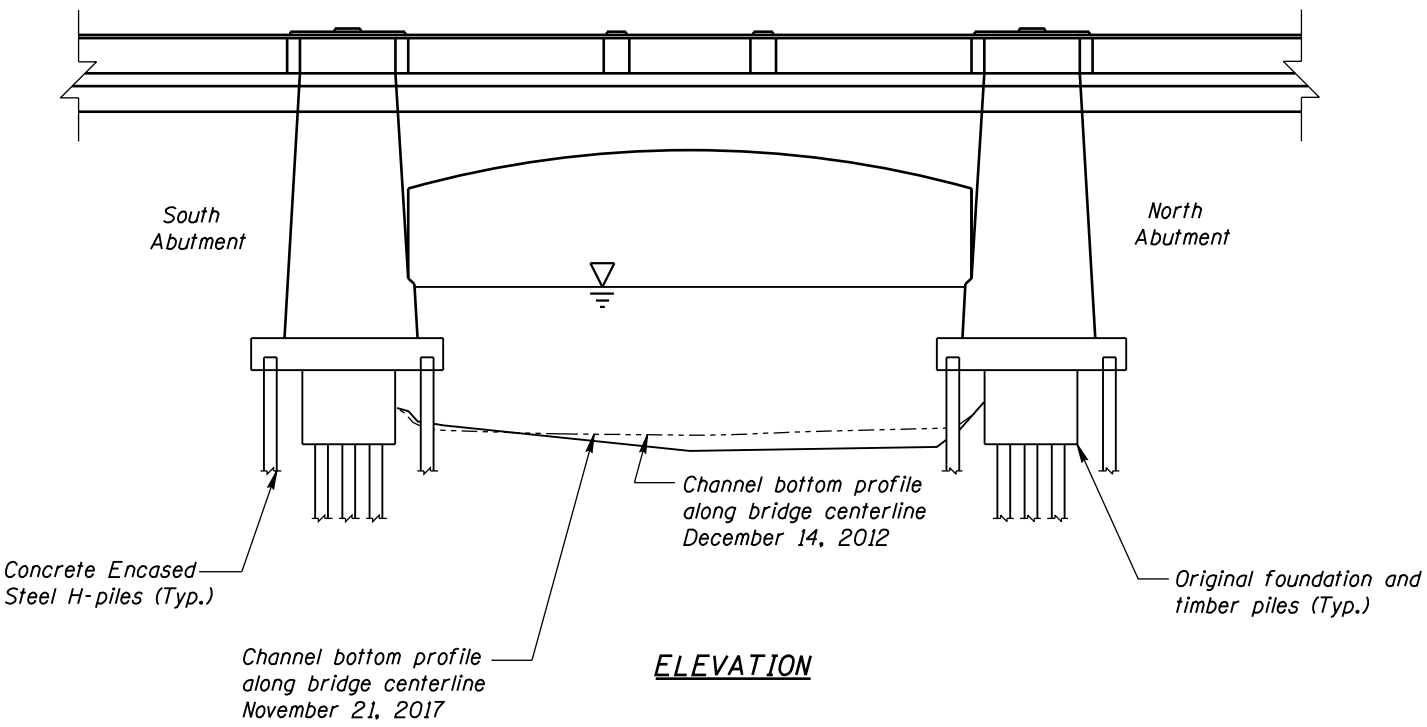
Drawn By: PRH	COLLINS ENGINEERS INC 123 North Wacker Drive Suite 900 Chicago, IL 60606 (312) 704-9300 www.collinsengr.com	Date: NOV., 2017
Checked By: BPD		Scale: NONE
Code: 106146195		Figure No.: 1



59th. Street Harbor



PLAN



ELEVATION

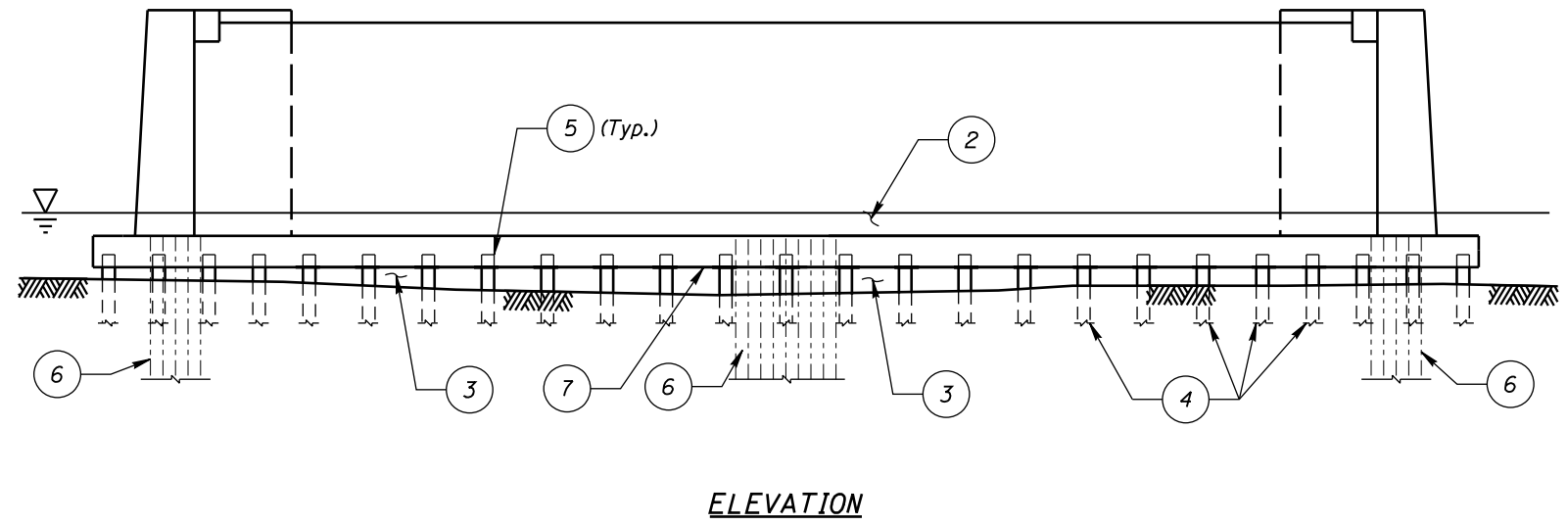
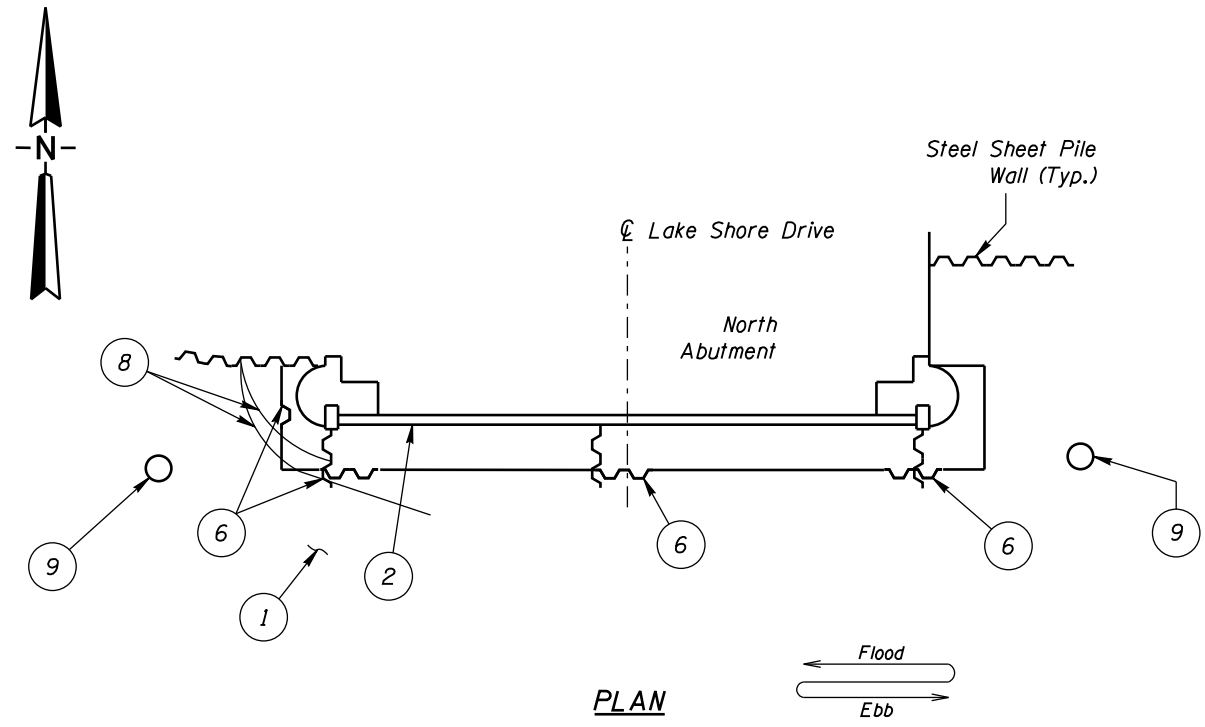
GENERAL NOTES:

1. At the time of the inspection on November 21, 2017 the waterline was located approximately 15.3 feet below the top of the sidewalk at mid-span of the West Fascia. This corresponds to a waterline elevation of +0.7 feet C.C.D.
2. Sounding across the channel were taken at the quarter points of the span and are measured in feet.
3. This figure was developed from drawings provided by the City of Chicago and field notes.
4. For Inspection Notes refer to Figures 3 & 4.

Legend

- 13.5 Channel Bottom Depth
- (1) Indicates Inspection Note Number
- Channel bottom, November 21, 2017
- Channel bottom, December 14, 2012
- Steel Pipe Dolphin

CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION		
59TH STREET LAGOON INLET BRIDGE OVER THE JACKSON PARK LAGOON STRUCTURE NO. 016-6195		
ELEVATION AND SOUNDING PLAN		
Drawn By: PRH	COLLINS ENGINEERS	Date: NOV., 2017
Checked By: BPD	<small>123 North Wacker Drive Suite 900 Chicago, IL 60606 (312) 704-9300 www.collinsengr.com</small>	Scale: NTS
Code: 106146195		Figure No.: 2

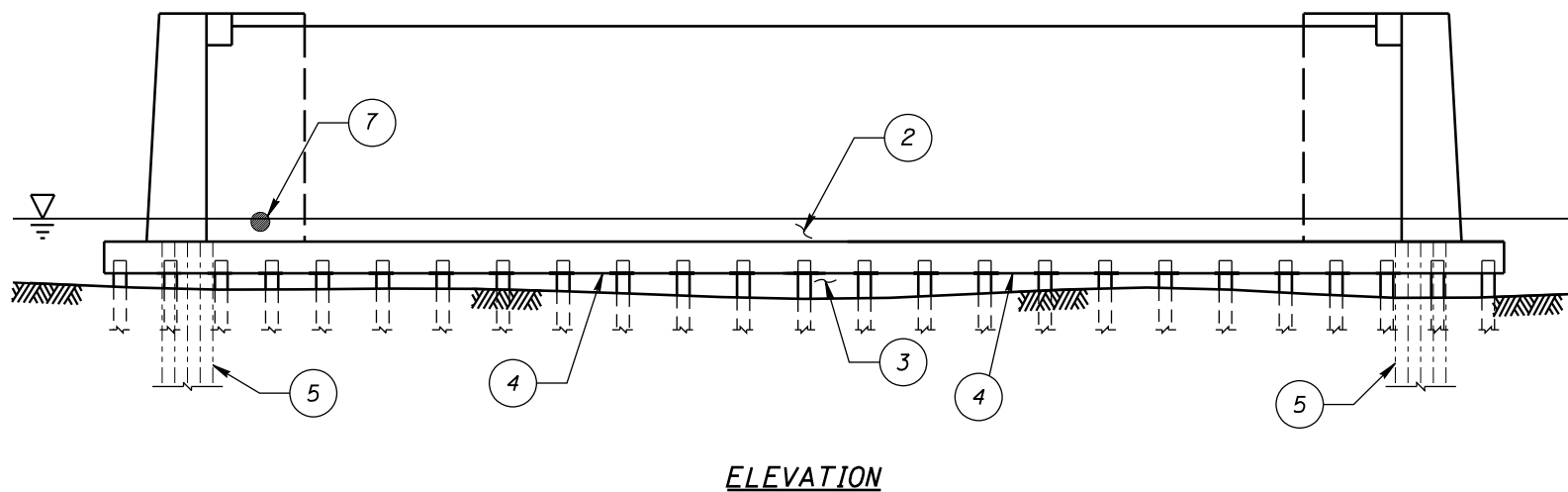
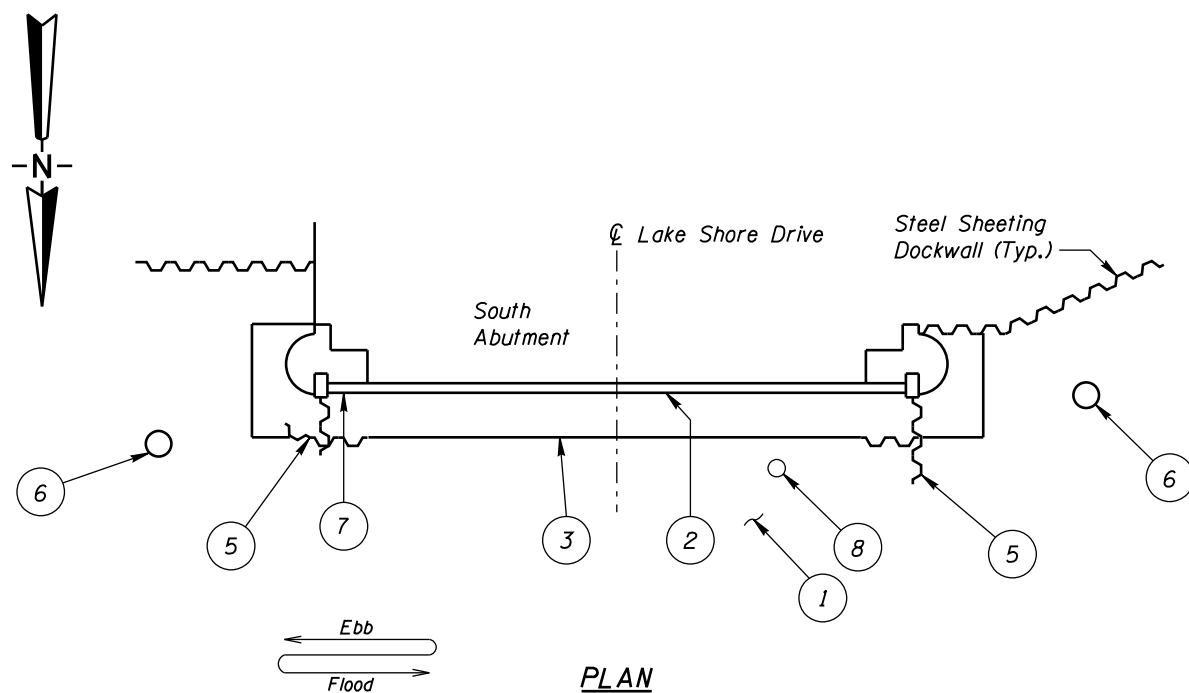


