F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1248	99-00080-00-BR	LAKE	46	3
STA. 185+96	TO STA. 189+70			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

63020

General Notes

1. City of Lake Forest Datum (LF Datum) - Lake Forest Elev. 0.00 ft = U.S.G.S. Elev. 580.16 ft for existing benchmarks.
2. It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to construction and ordering materials.
3. Any reference to standards in the plans or special provisions shall be interpreted to be the latest Standard Specifications of the Department listed in the plans with the latest revision numbers.
4. Before starting any excavation work, the Contractor shall call "JULIE" at 800-892-0123 for field locations of buried electric, telephone, cable and gas facilities (48 hours notification is required).
5. The City of Lake Forest Department of Public Works shall be notified at least 48 hours prior to commencing construction.
6. The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number which was issued for the permanent construction.
7. All utilities, school districts, local police and fire departments should be notified by the Contractor prior to the start of the construction.
8. The Contractor will be allowed to set up a yard and/or field office at the west end of the project limits on the closed portion of Old Elm Road. The Engineer's field office will be paid for under the contract unit price per calendar month for ENGINEER'S FIELD OFFICE TYPE A.
9. The Contractor shall provide traffic control in conformance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," State of Illinois, and Section 107.14 of the Standard Specifications. Barricades and other required traffic control will be paid under the lump sum price for TRAFFIC CONTROL AND PROTECTION.
10. No work shall commence until the detour route is established and traffic control requirements are met.
11. The Contractor shall limit his construction activities to the work areas designated in the job plans. The Contractor at his own expense shall repair any damage to areas outside of these limits to the satisfaction of the Engineer.
12. Special care shall be taken in excavating the grading near utilities and trees to be saved in order to avoid unnecessary damage.
13. Silt fence shall be installed at low points adjacent to the river, downslope from areas susceptible to erosion during construction.
14. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
15. It is the Contractor's responsibility to insure pipe outlets from all catch basins are free from blockages and debris. The storm sewer drainage flow on the east abutment pipe shall be maintained during the project duration.
16. During construction operations, loose material deposits that obstruct the flow of water in the river channel shall be removed before the end of each workday. At the conclusion of construction operations, all drainage structures shall be free from all dirt and debris. This work will not be paid for separately but shall be included in the contract.
17. All trees with diameters larger than six-inches (6") shall have their trunks protected from construction activity.
18. The Contractor shall protect all identified trees during construction. At the Contractor's expense, all broken tree limbs over one-inch (1") in diameter shall be made flush with the next large branch. All limbs, branches, scrub brush and other debris shall be disposed of by the Contractor outside the limits of the project.
19. All existing grass areas disturbed by the Contractor shall be reseeded and protected from erosion with erosion control blankets.
20. During the construction, the contractor will be required, at his expense, to have available a water truck or similar equipment to control dust. If necessary, the Contractor shall be required to control dust during non-working hours.
21. The Contractor shall make all reasonable and necessary attempts to open Old Elm prior to the required completion date. Several work activities can be and are expected to be finished under traffic (notified of reduced speed) using daily shoulder closures or occasional flagmen. Representative work activities include but are not limited to topsoil placement, seeding, finish grading outside the railing walls and miscellaneous site work. Daily traffic control, if used, shall be incidental to the TRAFFIC CONTROL pay item.

Utility Coordination

1. Utilities in the vicinity of the project are shown on Sheets 8 and12 of this plan set. The Contractor shall be responsible for coordinating his construction activities with the appropriate utility company.
2. The location and elevation of existing utilities are approximate and are provided by the owners. The exact locations and elevations are to be verified by the Contractor through the owner of the utility.
3. The Contractor shall maintain pipe flow throughout the course of removal and replacement of sanitary sewer.
4. Existing sanitary shall be removed and replaced using auger pits. No open excavation shall be performed in the channel for the sanitary sewer work.

Demolition Notes

1. The Contractor shall exercise extreme care with demolition activities on the existing foundation. Vibrations from demolition of concrete in direct contact with the ground may be too excessive for the buried North Shore Sanitary District line and shall be avoided. Damage to the 42 in. diameter concrete pipe due to demolition or demolition vibrations shall be the Contractor's sole responsibility. Costs for pipe repair and effluent clean-up shall be borne by the Contractor, at his expense.
2. The Contractor may elect to sawcut or otherwise partition the existing concrete footings, abutments and wingwalls for removal from the excavation area. Concrete break-up and disposal would be performed away from the existing utilities to avoid damage. The work activity will not be paid for separately but shall be considered incidental to the concrete removal cost.
3. The extent of the demolition work is as shown on, and reasonably inferable from, the drawings.
4. Provide for off-site disposal of all demolished materials.