INSPECTION NOTES:

- 1 The channel bottom material in the vicinity of the abutment consisted of gravel with scattered riprap and concrete rubble with 1 inch of probe rod penetration.
- 2 The concrete and masonry of the abutment was in satisfactory condition above and below the waterline.
- 3 The footing was exposed and undermined along most of the length of the abutment, with horizontal penetrations up to 4 feet, at which point the vertical face of the original abutment was encountered. The 2 foot diameter concrete encased steel H-piles were exposed under the footing, with a maximum vertical exposure of 4 feet near the center of the abutment.
- 4 Four piles were misaligned/offset toward the channel such that 2 to 3 inches of the top of the concrete encasement was not under the footing.
- 5 Voids were typically located in the top 6 inches of the pile encasement at the interface of the underside of the footing with typical penetrations of 1 to 2 inches. Voids resulted in the exposure of the reinforcing steel and steel H-piles exhibiting minor surface corrosion.
- 6 Sections of steel sheet piles from the temporary cofferdam, used during the bridge reconstruction, were located in line with the abutment footing at several locations. Sheeting extending from the top of footing to the channel bottom.
- 7 The bottom of the footing was observed to be very irregular with random areas of concrete construction over-pour which extended from the bottom of the footing to the channel bottom. The excess concrete appeared to be the result of poor forming during construction.
- 8 Three submarine cables extended from the northwest embankment. One cable was cut off at the west nose of the abutment, one cable was cut off at the steel sheet piling perpendicular to the face of the abutment and one cable extended into the channel bottom 10 feet east the sheet piling.
- 9 Steel protection piles measuring 2 feet in diameter, were in good condition above and below water exhibiting minor surface corrosion.

Note:
 For General Notes and Legend see Figure 2.

CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION		
59TH STREET LAGOON INLET BRIDGE OVER THE JACKSON PARK LAGOON STRUCTURE NO. 016-6195		
NORTH ABUTMENT INSPECTION NOTES		
Drawn By: PRH	COLLINS ENGINEERS	Date: NOV., 2017
Checked By: BPD	123 North Wacker Drive Suite 900 Chicago, IL 60606 (312) 704-9300 www.collinsengr.com	Scale: NTS
Code: 106146195		Figure No.: 3



INSPECTION NOTES:

- ① The channel bottom material in the vicinity of the abutment consisted of gravel with scattered riprap and concrete rubble with 1 inch of probe rod penetration.
- ② The concrete and masonry of the abutment was in satisfactory condition above and below the waterline.
- ③ The footing was exposed and undermined along most of the length of the abutment, with penetrations of approximately 3 to 4 feet, at which point the vertical face of the original abutment was encountered. The 2 foot diameter concrete encased steel H-piles were exposed under the footing, with a maximum vertical exposure of 4 feet near the center of the abutment.
- ④ The bottom of the footing was observed to be very irregular with random areas of concrete construction over-pour which extended from the bottom of the footing to the channel bottom. The excess concrete appeared to be the result of poor forming during construction.
- ⑤ Sections of steel sheet piles from the temporary cofferdam, used during the bridge reconstruction, were located in line with the abutment footing at several locations. Sheeting extending from the top of footing to the channel bottom.
- ⑥ Steel protection piles measuring 2 feet in diameter, were in good condition above and below water exhibiting minor surface corrosion.
- ⑦ An area of section loss was located 1.5 feet above the top of the concrete footing near the east corner of the abutment. The area measured 1 foot in diameter with up to 1.5 inches of penetration.
- ⑧ An abandoned 2 foot diameter concrete pile, located 2 feet north of the west quarter-point of the abutment footing, extended from the channel bottom up 2 feet.

Note:

For General Notes and Legend see Figure 2.

CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION		
59TH STREET LAGOON INLET BRIDGE OVER THE JACKSON PARK LAGOON STRUCTURE NO. 016-6195		
SOUTH ABUTMENT INSPECTION NOTES		
Drawn By: PRH	COLLINS ENGINEERS	Date: NOV., 2017
Checked By: BPD	<small>123 North Wacker Drive Suite 900 Chicago, IL 60606 (312) 704-9300 www.collinsengr.com</small>	Scale: NTS
Code: 106146195		Figure No.: 4

APPENDIX B
PHOTOGRAPHS



Photographs 1: Overall View of Structure No. 016-6195, Looking West.



Photographs 2: View of the North River Pier, Looking Northwest.



Photographs 3: View of the Typical Masonry Condition at the Waterline of the North River Pier, Looking North.



Photographs 4: View of the South River Pier, Looking Southwest.

APPENDIX C
RATING FORM



SN: 016-6195	District: 1	Spans: 1	Appr. Spans: 0	Skew: 0	ADT: 42600	Truck Pct: 0
ADT Un:	Maint. Co: COOK	Twsp: HYDE PARK (CHICAGO)	Status: OPEN - NO RESTRICT			
Facility Carried: S LAKE SHORE DRIVE	Feature Crossed: JACKSON PK LAGOON IN					
Location: 5900 S & 1900 E	Municipality: CHICAGO	Team/Sub: /	Insp/Rte:			
Bridge Name: 59TH ST LAGOON INLET	Material & Type: STEEL/STRINGER/MULTI-BEAM/GIRDER					
Insp. Intervals Routine: 24	Fracture Critical: 0	Underwater: 60	Special: N/A	Element Level: 24		
93B - Inspection Date: 11 / 21 / 17	93B6 - Temp. (°F): 40					
Is Delinquent: <input type="checkbox"/>	Reason:					
90A - Agency Program Manager: HILL,J,E	90A3 - Consultant Program Manager: BENDOK,M,R					
93B3 - Team Leader: DILWORTH,B,P	93B7 - Inspector: GREEN,J,P					

93B2 - Underwater Inspection Remarks:

Previous Inspection	EXPOSURE OF ENCASED PILES AND UNDERMINING OF THE FOOTING AT EACH ABUTMENT WITH UP TO 4 FEET OF PENETRATION AND 4 FEET OF VERTICAL EXPOSURE. FOUR CONCRETE PILE ENCASEMENTS ARE MISALIGNED AT THE NORTH ABUTMENT WITH 2 INCHES OF THE ENCASEMENT NOT UNDER THE FOOTING. ABANDONED STEEL SHEET PILES FROM TEMP COFFERDAMS WERE ENCOUNTERED AT THE EAST END, WEST
---------------------	--

Resources

Time to Inspect (H:M): 2:0	3 : 30	Traffic Control: N	Boat: B	Y	Waders: N	Snooper: N	
Ladder: N	Manlift: N	Bucket Truck: N	Other:				

Inspector's Appraisals

93B8-Substructure Units Inspected

93B1-Rating

NORTH AND SOUTH ABUTMENTS

Prev	New
6	6

Prev	New
93B4 - Method: DPSV	DPSV

If "O-Other" Describe: _____

93B2 - Underwater Inspection Remarks:

THE FOOTING WAS EXPOSED AND UNDERMINED FOR THE FULL LENGTH OF BOTH ABUTMENTS WITH UP TO 4 FEET OF VERTICAL AND HORIZONTAL UNDERMINING BENEATH THE FOOTINGS WHICH EXPOSED SEVERAL PILES.

FOUR PILES WERE MISALIGNED AT THE NORTH ABUTMENT WITH UP TO 2 INCHES OF THE CONCRETE ENCASEMENT NOT BELOW THE FOOTING.

THE TOP 6 INCHES OF THE CONCRETE PILE ENCASEMENTS EXHIBITED SECTION LOSS, EXPOSING THE UNDERLYING STEEL H-PILES.

	Signature	Date
Inspection Team Leader:		2 / 13 / 18
Consultant Program Manager:		02 / 13 / 18
Agency Program Manager:		02 / 14 / 18

Sewer Televising Summary



MEMORANDUM

TO: DUANE MAHONE
FROM: KARL DAVIS
SUBJECT: CHICAGO PARK DISTRICT STORM SEWER TELEVISIONING
DATE: OCTOBER 17, 2018
CC: AMA ADDAI

On the night of Tuesday October 9, National Power Rodding televised the accessible portions of (approximately 1000 ft.) of CPD storm sewer potentially impacted by the proposed Lake Shore Drive widening. The sewers televised are shown in the attached sketch.

Recommendations

1. The vitreous clay sewers south of MH 6 are in good condition and can be left in place.
2. The manhole and catch basin structures should be equipped with new frames and lids at a minimum and the top two ft. of the conical sections of the brick structures should be reconstructed.
3. Given the limited areas contributing surface runoff into the catch basins, and the amount of dirt washed into the structures at those locations, consideration should be given to replacing the open grates with closed MH lids.
4. The 24" brick sewer north of MH 6 should be lined from MH 6 to the outfall.
5. MH 1 and MH 2 are 22.5 ft. and 18.5 ft., respectively, west of the existing curb and therefore outside the area of lane widening. The replacement of the frames and lids on these two structures is not necessary, but may be desired.

MH2 – MH3 -179 ft.

1. 15" VCP in good condition w/ 5' of 24" brick w/collar south of MH 3.
2. MH 2 cone and frame in fair condition, structure is good.
3. MH 3 cone and frame in fair condition, structure is good.
4. Sewer was jetted for access.

MH 3 – MH 4 – 89 ft.

1. 15" VCP in good condition.
2. MH 4 cone and frame in fair condition, structure is good.
3. Debris at structures due to open lids.

MH 4 – MH 5

1. A bulkhead was found at MH 4 on the north sewer.
2. A 12"-15" sewer enters the west side of MH 4.
3. The visible VCP pipe is in good condition.



MH 4 – MH 5 (cont.)

4. An 18" VCP sewer leads south out of MH 5, with a 45⁰ bend located 5' south of MH 5. (See attached sketch.)
5. The 18" pipe then leads southwest for a distance of 55 ft. At that point there is a 90⁰ bend in the pipe and it turns south.
6. A 12" VCP pipe connects to MH 5 from the east. A bulkhead was not visible in the pipe.
7. MH 5 cone and frame in fair condition, structure is good.

MH 5 – MH 5B – 175 ft.

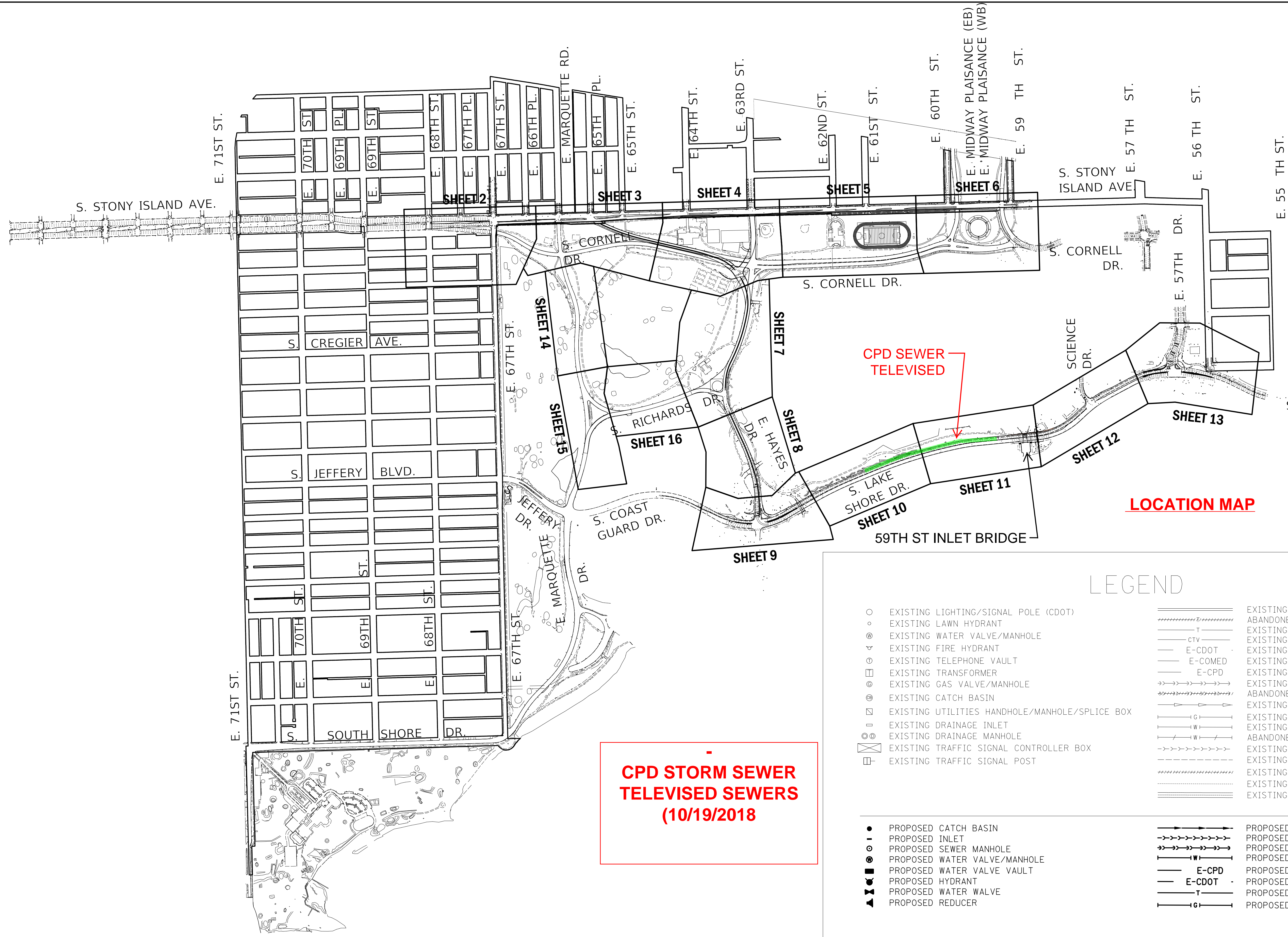
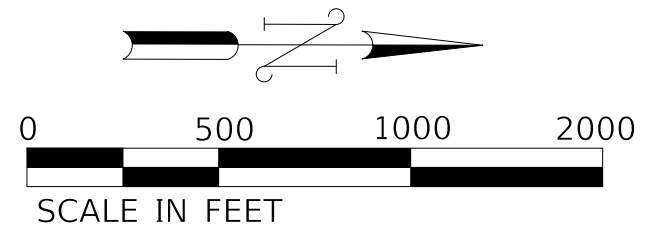
1. A new MH was found 175 ft. north of MH 5, noted as MH 5B.
2. 15" VCP in good condition.
3. A 12" VCP pipe connects to MH 5B from the east. A bulkhead was not visible in the pipe.
4. Structure/frame of MH 5B buried under 4" of topsoil.
5. Cone of MH 5B in fair condition, frame in poor condition, structure in good condition.

MH 5B – MH 6

1. 12" VCP extends north 7 ft from MH 5B to a 45⁰ bend west. The bend was not traversable, but a second 45⁰ bend was visible that shifted the 12" sewer alignment back north.
2. Visible pipe was in good condition.
3. A bulkhead was found at MH 6 on the south sewer.

MH 6 – MH 7 – 177 ft.

1. 24" brick sewer - 177 ft.
2. Sewer in fair condition.
3. Water was at 50% level at MH 6.
4. Water was at 80% level at MH 7, too deep to continue.
5. Cone and frame of MH 6 in fair condition, structure in fair condition.
6. Cone of MH 7 in fair condition, frame in fair condition, structure in fair condition.



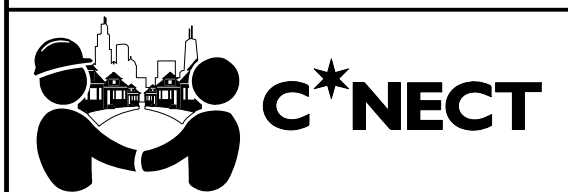
LOCATION MAP

LEGEND

○	EXISTING LIGHTING/SIGNAL POLE (CDOT)	=====	EXISTING LIGHTING CONDUIT
○	EXISTING LAWN HYDRANT	-----	ABANDONED UNDERGROUND TELEPHONE
⊙	EXISTING WATER VALVE/MANHOLE	-----	EXISTING UNDERGROUND TELEPHONE
⊙	EXISTING FIRE HYDRANT	-----	EXISTING UNDERGROUND CABLETV
⊙	EXISTING TELEPHONE VAULT	-----	EXISTING UNDERGROUND ELECTRIC CDOT
⊙	EXISTING TRANSFORMER	-----	EXISTING UNDERGROUND ELECTRIC COMED
⊙	EXISTING GAS VALVE/MANHOLE	-----	EXISTING UNDERGROUND ELECTRIC CPD
⊙	EXISTING CATCH BASIN	-----	EXISTING COMBINED SEWER
⊙	EXISTING UTILITIES HANDHOLE/MANHOLE/SPLICE BOX	-----	ABANDONED COMBINED SEWER
⊙	EXISTING DRAINAGE INLET	-----	EXISTING STORM SEWER
⊙	EXISTING DRAINAGE MANHOLE	-----	EXISTING PEOPLE'S GAS LINE
⊙	EXISTING TRAFFIC SIGNAL CONTROLLER BOX	-----	EXISTING UNDERGROUND WATER/LAWN HYDRANT LINE
⊙	EXISTING TRAFFIC SIGNAL POST	-----	ABANDONED UNDERGROUND LAWN HYDRANT LINE
●	PROPOSED CATCH BASIN	-----	EXISTING SANITARY SEWER
●	PROPOSED INLET	-----	EXISTING UNDERGROUND FIRE ALARM FIBER
●	PROPOSED SEWER MANHOLE	-----	EXISTING AERIAL FIRE ALARM FIBER
●	PROPOSED WATER VALVE/MANHOLE	-----	EXISTING DETECTOR LOOP
●	PROPOSED WATER VALVE VAULT	-----	EXISTING UNDERGROUND SIGNAL CONDUIT
●	PROPOSED HYDRANT	-----	
●	PROPOSED WATER VALVE	-----	
▲	PROPOSED REDUCER	-----	
-----		-----	PROPOSED STORM SEWER
-----		-----	PROPOSED SANITARY SEWER
-----		-----	PROPOSED COMBINED SEWER
-----		-----	PROPOSED WATER MAIN
-----		-----	E-CPD PROPOSED ELECTRIC CONDUIT PARK DISTRICT
-----		-----	E-CDOT PROPOSED ELECTRIC CONDUIT CDOT
-----		-----	PROPOSED TELEPHONE/CABLE/FIBER
-----		-----	PROPOSED GAS

**CPD STORM SEWER
TELEVISED SEWERS
(10/19/2018)**

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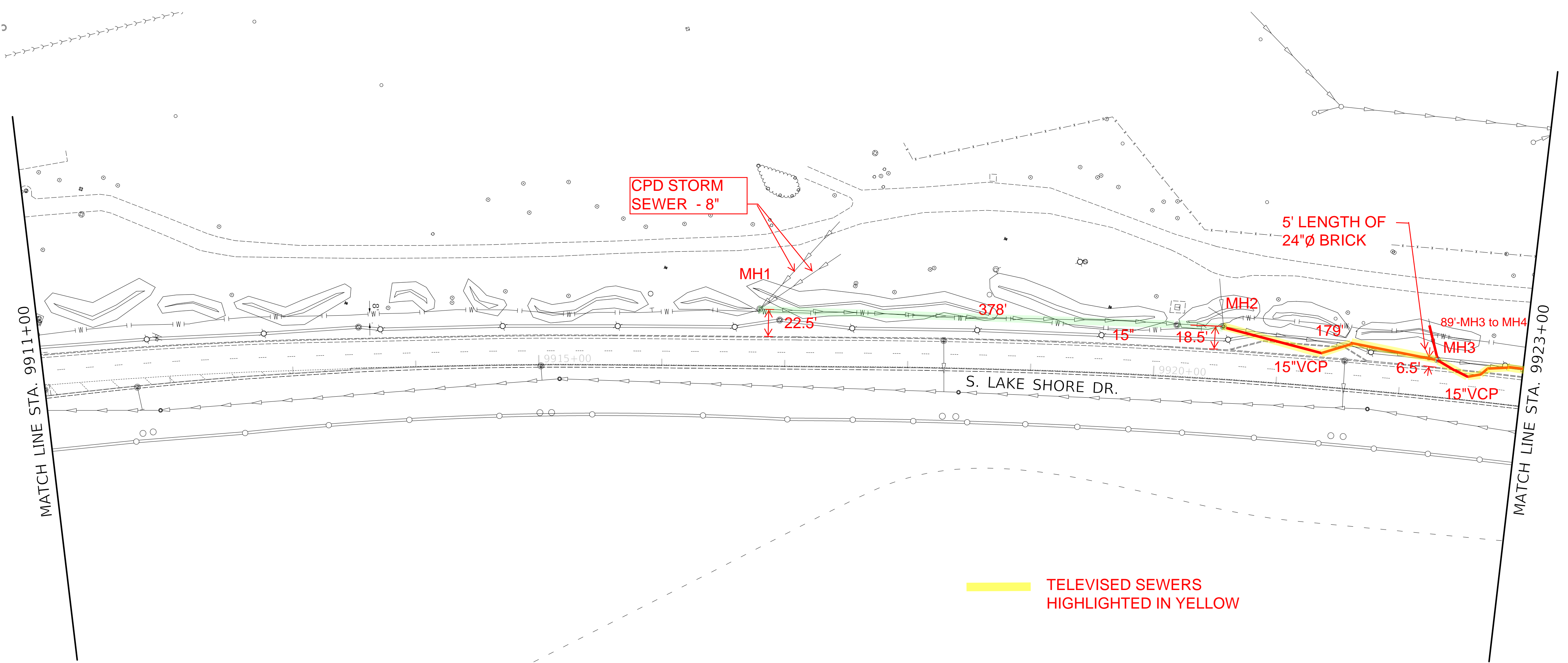
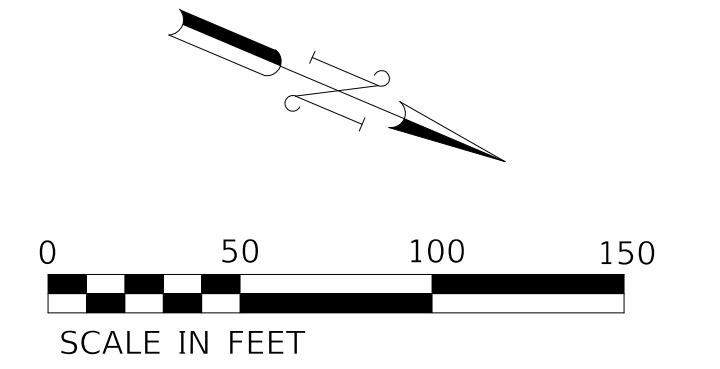


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	DATE -	REVISED -



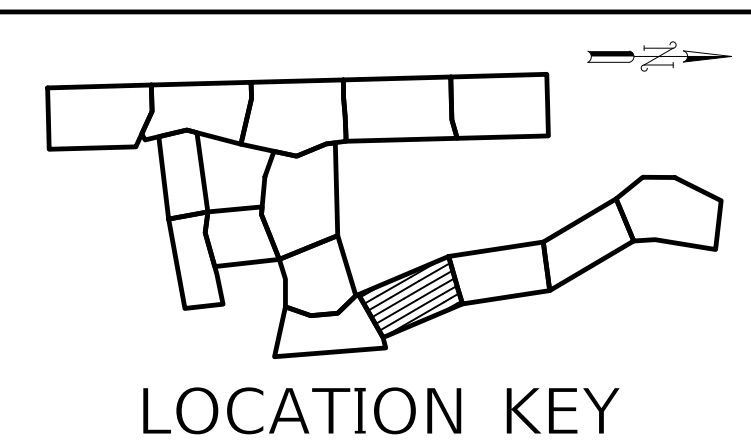
JACKSON PARK MOBILITY IMPROVEMENTS		
EXISTING UTILITY PLAN W/ PROPOSED IMPROVEMENTS		
SCALE: 1" = 500'	SHEET 1 OF 16 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	16	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



TELEVISED SEWERS
HIGHLIGHTED IN YELLOW

NOTE: TELEVISION EQUIPMENT COULD
NOT PASS MOST BEND CONNECTIONS.