Concrete General Notes

1. Reinforcing bars shall conform to the requirements of ASTM A706 Gr. 60. See special provisions.
2. Reinforcing bars designed (E) shall be epoxy-coated. Damage to the epoxy coating during handling, placement, etc. shall be repaired with a compatible epoxy.
3. All accessories including bolsters, chairs, tie wire, etc. used to tie or support the epoxy-coated bars shall be epoxy-coated.
4. Structural Concrete: Concrete shall be IDOT Class SI having a minimum compressive strength (f'c) of 4,000 psi at 28 days. The concrete mix shall have an air content between 5 and 8 percent of the volume of the concrete. The Contractor shall submit concrete mix designs to the Engineer for approval.
5. The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding.
6. All construction joints shall be bonded.
7. The Contractor shall make allowance for the lateral deflection of forms, shrinkage and settlement of falsework or braces, in addition to allowance for deadlock deflection. Forms for deck slabs shall be removed prior to placement of bridge approach pavement.
8. Design and construction of formwork shall be the responsibility of the Contractor and shall be performed with accordance with ACI 347 and the Standard Specifications.
9. The Contractor shall use cantilever forming brackets on the exterior beams or girders, and brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06 of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
10. The Contractor shall use a form-lined textured surface when casting the walls for this project. The selected textured surface, approved by the Engineer, shall match as close as possible to a random ashlar limestone masonry pattern.
11. The form-lined textured surface shall be carried a minimum of 2 ft. below the proposed finished grade elevation or as indicated on the drawings. At vertical wingwall and abutment surfaces facing the river, the form lined textured surface shall be as shown on the drawings.
12. The back face of the wingwalls and retaining walls shall be waterproofed according to 503.18 of the Standard Specifications.

Steel Notes

1. All structural steel members shall be AASHTO M270 Grade 50, unless noted otherwise.
2. Stainless steel shall conform to ASTM A276 Type 316.
3. Load carrying member components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
4. The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
5. All fasteners shall be high strength bolts AASHTO M164 Type 3, ASTM A325, unless noted otherwise. All nuts shall be type DH and coated with a visible lubricant.
6. Calculated weight of structural steel = 27,500 lbs.
7. All welding shall be performed by certified welders and shall comply with the latest edition of the bridge Welding Code ANSI/AASHTO/AWS D1.5.
8. Welding electrodes shall be E70XX.
9. Field welding of construction accessories will not be permitted to beams or girders, except as specified in the Contract Documents.
10. All cross frames and diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Hot Dip Galvanizing

1. All structural steel members, bearing plates, side retainers, bolts, nuts, and washers shall be galvanized according to AASHTO M111 or M232 (as applicable).
2. Safeguard products against steel embrittlement in conformance with ASTM 143.
3. Handle all articles to be galvanized in such a manner as to avoid any mechanical damage and to avoid distortion.
4. Repair of damaged coating:
4.1. The maximum area to be repaired is defined in accordance with ASTM 123 Section 4.6 current edition.
4.2. Repair areas damaged by welding, flame cutting or during handling, transport or erection by one of the approved methods in accordance with ASTM A780 whenever damage exceeds 3/16" in width. Minimum thickness requirements for the repair are those described in ASTM A123 Section 4.6 current edition.
5. Cost incurred for touch-up cold galvanizing all new steel shall be incidental to the steel cost.

Moisture Protection

1. Construction joints designated on the drawings will be filled with a 2-component sealant supported by closed cell form backer rod. The joint sealant is specified as follows:
1.1. Silicone Sealant - Use for buried joints or where long term water exposure is anticipated.
1.2. Polyurethane Sealant - Architectural joint sealant for exposed-to-view surfaces. Color shall match the substrate.
2. Refer to Special Provisions for any additional information on joint sealant.
3. Joint sealant to be used in horizontal, nearly level applications shall be self-leveling (SL) formulation. Joints to receive the self-leveling sealant shall be identified by the Engineer in the field.
4. Joint sealant shall be applied as specified in the construction plans and as determined by the Engineer.
5. Designated concrete surface shall be coated with a silane surface sealer. The sealer shall be isobutyl trimethoxy silane in a 40% solids solution of anhydrous isopropyl alcohol. Surfaces to receive silane include the bridge deck, concrete sidewalk, bridge approach pavement, gutter sections and other Engineer designated surfaces.
6. The silane surface sealer shall be considered an alternate to the Department's protective coat requirements for concrete cast in the fall.