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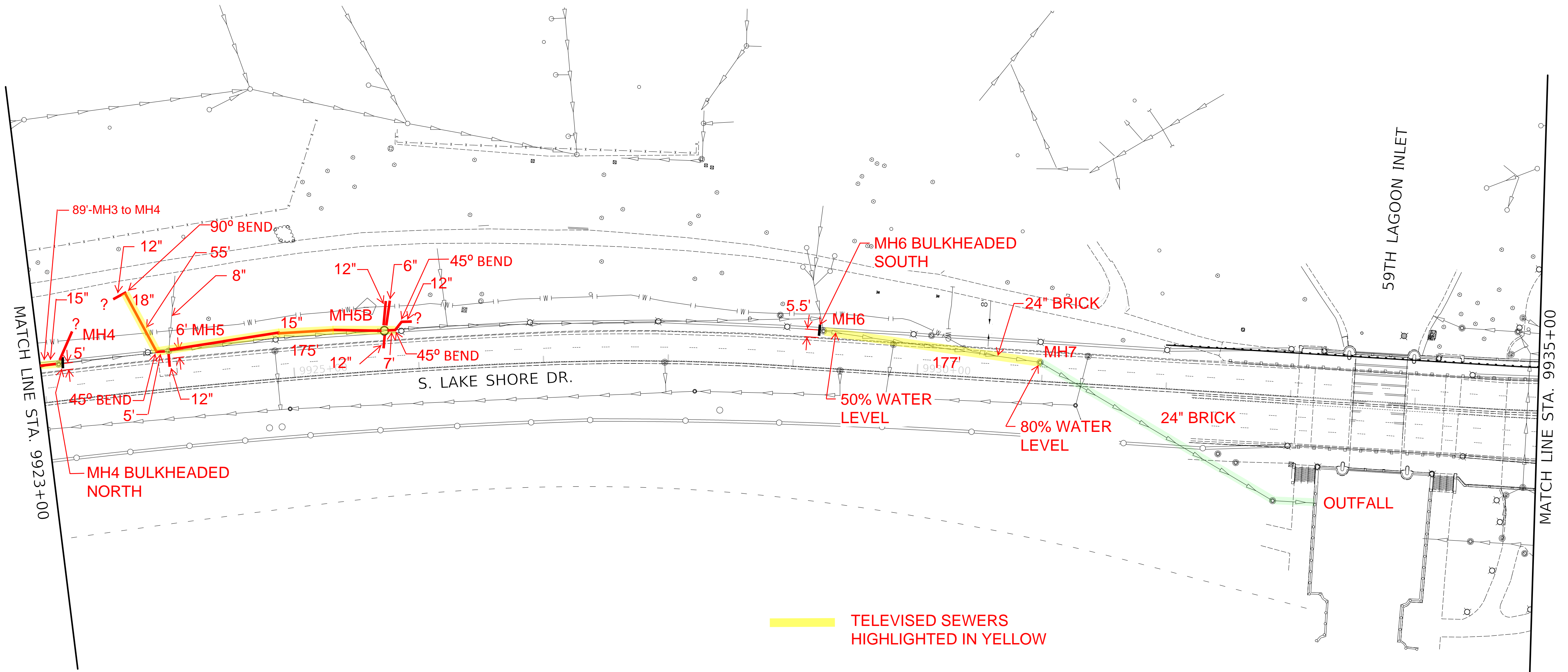
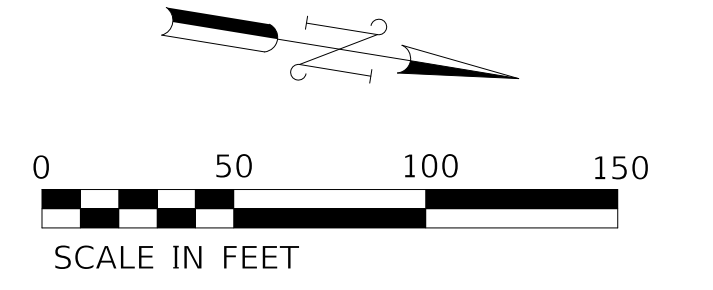


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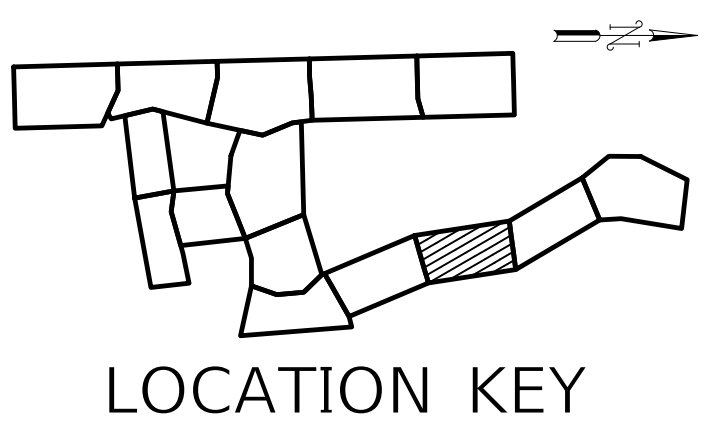
JACKSON PARK MOBILITY IMPROVEMENTS
EXISTING UTILITY PLAN W/ PROPOSED IMPROVEMENTS
SCALE: 1" = 50' SHEET 10 OF 16 SHEETS STA. 9911+00 TO STA. 9923+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	17-B7203-00-ES	COOK	16	10
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



TELEVISED SEWERS HIGHLIGHTED IN YELLOW

NOTE: TELEVISION EQUIPMENT COULD NOT PASS MOST BEND CONNECTIONS.



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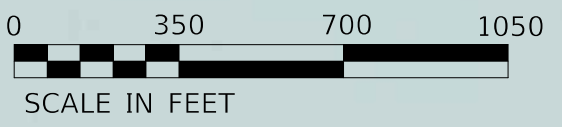


JACKSON PARK MOBILITY IMPROVEMENTS
EXISTING UTILITY PLAN W/ PROPOSED IMPROVEMENTS
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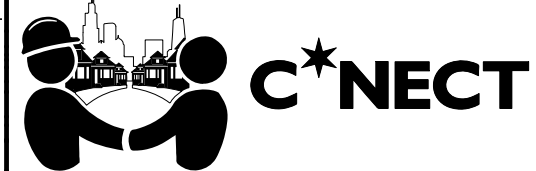
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341	17-B7203-00-ES	COOK	16	11
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				



TELEVISED SEWERS



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PLOT DATE = 2/20/2019	DATE - OCT 2018	REVISED -



OPC MOBILITY IMPROVEMENTS
TELEVISED SEWER OVERVIEW

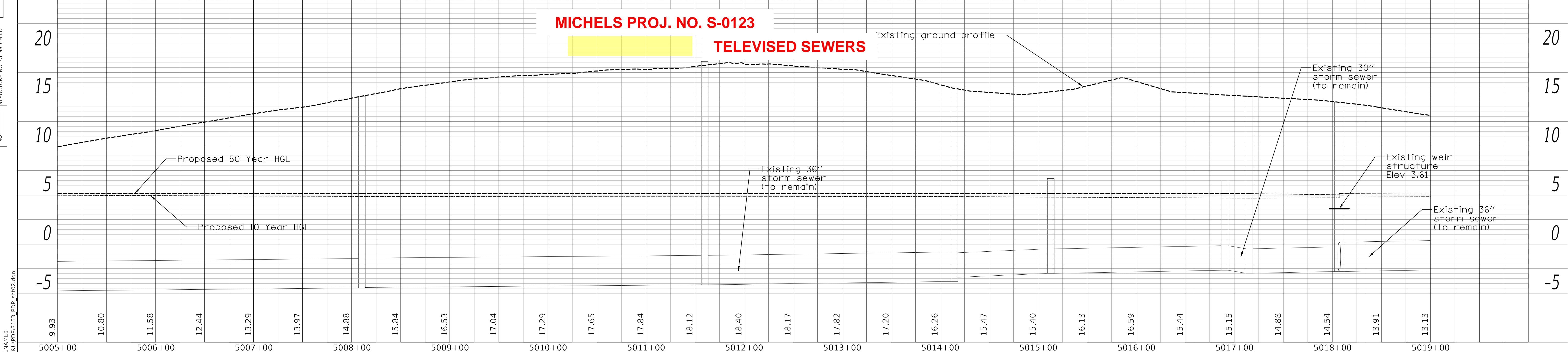
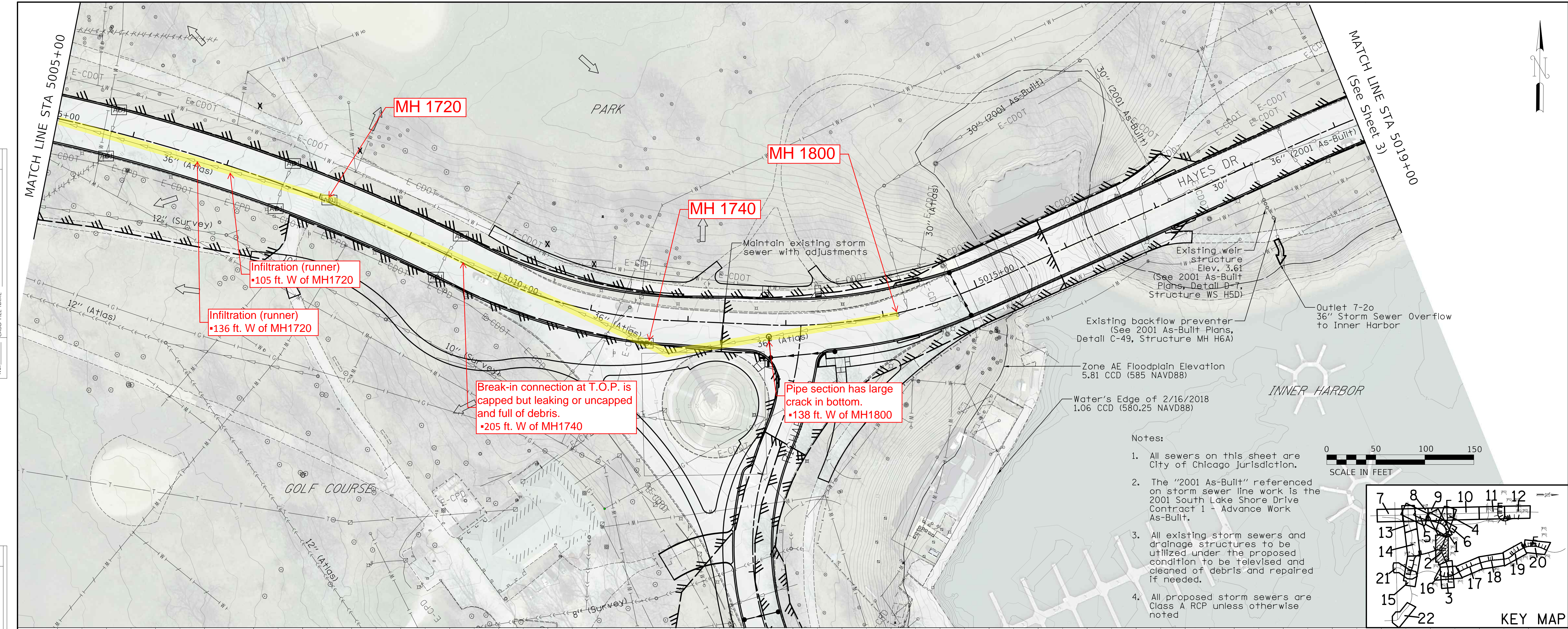
SCALE: 1" = 350' SHEET OF SHEETS STA. TO STA.

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	17-B7203-00-ES	COOK	1	1
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
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	STRUCTURE NOTATION	

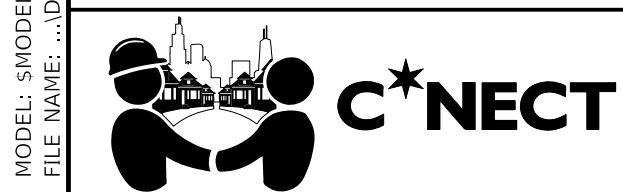
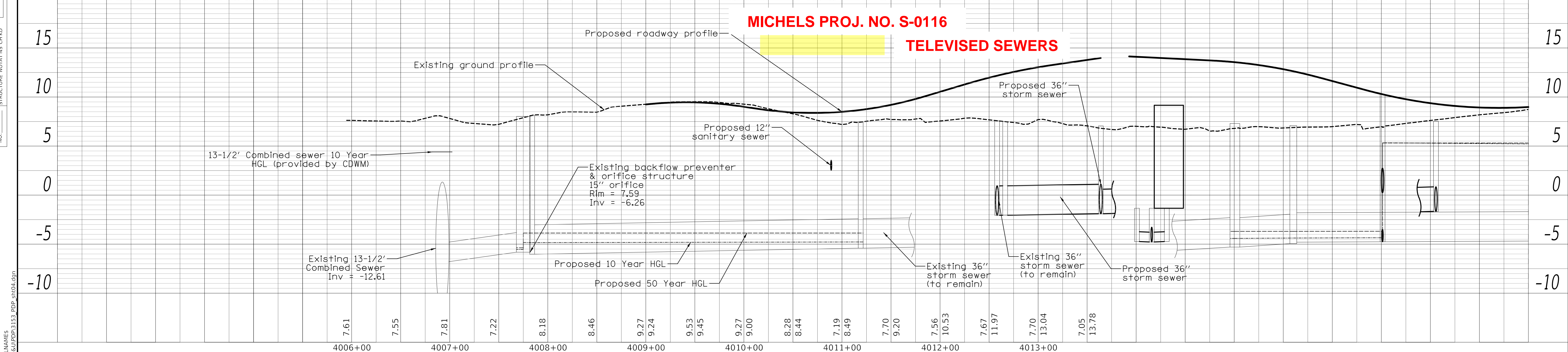
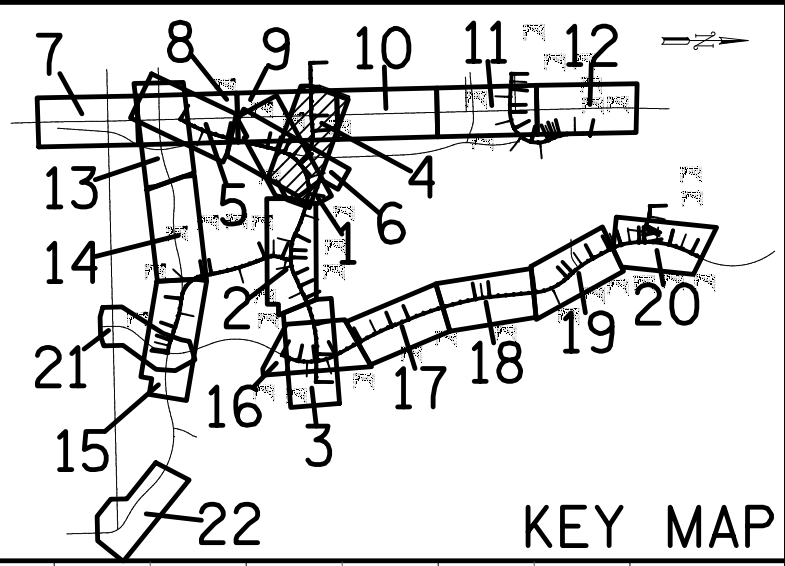
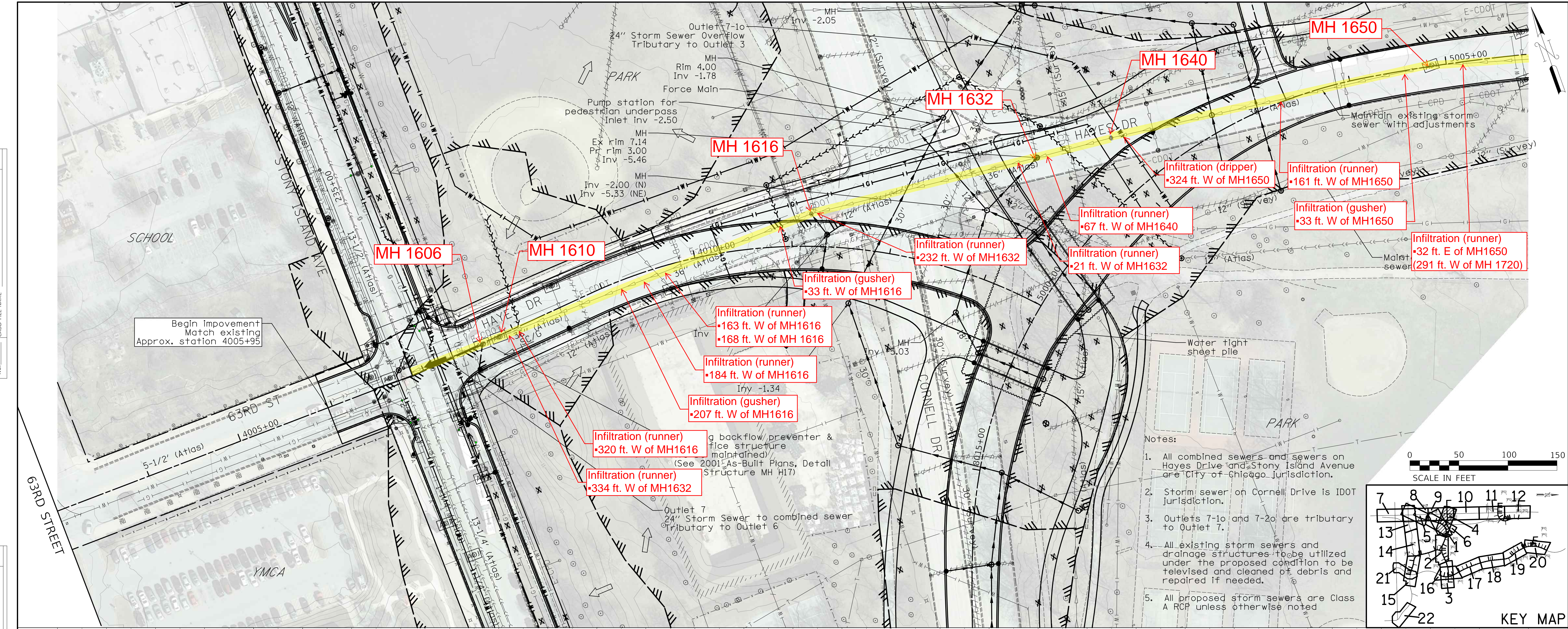


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	PLOT SCALE = 50.0000' / in.	CHECKED - TKL	REVISED -		SCALE: 1" = 50'	SHEET 2	OF 22 SHEETS	STA.	TO STA.	COOK	22	2
	PLOT DATE = 2/8/2019	DATE - OCT 2018	REVISED -					CONTRACT NO. B-7-203		ILLINOIS / FED. AID PROJECT		

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PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	



USER NAME = MSA	DESIGNED - MSA	REVISED -
	DRAWN - WAM/MSA	REVISED -
	CHECKED - TKL	REVISED -
	DATE - OCT 2018	REVISED -



OPC MOBILITY IMPROVEMENTS	
PROPOSED DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 4 OF 22 SHEETS STA. TO STA.

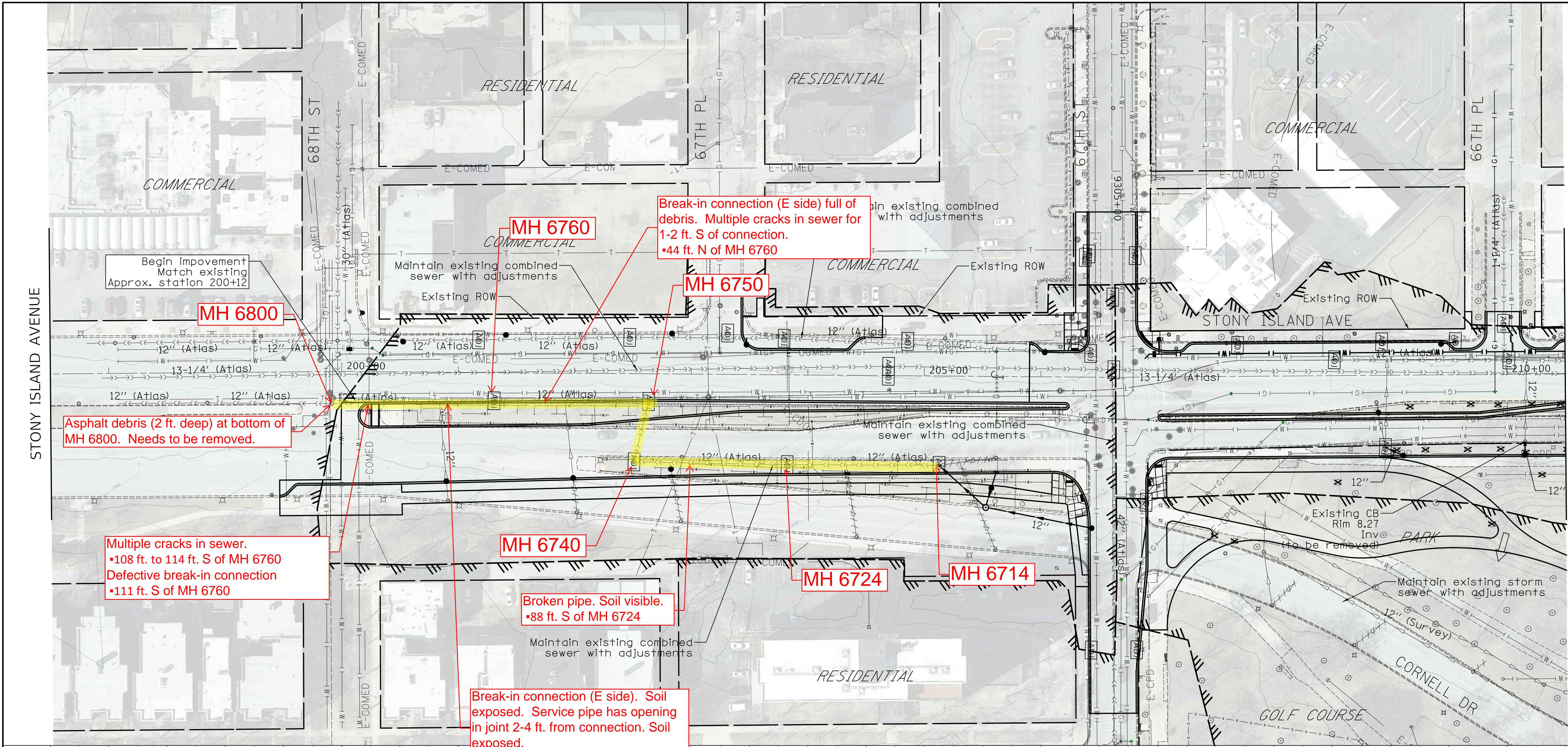
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CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

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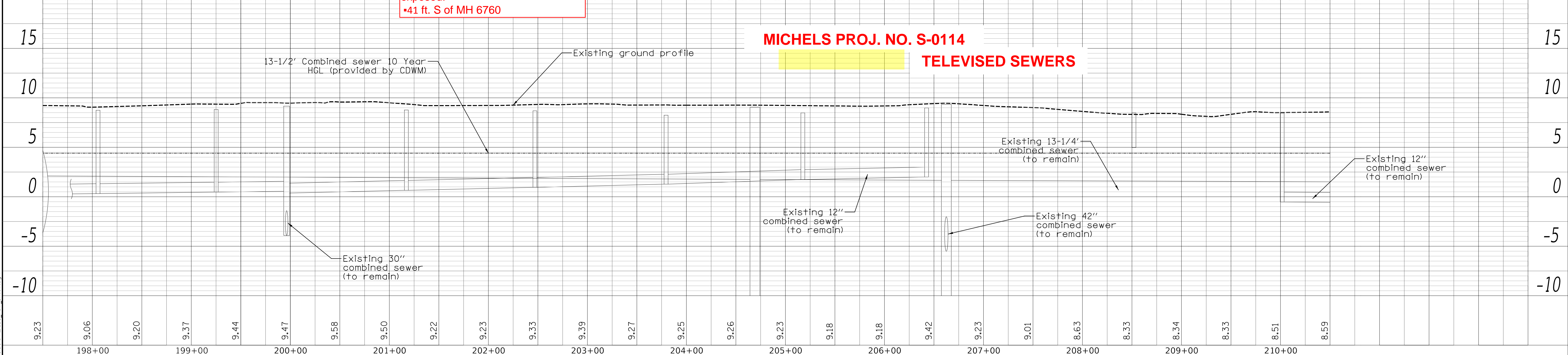
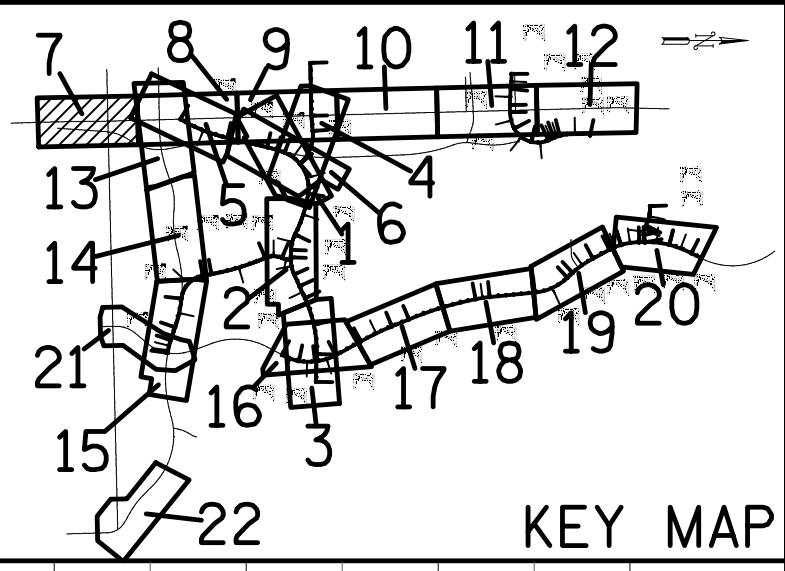
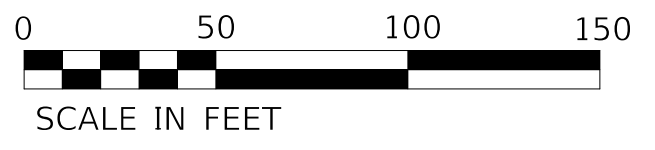
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	STRUCTURE NOTATION	
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MATCH LINE STA 210+50
(See Sheet 8)

- Notes:
- All combined sewers are City of Chicago jurisdiction.
 - Storm sewer on Stony Island Avenue and Cornell Drive are IDOT jurisdiction.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
 - All proposed storm sewers are Class A RCP unless otherwise noted.