Sedimentation and Erosion Control Notes

1. Soil disturbances shall be conducted in such a manner as to minimize erosion. Soil stabilization measures shall consider the time of year, site conditions and the use of temporary or permanent measures.
2. Soil erosion and sediment control features shall be constructed prior to the commencement of hydrologic disturbance of upland areas.
3. Disturbed areas shall be stabilized with temporary or permanent measures within 14 calendar days of the end of active hydrologic disturbance or redistribution.
4. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization is achieved or after the temporary measures are no longer needed.
5. All temporary and permanent erosion control measures must be maintained and repaired as needed.
6. Soil stockpiles shall not be located in a flood prone area or a designated Buffer Protecting Waters of the United States or Isolated waters of Lake County.
7. The erosion control measures indicated on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or Governing Agency.

Expansion Joint Seal

1. Perform all shop welding in accordance with the Bridge Welding Code ANSI/AASHTO/AWS D1.5. Do not weld to surfaces in contact with the elastomeric seal or the top surface (riding surface) except as shown in the shop splice detail. Do not weld inside seal cavity.
2. Fabricate edge rail assemblies in one piece including upturns, except where the length or configuration prohibits shipping or proper installation or where phase construction requires separate assemblies. Shop splice sections of edge rail to obtain the required length by partial penetration double v-groove welds on prepared beveled edges and seal welds. Weld all around the joint as far as practical to achieve a watertight seal. Do not use short pieces of edge rail less than 6 ft - 0 in. long unless required at curbs, sidewalks or phase construction locations.
3. Hot-dip galvanize (HDG) edge rail assemblies after shop fabrication in accordance with the Special Provisions and the manufacturer's recommendations.
4. Furnish temporary or sacrificial support brackets, bolts, clamps, etc. that are capable of resisting shipping, handling and construction forces without damage to the edge rail assemblies or galvanized coating and are adjustable to account for variable temperature settings. Do not use temporary or sacrificial support brackets, bolts, clamps, etc. between the faces of the edge rails.
5. Clearly match mark corresponding edge rail assemblies with joint location and direction of stationing.
6. Submit shop drawings showing all joint materials and project specific details and dimensions. Include name of manufacturer, seal model number, and seal movement range.
7. After galvanizing has been completed, do not weld within 2 in. of edge rail surfaces that will be exposed in the completed structure. Do not weld expansion joint components to or electrically ground to reinforcing steel or structural steel. Seal field butt joints and empty shipping and erection holes with caulk before placing deck concrete.
8. Protect galvanized edge rail assemblies during screeding operations per the manufacturer's recommendations. Provide temporary blocking material in the edge rail seal cavities to prevent concrete intrusion during approach slab placement and finishing.
9. Loosen any temporary or sacrificial support brackets, bolts, clamps, etc. that span across the joint after initial set of concrete, but not later than two hours after conclusion of concrete placement.
10. Install elastomeric seal after completion of approach slab casting. Remove all joint form material and blocking material prior to installing elastomeric seal. Field install elastomeric seal in accordance with manufacturer's recommendations. Thoroughly coat all contact surfaces between the elastomeric seal and the edge rail seal cavities with an adhesive lubricant before setting elastomeric seal in place.

Reference Standards

1. Illinois Department of Transportation (IDOT)
1.1. Standard Specifications for Road and Bridge Construction (Adopted January 1, 2007)
1.2. Supplemental Specifications and Recurring Special Provisions (Adopted January 1, 2008)
1.3. Highway Standards
2. American Association of State Highway and Transportation Officials (AASHTO)
2.1. Standard Specifications for Highway Bridges (LRFD)
2.2. Standard Specifications for Transportation Materials and Methods of Sampling and Testing
2.3. Bridge Welding Code (ANSI/AASHTO/AWS D1.5)
2.4. M111 Standard Specifications for Zinc (Hot Dip Galvanized) Coating on Iron and Steel Products
2.5. M232 Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware.
3. American Society for Testing and Materials (ASTM)
3.1. A123 Standard Specifications for Zinc (Hot Dip Galvanized) Coating on Iron and Steel Products.
3.2. A143 Standard Practice for Safeguarding Against Embrittlement of Hot Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement
3.3. A153 Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware
3.4. A384 Standard Recommended Practice for Safeguarding Against Warpage and Distortion During Hot Dip Galvanizing of Steel Assemblies
3.5. A385 Standard practice for Providing High Quality Zinc Coatings (Hot Dip)
3.6. A780 Standard Practice for Repair of Damaged Hot Dip Galvanized Coatings
4. City of Lake Forest
4.1. Engineering and Construction Standards

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THE CITY OF LAKE FOREST
CHARTERED 1861

ILLINOIS DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCAL ROADS AND STREETS

PROJECT: OLD ELM ROAD OVER EAST SKOKIE DITCH

TITLE: GENERAL NOTES

SCALE: N.T.S | DRAWN BY: IMG
DATE: JANUARY 2008 | CHECKED BY: NSA