USER NAME = MSA	DESIGNED - MSA	REVISED -
	DRAWN - WAM/MSA	REVISED -
PLOT SCALE = 50.0000' / in.	CHECKED - TKL	REVISED -
PLOT DATE = 2/8/2019	DATE - OCT 2018	REVISED -



OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN	
SCALE: 1" = 50'	SHEET 7 OF 22 SHEETS STA. TO STA.

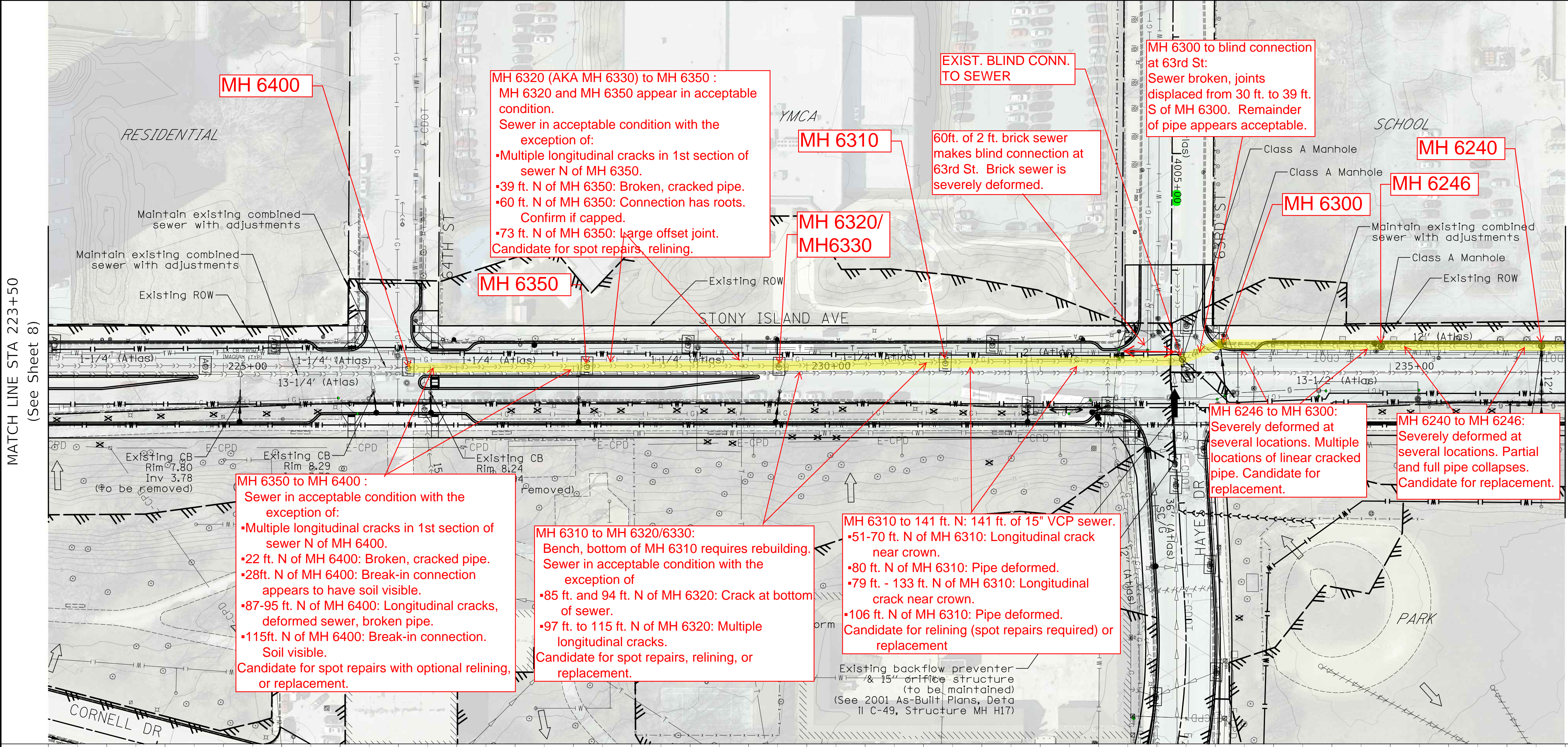
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	17-B7203-00-ES	COOK	22	7
CONTRACT NO. B-7-203			ILLINOIS FED. AID PROJECT	

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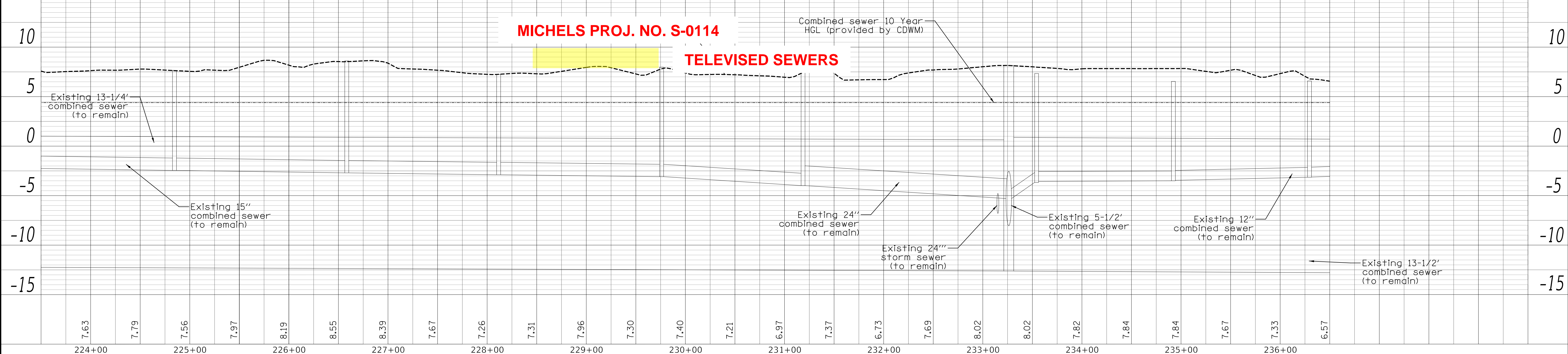
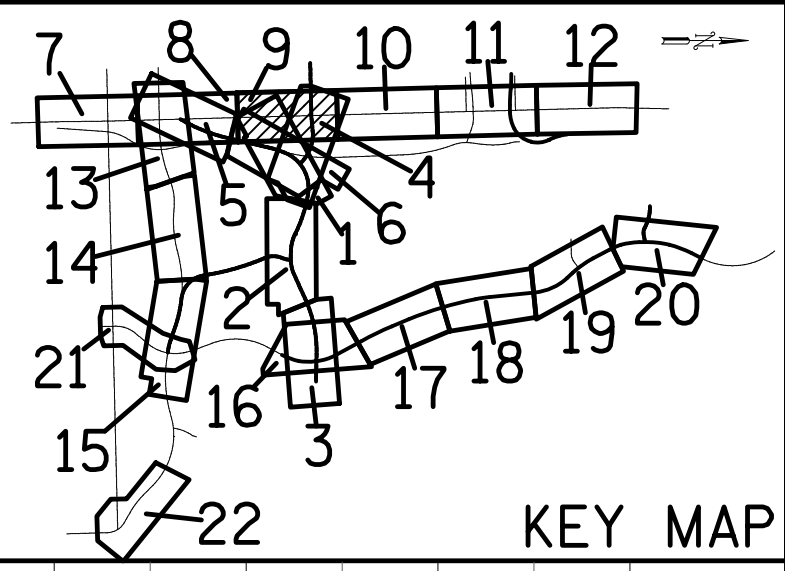
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	NOTE BOOK	
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MODEL: SHIDELNAMES
FILE NAME: ...DSUDDP3153_rdp_sht09.dgn



- Notes:
- All combined sewers and sewers on Hayes Drive and Stony Island Avenue are City of Chicago Jurisdiction.
 - Outlets 7-1o and 7-2o are tributary to Outlet 7.
 - Stony Island will be reconstructed north of 63rd Street.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
 - All proposed storm sewers are Class A RCP unless otherwise noted



	USER NAME = MSA	DESIGNED - MSA	REVISED -		CHICAGO DEPARTMENT OF TRANSPORTATION	OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0015' / in.	DRAWN - WAM/MSA	REVISED -					17-B7203-00-ES	COOK	22	9	
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	DATE - OCT 2018	REVISED -	ILLINOIS / FED. AID PROJECT									

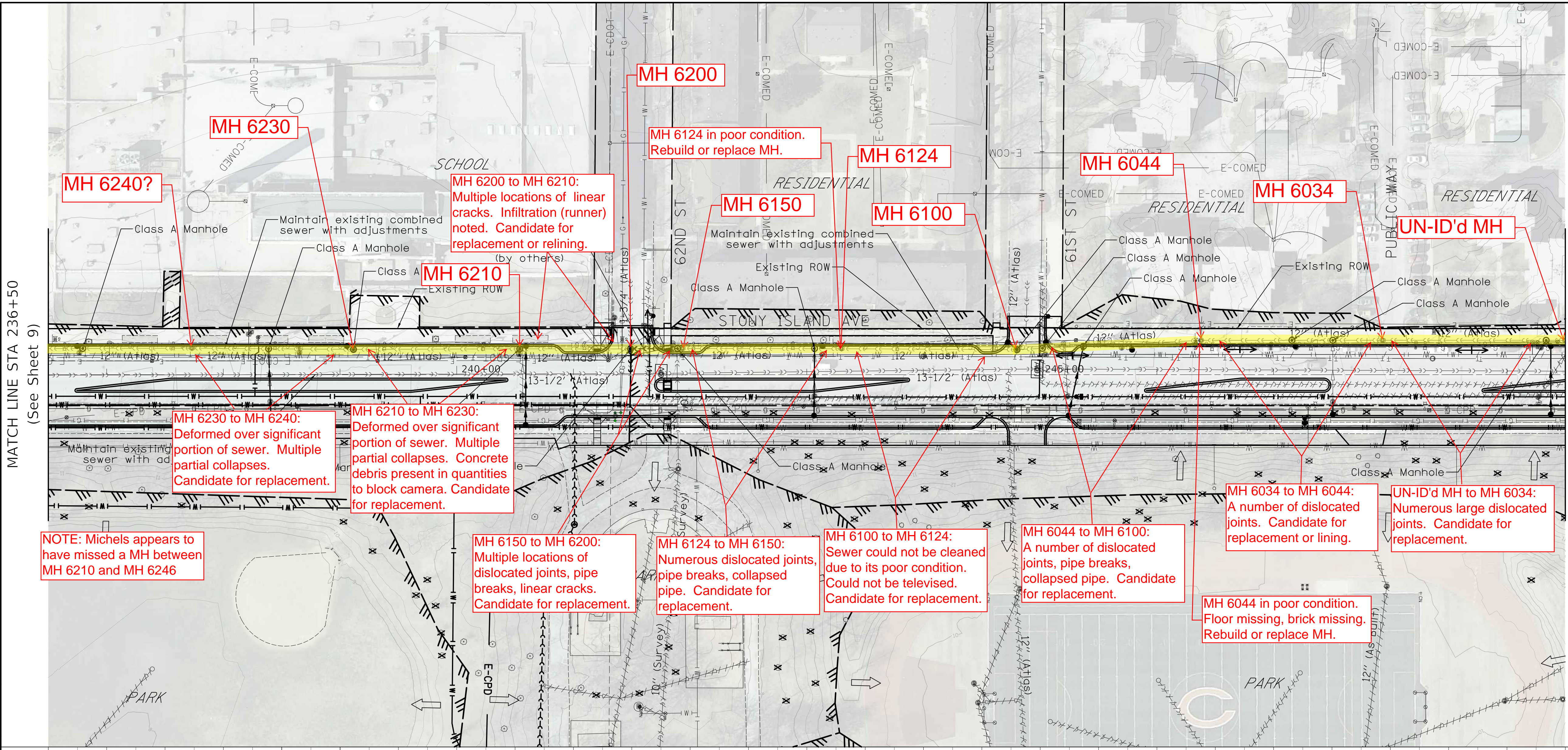
SCALE: 1" = 50' SHEET 9 OF 22 SHEETS STA. TO STA.

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PLAN	SURVISED	DATE
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	ALIGNMENT CHECKED	
	NOTE BOOK	
	CADD FILE NAME	
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PROFILE	SURVISED	DATE
	PLOTTED	
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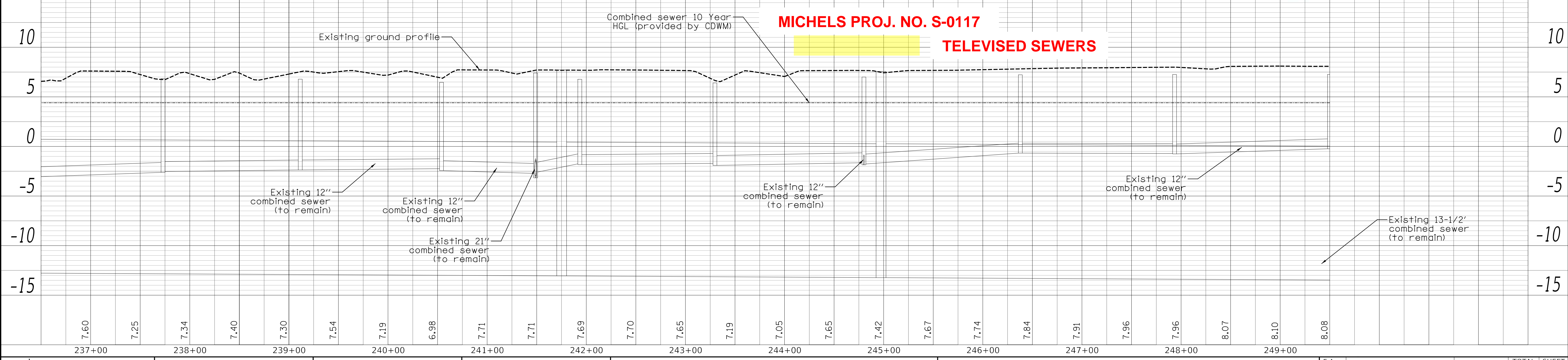


Note:

- All sewers on Stony Island Avenue are City of Chicago jurisdiction.
- Stony Island will be reconstructed north of 63rd Street.
- All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
- Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
- All proposed storm sewers are Class A RCP unless otherwise noted.

0 50 100 150
SCALE IN FEET

KEY MAP

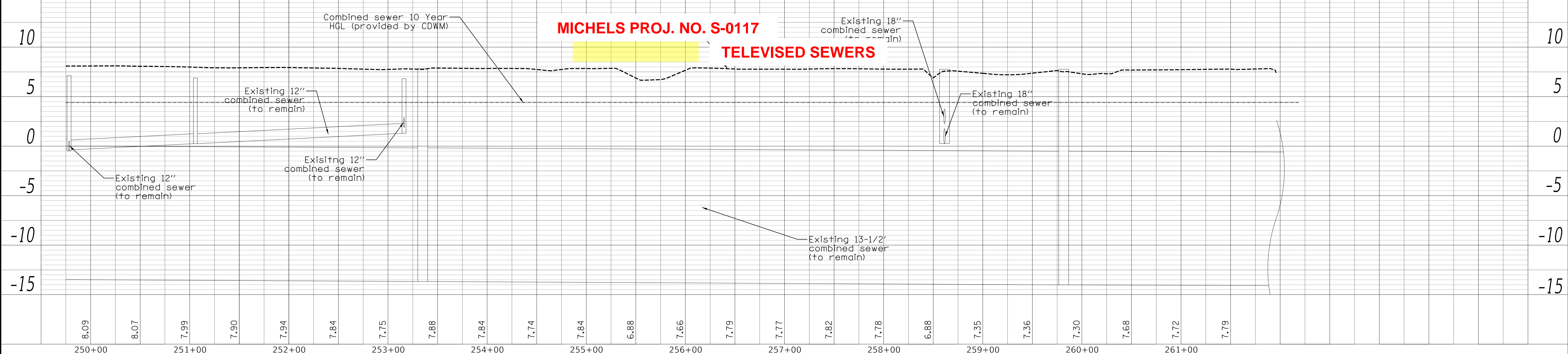
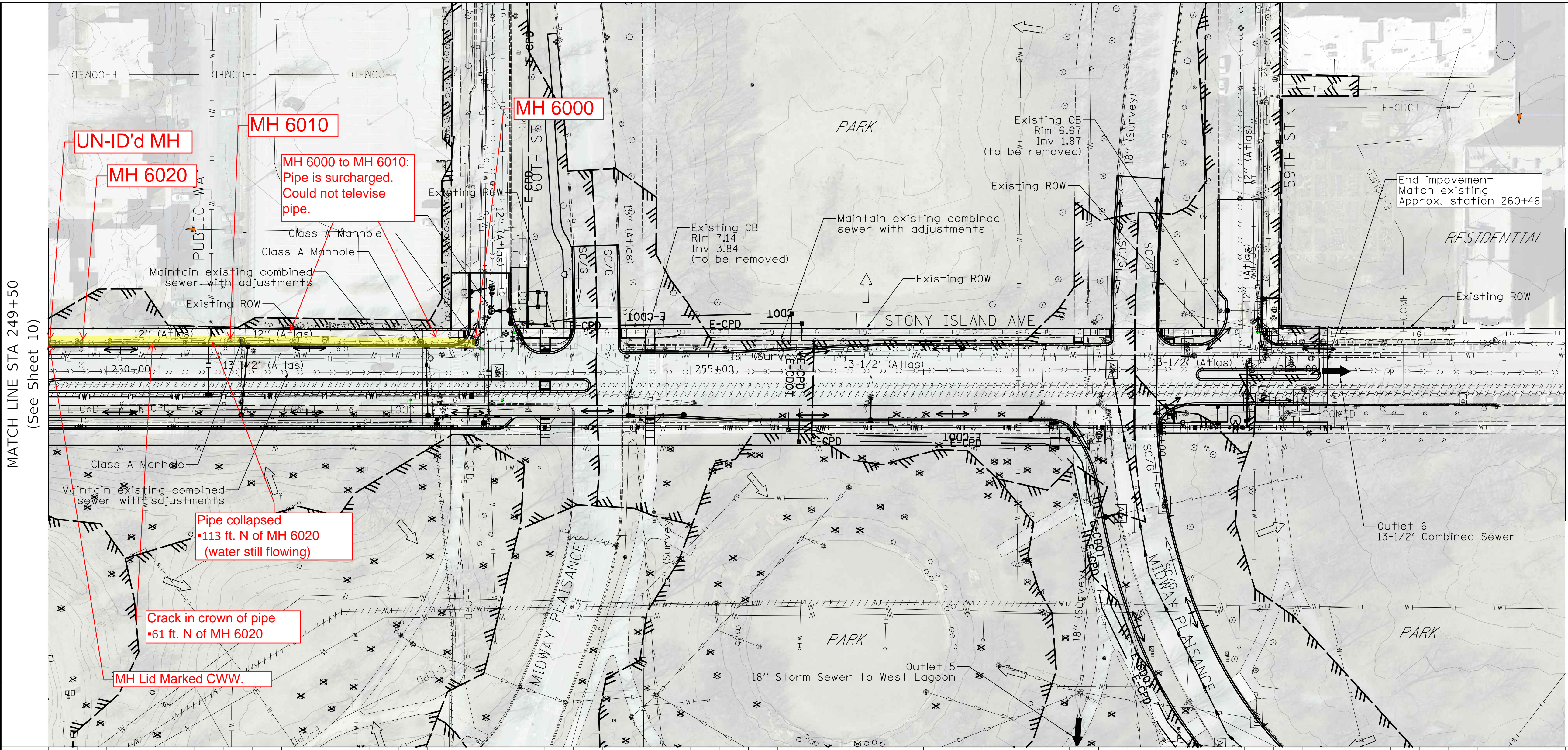


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	PLOT SCALE = 50.0000' / in. PLOT DATE = 2/8/2019	DRAWN - WAM/MSA CHECKED - TKL DATE - OCT 2018	REVISED - REVISED - REVISED - REVISED -			SCALE: 1" = 50' SHEET 10 OF 22 SHEETS STA. TO STA.	17-B7203-00-ES ILLINOIS FED. AID PROJECT	COOK CONTRACT NO. B-7-203	22 10	10		

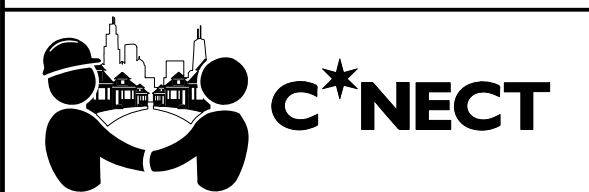
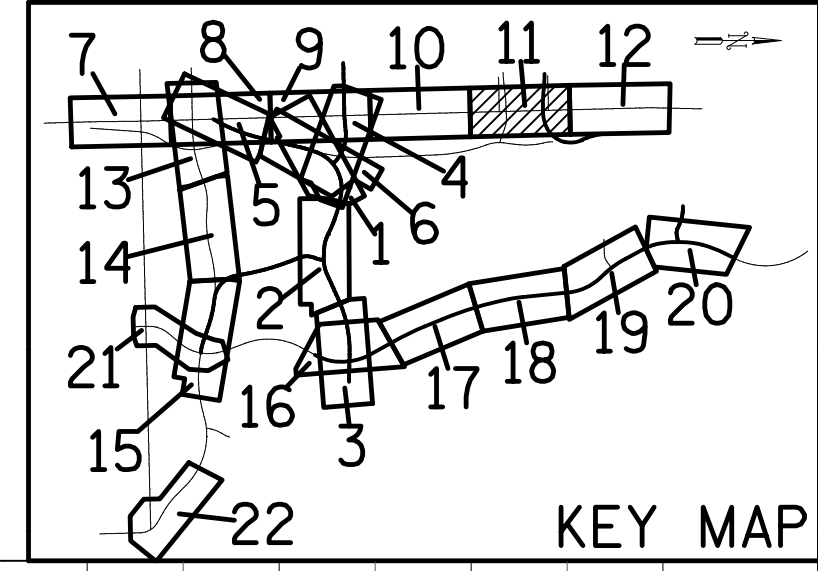
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	GRADES CHECKED	
	NOTE BOOK	
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	STRUCTURE NOTATIONS CHECKED	

MODEL: SHIDELNAMES
FILE NAME: ...DSUPDR3152_rdp_sh11.dgn



- Notes:
1. Outlets 7 and 8. are tributary to Outlet 6.
 2. All sewers shown on this sheet are City of Chicago jurisdiction.
 3. All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 4. Catch basins on Stony Island shall be City of Chicago standard for arterial streets with restrictor size to be determined by the Chicago Department of Water Management.
 5. All proposed storm sewers are Class A RCP unless otherwise noted



USER NAME = MSA	DESIGNED - MSA	REVISED -
	DRAWN - WAM/MSA	REVISED -
PLOT SCALE = 50.0000' / in.	CHECKED - TKL	REVISED -
PLOT DATE = 2/8/2019	DATE - OCT 2018	REVISED -



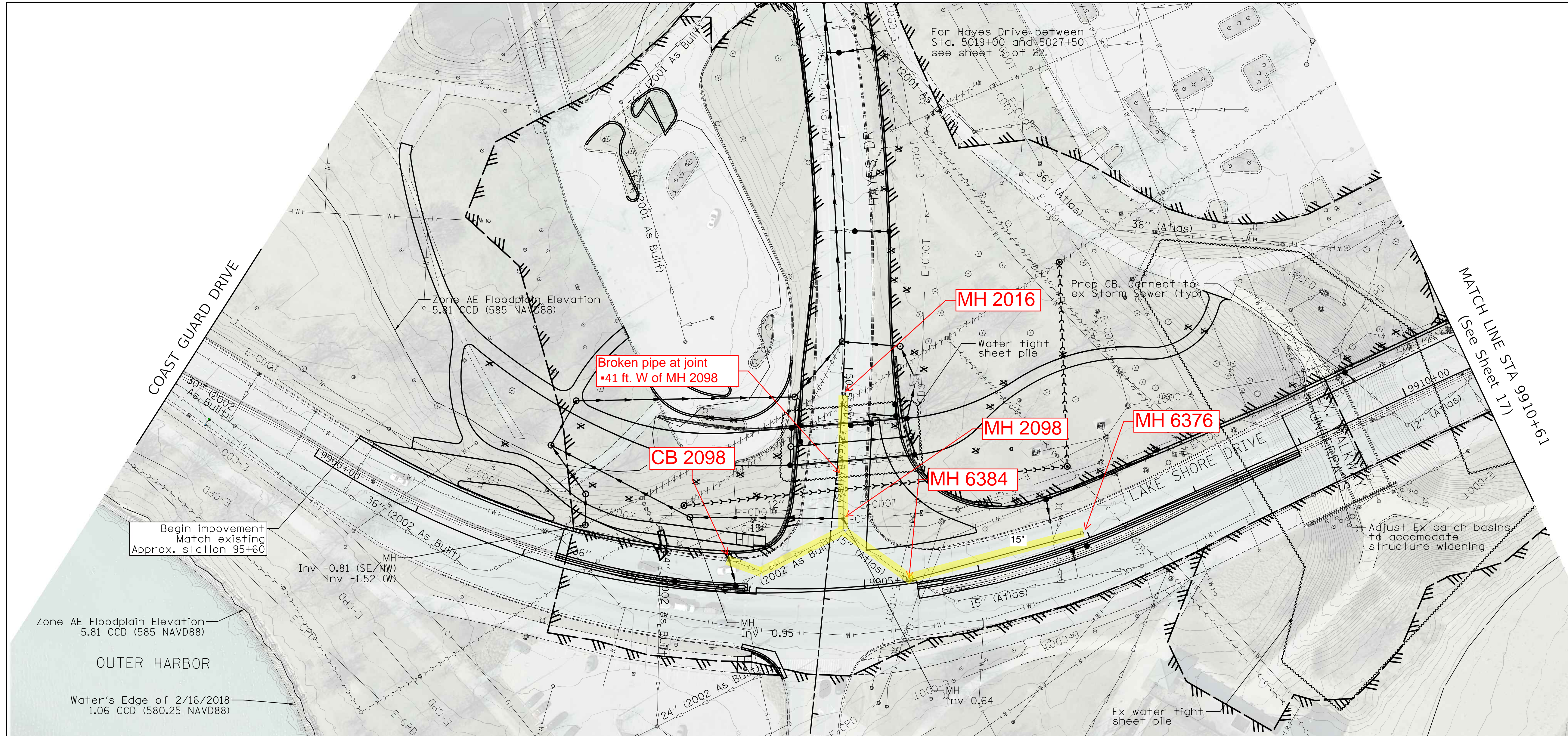
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OPC MOBILITY IMPROVEMENTS PROPOSED DRAINAGE PLAN					

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-B7203-00-ES	COOK	22	11
CONTRACT NO. B-7-203				
ILLINOIS FED. AID PROJECT				

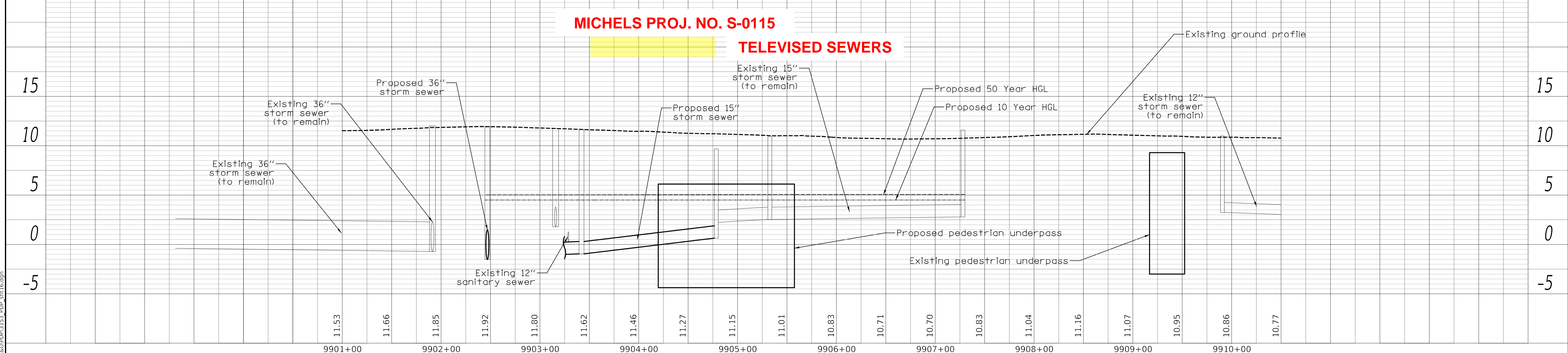
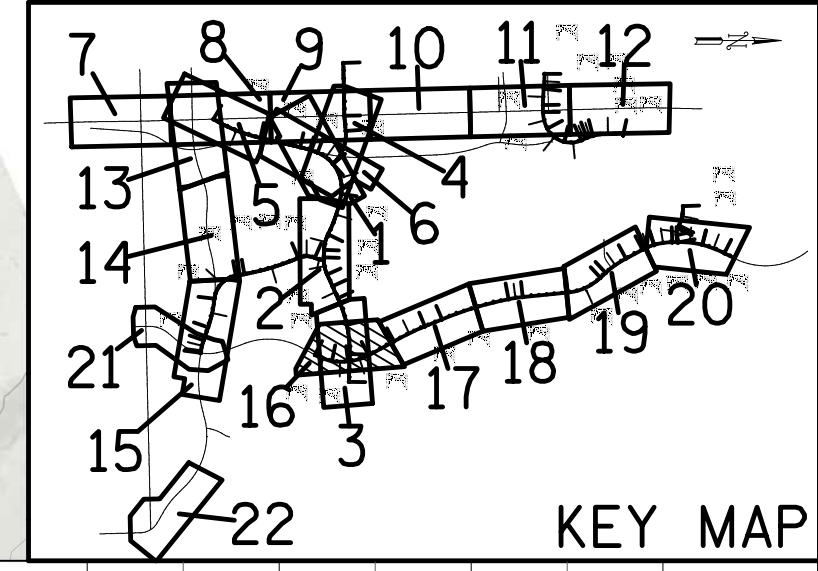
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	
	STRUCTURE NOTATION CHECKED	



- Notes:
- All storm sewer on Lake Shore Drive is IDOT jurisdiction.
 - All sewers on Hayes Drive are City of Chicago jurisdiction.
 - The "2001 As-Built" referenced on storm sewer line work is the 2001 South Lake Shore Drive Contract 1 - Advance Work As-Built.
 - The "2002 As-Built" referenced on storm sewer line work is the 2002 South Lake Shore Drive Mainline Reconstruction As-Built.
 - All existing storm sewers and drainage structures to be utilized under the proposed condition to be televised and cleaned of debris and repaired if needed.
 - All proposed storm sewers are Class A RCP unless otherwise noted.



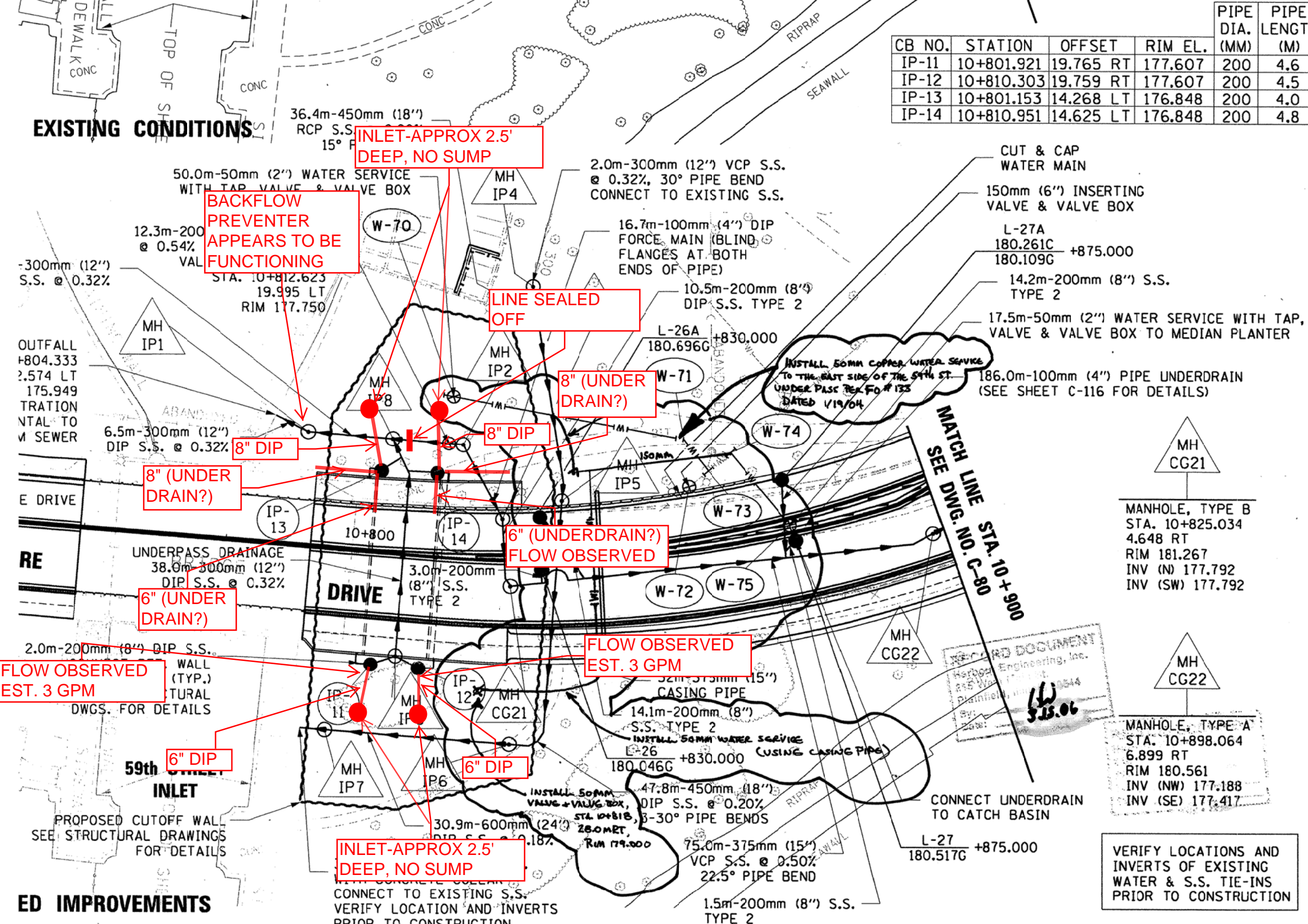
MICHELS PROJ. NO. S-0115
TELEVISED SEWERS

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	PLOT SCALE = 50.0000' / in.	DRAWN - WAM/MSA	REVISED -			17-B7203-00-ES	COOK	22	16				
	PLOT DATE = 2/8/2019	CHECKED - TKL	REVISED -			CONTRACT NO. B-7-203							
	DATE - OCT 2018	DATE - OCT 2018	REVISED -			ILLINOIS FED. AID PROJECT							

MODEL: SHODLNAME
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59th Street Drainage Investigation

CB NO.	STATION	OFFSET	RIM EL.	PIPE DIA. (MM)	PIPE LENGTH (M)
IP-11	10+801.921	19.765 RT	177.607	200	4.6
IP-12	10+810.303	19.759 RT	177.607	200	4.5
IP-13	10+801.153	14.268 LT	176.848	200	4.0
IP-14	10+810.951	14.625 LT	176.848	200	4.8



MH CG21	MANHOLE, TYPE B STA. 10+825.034 4.648 RT RIM 181.267 INV (N) 177.792 INV (SW) 177.792
MH CG22	MANHOLE, TYPE A STA. 10+898.064 6.899 RT RIM 180.561 INV (NW) 177.188 INV (SE) 177.417

VERIFY LOCATIONS AND INVERTS OF EXISTING WATER & S.S. TIE-INS PRIOR TO CONSTRUCTION

RECORD DOCUMENT
Herbert Engineering, Inc.
215 West Main Street
Plainfield, NJ 07064
By: [Signature]
Date: 5/15/06

AGO OF ON WAYS	 CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.	SOUTH LAKE SHORE DRIVE JACKSON PARK SECTION MAINLINE RECONSTRUCTION	DRAINAGE AND UTILITY PLAN LAKE SHORE DRIVE	CONTRACT NO. 00-B0241-06-PV
				DRAWING NO. C-78
				PROJECT NO. B-1-440

1065440008
1061950197 10640091361